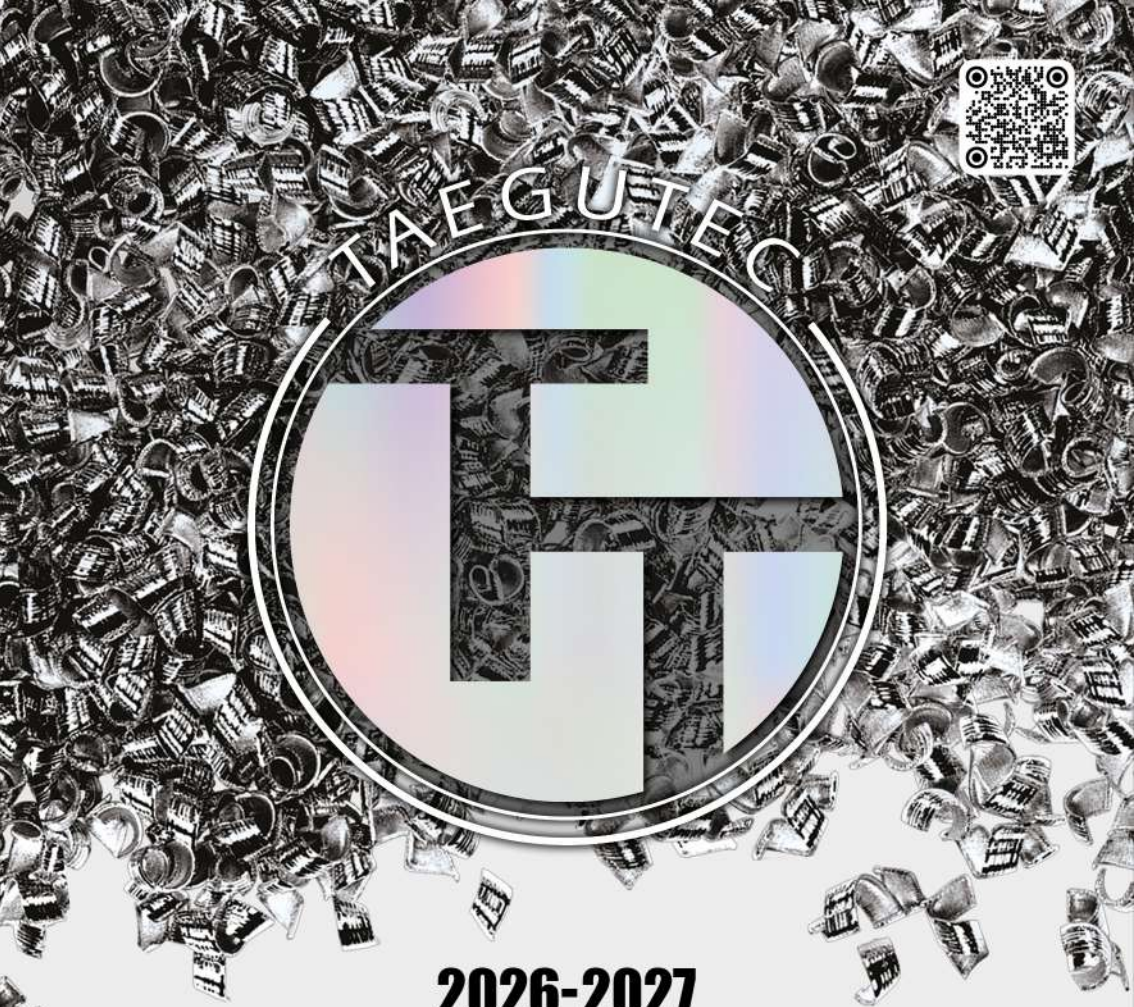


2026-2027

ROTATING

METALCUTTING TOOLS

TaeguTec

Member IMC Group

Contents

Thread Making		Contents Thread Milling Tapping	C 2 C 11 C 75	C Thread Making
Holemaking		Contents Drilling Tools Reaming Tools	D 2 D 17 D 129	D Holemaking
Milling		Contents Cutters Inserts	E 2 E 43 E 251	E Milling
Solid End Mills		Contents MAXI-RUSH Line Solid End Mill Line	F 2 F 16 F 59	F Solid End Mills
Tooling System		Contents Tool Adapter Collet and Accessories	G 2 G 8 G 149	G Tooling System
MPT		Contents Shanks and Heads Spare Parts	H 2 H 6 H 60	H MPT
Materials & Grades		Grade Comparison Table Hardness Conversion Table Material Conversion Table	I 2 I 6 I 8	I Materials & Grades
Index				Index

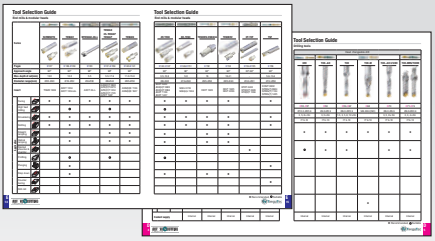
How to use the catalogue page

1 Main Contents

Select an application line from the main Table of Contents. Each line is color coded in alphabetical order.

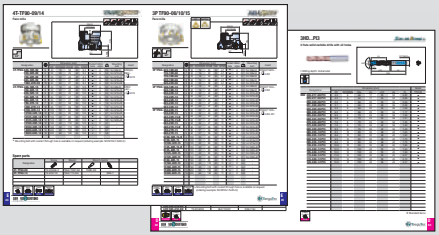
2 Tool Selection Guide

Choose the required machining solutions and tools from tool selection guide.



3 Products Page

Obtain detailed information of products such as dimensions, grades and related parts etc. Holder and insert pages are organized separately.



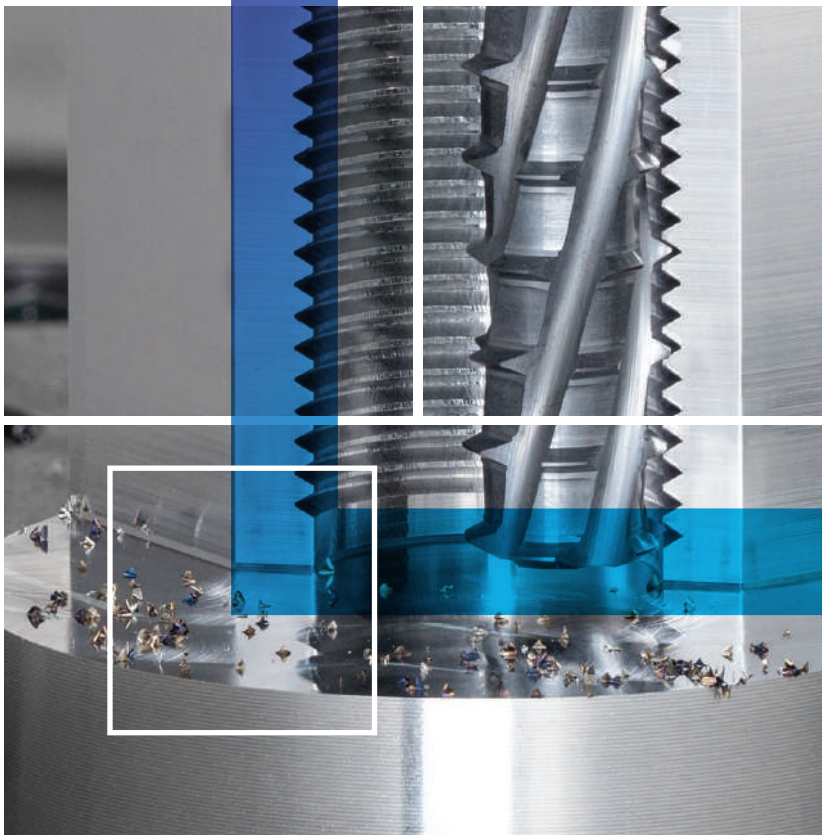
4 Alphabetical Index

All tools are listed in the alphabetical index at the end of the catalogue.

ABC

Should you require more information and data from TaeguTec, please contact the nearest TaeguTec Global Service Center or visit our website. www.taegutec.com

THREAD MAKING



THREAD MAKING

contents

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T-TAP (Tapping)	C8
Grades	C10
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Indexable Tools	C47
Inserts	C55
Recommended Cutting Conditions	C68

Guide to Icons

› TS-THREAD Holder Page

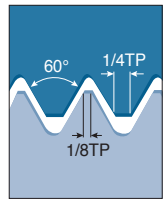
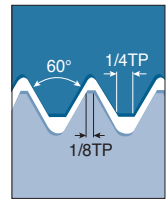
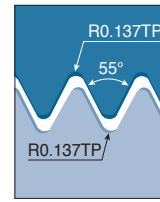
› Insert Page

› Cutting Condition Page

T-TAP (Tapping)	
T-TAP Designation System	C76
Straight Flute with Spiral Point	C77
Right-hand Spiral Flute (40°)	C80
Recommended Cutting Conditions	C83

Tool Selection Guide

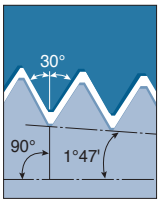
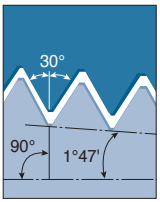
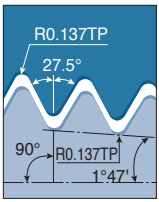
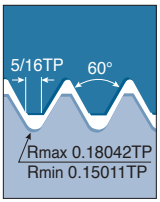
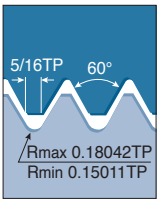
Solid carbide threading end mills

Thread	TS-THREAD		
	Metric ISO	**American UN**	**Whitworth**
			
Application	General usage for all industries	General usage for all industries	General industies. Pipe fittings and couplings
MTEC General	● C13, C14	● C28, C29	● C41
MTECB Internal coolant	● C15	● C30	● C41
MTECBF Internal coolant more flutes	● C16	● C31	● C42
MTECQ Reduced neck diameter for deep threading	● C17	● C32	
MTECZ Internal coolant in the flutes	● C18	● C33	● C41
MTECH Chamfering ability hard material	● C19	● C34	
MTECM Triple lead for low cutting load	● C20	● C35	
MTECK Double lead for low cutting load	● C21	● C38	
MTECS Short flute	● C22	● C36	● C42
MTECSH Short flute for hard material	● C24	● C39	
MTECD Short flute drilling ability	● C25	● C40	
MTECI Single point edge	● C26, C27		

▸ For correct tool choice and CNC programming, use the 'TS-thread guide' software (Available at www.taegutec.com)

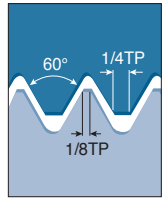
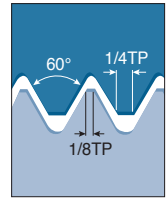
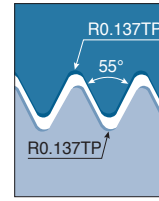
Tool Selection Guide

Solid carbide threading end mills

TS-THREAD				
NPT	**NPTF**	**BSPT**	**UNJ**	**MJ**
				
Steam, gas and water pipes	Steam, gas and water pipes. Dry seal	55° form for steam, gas and water pipes	Aviation and aerospace industry	Aviation and aerospace industry
● C43	● C44	● C45		
● C43		● C45		
● C43	● C44	● C45		
			● C46	● C46

Tool Selection Guide

Indexable insert type

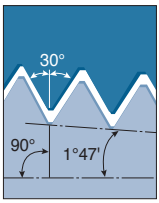
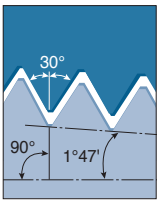
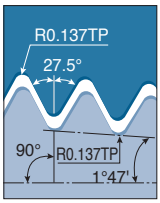
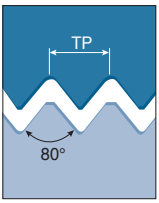
Thread	TS-THREAD		
	Metric ISO	**American UN**	**Whitworth**
			
Insert page	C56, C64	C57-C58, C65	C59, C66
Application	General usage for all industries	General usage for all industries	General industies. Pipe fittings and couplings
MTE D-1 C48 Single insert	●	●	●
MTE D-1-C C49 Solid carbide shank	●	●	●
MTE D-2 C50 Twin insert	●	●	●
TMTSRH C51 Helical end mill	●	●	●
MTF D C52 Large diameter thread	●	●	●
MTFLE D C53 Multi tooth-external threading	●	●	●
TMTSRH C54 Helical shell mill	●	●	●

▸ For correct tool choice and CNC programming, use the 'TS-thread guide' software (Available at www.taegutec.com)

ADVANCE CUTTING TaeguTec

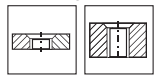
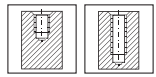
Tool Selection Guide

Indexable insert type

TS-THREAD			
NPT	**NPTF**	**BSPT**	**PG**
			
C60, C66	C61	C62, C67	C63
Steam, gas and water pipes	Steam, gas and water pipes (Dry seal)	55° form for steam, gas and water pipes	Electrical connector
●	●	●	●
●	●	●	●
●	●	●	●
●		●	
●	●	●	●
●	●	●	●
●		●	

Tool Selection Guide

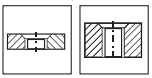
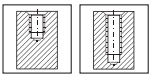
Straight flute with spiral point tap

Series		T-TAP Straight flute with spiral point tap		
		TPH...52B	**TPH...52B05**	**TPH...52B10**
Pages		C77	C78	C79
Coating type		Uncoated	Steam tempered	TiN coated
Chamfer form		Form B 4-5 threads chamfer	Form B 4-5 threads chamfer	Form B 4-5 threads chamfer
Range (ISO metric)	Coarse threads	M2 - M20	M2 - M20	M2 - M20
	Fine threads	M8 - M16	M8 - M16	M8 - M16
Tolerance		ISO 2-6H	ISO 2-6H	ISO 2-6H
Material	P	○	●	●
	M		●	●
	K	○	○	○
	N	●	○	○
	S			○
Application	Through hole  (2xTDZ) (3xTDZ)	●	●	●
	Blind hole  (2xTDZ) (3xTDZ)			

● Recommended, ○ Suitable

Tool Selection Guide

40˚ Right-hand spiral flute tap

Series		T-TAP 40˚ Right-hand spiral flute tap		
		TPH...54C	**TPH...54C05**	**TPH...54C10**
Pages		C80	C81	C82
Coating type		Uncoated	Steam tempered	TiN coated
Chamfer form		Form C 2-3 threads chamfer	Form C 2-3 threads chamfer	Form C 2-3 threads chamfer
Range (ISO metric)	Coarse threads	M2 - M20	M2 - M20	M2 - M20
	Fine threads	M8 - M16	M8 - M16	M8 - M16
Tolerance		ISO 2-6H	ISO 2-6H	ISO 2-6H
Material	P	○	●	●
	M		●	●
	K	○	○	○
	N	●	○	○
	S			○
Application	Through hole  (2xTDZ) (3xTDZ)			
	Blind hole  (2xTDZ) (3xTDZ)	●	●	●

● Recommended, ○ Suitable

TaeguTec Member IMC Group

Grades

Thread making grades

Grades	ISO	Characteristics & applications
TT9030 PVD coated	P20 – P40 M20 – M40 S20 – S40	• General machining of steel • General machining of stainless steel • General machining of heat-resistant alloy
TT5515	P10 – P30 M10 – M30 K10 – K30 S10 – S30 H10 – H30	• High speed machining of steel and hardened steel • General machining of stainless steel, cast iron and heat-resistant alloy
TT1040	P10 – P30 M10 – M30 K10 – K30 S10 – S30 H10 – H30	• High speed machining of steel and hardened steel Excellent wear and heat resistance • General machining of stainless steel, cast iron and heat-resistant alloy

TS-THREAD

Thread Milling

Designation System

TS-THREAD

Solid carbide end mill

MTEC	□	06	04	C	14	1.0	ISO	TT9030
1	2	3	4	5	6	7	8	9

1 TaeguTec mill thread

MT - Mill thread
E - End mill
C - Carbide

2 End mill type

□ - General
B - Internal coolant hole
BF - More flutes number
Q - Reduced neck diameter
Z - Coolant hole in the flutes
H - Chamfering ability
M - Triple lead
K - Double lead
S - Short flute
SH - Short flute for hard material
D - Drilling ability
I - Single point edge

3 Shank diameter

06 6.0 mm
10 10.0 mm

4 Cutting diameter

031 3.1 mm
04 4.0 mm

5 No. of flutes

C - 3 flutes
D - 4 flutes
E - 5 flutes
F - 6 flutes
G - 7 flutes
H - 8 flutes

6 Length of thread (APMX)

10 10.0 mm

7 Thread pitch

0.25-4.0 **mm** (Thread pitch)
72-7 **TPI** (Threads per inch)

8 Thread standard

ISO
UN
W
NPT
NPTF
BSPT
UNJ
MJ
UNJ

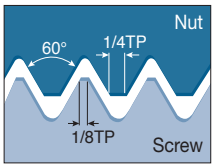
9 Grades

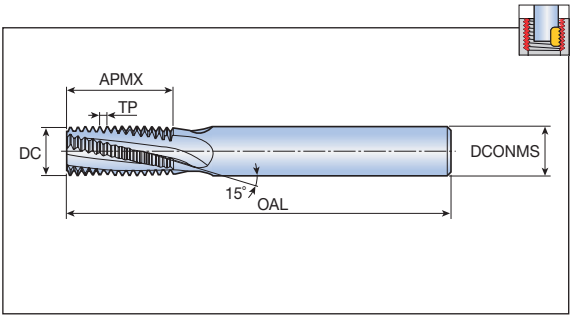
Coated
TT5515
TT9030
TT1040

MTEC-ISO

TS-THREAD

Solid carbide threading end mills





Designation				TP (mm)	M coarse	M fine	Dimension (mm)				NOF	Grade
							DCONMS	DC	APMX	OAL		TT9030
MTEC	06022C5	0.5	ISO	0.5	M3	Ø ≥ 4	6	2.2	5.3	58	3	●
	06038C10	0.5	ISO	0.5	-	Ø ≥ 5	6	3.8	10.3	58	3	●
	06031C7	0.7	ISO	0.7	M4	Ø ≥ 5	6	3.1	7.4	58	3	●
	06045C10	0.75	ISO	0.75	-	Ø ≥ 6	6	4.5	10.0	58	3	●
	06036C9	0.8	ISO	0.8	M5	Ø ≥ 6	6	3.6	9.2	58	3	●
	0604C10	1.0	ISO	1.0	M6	Ø ≥ 7	6	4.0	10.5	58	3	●
	0604C14	1.0	ISO	1.0	M6	Ø ≥ 7	6	4.0	14.5	58	3	●
	0606C12	1.0	ISO	1.0	-	Ø ≥ 9	6	6.0	12.5	58	3	●
	0808D16	1.0	ISO	1.0	-	Ø ≥ 10	8	8.0	16.5	64	4	●
	0605C14	1.25	ISO	1.25	M8	Ø ≥ 10	6	5.0	14.4	58	3	●
	0605C19	1.25	ISO	1.25	M8	Ø ≥ 10	6	5.0	19.4	58	3	●
	0807C17	1.5	ISO	1.5	M10	Ø ≥ 12	8	7.0	17.3	64	3	●
	0807C24	1.5	ISO	1.5	M10	Ø ≥ 12	8	7.0	24.8	76	3	●
	1010D21	1.5	ISO	1.5	-	Ø ≥ 14	10	10.0	21.8	73	4	●
	1616F33	1.5	ISO	1.5	-	Ø ≥ 20	16	16.0	33.8	100	6	●
	0808C20	1.75	ISO	1.75	M12	Ø ≥ 14	8	8.0	20.1	64	3	●
	0808C28	1.75	ISO	1.75	M12	Ø ≥ 14	8	8.0	28.9	76	3	●
	1010C27	2.0	ISO	2.0	M14	Ø ≥ 15	10	10.0	27.0	73	3	●
	1010C39	2.0	ISO	2.0	M14	Ø ≥ 15	10	10.0	39.0	100	3	●
	1212D27	2.0	ISO	2.0	-	Ø ≥ 18	12	12.0	27.0	84	4	●
	2020F41	2.0	ISO	2.0	-	Ø ≥ 26	20	20.0	41.0	105	6	●
	1414D33	2.5	ISO	2.5	M20	Ø ≥ 22	14	14.0	33.8	84	4	●
	1414D48	2.5	ISO	2.5	M20	Ø ≥ 22	14	14.0	48.8	107	4	●
	1616C40	3.0	ISO	3.0	M24	Ø ≥ 25	16	16.0	40.5	100	3	●
	1616C58	3.0	ISO	3.0	M24	Ø ≥ 25	16	16.0	58.5	120	3	●

Cutting Condition C70

▸ NOF: Number of flutes

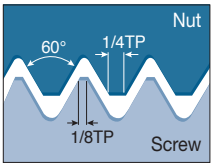
●: Standard items

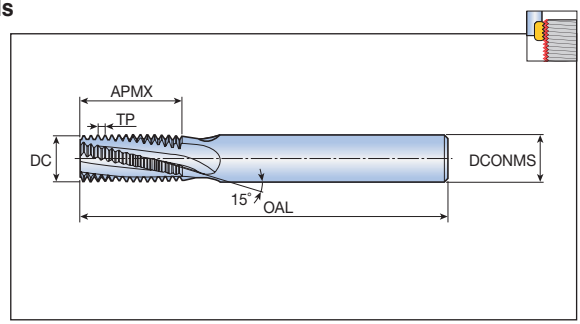
TaeguTec

MTEC E-ISO

TS-THREAD

Solid carbide external threading end mills





Designation	TP (mm)	Dimension (mm)				NOF	Grade
		DCONMS	DC	APMX	OAL		TT9030
MTEC E 1010D16 1.0 ISO	1.0	10	10.0	16.5	73	4	●
1212E20 1.0 ISO	1.0	12	12.0	20.5	84	5	●
1010D16 1.25 ISO	1.25	10	10.0	16.9	73	4	●
1010D15 1.5 ISO	1.5	10	10.0	15.8	73	4	●
1212D20 1.5 ISO	1.5	12	12.0	20.3	84	4	●
1212D20 1.75 ISO	1.75	12	12.0	20.1	84	4	●
1010C17 2.0 ISO	2.0	10	10.0	17.0	73	3	●
1212D21 2.0 ISO	2.0	12	12.0	21.0	84	4	●

Cutting Condition C70

▸ NOF: Number of flutes

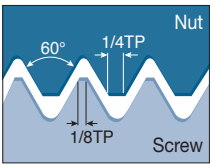
●: Standard items

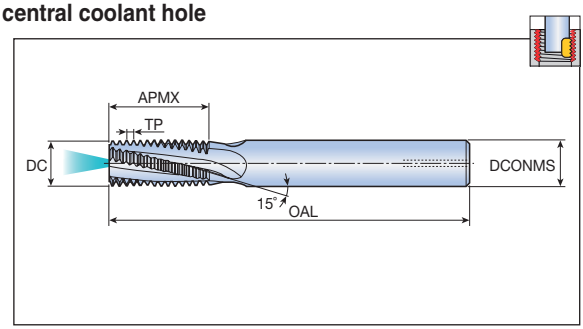
ADVANCE CUTTING TaeguTec

MTECB-ISO

TS-THREAD

Solid carbide threading end mills with a central coolant hole





Designation				TP (mm)	M coarse	M fine	Dimension (mm) DCONMS	DC	APMX	OAL	NOF	Grade TT9030
MTECB	06038C10	0.5	ISO	0.5	-	Ø ≥ 5	6	3.8	10.3	58	3	●
	06031C7	0.7	ISO	0.7	M4	Ø ≥ 5	6	3.1	7.4	58	3	●
	06045C10	0.75	ISO	0.75	-	Ø ≥ 6	6	4.5	10.1	58	3	●
	1010D24	0.75	ISO	0.75	-	Ø ≥ 12	10	10.0	24.4	73	4	●
	06038C9	0.8	ISO	0.8	M5	Ø ≥ 6	6	3.8	9.2	58	3	●
	06046C10	1.0	ISO	1.0	M6	Ø ≥ 7	6	4.6	10.5	58	3	●
	06046C14	1.0	ISO	1.0	M6	Ø ≥ 7	6	4.6	14.5	58	3	●
	0606C12	1.0	ISO	1.0	-	Ø ≥ 9	6	6.0	12.5	58	3	●
	0808D16	1.0	ISO	1.0	-	Ø ≥ 10	8	8.0	16.5	64	4	●
	1010D24	1.0	ISO	1.0	-	Ø ≥ 12	10	10.0	24.5	73	4	●
	0606C14	1.25	ISO	1.25	M8	Ø ≥ 10	6	6.0	14.4	58	3	●
	0606C19	1.25	ISO	1.25	M8	Ø ≥ 10	6	6.0	19.4	58	3	●
	08078C17	1.5	ISO	1.5	M10	Ø ≥ 12	8	7.8	17.0	64	3	●
	08078C24	1.5	ISO	1.5	M10	Ø ≥ 12	8	7.8	24.8	76	3	●
	1010D21	1.5	ISO	1.5	-	Ø ≥ 14	10	10.0	21.8	73	4	●
	1212D26	1.5	ISO	1.5	-	Ø ≥ 16	12	12.0	26.3	84	4	●
	1616F33	1.5	ISO	1.5	-	Ø ≥ 20	16	16.0	33.8	105	6	●
	1009C20	1.75	ISO	1.75	M12	Ø ≥ 12	10	9.0	20.1	73	3	●
	1009C28	1.75	ISO	1.75	M12	Ø ≥ 12	10	9.0	28.9	73	3	●
	1010C27	2.0	ISO	2.0	M14	Ø ≥ 15	10	10.0	27.0	73	3	●
	12118D27	2.0	ISO	2.0	M16	Ø ≥ 17	12	11.8	27.0	84	4	●
	12118D39	2.0	ISO	2.0	M16	Ø ≥ 17	12	11.8	39.0	105	4	●
	1615E33	2.5	ISO	2.5	M20	Ø ≥ 22	16	15.0	33.8	105	5	●
	1615E48	2.5	ISO	2.5	M20	Ø ≥ 22	16	15.0	48.8	105	5	●
	2018D58	3.0	ISO	3.0	M24	Ø ≥ 25	20	18.0	58.5	120	4	●

Cutting Condition C70

▸ NOF: Number of flutes

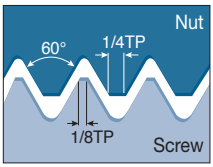
●: Standard items

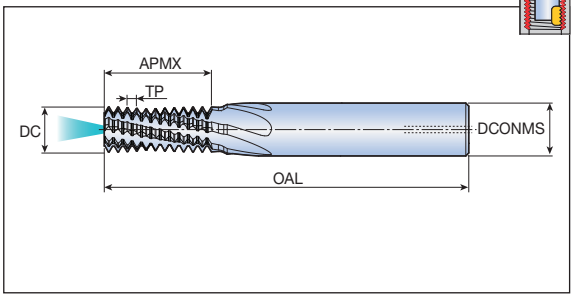
TaeguTec

MTECBF-ISO

TS-THREAD

Solid carbide threading end mills with large number of flutes





Designation	TP (mm)	M Coarse	M Fine	Dimension (mm)				NOF	Grade
				DCONMS	DC	APMX	OAL		TT9030
MTECBF 06048F10 1.0 ISO	1.0	M6	Ø ≥ 7	6	4.8	10.2	58	6	●
08064G14 1.25 ISO	1.25	M8	Ø ≥ 10	8	6.4	14.0	64	7	●
1008G16 1.5 ISO	1.5	M10	Ø ≥ 12	10	8.0	16.7	73	7	●
12095G20 1.75 ISO	1.75	M12	Ø ≥ 12	12	9.5	20.0	84	7	●

Cutting Condition C72

▸ NOF: Number of flutes

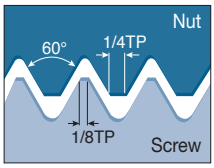
●: Standard items

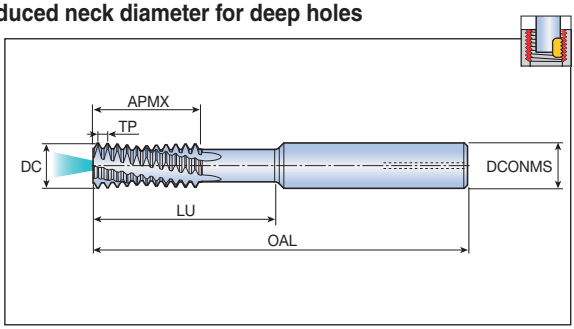
ADVANCE CUTTING TaeguTec

MTECQ-ISO

TS-THREAD

Solid carbide threading end mills with reduced neck diameter for deep holes





Designation		TP (mm)	TDZ	Dimension (mm)					NOF	Grade
				DCONMS	DC	APMX	LU	OAL		TT9030
MTECQ	**1010D32 1.0 ISO**	1.0	Ø ≥ 12	10	10.0	18.0	32.0	73	4	●
	1212D38 1.0 ISO	1.0	Ø ≥ 14	12	12.0	21.0	38.0	84	4	●
	1010D30 1.5 ISO	1.5	Ø ≥ 13	10	10.0	18.0	30.0	73	4	●
	2020F60 1.5 ISO	1.5	Ø ≥ 24	20	20.0	36.0	60.0	105	6	●
	1212D42 2.0 ISO	2.0	Ø ≥ 16	12	12.0	24.0	42.0	84	4	●
	2020F56 2.0 ISO	2.0	Ø ≥ 24	20	20.0	34.0	56.0	105	6	●
	2020D45 3.5 ISO	3.5	Ø ≥ 26	20	20.0	28.0	45.5	105	4	●

Cutting Condition C70

- TDZ: Thread diameter size
- NOF: Number of flutes

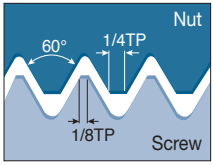
●: Standard items

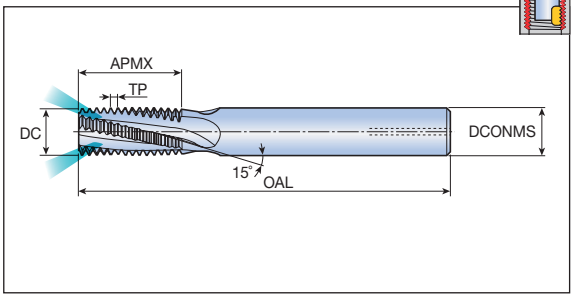
TaeguTec

MTECZ-ISO

TS-THREAD

Solid carbide threading end mills with internal coolant holes directed to the cutting edges





Designation				TP (mm)	M coarse	M fine	Dimension (mm)				NOF	Grade TT9030
							DCONMS	DC	APMX	OAL		
MTECZ	**06048C10**	**1.0**	**ISO**	1.0	M6	Ø ≥ 7	6	4.8	10.5	58	3	●
	0606C12	**1.0**	**ISO**	1.0	-	Ø ≥ 9	6	6.0	12.5	58	3	●
	0808D16	**1.0**	**ISO**	1.0	-	Ø ≥ 10	8	8.0	16.5	64	4	●
	0606C14	**1.25**	**ISO**	1.25	M8	Ø ≥ 10	6	6.0	14.4	58	3	●
	0606C19	**1.25**	**ISO**	1.25	M8	Ø ≥ 10	6	6.0	19.4	58	3	●
	08078C17	**1.5**	**ISO**	1.5	M10	Ø ≥ 12	8	7.8	17.0	64	3	●
	1010D21	**1.5**	**ISO**	1.5	-	Ø ≥ 14	10	10.0	21.8	73	4	●
	1212D26	**1.5**	**ISO**	1.5	-	Ø ≥ 16	12	12.0	26.3	84	4	●
	1616E33	**1.5**	**ISO**	1.5	-	Ø ≥ 20	16	16.0	33.8	101	5	●
	1009C20	**1.75**	**ISO**	1.75	M12	Ø ≥ 12	10	9.0	20.1	73	3	●
	1009C28	**1.75**	**ISO**	1.75	M12	Ø ≥ 12	10	9.0	28.9	73	3	●
	1010C27	**2.0**	**ISO**	2.0	M14	Ø ≥ 15	10	10.0	27.0	73	3	●
	12118D27	**2.0**	**ISO**	2.0	M16	Ø ≥ 17	12	11.8	27.0	84	4	●

Cutting Condition C70

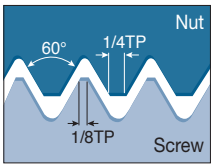
▸ NOF: Number of flutes

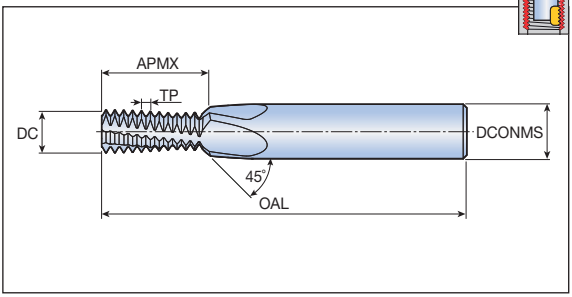
●: Standard items

MTECH-ISO

TS-THREAD

Solid carbide threading end mills for threading and chamfering on hardened steel





Designation				TP (mm)	M Coarse	M Fine	Dimension (mm)				NOF	Grade
							DCONMS	DC	APMX	OAL		TT5515
MTECH	**0604C9**	**0.8**	**ISO**	0.8	M5	Ø ≥ 5.9	6	4.0	9.2	58	3	●
	08048D10	**1.0**	**ISO**	1.0	M6	Ø ≥ 6.9	8	4.8	10.5	64	4	●
	0806D14	**1.25**	**ISO**	1.25	M8	Ø ≥ 9.9	8	6.0	13.7	64	4	●
	12095D20	**1.75**	**ISO**	1.75	M12	-	12	9.5	20.1	84	4	●

Cutting Condition C70

▸ NOF: Number of flutes

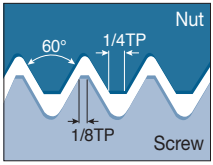
●: Standard items

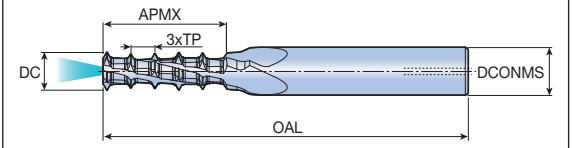
TaeguTec

MTECM-ISO

TS-THREAD

Triple lead solid carbide threading end mills for low cutting loads





• Lead: 3 x pitch

Designation	TP (mm)	M Coarse	M Fine	Dimension (mm)				NOF	Grade
				DCONMS	DC	APMX	OAL		TT9030
MTECM 06031C11 0.7 ISO	0.7	M4	-	6	3.1	10.8	58	3	●
06039C12 0.8 ISO	0.8	M5	-	6	3.9	13.2	58	3	●
06047D14 1.0 ISO	1.0	M6	-	6	4.7	15.4	58	4	●
08079E21 1.0 ISO	1.0	-	M10	8	7.9	21.4	64	5	●
10096D32 1.75 ISO	1.75	M12	-	10	9.6	32.3	81	4	●
16131E42 2.0 ISO	2.0	M16	-	16	13.1	42.9	105	5	●

Cutting Condition C72

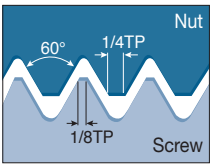
▸ NOF: Number of flutes

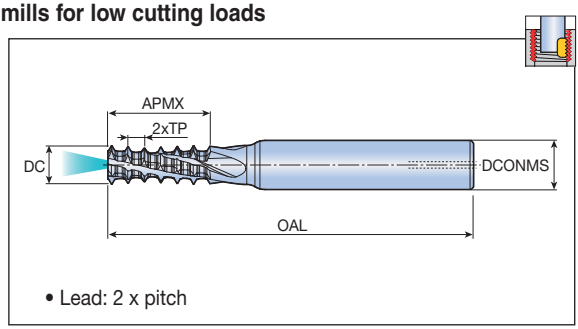
●: Standard items

MTECK-ISO

TS-THREAD

Double lead solid carbide threading end mills for low cutting loads





• Lead: 2 x pitch

Designation	TP (mm)	M Coarse	M Fine	Dimension (mm) DCONMS	DC	APMX	OAL	NOF	Grade TT9030
MTECK 06032D8 0.5 ISO	0.5	-	M4	6	3.2	8.2	58	4	●
06031C9 0.7 ISO	0.7	M4	-	6	3.1	8.7	58	3	●
06039C10 0.8 ISO	0.8	M5	-	6	3.9	10.8	58	3	●
06047D12 1.0 ISO	1.0	M6	-	6	4.7	12.5	58	4	●
08063D16 1.25 ISO	1.25	M8	-	8	6.3	16.9	64	4	●
08079D21 1.5 ISO	1.5	M10	-	8	7.9	21.7	64	4	●
10098E24 1.5 ISO	1.5	-	M13	10	9.8	24.8	73	5	●
120117E28 1.5 ISO	1.5	-	M16	12	11.7	29.3	94	5	●
160125F33 1.5 ISO	1.5	-	M16	16	12.5	33.7	93	6	●
10096D24 1.75 ISO	1.75	M12	-	10	9.6	25.3	73	4	●
12112D28 2.0 ISO	2.0	M16	-	12	11.2	28.9	84	4	●
16131E32 2.0 ISO	2.0	M16	-	16	13.1	32.9	93	5	●

Cutting Condition C72

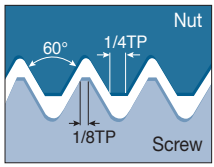
▸ NOF: Number of flutes

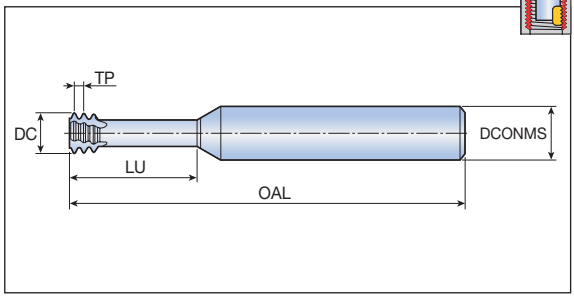
●: Standard items

MTECS-ISO

TS-THREAD

Solid carbide threading end mills with short cutting flutes for low cutting loads





Designation				TP (mm)	TDZ	Dimension (mm)				NOF	Grade
						DCONMS	DC	LU	OAL		TT9030
MTECS	**03007C2**	**0.25**	**ISO**	0.25	M1	3	0.72	2.5	39	3	●
	03009C3	**0.25**	**ISO**	0.25	M1.2	3	0.9	3.0	39	3	●
	03011C4	**0.3**	**ISO**	0.3	M1.4	3	1.05	4.0	39	3	●
	03012C5	**0.35**	**ISO**	0.35	M1.6	3	1.20	5.0	39	3	●
	06016C4	**0.4**	**ISO**	0.4	M2	6	1.53	4.5	58	3	●
	03016C6	**0.4**	**ISO**	0.4	M2	3	1.53	6.0	39	3	●
	03017C7	**0.45**	**ISO**	0.45	M2.2	3	1.65	7.0	39	3	●
	06017C5	**0.45**	**ISO**	0.45	M2.2	6	1.65	5.0	58	3	●
	0602C5	**0.45**	**ISO**	0.45	M2.5	6	1.95	5.5	58	3	●
	0602C5	**0.45**	**ISO-L**	0.45	M2.5	6	1.95	5.5	100	3	●
	0602C7	**0.45**	**ISO**	0.45	M2.5	6	1.95	7.5	58	3	●
	06024C6	**0.5**	**ISO**	0.5	M3	6	2.37	6.5	58	3	●
	06024C9	**0.5**	**ISO**	0.5	M3	6	2.37	9.5	58	3	●
	06024C9	**0.5**	**ISO-L**	0.5	M3	6	2.37	9.5	100	3	●
	03024C12	**0.5**	**ISO**	0.5	M3	3	2.4	12.5	39	3	●
	03024C15	**0.5**	**ISO**	0.5	M3	3	2.4	15.5	39	3	●
	06054D20	**0.5**	**ISO**	0.5	M6	6	5.35	20.0	58	4	●
	06028C7	**0.6**	**ISO**	0.6	M3.5	6	2.75	7.5	58	3	●
	06028C10	**0.6**	**ISO**	0.6	M3.5	6	2.75	10.5	58	3	●
	06031C9	**0.7**	**ISO**	0.7	M4	6	3.1	9.0	58	3	●
	06031C12	**0.7**	**ISO**	0.7	M4	6	3.1	12.5	58	3	●
	06031C12	**0.7**	**ISO-L**	0.7	M4	6	3.1	12.5	100	3	●
	06031C16	**0.7**	**ISO**	0.7	M4	6	3.1	16.7	58	3	●
	0808D25	**0.75**	**ISO**	0.75	M10	8	8.0	25.0	64	4	●
	06038C12	**0.8**	**ISO**	0.8	M5	6	3.8	12.5	58	3	●
	06038C16	**0.8**	**ISO**	0.8	M5	6	3.8	16.0	58	3	●
	06038C16	**0.8**	**ISO-L**	0.8	M5	6	3.8	16.0	100	3	●
	0604C20	**0.8**	**ISO**	0.8	M5	6	4.0	20.8	58	3	●
	06047C14	**1.0**	**ISO**	1.0	M6	6	4.65	14.0	58	3	●
	06047C20	**1.0**	**ISO**	1.0	M6	6	4.65	20.0	58	3	●
	06047C20	**1.0**	**ISO-L**	1.0	M6	6	4.65	20.0	100	3	●
	06048C25	**1.0**	**ISO**	1.0	M6	6	4.8	25.0	58	3	●
	0606C18	**1.25**	**ISO**	1.25	M8	6	6.0	18.0	58	3	●
	0606C24	**1.25**	**ISO**	1.25	M8	6	6.0	24.0	58	3	●
	0606C24	**1.25**	**ISO-L**	1.25	M8	6	6.0	24.6	100	3	●

Cutting Condition C74

- TDZ: Thread diameter size
- NOF: Number of flutes

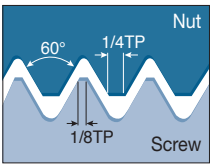
●: Standard items

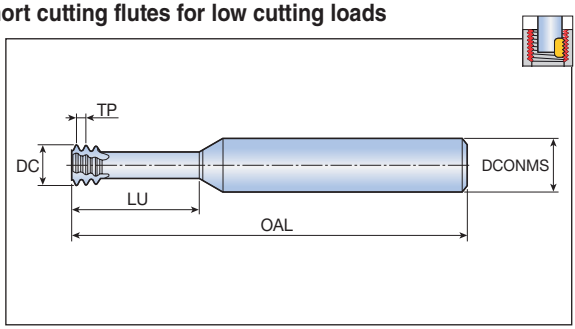
ADVANCE CUTTING TaeguTec

MTECS-ISO

TS-THREAD

Solid carbide threading end mills with short cutting flutes for low cutting loads





Designation	TP (mm)	TDZ	Dimension (mm)				NOF	Grade
			DCONMS	DC	LU	OAL		TT9030
MTECS 08078C23 1.5 ISO	1.5	M10	8	7.8	23.0	64	3	●
08078C31 1.5 ISO	1.5	M10	8	7.8	31.5	64	3	●
1009C26 1.75 ISO	1.75	M12	10	9.0	26.0	73	3	●
1009C37 1.75 ISO	1.75	M12	10	9.0	37.8	73	3	●
12118D35 2.0 ISO	2.0	M16	12	11.8	35.0	84	4	●
12118D50 2.0 ISO	2.0	M16	12	11.8	50.0	100	4	●
1615E43 2.5 ISO	2.5	M20	16	15.0	43.0	100	5	●

Cutting Condition C74

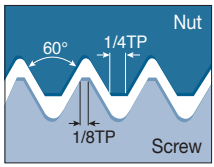
- TDZ: Thread diameter size
- NOF: Number of flutes

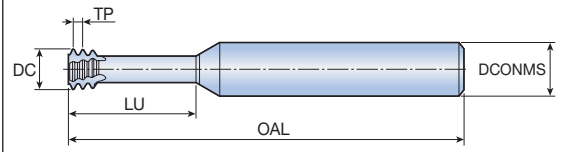
●: Standard items

MTECSH-ISO

TS-THREAD

Left-handed solid carbide threading end mills with short cutting flutes for hardened steel





• Left-hand tools (CNC code M04)

Designation				TP (mm)	TDZ	Dimension (mm)				NOF	Grade
						DCONMS	DC	LU	OAL		TT1040
MTECSH	**03011C4**	**0.3**	**ISO**	0.3	M1.4	3	1.05	4.0	39	3	●
	03012C5	**0.35**	**ISO**	0.35	M1.6	3	1.20	4.8	39	3	●
	03016C6	**0.4**	**ISO**	0.4	M2	3	1.55	6.0	39	3	●
	06016C4	**0.4**	**ISO**	0.4	M2	6	1.55	4.5	58	3	●
	06017C5	**0.45**	**ISO**	0.45	M2.2	6	1.65	5.0	58	3	●
	0602C5	**0.45**	**ISO**	0.45	M2.5	6	1.95	5.5	58	3	●
	0602C7	**0.45**	**ISO**	0.45	M2.5	6	1.95	7.5	58	3	●
	06024C6	**0.5**	**ISO**	0.5	M3	6	2.35	6.5	58	3	●
	06024C9	**0.5**	**ISO**	0.5	M3	6	2.35	9.5	58	3	●
	06028C7	**0.6**	**ISO**	0.6	M3.5	6	2.75	7.5	58	3	●
	06028C10	**0.6**	**ISO**	0.6	M3.5	6	2.75	10.0	58	3	●
	06031C9	**0.7**	**ISO**	0.7	M4	6	3.1	9.0	58	3	●
	06031C12	**0.7**	**ISO**	0.7	M4	6	3.1	12.5	58	3	●
	06038C12	**0.8**	**ISO**	0.8	M5	6	3.8	12.5	58	3	●
	06038C16	**0.8**	**ISO**	0.8	M5	6	3.8	16.0	58	3	●
	06047C14	**1.0**	**ISO**	1.0	M6	6	4.65	14.0	58	3	●
	06047C20	**1.0**	**ISO**	1.0	M6	6	4.65	20.0	58	3	●
	0606C18	**1.25**	**ISO**	1.25	M8	6	5.95	18.0	58	3	●
	0606C24	**1.25**	**ISO**	1.25	M8	6	5.95	24.0	58	3	●
	08078C23	**1.5**	**ISO**	1.5	M10	8	7.8	23.0	64	3	●
	1009C26	**1.75**	**ISO**	1.75	M12	10	9.0	26.0	73	3	●
	12118D35	**2.0**	**ISO**	2.0	M16	12	11.8	35.0	84	4	●

Cutting Condition C74

▸ TDZ: Thread diameter size
▸ NOF: Number of flutes

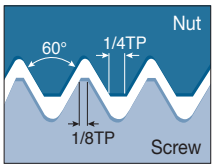
●: Standard items

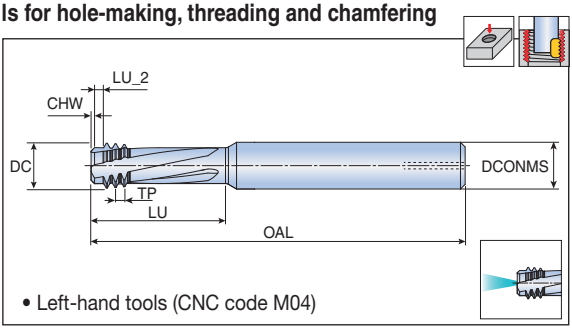
ADVANCE CUTTING TaeguTec

MTECD-ISO

TS-THREAD

Left-handed solid carbide threading end mills for hole-making, threading and chamfering





• Left-hand tools (CNC code M04)

Designation	TP (mm)	TDZ	Dimension (mm)						NOF	Coolant hole	Grade TT9030
			DCONMS	DC	LU	OAL	CHW	LU_2			
MTECD 06032C11 0.7 ISO	0.7	M4	6	3.15	11.6	58	0.2	0.7	3	x	●
0604C14 0.8 ISO	0.8	M5	6	4.0	14.4	58	0.3	0.8	3	x	●
08047C14 1.0 ISO	1.0	M6-M9	8	4.7	14.0	64	0.4	1.0	3	●	●
08061D18 1.25 ISO	1.25	M8-M12	8	6.1	18.0	64	0.5	1.3	4	●	●
08078D23 1.5 ISO	1.5	M10-M15	8	7.8	23.0	64	0.6	1.5	4	●	●
1009D26 1.75 ISO	1.75	M12	10	9.0	26.0	73	0.6	1.8	4	●	●
12118D35 2.0 ISO	2.0	M16-M23	12	11.8	35.0	84	0.6	2.0	4	●	●

Cutting Condition C74

- Thread hole, thread and chamfer by circular interpolation
- TDZ: Thread diameter size
- NOF: Number of flutes

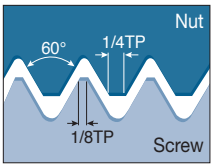
●: Standard items

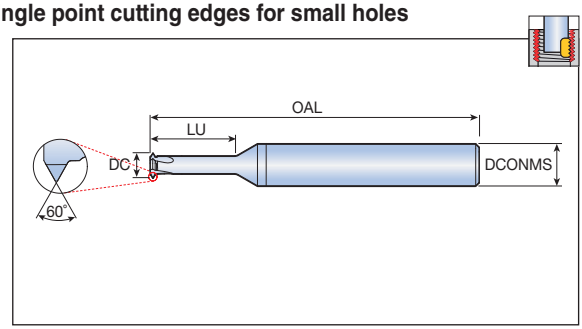
TaeguTec

MTECI-ISO

TS-THREAD

Solid carbide threading end mills with single point cutting edges for small holes





Designation	TP (mm)	M Coarse	M Fine	Dimension (mm)				NOF	Grade
				DCONMS	DC	LU	OAL		TT5515
MTECI 03007C3 0.25 ISO	0.25	M1	-	3	0.72	3.6	39	3	●
03009C4 0.25 ISO	0.25	M1.2	M1.4, M1.6	3	0.9	4.3	39	3	●
03011C5 0.3 ISO	0.3	M1.4	-	3	1.05	5.0	39	3	●
03012C6 0.35 ISO	0.35	M1.6	M2, M2.2	3	1.2	5.7	39	3	●
03016C7 0.4 ISO	0.4	M2	-	3	1.55	7.1	39	3	●
03024C10 0.5 ISO	0.5	M3	M3.5, M4	3	2.37	10.6	39	3	●

Cutting Condition C70

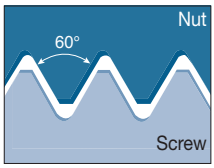
▸ NOF: Number of flutes

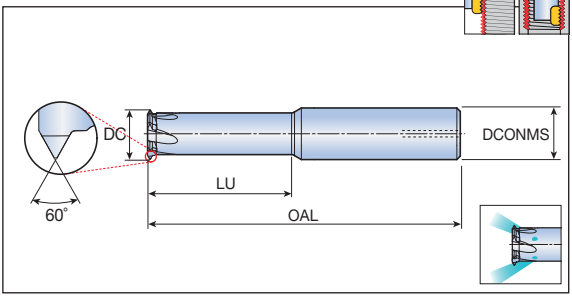
●: Standard items

MTECI-60

TS-THREAD

Solid carbide threading end mills with single point cutting edges for 60° partial profiles





Designation		TP (mm)	TPI	TDZ	Dimension (mm)				NOF	Coolant hole	Grade	
					DCONMS	DC	LU	OAL			TT5515	TT9030
MTECI	**03019C5 A60**	0.35-0.6	72-40	Ø ≥ 2	3	1.9	5.2	39	3	x	●	
	03024C7 A60	0.5-0.8	48-32	Ø ≥ 2.5	3	2.4	7.1	38	3	x	●	
	06032C9 A60	0.5-1.0	48-24	Ø ≥ 3	6	3.2	9.5	57	3	x	●	
	0604C12 A60	0.5-1.0	48-24	Ø ≥ 4	6	4.0	12.5	58	3	x	●	
	0605D20 A60	Int. 0.5-0.8	56-28	Ø ≥ 6	6	5.0	20.0	58	4	●		●
	0808D28 A60	Ext. 0.4-0.8	64-32	Ø ≥ 9	8	8.0	28.0	64	4	●		●
	0808D30 A60	Int. 1.0-1.75 Ext. 0.8-1.5	28-14 32-16	Ø ≥ 10	8	8.0	30.0	64	4	●		●
	1010D35 A60			Ø ≥ 12	10	10.0	35.0	73	4	●		●
	1212E39 A60			Ø ≥ 14	12	12.0	39.0	84	5	●		●
	1212E40 A60	Int. 2.0-3.0 Ext. 1.75-2.5	13-8 15-10	Ø ≥ 16	12	12.0	40.0	84	5	●		●
	1614E45 A60			Ø ≥ 18	16	14.0	45.0	101	5	●		●
	1616E50 A60			Ø ≥ 20	16	16.0	50.0	101	5	●		●

Cutting Condition C70

- TDZ: Thread diameter size
- NOF: Number of flutes

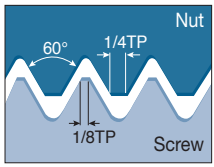
●: Standard items

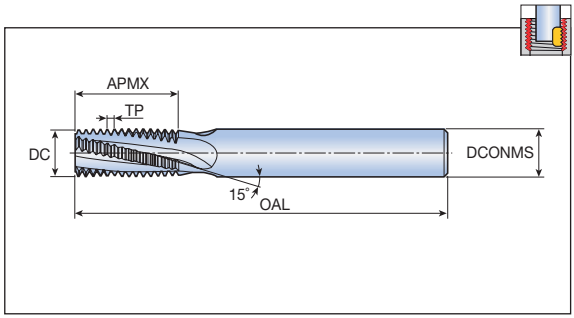
TaeguTec

MTEC-UN

TS-THREAD

Solid carbide threading end mills





Designation			TPI	UNC	UNF	UNEF	Dimension (mm)				NOF	Grade
							DCONMS	DC	APMX	OAL		TT9030
MTEC	06025C6	40 UN	40	#5	-	-	6	2.5	6.0	58	3	●
	06032C6	32 UN	32	#8	#10	#12	6	3.2	6.8	58	3	●
	0604C11	28 UN	28	-	1/4	-	6	4.0	11.3	58	3	●
	0606C14	28 UN	28	-	-	7/16-1/2	6	6.0	14.5	58	3	●
	0605C14	24 UN	24	-	5/16	-	6	5.0	14.3	58	3	●
	0807C21	24 UN	24	-	3/8	9/16-5/8	8	7.0	20.0	64	3	●
	06045C12	20 UN	20	1/4	-	-	6	4.5	12.1	58	3	●
	0807C21	20 UN	20	-	7/16-1/2	-	8	7.0	20.0	64	3	●
	1212E27	20 UN	20	-	-	3/4-1	12	12.0	27.3	84	5	●
	0605C14	18 UN	18	5/16	-	-	6	5.0	14.8	58	3	●
	1010D26	18 UN	18	-	9/16-5/8	1 1/8-1 5/8	10	10.0	26.1	73	4	●
	0606C16	16 UN	16	3/8	-	-	6	6.0	16.7	57	3	●
	1212D31	16 UN	16	-	3/4	-	12	12.0	30.0	83	4	●
	1615E37	14 UN	14	-	7/8	-	16	15.0	37.2	100	5	●
	0808C22	13 UN	13	1/2	-	-	8	8.0	22.5	63	3	●
	1010C26	12 UN	12	9/16	-	-	10	10.0	26.5	72	3	●
	1616E41	12 UN	12	-	1-1 1/2	-	16	16.0	41.3	100	5	●
	1010C28	11 UN	11	5/8	-	-	10	10.0	28.9	72	3	●
	1212C34	10 UN	10	3/4	-	-	12	12.0	34.3	83	3	●
	1615C38	9 UN	9	7/8	-	-	16	15.0	38.1	101	3	●
	1616C42	8 UN	8	1	-	-	16	16.0	42.9	100	3	●

Cutting Condition C70

▸ NOF: Number of flutes

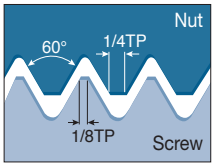
●: Standard items

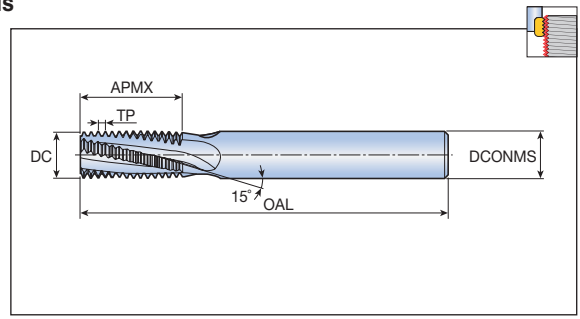
ADVANCE CUTTING TaeguTec

MTEC E-UN

TS-THREAD

Solid carbide external threading end mills





Designation		TPI	Dimension (mm)				NOF	Grade
			DCONMS	DC	APMX	OAL		TT9030
MTEC E	**1010D16 24 UN**	24	10	10.0	16.4	73	4	●
	1212E21 20 UN	20	12	12.0	21.0	84	5	●
	1212D20 12 UN	12	12	12.0	20.1	84	4	●

Cutting Condition C70

▸ NOF: Number of flutes

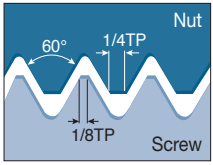
●: Standard items

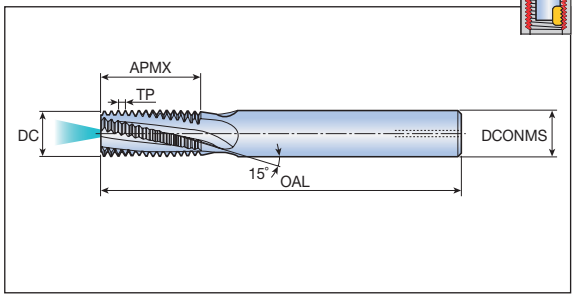
TaeguTec

MTECB-UN

TS-THREAD

Solid carbide threading end mills with a central coolant hole





	Designation	TPI	UNC	UNF	UNEF	Dimension (mm)				NOF	Grade
						DCONMS	DC	APMX	OAL		TT9030
MTECB	06032C6 32 UN	32	#8	#10	#12	6	3.2	6.8	58	3	●
	0606C14 32 UN	32	-	-	7/16-1/2	6	6.0	16.0	58	3	●
	0808D18 32 UN	32	-	-	3/8	8	8.0	18.7	64	4	●
	0605C11 28 UN	28	-	1/4	-	6	5.0	11.3	58	3	●
	08066C14 24 UN	24	-	5/16	-	8	6.6	14.3	64	3	●
	0808D21 24 UN	24	-	-	9/16-5/8	8	8.0	20.6	64	4	●
	0808C21 20 UN	20	-	7/16	-	8	8.0	21.0	64	3	●
	1010D22 20 UN	20	-	1/2	-	10	10.0	22.3	73	4	●
	06056C14 18 UN	18	5/16	-	-	6	5.6	14.8	58	3	●
	12113D26 18 UN	18	-	9/16-5/8	11/8-15/8	12	11.3	26.1	84	4	●
	08067C16 16 UN	16	3/8	-	-	8	6.7	16.7	64	3	●
	1212D31 16 UN	16	-	3/4	-	12	12.0	31.0	84	4	●
	08077C20 14 UN	14	7/16	-	-	8	7.7	20.9	64	3	●
	1616E37 14 UN	14	-	7/8	-	16	16.0	37.2	105	5	●
	10092C22 13 UN	13	1/2	-	-	10	9.2	22.5	73	3	●
	12114C28 11 UN	11	5/8	-	-	12	11.4	28.9	84	3	●
	16144D34 10 UN	10	3/4	-	-	16	14.4	34.3	105	4	●
	20195D42 8 UN	8	1	-	-	20	19.5	42.9	105	4	●

Cutting Condition C70

▸ NOF: Number of flutes

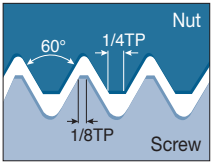
●: Standard items

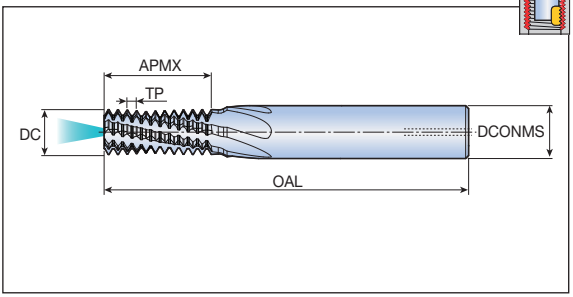
ADVANCE CUTTING TaeguTec

MTECBF-UN

TS-THREAD

Solid carbide threading end mills with large number of flutes





Designation	TPI	UNC	UNF	UNEF	Dimension (mm)				NOF	Grade
					DCONMS	DC	APMX	OAL		TT9030
MTECBF 08066G14 24 UN	24	-	5/16	-	8	6.6	14.2	64	7	●
10066G14 24 UN	24	-	5/16	-	10	6.6	14.2	73	7	●
06048E12 20 UN	20	1/4	-	-	6	4.8	12.0	58	5	●
10092H21 20 UN	20	-	7/16	-	10	9.2	20.9	73	8	●
12092H21 20 UN	20	-	7/16	-	12	9.2	20.9	84	8	●
0806F14 18 UN	18	5/16	-	-	8	6.0	14.7	64	6	●
16125H26 18 UN	18	-	9/16-5/8	11/16	16	12.5	26.0	105	8	●
10074F16 16 UN	16	3/8	-	-	10	7.4	16.6	73	6	●
10085F20 14 UN	14	7/16	-	-	10	8.5	20.8	73	6	●
12098F24 13 UN	13	1/2	-	-	12	9.8	24.3	84	6	●
16116F26 12 UN	12	5/8	1-1 1/2	-	16	11.6	26.4	105	6	●

Cutting Condition C72

▸ NOF: Number of flutes

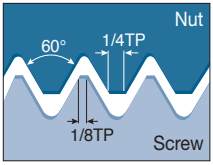
●: Standard items

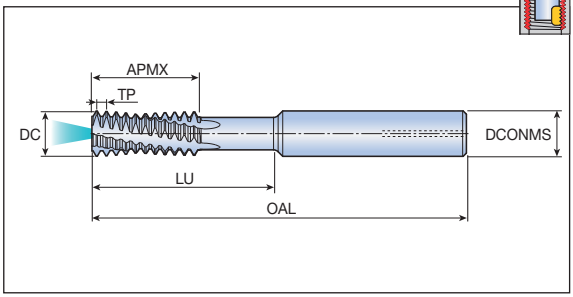
TaeguTec

MTECQ-UN

TS-THREAD

Solid carbide threading end mills with reduced neck diameter for deep holes





Designation		TPI	TDZ	Dimension (mm)					NOF	Grade
				DCONMS	DC	APMX	LU	OAL		TT9030
MTECQ	**1010D30 20 UN**	20	Ø ≥ 12	10	10.0	17.8	30.5	73	4	●
	1616F43 20 UN	20	Ø ≥ 18	16	16.0	25.4	43.2	105	6	●
	1616E42 16 UN	16	Ø ≥ 19	16	16.0	25.4	42.9	105	5	●
	1212D42 12 UN	12	Ø ≥ 16	12	12.0	25.4	42.3	84	4	●

Cutting Condition C70

- TDZ: Thread diameter size
- NOF: Number of flutes

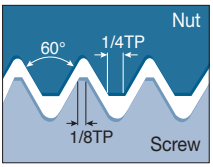
●: Standard items

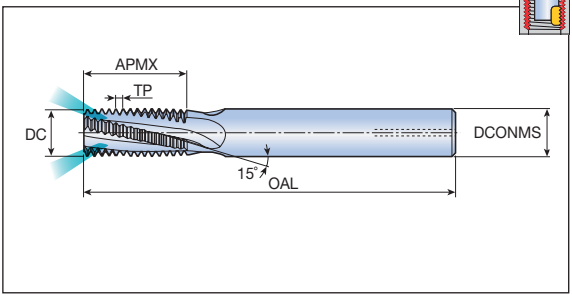
ADVANCE CUTTING TaeguTec

MTECZ-UN

TS-THREAD

Solid carbide threading end mills with internal coolant holes directed to the cutting edges





Designation		TPI	UNC	UNF	UNEF	Dimension (mm)				NOF	Grade
						DCONMS	DC	APMX	OAL		TT9030
MTECZ	**1010D22 20 UN**	20	-	1/2	-	10	10.0	22.3	73	4	●
	1212E27 20 UN	20	-	-	3/4-1	12	12.0	27.3	84	5	●
	12113D26 18 UN	18	-	9/16-5/8	1 1/8-1 5/8	12	11.3	26.1	84	4	●
	08067C16 16 UN	16	3/8	-	-	8	6.7	16.7	64	3	●
	1212D31 16 UN	16	-	3/4	-	12	12.0	31.0	84	4	●
	12114C28 11 UN	11	5/8	-	-	12	11.4	28.9	84	3	●
	16144D34 10 UN	10	3/4	-	-	16	14.4	34.3	101	4	●

Cutting Condition C70

▸ NOF: Number of flutes

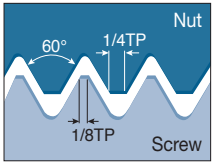
●: Standard items

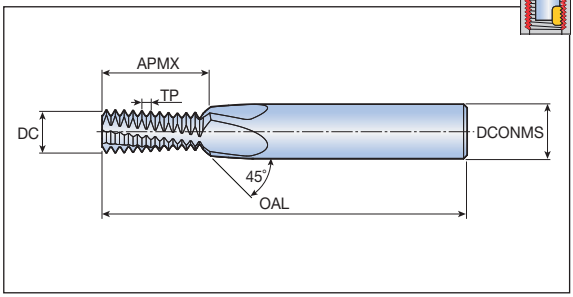
TaeguTec

MTECH-UN

TS-THREAD

Solid carbide threading end mills for threading and chamfering on hardened steel





Designation		TPI	UNC	UNF	UNEF	Dimension (mm)				NOF	Grade
						DCONMS	DC	APMX	OAL		TT5515
MTECH	**06026C5 32 UN**	32	#6	-	-	6	2.6	6.7	58	3	●
	06048C12 20 UN	20	1/4	-	-	6	4.8	12.1	58	3	●
	08057C14 18 UN	18	5/16	9/16-5/8	11/16	8	5.7	14.8	64	3	●
	10074C16 16 UN	16	3/8	3/4	-	10	7.4	16.7	73	3	●
	12094D22 13 UN	13	1/2	-	-	12	9.4	22.5	84	4	●

Cutting Condition C70

▸ NOF: Number of flutes

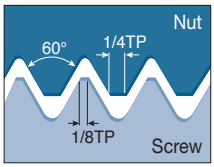
●: Standard items

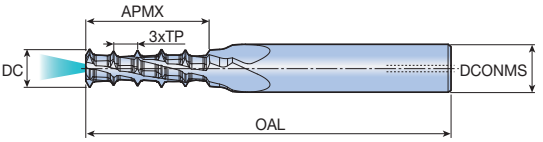
ADVANCE CUTTING TaeguTec

MTECM-UN

TS-THREAD

Triple lead solid carbide threading end mills for low cutting loads





• Lead: 3 x pitch

Designation		TPI	UNC	Dimension (mm)				NOF	Grade
				DCONMS	DC	APMX	OAL		TT9030
MTECM	**0250C28 32 UN**	32	#8	6.35	3.1	7.5	63.5	3	●
	0250C50 24 UN	24	#10	6.35	3.5	13.2	63.5	3	●
	06047C16 20 UN	20	1/4	6	4.7	17.1	58	3	●
	0250C65 20 UN	20	1/4	6.35	4.7	17.1	63.5	3	●
	0312D09 16 UN	16	3/8	7.94	7.4	24.5	63.5	4	●

Cutting Condition C72

▸ NOF: Number of flutes

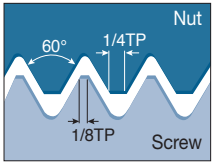
●: Standard items

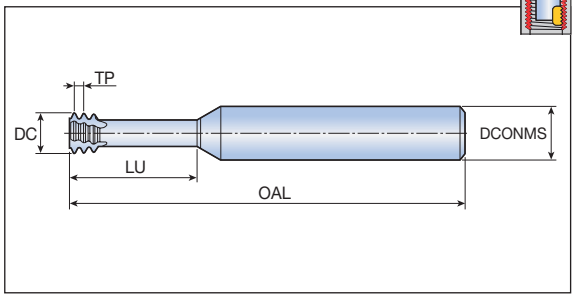
TaeguTec

MTECS-UN

TS-THREAD

Solid carbide threading end mills with short cutting flutes for low cutting loads





Designation		TPI	UNC	UNF	Dimension (mm)				NOF	Grade
					DCONMS	DC	LU	OAL		TT9030
MTECS	**03012C8 80 UN**	80	-	#0	3	1.15	8.0	39	3	●
	03015C6 72 UN	72	-	#1	3	1.45	6.0	39	3	●
	03016C6 56 UN	56	#2	#3	3	1.65	6.6	39	3	●
	03016C9 56 UN	56	#2	#3	3	1.65	9.2	39	3	●
	03016C11 56 UN	56	#2	#3	3	1.65	11.4	39	3	●
	06016C4 56 UN	56	#2	#3	6	1.65	4.4	58	3	●
	06016C6 56 UN	56	#2	#3	6	1.65	6.6	58	3	●
	06016C6 56 UN-L	56	#2	#3	6	1.65	6.6	100	3	●
	06019C5 48 UN	48	#3	#4	6	1.9	5.2	58	3	●
	03021C8 40 UN	40	#4	-	3	2.1	8.0	39	3	●
	03021C12 40 UN	40	#4	-	3	2.1	12.0	39	3	●
	06021C6 40 UN	40	#4	-	6	2.1	6.3	58	3	●
	06021C6 40 UN-L	40	#4	-	6	2.1	6.3	100	3	●
	06021C8 40 UN	40	#4	-	6	2.1	8.0	58	3	●
	06021C8 40 UN-L	40	#4	-	6	2.1	8.0	100	3	●
	06024C9 40 UN	40	#5	#6	6	2.45	9.6	58	3	●
	06033C9 36 UN	36	-	#8	6	3.3	9.0	58	3	●
	03025C14 32 UN	32	#6	-	3	2.55	14.8	39	3	●
	06025C7 32 UN	32	#6	-	6	2.55	7.1	58	3	●
	06025C10 32 UN	32	#6	-	6	2.55	10.5	58	3	●
	06025C10 32UN-L	32	#6	-	6	2.55	10.5	100	3	●
	06032C9 32 UN	32	#8	#10	6	3.2	9.5	58	3	●
	06032C12 32 UN	32	#8	#10	6	3.2	12.5	58	3	●
	06037C10 32 UN	32	-	#10	6	3.7	10.5	58	3	●
	06037C15 32 UN	32	-	#10	6	3.7	15.0	58	3	●
	06037C15 32 UN-L	32	-	#10	6	3.7	15.0	101	3	●
	06042C11 28 UN	28	-	#12	6	4.2	11.0	58	3	●
	0605C14 28 UN	28	-	1/4	6	5.0	14.5	58	3	●
	0605C19 28 UN	28	-	1/4	6	5.0	19.0	58	3	●
	06035C10 24 UN	24	#10,#12	-	6	3.5	10.6	58	3	●
	06035C15 24 UN	24	#10,#12	-	6	3.5	15.5	58	3	●
	08066C17 24 UN	24	-	5/16	8	6.6	17.0	64	3	●
	08066C24 24 UN	24	-	5/16	8	6.6	24.0	64	3	●

Cutting Condition C74

▸ NOF: Number of flutes

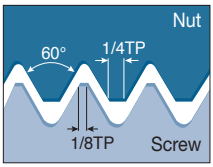
●: Standard items

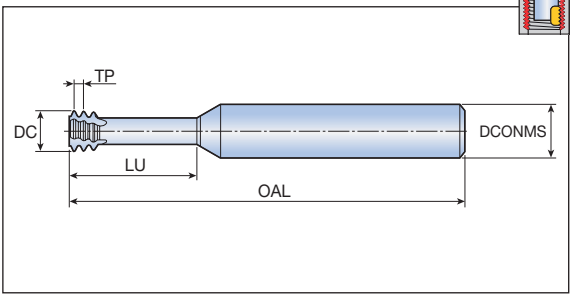
ADVANCE CUTTING TaeguTec

MTECS-UN

TS-THREAD

Solid carbide threading end mills with short cutting flutes for low cutting loads





Designation	TPI	UNC	UNF	Dimension (mm)				NOF	Grade
				DCONMS	DC	LU	OAL		TT9030
MTECS 06047C14 20 UN	20	1/4	-	6	4.75	14.0	58	3	●
06047C19 20 UN	20	1/4	-	6	4.75	19.0	58	3	●
06047C19 20 UN-L	20	1/4	-	6	4.75	19.0	100	3	●
0808C25 20 UN	20	-	7/16	8	8.0	25.0	64	3	●
0808C34 20 UN	20	-	7/16	8	8.0	34.6	64	3	●
0606C17 18 UN	18	5/16	-	6	6.0	17.0	58	3	●
0606C23 18 UN	18	5/16	-	6	6.0	23.0	58	3	●
1212D35 18 UN	18	-	5/8	12	12.0	35.0	84	4	●
08067C22 16 UN	16	3/8	-	8	6.7	22.0	64	3	●
08067C30 16 UN	16	3/8	-	8	6.7	30.2	64	3	●
08077C25 14 UN	14	7/16	-	8	7.7	25.0	64	3	●
08077C35 14 UN	14	7/16	-	8	7.7	35.2	64	3	●
10092C27 13 UN	13	1/2	-	10	9.2	27.5	73	3	●
12114C34 11 UN	11	5/8	-	12	11.4	34.5	84	3	●
12114C50 11 UN	11	5/8	-	12	11.4	50.0	101	3	●
16144D41 10 UN	10	3/4	-	16	14.4	41.5	105	4	●

Cutting Condition C74

▸ NOF: Number of flutes

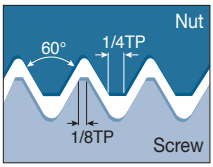
●: Standard items

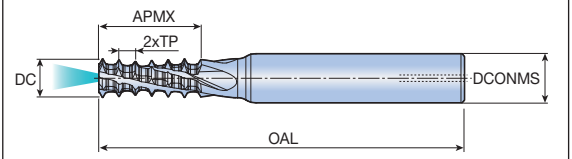
TaeguTec

MTECK-UN

TS-THREAD

Double lead solid carbide threading end mills for low cutting loads





• Lead: 2 x pitch

	Designation	TPI	UNC	UNF	Dimension (mm)				NOF	Grade
					DCONMS	DC	APMX	OAL		TT9030
MTECK	**0250C34 32 UN**	32	#8	-	6.35	3.1	9.1	63.5	3	●
	0250D50 28 UN	28	-	1/4	6.35	5.0	13.1	63.5	4	●
	06035C10 24 UN	24	#10	-	6	3.5	11.0	58	3	●
	0250C50 20 UN	20	1/4	-	6.35	4.7	13.3	63.5	3	●
	0250D67 18 UN	18	5/16	-	6.35	6.1	17.6	63.5	4	●
	08061D17 18 UN	18	5/16	-	8	6.1	17.6	64	4	●
	08061D22 18 UN	18	5/16	-	8	6.1	23.2	76	4	●
	12011E29 18 UN	18	-	9/16	12	11.0	30.4	84	5	●
	08074D19 16 UN	16	3/8	-	8	7.4	19.8	64	4	●
	1298D25 13 UN	13	1/2	-	12	9.8	26.3	84	4	●

Cutting Condition C72

▸ NOF: Number of flutes

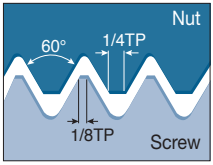
●: Standard items

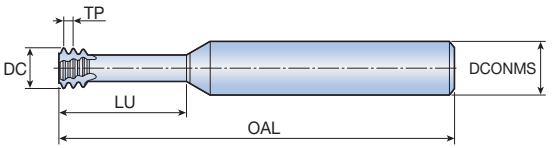
ADVANCE CUTTING TaeguTec

MTECSH-UN

TS-THREAD

Left-handed solid carbide threading end mills with short cutting flutes for hardened steel





• Left-hand tools (CNC code M04)

Designation	TPI	UNC	UNF	Dimension (mm)				NOF	Grade
				DCONMS	DC	LU	OAL		TT1040
MTECSH 06012C4 80 UN	80	-	#0	6	1.15	4.0	58	3	●
03015C6 72 UN	72	-	#1	3	1.45	6.0	39	3	●
06016C6 56 UN	56	#2	#3	6	1.65	6.6	58	3	●
06019C5 48 UN	48	#3	#4	6	1.9	5.2	58	3	●
06021C6 40 UN	40	#4	-	6	2.1	6.3	58	3	●
06021C8 40 UN	40	#4	-	6	2.1	8.0	58	3	●
06024C7 40 UN	40	#5	#6	6	2.45	7.0	58	3	●
06024C9 40 UN	40	#5	#6	6	2.45	9.6	58	3	●
06025C7 32 UN	32	#6	-	6	2.55	7.1	58	3	●
06025C10 32 UN	32	#6	-	6	2.55	10.5	58	3	●
06032C9 32 UN	32	#8	-	6	3.2	9.5	58	3	●
06032C12 32 UN	32	#8	-	6	3.2	12.5	58	3	●
06037C10 32 UN	32	-	#10	6	3.7	10.5	58	3	●
06037C15 32 UN	32	-	#10	6	3.7	15.0	58	3	●
06042C11 28 UN	28	-	#12	6	4.2	11.0	58	3	●
0605C14 28 UN	28	-	1/4	6	5.0	14.5	58	3	●
0605C19 28 UN	28	-	1/4	6	5.0	19.0	58	3	●
06035C10 24 UN	24	#10,#12	-	6	3.5	10.6	58	3	●
08066C17 24 UN	24	-	5/16	8	6.6	17.0	64	3	●
08066C24 24 UN	24	-	5/16	8	6.6	24.0	64	3	●
06047C14 20 UN	20	1/4	-	6	4.75	14.0	58	3	●
06047C19 20 UN	20	1/4	-	6	4.75	19.0	58	3	●
0808C25 20 UN	20	-	7/16	8	8.0	25.0	64	3	●
0606C17 18 UN	18	5/16	-	6	6.0	17.0	58	3	●
0606C23 18 UN	18	5/16	-	6	6.0	23.0	58	3	●
08067C22 16 UN	16	3/8	-	8	6.7	22.0	64	3	●
08077C25 14 UN	14	7/16	-	8	7.7	25.0	64	3	●
10092C27 13 UN	13	1/2	-	10	9.2	27.5	73	3	●
12114C34 11 UN	11	5/8	-	12	11.4	34.5	84	3	●

Cutting Condition C74

▸ NOF: Number of flutes

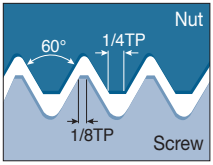
●: Standard items

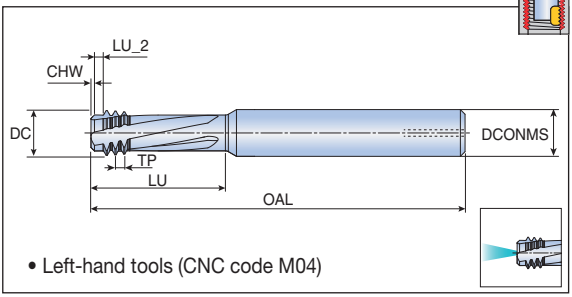
TaeguTec

MTECD-UN

TS-THREAD

Left-handed solid carbide threading end mills for hole-making, threading and chamfering





• Left-hand tools (CNC code M04)

	Designation	TPI	CNT	Dimension (mm)						NOF	Coolant hole	Grade
				DCONMS	DC	LU	OAL	CHW	LU_2			TT9030
MTECD	**06033C12 36 UN**	36	#8	6	3.3	12.0	58	0.2	0.7	3	x	●
	06032C12 32 UN	32	#8	6	3.2	12.3	58	0.3	0.8	3	x	●
	06038C14 32 UN	32	#10	6	3.8	14.0	58	0.3	0.8	3	x	●
	0805C14 28 UN	28	1/4-3/8	8	5.0	14.5	64	0.4	0.9	3	●	●
	08065D17 24 UN	24	5/16-1/2	8	6.5	17.0	64	0.5	1.1	4	●	●
	08048C14 20 UN	20	1/4-3/8	8	4.8	14.0	64	0.4	1.3	3	●	●
	0806D17 18 UN	18	5/16-7/16	8	6.0	17.0	64	0.5	1.4	4	●	●
	08067C22 16 UN	16	3/8-1/2	8	6.7	22.0	64	0.5	1.6	3	●	●

Cutting Condition C74

- Thread hole, thread and chamfer by circular interpolation
- NOF: Number of flutes

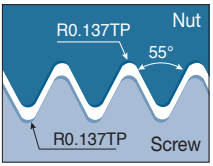
●: Standard items

ADVANCE CUTTING TaeguTec

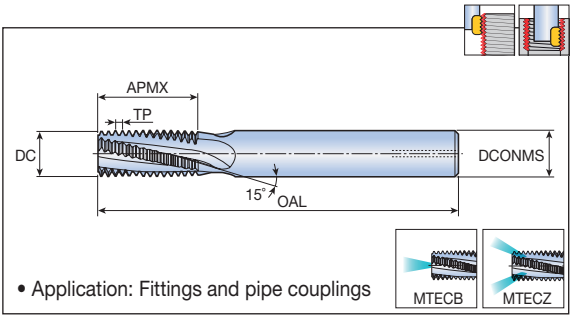
MTEC-W / MTECB-W / MTECZ-W

TS-THREAD

Solid carbide threading end mills



BSF
BSP
BSW



• Application: Fittings and pipe couplings

	Designation			TPI	TDZ	Designation				NOF	Grade
						DCONMS	DC	APMX	OAL		TT9030
MTEC	**0606C9**	**28**	**W**	28	G1/8	6	6.0	9.5	58	3	●
	0808C14	**19**	**W**	19	G1/4-3/8	8	8.0	14.0	64	3	●
	1212D19	**14**	**W**	14	G1/2-7/8	12	12.0	19.3	84	4	●
	1212D26	**14**	**W**	14	G1/2-7/8	12	12.0	26.3	84	4	●
	1212C24	**11**	**W**	11	G1-1 1/2	12	12.0	24.2	84	3	●
	1616D38	**11**	**W**	11	G1-3	16	16.0	38.1	101	4	●
MTECB	**08078C14**	**28**	**W**	28	G1/8	8	7.8	14.1	64	3	●
	1010D16	**19**	**W**	19	G1/4-3/8	10	10.0	16.7	73	4	●
	1616E26	**14**	**W**	14	G1/2-7/8	16	16.0	26.3	105	5	●
	1616D38	**11**	**W**	11	G ≥ 1	16	16.0	38.1	105	4	●
	2020E47	**11**	**W**	11	G ≥ 1	20	20.0	47.3	105	5	●
MTECZ	**08078C14**	**28**	**W**	28	G1/8	8	7.8	14.1	64	3	●
	1010D16	**19**	**W**	19	G1/4-3/8	10	10.0	16.7	73	4	●
	10092D24	**16**	**W**	16	G1/2	10	9.2	24.6	73	4	●
	1616E26	**14**	**W**	14	G1/2-7/8	16	16.0	26.3	101	5	●
	10086D24	**12**	**W**	12	G1/2	10	8.6	24.4	73	4	●
	12109D28	**11**	**W**	11	G5/8	12	10.9	28.9	84	4	●
	1616D38	**11**	**W**	11	G ≥ 1	16	16.0	38.1	101	4	●

Cutting Condition C70

- TDZ: Thread diameter size
- NOF: Number of flutes

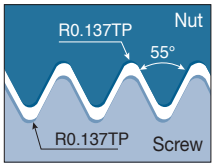
●: Standard items

TaeguTec

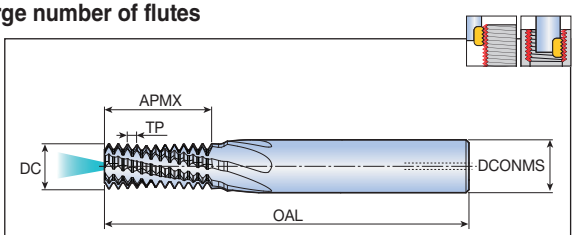
MTECBF-W

TS-THREAD

Solid carbide threading end mills with large number of flutes



BSF
BSP
BSW



• Application: Fitting and pipe couplings

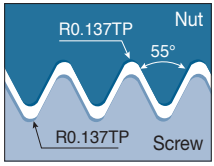
Designation		TPI	TDZ	Dimension (mm)				NOF	Grade
				DCONMS	DC	LU	OAL		TT9030
MTECBF	**08078H14 28 W**	28	G1/8	8	7.8	14.0	64	8	●
	1010G16 19 W	19	G1/4-3/8	10	10.0	16.0	73	7	●
	1614H26 14 W	14	G1/2-7/8	16	14.0	26.2	105	8	●
	1616H38 11 W	11	G7/18	16	16.0	37.9	105	8	●

Cutting Condition C72

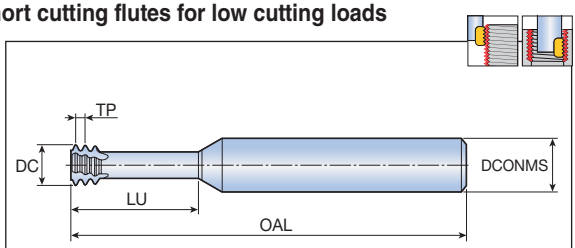
●: Standard items

MTECS-W

Solid carbide threading end mills with short cutting flutes for low cutting loads



BSF
BSP
BSW



• Application: Fittings and pipe couplings

Designation		TPI	TDZ	Dimension (mm)				NOF	Grade
				DCONMS	DC	LU	OAL		TT9030
MTECS	**08078C19 28 W**	28	G1/8	8	7.8	19.5	64	3	●
	1010D30 19 W	19	G1/4-3/8	10	10.0	30.0	73	4	●
	1212D37 14 W	14	G1/2-7/8	12	12.0	37.0	84	4	●
	1616D44 11 W	11	G ≥ 1	16	16.0	44.0	105	4	●

Cutting Condition C74

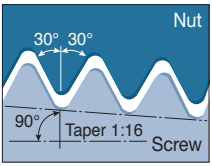
- TDZ: Thread diameter size
- NOF: Number of flutes

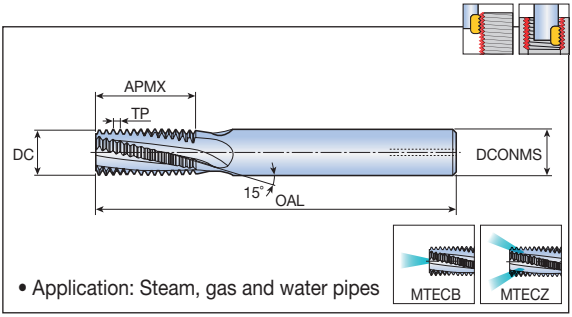
●: Standard items

MTEC-NPT / MTECB-NPT / MTECZ-NPT

TS-THREAD

Solid carbide threading end mills





• Application: Steam, gas and water pipes

Designation				TPI	TDZ	Dimension (mm)				NOF	Grade
						DCONMS	DC	APMX	OAL		TT9030
MTEC	**0606C9**	**27**	**NPT**	27	1/16-1/8	6	5.36	9.9	58	3	●
	0808C14	**18**	**NPT**	18	1/4-3/8	8	7.12	14.8	64	3	●
	1212D20	**14**	**NPT**	14	1/2-3/4	12	10.77	20.9	84	4	●
	1616D27	**11.5**	**NPT**	11.5	1-2	16	14.24	27.6	101	4	●
	2020D39	**8**	**NPT**	8	2 1/2	20	20.0	39.7	105	4	●
MTECB	**08076C10**	**27**	**NPT**	27	1/8	8	7.6	10.8	64	3	●
	1010D16	**18**	**NPT**	18	1/4-3/8	10	10.0	16.2	73	4	●
	16155D22	**14**	**NPT**	14	1/2-3/4	16	15.5	22.7	105	4	●
MTECZ	**08076C10**	**27**	**NPT**	27	1/8	8	7.6	10.8	64	3	●
	1010D16	**18**	**NPT**	18	1/4-3/8	10	10.0	16.2	73	4	●
	16155D22	**14**	**NPT**	14	1/2-3/4	16	15.5	22.7	101	4	●

Cutting Condition C70

▸ TDZ: Thread diameter size
▸ NOF: Number of flutes

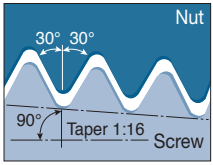
●: Standard items

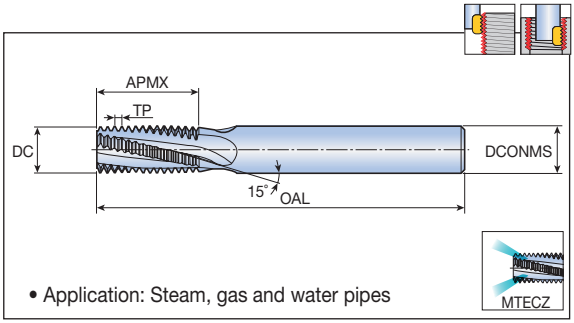
TaeguTec

MTEC-NPTF / MTECZ-NPTF

TS-THREAD

Solid carbide threading end mills





• Application: Steam, gas and water pipes

Designation				TPI	TDZ	Dimension (mm)				NOF	Grade
						DCONMS	DC	APMX	OAL		TT9030
MTEC	**0606C9**	**27**	**NPTF**	27	1/16-1/8	6	6.0	9.9	58	3	●
	0808C14	**18**	**NPTF**	18	1/4-3/8	8	8.0	14.8	64	3	●
	1212D20	**14**	**NPTF**	14	1/2-3/4	12	12.0	20.9	84	4	●
MTECZ	**08076C10**	**27**	**NPTF**	27	1/8	8	7.6	10.8	64	3	●
	1010D16	**18**	**NPTF**	18	1/4-3/8	10	10.0	16.2	73	4	●

Cutting Condition C70

- TDZ: Thread diameter size
- NOF: Number of flutes

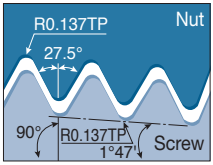
●: Standard items

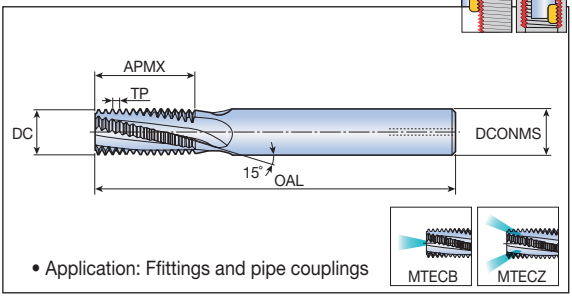
ADVANCE CUTTING TaeguTec

MTEC-BSPT / MTECB-BSPT / MTECZ-BSPT

TS-THREAD

Solid carbide threading end mills





• Application: Ffittings and pipe couplings

Designation			TPI	TDZ	Dimension (mm)				NOF	Grade
					DCONMS	DC	APMX	OAL		TT9030
MTEC	**0606C9**	**28 BSPT**	28	RC1/8	6	5.4	8.1	58	3	●
	0808C14	**19 BSPT**	19	RC1/4-3/8	8	7.16	12.0	64	3	●
	1212D19	**14 BSPT**	14	RC1/2-7/8	12	10.88	16.3	84	4	●
	1616D28	**11 BSPT**	11	RC1-2	16	14.17	25.4	101	4	●
MTECB	**08078C14**	**28 BSPT**	28	RC1/8	8	7.8	14.1	64	3	●
	1010D16	**19 BSPT**	19	RC1/4-3/8	10	10.0	16.7	73	4	●
	1616E26	**14 BSPT**	14	RC1/2-7/8	16	16.0	26.3	105	5	●
MTECZ	**08078C14**	**28 BSPT**	28	RC1/8	8	7.8	14.1	64	3	●
	1010D16	**19 BSPT**	19	RC1/4-3/8	10	10.0	16.7	73	4	●

Cutting Condition C70

- TDZ: Thread diameter size
- NOF: Number of flutes

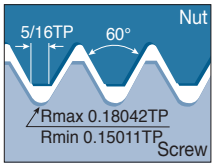
●: Standard items

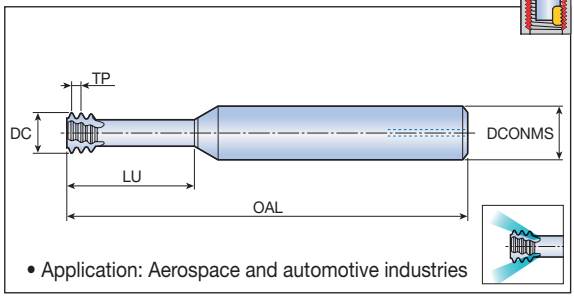
TaeguTec

MTECS-MJ/UNJ

TS-THREAD

Solid carbide threading end mills with short cutting flutes for low cutting loads





• Application: Aerospace and automotive industries

Designation	TP (mm)	TPI	MJ size	UNJC	UNJF	Dimension (mm)				NOF	Coolant hole	Grade
						DCONMS	DC	LU	OAL			TT9030
MTECS 06032C10 0.7 MJ	0.7	-	MJ4	-	-	6	3.2	10.0	58	3	x	●
06039C12 0.8 MJ	0.8	-	MJ5	-	-	6	3.9	12.5	58	3	x	●
06048C15 1.0 MJ	1.0	-	MJ6	-	-	6	4.8	15.0	58	3	x	●
08061C20 1.25 MJ	1.25	-	MJ8	-	-	8	6.1	20.0	64	3	●	●
0808C25 1.5 MJ	1.5	-	MJ10	-	-	8	8.0	25.0	64	3	●	●
10092C30 1.75 MJ	1.75	-	MJ12	-	-	10	9.2	30.0	73	3	●	●
1010C35 2.0 MJ	2.0	-	MJ16	-	-	10	10.0	35.0	73	3	●	●
MTECS 06033C10 32 UNJ	-	32	-	#8	#10	6	3.3	10.5	58	3	x	●
08051C16 28 UNJ	-	28	-	-	1/4	8	5.1	16.0	64	3	●	●
08067C20 24 UNJ	-	24	-	-	5/16	8	6.7	20.0	64	3	●	●
06049C16 20 UNJ	-	20	-	1/4	-	6	4.9	16.0	58	3	x	●
0808C28 20 UNJ	-	20	-	-	7/16	8	8.0	28.0	64	3	●	●
08061C20 18 UNJ	-	18	-	5/16	9/16	8	6.15	20.0	64	3	●	●
08069C24 16 UNJ	-	16	-	3/8	-	8	6.9	24.0	64	3	●	●
10094C27 13 UNJ	-	13	-	1/2	-	10	9.4	27.5	73	3	●	●

Cutting Condition C74

▸ NOF: Number of flutes

●: Standard items

ADVANCE CUTTING TaeguTec

Tool Designation System

T-THREAD

End mills

MT	E	D25	-	1	-	W	20	(C)	-	21
1	2	3		4		5	6	7		8

1 Mill thread

M - Mill
T - Thread

2 Tool type

E - End mills type

3 Cutting diameter

D25 - 25.0mm

4 Number of insert

1 1 insert
2 2 inserts

5 Shank type

W - Weldon shank
C - Cylindrical type

6 Shank diameter

20 - 20.0mm

7 Shank material

C Carbide shank

8 Insert size (APMX)

12 12.0 mm
14 14.0 mm
21 21.0 mm
30 30.0 mm
40 40.0 mm

Cutters

MT	F	D063	-	5	-	22	-	21
1	2	3		4		5		6

1 Mill thread

M - Mill
T - Thread

2 Tool type

F - Facemill type

3 Cutting diameter

D063 - 63.0mm

4 Number of insert

4 4 inserts
5 5 inserts

5 Bore diameter

22 22.0 mm
27 27.0 mm
32 32.0 mm

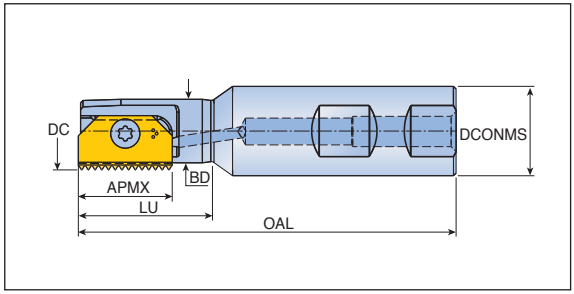
6 Insert size (APMX)

21 21.0 mm
30 30.0 mm
40 40.0 mm

MTE D-1

TS-THREAD

Indexable threading end mills - Weldon shank



Designation			Dimension (mm)						Shank	Coolant hole	Kg	Insert
			APMX	DC	DCONMS	BD	LU	OAL				
MTE	D09.5-1-W20-12 (1)	1	12	9.5	20	7.5	15.5	85	W	●	0.16	TTMT12
	D09.9-1-W20-12	1	12	9.9	20	7.5	16.0	85	W	●	0.16	TTMT12
	D12.2-1-W20-14	1	14	12.2	20	8.8	20.0	75	W	●	0.15	TTMT14
	D14.5-1-W20-14	1	14	14.5	20	10.8	27.1	85	W	●	0.16	TTMT14
	D17.0-1-W20-14	1	14	17.0	20	12.8	30.0	85	W	●	0.23	TTMT14
	D18-1-W20-21 (2)	1	21	18.5	20	14.2	30.0	85	W	●	0.20	TTMT21
	D21-1-W20-21	1	21	21.0	20	15.9	40.0	94	W	●	0.23	TTMT21
	D25-1-W20-21	1	21	25.0	20	20.0	61.0	115	W	●	0.24	TTMT21
	D29-1-W25-30	1	30	29.0	25	22.2	50.0	110	W	●	0.32	TTMT30
	D31-1-W25-30	1	30	31.0	25	25.0	90.0	150	W	●	0.60	TTMT30
	D38-1-W32-30	1	30	38.0	32	32.0	86.0	150	W	●	0.90	TTMT30
	D48-1-W40-40	1	40	48.0	40	35.0	78.0	153	W	●	1.30	TTMT40
	D48-1-W40-40-B	1	40	48.0	40	36.5	138.0	210	W	●	1.50	TTMT40

- Minimum bore should be one-third larger than DC (diameter)
- All end mills are equipped with a bore for internal coolant
- (1) Not suitable for inserts: TTMT12 18 NPT, TTMT12 18 NPTF, TTMT12 19 BSPT
- (2) Not suitable for inserts: TTMT21 I 3.50 ISO, TTMT21 I 7 UN, TTMT21 11.5 NPT, TTMT21 11.5 NPTF

Spare parts

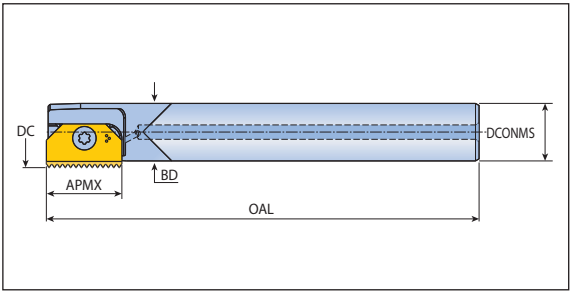
Designation	Screw	Wrench	Wrench handle	
MTE D...12	SR M2.5-T8-MT	BLD T08/M7	SW4-SD	-
MTE D...14	S11	BLD T08/M7	SW4-SD	-
MTE D...21	SR M4-IP15-MT	BLD IP15/S7	SW6-SD	-
MTE D...30/40(-B)	SR M5-IP25-MT	BLD IP25/S7	-	SW6-T

ADVANCE CUTTING TaeguTec

MTE D-1-C

TS-THREAD

Indexable threading end mills - Cylindrical carbide shank



Designation			Dimension (mm)					Shank	Coolant hole	Kg	Insert
			APMX	DC	DCONMS	BD	OAL				
MTE	**D09.9-1-C08C-12**	1	12	9.9	8	8	127.0	C	●	0.10	TTMT12
	D13.7-1-C10C-14	1	14	13.7	10	10	110.0	C	●	0.12	TTMT14
	D13.7-1-C10C-14-B	1	14	13.7	10	10	153.5	C	●	0.17	TTMT14
	D15.2-1-C12C-14	1	14	15.2	12	12	182.3	C	●	0.30	TTMT14
	D21-1-C16C-21	1	21	21.0	16	16	130.0	C	●	0.35	TTMT21
	D21-1-C16C-21-B	1	21	21.0	16	16	206.3	C	●	0.50	TTMT21
	D27-1-C20C-30	1	30	27.0	20	20	263.0	C	●	1.20	TTMT30

- For holders with long overhang, reduce the cutting speed and feed rate, between 20 to 40% (depending on workpiece, material, pitch and overhang)
- All end mills are equipped with a bore for internal coolant

Spare parts

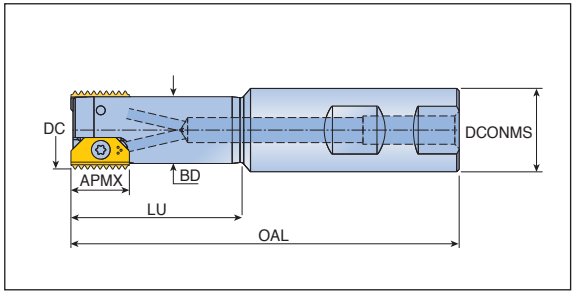
Designation	Screw	Wrench	Wrench handle	
MTE D...C...12	SR M2.5-T8-MT	BLD T08/M7	SW4-SD	-
MTE D...C...14(-B)	S11	BLD T08/M7	SW4-SD	-
MTE D...C...21(-B)	SR M4-IP15-MT	BLD IP15/S7	SW6-SD	-
MTE D...C...30	SR M5-IP25-MT-S	BLD IP25/S7	-	SW6-T

C56-C63 | Cutting Condition C69

MTE D-2

TS-THREAD

Double insert thread milling end mills - Weldon shank



Designation			Dimension (mm)						Shank	Coolant hole	Kg	Insert
			APMX	DC	DCONMS	BD	LU	OAL				
MTE	**D20.0-2-W20-14**	2	14	20	20	16	41	93	W	●	0.20	TTMT14
	D30-2-W25-21	2	21	30	25	24	52	108	W	●	0.40	TTMT21
	D40-2-W32-30	2	30	40	32	30	70	130	W	●	0.70	TTMT30
	D50-2-W40-40	2	40	50	40	38	78	153	W	●	0.80	TTMT40

- Minimum bore should be one-third larger than DC (diameter)
- All end mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Wrench	Wrench handle	
MTE D...W...14	S11	BLD T08/M7	SW4-SD	-
MTE D...W...21	SR M4-IP15-MT	BLD IP15/S7	SW6-SD	-
MTE D...W...30/40	SR M5-IP25-MT	BLD IP25/S7	-	SW6-T

Cutting Condition

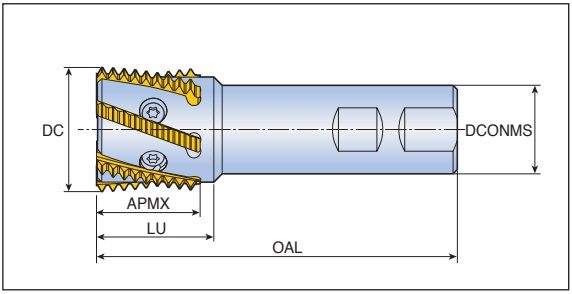
C56-C63 | C69

ADVANCE CUTTING TaeguTec

TMTSRH

TS-THREAD

End mills with coolant holes for helical threading inserts - Weldon shank



Designation			Dimension (mm)					Shank	Coolant hole	Kg	Insert
			APMX	DC	DCONMS	LU	OAL				
TMTSRH	**23-2-N**	2	27	23	25	50	110	W	●	0.26	TMTH 23
	32-5-N	5	32	32	32	60	130	W	●	0.60	TMTH 32
	45-6-N	6	37	45	32	-	130	W	●	0.70	TMTH 45

▸ All end mills are equipped with a bore for internal coolant

Spare parts

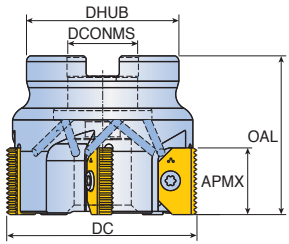
Designation	Screw	Wrench		
TMTSRH 23	TS23	TK21		
TMTSRH 32	TS32	TK22		
TMTSRH 45	TS45	TK40		

C64-C67 Cutting Condition C69

MTF D

TS-THREAD

Multi-insert shell mills for large diameter threading



Designation			Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
			APMX	DC	DHUB	DCONMS	OAL					
MTF	**D063-5-22-21**	5	21	63	40	22	50	●	A	0.70	SR M10X25 DIN912	TTMT21
	D063-4-22-30	4	30	63	48	22	50	●	A	0.56	SR M10X25 DIN912	TTMT30
	D080-4-27-30	4	30	80	60	27	50	●	A	1.18	SR M12X25	TTMT30
	D080-4-27-40	4	40	80	60	27	65	●	A	1.04	SR M12X25	TTMT30
	D100-4-32-30	4	30	100	78	32	50	●	A	1.89	SR M16X30 DIN912	TTMT40
	D100-4-32-40	4	40	100	78	32	65	●	A	0.20	SR M16X30 DIN912	TTMT40

▸ All shell mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Wrench	Wrench handle		
MTF D063...21	SR M4-IP15-MT	BLD IP15/S7	SW6-SD	-	
MTF D063...30	SR M5-IP25-MT	BLD IP25/S7	-	SW6-T	
MTF D080...30/40	SR M5-IP25-MT	BLD IP25/S7	-	SW6-T	
MTF D100...30/40	SR M5-IP25-MT	BLD IP25/S7	-	SW6-T	

Cutting Condition

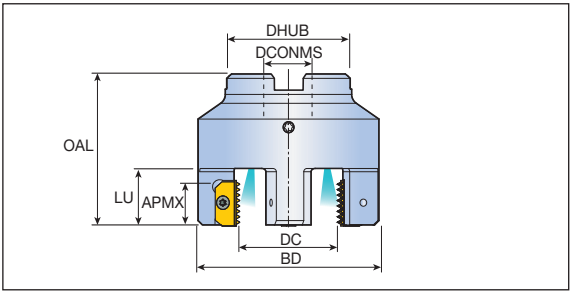
C56-C63 C69

ADVANCE CUTTING TaeguTec

MTFLE D

TS-THREAD

External multi-tooth threading shell mills



Designation		Dimension (mm)							Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		APMX	DC	BD	DHUB	DCONMS	LU	OAL					
MTFLE D20-3-22-21	3	21	20	58.2	48	22	27	63	●	A	0.70	SR M10X25 DIN912	TTMT21 E
D30-3-22-21	3	21	30	68.2	48	22	27	63	●	A	0.90	SR M10X25 DIN912	TTMT21 E
D45-4-27-21	4	21	45	83.2	60	27	27	67	●	A	1.40	SR M12X25 DIN 912	TTMT21 E

▸ All shell mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Wrench	Wrench handle	
MTFLE D...21	SR M4-IP15-MT	BLD IP15/S7	SW6-SD	

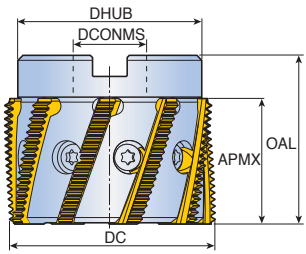
Cutting Condition C69

TaeguTec

TMTSRH

TS-THREAD

Helical shell mill for large thread diameters



Designation			Dimension (mm)					Coolant hole	Arbor style	Kg	Insert
			APMX	DC	DHUB	DCONMS	OAL				
TMTSRH	**32-5M-N**	5	32	32	26.0	16	52	●	A	0.12	TMTH 32
	45-6M-N	6	37	45	38.0	22	60	●	A	0.43	TMTH 45
	63-9-N	9	38	63	51.7	22	50	●	A	0.71	TMTH 63

▸ All shell mills are equipped with a bore for internal coolant

Spare parts

Designation	Screw	Wrench		
TMTSRH 32	TS32S	TK22		
TMTSRH 45	SR M5X0.8-MTH45	TK40		
TMTSRH 63	SR M5X0.8-MTH63	TK40		

Cutting Condition
C64-C67 C69

ADVANCE CUTTING TaeguTec

Insert Designation System

T-THREAD

Thread milling inserts

TTMT(H)	30	E	1.5	ISO	TT9030
1	2	3	4	5	6

1 TaeguTec mill thread

TT - TaeguTec
M - Mill
T - Thread
H - Helical insert

2 Insert size (INSL)

12 12.0 mm
14 14.0 mm
21 21.0 mm
30 30.0 mm
40 40.0 mm

3 Application

E - External
I - Internal
☐ - External + internal

4 Thread pitch

0.5 - 6.0 **mm** (Thread pitch)
32 - 4 **TPI** (Threads per inch)

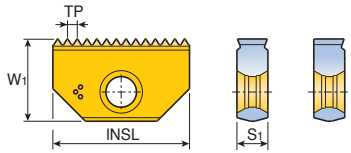
5 Thread standard

ISO
UN
WHIT
NPT
NPTF
BSPT

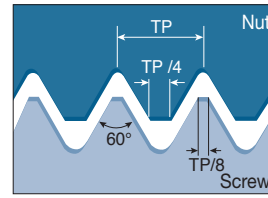
6 Grades

Coated
TT9030

ISO Metric



TTMT12 I [1]



Insert	Designation	TP (mm)	Dimension (mm)			Grade
			INSL	W1	S1	TT9030
	TTMT12 I 0.5 ISO[1]	0.50	12	6.5	2.9	●
	TTMT12 I 0.75 ISO[1]	0.75	12	6.5	2.9	●
	TTMT12 I 1.0 ISO[1]	1.00	12	6.5	2.9	●
	TTMT12 I 1.25 ISO[1]	1.25	12	6.5	2.9	●
	TTMT12 I 1.5 ISO[1]	1.50	12	6.5	2.9	●
	TTMT14 I 0.5 ISO	0.50	14	7.9	3.2	●
	TTMT14 E/I 0.75 ISO	0.75	14	7.9	3.2	●
	TTMT14 E/I 1.0 ISO	1.00	14	7.9	3.2	●
	TTMT14 E/I 1.25 ISO	1.25	14	7.9	3.2	●
	TTMT14 E/I 1.5 ISO	1.50	14	7.9	3.2	●
	TTMT14 E/I 1.75 ISO	1.75	14	7.9	3.2	●
	TTMT14 E/I 2.0 ISO	2.00	14	7.9	3.2	●
	TTMT14 E/I 2.5 ISO	2.50	14	7.9	3.2	●
	TTMT21 E/I 1.0 ISO	1.00	21	12.6	4.8	●
	TTMT21 E/I 1.5 ISO	1.50	21	12.6	4.8	●
	TTMT21 I 1.75 ISO	1.75	21	12.6	4.8	●
	TTMT21 E/I 2.0 ISO	2.00	21	12.6	4.8	●
	TTMT21 E/I 2.5 ISO	2.50	21	12.6	4.8	●
	TTMT21 E/I 3.0 ISO	3.00	21	12.6	4.8	●
	TTMT21 I 3.5 ISO	3.50	21	12.6	4.8	●
	TTMT30 E/I 1.5 ISO	1.50	30	16.7	5.6	●
	TTMT30 E/I 2.0 ISO	2.00	30	16.7	5.6	●
	TTMT30 E/I 3.0 ISO	3.00	30	16.7	5.6	●
	TTMT30 E/I 3.5 ISO	3.50	30	16.7	5.6	●
	TTMT30 E/I 4.0 ISO	4.00	30	16.7	5.6	●
	TTMT30 I 4.5 ISO	4.50	30	16.7	5.6	●
	TTMT30 I 5.0 ISO	5.00	30	16.7	5.6	●
	TTMT40 E/I 1.5 ISO	1.50	40	20.8	6.4	●
	TTMT40 E/I 2.0 ISO	2.00	40	20.8	6.4	●
	TTMT40 E/I 3.0 ISO	3.00	40	20.8	6.4	●
	TTMT40 I 3.5 ISO	3.50	40	20.8	6.4	●
	TTMT40 E/I 4.0 ISO	4.00	40	20.8	6.4	●
	TTMT40 I 4.5 ISO	4.50	40	20.8	6.4	●
	TTMT40 E/I 5.0 ISO	5.00	40	20.8	6.4	●
	TTMT40 I 5.5 ISO	5.50	40	20.8	6.4	●
	TTMT40 E/I 6.0 ISO	6.00	40	20.8	6.4	●

MTE/F
C48-C53

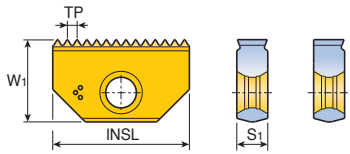
▸ [1] TTMT12 insert is only available with a single cutting edge

●: Standard items

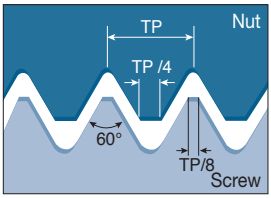
TTMT-UN

TS-THREAD

UN, UNC, UNF, UNEF, UNS



TTMT12 I [1]



Insert	Designation	TPI	Dimension (mm)			Grade
			INSL	W1	S1	TT9030
	TTMT12 I 32 UN [1]	32	12	6.5	2.9	●
	TTMT12 I 28 UN [1]	28	12	6.5	2.9	●
	TTMT12 I 24 UN [1]	24	12	6.5	2.9	●
	TTMT12 I 20 UN [1]	20	12	6.5	2.9	●
	TTMT12 I 18 UN [1]	18	12	6.5	2.9	●
	TTMT12 I 16 UN [1]	16	12	6.5	2.9	●
	TTMT14 E/I 32 UN	32	14	7.9	3.2	●
	TTMT14 E/I 28 UN	28	14	7.9	3.2	●
	TTMT14 I 27 UN	27	14	7.9	3.2	●
	TTMT14 E/I 24 UN	24	14	7.9	3.2	●
	TTMT14 E/I 20 UN	20	14	7.9	3.2	●
	TTMT14 E/I 18 UN	18	14	7.9	3.2	●
	TTMT14 E/I 16 UN	16	14	7.9	3.2	●
	TTMT14 E/I 14 UN	14	14	7.9	3.2	●
	TTMT14 E/I 12 UN	12	14	7.9	3.2	●
	TTMT14 I 11 UN	11	14	7.9	3.2	●
	TTMT14 I 10 UN	10	14	7.9	3.2	●
	TTMT21 E/I 24 UN	24	21	12.6	4.8	●
	TTMT21 E/I 20 UN	20	21	12.6	4.8	●
	TTMT21 E/I 18 UN	18	21	12.6	4.8	●
	TTMT21 E/I 16 UN	16	21	12.6	4.8	●
	TTMT21 E/I 14 UN	14	21	12.6	4.8	●
	TTMT21 E/I 12 UN	12	21	12.6	4.8	●
	TTMT21 E/I 10 UN	10	21	12.6	4.8	●
	TTMT21 I 8 UN	8	21	12.6	4.8	●
	TTMT21 I 7 UN	7	21	12.6	4.8	●
	TTMT30 E/I 20 UN	20	30	16.7	5.6	●
	TTMT30 E/I 18 UN	18	30	16.7	5.6	●
	TTMT30 E/I 16 UN	16	30	16.7	5.6	●
	TTMT30 E/I 14 UN	14	30	16.7	5.6	●
	TTMT30 E/I 12 UN	12	30	16.7	5.6	●
	TTMT30 E/I 10 UN	10	30	16.7	5.6	●
	TTMT30 E/I 8 UN	8	30	16.7	5.6	●
	TTMT30 E/I 6 UN	6	30	16.7	5.6	●
	TTMT30 I 5 UN	5	30	16.7	5.6	●

MTE/F

C48-C53

▸ [1] TTMT12 insert is only available with a single cutting edge

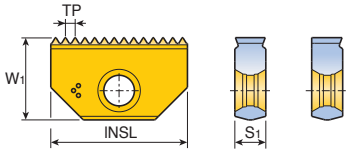
●: Standard items

TaeguTec

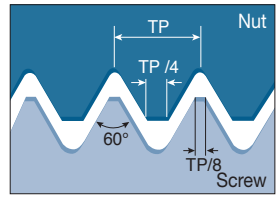
TTMT-UN

TS-THREAD

UN, UNC, UNF, UNEF, UNS



TTMT12 I [1]



Insert	Designation	TPI	Dimension (mm)			Grade
			INSL	W1	S1	TT9030
	TTMT40 E/I 16 UN	16	40	20.8	6.4	●
	TTMT40 E/I 14 UN	14	40	20.8	6.4	●
	TTMT40 E/I 12 UN	12	40	20.8	6.4	●
	TTMT40 E/I 10 UN	10	40	20.8	6.4	●
	TTMT40 E/I 8 UN	8	40	20.8	6.4	●
	TTMT40 E/I 6 UN	6	40	20.8	6.4	●
	TTMT40 I 4.5 UN	4.5	40	20.8	6.4	●
	TTMT40 I 4 UN	4	40	20.8	6.4	●

MTE/F

C48-C53

▸ [1] TTMT12 insert is only available with a single cutting edge

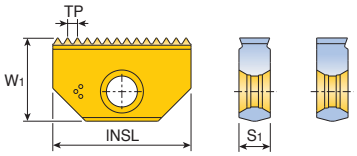
●: Standard items

ADVANCE CUTTING TaeguTec

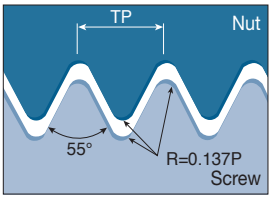
TTMT-W

TS-THREAD

Whitworth (BSW, BSF, BSP)



TTMT12 (1)



Insert	Designation	TPI	Dimension (mm)			Grade
			INSL	W1	S1	TT9030
	TTMT12 19 W(1)	19	12	6.5	2.9	●
	TTMT14 24 W	24	14	7.9	3.2	●
	TTMT14 20 W	20	14	7.9	3.2	●
	TTMT14 19 W	19	14	7.9	3.2	●
	TTMT14 16 W	16	14	7.9	3.2	●
	TTMT14 14 W	14	14	7.9	3.2	●
	TTMT21 20 W	20	21	12.6	4.8	●
	TTMT21 19 W	19	21	12.6	4.8	●
	TTMT21 16 W	16	21	12.6	4.8	●
	TTMT21 14 W	14	21	12.6	4.8	●
	TTMT21 11 W	11	21	12.6	4.8	●
	TTMT30 16 W	16	30	16.7	5.6	●
	TTMT30 14 W	14	30	16.7	5.6	●
	TTMT30 11 W	11	30	16.7	5.6	●
	TTMT40 11 W	11	40	20.8	6.4	●
	TTMT40 8 W	8	40	20.8	6.4	●

MTE/F

C48-C53

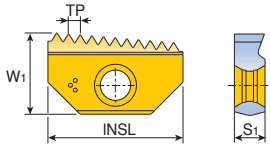
- The same insert for external and internal threading
- (1) TTMT12 insert is only available with a single cutting edge

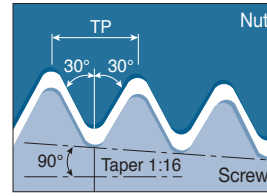
●: Standard items

TTMT-NPT

TS-THREAD

NPT - National pipe taper thread





Insert	Designation	TPI	Dimension (mm)			Grade
			INSL	W1	S1	TT9030
	TTMT12 18 NPT	18	12	6.5	2.9	●
	TTMT14 18 NPT	18	14	7.9	3.2	●
	TTMT14 14 NPT	14	14	7.9	3.2	●
	TTMT21 14 NPT	14	21	12.6	4.8	●
	TTMT21 11.5 NPT	11.5	21	12.6	4.8	●
	TTMT30 11.5 NPT	11.5	30	16.7	5.6	●
	TTMT30 8 NPT	8	30	16.7	5.6	●
	TTMT40 11.5 NPT	11.5	40	20.8	6.4	●
	TTMT40 8 NPT	8	40	20.8	6.4	●

MTE/F

C48-C53

- The same insert for external and internal threading
- Conical pipe thread inserts are single-sided

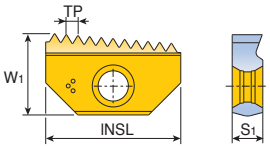
●: Standard items

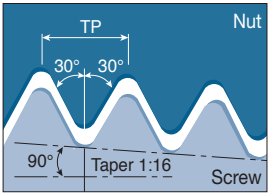
ADVANCE CUTTING TaeguTec

TTMT-NPTF

TS-THREAD

NPTF - National pipe thread tapered (Dryseal)





Insert	Designation	TPI	Dimension (mm)			Grade
			INSL	W1	S1	TT9030
	TTMT12 18 NPTF	18	12	6.5	2.9	●
	TTMT14 18 NPTF	18	14	7.9	3.2	●
	TTMT14 14 NPTF	14	14	7.9	3.2	●
	TTMT21 14 NPTF	14	21	12.6	4.8	●
	TTMT21 11.5 NPTF	11.5	21	12.6	4.8	●
	TTMT30 11.5 NPTF	11.5	30	16.7	5.6	●
	TTMT30 8 NPTF	8	30	16.7	5.6	●
	TTMT40 11.5 NPTF	11.5	40	20.8	6.4	●
	TTMT40 8 NPTF	8	40	20.8	6.4	●

MTE/F

C48-C53

- The same insert for external and internal threading
- Conical pipe thread Inserts are single-sided

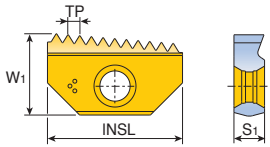
●: Standard items

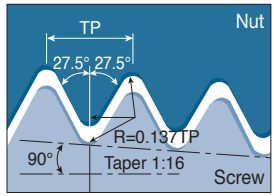
TaeguTec

TTMT-BSPT

TS-THREAD

BSPT - British standard pipe tapered





Insert	Designation	TPI	Dimension (mm)			Grade
			INSL	W1	S1	TT9030
	TTMT12 19 BSPT	19	12	6.5	2.9	●
	TTMT14 19 BSPT	19	14	7.9	3.2	●
	TTMT14 14 BSPT	14	14	7.9	3.2	●
	TTMT21 14 BSPT	14	21	12.6	4.8	●
	TTMT21 11 BSPT	11	21	12.6	4.8	●
	TTMT30 11 BSPT	11	30	16.7	5.6	●
	TTMT40 11 BSPT	11	40	20.8	6.4	●

MTE/F

C48-C53

- The same insert for external and internal threading
- Conical pipe thread inserts are single-sided

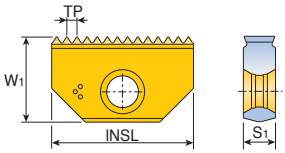
●: Standard items

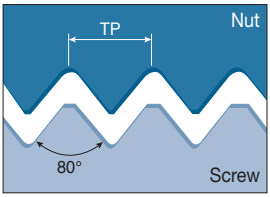
ADVANCE CUTTING TaeguTec

TTMT-PG

TS-THREAD

Electrical connectors (DIN 40430)





Insert	Designation	TPI	Thread size	Dimension (mm)			Grade
				INSL	W1	S1	TT9030
	TTMT14 18 PG	18	PG9, 11, 13.5, 16	14	7.9	3.2	●
	TTMT21 18 PG	18	PG16	21	12.6	4.8	●
	TTMT21 16 PG	16	PG21, 29, 36, 42, 48	21	12.6	4.8	●
	TTMT30 16 PG	16	PG36, 42, 48	30	16.7	5.6	●

MTE/F

C48-C53

▸ The same insert for external and internal threading

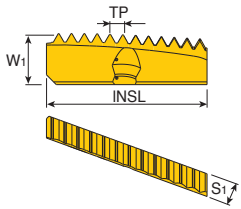
●: Standard items

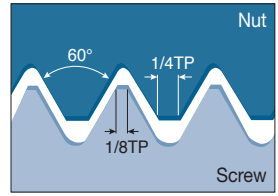
TaeguTec

TMTH-ISO

TS-THREAD

Helical inserts for ISO metric threads (Internal)





Insert	Designation	TP (mm)	THID	Dimension (mm)			Tool	Grade
				INSL	W1	S1		TT9030
	TMTH 23 I 1.0 ISO	1.0	≥M26	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 1.5 ISO	1.5	≥M27	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 2.0 ISO	2.0	≥M28	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 3.0 ISO	3.0	≥M30	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 I 1.0 ISO	1.0	≥M34	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 1.5 ISO	1.5	≥M35	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 2.0 ISO	2.0	≥M36	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 3.0 ISO	3.0	≥M38	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 4.0 ISO	4.0	≥M40	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 I 1.5 ISO	1.5	≥M50	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 2.0 ISO	2.0	≥M50	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 3.0 ISO	3.0	≥M56	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 4.0 ISO	4.0	≥M56	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 I 1.5 ISO	1.5	≥M70	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 2.0 ISO	2.0	≥M70	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 3.0 ISO	3.0	≥M75	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 4.0 ISO	4.0	≥M75	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 6.0 ISO	6.0	≥M78	38	11.9	5.0	TMTSRH 63-9	●

TMTSRH
C51,C54

▸ THID: Thread designation inside

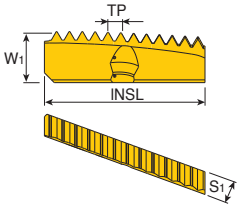
●: Standard items

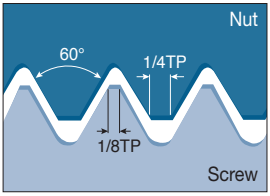
ADVANCE CUTTING
TaeguTec

TMTH-UN

TS-THREAD

Helical inserts for UN, UNC, UNF, UNEF, UNS threads (Internal)





Insert	Designation	TPI	THID	Dimension (mm)			Tool	Grade
				INSL	W1	S1		TT9030
	TMTH 23 I 24 UN	24	≥1”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 20 UN	20	≥1”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 18 UN	18	≥1 1/16”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 16 UN	16	≥1 1/16”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 14 UN	14	≥1 1/8”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 12 UN	12	≥1 1/8”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 8 UN	8	≥1 3/16”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 23 I 7 UN	7	≥1 1/4”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 I 20 UN	20	≥1 3/8”	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 18 UN	18	≥1 3/8”	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 16 UN	16	≥1 3/8”	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 12 UN	12	≥1 7/16”	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 8 UN	8	≥1 1/2”	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 32 I 6 UN	6	≥1 9/16”	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 I 16 UN	16	≥2”	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 12 UN	12	≥2”	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 8 UN	8	≥2 1/4”	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 45 I 6 UN	6	≥2 1/4”	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 I 16 UN	16	≥2 3/4”	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 12 UN	12	≥2 3/4”	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 8 UN	8	≥3”	38	11.9	5.0	TMTSRH 63-9	●
	TMTH 63 I 6 UN	6	≥3”	38	11.9	5.0	TMTSRH 63-9	●

TMTSRH
C51,C54

▸ THID: Thread designation inside

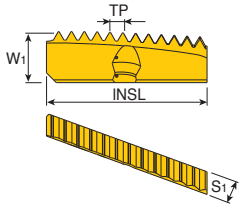
●: Standard items

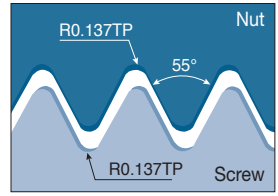
TaeguTec

TMTH-W

TS-THREAD

Helical inserts for whitworth threads, BSW, BSF, BSP (Internal and external)





Insert	Designation	TPI	THID	THOD	Dimension (mm)			Tool	Grade
					INSL	W1	S1		TT9030
	TMTH 23 11 W	11	≥G 1”	≥G 1”	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11 W	11	≥G 1 1/8”	≥G 1”	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11 W	11	≥G 1 3/4”	≥G 1”	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11 W	11	≥G 2 1/2”	≥G 1”	38	11.9	5.0	TMTSRH 63-9	●

TMTSRH
C51,C54

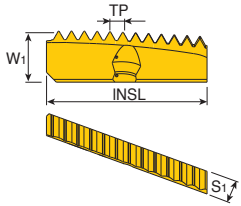
- THID: Thread designation inside
- THOD: Thread designation outside

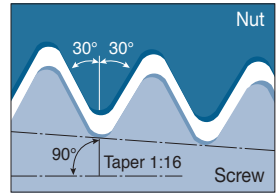
●: Standard item

TMTH-NPT

TS-THREAD

Helical inserts for NPT threads (Internal and external)





Insert	Designation	TPI	THID	THOD	Dimension (mm)			Tool	Grade
					INSL	W1	S1		TT9030
	TMTH 23 11.5 NPT	11.5	1”-2” NPT	1”-2” NPT	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11.5 NPT	11.5	11/14”-2” NPT	1”-2” NPT	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11.5 NPT	11.5	2” NPT	1”-2” NPT	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11.5 NPT	11.5	-	≥1” NPT	38	11.9	5.0	TMTSRH 63-9	●

TMTSRH
C51,C54

- THID: Thread designation inside
- THOD: Thread designation outside

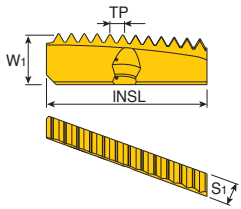
●: Standard items

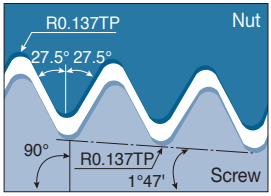
ADVANCE CUTTING
TaeguTec

TMTH-BSPT

TS-THREAD

Helical inserts for BSPT threads (Internal and external)





Insert	Designation	TPI	THID	THOD	Dimension (mm)			Tool	Grade
					INSL	W1	S1		TT9030
	TMTH 23 11 BSPT	11	≥1" BSPT	≥1" BSPT	27	8.0	3.5	TMTSRH 23-2	●
	TMTH 32 11 BSPT	11	≥1 1/8" BSPT	≥1" BSPT	32	9.0	4.0	TMTSRH 32-5	●
	TMTH 45 11 BSPT	11	≥1 3/4" BSPT	≥1" BSPT	37	11.9	5.0	TMTSRH 45-6	●
	TMTH 63 11 BSPT	11	≥2 1/2" BSPT	≥1" BSPT	38	11.9	5.0	TMTSRH 63-9	●

TMTSRH
C51,C54

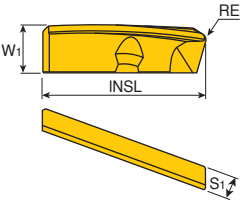
- THID: Thread designation inside
- THOD: Thread designation outside

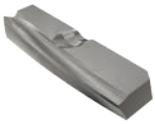
●: Standard Item

TMTH-F

TS-THREAD

Helical long edge finishing inserts



Insert	Designation	Dimension (mm)				Tool	Grade
		INSL	W1	S1	RE		TT9030
	**TMTH 23F R0.2**	27	8.0	3.5	0.2	TMTSRH 23-2	●
	TMTH 23F R0.5	27	8.0	3.5	0.5	TMTSRH 23-2	●
	TMTH 23F R1.0	27	8.0	3.5	1.0	TMTSRH 23-2	●
	TMTH 32F R0.2	32	9.0	4.0	0.2	TMTSRH 32-5	●
	TMTH 32F R0.5	32	9.0	4.0	0.5	TMTSRH 32-5	●
	TMTH 32F R1.0	32	9.0	4.0	1.0	TMTSRH 32-5	●
	TMTH 45F R0.2	37	11.9	5.0	0.2	TMTSRH 45-6	●

TMTSRH
C51,C54

●: Standard items

TaeguTec

Recommended Cutting Conditions

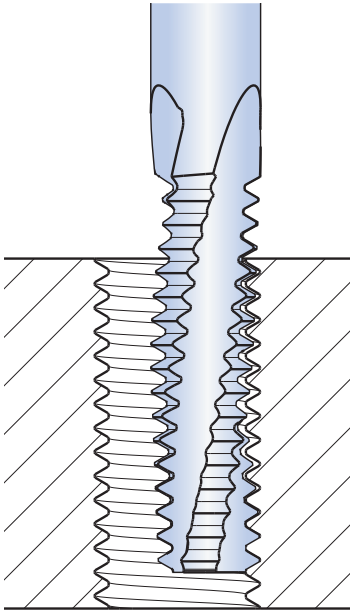
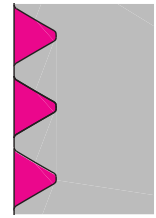
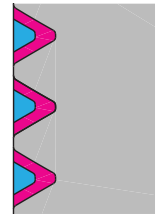
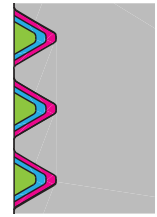
TS-THREAD

Radial depth per pass

Recommended number of passes

ISO	Material	Material No.	Number of passes by pitch			
			0.25-1.0	1.25-1.5	1.75-2.0	2.5-6.0
P	Steels	1-11	1	1	2	3
M	Stainless steels	12-14	1	1	2	3
K	Cast iron	15-20	1	1	2	3
N	Aluminum	21-24	1	1	1	1
	High temp. cast alloys	25	1	1	2	3
	Copper alloys, non metallic	26-30	1	1	1	1
S	High temperature alloys	31-37	2	2	2	3
H	Chilled cast iron	40	3	3	3	3
	Hardened cast iron nodular	41	2	2	2	3

Recommended depths per pass

Number of passes		Radial depths	
	1 pass		1st: 100%
	2 passes		1st: 75% 2nd: 100%
	3 passes		1st: 65% 2nd: 75% 3rd: 100%

Recommended Cutting Conditions

TS-THREAD

Machining data for indexable insert of threading cutters

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc(m/min) TT9030
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	100-200
		>=0.25%C	Annealed	650	190	2	95-190
		<0.55%C	Quenched and tempered	850	250	3	90-180
		>=0.55%C	Annealed	750	220	4	90-170
			Quenched and tempered	1000	300	5	80-150
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	120-170
			Quenched and tempered	930	275	7	115-160
				1000	300	8	105-150
				1200	350	9	140
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	90-170
			Quenched and tempered	1100	325	11	75-145
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	110-170
			Martensitic	820	240	13	100-160
			Austenitic	600	180	14	90-145
K	Gray cast iron (GG)		Ferritic		160	15	65-135
			Pearlitic		250	16	65-110
	Cast iron nodular (GGG)		Ferritic		180	17	65-135
			Pearlitic		260	18	60-100
	Malleable cast iron		Ferritic		130	19	65-135
			Pearlitic		230	20	60-120
N	Aluminum - Wrought alloy		Not cureable		60	21	110-260
			Cured		100	22	110-200
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	145-350
			Cured		90	24	145-275
		>12% Si	High temp.		130	25	95-225
	Copper alloys	>1% Pb	Free cutting		110	26	145-350
			Brass		90	27	145-350
			Electrolitic copper		100	28	145-350
	Non-metallic		Duroplastics, fiber plastics			29	90-370
			Hard rubber			30	80-330
S	High temp. alloys	Fe based	Annealed		200	31	20-60
			Cured		280	32	20-50
		Ni or Co based	Annealed		250	33	20-30
			Cured		350	34	10-20
			Cast		320	35	15-25
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-90
			Alpha+beta alloys cured	Rm 1050	310	37	20-70
H	Hardened steel		Hardened		55HRC	38	25-60
			Hardened		60HRC	39	20-40
	Chilled cast iron		Cast		400	40	25-60
	Cast iron nodular		Hardened		55HRC	41	20-50

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

▸ Feed rate: 0.05 - 0.15 mm/tooth

Recommended Cutting Conditions

TS-THREAD

Machining data for MTEC, MTECB, MTECQ, MTECZ, MTECH, MTECI

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc(m/min)	
							TT9030	TT5515
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	100-250	100-250
		>=0.25%C	Annealed	650	190	2	80-210	80-210
		<0.55%C	Quenched and tempered	850	250	3	65-170	65-170
		>=0.55%C	Annealed	750	220	4	110-180	110-180
			Quenched and tempered	1000	300	5	95-160	95-160
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	90-160	90-160
			Quenched and tempered	930	275	7	65-200	65-200
				1000	300	8	70-210	70-210
				1200	350	9	95-160	95-160
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	130-170	130-170
			Quenched and tempered	1100	325	11	75-100	75-100
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	110-170	110-170
			Martensitic	820	240	13	70-155	70-155
			Austenitic	600	180	14	85-100	85-100
K	Gray cast iron (GG)		Ferritic		160	15	70-150	70-150
			Pearlitic		250	16	110-140	110-140
	Cast iron nodular (GGG)		Ferritic		180	17	120-160	120-160
			Pearlitic		260	18	75-160	75-160
	Malleable cast iron		Ferritic		130	19	120-160	120-160
			Pearlitic		230	20	110-140	110-140
N	Aluminum - Wrought alloy		Not cureable		60	21	160-300	160-300
			Cured		100	22		
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	150-350	150-350
			Cured		90	24		
		>12% Si	High temp.		130	25	100-250	100-250
	Copper alloys	>1% Pb	Free cutting		110	26		
			Brass		90	27		
			Electrolitic copper		100	28		
	Non-metallic		Duroplastics, fiber plastics			29	100-400	100-400
			Hard rubber			30		
S	High temp. alloys	Fe based	Annealed		200	31		
			Cured		280	32		
		Ni or Co based	Annealed		250	33	20-80	20-80
			Cured		350	34		
			Cast		320	35		
	Titanium, Ti alloys		Pure	Rm 400		36		
			Alpha+beta alloys cured	Rm 1050		37	20-80	30-100
H	Hardened steel		Hardened		55HRC	38	55-65	60-80
			Hardened		60HRC	39	45-55	50-70
	Chilled cast iron		Cast		400	40	90-105	100-120
	Cast iron nodular		Hardened		55HRC	41	55-65	60-80

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

TS-THREAD

Machining data for MTEC, MTECB, MTECQ, MTECZ, MTECH, MTECI

Feed (mm/tooth) for diameter (mm)											
Ø2	Ø3	Ø4	Ø6	Ø8	Ø10	Ø12	Ø14	Ø16	Ø20	Ø25	Ø30
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.02	0.03	0.03	0.05	0.06	0.07	0.08	0.09	0.1	0.12	0.15	0.18
0.02	0.03	0.03	0.05	0.06	0.07	0.08	0.09	0.1	0.12	0.15	0.18
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.11
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.21	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.03	0.04	0.04	0.06	0.07	0.08	0.09	0.11	0.12	0.15	0.18	0.21
0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.1	0.12
0.05	0.06	0.07	0.09	0.1	0.11	0.12	0.13	0.15	0.18	0.22	0.25
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05

Recommended Cutting Conditions

TS-THREAD

Machining data for MTECBF, MTECM, MTECK

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc(m/min) TT9030
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	70-120
		>=0.25%C	Annealed	650	190	2	65-115
		<0.55%C	Quenched and tempered	850	250	3	60-110
		>=0.55%C	Annealed	750	220	4	70-90
			Quenched and tempered	1000	300	5	60-85
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	60-80
			Quenched and tempered	930	275	7	60-75
				1000	300	8	55-75
				1200	350	9	55-70
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-65
			Quenched and tempered	1100	325	11	50-63
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	50-60
			Martensitic	820	240	13	50-70
			Austenitic	600	180	14	60-90
K	Gray cast iron (GG)		Ferritic		160	15	60-80
			Pearlitic		250	16	60-75
	Cast iron nodular (GGG)		Ferritic		180	17	50-70
			Pearlitic		260	18	40-65
	Malleable cast iron		Ferritic		130	19	50-70
			Pearlitic		230	20	40-65
N	Aluminum - Wrought alloy		Not cureable		60	21	150
			Cured		100	22	110-
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	120-
			Cured		90	24	120-
		>12% Si	High temp.		130	25	80-110
	Copper alloys	>1% Pb	Free cutting		110	26	85-120
			Brass		90	27	85-120
			Electrolitic copper		100	28	70-100
	Non-metallic		Duroplastics, fiber plastics			29	120-
			Hard rubber			30	120-
S	High temp. alloys	Fe based	Annealed		200	31	40-60
			Cured		280	32	30-50
		Ni or Co based	Annealed		250	33	25-40
			Cured		350	34	20-35
			Cast		320	35	20-40
	Titanium, Ti alloys		Pure	Rm 400		36	30-45
			Alpha+beta alloys cured	Rm 1050		37	30-40
H	Hardened steel		Hardened		55HRC	38	
			Hardened		60HRC	39	
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel | Stainless steel | Cast iron | Nonferrous | High temp. alloys | Hardened steel

Recommended Cutting Conditions

TS-THREAD

Machining data for MTECBF, MTECM, MTECK

Feed (mm/tooth) for diameter (mm)												
Ø1.5	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø12	Ø14	Ø15
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.04	0.05	0.06	0.08	0.09	0.1	0.12	0.13	0.14	0.14	0.16	0.17	0.18
0.04	0.05	0.06	0.08	0.09	0.1	0.12	0.13	0.14	0.14	0.16	0.17	0.18
0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
0.1	0.11	0.12	0.14	0.16	0.18	0.19	0.19	0.19	0.19	0.19	0.2	0.2
0.1	0.11	0.12	0.14	0.16	0.18	0.19	0.19	0.19	0.19	0.19	0.2	0.2
0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08

Recommended Cutting Conditions

TS-THREAD

Machining data for MTECS, MTECSH, MTECD

ISO	Material		Cutting speed Vc (m/min)		Feed (mm/tooth) for diameter (mm)												
			TT9030	TT1040	Ø1.5	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø12	Ø14	Ø15
P	Low & medium carbon steels		60-120	60-120	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
	High carbon steels		60-90	60-90	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.13	0.14	0.14	0.16	0.17	0.18
	Alloy steels, treated steels		50-80	50-80	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
	Cast steels		70-90	70-90	0.04	0.04	0.05	0.05	0.06	0.07	0.07	0.08	0.09	0.1	0.12	0.13	0.14
M	Stainless steels		60-90	60-90	0.03	0.03	0.04	0.05	0.06	0.06	0.07	0.08	0.09	0.1	0.11	0.12	0.13
K	Cast Iron		40-80	40-80	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
N	Aluminum		80-150	80-150	0.05	0.05	0.07	0.09	0.11	0.13	0.14	0.15	0.16	0.16	0.17	0.18	0.18
	Synthetics, duroplastics, thermoplastics		50-200	50-200	0.10	0.11	0.12	0.14	0.16	0.18	0.19	0.19	0.19	0.19	0.19	0.20	0.20
S	Nickel alloys, titanium alloys.		20-40	20-40	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.06	0.07	0.07	0.07	0.08	0.08
H	Hardened steel	HrC 45-50	35-50	60-70	0.04	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.08				
		HrC 51-55	25-40	50-60	0.03	0.03	0.04	0.04	0.05	0.05	0.06	0.06	0.07				
		HrC 56-62	15-30	40-50	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.06				

Steel | Stainless steel | Cast iron | Nonferrous | High temp. alloys | Hardened steel

T-TAP

Tapping

Designation System

T-TAP

TPH	4	5	2	B	05	M2 X 0.4
1	2	3	4	5	6	7

1 TaeguTec T-Tap

T	TaeguTec
P	PM
H	HSSE

2 Standard

4	DIN371
5	DIN374
6	DIN376

3 ISO grade

5	Multi

4 Flute

2	Straight flute-spiral point
4	Right-hand spiral 40˚

5 Chamfer

B	4-5 threads
C	2-3 threads

6 Coating

None	Uncoated
05	S.T.
10	TiN

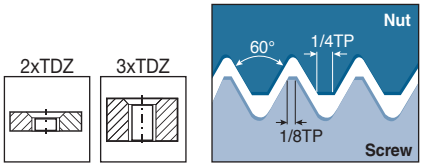
7 Tap X Pitch

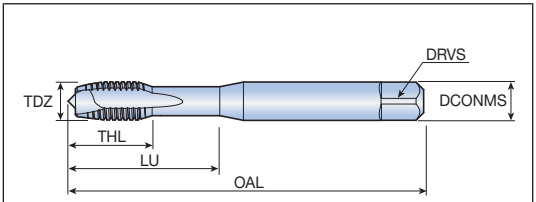
M2 X 0.4	M2 size
	0.4 pitch

TPH...52B

T-TAP

Straight flute with spiral point - Uncoated





- For general purpose
- Form B: 4-5 threads chamfer

Metric ISO standard thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH452B M2x0.4	M2	0.4	DIN371	ISO 2-6H	45	8	-	2.8	2.1	1.6
TPH452B M2.5x0.45	M2.5	0.45			50	9	-	2.8	2.1	2.05
TPH452B M3x0.5	M3	0.5			56	10	18	3.5	2.7	2.5
TPH452B M4x0.7	M4	0.7			63	12	21	4.5	3.4	3.3
TPH452B M5x0.8	M5	0.8			70	14	25	6	4.9	4.2
TPH452B M6x1.0	M6	1			80	16	30	6	4.9	5
TPH452B M8x1.25	M8	1.25			90	18	35	8	6.2	6.8
TPH452B M10x1.5	M10	1.5			100	20	39	10	8	8.5
TPH652B M12x1.75	M12	1.75	DIN376	ISO 2-6H	110	22	-	9	7	10.2
TPH652B M14x2.0	M14	2			110	24	-	11	9	12
TPH652B M16x2.0	M16	2			110	26	-	12	9	14
TPH652B M20x2.5	M20	2.5			140	30	-	16	12	17.5

Metric ISO fine thread DIN 13 standard

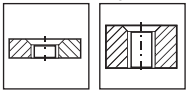
Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH552B MF8x1.0	M8	1	DIN374	ISO 2-6H	90	15	-	6	4.9	7
TPH552B MF10x1.25	M10	1.25			100	18	-	7	5.5	8.8
TPH552B MF12x1.5	M12	1.5			100	18	-	9	7	10.5
TPH552B MF14x1.5	M14	1.5			100	18	-	11	9	12.5
TPH552B MF16x1.5	M16	1.5			100	18	-	12	9	14.5

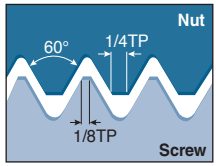
Cutting Condition
C83

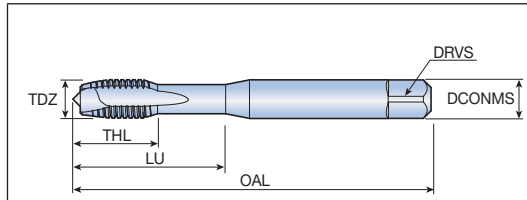
TPH...52B05

T-TAP

Straight flute with spiral point - Steam tempered







- For general purpose
- Form B: 4-5 threads chamfer

Metric ISO standard thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH452B05 M2x0.4	M2	0.4	DIN371	ISO 2-6H	45	8	-	2.8	2.1	1.6
TPH452B05 M2.5x0.45	M2.5	0.45			50	9	-	2.8	2.1	2.05
TPH452B05 M3x0.5	M3	0.5			56	10	18	3.5	2.7	2.5
TPH452B05 M4x0.7	M4	0.7			63	12	21	4.5	3.4	3.3
TPH452B05 M5x0.8	M5	0.8			70	14	25	6	4.9	4.2
TPH452B05 M6x1.0	M6	1			80	16	30	6	4.9	5
TPH452B05 M8x1.25	M8	1.25			90	18	35	8	6.2	6.8
TPH452B05 M10x1.5	M10	1.5			100	20	39	10	8	8.5
TPH652B05 M12x1.75	M12	1.75	DIN376	ISO 2-6H	110	22	-	9	7	10.2
TPH652B05 M14x2.0	M14	2			110	24	-	11	9	12
TPH652B05 M16x2.0	M16	2			110	26	-	12	9	14
TPH652B05 M20x2.5	M20	2.5			140	30	-	16	12	17.5

Metric ISO fine thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH552B05 MF8x1.0	M8	1	DIN374	ISO 2-6H	90	15	-	6	4.9	7
TPH552B05 MF10x1.25	M10	1.25			100	18	-	7	5.5	8.8
TPH552B05 MF12x1.5	M12	1.5			100	18	-	9	7	10.5
TPH552B05 MF14x1.5	M14	1.5			100	18	-	11	9	12.5
TPH552B05 MF16x1.5	M16	1.5			100	18	-	12	9	14.5

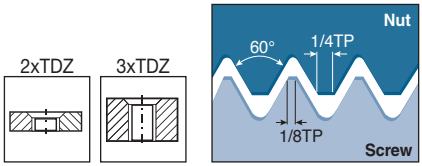
Cutting Condition C83

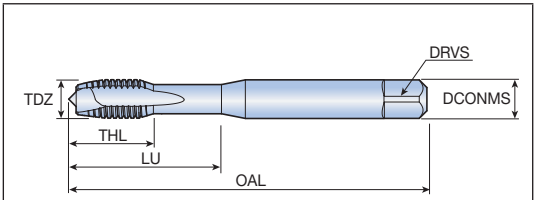
ADVANCE CUTTING TaeguTec

TPH...52B10

T-TAP

Straight flute with spiral point - TiN coated





- For general purpose
- Form B: 4-5 threads chamfer

Metric ISO standard thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH452B10 M2x0.4	M2	0.4	DIN371	ISO 2-6H	45	8	-	2.8	2.1	1.6
TPH452B10 M2.5x0.45	M2.5	0.45			50	9	-	2.8	2.1	2.05
TPH452B10 M3x0.5	M3	0.5			56	10	18	3.5	2.7	2.5
TPH452B10 M4x0.7	M4	0.7			63	12	21	4.5	3.4	3.3
TPH452B10 M5x0.8	M5	0.8			70	14	25	6	4.9	4.2
TPH452B10 M6x1.0	M6	1			80	16	30	6	4.9	5
TPH452B10 M8x1.25	M8	1.25			90	18	35	8	6.2	6.8
TPH452B10 M10x1.5	M10	1.5			100	20	39	10	8	8.5
TPH652B10 M12x1.75	M12	1.75	DIN376	ISO 2-6H	110	22	-	9	7	10.2
TPH652B10 M14x2.0	M14	2			110	24	-	11	9	12
TPH652B10 M16x2.0	M16	2			110	26	-	12	9	14
TPH652B10 M20x2.5	M20	2.5			140	30	-	16	12	17.5

Metric ISO fine thread DIN 13 standard

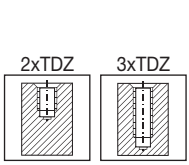
Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH552B10 MF8x1.0	M8	1	DIN374	ISO 2-6H	90	15	-	6	4.9	7
TPH552B10 MF10x1.25	M10	1.25			100	18	-	7	5.5	8.8
TPH552B10 MF12x1.5	M12	1.5			100	18	-	9	7	10.5
TPH552B10 MF14x1.5	M14	1.5			100	18	-	11	9	12.5
TPH552B10 MF16x1.5	M16	1.5			100	18	-	12	9	14.5

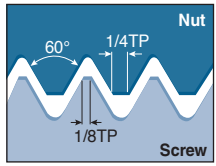
Cutting Condition
CB3

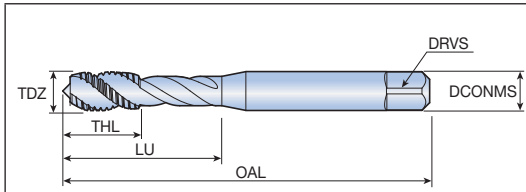
TPH...54C

T-TAP

Right-hand spiral flute (40˚) - Uncoated







- For general purpose
- Form C: 2-3 threads chamfer

Metric ISO standard thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH454C M2x0.4	M2	0.4	DIN371	ISO 2-6H	45	6	10	2.8	2.1	1.6
TPH454C M2.5x0.45	M2.5	0.45			50	6	12	2.8	2.1	2.05
TPH454C M3x0.5	M3	0.5			56	7	18	3.5	2.7	2.5
TPH454C M4x0.7	M4	0.7			63	8	21	4.5	3.4	3.3
TPH454C M5x0.8	M5	0.8			70	10	25	6	4.9	4.2
TPH454C M6x1.0	M6	1			80	12	30	6	4.9	5
TPH454C M8x1.25	M8	1.25			90	15	35	8	6.2	6.8
TPH454C M10x1.5	M10	1.5			100	18	39	10	8	8.5
TPH654C M12x1.75	M12	1.75	DIN376	ISO 2-6H	110	18	-	9	7	10.2
TPH654C M14x2.0	M14	2			110	20	-	11	9	12
TPH654C M16x2.0	M16	2			110	20	-	12	9	14
TPH654C M20x2.5	M20	2.5			140	25	-	16	12	17.5

Metric ISO fine thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH554C MF8x1.0	M8	1	DIN374	ISO 2-6H	90	15	-	6	4.9	7
TPH554C MF10x1.25	M10	1.25			100	18	-	7	5.5	8.8
TPH554C MF12x1.5	M12	1.5			100	18	-	9	7	10.5
TPH554C MF14x1.5	M14	1.5			100	18	-	11	9	12.5
TPH554C MF16x1.5	M16	1.5			100	18	-	12	9	14.5

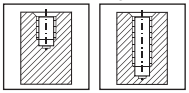
Cutting Condition C84

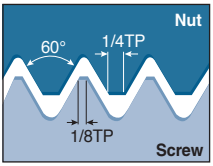
ADVANCE CUTTING TaeguTec

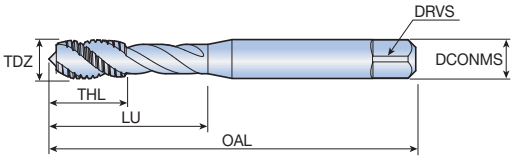
TPH...54C05

T-TAP

Right-hand spiral flute (40˚) - Steam tempered







- For general purpose
- Form C: 2-3 threads chamfer

Metric ISO standard thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH454C05 M2x0.4	M2	0.4	DIN371	ISO 2-6H	45	6	10	2.8	2.1	1.6
TPH454C05 M2.5x0.45	M2.5	0.45			50	6	12	2.8	2.1	2.05
TPH454C05 M3x0.5	M3	0.5			56	7	18	3.5	2.7	2.5
TPH454C05 M4x0.7	M4	0.7			63	8	21	4.5	3.4	3.3
TPH454C05 M5x0.8	M5	0.8			70	10	25	6	4.9	4.2
TPH454C05 M6x1.0	M6	1			80	12	30	6	4.9	5
TPH454C05 M8x1.25	M8	1.25			90	15	35	8	6.2	6.8
TPH454C05 M10x1.5	M10	1.5			100	18	39	10	8	8.5
TPH654C05 M12x1.75	M12	1.75	DIN376	ISO 2-6H	110	18	-	9	7	10.2
TPH654C05 M14x2.0	M14	2			110	20	-	11	9	12
TPH654C05 M16x2.0	M16	2			110	20	-	12	9	14
TPH654C05 M20x2.5	M20	2.5			140	25	-	16	12	17.5

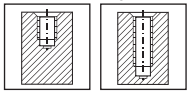
Metric ISO fine thread DIN 13 standard

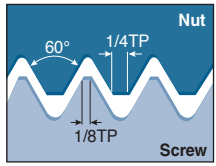
Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH554C05 MF8x1.0	M8	1	DIN374	ISO 2-6H	90	15	-	6	4.9	7
TPH554C05 MF10x1.25	M10	1.25			100	18	-	7	5.5	8.8
TPH554C05 MF12x1.5	M12	1.5			100	18	-	9	7	10.5
TPH554C05 MF14x1.5	M14	1.5			100	18	-	11	9	12.5
TPH554C05 MF16x1.5	M16	1.5			100	18	-	12	9	14.5

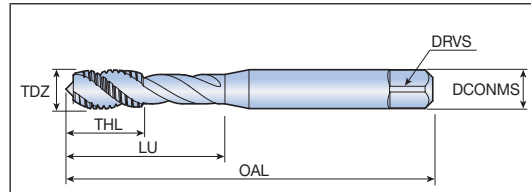
Cutting Condition C84

TPH...54C10

Right-hand spiral flute (40˚) - TiN coated







- For general purpose
- Form C: 2-3 threads chamfer

Metric ISO standard thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH454C10 M2x0.4	M2	0.4	DIN371	ISO 2-6H	45	6	10	2.8	2.1	1.6
TPH454C10 M2.5x0.45	M2.5	0.45			50	6	12	2.8	2.1	2.05
TPH454C10 M3x0.5	M3	0.5			56	7	18	3.5	2.7	2.5
TPH454C10 M4x0.7	M4	0.7			63	8	21	4.5	3.4	3.3
TPH454C10 M5x0.8	M5	0.8			70	10	25	6	4.9	4.2
TPH454C10 M6x1.0	M6	1			80	12	30	6	4.9	5
TPH454C10 M8x1.25	M8	1.25			90	15	35	8	6.2	6.8
TPH454C10 M10x1.5	M10	1.5			100	18	39	10	8	8.5
TPH654C10 M12x1.75	M12	1.75	DIN376	ISO 2-6H	110	18	-	9	7	10.2
TPH654C10 M14x2.0	M14	2			110	20	-	11	9	12
TPH654C10 M16x2.0	M16	2			110	20	-	12	9	14
TPH654C10 M20x2.5	M20	2.5			140	25	-	16	12	17.5

Metric ISO fine thread DIN 13 standard

Designation	TDZ	TP (mm)	Standard (DIN)	Tolerance	Dimension (mm)					
					OAL	THL	LU	DCONMS	DRVS	Core hole
TPH554C10 MF8x1.0	M8	1	DIN374	ISO 2-6H	90	15	-	6	4.9	7
TPH554C10 MF10x1.25	M10	1.25			100	18	-	7	5.5	8.8
TPH554C10 MF12x1.5	M12	1.5			100	18	-	9	7	10.5
TPH554C10 MF14x1.5	M14	1.5			100	18	-	11	9	12.5
TPH554C10 MF16x1.5	M16	1.5			100	18	-	12	9	14.5

Cutting Condition C84

Recommended Cutting Conditions

T-TAP

Machining data for straight flute with spiral point tap

Cutting speed Vc(m/min)

ISO	Material		Condition	Straight flute with spiral point tap			Lubrication
				Uncoated	Steam tempered	TiN coated	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	5-25	5-25 *	15-45 *	E/O
		>=0.25%C	Annealed	5-20	5-20 *	10-40 *	E/O
		<0.55%C	Quenched and tempered	-	2-15 *	5-25 *	E/O
		>=0.55%C	Annealed	5-20	5-20 *	10-40 *	E/O
			Quenched and tempered	-	2-15 *	5-25 *	E/O
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	5-25	5-25 *	15-45 *	E/O
			Quenched and tempered	-	2-15 *	5-20 *	E/O
	High alloy steel, cast steel and tool steel		Annealed	5-20	5-20	10-40 *	E/O
			Quenched and tempered	-	-	5-20	O/S
M	Stainless steel and cast steel		Ferritic / martensitic	-	2-10 *	5-20 *	E/O
			Martensitic	-	2-10 *	5-20 *	E/O
			Austenitic	-	2-10 *	5-20 *	E/O
K	Gray cast iron (GG)		Ferritic	10-15	10-25	15-45	E/D
			Pearlitic	10-15	10-25	10-40	E/D
	Cast iron nodular (GGG)		Ferritic	8-12	5-20	10-30	E/D
			Pearlitic	8-12	5-15	10-25	E/D
	Malleable cast iron		Ferritic	10-15	10-25	15-45	E/D
			Pearlitic	10-15	10-20	10-40	E/D
N	Aluminum - wrought alloy		Not cureable	15-25 *	15-25	15-25	E/O
			Cured	15-25 *	15-25	15-25	E/O
	Aluminum-cast, alloyed	<=12% Si	Not cureable	15-20 *	10-20	15-40 *	E/O
			Cured	15-20 *	10-20	15-40 *	E/O
		>12% Si	High temp.	15-20 *	15-20	10-30	E/O
	Copper alloys	>1% Pb	Free cutting	15-25 *	15-25	10-30	E/O
			Brass	10-40	10-40	20-60	E/O
			Electrolitic copper	10-15 *	2-10	5-25	E/O
	Non-metallic		Duroplastics, fiber plastics	-	10-20	10-20	D
			Hard rubber	-	10-20	10-20	D
S	High temp. alloys	Fe based	Annealed	-	-	3-5	S
			Cured	-	-	3-5	S
		Ni or Co based	Annealed	-	-	2-4	S
			Cured	-	-	2-4	S
			Cast	-	-	2-4	S
	Titanium, Ti alloys		Pure	-	-	4-6	S
			Alpha+beta alloys cured	-	-	4-6	S

* : Recommended

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

▸ **Lubrication** **E:** Emulsion **O:** Cutting oil **S:** Special cutting oil **D:**Dry/air

Recommended Cutting Conditions

T-TAP

Machining data for 40˚ Right-hand spiral flute tap

Cutting speed Vc(m/min)

ISO	Material		Condition	40˚ Right-hand spiral flute tap			Lubrication
				Uncoated	Steam tempered	TiN coated	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	5-25	5-25*	15-45 *	E/O
		>=0.25%C	Annealed	5-20	5-20*	10-40 *	E/O
		<0.55%C	Quenched and tempered	-	2-15*	5-25 *	E/O
		>=0.55%C	Annealed	5-20	5-20*	10-40 *	E/O
			Quenched and tempered	-	2-15*	5-25 *	E/O
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	5-25	5-25*	15-45 *	E/O
			Quenched and tempered	-	2-15*	5-20 *	E/O
	High alloy steel, cast steel and tool steel		Annealed	5-20	5-20	10-40 *	E/O
			Quenched and tempered	-	-	5-20	O/S
M	Stainless steel and cast steel		Ferritic / martensitic	-	2-10*	5-20*	E/O
			Martensitic	-	2-10*	5-20*	E/O
			Austenitic	-	2-10*	5-20*	E/O
K	Gray cast iron (GG)		Ferritic	10-15	10-25	15-45	E/D
			Pearlitic	10-15	10-20	10-40	E/D
	Cast iron nodular (GGG)		Ferritic	8-12	5-20	10-30	E/D
			Pearlitic	8-12	5-15	10-25	E/D
	Malleable cast iron		Ferritic	10-15	10-25	15-45	E/D
			Pearlitic	10-15	10-20	10-40	E/D
N	Aluminum - wrought alloy		Not cureable	15-25 *	15-25	15-25	E/O
			Cured	15-25 *	15-25	15-25	E/O
	Aluminum-cast, alloyed	<=12% Si	Not cureable	15-20 *	10-20	15-40*	E/O
			Cured	15-20 *	10-20	15-40*	E/O
		>12% Si	High temp.	15-20 *	15-20	10-30	E/O
	Copper alloys	>1% Pb	Free cutting	15-25 *	15-25	10-30	E/O
			Brass	10-40	10-40	50-60	E/O
			Electrolitic copper	10-15 *	2-10	5-25	E/O
	Non-metallic		Duroplastics, fiber plastics	-	10-20	10-20	D
			Hard rubber	-	10-20	10-20	D
S	High temp. alloys	Fe based	Annealed	-	-	3-5	S
			Cured	-	-	3-5	S
		Ni or Co based	Annealed	-	-	2-4	S
			Cured	-	-	2-4	S
			Cast	-	-	2-4	S
	Titanium, Ti alloys		Pure	-	-	4-6	S
			Alpha+beta alloys cured	-	-	4-6	S

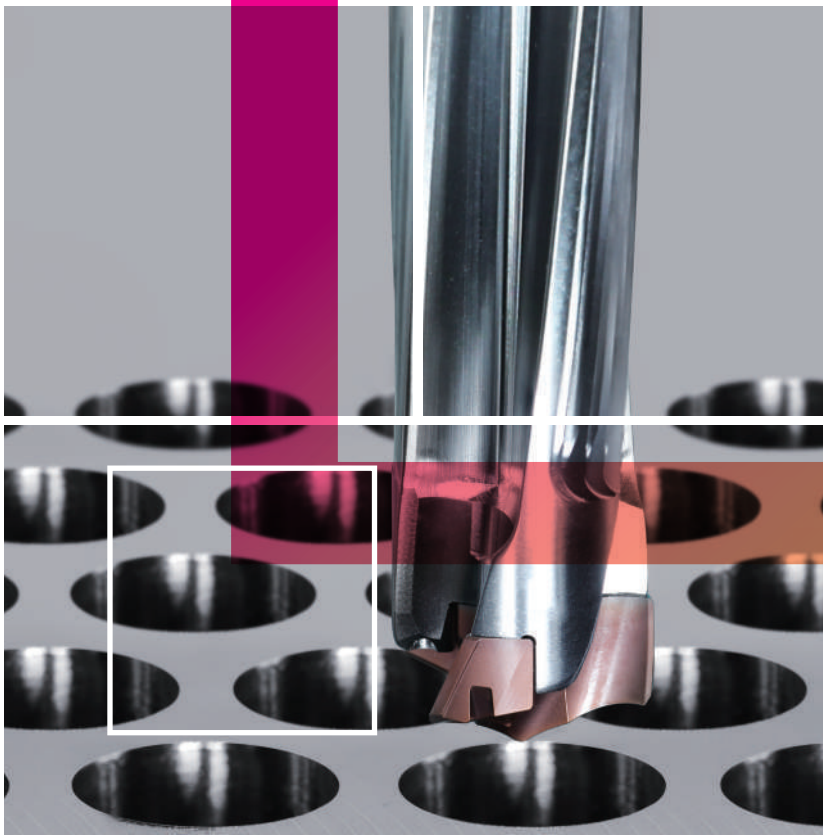
* : Recommended

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

▸ **Lubrication** **E:** Emulsion **O:** Cutting oil **S:** Special cutting oil **D:**Dry/air

HOLEMAKING



HOLEMAKING

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External Coolant

Internal Coolant

Through Hole

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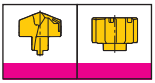
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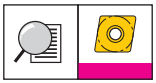
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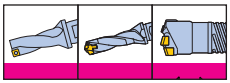
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Tool Selection Guide

Drilling tools

Series			Indexable drill				
			TOPDRILL		TDRILL		TOPCAP
			TOP 2/3/4/5	TOP-CA	TDR 2/3/4/5	TDR-CA	TCAP
Pages			D18-D29	D30-D33	D34-D46	D47-D49	D51-D53
DC(mm)			Ø12.0-Ø50.0	Ø51.0-Ø80.0	Ø12.5-Ø50.0	Ø51.0-Ø80.0	Ø8.0-Ø32.0
Drilling depth(L/D)			2, 3, 4, 5 x Dc	2, 3, 4 x Dc	2, 3, 4, 5 x Dc	2.5, 3.5 x Dc	2.25, 3 x Dc
Hole tolerance			IT 11-13	IT 12-13	IT 12-13	IT 12-13	IT 10-12
Application	General drilling		●	●	●	●	●
	Cross hole drilling		●	●	●	●	
	Irregular surface drilling		○	○	○	○	●
	Interrupted drilling		○	○	○	○	
	Chamfering						
Coolant supply			Internal	Internal	Internal	Internal	Internal

Tool Selection Guide

Drilling tools

Head changeable drill					
DrillSpeed	WinDrill	DrillRush			WinDrill
3ED	**TCD...A0**	**TCD**	**TCD-M**	**TCD...A0 3/5/8D**	**TCD-MRS/TCDM**
D55-D57	D58	D59-D67	D68	D70	D71-D74
Ø12.0-Ø25.9	Ø4.0-Ø5.9	Ø6.0-Ø25.9	M8-M24 (ISO)	Ø6.0-Ø9.9	Ø6.0-Ø20.9
3, 5, 8 x Dc	3, 5 x Dc	1.5, 3, 5, 8, 12 x Dc		3, 5, 8 x Dc	2, 3, 4 x Dc
IT 9-10	IT 9-10	IT 9-10	IT 9-10	IT 9-10	IT 9-10
●	●	●	●	●	●
○	●	●		●	●
			●		
Internal	Internal	Internal	Internal	Internal	Internal

● Recommended, ○ Suitable

Tool Selection Guide

Drilling tools

Series			Head changeable drill			Solid carbide drill	
			WinGun	ModuDrill	SpadeRush	Solid3Drill	HDrill
			TCDGN	TNDH-TP/MDB	LCD	3HD	NHD-PE/PI
Pages			D143-D144	D75-D79	D80-D82	D83-D88	D89-D100
DC(mm)			Ø10.0-Ø25.9	Ø26.0-Ø50.0	Ø20.0-Ø41.0	Ø4.0-Ø12.0	Ø3.0-Ø12.0
Drilling depth(L/D)			16, 20 x Dc	3, 5, 7 x Dc	3, 5, 8 x Dc	3, 5, 8, 12 x Dc	3, 5 x Dc
Hole tolerance			IT 9-10	IT 10-12	IT 9-10	IT 8-10	IT 8-10
Application	General drilling		●	●	●	●	●
	Cross hole drilling		●	●	●	●	●
	Irregular surface drilling						
	Interrupted drilling						
	Chamfering						
Coolant supply			Internal	Internal	Internal	Internal	External / Internal

Tool Selection Guide

Drilling tools

Solid carbide drill					
HDRILL					
NHD-KI	**NHD-NI**	**TED/TEO**	**SHO 10/15/20**	**SHO-M**	**CDF**
D101-D102	D103-D108	D109-D120	D122	D123	D124
Ø3.0-Ø12.0	Ø3.0-Ø12.0	Ø3.0-Ø12.0	Ø4.0-Ø10.0	M4-M10 (ISO)	Ø3.0-Ø12.7
3, 5 x Dc	3, 5 x Dc	3, 5 x Dc	10, 15, 20 x Dc		
IT 8-10	IT 8-10	IT 8-10	IT 8-10	IT 8-10	IT 8-10
●	●	●	●	●	●
●	●	●	○		
				●	
Internal	Internal	External / Internal	Internal	Internal	External

● Recommended, ○ Suitable

TaeguTec Member IMC Group

Tool Selection Guide

Reaming tools

Series				Indexable reamer		Solid reamer	
				XM-REAM	TM-REAM	TBREAM	TSREAM
				XR-SO	TM	TB	TS
Pages				D130-D131	D133	D136-D138	D140-D141
DC(mm)				Ø8.000-Ø12.999	Ø11.501-Ø32.000	Ø8.000-Ø32.000	Ø3.000-Ø12.000
Reaming depth(L/D)				3, 5 x Dc	3, 5, 8 x Dc	5-9 x Dc	7.5-10 x Dc
Hole tolerance				IT 7 ★	IT 7 ★	IT 6 ★★	IT 7
Application		**Through**	**Blind**				
	General reaming			●	●	●	●
	Cross hole reaming					●	●
	Irregular surface reaming					●	●
	Interrupted reaming			●	●	●	●
Coolant supply				Internal	Internal	Internal	Internal

★ Up to IT 6 tolerance ★★ Up to IT 5 tolerance

ADVANCE CUTTING TaeguTec

Tool Selection Guide

Deep drilling tools

Series		Indexable deep drill head			
		TDeep			
		TRGD/TRGD3 /TRGDL	TBTA3	TBTA5	TBTA7
Pages		D145-D152	D153-155, D159	D156-157, D160	D158, D161
DC(mm)		Ø8.0-Ø36.0	Ø38.00-Ø106.99	Ø107.00-Ø168.99	Ø169.00-Ø232.99
Drilling depth(L/D)		10-45 x Dc	100 x Dc	100 x Dc	100 x Dc
Hole tolerance		IT 10-11	IT 10	IT 10	IT 10
Surface finish			3μm	3μm	3μm
Single tube	Outer four thread		●	●	●
	Inner single thread		●	● ★	●
Double tube	Outer four thread		●	●	

★ In case of inner single thread connection TBTA7 series can cover up to dia. 245.99mm

Series		Indexable deep drill & boring head			Brazed deep drill head		
		TDeep					
		TBTA-FB	TBTA-TR	TBTA-R	BTA-SE/DE	BTS-SE	BTE…SE4
Pages		D164-D169	D176-D179	D170-D175	D180-D182	D183	D184
DC(mm)		Ø25.00-Ø89.00	Ø14.00-Ø40.00	Ø25.00-Ø110.99	Ø12.60-Ø65.00	Ø8.00-Ø20.00	Ø15.60-Ø16.70
Drilling depth(L/D)		100 x Dc	100 x Dc	100 x Dc	100 x Dc	100 x Dc	100 x Dc
Hole tolerance		IT 10	IT 10	IT 7 - IT 9	IT 9	IT 9	
Surface finish		3μm	3μm	1-2μm	2μm	2μm	
Single tube	Outer four thread	●	●	●	●	● ★	
	Inner single thread	●	●	●			
Double tube	Outer four thread	●	●		●		

★ Two start thread: Diameter 12.60 to 15.59mm

● Recommended

TaeguTec Member IMC Group

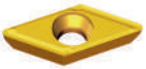
Tool Selection Guide

Drill inserts

			TOPDRILL	TDRILL	DRILLSPEED	
			SOMT	SPMG / SPGG	3ED-P+	3ED-F
Series						
Pages			D195-D196	D197-D198	D199-D201	D202
Size			04/05/06/07/08 09/11/13/15	05/06/07/09 11/12/14	Ø12.0-Ø25.9	Ø12.0-Ø25.9
Chip former			DP, DK, DL, DA	DG, DK, DA	P+	F
Grades			TT9080, TT9300 TT8020, TT6080, K10	TT9030, TT8020 TT7400, TT6030, K10	TT5130	TT5130
Application	General drilling		●	●	●	●
	Cross hole drilling		●	●	●	●
	Irregular surface drilling		○	○	○	○
	Interrupted drilling		○	○		
	Chamfering					

Tool Selection Guide

Drill inserts

WINDRILL	DRILLRUSH				
TCD-P	**TCD-P/M/K/N**	**TCD-P+**	**TCD-F**	**AOMT**	**CRNG**
					
D203	D204-D210	D211-D214	D215-D216	D217	D217
Ø4.0-Ø5.9	Ø6.0-Ø25.9	Ø6.0-Ø25.9	Ø8.0-Ø25.9	03,04,06-C30/C45	08-45CD
P	P/M/K/N	P+	F	-	-
TT9080	TT9080 UF10	TT9080	TT9080	TT9080	TT9080
●	●	●	●		
●	●	●	●		
○	○	○	○		
				●	●

● Recommended, ○ Suitable

Tool Selection Guide

Drill inserts

Series			MODUDRILL		SPADERUSH	
			TCD-P-CO+	SPGX...DW	LCD-P	LCD-P+
Pages			D218	D218	D219-D220	D221
Size			Ø15.9-Ø25.9	06/07/09/11/14	Ø20.0-Ø41.0	Ø20.0-Ø34.5
Chip former			P-CO+	DW	P	P+
Grades			TT9080	TT9080	TT9080	TT9080
Application	General drilling		●	●	●	●
	Cross hole drilling		●	●	●	●
	Irregular surface drilling		○	○	○	○
	Interrupted drilling					
	Chamfering					

Tool Selection Guide

Drill inserts

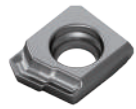
SpadeRush	TChamfer	TopCap	TDeep	
LCD-F	**XCGT-C**	**XCGT-TA XCMT**	**NPHT NPMT**	**NPMX TPMX**
D222-D223	D224	D225-D226	D227 -D229	D230
Ø20.0-Ø41.0	06/09	04/05/06/07/08 10/13/17	06/07/08/09 10/11/13	08/14/17/24/28
F	C30/C45/C60	TA/GV/TC	R(L)-G... /R(L)-HF...	R-B/R-G
TT9080	TT9080	TT9080, TT8020, TT9030, K10	TT9030, TT9130, TT8125, TT6130, TT5030	TT9030, TT9130, TT8125, TT7200, TT6130, TT6020, TT5100, TT5030
●		●	●	●
●			○	○
○				
	●			

● Recommended, ○ Suitable

TaeguTec

Tool Selection Guide

Drill inserts

Series			TDEEP			
			TOGT	ZSGT	LOGT	TPMX XPMT
						
Pages			D232	D231	D231	D233
Size			07/08/09/10/11 /12/13/14	04/05/06	06	14/16/17/24
Chip former			RS/GF	RS	RS	LG/-45
Grades			TT9030, TT9130	TT9130	TT9030, TT9130	TT9030, TT9130, TT6020, TT5030
Application	General drilling		●	●	●	●
	Cross hole drilling					○
	Irregular surface drilling					
	Interrupted drilling					
	Chamfering					

Tool Selection Guide

Reamer heads & blades

Series				XM-REAM **XR** 	TM-REAM **TM** 	TBREAM **TB**
Pages				D132	D134 - D135	D139
Size				Ø8.000-Ø12.000	Ø11.50-Ø32.000	1/2/3/4
Chip former				AS/BL	AS/BL	A06/B06/B12
Grades				TT9030	TT9030	TT5030, TT5050
Application		**Through**	**Blind**			
	General reaming			●	●	●
	Cross hole reaming					
	Irregular surface reaming					
	Interrupted reaming					

● Recommended, ○ Suitable

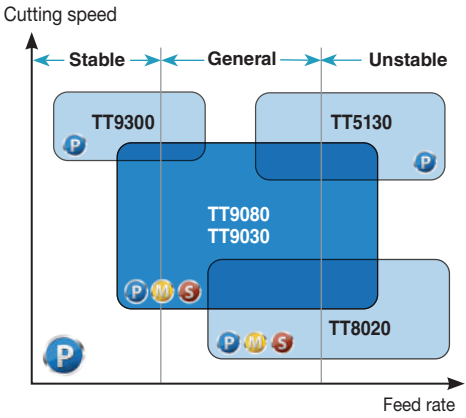
Grades

Holemaking grades

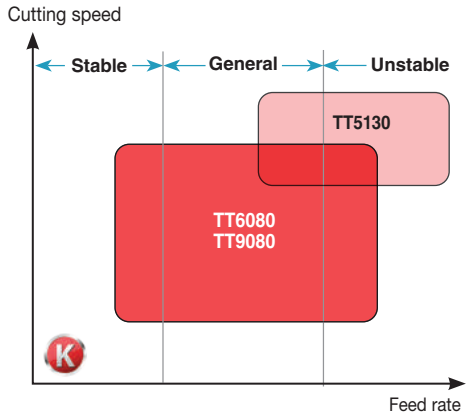
Grades	ISO	Characteristics & applications
TT6080 PVD carbide	K05 – K25 H05 – H25	• General machining for gray and ductile cast iron • Finish and medium machining of hardened steel
TT9300 CVD carbide	P10 – P25	• High speed drilling of carbon & alloy steel
TT5130 PVD carbide	P20 – P40 K20 – K40	• High speed drilling of carbon & alloy steel
TT9080 PVD carbide	P20 – P40 M20 – M40 S20 – S40	• General machining of steel • General machining of stainless steel • General machining of heat-resistant alloy
TT9030 PVD carbide	P20 – P40 M20 – M40 S20 – S40	• General machining of steel • General machining of stainless steel • General machining of heat-resistant alloy
TT8020 PVD carbide	P30 – P50 M30 – M50 S30 – S50	• Interrupted and rough machining of steel • Interrupted and rough machining of stainless steel • Low speed and interrupted machining of heat-resistant alloy
K10 Uncoated	K05 – K15 N05 – N15 S05 – S15	• General machining of cast iron • General machining of aluminum alloys and non-ferrous materials • General machining of heat-resistant alloy
UF1A/UF10 Uncoated	N10 – N25 S10 – S30	• General machining of aluminum alloys and non-ferrous materials • General machining of heat-resistant alloy

Selection guide for holemaking grades

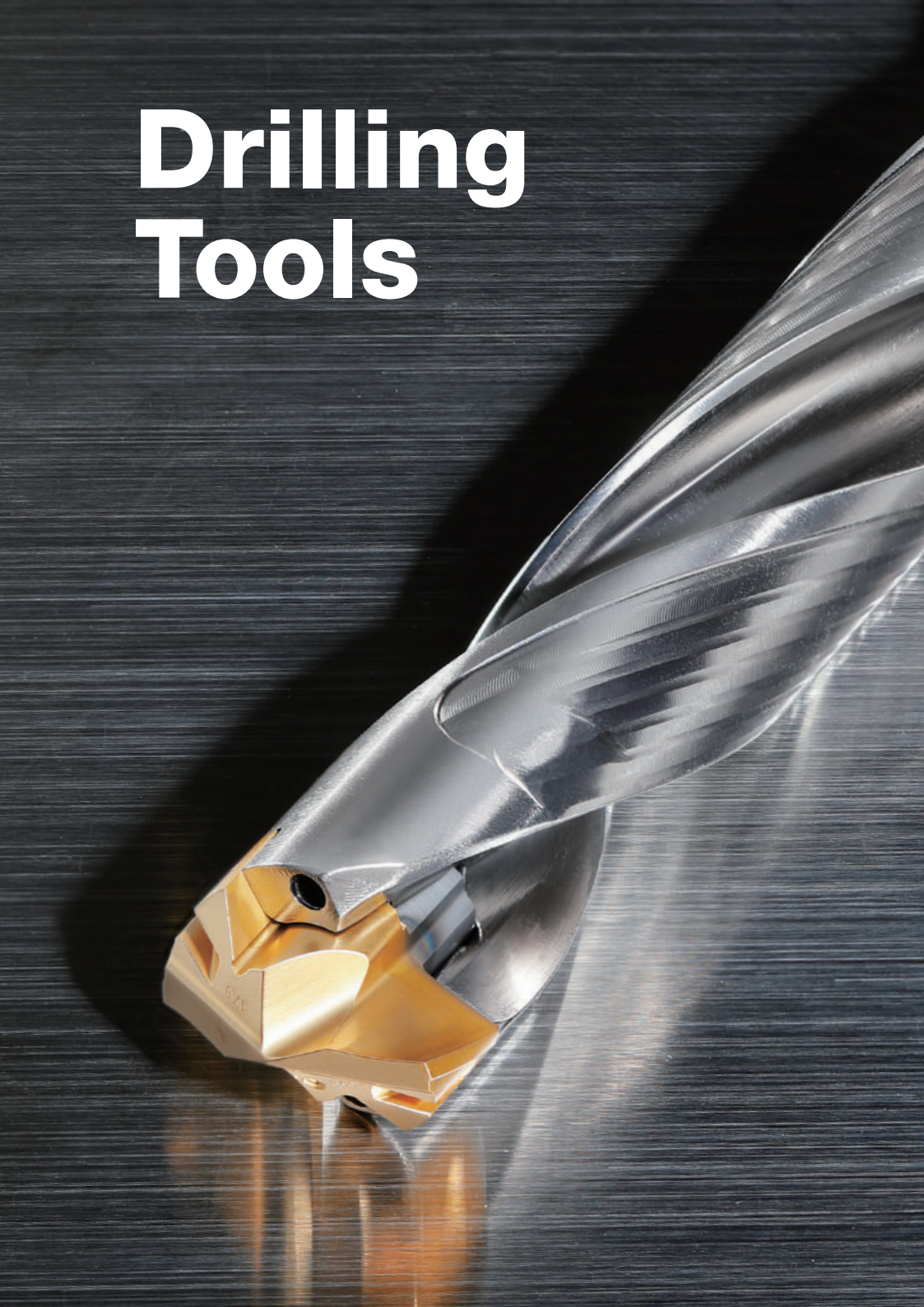
For steel



For cast iron



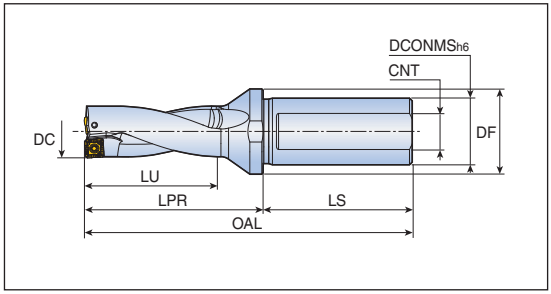
Drilling Tools



TOP 2...-T2

Indexable drill holders

• Drilling depth: 2xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 2120-20T2-04	12.0	20	25	24	44	50	M13X1.0	SOMT 04...DP
2125-20T2-04	12.5	20	25	26	46	50	M13X1.0	D195
2130-20T2-04	13.0	20	25	26	46	50	M13X1.0	
2135-20T2-04	13.5	20	25	28	46	50	M13X1.0	
2140-20T2-05	14.0	20	25	28	46	50	M13X1.0	SOMT 05...DP/DL/DK/DA
2145-20T2-05	14.5	20	25	30	49	50	M13X1.0	D195-D196
2150-20T2-05	15.0	20	25	30	49	50	M13X1.0	
2155-20T2-05	15.5	20	25	32	52	50	M13X1.0	
2160-20T2-05	16.0	20	25	32	52	50	M13X1.0	
2165-25T2-06	16.5	25	32	34	54	56	M16X1.5	SOMT 06...DP/DL/DK/DA
2170-25T2-06	17.0	25	32	34	54	56	M16X1.5	D195-D196
2175-25T2-06	17.5	25	32	36	57	56	M16X1.5	
2180-25T2-06	18.0	25	32	36	57	56	M16X1.5	
2185-25T2-06	18.5	25	32	38	59	56	M16X1.5	
2190-25T2-06	19.0	25	32	38	59	56	M16X1.5	
2195-25T2-07	19.5	25	32	40	63	56	M16X1.5	SOMT 07...DP/DL/DK/DA
2200-25T2-07	20.0	25	32	40	63	56	M16X1.5	D195-D196
2205-25T2-07	20.5	25	32	42	65	56	M16X1.5	
2210-25T2-07	21.0	25	32	42	65	56	M16X1.5	
2215-25T2-07	21.5	25	32	44	67	56	M16X1.5	
2220-25T2-07	22.0	25	32	44	67	56	M16X1.5	
2225-25T2-08	22.5	25	32	46	68	56	M16X1.5	SOMT 08...DP/DL/DK/DA
2230-25T2-08	23.0	25	32	46	68	56	M16X1.5	D195-D196
2230-32T2-08	23.0	32	40	46	68	60	M22X2.0	
2235-25T2-08	23.5	25	32	48	70	56	M16X1.5	
2235-32T2-08	23.5	32	40	48	70	60	M22X2.0	
2240-25T2-08	24.0	25	32	48	70	56	M16X1.5	
2240-32T2-08	24.0	32	40	48	70	60	M22X2.0	
2245-25T2-08	24.5	25	32	50	72	56	M16X1.5	
2245-32T2-08	24.5	32	40	50	72	60	M22X2.0	
2250-25T2-08	25.0	25	32	50	72	56	M16X1.5	
2250-32T2-08	25.0	32	40	50	72	60	M22X2.0	
2255-25T2-08	25.5	25	32	52	73	56	M16X1.5	
2255-32T2-08	25.5	32	40	52	73	60	M22X2.0	
2260-25T2-08	26.0	25	32	52	73	56	M16X1.5	
2260-32T2-08	26.0	32	40	52	73	60	M22X2.0	

Cutting Condition D242

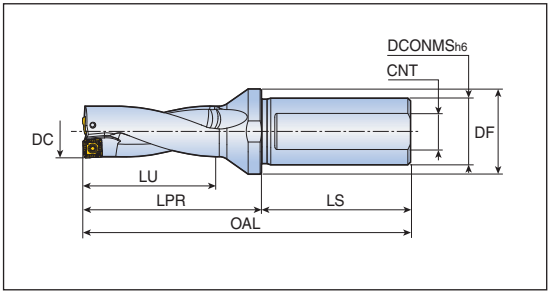
▸ OAL: LPR+LS

ADVANCE CUTTING TaeguTec

TOP 2...-T2

TOPDRILL

Indexable drill holders



• Drilling depth: 2xdiameter

Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 2265-32T2-09	26.5	32	40	54	77	60	M22X2.0	SOMT 09...DP/DL/DK/DA
2270-25T2-09	27.0	25	40	54	77	56	M16X1.5	D195-D196
2270-32T2-09	27.0	32	40	54	77	60	M22X2.0	
2275-32T2-09	27.5	32	40	56	79	60	M22X2.0	
2280-25T2-09	28.0	25	40	56	79	56	M16X1.5	
2280-32T2-09	28.0	32	40	56	79	60	M22X2.0	
2285-32T2-09	28.5	32	40	58	81	60	M22X2.0	
2290-25T2-09	29.0	25	40	58	81	56	M16X1.5	
2290-32T2-09	29.0	32	40	58	81	60	M22X2.0	
2295-32T2-09	29.5	32	40	60	83	60	M22X2.0	
2300-32T2-09	30.0	32	40	60	83	60	M22X2.0	
2305-32T2-09	30.5	32	40	62	85	60	M22X2.0	
2310-32T2-09	31.0	32	40	62	85	60	M22X2.0	
2320-32T2-11	32.0	32	40	64	87	60	M22X2.0	SOMT 11...DP/DL/DK/DA
2320-40T2-11	32.0	40	50	64	87	70	M30X2.0	D195-D196
2330-32T2-11	33.0	32	40	66	89	60	M22X2.0	
2330-40T2-11	33.0	40	50	66	89	70	M30X2.0	
2340-32T2-11	34.0	32	40	68	91	60	M22X2.0	
2340-40T2-11	34.0	40	50	68	91	70	M30X2.0	
2350-32T2-11	35.0	32	40	70	93	60	M22X2.0	
2350-40T2-11	35.0	40	50	70	93	70	M30X2.0	
2360-32T2-11	36.0	32	40	72	95	60	M22X2.0	
2360-40T2-11	36.0	40	50	72	95	70	M30X2.0	
2370-32T2-13	37.0	32	50	74	102	60	M22X2.0	SOMT 13...DP/DL/DK/DA
2370-40T2-13	37.0	40	50	74	102	70	M30X2.0	D195-D196
2380-32T2-13	38.0	32	50	76	104	60	M22X2.0	
2380-40T2-13	38.0	40	50	76	104	70	M30X2.0	
2390-32T2-13	39.0	32	50	78	106	60	M22X2.0	
2390-40T2-13	39.0	40	50	78	106	70	M30X2.0	
2400-32T2-13	40.0	32	50	80	108	60	M22X2.0	
2400-40T2-13	40.0	40	50	80	108	70	M30X2.0	
2410-40T2-13	41.0	40	50	82	110	70	M30X2.0	
2420-40T2-13	42.0	40	50	84	112	70	M30X2.0	
2430-40T2-13	43.0	40	50	86	114	70	M30X2.0	

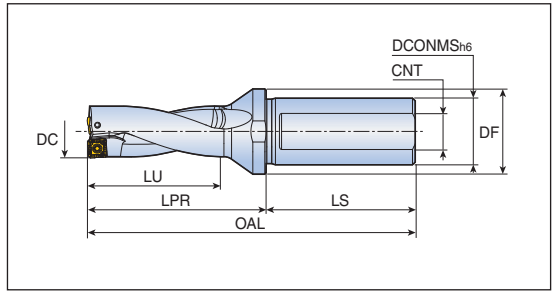
Cutting Condition D242

▸ OAL: LPR+LS

TOP 2...-T2

Indexable drill holders

• Drilling depth: 2xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 2440-40T2-15	44.0	40	60	88	123	70	M30X2.0	SOMT 15...DP/DL/DK/DA
2450-40T2-15	45.0	40	60	90	125	70	M30X2.0	D195-D196
2460-40T2-15	46.0	40	60	92	127	70	M30X2.0	
2470-40T2-15	47.0	40	60	94	129	70	M30X2.0	
2480-40T2-15	48.0	40	60	96	131	70	M30X2.0	
2490-40T2-15	49.0	40	60	98	133	70	M30X2.0	
2500-40T2-15	50.0	40	60	100	135	70	M30X2.0	

▸ OAL: LPR+LS

Spare parts

Designation	Screw	Wrench	Plug*	
TOP 2120 - 2135	TS 18041I/HG	TD 6P	SL 20M	
TOP 2140 - 2160	TS 20043I/HG-P	TD 6P	SL 20M	
TOP 2165 - 2220	TS 22052I/HG-P	TD 7P	SL 25M	
TOP 2225 - 2260	SO 25065I	TD 7	SL 25M / SL 32M	
TOP 2265 - 2360	TS 35088I	TD 10	SL 25M / SL 32M / SL 40M	
TOP 2370 - 2430	TS 40093I	TD 15	SL 32M / SL 40M	
TOP 2440 - 2550	TS 50115I	TD 20	SL 40M	

Cutting Condition D242

▸ *Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm: SL 25M

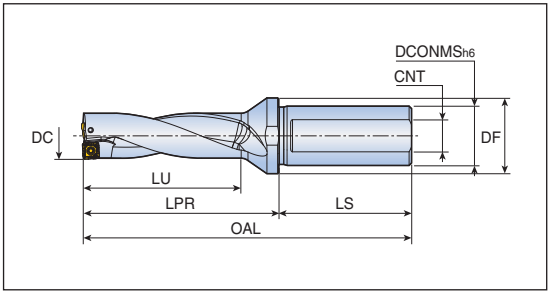
ADVANCE CUTTING TaeguTec

TOP 3...-T2

TOPDRILL

Indexable drill holders

• Drilling depth: 3xdiameter



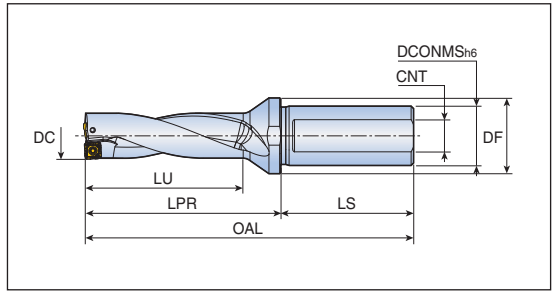
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 3120-20T2-04	12.0	20	25	36	56	50	M13X1.0	SOMT 04...DP
3125-20T2-04	12.5	20	25	39	59	50	M13X1.0	D195
3130-20T2-04	13.0	20	25	39	59	50	M13X1.0	
3135-20T2-04	13.5	20	25	42	60	50	M13X1.0	
3140-20T2-05	14.0	20	25	42	60	50	M13X1.0	SOMT 05...DP/DL/DK/DA
3145-20T2-05	14.5	20	25	45	64	50	M13X1.0	D195-D196
3150-20T2-05	15.0	20	25	45	64	50	M13X1.0	
3155-20T2-05	15.5	20	25	48	68	50	M13X1.0	
3160-20T2-05	16.0	20	25	48	68	50	M13X1.0	
3165-25T2-06	16.5	25	32	51	71	56	M16X1.5	SOMT 06...DP/DL/DK/DA
3167-25T2-06 *	16.7	25	32	51	71	56	M16X1.5	D195-D196
3170-25T2-06	17.0	25	32	51	71	56	M16X1.5	
3175-25T2-06	17.5	25	32	54	75	56	M16X1.5	
3180-25T2-06	18.0	25	32	54	75	56	M16X1.5	
3185-25T2-06	18.5	25	32	57	78	56	M16X1.5	
3190-25T2-06	19.0	25	32	57	78	56	M16X1.5	
3195-25T2-07	19.5	25	32	60	83	56	M16X1.5	SOMT 07...DP/DL/DK/DA
3200-25T2-07	20.0	25	32	60	83	56	M16X1.5	D195-D196
3205-25T2-07	20.5	25	32	63	86	56	M16X1.5	
3210-25T2-07	21.0	25	32	63	86	56	M16X1.5	
3215-25T2-07	21.5	25	32	66	89	56	M16X1.5	
3220-25T2-07	22.0	25	32	66	89	56	M16X1.5	
3222-25T2-07 *	22.2	25	32	66	89	56	M16X1.5	
3225-25T2-08	22.5	25	32	69	91	56	M16X1.5	SOMT 08...DP/DL/DK/DA
3230-25T2-08	23.0	25	32	69	91	56	M16X1.5	D195-D196
3230-32T2-08	23.0	32	40	69	91	60	M22X2.0	
3235-25T2-08	23.5	25	32	72	94	56	M16X1.5	
3235-32T2-08	23.5	32	40	72	94	60	M22X2.0	
3240-25T2-08	24.0	25	32	72	94	56	M16X1.5	
3240-32T2-08	24.0	32	40	72	94	60	M22X2.0	
3245-25T2-08	24.5	25	32	75	97	56	M16X1.5	
3245-32T2-08	24.5	32	40	75	97	60	M22X2.0	
3250-25T2-08	25.0	25	32	75	97	56	M16X1.5	
3250-32T2-08	25.0	32	40	75	97	60	M22X2.0	
3254-25T2-08 *	25.4	25	32	75	97	56	M16X1.5	

Cutting Condition D242

- *: Inch sized hole
- OAL: LPR+LS

Indexable drill holders

• Drilling depth: 3xdiameter



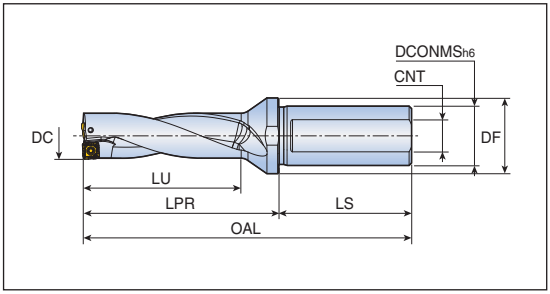
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 3255-25T2-08	25.5	25	32	78	99	56	M16X1.5	SOMT 08...DP/DL/DK/DA
3255-32T2-08	25.5	32	40	78	99	60	M22X2.0	D195-D196
3260-25T2-08	26.0	25	32	78	99	56	M16X1.5	
3260-32T2-08	26.0	32	32	78	99	60	M22X2.0	
3265-25T2-09	26.5	25	40	81	104	56	M16X1.5	SOMT 09...DP/DL/DK/DA
3265-32T2-09	26.5	32	40	81	104	60	M22X2.0	D195-D196
3270-25T2-09	27.0	25	40	81	104	56	M16X1.5	
3270-32T2-09	27.0	32	40	81	104	60	M22X2.0	
3275-25T2-09	27.5	25	40	84	107	56	M16X1.5	
3275-32T2-09	27.5	32	40	84	107	60	M22X2.0	
3280-25T2-09	28.0	25	40	84	107	56	M16X1.5	
3280-32T2-09	28.0	32	40	84	107	60	M22X2.0	
3285-25T2-09	28.5	25	40	87	110	56	M16X1.5	
3285-32T2-09	28.5	32	40	87	110	60	M22X2.0	
3290-25T2-09	29.0	25	40	87	110	56	M16X1.5	
3290-32T2-09	29.0	32	40	87	110	60	M22X2.0	
3295-32T2-09	29.5	32	40	90	113	60	M22X2.0	
3300-32T2-09	30.0	32	40	90	113	60	M22X2.0	
3305-32T2-09	30.5	32	40	93	116	60	M22X2.0	
3310-32T2-09	31.0	32	40	93	116	60	M22X2.0	
3320-32T2-11	32.0	32	40	96	119	60	M22X2.0	SOMT 11...DP/DL/DK/DA
3320-40T2-11	32.0	40	50	96	119	70	M30X2.0	D195-D196
3330-32T2-11	33.0	32	40	99	122	60	M22X2.0	
3330-40T2-11	33.0	40	50	99	122	70	M30X2.0	
3340-32T2-11	34.0	32	40	102	125	60	M22X2.0	
3340-40T2-11	34.0	40	50	102	125	70	M30X2.0	
3350-32T2-11	35.0	32	40	105	128	60	M22X2.0	
3350-40T2-11	35.0	40	50	105	128	70	M30X2.0	
3360-32T2-11	36.0	32	40	108	131	60	M22X2.0	
3360-40T2-11	36.0	40	50	108	131	70	M30X2.0	
3370-32T2-13	37.0	32	50	111	139	60	M22X2.0	SOMT 13...DP/DL/DK/DA
3370-40T2-13	37.0	40	50	111	139	70	M30X2.0	D195-D196
3380-32T2-13	38.0	32	50	114	142	60	M22X2.0	
3380-40T2-13	38.0	40	50	114	142	70	M30X2.0	
3390-32T2-13	39.0	32	50	117	145	60	M22X2.0	

Cutting Condition D242

▸ OAL: LPR+LS

Indexable drill holders

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 3390-40T2-13	39.0	40	50	117	145	70	M30X2.0	SOMT 13...DP/DL/DK/DA
3400-32T2-13	40.0	32	50	120	148	60	M22X2.0	D195-D196
3400-40T2-13	40.0	40	50	120	148	70	M30X2.0	
3410-40T2-13	41.0	40	50	123	151	70	M30X2.0	
3420-40T2-13	42.0	40	50	126	154	70	M30X2.0	
3430-40T2-13	43.0	40	50	129	157	70	M30X2.0	
3440-40T2-15	44.0	40	60	132	167	70	M30X2.0	SOMT 15...DP/DL/DK/DA
3450-40T2-15	45.0	40	60	135	170	70	M30X2.0	D195-D196
3460-40T2-15	46.0	40	60	138	173	70	M30X2.0	
3470-40T2-15	47.0	40	60	141	176	70	M30X2.0	
3480-40T2-15	48.0	40	60	144	179	70	M30X2.0	
3490-40T2-15	49.0	40	60	147	182	70	M30X2.0	
3500-40T2-15	50.0	40	60	150	185	70	M30X2.0	

▸ OAL: LPR+LS

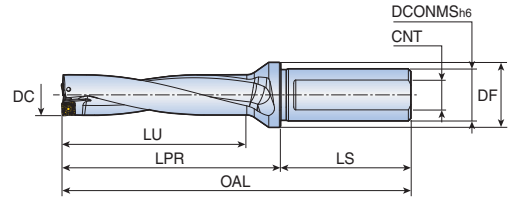
Spare parts

Designation	Screw	Wrench	Plug*	
TOP 3120 - 3135	TS 18041I/HG	TD 6P	SL 20M	
TOP 3140 - 3160	TS 20043I/HG-P	TD 6P	SL 20M	
TOP 3165 - 3220	TS 22052I/HG-P	TD 7P	SL 25M	
TOP 3225 - 3260	SO 25065I	TD 7	SL 25M / SL 32M	
TOP 3265 - 3360	TS 35088I	TD 10	SL 25M / SL 32M / SL 40M	
TOP 3370 - 3430	TS 40093I	TD 15	SL 32M / SL 40M	
TOP 3440 - 3500	TS 50115I	TD 20	SL 40M	

Cutting Condition D242

▸ * Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm: SL 25M

Indexable drill holders



• Drilling depth: 4xdiameter

Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 4120-20T2-04	12.0	20	25	48	68	50	M13X1.0	SOMT 04...DP
4125-20T2-04	12.5	20	25	52	72	50	M13X1.0	D195
4130-20T2-04	13.0	20	25	52	72	50	M13X1.0	
4135-20T2-04	13.5	20	25	56	74	50	M13X1.0	
4140-20T2-05	14.0	20	25	56	74	50	M13X1.0	SOMT 05...DP/DL/DK/DA
4145-20T2-05	14.5	20	25	60	79	50	M13X1.0	D195-D196
4150-20T2-05	15.0	20	25	60	79	50	M13X1.0	
4155-20T2-05	15.5	20	25	64	84	50	M13X1.0	
4160-20T2-05	16.0	20	25	64	84	50	M13X1.0	
4165-25T2-06	16.5	25	32	68	88	56	M16X1.5	SOMT 06...DP/DL/DK/DA
4170-25T2-06	17.0	25	32	68	88	56	M16X1.5	D195-D196
4175-25T2-06	17.5	25	32	72	93	56	M16X1.5	
4180-25T2-06	18.0	25	32	72	93	56	M16X1.5	
4185-25T2-06	18.5	25	32	76	97	56	M16X1.5	
4190-25T2-06	19.0	25	32	76	97	56	M16X1.5	
4195-25T2-07	19.5	25	32	80	103	56	M16X1.5	SOMT 07...DP/DL/DK/DA
4200-25T2-07	20.0	25	32	80	103	56	M16X1.5	D195-D196
4205-25T2-07	20.5	25	32	84	107	56	M16X1.5	
4210-25T2-07	21.0	25	32	84	107	56	M16X1.5	
4215-25T2-07	21.5	25	32	88	111	56	M16X1.5	
4220-25T2-07	22.0	25	32	88	111	56	M16X1.5	
4225-25T2-08	22.5	25	32	92	114	56	M16X1.5	SOMT 08...DP/DL/DK/DA
4230-25T2-08	23.0	25	32	92	114	56	M16X1.5	D195-D196
4230-32T2-08	23.0	32	40	92	114	60	M22X2.0	
4235-25T2-08	23.5	25	32	96	118	56	M16X1.5	
4235-32T2-08	23.5	32	40	96	118	60	M22X2.0	
4240-25T2-08	24.0	25	32	96	118	56	M16X1.5	
4240-32T2-08	24.0	32	40	96	118	60	M22X2.0	
4245-25T2-08	24.5	25	32	100	122	56	M16X1.5	
4245-32T2-08	24.5	32	40	100	122	60	M22X2.0	
4250-25T2-08	25.0	25	32	100	122	56	M16X1.5	
4250-32T2-08	25.0	32	40	100	122	60	M22X2.0	
4254-25T2-08 *	25.4	25	32	100	122	56	M16X1.5	
4255-25T2-08	25.5	25	32	104	125	56	M16X1.5	
4255-32T2-08	25.5	32	40	104	125	60	M22X2.0	

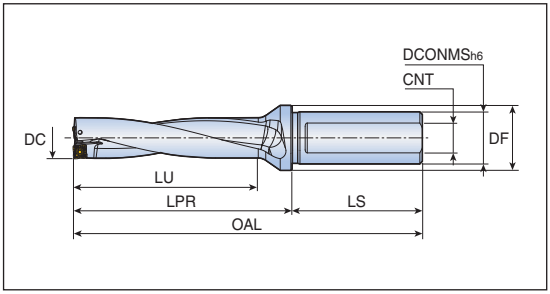
Cutting Condition D242

- *: Inch sized hole
- OAL: LPR+LS

TOP 4...-T2

TOPDRILL

Indexable drill holders



• Drilling depth: 4xdiameter

Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 4260-25T2-08	26.0	25	32	104	125	56	M16X1.5	SOMT 08...DP/DL/DK/DA
4260-32T2-08	26.0	32	40	104	125	60	M22X2.0	D195-D196
4265-25T2-09	26.5	25	40	108	131	56	M16X1.5	SOMT 09...DP/DL/DK/DA
4265-32T2-09	26.5	32	40	108	131	60	M22X2.0	D195-D196
4270-25T2-09	27.0	25	40	108	131	56	M16X1.5	
4270-32T2-09	27.0	32	40	108	131	60	M22X2.0	
4275-25T2-09	27.5	25	40	112	135	56	M16X1.5	
4275-32T2-09	27.5	32	40	112	135	60	M22X2.0	
4280-25T2-09	28.0	25	40	112	135	56	M16X1.5	
4280-32T2-09	28.0	32	40	112	135	60	M22X2.0	
4285-25T2-09	28.5	25	40	116	139	56	M16X1.5	
4285-32T2-09	28.5	32	40	116	139	60	M22X2.0	
4286-32T2-09 *	28.6	32	40	116	139	60	M22X2.0	
4290-25T2-09	29.0	25	40	116	139	56	M16X1.5	
4290-32T2-09	29.0	32	40	116	139	60	M22X2.0	
4295-32T2-09	29.5	32	40	120	143	60	M22X2.0	
4300-32T2-09	30.0	32	40	120	143	60	M22X2.0	
4305-32T2-09	30.5	32	40	124	147	60	M22X2.0	
4310-32T2-09	31.0	32	40	124	147	60	M22X2.0	
4318-32T2-11 *	31.8	32	40	128	151	60	M22X2.0	SOMT 11...DP/DL/DK/DA
4320-32T2-11	32.0	32	40	128	151	60	M22X2.0	D195-D196
4320-40T2-11	32.0	40	50	128	151	70	M30X2.0	
4330-32T2-11	33.0	32	40	132	155	60	M22X2.0	
4330-40T2-11	33.0	40	50	132	155	70	M30X2.0	
4340-32T2-11	34.0	32	40	136	159	60	M22X2.0	
4340-40T2-11	34.0	40	50	136	159	70	M30X2.0	
4349-40T2-11 *	34.9	40	50	140	163	70	M30X2.0	
4350-32T2-11	35.0	32	40	140	163	60	M22X2.0	
4350-40T2-11	35.0	40	50	140	163	70	M30X2.0	
4360-32T2-11	36.0	32	40	144	167	60	M22X2.0	
4360-40T2-11	36.0	40	50	144	167	70	M30X2.0	
4370-32T2-13	37.0	32	50	148	176	60	M22X2.0	SOMT 13...DP/DL/DK/DA
4370-40T2-13	37.0	40	50	148	176	70	M30X2.0	D195-D196
4371-40T2-13 *	37.1	40	50	148	176	70	M30X2.0	

Cutting Condition D242

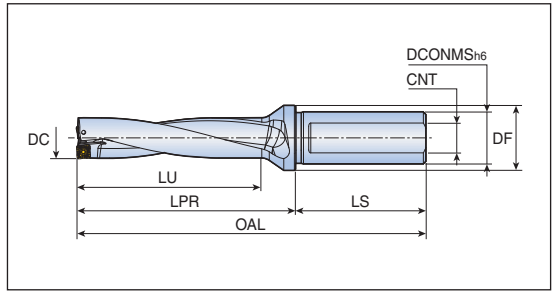
- *: Inch sized hole
- OAL: LPR+LS

TOP 4...-T2

TOPDRILL

Indexable drill holders

• Drilling depth: 4xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 4380-32T2-13	38.0	32	50	152	180	60	M22X2.0	SOMT 13...DP/DL/DK/DA
4380-40T2-13	38.0	40	50	152	180	70	M30X2.0	D195-D196
4381-40T2-13 *	38.1	40	50	152	180	70	M30X2.0	
4390-32T2-13	39.0	32	50	156	184	60	M22X2.0	
4390-40T2-13	39.0	40	50	156	184	70	M30X2.0	
4400-32T2-13	40.0	32	50	160	188	60	M22X2.0	
4400-40T2-13	40.0	40	50	160	188	70	M30X2.0	
4410-40T2-13	41.0	40	50	164	192	70	M30X2.0	
4413-40T2-13 *	41.3	40	50	164	192	70	M30X2.0	
4420-40T2-13	42.0	40	50	168	196	70	M30X2.0	
4429-40T2-13 *	42.9	40	50	172	200	70	M30X2.0	
4430-40T2-13	43.0	40	50	172	200	70	M30X2.0	
4440-40T2-15	44.0	40	60	176	211	70	M30X2.0	SOMT 15...DP/DL/DK/DA
4445-40T2-15 *	44.5	40	60	180	215	70	M30X2.0	D195-D196
4450-40T2-15	45.0	40	60	180	215	70	M30X2.0	
4460-40T2-15	46.0	40	60	184	219	70	M30X2.0	
4470-40T2-15	47.0	40	60	188	223	70	M30X2.0	
4476-40T2-15 *	47.6	40	60	192	227	70	M30X2.0	
4480-40T2-15	48.0	40	60	192	227	70	M30X2.0	
4490-40T2-15	49.0	40	60	196	231	70	M30X2.0	
4500-40T2-15	50.0	40	60	200	235	70	M30X2.0	
4508-40T2-15 *	50.8	40	60	204	239	70	M30X2.0	

▸ *: Inch sized hole
▸ OAL: LPR+LS

Spare parts

Designation	Screw	Wrench	Plug*	
TOP 4120 - 4135	TS 18041I/HG	TD 6P	SL 20M	
TOP 4140 - 4160	TS 20043I/HG-P	TD 6P	SL 20M	
TOP 4165 - 4220	TS 22052I/HG-P	TD 7P	SL 25M	
TOP 4225 - 4260	SO 25065I	TD 7	SL 25M / SL 32M	
TOP 4265 - 4360	TS 35088I	TD 10	SL 25M / SL 32M / SL 40M	
TOP 4370 - 4430	TS 40093I	TD 15	SL 32M / SL 40M	
TOP 4440 - 4508	TS 50115I	TD 20	SL 40M	

Cutting Condition D242

▸ *Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm: SL 25M

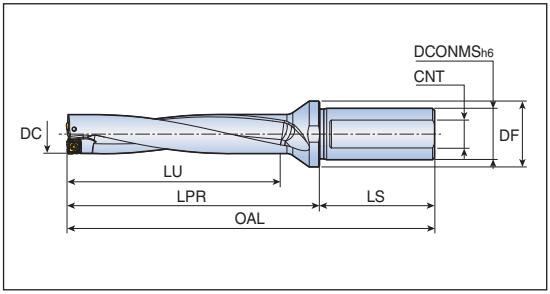
ADVANCE CUTTING TaeguTec

TOP 5...-T2

TOPDRILL

Indexable drill holders

• Drilling depth: 5xdiameter



Designation		Dimension (mm)							Insert
		DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP	5120-20T2-04	12.0	20	25	60	80	50	M13X1.0	SOMT 04...DP
	5125-20T2-04	12.5	20	25	65	85	50	M13X1.0	D195
	5130-20T2-04	13.0	20	25	65	85	50	M13X1.0	
	5135-20T2-04	13.5	20	25	70	88	50	M13X1.0	
	5140-20T2-05	14.0	20	25	70	88	50	M13X1.0	SOMT 05...DP/DL/DK/DA
	5145-20T2-05	14.5	20	25	75	94	50	M13X1.0	D195-D196
	5150-20T2-05	15.0	20	25	75	94	50	M13X1.0	
	5155-20T2-05	15.5	20	25	80	100	50	M13X1.0	
	5160-20T2-05	16.0	20	25	80	100	50	M13X1.0	
	5165-25T2-06	16.5	25	32	85	105	56	M16X1.5	SOMT 06...DP/DL/DK/DA
	5170-25T2-06	17.0	25	32	85	105	56	M16X1.5	D195-D196
	5175-25T2-06	17.5	25	32	90	111	56	M16X1.5	
	5180-25T2-06	18.0	25	32	90	111	56	M16X1.5	
	5185-25T2-06	18.5	25	32	95	116	56	M16X1.5	
	5190-25T2-06	19.0	25	32	95	116	56	M16X1.5	
	5195-25T2-07	19.5	25	32	100	123	56	M16X1.5	SOMT 07...DP/DL/DK/DA
	5200-25T2-07	20.0	25	32	100	123	56	M16X1.5	D195-D196
	5205-25T2-07	20.5	25	32	105	128	56	M16X1.5	
	5210-25T2-07	21.0	25	32	105	128	56	M16X1.5	
	5215-25T2-07	21.5	25	32	110	133	56	M16X1.5	
	5220-25T2-07	22.0	25	32	110	133	56	M16X1.5	
	5222-25T2-07 *	22.2	25	32	110	133	56	M16X1.5	
	5225-25T2-08	22.5	25	32	115	137	56	M16X1.5	SOMT 08...DP/DL/DK/DA
	5230-25T2-08	23.0	25	32	115	137	56	M16X1.5	D195-D196
	5230-32T2-08	23.0	32	40	115	137	60	M22X2.0	
	5235-25T2-08	23.5	25	32	120	142	56	M16X1.5	
	5235-32T2-08	23.5	32	40	120	142	60	M22X2.0	
	5240-25T2-08	24.0	25	32	120	142	56	M16X1.5	
	5240-32T2-08	24.0	32	40	120	142	60	M22X2.0	
	5245-25T2-08	24.5	25	32	125	147	56	M16X1.5	
	5245-32T2-08	24.5	32	40	125	147	60	M22X2.0	
	5250-25T2-08	25.0	25	32	125	147	56	M16X1.5	
	5250-32T2-08	25.0	32	40	125	147	60	M22X2.0	
	5255-25T2-08	25.5	25	32	130	151	56	M16X1.5	
	5255-32T2-08	25.5	32	40	130	151	60	M22X2.0	

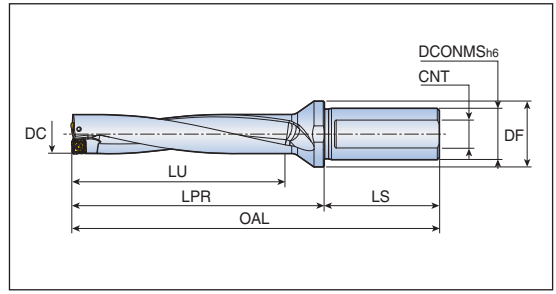
Cutting Condition D244

- *: Inch sized hole
- OAL: LPR+LS

TOP 5...-T2

Indexable drill holders

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 5260-25T2-08	26.0	25	32	130	151	56	M16X1.5	SOMT 08...DP/DL/DK/DA
5260-32T2-08	26.0	32	40	130	151	60	M22X2.0	D195-D196
5265-32T2-09	26.5	32	40	135	158	60	M22X2.0	SOMT 09...DP/DL/DK/DA
5270-25T2-09	27.0	25	40	135	158	56	M16X1.5	D195-D196
5270-32T2-09	27.0	32	40	135	158	60	M22X2.0	
5275-32T2-09	27.5	32	40	140	163	60	M22X2.0	
5280-25T2-09	28.0	25	40	140	163	56	M16X1.5	
5280-32T2-09	28.0	32	40	140	163	60	M22X2.0	
5282-32T2-09 *	28.2	32	40	140	163	60	M22X2.0	
5285-32T2-09	28.5	32	40	145	168	60	M22X2.0	
5290-25T2-09	29.0	25	40	145	168	56	M16X1.5	
5290-32T2-09	29.0	32	40	145	168	60	M22X2.0	
5295-32T2-09	29.5	32	40	150	173	60	M22X2.0	
5300-32T2-09	30.0	32	40	150	173	60	M22X2.0	
5305-32T2-09	30.5	32	40	155	178	60	M22X2.0	
5310-32T2-09	31.0	32	40	155	178	60	M22X2.0	
5320-32T2-11	32.0	32	40	160	183	60	M22X2.0	SOMT 11...DP/DL/DK/DA
5320-40T2-11	32.0	40	50	160	183	70	M30X2.0	D195-D196
5330-32T2-11	33.0	32	40	165	188	60	M22X2.0	
5330-40T2-11	33.0	40	50	165	188	70	M30X2.0	
5340-32T2-11	34.0	32	40	170	193	60	M22X2.0	
5340-40T2-11	34.0	40	50	170	193	70	M30X2.0	
5350-32T2-11	35.0	32	40	175	198	60	M22X2.0	
5350-40T2-11	35.0	40	50	175	198	70	M30X2.0	
5360-32T2-11	36.0	32	40	180	203	60	M22X2.0	
5360-40T2-11	36.0	40	50	180	203	70	M30X2.0	
5370-32T2-13	37.0	32	50	185	213	60	M22X2.0	SOMT 13...DP/DL/DK/DA
5370-40T2-13	37.0	40	50	185	213	70	M30X2.0	D195-D196
5380-32T2-13	38.0	32	50	190	218	60	M22X2.0	
5380-40T2-13	38.0	40	50	190	218	70	M30X2.0	
5390-32T2-13	39.0	32	50	195	223	60	M22X2.0	
5390-40T2-13	39.0	40	50	195	223	70	M30X2.0	
5400-32T2-13	40.0	32	50	200	228	60	M22X2.0	
5400-40T2-13	40.0	40	50	200	228	70	M30X2.0	

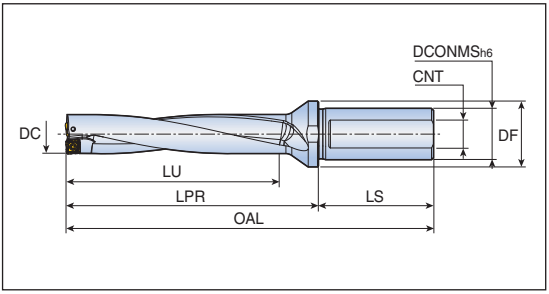
Cutting Condition D244

- *: Inch sized hole
- OAL: LPR+LS

ADVANCE CUTTING TaeguTec

TOP 5...-T2

Indexable drill holders



• Drilling depth: 5xdiameter

Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TOP 5410-40T2-13	41.0	40	50	205	233	70	M30X2.0	SOMT 13...DP/DL/DK/DA
5420-40T2-13	42.0	40	50	210	238	70	M30X2.0	D195-D196
5430-40T2-13	43.0	40	50	215	243	70	M30X2.0	
5440-40T2-15	44.0	40	60	220	255	70	M30X2.0	SOMT 15...DP/DL/DK/DA
5450-40T2-15	45.0	40	60	225	260	70	M30X2.0	D195-D196
5460-40T2-15	46.0	40	60	230	265	70	M30X2.0	
5470-40T2-15	47.0	40	60	235	270	70	M30X2.0	
5480-40T2-15	48.0	40	60	240	275	70	M30X2.0	
5490-40T2-15	49.0	40	60	245	280	70	M30X2.0	
5500-40T2-15	50.0	40	60	250	285	70	M30X2.0	

▸ OAL: LPR+LS

Spare parts

Designation	Screw	Wrench	Plug*	
TOP 5120 - 5135	TS 18041I/HG	TD 6P	SL 20M	
TOP 5140 - 5160	TS 20043I/HG-P	TD 6P	SL 20M	
TOP 5165 - 5220	TS 22052I/HG-P	TD 7P	SL 25M	
TOP 5225 - 5260	SO 25065I	TD 7	SL 25M / SL 32M	
TOP 5265 - 5360	TS 35088I	TD 10	SL 25M / SL 32M / SL 40M	
TOP 5370 - 5430	TS 40093I	TD 15	SL 32M / SL 40M	
TOP 5440 - 5500	TS 50115I	TD 20	SL 40M	

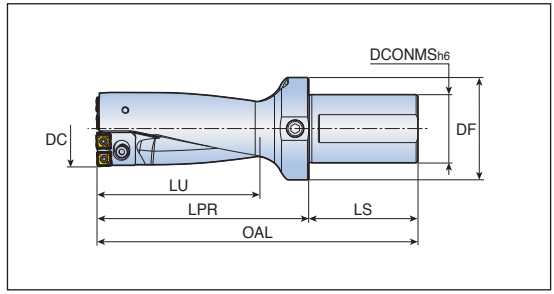
Cutting Condition D244

▸ *Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm: SL 25M

TOP 20…CA

Indexable drill holders for cartridge

• Drilling depth: 2xdiameter



Designation	Dimension (mm)							Setting Plate	Insert
	DC	DCONMS	DF	OAL	LU	LPR	LS		
TOP 2051-55-50T2-09CA	51	50	64	223	110	143	80	-	SOMT 09… DP/DL/DK/DA D195-D196
	52	50	64	223	110	143	80	TOP-0901	
	53	50	64	223	110	143	80	TOP-0902	
	54	50	64	223	110	143	80	TOP-0903	
	55	50	64	223	110	143	80	TOP-0904	
TOP 2056-60-50T2-11CA	56	50	64	236	120	156	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	57	50	64	236	120	156	80	TOP-0901	
	58	50	64	236	120	156	80	TOP-0902	
	59	50	64	236	120	156	80	TOP-0903	
	60	50	64	236	120	156	80	TOP-0904	
TOP 2061-65-50T2-11CA	61	50	69	249	130	169	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	62	50	69	249	130	169	80	TOP-0901	
	63	50	69	249	130	169	80	TOP-0902	
	64	50	69	249	130	169	80	TOP-0903	
	65	50	69	249	130	169	80	TOP-0904	
TOP 2066-70-50T2-11CA	66	50	69	262	140	182	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	67	50	69	262	140	182	80	TOP-0901	
	68	50	69	262	140	182	80	TOP-0902	
	69	50	69	262	140	182	80	TOP-0903	
	70	50	69	262	140	182	80	TOP-0904	
TOP 2071-75-50T2-13CA	71	50	74	275	150	195	80	-	SOMT 13… DP/DL/DK/DA D195-D196
	72	50	74	275	150	195	80	TOP-0901	
	73	50	74	275	150	195	80	TOP-0902	
	74	50	74	275	150	195	80	TOP-0903	
	75	50	74	275	150	195	80	TOP-0904	
TOP 2076-80-50T2-13CA	76	50	74	288	160	208	80	-	SOMT 13… DP/DL/DK/DA D195-D196
	77	50	74	288	160	208	80	TOP-0901	
	78	50	74	288	160	208	80	TOP-0902	
	79	50	74	288	160	208	80	TOP-0903	
	80	50	74	288	160	208	80	TOP-0904	

Cutting Condition D246

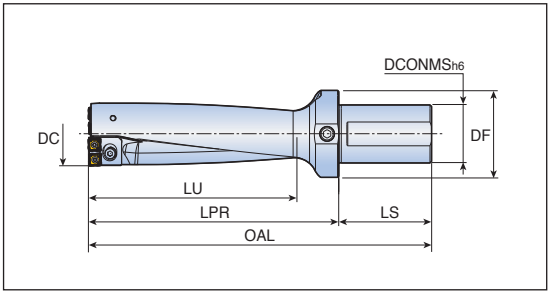
▸ OAL: LPR+LS

ADVANCE CUTTING TaeguTec

TOP 30…CA

Indexable drill holders for cartridge

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Setting Plate	Insert
	DC	DCONMS	DF	OAL	LU	LPR	LS		
TOP 3051-55-50T2-09CA	51	50	64	278	165	198	80	-	SOMT 09… DP/DL/DK/DA D195-D196
	52	50	64	278	165	198	80	TOP-0901	
	53	50	64	278	165	198	80	TOP-0902	
	54	50	64	278	165	198	80	TOP-0903	
	55	50	64	278	165	198	80	TOP-0904	
TOP 3056-60-50T2-11CA	56	50	64	296	180	216	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	57	50	64	296	180	216	80	TOP-0901	
	58	50	64	296	180	216	80	TOP-0902	
	59	50	64	296	180	216	80	TOP-0903	
	60	50	64	296	180	216	80	TOP-0904	
TOP 3061-65-50T2-11CA	61	50	69	314	195	234	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	62	50	69	314	195	234	80	TOP-0901	
	63	50	69	314	195	234	80	TOP-0902	
	64	50	69	314	195	234	80	TOP-0903	
	65	50	69	314	195	234	80	TOP-0904	
TOP 3066-70-50T2-11CA	66	50	69	332	210	252	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	67	50	69	332	210	252	80	TOP-0901	
	68	50	69	332	210	252	80	TOP-0902	
	69	50	69	332	210	252	80	TOP-0903	
	70	50	69	332	210	252	80	TOP-0904	
TOP 3071-75-50T2-13CA	71	50	74	350	225	270	80	-	SOMT 13… DP/DL/DK/DA D195-D196
	72	50	74	350	225	270	80	TOP-0901	
	73	50	74	350	225	270	80	TOP-0902	
	74	50	74	350	225	270	80	TOP-0903	
	75	50	74	350	225	270	80	TOP-0904	
TOP 3076-80-50T2-13CA	76	50	74	368	240	288	80	-	SOMT 13… DP/DL/DK/DA D195-D196
	77	50	74	368	240	288	80	TOP-0901	
	78	50	74	368	240	288	80	TOP-0902	
	79	50	74	368	240	288	80	TOP-0903	
	80	50	74	368	240	288	80	TOP-0904	

Cutting Condition D246

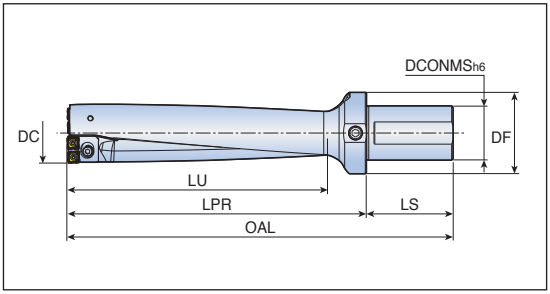
▸ OAL: LPR+LS

TOP 40…CA

TOPDRILL

Indexable drill holders for cartridge

• Drilling depth: 4xdiameter



Designation	Dimension (mm)							Setting Plate	Insert
	DC	DCONMS	DF	OAL	LU	LPR	LS		
TOP 4051-55-50T2-09CA	51	50	64	333	220	253	80	-	SOMT 09… DP/DL/DK/DA D195-D196
	52	50	64	333	220	253	80	TOP-0901	
	53	50	64	333	220	253	80	TOP-0902	
	54	50	64	333	220	253	80	TOP-0903	
	55	50	64	333	220	253	80	TOP-0904	
TOP 4056-60-50T2-11CA	56	50	64	356	240	276	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	57	50	64	356	240	276	80	TOP-0901	
	58	50	64	356	240	276	80	TOP-0902	
	59	50	64	356	240	276	80	TOP-0903	
	60	50	64	356	240	276	80	TOP-0904	
TOP 4061-65-50T2-11CA	61	50	69	379	260	299	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	62	50	69	379	260	299	80	TOP-0901	
	63	50	69	379	260	299	80	TOP-0902	
	64	50	69	379	260	299	80	TOP-0903	
	65	50	69	379	260	299	80	TOP-0904	
TOP 4066-70-50T2-11CA	66	50	69	402	280	322	80	-	SOMT 11… DP/DL/DK/DA D195-D196
	67	50	69	402	280	322	80	TOP-0901	
	68	50	69	402	280	322	80	TOP-0902	
	69	50	69	402	280	322	80	TOP-0903	
	70	50	69	402	280	322	80	TOP-0904	
TOP 4071-75-50T2-13CA	71	50	74	425	300	345	80	-	SOMT 13… DP/DL/DK/DA D195-D196
	72	50	74	425	300	345	80	TOP-0901	
	73	50	74	425	300	345	80	TOP-0902	
	74	50	74	425	300	345	80	TOP-0903	
	75	50	74	425	300	345	80	TOP-0904	
TOP 4076-80-50T2-13CA	76	50	74	448	320	368	80	-	SOMT 13… DP/DL/DK/DA D195-D196
	77	50	74	448	320	368	80	TOP-0901	
	78	50	74	448	320	368	80	TOP-0902	
	79	50	74	448	320	368	80	TOP-0903	
	80	50	74	448	320	368	80	TOP-0904	

Cutting Condition D246

▸ OAL: LPR+LS

ADVANCE CUTTING TaeguTec

Indexable drill holders for cartridge

Spare parts

Designation	Insert	Insert screw	Cartridge for peripheral	Cartridge for center
TOP ..51-55-50T2-09CA	SOMT 09	TS 35088I	TOP 09CA-P1	TOP 09CA-C1
TOP ..56-60-50T2-11CA	SOMT 09	TS 35088I	TOP 11CA-P1	TOP 11CA-C1
TOP ..61-65-50T2-11CA	SOMT 11	TS 35088I	TOP 11CA-P2	TOP 11CA-C2
TOP ..66-70-50T2-11CA	SOMT 11	TS 35088I	TOP 11CA-P3	TOP 11CA-C3
TOP ..71-75-50T2-13CA	SOMT 13	TS 40093I	TOP 13CA-P1	TOP 13CA-C1
TOP ..76-80-50T2-13CA	SOMT 13	TS 40093I	TOP 13CA-P2	TOP 13CA-C2

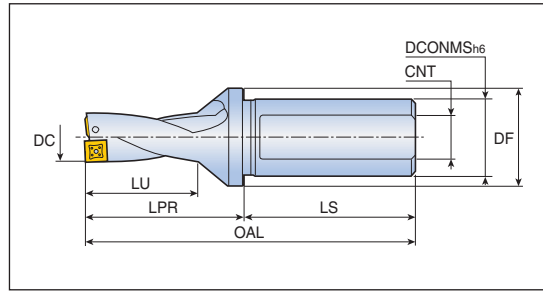
Spare parts for cartridge

Designation	Cartridge clamping screw	Washer	Setting plate screw
TOP 09CA-P1	SH M4x0.7x16	MW 4.3x8	TS 20043I/HG-P
TOP 09CA-C1	SH M4x0.7x16	MW 4.3x8	-
TOP 11CA-P1	SH M5x0.8x16	MW 5.5x10	TS 20043I/HG-P
TOP 11CA-C1	SH M5x0.8x16	MW 5.5x10	-
TOP 11CA-P2	SH M5x0.8x16	MW 5.5x10	TS 20043I/HG-P
TOP 11CA-C2	SH M5x0.8x16	MW 5.5x10	-
TOP 11CA-P3	SH M5x0.8x16	MW 5.5x10	TS 20043I/HG-P
TOP 11CA-C3	SH M5x0.8x16	MW 5.5x10	-
TOP 13CA-P1	SH M6x1.0x20	MW 6.4x12	TS 20043I/HG-P
TOP 13CA-C1	SH M6x1.0x20	MW 6.4x12	-
TOP 13CA-P2	SH M6x1.0x20	MW 6.4x12	TS 20043I/HG-P
TOP 13CA-C2	SH M6x1.0x20	MW 6.4x12	-

TDR 2...-T2

Indexable drill holders

• Drilling depth: 2xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 2125-20T2-05	12.5	20	25	26	44	50	M13X1.0	SPMG 05...
2130-20T2-05	13.0	20	25	26	44	50	M13X1.0	DG/DK
2135-20T2-05	13.5	20	25	28	46	50	M13X1.0	SPGG 05..DA
2140-20T2-05	14.0	20	25	28	46	50	M13X1.0	D197-D198
2145-20T2-05	14.5	20	25	30	49	50	M13X1.0	
2150-20T2-05	15.0	20	25	30	49	50	M13X1.0	
2155-25T2-06	15.5	25	32	32	52	56	M16X1.5	SPMG 06...
2160-25T2-06	16.0	25	32	32	52	56	M16X1.5	DG/DK
2165-25T2-06	16.5	25	32	34	54	56	M16X1.5	SPGG 06..DA
2170-25T2-06	17.0	25	32	34	54	56	M16X1.5	D197-D198
2175-25T2-06	17.5	25	32	36	57	56	M16X1.5	
2180-25T2-06	18.0	25	32	36	57	56	M16X1.5	
2185-25T2-06	18.5	25	32	38	59	56	M16X1.5	
2190-25T2-06	19.0	25	32	38	59	56	M16X1.5	
2195-25T2-06	19.5	25	32	40	63	56	M16X1.5	
2200-25T2-06	20.0	25	32	40	63	56	M16X1.5	
2205-25T2-06	20.5	25	32	42	65	56	M16X1.5	
2210-25T2-06	21.0	25	32	42	65	56	M16X1.5	
2215-25T2-06	21.5	25	32	44	67	56	M16X1.5	
2220-25T2-07	22.0	25	32	44	67	56	M16X1.5	SPMG 07...
2225-25T2-07	22.5	25	32	46	71	56	M16X1.5	DG/DK
2225-32T2-07	22.5	32	40	46	71	60	M22X2.0	SPGG 07..DA
2230-25T2-07	23.0	25	32	46	71	56	M16X1.5	D197-D198
2230-32T2-07	23.0	32	40	46	71	60	M22X2.0	
2235-25T2-07	23.5	25	32	48	74	56	M16X1.5	
2235-32T2-07	23.5	32	40	48	74	60	M22X2.0	
2240-25T2-07	24.0	25	32	48	74	56	M16X1.5	
2240-32T2-07	24.0	32	40	48	74	60	M22X2.0	
2245-25T2-07	24.5	25	32	50	77	56	M16X1.5	
2245-32T2-07	24.5	32	40	50	77	60	M22X2.0	
2250-25T2-07	25.0	25	32	50	77	56	M16X1.5	
2250-32T2-07	25.0	32	40	50	77	60	M22X2.0	
2255-25T2-07	25.5	25	32	52	79	56	M16X1.5	
2255-32T2-07	25.5	32	40	52	79	60	M22X2.0	
2260-25T2-07	26.0	25	32	52	79	56	M16X1.5	

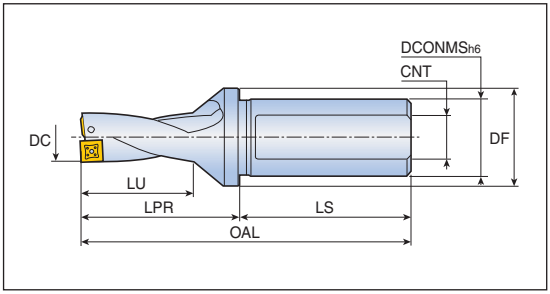
Cutting Condition D248

▸ OAL: LPR+LS

TDR 2...-T2

Indexable drill holders

• Drilling depth: 2xdiameter



Designation		Dimension (mm)							Insert
		DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR	2260-32T2-07	26.0	32	40	52	79	60	M22X2.0	SPMG 07...
	2265-25T2-07	26.5	25	32	54	81	56	M16X1.5	DG/DK
	2265-32T2-07	26.5	32	40	54	81	60	M22X2.0	SPGG 07..DA
	2270-25T2-07	27.0	25	32	54	81	56	M16X1.5	D197-D198
	2270-32T2-07	27.0	32	40	54	81	60	M22X2.0	
	2275-25T2-07	27.5	25	32	56	84	56	Rc 1/8	
	2275-32T2-07	27.5	32	40	56	84	60	Rc 1/4	
	2280-25T2-09	28.0	25	40	56	84	56	Rc 1/8	SPMG 09...
	2280-32T2-09	28.0	32	40	56	84	60	Rc 1/4	DG/DK
	2285-25T2-09	28.5	25	40	58	86	56	Rc 1/8	SPGG 09..DA
	2285-32T2-09	28.5	32	40	58	86	60	Rc 1/4	D197-D198
	2290-25T2-09	29.0	25	40	58	86	56	Rc 1/8	
	2290-32T2-09	29.0	32	40	58	86	60	Rc 1/4	
	2295-32T2-09	29.5	32	40	60	91	60	Rc 1/4	
	2295-40T2-09	29.5	40	50	60	91	70	Rc 1/4	
	2300-32T2-09	30.0	32	40	60	91	60	Rc 1/4	
	2300-40T2-09	30.0	40	50	60	91	70	Rc 1/4	
	2305-32T2-09	30.5	32	40	62	94	60	Rc 1/4	
	2305-40T2-09	30.5	40	50	62	94	70	Rc 1/4	
	2310-32T2-09	31.0	32	40	62	94	60	Rc 1/4	
	2310-40T2-09	31.0	40	50	62	94	70	Rc 1/4	
	2315-32T2-09	31.5	32	40	64	96	60	Rc 1/4	
	2315-40T2-09	31.5	40	50	64	96	70	Rc 1/4	
	2320-32T2-09	32.0	32	40	64	96	60	Rc 1/4	
	2320-40T2-09	32.0	40	50	64	96	70	Rc 1/4	
	2325-32T2-09	32.5	32	40	66	99	60	Rc 1/4	
	2325-40T2-09	32.5	40	50	66	99	70	Rc 1/4	
	2330-32T2-09	33.0	32	40	66	99	60	Rc 1/4	
	2330-40T2-09	33.0	40	50	66	99	70	Rc 1/4	
	2340-32T2-11	34.0	32	50	68	101	60	Rc 1/4	SPMG 11...
	2340-40T2-11	34.0	40	55	68	101	70	Rc 1/4	DG/DK
	2350-32T2-11	35.0	32	50	70	104	60	Rc 1/4	SPGG 11..DA
	2350-40T2-11	35.0	40	55	70	104	70	Rc 1/4	D197-D198
	2360-32T2-11	36.0	32	50	72	107	60	Rc 1/4	
	2360-40T2-11	36.0	40	55	72	107	70	Rc 1/4	

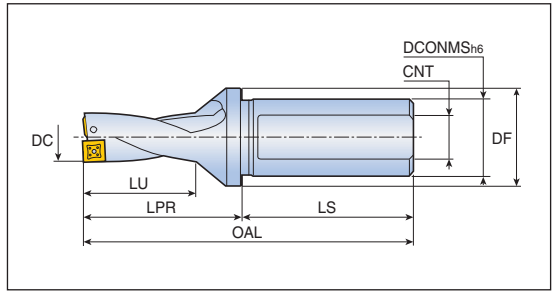
Cutting Condition D248

▸ OAL: LPR+LS

TDR 2...-T2

Indexable drill holders

• Drilling depth: 2xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 2370-32T2-11	37.0	32	50	74	110	60	Rc 1/4	SPMG 11...
2370-40T2-11	37.0	40	55	74	110	70	Rc 1/4	DG/DK
2380-32T2-11	38.0	32	50	76	113	60	Rc 1/4	SPGG 11..DA
2380-40T2-11	38.0	40	55	76	113	70	Rc 1/4	D197-D198
2390-32T2-11	39.0	32	50	78	115	60	Rc 1/4	
2390-40T2-11	39.0	40	55	78	115	70	Rc 1/4	
2400-32T2-11	40.0	32	50	80	118	60	Rc 1/4	
2400-40T2-11	40.0	40	55	80	118	70	Rc 1/4	
2410-40T2-11	41.0	40	55	82	121	70	Rc 1/4	
2420-40T2-14	42.0	40	60	84	123	70	Rc 1/4	SPMG 14...
2430-40T2-14	43.0	40	60	86	126	70	Rc 1/4	DG/DK
2440-40T2-14	44.0	40	60	88	128	70	Rc 1/4	SPGG 14..DA
2450-40T2-14	45.0	40	60	90	132	70	Rc 1/4	D197-D198
2460-40T2-14	46.0	40	60	92	135	70	Rc 1/4	
2470-40T2-14	47.0	40	60	94	137	70	Rc 1/4	
2480-40T2-14	48.0	40	60	96	140	70	Rc 1/4	
2490-40T2-14	49.0	40	60	98	142	70	Rc 1/4	
2500-40T2-14	50.0	40	60	100	145	70	Rc 1/4	

▸ OAL: LPR+LS

Spare parts

Designation	Screw	Wrench	Plug*	
TDR 2125 - 2150	TS 20043I/HG-P	TD 6P	SL 20 M	
TDR 2155 - 2215	TS 22052I/HG	TD 7	SL 25 M	
TDR 2220 - 2270	TS 25064I	TD 8	SL 25 M / SL 32 M	
TDR 2275	TS 25064I	TD 8	-	
TDR 2280 - 2330	TS 35088I	TD 10	-	
TDR 2340 - 2390	TS 40093I	TD 15	-	
TDR 2400 - 2410	TS 40093I	TD 15	-	
TDR 2420 - 2500	SO 50090I	TD 20	-	

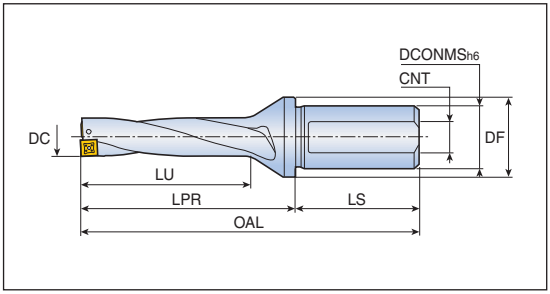
Cutting Condition D248

▸ *Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm: SL 25M

TDR 3...-T2

Indexable drill holders

• Drilling depth: 3xdiameter



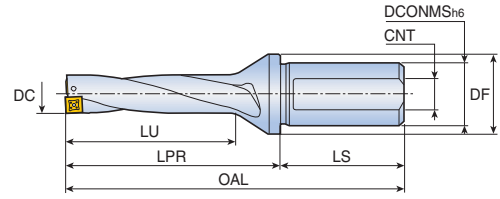
Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 3125-20T2-05	12.5	20	25	39	57	50	M13X1.0	SPMG 05...
3130-20T2-05	13.0	20	25	39	57	50	M13X1.0	DG/DK
3135-20T2-05	13.5	20	25	42	60	50	M13X1.0	SPGG 05..DA
3140-20T2-05	14.0	20	25	42	60	50	M13X1.0	D197-D198
3145-20T2-05	14.5	20	25	45	64	50	M13X1.0	
3150-20T2-05	15.0	20	25	45	64	50	M13X1.0	
3155-25T2-06	15.5	25	32	48	68	56	M16X1.5	SPMG 06...
3160-25T2-06	16.0	25	32	48	68	56	M16X1.5	DG/DK
3165-25T2-06	16.5	25	32	51	71	56	M16X1.5	SPGG 06..DA
3170-25T2-06	17.0	25	32	51	71	56	M16X1.5	D197-D198
3175-25T2-06	17.5	25	32	54	75	56	M16X1.5	
3180-25T2-06	18.0	25	32	54	75	56	M16X1.5	
3185-25T2-06	18.5	25	32	57	78	56	M16X1.5	
3190-25T2-06	19.0	25	32	57	78	56	M16X1.5	
3195-25T2-06	19.5	25	32	60	83	56	M16X1.5	
3200-25T2-06 *	20.0	25	32	60	83	56	M16X1.5	
3205-25T2-06	20.5	25	32	63	86	56	M16X1.5	
3209-25T2-06 *	20.9	25	32	63	86	56	M16X1.5	
3210-25T2-06	21.0	25	32	63	86	56	M16X1.5	
3215-25T2-06	21.5	25	32	66	89	56	M16X1.5	
3220-25T2-07	22.0	25	32	66	89	56	M16X1.5	SPMG 07...
3225-25T2-07	22.5	25	32	69	94	56	M16X1.5	DG/DK
3225-32T2-07	22.5	32	40	69	94	60	M22X2.0	SPGG 07..DA
3230-25T2-07	23.0	25	32	69	94	56	M16X1.5	D197-D198
3230-32T2-07	23.0	32	40	69	94	60	M22X2.0	
3235-25T2-07	23.5	25	32	72	98	56	M16X1.5	
3235-32T2-07	23.5	32	40	72	98	60	M22X2.0	
3239-25T2-07 *	23.9	25	32	72	98	56	M16X1.5	
3239-32T2-07 *	23.9	32	40	72	98	60	M22X2.0	
3240-25T2-07	24.0	25	32	72	98	56	M16X1.5	
3240-32T2-07	24.0	32	40	72	98	60	M22X2.0	
3245-25T2-07	24.5	25	32	75	102	56	M16X1.5	
3245-32T2-07	24.5	32	40	75	102	60	M22X2.0	
3250-25T2-07	25.0	25	32	75	102	56	M16X1.5	
3250-32T2-07	25.0	32	40	75	102	60	M22X2.0	

Cutting Condition D248

- *: Pre-thread hole making
- OAL: LPR+LS

TDR 3...-T2

Indexable drill holders



• Drilling depth: 3xdiameter

Designation		Dimension (mm)							Insert
		DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR	**3255-25T2-07**	25.5	25	32	78	105	56	M16X1.5	SPMG 07...
	3255-32T2-07	25.5	32	40	78	105	60	M22X2.0	DG/DK
	3260-25T2-07	26.0	25	32	78	105	56	M16X1.5	SPGG 07..DA
	3260-32T2-07	26.0	32	40	78	105	60	M22X2.0	D197-D198
	3264-25T2-07 *	26.4	25	45	81	108	56	M16X1.5	
	3264-32T2-07 *	26.4	32	45	81	108	60	M22X2.0	
	3265-25T2-07	26.5	25	32	81	108	56	M16X1.5	
	3265-32T2-07	26.5	32	40	81	108	60	M22X2.0	
	3270-25T2-07	27.0	25	32	81	108	56	M16X1.5	
	3270-32T2-07	27.0	32	40	81	108	60	M22X2.0	
	3275-25T2-07	27.5	25	32	84	112	56	Rc 1/8	
	3275-32T2-07	27.5	32	40	84	112	60	Rc 1/4	
	3280-25T2-09	28.0	25	40	84	112	56	Rc 1/8	SPMG 09...
	3280-32T2-09	28.0	32	40	84	112	60	Rc 1/4	DG/DK
	3285-25T2-09	28.5	25	40	87	115	56	Rc 1/8	SPGG 09..DA
	3285-32T2-09	28.5	32	40	87	115	56	Rc 1/4	D197-D198
	3290-25T2-09	29.0	25	40	87	115	56	Rc 1/8	
	3290-32T2-09	29.0	32	40	87	115	60	Rc 1/4	
	3294-32T2-09 *	29.4	32	55	90	121	60	Rc 1/4	
	3294-40T2-09 *	29.4	40	55	90	121	70	Rc 1/4	
	3295-32T2-09	29.5	32	40	90	121	60	Rc 1/4	
	3295-40T2-09	29.5	40	50	90	121	70	Rc 1/4	
	3300-32T2-09	30.0	32	40	90	121	60	Rc 1/4	
	3300-40T2-09	30.0	40	50	90	121	70	Rc 1/4	
	3305-32T2-09	30.5	32	40	93	125	60	Rc 1/4	
	3305-40T2-09	30.5	40	50	93	125	70	Rc 1/4	
	3310-32T2-09	31.0	32	40	93	125	60	Rc 1/4	
	3310-40T2-09	31.0	40	50	93	125	70	Rc 1/4	
	3315-32T2-09	31.5	32	40	96	128	60	Rc 1/4	
	3315-40T2-09	31.5	40	50	96	128	70	Rc 1/4	
	3320-32T2-09	32.0	32	40	96	128	60	Rc 1/4	
	3320-40T2-09	32.0	40	50	96	128	70	Rc 1/4	

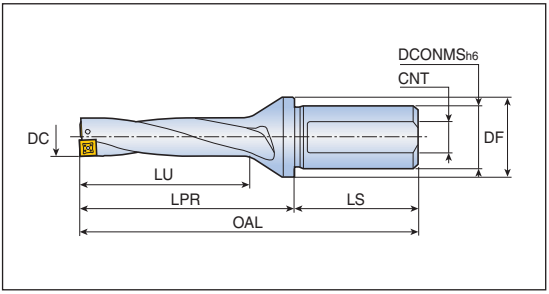
Cutting Condition D248

- *: Pre-thread hole making
- OAL: LPR+LS

TDR 3...-T2

Indexable drill holders

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 3325-32T2-09	32.5	32	40	99	132	60	Rc 1/4	SPMG 09... DG/DK SPGG 09..DA D197-D198
3325-40T2-09	32.5	40	50	99	132	70	Rc 1/4	
3330-32T2-09	33.0	32	40	99	132	60	Rc 1/4	
3330-40T2-09	33.0	40	50	99	132	70	Rc 1/4	
3340-32T2-11	34.0	32	50	102	135	60	Rc 1/4	SPMG 11... DG/DK SPGG 09..DA D197-D198
3340-40T2-11	34.0	40	55	102	135	70	Rc 1/4	
3350-32T2-11	35.0	32	50	105	139	60	Rc 1/4	
3350-40T2-11	35.0	40	55	105	139	70	Rc 1/4	
3360-32T2-11	36.0	32	50	108	143	60	Rc 1/4	
3360-40T2-11	36.0	40	55	108	143	70	Rc 1/4	
3370-32T2-11	37.0	32	50	111	147	60	Rc 1/4	
3370-40T2-11	37.0	40	55	111	147	70	Rc 1/4	
3375-32T2-11 *	37.5	32	55	114	151	60	Rc 1/4	
3375-40T2-11 *	37.5	40	55	114	151	70	Rc 1/4	
3380-32T2-11	38.0	32	50	114	151	60	Rc 1/4	
3380-40T2-11	38.0	40	55	114	151	70	Rc 1/4	
3390-32T2-11	39.0	32	50	117	154	60	Rc 1/4	
3390-40T2-11	39.0	40	55	117	154	70	Rc 1/4	
3400-32T2-11	40.0	32	50	120	158	60	Rc 1/4	
3400-40T2-11	40.0	40	55	120	158	70	Rc 1/4	
3405-40T2-11 *	40.5	40	60	123	162	70	Rc 1/4	
3410-40T2-11	41.0	40	55	123	162	70	Rc 1/4	

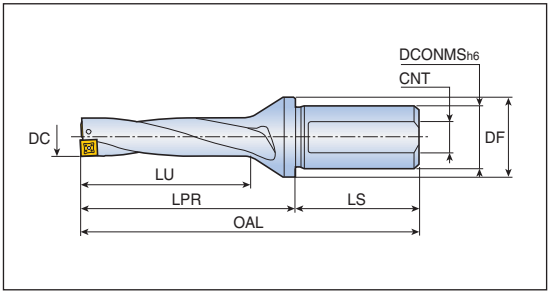
Cutting Condition D248

- *: Pre-thread hole making
- OAL: LPR+LS

TDR 3...-T2

Indexable drill holders

• Drilling depth: 3xdiameter



Designation		Dimension (mm)							Insert
		DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR	**3420-40T2-14**	42.0	40	60	126	165	70	Rc 1/4	SPMG 14...
	3430-40T2-14	43.0	40	60	129	169	70	Rc 1/4	DG/DK
	3440-40T2-14	44.0	40	60	132	172	70	Rc 1/4	SPGG 14..DA
	3450-40T2-14	45.0	40	60	135	177	70	Rc 1/4	D197-D198
	3460-40T2-14	46.0	40	60	138	181	70	Rc 1/4	
	3470-40T2-14	47.0	40	60	141	184	70	Rc 1/4	
	3480-40T2-14	48.0	40	60	144	188	70	Rc 1/4	
	3490-40T2-14	49.0	40	60	147	191	70	Rc 1/4	
	3500-40T2-14	50.0	40	60	150	195	70	Rc 1/4	

▸ OAL: LPR+LS

Spare parts

Designation	Screw	Wrench	Plug*	
TDR 3125 - 3150	TS 20043I/HG-P	TD 6P	SL 20 M	
TDR 3155 - 3215	TS 22052I/HG	TD 7	SL 25 M	
TDR 3220 - 3270	TS 25064I	TD 8	SL 25 M / SL 32 M	
TDR 3275	TS 25064I	TD 8	-	
TDR 3280 - 3330	TS 35088I	TD 10	-	
TDR 3340 - 3390	TS 40093I	TD 15	-	
TDR 3400 - 3410	TS 40093I	TD 15	-	
TDR 3420 - 3500	SO 50090I	TD 20	-	

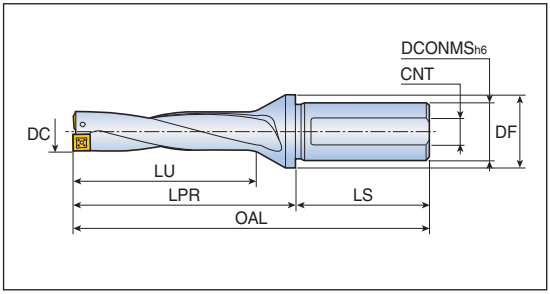
Cutting Condition D248

▸ *Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm : SL 25M

TDR 4...-T2

Indexable drill holders

• Drilling depth: 4xdiameter



Designation		Dimension (mm)							Insert
		DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR	4125-20T2-05	12.5	20	25	52	70	50	M13X1.0	SPMG 05...
	4130-20T2-05	13.0	20	25	52	70	50	M13X1.0	DG/DK
	4135-20T2-05	13.5	20	25	56	74	50	M13X1.0	SPGG 05..DA
	4140-20T2-05	14.0	20	25	56	74	50	M13X1.0	D197-D198
	4145-20T2-05	14.5	20	25	60	79	50	M13X1.0	
	4150-20T2-05	15.0	20	25	60	79	50	M13X1.0	
	4155-25T2-06	15.5	25	32	64	84	56	M16X1.5	SPMG 06...
	4160-25T2-06	16.0	25	32	64	84	56	M16X1.5	DG/DK
	4165-25T2-06	16.5	25	32	68	88	56	M16X1.5	SPGG 06..DA
	4170-25T2-06	17.0	25	32	68	88	56	M16X1.5	D197-D198
	4175-25T2-06	17.5	25	32	72	93	56	M16X1.5	
	4180-25T2-06	18.0	25	32	72	93	56	M16X1.5	
	4185-25T2-06	18.5	25	32	76	97	56	M16X1.5	
	4190-25T2-06	19.0	25	32	76	97	56	M16X1.5	
	4195-25T2-06	19.5	25	32	80	103	56	M16X1.5	
	4200-25T2-06	20.0	25	32	80	103	56	M16X1.5	
	4205-25T2-06	20.5	25	32	84	107	56	M16X1.5	
	4210-25T2-06	21.0	25	32	84	107	56	M16X1.5	
	4215-25T2-06	21.5	25	32	88	111	56	M16X1.5	
	4220-25T2-07	22.0	25	32	88	111	56	M16X1.5	SPMG 07...
	4225-25T2-07	22.5	25	32	92	117	56	M16X1.5	DG/DK
	4225-32T2-07	22.5	32	40	92	117	60	M22X2.0	SPGG 07..DA
	4230-25T2-07	23.0	25	32	92	117	56	M16X1.5	D197-D198
	4230-32T2-07	23.0	32	40	92	117	60	M22X2.0	
	4235-25T2-07	23.5	25	32	96	122	56	M16X1.5	
	4235-32T2-07	23.5	32	40	96	122	60	M22X2.0	
	4240-25T2-07	24.0	25	32	96	122	56	M16X1.5	
	4240-32T2-07	24.0	32	40	96	122	60	M22X2.0	
	4245-25T2-07	24.5	25	32	100	127	56	M16X1.5	
	4245-32T2-07	24.5	32	40	100	127	60	M22X2.0	
	4250-25T2-07	25.0	25	32	100	127	56	M16X1.5	
	4250-32T2-07	25.0	32	40	100	127	60	M22X2.0	
	4255-25T2-07	25.5	25	32	104	131	56	M16X1.5	
	4255-32T2-07	25.5	32	40	104	131	60	M22X2.0	
	4260-25T2-07	26.0	25	32	104	131	56	M16X1.5	

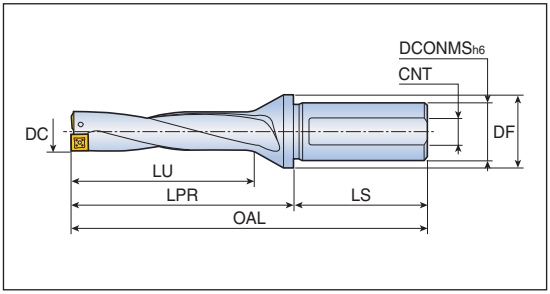
Cutting Condition D248

▸ OAL: LPR+LS

TDR 4...-T2

Indexable drill holders

• Drilling depth: 4xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 4260-32T2-07	26.0	32	40	104	131	60	M22X2.0	SPMG 07...
4265-25T2-07	26.5	25	32	108	135	56	M16X1.5	DG/DK
4265-32T2-07	26.5	32	40	108	135	60	M22X2.0	SPGG 07..DA
4270-25T2-07	27.0	25	32	108	135	56	M16X1.5	D197-D198
4270-32T2-07	27.0	32	40	108	135	60	M22X2.0	
4275-25T2-07	27.5	25	32	112	140	56	Rc 1/8	
4275-32T2-07	27.5	32	40	112	140	60	Rc 1/4	
4280-25T2-09	28.0	25	40	112	140	56	Rc 1/8	SPMG 09...
4280-32T2-09	28.0	32	40	112	140	60	Rc 1/4	DG/DK
4285-25T2-09	28.5	25	40	116	144	56	Rc 1/8	SPGG 09..DA
4285-32T2-09	28.5	32	40	116	144	60	Rc 1/4	D197-D198
4290-25T2-09	29.0	25	40	116	144	56	Rc 1/8	
4290-32T2-09	29.0	32	40	116	144	60	Rc 1/4	
4295-32T2-09	29.5	32	40	120	151	60	Rc 1/4	
4295-40T2-09	29.5	40	50	120	151	70	Rc 1/4	
4300-32T2-09	30.0	32	40	120	151	60	Rc 1/4	
4300-40T2-09	30.0	40	50	120	151	70	Rc 1/4	
4305-32T2-09	30.5	32	40	124	156	60	Rc 1/4	
4305-40T2-09	30.5	40	50	124	156	70	Rc 1/4	
4310-32T2-09	31.0	32	40	124	156	60	Rc 1/4	
4310-40T2-09	31.0	40	50	124	156	70	Rc 1/4	
4315-32T2-09	31.5	32	40	128	160	60	Rc 1/4	
4315-40T2-09	31.5	40	50	128	160	70	Rc 1/4	
4320-32T2-09	32.0	32	40	128	160	60	Rc 1/4	
4320-40T2-09	32.0	40	50	128	160	70	Rc 1/4	
4325-32T2-09	32.5	32	40	132	165	60	Rc 1/4	
4325-40T2-09	32.5	40	50	132	165	70	Rc 1/4	
4330-32T2-09	33.0	32	40	132	165	60	Rc 1/4	
4330-40T2-09	33.0	40	50	132	165	70	Rc 1/4	
4340-32T2-11	34.0	32	50	136	169	60	Rc 1/4	SPMG 11...
4340-40T2-11	34.0	40	55	136	169	70	Rc 1/4	DG/DK
4350-32T2-11	35.0	32	50	140	174	60	Rc 1/4	SPGG 11..DA
4350-40T2-11	35.0	40	55	140	174	70	Rc 1/4	D197-D198
4360-32T2-11	36.0	32	50	144	179	60	Rc 1/4	
4360-40T2-11	36.0	40	55	144	179	70	Rc 1/4	

Cutting Condition D248

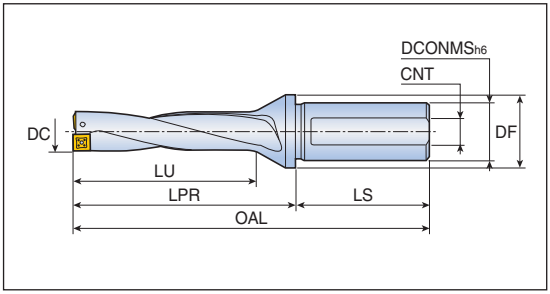
▸ OAL: LPR+LS

ADVANCE CUTTING TaeguTec

TDR 4...-T2

Indexable drill holders

• Drilling depth: 4xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 4370-32T2-11	37.0	32	50	148	184	60	Rc 1/4	SPMG 11...
4370-40T2-11	37.0	40	55	148	184	70	Rc 1/4	DG/DK
4380-32T2-11	38.0	32	50	152	189	60	Rc 1/4	SPGG 11..DA
4380-40T2-11	38.0	40	55	152	189	70	Rc 1/4	D197-D198
4390-32T2-11	39.0	32	50	156	193	60	Rc 1/4	
4390-40T2-11	39.0	40	55	156	193	70	Rc 1/4	
4400-32T2-11	40.0	32	50	160	198	60	Rc 1/4	
4400-40T2-11	40.0	40	55	160	198	70	Rc 1/4	
4410-40T2-11	41.0	40	55	164	203	70	Rc 1/4	
4420-40T2-14	42.0	40	60	168	207	70	Rc 1/4	SPMG 14...
4430-40T2-14	43.0	40	60	172	212	70	Rc 1/4	DG/DK
4440-40T2-14	44.0	40	60	176	216	70	Rc 1/4	SPGG 14..DA
4450-40T2-14	45.0	40	60	180	222	70	Rc 1/4	D197-D198
4460-40T2-14	46.0	40	60	184	227	70	Rc 1/4	
4470-40T2-14	47.0	40	60	188	231	70	Rc 1/4	
4480-40T2-14	48.0	40	60	192	236	70	Rc 1/4	
4490-40T2-14	49.0	40	60	196	240	70	Rc 1/4	
4500-40T2-14	50.0	40	60	200	245	70	Rc 1/4	

▸ OAL = LPR+LS

Spare parts

Designation	Screw	Wrench	Plug*	
TDR 4125 - 4150	TS 20043I/HG-P	TD 6P	SL 20 M	
TDR 4155 - 4215	TS 22052I/HG	TD 7	SL 25 M	
TDR 4220 - 4270	TS 25064I	TD 8	SL 25 M / SL 32 M	
TDR 4275	TS 25064I	TD 8	-	
TDR 4280 - 4330	TS 35088I	TD 10	-	
TDR 4340 - 4390	TS 40093I	TD 15	-	
TDR 4400 - 4410	TS 40093I	TD 15	-	
TDR 4420 - 4500	SO 50090I	TD 20	-	

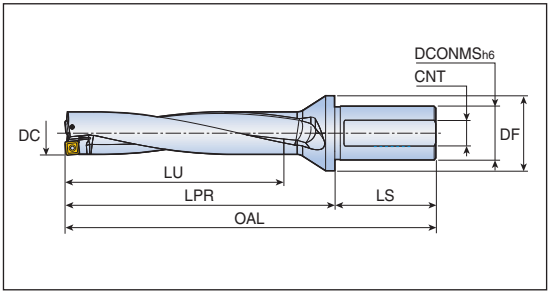
Cutting Condition D248

▸ *Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm: SL 25M

TDR 5...-T2

Indexable drill holders

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 5125-20T2-05	12.5	20	25	65	83	50	M13X1.0	SPMG 05...
5130-20T2-05	13.0	20	25	65	83	50	M13X1.0	DG/DK
5135-20T2-05	13.5	20	25	70	88	50	M13X1.0	SPGG 05..DA
5140-20T2-05	14.0	20	25	70	88	50	M13X1.0	D197-D198
5145-20T2-05	14.5	20	25	75	94	50	M13X1.0	
5150-20T2-05	15.0	20	25	75	94	50	M13X1.0	
5155-25T2-06	15.5	25	32	80	100	56	M16X1.5	SPMG 06...
5160-25T2-06	16.0	25	32	80	100	56	M16X1.5	DG/DK
5165-25T2-06	16.5	25	32	85	105	56	M16X1.5	SPGG 06..DA
5170-25T2-06	17.0	25	32	85	105	56	M16X1.5	D197-D198
5175-25T2-06	17.5	25	32	90	111	56	M16X1.5	
5180-25T2-06	18.0	25	32	90	111	56	M16X1.5	
5185-25T2-06	18.5	25	32	95	116	56	M16X1.5	
5190-25T2-06	19.0	25	32	95	116	56	M16X1.5	
5195-25T2-06	19.5	25	32	100	123	56	M16X1.5	
5200-25T2-06	20.0	25	32	100	123	56	M16X1.5	
5205-25T2-06	20.5	25	32	105	128	56	M16X1.5	
5210-25T2-06	21.0	25	32	105	128	56	M16X1.5	
5215-25T2-06	21.5	25	32	110	133	56	M16X1.5	
5220-25T2-07	22.0	25	32	110	133	56	M22X2.0	SPMG 07...
5225-32T2-07	22.5	32	40	115	140	60	M22X2.0	DG/DK
5230-32T2-07	23.0	32	40	115	140	60	M22X2.0	SPGG 07..DA
5235-32T2-07	23.5	32	40	120	146	60	M22X2.0	D197-D198
5240-32T2-07	24.0	32	40	120	146	60	M22X2.0	
5245-32T2-07	24.5	32	40	125	152	60	M22X2.0	
5250-32T2-07	25.0	32	40	125	152	60	M22X2.0	
5255-32T2-07	25.5	32	40	130	157	60	M22X2.0	
5260-32T2-07	26.0	32	40	130	157	60	M22X2.0	
5265-32T2-07	26.5	32	40	135	162	60	M22X2.0	
5270-32T2-07	27.0	32	40	135	162	60	M22X2.0	
5275-32T2-07	27.5	32	40	140	168	60	Rc 1/4	

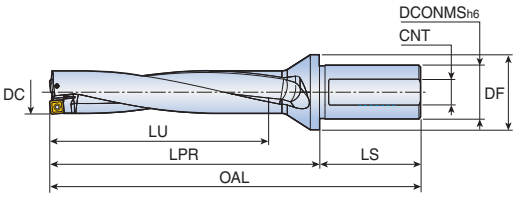
Cutting Condition D250

▸ OAL: LPR+LS

ADVANCE CUTTING TaeguTec

TDR 5...-T2

Indexable drill holders



• Drilling depth: 5xdiameter

Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 5280-32T2-09	28.0	32	40	140	168	60	Rc 1/4	SPMG 09...
5285-32T2-09	28.5	32	40	145	173	60	Rc 1/4	DG/DK
5290-32T2-09	29.0	32	40	145	173	60	Rc 1/4	SPGG 09..DA
5295-32T2-09	29.5	32	40	150	181	60	Rc 1/4	D197-D198
5300-32T2-09	30.0	32	40	150	181	60	Rc 1/4	
5300-40T2-09	30.0	40	50	150	181	70	Rc 1/4	
5310-32T2-09	31.0	32	40	155	187	60	Rc 1/4	
5310-40T2-09	31.0	40	50	155	187	70	Rc 1/4	
5320-32T2-09	32.0	32	40	160	192	60	Rc 1/4	
5320-40T2-09	32.0	40	50	160	192	70	Rc 1/4	
5330-32T2-09	33.0	32	40	165	198	60	Rc 1/4	
5330-40T2-09	33.0	40	50	165	198	70	Rc 1/4	
5340-32T2-11	34.0	32	50	170	203	60	Rc 1/4	SPMG 11...
5340-40T2-11	34.0	40	55	170	203	70	Rc 1/4	DG/DK
5350-32T2-11	35.0	32	50	175	209	60	Rc 1/4	SPGG 11..DA
5350-40T2-11	35.0	40	55	175	209	70	Rc 1/4	D197-D198
5360-32T2-11	36.0	32	50	180	215	60	Rc 1/4	
5360-40T2-11	36.0	40	55	180	215	70	Rc 1/4	
5370-32T2-11	37.0	32	50	185	221	60	Rc 1/4	
5370-40T2-11	37.0	40	55	185	221	70	Rc 1/4	
5380-32T2-11	38.0	32	50	190	227	60	Rc 1/4	
5380-40T2-11	38.0	40	55	190	227	70	Rc 1/4	
5390-32T2-11	39.0	32	50	195	232	60	Rc 1/4	
5390-40T2-11	39.0	40	55	195	232	70	Rc 1/4	
5400-32T2-11	40.0	32	50	200	238	60	Rc 1/4	
5400-40T2-11	40.0	40	55	200	238	70	Rc 1/4	
5410-40T2-11	41.0	40	55	205	244	70	Rc 1/4	

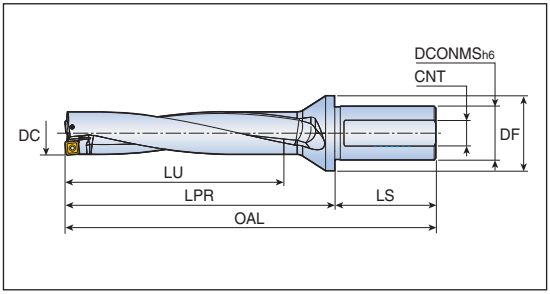
Cutting Condition D250

▸ OAL: LPR+LS

TDR 5...-T2

Indexable drill holders

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Insert
	DC	DCONMS	DF	LU	LPR	LS	CNT	
TDR 5420-40T2-14	42.0	40	60	210	249	70	Rc 1/4	SPMG 14...
5430-40T2-14	43.0	40	60	215	255	70	Rc 1/4	DG/DK
5440-40T2-14	44.0	40	60	220	260	70	Rc 1/4	SPGG 14..DA
5450-40T2-14	45.0	40	60	225	267	70	Rc 1/4	D197-D198
5460-40T2-14	46.0	40	60	230	273	70	Rc 1/4	
5470-40T2-14	47.0	40	60	235	278	70	Rc 1/4	
5480-40T2-14	48.0	40	60	240	284	70	Rc 1/4	
5490-40T2-14	49.0	40	60	245	289	70	Rc 1/4	
5500-40T2-14	50.0	40	60	250	295	70	Rc 1/4	

▸ OAL: LPR+LS

Spare parts

Designation	Screw	Wrench	Plug*	
TDR 5125 - 5150	TS 20043I/HG-P	TD 6P	SL 20 M	
TDR 5155 - 5215	TS 22052I/HG	TD 7	SL 25 M	
TDR 5220 - 5270	TS 25064I	TD 8	SL 25 M / SL 32 M	
TDR 5275	TS 25064I	TD 8	-	
TDR 5280 - 5330	TS 35088I	TD 10	-	
TDR 5340 - 5390	TS 40093I	TD 15	-	
TDR 5400 - 5410	TS 40093I	TD 15	-	
TDR 5420 - 5500	SO 50090I	TD 20	-	

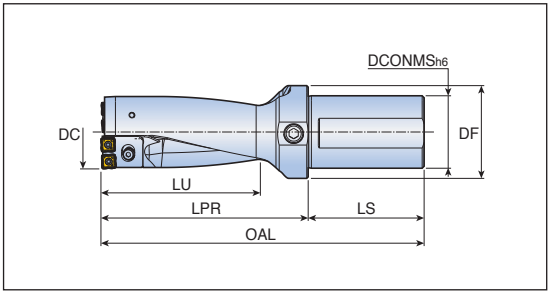
Cutting Condition D250

▸ *Notice: Cooling hole plug for lathe should be ordered separately
Order example) Plug for shank diameter 25.0mm: SL 25M

TDR 25...CA-T

Indexable cartridge drill holders

• Drilling depth: 2.5xdiameter



Designation	Dimension (mm)						Setting plate	Insert
	DC	DCONMS	DF	LU	LPR	LS		
TDR 2551-53-50T2-07CA-T	51	50	64	133	170	80	-	SPMG 07... DG/DK SPGG 07..DA D197-D198
	52	50	64	133	170	80	TDP-0701	
	53	50	64	133	170	80	TDP-0702	
2554-56-50T2-07CA-T	54	50	64	140	180	80	-	SPMG 07... DG/DK SPGG 07..DA D197-D198
	55	50	64	140	180	80	TDP-0701	
	56	50	64	140	180	80	TDP-0702	
2557-62-50T2-09CA-T	57	50	64	155	201	80	-	SPMG 09... DG/DK SPGG 09..DA D197-D198
	58	50	64	155	201	80	TDP-0901	
	59	50	64	155	201	80	TDP-0902	
	60	50	64	155	201	80	TDP-0903	
	61	50	64	155	201	80	TDP-0904	
	62	50	64	155	201	80	TDP-0905	
2563-66-50T2-09CA-T	63	50	69	165	215	80	-	SPMG 09... DG/DK SPGG 09..DA D197-D198
	64	50	69	165	215	80	TDP-0901	
	65	50	69	165	215	80	TDP-0902	
	66	50	69	165	215	80	TDP-0903	
2567-73-50T2-11CA-T	67	50	69	183	240	80	-	SPMG 11... DG/DK SPGG 11..DA D197-D198
	68	50	69	183	240	80	TDP-1101	
	69	50	69	183	240	80	TDP-1102	
	70	50	69	183	240	80	TDP-1103	
	71	50	69	183	240	80	TDP-1104	
	72	50	69	183	240	80	TDP-1105	
	73	50	69	183	240	80	TDP-1106	
2574-80-50T2-12CA-T	74	50	74	200	250	80	-	SPMG 12...DG D197
	75	50	74	200	250	80	TDP-1101	
	76	50	74	200	250	80	TDP-1102	
	77	50	74	200	250	80	TDP-1103	
	78	50	74	200	250	80	TDP-1104	
	79	50	74	200	250	80	TDP-1105	
	80	50	74	200	250	80	TDP-1106	

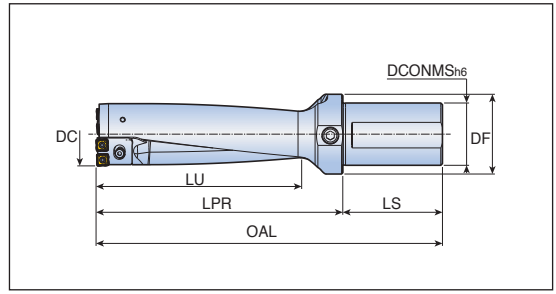
Cutting Condition D252

▸ OAL: LPR+LS

TDR 35...CA-T

Indexable cartridge drill holders

• Drilling depth: 3.5xdiameter



Designation	Dimension (mm)						Setting plate	Insert
	DC	DCONMS	DF	LU	LPR	LS		
TDR 3551-53-50T2-07CA-T	51	50	64	186	223	80	-	SPMG 07... DG/DK SPGG 07..DA D197-D198
	52	50	75	186	223	80	TDP-0701	
	53	50	75	186	223	80	TDP-0702	
3554-56-50T2-07CA-T	54	50	75	196	236	80	-	SPMG 07... DG/DK SPGG 07..DA D197-D198
	55	50	75	196	236	80	TDP-0701	
	56	50	75	196	236	80	TDP-0702	
3557-62-50T2-09CA-T	57	50	75	217	263	80	-	SPMG 09... DG/DK SPGG 09..DA D197-D198
	58	50	75	217	263	80	TDP-0901	
	59	50	75	217	263	80	TDP-0902	
	60	50	75	217	263	80	TDP-0903	
	61	50	75	217	263	80	TDP-0904	
	62	50	75	217	263	80	TDP-0905	
3563-66-50T2-09CA-T	63	50	75	231	281	80	-	SPMG 09... DG/DK SPGG 09..DA D197-D198
	64	50	75	231	281	80	TDP-0901	
	65	50	75	231	281	80	TDP-0902	
	66	50	75	231	281	80	TDP-0903	
3567-73-50T2-11CA-T	67	50	75	256	313	80	-	SPMG 11... DG/DK SPGG 11..DA D197-D198
	68	50	75	256	313	80	TDP-1101	
	69	50	75	256	313	80	TDP-1102	
	70	50	75	256	313	80	TDP-1103	
	71	50	75	256	313	80	TDP-1104	
	72	50	75	256	313	80	TDP-1105	
	73	50	75	256	313	80	TDP-1106	

Cutting Condition D252

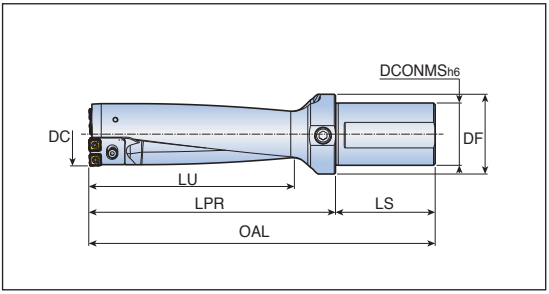
▸ OAL: LPR+LS

ADVANCE CUTTING TaeguTec

TDR 35...CA-T

Indexable cartridge drill holders

• Drilling depth: 3.5xdiameter



Designation	Dimension (mm)						Setting plate	Insert
	DC	DCONMS	DF	LU	LPR	LS		
TDR 3574-80-50T2-12CA-T	74	50	75	280	330	80	-	SPMG 12...DG
	75	50	75	280	330	80	TDP-1101	D197
	76	50	75	280	330	80	TDP-1102	
	77	50	75	280	330	80	TDP-1103	
	78	50	75	280	330	80	TDP-1104	
	79	50	75	280	330	80	TDP-1105	
	80	50	75	280	330	80	TDP-1106	

▸ OAL: LPR+LS

Spare parts

Designation	Screw	Cartridge for peripheral	Cartridge for center
TDR.. 51-53...	TS 25064I	TDR 07CA-P1-T	TDR 07CA-C1-T
TDR.. 54-56...	TS 25064I	TDR 07CA-P2-T	TDR 07CA-C2-T
TDR.. 57-62...	TS 35088I	TDR 09CA-P1-T	TDR 09CA-C1-T
TDR.. 63-66...	TS 35088I	TDR 09CA-P2-T	TDR 09CA-C2-T
TDR.. 67-73...	TS 40093I	TDR 11CA-P1-T	TDR 11CA-C1-T
TDR.. 74-80...	TS 40093I	TDR 12CA-P2-T	TDR 12CA-C2-T

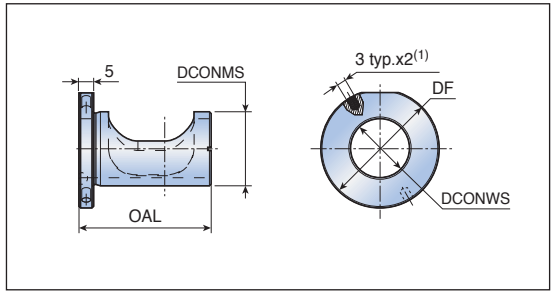
Spare parts for cartridges

Designation	Cartridge clamping screw	Washer	Setting plate screw
TDR 07CA-P1-T	SH M4x0.7x16	MW 4.3x8	TS 20043I/HG-P
TDR 07CA-C1-T	SH M4x0.7x16	MW 4.3x8	-
TDR 07CA-P2-T	SH M4x0.7x16	MW 4.3x8	TS 20043I/HG-P
TDR 07CA-C2-T	SH M4x0.7x16	MW 4.3x8	-
TDR 09CA-P1-T	SH M5x0.8x16	MW 5.5x10	SO 30055I
TDR 09CA-C1-T	SH M5x0.8x16	MW 5.5x10	-
TDR 09CA-P2-T	SH M5x0.8x16	MW 5.5x10	SO 30055I
TDR 09CA-C2-T	SH M5x0.8x16	MW 5.5x10	-
TDR 11CA-P1-T	SH M6x1.0x20	MW 6.4x12	SO 30055I
TDR 11CA-C1-T	SH M6x1.0x20	MW 6.4x12	-
TDR 12CA-P2-T	SH M6x1.0x20	MW 6.4x12	SO 30055I
TDR 12CA-C2-T	SH M6x1.0x20	MW 6.4x12	-

Cutting Condition D252

ECCENTER SLEEVE

Drill center adjustment sleeves / eccentric sleeve



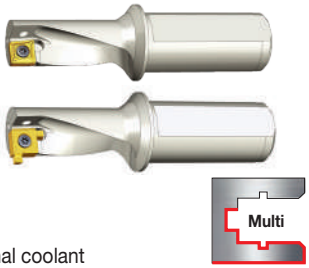
Designation	Dimension (mm)			
	DCONWS	DCONMS	DF	OAL
ECCENTER SLEEVE 20x25	20	25	40	44
25x32	25	32	50	46
32x40	32	40	65	55
40x50	40	50	75	62

▸ (1) Holes for inserting a pin are used to facilitate radial adjustment of the sleeve (Pin is not supplied)

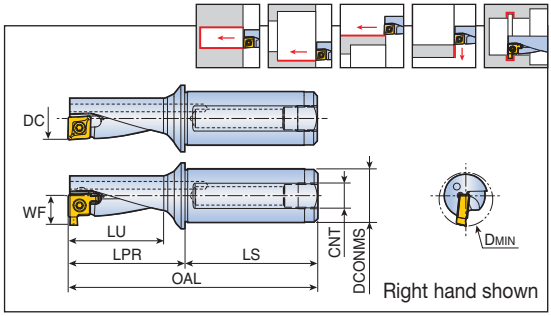
TCAP...-2.25DN

TOPCAP

Multi-function toolholders - 2.25xD



• Internal coolant



Designation	Dimension (mm)								Insert	
	DC	DCONMS	WF	LU	LPR	LS	DMIN	CNT	For drilling, boring, turning	For grooving
TCAP 08R/L-2.25DN	8	12	-	18.0	22.5	42	-	G 1/16	XCM(G)T 04...TC/TA	-
10R/L-2.25DN-GV	10	12	7.1	22.5	27.5	42	12.0	G 1/16	XCM(G)T 05...TC/TA	XCMT 05R...GV
12R/L-2.25DN-GV	12	16	8.5	27.0	33.0	45	14.5	G 1/8	XCM(G)T 06...TC/TA	XCMT 06R...GV
14R/L-2.25DN-GV	14	16	9.5	31.5	38.5	45	16.5	G 1/8	XCM(G)T 07...TC/TA	XCMT 07R...GV
16R/L-2.25DN-GV	16	20	11.1	36.0	44.0	50	19.0	G 1/8	XCM(G)T 08...TC/TA	XCMT 08R...GV
20R/L-2.25DN-GV	20	25	13.2	45.0	55.0	56	23.5	G 1/8	XCM(G)T 10...TC/TA	XCMT 10R...GV
25R/L-2.25DN-GV	25	32	16.5	56.2	69.0	61	29.0	G 1/8	XCM(G)T 13...TC/TA	XCMT 13R...GV
32R/L-2.25DN-GV	32	40	20.5	72.0	86.0	74	36.5	G 1/8	XCM(G)T 17...TC/TA	XCMT 17R...GV
									D225-D226	D225

▸ OAL: LPR+LS
▸ Grooving insert is available for right handed type

Spare parts

Designation	Screw	Wrench		
TCAP 08	TS 18034I/HG-P	T 6P	-	
TCAP 10	TS 20038I/HG-P	T 6P	-	
TCAP 12	TS 22052I/HG-P	T 7P	-	
TCAP 14	TS 25064I/HG-P	T 8P	-	
TCAP 16	TS 30100I/HG-P	-	TD 9P	
TCAP 20	TS 35088I/HG-P	-	TD10P	
TCAP 25	TS 45A100I/HG	-	TD 20	
TCAP 32	TS 45A100I/HG	-	TD 20	

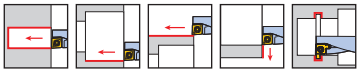
Cutting Condition D254

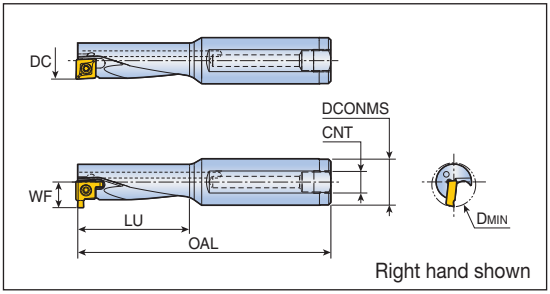
TCAP...-3.0DN

TOPCAP

Multi-function toolholders - 3.0xD

• Internal coolant





Designation	Dimension (mm)							Insert	
	DC	DCONMS	WF	LU	OAL	DMIN	CNT	For drilling, boring, turning	For grooving
TCAP 08R/L-3.0DN12	8	12	-	24	80	-	G 1/16	XCM(G)T 04...TC/TA	-
10R/L-3.0DN-GV	10	12	7.1	30	85	12.0	G 1/16	XCM(G)T 05...TC/TA	XCMT 05R...GV
12R/L-3.0DN-GV	12	16	8.5	36	95	14.5	G 1/8	XCM(G)T 06...TC/TA	XCMT 06R...GV
14R/L-3.0DN-GV	14	16	9.5	42	100	16.5	G 1/8	XCM(G)T 07...TC/TA	XCMT 07R...GV
16R/L-3.0DN-GV	16	20	11.1	48	110	19.0	G 1/8	XCM(G)T 08...TC/TA	XCMT 08R...GV
20R/L-3.0DN-GV	20	25	13.2	60	130	23.5	G 1/8	XCM(G)T 10...TC/TA	XCMT 10R...GV
25R/L-3.0DN-GV	25	32	16.5	75	150	29.0	G 1/8	XCM(G)T 13...TC/TA	XCMT 13R...GV
32R/L-3.0DN-GV	32	40	20.5	96	185	36.5	G 1/8	XCM(G)T 17...TC/TA	XCMT 17R...GV
								D225-D226	D225

▸ OA: LPR+LS
▸ Grooving insert is available for right handed type

Spare parts

Designation	Screw	Wrench		
TCAP 08	TS 18034I/HG-P	T 6P	-	
TCAP 10	TS 20038I/HG-P	T 6P	-	
TCAP 12	TS 22052I/HG-P	T 7P	-	
TCAP 14	TS 25064I/HG-P	T 8P	-	
TCAP 16	TS 30100I/HG-P	-	TD 9P	
TCAP 20	TS 35088I/HG-P	-	TD10P	
TCAP 25	TS 45A100I/HG	-	TD 20	
TCAP 32	TS 45A100I/HG	-	TD 20	

Cutting Condition D254

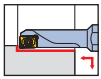
ADVANCE CUTTING TaeguTec

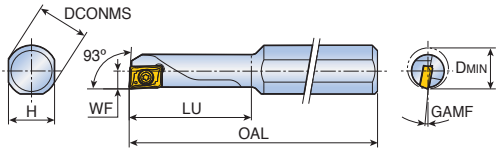
S...SXUCR/L

TOP CAP

Boring bars with TOP-CAP inserts

- For boring
- External coolant





Right hand shown

Designation	Dimension (mm)							Insert
	DCONMS	H	OAL	LU	WF	DMIN	GAMF	
S10H SXUCR/L 04-06 (1)	10	9	100	21	3.0	6	9°	XCMT 04...R/L TC
S10J SXUCR/L 04-07 (1)	10	9	110	24.5	3.5	7	5°	D226
S10J SXUCR/L 04-08 (1)	10	9	110	28	4.0	8	2°	
S10K SXUCR/L 05-10	10	9	125	35	5.0	10	2°	XCMT 05..TC
								D226

▸ (1) Right hand Insert should be used in right hand boring bar

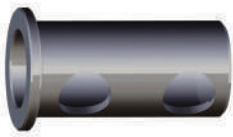
Spare parts

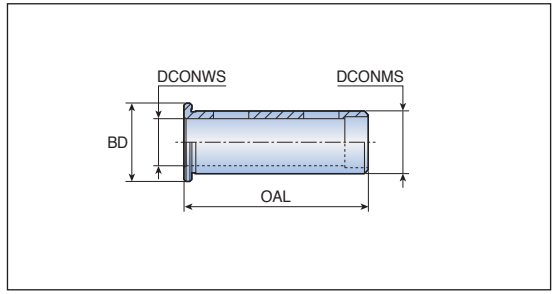
Designation	Screw	Wrench		
S10H SXUCR/L 04-06	TS 18034I/HG-P	T 6P		
S10J SXUCR/L 04-07	TS 18034I/HG-P	T 6P		
S10J SXUCR/L 04-08	TS 18034I/HG-P	T 6P		
S10K SXUCR/L 05-10	TS 20038I/HG-P	T 6P		

Cutting Condition D254

TSL

Sleeves for clamping unit

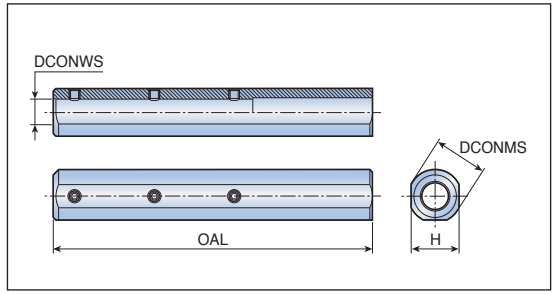




Designation	Dimension (mm)				Toolholders
	DCONMS	DCONWS	BD	OAL	
TSL 16-12	16	12	20	47	TCAP 10R/L...
25-20	25	20	32	55	TCAP 16R/L...

TBSL

Sleeves for boring bar



Designation	Dimension (mm)			
	DCONMS	DCONWS	OAL	H
TBSL 20-10-120	20	10	120	18

Spare parts

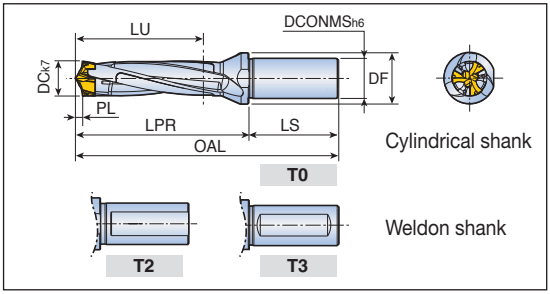
Designation	Screw	Wrench		
TBSL 20-10-120	SS M4x0.7x4	L-W 2		

3ED...T...-3D

DRILLSPEED INDEXABLE 3 FLUTE

Head changeable 3 flute drill holder

• Drilling depth: 3xdiameter



Designation	Dimension (mm)								Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
3ED 120-124-16T3/T0-3D	12.0-12.4	16	20	40.0	60.7	48	2.74	12	K 3ED D12-D13
125-129-16T3/T0-3D	12.5-12.9	16	20	41.5	62.5	48	2.76	12	
130-134-16T3/T0-3D	13.0-13.4	16	20	43.0	64.8	48	2.91	13	
135-139-16T3/T0-3D	13.5-13.9	16	20	44.5	66.6	48	2.93	13	
140-144-16T3/T0-3D	14.0-14.4	16	20	46.0	68.9	48	3.17	14	K 3ED D14-D15
145-149-16T3/T0-3D	14.5-14.9	16	20	47.5	70.7	48	3.19	14	
150-159-20T3/T0-3D	15.0-15.9	20	25	49.0	73.9	50	3.31	15	
160-169-20T3/T0-3D	16.0-16.9	20	25	52.0	79.0	50	3.70	16	K 3ED D16-D17
170-179-20T3/T0-3D	17.0-17.9	20	25	55.0	84.0	50	3.88	17	
180-189-25T2/T0-3D	18.0-18.9	25	32	58.0	90.1	56	4.07	18	K 3ED D18-D19
190-199-25T2/T0-3D	19.0-19.9	25	32	61.0	94.7	56	4.26	19	
200-209-25T2/T0-3D	20.0-20.9	25	32	64.0	99.3	56	4.44	20	K 3ED D20-D21
210-219-25T2/T0-3D	21.0-21.9	25	32	67.0	103.8	56	4.62	21	
220-229-25T2/T0-3D	22.0-22.9	25	32	70.0	108.4	56	4.78	22	K 3ED D22-D23
230-239-32T2/T0-3D	23.0-23.9	32	42	73.0	112.8	60	5.02	23	
240-249-32T2/T0-3D	24.0-24.9	32	42	76.0	117.4	60	5.18	24	K 3ED D24-D25
250-259-32T2/T0-3D	25.0-25.9	32	42	79.0	122.0	60	5.29	25	

D199-D202

Cutting Condition D256

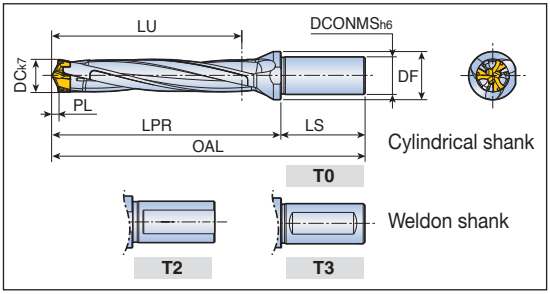
- OAL: LPR+LS
- SSC: Seat size code

3ED...T...-5D

DRILLSFEED INDEXABLE 3 FLUTE

Head changeable 3 flute drill holder

• Drilling depth: 5xdiameter



Designation	Dimension (mm)								Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
3ED 120-124-16T3/T0-5D	12.0-12.4	16	20	64.0	84.7	48	2.74	12	K 3ED D12-D13
125-129-16T3/T0-5D	12.5-12.9	16	20	66.5	87.5	48	2.76	12	
130-134-16T3/T0-5D	13.0-13.4	16	20	69.0	90.8	48	2.91	13	
135-139-16T3/T0-5D	13.5-13.9	16	20	71.5	93.6	48	2.93	13	
140-144-16T3/T0-5D	14.0-14.4	16	20	74.0	96.9	48	3.17	14	K 3ED D14-D15
145-149-16T3/T0-5D	14.5-14.9	16	20	76.5	99.7	48	3.19	14	
150-159-20T3/T0-5D	15.0-15.9	20	25	79.0	103.9	50	3.31	15	
160-169-20T3/T0-5D	16.0-16.9	20	25	84.0	111.0	50	3.70	16	K 3ED D16-D17
170-179-20T3/T0-5D	17.0-17.9	20	25	89.0	118.0	50	3.88	17	
180-189-25T2/T0-5D	18.0-18.9	25	32	94.0	126.1	56	4.07	18	K 3ED D18-D19
190-199-25T2/T0-5D	19.0-19.9	25	32	99.0	132.7	56	4.26	19	
200-209-25T2/T0-5D	20.0-20.9	25	32	104.0	139.3	56	4.44	20	K 3ED D20-D21
210-219-25T2/T0-5D	21.0-21.9	25	32	109.0	145.8	56	4.62	21	
220-229-25T2/T0-5D	22.0-22.9	25	32	114.0	152.4	56	4.78	22	K 3ED D22-D23
230-239-32T2/T0-5D	23.0-23.9	32	42	119.0	158.8	60	5.02	23	
240-249-32T2/T0-5D	24.0-24.9	32	42	124.0	165.4	60	5.18	24	K 3ED D24-D25
250-259-32T2/T0-5D	25.0-25.9	32	42	129.0	172.0	60	5.29	25	

D199-D202

Cutting Condition

D256

- OAL: LPR+LS
- SSC: Seat size code

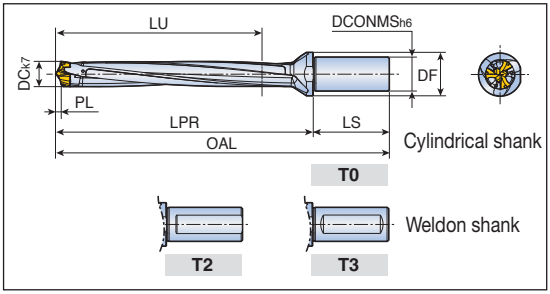
ADVANCE CUTTING TaeguTec

3ED...T...-8D

DRILLSPEED INDEXABLE 3 FLUTE

Head changeable 3 flute drill holder

• Drilling depth: 8xdiameter



Designation	Dimension (mm)								Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
3ED 120-124-16T3/T0-8D	12.0-12.4	16	20	100	120.7	48	2.74	12	K 3ED D12-D13
125-129-16T3/T0-8D	12.5-12.9	16	20	104	125.0	48	2.76	12	
130-134-16T3/T0-8D	13.0-13.4	16	20	108	129.8	48	2.91	13	
135-139-16T3/T0-8D	13.5-13.9	16	20	112	134.1	48	2.93	13	
140-144-16T3/T0-8D	14.0-14.4	16	20	116	138.9	48	3.17	14	K 3ED D14-D15
145-149-16T3/T0-8D	14.5-14.9	16	20	120	143.2	48	3.19	14	
150-159-20T3/T0-8D	15.0-15.9	20	25	124	148.9	50	3.31	15	
160-169-20T3/T0-8D	16.0-16.9	20	25	132	159.0	50	3.70	16	K 3ED D16-D17
170-179-20T3/T0-8D	17.0-17.9	20	25	140	169.0	50	3.88	17	
180-189-25T2/T0-8D	18.0-18.9	25	32	148	180.1	56	4.07	18	K 3ED D18-D19
190-199-25T2/T0-8D	19.0-19.9	25	32	156	189.7	56	4.26	19	
200-209-25T2/T0-8D	20.0-20.9	25	32	164	199.3	56	4.44	20	K 3ED D20-D21
210-219-25T2/T0-8D	21.0-21.9	25	32	172	208.8	56	4.62	21	
220-229-25T2/T0-8D	22.0-22.9	25	32	180	218.4	56	4.78	22	K 3ED D22-D23
230-239-32T2/T0-8D	23.0-23.9	32	42	188	227.8	60	5.02	23	
240-249-32T2/T0-8D	24.0-24.9	32	42	196	237.4	60	5.18	24	K 3ED D24-D25
250-259-32T2/T0-8D	25.0-25.9	32	42	204	247.0	60	5.29	25	

D199-D202

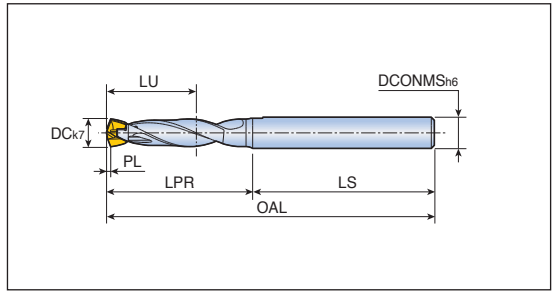
Cutting Condition D256

- OAL: LPR+LS
- SSC: Seat size code

TCD...-3D

Head changeable drill holders for small diameter holes - Cylindrical type shank

• Drilling depth: 3xdiameter



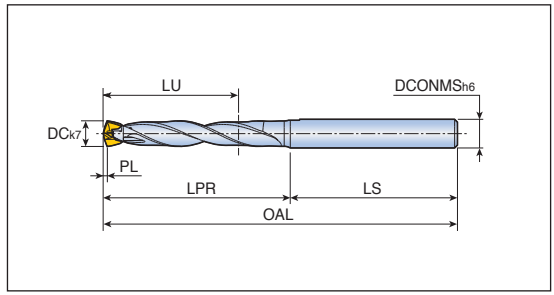
Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 040-044-06A0-3D	4.0-4.4	6	13	22.7	35	0.62	4	K TCD D040-D049
045-049-06A0-3D	4.5-4.9	6	14	24.7	35	0.66	4.5	
050-054-06A0-3D	5.0-5.4	6	16	26.3	35	0.73	5	K TCD D050-D059
055-059-06A0-3D	5.5-5.9	6	17	28.2	35	0.80	5.5	

- OAL: LPR+LS
- SSC: Seat size code

TCD...-5D

Head changeable drill holders for small diameter holes - Cylindrical type shank

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 040-044-06A0-5D	4.0-4.4	6	21	30.7	35	0.62	4	K TCD D040-D049
045-049-06A0-5D	4.5-4.9	6	23	33.7	35	0.66	4.5	
050-054-06A0-5D	5.0-5.4	6	26	36.3	35	0.73	5	K TCD D050-D059
055-059-06A0-5D	5.5-5.9	6	28	39.2	35	0.80	5.5	

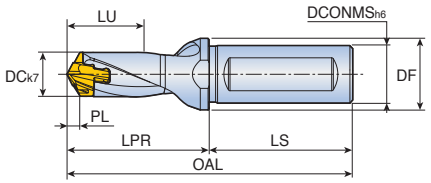
- OAL: LPR+LS
- SSC: Seat size code

TCD...T...-1.5D

DRILLRUSH

Head changeable drill holders - Weldon type shank

• Drilling depth: 1.5xdiameter



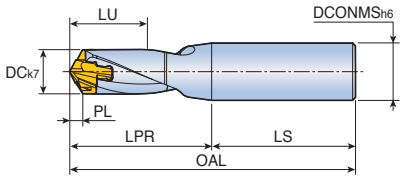
Designation	Dimension (mm)								Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
TCD 060-064-12T3-1.5D	6.0-6.4	12	16	10	23.0	45	0.96	6	K TCD D060-D099
065-069-12T3-1.5D	6.5-6.9	12	16	11	24.1	45	1.18	6.5	
070-074-12T3-1.5D	7.0-7.4	12	16	12	25.1	45	1.01	7	
075-079-12T3-1.5D	7.5-7.9	12	16	12	25.9	45	1.10	7	
080-089-12T3-1.5D	8.0-8.9	12	16	13	27.4	45	1.20	8	
090-099-12T3-1.5D	9.0-9.9	12	16	15	29.3	45	1.35	9	
100-109-16T3-1.5D	10.0-10.9	16	20	17	31.2	48	1.50	10	K TCD D100-D199
110-119-16T3-1.5D	11.0-11.9	16	20	19	33.1	48	1.67	11	
120-129-16T3-1.5D	12.0-12.9	16	20	20	35.0	48	1.82	12	
130-139-16T3-1.5D	13.0-13.9	16	20	22	37.1	48	1.96	13	
140-149-16T3-1.5D	14.0-14.9	16	20	23	41.1	48	2.12	14	
150-159-20T3-1.5D	15.0-15.9	20	25	25	46.2	50	2.27	15	
160-169-20T3-1.5D	16.0-16.9	20	25	26	49.3	50	2.42	16	
170-179-20T3-1.5D	17.0-17.9	20	25	29	52.4	50	2.59	17	
180-189-25T2-1.5D	18.0-18.9	25	32	30	55.5	56	2.73	18	
190-199-25T2-1.5D	19.0-19.9	25	32	32	58.5	56	2.88	19	
200-209-25T2-1.5D	20.0-20.9	25	32	33	61.6	56	3.02	20	K TCD D200-D269
210-219-25T2-1.5D	21.0-21.9	25	32	35	64.7	56	3.18	21	
220-229-25T2-1.5D	22.0-22.9	25	32	36	67.8	56	3.24	22	
230-239-32T2-1.5D	23.0-23.9	32	42	38	70.8	60	3.46	23	
240-249-32T2-1.5D	24.0-24.9	32	42	40	73.9	60	3.62	24	
250-259-32T2-1.5D	25.0-25.9	32	42	42	77.0	60	3.80	25	

- OAL: LPR+LS
- SSC: Seat size code

TCD...S0-1.5D

DRILLRUSH

Head changeable drill holders - Cylindrical type shank



• Drilling depth: 1.5xdiameter

Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 060-064-12S0-1.5D	6.0-6.4	12	10	23.0	45	0.96	6	K TCD D060-D099
065-069-12S0-1.5D	6.5-6.9	12	11	24.1	45	1.18	6.5	
070-074-12S0-1.5D	7.0-7.4	12	12	25.1	45	1.01	7	
075-079-12S0-1.5D	7.5-7.9	12	12	25.9	45	1.10	7	
080-089-12S0-1.5D	8.0-8.9	12	13	27.4	45	1.20	8	
090-099-12S0-1.5D	9.0-9.9	12	15	29.3	45	1.35	9	
100-109-16S0-1.5D	10.0-10.9	16	17	31.2	48	1.50	10	K TCD D100-D199
110-119-16S0-1.5D	11.0-11.9	16	19	33.1	48	1.67	11	
120-129-16S0-1.5D	12.0-12.9	16	20	35.0	48	1.82	12	
130-139-16S0-1.5D	13.0-13.9	16	22	37.1	48	1.96	13	
140-149-16S0-1.5D	14.0-14.9	16	23	41.1	48	2.12	14	
150-159-20S0-1.5D	15.0-15.9	20	25	46.2	50	2.27	15	
160-169-20S0-1.5D	16.0-16.9	20	26	49.3	50	2.42	16	
170-179-20S0-1.5D	17.0-17.9	20	29	52.4	50	2.59	17	
180-189-25S0-1.5D	18.0-18.9	25	30	55.5	56	2.73	18	
190-199-25S0-1.5D	19.0-19.9	25	32	58.5	56	2.88	19	
200-209-25S0-1.5D	20.0-20.9	25	33	61.6	56	3.02	20	K TCD D200-D269
210-219-25S0-1.5D	21.0-21.9	25	35	64.7	56	3.18	21	
220-229-25S0-1.5D	22.0-22.9	25	36	67.8	56	3.24	22	
230-239-32S0-1.5D	23.0-23.9	32	38	70.8	60	3.46	23	
240-249-32S0-1.5D	24.0-24.9	32	40	73.9	60	3.62	24	
250-259-32S0-1.5D	25.0-25.9	32	42	77.0	60	3.80	25	

D204-D216

Cutting Condition

D258

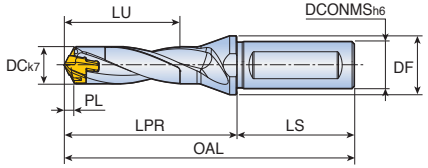
- OAL: LPR+LS
- SSC: Seat size code

ADVANCE CUTTING TaeguTec

TCD...T...-3D

DRILLRUSH

Head changeable drill holders - Weldon type shank



- Drilling depth: 3xdiameter

Designation	Dimension (mm)								Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
TCD 060-064-12T3-3D	6.0-6.4	12	16	19	32.0	45	0.96	6	K TCD D060-D099
065-069-12T3-3D	6.5-6.9	12	16	21	33.8	45	1.18	6.5	
070-074-12T3-3D	7.0-7.4	12	16	22	35.6	45	1.01	7	
075-079-12T3-3D	7.5-7.9	12	16	24	37.1	45	1.10	7	
080-084-12T3-3D	8.0-8.4	12	16	25	39.4	45	1.20	8	
085-089-12T3-3D	8.5-8.9	12	16	27	40.9	45	1.29	8	
090-094-12T3-3D	9.0-9.4	12	16	28	42.8	45	1.35	9	
095-099-12T3-3D	9.5-9.9	12	16	30	44.3	45	1.44	9	
100-104-16T3-3D	10.0-10.4	16	20	32	46.2	48	1.50	10	K TCD D100-D199
105-109-16T3-3D	10.5-10.9	16	20	34	47.7	48	1.59	10	
110-114-16T3-3D	11.0-11.4	16	20	35	49.6	48	1.67	11	
115-119-16T3-3D	11.5-11.9	16	20	37	51.1	48	1.76	11	
120-124-16T3-3D	12.0-12.4	16	20	38	53.0	48	1.82	12	
125-129-16T3-3D	12.5-12.9	16	20	39	54.5	48	1.91	12	
130-134-16T3-3D	13.0-13.4	16	20	41	56.6	48	1.96	13	
135-139-16T3-3D	13.5-13.9	16	20	43	58.1	48	2.05	13	
140-144-16T3-3D	14.0-14.4	16	20	44	62.2	48	2.12	14	
145-149-16T3-3D	14.5-14.9	16	20	46	63.7	48	2.21	14	
150-159-20T3-3D	15.0-15.9	20	25	47	68.7	50	2.27	15	
160-169-20T3-3D	16.0-16.9	20	25	50	73.3	50	2.42	16	
170-179-20T3-3D	17.0-17.9	20	25	54	77.9	50	2.59	17	
180-189-25T2-3D	18.0-18.9	25	32	57	82.5	56	2.73	18	
190-199-25T2-3D	19.0-19.9	25	32	60	87.0	56	2.88	19	
200-209-25T2-3D	20.0-20.9	25	32	63	91.6	56	3.02	20	K TCD D200-D269
210-219-25T2-3D	21.0-21.9	25	32	66	96.2	56	3.18	21	
220-229-25T2-3D	22.0-22.9	25	32	69	100.8	56	3.24	22	
230-239-32T2-3D	23.0-23.9	32	42	72	105.3	60	3.46	23	
240-249-32T2-3D	24.0-24.9	32	42	76	109.9	60	3.62	24	
250-259-32T2-3D	25.0-25.9	32	42	79	114.5	60	3.80	25	

D204-D216 | Sleeve D127 | Cutting Condition D258

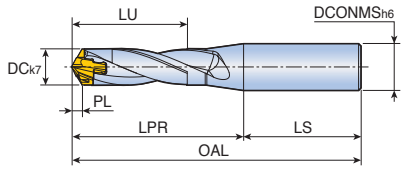
- OAL: LPR+LS
- SSC: Seat size code

TCD...S0-3D

DRILLRUSH

Head changeable drill holders - Cylindrical type shank

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 060-064-12S0-3D	6.0-6.4	12	19	32.0	45	0.96	6	K TCD D060-D099
065-069-12S0-3D	6.5-6.9	12	21	33.8	45	1.18	6.5	
070-074-12S0-3D	7.0-7.4	12	22	35.6	45	1.01	7	
075-079-12S0-3D	7.5-7.9	12	24	37.1	45	1.10	7	
080-084-12S0-3D	8.0-8.4	12	25	39.4	45	1.20	8	
085-089-12S0-3D	8.5-8.9	12	27	40.9	45	1.29	8	
090-094-12S0-3D	9.0-9.4	12	28	42.8	45	1.35	9	
095-099-12S0-3D	9.5-9.9	12	30	44.3	45	1.44	9	
100-104-16S0-3D	10.0-10.4	16	32	46.2	48	1.50	10	K TCD D100-D199
105-109-16S0-3D	10.5-10.9	16	34	47.7	48	1.59	10	
110-114-16S0-3D	11.0-11.4	16	35	49.6	48	1.67	11	
115-119-16S0-3D	11.5-11.9	16	37	51.1	48	1.76	11	
120-124-16S0-3D	12.0-12.4	16	38	53.0	48	1.82	12	
125-129-16S0-3D	12.5-12.9	16	39	54.5	48	1.91	12	
130-134-16S0-3D	13.0-13.4	16	41	56.6	48	1.96	13	
135-139-16S0-3D	13.5-13.9	16	43	58.1	48	2.05	13	
140-144-16S0-3D	14.0-14.4	16	44	62.1	48	2.12	14	
145-149-16S0-3D	14.5-14.9	16	46	63.7	48	2.21	14	
150-159-20S0-3D	15.0-15.9	20	47	68.7	50	2.27	15	
160-169-20S0-3D	16.0-16.9	20	50	73.3	50	2.42	16	
170-179-20S0-3D	17.0-17.9	20	54	77.9	50	2.59	17	
180-189-25S0-3D	18.0-18.9	25	57	82.5	56	2.73	18	
190-199-25S0-3D	19.0-19.9	25	60	87.0	56	2.88	19	
200-209-25S0-3D	20.0-20.9	25	63	91.6	56	3.02	20	K TCD D200-D269
210-219-25S0-3D	21.0-21.9	25	66	96.2	56	3.18	21	
220-229-25S0-3D	22.0-22.9	25	69	100.8	56	3.24	22	
230-239-32S0-3D	23.0-23.9	32	72	105.3	60	3.46	23	
240-249-32S0-3D	24.0-24.9	32	76	109.9	60	3.62	24	
250-259-32S0-3D	25.0-25.9	32	79	114.5	60	3.80	25	

D204-D216

Cutting Condition

D258

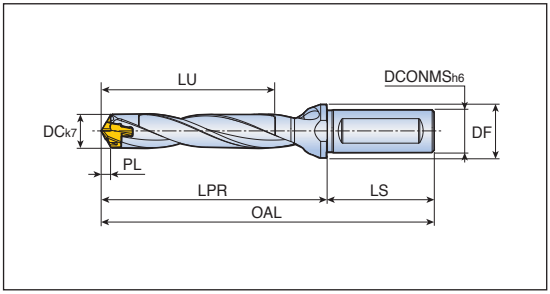
- OAL: LPR+LS
- SSC: Seat size code

ADVANCE CUTTING TaeguTec

TCD...T...-5D

DRILLRUSH

Head changeable drill holders - Weldon type shank



• Drilling depth: 5xdiameter

Designation	Dimension (mm)								Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
TCD 060-064-12T3-5D	6.0-6.4	12	16	31	44.0	45	0.96	6	K TCD D060-D099
065-069-12T3-5D	6.5-6.9	12	16	34	46.8	45	1.18	6.5	
070-074-12T3-5D	7.0-7.4	12	16	36	49.6	45	1.01	7	
075-079-12T3-5D	7.5-7.9	12	16	39	52.1	45	1.10	7	
080-084-12T3-5D	8.0-8.4	12	16	41	55.4	45	1.20	8	
085-089-12T3-5D	8.5-8.9	12	16	44	57.9	45	1.29	8	
090-094-12T3-5D	9.0-9.4	12	16	46	60.8	45	1.35	9	
095-099-12T3-5D	9.5-9.9	12	16	49	63.3	45	1.44	9	
100-104-16T3-5D	10.0-10.4	16	20	52	66.2	48	1.50	10	K TCD D100-D199
105-109-16T3-5D	10.5-10.9	16	20	55	68.7	48	1.59	10	
110-114-16T3-5D	11.0-11.4	16	20	57	71.6	48	1.67	11	
115-119-16T3-5D	11.5-11.9	16	20	60	74.1	48	1.76	11	
120-124-16T3-5D	12.0-12.4	16	20	62	77.0	48	1.82	12	
125-129-16T3-5D	12.5-12.9	16	20	64	79.5	48	1.91	12	
130-134-16T3-5D	13.0-13.4	16	20	67	82.6	48	1.96	13	
135-139-16T3-5D	13.5-13.9	16	20	70	85.1	48	2.05	13	
140-144-16T3-5D	14.0-14.4	16	20	72	90.2	48	2.12	14	
145-149-16T3-5D	14.5-14.9	16	20	75	92.7	48	2.21	14	
150-159-20T3-5D	15.0-15.9	20	25	77	98.7	50	2.27	15	
160-169-20T3-5D	16.0-16.9	20	25	82	105.3	50	2.42	16	
170-179-20T3-5D	17.0-17.9	20	25	88	111.9	50	2.59	17	
180-189-25T2-5D	18.0-18.9	25	32	93	118.5	56	2.73	18	
190-199-25T2-5D	19.0-19.9	25	32	98	125.0	56	2.88	19	
200-209-25T2-5D	20.0-20.9	25	32	103	131.6	56	3.02	20	K TCD D200-D269
210-219-25T2-5D	21.0-21.9	25	32	108	138.2	56	3.18	21	
220-229-25T2-5D	22.0-22.9	25	32	113	144.8	56	3.24	22	
230-239-32T2-5D	23.0-23.9	32	42	118	151.3	60	3.46	23	
240-249-32T2-5D	24.0-24.9	32	42	124	157.9	60	3.62	24	
250-259-32T2-5D	25.0-25.9	32	42	129	164.5	60	3.80	25	

D204-D216 | Sleeve D127 | Cutting Condition D258

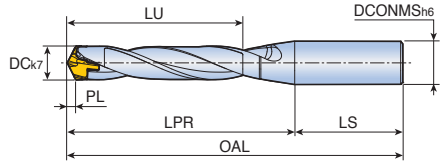
- OAL: LPR+LS
- SSC: Seat size code

TCD...S0-5D

DRILLRUSH

Head changeable drill holders - Cylindrical type shank

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 060-064-12S0-5D	6.0-6.4	12	31	44.0	45	0.96	6	K TCD D060-D099
065-069-12S0-5D	6.5-6.9	12	34	46.8	45	1.18	6.5	
070-074-12S0-5D	7.0-7.4	12	36	49.6	45	1.01	7	
075-079-12S0-5D	7.5-7.9	12	39	52.1	45	1.10	7	
080-084-12S0-5D	8.0-8.4	12	41	55.4	45	1.20	8	
085-089-12S0-5D	8.5-8.9	12	44	57.9	45	1.29	8	
090-094-12S0-5D	9.0-9.4	12	46	60.8	45	1.35	9	
095-099-12S0-5D	9.5-9.9	12	49	63.3	45	1.44	9	
100-104-16S0-5D	10.0-10.4	16	52	66.2	48	1.50	10	K TCD D100-D199
105-109-16S0-5D	10.5-10.9	16	55	68.7	48	1.59	10	
110-114-16S0-5D	11.0-11.4	16	57	71.6	48	1.67	11	
115-119-16S0-5D	11.5-11.9	16	60	74.1	48	1.76	11	
120-124-16S0-5D	12.0-12.4	16	62	77.0	48	1.82	12	
125-129-16S0-5D	12.5-12.9	16	64	79.5	48	1.91	12	
130-134-16S0-5D	13.0-13.4	16	67	82.6	48	1.96	13	
135-139-16S0-5D	13.5-13.9	16	70	85.1	48	2.05	13	
140-144-16S0-5D	14.0-14.4	16	72	90.2	48	2.12	14	
145-149-16S0-5D	14.5-14.9	16	75	92.7	48	2.21	14	
150-159-20S0-5D	15.0-15.9	20	77	98.7	50	2.27	15	
160-169-20S0-5D	16.0-16.9	20	82	105.3	50	2.42	16	
170-179-20S0-5D	17.0-17.9	20	88	111.9	50	2.59	17	
180-189-25S0-5D	18.0-18.9	25	93	118.5	56	2.73	18	
190-199-25S0-5D	19.0-19.9	25	98	125.0	56	2.88	19	
200-209-25S0-5D	20.0-20.9	25	103	131.6	56	3.02	20	K TCD D200-D269
210-219-25S0-5D	21.0-21.9	25	108	138.2	56	3.18	21	
220-229-25S0-5D	22.0-22.9	25	113	144.8	56	3.24	22	
230-239-32S0-5D	23.0-23.9	32	118	151.3	60	3.46	23	
240-249-32S0-5D	24.0-24.9	32	124	157.9	60	3.62	24	
250-259-32S0-5D	25.0-25.9	32	129	164.5	60	3.80	25	

D204-D216

Cutting Condition

D258

- OAL: LPR+LS
- SSC: Seat size code

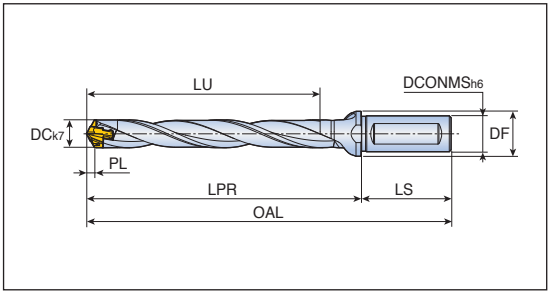
ADVANCE CUTTING
TaeguTec

TCD...T...-8D

DRILLRUSH

Head changeable drill holders - Weldon type shank

• Drilling depth: 8xdiameter



Designation		Dimension (mm)								Clamping key
		DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
TCD	070-074-12T3-8D	7.0-7.4	12	16	57	70.6	45	1.01	7	K TCD D060-D099
	075-079-12T3-8D	7.5-7.9	12	16	61	74.6	45	1.10	7	
	080-084-12T3-8D	8.0-8.4	12	16	65	79.4	45	1.20	8	
	085-089-12T3-8D	8.5-8.9	12	16	69	83.4	45	1.29	8	
	090-094-12T3-8D	9.0-9.4	12	16	73	87.8	45	1.35	9	
	095-099-12T3-8D	9.5-9.9	12	16	77	91.8	45	1.44	9	
	100-104-16T3-8D	10.0-10.4	16	20	82	96.2	48	1.50	10	K TCD D100-D199
	105-109-16T3-8D	10.5-10.9	16	20	86	100.2	48	1.59	10	
	110-114-16T3-8D	11.0-11.4	16	20	90	104.6	48	1.67	11	
	115-119-16T3-8D	11.5-11.9	16	20	94	108.6	48	1.76	11	
	120-124-16T3-8D	12.0-12.4	16	20	98	113.0	48	1.82	12	
	125-129-16T3-8D	12.5-12.9	16	20	102	117.0	48	1.91	12	
	130-134-16T3-8D	13.0-13.4	16	20	106	121.6	48	1.96	13	
	135-139-16T3-8D	13.5-13.9	16	20	110	125.6	48	2.05	13	
	140-144-16T3-8D	14.0-14.4	16	20	114	132.2	48	2.12	14	
	145-149-16T3-8D	14.5-14.9	16	20	118	136.2	48	2.21	14	
	150-159-20T3-8D	15.0-15.9	20	25	122	143.7	50	2.27	15	
	160-169-20T3-8D	16.0-16.9	20	25	130	153.3	50	2.42	16	
	170-179-20T3-8D	17.0-17.9	20	25	139	162.9	50	2.59	17	
	180-189-25T2-8D	18.0-18.9	25	32	147	172.5	56	2.73	18	
	190-199-25T2-8D	19.0-19.9	25	32	155	182.0	56	2.88	19	
	200-209-25T2-8D	20.0-20.9	25	32	163	191.6	56	3.02	20	K TCD D200-D269
	210-219-25T2-8D	21.0-21.9	25	32	171	201.2	56	3.18	21	
	220-229-25T2-8D	22.0-22.9	25	32	179	210.8	56	3.24	22	
	230-239-32T2-8D	23.0-23.9	32	42	187	220.3	60	3.46	23	
	240-249-32T2-8D	24.0-24.9	32	42	196	229.9	60	3.62	24	
	250-259-32T2-8D	25.0-25.9	32	42	204	239.5	60	3.80	25	

D204-D216 | Sleeve D127 | Cutting Condition D258

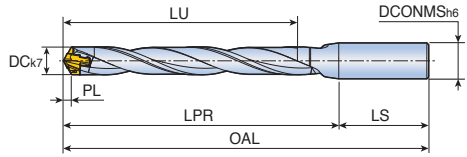
- It is recommended to make the pilot hole with a 1.5D holder
- OAL: LPR+LS
- SSC: Seat size code

TCD...S0-8D

DRILLRUSH

Head changeable drill holders - Cylindrical type shank

• Drilling depth: 8xdiameter



Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 060-064-12S0-8D	6.0-6.4	12	49	62.0	45	0.96	6	K TCD D060-D099
065-069-12S0-8D	6.5-6.9	12	53	66.3	45	1.18	6.5	
070-074-12S0-8D	7.0-7.4	12	57	70.6	45	1.01	7	
075-079-12S0-8D	7.5-7.9	12	61	74.6	45	1.10	7	
080-084-12S0-8D	8.0-8.4	12	65	79.4	45	1.20	8	
085-089-12S0-8D	8.5-8.9	12	69	83.4	45	1.29	8	
090-094-12S0-8D	9.0-9.4	12	73	87.8	45	1.35	9	
095-099-12S0-8D	9.5-9.9	12	77	91.8	45	1.44	9	
100-104-16S0-8D	10.0-10.4	16	82	96.2	48	1.50	10	K TCD D100-D199
105-109-16S0-8D	10.5-10.9	16	86	100.2	48	1.59	10	
110-114-16S0-8D	11.0-11.4	16	90	104.6	48	1.67	11	
115-119-16S0-8D	11.5-11.9	16	94	108.6	48	1.76	11	
120-124-16S0-8D	12.0-12.4	16	98	113.0	48	1.82	12	
125-129-16S0-8D	12.5-12.9	16	102	117.0	48	1.91	12	
130-134-16S0-8D	13.0-13.4	16	106	121.6	48	1.96	13	
135-139-16S0-8D	13.5-13.9	16	110	125.6	48	2.05	13	
140-144-16S0-8D	14.0-14.4	16	114	132.2	48	2.12	14	
145-149-16S0-8D	14.5-14.9	16	118	136.2	48	2.21	14	
150-159-20S0-8D	15.0-15.9	20	122	143.7	50	2.27	15	
160-169-20S0-8D	16.0-16.9	20	130	153.3	50	2.42	16	
170-179-20S0-8D	17.0-17.9	20	139	162.9	50	2.59	17	
180-189-25S0-8D	18.0-18.9	25	147	172.5	56	2.73	18	
190-199-25S0-8D	19.0-19.9	25	155	182.0	56	2.88	19	
200-209-25S0-8D	20.0-20.9	25	163	191.6	56	3.02	20	K TCD D200-D269
210-219-25S0-8D	21.0-21.9	25	171	201.2	56	3.18	21	
220-229-25S0-8D	22.0-22.9	25	179	210.8	56	3.24	22	
230-239-32S0-8D	23.0-23.9	32	187	220.3	60	3.46	23	
240-249-32S0-8D	24.0-24.9	32	196	229.9	60	3.62	24	
250-259-32S0-8D	25.0-25.9	32	204	239.5	60	3.80	25	

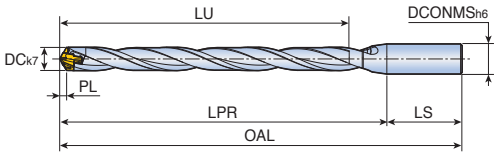
D204-D216
Cutting Condition
D258

- It is recommended to make the pilot hole with a 1.5D holder
- OAL: LPR+LS
- SSC: Seat size code

TCD...S0-12D

DRILLRUSH

Head changeable drill holders - Cylindrical type shank



• Drilling depth: 12xdiameter

Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 080-084-12S0-12D	8.0-8.4	12	97	111.4	45	1.20	8	K TCD D060-D099
085-089-12S0-12D	8.5-8.9	12	103	117.4	45	1.29	8	
090-094-12S0-12D	9.0-9.4	12	109	123.8	45	1.35	9	
095-099-12S0-12D	9.5-9.9	12	115	129.8	45	1.44	9	
100-104-16S0-12D	10.0-10.4	16	122	136.2	48	1.50	10	K TCD D100-D199
105-109-16S0-12D	10.5-10.9	16	128	142.2	48	1.59	10	
110-114-16S0-12D	11.0-11.4	16	134	148.6	48	1.67	11	
115-119-16S0-12D	11.5-11.9	16	140	154.6	48	1.76	11	
120-124-16S0-12D	12.0-12.4	16	146	161.0	48	1.82	12	
125-129-16S0-12D	12.5-12.9	16	152	167.0	48	1.91	12	
130-134-16S0-12D	13.0-13.4	16	158	173.6	48	1.96	13	
135-139-16S0-12D	13.5-13.9	16	164	179.6	48	2.05	13	
140-144-16S0-12D	14.0-14.4	16	170	188.2	48	2.12	14	
145-149-16S0-12D	14.5-14.9	16	176	194.2	48	2.21	14	
150-159-20S0-12D	15.0-15.9	20	182	203.7	50	2.27	15	
160-169-20S0-12D	16.0-16.9	20	194	217.3	50	2.42	16	
170-179-20S0-12D	17.0-17.9	20	207	230.9	50	2.59	17	
180-189-25S0-12D	18.0-18.9	25	219	244.5	56	2.73	18	
190-199-25S0-12D	19.0-19.9	25	221	258.0	56	2.88	19	
200-209-25S0-12D	20.0-20.9	25	243	271.6	56	3.02	20	K TCD D200-D269
210-219-25S0-12D	21.0-21.9	25	255	285.2	56	3.18	21	
220-229-25S0-12D	22.0-22.9	25	267	298.8	56	3.24	22	
230-239-32S0-12D	23.0-23.9	32	289	312.3	60	3.46	23	
240-249-32S0-12D	24.0-24.9	32	292	325.9	60	3.62	24	
250-259-32S0-12D	25.0-25.9	32	304	339.5	60	3.80	25	

D204-D216

Cutting Condition

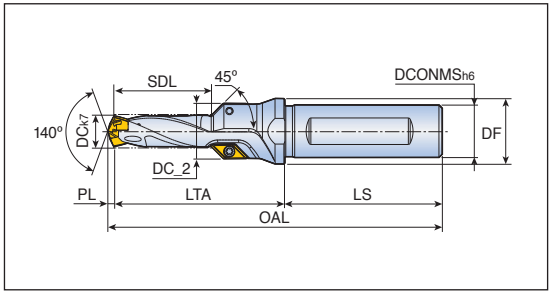
D258

- It is recommended to make the pilot hole with a 1.5D holder
- OAL: LPR+LS
- SSC: Seat size code

TCD...-M

DRILLRUSH

Head changeable drill holders for pre-thread hole



Designation	ISO thread	DC	Dimension (mm)							Drill dia. range	Insert
			SDL	LTA	LS	DC_2	DCONMS	DF	PL		
TCD 068x21x12T3-M8	M8	6.8	21	43.77	45	13.5	12	16	1.23	6.5-6.9	AOMT 06...-C45
085x26x12T3-M10	M10	8.5	26	48.71	45	15.5	12	16	1.29	8.5-8.9	D217
102x30x16T3-M12	M12	10.2	30	52.46	48	17.0	16	20	1.54	10.0-10.4	
120x35x16T3-M14	M14	12.0	35	59.18	48	19.0	16	20	1.82	12.0-12.4	
140x39x20T3-M16	M16	14.0	39	66.88	50	21.0	20	25	2.12	14.0-14.4	
175x42x20T3-M20	M20	17.5	42	69.32	50	24.5	20	27	2.68	17.0-17.9	
210x48x25T2-M24	M24	21.0	48	76.82	56	28.0	25	32	3.18	21.0-21.9	

▸ OAL: LTA+LS+PL

Spare parts

Designation	Screw	Wrench	Clamping key	
TCD 068	TS 22046I	TD 7	K TCD D060-D099	
TCD 085	TS 22046I	TD 7	K TCD D060-D099	
TCD 102 - 175	TS 22046I	TD 7	K TCD D100-D199	
TCD 210	TS 22046I	TD 7	K TCD D200-D269	

D204-D216 | Sleeve D127 | Cutting Condition D258

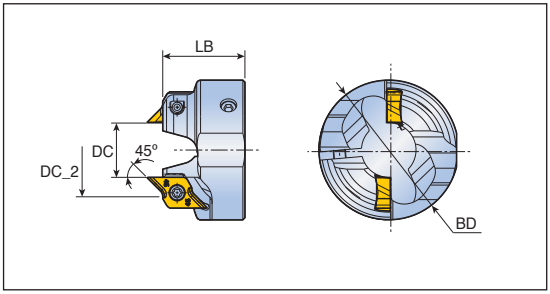
Plug for coolant supply in a stationary machines

TaeguTec supplies special plugs with an internal thread for coolant connections used on lathes that can be pressed into the cavity on the back end of the shank.

Description	Shank diameter	Internal thread
PL-TCD-12	12	G 1/16
PL-TCD-16	16	G 1/16
PL-TCD-20	20	G 1/8
PL-TCD-25	25	G 1/8
PL-TCD-32	32	G 1/8

CFR D...-A45

Chamfering ring tools



Designation	Dimension (mm)				Chamfer size	Chamfer insert
	DC	DC_2	BD	LB		
CFR D100-A45	9.8	16.56	34	20	2.5	CRNG 08...-45CD
D105-A45	10.3	17.06	34	20	2.5	D217
D110-A45	10.8	17.56	34	20	2.5	
D115-A45	11.3	18.06	34	20	2.5	
D120-A45	11.8	18.56	34	20	2.5	
D125-A45	12.3	19.06	34	20	2.5	
D130-A45	12.8	19.56	34	20	2.5	
D135-A45	13.3	20.06	34	20	2.5	
D140-A45	13.8	20.56	38	22	2.5	
D145-A45	14.3	21.06	38	22	2.5	
D150-A45	14.6	21.36	38	22	2.5	
D160-A45	15.6	22.36	42	23	2.5	
D170-A45	16.6	23.36	42	23	2.5	
D180-A45	17.6	24.36	42	23	2.5	
D190-A45	18.6	25.36	42	24	2.5	
D200-A45	19.6	26.36	42	24	2.5	
D210-A45	20.6	27.36	47	24	2.5	
D220-A45	21.6	28.36	47	24	2.5	
D230-A45	22.6	29.36	47	24	2.5	
D240-A45	23.6	30.36	47	24	2.5	
D250-A45	24.6	31.36	47	24	2.5	

Spare parts

Designation	Insert screw	Wrench	Clamping screw	L-wrench
CFR D100 - D135	SO 25065I	TD 7	SH M3x0.5x10 (1)	L-W2.5
CFR D140 - D150	SO 25065I	TD 7	SH M4x0.7x12 (2)	L-W3
CFR D160 - D250	SO 25065I	TD 7	SH M5x0.8x16 (3)	L-W4

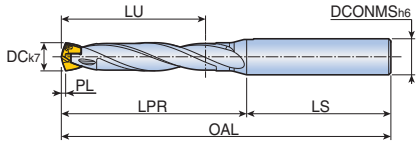
▸ (1) Clamping torque: 2-3 [N•m] (2) Clamping torque: 3.5-4.5 [N•m] (3) Clamping torque: 5-6 [N•m]

Technical Data D288-291

TCD…A0-3D/5D/8D

DRILLRUSH

Head changeable drill holders - Cylindrical type shank



• Drilling depth: 3/5/8xdiameter

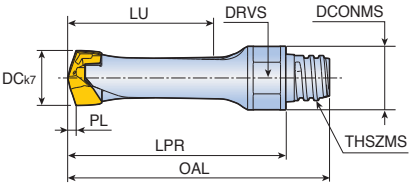
Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 060-064-08A0-3D	6.0-6.4	8	19	28.0	36	0.96	6	K TCD D060-D099
065-069-08A0-3D	6.5-6.9	8	21	29.8	36	1.18	6.5	
070-074-08A0-3D	7.0-7.4	8	22	31.6	36	1.01	7	
075-079-08A0-3D	7.5-7.9	8	24	33.1	36	1.10	7.5	
080-084-10A0-3D	8.0-8.4	10	25	35.4	40	1.20	8	
085-089-10A0-3D	8.5-8.9	10	27	36.9	40	1.29	8.5	
090-094-10A0-3D	9.0-9.4	10	28	38.8	40	1.35	9	
095-099-10A0-3D	9.5-9.9	10	30	40.3	40	1.44	9.5	
TCD 060-064-08A0-5D	6.0-6.4	8	31	40.0	36	0.96	6	K TCD D060-D099
065-069-08A0-5D	6.5-6.9	8	34	42.8	36	1.18	6.5	
070-074-08A0-5D	7.0-7.4	8	36	45.6	36	1.01	7	
075-079-08A0-5D	7.5-7.9	8	39	48.1	36	1.10	7.5	
080-084-10A0-5D	8.0-8.4	10	41	51.4	40	1.20	8	
085-089-10A0-5D	8.5-8.9	10	44	53.9	40	1.29	8.5	
090-094-10A0-5D	9.0-9.4	10	46	56.8	40	1.35	9	
095-099-10A0-5D	9.5-9.9	10	49	59.3	40	1.44	9.5	
TCD 060-064-08A0-8D	6.0-6.4	8	49	58.0	36	0.96	6	K TCD D060-D099
065-069-08A0-8D	6.5-6.9	8	53	62.3	36	1.18	6.5	
070-074-08A0-8D	7.0-7.4	8	57	66.6	36	1.01	7	
075-079-08A0-8D	7.5-7.9	8	61	70.6	36	1.10	7.5	
080-084-10A0-8D	8.0-8.4	10	65	75.4	40	1.20	8	
085-089-10A0-8D	8.5-8.9	10	69	79.4	40	1.29	8.5	
090-094-10A0-8D	9.0-9.4	10	73	83.8	40	1.35	9	
095-099-10A0-8D	9.5-9.9	10	77	87.8	40	1.44	9.5	

D204-216 Cutting Condition D258

▸ OAL: LPR+LS
▸ SSC: Seat size code

TCD...-MRS-2D

Head changeable drill holder with MAXI-RUSH type shank



• Drilling depth: 2xdiameter

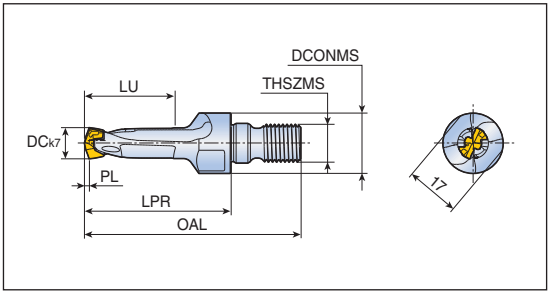
Designation	Dimension (mm)									Clamping key
	DC	DCONMS	LU	LPR	PL	OAL	DRVS	THSZMS	SSC	
TCD 060-064-MRS06-2D	6.0-6.4	9.6	13.0	28.0	1.0	34.3	8	S06	6	K TCD D060-D099
080-084-MRS06-2D	8.0-8.4	9.6	17.2	32.9	1.2	39.2	8	S06	8	
100-104-MRS08-2D	10.0-10.4	11.6	21.5	39.8	1.5	47.3	10	S08	10	K TCD D100-D199

D204-216 D258

- SSC: Seat size code
- Matched with MAXI-RUSH holder

TCDM...-M12-2D

Head changeable drill holder with T-FLEXTEC type shank



• Drilling depth: 2xdiameter

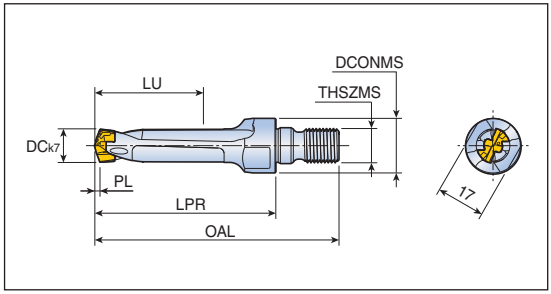
Designation		Dimension (mm)								Clamping key
		DC	DCONMS	LU	LPR	PL	OAL	THSZMS	SSC	
TCDM	**100-104-M12-2D**	10.0-10.4	19	28.7	46.2	1.5	68.2	M12	10	K TCD D100-D199
	105-109-M12-2D	10.5-10.9	19	29.7	47.2	1.6	69.2	M12	10	
	110-114-M12-2D	11.0-11.4	19	31.1	48.6	1.7	70.6	M12	11	
	115-119-M12-2D	11.5-11.9	19	32.1	49.6	1.8	71.6	M12	11	
	120-124-M12-2D	12.0-12.4	19	33.5	51.0	1.8	73.0	M12	12	
	125-129-M12-2D	12.5-12.9	19	34.5	52.0	1.9	74.0	M12	12	
	130-134-M12-2D	13.0-13.4	19	36.1	53.6	2.0	75.6	M12	13	
	135-139-M12-2D	13.5-13.9	19	37.1	54.6	2.1	76.6	M12	13	
	140-144-M12-2D	14.0-14.4	19	38.7	56.2	2.1	78.2	M12	14	
	145-149-M12-2D	14.5-14.9	19	39.7	57.2	2.2	79.2	M12	14	
	150-159-M12-2D	15.0-15.9	19	41.2	58.7	2.3	80.7	M12	15	

D204-216
Cutting Condition D258

- SSC: Seat size code
- Matched with T-FLEXTEC holder

TCDM...-M12-3D

Head changeable drill holder with T-FLEXTEC type shank



- Drilling depth: 3xdiameter

Designation	Dimension (mm)								Clamping key
	DC	DCONMS	LU	LPR	PL	OAL	THSZMS	SSC	
TCDM 060-064-M12-3D	6.0-6.4	19	25.5	42.0	1.0	64.0	M12	6	K TCD D060-D099
065-069-M12-3D	6.5-6.9	19	27.2	44.3	1.2	66.3	M12	6.5	
070-074-M12-3D	7.0-7.4	19	28.5	45.6	1.0	67.6	M12	7	
075-079-M12-3D	7.5-7.9	19	30.1	47.6	1.1	69.6	M12	7	
080-084-M12-3D	8.0-8.4	19	31.7	49.4	1.2	71.4	M12	8	
085-089-M12-3D	8.5-8.9	19	33.3	50.4	1.3	72.4	M12	8	
090-094-M12-3D	9.0-9.4	19	34.9	52.8	1.4	74.8	M12	9	
095-099-M12-3D	9.5-9.9	19	36.4	54.8	1.4	76.8	M12	9	
100-104-M12-3D	10.0-10.4	19	38.0	56.2	1.5	78.2	M12	10	K TCD D100-D199
105-109-M12-3D	10.5-10.9	19	39.6	58.2	1.6	80.2	M12	10	
110-114-M12-3D	11.0-11.4	19	41.2	59.6	1.7	81.6	M12	11	
115-119-M12-3D	11.5-11.9	19	42.8	61.6	1.8	83.6	M12	11	
120-124-M12-3D	12.0-12.4	19	44.3	63.0	1.8	85.0	M12	12	
125-129-M12-3D	12.5-12.9	19	45.9	64.0	1.9	86.0	M12	12.	
130-134-M12-3D	13.0-13.4	19	47.5	66.6	2.0	88.6	M12	13	
135-139-M12-3D	13.5-13.9	19	49.1	68.6	2.1	90.6	M12	13	
140-144-M12-3D	14.0-14.4	19	50.6	70.2	2.1	92.2	M12	14	
145-149-M12-3D	14.5-14.9	19	52.2	72.2	2.2	94.2	M12	14	
150-159-M12-3D	15.0-15.9	19	53.8	73.7	2.3	95.7	M12	15	
160-169-M12-3D	16.0-16.9	19	56.9	77.3	2.4	99.3	M12	16	
170-179-M12-3D	17.0-17.9	19	60.1	80.9	2.6	102.9	M12	17	
180-189-M12-3D	18.0-18.9	19	63.2	84.5	2.7	106.5	M12	18	
190-199-M12-3D	19.0-19.9	19	66.4	88.0	2.9	110.0	M12	19	
200-209-M12-3D	20.0-20.9	19	69.5	91.6	3.0	113.6	M12	20	K TCD D200-D269

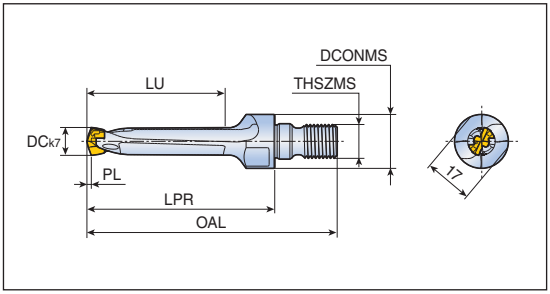
D204-216
Cutting Condition D258

- SSC: Seat size code
- Matched with T-FLEXTEC holder

TCDM...-M12-4D

Head changeable drill holder with T-FLEXTEC type shank

• Drilling depth: 4xdiameter



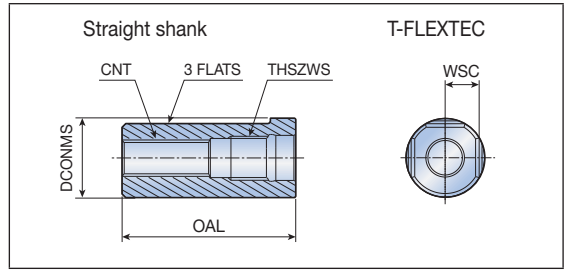
Designation		Dimension (mm)								Clamping key
		DC	DCONMS	LU	LPR	PL	OAL	THSZMS	SSC	
TCDM	**100-104-M12-4D**	10.0-10.4	19	48.7	66.2	1.5	88.2	M12	10	K TCD D100-D199
	105-109-M12-4D	10.5-10.9	19	50.7	68.2	1.6	90.2	M12	10	
	110-114-M12-4D	11.0-11.4	19	53.1	70.6	1.7	92.6	M12	11	
	115-119-M12-4D	11.5-11.9	19	55.1	72.6	1.8	94.6	M12	11	
	120-124-M12-4D	12.0-12.4	19	57.5	75.0	1.8	97.0	M12	12	
	125-129-M12-4D	12.5-12.9	19	59.5	77.0	1.9	99.0	M12	12	
	130-134-M12-4D	13.0-13.4	19	62.1	79.6	2.0	101.6	M12	13	
	135-139-M12-4D	13.5-13.9	19	64.1	81.6	2.1	103.6	M12	13	
	140-144-M12-4D	14.0-14.4	19	66.7	84.2	2.1	106.2	M12	14	
	145-149-M12-4D	14.5-14.9	19	68.7	86.2	2.2	108.2	M12	14	
	150-159-M12-4D	15.0-15.9	19	71.2	88.7	2.3	110.7	M12	15	

D204-216 D258

- SSC: Seat size code
- Matched with T-FLEXTEC holder

TFLEX-TCD-M12

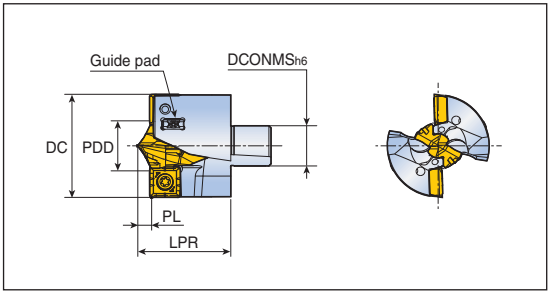
T-FLEXTEC shank



Designation		Dimension (mm)				CNT
		THSZWS	DCONMS	OAL	WSC	
TFLEX	**160X36-TCD-M12**	M12	16	36	7.5	UNF 5/16
	1905X36-TCD-M12	M12	19.05	36	8.5	UNF 5/16
	200X36-TCD-M12	M12	20	36	8.5	G 1/8
	220X48-TCD-M12	M12	22	48	9.5	G 1/8
	250X54-TCD-M12	M12	25	54	11	G 1/8
	254X54-TCD-M12	M12	25.4	54	11	G 1/8

TNDH-TP

Modular drill heads



Designation		Dimension (mm)					Clamping Key	Insert	
		DC	DCONMS	LPR	PL	PDD		Center	Outer
TNDH	**2600-C26-TP**	26	10.4	24.9	3.98	15.9	K TCD D15-D16 CO	TCD-159-P-CO+	SPGX 06...DW
	2700-C26-TP	27	10.4	25.4	4.14	16.9	K TCD D15-D16 CO	TCD-169-P-CO+	D218
	2800-C28-TP	28	11.2	26.9	4.29	17.9	K TCD D17-D19 CO	TCD-179-P-CO+	
	2900-C28-TP	29	11.2	26.6	3.97	15.9	K TCD D15-D16 CO	TCD-159-P-CO+	SPGX 07...DW
	3000-C30-TP	30	12.0	28.3	4.14	16.9	K TCD D15-D16 CO	TCD-169-P-CO+	D218
	3100-C30-TP	31	12.0	28.5	4.30	17.9	K TCD D17-D19 CO	TCD-179-P-CO+	
	3200-C32-TP	32	12.8	30.3	4.46	18.9	K TCD D17-D19 CO	TCD-189-P-CO+	
	3300-C32-TP	33	12.8	29.8	3.97	15.9	K TCD D15-D16 CO	TCD-159-P-CO+	SPGX 09...DW
	3400-C34-TP	34	13.6	31.6	4.14	16.9	K TCD D15-D16 CO	TCD-169-P-CO+	D218
	3500-C34-TP	35	13.6	31.8	4.30	17.9	K TCD D17-D19 CO	TCD-179-P-CO+	
	3600-C36-TP	36	14.4	33.5	4.46	18.9	K TCD D17-D19 CO	TCD-189-P-CO+	
	3700-C36-TP	37	14.4	33.3	4.14	16.9	K TCD D15-D16 CO	TCD-169-P-CO+	SPGX 11...DW
	3800-C38-TP	38	15.2	35.0	4.30	17.9	K TCD D17-D19 CO	TCD-179-P-CO+	D218
	3900-C38-TP	39	15.2	35.2	4.46	18.9	K TCD D17-D19 CO	TCD-189-P-CO+	
	4000-C40-TP	40	16.0	36.9	4.62	19.9	K TCD D17-D19 CO	TCD-199-P-CO+	
	4100-C40-TP	41	16.0	37.1	4.78	20.9	K TCD D20-D21 CO	TCD-209-P-CO+	
	4200-C42-TP	42	16.8	38.9	4.95	21.9	K TCD D20-D21 CO	TCD-219-P-CO+	
	4300-C42-TP	43	16.8	38.9	5.11	22.9	K TCD D22-D23 CO	TCD-229-P-CO+	

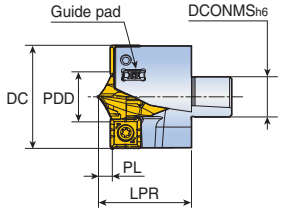
- DCONMS: Holder connection size
- Guide pad is sold separately from drill head

Spare parts

Designation	For double pitch screw		For SPGX		For Guide pad	
	Screw1	Wrench1	Screw2	Wrench2	Screw3	Wrench3
TNDH 2600-2800	TDPS 0512-T7	TD 7	TS 22052I/HG	TD 7	TS 20043I/HG-P	TD 6P
TNDH 2900-3200	TDPS 0512-T7	TD 7	TS 25064I	TD 8	TS 20043I/HG-P	TD 6P
TNDH 3300-3500	TDPS 0512-T7	TD 7	TS 35088I	TD 10	TS 20043I/HG-P	TD 6P
TNDH 3600	TDPS 0618-T8	TD 8	TS 35088I	TD 10	TS 20043I/HG-P	TD 6P
TNDH 3700-4300	TDPS 0618-T8	TD 8	TS 40093I	TD 15	TS 20043I/HG-P	TD 6P

TNDH-TP

Modular drill heads



Designation		Dimension (mm)					Clamping Key	Insert	
		DC	DCONMS	LPR	PL	PDD		Center	Outer
TNDH	**4400-C44-TP**	44	17.6	40.8	5.28	23.9	K TCD D22-D23 CO	TCD-239-P-CO+	SPGX 11...DW
	4500-C44-TP	45	17.6	41.0	5.44	24.9	K TCD D24-D25 CO	TCD-249-P-CO+	D218
	4600-C46-TP	46	18.4	42.2	4.95	21.9	K TCD D20-D21 CO	TCD-219-P-CO+	SPGX 14...DW
	4700-C46-TP	47	18.4	42.3	5.11	22.9	K TCD D22-D23 CO	TCD-229-P-CO+	D218
	4800-C48-TP	48	19.2	44.0	5.28	23.9	K TCD D22-D23 CO	TCD-239-P-CO+	
	4900-C48-TP	49	19.2	44.3	5.44	24.9	K TCD D24-D25 CO	TCD-249-P-CO+	
	5000-C48-TP	50	19.2	46.0	5.61	25.9	K TCD D24-D25 CO	TCD-259-P-CO+	

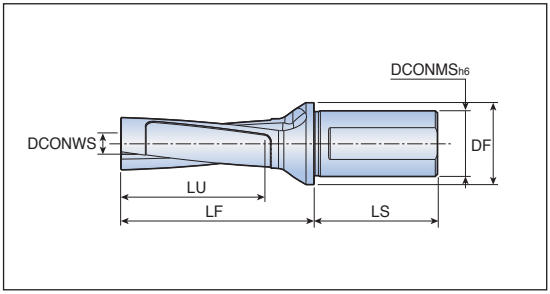
- DCONMS: Holder connection size
- Guide pad is sold separately from drill head

Spare parts

Designation	For double pitch screw		For SPGX		For Guide pad	
	Screw1	Wrench1	Screw2	Wrench2	Screw3	Wrench3
TNDH 4400-4500	TDPS 0722-W3.0	F-W3.0	TS 40093I	TD 15	TS 20043I/HG-P	TD 6P
TNDH 4600-5000	TDPS 0722-W3.0	F-W3.0	SO 50090I	TD 20	TS 20043I/HG-P	TD 6P

MDB...T2-3

Modular drill holders - Weldon type shank



• Drilling depth: 3xdiameter

Designation	Dimension (mm)						
	DC	DCONWS	DCONMS	DF	LU	LF	LS
MDB D26/27-081-32T2-C26-3	26-27	10.4	32	40	60	94.3	60
D28/29-087-32T2-C28-3	28-29	11.2	32	40	64	100.5	60
D30/31-093-32T2-C30-3	30-31	12.0	32	40	69	105.5	60
D32/33-099-32T2-C32-3	32-33	12.8	32	40	73	111.7	60
D34/35-105-40T2-C34-3	34-35	13.6	40	50	78	120.2	68
D36/37-111-40T2-C36-3	36-37	14.4	40	50	82	126.5	68
D38/39-117-40T2-C38-3	38-39	15.2	40	50	86	131.4	68
D40/41-123-40T2-C40-3	40-41	16.0	40	50	91	137.6	68
D42/43-129-40T2-C42-3	42-43	16.8	40	50	95	143.8	68
D44/45-135-40T2-C44-3	44-45	17.6	40	50	99	150.0	68
D46/47-141-50T2-C46-3	46-47	18.4	50	60	104	154.5	80
D48/50-150-50T2-C48-3	48-50	19.2	50	60	111	160.9	80

▸ DC: Cutting diameter range
▸ DCONWS: Modular head connection size
▸ Refer to the Modular head information on page D75-D76

Spare parts

Designation	Wrench	Wrench handle		
MDB D26/27-D34/35-3	BLD H-W2.5x210	SW6-T-SH		
MDB D36/37-D42/43-3	BLD H-W3.0x225	SW6-T-SH		
MDB D44/45-D48/50-3	BLD H-W4.0x255	SW6-T-SH		

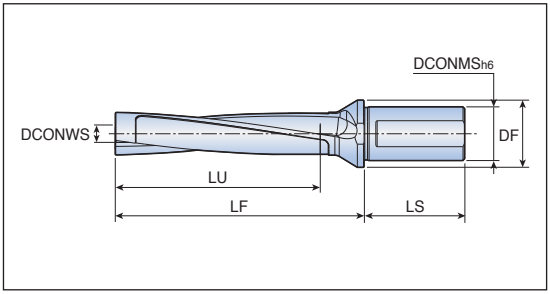
▸ Wrench: Disassemble the modular head from the modular body (Insert from the rear shank)

Cutting Condition D260
Technical Data D292

MDB...T2-5

Modular drill holders - Weldon type shank

• Drilling depth: 5xdiameter



Designation		Dimension (mm)						
		DC	DCONWS	DCONMS	DF	LU	LF	LS
MDB	D26/27-135-32T2-C26-5	26-27	10.4	32	40	114	148.3	60
	D28/29-145-32T2-C28-5	28-29	11.2	32	40	122	158.5	60
	D30/31-155-32T2-C30-5	30-31	12.0	32	40	131	167.5	60
	D32/33-165-32T2-C32-5	32-33	12.8	32	40	139	177.7	60
	D34/35-175-40T2-C34-5	34-35	13.6	40	50	148	190.2	68
	D36/37-185-40T2-C36-5	36-37	14.4	40	50	156	200.5	68
	D38/39-195-40T2-C38-5	38-39	15.2	40	50	164	209.4	68
	D40/41-205-40T2-C40-5	40-41	16.0	40	50	173	219.6	68
	D42/43-215-40T2-C42-5	42-43	16.8	40	50	181	229.8	68
	D44/45-225-40T2-C44-5	44-45	17.6	40	50	189	240.0	68
	D46/47-235-50T2-C46-5	46-47	18.4	50	60	198	248.5	80
	D48/50-250-50T2-C48-5	48-50	19.2	50	60	211	258.9	80

▸ DC: Cutting diameter range
▸ DCONWS: Modular head connection size
▸ Refer to the Modular head information on page D75-D76

Spare parts

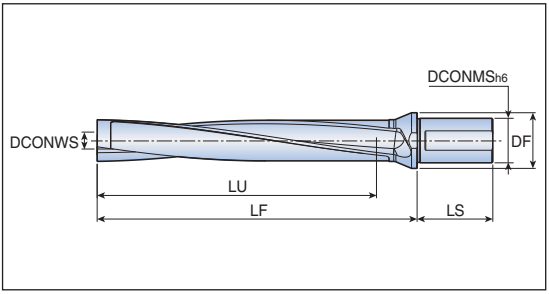
Designation	Wrench	Wrench handle		
MDB D26/27-D34/35-5	BLD H-W2.5x280	SW6-T-SH		
MDB D36/37-D42/43-5	BLD H-W3.0x310	SW6-T-SH		
MDB D44/45-D48/50-5	BLD H-W4.0x350	SW6-T-SH		

▸ Wrench: Disassemble the modular head from the modular body (Insert from the rear shank)

Cutting Condition D260
Technical Data D292

MDB...T2-7

Modular drill holders - Weldon type shank



• Drilling depth: 7xdiameter

Designation	Dimension (mm)						
	DC	DCONWS	DCONMS	DF	LU	LF	LS
MDB D26/27-189-32T2-C26-7	26-27	10.4	32	40	168	202.3	60
D28/29-203-32T2-C28-7	28-29	11.2	32	40	180	216.5	60
D30/31-217-32T2-C30-7	30-31	12.0	32	40	193	229.5	60
D32/33-231-32T2-C32-7	32-33	12.8	32	40	205	243.7	60
D34/35-245-40T2-C34-7	34-35	13.6	40	50	218	260.2	68
D36/37-259-40T2-C36-7	36-37	14.4	40	50	230	274.5	68
D38/39-273-40T2-C38-7	38-39	15.2	40	50	242	287.4	68
D40/41-287-40T2-C40-7	40-41	16.0	40	50	255	301.6	68

▸ DC: Cutting diameter range
▸ DCONWS: Modular head connection size
▸ Refer to the Modular head information on page D75-D76

Spare parts

Designation	Wrench	Wrench handle		
MDB D26/27-7	BLD H-W2.5x280	SW6-T-SH		
MDB D28/29-D34/35-7	BLD H-W2.5x350	SW6-T-SH		
MDB D36/37-D40/41-7	BLD H-W3.0x400	SW6-T-SH		

▸ Wrench: Disassemble the modular head from the modular body (Insert from the rear shank)

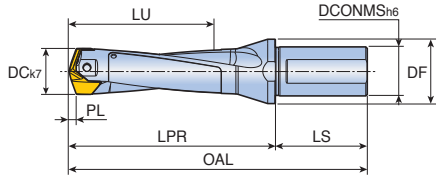
Cutting Condition D260
Technical Data D292

LCD...T2-3D

SPADERUSH

Head changeable drill holders - Weldon type shank

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC
LCD 200-209-25T2-3D	20.0-20.9	25	32	63	92.1	56	3.11	20
210-219-25T2-3D	21.0-21.9	25	32	66	95.3	56	3.29	21
220-229-25T2-3D	22.0-22.9	25	32	69	98.4	56	3.42	22
230-239-25T2-3D	23.0-23.9	25	32	73	101.6	56	3.60	23
240-249-32T2-3D	24.0-24.9	32	40	76	110.7	60	3.73	24
250-259-32T2-3D	25.0-25.9	32	40	79	113.9	60	3.91	25
260-269-32T2-3D	26.0-26.9	32	40	82	117.0	60	4.04	26
270-279-32T2-3D	27.0-27.9	32	40	85	120.2	60	4.22	27
280-289-32T2-3D	28.0-28.9	32	40	88	128.4	60	4.35	28
290-299-32T2-3D	29.0-29.9	32	40	92	131.5	60	4.53	29
300-309-32T2-3D	30.0-30.9	32	42	95	134.7	60	4.67	30
310-319-32T2-3D	31.0-31.9	32	42	98	137.9	60	4.85	31
320-329-40T2-3D	32.0-32.9	40	48	101	143.0	68	4.98	32
330-339-40T2-3D	33.0-33.9	40	48	104	146.2	68	5.16	33
340-349-40T2-3D	34.0-34.9	40	48	107	149.3	68	5.34	34
350-359-40T2-3D	35.0-35.9	40	48	110	152.4	68	5.44	35
360-369-40T2-3D	36.0-36.9	40	48	114	155.6	68	5.62	36
370-379-40T2-3D	37.0-37.9	40	48	117	158.8	68	5.80	37
380-389-40T2-3D	38.0-38.9	40	50	120	166.9	68	5.91	38
390-399-40T2-3D	39.0-39.9	40	50	123	170.1	68	6.09	39
400-410-40T2-3D	40.0-41.0	40	50	126	173.3	68	6.27	40

▸ OAL: LPR+LS ▸ SSC: Seat size code

Spare parts

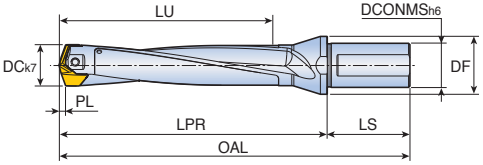
Designation	Screw	Wrench	Wrench handle	
LCD 200-219-3D	TS 40178D25	BLD T20/S7	SW6-T-SH	
LCD 220-239-3D	TS 40198D28	BLD T20/S7	SW6-T-SH	
LCD 240-259-3D	TS 40210D3	BLD T20/S7	SW6-T-SH	
LCD 260-279-3D	TS 50230D3	BLD T20/S7	SW6-T-SH	
LCD 280-299-3D	TS 50250D35	BLD T25/S7	SW6-T-SH	
LCD 300-319-3D	TS 60265D4	BLD T25/S7	SW6-T-SH	
LCD 320-349-3D	TS 60285D42	BLD T25/S7	SW6-T-SH	
LCD 350-379-3D	TS 60320D5	BLD T25/S7	SW6-T-SH	
LCD 380-410-3D	TS 80340D6	BLD T25/S7	SW6-T-SH	

ADVANCE CUTTING TaeguTec

LCD...T2-5D

SPADERUSH

Head changeable drill holders - Weldon type shank



• Drilling depth: 5xdiameter

Designation	Dimension (mm)							
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC
LCD 200-209-25T2-5D	20.0-20.9	25	32	103	132.1	56	3.11	20
210-219-25T2-5D	21.0-21.9	25	32	108	137.3	56	3.29	21
220-229-25T2-5D	22.0-22.9	25	32	113	142.4	56	3.42	22
230-239-25T2-5D	23.0-23.9	25	32	119	147.6	56	3.60	23
240-249-32T2-5D	24.0-24.9	32	40	124	158.7	60	3.73	24
250-259-32T2-5D	25.0-25.9	32	40	129	163.9	60	3.91	25
260-269-32T2-5D	26.0-26.9	32	40	134	169.0	60	4.04	26
270-279-32T2-5D	27.0-27.9	32	40	139	174.2	60	4.22	27
280-289-32T2-5D	28.0-28.9	32	40	144	184.4	60	4.35	28
290-299-32T2-5D	29.0-29.9	32	40	150	189.5	60	4.53	29
300-309-32T2-5D	30.0-30.9	32	42	155	194.7	60	4.67	30
310-319-32T2-5D	31.0-31.9	32	42	160	199.9	60	4.85	31
320-329-40T2-5D	32.0-32.9	40	48	165	207.0	68	4.98	32
330-339-40T2-5D	33.0-33.9	40	48	170	212.2	68	5.16	33
340-349-40T2-5D	34.0-34.9	40	48	175	217.3	68	5.34	34
350-359-40T2-5D	35.0-35.9	40	48	180	222.4	68	5.44	35
360-369-40T2-5D	36.0-36.9	40	48	186	227.6	68	5.62	36
370-379-40T2-5D	37.0-37.9	40	48	191	232.8	68	5.80	37
380-389-40T2-5D	38.0-38.9	40	50	196	242.9	68	5.91	38
390-399-40T2-5D	39.0-39.9	40	50	201	248.1	68	6.09	39
400-410-40T2-5D	40.0-41.0	40	50	206	253.3	68	6.27	40

▸ OAL: LPR+LS ▸ SSC: Seat size code

Spare parts

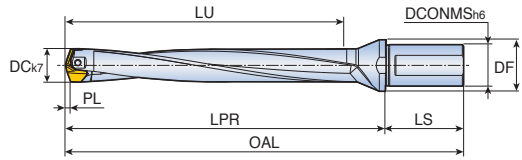
Designation	Screw	Wrench	Wrench handle	
LCD 200-219-5D	TS 40178D25	BLD T20/S7	SW6-T-SH	
LCD 220-239-5D	TS 40198D28	BLD T20/S7	SW6-T-SH	
LCD 240-259-5D	TS 40210D3	BLD T20/S7	SW6-T-SH	
LCD 260-279-5D	TS 50230D3	BLD T20/S7	SW6-T-SH	
LCD 280-299-5D	TS 50250D35	BLD T25/S7	SW6-T-SH	
LCD 300-319-5D	TS 60265D4	BLD T25/S7	SW6-T-SH	
LCD 320-349-5D	TS 60285D42	BLD T25/S7	SW6-T-SH	
LCD 350-379-5D	TS 60320D5	BLD T25/S7	SW6-T-SH	
LCD 380-410-5D	TS 80340D6	BLD T25/S7	SW6-T-SH	

D219-D223 Cutting Condition D262

LCD...T2-8D

SPADERUSH

Head changeable drill holders - Weldon type shank



• Drilling depth: 8xdiameter

Designation	Dimension (mm)							
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC
LCD 200-209-25T2-8D	20.0-20.9	25	32	163.1	192.1	56	3.11	20
210-219-25T2-8D	21.0-21.9	25	32	171.3	200.1	56	3.29	21
220-229-25T2-8D	22.0-22.9	25	32	179.4	208.4	56	3.42	22
230-239-25T2-8D	23.0-23.9	25	32	187.6	216.4	56	3.60	23
240-249-32T2-8D	24.0-24.9	32	40	195.7	230.7	60	3.73	24
250-259-32T2-8D	25.0-25.9	32	40	203.9	238.7	60	3.91	25
260-269-32T2-8D	26.0-26.9	32	40	212.0	247.0	60	4.04	26
270-279-32T2-8D	27.0-27.9	32	40	220.2	255.0	60	4.22	27
280-289-32T2-8D	28.0-28.9	32	40	228.4	268.4	60	4.35	28
290-299-32T2-8D	29.0-29.9	32	40	236.5	276.4	60	4.53	29
300-309-32T2-8D	30.0-30.9	32	42	244.7	284.7	60	4.67	30
310-319-32T2-8D	31.0-31.9	32	42	252.9	292.7	60	4.85	31
320-329-40T2-8D	32.0-32.9	40	48	261.0	303.0	68	4.98	32
330-339-40T2-8D	33.0-33.9	40	48	269.2	311.0	68	5.16	33
340-349-40T2-8D	34.0-34.9	40	48	277.3	319.0	68	5.34	34
350-359-40T2-8D	35.0-35.9	40	48	285.4	327.4	68	5.44	35
360-369-40T2-8D	36.0-36.9	40	48	293.6	335.4	68	5.62	36
370-379-40T2-8D	37.0-37.9	40	48	301.8	343.4	68	5.80	37
380-389-40T2-8D	38.0-38.9	40	50	309.9	356.9	68	5.91	38
390-399-40T2-8D	39.0-39.9	40	50	318.1	364.9	68	6.09	39
400-410-40T2-8D	40.0-41.0	40	50	326.3	372.9	68	6.27	40

▸ OAL: LPR+LS ▸ SSC: Seat size code ▸ It is recommended to make the pilot hole with a 3D holder

Spare parts

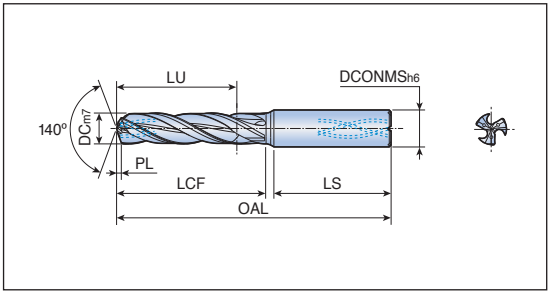
Designation	Screw	Wrench	Wrench handle	
LCD 200-219-8D	TS 40178D25	BLD T20/S7	SW6-T-SH	
LCD 220-239-8D	TS 40198D28	BLD T20/S7	SW6-T-SH	
LCD 240-259-8D	TS 40210D3	BLD T20/S7	SW6-T-SH	
LCD 260-279-8D	TS 50230D3	BLD T20/S7	SW6-T-SH	
LCD 280-299-8D	TS 50250D35	BLD T25/S7	SW6-T-SH	
LCD 300-319-8D	TS 60265D4	BLD T25/S7	SW6-T-SH	
LCD 320-349-8D	TS 60285D42	BLD T25/S7	SW6-T-SH	
LCD 350-379-8D	TS 60320D5	BLD T25/S7	SW6-T-SH	
LCD 380-410-8D	TS 80340D6	BLD T25/S7	SW6-T-SH	

D219-D223
Cutting Condition
D262

3HD...PI3

SOLID3DRILL

3 flute solid carbide drills with oil holes



• Drilling depth: 3xdiameter

Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT5130
3HD 040-017-06 PI3	4.0	6	66	17	25	35	0.82	●
045-017-06 PI3	4.5	6	66	17	25	35	0.88	●
050-020-06 PI3	5.0	6	66	20	29	36	0.96	●
051-020-06 PI3	5.1	6	66	20	29	36	0.98	●
055-020-06 PI3	5.5	6	66	20	29	36	1.08	●
060-020-06 PI3	6.0	6	66	20	29	36	1.17	●
065-024-08 PI3	6.5	8	79	24	35	36	1.26	●
068-024-08 PI3	6.8	8	79	24	35	36	1.31	●
070-024-08 PI3	7.0	8	79	24	35	36	1.35	●
075-029-08 PI3	7.5	8	79	29	42	36	1.40	●
080-029-08 PI3	8.0	8	79	29	42	36	1.49	●
085-035-10 PI3	8.5	10	89	35	48	40	1.63	●
086-035-10 PI3	8.6	10	89	35	48	40	1.65	●
090-035-10 PI3	9.0	10	89	35	48	40	1.72	●
095-035-10 PI3	9.5	10	89	35	48	40	1.75	●
100-035-10 PI3	10.0	10	89	35	48	40	1.85	●
103-040-12 PI3	10.3	12	102	40	55	45	1.94	●
105-040-12 PI3	10.5	12	102	40	55	45	1.98	●
110-040-12 PI3	11.0	12	102	40	55	45	2.07	●
115-040-12 PI3	11.5	12	102	40	56	45	2.12	●
120-040-12 PI3	12.0	12	102	40	56	45	2.21	●

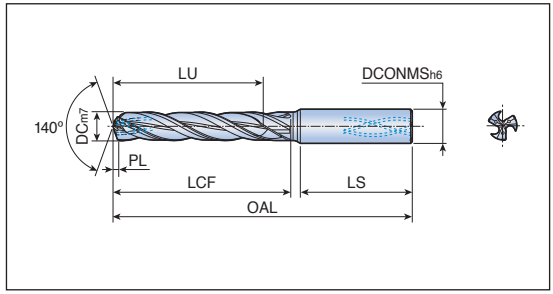
Cutting Condition D264

●: Standard items

3HD...PI5

3 flute solid carbide drills with oil holes

• Drilling depth: 5xdiameter



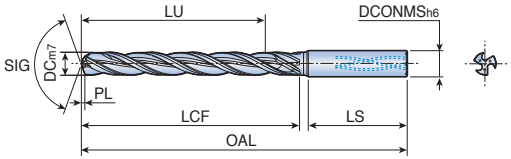
Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT5130
3HD 040-029-06 PI5	4.0	6	74	29	37	35	0.82	●
045-029-06 PI5	4.5	6	74	29	37	35	0.88	●
050-035-06 PI5	5.0	6	82	35	45	36	0.96	●
051-035-06 PI5	5.1	6	82	35	45	36	0.98	●
055-035-06 PI5	5.5	6	82	35	45	36	1.08	●
060-035-06 PI5	6.0	6	82	35	45	36	1.17	●
065-043-08 PI5	6.5	8	91	43	54	36	1.26	●
068-043-08 PI5	6.8	8	91	43	54	36	1.31	●
070-043-08 PI5	7.0	8	91	43	54	36	1.35	●
075-043-08 PI5	7.5	8	91	43	54	36	1.40	●
080-043-08 PI5	8.0	8	91	43	54	36	1.49	●
085-049-10 PI5	8.5	10	103	49	62	40	1.63	●
086-049-10 PI5	8.6	10	103	49	62	40	1.65	●
090-049-10 PI5	9.0	10	103	49	62	40	1.72	●
095-049-10 PI5	9.5	10	103	49	62	40	1.75	●
100-049-10 PI5	10.0	10	103	49	62	40	1.85	●
103-056-12 PI5	10.3	12	118	56	71	45	1.94	●
105-056-12 PI5	10.5	12	118	56	71	45	1.98	●
110-056-12 PI5	11.0	12	118	56	71	45	2.07	●
115-056-12 PI5	11.5	12	118	56	72	45	2.12	●
120-056-12 PI5	12.0	12	118	56	72	45	2.21	●

●: Standard items

Cutting Condition
D264

3HD...PI8

3 flute solid carbide drills with oil holes



• Drilling depth: 8xdiameter

Designation	Dimension (mm)								Grade
	DC	DCONMS	OAL	SIG	LU	LCF	LS	PL	TT5130
3HD 040-036-06 PI8	4.0	6	81	140	36	43	35	0.82	●
045-036-06 PI8	4.5	6	81	140	36	43	35	0.88	●
050-048-06 PI8	5.0	6	95	140	48	57	36	0.96	●
055-048-06 PI8	5.5	6	95	140	48	57	36	1.08	●
060-048-06 PI8	6.0	6	95	140	48	57	36	1.17	●
065-064-08 PI8	6.5	8	114	140	64	76	36	1.26	●
070-064-08 PI8	7.0	8	114	140	64	76	36	1.35	●
075-064-08 PI8	7.5	8	114	140	64	76	36	1.40	●
080-064-08 PI8	8.0	8	114	140	64	76	36	1.49	●
085-080-10 PI8	8.5	10	142	130	80	95	40	2.04	●
090-080-10 PI8	9.0	10	142	130	80	95	40	2.16	●
095-080-10 PI8	9.5	10	142	130	80	95	40	2.29	●
100-080-10 PI8	10.0	10	142	130	80	95	40	2.33	●
105-096-12 PI8	10.5	12	162	130	96	113	45	2.50	●
110-096-12 PI8	11.0	12	162	130	96	113	45	2.61	●
115-096-12 PI8	11.5	12	162	130	96	113	45	2.67	●
120-096-12 PI8	12.0	12	162	130	96	113	45	2.80	●

Cutting Condition D264

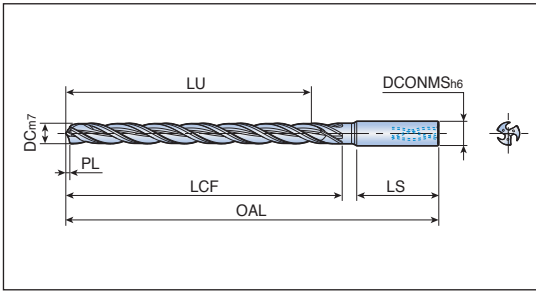
- Ø4.00-Ø8.00: SIG 140°
- Ø8.01-Ø12.00: SIG 130°

●: Standard items

3HD…CI12

SOLID3DRILL

3 flute solid carbide drill with oil holes



• Drilling depth: 12xdiameter

Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT5130
3HD 060-069-06 CI12	6.0	6	116	69	78	36	1.38	●
065-096-08 CI12	6.5	8	146	96	108	36	1.57	●
070-096-08 CI12	7.0	8	146	96	108	36	1.60	●
075-096-08 CI12	7.5	8	146	96	108	36	1.78	●
080-096-08 CI12	8.0	8	146	96	108	36	1.81	●
085-105-10 CI12	8.5	10	162	105	120	40	2.07	●
090-105-10 CI12	9.0	10	162	105	120	40	2.10	●
095-105-10 CI12	9.5	10	162	105	120	40	2.27	●
100-105-10 CI12	10.0	10	162	105	120	40	2.30	●
105-139-12 CI12	10.5	12	204	139	156	45	2.56	●
110-139-12 CI12	11.0	12	204	139	156	45	2.59	●
115-139-12 CI12	11.5	12	204	139	156	45	2.76	●
120-139-12 CI12	12.0	12	204	139	156	45	2.79	●

Cutting Condition D264

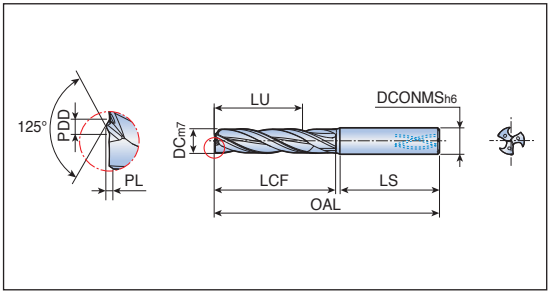
●: Standard items

ADVANCE CUTTING TaeguTec

3HD...FI3

3 flute solid carbide drills for flat bottom holes

• Drilling depth: 3xdiameter



Designation	Dimension (mm)								Grade
	DC	DCONMS	OAL	LU	LCF	LS	PDD	PL	TT5130
3HD 040-017-06 FI3	4.0	6	66	17	25	35	0.77	0.43	●
045-017-06 FI3	4.5	6	66	17	25	35	0.86	0.45	●
050-020-06 FI3	5.0	6	66	20	29	36	0.97	0.47	●
055-020-06 FI3	5.5	6	66	20	29	36	1.08	0.58	●
060-020-06 FI3	6.0	6	66	20	29	36	1.08	0.58	●
065-024-08 FI3	6.5	8	79	24	35	36	1.26	0.62	●
070-024-08 FI3	7.0	8	79	24	35	36	1.26	0.62	●
075-029-08 FI3	7.5	8	79	29	42	36	1.44	0.66	●
080-029-08 FI3	8.0	8	79	29	42	36	1.44	0.66	●
085-035-10 FI3	8.5	10	89	35	48	40	1.62	0.79	●
090-035-10 FI3	9.0	10	89	35	48	40	1.62	0.79	●
095-035-10 FI3	9.5	10	89	35	48	40	1.80	0.82	●
100-035-10 FI3	10.0	10	89	35	48	40	1.80	0.82	●
105-040-12 FI3	10.5	12	102	40	55	45	1.98	0.95	●
110-040-12 FI3	11.0	12	102	40	55	45	1.98	0.95	●
115-040-12 FI3	11.5	12	102	40	56	45	2.16	0.98	●
120-040-12 FI3	12.0	12	102	40	56	45	2.16	0.98	●

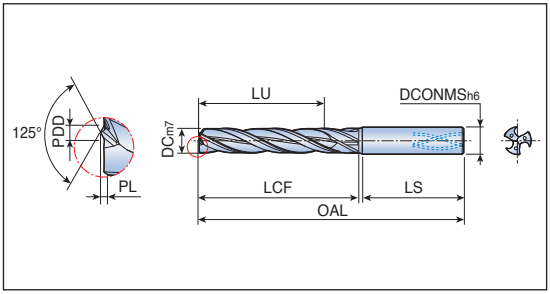
Cutting Condition
D264

●: Standard items

3HD...FI5

3 flute solid carbide drills for flat bottom holes

• Drilling depth: 5xdiameter



Designation	Dimension (mm)								Grade
	DC	DCONMS	OAL	LU	LCF	LS	PDD	PL	TT5130
3HD 040-029-06 FI5	4.0	6	74	29	37	35	0.77	0.43	●
045-029-06 FI5	4.5	6	74	29	37	35	0.86	0.45	●
050-035-06 FI5	5.0	6	82	35	45	36	0.97	0.47	●
055-035-06 FI5	5.5	6	82	35	45	36	1.08	0.58	●
060-035-06 FI5	6.0	6	82	35	45	36	1.08	0.58	●
065-043-08 FI5	6.5	8	91	43	54	36	1.26	0.62	●
070-043-08 FI5	7.0	8	91	43	54	36	1.26	0.62	●
075-043-08 FI5	7.5	8	91	43	54	36	1.44	0.66	●
080-043-08 FI5	8.0	8	91	43	54	36	1.44	0.66	●
085-049-10 FI5	8.5	10	103	49	62	40	1.62	0.79	●
090-049-10 FI5	9.0	10	103	49	62	40	1.62	0.79	●
095-049-10 FI5	9.5	10	103	49	62	40	1.80	0.82	●
100-049-10 FI5	10.0	10	103	49	62	40	1.80	0.82	●
105-056-12 FI5	10.5	12	118	56	71	45	1.98	0.95	●
110-056-12 FI5	11.0	12	118	56	71	45	1.98	0.95	●
115-056-12 FI5	11.5	12	118	56	72	45	2.16	0.98	●
120-056-12 FI5	12.0	12	118	56	72	45	2.16	0.98	●

●: Standard items

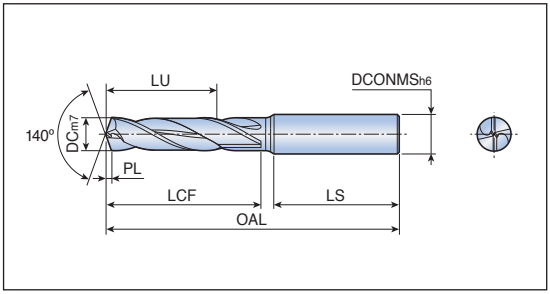
Cutting Condition D264

ADVANCE CUTTING TaeguTec

NHD...PE3

Solid carbide drills without oil holes

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 030-014-06 PE3	3.0	6	62	14	21	34	0.5	●
031-014-06 PE3	3.1	6	62	14	21	34	0.5	●
032-014-06 PE3	3.2	6	62	14	21	34	0.5	●
033-014-06 PE3	3.3	6	62	14	21	34	0.5	●
034-014-06 PE3	3.4	6	62	14	21	34	0.5	●
035-014-06 PE3	3.5	6	62	14	21	34	0.6	●
036-014-06 PE3	3.6	6	62	14	21	34	0.6	●
037-014-06 PE3	3.7	6	62	14	21	34	0.6	●
038-017-06 PE3	3.8	6	66	17	25	35	0.6	●
039-017-06 PE3	3.9	6	66	17	25	35	0.6	●
040-017-06 PE3	4.0	6	66	17	25	35	0.6	●
041-017-06 PE3	4.1	6	66	17	25	35	0.7	●
042-017-06 PE3	4.2	6	66	17	25	35	0.7	●
043-017-06 PE3	4.3	6	66	17	25	35	0.7	●
044-017-06 PE3	4.4	6	66	17	25	35	0.7	●
045-017-06 PE3	4.5	6	66	17	25	35	0.7	●
046-017-06 PE3	4.6	6	66	17	25	35	0.7	●
047-017-06 PE3	4.7	6	66	17	25	35	0.8	●
048-020-06 PE3	4.8	6	66	20	29	36	0.8	●
049-020-06 PE3	4.9	6	66	20	29	36	0.8	●
050-020-06 PE3	5.0	6	66	20	29	36	0.8	●
051-020-06 PE3	5.1	6	66	20	29	36	0.8	●
052-020-06 PE3	5.2	6	66	20	29	36	0.8	●
053-020-06 PE3	5.3	6	66	20	29	36	0.8	●
054-020-06 PE3	5.4	6	66	20	29	36	0.8	●
055-020-06 PE3	5.5	6	66	20	29	36	0.9	●
056-020-06 PE3	5.6	6	66	20	29	36	0.9	●
057-020-06 PE3	5.7	6	66	20	29	36	0.9	●
058-020-06 PE3	5.8	6	66	20	29	36	0.9	●
059-020-06 PE3	5.9	6	66	20	29	36	0.9	●
060-020-06 PE3	6.0	6	66	20	29	36	0.9	●
061-024-08 PE3	6.1	8	79	24	35	36	1.0	●
062-024-08 PE3	6.2	8	79	24	35	36	1.0	●
063-024-08 PE3	6.3	8	79	24	35	36	1.0	●
064-024-08 PE3	6.4	8	79	24	35	36	1.0	●

Cutting Condition D266

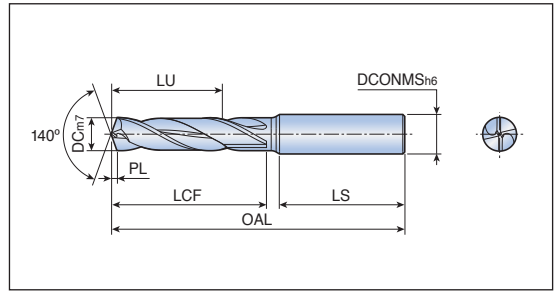
●: Standard items

NHD...PE3

HDRILL

Solid carbide drills without oil holes

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 065-024-08 PE3	6.5	8	79	24	35	36	1.0	●
066-024-08 PE3	6.6	8	79	24	35	36	1.0	●
067-024-08 PE3	6.7	8	79	24	35	36	1.1	●
068-024-08 PE3	6.8	8	79	24	35	36	1.1	●
069-024-08 PE3	6.9	8	79	24	35	36	1.1	●
070-024-08 PE3	7.0	8	79	24	35	36	1.1	●
071-029-08 PE3	7.1	8	79	29	42	36	1.1	●
072-029-08 PE3	7.2	8	79	29	42	36	1.1	●
073-029-08 PE3	7.3	8	79	29	42	36	1.1	●
074-029-08 PE3	7.4	8	79	29	42	36	1.2	●
075-029-08 PE3	7.5	8	79	29	42	36	1.2	●
076-029-08 PE3	7.6	8	79	29	42	36	1.2	●
077-029-08 PE3	7.7	8	79	29	42	36	1.2	●
078-029-08 PE3	7.8	8	79	29	42	36	1.2	●
079-029-08 PE3	7.9	8	79	29	42	36	1.3	●
080-029-08 PE3	8.0	8	79	29	42	36	1.3	●
081-035-10 PE3	8.1	10	89	35	48	40	1.3	●
082-035-10 PE3	8.2	10	89	35	48	40	1.3	●
083-035-10 PE3	8.3	10	89	35	48	40	1.3	●
084-035-10 PE3	8.4	10	89	35	48	40	1.3	●
085-035-10 PE3	8.5	10	89	35	48	40	1.3	●
086-035-10 PE3	8.6	10	89	35	48	40	1.4	●
087-035-10 PE3	8.7	10	89	35	48	40	1.4	●
088-035-10 PE3	8.8	10	89	35	48	40	1.4	●
089-035-10 PE3	8.9	10	89	35	48	40	1.4	●
090-035-10 PE3	9.0	10	89	35	48	40	1.4	●
091-035-10 PE3	9.1	10	89	35	48	40	1.4	●
092-035-10 PE3	9.2	10	89	35	48	40	1.4	●
093-035-10 PE3	9.3	10	89	35	48	40	1.5	●
094-035-10 PE3	9.4	10	89	35	48	40	1.5	●
095-035-10 PE3	9.5	10	89	35	48	40	1.5	●
096-035-10 PE3	9.6	10	89	35	48	40	1.5	●
097-035-10 PE3	9.7	10	89	35	48	40	1.5	●
098-035-10 PE3	9.8	10	89	35	48	40	1.6	●
099-035-10 PE3	9.9	10	89	35	48	40	1.6	●

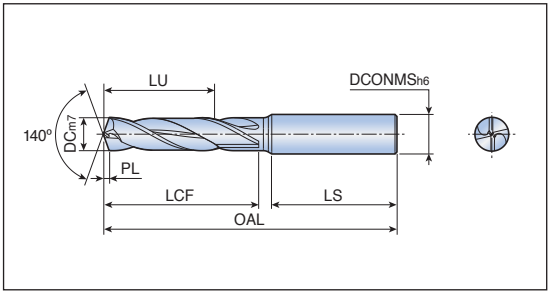
●: Standard items

Cutting Condition
D266

NHD...PE3

Solid carbide drills without oil holes

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 100-035-10 PE3	10.0	10	89	35	48	40	1.6	●
101-040-12 PE3	10.1	12	101	40	54	45	1.6	●
102-040-12 PE3	10.2	12	101	40	54	45	1.6	●
103-040-12 PE3	10.3	12	101	40	54	45	1.6	●
104-040-12 PE3	10.4	12	101	40	54	45	1.6	●
105-040-12 PE3	10.5	12	101	40	54	45	1.6	●
106-040-12 PE3	10.6	12	101	40	54	45	1.7	●
107-040-12 PE3	10.7	12	101	40	54	45	1.7	●
108-040-12 PE3	10.8	12	101	40	54	45	1.7	●
109-040-12 PE3	10.9	12	101	40	54	45	1.7	●
110-040-12 PE3	11.0	12	101	40	54	45	1.7	●
111-040-12 PE3	11.1	12	101	40	55	45	1.7	●
112-040-12 PE3	11.2	12	101	40	55	45	1.8	●
113-040-12 PE3	11.3	12	101	40	55	45	1.8	●
114-040-12 PE3	11.4	12	101	40	55	45	1.8	●
115-040-12 PE3	11.5	12	101	40	55	45	1.8	●
116-040-12 PE3	11.6	12	101	40	55	45	1.8	●
117-040-12 PE3	11.7	12	101	40	55	45	1.9	●
118-040-12 PE3	11.8	12	101	40	55	45	1.9	●
119-040-12 PE3	11.9	12	101	40	55	45	1.9	●
120-040-12 PE3	12.0	12	101	40	55	45	1.9	●

Cutting Condition
D266

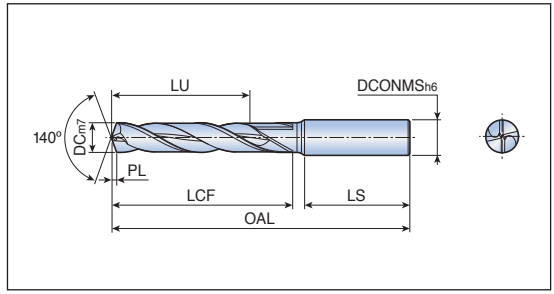
●: Standard items

NHD...PE5

HDRILL

Solid carbide drills without oil holes

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 030-023-06 PE5	3.0	6	66	23	29	34	0.5	●
031-023-06 PE5	3.1	6	66	23	29	34	0.5	●
032-023-06 PE5	3.2	6	66	23	29	34	0.5	●
033-023-06 PE5	3.3	6	66	23	29	34	0.5	●
034-023-06 PE5	3.4	6	66	23	29	34	0.5	●
035-023-06 PE5	3.5	6	66	23	29	34	0.6	●
036-023-06 PE5	3.6	6	66	23	29	34	0.6	●
037-023-06 PE5	3.7	6	66	23	29	34	0.6	●
038-029-06 PE5	3.8	6	74	29	37	35	0.6	●
039-029-06 PE5	3.9	6	74	29	37	35	0.6	●
040-029-06 PE5	4.0	6	74	29	37	35	0.6	●
041-029-06 PE5	4.1	6	74	29	37	35	0.7	●
042-029-06 PE5	4.2	6	74	29	37	35	0.7	●
043-029-06 PE5	4.3	6	74	29	37	35	0.7	●
044-029-06 PE5	4.4	6	74	29	37	35	0.7	●
045-029-06 PE5	4.5	6	74	29	37	35	0.7	●
046-029-06 PE5	4.6	6	74	29	37	35	0.7	●
047-029-06 PE5	4.7	6	74	29	37	35	0.8	●
048-035-06 PE5	4.8	6	82	35	45	36	0.8	●
049-035-06 PE5	4.9	6	82	35	45	36	0.8	●
050-035-06 PE5	5.0	6	82	35	45	36	0.8	●
051-035-06 PE5	5.1	6	82	35	45	36	0.8	●
052-035-06 PE5	5.2	6	82	35	45	36	0.8	●
053-035-06 PE5	5.3	6	82	35	45	36	0.8	●
054-035-06 PE5	5.4	6	82	35	45	36	0.8	●
055-035-06 PE5	5.5	6	82	35	45	36	0.9	●
056-035-06 PE5	5.6	6	82	35	45	36	0.9	●
057-035-06 PE5	5.7	6	82	35	45	36	0.9	●
058-035-06 PE5	5.8	6	82	35	45	36	0.9	●
059-035-06 PE5	5.9	6	82	35	45	36	0.9	●
060-035-06 PE5	6.0	6	82	35	45	36	0.9	●
061-043-08 PE5	6.1	8	91	43	54	36	1.0	●
062-043-08 PE5	6.2	8	91	43	54	36	1.0	●
063-043-08 PE5	6.3	8	91	43	54	36	1.0	●
064-043-08 PE5	6.4	8	91	43	54	36	1.0	●

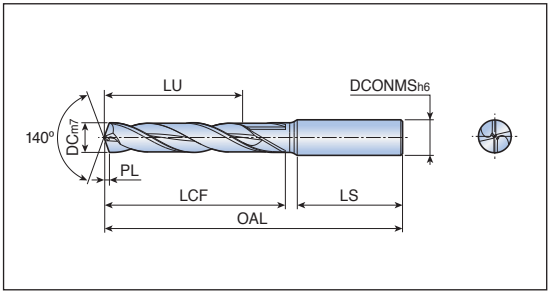
●: Standard items

Cutting Condition
D266

NHD...PE5

Solid carbide drills without oil holes

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 065-043-08 PE5	6.5	8	91	43	54	36	1.0	●
066-043-08 PE5	6.6	8	91	43	54	36	1.0	●
067-043-08 PE5	6.7	8	91	43	54	36	1.1	●
068-043-08 PE5	6.8	8	91	43	54	36	1.1	●
069-043-08 PE5	6.9	8	91	43	54	36	1.1	●
070-043-08 PE5	7.0	8	91	43	54	36	1.1	●
071-043-08 PE5	7.1	8	91	43	54	36	1.1	●
072-043-08 PE5	7.2	8	91	43	54	36	1.1	●
073-043-08 PE5	7.3	8	91	43	54	36	1.1	●
074-043-08 PE5	7.4	8	91	43	54	36	1.2	●
075-043-08 PE5	7.5	8	91	43	54	36	1.2	●
076-043-08 PE5	7.6	8	91	43	54	36	1.2	●
077-043-08 PE5	7.7	8	91	43	54	36	1.2	●
078-043-08 PE5	7.8	8	91	43	54	36	1.2	●
079-043-08 PE5	7.9	8	91	43	54	36	1.3	●
080-043-08 PE5	8.0	8	91	43	54	36	1.3	●
081-049-10 PE5	8.1	10	103	49	62	40	1.3	●
082-049-10 PE5	8.2	10	103	49	62	40	1.3	●
083-049-10 PE5	8.3	10	103	49	62	40	1.3	●
084-049-10 PE5	8.4	10	103	49	62	40	1.3	●
085-049-10 PE5	8.5	10	103	49	62	40	1.3	●
086-049-10 PE5	8.6	10	103	49	62	40	1.4	●
087-049-10 PE5	8.7	10	103	49	62	40	1.4	●
088-049-10 PE5	8.8	10	103	49	62	40	1.4	●
089-049-10 PE5	8.9	10	103	49	62	40	1.4	●
090-049-10 PE5	9.0	10	103	49	62	40	1.4	●
091-049-10 PE5	9.1	10	103	49	62	40	1.4	●
092-049-10 PE5	9.2	10	103	49	62	40	1.4	●
093-049-10 PE5	9.3	10	103	49	62	40	1.5	●
094-049-10 PE5	9.4	10	103	49	62	40	1.5	●
095-049-10 PE5	9.5	10	103	49	62	40	1.5	●
096-049-10 PE5	9.6	10	103	49	62	40	1.5	●
097-049-10 PE5	9.7	10	103	49	62	40	1.5	●
098-049-10 PE5	9.8	10	103	49	62	40	1.6	●
099-049-10 PE5	9.9	10	103	49	62	40	1.6	●

Cutting Condition D266

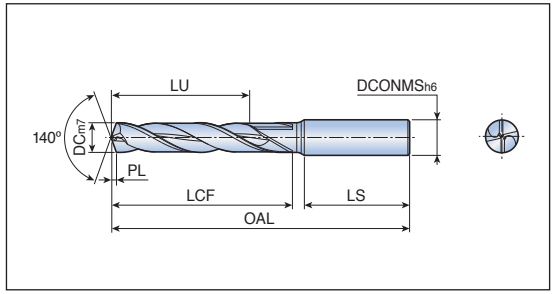
●: Standard items

NHD...PE5

HDRILL

Solid carbide drills without oil holes

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 100-049-10 PE5	10.0	10	103	49	62	40	1.6	●
101-056-12 PE5	10.1	12	118	56	71	45	1.6	●
102-056-12 PE5	10.2	12	118	56	71	45	1.6	●
103-056-12 PE5	10.3	12	118	56	71	45	1.6	●
104-056-12 PE5	10.4	12	118	56	71	45	1.6	●
105-056-12 PE5	10.5	12	118	56	71	45	1.6	●
106-056-12 PE5	10.6	12	118	56	71	45	1.7	●
107-056-12 PE5	10.7	12	118	56	71	45	1.7	●
108-056-12 PE5	10.8	12	118	56	71	45	1.7	●
109-056-12 PE5	10.9	12	118	56	71	45	1.7	●
110-056-12 PE5	11.0	12	118	56	71	45	1.7	●
111-056-12 PE5	11.1	12	118	56	72	45	1.7	●
112-056-12 PE5	11.2	12	118	56	72	45	1.8	●
113-056-12 PE5	11.3	12	118	56	72	45	1.8	●
114-056-12 PE5	11.4	12	118	56	72	45	1.8	●
115-056-12 PE5	11.5	12	118	56	72	45	1.8	●
116-056-12 PE5	11.6	12	118	56	72	45	1.8	●
117-056-12 PE5	11.7	12	118	56	72	45	1.9	●
118-056-12 PE5	11.8	12	118	56	72	45	1.9	●
119-056-12 PE5	11.9	12	118	56	72	45	1.9	●
120-056-12 PE5	12.0	12	118	56	72	45	1.9	●

●: Standard items

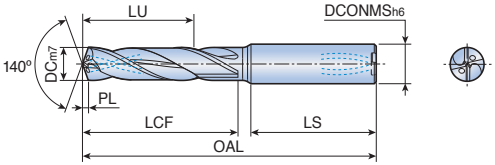
Cutting Condition
D266

ADVANCE CUTTING
TaeguTec

NHD...PI3

Solid carbide drills with oil holes

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 030-014-06 PI3	3.0	6	62	14	21	34	0.5	●
031-014-06 PI3	3.1	6	62	14	21	34	0.5	●
032-014-06 PI3	3.2	6	62	14	21	34	0.5	●
033-014-06 PI3	3.3	6	62	14	21	34	0.5	●
034-014-06 PI3	3.4	6	62	14	21	34	0.5	●
035-014-06 PI3	3.5	6	62	14	21	34	0.6	●
036-014-06 PI3	3.6	6	62	14	21	34	0.6	●
037-014-06 PI3	3.7	6	62	14	21	34	0.6	●
038-017-06 PI3	3.8	6	66	17	25	35	0.6	●
039-017-06 PI3	3.9	6	66	17	25	35	0.6	●
040-017-06 PI3	4.0	6	66	17	25	35	0.6	●
041-017-06 PI3	4.1	6	66	17	25	35	0.7	●
042-017-06 PI3	4.2	6	66	17	25	35	0.7	●
043-017-06 PI3	4.3	6	66	17	25	35	0.7	●
044-017-06 PI3	4.4	6	66	17	25	35	0.7	●
045-017-06 PI3	4.5	6	66	17	25	35	0.7	●
046-017-06 PI3	4.6	6	66	17	25	35	0.7	●
047-017-06 PI3	4.7	6	66	17	25	35	0.8	●
048-020-06 PI3	4.8	6	66	20	29	36	0.8	●
049-020-06 PI3	4.9	6	66	20	29	36	0.8	●
050-020-06 PI3	5.0	6	66	20	29	36	0.8	●
051-020-06 PI3	5.1	6	66	20	29	36	0.8	●
052-020-06 PI3	5.2	6	66	20	29	36	0.8	●
053-020-06 PI3	5.3	6	66	20	29	36	0.8	●
054-020-06 PI3	5.4	6	66	20	29	36	0.8	●
055-020-06 PI3	5.5	6	66	20	29	36	0.9	●
056-020-06 PI3	5.6	6	66	20	29	36	0.9	●
057-020-06 PI3	5.7	6	66	20	29	36	0.9	●
058-020-06 PI3	5.8	6	66	20	29	36	0.9	●
059-020-06 PI3	5.9	6	66	20	29	36	0.9	●
060-020-06 PI3	6.0	6	66	20	29	36	0.9	●
061-024-08 PI3	6.1	8	79	24	35	36	1.0	●
062-024-08 PI3	6.2	8	79	24	35	36	1.0	●
063-024-08 PI3	6.3	8	79	24	35	36	1.0	●
064-024-08 PI3	6.4	8	79	24	35	36	1.0	●

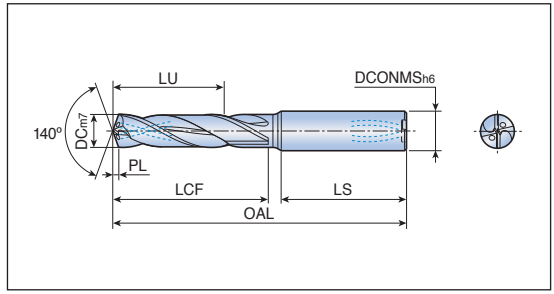
●: Standard items

Cutting Condition D266

NHD...PI3

Solid carbide drills with oil holes

• Drilling depth: 3xdiameter



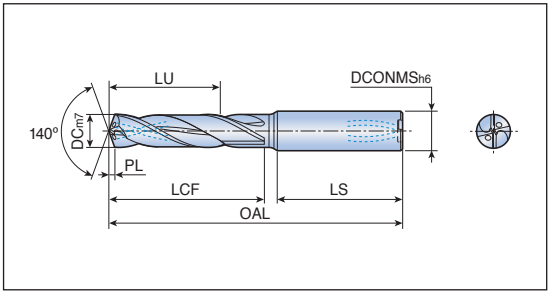
Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 065-024-08 PI3	6.5	8	79	24	35	36	1.0	●
066-024-08 PI3	6.6	8	79	24	35	36	1.0	●
067-024-08 PI3	6.7	8	79	24	35	36	1.1	●
068-024-08 PI3	6.8	8	79	24	35	36	1.1	●
069-024-08 PI3	6.9	8	79	24	35	36	1.1	●
070-024-08 PI3	7.0	8	79	24	35	36	1.1	●
071-029-08 PI3	7.1	8	79	29	42	36	1.1	●
072-029-08 PI3	7.2	8	79	29	42	36	1.1	●
073-029-08 PI3	7.3	8	79	29	42	36	1.1	●
074-029-08 PI3	7.4	8	79	29	42	36	1.2	●
075-029-08 PI3	7.5	8	79	29	42	36	1.2	●
076-029-08 PI3	7.6	8	79	29	42	36	1.2	●
077-029-08 PI3	7.7	8	79	29	42	36	1.2	●
078-029-08 PI3	7.8	8	79	29	42	36	1.2	●
079-029-08 PI3	7.9	8	79	29	42	36	1.3	●
080-029-08 PI3	8.0	8	79	29	42	36	1.3	●
081-035-10 PI3	8.1	10	89	35	48	40	1.3	●
082-035-10 PI3	8.2	10	89	35	48	40	1.3	●
083-035-10 PI3	8.3	10	89	35	48	40	1.3	●
084-035-10 PI3	8.4	10	89	35	48	40	1.3	●
085-035-10 PI3	8.5	10	89	35	48	40	1.3	●
086-035-10 PI3	8.6	10	89	35	48	40	1.4	●
087-035-10 PI3	8.7	10	89	35	48	40	1.4	●
088-035-10 PI3	8.8	10	89	35	48	40	1.4	●
089-035-10 PI3	8.9	10	89	35	48	40	1.4	●
090-035-10 PI3	9.0	10	89	35	48	40	1.4	●
091-035-10 PI3	9.1	10	89	35	48	40	1.4	●
092-035-10 PI3	9.2	10	89	35	48	40	1.4	●
093-035-10 PI3	9.3	10	89	35	48	40	1.5	●
094-035-10 PI3	9.4	10	89	35	48	40	1.5	●
095-035-10 PI3	9.5	10	89	35	48	40	1.5	●
096-035-10 PI3	9.6	10	89	35	48	40	1.5	●
097-035-10 PI3	9.7	10	89	35	48	40	1.5	●
098-035-10 PI3	9.8	10	89	35	48	40	1.6	●
099-035-10 PI3	9.9	10	89	35	48	40	1.6	●

●: Standard items

Cutting Condition
D266

NHD...PI3

Solid carbide drills with oil holes



• Drilling depth: 3xdiameter

Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 100-035-10 PI3	10.0	10	89	35	48	40	1.6	●
101-040-12 PI3	10.1	12	102	40	55	45	1.6	●
102-040-12 PI3	10.2	12	102	40	55	45	1.6	●
103-040-12 PI3	10.3	12	102	40	55	45	1.6	●
104-040-12 PI3	10.4	12	102	40	55	45	1.6	●
105-040-12 PI3	10.5	12	102	40	55	45	1.6	●
106-040-12 PI3	10.6	12	102	40	55	45	1.7	●
107-040-12 PI3	10.7	12	102	40	55	45	1.7	●
108-040-12 PI3	10.8	12	102	40	55	45	1.7	●
109-040-12 PI3	10.9	12	102	40	55	45	1.7	●
110-040-12 PI3	11.0	12	102	40	55	45	1.7	●
111-040-12 PI3	11.1	12	102	40	56	45	1.7	●
112-040-12 PI3	11.2	12	102	40	56	45	1.8	●
113-040-12 PI3	11.3	12	102	40	56	45	1.8	●
114-040-12 PI3	11.4	12	102	40	56	45	1.8	●
115-040-12 PI3	11.5	12	102	40	56	45	1.8	●
116-040-12 PI3	11.6	12	102	40	56	45	1.8	●
117-040-12 PI3	11.7	12	102	40	56	45	1.9	●
118-040-12 PI3	11.8	12	102	40	56	45	1.9	●
119-040-12 PI3	11.9	12	102	40	56	45	1.9	●
120-040-12 PI3	12.0	12	102	40	56	45	1.9	●

Cutting Condition D266

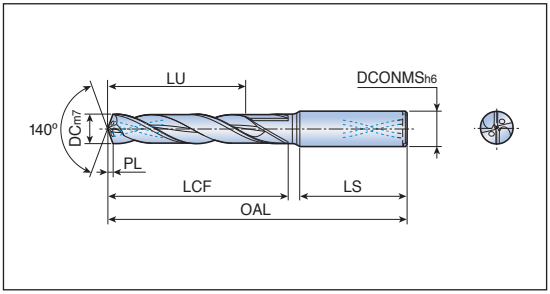
●: Standard items

NHD...PI5

HDRILL

Solid carbide drills with oil holes

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 030-023-06 PI5	3.0	6	66	23	29	34	0.5	●
031-023-06 PI5	3.1	6	66	23	29	34	0.5	●
032-023-06 PI5	3.2	6	66	23	29	34	0.5	●
033-023-06 PI5	3.3	6	66	23	29	34	0.5	●
034-023-06 PI5	3.4	6	66	23	29	34	0.5	●
035-023-06 PI5	3.5	6	66	23	29	34	0.6	●
036-023-06 PI5	3.6	6	66	23	29	34	0.6	●
037-023-06 PI5	3.7	6	66	23	29	34	0.6	●
038-029-06 PI5	3.8	6	74	29	37	35	0.6	●
039-029-06 PI5	3.9	6	74	29	37	35	0.6	●
040-029-06 PI5	4.0	6	74	29	37	35	0.6	●
041-029-06 PI5	4.1	6	74	29	37	35	0.7	●
042-029-06 PI5	4.2	6	74	29	37	35	0.7	●
043-029-06 PI5	4.3	6	74	29	37	35	0.7	●
044-029-06 PI5	4.4	6	74	29	37	35	0.7	●
045-029-06 PI5	4.5	6	74	29	37	35	0.7	●
046-029-06 PI5	4.6	6	74	29	37	35	0.7	●
047-029-06 PI5	4.7	6	74	29	37	35	0.8	●
048-035-06 PI5	4.8	6	82	35	45	36	0.8	●
049-035-06 PI5	4.9	6	82	35	45	36	0.8	●
050-035-06 PI5	5.0	6	82	35	45	36	0.8	●
051-035-06 PI5	5.1	6	82	35	45	36	0.8	●
052-035-06 PI5	5.2	6	82	35	45	36	0.8	●
053-035-06 PI5	5.3	6	82	35	45	36	0.8	●
054-035-06 PI5	5.4	6	82	35	45	36	0.8	●
055-035-06 PI5	5.5	6	82	35	45	36	0.9	●
056-035-06 PI5	5.6	6	82	35	45	36	0.9	●
057-035-06 PI5	5.7	6	82	35	45	36	0.9	●
058-035-06 PI5	5.8	6	82	35	45	36	0.9	●
059-035-06 PI5	5.9	6	82	35	45	36	0.9	●
060-035-06 PI5	6.0	6	82	35	45	36	0.9	●
061-043-08 PI5	6.1	8	91	43	54	36	1.0	●
062-043-08 PI5	6.2	8	91	43	54	36	1.0	●
063-043-08 PI5	6.3	8	91	43	54	36	1.0	●
064-043-08 PI5	6.4	8	91	43	54	36	1.0	●

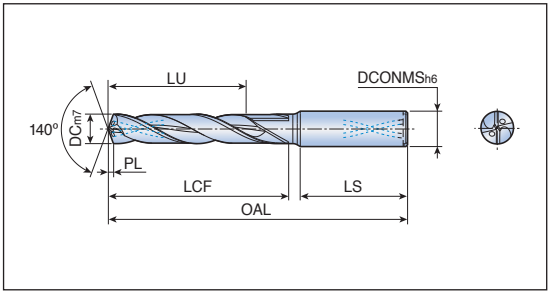
●: Standard items

Cutting Condition
D266

NHD...PI5

Solid carbide drills with oil holes

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 065-043-08 PI5	6.5	8	91	43	54	36	1.0	●
066-043-08 PI5	6.6	8	91	43	54	36	1.0	●
067-043-08 PI5	6.7	8	91	43	54	36	1.1	●
068-043-08 PI5	6.8	8	91	43	54	36	1.1	●
069-043-08 PI5	6.9	8	91	43	54	36	1.1	●
070-043-08 PI5	7.0	8	91	43	54	36	1.1	●
071-043-08 PI5	7.1	8	91	43	54	36	1.1	●
072-043-08 PI5	7.2	8	91	43	54	36	1.1	●
073-043-08 PI5	7.3	8	91	43	54	36	1.1	●
074-043-08 PI5	7.4	8	91	43	54	36	1.2	●
075-043-08 PI5	7.5	8	91	43	54	36	1.2	●
076-043-08 PI5	7.6	8	91	43	54	36	1.2	●
077-043-08 PI5	7.7	8	91	43	54	36	1.2	●
078-043-08 PI5	7.8	8	91	43	54	36	1.2	●
079-043-08 PI5	7.9	8	91	43	54	36	1.3	●
080-043-08 PI5	8.0	8	91	43	54	36	1.3	●
081-049-10 PI5	8.1	10	103	49	62	40	1.3	●
082-049-10 PI5	8.2	10	103	49	62	40	1.3	●
083-049-10 PI5	8.3	10	103	49	62	40	1.3	●
084-049-10 PI5	8.4	10	103	49	62	40	1.3	●
085-049-10 PI5	8.5	10	103	49	62	40	1.3	●
086-049-10 PI5	8.6	10	103	49	62	40	1.4	●
087-049-10 PI5	8.7	10	103	49	62	40	1.4	●
088-049-10 PI5	8.8	10	103	49	62	40	1.4	●
089-049-10 PI5	8.9	10	103	49	62	40	1.4	●
090-049-10 PI5	9.0	10	103	49	62	40	1.4	●
091-049-10 PI5	9.1	10	103	49	62	40	1.4	●
092-049-10 PI5	9.2	10	103	49	62	40	1.4	●
093-049-10 PI5	9.3	10	103	49	62	40	1.5	●
094-049-10 PI5	9.4	10	103	49	62	40	1.5	●
095-049-10 PI5	9.5	10	103	49	62	40	1.5	●
096-049-10 PI5	9.6	10	103	49	62	40	1.5	●
097-049-10 PI5	9.7	10	103	49	62	40	1.5	●
098-049-10 PI5	9.8	10	103	49	62	40	1.6	●
099-049-10 PI5	9.9	10	103	49	62	40	1.6	●

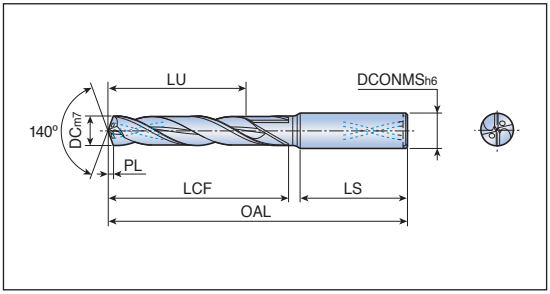
●: Standard items

Cutting Condition D266

NHD...PI5

HDRILL

Solid carbide drills with oil holes



• Drilling depth: 5xdiameter

Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 100-049-10 PI5	10.0	10	103	49	62	40	1.6	●
101-056-12 PI5	10.1	12	118	56	71	45	1.6	●
102-056-12 PI5	10.2	12	118	56	71	45	1.6	●
103-056-12 PI5	10.3	12	118	56	71	45	1.6	●
104-056-12 PI5	10.4	12	118	56	71	45	1.6	●
105-056-12 PI5	10.5	12	118	56	71	45	1.6	●
106-056-12 PI5	10.6	12	118	56	71	45	1.7	●
107-056-12 PI5	10.7	12	118	56	71	45	1.7	●
108-056-12 PI5	10.8	12	118	56	71	45	1.7	●
109-056-12 PI5	10.9	12	118	56	71	45	1.7	●
110-056-12 PI5	11.0	12	118	56	71	45	1.7	●
111-056-12 PI5	11.1	12	118	56	72	45	1.7	●
112-056-12 PI5	11.2	12	118	56	72	45	1.8	●
113-056-12 PI5	11.3	12	118	56	72	45	1.8	●
114-056-12 PI5	11.4	12	118	56	72	45	1.8	●
115-056-12 PI5	11.5	12	118	56	72	45	1.8	●
116-056-12 PI5	11.6	12	118	56	72	45	1.8	●
117-056-12 PI5	11.7	12	118	56	72	45	1.9	●
118-056-12 PI5	11.8	12	118	56	72	45	1.9	●
119-056-12 PI5	11.9	12	118	56	72	45	1.9	●
120-056-12 PI5	12.0	12	118	56	72	45	1.9	●

●: Standard items

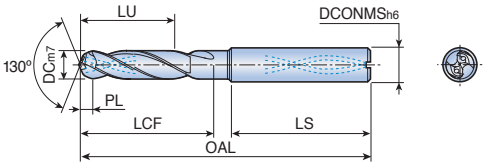
Cutting Condition D266

ADVANCE CUTTING TaeguTec

NHD…KI3

Solid carbide drills with oil holes for cast iron machining

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 030-014-06 KI3	3.0	6	62	14	20	34	1.4	●
033-014-06 KI3	3.3	6	62	14	20	34	1.6	●
035-014-06 KI3	3.5	6	62	14	20	34	1.7	●
040-017-06 KI3	4.0	6	66	17	24	35	1.9	●
041-017-06 KI3	4.1	6	66	17	24	35	2.0	●
042-017-06 KI3	4.2	6	66	17	24	35	2.0	●
045-017-06 KI3	4.5	6	66	17	24	35	2.2	●
046-017-06 KI3	4.6	6	66	17	24	35	2.2	●
050-020-06 KI3	5.0	6	66	20	27	36	2.4	●
051-020-06 KI3	5.1	6	66	20	27	36	2.5	●
052-020-06 KI3	5.2	6	66	20	27	36	2.5	●
055-020-06 KI3	5.5	6	66	20	27	36	2.6	●
060-020-06 KI3	6.0	6	66	20	27	36	2.9	●
061-024-08 KI3	6.1	8	79	24	34	36	2.9	●
065-024-08 KI3	6.5	8	79	24	34	36	3.1	●
067-024-08 KI3	6.7	8	79	24	34	36	3.2	●
068-024-08 KI3	6.8	8	79	24	34	36	3.3	●
070-024-08 KI3	7.0	8	79	24	34	36	3.4	●
075-029-08 KI3	7.5	8	79	29	40	36	3.6	●
080-029-08 KI3	8.0	8	79	29	40	36	3.8	●
081-035-10 KI3	8.1	10	89	35	45	40	3.9	●
085-035-10 KI3	8.5	10	89	35	45	40	4.1	●
087-035-10 KI3	8.7	10	89	35	45	40	4.2	●
089-035-10 KI3	8.9	10	89	35	45	40	4.3	●
090-035-10 KI3	9.0	10	89	35	45	40	4.3	●
095-035-10 KI3	9.5	10	89	35	45	40	4.6	●
100-035-10 KI3	10.0	10	89	35	45	40	4.8	●
103-040-12 KI3	10.3	12	102	40	53	45	4.9	●
105-040-12 KI3	10.5	12	102	40	53	45	5.0	●
110-040-12 KI3	11.0	12	102	40	53	45	5.3	●
115-040-12 KI3	11.5	12	102	40	53	45	5.5	●
120-040-12 KI3	12.0	12	102	40	53	45	5.8	●

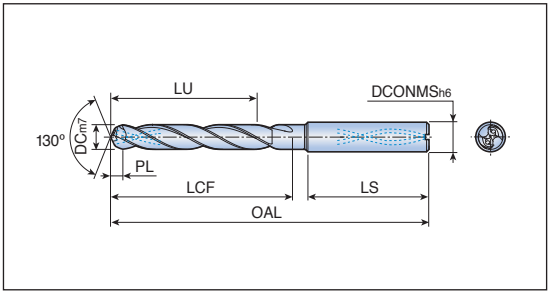
Cutting Condition D266

●: Standard items

NHD…KI5

Solid carbide drills with oil holes for cast iron machining

• Drilling depth: 5xdiameter



Designation		Dimension (mm)							Grade
		DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD	030-023-06 KI5	3.0	6	66	23	27	34	1.4	●
	033-023-06 KI5	3.3	6	66	23	27	34	1.6	●
	035-023-06 KI5	3.5	6	66	23	27	34	1.7	●
	040-029-06 KI5	4.0	6	74	29	34	35	1.9	●
	042-029-06 KI5	4.2	6	74	29	34	35	2.0	●
	045-029-06 KI5	4.5	6	74	29	35	35	2.2	●
	046-029-06 KI5	4.6	6	74	29	35	35	2.2	●
	050-035-06 KI5	5.0	6	82	35	43	36	2.4	●
	052-035-06 KI5	5.2	6	82	35	43	36	2.5	●
	055-035-06 KI5	5.5	6	82	35	43	36	2.6	●
	060-035-06 KI5	6.0	6	82	35	43	36	2.9	●
	065-043-08 KI5	6.5	8	91	43	52	36	3.1	●
	067-043-08 KI5	6.7	8	91	43	52	36	3.2	●
	068-043-08 KI5	6.8	8	91	43	52	36	3.3	●
	070-043-08 KI5	7.0	8	91	43	52	36	3.4	●
	075-043-08 KI5	7.5	8	91	43	52	36	3.6	●
	080-043-08 KI5	8.0	8	91	43	52	36	3.8	●
	081-049-10 KI5	8.1	10	103	49	59	40	3.9	●
	085-049-10 KI5	8.5	10	103	49	59	40	4.1	●
	087-049-10 KI5	8.7	10	103	49	59	40	4.2	●
	089-049-10 KI5	8.9	10	103	49	59	40	4.3	●
	090-049-10 KI5	9.0	10	103	49	59	40	4.3	●
	095-049-10 KI5	9.5	10	103	49	59	40	4.6	●
	100-049-10 KI5	10.0	10	103	49	59	40	4.8	●
	103-056-12 KI5	10.3	12	118	56	69	45	4.9	●
	105-056-12 KI5	10.5	12	118	56	69	45	5.0	●
	110-056-12 KI5	11.0	12	118	56	69	45	5.3	●
	115-056-12 KI5	11.5	12	118	56	69	45	5.5	●
	120-056-12 KI5	12.0	12	118	56	69	45	5.8	●

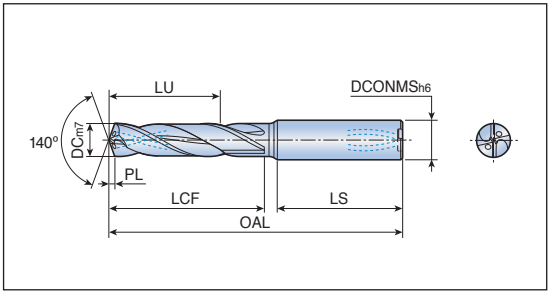
●: Standard items

Cutting Condition
D266

NHD...NI3

Solid carbide drills with oil holes for aluminum machining

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	UF10
NHD 030-014-06 NI3	3.0	6	62	14	21	34	0.5	●
031-014-06 NI3	3.1	6	62	14	21	34	0.5	●
032-014-06 NI3	3.2	6	62	14	21	34	0.5	●
033-014-06 NI3	3.3	6	62	14	21	34	0.5	●
034-014-06 NI3	3.4	6	62	14	21	34	0.5	●
035-014-06 NI3	3.5	6	62	14	21	34	0.6	●
036-014-06 NI3	3.6	6	62	14	21	34	0.6	●
037-014-06 NI3	3.7	6	62	14	21	34	0.6	●
038-017-06 NI3	3.8	6	66	17	25	35	0.6	●
039-017-06 NI3	3.9	6	66	17	25	35	0.6	●
040-017-06 NI3	4.0	6	66	17	25	35	0.6	●
041-017-06 NI3	4.1	6	66	17	25	35	0.7	●
042-017-06 NI3	4.2	6	66	17	25	35	0.7	●
043-017-06 NI3	4.3	6	66	17	25	35	0.7	●
044-017-06 NI3	4.4	6	66	17	25	35	0.7	●
045-017-06 NI3	4.5	6	66	17	25	35	0.7	●
046-017-06 NI3	4.6	6	66	17	25	35	0.7	●
047-017-06 NI3	4.7	6	66	17	25	35	0.8	●
048-020-06 NI3	4.8	6	66	20	29	36	0.8	●
049-020-06 NI3	4.9	6	66	20	29	36	0.8	●
050-020-06 NI3	5.0	6	66	20	29	36	0.8	●
051-020-06 NI3	5.1	6	66	20	29	36	0.8	●
052-020-06 NI3	5.2	6	66	20	29	36	0.8	●
053-020-06 NI3	5.3	6	66	20	29	36	0.8	●
054-020-06 NI3	5.4	6	66	20	29	36	0.8	●
055-020-06 NI3	5.5	6	66	20	29	36	0.9	●
056-020-06 NI3	5.6	6	66	20	29	36	0.9	●
057-020-06 NI3	5.7	6	66	20	29	36	0.9	●
058-020-06 NI3	5.8	6	66	20	29	36	0.9	●
059-020-06 NI3	5.9	6	66	20	29	36	0.9	●
060-020-06 NI3	6.0	6	66	20	29	36	0.9	●
061-024-08 NI3	6.1	8	79	24	35	36	1.0	●
062-024-08 NI3	6.2	8	79	24	35	36	1.0	●
063-024-08 NI3	6.3	8	79	24	35	36	1.0	●
064-024-08 NI3	6.4	8	79	24	35	36	1.0	●

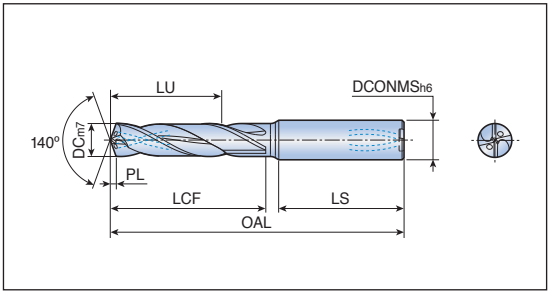
Cutting Condition D266

●: Standard items

NHD...NI3

Solid carbide drills with oil holes for aluminum machining

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 065-024-08 NI3	6.5	8	79	24	35	36	1.0	●
066-024-08 NI3	6.6	8	79	24	35	36	1.0	●
067-024-08 NI3	6.7	8	79	24	35	36	1.1	●
068-024-08 NI3	6.8	8	79	24	35	36	1.1	●
069-024-08 NI3	6.9	8	79	24	35	36	1.1	●
070-024-08 NI3	7.0	8	79	24	35	36	1.1	●
071-029-08 NI3	7.1	8	79	29	42	36	1.1	●
072-029-08 NI3	7.2	8	79	29	42	36	1.1	●
073-029-08 NI3	7.3	8	79	29	42	36	1.1	●
074-029-08 NI3	7.4	8	79	29	42	36	1.2	●
075-029-08 NI3	7.5	8	79	29	42	36	1.2	●
076-029-08 NI3	7.6	8	79	29	42	36	1.2	●
077-029-08 NI3	7.7	8	79	29	42	36	1.2	●
078-029-08 NI3	7.8	8	79	29	42	36	1.2	●
079-029-08 NI3	7.9	8	79	29	42	36	1.3	●
080-029-08 NI3	8.0	8	79	29	42	36	1.3	●
081-035-10 NI3	8.1	10	89	35	48	40	1.3	●
082-035-10 NI3	8.2	10	89	35	48	40	1.3	●
083-035-10 NI3	8.3	10	89	35	48	40	1.3	●
084-035-10 NI3	8.4	10	89	35	48	40	1.3	●
085-035-10 NI3	8.5	10	89	35	48	40	1.3	●
086-035-10 NI3	8.6	10	89	35	48	40	1.4	●
087-035-10 NI3	8.7	10	89	35	48	40	1.4	●
088-035-10 NI3	8.8	10	89	35	48	40	1.4	●
089-035-10 NI3	8.9	10	89	35	48	40	1.4	●
090-035-10 NI3	9.0	10	89	35	48	40	1.4	●
091-035-10 NI3	9.1	10	89	35	48	40	1.4	●
092-035-10 NI3	9.2	10	89	35	48	40	1.4	●
093-035-10 NI3	9.3	10	89	35	48	40	1.5	●
094-035-10 NI3	9.4	10	89	35	48	40	1.5	●
095-035-10 NI3	9.5	10	89	35	48	40	1.5	●
096-035-10 NI3	9.6	10	89	35	48	40	1.5	●
097-035-10 NI3	9.7	10	89	35	48	40	1.5	●
098-035-10 NI3	9.8	10	89	35	48	40	1.6	●
099-035-10 NI3	9.9	10	89	35	48	40	1.6	●

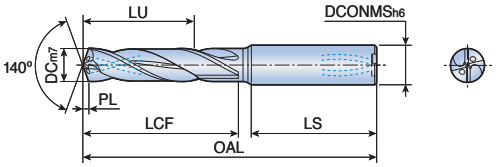
●: Standard items

Cutting Condition
D266

NHD...NI3

Solid carbide drills with oil holes for aluminum machining

• Drilling depth: 3xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	UF10
NHD 100-035-10 NI3	10.0	10	89	35	48	40	1.6	●
101-040-12 NI3	10.1	12	102	40	55	45	1.6	●
102-040-12 NI3	10.2	12	102	40	55	45	1.6	●
103-040-12 NI3	10.3	12	102	40	55	45	1.6	●
104-040-12 NI3	10.4	12	102	40	55	45	1.6	●
105-040-12 NI3	10.5	12	102	40	55	45	1.6	●
106-040-12 NI3	10.6	12	102	40	55	45	1.7	●
107-040-12 NI3	10.7	12	102	40	55	45	1.7	●
108-040-12 NI3	10.8	12	102	40	55	45	1.7	●
109-040-12 NI3	10.9	12	102	40	55	45	1.7	●
110-040-12 NI3	11.0	12	102	40	55	45	1.7	●
111-040-12 NI3	11.1	12	102	40	56	45	1.7	●
112-040-12 NI3	11.2	12	102	40	56	45	1.8	●
113-040-12 NI3	11.3	12	102	40	56	45	1.8	●
114-040-12 NI3	11.4	12	102	40	56	45	1.8	●
115-040-12 NI3	11.5	12	102	40	56	45	1.8	●
116-040-12 NI3	11.6	12	102	40	56	45	1.8	●
117-040-12 NI3	11.7	12	102	40	56	45	1.9	●
118-040-12 NI3	11.8	12	102	40	56	45	1.9	●
119-040-12 NI3	11.9	12	102	40	56	45	1.9	●
120-040-12 NI3	12.0	12	102	40	56	45	1.9	●

Cutting Condition D266

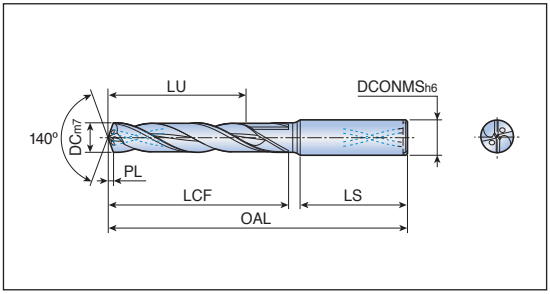
●: Standard items

NHD...NI5

HDRILL

Solid carbide drills with oil holes for aluminum machining

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD 030-023-06 NI5	3.0	6	66	23	29	34	0.5	●
031-023-06 NI5	3.1	6	66	23	29	34	0.5	●
032-023-06 NI5	3.2	6	66	23	29	34	0.5	●
033-023-06 NI5	3.3	6	66	23	29	34	0.5	●
034-023-06 NI5	3.4	6	66	23	29	34	0.5	●
035-023-06 NI5	3.5	6	66	23	29	34	0.6	●
036-023-06 NI5	3.6	6	66	23	29	34	0.6	●
037-023-06 NI5	3.7	6	66	23	29	34	0.6	●
038-029-06 NI5	3.8	6	74	29	37	35	0.6	●
039-029-06 NI5	3.9	6	74	29	37	35	0.6	●
040-029-06 NI5	4.0	6	74	29	37	35	0.6	●
041-029-06 NI5	4.1	6	74	29	37	35	0.7	●
042-029-06 NI5	4.2	6	74	29	37	35	0.7	●
043-029-06 NI5	4.3	6	74	29	37	35	0.7	●
044-029-06 NI5	4.4	6	74	29	37	35	0.7	●
045-029-06 NI5	4.5	6	74	29	37	35	0.7	●
046-029-06 NI5	4.6	6	74	29	37	35	0.7	●
047-029-06 NI5	4.7	6	74	29	37	35	0.8	●
048-035-06 NI5	4.8	6	82	35	45	36	0.8	●
049-035-06 NI5	4.9	6	82	35	45	36	0.8	●
050-035-06 NI5	5.0	6	82	35	45	36	0.8	●
051-035-06 NI5	5.1	6	82	35	45	36	0.8	●
052-035-06 NI5	5.2	6	82	35	45	36	0.8	●
053-035-06 NI5	5.3	6	82	35	45	36	0.8	●
054-035-06 NI5	5.4	6	82	35	45	36	0.8	●
055-035-06 NI5	5.5	6	82	35	45	36	0.9	●
056-035-06 NI5	5.6	6	82	35	45	36	0.9	●
057-035-06 NI5	5.7	6	82	35	45	36	0.9	●
058-035-06 NI5	5.8	6	82	35	45	36	0.9	●
059-035-06 NI5	5.9	6	82	35	45	36	0.9	●
060-035-06 NI5	6.0	6	82	35	45	36	0.9	●
061-043-08 NI5	6.1	8	91	43	54	36	1.0	●
062-043-08 NI5	6.2	8	91	43	54	36	1.0	●
063-043-08 NI5	6.3	8	91	43	54	36	1.0	●
064-043-08 NI5	6.4	8	91	43	54	36	1.0	●

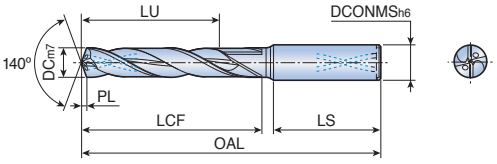
●: Standard items

Cutting Condition
D266

NHD...NI5

Solid carbide drills with oil holes for aluminum machining

• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	UF10
NHD 065-043-08 NI5	6.5	8	91	43	54	36	1.0	●
066-043-08 NI5	6.6	8	91	43	54	36	1.0	●
067-043-08 NI5	6.7	8	91	43	54	36	1.1	●
068-043-08 NI5	6.8	8	91	43	54	36	1.1	●
069-043-08 NI5	6.9	8	91	43	54	36	1.1	●
070-043-08 NI5	7.0	8	91	43	54	36	1.1	●
071-043-08 NI5	7.1	8	91	43	54	36	1.1	●
072-043-08 NI5	7.2	8	91	43	54	36	1.1	●
073-043-08 NI5	7.3	8	91	43	54	36	1.1	●
074-043-08 NI5	7.4	8	91	43	54	36	1.2	●
075-043-08 NI5	7.5	8	91	43	54	36	1.2	●
076-043-08 NI5	7.6	8	91	43	54	36	1.2	●
077-043-08 NI5	7.7	8	91	43	54	36	1.2	●
078-043-08 NI5	7.8	8	91	43	54	36	1.2	●
079-043-08 NI5	7.9	8	91	43	54	36	1.3	●
080-043-08 NI5	8.0	8	91	43	54	36	1.3	●
081-049-10 NI5	8.1	10	103	49	62	40	1.3	●
082-049-10 NI5	8.2	10	103	49	62	40	1.3	●
083-049-10 NI5	8.3	10	103	49	62	40	1.3	●
084-049-10 NI5	8.4	10	103	49	62	40	1.3	●
085-049-10 NI5	8.5	10	103	49	62	40	1.3	●
086-049-10 NI5	8.6	10	103	49	62	40	1.4	●
087-049-10 NI5	8.7	10	103	49	62	40	1.4	●
088-049-10 NI5	8.8	10	103	49	62	40	1.4	●
089-049-10 NI5	8.9	10	103	49	62	40	1.4	●
090-049-10 NI5	9.0	10	103	49	62	40	1.4	●
091-049-10 NI5	9.1	10	103	49	62	40	1.4	●
092-049-10 NI5	9.2	10	103	49	62	40	1.4	●
093-049-10 NI5	9.3	10	103	49	62	40	1.5	●
094-049-10 NI5	9.4	10	103	49	62	40	1.5	●
095-049-10 NI5	9.5	10	103	49	62	40	1.5	●
096-049-10 NI5	9.6	10	103	49	62	40	1.5	●
097-049-10 NI5	9.7	10	103	49	62	40	1.5	●
098-049-10 NI5	9.8	10	103	49	62	40	1.6	●
099-049-10 NI5	9.9	10	103	49	62	40	1.6	●

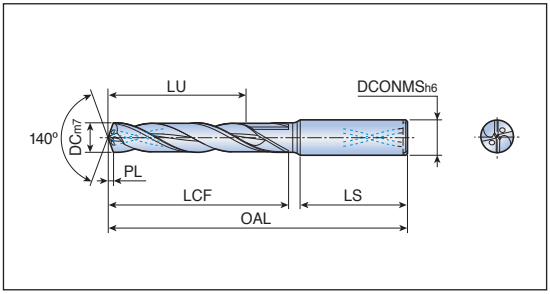
Cutting Condition D266

●: Standard items

NHD...NI5

Solid carbide drills with oil holes for aluminum machining

• Drilling depth: 5xdiameter



Designation		Dimension (mm)							Grade
		DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
NHD	100-049-10 NI5	10.0	10	103	49	62	40	1.6	●
	101-056-12 NI5	10.1	12	118	56	71	45	1.6	●
	102-056-12 NI5	10.2	12	118	56	71	45	1.6	●
	103-056-12 NI5	10.3	12	118	56	71	45	1.6	●
	104-056-12 NI5	10.4	12	118	56	71	45	1.6	●
	105-056-12 NI5	10.5	12	118	56	71	45	1.6	●
	106-056-12 NI5	10.6	12	118	56	71	45	1.7	●
	107-056-12 NI5	10.7	12	118	56	71	45	1.7	●
	108-056-12 NI5	10.8	12	118	56	71	45	1.7	●
	109-056-12 NI5	10.9	12	118	56	71	45	1.7	●
	110-056-12 NI5	11.0	12	118	56	71	45	1.7	●
	111-056-12 NI5	11.1	12	118	56	72	45	1.7	●
	112-056-12 NI5	11.2	12	118	56	72	45	1.8	●
	113-056-12 NI5	11.3	12	118	56	72	45	1.8	●
	114-056-12 NI5	11.4	12	118	56	72	45	1.8	●
	115-056-12 NI5	11.5	12	118	56	72	45	1.8	●
	116-056-12 NI5	11.6	12	118	56	72	45	1.8	●
	117-056-12 NI5	11.7	12	118	56	72	45	1.9	●
	118-056-12 NI5	11.8	12	118	56	72	45	1.9	●
	119-056-12 NI5	11.9	12	118	56	72	45	1.9	●
	120-056-12 NI5	12.0	12	118	56	72	45	1.9	●

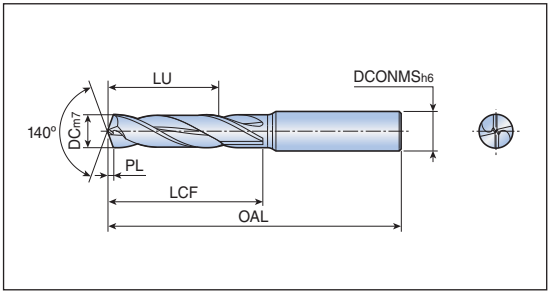
●: Standard items

Cutting Condition D266

TED S

Solid carbide drills without oil holes

• Drilling depth: 3xdiameter



Designation		Dimension (mm)						Grade
		DC	DCONMS	OAL	LU	LCF	PL	TT5130
TED	S030-4	3.0	4	62	11	18	0.5	●
	S031-4	3.1	4	62	11	18	0.5	●
	S032-4	3.2	4	62	11	18	0.5	●
	S033-4	3.3	4	62	11	18	0.5	●
	S034-4	3.4	4	62	11	18	0.5	●
	S035-4	3.5	4	62	11	18	0.6	●
	S036-4	3.6	4	62	11	18	0.6	●
	S037-4	3.7	4	62	11	18	0.6	●
	S038-4	3.8	4	66	12	18	0.6	●
	S039-4	3.9	4	66	12	18	0.6	●
	S040-4	4.0	4	66	12	18	0.6	●
	S041-5	4.1	5	66	19	27	0.7	●
	S042-5	4.2	5	66	19	27	0.7	●
	S043-5	4.3	5	66	19	27	0.7	●
	S044-5	4.4	5	66	19	27	0.7	●
	S045-5	4.5	5	66	19	27	0.7	●
	S046-5	4.6	5	66	19	27	0.8	●
	S047-5	4.7	5	66	19	27	0.8	●
	S048-5	4.8	5	66	19	27	0.8	●
	S049-5	4.9	5	66	19	27	0.8	●
	S050-5	5.0	5	66	19	27	0.8	●
	S051-6	5.1	6	66	22	31	0.8	●
	S052-6	5.2	6	66	22	31	0.8	●
	S053-6	5.3	6	66	22	31	0.8	●
	S054-6	5.4	6	66	22	31	0.8	●
	S055-6	5.5	6	66	22	31	0.9	●
	S056-6	5.6	6	66	22	31	0.9	●
	S057-6	5.7	6	66	22	31	0.9	●
	S058-6	5.8	6	66	22	31	0.9	●
	S059-6	5.9	6	66	22	31	0.9	●
	S060-6	6.0	6	66	22	31	0.9	●
	S061-7	6.1	7	79	26	37	1	●
	S062-7	6.2	7	79	26	37	1	●
	S063-7	6.3	7	79	26	37	1	●
	S064-7	6.4	7	79	26	37	1	●

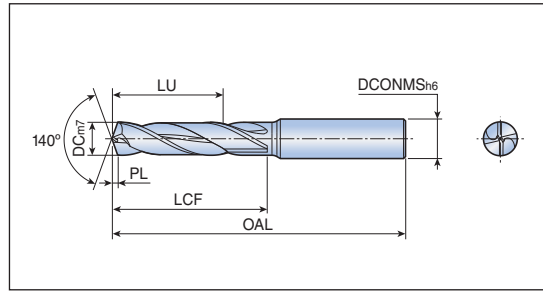
Cutting Condition
D266

●: Standard items

TED S

Solid carbide drills without oil holes

• Drilling depth: 3xdiameter



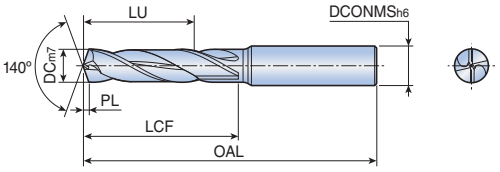
Designation		Dimension (mm)						Grade
		DC	DCONMS	OAL	LU	LCF	PL	TT5130
TED	S065-7	6.5	7	79	26	37	1	●
	S066-7	6.6	7	79	26	37	1	●
	S067-7	6.7	7	79	26	37	1.1	●
	S068-7	6.8	7	79	26	37	1.1	●
	S069-7	6.9	7	79	26	37	1.1	●
	S070-7	7.0	7	79	26	37	1.1	●
	S071-8	7.1	8	79	28	41	1.1	●
	S072-8	7.2	8	79	28	41	1.1	●
	S073-8	7.3	8	79	28	41	1.1	●
	S074-8	7.4	8	79	28	41	1.2	●
	S075-8	7.5	8	79	28	41	1.2	●
	S076-8	7.6	8	79	28	41	1.2	●
	S077-8	7.7	8	79	28	41	1.2	●
	S078-8	7.8	8	79	28	41	1.2	●
	S079-8	7.9	8	79	28	41	1.3	●
	S080-8	8.0	8	79	28	41	1.3	●
	S081-9	8.1	9	89	32	45	1.3	●
	S082-9	8.2	9	89	32	45	1.3	●
	S083-9	8.3	9	89	32	45	1.3	●
	S084-9	8.4	9	89	32	45	1.3	●
	S085-9	8.5	9	89	32	45	1.3	●
	S086-9	8.6	9	89	32	45	1.4	●
	S087-9	8.7	9	89	32	45	1.4	●
	S088-9	8.8	9	89	32	45	1.4	●
	S089-9	8.9	9	89	32	45	1.4	●
	S090-9	9.0	9	89	32	45	1.4	●
	S091-10	9.1	10	89	35	48	1.4	●
	S092-10	9.2	10	89	35	48	1.4	●
	S093-10	9.3	10	89	35	48	1.5	●
	S094-10	9.4	10	89	35	48	1.5	●
	S095-10	9.5	10	89	35	48	1.5	●
	S096-10	9.6	10	89	35	48	1.5	●
	S097-10	9.7	10	89	35	48	1.5	●
	S098-10	9.8	10	89	35	48	1.6	●
	S099-10	9.9	10	89	35	48	1.6	●

●: Standard items

Cutting Condition D266

TED S

Solid carbide drills without oil holes



• Drilling depth: 3xdiameter

Designation	Dimension (mm)						Grade
	DC	DCONMS	OAL	LU	LCF	PL	TT5130
TED S100-10	10.0	10	89	35	48	1.6	●
S101-11	10.1	11	102	36	50	1.6	●
S102-11	10.2	11	102	36	50	1.6	●
S103-11	10.3	11	102	36	50	1.6	●
S104-11	10.4	11	102	36	50	1.6	●
S105-11	10.5	11	102	36	50	1.6	●
S106-11	10.6	11	102	36	50	1.7	●
S107-11	10.7	11	102	36	50	1.7	●
S108-11	10.8	11	102	36	50	1.7	●
S109-11	10.9	11	102	36	50	1.7	●
S110-11	11.0	11	102	36	50	1.7	●
S111-12	11.1	12	102	42	57	1.7	●
S112-12	11.2	12	102	42	57	1.8	●
S113-12	11.3	12	102	42	57	1.8	●
S114-12	11.4	12	102	42	57	1.8	●
S115-12	11.5	12	102	42	57	1.8	●
S116-12	11.6	12	102	42	57	1.8	●
S117-12	11.7	12	102	42	57	1.9	●
S118-12	11.8	12	102	42	57	1.9	●
S119-12	11.9	12	102	42	57	1.9	●
S120-12	12.0	12	102	42	57	1.9	●

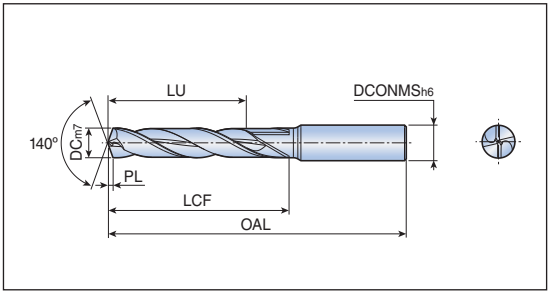
Cutting Condition D266

●: Standard items

TED R

Solid carbide drills without oil holes

• Drilling depth: 5xdiameter



Designation		Dimension (mm)						Grade
		DC	DCONMS	OAL	LU	LCF	PL	TT5130
TED	R030-4	3.0	4	66	24	30	0.5	●
	R031-4	3.1	4	66	24	30	0.5	●
	R032-4	3.2	4	66	24	30	0.5	●
	R033-4	3.3	4	66	24	30	0.5	●
	R034-4	3.4	4	66	24	30	0.5	●
	R035-4	3.5	4	66	24	30	0.6	●
	R036-4	3.6	4	66	24	30	0.6	●
	R037-4	3.7	4	66	24	30	0.6	●
	R038-4	3.8	4	74	24	30	0.6	●
	R039-4	3.9	4	74	24	30	0.6	●
	R040-4	4.0	4	74	24	30	0.6	●
	R041-5	4.1	5	74	32	40	0.7	●
	R042-5	4.2	5	74	32	40	0.7	●
	R043-5	4.3	5	74	32	40	0.7	●
	R044-5	4.4	5	74	32	40	0.7	●
	R045-5	4.5	5	74	32	40	0.7	●
	R046-5	4.6	5	74	32	40	0.7	●
	R047-5	4.7	5	74	32	40	0.8	●
	R048-5	4.8	5	82	32	40	0.8	●
	R049-5	4.9	5	82	32	40	0.8	●
	R050-5	5.0	5	82	32	40	0.8	●
	R051-6	5.1	6	82	35	45	0.8	●
	R052-6	5.2	6	82	35	45	0.8	●
	R053-6	5.3	6	82	35	45	0.8	●
	R054-6	5.4	6	82	35	45	0.8	●
	R055-6	5.5	6	82	35	45	0.9	●
	R056-6	5.6	6	82	35	45	0.9	●
	R057-6	5.7	6	82	35	45	0.9	●
	R058-6	5.8	6	82	35	45	0.9	●
	R059-6	5.9	6	82	35	45	0.9	●
	R060-6	6.0	6	82	35	45	0.9	●
	R061-7	6.1	7	91	37	48	1	●
	R062-7	6.2	7	91	37	48	1	●
	R063-7	6.3	7	91	37	48	1	●
	R064-7	6.4	7	91	37	48	1	●

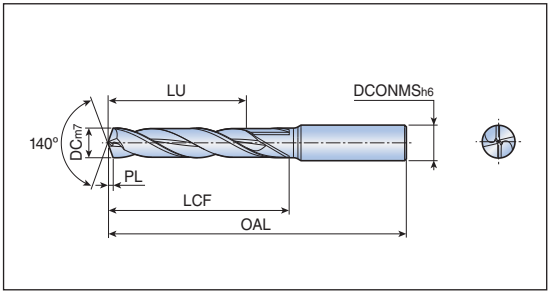
●: Standard items

Cutting Condition D266

TED R

Solid carbide drills without oil holes

• Drilling depth: 5xdiameter



Designation		Dimension (mm)						Grade
		DC	DCONMS	OAL	LU	LCF	PL	TT5130
TED	R065-7	6.5	7	91	37	48	1	●
	R066-7	6.6	7	91	37	48	1	●
	R067-7	6.7	7	91	37	48	1.1	●
	R068-7	6.8	7	91	37	48	1.1	●
	R069-7	6.9	7	91	37	48	1.1	●
	R070-7	7.0	7	91	37	48	1.1	●
	R071-8	7.1	8	91	42	53	1.1	●
	R072-8	7.2	8	91	42	53	1.1	●
	R073-8	7.3	8	91	42	53	1.1	●
	R074-8	7.4	8	91	42	53	1.2	●
	R075-8	7.5	8	91	42	53	1.2	●
	R076-8	7.6	8	91	42	53	1.2	●
	R077-8	7.7	8	91	42	53	1.2	●
	R078-8	7.8	8	91	42	53	1.2	●
	R079-8	7.9	8	91	42	53	1.3	●
	R080-8	8.0	8	91	42	53	1.3	●
	R081-9	8.1	9	103	46	59	1.3	●
	R082-9	8.2	9	103	46	59	1.3	●
	R083-9	8.3	9	103	46	59	1.3	●
	R084-9	8.4	9	103	46	59	1.3	●
	R085-9	8.5	9	103	46	59	1.3	●
	R086-9	8.6	9	103	46	59	1.4	●
	R087-9	8.7	9	103	46	59	1.4	●
	R088-9	8.8	9	103	46	59	1.4	●
	R089-9	8.9	9	103	46	59	1.4	●
	R090-9	9.0	9	103	46	59	1.4	●
	R091-10	9.1	10	103	50	63	1.4	●
	R092-10	9.2	10	103	50	63	1.4	●
	R093-10	9.3	10	103	50	63	1.5	●
	R094-10	9.4	10	103	50	63	1.5	●
	R095-10	9.5	10	103	50	63	1.5	●
	R096-10	9.6	10	103	50	63	1.5	●
	R097-10	9.7	10	103	50	63	1.5	●
	R098-10	9.8	10	103	50	63	1.6	●
	R099-10	9.9	10	103	50	63	1.6	●

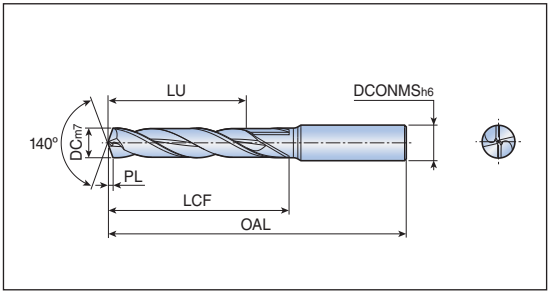
Cutting Condition D266

●: Standard items

TED R

Solid carbide drills without oil holes

• Drilling depth: 5xdiameter



Designation	Dimension (mm)						Grade
	DC	DCONMS	OAL	LU	LCF	PL	TT5130
TED R100-10	10.0	10	103	50	63	1.6	●
R101-11	10.1	11	118	53	68	1.6	●
R102-11	10.2	11	118	53	68	1.6	●
R103-11	10.3	11	118	53	68	1.6	●
R104-11	10.4	11	118	53	68	1.6	●
R105-11	10.5	11	118	53	68	1.6	●
R106-11	10.6	11	118	53	68	1.7	●
R107-11	10.7	11	118	53	68	1.7	●
R108-11	10.8	11	118	53	68	1.7	●
R109-11	10.9	11	118	53	68	1.7	●
R110-11	11.0	11	118	53	68	1.7	●
R111-12	11.1	12	118	59	75	1.7	●
R112-12	11.2	12	118	59	75	1.8	●
R113-12	11.3	12	118	59	75	1.8	●
R114-12	11.4	12	118	59	75	1.8	●
R115-12	11.5	12	118	59	75	1.8	●
R116-12	11.6	12	118	59	75	1.8	●
R117-12	11.7	12	118	59	75	1.9	●
R118-12	11.8	12	118	59	75	1.9	●
R119-12	11.9	12	118	59	75	1.9	●
R120-12	12.0	12	118	59	75	1.9	●

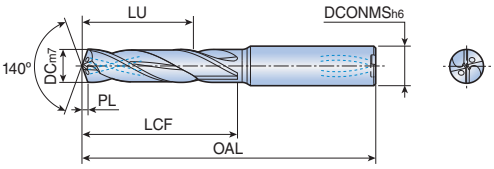
●: Standard items

Cutting Condition D266

TEO S

Solid carbide drills with oil holes

• Drilling depth: 3xdiameter



Designation		Dimension (mm)						Grade
		DC	DCONMS	OAL	LU	LCF	PL	TT5130
TEO	S030-6	3.0	6	62	11	18	0.5	●
	S031-6	3.1	6	62	11	18	0.5	●
	S032-6	3.2	6	62	11	18	0.5	●
	S033-6	3.3	6	62	11	18	0.5	●
	S034-6	3.4	6	62	11	18	0.5	●
	S035-6	3.5	6	62	11	18	0.6	●
	S036-6	3.6	6	62	11	18	0.6	●
	S037-6	3.7	6	62	11	18	0.6	●
	S038-6	3.8	6	66	12	18	0.6	●
	S039-6	3.9	6	66	12	18	0.6	●
	S040-6	4.0	6	66	12	18	0.6	●
	S041-6	4.1	6	66	19	27	0.7	●
	S042-6	4.2	6	66	19	27	0.7	●
	S043-6	4.3	6	66	19	27	0.7	●
	S044-6	4.4	6	66	19	27	0.7	●
	S045-6	4.5	6	66	19	27	0.7	●
	S046-6	4.6	6	66	19	27	0.8	●
	S047-6	4.7	6	66	19	27	0.8	●
	S048-6	4.8	6	66	19	27	0.8	●
	S049-6	4.9	6	66	19	27	0.8	●
	S050-6	5.0	6	66	19	27	0.8	●
	S051-6	5.1	6	66	22	31	0.8	●
	S052-6	5.2	6	66	22	31	0.8	●
	S053-6	5.3	6	66	22	31	0.8	●
	S054-6	5.4	6	66	22	31	0.8	●
	S055-6	5.5	6	66	22	31	0.9	●
	S056-6	5.6	6	66	22	31	0.9	●
	S057-6	5.7	6	66	22	31	0.9	●
	S058-6	5.8	6	66	22	31	0.9	●
	S059-6	5.9	6	66	22	31	0.9	●
	S060-6	6.0	6	66	22	31	0.9	●
	S061-7	6.1	7	79	26	37	1	●
	S062-7	6.2	7	79	26	37	1	●
	S063-7	6.3	7	79	26	37	1	●
	S064-7	6.4	7	79	26	37	1	●

Cutting Condition D266

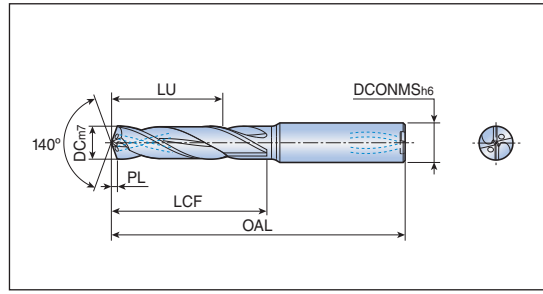
●: Standard items

TEO S

HDRILL

Solid carbide drills with oil holes

• Drilling depth: 3xdiameter



Designation		Dimension (mm)						Grade
		DC	DCONMS	OAL	LU	LCF	PL	TT5130
TEO	S065-7	6.5	7	79	26	37	1	●
	S066-7	6.6	7	79	26	37	1	●
	S067-7	6.7	7	79	26	37	1.1	●
	S068-7	6.8	7	79	26	37	1.1	●
	S069-7	6.9	7	79	26	37	1.1	●
	S070-7	7.0	7	79	26	37	1.1	●
	S071-8	7.1	8	79	28	41	1.1	●
	S072-8	7.2	8	79	28	41	1.1	●
	S073-8	7.3	8	79	28	41	1.1	●
	S074-8	7.4	8	79	28	41	1.2	●
	S075-8	7.5	8	79	28	41	1.2	●
	S076-8	7.6	8	79	28	41	1.2	●
	S077-8	7.7	8	79	28	41	1.2	●
	S078-8	7.8	8	79	28	41	1.2	●
	S079-8	7.9	8	79	28	41	1.3	●
	S080-8	8.0	8	79	28	41	1.3	●
	S081-9	8.1	9	89	32	45	1.3	●
	S082-9	8.2	9	89	32	45	1.3	●
	S083-9	8.3	9	89	32	45	1.3	●
	S084-9	8.4	9	89	32	45	1.3	●
	S085-9	8.5	9	89	32	45	1.3	●
	S086-9	8.6	9	89	32	45	1.4	●
	S087-9	8.7	9	89	32	45	1.4	●
	S088-9	8.8	9	89	32	45	1.4	●
	S089-9	8.9	9	89	32	45	1.4	●
	S090-9	9.0	9	89	32	45	1.4	●
	S091-10	9.1	10	89	35	48	1.4	●
	S092-10	9.2	10	89	35	48	1.4	●
	S093-10	9.3	10	89	35	48	1.5	●
	S094-10	9.4	10	89	35	48	1.5	●
	S095-10	9.5	10	89	35	48	1.5	●
	S096-10	9.6	10	89	35	48	1.5	●
	S097-10	9.7	10	89	35	48	1.5	●
	S098-10	9.8	10	89	35	48	1.6	●
	S099-10	9.9	10	89	35	48	1.6	●

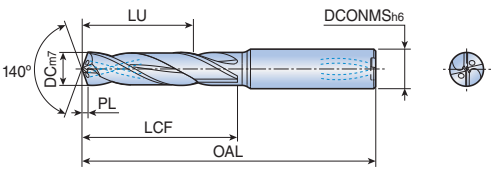
●: Standard items

Cutting Condition
D266

TEO S

Solid carbide drills with oil holes

• Drilling depth: 3xdiameter



Designation		Dimension (mm)						Grade
		DC	DCONMS	OAL	LU	LCF	PL	TT5130
TEO	S100-10	10.0	10	89	35	48	1.6	●
	S101-11	10.1	11	102	36	50	1.6	●
	S102-11	10.2	11	102	36	50	1.6	●
	S103-11	10.3	11	102	36	50	1.6	●
	S104-11	10.4	11	102	36	50	1.6	●
	S105-11	10.5	11	102	36	50	1.6	●
	S106-11	10.6	11	102	36	50	1.7	●
	S107-11	10.7	11	102	36	50	1.7	●
	S108-11	10.8	11	102	36	50	1.7	●
	S109-11	10.9	11	102	36	50	1.7	●
	S110-11	11.0	11	102	36	50	1.7	●
	S111-12	11.1	12	102	42	57	1.7	●
	S112-12	11.2	12	102	42	57	1.8	●
	S113-12	11.3	12	102	42	57	1.8	●
	S114-12	11.4	12	102	42	57	1.8	●
	S115-12	11.5	12	102	42	57	1.8	●
	S116-12	11.6	12	102	42	57	1.8	●
	S117-12	11.7	12	102	42	57	1.9	●
	S118-12	11.8	12	102	42	57	1.9	●
	S119-12	11.9	12	102	42	57	1.9	●
	S120-12	12.0	12	102	42	57	1.9	●

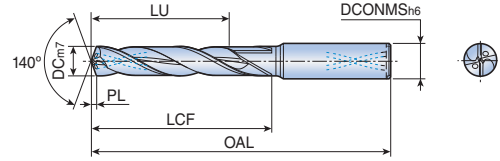
Cutting Condition D266

●: Standard items

TEO R

Solid carbide drills with oil holes

• Drilling depth: 5xdiameter



Designation		Dimension (mm)						Grade
		DC	DCONMS	OAL	LU	LCF	PL	TT5130
TEO	R030-6	3.0	6	66	24	30	0.5	●
	R031-6	3.1	6	66	24	30	0.5	●
	R032-6	3.2	6	66	24	30	0.5	●
	R033-6	3.3	6	66	24	30	0.5	●
	R034-6	3.4	6	66	24	30	0.5	●
	R035-6	3.5	6	66	24	30	0.6	●
	R036-6	3.6	6	66	24	30	0.6	●
	R037-6	3.7	6	66	24	30	0.6	●
	R038-6	3.8	6	74	24	30	0.6	●
	R039-6	3.9	6	74	24	30	0.6	●
	R040-6	4.0	6	74	24	30	0.6	●
	R041-6	4.1	6	74	32	40	0.7	●
	R042-6	4.2	6	74	32	40	0.7	●
	R043-6	4.3	6	74	32	40	0.7	●
	R044-6	4.4	6	74	32	40	0.7	●
	R045-6	4.5	6	74	32	40	0.7	●
	R046-6	4.6	6	74	32	40	0.7	●
	R047-6	4.7	6	74	32	40	0.8	●
	R048-6	4.8	6	82	32	40	0.8	●
	R049-6	4.9	6	82	32	40	0.8	●
	R050-6	5.0	6	82	32	40	0.8	●
	R051-6	5.1	6	82	35	45	0.8	●
	R052-6	5.2	6	82	35	45	0.8	●
	R053-6	5.3	6	82	35	45	0.8	●
	R054-6	5.4	6	82	35	45	0.8	●
	R055-6	5.5	6	82	35	45	0.9	●
	R056-6	5.6	6	82	35	45	0.9	●
	R057-6	5.7	6	82	35	45	0.9	●
	R058-6	5.8	6	82	35	45	0.9	●
	R059-6	5.9	6	82	35	45	0.9	●
	R060-6	6.0	6	82	35	45	0.9	●
	R061-7	6.1	7	91	37	48	1	●
	R062-7	6.2	7	91	37	48	1	●
	R063-7	6.3	7	91	37	48	1	●
	R064-7	6.4	7	91	37	48	1	●

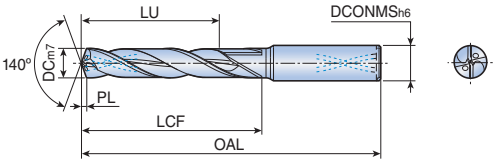
●: Standard items

Cutting Condition
D266

TEO R

Solid carbide drills with oil holes

• Drilling depth: 5xdiameter



Designation	Dimension (mm)						Grade
	DC	DCONMS	OAL	LU	LCF	PL	TT5130
TEO R065-7	6.5	7	91	37	48	1	●
R066-7	6.6	7	91	37	48	1	●
R067-7	6.7	7	91	37	48	1.1	●
R068-7	6.8	7	91	37	48	1.1	●
R069-7	6.9	7	91	37	48	1.1	●
R070-7	7.0	7	91	37	48	1.1	●
R071-8	7.1	8	91	42	53	1.1	●
R072-8	7.2	8	91	42	53	1.1	●
R073-8	7.3	8	91	42	53	1.1	●
R074-8	7.4	8	91	42	53	1.2	●
R075-8	7.5	8	91	42	53	1.2	●
R076-8	7.6	8	91	42	53	1.2	●
R077-8	7.7	8	91	42	53	1.2	●
R078-8	7.8	8	91	42	53	1.2	●
R079-8	7.9	8	91	42	53	1.3	●
R080-8	8.0	8	91	42	53	1.3	●
R081-9	8.1	9	103	46	59	1.3	●
R082-9	8.2	9	103	46	59	1.3	●
R083-9	8.3	9	103	46	59	1.3	●
R084-9	8.4	9	103	46	59	1.3	●
R085-9	8.5	9	103	46	59	1.3	●
R086-9	8.6	9	103	46	59	1.4	●
R087-9	8.7	9	103	46	59	1.4	●
R088-9	8.8	9	103	46	59	1.4	●
R089-9	8.9	9	103	46	59	1.4	●
R090-9	9.0	9	103	46	59	1.4	●
R091-10	9.1	10	103	50	63	1.4	●
R092-10	9.2	10	103	50	63	1.4	●
R093-10	9.3	10	103	50	63	1.5	●
R094-10	9.4	10	103	50	63	1.5	●
R095-10	9.5	10	103	50	63	1.5	●
R096-10	9.6	10	103	50	63	1.5	●
R097-10	9.7	10	103	50	63	1.5	●
R098-10	9.8	10	103	50	63	1.6	●
R099-10	9.9	10	103	50	63	1.6	●

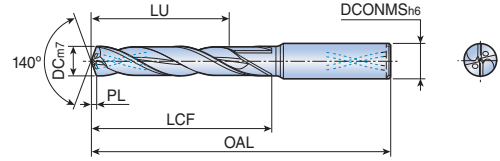
●: Standard items

Cutting Condition D266

TEO R

Solid carbide drills with oil holes

• Drilling depth: 5xdiameter



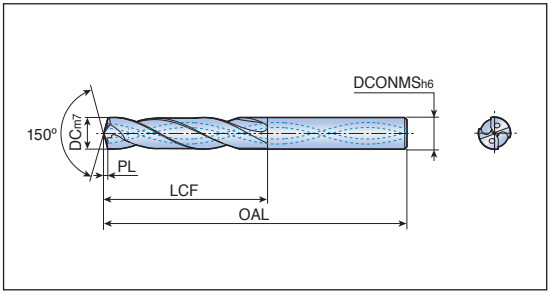
Designation	Dimension (mm)						Grade
	DC	DCONMS	OAL	LU	LCF	PL	TT5130
TEO R100-10	10.0	10	103	50	63	1.6	●
R101-11	10.1	11	118	53	68	1.6	●
R102-11	10.2	11	118	53	68	1.6	●
R103-11	10.3	11	118	53	68	1.6	●
R104-11	10.4	11	118	53	68	1.6	●
R105-11	10.5	11	118	53	68	1.6	●
R106-11	10.6	11	118	53	68	1.7	●
R107-11	10.7	11	118	53	68	1.7	●
R108-11	10.8	11	118	53	68	1.7	●
R109-11	10.9	11	118	53	68	1.7	●
R110-11	11.0	11	118	53	68	1.7	●
R111-12	11.1	12	118	59	75	1.7	●
R112-12	11.2	12	118	59	75	1.8	●
R113-12	11.3	12	118	59	75	1.8	●
R114-12	11.4	12	118	59	75	1.8	●
R115-12	11.5	12	118	59	75	1.8	●
R116-12	11.6	12	118	59	75	1.8	●
R117-12	11.7	12	118	59	75	1.9	●
R118-12	11.8	12	118	59	75	1.9	●
R119-12	11.9	12	118	59	75	1.9	●
R120-12	12.0	12	118	59	75	1.9	●

●: Standard items

Cutting Condition
D266

SHO 3...-PH

Solid pilot drills for solid long drill



• M.Q.L drilling is available

Designation	Dimension (mm)					Grade
	DC	DCONMS	OAL	LCF	PL	TT9030
SHO 30403-PH	4.03	4	66.5	24.5	0.5	●
30503-PH	5.03	5	68.6	30.6	0.6	●
30603-PH	6.03	6	68.7	30.7	0.7	●
30703-PH	7.03	7	73.8	35.8	0.8	●
30803-PH	8.03	8	79.9	41.9	0.9	●
30903-PH	9.03	9	91.0	49.0	1.0	●
31003-PH	10.03	10	91.1	49.1	1.1	●

Cutting Condition D266

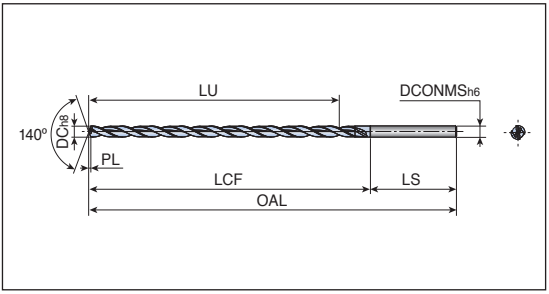
●: Standard items

SHO 10/15/20

HDRILL

Solid long drills with oil holes

- Drilling depth: 10/15/20xdiameter
- M.Q.L drilling is available



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT9030
SHO 10040	4.0	4	105.6	50	55.6	50	0.6	●
10050	5.0	5	115.8	60	65.8	50	0.8	●
10060	6.0	6	131.0	76	81.0	50	1.0	●
10070	7.0	7	141.1	86	91.1	50	1.1	●
10080	8.0	8	156.3	98	106.3	50	1.3	●
10090	9.0	9	171.4	108	116.4	55	1.4	●
10100	10.0	10	191.6	123	131.6	60	1.6	●
15040	4.0	4	125.6	70	75.6	50	0.6	●
15050	5.0	5	140.8	85	90.8	50	0.8	●
15060	6.0	6	161.0	106	111.0	50	1.0	●
15070	7.0	7	176.1	121	126.1	50	1.1	●
15080	8.0	8	196.3	138	146.3	50	1.3	●
15090	9.0	9	221.4	153	161.4	60	1.4	●
15100	10.0	10	241.6	173	181.6	60	1.6	●
20040	4.0	4	140.6	85	90.6	50	0.6	●
20050	5.0	5	165.8	110	115.8	50	0.8	●
20060	6.0	6	191.0	136	141.0	50	1.0	●
20070	7.0	7	211.1	156	161.1	50	1.1	●
20080	8.0	8	231.3	173	181.3	50	1.3	●
20090	9.0	9	266.4	198	206.4	60	1.4	●
20100	10.0	10	286.6	218	226.6	60	1.6	●

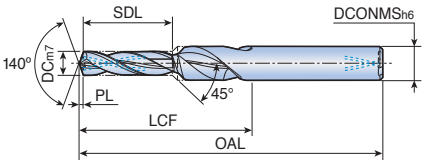
●: Standard items

Cutting Condition
D266

SHO...-M

HDRILL

Solid carbide drills for pre-thread holes



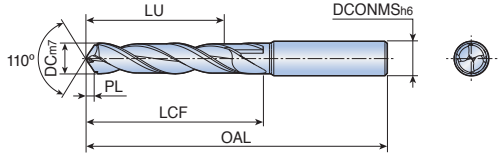
Designation	ISO thread	Dimension (mm)						Grade
		DC	OAL	SDL	LCF	DCONMS	PL	TT9030
SHO 033x12x6-M4	M4	3.3	62.5	12	26.5	6	0.5	●
042x15x6-M5	M5	4.2	66.6	15	28.6	6	0.6	●
050x18x8-M6	M6	5.0	79.8	18	36.8	8	0.8	●
068x24x10-M8	M8	6.8	91.0	24	49.0	10	1.0	●
085x30x12-M10	M10	8.5	103.3	30	56.3	12	1.3	●

Cutting Condition D266

●: Standard items

CDF

Solid carbide drills for composite material



Designation	Dimension (mm)							Grade
	DC (Metric)	DC (Inch)	DCONMS	OAL	LU	LCF	PL	TTD610
CDF 030-027-06	3	-	6	72.7	28	34.7	0.7	●
040-027-06	4	-	6	73.0	28	35.0	1.0	●
0476-034-06	4.76	3/16	6	81.3	35	43.3	1.3	●
050-034-06	5	-	6	81.3	35	43.3	1.3	●
060-034-06	6	-	6	81.7	36	43.7	1.7	●
0635-040-08	6.35	-	8	89.7	42	51.7	1.7	●
070-040-08	7	-	8	89.9	42	51.9	1.9	●
0794-040-08	7.94	5/16	8	90.2	42	52.2	2.2	●
080-040-08	8	-	8	90.2	42	52.2	2.2	●
090-045-10	9	-	10	101.5	48	59.5	2.5	●
0952-045-10	9.52	3/8	10	101.6	48	59.6	2.6	●
100-045-10	10	-	10	101.8	48	59.8	2.8	●
110-052-12	11	-	12	117.1	55	70.1	3.1	●
1111-052-12	11.11	7/16	12	117.1	55	70.1	3.1	●
120-052-12	12	-	12	117.4	55	70.4	3.4	●
127-055-14	12.7	1/2	14	122.6	59	75.6	3.6	●

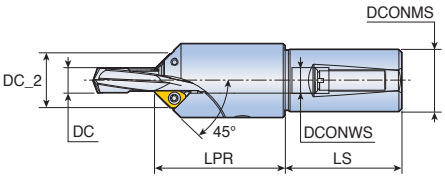
●: Standard items

Cutting Condition D278

ADVANCE CUTTING TaeguTec

T-CHAMFER...T1

Chamfering tools with solid carbide drill



Designation	DC	Dimension (mm)					Insert
		DCONWS	DC_2	DCONMS	LPR	LS	
T-CHAMFER 080-20T1-06	7.1-8.0	8	18.8	20	47.4	50	XCGT 06...-C.. D224
090-20T1-06	8.1-9.0	9	19.8	20	47.4	50	
100-32T1-09	9.1-10.0	10	24.9	32	67.3	60	XCGT 09...-C.. D224
110-32T1-09	10.1-11.0	11	25.9	32	67.3	60	
120-32T1-09	11.1-12.0	12	26.9	32	67.3	60	
130-32T1-09	12.1-13.0	13	27.9	32	67.3	60	
140-32T1-09	13.1-14.0	14	28.4	32	67.3	60	
150-32T1-09	14.1-15.0	15	29.4	32	67.3	60	
160-32T1-09	15.1-16.0	16	30.4	32	67.3	60	
170-32T1-09	16.1-17.0	17	31.4	32	67.3	60	
180-32T1-09	17.1-18.0	18	32.4	32	67.3	60	
190-32T1-09	18.1-19.0	19	33.4	32	75.0	60	
200-32T1-09	19.1-20.0	20	34.4	32	75.0	60	

Spare parts

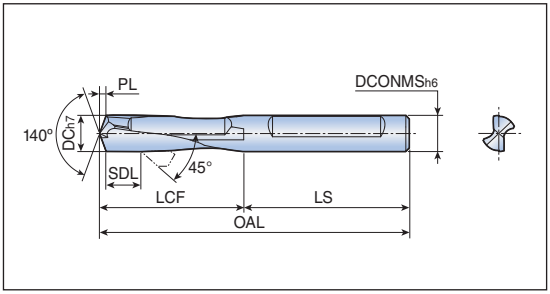
Designation	Side screw	Back screw	L-wrench	Insert screw	Wrench
T-CHAMFER 080 - 090	SS M6x1x6	M6x1-SP	L-W 3	TS 25064I	TD 8
T-CHAMFER 100 - 200	SS M10x1.5x10	M10x1.5-SP	L-W 5	TS 40093I	TD 15

Assembly
D126

SHD 3...-CF

T-CHAMFER

Solid carbide drills for T-CHAMFER



Designation	Dimension (mm)								Grade
	DC	DCONMS	OAL	LCF	LS	SDL min	SDL max	PL	TT9030
SHD 3080-CF	8.0	8.0	80.3	37.3	43	9.5	17.5	1.3	●
3090-CF	9.0	9.0	85.4	42.4	43	13.0	23.5	1.4	●
3100-CF	10.0	10.0	90.6	47.6	43	15.5	25.0	1.6	●
3110-CF	11.0	11.0	96.8	53.8	43	21.5	30.0	1.8	●
3120-CF	12.0	12.0	103.9	60.9	43	25.5	37.0	1.9	●
3130-CF	13.0	13.0	104.1	61.1	43	25.5	35.0	2.1	●
3150-CF	15.0	15.0	113.4	65.4	48	26.5	40.5	2.4	●
3170-CF	17.0	17.0	121.7	71.7	50	24.5	44.0	2.7	●
3180-CF	18.0	18.0	125.9	75.9	50	26.5	48.0	2.9	●
3190-CF	19.0	19.0	130.0	76.0	54	26.5	49.0	3.0	●

▸ 'SDL' is factored with a 45° insert positioned in insert pocket

▸ Solid carbide drill with internal coolant holes is available on request

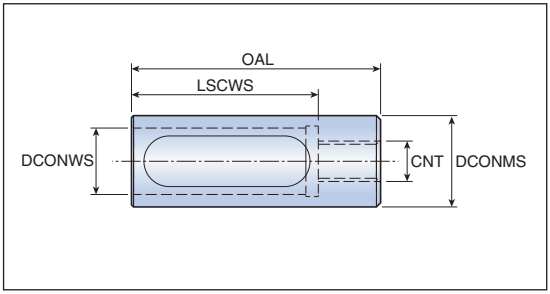
●: Standard items

Insert	Chamfer angle (°)	Chamfer size
XCGT 0603-C30	30	1.5
0603-C45	45	4.5
0603-C60	60	2.5
XCGT 0903-C30	30	1.5
0903-C45	45	6.0
0903-C60	60	3.5

▸ The maximum chamfer size is obtained when using the smallest drill diameter in the drilling range

TSL-NC

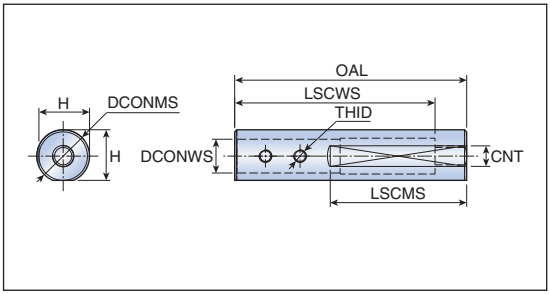
Drill sleeves for Swiss type automatic lathes (Fixed type, internal coolant)



Designation		Dimension (mm)				
		DCONMS	DCONWS	LSCWS	OAL	CNT
TSL-NC	19.05-12	19.05	12.0	45	60	Rc 1/8
	19.05-16	19.05	16.0	45	60	Rc 1/8
	20-12	20.0	12.0	45	60	Rc 1/8
	20-16	20.0	16.0	45	60	Rc 1/8
	22-16	22.0	16.0	45	60	Rc 1/8
	25-20	25.0	20.0	45	60	Rc 1/8
	25.4-20	25.4	20.0	45	60	Rc 1/8
	32-25	32.0	25.0	45	60	Rc 1/8

TSL-SW

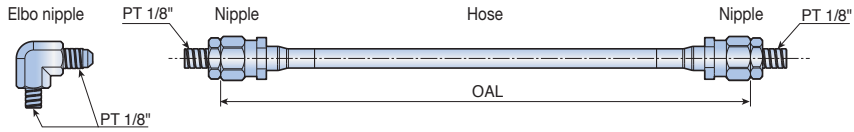
Drill sleeves for Swiss type automatic lathes (Adjustable type, internal coolant)



Designation		Dimension (mm)							
		DCONMS	DCONWS	LSCWS	LSCMS	OAL	H	THID	CNT
TSL-SW	22-12	22.0	12.0	95	65	110	21.0	M6	Rc 1/8
	25-12	25.0	12.0	95	65	110	24.0	M8	Rc 1/8
	25-16	25.0	16.0	95	65	110	24.0	M6	Rc 1/8
	25.4-12	25.4	12.0	95	65	110	24.4	M8	Rc 1/8
	25.4-16	25.4	16.0	95	65	110	24.4	M6	Rc 1/8
	32-12	32.0	12.0	95	65	110	31.0	M8	Rc 1/8
	32-16	32.0	16.0	95	65	110	31.0	M8	Rc 1/8
	32-20	32.0	20.0	95	65	110	31.0	M8	Rc 1/8

Accessories

Hose set



*Hose set components: 1 hose, 2 nipples, 1 elbo nipple

Designation		Dimension (mm)	
		OAL (mm)	Max. pressure (bar)
S-TSL HOSE	**R1/8-220**	220	100
	R1/8-350	350	100

▸ Hose set is ordered separately

Spare parts

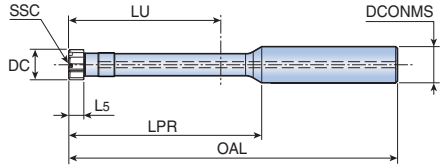
Designation	Mounting screw	Wrench		
TSL-SW 22-12	SS M6X1X5	L-W 3		
TSL-SW 25-12	SS M8X1.25X6	L-W 4		
TSL-SW 25-16	SS M6X1X5	L-W 3		
TSL-SW 25.4-12	SS M8X1.25X6	L-W 4		
TSL-SW 25.4-16	SS M6X1X5	L-W 3		
TSL-SW 32-12	SS M8X1.25X6	L-W 4		
TSL-SW 32-16	SS M8X1.25X6	L-W 4		
TSL-SW 32-20	SS M8X1.25X6	L-W 4		

Reaming Tools

XR...-3B/5B-S0

XM-REAM

Head changeable reamer holders for small diameter blind hole

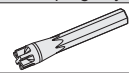


• Cylindrical shank

Designation	DC	SSC	Dimension (mm)					Overhang
			DCONMS	L5	OAL	LU	LPR	
XR- D08-3B-10S0	8.000-8.999	8	10	4.0	81.0	28.0	36.0	
D09-3B-10S0	9.000-9.999	9	10	4.5	85.5	31.5	40.5	
D10-3B-12S0	10.000-10.999	10	12	5.0	89.0	35.0	44.0	3XD
D11-3B-12S0	11.000-11.999	11	12	5.5	92.5	38.5	47.5	
D12-3B-12S0	12.000-12.999	12	12	6.0	96.0	42.0	51.0	
XR- D08-5B-10S0	8.000-8.999	8	10	4.0	97.0	44.0	52.0	
D09-5B-10S0	9.000-9.999	9	10	4.5	103.5	49.5	58.5	
D10-5B-12S0	10.000-10.999	10	12	5.0	109.0	55.0	64.0	5XD
D11-5B-12S0	11.000-11.999	11	12	5.5	114.5	60.5	69.5	
D12-5B-12S0	12.000-12.999	12	12	6.0	120.0	66.0	75.0	

▸ SSC: Seat size code
▸ Matched with XR...-AS reamer heads
▸ Reamer head is sold separately from reamer holder

Spare parts

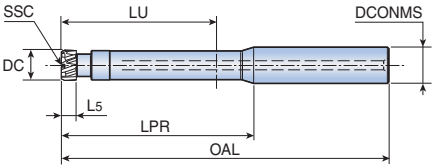
Designation	Clamping key	Key handle
		
XR-D08	W XR D08-KEY	SW6-T-SH
XR-D09	W XR D08-KEY	SW6-T-SH
XR-D10	W XR D10-KEY	SW6-T-SH
XR-D11	W XR D10-KEY	SW6-T-SH
XR-D12	W XR D12-KEY	SW6-T-SH

▸ Clamping key & clamping screw are included

XR...-3T/5T-S0

XM-REAM

Head changeable reamer holders for small diameter through hole

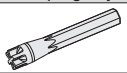


• Cylindrical shank

Designation	DC	SSC	Dimension (mm)					Overhang
			DCONMS	L5	OAL	LU	LPR	
XR- **D08-3T-10S0**	8.000-8.999	8	10	4.0	81.0	28.0	36.0	
D09-3T-10S0	9.000-9.999	9	10	4.5	85.5	31.5	40.5	
D10-3T-12S0	10.000-10.999	10	12	5.0	89.0	35.0	44.0	3XD
D11-3T-12S0	11.000-11.999	11	12	5.5	92.5	38.5	47.5	
D12-3T-12S0	12.000-12.999	12	12	6.0	95.0	42.0	50.0	
XR- **D08-5T-10S0**	8.000-8.999	8	10	4.0	97.0	44.0	52.0	
D09-5T-10S0	9.000-9.999	9	10	4.5	103.5	49.5	58.5	
D10-5T-12S0	10.000-10.999	10	12	5.0	109.0	55.0	64.0	5XD
D11-5T-12S0	11.000-11.999	11	12	5.5	114.5	60.5	69.5	
D12-5T-12S0	12.000-12.999	12	12	6.0	119.0	66.0	74.0	

▸ SSC: Seat size code
▸ Matched with XR...-BL reamer heads
▸ Reamer head is sold separately from reamer holder

Spare parts

Designation	Clamping key	Key handle
		
XR-D08	W XR D08-KEY	SW6-T-SH
XR-D09	W XR D08-KEY	SW6-T-SH
XR-D10	W XR D10-KEY	SW6-T-SH
XR-D11	W XR D10-KEY	SW6-T-SH
XR-D12	W XR D12-KEY	SW6-T-SH

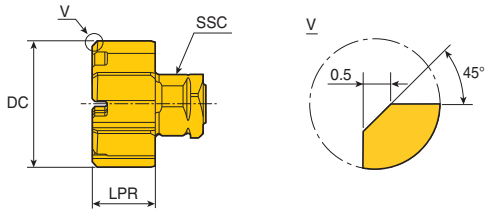
D132 Cutting Condition D279 Technical Data D294

▸ Clamping key & clamping screw are included

XR...-AS

XM-REAM

Head changeable reamer head



- Straight flute for blind hole
- For H7 hole tolerance

Head	Designation	Dimension (mm)		NOF	SSC	Flute type	Edge type	Grade
		DC	LPR					TT9030
	XR- 08.000-AS	8.000	4.0	6	8	S	A	●
	09.000-AS	9.000	4.5	6	9	S	A	●
	10.000-AS	10.000	5.0	6	10	S	A	●
	11.000-AS	11.000	5.5	6	11	S	A	●
	12.000-AS	12.000	6.0	6	12	S	A	●

D130 D294

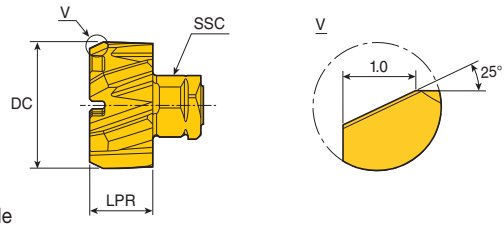
- NOF: Number of flutes
- SSC: Seat size code

●: Standard items

XR...-BL

XM-REAM

Head changeable reamer head



- Helical flute for through hole
- For H7 hole tolerance

Head	Designation	Dimension (mm)		NOF	SSC	Flute type	Edge type	Grade
		DC	LPR					TT9030
	XR- 08.000-BL	8.000	4.0	6	8	L	B	●
	09.000-BL	9.000	4.5	6	9	L	B	●
	10.000-BL	10.000	5.0	6	10	L	B	●
	11.000-BL	11.000	5.5	6	11	L	B	●
	12.000-BL	12.000	6.0	6	12	L	B	●

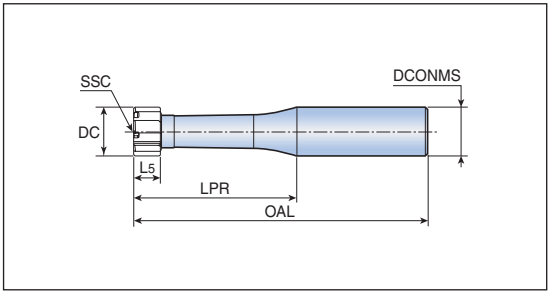
D131 D294

- NOF: Number of flutes
- SSC: Seat size code

●: Standard items

Head changeable reamer holders

• Cylindrical shank



Designation	DC	SSC	Dimension (mm)				Overhang
			DCONMS	L5	OAL	LPR	
TM-3B5-16T0	11.501-13.500	B5	16	9.3	97.8	49.8	3XD
3B6-16T0	13.501-16.000	B6	16	9.4	105.4	57.4	
3B7-20T0	16.000-20.000	B7	20	10.6	120.6	70.6	
3B8-20T0	20.001-25.400	B8	20	12.8	137.8	87.8	
3B9-32T0	25.401-32.000	B9	32	12.8	167.1	107.1	
5B5-16T0	11.501-13.500	B5	16	9.3	125.0	77.0	5XD
5B6-16T0	13.501-16.000	B6	16	9.4	137.4	89.4	
5B7-20T0	16.000-20.000	B7	20	10.6	160.6	110.6	
5B8-20T0	20.001-25.400	B8	20	12.8	187.8	137.8	
5B9-32T0	25.401-32.000	B9	32	12.8	231.1	171.1	
8B5-16T0	11.501-13.500	B5	16	9.3	165.5	117.5	8XD
8B6-16T0	13.501-16.000	B6	16	9.4	185.4	137.4	
8B7-20T0	16.000-20.000	B7	20	10.6	220.6	170.6	
8B8-20T0	20.001-25.400	B8	20	12.8	262.8	212.8	
8B9-32T0	25.401-32.000	B9	32	12.8	327.1	267.1	

▸ SSC: Seat size code
▸ Reamer head is sold separately from reamer holder

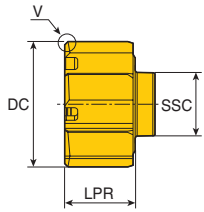
Spare parts

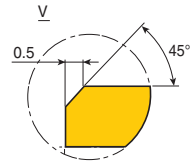
Designation	Clamping screw	Clamping key
TM...B5-16T0	TM-B5-SCR	TM-B5-KEY
TM...B6-16T0	TM-B6-SCR	TM-B6-KEY
TM...B7-20T0	TM-B7-SCR	TM-B7-KEY
TM...B8-20T0	TM-B8-SCR	TM-B8-KEY
TM...B9-32T0	TM-B9-SCR	TM-B9-KEY

▸ Clamping key & clamping screw are included

TM...-AS

Head changeable reamer heads





- Straight flute for blind hole
- For H7 hole tolerance

Head	Designation	Dimension (mm)		NOF	SSC	Flute type	Edge type	Grade
		DC	LPR					TT9030
	TM- 11.501-AS-B5	11.501	9.5	6	B5	S	A	●
	12.000-AS-B5	12.000	9.5	6	B5	S	A	●
	13.000-AS-B5	13.000	9.5	6	B5	S	A	●
	13.500-AS-B5	13.500	9.5	6	B5	S	A	●
	13.501-AS-B6	13.501	9.5	6	B6	S	A	●
	14.000-AS-B6	14.000	9.5	6	B6	S	A	●
	15.000-AS-B6	15.000	9.5	6	B6	S	A	●
	16.000-AS-B6	16.000	9.5	6	B6	S	A	●
	16.001-AS-B7	16.001	10.7	6	B7	S	A	●
	17.000-AS-B7	17.000	10.7	6	B7	S	A	●
	18.000-AS-B7	18.000	10.7	6	B7	S	A	●
	19.000-AS-B7	19.000	10.7	6	B7	S	A	●
	20.000-AS-B7	20.000	10.7	6	B7	S	A	●
	20.001-AS-B8	20.001	12.9	8	B8	S	A	●
	21.000-AS-B8	21.000	12.9	8	B8	S	A	●
	22.000-AS-B8	22.000	12.9	8	B8	S	A	●
	23.000-AS-B8	23.000	12.9	8	B8	S	A	●
	24.000-AS-B8	24.000	12.9	8	B8	S	A	●
	25.000-AS-B8	25.000	12.9	8	B8	S	A	●
	26.000-AS-B9	26.000	12.9	8	B9	S	A	●
	27.000-AS-B9	27.000	12.9	8	B9	S	A	●
	28.000-AS-B9	28.000	12.9	8	B9	S	A	●
	29.000-AS-B9	29.000	12.9	8	B9	S	A	●
	30.000-AS-B9	30.000	12.9	8	B9	S	A	●
	31.000-AS-B9	31.000	12.9	8	B9	S	A	●
	32.000-AS-B9	32.000	12.9	8	B9	S	A	●

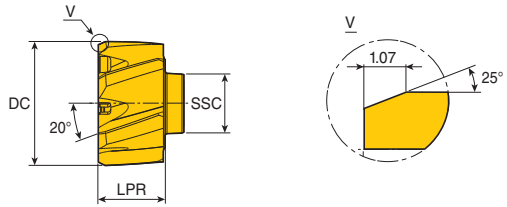
- NOF: Number of flutes
- SSC: Seat size code

●: Standard items

TM...-BL

TM-REAM

Head changeable reamer heads



- Helical flute for through hole
- For H7 hole tolerance

Head	Designation	Dimension (mm)		NOF	SSC	Flute type	Edge type	Grade
		DC	LPR					TT9030
	TM - 11.501-BL-B5	11.501	9.5	6	B5	L	B	●
	12.000-BL-B5	12.000	9.5	6	B5	L	B	●
	13.000-BL-B5	13.000	9.5	6	B5	L	B	●
	13.500-BL-B5	13.500	9.5	6	B5	L	B	●
	13.501-BL-B6	13.501	9.5	6	B6	L	B	●
	14.000-BL-B6	14.000	9.5	6	B6	L	B	●
	15.000-BL-B6	15.000	9.5	6	B6	L	B	●
	16.000-BL-B6	16.000	9.5	6	B6	L	B	●
	16.001-BL-B7	16.001	10.7	6	B7	L	B	●
	17.000-BL-B7	17.000	10.7	6	B7	L	B	●
	18.000-BL-B7	18.000	10.7	6	B7	L	B	●
	19.000-BL-B7	19.000	10.7	6	B7	L	B	●
	20.000-BL-B7	20.000	10.7	6	B7	L	B	●
	20.001-BL-B8	20.001	12.9	8	B8	L	B	●
	21.000-BL-B8	21.000	12.9	8	B8	L	B	●
	22.000-BL-B8	22.000	12.9	8	B8	L	B	●
	23.000-BL-B8	23.000	12.9	8	B8	L	B	●
	24.000-BL-B8	24.000	12.9	8	B8	L	B	●
	25.000-BL-B8	25.000	12.9	8	B8	L	B	●
	26.000-BL-B9	26.000	12.9	8	B9	L	B	●
	27.000-BL-B9	27.000	12.9	8	B9	L	B	●
	28.000-BL-B9	28.000	12.9	8	B9	L	B	●
	29.000-BL-B9	29.000	12.9	8	B9	L	B	●
	30.000-BL-B9	30.000	12.9	8	B9	L	B	●
	31.000-BL-B9	31.000	12.9	8	B9	L	B	●
	32.000-BL-B9	32.000	12.9	8	B9	L	B	●

- NOF: Number of flutes
- SSC: Seat size code

●: Standard items

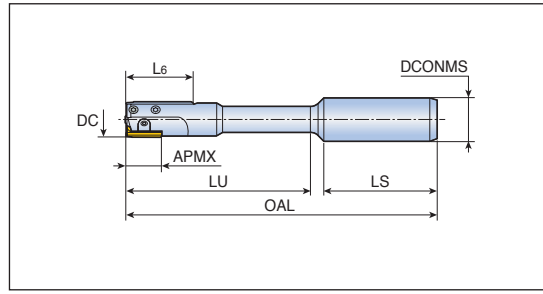
TaeguTec

TB-T...-T0

TBREAM

Indexable reamer holders

• For through hole



Designation	Dimension (mm)							SSC
	DC	APMX	OAL	LU	LS	L6	DCONMS	
TB-T08.000-S-16T0-1B	8	15.5	123.5	75	45	30	16	1
T09.000-S-16T0-1B	9	15.5	123.5	75	45	30	16	1
T10.000-S-16T0-2B	10	15.5	123.5	75	45	30	16	2
T11.000-S-16T0-2B	11	15.5	123.5	75	45	30	16	2
T12.000-S-16T0-3B	12	17.0	135	85	45	30	16	3
T13.000-S-16T0-3B	13	17.0	135	85	45	30	16	3
T14.000-S-16T0-3B	14	17.0	135	85	45	30	16	3
T15.000-S-16T0-3B	15	17.0	135	85	45	30	16	3
T16.000-S-20T0-3B	16	17.0	165	110	50	30	20	3
T17.000-S-20T0-3B	17	17.0	165	110	50	30	20	3
T18.000-S-20T0-3B	18	17.0	165	110	50	30	20	3
T19.000-S-20T0-3B	19	17.0	165	110	50	30	20	3
T20.000-S-25T0-3B	20	17.0	171	110	56	30	25	3
T21.000-S-25T0-3B	21	17.0	171	110	56	30	25	3
T22.000-S-25T0-3B	22	17.0	191	130	56	30	25	3
T23.000-S-25T0-3B	23	17.0	191	130	56	30	25	3
T24.000-S-25T0-3B	24	17.0	191	130	56	30	25	3
T25.000-S-25T0-3B	25	17.0	191	130	56	30	25	3
T26.000-S-25T0-4B	26	22.5	221	160	56	30	25	4
T27.000-S-25T0-4B	27	22.5	221	160	56	30	25	4
T28.000-S-25T0-4B	28	22.5	221	160	56	30	25	4
T29.000-S-25T0-4B	29	22.5	221	160	56	30	25	4
T30.000-S-25T0-4B	30	22.5	221	160	56	30	25	4
T31.000-S-25T0-4B	31	22.5	221	160	56	30	25	4
T32.000-S-25T0-4B	32	22.5	221	160	56	30	25	4

▸ SSC: Seat size code

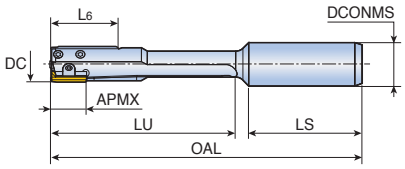
▸ Available upon request

ADVANCE CUTTING TaeguTec

TB-B...-T0

TBREAM

Indexable reamer holders



• For blind hole

Designation	Dimension (mm)							SSC
	DC	APMX	OAL	LU	LS	L6	DCONMS	
TB- B08.000-S-16T0-1B	8	15.5	123.5	75	45	30	16	1
B09.000-S-16T0-1B	9	15.5	123.5	75	45	30	16	1
B10.000-S-16T0-2B	10	15.5	123.5	75	45	30	16	2
B11.000-S-16T0-2B	11	15.5	123.5	75	45	30	16	2
B12.000-S-16T0-3B	12	17.0	135	85	45	30	16	3
B13.000-S-16T0-3B	13	17.0	135	85	45	30	16	3
B14.000-S-16T0-3B	14	17.0	135	85	45	30	16	3
B15.000-S-16T0-3B	15	17.0	135	85	45	30	16	3
B16.000-S-20T0-3B	16	17.0	165	110	50	30	20	3
B17.000-S-20T0-3B	17	17.0	165	110	50	30	20	3
B18.000-S-20T0-3B	18	17.0	165	110	50	30	20	3
B19.000-S-20T0-3B	19	17.0	165	110	50	30	20	3
B20.000-S-25T0-3B	20	17.0	171	110	56	30	25	3
B21.000-S-25T0-3B	21	17.0	171	110	56	30	25	3
B22.000-S-25T0-3B	22	17.0	191	130	56	30	25	3
B23.000-S-25T0-3B	23	17.0	191	130	56	30	25	3
B24.000-S-25T0-3B	24	17.0	191	130	56	30	25	3
B25.000-S-25T0-3B	25	17.0	191	130	56	30	25	3
B26.000-S-25T0-4B	26	22.5	221	160	56	30	25	4
B27.000-S-25T0-4B	27	22.5	221	160	56	30	25	4
B28.000-S-25T0-4B	28	22.5	221	160	56	30	25	4
B29.000-S-25T0-4B	29	22.5	221	160	56	30	25	4
B30.000-S-25T0-4B	30	22.5	221	160	56	30	25	4
B31.000-S-25T0-4B	31	22.5	221	160	56	30	25	4
B32.000-S-25T0-4B	32	22.5	221	160	56	30	25	4

▸ SSC: Seat size code

▸ Available upon request

TaeguTec

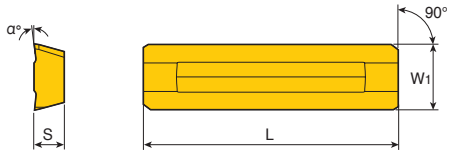
Indexable reamer holders

Spare parts

DC (mm)	Clamping wedge	Clamping screw	Adjustment screw	Adjustment pin	SSC
8	WDG-TB-1	SR-CL-TB-1	SR-ADJ-M3x2.5	PIN-ADJ-TB-1	1
9	WDG-TB-1	SR-CL-TB-1	SR-ADJ-M3x3	PIN-ADJ-TB-1	1
10	WDG-TB-1	SR-CL-TB-2	SR-ADJ-M3x3	PIN-ADJ-TB-2	2
11	WDG-TB-1	SR-CL-TB-2	SR-ADJ-M3x4	PIN-ADJ-TB-2	2
12	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x4	PIN-ADJ-TB-3	3
13	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x4	PIN-ADJ-TB-3	3
14	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x4	PIN-ADJ-TB-3	3
15	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x6	PIN-ADJ-TB-3	3
16	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x6	PIN-ADJ-TB-3	3
17	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x8	PIN-ADJ-TB-3	3
18	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x8	PIN-ADJ-TB-3	3
19	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x8	PIN-ADJ-TB-3	3
20	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x10	PIN-ADJ-TB-3	3
21	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x10	PIN-ADJ-TB-3	3
22	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x10	PIN-ADJ-TB-3	3
23	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x10	PIN-ADJ-TB-3	3
24	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x10	PIN-ADJ-TB-3	3
25	WDG-TB-3	SR-CL-TB-3	SR-ADJ-M4x10	PIN-ADJ-TB-3	3
26	WDG-TB-4	SR-CL-TB-4	SR-ADJ-M4x10	PIN-ADJ-TB-4	4
27	WDG-TB-4	SR-CL-TB-4	SR-ADJ-M4x10	PIN-ADJ-TB-4	4
28	WDG-TB-4	SR-CL-TB-4	SR-ADJ-M4x10	PIN-ADJ-TB-4	4
29	WDG-TB-4	SR-CL-TB-4	SR-ADJ-M4x10	PIN-ADJ-TB-4	4
30	WDG-TB-4	SR-CL-TB-4	SR-ADJ-M4x10	PIN-ADJ-TB-4	4
31	WDG-TB-4	SR-CL-TB-4	SR-ADJ-M4x10	PIN-ADJ-TB-4	4
32	WDG-TB-4	SR-CL-TB-4	SR-ADJ-M4x10	PIN-ADJ-TB-4	4

▸ SSC: Seat size code

Indexable blades



• For H6 hole tolerance

Insert	Designation	Dimension (mm)				SSC	Lead type	Grades	
		Rake angle (α°)	L	W1	S			TT5030	TT5050
	TB- 1B06	6	15.5	2.8	1.5	1	B	●	
	1B12	12	15.5	2.8	1.5	1	B	●	
	1A06	6	15.5	2.8	1.5	1	A		●
	1B06	6	15.5	2.8	1.5	1	B		●
	2B06	6	15.5	3.6	1.5	2	B	●	
	2B12	12	15.5	3.6	1.5	2	B	●	
	2A06	6	15.5	3.6	1.5	2	A		●
	2B06	6	15.5	3.6	1.5	2	B		●
	3B06	6	17.0	4.4	2.0	3	B	●	
	3B12	12	17.0	4.4	2.0	3	B	●	
	3A06	6	17.0	4.4	2.0	3	A		●
	3B06	6	17.0	4.4	2.0	3	B		●
	4B06	6	22.5	6.6	3.0	4	B	●	
	4B12	12	22.5	6.6	3.0	4	B	●	
	4A06	6	22.5	6.6	3.0	4	A		●
	4B06	6	22.5	6.6	3.0	4	B		●

D136-137

▸ Grades application
-TT5030: TiAlN coating for steel(P) and stainless steel(M)
-TT5050: TiCN + TiN coating for cast iron(K)

●: Standard items

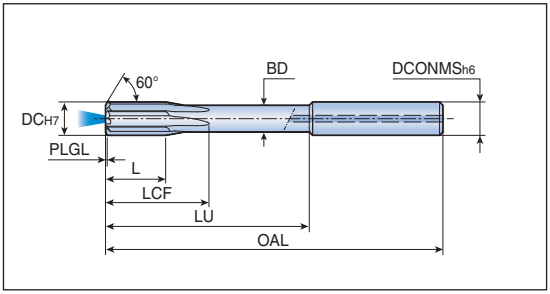
▸ SSC: Seat size code

TS-S...-NS

TSREAM

Solid reamers for blind hole

• Straight flute - DIN1420



Designation	Dimension (mm)								NOF	Grade
	DC	L	PLGL	LCF	BD	LU	OAL	DCONMS		TT5040
TS- **S0300-NS ***	3.0	12	0.25	21	2.4	31	60	4.0	4	●
S0400-NS	4.0	12	0.3	17	3.4	40	68	6.0	4	●
S0500-NS	5.0	12	0.3	17	3.8	40	76	6.0	4	●
S0600-NS	6.0	12	0.3	17	4.5	40	76	6.0	4	●
S0700-NS	7.0	15	0.4	20	5.6	65	101	8.0	6	●
S0800-NS	8.0	15	0.4	20	6.4	65	101	8.0	6	●
S0900-NS	9.0	18	0.4	23	7.2	61	101	10.0	6	●
S1000-NS	10.0	18	0.5	23	8.0	61	101	10.0	6	●
S1050-NS	10.5	18	0.5	23	8.4	85	130	12.0	6	●
S1100-NS	11.0	18	0.5	23	8.8	85	130	12.0	6	●
S1150-NS	11.5	18	0.5	23	9.2	85	130	12.0	6	●
S1200-NS	12.0	18	0.5	23	9.6	85	130	12.0	6	●

Cutting Condition D286

- Special diameters are available on request
- NOF: Number of flutes
- *: Ø3 reamer does not include a coolant hole

●: Standard items

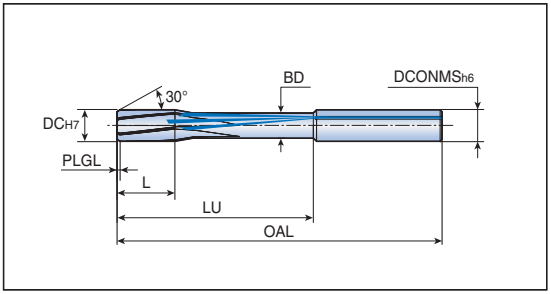
ADVANCE CUTTING TaeguTec

TS-L...-NS

TSREAM

Solid reamers for through hole

• Left flute - DIN1420



Designation	Dimension (mm)							NOF	Grade
	DC	L	PLGL	BD	LU	OAL	DCONMS		TT5040
TS-L0300-NS *	3.0	12	0.7	2.2	31	60	4.0	4	●
L0400-NS	4.0	12	0.7	3.0	40	68	6.0	4	●
L0500-NS	5.0	12	0.9	3.8	40	76	6.0	4	●
L0600-NS	6.0	12	0.9	4.5	40	76	6.0	4	●
L0700-NS	7.0	15	0.9	5.6	65	101	8.0	6	●
L0800-NS	8.0	15	0.9	6.4	65	101	8.0	6	●
L0900-NS	9.0	18	0.95	7.2	61	101	10.0	6	●
L1000-NS	10.0	18	0.95	8.0	61	101	10.0	6	●
L1050-NS	10.5	18	1.05	8.4	85	130	12.0	6	●
L1100-NS	11.0	18	1.05	8.8	85	130	12.0	6	●
L1150-NS	11.5	18	1.05	9.2	85	130	12.0	6	●
L1200-NS	12.0	18	1.05	9.6	85	130	12.0	6	●

Cutting Condition D286

- Special diameters are available on request
- NOF: Number of flutes
- *: Ø3 reamer does not include a coolant hole

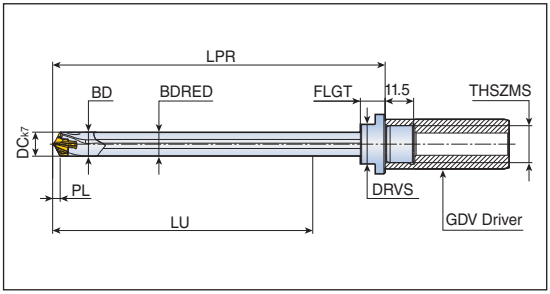
●: Standard items

Deep Drilling Tools

TCDGN

DRILL-RUSH head-changeable and modular shank gundrill holders

• Drilling depth: 16-20xdiameter

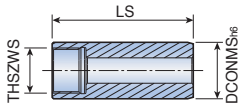


Designation		Dimension (mm)										Clamping Key
		DC	LU	LPR	PL	THSZMS	BD	BDRED	FLGT	DRVS	SSC	
TCDGN	**100X200-MF16X1**	10.0-10.4	200	274	2.33	MF16X1	9.7	9.6	10	16	10	K TCD D100-D199
	100X400-MF16X1	10.0-10.4	400	474	2.33	MF16X1	9.7	9.6	10	16	10	
	110X200-MF16X1	11.0-11.4	200	275	2.50	MF16X1	10.7	10.6	10	16	11	
	110X400-MF16X1	11.0-11.4	400	474	2.50	MF16X1	10.7	10.6	10	16	11	
	120X200-MF16X1	12.0-12.4	200	275	2.67	MF16X1	11.7	11.6	10	16	12	
	120X400-MF16X1	12.0-12.4	400	475	2.67	MF16X1	11.7	11.6	10	16	12	
	130X200-MF16X1	13.0-13.4	200	276	2.85	MF16X1	12.7	12.6	12	16	13	
	130X400-MF16X1	13.0-13.4	400	476	2.85	MF16X1	12.7	12.6	12	16	13	
	140X250-MF16X1	14.0-14.4	250	326	3.02	MF16X1	13.7	13.6	12	16	14	
	140X400-MF16X1	14.0-14.4	400	476	3.02	MF16X1	13.7	13.6	12	16	14	
	145X250-MF16X1	14.5-14.9	250	326	3.02	MF16X1	14.2	14.1	12	18	14	
	145X400-MF16X1	14.5-14.9	400	476	3.02	MF16X1	14.2	14.1	12	18	14	
	150X400-MF16X1	15.0-15.9	400	484	3.19	MF16X1	14.7	14.6	12	18	15	
	160X400-MF20X1	16.0-16.9	400	484	3.46	MF20X1	15.5	15.4	12	18	16	
	170X400-MF20X1	17.0-17.9	400	485	3.63	MF20X1	16.5	16.4	12	22	17	
	180X400-MF20X1	18.0-18.9	400	486	3.81	MF20X1	17.5	17.4	12	22	18	
	190X400-MF20X1	19.0-19.9	400	486	3.98	MF20X1	18.5	18.4	12	22	19	
	200X400-MF20X1	20.0-20.9	400	487	4.15	MF20X1	19.5	19.4	12	22	20	K TCD D200-D269
	210X400-MF20X1	21.0-21.9	400	503	4.32	MF20X1	20.5	20.4	21	28	21	
	220X400-MF20X1	22.0-22.9	400	504	4.50	MF20X1	21.5	21.4	21	28	22	
	230X400-MF20X1	23.0-23.9	400	504	4.67	MF20X1	22.5	22.4	21	28	23	
	240X400-MF20X1	24.0-24.9	400	505	4.84	MF20X1	23.5	23.4	21	28	24	
	250X400-MF20X1	25.0-25.9	400	506	5.01	MF20X1	24.5	24.4	21	28	25	

Assembly D144
D204-D216
Cutting Condition D274

- OAL: LPR+11.5
- Driver is sold separately from drill holder
- SSC: Seat size code

TCDGN holder drivers



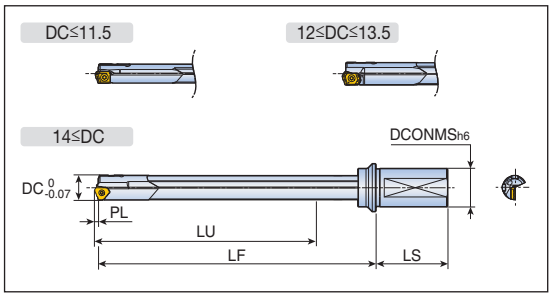
Cylindrical (C) Type Weldon (W) Type

Designation		Dimension (mm)				Shank
		DC	THSZWS	DCONMS	LS	
GDV	10-MF16X1-M-C20-T	10.0-15.9	MF16X1	20	50	C
	11-MF20X1-M-C25-T	16.0-25.9	MF20X1	25	56	C
	22-MF16X1-M-W20-T	10.0-15.9	MF16X1	20	50	W
	23-MF20X1-M-W25-T	16.0-25.9	MF20X1	25	56	W

TRGD

Standard gundrill holders

• Drilling depth: 10-45xdiameter



Designation	Dimension (mm)						
	DC	LU	LF	LS	DCONMS	PL	L/D
TRGD 16.00xM25-10	16.0	172	209	56	25	2.2	10
16.50xM25-10	16.5	172	209	56	25	2.2	10
17.00xM25-10	17.0	182	220	56	25	2.2	10
18.00xM25-10	18.0	193	232	56	25	3.0	10
19.00xM25-10	19.0	203	243	56	25	3.0	10
20.00xM32-10	20.0	213	255	60	32	3.2	10
29.00xFM40-10	29.0	294.6	360	69	40	4.6	10
30.00xFM40-10	30.0	314.6	383	69	40	4.6	10
31.00xFM40-10	31.0	314.6	383	69	40	4.6	10
32.00xFM40-10	32.0	324.6	395	69	40	4.6	10
10.00xM20-15	10.0	159.2	184.5	50	20	1.8	15
10.50xM20-15	10.5	166.7	193	50	20	1.8	15
11.00xM20-15	11.0	181.7	209	50	20	1.8	15
11.50xM20-15	11.5	181.7	209	50	20	1.8	15
12.00xM20-15	12.0	196.8	225	50	20	1.8	15
12.50xM20-15	12.5	196.8	226	50	20	1.8	15
13.00xM25-15	13.0	211.8	245	56	25	1.8	15
13.50xM25-15	13.5	211.8	245	56	25	1.8	15
14.00xM25-15	14.0	227	261	56	25	2.0	15
14.50xM25-15	14.5	227	262	56	25	2.0	15
15.00xM25-15	15.0	242	278	56	25	2.0	15
16.00xM25-15	16.0	257	294	56	25	2.2	15
16.50xM25-15	16.5	257	294	56	25	2.2	15
17.00xM25-15	17.0	272	310	56	25	2.2	15
17.50xM25-15	17.5	272	310	56	25	2.2	15
18.00xM25-15	18.0	288	327	56	25	3.0	15
18.50xM25-15	18.5	288	327	56	25	3.0	15
19.00xM25-15	19.0	303	343	56	25	3.0	15
19.50xM25-15	19.5	303	343	56	25	3.0	15
20.00xM32-15	20.0	318	360	60	32	3.2	15
21.00xM32-15	21.0	333	376	60	32	3.2	15
22.00xM32-15	22.0	348	393	60	32	3.4	15
23.00xM32-15	23.0	363	409	60	32	3.4	15
24.00xM32-15	24.0	378	426	60	32	3.4	15
25.00xM32-15	25.0	394	442	60	32	3.7	15

Assembly D148
Cutting Condition D276

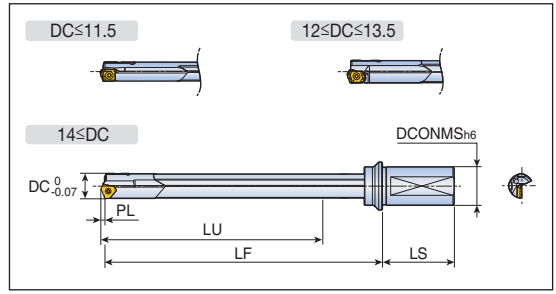
▸ Guide pad is sold separately from drill body

▸ Available upon request

TRGD

Standard gundrill holders

• Drilling depth: 10-45xdiameter



Designation		Dimension (mm)						
		DC	LU	LF	LS	DCONMS	PL	L/D
TRGD	26.00xM40-15	26.0	409	449	70	40	3.7	15
	27.00xM40-15	27.0	424	465	70	40	3.7	15
	28.00xM40-15	28.0	424	467	70	40	3.7	15
	8.00xM20-20	8.0	169.2	192	50	20	1.2	20
	10.00xM20-20	10.0	211.7	237	50	20	1.8	20
	10.50xM20-20	10.5	221.7	248	50	20	1.8	20
	11.00xM20-20	11.0	241.7	269	50	20	1.8	20
	11.50xM20-20	11.5	211.7	269	50	20	1.8	20
	12.00xM20-20	12.0	261.8	290	50	20	1.8	20
	12.50xM20-20	12.5	261.8	291	50	20	1.8	20
	13.00xM25-20	13.0	281.8	315	56	25	1.8	20
	13.50xM25-20	13.5	281.8	315	56	25	1.8	20
	14.00xM25-20	14.0	302	336	56	25	2.0	20
	14.50xM25-20	14.5	302	337	56	25	2.0	20
	15.00xM25-20	15.0	322	358	56	25	2.0	20
	29.00xFM40-20	29.0	584.6	650	69	40	4.6	20
	30.00xFM40-20	30.0	624.6	693	69	40	4.6	20
	31.00xFM40-20	31.0	624.6	693	69	40	4.6	20
	32.00xFM40-20	32.0	644.6	715	69	40	4.6	20
	8.00xM20-25	8.0	211.2	234	50	20	1.2	25
	8.50xM20-25	8.5	218.7	242.5	50	20	1.2	25
	9.00xM20-25	9.0	236.1	261	50	20	1.1	25
	10.00xM20-25	10.0	264.5	289.5	50	20	1.8	25
	11.00xM20-25	11.0	301.7	329	50	20	1.8	25
	11.50xM20-25	11.5	301.7	329	50	20	1.8	25
	12.00xM20-25	12.0	326.8	355	50	20	1.8	25
	12.50xM20-25	12.5	326.8	356	50	20	1.8	25
	13.00xM25-25	13.0	351.8	385	56	25	1.8	25
	13.50xM25-25	13.5	351.8	385	56	25	1.8	25
	14.00xM25-25	14.0	377	411	56	25	2.0	25
	14.50xM25-25	14.5	377	412	56	25	2.0	25
	15.00xM25-25	15.0	402	438	56	25	2.0	25
	16.00xM25-25	16.0	427	464	56	25	2.2	25
	16.50xM25-25	16.5	427	464	56	25	2.2	25
	17.00xM25-25	17.0	452	490	56	25	2.2	25

Assembly D148

Cutting Condition D276

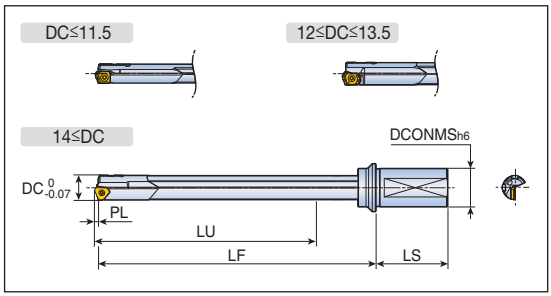
▸ Guide pad is sold separately from drill body

▸ Available upon request

TRGD

Standard gundrill holders

• Drilling depth: 10-45xdiameter



Designation	Dimension (mm)						
	DC	LU	LF	LS	DCONMS	PL	L/D
TRGD 17.50xM25-25	17.5	452	490	56	25	2.2	25
18.00xM25-25	18.0	478	517	56	25	3.0	25
18.50xM25-25	18.5	478	517	56	25	3.0	25
19.00xM25-25	19.0	503	543	56	25	3.0	25
19.50xM25-25	19.5	503	543	56	25	3.0	25
20.00xM32-25	20.0	528	570	60	32	3.2	25
21.00xM32-25	21.0	553	596	60	32	3.2	25
22.00xM32-25	22.0	578	623	60	32	3.4	25
23.00xM32-25	23.0	603	649	60	32	3.4	25
24.00xM32-25	24.0	628	676	60	32	3.4	25
25.00xM32-25	25.0	654	702	60	32	3.7	25
26.00xM40-25	26.0	679	729	70	40	3.7	25
27.00xM40-25	27.0	704	755	70	40	3.7	25
28.00xM40-25	28.0	704	757	70	40	3.7	25
8.00xM20-35	8.0	295.2	318	50	20	1.2	35
12.00xM20-35	12.0	456.8	458	50	20	1.8	35
14.00xM25-35	14.0	527	561	56	25	2.0	35
15.00xM25-35	15.0	562	598	56	25	2.0	35
8.50xM20-40	8.5	349.2	373	50	20	1.2	40
9.00xM20-40	9.0	377.1	402	50	20	1.1	40
12.00xM20-40	12.0	521.8	550	50	20	1.8	40
14.00xM25-40	14.0	602	636	56	25	2.0	40
15.00xM25-40	15.0	642	678	56	25	2.0	40
8.00xM20-45	8.0	379.2	402	50	20	1.2	45
12.00xM20-45	12.0	586.8	615	50	20	1.8	45

Assembly D148
Cutting Condition D276

▸ Guide pad is sold separately from drill body

▸ Available upon request

Insert & guide pad

Tool dia. (mm)	Insert			Guide pad		
	Insert	Screw	Wrench	Guide pad	Screw	Wrench
7.94-8.49	ZSGT 040104 RS	CSPB-2FL3.1	T-6P	PAD-SGP03-12-035-DC-SB	CSPB-2FL2.7-LH	T-6P
8.50-8.99	ZSGT 040104 RS	CSPB-2FL3.1	T-6P	PAD-SGP03-12-040-DC-SB	CSPB-2FL3.1	
9.00-9.99	ZSGT 050104 RS					
10.00-10.99	ZSGT 060204 RS	SR-M2.5X0.35L3.8	T-7F	PAD-GP04-16-045-DC-SB	CSTB-2	T-6
11.00-11.80	ZSGT 060204 RS	SR-M2.5X0.35L3.8	T-7F	PAD-GP04-16-050-DC-SB	CSTB-2	T-6
11.81-11.99	LOGT 060204 RS	SR10503833L040	T-7F			
12.00-13.99	LOGT 060204 RS	SR10503833L040	T-7F	PAD-GP04-16-055-DC-SB PAD-GP04-16-055-DC-SC	TS 20043I/HG-P	T-6P
14.00-15.99	TOGT 070304 RS	SR14-560/S	T-8F	PAD-GP05-18-060-DC-SB PAD-GP05-18-060-DC-SC	SR34-508	T-7F
16.00-18.00	TOGT 080305 RS	SR14-560/S	T-8F	PAD-GP05-18-075-DC-SB PAD-GP05-18-075-DC-SC	SR34-508	T-7F
18.01-20.00	TOGT 090305 RS	SR14-560/S	T-8F	PAD-GP06-20-085-DC-SB PAD-GP06-20-085-DC-SC	SR34-508	T-7F
20.01-21.00	TOGT 100305 RS	SR34-506	T-9F			
21.01-21.99	TOGT 100305 RS	SR34-506	T-9F	PAD-GP06-20-100-DC-SB PAD-GP06-20-100-DC-SC	SR34-508	T-7F
22.00-25.00	TOGT 110405 RS	SR14-571/S	T-10/5			
25.01-28.00	TOGT 120405 RS	SR14-560	T-15F	PAD-GP06-20-120-DC-SB PAD-GP06-20-120-DC-SC	SR34-508	T-7F
28.01-29.99	TOGT 130408 RS	SR16-212/L10	T-20/5	PAD-GP06-20-120-DC-SB PAD-GP06-20-120-DC-SC	SR34-508	T-7F
30.00-32.00	TOGT 130408 RS	SR16-212/L10	T-20/5	PAD-GP07-20-120-DC-SB PAD-GP07-20-120-DC-SC	CSTB-3S	T-9F

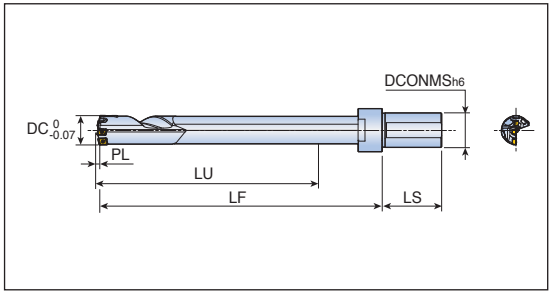
D231-D232 | Guide Pad D236 | Cutting Condition D276

- SB: First choice for general purpose
- SC: First choice when using water-soluble coolant
- Inserts and guide pads must be ordered separately

TRGD3

Standard gundrill holders

• Drilling depth: 10-15xdiameter



Designation	Dimension (mm)						
	DC	LU	LF	LS	DCONMS	PL	L/D
TRGD3 29.00xFM40-10	29.0	293	360	69	40	2.6	10
30.00xFM40-10	30.0	313	383	69	40	2.9	10
31.00xFM40-10	31.0	313	383	69	40	2.9	10
32.00xFM40-10	32.0	323	395	69	40	3.0	10
33.00xFM40-10	33.0	333	406	69	40	3.1	10
34.00xFM40-10	34.0	343	418	69	40	3.0	10
35.00xFM40-10	35.0	353	428	69	40	3.1	10
36.00xFM40-10	36.0	363	441	69	40	3.1	10
29.00xFM40-15	29.0	438	505	69	40	2.6	15
30.00xFM40-15	30.0	468	538	69	40	2.9	15
31.00xFM40-15	31.0	468	538	69	40	2.9	15
32.00xFM40-15	32.0	483	555	69	40	3.0	15
33.00xFM40-15	33.0	498	571	69	40	3.1	15
34.00xFM40-15	34.0	513	588	69	40	3.0	15
35.00xFM40-15	35.0	528	603	69	40	3.1	15
36.00xFM40-15	36.0	543	621	69	40	3.1	15

▸ Guide pad is sold separately from drill body.
▸ Supply up to 42.5 mm drill daimeter

▸ Available upon request

Insert & guide pad

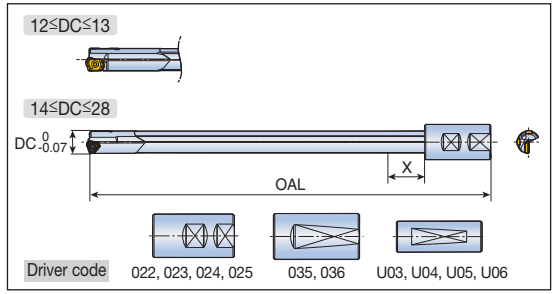
Parts		Diameter (mm)			
		28.01-29.99	30.00-33.00	33.01-35.00	35.01-38.00
Insert	Peripheral insert	NPHT 0603...-P	NPHT 0804...-P	NPHT 0804...-P	NPHT 0804...-P
	Screw	CSTB-2.2	CSTB-2.5	CSTB-2.5	CSTB-2.5
	Wrench	T-7F	T-8F	T-8F	T-8F
	Intermediate insert	NPMT 060304R...-I	NPMT 070404R...-I	NPMT 070404R...-I	NPMT 070404R...-I
	Screw	CSTB-2.2	CSTB-2.5	CSTB-2.5	CSTB-2.5
	Wrench	T-7F	T-8F	T-8F	T-8F
	Central insert	NPMT 070408L...-C	NPMT 070408L...-C	NPMT 070408L...-C	NPMT 080408L-L...-C
	Screw	CSTB-2.5	CSTB-2.5	CSTB-2.5	CSTB-2.5
	Wrench	T-8F	T-8F	T-8F	T-8F
Pad	Guide pad	PAD-GP06-20-120-DC-SB	PAD-GP06-20-120-DC-SB	PAD-GP07-20-120-DC-SB	PAD-GP07-20-120-DC-SB
		PAD-GP06-20-120-DC-SC	PAD-GP06-20-120-DC-SC	PAD-GP07-20-120-DC-SC	PAD-GP07-20-120-DC-SC
	Screw	SR34-508	SR34-508	CSTB-3S	CSTB-3S
	Wrench	T-7F	T-7F	T-9F	T-9F

D227-D229 | Guide Pad D236 | Cutting Condition D276

▸ Inserts and guide pads must be ordered separately

TRGDL

Standard gundrill holders



Designation	Driver code	Dimension (mm)		
		DC	OAL	X
TRGDL 12.00x800-xxx	U03 022	12	801.8	18
12.00x800-xxx		12	801.8	18
12.00x1000-xxx		12	1001.8	18
12.00x1000-xxx		12	1001.8	18
12.00x1650-xxx		12	1651.8	18
12.00x1650-xxx		12	1651.8	18
12.70x1219-xxx	U04	12.7	1220.8	19
12.70x1524-xxx		12.7	1525.8	19
13.00x800-xxx	U04 023	13	801.8	20
13.00x800-xxx		13	801.8	20
13.00x1000-xxx		13	1001.8	20
13.00x1000-xxx		13	1001.8	20
13.00x1650-xxx		13	1651.8	20
13.00x1650-xxx		13	1651.8	20
13.49x1219-xxx	U04	13.49	1220.8	20
13.49x1527-xxx		13.49	1528.8	20
14.00x800-xxx	U04 023	14	800	21
14.00x1000-xxx		14	1000	21
14.00x1650-xxx		14	1650	21
14.50x800-xxx		14.5	800	22
14.50x1000-xxx		14.5	1000	22
14.50x1650-xxx		14.5	1650	22
15.00x800-xxx		15	800	23
15.00x1000-xxx		15	1000	23
15.00x1650-xxx		15	1650	23
16.00x800-xxx	U04 023 035	16	800	24
16.00x1000-xxx		16	1000	24
16.00x1500-xxx		16	1500	24
17.00x1000-xxx		17	1000	25
17.00x1500-xxx		17	1500	25
18.00x800-xxx		18	800	27
18.00x1000-xxx		18	1000	27
18.00x1500-xxx		18	1500	27
19.00x800-xxx		19	800	28
19.00x1000-xxx		19	1000	28
19.00x1500-xxx		19	1500	28

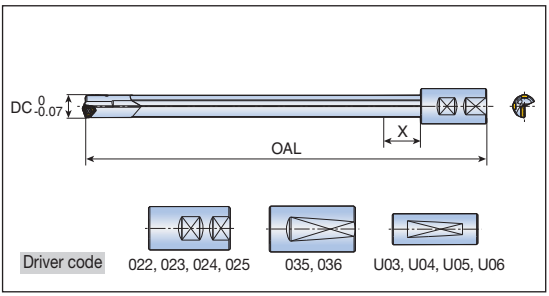
Assembly D152

Cutting Condition D276

- Guide pad is sold separately from drill body
- Available upon request
- Select "xxx" driver code

TRGDL

Standard gundrill holders



Designation	Driver code	Dimension (mm)		
		DC	OAL	X
TRGDL 20.00x800-xxx	U05 024 036	20	800	30
20.00x1000-xxx		20	1000	30
20.00x1500-xxx		20	1500	30
21.00x1000-xxx		21	1000	31
21.00x1500-xxx		21	1500	31
22.00x1000-xxx		22	1000	33
22.00x1500-xxx		22	1500	33
23.00x1000-xxx		23	1000	34
23.00x1500-xxx		23	1500	34
24.00x1000-xxx		24	1000	36
24.00x1500-xxx		24	1500	36
25.00x1000-xxx		25	1000	37
25.00x1500-xxx		25	1500	37
26.00x1000-xxx	U06 025 026 036	26	1000	39
26.00x1500-xxx		26	1500	39
27.00x1000-xxx		27	1000	40
27.00x1500-xxx		27	1500	40
28.00x1000-xxx		28	1000	42
28.00x1500-xxx		28	1500	42

Assembly D152

Cutting Condition D276

- Guide pad is sold separately from drill body

- Available upon request
- Select "xxx" driver code

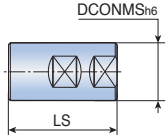
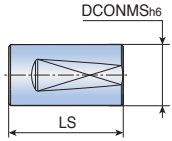
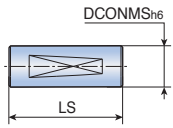
Insert & guide pad

Tool dia. (mm)	Insert			Guide pad		
	Insert	Screw	Wrench	Guide pad	Screw	Wrench
12.00-13.99	LOGT 060204 RS	SR10503833L040	T-7F	PAD-GP04-16-055-DC-SB PAD-GP04-16-055-DC-SC	TS 20043I/HG-P	T-7F
14.00-15.99	TOGT 070304 RS	SR14-560/S	T-8F	PAD-GP05-18-060-DC-SB PAD-GP05-18-060-DC-SC	SR34-508	T-7F
16.00-18.00	TOGT 080305 RS	SR14-560/S	T-8F	PAD-GP05-18-075-DC-SB PAD-GP05-18-075-DC-SC	SR34-508	T-7F
18.01-20.00	TOGT 090305 RS	SR14-560/S	T-8F	PAD-GP06-20-085-DC-SB PAD-GP06-20-085-DC-SC	SR34-508	T-7F
20.01-21.00	TOGT 100305 RS	SR34-506	T-9F			
21.01-21.99	TOGT 100305 RS	SR34-506	T-9F	PAD-GP06-20-100-DC-SB PAD-GP06-20-100-DC-SC	SR34-508	T-7F
22.00-25.00	TOGT 110405 RS	SR14-571/S	T-10/5			
25.01-28.00	TOGT 120405 RS	SR14-560	T-15F	PAD-GP06-20-120-DC-SB PAD-GP06-20-120-DC-SC	SR34-508	T-7F

D231-D232 Guide Pad D236 Cutting Condition D276

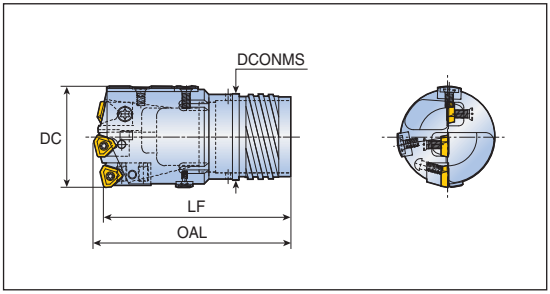
- SB: First choice for general purpose
- SC: First choice when using water-soluble coolant
- Inserts and guide pads must be ordered separately

Driver for TRGDL Type

Driver	Driver code	Dimension (mm)	
		LS	DCONMS
	022	50	20.00
	023	56	25.00
	024	60	32.00
	025	70	40.00
	026	80	50.00
	035	56	25.00
	036	60	32.00
	U03	70	19.05
	U04	70	25.40
	U05	70	31.75
	U06	70	38.10

TBTA3...SE4

Single tube system



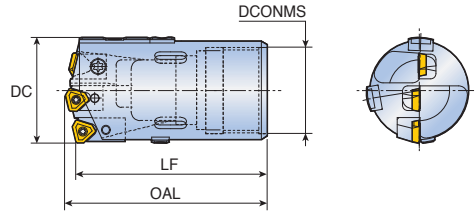
• Outer four start thread

Designation	DC	Dimension (mm)			Tube	
		LF	OAL	DCONMS	Part	Diameter (mm)
TBTA3-xxx.xxSE4-33	38.00-39.60	85	90	30	BTSI 033	33
xxx.xxSE4-36	39.61-43.00	85	91	33	BTSI 036	36
xxx.xxSE4-39	43.01-47.00	95	101	36	BTSI 039	39
xxx.xxSE4-43	47.01-51.70	95	102	39	BTSI 043	43
xxx.xxSE4-47	51.71-56.20	100	107	43	BTSI 047	47
xxx.xxSE4-51	56.21-60.60	110	118	47	BTSI 051	51
xxx.xxSE4-56A	60.61-64.99	110	119	51	BTSI 056A	56
xxx.xxSE4-56B	65.00-66.99	150	159	52	BTSI 056B	56
xxx.xxSE4-62	67.00-72.99	150	159	58	BTSI 062	62
xxx.xxSE4-68	73.00-79.99	150	160	63	BTSI 068	68
xxx.xxSE4-75	80.00-86.99	180	191	70	BTSI 075	75
xxx.xxSE4-82	87.00-99.99	180	193	77	BTSI 082	82
xxx.xxSE4-94	100.00-106.99	180	193	89	BTSI 094	94

Assembly D159 | Tube D185-D186 | Cutting Condition D268

TBTA3...SI1

Single tube system



• Inner single start thread

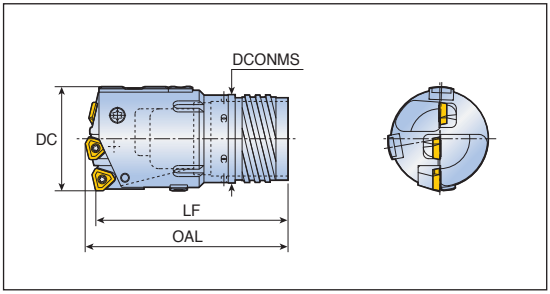
Designation	DC	Dimension (mm)			Tube	
		LF	OAL	DCONMS	Part	Diameter (mm)
TBTA3- xxx.xxSI1-33	38.00-39.99	80	85	30	BTSE 033	33
xxx.xxSI1-36	40.00-43.99	80	86	33	BTSE 036	36
xxx.xxSI1-39	44.00-46.99	90	96	37	BTSE 039	39
xxx.xxSI1-43	47.00-51.99	90	97	41	BTSE 043	43
xxx.xxSI1-47	52.00-56.99	100	107	44	BTSE 047	47
xxx.xxSI1-51	57.00-60.99	110	118	49	BTSE 051	51
xxx.xxSI1-56	61.00-67.99	110	119	53	BTSE 056	56
xxx.xxSI1-62	68.00-74.99	120	129	59	BTSE 062	62
xxx.xxSI1-68	75.00-80.99	150	161	65	BTSE 068	68
xxx.xxSI1-75	81.00-90.99	150	162	71	BTSE 075	75
xxx.xxSI1-82	91.00-98.99	150	162	79	BTSE 082	82
xxx.xxSI1-94	99.00-106.99	150	163	90	BTSE 094	94

Assembly D159 | Tube D187-D188 | Cutting Condition D268

ADVANCE CUTTING TaeguTec

TBTA3...DE4

Double tube system



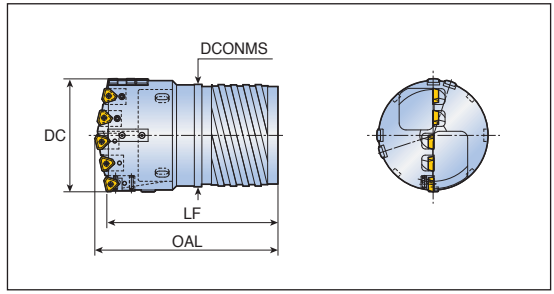
• Outer four start thread

Designation	DC	Dimension (mm)			Tube		
		LF	OAL	DCONMS	Outer tube	Inner tube	Diameter (mm)
TBTA3-xxx.xxDE4-35.5	38.00-39.60	85	90	33	BTDO 035.5	BTDI 026	35.5
xxx.xxDE4-39	39.61-43.00	85	91	36	BTDO 039	BTDI 029	39.0
xxx.xxDE4-42.5	43.01-47.00	95	101	39	BTDO 042.5	BTDI 032	42.5
xxx.xxDE4-46.5	47.01-51.70	100	102	43	BTDO 046.5	BTDI 035	46.5
xxx.xxDE4-51	51.71-56.20	100	107	47	BTDO 051	BTDI 039	51.0
xxx.xxDE4-55.5	56.21-65.00	110	119	51	BTDO 055.5	BTDI 043A	55.5
xxx.xxDE4-56	65.00-66.99	150	159	52	BTDO 056	BTDI 043B	56.0
xxx.xxDE4-62	67.00-72.99	150	159	58	BTDO 062	BTDI 048	62.0
xxx.xxDE4-68	73.00-79.99	150	160	63	BTDO 068	BTDI 053	68.0
xxx.xxDE4-75	80.00-86.99	180	191	70	BTDO 075	BTDI 059	75.0
xxx.xxDE4-82	87.00-99.99	180	193	77	BTDO 082	BTDI 066	82.0
xxx.xxDE4-94	100.00-106.99	180	193	89	BTDO 094	BTDI 078	94.0

Assembly D159 | Tube D189-D190 | Cutting Condition D268

TBTA5...SE4

Single tube system

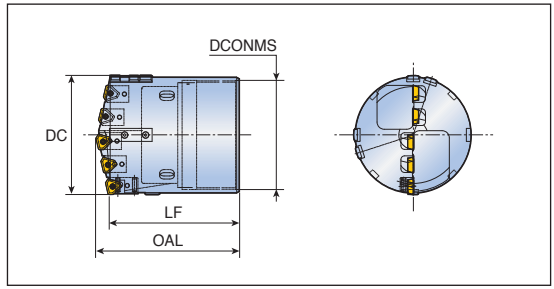


• Outer four start thread

Designation	DC	Dimension (mm)			Tube	
		LF	OAL	DCONMS	Part	Diameter (mm)
TBTA5- xxx.xxSE4-094	107.00-111.99	180	197	89	BTSI 094	94
xxx.xxSE4-106	112.00-123.99	205	221	101	BTSI 106	106
xxx.xxSE4-118	124.00-135.99	205	222	113	BTSI 118	118
xxx.xxSE4-130	136.00-147.99	205	223	125	BTSI 130	130
xxx.xxSE4-142	148.00-159.99	225	245	137	BTSI 142	142
xxx.xxSE4-154	160.00-168.99	225	246	149	BTSI 154	154

TBTA5...SI1

Single tube system



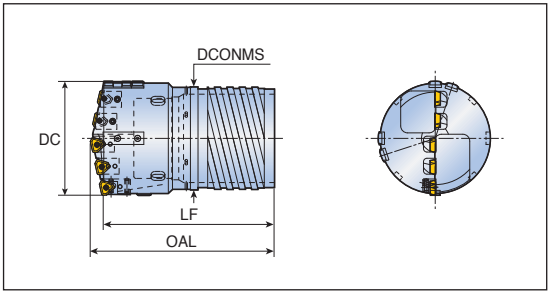
• Inner single start thread

Designation	DC	Dimension (mm)			Tube	
		LF	OAL	DCONMS	Part	Diameter (mm)
TBTA5- xxx.xxSI1-094	107.00-110.99	150	164	90	BTSE 094	94
xxx.xxSI1-106	111.00-122.99	150	165	102	BTSE 106	106
xxx.xxSI1-118	123.00-134.99	150	167	114	BTSE 118	118
xxx.xxSI1-130	135.00-148.99	150	168	126	BTSE 130	130
xxx.xxSI1-142	149.00-161.99	150	170	139	BTSE 142	142
xxx.xxSI1-154	162.00-168.99	190	211	151	BTSE 154	154

Assembly D160 | Tube D186, D188 | Cutting Condition D268

TBTA5...DE4

Double tube system



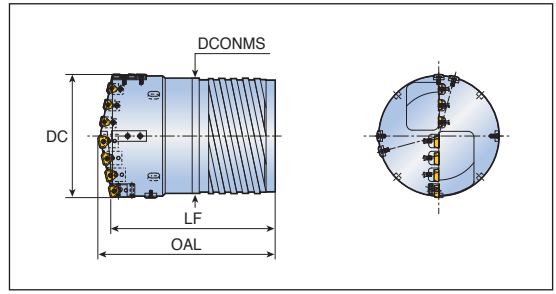
• Outer four start thread

Designation	DC	Dimension (mm)			Tube		
		LF	OAL	DCONMS	Outer Tube	Inner Tube	Diameter (mm)
TBTA5 - xxx.xxDE4-094	107.00-111.99	180	197	89	BTDO 094	BTDI 078	94
xxx.xxDE4-106	112.00-123.99	205	221	101	BTDO 106	BTDI 090	106
xxx.xxDE4-118	124.00-135.99	205	222	113	BTDO 118	BTDI 092	118
xxx.xxDE4-130	136.00-147.99	205	223	125	BTDO 130	BTDI 104	130
xxx.xxDE4-142	148.00-159.99	225	245	137	BTDO 142	BTDI 116	142
xxx.xxDE4-154	160.00-168.99	225	246	149	BTDO 154	BTDI 128	154

Assembly D160 | Tube D189 | Cutting Condition D268

TBTA7...SE4

Single tube system

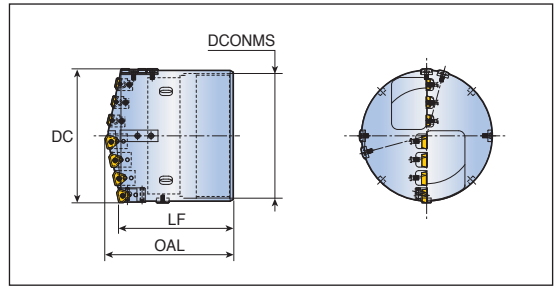


- Outer four start thread
- Double tube system also available on request

Designation	DC	Dimension (mm)			Tube	
		LF	OAL	DCONMS	Part	Diameter (mm)
TBTA7- xxx.xxSE4-154	169.00-171.99	225	246	149	BTSI 154	154
xxx.xxSE4-166	172.00-183.99	225	247	161	BTSI 166	166
xxx.xxSE4-178	184.00-195.99	245	267	173	BTSI 178	178
xxx.xxSE4-190	196.00-207.99	245	270	185	BTSI 190	190
xxx.xxSE4-202	208.00-219.99	245	271	197	BTSI 202	202
xxx.xxSE4-214	220.00-231.99	265	293	208	BTSI 214	214
xxx.xxSE4-226	232.00-232.99	265	293	220	BTSI 226	226

TBTA7...SI1

Single tube system



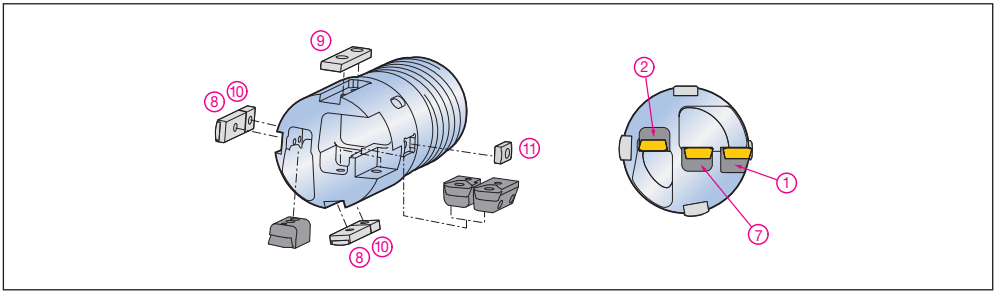
- Inner single start thread

Designation	DC	Dimension (mm)			Tube	
		LF	OAL	DCONMS	Part	Diameter (mm)
TBTA7- xxx.xxSI1-154	169.00-173.99	190	211	151	BTSE 154	154
xxx.xxSI1-166	174.00-185.99	190	213	163	BTSE 166	166
xxx.xxSI1-178	186.00-197.99	190	212	175	BTSE 178	178
xxx.xxSI1-190	198.00-209.99	190	215	187	BTSE 190	190
xxx.xxSI1-202	210.00-221.99	190	217	199	BTSE 202	202
xxx.xxSI1-214	222.00-232.99	190	218	211	BTSE 214	214

Assembly D161 | Tube D186,D188 | Cutting Condition D268

TBTA3 Series

Assembly of TBTA3 series



Cartridge (1,2,7)

DCN - DCX	Peripheral ①	Intermediate ②	Central ⑦
38 - 39.99	PERC 05R	CENC 05R	CENC 05R
40 - 44.99	PERC 402 - 04	CENC 05R	CENC 05R
45 - 47.99	PERC 402 - 04	CENC 05R	CENC 402 - 04
48 - 51.99	PERC 402 - 04	CENC 402 - 04	CENC 402 - 04
52 - 54.99	PERC 402 - 32	CENC 402 - 04	CENC 402 - 04
55 - 57.99	PERC 402 - 32	CENC 402 - 04	CENC 402 - 32
58 - 59.99	PERC 402 - 32	CENC 402 - 32	CENC 402 - 32
60 - 63.99	PERC 402 - 32	CENC 402 - 32	CENC 402 - 32
64 - 67.99	PERC 402 - 43	CENC 402 - 32	CENC 402 - 32
68 - 77.99	PERC 402 - 32	CENC 402 - 43	CENC 402 - 43
78 - 84.99	PERC 402 - 43	CENC 402 - 43	CENC 402 - 43
85 - 91.99	PERC 402 - 63	CENC 402 - 43	CENC 402 - 43
92 - 98.99	PERC 402 - 43	CENC 402 - 63	CENC 402 - 63
99 - 106.99	PERC 402 - 63	CENC 402 - 63	CENC 402 - 63

Cartridge & Insert (1,2,7)

Peripheral ①		Intermediate & Central ②⑦	
Cartridge	Insert	Cartridge	Insert
PERC 05R	NPMX 080308R-G	CENC 05R	NPMX 080308R-G
PERC 402 - 04	TPMX 140308R-G	CENC 402 - 04	TPMX 140308R-G
PERC 402 - 32	TPMX 170408R-G	CENC 402 - 32	TPMX 170408R-G
PERC 402 - 43	TPMX 240512R-G	CENC 402 - 43	TPMX 240512R-G
PERC 402 - 63	TPMX 280716R-G	CENC 402 - 63	TPMX 280716R-G

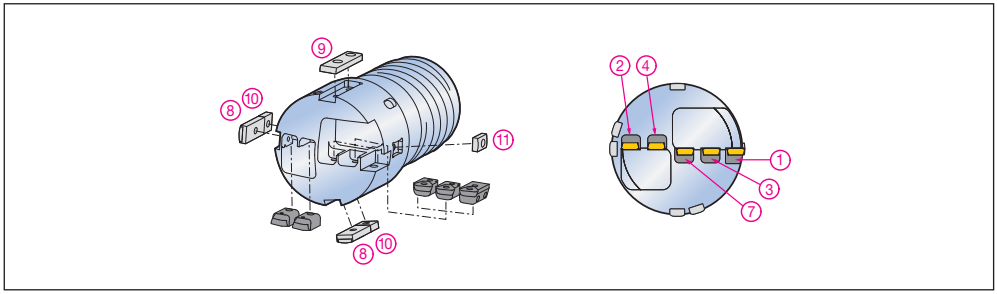
Guide Pad (8,9,10,11)

DCN - DCX	Guide Pad ⑧	QTY	Filler ⑨	QTY	Protector ⑩	QTY	Sub guide pad ⑪	QTY
38 - 44.99	PAD-GP08-25-155-DC-SB	2	FILLER08	1	PAD-P08	2	PAD-S08	1
45 - 59.99	PAD-GP10-35-200-DC-SB	2	FILLER10	1	PAD-P10	2	PAD-S08	1
60 - 63.99	PAD-GP14-40-250-DC-SB	2	FILLER14	1	PAD-P14	2	PAD-S08	1
64 - 98.99	PAD-GP14-40-250-DC-SB	2	FILLER14	1	PAD-P14	2	PAD-S10	1
99 - 106.99	PAD-GP18-40-300-DC-SB	2	FILLER18	1	PAD-P18	2	PAD-S14	1

D230 | Guide Pad D234 | Cartridge D239

▸ Insert and guide pad are sold separately from drill body.

Assembly of TBTA5 series



Cartridge (1,2,3, 4,7)

DCN - DCX	Peripheral ①	Intermediate ②	Intermediate ③	Intermediate ④	Central ⑦
107 - 117.99	PERC 402 - 43	CENC 402 - 32	CENC 402 - 32	CENC 402 - 32	CENC 402 - 43
118 - 135.99	PERC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43
136 - 144.99	PERC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 63
145 - 150.99	PERC 402 - 43	CENC 402 - 43	CENC 402 - 63	CENC 402 - 43	CENC 402 - 63
151 - 156.99	PERC 402 - 63	CENC 402 - 43	CENC 402 - 63	CENC 402 - 43	CENC 402 - 63
157 - 162.99	PERC 402 - 63	CENC 402 - 43	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63
163 - 168.99	PERC 402 - 63	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63

Cartridge & Insert (1,2,3, 4,7)

Peripheral ①		Intermediate & Central ②③④⑦	
Cartridge	Insert	Cartridge	Insert
-	-	CENC 402 - 32	TPMX 170408R-G
PERC 402 - 43	TPMX 240512R-G	CENC 402 - 43	TPMX 240512R-G
PERC 402 - 63	TPMX 280716R-G	CENC 402 - 63	TPMX 280716R-G

Guide Pad (8,9,10,11)

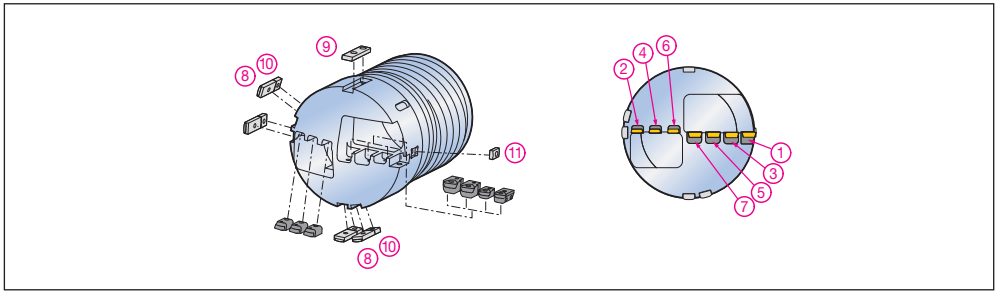
DCN - DCX	Guide Pad ⑧	QTY	Filler ⑨	QTY	Protector ⑩	QTY	Sub guide pad ⑪	QTY
107 - 135.99	PAD-GP18-40-300-DC-SB	2	FILLER18	1	PAD-P18	2	PAD-S14	1
136 - 168.99	PAD-GP18-40-300-DC-SB	4	FILLER18	1	PAD-P18	4	PAD-S14	1

D230 Guide Pad D234 Cartridge D239

▸ Insert and guide pad are sold separately from drill body.

TBTA7 Series

Assembly of TBTA7 series



Cartridge (1,2,3,4,5,6,7)

DCN - DCX	Peripheral	Intermediate					Central
	①	②	③	④	⑤	⑥	⑦
169 - 188.99	PERC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43
189 - 196.99	PERC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 63
197 - 202.99	PERC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 43	CENC 402 - 63	CENC 402 - 43	CENC 402 - 63
203 - 208.99	PERC 402 - 43	CENC 402 - 43	CENC 402 - 63	CENC 402 - 43	CENC 402 - 63	CENC 402 - 43	CENC 402 - 63
209 - 214.99	PERC 402 - 63	CENC 402 - 43	CENC 402 - 63	CENC 402 - 43	CENC 402 - 63	CENC 402 - 43	CENC 402 - 63
215 - 220.99	PERC 402 - 63	CENC 402 - 43	CENC 402 - 63	CENC 402 - 43	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63
221 - 226.99	PERC 402 - 63	CENC 402 - 43	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63
227 - 232.99	PERC 402 - 63	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63	CENC 402 - 63

Cartridge & Insert (1,2,3,4,5,6,7)

Peripheral ①		Intermediate & Central ②③④⑤⑥⑦	
Cartridge	Insert	Cartridge	Insert
PERC 402 - 43	TPMX 240512R-G	CENC 402 - 43	TPMX 240512R-G
PERC 402 - 63	TPMX 280716R-G	CENC 402 - 63	TPMX 280716R-G

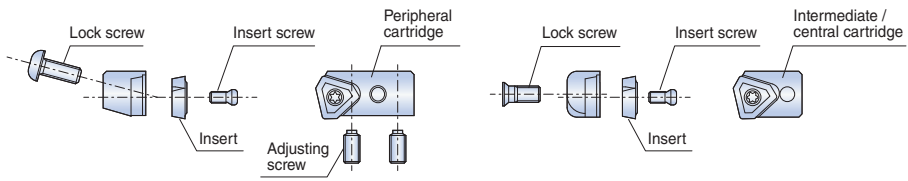
Guide Pad (8,9,10,11)

DCN - DCX	Guide Pad ⑧		Filler ⑨		Protector ⑩		Sub guide pad ⑪	
		QTY		QTY		QTY		QTY
165 - 232.99	PAD-GP18-40-300-DC-SB	4	FILLER18	1	PAD-P18	4	PAD-S14	1

D230 | Guide Pad D234 | Cartridge D239

▸ Insert and guide pad are sold separately from drill body.

Accessories of TBTA series



Peripheral inserts and accessories

Cartridge	Insert	Adjusting screw	Wrench	Lock screw	Wrench
PERC 05R	NPMX 080308R-G	AS0003-5	H1.5	LS1803RH	H2
PERC 402-04	TPMX 140308R-G	AS0004-8	H2	LS1803.5RH	H2.5
PERC 402-32	TPMX 170408R-G	AS0005-10	H2.5	LS1805RH	H3
PERC 402-43	TPMX 240512R-G	AS0005-15	H2.5	LS1806RH	H4
PERC 402-63	TPMX 280716R-G	AS0006-15	H3	LS1806RH	H4

Central and intermediate inserts and accessories

Cartridge	Insert	Lock screw		Wrench	
		Inter. Cart.	Cen. Cart.	< ø151.00	ø151.00 =<
CENC 05R	NPMX 080308R-G	CSTB-3		T-9D	
CENC 402-04	TPMX 140308R-G	CSTB-3.5		T-15D	
CENC 402-32	TPMX 170408R-G	CSTA-5		T-15D	
CENC 402-43	TPMX 240512R-G	LS1206		H3	H3L
CENC 402-63	TPMX 280716R-G	LS1206	LS1206S (CICT3) LS1206 (CICT5, 7)	H3	H3L

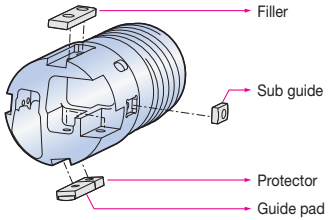
Spare part for Inserts

Insert	Insert screw	Wrench
NPMX 080308R-G	CSTB-2.2	T-7LB-L
TPMX 140308R-G	CSTB-2.5	T-8LB-L
TPMX 170408R-G	CSTB-3.5D	T-9LB-L
TPMX 240512R-G	CSTB-4M	T-15LB-L
TPMX 280716R-G	CSTB-5	T-20LB-L

- Peripheral cartridges are supplied with the adjusting screws and insert screw (inserts, lock screw and wrenches are not included)
- Central and intermediate cartridges are supplied with insert screw (inserts, lock screw and wrenches are not included)

Cartridge
D230
D239

Assembly of TBTA series



Guide pads, protectors, fillers and accessories

Guide pad	Protector	Filler	Lock screw	Wrench
PAD-GP08-25-155-DC-SB	PAD-P08	FILLER08	CSTB-3S	T-9D
PAD-GP10-35-200-DC-SB	PAD-P10	FILLER10	CSTB-4S	T-15D
PAD-GP14-40-250-DC-SB	PAD-P14	FILLER14	CSTA-5S	T-15D
PAD-GP18-40-300-DC-SB	PAD-P18	FILLER18	LS1206S / LS1206SS	H3

Sub guide pad and accessories

Guide pad	Lock screw	Wrench
PAD-GP08-25-155-DC-SB	PAD-P08	T-9D
PAD-GP10-35-200-DC-SB	PAD-P10	T-15D
PAD-GP14-40-250-DC-SB	PAD-P14	T-15D
PAD-GP18-40-300-DC-SB	PAD-P18	H3

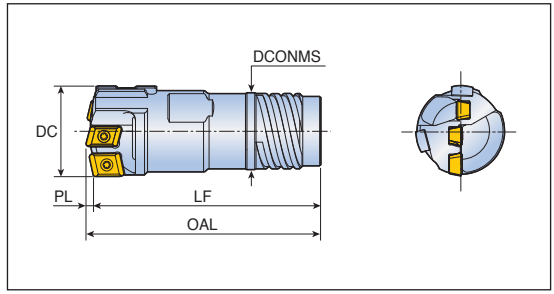
Guide Pad

D234

▸ Insert and guide pad are sold separately from drill body.

TBTA-FB...SE4

Single tube system



• Outer four start thread

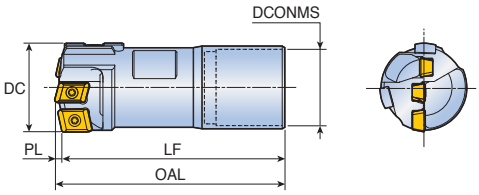
Designation	DC	Dimension (mm)				Tube	
		LF	OAL	DCONMS	PL	Part	Diameter (mm)
TBTA-FB xx.xxSE4-22	25.00-26.40	70	73	19.5	3	BTSI 022	22
xx.xxSE4-24	26.41-28.70	70	73	21.0	3	BTSI 024	24
xx.xxSE4-26	28.71-31.00	75	78	23.5	3	BTSI 026	26
xx.xxSE4-28	31.01-33.30	75	78	25.5	3	BTSI 028	28
xx.xxSE4-30	33.31-36.20	80	83	28.0	3	BTSI 030	30
xx.xxSE4-33	36.21-39.60	90	93	30.0	3	BTSI 033	33
xx.xxSE4-36	39.61-43.00	95	99	33.0	4	BTSI 036	36
xx.xxSE4-39	43.01-47.00	100	104	36.0	4	BTSI 039	39
xx.xxSE4-43	47.01-51.70	100	104	39.0	4	BTSI 043	43
xx.xxSE4-47	51.71-56.20	110	114	43.0	4	BTSI 047	47
xx.xxSE4-51	56.21-60.60	115	120	47.0	5	BTSI 051	51
xx.xxSE4-51	60.61-65.00	115	120	47.0	5	BTSI 051	51
xx.xxSE4-56A	60.61-65.00	115	120	51.0	5	BTSI 056A	56
xx.xxSE4-56B	65.01-66.99	141	149	52.0	8	BTSI 056B	56
xx.xxSE4-62	67.00-72.99	141	149	58.0	8	BTSI 062	62
xx.xxSE4-68	73.00-79.99	141	150	63.0	9	BTSI 068	68
xx.xxSE4-75	80.00-86.99	164	173	70.0	9	BTSI 075	75
xx.xxSE4-82	87.00-89.00	164	173	77.0	9	BTSI 082	82

Assembly D167-D169
Tube D185-D186
Cutting Condition D270

▸ Insert and guide pad are sold separately from drill body

TBTA-FB...SI1

Single tube system



• Inner single start thread

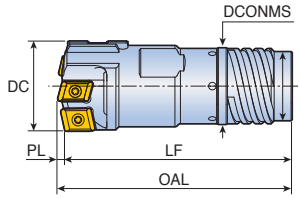
Designation	DC	Dimension (mm)				Tube	
		LF	OAL	DCONMS	PL	Part	Diameter (mm)
TBTA-FB xx.xxSI1-22	25.00-26.99	70	73	20	3	BTSE 022	22
xx.xxSI1-24	27.00-29.00	70	73	22	3	BTSE 024	24
xx.xxSI1-24	29.01-29.99	70	73	22	3	BTSE 024	24
xx.xxSI1-26	30.00-31.99	75	78	24	3	BTSE 026	26
xx.xxSI1-28	32.00-33.99	75	78	26	3	BTSE 028	28
xx.xxSI1-30	34.00-36.99	90	93	27	3	BTSE 030	30
xx.xxSI1-33	37.00-39.99	95	98	30	3	BTSE 033	33
xx.xxSI1-36	40.00-43.99	100	104	33	4	BTSE 036	36
xx.xxSI1-39	44.00-46.99	105	109	37	4	BTSE 039	39
xx.xxSI1-43	47.00-51.99	105	109	41	4	BTSE 043	43
xx.xxSI1-47	52.00-56.99	110	114	44	4	BTSE 047	47
xx.xxSI1-51	57.00-60.99	115	120	49	5	BTSE 051	51
xx.xxSI1-56	61.00-65.00	115	120	53	5	BTSE 056	56
xx.xxSI1-56	65.01-67.99	104	112	53	8	BTSE 056	56
xx.xxSI1-62	68.00-74.99	104	113	59	9	BTSE 062	62
xx.xxSI1-68	75.00-80.99	134	143	65	9	BTSE 068	68
xx.xxSI1-75	81.00-89.00	134	143	71	9	BTSE 075	75

Assembly D167-D169
Tube D187-D188
Cutting Condition D270

▸ Insert and guide pad are sold separately from drill body

TBTA-FB...DE4

Double tube system



• Outer four start thread

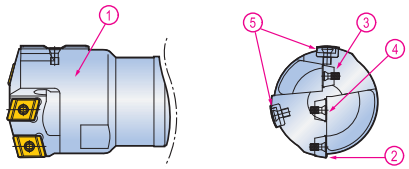
Designation		DC	Dimension (mm)				Tube		
			LF	OAL	DCONMS	PL	Outer tube	Inner tube	Diameter (mm)
TBTA-FB	**xx.xxDE4-23.5**	25.00-26.40	70	73	21.0	3	BTDO 023.5	BTDI 016	23.5
	xx.xxDE4-26	26.41-28.70	75	78	23.5	3	BTDO 026	BTDI 018	26.0
	xx.xxDE4-28	28.71-31.00	75	78	25.5	3	BTDO 028	BTDI 020	28.0
	xx.xxDE4-30.5	31.01-33.30	80	83	28.0	3	BTDO 030.5	BTDI 022	30.5
	xx.xxDE4-33	33.31-36.20	90	93	30.0	3	BTDO 033	BTDI 024	33.0
	xx.xxDE4-35.5	36.21-39.60	95	99	33.0	4	BTDO 035.5	BTDI 026	35.5
	xx.xxDE4-39	39.61-43.00	100	104	36.0	4	BTDO 039	BTDI 029	39.0
	xx.xxDE4-42.5	43.01-47.00	100	104	39.0	4	BTDO 042.5	BTDI 032	42.5
	xx.xxDE4-46.5	47.01-51.70	110	114	43.0	4	BTDO 046.5	BTDI 035	46.5
	xx.xxDE4-51	51.71-56.20	115	120	47.5	5	BTDO 051	BTDI 039	51.0
	xx.xxDE4-55.5	56.21-65.00	115	120	51.0	5	BTDO 055.5	BTDI 043A	55.5

▸ Insert and guide pad are sold separately from drill body

Assembly D167-D169 | Tube D189 | Cutting Condition D270

TBTA-FB Series

Assembly of TBTA-FB series



1. Head shank
2. Peripheral insert
3. Intermediate insert
4. Central insert
5. Guide pad

	Parts	Diameter (mm)			
		25.00-28.00	28.01-29.99	30.00-35.00	35.01-38.00
Insert	Peripheral	NPHT 060304R-G-P	NPHT 060304R-G-P	NPHT 080404R-G-P	NPHT 080404R-G-P
	Screw	CSTB-2.2	CSTB-2.2	SR14-560-HG	SR14-560-HG
	Wrench	T-7F	T-7F	T-8F	T-8F
	Intermediate	NPMT 060304R-G-I	NPMT 060304R-G-I	NPMT 070404R-G-I	NPMT 070404R-G-I
	Screw	CSTB-2.2	CSTB-2.2	SR14-560-HG	SR14-560-HG
	Wrench	T-7F	T-7F	T-8F	T-8F
	Central	NPMT 060308L-G-C	NPMT 070408L-G-C	NPMT 070408L-G-C	NPMT 080480L-G-C
	Screw	CSTB-2.2	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-7F	T-8F	T-8F	T-8F
Pad	PAD	PAD-GP06-20-120-DC-SB	PAD-GP06-20-120-DC-SB	PAD-GP07-20-120-DC-SB	PAD-GP07-20-120-DC-SB
		PAD-GP06-20-120-DC-SC	PAD-GP06-20-120-DC-SC	PAD-GP07-20-120-DC-SC	PAD-GP07-20-120-DC-SC
	Screw	CSTB-2.2S	CSTB-2.2S	CSTB-3S	CSTB-3S
	Wrench	T-7F	T-7F	T-9F	T-9F

	Parts	Diameter (mm)			
		38.01-39.00	39.01-41.00	41.01-44.00	44.01-45.00
Insert	Peripheral	NPHT 090404R-G-P	NPHT 090404R-G-P	NPHT 090404R-G-P	NPHT 090404R-G-P
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F	T-8F
	Intermediate	NPMT 070404R-G-I	NPMT 070404R-G-I	NPMT 080404R-G-I	NPMT 080404R-G-I
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F	T-8F
	Central	NPMT 080408L-G-C	NPMT 080408L-G-C	NPMT 080408L-G-C	NPMT 100408L-G-C
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F	T-8F
Pad	PAD	PAD-GP07-20-120-DC-SB	PAD-GP08-25-155-DC-SB	PAD-GP08-25-155-DC-SB	PAD-GP08-25-155-DC-SB
		PAD-GP07-20-120-DC-SC	PAD-GP08-25-155-DC-SC	PAD-GP08-25-155-DC-SC	PAD-GP08-25-155-DC-SC
	Screw	CSTB-3S	CSTB-3S	CSTB-3S	CSTB-3S
	Wrench	T-9F	T-9F	T-9F	T-9F

D227-D229

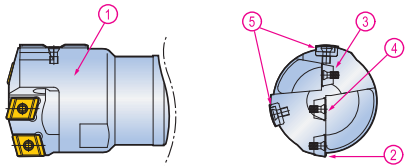
Guide Pad

D235

▸ Insert and guide pad are sold separately from drill body

TBTA-FB Series

Assembly of TBTA-FB series



1. Head shank
2. Peripheral insert
3. Intermediate insert
4. Central insert
5. Guide pad

	Parts	Diameter (mm)			
		45.01-47.00	47.01-51.00	51.01-54.00	54.01-57.00
Insert	Peripheral	NPHT 090404R-G-P	NPHT 110404R-G-P	NPHT 110404R-G-P	NPHT 110404R-G-P
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F	T-8F
	Intermediate	NPMT 080404R-G-I	NPMT 080404R-G-I	NPMT 100404R-G-I	NPMT 100404R-G-I
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F	T-8F
	Central	NPMT 100408L-G-C	NPMT 100408L-G-C	NPMT 100408L-G-C	NPMT 130408L-G-C
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F	T-8F
Pad	PAD	PAD-GP10-30-200-DC-SB	PAD-GP10-30-200-DC-SB	PAD-GP10-30-200-DC-SB	PAD-GP10-30-200-DC-SB
		PAD-GP10-30-200-DC-SC	PAD-GP10-30-200-DC-SC	PAD-GP10-30-200-DC-SC	PAD-GP10-30-200-DC-SC
	Screw	CSTB-3.5	CSTB-3.5	CSTB-3.5	CSTB-3.5
	Wrench	T-15F	T-15F	T-15F	T-15F

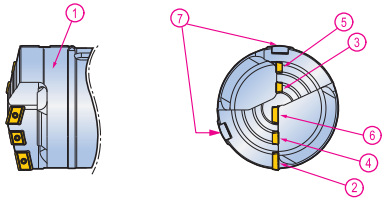
	Parts	Diameter (mm)		
		57.01-60.00	60.01-64.00	64.01-65.00
Insert	Peripheral	NPHT 110404R-G-P	NPHT 130404R-G-P	NPHT 130404R-G-P
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F
	Intermediate	NPMT 100404R-G-I	NPMT 100404R-G-I	NPMT 130404R-G-I
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F
	Central	NPMT 130408L-G-C	NPMT 130408L-G-C	NPMT 130408L-G-C
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F
Pad	PAD	PAD-GP12-35-250-DC-SB	PAD-GP12-35-250-DC-SB	PAD-GP12-35-250-DC-SB
		PAD-GP12-35-250-DC-SC	PAD-GP12-35-250-DC-SC	PAD-GP12-35-250-DC-SC
	Screw	CSTB-3.5	CSTB-3.5	CSTB-3.5
	Wrench	T-15F	T-15F	T-15F

D227-D229 Guide Pad D235

▸ Insert and guide pad are sold separately from drill body

TBTA-FB Series

Assembly of TBTA-FB series



1. Head shank
2. Peripheral insert
3. Intermediate insert1
4. Intermediate insert2
5. Intermediate insert3
6. Central insert
7. Guide pad

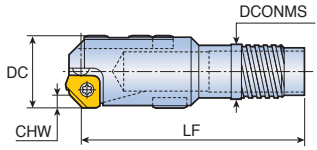
	Parts	Diameter (mm)		
		65.01-71.00	71.01-83.00	83.01-89.00
Insert	Peripheral	NPHT 110404R-G-P	NPHT 130404R-G-P	NPHT 130404R-G-P
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F
	Intermediate1	NPMT 080404R-G-I	NPMT 080404R-G-I	NPMT 080404R-G-I
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F
	Intermediate2	NPMT 080404R-G-I	NPMT 080404R-G-I	NPMT 100404R-G-I
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F
	Intermediate3	NPMT 070404R-G-I	NPMT 080404R-G-I	NPMT 080404R-G-I
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F
	Central	NPMT 100408L-G-C	NPMT 100408L-G-C	NPMT 130408L-G-C
	Screw	SR14-560-HG	SR14-560-HG	SR14-560-HG
	Wrench	T-8F	T-8F	T-8F
Pad	PAD	PAD-GP12-35-250-DC-SB	PAD-GP12-35-250-DC-SB	PAD-GP12-35-250-DC-SB
		PAD-GP12-35-250-DC-SC	PAD-GP12-35-250-DC-SC	PAD-GP12-35-250-DC-SC
	Screw	CSTB-3.5	CSTB-3.5	CSTB-3.5
	Wrench	T-15F	T-15F	T-15F

D227-D229 Guide Pad D235

▸ Insert and guide pad are sold separately from drill body

TBTA-R...SE4

Single tube system



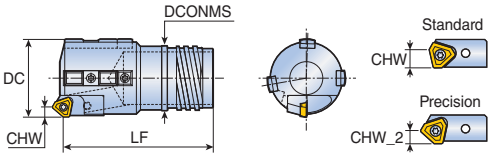
• Outer four start thread

Designation	DC	CHW	Dimension (mm)		Tube	
			LF	DCONMS	Part	Diameter (mm)
TBTA-R xxx.xxSE4-22	25.00-26.40	2.8	72.5	19.5	BTSI 022	22
xxx.xxSE4-24	26.41-28.70	2.8	72.5	21.0	BTSI 024	24
xxx.xxSE4-26	28.71-31.00	2.8	72.5	23.5	BTSI 026	26
xxx.xxSE4-28	31.01-33.30	2.8	75.5	25.5	BTSI 028	28
xxx.xxSE4-30	33.31-36.20	2.8	75.5	28.0	BTSI 030	30
xxx.xxSE4-33	36.21-39.60	2.8	90.5	30.0	BTSI 033	33
xxx.xxSE4-36	39.61-39.99	2.8	90.5	33.0	BTSI 036	36

Assembly D173 | Tube D185 | Cutting Condition D268

TBTA-R...SE4

Single tube system



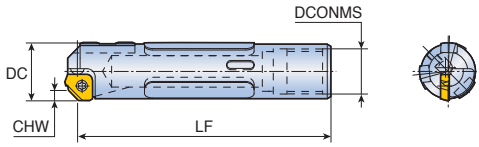
- Outer four start thread

Designation	DC	CHW (mm)		Dimension (mm)		Tube	
		Standard	Precision	LF	DCONMS	Part	Diameter (mm)
TBTA-R xxx.xxSE4-36	40.00-43.00	6.4	4	90	33.0	BTSI 036	36
xxx.xxSE4-39	43.01-47.00	6.4	4	95	36.0	BTSI 039	39
xxx.xxSE4-43	47.01-51.70	6.4	4	95	39.0	BTSI 043	43
xxx.xxSE4-47	51.71-56.20	6.4/7.2	4/4.8	100	43.0	BTSI 047	47
xxx.xxSE4-51	56.21-60.60	7.2	4.8	110	47.0	BTSI 051	51
xxx.xxSE4-56A	60.61-65.00	7.2	4.8	110	51.0	BTSI 056A	56
xxx.xxSE4-56B	65.00-66.99	7.2	4.8	150	52.0	BTSI 056B	56
xxx.xxSE4-62	67.00-72.99	10.4	6.4	150	58.0	BTSI 062	62
xxx.xxSE4-68	73.00-79.99	10.4	6.4	150	63.0	BTSI 068	68
xxx.xxSE4-75	80.00-86.99	10.4	6.4	180	70.0	BTSI 075	75
xxx.xxSE4-82	87.00-99.99	10.4	6.4	180	77.0	BTSI 082	82

Assembly D174-D175
Tube D185-D186
Cutting Condition D268

TBTA-R...SI1

Single tube system

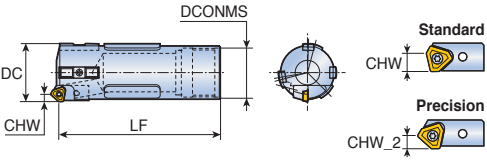


• Inner single start thread

Designation		DC	CHW (mm)	Dimension (mm)		Tube	
				LF	DCONMS	Part	Diameter (mm)
TBTA-R-	**xxx.xxSI1-22**	25.00-26.99	2.8	110.5	20	BTSE 022	22
	xxx.xxSI1-24	27.00-29.99	2.8	110.5	22	BTSE 024	24
	xxx.xxSI1-26	30.00-31.99	2.8	110.5	24	BTSE 026	26
	xxx.xxSI1-28	32.00-33.99	2.8	110.5	26	BTSE 028	28
	xxx.xxSI1-30	34.00-36.99	2.8	135.5	27	BTSE 030	30
	xxx.xxSI1-33	37.00-39.99	2.8	135.5	30	BTSE 033	33

TBTA-R...SI1

Single tube system



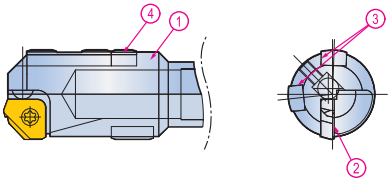
• Inner single start thread

Designation		DC	CHW (mm)		Dimension (mm)		Tube	
			Standard	Precision	LF	DCONMS	Part	Diameter (mm)
TBTA-R-	**xxx.xxSI1-36**	40.00-43.99	6.4	4	135	33	BTSE 036	36
	xxx.xxSI1-39	44.00-46.99	6.4	4	135	37	BTSE 039	39
	xxx.xxSI1-43	47.00-51.99	6.4	4	145	41	BTSE 043	43
	xxx.xxSI1-47	52.00-56.99	7.2	4.8	145	44	BTSE 047	47
	xxx.xxSI1-51	57.00-60.99	7.2	4.8	170	49	BTSE 051	51
	xxx.xxSI1-56	61.00-67.99	7.2/10.4	4.8/6.4	170	53	BTSE 056	56
	xxx.xxSI1-62	68.00-74.99	10.4	6.4	170	59	BTSE 062	62
	xxx.xxSI1-68	75.00-80.99	10.4	6.4	205	65	BTSE 068	68
	xxx.xxSI1-75	81.00-90.99	10.4	6.4	215	71	BTSE 075	75
	xxx.xxSI1-82	91.00-98.99	10.4	6.4	225	79	BTSE 082	82
	xxx.xxSI1-94	99.00-110.99	10.4	6.4	235	90	BTSE 094	94

Assembly D173-D175 | Tube D187-D188 | Cutting Condition D268

TBTA-R Series

Assembly of TBTA-R series



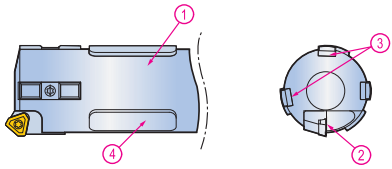
1. Head shank
2. Insert
3. Guide pad
4. Guide pad protector

Parts			Diameter (mm)			
			25.00-27.99	28.00-29.99	30.00-37.99	38.00-39.99
Close tolerance	Cartridge	Adjust ball	BALL5	BALL5	BALL5	BALL5
		Adjust screw	AS0005-5	AS0005-5	AS0005-5	AS0005-5
		Wrench	H2.5	H2.5	H2.5	H2.5
		Screw	-	-	-	-
		Wrench	-	-	-	-
	Insert	Insert	XPMT 16002-45	XPMT 16002-45	XPMT 16002-45	XPMT 16002-45
		Screw	CSTA-NO3	CSTA-NO3	CSTA-NO3	CSTA-NO3
		Wrench	T-9D	T-9D	T-9D	T-9D
Normal tolerance	Cartridge	Peripheral	-	-	-	-
		Adjust screw	-	-	-	-
		Wrench	-	-	-	-
		Screw	-	-	-	-
		Wrench	-	-	-	-
	Insert	Insert	XPMT 16002-45	XPMT 16002-45	XPMT 16002-45	XPMT 16002-45
		Screw	CSTA-NO3	CSTA-NO3	CSTA-NO3	CSTA-NO3
		Wrench	T-9D	T-9D	T-9D	T-9D
Pad		Guide pad (A)	PAD-GP06-20-120-DC-SB	PAD-GP06-20-120-DC-SB	PAD-GP07-20-120-DC-SB	PAD-GP08-25-155-DC-SB
			PAD-GP06-20-120-DC-SC	PAD-GP06-20-120-DC-SC	PAD-GP07-20-120-DC-SC	PAD-GP08-25-155-DC-SC
		Screw	CSTB-2.2S	CSTB-2.2S	CSTB-3S	CSTB-3S
		Wrench	T-9D	T-9D	T-9D	T-9D
		Guide pad protector (B)	-	-	-	PAD-P08
		Screw	-	-	-	CSTB-3S
		Wrench	-	-	-	T-9D
		Resin guide pad (C)	PAD-R10	PAD-R10	PAD-R12	PAD-R15
		Screw	LS0902, 5-6	LS0902, 5-6	LS0903-8	LS0904-10
		Wrench	-	-	H2	H2.5

D233 Guide Pad D238 Cartridge D240

- A+B is for outer four start thread connection type
- A+C is for inner single start thread connection type

Assembly of TBTA-R series



1. Head shank
2. Cartridge & lock screw
3. Guide pad
4. Resin guide pad & lock screw

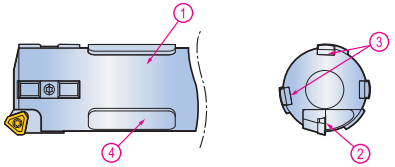
Parts			Diameter (mm)			
			40.00-45.99	46.00-51.99	52.00-56.99	57.00-59.99
Close tolerance	Cartridge	Peripheral	PERC P04R	PERC P04R	PERC P32R	PERC P32R
		Adjust screw	AS0004-8	AS0004-8	AS0005-10	AS0005-10
		Wrench	H2	H2	H2.5	H2.5
		Screw	LS1803.5RH	LS1803.5RH	LS1805RH	LS1805RH
		Wrench	H2.5	H2.5	H3	H3
	Insert	Insert	TPMX 1403LG	TPMX 1403LG	TPMX 1704LG	TPMX 1704LG
		Screw	CSTB-2.5	CSTB-2.5	CSTB-3.5D	CSTB-3.5D
		Wrench	T-8D	T-8D	T-8D	T-8D
Normal tolerance	Cartridge	Peripheral	PERC 402-04	PERC 402-04	PERC 402-32	PERC 402-32
		Adjust screw	AS0004-8	AS0004-8	AS0005-10	AS0005-10
		Wrench	H2	H2	H2.5	H2.5
		Screw	LS1803.5RH	LS1803.5RH	LS1805RH	LS1805RH
		Wrench	H2.5	H2.5	H3	H3
	Insert	Insert	TPMX 140308R-G	TPMX 140308R-G	TPMX 170408R-G	TPMX 170408R-G
		Screw	CSTB-2.5	CSTB-2.5	CSTB-3.5D	CSTB-3.5D
		Wrench	T-8D	T-8D	T-8D	T-8D
Pad		Guide pad (A)	PAD-GP08-25-155-DC-SB	PAD-GP10-35-200-DC-SB	PAD-GP10-35-200-DC-SB	PAD-GP10-35-200-DC-SB
			PAD-GP08-25-155-DC-SC	PAD-GP10-35-200-DC-SC	PAD-GP10-35-200-DC-SC	PAD-GP10-35-200-DC-SC
		Screw	CSTB-3S	CSTB-4S	CSTB-4S	CSTB-4S
		Wrench	T-9D	T-15D	T-15D	T-15D
		Guide pad protector (B)	PAD-P08	PAD-P10	PAD-P10	PAD-P14
		Screw	CSTB-3S	CSTB-4S	CSTB-4S	CSTB-4S
		Wrench	T-9D	T-15D	T-15D	T-15D
		Resin guide pad (C)	PAD-R15	PAD-R15	PAD-R15	PAD-R20
		Screw	LS0904-10	LS0904-10	LS0904-10	LS0905-12
		Wrench	H2.5	H2.5	H2.5	H3

D230,D233 | Guide Pad D238 | Cartridge D240

- A+B is for outer four start thread connection type
- A+C is for inner single start thread connection type

TBTA-R Series

Assembly of TBTA-R series



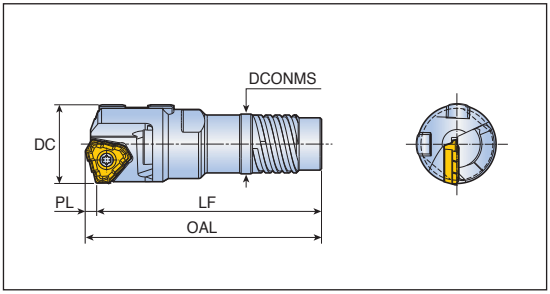
1. Head shank
2. Cartridge & lock screw
3. Guide pad
4. Resin guide pad & lock screw

Parts			Diameter (mm)		
			60.00-66.99	67.00-99.99	100.00-122.99
Close tolerance	Cartridge	Peripheral	PERC P32R	PERC P43R	PERC P43R
		Adjust screw	AS0005-10	AS0005-15	AS0005-15
		Wrench	H2.5	H2.5	H2.5
		Screw	LS1805RH	LS1806RH	LS1806RH
		Wrench	H3	H4	H4
	Insert	Insert	TPMX 1704LG	TPMX 2405LG	TPMX 2405LG
		Screw	CSTB-3.5D	CSTB-4M	CSTB-4M
		Wrench	T-8D	T-15D	T-15D
Normal tolerance	Cartridge	Peripheral	PERC 402-32	PERC 402-43	PERC 402-43
		Adjust screw	AS0005-10	AS0005-15	AS0005-15
		Wrench	H2.5	H2.5	H2.5
		Screw	LS1805RH	LS1806RH	LS1806RH
		Wrench	H3	H4	H4
	Insert	Insert	TPMX 170408R-G	TPMX 240512R-G	TPMX 240512R-G
		Screw	CSTB-3.5D	CSTB-4M	CSTB-4M
		Wrench	T-8D	T-15D	T-15D
Pad		Guide pad (A)	PAD-GP14-40-250-DC-SB	PAD-GP14-40-250-DC-SB	PAD-GP18-40-300-DC-SB
			PAD-GP14-40-250-DC-SC	PAD-GP14-40-250-DC-SC	PAD-GP18-40-300-DC-SC
		Screw	CSTA-5S	CSTA-5S	LS1206S
		Wrench	T-15D	T-15D	H3
		Guide pad protector (B)	PAD-P14	PAD-P14	PAD-P18
		Screw	CSTA-5S	CSTA-5S	LS1206S
		Wrench	T-15D	T-15D	H3
		Resin guide pad (C)	PAD-R20	PAD-R35	PAD-R35
		Screw	LS0905-12	LS0906-15	LS0906-15
		Wrench	H3	H4	H4

- A+B is for outer four start thread connection type
- A+C is for inner single start thread connection type

TBTA-TR…SE4

Single tube system



• Outer four start thread

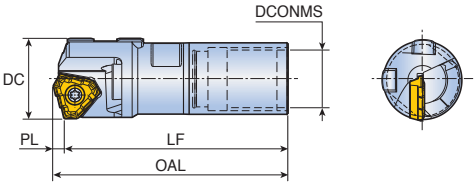
Designation		DC	Dimension (mm)				Tube	
			LF	OAL	DCONMS	PL	Part	Diameter (mm)
TBTA-	**TRxx.xxSE4-12**	14.00-14.60	57.0	59.0	10.6	2.0	BTSI 012	12
	TRxx.xxSE4-13	14.61-15.59	57.0	59.0	11.6	2.0	BTSI 013	13
	TRxx.xxSE4-14	15.60-15.99	57.0	59.0	12.6	2.0	BTSI 014	14
	TRxx.xxSE4-14A	16.00-16.70	55.0	57.2	12.6	2.2	BTSI 014	14
	TRxx.xxSE4-15A	16.71-17.70	55.0	57.2	13.6	2.2	BTSI 015	15
	TRxx.xxSE4-16A	17.71-18.00	56.0	59.0	14.5	3.0	BTSI 016	16
	TRxx.xxSE4-16	18.01-18.90	56.0	59.0	14.5	3.0	BTSI 016	16
	TRxx.xxSE4-17	18.91-20.00	56.0	59.0	15.5	3.0	BTSI 017	17
	TRxx.xxSE4-18	20.01-21.80	60.0	63.2	16.0	3.2	BTSI 018	18
	TRxx.xxSE4-20	21.81-21.99	63.5	66.7	18.0	3.2	BTSI 020	20
	TRxx.xxSE4-20	22.00-24.10	65.5	68.9	18.0	3.4	BTSI 020	20
	TRxx.xxSE4-22	24.11-26.40	65.5	69.1	19.5	3.6	BTSI 022	22
	TRxx.xxSE4-24	26.41-28.00	65.6	69.1	21.0	3.6	BTSI 024	24
	TRxx.xxSE4-24	28.01-28.70	70.0	74.6	21.0	4.6	BTSI 024	24
	TRxx.xxSE4-26	28.71-29.99	75.0	79.6	23.5	4.6	BTSI 026	26
	TRxx.xxSE4-26	30.00-31.00	75.0	79.6	23.5	4.6	BTSI 026	26
	TRxx.xxSE4-28	31.01-32.00	75.0	79.6	25.5	4.6	BTSI 028	28
	TRxx.xxSE4-28	32.01-33.30	74.5	79.9	25.5	5.4	BTSI 028	28
	TRxx.xxSE4-30	33.31-36.20	79.5	84.9	28.0	5.4	BTSI 030	30
	TRxx.xxSE4-33	36.21-39.00	89.5	94.9	30.0	5.4	BTSI 033	33
	TRxx.xxSE4-33	39.01-39.60	89.5	94.9	30.0	5.4	BTSI 033	33
	TRxx.xxSE4-36	39.61-40.00	94.5	99.9	33.0	5.4	BTSI 036	36

Assembly D179 | Tube D185 | Cutting Condition D276

▸ Insert and guide pad are sold separately from drill body

TBTA-TR…SI

Single tube system



• Inner single start thread

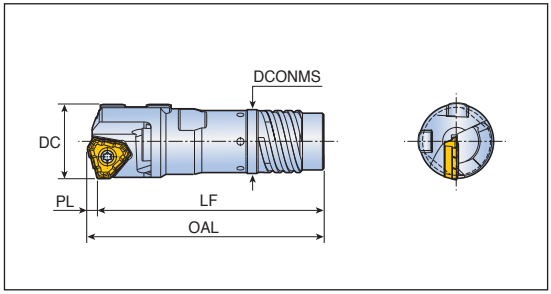
Designation		DC	Dimension (mm)				Tube	
			LF	OAL	DCONMS	PL	Part	Diameter (mm)
TBTA-	**TRxx.xxSI-12A**	14.50-15.00	54.5	56.4	11.5	1.9	BTSE 012A	12
	TRxx.xxSI-12B	15.01-15.50	54.5	56.4	11.8	1.9	BTSE 012B	12
	TRxx.xxSI-13A	15.51-15.99	54.5	56.4	12.4	1.9	BTSE 013A	13
	TR16.00SI-13AA	16.00	53.5	55.7	10.8	2.2	BTSE 013A	13
	TRxx.xxSI-13BA	16.01-16.50	53.5	55.7	11.1	2.2	BTSE 013B	13
	TRxx.xxSI-14AA	16.51-17.25	53.5	55.7	11.8	2.2	BTSE 014A	14
	TRxx.xxSI-14BA	17.26-18.00	53.5	55.7	12.1	2.2	BTSE 014B	14
	TRxx.xxSI-15	18.01-19.00	53.5	56.5	12.8	3.0	BTSE 015	15
	TRxx.xxSI-16.5	19.01-19.99	53.5	56.7	13.8	3.2	BTSE 016.5	16.5
	TRxx.xxSI-18	20.00-21.99	58.0	61.2	14.5	3.2	BTSE 018	18
	TRxx.xxSI-20	22.00-24.99	60.0	63.4	16.0	3.4	BTSE 020	20
	TRxx.xxSI-22	25.00	60.0	63.5	17.0	3.5	BTSE 022	22
	TRxx.xxSI-22	25.01-26.99	65.0	68.5	17.0	3.5	BTSE 022	22
	TRxx.xxSI-24	27.00-28.00	65.0	68.5	19.0	3.5	BTSE 024	24
	TRxx.xxSI-24	28.01-29.99	70.0	74.6	22.0	4.6	BTSE 024	24
	TRxx.xxSI-26	30.00-31.99	75.0	79.6	24.0	4.6	BTSE 026	26
	TRxx.xxSI-28	32.00	75.0	79.6	26.0	4.6	BTSE 028	28
	TRxx.xxSI-28	32.01-33.99	74.5	79.9	26.0	5.4	BTSE 028	28
	TRxx.xxSI-30	34.00-36.99	89.5	94.9	27.0	5.4	BTSE 030	30
	TRxx.xxSI-33	37.00-39.00	94.5	99.9	30.0	5.4	BTSE 033	33
	TRxx.xxSI-33	39.01-39.99	94.5	99.9	30.0	5.4	BTSE 033	33
	TRxx.xxSI-36	40.00	99.5	104.9	33.0	5.4	BTSE 036	36

Assembly D179 | Tube D186 | Cutting Condition D276

▸ Insert and guide pad are sold separately from drill body

TBTA-TR…DE4

Double tube system



• Outer four start thread

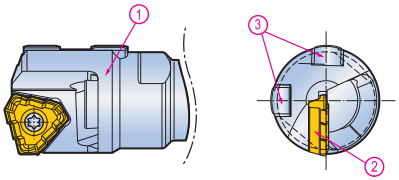
Designation		DC	Dimension (mm)				Tube	
			LF	OAL	DCONMS	PL	Part	Diameter (mm)
TBTA-	**TRxx.xxDE4-18**	18.40-20.00	59.0	62.0	16.0	3.0	BTDO 018	18
	TRxx.xxDE4-19.5	20.01-21.80	63.5	66.7	18.0	3.2	BTDO 019.5	19.5
	TRxx.xxDE4-21.5	21.81-21.99	63.5	66.7	19.5	3.2	BTDO 021.5	21.5
	TRxx.xxDE4-21.5	22.00-24.10	65.5	68.9	19.5	3.4	BTDO 021.5	21.5
	TRxx.xxDE4-23.5	24.11-25.00	65.5	68.9	21.0	3.4	BTDO 023.5	23.5
	TRxx.xxDE4-23.5	25.01-26.40	65.5	71.1	21.0	3.6	BTDO 023.5	23.5
	TRxx.xxDE4-26	26.41-28.00	70.5	74.1	23.5	3.6	BTDO 026	26
	TRxx.xxDE4-26	28.01-28.70	75.0	79.6	23.5	4.6	BTDO 026	26
	TRxx.xxDE4-28	28.71-29.99	75.0	79.6	25.5	4.6	BTDO 026	28
	TRxx.xxDE4-28	30.00-31.00	75.0	79.6	25.5	4.6	BTDO 028	28
	TRxx.xxDE4-30.5	31.01-32.00	80.0	84.6	28.0	4.6	BTDO 030.5	30.5
	TRxx.xxDE4-30.5	32.01-33.30	79.5	84.9	28.0	5.4	BTDO 030.5	30.5
	TRxx.xxDE4-33	33.31-36.20	89.5	94.9	30.0	5.4	BTDO 033	33
	TRxx.xxDE4-35.5	36.21-39.00	94.5	99.9	33.0	5.4	BTDO 035.5	35.5
	TRxx.xxDE4-35.5	39.01-39.60	94.5	99.9	33.0	5.4	BTDO 035.5	35.5
	TRxx.xxDE4-39	39.61-40.00	99.5	104.9	36.0	5.4	BTDO 039	39

Assembly D179 | Tube D189 | Cutting Condition D276

▸ Insert and guide pad are sold separately from drill body.

TBTA-TR Series

Assembly of TBTA-TR series



1. Head shank
2. Insert
3. Guide pad

	Parts	Diameter (mm)			
		14.00-15.99	16.00-18.00	18.01-20.00	20.01-21.00
Insert	Insert	TOGT 070304 RS	TOGT 080305 RS	TOGT 090305 RS	TOGT 100305 RS
	Screw	SR14-560/S	SR14-560/S	SR14-560/S	SR34-506
	Wrench	T-8F	T-8F	T-8F	T-9F
Guide Pad	Guide Pad	PAD-GP05-18-060-DC-SB	PAD-GP05-18-075-DC-SB	PAD-GP06-20-085-DC-SB	PAD-GP06-20-085-DC-SB
		PAD-GP05-18-060-DC-SC	PAD-GP05-18-075-DC-SC	PAD-GP06-20-085-DC-SC	PAD-GP06-20-085-DC-SC
	Screw	SR34-508	SR34-508	SR34-508	SR34-508
	Wrench	T-7F	T-7F	T-7F	T-7F

	Parts	Diameter (mm)		
		21.01-21.99	22.00-25.00	25.01-28.00
Insert	Insert	TOGT 100305 RS	TOGT 110405 RS	TOGT 120405 RS
	Screw	SR34-506	SR14-571/S	SR14-506
	Wrench	T-9F	T-10/5	T-15F
Guide Pad	Guide Pad	PAD-GP06-20-100-DC-SB	PAD-GP06-20-100-DC-SB	PAD-GP06-20-120-DC-SB
		PAD-GP06-20-100-DC-SC	PAD-GP06-20-100-DC-SC	PAD-GP06-20-120-DC-SC
	Screw	SR34-508	SR34-508	SR34-508
	Wrench	T-7F	T-7F	T-7F

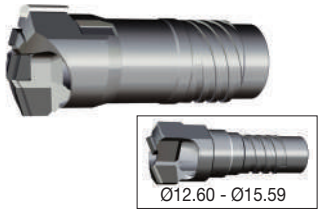
	Parts	Diameter (mm)			
		28.01-29.99	30.00-32.00	32.01-39.00	39.01-40.00
Insert	Insert	TOGT 130408 RS	TOGT 130408 RS	TOGT 140510 RS	TOGT 140510 RS
	Screw	SR16-212/L10	SR16-212/L10	SR16-212/L10	SR16-212/L10
	Wrench	T-20/5	T-20/5	T-20/5	T-20/5
Guide Pad	Guide Pad	PAD-GP06-20-120-DC-SB	PAD-GP07-20-120-DC-SB	PAD-GP07-20-120-DC-SB	PAD-GP08-25-155-DC-SB
		PAD-GP06-20-120-DC-SC	PAD-GP07-20-120-DC-SC	PAD-GP07-20-120-DC-SC	PAD-GP08-25-155-DC-SC
	Screw	CSTB-2.2	CSTB-3S	CSTB-3S	CSTB-3S
	Wrench	T-7F	T-9F	T-9F	T-9F

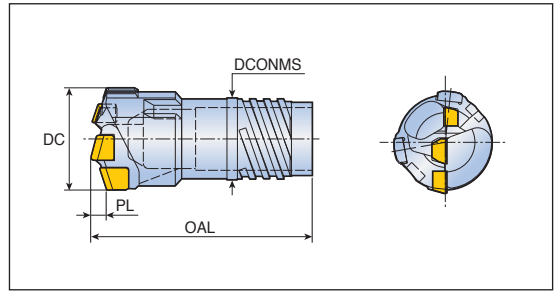
D232 Guide Pad D236

▸ Insert and guide pad are sold separately from drill body.

BTA...SE2/SE4

Single tube system





• Outer four start thread

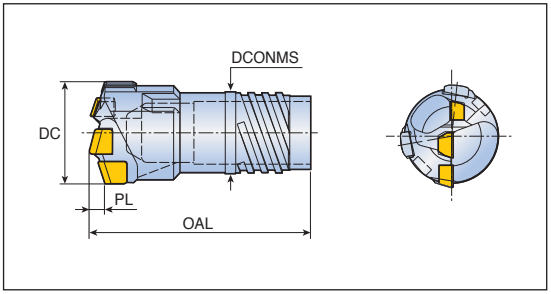
Designation	DC	Dimension (mm)			Tube	
		OAL	PL	DCONMS	Part	Diameter (mm)
BTA xxx.xx SE2-11*	12.60-13.10	43.0	1.1	9.6	BTSI 011	11
xxx.xx SE2-11*	13.11-13.60	43.0	1.1	9.6	BTSI 011	11
xxx.xx SE2-12*	13.61-14.10	43.0	1.2	10.6	BTSI 012	12
xxx.xx SE2-12*	14.11-14.60	43.0	1.2	10.6	BTSI 012	12
xxx.xx SE2-13*	14.61-15.10	43.0	1.3	11.6	BTSI 013	13
xxx.xx SE2-13*	15.11-15.59	43.0	1.3	11.6	BTSI 013	13
xxx.xx SE4-14	15.60-16.20	43.0	2.7	12.6	BTSI 014	14
xxx.xx SE4-14	16.21-16.70	43.0	2.7	12.6	BTSI 014	14
xxx.xx SE4-15	16.71-17.20	43.0	2.7	13.6	BTSI 015	15
xxx.xx SE4-15	17.21-17.70	43.0	2.7	13.6	BTSI 015	15
xxx.xx SE4-16	17.71-18.40	47.0	2.8	14.5	BTSI 016	16
xxx.xx SE4-16	18.41-18.90	47.0	2.9	14.5	BTSI 016	16
xxx.xx SE4-17	18.91-19.20	47.0	2.9	15.5	BTSI 017	17
xxx.xx SE4-17	19.21-20.00	47.0	2.9	15.5	BTSI 017	17
xxx.xx SE4-18	20.01-20.90	52.5	3.2	16.0	BTSI 018	18
xxx.xx SE4-18	20.91-21.80	52.5	3.2	16.0	BTSI 018	18
xxx.xx SE4-20	21.81-22.90	56.0	3.2	18.0	BTSI 020	20
xxx.xx SE4-20	22.91-24.10	56.0	3.2	18.0	BTSI 020	20
xxx.xx SE4-22	24.11-25.20	57.5	3.5	19.5	BTSI 022	22
xxx.xx SE4-22	25.21-26.40	57.5	3.5	19.5	BTSI 022	22
xxx.xx SE4-24	26.41-27.50	57.5	3.7	21.0	BTSI 024	24
xxx.xx SE4-24	27.51-28.70	57.5	3.7	21.0	BTSI 024	24
xxx.xx SE4-26	28.71-29.80	63.5	4.0	23.5	BTSI 026	26
xxx.xx SE4-26	29.81-31.00	63.5	4.0	23.5	BTSI 026	26
xxx.xx SE4-28	31.01-32.10	63.5	4.3	25.5	BTSI 028	28
xxx.xx SE4-28	32.11-33.30	63.5	4.3	25.5	BTSI 028	28
xxx.xx SE4-30	33.31-34.80	63.5	4.5	28.0	BTSI 030	30
xxx.xx SE4-30	34.81-36.20	63.5	4.5	28.0	BTSI 030	30
xxx.xx SE4-33	36.21-37.30	73.5	4.8	30.0	BTSI 033	33
xxx.xx SE4-33	37.31-38.40	73.5	4.8	30.0	BTSI 033	33
xxx.xx SE4-33	38.41-39.60	73.5	4.8	30.0	BTSI 033	33
xxx.xx SE4-36	39.61-40.60	73.5	5.6	33.0	BTSI 036	36
xxx.xx SE4-36	40.61-41.80	73.5	5.6	33.0	BTSI 036	36
xxx.xx SE4-36	41.81-43.00	73.5	5.6	33.0	BTSI 036	36
xxx.xx SE4-39	43.01-44.30	75.0	5.4	36.0	BTSI 039	39

▸ *: 2 cutting edge head, 2 start thread

Tube D185
Cutting Condition D272

BTA...SE4

Single tube system



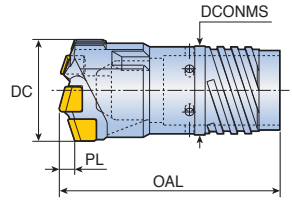
• Outer four start thread

Designation	DC	Dimension (mm)			Tube	
		OAL	PL	DCONMS	Part	Diameter (mm)
BTA xxx.xx SE4-39	44.31-45.60	75.0	5.4	36.0	BTSI 039	39
xxx.xx SE4-39	45.61-47.00	75.0	5.4	36.0	BTSI 039	39
xxx.xx SE4-43	47.01-48.50	75.0	6.1	39.0	BTSI 043	43
xxx.xx SE4-43	48.51-50.10	75.0	6.1	39.0	BTSI 043	43
xxx.xx SE4-43	50.11-51.70	75.0	6.1	39.0	BTSI 043	43
xxx.xx SE4-47	51.71-53.20	82.0	6.5	43.0	BTSI 047	47
xxx.xx SE4-47	53.21-54.70	82.0	6.5	43.0	BTSI 047	47
xxx.xx SE4-47	54.71-56.20	82.0	6.5	43.0	BTSI 047	47
xxx.xx SE4-51	56.21-58.40	84.0	6.6	47.0	BTSI 051	51
xxx.xx SE4-51	58.41-60.60	84.0	6.6	47.0	BTSI 051	51
xxx.xx SE4-51	60.61-62.80	84.0	7.0	47.0	BTSI 051	51
xxx.xx SE4-51	62.81-65.00	84.0	7.0	47.0	BTSI 051	51
xxx.xx SE4-56	60.61-62.80	84.0	7.0	51.0	BTSI 056	56
xxx.xx SE4-56	62.81-65.00	84.0	7.0	51.0	BTSI 056	56

Tube D186
Cutting Condition D272

BTA...DE4

Double tube system



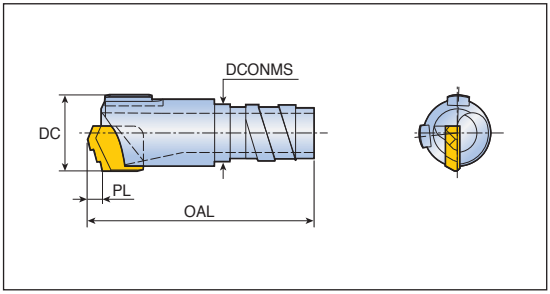
• Outer four start thread

Designation	DC	Dimension (mm)			Tube		
		OAL	PL	DCONMS	Outer tube	Inner tube	Diameter (mm)
BTA xxx.xx DE4-18	18.41-19.20	50.0	2.9	16.0	BTDO 018	BTDI 012	18.0
xxx.xx DE4-18	19.21-20.00	50.0	2.9	16.0	BTDO 018	BTDI 012	18.0
xxx.xx DE4-19.5	20.01-20.90	56.0	3.2	18.0	BTDO 019.5	BTDI 014	19.5
xxx.xx DE4-19.5	20.91-21.80	56.0	3.2	18.0	BTDO 019.5	BTDI 014	19.5
xxx.xx DE4-21.5	21.81-22.90	56.0	3.2	19.5	BTDO 021.5	BTDI 015	21.5
xxx.xx DE4-21.5	22.91-24.10	56.0	3.2	19.5	BTDO 021.5	BTDI 015	21.5
xxx.xx DE4-23.5	24.11-25.20	57.5	3.5	21.0	BTDO 023.5	BTDI 016	23.5
xxx.xx DE4-23.5	25.21-26.40	57.5	3.5	21.0	BTDO 023.5	BTDI 016	23.5
xxx.xx DE4-26	26.41-27.50	60.5	3.7	23.5	BTDO 026	BTDI 018	26.0
xxx.xx DE4-26	27.51-28.70	60.5	3.7	23.5	BTDO 026	BTDI 018	26.0
xxx.xx DE4-28	28.71-29.80	63.5	4.0	25.5	BTDO 028	BTDI 020	28.0
xxx.xx DE4-28	29.81-31.00	63.5	4.0	25.5	BTDO 028	BTDI 020	28.0
xxx.xx DE4-30.5	31.01-32.10	63.5	4.1	28.0	BTDO 030.5	BTDI 022	30.5
xxx.xx DE4-30.5	32.11-33.30	63.5	4.1	28.0	BTDO 030.5	BTDI 022	30.5
xxx.xx DE4-33	33.31-34.80	70.5	4.5	30.0	BTDO 033.0	BTDI 024	33.0
xxx.xx DE4-33	34.81-36.20	70.5	4.5	30.0	BTDO 033.0	BTDI 024	33.0
xxx.xx DE4-35.5	36.21-37.30	73.5	4.8	33.0	BTDO 035.5	BTDI 026	35.5
xxx.xx DE4-35.5	37.31-38.40	73.5	4.8	33.0	BTDO 035.5	BTDI 026	35.5
xxx.xx DE4-35.5	38.41-39.60	73.5	4.8	33.0	BTDO 035.5	BTDI 026	35.5
xxx.xx DE4-39	39.61-40.60	73.5	5.3	36.0	BTDO 039	BTDI 029	39.0
xxx.xx DE4-39	40.61-41.80	73.5	5.3	36.0	BTDO 039	BTDI 029	39.0
xxx.xx DE4-39	41.81-43.00	73.5	5.3	36.0	BTDO 039	BTDI 029	39.0
xxx.xx DE4-42.5	43.01-44.30	75.0	5.5	39.0	BTDO 042.5	BTDI 032	42.5
xxx.xx DE4-42.5	44.31-45.60	75.0	5.5	39.0	BTDO 042.5	BTDI 032	42.5
xxx.xx DE4-42.5	45.61-47.00	75.0	5.5	39.0	BTDO 042.5	BTDI 032	42.5
xxx.xx DE4-46.5	47.01-48.50	79.0	6.1	43.0	BTDO 046.5	BTDI 035	46.5
xxx.xx DE4-46.5	48.51-50.10	79.0	6.1	43.0	BTDO 046.5	BTDI 035	46.5
xxx.xx DE4-46.5	50.11-51.70	79.0	6.1	43.0	BTDO 046.5	BTDI 035	46.5
xxx.xx DE4-51	51.71-53.20	82.0	6.5	47.0	BTDO 051	BTDI 039	51.0
xxx.xx DE4-51	53.21-54.70	82.0	6.5	47.0	BTDO 051	BTDI 039	51.0
xxx.xx DE4-51	54.71-56.20	82.0	6.5	47.0	BTDO 051	BTDI 039	51.0
xxx.xx DE4-55.5	56.21-58.40	84.0	6.6	51.0	BTDO 055.5	BTDI 043A	55.5
xxx.xx DE4-55.5	58.41-60.60	84.0	6.6	51.0	BTDO 055.5	BTDI 043A	55.5
xxx.xx DE4-55.5	60.61-62.80	84.0	6.6	51.0	BTDO 055.5	BTDI 043A	55.5
xxx.xx DE4-55.5	62.81-65.00	84.0	6.6	51.0	BTDO 055.5	BTDI 043A	55.5

Tube D189
Cutting Condition D272

BTS...SE1

Single tube system



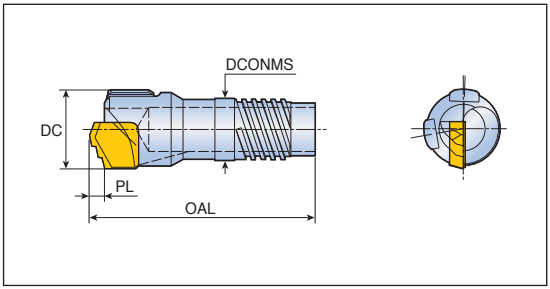
• Outer single start thread

Designation	DC	Dimension (mm)			Tube	
		OAL	PL	DCONMS	Part	Diameter (mm)
BTS xxx.xx SE1-7.1	8.00-8.99	34	2.0	6.0	BTSO 071	7.1
xxx.xx SE1-8.3	9.00-9.99	34	2.0	7.2	BTSO 083	8.3
xxx.xx SE1-9	10.00-10.99	34	2.2	7.6	BTSO 090	9.0
xxx.xx SE1-10	11.00-11.99	34	2.2	8.6	BTSO 100	10.0
xxx.xx SE1-11	12.00-13.49	34	2.3	9.1	BTSO 110	11.0
xxx.xx SE1-12	13.50-14.79	34	2.4	10.8	BTSO 120	12.0

Tube D188 Cutting Condition D272

BTS...SE2/SE4

Single tube system



• Outer four start thread

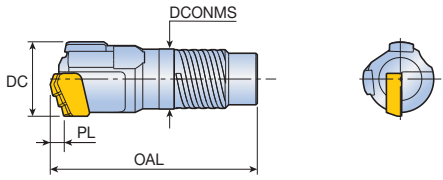
Designation	DC	Dimension (mm)			Tube	
		OAL	PL	DCONMS	Part	Diameter (mm)
BTS xxx.xx SE2-11*	12.60-13.60	40	2.3	9.6	BTSI 011	11
xxx.xx SE2-12*	13.61-14.60	40	2.4	10.6	BTSI 012	12
xxx.xx SE2-13*	14.61-15.59	40	3.0	11.6	BTSI 013	13
xxx.xx SE4-14	15.60-16.70	40	2.4	12.6	BTSI 014	14
xxx.xx SE4-15	16.71-17.70	40	3.0	13.6	BTSI 015	15
xxx.xx SE4-16	17.71-18.90	40	3.3	14.5	BTSI 016	16
xxx.xx SE4-17	18.91-20.00	40	3.3	15.5	BTSI 017	17

Tube D185 Cutting Condition D272

▸ *: Designates outer two start thread

BTE…SE4

Single tube system



• Outer four start thread

Designation		DC	Dimension (mm)			Tube	
			OAL	PL	DCONMS	Part	Diameter (mm)
BTE	**xxx.xx SE4-14**	15.60-16.70	43.4	3.4	12.6	BTSI 014	14

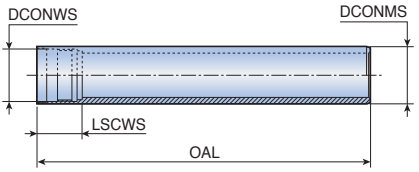
Tube D185

Cutting Condition D270

ADVANCE CUTTING TaeguTec

BTSI

Single tube



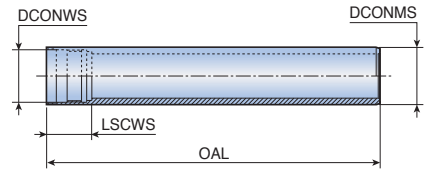
• Inner four start thread

Designation	DC	Dimension (mm)		
		DCONMS	DCONWS	LSCWS
BTSI 011 *	12.60-13.60	11.0	9.6	22
012 *	13.61-14.60	12.0	10.6	22
013 *	14.61-15.59	13.0	11.6	22
014	15.60-16.70	14.0	12.6	21
015	16.71-17.70	15.0	13.6	21
016	17.71-18.90	16.0	14.5	22
017	18.91-20.00	17.0	15.5	22
018	20.01-21.80	18.0	16.0	27.5
020	21.81-24.10	20.0	18.0	30
022	24.11-26.40	22.0	19.5	30
024	26.41-28.70	24.0	21.0	30
026	28.71-31.00	26.0	23.5	33
028	31.01-33.30	28.0	25.5	33
030	33.31-36.20	30.0	28.0	33
033	36.21-39.60	33.0	30.0	40
036	39.61-43.00	36.0	33.0	40
039	43.01-47.00	39.0	36.0	40
043	47.01-51.70	43.0	39.0	40
047	51.71-56.20	47.0	43.0	44

▸ Please indicate overall length (OAL) when ordering
▸ *: Indicates parts are inner two start thread

BTSI

Single tube



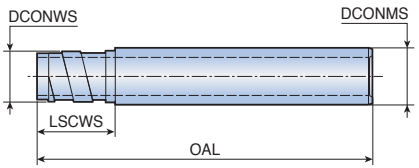
• Inner four start thread

Designation	DC	Dimension (mm)		
		DCONMS	DCONWS	LSCWS
BTSI 051	56.21-60.60	51.0	47.0	44
056A	60.61-65.00	56.0	51.0	44
056B	65.00-66.99	56.0	52.0	75
062	67.00-72.99	62.0	58.0	75
068	73.00-79.99	68.0	63.0	75
075	80.00-86.99	75.0	70.0	97
082	87.00-99.99	82.0	77.0	97
094	100.00-111.99	94.0	89.0	97
106	112.00-123.99	106.0	101.0	118
118	124.00-135.99	118.0	113.0	118
130	136.00-147.99	130.0	125.0	118
142	148.00-159.99	142.0	137.0	139
154	160.00-171.99	154.0	149.0	139
166	172.00-183.99	166.0	161.0	139
178	184.00-195.99	178.0	173.0	144
190	196.00-207.99	190.0	185.0	144
202	208.00-219.99	202.0	197.0	144
214	220.00-231.99	214.0	208.0	164
226	232.00-243.99	226.0	220.0	164
238	244.00-255.99	238.0	232.0	164
250	256.00-267.99	250.0	244.0	184
262	268.00-279.99	262.0	256.0	184
274	280.00-291.99	274.0	268.0	184

▸ Please indicate overall length (OAL) when ordering

BTSE

Single tube



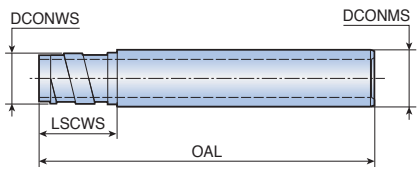
• Outer single start thread

Designation		DC	Dimension (mm)		
			DCONMS	DCONWS	LSCWS
BTSE	**012A**	14.50-15.00	12.0	11.5	23
	012B	15.01-15.50	12.0	11.8	23
	013A	15.51-16.00	13.0	12.4	23
	013B	16.01-16.50	13.0	12.7	23
	014A	16.51-17.25	14.0	13.4	23
	014B	17.26-18.00	14.0	13.7	23
	015	18.01-19.00	15.0	14.4	23
	016.5	19.01-19.99	16.5	15.4	23
	018	20.00-21.99	18.0	16.5	26
	020	22.00-24.99	20.0	19.0	26
	022	25.00-26.99	22.0	20.0	26
	024	27.00-29.99	24.0	22.0	26
	026	30.00-31.99	26.0	24.0	26
	028	32.00-33.99	28.0	26.0	26
	030	34.00-36.99	30.0	27.0	41
	033	37.00-39.99	33.0	30.0	41
	036	40.00-43.99	36.0	33.0	41
	039	44.00-46.99	39.0	37.0	41
	043	47.00-51.99	43.0	41.0	41

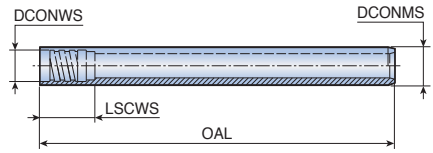
▸ Please indicate overall length (OAL) when ordering

BTSE / BTSO

Single tube



BTSE
Outer single start thread



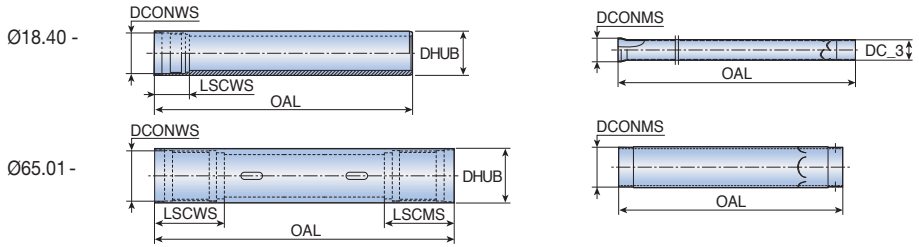
BTSO
Inner single start thread

Designation		DC	Dimension (mm)			
			DCONMS	DCONWS		LSCWS
BTSE	**047**	52.00-56.99	47.0	44	-	41
	051	57.00-60.99	51.0	49	-	41
	056	61.00-67.99	56.0	53	-	41
	062	68.00-74.99	62.0	59	-	41
	068	75.00-80.99	68.0	65	-	71
	075	81.00-90.99	75.0	71	-	71
	082	91.00-98.99	82.0	79	-	71
	094	99.00-110.99	94.0	90	-	71
	106	111.00-122.99	106.0	102	-	71
	118	123.00-134.99	118.0	114	-	71
	130	135.00-148.99	130.0	126	-	71
	142	149.00-161.99	142.0	139	-	71
	154	162.00-173.99	154.0	151	-	86
	166	174.00-185.99	166.0	163	-	86
	178	186.00-197.99	178.0	175	-	86
	190	198.00-209.99	190.0	187	-	86
	202	210.00-221.99	202.0	199	-	86
	214	222.00-233.99	214.0	211	-	86
	226	234.00-245.99	226.0	223	-	86
	238	246.00-257.99	238.0	235	-	86
	250	258.00-269.99	250.0	247	-	121
	262	270.00-281.99	262.0	259	-	121
	274	282.00-293.99	274.0	271	-	121
BTSO	**071**	8.00-8.99	7.1	-	6.0	13.5
	083	9.00-9.99	8.3	-	7.2	13.5
	090	10.00-10.99	9.0	-	7.6	13.5
	100	11.00-11.99	10.0	-	8.6	13.5
	110	12.00-13.49	11.0	-	9.1	13.5
	120	13.50-14.79	12.0	-	10.8	13.5

▸ Please indicate overall length (OAL) when ordering

BTDO / BTDI

Double tube



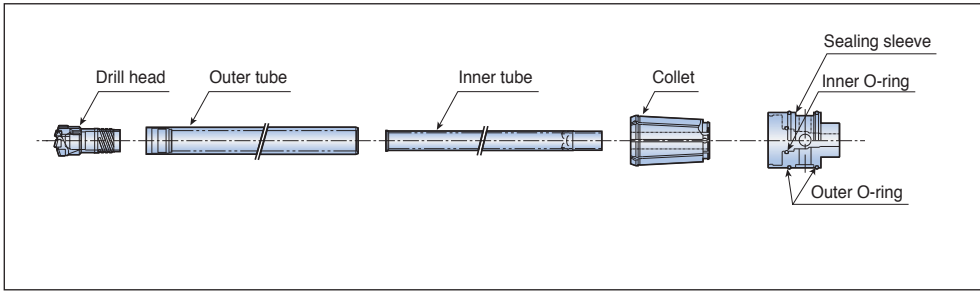
Outer tube **Inner tube**

DC	Outer tube	Dimension (mm)			Inner tube	Dimension (mm)	
		DHUB	DCONWS	LSCWS		DCONMS	DC_3
18.40-20.00	**BTDO 018**	18.0	16	27.5	**BTDI 012**	12	10
20.01-21.80	**019.5**	19.5	18	30	**014**	14	12
21.81-24.10	**021.5**	21.5	19.5	30	**015**	15	13
24.11-26.40	**023.5**	23.5	21	30	**016**	16	14
26.41-28.70	**026**	26.0	23.5	33	**018**	18	16
28.71-31.00	**028**	28.0	25.5	33	**020**	20	18
31.01-33.30	**030.5**	30.5	28	33	**022**	22	20
33.31-36.20	**033**	33.0	30	40	**024**	24	22
36.21-39.60	**035.5**	35.5	33	40	**026**	26	24
39.61-43.00	**039**	39.0	36	40	**029**	29	27
43.01-47.00	**042.5**	42.5	39	40	**032**	32	30
47.01-51.70	**046.5**	46.5	43	44	**035**	35	32
51.71-56.20	**051**	51.0	47	44	**039**	39	36
56.21-65.00	**055.5**	55.5	51	44	**043A**	43	40
65.01-69.99	**056**	56.0	52	75	**043B**	40	-
70.00-72.99	**062**	62.0	58	75	**048**	44	-
73.00-79.99	**068**	68.0	63	75	**053**	48	-
80.00-86.99	**075**	75.0	70	97	**059**	54	-
87.00-99.99	**082**	82.0	77	97	**066**	60	-
100.00-111.99	**094**	94.0	89	97	**078**	70	-
112.00-123.99	**106**	106.0	101	118	**090**	80	-
124.00-135.99	**118**	118.0	113	118	**092**	80	-
136.00-147.99	**130**	130.0	125	118	**104**	95	-
148.00-159.99	**142**	142.0	137	139	**116**	100	-
160.00-171.99	**154**	154.0	149	139	**128**	120	-
172.00-183.99	**166**	166.0	161	139	**138**	130	-

▸ Please indicate overall length (OAL) when ordering

- For diameter range 18.40-65.00 (BTDO 055.5) the inner tube should be ordered 30mm longer than outer tube
- For diameter range 65.01-123.99 (BTDO 056-BTDO 106) the inner tube should be ordered 190mm longer than outer tube
- For diameter range 124.00-183.99 (BTDO 118-BTDO 166) the inner tube should be ordered 220mm longer than outer tube

Assembly of Double Tube System

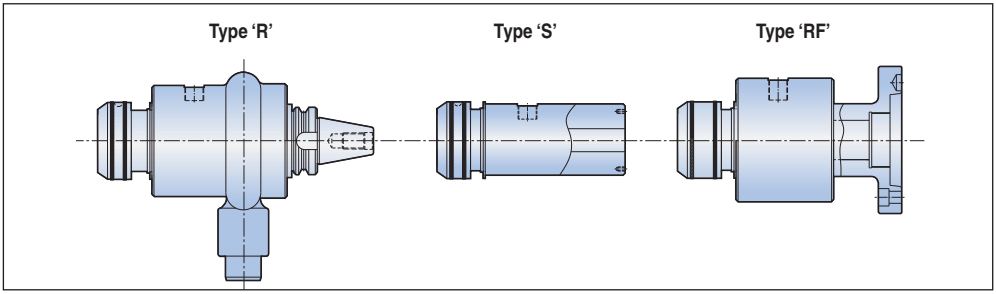


Designation		DC	Collet
BTDO 018	**BTDI 012**	18.40-19.20	COLLET 4-18
018	**012**	19.21-20.00	COLLET 4-18
019.5	**014**	20.01-20.90	COLLET 4-19.5
019.5	**014**	20.91-21.80	COLLET 4-19.5
021.5	**015**	21.81-22.90	COLLET 4-21.5
021.5	**015**	22.91-24.10	COLLET 4-21.5
023.5	**016**	24.11-25.20	COLLET 4-23.5
023.5	**016**	25.21-26.40	COLLET 4-23.5
026	**018**	26.41-27.50	COLLET 4-26
026	**018**	27.51-28.70	COLLET 4-26
028	**020**	28.71-29.80	COLLET 4-28
028	**020**	29.81-31.00	COLLET 4-28
030.5	**022**	31.01-32.10	COLLET 4-30.5
030.5	**022**	32.11-33.30	COLLET 4-30.5
033	**024**	33.31-34.80	COLLET 4-33
033	**024**	34.81-36.20	COLLET 4-33
035.5	**026**	36.21-37.30	COLLET 4-35.5
035.5	**026**	37.31-38.40	COLLET 4-35.5
035.5	**026**	38.41-39.60	COLLET 4-35.5
039	**029**	39.61-40.60	COLLET 4-39
039	**029**	40.61-41.80	COLLET 4-39
039	**029**	41.81-43.00	COLLET 4-39
042.5	**032**	43.01-44.30	COLLET 4-42.5
042.5	**032**	44.31-45.60	COLLET 4-42.5
042.5	**032**	45.61-47.00	COLLET 4-42.5
046.5	**035**	47.01-48.50	COLLET 4-46.5
046.5	**035**	48.51-50.10	COLLET 4-46.5
046.5	**035**	50.11-51.70	COLLET 4-46.5
051	**039**	51.71-53.20	COLLET 4-51
051	**039**	53.21-54.70	COLLET 4-51
051	**039**	54.71-56.20	COLLET 4-51
055.5	**043A**	56.21-58.40	COLLET 4-55.5
055.5	**043A**	58.41-60.60	COLLET 4-55.5
055.5	**043A**	60.61-62.80	COLLET 4-55.5
055.5	**043A**	62.81-65.00	COLLET 4-55.5

▸ Inner tube should be longer than outer tube. Please refer to page D189 for details

Assembly of Double Tube System

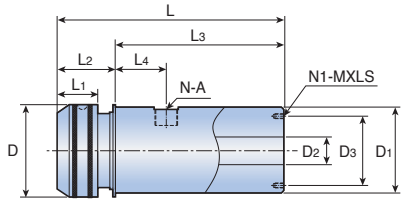
Connector



Sealing sleeve	Outer O-ring	Inner O-ring	Connector
SEALING SLEEVE 4R-18	OOR-25.24	IOR-18	DTC-4S/4R/4RF
SEALING SLEEVE 4R-18		IOR-18	
SEALING SLEEVE 4R-19.5		IOR-19.5	
SEALING SLEEVE 4R-19.5		IOR-19.5	
SEALING SLEEVE 4R-21.5		IOR-21.5	
SEALING SLEEVE 4R-21.5		IOR-21.5	
SEALING SLEEVE 4R-23.5		IOR-23.5	
SEALING SLEEVE 4R-23.5		IOR-23.5	
SEALING SLEEVE 4R-26		IOR-26	
SEALING SLEEVE 4R-26		IOR-26	
SEALING SLEEVE 4R-28		IOR-28	
SEALING SLEEVE 4R-28		IOR-28	
SEALING SLEEVE 4R-30.5		IOR-30.5	
SEALING SLEEVE 4R-30.5		IOR-30.5	
SEALING SLEEVE 4R-33		IOR-33	
SEALING SLEEVE 4R-33		IOR-33	
SEALING SLEEVE 4R-35.5	OOR-65	IOR-35.5	
SEALING SLEEVE 4R-35.5		IOR-35.5	
SEALING SLEEVE 4R-35.5		IOR-35.5	
SEALING SLEEVE 4R-39		IOR-39	
SEALING SLEEVE 4R-39		IOR-39	
SEALING SLEEVE 4R-39		IOR-39	
SEALING SLEEVE 4R-42.5		IOR-42.5	
SEALING SLEEVE 4R-42.5		IOR-42.5	
SEALING SLEEVE 4R-42.5		IOR-42.5	
SEALING SLEEVE 4R-46.5		IOR-46.5	
SEALING SLEEVE 4R-46.5		IOR-46.5	
SEALING SLEEVE 4R-46.5		IOR-46.5	
SEALING SLEEVE 4R-51		IOR-51	
SEALING SLEEVE 4R-51		IOR-51	
SEALING SLEEVE 4R-51		IOR-51	
SEALING SLEEVE 4R-55.5		IOR-55.5	
SEALING SLEEVE 4R-55.5		IOR-55.5	
SEALING SLEEVE 4R-55.5		IOR-55.5	
SEALING SLEEVE 4R-55.5		IOR-55.5	

DTC-S

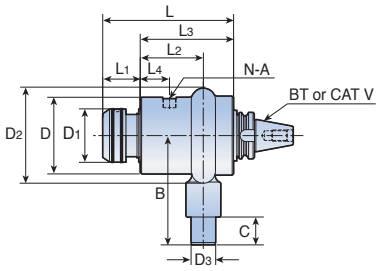
'S' type connector



Designation	DC	D	D1	D2	D3	L	L1	L2	L3	L4	N-A	N1-MXLS
DTC 4S	18.4-65.0	115	100	45	80	310	50	60	250	68	2-PT3/4"	4-M8x15
5S	65.0-123.9	164	140	81	120	415	47	115	300		2-PT1"	6-M8x20

DTC-R

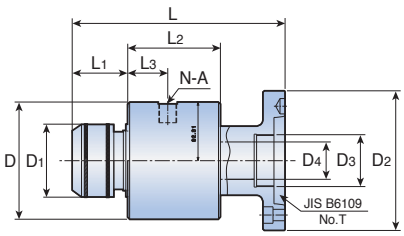
'R' type connector



Designation	DC	D	D1	D2	D3	B	C	L	L1	L2	L3	L4	N-A
DTC 4R	18.4-65.0	165	115	206	53	186.5	60	319.7	59.2	152	228	75	2-PT1"
5R	65.0-123.9	225	164	312	100	310	100	382	62	201	320	95	2-PT1 1/4"
6R	124.0-183.9	350	244	445	152.4	412	120	487	75	250	412	118	4-PT1-1/4"

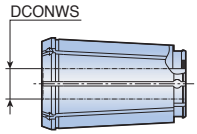
DTC-RF

'RF' type connector

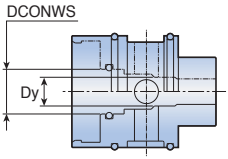


Designation	DC	D	D1	D2	D3	D4	L	L1	L2	L3	N-A
DTC 4RF	18.4-65.0	160	115	210	M62x2	46	291.5	64.5	150	75	2-PT1"

Collet / Sealing Sleeve



Collet



Sealing sleeve

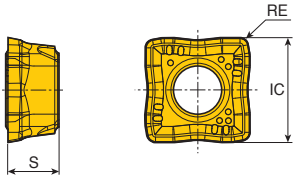
Designation	DC	DCONWS	Designation	DC	DCONWS	Dy	Outer O-ring	Inner O-ring
COLLET 4-18	18.40-20.00	18.0	**SEALING SLEEVE 4-18**	18.40-20.00	18.0	10		IOR 18
4-19.5	20.01-21.80	19.5	**4-19.5**	20.01-21.80	19.5	12		IOR 19.5
4-21.5	21.81-24.10	21.5	**4-21.5**	21.81-24.10	21.5	13		IOR 21.5
4-23.5	24.11-26.40	23.5	**4-23.5**	24.11-26.40	23.5	14		IOR 23.5
4-26	26.41-28.70	26.0	**4-26**	26.41-28.70	26.0	16		IOR 26
4-28	28.71-31.00	28.0	**4-28**	28.71-31.00	28.0	18		IOR 28
4-30.5	31.01-33.30	30.5	**4-30.5**	31.01-33.30	30.5	20	OOR-65	IOR 30.5
4-33	33.31-36.20	33.0	**4-33**	33.31-36.20	33.0	22		IOR 33
4-35.5	36.21-39.60	35.5	**4-35.5**	36.21-39.60	35.5	24		IOR 35.5
4-39	39.61-43.00	39.0	**4-39**	39.61-43.00	39.0	27		IOR 39
4-42.5	43.01-47.00	42.5	**4-42.5**	43.01-47.00	42.5	30		IOR 42.5
4-46.5	47.01-51.70	46.5	**4-46.5**	47.01-51.70	46.5	32		IOR 46.5
4-51	51.71-56.20	51.0	**4-51**	51.71-56.20	51.0	36		IOR 51
4-55.5	56.21-65.00	55.5	**4-55.5**	56.21-65.00	55.5	40		IOR 55.5

Drilling Heads & Inserts

SOMT...DP

TOPDRILL

Inserts for general purpose



Size	Dimension (mm)		
	IC	S	RE
04	4.4	2.38	0.4
05	4.9	2.38	0.4
06	5.7	2.38	0.4
07	6.8	2.80	0.6
08	7.9	3.97	0.6
09	9.2	3.97	0.8
11	11.0	3.97	0.8
13	12.8	4.40	0.8
15	15.0	4.80	1.0

Insert	Designation	Coated						Uncoated
		TT9080	TT8020	TT9300	TT9030	TT6030	TT7400	K10
	SOMT 040204 DP	●	●	●				
	050204 DP	●	●	●				
	060204 DP	●	●	●				
	070306 DP	●	●	●				
	08T306 DP	●	●	●				
	09T308 DP	●	●	●				
	11T308 DP	●	●	●				
	130408 DP	●	●	●				
	150510 DP	●	●	●				

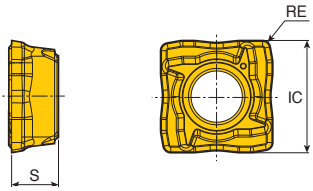
- TT9080: First choice for general purpose
- TT8020: For unstable condition
- TT9300: For high speed machining on a steel application (Peripheral **ONLY**)

●: Standard items

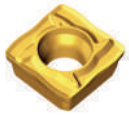
SOMT...DL

TOPDRILL

Inserts for low carbon steel



Size	Dimension (mm)		
	IC	S	RE
05	4.9	2.38	0.4
06	5.7	2.38	0.4
07	6.8	2.80	0.6
08	7.9	3.97	0.6
09	9.2	3.97	0.8
11	11.0	3.97	0.8
13	12.8	4.40	0.8
15	15.0	4.80	1.0

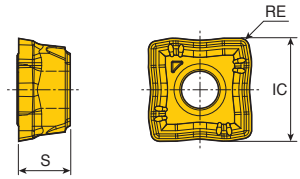
Insert	Designation	Coated						Uncoated
		TT9080	TT9030	TT8020	TT6030	TT9300	TT7400	K10
	**SOMT 050204 DL**	●						
	060204 DL	●						
	070306 DL	●						
	08T306 DL	●						
	09T308 DL	●						
	11T308 DL	●						
	130408 DL	●						
	150510 DL	●						

- TT9080: First choice for general purpose

●: Standard items

SOMT...DK

Inserts for cast iron



Size	Dimension (mm)		
	IC	S	RE
05	4.9	2.38	0.4
06	5.7	2.38	0.4
07	6.8	2.80	0.6
08	7.9	3.97	0.6
09	9.2	3.97	0.8
11	11.0	3.97	0.8
13	12.8	4.40	0.8
15	15.0	4.80	1.0

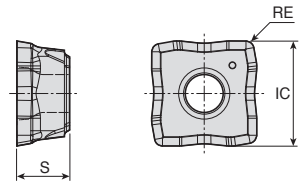
Insert	Designation	Coated							Uncoated			
		TT9080	TT8020	TT9300	TT9030	TT6030	TT6080	TT7400	K10			
	SOMT 050204 DK						●					
	060204 DK						●					
	070306 DK						●					
	08T306 DK						●					
	09T308 DK						●					
	11T308 DK						●					
	130408 DK						●					
	150510 DK						●					

●: Standard items

D18-D33

SOMT...DA

Inserts for aluminum alloy



Size	Dimension (mm)		
	IC	S	RE
05	4.9	2.38	0.4
06	5.7	2.38	0.4
07	6.8	2.80	0.6
08	7.9	3.97	0.6
09	9.2	3.97	0.8
11	11.0	3.97	0.8
13	12.8	4.40	0.8
15	15.0	4.80	1.0

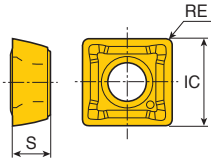
Insert	Designation	Coated							Uncoated			
		TT9080	TT8020	TT9300	TT9030	TT6030	TT6080	TT7400	K10			
	SOMT 050204 DA								●			
	060204 DA								●			
	070306 DA								●			
	08T306 DA								●			
	09T308 DA								●			
	11T308 DA								●			
	130408 DA								●			
	150510 DA								●			

●: Standard items

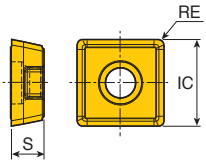
D18-D33

SPMG...DG

Inserts for general purpose

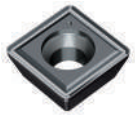


05/06



07/09/11/12/14

Size	Dimension (mm)		
	IC	S	RE
05	5.00	2.38	0.4
06	6.00	2.38	0.4
07	7.94	3.97	0.8
09	9.80	4.30	0.8
11	11.50	4.80	0.8
12	12.70	4.76	0.8
14	14.30	5.20	1.2

Insert	Designation	Coated						Uncoated			
		TT9080	TT9030	TT8020	TT6030	TT9300	TT7400		K10		
	**SPMG 050204 DG**		●	●			●				
	060204 DG		●	●			●				
	07T308 DG		●	●			●				
	090408 DG		●	●			●				
	110408 DG		●	●			●				
	120408 DG		●								
	140512 DG		●	●			●				

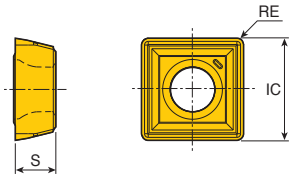
D34-D49

- TT9030: First choice for general purpose
- TT8020: For unstable condition
- TT7400: For high speed machining on a steel application (Peripheral **ONLY**)

●: Standard items

SPMG...DK

Inserts for cast iron



Size	Dimension (mm)		
	IC	S	RE
05	5.00	2.38	0.4
06	6.00	2.38	0.4
07	7.94	3.97	0.8
09	9.80	4.30	0.8
11	11.50	4.80	0.8
14	14.30	5.20	1.2

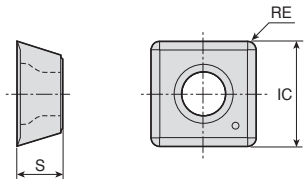
Insert	Designation	Coated						Uncoated			
		TT9080	TT9030	TT8020	TT6030	TT9300	TT7400		K10		
	SPMG 050204 DK				●						
	060204 DK				●						
	07T308 DK				●						
	090408 DK				●						
	110408 DK				●						
	140512 DK				●						

D34-D49

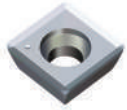
●: Standard items

SPGG...DA

Inserts for aluminum alloy



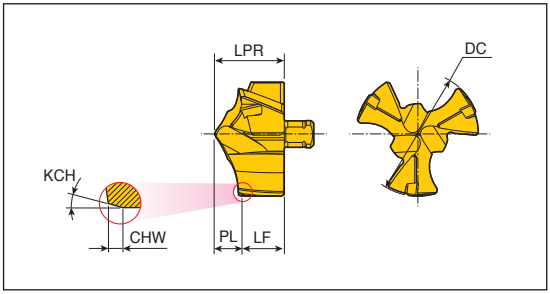
Size	Dimension (mm)		
	IC	S	RE
05	5.00	2.38	0.4
06	6.00	2.38	0.4
07	7.94	3.97	0.8
09	9.80	4.30	0.8
11	11.50	4.80	0.8
14	14.30	5.20	1.2

Insert	Designation	Coated						Uncoated
		TT9080	TT9030	TT8020	TT6030	TT9300	TT7400	K10
	**SPGG 050204 DA**							●
	060204 DA							●
	07T308 DA							●
	090408 DA							●
	110408 DA							●
	140512 DA							●

●: Standard items

3ED...-P+

3 flute drill heads



Designation	Dimension (mm)							Grade
	DC	LPR	PL	LF	CHW	KCH	SSC	TT5130
3ED-120-P+	12.0	6.7	2.74	3.96	0.4	15	12	●
121-P+	12.1	6.7	2.74	3.96	0.4	15	12	●
122-P+	12.2	6.7	2.74	3.96	0.4	15	12	●
123-P+	12.3	6.7	2.74	3.96	0.4	15	12	●
124-P+	12.4	6.7	2.74	3.96	0.4	15	12	●
125-P+	12.5	6.7	2.76	3.94	0.4	15	12	●
126-P+	12.6	6.7	2.76	3.94	0.4	15	12	●
127-P+	12.7	6.7	2.76	3.94	0.4	15	12	●
128-P+	12.8	6.7	2.76	3.94	0.4	15	12	●
129-P+	12.9	6.7	2.76	3.94	0.4	15	12	●
130-P+	13.0	7.3	2.91	4.39	0.4	15	13	●
131-P+	13.1	7.3	2.91	4.39	0.4	15	13	●
132-P+	13.2	7.3	2.91	4.39	0.4	15	13	●
133-P+	13.3	7.3	2.91	4.39	0.4	15	13	●
134-P+	13.4	7.3	2.91	4.39	0.4	15	13	●
135-P+	13.5	7.3	2.93	4.37	0.4	15	13	●
136-P+	13.6	7.3	2.93	4.37	0.4	15	13	●
137-P+	13.7	7.3	2.93	4.37	0.4	15	13	●
138-P+	13.8	7.3	2.93	4.37	0.4	15	13	●
139-P+	13.9	7.3	2.93	4.37	0.4	15	13	●
140-P+	14.0	7.9	3.17	4.73	0.4	15	14	●
141-P+	14.1	7.9	3.17	4.73	0.4	15	14	●
142-P+	14.2	7.9	3.17	4.73	0.4	15	14	●
143-P+	14.3	7.9	3.17	4.73	0.4	15	14	●
144-P+	14.4	7.9	3.17	4.73	0.4	15	14	●
145-P+	14.5	7.9	3.19	4.71	0.4	15	14	●
146-P+	14.6	7.9	3.19	4.71	0.4	15	14	●
147-P+	14.7	7.9	3.19	4.71	0.4	15	14	●
148-P+	14.8	7.9	3.19	4.71	0.4	15	14	●
149-P+	14.9	7.9	3.19	4.71	0.4	15	14	●
150-P+	15.0	8.4	3.31	5.09	0.5	30	15	●
151-P+	15.1	8.4	3.31	5.09	0.5	30	15	●
152-P+	15.2	8.4	3.31	5.09	0.5	30	15	●
153-P+	15.3	8.4	3.31	5.09	0.5	30	15	●
154-P+	15.4	8.4	3.31	5.09	0.5	30	15	●

D55-D57

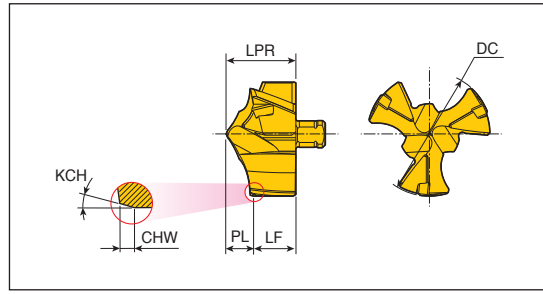
▸ SSC: Seat size code

●: Standard items

3ED...-P+

DRILLSPEED

3 flute drill heads



Designation	Dimension (mm)							Grade
	DC	LPR	PL	LF	CHW	KCH	SSC	TT5130
3ED- 155-P+	15.5	8.4	3.32	5.08	0.5	30	15	●
156-P+	15.6	8.4	3.32	5.08	0.5	30	15	●
157-P+	15.7	8.4	3.32	5.08	0.5	30	15	●
158-P+	15.8	8.4	3.32	5.08	0.5	30	15	●
159-P+	15.9	8.4	3.32	5.08	0.5	30	15	●
160-P+	16.0	9.0	3.70	5.30	0.7	30	16	●
161-P+	16.1	9.0	3.70	5.30	0.7	30	16	●
162-P+	16.2	9.0	3.70	5.30	0.7	30	16	●
163-P+	16.3	9.0	3.70	5.30	0.7	30	16	●
164-P+	16.4	9.0	3.70	5.30	0.7	30	16	●
165-P+	16.5	9.0	3.71	5.29	0.7	30	16	●
166-P+	16.6	9.0	3.71	5.29	0.7	30	16	●
167-P+	16.7	9.0	3.71	5.29	0.7	30	16	●
168-P+	16.8	9.0	3.71	5.29	0.7	30	16	●
169-P+	16.9	9.0	3.71	5.29	0.7	30	16	●
170-P+	17.0	9.5	3.88	5.62	0.7	30	17	●
171-P+	17.1	9.5	3.88	5.62	0.7	30	17	●
172-P+	17.2	9.5	3.88	5.62	0.7	30	17	●
173-P+	17.3	9.5	3.88	5.62	0.7	30	17	●
174-P+	17.4	9.5	3.88	5.62	0.7	30	17	●
175-P+	17.5	9.5	3.89	5.61	0.7	30	17	●
176-P+	17.6	9.5	3.89	5.61	0.7	30	17	●
177-P+	17.7	9.5	3.89	5.61	0.7	30	17	●
178-P+	17.8	9.5	3.89	5.61	0.7	30	17	●
179-P+	17.9	9.5	3.89	5.61	0.7	30	17	●
180-P+	18.0	10.1	4.07	6.03	0.7	30	18	●
181-P+	18.1	10.1	4.07	6.03	0.7	30	18	●
182-P+	18.2	10.1	4.07	6.03	0.7	30	18	●
183-P+	18.3	10.1	4.07	6.03	0.7	30	18	●
184-P+	18.4	10.1	4.07	6.03	0.7	30	18	●
185-P+	18.5	10.1	4.08	6.02	0.7	30	18	●
186-P+	18.6	10.1	4.08	6.02	0.7	30	18	●
187-P+	18.7	10.1	4.08	6.02	0.7	30	18	●
188-P+	18.8	10.1	4.08	6.02	0.7	30	18	●
189-P+	18.9	10.1	4.08	6.02	0.7	30	18	●

D55-D57

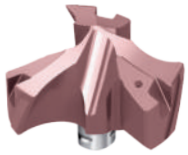
▸ SSC: Seat size code

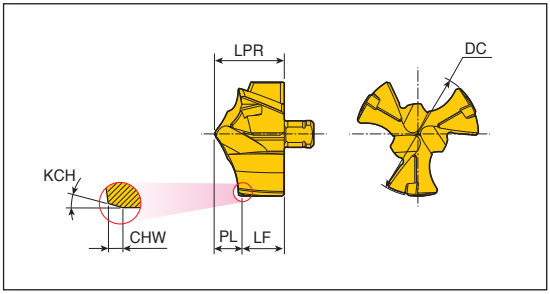
●: Standard items

3ED...-P+

DRILLSPEED

3 flute drill heads





Designation	Dimension (mm)							Grade
	DC	LPR	PL	LF	CHW	KCH	SSC	TT5130
3ED- 190-P+	19.0	10.7	4.26	6.44	0.7	30	19	●
191-P+	19.1	10.7	4.26	6.44	0.7	30	19	●
192-P+	19.2	10.7	4.26	6.44	0.7	30	19	●
193-P+	19.3	10.7	4.26	6.44	0.7	30	19	●
194-P+	19.4	10.7	4.26	6.44	0.7	30	19	●
195-P+	19.5	10.7	4.27	6.43	0.7	30	19	●
196-P+	19.6	10.7	4.27	6.43	0.7	30	19	●
197-P+	19.7	10.7	4.27	6.43	0.7	30	19	●
198-P+	19.8	10.7	4.27	6.43	0.7	30	19	●
199-P+	19.9	10.7	4.27	6.43	0.7	30	19	●
200-P+	20.0	11.3	4.44	6.86	0.7	30	20	●
201-P+	20.1	11.3	4.44	6.86	0.7	30	20	●
202-P+	20.2	11.3	4.44	6.86	0.7	30	20	●
203-P+	20.3	11.3	4.44	6.86	0.7	30	20	●
204-P+	20.4	11.3	4.44	6.86	0.7	30	20	●
205-P+	20.5	11.3	4.45	6.85	0.7	30	20	●
206-P+	20.6	11.3	4.45	6.85	0.7	30	20	●
207-P+	20.7	11.3	4.45	6.85	0.7	30	20	●
208-P+	20.8	11.3	4.45	6.85	0.7	30	20	●
209-P+	20.9	11.3	4.45	6.85	0.7	30	20	●
210-P+	21.0	11.8	4.62	7.18	0.4	15	21	●
215-P+	21.5	11.8	4.64	7.16	0.4	15	21	●
220-P+	22.0	12.4	4.78	7.62	0.4	15	22	●
225-P+	22.5	12.4	4.80	7.60	0.4	15	22	●
230-P+	23.0	12.8	5.02	7.78	0.4	15	23	●
235-P+	23.5	12.8	5.04	7.76	0.4	15	23	●
240-P+	24.0	13.4	5.18	8.22	0.4	15	24	●
245-P+	24.5	13.4	5.20	8.20	0.4	15	24	●
250-P+	25.0	14.0	5.29	8.71	0.4	15	25	●
255-P+	25.5	14.0	5.31	8.69	0.4	15	25	●

D55-D57

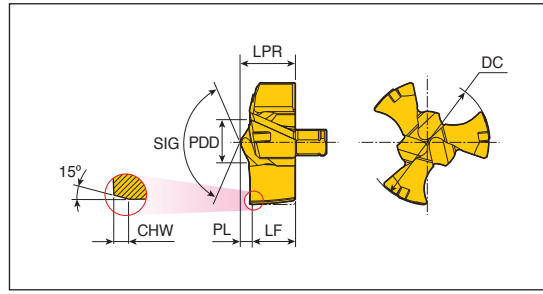
▸ SSC: Seat size code

●: Standard items

3ED...-F

DRILLSPEED

3 flute drill heads for flat bottom hole



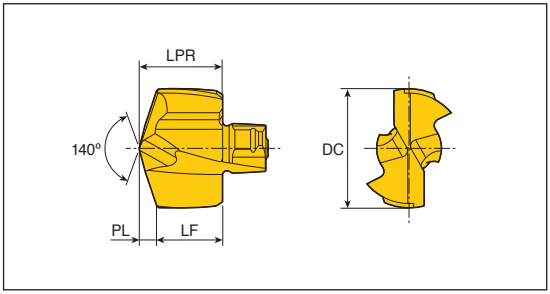
Designation	Dimension (mm)								Grade
	DC	LPR	PL	LF	PDD	SIG	CHW	SSC	TT5130
3ED- 120-F	12.0	5.14	1.18	3.96	3.38	133	0.4	12	●
125-F	12.5	5.14	1.20	3.94	3.38	133	0.4	12	●
130-F	13.0	5.61	1.22	4.39	3.58	132	0.4	13	●
135-F	13.5	5.61	1.24	4.37	3.58	132	0.4	13	●
140-F	14.0	6.01	1.28	4.73	4.01	133	0.4	14	●
145-F	14.5	6.01	1.30	4.71	4.01	133	0.4	14	●
150-F	15.0	6.38	1.32	5.06	4.16	133	0.4	15	●
155-F	15.5	6.38	1.34	5.04	4.16	133	0.4	15	●
160-F	16.0	6.86	1.38	5.48	4.52	134	0.4	16	●
165-F	16.5	6.86	1.40	5.46	4.52	134	0.4	16	●
170-F	17.0	7.22	1.45	5.77	4.79	134	0.4	17	●
175-F	17.5	7.22	1.47	5.75	4.79	134	0.4	17	●
180-F	18.0	7.93	1.75	6.18	5.96	133	0.4	18	●
185-F	18.5	7.93	1.77	6.16	5.96	133	0.4	18	●
190-F	19.0	8.41	1.83	6.58	6.32	133	0.4	19	●
195-F	19.5	8.41	1.85	6.56	6.32	133	0.4	19	●
200-F	20.0	8.89	1.90	6.99	6.61	133	0.4	20	●
205-F	20.5	8.89	1.92	6.97	6.61	133	0.4	20	●
210-F	21.0	9.17	1.99	7.18	7.01	133	0.4	21	●
215-F	21.5	9.17	2.01	7.16	7.01	133	0.4	21	●
220-F	22.0	9.72	2.10	7.62	7.30	133	0.4	22	●
225-F	22.5	9.72	2.12	7.60	7.30	133	0.4	22	●
230-F	23.0	9.96	2.18	7.78	7.49	132	0.4	23	●
235-F	23.5	9.96	2.20	7.76	7.49	132	0.4	23	●
240-F	24.0	10.46	2.24	8.22	7.81	132	0.4	24	●
245-F	24.5	10.46	2.26	8.20	7.81	132	0.4	24	●
250-F	25.0	11.03	2.31	8.72	8.16	132	0.4	25	●
255-F	25.5	11.03	2.33	8.70	8.16	132	0.4	25	●

▸ SSC: Seat size code

●: Standard items

D55-D57

Drill heads



Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	TT9080
TCD - 040-P	4.0	3.10	0.62	2.48	4	●
041-P	4.1	3.10	0.64	2.46	4	●
042-P	4.2	3.10	0.66	2.44	4	●
043-P	4.3	3.10	0.67	2.43	4	●
044-P	4.4	3.10	0.69	2.41	4	●
045-P	4.5	3.55	0.66	2.89	4.5	●
046-P	4.6	3.55	0.68	2.87	4.5	●
047-P	4.7	3.55	0.70	2.85	4.5	●
048-P	4.8	3.55	0.71	2.84	4.5	●
049-P	4.9	3.55	0.73	2.82	4.5	●
050-P	5.0	3.70	0.73	2.97	5	●
051-P	5.1	3.70	0.75	2.95	5	●
052-P	5.2	3.70	0.77	2.93	5	●
053-P	5.3	3.70	0.78	2.92	5	●
054-P	5.4	3.70	0.80	2.90	5	●
055-P	5.5	3.85	0.80	3.05	5.5	●
056-P	5.6	3.85	0.82	3.03	5.5	●
057-P	5.7	3.85	0.84	3.01	5.5	●
058-P	5.8	3.85	0.85	3.00	5.5	●
059-P	5.9	3.85	0.87	2.98	5.5	●

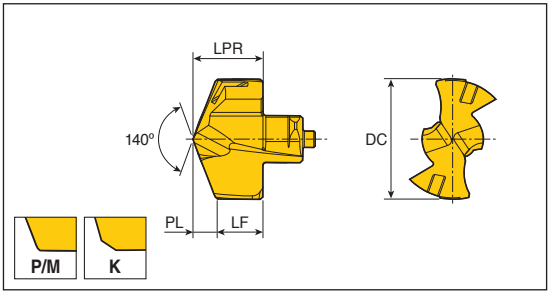
D58

●: Standard items

Steel

TCD...P/M/K

Drill heads



Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	TT9080
TCD - 060-P/M/K	6.0	4.0	0.96	3.04	6	●
061-P/M/K	6.1	4.0	0.98	3.02	6	●
062-P/M/K	6.2	4.0	1.00	3.00	6	●
063-P/M/K	6.3	4.0	1.01	2.99	6	●
064-P/M/K	6.4	4.0	1.03	2.97	6	●
065-P/M/K	6.5	4.3	1.18	3.12	6.5	●
066-P/M/K	6.6	4.3	1.20	3.10	6.5	●
067-P/M/K	6.7	4.3	1.22	3.08	6.5	●
068-P/M/K	6.8	4.3	1.23	3.07	6.5	●
069-P/M/K	6.9	4.3	1.25	3.05	6.5	●
070-P/M/K	7.0	4.6	1.01	3.59	7	●
071-P/M/K	7.1	4.6	1.03	3.57	7	●
072-P/M/K	7.2	4.6	1.05	3.55	7	●
073-P/M/K	7.3	4.6	1.06	3.54	7	●
074-P/M/K	7.4	4.6	1.08	3.52	7	●
075-P/M/K	7.5	4.6	1.10	3.50	7	●
076-P/M/K	7.6	4.6	1.12	3.48	7	●
077-P/M/K	7.7	4.6	1.14	3.46	7	●
078-P/M/K	7.8	4.6	1.16	3.44	7	●
079-P/M/K	7.9	4.6	1.17	3.43	7	●
080-P/M/K	8.0	5.4	1.20	4.20	8	●
081-P/M/K	8.1	5.4	1.22	4.18	8	●
082-P/M/K	8.2	5.4	1.24	4.16	8	●
083-P/M/K	8.3	5.4	1.25	4.15	8	●
084-P/M/K	8.4	5.4	1.27	4.13	8	●
085-P/M/K	8.5	5.4	1.29	4.11	8	●
086-P/M/K	8.6	5.4	1.31	4.09	8	●
087-P/M/K	8.7	5.4	1.33	4.07	8	●
088-P/M/K	8.8	5.4	1.35	4.05	8	●
089-P/M/K	8.9	5.4	1.36	4.04	8	●
090-P/M/K	9.0	5.8	1.35	4.45	9	●
091-P/M/K	9.1	5.8	1.37	4.43	9	●
092-P/M/K	9.2	5.8	1.39	4.41	9	●
093-P/M/K	9.3	5.8	1.40	4.40	9	●
094-P/M/K	9.4	5.8	1.42	4.38	9	●

▸ Drill head can be ordered by an application
Order example) Diameter 10.0mm drill head for ISO P application: TCD-100-P TT9080

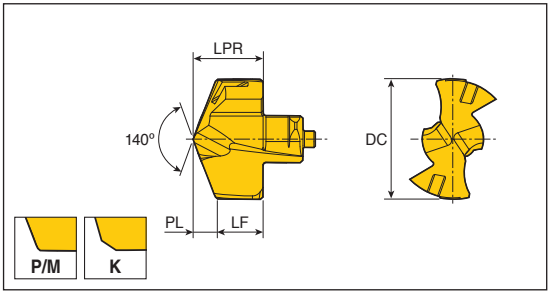
●: Standard items

P Steel M Stainless steel K Cast iron

TCD...P/M/K

DRILLRUSH

Drill heads



Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	TT9080
TCD - 095-P/M/K	9.5	5.8	1.44	4.36	9	●
096-P/M/K	9.6	5.8	1.46	4.34	9	●
097-P/M/K	9.7	5.8	1.48	4.32	9	●
098-P/M/K	9.8	5.8	1.50	4.30	9	●
099-P/M/K	9.9	5.8	1.51	4.29	9	●
100-P/M/K	10.0	6.2	1.50	4.70	10	●
101-P/M/K	10.1	6.2	1.52	4.68	10	●
102-P/M/K	10.2	6.2	1.54	4.66	10	●
103-P/M/K	10.3	6.2	1.55	4.65	10	●
104-P/M/K	10.4	6.2	1.57	4.63	10	●
105-P/M/K	10.5	6.2	1.59	4.61	10	●
106-P/M/K	10.6	6.2	1.61	4.59	10	●
107-P/M/K	10.7	6.2	1.63	4.57	10	●
108-P/M/K	10.8	6.2	1.65	4.55	10	●
109-P/M/K	10.9	6.2	1.66	4.54	10	●
110-P/M/K	11.0	6.6	1.67	4.93	11	●
111-P/M/K	11.1	6.6	1.69	4.91	11	●
112-P/M/K	11.2	6.6	1.71	4.89	11	●
113-P/M/K	11.3	6.6	1.72	4.88	11	●
114-P/M/K	11.4	6.6	1.74	4.86	11	●
115-P/M/K	11.5	6.6	1.76	4.84	11	●
116-P/M/K	11.6	6.6	1.78	4.82	11	●
117-P/M/K	11.7	6.6	1.80	4.80	11	●
118-P/M/K	11.8	6.6	1.82	4.78	11	●
119-P/M/K	11.9	6.6	1.83	4.77	11	●
120-P/M/K	12.0	7.0	1.82	5.18	12	●
121-P/M/K	12.1	7.0	1.84	5.16	12	●
122-P/M/K	12.2	7.0	1.86	5.14	12	●
123-P/M/K	12.3	7.0	1.87	5.13	12	●
124-P/M/K	12.4	7.0	1.89	5.11	12	●
125-P/M/K	12.5	7.0	1.91	5.09	12	●
126-P/M/K	12.6	7.0	1.93	5.07	12	●
127-P/M/K	12.7	7.0	1.95	5.05	12	●
128-P/M/K	12.8	7.0	1.97	5.03	12	●
129-P/M/K	12.9	7.0	1.98	5.02	12	●

▸ Drill head can be ordered by an application
Order example) Diameter 10.0mm drill head for ISO P application: TCD-100-P TT9080

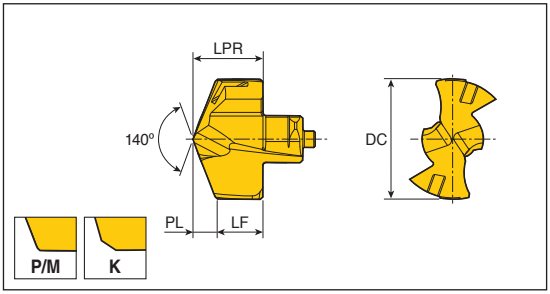
●: Standard items

P Steel M Stainless steel K Cast iron

TaeguTec

TCD...P/M/K

Drill heads

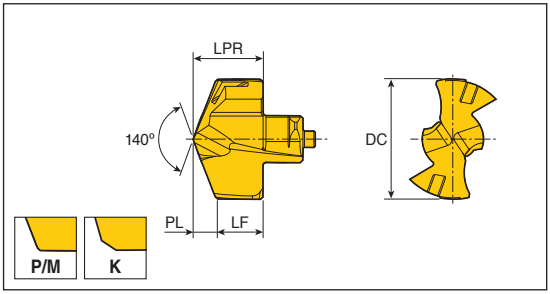


Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	TT9080
TCD - 130-P/M/K	13.0	7.6	1.96	5.64	13	●
131-P/M/K	13.1	7.6	1.98	5.62	13	●
132-P/M/K	13.2	7.6	2.00	5.60	13	●
133-P/M/K	13.3	7.6	2.01	5.59	13	●
134-P/M/K	13.4	7.6	2.03	5.57	13	●
135-P/M/K	13.5	7.6	2.05	5.55	13	●
136-P/M/K	13.6	7.6	2.07	5.53	13	●
137-P/M/K	13.7	7.6	2.09	5.51	13	●
138-P/M/K	13.8	7.6	2.11	5.49	13	●
139-P/M/K	13.9	7.6	2.12	5.48	13	●
140-P/M/K	14.0	8.1	2.12	5.98	14	●
141-P/M/K	14.1	8.1	2.14	5.96	14	●
142-P/M/K	14.2	8.1	2.16	5.94	14	●
143-P/M/K	14.3	8.1	2.17	5.93	14	●
144-P/M/K	14.4	8.1	2.19	5.91	14	●
145-P/M/K	14.5	8.1	2.21	5.89	14	●
146-P/M/K	14.6	8.1	2.23	5.87	14	●
147-P/M/K	14.7	8.1	2.25	5.85	14	●
148-P/M/K	14.8	8.1	2.27	5.83	14	●
149-P/M/K	14.9	8.1	2.28	5.82	14	●
150-P/M/K	15.0	8.7	2.27	6.43	15	●
151-P/M/K	15.1	8.7	2.29	6.41	15	●
152-P/M/K	15.2	8.7	2.31	6.39	15	●
153-P/M/K	15.3	8.7	2.32	6.38	15	●
154-P/M/K	15.4	8.7	2.34	6.36	15	●
155-P/M/K	15.5	8.7	2.36	6.34	15	●
156-P/M/K	15.6	8.7	2.38	6.32	15	●
157-P/M/K	15.7	8.7	2.40	6.30	15	●
158-P/M/K	15.8	8.7	2.42	6.28	15	●
159-P/M/K	15.9	8.7	2.43	6.27	15	●
160-P/M/K	16.0	9.3	2.42	6.88	16	●
161-P/M/K	16.1	9.3	2.44	6.86	16	●
162-P/M/K	16.2	9.3	2.46	6.84	16	●
163-P/M/K	16.3	9.3	2.47	6.83	16	●
164-P/M/K	16.4	9.3	2.49	6.81	16	●

▸ Drill head can be ordered by an application
Order example) Diameter 10.0mm drill head for ISO P application: TCD-100-P TT9080

●: Standard items

P Steel M Stainless steel K Cast iron



Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	TT9080
TCD - 165-P/M/K	16.5	9.3	2.51	6.79	16	●
166-P/M/K	16.6	9.3	2.53	6.77	16	●
167-P/M/K	16.7	9.3	2.55	6.75	16	●
168-P/M/K	16.8	9.3	2.57	6.73	16	●
169-P/M/K	16.9	9.3	2.58	6.72	16	●
170-P/M/K	17.0	9.9	2.59	7.31	17	●
171-P/M/K	17.1	9.9	2.61	7.29	17	●
172-P/M/K	17.2	9.9	2.63	7.27	17	●
173-P/M/K	17.3	9.9	2.64	7.26	17	●
174-P/M/K	17.4	9.9	2.66	7.24	17	●
175-P/M/K	17.5	9.9	2.68	7.22	17	●
176-P/M/K	17.6	9.9	2.70	7.20	17	●
177-P/M/K	17.7	9.9	2.72	7.18	17	●
178-P/M/K	17.8	9.9	2.74	7.16	17	●
179-P/M/K	17.9	9.9	2.75	7.15	17	●
180-P/M/K	18.0	10.5	2.73	7.77	18	●
181-P/M/K	18.1	10.5	2.75	7.75	18	●
182-P/M/K	18.2	10.5	2.77	7.73	18	●
183-P/M/K	18.3	10.5	2.78	7.72	18	●
184-P/M/K	18.4	10.5	2.80	7.70	18	●
185-P/M/K	18.5	10.5	2.82	7.68	18	●
186-P/M/K	18.6	10.5	2.84	7.66	18	●
187-P/M/K	18.7	10.5	2.86	7.64	18	●
188-P/M/K	18.8	10.5	2.88	7.62	18	●
189-P/M/K	18.9	10.5	2.89	7.61	18	●
190-P/M/K	19.0	11.0	2.88	8.12	19	●
191-P/M/K	19.1	11.0	2.90	8.10	19	●
192-P/M/K	19.2	11.0	2.92	8.08	19	●
193-P/M/K	19.3	11.0	2.93	8.07	19	●
194-P/M/K	19.4	11.0	2.95	8.05	19	●
195-P/M/K	19.5	11.0	2.97	8.03	19	●
196-P/M/K	19.6	11.0	2.99	8.01	19	●
197-P/M/K	19.7	11.0	3.01	7.99	19	●
198-P/M/K	19.8	11.0	3.03	7.97	19	●
199-P/M/K	19.9	11.0	3.04	7.96	19	●

▸ Drill head can be ordered by an application
Order example) Diameter 10.0mm drill head for ISO P application: TCD-100-P TT9080

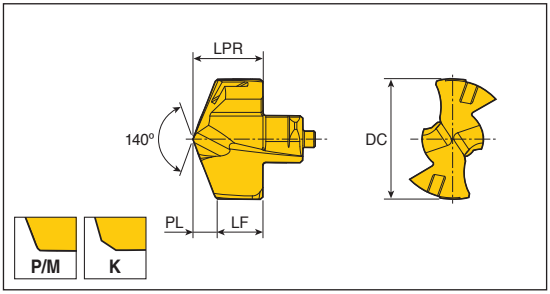
●: Standard items

P Steel M Stainless steel K Cast iron

TCD...P/M/K

DRILLRUSH

Drill heads



Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	TT9080
TCD - 200-P/M/K	20.0	11.6	3.02	8.58	20	●
201-P/M/K	20.1	11.6	3.04	8.56	20	●
202-P/M/K	20.2	11.6	3.06	8.54	20	●
203-P/M/K	20.3	11.6	3.07	8.53	20	●
204-P/M/K	20.4	11.6	3.09	8.51	20	●
205-P/M/K	20.5	11.6	3.11	8.49	20	●
206-P/M/K	20.6	11.6	3.13	8.47	20	●
207-P/M/K	20.7	11.6	3.15	8.45	20	●
208-P/M/K	20.8	11.6	3.17	8.43	20	●
209-P/M/K	20.9	11.6	3.18	8.42	20	●
210-P/M/K	21.0	12.1	3.18	8.92	21	●
211-P/M/K	21.1	12.1	3.20	8.90	21	●
212-P/M/K	21.2	12.1	3.22	8.88	21	●
213-P/M/K	21.3	12.1	3.23	8.87	21	●
214-P/M/K	21.4	12.1	3.25	8.85	21	●
215-P/M/K	21.5	12.1	3.27	8.83	21	●
216-P/M/K	21.6	12.1	3.29	8.81	21	●
217-P/M/K	21.7	12.1	3.31	8.79	21	●
218-P/M/K	21.8	12.1	3.33	8.77	21	●
219-P/M/K	21.9	12.1	3.34	8.76	21	●
220-P/M/K	22.0	12.7	3.24	9.46	22	●
221-P/M/K	22.1	12.7	3.26	9.44	22	●
222-P/M/K	22.2	12.7	3.28	9.42	22	●
223-P/M/K	22.3	12.7	3.29	9.41	22	●
224-P/M/K	22.4	12.7	3.31	9.39	22	●
225-P/M/K	22.5	12.7	3.33	9.37	22	●
226-P/M/K	22.6	12.7	3.35	9.35	22	●
227-P/M/K	22.7	12.7	3.37	9.33	22	●
228-P/M/K	22.8	12.7	3.39	9.31	22	●
229-P/M/K	22.9	12.7	3.40	9.30	22	●
230-P/M/K	23.0	13.3	3.46	9.84	23	●
231-P/M/K	23.1	13.3	3.48	9.82	23	●
232-P/M/K	23.2	13.3	3.50	9.80	23	●
233-P/M/K	23.3	13.3	3.51	9.79	23	●
234-P/M/K	23.4	13.3	3.53	9.77	23	●

▸ Drill head can be ordered by an application
Order example) Diameter 10.0mm drill head for ISO P application: TCD-100-P TT9080

●: Standard items

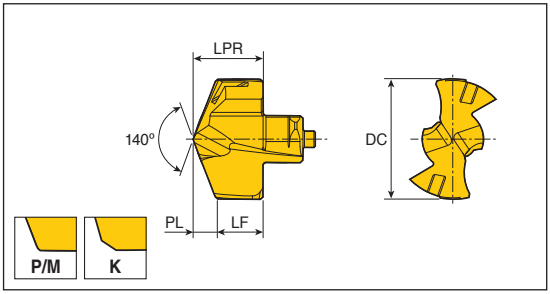
P Steel M Stainless steel K Cast iron

ADVANCE CUTTING TaeguTec

TCD...P/M/K

DRILLRUSH

Drill heads



Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	TT9080
TCD - 235-P/M/K	23.5	13.3	3.55	9.75	23	●
236-P/M/K	23.6	13.3	3.57	9.73	23	●
237-P/M/K	23.7	13.3	3.59	9.71	23	●
238-P/M/K	23.8	13.3	3.61	9.69	23	●
239-P/M/K	23.9	13.3	3.62	9.68	23	●
240-P/M/K	24.0	13.9	3.62	10.28	24	●
241-P/M/K	24.1	13.9	3.64	10.26	24	●
242-P/M/K	24.2	13.9	3.66	10.24	24	●
243-P/M/K	24.3	13.9	3.67	10.23	24	●
244-P/M/K	24.4	13.9	3.69	10.21	24	●
245-P/M/K	24.5	13.9	3.71	10.19	24	●
246-P/M/K	24.6	13.9	3.73	10.17	24	●
247-P/M/K	24.7	13.9	3.75	10.15	24	●
248-P/M/K	24.8	13.9	3.77	10.13	24	●
249-P/M/K	24.9	13.9	3.78	10.12	24	●
250-P/M/K	25.0	14.5	3.80	10.70	25	●
251-P/M/K	25.1	14.5	3.82	10.68	25	●
252-P/M/K	25.2	14.5	3.84	10.66	25	●
253-P/M/K	25.3	14.5	3.85	10.65	25	●
254-P/M/K	25.4	14.5	3.87	10.63	25	●
255-P/M/K	25.5	14.5	3.89	10.61	25	●
256-P/M/K	25.6	14.5	3.91	10.59	25	●
257-P/M/K	25.7	14.5	3.93	10.57	25	●
258-P/M/K	25.8	14.5	3.95	10.55	25	●
259-P/M/K	25.9	14.5	3.96	10.54	25	●

▸ Drill head can be ordered by an application
Order example) Diameter 10.0mm drill head for ISO P application: TCD-100-P TT9080

●: Standard items

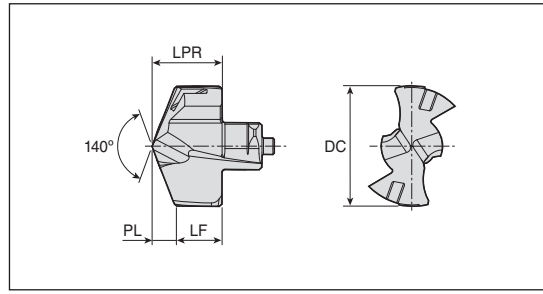
P Steel M Stainless steel K Cast iron

TaeguTec

TCD...N

DRILLRUSH

Drill heads for aluminum alloy



Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	UF10
TCD - 060-N	6.0	4.00	0.96	3.04	6	●
065-N	6.5	4.30	1.18	3.12	6.5	●
070-N	7.0	4.60	1.01	3.59	7	●
075-N	7.5	4.60	1.10	3.50	7	●
080-N	8.0	5.40	1.20	4.20	8	●
085-N	8.5	5.40	1.29	4.11	8	●
090-N	9.0	5.80	1.35	4.45	9	●
095-N	9.5	5.80	1.44	4.36	9	●
100-N	10.0	6.20	1.50	4.70	10	●
105-N	10.5	6.20	1.59	4.61	10	●
110-N	11.0	6.60	1.67	4.93	11	●
115-N	11.5	6.60	1.76	4.84	11	●
120-N	12.0	7.00	1.82	5.18	12	●
125-N	12.5	7.00	1.91	5.09	12	●
130-N	13.0	7.60	1.96	5.64	13	●
135-N	13.5	7.60	2.05	5.55	13	●
140-N	14.0	8.15	2.12	6.03	14	●
145-N	14.5	8.15	2.21	5.94	14	●
150-N	15.0	8.73	2.27	6.46	15	●
155-N	15.5	8.73	2.36	6.37	15	●
160-N	16.0	9.30	2.42	6.88	16	●
165-N	16.5	9.30	2.51	6.79	16	●
170-N	17.0	9.90	2.59	7.31	17	●
175-N	17.5	9.90	2.68	7.22	17	●
180-N	18.0	10.50	2.73	7.77	18	●
185-N	18.5	10.50	2.82	7.68	18	●
190-N	19.0	11.00	2.88	8.12	19	●
195-N	19.5	11.00	2.97	8.03	19	●

▸ SSC: Seat size code

●: Standard items

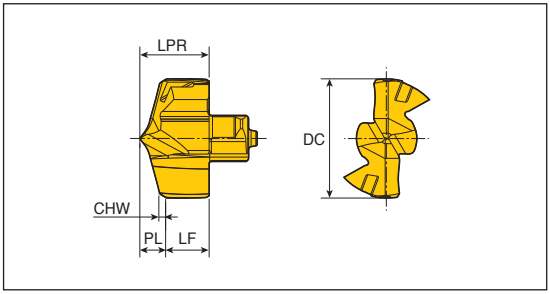
N Nonferrous

ADVANCE CUTTING TaeguTec

TCD-P+

DRILLRUSH

Self-centering drill heads



Designation	Dimension (mm)						Grade
	DC	LPR	PL	LF	CHW	SSC	TT9080
TCD-060-P+	6.0	4.00	1.46	2.54	0.5	6	●
065-P+	6.5	4.30	1.55	2.75	0.5	6.5	●
068-P+	6.8	4.30	1.59	2.71	0.5	6.5	●
070-P+	7.0	4.60	1.64	2.96	0.5	7	●
072-P+	7.2	4.60	1.67	2.93	0.5	7	●
075-P+	7.5	4.60	1.71	2.89	0.5	7	●
080-P+	8.0	5.40	1.81	3.59	0.5	8	●
081-P+	8.1	5.40	1.82	3.58	0.5	8	●
082-P+	8.2	5.40	1.84	3.56	0.5	8	●
083-P+	8.3	5.40	1.85	3.55	0.5	8	●
085-P+	8.5	5.40	1.88	3.52	0.5	8	●
086-P+	8.6	5.40	1.89	3.51	0.5	8	●
087-P+	8.7	5.40	1.90	3.50	0.5	8	●
088-P+	8.8	5.40	1.92	3.48	0.5	8	●
089-P+	8.9	5.40	1.93	3.47	0.5	8	●
090-P+	9.0	5.80	1.98	3.82	0.5	9	●
093-P+	9.3	5.80	2.02	3.78	0.5	9	●
095-P+	9.5	5.80	2.05	3.75	0.5	9	●
096-P+	9.6	5.80	2.06	3.74	0.5	9	●
097-P+	9.7	5.80	2.07	3.73	0.5	9	●
098-P+	9.8	5.80	2.09	3.71	0.5	9	●
099-P+	9.9	5.80	2.10	3.70	0.5	9	●
100-P+	10.0	6.20	2.33	3.87	0.7	10	●
101-P+	10.1	6.20	2.34	3.86	0.7	10	●
102-P+	10.2	6.20	2.36	3.84	0.7	10	●
103-P+	10.3	6.20	2.37	3.83	0.7	10	●
105-P+	10.5	6.20	2.40	3.80	0.7	10	●
106-P+	10.6	6.20	2.41	3.79	0.7	10	●
107-P+	10.7	6.20	2.42	3.78	0.7	10	●
108-P+	10.8	6.20	2.44	3.76	0.7	10	●
109-P+	10.9	6.20	2.45	3.75	0.7	10	●
110-P+	11.0	6.60	2.50	4.10	0.7	11	●
111-P+	11.1	6.60	2.51	4.09	0.7	11	●
112-P+	11.2	6.60	2.53	4.07	0.7	11	●
113-P+	11.3	6.60	2.54	4.06	0.7	11	●

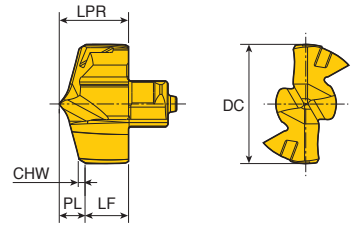
▸ SSC: Seat size code

●: Standard items

TCD-P+

DRILLRUSH

Self-centering drill heads



Designation	Dimension (mm)						Grade
	DC	LPR	PL	LF	CHW	SSC	TT9080
TCD-114-P+	11.4	6.60	2.55	4.05	0.7	11	●
115-P+	11.5	6.60	2.57	4.03	0.7	11	●
116-P+	11.6	6.60	2.58	4.02	0.7	11	●
117-P+	11.7	6.60	2.59	4.01	0.7	11	●
118-P+	11.8	6.60	2.61	3.99	0.7	11	●
119-P+	11.9	6.60	2.62	3.98	0.7	11	●
120-P+	12.0	7.00	2.67	4.33	0.7	12	●
121-P+	12.1	7.00	2.68	4.32	0.7	12	●
122-P+	12.2	7.00	2.70	4.30	0.7	12	●
123-P+	12.3	7.00	2.71	4.29	0.7	12	●
124-P+	12.4	7.00	2.72	4.28	0.7	12	●
125-P+	12.5	7.00	2.74	4.26	0.7	12	●
126-P+	12.6	7.00	2.75	4.25	0.7	12	●
127-P+	12.7	7.00	2.76	4.24	0.7	12	●
128-P+	12.8	7.00	2.78	4.22	0.7	12	●
130-P+	13.0	7.60	2.85	4.75	0.7	13	●
131-P+	13.1	7.60	2.86	4.74	0.7	13	●
132-P+	13.2	7.60	2.88	4.72	0.7	13	●
133-P+	13.3	7.60	2.89	4.71	0.7	13	●
134-P+	13.4	7.60	2.90	4.70	0.7	13	●
135-P+	13.5	7.60	2.92	4.68	0.7	13	●
136-P+	13.6	7.60	2.93	4.67	0.7	13	●
137-P+	13.7	7.60	2.94	4.66	0.7	13	●
138-P+	13.8	7.60	2.96	4.64	0.7	13	●
139-P+	13.9	7.60	2.97	4.63	0.7	13	●
140-P+	14.0	8.15	3.02	5.13	0.7	14	●
141-P+	14.1	8.15	3.03	5.12	0.7	14	●
142-P+	14.2	8.15	3.05	5.10	0.7	14	●
143-P+	14.3	8.15	3.06	5.09	0.7	14	●
144-P+	14.4	8.15	3.07	5.08	0.7	14	●
145-P+	14.5	8.15	3.09	5.06	0.7	14	●
146-P+	14.6	8.15	3.10	5.05	0.7	14	●
147-P+	14.7	8.15	3.11	5.04	0.7	14	●
148-P+	14.8	8.15	3.13	5.02	0.7	14	●
150-P+	15.0	8.73	3.19	5.54	0.7	15	●

▸ SSC: Seat size code

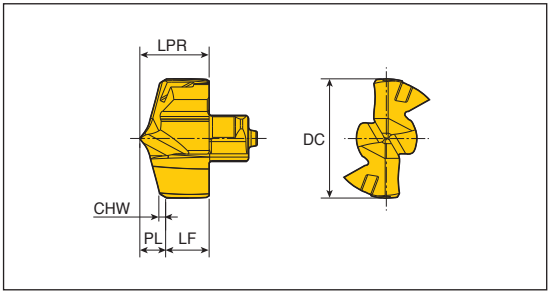
●: Standard items

ADVANCE CUTTING TaeguTec

TCD-P+

DRILLRUSH

Self-centering drill heads



Designation	Dimension (mm)						Grade
	DC	LPR	PL	LF	CHW	SSC	TT9080
TCD-151-P+	15.1	8.73	3.20	5.53	0.7	15	●
152-P+	15.2	8.73	3.22	5.51	0.7	15	●
153-P+	15.3	8.73	3.23	5.50	0.7	15	●
154-P+	15.4	8.73	3.24	5.49	0.7	15	●
155-P+	15.5	8.73	3.26	5.47	0.7	15	●
156-P+	15.6	8.73	3.27	5.46	0.7	15	●
157-P+	15.7	8.73	3.28	5.45	0.7	15	●
158-P+	15.8	8.73	3.30	5.43	0.7	15	●
159-P+	15.9	8.73	3.31	5.42	0.7	15	●
160-P+	16.0	9.30	3.46	5.84	0.81	16	●
161-P+	16.1	9.30	3.47	5.83	0.81	16	●
162-P+	16.2	9.30	3.49	5.81	0.81	16	●
163-P+	16.3	9.30	3.50	5.80	0.81	16	●
164-P+	16.4	9.30	3.51	5.79	0.81	16	●
165-P+	16.5	9.30	3.53	5.77	0.81	16	●
166-P+	16.6	9.30	3.54	5.76	0.81	16	●
167-P+	16.7	9.30	3.55	5.75	0.81	16	●
168-P+	16.8	9.30	3.57	5.73	0.81	16	●
170-P+	17.0	9.90	3.63	6.27	0.81	17	●
171-P+	17.1	9.90	3.64	6.26	0.81	17	●
172-P+	17.2	9.90	3.66	6.24	0.81	17	●
173-P+	17.3	9.90	3.67	6.23	0.81	17	●
174-P+	17.4	9.90	3.68	6.22	0.81	17	●
175-P+	17.5	9.90	3.70	6.20	0.81	17	●
176-P+	17.6	9.90	3.71	6.19	0.81	17	●
177-P+	17.7	9.90	3.72	6.18	0.81	17	●
178-P+	17.8	9.90	3.74	6.16	0.81	17	●
179-P+	17.9	9.90	3.75	6.15	0.81	17	●
180-P+	18.0	10.50	3.81	6.69	0.81	18	●
181-P+	18.1	10.50	3.82	6.68	0.81	18	●
182-P+	18.2	10.50	3.84	6.66	0.81	18	●
183-P+	18.3	10.50	3.85	6.65	0.81	18	●
185-P+	18.5	10.50	3.88	6.62	0.81	18	●
186-P+	18.6	10.50	3.89	6.61	0.81	18	●
187-P+	18.7	10.50	3.90	6.60	0.81	18	●
188-P+	18.8	10.50	3.92	6.58	0.81	18	●

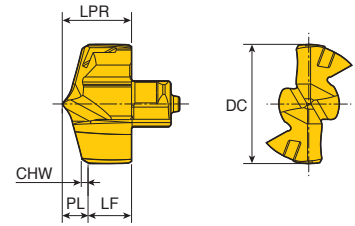
▸ SSC: Seat size code

●: Standard items

TCD-P+

DRILLRUSH

Self-centering drill heads



Designation	Dimension (mm)						Grade
	DC	LPR	PL	LF	CHW	SSC	TT9080
TCD-190-P+	19.0	11.00	3.98	7.02	0.81	19	●
191-P+	19.1	11.00	3.99	7.01	0.81	19	●
192-P+	19.2	11.00	4.01	6.99	0.81	19	●
193-P+	19.3	11.00	4.02	6.98	0.81	19	●
194-P+	19.4	11.00	4.03	6.97	0.81	19	●
195-P+	19.5	11.00	4.05	6.95	0.81	19	●
196-P+	19.6	11.00	4.06	6.94	0.81	19	●
197-P+	19.7	11.00	4.07	6.93	0.81	19	●
198-P+	19.8	11.00	4.09	6.91	0.81	19	●
199-P+	19.9	11.00	4.10	6.90	0.81	19	●
200-P+	20.0	11.60	4.15	7.45	0.81	20	●
201-P+	20.1	11.60	4.16	7.44	0.81	20	●
202-P+	20.2	11.60	4.18	7.42	0.81	20	●
205-P+	20.5	11.60	4.22	7.38	0.81	20	●
206-P+	20.6	11.60	4.23	7.37	0.81	20	●
207-P+	20.7	11.60	4.24	7.36	0.81	20	●
210-P+	21.0	12.18	4.32	7.86	0.81	21	●
212-P+	21.2	12.18	4.35	7.83	0.81	21	●
213-P+	21.3	12.18	4.36	7.82	0.81	21	●
214-P+	21.4	12.18	4.37	7.81	0.81	21	●
215-P+	21.5	12.18	4.39	7.79	0.81	21	●
218-P+	21.8	12.18	4.43	7.75	0.81	21	●
220-P+	22.0	12.76	4.50	8.26	0.81	22	●
225-P+	22.5	12.76	4.57	8.19	0.81	22	●
229-P+	22.9	12.76	4.62	8.14	0.81	22	●
230-P+	23.0	13.33	4.67	8.66	0.81	23	●
235-P+	23.5	13.33	4.74	8.59	0.81	23	●
240-P+	24.0	13.90	4.84	9.06	0.81	24	●
245-P+	24.5	13.90	4.91	8.99	0.81	24	●
250-P+	25.0	14.50	5.01	9.49	0.81	25	●
254-P+	25.4	14.50	5.06	9.44	0.81	25	●
255-P+	25.5	14.50	5.08	9.42	0.81	25	●
256-P+	25.6	14.50	5.09	9.41	0.81	25	●
257-P+	25.7	14.50	5.10	9.40	0.81	25	●
258-P+	25.8	14.50	5.12	9.38	0.81	25	●
259-P+	25.9	14.50	5.13	9.37	0.81	25	●

▸ SSC: Seat size code

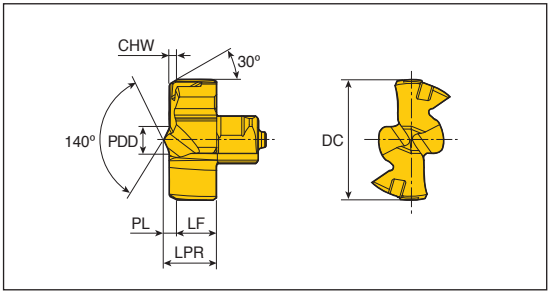
●: Standard items

ADVANCE CUTTING
TaeguTec

TCD...F

DRILLRUSH

Drill heads for flat bottom hole



Designation	Dimension (mm)							Grade
	DC	PDD	LPR	PL	LF	CHW	SSC	TT9080
TCD - 080-F	8.0	2.33	4.4	1.09	3.3	0.7	8	●
085-F	8.5	2.33	4.4	1.09	3.3	0.7	8	●
090-F	9.0	2.29	4.6	1.11	3.5	0.7	9	●
095-F	9.5	2.29	4.6	1.11	3.5	0.7	9	●
100-F	10.0	2.44	4.9	1.17	3.7	0.7	10	●
105-F	10.5	2.44	4.9	1.17	3.7	0.7	10	●
110-F	11.0	3.09	5.1	1.25	3.8	0.7	11	●
115-F	11.5	3.09	5.1	1.25	3.8	0.7	11	●
120-F	12.0	2.95	5.4	1.26	4.1	0.7	12	●
125-F	12.5	2.95	5.4	1.26	4.1	0.7	12	●
130-F	13.0	3.04	5.7	1.30	4.4	0.7	13	●
135-F	13.5	3.04	5.7	1.30	4.4	0.7	13	●
140-F	14.0	3.30	6.1	1.31	4.8	0.7	14	●
145-F	14.5	3.30	6.1	1.31	4.8	0.7	14	●
150-F	15.0	3.54	6.6	1.35	5.23	0.7	15	●
155-F	15.5	3.54	6.6	1.35	5.23	0.7	15	●
160-F	16.0	3.74	7.0	1.39	5.6	0.7	16	●
165-F	16.5	3.74	7.0	1.39	5.6	0.7	16	●
170-F	17.0	3.75	7.3	1.40	5.9	0.7	17	●
175-F	17.5	3.75	7.3	1.40	5.9	0.7	17	●
180-F	18.0	3.85	7.6	1.42	6.18	0.7	18	●
185-F	18.5	3.85	7.6	1.42	6.18	0.7	18	●
190-F	19.0	3.86	7.9	1.44	6.5	0.7	19	●
195-F	19.5	3.86	7.9	1.44	6.5	0.7	19	●
200-F	20.0	6.76	9.3	1.77	7.5	0.7	20	●
205-F	20.5	6.76	9.3	1.77	7.5	0.7	20	●
210-F	21.0	6.98	9.7	1.79	7.9	0.7	21	●
215-F	21.5	6.98	9.7	1.79	7.9	0.7	21	●
220-F	22.0	7.42	10.0	1.81	8.2	0.7	22	●
225-F	22.5	7.42	10.0	1.81	8.2	0.7	22	●
230-F	23.0	7.60	10.4	1.83	8.6	0.7	23	●
235-F	23.5	7.60	10.4	1.83	8.6	0.7	23	●
240-F	24.0	8.13	10.9	1.86	9.0	0.7	24	●
245-F	24.5	8.13	10.9	1.86	9.0	0.7	24	●
250-F	25.0	8.16	11.3	1.89	9.4	0.7	25	●

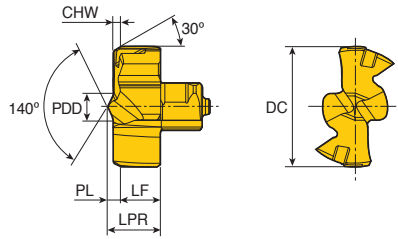
▸ SSC: Seat size code

●: Standard items

TCD...F

DRILLRUSH

Drill heads for flat bottom hole



Designation	Dimension (mm)							Grade
	DC	PDD	LPR	PL	LF	CHW	SSC	TT9080
TCD - 254-F	25.4	8.16	11.3	1.89	9.4	0.7	25	●
255-F	25.5	8.16	11.3	1.89	9.4	0.7	25	●

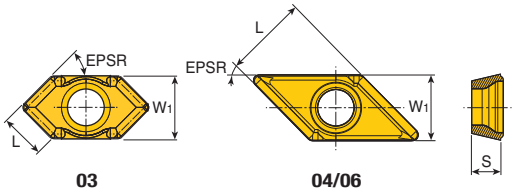
▸ SSC: Seat size code

●: Standard items

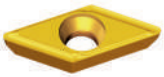
ADVANCE CUTTING
TaeguTec

AOMT

Chamfering inserts for pre-thread hole



Size	Dimension (mm)			
	W1	L	S	EPSR
03-C30	4.0	4.00	1.59	30
03-C45	4.0	2.80	1.59	45
04-C45	3.6	5.20	1.80	45
06-C45	4.5	5.66	1.96	45

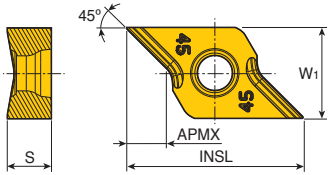
Insert	Designation	Coated						Uncoated			
		TT9080	TT9030	TT8020	TT6030	TT9300	TT7400	K10			
	AOMT 030204-C30	●									
	030204-C45	●									
	**AOMT 040204-C45**	●									
	060204-C45	●									

●: Standard items

D68

CRNG 0802-45CD

Chamfering inserts for chamfering ring



Size	Dimension (mm)			
	W1	INSL	S	APMX
08	7.5	14.80	3.65	3.3

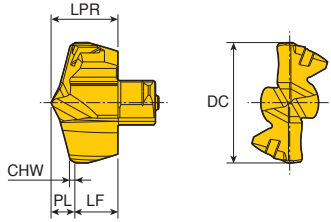
Insert	Designation	Coated						Uncoated			
		TT9080	TT9030	TT8020	TT6030	TT9300	TT7400	K10			
	CRNG 0802-45CD	●									

●: Standard items

D69

TCD...P-CO+

Drill heads



Designation	Dimension (mm)						Grade
	DC	LPR	PL	LF	CHW	SSC	TT9080
TCD-159-P-CO+	15.9	8.73	3.17	5.56	0.7	15	●
169-P-CO+	16.9	9.30	3.34	5.96	0.81	16	●
179-P-CO+	17.9	9.90	3.50	6.40	0.81	17	●
189-P-CO+	18.9	10.50	3.66	6.84	0.81	18	●
199-P-CO+	19.9	11.00	3.82	7.18	0.81	19	●
209-P-CO+	20.9	11.60	3.98	7.62	0.81	20	●
219-P-CO+	21.9	12.18	4.15	8.03	0.81	21	●
229-P-CO+	22.9	12.76	4.31	8.45	0.81	22	●
239-P-CO+	23.9	13.33	4.48	8.85	0.81	23	●
249-P-CO+	24.9	13.90	4.64	9.26	0.81	24	●
259-P-CO+	25.9	14.50	4.81	9.69	0.81	25	●

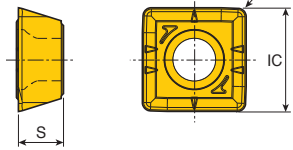
D75-D76

▸ SSC: Seat size code

●: Standard items

SPGX...DW

Inserts



Size	Dimension (mm)			
	IC	S	RE	
06	6.07	2.38	0.4	
07	8.02	3.97	0.8	
09	9.91	4.30	0.8	
11	11.62	4.80	0.8	
14	14.41	5.20	1.2	

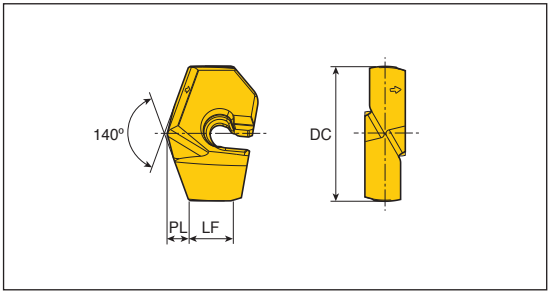
Insert	Designation	Coated								Uncoated			
		TT9080	TT8020	TT9300	TT9030	TT6030	TT7400			K10			
	SPGX 060204 DW	●											
	07T308 DW	●											
	090408 DW	●											
	110408 DW	●											
	140512 DW	●											

●: Standard items

D75-D76

LCD...-P

Drill heads



Designation	Dimension (mm)				Grade
	DC	PL	LF	SSC	TT9080
LCD- 200-P	20.0	3.11	6.54	20	●
205-P	20.5	3.20	6.45	20	●
210-P	21.0	3.29	6.36	21	●
215-P	21.5	3.38	6.27	21	●
220-P	22.0	3.42	7.12	22	●
225-P	22.5	3.51	7.03	22	●
230-P	23.0	3.60	6.94	23	●
235-P	23.5	3.69	6.85	23	●
240-P	24.0	3.73	7.03	24	●
245-P	24.5	3.82	6.94	24	●
250-P	25.0	3.91	6.85	25	●
255-P	25.5	4.00	6.76	25	●
260-P	26.0	4.04	7.51	26	●
265-P	26.5	4.13	7.42	26	●
270-P	27.0	4.22	7.33	27	●
275-P	27.5	4.31	7.24	27	●
280-P	28.0	4.35	7.39	28	●
285-P	28.5	4.44	7.30	28	●
290-P	29.0	4.53	7.21	29	●
295-P	29.5	4.62	7.12	29	●
300-P	30.0	4.67	9.47	30	●
305-P	30.5	4.76	9.38	30	●
310-P	31.0	4.85	9.29	31	●
315-P	31.5	4.94	9.20	31	●
320-P	32.0	4.98	9.55	32	●
325-P	32.5	5.07	9.46	32	●
330-P	33.0	5.16	9.37	33	●
335-P	33.5	5.25	9.28	33	●
340-P	34.0	5.34	9.19	34	●
345-P	34.5	5.44	9.10	34	●
350-P	35.0	5.44	11.12	35	●
355-P	35.5	5.53	11.03	35	●
360-P	36.0	5.62	10.94	36	●
365-P	36.5	5.71	10.85	36	●
370-P	37.0	5.80	10.76	37	●

D80-D82

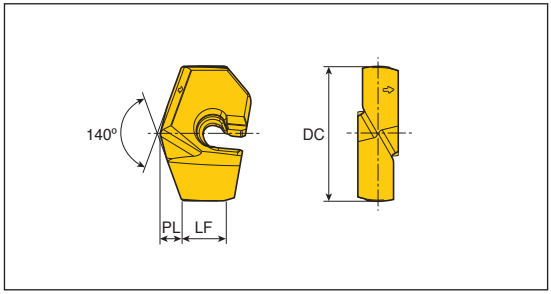
▸ SSC: Seat size code

●: Standard items

LCD...-P

SPADERUSH

Drill heads



Designation	Dimension (mm)				Grade
	DC	PL	LF	SSC	TT9080
LCD- 375-P	37.5	5.90	10.67	37	●
380-P	38.0	5.91	11.09	38	●
385-P	38.5	6.00	11.00	38	●
390-P	39.0	6.09	10.91	39	●
395-P	39.5	6.18	10.82	39	●
400-P	40.0	6.27	10.73	40	●
405-P	40.5	6.37	10.64	40	●
410-P	41.0	6.46	10.54	40	●

D80-D82

▸ SSC: Seat size code

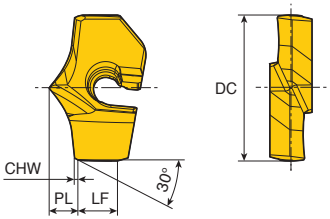
●: Standard items

ADVANCE CUTTING TaeguTec

LCD...-P+

SPADERUSH

Self-centering drill head



Designation	Dimension (mm)					Grade
	DC	PL	LF	CHW	SSC	TT9080
LCD- 200-P+	20.0	4.55	5.83	0.86	20	●
205-P+	20.5	4.58	5.60	0.86	20	●
210-P+	21.0	4.60	5.36	0.86	21	●
215-P+	21.5	4.63	5.13	0.86	21	●
220-P+	22.0	4.92	6.21	0.86	22	●
225-P+	22.5	4.95	5.98	0.86	22	●
230-P+	23.0	4.97	5.74	0.86	23	●
235-P+	23.5	5.00	5.51	0.86	23	●
240-P+	24.0	5.30	5.93	0.86	24	●
245-P+	24.5	5.33	5.70	0.86	24	●
250-P+	25.0	5.35	5.46	0.86	25	●
255-P+	25.5	5.38	5.23	0.86	25	●
260-P+	26.0	5.67	7.39	0.86	26	●
265-P+	26.5	5.70	7.16	0.86	26	●
270-P+	27.0	5.72	6.92	0.86	27	●
275-P+	27.5	5.75	6.69	0.86	27	●
280-P+	28.0	5.73	7.26	0.86	28	●
285-P+	28.5	5.76	7.03	0.86	28	●
290-P+	29.0	5.78	6.79	0.86	29	●
295-P+	29.5	5.81	6.56	0.86	29	●
300-P+	30.0	6.08	9.17	0.86	30	●
305-P+	30.5	6.11	8.94	0.86	30	●
310-P+	31.0	6.13	8.70	0.86	31	●
315-P+	31.5	6.16	8.47	0.86	31	●
320-P+	32.0	6.43	9.18	0.86	32	●
325-P+	32.5	6.46	8.95	0.86	32	●
330-P+	33.0	6.48	8.71	0.86	33	●
335-P+	33.5	6.51	8.48	0.86	33	●
340-P+	34.0	6.53	8.24	0.86	34	●
345-P+	34.5	6.56	8.01	0.86	34	●

D80-D82

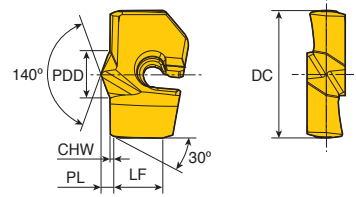
▸ SSC: Seat size code

●: Standard items

LCD...-F

SPADERUSH

Drill heads for flat bottom hole



Designation	Dimension (mm)						Grade
	DC	PL	LF	CHW	SSC	PDD	TT9080
LCD - 200-F	20.0	2.18	7.63	0.7	20	8.3	●
205-F	20.5	2.18	7.63	0.7	20	8.3	●
210-F	21.0	2.18	7.63	0.7	21	8.3	●
215-F	21.5	2.18	7.63	0.7	21	8.3	●
220-F	22.0	2.38	8.17	0.7	22	9.0	●
225-F	22.5	2.38	8.17	0.7	22	9.0	●
230-F	23.0	2.38	8.17	0.7	23	9.0	●
235-F	23.5	2.38	8.17	0.7	23	9.0	●
240-F	24.0	2.52	8.10	0.7	24	10.0	●
245-F	24.5	2.52	8.10	0.7	24	10.0	●
250-F	25.0	2.52	8.10	0.7	25	10.0	●
255-F	25.5	2.52	8.10	0.7	25	10.0	●
260-F	26.0	2.48	9.84	0.7	26	10.5	●
265-F	26.5	2.48	9.84	0.7	26	10.5	●
270-F	27.0	2.48	9.84	0.7	27	10.5	●
275-F	27.5	2.48	9.84	0.7	27	10.5	●
280-F	28.0	2.72	9.50	0.7	28	11.6	●
285-F	28.5	2.72	9.50	0.7	28	11.6	●
290-F	29.0	2.72	9.50	0.7	29	11.6	●
295-F	29.5	2.72	9.50	0.7	29	11.6	●
300-F	30.0	2.80	11.63	0.7	30	12.4	●
305-F	30.5	2.80	11.63	0.7	30	12.4	●
310-F	31.0	2.80	11.63	0.7	31	12.4	●
315-F	31.5	2.80	11.63	0.7	31	12.4	●
320-F	32.0	3.13	11.59	0.7	32	13.6	●
325-F	32.5	3.13	11.59	0.7	32	13.6	●
330-F	33.0	3.13	11.59	0.7	33	13.6	●
335-F	33.5	3.13	11.59	0.7	33	13.6	●
340-F	34.0	3.13	11.59	0.7	34	13.6	●
345-F	34.5	3.13	11.59	0.7	34	13.6	●
350-F	35.0	3.31	13.20	0.7	35	14.6	●
355-F	35.5	3.31	13.20	0.7	35	14.6	●
360-F	36.0	3.31	13.20	0.7	36	14.6	●
365-F	36.5	3.31	13.20	0.7	36	14.6	●
370-F	37.0	3.31	13.20	0.7	37	14.6	●

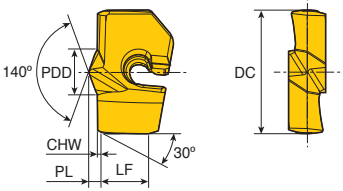
▸ SSC: Seat size code

●: Standard items

LCD...-F

SPADERUSH

Drill heads for flat bottom hole



Designation	Dimension (mm)						Grade
	DC	PL	LF	CHW	SSC	PDD	TT9080
LCD - 375-F	37.5	3.31	13.20	0.7	37	14.6	●
380-F	38.0	3.49	13.32	0.7	38	15.9	●
385-F	38.5	3.49	13.32	0.7	38	15.9	●
390-F	39.0	3.49	13.32	0.7	39	15.9	●
395-F	39.5	3.49	13.32	0.7	39	15.9	●
400-F	40.0	3.49	13.32	0.7	40	15.9	●
405-F	40.5	3.49	13.32	0.7	40	15.9	●
410-F	41.0	3.49	13.32	0.7	40	15.9	●

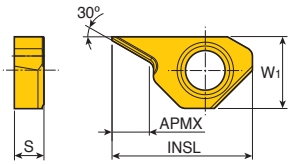
▸ SSC: Seat size code

●: Standard items

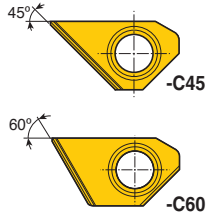
XCGT ...-C

T-CHAMFER

Chamfering inserts for T-CHAMFER holder



-C30



Size	Dimension (mm)			
	W1	INSL	S	APMX
06-C30	6.18	12.3	2.8	3.49
09-C30	8.50	16.0	3.3	4.43
06-C45	6.18	12.3	2.8	5.89
09-C45	8.50	16.0	3.3	8.07
06-C60	6.18	12.3	2.8	3.43
09-C60	8.50	16.0	3.3	4.78

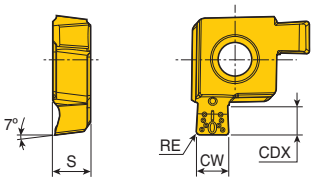
Insert	Designation	Coated						Uncoated
		TT9080	TT9030	TT8020	TT6030	TT9300	TT7400	K10
	XCGT 0603-C30	●						
	0903-C30	●						
	XCGT 0603-C45	●						
	0903-C45	●						
	XCGT 0603-C60	●						
	0903-C60	●						

●: Standard items

XCMT..R-GV

TOPCAP

Inserts



Size	Dimension (mm)			
	CW	CDX	S	RE
05	2.0	1.8	2.27	0.2
06	2.0	2.0	2.62	0.2
07	2.5	2.0	3.42	0.2
08	2.5	2.5	3.50	0.2
10	3.0	3.0	4.37	0.3
13	3.5	3.5	5.24	0.3
17	4.0	4.0	6.06	0.4

• For grooving

Insert	Designation	Coated									Uncoated								
		TT9080	TT8020	TT9300	TT9030	TT6030	TT7400				K10								
	XCMT 05R-200020GV	●	●																
	06R-200020GV	●	●																
	07R-250020GV	●	●																
	08R-250020GV	●	●																
	10R-300030GV	●	●																
	13R-350030GV	●	●																
	17R-400040GV	●	●																

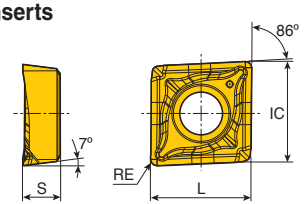
▸ Grooving insert is available only for right handed type

●: Standard items

XCGT...TA

TOPCAP

Inserts



XCGT 0401

Size	Dimension (mm)			
	IC	L	S	RE
04	4.4	6.4	1.70	0.4
05	5.6	5.6	2.10	0.4
06	6.4	6.4	2.38	0.4
07	7.5	7.5	3.18	0.4
08	8.4	8.4	3.18	0.4
10	10.5	10.5	3.97	0.4
13	13.4	13.4	4.76	0.4
17	17.5	17.5	5.56	0.8

• For aluminum alloy

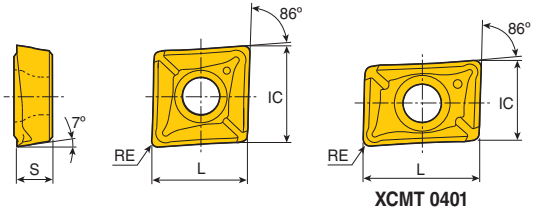
Insert	Designation	Turning		Drilling	Coated						Uncoated								
		ap (mm)	Feed (mm/rev)	Feed (mm/rev)	TT9080	TT8020	TT9300	TT9030	TT6030	TT7400	K10								
Right-hand shown (XCGT 0401)	**XCGT 040104R TA**	0.2-1.8	0.02-0.15	0.02-0.09							●								
	040104L TA	0.2-1.8	0.02-0.15	0.02-0.09							●								
	050204 TA	0.2-2.2	0.03-0.18	0.02-0.11							●								
	060204 TA	0.3-2.5	0.03-0.20	0.03-0.12							●								
	070304 TA	0.4-2.8	0.05-0.22	0.03-0.13							●								
	080304 TA	0.4-3.2	0.06-0.25	0.03-0.13							●								
	10T304 TA	0.5-3.5	0.06-0.30	0.03-0.13							●								
	130404 TA	0.6-4.3	0.08-0.33	0.03-0.13							●								
	170508 TA	0.7-5.3	0.10-0.38	0.03-0.13							●								

●: Standard items

XCMT...TC

TOPCAP

Inserts



XCMT 0401

Size	Dimension (mm)			
	IC	L	S	RE
04	4.4	6.4	1.70	0.4
05	5.6	5.6	2.10	0.4
06	6.4	6.4	2.38	0.4
07	7.5	7.5	3.18	0.4
08	8.4	8.4	3.18	0.4
10	10.5	10.5	3.97	0.4/0.8
13	13.4	13.4	4.76	0.4/0.8
17	17.4	17.4	5.56	0.8

• For drilling, boring and turning

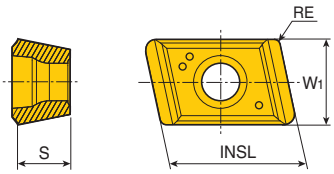
Insert	Designation	Turning		Drilling	Coated						Uncoated
		ap (mm)	Feed (mm/rev)	Feed (mm/rev)	TT9080	TT8020	TT9300	TT9030	TT6030	TT7400	K10
Right-hand shown (XCMT 0401)	**XCMT 040104R TC**	0.2-1.8	0.02-0.15	0.02-0.09	●	●		●			
	040104L TC	0.2-1.8	0.02-0.15	0.02-0.09	●	●		●			
	050204 TC	0.2-2.2	0.03-0.18	0.02-0.11	●	●		●			
	060204 TC	0.3-2.5	0.03-0.20	0.03-0.12	●	●		●			
	070304 TC	0.4-2.8	0.05-0.22	0.03-0.13	●	●		●			
	080304 TC	0.4-3.2	0.06-0.25	0.03-0.13	●	●		●			
	10T304 TC	0.5-3.5	0.06-0.30	0.03-0.13	●	●		●			
	10T308 TC	0.5-3.5	0.06-0.30	0.03-0.13	●	●		●			
	130404 TC	0.6-4.3	0.08-0.33	0.03-0.13	●	●		●			
	130408 TC	0.6-4.3	0.08-0.33	0.03-0.13	●	●		●			
	170508 TC	0.7-5.3	0.10-0.38	0.03-0.13	●	●		●			

●: Standard items

D51-D53

NPHT...R-G-P/R-HF-P

Inserts for TBTA-FB & TRGD3



Size	Dimension (mm)			
	W1	INSL	S	RE
06	6.0	8	3.0	0.4/0.8
08	7.5	10	4.0	0.4/0.8
09	9.0	10	4.0	0.4/0.8
11	11.0	10	4.0	0.4/0.8
13	13.0	10	4.0	0.4/0.8

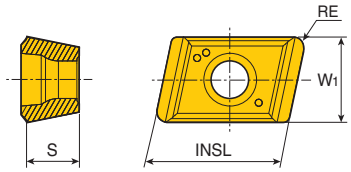
Insert	Designation	Pocket			Coated							Uncoated
		Center	Inner	Outer	TT9030	TT9130	TT8125	TT7200	TT6130	TT6020	TT5100	TT5030	K10
	NPHT 060304R-G-P			●	●				●			●	
	060308R-G-P			●	●	●			●			●	
	060308R-HF-P			●	●	●			●			●	
	080404R-G-P			●	●				●			●	
	080408R-G-P			●	●	●			●			●	
	080408R-HF-P			●	●	●			●			●	
	090404R-G-P			●	●				●			●	
	090408R-G-P			●	●	●			●			●	
	090408R-HF-P			●	●	●			●			●	
	110404R-G-P			●	●				●			●	
	110408R-G-P			●	●	●			●			●	
	110408R-HF-P			●	●	●			●			●	
	130404R-G-P			●	●				●			●	
	130408R-G-P			●	●	●			●			●	
	130404R-HF-P			●	●	●			●			●	

- **-G-* : General chipbreaker type
- **-HF-*: High feed chipbreaker type

●: Standard items

NPMT...L-G-C/L-HF-C

Inserts for TBTA-FB & TRGD3



Size	Dimension (mm)			
	W1	INSL	S	RE
06	5.5	8	3.0	0.8
07	6.5	10	4.0	0.8
08	8.0	10	4.0	0.8
10	10.0	10	4.0	0.8
13	12.5	10	4.0	0.8

Insert	Designation	Pocket			Coated							Uncoated
		Center	Inner	Outer	TT9030	TT9130	TT8125	TT7200	TT6130	TT6020	TT5100	TT5030	K10
	NPMT 060308L-G-C	●			●	●	●		●			●	
	060308L-HF-C	●			●	●	●		●			●	
	070408L-G-C	●			●	●	●		●			●	
	070408L-HF-C	●			●	●	●		●			●	
	080408L-G-C	●			●	●	●		●			●	
	080408L-HF-C	●			●	●	●		●			●	
	100408L-G-C	●			●	●	●		●			●	
	100408L-HF-C	●			●	●	●		●			●	
	130408L-G-C	●			●	●	●		●			●	
	130408L-HF-C	●			●	●	●		●			●	

D164-D169 D149

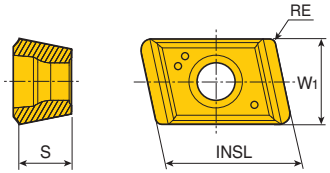
▸ **-G-* : General chipbreaker type
▸ **-HF-*: High feed chipbreaker type

●: Standard items

ADVANCE CUTTING TaeguTec

NPMT...R-G-I/R-HF-I

Inserts for TBTA-FB & TRGD3



Size	Dimension (mm)			
	W1	INSL	S	RE
06	5.5	8	3.0	0.4
07	6.5	10	4.0	0.4
08	8.0	10	4.0	0.4
10	10.0	10	4.0	0.4
13	12.5	10	4.0	0.4

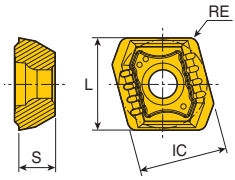
Insert	Designation	Pocket			Coated							Uncoated
		Center	Inner	Outer	TT9030	TT9130	TT8125	TT7200	TT6130	TT6020	TT5100	TT5030	K10
	NPMT 060304R-G-I		●		●	●	●		●			●	
	060304R-HF-I		●		●	●	●		●			●	
	070404R-G-I		●		●	●	●		●			●	
	070404R-HF-I		●		●	●	●		●			●	
	080404R-G-I		●		●	●	●		●			●	
	080404R-HF-I		●		●	●	●		●			●	
	100404R-G-I		●		●	●	●		●			●	
	100404R-HF-I		●		●	●	●		●			●	
	130404R-G-I		●		●	●	●		●			●	
	130404R-HF-I		●		●	●	●		●			●	

- **-G- : General chipbreaker type
- **-HF-: High feed chipbreaker type

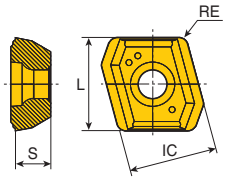
●: Standard items

NPMX...R-B/R-G

Inserts for TBTA...3/5/7



R-B



R-G

Size	Dimension (mm)			
	IC	L	S	RE
08	8.0	8.36	3.18	0.8

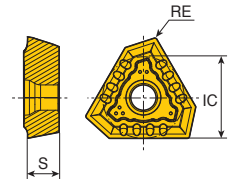
Insert	Designation	Pocket			Coated							Uncoated	
		Center	Inner	Outer	TT9030	TT8125	TT7200	TT6130	TT6020	TT5100	TT5030	K10	
	NPMX 080308R-B	●	●	●	●	●		●					
	080308R-G	●	●	●	●	●			●	●			

- G: General chipbreaker
- B: Good chip control for heat-resistant alloy

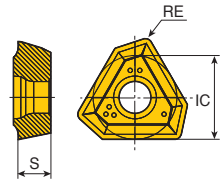
●: Standard items

TPMX...R-B/R-G

Inserts for TBTA...3/5/7 & TBTA-R



R-B



R-G

Size	Dimension (mm)		
	IC	S	RE
140304 R-B	8.45	3.5	0.4
140308 R-B/R-G	8.45	3.5	0.8
170404 R-B	10.30	4.0	0.4
170408 R-B/R-G	10.30	4.0	0.8
240504 R-B	14.20	5.5	0.4
240512 R-B/R-G	14.20	5.5	1.2
280708 R-B	17.00	7.5	0.8
280716 R-B/R-G	17.00	7.5	1.6

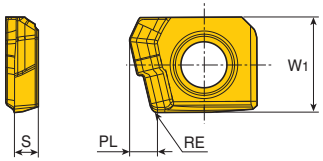
Insert	Designation	Pocket			Coated								Uncoated	
		Center	Inner	Outer	TT9030	TT9130	TT8125	TT7200	TT6130	TT6020	TT5100	TT5030	K10	
	TPMX 140304R-B	●	●	●	●		●		●					
	140308R-B	●	●	●		●						●		
	140308R-G	●	●	●	●	●	●	●		●	●	●		
	170404R-B	●	●	●	●		●		●					
	170408R-B	●	●	●		●						●		
	170408R-G	●	●	●	●	●	●	●		●	●	●		
	240504R-B	●	●	●	●		●		●					
	240512R-B	●	●	●		●						●		
	240512R-G	●	●	●	●	●	●	●		●	●	●		
	280708R-B	●	●	●	●		●		●					
	280716R-B	●	●	●		●						●		
	280716R-G	●	●	●	●	●	●	●		●	●	●		

- G: General chipbreaker
- B: Good chip control for heat-resistant alloy

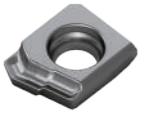
●: Standard items

ZSGT

Inserts for TRGD



Size	Dimension (mm)			
	W_1	RE	PL	S
04	4.80	0.4	1.2	1.5
05	5.30	0.4	1.1	1.5
06	6.00	0.4	1.8	1.5

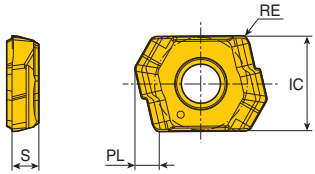
Insert	Designation	Coated							Uncoated		
		TT9030	TT9130	TT8125	TT7200	TT6130	TT6020	TT5100	TT5030	K10	
	**ZSGT 040104 RS**		●								
	050104 RS		●								
	060204 RS		●								

D145-D148

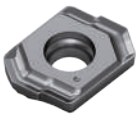
●: Standard items

LOGT

Inserts for TRGD / TRGDL



Size	Dimension (mm)			
	IC	RE	PL	S
06	7.00	0.4	1.8	2.0

Insert	Designation	Coated							Uncoated		
		TT9030	TT9130	TT8125	TT7200	TT6130	TT6020	TT5100	TT5030	K10	
	**LOGT 060204 RS**	●	●								

D145-D152

●: Standard items

TOGT…RS/GF

Inserts for TBTA-TR & TRGD

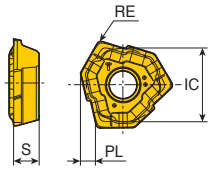


Fig.1

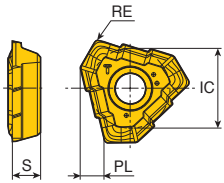


Fig.2

Size	Dimension (mm)			
	IC	PL	S	RE
07	7.69	2.0	2.3	0.4
08	8.32	2.2	2.8	0.5
09	8.55	3.0	3.0	0.5
10	9.23	3.2	3.3	0.5
11	10.40	3.4	3.8	0.5
12	11.59	3.7	4.3	0.5
13	12.85	4.6	4.8	0.8
14	16.85	5.4	5.3	1.0

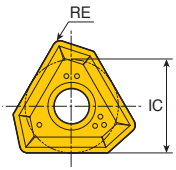
Insert	Designation	Fig.	Coated						Uncoated	
			TT9030	TT9130	TT7200	TT6130	TT6020	TT5100	TT5030	K10
	TOGT 070304 RS	1	●	●						
	070304 GF	1	●							
	080305 RS	1	●	●						
	080305 GF	1	●							
	090305 RS	2	●	●						
	090305 GF	2	●							
	100305 RS	2	●	●						
	100305 GF	2	●							
	110405 RS	2	●	●						
	110405 GF	2	●							
	120405 RS	2	●	●						
	120405 GF	2	●							
	130408 RS	2	●							
	130408 GF	2	●							
	140510 RS	2	●							

- RS: First choice for general purpose
- GF: Exotic materials

●: Standard items

TPMX...LG

Inserts for TBTA-R



Size	Dimension (mm)			
	IC	S	RE	
14	8.45	3.5	0.8	
17	10.30	4.0	0.8	
24	14.20	5.5	1.2	

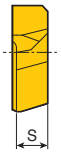
Insert	Designation	Pocket			Coated							Uncoated	
		Center	Inner	Outer	TT9030	TT9130	TT8125	TT7200	TT6130	TT6020	TT5100	TT5030	K10
	TPMX 140308 LG			●	●							●	
	170408 LG			●	●	●				●		●	
	240512 LG			●	●	●				●		●	

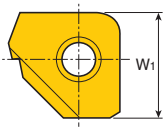
●: Standard items

D170-D175

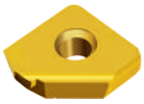
XPMT...-45

Inserts for TBTA-R





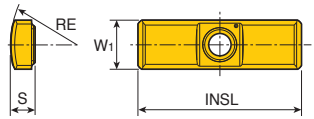
Size	Dimension (mm)			
	W1	S		
16	9.5	2.70		

Insert	Designation	Pocket			Coated							Uncoated	
		Center	Inner	Outer	TT9030	TT8125	TT7100	TT3500	TT6020	TT9300	TT7400	K10	
	**XPMT 16002-45**			●	●								

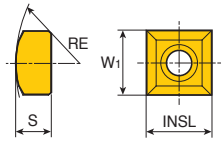
●: Standard items

D170-D175

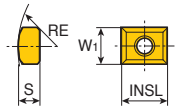
Pad for TBTA 3.../5.../7...



Guide pad



Guide pad protector

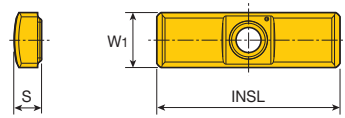


Sub guide pad

Designation		Dimension (mm)				Screw
		W1	S	INSL	RE	
Guide pad	**PAD - GP08-25-155-DC-SB**	8	4.5	25	15.5	CSTB-3S
	GP08-25-155-DC-SC	8	4.5	25	15.5	CSTB-3S
	GP10-35-200-DC-SB	10	6.0	35	20.0	CSTB-4S
	GP10-35-200-DC-SC	10	6.0	35	20.0	CSTB-4S
	GP14-40-250-DC-SB/SC	14	7.5	40	25.0	CSTA-5S
	GP18-40-300-DC-SB/SC	18	9.0	40	30.0	LS1206S
Guide pad protector	**PAD - P08**	8	4.5	8	17.5	CSTB-3S
	P10	10	6.0	10	20.0	CSTB-4S
	P14	14	7.5	14	25.0	CSTA-5S
	P18	18	9.0	18	30.0	LS1206S
Sub guide pad	**PAD - S08**	8	4.5	10	17.5	CSTB-3S
	S10	10	5.0	10	29.0	CSTB-3S
	S14	14	7.0	20	45.0	CSTA-5S

D153-D163

Plus Guide Pad for TBTA 3.../5.../7...

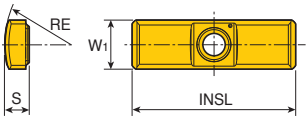


• Plus guide pad for diameter enlargement

Designation								
DC	PAD-GC08	S	PAD-GC10	S	PAD-GC14	S	PAD-GC18	S
DC+1mm	**PAD-GC08-DC+1**	5.0	**PAD-GC10-DC+1**	6.5	**PAD-GC14-DC+1**	8.0	**PAD-GC18-DC+1**	9.5
DC+2mm	**PAD-GC08-DC+2**	5.5	**PAD-GC10-DC+2**	7.0	**PAD-GC14-DC+2**	8.5	**PAD-GC18-DC+2**	10.0
DC+3mm	**PAD-GC08-DC+3**	6.0	**PAD-GC10-DC+3**	7.5	**PAD-GC14-DC+3**	9.0	**PAD-GC18-DC+3**	10.5
DC+4mm	-	-	**PAD-GC10-DC+4**	8.0	**PAD-GC14-DC+4**	9.5	**PAD-GC18-DC+4**	11.0
DC+5mm	-	-	-	-	**PAD-GC14-DC+5**	10.0	**PAD-GC18-DC+5**	11.5

D153-D163

Pad for TBTA-FB



Guide pad

Designation		Dimension (mm)				Screw
		W1	S	INSL	RE	
Guide pad	**PAD - GP06-20-120-DC-SB**	6	3.0	20	12.0	CSTB-2.2S
	GP06-20-120-DC-SC	6	3.0	20	12.0	CSTB-2.2S
	GP07-20-120-DC-SB	7	3.5	20	12.0	CSTB-3S
	GP07-20-120-DC-SC	7	3.5	20	12.0	CSTB-3S
	GP08-25-155-DC-SB	8	4.5	25	15.5	CSTB-3S
	GP08-25-155-DC-SC	8	4.5	25	15.5	CSTB-3S
	GP10-30-200-DC-SB	10	4.5	30	20.0	CSTB-3.5
	GP10-30-200-DC-SC	10	4.5	30	20.0	CSTB-3.5
	GP12-35-250-DC-SB	12	5.5	35	25.0	CSTB-3.5
	GP12-35-250-DC-SC	12	5.5	35	25.0	CSTB-3.5

D164-D169

Pad for TBTA-TR & TRGD, TRGD3, TRGDL

Solid carbide guide pads

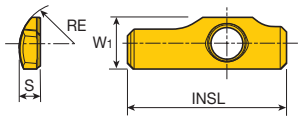


Fig.1

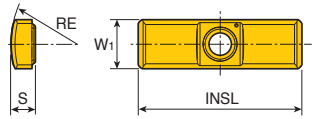


Fig.2

Designation		Fig.	Dimension (mm)				Screw
			W1	S	INSL	RE	
Guide pad	PAD - SGP03-12-035-DC-SB	1	3.9	1.6	12	3.5	CSPB-2FL2.7-LH
	SGP03-12-040-DC-SB	1	3.9	1.6	12	4.0	CSPB-2FL3.1
	GP04-16-045-DC-SB	2	4	1.8	16	4.5	CSTB-2
	GP04-16-050-DC-SB	2	4	1.8	16	5.0	CSTB-2
	GP04-16-055-DC-SB	2	4	2.0	16	5.5	TS 20043I/HG-P
	GP04-16-055-DC-SC	2	4	2.0	16	5.5	TS 20043I/HG-P
	GP05-18-060-DC-SB	2	5	2.5	18	6.0	SR34-508
	GP05-18-060-DC-SC	2	5	2.5	18	6.0	SR34-508
	GP05-18-075-DC-SB	2	5	2.5	18	7.5	SR34-508
	GP05-18-075-DC-SC	2	5	2.5	18	7.5	SR34-508
	GP06-20-085-DC-SB	2	6	3.0	20	8.5	SR34-508
	GP06-20-085-DC-SC	2	6	3.0	20	8.5	SR34-508
	GP06-20-100-DC-SB	2	6	3.0	20	10.0	SR34-508
	GP06-20-100-DC-SC	2	6	3.0	20	10.0	SR34-508
	GP06-20-120-DC-SB	2	6	3.0	20	12.0	SR34-508
	GP06-20-120-DC-SC	2	6	3.0	20	12.0	SR34-508
	GP07-20-120-DC-SB	2	7	3.5	20	12.0	CSTB-3S
	GP07-20-120-DC-SC	2	7	3.5	20	12.0	CSTB-3S
	GP08-25-155-DC-SB	2	8	4.5	25	15.5	CSTB-3S
	GP08-25-155-DC-SC	2	8	4.5	25	15.5	CSTB-3S

D176-D179 D145-D152

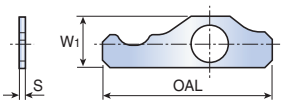
- SB: First choice for general purpose
- SC: First choice when using water-soluble coolant

ADVANCE CUTTING
TaeguTec

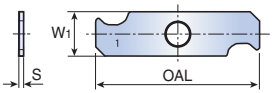
Pad for TBTA-TR & TRGD, TRGD3, TRGDL

Shim thickness:

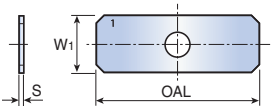
There are numbers marked on each shim: 1-5.
The number on the shim indicates the shim's thickness.
1=0.01 mm, 2=0.02 mm, 3=0.03 mm
4=0.04 mm, 5=0.05 mm



SHIMSET-SGP03



SHIMSET-GP04
SHIMSET-GP05

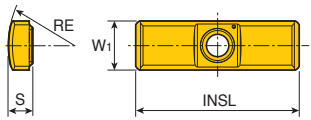


SHIMSET-GP06

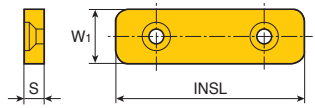
Item #	Designation	W1 (mm)	OAL (mm)	S (mm)	Applicable guide pad size
6285255	**SHIMSET-SGP03**	3.45	11.4	0.01-0.05	PAD-SGP03
6285255	**SHIMSET-GP03**	4	16	0.01-0.05	PAD-GP04
6285255	**SHIMSET-GP05**	5	18	0.01-0.05	PAD-GP05
6285255	**SHIMSET-GP06**	6	20	0.01-0.05	PAD-GP06

- The shim set consists of five shims in different thickness: 0.01, 0.02, 0.03, 0.04, 0.05 mm
- Shims are sold by set only, and are not to be sold separately

Pad for TBTA-R



Guide pad

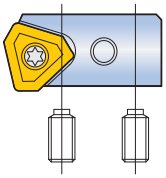


Resin guide pad

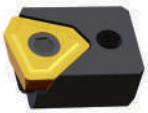
Designation		Dimension (mm)				Screw
		W1	S	INSL	RE	
Guide pad	**PAD - GP08-25-155-DC-SB**	8	4.5	25	15.5	CSTB-3S
	GP08-25-155-DC-SC	8	4.5	25	15.5	CSTB-3S
	GP10-35-200-DC-SB	10	6.0	35	20.0	CSTB-4S
	GP10-35-200-DC-SC	10	6.0	35	20.0	CSTB-4S
	GP14-40-250-DC-SB	14	7.5	40	25.0	CSTA-5S
	GP14-40-250-DC-SC	14	7.5	40	25.0	CSTA-5S
	GP18-40-300-DC-SB	18	9.0	40	30.0	LS1206S
	GP18-40-300-DC-SC	18	9.0	40	30.0	LS1206S
Resin guide pad	**PAD - R10**	10	4.0	40	-	LS0902.5-6
	R12	12	5.0	45	-	LS0903-8
	R15	15	5.8	50	-	LS0904-10
	R20	20	7.5	70	-	LS0905-12
	R30	30	12.5	80	-	LS0906-15
	R35	35	15.5	100	-	LS0906-15

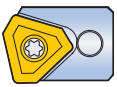
D170-D175

Cartridge for TBTA 3.../5.../7...



Peripheral



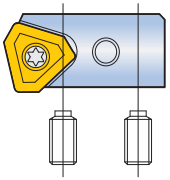


Intermediate & Central

Designation		Adjust screw	Wrench	Lock screw	Wrench	Insert
Peripheral	**PERC 05R**	AS0003-5	H1.5	LS1803RH	H2	NPMX0803..
	402-04	AS0004-8	H2	LS1803.5RH	H2.5	TPMX1403..
	402-32	AS0005-10	H2.5	LS1805RH	H3	TPMX1704..
	402-43	AS0005-15	H2.5	LS1806RH	H4	TPMX2405..
	402-63	AS0006-15	H3	LS1806RH	H4	TPMX2807..
Intermediate & central	**CENC 05R**	-	-	CSTB-3	T9	NPMX0803..
	402-04	-	-	CSTB-3.5	T15	TPMX1403..
	402-32	-	-	CSTA-5	T15	TPMX1704..
	402-43	-	-	LS1206	H3	TPMX2405..
	402-63	-	-	LS1206	H3	TPMX2807..

D153-D163

Plus Cartridge for TBTA 3.../5.../7...

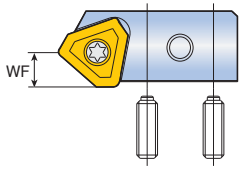


• Plus cartridge for diameter enlargement

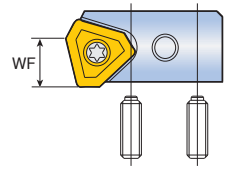
Designation					
DC	DC+1mm	DC+2mm	DC+3mm	DC+4mm	DC+5mm
PERC 05R	**PERC 05R+1**	**PERC 05R+2**	-	-	-
PERC 402-04	**PERC 402-04+1**	**PERC 402-04+2**	**PERC 402-04+3**	-	-
PERC 402-32	**PERC 402-32+1**	**PERC 402-32+2**	**PERC 402-32+3**	**PERC 402-32+4**	-
PERC 402-43	**PERC 402-43+1**	**PERC 402-43+2**	**PERC 402-43+3**	**PERC 402-43+4**	**PERC 402-43+5**
PERC 402-63	**PERC 402-63+1**	**PERC 402-63+2**	**PERC 402-63+3**	**PERC 402-63+4**	**PERC 402-63+5**

D153-D163

Cartridge for TBTA-R



Accurate tolerance applications



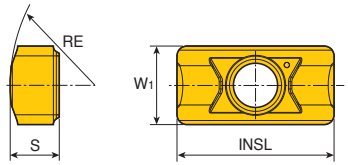
Open tolerance applications

Designation		WF (mm)	Adjust screw	Wrench	Lock screw	Wrench	Insert
Accurate tolerance applications	**PERC P04R**	5	AS0004-8	H2	LS1803.5RH	H2.5	TPMX1403..LG
	P32R	6	AS0005-10	H2.5	LS1805RH	H3	TPMX1704..LG
	P43R	8	AS0005-15	H2.5	LS1806RH	H4	TPMX2405..LG
Open tolerance applications	**PERC 402-04**	8	AS0004-8	H2	LS1803.5RH	H2.5	TPMX1403..RG
	402-32	9	AS0005-10	H2.5	LS1805RH	H3	TPMX1704..RG
	402-43	13	AS0005-15	H2.5	LS1806RH	H4	TPMX2405..RG

D170-D175

▸ PERC P□□□ and PERC 402-□□ cartridges are interchangable in the same pocket

Guide pad for TNDH-TP



Designation	Dimension (mm)				Screw	Grade
	W1	S	INSL	RE		TT9030
PAD-G04-08	4	2.5	8	9	TS 20043I/HG-P	●

D75-D76

▸ Guide pad is sold separately from drill heads

●: Standard items

Recommended Cutting Conditions

TOPDRILL

Machining data for TOP-DRILL 2,3,4xD

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	220-350
		>=0.25%C	Annealed	650	190	2	180-280
		<0.55%C	Quenched and tempered	850	250	3	140-240
		>=0.55%C	Annealed	750	220	4	140-240
			Quenched and tempered	1000	300	5	140-240
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	140-240
			Quenched and tempered	930	275	7	100-180
				1000	300	8	100-180
				1200	350	9	100-180
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-200
			Quenched and tempered	1100	325	11	100-160
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	150-250
			Martensitic	820	240	13	150-250
			Austenitic	600	180	14	150-250
K	Gray cast iron (GG)		Ferritic		160	15	160-260
			Pearlitic		250	16	160-260
	Cast iron nodular (GGG)		Ferritic		180	17	160-260
			Pearlitic		260	18	160-260
	Malleable cast iron		Ferritic		130	19	120-220
			Pearlitic		230	20	120-220
N	Aluminum - Wrought alloy		Not cureable		60	21	200-350
			Cured		100	22	200-350
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	200-350
			Cured		90	24	200-350
		>12% Si	High temp.		130	25	200-350
	Copper alloys	>1% Pb	Free cutting		110	26	150-250
			Brass		90	27	150-250
			Electrolitic copper		100	28	150-250
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	150-250
			Hard rubber		55 Shore D	30	150-250
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	30-60
		Ni or Co based	Annealed		250	33	30-60
			Cured		350	34	30-60
			Cast		320	35	30-60
	Titanium,Ti alloys		Pure	Rm 400	190	36	50-80
			Alpha+beta alloys cured	Rm 1050	310	37	50-80
H	Hardened steel		Hardened		55HRC	38	30-60
			Hardened		60HRC	39	30-60
	Chilled cast iron		Cast		400	40	30-60
	Cast iron nodular		Hardened		55HRC	41	30-60

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

TOP DRILL

Machining data for TOP-DRILL 2,3,4xD

Feed (mm/rev) vs. drill diameter Drill length 2,3,4xD								
SOMT 04 Ø12 - Ø13.5	SOMT 05 Ø14 - Ø16	SOMT 06 Ø17 - Ø19	SOMT 07 Ø20 - Ø22	SOMT 08 Ø23 - Ø26	SOMT 09 Ø27 - Ø31	SOMT 11 Ø32 - Ø36	SOMT 13 Ø37 - Ø43	SOMT 15 Ø44 - Ø50
0.04-0.06	0.04-0.06	0.04-0.06	0.04-0.08	0.04-0.08	0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.12
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12	0.08-0.14	0.08-0.14	0.08-0.16	0.10-0.16
0.08-0.12	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.16	0.10-0.16	0.10-0.16	0.10-0.18	0.10-0.18
0.08-0.12	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.16	0.10-0.16	0.10-0.16	0.10-0.18	0.10-0.18
0.08-0.12	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.16	0.10-0.16	0.10-0.16	0.10-0.18	0.10-0.18
0.06-0.16	0.06-0.16	0.06-0.16	0.08-0.20	0.08-0.20	0.08-0.20	0.10-0.22	0.10-0.22	0.10-0.24
0.06-0.16	0.06-0.16	0.06-0.16	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.22	0.10-0.22	0.10-0.22
0.06-0.16	0.06-0.16	0.06-0.16	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.22	0.10-0.22	0.10-0.22
0.06-0.16	0.06-0.16	0.06-0.16	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.22	0.10-0.22	0.10-0.22
0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.16	0.06-0.16	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.16	0.06-0.16	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.16	0.06-0.16	0.08-0.18	0.08-0.20	0.10-0.20	0.10-0.20
0.08-0.18	0.08-0.18	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.20	0.10-0.20	0.10-0.22	0.10-0.22
0.08-0.18	0.08-0.18	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.20	0.10-0.20	0.10-0.22	0.10-0.22
0.08-0.18	0.08-0.18	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.20	0.10-0.20	0.10-0.22	0.10-0.22
0.08-0.18	0.08-0.18	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.20	0.10-0.20	0.10-0.22	0.10-0.22
0.08-0.14	0.08-0.14	0.08-0.14	0.10-0.16	0.10-0.16	0.10-0.16	0.10-0.18	0.10-0.18	0.10-0.18
0.08-0.14	0.08-0.14	0.08-0.14	0.10-0.16	0.10-0.16	0.10-0.16	0.10-0.18	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.18	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.17	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.17	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.17	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17	0.10-0.18	0.10-0.18
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17	0.10-0.18	0.10-0.18
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12
0.06-0.09	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.09	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10

Recommended Cutting Conditions

TOP DRILL

Machining data for TOP-DRILL 5xD

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	220-350
		>=0.25%C	Annealed	650	190	2	180-280
		<0.55%C	Quenched and tempered	850	250	3	140-240
		>=0.55%C	Annealed	750	220	4	140-240
			Quenched and tempered	1000	300	5	140-240
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	140-240
			Quenched and tempered	930	275	7	100-180
				1000	300	8	100-180
				1200	350	9	100-180
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-200
			Quenched and tempered	1100	325	11	100-160
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	150-250
			Martensitic	820	240	13	150-250
			Austenitic	600	180	14	150-250
K	Gray cast iron (GG)		Ferritic		160	15	160-260
			Pearlitic		250	16	160-260
	Cast iron nodular (GGG)		Ferritic		180	17	160-260
			Pearlitic		260	18	160-260
	Malleable cast iron		Ferritic		130	19	120-220
			Pearlitic		230	20	120-220
N	Aluminum - Wrought alloy		Not cureable		60	21	200-350
			Cured		100	22	200-350
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	200-350
			Cured		90	24	200-350
		>12% Si	High temp.		130	25	200-350
	Copper alloys	>1% Pb	Free cutting		110	26	150-250
			Brass		90	27	150-250
			Electrolitic copper		100	28	150-250
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	150-250
			Hard rubber		55 Shore D	30	150-250
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	30-60
		Ni or Co based	Annealed		250	33	30-60
			Cured		350	34	30-60
			Cast		320	35	30-60
	Titanium, Ti alloys		Pure	Rm 400	190	36	50-80
			Alpha+beta alloys cured	Rm 1050	310	37	50-80
H	Hardened steel		Hardened		55HRC	38	30-60
			Hardened		60HRC	39	30-60
	Chilled cast iron		Cast		400	40	30-60
	Cast iron nodular		Hardened		55HRC	41	30-60

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

TOP DRILL

Machining data for TOP-DRILL 5xD

Feed (mm/rev) vs. drill diameter Drill length 5xD								
SOMT 04 Ø12 - Ø13.5	SOMT 05 Ø14 - Ø16	SOMT 06 Ø17 - Ø19	SOMT 07 Ø20 - Ø22	SOMT 08 Ø23 - Ø26	SOMT 09 Ø27 - Ø31	SOMT 11 Ø32 - Ø36	SOMT 13 Ø37 - Ø43	SOMT 15 Ø44 - Ø50
0.04-0.05	0.04-0.05	0.04-0.05	0.04-0.05	0.04-0.06	0.06-0.08	0.06-0.08	0.08-0.10	0.08-0.10
0.06-0.08	0.06-0.08	0.06-0.08	0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.12	0.08-0.14	0.10-0.14
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12	0.10-0.15	0.10-0.15	0.10-0.17	0.10-0.17
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12	0.10-0.15	0.10-0.15	0.10-0.17	0.10-0.17
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12	0.10-0.15	0.10-0.15	0.10-0.17	0.10-0.17
0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.22
0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.22
0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.22
0.06-0.12	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.16	0.08-0.18	0.10-0.20	0.10-0.20	0.10-0.22
0.06-0.10	0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
0.06-0.10	0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.12	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.12	0.06-0.12	0.08-0.16	0.08-0.18	0.10-0.18	0.10-0.20
0.08-0.14	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16	0.10-0.18	0.10-0.18	0.10-0.20	0.10-0.20
0.08-0.14	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16	0.10-0.18	0.10-0.18	0.10-0.20	0.10-0.20
0.08-0.14	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16	0.10-0.18	0.10-0.18	0.10-0.20	0.10-0.20
0.08-0.14	0.08-0.14	0.08-0.14	0.08-0.16	0.08-0.16	0.10-0.18	0.10-0.18	0.10-0.20	0.10-0.20
0.08-0.12	0.08-0.12	0.08-0.14	0.08-0.16	0.08-0.16	0.10-0.16	0.10-0.16	0.10-0.16	0.10-0.16
0.08-0.12	0.08-0.12	0.08-0.14	0.08-0.16	0.08-0.16	0.10-0.16	0.10-0.16	0.10-0.16	0.10-0.16
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.15	0.08-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.15	0.08-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.08-0.15	0.08-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.10-0.16	0.10-0.16	0.10-0.17	0.10-0.17
0.06-0.15	0.06-0.15	0.06-0.15	0.08-0.16	0.08-0.16	0.10-0.16	0.10-0.16	0.10-0.17	0.10-0.17
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10
0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.05-0.08	0.05-0.08	0.05-0.08	0.06-0.09	0.06-0.09	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10

Recommended Cutting Conditions

TOP DRILL

Machining data for TOP-DRILL cartridge

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	250-350
		>=0.25%C	Annealed	650	190	2	160-250
		<0.55%C	Quenched and tempered	850	250	3	140-240
		>=0.55%C	Annealed	750	220	4	140-240
			Quenched and tempered	1000	300	5	140-240
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	140-240
			Quenched and tempered	930	275	7	100-180
				1000	300	8	100-180
				1200	350	9	100-180
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-200
			Quenched and tempered	1100	325	11	100-160
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	150-250
			Martensitic	820	240	13	150-250
			Austenitic	600	180	14	150-250
K	Gray cast iron (GG)		Ferritic		160	15	160-260
			Pearlitic		250	16	160-260
	Cast iron nodular (GGG)		Ferritic		180	17	160-260
			Pearlitic		260	18	160-260
	Malleable cast iron		Ferritic		130	19	120-220
			Pearlitic		230	20	120-220
N	Aluminum - Wrought alloy		Not cureable		60	21	200-350
			Cured		100	22	200-350
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	200-350
			Cured		90	24	200-350
		>12% Si	High temp.		130	25	200-350
	Copper alloys	>1% Pb	Free cutting		110	26	150-250
			Brass		90	27	150-250
			Electrolitic copper		100	28	150-250
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	150-250
			Hard rubber		55 Shore D	30	150-250
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	30-60
		Ni or Co based	Annealed		250	33	30-60
			Cured		350	34	30-60
			Cast		320	35	30-60
	Titanium, Ti alloys		Pure	Rm 400	190	36	50-80
			Alpha+beta alloys cured	Rm 1050	310	37	50-80
H	Hardened steel		Hardened		55HRC	38	30-60
			Hardened		60HRC	39	30-60
	Chilled cast iron		Cast		400	40	30-60
	Cast iron nodular		Hardened		55HRC	41	30-60

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

TOP DRILL

Machining data for TOP-DRILL cartridge

Feed (mm/rev) vs. drill diameter Drill length 2,3,4xD					
SOMT 09 Ø51 - Ø55	SOMT 11 Ø56 - Ø60	SOMT 11 Ø61 - Ø65	SOMT 11 Ø66 - Ø70	SOMT 13 Ø71 - Ø75	SOMT 13 Ø76 - Ø80
0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.12
0.06-0.16	0.06-0.16	0.06-0.16	0.06-0.16	0.06-0.16	0.06-0.16
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20
0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20
0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20
0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20
0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20	0.08-0.20
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22
0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22
0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22
0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22	0.10-0.22
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10

Recommended Cutting Conditions

T-DRILL

Machining data for T-DRILL 2,3,4xD

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	250-350
		>=0.25%C	Annealed	650	190	2	180-250
		<0.55%C	Quenched and tempered	850	250	3	160-220
		>=0.55%C	Annealed	750	220	4	160-220
			Quenched and tempered	1000	300	5	160-220
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	150-220
			Quenched and tempered	930	275	7	120-160
				1000	300	8	120-160
				1200	350	9	120-160
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-180
			Quenched and tempered	1100	325	11	130-180
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	170-240
			Martensitic	820	240	13	170-240
			Austenitic	600	180	14	170-240
K	Gray cast iron (GG)		Ferritic		160	15	180-250
			Pearlitic		250	16	180-250
	Cast iron nodular (GGG)		Ferritic		180	17	180-250
			Pearlitic		260	18	180-250
	Malleable cast iron		Ferritic		130	19	130-200
			Pearlitic		230	20	130-200
N	Aluminum - Wrought alloy		Not cureable		60	21	330-380
			Cured		100	22	330-380
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	330-380
			Cured		90	24	330-380
		>12% Si	High temp.		130	25	330-380
	Copper alloys	>1% Pb	Free cutting		110	26	150-230
			Brass		90	27	150-230
			Electrolitic copper		100	28	150-230
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	150-230
			Hard rubber		55 Shore D	30	150-230
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	30-60
		Ni or Co based	Annealed		250	33	30-60
			Cured		350	34	30-60
			Cast		320	35	30-60
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-60
			Alpha+beta alloys cured	Rm 1050	310	37	30-60
H	Hardened steel		Hardened		55HRC	38	30-60
			Hardened		60HRC	39	30-60
	Chilled cast iron		Cast		400	40	30-60
	Cast iron nodular		Hardened		55HRC	41	30-60

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for T-DRILL 2,3,4xD

Feed (mm/rev) vs. drill diameter Drill length 2,3,4xD					
SPMG 05 Ø12.5 - Ø15	SPMG 06 Ø16 - Ø21	SPMG 07 Ø22 - Ø27	SPMG 09 Ø28 - Ø33	SPMG 11 Ø34 - Ø41	SPMG 14 Ø42 - Ø50
0.04-0.06	0.04-0.06	0.04-0.08	0.04-0.08	0.06-0.10	0.06-0.12
0.05-0.08	0.06-0.10	0.06-0.12	0.07-0.13	0.08-0.15	0.08-0.16
0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25
0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25
0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25
0.06-0.12	0.08-0.14	0.10-0.18	0.12-0.20	0.12-0.20	0.13-0.20
0.06-0.15	0.06-0.15	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.06-0.15	0.06-0.15	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.06-0.15	0.06-0.15	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.06-0.10	0.06-0.10	0.08-0.12	0.08-0.14	0.08-0.14	0.08-0.14
0.06-0.10	0.08-0.12	0.10-0.15	0.12-0.15	0.12-0.18	0.13-0.18
0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.18
0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.18
0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.18
0.06-0.12	0.08-0.16	0.12-0.20	0.15-0.25	0.16-0.28	0.18-0.30
0.06-0.12	0.08-0.16	0.12-0.20	0.15-0.25	0.16-0.28	0.18-0.30
0.06-0.12	0.08-0.16	0.12-0.20	0.15-0.25	0.16-0.28	0.18-0.30
0.06-0.12	0.08-0.16	0.12-0.20	0.15-0.25	0.16-0.28	0.18-0.30
0.06-0.10	0.08-0.15	0.10-0.18	0.12-0.20	0.15-0.23	0.16-0.25
0.06-0.10	0.08-0.15	0.10-0.18	0.12-0.20	0.15-0.23	0.16-0.25
0.06-0.14	0.08-0.15	0.10-0.20	0.12-0.22	0.14-0.23	0.15-0.26
0.06-0.14	0.08-0.15	0.10-0.20	0.12-0.22	0.14-0.23	0.15-0.26
0.06-0.14	0.08-0.15	0.10-0.20	0.12-0.22	0.14-0.23	0.15-0.26
0.06-0.14	0.08-0.15	0.10-0.20	0.12-0.22	0.14-0.23	0.15-0.26
0.06-0.14	0.08-0.15	0.10-0.20	0.12-0.22	0.14-0.23	0.15-0.26
0.06-0.13	0.06-0.13	0.08-0.15	0.08-0.15	0.08-0.15	0.08-0.15
0.06-0.13	0.06-0.13	0.08-0.15	0.08-0.15	0.08-0.15	0.08-0.15
0.06-0.13	0.06-0.13	0.08-0.15	0.08-0.15	0.08-0.15	0.08-0.15
0.06-0.13	0.06-0.13	0.08-0.15	0.08-0.15	0.08-0.15	0.08-0.15
0.06-0.13	0.06-0.13	0.08-0.15	0.08-0.15	0.08-0.15	0.08-0.15
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09
0.05-0.10	0.06-0.14	0.08-0.18	0.10-0.22	0.14-0.23	0.15-0.24
0.05-0.10	0.06-0.14	0.08-0.18	0.10-0.22	0.14-0.23	0.15-0.24
0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.09	0.05-0.09	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10

Recommended Cutting Conditions

T-DRILL

Machining data for T-DRILL 5xD

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	250-350
		>=0.25%C	Annealed	650	190	2	180-250
		<0.55%C	Quenched and tempered	850	250	3	160-220
		>=0.55%C	Annealed	750	220	4	160-220
			Quenched and tempered	1000	300	5	160-220
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	150-220
			Quenched and tempered	930	275	7	120-160
				1000	300	8	120-160
				1200	350	9	120-160
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-180
			Quenched and tempered	1100	325	11	130-180
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	170-240
			Martensitic	820	240	13	170-240
			Austenitic	600	180	14	170-240
K	Gray cast iron (GG)		Ferritic		160	15	180-250
			Pearlitic		250	16	180-250
	Cast iron nodular (GGG)		Ferritic		180	17	180-250
			Pearlitic		260	18	180-250
	Malleable cast iron		Ferritic		130	19	130-200
			Pearlitic		230	20	130-200
N	Aluminum - Wrought alloy		Not cureable		60	21	330-380
			Cured		100	22	330-380
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	330-380
			Cured		90	24	330-380
		>12% Si	High temp.		130	25	330-380
	Copper alloys	>1% Pb	Free cutting		110	26	150-230
			Brass		90	27	150-230
			Electrolitic copper		100	28	150-230
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	150-230
			Hard rubber		55 Shore D	30	150-230
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	30-60
		Ni or Co based	Annealed		250	33	30-60
			Cured		350	34	30-60
			Cast		320	35	30-60
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-60
			Alpha+beta alloys cured	Rm 1050	310	37	30-60
H	Hardened steel		Hardened		55HRC	38	30-60
			Hardened		60HRC	39	30-60
	Chilled cast iron		Cast		400	40	30-60
	Cast iron nodular		Hardened		55HRC	41	30-60

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for T-DRILL 5xD

Feed (mm/rev) vs. drill diameter Drill length 5xD					
SPMG 05 Ø12.5 - Ø15	SPMG 06 Ø16 - Ø21	SPMG 07 Ø22 - Ø27	SPMG 09 Ø28 - Ø33	SPMG 11 Ø34 - Ø41	SPMG 14 Ø42 - Ø50
0.04-0.05	0.04-0.05	0.04-0.06	0.04-0.07	0.06-0.08	0.06-0.10
0.06-0.08	0.06-0.08	0.06-0.10	0.07-0.12	0.08-0.13	0.08-0.14
0.06-0.10	0.08-0.13	0.10-0.16	0.12-0.20	0.12-0.22	0.13-0.23
0.06-0.10	0.08-0.13	0.10-0.16	0.12-0.20	0.12-0.22	0.13-0.23
0.06-0.10	0.08-0.13	0.10-0.16	0.12-0.20	0.12-0.22	0.13-0.23
0.06-0.10	0.08-0.12	0.10-0.16	0.12-0.18	0.12-0.18	0.13-0.18
0.06-0.12	0.06-0.13	0.08-0.16	0.08-0.16	0.08-0.17	0.08-0.17
0.06-0.12	0.06-0.13	0.08-0.16	0.08-0.16	0.08-0.17	0.08-0.17
0.06-0.12	0.06-0.13	0.08-0.16	0.08-0.16	0.08-0.17	0.08-0.17
0.06-0.08	0.06-0.08	0.08-0.10	0.08-0.12	0.08-0.12	0.08-0.12
0.06-0.09	0.08-0.10	0.10-0.13	0.12-0.13	0.12-0.15	0.12-0.16
0.05-0.09	0.06-0.10	0.08-0.13	0.09-0.15	0.10-0.15	0.10-0.17
0.05-0.09	0.06-0.10	0.08-0.13	0.09-0.15	0.10-0.15	0.10-0.17
0.05-0.09	0.06-0.10	0.08-0.13	0.09-0.15	0.10-0.15	0.10-0.17
0.06-0.10	0.08-0.15	0.12-0.18	0.15-0.22	0.16-0.25	0.18-0.28
0.06-0.10	0.08-0.15	0.12-0.18	0.15-0.22	0.16-0.25	0.18-0.28
0.06-0.10	0.08-0.15	0.12-0.18	0.15-0.22	0.16-0.25	0.18-0.28
0.06-0.10	0.08-0.15	0.12-0.18	0.15-0.22	0.16-0.25	0.18-0.28
0.06-0.08	0.08-0.12	0.10-0.16	0.12-0.18	0.15-0.22	0.16-0.23
0.06-0.08	0.08-0.12	0.10-0.16	0.12-0.18	0.15-0.22	0.16-0.23
0.06-0.12	0.08-0.15	0.10-0.13	0.12-0.18	0.14-0.20	0.14-0.24
0.06-0.12	0.08-0.15	0.10-0.13	0.12-0.18	0.14-0.20	0.14-0.24
0.06-0.12	0.08-0.15	0.10-0.13	0.12-0.18	0.14-0.20	0.14-0.24
0.06-0.12	0.08-0.15	0.10-0.13	0.12-0.18	0.14-0.20	0.14-0.24
0.06-0.12	0.08-0.15	0.10-0.13	0.12-0.18	0.14-0.20	0.14-0.24
0.06-0.12	0.06-0.12	0.08-0.13	0.08-0.13	0.08-0.14	0.08-0.14
0.06-0.12	0.06-0.12	0.08-0.13	0.08-0.13	0.08-0.14	0.08-0.14
0.06-0.12	0.06-0.12	0.08-0.13	0.08-0.13	0.08-0.14	0.08-0.14
0.06-0.12	0.06-0.12	0.08-0.13	0.08-0.13	0.08-0.14	0.08-0.14
0.06-0.12	0.06-0.12	0.08-0.13	0.08-0.13	0.08-0.14	0.08-0.14
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.08
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.08
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.08
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.08
0.05-0.07	0.05-0.07	0.05-0.08	0.05-0.08	0.05-0.08	0.05-0.08
0.05-0.09	0.08-0.13	0.08-0.17	0.10-0.20	0.14-0.22	0.14-0.24
0.05-0.09	0.08-0.13	0.08-0.17	0.10-0.20	0.14-0.22	0.14-0.24
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09
0.05-0.08	0.05-0.08	0.05-0.09	0.05-0.09	0.05-0.09	0.05-0.09

Recommended Cutting Conditions

T-DRILL

Machining data for T-DRILL cartridge

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	250-350
		>=0.25%C	Annealed	650	190	2	180-250
		<0.55%C	Quenched and tempered	850	250	3	160-220
		>=0.55%C	Annealed	750	220	4	160-220
			Quenched and tempered	1000	300	5	160-220
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	150-220
			Quenched and tempered	930	275	7	120-160
				1000	300	8	120-160
				1200	350	9	120-160
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	140-180
			Quenched and tempered	1100	325	11	130-180
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	170-240
			Martensitic	820	240	13	170-240
			Austenitic	600	180	14	170-240
K	Gray cast iron (GG)		Ferritic		160	15	180-250
			Pearlitic		250	16	180-250
	Cast iron nodular (GGG)		Ferritic		180	17	180-250
			Pearlitic		260	18	180-250
	Malleable cast iron		Ferritic		130	19	130-200
			Pearlitic		230	20	130-200
N	Aluminum - Wrought alloy		Not cureable		60	21	330-380
			Cured		100	22	330-380
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	330-380
			Cured		90	24	330-380
		>12% Si	High temp.		130	25	330-380
	Copper alloys	>1% Pb	Free cutting		110	26	150-230
			Brass		90	27	150-230
			Electrolitic copper		100	28	150-230
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	150-230
			Hard rubber		55 Shore D	30	150-230
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	30-60
		Ni or Co based	Annealed		250	33	30-60
			Cured		350	34	30-60
			Cast		320	35	30-60
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-60
			Alpha+beta alloys cured	Rm 1050	310	37	30-60
H	Hardened steel		Hardened		55HRC	38	30-60
			Hardened		60HRC	39	30-60
	Chilled cast iron		Cast		400	40	30-60
	Cast iron nodular		Hardened		55HRC	41	30-60

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for T-DRILL cartridge

Feed (mm/rev) vs. drill diameter Drill length 5xD					
SPMG 07 Ø51 - Ø53	SPMG 07 Ø54 - Ø56	SPMG 09 Ø57 - Ø62	SPMG 09 Ø63- Ø66	SPMG 11 Ø67 - Ø73	SPMG 12 Ø74 - Ø80
0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.12	0.06-0.12
0.06-0.16	0.06-0.12	0.06-0.16	0.06-0.16	0.06-0.16	0.06-0.16
0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.18
0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.18
0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18	0.08-0.18
0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16	0.08-0.16
0.06-0.12	0.06-0.12	0.08-0.15	0.08-0.15	0.08-0.15	0.08-0.15
0.06-0.12	0.06-0.12	0.08-0.15	0.08-0.15	0.08-0.15	0.08-0.15
0.06-0.12	0.06-0.12	0.08-0.15	0.08-0.15	0.08-0.15	0.08-0.15
0.12-0.20	0.12-0.20	0.12-0.20	0.12-0.20	0.15-0.22	0.15-0.22
0.12-0.20	0.12-0.20	0.12-0.20	0.12-0.20	0.15-0.22	0.15-0.22
0.12-0.20	0.12-0.20	0.12-0.20	0.12-0.20	0.15-0.22	0.15-0.22
0.12-0.20	0.12-0.20	0.12-0.20	0.12-0.20	0.15-0.22	0.15-0.22
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.12-0.20	0.12-0.20
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.12-0.20	0.12-0.20
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18	0.06-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18	0.10-0.18
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10	0.06-0.10
0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10
0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.10

Recommended Cutting Conditions

TOPCAP

Machining data for TOP-CAP

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1
		>=0.25%C	Annealed	650	190	2
		<0.55%C	Quenched and tempered	850	250	3
		>=0.55%C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloy steel, cast steel and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12
			Martensitic	820	240	13
			Austenitic	600	180	14
K	Gray cast iron (GG)		Ferritic		160	15
			Pearlitic		250	16
	Cast iron nodular (GGG)		Ferritic		180	17
			Pearlitic		260	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum - Wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temp.		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29
			Hard rubber		55 Shore D	30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium, Ti alloys		Pure	Rm 400	190	36
			Alpha+beta alloys cured	Rm 1050	310	37
H	Hardened steel		Hardened		55HRC	38
			Hardened		60HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron nodular		Hardened		55HRC	41

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

TOP CAP

Machining data for TOP-CAP

Drilling		Turning & boring		Grooving	
Vc (m/min)	Feed (mm/rev)	Vc (m/min)	Feed (mm/rev)	Vc (m/min)	Feed (mm/rev)
120-260	0.05-0.06	140-280	0.04-0.14	120-250	0.04-0.25
80-190	0.05-0.15	90-200	0.04-0.12	80-180	0.04-0.25
100-280	0.06-0.18	100-200	0.04-0.15	80-180	0.04-0.25
100-280	0.06-0.18	100-200	0.04-0.15	80-180	0.04-0.25
100-280	0.06-0.18	100-200	0.04-0.15	80-180	0.04-0.25
100-280	0.06-0.18	100-200	0.04-0.15	80-180	0.04-0.25
60-180	0.04-0.15	80-180	0.07-0.12	60-160	0.04-0.25
60-180	0.04-0.15	80-180	0.07-0.12	60-160	0.04-0.25
60-180	0.04-0.15	80-180	0.07-0.12	60-160	0.04-0.25
80-190	0.05-0.15	80-200	0.04-0.12	80-160	0.04-0.25
50-150	0.04-0.14	60-150	0.04-0.12	50-120	0.04-0.25
50-210	0.04-0.15	60-230	0.07-0.12	50-200	0.04-0.25
50-210	0.04-0.15	60-230	0.07-0.12	50-200	0.04-0.25
50-210	0.04-0.15	60-230	0.07-0.12	50-200	0.04-0.25
100-300	0.06-0.23	120-230	0.07-0.2	100-200	0.04-0.25
100-300	0.06-0.23	120-230	0.07-0.2	100-200	0.04-0.25
100-300	0.06-0.23	120-230	0.07-0.2	100-200	0.04-0.25
100-300	0.06-0.23	120-230	0.07-0.2	100-200	0.04-0.25
100-200	0.06-0.15	120-230	0.04-0.13	100-200	0.04-0.25
100-200	0.06-0.15	120-230	0.04-0.13	100-200	0.04-0.25
120-500	0.05-0.3	120-700	0.04-0.25	100-700	0.04-0.25
120-500	0.05-0.3	120-700	0.04-0.25	100-700	0.04-0.25
120-500	0.05-0.3	120-700	0.04-0.25	100-700	0.04-0.25
120-500	0.05-0.3	120-700	0.04-0.25	100-700	0.04-0.25
120-500	0.05-0.3	120-700	0.04-0.25	100-700	0.04-0.25
80-380	0.05-0.23	80-500	0.04-0.2	80-350	0.04-0.25
80-380	0.05-0.23	80-500	0.04-0.2	80-350	0.04-0.25
80-380	0.05-0.23	80-500	0.04-0.2	80-350	0.04-0.25
50-140	0.04-0.14	50-160	0.04-0.12	50-140	0.04-0.25
50-140	0.04-0.14	50-160	0.04-0.12	50-140	0.04-0.25
20-50	0.04-0.05	20-80	0.04-0.05	20-50	0.04-0.05
20-50	0.04-0.05	20-80	0.04-0.05	20-50	0.04-0.05
20-50	0.04-0.05	20-80	0.04-0.05	20-50	0.04-0.05
20-50	0.04-0.05	20-80	0.04-0.05	20-50	0.04-0.05
20-50	0.04-0.05	20-80	0.04-0.05	20-50	0.04-0.05
30-60	0.04-0.05	30-100	0.04-0.05	30-80	0.04-0.05
30-60	0.04-0.05	30-100	0.04-0.05	30-80	0.04-0.05
20-40	0.04-0.05	20-70	0.04-0.05	20-50	0.04-0.05
20-40	0.04-0.05	20-70	0.04-0.05	20-50	0.04-0.05
20-40	0.04-0.05	20-70	0.04-0.05	20-50	0.04-0.05
20-40	0.04-0.05	20-70	0.04-0.05	20-50	0.04-0.05

Recommended Cutting Conditions

DRILL SFEED

Machining data for DRILL-SFEED 3,5,8xD

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1
		>=0.25%C	Annealed	650	190	2
		<0.55%C	Quenched and tempered	850	250	3
		>=0.55%C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloy steel, cast steel and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12
			Martensitic	820	240	13
			Austenitic	600	180	14
K	Gray cast iron (GG)		Ferritic		160	15
			Pearlitic		250	16
	Cast iron nodular (GGG)		Ferritic		180	17
			Pearlitic		260	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum - Wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temp.		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29
			Hard rubber		55 Shore D	30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium, Ti alloys		Pure	Rm 400	190	36
			Alpha+beta alloys cured	Rm 1050	310	37
H	Hardened steel		Hardened		55HRC	38
			Hardened		60HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron nodular		Hardened		55HRC	41

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

DRILL SFEED

Machining data for DRILL-SFEED 3,5,8xD

Cutting speed Vc (m/min)	Feed (mm/rev) vs. drill diameter			
	Ø12 - Ø13.9	Ø14 - Ø15.9	Ø16 - Ø19.9	Ø20 - Ø25.9
80-140	0.25-0.45	0.30-0.50	0.35-0.55	0.40-0.60
80-130	0.25-0.45	0.30-0.50	0.35-0.55	0.40-0.60
80-120	0.25-0.45	0.30-0.50	0.35-0.55	0.40-0.60
70-110	0.25-0.45	0.30-0.50	0.35-0.55	0.40-0.60
50-90	0.25-0.45	0.30-0.50	0.35-0.55	0.40-0.60
80-120	0.20-0.40	0.25-0.45	0.30-0.50	0.35-0.55
70-110	0.20-0.40	0.25-0.45	0.30-0.50	0.35-0.55
50-90	0.20-0.40	0.25-0.45	0.30-0.50	0.35-0.55
40-70	0.20-0.40	0.25-0.45	0.30-0.50	0.35-0.55
50-90	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50
40-80	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50
90-160	0.35-0.50	0.40-0.60	0.45-0.65	0.50-0.70
80-140	0.35-0.50	0.40-0.60	0.45-0.65	0.50-0.70
90-180	0.30-0.45	0.35-0.55	0.40-0.60	0.45-0.65
80-140	0.30-0.45	0.35-0.55	0.40-0.60	0.45-0.65
90-160	0.30-0.45	0.35-0.55	0.40-0.60	0.45-0.65
80-140	0.30-0.45	0.35-0.55	0.40-0.60	0.45-0.65

Recommended Cutting Conditions

WINDRILL ADVANCED MACHINING DRILLRUSH RUSH 3 FLUTE

Machining data for DRILL-RUSH

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-140
		>=0.25%C	Annealed	650	190	2	80-130
		<0.55%C	Quenched and tempered	850	250	3	80-120
		>=0.55%C	Annealed	750	220	4	70-110
			Quenched and tempered	1000	300	5	50-90
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	70-120
			Quenched and tempered	930	275	7	70-110
				1000	300	8	50-90
				1200	350	9	40-70
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-90
			Quenched and tempered	1100	325	11	40-80
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	40-70
			Martensitic	820	240	13	40-70
			Austenitic	600	180	14	30-70
K	Gray cast iron (GG)		Ferritic		160	15	90-160
			Pearlitic		250	16	80-140
	Cast iron nodular (GGG)		Ferritic		180	17	90-180
			Pearlitic		260	18	80-140
	Malleable cast iron		Ferritic		130	19	90-160
			Pearlitic		230	20	80-140
N	Aluminum - Wrought alloy		Not cureable		60	21	90-220
			Cured		100	22	90-220
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	90-220
			Cured		90	24	90-220
		>12% Si	High temp.		130	25	80-160
	Copper alloys	>1% Pb	Free cutting		110	26	90-220
			Brass		90	27	90-220
			Electrolitic copper		100	28	90-220
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	20-50
		Ni or Co based	Annealed		250	33	20-50
			Cured		350	34	20-50
			Cast		320	35	20-50
	Titanium, Ti alloys		Pure	Rm 400	190	36	20-50
			Alpha+beta alloys cured	Rm 1050	310	37	20-50
H	Hardened steel		Hardened		55HRC	38	20-50
			Hardened		60HRC	39	20-50
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

WinDrill ADVANCED MACHINING DrillRush 4DEM 2 FLUTE

Machining data for DRILL-RUSH

Feed (mm/rev) vs. drill diameter								
Ø4 - Ø4.9	Ø5 - Ø5.9	Ø6 - Ø7.9	Ø8 - Ø9.9	Ø10 - Ø11.9	Ø12 - Ø13.9	Ø14 - Ø15.9	Ø16 - Ø19.9	Ø20 - Ø25.9
0.04-0.08	0.07-0.11	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.04-0.08	0.07-0.11	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.04-0.08	0.07-0.11	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.04-0.08	0.07-0.11	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.04-0.08	0.07-0.11	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30	0.20-0.35	0.25-0.45	0.25-0.45
0.04-0.08	0.07-0.13	0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32	0.18-0.35	0.23-0.40	0.25-0.45
0.04-0.08	0.07-0.13	0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32	0.18-0.35	0.23-0.40	0.25-0.45
0.04-0.08	0.07-0.13	0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32	0.18-0.35	0.23-0.40	0.25-0.45
0.04-0.08	0.07-0.13	0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32	0.18-0.35	0.23-0.40	0.25-0.45
0.06-0.08	0.07-0.11	0.09-0.12	0.12-0.20	0.12-0.22	0.15-0.25	0.18-0.28	0.20-0.30	0.22-0.33
0.06-0.08	0.07-0.11	0.09-0.12	0.12-0.20	0.12-0.22	0.15-0.25	0.18-0.28	0.20-0.30	0.22-0.33
0.05-0.07	0.06-0.08	0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20	0.16-0.24	0.16-0.26	0.18-0.30
0.05-0.07	0.06-0.08	0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20	0.16-0.24	0.16-0.26	0.18-0.30
0.05-0.07	0.06-0.08	0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20	0.16-0.24	0.16-0.26	0.18-0.30
0.04-0.08	0.10-0.15	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.04-0.08	0.10-0.15	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.04-0.08	0.10-0.15	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.04-0.08	0.10-0.15	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.04-0.08	0.10-0.15	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
0.04-0.08	0.10-0.15	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.55	0.35-0.60
		0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
		0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
		0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
		0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
		0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
		0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
		0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
		0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45	0.35-0.50	0.40-0.60	0.45-0.70
		0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
		0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
		0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
		0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
		0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15	0.12-0.18	0.12-0.20	0.14-0.22
		0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.20	0.14-0.22	0.16-0.25
		0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.20	0.14-0.22	0.16-0.25
		0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.20	0.14-0.22	0.16-0.25
		0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.20	0.14-0.22	0.16-0.25

Recommended Cutting Conditions

MODU-R-DRILL

Machining data for MODU-R-DRILL

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	120-200
		>=0.25%C	Annealed	650	190	2	120-200
		<0.55%C	Quenched and tempered	850	250	3	130-190
		>=0.55%C	Annealed	750	220	4	130-190
			Quenched and tempered	1000	300	5	130-190
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	100-200
			Quenched and tempered	930	275	7	100-200
				1000	300	8	100-200
				1200	350	9	100-200
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	100-160
			Quenched and tempered	1100	325	11	100-160
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	80-140
			Martensitic	820	240	13	80-140
			Austenitic	600	180	14	80-140
K	Gray cast iron (GG)		Ferritic		160	15	100-250
			Pearlitic		250	16	100-250
	Cast iron nodular (GGG)		Ferritic		180	17	100-250
			Pearlitic		260	18	100-250
	Malleable cast iron		Ferritic		130	19	100-250
			Pearlitic		230	20	100-250
N	Aluminum - Wrought alloy		Not cureable		60	21	160-260
			Cured		100	22	160-260
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	160-260
			Cured		90	24	160-260
		>12% Si	High temp.		130	25	160-260
	Copper alloys	>1% Pb	Free cutting		110	26	160-260
			Brass		90	27	160-260
			Electrolitic copper		100	28	160-260
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	30-80
		Ni or Co based	Annealed		250	33	30-80
			Cured		350	34	30-80
			Cast		320	35	30-80
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-80
			Alpha+beta alloys cured	Rm 1050	310	37	30-80
H	Hardened steel		Hardened		55HRC	38	20-50
			Hardened		60HRC	39	20-50
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

MODU-R-DRILL

Machining data for MODU-R-DRILL

Feed (mm/rev) vs. drill diameter					
SPGX 06 Ø26 - Ø28	SPGX 07 Ø29 - Ø32	SPGX 09 Ø33 - Ø36	SPGX 11 Ø37 - Ø43	SPGX 11 Ø44 - Ø45	SPGX 14 Ø46 - Ø50
0.20-0.35	0.25-0.35	0.2-0.4	0.25-0.4	0.28-0.45	0.28-0.45
0.20-0.35	0.25-0.35	0.2-0.4	0.25-0.4	0.28-0.45	0.28-0.45
0.20-0.35	0.25-0.35	0.2-0.4	0.25-0.4	0.28-0.45	0.28-0.45
0.20-0.35	0.25-0.35	0.2-0.4	0.25-0.4	0.28-0.45	0.28-0.45
0.20-0.35	0.25-0.35	0.2-0.4	0.25-0.4	0.28-0.45	0.28-0.45
0.20-0.33	0.25-0.33	0.25-0.36	0.25-0.36	0.25-0.40	0.25-0.40
0.20-0.33	0.25-0.33	0.25-0.36	0.25-0.36	0.25-0.40	0.25-0.40
0.20-0.33	0.25-0.33	0.25-0.36	0.25-0.36	0.25-0.40	0.25-0.40
0.20-0.33	0.25-0.33	0.25-0.36	0.25-0.36	0.25-0.40	0.25-0.40
0.20-0.33	0.25-0.33	0.25-0.36	0.25-0.36	0.25-0.40	0.25-0.40
0.20-0.33	0.25-0.33	0.25-0.36	0.25-0.36	0.25-0.40	0.25-0.40
0.12-0.24	0.15-0.24	0.16-0.25	0.18-0.28	0.18-0.30	0.18-0.30
0.12-0.24	0.15-0.24	0.16-0.25	0.18-0.28	0.18-0.30	0.18-0.30
0.12-0.24	0.15-0.24	0.16-0.25	0.18-0.28	0.18-0.30	0.18-0.30
0.25-0.45	0.25-0.45	0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55
0.25-0.45	0.25-0.45	0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55
0.25-0.45	0.25-0.45	0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55
0.25-0.45	0.25-0.45	0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55
0.25-0.45	0.25-0.45	0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55
0.25-0.45	0.25-0.45	0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55
0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55	0.4-0.6	0.4-0.6
0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55	0.4-0.6	0.4-0.6
0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55	0.4-0.6	0.4-0.6
0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55	0.4-0.6	0.4-0.6
0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55	0.4-0.6	0.4-0.6
0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55	0.4-0.6	0.4-0.6
0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55	0.4-0.6	0.4-0.6
0.3-0.5	0.3-0.5	0.35-0.55	0.35-0.55	0.4-0.6	0.4-0.6
0.1-0.16	0.10-0.18	0.15-0.20	0.15-0.22	0.16-0.24	0.16-0.24
0.1-0.16	0.10-0.18	0.15-0.20	0.15-0.22	0.16-0.24	0.16-0.24
0.1-0.16	0.10-0.18	0.15-0.20	0.15-0.22	0.16-0.24	0.16-0.24
0.1-0.16	0.10-0.18	0.15-0.20	0.15-0.22	0.16-0.24	0.16-0.24
0.1-0.16	0.10-0.18	0.15-0.20	0.15-0.22	0.16-0.24	0.16-0.24
0.1-0.16	0.10-0.18	0.15-0.20	0.15-0.22	0.16-0.24	0.16-0.24
0.1-0.16	0.10-0.18	0.15-0.20	0.15-0.22	0.16-0.24	0.16-0.24
0.1-0.16	0.12-0.18	0.14-0.20	0.14-0.20	0.16-0.22	0.16-0.22
0.1-0.16	0.12-0.18	0.14-0.20	0.14-0.20	0.16-0.22	0.16-0.22

Recommended Cutting Conditions

SPADE RUSH

Machining data for SPADE-RUSH

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-140
		>=0.25%C	Annealed	650	190	2	80-130
		<0.55%C	Quenched and tempered	850	250	3	80-120
		>=0.55%C	Annealed	750	220	4	70-110
			Quenched and tempered	1000	300	5	50-90
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	80-120
			Quenched and tempered	930	275	7	70-110
				1000	300	8	50-90
				1200	350	9	40-70
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-90
			Quenched and tempered	1100	325	11	40-80
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	40-70
			Martensitic	820	240	13	40-70
			Austenitic	600	180	14	30-70
K	Gray cast iron (GG)		Ferritic		160	15	90-180
			Pearlitic		250	16	80-140
	Cast iron nodular (GGG)		Ferritic		180	17	90-165
			Pearlitic		260	18	80-140
	Malleable cast iron		Ferritic		130	19	90-160
			Pearlitic		230	20	80-140
N	Aluminum - Wrought alloy		Not cureable		60	21	90-220
			Cured		100	22	90-220
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	90-220
			Cured		90	24	90-220
		>12% Si	High temp.		130	25	80-160
	Copper alloys	>1% Pb	Free cutting		110	26	90-220
			Brass		90	27	90-220
			Electrolitic copper		100	28	90-220
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	30-60
			Cured		280	32	20-50
		Ni or Co based	Annealed		250	33	20-50
			Cured		350	34	20-50
			Cast		320	35	20-50
	Titanium, Ti alloys		Pure	Rm 400	190	36	20-50
			Alpha+beta alloys cured	Rm 1050	310	37	20-50
H	Hardened steel		Hardened		55HRC	38	20-50
			Hardened		60HRC	39	20-50
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

SPADE-RUSH

Machining data for SPADE-RUSH

Feed (mm/rev) vs. drill diameter						
Ø20 - Ø25.9		Ø26 - Ø29.9		Ø30 - Ø34.9		Ø35 - Ø41
LCD…-P	LCD…-P+	LCD…-P	LCD…-P+	LCD…-P	LCD…-P+	
0.30-0.50	0.25-0.45	0.30-0.50	0.30-0.50	0.30-0.50	0.30-0.50	0.35-0.55
0.30-0.50	0.25-0.45	0.30-0.50	0.30-0.50	0.30-0.50	0.30-0.50	0.35-0.55
0.30-0.50	0.25-0.45	0.30-0.50	0.30-0.50	0.30-0.50	0.30-0.50	0.35-0.55
0.30-0.50	0.25-0.45	0.30-0.50	0.30-0.50	0.30-0.50	0.30-0.50	0.35-0.55
0.30-0.50	0.25-0.45	0.30-0.50	0.30-0.50	0.30-0.50	0.30-0.50	0.35-0.55
0.25-0.45	0.20-0.40	0.25-0.45	0.25-0.45	0.25-0.45	0.25-0.45	0.30-0.50
0.25-0.45	0.20-0.40	0.25-0.45	0.25-0.45	0.25-0.45	0.25-0.45	0.30-0.50
0.25-0.45	0.20-0.40	0.25-0.45	0.25-0.45	0.25-0.45	0.25-0.45	0.30-0.50
0.25-0.45	0.20-0.40	0.25-0.45	0.25-0.45	0.25-0.45	0.25-0.45	0.30-0.50
0.25-0.35	0.20-0.30	0.25-0.35	0.25-0.35	0.25-0.35	0.25-0.35	0.30-0.40
0.25-0.35	0.20-0.30	0.25-0.35	0.25-0.35	0.25-0.35	0.25-0.35	0.30-0.40
0.15-0.30		0.15-0.30		0.15-0.30		0.20-0.35
0.15-0.30		0.15-0.30		0.15-0.30		0.20-0.35
0.15-0.30		0.15-0.30		0.15-0.30		0.20-0.35
0.35-0.55	0.30-0.50	0.35-0.55	0.35-0.55	0.35-0.55	0.35-0.55	0.40-0.60
0.35-0.55	0.30-0.50	0.35-0.55	0.35-0.55	0.35-0.55	0.35-0.55	0.40-0.60
0.35-0.55	0.30-0.50	0.35-0.55	0.35-0.55	0.35-0.55	0.35-0.55	0.40-0.60
0.35-0.55	0.30-0.50	0.35-0.55	0.35-0.55	0.35-0.55	0.35-0.55	0.40-0.60
0.35-0.55	0.30-0.50	0.35-0.55	0.35-0.55	0.35-0.55	0.35-0.55	0.40-0.60
0.35-0.55	0.30-0.50	0.35-0.55	0.35-0.55	0.35-0.55	0.35-0.55	0.40-0.60
0.40-0.60		0.40-0.60		0.40-0.60		0.50-0.70
0.40-0.60		0.40-0.60		0.40-0.60		0.50-0.70
0.40-0.60		0.40-0.60		0.40-0.60		0.50-0.70
0.40-0.60		0.40-0.60		0.40-0.60		0.50-0.70
0.40-0.60		0.40-0.60		0.40-0.60		0.50-0.70
0.40-0.60		0.40-0.60		0.40-0.60		0.50-0.70
0.40-0.60		0.40-0.60		0.40-0.60		0.50-0.70
0.40-0.60		0.40-0.60		0.40-0.60		0.50-0.70
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25
0.10-0.20		0.10-0.20		0.15-0.25		0.15-0.25

Recommended Cutting Conditions

SOLID3DRILL

Machining data for SOLID-3-DRILL

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-140
		>=0.25%C	Annealed	650	190	2	80-130
		<0.55%C	Quenched and tempered	850	250	3	80-120
		>=0.55%C	Annealed	750	220	4	70-110
			Quenched and tempered	1000	300	5	50-90
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	80-120
			Quenched and tempered	930	275	7	70-110
				1000	300	8	50-90
				1200	350	9	40-70
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-90
			Quenched and tempered	1100	325	11	40-80
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	
			Martensitic	820	240	13	
			Austenitic	600	180	14	
K	Gray cast iron (GG)		Ferritic		160	15	80-140
			Pearlitic		250	16	70-120
	Cast iron nodular (GGG)		Ferritic		180	17	80-120
			Pearlitic		260	18	70-110
	Malleable cast iron		Ferritic		130	19	80-120
			Pearlitic		230	20	70-110
N	Aluminum - Wrought alloy		Not cureable		60	21	
			Cured		100	22	
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	
			Cured		90	24	
		>12% Si	High temp.		130	25	
	Copper alloys	>1% Pb	Free cutting		110	26	
			Brass		90	27	
			Electrolitic copper		100	28	
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	
			Cured		280	32	
		Ni or Co based	Annealed		250	33	
			Cured		350	34	
			Cast		320	35	
	Titanium, Ti alloys		Pure	Rm 400	190	36	
			Alpha+beta alloys cured	Rm 1050	310	37	
H	Hardened steel		Hardened		55HRC	38	
			Hardened		60HRC	39	
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

SOLID3DRILL 3 FLUTE

Machining data for SOLID-3-DRILL

Feed (mm/rev) vs. drill diameter 3,5,8xD					Feed (mm/rev) vs. drill diameter 12xD			
Ø4 - Ø5	Ø5.1 - Ø6	Ø6.1 - Ø8	Ø8.1 - Ø10	Ø10.1 - Ø12	Ø6	Ø6.1 - Ø8	Ø8.1 - Ø10	Ø10.1 - Ø12
0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60	0.15-0.30	0.20-0.40	0.25-0.45	0.30-0.50
0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60	0.15-0.30	0.20-0.40	0.25-0.45	0.30-0.50
0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60	0.15-0.30	0.20-0.40	0.25-0.45	0.30-0.50
0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60	0.15-0.30	0.20-0.40	0.25-0.45	0.30-0.50
0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60	0.15-0.30	0.20-0.40	0.25-0.45	0.30-0.50
0.15-0.25	0.20-0.35	0.25-0.40	0.30-0.50	0.35-0.55	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45
0.15-0.25	0.20-0.35	0.25-0.40	0.30-0.50	0.35-0.55	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45
0.15-0.25	0.20-0.35	0.25-0.40	0.30-0.50	0.35-0.55	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45
0.15-0.25	0.20-0.35	0.25-0.40	0.30-0.50	0.35-0.55	0.15-0.30	0.20-0.35	0.25-0.40	0.30-0.45
0.15-0.20	0.20-0.30	0.25-0.35	0.30-0.45	0.35-0.50	0.15-0.25	0.20-0.30	0.25-0.35	0.30-0.40
0.15-0.20	0.20-0.30	0.25-0.35	0.30-0.45	0.35-0.50	0.15-0.25	0.20-0.30	0.25-0.35	0.30-0.40
0.20-0.30	0.25-0.45	0.35-0.55	0.40-0.60	0.45-0.65	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60
0.20-0.30	0.25-0.45	0.35-0.55	0.40-0.60	0.45-0.65	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60
0.20-0.30	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60	0.15-0.35	0.25-0.45	0.30-0.50	0.35-0.55
0.20-0.30	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60	0.15-0.35	0.25-0.45	0.30-0.50	0.35-0.55
0.20-0.30	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60	0.15-0.35	0.25-0.45	0.30-0.50	0.35-0.55
0.20-0.30	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60	0.15-0.35	0.25-0.45	0.30-0.50	0.35-0.55

Recommended Cutting Conditions

HDRILL

Machining data for H-DRILL

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-120
		>=0.25%C	Annealed	650	190	2	80-110
		<0.55%C	Quenched and tempered	850	250	3	70-100
		>=0.55%C	Annealed	750	220	4	70-100
			Quenched and tempered	1000	300	5	70-100
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	70-90
			Quenched and tempered	930	275	7	70-90
				1000	300	8	50-80
				1200	350	9	40-70
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-80
			Quenched and tempered	1100	325	11	40-70
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	30-60
			Martensitic	820	240	13	30-60
			Austenitic	600	180	14	30-60
K	Gray cast iron (GG)		Ferritic		160	15	65-80
			Pearlitic		250	16	65-80
	Cast iron nodular (GGG)		Ferritic		180	17	85-105
			Pearlitic		260	18	75-90
	Malleable cast iron		Ferritic		130	19	65-80
			Pearlitic		230	20	65-80
N	Aluminum - Wrought alloy		Not cureable		60	21	70-200
			Cured		100	22	70-200
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	70-200
			Cured		90	24	70-200
		>12% Si	High temp.		130	25	70-150
	Copper alloys	>1% Pb	Free cutting		110	26	70-200
			Brass		90	27	70-200
			Electrolitic copper		100	28	70-200
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	15-40
			Cured		280	32	15-40
		Ni or Co based	Annealed		250	33	15-40
			Cured		350	34	15-40
			Cast		320	35	15-40
	Titanium, Ti alloys		Pure	Rm 400	190	36	
			Alpha+beta alloys cured	Rm 1050	310	37	
H	Hardened steel		Hardened		55HRC	38	10-40
			Hardened		60HRC	39	10-40
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for H-DRILL

Feed (mm/rev) vs. drill diameter		
Ø3 - Ø5	Ø5.1 - Ø8	Ø8.1 - Ø12
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.08-0.18	0.10-0.20	0.15-0.25
0.08-0.18	0.10-0.20	0.15-0.25
0.06-0.12	0.10-0.15	0.12-0.18
0.06-0.12	0.10-0.15	0.12-0.18
0.06-0.12	0.10-0.15	0.12-0.18
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.20	0.15-0.25	0.20-0.30
0.10-0.25	0.15-0.35	0.25-0.45
0.10-0.25	0.15-0.35	0.25-0.45
0.10-0.25	0.15-0.35	0.25-0.45
0.10-0.25	0.15-0.35	0.25-0.45
0.10-0.25	0.15-0.35	0.25-0.45
0.08-0.18	0.15-0.25	0.20-0.35
0.08-0.18	0.15-0.25	0.20-0.35
0.08-0.18	0.15-0.25	0.20-0.35
0.02-0.08	0.04-0.10	0.06-0.12
0.02-0.08	0.04-0.10	0.06-0.12
0.02-0.08	0.04-0.10	0.06-0.12
0.02-0.08	0.04-0.10	0.06-0.12
0.02-0.08	0.04-0.10	0.06-0.12
0.02-0.08	0.04-0.10	0.06-0.12
0.02-0.08	0.04-0.10	0.06-0.12

Recommended Cutting Conditions

Machining data for TBTA 3/5/7 & TBTA-R

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	60-120
		>=0.25%C	Annealed	650	190	2	60-120
		<0.55%C	Quenched and tempered	850	250	3	60-120
		>=0.55%C	Annealed	750	220	4	60-120
			Quenched and tempered	1000	300	5	50-100
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	50-100
			Quenched and tempered	930	275	7	50-100
				1000	300	8	50-100
				1200	350	9	50-100
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	60-120
			Quenched and tempered	1100	325	11	60-120
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	60-110
			Martensitic	820	240	13	60-110
			Austenitic	600	180	14	60-110
K	Gray cast iron (GG)		Ferritic		160	15	60-100
			Pearlitic		250	16	60-100
	Cast iron nodular (GGG)		Ferritic		180	17	60-100
			Pearlitic		260	18	60-100
	Malleable cast iron		Ferritic		130	19	60-100
			Pearlitic		230	20	60-100
N	Aluminum - Wrought alloy		Not cureable		60	21	60-130
			Cured		100	22	60-130
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	60-130
			Cured		90	24	60-130
		>12% Si	High temp.		130	25	60-130
	Copper alloys	>1% Pb	Free cutting		110	26	60-130
			Brass		90	27	60-130
			Electrolitic copper		100	28	60-130
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	20-65
			Cured		280	32	20-65
		Ni or Co based	Annealed		250	33	20-65
			Cured		350	34	20-65
			Cast		320	35	20-65
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-100
			Alpha+beta alloys cured	Rm 1050	310	37	30-100
H	Hardened steel		Hardened		55HRC	38	
			Hardened		60HRC	39	
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for TBTA 3/5/7 & TBTA-R

Feed (mm/rev) vs. drill diameter				
Ø38.00 - Ø39.99	Ø40.00 - Ø51.99	Ø52.00 - Ø63.99	Ø64.00 - Ø84.99	Ø85.00 -
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.13	0.10-0.15	0.13-0.18	0.15-0.20	0.18-0.23
0.08-0.13	0.10-0.15	0.13-0.18	0.15-0.20	0.18-0.23
0.08-0.13	0.10-0.15	0.13-0.18	0.15-0.20	0.18-0.23
0.08-0.13	0.10-0.15	0.13-0.18	0.15-0.20	0.18-0.23
0.08-0.13	0.10-0.15	0.13-0.18	0.15-0.20	0.18-0.23
0.08-0.13	0.10-0.15	0.13-0.18	0.15-0.20	0.18-0.23
0.08-0.20	0.10-0.25	0.13-0.28	0.15-0.30	0.18-0.33
0.08-0.20	0.10-0.25	0.13-0.28	0.15-0.30	0.18-0.33
0.08-0.20	0.10-0.25	0.13-0.28	0.15-0.30	0.18-0.33
0.08-0.20	0.10-0.25	0.13-0.28	0.15-0.30	0.18-0.33
0.08-0.20	0.10-0.25	0.13-0.28	0.15-0.30	0.18-0.33
0.08-0.20	0.10-0.25	0.13-0.28	0.15-0.30	0.18-0.33
0.08-0.20	0.10-0.25	0.13-0.28	0.15-0.30	0.18-0.33
0.08-0.20	0.10-0.25	0.13-0.28	0.15-0.30	0.18-0.33
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30
0.08-0.15	0.10-0.20	0.13-0.23	0.15-0.25	0.18-0.30

Recommended Cutting Conditions

Machining data for TBTA-FB, BTE

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	70-130
		>=0.25%C	Annealed	650	190	2	70-130
		<0.55%C	Quenched and tempered	850	250	3	70-130
		>=0.55%C	Annealed	750	220	4	70-130
			Quenched and tempered	1000	300	5	70-130
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	70-120
			Quenched and tempered	930	275	7	60-120
				1000	300	8	60-120
				1200	350	9	60-120
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	70-130
			Quenched and tempered	1100	325	11	70-130
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	70-130
			Martensitic	820	240	13	70-130
			Austenitic	600	180	14	70-130
K	Gray cast iron (GG)		Ferritic		160	15	60-110
			Pearlitic		250	16	60-110
	Cast iron nodular (GGG)		Ferritic		180	17	50-110
			Pearlitic		260	18	50-110
	Malleable cast iron		Ferritic		130	19	70-110
			Pearlitic		230	20	70-110
N	Aluminum - Wrought alloy		Not cureable		60	21	65-130
			Cured		100	22	65-130
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	65-130
			Cured		90	24	65-130
		>12% Si	High temp.		130	25	65-130
	Copper alloys	>1% Pb	Free cutting		110	26	65-130
			Brass		90	27	65-130
			Electrolitic copper		100	28	65-130
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	20-50
			Cured		280	32	20-50
		Ni or Co based	Annealed		250	33	20-50
			Cured		350	34	20-50
			Cast		320	35	20-50
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-60
			Alpha+beta alloys cured	Rm 1050	310	37	30-60
H	Hardened steel		Hardened		55HRC	38	
			Hardened		60HRC	39	
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for TBTA-FB, BTE

TBTA-FB		BTE	
Feed (mm/rev) vs. drill diameter		Cutting speed Vc (m/min)	Feed (mm/rev) vs. drill diameter
Ø25.00 - Ø43.00	Ø43.01 - Ø65.00		Ø15.60 - Ø16.70
0.10-0.30	0.12-0.35	80-140	0.10-0.16
0.10-0.30	0.12-0.35	80-130	0.10-0.16
0.10-0.30	0.12-0.35	80-120	0.10-0.16
0.10-0.30	0.12-0.35	70-110	0.10-0.16
0.10-0.30	0.12-0.35	50-90	0.10-0.12
0.10-0.30	0.12-0.35	70-120	0.10-0.16
0.10-0.30	0.12-0.35	70-110	0.10-0.12
0.10-0.30	0.12-0.35	50-90	0.10-0.12
0.10-0.30	0.12-0.35	40-70	0.10-0.12
0.10-0.30	0.12-0.35	50-90	0.10-0.16
0.10-0.30	0.12-0.35	40-80	0.10-0.12
0.10-0.30	0.12-0.35	40-70	0.04-0.16
0.10-0.30	0.12-0.35	40-70	0.04-0.16
0.10-0.30	0.12-0.35	30-70	0.04-0.14
0.10-0.25	0.12-0.35	90-160	0.06-0.16
0.10-0.25	0.12-0.35	80-140	0.06-0.16
0.10-0.25	0.12-0.35	90-180	0.06-0.16
0.10-0.25	0.12-0.35	80-140	0.06-0.16
0.10-0.25	0.12-0.35	90-160	0.06-0.16
0.10-0.25	0.12-0.35	80-140	0.06-0.16
0.10-0.25	0.12-0.35	90-220	0.08-0.16
0.08-0.23	0.12-0.27	90-220	0.08-0.16
0.08-0.23	0.12-0.27	90-220	0.08-0.16
0.08-0.23	0.12-0.27	90-220	0.08-0.16
0.08-0.23	0.12-0.27	80-160	0.08-0.16
0.08-0.23	0.12-0.27	90-220	0.08-0.16
0.08-0.23	0.12-0.27	90-220	0.08-0.16
0.08-0.23	0.12-0.27	90-220	0.08-0.16
0.08-0.23	0.12-0.27	30-60	0.06-0.14
0.08-0.23	0.12-0.27	20-50	0.06-0.14
0.08-0.23	0.12-0.27	20-50	0.06-0.14
0.08-0.23	0.12-0.27	20-50	0.06-0.14
0.08-0.23	0.12-0.27	20-50	0.06-0.14
0.08-0.23	0.12-0.27	20-50	0.06-0.12
0.08-0.23	0.12-0.27	20-50	0.06-0.12

Recommended Cutting Conditions

Machining data for BTA & BTS

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	70-120
		>=0.25%C	Annealed	650	190	2	70-120
		<0.55%C	Quenched and tempered	850	250	3	40-70
		>=0.55%C	Annealed	750	220	4	70-120
			Quenched and tempered	1000	300	5	55-100
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	70-100
			Quenched and tempered	930	275	7	55-100
				1000	300	8	55-100
				1200	350	9	55-100
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-85
			Quenched and tempered	1100	325	11	55-100
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	60-100
			Martensitic	820	240	13	60-100
			Austenitic	600	180	14	60-100
K	Gray cast iron (GG)		Ferritic		160	15	60-100
			Pearlitic		250	16	60-100
	Cast iron nodular (GGG)		Ferritic		180	17	80-100
			Pearlitic		260	18	80-100
	Malleable cast iron		Ferritic		130	19	50-100
			Pearlitic		230	20	50-100
N	Aluminum - Wrought alloy		Not cureable		60	21	65-130
			Cured		100	22	65-100
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	65-130
			Cured		90	24	65-130
		>12% Si	High temp.		130	25	65-130
	Copper alloys	>1% Pb	Free cutting		110	26	65-130
			Brass		90	27	65-130
			Electrolitic copper		100	28	65-130
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	10-50
			Cured		280	32	10-50
		Ni or Co based	Annealed		250	33	10-50
			Cured		350	34	10-50
			Cast		320	35	10-50
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-50
			Alpha+beta alloys cured	Rm 1050	310	37	30-50
H	Hardened steel		Hardened		55HRC	38	
			Hardened		60HRC	39	
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for BTA & BTS

Feed (mm/rev) vs. drill diameter				
Ø8.00 - Ø20.00	Ø15.60 - Ø20.00	Ø20.01 - Ø31.00	Ø31.01 - Ø43.00	Ø43.01 - Ø65.00
0.05-0.13	0.08-0.15	0.10-0.17	0.13-0.20	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.17	0.13-0.20	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.17	0.13-0.20	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.17	0.13-0.20	0.16-0.30
0.05-0.10	0.08-0.12	0.10-0.15	0.13-0.17	0.15-0.28
0.05-0.13	0.08-0.15	0.10-0.17	0.13-0.20	0.16-0.30
0.05-0.10	0.08-0.12	0.10-0.15	0.13-0.17	0.15-0.28
0.05-0.10	0.08-0.12	0.10-0.15	0.13-0.17	0.15-0.28
0.05-0.10	0.08-0.12	0.10-0.15	0.13-0.17	0.15-0.28
0.05-0.13	0.08-0.15	0.10-0.17	0.13-0.20	0.16-0.30
0.05-0.10	0.08-0.12	0.10-0.15	0.13-0.17	0.15-0.28
0.05-0.13	0.08-0.15	0.10-0.28	0.13-0.30	0.16-0.35
0.05-0.13	0.08-0.15	0.10-0.28	0.13-0.30	0.16-0.35
0.05-0.12	0.05-0.12	0.08-0.25	0.10-0.28	0.15-0.33
0.05-0.13	0.06-0.13	0.08-0.18	0.10-0.20	0.15-0.25
0.05-0.13	0.06-0.13	0.08-0.18	0.10-0.20	0.15-0.25
0.05-0.13	0.08-0.15	0.10-0.17	0.13-0.20	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.17	0.13-0.20	0.16-0.30
0.05-0.13	0.06-0.13	0.08-0.18	0.10-0.20	0.15-0.25
0.05-0.13	0.06-0.13	0.08-0.18	0.10-0.20	0.15-0.25
0.05-0.13	0.08-0.15	0.10-0.20	0.15-0.25	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.20	0.15-0.25	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.20	0.15-0.25	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.20	0.15-0.25	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.20	0.15-0.25	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.20	0.15-0.25	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.20	0.15-0.25	0.16-0.30
0.05-0.13	0.08-0.15	0.10-0.20	0.15-0.25	0.16-0.30
0.05-0.12	0.06-0.12	0.08-0.15	0.12-0.18	0.15-0.25
0.05-0.12	0.06-0.12	0.08-0.15	0.12-0.18	0.15-0.25
0.05-0.12	0.06-0.12	0.08-0.15	0.12-0.18	0.15-0.25
0.05-0.12	0.06-0.12	0.08-0.15	0.12-0.18	0.15-0.25
0.05-0.12	0.06-0.12	0.08-0.15	0.12-0.18	0.15-0.25
0.05-0.10	0.05-0.10	0.08-0.12	0.10-0.15	0.12-0.20
0.05-0.10	0.05-0.10	0.08-0.12	0.10-0.15	0.12-0.20

Recommended Cutting Conditions

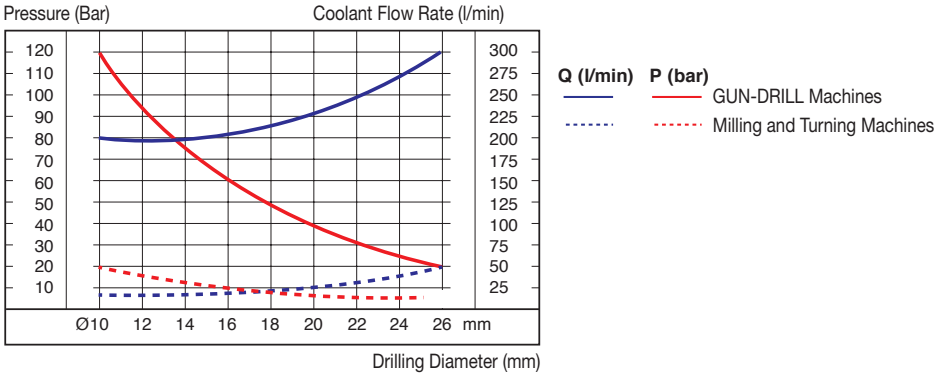
Machining data for WIN-GUN

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-110-140
		>=0.25%C	Annealed	650	190	2	80-105-130
		<0.55%C	Quenched and tempered	850	250	3	80-100-120
		>=0.55%C	Annealed	750	220	4	70-90-110
			Quenched and tempered	1000	300	5	50-70-90
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	80-100-120
			Quenched and tempered	930	275	7	70-90-110
				1000	300	8	50-70-90
				1200	350	9	40-55-70
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-70-90
			Quenched and tempered	1100	325	11	40-60-80
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	40-55-70
			Martensitic	820	240	13	
K	Gray cast iron (GG)		Ferritic		160	15	90-125-160
			Pearlitic		250	16	80-110-140
	Cast iron nodular (GGG)		Ferritic		180	17	90-135-180
			Pearlitic		260	18	80-110-140
	Malleable cast iron		Ferritic		130	19	90-125-160
			Pearlitic		230	20	80-110-140
N	Aluminum - Wrought alloy		Not cureable		60	21	90-155-220
			Cured		100	22	
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	
			Cured		90	24	
		>12% Si	High temp.		130	25	80-120-160

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel | Stainless steel | Cast iron | Nonferrous

Pressure and Coolant Flow Rate for WIN-GUN



Recommended Cutting Conditions

WIN-GUN

Machining data for WIN-GUN

Feed (mm/rev) vs. drill diameter				
Ø10 - Ø11.9	Ø12 - Ø13.9	Ø14 - Ø15.9	Ø16 - Ø19.9	Ø20 - Ø25.9
0.15 0.18 0.21	0.18 0.21 0.24	0.20 0.23 0.27	0.25 0.30 0.35	0.25 0.30 0.35
0.14 0.17 0.21	0.16 0.20 0.24	0.18 0.22 0.26	0.23 0.27 0.31	0.25 0.30 0.35
0.12 0.14 0.17	0.15 0.17 0.20	0.18 0.20 0.23	0.20 0.22 0.25	0.22 0.24 0.27
0.12 0.13 0.15	0.14 0.15 0.17	0.16 0.18 0.20	0.16 0.19 0.21	0.18 0.21 0.24
0.20 0.23 0.27	0.25 0.28 0.32	0.30 0.33 0.37	0.35 0.40 0.45	0.35 0.42 0.47
0.25 0.28 0.32	0.30 0.33 0.37	0.35 0.38 0.42	0.40 0.45 0.50	0.45 0.50 0.57

- Red text: Recommended cutting data
- Mandatory use of emulsion or oil when drilling
- For the 400 mm long tools, please reduce the cutting speed by 20%

Recommended Cutting Conditions

TDEEP

Machining data for TRGD / TRGD3 / TRGDL / TBTA-TR

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1
		>=0.25%C	Annealed	650	190	2
		<0.55%C	Quenched and tempered	850	250	3
		>=0.55%C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloy steel, cast steel and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12
			Martensitic	820	240	13
			Austenitic	600	180	14
K	Gray cast iron (GG)		Ferritic		160	15
			Pearlitic		250	16
	Cast iron nodular (GGG)		Ferritic		180	17
			Pearlitic		260	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum - Wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temp.		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29
			Hard rubber		55 Shore D	30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium, Ti alloys		Pure	Rm 400	190	36
			Alpha+beta alloys cured	Rm 1050	310	37
H	Hardened steel		Hardened		55 HRC	38
			Hardened		60 HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron nodular		Hardened		55 HRC	41

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for TRGD / TRGD3 / TRGDL / TBTA-TR

Feed (mm/rev) vs. drill diameter							
TRGD / TRGD3 / TRGDL						TBTA-TR	
Cutting speed Vc (m/min)	Ø10.00-Ø11.80	Ø12.00-Ø13.99	Ø14.00-Ø15.99	Ø16.00-Ø28.00	Ø28.01-Ø40.00	Cutting speed Vc (m/min)	Ø16.00-Ø28.00
80-140	0.05-0.08	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.15	90-130	0.15-0.20
80-140	0.05-0.14	0.05-0.16	0.05-0.10	0.05-0.10	0.05-0.15	90-130	0.15-0.20
80-140	0.05-0.14	0.05-0.16	0.05-0.16	0.05-0.20	0.05-0.20	90-130	0.15-0.20
80-140	0.05-0.14	0.05-0.16	0.05-0.16	0.05-0.20	0.05-0.20	70-130	0.10-0.25
80-140	0.05-0.14	0.05-0.16	0.05-0.16	0.05-0.20	0.05-0.20	70-130	0.10-0.25
80-140	0.05-0.14	0.05-0.16	0.05-0.10	0.05-0.10	0.05-0.15	70-120	0.10-0.25
80-120	0.05-0.14	0.05-0.16	0.05-0.16	0.05-0.20	0.05-0.20	60-120	0.10-0.25
80-120			0.05-0.16	0.05-0.20	0.05-0.20	60-120	0.10-0.25
80-120			0.05-0.16	0.05-0.20	0.05-0.20	60-120	0.10-0.25
80-140			0.05-0.10	0.05-0.10	0.05-0.15	70-130	0.10-0.25
80-120			0.05-0.16	0.05-0.20	0.05-0.20	70-130	0.10-0.25
60-100	0.05-0.08	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.15	80-130	0.06-0.10
60-100	0.05-0.08	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.15	80-130	0.06-0.10
60-100	0.05-0.08	0.05-0.10	0.05-0.10	0.05-0.10	0.05-0.15	80-130	0.06-0.10
80-140	0.05-0.20	0.05-0.25	0.05-0.25	0.05-0.30	0.05-0.30	50-110	0.10-0.20
80-140	0.05-0.20	0.05-0.25	0.05-0.25	0.05-0.30	0.05-0.30	50-110	0.10-0.20
80-140	0.05-0.20	0.05-0.25	0.05-0.25	0.05-0.30	0.05-0.30	60-110	0.10-0.20
80-140	0.05-0.20	0.05-0.25	0.05-0.25	0.05-0.30	0.05-0.30	60-110	0.10-0.20
80-140			0.05-0.25	0.05-0.30	0.05-0.30	70-110	0.10-0.20
80-140			0.05-0.25	0.05-0.30	0.05-0.30	70-110	0.10-0.20
100-200	0.05-0.18	0.05-0.20	0.05-0.20	0.05-0.20	0.05-0.25	65-130	0.08-0.18
100-200	0.05-0.18	0.05-0.20	0.05-0.20	0.05-0.20	0.05-0.25	65-130	0.08-0.18
100-200	0.05-0.18	0.05-0.20	0.05-0.20	0.05-0.20	0.05-0.25	65-130	0.08-0.18
100-200	0.05-0.18	0.05-0.20	0.05-0.20	0.05-0.20	0.05-0.25	65-130	0.08-0.18
						65-130	0.08-0.18
						65-130	0.08-0.18
						65-130	0.08-0.18
						65-130	0.08-0.18
						65-130	0.08-0.18
						65-130	0.08-0.18
20-50	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13	20-50	0.08-0.18
20-50	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13	20-50	0.08-0.18
20-50	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13	20-50	0.08-0.18
20-50	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13	20-50	0.08-0.18
20-50	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13	20-50	0.08-0.18
30-60	0.04-0.10	0.05-0.13	0.05-0.13	0.05-0.15	0.05-0.18	30-60	0.08-0.18
30-60	0.04-0.10	0.05-0.13	0.05-0.13	0.05-0.15	0.05-0.18	30-60	0.08-0.18
50-100	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13		
50-100	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13		
50-100	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13		
50-100	0.04-0.06	0.04-0.08	0.04-0.08	0.04-0.10	0.04-0.13		

Recommended Cutting Conditions

HDRILL

Machining data for CDF

Material	Tensile strength (N/mm^2)	Hardness HB	Cutting speed Vc (m/min)	Feed (mm/rev) vs. drill diameter			
				Ø3.0 - Ø6.0	Ø6.1- Ø8.0	Ø8.1- Ø10.0	Ø10.1- Ø12.7
CFRP	420	125	50-150	0.02-0.07	0.03-0.08	0.03-0.08	0.04-0.10
GFRP	650	190	40-120	0.02-0.07	0.03-0.08	0.03-0.08	0.04-0.10

Recommended Cutting Conditions

XM-REAM

Machining data for XM-REAM

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc (m/min)	Feed (mm/rev) vs. reamer diameter		
								Ø8-9.99	Ø10-11.99	Ø12-12.99
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	50-150	0.25-0.50	0.30-0.60	0.35-0.80
		>=0.25%C	Annealed	650	190	2	50-150	0.25-0.50	0.30-0.60	0.35-0.80
		<0.55%C	Quenched and tempered	850	250	3	50-150	0.25-0.50	0.30-0.60	0.35-0.80
		>=0.55%C	Annealed	750	220	4	50-150	0.25-0.50	0.30-0.60	0.35-0.80
			Quenched and tempered	1000	300	5	50-150	0.25-0.50	0.30-0.60	0.35-0.80
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	50-150	0.25-0.50	0.30-0.60	0.35-0.80
			Quenched and tempered	930	275	7	50-150	0.25-0.50	0.30-0.60	0.35-0.80
				1000	300	8	50-150	0.25-0.50	0.30-0.60	0.35-0.80
				1200	350	9	50-150	0.25-0.50	0.30-0.60	0.35-0.80
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	20-60	0.20-0.30	0.25-0.40	0.30-0.50
			Quenched and tempered	1100	325	11	20-60	0.20-0.30	0.25-0.40	0.30-0.50
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	20-40	0.20-0.30	0.25-0.40	0.30-0.50
			Martensitic	820	240	13	20-40	0.20-0.30	0.25-0.40	0.30-0.50
			Austenitic	600	180	14	20-40	0.20-0.30	0.25-0.40	0.30-0.50
K	Gray cast iron (GG)		Ferritic		160	15	50-200	0.30-0.60	0.35-0.80	0.40-1.00
			Pearlitic		250	16	50-200	0.30-0.60	0.35-0.80	0.40-1.00
	Cast iron nodular (GGG)		Ferritic		180	17	50-200	0.30-0.60	0.35-0.80	0.40-1.00
			Pearlitic		260	18	50-200	0.30-0.60	0.35-0.80	0.40-1.00
	Malleable cast iron		Ferritic		130	19	50-200	0.30-0.60	0.35-0.80	0.40-1.00
			Pearlitic		230	20	50-200	0.30-0.60	0.35-0.80	0.40-1.00
N	Aluminum - Wrought alloy		Not cureable		60	21	100-250	0.30-0.60	0.35-0.80	0.40-1.00
			Cured		100	22	100-250	0.30-0.60	0.35-0.80	0.40-1.00
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	100-250	0.30-0.60	0.35-0.80	0.40-1.00
			Cured		90	24	100-250	0.30-0.60	0.35-0.80	0.40-1.00
		>12% Si	High temp.		130	25	100-250	0.30-0.60	0.35-0.80	0.40-1.00
	Copper alloys	>1% Pb	Free cutting		110	26	100-250	0.30-0.60	0.35-0.80	0.40-1.00
			Brass		90	27	100-250	0.30-0.60	0.35-0.80	0.40-1.00
			Electrolitic copper		100	28	100-250	0.30-0.60	0.35-0.80	0.40-1.00
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29				
			Hard rubber		55 Shore D	30				
S	High temp. alloys	Fe based	Annealed		200	31				
			Cured		280	32				
		Ni or Co based	Annealed		250	33				
			Cured		350	34				
			Cast		320	35				
	Titanium, Ti alloys		Pure	Rm 400	190	36				
			Alpha+beta alloys cured	Rm 1050	310	37				
H	Hardened steel		Hardened		55 HRC	38				
			Hardened		60 HRC	39				
	Chilled cast iron		Cast		400	40				
	Cast iron nodular		Hardened		55 HRC	41				

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

TM-REAM

Machining data for TM-REAM - Through hole

ISO	Material		Condition	Material No.	Through hole		Interrupted through Hole	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	1	TT9030	BL	TT9030	BL
		>=0.25%C	Annealed	2	Vc = 80 - 200		Vc = 60 - 120	
		<0.55%C	Quenched and tempered	3	B4 - B6	fz = 0.08 - 0.21	B4 - B6	fz = 0.08 - 0.21
		>=0.55%C	Annealed	4				
			Quenched and tempered	5	B7 - B9	fz = 0.12 - 0.27	B7 - B9	fz = 0.09 - 0.21
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	6	TT9030	BL	TT9030	BL
			Quenched and tempered	7	Vc = 80 - 200		Vc = 60 - 120	
				8	B4 - B6	fz = 0.08 - 0.21	B4 - B6	fz = 0.08 - 0.21
				9	B7 - B9	fz = 0.12 - 0.27	B7 - B9	fz = 0.09 - 0.21
	High alloy steel, cast steel and tool steel		Annealed	10	TT9030	BL	TT9030	BL
					Vc = 20 - 60		Vc = 20 - 60	
			Quenched and tempered	11	B4 - B6	fz = 0.05 - 0.13	B4 - B6	fz = 0.04 - 0.11
					B7 - B9	fz = 0.07 - 0.17	B7 - B9	fz = 0.05 - 0.14
M	Stainless steel and cast steel		Ferritic / martensitic	12	TT9030	BL	TT9030	BL
					Vc = 20 - 40		Vc = 20 - 40	
			Martensitic	13	B4 - B6	fz = 0.05 - 0.13	B4 - B6	fz = 0.04 - 0.11
			Austenitic	14	B7 - B9	fz = 0.07 - 0.17	B7 - B9	fz = 0.05 - 0.14
K	Gray cast iron (GG)		Ferritic	15	TT9030	BL	TT9030	BL
					Vc = 120 - 220		Vc = 80 - 200	
			Pearlitic	16	B4 - B6	fz = 0.08 - 0.18	B4 - B6	fz = 0.05 - 0.13
					B7 - B9	fz = 0.10 - 0.24	B7 - B9	fz = 0.07 - 0.17
	Cast iron nodular (GGG)		Ferritic	17	TT9030	AS or BL	TT9030	BL
					Vc = 160 - 280		Vc = 150 - 250	
			Pearlitic	18	B4 - B6	fz = 0.11 - 0.20	B4 - B6	fz = 0.06 - 0.15
					B7 - B9	fz = 0.11 - 0.24	B7 - B9	fz = 0.08 - 0.19
	Malleable cast iron		Ferritic	19	TT9030	AS or BL	TT9030	BL
					Vc = 100 - 220		Vc = 100 - 220	
			Pearlitic	20	B4 - B6	fz = 0.11 - 0.20	B4 - B6	fz = 0.06 - 0.15
					B7 - B9	fz = 0.11 - 0.24	B7 - B9	fz = 0.08 - 0.20

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

TM-REAM

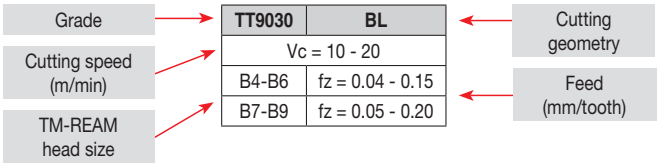
Machining data for TM-REAM - Through hole

ISO	Material		Condition	Material No.	Through hole		Interrupted through Hole	
N	Aluminum - Wrought alloy		Not cureable	21	UF10	BL or GS	UF10	BL
			Cured	22	Vc = 150 - 400		Vc = 150 - 400	
	Aluminum-cast, alloyed	<=12% Si	Not cureable	23	B4 - B6	fz = 0.08 - 0.16	B4 - B6	fz = 0.08 - 0.16
			Cured	24				
		>12% Si	High temp.	25	B7 - B9	fz = 0.10 - 0.20	B7 - B9	fz = 0.10 - 0.20
	Copper alloys	>1% Pb	Free cutting	26	TT9030	BL	TT9030	BL
					Vc = 50 - 200		Vc = 50 - 200	
			Brass	27	B4 - B6	fz = 0.08 - 0.18	B4 - B6	fz = 0.05 - 0.13
			Electrolitic copper	28	B7 - B9	fz = 0.10 - 0.23	B7 - B9	fz = 0.07 - 0.16
	Non-metallic		Duroplastics, fiber plastics	29	TT9030	AS	TT9030	AS
					Vc = 25 - 80		Vc = 25 - 80	
			Hard rubber	30	B4 - B6	fz = 0.05 - 0.10	B4 - B6	fz = 0.05 - 0.10
					B7 - B9	fz = 0.10 - 0.20	B7 - B9	fz = 0.10 - 0.20
S	High temp. alloys	Fe based	Annealed	31	TT9030	L *	TT9030	L *
			Cured	32	Vc = 15 - 50		Vc = 15 - 50	
		Ni or Co based	Annealed	33				
			Cured	34	B4 - B6	fz = 0.04 - 0.10	B4 - B6	fz = 0.03 - 0.08
			Cast	35				
	Titanium, Ti alloys		Pure	36	B7 - B9	fz = 0.05 - 0.13	B4 - B6	fz = 0.04 - 0.11
			Alpha+beta alloys cured	37				
H	Hardened steel		Hardened	38	TT9030	BL	TT9030	BL
			Hardened	39	Vc = 25 - 50		Vc = 25 - 50	
	Chilled cast iron		Cast	40	B4 - B6	fz = 0.06 - 0.15	B4 - B6	fz = 0.06 - 0.15
	Cast iron nodular		Hardened	41	B7 - B9	fz = 0.10 - 0.20	B7 - B9	fz = 0.10 - 0.20

* Standard edge geometries are not suitable for reaming titanium and high temperature alloys.
In order to choose a proper geometry, please ask for our recommendations.

- The given cutting data recommendations refer to the short holders (3xD effective reaming overhang). For longer holders, the cutting speed to be reduced proportionally.
- For relatively large leading angles (spot-facing geometries), the feed to be reduced up to 30%.
- All the given cutting data recommendations refer to the machines with spindle through coolant supply.

Legend:



Recommended Cutting Conditions

TM-REAM

Machining data for TM-REAM - Blind hole

ISO	Material		Condition	Material No.	Blind hole		Interrupted blind hole	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	1	TT9030	AS	TT9030	AS
		>=0.25%C	Annealed	2	Vc = 60-160		Vc = 60 - 120	
		<0.55%C	Quenched and tempered	3	B4 - B6	fz = 0.06 - 0.18	B4 - B6	fz = 0.05 - 0.15
		>=0.55%C	Annealed	4				
			Quenched and tempered	5	B7 - B9	fz = 0.08 - 0.20	B7 - B9	fz = 0.07 - 0.16
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	6	TT9030	AS	TT9030	AS
			Quenched and tempered	7	Vc = 60-160		Vc = 60 - 120	
				8	B4 - B6	fz = 0.06 - 0.18	B4 - B6	fz = 0.05 - 0.15
				9	B7 - B9	fz = 0.08 - 0.20	B7 - B9	fz = 0.07 - 0.16
	High alloy steel, cast steel and tool steel		Annealed	10	TT9030	AS	TT9030	AS
					Vc = 20 - 60		Vc = 20 - 60	
			Quenched and tempered	11	B4 - B6	fz = 0.04 - 0.10	B4 - B6	fz = 0.03 - 0.08
					B7 - B9	fz = 0.05 - 0.13	B7 - B9	fz = 0.04 - 0.10
M	Stainless steel and cast steel		Ferritic / martensitic	12	TT9030	AS	TT9030	AS
					Vc = 20 - 40		Vc = 20 - 40	
			Martensitic	13	B4 - B6	fz = 0.04 - 0.10	B4 - B6	fz = 0.03 - 0.08
			Austenitic	14	B7 - B9	fz = 0.05 - 0.13	B7 - B9	fz = 0.05 - 0.10
K	Gray cast iron (GG)		Ferritic	15	TT9030	AS	TT9030	AS
					Vc = 80 - 200		Vc = 60 - 120	
			Pearlitic	16	B4 - B6	fz = 0.06 - 0.18	B4 - B6	fz = 0.05 - 0.13
					B7 - B9	fz = 0.08 - 0.23	B7 - B9	fz = 0.08 - 0.18
	Cast iron nodular (GGG)		Ferritic	17	TT9030	AS	TT9030	AS
					Vc = 160 - 280		Vc = 160 - 240	
			Pearlitic	18	B4 - B6	fz = 0.06 - 0.18	B4 - B6	fz = 0.06 - 0.16
					B7 - B9	fz = 0.08 - 0.23	B7 - B9	fz = 0.08 - 0.18
	Malleable cast iron		Ferritic	19	TT9030	AS	TT9030	AS
					Vc = 100 - 220		Vc = 100 - 220	
			Pearlitic	20	B4 - B6	fz = 0.06 - 0.18	B4 - B6	fz = 0.05 - 0.15
					B7 - B9	fz = 0.08 - 0.23	B7 - B9	fz = 0.08 - 0.20

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

TM-REAM

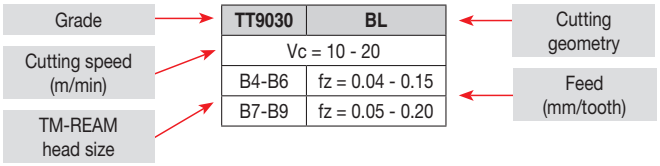
Machining data for TM-REAM - Blind hole

ISO	Material		Condition	Material No.	Blind hole		Interrupted blind hole	
N	Aluminum - Wrought alloy		Not cureable	21	UF10	GS or AS	UF10	GS or AS
			Cured	22	Vc = 150 - 400		Vc = 150 - 300	
	Aluminum-cast, alloyed	<=12% Si	Not cureable	23	B4 - B6	fz = 0.08 - 0.16	B4 - B6	fz = 0.07 - 0.15
			Cured	24				
		>12% Si	High temp.	25	B7 - B9	fz = 0.11 - 0.20	B7 - B9	fz = 0.11 - 0.20
	Copper alloys	>1% Pb	Free cutting	26	TT9030	AS	TT9030	AS
					Vc = 50 - 200		Vc = 50 - 200	
			Brass	27	B4 - B6	fz = 0.08 - 0.16	B4 - B6	fz = 0.08 - 0.16
			Electrolitic copper	28	B7 - B9	fz = 0.10 - 0.20	B7 - B9	fz = 0.10 - 0.20
	Non-metallic		Duroplastics, fiber plastics	29	TT9030	AS	TT9030	AS
					Vc = 25 - 80		Vc = 25 - 80	
			Hard rubber	30	B4 - B6	fz = 0.05 - 0.10	B4 - B6	fz = 0.05 - 0.10
					B7 - B9	fz = 0.10 - 0.20	B7 - B9	fz = 0.10 - 0.20
S	High temp. alloys	Fe based	Annealed	31	TT9030	L *	TT9030	L *
			Cured	32	Vc = 15 - 50		Vc = 15 - 50	
		Ni or Co based	Annealed	33				
			Cured	34	B4 - B6	fz = 0.03 - 0.08	B4 - B6	fz = 0.03 - 0.08
			Cast	35				
	Titanium, Ti alloys		Pure	36	B7 - B9	fz = 0.04 - 0.11	B7 - B9	fz = 0.04 - 0.11
			Alpha+beta alloys cured	37				
H	Hardened steel		Hardened	38	TT9030	AS	TT9030	AS
			Hardened	39	Vc = 25 - 50		Vc = 25 - 50	
	Chilled cast iron		Cast	40	B4 - B6	fz = 0.05 - 0.13	B4 - B6	fz = 0.05 - 0.13
	Cast iron nodular		Hardened	41	B7 - B9	fz = 0.10 - 0.20	B7 - B9	fz = 0.10 - 0.20

* Standard edge geometries are not suitable for reaming titanium and high temperature alloys.
In order to choose a proper geometry, please ask for our recommendations.

- The given cutting data recommendations refer to the short holders (3xD effective reaming overhang).
For longer holders, the cutting speed to be reduced proportionally.
- For relatively large leading angles (spot-facing geometries), the feed to be reduced up to 30%.
- All the given cutting data recommendations refer to the machines with spindle through coolant supply.

Legend:



Recommended Cutting Conditions

TBREAM

Machining data for TB-REAM

ISO	Material	Material No.	Lead A (15°/3°) (Reaming allowance: 0.1 ~ 0.3) Feed (mm/rev)	Rake (°)	Cutting speed Vc (m/min) Carbide	Coated carbide	Cermet	PCD	CBN
P	Non-alloy steel and cast steel, free cutting steel	1 - 5	0.1-0.4	6	40-60	60-80	110-160		
P	Low alloy steel and cast steel (Less than 5% of alloying elements)	6 - 9	0.1-0.4	6	20-40	40-60	110-160		
P	High alloyed steel, cast steel and tool steel	10 - 11	0.1-0.4	6	20-40	20-60	20-60		
M	Stainless steel, cast steel	12 - 14	0.1-0.3	12	20-40	40-60	20-60		
K	Grey cast iron (GG)	15 - 16	0.1-0.3	0 / 6	40-60	60-100			Please ask
K	Cast iron nodular (GGG)	17 - 18	0.1-0.3	0 / 6	40-60	60-100			
K	Malleable cast iron	19 - 20	0.1-0.3	0 / 6	40-60	60-100			
N	Aluminum wrought alloy	21 - 22						Please ask	
N	Aluminum-cast,alloyed	23 - 25							
N	Copper alloys	26 - 28							
N	Non-metallic	29 - 30							

ISO	Material	Material No.	Lead C (75°) (Reaming allowance: 0.2 ~ 0.4) Feed (mm/rev)	Rake (°)	Cutting speed Vc (m/min) Carbide	Coated carbide	Cermet	PCD	CBN
P	Non-alloy steel and cast steel, free cutting steel	1 - 5							
P	Low alloy steel and cast steel (Less than 5% of alloying elements)	6 - 9							
P	High alloyed steel, cast steel and tool steel	10 - 11							
M	Stainless steel, cast steel	12 - 14							
K	Grey cast iron (GG)	15 - 16							Please ask
K	Cast iron nodular (GGG)	17 - 18							
K	Malleable cast iron	19 - 20							
N	Aluminum wrought alloy	21 - 22	0.15-0.3	12	150-250			Please ask	
N	Aluminum-cast,alloyed	23 - 25	0.15-0.3	12	150-250				
N	Copper alloys	26 - 28							
N	Non-metallic	29 - 30							

▸ The cutting conditions in the table below should be used to start a new application.
Optimal conditions for a specific application should be evaluated by examining the results and changing the machining conditions accordingly.

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous

Recommended Cutting Conditions

TBREAM

Machining data for TB-REAM

			Lead B (30°/3°) (Reaming allowance: 0.1 ~ 0.3)						
			Feed (mm/rev)	Rake (°)	Cutting speed Vc (m/min)				
ISO	Material	Material No.			Carbide	Coated carbide	Cermet	PCD	CBN
P	Non-alloy steel and cast steel, free cutting steel	1 - 5	0.1-0.4	6	60-80	80-120	110-160		
P	Low alloy steel and cast steel (Less than 5% of alloying elements)	6 - 9	0.1-0.4	6	60-80	80-120	110-160		
P	High alloyed steel, cast steel and tool steel	10 - 11	0.1-0.4	6	40-60	40-80	40-80		
M	Stainless steel, cast steel	12 - 14	0.1-0.3	12	40-60	60-80	60-80		
K	Grey cast iron (GG)	15 - 16	0.1-0.3	0 / 6	60-80	80-120			Please ask
K	Cast iron nodular (GGG)	17 - 18	0.1-0.3	0 / 6	60-80	80-120			
K	Malleable cast iron	19 - 20	0.1-0.3	0 / 6	60-80	80-120			
N	Aluminum wrought alloy	21 - 22		12	160-200			Please ask	
N	Aluminum-cast,alloyed	23 - 25		12	160-200				
N	Copper alloys	26 - 28		0	80-100				
N	Non-metallic	29 - 30		0	10-70				

			Lead D (30°/3°) (Reaming allowance: 0.1 ~ 0.2)						
			Feed (mm/rev)	Rake (°)	Cutting speed Vc (m/min)				
ISO	Material	Material No.			Carbide	Coated carbide	Cermet	PCD	CBN
P	Non-alloy steel and cast steel, free cutting steel	1 - 5	0.1-0.4	6	60-80	80-120	110-160		
P	Low alloy steel and cast steel (Less than 5% of alloying elements)	6 - 9	0.1-0.4	6	60-80	80-120	110-160		
P	High alloyed steel, cast steel and tool steel	10 - 11	0.1-0.4	6	40-60	40-80	40-80		
M	Stainless steel, cast steel	12 - 14	0.1-0.3	12	40-60	60-80	60-80		
K	Grey cast iron (GG)	15 - 16	0.1-0.3	0 / 6	60-80	80-120			Please ask
K	Cast iron nodular (GGG)	17 - 18	0.1-0.3	0 / 6	60-80	80-120			
K	Malleable cast iron	19 - 20	0.1-0.3	0 / 6	60-80	80-120			
N	Aluminum wrought alloy	21 - 22		12	110-200			Please ask	
N	Aluminum-cast,alloyed	23 - 25		12	160-200				
N	Copper alloys	26 - 28		0	80-100				
N	Non-metallic	29 - 30							

▸ The cutting conditions in the table below should be used to start a new application. Optimal conditions for a specific application should be evaluated by examining the results and changing the machining conditions accordingly.

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous

Recommended Cutting Conditions

TSREAM

Machining data for TS-REAM

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc (m/min)
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	120-250
		>=0.25%C	Annealed	650	190	2	120-250
		<0.55%C	Quenched and tempered	850	250	3	120-250
		>=0.55%C	Annealed	750	220	4	
			Quenched and tempered	1000	300	5	
	Low alloy steel and cast steel (Less than 5% of alloying elements)		Annealed	600	200	6	120-250
			Quenched and tempered	930	275	7	120-250
				1000	300	8	120-250
				1200	350	9	120-250
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	120-250
			Quenched and tempered	1100	325	11	120-250
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	60-120
			Martensitic	820	240	13	60-120
			Austenitic	600	180	14	60-120
K	Gray cast iron (GG)		Ferritic		160	15	60-120
			Pearlitic		250	16	60-120
	Cast iron nodular (GGG)		Ferritic		180	17	60-120
			Pearlitic		260	18	60-120
	Malleable cast iron		Ferritic		130	19	60-120
			Pearlitic		230	20	60-120
N	Aluminum - Wrought alloy		Not cureable		60	21	250-500
			Cured		100	22	250-500
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	250-500
			Cured		90	24	250-500
		>12% Si	High temp.		130	25	
	Copper alloys	>1% Pb	Free cutting		110	26	
			Brass		90	27	
			Electrolitic copper		100	28	
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	
			Hard rubber		55 Shore D	30	
S	High temp. alloys	Fe based	Annealed		200	31	
			Cured		280	32	
		Ni or Co based	Annealed		250	33	25-50
			Cured		350	34	25-50
			Cast		320	35	
	Titanium, Ti alloys		Pure	Rm 400	190	36	30-80
			Alpha+beta alloys cured	Rm 1050	310	37	30-80
H	Hardened steel		Hardened		55HRC	38	25-60
			Hardened		60HRC	39	
	Chilled cast iron		Cast		400	40	
	Cast iron nodular		Hardened		55HRC	41	

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

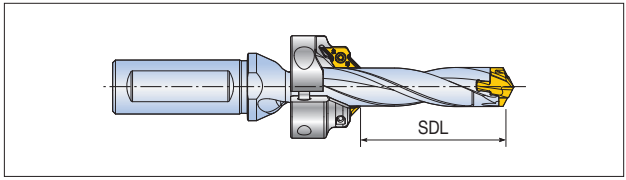
Recommended Cutting Conditions

TS REAM

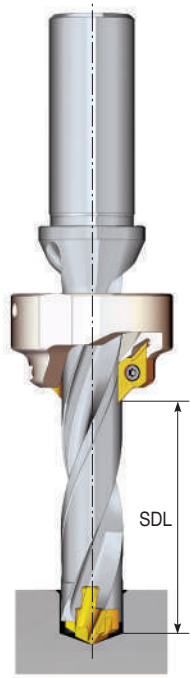
Machining data for TS-REAM

Feed (mm/rev) vs. reamer diameter			
Ø3.0 - Ø5.0	Ø6.0 - Ø7.0	Ø8.0 - Ø10.0	Ø10.5 - Ø12.0
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60
0.10-0.40	0.15-0.70	0.50-1.40	0.80-1.60

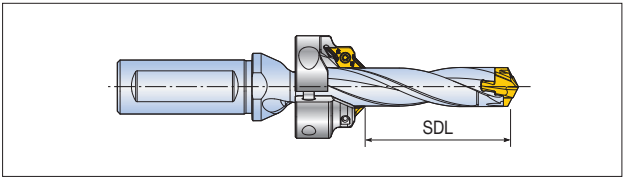
Chamfering ring designation - DRILL-RUSH



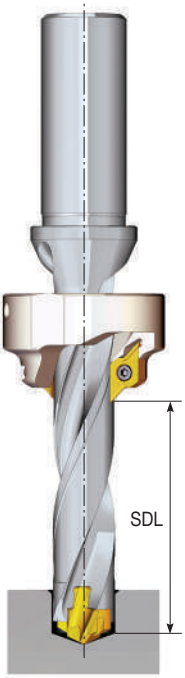
	Designation	CFR designation	SDL	
			min	max
3D	TCD 130-134-16T3/S0-3D	CFR D130-A45	19	19
	135-139-16T3/S0-3D	CFR D135-A45	19	20
	140-144-16T3/S0-3D	CFR D140-A45	21	22
	145-149-16T3/S0-3D	CFR D145-A45	22	23
	150-159-20T3/S0-3D	CFR D150-A45	23	23
	160-169-20T3/S0-3D	CFR D160-A45	24	25
	170-179-20T3/S0-3D	CFR D170-A45	26	28
	180-189-25T2/S0-3D	CFR D180-A45	27	30
	190-199-25T2/S0-3D	CFR D190-A45	29	33
	200-209-25T2/S0-3D	CFR D200-A45	30	36
	210-219-25T2/S0-3D	CFR D210-A45	32	39
	220-229-25T2/S0-3D	CFR D220-A45	33	42
	230-239-32T2/S0-3D	CFR D230-A45	35	45
	240-249-32T2/S0-3D	CFR D240-A45	36	48
	250-259-32T2/S0-3D	CFR D250-A45	38	51
5D	TCD 100-104-16T3/S0-5D	CFR D100-A45	28	28
	105-109-16T3/S0-5D	CFR D105-A45	29	30
	110-114-16T3/S0-5D	CFR D110-A45	31	33
	115-119-16T3/S0-5D	CFR D115-A45	32	35
	120-124-16T3/S0-5D	CFR D120-A45	33	45
	125-129-16T3/S0-5D	CFR D125-A45	34	40
	130-134-16T3/S0-5D	CFR D130-A45	36	43
	135-139-16T3/S0-5D	CFR D135-A45	37	43
	140-144-16T3/S0-5D	CFR D140-A45	38	48
	145-149-16T3/S0-5D	CFR D145-A45	39	48
	150-159-20T3/S0-5D	CFR D150-A45	41	53
	160-169-20T3/S0-5D	CFR D160-A45	43	58
	170-179-20T3/S0-5D	CFR D170-A45	46	63
	180-189-25T2/S0-5D	CFR D180-A45	48	68
	190-199-25T2/S0-5D	CFR D190-A45	51	73
	200-209-25T2/S0-5D	CFR D200-A45	53	78
	210-219-25T2/S0-5D	CFR D210-A45	56	79
	220-229-25T2/S0-5D	CFR D220-A45	58	84
	230-239-32T2/S0-5D	CFR D230-A45	61	89
	240-249-32T2/S0-5D	CFR D240-A45	63	94
	250-259-32T2/S0-5D	CFR D250-A45	66	99



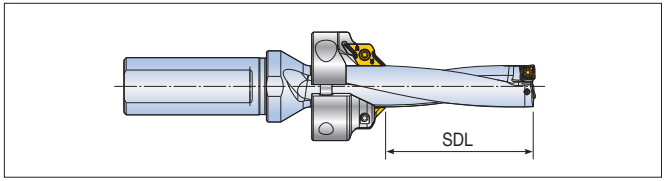
Chamfering ring designation - DRILL-RUSH



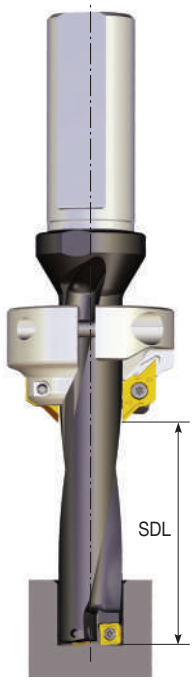
	Designation	CFR designation	SDL	
			min	max
8D	TCD 100-104-16T3/S0-8D	CFR D100-A45	45	58
	105-109-16T3/S0-8D	CFR D105-A45	49	62
	110-114-16T3/S0-8D	CFR D110-A45	49	66
	115-119-16T3/S0-8D	CFR D115-A45	53	70
	120-124-16T3/S0-8D	CFR D120-A45	53	74
	125-129-16T3/S0-8D	CFR D125-A45	57	78
	130-134-16T3/S0-8D	CFR D130-A45	57	82
	135-139-16T3/S0-8D	CFR D135-A45	61	84
	140-144-16T3/S0-8D	CFR D140-A45	61	88
	145-149-16T3/S0-8D	CFR D145-A45	65	92
	150-159-20T3/S0-8D	CFR D150-A45	65	96
	160-169-20T3/S0-8D	CFR D160-A45	69	103
	170-179-20T3/S0-8D	CFR D170-A45	73	111
	180-189-25T2/S0-8D	CFR D180-A45	77	118
	190-199-25T2/S0-8D	CFR D190-A45	81	126
	200-209-25T2/S0-8D	CFR D200-A45	85	134
	210-219-25T2/S0-8D	CFR D210-A45	89	142
	220-229-25T2/S0-8D	CFR D220-A45	93	150
	230-239-32T2/S0-8D	CFR D230-A45	97	158
	240-249-32T2/S0-8D	CFR D240-A45	101	166
	250-259-32T2/S0-8D	CFR D250-A45	105	174
12D	TCD 120-124-16S0-12D	CFR D120-A45	87	121
	125-129-16S0-12D	CFR D125-A45	90	127
	130-134-16S0-12D	CFR D130-A45	93	133
	135-139-16S0-12D	CFR D135-A45	96	137
	140-144-16S0-12D	CFR D140-A45	99	143
	145-149-16S0-12D	CFR D145-A45	102	149
	150-159-20S0-12D	CFR D150-A45	105	155
	160-169-20S0-12D	CFR D160-A45	111	166
	170-179-20S0-12D	CFR D170-A45	117	178
	180-189-25S0-12D	CFR D180-A45	123	189
	190-199-25S0-12D	CFR D190-A45	129	201
	200-209-25S0-12D	CFR D200-A45	135	213
	210-219-25S0-12D	CFR D210-A45	141	225
	220-229-25S0-12D	CFR D220-A45	147	237



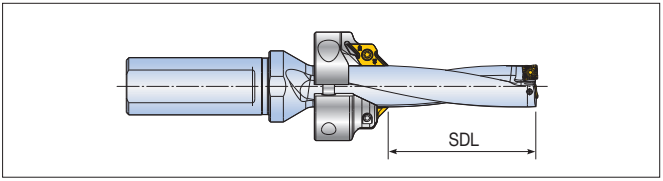
Chamfering ring designation - TOP-DRILL and T-DRILL



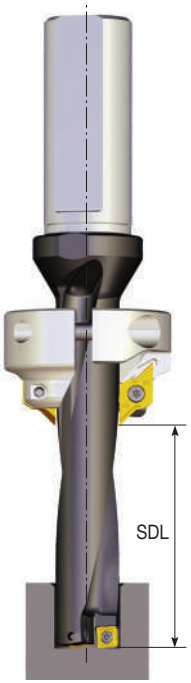
	TOP-DRILL		T-DRILL		CFR designation	SDL	
						min	max
3D	TOP	-	TDR	3125-20T2-05	CFR D125-A45	16	16
		-		3130-20T2-05	CFR D130-A45	16	16
		-		3135-20T2-05	CFR D135-A45	17	18
		3140-20T2-05		3140-20T2-05	CFR D140-A45	17	18
		3145-20T2-05		3145-20T2-05	CFR D145-A45	18	19
		3150-20T2-05		3150-20T2-05	CFR D150-A45	18	19
		3155-20T2-05		3155-25T2-06	CFR D160-A45	19	21
		3160-20T2-05		3160-25T2-06	CFR D160-A45	19	21
		3165-25T2-06		3165-25T2-06	CFR D170-A45	21	24
		3170-25T2-06		3170-25T2-06	CFR D170-A45	22	24
		3175-25T2-06		3175-25T2-06	CFR D180-A45	23	27
		3180-25T2-06		3180-25T2-06	CFR D180-A45	23	26
		3185-25T2-06		3185-25T2-06	CFR D180-A45	24	29
		3190-25T2-06		3190-25T2-06	CFR D190-A45	25	29
		3195-25T2-07		3195-25T2-06	CFR D190-A45	25	32
		3200-25T2-07		3200-25T2-06	CFR D200-A45	26	32
		3205-25T2-07		3205-25T2-06	CFR D200-A45	27	35
		3210-25T2-07		3210-25T2-06	CFR D210-A45	27	35
		3215-25T2-07		3215-25T2-07	CFR D210-A45	28	38
		3220-25T2-07		3220-25T2-07	CFR D220-A45	29	38
		3225-25T2-08		3225-25T2-07	CFR D220-A45	29	41
		3230-25T2-08		3230-25T2-07	CFR D230-A45	30	41
		3235-25T2-08		3235-25T2-07	CFR D230-A45	31	44
		3240-25T2-08		3240-25T2-07	CFR D240-A45	31	44
		3245-25T2-08		3245-25T2-07	CFR D240-A45	32	47
		3250-25T2-08		3250-25T2-07	CFR D250-A45	33	47



Chamfering ring designation - TOP-DRILL and T-DRILL



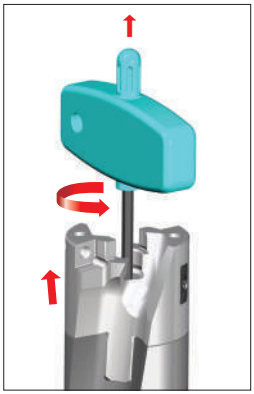
	TOP-DRILL		T-DRILL		CFR designation	SDL	
						min	max
4D	TOP	-	TDR	4125-20T2-05	CFR D125-A45	25	26
		-		4130-20T2-05	CFR D130-A45	25	26
		-		4135-20T2-05	CFR D135-A45	27	30
		4140-20T2-05		4140-20T2-05	CFR D140-A45	28	30
		4145-20T2-05		4145-20T2-05	CFR D145-A45	29	34
		4150-20T2-05		4150-20T2-05	CFR D150-A45	30	34
		4155-20T2-05		4155-25T2-06	CFR D160-A45	31	37
		4160-20T2-05		4160-25T2-06	CFR D160-A45	32	37
		4165-25T2-06		4165-25T2-06	CFR D170-A45	33	41
		4170-25T2-06		4170-25T2-06	CFR D170-A45	34	41
		4175-25T2-06		4175-25T2-06	CFR D180-A45	35	45
		4180-25T2-06		4180-25T2-06	CFR D180-A45	36	44
		4185-25T2-06		4185-25T2-06	CFR D180-A45	37	48
		4190-25T2-06		4190-25T2-06	CFR D190-A45	38	48
		4195-25T2-07		4195-25T2-06	CFR D190-A45	39	52
		4200-25T2-07		4200-25T2-06	CFR D200-A45	40	52
		4205-25T2-07		4205-25T2-06	CFR D200-A45	41	56
		4210-25T2-07		4210-25T2-06	CFR D210-A45	42	56
		4215-25T2-07		4215-25T2-07	CFR D210-A45	43	60
		4220-25T2-07		4220-25T2-07	CFR D220-A45	44	60
		4225-25T2-08		4225-25T2-07	CFR D220-A45	45	64
		4230-25T2-08		4230-25T2-07	CFR D230-A45	46	64
		4235-25T2-08		4235-25T2-07	CFR D230-A45	47	68
		4240-25T2-08		4240-25T2-07	CFR D240-A45	48	68
		4245-25T2-08		4245-25T2-07	CFR D240-A45	49	72
		4250-25T2-08		4250-25T2-07	CFR D250-A45	50	72



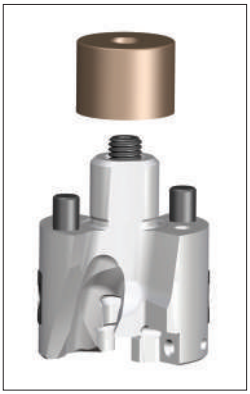
Modular head replacement instructions

1. Remove both outer inserts, then remove the center drill head. (When clamping, go in the reverse order)

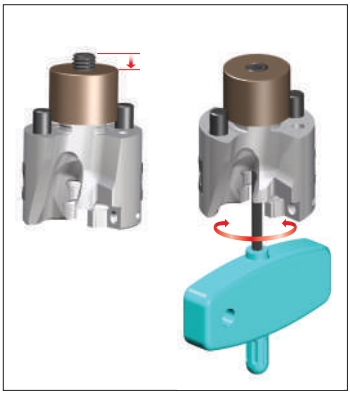
2. Use a wrench to turn the screw counter-clock-wise to remove the modular head.



3. Insert the setting gauge into the bottom of the disconnected modular head.



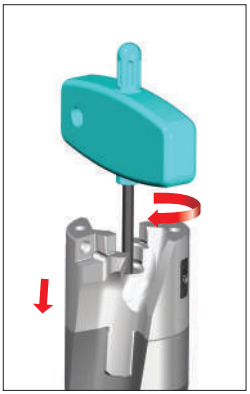
4. Rotate the screw to adjust to the same height with the setting gauge.



Setting gauge

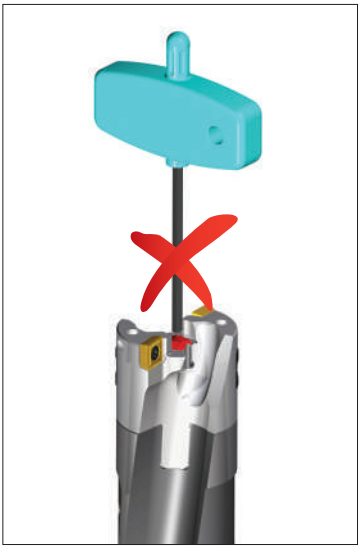
Drill dia.	Designation
D26-D29	SG TNDH D26-29-TP
D30-D35	SG TNDH D30-35-TP
D36-D39	SG TNDH D36-39-TP
D40-D43	SG TNDH D40-43-TP
D44-D50	SG TNDH D44-50-TP

5. Remove the height adjusted modular head from the setting gauge and attach it to the holder.



Modular head disassembly in the event of center drill damage

If the modular head cannot be unclamped due to center drill damage, insert the wrench into the rear section of the shank. Then, turn it clock-wise to disassemble the modular head.

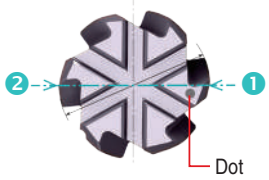


Damaged center drill

▸ Disassembling wrench and handle are included with the modular drill holder. (MDB Dxx/xx…)

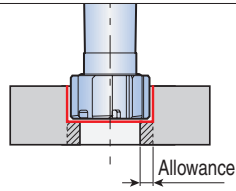
XM-REAM user guide and notice

How to check reamer diameter



Measure the dot side edge ❶ and opposite side edge ❷.

Reaming allowance



Material	Diameter	
	< Ø10	Ø10-12
Steel & Cast iron	0.07-0.10	0.07-0.15
Aluminum & brass	0.07-0.10	0.10-0.15

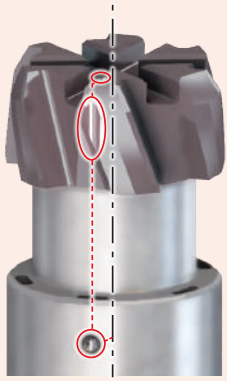
* Based on diameter

Ex) Ø9.85-9.93 mm pre-hole is recommended for Ø10H7 reaming in cast iron.

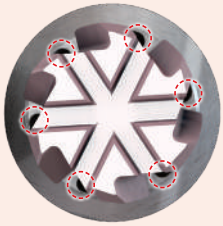
Caution

- To ensure smooth coolant flow, the dot and slot orientation of the head must be aligned as illustrated.

O



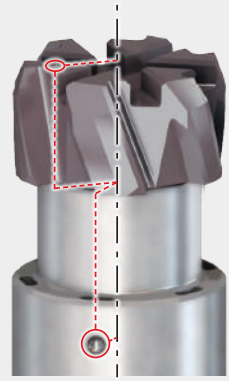
Dot orientation match between head and holder



Coolant hole slightly visible through flutes

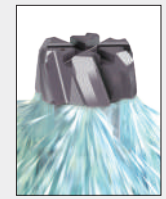
Smooth coolant flow

X



Dot orientation mismatch between head and holder

Coolant hole is hidden by the flute

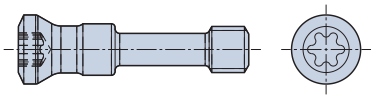


Reduced coolant flow

Screw torque

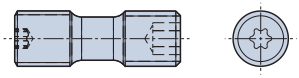
For SPADE-RUSH

Designation	Thread	Length	Torx	Tightening Torque
TS 30138D33	M3	13.8	Torx 10	2.0 Nm
TS 40178D25	M4	17.8	Torx 20	4.5 Nm
TS 40198D28	M4	19.8	Torx 20	4.5 Nm
TS 40210D3	M4	21	Torx 20	5.0 Nm
TS 50230D3	M5	23	Torx 20	5.0 Nm
TS 50250D35	M5	25	Torx 25	5.5 Nm
TS 60265D4	M6	26.5	Torx 25	6.0 Nm
TS 60285D42	M6	28.5	Torx 25	6.0 Nm
TS 60320D5	M6	31	Torx 25	6.0 Nm
TS 80340D6	M8	34	Torx 25	7.0 Nm



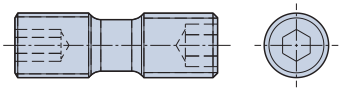
For MODU-R-DRILL

Designation	Thread	Length	Torx	Tightening Torque
TDPS 0512-T7	M5	12	Torx 7	1.0 Nm
TDPS 0618-T8	M6	18	Torx 8	2.0 Nm



For MODU-R-DRILL

Designation	Thread	Length	Torx	Tightening Torque
TDPS 0722-W3.0	M7	22	Hexa 3.0 mm	5.0 Nm



Technical Data

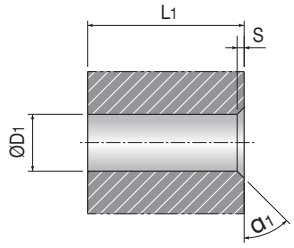
Hole tolerance

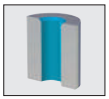
Diameter D(mm)		Tolerance (μm)														
>D	≤D	B10	C9	C10	D8	D9	D10	E7	E8	E9	F6	F7	F8	G6	G7	H6	H7
–	3	+180 +140	+85 +60	+100 +60	+34 +20	+45 +20	+60 +20	+24 +14	+28 +14	+39 +14	+12 +6	+16 +6	+20 +6	+8 +2	+12 +2	+6 0	+10 0
3	6	+180 +140	+100 +70	+118 +70	+48 +30	+60 +30	+78 +30	+32 +20	+38 +20	+50 +20	+18 +10	+22 +10	+28 +10	+12 +4	+16 +4	+8 0	+12 0
6	10	+208 +150	+116 +80	+138 +80	+62 +40	+76 +40	+98 +40	+40 +25	+47 +25	+61 +25	+22 +13	+28 +13	+35 +13	+14 +5	+20 +5	+9 0	+15 0
10	14	+220 +150	+138 +95	+165 +95	+77 +50	+93 +50	+120 +50	+50 +32	+59 +32	+75 +32	+27 +16	+34 +16	+43 +16	+17 +6	+24 +6	+11 0	+18 0
14	18																
18	24	+244 +160	+162 +110	+194 +110	+98 +65	+117 +65	+149 +65	+61 +40	+73 +40	+92 +40	+33 +20	+41 +20	+53 +20	+20 +7	+28 +7	+13 0	+21 0
24	30																
30	40	+270 +170	+182 +120	+220 +120	+119 +80	+142 +80	+180 +80	+75 +50	+89 +50	+112 +50	+41 +25	+50 +25	+64 +25	+25 +9	+34 +9	+16 0	+25 0
40	50	+280 +180	+192 +130	+230 +130													
50	65	+310 +190	+214 +140	+260 +140	+146 +100	+174 +100	+220 +146	+90 +60	+106 +60	+134 +60	+49 +30	+60 +30	+76 +30	+29 +10	+40 +10	+19 0	+30 0
65	80	+320 +200	+224 +150	+270 +150													

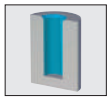
Hole tolerance

Tolerance (μm)																	
H8	H9	H10	JS6	JS7	K6	K7	M6	M7	N6	N7	P6	P7	R7	S7	T7	U7	X7
+14 0	+25 0	+40 0	±3	±5	0 -6	0 -10	-2 -8	-2 -12	-4 -10	-4 -14	-6 -12	-6 -16	-10 -20	-14 -24	–	-18 -28	-20 -30
+18 0	+30 0	+48 0	±4	±6	+2 -6	+3 -9	-1 -9	0 -12	-5 -13	-4 -16	-9 -17	-8 -20	-11 -23	-15 -27	–	-19 -31	-24 -36
+22 0	+36 0	+58 0	±4.5	±7.5	+2 -7	+5 -10	-3 -12	0 -15	-7 -16	-4 -19	-12 -21	-9 -24	-13 -28	-17 -32	–	-22 -37	-28 -43
+27 0	+43 0	+70 0	±5.5	±9	+2 -9	+6 -12	-4 -15	0 -18	-9 -20	-5 -23	-15 -26	-11 -29	-16 -34	-21 -39	–	-26 -44	-33 -51 -38 -56
+33 0	+52 0	+84 0	±6.5	±10.5	+2 -11	+6 -15	-4 -17	0 -21	-11 -24	-7 -28	-18 -31	-14 -35	-20 -41	-27 -48	– -33 -54	-33 -54 -40 -61	-46 -67 -56 -77
+39 0	+62 0	+100 0	±8	±12.5	+3 -13	+7 -18	-4 -20	0 -25	-12 -28	-8 -33	-21 -37	-17 -42	-25 -50	-34 -59	-39 -64 -45 -70	-51 -76 -61 -86	–
+46 0	+74 0	+120 0	±9.5	±15	+4 -15	+9 -21	-5 -24	0 -30	-14 -33	-9 -39	-26 -45	-21 -51	-30 -60 -32 -62	-42 -72 -48 -78	-55 -85 -64 -94	-76 -106 -91 -121	–

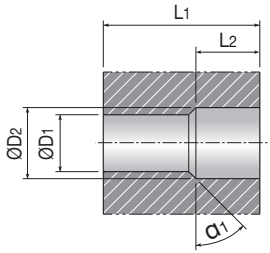
Specific dimensions

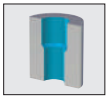


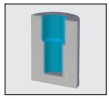




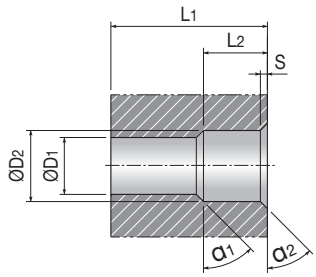
Through ☐ Blind ☐
ØD1 L1
α1 S
•Hole tolerance

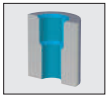


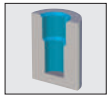




Through ☐ Blind ☐
ØD1 ØD2
L1 L2
α1
•Hole tolerance







Through ☐ Blind ☐
ØD1 ØD2
L1 L2
α1 α2
S
•Hole tolerance

Comment

Drill type

•TOPDRILL ☐
•T-DRILL ☐

Technical data

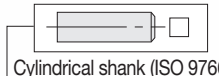
•Machine type
MCT ☐ Lathe ☐
Vertical ☐ Horizontal ☐
Machine name
Power kW

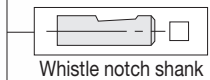
•Coolant supply
Internal ☐ External ☐
Coolant pressure bar
Coolant type

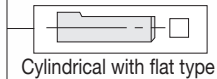
Workpiece

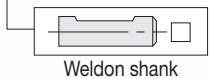
•Part
•Material
•Hardness

Shank type


Cylindrical shank (ISO 9766)


Whistle notch shank

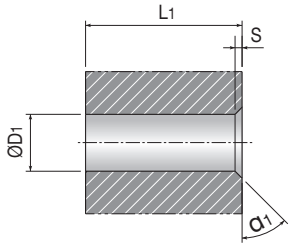

Cylindrical with flat type

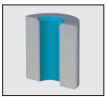
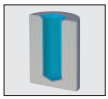

Weldon shank

Tailor-made Order Form

DRILLRUSH

Specific dimensions



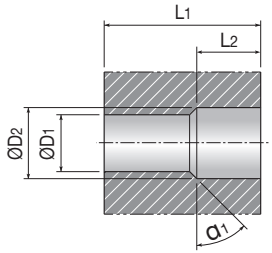



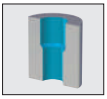
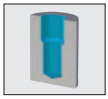
Through ☐ Blind ☐

ØD1 _____ L1 _____

α1 _____ S _____

•Hole tolerance _____



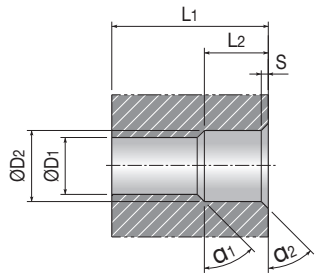
Through ☐ Blind ☐

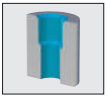
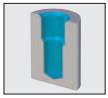
ØD1 _____ ØD2 _____

L1 _____ L2 _____

α1 _____

•Hole tolerance _____



Through ☐ Blind ☐

ØD1 _____ ØD2 _____

L1 _____ L2 _____

α1 _____ α2 _____

S _____

•Hole tolerance _____

Comment

Technical data

•Machine type

MCT ☐ Lathe ☐

Vertical ☐ Horizontal ☐

Machine name _____

Power _____ kW

•Coolant supply

Internal ☐ External ☐

Coolant pressure _____ bar

Coolant type _____

Workpiece

•Part _____

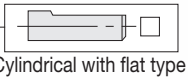
•Material _____

•Hardness _____

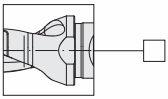
Shank type

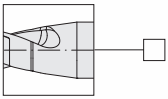
Cylindrical shank (ISO 9766)

Whistle notch shank


Cylindrical with flat type

Weldon shank



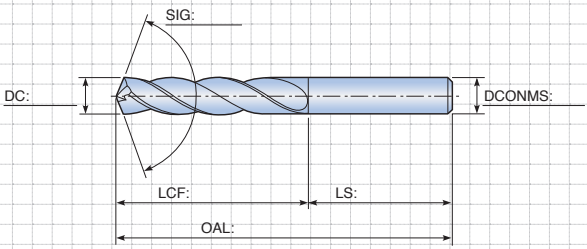


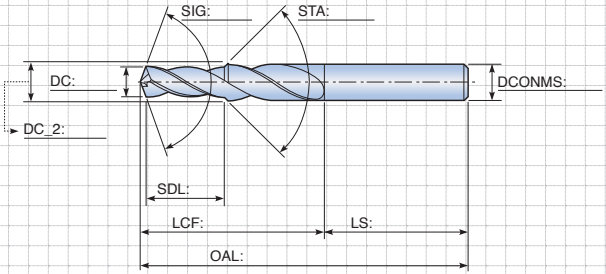
•Shank dia: _____

•Shank length: _____

Tailor-made Order Form

Specific dimensions





• DC, DC_2 would be hole dimensions and please note hole tolerance if possible

Technical data

•Machine type

MCT ☐ Lathe ☐

Vertical ☐ Horizontal ☐

Machine name _____

Power _____ kW

•Coolant supply

Internal ☐ External ☐

Coolant pressure _____ bar

Coolant type _____

Workpiece

•Part _____

•Material _____

•Hardness _____

Hole type

•Blind hole _____ ☐

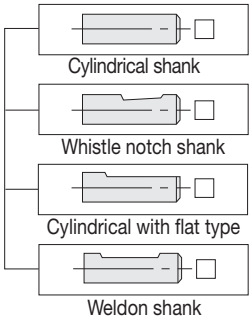
•Through hole _____ ☐

Coating

•TiAlN _____ ☐

•Non-coated _____ ☐

Shank type



Comment

Tailor-made Order Form

Deep hole drilling order form

★: Mandatory data field

Campany name :	Inquiry number :
Address :	Inquiry date :
Contact person :	Customer No :

Workpiece (If possible,please attach a drawing)			
Product name			
Hole diameter (ø)	(mm)		
Hole depth (drilling length)	(mm)		
No. of holes			
Tolerance (of hole)			
Surface finish (Rz,Ra...)			
Deviation (mm/100)			
Straightness (mm/100)			
Material			
Material (DIN,AISI,JIS...)			
Hardness (HB,HS,HRC...)			
Condition ★	☐ Annealed	☐ Quenched	☐ Tempered
	☐ Cast	☐	
	☐ Other	☐	

Machine			
Machine supplier name			
Machine type/model			
Rigidity	☐ Good	☐ Normal	☐ Bad
Date of manufacture			
Retrofitted	☐ NC lathe	☐ M/C	☐ Other
Double rotation (TR/WR)	☐ Tool and workpiece		
Rotating workpiece (WR)	☐		
Rotating tool (TR)	☐		
Safety devices			
Motor power	(kW)		

Type of coolant			
Coolant supplier name			
Water based	☐ Soluble	☐ Emulsion	%
Oil based	☐		
Coolant pressure	(bar)		
Coolant volume	(L/min)		

Tailor-made Order Form

Deep hole drilling order form

★: Mandatory data field

Tool (Drill head)			
Drill diameter(ø)		(mm)	
Thread	☐ Inner	☐ Outer	
Brazed	☐		
Indexable	☐ Adjustable	☐ Direct mount	☐
Coating	☐ Coated	☐ Uncoated	
Coating type	☐ TiN	☐ TiAlN	☐ Other
• Solid drilling	☐		
• Counterboring	☐		
Cutting angle★ Brazed indexable	☐ 20°	☐ 45°	
	☐ Nomal angle	☐ Close angle	
Pre-bored size(per side)		(mm)	
Bottom finishing★	☐ Fullball R	☐ Flatbottom R	☐ Corner R
	☐ Compound R		
• Trepanning	☐		
Core size(ø)		(mm)	☐
Tube inner dia(ø)		(mm)	
Tube outer dia(ø)		(mm)	
Tube			
Outside dia(ø)		(mm)	
Total length(L)		(mm)	
Internal thread	☐		
External thread	☐ 4 Starts	☐ 2 Starts	☐ 1 Starts
Tube thread	☐ 1 end	☐ Both ends	
Inner tube length		(mm)	
Inner tube slit	☐ 1 end	☐ Both ends	

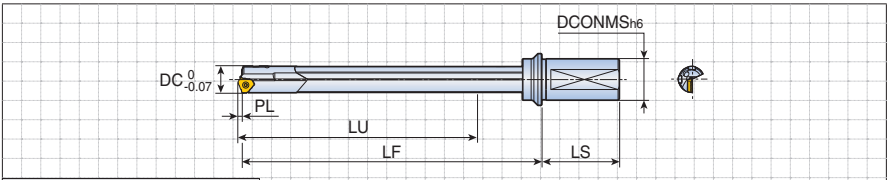
Drilling system		
Single tube system	☐	STS
Double tube system	☐	DTS

Boring conditions	
Through hole drilling	☐
Blind hole drilling	☐
Cross hole drilling★	☐

★ **Please sketch your drilling application**

General information	Production			
Quantity per year:				
Present performance status:				
grade, tool life, etc:				
Cutting data:	Vc=	m/min,	N=	rpm
	f=	mm/rev,	F=	mm/min

Deep hole drilling order form



Sketch of drilling application

• Note: It may be necessary to change several of the parameters that you indicated based on our experience with your application.

Tool	
Quantity	
Nominal diameter and tolerance	
- Please fill in dimensions on the sketch above.	
Driver	
Code No	

- For standard drivers, please use codes from next pages and for special drivers, please attach sketch and specifications.

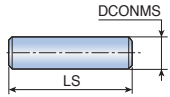
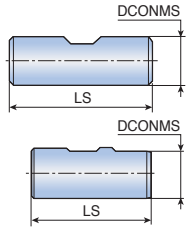
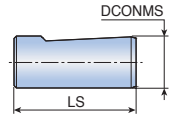
Workpiece (If possible, please attach a drawing)		
Material description (DIN material number or any other standard)		
Hardness and properties		
Hole type		☐ Blind hole ☐ Through hole ☐ Drilling into pre-hole
		☐ Angled entry ☐ Drilling into solid ☐ Boring
		☐ Angled exit
Drilling depth		mm
Hole tolerance		
Application	Workpiece	☐ Stationary ☐ Rotating
	Tool	☐ Stationary ☐ Rotating

Machine			
Machine type			
Power		kW	
Cutting data	Cutting speed (Vc)	m/min	
	Revolutions	**N**min : RPM	**N**max : RPM
	Feed	**F**min : mm/rev	**F**min : mm/rev
	Feed rate (VF)	mm/min	
Coolant	Coolant type	☐ Oil ☐ Soluble oil	☐ Other
	Coolant pressure	Bar	
	Coolant volume	liter/min	

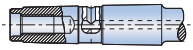
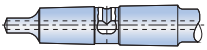
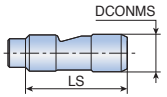
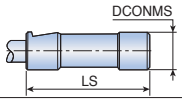
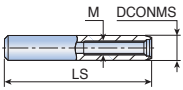
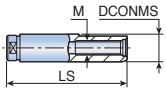
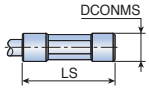
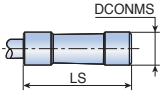
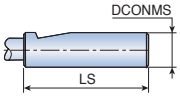
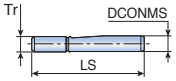
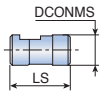
Standard gundrill drivers for machining centers and lathes

Drivers

Drivers are available for dedicated and CNC machines as well as any specified diameter or length. Please note that the driver codes and technical data can be found in the chart below.

Driver type	Drawing	DCONMS x LS	Driver code
Cylindrical DIN1835A DIN6535HA		20x50	10
		25x56	11
		32x60	12
		40x70	13
		.75x2.03"	95
		1.00x2.28"	96
		1.25x2.28"	97
Weldon DIN1835B DIN6535HB		20x50	22
		25x56	23
		32x60	24
		40x70	25
		.75x2.03"	99
		1.00x2.28"	100
		1.25x2.28"	101
Whistle notch DIN1835E		20x50	34
		25x56	35
		32x60	36
		40x70	37

Standard drivers for gundrill machines

Driver type	Drawing	DCONMS x LS	Driver code
DIN228AK		CM2	46
		CM3	47
		CM4	48
DIN228BK		CM2	50
		CM3	51
		CM4	52
Central clamping surface 15°		.750x2.75”	56
		25x70	57
		1.00x2.75”	58
		1.25x2.75”	59
		1.50x2.75”	60
Frontal clamping surface 15°		16x50	61
Cylindrical with thread		25x100 M16x1.5	66
		36x120 M24x1.5	67
VDI design		25x112 M16x1.5	70
		36x135 M24x1.5	71
Central clamping hexagonal		25x70	72
		32x70	73
Central clamping tapered		.75x2.75”	76
		20x70	77
Frontal clamping surface 2°		1.00x2.75”	80
		1.00x3.94”	81
		1.25x2.75”	82
		1.25x3.94”	83
		1.50x2.75”	84
		1.50x3.94”	85
Trapezoidal thread		28x126 Tr 28x2	88
		36x162 Tr 36x2	89
Spraymist driver		25x50	91
		35x60	92

Reamer order form

★: Mandatory data field

Date: Subsidiary:

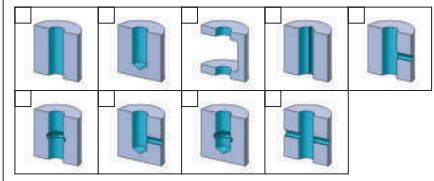
Company★ : Enquiry dead line:

Contact person:

Address:

Request reason	
New tool ☐ Problem ☐	
Quality	
Cycle time	
Alternative supplier	
Other	

Existing tool	
Maker	
Tool type	
Speed & Feed	
Tool life	
No of teeth	
Coolant type	

Workpiece	
Description★	
Hardness★	
Pre-hole size★	(Tolerance :)
Depth★	
Bore type	
Clamping information	

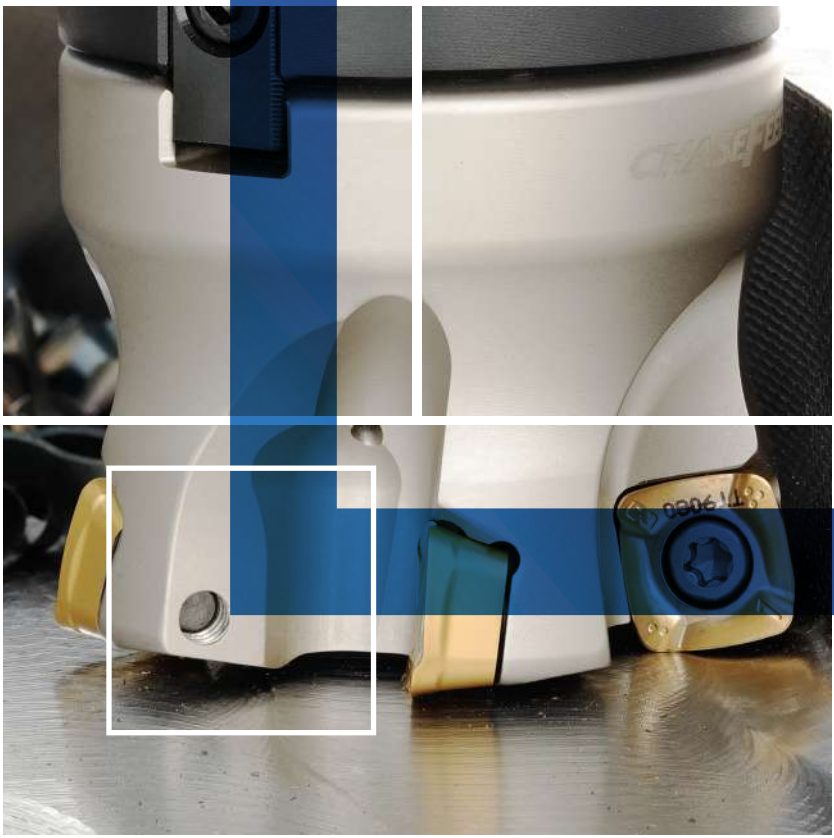
Machine	
Model	
Type★	vertical ☐
	horizontal ☐
	multi-spindle ☐
Adaption★	
Max RPM	
Power	
Spindle accuracy	
Coolant	

Lubricant	
Oil	☐
MQL	☐
Emulsion	☐
Ratio of mixture	
Coolant pressure	

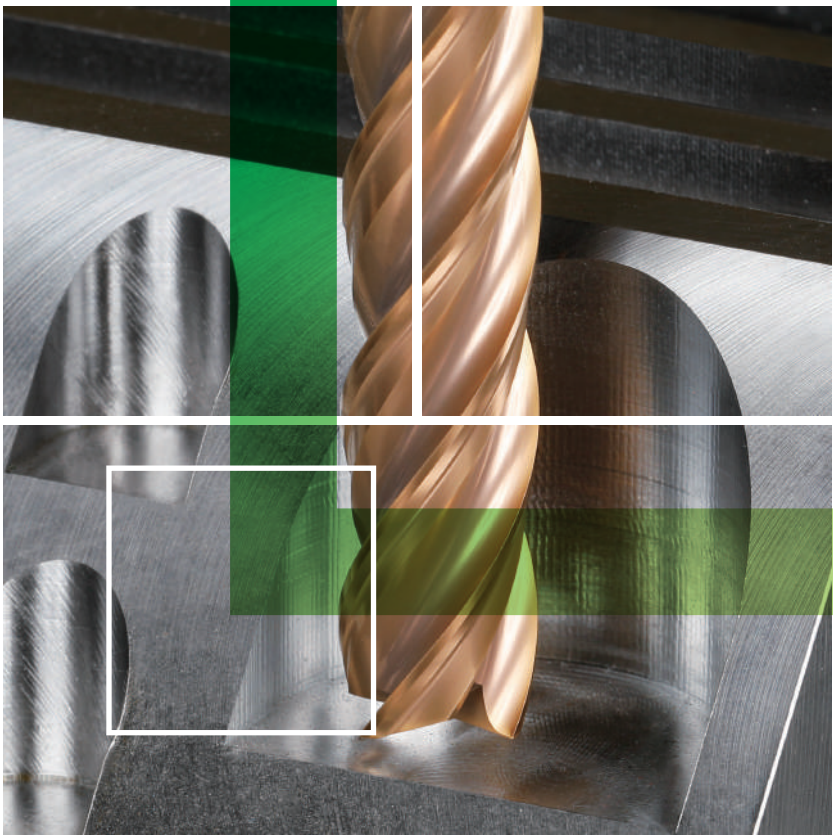
Quality requirement	
Tolerance★	
Surface finish(Ra)★	
Roundness	
Straightness	
Cylindricity	
Concentricity	

Tool			
Type★	TM(Index multi-edge) ☐	TB(Single blade) ☐	TS(Solid) ☐ Other ☐ ( )
Diameter★			
Depth of cut★			
Coolant★	Internal ☐	External ☐	
Shank type★			
Holder type	Collet ☐	Hydraulic ☐	Other ☐
Adjustable adaptor	Yes ☐	No ☐	

MILLING



SOLID
END MILLS



SOLID END MILLS

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MAXI-RUSH	
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Guide to Icons

› Flutes

› Helix Angle

› Cutting Condition Page

› Ball Nose

› Corner Radius

› Wave Cutting Edge

› Head Page

› Wrench

Solid End Mill Line

Designation System	F60
End Mills	
HARD-MILL	F62
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STAR-MILL	F70
ALU-MILL	F78
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DIA-MILL	F82
Recommended Cutting Conditions	F88

Tool Selection Guide

MAXIRUSH
INDEXABLE SOLID HEADS

Modular solid carbide end mill heads

Series	MXDM	MXEE-03	MXEE(D)-04	MXEE-03	MXEE-I04	MXES-R
Type	Flat	Flat	Corner R	Corner R	Corner R/Ch	Flat
Flute	3	3	4	3	4	4
Grades	TT5523	TT5523	TT5523	TT5523	TT5523	TT5523
Material	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○
Diameter range (mm)	Ø10-Ø20	Ø8-Ø12	Ø5-Ø20	Ø7.7-Ø19.7	Ø8-Ø25	Ø8-Ø25
Pages	F17	F17	F18	F20	F20	F21

Series	MXEE-R	MXEE-R-1.5D	MXEE-C04	MXEE-A02	MXEE-A03	MXEE-RA03
Type	Corner Ch	Corner Ch	Corner Ch	Corner R	Corner R	Flat
Flute	4-6	4-6	4	2	3	3
Grades	TT5523	TT5523	TT5523	UF10/TTA101	UF10/TTA101	UF10
Material	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ●	P M K N S H ●	P M K N S H ●
Diameter range (mm)	Ø8-Ø25	Ø8-Ø20	Ø8-Ø25	Ø10-Ø12	Ø8-Ø20	Ø8-Ø20
Pages	F22	F22	F23	F23	F24	F24

● Recommended, O Suitable

Tool Selection Guide

Modular solid carbide end mill heads

Series	MXCRF	MXEE(D)-06	MXED-08/10	MXED-I07/I09-1.5D	MXRB-02	MXRD-06
Type	Corner R	Corner R	Corner R	Corner R	Radius	Radius
Flute	6	6	8,10	7,9	2	6
Grades	TC3030	TT5523	TT5523	TT5523	TT5523	TT5523
Material	P M K N S H ○ ○ ○ ○ ● ○	P M K N S H ● ○ ● ○ ● ○	P M K N S H ● ○ ● ○ ○ ○	P M K N S H ● ○ ● ○ ○ ○	P M K N S H ● ○ ● ○ ○ ○	P M K N S H ● ○ ● ○ ○ ○
Diameter range (mm)	Ø10-Ø16	Ø8-Ø12	Ø16-Ø25	Ø10-Ø20	Ø20	Ø8-Ø16
Pages	F25	F25	F26	F26	F27	F27

Series	MXFX-02	MXFX-04/06	MXBD-BG-02	MXBD(E)-BG-04	MXBE-BH-04	MXBB-SG-02
Type	High Feed	High Feed	Ball	Ball	Ball	Ball (Spherical)
Flute	2	4,6	2	4	4	2
Grades	TT5523	TT5513/TT5523	TT5523	TT5523	TT5513	TT5523
Material	P M K N S H ● ○ ● ○ ○ ○	P M K N S H ● ○ ● ○ ○ ○	P M K N S H ● ○ ● ○ ○ ○	P M K N S H ● ○ ● ○ ○ ○	P M K N S H ● ○ ● ○ ○ ○	P M K N S H ● ○ ● ○ ○ ○
Diameter range (mm)	Ø10-Ø20	Ø8-Ø25	Ø8-Ø16	Ø5-Ø25	Ø8-Ø20	Ø8-Ø25
Pages	F28	F28	F29	F29	F30	F30

● Recommended, ○ Suitable

Tool Selection Guide

MAXIRUSH
INDEXABLE SOLID HEADS

Modular solid carbide end mill heads

Series	MXBE-BGA02	MXCP-02	MXCA-04/06	MXCW-02	MXCR-02	MXCS-04
Type	Ball	Chamfer	Chamfer	Chamfer	Concave	Chamfer
Flute	2	2	4,6	2	2	4
Grades	UF10/TTA101	TT5523	TT5523	TT5523	TT5523	TT5523
Material	P M K N S H ●	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○
Diameter range (mm)	Ø8-Ø20	Ø8-Ø16.5	Ø10-Ø20	Ø9.8-Ø15.7	Ø8-Ø20	Ø7.7
Pages	F31	F32	F33	F33	F34	F35

Series	MXDP-02	MXGC-02	MXDS-02	MXEG-01	MXDG-04	MXCSL
Type	Center Drill	Counter Boring	Drill & Chamfer	Engraving	Grooving	Lens Shape
Flute	2	2	2	1	4	4
Grades	TT5523	TT5523	TT5523	TT5523	TT5523	TT5523
Material	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○
Diameter range (mm)	Ø1.07-Ø6.46	Ø8-Ø16	Ø6-Ø16	Ø6-Ø8	Ø15.5-Ø24.5	Ø8-Ø16
Pages	F35	F36	F36	F37	F37	F38

● Recommended, O Suitable

Tool Selection Guide

MAXIRUSH INDEXABLE SOLID HEADS

Modular solid carbide end mill heads

Series	MXCS0	MXFM-I06	TTRD-A60	TTRD-W55	TDT-06
Type	Oval Shape	Milling	Thread	Thread	Dovetail
Flute	4	6	3,4	4	6
Grades	TT5523	TT5523	TT5543	TT5543	TT5523
Material	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ● ○ ○	P M K N S H ● ● ○ ○	P M K N S H ● ○ ● ○
Diameter range (mm)	Ø8-Ø16	Ø10-Ø25	Ø15.7-Ø21.7	Ø21.7	Ø27.7
Pages	F38	F39	F40	F40	F41

Modular solid carbide slotting heads

Series	TST-3	TST-4/6	TST-A45	TTB-04	TTB-06
Type	Slot	Slot	Slot Chamfer	Slot	Slot
Flute	3	4,6	3,4	4	6
Grades	TT5543	TT5523/TT5543	TT5523/TT5543	TT5523	TT5523/TT5543
Material	P M K N S H ● ● ○ ○	P M K N S H ● ● ● ○	P M K N S H ● ● ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○
Diameter range (mm)	Ø15.7-Ø17.7	Ø21.7-Ø27.7	Ø17.7-Ø27.7	Ø7.7	Ø10.5-Ø25
Width of cut (mm)	CW 1.5-3.17	CW 0.76-10	CW 3.4-9.8	CW 1-2	CW 1.58-8
Pages	F42	F43	F44	F44	F45

● Recommended, ○ Suitable

Tool Selection Guide

Holders for MAXI-RUSH head

Series	MXSSD	MXSSD-S	MXSSD-C	MXSSD-W	MXTSD-S
Shank Type	Short	Step neck	Step neck	Step neck	Taper neck
Shank material	Steel/Carbide	Steel	Carbide	Tungsten	Steel
Internal coolant	X	●/X	●/X	●/X	X
Connection size	S04-S15	S05-S15	S05-S15	S05-S12	S04-S15
Shank range (mm)	Ø6-Ø32	Ø8-Ø25	Ø8-Ø25	Ø8-Ø20	Ø8-Ø32
Pages	F46	F47	F48	F49	F50

Series	MXTSD-C	MXTSD-W-A	MXSTD-S	MXSC-C	
Shank Type	Taper neck	Taper neck	Straight	Straight	
Shank material	Carbide	Tungsten	Steel	Carbide	
Internal coolant	X	●	X	●/X	
Connection size	S05-S15	S06	S04-S10	S06, S08	
Shank range (mm)	Ø12-Ø32	Ø12-Ø16	Ø6-Ø16	Ø10-Ø12	
Pages	F51	F52	F53	F53	

Tool Selection Guide

Adaptor for MAXI-RUSH head

Series	MXAD-M	MXER				
Shank Type	T-FLEXTEC	ER Collet				
Shank material	Steel	Steel				
Internal coolant	X	X				
Connection size	S08	S04-S08				
Shank range (mm)	M8-M12	ER11-ER25				
Pages	F54	F55				

Tool Selection Guide

Solid end mill

Series	HARDMILL	SLIKSOLID		APEXMILL	
	HSB 2CBN	UHP 4	UHP 4…R	SDM 3	SCSL
Type	CBN Ball	Flat	Corner R	Drill + Milling	Lens Shape
Flute	2	4	4	3	4-6
Length	Long neck	Medium	Medium	Short	Medium
Grades	TB7015	TT5520	TT5520	TT5525	TT5515
Application	Finishing	General	General	General	Finishing
Material	P M K N S H ●	P M K N S H ● ●	P M K N S H ● ●	P M K N S H ● ○	P M K N S H ● ●
Range	Ø0.4-Ø4	Ø2-Ø25	Ø3-Ø20	Ø10-Ø20	Ø8-Ø12
Pages	F62	F63	F64	F65	F65

Series	APEXMILL					
	SCSO	SCST	HTB 2.../3...	HCEM 5	HFM 2	HFM 4
					SOLIDFEED	SOLIDFEED
Type	Oval Shape	Oval Shape	Taper Ball	Chamfer 45°	High Feed	High Feed
Flute	4	4	2-3	5	2	4
Length	Medium	Medium	Medium	Medium	Medium	Medium
Grades	TT5515	TT5515	TT5515	TT5525	TT5515	TT5515
Application	Finishing	Finishing	General	General	*H.F.M	*H.F.M
Material	P M K N S H ● ●	P M K N S H ● ●	P M K N S H ● ○ ● ○	P M K N S H ● ○ ● ○	P M K N S H ● ● ○	P M K N S H ● ● ○
Range	Ø8-Ø12	Ø8-Ø12	Ø3-Ø8	Ø8-Ø16	Ø4-Ø12	Ø6-Ø12
Pages	F66	F66	F67	F67	F68	F68

▸ *H.F.M: High Feed Machining

● Recommended, ○ Suitable

Tool Selection Guide

Solid end mill

Series	APEXMILL		STARMILL			
					SED 4	
	CFM 4...M	FSM 4...M	SBT 3...U	SBT 4...U	SED 4...U	SED 4...UL
Type	Corner Chamfer	Corner Chamfer	Ball	Ball	Flat	Flat
Flute	4	4	3	4	4	4
Length	Medium	Medium	Medium	Medium	Medium	Long
Grades	TT5525	TT5525	TT5515	TT5515	TT5515	TT5515
Application	General	Roughing +Finishing	Difficult-to-cut	Difficult-to-cut	Difficult-to-cut	Difficult-to-cut
Material	P M K N S H ● ● ○ ●	P M K N S H ● ○	P M K N S H ○ ● ●	P M K N S H ○ ● ●	P M K N S H ○ ● ●	P M K N S H ○ ● ●
Range	Ø4-Ø25	Ø6-Ø25	Ø4-Ø12	Ø4-Ø12	Ø3-Ø20	Ø3-Ø12
Pages	F69	F69	F70	F70	F71	F72

Series	STARMILL					ALUMILL
	SED 4		SED 7			
	SED 4...-R	SED 4...-C	SED 7	SED 7...N	SER	AWE 3
Type	Corner R	Corner Chamfer	Flat	Flat	Corner R	Wave Flat
Flute	4	4	7	7	3-5	3
Length	Medium	Medium	Medium	Medium	Medium	Medium
Grades	TT5515	TT5515	TT5515	TT5515	TT5525	UF10
Application	Difficult-to-cut	Difficult-to-cut	Difficult-to-cut	Difficult-to-cut	Difficult-to-cut	Aluminum
Material	P M K N S H ○ ● ●	P M K N S H ○ ● ●	P M K N S H ○ ● ●	P M K N S H ○ ● ●	P M K N S H ○ ● ●	P M K N S H ●
Range	Ø2-Ø16	Ø4-Ø12	Ø6-Ø20	Ø6-Ø20	Ø3-Ø20	Ø6-Ø20
Pages	F73	F74	F75	F76	F77	F78

● Recommended, ○ Suitable

TaeguTec Member IMC Group

Tool Selection Guide

Solid end mill

Series	ALUMILL		CERAMICSPEED			
	AWE 3...ML	AWE 3...ML-R	CRF 4	CRF 6	CRH 4	CRFB 6
Type	Wave Flat	Wave/Corner R	Corner R	Corner R	High Feed	Corner R
Flute	3	3	4	6	4	6
Length	Long	Long	Medium	Medium	Medium	Medium
Grades	UF10	UF10	TC3030	TC3030	TC3030	TC3030
Application	Aluminum	Aluminum	*H.S.M	*H.S.M	*H.F.M	*H.S.M
Material	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H	P M K N S H
	●	●	●	●	●	●
Range	Ø6-Ø20	Ø6-Ø20	Ø6-Ø16	Ø6-Ø16	Ø6-Ø16	Ø6-Ø16
Pages	F78	F79	F80	F80	F81	F81

▸ *H.S.M: High Speed Machining ▸ *H.F.M: High Feed Machining ● Recommended, ○ Suitable

Series	DIAMILL					
		DEB 2			DER 3	
	DMB 2	DEB 2...S	DEB 2...L	DMR 2	DER 3...S	DER 3...L
Type	Ball	Ball	Ball	Corner R	Corner R	Corner R
Flute	2	2	3	4	6	4
Length	Miniature	Short	Long	Medium	Short	Long
Grades	TTD620	TTD620	TTD620	TTD620	TTD620	TTD620
Application	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
Material	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
Range	Ø0.6-Ø2	Ø3-Ø12	Ø3-Ø12	Ø0.6-Ø2	Ø3-Ø12	Ø4-Ø12
Pages	F82	F82	F83	F83	F84	F84

Tool Selection Guide

Solid end mill

Series	DIAMILL				
	RRFE	**RCFE**	**RCME**	**RCDE**	**RCOM**
Type	Flat	Flat	Flat	Chamfer	Flat
Flute	6-12	–	–	–	4,6
Grades	TTD610	TTD610	TTD610	TTD610	TTD610
Application	Roughing	Roughing	Medium	Drilling + Medium	Finishing
Material	Composite material	Composite material	Composite material	Composite material	Composite material
Range	Ø4-Ø12	Ø4-Ø12	Ø4-Ø12	Ø4-Ø12	Ø6-Ø12
Pages	F85	F85	F86	F86	F87

Series	DIAMILL				
	RDCF				
Type	Flat				
Flute	4-8				
Grades	TTD610				
Application	Finishing				
Material	Composite material				
Range	Ø4-Ø12				
Pages	F87				

Grades

MAXI-RUSH grades

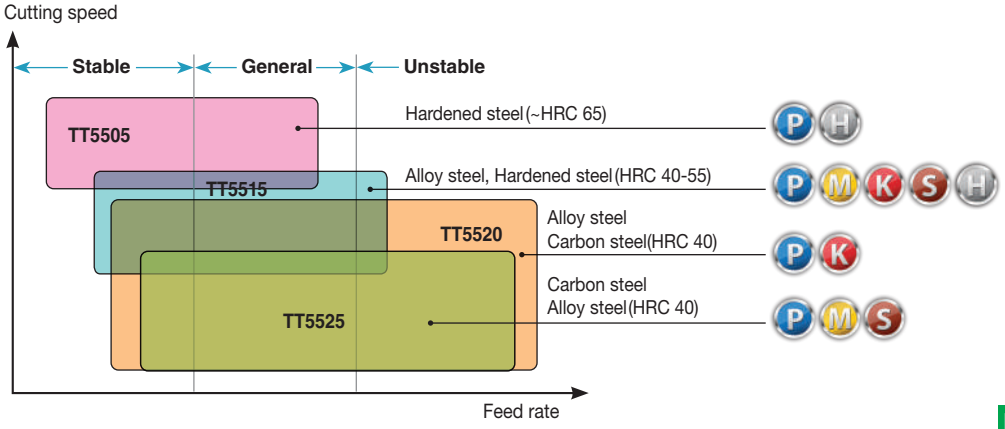
Grades	ISO	Characteristics & applications
TT5513 PVD coated	P10 – P30 K10 – K30	• Excellent abrasion resistant with ultra-fine substrate and optimum toughness • Improved anti-chipping and Anti-abrasion PVD AlTiN coated layer • Suitable for mold steels and pre hardened steels
TT5523 PVD coated	P20 – P40 M20 – M40 S20 – S40	• High speed milling of steel, stainless steed and high-temp alloy
TT5543 PVD coated	P30 – P50 M30 – M50 S30 – S50	• Interrupted and rough machining of steel, stainless steel and high-temp alloy
UF10 Uncoated	P25 – P35 M25 – M35 N25 – N35	• General machining of steel, aluminum alloys, non-ferrous materials • Submicron substrate
TTA101 PVD coated	P25 – P35 M25 – M35 N25 – N35	• Thin coating (less than 0.5μm) • Sharp edges even after coating • Low friction coefficient: minimizes built-up edges and promotes smooth chip evacuation • Hard coating (above HV 5000) • Oxidation resistance at high temperatures

Grades

Solid end mill grades

Grades	ISO	Characteristics & applications
TT5505 PVD coated	P05 – P25 H05 – H25	• High wear and oxidation resistance that delivers exceptional productivity levels • Hardened steel, pre-hardened steel (Hardness < 65 HRC) • High speed machining
TT5515 PVD coated	P10 – P30 M15 – M30 K10 – K30 S10 – S30 H10 – H30	• An ultra wear resistant high performance grade covering all ISO ranges • Alloy steel, pre-hardeded steel, stainless steel, high-temp alloy (45 < HRC < 55) • Medium to high speed machining
TT5520 PVD coated	P10 – P30 K10 – K30	• Anti-abrasion and chipping resistant PVD coated layer • Single direction crystal aligned AlCrN layer - Excellent abrasion resistance with sub-micron substrate - Anti-abrasion and oxidation resistant PVD AlCrN coated layer
TT5525 PVD coated	P20 – P40 M20 – M40 S20 – S40	• Optimally balanced with wear resistant and anti-chipping properties • General machining of carbon steel, alloy steel, stainless steel, high-temp alloy (< 40 HRC) • Low to medium speed machining
TTD620 Diamond coated	**Graphite**	• High hardness and excellent wear resistance • Machining of graphite
TTD610 Diamond coated	**Composite material**	• Advanced nano diamond coating provides longer tool life and stability of machining • Excellent abrasive wear resistance (Hardness: more Hv 8000) • Machining of composite material
UF10N **UF10** Uncoated	P25 – P35 M25 – M35 N25 – N35	• General machining of steel, aluminum alloys, non-ferrous materials • Submicron substrate
TC3030 Ceramic	S25 – S35	• SiAlON ceramic grade • High speed machining of nikel based super alloys

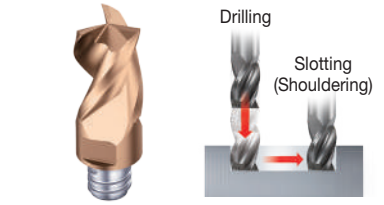
Selection guide for solid end mill grades

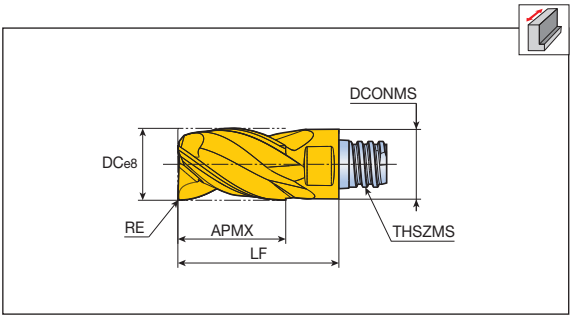


MAXI-RUSH Line

MXDM

3 flute, drill-mill heads





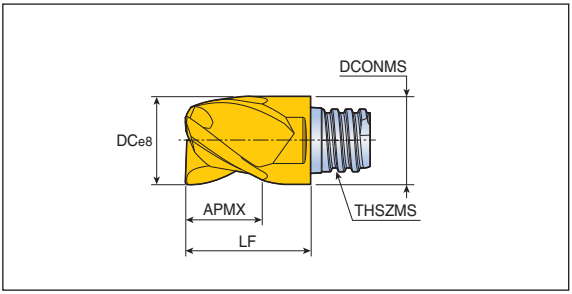
Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXDM	100L15R02-03S06	0.025-0.08	10	0.2	15	22	S06	9.7	●
	120L18R02-03S08	0.025-0.10	12	0.2	18	27	S08	11.7	●
	160L24R02-03S10	0.03-0.12	16	0.2	24	33.5	S10	15.3	●
	200L30R02-03S12	0.04-0.16	20	0.2	30	41	S12	18.45	●

▸ Wrench should be ordered separately

●: Standard items

MXEE-03

3 flute, for general purpose



Designation		Feed (mm/tooth)	Dimension (mm)					Grade
			DC	APMX	LF	THSZMS	DCONMS	TT5523
MXEE	080L05R00-03S05	0.03-0.09	8	5	10.0	S05	7.7	●
	100L07R00-03S06	0.03-0.10	10	7	13.0	S06	9.7	●
	120L09R00-03S08	0.04-0.11	12	9	16.5	S08	11.7	●

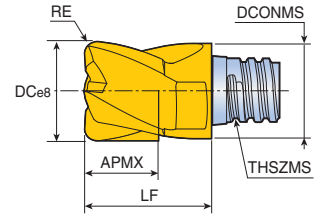
▸ Wrench should be ordered separately

●: Standard items

MXEE(D)-04

MAXIRUSH
INDEXABLE SOLID HEADS

4 flute, for general purpose



Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	RE	FHA	APMX	LF	THSZMS	DCONMS	TT5523
MXEE 050L04R05-04S04	0.02-0.06	5	0.5	45	4	8.5	S04	6.0	●
MXEE 050L07R00-04S05	0.02-0.06	5	-	45	7	15.0	S05	8.0	●
MXEE 060L04R05-04S04	0.02-0.04	6	0.5	45	4	8.5	S04	5.8	●
MXEE 060L05R00-04S05	0.03-0.04	6	-	45	5	10.0	S05	8.0	●
MXED 080L05R05-04S05	0.03-0.09	8	0.5	30	5	10.0	S05	7.7	●
MXED 080L05R10-04S05	0.03-0.09	8	1.0	30	5	10.0	S05	7.7	●
MXED 080L05R15-04S05	0.03-0.09	8	1.5	30	5	10.0	S05	7.7	●
MXED 080L09R05-04S05	0.03-0.09	8	0.5	30	9	15.0	S05	7.7	●
MXEE 080L05R00-04S05	0.03-0.09	8	-	45	5	10.0	S05	7.7	●
MXEE 080L05R05-04S05	0.03-0.09	8	0.5	45	5	10.0	S05	7.7	●
MXEE 080L05R10-04S05	0.03-0.09	8	1.0	45	5	10.0	S05	7.7	●
MXEE 080L09R00-04S05	0.03-0.09	8	-	45	9	15.0	S05	7.7	●
MXED 100L07R05-04S06	0.03-0.10	10	0.5	30	7	13.0	S06	9.6	●
MXED 100L07R10-04S06	0.03-0.10	10	1.0	30	7	13.0	S06	9.6	●
MXEE 100L07R00-04S06	0.03-0.10	10	-	45	7	13.0	S06	9.6	●
MXEE 100L07R05-04S06	0.03-0.10	10	0.5	45	7	13.0	S06	9.6	●
MXEE 100L07R10-04S06	0.03-0.10	10	1.0	45	7	13.0	S06	9.6	●
MXEE 100L12R00-04S06	0.03-0.10	10	-	45	12	19.0	S06	9.6	●
MXED 120L09R05-04S08	0.04-0.11	12	0.5	30	9	16.5	S08	11.7	●
MXED 120L09R10-04S08	0.04-0.11	12	1.0	30	9	16.5	S08	11.7	●
MXEE 120L09R00-04S08	0.04-0.11	12	-	45	9	16.5	S08	11.7	●
MXEE 120L09R05-04S08	0.04-0.11	12	0.5	45	9	16.5	S08	11.7	●
MXEE 120L09R10-04S08	0.04-0.11	12	1.0	45	9	16.5	S08	11.7	●
MXEE 120L14R00-04S08	0.04-0.11	12	-	45	14	23.0	S08	11.7	●
MXED 160L12R05-04S10	0.05-0.13	16	0.5	30	12	20.5	S10	15.3	●
MXED 160L12R10-04S10	0.05-0.13	16	1.0	30	12	20.5	S10	15.3	●
MXED 160L12R15-04S10	0.05-0.13	16	1.5	30	12	20.5	S10	15.3	●
MXED 160L12R20-04S10	0.05-0.13	16	2.0	30	12	20.5	S10	15.3	●
MXED 160L12R30-04S10	0.05-0.13	16	3.0	30	12	20.5	S10	15.3	●
MXED 160L12R40-04S10	0.05-0.13	16	4.0	30	12	20.5	S10	15.3	●
MXEE 160L12R00-04S10	0.05-0.13	16	-	45	12	20.5	S10	15.3	●
MXEE 160L12R05-04S10	0.05-0.13	16	0.5	45	12	20.5	S10	15.3	●
MXEE 160L12R10-04S10	0.05-0.13	16	1.0	45	12	20.5	S10	15.3	●
MXEE 160L12R15-04S10	0.05-0.13	16	1.5	45	12	20.5	S10	15.3	●
MXEE 160L12R20-04S10	0.05-0.13	16	2.0	45	12	20.5	S10	15.3	●

▸ Wrench should be ordered separately

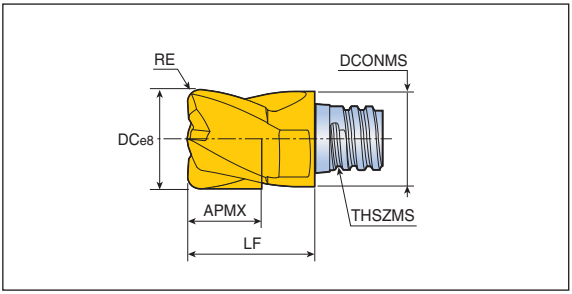
▸ FHA: Flute helix angle (MXEE-45°, MXED-30°)

●: Standard items

MXEE(D)-04

MAXIRUSH

4 flute, for general purpose



4 | H•A 30° | H•A 45° | Cutting Condition F58 | F56

Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	RE	FHA	APMX	LF	THSZMS	DCONMS	TT5523
MXEE 160L12R30-04S10	0.05-0.13	16	3.0	45	12	20.5	S10	15.3	●
MXEE 160L12R40-04S10	0.05-0.13	16	4.0	45	12	20.5	S10	15.3	●
MXED 200L15R05-04S12	0.05-0.13	20	0.5	30	15	25.5	S12	18.3	●
MXED 200L15R10-04S12	0.05-0.13	20	1.0	30	15	25.5	S12	18.3	●
MXED 200L15R20-04S12	0.05-0.13	20	2.0	30	15	25.5	S12	18.3	●
MXED 200L15R30-04S12	0.05-0.13	20	3.0	30	15	25.5	S12	18.3	●
MXEE 200L15R00-04S12	0.05-0.13	20	-	45	15	25.5	S12	18.3	●

▸ Wrench should be ordered separately

▸ FHA: Flute helix angle (MXEE-45°, MXED-30°)

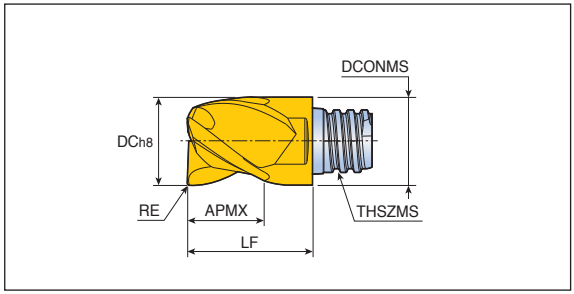
●: Standard items

TaeguTec

MXEE-03

MAXIRUSH

3 flute, for keyways



Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXEE	077L04R02-03S05	0.03-0.08	7.7	0.2	4	10.0	S05	7.7	●
	097L05R03-03S06	0.03-0.09	9.7	0.3	5	13.0	S06	9.7	●
	117L07R03-03S08	0.03-0.10	11.7	0.3	7	16.5	S08	11.7	●
	157L08R03-03S10	0.04-0.12	15.7	0.3	8	20.5	S10	15.3	●
	197L12R04-03S12	0.05-0.13	19.7	0.4	12	25.5	S12	18.3	●

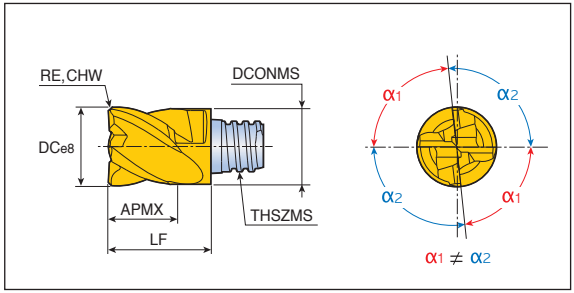
▸ Wrench should be ordered separately

●: Standard items

MXEE-I04

MAXIRUSH

4 flute, unequal spacing of cutting edges (vibration free)



Designation		Feed (mm/tooth)	Dimension (mm)							Grade
			DC	RE	CHW	APMX	LF	THSZMS	DCONMS	TT5523
MXEE	080L05C30I04S05	0.03-0.09	8	-	0.3	5	10.0	S05	7.7	●
	100L07C40I04S06	0.03-0.10	10	-	0.4	7	13.0	S06	9.7	●
	120L09C50I04S08	0.04-0.11	12	-	0.5	9	16.5	S08	11.7	●
	160L12C60I04S10	0.05-0.13	16	-	0.6	12	20.5	S10	15.3	●
	200L15C60I04S12	0.05-0.17	20	-	0.6	15	25.5	S12	18.3	●
	250L22C60I04S15	0.06-0.17	25	-	0.6	22	37.0	S15	23.9	●
	250L22R00I04S15	0.06-0.17	25	-	-	22	37.0	S15	23.9	●
	250L22R05I04S15	0.06-0.17	25	0.5	-	22	37.0	S15	23.9	●
	250L22R10I04S15	0.06-0.17	25	1.0	-	22	37.0	S15	23.9	●
	250L22R20I04S15	0.06-0.17	25	2.0	-	22	37.0	S15	23.9	●
	250L22R30I04S15	0.06-0.17	25	3.0	-	22	37.0	S15	23.9	●

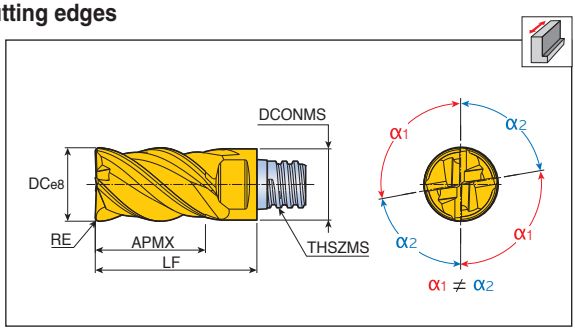
▸ Wrench should be ordered separately

●: Standard items

MXES-R

MAXI RUSH

4 flute, unequal space & variable helix cutting edges



4 | H•A 45° | Cutting Condition F58 | F56

Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXES	080H05R05I04S05	0.03-0.09	8	0.5	5	10.0	S05	7.7	●
	080H12R05I04S05	0.03-0.08	8	0.5	12	18.0	S05	7.7	●
	100H07R05I04S06	0.03-0.10	10	0.5	7	13.0	S06	9.7	●
	100H15R05I04S06	0.03-0.09	10	0.5	15	22.0	S06	9.7	●
	120H09R05I04S08	0.04-0.11	12	0.5	9	16.5	S08	11.7	●
	120H18R05I04S08	0.04-0.10	12	0.5	18	27.0	S08	11.7	●
	160H12R05I04S10	0.05-0.13	16	0.5	12	20.5	S10	15.3	●
	160H24R05I04S10	0.04-0.10	16	0.5	24	33.5	S10	15.3	●
	200H15R05I04S12	0.05-0.17	20	0.5	15	25.5	S12	18.5	●
	200H30R05I04S12	0.05-0.11	20	0.5	30	41.0	S12	18.5	●
	250H22R05I04S15	0.06-0.17	25	0.5	22	37.0	S15	23.9	●
	250H37R05I04S15	0.05-0.12	25	0.5	37	52.5	S15	23.9	●

▸ Wrench should be ordered separately

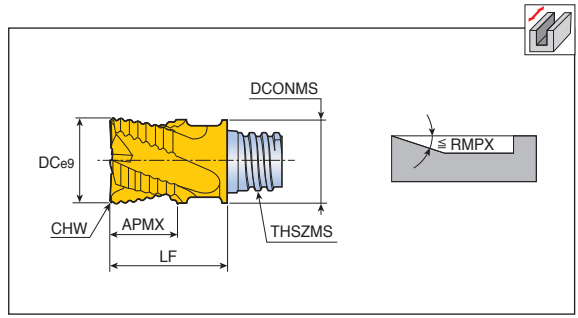
●: Standard items

TaeguTec Member IMC Group

MXEE-R

MAXI RUSH

4-6 flute, for roughing



4-6 | H•A 45° | Cutting Condition F58 | F56

Designation		Feed (mm/tooth)	Dimension (mm)								Grade
			DC	NOF	CHW	APMX	LF	THSZMS	DCONMS	RMPX	TT5523
MXEE	080L05C25R04S05	0.03-0.08	8	4	0.25	5	10.0	S05	7.7	5	●
	100L07C30R04S06	0.03-0.09	10	4	0.30	7	13.0	S06	9.7	5	●
	120L09C35R04S08	0.04-0.10	12	4	0.35	9	16.5	S08	11.7	5	●
	160L12C40R05S10	0.04-0.10	16	5	0.40	12	20.5	S10	15.3	5	●
	200L15C40R06S12	0.05-0.11	20	6	0.40	15	25.5	S12	18.3	3	●
	250L22C50R06S15	0.05-0.11	25	6	0.50	22	37.0	S15	23.9	3	●

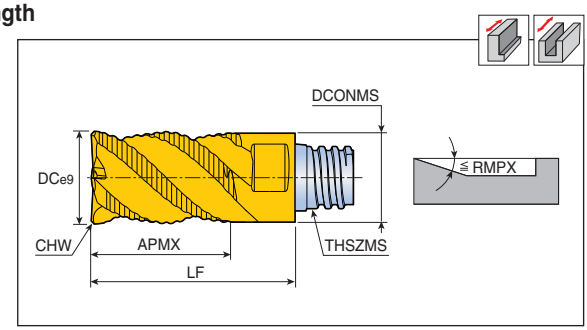
- Wrench should be ordered separately
- NOF: Number of flutes
- RMPX: Ramping angle maximum

●: Standard items

MXEE-R-1.5D

MAXI RUSH

4-6 flute, for roughing with 1.5D flute length



4-6 | H•A 45° | Cutting Condition F58 | F56

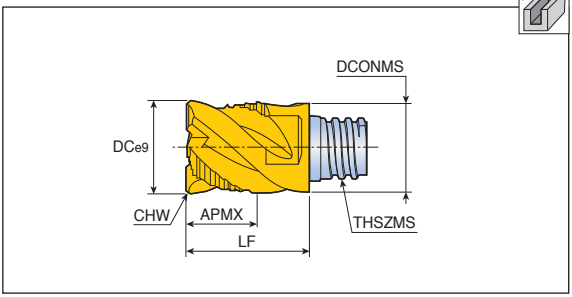
Designation		Feed (mm/tooth)	Dimension (mm)								Grade
			DC	NOF	CHW	APMX	LF	THSZMS	DCONMS	RMPX	TT5523
MXEE	080L12C25R04S05	0.03-0.08	8	4	0.25	12	18.0	S05	7.7	5	●
	100L15C30R04S06	0.03-0.09	10	4	0.30	15	22.0	S06	9.6	5	●
	120L18C35R04S08	0.04-0.10	12	4	0.35	18	27.0	S08	11.7	5	●
	160L24C40R05S10	0.04-0.10	16	5	0.40	24	33.5	S10	15.3	5	●
	200L30C40R06S12	0.05-0.11	20	6	0.40	30	41.0	S12	18.5	3	●

- Wrench should be ordered separately
- NOF: Number of flutes
- RMPX: Ramping angle maximum

●: Standard items

MXEE-C04

4 flute, combined edges for roughing & finishing



Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	CHW	APMX	LF	THSZMS	DCONMS	TT5523
MXEE	080L05C30C04S05	0.03-0.08	8	0.3	5	10.0	S05	7.7	●
	100L07C30C04S06	0.03-0.09	10	0.3	7	13.0	S06	9.7	●
	120L09C40C04S08	0.04-0.10	12	0.4	9	16.5	S08	11.7	●
	160L12C60C04S10	0.05-0.11	16	0.6	12	20.5	S10	15.3	●
	200L15C60C04S12	0.05-0.11	20	0.6	15	25.5	S12	18.3	●
	250L22C60C04S15	0.05-0.11	25	0.6	22	37.0	S15	23.9	●

▸ Wrench should be ordered separately

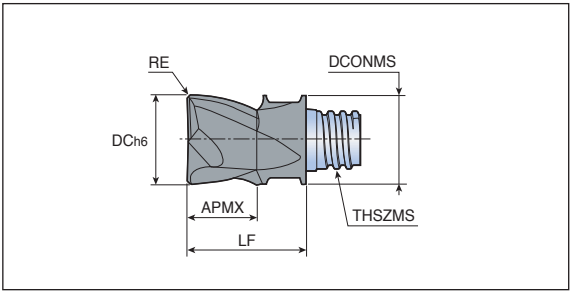
●: Standard items

MXEE-A02

2 flute, for aluminum machining

UF10

TTA101



Designation		Feed (mm/tooth)	Dimension (mm)						Grade	
			DC	RE	APMX	LF	THSZMS	DCONMS	UF10	TTA101
MXEE	100L07R05A02S06	0.03-0.10	10	0.5	7	13.0	S06	9.7	●	●
	100L07R10A02S06	0.03-0.10	10	1.0	7	13.0	S06	9.7	●	●
	120L09R05A02S08	0.04-0.11	12	0.5	9	16.5	S08	11.7	●	●

▸ Wrench should be ordered separately

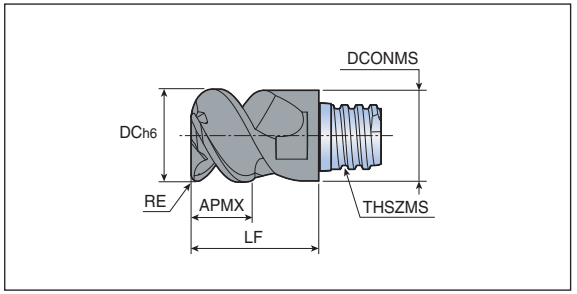
●: Standard items

MXEE-A03

3 flute, for aluminum machining

UF10

TTA101



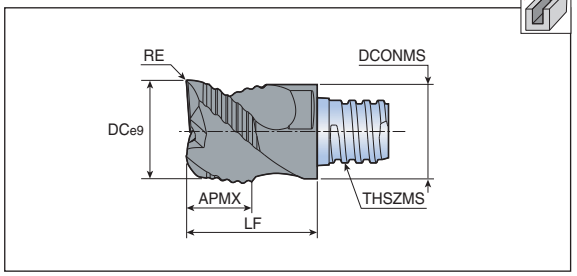
Designation		Feed (mm/tooth)	Dimension (mm)						Grade	
			DC	RE	APMX	LF	THSZMS	DCONMS	UF10	TTA101
MXEE	080L05R05A03S05	0.03-0.09	8	0.5	5	10.0	S05	7.7	●	●
	100L06R05A03S06	0.03-0.10	10	0.5	6	13.0	S06	9.7	●	●
	100L06R10A03S06	0.03-010	10	1.0	6	13.0	S06	9.7	●	●
	120L08R05A03S08	0.04-0.11	12	0.5	8	16.5	S08	11.7	●	●
	120L08R10A03S08	0.04-0.11	12	1.0	8	16.5	S08	11.7	●	●
	160L10R00A03S10	0.05-0.13	16	-	10	20.5	S10	15.3	●	●
	160L10R10A03S10	0.05-0.13	16	1.0	10	20.5	S10	15.3	●	●
	160L10R20A03S10	0.05-0.13	16	2.0	10	20.5	S10	15.3	●	●
	200L12R05A03S12	0.05-0.13	20	0.5	12	25.5	S12	18.3	●	●
	200L12R10A03S12	0.05-0.13	20	1.0	12	25.5	S12	18.3	●	●
	200L12R20A03S12	0.05-0.13	20	2.0	12	25.5	S12	18.3	●	●

▸ Wrench should be ordered separately

●: Standard items

MXEE-RA03

3 flute, for roughing with aluminum machining



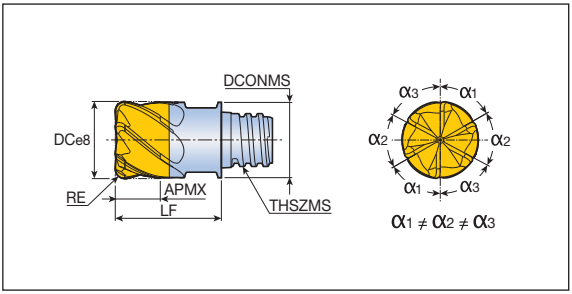
Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	RE	APMX	LF	THSZMS	DCONMS	UF10
MXEE	080L05R02RA03S05	0.03-0.15	8	0.2	5	10.0	S05	7.7	●
	100L06R02RA03S06	0.05-0.20	10	0.2	6	13.0	S06	9.6	●
	120L08R02RA03S08	0.07-0.22	12	0.2	8	16.5	S08	11.7	●
	160L10R02RA03S10	0.07-0.25	16	0.2	10	20.5	S10	15.3	●
	200L12R02RA03S12	0.07-0.25	20	0.2	12	25.5	S12	18.5	●

▸ Wrench should be ordered separately

●: Standard items

MXCRF

6 flute, ceramic brazed heads



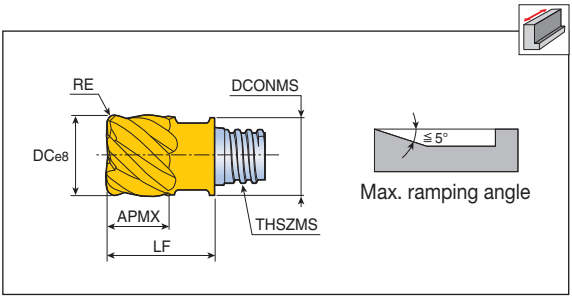
Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	RE	APMX	LF	THSZMS	DCONMS	TC3030
MXCRF	100L07R10-06S06	0.02-0.04	10	1.0	7	13.0	S06	9.7	●
	120L07R15-06S08	0.03-0.05	12	1.5	7	16.5	S08	11.7	●
	160L09R20-06S10	0.03-0.05	16	2.0	9	20.5	S10	15.3	●

▸ Wrench should be ordered separately

●: Standard items

MXEE(D)-06

6 flute, for difficult-to-cut material machining without central edge



Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	RE	FHA	APMX	LF	THSZMS	DCONMS	TT5523
MXEE 080L05R05-06S05	0.03-0.10	8	0.5	45	5	10.0	S05	7.7	●
MXEE 080L05R10-06S05	0.03-0.10	8	1.0	45	5	10.0	S05	7.7	●
MXED 100L07R05-06S06	0.03-0.10	10	0.5	30	7	13.0	S06	9.7	●
MXED 100L07R10-06S06	0.03-0.10	10	1.0	30	7	13.0	S06	9.7	●
MXEE 100L07R05-06S06	0.04-0.10	10	0.5	45	7	13.0	S06	9.7	●
MXEE 100L07R10-06S06	0.04-0.10	10	1.0	45	7	13.0	S06	9.7	●
MXEE 100L07R15-06S06	0.03-0.10	10	1.5	45	7	13.0	S06	9.7	●
MXED 120L09R05-06S08	0.04-0.11	12	0.5	30	9	16.5	S08	11.7	●
MXEE 120L09R00-06S08	0.04-0.11	12	-	45	9	16.5	S08	11.7	●
MXEE 120L09R10-06S08	0.04-0.11	12	1.0	45	9	16.5	S08	11.7	●
MXEE 120L09R15-06S08	0.04-0.11	12	1.5	45	9	16.5	S08	11.7	●

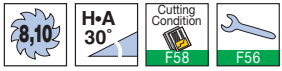
▸ Wrench should be ordered separately

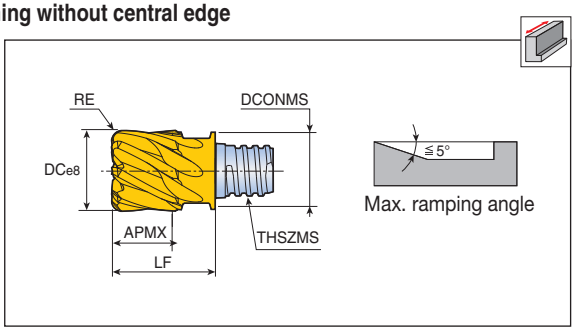
▸ FHA: Flute helix angle (MXEE-45°, MXED-30°)

●: Standard items

MXED-08/10

8, 10 flute, for difficult-to-cut material machining without central edge





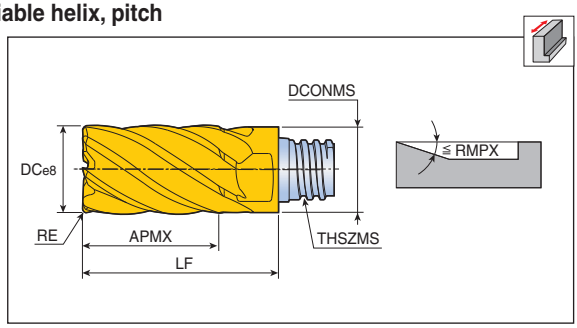
Designation		Feed (mm/tooth)	Dimension (mm)							Grade
			DC	NOF	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXED	**160L12R05-08S10**	0.05-0.13	16	8	0.5	12	20.5	S10	15.3	●
	160L12R10-08S10	0.05-0.13	16	8	1.0	12	20.5	S10	15.3	●
	160L12R20-08S10	0.05-0.13	16	8	2.0	12	20.5	S10	15.3	●
	200L15R10-10S12	0.05-0.13	20	10	1.0	15	25.5	S12	18.3	●
	200L15R20-10S12	0.05-0.13	20	10	2.0	15	25.5	S12	18.3	●
	250L22R10-10S15	0.05-0.13	25	10	1.0	22	37.0	S15	23.9	●
	250L22R20-10S15	0.05-0.13	25	10	2.0	22	37.0	S15	23.9	●

▸ Wrench should be ordered separately
▸ NOF: Number of flutes

●: Standard items

MXED-I07/I09-1.5D

Long cutting edge 1.5D & 7,9 flutes & variable helix, pitch



Designation		Feed (mm/tooth)	Dimension (mm)								Grade
			DC	NOF	RE	APMX	LF	THSZMS	DCONMS	RMPX	TT5523
MXED	**100L15R05I07S06**	0.04-0.10	10	7	0.5	15	22.0	S06	9.6	3	●
	120L18R05I07S08	0.04-0.10	12	7	0.5	18	27.0	S08	11.7	3	●
	160L24R08I09S10	0.05-0.10	16	9	0.8	24	33.5	S10	15.3	1	●
	200L30R10I09S12	0.05-0.10	20	9	1.0	30	41.0	S12	18.5	1	●

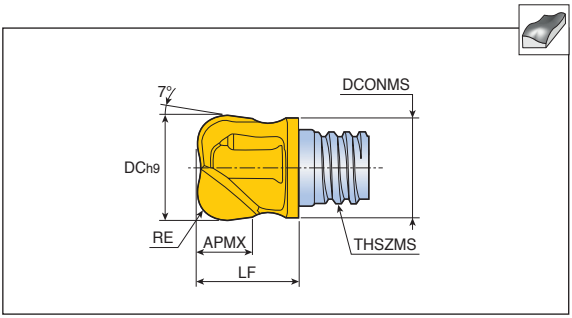
▸ Wrench should be ordered separately
▸ NOF: Number of flutes
▸ RMPX: Ramping angle maximum

●: Standard items

MXRB-02

MAXIRUSH

2 flute, 7° back taper flute



2 | Cutting Condition F58 | F56

Designation	Feed (mm/tooth)	Dimension (mm)						Grade
		DC	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXRB 200L11R50-02S12	0.05-0.15	20	5.0	11.3	17.3	S12	18.3	●

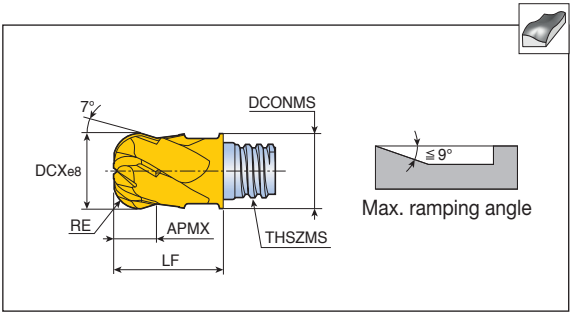
▸ Wrench should be ordered separately

●: Standard items

MXRD-06

MAXIRUSH

6 flute, 7° back taper sided ground flute



6 | H•A 30° | Cutting Condition F58 | F56

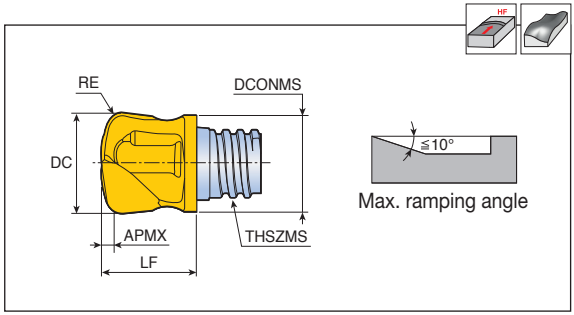
Designation	Dimension (mm)						Grade
	DCX	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXRD 080L04R20-06S05	8	2.0	4	10.0	S05	7.7	●
100L05R30-06S06	10	3.0	5	13.0	S06	9.7	●
120L07R40-06S08	12	4.0	7	16.5	S08	11.7	●
160L09R50-06S10	16	5.0	9	20.5	S10	15.3	●

▸ Wrench should be ordered separately

●: Standard items

MXFX-02

2 flute, for high feed milling



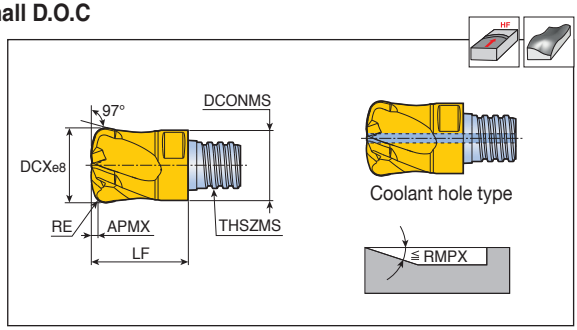
Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXFX	100L0.6R20-02S06	0.30-0.60	10	2.0	0.6	12.5	S06	9.6	●
	120L1.0R25-02S08	0.50-1.00	12	2.5	0.68	11.1	S08	11.5	●
	160L1.1R30-02S10	0.55-1.10	16	3.0	1.1	20.0	S10	15.2	●
	200L1.5R34-02S12	0.75-1.50	20	3.4	1.5	17.4	S12	18.3	●

▸ Wrench should be ordered separately

●: Standard items

MXFX-04/06

4,6 flute, for high feed machining and small D.O.C



Designation		Feed (mm/tooth)	Dimension (mm)								Coolant hole	Grade	
			DC	NOF	RE	APMX	LF	THSZMS	DCONMS	RMPX		TT5513	TT5523
MXFX	080L0.4R16-04S05	0.12-0.48	8	4	1.62	0.4	10.0	S05	7.5	5	x	●	
	100L0.5R20-04S06	0.16-0.57	10	4	2.01	0.5	13.0	S06	9.5	5	x	●	
	100L0.4R10-06S06C	0.16-0.47	10	6	1.00	0.45	10.0	S06	9.5	3	●	●	
	120L0.6R18-04S08C	0.16-0.67	12	4	1.80	0.6	16.5	S08	11.5	5	●		●
	120L0.6R24-04S08	0.16-0.67	12	4	2.47	0.6	16.5	S08	11.5	5	x	●	
	120L0.6R12-06S08C	0.16-0.54	12	6	1.20	0.65	12.0	S08	11.5	3	●	●	
	160L0.8R22-04S10C	0.20-0.75	16	4	2.20	0.8	20.5	S10	15.4	5	●		●
	160L0.8R32-04S10	0.20-0.75	16	4	3.25	0.8	20.5	S10	15.4	5	x	●	
	200L1.0R40-04S12	0.20-0.90	20	4	4.02	1.0	25.5	S12	18.45	5	x	●	
	250L1.2R31-06S15	0.25-1.00	25	6	3.10	1.2	25.0	S15	23.9	5	x	●	

▸ Wrench should be ordered separately

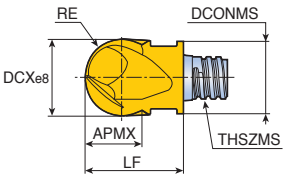
▸ NOF: Number of flutes

▸ RMPX: Ramping angle maximum

●: Standard items

MXBD-BG-02

2 flute, for high precision machining



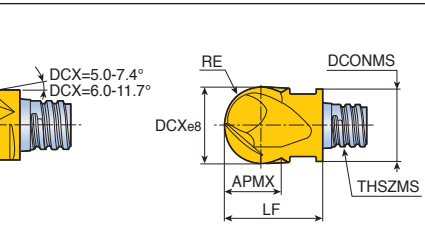
Designation	Dimension (mm)						Grade
	DCX	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXBD 080L05-BG-02S05	8	3.98(1)	5	10.0	S05	7.7	●
100L07-BG-02S06	10	4.98(1)	7	13.0	S06	9.7	●
120L09-BG-02S08	12	5.98(2)	9	16.5	S08	11.7	●
160L09-BG-02S10	16	7.98(2)	9	20.5	S10	15.3	●

▸ Wrench should be ordered separately
▸ RE Tolerance: (1)± 0.01, (2)± 0.012

●: Standard items

MXBD(E)-BG-04

4 flute, for high precision machining



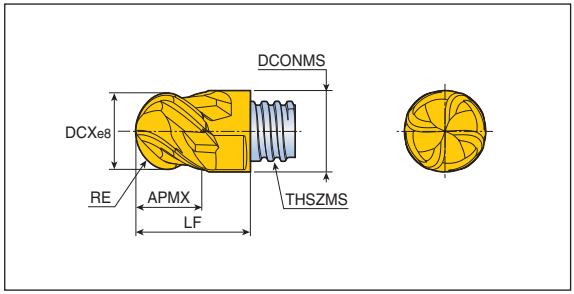
Designation	Dimension (mm)							Grade
	DCX	RE	FHA	APMX	LF	THSZMS	DCONMS	TT5523
MXBE 050L07-BG-04S05	5	2.49(1)	38	7.0	15.0	S05	8.0	●
060L04-BG-04S04	6	2.99(1)	38	4.0	8.5	S04	5.8	●
060L05-BG-04S05	6	2.99(1)	38	5.5	10.0	S05	8.0	●
MXBD 080L05-BG-04S05	8	3.98(1)	30	5.0	10.0	S05	7.7	●
100L07-BG-04S06	10	4.98(1)	30	7.0	13.0	S06	9.7	●
120L09-BG-04S08	12	5.98(2)	30	9.0	16.5	S08	11.7	●
160L12-BG-04S10	16	7.98(2)	30	12.0	20.5	S10	15.3	●
200L15-BG-04S12	20	9.97(2)	30	15.0	25.5	S12	18.3	●
250L22-BG-04S15	25	12.47(3)	30	22.0	37.0	S15	23.9	●

▸ Wrench should be ordered separately
▸ RE Tolerance: (1)± 0.01, (2)± 0.012, (3)± 0.02
▸ FHA: Flute helix angle

●: Standard items

MXBE-BH-04

4 flute, for high productivity on hard material



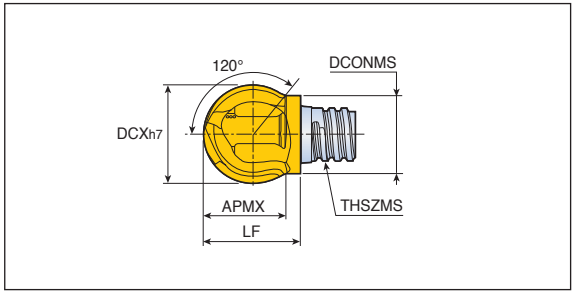
Designation		Dimension (mm)						Grade
		DCX	RE	APMX	LF	THSZMS	DCONMS	TT5513
MXBE	080L05-BH-04S05	8	3.98(1)	5.4	10.0	S05	7.7	●
	100L07-BH-04S06	10	4.98(1)	7.4	13.0	S06	9.6	●
	120L09-BH-04S08	12	5.98(2)	9.3	16.5	S08	11.7	●
	160L12-BH-04S10	16	7.98(2)	12.4	20.5	S10	15.3	●
	200L16-BH-04S12	20	9.97(2)	16.0	25.5	S12	18.5	●

▸ Wrench should be ordered separately
▸ RE Tolerance: (1)± 0.01, (2)± 0.012

●: Standard items

MXBB-SG-02

2 flute, spherical designed edge



Designation		Dimension (mm)					Key	Grade
		DCX	APMX	LF	THSZMS	DCONMS		TT5523
MXBB	080L05-SG-02S04	8	5	8.2	S04	5.8	MX KEY-S04	●
	100L07-SG-02S05	10	7	10.0	S05	7.6	MX KEY-S05	●
	120L09-SG-02S06	12	9	11.6	S06	9.5	MX KEY-S08	●
	160L12-SG-02S08	16	12	15.4	S08	12.2	MX KEY-S10	●
	200L15-SG-02S10	20	15	18.4	S10	15.2	MX KEY-S10	●
	250L18-SG-02S12	25	18	23.2	S12	18.3	MX KEY-S12	●

▸ Wrench should be ordered separately

●: Standard items

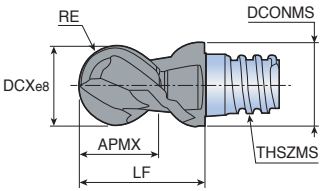
MXBE-BGA02

MAXIRUSH

2 flute, for high precision aluminum machining

UF10

TTA101



Designation		Dimension (mm)						Grade	
		DCX	RE	APMX	LF	THSZMS	DCONMS	UF10	TTA101
MXBE	080L05-BGA02S05	8	3.98(1)	5	10.0	S05	7.7	●	●
	100L07-BGA02S06	10	4.98(1)	7	13.0	S06	9.7	●	●
	120L09-BGA02S08	12	5.98(2)	9	16.5	S08	11.7	●	●
	160L12-BGA02S10	16	7.98(2)	12	20.5	S10	15.3	●	●
	200L15-BGA02S12	20	9.97(2)	15	25.5	S12	18.3	●	●

▸ Wrench should be ordered separately

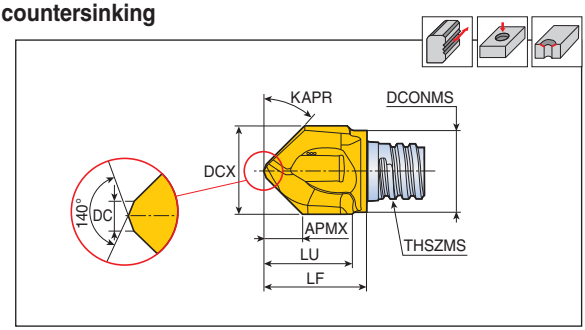
▸ RE Tolerance: (1)± 0.01, (2)± 0.012

●: Standard items

MXCP-02

MAXIRUSH

2 flute, for spot drilling, chamfering and countersinking



2 | Cutting Condition F58 | F56

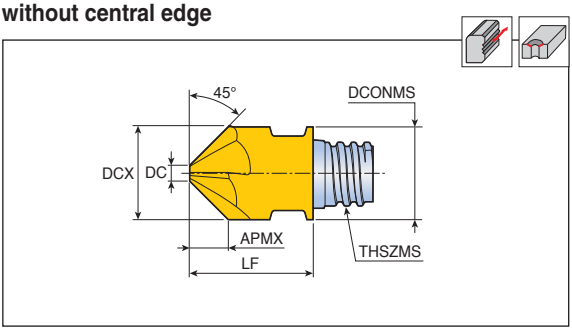
Designation		Dimension (mm)									Grade
		KAPR	DCX	DCXTOL	DC	APMX	LU	LF	THSZMS	DCONMS	TT5523
MXCP	**100L09A30-02S06**	60	10.0	h10	1.5	7.5	8.5	11.75	S06	9.5	●
	120L12A30-02S08	60	12.0	h10	1.5	9.2	11.0	15.4	S08	11.5	●
	160L15A30-02S10	60	16.0	h10	2.5	12	16.0	20.2	S10	15.2	●
MXCP	**080L07A45-02S05**	45	8.0	z9	1.0	3.7	7.5	9.75	S05	7.6	●
	083L07A45-02S05	45	8.3	z9	1.0	3.8	7.5	10.0	S05	7.6	●
	100L09A45-02S06	45	10.0	z9	1.5	4.4	9.5	11.75	S06	9.5	●
	104L09A45-02S06	45	10.4	z9	1.5	4.6	9.5	11.75	S06	9.5	●
	120L12A45-02S08	45	12.0	z9	1.5	5.4	11.5	15.4	S08	11.5	●
	124L12A45-02S08	45	12.4	z9	1.5	5.6	11.5	15.4	S08	11.5	●
	160L15A45-02S10	45	16.0	z9	1.5	7.1	15.0	18.8	S10	15.2	●
	165L15A45-02S10	45	16.5	z9	1.5	7.1	15.0	18.8	S10	15.2	●
MXCP	**100L09A60-02S06**	30	10.0	h10	1.5	2.7	9.5	12.7	S06	9.5	●
	120L12A60-02S08	30	12.0	h10	1.5	3.3	11.5	15.2	S08	11.5	●
	160L15A60-02S10	30	16.0	h10	1.5	4.4	16.0	19.9	S10	15.2	●

▸ Wrench should be ordered separately

●: Standard items

MXCA-04/06

4, 6 flute, chamfering and countersinking without central edge



4,6 | Cutting Condition F58 | F56

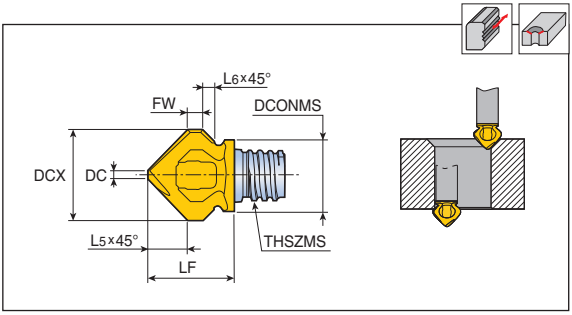
Designation		Dimension (mm)							Grade
		DCX	DC	NOF	APMX	LF	THSZMS	DCONMS	TT5523
MXCA	**100L04A45-04S06**	10.0	1.95	4	4.0	13.0	S06	10.0	●
	120L05A45-04S08	12.0	1.95	4	5.0	16.5	S08	12.0	●
	127L05A45-04S08	12.7	1.98	4	5.3	16.5	S08	12.7	●
	160L06A45-06S10	16.0	3.0	6	6.5	20.3	S10	16.0	●
	200L07A45-06S12	20.0	5.0	6	7.5	25.5	S12	20.0	●

▸ Wrench should be ordered separately
▸ NOF: Number of flutes

●: Standard items

MXCW-02

2 flute, for double chamfering



2 | Cutting Condition F58

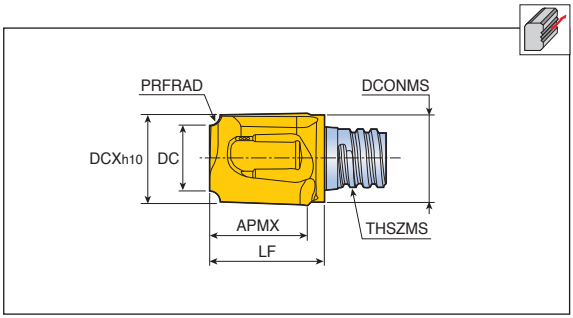
Designation		Dimension (mm)							Key	Grade
		DCX	DC	L5	LF	FW	L6	THSZMS	DCONMS		TT5523
MXCW	**098L04A45-02S05**	9.8	1.2	4.3	10.8	2.5	1.2	S05	7.6	MX KEY-S06	●
	118L05A45-02S06	11.8	1.2	5.3	11.2	2.0	1.2	S06	9.3	MX KEY-S08	●
	157L07A45-02S08	15.7	1.5	7.1	14.0	2.0	1.2	S08	11.5	MX KEY-S10	●

▸ Wrench should be ordered separately

●: Standard items

MXCR-02

2 flute, for concave radius milling



2 | Cutting Condition F58 | F56

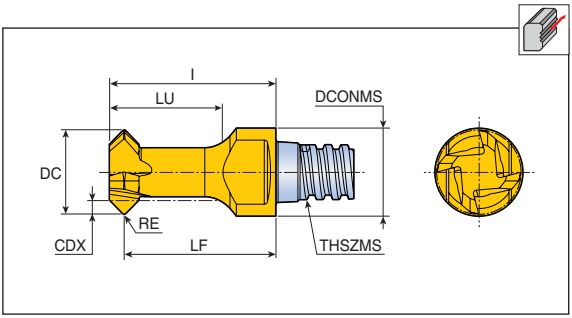
Designation		Feed (mm/tooth)	Dimension (mm)							Grade
			DCX	DC	PRFRAD	APMX	LF	THSZMS	DCONMS	TT5523
MXCR	080L07R10-02S05	0.03-0.08	8.0	5.8	1.0	7.5	10.5	S05	7.6	●
	100L09R16-02S06	0.04-0.09	10.0	6.8	1.6	9.5	12.5	S06	9.5	●
	100L09R25-02S06	0.04-0.09	10.0	5.1	2.5	9.5	12.5	S06	9.5	●
	127L12R30-02S08	0.04-0.11	12.7	6.5	3.0	12.0	15.6	S08	12.2	●
	127L12R40-02S08	0.04-0.11	12.7	4.7	4.0	12.0	15.6	S08	12.2	●
	160L15R50-02S10	0.04-0.13	16.0	6.2	5.0	15.0	19.1	S10	15.2	●
	200L07R60-02S12	0.05-0.15	20.0	8.0	6.0	7.0	17.4	S12	18.3	●

▸ Wrench should be ordered separately
▸ PRFRAD: Profile radius

●: Standard items

MXCS-04

4 flute, for chamfering



Designation	Dimension (mm)								Grade
	DC	CDX	RE	LF	LU	l	THSZMS	DCONMS	TT5523
MXCS 077L10A45-04S05	7.7	1.2	0.2	13.9	10.2	15.2	S05	8.0	●

▸ Wrench should be ordered separately

●: Standard items

MXDP-02

2 flute, for center drilling

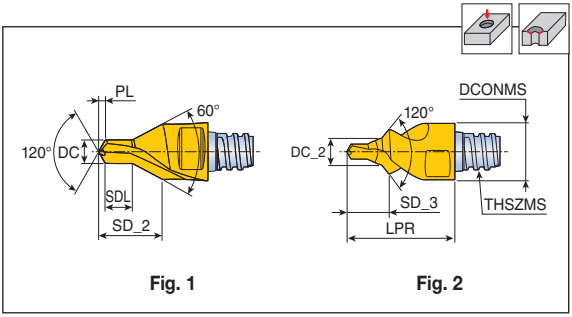


Fig. 1 Fig. 2

Designation	Dimension (mm)										Grade
	DC	DC2	SDL	SD_2	SD_3	LPR	THSZMS	DCONMS	PL	Fig	TT5523
MXDP 107L01A30-02S04	1.07	-	1.32	4.14	-	10.0	S04	6.0	0.28	1	●
165L02A30-02S04	1.65	-	1.97	4.45	-	10.0	S04	6.0	0.43	1	●
207L02A30-02S04	2.07	-	2.36	6.37	-	10.0	S04	6.0	0.54	1	●
328L04A30-02S05	3.28	-	3.75	8.76	-	15.0	S05	8.0	0.85	1	●
412L05A30-02S06	4.12	-	4.83	11.05	-	19.0	S06	10.0	1.07	1	●
513L07A30-02S08	5.13	-	5.88	13.23	-	23.0	S08	12.0	1.32	1	●
646L08A30-02S10	6.46	-	7.25	17.18	-	28.0	S10	16.0	1.65	1	●
MXDP 324L04B30-02S08	3.24	6.77	3.55	7.40	8.94	23.0	S08	12.0	0.83	2	●
509L06B30-02S12	5.09	10.69	5.56	11.70	14.17	25.5	S12	18.5	1.33	2	●
641L08B30-02S12	6.41	13.29	6.95	14.50	16.58	25.5	S12	20.0	1.68	2	●

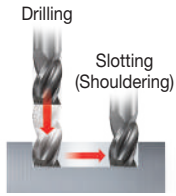
▸ Wrench should be ordered separately

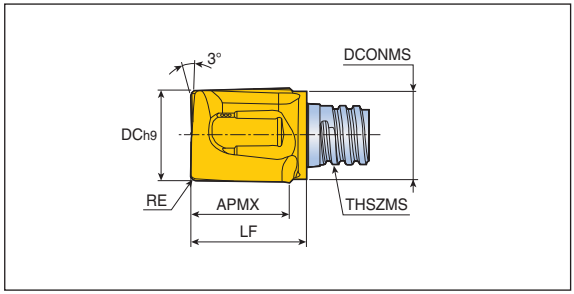
▸ SDL: Step diameter length

●: Standard items

MXGC-02

2 flute, for drilling and milling





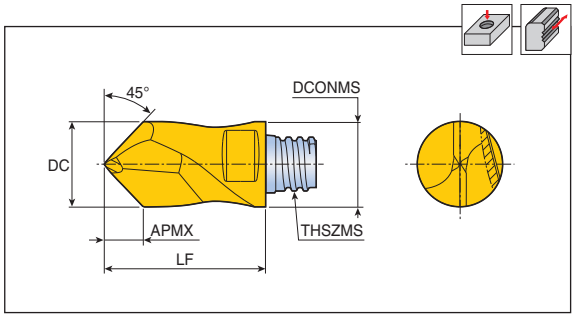
Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	RE	APMX	LF	THSZMS	DCONMS	TT5523
MXGC	**080L08R04-02S05**	0.03-0.09	8	0.4	7.7	10.0	S05	7.6	●
	080L08R10-02S05	0.03-0.09	8	1.0	7.7	10.0	S05	7.6	●
	100L09R04-02S06	0.03-0.10	10	0.4	9.0	12.4	S06	9.5	●
	100L09R20-02S06	0.03-0.10	10	2.0	9.0	12.4	S06	9.5	●
	120L10R04-02S08	0.04-0.11	12	0.4	10.0	14.2	S08	11.5	●
	120L10R10-02S08	0.04-0.11	12	1.0	10.0	14.2	S08	11.5	●
	120L10R20-02S08	0.04-0.11	12	2.0	10.0	14.2	S08	11.5	●
	160L15R04-02S10	0.05-0.13	16	0.4	14.9	19.0	S10	15.2	●

▸ Wrench should be ordered separately

●: Standard items

MXDS-02

2 flute, for spot drill & chamfer



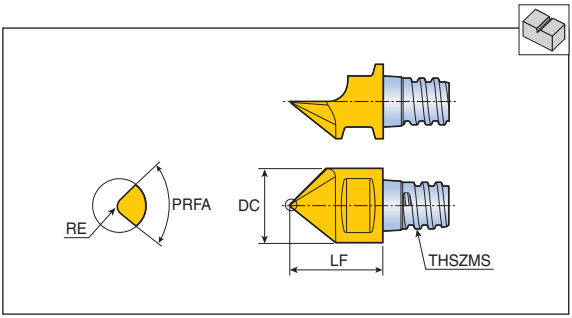
Designation		Dimension (mm)					Grade
		DC	APMX	LF	THSZMS	DCONMS	TT5523
MXDS	**060A45-02S04**	6	2.7	11.0	S04	5.7	●
	080A45-02S05	8	3.7	15.0	S05	7.7	●
	100A45-02S06	10	4.4	19.0	S06	9.7	●
	120A45-02S08	12	5.4	23.0	S08	11.7	●
	160A45-02S10	16	7.1	28.0	S10	15.3	●

▸ Wrench should be ordered separately

●: Standard items

MXEG-01

Single flute, for engraving



1 | Cutting Condition F58 | F56

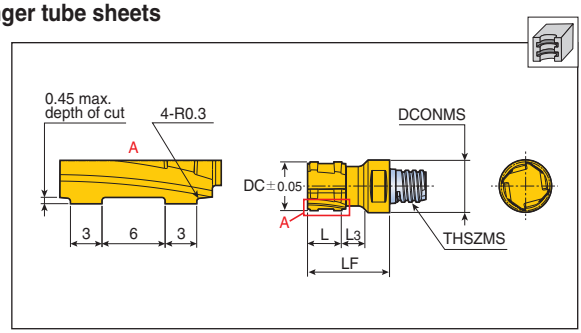
Designation	Dimension (mm)					Grade
	DC	RE	PRFA	LF	THSZMS	TT5523
MXEG 060A60-01S04	6	0.2	60	8.5	S04	●
080A30-01S05	8	0.2	30	10.0	S05	●
080A45-01S05	8	0.2	45	10.0	S05	●
080A60-01S05	8	0.2	60	10.0	S05	●
080A90-01S05	8	0.2	90	10.0	S05	●

▸ Wrench should be ordered separately

●: Standard items

MXDG-04

4 flute, internal grooving for heat exchanger tube sheets



4 | Cutting Condition F58

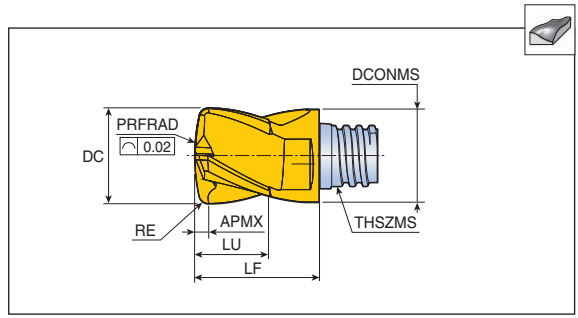
Designation	Dimension (mm)							Key	Grade
	DC	L	L_3	LF	THSZMS	DCONMS	D_{MIN}		TT5523
MXDG 155-04S10-8238	15.5	14.2	17.8	33.7	S10	16.0	15.88	MX KEY-S08	●
185-04S12-8239	18.5	14.5	18.3	34.5	S12	18.5	19.05	MX KEY-S10	●
245-04S15-8240	24.5	14.4	11.0	37.2	S15	23.8	25.40	MX KEY-S15	●

▸ Wrench should be ordered separately

●: Standard items

MXCSL

4 flute, lens shape for 5-axis profiling



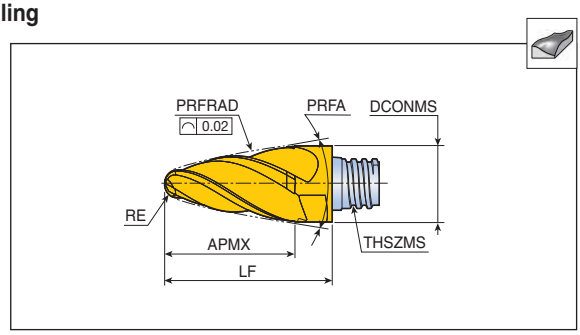
Designation		Feed (mm/tooth)	Dimension (mm)								Grade
			DC	PRFRAD	RE	APMX	LU	LF	THSZMS	DCONMS	TT5523
MXCSL	**4080R016-S05**	0.02-0.08	8	16	0.5	0.9	5.5	10.0	S05	8	●
	4100R020-S06	0.03-0.09	10	20	1.0	1.4	7.5	13.0	S06	10	●
	4120R024-S08	0.03-0.10	12	24	1.0	1.6	9.0	16.5	S08	12	●
	4160R032-S10	0.04-0.12	16	32	1.0	1.8	12.0	20.5	S10	16	●

▸ Wrench should be ordered separately
▸ PRFRAD: Profile radius

●: Standard items

MXCSO

4 flute, oval shape(barrel) for 5-axis profiling



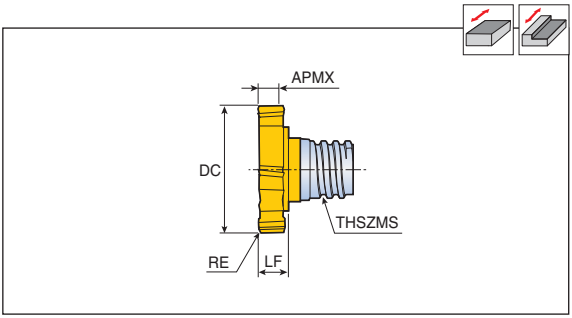
Designation		Feed (mm/tooth)	Dimension (mm)							Grade
			PRFRAD	RE	APMX	LF	PRFA	THSZMS	DCONMS	TT5523
MXCSO	**4080R080-S05**	0.02-0.08	80	1.5	14.2	18.0	24	S05	8	●
	4100R085-S06	0.03-0.09	85	2.0	16.5	22.0	24	S06	10	●
	4120R075-S08	0.03-0.10	75	2.0	21.3	27.0	24	S08	12	●
	4160R075-S10	0.04-0.12	75	3.0	27.0	33.4	24	S10	16	●

▸ Wrench should be ordered separately
▸ PRFRAD: Profile radius

●: Standard items

MXFM-I06

6 flute, for face milling



6 | Cutting Condition F58 | F56

Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	RE	APMX	LF	THSZMS	Torx	TT5523
MXFM	100L036R02I06S05	0.04-0.10	10	0.2	3.6	4.4	S05	T20	●
	120L036R02I06S05	0.04-0.10	12	0.2	3.6	4.4	S05	T20	●
	160L048R04I06S06	0.05-0.10	16	0.4	4.8	5.6	S06	T25	●
	200L060R04I06S08	0.05-0.10	20	0.4	6.0	6.8	S08	T40	●
	250L075R04I06S10	0.05-0.10	25	0.4	7.5	8.4	S10	T50	●

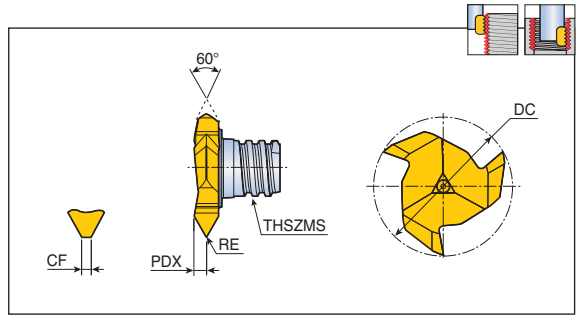
▸ Wrench should be ordered separately

●: Standard items

TTRD-A60

MAXIRUSH

3, 4 flute, ISO threading



3,4 | Cutting Condition F58 | F56

Designation		TP	Dimension (mm)							Grade
			DC	NOF	PDX	RE	CF	RANGE	THSZMS	TT5543
TTRD	**16A60-0.5P-3S06**	0.5-2.0	15.7	3	1.4	-	0.05	M20	S06	●
	16A60-1.5P-3S06	1.5-2.0	15.7	3	1.4	0.05	-	M22	S06	●
	22A60-3.0P-4S08	3.0-4.5	21.7	4	2.4	0.20	-	M36	S08	●

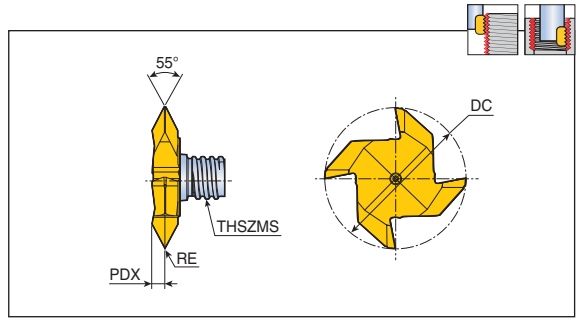
▸ Wrench should be ordered separately
▸ NOF: Number of flutes
▸ TP: Threads pitch

●: Standard items

TTRD-W55

MAXIRUSH

4 flute, BSW threading



4 | Cutting Condition F58 | F56

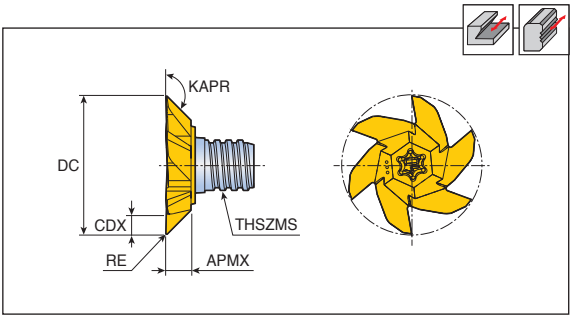
Designation		TPI	Dimension (mm)					Grade
			DC	PDX	RE	RANGE	THSZMS	TT5543
TTRD	**22W55-14P-4S08**	14-11	21.7	2.0	0.2	3/4	S08	●

▸ Wrench should be ordered separately
▸ TPI: Threads per inch

●: Standard items

TDT-06

6 flute, dovetail



Designation	Dimension (mm)							Grade
	DC	KAPR	CDX	APMX	RE	THSZMS	Torx	TT5523
TDT **277A45R02-06S10**	27.7	135	4.0	5.05	0.2	S10	T40	●
277A60R02-06S10	27.7	120	4.0	7.75	0.2	S10	T40	●
277A75R02-06S10	27.7	105	2.2	10.15	0.2	S10	T40	●

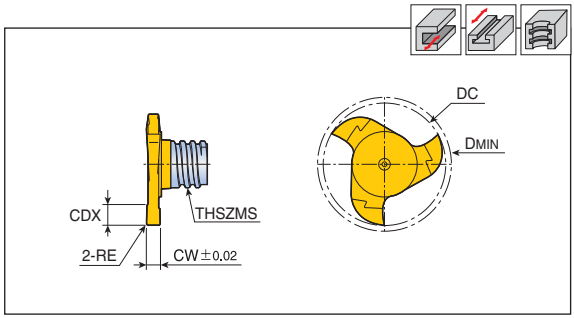
▸ Wrench should be ordered separately

●: Standard items

TST-3

MAXIRUSH

3 flute, for slotting



3 | Cutting Condition F58 | F56

Designation	Feed (mm/tooth)	Dimension (mm)						Grade
		DC	CW	CDX	RE	THSZMS	DMIN	TT5543
TST 157W1.50R010-3S06	0.03-0.12	15.7	1.5	2.8	0.1	S06	16	●
157W1.57R020-3S06	0.03-0.12	15.7	1.57	2.8	0.2	S06	16	●
157W2.0R020-3S06	0.03-0.12	15.7	2.0	2.8	0.2	S06	16	●
157W2.50R020-3S06	0.03-0.12	15.7	2.5	2.8	0.2	S06	16	●
157W3.0R020-3S06	0.03-0.13	15.7	3.0	2.8	0.2	S06	16	●
157W3.17R020-3S06	0.03-0.15	15.7	3.17	2.8	0.2	S06	16	●
177W1.20R005-3S06	0.03-0.12	17.7	1.2(1)	3.8	0.05	S06	18	●
177W1.40R005-3S06	0.03-0.12	17.7	1.4(1)	3.8	0.05	S06	18	●
177W1.50R010-3S06	0.03-0.12	17.7	1.5	3.8	0.1	S06	18	●
177W1.57R020-3S06	0.03-0.12	17.7	1.57	3.8	0.2	S06	18	●
177W1.70R005-3S06	0.03-0.12	17.7	1.7(1)	3.8	0.05	S06	18	●
177W2.0R020-3S06	0.03-0.12	17.7	2.0	3.8	0.2	S06	18	●
177W2.20R110-3S06	0.03-0.12	17.7	2.2	3.8	1.1	S06	18	●
177W2.50R020-3S06	0.03-0.12	17.7	2.5	3.8	0.2	S06	18	●
177W3.0R020-3S06	0.03-0.13	17.7	3.0	3.8	0.2	S06	18	●
177W3.17R020-3S06	0.03-0.15	17.7	3.17	3.8	0.2	S06	18	●

▸ Wrench should be ordered separately

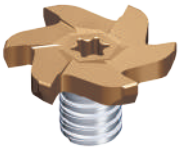
●: Standard items

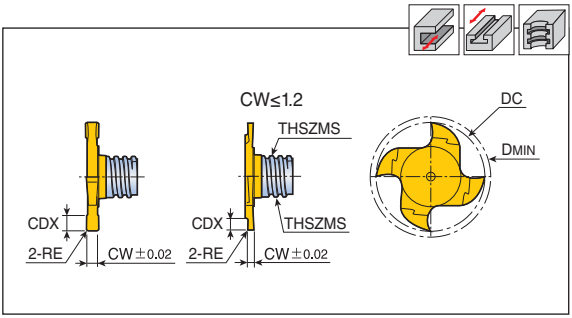
▸ (1) CW for circle clips according to DIN 471/472

TST-4/6

MAXIRUSH

4, 6 flute, for slotting





4,6 | Cutting Condition F58 | F56

Designation		Feed (mm/tooth)	Dimension (mm)								Grade	
			DC	NOF	CW	CDX	RE	THSZMS	DMIN	Torx	TT5523	TT5543
TST	217W0.76R000-4S08	0.03-0.10	21.7	4	0.76(1)	1.5	-	S08	22	-		●
	217W0.96R000-4S08	0.03-0.10	21.7	4	0.96(1)	1.9	-	S08	22	-		●
	217W1.0R005-4S08	0.03-0.10	21.7	4	1.0	2.0	0.05	S08	22	-		●
	217W1.20R005-4S08	0.03-0.12	21.7	4	1.2(1)	4.5	0.05	S08	22	-		●
	217W1.40R005-4S08	0.03-0.12	21.7	4	1.4(1)	4.5	0.05	S08	22	-		●
	217W1.57R000-4S08	0.03-0.12	21.7	4	1.57	4.5	-	S08	22	-		●
	217W1.70R010-4S08	0.03-0.12	21.7	4	1.7(1)	4.5	0.1	S08	22	-		●
	217W1.95R020-4S08	0.03-0.12	21.7	4	1.95(1)	4.5	0.2	S08	22	-		●
	217W2.0R020-4S08	0.03-0.12	21.7	4	2.0	4.5	0.2	S08	22	-		●
	217W2.25R020-4S08	0.03-0.12	21.7	4	2.25(1)	4.5	0.2	S08	22	-		●
	217W2.39R020-4S08	0.03-0.12	21.7	4	2.39	4.5	0.2	S08	22	-		●
	217W2.50R020-4S08	0.03-0.12	21.7	4	2.5	4.5	0.2	S08	22	-		●
	217W2.75R020-4S08	0.03-0.13	21.7	4	2.75(1)	4.5	0.2	S08	22	-		●
	217W3.0R020-4S08	0.03-0.13	21.7	4	3.0	4.5	0.2	S08	22	-		●
	217W3.17R020-4S08	0.03-0.15	21.7	4	3.17	4.5	0.2	S08	22	-		●
	217W3.25R020-4S08	0.03-0.15	21.7	4	3.25(1)	4.5	0.2	S08	22	-		●
	217W4.0R020-4S08	0.03-0.15	21.7	4	4.0	4.5	0.2	S08	22	-		●
	217W4.25R020-4S08	0.03-0.15	21.7	4	4.25(1)	4.5	0.2	S08	22	-		●
	217W4.75R020-4S08	0.03-0.15	21.7	4	4.75	4.5	0.2	S08	22	-		●
	217W5.25R020-4S08	0.03-0.17	21.7	4	5.25(1)	4.5	0.2	S08	22	-		●
	217W6.0R300-4S08	0.03-0.17	21.7	4	6.0	4.5	3	S08	22	-	●	
	277W2.50R020-6S10	0.03-0.12	27.7	6	2.5	6.0	0.2	S10	28	T40		●
	277W5.25R020-6S10	0.03-0.17	27.7	6	5.25	6.0	0.2	S10	28	T40		●
	277W10R020-6S10	0.03-0.17	27.7	6	10.0	6.0	0.2	S10	28	T40		●

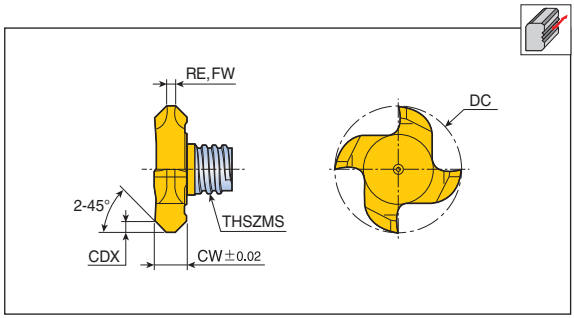
▸ Wrench should be ordered separately
▸ NOF: Number of flutes
▸ (1) CW for circle clips according to DIN 471/472

●: Standard items

TST-A45

MAXI RUSH

3-6 flute, for chamfering



3-6 | Cutting Condition F58 | F56

Designation		Feed (mm/tooth)	Dimension (mm)								Grade	
			DC	NOF	CW	CDX	RE	FW	THSZMS	Torx	TT5523	TT5543
TST	177L01.40A45-3S06	0.03-0.15	17.7	3	3.4	1.4	0.1	-	S06	-		●
	217L01.70A45-4S08	0.03-0.17	21.7	4	5.5	1.7	-	1.5	S08	-		●
	277L04.00A45-6S10	0.03-0.17	27.7	6	9.8	4.0	-	0.5	S10	T40	●	

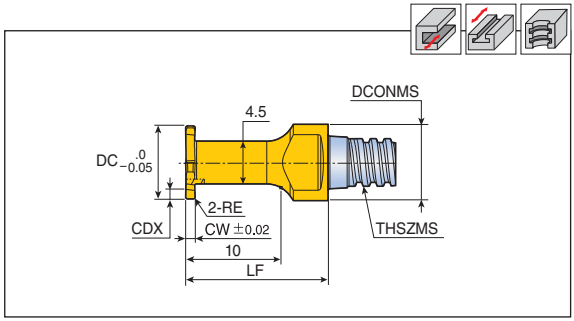
▸ Wrench should be ordered separately
▸ NOF: Number of flutes
▸ FW: Flat width

●: Standard items

TTB-04

MAXI RUSH

4 flute, for slotting



4 | Cutting Condition F58 | F56

Designation		Feed (mm/tooth)	Dimension (mm)							Grade
			DC	CW	CDX	RE	LF	THSZMS	DCONMS	TT5523
TTB	077W1.0R02-04S05	0.02-0.08	7.7	1.0	1.2	0.2	15	S05	8.0	●
	077W1.5R02-04S05	0.02-0.08	7.7	1.5	1.2	0.2	15	S05	8.0	●
	077W2.0R02-04S05	0.02-0.08	7.7	2.0	1.2	0.2	15	S05	8.0	●

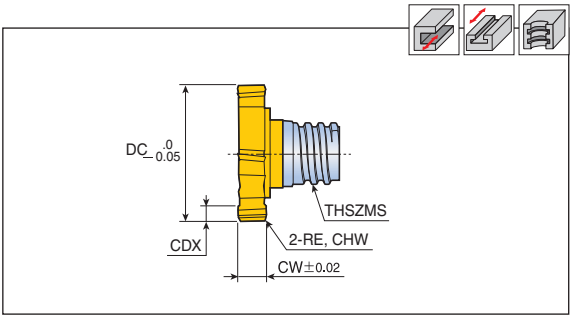
▸ Wrench should be ordered separately

●: Standard items

TTB-06

MAXIRUSH

6 flute, for slotting



6 | Cutting Condition F58 | F56

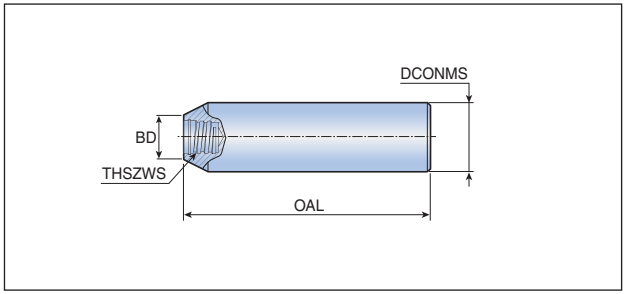
Designation	Feed (mm/tooth)	Dimension (mm)							Grade	
		DC	CW	CDX	CHW	RE	THSZMS	Torx	TT5523	TT5543
TTB 105W2.0R04-06S04	0.02-0.10	10.5	2.0	2.0	-	0.4	S04	T15		●
127W1.58C15-06S05	0.03-0.12	12.7	1.58	2.25	0.15	-	S05	T20	●	
127W1.98C15-06S05	0.03-0.12	12.7	1.98	2.25	0.15	-	S05	T20	●	
135W2.0C15-06S05	0.03-0.12	13.5	2.0	2.65	0.15	-	S05	T20		●
135W3.0R04-06S05	0.03-0.13	13.5	3.0	2.65	-	0.4	S05	T20		●
135W4.0R04-06S05	0.03-0.15	13.5	4.0	2.65	-	0.4	S05	T20		●
160W2.0R04-06S06	0.03-0.12	16.0	2.0	2.9	-	0.4	S06	T20		●
160W3.0R04-06S06	0.03-0.13	16.0	3.0	2.9	-	0.4	S06	T25		●
160W4.0R04-06S06	0.03-0.15	16.0	4.0	2.9	-	0.4	S06	T25		●
165W2.0R04-06S06	0.03-0.12	16.5	2.0	3.15	-	0.4	S06	T20		●
165W3.0R04-06S06	0.03-0.13	16.5	3.0	3.15	-	0.4	S06	T25		●
165W4.0R04-06S06	0.03-0.15	16.5	4.0	3.15	-	0.4	S06	T25		●
195W4.0R04-06S08	0.03-0.15	19.5	4.0	3.45	-	0.4	S08	T30		●
195W5.0R04-06S08	0.03-0.15	19.5	5.0	3.45	-	0.4	S08	T30		●
195W6.0R04-06S08	0.03-0.17	19.5	6.0	3.45	-	0.4	S08	T30		●
225W5.0R04-06S08	0.03-0.15	22.5	5.0	4.95	-	0.4	S08	T40		●
225W6.0R04-06S08	0.03-0.17	22.5	6.0	4.95	-	0.4	S08	T40		●
225W8.0R04-06S08	0.03-0.17	22.5	8.0	4.95	-	0.4	S08	T40		●
250W6.0R04-06S08	0.03-0.17	25.0	6.0	5.9	-	0.4	S08	T50		●
250W8.0R04-06S08	0.03-0.17	25.0	8.0	5.9	-	0.4	S08	T50		●
250W5.0R04-06S10	0.03-0.15	25.0	5.0	4.3	-	0.4	S10	T50		●
250W6.0R04-06S10	0.03-0.17	25.0	6.0	4.3	-	0.4	S10	T50		●
250W8.0R04-06S10	0.03-0.17	25.0	8.0	4.3	-	0.4	S10	T50		●

▸ Wrench should be ordered separately

●: Standard items

MXSSD

High rigidity shank



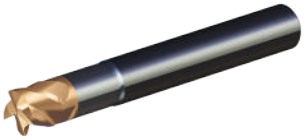
F17-F45

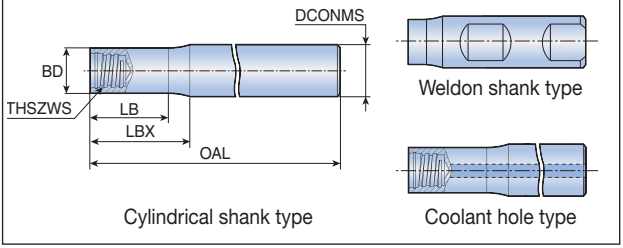
Designation	Dimension (mm)				Shank material
	THSZWS	DCONMS	BD	OAL	
MXSSD 06L050S04-S	S04	6	5.8	50	Steel
06L060S04-C	S04	6	5.8	60	Carbide
08L050S04-S	S04	8	5.8	50	Steel
08L060S04-C	S04	8	5.8	60	Carbide
10L055S05-S	S05	10	7.6	55	Steel
12L065S06-S	S06	12	9.6	65	Steel
16L065S08-S	S08	16	11.6	65	Steel
20L070S10-S	S10	20	15.3	70	Steel
25L075S12-S	S12	25	18.3	75	Steel
32L100S15-S	S15	32	23.9	100	Steel

▸ THSZWS: Connection thread size

MXSSD-S

Steel shanks with step neck & internal coolant hole





F17-F45

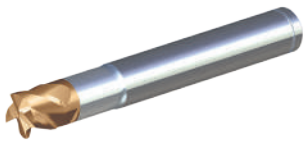
Designation	Dimension (mm)						Coolant hole	Shank type	Shank material
	THSZWS	DCONMS	BD	OAL	LB	LBX			
MXSSD 08L060S05-S	S05	8	7.6	60	12.8	15	x	Cylindrical	Steel
10L075S06-S	S06	10	9.6	75	17.7	20	x	Cylindrical	Steel
10L075S06-S-A	S06	10	9.6	75	10.6	12	●	Cylindrical	Steel
12L055W05-S	S05	12	7.6	55	-	3.8	x	Weldon	Steel
12L090S08-S	S08	12	11.6	90	13.6	16	x	Cylindrical	Steel
12L090S08-S-A	S08	12	11.6	90	13.6	16	●	Cylindrical	Steel
12L090LS08-S-A	S08	12	11.6	90	37	42	●	Cylindrical	Steel
16L065W06-S	S06	16	9.6	65	-	6	x	Weldon	Steel
16L065W08-S	S08	16	11.6	65	-	4	x	Weldon	Steel
16L100S10-S	S10	16	15.3	100	18	20	x	Cylindrical	Steel
16L100S10-S-A	S10	16	15.3	100	18	20	●	Cylindrical	Steel
16L100LS10-S-A	S10	16	15.3	100	38	42	●	Cylindrical	Steel
20L070W10-S	S10	20	15.3	70	-	4	x	Weldon	Steel
20L120S12-S	S12	20	18.3	120	20.5	25	x	Cylindrical	Steel
25L075W12-S	S12	25	18.3	75	-	6	x	Weldon	Steel
25L135S15-S	S15	25	23.9	135	33	35	x	Cylindrical	Steel

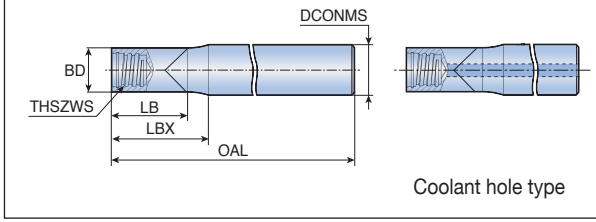
▸ THSZWS: Connection thread size

MXSSD-C

MAXIRUSH

Carbide shanks with step neck & internal coolant hole





Coolant hole type

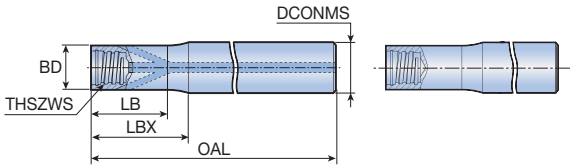
F17-F45

Designation	Dimension (mm)						Coolant hole	Shank material
	THSZWS	DCONMS	BD	OAL	LB	LBX		
MXSSD 08L070S05-C	S05	8	7.6	70	19	20	x	Carbide
08L090S05-C	S05	8	7.6	90	39	40	x	Carbide
08L110S05-C	S05	8	7.6	110	59	60	x	Carbide
10L070S06-C	S06	10	9.6	70	18.5	20	x	Carbide
10L090S06-C	S06	10	9.6	90	38.5	40	x	Carbide
10L110S06-C	S06	10	9.6	110	58.5	60	x	Carbide
10L150S06-C	S06	10	9.6	150	98.5	100	x	Carbide
12L070S08-C	S08	12	11.6	70	17	20	x	Carbide
12L070S08-C-A	S08	12	11.6	70	17	20	●	Carbide
12L090S08-C	S08	12	11.6	90	37	40	x	Carbide
12L090LS08-C-A	S08	12	11.6	90	37	40	●	Carbide
12L110S08-C	S08	12	11.6	110	57	60	x	Carbide
12L110S08-C-A	S08	12	11.6	110	57	60	●	Carbide
12L130S08-C	S08	12	11.6	130	77	80	x	Carbide
12L130S08-C-A	S08	12	11.6	130	77	80	●	Carbide
16L090S10-C	S10	16	15.3	90	38	40	x	Carbide
16L090S10-C-A	S10	16	15.3	90	38	40	●	Carbide
16L110S10-C	S10	16	15.3	110	58	60	x	Carbide
16L110S10-C-A	S10	16	15.3	110	58	60	●	Carbide
16L130S10-C	S10	16	15.3	130	78	80	x	Carbide
16L130S10-C-A	S10	16	15.3	130	78	80	●	Carbide
16L150S10-C	S10	16	15.3	150	98	100	x	Carbide
20L090S12-C	S12	20	18.3	90	37	40	x	Carbide
20L130S12-C	S12	20	18.3	130	77	80	x	Carbide
20L200S12-C	S12	20	18.3	200	117	120	x	Carbide
25L120S15-C	S15	25	23.9	120	58	60	x	Carbide
25L170S15-C	S15	25	23.9	170	98	100	x	Carbide
25L250S15-C	S15	25	23.9	250	148	150	x	Carbide

▸ THSZWS: Connection thread size

MXSSD-W

Tungsten shanks with step neck & internal coolant hole



Coolant hole type

F17-F45

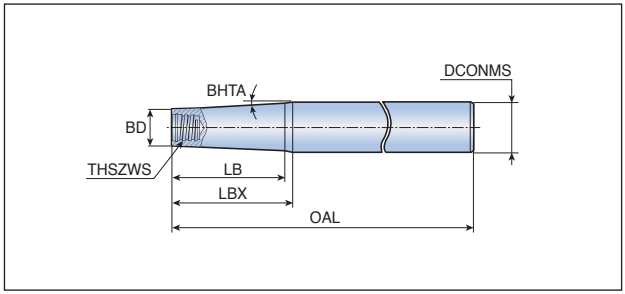
Designation		Dimension (mm)						Coolant hole	Shank material
		THSZWS	DCONMS	BD	OAL	LB	LBX		
MXSSD	**08L090S05-W**	S05	8	7.6	90	39	40	x	Tungsten
	10L070S06-W-A	S06	10	9.6	70	19	20	●	Tungsten
	10L090S06-W-A	S06	10	9.6	90	39	40	●	Tungsten
	10L110S06-W-A	S06	10	9.6	110	59	60	●	Tungsten
	12L070S08-W-A	S08	12	11.6	70	19	20	●	Tungsten
	12L090S08-W-A	S08	12	11.6	90	39	40	●	Tungsten
	12L110S08-W-A	S08	12	11.6	110	59	60	●	Tungsten
	12L130S08-W-A	S08	12	11.6	130	79	80	●	Tungsten
	16L070S10-W-A	S10	16	15.3	70	18.5	20	●	Tungsten
	16L090S10-W-A	S10	16	15.3	90	36.5	40	●	Tungsten
	16L110S10-W-A	S10	16	15.3	110	58.5	60	●	Tungsten
	16L130S10-W-A	S10	16	15.3	130	78.5	80	●	Tungsten
	20L090S12-W-A	S12	20	18.3	90	37	40	●	Tungsten
	20L130S12-W-A	S12	20	18.3	130	77	80	●	Tungsten

▸ THSZWS: Connection thread size

MXTSD-S

MAXIRUSH

Steel shanks with taper neck



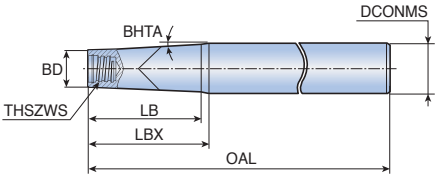
F17-F45

Designation		Dimension (mm)							Shank material
		THSZWS	DCONMS	BD	OAL	BHTA	LB	LBX	
MXTSD	**08L080S04-S**	S04	8	5.8	80	2.6°	-	24	Steel
	12L080S05-S	S05	12	7.6	80	5°	-	25	Steel
	12L100S05-S	S05	12	7.6	100	1°	31.0	35	Steel
	16L125S06-S	S06	16	9.6	125	5°	31.6	34	Steel
	16L140S08-S	S08	16	11.6	140	5°	19.3	22	Steel
	16L160S06-S	S06	16	9.6	160	1°	45.9	55	Steel
	20L140S10-S	S10	20	15.3	140	5°	-	27.5	Steel
	20L170S08-S	S08	20	11.6	170	1°	68.6	80	Steel
	20L190S10-S	S10	20	15.3	190	1°	73.0	80	Steel
	25L160S12-S	S12	25	18.3	160	5°	-	40	Steel
	25L170S10-S	S10	25	15.3	170	5°	-	56	Steel
	25L210S12-S	S12	25	18.3	210	1°	91.0	100	Steel
	32L155S15-S	S15	32	23.9	155	5°	40.0	45	Steel
	32L190S12-S	S12	32	18.3	190	5°	-	80	Steel
	32L220S15-S	S15	32	23.9	220	5°	-	100	Steel

▸ THSZWS: Connection thread size

MXTSD-C

Carbide shanks with taper neck



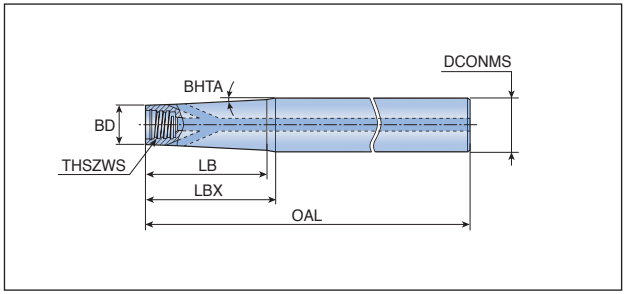
F17-F45

Designation		Dimension (mm)							Shank material
		THSZWS	DCONMS	BD	OAL	BHTA	LB	LBX	
MXTSD	**12L110S05-C**	S05	12	7.6	110	1°	58.0	60	Carbide
	12L130S05-C	S05	12	7.6	130	1°	79.0	80	Carbide
	16L130S08-C	S08	16	11.6	130	1°	78.8	80	Carbide
	16L150S05-C	S05	16	7.6	150	1°	96.0	100	Carbide
	16L150S06-C	S06	16	9.6	150	1°	98.0	100	Carbide
	16L150S08-C	S08	16	11.6	150	1°	-	100	Carbide
	16L170S06-C	S06	16	9.6	170	1°	119.0	120	Carbide
	20L170S08-C	S08	20	11.6	170	1°	117.0	120	Carbide
	20L170S10-C	S10	20	15.3	170	1°	-	120	Carbide
	20L190S10-C	S10	20	15.3	190	1°	-	140	Carbide
	20L210S10-C	S10	20	15.3	210	1°	-	160	Carbide
	25L180S12-C	S12	25	18.3	180	1°	-	120	Carbide
	25L250S12-C	S12	25	18.3	250	1°	-	140	Carbide
	32L250S15-C	S15	32	23.9	250	1°	-	150	Carbide
	32L300S15-C	S15	32	23.9	300	1°	-	200	Carbide

▸ THSZWS: Connection thread size

MXTSD-W-A

Tungsten shanks with taper neck & internal coolant hole



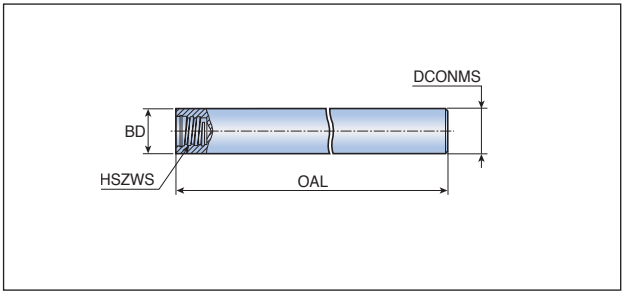
F17-F45

Designation		Dimension (mm)							Shank material
		THSZWS	DCONMS	BD	OAL	BHTA	LB	LBX	
MXTSD	**12L110S06-W-A**	S06	12	9.6	110	1°	59	60	Tungsten
	16L170S06-W-A	S06	16	9.6	170	1°	116	120	Tungsten

▸ THSZWS: Connection thread size

MXSTD-S

Straight steel shanks



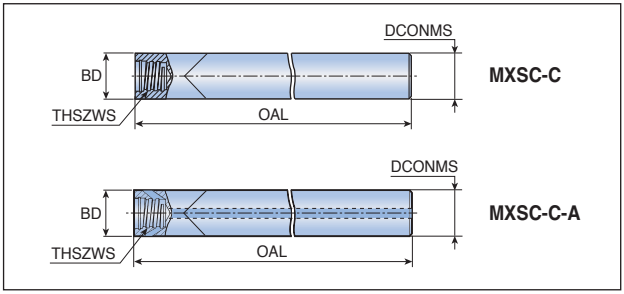
F17-F45

Designation		Dimension (mm)				Shank material
		THSZWS	DCONMS	BD	OAL	
MXSTD	**06L070S04-S**	S04	6	6	70	Steel
	08L050S05-S	S05	8	8	50	Steel
	08L070S05-S	S05	8	8	70	Steel
	10L050S06-S	S06	10	10	50	Steel
	10L080S06-S	S06	10	10	80	Steel
	12L090S08-S	S08	12	12	90	Steel
	16L100S10-S	S10	16	16	100	Steel

▸ THSZWS: Connection thread size

MXSC-C

Straight carbide shanks

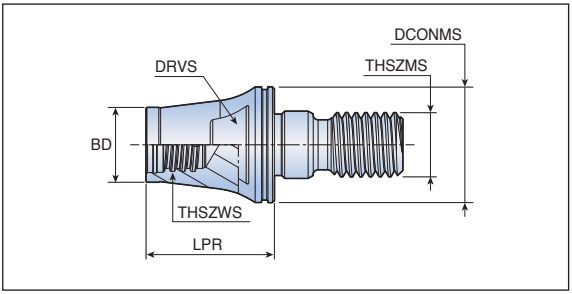


F17-F45

Designation		Dimension (mm)				Coolant hole	Shank material
		THSZWS	DCONMS	BD	OAL		
MXSC	**100L100S06-C**	S06	10	10	100	x	Carbide
	120L100S08-C-A	S08	12	12	100	●	Carbide

▸ THSZWS: Connection thread size

Adapters for T-FLEXTEC



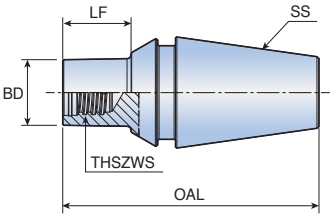
F17-F45

Designation		Dimension (mm)						Shank material
		THSZWS	THSZMS	DCONMS	BD	LPR	DRVS	
MXAD	**130L016S08-S-M8**	S08	M8	13	11.7	16	11	Steel
	130L025S08-S-M8	S08	M8	13	11.7	25	11	Steel
	180L020S08-S-M10	S08	M10	18	11.7	20	13	Steel
	180L025S08-S-M10	S08	M10	18	11.7	25	11	Steel
	210L020S08-S-M12	S08	M12	21	11.7	20	13	Steel
	210L025S08-S-M12	S08	M12	21	11.7	25	13	Steel

- THSZWS: Connection thread size
- DRVS: Clamping wrench size

MXER

ER collet chucks conversion adaptor with MAXI-RUSH



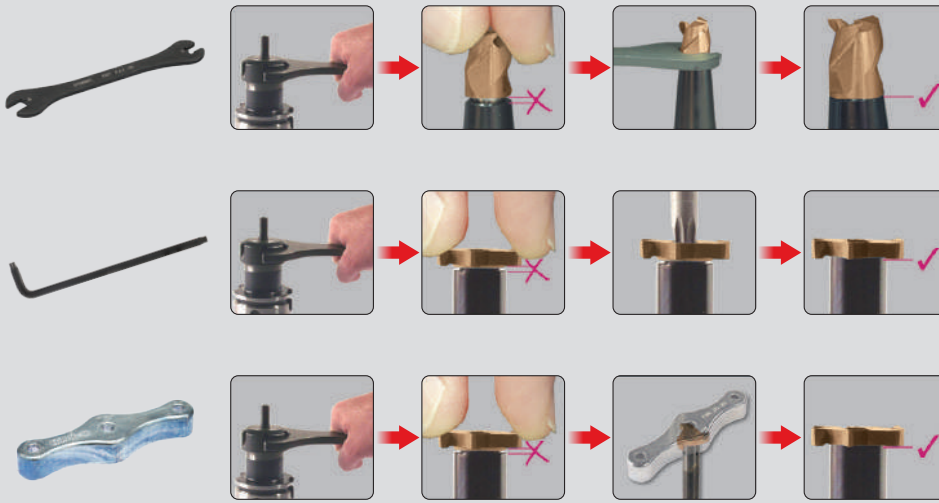
F17-F45

Designation		Dimension (mm)					Shank material
		SS	THSZWS	BD	LF	OAL	
MXER	**11AL006S04-S**	ER11	S04	5.8	6	24.0	Steel
	11CL006S05-S	ER11	S05	7.92	6	24.0	Steel
	11CL020S05-S	ER11	S05	7.92	20	38.0	Steel
	16CL012S05-S	ER16	S05	7.92	12	39.5	Steel
	16CL020S05-S	ER16	S05	7.92	20	47.5	Steel
	16CL010S06-S	ER16	S06	9.92	10	37.5	Steel
	16CL020S06-S	ER16	S06	9.92	20	47.5	Steel
	16CL006S08-S	ER16	S08	11.6	6	33.5	Steel
	16CL020S08-S	ER16	S08	11.6	20	47.5	Steel
	25CL004S08-S	ER25	S08	11.6	4	38.0	Steel
	25CL010S08-S	ER25	S08	11.6	10	44.5	Steel

▸ THSZWS: Connection thread size

Wrench

Head designation	Head type	Wrench type	Designation	Thread size	Torque (N.m)
Cylindrical & 2 flute eco type • MX… • TTB–04			MX KEY-S04	S04	4
			MX KEY-S05	S05	7
			MX KEY-S06	S06	10
			MX KEY-S08	S08	15
			MX KEY-S10	S10	28
			MX KEY-S12	S12	28
			MX KEY-S15	S15	40
T-cutter type • T… • MXFM			MX SKEY-T15	S04	4
			MX SKEY-T20	S05, S06	7, 10
			MX SKEY-T25	S06	10
			MX SKEY-T30L	S08	15
			MX SKEY-T40L	S08, S10	15, 28
			MX SKEY-T50L	S08, S10	15, 28
			MX SKEY-S06	S06	10
			MX SKEY-S08	S08	15



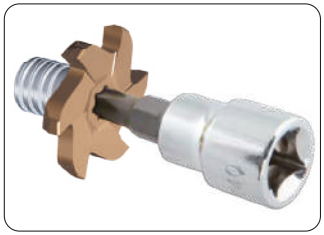
※ Once the head and holder come into contact, cease tightening to avoid breaking the cutting head.

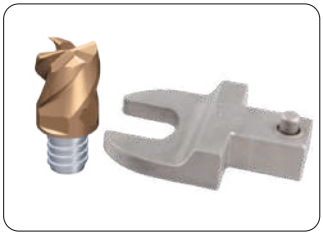
▸ Wrench should be ordered separately

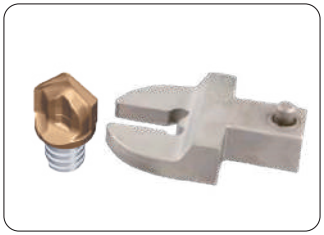
Torque wrench

Handle			
Handle appearance	Designation	Thread size	Torque (N.m)
	TORQUE WRENCH 3-25NM 9X12	S04-S08	3-25
	TORQUE WRENCH 5-50NM 9X12	S05-S15	5-50

Wrenches and Torx bits					
Head designation	Head type	Wrench type	Designation	Thread size	Torque (N.m)
Cylindrical & 2 flute eco type • MX··· • TTB–04			MX WRENCH 6-05	S04, S05	4, 7
			MX WRENCH 8-06	S06	10
			MX WRENCH 10-08	S08	15
			MX WRENCH 13-10	S10	28
			MX WRENCH 16-12	S12	28
			MX WRENCH 20-15	S15	40
			MX WRENCH 4E-05	S05	7
			MX WRENCH 5E-06	S06	10
			MX WRENCH 7E-08	S08	15
			MX WRENCH 8E-10	S10	28
			MX WRENCH 9E-12	S12	28
T-cutter type • T··· • MXFM			INSERT TOOL 9X12MM	-	-
			BIT SOCKET T20 DRIVE	S04, S05, S06	4, 7, 10
			BIT SOCKET T25 DRIVE	S06	10
			BIT SOCKET T30 DRIVE	S08	15
			BIT SOCKET T40 DRIVE	S08, S10	15, 28
			BIT SOCKET T50 DRIVE	S08, S10	15, 28







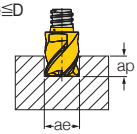
Recommended Cutting Conditions

Machining data for MAXI-RUSH

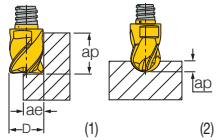
fz for Square & Round heads

(mm/tooth)

Slotting
ap≦0.5D
ae≦D



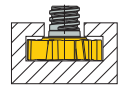
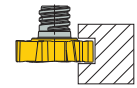
Side
Milling
ae≦0.5D
(1) ap≦D
(2) ap≦0.05D



D (mm)	fz (mm/tooth)	D (mm)	fz (mm/tooth)
6	0.027-0.05	6	0.027-0.06
8	0.032-0.07	8	0.032-0.08
10	0.034-0.08	10	0.034-0.09
12	0.036-0.10	12	0.036-0.11
16	0.050-0.12	16	0.05 - 0.13
20	0.052-0.14	20	0.052-0.15
25	0.062-0.15	25	0.062-0.17

fz for Slotting heads

(mm/tooth)

ISO		
P	0.025-0.12	0.035-0.15
M	0.025-0.10	0.025-0.12
K	0.025-0.15	0.035-0.17

Recommended Cutting Speed

ISO	Material No.	Hardness HB	Vc m/min
P	1	125	220-240
	2	190	170-200
	3-6	200	140-160
	7-8	300	110-130
	9-11	200	100-130
M	12-13	240	90-150
	14	180	70-100
K	15	180	70-240
	16	260	110-220
	17	170	130-250
	19	130	130-230
	20	230	100-200
N	21-24	90	600-700
S	33-35	350	10-20
	36-37	-	30-50
H	38	HRC55	30-40
	39	HRC60	25-30

High feed milling - MXFX Only

ISO	Material No.	Depth of cut (ap)	Width of cut (ae)	fz (mm/tooth) vs. Tool Diameter D(mm)					
				Ø8	Ø10	Ø12	Ø16	Ø20	Ø25
P	1	0.045xD	0.7xD	0.50	0.60	0.70	0.80	0.95	1.05
	2	0.045xD	0.7xD	0.50	0.60	0.70	0.80	0.95	1.05
	3	0.045xD	0.7xD	0.50	0.60	0.70	0.80	0.95	1.05
	4	0.045xD	0.7xD	0.50	0.60	0.70	0.80	0.95	1.05
	5	0.045xD	0.7xD	0.45	0.55	0.60	0.70	0.80	0.90
	6	0.045xD	0.7xD	0.35	0.45	0.50	0.60	0.70	0.80
	7	0.045xD	0.7xD	0.35	0.45	0.50	0.60	0.70	0.80
	8	0.045xD	0.7xD	0.35	0.40	0.45	0.55	0.65	0.75
	9	0.045xD	0.7xD	0.35	0.40	0.45	0.55	0.65	0.75
	10	0.04xD	0.6xD	0.30	0.35	0.40	0.50	0.6	0.70
	11	0.04xD	0.6xD	0.30	0.35	0.40	0.45	0.55	0.65
M	12-14	0.04xD	0.6xD	0.35	0.40	0.45	0.55	0.65	0.75
K	15-16	Apmax	0.7xD	0.50	0.55	0.65	0.75	0.85	0.95
	17-20	Apmax	0.7xD	0.40	0.50	0.55	0.65	0.75	0.85
H	38.1	0.035xD	0.45xD	0.25	0.30	0.35	0.45	0.50	0.60
	38.2	0.03xD	0.3xD	0.20	0.25	0.35	0.40	0.50	0.55
	39	0.02xD	0.25xD	0.15	0.20	0.20	0.25	0.25	0.30

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel | Stainless steel | Cast iron | Nonferrous | High temp. alloys | Hardened steel

Solid End Mill Line

Designation System

SLIKSOLID

UHP	4	100	x	25	x	72	R0.5
1	2	3		4		5	6

1 End mill type

UHP Flat

UHP_R Corner radius

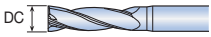
2 No. of flute

4 4 Flutes

6 6 Flutes

3 Cutting diameter

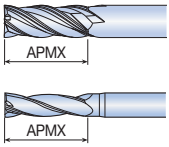
100 10.0 mm



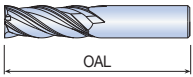
4 Length of cut

6 6 mm

40 40 mm

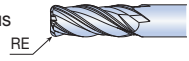


5 Tool length



6 Corner radius

-R□□ Corner radius

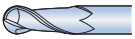
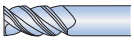
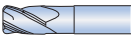


Designation System

HARDMILL APEXMILL STARMILL ALUMILL DIAMILL

SBE	2	010	S	-	***
1	2	3	4		5/5*

1 End mill type

HSB/SBT/DEB	Ball nose	
SED	Flat	
DER	Corner radius	
SCSO/SCST	Taper	

2 No. of flute

2 2 Flutes

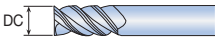
4 4 Flutes

6 6 Flutes

3 Cutting diameter

010 1.0 mm

100 10.0 mm



4 Overall length

S Short length

M Medium length

L Long length

XL Extra long length

5 Others

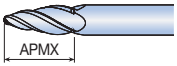
-□ Shank diameter

-R□□ Corner radius

5* Length of cut

SCSO / SCST type

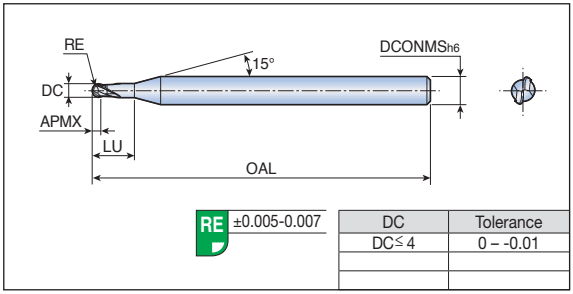
24 24 mm



HSB 2CBN

HARDMILL

2 flute CBN ball



RE ±0.005-0.007

DC	Tolerance
DC≤ 4	0 – -0.01

2 | H•A 30° | Cutting Condition F88-F89

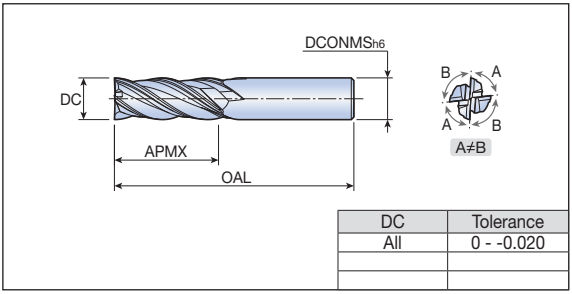
Designation	Feed (mm/tooth)	Dimension (mm)						Grade
		DC	RE	OAL	APMX	LU	DCONMS	TB7015
HSB 2CBN 2004-1.5	0.007-0.009	0.4	0.2	48	0.3	1.5	4	●
2004-6.0	0.007-0.009	0.4	0.2	48	0.3	6.0	4	●
2006-1.5	0.013-0.014	0.6	0.3	48	0.5	1.5	4	●
2008-4.0	0.013-0.018	0.8	0.4	48	0.6	4.0	4	●
2010-2.5	0.022-0.028	1.0	0.5	48	0.7	2.5	4	●
2010-4.0	0.022-0.028	1.0	0.5	48	0.7	4.0	4	●
2010-6.0	0.022-0.028	1.0	0.5	48	0.7	6.0	4	●
2015-6.0	0.023-0.028	1.5	0.75	48	1.0	6.0	4	●
2020-1.2	0.032-0.040	2.0	1.0	50	1.2	-	4	●
2020-4.0	0.032-0.040	2.0	1.0	50	1.2	4.0	4	●
2040-8.0	0.035-0.040	4.0	2.0	66	2.4	8.0	6	●

●: Standard items

UHP 4

SLIKSOLID

4 flute medium flat



DC	Tolerance
All	0 - -0.020

4 | H•A Various | Cutting Condition F88-F89

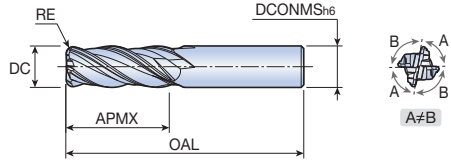
Designation	Feed (mm/tooth)	Dimension (mm)				Grades
		DC	OAL	APMX	DCONMS	TT5520
UHP 4020X6X42	0.010-0.015	2	42	6	6	●
4030X10X57	0.010-0.020	3	57	10	6	●
4040X12X57	0.010-0.035	4	57	12	6	●
4040X20X70	0.010-0.025	4	70	20	6	●
4050X14X57	0.015-0.040	5	57	14	6	●
4060X16X57	0.020-0.060	6	57	16	6	●
4060X25X80	0.020-0.050	6	80	25	6	●
4070X20X63	0.020-0.070	7	63	20	8	●
4080X20X63	0.020-0.080	8	63	20	8	●
4080X35X90	0.020-0.060	8	90	35	8	●
4090X25X72	0.025-0.090	9	72	25	10	●
4100X25X72	0.025-0.100	10	72	25	10	●
4100X45X100	0.025-0.080	10	100	45	10	●
4110X30X83	0.030-0.110	11	83	30	12	●
4120X30X83	0.030-0.130	12	83	30	12	●
4120X55X110	0.030-0.100	12	110	55	12	●
4140X40X92	0.030-0.120	14	92	40	16	●
4160X40X92	0.040-0.140	16	92	40	16	●
4160X70X125	0.040-0.100	16	125	70	16	●
4180X45X110	0.040-0.140	18	110	45	20	●
4200X45X110	0.050-0.140	20	110	45	20	●
4200X75X150	0.050-0.120	20	150	75	20	●
4250X65X140	0.060-0.140	25	140	65	25	●

●: Standard items

UHP 4…R

SLIKSOLID

4 flute medium corner radius



4 | H•A Various | Cutting Condition F88-F89

RE	±0.02

DC	Tolerance
All	0 - -0.020

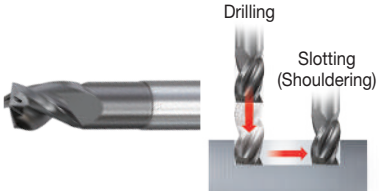
Designation	Feed (mm/taooth)	Dimension (mm)					Grade
		DC	RE	OAL	APMX	DCONMS	TT5520
UHP 4030X10X57R0.3	0.010-0.020	3	0.3	57	10	6	●
4030X10X57R0.5	0.010-0.020	3	0.5	57	10	6	●
4040X12X57R0.3	0.010-0.035	4	0.3	57	12	6	●
4040X12X57R0.5	0.010-0.035	4	0.5	57	12	6	●
4040X12X57R1.0	0.010-0.035	4	1.0	57	12	6	●
4050X14X57R0.3	0.015-0.040	5	0.3	57	14	6	●
4060X16X57R0.5	0.020-0.060	6	0.5	57	16	6	●
4060X16X57R1.0	0.020-0.060	6	1.0	57	16	6	●
4080X20X63R0.5	0.020-0.080	8	0.5	63	20	8	●
4080X20X63R1.0	0.020-0.080	8	1.0	63	20	8	●
4080X20X63R2.0	0.020-0.080	8	2.0	63	20	8	●
4100X25X72R0.5	0.025-0.100	10	0.5	72	25	10	●
4100X25X72R1.0	0.025-0.100	10	1.0	72	25	10	●
4100X25X72R2.0	0.025-0.100	10	2.0	72	25	10	●
4100X25X72R3.0	0.025-0.100	10	3.0	72	25	10	●
4120X30X83R0.5	0.030-0.130	12	0.5	83	30	12	●
4120X30X83R1.0	0.030-0.130	12	1.0	83	30	12	●
4120X30X83R2.0	0.030-0.130	12	2.0	83	30	12	●
4120X30X83R3.0	0.030-0.130	12	3.0	83	30	12	●
4160X40X92R0.5	0.040-0.140	16	0.5	92	40	16	●
4160X40X92R1.0	0.040-0.140	16	1.0	92	40	16	●
4160X40X92R3.0	0.040-0.140	16	3.0	92	40	16	●
4200X45X110R0.5	0.050-0.140	20	0.5	110	45	20	●
4200X45X110R3.0	0.050-0.140	20	3.0	110	45	20	●

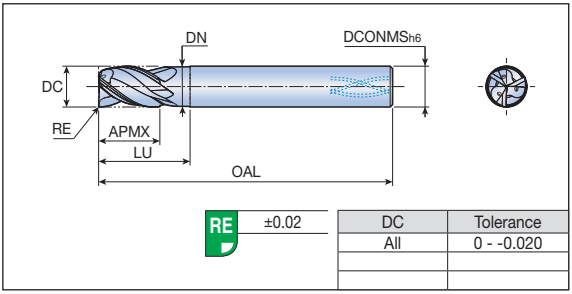
●: Standard items

SDM 3

APEXMILL

3 flute, drill-mills





3 | H•A Various | Cutting Condition F88-F89

RE ±0.02

DC	Tolerance
All	0 - -0.020

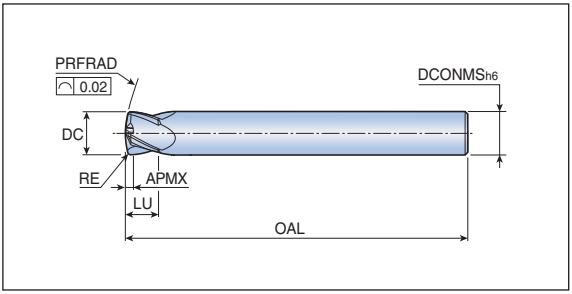
Designation		Feed (mm/taooth)	Dimension (mm)							Coolant hole	Grade TT5525
			DC	RE	OAL	APMX	LU	DN	DCONMS		
SDM	3100X15X72R0.2	0.025-0.08	10	0.2	72	15	30	9.6	10	●	●
	3120X18X83R0.2	0.025-0.10	12	0.2	83	18	36	11.7	12	●	●
	3160X24X92R0.2	0.03-0.12	16	0.2	92	24	40	15.3	16	●	●
	3200X30X110R0.2	0.04-0.16	20	0.2	110	30	55	18.3	20	●	●

●: Standard items

SCSL

APEXMILL

4, 6 flute, lens shape for 5-axis profiling



4,6 | Cutting Condition F88-F89

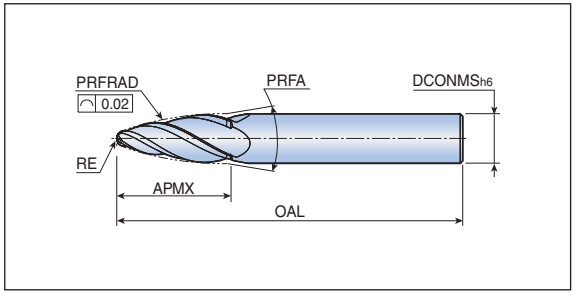
Designation		Feed (mm/tooth)	Dimension (mm)								Grade TT5515
			DC	NOF	PRFRAD	RE	APMX	LU	DCONMS	OAL	
SCSL	4080R015X05	0.02-0.08	8	4	15	0.75	1.1	5.0	8	63	●
	6100R020X07	0.03-0.09	10	6	20	1.0	1.4	7.0	10	72	●
	6120R025X09	0.03-0.10	12	6	25	1.0	1.5	9.0	12	83	●

▸ PRFRAD: Profile radius

●: Standard items

SCS0

4 flute, oval shape(barrel) for 5-axis profiling



4 Cutting Condition F88-F89

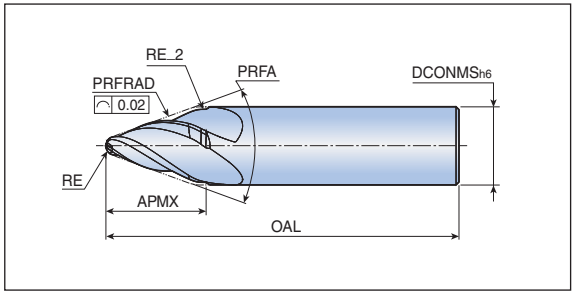
Designation	Feed (mm/tooth)	Dimension (mm)						Grade
		PRFRAD	RE	APMX	PRFA	DCONMS	OAL	TT5515
SCS0 4080R090X24	0.02-0.08	90	1.0	24.8	14.9	8	63	●
4100R085X26	0.03-0.09	85	2.0	26.6	15.5	10	72	●
4120R080X27	0.03-0.10	80	2.0	27.1	18.4	12	83	●

▸ PRFRAD: Profile radius

●: Standard items

SCST

4 flute, tapered shape(barrel) for 5-axis profiling



4 Cutting Condition F88-F89

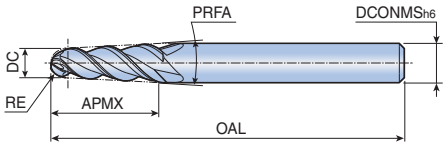
Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		PRFRAD	RE	RE_2	APMX	PRFA	DCONMS	OAL	TT5515
SCST 4080R250A40X10	0.02-0.08	250	1.0	4.0	10	40	8	63	●
4100R250A40X11	0.03-0.09	250	2.0	5.0	11	40	10	63	●
4120R250A40X12	0.03-0.10	250	3.0	6.0	12	40	12	63	●

▸ PRFRAD: Profile radius

●: Standard items

HTB 2.../3...

2, 3 flute, taper ball shape



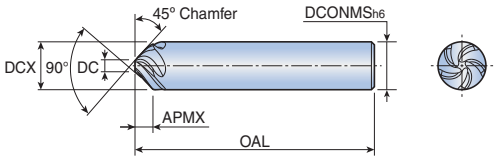
2-3 | Cutting Condition F88-F89

Designation	Dimension (mm)							Grade
	DC	NOF	RE	APMX	PRFA	DCONMS	OAL	TT5515
HTB 2030TA4-06	3	2	1.5	22	8	6	70	●
3040TA4-08	4	3	2.0	30	8	8	75	●
3040TA4-10	4	3	2.0	44	8	10	95	●
3050TA4-12	5	3	2.5	52	8	12	110	●
3060TA3-12	6	3	3.0	60	6	12	120	●
3080TA3-16	8	3	4.0	80	6	16	150	●

●: Standard items

HCEM 5

5 flute, 45° chamfering



DC	Tolerance
All	±0.1

5 | H•A 40° | Cutting Condition F88-F89

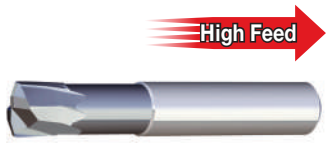
Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DCX	DC	OAL	APMX	DCONMS	TT5525
HCEM 5080	0.02-0.06	8	2	63	3.0	8	●
5100	0.03-0.07	10	2.5	72	3.8	10	●
5120	0.03-0.08	12	3	83	4.5	12	●
5160	0.04-0.10	16	4	92	6.0	16	●

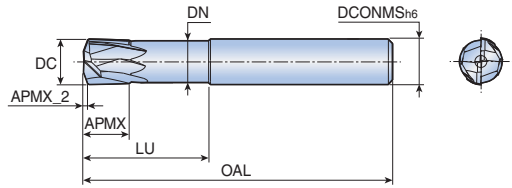
●: Standard items

HFM 2

SOLIDFEED APEXMILL

2 flute high feed flat





DC	Tolerance
All	0 - -0.030

• High Feed Machining (H.F.M)

Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	OAL	APMX	APMX_2*	LU	DN	DCONMS	TT5515
HFM 2040	0.2-0.4	4	47	4	0.3	10	3.9	6	●
2060	0.3-0.6	6	52	6	0.5	16	5.5	6	●
2080	0.4-0.7	8	60	8	0.75	22	7.3	8	●
2100	0.5-0.9	10	68	10	1.0	28	9.2	10	●
2120	0.5-1.0	12	76	12	1.1	33	11.0	12	●

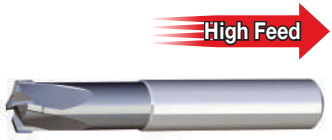
▸ *: Maximum D.O.C for high feed milling

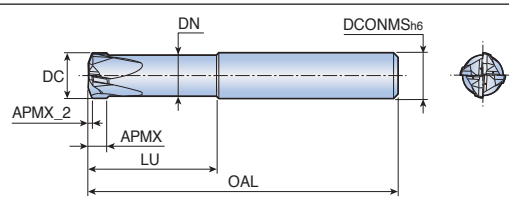
●: Standard items

HFM 4

SOLIDFEED APEXMILL

4 flute high feed flat





DC	Tolerance
All	0 - -0.030

• High Feed Machining (H.F.M)

Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	OAL	APMX	APMX_2*	LU	DN	DCONMS	TT5515
HFM 4060	0.3-0.5	6	52	2.5	0.5	16	5.4	6	●
4080	0.3-0.6	8	60	3.5	0.7	24	7.2	8	●
4100	0.4-0.8	10	68	4.0	0.75	28	9.2	10	●
4120	0.4-1.0	12	76	5.0	1.05	33	11.0	12	●

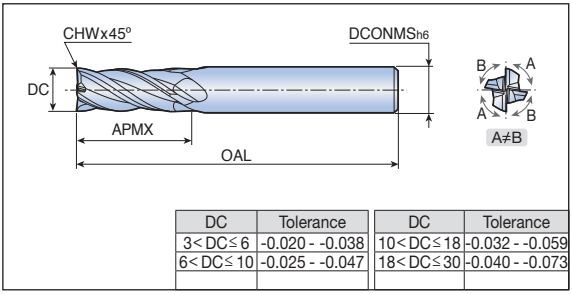
▸ *: Maximum D.O.C for high feed milling

●: Standard items

CFM 4...M

VFIMILL APEXMILL

4 flute corner chamfer



DC	Tolerance	DC	Tolerance
3< DC≤ 6	-0.020 - -0.038	10< DC≤ 18	-0.032 - -0.059
6< DC≤ 10	-0.025 - -0.047	18< DC≤ 30	-0.040 - -0.073

• Vibration free mill

4 | H•A 38° | Cutting Condition F88-F89

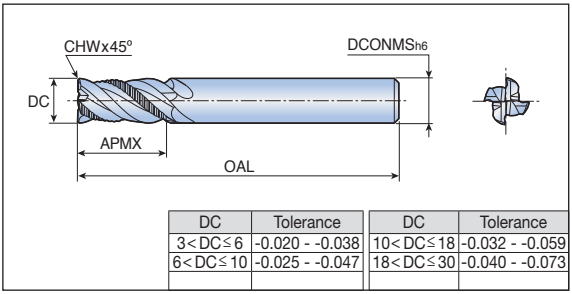
Designation		Feed (mm/tooth)	Dimension (mm)					Grade
			DC	CHW	OAL	APMX	DCONMS	TT5525
CFM	4060M	0.03-0.07	4	0.15	57	10	6	●
	4060M	0.03-0.07	6	0.25	57	14	6	●
	4080M	0.03-0.08	8	0.3	63	18	8	●
	4100M	0.03-0.10	10	0.4	72	22	10	●
	4120M	0.04-0.11	12	0.5	83	26	12	●
	4160M	0.05-0.13	16	0.6	100	34	16	●
	4200M	0.05-0.17	20	0.6	110	42	20	●
	4250M	0.06-0.20	25	0.6	121	52	25	●

●: Standard items

FSM 4...M

MULTIMILL APEXMILL

4 flute medium corner chamfer



DC	Tolerance	DC	Tolerance
3< DC≤ 6	-0.020 - -0.038	10< DC≤ 18	-0.032 - -0.059
6< DC≤ 10	-0.025 - -0.047	18< DC≤ 30	-0.040 - -0.073

• MULTIMILL (Rough + Finish)

4 | H•A 45° | Cutting Condition F88-F89

Designation		Feed (mm/tooth)	Dimension (mm)					Grade
			DC	CHW	OAL	APMX	DCONMS	TT5525
FSM	4060M	0.03-0.06	6	0.25	57	14	6	●
	4080M	0.03-0.08	8	0.3	63	18	8	●
	4100M	0.03-0.09	10	0.3	72	22	10	●
	4120M	0.04-0.11	12	0.4	83	26	12	●
	4140M	0.04-0.11	14	0.4	83	30	14	●
	4160M	0.05-0.11	16	0.6	92	34	16	●
	4200M	0.05-0.11	20	0.6	104	42	20	●
	4250M	0.06-0.11	25	0.6	121	52	25	●

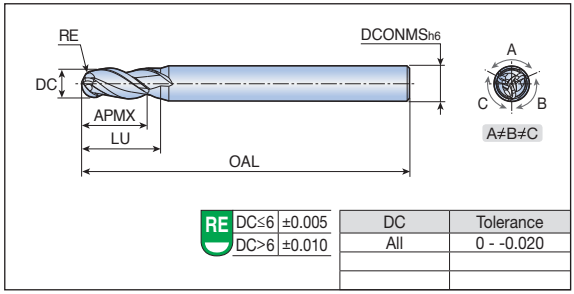
●: Standard items

SBT 3...U

STARMILL

3 flute medium ball

- Excellent chatter damping due to unequal spacing of cutting edges



RE		DC	Tolerance
	DC≤6 ±0.005	All	0 - -0.020
	DC>6 ±0.010		

Designation	Dimension (mm)						Grade
	DC	RE	OAL	APMX	LU	DCONMS	TT5515
SBT 3040U	4	2	70	8	10	6	●
3060U	6	3	80	12	-	6	●
3080U	8	4	90	16	-	8	●
3100U	10	5	100	20	-	10	●
3120U	12	6	110	25	-	12	●

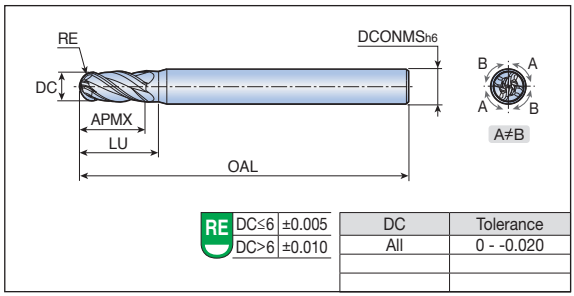
●: Standard items

SBT 4...U

STARMILL

4 flute medium ball

- Excellent chatter damping due to unequal spacing of cutting edges



RE		DC	Tolerance
	DC≤6 ±0.005	All	0 - -0.020
	DC>6 ±0.010		

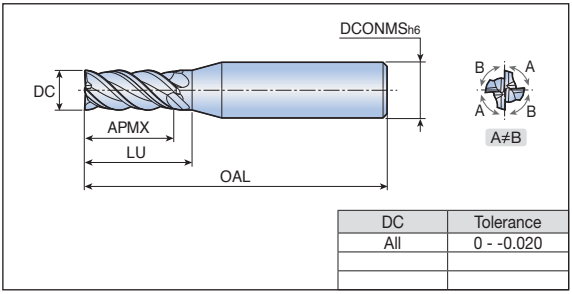
Designation	Dimension (mm)						Grade
	DC	RE	OAL	APMX	LU	DCONMS	TT5515
SBT 4030U	3	1.5	70	8	10	6	●
4040U	4	2	70	8	10	6	●
4050U	5	2.5	80	10	12	6	●
4060U	6	3	80	12	-	6	●
4080U	8	4	90	16	-	8	●
4100U	10	5	100	20	-	10	●
4120U	12	6	110	25	-	12	●
4160U	16	8	125	35	-	16	●
4200U	20	10	150	40	-	20	●

●: Standard items

SED 4...U

4 flute medium flat

- Excellent chatter damping credit to unequal spacing of cutting edges



DC	Tolerance
All	0 - -0.020

Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	OAL	APMX	LU	DCONMS	TT5515
SED 4010U	0.004-0.010	1	42	2.5	3.5	6	●
4015U	0.005-0.012	1.5	42	4	5.5	6	●
4020U	0.006-0.015	2	42	6	8	6	●
4025U	0.007-0.017	2.5	42	8	10	6	●
4030U	0.015-0.030	3	57	10	12	6	●
4040U	0.020-0.040	4	57	12	14	6	●
4050U	0.020-0.040	5	57	15	16	6	●
4060U	0.025-0.070	6	57	15	-	6	●
4070U	0.025-0.070	7	63	16	21	8	●
4080U	0.030-0.090	8	70	25	-	8	●
4080US	0.030-0.090	8	70	20	-	8	●
4100U	0.030-0.100	10	72	25	-	10	●
4120U	0.035-0.110	12	83	30	-	12	●
4140U	0.035-0.110	14	90	35	-	14	●
4160U	0.050-0.130	16	100	42	-	16	●
4200U	0.050-0.170	20	104	48	-	20	●

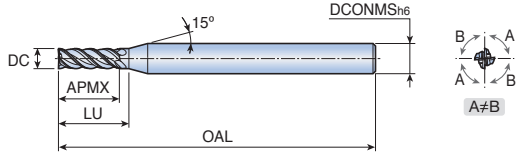
●: Standard items

SED 4...UL

STARMILL

4 flute long flat

- Excellent chatter damping credit to unequal spacing of cutting edges



DC	Tolerance
All	0 - -0.020

4 | H•A 45° | Cutting Condition F88-F89

Designation		Feed (mm/tooth)	Dimension (mm)					Grade
			DC	OAL	APMX	LU	DCONMS	TT5515
SED	**4030UL**	0.015-0.030	3	63	10	12	6	●
	4040UL	0.020-0.040	4	63	12	14	6	●
	4060UL	0.025-0.070	6	65	20	-	6	●
	4080UL	0.030-0.090	8	83	30	-	8	●
	4100UL	0.030-0.100	10	83	35	-	10	●
	4120UL	0.035-0.110	12	92	40	-	12	●

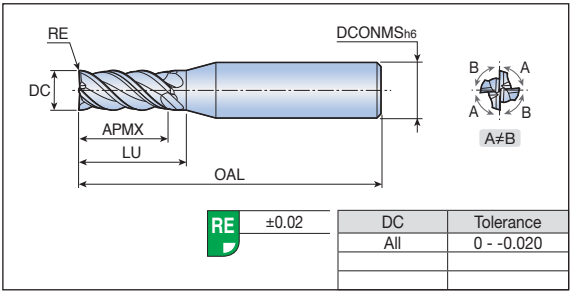
●: Standard items

SED 4...-R

STARMILL

4 flute medium corner radius

- Excellent chatter damping credit to unequal spacing of cutting edges



DC	Tolerance
All	0 - -0.020

Designation	Feed (mm/tooth)	Dimension (mm)						Grade
		DC	RE	OAL	APMX	LU	DCONMS	TT5515
SED 4020U-R0.1	0.010-0.020	2	0.1	42	6	8	6	●
4030U-R0.2	0.015-0.030	3	0.2	57	10	12	6	●
4040U-R0.1	0.020-0.040	4	0.1	57	12	14	6	●
4040U-R0.2	0.020-0.040	4	0.2	57	12	14	6	●
4040U-R0.5	0.020-0.040	4	0.5	57	12	14	6	●
4050U-R0.15	0.020-0.040	5	0.15	57	15	16	6	●
4050U-R0.2	0.020-0.040	5	0.2	57	15	16	6	●
4060U-R0.2	0.025-0.070	6	0.2	57	15	-	6	●
4060U-R0.3	0.025-0.070	6	0.3	57	15	-	6	●
4060U-R0.5	0.025-0.070	6	0.5	57	15	-	6	●
4080U-R0.2	0.030-0.090	8	0.2	70	25	-	8	●
4080U-R0.3	0.030-0.090	8	0.3	70	25	-	8	●
4080U-R0.5	0.030-0.090	8	0.5	70	25	-	8	●
4080U-R1.0	0.030-0.090	8	1.0	70	25	-	8	●
4100U-R0.2	0.030-0.100	10	0.2	72	25	-	10	●
4100U-R0.3	0.030-0.100	10	0.3	72	25	-	10	●
4100U-R0.5	0.030-0.100	10	0.5	72	25	-	10	●
4100U-R1.0	0.030-0.100	10	1.0	72	25	-	10	●
4100U-R2.0	0.030-0.100	10	2.0	72	25	-	10	●
4120U-R0.2	0.035-0.110	12	0.2	83	30	-	12	●
4120U-R0.3	0.035-0.110	12	0.3	83	30	-	12	●
4120U-R0.5	0.035-0.110	12	0.5	83	30	-	12	●
4120U-R1.0	0.035-0.110	12	1.0	83	30	-	12	●
4160U-R0.5	0.050-0.130	16	0.5	100	42	-	16	●
4160U-R1.0	0.050-0.130	16	1.0	100	42	-	16	●
4160U-R2.0	0.050-0.130	16	2.0	100	42	-	16	●
4160U-R3.0	0.050-0.130	16	3.0	100	42	-	16	●

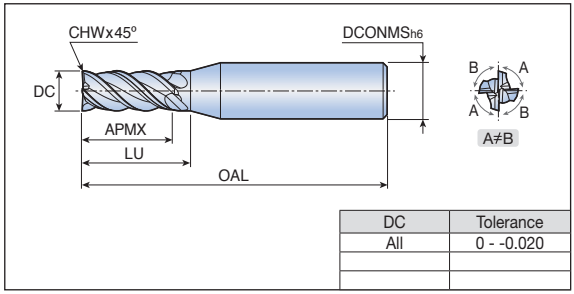
●: Standard items

SED 4...-C

STARMILL

4 flute medium corner chamfer

- Excellent chatter damping credit to unequal spacing of cutting edges



DC	Tolerance
All	0 - -0.020

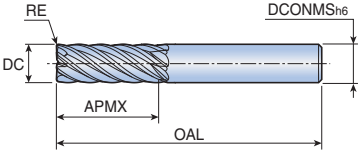
Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	CHW	OAL	APMX	LU	DCONMS	TT5515
SED	**4040U-C0.1**	0.020-0.040	4	0.1	57	12	14	6	●
	4060U-C0.2	0.030-0.060	6	0.2	57	15	-	6	●
	4080U-C0.3	0.030-0.090	8	0.3	70	25	-	8	●
	4100U-C0.3	0.030-0.100	10	0.3	72	25	-	10	●
	4120U-C0.4	0.035-0.110	12	0.4	83	30	-	12	●

●: Standard items

SED 7

7 flute medium corner radius

- Excellent chatter damping credit to unequal spacing of cutting edges
- For trochoidal operation



RE ±0.05

DC	Tolerance
All	0 - -0.020

Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	RE	OAL	APMX	DCONMS	TT5515
SED 7060	0.02-0.04	6	0.5	57	15	6	●
7060-4D	0.02-0.04	6	0.5	70	24	6	●
7080	0.02-0.05	8	0.5	70	25	8	●
7080-4D	0.02-0.05	8	0.5	90	32	8	●
7100	0.03-0.07	10	0.5	72	25	10	●
7100-4D	0.03-0.07	10	0.5	100	40	10	●
7120	0.03-0.09	12	0.5	83	30	12	●
7120-4D	0.03-0.09	12	0.5	110	48	12	●
7140	0.04-0.10	14	0.5	90	35	14	●
7160	0.04-0.11	16	0.5	100	42	16	●
7160-4D	0.04-0.11	16	0.5	125	64	16	●
7200	0.05-0.12	20	0.5	104	48	20	●
7200-4D	0.05-0.12	20	0.5	150	80	20	●

▸ 4D: 4xD depth of cut

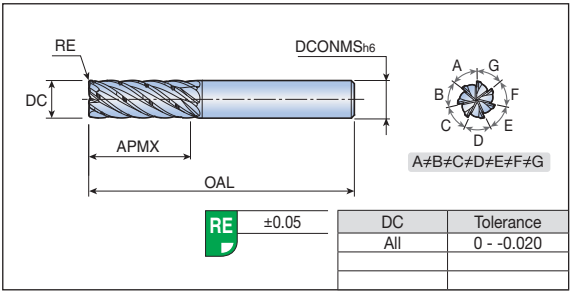
●: Standard items

SED 7...N

STARMILL

7 flute medium corner radius with chip splitters

- Excellent chatter damping credit to unequal spacing of cutting edges with chip splitters
- For trochoidal operation



DC	Tolerance
All	0 - -0.020

Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	RE	OAL	APMX	DCONMS	TT5515
SED 7060-N	0.02-0.04	6	0.5	57	15	6	●
7060-4D-N	0.02-0.04	6	0.5	70	24	6	●
7080-N	0.02-0.05	8	0.5	70	25	8	●
7080-4D-N	0.02-0.05	8	0.5	90	32	8	●
7100-N	0.03-0.07	10	0.5	72	25	10	●
7100-4D-N	0.03-0.07	10	0.5	100	40	10	●
7120-N	0.03-0.09	12	0.5	83	30	12	●
7120-4D-N	0.03-0.09	12	0.5	110	48	12	●
7160-N	0.04-0.11	16	0.5	100	42	16	●
7160-4D-N	0.04-0.11	16	0.5	125	64	16	●
7200-N	0.05-0.12	20	0.5	104	48	20	●
7200-4D-N	0.05-0.12	20	0.5	150	80	20	●

▸ N: Chip splitter type

●: Standard items

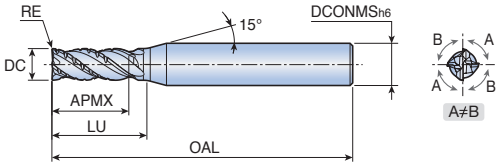
SER

STARMILL

3-5 flute chip splitter type

- Excellent chatter damping credit to unequal spacing of cutting edges

3-5 | H•A 38° | Cutting Condition F88-F89



RE ±0.02

DC	Tolerance
All	0 - -0.030

Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	NOF	RE	OAL	APMX	LU	DCONMS	TT5525
SER 3030M 020	0.010-0.030	3	3	0.2	52	8	10	6	●
3040M 020	0.020-0.040	4	3	0.2	52	10	12	6	●
4050M 020	0.020-0.040	5	4	0.2	57	13	18	6	●
4060M 020	0.025-0.070	6	4	0.2	57	13	-	6	●
4060M 050	0.025-0.070	6	4	0.5	57	13	-	6	●
4070M 020	0.025-0.070	7	4	0.2	63	18	25	8	●
4080M 020	0.030-0.090	8	4	0.2	63	19	-	8	●
4080M 100	0.030-0.090	8	4	1.0	63	19	-	8	●
4090M 030	0.030-0.090	9	4	0.3	72	20	30	10	●
4100M 030	0.030-0.100	10	4	0.3	72	22	-	10	●
4100M 100	0.030-0.100	10	4	1.0	72	22	-	10	●
4110M 030	0.030-0.100	11	4	0.3	83	25	35	12	●
4120M 030	0.035-0.110	12	4	0.3	83	26	-	12	●
4120M 100	0.035-0.110	12	4	1.0	83	26	-	12	●
5140M 050	0.035-0.110	14	5	0.5	92	28	40	16	●
5160M 050	0.050-0.130	16	5	0.5	92	32	-	16	●
5160M 150	0.050-0.130	16	5	1.5	92	32	-	16	●
5180M 050	0.050-0.130	18	5	0.5	110	38	55	20	●
5180M 200	0.050-0.130	18	5	2.0	110	38	55	20	●
5200M 050	0.050-0.170	20	5	0.5	110	38	-	20	●
5200M 200	0.050-0.170	20	5	2.0	110	38	-	20	●

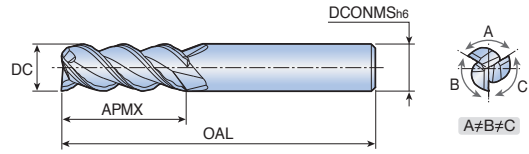
▸ NOF: Number of flutes

●: Standard items

AWE 3

ALUMILL

3 flute wave flat



DC	Tolerance
All	0 - -0.012

• Wave cutting edge

3 | H•A 50° | Wave | Cutting Condition F88-F89

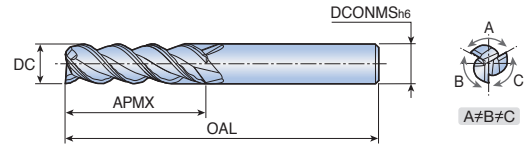
Designation		Feed (mm/tooth)	Dimension (mm)				Grade
			DC	OAL	APMX	DCONMS	UF10
AWE	**3060**	0.03-0.07	6	52	14	6	●
	3080	0.03-0.09	8	60	14	8	●
	3100	0.03-0.10	10	68	19	10	●
	3120	0.03-0.12	12	76	22	12	●
	3140	0.05-0.14	14	85	24	14	●
	3160	0.05-0.14	16	90	30	16	●
	3180	0.05-0.15	18	110	34	18	●
	3200	0.05-0.15	20	110	38	20	●

●: Standard items

AWE 3...ML

ALUMILL

3 flute wave long flat



DC	Tolerance
All	0 - -0.012

• Wave cutting edge

3 | H•A 50° | Wave | Cutting Condition F88-F89

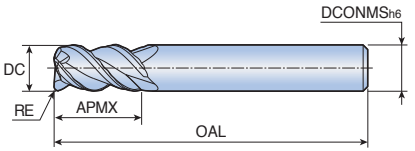
Designation		Feed (mm/tooth)	Dimension (mm)				Grade
			DC	OAL	APMX	DCONMS	UF10
AWE	**3060ML**	0.03-0.07	6	65	20	6	●
	3080ML	0.03-0.09	8	75	20	8	●
	3100ML	0.03-0.10	10	80	25	10	●
	3120ML	0.03-0.12	12	95	30	12	●
	3140ML	0.03-0.12	14	110	35	14	●
	3160ML	0.05-0.14	16	110	40	16	●
	3180ML	0.05-0.15	18	125	45	18	●
	3200ML	0.05-0.15	20	125	45	20	●

●: Standard items

AWE 3...ML-R

ALUMILL

3 flute wave long corner radius



• Wave cutting edge

3 | H•A 50° | Wave | Cutting Condition F88-F89

RE ±0.02

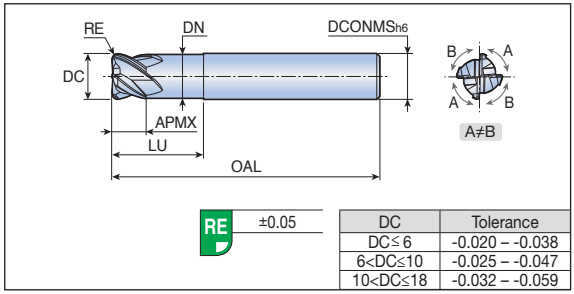
DC	Tolerance
All	0 - -0.012

Designation		Feed (mm/tooth)	Dimension (mm)					Grade
			DC	RE	OAL	APMX	DCONMS	UF10
AWE	3060ML-R0.5	0.03-0.07	6	0.5	65	20	6	●
	3080ML-R0.5	0.03-0.09	8	0.5	75	20	8	●
	3100ML-R1.0	0.03-0.10	10	1.0	80	25	10	●
	3120ML-R1.0	0.03-0.12	12	1.0	95	30	12	●

●: Standard items

CRF 4

4 flute, Ceramic end mills



4 | H•A 40° | Cutting Condition F90

RE ±0.05

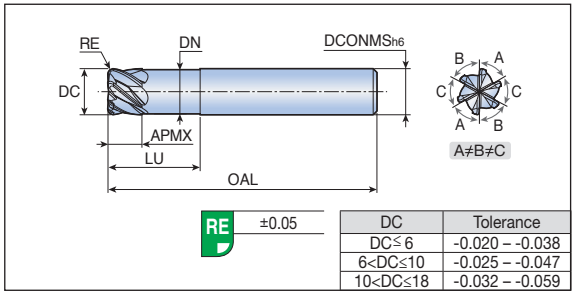
DC	Tolerance
DC≤ 6	-0.020 – -0.038
6<DC≤10	-0.025 – -0.047
10<DC≤18	-0.032 – -0.059

Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	RE	OAL	APMX	LU	DN	DCONMS	TC3030
CRF 4060 050 120	0.02-0.03	6	0.5	50	4.5	12	5.8	6	●
4080 100 160	0.02-0.03	8	1.0	57	6.0	16	7.7	8	●
4100 100 200	0.02-0.04	10	1.0	63	7.5	20	9.6	10	●
4120 150 240	0.03-0.05	12	1.5	70	9.0	24	11.5	12	●
4160 200 320	0.03-0.05	16	2.0	83	12.0	32	15.5	16	●

●: Standard items

CRF 6

6 flute, Ceramic end mills



6 | H•A 40° | Cutting Condition F90

RE ±0.05

DC	Tolerance
DC≤ 6	-0.020 – -0.038
6<DC≤10	-0.025 – -0.047
10<DC≤18	-0.032 – -0.059

Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	RE	OAL	APMX	LU	DN	DCONMS	TC3030
CRF 6060 050 120	0.02-0.03	6	0.5	50	4.5	12	5.8	6	●
6080 100 160	0.02-0.03	8	1.0	57	6.0	16	7.7	8	●
6100 100 200	0.02-0.04	10	1.0	63	7.5	20	9.6	10	●
6120 150 240	0.03-0.05	12	1.5	70	9.0	24	11.5	12	●
6160 200 320	0.03-0.05	16	2.0	83	12.0	32	15.5	16	●

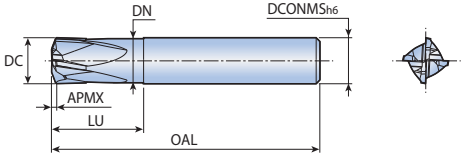
●: Standard items

CRH 4

4 flute, ceramic end mills for high feed milling

Ceramic

4 | H•A 10° | Cutting Condition F90



RE ±0.1

DC	Tolerance
DC≤6	-0.020 – -0.038
6<DC≤10	-0.025 – -0.047
10<DC≤18	-0.032 – -0.059

Designation	Feed (mm/tooth)	Dimension (mm)						Grade
		DC	OAL	APMX	LU	DN	DCONMS	TC3030
CRH 4060	0.1-0.15	6	50	0.55	12	5.8	6	●
4080	0.1-0.2	8	57	0.75	16	7.7	8	●
4100	0.1-0.2	10	63	0.85	20	9.6	10	●
4120	0.1-0.3	12	70	1.15	24	11.5	12	●
4160	0.1-0.3	16	83	1.55	32	15.5	16	●

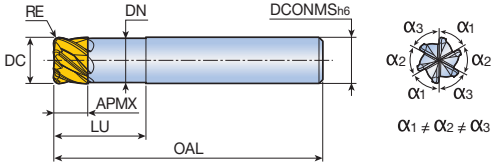
●: Standard items

CRFB 6

6 flute, ceramic brazed end mills

Ceramic

6 | H•A 40° | Cutting Condition F90



RE ±0.05

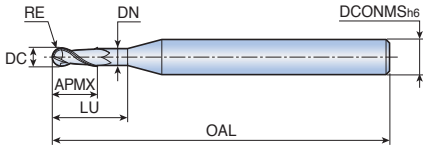
DC	Tolerance
DC≤6	-0.020 – -0.038
6<DC≤10	-0.025 – -0.047
10<DC≤18	-0.032 – -0.059

Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	RE	OAL	APMX	LU	DN	DCONMS	TC3030
CRFB 6060 050 120	0.02-0.03	6	0.5	50	4.5	12	5.8	6	●
6080 100 160	0.02-0.03	8	1.0	57	6.0	16	7.7	8	●
6100 100 200	0.02-0.04	10	1.0	63	7.5	20	9.6	10	●
6120 150 240	0.03-0.05	12	1.5	70	9.0	24	11.5	12	●
6160 200 320	0.03-0.05	16	2.0	83	12.0	32	15.5	16	●

●: Standard items

DMB 2

2 flute miniature ball



2 | H•A 30° | Cutting Condition F88-F89

RE ±0.01

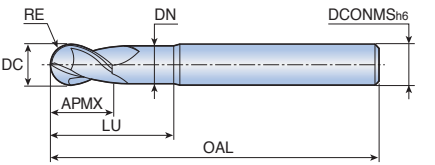
DC	Tolerance
All	0 - -0.020

Designation	Dimension (mm)							Grade
	DC	RE	OAL	APMX	LU	DN	DCONMS	TTD620
DMB 2006-0.6x3.0	0.6	0.3	40	0.6	3.0	0.55	3	●
2010-1.0x5.0	1.0	0.5	40	1.0	5.0	0.95	3	●
2010-1.0x8.5	1.0	0.5	40	1.0	8.5	0.95	3	●
2015-1.5x7.5	1.5	0.75	50	1.5	7.5	1.4	3	●
2015-1.5x12.0	1.5	0.75	50	1.5	12.0	1.4	3	●
2020-2.2x10.0	2.0	1.0	60	2.2	10.0	1.9	3	●
2020-2.2x16.0	2.0	1.0	60	2.2	16.0	1.9	3	●

●: Standard items

DEB 2...S

2 flute short ball



2 | H•A 30° | Cutting Condition F88-F89

RE ±0.01

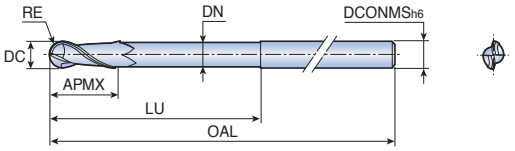
DC	Tolerance
DC≤6	0 - -0.020
DC>6	0 - -0.030

Designation	Dimension (mm)							Grade
	DC	RE	OAL	APMX	LU	DN	DCONMS	TTD620
DEB 2030S	3	1.5	60	4.5	6.5	2.8	6	●
2040S	4	2.0	65	6.0	8.0	3.7	6	●
2060S	6	3.0	75	9.0	12.0	5.6	6	●
2120S	12	6.0	90	18.0	36.0	11.4	12	●

●: Standard items

DEB 2...L

2 flute long neck ball



2 | H•A 30° | Cutting Condition F88-F89

RE ±0.01

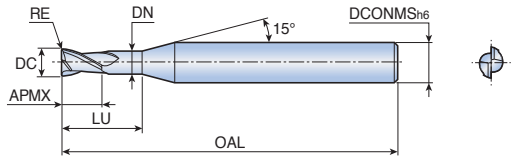
DC	Tolerance
DC≤6	0 - -0.020
DC>6	0 - -0.030

Designation	Dimension (mm)							Grade
	DC	RE	OAL	APMX	LU	DN	DCONMS	TTD620
DEB 2030L-4	3	1.5	80	15	25	2.9	4	●
2040L-4	4	2.0	80	20	30	3.9	4	●
2060L	6	3.0	100	30	50	5.5	6	●
2080L	8	4.0	110	40	60	7.5	8	●
2100L	10	5.0	120	50	70	9.5	10	●
2120L	12	6.0	130	55	75	11.5	12	●

●: Standard items

DMR 2

2 flute miniature corner radius



2 | H•A 30° | Cutting Condition F88-F89

RE ±0.02

DC	Tolerance
All	0 - -0.020

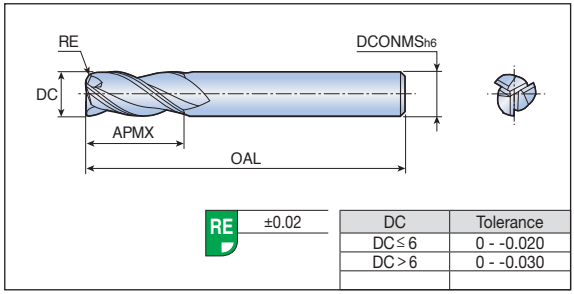
Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	RE	OAL	APMX	LU	DN	DCONMS	TTD620
DMR 2006-0.9x3.0	0.006-0.010	0.6	0.05	40	0.9	3.0	0.55	3	●
2008-1.2x4.0	0.008-0.015	0.8	0.05	40	1.2	4.0	0.75	3	●
2010-1.5x5.0	0.010-0.020	1.0	0.1	40	1.5	5.0	0.95	3	●
2010-1.5x8.5	0.010-0.020	1.0	0.1	40	1.5	8.5	0.95	3	●
2012-1.8x6.0	0.010-0.025	1.2	0.1	50	1.8	6.0	1.15	3	●
2015-2.2x7.5	0.015-0.035	1.5	0.15	50	2.2	7.5	1.4	3	●
2015-2.2x12.0	0.015-0.030	1.5	0.15	50	2.2	12.0	1.4	3	●
2020-2.2x10.0	0.015-0.040	2.0	0.15	60	2.2	10.0	1.9	3	●
2020-2.2x16.0	0.015-0.035	2.0	0.15	60	2.2	16.0	1.9	3	●

●: Standard items

DER 3...S

DIA MILL

3 flute short corner radius



3 | H•A 40° | Cutting Condition F88-F89

RE ±0.02

DC	Tolerance
DC≤6	0 - -0.020
DC>6	0 - -0.030

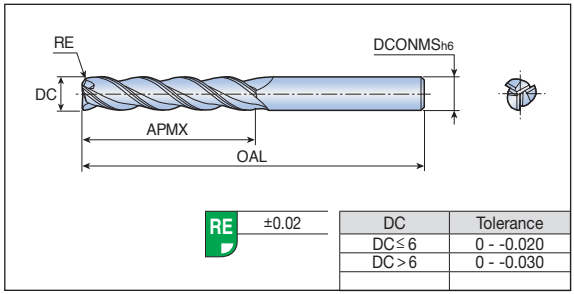
Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	RE	OAL	APMX	DCONMS	TTD620
DER 3030S-3	0.025-0.05	3	0.15	40	12	3	●
3040S-4	0.04-0.06	4	0.2	50	14	4	●
3050S-5	0.05-0.08	5	0.3	50	16	5	●
3060S	0.06-0.09	6	0.3	65	20	6	●
3080S	0.07-0.10	8	0.5	65	20	8	●
3100S	0.08-0.13	10	0.5	75	25	10	●
3120S	0.10-0.15	12	0.5	75	25	12	●

●: Standard items

DER 3...L

DIA MILL

3 flute long corner radius



3 | H•A 40° | Cutting Condition F88-F89

RE ±0.02

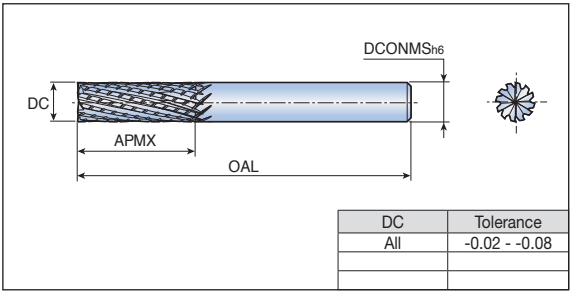
DC	Tolerance
DC≤6	0 - -0.020
DC>6	0 - -0.030

Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	RE	OAL	APMX	DCONMS	TTD620
DER 3040L-4	0.03-0.05	4	0.2	60	30	4	●
3050L-5	0.04-0.07	5	0.3	70	35	5	●
3060L	0.05-0.08	6	0.3	100	40	6	●
3080L	0.06-0.09	8	0.5	100	40	8	●
3100L	0.07-0.12	10	0.5	100	40	10	●
3120L	0.09-0.14	12	0.5	100	45	12	●

●: Standard items

RRFE

Roughing for composite material (Chip splitter)



DC	Tolerance
All	-0.02 - -0.08

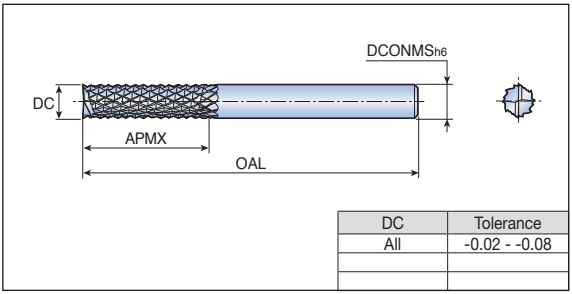
Designation	Feed (mm/tooth)	Dimension (mm)					Grade
		DC	NOF	OAL	APMX	DCONMS	TTD610
RRFE 040	0.01-0.02	4	6	50	12	4	●
060	0.01-0.02	6	8	65	18	6	●
080	0.01-0.03	8	10	75	24	8	●
100	0.02-0.04	10	12	85	30	10	●
120	0.02-0.05	12	12	100	36	12	●

▸ NOF: Number of flutes

●: Standard items

RCFE

Roughing for composite material (Multi-flute)



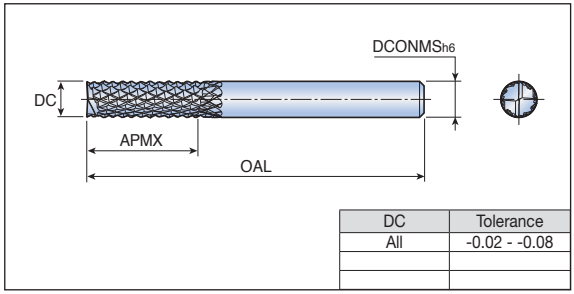
DC	Tolerance
All	-0.02 - -0.08

Designation	Feed (mm/rev)	Dimension (mm)				Grade
		DC	OAL	APMX	DCONMS	TTD610
RCFE 040	0.03-0.06	4	50	12	4	●
060	0.07-0.15	6	65	18	6	●
080	0.10-0.20	8	75	24	8	●
100	0.15-0.30	10	85	30	10	●
120	0.20-0.40	12	100	36	12	●

●: Standard items

RCME

Medium to finishing for composite materials (Multi-flute)



DC	Tolerance
All	-0.02 - -0.08

H·A 28°

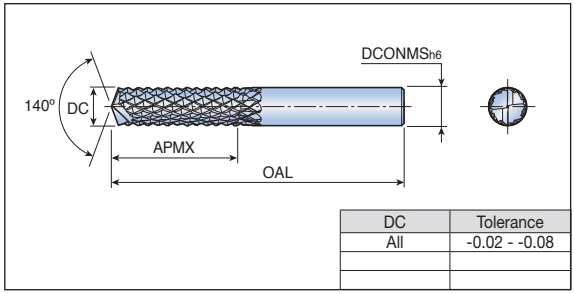
Cutting Condition F91

Designation		Feed (mm/rev)	Dimension (mm)				Grade
			DC	OAL	APMX	DCONMS	TTD610
RCME	**040**	0.03-0.06	4	50	12	4	●
	060	0.07-0.15	6	65	18	6	●
	080	0.10-0.20	8	75	24	8	●
	100	0.15-0.30	10	85	30	10	●
	120	0.20-0.40	12	100	36	12	●

●: Standard items

RCDE

Medium to finishing for composite materials (Cutting edge for drilling + multi-flute)



DC	Tolerance
All	-0.02 - -0.08

H·A 28°

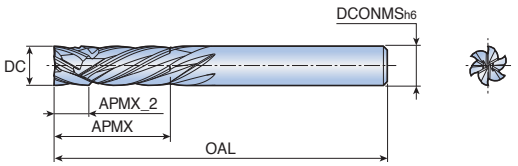
Cutting Condition F91

Designation		Feed (mm/rev)	Dimension (mm)				Grade
			DC	OAL	APMX	DCONMS	TTD610
RCDE	**040**	0.03-0.06	4	50	12	4	●
	060	0.07-0.15	6	65	18	6	●
	080	0.10-0.20	8	75	24	8	●
	100	0.15-0.30	10	85	30	10	●
	120	0.20-0.40	12	100	36	12	●

●: Standard items

RCOM

4 and 6 flute for finishing of composite materials (Left and right hand helix type)



DC	Tolerance
All	-0.02 - -0.04

4,6 | H·A 30° | Cutting Condition F91

Designation		Feed (mm/tooth)	Dimension (mm)						Grade
			DC	NOF	OAL	APMX	APMX_2	DCONMS	TTD610
RCOM	**4060**	0.02-0.04	6	4	65	18	6.7	6	●
	4080	0.02-0.05	8	4	75	24	9.2	8	●
	6100	0.03-0.06	10	6	85	30	7.9	10	●
	6120	0.04-0.08	12	6	100	36	9.2	12	●

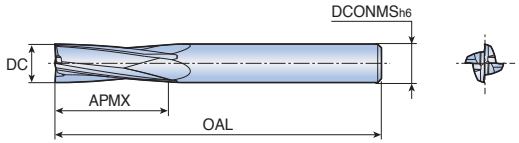
▸ NOF: Number of flutes

●: Standard items

▸ Notice: For best machining performance, the end mill's intersection point(APMX_2) should be positioned at the center of the workpiece thickness.

RDCF

4-8 flute for finishing of composite materials (Low helix angle)



DC	Tolerance
All	-0.02 - -0.04

4-8 | H·A 10° | Cutting Condition F91

Designation		Feed (mm/tooth)	Dimension (mm)					Grade
			DC	NOF	OAL	APMX	DCONMS	TTD610
RDCF	**4040**	0.01-0.03	4	4	50	12	4	●
	6040	0.01-0.03	4	6	50	12	4	●
	4060	0.02-0.04	6	4	65	18	6	●
	6060	0.02-0.04	6	6	65	18	6	●
	4080	0.03-0.05	8	4	75	24	8	●
	6080	0.03-0.05	8	6	75	24	8	●
	4100	0.04-0.06	10	4	85	30	10	●
	8100	0.04-0.06	10	8	85	30	10	●
	4120	0.04-0.08	12	4	100	36	12	●
	8120	0.04-0.08	12	8	100	36	12	●

▸ NOF: Number of flutes

●: Standard items

Recommended Cutting Conditions

Machining data for solid end mill

ISO	Material		Condition	Tensile strength (N/mm^2)	Hardness HB	Material No.
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1
		>=0.25%C	Annealed	650	190	2
		<0.55%C	Quenched and tempered	850	250	3
		>=0.55%C	Annealed	750	220	4
			Quenched and tempered	1000	300	5
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6
			Quenched and tempered	930	275	7
				1000	300	8
				1200	350	9
	High alloy steel, cast steel and tool steel		Annealed	680	200	10
			Quenched and tempered	1100	325	11
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12
			Martensitic	820	240	13
			Austenitic	600	180	14
K	Gray cast iron (GG)		Ferritic		160	15
			Pearlitic		250	16
	Cast iron nodular (GGG)		Ferritic		180	17
			Pearlitic		260	18
	Malleable cast iron		Ferritic		130	19
			Pearlitic		230	20
N	Aluminum - Wrought alloy		Not cureable		60	21
			Cured		100	22
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23
			Cured		90	24
		>12% Si	High temp.		130	25
	Copper alloys	>1% Pb	Free cutting		110	26
			Brass		90	27
			Electrolitic copper		100	28
	Non-metallic		Duroplastics, graphite		70 Shore D	29
			Hard rubber		55 Shore D	30
S	High temp. alloys	Fe based	Annealed		200	31
			Cured		280	32
		Ni or Co based	Annealed		250	33
			Cured		350	34
			Cast		320	35
	Titanium, Ti alloys		Pure	Rm 400	190	36
			Alpha+beta alloys cured	Rm 1050	310	37
H	Hardened steel		Hardened		55HRC	38
			Hardened		60HRC	39
	Chilled cast iron		Cast		400	40
	Cast iron nodular		Hardened		55HRC	41

▸ For more information of material groups, see the materials & grades "material conversion table"

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for solid end mill

Cutting speed Vc(m/min)								
CBN	Coated						Uncoated	Ceramic
TB7015	TT5505	TT5515	TT5520/TT5513	TT5525/TT5523	TT5543	TTA101	UF10N/UF10	TC3030
	260-300	260-280	210-270	210-220	170-200		140-200	
	200-250	200-230	160-220	160-180	140-170		120-160	
	160-230	160-220	130-200	130-180	120-150		100-150	
	160-230	160-220	130-200	130-180	100-140		100-140	
	140-200	140-180	110-160	110-140	90-130		90-130	
	160-230	160-220	130-200	130-180	100-150		110-150	
	120-200	120-180	100-160	100-140	90-130		80-130	
	140-200	130-180	100-160	100-140	90-130		90-130	
	140-200	140-180	110-160	110-140	90-130		100-130	
	140-200	130-180	100-160	100-140	90-130		90-130	
	80-150	70-120	60-110	60-100	50-90		50-80	
		80-160	60-140	60-130	50-110		60-110	
		60-150	50-130	50-120	40-100		40-100	
		60-120	50-110	50-100	40-80		40-80	
	100-300	80-260	60-240	60-210	50-180		60-180	
	130-280	130-240	100-220	100-190	100-170		90-170	
	150-280	150-270	120-240	120-220	110-200		100-200	
	90-280	90-270	70-240	70-220	110-200		60-200	
	150-280	150-270	120-240	120-220	110-200		100-200	
	140-250	140-240	110-220	110-190	100-180		100-170	
						800-900	800-900	
						700-800	700-800	
						800-900	800-900	
						750-850	750-850	
						400-450	400-450	
						500-550	500-550	
						500-550	500-550	
						350-380	350-380	
	20-40	20-40	20-30	20-30	20-30		10-20	
	20-30	20-30	20-30	20-30	20-30		10-20	
	20-30	20-30	20-30	20-30	20-30		20-50	300-1000
	20-30	20-30	20-30	20-30	20-30		20-50	300-1000
	30-80	30-70	20-60	20-60	20-60		20-50	300-1000
		30-70	20-60	20-60	20-60		20-30	
		30-70	20-60	20-60	20-60		20-30	
100-210	30-60						40-60	
90-200	30-40						20-30	
120-200	70-90	60-80	40-70				65-75	
120-200	30-60	30-50	20-40				40-45	

Recommended Cutting Conditions

Machining data for ceramic end mill

CRF/CRFB 4 teeth & 6 teeth

(Unit: mm)

Diameter	Cutting speed (m/min)	Feed (mm/tooth)	Shouldering, profiling		Slotting
			ap	ae	ae
Ø6	300-1000	0.02-0.03	-0.6xD	-0.1xD	-0.05xD
Ø8	300-1000	0.02-0.03	-0.6xD	-0.1xD	-0.05xD
Ø10	300-1000	0.02-0.04	-0.6xD	-0.1xD	-0.05xD
Ø12	300-1000	0.03-0.05	-0.6xD	-0.1xD	-0.05xD
Ø16	300-1000	0.03-0.05	-0.6xD	-0.1xD	-0.05xD

- ae must not exceed a maximum 1 mm
- Apply a 30% reduction in feed during slotting, ramping (less 2.5°)

ap: axial direction DOC ae: radial direction DOC

CRH 4 teeth

(Unit: mm)

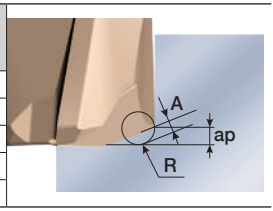
Diameter	Cutting speed (m/min)	Feed (mm/tooth)	Shouldering, profiling	
			ap	ae
Ø6	300-1000	0.1-0.15	-0.05xD	-0.6xD
Ø8	300-1000	0.1-0.2	-0.05xD	-0.6xD
Ø10	300-1000	0.1-0.2	-0.05xD	-0.6xD
Ø12	300-1000	0.1-0.3	-0.05xD	-0.6xD
Ø16	300-1000	0.1-0.3	-0.05xD	-0.6xD

- ae must not exceed a maximum 1 mm
- Apply a 30% reduction in feed during ramping (less 2.5°)

ap: axial direction DOC ae: radial direction DOC

Programming tip - CRH

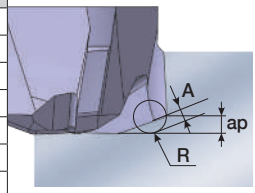
Diameter (CRH 4 teeth)	R (Program)	A Un-machined material thickness
Ø6	0.7	0.35
Ø8	0.9	0.47
Ø10	1.0	0.50
Ø12	1.4	0.70
Ø16	1.8	0.95



APEXMILL

Programming tip - HFM 2 / HFM 4

Designation	Diameter	R (Program)	A (Un-machined)	ap (Max)
HFM 2040	Ø4	0.38	0.25	0.3
HFM 2060	Ø6	0.65	0.43	0.5
HFM 2080	Ø8	0.87	0.57	0.75
HFM 2100	Ø10	1.09	0.71	1
HFM 2120	Ø12	1.3	0.86	1.1
HFM 4060	Ø6	0.59	0.38	0.5
HFM 4080	Ø8	0.78	0.51	0.7
HFM 4100	Ø10	0.85	0.55	0.75
HFM 4120	Ø12	1.17	0.77	1.05



Recommended Cutting Conditions

Machining data for composite material

Grade: TTD610

Material		Cutting Speed Vc(m/min)					
		RRFE		RCFE		RCDE	
		Shouldering	Slotting	Shouldering	Slotting	Shouldering	Slotting
CFRP	CFRP	100-300	50-120	100-300	50-120	80-250	50-120
	Honeycomb	150-250	100-200	150-250	100-200	120-200	100-200
GFRP	GFRP	50-150	30-70	50-150	30-70	50-130	30-70
	Honeycomb	150-250	100-200	150-250	100-200	120-200	100-200

Material		Cutting Speed Vc(m/min)					
		RCME		RCOM		RDCF	
		Shouldering	Slotting	Shouldering	Slotting	Shouldering	Slotting
CFRP	CFRP	80-250	50-120	50-200	50-120	100-300	50-120
	Honeycomb	120-200	100-200	-	-	-	-
GFRP	GFRP	50-130	30-70	50-100	30-70	50-150	30-70
	Honeycomb	120-200	100-200	-	-	-	-

Material	RCDE & H-Drill				
	Drilling				
	Cutting speed Vc (m/min)	Drill diameter (mm) vs. Feed (mm/rev)			
		Ø3.0-Ø6.0	Ø6.1-Ø8.0	Ø8.1-Ø10.0	Ø10.1-Ø12.7
CFRP	50-150	0.02-0.07	0.03-0.08	0.03-0.08	0.04-0.10
GFRP	40-120	0.02-0.07	0.03-0.08	0.03-0.08	0.04-0.10

MILLING

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Guide to Icons

Entering Angle

Angled Screw

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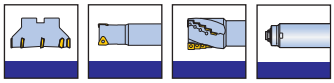

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Milling Inserts	
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Inserts	E254
Tailor-made Inserts	E320
Recommended Cutting Conditions	E322
Mounting Reference	E326
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Tool Selection Guide

Face mills

Series			TANGSPEED	MILLRUSH	MILL2RUSH	MILL2RUSH	WINMILL
			4T-TF90	3P TF90	6N TF90	SCRM90TN	TFM90AV
Pages			E44	E45-E47	E48-E49	E50-E51	E52
Approach angle			90°	90°	90°	90°	90°
Max. depth of cut(mm)			8.3-12.5	4.7-15	4.1-9.2	13-15	10
Diameter range(mm)			Ø40-Ø200	Ø32-Ø250	Ø40-Ø250	Ø50-Ø250	Ø40-Ø63
Insert			LPK(H)U 0904 LPKU 1407	3PK(H)T 0603 3PK(H)T 1004 3PK(H)T 1505 3PK(H)T 1906	6NKU 0403 6NGU 0604 6NGU 0905	TNMX 1806 TNM(G)X 2207	AVKT 1004 AVCT 1004-AL
Application	Facing		●	●	●	●	●
	High feed milling						○
	Shouldering		●	●	●	●	●
	Slotting		●	●	●	●	●
	Straight ramping		●	●			●
	Helical ramping		●	●			●
	Side slotting						
	Profiling						○
	Step down						●
	Counter boring						

Tool Selection Guide

Face mills

CHASE1MILL	CHASE2MILL	CHASE4MILL	CHASE3MILL	CHASEALU	CHASE4FINISH
TFM90AX 2S-TFM90AP TFM90AP	**TFM90AN**	**4N TF90**	**8D-TF90**	**TFM90XEV**	For Finishing **4W-TF90**
E53 -E56	E57	E58-E59	E60-E62	E63	E64
90°	90°	90°	90°	90°	-
5.5-17.9	11-15	3.5-13.8	5.0-8.5	16-21	0.5
Ø32-Ø200	Ø40-Ø200	Ø32-Ø200	Ø32-Ø160	Ø40-Ø160	Ø50-Ø160
AXM(C)T 0602 APK(C)T 09T3 APK(C)T 1204 APK(C)T 1705 APKT1907	ANM(H)X 1106 ANM(H)X 1607	4NK(H)T 0402 4NK(H)T 0603 4NK(H)T 0904 4NKT 1106 4NKT 1407	SQKU 0703 SQK(H)U 1004 SQK(H)U 1206	XEVT 1605 XEVT 2206	4WHU 1207
●	●	●	●	●	●
○		○			
●	●	●	●	●	
●	●	●	●	●	
●	●	●		●	
●	●	●		●	
○		○			
		●		●	

● Recommended, ○ Suitable

Tool Selection Guide

Face mills

Series			CHASE2QUAD	CHASE2QUAD	LIONMILL	LIONMILL	CHASE2QUAD
			For Finishing **TFM90SNS**	For Finishing **TQ90SNS**	**LM90TP**	**LM90SE**	**TFM90SN** **TFM88SN**
Pages			E65	E66	E67	E68	E69-E70
Approach angle			90°	90°	90°	90°	90°, 88°
Max. depth of cut(mm)			1.0	1.0	17.6	17.0	12.0
Diameter range(mm)			Ø50-Ø250	Ø250-Ø400	Ø80-Ø315	Ø125-Ø315	Ø50-Ø200
Insert			SNEX 1204 SNET 1205	SNEX 1204 SNET 1205	TPKN 2204	SEKX 2107	SNGX 1306 SNGX 1306 ZN
Application	Facing		●	●	●	●	●
	High feed milling						
	Shouldering				●	●	●
	Slotting						
	Straight ramping						
	Helical ramping						
	Side slotting						
	Profiling						
	Step down						
	Counter boring						

Tool Selection Guide

Face mills

CHASE2QUAD	LIONMILL	CHASEMILL	CHASE10MILL	LIONMILL	CHASE8SFEED
TFM75SN	**LM75SP**	**TFM75AP**	**TFM65PT**	**LM60SC**	**8D-TF45**
E71	E72	E73	E74	E75-E76	E77-E78
75°	75°	75°	65°	60°	45°
9.5	9.5-12.5	3.9	3.3-6.5	13.0-18.0	4.2-6
Ø50-Ø250	Ø80-Ø315	Ø80-Ø125	Ø40-Ø125	Ø125-Ø315	Ø40-Ø200
SNM(G)X 1306 EN SNMX 1306 XTN	SPKN 1203 SPKN 1504	APKT 1705 PER-M APKT 1705 PER-EM	PTKU 0503 PTKU 1006	SCKN 2107 SCKN 2708	SQKU 1105 SQKU 1406
●	●	●	●	●	●

● Recommended, ○ Suitable

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Tool Selection Guide

Face mills

Series			CHASE 12 MILL 12D-TF45	CHASE 2 HEPTA 14D-F45XN	CHASE 2 HEPTA 14D-F45XNH	CHASE 2 HEPTA 14D-F45XNW	CHASE HEPTA 7S-F45
Pages			E79-E80	E81-E82	E83	E84	E85
Approach angle			45°	45°	45°	45°	45°
Max. depth of cut(mm)			3.0-5.0	3.5-5.0	3.5-5.0	5.0	3.2
Diameter range(mm)			Ø50-Ø250	Ø50-Ø250	Ø63-Ø125	Ø80-Ø315	Ø32-Ø125
Insert			HXK(H)U 0605 HXK(H)U 1007	XNM(H)U 0605 XNM(H)U 0906	XNM(H)U 0605 XNM(H)U 0906	XNHU 0906	7EMT 0604
Application	Facing		●	●	●	●	●
	High feed milling						
	Shouldering						
	Slotting						
	Straight ramping						●
	Helical ramping						●
	Side slotting						
	Profiling						
	Step down						
	Counter boring						

Tool Selection Guide

Face mills

CHASE2QUAD	CHASE2QUAD	CHASE2QUAD	CHASE2QUAD	CHASE2MILL	LIONMILL
TFM45SN	**TFM45SNS**	**TFM45SNS-CA**	**TFM45SNW TQ45SNW**	**TFM45AN**	**LM45SD**
E86	E87	E88	E89	E90	E91
45°	45°	45°	45°	45°	45°
7.0	8.8	8.8	8.8	8.4	6.5-8.7
Ø40-Ø250	Ø63-Ø250	Ø125-Ø315	Ø80-Ø355	Ø50-Ø160	Ø80-Ø315
SNM(G)X 1306 AN SNMX 1306 XTN	SNMX 1607 SNHX 1606	SNMX 1607 SNHX 1606	SNHX 1606	ANHX 1607 ANR-M	SDKN 1203 SDKN 1504
●	●	●	●	●	●

● Recommended, ○ Suitable

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Tool Selection Guide

Face mills

Series			LM45SE	TFMRNS	TFMRY	TFMRN	TFMRP
Pages			E92	E93-E94	E95-E97	E98	E99
Approach angle			45°	-	-	-	-
Max. depth of cut(mm)			6.5-8.7	5.0-8.0	4.0-10.0	6.3	6.3
Diameter range(mm)			Ø80-Ø250	Ø32-Ø200	Ø32-Ø250	Ø50-Ø80	Ø50
Insert			SEKN 1203 SEKN 1504	RNMU 1004 RNMU 1205 RNMU 1606	RYM(H)X 0803 RYM(H)X 1004 RYM(H)X 1205 RYM(H)X 1606 RYMX 2007	RNGN 1207 FL	RPGN 1204 FL
Application	Facing		●	●	●	●	●
	High feed milling						
	Shouldering						
	Slotting						
	Straight ramping			●	●	●	●
	Helical ramping			●	●	●	●
	Side slotting						
	Profiling			●	●	●	●
	Step down						
	Counter boring						

Tool Selection Guide

Face mills

CERAMIC SPEED	CERAMIC SPEED	CHASE 10 MILL	CHASE 8 SPEED	WIN 4 FEED	CHASE 4 FEED
TFMBN-09CH	**TFMBN-12**	**TFMPT**	**8D-TF20**	**TFMBLV**	**TFMBL**
E100	E101	E102	E103	E104	E105-E106
-	-	25°	20°	-	-
1.5	2.5	1.5-3.0	1.8-2.5	1.0	1.0-2.0
Ø40-Ø50	Ø50-Ø80	Ø40-Ø200	Ø50-Ø125	Ø32-Ø66	Ø32-Ø200
BNGX 0904	BNGX 1207	PTKU 0503 PTKU 1006	SQKU 1105	BLMV 0603	BLMP 0603 BLMP 0904 BLMP 1105
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●		●	●
●	●	●		●	●
●	●	●		●	●
				●	

● Recommended, ○ Suitable

Tool Selection Guide

Face mills

Series			CHASE2FEED TFMBL-13	CHASEFEED TFMSB	CHASEFEED TFMSR		
Pages			E107-E108	E109-E110	E111-E112		
Approach angle			-	-	-		
Max. depth of cut(mm)			2.0	1.0-2.0	0.7-2.0		
Diameter range(mm)			Ø40-Ø250	Ø32-Ø250	Ø40-Ø200		
Insert			BLMP 1306	SBMT 0603 SBMT 0904 SBMT 1306	SRMT 0703 SRMT 1004 SRMT 1406		
Application	Facing		●	●	●		
	High feed milling		●	●	●		
	Shouldering						
	Slotting						
	Straight ramping		●	●	●		
	Helical ramping		●	●	●		
	Side slotting						
	Profiling		●	●	●		
	Step down						
	Counter boring						

Tool Selection Guide

End mills & modular heads

Series			WinMill	TangSpeed	TangSpeed	MillRush	Mill2Rush
			2S-TE90CV	4T-MTE90	4T-TE90	3P-TE90	6N TE90
Pages			E113-E114	E115-E116	E117-E118	E119-E124	E125-E126
Approach angle			90°	90°	90°	90°	90°
Max. depth of cut(mm)			5.0	4.6	4.6-8.3	3.5-15.0	4.1-9.2
Diameter range(mm)			Ø6-Ø20	Ø10-Ø30	Ø10-Ø40	Ø8-Ø50	Ø20-Ø40
Insert			CVK(H)T 0502	LPHU 05	LPK(H)U 0502 LPK(H)U 0904	3PKT 0402 3PK(H)T 0603 3PK(H)T 1004 3PK(H)T 1505 3PK(H)T 1906	6NKU 0403 6NGU 0604 6NGU 0905
Application	Facing		●	●	●	●	●
	High feed milling		○				
	Shouldering		●	●	●	●	●
	Slotting		●	●	●	●	●
	Straight ramping		●	●	●	●	
	Helical ramping		●	●	●	●	
	Chamfer & serration						
	Profiling		○				
	Plunging						
	Step down						
	Counter boring						

● Recommended, ○ Suitable

Tool Selection Guide

End mills & modular heads

Series			MILL2RUSH SCRM90TN	WINMILL TE90AV	CHASEMILL MTE90AX-06-L	CHASEMILL TE90AX 2S-TE90AP TE90AP	CHASE2MILL TE90AN
Pages			E127	E128-E129	E130	E131-E139	E140-E141
Approach angle			90°	90°	90°	90°	90°
Max. depth of cut(mm)			13.0	10.0	5.5	5.5-17.9	11.0-15.0
Diameter range(mm)			Ø35-Ø40	Ø16-Ø40	Ø8-Ø30	Ø8-Ø42	Ø25-Ø50
Insert			TNMX 1806	AVKT 1004 AVCT 1004-AL	AXCT 06-L	AXM(C)T 0602 APK(C)T 09T3 APK(C)T 1204 APK(C)T 1705 APKT 1907	ANM(H)X 1106 ANM(H)X 1607
Application	Facing		●	●	●	●	●
	High feed milling			○		○	
	Shouldering		●	●	●	●	●
	Slotting		●	●	●	●	●
	Straight ramping			●		●	●
	Helical ramping			●		●	●
	Chamfer & serration						
	Profiling			○		○	
	Plunging			●			
	Step down			●			
	Counter boring						
	Drill mill						

Tool Selection Guide

End mills & modular heads

CHASE4MILL	CHASE2MILL	CHASEALU	CHASEALU	MILLRUSH	CHASEQUAD
4N TE90	**8D-TE90**	**TE90XEV-HSK63A**	**TE90XEV**	**3P-TCF**	**TSF**
E142-E147	E148-E151	E152	E153	E154-E155	E156
90°	90°	90°	90°	30°-60°	90°
3.5-13.8	5.0-8.5	16	16-21	2.5-5.9	5.6-13.4
Ø8-Ø42	Ø16-Ø40	Ø25-Ø50	Ø25-Ø40	Ø3.3-Ø31	Ø12-Ø50
4NKT 0402 4NK(H)T 0603 4NK(H)T 0904 4NKT 1106 4NKT 1407	SQKU 0703 SQK(H)U 1004 SQK(H)U 1206	XEVT 1605	XEVT 1605 XEVT 2206	3PKT 0402 3PK(H)T 0603 3PK(H)T 1004	XOMT 0602 SPMG(T) 0904 SPMG(T) 1104 SPMG(T) 1405
●	●	●	●		●
○					
●	●	●	●		●
●	●	●	●		●
●		●	●		
●		●	●		
				●	
○					
					●
●		●	●		
					●

● Recommended, ○ Suitable

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Tool Selection Guide

End mills & modular heads

Series			CHASEQUAD TDM	CHASEQUAD TCF	CHASEHEPTA 7S-E45	SPEEDBARREL TBR	CHASE2MOLD TERNS
Pages			E157	E158	E159	E160-E162	E163-E164
Approach angle			90°	45°-75°	45°	37°-90°	-
Max. depth of cut(mm)			12-40	-	3.2	6.3-12.0	5.0-8.0
Diameter range(mm)			Ø12-Ø50	Ø8.3-Ø38.9	Ø32-Ø50	Ø12-Ø32	Ø25-Ø50
Insert			XOMT 0602 SPMG(T) 0904 SPMG(T) 1104 SPMG(T) 1405	SPMG(T) 1104	7EMT 0604	BRHU 06R2 BRHU 12R3	RNMU 1004 RNMU 1205 RNMU 1606
Application	Facing		●		●		●
	High feed milling						
	Shouldering		●				
	Slotting		●				
	Straight ramping		●		●		●
	Helical ramping		●		●		●
	Chamfer & serration			●	●		
	Profiling					●	●
	Plunging		●				
	Step down		●				
	Counter boring		●				
	Drill mill		●				

Tool Selection Guide

End mills & modular heads

CHASEMOLD	FINEBALL	FINEBALL	CHASESPEED	DUETBALL	TRIOBALL
TERY	**TNF**	**TNFR**	**TERP**	**2F**	**3F**
E165-E167	E168-E170	E171-E173	E174-E175	E176-E177	E178
-	-	-	-	-	-
4.0-10.0	-	-	4.7-6.3	11.8-55.3	39-94
Ø16-Ø50	Ø6-Ø32	Ø6-Ø32	Ø20-Ø40	Ø16-Ø32	Ø32-Ø50
RYM(H)X 0803 RYM(H)X 1004 RYM(H)X 1205 RYM(H)X 1606 RYM(H)X 2007	NFB(NFR) NFLB NFCB	NFR	RPGN 0903 FL RPGN 1204 FL	2FB APKT 09T3 APKT 1204	3FB CNHX 1311 CNHX 1606
●		●	●		
		●			
		●			
●	●	●	●	●	●
●	●	●	●	●	●
●	●	●	●	●	●
	○	○			
	○	○			

● Recommended, ○ Suitable

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Tool Selection Guide

End mills & modular heads

Series			CHASE2BALL **TDB50X**	CHASE2BALL **TDB50X-WT**			
Pages			E179	E180			
Approach angle			-	-			
Max. depth of cut(mm)			59-69	59-69			
Diameter range(mm)			Ø50	Ø50			
Insert			6RBE 50-M	6RBE 50-M			
Application	Facing						
	High feed milling						
	Shouldering						
	Slotting						
	Straight ramping		●	●			
	Helical ramping		●	●			
	Profiling		●	●			
	Plunging						
	Step down						
	Counter boring						
	Drill mill						

Tool Selection Guide

High feed end mills & modular heads

Series			THFN	TEBN	TEBCS	TEBNS	TEPT
Pages			E181-E182	E183-E184	E185	E186	E187
Approach angle			20°	-	-	-	25°
Max. depth of cut(mm)			0.3-0.5	1.0-1.5	0.5	1.0	1.5-3.0
Diameter range(mm)			Ø6-Ø8	Ø16-Ø40	Ø10-Ø40	Ø16-Ø32	Ø20-Ø40
Insert			HFN 060 HFN 080	BNGX 0603 BNGX 0904	BCGT 0403	BNGT 0603	PTKU 0503 PTKU 1006
Application	Facing		●	●	●	●	●
	High feed milling		●	●	●	●	●
	Shouldering		○	○			○
	Slotting						
	Straight ramping		●	●	●	●	●
	Helical ramping		●	●	●	●	●
	Profiling		●	●	●	●	●
	Plunging						
	Step down						
	Counter boring						
	Drill mill						

● Recommended, ○ Suitable

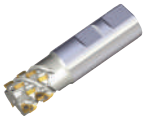
Tool Selection Guide

High feed end mills & modular heads

Series			WIN4FEED TEBLV	CHASE4FEED TEBL	CHASE2FEED TEBL-13	CHASEFEED TESB	CHASEFEED TESR
Pages			E188-E190	E191-E198	E199	E200-E202	E203-E206
Approach angle			-	-	-	-	-
Max. depth of cut(mm)			0.7-1.0	0.5-2.0	2.0	1.0-2.0	0.7-2.0
Diameter range(mm)			Ø16-Ø40	Ø8-Ø42	Ø32-Ø42	Ø16-Ø42	Ø16-Ø42
Insert			BLMV 0603	BLMP 0402 BLMP 0603 BLMP 0904 BLMP 1105	BLMP 1306	SBMT 0603 SBMT 0904 SBMT 1306	SRMT 0703 SRMT 1004 SRMT 1406
Application	Facing		●	●	●	●	●
	High feed milling		●	●	●	●	●
	Shouldering		○	○	○	○	
	Slotting						
	Straight ramping		●	●	●	●	●
	Helical ramping		●	●	●	●	●
	Profiling		●	●	●	●	●
	Plunging		●				
	Step down		●				
	Counter boring						
	Drill mill						

Tool Selection Guide

Extended flute cutters

Series			TANGSPEED 4T-TEF	TANGSPEED 4T-TES	CHASEVQUAD 4S-TEF 4S-TES	CHASEVQUAD 4S-TFP 4S-TEF-B 4S-TES-B	MILLRUSH 3P TEF 3P TES
							
Pages			E207	E208	E209-E210	E211-E213	E214-E215
Approach angle			90°	90°	90°	90°	90°
Max. depth of cut(mm)			15-51	34-56	52-77.9	34-76	20-83
Diameter range(mm)			Ø16-Ø40	Ø50-Ø100	Ø32-Ø80	Ø40-Ø80	Ø20-Ø100
Insert			LPK(H)U 0502 LPK(H)U 0904	LPKU 1407	SVKT 0938 SVK(H)T 1145	SVKT 0938 SVK(H)T 1145	3PK(H)T 0603 3PK(H)T 1004 3PK(H)T 1505 3PK(H)T 1906
Application	Facing						
	High feed milling						
	Shouldering		●	●	●	●	●
	Slotting						
	Trochoidal milling		●	●	●	●	
	Straight ramping						
	Helical ramping						
	Profiling						
	Plunging						
	Step down						
	Counter boring						

● Recommended, ○ Suitable

Tool Selection Guide

Extended flute cutters

Series	MILL2RUSH	CHASE2MILL	WinMill	CHASEMILL	CHASEMILL
	TEF-TN TES-TN	TEF-AN TES-AN	TEF-AV10 TES-AV10	TEF-AX 2S-TEF-AP TEF-AP	TES-AP
Pages	E216-E217	E218-E219	E220-E221	E222	E223
Approach angle	90°	90°	90°	90°	90°
Max. depth of cut(mm)	48-71	40-69	27-44	16-45	45-88
Diameter range(mm)	Ø50-Ø100	Ø32-Ø100	Ø25-Ø50	Ø16-Ø40	Ø50-Ø100
Insert	TNMX 1806	ANM(H)X 1106 ANM(H)X 1607	AVKT 1004 AVCT 1004-AL	AXM(C)T 0602 APK(C)T 09T3 APK(C)T 1204 APK(C)T 1705	APK(C)T 1204 APK(C)T 1705
Application Facing					
High feed milling					
Shouldering	●	●	●	●	●
Slotting					
Trochoidal milling				●	●
Straight ramping					
Helical ramping					
Profiling					
Plunging					
Step down					
Counter boring					

Tool Selection Guide

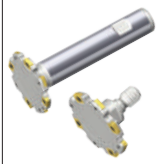
Extended flute cutters

CHASEQUAD					
TEF **TES** 					
E224					
90°					
23.8-48.4					
Ø32-Ø80					
SPMG(T) 0904 SPMG(T) 1104 SPMG(T) 1405					
●					

● Recommended, ○ Suitable

Tool Selection Guide

Slotting cutters

Series			TOPSLOT TSM-TS16	TOPSLOT TSM-SL	TOPSLOT TSM-FD-Z	TOPSLOT TSM-FD-ZN	TOPSLOT TSM-FD-S/W-ZN
							
Pages			E225-E226	E227-E228	E229-E230	E231	E232-E234
Approach angle			-	-	-	-	-
Max. width of cut(mm)			1.2-6.0	3-6	3-10	10-20	10-26
Diameter range(mm)			Ø32.2-Ø80	Ø25-Ø63	Ø63-Ø250	Ø80-Ø125	Ø100-Ø315
Insert			TS16	SLOT	ZNHT	ZNHU 080 ZNHU 110	ZNHU 080 ZNHU 110 ZNHU 140
Application	Facing		●				
	Shouldering						
	Slotting						
	T slotting		●	●			
	Side slotting		●	●	●	●	●
	Internal groove milling		●	●			
	Bottom shouldering		●	●	●	●	●
	Slitting				●	●	●

Tool Selection Guide

Slotting cutters

TOPSLOT	TOPSLOT	TOPSLOT	TSC Slotting Cutter	TANGSPEED	
TSM-FF-Z	**TSM-FF-ZN**	**TSM-FF-S/W-ZN**	**TSC**	**4T-TSM-W**	
E235	E236	E237-E239	E240	E241	
-	-	-	-	-	
3-10	10-20	10-26	1.6-4.52	7	
Ø80-Ø160	Ø63-Ø125	Ø100-Ø315	Ø75-Ø160	Ø16-Ø40	
ZNHT	ZNHU 080 ZNHU 110	ZNHU 080 ZNHU 110 ZNHU 140	TIMC TIMJ TIPV	LXHU 0502	
●	●	●		●	
●	●	●	●	●	
●	●	●		●	
			●		

● Recommended, ○ Suitable

TaeguTec

Tool Selection Guide

Slotting cutters

Series			MAXITANG	MAXITANG	MAXISPEED	MAXISPEED	MAXISPEED
			4T-TSM-TR	4T-TE90-TR	TR-S	TR-F	TR-T-W55 TR-T-M60
Pages			E242	E243	E244	E245	E246-E247
Approach angle			-	-	-	-	-
Max. width of cut(mm)			7	4.6	3-10	8-10	7.7-9.5
Diameter range(mm)			Ø23-Ø40	Ø25-Ø40	Ø24.7-Ø39.7	Ø24.25-Ø39.25	Ø24.7-Ø39.7
Insert			LXHU 0502	LPK(H)U 0502	-	-	-
Application	Facing			●		●	
	Shouldering			●		●	
	Slotting						
	T slotting		●		●		
	Side slotting		●		●		
	Internal groove milling						
	Bottom shouldering		●		●		
	Slitting						
	External threading						●
	Internal threading						●

Tool Selection Guide

Milling inserts

Series	WinMill	MaxiTang	TangSpeed	MillRush	Mill2Rush
	CVK(H)T 0502	LXHU 05-04	LPK(H)U 0502 LPK(H)U 0904 LPKU 1407	3PKT 0402 3PK(H)T 0603 3PK(H)T 1004 3PK(H)T 1505 3PK(H)T 1906	6NKU 0403 6NGU 0604 6NGU 0905
Material	P M N S	P M K S H	P M K S H	P M K N S H	P M K N S H
Pages	E281	E285	E284	E256-E257	E262-E263
Approach angle	90°	90°	90°	90°	90°
Max. depth of cut(mm)	0.5-5	*	4.6-12.5	3.5-15	4.1-9.2
Application Facing	●		●	●	●
High feed milling	○				
Shouldering	●		●	●	●
Slotting	●		●	●	●
Straight ramping	●		●	●	
Helical ramping	●		●	●	
Step down					
Profiling	○				
T slotting		●			
Side slotting		●			
Bottom shouldering		●			

▸ '*' Marked: For CDX, refer to the cutter page

● Recommended, ○ Suitable

TaeguTec Member IMC Group

Tool Selection Guide

Milling inserts

Series			MILL2RUSH TNMX 1806 TNM(G)X 2207	WINMILL AVK(C)T 1004	CHASEMILL AXCT 0602-L	CHASEMILL AXM(C)T 0602 APK(C)T 09T3 APK(C)T 1204 APK(C)T 1705 APKT 1907	CHASEMILL APCT 12-PCD35
Material			P M K S H	P M K N S H	P M S	P M K N S H	N
Pages			E312	E274	E273	E266-E273	E267
Approach angle			90°	90°	90°	90°	90°
Max. depth of cut(mm)			13-15	1.0-10	5.5	0.5-17.9	3.5
Application	Facing		●	●	●	●	●
	High feed milling			○		○	
	Shouldering		●	●	●	●	●
	Slotting		●	●	●	●	●
	Straight ramping			●		●	
	Helical ramping			●		●	
	Chamfer & serration						
	Profiling			○		○	
	Plunging						
	Step down						
	Counter boring						

Tool Selection Guide

Milling inserts

CHASE2MILL	CHASE4MILL	CHASE8MILL	CHASE8SPEED	CHASEALU	CHASE4FINISH
ANM(H)X 1106 ANM(H)X 1607	4NKT 0402 4NK(H)T 0603 4NK(H)T 0904 4NK(H)T 1106 4NK(H)T 1407	SQKU 0703 SQK(H)U 1004 SQK(H)U 1206	SQKU 1105 SQKU 1406	XEVT 1605 XEVT 2206	4WHU 1207
P M K N S H	P M K N S H	P M K S H	P M K S H	N	P M K N S H
E265	E258-E260	E305	E306-E307	E315	E261
90°	90°	90°	20°,45°	90°	90°
11-15	0.5-13.8	5.0-8.5	1.8-6.0	14-21	0.5
●	●	●	●	●	●
	○				
●	●	●		●	
●	●	●		●	
●	●			●	
●	●			●	
			●		
	○				
	●			●	

● Recommended, ○ Suitable

TaeguTec

Tool Selection Guide

Milling inserts

Series			CHASE2QUAD SNEX 1204 SNET 1205	LIONMILL TPKN 2204	LIONMILL SEKX 2107	CHASEVQUAD SVK(H)T 0938 SVK(H)T 1145	CHASE2QUAD SNGX 1306... SNGX 1306 ZN
Material			P K	P M K	P K	P M K S H	P M K
Pages			E299	E313	E297	E309	E301
Approach angle			90°	90°	90°	90°	90°
Max. depth of cut(mm)			1.0	17.6	17	7-10	10-20
Application	Facing		●	●	●		●
	High feed milling						
	Shouldering			●	●	●	●
	Slotting			●		●	
	Straight ramping						
	Helical ramping						
	Chamfer & serration						
	Profiling						
	Plunging						
	Step down						
	Counter boring						

Tool Selection Guide

Milling inserts

CHASE2QUAD	LIONMILL	CHASEMILL	CHASE10MILL	LIONMILL	CHASE12MILL
SNM(G)X 1306 EN... SNMX 1306 XTN	SPKN 1203 SPKN 1504	APKT 1705	PTKU 0503 PTKU 1006	SCKN 2107 SCKN 2708	HXK(H)U 0605 HXK(H)U 1007
P M K	P M K	P M K N S H	P M K	P K	P K
E300	E304	E268-E269	E290	E296	E283
75°	75°	75°	65°	60°	45°
9.5	9.5-12.5	3.9	3.3-6.5	13-18	3.0-5.0
●	●	●	●	●	●
●	●		●	●	●

● Recommended, ○ Suitable

Tool Selection Guide

Milling inserts

Series			CHASE 2 HEPTA XNM(H)U 0605 XNM(H)U 0906	CHASE HEPTA 7EMT 0604	CHASE 2 QUAD SNM(G)X 1306 AN... SNMX 1306 XTN	CHASE 2 QUAD SNMX 1607 SNHX 1606	CHASE 2 MILL ANHX 1607
Material			P M K	P M K	P M K N	P M K	P M K N S
Pages			E316-E317	E264	E300	E302	E265
Approach angle			45°	45°	45°	45°	45°
Max. depth of cut(mm)			1.0-5.0	3.2	6-7	8.8	8.4
Application	Facing		●	●	●	●	●
	High feed milling						
	Shouldering						
	Slotting						
	Straight ramping			●			
	Helical ramping			●			
	Chamfer & serration		●	●	●	●	
	Profiling						
	Plunging						
	Step down						
	Counter boring						

Tool Selection Guide

Milling inserts

LIONMILL	SPEEDBARREL	CHASE2MOLD	CHASEMOLD	CHASESPEED	CERAMICSPEED
SDKN 1203 SDKN 1504 SEKN 1203 SEKN 1504	BRHU 06R2 BRHU 12R3	RNMU 1004 RNMU 1205 RNMU 1606	RYM(H)X 0803 RYM(H)X 1004 RYM(H)X 1205 RYM(H)X 1606 RYMX 2007	RNGN 1207 FL RPGN 0903 FL RPGN 1204 FL	BCGT 0403
P	P M K S H	P M K S H	P M K S H	S	S
E296-E297	E280	E292	E293-E294	E291	E278
45°	90°,75°,45°	-	-	-	-
6.5-8.7	4.2-12.0	5-8	4-10	4.7-6.3	0.5
●		●	●	●	●
					●
					○
		●	●	●	●
		●	●	●	●
●					
	●	●	●	●	●

● Recommended, ○ Suitable

TaeguTec

Tool Selection Guide

Milling inserts

Series			CERAMICSPEED BNGT 0603	CERAMICSPEED BNGX 0603 BNGX 0904	CERAMICSPEED BNGX 1207	CHASEMILL PTKU 0503 PTKU 1006	WIN4FEED BLMV 0603
Material			S	S	S	P M K	P M K S H
Pages			E278	E279	E279	E290	E277
Approach angle			-	-	-	25°	-
Max. depth of cut(mm)			1.0	1.5	2.5	1.5-3.0	0.7-1.0
Application	Facing		●	●	●	●	●
	High feed milling		●	●	●	●	●
	Shouldering		○	○	○	○	○
	Slotting						
	Straight ramping		●	●	●	●	●
	Helical ramping		●	●	●	●	●
	Chamfer & serration						
	Profiling		●	●	●	●	●
	Plunging						●
	Step down						●
	Counter boring						
	Drill mill						

Tool Selection Guide

Milling inserts

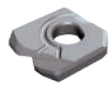
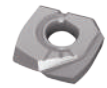
CHASE4FEED	CHASE2FEED	CHASEFEED	CHASEFEED	MILLRUSH	CHASEQUAD
BLMP 0402 BLMP 0603 BLMP 0904 BLMP 1105	BLMP 1306	SBMT 0603 SBMT 0904 SBMT 1306	SRMT 07 SRMT 10 SRMT 14	3PKT 0402 3PK(H)T 0603 3PK(H)T 1004	SPMG(T) 0904 SPMG(T) 1104 SPMG(T) 1405 XOMT 0602
P M K S H	P M K S H	P M K S H		P M K N S H	P M K
E275	E276	E295	E308	E256-E257	E303
-	-	-		30°-60°	15°-45°, 90°
0.5-2.0	2.0	1.0-2.0	0.7-2.0	-	-
●	●	●	●		●
●	●	●	●		
○	○	○			●
					●
●	●	●	●		●
●	●	●	●		●
				●	●
●	●	●	●		
					●
					●
					●
					●

● Recommended, ○ Suitable

TaeguTec

Tool Selection Guide

Milling inserts

Series			MANRUSH	FINEBARREL	FINEBARREL	FINEBALL	FINEBALL
			HFN 060 HFN 080	NFLB	NFCB	NFB	NFR
							
Material			P M K S H	P M K S H	P M K S H	P M K S H	P M K S H
Pages			E282	E287	E287	E286	E288-E289
Approach angle			-	-	-	-	-
Max. depth of cut(mm)			0.3-0.5	-	-	-	-
Application	Facing		●				●
	High feed milling		●				●
	Shouldering		○				●
	Slotting						●
	Straight ramping		●			●	●
	Helical ramping		●			●	
	Chamfer & serration						○
	Profiling		●	●	●	●	●
	Plunging					○	○
	Step down						
	Counter boring					○	○
	Drill mill						

Tool Selection Guide

Milling inserts

Series			DUET BALL 2FB	TRIO BALL 3FB	CHASE 2 BALL 6RBE	TOP SLOT TS16	TOP SLOT SLOT
Material			P M K S H	P M K S H	P M K S H	P M K S H	P M K
Pages			E254	E255	E263	E314	E298
Approach angle			-	-	-	-	-
Max. depth of cut(mm)			11.8-44.7	39-94	59-69	4.8	*
Application	Facing					●	
	High feed milling						
	Shouldering						
	Slotting		●	●	●		
	Straight ramping		●	●	●		
	Helical ramping						
	Chamfer & serration						
	Profiling		●	●	●		
	Side slotting					●	●
	Internal groove milling						
	Bottom shouldering						
	Slitting						

▸ *: For CDX, refer to the cutter page

● Recommended, ○ Suitable

TaeguTec Member IMC Group

Tool Selection Guide

Milling inserts

Series			TOPSLOT ZNHT	TOPSLOT ZNHU	TSC slotting cutter TIMC TIMJ TIPV	Tailor-made Insert LNC PMIN SNA SNB	
Material			P M K N	P M K	P M K N	P M K N S H	
Pages			E318	E319	E310-E311	E320-E321	
Approach angle			-	-	-	-	
Max. depth of cut(mm)			*	*		-	
Application	Facing					●	
	Shouldering					●	
	Slotting					●	
	T slotting						
	Side slotting		●	●	●	●	
	Internal groove milling						
	Bottom shouldering						
	Slitting		●	●	●		

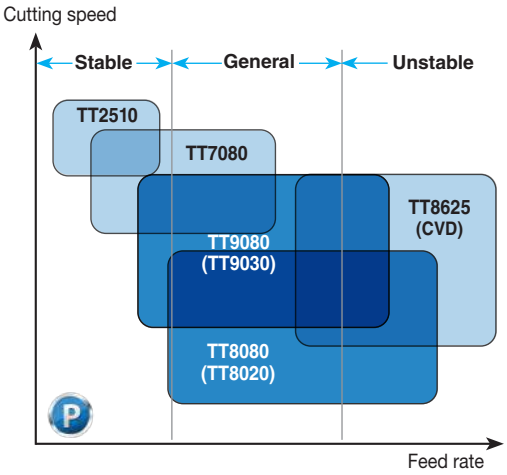
▸ *: For CDX, refer to the cutter page

● Recommended, ○ Suitable

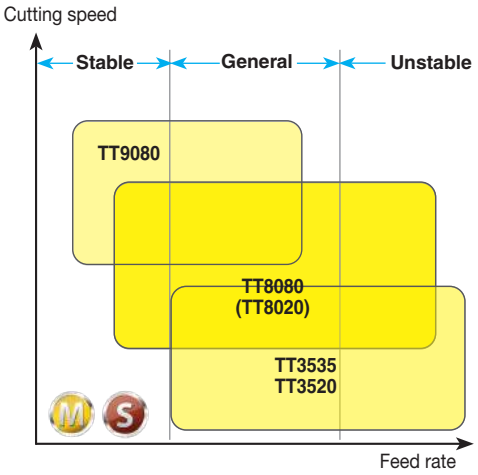
Grades

Selection guide for milling grades

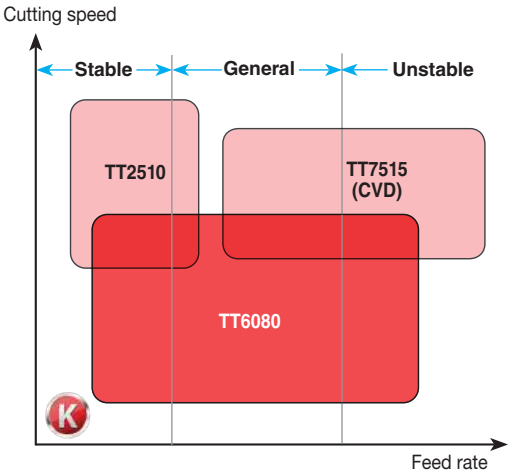
For steel



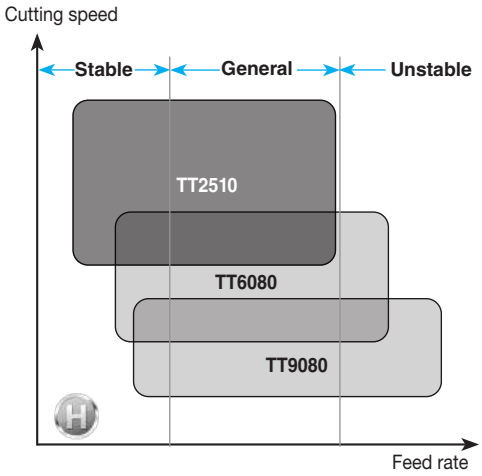
For stainless steel & super alloy



For cast iron



For hardened material



Grades

Carbide grades

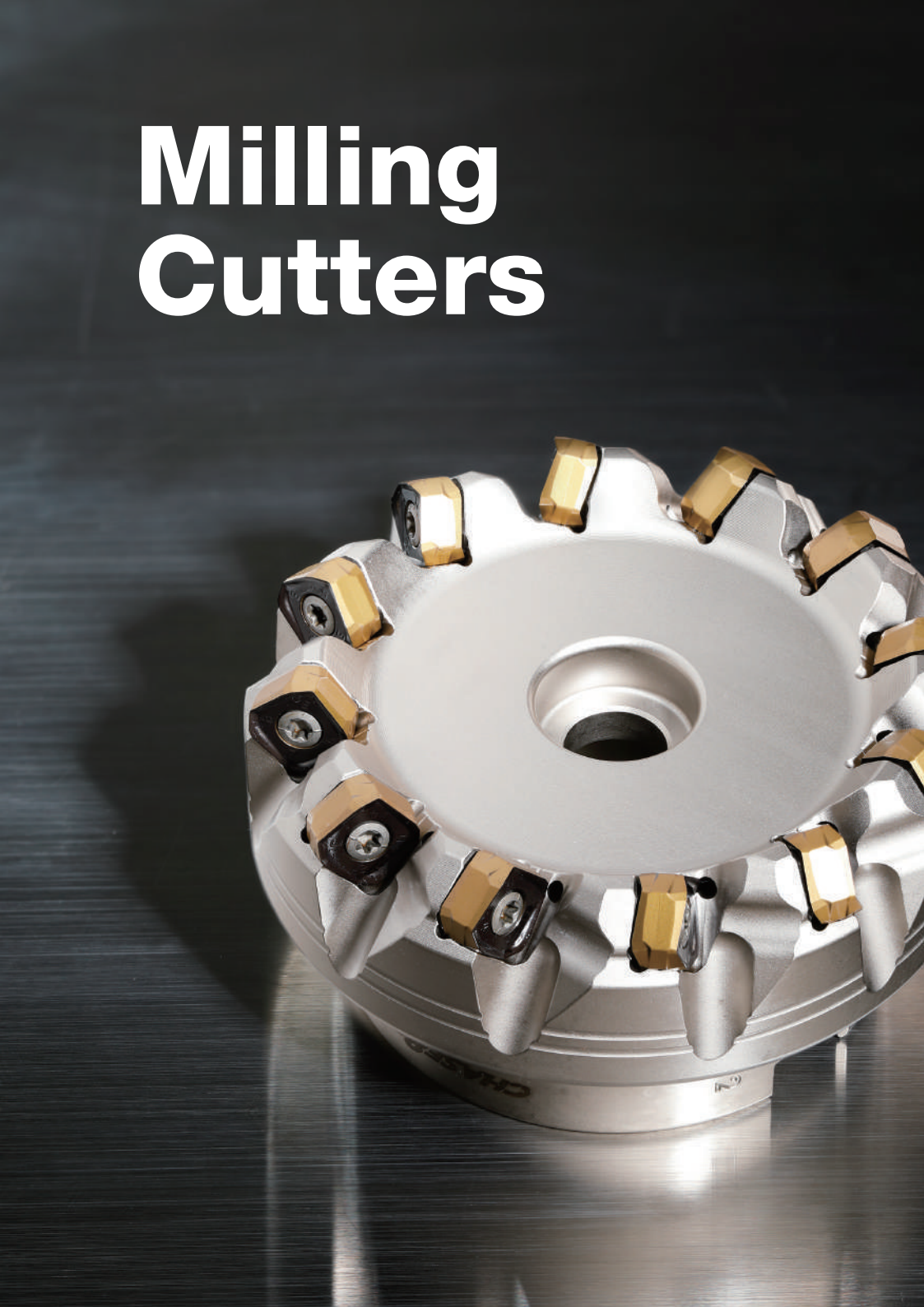
Grades	ISO	Charactristics & applications
K10 Carbide	K05 – K15 N05 – N15 S05 – S15	• General machining of cast iron, aluminum alloys and non-ferrous materials
TT2510 PVD coated	P05 – P25 H05 – H25	• High speed milling of pre-hardened steel and hardened steel
TT3535 PVD coated	M30 – M50 S30 – S50	• Interrupted and rough machining of stainless steel • Low speed and interrupted machining of Ti-Alloy and heat-resistant alloy
TT3520 CVD coated	M30 – M50 S30 – S50	• Interrupted and rough machining of stainless steel • Low speed and interrupted machining of Ti-Alloy and heat-resistant alloy
TT6080 PVD coated	K05 – K25 H05 – H25	• General machining for gray and ductile cast iron • Finish and medium machining of hardened steel
TT7080 PVD coated	P05 – P25 K05 – K25	• General milling of steel • Heavy interrupted cutting of cast iron
TT9080 PVD coated	P20 – P40 M20 – M40 S20 – S40	• General machining of steel, stainless steel and heat-resistant alloy
TT9030 PVD coated	P20 – P40 M20 – M40 S20 – S40	• General machining of steel, stainless steel and heat-resistant alloy
TT8080 PVD coated	P30 – P50 M30 – M50 S30 – S50	• Interrupted and rough machining of steel and stainless steel • Low speed and interrupted machining of heat-resistant alloy
TT8020 PVD coated	P30 – P50 M30 – M50 S30 – S50	• Interrupted and rough machining of steel and stainless steel • Low speed and interrupted machining of heat-resistant alloy
TT5515 PVD coated	P10 – P30 M10 – M30 K10 – K30 S10 – S30 H10 – H30	• High speed milling of steel and hardened steel • General milling of stainless steel, cast iron and heat-resistant alloy
TT5525 PVD coated	P20 – P40 M20 – M40 S20 – S40	• General machining of steel, stainless steel and heat-resistant alloy
TT7515 CVD coated	K05 – K25 H05 – H25	• General machining for gray and ductile cast iron • Finish and medium machining of hardened steel
TT8625 CVD coated	P30 – P45 M30 – M45	• Rough milling & high speed drilling of carbon & alloy steel • Medium speed milling of stainless steel

Grades

Cermet, ceramic and CBN grades

Grades	ISO	Charactristics & applications
CT7000 Cermet	P15 – P25 M15 – M25	• Finish milling of steel and stainless steel
AS10 Ceramic	K20 – K30	• General milling of cast iron
TC3030 Ceramic	S25 – S35	• High feed milling of super alloy • SiAlON ceramic grade
TB7015 CBN	H25 – H35 K10 – K20	• Machining of hardened steel • High speed machining of cast iron
TTA101 Diamond coated	N05 – N15	• High speed machining of AL alloy and non-ferrous matetrial

Milling Cutters

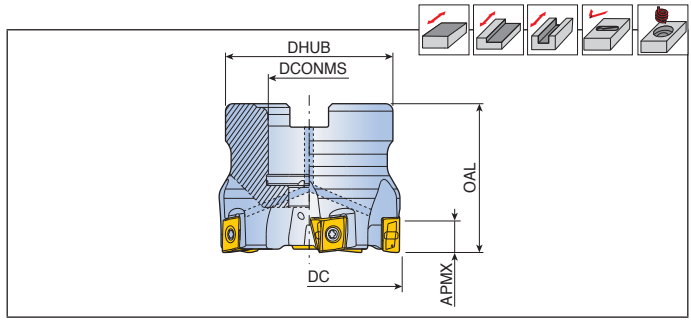


4T-TF90-09/14

TANGSFEED TANGENTIAL MILL

Face mills

90°



Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
4T-TF90-640-16R-09	6	40	16	38	40	8.3	●	A	0.3	SH M8x30	LPK(H)U 0904... E284
550-22R-09	5	50	22	45	40	8.3	●	A	0.4	SH M10x30	
750-22R-09	7	50	22	45	40	8.3	●	A	0.4	SH M10x30	
663-22R-09	6	63	22	47	40	8.3	●	A	0.5	SH M10x30	
1063-22R-09	10	63	22	47	40	8.3	●	A	0.5	SH M10x30	
4T-TF90-440-16R-14	4	40	16	38	40	12.5	●	A	0.3	SH M8x30	LPKU 1407... E284
450-22R-14	4	50	22	45	40	12.5	●	A	0.3	SH M10x30	
650-22R-14	6	50	22	45	40	12.5	●	A	0.3	SH M10x30	
563-22R-14	5	63	22	47	40	12.5	●	A	0.5	SH M10x30	
863-22R-14	8	63	22	47	40	12.5	●	A	0.5	SH M10x30	
780-27R-14	7	80	27	58	50	12.5	●	A	1.0	SH M12x35	
1080-27R-14	10	80	27	58	50	12.5	●	A	1.2	SH M12x35	
8100-32R-14	8	100	32	85	50	12.5	●	A	2.0	SH M16x35	
12100-32R-14	12	100	32	85	50	12.5	●	A	2.1	SH M16x35	
10125-40R-14	10	125	40	85	63	12.5	●	A	3.1	SH M20x40	
14125-40R-14	14	125	40	85	63	12.5	●	A	3.3	SH M20x40	
12160-40R-14	12	160	40	110	63	12.5	x	C	4.1	-	
16160-40R-14	16	160	40	110	63	12.5	x	C	4.3	-	
14200-60R-14	14	200	60	130	63	12.5	x	C	5.7	-	
18200-60R-14	18	200	60	130	63	12.5	x	C	5.8	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

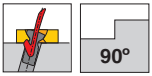
Designation	Screw	Wrench	Wrench handle		
4T-TF90-09	TS 30D082-P	TBLD T08P-W4	THND 4W	-	
4T-TF90-14	TS 40G110I	TBLD T15-W6	-	SW6-T	

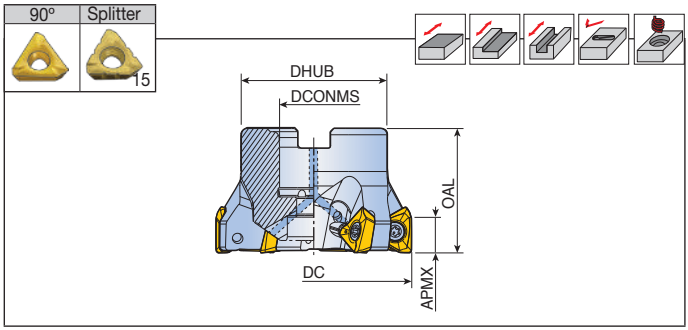
Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328
Ramping Data E345-E346

3P TF90-06/10/15

MILLRUSH

Face mills





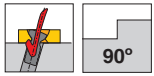
Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
3P TF90-	632-16R-06	6	32	16	30	32	4.7	●	A	0.1	SH M8x30	3PK(H)T 0603...
	732-16R-06	7	32	16	30	32	4.7	●	A	0.1	SH M8x30	E256
	735-16R-06	7	35	16	30	35	4.7	●	A	0.1	SH M8x30	
	840-16R-06	8	40	16	38	40	4.7	●	A	0.2	SH M8x30	
	840-22R-06	8	40	22	38	40	4.7	●	A	0.2	SH M10x30	
3P TF90-	540-16R-10	5	40	16	38	40	7	●	A	0.3	SH M8x30	3PK(H)T 1004...
	640-16R-10	6	40	16	38	40	7	●	A	0.3	SH M8x30	E256
	650-22R-10	6	50	22	45	40	7	●	A	0.4	SH M10x30	
	750-22R-10	7	50	22	45	40	7	●	A	0.4	SH M10x30	
	663-22R-10	6	63	22	47	40	7	●	A	0.5	SH M10x30	
	863-22R-10	8	63	22	47	40	7	●	A	0.5	SH M10x30	
	963-22R-10	9	63	22	47	40	7	●	A	0.5	SH M10x30	
3P TF90-	450-22R-15	4	50	22	45	40	11	●	A	0.3	SH M10x30	3PK(H)T 1505...
	550-22R-15	5	50	22	45	40	11	●	A	0.3	SH M10x30	E256-257
	463-22R-15-B	4	63	22	47	40	11	●	A	0.5	SH M10x30	
	463-27R-15-B	4	63	27	58	50	11	●	A	0.5	SH M12x35	
	663-22R-15	6	63	22	47	40	11	●	A	0.5	SH M10x30	
	480-27R-15-B	4	80	27	58	50	11	●	A	1.0	SH M12x35	
	780-27R-15	7	80	27	58	50	11	●	A	1.0	SH M12x35	
	880-27R-15	8	80	27	58	50	11	●	A	1.0	SH M12x35	
	6100-32R-15-B	6	100	32	85	50	11	●	A	1.8	LH M16x35	
	8100-32R-15	8	100	32	85	50	11	●	A	1.9	LH M16x35	
	10100-32R-15	10	100	32	85	50	11	●	A	1.9	LH M16x35	
	7125-40R-15-B	7	125	40	85	63	11	●	A	3.0	SH M20x40	
	8125-40R-15	8	125	40	85	63	11	●	A	3.0	SH M20x40	
	10125-40R-15	10	125	40	85	63	11	●	A	3.1	SH M20x40	
	12125-40R-15	12	125	40	85	63	11	●	A	3.1	SH M20x40	
	8160-40R-15	8	160	40	85	63	11	x	C	4.4	-	
	12160-40R-15	12	160	40	110	63	11	x	C	4.4	-	
	15160-40R-15	15	160	40	110	63	11	x	C	4.4	-	
	15200-60R-15	15	200	60	130	63	11	x	C	6.0	-	
	18200-60R-15	18	200	60	130	63	11	x	C	5.8	-	

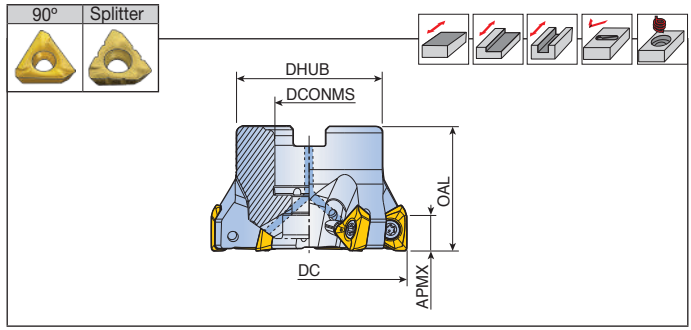
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E347-E349

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

3P TF90-19

Face mills





Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
3P TF90- 463-22R-19	4	63	22	47	40	15	●	A	0.4	SH M10x30	3PK(H)T 1906...
663-22R-19	6	63	22	47	40	15	●	A	0.9	SH M10x30	E256-257
480-27R-19	4	80	27	58	50	15	●	A	0.9	SH M12x35	
780-27R-19	7	80	27	58	50	15	●	A	1.0	SH M12x35	
6100-32R-19	6	100	32	85	50	15	●	A	1.8	LH M16x35	
8100-32R-19	8	100	32	85	50	15	●	A	2.6	LH M16x35	
6125-40R-19	6	125	40	85	63	15	●	A	3.0	SH M20x40	
8125-40R-19	8	125	40	85	63	15	●	A	3.0	SH M20x40	
10125-40R-19	10	125	40	85	63	15	●	A	3.1	SH M20x40	
8160-40R-19	8	160	40	110	63	15	x	C	4.2	-	
12160-40R-19	12	160	40	110	63	15	x	C	4.3	-	
10200-60R-19	10	200	60	130	63	15	x	C	6.0	-	
14200-60R-19	14	200	60	130	63	15	x	C	6.0	-	
12250-60R-19	12	250	60	160	63	15	x	C	10.5	-	
16250-60R-19	16	250	60	160	63	15	x	C	10.5	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

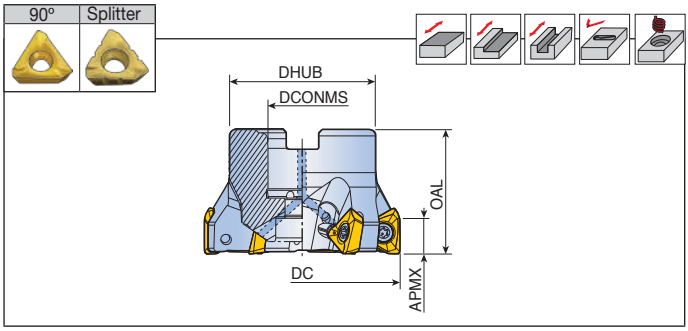
Spare parts

Designation	Screw	Wrench			
3P TF90-06	TS 20043I/HG-P	TD 6P	-		
3P TF90-10	TS 25C065I/HG	TD 8	-		
3P TF90-15	TS 40B100I	TD 15	-		
3P TF90-19	TS 45120I	-	T-T20		

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328
Ramping Data E347-E349

3P TF90-15/19

Face mills (Inch bore)



Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
3P TF90-	**480-25.4R-15-B**	4	80	25.4	70	50	11	●	A	1.2	SH M12x35	3PK(H)T 1505...
	780-25.4R-15	7	80	25.4	70	50	11	●	A	1.0	SH M12x35	E256-257
	880-25.4R-15	8	80	25.4	70	50	11	●	A	1.0	SH M12x35	
	6100-31.75R-15-B	6	100	31.75	80	50	11	●	B	1.5	-	
	8100-31.75R-15	8	100	31.75	80	50	11	x	B	1.9	-	
	10100-31.75R-15	10	100	31.75	80	50	11	x	B	1.9	-	
	7125-38.1R-15-B	7	125	38.1	80	63	11	x	B	2.4	-	
	10125-38.1R-15	10	125	38.1	80	63	11	x	B	3.1	-	
	12125-38.1R-15	12	125	38.1	80	63	11	x	B	3.1	-	
	8160-50.8R-15	8	160	50.8	100	63	11	x	B	2.6	-	
	12160-50.8R-15	12	160	50.8	100	63	11	x	B	4.4	-	
	15160-50.8R-15	15	160	50.8	100	63	11	x	B	4.4	-	
	15200-47.625R-15	15	200	47.625	130	63	11	x	C	6.0	-	
3P TF90-	**480-25.4R-19**	4	80	25.4	70	50	15	●	A	0.9	SH M12x35	3PK(H)T 1906...
	780-25.4R-19	7	80	25.4	70	50	15	●	A	1.0	SH M12x35	E256-257
	6100-31.75R-19	6	100	31.75	80	50	15	x	B	1.8	-	
	8100-31.75R-19	8	100	31.75	80	50	15	x	B	2.6	-	
	6125-38.1R-19	6	125	38.1	80	63	15	x	B	4.4	-	
	8125-38.1R-19	8	125	38.1	80	63	15	x	B	3.0	-	
	10125-38.1R-19	10	125	38.1	80	63	15	x	B	3.1	-	
	8160-50.8R-19	8	160	50.8	100	63	15	x	B	4.2	-	
	12160-50.8R-19	12	160	50.8	100	63	15	x	B	4.3	-	
	10200-47.625R-19	10	200	47.625	130	63	15	x	C	6.0	-	
	14200-47.625R-19	14	200	47.625	130	63	15	x	C	6.0	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
3P TF90-15	TS 40B100I	TD 15	-		
3P TF90-19	TS 45120I	-	T-T20		

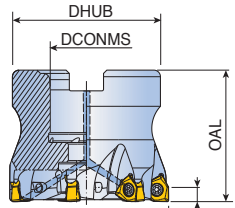
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E347-E349

6N TF90-04/06

MILL2RUSH

Face mills

90°



Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
6N TF90-540-16R-04	5	40	16	38	40	4.1	●	A	0.2	SH M8x30	6NKU 0403...
740-16R-04	7	40	16	38	40	4.1	●	A	0.2	SH M8x30	E263
750-22R-04	7	50	22	45	40	4.1	●	A	0.3	LH M10x25	
950-22R-04	9	50	22	45	40	4.1	●	A	0.3	LH M10x25	
863-22R-04	8	63	22	47	40	4.1	●	A	0.5	LH M10x25	
1063-22R-04	10	63	22	47	40	4.1	●	A	0.5	LH M10x25	
6N TF90-440-16R-06	4	40	16	38	40	6.2	●	A	0.3	SH M8x30	6NGU 0604...
450-22R-06	4	50	22	45	40	6.2	●	A	0.4	LH M10x25	E262
650-22R-06	6	50	22	45	40	6.2	●	A	0.4	LH M10x25	
463-22R-06	4	63	22	47	40	6.2	●	A	0.5	LH M10x25	
663-22R-06	6	63	22	47	40	6.2	●	A	0.5	LH M10x25	
763-22R-06	7	63	22	47	40	6.2	●	A	0.5	LH M10x25	
580-27R-06	5	80	27	58	50	6.2	●	A	1.0	SH M12x35	
680-27R-06	6	80	27	58	50	6.2	●	A	1.0	SH M12x35	
780-27R-06	7	80	27	58	50	6.2	●	A	1.0	SH M12x35	
980-27R-06	9	80	27	58	50	6.2	●	A	1.0	SH M12x35	
6100-32R-06	6	100	32	85	50	6.2	●	A	1.9	SH M16x35	
8100-32R-06	8	100	32	85	50	6.2	●	A	1.9	SH M16x35	
11100-32R-06	11	100	32	85	50	6.2	●	A	1.9	SH M16x35	
7125-40R-06	7	125	40	85	63	6.2	●	A	3.2	SH M20x40	
11125-40R-06	11	125	40	85	63	6.2	●	A	3.2	SH M20x40	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

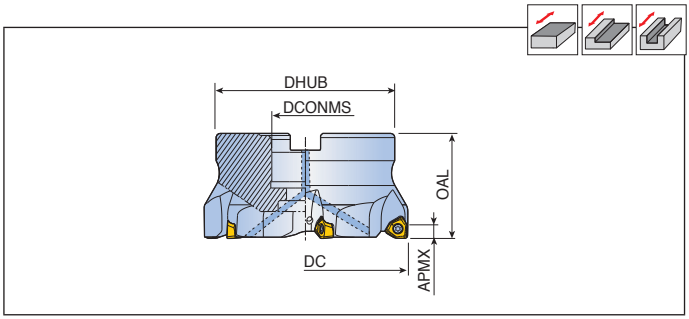
Designation	Screw	Wrench			
6N TF90-04	TS 25064I	TD 8			
6N TF90-06	TS 30085I/HG	TD 9			

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

6N TF90-09

MILL2RUSH

Face mills



90°

Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
6N TF90-450-22R-09	4	50	22	45	40	9.2	●	A	0.3	LH M10x25	6NGU 0905...
550-22R-09	5	50	22	45	40	9.2	●	A	0.4	LH M10x25	E262
463-22R-09	4	63	22	47	40	9.2	●	A	0.5	LH M10x25	
663-22R-09	6	63	22	47	40	9.2	●	A	0.5	LH M10x25	
763-22R-09	7	63	22	47	40	9.2	●	A	0.5	LH M10x25	
580-27R-09	5	80	27	58	50	9.2	●	A	1.0	SH M12x35	
780-27R-09	7	80	27	58	50	9.2	●	A	1.1	SH M12x35	
880-27R-09	8	80	27	58	50	9.2	●	A	1.1	SH M12x35	
980-27R-09	9	80	27	58	50	9.2	●	A	1.1	SH M12x35	
6100-32R-09	6	100	32	85	50	9.2	●	A	1.9	LH M16x35	
8100-32R-09	8	100	32	85	50	9.2	●	A	1.8	LH M16x35	
11100-32R-09	11	100	32	85	50	9.2	●	A	1.9	LH M16x35	
7125-40R-09	7	125	40	85	63	9.2	●	A	3.1	SH M20x40	
8125-40R-09	8	125	40	85	63	9.2	●	A	3.1	SH M20x40	
11125-40R-09	11	125	40	85	63	9.2	●	A	3.1	SH M20x40	
14125-40R-09	14	125	40	85	63	9.2	●	A	3.2	SH M20x40	
12160-40R-09	12	160	40	110	63	9.2	x	C	4.3	-	
16160-40R-09	16	160	40	110	63	9.2	x	C	4.3	-	
14200-60R-09	14	200	60	130	63	9.2	x	C	5.9	-	
18200-60R-09	18	200	60	130	63	9.2	x	C	5.9	-	
18250-60R-09	18	250	60	160	63	9.2	x	C	10.7	-	
22250-60R-09	22	250	60	160	63	9.2	x	C	10.8	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

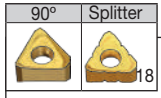
Designation	Screw	Wrench			
6N TF90-09	TS 40B100I	T-T15			

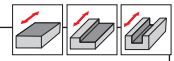
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

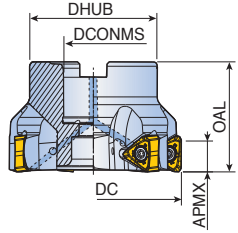
SCRM90TN-18/22

MILL2RUSH

Face mills







Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
SCRM90TN 450-16R-18	4	50	16	38	40	13	●	A	0.3	SH M8x30	TNMX 1806...
563-22R-18	5	63	22	47	40	13	●	A	0.5	SH M10x30	E312
580-27R-18	5	80	27	58	50	13	●	A	1.1	SH M12x35	
780-27R-18	7	80	27	58	50	13	●	A	1.1	SH M12x35	
6100-32R-18-B	6	100	32	85	50	13	●	A	2.0	SH M16x35	
8100-32R-18	8	100	32	85	50	13	●	A	2.0	SH M16x35	
7125-40R-18-B	7	125	40	85	63	13	●	A	3.4	SH M20x40	
10125-40R-18	10	125	40	85	63	13	●	A	3.3	SH M20x40	
10160-40R-18	10	160	40	110	63	13	x	C	4.5	-	
14160-40R-18	14	160	40	110	63	13	x	C	4.5	-	
16200-60R-18	16	200	60	130	63	13	x	C	6.2	-	
SCRM90TN 350-16R-22	3	50	16	38	40	15	●	A	0.3	SH M8x30	TNM(G)X
463-22R-22	4	63	22	47	40	15	●	A	0.4	SH M10x30	2207...
580-27R-22	5	80	27	58	50	15	●	A	0.9	SH M12x35	E312
6100-32R-22	6	100	32	85	50	15	●	A	1.8	SH M16x35	
8125-40R-22	8	125	40	85	63	15	●	A	3.0	SH M20x40	
10160-40R-22	10	160	40	110	63	15	x	C	4.2	-	
12200-60R-22	12	200	60	130	63	15	x	C	6	-	
14250-60R-22	14	250	60	160	63	15	x	C	10.6	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
SCRM90TN-18	TS 40B100I	T-T15			
SCRM90TN-22	TS 45I20I	T-T20			

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

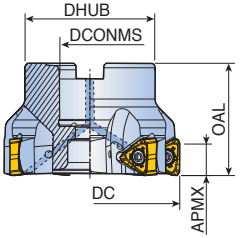
SCRM90TN

MILL2RUSH

Face mills (Inch bore)

90°

90°	Splitter
	18



Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
SCRM90TN 580-25.4R-18	5	80	25.4	70	50	13	●	A	1.1	SH M12x35	TNMX 1806...
780-25.4R-18	7	80	25.4	70	50	13	●	A	1.1	SH M12x35	E312
6100-31.75R-18-B	6	100	31.75	80	50	13	×	B	2.0	-	
8100-31.75R-18	8	100	31.75	80	50	13	×	B	2.0	-	
7125-38.1R-18-B	7	125	38.1	80	63	13	×	B	3.4	-	
10125-38.1R-18	10	125	38.1	80	63	13	×	B	3.3	-	
10160-50.8R-18	10	160	50.8	100	63	13	×	B	4.5	-	
14160-50.8R-18	14	160	50.8	100	63	13	×	B	4.5	-	
16200-47.625R-18	16	200	47.625	130	63	13	×	C	6.2	-	
SCRM90TN 580-25.4R-22	5	80	25.4	70	50	15	●	A	0.9	SH M12x35	TNM(G)X 2207...
6100-31.75R-22	6	100	31.75	80	50	15	×	B	1.8	-	E312
8125-38.1R-22	8	125	38.1	80	63	15	×	B	3.0	-	
10160-50.8R-22	10	160	50.8	100	63	15	×	B	4.3	-	
12200-47.625R-22	12	200	47.625	130	63	15	×	C	6.0	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

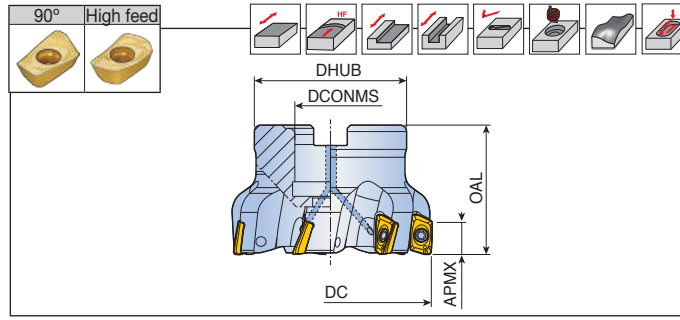
Spare parts

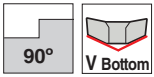
Designation	Screw	Wrench			
SCRM90TN-18	TS 40B100I	T-T15			
SCRM90TN-22	TS 45I20I	T-T20			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFM90AV-10

Face mills





Designation		Dimension (mm)					Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
TFM90AV-540-16R-10	5	40	16	38	40	10	●	A	0.2	SH M8x30	AVKT 10-M/EL AVKT 10-HF AVCT 10-AL E274
550-22R-10	5	50	22	45	40	10	●	A	0.3	SH M10x30	
750-22R-10	7	50	22	45	40	10	●	A	0.3	SH M10x30	
763-22R-10	7	63	22	47	40	10	●	A	0.5	SH M10x30	

- When using the "AVKT 1004R-HF" insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- For “AVKT 10” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE + 0.2 mm
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

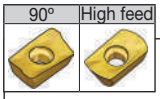
Designation	Screw	Wrench			
TFM90AV-10	TS 30B062/HG-P	TD 8P			

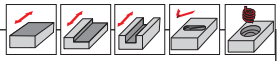
Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328
Ramping Data E340-E344

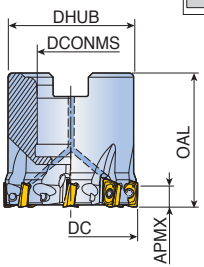
TFM90AX-06/2S-TFM90AP-09

Face mills

90°







Designation			Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
			DC	DCONMS	DHUB	OAL	APMX					
TFM90AX	**832-16R-06**	8	32	16	30	32	5.5	●	A	0.1	SH M8x25	AXM(C)T 0602... E271-E273
	1040-16R-06	10	40	16	38	40	5.5	●	A	0.2	SH M8x25	
	1040-22R-06	10	40	22	38	40	5.5	●	A	0.2	SH M10x30	
2S-TFM90AP	**540-16R-09**	5	40	16	38	40	8.8	●	A	0.3	SH M8x30	APK(C)T 09T3... E266,E271
	640-16R-09	6	40	16	38	40	8.8	●	A	0.2	SH M8x30	
	550-22R-09-B	5	50	22	45	40	8.8	●	A	0.3	SH M10x30	
	650-22R-09	6	50	22	45	40	8.8	●	A	0.3	SH M10x30	
	750-22R-09	7	50	22	45	40	8.8	●	A	0.3	SH M10x30	
	863-22R-09	8	63	22	47	40	8.8	●	A	0.5	SH M10x30	
	1080-27R-09	10	80	27	58	50	8.8	●	A	1.1	SH M12x35	

- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- For “AXMT 06” inserts with a corner radius larger than 1.0 mm (RE > 1.0 mm), modify the cutter body corner radius as follows: R = RE - 0.1 mm
- For “APKT 09” inserts with a corner radius larger than 2.0 mm (RE > 2.0 mm), modify the cutter body corner radius as follows: R = RE - 0.2 mm

Spare parts

Designation	Screw	Wrench			
TFM90AX	TS 18041I/HG	TD 6P			
2S-TFM90AP	TS 25075I/HG	TD 8			

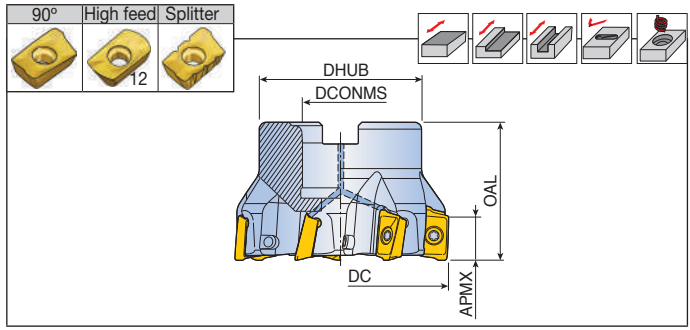
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E372-E378

TFM90AP-12/17

CHASEMILL

Face mills

90°



Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
TFM90AP 440-16R-12	4	40	16	38	40	12	●	A	0.2	SH M8x25	APK(C)T 1204... E267,E271
540-16R-12	5	40	16	38	40	12	●	A	0.2	SH M8x25	
550-22R-12	5	50	22	45	40	12	●	A	0.3	SH M10x30	
650-22R-12	6	50	22	45	40	12	●	A	0.3	SH M10x30	
563-22R-12	5	63	22	47	40	12	●	A	0.5	SH M10x30	
663-22R-12	6	63	22	47	40	12	●	A	0.5	SH M10x30	
763-22R-12	7	63	22	47	40	12	●	A	0.5	SH M10x30	
680-27R-12	6	80	27	58	50	12	●	A	1.0	SH M10x25	
880-27R-12	8	80	27	58	50	12	●	A	1.0	SH M10x25	
TFM90AP 440-16R-17	4	40	16	38	40	16.1	●	A	0.3	SH M8x30	APK(C)T 1705... E268-E269
350-22R-17-B	3	50	22	45	40	16.1	●	A	0.4	SH M10x30	
450-22R-17-B	4	50	22	45	40	16.1	●	A	0.3	SH M10x30	
550-22R-17	5	50	22	45	40	16.1	●	A	0.4	SH M10x30	
463-22R-17-B	4	63	22	47	40	16.1	●	A	0.5	SH M10x30	
663-22R-17	6	63	22	47	50	16.1	●	A	0.5	SH M10x30	
480-27R-17-B	4	80	27	58	50	16.1	●	A	0.8	SH M12x35	
680-27R-17	6	80	27	58	50	16.1	●	A	0.9	SH M12x35	
780-27R-17	7	80	27	58	50	16.1	●	A	0.9	SH M12x35	
6100-32R-17-B	6	100	32	85	50	16.1	●	A	1.3	LH M16x35	
8100-32R-17	8	100	32	85	50	16.1	●	A	1.5	LH M16x35	
7125-40R-17-B	7	125	40	85	63	16.1	●	A	2.9	SH M20x40	
8125-40R-17	8	125	40	85	63	16.1	●	A	3.0	SH M20x40	
9125-40R-17	9	125	40	85	63	16.1	●	A	3.1	SH M20x40	
8160-40R-17-B	8	160	40	110	63	16.1	x	C	4.1	-	
10160-40R-17	10	160	40	110	63	16.1	x	C	4.2	-	
12200-60R-17	12	200	60	130	63	16.1	x	C	6.1	-	

- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- For “APKT 12” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE - 0.5 mm
- For “APKT 17” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE - 0.8 mm

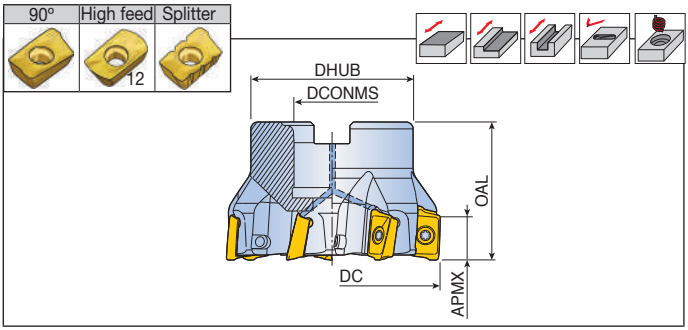
Cutting Condition E322-E325 | Arbor Style E326-E327 | Torque E328 | Ramping Data E372-E378

TFM90AP-12/17

CHASEMILL

Face mills (Inch bore)

90°



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX						
TFM90AP	**880-25.4R-12**	8	80	25.4	70	50	12	●	A	1.0	SH M12x30	APK(C)T 1204... E267,E271
TFM90AP	**663-25.4R-17**	6	63	25.4	45	40	16.1	●	A	0.5	LM M12x30	APK(C) T 1705... E268-E269
	780-25.4R-17	7	80	25.4	70	50	16.1	●	A	0.9	SH M12x35	
	8100-31.75R-17	8	100	31.75	80	50	16.1	x	B	1.5	-	
	9125-38.1R-17	9	125	38.1	80	63	16.1	x	B	3.1	-	
	10160-50.8R-17	10	160	50.8	100	63	16.1	x	B	4.2	-	

- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- For “APKT 12” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE - 0.5 mm
- For “APKT 17” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE - 0.8 mm

Spare parts

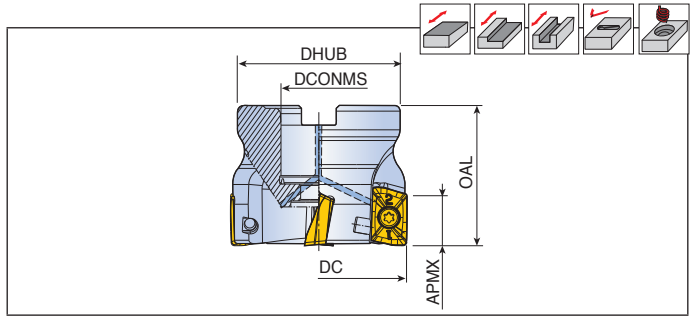
Designation	Screw	Wrench			
TFM90AP-12	TS 35A088I/HG	TD 10P	-		
TFM90AP-17 (Ø40-Ø63)	TS 40093I/HG	-	T-T15		
TFM90AP-17 (Ø80-)	TS 40120I/HG	-	T-T15		

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E372-E378

2S-TFM90AP-19

CHASEMILL

Face mills



90°

Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
2S-TFM90AP 350-22R-19	3	50	22	45	45	17.9	●	A	0.3	LH M10x35	APKT 1907...
463-22R-19	4	63	22	47	40	17.9	●	A	0.7	SH M10x30	E270
463-27R-19	4	63	27	58	50	17.9	●	A	0.7	SH M12x35	
680-27R-19	6	80	27	58	50	17.9	●	A	1.1	SH M12x35	
7100-32R-19	7	100	32	85	50	17.9	●	A	1.9	SH M16x35	
6125-40R-19	6	125	40	85	63	17.9	●	A	3.0	SH M20x40	
8125-40R-19	8	125	40	85	63	17.9	●	A	3.0	SH M20x40	
10160-40R-19	10	160	40	110	63	17.9	x	C	4.2	-	
12200-60R-19	12	200	60	130	63	17.9	x	C	6.0	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
2S-TFM90AP-19	TS 50115I	T-T20			

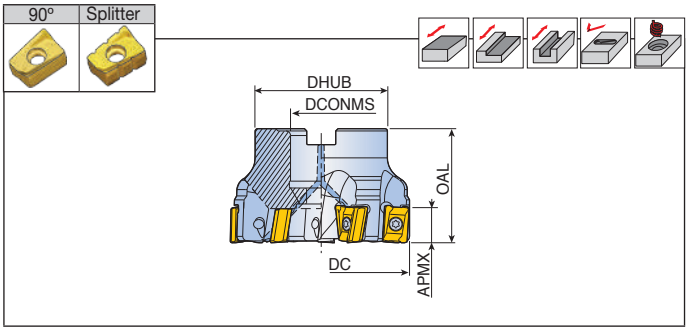
Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328
Ramping Data E372-E378

TFM90AN-11/16

CHASE2MILL

Face mills

90°



Designation			Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
			DC	DCONMS	DHUB	OAL	APMX					
TFM90AN	**440-16R-11**	4	40	16	38	40	11	●	A	0.2	SH M8x30	ANM(H)X 1106...
	450-22R-11	4	50	22	45	40	11	●	A	0.3	SH M10x30	E265
	650-22R-11	6	50	22	45	40	11	●	A	0.3	SH M10x30	
	563-22R-11	5	63	22	47	40	11	●	A	0.6	SH M10x30	
	763-22R-11	7	63	22	47	40	11	●	A	0.6	SH M10x30	
	880-27R-11	8	80	27	58	50	11	●	A	1.1	SH M12x35	
	1080-27R-11	10	80	27	58	50	11	●	A	1.1	SH M12x35	
	9100-32R-11	9	100	32	85	50	11	●	A	2.0	SH M16x35	
	12100-32R-11	12	100	32	85	50	11	●	A	2.0	SH M16x35	
	10125-40R-11	10	125	40	85	63	11	●	A	3.3	SH M20x40	
	14125-40R-11	14	125	40	85	63	11	●	A	3.4	SH M20x40	
TFM90AN	**350-22R-16**	3	50	22	45	40	15	●	A	0.4	SH M10x30	ANM(H)X 1607...
	450-22R-16	4	50	22	45	40	15	●	A	0.4	SH M10x30	E265
	463-22R-16	4	63	22	47	40	15	●	A	0.5	SH M10x30	
	663-22R-16	6	63	22	47	40	15	●	A	0.5	SH M10x30	
	580-27R-16	5	80	27	58	50	15	●	A	0.8	SH M12x35	
	680-27R-16	6	80	27	58	50	15	●	A	1.2	SH M12x35	
	780-27R-16	7	80	27	58	50	15	●	A	0.9	SH M12x35	
	5100-32R-16	5	100	32	85	50	15	●	A	1.3	SH M16x35	
	8100-32R-16	8	100	32	85	50	15	●	A	1.5	SH M16x35	
	7125-40R-16	7	125	40	85	63	15	●	A	3.9	SH M20x40	
	10125-40R-16	10	125	40	85	63	15	●	A	3.7	SH M20x40	
	8160-40R-16	8	160	40	110	63	15	x	C	5.0	-	
	12160-40R-16	12	160	40	110	63	15	x	C	5.3	-	
	14200-60R-16	14	200	60	130	63	15	x	C	7.0	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
TFM90AN-11	TS 35A088I/HG	TD 10P	-		
TFM90AN-16	TS 40120I	-	T-T15		

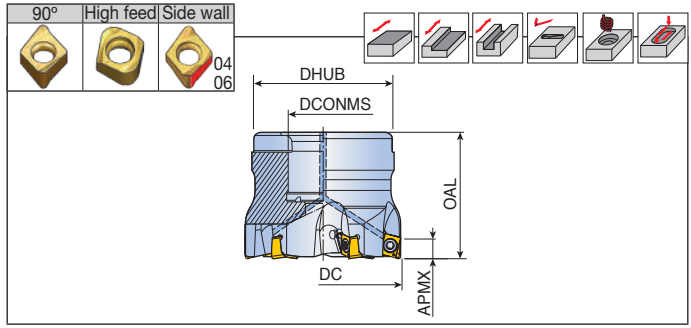
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E379

4N TF90-04/06/09

CHASE4MILL

Face mills

90°



Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
4N TF90- 832-16R-04	8	32	16	30	32	3.5	●	A	0.1	SH M8x25	4NK(H)T 0402....
1040-16R-04	10	40	16	38	40	3.5	●	A	0.2	SH M8x25	E258-E260
4N TF90- 432-16R-06	4	32	16	30	32	6.0	●	A	0.1	SH M8x25	4NK(H)T 0603....
532-16R-06	5	32	16	30	32	6.0	●	A	0.1	SH M8x25	E258-E260
540-16R-06	5	40	16	38	40	6.0	●	A	0.3	SH M8x25	
640-16R-06	6	40	16	38	40	6.0	●	A	0.3	SH M8x25	
650-22R-06	6	50	22	45	40	6.0	●	A	0.4	SH M10x30	
750-22R-06	7	50	22	47	40	6.0	●	A	0.4	SH M10x30	
752-22R-06	7	52	22	47	40	6.0	●	A	0.4	SH M10x30	
763-22R-06	7	63	22	47	40	6.0	●	A	0.6	SH M10x30	
863-22R-06	8	63	22	47	40	6.0	●	A	0.6	SH M10x30	
866-27R-06	8	66	27	58	50	6.0	●	A	0.8	SH M10x30	
4N TF90- 540-16R-09	5	40	16	38	40	8.0	●	A	0.3	SH M8x25	4NK(H)T 0904...
650-22R-09	6	50	22	45	40	8.0	●	A	0.3	LH M10x25	E258-E260
563-22R-09	5	63	22	47	40	8.0	●	A	0.5	LH M10x25	
763-22R-09	7	63	22	47	40	8.0	●	A	0.5	LH M10x25	
780-27R-09	7	80	27	58	50	8.0	●	A	1.0	SH M12x35	
980-27R-09	9	80	27	58	50	8.0	●	A	1.1	SH M12x35	
9100-32R-09	9	100	32	85	50	8.0	●	A	1.9	SH M16x35	
10125-40R-09	10	125	40	85	63	8.0	●	A	3.0	SH M20x40	

- Cutter body for '4NKT 040212R-HF' insert should be modified with body corner radius 1.2 mm
- Cutter body for '4NKT 060320R-HF' and '4NHT 060320R-F' inserts should be modified with body corner radius 2.0 mm
- Cutter body for '4NKT 090432R-HF' insert should be modified with body corner radius 3.2 mm
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

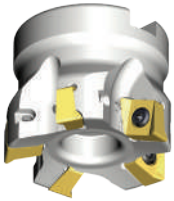
Spare parts

Designation	Screw	Wrench		Wrench handle	
4N TF90-04	TS 18041I/HG	TD 6P	-	-	
4N TF90-06	TS 30B068I/HG	TD 8	-	-	
4N TF90-09	TS 35A088I/HG	-	TBLD T10P-W6	THND 6W	

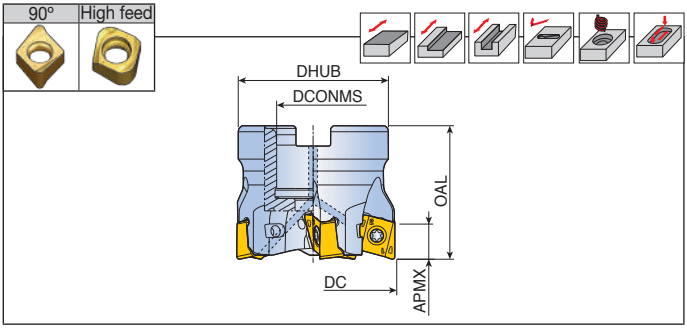
Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328
Ramping Data E350-E371

4N TF90-11/14

Face mills



90°



Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
4N TF90- 440-16R-11	4	40	16	38	40	10.5	●	A	0.2	SH M8x30	4NKT 1106... E258-E260
450-22R-11	4	50	22	45	40	10.5	●	A	0.3	LH M10x25	
550-22R-11	5	50	22	45	40	10.5	●	A	0.3	LH M10x25	
463-22R-11	4	63	22	47	40	10.5	●	A	0.6	LH M10x25	
663-22R-11	6	63	22	47	40	10.5	●	A	0.5	LH M10x25	
480-27R-11	4	80	27	58	50	10.5	●	A	1.1	SH M12x35	
680-27R-11	6	80	27	58	50	10.5	●	A	1.0	SH M12x35	
880-27R-11	8	80	27	58	50	10.5	●	A	1.0	SH M12x35	
9100-32R-11	9	100	32	85	50	10.5	●	A	1.9	SH M16x35	
10125-40R-11	10	125	40	85	63	10.5	●	A	3.1	SH M20x40	
4N TF90- 450-22R-14	4	50	22	45	45	13.8	●	A	0.4	SH M10x25	4NKT 1407... E258-E260
463-22R-14	4	63	22	47	45	13.8	●	A	0.6	SH M10x25	
663-22R-14	6	63	22	47	45	13.8	●	A	0.6	SH M10x25	
580-27R-14	5	80	27	58	50	13.8	●	A	1.0	SH M12x35	
780-27R-14	7	80	27	58	50	13.8	●	A	1.0	SH M12x35	
8100-32R-14	8	100	32	85	50	13.8	●	A	1.9	SH M16x35	
9125-40R-14	9	125	40	85	63	13.8	●	A	3.0	SH M20x40	
10160-40R-14	10	160	40	110	63	13.8	X	C	4.1	-	
12200-60R-14	12	200	60	130	63	13.8	X	C	5.8	-	

- Cutter body for '4NKT 110640R-HF' insert should be modified with body corner radius 4.0 mm
- Cutter body for '4NKT 140750R-HF' insert should be modified with body corner radius 5.0 mm
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench	Wrench handle		
4N TF90-11	TS 40093I/HG	TBLD T15-W6	SW6-T		
4N TF90-14	TS 50A121I/HG	TBLD T20-W6	SW6-T		

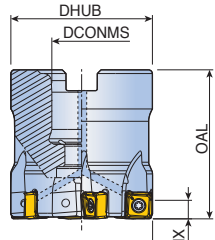
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E350-E371

8D-TF90-07

CHASE MILL 90° FACING & SHOULDERING

Face mills

90°



-M / -ML

Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
8D-TF90-432-16R-07	4	32	16	30	32	5.0	●	A	0.1	SH M8x25	SQKU 0703...
640-16R-07	6	40	16	38	40	5.0	●	A	0.3	SH M8x25	E305
650-22R-07	6	50	22	45	40	5.0	●	A	0.4	SH M10x30	
850-22R-07	8	50	22	45	40	5.0	●	A	0.4	SH M10x30	
763-22R-07	7	63	22	47	40	5.0	●	A	0.5	SH M10x30	
963-22R-07	9	63	22	47	40	5.0	●	A	0.6	SH M10x30	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

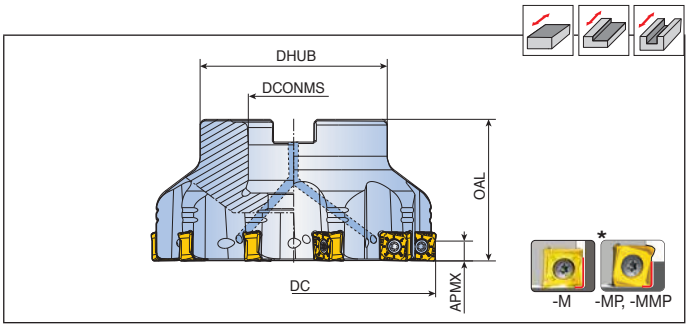
Designation	Screw	Wrench			
8D-TF90-07	TS 25D060/HG-P	TD 7P			

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

8D-TF90-10

CHASE MILL 90° FACING & SHOULDERING

Face mills



90°

Designation		Dimension (mm)					Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
8D-TF90-440-16R-10	4	40	16	38	40	7.0**	●	A	0.2	SH M8x25	SQK(H)U 1004... E305
550-22R-10	5	50	22	45	40	7.0**	●	A	0.3	SH M10x30	
663-22R-10	6	63	22	47	40	7.0**	●	A	0.5	SH M10x30	
863-22R-10	8	63	22	47	40	7.0**	●	A	0.5	SH M10x30	
1063-22R-10	10	63	22	47	40	7.0**	●	A	0.6	SH M10x30	
880-27R-10	8	80	27	58	50	7.0**	●	A	1.1	SH M12x35	
1080-27R-10	10	80	27	58	50	7.0**	●	A	1.1	SH M12x35	
10100-32R-10	10	100	32	66	50	7.0**	●	A	1.6	SH M16x35	
14100-32R-10	14	100	32	66	50	7.0**	●	A	1.7	SH M16x35	
12125-40R-10	12	125	40	85	63	7.0**	●	A	3.4	SH M20x40	
16125-40R-10	16	125	40	85	63	7.0**	●	A	3.5	SH M20x40	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
▸ *:Multi-Step milling is not recommended over the APMX ▸ **:When applying SQHU insert, APMX is 6.5 mm.

Spare parts

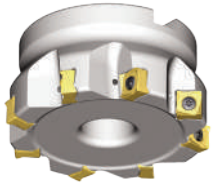
Designation	Screw	Wrench			
8D-TF90-10	TS 35A088I/HG	TD 10P			

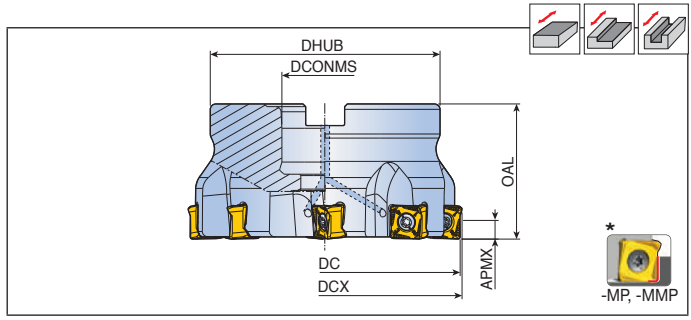
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

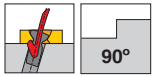
8D-TF90-12

CHASE 8 MILL 90° FACING & SHOULDERING

Face mills







Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
8D-TF90-340-16R-12	3	40	41.3	16	38	40	8.5**	●	E	0.3	KTB 32B	SQK(H)U 1206... E305
440-16R-12	4	40	41.3	16	38	40	8.5**	●	E	0.3	KTB 32B	
450-22R-12	4	50	51.3	22	45	40	8.5**	●	A	0.3	SH M10x30	
650-22R-12	6	50	51.3	22	45	40	8.5**	●	A	0.4	SH M10x30	
563-22R-12	5	63	64.3	22	47	40	8.5**	●	A	0.5	SH M10x30	
863-22R-12	8	63	64.3	22	47	40	8.5**	●	A	0.6	SH M10x30	
680-27R-12	6	80	81.3	27	58	50	8.5**	●	A	1.1	SH M12x35	
680-25.4R-12	6	80	81.3	25.4	70	50	8.5**	●	A	1.3	SH M12x35	
980-27R-12	9	80	81.3	27	58	50	8.5**	●	A	1.2	SH M12x35	
1180-27R-12	11	80	81.3	27	58	50	8.5**	●	A	1.2	SH M12x35	
8100-32R-12	8	100	101.3	32	66	50	8.5**	●	A	1.6	SH M16x35	
8100-31.75R-12	8	100	101.3	31.75	80	50	8.5**	x	B	1.8	-	
11100-32R-12	11	100	101.3	32	66	50	8.5**	●	A	1.7	SH M16x35	
14100-32R-12	14	100	101.3	32	66	50	8.5**	●	A	1.7	SH M16x35	
10125-40R-12	10	125	126.3	40	85	63	8.5**	●	A	3.4	SH M20x40	
10125-38.1R-12	10	125	126.3	38.1	80	63	8.5**	x	B	3.0	-	
18125-40R-12	18	125	126.3	40	85	63	8.5**	●	A	3.5	SH M20x40	
12160-40R-12	12	160	161.3	40	110	63	8.5**	x	C	4.7	-	
12160-50.8R-12	12	160	161.3	50.8	100	63	8.5**	x	B	4.9	-	
22160-40R-12	22	160	161.3	40	110	63	8.5**	x	C	4.9	-	

▸ DC: Cutting diameter ▸ DCX: Cutting diameter maximum
▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
▸ *: Multi-Step milling is not recommended over the APMX ▸ **: When applying SQHU insert, APMX is 8.0mm.

Spare parts

Designation	Screw	Wrench	Wrench handle		
8D-TF90-12	TS 40M100/HG	TBLD T15-W6	SW6-T		

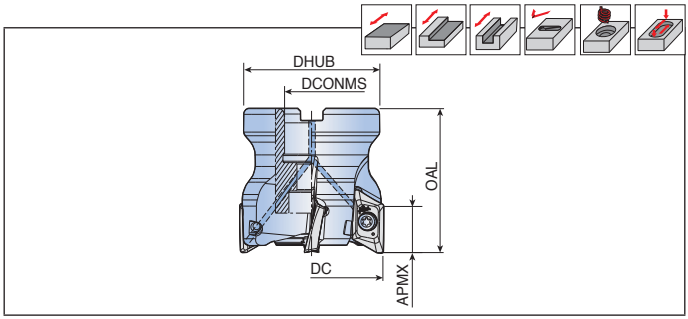
Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TFM90XEV-16/22

CHASEALU

Face mills

90°



Designation		Dimension (mm)					Coolant hole	Arbor style	Max RPM	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX						
TFM90XEV 340-16R-16	3	40	16	38	50	16	●	A	41,200	0.2	SH M8x35-C	XEVT 1605... E315
350-22R-16	3	50	22	47	50	16	●	A	41,200	0.3	SH M8x35-C	
363-22R-16	3	63	22	47	50	16	●	A	41,200	0.5	SH M8x35-C	
450-22R-16	4	50	22	45	50	16	●	A	36,800	0.3	SH M10x30-C	
563-22R-16	5	63	22	47	50	16	●	A	32,700	0.5	SH M10x30-C	
480-27R-16	4	80	27	58	50	16	●	A	29,000	0.9	LH M12x30-C	
580-27R-16	5	80	27	58	50	16	●	A	29,000	0.9	LH M12x30-C	
680-27R-16	6	80	27	58	50	16	●	A	29,000	0.8	LH M12x30-C	
6100-32R-16	6	100	32	66	63	16	●	A	26,000	1.6	SH M16x35-C	
7125-40R-16	7	125	40	85	63	16	●	A	23,200	2.5	SH M20x40-C	
8160-40R-16	8	160	40	110	63	16	x	C	20,000	3.8	-	
TFM90XEV 350-22R-22	3	50	22	45	55	21	●	A	31,400	0.4	SH M10x30-C	XEVT 2206... E315
463-22R-22	4	63	22	47	55	21	●	A	28,000	0.6	SH M10x30-C	
580-27R-22	5	80	27	58	55	21	●	A	24,800	1.0	LH M12x30-C	
6100-32R-22	6	100	32	85	63	21	●	A	22,200	2.1	SH M16x35-C	
7125-40R-22	7	125	40	85	63	21	●	A	19,900	2.8	SH M20x40-C	

▶ For “XEVT” inserts with a corner radius larger than 3.2 mm (RE > 3.2 mm), modify the cutter body corner radius as follows: R = RE - 0.3 mm

Spare parts

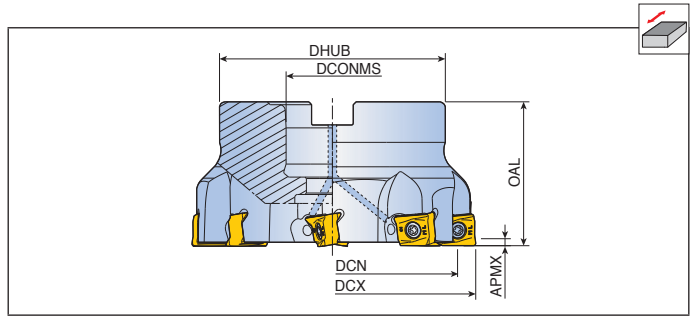
Designation	Screw	Wrench			
TFM90XEV-16	TS 40093I/HG	T-T15			
TFM90XEV-22	TS 50115I	T-T20			

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328 | Ramping Data E380-E384

4W-TF90-12

CHASE4FINISH

Face mills for finishing



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DCN	DCONMS	DHUB	OAL	APMX					
4W-TF90-550-22R-12	5	50	38.9	22	45	40	0.5	●	A	0.4	SH M10x30-C	4WHU 1207... E261
663-22R-12	6	63	50.9	22	47	40	0.5	●	A	0.5	SH M10x30-C	
880-27R-12	8	80	66.9	27	58	50	0.5	●	A	1.1	SH M12x35-C	
8100-32R-12	8	100	86.9	32	66	50	0.5	●	A	1.6	SH M16x35-C	
10125-40R-12	10	125	110.9	40	85	63	0.5	●	A	3.1	SH M20x40-C	
10160-40R-12	10	160	145.9	40	110	63	0.5	x	C	4.1	-	

▸ DCN: Cutting diameter minimum
▸ DCX: Cutting diameter maximum

Spare parts

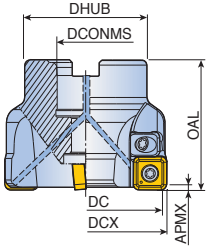
Designation	Screw	Wrench	Wrench handle		
4W-TF90-12	TS 40A115I	TBLD T15-W6	SW6-T		

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TFM90SNS-12

CHASE2QUAD

Face mills for finishing



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFM90SNS 350-22R-12	3	50	43.35	22	45	50	1.0	●	A	0.5	SH M10x40	SNEX 1204... SNET 1205... E299
463-22R-12	4	63	56.35	22	47	50	1.0	●	A	0.7	SH M10x40	
680-27R-12	6	80	73.35	27	58	50	1.0	●	A	1.0	SH M12x35	
8100-32R-12	8	100	93.35	32	66	63	1.0	●	A	2.0	SH M16x30	
12100-32R-12	12	100	93.35	32	66	63	1.0	●	A	2.0	SH M16x30	
10125-40R-12	10	125	118.35	40	85	63	1.0	x	B	2.9	-	
16125-40R-12	16	125	118.35	40	85	63	1.0	x	B	2.9	-	
12160-40R-12	12	160	153.35	40	110	63	1.0	x	C	4.4	-	
20160-40R-12	20	160	153.35	40	110	63	1.0	x	C	4.4	-	
16200-60R-12	16	200	193.35	60	130	63	1.0	x	C	6.0	-	
24200-60R-12	24	200	193.35	60	130	63	1.0	x	C	6.0	-	
30250-60R-12	30	250	243.35	60	160	63	1.0	x	C	10.8	-	

- Recommend to very stable machining condition at cast iron & steel
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

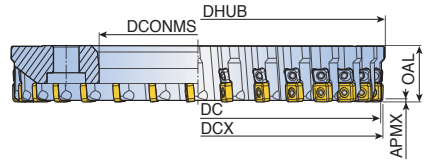
Designation	Screw	Adj. wedge	Adj. screw	Wrench	
TFM90SNS-12	TS 35C110I	AJS 1010R	AWS 0620	T-T15	

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Technical Data E332-E333

TQ90SNS-12

CHASE2QUAD

Quick change type face mills for finishing



Designation			Dimension (mm)						Kg	Adaptor	Insert
			DCX	DC	DCONMS	DHUB	OAL	APMX			
TQ90SNS	**20250R-12**	20	250	243.35	133.35	253	38	1.0	7.5	QA 10 K/M	SNEX 1204... SNET 1205... E299
	30250R-12	30	250	243.35	133.35	253	38	1.0	7.5	QA 10 K/M	
	36315R-12	36	315	308.35	146.05	317	38	1.0	14.0	QA 12 K/M	
	32400R-12	32	400	393.35	254	402	38	1.0	16.0	QA 16 K/M	

▸ Recommend to very stable machining condition at cast iron & steel

Spare parts

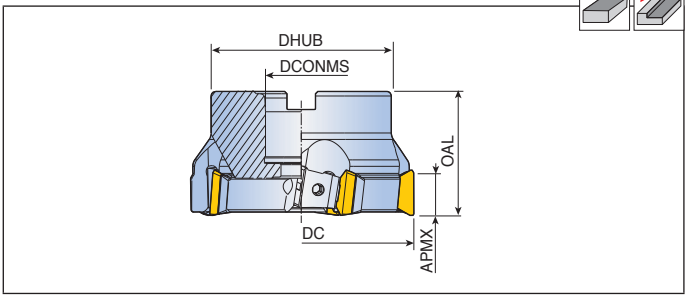
Designation	Screw	Adj. wedge	Adj. screw	Wrench	
TQ90SNS-12	TS 35C110I	AJS 1010R	AWS 0620	T-T15	

Cutting Condition E322-E325
Torque E328
Technical Data E329
Technical Data E332-E333

LM90TP-22

LIONMILL

Face mills (Inch bore)



90°

Designation		Dimension (mm)					Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX				
LM90TP480-25.4R-22	4	80	25.4	70	50	17.6	A	1.2	SH M12x35	TPKN 2204...
5100-31.75R-22	5	100	31.75	80	55	17.6	A	2.2	SH M16x35	E313
6125-38.1R-22	6	125	38.1	80	63	17.6	B	3.0	-	
8160-50.8R-22	8	160	50.8	100	63	17.6	B	4.7	-	
10200-47.625R-22	10	200	47.625	130	63	17.6	C	6.4	-	
12250-47.625R-22	12	250	47.625	160	63	17.6	C	10.7	-	
14315-47.625R-22	14	315	47.625	220	63	17.6	D	16.7	-	

▸ Metric bore cutter is available upon request

Spare parts

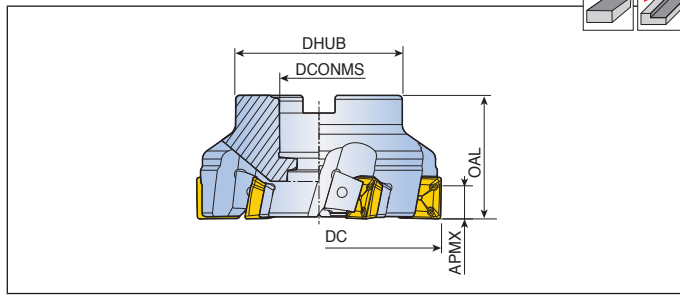
Designation	Carbide shim	Wedge	Shim screw	Wedge screw	Wrench	Shim screw wrench
						(1)
LM90TP-22 (Ø80)	TSTP 22N	WPA 8	TS 40B100I	TS 80160W	T-W 4	T-T15
LM90TP-22 (Ø100-)	TSTP 22N	WPA 8	TS 40B100I	TS 80200W	T-W 4	T-T15

▸ The shim screw wrench T-T15(1) shall be ordered separately

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

LM90SE-21

Face mills



90°

Designation		Dimension (mm)					Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX				
LM90SE6125-40R-21	6	125	40	85	63	17.0	A	3.4	SH M20x40	SEKX 2107...
8160-40R-21	8	160	40	110	63	17.0	C	5.3	-	E297
10200-60R-21	10	200	60	130	80	17.0	C	9.6	-	
12200-60R-21	12	200	60	130	80	17.0	C	9.5	-	
12250-60R-21	12	250	60	160	80	17.0	C	16.4	-	
14250-60R-21	14	250	60	160	80	17.0	C	16.4	-	
12315-60R-21	12	315	60	220	80	17.0	D	21.0	-	
LM90SE6125-38.1R-21	6	125	38.1	85	63	17.0	B	3.4	-	
8160-50.8R-21	8	160	50.8	110	63	17.0	B	5.3	-	
10200-47.625R-21	10	200	47.625	130	80	17.0	C	9.6	-	

Spare parts

Designation	Shim	Shim screw	Wedge	Wedge screw	Wedge screw wrench	Shim screw wrench
LM90SE-21(-Ø200)	TSSE 21N-ST	TS 50C130I/HG	WPA 8-SE16	TS 80160W	T-W 4	T-T20
LM90SE-21(Ø250-)	TSSE 21N-ST	TS 50C130I/HG	WPA 8-SE16	TS 80200W	T-W 4	T-T20

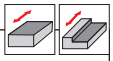
▸ The shim screw wrench(1) shall be ordered separately

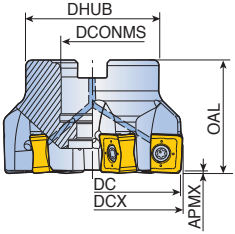
Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TFM90SN/TFM88SN-13

CHASE2QUAD

Face mills





Designation			Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
			DC	DCX	DCONMS	DHUB	OAL	APMX					
TFM90SN	**550-22R-13**	5	50	50.7	22	45	40	12.0	●	A	0.3	SH M10x30	SNG(M)X 1306 ... SNKX 1306 ... E301
	663-22R-13	6	63	63.7	22	47	40	12.0	●	A	0.5	SH M10x30	
	780-27R-13	7	80	80.7	27	70	50	12.0	●	A	1.2	SH M12x35	
	980-27R-13*	9	80	80.7	27	70	50	12.0	●	A	1.2	SH M12x35	
	8100-32R-13	8	100	100.8	32	85	50	12.0	●	A	1.9	SH M16x30	
	13100-32R-13*	13	100	100.8	32	85	50	12.0	●	A	1.9	SH M16x30	
	10125-40R-13	10	125	125.8	40	85	63	12.0	x	B	2.8	-	
	16125-40R-13*	16	125	125.8	40	85	63	12.0	x	B	2.8	-	
TFM88SN	**550-22R-13**	5	50	51.2	22	45	40	12.0	●	A	0.3	SH M10x30	SNG(M)X 1306 ZN... E301
	663-22R-13	6	63	64.2	22	47	40	12.0	●	A	0.5	SH M10x30	
	780-27R-13	7	80	81.2	27	70	50	12.0	●	A	1.2	SH M12x35	
	980-27R-13*	9	80	81.2	27	70	50	12.0	●	A	1.2	SH M12x35	
	8100-32R-13	8	100	101.2	32	85	50	12.0	●	A	1.9	SH M16x30	
	11100-32R-13*	11	100	101.2	32	85	50	12.0	●	A	1.9	SH M16x30	
	10125-40R-13	10	125	126.1	40	85	63	12.0	x	B	2.8	-	
	14125-40R-13*	14	125	126.1	40	85	63	12.0	x	B	2.8	-	
	12160-40R-13	12	160	161.1	40	110	63	12.0	x	C	4.2	-	
	18160-40R-13*	18	160	161.1	40	110	63	12.0	x	C	4.2	-	
	14200-60R-13	14	200	201.1	60	130	63	12.0	x	C	6.0	-	
	22200-60R-13*	22	200	201.1	60	130	63	12.0	x	C	6.0	-	

- *: Fine pitch cutter for cast iron
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

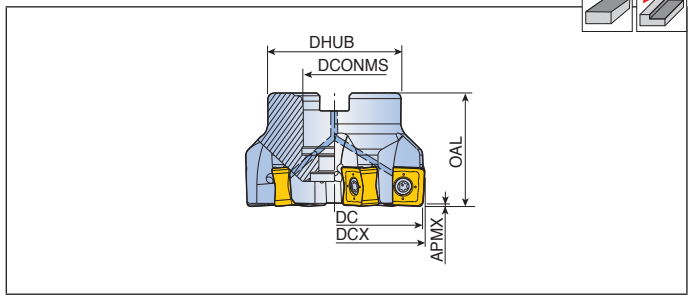
Designation	Screw	Wrench			
TFM90SN	TS 40B100I	T-T15			
TFM88SN	TS 40B100I	T-T15			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFM90SN/TFM88SN-13

CHASE2QUAD

Face mills (Inch bore)



Designation			Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
			DC	DCX	DCONMS	DHUB	OAL	APMX					
TFM90SN	**780-25.4R-13**	7	80	80.7	25.4	70	50	12.0	●	A	1.2	SH M12x35	SNG(M)X 1306 ... SNKX 1306 ...
	8100-31.75R-13	8	100	100.8	31.75	80	50	12.0	x	B	1.9	-	
	10125-38.1R-13	10	125	125.8	38.1	80	63	12.0	x	B	2.8	-	
TFM88SN	**780-25.4R-13**	7	80	81.2	25.4	70	50	12.0	●	A	1.2	SH M12x35	SNG(M)X 1306 ZN... E301
	980-25.4R-13*	9	80	81.2	25.4	70	50	12.0	●	A	1.2	SH M12x35	
	8100-31.75R-13	8	100	101.2	31.75	80	50	12.0	x	B	1.9	-	
	11100-31.75R-13*	11	100	101.2	31.75	80	50	12.0	x	B	1.9	-	
	10125-38.1R-13	10	125	126.1	38.1	80	63	12.0	x	B	2.8	-	
	12160-50.8R-13	12	160	161.1	50.8	100	63	12.0	x	B	4.2	-	

▸ *: Fine pitch cutter for cast iron

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

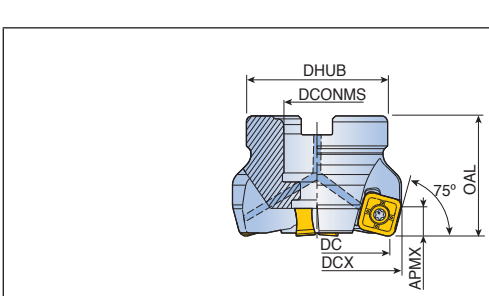
Designation	Screw	Wrench			
TFM90SN	TS 40B100I	T-T15			
TFM88SN	TS 40B100I	T-T15			

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TFM75SN-13

CHASE2QUAD

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
TFM75SN 450-22R-13	4	50	55.4	22	45	40	9.5	●	A	0.4	LH M10x25	SNM(G)X 1306 EN... SNMX 1306 XTN... E300
650-22R-13	6	50	55.4	22	45	40	9.5	●	A	0.4	LH M10x25	
663-22R-13	6	63	68.4	22	47	40	9.5	●	A	0.6	LH M10x25	
863-22R-13	8	63	68.4	22	47	40	9.5	●	A	0.6	LH M10x25	
780-27R-13	7	80	85.4	27	70	50	9.5	●	A	1.3	LH M12x30	
1080-27R-13	10	80	85.4	27	70	50	9.5	●	A	1.3	LH M12x30	
8100-32R-13	8	100	105.4	32	85	50	9.5	●	A	1.9	LH M16x35	
12100-32R-13	12	100	105.4	32	85	50	9.5	●	A	2.0	LH M16x35	
10125-40R-13	10	125	130.3	40	85	63	9.5	●	A	3.2	SH M20x40	
16125-40R-13	16	125	130.4	40	85	63	9.5	●	A	3.3	SH M20x40	
12160-40R-13	12	160	165.3	40	110	63	9.5	x	C	4.7	-	
20160-40R-13	20	160	165.4	40	110	63	9.5	x	C	4.8	-	
16200-60R-13	16	200	205.3	60	130	63	9.5	x	C	6.4	-	
22200-60R-13	22	200	205.4	60	130	63	9.5	x	C	6.4	-	
20250-60R-13	20	250	255.3	60	160	63	9.5	x	C	11.7	-	
TFM75SN 580-25.4R-13B	5	80	85.4	25.4	70	50	9.5	●	A	1.3	LH M12x30	
1080-25.4R-13	10	80	85.4	25.4	70	50	9.5	●	A	1.5	LH M12x30	
6100-31.75R-13B	6	100	105.4	31.75	80	50	9.5	x	B	1.9	-	
8125-38.1R-13B	8	125	130.3	38.1	80	63	9.5	x	B	3.2	-	
12160-50.8R-13B	12	160	165.3	50.8	100	63	9.5	x	B	4.7	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

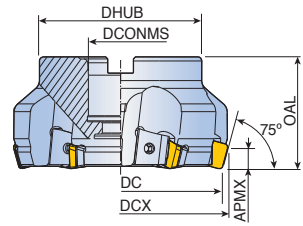
Designation	Screw	Wrench			
TFM75SN	TS 40B100I	T-T15			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

LM75SP-12/15

LIONMILL

Face mills



75°

Designation		Dimension (mm)						Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX				
LM75SP580-25.4 R-12	5	80	85.4	25.4	70	50	9.5	A	1.5	SH M12x35	SPKN 1203...
6100-31.75R-12	6	100	105.4	31.75	80	55	9.5	A	2.4	LH M16x35	E304
8125-38.1R-12	8	125	130.4	38.1	80	63	9.5	B	3.2	-	
10160-50.8R-12	10	160	165.4	50.8	100	63	9.5	B	5.0	-	
12200-47.625R-12	12	200	205.4	47.625	130	63	9.5	C	7.4	-	
16250-47.625R-12	16	250	255.4	47.625	160	63	9.5	C	10.8	-	
LM75SP580-25.4R-15	5	80	86.97	25.4	70	55	12.5	A	1.5	SH M12x35	SPKN 1504...
5100-31.75R-15	5	100	106.96	31.75	80	55	12.5	A	2.4	LH M16x35	E304
8125-38.1R-15	8	125	131.95	38.1	80	63	12.5	B	3.1	-	
10160-50.8R-15	10	160	166.94	50.8	100	63	12.5	B	5.0	-	
12200-47.625R-15	12	200	206.94	47.625	130	63	12.5	C	6.9	-	
16250-47.625R-15	16	250	256.93	47.625	160	63	12.5	C	10.8	-	
20315-47.625R-15	20	315	321.93	47.625	220	63	12.5	D	17.4	-	

▸ Metric bore cutter is available upon request

Spare parts

Designation	Carbide shim	Wedge	Shim screw	Wedge screw	Wrench	
LM75SP-12 (Ø80)	TSSP 12N	WPA 8	TS 40B100I	TS 80160W	T-W 4	T-T15
LM75SP-12 (Ø100-)	TSSP 12N	WPA 8	TS 40B100I	TS 80200W	T-W 4	T-T15
LM75SP-15	TSSP 15N	WPA 8	TS 40B100I	TS 80200W	T-W 4	T-T15

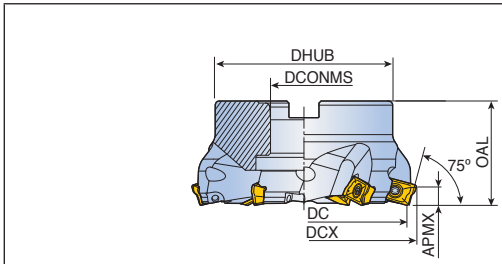
▸ The shim screw wrench T-T15(1) shall be ordered separately

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TFM75AP-17

CHASEMILL

Face mills



75°

Designation			Dimension (mm)						Arbor style	Kg	Mounting bolt	Insert
			DC	DCX	DCONMS	DHUB	OAL	APMX				
TFM75AP	**580-27R-17**	5	80	87.82	27	58	50	3.9	A	0.8	SH M12x35	APKT 1705 PER-M APKT 1705 PER-EM E269
	6100-32R-17	6	100	107.82	32	85	50	3.9	B	1.3	-	
	7125-40R-17	7	125	132.82	40	85	63	3.9	B	3.5	-	
TFM75AP	**580-25.4R-17**	5	80	87.82	25.4	70	50	3.9	A	0.8	SH M12x35	
	6100-31.75R-17	6	100	107.82	31.75	80	50	3.9	B	1.3	-	
	7125-38.1R-17	7	125	132.82	38.1	80	63	3.9	B	3.5	-	

▸ Cutter for the other corner of APKT inserts

Spare parts

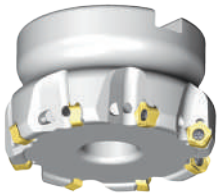
Designation	Screw	Wrench			
TFM75AP-17	TS 40120I/HG	T-T15			

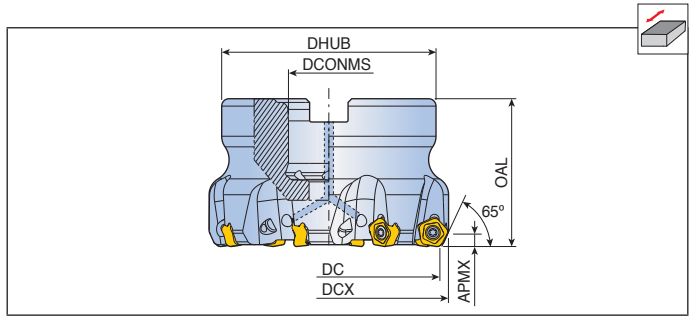
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFM65PT-05/10

CHASE 10 MILL

Face mills





65°

Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
TFM65PT 640-16R-05	6	40	43.7	16	38	40	3.3	●	A	0.3	SH M8x25	PTKU 0503...
750-22R-05	7	50	53.7	22	45	40	3.3	●	A	0.4	SH M10x30	E290
863-22R-05	8	63	66.7	22	58	40	3.3	●	A	0.7	SH M10x30	
TFM65PT 680-27R-10	6	80	87.4	27	70	50	6.5	●	A	1.2	LH M12x30	PTKU 1006...
8100-32R-10	8	100	107.4	32	85	50	6.5	●	A	1.9	LH M16x35	E290
9125-40R-10	9	125	132.4	40	85	63	6.5	●	A	3.2	SH M20x40	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench		Wrench handle	
TFM65PT-05	TS 25D060/HG-P	TD 7P	-		
TFM65PT-10	TS 50D130/HG-P	-	TBLD T20P-W6	SW6-T	

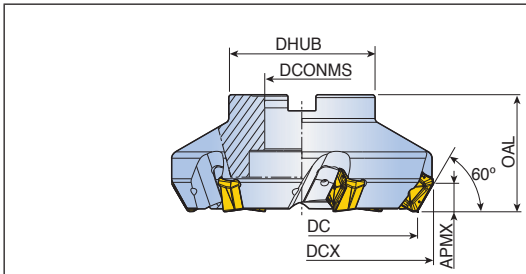
Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

ADVANCE CUTTING TaeguTec

LM60SC-21

LIONMILL

Face mills



60°

Designation			Dimension (mm)						Arbor style	Kg	Insert
			DC	DCX	DCONMS	DHUB	OAL	APMX			
LM60SC	**5125-40R-21**	5	125	141.2	40	85	63	13.0	B	4.1	SCKN 2107...
	8160-40R-21	8	160	176.1	40	110	63	13.0	C	6.5	E296
	10160-40R-21	10	160	176.1	40	110	63	13.0	C	6.4	
	10200-60R-21	10	200	216.1	60	130	80	13.0	C	11.8	
	12200-60R-21	12	200	216.1	60	130	80	13.0	C	11.8	
	12250-60R-21	12	250	266	60	160	80	13.0	C	19.2	
	14250-60R-21	14	250	266	60	160	80	13.0	C	19.1	
	16250-60R-21	16	250	266	60	160	80	13.0	C	19.1	
	12315-60R-21	12	315	331	60	220	80	13.0	D	25.0	
	16315-60R-21	16	315	331	60	220	80	13.0	D	25.0	
LM60SC	**5125-38.1R-21**	5	125	141.2	38.1	80	63	13.0	B	4.1	
	10160-50.8R-21	10	160	176.1	50.8	100	63	13.0	B	6.4	
	10200-47.625R-21	10	200	216.1	47.625	130	80	13.0	C	11.8	
	12250-47.625R-21	12	250	266	47.625	160	80	13.0	C	19.2	
	16250-47.625R-21	16	250	266	47.625	160	80	13.0	C	19.1	

Spare parts

Designation	Shim	Shim screw	Wedge	Wedge screw	Wrench	
LM60SC-21	TSSC 21R-ST	TS 50C130I/HG	WSC 8R-21	TS 80200W	T-W 4	T-T20

▸ The shim screw wrench(1) shall be ordered separately

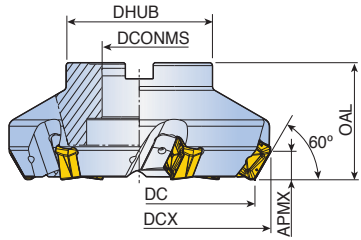
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

LM60SC-27

LIONMILL

Face mills

60°



Designation		Dimension (mm)						Arbor style	Kg	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX			
LM60SC 5125-40R-27	5	125	146	40	85	63	18.0	B	4.6	SCKN 2708...
6160-40R-27	6	160	181	40	110	80	18.0	C	8.7	E296
8160-40R-27	8	160	181	40	110	80	18.0	C	8.4	
8200-60R-27	8	200	220.9	60	130	80	18.0	C	12.4	
10200-60R-27	10	200	220.9	60	130	80	18.0	C	12.3	
10250-60R-27	10	250	270.8	60	160	80	18.0	C	19.9	
12250-60R-27	12	250	270.8	60	160	80	18.0	C	19.8	
12315-60R-27	12	315	335.8	60	220	80	18.0	D	26.0	
15315-60R-27	15	315	335.8	60	220	80	18.0	D	25.9	
LM60SC 12250-47.625R-27	12	250	270.8	47.625	160	80	18.0	C	19.8	
12315-47.625R-27	12	315	335.8	47.625	220	80	18.0	D	26.0	

Spare parts

Designation	Shim	Shim screw	Wedge	Wedge screw	Wrench		Wrench handle
						(1)	(2)
LM60SC-27	TSSC 27R-ST	TS 60A130I	WSC 8R	TS 80200W	T-W 4	BLD T25	SW6-T

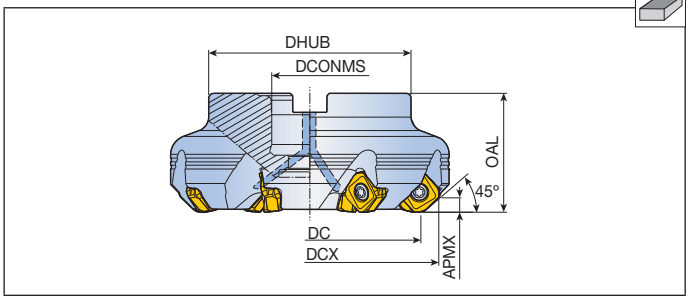
▸ The wrench(1) & wrench handle(2) shall be ordered separately

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

8D-TF45-11

CHASE & SPEED FACING & HIGH FEED

Face mills



45°

Designation		Dimension (mm)						Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
8D-TF45-440-16R-11	4	40	51	16	38	40	4.2	●	A	0.4	SH M8x25	SQKU 1105 E306-E307
640-16R-11	6	40	51	16	38	40	4.2	●	A	0.4	SH M8x25	
650-22R-11	6	50	61	22	45	40	4.2	●	A	0.5	LH M10x25	
850-22R-11	8	50	61	22	45	40	4.2	●	A	0.5	LH M10x25	
763-22R-11	7	63	74	22	47	50	4.2	●	A	1.0	SH M10x30	
1063-22R-11	10	63	74	22	47	50	4.2	●	A	1.0	SH M10x30	
480-27R-11	4	80	91	27	70	50	4.2	●	A	1.4	LH M12x30	
880-27R-11	8	80	91	27	70	50	4.2	●	A	1.6	LH M12x30	
1280-27R-11	12	80	91	27	70	50	4.2	●	A	1.6	LH M12x30	
5100-32R-11	5	100	111	32	85	50	4.2	●	A	2.2	LH M16x35	
9100-32R-11	9	100	111	32	85	50	4.2	●	A	2.4	LH M16x35	
14100-32R-11	14	100	111	32	85	50	4.2	●	A	2.5	LH M16x35	
8125-40R-11	8	125	136	40	85	63	4.2	●	A	4.1	SH M20x40	
12125-40R-11	12	125	136	40	85	63	4.2	●	A	4.0	SH M20x40	
18125-40R-11	18	125	136	40	85	63	4.2	●	A	4.1	SH M20x40	
10160-40R-11	10	160	171	40	110	63	4.2	x	C	5.7	-	
16160-40R-11	16	160	171	40	110	63	4.2	x	C	5.6	-	
24160-40R-11	24	160	171	40	110	63	4.2	x	C	5.6	-	

- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- Certain assembly dimensions differ slightly between carbide and ceramic inserts (e.g., DC, APMX)

Spare parts

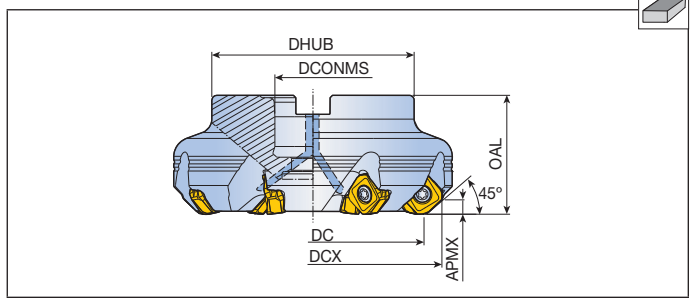
Designation	Screw	Wrench	Wrench handle		
8D-TF45-11	TS 40A115I	TBLD T15-W6	SW6-T		

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

8D-TF45-14

CHASE 8 SFEED
FACING & HIGH FEED

Face mills



45°

Designation		Dimension (mm)						Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
8D-TF45-450-22R-14	4	50	65.5	22	45	40	6	●	A	0.6	LH M10x25	SQKU 1406 E306-E307
650-22R-14	6	50	65.5	22	45	40	6	●	A	0.6	LH M10x25	
663-22R-14	6	63	78.5	22	47	50	6	●	A	1.1	SH M10x30	
863-22R-14	8	63	78.5	22	47	50	6	●	A	1.0	SH M10x30	
480-27R-14	4	80	95.5	27	70	50	6	●	A	1.4	LH M12x30	
780-27R-14	7	80	95.5	27	70	50	6	●	A	1.7	LH M12x30	
1080-27R-14	10	80	95.5	27	70	50	6	●	A	1.7	LH M12x30	
5100-32R-14	5	100	115.5	32	85	50	6	●	A	2.2	LH M16x35	
8100-32R-14	8	100	115.5	32	85	50	6	●	A	2.6	LH M16x35	
12100-32R-14	12	100	115.5	32	85	50	6	●	A	2.5	LH M16x35	
6125-40R-14	6	125	140.5	40	85	63	6	●	A	4.1	SH M20x40	
10125-40R-14	10	125	140.5	40	85	63	6	●	A	4.4	SH M20x40	
16125-40R-14	16	125	140.5	40	85	63	6	●	A	4.3	SH M20x40	
7160-40R-14	7	160	175.5	40	110	63	6	x	C	5.6	-	
12160-40R-14	12	160	175.5	40	110	63	6	x	C	5.9	-	
20160-40R-14	20	160	175.5	40	110	63	6	x	C	5.9	-	
8200-60R-14	8	200	215.5	60	130	63	6	x	C	8.0	-	
18200-60R-14	18	200	215.5	60	130	63	6	x	C	8.4	-	
26200-60R-14	26	200	215.5	60	130	63	6	x	C	8.3	-	

- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- Certain assembly dimensions differ slightly between carbide and ceramic inserts (e.g., DC, APMX)

Spare parts

Designation	Screw	Wrench	Wrench handle		
8D-TF45-14	TS 50C130I/HG	TBLD T20-W6	SW6-T		

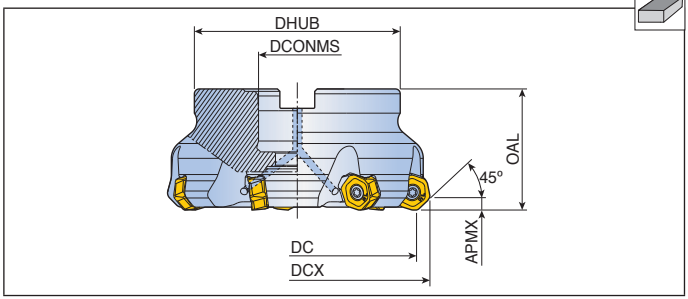
Cutting Condition E322-E325
Torque E328

ADVANCE CUTTING
TaeguTec

12D-TF45-06

CHASE 12 MILL FACE MILLING

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
12D-TF45-440-16R-06	4	40	50.8	16	38	40	3.0	●	A	0.3	SH M8x25	HXK(H)U 0605... E283
450-22R-06	4	50	60.8	22	45	40	3.0	●	A	0.5	LH M10x25	
650-22R-06	6	50	60.8	22	45	40	3.0	●	A	0.5	LH M10x25	
563-22R-06	5	63	73.8	22	47	40	3.0	●	A	0.7	LH M10x25	
763-22R-06	7	63	73.8	22	47	40	3.0	●	A	0.7	LH M10x25	
480-27R-06	4	80	90.8	27	70	50	3.0	●	A	1.4	SH M12x35	
680-27R-06	6	80	90.8	27	70	50	3.0	●	A	1.5	SH M12x35	
1080-27R-06	10	80	90.8	27	70	50	3.0	●	A	1.5	SH M12x35	
5100-32R-06	5	100	110.8	32	85	50	3.0	●	A	2.0	LH M16x35	
7100-32R-06	7	100	110.8	32	85	50	3.0	●	A	2.2	LH M16x35	
12100-32R-06	12	100	110.8	32	85	50	3.0	●	A	2.2	LH M16x35	
6125-40R-06	6	125	135.8	40	85	63	3.0	●	A	3.5	SH M20x40	
10125-40R-06	10	125	135.8	40	85	63	3.0	●	A	3.6	SH M20x40	
16125-40R-06	16	125	135.8	40	85	63	3.0	●	A	3.6	SH M20x40	
8160-40R-06	8	160	170.8	40	110	63	3.0	x	C	4.7	-	
12160-40R-06	12	160	170.8	40	110	63	3.0	x	C	4.9	-	
20160-40R-06	20	160	170.8	40	110	63	3.0	x	C	4.9	-	

- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- Certain assembly dimensions differ slightly between carbide and ceramic inserts (e.g., DC, APMX)

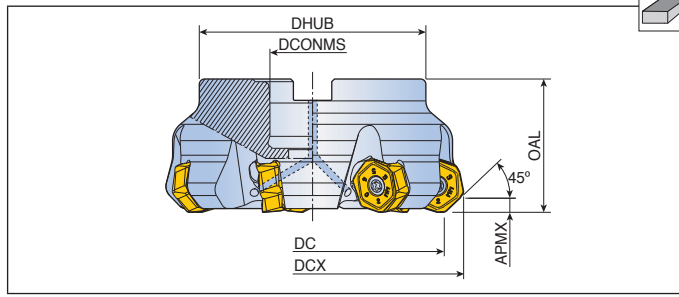
Spare parts

Designation	Screw	Wrench	Wrench handle		
12D-TF45-06	TS 40B100I	TBLD T15-W6	SW6-T		

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

12D-TF45-10

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
12D-TF45-563-22R-10	5	63	77.5	22	47	50	5.0	●	A	0.9	SH M10x30	HXK(H)U 1007... E283
763-22R-10	7	63	77.5	22	47	50	5.0	●	A	0.9	SH M10x30	
480-27R-10	4	80	94.5	27	70	50	5.0	●	A	1.5	SH M12x35	
680-27R-10	6	80	94.5	27	70	50	5.0	●	A	1.6	SH M12x35	
980-27R-10	9	80	94.5	27	70	50	5.0	●	A	1.6	SH M12x35	
5100-32R-10	5	100	114.5	32	85	50	5.0	●	A	2.2	LH M16x35	
7100-32R-10	7	100	114.5	32	85	50	5.0	●	A	2.4	LH M16x35	
11100-32R-10	11	100	114.5	32	85	50	5.0	●	A	2.4	LH M16x35	
8125-40R-10	8	125	139.5	40	85	63	5.0	●	A	4.1	SH M20x40	
10125-40R-10	10	125	139.5	40	85	63	5.0	●	A	4.0	SH M20x40	
14125-40R-10	14	125	139.5	40	85	63	5.0	●	A	4.0	SH M20x40	
6160-40R-10	6	160	174.5	40	110	63	5.0	x	C	5.4	-	
10160-40R-10	10	160	174.5	40	110	63	5.0	x	C	5.6	-	
16160-40R-10	16	160	174.5	40	110	63	5.0	x	C	5.6	-	
14200-60R-10	14	200	214.5	60	130	63	5.0	x	C	7.9	-	
21200-60R-10	21	200	214.5	60	130	63	5.0	x	C	7.9	-	
16250-60R-10	16	250	264.5	60	160	63	5.0	x	C	12.4	-	
26250-60R-10	26	250	264.5	60	160	63	5.0	x	C	12.4	-	

- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- Certain assembly dimensions differ slightly between carbide and ceramic inserts (e.g., DC, APMX)

Spare parts

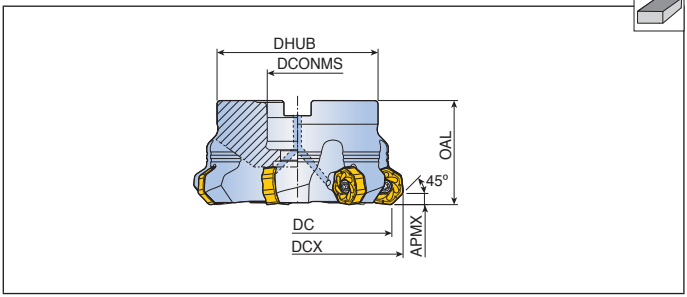
Designation	Screw	Wrench	Wrench handle		
12D-TF45-10	TS 50C130I/HG	TBLD T20-W6	SW6-T		

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

14D-F45XN-06

CHASE2HEPTA

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
14D-F45XN550-22R-06	5	50	59.1	22	45	40	3.5	●	A	0.4	LH M10x25	XNM(H)U 0605... E316
563-22R-06	5	63	72.1	22	47	50	3.5	●	A	0.8	SH M10x35	
763-22R-06	7	63	72.1	22	47	50	3.5	●	A	0.8	SH M10x35	
680-27R-06	6	80	89.1	27	70	50	3.5	●	A	1.4	SH M12x35	
980-27R-06	9	80	89.1	27	70	50	3.5	●	A	1.4	SH M12x35	
7100-32R-06	7	100	109.1	32	85	50	3.5	●	A	2.1	SH M16x35	
11100-32R-06	11	100	109.1	32	85	50	3.5	●	A	2.1	SH M16x35	
10125-40R-06	10	125	134.1	40	85	63	3.5	●	A	3.6	SH M20x40	
14125-40R-06	14	125	134.1	40	85	63	3.5	●	A	3.6	SH M20x40	
12160-40R-06	12	160	169.1	40	110	63	3.5	x	C	4.7	-	
16160-40R-06	16	160	169.1	40	110	63	3.5	x	C	4.9	-	
18160-40R-06	18	160	169.1	40	110	63	3.5	x	C	5.0	-	
14D-F45XN763-25.4R-06	7	63	72.1	25.4	47	50	3.5	●	A	0.8	SH M12x30	
980-25.4R-06	9	80	89.1	25.4	70	50	3.5	●	A	1.4	SH M12x35	
11100-31.75R-06	11	100	109.1	31.75	80	50	3.5	●	A	1.9	LH M16x35	
14125-38.1R-06	14	125	134.1	38.1	80	63	3.5	x	B	3.9	-	
											-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

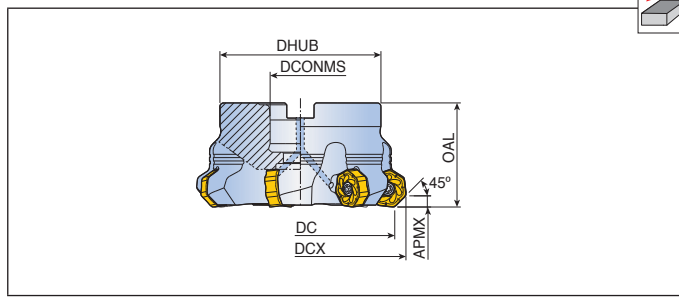
Designation	Screw	Wrench			
14D-F45XN-06	TS 40B100I	T-T15			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

14D-F45XN-09

CHASE2HEPTA

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
14D-F45XN 563-22R-09	5	63	74.9	22	47	50	5.0	●	A	0.9	SH M10x35	XNM(H)U 0906... E317
663-22R-09	6	63	74.9	22	47	50	5.0	●	A	0.9	SH M10x35	
680-27R-09	6	80	91.9	27	70	50	5.0	●	A	1.4	SH M12x35	
780-27R-09	7	80	91.9	27	70	50	5.0	●	A	1.5	SH M12x35	
7100-32R-09	7	100	112	32	85	55	5.0	●	A	2.4	SH M16x35	
9100-32R-09	9	100	112	32	85	55	5.0	●	A	2.5	SH M16x35	
8125-40R-09	8	125	137	40	85	63	5.0	●	A	3.5	SH M20x40	
10125-40R-09	10	125	137	40	85	63	5.0	●	A	3.6	SH M20x40	
12125-40R-09	12	125	137	40	85	63	5.0	●	A	3.4	SH M20x40	
10160-40R-09	10	160	172	40	110	63	5.0	x	C	4.8	-	
12160-40R-09	12	160	172	40	110	63	5.0	x	C	4.8	-	
14160-40R-09	14	160	172	40	110	63	5.0	x	C	4.8	-	
12200-60R-09	12	200	212	60	130	63	5.0	x	C	6.8	-	
16200-60R-09	16	200	212	60	130	63	5.0	x	C	6.9	-	
16250-60R-09	16	250	262	60	160	63	5.0	x	C	11.5	-	
20250-60R-09	20	250	262	60	160	63	5.0	x	C	11.5	-	
14D-F45XN 680-25.4R-09	6	80	91.9	25.4	70	50	5.0	●	A	1.4	SH M12x35	
7100-31.75R-09	7	100	112	31.75	80	55	5.0	●	A	2.4	SH M16x35	
8125-38.1R-09	8	125	137	38.1	80	63	5.0	x	B	3.5	-	
10160-50.8R-09	10	160	172	50.8	100	63	5.0	x	B	4.8	-	
12200-47.625R-09	12	200	212	47.625	130	63	5.0	x	C	6.8	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

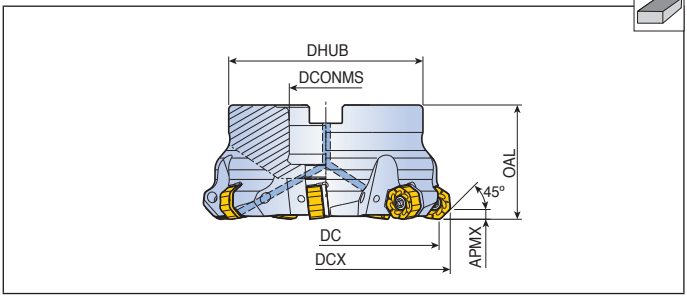
Designation	Screw	Wrench			
14D-F45XN-09	TS 50C130I/HG	T-T20			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

14D-F45XNH-06/09

CHASE2HEPTA

Shim type face mills



45°

Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
14D-F45XNH 763-22R-06	7	63	72.2	22	47	40	3.5	●	A	0.7	SH M10x25	XNM(H)U 0605... E316
780-27R-06	7	80	89.2	27	70	50	3.5	●	A	1.5	SH M12x35	
880-27R-06	8	80	89.2	27	70	50	3.5	●	A	1.5	SH M12x35	
7100-32R-06	7	100	109.2	32	85	50	3.5	●	A	2.2	SH M16x35	
8100-32R-06	8	100	109.2	32	85	50	3.5	●	A	2.2	SH M16x35	
11125-40R-06	11	125	134.2	40	85	63	3.5	●	A	3.5	SH M20x40	
14D-F45XNH 563-22R-09	5	63	75.1	22	47	40	5.0	●	A	0.6	SH M10x35	XNM(H)U 0906... E317
680-27R-09	6	80	92.1	27	70	50	5.0	●	A	1.5	SH M12x35	
7100-32R-09	7	100	112.1	32	85	50	5.0	●	A	2.2	SH M16x35	
9125-40R-09	9	125	137.0	40	85	63	5.0	●	A	3.6	SH M20x40	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

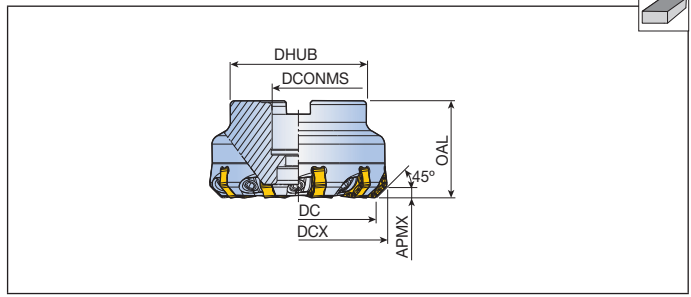
Designation	Screw	Shim	Shim screw	Wrench	Wrench handle
14D-F45XNH-06	TS 35C110I	TSXN 06N	TS 5035062S-B	TBLD T15-W6	SW6-T
14D-F45XNH-09	TS 50C130I/HG	TSXN 09N	TS 8050110S	TBLD T20-W6	SW6-T

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

14D-F45XNW-09

CHASE2HEPTA

Face mill



45°

Designation		Dimension (mm)						Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX				
14D-F45XNW 1080-27R-09	10	80	91.9	27	70	50	5.0	A	1.5	SH M12x35	XNHU 0906... E317
14100-32R-09	14	100	112	32	85	55	5.0	A	2.9	SH M16x35	
18125-40R-09	18	125	137	40	85	63	5.0	B	3.8	-	
18160-40R-09	18	160	172	40	110	63	5.0	C	5.6	-	
22160-40R-09	22	160	172	40	110	63	5.0	C	5.6	-	
28200-60R-09	28	200	212	60	130	63	5.0	C	7.9	-	
36250-60R-09	36	250	262	60	160	63	5.0	C	12.7	-	
44315-60R-09	44	315	327	60	220	63	5.0	D	19.9	-	

▸ Recommend to very stable machining condition at cast iron & steel

Spare parts

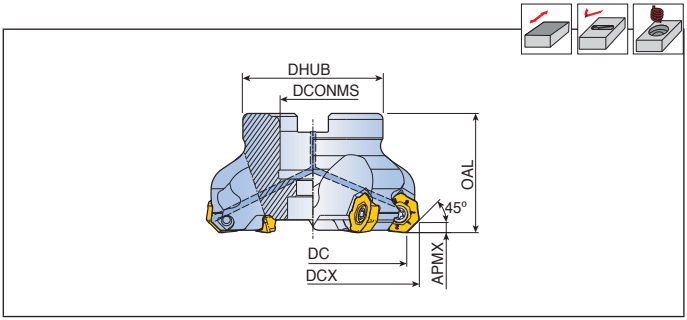
Designation	Wedge	Wedge screw	Wrench		
14D-F45XNW-09	WFZ 8H	WS 8	T-W 4		

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

7S-F45-06

CHASE HEPTA

Face mills



45°

Designation			Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
			DC	DCX	DCONMS	DHUB	OAL	APMX					
7S-F45	332-16R-06	3	32	40.4	16	38	40	3.2	●	E	0.2	KTB 32B	7EMT 0604... E264
	440-16R-06	4	40	48.5	16	38	40	3.2	●	A	0.3	SH M8x30	
	550-22R-06	5	50	58.5	22	45	40	3.2	●	A	0.4	LH M10x25	
	663-22R-06	6	63	71.5	22	47	40	3.2	●	A	0.5	LH M10x25	
	780-27R-06	7	80	88.5	27	70	50	3.2	●	A	1.3	LH M12x30	
	8100-32R-06	8	100	108.5	32	85	50	3.2	●	A	1.9	LH M16x35	
	9125-40R-06	9	125	133.5	40	85	63	3.2	●	A	3.3	SH M20x40	
	10160-40R-06	10	160	168.5	40	110	63	3.2	x	C	4.8	-	
7S-F45	780-25.4R-06	7	80	88.5	25.4	70	50	3.2	●	A	1.3	LH M12x30	
	8100-31.75R-06	8	100	108.5	31.75	80	50	3.2	●	A	1.8	LH M16x35	
	9125-38.1R-06	9	125	133.5	38.1	80	63	3.2	x	B	2.8	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M8x1.25x30-C)

Spare parts

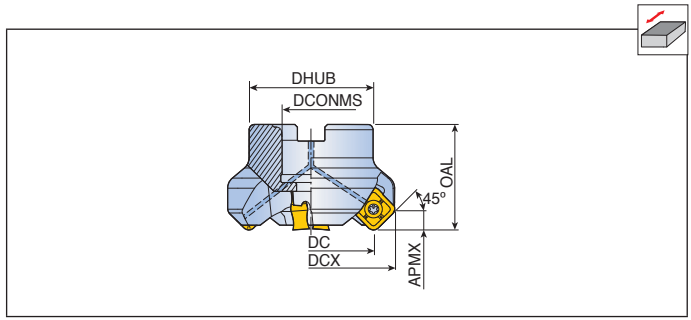
Designation	Screw	Wrench			
7S-F45-06	TS 40093I/HG	T-T15			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E385

TFM45SN-13

CHASE2QUAD

Face mills



Designation			Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
			DC	DCX	DCONMS	DHUB	OAL	APMX					
TFM45SN	440-16R-13	4	40	54.7	16	38	40	7.0	●	A	0.3	LH M10x25	SNM(G)X 1306 AN... SNMX 1306 XTN E300
	450-22R-13	4	50	64.7	22	45	40	7.0	●	A	0.5	LH M10x25	
	650-22R-13	6	50	64.7	22	45	40	7.0	●	A	0.5	LH M10x25	
	663-22R-13	6	63	77.7	22	47	40	7.0	●	A	0.7	LH M10x25	
	863-22R-13	8	63	77.7	22	47	40	7.0	●	A	0.7	LH M10x25	
	480-27R-13B	4	80	94.8	27	70	50	7.0	●	A	1.4	LH M12x30	
	780-27R-13	7	80	94.8	27	70	50	7.0	●	A	1.5	LH M12x30	
	1080-27R-13	10	80	94.8	27	70	50	7.0	●	A	1.5	LH M12x30	
	5100-32R-13B	5	100	114.8	32	85	50	7.0	●	A	2.1	LH M16x35	
	8100-32R-13	8	100	114.8	32	85	50	7.0	●	A	2.2	LH M16x35	
	12100-32R-13	12	100	114.8	32	85	50	7.0	●	A	2.2	LH M16x35	
	6125-40R-13B	6	125	139.8	40	85	63	7.0	●	A	3.8	SH M20x40	
	10125-40R-13	10	125	139.8	40	85	63	7.0	●	A	3.8	SH M20x40	
	16125-40R-13	16	125	139.6	40	85	63	7.0	●	A	3.8	SH M20x40	
	8160-40R-13B	8	160	174.8	40	110	63	7.0	x	C	4.9	-	
	12160-40R-13	12	160	174.8	40	110	63	7.0	x	C	4.9	-	
	20160-40R-13	20	160	174.5	40	110	63	7.0	x	C	5.0	-	
	10200-60R-13B	10	200	214.8	60	130	63	7.0	x	C	6.5	-	
	18200-60R-13	18	200	214.8	60	130	63	7.0	x	C	6.6	-	
	26200-60R-13	26	200	214.3	60	130	63	7.0	x	C	7.0	-	
	20250-60R-13	20	250	264.8	60	160	63	7.0	x	C	12.9	-	
TFM45SN	480-25.4R-13B	4	80	94.8	25.4	70	50	7.0	●	A	1.4	LH M12x30	
	5100-31.75R-13B	5	100	114.8	31.75	80	50	7.0	x	B	2.1	-	
	6125-38.1R-13B	6	125	139.8	38.1	80	63	7.0	x	B	3.8	-	
	10125-38.1R-13	10	125	139.8	38.1	80	63	7.0	x	B	3.4	-	
	8160-50.8R-13B	8	160	174.8	50.8	100	63	7.0	x	B	4.9	-	
	12160-50.8R-13	12	160	174.8	50.8	100	63	7.0	x	B	5.0	-	
	10200-47.625R-13B	10	200	214.8	47.625	130	63	7.0	x	C	6.5	-	
	12250-47.625R-13B	12	250	264.8	47.625	160	63	7.0	x	C	12.9	-	

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328

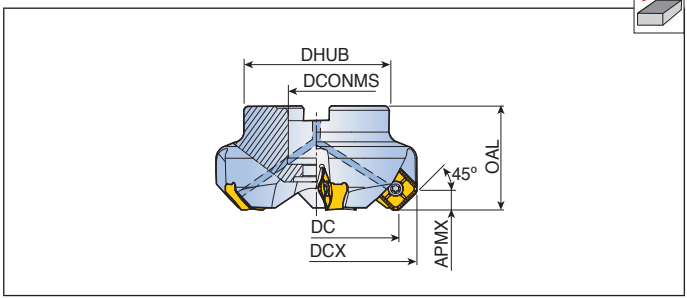
▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

ADVANCE CUTTING TaeguTec

TFM45SNS-16

CHASE2QUAD

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
TFM45SNS 463-22R-16	4	63	81.1	22	47	50	8.8	●	A	1.0	LH M10x25	SNMX 1607... SNHX 1606... E302
580-27R-16	5	80	98.2	27	70	50	8.8	●	A	1.5	LH M12x30	
7100-32R-16	7	100	118.2	32	85	50	8.8	●	A	2.3	LH M16x35	
8125-40R-16	8	125	143.2	40	85	63	8.8	●	A	4.0	SH M20x40	
10125-40R-16	10	125	143.2	40	85	63	8.8	●	A	4.0	SH M20x40	
10160-40R-16	10	160	178.2	40	110	63	8.8	x	C	5.4	-	
12160-40R-16	12	160	178.2	40	110	63	8.8	x	C	5.4	-	
12200-60R-16	12	200	218.2	60	130	63	8.8	x	C	7.5	-	
14250-60R-16	14	250	268.2	60	160	63	8.8	x	C	13	-	
TFM45SNS 580-25.4R-16	5	80	98.2	25.4	70	50	8.8	●	A	1.5	LH M12x30	
7100-31.75R-16	7	100	118.2	31.75	80	50	8.8	x	B	2.3	-	
8125-38.1R-16	8	125	143.2	38.1	80	63	8.8	x	B	4.0	-	
10160-50.8R-16	10	160	178.2	50.8	100	63	8.8	x	B	5.4	-	
12200-47.625R-16	12	200	218.2	47.625	130	63	8.8	x	C	7.5	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

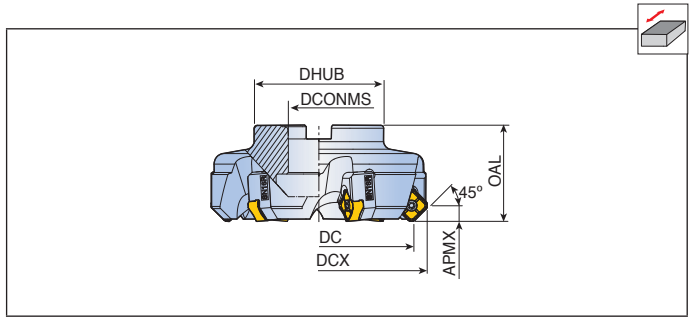
Designation	Screw	Wrench			
TFM45SN-13	TS 40B100I	T-T15			
TFM45SNS-16	TS 45120I	T-T20			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFM45SNS-16B-CA

CHASE2QUAD

Face mills



Designation		Dimension (mm)						Arbor style	Kg	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX			
TFM45SNS 6125-40R-16B-CA	6	125	143.2	40	85	63	8.8	B	4.0	SNMX 1607...
8160-40R-16B-CA	8	160	178.2	40	110	63	8.8	C	5.9	SNHX 1606...
10200-60R-16B-CA	10	200	218.2	60	130	63	8.8	C	8.1	E302
14250-60R-16-CA	14	250	268.2	60	160	63	8.8	C	13.3	
14315-60R-16B-CA	14	315	333.2	60	220	80	8.8	D	24.0	

Spare parts

Designation	Screw	Cartridge	Cartridge screw	Wrench	
TFM45SNS-16B-CA	TS 45120I	TCT23-SN16R	TS 60170I	T-T20	

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFM45SNW-16/TQ45SNW-16

CHASE2QUAD

Face mills

45°

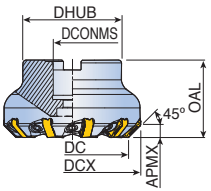


Fig.1

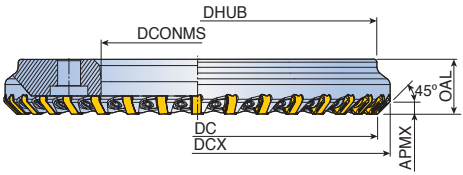


Fig.2

Designation		Dimension (mm)						Fig.	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
TFM45SNW	**1080-27R-16**	80	98.2	27	70	55	8.8	1	A	1.9	LH M12x30	SNHX 1606...
	14100-32R-16	100	118.2	32	85	63	8.8	1	A	3.2	SH M16x35	E302
	18125-40R-16	125	143.2	40	85	63	8.8	1	B	3.9	-	
	22160-40R-16	160	178.2	40	110	63	8.8	1	C	5.7	-	
	26200-60R-16	200	218.2	60	130	63	8.8	1	C	7.8	-	
	32250-60R-16	250	268.2	60	160	63	8.8	1	C	13.5	-	

Designation		Dimension (mm)						Fig.	Kg	Adapter	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX				
TQ45SNW	**26200R-16**	200	218.2	63.5	200	38	8.8	2	6.3	QA 08 K/M	SNHX 1606...
	34250R-16	250	268.2	133.35	248	38	8.8	2	7.9	QA 10 K/M	E302
	44315R-16	315	333.2	146.05	313	38	8.8	2	13.2	QA 12 K/M	
	50355R-16	355	373.2	215.90	353	38	8.8	2	13.0	QA 14 K/M	

▸ Recommend to very stable machining condition at cast iron & steel

Spare parts

Designation	Wedge	Wedge screw	Wrench		
TFM45SNW	WFZ 8H-SN	WS 8	T-W 4		
TQ45SNW	WFZ 8H-SN	WS 8	T-W 4		

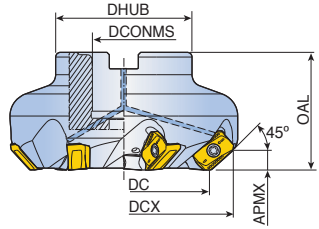
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFM45AN-16

CHASE2MILL

Face mills

45°



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
TFM45AN 450-22R-16	4	50	67.8	22	45	40	8.4	●	A	0.6	LH M10x25	ANHX 1607
663-22R-16	6	63	80.6	22	47	40	8.4	●	A	0.9	LH M10x25	ANR-M
780-27R-16	7	80	97.5	27	58	50	8.4	●	A	1.6	SH M12x35	E264
8100-32R-16	8	100	117.5	32	85	50	8.4	●	A	2.5	LH M16x35	
9125-40R-16	9	125	142.6	40	85	63	8.4	●	A	4.3	SH M20x40	
10160-40R-16	10	160	177.7	40	110	63	8.4	x	C	5.8	-	

- 90° Inserts can not be mounted
- Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

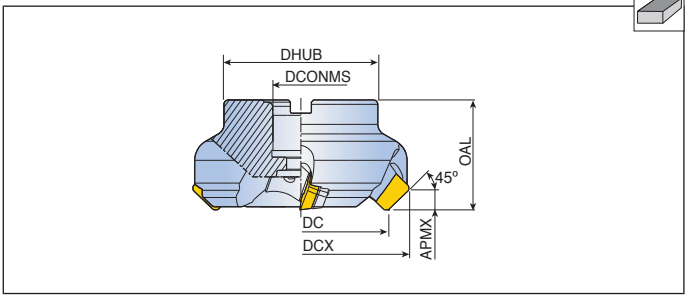
Designation	Screw	Wrench			
TFM45AN	TS 40120I	T-T15			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

LM45SD-12/15

LIONMILL

Face mills (Inch bore)



45°

Designation		Dimension (mm)						Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX				
LM45SD	**480-25.4R-12**	4	80	93.8	25.4	70	50	6.5	A	1.6	LH M12x30	SDKN 1203...
	5100-31.75R-12	5	100	113.8	31.75	80	60	6.5	A	2.8	LH M16x35	E296
	6125-38.1R-12	6	125	138.8	38.1	80	63	6.5	B	3.5	-	
	8160-50.8R-12	8	160	173.9	50.8	100	63	6.5	B	5.5	-	
	10200-47.625R-12	10	200	213.9	47.625	130	63	6.5	C	7.6	-	
	12250-47.625R-12	12	250	263.9	47.625	160	63	6.5	C	12.6	-	
LM45SD	**6125-38.1R/L-15**	6	125	143.6	38.1	80	63	8.7	B	3.5	-	SDKN 1504...
	8160-50.8R/L-15	8	160	178.6	50.8	100	63	8.7	B	5.5	-	E296
	10200-47.625R-15	10	200	218.6	47.625	130	63	8.7	C	7.6	-	
	12250-47.625R/L-15	12	250	268.6	47.625	160	63	8.7	C	12.6	-	
	14315-47.625R/L-15	14	315	333.54	47.625	220	63	6.7	D	18.7	-	

▸ Metric bore cutter is available upon request

Spare parts

Designation	Carbide shim	Wedge	Shim screw	Wedge screw	Wrench	
						(1)
LM45SD-12 (Ø80)	TSSDSE 12N	WPA 8	TS 40B100I	TS 80160W	T-W 4	T-T15
LM45SD-15 (Ø100-)	TSSDSE 15N	WPA 8	TS 40B100I	TS 80200W	T-W 4	T-T15

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328

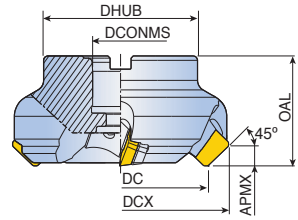
▸ The shim screw wrench T-T15(1) shall be ordered separately

LM45SE-12/15

LIONMILL

Face mills (Inch bore)

45°



Designation		Dimension (mm)						Arbor style	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX				
LM45SE	**480-25.4R-12**	4	80	93.7	25.4	70	55	6.5	A	1.8	LH M12x30	SEKN 1203...
	5100-31.75R-12	5	100	113.6	31.75	80	60	6.5	A	2.8	LH M16x35	E297
	6125-38.1R-12	6	125	138.6	38.1	80	63	6.5	B	3.4	-	
	8160-50.8R-12	8	160	173.6	50.8	100	63	6.5	B	5.0	-	
	10200-47.625R-12	10	200	213.6	47.625	130	63	6.5	C	7.5	-	
	12250-47.625R-12	12	250	263.6	47.625	160	63	6.5	C	12.2	-	
LM45SE	**480-25.4R-15**	4	80	97.8	25.4	70	55	8.7	A	1.8	LH M12x30	SEKN 1504...
	5100-31.75R-15	5	100	118	31.75	80	60	8.7	A	2.8	LH M16x35	E297
	6125-38.1R-15	6	125	143	38.1	80	63	8.7	B	3.5	-	
	8160-50.8R-15	8	160	178	50.8	100	63	8.7	B	5.7	-	
	10200-47.625R-15	10	200	218	47.625	130	63	8.7	C	7.8	-	
	12250-47.625R-15	12	250	268	47.625	160	63	8.7	C	12.8	-	

▸ Metric bore cutter is available upon request

Spare parts

Designation	Carbide shim	Wedge	Shim screw	Wedge screw	Wrench	
				(1)		(2)
LM45SE-12	TSSDSE 12N	WPA 8	TS 40B100I	TS 80200W TS 80160W(1)	T-W 4	T-T15
LM45SE-15	TSSDSE 15N	WPA 8	TS 40B100I		T-W 4	T-T15

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328

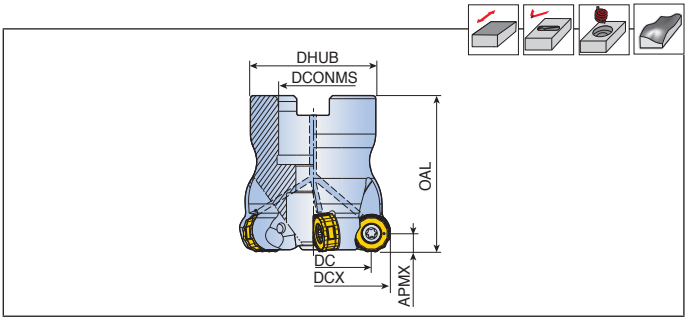
▸ (1) TS 80160W is for D80 cutter

▸ The shim screw wrench T-T15(2) shall be ordered separately

ADVANCE CUTTING TaeguTec

TFMRNS-10/12

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMRNS 432-16R-10	4	32	22	16	30	40	5.0	●	E	0.1	KTB 32B	RNMU 1004... E292
433-16R-10	4	33	23	16	30	40	5.0	●	E	0.1	KTB 32B	
540-16R-10	5	40	30	16	38	40	5.0	●	A	0.2	SH M8x30	
650-22R-10	6	50	40	22	45	50	5.0	●	A	0.4	SH M10x30	
652-22R-10	6	52	42	22	45	50	5.0	●	A	0.4	SH M10x30	
763-22R-10	7	63	53	22	47	50	5.0	●	A	0.7	SH M10x30	
TFMRNS 440-16R-12	4	40	28	16	38	40	6.0	●	A	0.2	SH M8x30	RNMU 1205... E292
450-22R-12	4	50	38	22	45	50	6.0	●	A	0.3	SH M10x30	
550-22R-12	5	50	40	22	45	50	6.0	●	A	0.3	SH M10x30	
552-22R-12	5	52	40	22	45	50	6.0	●	A	0.4	SH M10x30	
563-22R-12	5	63	51	22	47	50	6.0	●	A	0.6	SH M10x30	
663-22R-12	6	63	51	22	47	50	6.0	●	A	0.6	SH M10x30	
666-27R-12	6	66	54	27	58	50	6.0	●	A	0.6	SH M12x35	
680-27R-12	6	80	68	27	58	50	6.0	●	A	1.1	SH M12x35	
780-27R-12	7	80	68	27	58	50	6.0	●	A	1.0	SH M12x35	
7100-32R-12	7	100	88	32	66	50	6.0	●	A	1.5	LH M16x35	
8100-32R-12	8	100	88	32	66	50	6.0	●	A	1.5	LH M16x35	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

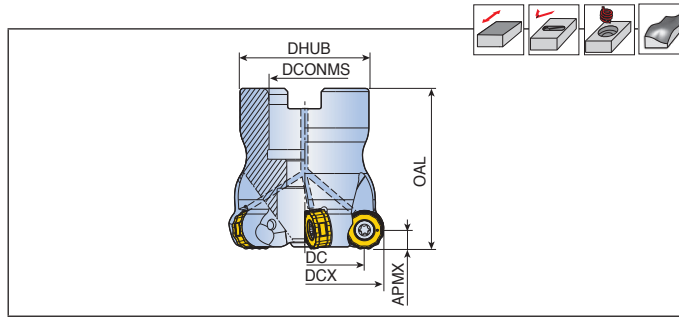
Designation	Screw	Wrench			
TFMRNS-10	TS 35085I/HG	T-T15			
TFMRNS-12	TS 40G110I	T-T15			

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328 | Ramping Data E401-E402

TFMRNS-16

CHASE2MOLD

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMRNS 350-16R-16	3	50	34	16	38	50	8.0	●	A	0.2	SH M8x30	RNMU 1606... E292
450-16R-16	4	50	34	16	38	50	8.0	●	A	0.2	SH M8x30	
452-22R-16	4	52	36	22	45	50	8.0	●	A	0.3	SH M10x30	
463-22R-16	4	63	47	22	47	50	8.0	●	A	0.5	SH M10x30	
566-27R-16	5	66	50	27	58	50	8.0	●	A	0.6	LH M12x30	
580-27R-16	5	80	64	27	58	50	8.0	●	A	0.9	LH M12x30	
680-27R-16	6	80	64	27	58	50	8.0	●	A	0.8	LH M12x30	
6100-32R-16	6	100	84	32	66	50	8.0	●	A	1.7	LH M16x35	
7125-40R-16	7	125	109	40	85	63	8.0	●	A	3.0	SH M20x40	
8125-40R-16	8	125	109	40	85	63	8.0	●	A	2.9	SH M20x40	
9160-40R-16	9	160	144	40	110	63	8.0	x	C	3.8	-	
10200-60R-16	10	200	184	60	130	63	8.0	x	C	5.6	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

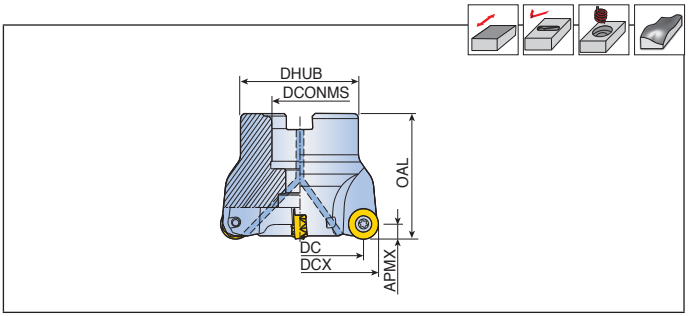
Spare parts

Designation	Screw	Wrench			
TFMRNS-16	TS 50A121I/HG	T-T20			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E401-E402

TFMRY-08/10/12

Face mills



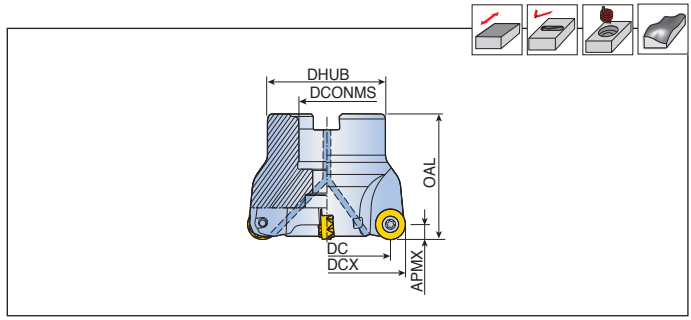
Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMRY 532-16R-08	5	32	24	16	30	40	4.0	●	A	0.12	SH M8x30	RYM(H)X 0803...
640-16R-08	6	40	32	16	38	40	4.0	●	A	0.22	SH M8x30	E293-E294
TFMRY 432-16R-10	4	32	22	16	30	40	5.0	●	A	0.12	SH M8x30	RYM(H)X 1004...
540-16R-10	5	40	30	16	38	40	5.0	●	A	0.22	SH M8x30	E293-E294
640-16R-10	6	40	30	16	38	40	5.0	●	A	0.23	SH M8x30	
650-22R-10	6	50	40	22	45	50	5.0	●	A	0.33	SH M10x30	
652-22R-10	6	52	42	22	45	50	5.0	●	A	0.36	SH M10x30	
763-22R-10	7	63	53	22	47	50	5.0	●	A	0.57	SH M10x30	
766-27R-10	7	66	56	27	58	50	5.0	●	A	0.68	LH M12x30	
TFMRY 332-16R-12	3	32	20	16	30	50	6.0	●	E	0.12	KTB 32B	RYM(H)X 1205...
440-16R-12	4	40	28	16	38	40	6.0	●	A	0.15	SH M8x30	E293-E294
442-16R-12	4	42	30	16	38	40	6.0	●	A	0.21	SH M8x30	
450-22R-12	4	50	38	22	45	50	6.0	●	A	0.33	SH M10x30	
550-22R-12	5	50	38	22	45	50	6.0	●	A	0.33	SH M10x30	
552-22R-12	5	52	40	22	45	50	6.0	●	A	0.34	SH M10x30	
463-22R-12	4	63	51	22	47	50	6.0	●	A	0.57	SH M10x30	
563-22R-12	5	63	51	22	47	50	6.0	●	A	0.58	SH M10x30	
663-22R-12	6	63	51	22	47	50	6.0	●	A	0.58	SH M10x30	
763-22R-12	7	63	51	22	47	50	6.0	●	A	0.71	SH M10x30	
666-27R-12	6	66	54	27	58	50	6.0	●	A	0.62	LH M12x30	
766-27R-12	7	66	54	27	58	50	6.0	●	A	0.62	LH M12x30	
680-27R-12	6	80	68	27	58	50	6.0	●	A	0.90	LH M12x30	
780-27R-12	7	80	68	27	58	50	6.0	●	A	0.92	LH M12x30	
880-27R-12	8	80	68	27	58	50	6.0	●	A	0.98	LH M12x30	
7100-32R-12	7	100	88	32	66	50	6.0	●	A	1.29	LH M16x35	
8100-32R-12	8	100	88	32	66	50	6.0	●	A	1.37	LH M16x35	
8125-40R-12	8	125	113	40	85	63	6.0	●	A	3.00	SH M20x40	
9125-40R-12	9	125	113	40	85	63	6.0	●	A	2.99	SH M20x40	

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328 | Ramping Data E403-E405

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

TFMRY-16

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMRY 350-16R-16	3	50	34	16	38	50	8.0	●	A	0.3	SH M8x35	RYM(H)X 1606... E293-E294
450-16R-16	4	50	34	16	38	50	8.0	●	A	0.3	SH M8x35	
450-22R-16	4	50	34	22	45	50	8.0	●	A	0.3	SH M10x30	
452-22R-16	4	52	36	22	45	50	8.0	●	A	0.3	SH M10x30	
463-22R-16	4	63	47	22	47	50	8.0	●	A	0.5	SH M10x30	
463H-22R-16*	4	63	47	22	47	50	8.0	●	A	0.5	SH M10x30	
566-27R-16	5	66	50	27	58	50	8.0	●	A	0.6	LH M12x30	
580-27R-16	5	80	64	27	58	50	8.0	●	A	0.8	LH M12x30	
580H-27R-16*	5	80	64	27	58	50	8.0	●	A	0.8	LH M12x30	
680-27R-16	6	80	64	27	58	50	8.0	●	A	0.8	LH M12x30	
6100-32R-16	6	100	84	32	66	50	8.0	●	A	1.2	LH M16x35	
6100H-32R-16*	6	100	84	32	66	50	8.0	●	A	1.2	LH M16x35	
7125-40R-16	7	125	109	40	85	63	8.0	●	A	2.7	SH M20x40	
7125H-40R-16*	7	125	109	40	85	63	8.0	●	A	2.6	SH M20x40	
8125-40R-16	8	125	109	40	85	63	8.0	●	A	2.7	SH M20x40	
8160H-40R-16*	8	160	144	40	110	63	8.0	x	C	3.3	-	
TFMRY 580-25.4R-16	5	80	64	25.4	70	50	8.0	●	A	1.0	SH M12x35	

▸ *: Carbide shim type

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

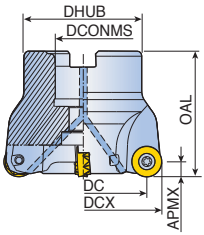
Designation	Shim	Shim screw	Screw	Wrench	
TFMRY-08	-	-	TS 30A60I/HG	TD 9	-
TFMRY-10	-	-	TS 35085/HG	-	T-T15
TFMRY-12	-	-	TS 40093I	-	T-T15
TFMRY-16	-	-	TS 50115I	-	T-T20
TFMRY...H-16	TSRY 16NS	TS 8050088S	TS 50A140I	-	T-T20

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328 | Ramping Data E403-E405

ADVANCE CUTTING TaeguTec

TFMRY-20

Face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMRY 463-22R-20	4	63	43	22	47	50	10.0	●	A	0.5	SH M10x30	RYMX 2007...
580-27R-20	5	80	60	27	58	50	10.0	●	A	0.8	LH M12x30	
5100H-32R-20*	5	100	80	32	66	50	10.0	●	A	1.1	LH M16x35	E293-E294
6100-32R-20	6	100	80	32	66	50	10.0	●	A	1.2	LH M16x35	
5125H-40R-20*	5	125	105	40	85	63	10.0	●	A	2.7	SH M20x40	
7125-40R-20	7	125	105	40	85	63	10.0	●	A	2.5	SH M20x40	
6160H-40R-20*	6	160	140	40	110	63	10.0	x	C	2.7	-	
8160-40R-20	8	160	140	40	110	63	10.0	x	C	3.8	-	
8200H-60R-20*	8	200	180	60	130	63	10.0	x	C	5.3	-	
9250H-60R-20*	9	250	230	60	160	63	10.0	x	C	9.3	-	

▸ *: Carbide shim type

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

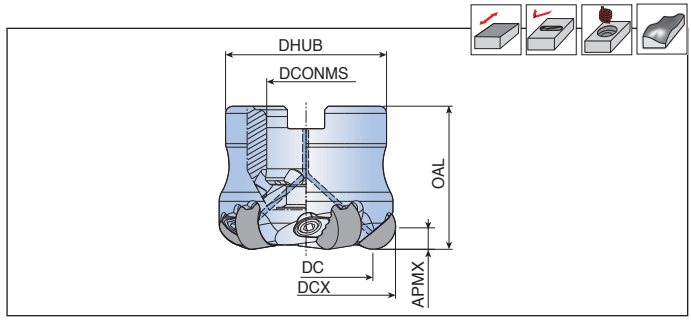
Designation	Shim	Shim screw	Screw	Wrench	Wrench handle
TFMRY-20	-	-	TS 60A130I	BLD T25/M7	SW6-T
TFMRY...H-20	TSRY 20NS	TS 9060011S	TS 60A165I	BLD T25/M7	SW6-T

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328 | Ramping Data E403-E405

TFMRN-12

CHASESPEED

Face mills



Designation			Dimension (mm)						Air hole(1)	Arbor style	Kg	Mounting bolt	Insert
			DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMRN	**450-22R-1207**	4	50	37.3	22	45	40	6.3	●	A	0.4	SH M10x30	RNGN 1207 FL... E291
	550-22R-1207	5	50	37.3	22	45	40	6.3	●	A	0.4	SH M10x30	
	463-22R-1207	4	63	50.3	22	47	40	6.3	●	A	0.6	SH M10x30	
	663-22R-1207	6	63	50.3	22	47	40	6.3	●	A	0.6	SH M10x30	
	763-22R-1207	7	63	50.3	22	47	40	6.3	●	A	0.6	SH M10x30	
	580-27R-1207	5	80	67.3	27	58	50	6.3	●	A	1.1	SH M12x35	
	780-27R-1207	7	80	67.3	27	58	50	6.3	●	A	1.1	SH M12x35	
	880-27R-1207	8	80	67.3	27	58	50	6.3	●	A	1.1	SH M12x35	

▸ Mounting bolt with air through hole is available on request (ordering example: SH M10x1.5x30-C)
▸ (1) Use only air (Coolant is prohibited)

Spare parts

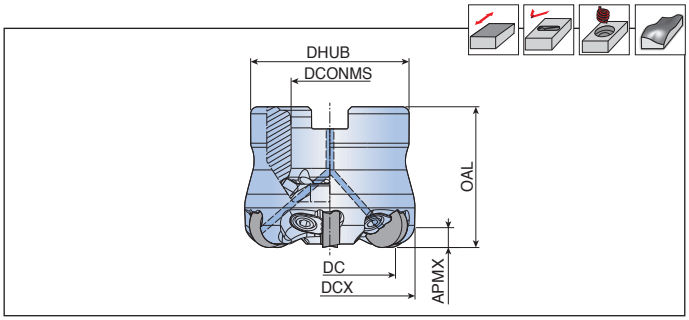
Designation	Wedge	Screw	Wrench		
TFMRN-12	WFZ 6-C	WS 6	T-W 3		

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFMRP-12

CHASESPEED

Face mills



Designation			Dimension (mm)						Air hole[1]	Arbor style	Kg	Mounting bolt	Insert
			DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMRP	**450-22R-12**	4	50	37.3	22	45	40	6.3	●	A	0.3	LH M10x25	RPGN 1204 FL... E291
	650-22R-12	6	50	37.3	22	45	40	6.3	●	A	0.3	LH M10x25	

▸ Mounting bolt with air through hole is available on request (ordering example: SH M10x1.5x30-C)
▸ [1] Use only air (Coolant is prohibited)

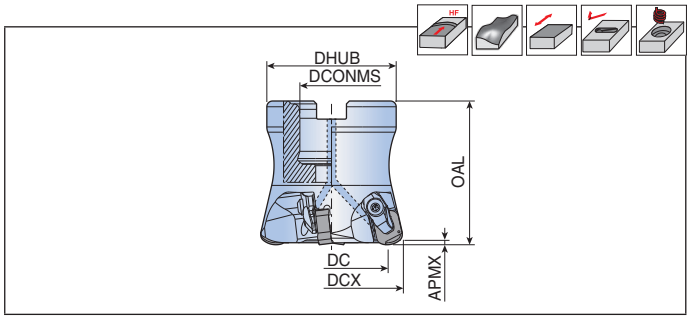
Spare parts

Designation	Wedge	Screw	Wrench		
TFMRP-12	WFZ 6-C	WS 6	T-W 3		

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFMBN-09CH

High feed face mills



Designation		Dimension (mm)						Air hole[1]	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBN 440-16R-09CH	4	40	29.4	16	38	40	1.5	●	A	0.2	SH M8x30	BNGX 0904... E279
350-22R-09CH	3	50	39.4	22	45	40	1.5	●	A	0.5	SH M10x30	
550-22R-09CH	5	50	39.4	22	45	40	1.5	●	A	0.4	SH M10x30	

▸ Mounting bolt with air through hole is available on request (ordering example: SH M10x1.5x30-C)
▸ [1] Use only air (Coolant is prohibited)

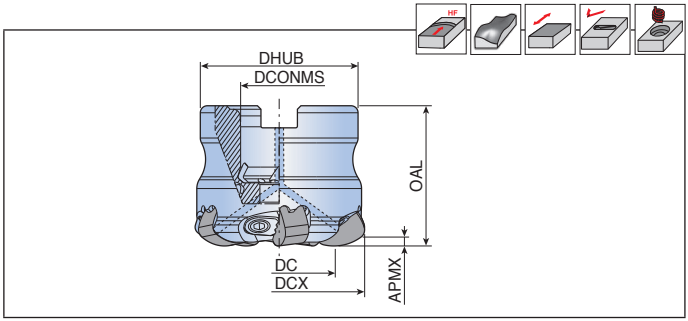
Spare parts

Designation	Clamp	Screw	Snap ring	Wrench	
TFMBN-09CH	CCL-3S	CLS-35A120/HG	CSR 1.25	L-W 2	

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328 | Ramping Data E406-E409

TFMBN-12

High feed face mills



Designation		Dimension (mm)						Air hole[1]	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBN 450-22R-12	4	50	32.8	22	45	40	2.5	●	A	0.3	SH M10x30	BNGX 1207... E279
550-22R-12	5	50	32.8	22	45	40	2.5	●	A	0.3	SH M10x30	
663-22R-12	6	63	45.7	22	47	40	2.5	●	A	0.4	SH M10x30	
763-22R-12	7	63	45.7	22	47	40	2.5	●	A	0.4	SH M10x30	
780-27R-12	7	80	62.6	27	70	50	2.5	●	A	1.2	SH M12x35	
880-27R-12	8	80	62.6	27	70	50	2.5	●	A	1.2	SH M12x35	

▸ Mounting bolt with air through hole is available on request (ordering example: SH M10x1.5x30-C)
▸ [1] Use only air (Coolant is prohibited)

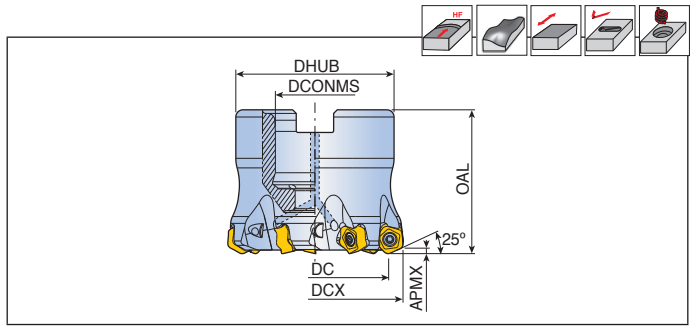
Spare parts

Designation	Wedge	Screw	Wrench		
TFMBN-12	WFZ 6-C	WS 6	T-W 3		

Cutting Condition E352-E325 | Arbor Style E326-E327 | Torque E328 | Ramping Data E406-E409

TFMPT-05/10

High feed face mills



25°

Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMPT	640-16R-05	6	40	31.8	16	38	40	1.5	●	A	0.3	SH M8x25	PTKU 0503... E290
	750-22R-05	7	50	41.8	22	45	40	1.5	●	A	0.4	LH M10x25	
	752-22R-05	7	52	43.8	22	45	40	1.5	●	A	0.3	LH M10x25	
	863-22R-05	8	63	54.8	22	58	50	1.5	●	A	0.8	SH M10x30	
	866-27R-05	8	66	57.8	27	58	50	1.5	●	A	0.7	SH M12x35	
TFMPT	450-22R-10	4	50	33.4	22	45	40	3.0	●	E	0.3	TCS10-40	PTKU 1006... E290
	563-22R-10	5	63	46.4	22	58	50	3.0	●	A	0.8	SH M10x30	
	566-22R-10	5	66	49.4	22	58	50	3.0	●	A	0.8	SH M10x30	
	680-27R-10	6	80	63.4	27	70	60	3.0	●	A	1.4	SH M12x30	
	8100-32R-10	8	100	83.4	32	85	60	3.0	●	A	2.3	SH M16x35	
	9125-32R-10	9	125	108.4	32	85	60	3.0	●	A	3.1	SH M16x35	
	10160-40R-10	10	160	143.4	40	110	60	3.0	x	C	4.1	-	
	12200-60R-10	12	200	183.4	60	130	60	3.0	x	C	5.7	-	
TFMPT	680-25.4R-10	6	80	63.4	25.4	70	60	3.0	●	A	1.5	SH M12x35	
	8100-31.75R-10	8	100	83.4	31.75	80	60	3.0	x	B	2.0	-	
	9125-38.1R-10	9	125	108.4	38.1	80	60	3.0	x	B	2.6	-	
	10160-50.8R-10	10	160	143.4	50.8	100	60	3.0	x	B	4.2	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

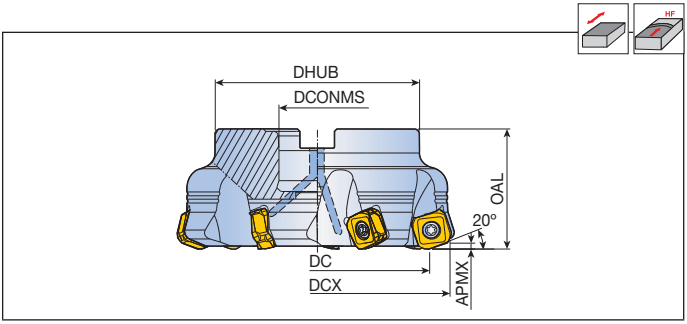
Designation	Screw	Wrench		Wrench handle	
TFMPT-05	TS 25D060/HG-P	TD7P	-	-	
TFMPT-10	TS 50D130/HG-P	-	TBLD T20P-W6	SW6-T	

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E386-E387

8D-TF20-11/14

CHASE & SPEED FACING & HIGH FEED

High feed face mills



20°

Designation		Dimension (mm)						Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
8D-TF20-450-22R-11	4	50	63.5	22	45	40	1.8	●	A	0.5	SH M10X30	SQKU 1105
8D-TF20-563-22R-11	5	63	76.5	22	47	50	1.8	●	A	0.9	SH M10X30	
8D-TF20-680-27R-11	6	80	93.5	27	70	50	1.8	●	A	1.5	SH M12X35	
8D-TF20-8100-32R-11	8	100	113.5	32	85	50	1.8	●	A	2.2	LH M16X35	E306
8D-TF20-563-22R-14	5	63	80.6	22	47	50	2.5	●	A	1.0	SH M10X30	SQKU 1406
8D-TF20-680-27R-14	6	80	97.6	27	70	50	2.5	●	A	1.7	SH M12X35	
8D-TF20-7100-32R-14	7	100	117.5	32	85	50	2.5	●	A	2.5	LH M16X35	
8D-TF20-8125-40R-14	8	125	142.5	40	85	63	2.5	●	A	4.3	SH M20X40	E306

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

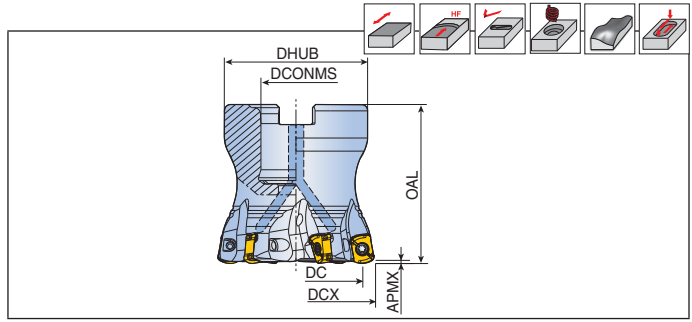
Designation	Screw	Wrench	Wrench handle		
8D-TF20-11	TS 40A115I	TBLD T15-W6	SW6-T		
8D-TF20-14	TS 50C130I/HG	TBLD T20-W6	SW6-T		

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328

TFMBLV-06

WIN4FEED

High feed face mills



V Bottom

Designation			Dimension (mm)						Coolant hole	Arbor type	Kg	Mounting bolt	Insert
			DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBLV	**432-16R-06**	4	32	24	16	30	40	1.0	●	A	0.1	SH M8x25	BLMV 0603... E277
	532-16R-06	5	32	24	16	30	40	1.0	●	A	0.1	SH M8x26	
	640-16R-06	6	40	32	16	38	40	1.0	●	A	0.2	SH M8x25	
	640-22R-06	6	40	32	22	38	40	1.0	●	A	0.2	SH M10x30	
	650-22R-06	6	50	42	22	45	50	1.0	●	A	0.4	SH M10x30	
	750-22R-06	7	50	42	22	45	50	1.0	●	A	0.4	SH M10x30	
	850-22R-06	8	50	42	22	45	50	1.0	●	A	0.4	SH M10x30	
	752-22R-06	7	52	44	22	45	40	1.0	●	A	0.4	SH M10x30	
	852-22R-06	8	52	44	22	45	40	1.0	●	A	0.4	SH M10x30	
	763-22R-06	7	63	55	22	48	50	1.0	●	A	0.6	SH M10x30	
	863-22R-06	8	63	55	22	48	50	1.0	●	A	0.6	SH M10x30	
	963-22R-06	9	63	55	22	48	50	1.0	●	A	0.6	SH M10x30	
	966-27R-06	9	66	58	27	58	50	1.0	●	A	0.7	SH M12x30	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
TEBLV/TFMBLV-06	TS 25064I/HG-P	TD 8P			

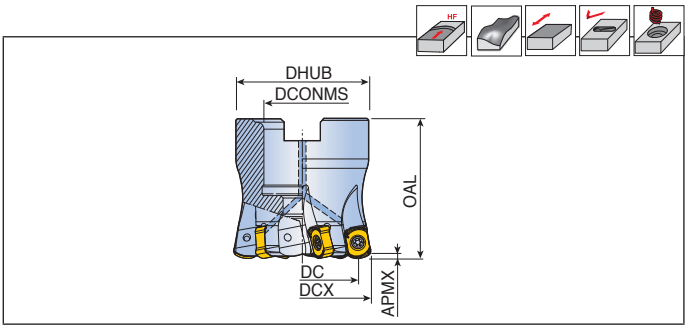
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E389

ADVANCE CUTTING TaeguTec

TFMBL-06/09

CHASE 4 FEED HIGH FEED MILL

High feed face mills

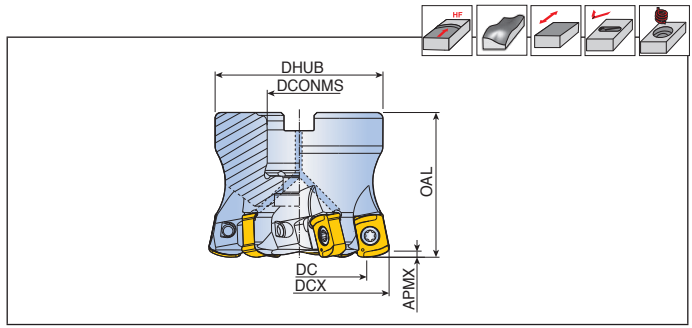


Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBL 432-16R-06	4	32	24.3	16	30	40	1.0	●	A	0.1	SH M8x25	BLMP 0603... E275
532-16R-06	5	32	24.3	16	30	40	1.0	●	A	0.1	SH M8x25	
640-16R-06	6	40	32.2	16	38	40	1.0	●	A	0.2	SH M8x25	
640-22R-06	6	40	32.2	22	38	40	1.0	●	A	0.2	SH M10x30	
650-22R-06	6	50	42.2	22	45	50	1.0	●	A	0.4	SH M10x30	
750-22R-06	7	50	42.2	22	45	50	1.0	●	A	0.4	SH M10x30	
850-22R-06	8	50	42.2	22	45	50	1.0	●	A	0.4	SH M10x30	
752-22R-06	7	52	44.2	22	45	40	1.0	●	A	0.4	SH M10x30	
852-22R-06	8	52	44.2	22	45	40	1.0	●	A	0.4	SH M10x30	
763-22R-06	7	63	55.5	22	47	50	1.0	●	A	0.6	SH M10x30	
863-22R-06	8	63	55.5	22	47	50	1.0	●	A	0.6	SH M10x30	
963-22R-06	9	63	55.5	22	47	50	1.0	●	A	0.6	SH M10x30	
966-27R-06	9	66	58.5	27	58	50	1.0	●	A	0.7	SH M12x35	
TFMBL 432-16R-09	4	32	21.6	16	30	40	1.5	●	E	0.1	KTB 32B	BLMP 0904... E275
440-16R-09	4	40	29.6	16	38	40	1.5	●	A	0.2	SH M8x25	
540-16R-09	5	40	29.6	16	38	40	1.5	●	A	0.2	SH M8x25	
550-22R-09	5	50	39.6	22	45	50	1.5	●	A	0.4	SH M10x30	
650-22R-09	6	50	39.6	22	45	50	1.5	●	A	0.4	SH M10x30	
750-22R-09	7	50	39.6	22	45	50	1.5	●	A	0.4	SH M10x30	
652-22R-09	6	52	41.6	22	45	40	1.5	●	A	0.4	SH M10x30	
752-22R-09	7	52	41.6	22	45	40	1.5	●	A	0.4	SH M10x30	
663-22R-09	6	63	52.6	22	47	50	1.5	●	A	0.6	SH M10x30	
763-22R-09	7	63	52.6	22	47	50	1.5	●	A	0.6	SH M10x30	
863-22R-09	8	63	52.6	22	47	50	1.5	●	A	0.6	SH M10x30	
766-27R-09	7	66	55.6	27	58	50	1.5	●	A	0.7	SH M12x35	
866-27R-09	8	66	55.6	27	58	50	1.5	●	A	0.8	SH M12x35	
780-27R-09	7	80	69.6	27	70	50	1.5	●	A	1.2	SH M12x35	
880-27R-09	8	80	69.6	27	70	50	1.5	●	A	1.2	SH M12x35	
980-27R-09	9	80	69.6	27	70	50	1.5	●	A	1.2	SH M12x35	
1080-27R-09	10	80	69.6	27	70	50	1.5	●	A	1.2	SH M12x35	
8100-32R-09	8	100	89.6	32	85	60	1.5	●	A	2.3	SH M16x35	
9100-32R-09	9	100	89.6	32	85	60	1.5	●	A	2.3	SH M16x35	
10100-32R-09	10	100	89.6	32	85	60	1.5	●	A	2.3	SH M16x35	
11100-32R-09	11	100	89.6	32	85	60	1.5	●	A	2.3	SH M16x35	
12100-32R-09	12	100	89.6	32	85	60	1.5	●	A	2.3	SH M16x35	
12125-40R-09	12	125	114.6	40	85	60	1.5	●	A	2.7	SH M20x40	
14125-40R-09	14	125	114.6	40	85	60	1.5	●	A	2.7	SH M20x40	

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E390-E393

TFMBL-11

High feed face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBL	**440-16R-11**	4	40	24.4	16	30	40	2.0	●	E	0.2	KTB 32B	BLMP 1105... E275
	450-22R-11	4	50	34.4	22	45	40	2.0	●	A	0.3	LH M10x25	
	550-22R-11	5	50	34.4	22	45	40	2.0	●	A	0.3	LH M10x25	
	552-22R-11	5	52	36.4	22	45	40	2.0	●	A	0.3	LH M10x25	
	563-22R-11	5	63	48.4	22	58	50	2.0	●	A	0.7	SH M10x30	
	663-22R-11	6	63	48.4	22	58	50	2.0	●	A	0.7	SH M10x30	
	666-22R-11	6	66	50.3	22	58	50	2.0	●	A	0.8	SH M10x30	
	666-27R-11	6	66	50.3	27	58	50	2.0	●	A	0.7	SH M12x35	
	680-27R-11	6	80	64.3	27	70	60	2.0	●	A	1.4	SH M12x30	
	780-27R-11	7	80	64.3	27	70	60	2.0	●	A	1.4	SH M12x30	
	6100-32R-11	6	100	84.3	32	85	60	2.0	●	A	2.2	SH M16x35	
	7100-32R-11	7	100	84.3	32	85	60	2.0	●	A	2.2	SH M16x35	
	8125-32R-11	8	125	109.3	32	85	60	2.0	●	A	2.5	SH M20x40	
	10125-40R-11	10	125	109.3	40	85	60	2.0	●	A	2.7	SH M20x40	
	10160-40R-11	10	160	144.3	40	110	60	2.0	x	C	3.9	-	
	12200-60R-11	12	200	184.3	60	130	60	2.0	x	C	5.8	-	
TFMBL	**680-25.4R-11**	6	80	64.3	25.4	70	60	2.0	●	A	1.4	SH M12x35	
	6100-31.75R-11	6	100	84.3	31.75	80	60	2.0	x	B	1.8	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

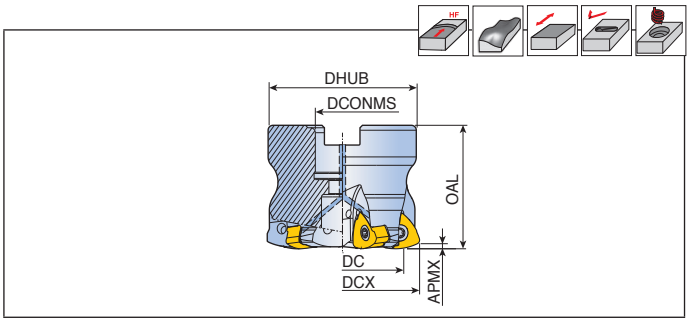
Designation	Screw	Wrench		Wrench handle	
TFMBL-06	TS 25064I/HG-P	TD 8P	-	-	
TFMBL-09	TS 35A088I/HG	TD 10P	-	-	
TFMBL-11	TS 50A121I/HG	-	TBLD T20-W6	SW6-T	

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E390-E393

TFMBL-13

CHASE2FEED

High feed face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBL 340-16R-13	3	40	20.7	16	30	50	2.0	●	A	0.2	KTB 32B	BLMP 1306...
350-22R-13	3	50	31.0	22	45	40	2.0	●	A	0.3	LH M10x25	E276
450-22R-13	4	50	31.0	22	45	40	2.0	●	A	0.3	LH M10x25	
452-22R-13	4	52	32.2	22	45	40	2.0	●	A	0.3	SH M10x30	
463-22R-13	4	63	45.8	22	60	50	2.0	●	A	0.8	SH M10x30	
563-22R-13	5	63	45.8	22	60	50	2.0	●	A	0.8	SH M10x30	
463-27R-13	4	63	45.8	27	58	50	2.0	●	A	0.7	SH M12x30	
466-22R-13	4	66	45.9	22	60	50	2.0	●	A	0.8	SH M10x30	
566-22R-13	5	66	45.9	22	60	50	2.0	●	A	0.8	SH M10x30	
566-27R-13	5	66	45.9	27	58	50	2.0	●	A	0.7	SH M12x30	
580-27R-13	5	80	59.8	27	70	60	2.0	●	A	1.4	SH M12x30	
680-27R-13	6	80	59.8	27	70	60	2.0	●	A	1.4	SH M12x30	
580-32R-13	5	80	59.8	32	76	60	2.0	●	A	1.4	SH M16x35	
5100-32R-13	5	100	79.7	32	76	60	2.0	●	A	1.9	SH M16x35	
6100-32R-13	6	100	79.7	32	76	60	2.0	●	A	2.0	SH M16x35	
7100-32R-13	7	100	79.7	32	76	60	2.0	●	A	2.0	SH M16x35	
6125-32R-13	6	125	104.5	32	85	60	2.0	●	A	3.0	SH M16x35	
7125-40R-13	7	125	104.5	40	85	60	2.0	●	A	2.9	SH M20x35	
7160-40R-13	7	160	139.5	40	110	60	2.0	x	C	3.6	-	
8160-40R-13	8	160	139.5	40	110	60	2.0	x	C	3.6	-	
9160-40R-13	9	160	139.5	40	110	60	2.0	x	C	3.8	-	
8200-60R-13	8	200	179.5	60	130	60	2.0	x	C	5.4	-	
9200-60R-13	9	200	179.5	60	130	60	2.0	x	C	5.3	-	
11200-60R-13	11	200	179.5	60	130	60	2.0	x	C	5.5	-	
9250-60R-13	9	250	229.5	60	160	60	2.0	x	C	10.6	-	
10250-60R-13	10	250	229.5	60	160	60	2.0	x	C	10.6	-	
12250-60R-13	12	250	229.5	60	160	60	2.0	x	C	10.7	-	

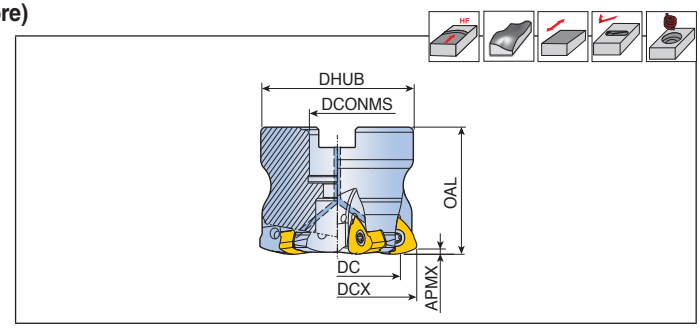
Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E394

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

TFMBL-13

CHASE2FEED

High feed face mills (Inch bore)



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBL 580-25.4R-13	5	80	59.8	25.4	70	60	2.0	●	A	1.3	SH M12x30	BLMP 1306...
580-31.75R-13	5	80	59.8	31.75	76	60	2.0	●	A	1.3	SH M16x35	E276
6100-31.75R-13	6	100	79.7	31.75	76	60	2.0	●	A	1.9	SH M16x35	
7125-38.1R-13	7	125	104.5	38.1	80	60	2.0	x	B	3.0	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

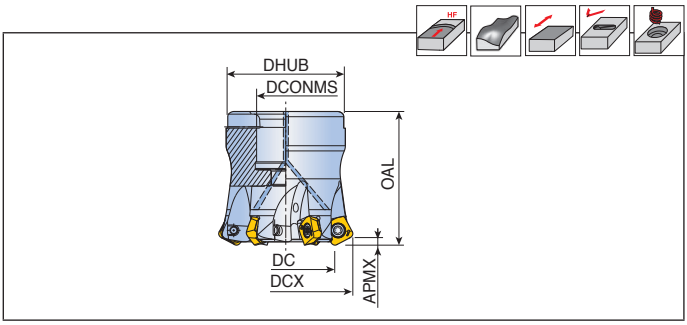
Designation	Screw	Wrench			
TFMBL-13	TS 50B106I/HG	T-T20			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E394

TFMSB-06/09

CHASEFEED

High feed face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMSB 532-16R-06	5	32	21.7	16	30	40	1.0	●	A	0.1	SH M8x25	SBMT 0603... E295
640-16R-06	6	40	29.7	16	38	40	1.0	●	A	0.2	SH M8x25	
750-22R-06	7	50	39.7	22	45	50	1.0	●	A	0.4	SH M10x35	
863-22R-06	8	63	52.7	22	47	50	1.0	●	A	0.6	SH M10x35	
TFMSB 432-16R-09	4	32	17.4	16	30	40	1.2	●	E	0.1	KTB 32B	SBMT 0904... E295
440-16R-09	4	40	25.5	16	38	40	1.2	●	A	0.2	SH M8x25	
540-16R-09	5	40	25.5	16	38	40	1.2	●	A	0.2	SH M8x25	
450-22R-09	4	50	35.5	22	45	50	1.2	●	A	0.4	SH M10x30	
550-22R-09	5	50	35.5	22	45	50	1.2	●	A	0.4	SH M10x30	
650-22R-09	6	50	35.5	22	45	50	1.2	●	A	0.4	SH M10x30	
750-22R-09	7	50	35.5	22	45	50	1.2	●	A	0.4	SH M10x30	
652-22R-09	6	52	37.5	22	45	50	1.2	●	A	0.4	SH M10x30	
752-22R-09	7	52	37.5	22	45	50	1.2	●	A	0.4	SH M10x30	
663-22R-09	6	63	48.4	22	58	50	1.2	●	A	0.8	SH M10x30	
763-22R-09	7	63	48.4	22	58	50	1.2	●	A	0.8	SH M10x30	
763-27R-09	7	63	48.4	27	58	50	1.2	●	A	0.7	SH M12x35	
863-22R-09	8	63	48.4	22	58	50	1.2	●	A	0.8	SH M10x30	
866-22R-09	8	66	51.5	22	58	50	1.2	●	A	0.8	SH M10x30	
780-27R-09	7	80	65.8	27	70	60	1.2	●	A	1.4	SH M12x35	
880-27R-09	8	80	65.8	27	70	60	1.2	●	A	1.4	SH M12x35	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M8x1.25x25-C)

Spare parts

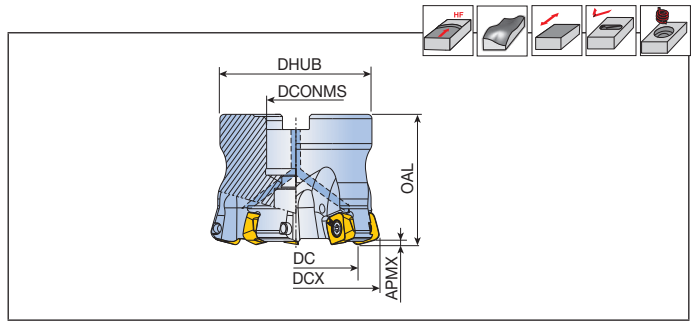
Designation	Screw	Wrench			
TFMSB-06	TS 25064I/HG-P	TD 8P			
TFMSB-09	TS 35A088I/HG	TD 10P			
TFMSB 750-22R-09	TS 35A070I/HG	TD 10P			
TFMSB 752-22R-09	TS 35A070I/HG	TD 10P			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E395-E396

TFMSB-13

CHASEFEED

High feed face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMSB 350-22R-13	3	50	29.3	22	45	40	2.0	●	A	0.3	LH M10x25	SBMT 1306...
450-22R-13	4	50	29.3	22	45	40	2.0	●	A	0.2	LH M10x25	E295
452-22R-13	4	52	31.3	22	45	40	2.0	●	A	0.3	LH M10x25	
552-22R-13	5	52	31.3	22	45	40	2.0	●	A	0.2	LH M10x25	
463-22R-13	4	63	42.4	22	58	50	2.0	●	A	0.6	SH M10x30	
563-22R-13	5	63	42.4	22	58	50	2.0	●	A	0.5	SH M10x30	
463-27R-13	4	63	42.4	27	58	50	2.0	●	A	0.5	SH M12x35	
566-27R-13	5	66	45.3	27	58	50	2.0	●	A	0.6	SH M12x35	
580-27R-13	5	80	59.4	27	70	60	2.0	●	A	1.3	SH M12x35	
680-27R-13	6	80	59.4	27	70	60	2.0	●	A	1.3	SH M12x35	
580-32R-13	5	80	59.4	32	76	60	2.0	●	A	1.3	SH M16x35	
6100-32R-13	6	100	79.4	32	76	60	2.0	●	A	1.9	SH M16x35	
7125-40R-13	7	125	104.7	40	85	60	2.0	●	A	2.5	SH M20x40	
8160-40R-13	8	160	139.4	40	110	60	2.0	x	C	3.5	-	
9200-60R-13	9	200	179.4	60	130	60	2.0	x	C	5.1	-	
10250-60R-13	10	250	229.4	60	160	60	2.0	x	C	9.1	-	
TFMSB 463-25.4R-13	4	63	42.4	25.4	58	50	2.0	●	A	0.5	SH M12x35	
580-25.4R-13	5	80	59.4	25.4	70	60	2.0	●	A	1.3	SH M12x35	
580-31.75R-13	5	80	59.4	31.75	76	60	2.0	●	A	1.3	SH M16x35	
7125-38.1R-13	7	125	104.7	38.1	80	60	2.0	x	B	2.2	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

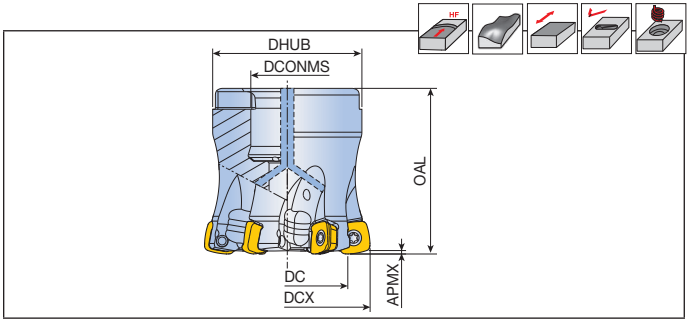
Designation	Screw	Wrench			
TFMSB-13	TS 50115I	T-T20			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E397

TFMSR-07/10

CHASEFEED

High feed face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMSR 640-16R-07	6	40	30.7	16	38	40	0.7	●	A	0.2	SH M8x25	SRMT 0703... E308
650-22R-07	6	50	40.7	22	45	50	0.7	●	A	0.4	SH M10x30	
750-22R-07	7	50	40.7	22	45	50	0.7	●	A	0.4	SH M10x30	
863-22R-07	8	63	53.7	22	47	50	0.7	●	A	0.6	SH M10x30	
TFMSR 540-16R-10	5	40	26.5	16	38	40	1.0	●	A	0.2	SH M8x40	SRMT 1004... E308
550-22R-10	5	50	36.5	22	45	50	1.0	●	A	0.4	SH M10x35	
650-22R-10	6	50	36.5	22	45	50	1.0	●	A	0.4	SH M10x35	
652-22R-10	6	52	38.5	22	45	50	1.0	●	A	0.4	SH M10x35	
663-22R-10	6	63	49.4	22	58	50	1.0	●	A	0.7	SH M10x30	
763-22R-10	7	63	49.4	22	58	50	1.0	●	A	0.7	SH M10x30	
566-27R-10	5	66	52.4	27	58	50	1.0	●	A	0.7	SH M12x35	
766-27R-10	7	66	52.4	27	58	50	1.0	●	A	0.7	SH M12x35	
780-27R-10	7	80	66.4	27	70	60	1.0	●	A	1.3	SH M12x35	
880-27R-10	8	80	66.4	27	70	60	1.0	●	A	1.4	SH M12x35	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

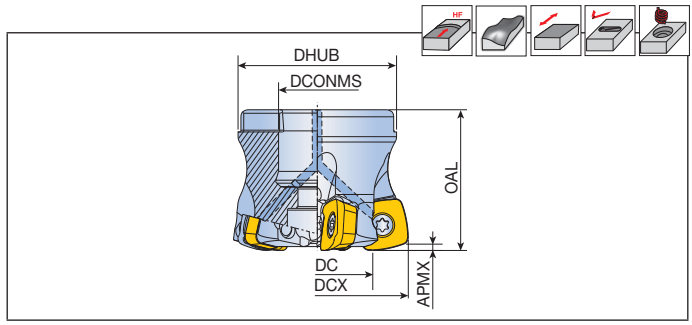
Designation	Screw	Wrench			
TFMSR-07	TS 25064I/HG-P	TD 8P			
TFMSR-10	TS 35A088I/HG	TD 10P			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E398-E399

TFMSR-14

CHASEFEED

High feed face mills



Designation		Dimension (mm)						Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMSR 350-22R-14	3	50	29.8	22	45	40	2	●	A	0.3	LH M10X25	SRMT 1406...
450-22R-14	4	50	29.8	22	45	40	2	●	A	0.3	LH M10X25	E308
452-22R-14	4	52	31.6	22	45	40	2	●	A	0.3	LH M10X25	
552-22R-14	5	52	31.7	22	45	40	2	●	A	0.3	LH M10X25	
463-22R-14	4	63	42.6	22	58	50	2	●	A	0.6	SH M10X30	
563-22R-14	5	63	42.6	22	58	50	2	●	A	0.6	SH M10X30	
566-27R-14	5	66	45.6	27	58	50	2	●	A	0.6	SH M12X35	
580-27R-14	5	80	59.6	27	70	60	2	●	A	1.3	SH M12X35	
580-32R-14	5	80	59.6	32	76	60	2	●	A	1.3	SH M16X35	
780-27R-14	7	80	59.6	27	70	60	2	●	A	1.3	SH M12X35	
880-32R-14	8	80	59.9	32	76	60	2	●	A	1.3	SH M16X35	
6100-32R-14	6	100	79.6	32	85	60	2	●	A	1.9	SH M16X35	
8100-32R-14	8	100	79.6	32	85	60	2	●	A	1.9	SH M16X35	
7125-40R-14	7	125	104.6	40	85	60	2	●	A	2.4	SH M20X40	
8160-40R-14	8	160	139.6	40	110	60	2	x	C	3.6	-	
9200-60R-14	9	200	179.6	60	130	60	2	x	C	4.9	-	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

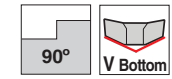
Spare parts

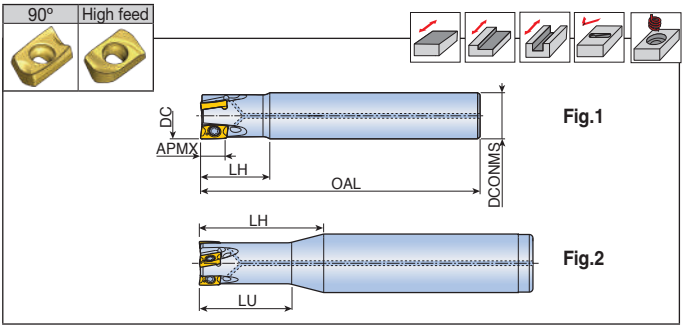
Designation	Screw	Wrench			
TFMSR-14	TS 50115I	T-T20			

Cutting Condition E352-E325
Arbor Style E326-E327
Torque E328
Ramping Data E400

2S-TE90CV-05

End mills





Designation		Dimension (mm)						Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	LU	APMX			
2S-TE90CV-106-06-05	1	6	6	60	12	-	5.0	●	1	CVK(H)T 0502...
106-06-05-L50	1	6	6	50	10	-	5.0	●	1	E281
208-07-05	2	8	7	80	12	-	5.0	●	1	
208-08-05	2	8	8	80	12	-	5.0	●	1	
208-08-05-L50	2	8	8	50	10	-	5.0	●	1	
208-12-05	2	8	12	80	25	18	5.0	●	2	
209-08-05	2	9	8	80	12	-	5.0	●	1	
210-10-05	2	10	10	80	15	-	5.0	●	1	
212-12-05	2	12	12	80	15	-	5.0	●	1	
310-09-05	3	10	9	80	12	-	5.0	●	1	
310-10-05	3	10	10	80	15	-	5.0	●	1	
310-10-05-L55	3	10	10	55	12	-	5.0	●	1	
310-16-05-L90	3	10	16	90	34	22	5.0	●	2	
311-10-05	3	11	10	80	12	-	5.0	●	1	
312-12-05	3	12	12	80	15	-	5.0	●	1	
412-11-05	4	12	11	80	12	-	5.0	●	1	
412-12-05	4	12	12	80	15	-	5.0	●	1	
412-12-05-L60	4	12	12	60	14	-	5.0	●	1	
412-16-05-L100	4	12	16	100	34	26	5.0	●	2	
413-12-05	4	13	12	80	12	-	5.0	●	1	
414-12-05	4	14	12	80	10	-	5.0	●	1	
514-14-05-L90	5	14	14	90	15	-	5.0	●	1	

▸ Cutter body for '-HF' insert should be modified with body corner radius 1.8 mm

Spare parts

Designation	Screw	Wrench			
2S-TE90CV-05	TS 18033/HG-P	T 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E340-E344

2S-TE90CV-M(S)-05

Modular heads

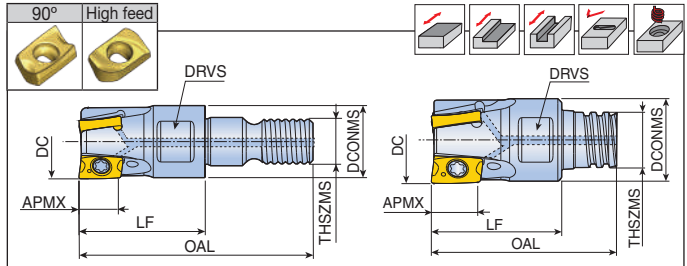
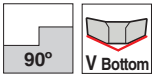


Fig.1 Fig.2



Designation		Dimension (mm)							Coolant hole	Fig.	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
2S-TE90CV- 208-M04-05	2	8	7.8	10	21.5	M04	5.0	6	●	1	CVK(H)T 0502...
310-M06-05	3	10	9.7	17	31.5	M06	5.0	8	●	1	E281
412-M06-05	4	12	11	17	31.5	M06	5.0	8	●	1	
516-M08-05	5	16	13	23	40.5	M08	5.0	10	●	1	
620-M10-05	6	20	18	23	43.0	M10	5.0	15	●	1	
720-M10-05	7	20	18	23	43.0	M10	5.0	15	●	1	
2S-TE90CV- 208-S05-05	2	8	7.6	10	16.7	S05	5.0	5.5	●	2	
310-S06-05	3	10	9.6	15	21.3	S06	5.0	8	●	2	
412-S08-05	4	12	11.5	16	23.5	S08	5.0	10	●	2	

- Cutter body for '-HF' insert should be modified with body corner radius 1.8 mm
- Matched with T-FLEXTEC holder (Fig.1) & MAXI-RUSH holder (Fig.2)

Spare parts

Designation	Screw	Wrench			
2S-TE90CV-05	TS 18033/HG-P	T 6P			

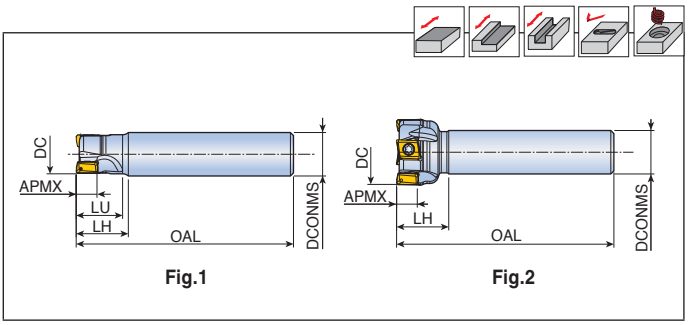
Cutting Condition E352-E325
Torque E328
Ramping Data E340-E344

4T-MTE90-05

TANGSFEED TANGENTIAL MILL

End mills

90°



Designation		Dimension (mm)						Fig.	Insert
		DC	DCONMS	OAL	LU	LH	APMX		
4T-MTE90- 210-10-05	2	10	10	50	10	12	4.6	1	LPHU 0502…
212-10-05	2	12	10	50	-	12	4.6	2	E284
314-10-05	3	14	10	50	-	12	4.6	2	
416-10-05	4	16	10	50	-	12	4.6	2	
420-10-05	4	20	10	50	-	12	4.6	2	
520-12-05	5	20	12	60	-	12	4.6	2	
430-10-05	4	30	10	50	-	12	4.6	2	
630-12-05	6	30	12	60	-	12	4.6	2	

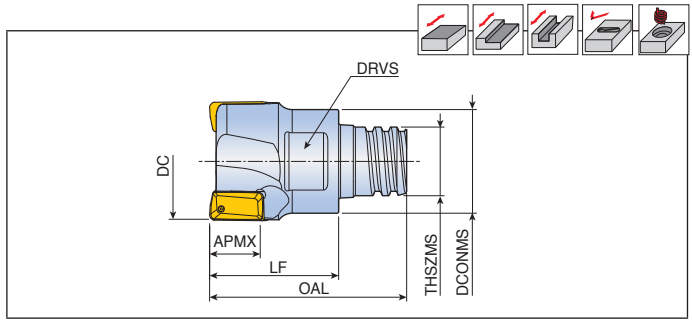
Spare parts

Designation	Screw	Wrench			
4T-MTE90-05 (Ø10)	TS 18041I/SG-P	T 6P			
4T-MTE90-05 (Ø12-)	TS 18049/HG-P	T 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E345

4T-MTE90-S-05

Modular heads



90°

Designation		Demension (mm)							Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS	
4T-MTE90-210-S06-05	2	10	9.6	11	17.3	S06	4.6	8	LPHU 0502…
212-S06-05	2	12	9.6	12	18.3	S06	4.6	8	E284
314-S06-05	3	14	9.6	13	19.3	S06	4.6	8	
416-S06-05	4	16	9.6	14	20.3	S06	4.6	8	
420-S06-05	4	20	9.6	15	21.3	S06	4.6	8	
430-S06-05	4	30	9.6	16	22.3	S06	4.6	8	
630-S08-05	6	30	11.5	16	23.5	S08	4.6	10	

▸ Matched with MAXI-RUSH holder

Spare parts

Designation	Screw	Wrench			
4T-MTE90-S-05 (Ø10)	TS 18041I/SG-P	T 6P			
4T-MTE90-S-05 (Ø12-)	TS 18049/HG-P	T 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E345

4T-TE90-05/09

TANGSFEED TANGENTIAL MILL

End mills

90°

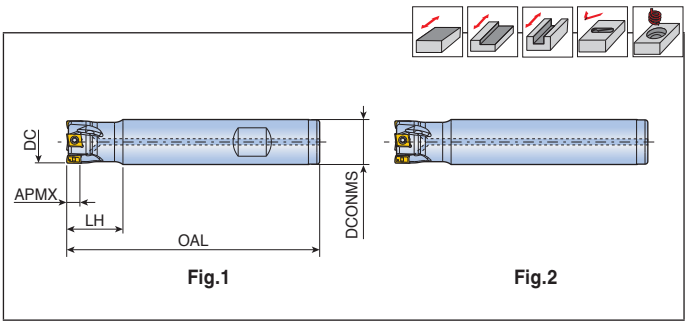


Fig.1 Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
4T-TE90-210-10-05	2	10	10	80	15	4.6	●	2	LPK(H)U 0502...
211-10-05	2	11	10	80	15	4.6	●	2	E284
212-12-05	2	12	12	80	15	4.6	●	2	
312-12-05	3	12	12	80	15	4.6	●	2	
313-12-05	3	13	12	80	15	4.6	●	2	
316-W16-05	3	16	16	90	20	4.6	●	1	
416-W16-05	4	16	16	90	20	4.6	●	1	
420-W20-05	4	20	20	100	25	4.6	●	1	
520-W20-05	5	20	20	100	25	4.6	●	1	
625-W25-05	6	25	25	110	30	4.6	●	1	
832-W25-05	8	32	25	110	20	4.6	●	1	
4T-TE90-220-W20-09	2	20	20	100	30	8.3	●	1	LPK(H)U 0904...
220-20-09-L170	2	20	20	170	30	8.3	●	2	E284
320-W20-09	3	20	20	100	30	8.3	●	1	
325-W25-09	3	25	25	100	30	8.3	●	1	
325-25-09-L200	3	25	25	200	30	8.3	●	2	
425-W25-09	4	25	25	100	30	8.3	●	1	
425-25-09-L120	4	25	25	120	30	8.3	●	2	
332-W32-09	3	32	32	110	35	8.3	●	1	
332-32-09-L210	3	32	32	210	35	8.3	●	2	
532-W32-09	5	32	32	110	35	8.3	●	1	
532-32-09-L130	5	32	32	130	35	8.3	●	2	
440-W32-09	4	40	32	115	30	8.3	●	1	
440-32-09-L150	4	40	32	150	30	8.3	●	2	
640-W32-09	6	40	32	115	30	8.3	●	1	

Spare parts

Designation	Screw	Wrench		Wrench handle	
4T-TE90-05 (Ø10,Ø11)	TS 18041I/SG-P	T 6P	-	-	
4T-TE90-05 (Ø12-)	TS 18049/HG-P	T 6P	-	-	
4T-TE90-09	TS 30D082-P	-	TBLD T08P-W4	THND 4W	

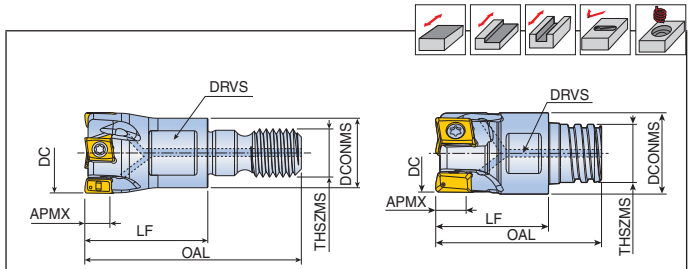
Cutting Condition E352-E325 | Torque E328 | Ramping Data E345

4T-TE90-M(S)-05/09

TANGSFEED TANGENTIAL MILL

Modular heads

90°



Designation		Dimension (mm)							Coolant hole	Fig.	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
4T-TE90-210-M06-05	2	10	9.7	17	31.5	M06	4.6	8	●	1	LPK(H)U 0502... E284
312-M06-05	3	12	11	17	31.5	M06	4.6	8	●	1	
416-M08-05	4	16	13	23	40.5	M08	4.6	10	●	1	
520-M10-05	5	20	18	23	43	M10	4.6	15	●	1	
625-M12-05	6	25	21	27	49	M12	4.6	17	●	1	
832-M16-05	8	32	29	27	52	M16	4.6	25	●	1	
4T-TE90-210-S06-05	2	10	9.6	15	21.3	S06	4.6	8	●	2	
312-S08-05	3	12	11.5	16	23.5	S08	4.6	10	●	2	
416-S10-05	4	16	15.2	20	31.3	S10	4.6	13	●	2	
4T-TE90-220-M10-09	2	20	18	30	50	M10	8.3	15	●	1	LPK(H)U 0904... E284
320-M10-09	3	20	18	30	50	M10	8.3	15	●	1	
425-M12-09	4	25	21	35	57	M12	8.3	17	●	1	
532-M16-09	5	32	29	43	68	M16	8.3	25	●	1	
640-M16-09	6	40	29	43	68	M16	8.3	25	●	1	

▸ Matched with T-FLEXTEC holder(Fig.1) & MAXI-RUSH holder(Fig.2)

Spare parts

Designation	Screw	Wrench		Wrench handle	
4T-TE90-05 (Ø10,Ø11)	TS 18041I/SG-P	T 6P	-	-	
4T-TE90-05 (Ø12-)	TS 18049/HG-P	T 6P	-	-	
4T-TE90-09	TS 30D082-P	-	TBLD T08P-W4	THND 4W	

Cutting Condition E352-E325
Torque E328
Ramping Data E345

3P-TE90-04

End mills

90°

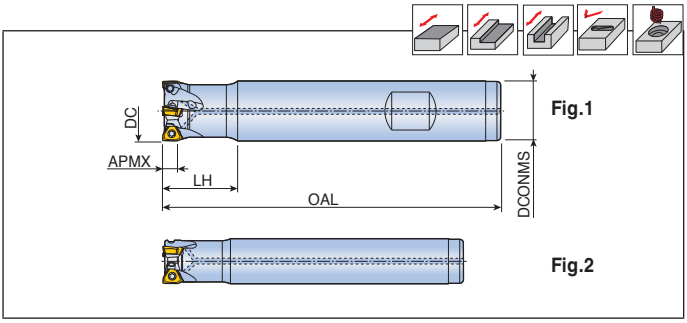


Fig.1

Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
3P-TE90-108-08-04	1	8	8	80	17	3.5	●	2	3PKT 0402... E256
210-10-04	2	10	10	80	17	3.5	●	2	
210-09-04-L	2	10	9	120	10	3.5	●	2	
211-10-04	2	11	10	80	11	3.5	●	2	
212-11-04-L	2	12	11	120	11	3.5	●	2	
212-12-04	2	12	12	80	18	3.5	●	2	
212-12-04-L	2	12	12	120	18	3.5	●	2	
312-12-04	3	12	12	80	18	3.5	●	2	
313-12-04	3	13	12	90	11	3.5	●	2	
314-12-04	3	14	12	90	12	3.5	●	2	
316-16-04	3	16	16	110	20	3.5	●	2	
416-W16-04	4	16	16	90	20	3.5	●	1	

Spare parts

Designation	Screw	Wrench			
3P-TE90-04 (Ø8)	TS 18033/HG-P	TD 6P			
3P-TE90-04 (Ø10-)	TS 18041I/HG	TD 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E347-E349

3P TE90-06

End mills

90°

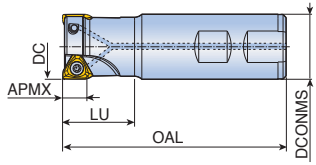


Fig.1

Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LU	APMX			
3P TE90-112-12-06-L80	1	12	12	80	20	4.7	●	2	3PK(H)T 0603...
114-12-06-L80	1	14	12	80	20	4.7	●	2	E256
216-W16-06	2	16	16	90	25	4.7	●	1	
216-16-06-L110	2	16	16	110	25	4.7	●	2	
216-16-06-L150	2	16	16	150	25	4.7	●	2	
316-16-06-L110	3	16	16	110	25	4.7	●	2	
217-16-06-L200	2	17	16	200	25	4.7	●	2	
317-16-06-L110	3	17	16	110	25	4.7	●	2	
318-W16-06	3	18	16	90	25	4.7	●	1	
318-16-06-L150	3	18	16	150	25	4.7	●	2	
319-16-06-L150	3	19	16	150	25	4.7	●	2	
320-W20-06	3	20	20	105	25	4.7	●	1	
320-20-06-L160	3	20	20	160	25	4.7	●	2	
420-W20-06	4	20	20	105	25	4.7	●	1	
420-19-06-L160	4	20	19	160	25	4.7	●	2	
421-20-06-L160	4	21	20	160	25	4.7	●	2	
422-W20-06	4	22	20	110	25	4.7	●	1	
425-W20-06	4	25	20	115	25	4.7	●	1	
525-W20-06	5	25	20	115	25	4.7	●	1	
525-W25-06	5	25	25	115	25	4.7	●	1	
630-W25-06	6	30	25	130	30	4.7	●	1	
632-W25-06	6	32	25	130	30	4.7	●	1	
732-W25-06	7	32	25	130	30	4.7	●	1	
840-W32-06	8	40	32	130	30	4.7	●	1	

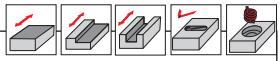
Spare parts

Designation	Screw	Wrench			
3P TE90-06	TS 20043I/HG-P	TD 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E347-E349

3P TE90-10

End mills



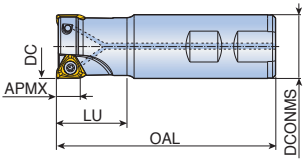
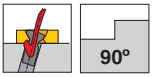


Fig.1

Fig.2



Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LU	APMX			
3P TE90-116-16-10-L150	1	16	16	150	25	7.0	●	2	3PK(H)T 1004... E256
116-W16-10	1	16	16	90	20	7.0	●	1	
220-W20-10	2	20	20	90	25	7.0	●	1	
220-19-10-L170	2	20	19	170	30	7.0	●	2	
220-20-10-L170	2	20	20	170	40	7.0	●	2	
221-20-10-L200	2	21	20	200	30	7.0	●	2	
221-20-10-L250-C	2	21	20	250	40	7.0	●	2	
222-W20-10	2	22	20	100	25	7.0	●	1	
225-25-10-L210	2	25	25	210	40	7.0	●	2	
325-W20-10	3	25	20	100	30	7.0	●	1	
325-W25-10	3	25	25	100	30	7.0	●	1	
325-24-10-L210	3	25	24	210	35	7.0	●	2	
325-25-10-L210	3	25	25	210	40	7.0	●	2	
226-25-10-L250	2	26	25	250	30	7.0	●	2	
330-W25-10	3	30	25	110	35	7.0	●	1	
232-W25-10	2	32	25	110	35	7.0	●	1	
332-W25-10	3	32	25	110	35	7.0	●	1	
333-32-10-L250	3	33	32	250	35	7.0	●	2	
333-32-10-L300-C	3	33	32	300	60	7.0	●	2	
432-W32-10	4	32	32	110	40	7.0	●	1	
440-32-10-L200	4	40	32	200	40	7.0	●	2	
532-W32-10	5	32	32	110	40	7.0	●	1	
540-W32-10	5	40	32	115	40	7.0	●	1	
640-W32-10	6	40	32	115	40	7.0	●	1	

Spare parts

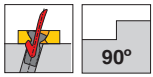
Designation	Screw	Wrench			
3P TE90-10	TS 25C065I/HG	TD 8			

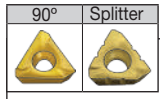
Cutting Condition E352-E325
Torque E328
Ramping Data E347-E349

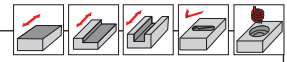
3P TE90-15/19

MILLRUSH

End mills







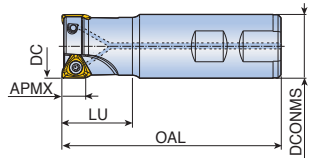


Fig.1

Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LU	APMX			
3P TE90-232-W32-15	2	32	32	110	40	11.0	●	1	3PK(H)T 1505...
232-32-15-L250	2	32	32	250	60	11.0	●	2	E256-E257
332-W25-15	3	32	25	100	40	11.0	●	1	
332-W25-15-L155	3	32	25	155	35	11.0	●	2	
332-W32-15	3	32	32	110	40	11.0	●	1	
332-32-15-L150	3	32	32	150	40	11.0	●	2	
332-32-15-L250	3	32	32	250	60	11.0	●	2	
233-32-15-L200	2	33	32	200	40	11.0	●	2	
233-32-15-L250	2	33	32	250	40	11.0	●	2	
335-W32-15	3	35	32	110	40	11.0	●	1	
340-W32-15	3	40	32	110	40	11.0	●	1	
340-32-15-L200	3	40	32	200	40	11.0	●	2	
440-W32-15	4	40	32	110	40	11.0	●	1	
3P TE90-240-32-19-L250	2	40	32	250	45	15.0	●	2	3PK(H)T 1906...
340-W32-19	3	40	32	115	45	15.0	●	1	E256-E257
340-32-19-L200	3	40	32	200	45	15.0	●	2	
450-W32-19	4	50	32	115	45	15.0	●	1	

Spare parts

Designation	Screw	Wrench			
3P TE90-15	TS 40B100I	TD 15	-		
3P TE90-19	TS 45120I	-	T-T20		

Cutting Condition E352-E325
Torque E328
Ramping Data E347-E349

3P-TE90-M(S)-04/06

Modular heads

90°

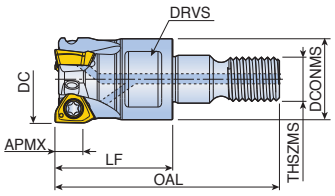


Fig.1

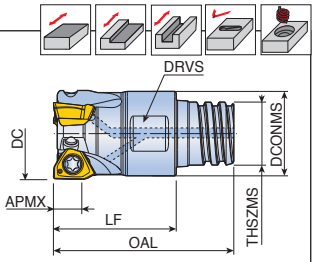


Fig.2

Designation		Dimension (mm)							Coolant hole	Fig.	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
3P-TE90-210-M06-04	2	10	9.7	17	31.5	M06	3.5	8	●	1	3PKT 0402... E256
312-M06-04	3	12	11	17	31.5	M06	3.5	8	●	1	
416-M08-04	4	16	13	23	40.5	M08	3.5	10	●	1	
3P-TE90-210-S06-04	2	10	9.6	15	21.3	S06	3.5	8	●	2	
312-S08-04	3	12	11.5	16	23.5	S08	3.5	10	●	2	
416-S10-04	4	16	15.2	20	31.3	S10	3.5	13	●	2	
3P TE90-216-M08-06	2	16	13	23	40.5	M08	4.7	10	●	1	3PK(H)T 0603... E256
217-M08-06	2	17	13	23	40.5	M08	4.7	10	●	1	
320-M10-06	3	20	18	35	55	M10	4.7	15	●	1	
420-M10-06	4	20	18	35	55	M10	4.7	15	●	1	
425-M12-06	4	25	21	35	57	M12	4.7	17	●	1	
525-M12-06	5	25	21	35	57	M12	4.7	17	●	1	
632-M16-06	6	32	29	43	68	M16	4.7	25	●	1	
732-M16-06	7	32	29	43	68	M16	4.7	25	●	1	
735-M16-06	7	35	29	43	68	M16	4.7	25	●	1	

▸ Matched with T-FLEXTEC holder(Fig.1) & MAXI-RUSH holder(Fig.2)

Spare parts

Designation	Screw	Wrench			
3P-TE90-04 (Ø8)	TS 18033/HG-P	TD 6P			
3P-TE90-04 (Ø10-)	TS 18041I/HG	TD 6P			
3P TE90-06	TS 20043I/HG-P	TD 6P			

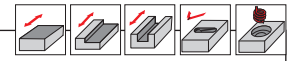
Cutting Condition E352-E325
Torque E328
Ramping Data E347-E349

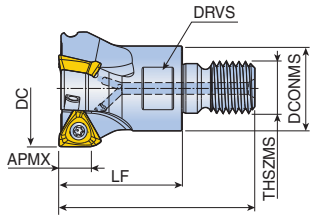
3P TE90-M-10/15/19

MILLRUSH

Modular heads

90°	Splitter
	15,19





90°

Designation		Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
3P TE90-220-M10-10	2	20	18	35	55	M10	7.0	15	●	3PK(H)T 1004...
221-M10-10	2	21	18	35	55	M10	7.0	15	●	E256
325-M12-10	3	25	21	35	57	M12	7.0	17	●	
326-M12-10	3	26	21	35	57	M12	7.0	17	●	
432-M16-10	4	32	29	43	68	M16	7.0	25	●	
532-M16-10	5	32	29	43	68	M16	7.0	25	●	
535-M16-10	5	35	29	43	68	M16	7.0	25	●	
540-M16-10	5	40	29	43	68	M16	7.0	25	●	
640-M16-10	6	40	29	43	68	M16	7.0	25	●	
642-M16-10	6	42	29	43	68	M16	7.0	25	●	
3P TE90-232-M16-15	2	32	29	43	68	M16	11.0	25	●	3PK(H)T 1505...
233-M16-15	2	33	29	43	68	M16	11.0	25	●	E256-E257
332-M16-15	3	32	29	43	68	M16	11.0	25	●	
340-M16-15	3	40	29	43	68	M16	11.0	25	●	
440-M16-15	4	40	29	43	68	M16	11.0	25	●	
3P TE90-340-M16-19	3	40	29	43	68	M16	15.0	25	●	3PK(H)T 1906...
										E256-E257

▸ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
3P TE90-10	TS 25C065I/HG	TD 8	-		
3P TE90-15	TS 40B100I	TD 15	-		
3P TE90-19	TS 45120I	-	T-T20		

Cutting Condition E352-E325
Torque E328
Ramping Data E347-E349

6N TE90-04/06/09

MILL2RUSH

End Mills

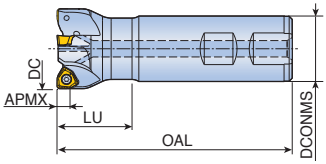


Fig.1

Fig.2

90°

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LU	APMX			
6N TE90-320-W20-04	3	20	20	90	30	4.1	●	1	6NKU 0403... E263
320-20-04-L160	3	20	20	160	30	4.1	●	2	
425-25-04-L170	4	25	25	170	30	4.1	●	2	
525-W25-04	5	25	25	100	35	4.1	●	1	
332-W32-04	3	32	32	110	43	4.1	●	1	
532-32-04-L200	5	32	32	200	40	4.1	●	2	
632-W32-04	6	32	32	110	40	4.1	●	1	
440-W32-04	4	40	32	110	43	4.1	●	1	
6N TE90-225-W25-06	2	25	25	100	30	6.2	●	1	6NGU 0604... E262
225-25-06-L150	2	25	25	150	30	6.2	●	2	
232-W32-06	2	32	32	110	40	6.2	●	1	
232-32-06-L160	2	32	32	160	40	6.2	●	2	
332-W32-06	3	32	32	110	40	6.2	●	1	
332-32-06-L160	3	32	32	160	40	6.2	●	2	
332-32-06-L200	3	32	32	200	44	6.2	●	2	
340-W32-06	3	40	32	115	40	6.2	●	1	
340-32-06-L200	3	40	32	200	40	6.2	●	2	
440-W32-06	4	40	32	115	40	6.2	●	1	
6N TE90-232-W32-09	2	32	32	110	40	9.2	●	1	6NGU 0905... E262
232-32-09-L160	2	32	32	160	60	9.2	●	2	
340-W32-09	3	40	32	120	40	9.2	●	1	
340-32-09-L200	3	40	32	200	40	9.2	●	2	
440-W32-09	4	40	32	120	40	9.2	●	1	

Spare parts

Designation	Screw	Wrench			
6N TE90-04	TS 25064I	TD 8			
6N TE90-06	TS 30085I/HG	TD 9			
6N TE90-09	TS 40B100I	TD15			

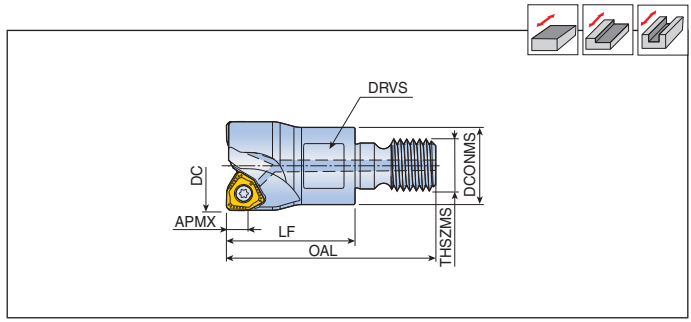
Cutting Condition E352-E325

Torque E328

6N TE90-...-M...-04/06/09

MILL2RUSH

Modular heads



90°

Designation		Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
6N TE90-320-M10-04	3	20	18	35	55	M10	4.1	15	●	6NKU 0403... E263
525-M12-04	5	25	21	35	57	M12	4.1	17	●	
632-M16-04	6	32	29	43	68	M16	4.1	25	●	
6N TE90-225-M12-06	2	25	21	35	57	M12	6.2	17	●	6NGU 0604... E262
332-M16-06	3	32	29	43	68	M16	6.2	25	●	
440-M16-06	4	40	29	43	68	M16	6.2	25	●	
6N TE90-232-M16-09	2	32	29	43	68	M16	9.2	25	●	6NGU 0905... E262
340-M16-09	3	40	29	43	68	M16	9.2	25	●	
440-M16-09	4	40	29	43	68	M16	9.2	25	●	

▸ Matched with T-FLEXTEC holder

Spare parts

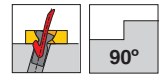
Designation	Screw	Wrench			
6N TE90-04	TS 25064I	TD 8			
6N TE90-06	TS 30085I/HG	TD 9			
6N TE90-09	TS 40B100I	TD15			

Cutting Condition E352-E325
Torque E328

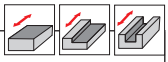
SCRM90TN-18/SCRM90TN-M-18

MILL2RUSH

End Mills & Modular heads



90°	Splitter



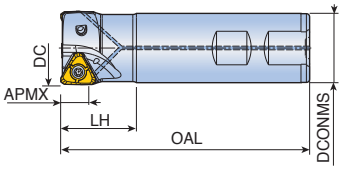


Fig.1

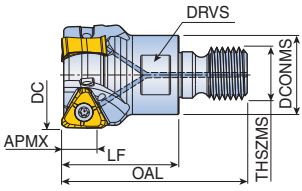


Fig.2

Designation		Dimension (mm)								Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	LF	THSZMS	APMX	DRVS			
SCRM90TN 235-W32-18	2	35	32	115	35	-	-	13.0	-	●	1	TNMX 1806...
340-W32-18	3	40	32	115	35	-	-	13.0	-	●	1	E312
SCRM90TN 235-M16-18	2	35	29	68	-	43	M16	13.0	25	●	2	
340-M16-18	3	40	29	68	-	43	M16	13.0	25	●	2	

▸ Matched with T-FLEXTEC holder(Fig.2)

Spare parts

Designation	Screw	Wrench			
SCRM90TN-18	TS 40B100I	T-T15			

Cutting Condition E352-E325

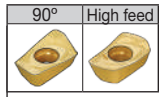
Torque E328

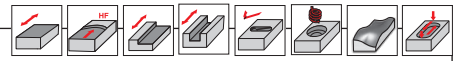
TaeguTec

TE90AV-10

End mills

90° | High feed





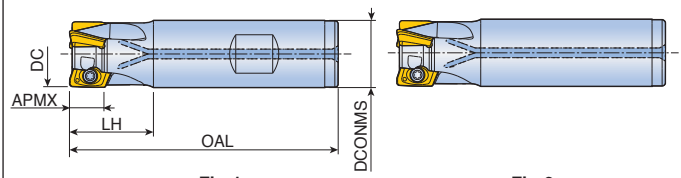


Fig.1 Fig.2

90° V Bottom

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
TE90AV- **216-15-10-L**	2	16	15	170	30	10	●	2	AVKT 10-M/EL AVKT 10-HF AVCT 10-AL E274
216-16-10-L	2	16	16	145	30	10	●	2	
216-16-10-L200	2	16	16	200	30	10	●	2	
216-W16-10	2	16	16	75	20	10	●	1	
217-16-10-L	2	17	16	180	25	10	●	2	
217-16-10-L200	2	17	16	200	42	10	●	2	
218-W16-10	2	18	16	90	25	10	●	1	
220-19-10-L	2	20	19	170	25	10	●	2	
320-20-10-L120	3	20	20	120	40	10	●	2	
320-W20-10	3	20	20	80	25	10	●	1	
322-W20-10	3	22	20	110	30	10	●	1	
225-25-10-L	2	25	25	210	40	10	●	2	
325-W25-10	3	25	25	90	30	10	●	1	
425-W20-10	4	25	20	110	30	10	●	1	
425-W25-10	4	25	25	90	30	10	●	1	
226-25-10-L	2	26	25	250	28	10	●	2	
430-W25-10	4	30	25	130	30	10	●	1	
432-W25-10	4	32	25	130	32	10	●	1	
532-W32-10	5	32	32	100	35	10	●	1	
533-32-10-L	5	33	32	250	40	10	●	2	
540-W32-10	5	40	32	130	32	10	●	1	

- When using the 'AVKT 1004R-HF' insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- For “AVKT 10” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE + 0.2 mm

Spare parts

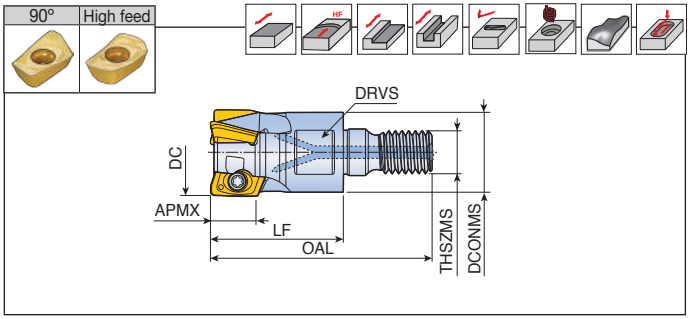
Designation	Screw	Wrench			
TE90AV-10	TS 30B062/HG-P	TD 8P			

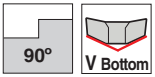
Cutting Condition E352-E325 | Torque E328 | Ramping Data E340-E342

ADVANCE CUTTING TaeguTec

TE90AV-M-10

Modular heads





Designation		Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TE90AV- 216-M08-10	2	16	13	30	47.5	M08	10	10	●	AVKT 10-M/EL AVKT 10-HF AVCT 10-AL E274
320-M10-10	3	20	18	30	50	M10	10	15	●	
425-M12-10	4	25	21	35	57	M12	10	17	●	
532-M16-10	5	32	29	43	68	M16	10	25	●	

- When using the 'AVKT 1004R-HF' insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- For “AVKT 10” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE + 0.2 mm
- Matched with T-FLEXTEC holder

Spare parts

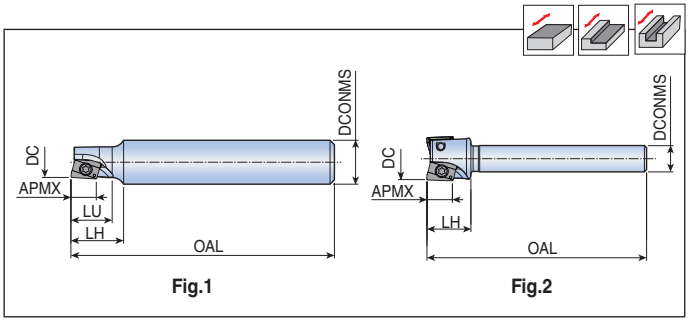
Designation	Screw	Wrench			
TE90AV-M-10	TS 30B062/HG-P	TD 8P			

Cutting Condition E352-E325
Torque E328
Ramping Data E340-E342

MTE90AX-06-L

End mills

90°



Designation		Dimension (mm)						Fig.	Insert
		DC	DCONMS	OAL	LU	LH	APMX		
MTE90AX 108-10-06-L60	1	8	10	60	9	12	5.5	1	AXCT 06-L...
210-05-06-L40	2	10	5	40	-	10	5.5	2	E272
210-06-06-L50	2	10	6	50	-	10	5.5	2	
210-07-06-L50	2	10	7	50	-	10	5.5	2	
210-10-06-L50	2	10	10	50	10	12	5.5	1	
212-10-06-L50	2	12	10	50	-	10	5.5	2	
214-10-06-L50	2	14	10	50	-	10	5.5	2	
315-05-06-L40	3	15	5	40	-	10	5.5	2	
316-07-06-L50	3	16	7	50	-	10	5.5	2	
316-10-06-L50	3	16	10	50	-	10	5.5	2	
320-07-06-L50	3	20	7	50	-	10	5.5	2	
320-10-06-L50	3	20	10	50	-	10	5.5	2	
326-10-06-L50	3	26	10	50	-	10	5.5	2	
530-10-06-L50	5	30	10	50	-	10	5.5	2	

▸ For “AXMT 06” inserts with a corner radius larger than 1.0 mm (RE > 1.0 mm), modify the cutter body corner radius as follows: R = RE - 0.1 mm

Spare parts

Designation	Screw	Wrench			
MTE90AX-06-L	TS 18041I/HG	TD 6P			

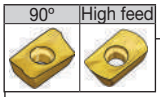
Cutting Condition E352-E325
Torque E328

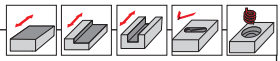
TE90AX-06

CHASEMILL

End mills

90°





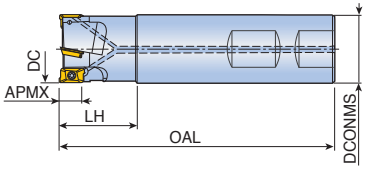


Fig.1

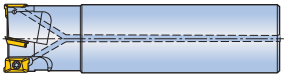


Fig.2

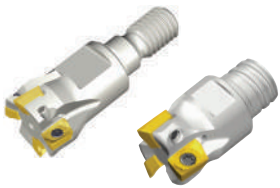
Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
TE90AX 108-08-06-C	1	8	8	80	17	5.5	●	2	AXM(C)T 0602 ...
210-09-06-L120	2	10	9	120	17	5.5	x	2	E271-E273
210-10-06-C	2	10	10	80	17	5.5	●	2	
211-10-06	2	11	10	80	17	5.5	x	2	
212-12-06-C	2	12	12	80	18	5.5	●	2	
212-12-06-L	2	12	12	130	18	5.5	x	2	
212-11-06-L120	2	12	11	120	20	5.5	x	2	
312-12-06-C	3	12	12	80	18	5.5	●	2	
313-12-06-C	3	13	12	90	20	5.5	●	2	
314-12-06	3	14	12	80	18	5.5	x	2	
415-12-06	4	15	12	80	18	5.5	x	2	
316-16-06-C	3	16	16	110	20	5.5	●	2	
316-16-06-L	3	16	16	150	20	5.5	x	2	
416-W16-06-C	4	16	16	90	20	5.5	●	1	
417-16-06	4	17	16	90	20	5.5	x	2	
418-W16-06-C	4	18	16	90	20	5.5	●	1	
418-16-06-L	4	18	16	150	20	5.5	x	2	
419-W16-06	4	19	16	90	20	5.5	x	1	
420-20-06	4	20	20	160	25	5.5	x	2	
420-W20-06-C	4	20	20	160	25	5.5	●	1	
520-19-06-L	5	20	19	160	25	5.5	x	1	
520-W20-06-C	5	20	20	105	25	5.5	●	1	
521-20-06	5	21	20	105	25	5.5	x	2	
725-W20-06-C	7	25	20	115	25	5.5	●	1	
725-W25-06	7	25	25	120	30	5.5	x	1	
832-W25-06-C	8	32	25	130	32	5.5	●	1	
1040-W32-06-C	10	40	32	140	40	5.5	●	1	

Cutting Condition E352-E325
Torque E328
Ramping Data E372-E378

TE90AX-M(S)-06

CHASEMILL

Modular heads



90°

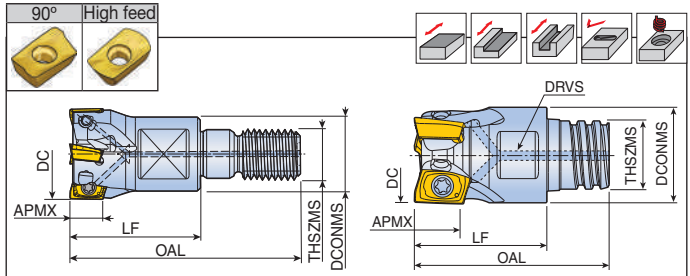


Fig.1 Fig.2

Designation		Dimension (mm)							Coolant hole	Fig.	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
TE90AX 210-M06-06	2	10	9.7	17	31.5	M06	5.5	8	●	1	AXM(C)T 0602...
312-M06-06	3	12	11	17	31.5	M06	5.5	8	●	1	E271-E273
416-M08-06	4	16	13	23	40.5	M08	5.5	10	●	1	
520-M10-06	5	20	18	23	43	M10	5.5	15	●	1	
725-M12-06	7	25	21	27	49	M12	5.5	17	●	1	
832-M16-06	8	32	29	27	52	M16	5.5	25	●	1	
1040-M16-06	10	40	29	27	52	M16	5.5	25	●	1	
TE90AX 210-S06-06	2	10	9.6	15	21.3	S06	5.5	8	●	2	
312-S08-06	3	12	11.5	16	23.5	S08	5.5	10	●	2	
416-S10-06	4	16	15.2	20	31.3	S10	5.5	13	●	2	

- Matched with T-FLEXTEC holder(Fig.1) & MAXI-RUSH holder(Fig.2)
- For “AXMT 06” inserts with a corner radius larger than 1.0 mm (RE > 1.0 mm), modify the cutter body corner radius as follows: R = RE - 0.1 mm

Spare parts

Designation	Screw	Wrench			
TE90AX-06	TS 18041I/HG	TD 6P			

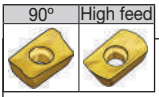
Cutting Condition E352-E325
Torque E328
Ramping Data E372-E378

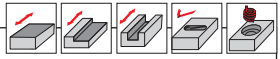
2S-TE90AP-09

CHASEMILL

End mills

90°





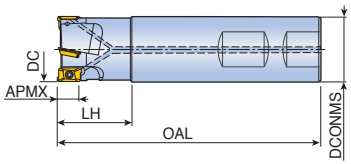


Fig.1

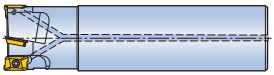


Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
2S-TE90AP 110-W10-09-C	1	10	10	80	25	8.8	●	1	APK(C)T 09T3...
112-W12-09	1	12	12	80	25	8.8	x	1	E266,E271
112-W16-09-C	1	12	16	80	26	8.8	●	1	
114-W12-09	1	14	12	80	25	8.8	x	1	
216-15-09-L	2	16	15	170	30	8.8	x	2	
216-W16-09-C	2	16	16	90	25	8.8	●	1	
216-16-09-L	2	16	16	145	30	8.8	x	2	
217-16-09-L	2	17	16	180	25	8.8	x	2	
218-W16-09-C	2	18	16	90	25	8.8	●	1	
220-19-09-L	2	20	19	170	25	8.8	x	2	
220-20-09-L	2	20	20	170	40	8.8	x	2	
320-W20-09-C	3	20	20	110	30	8.8	●	1	
221-20-09-L	2	21	20	200	25	8.8	x	2	
222-20-09-L-C	2	22	20	200	25	8.8	●	2	
322-W20-09-C	3	22	20	110	30	8.8	●	1	
225-24-09-L	2	25	24	210	28	8.8	x	2	
225-25-09-L	2	25	25	210	40	8.8	x	2	
325-W20-09-C	3	25	20	110	30	8.8	●	1	
325-W25-09	3	25	25	110	30	8.8	x	1	
425-W20-09-C	4	25	20	110	30	8.8	●	1	
226-25-09-L	2	26	25	250	40	8.8	x	2	
430-W25-09-C	4	30	25	130	32	8.8	●	1	
232-32-09-L	2	32	32	250	65	8.8	x	2	
432-W25-09-C	4	32	25	130	32	8.8	●	1	
532-W25-09-C	5	32	25	130	32	8.8	●	1	
333-32-09-L	3	33	32	250	40	8.8	x	2	
240-32-09-L	2	40	32	250	32	8.8	x	2	
540-W32-09-C	5	40	32	130	32	8.8	●	1	
640-W32-09	6	40	32	130	32	8.8	x	1	

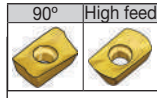
Cutting Condition E352-E325
Torque E328
Ramping Data E372-E378

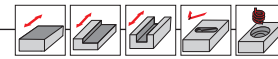
2S-TE90AP-M-09

CHASEMILL

Modular heads

90°





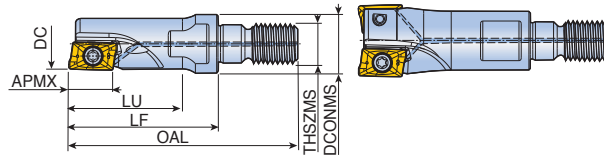


Fig.1 Fig.2

Designation		Dimension (mm)							Coolant hole	Fig.	Insert
		DC	DCONMS	LF	OAL	LU	THSZMS	APMX			
2S-TE90AP 110-M06-09	1	10	9.7	33	47.5	19	M06	8.8	●	1	APK(C)T 09T3...
112-M08-09	1	12	13	33	50.5	25	M08	8.8	●	1	E266,E271
216-M08-09	2	16	13	38	50.5	-	M08	8.8	●	2	
320-M10-09	3	20	18	38	58	-	M10	8.8	●	2	
325-M12-09	3	25	21	38	60	-	M12	8.8	●	2	
425-M12-09	4	25	21	38	60	-	M12	8.8	●	2	
432-M16-09	4	32	29	38	63	-	M16	8.8	●	2	
532-M16-09	5	32	29	38	63	-	M16	8.8	●	2	
540-M16-09	5	40	29	43	68	-	M16	8.8	●	2	
640-M16-09	6	40	29	43	68	-	M16	8.8	●	2	

- Matched with T-FLEXTEC holder
- For “APKT 09” inserts with a corner radius larger than 2.0 mm (RE > 2.0 mm), modify the cutter body corner radius as follows: R = RE - 0.2 mm

Spare parts

Designation	Screw	Wrench			
2S-TE90AP-09	TS 25055I/HG	TD 8			

Cutting Condition E352-E325
Torque E328
Ramping Data E372-E378

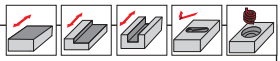
TE90AP-12

CHASEMILL

End mills

90°

90°	High feed	Splitter



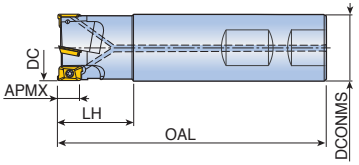


Fig.1

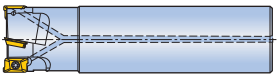


Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
TE90AP 116-W16-12-C	1	16	16	85	26	12.0	●	1	APK(C)T 1204....
218-W20-12-C	2	18	20	85	26	12.0	●	1	E267,E271
220-19-12-L	2	20	19	170	30	12.0	●	2	
220-W20-12-C	2	20	20	90	30	12.0	●	1	
220-W20-12-L-C	2	20	20	125	30	12.0	●	1	
220-20-12-L	2	20	20	170	30	12.0	●	2	
220-20-12-L200	2	20	20	200	30	12.0	●	2	
221-20-12-L200	2	21	20	200	30	12.0	●	2	
221-20-12-L250	2	21	20	250	30	12.0	●	2	
225-24-12-L	2	25	24	200	40	12.0	●	2	
225-W25-12-L-C	2	25	25	145	40	12.0	●	1	
225-25-12-L	2	25	25	210	40	12.0	●	2	
225-25-12-L200	2	25	25	200	40	12.0	●	2	
325-W25-12-C	3	25	25	100	40	12.0	●	1	
226-25-12-L200	2	26	25	200	40	12.0	●	2	
226-25-12-L250	2	26	25	250	40	12.0	●	2	
232-25-12-L	2	32	25	250	40	12.0	●	2	
332-W25-12-L-C	3	32	25	155	35	12.0	●	1	
332-W32-12-C	3	32	32	110	40	12.0	●	1	
332-32-12-L	3	32	32	250	40	12.0	●	2	
332-32-12-L150	3	32	32	150	40	12.0	●	2	
432-W25-12-C	4	32	25	100	40	12.0	●	1	
233-32-12-L200	2	33	32	200	40	12.0	●	2	
233-32-12-L250	2	33	32	250	40	12.0	●	2	
333-32-12-L200	3	33	32	200	40	12.0	●	2	
333-32-12-L250	3	33	32	250	40	12.0	●	2	
435-W25-12	4	35	25	100	40	12.0	●	1	
440-W32-12-C	4	40	32	115	45	12.0	●	1	
440-32-12-L	4	40	32	250	40	12.0	●	2	
540-W32-12-C	5	40	32	115	45	12.0	●	1	

Cutting Condition E352-E325

Torque E328

Ramping Data E372-E378

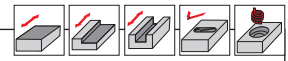
TE90AP-M-12

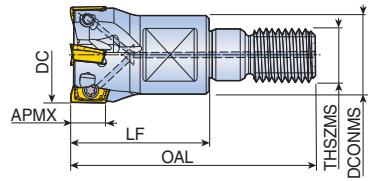
CHASEMILL

Modular heads

90°

90°	High feed	Splitter





Designation		Dimension (mm)						Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX		
TE90AP 116-M08-12	1	16	13	35	52.5	M08	12.0	●	APK(C)T 1204...
220-M10-12	2	20	18	35	55	M10	12.0	●	E267,E271
325-M12-12	3	25	21	35	57	M12	12.0	●	
432-M16-12	4	32	29	43	68	M16	12.0	●	
540-M16-12	5	40	29	43	68	M16	12.0	●	
542-M16-12	5	42	29	43	68	M16	12.0	●	

- Matched with T-FLEXTEC holder
- For “APKT 12” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE - 0.5 mm

Spare parts

Designation	Screw	Wrench			
TE90AP-12 (Ø16-Ø26)	TS 35A070I/HG	TD 10P			
TE90AP-12 (Ø32-)	TS 35A088I/HG	TD 10P			

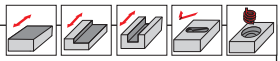
Cutting Condition E352-E325
Torque E328
Ramping Data E372-E378

TE90AP-17

CHASEMILL

End mills

90°



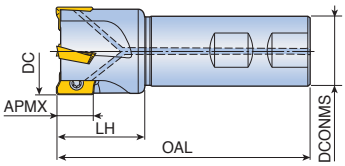


Fig.1

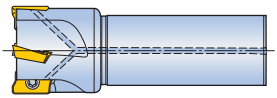


Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
TE90AP 120-W20-17-C	1	20	20	90	32	16.1	●	1	APK(C)T 1705...
225-24-17-L	2	25	24	210	40	16.1	x	2	E268-E269
225-W25-17-C	2	25	25	100	39	16.1	●	1	
225-25-17-L	2	25	25	210	40	16.1	x	2	
226-25-17-L200	2	26	25	200	40	16.1	●	2	
226-25-17-L250	2	26	25	250	40	16.1	●	2	
232-32-17-L	2	32	32	250	65	16.1	x	2	
233-32-17-L250	2	33	32	250	40	16.1	●	2	
233-32-17-L300	2	33	32	300	40	16.1	●	2	
332-W32-17-C	3	32	32	110	40	16.1	●	1	
332-32-17-L	3	32	32	200	65	16.1	x	2	
332-32-17-L-C	3	32	32	200	65	16.1	●	2	
333-32-17-L200	3	33	32	200	55	16.1	●	2	
333-32-17-L250	3	33	32	250	55	16.1	●	2	
335-32-17-L-C	3	35	32	200	55	16.1	●	2	
240-32-17-L	2	40	32	250	57	16.1	x	2	
340-W32-17	3	40	32	110	40	16.1	x	1	
340-32-17-L	3	40	32	200	54	16.1	x	2	
440-W32-17-C	4	40	32	115	45	16.1	●	1	
440-32-17-L	4	40	32	200	57	16.1	x	2	

▸ For “APKT 17” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE - 0.8 mm

Spare parts

Designation	Screw	Wrench			
TE90AP-17 (Ø20-Ø25)	TS 40085I/HG	TD 15			
TE90AP-17 (Ø26-Ø63)	TS 40093I/HG	TD 15			

Cutting Condition E352-E325
Torque E328
Ramping Data E372-E378

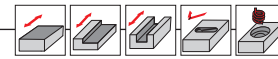
TE90AP-M-17

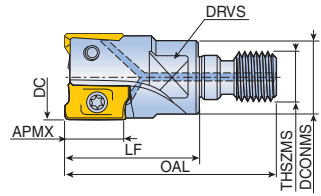
CHASEMILL

Modular heads

90°

90°	Splitter





Designation		Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TE90AP 120-M10-17	1	20	18	43	63	M10	16.1	15	●	APK(C)T 1705...
225-M12-17	2	25	21	43	65	M12	16.1	17	●	E268-E269
232-M16-17	2	32	29	43	68	M16	16.1	25	●	
332-M16-17	3	32	29	43	68	M16	16.1	25	●	
340-M16-17	3	40	29	43	68	M16	16.1	25	●	
440-M16-17	4	40	29	43	68	M16	16.1	25	●	

- Matched with T-FLEXTEC holder
- For “APKT 17” inserts with a corner radius larger than 1.6 mm (RE > 1.6 mm), modify the cutter body corner radius as follows: R = RE - 0.8 mm

Spare parts

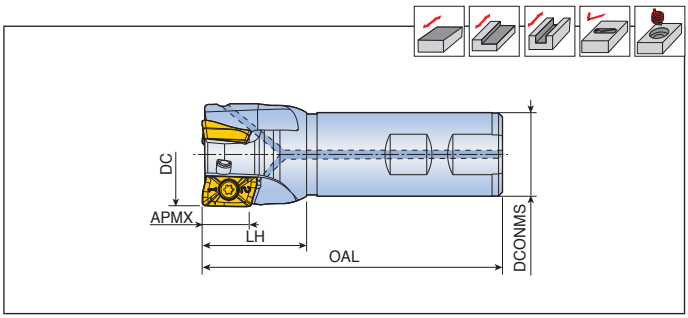
Designation	Screw	Wrench			
TE90AP-17 (Ø20-Ø25)	TS 40085I/HG	TD 15			
TE90AP-17 (Ø26-)	TS 40093I/HG	TD 15			

Cutting Condition E352-E325
Torque E328
Ramping Data E372-E378

2S-TE90AP-19

CHASEMILL

End mills



90°

Designation		Dimension (mm)					Coolant hole	Insert
		DC	DCONMS	OAL	LH	APMX		
2S-TE90AP 340-W32-19	3	40	32	115	40	17.9	●	APKT 1907... E270

Spare parts

Designation	Screw	Wrench			
2S-TE90AP-19	TS 50115I	TD 20			

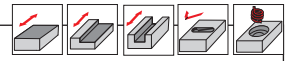
Cutting Condition E352-E325
Torque E328
Ramping Data E372-E378

TE90AN-11/16

CHASE2MILL

End mills

90°



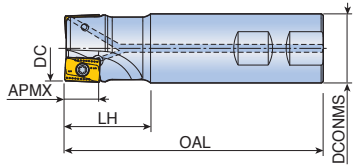


Fig.1

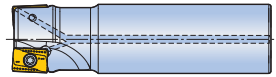


Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
TE90AN 225-24-11-L	2	25	24	200	40	11.0	●	2	ANM(H)X 1106...
225-W25-11	2	25	25	100	40	11.0	●	1	E265
225-25-11-L	2	25	25	200	40	11.0	●	2	
226-25-11-L	2	26	25	200	40	11.0	●	2	
332-W32-11	3	32	32	110	40	11.0	●	1	
332-32-11-L	3	32	32	200	40	11.0	●	2	
233-32-11-L	2	33	32	250	40	11.0	●	2	
333-32-11-L	3	33	32	200	40	11.0	●	2	
340-32-11-L	3	40	32	250	40	11.0	●	2	
440-W32-11	4	40	32	115	40	11.0	●	1	
440-32-11-L	4	40	32	200	40	11.0	●	2	
TE90AN 232-W32-16	2	32	32	110	30	15.0	●	1	ANM(H)X 1607...
232-32-16	2	32	32	150	45	15.0	●	2	E265
232-32-16-L250	2	32	32	250	40	15.0	●	2	
233-32-16-L200	2	33	32	200	55	15.0	●	2	
340-W32-16	3	40	32	115	35	15.0	●	1	
340-32-16	3	40	32	150	45	15.0	●	2	
340-32-16-L250	3	40	32	250	45	15.0	●	2	
450-32-16	4	50	32	150	50	15.0	●	2	

Spare parts

Designation	Screw	Wrench			
TE90AN-11	TS 35A088I/HG	TD 10P			
TE90AN-16	TS 40120I	TD 15			

Cutting Condition E352-E325
Torque E328
Ramping Data E379

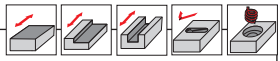
TE90AN-M-11/16

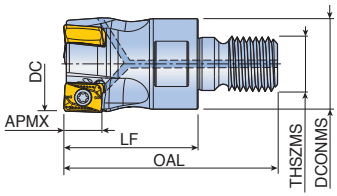
CHASE2MILL

Modular heads

90°

90°	Splitter





Designation		Dimension (mm)						Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX		
TE90AN 225-M12-11	2	25	21	35	57	M12	11.0	●	ANM(H)X 1106...
332-M16-11	3	32	29	43	68	M16	11.0	●	E265
440-M16-11	4	40	29	43	68	M16	11.0	●	
TE90AN 232-M16-16	2	32	29	43	68	M16	15.0	●	ANM(H)X 1607...
340-M16-16	3	40	29	43	68	M16	15.0	●	E265

▸ Matched with T-FLEXTEC holder

Spare parts

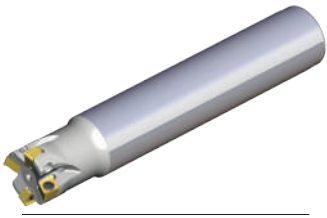
Designation	Screw	Wrench			
TE90AN-11	TS 35A088I/HG	TD 10P			
TE90AN-16	TS 40120I	TD 15			

Cutting Condition E352-E325
Torque E328
Ramping Data E379

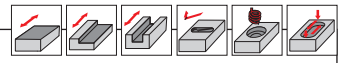
4N TE90-04

CHASE4MILL

End mills



90°



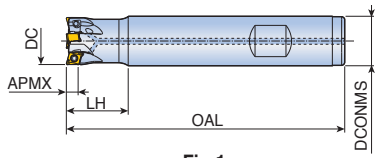


Fig.1

Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
4N TE90-108-08-04	1	8	8	80	17	3.5	●	2	4NKT 0402...
210-10-04	2	10	10	80	17	3.5	●	2	E258-E260
210-10-04-L55	2	10	10	55	12	3.5	●	2	
211-10-04	2	11	10	80	17	3.5	●	2	
212-12-04	2	12	12	80	18	3.5	●	2	
312-12-04	3	12	12	80	18	3.5	●	2	
312-12-04-L60	3	12	12	60	14	3.5	●	2	
313-12-04	3	13	12	90	20	3.5	●	2	
316-16-04	3	16	16	90	20	3.5	●	2	
416-W16-04	4	16	16	90	20	3.5	●	1	
416-W16-04-L68	4	16	16	68	18	3.5	●	1	
417-16-04	4	17	16	90	20	3.5	●	2	
420-20-04-L	4	20	20	160	25	3.5	●	2	
520-W20-04	5	20	20	105	25	3.5	●	1	
520-W20-04-L75	5	20	20	75	22	3.5	●	1	
725-W25-04	7	25	25	120	30	3.5	●	1	
832-W25-04	8	32	25	130	35	3.5	●	1	
1040-W32-04	10	40	32	140	40	3.5	●	1	

▸ Cutter body for '4NKT 040212R-HF' insert should be modified with body corner radius 1.2 mm

Spare parts

Designation	Screw	Wrench			
4N TE90-04	TS 18041I/HG	TD 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E350-E371

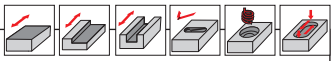
4N TE90-M(S)-04

CHASE4MILL

Modular heads

90°

90° | High feed



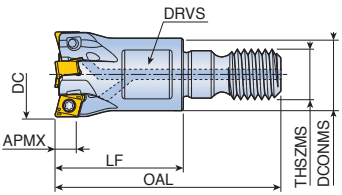


Fig.1

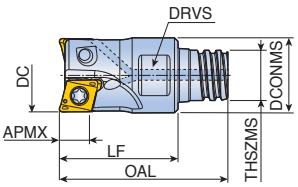


Fig.2

Designation		Dimension (mm)							Coolant hole	Fig.	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
4N TE90-210-M06-04	2	10	9.7	17	31.5	M06	3.5	8	●	1	4NKT 0402...
211-M06-04	2	11	9.7	17	31.5	M06	3.5	8	●	1	E258-E260
312-M06-04	3	12	11	17	31.5	M06	3.5	8	●	1	
313-M06-04	3	13	11	17	31.5	M06	3.5	8	●	1	
416-M08-04	4	16	13	23	40.5	M08	3.5	10	●	1	
417-M08-04	4	17	13	23	40.5	M08	3.5	10	●	1	
520-M10-04	5	20	18	23	43	M10	3.5	15	●	1	
725-M12-04	7	25	21	27	49	M12	3.5	17	●	1	
4N TE90-210-S06-04	2	10	9.6	15	21.3	S06	3.5	8	●	2	
312-S08-04	3	12	11.5	16	23.5	S08	3.5	10	●	2	
416-S10-04	4	16	15.2	20	31.3	S10	3.5	13	●	2	

▸ Cutter body for '4NKT 040212R-HF' insert should be modified with body corner radius 1.2 mm
▸ Matched with T-FLEXTEC holder(Fig.1) & MAXI-RUSH holder(Fig.2)

Spare parts

Designation	Screw	Wrench			
4N TE90-04	TS 18041I/HG	TD 6P			

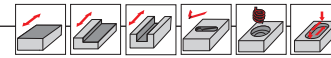
Cutting Condition E352-E325
Torque E328
Ramping Data E350-E371

4N TE90-06

CHASE4MILL

End mills

90°



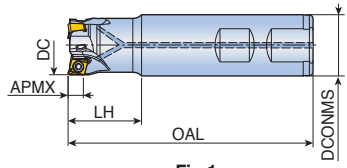


Fig.1

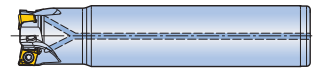


Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
4N TE90-216-15-06-L150	2	16	15	150	25	6.0	●	2	4NK(H)T 0603.....
216-W16-06	2	16	16	90	25	6.0	●	1	E258-E260
216-16-06-L100	2	16	16	100	25	6.0	●	2	
216-16-06-L150	2	16	16	150	25	6.0	●	2	
217-16-06	2	17	16	90	25	6.0	●	2	
217-16-06-L200	2	17	16	200	25	6.0	●	2	
218-W16-06	2	18	16	90	25	6.0	●	1	
218-16-06-L150	2	18	16	150	25	6.0	●	2	
220-19-06-L160	2	20	19	160	25	6.0	●	2	
220-W20-06	2	20	20	90	25	6.0	●	1	
220-20-06-L110	2	20	20	110	25	6.0	●	2	
220-20-06-L160	2	20	20	160	25	6.0	●	2	
320-W20-06	3	20	20	90	25	6.0	●	1	
320-20-06-L110	3	20	20	110	25	6.0	●	2	
221-20-06-L200	2	21	20	200	25	6.0	●	2	
325-W25-06	3	25	25	100	30	6.0	●	1	
325-25-06-L120	3	25	25	120	30	6.0	●	2	
325-25-06-L200	3	25	25	200	30	6.0	●	2	
326-25-06-L200	3	26	25	200	30	6.0	●	2	
425-W25-06	4	25	25	100	30	6.0	●	1	
425-25-06-L120	4	25	25	120	30	6.0	●	2	
432-W32-06	4	32	32	110	35	6.0	●	1	
432-32-06-L130	4	32	32	130	35	6.0	●	2	
432-32-06-L210	4	32	32	210	35	6.0	●	2	
433-32-06-L220	4	33	32	220	35	6.0	●	2	
532-W32-06	5	32	32	110	35	6.0	●	1	
532-32-06-L130	5	32	32	130	35	6.0	●	2	
540-W32-06	5	40	32	110	40	6.0	●	1	
540-32-06-L150	5	40	32	150	40	6.0	●	2	
540-32-06-L250	5	40	32	250	40	6.0	●	2	
640-W32-06	6	40	32	110	35	6.0	●	1	
640-32-06-L150	6	40	32	150	35	6.0	●	2	

▸ Cutter body for '4NKT 060320R-HF' and '4NHT 060320R-F' inserts should be modified with body corner radius 2.0 mm

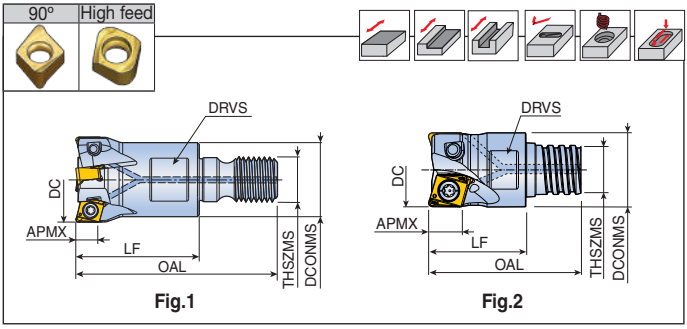
Cutting Condition E352-E325
Torque E328
Ramping Data E350-E371

4N TE90-M(S)-06

CHASE4MILL

Modular heads

90°



Designation			Dimension (mm)							Coolant hole	Fig.	Insert
			DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
4N TE90-	**216-M08-06**	2	16	13	23	40.5	M08	6.0	10	●	1	4NK(H)T 0603...
	217-M08-06	2	17	13	23	40.5	M08	6.0	10	●	1	E258-E260
	220-M10-06	2	20	18	35	55	M10	6.0	15	●	1	
	320-M10-06	3	20	18	35	55	M10	6.0	15	●	1	
	321-M10-06	3	21	18	35	55	M10	6.0	15	●	1	
	325-M12-06	3	25	21	35	57	M12	6.0	17	●	1	
	425-M12-06	4	25	21	35	57	M12	6.0	17	●	1	
	426-M12-06	4	26	21	35	57	M12	6.0	17	●	1	
	432-M16-06	4	32	29	43	68	M16	6.0	25	●	1	
	532-M16-06	5	32	29	43	68	M16	6.0	25	●	1	
	533-M16-06	5	33	29	43	68	M16	6.0	25	●	1	
	535-M16-06	5	35	29	43	68	M16	6.0	25	●	1	
	540-M16-06	5	40	29	43	68	M16	6.0	25	●	1	
	640-M16-06	6	40	29	43	68	M16	6.0	25	●	1	
	642-M16-06	6	42	29	43	68	M16	6.0	25	●	1	
4N TE90-	**216-S10-06**	2	16	15.2	20	31.3	S10	6.0	8	●	2	

- Cutter body for '4NKT 060320R-HF' and '4NHT 060320R-F' inserts should be modified with body corner radius 2.0 mm
- Matched with T-FLEXTEC holder(Fig.1) & MAXI-RUSH holder(Fig.2)

Spare parts

Designation	Screw	Wrench			
4N TE90-06	TS 30B068I/HG	TD 8			

Cutting Condition E352-E325
Torque E328
Ramping Data E350-E371

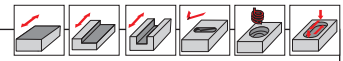
4N TE90-09/11/14

CHASE4MILL

End mills

90°

90°	High feed



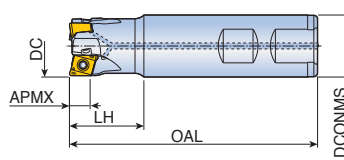


Fig.1

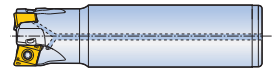


Fig.2

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
4N TE90-220-W20-09	2	20	20	100	30	8.0	●	1	4NK(H)T 0904.. E258-E260
220-20-09-L170	2	20	20	170	30	8.0	●	2	
225-W25-09	2	25	25	100	30	8.0	●	1	
225-25-09-L200	2	25	25	200	40	8.0	●	2	
325-W25-09	3	25	25	100	30	8.0	●	1	
325-25-09-L210	3	25	25	210	30	8.0	●	2	
226-25-09-L200	2	26	25	200	40	8.0	●	2	
332-W32-09	3	32	32	110	40	8.0	●	1	
332-32-09-L250	3	32	32	250	40	8.0	●	2	
333-32-09-L250	3	33	32	250	40	8.0	●	2	
432-W25-09	4	32	25	130	35	8.0	●	1	
432-25-09-L200	4	32	25	200	40	8.0	●	2	
432-W32-09	4	32	32	110	40	8.0	●	1	
440-W32-09	4	40	32	115	40	8.0	●	1	
440-32-09-L250	4	40	32	250	40	8.0	●	2	
540-W32-09	5	40	32	115	40	8.0	●	1	
4N TE90-225-W25-11	2	25	25	100	30	10.5	●	1	4NKT 1106... E258-E260
225-25-11-L200	2	25	25	200	40	10.5	●	2	
332-W32-11	3	32	32	110	40	10.5	●	1	
440-W32-11	4	40	32	115	40	10.5	●	1	
440-32-11-L200	4	40	32	200	40	10.5	●	2	
4N TE90-232-W32-14	2	32	32	110	40	13.8	●	1	4NKT 1407... E258-E260
232-32-14	2	32	32	150	45	13.8	●	2	
232-32-14-L250	2	32	32	250	40	13.8	●	2	
340-W32-14	3	40	32	115	40	13.8	●	1	
340-32-14	3	40	32	115	40	13.8	●	2	

Cutting Condition E352-E325 | Torque E328 | Ramping Data E350-E371

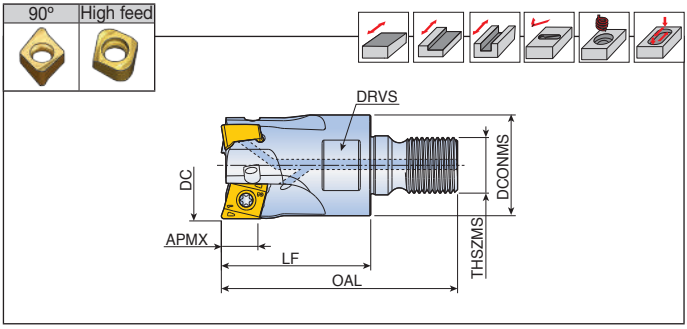
- Cutter body for '4NKT 090432R-HF' insert should be modified with body corner radius 3.2mm
- Cutter body for '4NKT 110640R-HF' insert should be modified with body corner radius 4.0 mm
- Cutter body for '4NKT 140750R-HF' insert should be modified with body corner radius 5.0 mm

4N TE90-M-09/11/14

CHASE4MILL

Modular heads

90°



Designation		Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
4N TE90- 220-M10-09	2	20	18	30	50	M10	8.0	15	●	4NK(H)T 0904...
325-M12-09	3	25	21	35	57	M12	8.0	17	●	E258-E260
432-M16-09	4	32	29	43	68	M16	8.0	25	●	
540-M16-09	5	40	29	43	68	M16	8.0	25	●	
4N TE90- 225-M12-11	2	25	21	35	57	M12	10.5	17	●	4NKT 1106...
332-M16-11	3	32	29	43	68	M16	10.5	25	●	E258-E260
440-M16-11	4	40	29	43	68	M16	10.5	25	●	
4N TE90- 232-M16-14	2	32	29	43	68	M16	13.8	25	●	4NKT 1407...
340-M16-14	3	40	29	43	68	M16	13.8	25	●	E258-E260

- Cutter body for '4NKT 090432R-HF' insert should be modified with body corner radius 3.2 mm
- Cutter body for '4NKT 110640R-HF' insert should be modified with body corner radius 4.0 mm
- Cutter body for '4NKT 140750R-HF' insert should be modified with body corner radius 5.0 mm
- Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench	Wrench handle		
4N TE90-09	TS 35A088I/HG	TBLD T10P-W6	THND 6W		
4N TE90-11	TS 40093I/HG	TBLD T15-W6	THND 6W		
4N TE90-14	TS 50A121I/HG	TBLD T20-W6	THND 6W		

Cutting Condition E352-E325
Torque E328
Ramping Data E350-E371

8D-TE90-07

CHASE MILL 90° FACING & SHOULDERING

End mills

90°

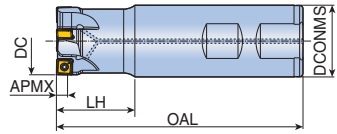


Fig.1

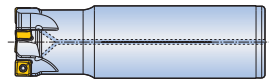


Fig.2

-M / -ML

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	LH	OAL	APMX			
8D-TE90- 216-W16-07	2	16	16	20	90	5.0	●	1	SQKU 0703...
216-16-07-L110	2	16	16	20	110	5.0	●	2	E305
217-16-07-L110	2	17	16	20	110	5.0	●	2	
220-W20-07	2	20	20	25	90	5.0	●	1	
220-20-07-L160	2	20	20	25	160	5.0	●	2	
320-W20-07	3	20	20	25	90	5.0	●	1	
221-20-07-L160	2	21	20	25	160	5.0	●	2	
325-W25-07	3	25	25	30	100	5.0	●	1	
325-25-07-L160	3	25	25	30	160	5.0	●	2	
425-W25-07	4	25	25	30	100	5.0	●	1	
326-25-07-L160	3	26	25	30	160	5.0	●	2	
432-W32-07	4	32	32	35	110	5.0	●	1	
432-32-07-L200	4	32	32	35	200	5.0	●	2	
632-W32-07	6	32	32	35	110	5.0	●	1	
433-32-07-L200	4	33	32	35	200	5.0	●	2	
540-W32-07	5	40	32	40	110	5.0	●	1	
840-W32-07	8	40	32	40	110	5.0	●	1	

Spare parts

Designation	Screw	Wrench			
8D-TE90-07	TS 25D060/HG-P	TD 7P			

Cutting Condition E352-E325

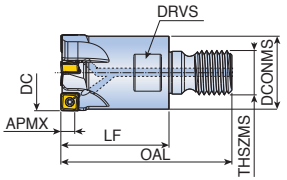
Torque E328

ADVANCE CUTTING TaeguTec

8D-TE90-M-07

CHASE 8 MILL
90° FACING & SHOULDERING

Modular heads



-M / -ML

90°

Designation		Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
8D-TE90- 216-M08-07	2	16	14	23	40.5	M08	5.0	10	●	SQKU 0703...
320-M10-07	3	20	18	30	50	M10	5.0	15	●	E305
325-M12-07	3	25	22	35	57	M12	5.0	17	●	
432-M16-07	4	32	29	43	68	M16	5.0	25	●	
540-M16-07	5	40	29	43	68	M16	5.0	25	●	

▸ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
8D-TE90-M-07	TS 25D060/HG-P	TD 7P			

Cutting Condition E352-E325

Torque E328

TaeguTec Member IMC Group

8D-TE90-10/12

End mills

90°

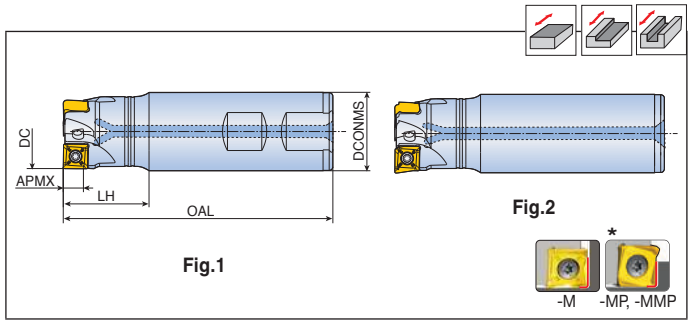


Fig.1

Fig.2

*

-M -MP, -MMP

Designation		Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
8D-TE90-225-W25-10	2	25	25	100	30	7.0**	●	1	SQK(H)U 1004...
225-25-10-L160	2	25	25	160	30	7.0**	●	2	E305
332-W32-10	3	32	32	110	35	7.0**	●	1	
332-32-10-L200	3	32	32	200	35	7.0**	●	2	
440-W32-10	4	40	32	110	40	7.0**	●	1	
8D-TE90-232-W32-12	2	32	32	110	35	8.5**	●	1	SQK(H)U 1206...
340-W32-12	3	40	32	110	40	8.5**	●	1	E305

▸ *:Multi-Step milling is not recommended over the APMX
▸ **:When applying SQHU insert, APMX is 6.5 / 8.0 mm

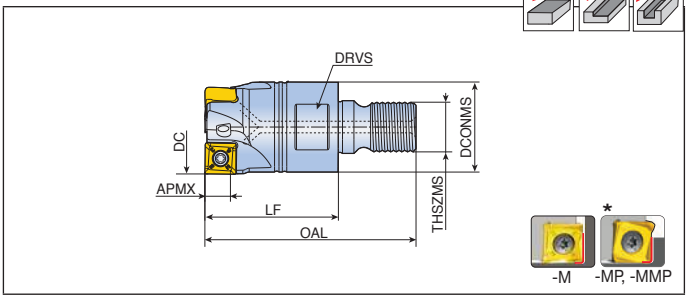
Spare parts

Designation	Screw	Wrench		Wrench handle	
8D-TE90-10	TS 35A088I/HG	TD 10P	-	-	
8D-TE90-12	TS 40M100/HG	-	TBLD T20P-W6	SW6-T	

Cutting Condition E352-E325
Torque E328

8D-TE90-M-10

Modular heads



90°

Designation		Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
8D-TE90- 225-M12-10	2	25	22	35	57	M12	7.0**	17	●	SQK(H)U 1004...
332-M16-10	3	32	29	43	68	M16	7.0**	25	●	E305
440-M16-10	4	40	29	43	68	M16	7.0**	25	●	

▸ *:Multi-Step milling is not recommended over the APMX ▸ **:When applying SQHU insert, APMX is 6.5 mm
▸ Matched with T-FLEXTEC holder

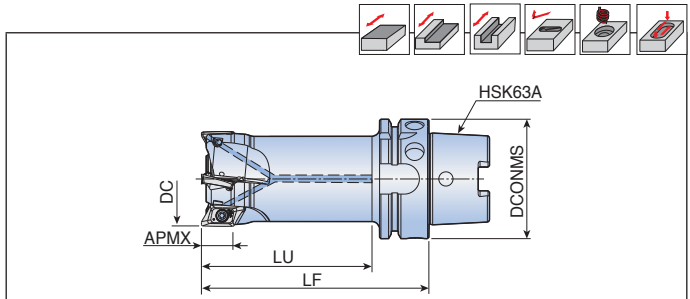
Spare parts

Designation	Screw	Wrench			
8D-TE90-M-10	TS 35A088I/HG	TD 10P			

Cutting Condition E352-E325
Torque E328

TE90XEV-HSK63A-16

End mills for HSK toolholder



90°

Designation		Dimension (mm)					Coolant hole	Max RPM	Insert
		DC	DCONMS	LF	LU	APMX			
TE90XEV 225-100-HSK63A-16	2	25	63	100	70	16	●	52,000	XEVT 1605...
232-125-HSK63A-16	2	32	63	125	95	16	●	46,000	E315
332-90-HSK63A-16	3	32	63	90	60	16	●	46,000	
340-105-HSK63A-16	3	40	63	105	75	16	●	41,200	
450-105-HSK63A-16	4	50	63	105	75	16	●	36,800	
450-120-HSK63A-16	4	50	63	120	90	16	●	36,800	

▸ For “XEVT” inserts with a corner radius larger than 3.2 mm (RE > 3.2 mm), modify the cutter body corner radius as follows: R = RE - 0.3 mm

Spare parts

Designation	Screw	Wrench			
TE90XEV-16 (Ø25)	TS 40085I/HG	T-T15			
TE90XEV-16 (Ø32-)	TS 40093I/HG	T-T15			

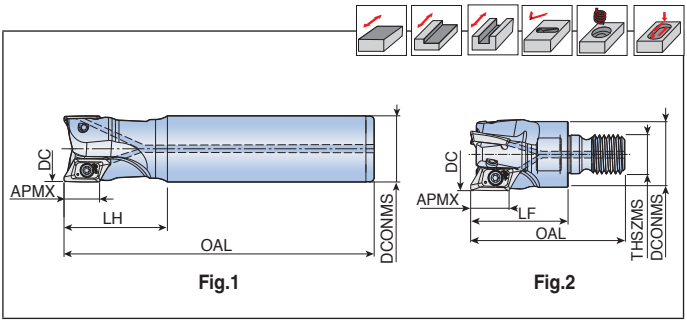
Cutting Condition E352-E325
Torque E328
Ramping Data E380-E384

TE90XEV-16/22

CHASEALU

End mills & Modular heads

90°



Designation			Dimension (mm)							Coolant hole	Fig.	Max RPM	Insert
			DC	DCONMS	OAL	THSZMS	LF	LH	APMX				
TE90XEV	**225-25-16**	2	25	25	125	-	-	55	16	●	1	52,000	XEVT 1605...
	225-25-16-L170	2	25	25	170	-	-	70	16	●	1	52,000	E315
	232-32-16	2	32	32	150	-	-	50	16	●	1	46,000	
	232-32-16-L200	2	32	32	200	-	-	80	16	●	1	46,000	
	332-32-16	3	32	32	150	-	-	50	16	●	1	46,000	
	332-32-16-L200	3	32	32	200	-	-	80	16	●	1	46,000	
	340-32-16	3	40	32	170	-	-	55	16	●	1	41,200	
	340-32-16-L250	3	40	32	250	-	-	55	16	●	1	41,200	
TE90XEV	**225-M12-16**	2	25	21	65	M12	43	-	16	●	2	52,000	
	232-M16-16	2	32	29	68	M16	43	-	16	●	2	46,000	
	332-M16-16	3	32	29	68	M16	43	-	16	●	2	46,000	
	340-M16-16	3	40	29	68	M16	43	-	16	●	2	41,200	
TE90XEV	**232-32-22**	2	32	32	160	-	-	100	21	●	1	37,500	XEVT 2206...
	340-40-22	3	40	40	160	-	-	80	21	●	1	35,100	E315

▸ Matched with T-FLEXTEC holder(Fig.2)

▸ For “XEVT” inserts with a corner radius larger than 3.2 mm (RE > 3.2 mm), modify the cutter body corner radius as follows: R = RE - 0.3 mm

Spare parts

Designation	Screw	Wrench			
TE90XEV-16 (Ø25)	TS 40085I/HG	T-T 15			
TE90XEV-16 (Ø32)	TS 40093I/HG	T-T 15			
TE90XEV-22 (Ø32)	TS 50105I	T-T 20			
TE90XEV-22 (Ø40)	TS 50115I	T-T 20			

Cutting Condition E352-E325

Torque E328

Ramping Data E380-E384

3P-TCF-06/10

End mills for chamfering

30°-60°

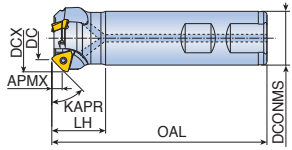


Fig.1

Fig.2

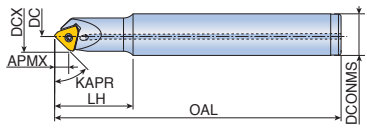


Fig.3

Designation		Dimension (mm)							Fig.	Application range(mm)	Insert
		KAPR	DC	DCX	DCONMS	OAL	LH	APMX			
3P-TCF	**45-309-12-06**	45°	9	16.7	12	100	17	3.0	2	Ø10.3-Ø14.4	3PK(H)T 0603...
	60-320-W25-10	60°	20	27.3	25	100	25	5.9	1	Ø21.3-Ø26.2	3PK(H)T 1004...
	45-320-W25-10	45°	20	31.2	25	100	25	4.8	1	Ø21.3-Ø28.9	
	30-320-W25-10	30°	20	34.5	25	100	25	3.3	1	Ø21.3-Ø31.0	
3P-TCF	**45-D2-16-10-L110**	45°	2	13.3	16	110	30	4.7	3	Ø3.3-Ø10.6	3PK(H)T 1004...
											E256-E257

▸ Coolant through type

Spare parts

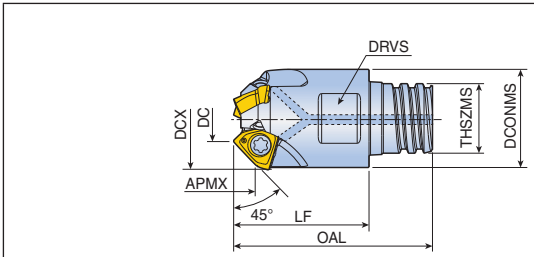
Designation	Screw	Wrench			
3P-TCF-06	TS 20043I/HG-P	TD 6P			
3P-TCF-10	TS 25C065I/HG	TD 8			

Cutting Condition E352-E325
Torque E328

ADVANCE CUTTING TaeguTec

3P-TCF-S-04

Modular heads for chamfering



45°

Designation		Dimension (mm)								Application range(mm)	Insert
		DC	DCX	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
3P-TCF45-306-S08-04	3	6	12.3	11.6	16	23.5	S08	2.5	10	Ø7.3-Ø10.5	3PKT 0402... E256

- Matched with MAXI-RUSH holder
- Coolant through type

Spare parts

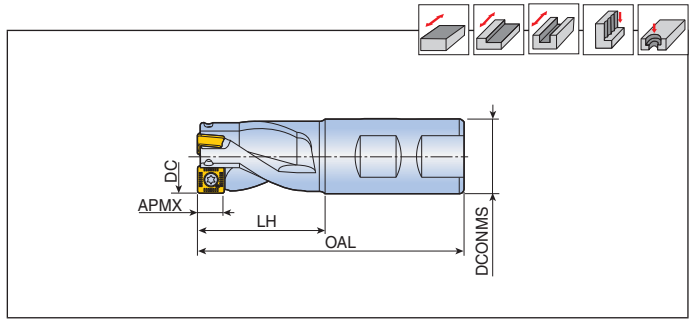
Designation	Screw	Wrench			
3P-TCF-S-04	TS 18033/HG-P	TD 6P			

Cutting Condition E352-E325
Torque E328

TSF-06/09/11/14

CHASEQUAD

End mills



90°

Designation		Dimension (mm)					Insert
		DC	DCONMS	OAL	LH	APMX	
TSF 112-W16-06	1	12	16	80	27	5.6	XOMT 0602... E303
216-W20-06	2	16	20	90	27	5.6	
320-W20-06	3	20	20	100	25	5.6	
TSF 222-W25-09	2	22	25	100	40	9.0	SPMG(T) 0904...-EM E303
225-W25-09	2	25	25	100	40	9.0	
TSF 332-W32-11	3	32	32	115	55	10.7	SPMG(T) 1104...-EM E303
440-W32-11	4	40	32	125	55	10.7	
TSF 445-W32-14	4	45	32	130	70	13.4	SPMG(T) 1405...-EM E303
450-W32-14	4	50	32	140	80	13.4	

Spare parts

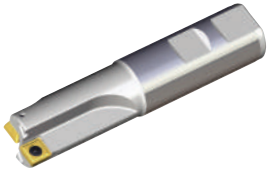
Designation	Screw	Wrench			
TSF (Ø12)	TS 22046I	TD 7			
TSF (Ø16-Ø20)	TS 22052I/HG	TD 7			
TSF (Ø22-Ø25)	TS 35088I	TD 10			
TSF (Ø32-Ø40)	TS 40093I	TD 15			
TSF (Ø45-Ø50)	TS 50A121I/HG	TD 20			

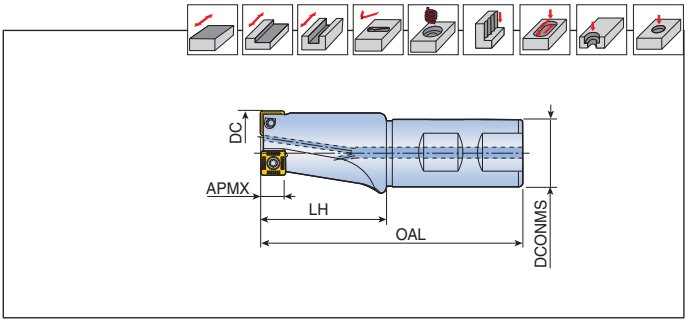
Cutting Condition E352-E325
Torque E328

TDM-06/09/11/14

CHASEQUAD

End mills





90°

Designation		Dimension (mm)					Coolant hole	Max. drilling depth (mm)	Insert
		DC	DCONMS	OAL	LH	APMX			
TDM 112 W16-06	1	12	16	80	20	5.6	●	12	XOMT 0602... E303
216 W20-06	2	16	20	90	25	5.6	●	16	
218 W20-06	2	18	20	90	25	5.6	●	16	
220 W25-06	2	20	25	100	40	5.6	●	20	
222 W25-06	2	22	25	110	47	5.6	●	25	
TDM 225 W25-09	2	25	25	110	50	9.0	●	30	SPMG(T) 0904...-EM E303
228 W32-09	2	28	32	125	60	9.0	●	38	
TDM 232 W32-11	2	32	32	125	60	10.7	●	38	SPMG(T) 1104...-EM E303
240 W32-11	2	40	32	125	60	10.7	●	38	
TDM 245 W32-14	2	45	32	130	66	13.4	●	40	SPMG(T) 1405...-EM E303
250 W32-14	2	50	32	150	66	13.4	●	40	

Spare parts

Designation	Screw	Wrench			
TDM (Ø12)	TS 22046I	TD 7			
TDM (Ø16-Ø22)	TS 22052I/HG	TD 7			
TDM (Ø25-Ø28)	TS 35088I	TD 10			
TDM (Ø32-Ø40)	TS 40093I	TD 15			
TDM (Ø45-Ø50)	TS 50A121I/HG	TD 20			

Cutting Condition E352-E325
Torque E328

TCF-11

End mills

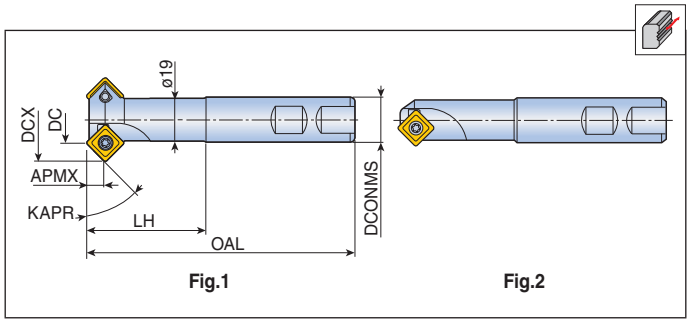


Fig.1 Fig.2

45°

Designation		Dimension (mm)							Fig.	Application range(mm)	Insert
		KAPR	DCX	DC	DCONMS	OAL	LH	APMX			
TCF15 D25-11	2	75°	30.5	25	20	120	40	10.1	1	Ø26.3-Ø30.0	SPMT(G) 1104...EM
30 D25-11	2	60°	35.5	25	20	120	40	8.9	1	Ø26.3-Ø34.0	E303
45 D07-11	1	45°	21.5	7	20	120	40	7.2	2	Ø8.3-Ø20.9	
45 D19-11	2	45°	33.4	19	20	120	40	7.2	1	Ø20.3-Ø32.9	
45 D25-11	3	45°	39.4	25	20	120	40	7.2	1	Ø26.3-Ø38.9	

Spare parts

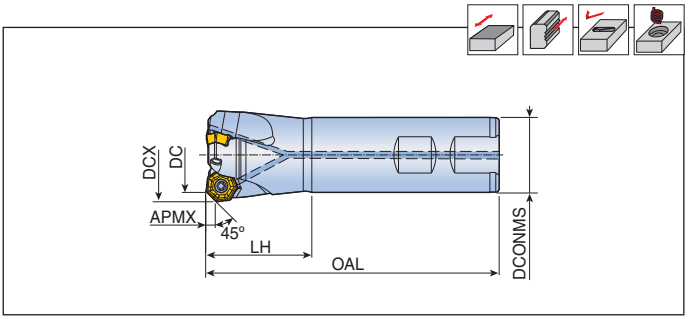
Designation	Screw	Wrench			
TCF-11	TS 40093I	TD 15			

Cutting Condition E352-E325
Torque E328

7S-E45-06

CHASE HEPTA

End mills



45°

Designation		Dimension (mm)						Coolant hole	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
7S-E45 232P-W32-06	2	32	23.7	32	125	45	3.2	●	7EMT 0604 ...
340P-W32-06	3	40	31.6	32	125	45	3.2	●	E264
450P-W32-06	4	50	41.5	32	125	45	3.2	●	

Spare parts

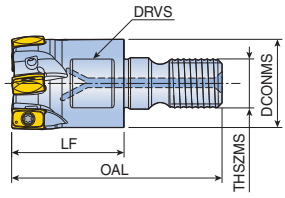
Designation	Screw	Wrench			
7S-E45-06 (-Ø40)	TS 40085I/HG	TD 15			
7S-E45-06 (Ø50)	TS 40093I/HG	TD 15			

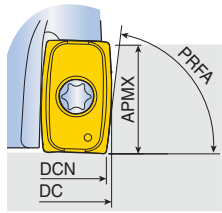
Cutting Condition E352-E325
Torque E328
Ramping Data E385

TBR90-M-06/12

SFEEDBARREL

Modular heads





Designation		Dimension (mm)									Coolant hole	Insert
		DC	DCN	APMX	PRFA	DCONMS	LF	OAL	THSZMS	DRVS		
TBR90 312-M06-06	3	12	10.95	6.3	80°- 90°	11	17	31.5	M06	8	●	BRHU 06... E280
416-M08-06	4	16	14.95	6.3	80°- 90°	13	23	40.5	M08	10	●	
520-M10-06	5	20	18.95	6.3	80°- 90°	18	23	43	M10	15	●	
725-M12-06	7	25	22.95	6.3	80°- 90°	21	27	49	M12	17	●	
TBR90 320-M10-12	3	20	17.5	12.0	75°- 90°	18	27	47	M10	15	●	BRHU 12... E280
425-M12-12	4	25	22.8	12.0	75°- 90°	21	35	57	M12	17	●	
532-M16-12	5	32	29.8	12.0	75°- 90°	29	38	63	M16	25	●	

▸ Matched with T-FLEXTEC holder

Spare parts

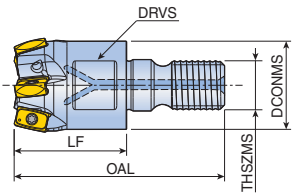
Designation	Screw	Wrench			
TBR90-M-06	TS 18041I/HG	TD 6P			
TBR90-M-12	TS 30B068I/HG	TD 8			

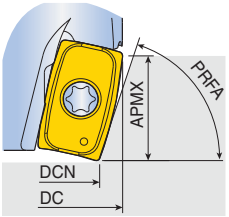
Cutting Condition E352-E325
Torque E328

TBR75-M-06/12

SPEEDBARREL

Modular heads





Designation		Dimension (mm)									Coolant hole	Insert
		DC	DCN	APMX	PRFA	DCONMS	LF	OAL	THSZMS	DRVS		
TBR75 416-M08-06	4	16	12.75	6.14	69°- 81°	13	23	40.5	M08	10	●	BRHU 06... E280
520-M10-06	5	20	16.75	6.14	69°- 81°	18	23	43	M10	15	●	
625-M12-06	6	25	21.75	6.14	69°- 81°	21	27	49	M12	17	●	
TBR75 220-M10-12	2	20	13.8	11.7	67°- 83°	18	27	47	M10	15	●	BRHU 12... E280
325-M12-12	3	25	18.8	11.7	67°- 83°	21	35	57	M12	17	●	
532-M16-12	5	32	25.8	11.7	67°- 83°	29	38	63	M16	25	●	

▸ Matched with T-FLEXTEC holder

Spare parts

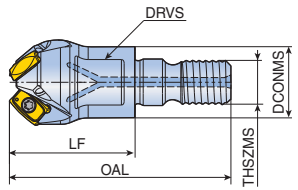
Designation	Screw	Wrench			
TBR75-M-06	TS 18041I/HG	TD 6P			
TBR75-M-12	TS 30B068I/HG	TD 8			

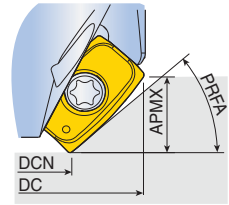
Cutting Condition E352-E325
Torque E328

TBR45-M-06/12

SFEEDBARREL

Modular heads





Designation		Dimension (mm)									Coolant hole	Insert
		DC	DCN	APMX	PRFA	DCONMS	LF	OAL	THSZMS	DRVS		
TBR45 316-M08-06	3	16	7	4.2	39°- 51°	13	23	40.5	M08	10	●	BRHU 06... E280
420-M10-06	4	20	11	4.2	39°- 51°	18	23	43	M10	15	●	
TBR45 332-M16-12	3	32	15	8.4	37°- 53°	29	38	63	M16	25	●	BRHU 12... E280

▸ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
TBR45-M-06	TS 18041I/HG	TD 6P			
TBR45-M-12	TS 30B068I/HG	TD 8			

Cutting Condition E352-E325

Torque E328

ADVANCE CUTTING TaeguTec

End mills

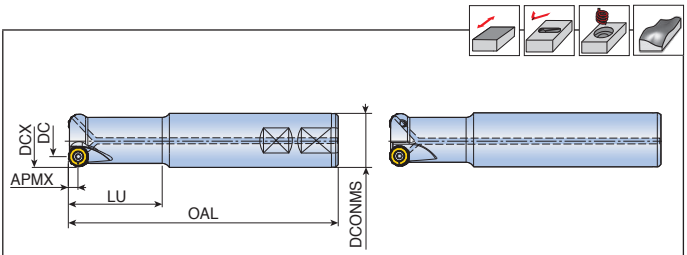


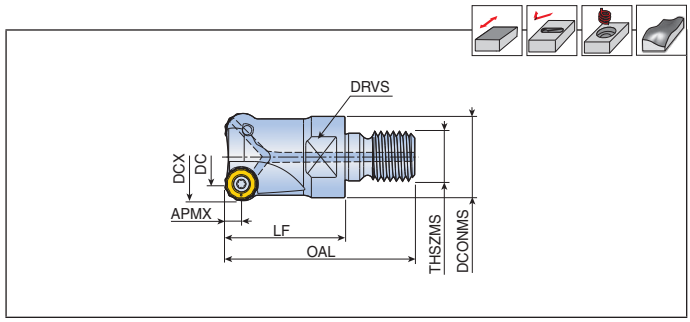
Fig.1 Fig.2

Designation			Dimension (mm)						Coolant hole	Fig.	Insert
			DCX	DC	DCONMS	OAL	LU	APMX			
TERNS	225-25-10-L160	2	25	15	25	160	60	5.0	●	2	RNMU 1004... E292
	225-32-10-L250	2	25	15	32	250	40	5.0	●	2	
	325-25-10-L160	3	25	15	25	160	60	5.0	●	2	
	226-25-10-L200	2	26	16	25	200	80	5.0	●	2	
	332-32-10-L180	3	32	22	32	180	70	5.0	●	2	
	332-32-10-L250	3	32	22	32	250	100	5.0	●	2	
	432-32-10-L180	4	32	22	32	180	70	5.0	●	2	
	432-32-10-L250	4	32	22	32	250	100	5.0	●	2	
	433-32-10-L200	4	33	23	32	200	80	5.0	●	2	
	433-32-10-L250	4	33	23	32	250	100	5.0	●	2	
TERNS	232-32-12-L150	2	32	20	32	150	50	6.0	●	2	RNMU 1205... E292
	232-32-12-L200	2	32	20	32	200	60	6.0	●	2	
	232-32-12-L	2	32	20	32	250	50	6.0	●	2	
	332-W32-12	3	32	20	32	160	60	6.0	●	1	
	332-32-12-L200	3	32	20	32	200	70	6.0	●	2	
	332-32-12-L250	3	32	20	32	250	60	6.0	●	2	
	233-32-12-L200	2	33	21	32	200	50	6.0	●	2	
	233-32-12-L250	2	33	21	32	250	50	6.0	●	2	
	333-32-12-L200	3	33	21	32	200	70	6.0	●	2	
	333-32-12-L250	3	33	21	32	250	60	6.0	●	2	
	340-W32-12	3	40	28	32	160	50	6.0	●	1	
	340-32-12-L250	3	40	28	32	250	50	6.0	●	2	
	440-W32-12	4	40	28	32	160	50	6.0	●	1	
	440-32-12-L250	4	40	28	32	250	60	6.0	●	2	
	450-32-12-L200	4	50	38	32	200	70	6.0	●	2	
	550-32-12-L250	5	50	38	32	250	60	6.0	●	2	
TERNS	240-W32-16-L160	2	40	24	32	160	50	6.0	●	1	RNMU 1606... E292
	240-32-16-L180	2	40	24	32	180	70	8.0	●	2	
	240-32-16-L250	2	40	24	32	250	100	8.0	●	2	
	340-32-16-L180	3	40	24	32	180	70	8.0	●	2	
	340-32-16-L250	3	40	24	32	250	100	8.0	●	2	

Cutting Condition E352-E325
Torque E328
Ramping Data E401-E402

TERNS-M

Modular heads



Designation		Dimension (mm)								Coolant hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TERNS 225-M12-10	2	25	15	21	35	57	M12	5.0	17	●	RNMU 1004...
325-M12-10	3	25	15	21	35	57	M12	5.0	17	●	E292
432-M16-10	4	32	22	29	43	68	M16	5.0	25	●	
542-M16-10	5	42	32	29	43	68	M16	5.0	25	●	
TERNS 232-M16-12	2	32	20	29	43	68	M16	6.0	25	●	RNMU 1205...
332-M16-12	3	32	20	29	43	68	M16	6.0	25	●	E292
233-M16-12	2	33	21	29	43	68	M16	6.0	25	●	
333-M16-12	3	33	21	29	43	68	M16	6.0	25	●	
340-M16-12	3	40	28	29	43	68	M16	6.0	25	●	
440-M16-12	4	40	28	29	43	68	M16	6.0	25	●	
TERNS 240-M16-16	2	40	24	29	43	68	M16	8.0	25	●	RNMU 1606...
340-M16-16	3	40	24	29	43	68	M16	8.0	25	●	E292

▸ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
TERNS-10	TS 35085I/HG	TD 15	-		
TERNS-12	TS 40G110I	-	T-T15		
TERNS-16	TS 50A121I/HG	TD 20	-		

Cutting Condition E352-E325
Torque E328
Ramping Data E401-E402

TERY

End mills

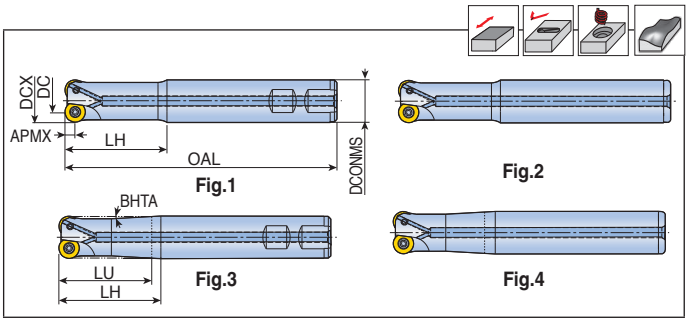


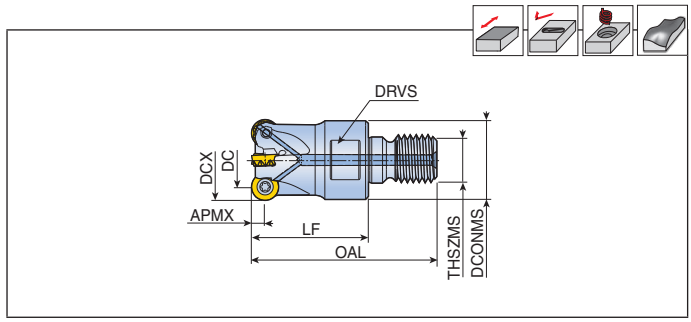
Fig.1 Fig.2 Fig.3 Fig.4

Designation		Dimension (mm)								Coolant hole	Fig.	Insert
		DCX	DC	DCONMS	OAL	LU	LH	BHTA	APMX			
TERY 216-W20-08-L	2	16	8	20	110	45	55	4.1°	4.0	●	3	RYM(H)X 0803...
217-16-08-L130	2	17	9	16	130	-	30	-	4.0	●	2	E293-E294
218-16-08-L150	2	18	10	16	150	-	30	-	4.0	●	2	
320-W20-08	3	20	12	20	150	-	43	-	4.0	●	1	
320-20-08-L110	3	20	12	20	110	-	60	-	4.0	●	2	
321-20-08-L150	3	21	13	20	150	-	40	-	4.0	●	2	
425-W25-08	4	25	17	25	150	-	43	-	4.0	●	1	
426-25-08-L150	4	26	18	25	150	-	40	-	4.0	●	2	
532-W32-08	5	32	24	32	160	-	60	-	4.0	●	1	
TERY 220-W20-10	2	20	10	20	160	-	60	-	5.0	●	1	RYM(H)X 1004...
220-25-10-L	2	20	10	25	250	60	80	3.5°	5.0	●	4	E293-E294
221-20-10-L200	2	21	11	20	200	-	30	-	5.0	●	2	
225-32-10-L	2	25	15	32	250	53	80	5.0°	5.0	●	4	
225-W25-10	2	25	15	25	160	-	60	-	5.0	●	1	
325-W25-10	3	25	15	25	160	-	60	-	5.0	●	1	
226-25-10-L200	2	26	16	25	200	-	30	-	5.0	●	2	
326-25-10-L200	3	26	16	25	200	-	60	-	5.0	●	2	
432-W32-10	4	32	22	32	160	-	60	-	5.0	●	1	
TERY 225-W25-12	2	25	13	25	160	-	60	-	6.0	●	1	RYM(H)X 1205...
226-25-12-L200	2	26	14	25	200	-	60	-	6.0	●	2	EE293-E294
232-32-12-L	2	32	20	32	250	-	50	-	6.0	●	2	
332-W32-12	3	32	20	32	160	-	64	-	6.0	●	1	
332-W32-12-S	3	32	20	32	105	-	35	-	6.0	●	1	
233-32-12-L250	2	33	21	32	250	-	40	-	6.0	●	2	
333-32-12-L200	3	33	21	32	200	-	60	-	6.0	●	2	
340-W32-12	3	40	28	32	160	-	50	-	6.0	●	1	
340-W32-12-S	3	40	28	32	105	-	35	-	6.0	●	1	
340-32-12-L250	3	40	28	32	250	-	50	-	6.0	●	2	
440-W32-12	4	40	28	32	150	-	35	-	6.0	●	1	
440-W32-12-S	4	40	28	32	105	-	35	-	6.0	●	1	
TERY 240-W32-16	2	40	24	32	160	-	50	-	8.0	●	1	RYM(H)X 1606...
340-32-16-L250	3	40	24	32	250	-	50	-	8.0	●	2	E293-E294
TERY 350-32-20	3	50	30	32	160	-	50	-	10.0	●	2	RYM(H)X 2007...
350-40-20	3	50	30	40	200	-	60	-	10.0	●	2	E293-E294

Cutting Condition E352-E325
Torque E328
Ramping Data E403-E405

TERY-M-08/10

Modular heads



Designation		Dimension (mm)								Coolant hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TERY 216-M08-08	2	16	8	13	23	40.5	M08	4.0	10	●	RYM(H)X 0803... E293-E294
218-M08-08	2	18	10	13	23	40.5	M08	4.0	10	●	
220-M10-08	2	20	12	18	30	50	M10	4.0	15	●	
320-M10-08	3	20	12	18	30	50	M10	4.0	15	●	
425-M12-08	4	25	17	21	35	57	M12	4.0	17	●	
530-M16-08	5	30	22	29	43	68	M16	4.0	25	●	
532-M16-08	5	32	24	29	43	68	M16	4.0	25	●	
540-M16-08	5	40	32	29	43	68	M16	4.0	25	●	
640-M16-08	6	40	32	29	43	68	M16	4.0	25	●	
TERY 220-M10-10	2	20	10	18	30	50	M10	5.0	15	●	RYM(H)X 1004... E293-E294
225-M12-10	2	25	15	21	35	57	M12	5.0	17	●	
325-M12-10	3	25	15	21	35	57	M12	5.0	17	●	
430-M16-10	4	30	20	29	43	68	M16	5.0	25	●	
432-M16-10	4	32	22	29	43	68	M16	5.0	25	●	
435-M16-10	4	35	25	29	43	68	M16	5.0	25	●	
542-M16-10	5	42	32	29	43	68	M16	5.0	25	●	
642-M16-10	6	42	32	29	43	68	M16	5.0	25	●	

▸ Matched with T-FLEXTEC holder

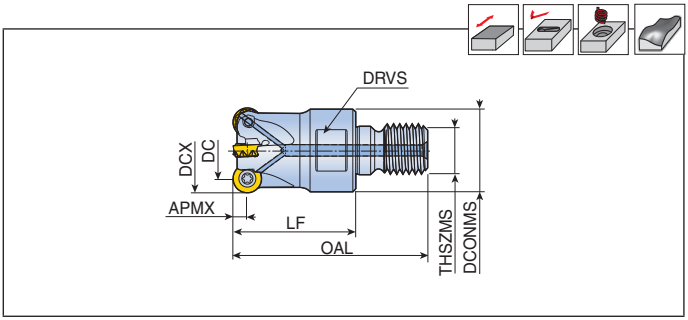
Spare parts

Designation	Screw	Wrench			
TERY-08	TS 30A060I/HG	TD 9			
TERY-10	TS 35070I/HG(UnderØ21), TS 35085I/HG	TD 15			
TERY-12	TS 40093I	TD 15			
TERY-16	TS 50115I	TD 20			

Cutting Condition E352-E325
Torque E328
Ramping Data E403-E405

TERY-M-12/16

Modular heads



Designation		Dimension (mm)								Coolant hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TERY 225-M12-12	2	25	13	21	35	57	M12	6.0	17	●	RYM(H)X 1205...
232-M16-12	2	32	20	29	43	68	M16	6.0	25	●	E293-E294
332-M16-12	3	32	20	29	43	68	M16	6.0	25	●	
335-M16-12	3	35	23	29	43	68	M16	6.0	25	●	
340-M16-12	3	40	28	29	43	68	M16	6.0	25	●	
440-M16-12	4	40	28	29	43	68	M16	6.0	25	●	
442-M16-12	4	42	30	29	43	68	M16	6.0	25	●	
TERY 232-M16-16	2	32	16	29	43	68	M16	8.0	25	●	RYM(H)X 1606...
240-M16-16	2	40	24	29	43	68	M16	8.0	25	●	E293-E294
342-M16-16	3	42	26	29	43	68	M16	8.0	25	●	

▸ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
TERY-12	TS 40093I	TD 15			
TERY-16	TS 50115I	TD 20			

Cutting Condition E352-E325
Torque E328
Ramping Data E403-E405

End mills

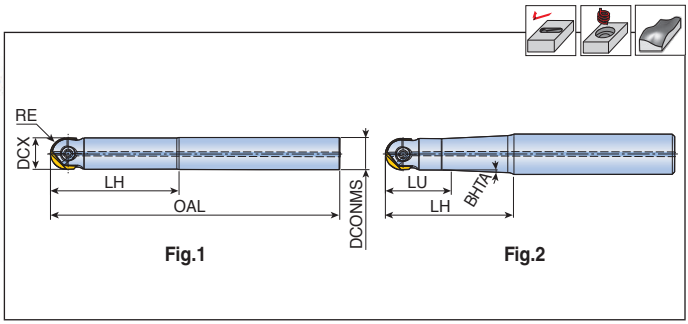


Fig.1 Fig.2

Designation	Dimension (mm)							Coolant hole	Fig.	Insert
	DCX	RE	DCONMS	OAL	LH	LU	BHTA			
TNF 060-10M	6	3	10	80	30	15	7.5°	●	2	NFB 060...
060-30-L80	6	3	10	80	30	-	-	●	1	NFR 060A...
080-08S	8	4	8	90	20	-	-	●	1	NFB 080...
080-12S	8	4	12	100	20	10	9.5°	●	2	NFR 080A...
080-12M	8	4	12	130	50	10	3°	●	2	NFCB 080...
100-10S	10	5	10	90	30	-	-	●	1	NFB 100...
100-12S	10	5	12	110	25	15	5°	●	2	NFR 100A...
100-16M	10	5	16	130	60	15	3.5°	●	2	NFR 110A... NFCB 100...
120-12S	12	6	12	110	30	-	-	●	1	NFB 120...
120-12M	12	6	12	180	60	-	-	●	1	NFR 120A...
120-16M	12	6	16	140	60	25	2.4°	●	2	NFR 130A...
120-20L	12	6	20	180	80	40	5°	●	2	NFL(C)B 120...
160-16M	16	8	16	130	40	-	-	●	1	NFB 160...
160-16L	16	8	16	200	100	-	-	●	1	NFR 160A...
160-20M	16	8	20	160	60	25	2.5°	●	2	NFR 170A...
160-25L	16	8	25	220	100	55	5°	●	2	NFL(C)B 160...
200-20S	20	10	20	110	40	-	-	●	1	NFB 200...
200-20M	20	10	20	150	50	-	-	●	1	NFR 200A...
200-20L	20	10	20	220	70	-	-	●	1	NFR 210A...
200-25M	20	10	25	180	80	40	2.5°	●	2	NFL(C)B 210...
200-25L	20	10	25	220	110	45	1.5°	●	2	
250-25S	25	12.5	25	125	40	-	-	●	1	NFB 250...
250-25M	25	12.5	25	170	70	-	-	●	1	NFR 250A...
250-32M	25	12.5	32	200	90	32	3°	●	2	NFR 260A...
250-32L	25	12.5	32	250	130	40	1.5°	●	2	NFL(C)B 250...
300-32S	30	15	32	140	55	-	-	●	1	NFB 300...
300-32M	30	15	32	190	75	-	-	●	1	NFB 320...
300-32L	30	15	32	250	100	65	1°	●	2	NFR 300A...
300-32XL	30	15	32	300	150	-	-	●	1	NFR 320A...
300-32-L220	30	15	32	220	100	55	1°	●	2	NFL(C)B 300...
320-32L	32	16	32	250	60	-	-	●	1	NFB 320...
										NFR 320A...
										E286-E289

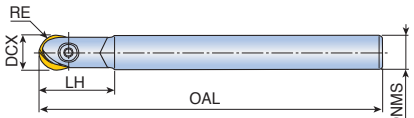
Cutting Condition E352-E325
Torque E328

ADVANCE CUTTING TaeguTec

TNF-CT-L

FINEBALL

End mills-carbide shank

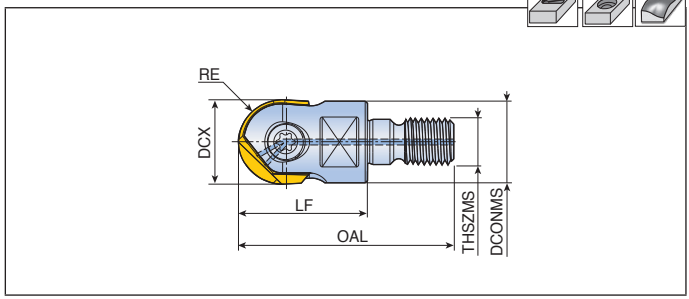


Designation		Dimension (mm)					Insert
		DCX	RE	DCONMS	OAL	LH	
TNF	060-06-CT-L60	6	3	6	60	15	NFB 060... NFR 060A...
	060-06-CT-L80	6	3	6	80	20	
	060-06-CT-L92	6	3	6	92	35	
	060-06-CT-L120	6	3	6	120	65	
	060-06-CT-L140	6	3	6	140	25	
	080-08-CT-L100	8	4	8	100	30	NFB 080... NFR 080A... NFCB 080...
	080-10-CT-L140	8	4	10	140	75	
	080-08-CT-L160	8	4	8	160	80	
	100-10-CT-L100	10	5	10	100	35	NFB 100... NFR 100A... NFR 110A... NFCB 110...
	100-10-CT-L140	10	5	10	140	75	
	100-10-CT-L200	10	5	10	200	70	
	100-10-CT-L220	10	5	10	220	140	
	120-12-CT-L120	12	6	12	120	50	NFB 120... NFR 120A... NFR 130A... NFL(C)B 120...
	120-12-CT-L160-S	12	6	12	160	30	
	120-12-CT-L160	12	6	12	160	90	
	120-12-CT-L200	12	6	12	200	70	
	120-12-CT-L220	12	6	12	220	150	
	160-16-CT-L120	16	8	16	120	60	NFB 160... NFR 160A... NFR 170A... NFL(C)B 160...
	160-16-CT-L160-S	16	8	16	160	70	
	160-16-CT-L160	16	8	16	160	80	
	160-16-CT-L200	16	8	16	200	70	
	160-16-CT-L220	16	8	16	220	150	
	200-20-CT-L200	20	10	20	200	70	NFB 200... NFR 200A... NFR 210A... NFL(C)B 200...
	200-20-CT-L110	20	10	20	110	40	
	200-20-CT-L220	20	10	20	220	120	
	200-20-CT-L300	20	10	20	300	220	
	250-25-CT-L200	25	12.5	25	200	70	NFB 250... NFR 250A... NFR 260A... NFL(C)B 250...
	250-25-CT-L220-S	25	12.5	25	220	80	
	250-25-CT-L220	25	12.5	25	220	120	
	250-25-CT-L300	25	12.5	25	300	220	
	300-32-CT-L200	30	15	32	200	70	NFB 300... NFB 320... NFR 300A... NFR 320A... NFL(C)B 300... E286-E289
	300-32-CT-L250-S	30	15	32	250	80	
	300-32-CT-L250	30	15	32	250	150	
	300-32-CT-L350-S	30	15	32	350	80	
	300-32-CT-L350	30	15	32	350	230	
	320-32-CT-L300	32	16	32	300	220	NFB 320... NFR 320A...

Cutting Condition E352-E325
Torque E328

TNF-M

Modular heads



Designation		Dimension (mm)						Coolant hole	Insert
		DCX	RE	DCONMS	OAL	LF	THSZMS		
TNF	**100-M06**	10	5	9.7	34.5	20	M06	●	NFB 100... NFR 100A... NFR 110A... NFCB 100...
	120-M06	12	6	11.5	37.5	23	M06	●	NFB 120... NFR 120A... NFR 130A... NFL(C)B 120...
	120-M08	12	6	13	40.5	23	M08	●	
	160-M08	16	8	13	47.5	30	M08	●	NFB 160... NFR 160A... NFR 170A... NFL(C)B 160...
	200-M10	20	10	19	50	30	M10	●	NFB 200... NFR 200A... NFR 210A... NFL(C)B 200...
	250-M12	25	12.5	24	57	35	M12	●	NFB 250... NFR 250A... NFR 260A... NFL(C)B 250...
	250-M16	25	12.5	29	68	43	M16	●	
	300-M16	30	15	29	68	43	M16	●	NFB 300... NFB 320... NFR 300A...NFR 320A... NFL(C)B 300...
	320-M16	32	16	29.5	68	43	M16	●	NFB 320... NFR 320A...

E286-E289

▸ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			Wrench handle	
TNF 060	TS 20F060A	TD 6	-	-	-	
TNF 080	TS 25F080A	TD 8	-	-	-	
TNF 100	TS 30F100A	TD 10	-	-	-	
TNF 120	TS 40F120A	TD 15	-	-	-	
TNF 160	TS 50F160A	-	T-T20	-	-	
TNF 200	TS 60F200A	-	-	BLD T25/M7	SW6-T	
TNF 250	TS 70F250A	-	-	BLD T25/M7	SW6-T	
TNF 300, TNF 320	TS 80F300A	-	T-T30	-	-	

Cutting Condition E352-E325
Torque E328

TNFR

FINEBALL

End mills

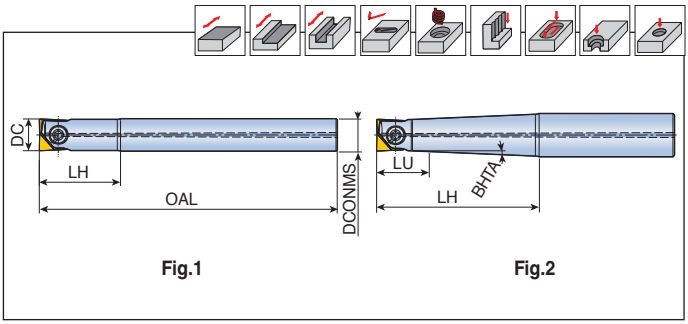


Fig.1 Fig.2

Designation	Dimension (mm)						Coolant hole	Fig.	Insert
	DC	DCONMS	OAL	LH	LU	BHTA			
TNFR 060-10M	6	10	80	30	15	9°	●	2	NFR 060A...
080-12S	8	12	100	22	10	9°	●	2	NFR 080A...
080-12M	8	12	130	50	10	2.8°	●	2	
100-12S	10	12	110	25	15	5°	●	2	NFR 100A...
100-16M	10	16	150	50	15	3.5°	●	2	NFR 110A...
120-12S	12	12	110	30	-	-	●	1	NFR 120A...
120-16M	12	16	160	60	18	2.5°	●	2	NFR 130A...
160-16S	16	16	130	50	-	-	●	1	NFR 160A...
160-16M	16	16	170	70	-	-	●	1	NFR 170A...
160-16L	16	16	200	100	-	-	●	1	
200-20S	20	20	140	60	-	-	●	1	NFR 200A...
200-20M	20	20	180	80	-	-	●	1	NFR 210A...
200-20L	20	20	250	120	-	-	●	1	
250-25S	25	25	150	70	-	-	●	1	NFR 250A...
250-25M	25	25	200	100	-	-	●	1	NFR 260A...
250-25L	25	25	250	120	-	-	●	1	
300-32S	30	32	140	55	-	-	●	1	NFR 300A
300-32M	30	32	190	75	-	-	●	1	NFR 320A
300-32L	30	32	250	100	65	1°	●	2	
320-32L	32	32	250	60	-	-	●	1	NFR 320A
									E288-E289

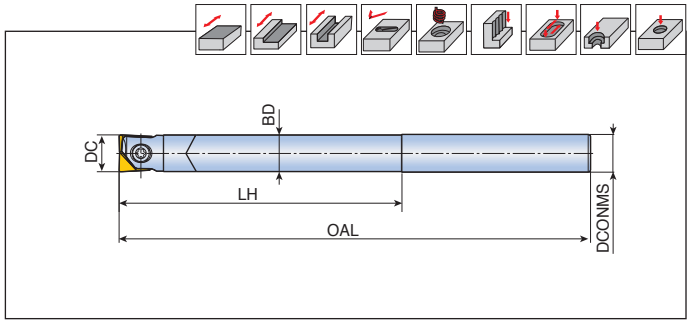
Spare parts

Designation	Screw	Wrench			Wrench handle	
TNFR 060	TS 20F060A	TD 6	-	-	-	
TNFR 080	TS 25F080A	TD 8	-	-	-	
TNFR 100	TS 30F100A	TD 10	-	-	-	
TNFR 120	TS 40F120A	TD 15	-	-	-	
TNFR 160	TS 50F160A	-	T-T20	-	-	
TNFR 200	TS 60F200A	-	-	BLD T25/M7	SW6-T	
TNFR 250	TS 70F250A	-	-	BLD T25/M7	SW6-T	
TNFR 300, TNFR 320	TS 80F300A	-	T-T30	-	-	

Cutting Condition E352-E325
Torque E328

TNFR-CT-L

End mills-carbide shank



Designation	Dimension (mm)					Insert
	DC	DCONMS	BD	OAL	LH	
TNFR 060-06-CT-L60	6	6	5.8	60	15	NFR 060A...
060-06-CT-L80	6	6	5.8	80	20	
080-08-CT-L140	8	8	7.8	140	75	NFR 080A...
100-10-CT-L140	10	10	9.7	140	75	NFR 100A...
						NFR 110A...
120-12-CT-L160	12	12	11.7	160	95	NFR 120A...
						NFR 130A...
160-16-CT-L200	16	16	15.5	200	120	NFR 160A...
						NFR 170A...
200-20-CT-L250	20	20	19.5	250	160	NFR 200A...
						NFR 210A...
250-25-CT-L300	25	25	24.5	300	200	NFR 250A...
						NFR 260A...
300-32-CT-L350	30	32	29.5	350	230	NFR 300A...
						NFR 320A...
320-32-CT-L350	32	32	31.5	350	230	NFR 320A...
						E288-E289

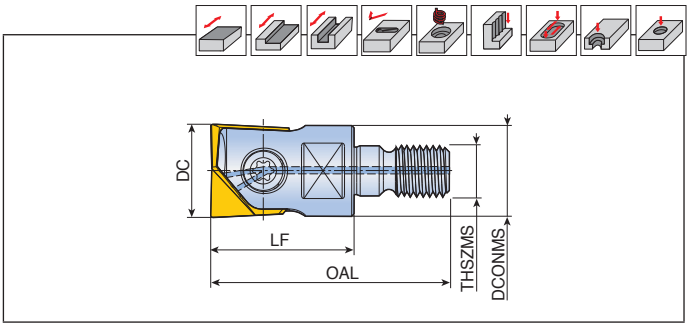
Spare parts

Designation	Screw	Wrench			Wrench handle	
TNFR 060	TS 20F060A	TD 6	-	-	-	
TNFR 080	TS 25F080A	TD 8	-	-	-	
TNFR 100	TS 30F100A	TD 10	-	-	-	
TNFR 120	TS 40F120A	TD 15	-	-	-	
TNFR 160	TS 50F160A	-	T-T20	-	-	
TNFR 200	TS 60F200A	-	-	BLD T25/M7	SW6-T	
TNFR 250	TS 70F250A	-	-	BLD T25/M7	SW6-T	
TNFR 300, TNFR 320	TS 80F300A	-	T-T30	-	-	

Cutting Condition E352-E325
Torque E328

TNFR-M

Modular heads



Designation	Dimension (mm)						Coolant hole	Insert
	DC	DCONMS	LF	OAL	THSZMS	DRVS		
TNFR 100-M06	10	9.7	20	34.5	M06	8	●	NFR 100A... NFR 110A...
120-M06	12	11.5	23	37.5	M06	8	●	NFR 120A...
120-M08	12	13	23	40.5	M08	10	●	NFR 130A...
160-M08	16	13	30	47.5	M08	10	●	NFR 160A... NFR 170A...
200-M10	20	19	30	50	M10	15	●	NFR 200A... NFR 210A...
250-M12	25	24	35	57	M12	17	●	NFR 250A... NFR 260A...
300-M16	30	29	43	68	M16	25	●	NFR 300A NFR 320A
320-M16	32	29.5	43	68	M16	25	●	NFR 320A E288-E289

▸ Matched with T-FLEXTEC holder

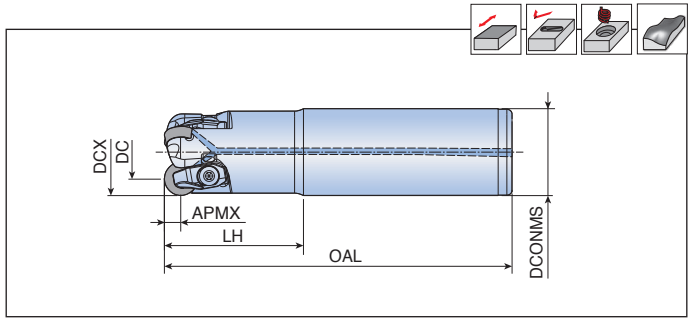
Spare parts

Designation	Screw	Wrench			Wrench handle	
TNFR 100	TS 30F100A	TD 10	-	-	-	
TNFR 120	TS 40F120A	TD 15	-	-	-	
TNFR 160	TS 50F160A	-	T-T20	-	-	
TNFR 200	TS 60F200A	-	-	BLD T25/M7	SW6-T	
TNFR 250	TS 70F250A	-	-	BLD T25/M7	SW6-T	
TNFR 300, TNFR 320	TS 80F300A	-	T-T30	-	-	

Cutting Condition E352-E325
Torque E328

TERP-09

End mills



Designation		Dimension (mm)						Air hole[1]	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TERP 220-20-09FL-L80	2	20	10.6	20	80	30	4.7	x	RPGN 0903 FL...
325-25-09FL-L100	3	25	15.6	25	100	40	4.7	●	E291
432-32-09FL-L120	4	32	22.5	32	120	40	4.7	●	

▸ [1] Use only air (Coolant is prohibited)

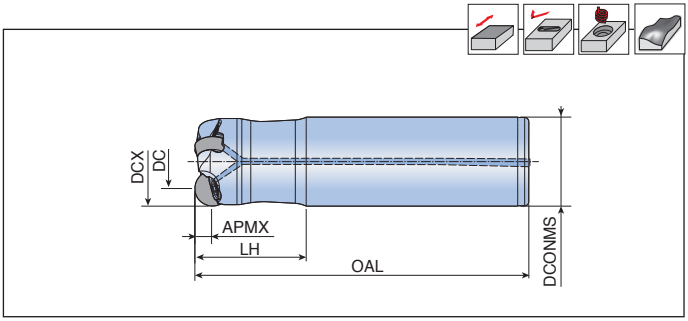
Spare parts

Designation	Clamp	Screw	Snap ring	Wrench	
TERP-09	CCL-3S-F	CLS-35A120	CSR 1.25	L-W 2	

Cutting Condition E352-E325 | Torque E328

TERP-12

End mills



Designation		Dimension (mm)						Air hole[1]	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TERP 332-32-12-L120	3	32	19.3	32	120	40	6.3	●	RPGN 1204 FL...
440-32-12-L120	4	40	27.3	32	120	40	6.3	●	E291

▸ [1] Use only air (Coolant is prohibited)

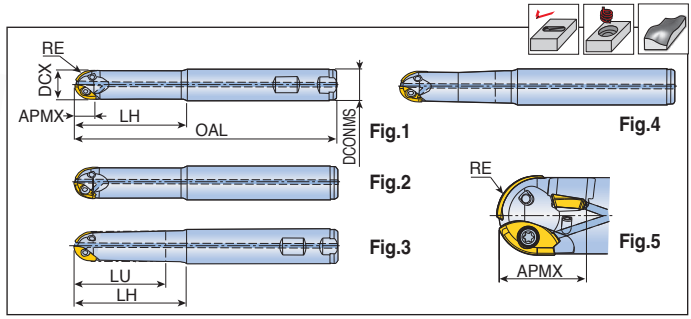
Spare parts

Designation	Clamp	Screw	Wrench		
TERP-12	WFZ 6-C	WS 6	T-W 3		

Cutting Condition E352-E325
Torque E328

DUETBALL

End mills

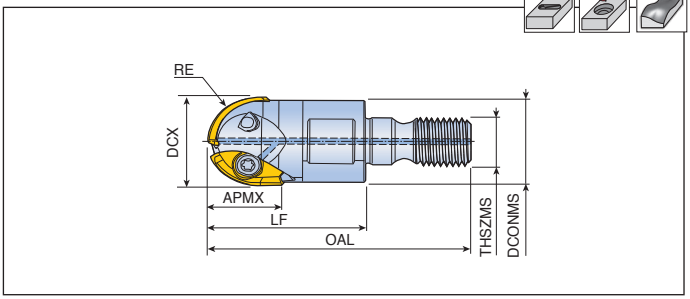


Designation	Dimension (mm)							Coolant hole	Fig.	Insert			
	DCX	RE	DCONMS	OAL	LU	LH	APMX			Ball		Periphery	
2F 16-11-W20-L120	16	8	20	120	35.5	60	11.8	●	3	2FB160 E254	2	-	-
16-11-20-L130	16	8	20	130	45.9	60	11.8	●	4		2	-	-
16-11-20-L200	16	8	20	200	45.9	60	11.8	●	4		2	-	-
16-20-W20-L120-P	16	8	20	120	41.8	60	20.5	X	5		2	APKT 09T3 E266	1
16-20-25-L200-P	16	8	25	200	43.4	65	20.5	X	5		2		1
20-13-W25-L105	20	10	25	105	-	45	13.6	●	1	2FB200 E254	2	-	-
20-13-W25-L150	20	10	25	150	45.7	65	13.6	●	3		2	-	-
20-13-20-L220	20	10	20	220	-	70	13.6	●	2		2	-	-
20-13-25-L160	20	10	25	160	58.4	75	13.6	●	4		2	-	-
20-13-25-L220	20	10	25	220	65.7	85	13.6	●	4		2	-	-
20-22-25-L125-P	20	10	25	125	45.7	65	22.3	●	5		2	APKT 09T3 E266	1
20-22-25-L200-P	20	10	25	200	74.3	90	22.3	●	5		2		1
20-22-32-L250-P	20	10	32	250	72.3	100	22.3	●	5		2		1
25-17-W25-L150	25	12.5	25	150	-	60	17.7	●	1	2FB250 E254	2	-	-
25-17-32-L150	25	12.5	32	150	55.7	75	17.7	●	4		2	-	-
25-17-32-L200	25	12.5	32	200	61.6	85	17.7	●	4		2	-	-
25-17-32-L300	25	12.5	32	300	80	120	17.7	●	4		2	-	-
25-35-25-L200-P	25	12.5	25	200	-	87.5	35.1	●	5		2		2
25-35-32-L200-P	25	12.5	32	200	-	100	35.1	●	5		2	APKT 09T3 E266	2
25-35-32-L250-P	25	12.5	32	250	-	110	35.1	●	5		2		2
25-43-32-L300-P	25	12.5	32	300	-	120	43.7	●	5		2		3
30-20-W32-L180	30	15	32	180	-	86.1	20.0	●	1	2FB300 E254	2	-	-
30-20-30-L250	30	15	30	250	-	104.6	20.0	●	2		2	-	-
30-20-32-L200	30	15	32	200	-	86.1	20.0	●	2		2	-	-
30-20-32-L300	30	15	32	300	-	126.1	20.0	●	2		2	-	-
30-43-32-L160-P	30	15	32	160	-	66	43.7	●	5		2		2
30-43-32-L200-P	30	15	32	200	-	85.6	43.7	●	5		2	APKT 1204 E267	2
30-43-32-L250-P	30	15	32	250	-	125.6	43.7	●	5		2		2
30-51-32-L300-P	30	15	32	300	-	146	55.3	●	5		2		3
32-21-W32-L200	32	16	32	200	-	100	21.4	●	1	2FB320 E254	2	-	-
32-21-32-L180	32	16	32	180	-	100	21.4	●	2		2	-	-
32-21-32-L300	32	16	32	300	-	130	21.4	●	2		2	-	-
32-44-32-L160-P	32	16	32	160	-	66.4	44.7	●	5		2		2
32-44-32-L200-P	32	16	32	200	-	83.7	44.7	●	5		2	APKT 1204 E267	2
32-44-32-L250-P	32	16	32	250	-	123.7	44.7	●	5		2		2
32-44-32-L300-P	32	16	32	300	-	143.7	44.7	●	5		2		2

Cutting Condition E352-E325
Torque E328

2F-M

Modular heads



Designation		Dimension (mm)							Coolant hole	Insert
		DCX	RE	DCONMS	LF	OAL	THSZMS	APMX		
2F 16-11-M08	2	16	8	13	25	42.5	M08	11.8	●	2FB160...
20-13-M10	2	20	10	18	30	50	M10	13.6	●	2FB200...
25-17-M12	2	25	12.5	21	35	57	M12	17.7	●	2FB250...
30-20-M16	2	30	15	29	43	68	M16	20.0	●	2FB300...
32-21-M16	2	32	16	29	43	68	M16	21.4	●	2FB320...
										E254

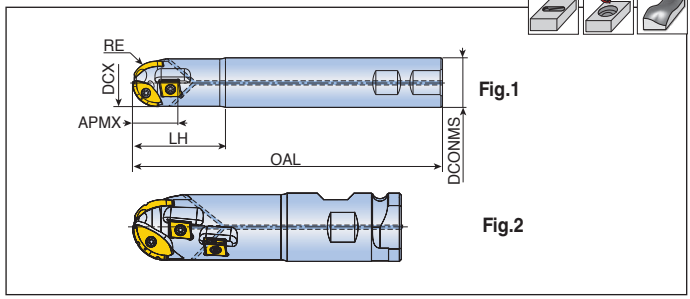
▸Matched with T-FLEXTEC holder

Spare parts

Designation	Screw		Wrench		
	Ball	Periphery	Ball	Periphery	
2FB160/APKT 09T3	TS 25064I	TS 25055I/HG	TD 8	TD 8	
2FB200/APKT 09T3	TS 30085I/HG	TS 25055I/HG	TD 9	TD 8	
2FB250/APKT 09T3	TS 35085I/HG	TS 25055I/HG	TD 15	TD 8	
2FB300/APKT 1204	TS 40A100I	TS 35A088I/HG	TD 15	TD 10P	
2FB320/APKT 1204	TS 40A115I	TS 35A088I/HG	TD 15	TD 10P	

Cutting Condition E352-E325
Torque E328

End mills



Designation	Dimension (mm)						Fig.	Insert					
	DCX	RE	DCONMS	OAL	LH	APMX		Ball1		Ball2		Periphery	
3F 32-39-W32-150	32	16	32	150	60	39	1	3FB320C-M E255	1	3FB320P-M E255	2	CNHX 131108T E280	2
32-39-W32-200	32	16	32	200	60	39	1		1		2		2
32-39-W32-250	32	16	32	250	60	39	1		1		2		2
50-54-W40-150	50	25	40	150	70	54	1	3FB500C-M E255	1	3FB500P-M E255	2	CNHX 160608T E280	2
50-80-W50-200	50	25	50	200	110	80	1		1		2		4
50-80-W50-250	50	25	50	250	110	80	1		1		2		4
3F 50-68-CN50.8-200	50	25	50.8	200	115	68	2		1		2		3
50-94-CN50.8-250	50	25	50.8	250	165	94	2		1		2		5

▸ When machining over 'APMX', please calculate Z=1
▸ Coolant through type

Spare parts

Designation	Screw	Wrench			
3F 32	TS 40093I	TD 15	-		
3F 50	TS 50115I	-	T-T20		

Cutting Condition E352-E325
Torque E328

TDB50X-CN/-W

CHASE2BALL

End mills

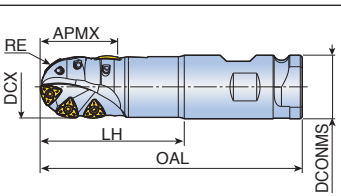


Fig.1

Fig.2

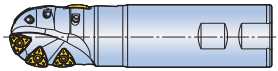


Fig.3

Designation		Dimension (mm)						Fig.	Insert
		DCX	RE	DCONMS	OAL	LH	APMX		
TDB50X 59-CN50.8-L200	6	50	25	50.8	200	110	59	1	6RBE 50-M...
69-CN50.8-L250	7	50	25	50.8	250	160	69	1	E263
TDB50X 59-W40-L200	6	50	25	40	200	128	59	2	
69-W40-L250	7	50	25	40	250	178	69	2	
59-W42-L200	6	50	25	42	200	128	59	2	
69-W42-L250	7	50	25	42	250	178	69	2	
59-W50-L200	6	50	25	50	200	90	59	3	
69-W50-L250	7	50	25	50	250	140	69	3	

Spare parts

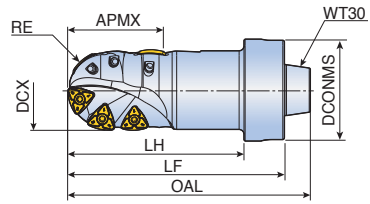
Designation	Screw	Wrench			
TDB50X	TS50B106I/HG	T-T20			

Cutting Condition E352-E325
Torque E328

TDB50X-WT

CHASE2BALL

End mills



Designation		Dimension (mm)							Insert
		DCX	RE	DCONMS	OAL	LH	LF	APMX	
TDB50X 59-WT30-L150	6	50	25	63	150	109	134	59	6RBE 50-M...
69-WT30-L200	7	50	25	63	200	159	184	69	E263

Spare parts

Designation	Screw	Wrench			
TDB50X-WT	TS50B106I/HG	T-T20			

Cutting Condition E352-E325

Torque E328

ADVANCE CUTTING TaeguTec

THFN/THFN-CT

High feed end mills

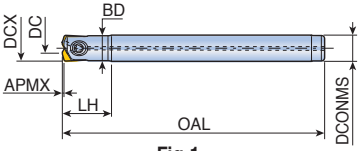


Fig.1

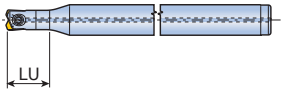


Fig.2

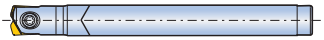


Fig.3

Designation		Dimension (mm)								Coolant hole	Fig.	Insert
		DCX	DC	DCONMS	BD	OAL	LH	LU	APMX			
THFN 060-06-L80	2	6	3	6	5.8	80	13	-	0.3	●	1	HFN 060...
060-10-L120	2	6	3	10	5.8	120	-	13	0.3	●	2	
080-08-L80	2	8	4	8	7.6	80	18	-	0.5	●	1	HFN 080...
080-12-L140	2	8	4	12	7.6	140	-	18	0.5	●	2	
THFN 060-06-CT-L80	2	6	3	6	5.8	80	20	-	0.3	x	3	HFN 060...
060-06-CT-L140	2	6	3	6	5.8	140	25	-	0.3	x	3	
080-08-CT-L80	2	8	4	8	7.6	80	20	-	0.5	x	3	HFN 080...
080-08-CT-L160	2	8	4	8	7.6	160	30	-	0.5	x	3	E252

▸ THFN-CT is carbide shank end mill

Spare parts

Designation	Screw	Wrench		Wrench handle	
THFN 060	TS 20F060A	TD 6	-	-	
THFN 080	TS 25F080A	-	TBLD T08-W4	THND 4W	

Cutting Condition E352-E325
Torque E328
Ramping Data E388

THFN-S

High feed modular heads

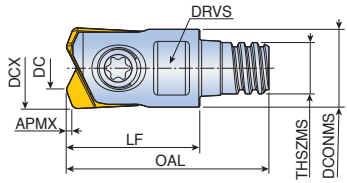


Fig.1

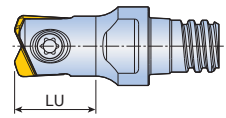


Fig.2

Designation		Dimension (mm)									Coolant hole	Fig.	Insert
		DCX	DC	DCONMS	LF	LU	OAL	THSZMS	APMX	DRVS			
THFN 060-S05	2	6	3	7.6	13	7.8	19.7	S05	0.3	5.5	x	2	HFN 060...
THFN 080-S05	2	8	4	7.6	13	-	19.7	S05	0.5	5.5	x	1	HFN 080...
													E282

▸ Matched with MAXI-RUSH holder

Spare parts

Designation	Screw	Wrench		Wrench handle	
THFN 060	TS 20F060A	TD 6	-	-	
THFN 080	TS 25F080A	-	TBLD T08-W4	THND 4W	

Cutting Condition E352-E325
Torque E328
Ramping Data E388

TEBN-06CH/TEBN-M-06CH

High feed end mills & modular heads

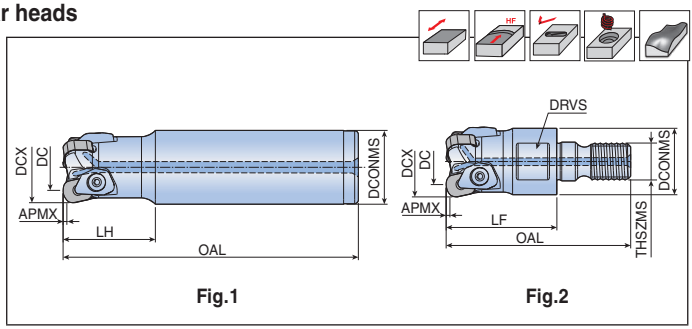


Fig.1 Fig.2

Designation		Dimension (mm)									Air(1) hole	Fig.	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	LH	APMX	DRVS			
TEBN 216-16-06CH-L80	2	16	8.6	16	-	80	-	25	1.0	-	x	1	BNGX 0603...
320-20-06CH-L80	3	20	12.5	20	-	80	-	25	1.0	-	●	1	E279
425-25-06CH-L100	4	25	17.4	25	-	100	-	40	1.0	-	●	1	
532-32-06CH-L120	5	32	24.3	32	-	120	-	40	1.0	-	●	1	
TEBN 216-M08-06CH	2	16	8.6	13	25	42.5	8	-	1.0	10	x	2	
320-M10-06CH	3	20	12.5	18	30	50	10	-	1.0	15	●	2	
425-M12-06CH	4	25	17.4	21	35	57	12	-	1.0	17	●	2	
532-M16-06CH	5	32	24.3	29	43	68	16	-	1.0	25	●	2	

▸ Matched with T-FLEXTEC holder(Fig.2)
▸ (1) Use only air (coolant is prohibited)

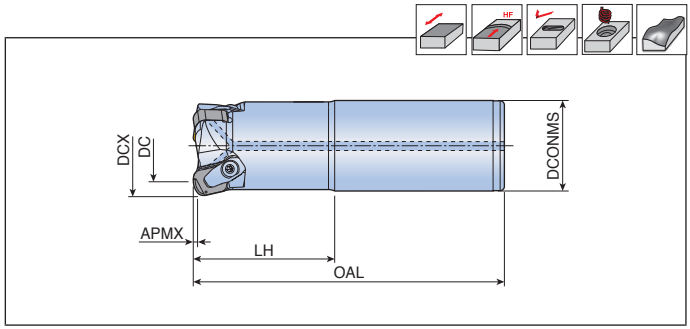
Spare parts

Designation	Clamp	Screw	Snap ring	Wrench	
TEBN-06CH	CCL-2S	CLS-25A080/HG	CSR M2.5	L-W 1.5	

Cutting Condition E352-E325
Torque E328
Ramping Data E406

TEBN-09CH

High feed end mills



Designation		Dimension (mm)						Air (1) hole	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TEBN 225-25-09CH-L100	2	25	14.8	25	100	40	1.5	x	BNGX 0904...
325-25-09CH-L100	3	25	14.8	25	100	40	1.5	x	E279
332-32-09CH-L120	3	32	21.5	32	120	40	1.5	●	
440-32-09CH-L120	4	40	29.4	32	120	40	1.5	●	

▸ (1) Use only air (Coolant is prohibited)

Spare parts

Designation	Clamp	Screw	Snap ring	Wrench	
TEBN-09CH	CCL-3S	CLS-35A120/HG	CSR 1.25	L-W 2	

Cutting Condition E352-E325
Torque E328
Ramping Data E406

TEBCS-04/TEBCS-M-04

High feed end mills & modular heads

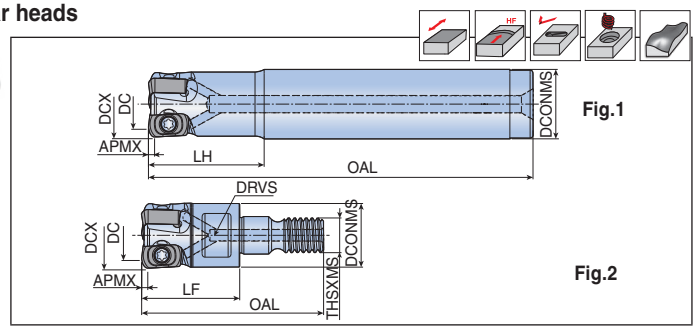


Fig.1

Fig.2

Designation		Dimension (mm)									Air (1) hole	Fig.	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	LH	APMX	DRVS			
TEBCS 210-12-04-L65	2	10	6.7	12	-	65	-	20	0.5	-	x	1	BCGT 0403G
312-12-04-L70	3	12	8.7	12	-	70	-	20	0.5	-	●	1	E278
416-16-04-L80	4	16	12.5	16	-	80	-	25	0.5	-	●	1	
520-20-04-L80	5	20	16.5	20	-	80	-	25	0.5	-	●	1	
725-20-04-L100	7	25	21.5	20	-	100	-	40	0.5	-	●	1	
832-25-04-L120	8	32	28.4	25	-	120	-	40	0.5	-	●	1	
940-32-04-L140	9	40	36.5	32	-	140	-	40	0.5	-	●	1	
TEBCS 312-M06-04	3	12	8.7	9.7	17	31.5	M06	-	0.5	8	●	2	
416-M08-04	4	16	12.5	13	23	40.5	M08	-	0.5	10	●	2	
520-M10-04	5	20	16.5	18	23	43.0	M10	-	0.5	15	●	2	

▸ Matched with T-FLEXTEC holder(Fig.2)
▸ (1) Use only air (coolant is prohibited)

Spare parts

Designation	Screw	Wrench			
TEBCS-04	TS 18049/HG-P	T 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E409

TEBNS-06/TEBCS-M-06

High feed end mills & modular heads

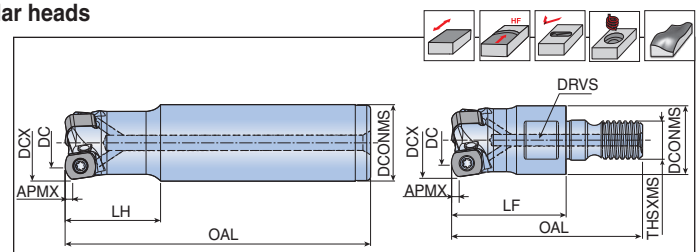


Fig.1 Fig.2

Designation		Dimension (mm)									Air (1) hole	Fig.	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	LH	APMX	DRVS			
TEBNS 216-16-06-L80	2	16	9.5	16	-	80	-	25	1.0	-	●	1	BNGT 0603K-E E278
320-20-06-L80	3	20	13.2	20	-	80	-	25	1.0	-	●	1	
425-25-06-L100	4	25	18.0	25	-	100	-	40	1.0	-	●	1	
532-32-06-L120	5	32	25.0	32	-	120	-	40	1.0	-	●	1	
TEBCS 216-M08-06	2	16	9.5	13	25	42.5	8	-	1.0	10	●	2	
320-M10-06	3	20	13.2	18	30	50	10	-	1.0	15	●	2	
425-M12-06	4	25	18.0	21	35	57	12	-	1.0	17	●	2	
532-M16-06	5	32	25.0	29	43	68	16	-	1.0	25	●	2	

▸ Matched with T-FLEXTEC holder(Fig.2)
▸ (1) Use only air (coolant is prohibited)

Spare parts

Designation	Screw	Wrench			
TEBNS-06	TS 25064I/HG-P	TD 8P			

Cutting Condition E352-E325
Torque E328
Ramping Data E408

TEPT-05/10

CHASE 10 MILL

High feed end mills & modular heads

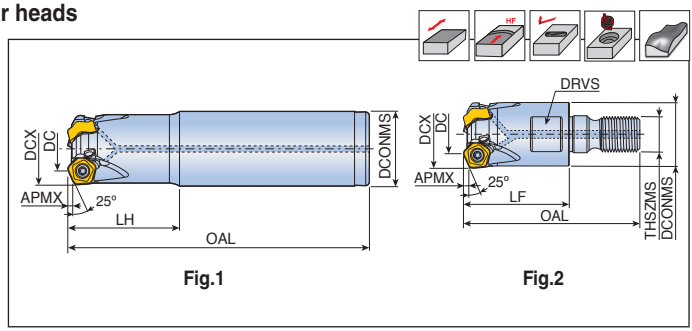


Fig.1 Fig.2

Designation		Dimension (mm)									Coolant hole	Fig.	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	LH	DRVS	APMX			
TEPT 320-20-05-L150	3	20	11.9	20	-	150	-	50	-	1.5	●	1	PTKU 0503... E290
425-25-05-L150	4	25	16.8	25	-	150	-	50	-	1.5	●	1	
426-25-05-L200	4	26	17.8	25	-	200	-	30	-	1.5	●	1	
532-32-05-L200	5	32	23.8	32	-	200	-	50	-	1.5	●	1	
533-32-05-L200	5	33	24.8	32	-	200	-	30	-	1.5	●	1	
640-32-05-L200	6	40	31.8	32	-	200	-	30	-	1.5	●	1	
TEPT 320-M10-05	3	20	11.9	18	30	50	M10	-	15	1.5	●	2	
425-M12-05	4	25	16.8	21	35	57	M12	-	17	1.5	●	2	
532-M16-05	5	32	23.8	29	43	68	M16	-	25	1.5	●	2	
640-M16-05	6	40	31.8	29	43	68	M16	-	25	1.5	●	2	
TEPT 340-32-10-L200	3	40	23.5	32	-	200	-	40	-	3.0	●	1	PTKU 1006... E290
TEPT 340-M16-10	3	40	23.5	29	43	68	M16	-	25	3.0	●	2	

▸ Matched with T-FLEXTEC holder(Fig.2)

Spare parts

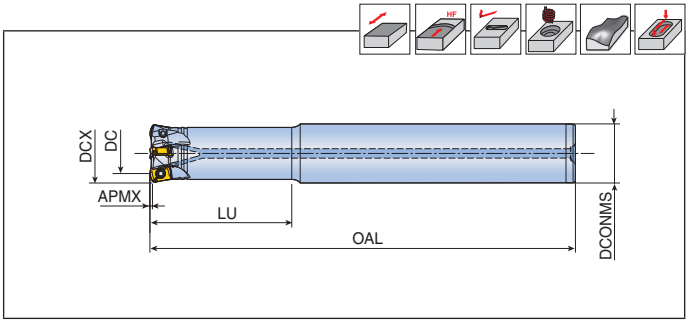
Designation	Screw	Wrench		Wrench handle	
TEPT-05	TS 25D060/HG-P	TD 7P	-	-	
TEPT-10	TS 50D130/HG-P	-	TBLD T20P-W6	THND 6W	

Cutting Condition E352-E325
Torque E328
Ramping Data E386-E387

TEBLV-06

WIN4FEED

End mills



V Bottom

Designation			Dimension (mm)						Coolant hole	Insert
			DCX	DC	DCONMS	OAL	LU	APMX		
TEBLV	**216-15-06-L150**	2	16	9.1	15	150	40	0.7	●	BLMV 0603...
	216-16-06-L100	2	16	9.1	16	100	30	0.7	●	E277
	216-16-06-L150	2	16	9.1	16	150	40	0.7	●	
	217-16-06-L100	2	17	10.1	16	100	30	0.7	●	
	217-16-06-L150	2	17	10.1	16	150	40	0.7	●	
	217-16-06-L200	2	17	10.1	16	200	20	0.7	●	
	218-16-06-L150	2	18	11.2	16	150	25	0.7	●	
	220-20-06-L200	2	20	12	20	200	80	1.0	●	
	320-19-06-L180	3	20	12	19	180	80	1.0	●	
	320-20-06-L130	3	20	12	20	130	50	1.0	●	
	320-20-06-L160	3	20	12	20	160	80	1.0	●	
	420-20-06-L130	4	20	12	20	130	50	1.0	●	
	321-20-06-L150	3	21	13	20	150	20	1.0	●	
	321-20-06-L200	3	21	13	20	200	20	1.0	●	
	321-20-06-L250	3	21	13	20	250	20	1.0	●	
	325-25-06-L220	3	25	17	25	220	50	1.0	●	
	425-24-06-L180	4	25	17	24	180	60	1.0	●	
	425-25-06-L140	4	25	17	25	140	60	1.0	●	
	425-25-06-L180	4	25	17	25	180	60	1.0	●	
	425-25-06-L250	4	25	17	25	250	40	1.0	●	
	525-25-06-L140	5	25	17	25	140	60	1.0	●	
	326-25-06-L200	3	26	18	25	200	30	1.0	●	

Spare parts

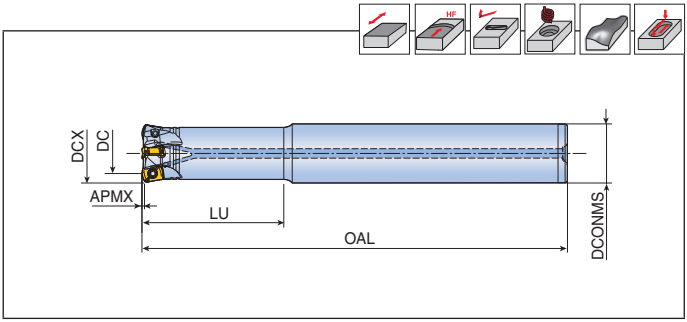
Designation	Screw	Wrench			
TEBLV-06	TS 25064I/HG-P	TD 8P			

Cutting Condition E352-E325
Torque E328
Ramping Data E389

TEBLV-06

WIN4FEED

End mills



V Bottom

Designation			Dimension (mm)						Coolant hole	Insert
			DCX	DC	DCONMS	OAL	LU	APMX		
TEBLV	**326-25-06-L250**	3	26	18	25	250	30	1.0	●	BLMV 0603...
	426-25-06-L150	4	26	18	25	150	30	1.0	●	E277
	426-25-06-L200	4	26	18	25	200	30	1.0	●	
	426-25-06-L250	4	26	18	25	250	30	1.0	●	
	530-32-06-L150	5	30	22	32	150	70	1.0	●	
	530-32-06-L200	5	30	22	32	200	120	1.0	●	
	432-32-06-L150	4	32	24	32	150	70	1.0	●	
	532-32-06-L150	5	32	24	32	150	70	1.0	●	
	532-32-06-L200	5	32	24	32	200	120	1.0	●	
	433-32-06-L220	4	33	25	32	220	40	1.0	●	
	433-32-06-L300	4	33	25	32	300	50	1.0	●	
	533-32-06-L150	5	33	25	32	150	30	1.0	●	
	533-32-06-L200	5	33	25	32	200	40	1.0	●	
	533-32-06-L250	5	33	25	32	250	40	1.0	●	
	435-32-06-L200	4	35	27	32	200	50	1.0	●	
	435-32-06-L300	4	35	27	32	300	50	1.0	●	
	535-32-06-L200	5	35	27	32	200	50	1.0	●	
	535-32-06-L300	5	35	27	32	300	50	1.0	●	
	540-32-06-L220	5	40	32	32	220	40	1.0	●	
	640-32-06-L150	6	40	32	32	150	40	1.0	●	
	640-32-06-L220	6	40	32	32	220	40	1.0	●	
	640-32-06-L250	6	40	32	32	250	40	1.0	●	

Spare parts

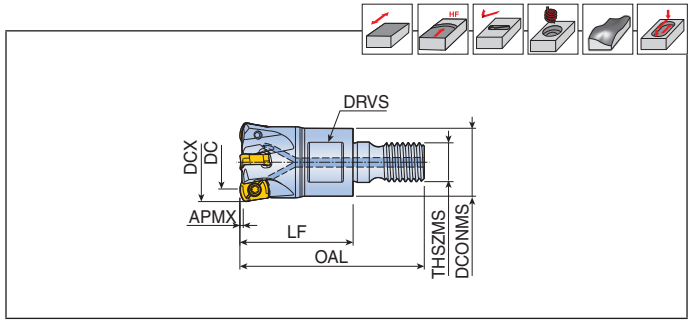
Designation	Screw	Wrench			
TEBLV-06	TS 25064I/HG-P	TD 8P			

Cutting Condition E352-E325
Torque E328
Ramping Data E389

TEBLV-M-06

WIN4FEED

Modular heads



V Bottom

Designation			Dimension (mm)								Coolant hole	Insert
			DCX	DC	DCONMS	LF	OAL	THSZMS	DRVS	APMX		
TEBLV	**216-M08-06**	2	16	9.1	13	25	42.5	M08	10	0.7	●	BLMV 0603...
	217-M08-06	2	17	10.1	13	25	42.5	M08	10	0.7	●	E277
	218-M08-06	2	18	11.2	13	25	42.5	M08	10	0.7	●	
	220-M10-06	2	20	12	18	30	50	M10	15	1.0	●	
	320-M10-06	3	20	12	18	30	50	M10	15	1.0	●	
	321-M10-06	3	21	13	18	30	50	M10	15	1.0	●	
	322-M10-06	3	22	14	18	30	50	M10	15	1.0	●	
	325-M12-06	3	25	17	21	35	57	M12	17	1.0	●	
	425-M12-06	4	25	17	21	35	57	M12	17	1.0	●	
	326-M12-06	3	26	18	21	35	57	M12	17	1.0	●	
	426-M12-06	4	26	18	21	35	57	M12	17	1.0	●	
	530-M16-06	5	30	22	29	40	65	M16	25	1.0	●	
	432-M16-06	4	32	24	29	40	65	M16	25	1.0	●	
	532-M16-06	5	32	24	29	40	65	M16	25	1.0	●	
	433-M16-06	4	33	25	29	40	65	M16	25	1.0	●	
	533-M16-06	5	33	25	29	40	65	M16	25	1.0	●	
	435-M16-06	4	35	27	29	43	68	M16	25	1.0	●	
	535-M16-06	5	35	27	29	43	68	M16	25	1.0	●	
	640-M16-06	6	40	32	29	43	68	M16	25	1.0	●	
	542-M16-06	5	42	34	29	43	68	M16	25	1.0	●	
	642-M16-06	6	42	34	29	43	68	M16	25	1.0	●	

▸ Matched with T-FLEXTEC holder

Spare parts

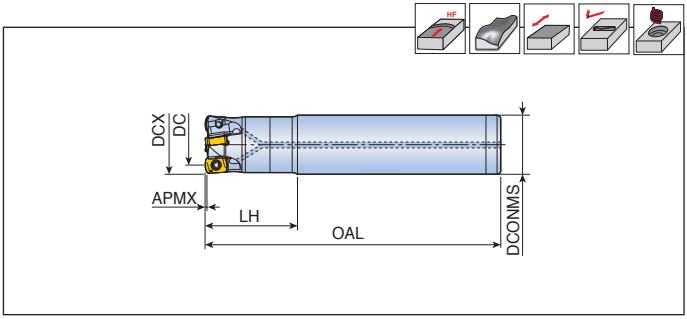
Designation	Screw	Wrench			
TEBLV-M-06	TS 25064I/HG-P	TD 8P			

Cutting Condition E352-E325
Torque E328
Ramping Data E389

TEBL-04

CHASE4FEED HIGH FEED MILL

High feed end mills



Designation		Dimension (mm)						Coolant hole	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TEBL 108-08-04-L80	1	8	3.8	8	80	20	0.5	●	BLMP 0402...
210-10-04-L100	2	10	5.7	10	100	20	0.5	●	E275
211-10-04-L100	2	11	6.6	10	100	20	0.5	●	
312-12-04-L110	3	12	7.6	12	110	20	0.5	●	
313-12-04-L110	3	13	8.6	12	110	20	0.5	●	
416-16-04-L150	4	16	11.6	16	150	25	0.5	●	
417-16-04-L200	4	17	12.6	16	200	25	0.5	●	
520-20-04-L200	5	20	15.5	20	200	25	0.5	●	
521-20-04-L200	5	21	16.5	20	200	25	0.5	●	

Spare parts

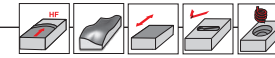
Designation	Screw	Wrench			
TEBL-04	TS 18041I/HG	T 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E390-E394

TEBL-M(S)-04

CHASE4FEED HIGH FEED MILL

High feed modular heads



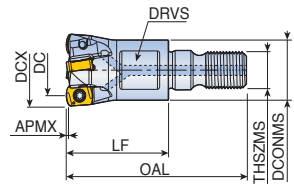


Fig.1

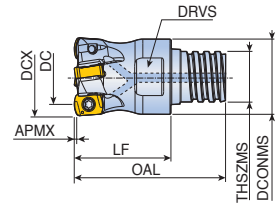


Fig.2

Designation		Dimension (mm)								Coolant hole	Fig.	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
TEBL 210-M06-04	2	10	5.7	9.7	17	31.5	M06	0.5	8	●	1	BLMP 0402...
211-M06-04	2	11	6.6	9.7	17	31.5	M06	0.5	8	●	1	E275
312-M06-04	3	12	7.6	11	17	31.5	M06	0.5	8	●	1	
313-M06-04	3	13	8.6	11	17	31.5	M06	0.5	8	●	1	
416-M08-04	4	16	11.6	13	23	40.5	M08	0.5	10	●	1	
417-M08-04	4	17	12.6	13	23	40.5	M08	0.5	10	●	1	
520-M10-04	5	20	15.5	18	23	43	M10	0.5	15	●	1	
725-M12-04	7	25	20.6	21	27	49	M12	0.5	17	●	1	
832-M16-04	8	32	27.5	29	27	52	M16	0.5	25	●	1	
TEBL 210-S06-04	2	10	5.6	9.6	15	21.3	S06	0.5	8	●	2	
312-S08-04	3	12	7.6	11.5	16	23.5	S08	0.5	10	●	2	
416-S10-04	4	16	11.6	15.2	20	31.3	S10	0.5	13	●	2	

▸ Matched with T-FLEXTEC holder(Fig.1) & MAXI-RUSH holder(Fig.2)

Spare parts

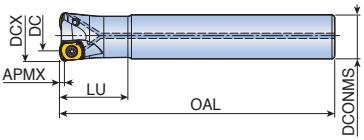
Designation	Screw	Wrench			
TEBL-04	TS 18041I/HG	T 6P			

Cutting Condition E352-E325
Torque E328
Ramping Data E390-E394

TEBL-06

CHASE4FEED HIGH FEED MILL

High feed end mills



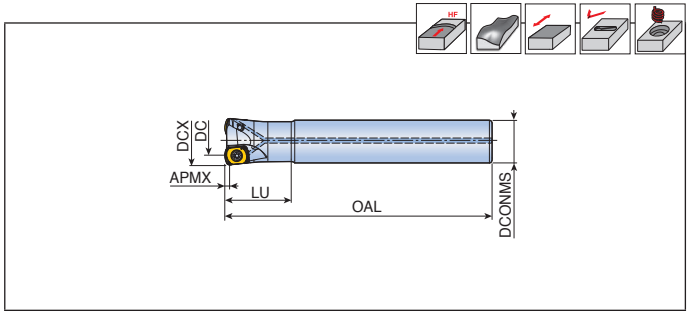
Designation			Dimension (mm)						Coolant hole	Insert
			DCX	DC	DCONMS	OAL	LU	APMX		
TEBL	216-15-06-L150	2	16	9.4	15	150	40	0.7	●	BLMP 0603...
	216-16-06	2	16	9.4	16	150	40	0.7	●	E275
	216-16-06-S	2	16	9.4	16	100	30	0.7	●	
	217-16-06	2	17	10.1	16	150	40	0.7	●	
	217-16-06-S	2	17	10.1	16	100	30	0.7	●	
	217-16-06-L200	2	17	10.1	16	200	20	0.7	●	
	218-16-06	2	18	11.1	16	150	25	0.7	●	
	220-20-06-L200	2	20	12.4	20	200	80	1.0	●	
	320-19-06-L180	3	20	12.4	19	180	80	1.0	●	
	320-20-06	3	20	12.4	20	160	80	1.0	●	
	320-20-06-S	3	20	12.4	20	130	50	1.0	●	
	420-20-06-S	4	20	12.4	20	130	50	1.0	●	
	321-20-06-S	3	21	13.4	20	150	20	1.0	●	
	321-20-06-L200	3	21	13.4	20	200	20	1.0	●	
	325-25-06-L220	3	25	17.3	25	220	50	1.0	●	
	425-24-06-L180	4	25	17.3	24	180	60	1.0	●	
	425-25-06	4	25	17.3	25	180	60	1.0	●	
	425-25-06-S	4	25	17.3	25	140	60	1.0	●	
	525-25-06-S	5	25	17.3	25	140	60	1.0	●	
	425-25-06-L250	4	25	17.3	25	250	40	1.0	●	
	326-25-06-L200	3	26	18.3	25	200	30	1.0	●	
	326-25-06-L250	3	26	18.3	25	250	30	1.0	●	
	426-25-06-S	4	26	18.3	25	150	30	1.0	●	
	426-25-06-L200	4	26	18.3	25	200	30	1.0	●	
	426-25-06-L250	4	26	18.3	25	250	30	1.0	●	
	530-32-06-S	5	30	22.3	32	150	70	1.0	●	
	530-32-06-L200	5	30	22.3	32	200	120	1.0	●	
	432-32-06-S	4	32	24.3	32	150	70	1.0	●	
	532-32-06-S	5	32	24.3	32	150	70	1.0	●	
	532-32-06-L200	5	32	24.3	32	200	120	1.0	●	
	433-32-06-L220	4	33	25.3	32	220	40	1.0	●	
	433-32-06-L300	4	33	25.3	32	300	50	1.0	●	
	533-32-06-S	5	33	25.3	32	150	30	1.0	●	
	533-32-06-L200	5	33	25.3	32	200	40	1.0	●	
	533-32-06-L250	5	33	25.3	32	250	40	1.0	●	

Cutting Condition E352-E325
Torque E328
Ramping Data E390-E394

TEBL-06

CHASE4FEED HIGH FEED MILL

High feed end mills



Designation		Dimension (mm)						Coolant hole	Insert
		DCX	DC	DCONMS	OAL	LU	APMX		
TEBL 435-32-06-L200	4	35	27.3	32	200	50	1.0	●	BLMP 0603...
435-32-06-L300	4	35	27.3	32	300	50	1.0	●	E275
535-32-06-L200	5	35	27.3	32	200	50	1.0	●	
535-32-06-L300	5	35	27.3	32	300	50	1.0	●	
540-32-06-L220	5	40	32.2	32	220	40	1.0	●	
640-32-06-S	6	40	32.2	32	150	40	1.0	●	
640-32-06-L220	6	40	32.2	32	220	40	1.0	●	

Spare parts

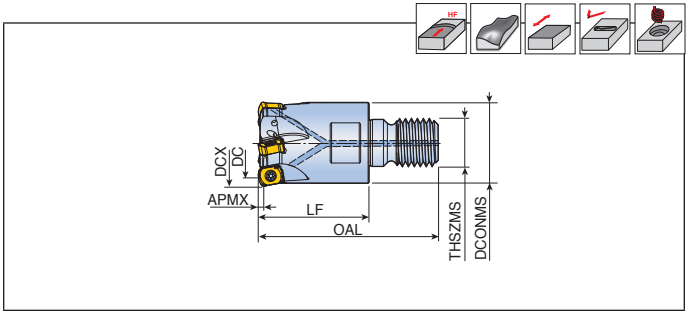
Designation	Screw	Wrench			
TEBL-06	TS 25064I/HG-P	TD 8P			

Cutting Condition E352-E325
Torque E328
Ramping Data E390-E394

TEBL-M-06

CHASE4FEED HIGH FEED MILL

High feed modular heads



Designation		Dimension (mm)							Coolant hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX		
TEBL 216-M08-06	2	16	9.4	13	25	42.5	M08	0.7	●	BLMP 0603... E275
217-M08-06	2	17	10.1	13	25	42.5	M08	0.7	●	
218-M08-06	2	18	11.1	13	25	42.5	M08	0.7	●	
220-M10-06	2	20	12.4	18	30	50	M10	1.0	●	
320-M10-06	3	20	12.4	18	30	50	M10	1.0	●	
321-M10-06	3	21	13.4	18	30	50	M10	1.0	●	
322-M10-06	3	22	14.4	18	30	50	M10	1.0	●	
325-M12-06	3	25	17.3	21	35	57	M12	1.0	●	
425-M12-06	4	25	17.3	21	35	57	M12	1.0	●	
326-M12-06	3	26	18.3	21	35	57	M12	1.0	●	
426-M12-06	4	26	18.3	21	35	57	M12	1.0	●	
530-M16-06	5	30	22.3	29	40	65	M16	1.0	●	
432-M16-06	4	32	24.3	29	40	65	M16	1.0	●	
532-M16-06	5	32	24.3	29	40	65	M16	1.0	●	
433-M16-06	4	33	25.3	29	40	65	M16	1.0	●	
533-M16-06	5	33	25.3	29	40	65	M16	1.0	●	
435-M16-06	4	35	27.3	29	43	68	M16	1.0	●	
535-M16-06	5	35	27.3	29	43	68	M16	1.0	●	
640-M16-06	6	40	32.2	29	43	68	M16	1.0	●	
542-M16-06	5	42	34.2	29	43	68	M16	1.0	●	
642-M16-06	6	42	34.2	29	43	68	M16	1.0	●	

▸ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
TEBL-06	TS 25064I/HG-P	TD 8P			

Cutting Condition E352-E325
Torque E328
Ramping Data E390-E394

TEBL-09

High feed end mills

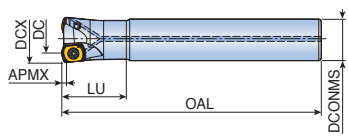


Fig.1

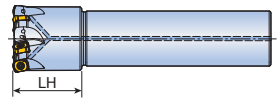


Fig.2

Designation			Dimension (mm)							Coolant hole	Fig.	Insert
			DCX	DC	DCONMS	OAL	LU	LH	APMX			
TEBL	**225-25-09-L150**	2	25	14.7	25	150	70	-	1.5	●	1	BLMP 0904... E275
	225-25-09-L200	2	25	14.7	25	200	100	-	1.5	●	1	
	325-25-09-L150	3	25	14.7	25	150	70	-	1.5	●	1	
	325-25-09-L200	3	25	14.7	25	200	110	-	1.5	●	1	
	326-25-09-L150	3	26	15.7	25	150	30	-	1.5	●	1	
	326-25-09-L220	3	26	15.7	25	220	30	-	1.5	●	1	
	330-32-09-L160	3	30	19.6	32	160	70	-	1.5	●	1	
	330-32-09-L220	3	30	19.6	32	220	120	-	1.5	●	1	
	332-32-09-L160	3	32	21.6	32	160	70	-	1.5	●	1	
	332-32-09-L220	3	32	21.6	32	220	120	-	1.5	●	1	
	432-32-09-L160	4	32	21.6	32	160	70	-	1.5	●	1	
	432-32-09-L220	4	32	21.6	32	220	120	-	1.5	●	1	
	433-32-09-L180	4	33	22.6	32	180	30	-	1.5	●	1	
	433-32-09-L250	4	33	22.6	32	250	30	-	1.5	●	1	
	440-32-09-L180	4	40	29.6	32	180	-	40	1.5	●	2	
	440-32-09-L250	4	40	29.6	32	250	-	40	1.5	●	2	
	540-32-09-L180	5	40	29.6	32	180	-	40	1.5	●	2	
	540-32-09-L250	5	40	29.6	32	250	-	40	1.5	●	2	

Spare parts

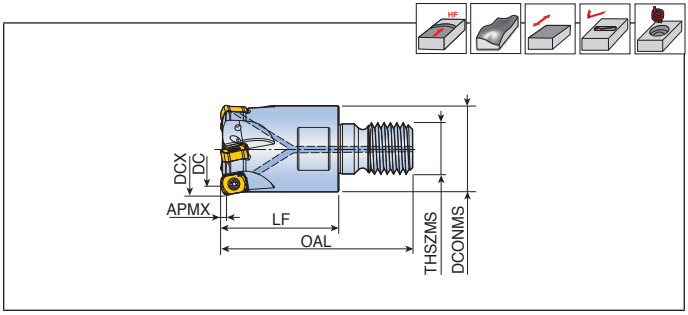
Designation	Screw	Wrench			
TEBL-09	TS 35A088I/HG	TD 10P			

Cutting Condition E352-E325
Torque E328
Ramping Data E390-E394

TEBL-M-09

CHASE4FEED HIGH FEED MILL

High feed modular heads



Designation		Dimension (mm)							Coolant hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX		
TEBL 225-M12-09	2	25	14.7	21	35	57	M12	1.5	●	BLMP 0904... E275
325-M12-09	3	25	14.7	21	35	57	M12	1.5	●	
326-M12-09	3	26	15.7	21	35	57	M12	1.5	●	
330-M16-09	3	30	19.6	29	43	68	M16	1.5	●	
332-M16-09	3	32	21.6	29	43	68	M16	1.5	●	
432-M16-09	4	32	21.6	29	43	68	M16	1.5	●	
433-M16-09	4	33	22.6	29	43	68	M16	1.5	●	
335-M16-09	3	35	24.6	29	43	68	M16	1.5	●	
435-M16-09	4	35	24.6	29	43	68	M16	1.5	●	
440-M16-09	4	40	29.6	29	43	68	M16	1.5	●	
540-M16-09	5	40	29.6	29	43	68	M16	1.5	●	
342-M16-09	3	42	31.6	29	43	68	M16	1.5	●	
542-M16-09	5	42	31.6	29	43	68	M16	1.5	●	

▸ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
TEBL-09	TS 35A088I/HG	TD 10P			

Cutting Condition E352-E325
Torque E328
Ramping Data E390-E394

TEBL-11

CHASE4FEED HIGH FEED MILL

High feed end mills & modular heads

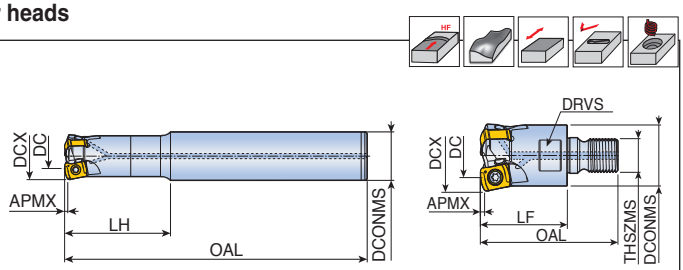


Fig.1 Fig.2

Designation		Dimension (mm)									Coolant hole	Fig.	Insert
		DCX	DC	DCONMS	OAL	THSZMS	LH	LF	APMX	DRVS			
TEBL 230-32-11-L150	2	30	14.7	32	150	-	70	-	2.0	-	●	1	BLMP 1105... E275
232-32-11-L150	2	32	16.6	32	150	-	70	-	2.0	-	●	1	
232-32-11-L200	2	32	16.6	32	200	-	70	-	2.0	-	●	1	
332-32-11-L200	3	32	16.6	32	200	-	70	-	2.0	-	●	1	
233-32-11-L200	2	33	17.6	32	200	-	40	-	2.0	-	●	1	
233-32-11-L250	2	33	17.6	32	250	-	50	-	2.0	-	●	1	
333-32-11-L250	3	33	17.6	32	250	-	50	-	2.0	-	●	1	
335-32-11-L200	3	35	19.5	32	200	-	40	-	2.0	-	●	1	
340-32-11-L150	3	40	24.4	32	150	-	40	-	2.0	-	●	1	
340-32-11-L200	3	40	24.4	32	200	-	40	-	2.0	-	●	1	
440-32-11-L200	4	40	24.4	32	200	-	40	-	2.0	-	●	1	
TEBL 230-M16-11	2	30	14.7	29	68	M16	-	43	2.0	25	●	2	
232-M16-11	2	32	16.6	29	68	M16	-	43	2.0	25	●	2	
233-M16-11	2	33	17.6	29	68	M16	-	43	2.0	25	●	2	
335-M16-11	3	35	19.5	29	68	M16	-	43	2.0	25	●	2	
340-M16-11	3	40	24.4	29	68	M16	-	43	2.0	25	●	2	
342-M16-11	3	42	26.4	29	68	M16	-	43	2.0	25	●	2	

▸ Matched with T-FLEXTEC holder(Fig.2)

Spare parts

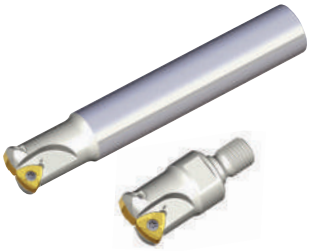
Designation	Screw	Wrench	Wrench handle		
TEBL-11	TS 50A121I/HG	TBLD T20-W6	THND 6W		

Cutting Condition E352-E325
Torque E328
Ramping Data E390-E394

TEBL-13

CHASE2FEED

High feed end mills & Modular heads



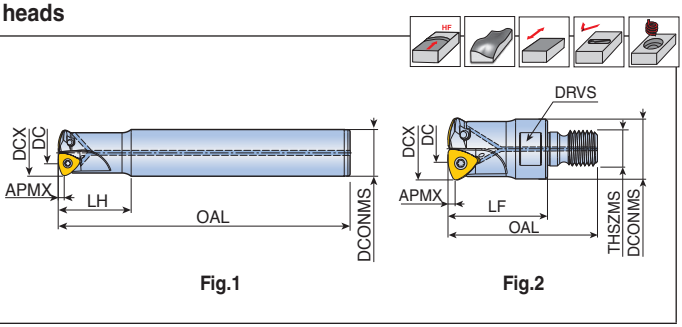


Fig.1 Fig.2

Designation		Dimension (mm)									Coolant hole	Fig.	Insert
		DCX	DC	DCONMS	OAL	THSZMS	LH	LF	APMX	DRVS			
TEBL 232-32-13-L150	2	32	12.9	32	150	-	50	-	2.0	-	●	1	BLMP 1306...
232-32-13-L200	2	32	12.9	32	200	-	80	-	2.0	-	●	1	E276
232-32-13-L	2	32	12.9	32	200	-	120	-	2.0	-	●	1	
233-32-13-L200	2	33	14.3	32	200	-	50	-	2.0	-	●	1	
233-32-13-L250	2	33	14.3	32	250	-	50	-	2.0	-	●	1	
235-32-13-L200	2	35	16.1	32	200	-	30	-	2.0	-	●	1	
240-42-13-XL	2	40	20.7	42	300	-	120	-	2.0	-	●	1	
340-32-13-L150	3	40	20.7	32	150	-	40	-	2.0	-	●	1	
340-32-13-L200	3	40	20.7	32	200	-	70	-	2.0	-	●	1	
340-42-13-S	3	40	20.7	42	150	-	70	-	2.0	-	●	1	
TEBL 232-M16-13	2	32	12.9	30	75	M16	-	50	2.0	25	●	2	
233-M16-13	2	33	14.3	30	75	M16	-	50	2.0	25	●	2	
235-M16-13	2	35	16.1	30	75	M16	-	50	2.0	25	●	2	
340-M16-13	3	40	20.7	30	75	M16	-	50	2.0	25	●	2	
342-M16-13	3	42	22.6	30	75	M16	-	50	2.0	25	●	2	

▸ Matched with T-FLEXTEC holder(Fig.2)

Spare parts

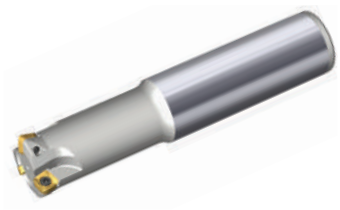
Designation	Screw	Wrench			
TEBL-13	TS50B106I/HG	T-T20			

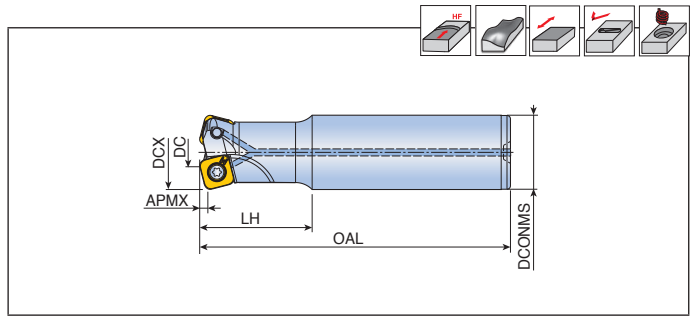
Cutting Condition E312-E315 | Torque E318 | Ramping Data E394

TESB-06/09

CHASEFEED

High feed end mills





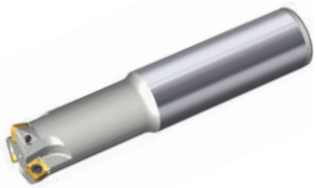
Designation		Dimension (mm)						Coolant hole	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TESB 216-16-06-L150	2	16	5.9	16	150	40	1.0	●	SBMT 0603... E295
217-16-06-L200	2	17	6.8	16	200	20	1.0	●	
320-20-06-L160	3	20	9.8	20	160	50	1.0	●	
420-20-06-L130	4	20	9.8	20	130	50	1.0	●	
321-20-06-L200	3	21	10.7	20	200	20	1.0	●	
425-25-06-L180	4	25	14.8	25	180	60	1.0	●	
525-25-06-L140	5	25	14.8	25	140	60	1.0	●	
532-32-06-L200	5	32	21.8	32	200	80	1.0	●	
TESB 225-25-09-L150	2	25	10.8	25	150	70	1.2	●	SBMT 0904... E295
225-25-09-L200	2	25	10.8	25	200	70	1.2	●	
325-25-09-L150	3	25	10.8	25	150	70	1.2	●	
325-25-09-L200	3	25	10.8	25	200	70	1.2	●	
226-25-09-L200	2	26	11.7	25	200	30	1.2	●	
226-25-09-L250	2	26	11.7	25	250	30	1.2	●	
326-25-09-L150	3	26	11.7	25	150	30	1.2	●	
326-25-09-L200	3	26	11.7	25	200	30	1.2	●	
326-25-09-L250	3	26	11.7	25	250	30	1.2	●	
330-32-09-L200	3	30	15.5	32	200	70	1.2	●	
332-32-09-L160	3	32	17.4	32	160	70	1.2	●	
332-32-09-L200	3	32	17.4	32	200	70	1.2	●	
332-32-09-L300	3	32	17.4	32	300	70	1.2	●	
432-32-09-L160	4	32	17.4	32	160	70	1.2	●	
432-32-09-L220	4	32	17.4	32	220	70	1.2	●	
233-32-09-L250	2	33	18.4	32	250	30	1.2	●	
333-32-09-L250	3	33	18.4	32	250	30	1.2	●	
333-32-09-L300	3	33	18.4	32	300	30	1.2	●	
433-32-09-L180	4	33	18.4	32	180	30	1.2	●	
433-32-09-L250	4	33	18.4	32	250	30	1.2	●	
335-32-09-L250	3	35	20.4	32	250	30	1.2	●	
440-32-09-L250	4	40	25.4	32	250	40	1.2	●	
440-32-09-L300	4	40	25.4	32	300	40	1.2	●	
540-32-09-L180	5	40	25.4	32	180	40	1.2	●	
540-32-09-L250	5	40	25.4	32	250	40	1.2	●	

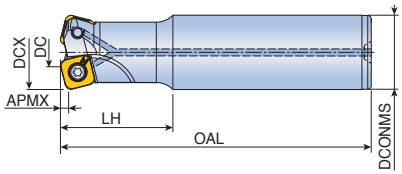
Cutting Condition E352-E325
Torque E328
Ramping Data E395-E400

TESB-13

CHASEFEED

High feed end mills





Designation		Dimension (mm)						Coolant hole	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TESB 232-32-13-L150	2	32	11.6	32	150	50	2.0	●	SBMT 1306...
232-32-13-L200	2	32	11.6	32	200	80	2.0	●	E295
233-32-13-L200	2	33	12.6	32	200	30	2.0	●	
233-32-13-L250	2	33	12.6	32	250	50	2.0	●	
235-32-13-L200	2	35	14.6	32	200	30	2.0	●	
340-32-13-L150	3	40	19.5	32	150	30	2.0	●	
340-32-13-L200	3	40	19.5	32	200	30	2.0	●	
342-32-13-L200	3	42	21.5	32	200	30	2.0	●	

Spare parts

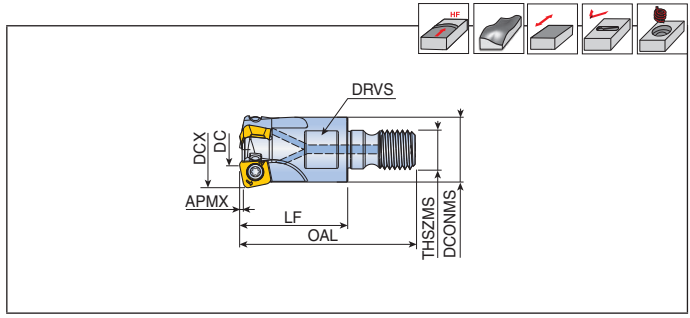
Designation	Screw	Wrench			
TESB-06	TS 250648I/HG-P	TD 8P	-		
TESB-09	TS 35A088I/HG	TD 10P	-		
TESB-13	TS 50115I	-	T-T20		

Cutting Condition E352-E325
Torque E328
Ramping Data E395-E400

TESB-M-06/09/13

CHASEFEED

High feed modular heads



Designation		Dimension (mm)								Coolant hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TESB 216-M08-06	2	16	5.9	13	25	42.5	M08	1.0	10	●	SBMT 0603... E295
320-M10-06	3	20	9.8	18	30	50	M10	1.0	15	●	
425-M12-06	4	25	14.8	21	35	57	M12	1.0	17	●	
532-M16-06	5	32	21.8	29	40	65	M16	1.0	25	●	
TESB 225-M12-09	2	25	10.8	21	35	57	M12	1.2	17	●	SBMT 0904... E295
325-M12-09	3	25	10.8	21	35	57	M12	1.2	17	●	
332-M16-09	3	32	17.4	29	43	68	M16	1.2	25	●	
432-M16-09	4	32	17.4	29	43	68	M16	1.2	25	●	
435-M16-09	4	35	20.4	29	43	68	M16	1.2	25	●	
440-M16-09	4	40	25.4	29	43	68	M16	1.2	25	●	
540-M16-09	5	40	25.4	29	43	68	M16	1.2	25	●	
542-M16-09	5	42	27.4	29	43	68	M16	1.2	25	●	
TESB 232-M16-13	2	32	11.6	29	50	75	M16	2.0	25	●	SBMT 1306... E295
233-M16-13	2	33	12.6	29	50	75	M16	2.0	25	●	
340-M16-13	3	40	19.5	29	50	75	M16	2.0	25	●	
342-M16-13	3	42	21.5	29	50	75	M16	2.0	25	●	

▸ Matched with T-FLEXTEC holder

Spare parts

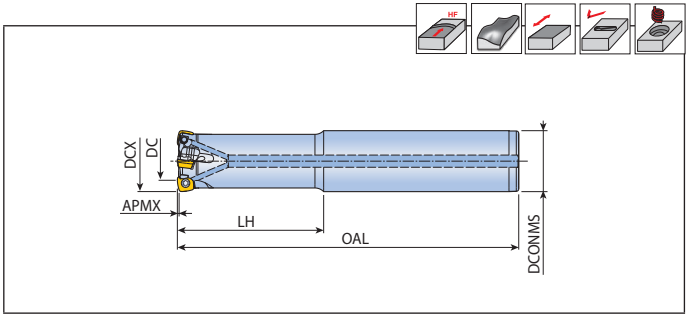
Designation	Screw	Wrench			
TESB-06	TS 250648I/HG-P	TD 8P	-		
TESB-09	TS 35A088I/HG	TD 10P	-		
TESB-13	TS 50115I	-	T-T20		

Cutting Condition E352-E325
Torque E328
Ramping Data E395-E400

TESR-07

CHASEFEED

High feed end mills



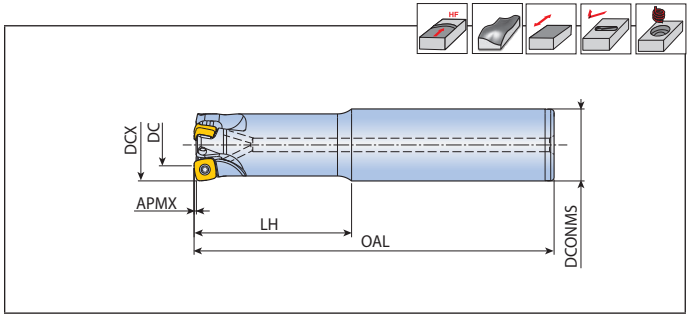
Designation		Dimension (mm)						Coolant hole	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TESR 216-15-07-L150	2	16	6.7	15	150	40	0.7	●	SRMT 0703... E308
216-16-07-L100	2	16	6.7	16	100	42	0.7	●	
216-16-07-L150	2	16	6.7	16	150	40	0.7	●	
217-16-07-L150	2	17	7.7	16	150	40	0.7	●	
217-16-07-L200	2	17	7.7	16	200	20	0.7	●	
320-19-07-L180	3	20	10.7	19	180	80	0.7	●	
320-20-07-L130	3	20	10.7	20	130	50	0.7	●	
320-20-07-L160	3	20	10.7	20	160	80	0.7	●	
321-20-07-L150	3	21	11.6	20	150	20	0.7	●	
321-20-07-L200	3	21	11.6	20	200	20	0.7	●	
425-25-07-L140	4	25	15.6	25	140	60	0.7	●	
425-25-07-L180	4	25	15.6	25	180	60	0.7	●	
426-25-07-L150	4	26	16.6	25	150	30	0.7	●	
426-25-07-L200	4	26	16.6	25	200	30	0.7	●	
532-32-07-L150	5	32	22.6	32	150	70	0.7	●	
532-32-07-L200	5	32	22.6	32	200	120	0.7	●	
533-32-07-L150	5	33	23.7	32	150	30	0.7	●	
533-32-07-L200	5	33	23.7	32	200	40	0.7	●	

Cutting Condition E352-E325
Torque E328
Ramping Data E395-E400

TESR-10

CHASEFEED

High feed end mills



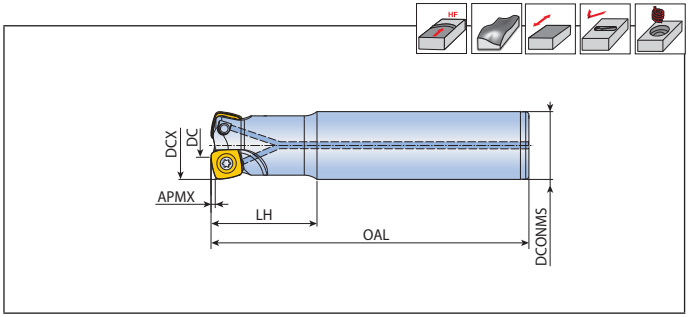
Designation			Dimension (mm)						Coolant hole	Insert
			DCX	DC	DCONMS	OAL	LH	APMX		
TESR	**225-25-10-L150**	2	25	11.6	25	150	70	1	●	SRMT 1004... E308
	225-25-10-L200	2	25	11.6	25	200	70	1	●	
	325-25-10-L150	3	25	11.6	25	150	70	1	●	
	325-25-10-L200	3	25	11.6	25	200	70	1	●	
	226-25-10-L250	2	26	12.6	25	250	30	1	●	
	326-25-10-L220	3	26	12.6	25	220	33	1	●	
	332-32-10-L160	3	32	18.5	32	160	70	1	●	
	432-32-10-L160	4	32	18.5	32	160	70	1	●	
	432-32-10-L220	4	32	18.5	32	220	70	1	●	
	333-32-10-L250	3	33	19.5	32	250	30	1	●	
	433-32-10-L180	4	33	19.5	32	180	30	1	●	
	433-32-10-L250	4	33	19.5	32	250	30	1	●	
	440-32-10-L180	4	40	26.5	32	180	40	1	●	
	440-32-10-L250	4	40	26.5	32	250	40	1	●	
	540-32-10-L180	5	40	26.5	32	180	40	1	●	

Cutting Condition E352-E325
Torque E328
Ramping Data E395-E400

TESR-14

CHASEFEED

High feed end mills



Designation			Dimension (mm)						Coolant hole	Insert
			DCX	DC	DCONMS	OAL	LH	APMX		
TESR	**232-32-14-L150**	2	32	11.9	32	150	50	2	●	SRMT 1406...
	232-32-14-L200	2	32	11.9	32	200	80	2	●	E308
	233-32-14-L200	2	33	12.9	32	200	50	2	●	
	233-32-14-L250	2	33	12.9	32	250	50	2	●	
	235-32-14-L200	2	35	14.9	32	200	30	2	●	
	340-32-14-L150	3	40	19.9	32	150	30	2	●	
	340-32-14-L200	3	40	19.9	32	200	30	2	●	
	342-32-14-L200	3	42	21.8	32	200	30	2	●	

Spare parts

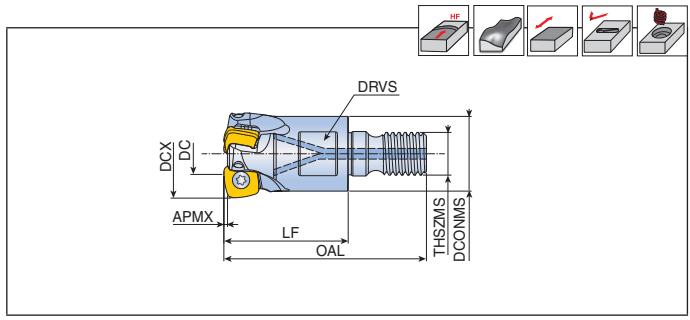
Designation	Screw	Wrench			
TESR-07 (-Ø26)	TS 25054I/HG-P	TD 8P	-		
TESR-07 (Ø32-)	TS 25064I/HG-P	TD 8P	-		
TESR-10	TS 35A088I/HG	TD 10P	-		
TESR-14	TS 50115I	-	T-T20		

Cutting Condition E352-E325
Torque E328
Ramping Data E395-E400

TESR-M-07/10/14

CHASEFEED

High feed modular heads



Designation		Dimension (mm)								Coolant hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TESR 216-M08-07	2	16	6.6	13	25	42.5	M8	0.7	10	●	SRMT 0703... E308
320-M10-07	3	20	10.7	18	30	50	M10	0.7	15	●	
425-M12-07	4	25	15.5	21	35	57	M12	0.7	17	●	
532-M16-07	5	32	22.6	29	40	65	M16	0.7	25	●	
640-M16-07	6	40	30.7	29	43	68	M16	0.7	25	●	
TESR 325-M12-10	3	25	11.6	21	35	57	M12	1	17	●	SRMT 1004... E308
432-M16-10	4	32	18.5	29	43	68	M16	1	25	●	
435-M16-10	4	35	21.5	29	43	68	M16	1	25	●	
540-M16-10	5	40	26.5	29	43	68	M16	1	25	●	
542-M16-10	5	42	28.5	29	43	68	M16	1	25	●	
TESR 232-M16-14	2	32	11.9	29	50	75	M16	2	25	●	SRMT 1406... E308
233-M16-14	2	33	12.9	29	50	75	M16	2	25	●	
340-M16-14	3	40	19.9	29	50	75	M16	2	25	●	
342-M16-14	3	42	21.8	29	50	75	M16	2	25	●	

▸ Matched with T-FLEXTEC holder

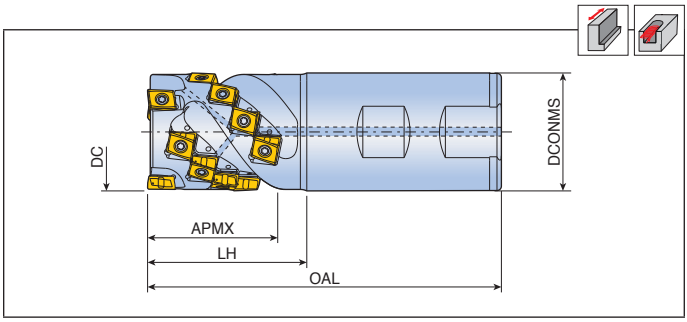
Spare parts

Designation	Screw	Wrench			
TESR-07 (-Ø26)	TS 25054I/HG-P	TD 8P	-		
TESR-07 (Ø32-)	TS 25064I/HG-P	TD 8P	-		
TESR-10	TS 35A088I/HG	TD 10P	-		
TESR-14	TS 50115I	-	T-T20		

Cutting Condition E352-E325
Torque E328
Ramping Data E395-E400

4T-TEF-05/09

Extended flute cutters



90°

Designation		No. of insert	Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	OAL	LH	APMX		
4T-TEF	D16-15-W16-05	2	8	16	16	80	28	15	●	LPK(H)U 0502... E284
	D20-23-W20-05	3	18	20	20	85	33	23	●	
	D25-27-W25-05	4	28	25	25	95	35	27	●	
4T-TEF	D25-36-W25-09	2	10	25	25	100	43	36	●	LPK(H)U 0904... E284
	D32-36-W32-09	3	15	32	32	105	44	36	●	
	D32-43-W32-09	3	18	32	32	115	52	43	●	
	D40-43-W40-09	3	18	40	40	125	54	43	●	
	D40-51-W40-09	3	21	40	40	135	64	51	●	

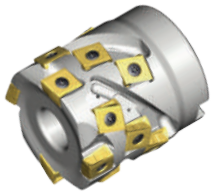
Spare parts

Designation	Screw	Wrench		Wrench handle	
4T-TEF-05	TS 18049/HG-P	T 6P	-	-	
4T-TEF-09	TS 30D082-P	-	TBLD T08P-W4	THND 4W	

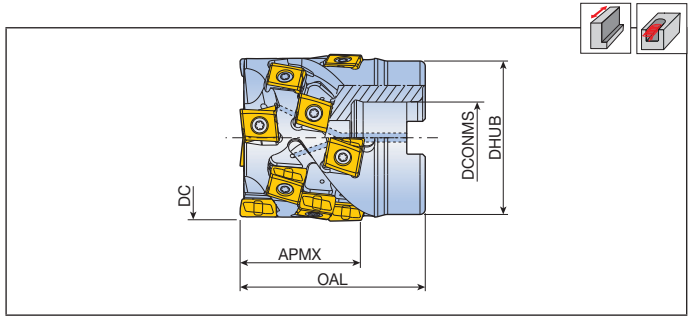
Cutting Condition E322-E325
Torque E328

4T-TES-14

Extended flute cutters



90°



Designation		No. of insert	Dimension (mm)					Coolant hole	Kg	Mounting bolt	Insert
			DC	DCONMS	DHUB	OAL	APMX				
4T-TES	**D50-34-22R-14**	3	50	22	45	55	34	●	0.5	SH M10x40	LPKU 1407... E284
	D50-45-22R-14	3	50	22	45	65	45	●	0.6	SH M10x50	
	D63-45-27R-14	4	63	27	58	70	45	●	1.1	SH M12x50	
	D63-56-27R-14	4	63	27	58	80	56	●	1.3	SH M12x60	
	D80-56-32R-14	5	80	32	74	85	56	●	2.3	SH M16x60	
	D100-56-40R-14	6	100	40	94	90	56	●	4.1	SH M20x60	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

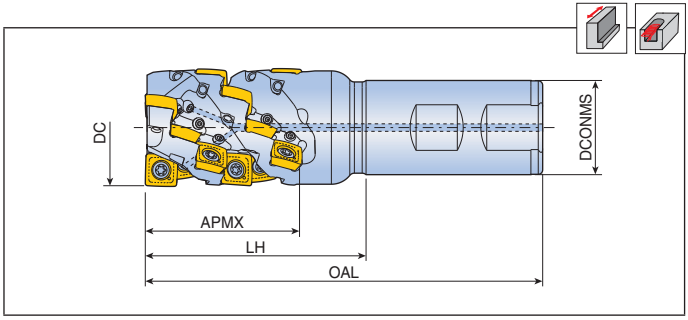
Designation	Screw	Wrench	Wrench handle		
4T-TES-14	TS 40G110I	TBLD T15-W6	SW6-T		

Cutting Condition E322-E325
Torque E328

4S-TEF-09/11V

CHASE V QUAD
90° FACING & SHOULDERING

Extended flute cutters



90°

V Bottom

Designation	No. of insert	Dimension (mm)					Coolant hole	Insert
		DC	DCONMS	OAL	LH	APMX		
4S-TEF- D25-21-W25-09V-2F	2	6	25	25	90	30	21	●	SVKT 0938... E309
D32-28-W32-09V-3F	3	12	32	32	105	40	28	●	
D32-42-W32-09V-3F	3	18	32	32	120	55	42	●	
D40-27-W32-09V-4F	4	16	40	32	110	45	27	●	
D40-41-W32-09V-4F	4	24	40	32	125	60	41	●	
4S-TEF- D32-52-W32-11V-2F	2	12	32	32	135	70	52	●	SVK(H)T 1145... E309
D40-52-W32-11V-3F	3	18	40	32	135	75	52	●	
D40-60-W32-11V-3F	3	21	40	32	180	85	60	●	
D50-52-W40-11V-4F	4	24	50	40	145	75	52	●	
D50-77-W40-11V-4F	4	36	50	40	170	100	77.9	●	

▸ Not recommended for slotting

Spare parts

Designation	Screw	Wrench	Wrench handle	Coolant Nozzle	
4S-TEF-09V(-Ø32)	TS 35A070I/HG	TBLD T10-W6	THND 6W	-	
4S-TEF-09V(Ø40)	TS 35A070I/HG	TBLD T10-W6	THND 6W	SS 3003-06C	
4S-TEF-11V	TS 40093I/HG	TBLD T15-W6	THND 6W	SS 3003-06C	

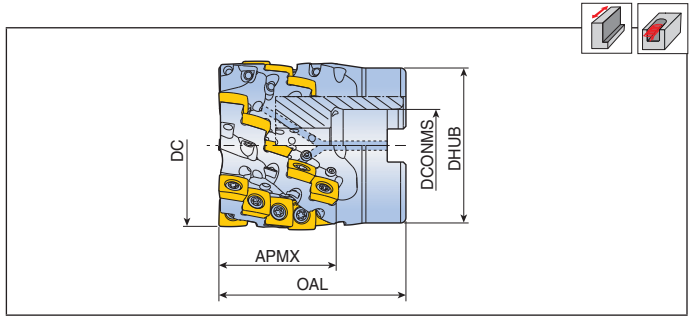
Cutting Condition E322-E325

Torque E328

4S-TES-09/11V

CHASE V QUAD 90° FACING & SHOULDERING

Extended flute cutters



90°

V Bottom

Designation		No. of insert	Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
			DC	DCONMS	DHUB	OAL	APMX					
4S-TES-	**D50-34-22R-09V-5F**	5	25	50	22	45	55	34	●	A	0.4	SH M10x40	SVKT 0938...
	D50-48-22R-09V-5F	5	35	50	22	45	65	48	●	A	0.5	SH M10x50	
4S-TES-	**D40-27-16R-11V-3F**	3	9	40	16	38	55	27	●	A	0.3	SH M8x40	SVK(H)T 1145...
	D50-43-22R-11V-4F	4	20	50	22	45	65	43	●	A	0.6	SH M10x50	
	D50-69-22R-11V-4F	4	32	50	22	45	90	69	●	A	0.8	SH M10x80	E309
	D63-60-27R-11V-5F	5	35	63	27	58	85	60	●	A	1.2	SH M12x60	
	D63-69-27R-11V-5F	5	40	63	27	58	93	69	●	A	1.4	SH M12x80	
	D80-76-32R-11V-6F	6	54	80	32	76	100	76	●	A	2.6	SH M16x80	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

▸ Not recommended for slotting

Spare parts

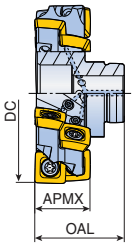
Designation	Screw	Wrench	Wrench handle	Coolant Nozzle	
4S-TES-09V	TS 35A070I/HG	TBLD T10P-W6	SW6-T	SS 3003-06C	
4S-TES-11V	TS 40093I/HG	TBLD T15-W6	SW6-T	SS 3003-06C	

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E318

4S-TFP-09V/11V

CHASE V QUAD
90° FACING & SHOULDERING

Front heads for extended flute cutter



90°

V Bottom

Designation		No. of insert	Dimension (mm)			Coolant hole	Kg	Insert
			DC	OAL	APMX			
4S-TFP-D40-14-09V-3F	3	6	40	27.8	14.7	●	0.1	SVKT 0938… E309
D50-14-09V-5F	5	10	50	27.8	14.7	●	0.1	
D63-14-09V-6F	6	12	63	27.8	14.7	●	0.2	
4S-TFP-D50-18-11V-4F	4	8	50	31.3	18.5	●	0.2	SVK(H)T 1145… E309
D63-18-11V-5F	5	10	63	31.3	18.5	●	0.3	
D80-18-11V-6F	6	12	80	31.3	18.5	●	0.5	

- Base unit ordered seperately
- Not recommended for slotting

Spare parts

Designation	Screw	Wrench	Wrench handle	Coolant Nozzle	
4S-TFP-09V	TS 35A070I/HG	TBLD T10P-W6	SW6-T	SS 3003-06C	
4S-TFP-11V	TS 40093I/HG	TBLD T15-W6	SW6-T	SS 3003-06C	

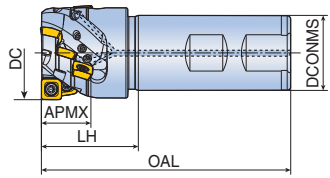
Cutting Condition E322-E325

Torque E328

4S-TEF-B-09V

CHASE V QUAD

Base unit extended flute cutter



90°

V Bottom

Designation		No. of insert	Dimension (mm)					Coolant hole	Kg	Mounting bolt	Insert
			DC	DCONMS	OAL	LH	APMX				
4S-TEF-D40B-21-W32-09V-3F	3	9	40	32	106.4	41.4	21	●	0.6	SH M8X45-C	SVKT 0938… E309

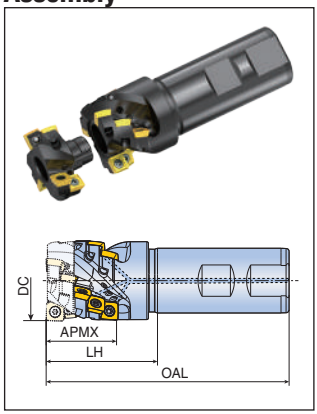
▸ Front head ordered seperately ▸ Not recommended for slotting

▸ Note: For bottom facing, both the front head and base unit must be connected.

Spare parts

Designation	Screw	Wrench	Wrench handle	Coolant Nozzle	
4S-TEF-09V	TS 35A070I/HG	TBLD T10P-W6	SW6-T	SS 3003-06C	

Assembly



Designation		No. of insert	Dimension (mm)			
			DC	OAL	LH	APMX
Head **4S-TFP-D40-14-09V-3F**	3	15	40	120	55	34
Base **4S-TEF-D40B-21-W32-09V-3F**						

Cutting Condition E322-E325

Torque E328

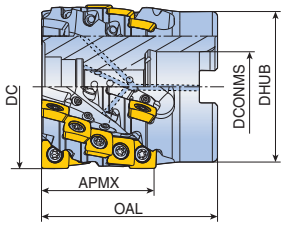
ADVANCE CUTTING TaeguTec

4S-TES-B-09V/11V

CHASE VQUAD 90° FACING & SHOULDERING

Base units for extended flute cutter

90°



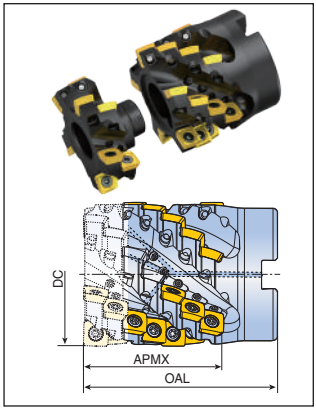
Designation	No. of insert	Dimension (mm) DC	DCONMS	DHUB	OAL	APMX	Coolant hole	Arbor style	Kg	Mounting bolt	Insert
4S-TES-D40B-20-16R-09V-3F	3	9	40	16	38	41.4	20	●	A	0.2	SH M8X45-C	SVKT
D50B-27-22R-09V-5F	5	20	50	22	45	49.4	27	●	A	0.4	LH M10X60-C	0938…
D63B-34-27R-09V-6F	6	30	63	27	58	56.4	34	●	A	0.7	LH M12X70-C	E309
4S-TES-D50B-34-22R-11V-4F	4	16	50	22	45	57.8	34	●	A	0.5	SH M10X60-C	SVK(H)T
D63B-43-27R-11V-5F	5	25	63	27	58	67.8	43	●	A	1.0	SH M12X70-C	1145…
D80B-59-32R-11V-6F	6	42	80	32	76	82.8	59	●	A	2.0	LH M16X80-C	E309

▸ Front head ordered seperately ▸ Not recommended for slotting
▸ Note: For bottom facing, both the front head and base unit must be connected.

Spare parts

Designation	Screw	Wrench	Wrench handle	Coolant Nozzle	
4S-TES-B-09V	TS 35A070I/HG	TBLD T10P-W6	SW6-T	SS 3003-06C	
4S-TES-B-11V	TS 40093I/HG	TBLD T15-W6	SW6-T	SS 3003-06C	

Assembly



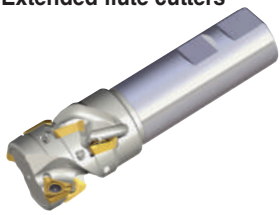
Designation		No. of insert	Dimension (mm) DC	OAL	APMX
Head	**4S-TFP-D40-14-09V-3F**	3	15	40	55	34
Base	**4S-TES-D40B-20-16R-09V-3F**					
Head	**4S-TFP-D50-14-09V-5F**	5	30	50	63	41
Base	**4S-TES-D50B-27-22R-09V-5F**					
Head	**4S-TFP-D63-14-09V-6F**	6	42	63	70	48
Base	**4S-TES-D63B-34-27R-09V-6F**					
Head	**4S-TFP-D50-18-11V-4F**	4	24	50	75	52
Base	**4S-TES-D50B-34-22R-11V-4F**					
Head	**4S-TFP-D63-18-11V-5F**	5	35	63	85	60
Base	**4S-TES-D63B-43-27R-11V-5F**					
Head	**4S-TFP-D80-18-11V-6F**	6	54	80	100	76
Base	**4S-TES-D80B-59-32R-11V-6F**					

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

3P TEF-06/10/15/19

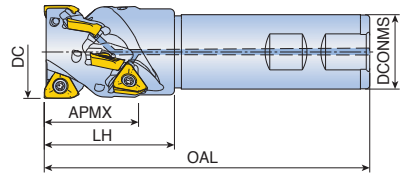
MILLRUSH

Extended flute cutters



90°

90°	Splitter
	15,19



Designation		No. of insert	Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	OAL	LH	APMX		
3P TEF	D20-20-W20-06	2	10	20	20	85	33	20	x	3PK(H)T 0603...
	D25-24-W25-06	3	18	25	25	95	39	24	●	
	D32-32-W32-06	4	32	32	32	105	43	32	●	
3P TEF	D32-42-W32-10	2	14	32	32	120	56	42	●	3PK(H)T 1004...
	D40-42-W32-10	3	21	40	32	130	56	42	●	
3P TEF	D40-40-W32-15	2	8	40	32	140	56	40	●	3PK(H)T 1505...
3P TEF	D50-55-W40-19	2	8	50	40	150	75	55	●	3PK(H)T 1906... E256-E257

Spare parts

Designation	Screw	Wrench			
3P TEF-06	TS 20043I/HG-P	TD 6P	-		
3P TEF-10	TS 25C065I/HG	TD 8	-		
3P TEF-15	TS 40B100I	TD 15	-		
3P TEF-19	TS 45120I	-	T-T20		

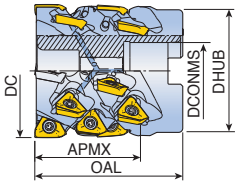
Cutting Condition E322-E325
Torque E328

3P TES-10/15/19

Extended flute cutters

90°

90°	Splitter
	15,19



Designation		No. of insert	Dimension (mm) DC	DCONMS	DHUB	OAL	APMX	Coolant hole	Kg	Mounting bolt	Insert
3P TES	**D50-48-22R-10**	4	32	50	22	45	65	48	●	0.6	SH M10x50	3PK(H)T 1004...
	D63-54-27R-10	4	36	63	27	58	75	54	●	1.2	SH M12x50	
3P TES	**D50-40-22R-15-2F**	2	8	50	22	45	65	40	●	0.6	SH M10x50	3PK(H)T 1505...
	D50-40-22R-15	3	12	50	22	45	65	40	●	0.6	SH M10x50	
	D63-50-27R-15	4	20	63	27	58	70	50	●	1.0	SH M12x50	
	D80-60-32R-15	4	24	80	32	77	75	60	●	2.0	SH M16x50	
	D100-78-40R-15-4F	4	32	100	40	96	110	78	●	5.0	SH M20x80	
3P TES	**D63-42-27R-19**	3	9	63	27	58	70	42	●	1.0	SH M12x50	3PK(H)T 1906... E256-E257
	D63-42-27R-19-4F	4	12	63	27	58	70	42	●	1.0	SH M12x50	
	D80-56-32R-19	4	16	80	32	76	75	56	●	1.7	SH M16x50	
	D100-83-40R-19-4F	4	24	100	40	96	110	83	●	4.4	SH M20x80	
	D100-83-40R-19	5	30	100	40	96	110	83	●	4.5	SH M20x80	
	D100-83-40R-19-6F	6	36	100	40	96	110	83	●	4.6	SH M20x80	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

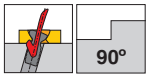
Designation	Screw	Wrench			
3P TES-10	TS 25C065I/HG	TD 8	-		
3P TES-15	TS 40B100I	TD 15	-		
3P TES-19	TS 45120I	-	T-T20		

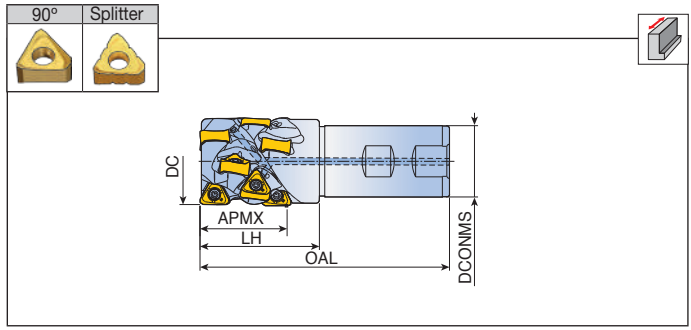
Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TEF-TN18

MILL2RUSH

Extended flute cutters





Designation		No. of insert	Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	OAL	LH	APMX		
TEF	D50-48-W40-TN18-2F	2	8	50	40	140	67	48	●	TNMX 1806...
	D50-48-W40-TN18	3	12	50	40	140	67	48	●	E312

Spare parts

Designation	Screw	Wrench			
TEF-TN18	TS 40B100I	T-T15			

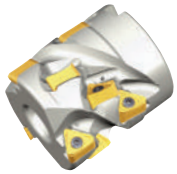
Cutting Condition E322-E325
Torque E328

ADVANCE CUTTING TaeguTec

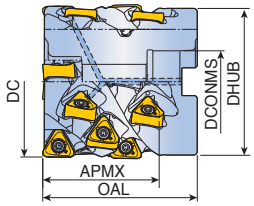
TES-TN18

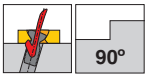
MILL2RUSH

Extended flute cutters



90°	Splitter





Designation		No. of insert	Dimension (mm) DC	DCONMS	DHUB	OAL	APMX	Coolant hole	Kg	Mounting bolt	Insert
TES	D63-48-27R-TN18-2F	2	8	63	27	60	70	48	●	1.2	SH M12x50	TNMX 1806...
	D63-48-27R-TN18	3	12	63	27	60	70	48	●	1.1	SH M12x50	E312
	D80-60-32R-TN18	4	20	80	32	76	80	60	●	2.2	SH M16x60	
	D100-71-40R-TN18-4F	4	24	100	40	96	100	71	●	4.5	SH M20x70	
	D100-71-40R-TN18	5	30	100	40	96	100	71	●	4.4	SH M20x70	
	D100-71-40R-TN18-6F	6	36	100	40	96	100	71	●	4.4	SH M20x70	

Spare parts

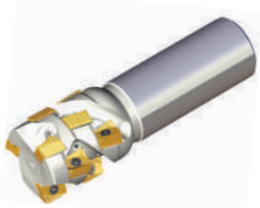
Designation	Screw	Wrench			
TES-TN18	TS 40B100I	T-T15			

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TEF-AN11/16

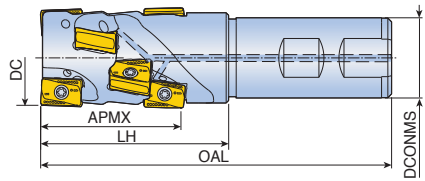
CHASE2MILL

Extended flute cutters



90°

90°	Splitter



Designation		No. of insert	Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	OAL	LH	APMX		
TEF **D32-40-W32-AN11**	2	8	32	32	110	48	40	●	ANM(H)X 1106··· E265
D40-40-W32-AN11-2F	2	8	40	32	125	50	40	●	
D40-40-W32-AN11	3	12	40	32	125	50	40	●	
TEF **D40-42-W32-AN16**	2	6	40	32	120	55	42	●	ANM(H)X 1607··· E265
D40-56-W32-AN16	2	8	40	32	140	75	56	●	
D50-56-W40-AN16-2F	2	8	50	40	140	70	56	●	
D50-56-W40-AN16	3	12	50	40	140	70	56	●	

Spare parts

Designation	Screw	Wrench			
TEF-AN11	TS 35A088I/HG	TD 10P	-		
TEF-AN16	TS 40120I/HG	-	T-T15		

Cutting Condition E322-E325
Torque E328

ADVANCE CUTTING TaeguTec

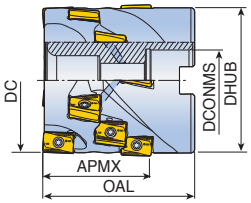
TES-AN11/16

CHASE2MILL

Extended flute cutters

90°

90°	Splitter



Designation		No. of insert	Dimension (mm) DC	DCONMS	DHUB	OAL	APMX	Coolant hole	Kg	Mounting bolt	Insert
TES	D50-40-22R-AN11	3	12	50	22	45	60	40	●	0.6	SH M10x40	ANM(H)X 1106··· E265
	D50-40-22R-AN11-4F	4	16	50	22	45	60	40	●	0.6	SH M10x40	
	D63-60-27R-AN11	4	24	63	27	60	80	60	●	1.3	SH M12x60	
	D80-60-32R-AN11-4F	4	24	80	32	76	80	60	●	2.2	SH M16x60	
	D80-60-32R-AN11	5	30	80	32	76	80	60	●	2.3	SH M16x60	
	D80-60-32R-AN11-6F	6	36	80	32	76	80	60	●	2.4	SH M16x60	
TES	D50-42-22R-AN16	2	6	50	22	47	65	42	●	0.7	SH M10x40	ANM(H)X 1607··· E265
	D63-42-27R-AN16	3	9	63	27	60.5	70	42	●	1.1	SH M12x50	
	D63-42-27R-AN16-4F	4	12	63	27	60.5	70	42	●	1.0	SH M12x50	
	D63-56-27R-AN16-2F	2	8	63	27	60.5	80	56	●	1.2	SH M12x50	
	D63-56-27R-AN16	3	12	63	27	60.5	80	56	●	1.3	SH M12x50	
	D63-56-27R-AN16-4F	4	16	63	27	60.5	80	56	●	1.2	SH M12x50	
	D80-56-32R-AN16	4	16	80	32	76.5	80	56	●	2.2	SH M16x50	
	D100-69-40R-AN16-4F	4	20	100	40	96.4	100	69	●	4.1	SH M20x60	
	D100-69-40R-AN16	5	25	100	40	96.4	100	69	●	4.5	SH M20x60	
	D100-69-40R-AN16-6F	6	30	100	40	96.4	100	69	●	4.0	SH M20x60	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

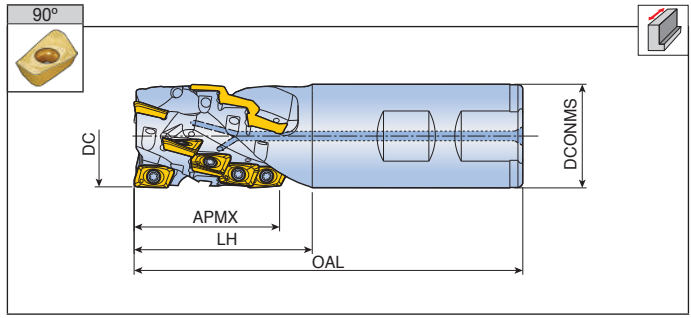
Spare parts

Designation	Screw	Wrench			
TES-AN11	TS 35A088I/HG	TD 10P	-		
TES-AN16	TS 40120I/HG	-	T-T15		

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TEF-AV10

Extended flute cutters



90° | V Bottom

Designation		No. of insert	Dimension (mm)					Coolant hole	Kg	Insert
			DC	DCONMS	OAL	LH	APMX			
TEF D25-27-W25-AV10-2F	2	6	25	25	95	35	27	●	0.3	AVKT 10-M/EL AVCT 10-AL E274
D32-44-W32-AV10-3F	3	15	32	32	120	55	44	●	0.6	

Spare parts

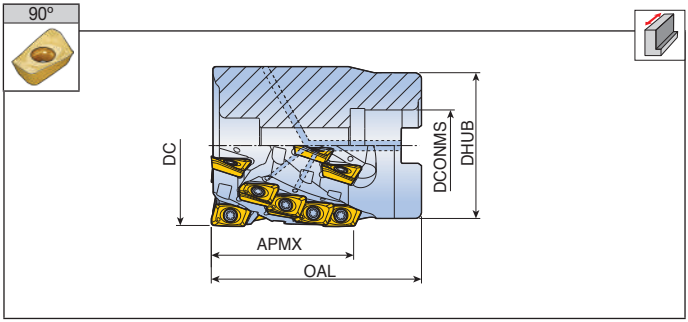
Designation	Screw	Wrench			
TEF-AV10	TS 30B062/HG-P	TD 8P			

Cutting Condition E322-E325 | Torque E328

ADVANCE CUTTING TaeguTec

TES-AV10

Extended flute cutters



90°

V Bottom

Designation	No. of insert	Dimension (mm) DC	DCONMS	OAL	DHUB	APMX	Coolant hole	Kg	Mounting bolt	Insert
TES D40-35-16R-AV10-4F	4	16	40	16	55	38	35	●	0.3	SH M8x40	AVKT 10-M/EL
D50-44-22R-AV10-5F	5	25	50	22	65	45	44	●	0.6	SH M10x50	AVCT 10-AL
											E274

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
TES-AV10	TS 30B062/HG-P	TD 8P			

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

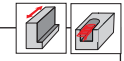
TEF-AP(AX)

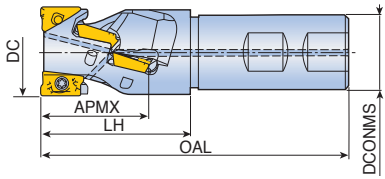
CHASEMILL

Extended flute cutters

90°

90°	Splitter
	12,17





Designation		No. of insert	Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	OAL	LH	APMX		
TEF	D16-16-W16-AX06	2	6	16	16	80	28	16	x	AXM(C)T 0602... E273
	D20-21-W20-AX06	3	12	20	20	85	33	21	●	
	D25-26-W25-AX06	4	20	25	25	95	38	26	●	
2S-TEF	D20-25-W20-AP09	1	3	20	20	110	38	26	●	APK(C)T 09T3... E266
	D25-42-W25-AP09	2	10	25	25	115	48	42	●	
	D32-42-W32-AP09	2	10	32	32	120	51	42	●	
TEF	D25-34-W25-AP12	2	6	25	25	120	47	34	●	APK(C)T 1204... E267
	D32-45-W32-AP12	2	8	32	32	120	58	45	●	
	D40-45-W32-AP12	3	12	40	32	140	65	45	●	
TEF	D32-30-W32-AP17	2	4	32	32	120	50	30	●	APK(C)T 1705... E268-E269
	D40-44-W32-AP17	2	6	40	32	140	65	44	●	

Spare parts

Designation	Screw	Wrench			
TEF-AX06	TS 18041 I/HG	TD 6P			
2S-TEF-AP09	TS 25055I/HG	TD 8			
TEF-AP12 (Ø25)	TS 35A070I/HG	TD 10P			
TEF-AP12 (Ø32-)	TS 35A088I/HG	TD 10P			
TEF-AP17	TS 40093I/HG	TD 15			

Cutting Condition E322-E325
Torque E328

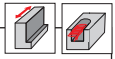
TES-AP12/17

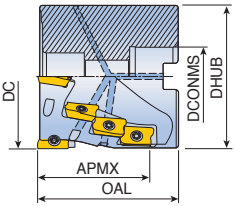
CHASEMILL

Extended flute cutters

90°

90°	Splitter





Designation	No. of insert	Dimension (mm) DC	DCONMS	DHUB	OAL	APMX	Coolant hole	Kg	Mounting bolt	Insert
TES D50-45-22R-AP12	4	16	50	22	47	65	45	●	0.6	SH M10x50	APK(C)T 1204...
D63-56-27R-AP12	5	25	63	27	60	75	56	●	1.2	SH M10x50	E267
TES D50-44-22-AP17	2	6	50	22	48.2	60	44	●	0.5	SH M10x40	APK(C)T 1705...
D63-44-27-AP17	3	9	63	27	60.8	63	44	●	0.9	SH M12x40	E268-E269
D63-44-27-AP17-4F	4	12	63	27	60.8	63	44	●	0.9	SH M12x40	
D80-58-32-AP17	4	16	80	32	78.4	75	58	●	1.9	SH M16x50	
D100-88-40-AP17-4F	4	24	100	40	97.4	110	88	●	4.4	SH M20x80	
D100-88-40-AP17	5	30	100	40	97.4	110	88	●	4.8	SH M20x80	

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
TES-AP12	TS 35A088I/HG	TD 10P	-		
TES-AP17	TS 40093I/HG	-	T-T15		

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

Extended flute cutters

90°

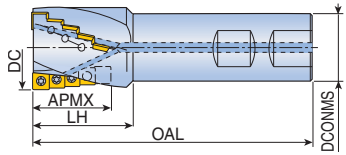


Fig.1

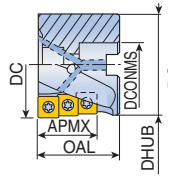


Fig.2

Designation		No. of insert	Dimension (mm) DC	DCONMS	DHUB	OAL	LH	APMX	Coolant hole	Fig.	Mounting bolt	Insert
TEF	D32-23-W32-09	2	6	32	32	-	120	40	23.8	●	1	-	SPMG(T) 090408-EM
	D40-38-W32-11	2	8	40	32	-	130	60	38.9	●	1	-	SPMG(T)110408-EM
	D50-48-W40-11	3	15	50	40	-	140	70	48.4	●	1	-	
	D50-48-W42-11	3	15	50	42	-	140	70	48.4	●	1	-	
TES	D50-29-22-11	3	9	50	22	47.3	52	-	29.0	●	2	SH M10x30	SPMG(T) 110408-EM
	D63-35-27-11	4	16	63	27	60.5	55	-	35.0	●	2	SH M12x35	
	D80-47-32-14	4	16	80	32	77.2	65	-	47.0	●	2	SH M16x40	SPMG(T)140508-EM
													E303

▸ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
TEF-SP09 (Ø32)	TS 35088I	TD 10	-		
TEF-SP11 (Ø40-Ø50)	TS 40093I	TD 15	-		
TES-SP11 (Ø50-Ø63)	TS 40093I	TD 15	-		
TES-SP14 (Ø80)	TS 50A121I/HG	-	T-T20		

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TSM-W-TS16

TOPSLOT

Slotting cutters: End mills

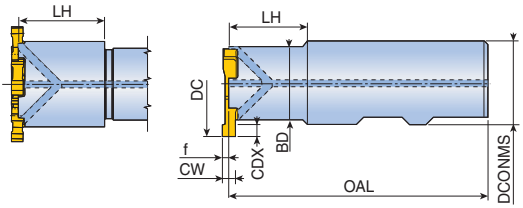


Fig.1 Fig.2

Designation		CW (mm)		Dimension (mm) DC	DCONMS	BD	OAL	LH	Coolant hole	Fig.	Kg	Insert
TSM	**D32-W25-3Z-TS16**	1.20-4.0	3	32.2	25	21.7	110	52.3	●	2	0.34	TS16-1.2–4.0
	D32-W25-3Z-B-TS16	4.01-6.0	3	32.2	25	21.7	110	52.3	●	2	0.46	TS16-4.01–6.0
	D40-W25-4Z-TS16	1.20-4.0	4	40.0	25	29.7	110	30.0	●	1	0.44	TS16-1.2–4.0
	D40-W25-4Z-B-TS16	4.01-6.0	4	40.0	25	29.7	110	30.0	●	1	0.53	TS16-4.01–6.0
	D50-W32-6Z-TS16	1.20-4.0	6	50.0	32	39.7	110	30.0	●	1	0.75	TS16-1.2–4.0
												E314

▸ f, CDX: Please refer to insert data

Spare parts

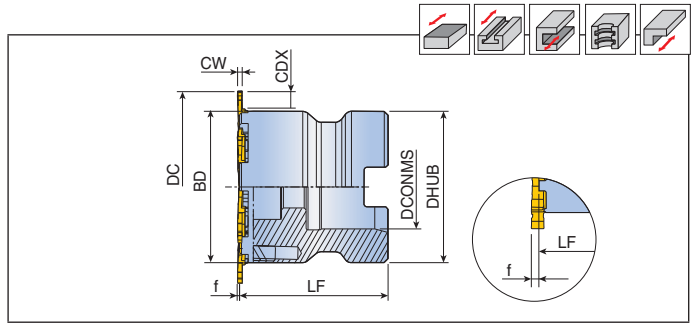
Designation	Screw	Wrench	Wrench handle		
TSM D32-W25-3Z-TS16	TS 40097I-N3.5	BLD T15/S7	SW6-T		
TSM D32-W25-3Z-B-TS16	TS 40097I	BLD T15/S7	SW6-T		
TSM D40-W25-4Z-TS16	TS 40097I-N3.5	BLD T15/S7	SW6-T		
TSM D40-W25-4Z-B-TS16	TS 40097I	BLD T15/S7	SW6-T		
TSM D50-W32-6Z-TS16	TS 40097I-N3.5	BLD T15/S7	SW6-T		

Cutting Condition E322-E325
Torque E328

TSM-TS16

TOPSLOT

Slotting cutters: Flange type



Designation		CW (mm)		Dimension (mm)					Arbor style	Kg	Insert
				DC	DCONMS	DHUB	BD	LF			
TSM	D50-22R-6Z-TS16	1.20-4.0	6	50	22	39.7	39.7	39	A	0.24	TS16-1.20–4.0
	D50-22R-6Z-B-TS16	4.01-6.0	6	50	22	39.7	39.7	39	A	0.24	TS16-4.01–6.0
	D63-22R-8Z-TS16	1.20-4.0	8	63	22	40.0	52.7	39	A	0.40	TS16-1.20–4.0
	D63-22R-8Z-B-TS16	4.01-6.0	8	63	22	40.0	52.7	39	A	0.27	TS16-4.01–6.0
	D80-27R-11Z-TS16	1.20-4.0	11	80	27	69.7	69.7	49	B	0.40	TS16-1.20–4.0
	D80-27R-11Z-B-TS16	4.01-6.0	11	80	27	69.7	69.7	49	B	0.95	TS16-4.01–6.0
											E314

▸ f, CDX: Please refer to insert data

Spare parts

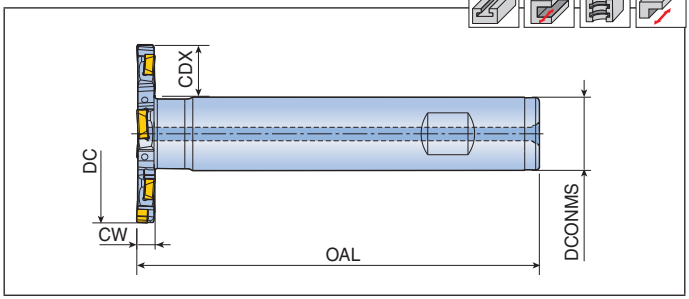
Designation	Screw	Wrench	Wrench handle		
TSM D50-22R-6Z-TS16	TS 40097I-N3.5	BLD T15/S7	SW6-T		
TSM D50-22R-6Z-B-TS16	TS 40097I	BLD T15/S7	SW6-T		
TSM D63-22R-8Z-TS16	TS 40097I-N3.5	BLD T15/S7	SW6-T		
TSM D63-22R-8Z-B-TS16	TS 40097I	BLD T15/S7	SW6-T		
TSM D80-27R-11Z-TS16	TS 40097I-N3.5	BLD T15/S7	SW6-T		
TSM D80-27R-11Z-B-TS16	TS 40097I	BLD T15/S7	SW6-T		

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TSM-W-SL

TOPSLOT

Slotting cutters: End mills



Designation		CW (mm)		Dimension (mm)				Coolant hole	Insert
				DC	DCONMS	OAL	CDX		
TSM	D25-03-W12-SL18	3	1+1	25	12	90	6.5	●	SLOT 018... E298
	D32-03-W16-SL18	3	2+2	32	16	90	8.0	●	
	D40-03-W16-SL18	3	3+3	40	16	105	12.0	●	
	D50-03-W20-SL18	3	4+4	50	20	110	15.0	●	
	D63-03-W20-SL18	3	5+5	63	20	110	21.5	●	
TSM	D25-04-W12-SL23	4	1+1	25	12	90	6.5	●	SLOT 023... E298
	D32-04-W16-SL23	4	2+2	32	16	90	8.0	●	
	D40-04-W16-SL23	4	3+3	40	16	105	12.0	●	
	D50-04-W20-SL23	4	4+4	50	20	110	15.0	●	
	D63-04-W20-SL23	4	5+5	63	20	110	21.5	●	
TSM	D25-05-W12-SL28	5	1+1	25	12	90	6.5	●	SLOT 028... E298
	D32-05-W16-SL28	5	2+2	32	16	90	8.0	●	
	D40-05-W16-SL28	5	3+3	40	16	105	12.0	●	
	D50-05-W20-SL28	5	4+4	50	20	110	15.0	●	
	D63-05-W20-SL28	5	5+5	63	20	110	21.5	●	
TSM	D25-06-W12-SL33	6	1+1	25	12	90	6.5	●	SLOT 033... E298
	D32-06-W16-SL33	6	2+2	32	16	90	8.0	●	
	D40-06-W16-SL33	6	3+3	40	16	105	12.0	●	
	D50-06-W20-SL33	6	4+4	50	20	110	15.0	●	
	D63-06-W20-SL33	6	5+5	63	20	110	21.5	●	

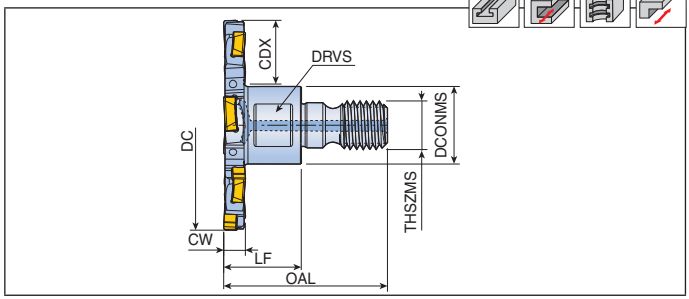
Spare parts

Designation	Screw	Wrench			
TSM-03-SL18	TS 25B024I/HG	TD 7P	L-T7P		
TSM-04-SL23	TS 25B031I/HG	TD 7P	L-T7P		
TSM-05-SL28	TS 25B042I/HG	TD 7P	L-T7P		
TSM-06-SL33	TS 25B053I/HG	TD 7P	L-T7P		

Cutting Condition E322-E325
Torque E328

TSM-M-SL

Slotting cutters: modular heads



Designation		CW (mm)		Dimension (mm)							Coolant hole	Insert
				DC	DCONMS	LF	OAL	THSZMS	CDX	DRVS		
TSM	D25-03-M08-SL18	3	1+1	25	13	18	35.5	M08	6	10	●	SLOT 018... E298
	D32-03-M08-SL18	3	2+2	32	13	18	35.5	M08	9	10	●	
	D40-03-M08-SL18	3	3+3	40	13	18	35.5	M08	13	10	●	
	D50-03-M10-SL18	3	4+4	50	18	18	38	M10	15	15	●	
	D63-03-M10-SL18	3	5+5	63	18	18	38	M10	22	15	●	
TSM	D25-04-M08-SL23	4	1+1	25	13	18	35.5	M08	6	10	●	SLOT 023... E298
	D32-04-M08-SL23	4	2+2	32	13	18	35.5	M08	9	10	●	
	D40-04-M08-SL23	4	3+3	40	13	18	35.5	M08	13	10	●	
	D50-04-M10-SL23	4	4+4	50	18	18	38	M10	15	15	●	
	D63-04-M10-SL23	4	5+5	63	18	18	38	M10	22	15	●	
TSM	D25-05-M08-SL28	5	1+1	25	13	18	35.5	M08	6	10	●	SLOT 028... E298
	D32-05-M08-SL28	5	2+2	32	13	18	35.5	M08	9	10	●	
	D40-05-M08-SL28	5	3+3	40	13	18	35.5	M08	13	10	●	
	D50-05-M10-SL28	5	4+4	50	18	18	38	M10	15	15	●	
	D63-05-M10-SL28	5	5+5	63	18	18	38	M10	22	15	●	
TSM	D25-06-M08-SL33	6	1+1	25	13	18	35.5	M08	6	10	●	SLOT 033... E298
	D32-06-M08-SL33	6	2+2	32	13	18	35.5	M08	9	10	●	
	D40-06-M08-SL33	6	3+3	40	13	18	35.5	M08	13	10	●	
	D50-06-M10-SL33	6	4+4	50	18	18	38	M10	15	15	●	
	D63-06-M10-SL33	6	5+5	63	18	18	38	M10	22	15	●	

▸ Matched with T-FLEXTEC holder

Spare parts

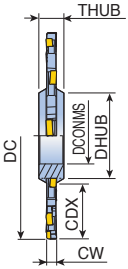
Designation	Screw	Wrench			
TSM-03-SL18	TS 25B024I/HG	TD 7P	L-T7P		
TSM-04-SL23	TS 25B031I/HG	TD 7P	L-T7P		
TSM-05-SL28	TS 25B042I/HG	TD 7P	L-T7P		
TSM-06-SL33	TS 25B053I/HG	TD 7P	L-T7P		

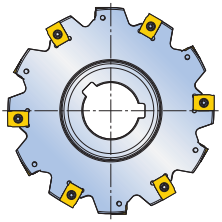
Cutting Condition E322-E325
Torque E328

TSM FD-N-Z

TOPSLOT

Slotting cutters: Fixed pocket disk type





Designation	CW (mm)		Dimension (mm)					Kg	Insert
			DC	DCONMS	DHUB	OAL	CDX		
TSM 063FD-03-22N-Z018	3	4+4	63	22	34	8	12.0	0.1	ZNHT 018... E318
080FD-03-22N-Z018	3	5+5	80	22	34	8	20.5	0.1	
100FD-03-27N-Z018	3	6+6	100	27	41	12	26.0	0.2	
125FD-03-40N-Z018	3	7+7	125	40	55	12	31.5	0.3	
160FD-03-40N-Z018	3	9+9	160	40	55	12	49.0	0.4	
TSM 063FD-04-22N-Z023	4	4+4	63	22	34	8	12.0	0.1	ZNHT 023... E318
080FD-04-22N-Z023	4	5+5	80	22	34	8	21.0	0.1	
100FD-04-27N-Z023	4	6+6	100	27	41	12	27.0	0.2	
125FD-04-40N-Z023	4	7+7	125	40	55	12	32.0	0.4	
160FD-04-40N-Z023	4	9+9	160	40	55	12	50.0	0.6	
TSM 063FD-05-22N-Z028	5	4+4	63	22	34	8	13.0	0.1	ZNHT 028... E318
080FD-05-22N-Z028	5	5+5	80	22	34	8	21.0	0.2	
100FD-05-27N-Z028	5	6+6	100	27	41	12	27.0	0.3	
125FD-05-40N-Z028	5	7+7	125	40	55	12	33.0	0.4	
160FD-05-40N-Z028	5	9+9	160	40	55	12	50.0	0.7	
TSM 063FD-06-22N-Z033	6	4+4	63	22	34	8	13.0	0.1	ZNHT 033... E318
080FD-06-22N-Z033	6	5+5	80	22	34	8	21.5	0.2	
100FD-06-27N-Z033	6	6+6	100	27	41	12	27.0	0.3	
125FD-06-40N-Z033	6	7+7	125	40	55	12	33.0	0.5	
160FD-06-40N-Z033	6	9+9	160	40	55	12	50.0	0.8	
200FD-06-50N-Z033	6	10+10	200	50	69	12	63.0	1.2	
250FD-06-50N-Z033	6	12+12	250	50	69	12	88.0	2.0	
TSM 080FD-07-22N-Z038	7	4+4	80	22	34	12	20.0	0.2	ZNHT 038... E318
100FD-07-27N-Z038	7	5+5	100	27	41	12	26.5	0.3	
125FD-07-40N-Z038	7	6+6	125	40	55	12	32.0	0.5	
160FD-07-40N-Z038	7	8+8	160	40	55	12	49.5	0.8	
200FD-07-50N-Z038	7	9+9	200	50	69	12	62.5	1.3	
250FD-07-50N-Z038	7	12+12	250	50	69	12	87.5	1.9	

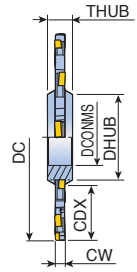
Cutting Condition E322-E325

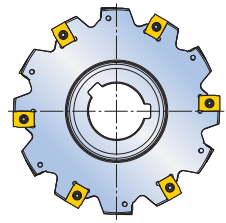
Torque E328

TSM FD-N-Z

TOPSLOT

Slotting cutters: Fixed pocket disk type





Designation	CW (mm)		Dimension (mm)					Kg	Insert
			DC	DCONMS	DHUB	OAL	CDX		
TSM 080FD-08-22N-Z043	8	4+4	80	22	34	12	20.5	0.2	ZNHT 043... E318
100FD-08-27N-Z043	8	5+5	100	27	41	12	27.0	0.3	
125FD-08-40N-Z043	8	6+6	125	40	55	12	32.5	0.5	
160FD-08-40N-Z043	8	8+8	160	40	55	12	50.0	0.9	
200FD-08-50N-Z043	8	9+9	200	50	69	12	63.0	1.4	
250FD-08-50N-Z043	8	12+12	250	50	69	12	88.0	2.3	
TSM 100FD-09-27N-Z048	9	5+5	100	27	41	12	27.5	0.4	ZNHT 048... E318
125FD-09-40N-Z048	9	6+6	125	40	55	12	33.0	0.6	
160FD-09-40N-Z048	9	8+8	160	40	55	12	50.5	1.0	
200FD-09-50N-Z048	9	9+9	200	50	69	12	63.5	1.6	
250FD-09-50N-Z048	9	12+12	250	50	69	12	88.5	2.6	
TSM 100FD-10-27N-Z053	10	5+5	100	27	41	12	28.0	0.4	ZNHT 053... E318
125FD-10-40N-Z053	10	6+6	125	40	55	12	33.5	0.6	
160FD-10-40N-Z053	10	8+8	160	40	55	12	51.0	1.3	
200FD-10-50N-Z053	10	9+9	200	50	69	12	64.0	2.0	
250FD-10-50N-Z053	10	12+12	250	50	69	12	89.0	3.2	

▸ Arbor: SCA, SEMC

Spare parts

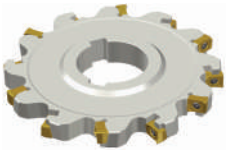
Designation	Screw	Wrench		Designation	Screw	Wrench	
TSM-Z018	TS 25B024I/HG	TD 7P	L-T7P	**TSM-Z038**	TS 40K0535I	T-T15	L-T15
TSM-Z023	TS 25B031I/HG	TD 7P	L-T7P	**TSM-Z043**	TS 40K065I	T-T15	L-T15
TSM-Z028	TS 25B042I/HG	TD 7P	L-T7P	**TSM-Z048**	TS 40K075I	T-T15	L-T15
TSM-Z033	TS 25B053I/HG	TD 7P	L-T7P	**TSM-Z053**	TS 40K085I	T-T15	L-T15

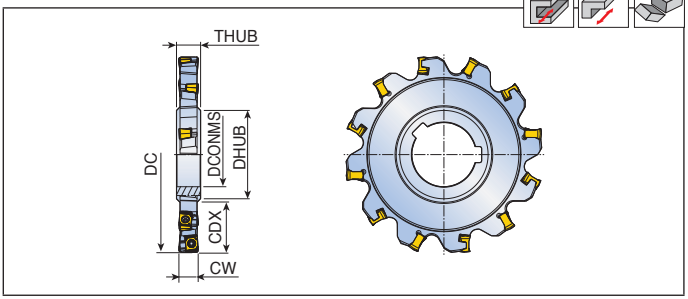
Cutting Condition E322-E325
Torque E328

TSM FD-N-ZN08/11

TOPSLOT

Slotting cutters: Fixed pocket disk type





Designation	CW (mm)		Dimension (mm)					Kg	Insert
			DC	DCONMS	DHUB	OAL	CDX		
TSM 080FD-10-27N-ZN08	10.0	4+4	80	27	41	15	15.5	0.3	ZNHU 080... E319
100FD-10-27N-ZN08	10.0	5+5	100	27	41	15	25.5	0.5	
125FD-10-40N-ZN08	10.0	6+6	125	40	55	15	31.0	0.7	
080FD-12-27N-ZN08	12.0	4+4	80	27	41	15	16.5	0.3	
100FD-12-27N-ZN08	12.0	5+5	100	27	41	15	26.5	0.5	
125FD-12-40N-ZN08	12.0	6+6	125	40	55	15	32.0	0.8	
TSM 125FD-14-40N-ZN11	14.0	6+6	125	40	55	15	34.5	0.9	ZNHU 110... E319
125FD-17-40N-ZN11	17.0	6+6	125	40	55	18	34.5	1.1	
125FD-20-40N-ZN11	20.0	6+6	125	40	55	20	34.5	1.3	

▸ Arbor: SCA, SEMC

Spare parts

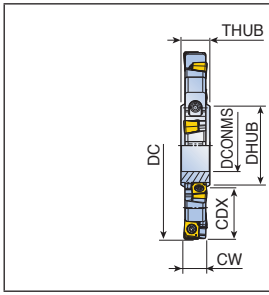
Designation	Screw	Wrench			
TSM FD-ZN08	TS 30085I/HG	TD 9	–		
TSM FD-ZN11	TS 40120I/HG	-	T-T15		

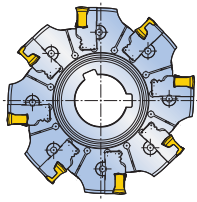
Cutting Condition E322-E325
Torque E328

TSM FD-S/W-ZN08

TOPSLOT

Slotting cutters: Adjustable disk type





Designation		CW (mm)		Dimension (mm)					Kg	Insert
				DC	DCONMS	DHUB	OAL	CDX		
TSM	**100FD-S-27N-ZN08**	10-12	4+4	100	27	41	15	26.5	0.4	ZNHU 080...
	125FD-S-40N-ZN08	10-12	5+5	125	40	55	15	31.5	0.7	E319
	160FD-S-40N-ZN08	10-12	6+6	160	40	55	15	48.5	1.1	
	200FD-S-50N-ZN08	10-12	8+8	200	50	69	15	61.5	1.8	
	250FD-S-50N-ZN08	10-12	9+9	250	50	69	15	87.5	2.8	
	100FD-W-27N-ZN08	12-14	4+4	100	27	41	15	27.0	0.5	
	125FD-W-40N-ZN08	12-14	5+5	125	40	55	15	31.5	0.8	
	160FD-W-40N-ZN08	12-14	6+6	160	40	55	15	49.5	1.3	
	200FD-W-50N-ZN08	12-14	8+8	200	50	69	15	62.5	2.1	
	250FD-W-50N-ZN08	12-14	9+9	250	50	69	15	87.5	3.4	

- Width of cut is set at the smallest unless a specific width is requested
- Arbor: SCA, SEMC

Spare parts

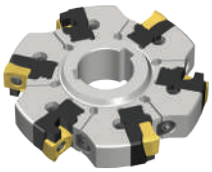
Designation	Right cartridge	Left cartridge	Wedge	Adjust screw	Insert screw
TSM FD-S/W-ZN08	TCT-SR-ZN08 TCT-WR-ZN08	TCT-SL-ZN08 TCT-WL-ZN08	WFZ 5	SA M8-6.0	TS 30085I/HG
	Wedge screw	Wrench	L-Wrench	Wedge Wrench	
	WS 5	TD 9	L-W 3	F-W 2.5	

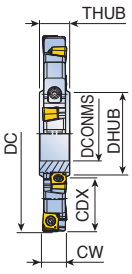
Cutting Condition E322-E325
Torque E328
Technical Data E332-E334

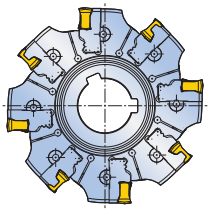
TSM FD-S/W-ZN11

TOPSLOT

Slotting cutters: Adjustable disk type







Designation		CW (mm)		Dimension (mm) DC	DCONMS	DHUB	OAL	CDX	Kg	Insert
TSM	100FD-S-27N-ZN11	14-17	3+3	100	27	41	18	28.0	0.6	ZNHU 110...
	125FD-S-40N-ZN11	14-17	4+4	125	40	55	18	31.0	1.0	E319
	160FD-S-40N-ZN11	14-17	6+6	160	40	55	18	48.5	1.6	
	200FD-S-50N-ZN11	14-17	7+7	200	50	69	18	61.5	2.6	
	250FD-S-50N-ZN11	14-17	9+9	250	50	69	18	86.5	4.2	
	100FD-W-27N-ZN11	17-20	3+3	100	27	41	22	28.0	0.8	
	125FD-W-40N-ZN11	17-20	4+4	125	40	55	22	31.0	1.2	
	160FD-W-40N-ZN11	17-20	6+6	160	40	55	22	48.5	2.0	
	200FD-W-50N-ZN11	17-20	7+7	200	50	69	22	61.5	3.2	
	250FD-W-50N-ZN11	17-20	9+9	250	50	69	22	86.5	5.2	
	315FD-W-60N-ZN11	17-20	12+12	315	60	85	22	110.0	8.5	

- Width of cut is set at the smallest unless a specific width is requested
- Arbor: SCA, SEMC

Spare parts

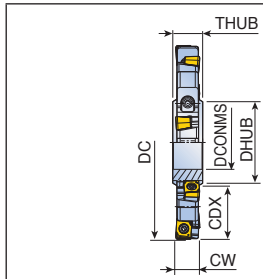
Designation	Right cartridge	Left cartridge	Wedge	Adjust screw	Insert screw
TSM FD-S/W-ZN11	TCT-SR-ZN11 TCT-WR-ZN11	TCT-SL-ZN11 TCT-WL-ZN11	WFZ 6	SA M8-9.0	TS 40120I/HG
	Wedge screw	Wrench	L-Wrench	Wedge Wrench	
	WS 6	T-T15	L-W 4	T-W 3	

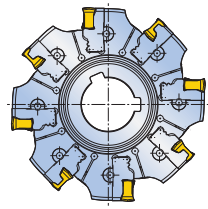
Cutting Condition E322-E325
Torque E328
Technical Data E332-E334

TSM FD-S/W-ZN14

TOPSLOT

Slotting cutters: Adjustable disk type





Designation		CW (mm)		Dimension (mm)					Kg	Insert
				DC	DCONMS	DHUB	OAL	CDX		
TSM	**125FD-S-40N-ZN14**	20-23	3+3	125	40	55	24.5	32.0	1.4	ZNHU 140... E319
	160FD-S-40N-ZN14	20-23	5+5	160	40	55	24.5	49.0	2.4	
	200FD-S-50N-ZN14	20-23	6+6	200	50	69	24.5	62.5	3.9	
	250FD-S-50N-ZN14	20-23	8+8	250	50	69	24.5	87.0	6.3	
	315FD-S-60N-ZN14	20-23	10+10	315	60	85	24.5	111.5	10.2	
	125FD-W-40N-ZN14	23-26	3+3	125	40	55	27.5	32.0	1.6	
	160FD-W-40N-ZN14	23-26	5+5	160	40	55	27.5	49.0	2.7	
	200FD-W-50N-ZN14	23-26	6+6	200	50	69	27.5	62.5	4.3	
	250FD-W-50N-ZN14	23-26	8+8	250	50	69	27.5	87.0	7.1	
	315FD-W-60N-ZN14	23-26	10+10	315	60	85	27.5	111.5	11.6	

- Width of cut is set at the smallest unless a specific width is requested
- Arbor: SCA, SEMC

Spare parts

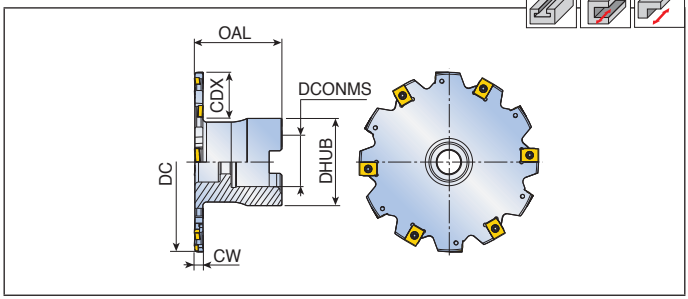
Designation	Right cartridge	Left cartridge	Wedge	Adjust screw	Insert screw
TSM FD-S/W-ZN14	TCT-SR-ZN14	TCT-SL-ZN14	WFZ 6	SA M8-9.0	TS 40120I/HG
	Wedge screw	Wrench	L-Wrench	Wedge Wrench	
	WS 6	T-T15	L-W 4	T-W 3	

Cutting Condition E322-E325
Torque E328
Technical Data E332-E334

TSM FF-Z

TOPSLOT

Slotting cutters: Fixed pocket flange type



Designation	CW (mm)		Dimension (mm)					Arbor style	Kg	Mounting bolt	Insert
			DC	DCONMS	DHUB	OAL	CDX				
TSM 080FF-03-22R-Z018	3	5+5	80	22	40	50	20.0	A	0.4	SH M10x35	ZNHT 018...
100FF-03-27R-Z018	3	6+6	100	27	48	50	26.0	A	0.6	SH M12x35	
080FF-04-22R-Z023	4	5+5	80	22	40	50	20.0	A	0.4	SH M10x35	ZNHT 023...
100FF-04-27R-Z023	4	6+6	100	27	48	50	26.0	A	0.6	SH M12x35	
080FF-05-22R-Z028	5	5+5	80	22	40	50	20.0	A	0.5	SH M10x35	ZNHT 028...
100FF-05-27R-Z028	5	6+6	100	27	48	50	26.0	A	0.7	SH M12x35	
080FF-06-22R-Z033	6	5+5	80	22	40	50	20.0	A	0.5	SH M10x35	ZNHT 033...
100FF-06-27R-Z033	6	6+6	100	27	48	50	26.0	A	0.7	SH M12x35	E318
125FF-06-40R-Z033	6	7+7	125	40	70	50	25.0	B	1.1	-	
160FF-06-40R-Z033	6	9+9	160	40	70	50	43.0	B	1.4	-	
080FF-07-22R-Z038	7	4+4	80	22	40	50	20.0	A	0.5	SH M10x40	ZNHT 038...
100FF-07-27R-Z038	7	5+5	100	27	48	50	25.5	A	0.7	SH M12x35	E318
125FF-07-40R-Z038	7	6+6	125	40	70	50	24.5	B	1.1	-	
160FF-07-40R-Z038	7	8+8	160	40	70	50	42.0	B	1.4	-	
080FF-08-22R-Z043	8	4+4	80	22	40	50	20.0	A	0.5	SH M10x35	ZNHT 043...
100FF-08-27R-Z043	8	5+5	100	27	48	50	25.5	A	0.8	SH M12x35	E318
125FF-08-40R-Z043	8	6+6	125	40	70	50	24.5	B	1.2	-	
160FF-08-40R-Z043	8	8+8	160	40	70	50	42.0	B	1.5	-	
100FF-09-27R-Z048	9	5+5	100	27	48	50	26.0	A	0.7	SH M12x35	ZNHT 048...
125FF-09-40R-Z048	9	6+6	125	40	70	50	24.5	B	1.2	-	E318
160FF-09-40R-Z048	9	8+8	160	40	70	50	42.0	B	1.6	-	
100FF-10-27R-Z053	10	5+5	100	27	48	50	26.0	A	0.8	SH M12x35	ZNHT 053..
125FF-10-40R-Z053	10	6+6	125	40	70	50	24.5	B	1.4	-	E318
160FF-10-40R-Z053	10	8+8	160	40	70	50	42.0	B	1.7	-	

Spare parts

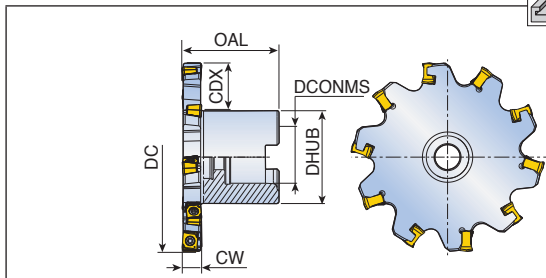
Designation	Screw	Wrench		Designation	Screw	Wrench	
TSM-Z018	TS 25B024I/HG	TD 7P	L-T7P	**TSM-Z038**	TS 40K0535I	T-T15	L-T15
TSM-Z023	TS 25B031I/HG	TD 7P	L-T7P	**TSM-Z043**	TS 40K065I	T-T15	L-T15
TSM-Z028	TS 25B042I/HG	TD 7P	L-T7P	**TSM-Z048**	TS 40K075I	T-T15	L-T15
TSM-Z033	TS 25B053I/HG	TD 7P	L-T7P	**TSM-Z053**	TS 40K085I	T-T15	L-T15

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TSM FF-ZN08/11

TOPSLOT

Slotting cutters: Fixed pocket flange type



Designation		CW (mm)		Dimension (mm) DC	DCONMS	DHUB	OAL	CDX	Arbor style	Kg	Mounting bolt	Insert
TSM	063FF-10-22R-ZN08	10.0	3+3	63	22	40	50	15	A	0.4	SH M10x35	ZNHU 080... E319
	080FF-10-22R-ZN08	10.0	4+4	80	22	40	50	24	A	0.5	SH M10x35	
	100FF-10-27R-ZN08	10.0	5+5	100	27	48	50	26	A	0.8	SH M12x35	
	125FF-10-32R-ZN08	10.0	6+6	125	32	58	50	34	B	1.1	-	
	063FF-12-22R-ZN08	12.0	3+3	63	22	40	50	15	A	0.4	SH M10x35	
	080FF-12-22R-ZN08	12.0	4+4	80	22	40	50	24	A	0.5	SH M10x35	
	100FF-12-27R-ZN08	12.0	5+5	100	27	48	50	26	A	0.9	SH M12x35	
	125FF-12-32R-ZN08	12.0	6+6	125	32	58	50	34	B	1.2	-	
TSM	063FF-14-22R-ZN11	14.0	3+3	63	22	40	50	15	A	0.4	SH M10x35	ZNHU 110... E319
	080FF-14-22R-ZN11	14.0	4+4	80	22	40	50	24	A	0.5	SH M10x35	
	100FF-14-27R-ZN11	14.0	5+5	100	27	48	50	26	A	1.0	SH M12x35	
	125FF-14-32R-ZN11	14.0	6+6	125	32	58	50	34	B	1.3	-	
	160FF-14-40R-ZN11	14.0	6+6	160	40	70	50	43	B	2.5	-	
	080FF-17-22R-ZN11	17.0	4+4	80	22	40	50	24	A	0.6	SH M10x35	
	100FF-17-27R-ZN11	17.0	5+5	100	27	48	50	26	A	1.0	SH M12x35	
	125FF-17-32R-ZN11	17.0	6+6	125	32	58	50	34	B	1.5	-	
	080FF-20-22R-ZN11	20.0	4+4	80	22	40	50	24	A	0.7	SH M10x35	
	100FF-20-27R-ZN11	20.0	5+5	100	27	48	50	26	A	1.1	SH M12x35	
	125FF-20-32R-ZN11	20.0	6+6	125	32	58	50	34	B	1.6	-	

Spare parts

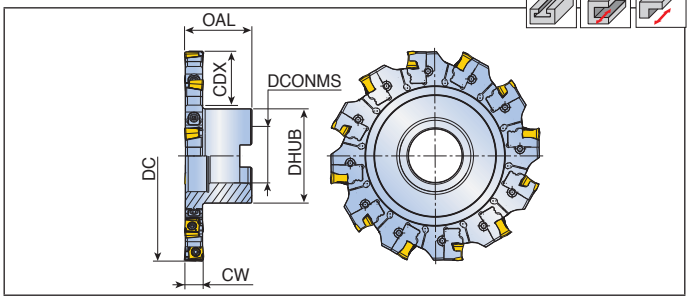
Designation	Screw	Wrench			
TSM FF-ZN08	TS 30085I/HG	TD 9	-		
TSM FF-ZN11	TS 40120I/HG	-	T-T15		

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328

TSM FF-S/W-ZN08

TOPSLOT

Slotting cutters: Adjustable flange type



Designation	CW (mm)		Dimension (mm) DC	DCONMS	DHUB	OAL	CDX	Arbor style	Kg	Mounting bolt	Insert
TSM 100FF-S-27R-ZN08	10-12	4+4	100	27	48	50	25	A	0.8	SH M12x35	ZNHU 080...
125FF-S-32R-ZN08	10-12	5+5	125	32	58	50	31.5	B	1.1	-	E319
160FF-S-40R-ZN08	10-12	6+6	160	40	70	50	43	B	1.8	-	
200FF-S-40R-ZN08	10-12	8+8	200	40	90	50	53	C	2.9	-	
100FF-W-27R-ZN08	12-14	4+4	100	27	48	50	25	A	0.9	SH M12x35	
125FF-W-32R-ZN08	12-14	5+5	125	32	58	50	31.5	B	1.2	-	
160FF-W-40R-ZN08	12-14	6+6	160	40	70	50	43	B	2.0	-	
200FF-W-40R-ZN08	12-14	8+8	200	40	90	50	53	C	3.2	-	

▸ Width of cut is set at the smallest unless a specific width is requested

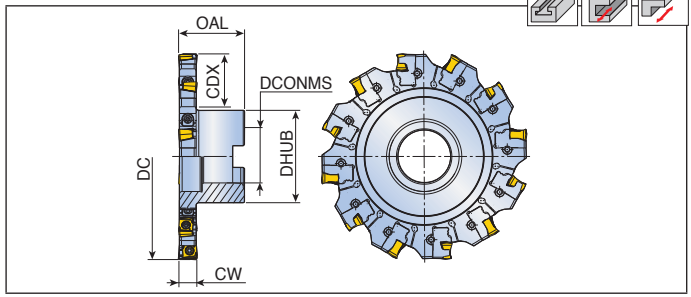
Spare parts

Designation	Right cartridge	Left cartridge	Wedge	Adjust screw	Insert screw
TSM FF-S/W-ZN08	TCT-SR-ZN08 TCT-WR-ZN08	TCT-SL-ZN08 TCT-WL-ZN08	WFZ 5	SA M8-6.0	TS 30085I/HG
	Wedge screw	Wrench	L-Wrench	Wedge Wrench	
	WS 5	TD 9	L-W 3	F-W 2.5	

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328
Technical Data E332-E334

TSM FF-S/W-ZN11

Slotting cutters: Adjustable flange type



Designation		CW (mm)		Dimension (mm) DC	DCONMS	DHUB	OAL	CDX	Arbor style	Kg	Mounting bolt	Insert
TSM	100FF-S-27R-ZN11	14-17	3+3	100	27	48	50	25.0	A	0.9	SH M12x35	ZNHU 110...
	125FF-S-32R-ZN11	14-17	4+4	125	32	58	50	31.5	B	1.3	-	E319
	160FF-S-40R-ZN11	14-17	6+6	160	40	70	50	43.0	B	2.2	-	
	200FF-S-40R-ZN11	14-17	7+7	200	40	90	50	53.0	C	3.9	-	
	250FF-S-60R-ZN11	14-17	9+9	250	60	130	50	55.0	C	6.2	-	
	315FF-S-60R-ZN11	14-17	12+12	315	60	130	50	90.0	C	8.9	-	
	100FF-W-27R-ZN11	17-20	3+3	100	27	48	50	25.0	A	1.0	SH M12x35	
	125FF-W-32R-ZN11	17-20	4+4	125	32	58	50	31.5	B	1.5	-	
	160FF-W-40R-ZN11	17-20	6+6	160	40	70	50	43.0	B	2.2	-	
	200FF-W-40R-ZN11	17-20	7+7	200	40	90	50	53.0	C	4.1	-	
	250FF-W-60R-ZN11	17-20	9+9	250	60	130	50	55.0	C	6.9	-	
	315FF-W-60R-ZN11	17-20	12+12	315	60	130	50	90.0	C	10.2	-	

▸ Width of cut is set at the smallest unless a specific width is requested

Spare parts

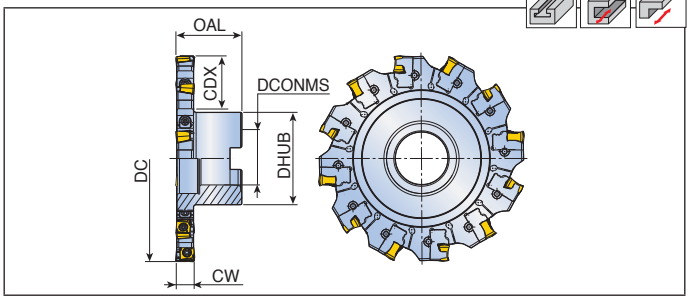
Designation	Right cartridge	Left cartridge	Wedge	Adjust screw	Insert screw
TSM FD-S/W-ZN11	TCT-SR-ZN11 TCT-WR-ZN11	TCT-SL-ZN11 TCT-WL-ZN11	WFZ 6	SA M8-9.0	TS 40120I/HG
	Wedge screw	Wrench	L-Wrench	Wedge Wrench	
	WS 6	T-T15	L-W 4	T-W 3	

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328
Technical Data E332-E334

TSM FF-S/W-ZN14

TOPSLOT

Slotting cutters: Adjustable flange type



Designation		CW (mm)		Dimension (mm) DC	DCONMS	DHUB	OAL	CDX	Arbor style	Kg	Insert
TSM	125FF-S-32R-ZN14	20-23	3+3	125	32	58	50	32.5	B	2.6	ZNHU 140...
	160FF-S-40R-ZN14	20-23	5+5	160	40	70	50	43.0	B	2.8	E319
	200FF-S-40R-ZN14	20-23	6+6	200	40	90	50	53.0	C	4.6	
	250FF-S-60R-ZN14	20-23	8+8	250	60	130	50	58.0	C	7.2	
	315FF-S-60R-ZN14	20-23	10+10	315	60	130	50	90.0	C	11.3	
	125FF-W-32R-ZN14	23-26	3+3	125	32	58	50	32.5	B	1.8	
	160FF-W-40R-ZN14	23-26	5+5	160	40	70	50	43.0	B	3.0	
	200FF-W-40R-ZN14	23-26	6+6	200	40	90	50	53.0	C	5.0	
	250FF-W-60R-ZN14	23-26	8+8	250	60	130	50	58.0	C	7.5	
	315FF-W-60R-ZN14	23-26	10+10	315	60	130	50	90.0	C	12.2	

▸ Width of cut is set at the smallest unless a specific width is requested

Spare parts

Designation	Right cartridge	Left cartridge	Wedge	Adjust screw	Insert screw
TSM FD-S/W-ZN14	TCT-SR-ZN14	TCT-SL-ZN14	WFZ 6	SA M8-9.0	TS 40120I/HG
	Wedge screw	Wrench	L-Wrench	Wedge Wrench	
	WS 6	T-T15	L-W 4	T-W 3	

Cutting Condition E322-E325
Arbor Style E326-E327
Torque E328
Technical Data E332-E334

TSC

Slotting cutters

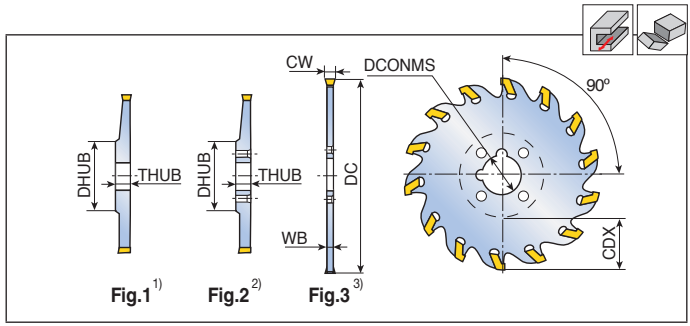


Fig.1 [1] Fig.2 [2] Fig.3 [3]

Designation	CW (mm)		Dimension (mm)						Fig.	Insert seat size	Insert
			DC	DCONMS	DHUB	WB	THUB	CDX			
TSC 75 1.6 22A	1.6	8	75	22.0	39	1.24	2.4	17	1	1	TIMC TIMJ TIPV E310-E311
100 1.6 22A	1.6	10	100	22.0	39	1.24	2.4	30	1	1	
125 1.6 27A	1.6	12	125	27.0	64	1.24	2.4	30	1	1	
75 2 22A	2.0-2.3	8	75	22.0	39	1.6	2.4	17	1	2	
100 2 22A	2.0-2.3	10	100	22.0	39	1.6	2.4	30	1	2	
125 2 27A	2.0-2.3	12	125	27.0	64	1.6	2.4	30	1	2	
100 2.4 22K	2.3-2.5	10	100	22.0	46	1.9	2.4	26	2	2	
125 2.4 32K	2.3-2.5	12	125	32.0	55	1.9	2.4	34	2	2	
160 2.4 32K	2.3-2.5	16	160	32.0	55	1.9	2.4	52	2	2	
100 3 22K	2.8-3.58	6	100	22.0	-	2.4	-	26	3	4	
125 3 32K	2.8-3.53	8	125	32.0	-	2.4	-	34	3	4	
160 3 40K	2.8-3.53	10	160	40.0	-	2.4	-	39	3	4	
100 4 22K	3.54-4.52	6	100	22.0	-	3.2	-	27	3	4	
125 4 32K	3.54-4.52	8	125	32.0	-	3.2	-	34	3	4	
160 4 40K	3.54-4.52	10	160	40.0	-	3.2	-	39	3	4	

- [1] Arbor type, [2] Drive shank, [3] Drive flange+Drive shank
- Extractor(ESG 0.5 or ESG 1) supplied with each cutter
- Flange set and shank should be ordered separately

Spare parts

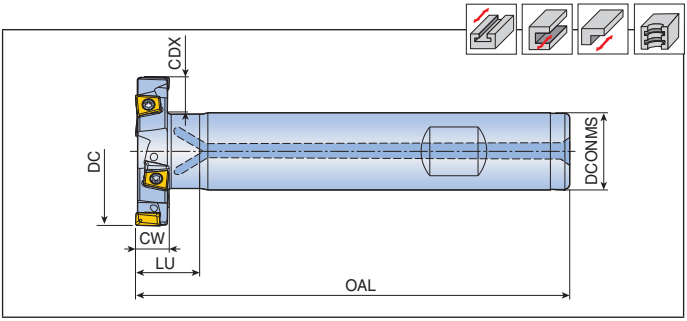
Designation	Drive flange set	Drive shank			
TSC-2.4-22K	-	TW32-40			
TSC-2.4-32K	-	T32-55			
TSC-22K	TR22-46	TW32-40			
TSC-32K	TR32-55	T32-55			
TSC-40K	TR40-80	T40-80			

Cutting Condition E322-E325
Technical Data E332-E334

4T-TSM-W-05

TANGSFEED TANGENTIAL MILL

Slotting Cutters: End mills



Designation	CW (mm)		Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	OAL	LU	CDX		
4T-TSM-D16-07-W12-05	7	1+1	16	12	90	12	3	●	LXHU 05
D20-07-W12-05	7	2+2	20	12	90	13	4	●	E285
D25-07-W12-05	7	2+2	25	12	90	13	6.5	●	
D32-07-W16-05	7	3+3	32	16	90	13	8	●	
D40-07-W16-05	7	4+4	40	16	105	13	12	●	

Spare parts

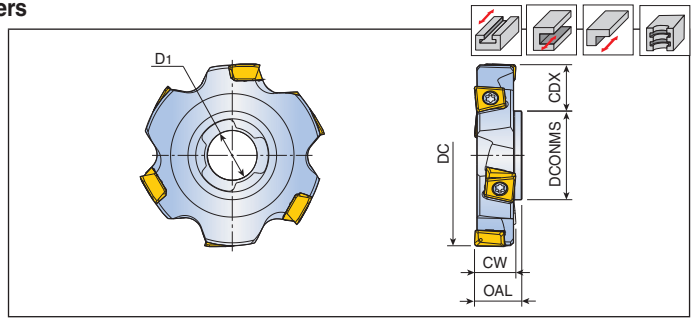
Designation	Screw	Wrench			
4T-TSM-W-05	TS 18049/HG-P	T 6P			

Cutting Condition E322-E325
Torque E328

4T-TSM-TR-05

MAXITANG

Interchangeable Slotting Cutters



Designation	CW (mm)		Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	D1	CDX	OAL		
4T-TSM-D23-07-TR13-05	7	2+2	23	13	7.5	4.5	8	x	LXHU 05
D25-07-TR13-05	7	2+2	25	13	7.5	5.5	8	x	E285
D32-07-TR15-05	7	3+3	32	15	8.4	8	8	x	
D40-07-TR17-05	7	4+4	40	17	9.8	11	10	x	

Spare parts

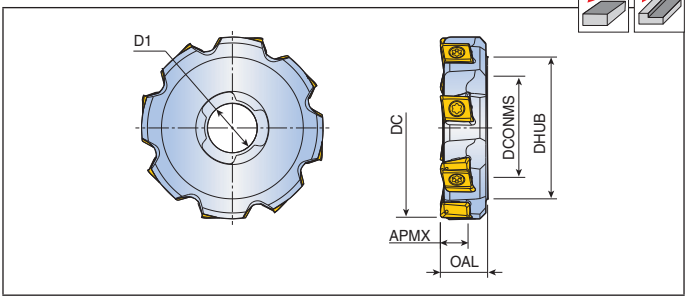
Designation	Screw	Wrench			
4T-TSM	TS 18049/HG-P	T 6P			

Arbor E248-E250
Cutting Condition E322-E325
Torque E328
Technical Data E332-E334

4T-TE90-TR-05

MAXITANG

Interchangeable Milling Cutters



Designation		Dimension (mm)						Coolant hole	Insert
		DC	DCONMS	D1	DHUB	OAL	APMX		
4T-TE90-625-TR15-05	6	25	15	8.4	19	8	4.6	x	LPK(H)U 05
832-TR15-05	8	32	15	8.4	24	8	4.6	x	E284
1040-TR17-05	10	40	17	9.8	31	10	4.6	x	

Spare parts

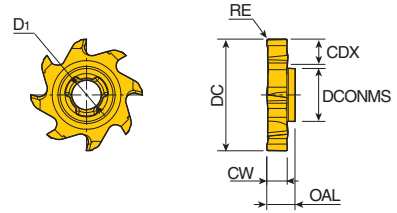
Designation	Screw	Wrench			
4T-TE90-TR-05	TS 18049/HG-P	T 6P			

Arbor E248-E250
Cutting Condition E322-E325
Torque E328

TR-S

MAXISFEED

Interchangeable solid carbide slot milling heads



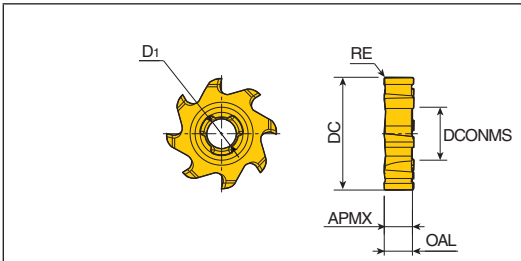
Designation	Feed (mm/tooth)	Dimension (mm)								Grade
		DC	CW	CDX	NOF	RE	D1	DCONMS	OAL	TT5525
TR13-S-24.7-3.0R0.4	0.02-0.15	24.7	3	5.5	6	0.4	7.5	13	8	●
24.7-4.0R0.4	0.02-0.15	24.7	4	5.5	6	0.4	7.5	13	8	●
24.7-5.0R0.4	0.02-0.15	24.7	5	5.5	6	0.4	7.5	13	8	●
24.7-6.0R0.4	0.02-0.15	24.7	6	5.5	6	0.4	7.5	13	8	●
24.7-7.0R0.4	0.02-0.15	24.7	7	5.5	6	0.4	7.5	13	8	●
24.7-8.0R0.4	0.02-0.15	24.7	8	5.5	6	0.4	7.5	13	8	●
TR15-S-31.7-3.0R0.4	0.022-0.18	31.7	3	8.0	8	0.4	8.4	15	8	●
31.7-4.0R0.4	0.022-0.18	31.7	4	8.0	8	0.4	8.4	15	8	●
31.7-5.0R0.4	0.022-0.18	31.7	5	8.0	8	0.4	8.4	15	8	●
31.7-6.0R0.4	0.022-0.18	31.7	6	8.0	8	0.4	8.4	15	8	●
31.7-7.0R0.4	0.022-0.18	31.7	7	8.0	8	0.4	8.4	15	8	●
31.7-8.0R0.4	0.022-0.18	31.7	8	8.0	8	0.4	8.4	15	8	●
TR17-S-39.7-4.0R0.4	0.025-0.20	39.7	4	11.0	10	0.4	9.8	17	10	●
39.7-5.0R0.4	0.025-0.20	39.7	5	11.0	10	0.4	9.8	17	10	●
39.7-6.0R0.4	0.025-0.20	39.7	6	11.0	10	0.4	9.8	17	10	●
39.7-7.0R0.4	0.025-0.20	39.7	7	11.0	10	0.4	9.8	17	10	●
39.7-8.0R0.4	0.025-0.20	39.7	8	11.0	10	0.4	9.8	17	10	●
39.7-9.0R0.4	0.025-0.20	39.7	9	11.0	10	0.4	9.8	17	10	●
39.7-10.0R0.4	0.025-0.20	39.7	10	11.0	10	0.4	9.8	17	10	●

▸ NOF: Number of flutes

●: Standard items

Arbor E248-E250
Cutting Condition E322-E325

Interchangeable solid carbide facing heads



Designation	Feed (mm/tooth)	Dimension (mm)							Grade
		DC	APMX	NOF	RE	D1	DCONMS	OAL	TT5525
TR13-F-25-8.0-R0.4	0.04-0.15	24.25	8	6	0.4	7.5	13	8	●
15-F-32-8.0-R0.4	0.04-0.15	31.25	8	8	0.4	8.4	15	8	●
17-F-40-10.0-R0.4	0.04-0.15	39.25	10	10	0.4	9.8	17	10	●

Arbor E248-E250
Cutting Condition E322-E325

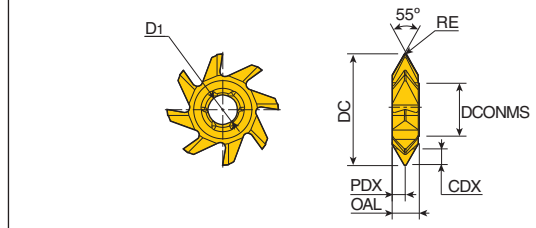
▸ NOF: Number of flutes

●: Standard items

TR-T-W55

MAXISFEED

Interchangeable solid carbide threading heads - 55° partial profile



Designation	TPI	Dimension (mm)									Grade
		DC	DMIN	PDX	RE	D1	CDX	OAL	ZEFP	DCONMS	TT5525
TR13-T-24.7-W55-3T	8-5	24.7	36	2.2	0.5	7.5	3.5	7.7	6	13	●
15-T-31.7-W55-4T	6-4	31.7	46	3.7	0.5	8.4	4.7	7.7	8	15	●
17-T-39.7-W55-3T	4-3	39.7	57	4.5	0.8	9.8	6.2	9.5	10	17	●

Arbor E248-E250

Cutting Condition E322-E325

- TPI: Threads per inch
- ZEFP: Peripheral effective cutting edge count

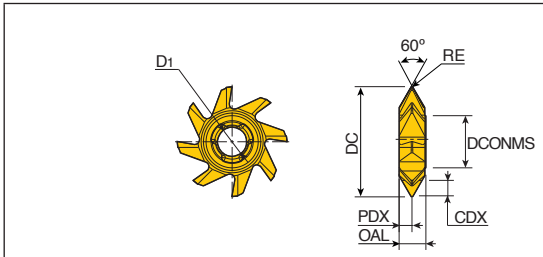
●: Standard items

ADVANCE CUTTING TaeguTec

TR-T-M60

MAXISFEED

Interchangeable solid carbide threading heads - 60° partial profile



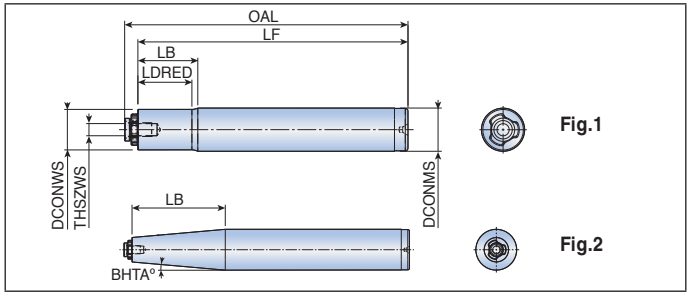
Designation	TP (mm)	TPI	Dimension (mm)									Grade
			DC	DMIN	PDX	RE	D1	CDX	OAL	ZEFP	DCONMS	TT5525
TR13-T-24.7-M60-5P	3-5	8-5	24.7	36	2.2	0.2	7.5	3.5	7.7	6	13	●
15-T-31.7-M60-6P	4-6	6-4	31.7	46	3.7	0.3	8.4	4.7	7.7	8	15	●
17-T-39.7-M60-8P	6-8	4-3	39.7	57	4.5	0.4	9.8	6.2	9.5	10	17	●

Arbor E248-E250
Cutting Condition E322-E325

- TP: Threads pitch, TPI: Threads per inch
- ZEFP: Peripheral effective cutting edge count

●: Standard items

Slotting & threading holders



Designation	Dimension (mm)								Coolant hole	Fig.	Carbide head
	DCONMS	DCONWS	LB	LF	OAL	THSZWS	LDRED	BHTA°			
TR13-16-L100	16	13	16.6	100	104.35	M4x0.5	13.0	-	x	1	TR-S, TR-T, 4T-TSM-TR E242-E247
15-16-L100	16	15	18.2	100	104.90	M5x0.5	16.0	-	x	1	
15-16-L130	16	15	18.2	130	134.90	M5x0.5	16.0	-	x	1	
17-20-L140	20	17	23.8	140	146.00	M6x0.5	20.2	-	x	1	
15-25-TC170	25	15	57.2	170	174.90	M5x0.5	-	5	x	2	

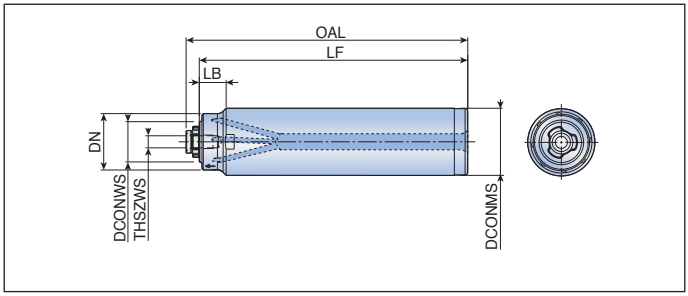
Spare parts

Designation	Screw	Wrench	Wrench handle		
TR13	TS 40T098/HG-P	BLD IP15/S7	SW6-T		
TR15	TS 50T110/HG-P	BLD IP20/S7	SW6-T		
TR17	SR M6x0.5-SP1719-IP25-H	BLD IP25/S7	SW6-T		

TR-F-C

MAXISFEED

Facing holders



Designation	Dimension (mm)							Coolant hole	Carbide head
	DCONMS	DCONWS	LB	LF	OAL	THSZWS	DN		
TR13-20-L100-F-C	20	13	10.0	100	104.35	M4x0.5	16	●	TR-F, 4T-TE90-TR E243,E245
13-25-L100-F-C	25	13	12.5	100	104.35	M4x0.5	16	●	
15-25-L100-F-C	25	15	10.0	100	104.90	M5x0.5	21	●	
15-32-L110-F-C	32	15	13.5	110	114.90	M5x0.5	21	●	
17-32-L140-F-C	32	17	10.0	140	146.00	M6x0.5	28	●	
17-42-L140-F-C	42	17	15.0	140	146.00	M6x0.5	28	●	

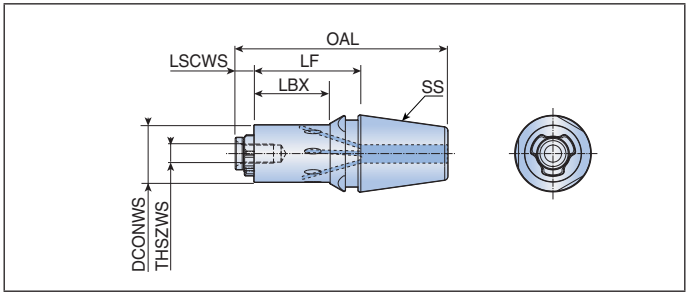
Spare parts

Designation	Screw	Wrench	Wrench handle		
TR13	TS 40T098/HG-P	BLD IP15/S7	SW6-T		
TR15	TS 50T110/HG-P	BLD IP20/S7	SW6-T		
TR17	SR M6x0.5-SP1719-IP25-H	BLD IP20/S7	SW6-T		

TR-ER-C

MAXISFEED

ER Collet adapter



Designation	Dimension (mm)							Kg	Coolant hole	Head
	SS	DCONWS	LBX	LF	OAL	THSZWS	LSCWS			
TR 13 ER20-H20-C	ER20	13	20	28.6	55.4	M4x0.5	4.4	0.07	●	TR-S/F/T, 4T-TSM, 4T-TE90-TR E242-E247
15 ER20-H20-C	ER20	15	20	28.6	55.9	M5x0.5	4.9	0.08	●	
13 ER25-H20-C	ER25	13	20	29.1	58.4	M4x0.5	4.4	0.10	●	
15 ER25-H20-C	ER25	15	20	29.1	58.9	M5x0.5	4.9	0.11	●	
17 ER25-H20-C	ER25	17	20	29.1	60.0	M6x0.5	6.0	0.12	●	
13 ER32-H20-C	ER32	13	20	30.1	64.4	M4x0.5	4.4	0.16	●	
15 ER32-H20-C	ER32	15	20	30.1	64.9	M5x0.5	4.9	0.16	●	
17 ER32-H20-C	ER32	17	20	30.1	66.0	M6x0.5	6.0	0.17	●	
17 ER40-H20-C	ER40	17	20	32.2	72.0	M6x0.5	6.0	0.29	●	

Spare parts

Designation	Screw	Wrench	Wrench handle		
TR13	TS 40T098/HG-P	BLD IP15/S7	SW6-T		
TR15	TS 50T110/HG-P	BLD IP20/S7	SW6-T		
TR17	SR M6x0.5-SP1719-IP25-H	BLD IP25/S7	SW6-T		

Milling Inserts

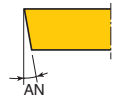
Insert Designation System

S	P	K	N
1	2	3	4

1 Shape

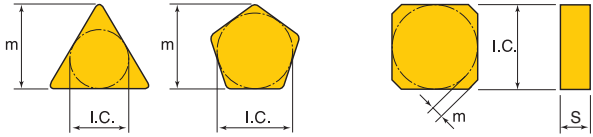
											Special
A	B	C	H	L	O	P	R	S	T	W	X

2 Clearance angle



B	C	D	E	F	G	N	P
5°	7°	15°	20°	25°	30°	0°	11°

3 Tolerance



Class	Tolerance (mm)			I.C. Dimension (mm)					
	m	S	I.C.	6.35	9.52	12.70	15.87	19.05	25.40
A	±0.005	±0.025	±0.025	●	●	●	●	●	●
E	±0.025	±0.025	±0.025	●	●	●	●	●	●
F	±0.005	±0.025	±0.013	●	●	●	●	●	●
G	±0.025	±0.130	±0.025	●	●	●	●	●	●
H	±0.013	±0.025	±0.013	●	●	●	●	●	●
K	±0.013	±0.025	±0.05	●	●				
			±0.08			●			
			±0.10				●	●	
			±0.13						●
M	±0.08	±0.130	±0.05	●	●				
	±0.13		±0.08			●			
	±0.15		±0.10				●	●	
	±0.18		±0.13						●

4 Chipformer and clamp type

								Special
A	F	G	M	N	R	T	W	X

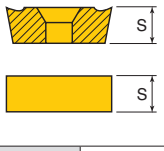
Insert Designation System

12	03	08 / ED	T	R	-	
5	6	7	8	9		10

5 Cutting edge length(mm)

I.C(mm)	C	R,S	T	H	O
5.56			09		
6.35	06	06	11		
7.94	08		13		
9.52	09	09	16		
12.70	12	12	22	05	05
15.87	16	15	27	09	
25.40	25	25			

6 Thickness(mm)

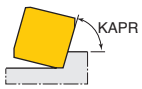


01	1.59
02	2.38
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52

7 Corner radius(mm)

02R	0.2
04R	0.4
05R	0.5
08R	0.8
10R	1.0
12R	1.2
15R	1.5
16R	1.6
24R	2.4
32R	3.2
40R	4.0

7 Parallel land



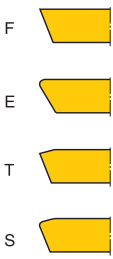
A=45° D=60°
E=75° F=85°
P=90° Z=Special

Entering angle

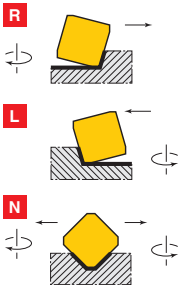
B= 5° F=25°
C= 7° G=30°
D=15° N= 0°
E=20° P=11°
Z=Special

Clearance angle of wiper

8 Edge condition



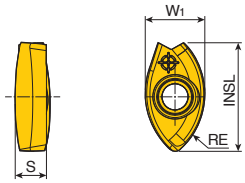
9 Hand of tool



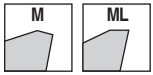
10 Manufacturer's option

AL	Aluminum
WC	Wiper crown
MR	Medium rough
M	Medium
L	Light
ML	Medium light
E□□	Economical

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	RE	
160	12.4	6.8	3.7	8.0	8.0	
200	14.9	8.2	4.8	10.0	10.0	
250	18.9	10.2	5.9	12.5	12.5	
300	22.1	11.8	6.8	15.0	15.0	
320	23.9	12.8	7.5	16.0	16.0	

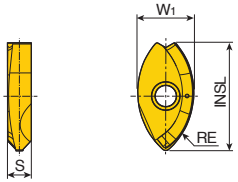


Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	2FB 160-M	2.0-6.5	0.30-0.07	●		●	●	●				●	
	200-M	3.0-8.0	0.35-0.08	●		●	●	●				●	
	250-M	3.5-10.0	0.35-0.08	●		●	●					●	
	300-M	4.0-12.5	0.40-0.08	●		●	●					●	
	320-M	4.5-13.0	0.40-0.08	●		●	●					●	
	2FB 160-ML	2.0-6.5	0.28-0.05	●		●	●						
	200-ML	3.0-8.0	0.32-0.07	●		●	●						
	250-ML	3.5-10.0	0.32-0.07	●		●							

●: Standard items

E176-E177

Inserts



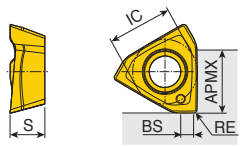
Size	Dimension (mm)					
	INSL	W1	S	APMX	RE	
320C-M	23	12.0	5.2	16	16	
500C-M	36	18.6	7.0	25	25	
320P-M	21	9.9	5.2	16	16	
500P-M	32.9	15.3	7.0	25	25	

Insert	Designation		Recommended machining conditions		Coated								Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	3FB	**320C-M**	4.5-13.0	0.15-0.08	●		●						●	
		500C-M	7.5-20.0	0.30-0.15	●		●		●				●	
	3FB	**320P-M**	4.5-13.0	0.15-0.08	●		●						●	
		500P-M	7.5-20.0	0.30-0.08	●		●						●	

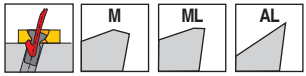
●: Standard items

3PK(H)T

Inserts



Size	Dimension (mm)				
	IC	S	APMX	BS	RE
04	3.9	2.1	3.5	0.5-0.7	0.2-0.4
06	5.3	2.8	4.7	0.6-1.2	0.2-0.8
10	6.9	4.0	7.0	0.5-1.3	0.4-1.6
15	10.7	5.0	11.0	0.5-2.0	0.4-2.4
19	13.5	6.0	15.0	0.5-2.4	0.4-3.2

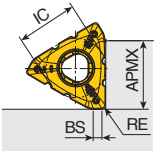


Insert	Designation		Recommended machining conditions		Cermet	Coated										Uncoated		
			ap (mm)	Feed (mm/tooth)	CT7000	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	TT3520	TT2510	TTA101	K10	
	3PKT	**040202R-M**	0.5-3.0	0.08-0.04		●	●											
		040204R-M	0.5-3.0	0.08-0.04		●	●											
		060302R-M	1.0-4.0	0.10-0.04		●	●	●							●			
		060304R-M	1.0-4.0	0.10-0.04		●	●	●				●			●			
		060308R-M	1.0-4.0	0.10-0.04		●	●	●				●			●			
		100404R-M	2.0-6.0	0.12-0.05		●	●	●	●	●	●	●			●			
		100408R-M	2.0-6.0	0.12-0.05		●	●	●	●	●	●	●			●			
		100416R-M	2.0-6.0	0.12-0.05		●			●						●			
		150508R-M	3.0-9.0	0.17-0.07		●	●	●	●	●	●	●			●			
		150516R-M	3.0-9.0	0.17-0.07		●	●			●					●			
		150524R-M	3.0-9.0	0.17-0.07		●									●			
		190608R-M	4.5-12.0	0.22-0.09		●	●	●	●	●	●	●			●			
		190616R-M	4.5-12.0	0.22-0.09		●	●	●		●					●			
		190624R-M	4.5-12.0	0.22-0.09		●									●			
		190632R-M	4.5-12.0	0.22-0.09		●									●			
	3PHT	**100404R-M**	2.0-6.0	0.12-0.05	●	●												
		100408R-M	2.0-6.0	0.12-0.05	●	●												
		150504R-M	3.0-9.0	0.17-0.07		●												
		150508R-M	3.0-9.0	0.17-0.07	●	●							●					
		150516R-M	3.0-9.0	0.17-0.07	●	●												
		190608R-M	4.5-12.0	0.22-0.09	●	●												
	3PKT	**100404R-ML**	2.0-6.0	0.10-0.04		●	●	●				●	●					
		100408R-ML	2.0-6.0	0.10-0.04		●	●	●					●					
		150508R-ML	3.0-9.0	0.12-0.05		●	●	●				●	●	●				
		150524R-ML	3.0-9.0	0.12-0.05			●											
		190608R-ML	4.5-12.0	0.14-0.06		●	●	●				●						
	3PHT	**100408R-ML**	2.0-6.0	0.10-0.04		●	●											
		150508R-ML	3.0-9.0	0.12-0.05		●	●											
	3PHT	**060304R-AL**	1.0-4.0	0.22-0.07												●	●	
		100404R-AL	2.0-6.0	0.40-0.10												●	●	
		100408R-AL	2.0-6.0	0.40-0.10												●	●	
		150504R-AL	3.0-9.0	0.50-0.10												●	●	
		150508R-AL	3.0-9.0	0.50-0.10												●	●	
		190604R-AL	4.5-12.0	0.50-0.15												●	●	
		190608R-AL	4.5-12.0	0.50-0.15												●	●	

●: Standard items

3PKT-SM

Splitter Inserts



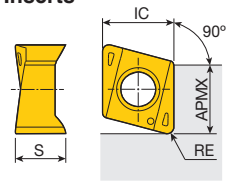
Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
15	10.7	5.0	11.0	1.6	0.8	
19	13.5	6.0	15.0	2.0	0.8	

Insert	Designation	Recommended machining conditions		Cermet	Coated							Uncoated	
		ap (mm)	Feed (mm/tooth)	CT7000	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	3PKT 150508-SM2	3.0-9.0	0.17-0.07		●	●		●			●		
	190608-SM2	4.5-12.0	0.22-0.09		●	●		●			●		
	3PKT 150508-SM3	3.0-9.0	0.17-0.07		●	●		●			●		
	190608-SM3	4.5-12.0	0.22-0.09		●	●		●			●		

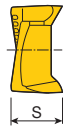
●: Standard items

4NK(H)T

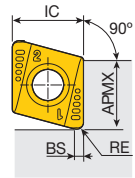
Inserts



4NKT M/ML

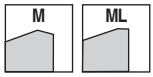


PNR-M



4NHT ML

Size	Dimension (mm)				
	IC	S	APMX	BS	RE
04	4.0	3.1	3.5	-	0.2-0.8
06	6.6	4.2-5.0	5.6-6.2	0.6-1.0	0.4-2.0
09	8.6	5.7-6.3	8.0	0.8-1.2	0.4-2.0
11	10.7	8.1	9.9-10.5	1.0	0.8-2.4
14	14.0	9.2-9.4	13.5-13.8	1.25	0.8

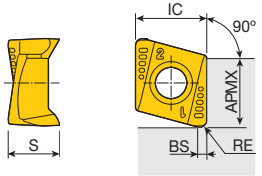


Insert	Designation		Recommended machining conditions		Coated								Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	TT2510	K10
	4NKT	**040202R-M**	0.5-3.0	0.08-0.04	●	●								
		040204R-M	1.0-3.0	0.12-0.06	●	●					●			
		040208R-M	1.0-3.0	0.12-0.06	●	●					●			
		060304R-M	0.5-5.0	0.15-0.07	●	●					●			
		060308R-M	1.0-5.0	0.15-0.07	●	●		●			●		●	
		060312R-M	1.0-5.0	0.15-0.07	●	●					●		●	
		060316R-M	2.0-4.5	0.15-0.07	●	●					●		●	
		060320R-M	2.0-4.5	0.15-0.07	●	●					●			
		090404R-M	2.5-7.0	0.15-0.07	●									
		090408R-M	2.5-7.0	0.15-0.07	●	●		●		●	●		●	
		090416R-M	2.5-7.0	0.15-0.07	●	●					●			
		090420R-M	2.5-7.0	0.15-0.07	●									
		110608R-M	3.5-10.0	0.18-0.09	●	●		●			●			
		110616R-M	2.5-9.5	0.18-0.09	●									
		110624R-M	2.5-9.5	0.18-0.09	●									
		140708R-M	4.0-12.0	0.18-0.09	●	●		●	●		●			
	4NKT	**110608 PNR-M**	3.5-10.0	0.18-0.09	●	●		●						
		140708 PNR-M	4.0-12.0	0.18-0.09	●	●		●						
	4NKT	**060304R-ML**	0.5-5.0	0.12-0.05	●	●					●			
		060308R-ML	1.0-5.0	0.12-0.05	●	●					●	●	●	
		060312R-ML	1.0-5.0	0.12-0.05	●	●					●			
		060316R-ML	2.0-4.5	0.12-0.05	●	●					●			
		060320R-ML	2.0-4.5	0.12-0.05	●	●					●			
		090408R-ML	2.5-7.0	0.10-0.05	●	●						●		
	4NHT	**060304R-ML**	0.5-5.0	0.13-0.05	●	●					●			
		060308R-ML	1.0-5.0	0.13-0.05	●	●					●		●	
		090404R-ML	2.5-7.0	0.12-0.05	●									
		090408R-ML	2.5-7.0	0.12-0.05	●	●								

●: Standard items

4NK(H)T

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
06	6.6	4.9	6.0	0.6-1.0	0.4-0.8	
09	8.6	6.2-6.3	8.0	0.8-1.2	0.4-0.8	
11	10.7	8.1	10.5	1.0	0.8	
14	11.0	8.7-9.3	13.5	0-1.19	0.8-3.0	

AL

Insert	Designation	Recommended machining conditions		Coated									Uncoated	
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	TT2510	TTA101	K10	
	4NHT 060304R-AL	1.0-5.0	0.40-0.10										●	●	
	060308R-AL	1.0-5.0	0.40-0.10										●	●	
	090404R-AL	2.5-7.0	0.50-0.10										●	●	
	090408R-AL	2.5-7.0	0.50-0.10										●	●	
	110608R-AL	3.5-10.0	0.50-0.10										●	●	
	140708R-AL	4.0-12.0	0.50-0.10											●	
	140716R-AL	4.0-12.0	0.50-0.10											●	
	140724R-AL	4.0-12.0	0.50-0.10											●	
	140730R-AL	4.0-12.0	0.50-0.10											●	

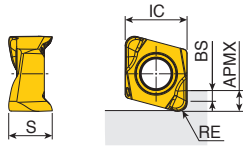
●: Standard items

E58-E59

E144-E147

4NHT-F

Inserts (Side wiper for side finishing)



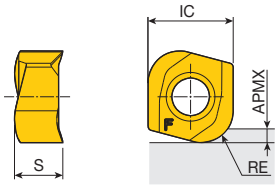
Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
04-05R	4.0	3.1	2.2	1.7	0.5	
04-10R	4.0	3.0	2.0	1.0	1.0	
06-05R	6.6	4.9	2.3	1.8	0.5	
06-10R	6.6	4.7	2.1	1.1	1.0	
06-15R	6.6	4.5	3.3	1.8	1.5	
06-20R	6.6	4.3	3.0	1.1	2.0	

Insert	Designation		Recommended machining conditions		Coated								Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	4NHT	**040205R-F**	0.2-2.0	0.30-0.07								●	
		040210R-F	0.2-1.8	0.30-0.07								●	
		060305R-F	0.2-2.0	0.30-0.07	●							●	
		060310R-F	0.2-1.8	0.30-0.07	●							●	
		060315R-F	0.2-3.0	0.30-0.07	●							●	
		060320R-F	0.2-2.7	0.30-0.07	●							●	

●: Standard items

4NKT-HF

High feed inserts

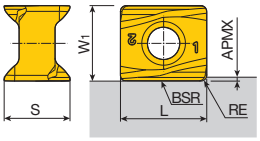


Size	Dimension (mm)					
	IC	S	APMX	RE		
04-HF	4.0	2.65	0.5	1.2		
06-HF	6.6	3.85	1.0	2.0		
09-HF	8.6	4.76	1.5	3.2		
11-HF	10.7	6.56	2.0	4.0		
14-HF	14.0	7.34	3.0	5.0		

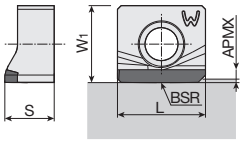
Insert	Designation		Recommended machining conditions		Coated							Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8625	TT7515	TT7080	TT6080	TT2510	K10
	4NKT	**040212R-HF**	0.2-0.4	0.60-0.10	●						●	
		060320R-HF	0.2-0.6	0.80-0.20	●	●	●				●	
		090432R-HF	0.3-0.8	1.00-0.20	●		●				●	
		110640R-HF	0.3-1.2	1.20-0.30	●		●					
		140750R-HF	0.3-1.5	1.50-0.30	●		●					

●: Standard items

Inserts

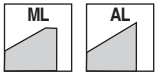


ML/AL



PCD / CBN

Size	Dimension (mm)					
	L	W1	S	APMX	RE	BSR
12-ML/AL	12	10.5	9.08	0.5	0.8	1000
12-PCD	12	10.5	6.74	0.5	-	1000
12-CBN	12	10.63	6.71	0.5	-	1000

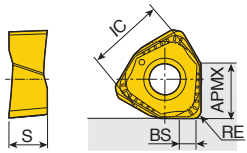


Insert	Designation	Recommended machining conditions		Cermet	Coated					Uncoated		PCD	CBN
		ap (mm)	Feed (mm/tooth)	CT7000	TT9080	TT9030	TT6080	TT2510	TTA101	K10		TD1010	TB7015
	4WHU 1207-ML	0.25-0.5	0.20-0.10		●		●	●					
	4WHU 1207-ML	0.25-0.5	0.20-0.10	●									
	4WHU 1207-AL	0.25-0.5	0.20-0.10						●	●			
	4WHU 1207-PCD	0.25-0.5	0.20-0.10									●	
	4WHU 1207-CBN	0.25-0.5	0.20-0.10										●

●: Standard items

6NGU

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
06	9.26	4.76	6.2	1.2-2.4	0.4-1.6	
09	13.05	6.70	9.2	1.2-2.2	0.4-1.6	

Insert	Designation		Recommended machining conditions		Coated									Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	TT2510	K10
	6NGU	**060404R-M**	1.5-5.0	0.15-0.08	●	●			●		●		●	
		060405R-M	1.5-5.0	0.15-0.08	●									
		060408R-M	1.5-5.0	0.15-0.08	●	●	●	●	●		●		●	
		060410R-M	1.5-5.0	0.15-0.08	●						●			
		060416R-M	1.5-5.0	0.15-0.08	●	●			●		●			
		090504R-M	2.5-7.5	0.20-0.10	●	●			●		●		●	
		090508R-M	2.5-7.5	0.20-0.10	●	●	●	●	●	●	●		●	
		090516R-M	2.5-7.5	0.20-0.10	●	●		●	●	●	●			
	6NGU	**060404R-ML**	1.5-5.0	0.10-0.05	●	●					●			
		060405R-ML	1.5-5.0	0.10-0.05	●									
		060408R-ML	1.5-5.0	0.10-0.05	●	●	●		●		●	●		
		060416R-ML	1.5-5.0	0.10-0.05	●	●					●			
		090504R-ML	2.5-7.5	0.10-0.05	●	●					●			
		090508R-ML	2.5-7.5	0.10-0.05	●	●	●		●		●			
		090516R-ML	2.5-7.5	0.10-0.05	●	●					●			
	6NGU	**060404R-AL**	1.5-5.0	0.40-0.10										●
		060408R-AL	1.5-5.0	0.40-0.10										●
		090504R-AL	2.5-7.5	0.40-0.10										●
		090508R-AL	2.5-7.5	0.40-0.10										●

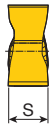
●: Standard items

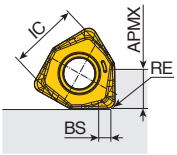
E49 E125-E126

6NKU 04

MILL2RUSH

Inserts





Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
04	7	3.9	4.1	0.85-1.25	0.4-0.8	

M

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	6NKU 040304R-M	1.0-3.0	0.10-0.05	●	●					●	●	
	040308R-M	1.0-3.0	0.10-0.05	●	●					●	●	

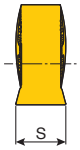
●: Standard items

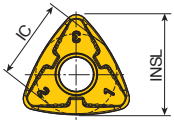
E48 E125-E126

6RBE

CHASE2BALL

Inserts





Size	Dimension (mm)					
	IC	S	INSL			
6RBE 50	13	8	16			

M

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	6RBE 50-M	1.0-5.0	0.80-0.10	●		●	●	●			●	●	

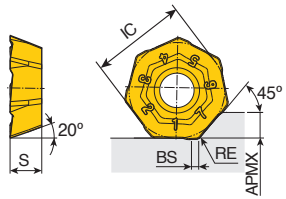
●: Standard items

E179-E180

7EMT

CHASE HEPTA

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
06	12.8	4.2	3.2	1.0	0.8	

M ML

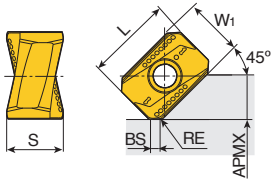
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	7EMT 0604 AETR-M	1.0-2.5	0.15-0.06	●	●			●		●		
	7EMT 0604 AETR-ML	1.0-2.5	0.15-0.06	●	●					●		

●: Standard items

ANHX 1607 ANR-M

CHASE 2 MILL

Inserts



Size	Dimension (mm)					
	L	W1	S	APMX	BS	RE
16	16	11	10.4	8.4	1.6	1.0

M

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	ANHX 1607 ANR-M	2.5-7.0	0.30-0.15	●		●		●	●		●	

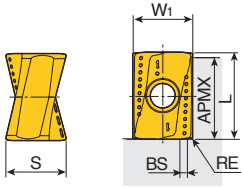
▸ Use only for 45° cutter

●: Standard items

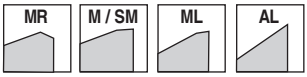
ANM(H)X

CHASE2MILL

Inserts



Size	Dimension (mm)					
	L	W_1	S	APMX	BS	RE
11	12	9.2	8.5	11	0.7-1.5	0.4-1.6
16	16	11.0	10.4-10.9	15	0.6--1.7	0.4-2.4

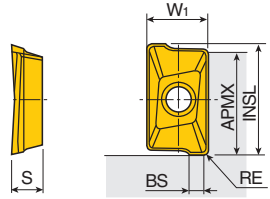


Insert	Designation		Recommended machining conditions		Coated									Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	ANMX	**110608R-M**	3.0-9.0	0.20-0.10	●		●							
		160708R-M	4.5-12.0	0.20-0.10	●		●							
	ANHX	**110604R-M**	3.0-9.0	0.15-0.08	●		●					●	●	
		110608R-M	3.0-9.0	0.15-0.08	●		●	●		●	●	●	●	
		110616R-M	3.0-9.0	0.15-0.08	●		●						●	
		160704R-M	4.5-12.0	0.20-0.10	●	●	●			●		●	●	
		160708R-M	4.5-12.0	0.20-0.10	●	●	●	●	●	●	●	●	●	
		160716R-M	4.5-12.0	0.20-0.10	●		●			●		●	●	
		160720R-M	4.5-12.0	0.20-0.10						●				
		160724R-M	4.5-12.0	0.20-0.10	●		●			●		●	●	
	ANHX	**110608R-ML**	3.0-9.0	0.15-0.08	●		●							
		160708R-ML	4.5-12.0	0.12-0.06			●	●						
	ANHX	**160708R-MR**	4.5-12.0	0.25-0.13			●							
	ANHX	**110604R-AL**	3.0-9.0	0.40-0.10										●
		110608R-AL	3.0-9.0	0.40-0.10										●
		160704R-AL	4.5-12.0	0.40-0.10										●
		160708R-AL	4.5-12.0	0.40-0.10										●
	ANHX	**110608R-SM**	3.0-9.0	0.15-0.08	●		●		●			●		
		160708R-SM	4.5-12.0	0.20-0.10	●		●					●		

●: Standard items

APK(C)T 09

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
09	9.7-10.6	6.20	3.8	8.8	0.5-1.79	0.4-3.2
09T3 PER	9.8-9.9	6.20	3.8	8.8	0-1.14	0.4

Insert	Designation		Recommended machining conditions		Cermet	Coated									Uncoated
			ap (mm)	Feed (mm/tooth)	CT7000	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	TTA101	K10
	APKT	**09T3 PER-EM**	2.5-7.5	0.10-0.05	●	●	●	●	●	●	●		●	●		●
		09T305R-EM	2.5-7.5	0.10-0.05					●							
		09T308R-EM	2.5-7.5	0.10-0.05		●	●	●	●		●		●	●		
		09T316R-EM	2.5-7.5	0.10-0.05		●	●	●	●		●		●	●		
		09T320R-EM	2.5-7.5	0.10-0.05		●		●						●		
		09T332R-EM	2.5-7.5	0.10-0.05		●		●						●		
		09T3 PER-M	2.5-7.5	0.10-0.05					●		●		●	●		
	APCT	**09T3 PER-ML**	3.0-7.5	0.10-0.05		●		●	●		●		●			
	APCT	**09T3 PER-AL**	2.5-7.5	0.35-0.05											●	●

●: Standard items

E53

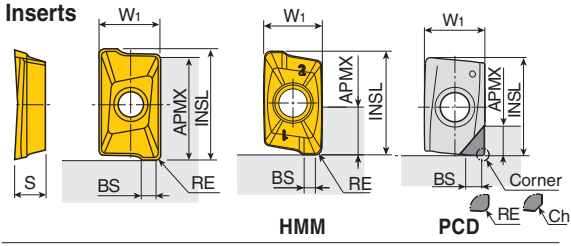
E133-E134,E176

E222

APK(C)T 12

CHASEMILL

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE(ch)
12	13.0-14.6	8.3	4.5-4.9	11.8-12.5	0.9-2.1	0.4-4.0
1204 PER	13.4-14.6	8.3	4.5-4.9	11.8-12.5	0.9-2.1	0.8
1204-HMM	14.6	8.3	4.7	6.5	1.6	0.8
12...R-PCD	13.3	8.2	4.5	3.5	2	0.4
12...C-PCD	13.3	8.2	4.5	3.5	2.1	(0.25)
12...-L	13.0	8.3	4.75	11.8		0.4

Insert	Designation	Recommended machining conditions		PCD	Coated										Uncoated
		ap (mm)	Feed (mm/tooth)	TD1030	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	TTD620	TTA101	K10
	APKT 1204 PER-EM	3.5-10.0	0.14-0.07		●	●	●	●	●	●	●	●	●			
	120404R-EM	3.5-10.0	0.14-0.07			●		●		●		●	●			
	120416R-EM	3.5-10.0	0.14-0.07		●	●	●	●	●	●		●	●			
	120420R-EM	3.5-10.0	0.14-0.07		●											
	120424R-EM	3.5-10.0	0.14-0.07			●	●	●					●			
	120430R-EM	3.5-10.0	0.14-0.07		●	●	●	●	●	●		●	●			
	120432R-EM	3.5-10.0	0.14-0.07			●		●				●	●			
	120440R-EM	3.5-10.0	0.14-0.07		●		●						●			
	APKT 1204 PER-SM	3.5-10.0	0.14-0.07		●		●		●			●				
	APKT 1204 PER-SML	3.5-10.5	0.14-0.06		●		●									
	APKT 1204 PER-EML	3.5-10.0	0.08-0.04		●		●									
	APKT 1204 PER-EL	3.5-10.0	0.05-0.03		●	●	●	●								
	APKT 1204 PER-HMM	3.5-6.5	0.12-0.05		●											
	APCT 120430R-ML	3.5-10.0	0.08-0.04		●		●									
	120432R-ML	3.5-10.0	0.08-0.04		●		●									
	120440R-ML	3.5-9.5	0.08-0.04		●		●									
	APCT 120404R-L	3.5-9.5	0.08-0.04											●		
	APCT 1204 PER-AL	3.5-10.0	0.50-0.10												●	●
	120404R-AL	3.5-10.0	0.50-0.10												●	●
	120416R-AL	3.5-10.0	0.50-0.10												●	●
PCD	**APCT 120404R-PCD35**	0.2-3.0	0.30-0.05	●												
	1204C025-PCD35	0.2-3.0	0.30-0.05	●												

●: Standard items

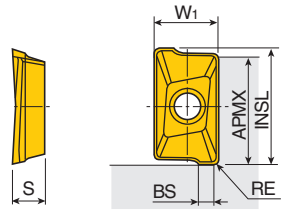
E54-E55

E135-E136,E176

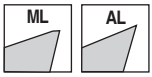
E222-E223

E330-E331

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
17-ML	18.5	10.8	5.55	16.1	2.07	0.8
17-AL	18.3-18.5	10.8	5.62	16.1	1.55-2.56	0.8-3.0
17-SAL	18.5	10.8	5.62	16.1	2.56	0.8

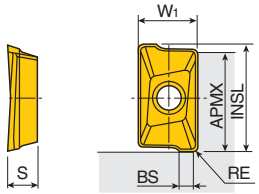


Insert	Designation	Recommended machining conditions		Coated									Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	TTA101	K10
	APCT 1705 PER-ML	4.5-13.0	0.12-0.06	●		●								
	APCT 1705 PER-AL	4.5-13.0	0.50-0.10										●	●
	170530R-AL	4.5-13.0	0.50-0.10										●	●
	APCT 1705 PER-SAL	4.5-13.0	0.50-0.10											●

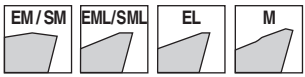
●: Standard items

APKT 17

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
17	16.8–18.5	10.7	5.56	15-16	0.9-3.17	0.4-6.4
17 PER	18.5-18.9	10.7	5.56-6.5	16	0.9-3.17	0.8

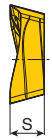


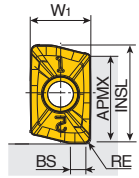
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	APKT 1705 PER-EM	4.5-13.0	0.18-0.09	●	●	●	●	●	●		●	●	●
	170504R-EM	4.5-13.0	0.18-0.09	●		●	●		●		●	●	
	170510R-EM	4.5-13.0	0.17-0.09	●	●	●		●	●		●	●	
	170516R-EM	4.5-13.0	0.17-0.09	●	●	●	●		●		●	●	
	170524R-EM	4.5-13.0	0.17-0.09	●	●	●	●	●	●		●	●	
	170530R-EM	4.5-13.0	0.17-0.09	●	●	●	●		●			●	
	170532R-EM	4.5-13.0	0.17-0.09	●	●	●	●	●	●		●	●	
	170535R-EM	4.5-13.0	0.17-0.09	●	●						●	●	
	170540R-EM	4.5-13.0	0.20-0.10	●	●		●					●	
	170548R-EM	4.5-13.0	0.17-0.09	●	●	●	●	●	●	●	●	●	
	170550R-EM	4.5-13.0	0.20-0.10		●		●					●	
	170564R-EM	4.5-13.0	0.18-0.09	●	●	●	●		●		●	●	
	APKT 1705 PER-M	4.5-13.0	0.18-0.09				●		●		●	●	●
	170516R-M	4.5-13.0	0.20-0.10				●						
	170532R-M	4.5-13.0	0.20-0.10				●		●		●	●	
	170548R-M	4.5-13.0	0.20-0.10				●						
	APKT 1705 PER-SM	4.5-13.0	0.17-0.09	●		●		●			●		
	APKT 1705 PER-SML	4.5-14.5	0.17-0.06	●		●							
	APKT 1705 PER-EML	4.5-13.0	0.14-0.07	●		●			●				
	APKT 1705 PER-EL	4.5-13.0	0.10-0.05	●	●	●	●	●					

●: Standard items

APKT 19

Inserts





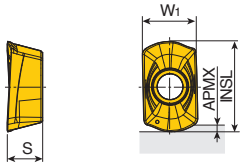
Size	Dimension (mm)					
	INSL	W_1	S	APMX	BS	RE
19	21	13	7.35	17.9	2.0	1.2

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	APKT 190712R-M	5.0-15.0	0.20-0.07	●		●		●	●		●	●	
	APKT 190712R-MR	5.0-15.0	0.25-0.10	●		●		●	●			●	
	APKT 190712R-ML	5.0-15.0	0.20-0.08								●		

●: Standard items

APKT/AXMT-HF

High feed inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX		
06	6.7	4.04	2.6	0.5		
09	10.7	5.94	3.9	1.0		
12	14.2	8.0	5.0	1.2		

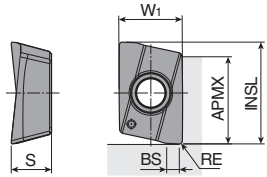
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	AXMT 0602R-HF	0.2-0.5	0.70-0.30	●		●						●	
	APKT 09T3R-HF	0.1-1.0	0.80-0.30	●		●						●	
	1204R-HF	0.2-1.0	0.80-0.10	●		●						●	

●: Standard items

AXCT 06-L

CHASEMILL

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
06	6.5	4.2	2.6	5.5	0.6-1.0	0-0.4

L

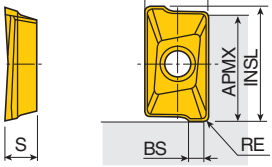
Insert	Designation		Recommended machining conditions		Coated									Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT5525	TTD620	K10
	AXCT	**060200R-L**	0.1-5.0	0.08-0.03									●		
		060202R-L	0.2-5.0	0.10-0.03									●		
		060204R-L	0.3-5.0	0.10-0.03									●	●	

●: Standard items

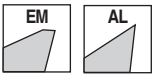
ADVANCE CUTTING TaeguTec

AXM(C)T 06

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
06-EM	6.7	4.15	2.6	5.5	0-0.76	0.2-2.0
06-AL	6.7	4.20	2.6	5.5	0.23-0.83	0.2-0.8

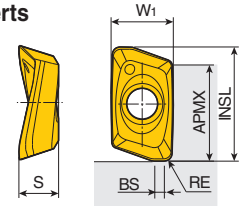


Insert	Designation	Recommended machining conditions		Coated									Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT5525	TT2510	K10
	AXMT 0602 PER-EM	1.5-5.0	0.08-0.04	●	●	●	●						●	
	060204R-EM	1.5-5.0	0.13-0.07	●	●	●	●				●		●	
	060208R-EM	1.5-5.0	0.13-0.07	●	●	●	●				●		●	
	060216R-EM	1.5-5.0	0.13-0.07	●	●	●	●						●	
	060220R-EM	1.5-5.0	0.13-0.07	●		●								
	AXCT 060202R-AL	1.5-5.0	0.20-0.10											●
	060204R-AL	1.5-5.0	0.20-0.10											●
	060208R-AL	1.5-5.0	0.20-0.10											●

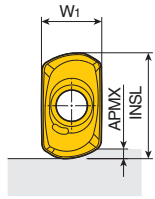
●: Standard items

AVK(C)T 10

Inserts

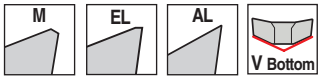


M / EL / AL



HF (High Feed)

Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
10-M/EL	10.8-12.5	6.8	3.8-4.3	9.3-10	0-1.4	0.4-4.0
10-HF	11.6	6.6	4.4	1.0	-	-
10-AL	11.3-12.5	6.7-6.8	4.0-4.5	9.5-10.1	0-1.2	0.4-3.2



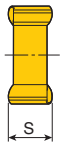
Insert	Designation		Recommended machining conditions		Coated									Uncoated		
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	TTA101	K10	
	AVKT	**1004 PER-M**	2.5-8.0	0.12-0.06	●		●			●		●				
		100404R-M	2.5-8.0	0.12-0.06	●											
		100412R-M	2.5-8.0	0.12-0.06	●											
		100416R-M	2.5-8.0	0.12-0.06	●											
		100420R-M	2.5-8.0	0.12-0.06	●											
		100424R-M	2.5-8.0	0.12-0.06	●											
		100432R-M	2.5-8.0	0.12-0.06	●											
		100440R-M	2.5-8.0	0.12-0.06	●											
	AVKT	**1004 PER-EL**	2.5-8.0	0.06-0.03			●						●			
		100416R-EL	2.5-8.0	0.06-0.03			●						●			
		100432R-EL	2.5-8.0	0.06-0.03			●						●			
	AVKT	**1004R-HF**	0.1-1.0	0.80-0.30	●		●		●				●			
	AVCT	**100404R-AL**	2.5-8.0	0.50-0.10										●	●	
		1004 PER-AL	2.5-8.0	0.50-0.10										●	●	
		100416R-AL	2.5-8.0	0.50-0.10											●	
		100420R-AL	2.5-8.0	0.50-0.10											●	
		100430R-AL	2.5-8.0	0.50-0.10											●	
		100432R-AL	2.5-8.0	0.50-0.10											●	

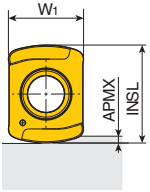
●: Standard items

BLMP

CHASE4FEED HIGH FEED MILL

High feed inserts





Size	Dimension (mm)					
	INSL	W1	S	APMX		
04	6.0	4.2	2.5	0.5		
06	9.0	6.39	3.73	1.0		
09	11.9	9.20	4.79	1.5		
11	14.6	11.2	6.54	2.0		

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	BLMP 0402R-M	0.1-0.5	1.50-0.20	●	●						●	
	0603R-M	0.1-1.0	2.50-0.30	●	●	●	●			●	●	
	0904R-M	0.1-1.5	3.50-0.30	●	●	●	●		●	●	●	
	1105R-M	0.3-2.0	4.00-0.30	●	●	●	●				●	
	BLMP 0603R-MM	0.1-1.0	2.00-0.20	●	●	●					●	
	0904R-MM	0.1-1.5	3.00-0.20	●	●	●					●	
	BLMP 0402R-ML	0.1-0.5	0.80-0.10	●	●							
	0603R-ML	0.1-1.0	0.80-0.10	●	●	●						
	0904R-ML	0.1-1.5	0.80-0.30	●	●	●						
	1105R-ML	0.3-2.0	0.40-0.30	●	●							

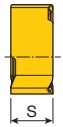
●: Standard items

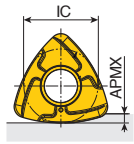
E105-E106

E191-E198

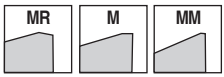
BLMP 13

High feed inserts





Size	Dimension (mm)					
	IC	S	APMX			
13	12.3	7	2.0			



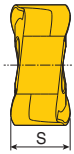
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	BLMP 1306R-M	0.5-2.0	4.50-0.40	●	●	●	●		●	●	●	
	BLMP 1306R-MM	0.5-2.0	4.50-0.40	●	●	●	●				●	
	BLMP 1306R-MR	0.5-2.0	4.50-0.40	●	●	●	●		●		●	

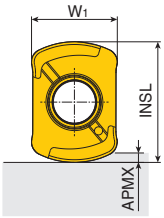
●: Standard items

BLMV 06

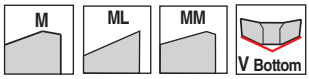
WIN4FEED

High feed inserts





Size	Dimension (mm)					
	INSL	W1	S	APMX		
06	9	6.4	4.43	1.0		

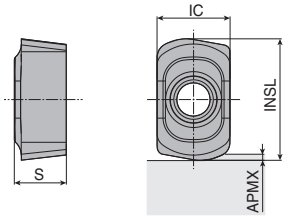


Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT3535	TT3520	TT2510	K10
	BLMV 0603R-M	0.1-1.0	2.50-0.35	●		●		●				●	
	BLMV 0603R-ML	0.1-1.0	0.80-0.12	●		●				●	●		
	BLMV 0603R-MM	0.1-1.0	2.00-0.25	●		●				●	●	●	

●: Standard items

BCGT 04

High feed inserts



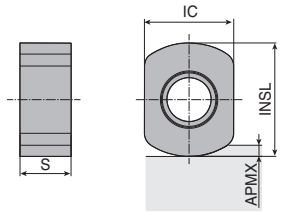
Size	Dimension (mm)					
	INSL	IC	S	APMX		
04	7	4.2	3	0.35		

Insert	Designation	Recommended machining conditions		Ceramic		Coated								Uncoated		
		ap (mm)	Feed (mm/tooth)	TC3030	TC3020	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10		
	BCGT 0403G	0.1-0.3	0.20-0.08	●												

●: Standard items

BNGT 06

High feed inserts



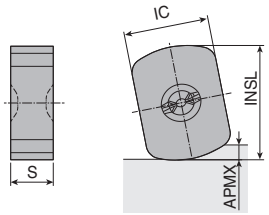
Size	Dimension (mm)					
	INSL	IC	S	APMX		
06	8	6.3	3.6	1.0		

Insert	Designation	Recommended machining conditions		Ceramic		Coated								Uncoated		
		ap (mm)	Feed (mm/tooth)	TC3030	TC3020	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10		
	BNGT 0603K-E	0.4-0.8	0.30-0.10	●												

●: Standard items

BNGX 06/09

High feed inserts



Size	Dimension (mm)					
	INSL	IC	S	APMX		
06	8	6	3	1.0		
09	12	9	5	1.5		

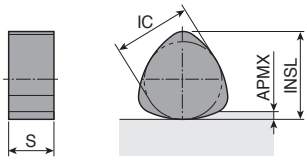
Insert	Designation	Recommended machining conditions		Ceramic		Coated								Uncoated		
		ap (mm)	Feed (mm/tooth)	TC3030	TC3020	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10		
	BNGX 0603 CH-E04	0.4-0.8	0.30-0.10	●												
	0904 CH-E04	0.5-1.0	0.35-0.15	●												

▸ E04: Honing 0.04-0.05 mm

●: Standard items

BNGX 12

High feed inserts



Size	Dimension (mm)					
	INSL	IC	S	APMX		
12	13.6	12	7	2.5		

Insert	Designation	Recommended machining conditions		Ceramic		Coated								Uncoated		
		ap (mm)	Feed (mm/tooth)	TC3030	TC3020	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10		
	BNGX 1207-E04	1.0-2.0	0.35-0.15	●												

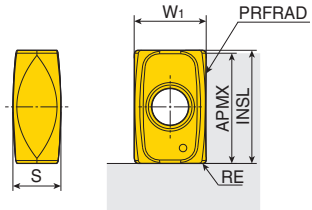
▸ E04: Honing 0.04-0.05 mm

●: Standard items

BRHU 06/12

SFEEDBARREL

Inserts



Size	Dimension (mm)					
	W1	S	APMX	INSL	RE	PRFRAD
06	4.2	2.8	6.4	6.6	0.2	20
12	7	4.56	12.2	12.4	0.2	30

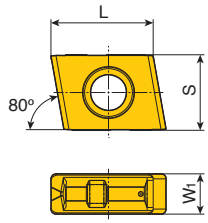
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT5515	TT2510	K10
	BRHU 06R2002-L	-	0.15-0.08								●		
	12R3002-L	-	0.20-0.08								●		

●: Standard items

CNHX

TRIOBALL

Inserts



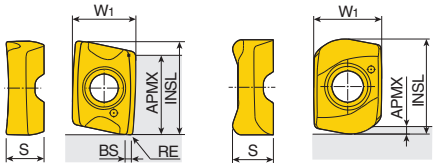
Size	Dimension (mm)					
	L	S	W1			
13	12.7	11	5.4			
16	16.0	12	6.4			

Insert	Designation	Recommended machining conditions		Coated							Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	CNHX 131108T	1.2-5.5	0.55-0.17					●				
	160608T	1.2-5.5	0.60-0.20					●				

●: Standard items

ADVANCE CUTTING TaeguTec

Inserts



M / L / AL　　HF (High Feed)

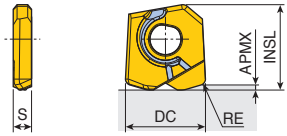
Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
05-M	6.2-6.3	4.2	2.6	5.0	0.3	0.2-0.4
05-L/AL	6.3	4.1	2.6	5.0	0.3	0.2
05-HF	5.6	4.1	2.5	0.5	-	-

Insert	Designation	Recommended machining conditions		Coated										Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT5525	TT3535	TT2510	UF10		
	CVKT 0502PNR-M	0.5-4.0	0.08-0.04	●		●								●			
	050204R-M	0.5-4.0	0.08-0.04	●		●											
	CVHT 0502PNR-L	0.5-4.0	0.07-0.03	●		●						●					
	CVHT 0502PNR-AL	0.5-4.0	0.20-0.07												●		
	CVKT 0502R-HF	0.2-0.4	0.70-0.30	●		●							●	●			

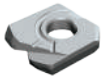
●: Standard items

E113-E114

High feed inserts



Size	Dimension (mm)					
	INSL	DC	S	APMX	RE	
06	5.9	6	1.6	0.3	0.5	
08	8.4	8	1.8	0.5	0.6	

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT5515	K10
	**HFN 060-M**	0.1-0.2	0.50-0.30									●	
	080-M	0.2-0.3	0.50-0.30									●	

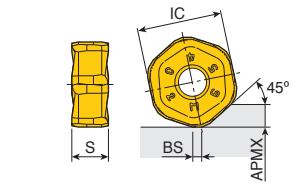
●: Standard items

E181-E182

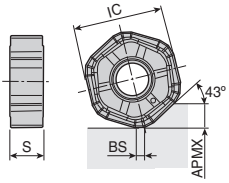
ADVANCE CUTTING TaeguTec

HXK(H)U

Inserts

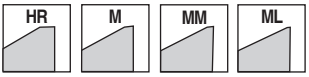


HR / M / MM / ML



CE

Size	Dimension (mm)					
	IC	S	APMX	BS		
06-MM	14	6.8	3.0	1.3		
06-M/ML	14	6.8	3.0	1.0		
06-CE	14	5.4	3.0	1.0		
10-MM	19.05	8.3	5.0	1.6		
10-M/HR/ML	19.05	8.3	5.0	1.0		
10-MM	19.05	6.3	5.0	1.2		
10-CE	19.05	6.3	5.0	1.2		



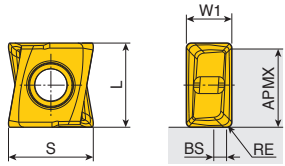
Insert	Designation	Recommended machining conditions		Ceramic	Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	AS10	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	K10
	HXKU 1007 ANR-HR	2.0-5.0	0.60-0.10		●				●		●			
	HXKU 0605 ANR-M	1.0-3.0	0.35-0.10		●				●			●		
	1007 ANR-M	2.0-5.0	0.45-0.10		●				●			●		
	HXHU 0605 ANR-MM	1.0-3.0	0.25-0.10		●							●		
	1007 ANR-MM	2.0-5.0	0.30-0.10		●							●		
	HXKU 0605 ANR-ML	1.0-3.0	0.25-0.10		●		●						●	
	1007 ANR-ML	2.0-5.0	0.30-0.10		●		●						●	
	HXKU 0605-CE	1.0-2.5	0.25-0.13	●										
	1007-CE	1.0-4.0	0.25-0.15	●										

●: Standard items

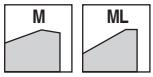
E79-E80

LPK(H)U

Inserts



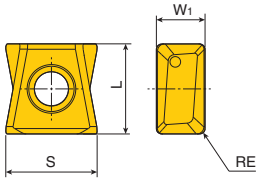
Size	Dimension (mm)					
	L	W1	S	APMX	BS	RE
05	5	2.7	4.9-5.03	4.6	-	0-0.8
09	9	4.5	8.3-8.6	8.3	0-0.6	0.4-1.6
14	13.5	6.7	13.1-13.5	12.5	0-0.9	0.8-2.4



Insert	Designation		Recommended machining conditions		Coated									Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT5525	K10
	LPKU	**050204 PNR-M**	1.0-3.5	0.08-0.04	●		●					●		
		050208 PNR-M	1.0-3.5	0.08-0.04	●							●		
		090404 PNR-M	2.5-6.0	0.15-0.06	●		●		●			●		
		090408 PNR-M	2.5-6.0	0.15-0.06	●		●		●			●		
		090412 PNR-M	2.5-6.0	0.15-0.06	●				●			●		
		090416 PNR-M	3.5-10.0	0.20-0.10	●		●		●			●		
		140708 PNR-M	3.5-10.0	0.20-0.10	●		●		●			●		
		140716 PNR-M	3.5-10.0	0.20-0.10	●				●			●		
		140724 PNR-M	3.5-10.0	0.20-0.10	●				●			●		
	LPHU	**050200 PNR-ML**	0.1-3.5	0.08-0.03									●	
		050202 PNR-ML	0.2-3.5	0.10-0.03									●	
		050204 PNR-ML	0.3-3.5	0.10-0.03	●		●					●	●	
	LPHU	**090404 PNR-M**	2.5-6.0	0.15-0.06			●					●		

●: Standard items

Inserts



Size	Dimension (mm)					
	L	W1	S	APMX	BS	RE
05	5	2.7	5.0	-	-	0.4

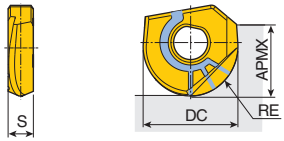
ML

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT5525	K10
	LXHU 05-04-ML	-	0.08-0.04	●		●							

●: Standard items

E241-E242

Inserts



Size	Dimension (mm)			
	DC	S	APMX	RE
060	6	2.0	4.5-4.8	3.0
080	8	2.2	6.6-6.9	4.0
100	10	2.7	8.0-8.2	5.0
120	12	3.2	9.6-9.7	6.0
160	16	4.2	12.3-12.7	8.0
200	20	5.2	14.4-14.7	10.0
250	25	6.2	16.8-17.4	12.5
300	30	7.2	18.6-19.2	15.0
320	32	7.2	18.4-19.2	16.0

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8625	TT7080	TT7515	TT6080	TT5525	TT5515	TT2510	K10
Straight cutting edge	**NFB 060-FM**	0.05-0.2	0.15-0.05								●		
	080-FM	0.05-0.3	0.20-0.05							●	●		
	100-FM	0.05-0.3	0.20-0.05							●	●		
	120-FM	0.05-0.5	0.30-0.08							●	●		
	160-FM	0.05-0.5	0.30-0.08							●	●		
	200-FM	0.10-1.0	0.30-0.08							●	●		
	250-FM	0.15-1.0	0.40-0.08							●	●		
	300-FM	0.15-1.0	0.40-0.08							●	●		
	320-FM	0.15-1.0	0.40-0.08							●	●		
Helical cutting edge	**NFB 060-SM**	0.80-2.5	0.20-0.05								●	●	
	080-SM	1.20-3.2	0.25-0.05							●	●	●	
	100-SM	1.50-4.0	0.25-0.05							●	●	●	
	120-SM	1.80-4.8	0.35-0.08							●	●	●	
	160-SM	2.40-6.4	0.35-0.08							●	●	●	
	200-SM	3.00-8.0	0.35-0.08							●	●	●	
	250-SM	3.75-10.0	0.45-0.08							●	●	●	
	300-SM	4.50-12.0	0.45-0.08							●	●	●	
	320-SM	4.80-12.8	0.45-0.08							●	●	●	

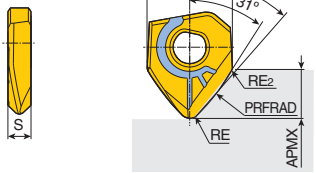
●: Standard items

E168-E170

NFCB

FINEBARREL

Inserts



Size	Dimension (mm)					
	DC	S	APMX	RE	PRFRAD	RE_2
080	8	2.2	4.3	1.0	20	0.6
100	10	2.7	5.4	1.2	25	0.8
120	12	3.2	6.4	1.5	30	1.0
160	16	4.2	8.5	2.0	40	1.3
200	20	5.2	10.7	2.5	50	1.6
250	25	6.2	13.5	3.0	62.5	2.0
300	30	7.2	16.3	3.5	75	2.4

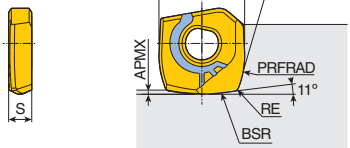
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT5515	K10
	NFCB 080-R20	-	0.12-0.05									●	
	100-R25	-	0.12-0.05									●	
	120-R30	-	0.15-0.08									●	
	160-R40	-	0.15-0.08									●	
	200-R50	-	0.15-0.08									●	
	250-R62.5	-	0.15-0.08									●	
	300-R75	-	0.20-0.08									●	

●: Standard items

NFLB

FINEBARREL

Inserts



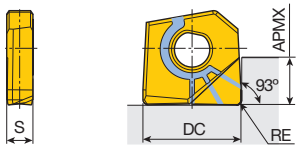
Size	Dimension (mm)					
	DC	S	APMX	RE	BSR	PRFRAD
120	12	3.2	0.4	0.7	24	12
160	16	4.2	0.6	0.8	32	16
200	20	5.2	0.7	1	40	20
250	25	6.2	0.9	1.3	50	25
300	30	7.2	1.1	1.5	60	30

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT5515	K10
	NFLB 120-L24-B12	-	0.15-0.08									●	
	160-L32-B16	-	0.15-0.08									●	
	200-L40-B20	-	0.15-0.08									●	
	250-L50-B25	-	0.15-0.08									●	
	300-L60-B30	-	0.20-0.08									●	

●: Standard items

E168-E170

Inserts



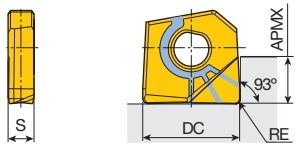
Size	Dimension (mm)					
	DC	S	APMX	RE		
060	6	2.0	2.5	0.3-1.0		
080	8	2.2	3.4	0.3-1.0		
100	10	2.7	4.0	0.3-2.0		
110	11	2.7	4.4	0.3-2.0		
120	12	3.2	5.0	0.3-2.0		
130	13	3.2	5.4	0.3-2.0		
160	16	4.2	6.9	0.3-3.0		
170	17	4.2	7.4	1.0-2.0		

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8625	TT7080	TT7515	TT6080	TT5525	TT5515	TT2510	K10
	NFR 060A-R03	0.05-0.15	0.10-0.05								●		
	060A-R05	0.10-0.15	0.10-0.05								●		
	060A-R10	0.10-0.15	0.10-0.05								●		
	080A-R03	0.05-0.2	0.12-0.05							●	●	●	
	080A-R05	0.05-0.2	0.12-0.05							●	●	●	
	080A-R06	0.05-0.2	0.12-0.05							●	●	●	
	080A-R10	0.05-0.2	0.12-0.05							●	●	●	
	100A-R03	0.05-0.3	0.12-0.05							●	●	●	
	100A-R05	0.05-0.3	0.12-0.05							●	●	●	
	100A-R08	0.05-0.3	0.12-0.05							●	●	●	
	100A-R10	0.05-0.3	0.12-0.05							●	●	●	
	100A-R15	0.05-0.3	0.12-0.05							●	●	●	
	100A-R20	0.05-0.3	0.12-0.05								●	●	
	110A-R10	0.05-0.3	0.12-0.05							●	●	●	
	110A-R20	0.05-0.3	0.12-0.05							●	●	●	
	120A-R03	0.07-0.3	0.15-0.08							●	●	●	
	120A-R05	0.07-0.3	0.15-0.08							●	●	●	
	120A-R10	0.07-0.3	0.15-0.08							●	●	●	
	120A-R15	0.07-0.3	0.15-0.08							●	●	●	
	120A-R20	0.07-0.3	0.15-0.08							●	●	●	
	130A-R10	0.07-0.3	0.15-0.08							●	●	●	
	130A-R20	0.07-0.3	0.15-0.08							●		●	
	160A-R03	0.08-0.5	0.15-0.08							●	●	●	
	160A-R05	0.08-0.5	0.15-0.08							●	●	●	
	160A-R10	0.08-0.5	0.15-0.08							●	●	●	
	160A-R13	0.08-0.5	0.15-0.08								●	●	
	160A-R15	0.08-0.5	0.15-0.08							●	●	●	
	160A-R20	0.08-0.5	0.15-0.08							●	●	●	
	160A-R30	0.08-0.5	0.15-0.08							●	●	●	
	170A-R10	0.08-0.5	0.15-0.08								●	●	
	170A-R20	0.08-0.5	0.15-0.08								●		

●: Standard items

E168-E173

Inserts



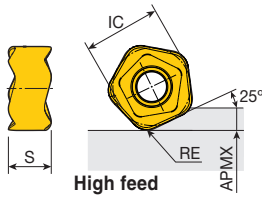
Size	Dimension (mm)					
	DC	S	APMX	RE		
200	20	5.2	8.7-9.2	0.3-3.0		
210	21	5.2	9.2	1.0-2.0		
250	25	6.2	10.6	0.3-3.0		
260	26	6.2	11	1.0-2.0		
300	30	7.1	12.7	1.0-2.0		
320	32	7.1	13.6	1.0-2.0		

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8625	TT7080	TT7515	TT6080	TT5525	TT5515	TT2510	K10
	NFR 200A-R03	0.1-0.7	0.15-0.08							●	●	●	
	200A-R05	0.1-0.7	0.15-0.08							●	●	●	
	200A-R10	0.1-0.7	0.15-0.08							●	●	●	
	200A-R15	0.1-0.7	0.15-0.08							●	●	●	
	200A-R16	0.1-0.7	0.15-0.08							●	●	●	
	200A-R20	0.1-0.7	0.15-0.08							●	●	●	
	200A-R30	0.1-0.7	0.15-0.08							●	●	●	
	210A-R10	0.1-0.7	0.15-0.08							●	●	●	
	210A-R20	0.1-0.7	0.15-0.08							●	●	●	
	250A-R03	0.1-1.0	0.15-0.08							●	●	●	
	250A-R05	0.1-1.0	0.15-0.08							●	●	●	
	250A-R10	0.1-1.0	0.15-0.08							●	●	●	
	250A-R15	0.1-1.0	0.15-0.08							●	●	●	
	250A-R20	0.1-1.0	0.15-0.08							●	●	●	
	250A-R30	0.1-1.0	0.15-0.08							●	●	●	
	260A-R10	0.1-1.0	0.15-0.08							●	●	●	
	260A-R20	0.1-1.0	0.15-0.08							●	●	●	
	300A-R05	0.1-1.0	0.20-0.08							●	●	●	
	300A-R10	0.1-1.0	0.20-0.08								●	●	
	300A-R20	0.1-1.0	0.20-0.08								●	●	
	320A-R10	0.1-1.0	0.20-0.08							●	●	●	
	320A-R20	0.1-1.0	0.20-0.08								●	●	

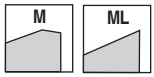
●: Standard items

E168-E173

Inserts



Size	Dimension (mm)					
	IC	S	APMX	RE		
05(HF)	7.1	3.8	1.5	1.5		
05(65°)	7.1	3.8	3.3	1.5		
10(HF)	14.2	7.7	3.0	3.0		
10(65°)	14.2	7.7	6.5	3.0		



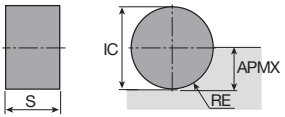
Insert	Designation	Recommended machining conditions		Coated									Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	TT2510	K10	
	PTKU 0503R-M (High feed)	0.2-1.5	1.20-0.20	●		●							●		
	1006R-M (High feed)	0.3-2.0	2.00-0.30	●		●		●					●		
	0503R-M (65°)	1.0-3.0	0.20-0.07	●		●							●		
	1006R-M (65°)	1.5-5.0	0.25-0.10	●		●		●					●		
	PTKU 0503R-ML (High feed)	0.2-1.5	1.00-0.20	●		●						●			
	1006R-ML (High feed)	0.3-2.0	1.20-0.30	●		●						●			
	0503R-ML (65°)	1.0-3.0	0.20-0.07	●		●						●			
	1006R-ML (65°)	1.5-5.0	0.25-0.10	●		●						●			

●: Standard items

RNGN 12-FL

CHASESPEED

Inserts



Size	Dimension (mm)					
	RE	IC	S	APMX		
12	6.35	12.7	7.94	6.3		

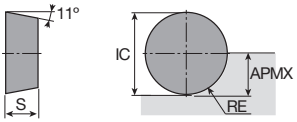
Insert	Designation	Recommended machining conditions		Ceramic		Coated							Uncoated
		ap (mm)	Feed (mm/tooth)	TC3020	TC3030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	RNGN 1207 FL-E	0.5-3.0	0.25-0.10	●	●								
	1207 FL-E04	0.5-3.0	0.25-0.10	●	●								
	1207 FL-T6	0.5-3.0	0.25-0.10	●	●								

●: Standard items

RPGN 09/12-FL

CHASESPEED

Inserts



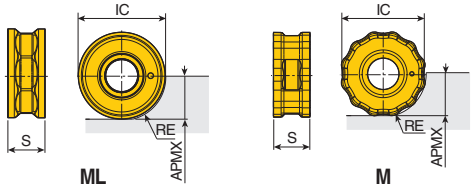
Size	Dimension (mm)					
	RE	IC	S	APMX		
09	4.76	9.52	3.18	4.7		
12	6.35	12.7	4.76	6.3		

Insert	Designation	Recommended machining conditions		Ceramic		Coated							Uncoated
		ap (mm)	Feed (mm/tooth)	TC3020	TC3030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	RPGN 0903 FL-E04	0.5-1.5	0.15-0.07	●	●								
	1204 FL-E	0.5-2.0	0.20-0.07	●	●								
	1204 FL-E04	0.5-2.0	0.20-0.07	●	●								
	1204 FL-T6	0.5-2.0	0.20-0.07	●	●								

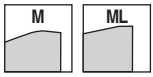
●: Standard items

RNMU

Inserts



Size	Dimension (mm)					
	RE	IC	S	APMX		
10	5	10	4.5	5.0		
12	6	12	5.0	6.0		
16	8	16	6.3	8.0		

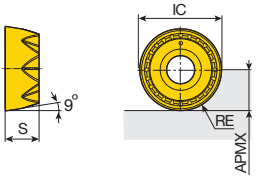


Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	RNMU1004-ML	1.5-4.0	0.30-0.05	●		●	●	●				●	
	1205-ML	1.5-5.0	0.35-0.05	●		●	●	●				●	
	1606-ML	2.0-6.5	0.40-0.05	●		●	●	●				●	
	RNMU1004S-M	1.5-4.0	0.35-0.05	●		●	●	●				●	
	1205S-M	1.5-5.0	0.40-0.05	●		●	●	●				●	
	1606S-M	2.0-6.5	0.45-0.05	●		●	●	●				●	

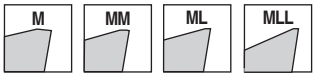
●: Standard items

RYM(H)X

Inserts



Size	Dimension (mm)					
	RE	IC	S	APMX		
08	4	8	3.2	4.0		
10	5	10	4.0	5.0		
12	6	12	4.8	6.0		
16	8	16	6.1	8.0		
20	10	20	7.0	10.0		

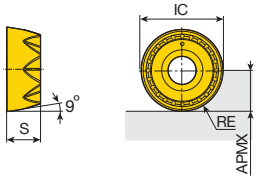


Insert	Designation	Recommended machining conditions		Coated								Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10		
	RYMX 0803-M	1.0-3.5	0.25-0.05	●		●		●	●		●	●			
	1004-M	1.5-4.0	0.30-0.10	●		●	●	●	●		●	●			
	1205-M	1.5-5.0	0.50-0.10	●		●	●	●	●		●	●			
	1205-6M	1.5-5.0	0.50-0.10	●								●			
	1606-M	2.0-6.5	0.50-0.10	●		●	●	●	●		●	●			
	1606-7M	2.0-6.5	0.50-0.10	●				●				●			
	2007-M	3.0-8.0	0.50-0.10	●		●	●	●	●		●	●			
	RYMX 0803-MM	1.0-3.5	0.30-0.07	●		●	●								
	1004-MM	1.5-4.0	0.35-0.07	●		●	●								
	1205-MM	1.5-5.0	0.40-0.10	●		●	●	●							
	1205-6MM	1.5-5.0	0.40-0.10	●											
	1606-MM	2.0-6.5	0.45-0.10	●		●	●								
	1606-7MM	2.0-6.5	0.45-0.10	●		●	●								
	RYHX 1205-MM	3.0-8.0	0.40-0.10	●			●								
	RYMX 0803-ML	1.0-3.5	0.25-0.05	●		●	●	●							
	1004-ML	1.5-4.0	0.30-0.05	●		●	●	●							
	1205-ML	1.5-5.0	0.35-0.05	●		●	●	●							
	1205-6ML	1.5-5.0	0.35-0.05	●		●									
	1606-ML	2.0-6.5	0.40-0.05	●		●	●	●							
	1606-7ML	2.0-6.5	0.40-0.05	●											
	2007-ML	3.0-8.0	0.50-0.10	●		●	●	●	●						
	RYHX 0803-ML	1.0-3.5	0.25-0.05	●		●	●								
	1004-ML	1.5-4.0	0.30-0.05	●		●	●								
	1205-ML	1.5-5.0	0.35-0.05	●		●	●								
	1606-ML	2.0-6.5	0.40-0.10	●		●									
	RYMX 0803-MLL	1.0-3.5	0.25-0.05			●	●								
	1004-MLL	1.5-4.0	0.30-0.05	●		●	●								
	1205-MLL	1.5-5.0	0.35-0.05	●		●	●								
	RYHX 0803-MLL	1.0-3.5	0.25-0.05			●	●								
	1004-MLL	1.5-4.0	0.30-0.05			●									
	1205-MLL	1.5-5.0	0.35-0.05	●		●	●								

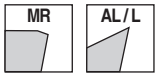
●: Standard items

RYM(H)X

Inserts



Size	Dimension (mm)					
	RE	IC	S	APMX		
08	4	8	3.2	4.0		
10	5	10	4.0	5.0		
12	6	12	4.8	6.0		
16	8	16	6.1	8.0		
20	10	20	7.0	10.0		



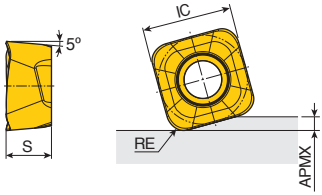
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	RYMX 0803-MR	1.0-3.5	0.30-0.05	●				●	●		●	●	
	1004-MR	1.5-4.0	0.35-0.05	●		●			●			●	
	1205-MR	1.5-5.0	0.35-0.05	●		●			●		●	●	
	1606-MR	2.0-6.5	0.40-0.05	●				●	●		●	●	
	2007-MR	3.0-8.0	0.45-0.10	●				●			●	●	
	RYHX 0803-MR	1.5-4.0	0.30-0.05	●								●	
	1004-MR	1.5-5.0	0.35-0.05	●							●	●	
	1205-MR	2.0-6.5	0.35-0.05	●							●	●	
	RYHX 0803-AL	1.0-3.5	0.80-0.10										●
	1004-AL	1.5-4.0	0.80-0.10										●
	1205-AL	1.5-5.0	0.80-0.10										●
	1606-AL	2.0-6.5	0.80-0.10										●
	RYHX 0803-L	1.0-3.5	0.25-0.05			●							
	1004-L	1.5-4.0	0.30-0.05	●		●	●						
	1205-L	1.5-5.0	0.35-0.05	●		●	●						

●: Standard items

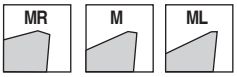
SBMT

CHASEFEED

Inserts



Size	Dimension (mm)					
	IC	S	APMX	RE		
06	6.3	3.16	1.0	1.0		
09	9.0	4.0	1.2	1.5		
13	13.1	6.7	2.0	2.5		



Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	SBMT 060310R-M	0.1-1.0	1.50-0.20	●	●							
	090415R-M	0.1-1.2	2.00-0.20	●	●	●	●	●		●	●	
	130625R-M	0.5-2.0	2.00-0.42	●	●	●	●	●		●	●	
	SBMT 060310R-ML	0.1-1.0	1.20-0.10	●	●							
	090415R-ML	0.1-1.2	1.50-0.10	●	●							
	130625R-ML	0.5-2.0	2.00-0.42	●	●							
	SBMT 090415R-MR	0.1-1.2	2.50-0.30	●			●				●	
	130625R-MR	0.5-2.0	2.00-0.42	●							●	

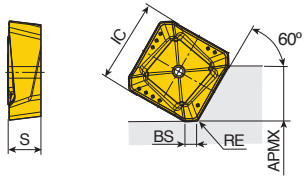
●: Standard items

E109-E110

E200-E202

SCKN 21/27

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
21-HE	20.8	7	13	2	1.5	
27-HE	26.8	8.95	18	2	2	

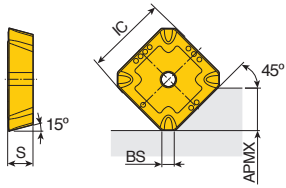
HE

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	SCKN 2107 DDTR-HE	3.5-10.5	0.25-0.13					●	●	●		
	2708 DDTR-HE	5.0-14.5	0.30-0.15					●				

●: Standard items

SDKN 12/15

Inserts



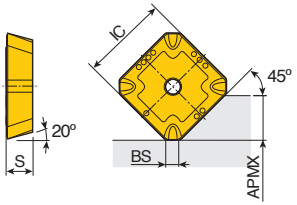
Size	Dimension (mm)					
	IC	S	APMX	BS		
12	12.7	3.18	6.5	2.00		
15	15.875	4.76	8.7	1.89		

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	SDKN 1203 MT-HPN	1.5-6.0	0.25-0.10						●			
	1504 MT-HPN	1.5-8.0	0.25-0.10						●			

●: Standard items

SEKN 12/15

Inserts



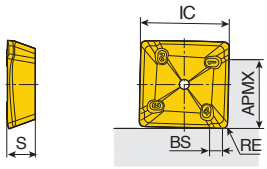
Size	Dimension (mm)					
	IC	S	APMX	BS		
12	12.7	3.18	6.5	2.08		
15	15.875	4.76	8.7	2.06		

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	SEKN 1203 AFTN-HPN	1.5-6.0	0.25-0.10						●			
	1504 AFTN-HPN	1.5-8.0	0.25-0.10						●			

●: Standard items

SEKX 21

Inserts



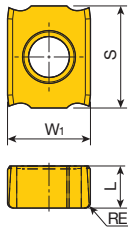
Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
21	21.85	7	17	2	1.2	

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	SEKX 2107 PETR-M	5.5-13.0	0.22-0.10					●			●	

●: Standard items

TOPSLOT

Inserts



Size	Dimension (mm)					
	S	W1	L	RE		
018	8	6.5	1.8	0.4		
023	8	6.5	2.3	0.4		
028	8	6.5	2.8	0.4		
033	8	6.5	3.3	0.4		

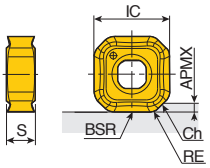
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	SLOT 018-04	-	0.08-0.05	●		●					●	
	023-04	-	0.08-0.05	●		●					●	
	028-04	-	0.08-0.05	●		●					●	
	033-04	-	0.10-0.06	●		●					●	

●: Standard items

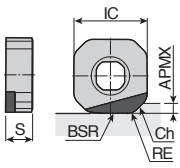
E227-E228

SNEX(T) 12

Inserts



P-W



CBN

Size	Dimension (mm)					
	IC	S	APMX	RE	BSR	Ch
1204 P-W	12.7	4.76	1.0	2.0	450	2.5
1204-W	12.7	4.76	1.0	2.0	800	-
1205-W	12.7	5.56	1.0	2.0	450	2.5
1204R-CBN	12.7	4.76	1.0	0.8	250	1.5

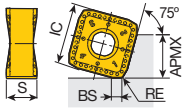
Insert	Designation	Recommended machining conditions		Cermet	CBN	Coated					Uncoated
		ap (mm)	Feed (mm/tooth)	CT3000	TB7015	TT9080	TT9030	TT7515	TT6080	TT2510	K10
	SNEX 1204 P-W	0.3-0.8	0.15-0.07						●	●	●
	SNEX 1204-W	0.3-0.8	0.15-0.07						●	●	
	SNET 1205-W	0.3-0.8	0.15-0.07	●		●			●		
	SNEX 1204R-CBN	0.3-0.8	0.12-0.08		●						

●: Standard items

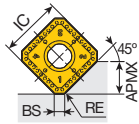
E65-E66

SNG(M)X 13

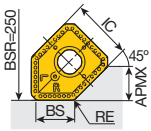
Inserts



ENTN / XTN



AN(T)N / XTN



W

Size	Dimension (mm)				
	IC	S	APMX	BS	RE
13 ENTN-M	13.5	7.0	9.5	2.2	0.4
13 ANTN-M/ML	13.5	6.8	7.0	2.2	0.4
13 ANN-AL	13.5	6.8	7.0	2.2	0.4
13 ANTR-MP	13.5	6.8	6.0	2.2	0.4
13 ANTN-W	13.5	6.8	7.0	7.5	1.2
13 XTN(75°)	13.5	6.8	9.6	1.4	0.4
13 XTN(45°)	13.5	6.8	6.35	1.4	0.4

M/W ML MP AL

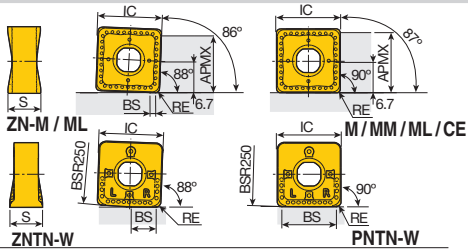
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	SNGX 1306 ENTN-M	2.5-8.0	0.20-0.10	●		●		●		●	●		
	SNMX 1306 ENTN-M	2.5-8.0	0.20-0.10	●		●		●		●	●	●	
	SNGX 1306 ANTN-M	2.0-6.0	0.20-0.10	●		●		●	●		●		
	1306 ANTN-ML	2.0-6.0	0.25-0.13	●		●					●		
	SNMX 1306 ANTN-M	2.0-6.0	0.20-0.10	●		●		●	●	●	●	●	
	1306 ANTN-ML	2.0-6.0	0.20-0.13	●									
	SNGX 1306 ANN-AL	2.0-6.0	0.35-0.10										●
	SNMX 1306 ANTR-MP	2.0-6.0	0.20-0.10	●		●		●			●		
	SNMX 1306 XTN	2.5-6.5	0.20-0.10	●		●			●	●	●	●	
	SNGX 1306 ANTN-W	0.2-1.0	0.20-0.10	●							●		

●: Standard items

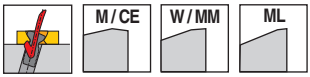
SNG(M)X 13, SNKX 13

CHASE2QUAD

Inserts



Size	Dimension (mm)				
	IC	S	APMX	BS	RE
13	13.5	6.8-7.0	10-12	1.2-5.3	0.4-2.0
13-W	13.5	6.8	10-12	11.5	1.0



Insert	Designation	Recommended machining conditions		Ceramic	Coated							Uncoated
		ap (mm)	Feed (mm/tooth)	AS10	TT9080	TT9030	TT8080	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	SNGX 1306 ZN-M	3.5-10.0	0.20-0.10		●		●		●	●	●		
	1306 ZN-ML	3.5-10.0	0.25-0.13				●				●		
	1306C08 ZN-M	3.5-10.0	0.20-0.10		●				●	●	●		
	SNMX 1306 ZN-M	3.5-10.0	0.20-0.10		●					●	●		
	1306C08 ZN-M	3.5-10.0	0.20-0.10							●			
	SNGX 130608-MM	3.5-10.0	0.15-0.08				●						
	130612-MM	3.5-10.0	0.15-0.08								●		
	130616-MM	3.5-10.0	0.15-0.08				●		●				
	130608-ML	3.5-10.0	0.25-0.13							●	●		
	130612-ML	3.5-10.0	0.25-0.13							●			
	SNMX 130608-ML	3.5-10.0	0.25-0.13								●		
	SNGX 130608-M	3.5-10.0	0.20-0.10		●				●	●	●		
	130612-M	3.5-10.0	0.20-0.10		●					●	●		
	130616-M	3.5-10.0	0.20-0.10		●		●	●	●	●	●		
	130620-M	3.5-10.0	0.20-0.10		●				●	●	●		
	SNMX 130604-M	3.5-10.0	0.20-0.10								●		
	130608-M	3.5-10.0	0.20-0.10		●						●		
	130612-M	3.5-10.0	0.20-0.10								●		
	130620-M	3.5-10.0	0.20-0.10		●					●	●		
	SNGX 130608-CE	3.5-10.0	0.25-0.13	●									
	SNKX 130608-CE	3.5-10.0	0.25-0.13	●									
	SNGX 1306 ZNTN-W	0.2-1.0	0.20-0.10		●						●		
	1306 PNTN-W	0.2-1.0	0.20-0.10		●						●		

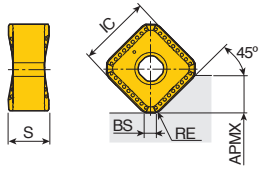
●: Standard items

E69-E70

SNM(H)X 16

CHASE2QUAD

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
SNMX 16	16.7	7.8	8.8	2.4	0.8	
SNHX 16	16.7	6.4	8.8	2.4	0.8	

M MM

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	SNMX 1607 ANTN-M	2.5-7.5	0.25-0.13	●		●		●	●		●	
	SNHX 1606 ANN-MM	2.5-7.5	0.20-0.10						●		●	

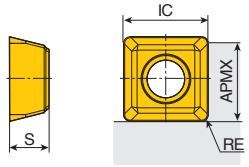
●: Standard items

E87-E89

SPMG/SPMT/XOMT

CHASEQUAD

Inserts



Size	Dimension (mm)					
	IC	S	APMX	RE		
06	6.16	2.56	5.6	0.4		
09	9.8	4.3	9.0	0.8		
11	11.5	4.8	10.7	0.8		
14	14.2	5.2	13.4	0.8		

Insert	Designation	Recommended machining conditions		Cermet	Coated							Uncoated		
		ap (mm)	Feed (mm/tooth)	CT7000	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10	
	SPMG 090404-EM	2.5-7.5	0.15-0.08					●						
	090408-EM	2.5-7.5	0.15-0.08		●			●		●		●		
	110408-EM	3.0-8.5	0.16-0.09		●	●	●	●		●		●		
	140508-EM	4.0-11.0	0.18-0.10		●		●	●		●		●		
	SPMT 090408-EM	2.5-7.5	0.15-0.08		●	●		●		●		●		
	110408-EM	3.0-8.5	0.16-0.09		●	●	●	●		●		●		
	140508-EM	4.0-11.0	0.18-0.10		●		●	●	●	●		●		
	XOMT 060204	1.5-4.5	0.06-0.03			●		●						

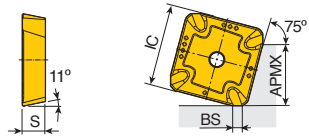
●: Standard items

E156-E158

E224

SPKN 12/15

Inserts



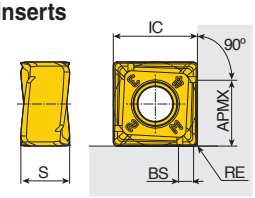
Size	Dimension (mm)					
	IC	S	APMX	BS		
12	12.7	3.18	9.5	1.2-1.6		
15	15.875	4.76	12.5	1.4-1.6		

Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	SPKN 1203 EDTR-HPN	1.5-7.0	0.25-0.10						●			
	1504 EDTR-HPN	1.5-10.0	0.25-0.10						●			
	SPKN 1203 EDR-HPN	1.5-7.0	0.25-0.10				●				●	
	1504 EDR-HPN	1.5-10.0	0.25-0.10				●				●	

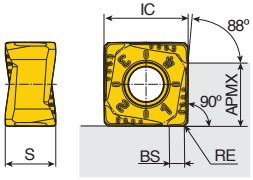
●: Standard items

SQK(H)U

Inserts



M / ML



MP / MMP

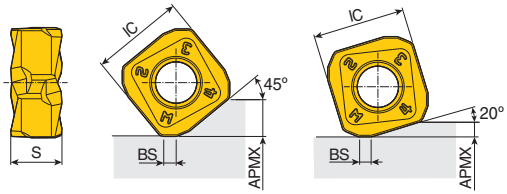
Size	Dimension (mm)				
	IC	S	APMX	BS	RE
07	7	3.9-4.1	5.0	0.2-0.9	0.8-1.6
10-M	10	5.6-5.8	7.0	0.4-1.1	0.8-1.6
10-MP	10	5.8-6.0	7.0	0.4-1.1	0.8-1.6
10-MMP	10	6.0	6.5	1.1	0.8
12-MP	12.2	7.8-8.0	8.5	0.4-1.1	0.8-1.6
12-MMP	12.2	8.0	8.0	1.1	0.8

Insert	Designation	Recommended machining conditions		Coated									Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	TT2510	K10
	SQKU 070308 PNR-M	1.0-4.0	0.20-0.10	●		●		●			●		●	
	070316 PNR-M	1.0-4.0	0.20-0.10	●							●			
	100408 PNR-M	1.5-5.5	0.20-0.10	●		●		●			●		●	
	100416 PNR-M	1.5-5.5	0.20-0.10	●							●			
	SQKU 070308 PNR-ML	1.0-4.0	0.20-0.10	●		●					●	●		
	SQKU 100408 PNR-MP	1.5-5.5	0.20-0.10	●				●			●		●	
	100416 PNR-MP	1.5-5.5	0.20-0.10	●				●			●			
	120608 PNR-MP	2.0-6.5	0.25-0.15	●				●			●		●	
	120612 PNR-MP	2.0-6.5	0.25-0.15	●				●			●			
	120616 PNR-MP	2.0-6.5	0.25-0.15	●				●			●			
	SQHU 100408 PNR-MMP	1.5-5.5	0.25-0.10	●							●			
	120608 PNR-MMP	2.0-6.5	0.25-0.15	●							●			

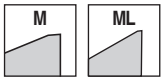
●: Standard items

SQKU 11/14

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS		
11(45º)	11.2	6.3	4.2	1.9		
11(20º)	11.2	6.3	1.8	1.0		
14(45º)	14.5	7.8	6.0	2.0		
14(20º)	14.5	7.8	2.5	1.6		



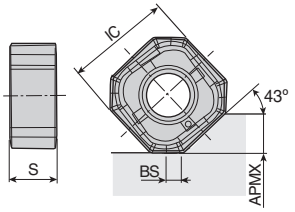
Insert	Designation	Recommended machining conditions		Coated									Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	TT2510	K10		
	SQKU 1105 ANR-M(45°)	1.0-4.0	0.25-0.10	●				●			●		●			
	1105 ANR-M(20°)	0.2-1.5	1.50-0.30	●				●			●		●			
	1406 ANR-M(45°)	2.0-6.0	0.30-0.10	●				●			●		●			
	1406 ANR-M(20°)	0.3-2.0	2.30-0.40	●				●			●		●			
	SQKU 1105 ANR-ML(45°)	1.0-4.0	0.25-0.10	●		●						●				
	1105 ANR-ML(20°)	0.2-1.5	1.00-0.30	●		●						●				
	1406 ANR-ML(45°)	2.0-6.0	0.30-0.10	●		●						●				
	1406 ANR-ML(20°)	0.3-2.0	1.30-0.40	●		●						●				

●: Standard items

E77-E78,E103

SQKU 11/14(CE)

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS		
11	11.2	5.0	4.0	1.45		
14	14.5	6.35	5.5	1.70		

Insert	Designation	Recommended machining conditions		Ceramic	Coated							Uncoated
		ap (mm)	Feed (mm/tooth)	AS10	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	SQKU 1105-CE	1.0-3.0	0.25-0.13	●									
	1406-CE	1.5-4.5	0.25-0.15	●									

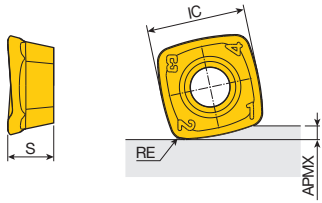
E77-E78

▸ 45° Cutter Only(20° Cutter 8D-TF20... Not Available)

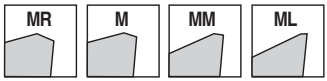
●: Standard items

SRMT

Inserts



Size	Dimension (mm)					
	IC	S	APMX	RE		
07	6.5	3.0	0.7	1.0		
10	9.5	4.7	1.0	1.5		
14	14.0	6.5	2.0	2.0		



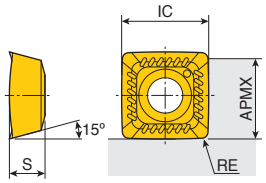
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT8080	TT6080	TT3520	TT3535	TT8625	TT2510		K10
	SRMT 140620R-MR	0.5-2.0	2.50-0.45	●					●	●		
	SRMT 070310R-M	0.1-0.7	1.50-0.30	●	●			●	●	●		
	100415R-M	0.2-1.0	1.80-0.40	●	●	●			●	●		
	140620R-M	0.5-2.0	2.00-0.45	●	●				●	●		
	SRMT 140620R-MM	0.5-2.0	1.80-0.45	●	●		●	●	●			
	SRMT 070310R-ML	0.1-0.7	1.20-0.30	●	●		●	●				
	100415R-ML	0.2-1.0	1.50-0.40	●	●		●	●				
	140620R-ML	0.5-2.0	1.80-0.45	●	●		●	●				

●: Standard items

E111-E112

E203-E205

Inserts



Size	Dimension (mm)					
	IC	S	APMX	RE		
093808	9	3.75	7.5	0.8		
093816	9	3.75	7	1.6		
114508	11	4.5	10	0.8		
114516	11	4.5	9	1.6		

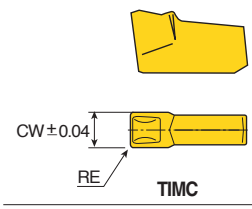
Insert	Designation		Recommended machining conditions		Coated								Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT3535	K10
	SVKT	**093808-M**	7.5	0.15-0.04	●		●							
		114508-M	10.0	0.15-0.04	●		●					●		
	SVKT	**093808-ML**	7.5	0.15-0.04	●		●						●	
		093816-ML	7.0	0.15-0.04	●		●						●	
		114508-ML	10.0	0.15-0.04	●		●						●	
		114516-ML	9.0	0.15-0.04	●		●						●	
	SVKT	**093808-L**	7.5	0.12-0.03	●		●						●	
		093816-L	7.0	0.12-0.03	●		●							
		114508-L	10.0	0.12-0.03	●		●							
	SVHT	**114508-L**	10.0	0.12-0.03	●		●							

●: Standard items

E209-E213

TIMC/J

Slotting inserts



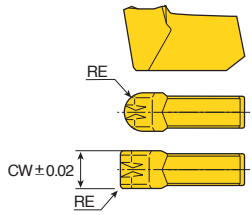
Size	Dimension (mm)					
	Seat size	CW	RE			
1.6	1	1.6	0.16			
2	2	2.2	0.20			
2.4	2	2.4	0.20			
3	4	3.1	0.20			
4	4	4.1	0.25			
4.8	4	4.8	0.28			

Insert	Designation		Recommended machining conditions		Coated								Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT7220	TT7080	TT6030	TT5100	K10
	TIMC	**1.6**	-	0.12-0.04		●		●	●		●		●
		2	-	0.13-0.05		●		●	●		●		●
		2.4	-	0.15-0.06		●							
		3	-	0.18-0.06		●		●	●		●	●	
		4	-	0.20-0.08		●		●	●				
		4.8	-	0.20-0.08				●				●	
	TIMJ	**2**	-	0.12-0.04				●				●	
		2.4	-	0.13-0.05				●			●		●
		3	-	0.15-0.05				●				●	●
		4	-	0.18-0.05				●			●		●
		4.8	-	0.18-0.05				●			●		●

●: Standard items

TIPV

Slotting inserts



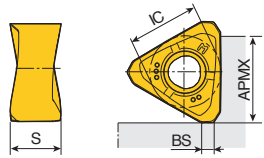
Size	Dimension (mm)			
	Seat size	CW	RE	
TIPV...E ...	3, 4	3.0-4.5	0.4-2.0	
TIPV 1.85-2.15	2	1.85-2.15	0.1-0.2	
TIPV 2.65-4.15	3, 4	2.65-4.15	0.15-0.20	

Insert	Designation		Recommended machining conditions		Coated								Uncoated
			ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT7220	TT7080	TT6030	TT5100	K10
	TIPV	**3.00E 0.40**	-	0.18-0.06							●	●	
		4.00E 0.40	-	0.20-0.08								●	
		4.50E 0.40	-	0.20-0.08									
		3.00E 1.50	-	0.18-0.06							●	●	
		4.00E 2.00	-	0.20-0.08							●	●	●
		1.85 0.10	-	0.13-0.05							●	●	
		2.00 0.20	-	0.13-0.05							●	●	
		2.15 0.15	-	0.13-0.05							●	●	●
		2.65 0.15	-	0.18-0.06								●	
		3.00 0.20	-	0.18-0.06								●	●
		3.18 0.20	-	0.18-0.06									●
		4.00 0.20	-	0.20-0.08								●	
		4.15 0.15	-	0.20-0.08								●	

●: Standard items

E240

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS		
18	11.65	8	13	1.4		
22	12.7	8	15	2.2		

SMR M

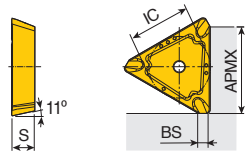
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	TNMX 1806 PNTR-M	1.0-11.0	0.15-0.07	●		●		●	●		●	●	
	TNMX 1806 PNTR-SMR2	2.7-11.0	0.20-0.10	●		●		●			●		
	TNMX 1806 PNTR-SMR3	2.7-11.0	0.20-0.10	●		●		●			●		
	TNGX 2207 PNTN	1.0-13.0	0.20-0.10	●		●		●	●		●		
	TNMX 2207 PNTN	1.0-13.0	0.20-0.10	●		●		●	●		●	●	

●: Standard items

E50-E51 E127 E216-E217

TPKN 22

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS		
22	12.7	4.76	17.6	1.7-1.8		

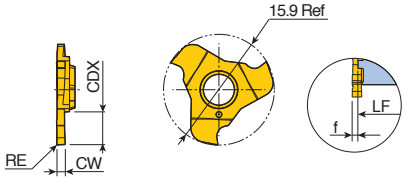
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	TPKN 2204 PDTR-HPN	1.5-13.0	0.25-0.10						●			
	TPKN 2204 PDR-HPN	1.5-13.0	0.25-0.10				●				●	

●: Standard items

E67

TS16

Inserts



Size	Dimension (mm)			Size	Dimension (mm)		
	CW	RE	CDX		CW	RE	CDX
1.2	1.2	0.05	4.6	**3.0**	3.0	0.20	4.8
1.4	1.4	0.10	4.8	**3.25**	3.25	0.15	4.8
1.5	1.5	0.10	4.8	**4.0**	4.0	0.20	4.8
1.7	1.7	0.10	4.8	**4.25**	4.25	0.15	4.8
1.95	1.95	0.15	4.8	**5.0**	5.0	0.20	4.8
2.0	2.0	0.20	4.8	**5.25**	5.25	0.15	4.8
2.25	2.25	0.15	4.8	**6.0**	6.0	0.20	4.8
2.75	2.75	0.15	4.8				

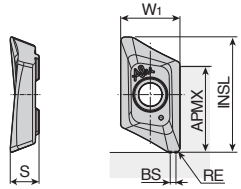
Insert	Designation	Recommended machining conditions		f (mm)	Coated								Uncoated
		CW (mm)	Feed (mm/tooth)		TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10
	TS16- 1.2-R0.05	1.20	0.08-0.02	0.45		●							
	1.4-R0.1	1.40	0.10-0.02	0.45		●							
	1.5-R0.1	1.50	0.12-0.03	0.45		●							
	1.7-R0.1	1.70	0.12-0.03	0.45		●							
	1.95-R0.15	1.95	0.15-0.04	0.45		●							
	2.0-R0.2	2.00	0.15-0.04	0.45		●							
	2.25-R0.15	2.25	0.15-0.04	0.65		●							
	2.75-R0.15	2.75	0.20-0.04	1.35		●							
	3.0-R0.2	3.00	0.20-0.04	1.35		●							
	3.25-R0.15	3.25	0.20-0.04	1.35		●							
	4.0-R0.2	4.00	0.25-0.05	2.36		●							
	4.25-R0.15	4.25	0.25-0.05	0.96		●							
	5.0-R0.2	5.00	0.30-0.05	2.15		●							
	5.25-R0.15	5.25	0.30-0.05	2.15		●							
	6.0-R0.2	6.00	0.30-0.05	3.15		●							

●: Standard items

XEVT 16/22-AL

CHASEALU

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
16	18.3-22.2	11.2	5.1-5.5	14-16	0.6-1.5	0.4-5.0
22	22.4-28	13.6	6.8-7.4	18.5-21	1.2-1.7	0.5-6.4

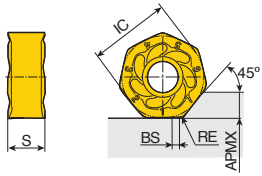
Insert	Designation	Recommended machining conditions		Coated								Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TTA101	K10
	XEVT 160504R-AL	3.5-12.0	0.4-0.1								●	●
	160508R-AL	3.5-12.0	0.4-0.1								●	●
	160512R-AL	3.5-12.0	0.4-0.1								●	●
	160516R-AL	3.5-12.0	0.4-0.1								●	●
	160520R-AL	3.5-12.0	0.4-0.1								●	●
	160524R-AL	3.5-12.0	0.4-0.1								●	●
	160530R-AL	3.5-12.0	0.4-0.1								●	●
	160532R-AL	3.5-12.0	0.4-0.1								●	●
	160540R-AL	3.5-12.0	0.4-0.1								●	●
	160550R-AL	3.5-12.0	0.4-0.1								●	●
	220605R-AL	3.5-18.0	0.6-0.1									●
	220608R-AL	3.5-18.0	0.6-0.1								●	●
	220616R-AL	3.5-18.0	0.6-0.1									●
	220620R-AL	3.5-18.0	0.6-0.1									●
	220630R-AL	3.5-18.0	0.6-0.1								●	●
	220632R-AL	3.5-18.0	0.6-0.1								●	●
	220640R-AL	3.5-18.0	0.6-0.1									●
	220650R-AL	3.5-18.0	0.6-0.1									●
	220664R-AL	3.5-18.0	0.6-0.1									●

●: Standard items

XNM(H)U 06

CHASE2HEPTA

Inserts



Size	Dimension (mm)					
	IC	S	APMX	BS	RE	
06(M, MM, ML)	13.7	6.2	3.5	1.0	1.0	
06-MT	13.7	6.0	4.2	-	0.8	
06-MLW	13.7	6.2	3.5	1.5	0.2	

Insert	Designation	Recommended machining conditions		Ceramic	Coated							Uncoated
		ap (mm)	Feed (mm/tooth)	AS10	TT9080	TT9030	TT8080	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	XNMU 0605 ANR-M	1.0-3.0	0.20-0.10		●				●		●		
	XNHU 0605 ANN-MM	1.0-3.5	0.20-0.10		●					●	●	●	
	XNHU 0605 ANN-ML	1.0-3.5	0.20-0.10		●		●				●		
	XNMU 060508-MT	1.0-4.2	0.30-0.10				●						
	XNHU 0605 ANR-MLW	0.3-1.0	0.15-0.08				●						

●: Standard items

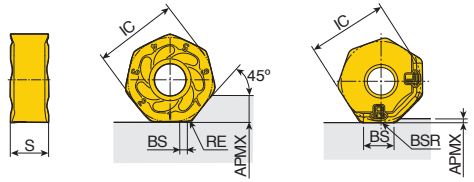
E81, E83

ADVANCE CUTTING TaeguTec

XNM(H)U 09

CHASE2HEPTA

Inserts



M / ML / MM / CE W

Size	Dimension (mm)					
	IC	S	APMX	BS	RE	BSR
09	18.5	6.35-7.4	5.0	1.0	1.0	-
09-W	18.5	6.35	1.0	7.1	-	250

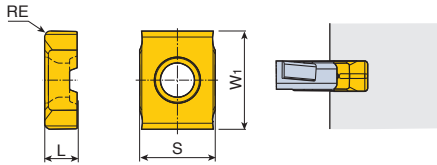
Insert	Designation	Recommended machining conditions		Ceramic	Coated							Uncoated
		ap (mm)	Feed (mm/tooth)	AS10	TT9080	TT8080	TT8625	TT7080	TT7515	TT6080	TT2510	K10
	XNMU 0906 ANTR-M	1.5-4.0	0.20-0.10		●	●	●	●	●	●	●	
	XNMU 0906 ANTN-ML	1.5-4.0	0.25-0.13		●	●	●	●				
	XNHU 0906 ANTN-ML	1.5-4.0	0.25-0.13		●					●		
	XNHU 0906 ANTN-MM	1.5-4.0	0.25-0.13		●		●		●	●	●	
	XNHU 0906 ANTN-CE	1.5-4.0	0.25-0.135	●								
	XNHU 0906 ANTN-W	0.1-1.0	0.20-0.10							●		

●: Standard items

E82-E84

ZNHT

Inserts



Size	Dimension (mm)					
	W_1	S	L	RE		
018	10	7.5	1.8	0.2-0.8		
023	10	7.5	2.3	0.2-0.8		
028	10	7.5	2.8	0.2-0.8		
033	10	7.5	3.3	0.2-0.8		
038	13	10	3.8	0.4-0.8		
043	13	10	4.3	0.4-0.8		
048	13	10	4.8	0.4-0.8		
053	13	10	5.3	0.4-0.8		

Insert	Designation	Recommended machining conditions		Coated								Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080		K10	
	ZNHT 018-04	-	0.08-0.05	●		●					●			
	018-08	-	0.08-0.05	●		●								
	023-04	-	0.08-0.05	●		●					●			
	023-08	-	0.08-0.05	●		●								
	028-04	-	0.10-0.15	●		●					●			
	028-08	-	0.10-0.15	●		●								
	033-04	-	0.12-0.05	●		●					●			
	033-08	-	0.12-0.05	●		●								
	038-04	-	0.12-0.05	●		●					●			
	038-08	-	0.12-0.05	●		●					●			
	043-04	-	0.15-0.05	●		●					●			
	043-08	-	0.15-0.05	●		●					●			
	048-04	-	0.15-0.05	●		●					●			
	048-08	-	0.15-0.05	●		●					●			
	053-04	-	0.15-0.05	●		●					●			
	053-08	-	0.15-0.05	●		●					●			
	ZNHT 018-04-ML	-	0.08-0.05			●					●			
	023-04-ML	-	0.08-0.05			●					●			
	028-04-ML	-	0.08-0.05			●					●			
	033-04-ML	-	0.12-0.05			●					●			
	038-04-ML	-	0.12-0.05			●					●			
	043-04-ML	-	0.12-0.05			●					●			
	048-04-ML	-	0.12-0.05			●					●			
	053-04-ML	-	0.12-0.05			●					●			
	ZNHT 018-02-AL	-	0.35-0.10										●	
	023-02-AL	-	0.35-0.10										●	
	028-02-AL	-	0.35-0.10										●	
	033-02-AL	-	0.35-0.10										●	
	038-04-AL	-	0.35-0.10										●	
	043-04-AL	-	0.35-0.10										●	
	048-04-AL	-	0.35-0.10										●	
	053-04-AL	-	0.35-0.10										●	

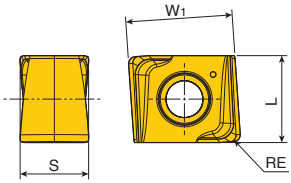
●: Standard items

E229-E230,E235

ZNHU

TOPSLOT

Inserts



Size	Dimension (mm)					
	L	W1	S	RE		
080	7.6	10.7	6.36-6.49	0.8		
110	10.6	13.0	8.38-8.42	0.8		
140	14	13.0	9.59-9.65	0.8		

None ML

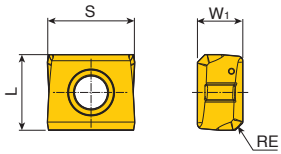
Insert	Designation	Recommended machining conditions		Coated								Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8625	TT7080	TT7515	TT6080	K10		
	ZNHU 080-08	-	0.16-0.08	●		●			●		●			
	110-08	-	0.20-0.10	●		●			●		●			
	140-08	-	0.21-0.11	●		●			●		●			
	ZNHU 080-08-ML	-	0.010-0.05	●		●					●			
	110-08-ML	-	0.12-0.06	●		●					●			
	140-08-ML	-	0.12-0.06	●		●								

●: Standard items

E231-E234
E236-E239

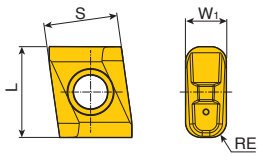
Tailor-made Insert

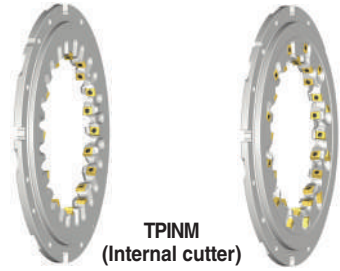
Tangential inserts



TTRC
(Slotting cutter)

Insert	Designation	Dimension (mm)				
		L	S	W1	RE	
	LNC 1060-C	10.0	11.5	6.0	chamfer	
	LNC 137020-L	13.6	11.6	6.7	2.0	
	LNCX 136508 PNR-ML	13.0	10.6	6.5	0.8	



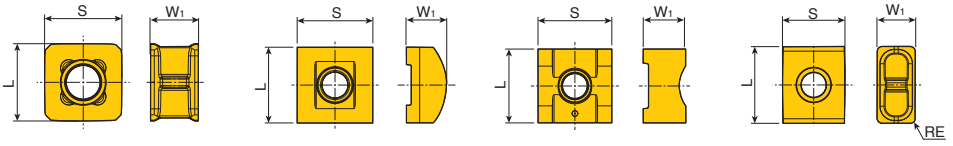


TPINM
(Internal cutter)

Insert	Designation	Dimension (mm)				
		L	S	W1	RE	
	PMIN 120905-M	12.0	9.7	5.4	2.0	
	PMIN 130907-M	13.5	9.7	7.0	2.0	
	PMIN 150907-M	15.0	9.9	7.0	2.0	
	PMIN 180907-M	18.0	9.7	7.0	2.0	

Tailor-made Insert

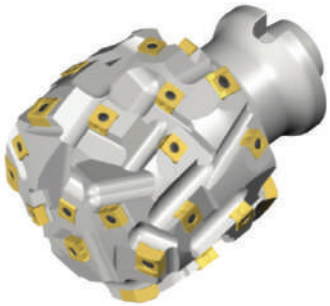
Tangential inserts



SNA SNB-CV SNB-CC LNA

Insert	Designation	Dimension (mm)				
		L	S	W1	RE	
	SNA 1065-M	10.5	10.5	6.5	-	
	SNA 1370-M	13.0	13.0	7.0	-	
	SNA 1680-M	16.0	16.0	8.0	-	
	SNB 1375-CV	13.0	13.0	7.5	-	
	SNB 1685-CV	16.0	16.0	8.5	-	
	SNB 1375-CC	13.0	13.0	7.5	-	
	SNB 1685-CC	16.0	16.0	8.5	-	
	LNA 137008-M	13.5	10.0	6.7	0.8	
	LNA 168008-M	16.5	14.0	8.0	0.8	

- CV: Convex, CC: Concave
- Various corner radii are available for SNB insert



TRMT
(Form profile cutter)

Recommended Cutting Conditions

Machining data for MAXI-SFEED

ISO	Material		Hardness HB	Vc(m/min)	Feed (mm/tooth)		
	Material	AISI/SAE/ASTM			TR13	TR15	TR17
P	Non-alloy steel	1020	130-180	120-200	0.04-0.12	0.05-0.15	0.06-0.15
	Low alloy steel	4030	260-300	200-300	0.04-0.12	0.05-0.15	0.06-0.15
	Low alloy steel	3135	HRC 35-40	80-120	0.02-0.06	0.03-0.12	0.04-0.12
	High alloy steel	H13	200-220	100-150	0.03-0.07	0.04-0.12	0.04-0.12
M	Martensitic stainless steel	420	200	100-150	0.02-0.06	0.04-0.12	0.04-0.12
	Austenitic stainless steel	304L	200	80-120	0.02-0.06	0.03-0.10	0.03-0.12
K	Gray cast iron	Class 40	250	150-200	0.04-0.12	0.05-0.20	0.05-0.20
	Malleable cast iron	Class 65 45 12	200	130-180	0.04-0.10	0.05-0.18	0.05-0.18
S	High temp. alloys	Inconel 718	HRC 36-40	20-30	0.015-0.10	0.02-0.12	0.02-0.12
		AMS R56400	HRC40-45	30-40	0.015-0.06	0.02-0.12	0.02-0.12

▸ For more information of material groups, see the materials & grades "material conversion table".

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data for CBN grade

ISO	Material	D.O.C. (mm)	Grade		
			TB7015		
			Cutting speed Vc(m/min)	Feed (mm/tooth)	Cutting edge
P	Bearing steel	< 2	180 - 220	0.05 - 0.25	Chamfer
	Ferrous powder metal	< 2	150 - 300	0.1 - 0.15	Chamfer
K	Grey cast iron HB 200 - 280	< 0.5	500 - 1500	0.1 - 0.3	Chamfer hone
		0.5 - 2.0	500 - 1100	0.1 - 0.25	Chamfer
	Compated graphite iron (CGI)	< 0.5	400 - 600	0.1 - 0.2	Hone
S	Co based > 35 HRC	0.5 - 2.0	150 - 200	0.05 - 0.15	Chamfer
	Ni based > 35 HRC		120 - 150	0.05 - 0.15	Chamfer
	Fe based > 35 HRC		60 - 120	0.05 - 0.15	Chamfer
	Cr based > 35 HRC		50 - 75	0.05 - 0.15	Chamfer
H	Hardened steels > 45 HRC	< 0.5	80 - 180	0.1 - 0.25	Chamfer
	Hardened cast iron	< 2	80 - 200	0.1 - 0.15	Chamfer

▸ For more information of material groups, see the materials & grades "material conversion table".

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

Machining data

Cutting Speed: Vc(m/min)

ISO	Material		Condition	Tensile strength (N/mm²)	Hardness HB	Material No.	Uncoated				
							K10	TT9080	TT9030	TT7080	TT8625
P	Non-alloy steel, cast steel, free cutting steel	< 0.25%C	Annealed	420	125	1		210-300	180-270	230-330	230-330
		>= 0.25%C	Annealed	650	190	2		200-280	180-260	220-300	220-300
		< 0.55%C	Quenched and tempered	850	250	3		150-230	140-220	160-240	160-240
		>= 0.55%C	Annealed	750	220	4		140-220	130-210	150-230	150-230
			Quenched and tempered	1000	300	5		130-200	120-190	140-210	140-210
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6		170-240	150-220	190-260	190-260
			Quenched and tempered	930	275	7		160-230	140-210	180-250	180-250
				1000	300	8		130-200	130-200	170-240	170-250
				1200	350	9		120~200	110-190	130-210	130-210
	High alloy steel, cast steel and tool steel		Annealed	680	200	10		120-210	110-200	130-220	130-220
			Quenched and tempered	1100	325	11		110-170	100-150	120-180	120-180
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12		150-230	140-210		
			Martensitic	820	240	13		140-220	130-200		
			Austenitic	600	180	14		120-180	110-160		
K	Gray cast iron (GG)		Ferritic		160	15		130-300			
			Pearlitic		250	16		120-280			
	Cast iron nodular (GGG)		Ferritic		180	17		110-220			
			Pearlitic		260	18		100-200			
	Malleable cast iron		Ferritic		130	19		150-250			
			Pearlitic		230	20		100-250			
N	Aluminum - wrought alloy		Not cureable		60	21	550-700				
			Cured		100	22	600-750				
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	800-900				
			Cured		90	24	650-800				
		>12% Si	High temp.		130	25	250-320				
	Copper alloys	>1% Pb	Free cutting		110	26	300-400				
			Brass		90	27	300-400				
			Electrolitic copper		100	28	210-280				
	Non-metallic		Duroplastics, fiber plastics		70 Shore D	29	150-250				
			Graphite								
			Hard rubber		55Shore D	30	150-250				
S	High temp. alloys	Fe based	Annealed		200	31		40-80			
			Cured		280	32		30-60			
		Ni or Co based	Annealed		250	33		35-70			
			Cured		350	34		30-60			
			Cast		320	35		35-65			
	Titanium, Ti alloys		Pure	Rm 400	190	36		90-130			
			Alpha+beta alloys, hardened	Rm 1050	310	37		35-70			
H	Hardened steel		Hardened		55HRC	38		55-75	45-65		
			Hardened		60HRC	39		45-65	40-60		
	Chilled cast iron		Cast		400	40		90-105	70-90		
	Cast iron nodular		Hardened		55HRC	41		55-75	45-65		

▸ For more information of material groups, see the materials & grades "material conversion table".

Steel | Stainless steel | Cast iron | Nonferrous | High temp. alloys | Hardened steel

Recommended Cutting Conditions

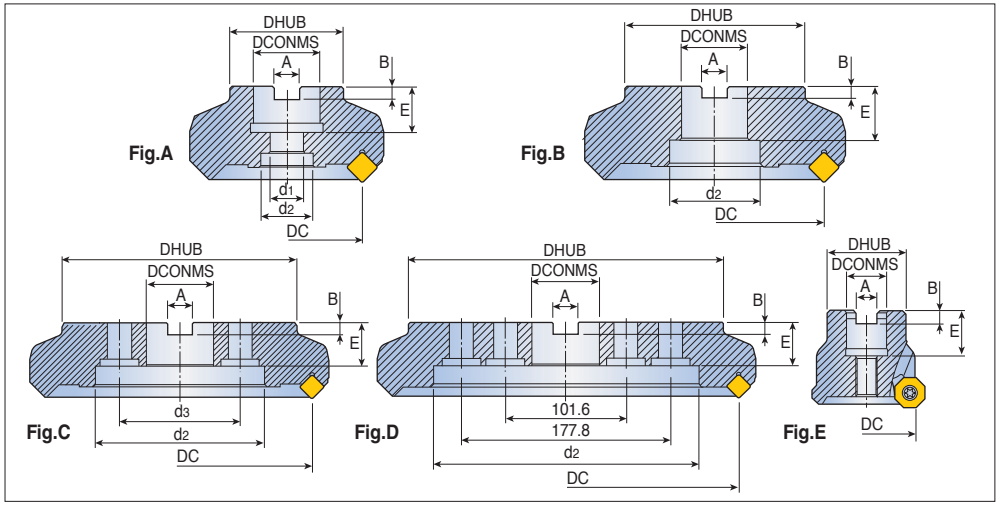
Machining data

Cutting Speed: Vc(m/min)

Coated									Diamond Coated	Ceramic				Cermet
TT8080	TT8020	TT6080	TT7515	TT3535	TT3520	TT2510	TT5515	TT5525	TTD620	AS10	AS20	TC3020	TC3030	CT7000
150-240	140-200						260-280	150-210						250-350
140-230	130-190						200-230	120-200						200-300
140-220	130-200						160-220	70-140						150-250
130-200	120-190						160-220	90-150						135-200
120-190	120-170						140-180	60-130						120-180
120-190	120-160						160-220	130-170						180-240
120-170	110-150						120-180	70-150						135-210
110-170	100-140						130-180	60-110						120-200
100-160	90-150						140-180	50-100						110-220
100-170	90-160						130-180	60-100						110-160
90-140	80-120						70-120	60-120						80-100
110-200	100-180			130-240	130-240		80-150	75-170						120-200
100-180	90-160			120-240	120-240		60-140	60-130						100-160
100-150	80-120			100-200	100-200		60-120	80-180						
		180-350	200-390			250-430	80-260			400-900				
		160-300	180-330			190-320	130-240			250-600				
		180-250	200-270				150-270			350-800				
		160-220	180-240				90-270			250-600				
		200-300	220-330				150-270			360-540				
		170-280	180-300				140-240			300-440				
									250-350					
									500-900					
35-55				40-70	40-70		20-40	30-55			500-900			
30-45				40-65	40-70		20-30	20-45			500-900			
30-45				30-70	30-70		20-30	25-50			500-900	600-1200	600-1200	
25-35				30-55	30-55		20-30	20-40			500-900	600-1200	600-1200	
30-35				35-70	35-70		30-70	20-45			500-900	600-1200	600-1200	
50-90				70-120	70-120		30-70	50-90			500-900			
40-80				40-75	40-75		30-70	25-55			500-900			
		60-90				70-130								50-75
		50-90				50-100								40-65
		60-100				60-120	60-80							80-105
		60-80				70-130	30-50							50-75

Mounting Reference

Arbor style



Dimension (mm)										Fig.	Arbor
DC	DCONMS	A	B	E	DHUB		d_1	d_2	d_3		
					For mold & die	For general					
32	16	8.4	5.6	20	30	-	-	-	-	E	SEM16
32	16	8.4	5.6	20	30	-	9	13.5	-	A	SEM16
40	16	8.4	5.6	20	38	-	9	13.5	-	A	SEM16
40	22	10.4	6.3	22	38	-	11	17	-	A	SEM22
50	22	10.4	6.3	22	40	45	11	17	-	A	SEM22
63	22	10.4	6.3	22	47	-	11	17	-	A	SEM22
80	25.4	9.526	6	26	-	70	13	20	-	A	FMA25.4
80	27	12.4	7	28	58	70	13	22	-	A	SEM27
100	31.75	12.7	8	32	-	80	18	26	-	A	FMA31.75
100	31.75	12.7	8	32	-	80	-	46	-	B	FMA31.75
100	32	14.4	8	26	66	85	18	26	-	A	SEM32
100	32	14.4	8	26	66	85	-	46	-	B	SEM32
125	38.1	15.875	10	38	80	-	-	56	-	B	FMA38.1
125	40	16.4	9	32	85	-	22	32	-	A	SEM40
125	40	16.4	9	32	85	-	-	56	-	B	SEM40
160	40	16.4	9	32	110	-	-	90	66.7	C	FM40
160	50.8	19.05	11	38	100	-	-	72	-	B	FMA50.8
200	47.625	25.4	14	38	130	-	-	132	101.6	C	FMA47.625
200	60	25.7	14	40	130	-	-	132	101.6	C	FM60
250	47.625	25.4	14	38	160	-	-	150	101.6	C	FMA47.625
250	60	25.7	14	40	160	-	-	150	101.6	C	FM60
315	47.625	25.4	14	38	220	-	-	224	-	D	-
315	60	25.7	14	40	220	-	-	220	-	D	-

▸ For Face Mill arbors, please refer to TaeguTec tooling system(part G)

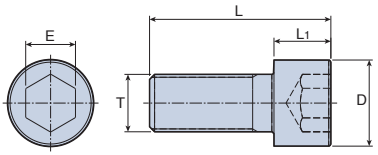
Mounting Reference

Mounting bolt

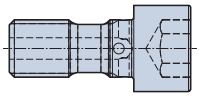
SH type

Designation	Dimension (mm)					Cutter size
	D	L	L_1	T	E	
SH M8x1.25x25(-C)	13	33	8	8	6	32,40
SH M8x1.25x30(-C)	13	38	8	8	6	32,40
SH M8x1.25x35(-C)	13	43	8	8	6	32,40
SH M10x1.5x30(-C)	16	40	10	10	8	50, 63
SH M12x1.75x35(-C)	18	47	12	12	10	80
SH M16x2x35(-C)	24	51	16	16	14	100
SH M20x2.5x40(-C)	30	60	20	20	17	125

▸ "-C": Bolt with hole for internal coolant



SH

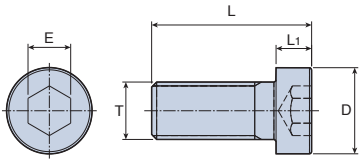


SH-C

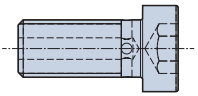
LH type

Description	Dimension (mm)					Cutter size
	D	L	L_1	T	E	
LH M10x1.5x25(-C)	16	31.5	6.5	10	8	50, 63
LH M12x1.75x30(-C)	18	36.9	6.9	12	8	80
LH M16x2x35(-C)	24	45	10	16	12	100

▸ "-C": Bolt with hole for internal coolant



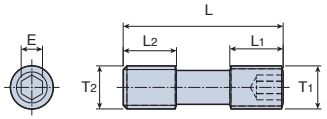
LH



LH-C

KTB, TCS type

Description	Dimension (mm)					
	L	L_1	L_2	T_1	T_2	E
KTB 32B	30	10	10	M8X1.0	M8X1.25	4
TCS10-40	40	10	15	M10X1.25	M10X1.5	5



KTB, TSC

▶ Recommeneded clamping torque for each screw

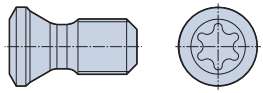


Fig.1

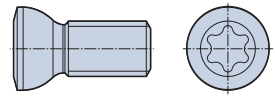
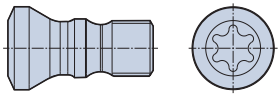


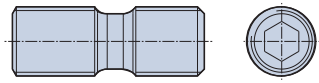
Fig.2

Designation	Thread	Length	Torx	Tightening Torque	Fig.
TS 18033/HG-P	M1.8	3.3	Torx Plus 6	0.5 Nm	1
TS 18041I/HG	M1.8	4.09	Torx Plus 6	0.5 Nm	1
TS 18041I/SG-P	M1.8	4.09	Torx Plus 6	0.5 Nm	1
TS 20043I/HG-P	M2	4.3	Torx Plus 6	0.6 Nm	1
TS 22046I	M2.2	4.6	Torx 7	0.9 Nm	1
TS 22052I/HG	M2.2	5.2	Torx 7	0.9 Nm	1
TS 25055I/HG	M2.5	5.5	Torx 8	1.2 Nm	1
TS 25075I/HG	M2.5	7.5	Torx 8	1.2 Nm	1
TS 25064I	M2.5	6.4	Torx 8	1.2 Nm	1
TS 25064I/HG-P	M2.5	6.4	Torx Plus 8	1.2 Nm	1
TS 25B024I/HG	M2.5	2.6	Torx Plus 7	0.9 Nm	1
TS 25B031I/HG	M2.5	3.3	Torx Plus 7	0.9 Nm	1
TS 25B042I/HG	M2.5	4.35	Torx Plus 7	0.9 Nm	1
TS 25B053I/HG	M2.5	5.45	Torx Plus 7	0.9 Nm	1
TS 25C065I/HG	M2.5	6.5	Torx 8	1.2 Nm	2
TS 30085I/HG	M3	8.5	Torx 9	2.0 Nm	1
TS 30A060I/HG	M3	6	Torx 9	2.0 Nm	1
TS 30B068I/HG	M3	6.8	Torx 8	1.2 Nm	1
TS 30D082-P	M3	8.2	Torx Plus 8	1.2 Nm	1
TS 35070I/HG	M3.5	7	Torx 15	3.0 Nm	1
TS 35085I/HG	M3.5	8.75	Torx 15	3.0 Nm	1
TS 35088I	M3.5	8.75	Torx 10	2.0 Nm	1
TS 35A070I/HG	M3.5	7	Torx Plus 10	2.0 Nm	1
TS 35A088I/HG	M3.5	8.75	Torx Plus 10	2.0 Nm	1
TS 35C110I	M3.5	11	Torx 15	3.0 Nm	2
TS 40085I/HG	M4	8.5	Torx 15	3.5 Nm	1

Designation	Thread	Length	Torx	Tightening Torque	Fig.
TS 40093I	M4	9.3	Torx 15	3.5 Nm	1
TS 40093I/HG	M4	9.3	Torx 15	3.5 Nm	1
TS 40097I	M4	9.7	Torx 15	3.5 Nm	1
TS 40120I	M4	12	Torx 15	3.5 Nm	1
TS 40120I/HG	M4	12	Torx 15	3.5 Nm	1
TS 40A100I	M4	10	Torx 15	3.5 Nm	1
TS 40A115I	M4	11.5	Torx 15	3.5 Nm	1
TS 40B100I	M4	10	Torx 15	3.5 Nm	2
TS 40G110I	M4	11	Torx 15	3.5 Nm	1
TS 40M100/HG	M4	10	Torx 15	3.5 Nm	2
TS 40K535I	M4	5.35	Torx 15	3.5 Nm	1
TS 40K065I	M4	6.5	Torx 15	3.5 Nm	1
TS 40K075I	M4	7.5	Torx 15	3.5 Nm	1
TS 40K085I	M4	8.5	Torx 15	3.5 Nm	1
TS 45120I	M4.5	12	Torx 20	5.0 Nm	2
TS 50105I	M5	10.5	Torx 20	5.0 Nm	1
TS 50115I	M5	11.5	Torx 20	5.0 Nm	1
TS 50A140I	M5	14	Torx 20	5.0 Nm	1
TS 50A121I/HG	M5	12.1	Torx 20	5.0 Nm	1
TS 50B106I/HG	M5	10.6	Torx 20	5.0 Nm	1
TS 50C130I/HG	M5	13	Torx 20	5.0 Nm	2
TS 50D130/HG-P	M5	13	Torx Plus 20	5.0 Nm	1
TS 60A130I	M6	13.5	Torx 25	6.0 Nm	2
TS 60A165I	M6	16.5	Torx 25	6.0 Nm	2
TS 60170I	M6	17	Torx 25	6.0 Nm	1

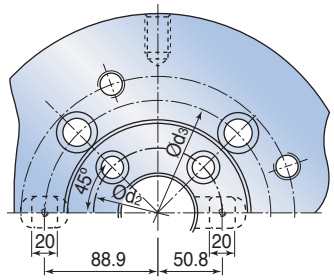


Designation	Thread	Length	Torx	Tightening Torque
TS 20F060A	M2	5	Torx 6	0.7 Nm
TS 25F080A	M2.5	6.9	Torx 8	1.1 Nm
TS 30F100A	M3	8.3	Torx 10	2.0 Nm
TS 40F120A	M4	10.6	Torx 15	4.0 Nm
TS 50F160A	M5	13.9	Torx 20	5.0 Nm
TS 60F200A	M6	16.7	Torx 25	6.0 Nm
TS 70F250A	M7	21	Torx 25	7.0 Nm
TS 80F300A	M8	25	Torx 30	8.0 Nm



Designation	Thread	Length	Torx	Tightening Torque
WS 4	M4	12.5	Hexa 2.0mm	1.5 Nm
WS 5	M5	14	Hexa 2.5mm	3.3 Nm
WS 6	M6	15	Hexa 3mm	5 Nm
WS 8	M8	21	Hexa 4mm	7 Nm

Quick change cutter adapter



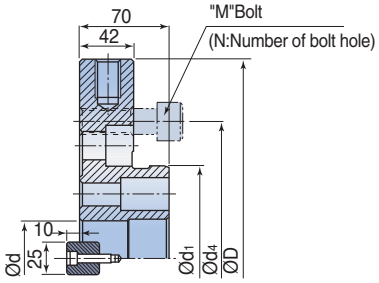
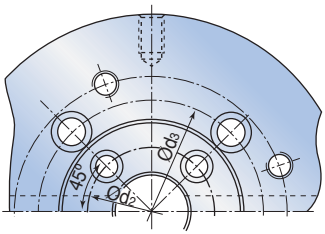


Fig.1



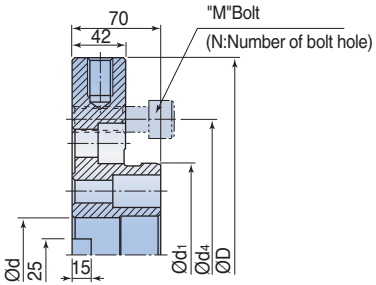


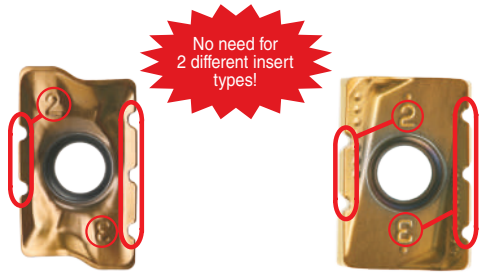
Fig.2

Designation	Dimension (mm)								Weight (Kg)
	D	d	d_1	d_2	d_3	d_4	M	N	
QA 08 K/M	198	47.625	63.5	101.6	-	114.3	M16x40	4	10
QA 10 K/M	248	60	133.35	101.6	-	177.8	M16x50	4	15
QA 12 K/M	313	60	146.05	101.6	177.8	215.9	M20x50	4	19.7
QA 14 K/M	353	60	215.9	101.6	177.8	260.4	M20x50	6	24
QA 16 K/M	398	60	254.0	101.6	177.8	304.8	M20x50	6	29

▸ K: Adapter with setting key (Fig.1)
M: Adapter without setting key (Fig.2)

How to use splitter

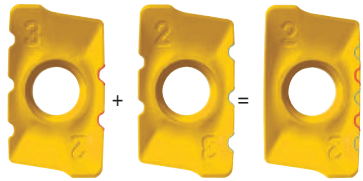
- 3 splitting grooves on one cutting edge and 2 splitting grooves on the opposite side



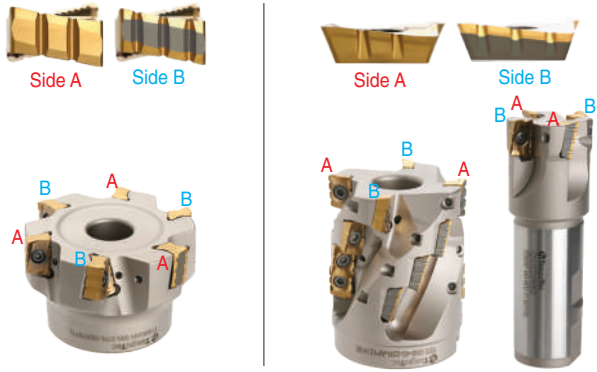
- Full proof configuration-inserts have metal color appearance only on the 3 groove side for simplified mounting

Notice: When insert mounting, ensure they are mounted in a staggered formation
i.e. 1st tooth-2 groove side; 2nd tooth-3 groove side and repeat action for the remaining teeth

- Both cutting edges split chip to small pieces for cutting load reduction and create complete cutting edge when combined.

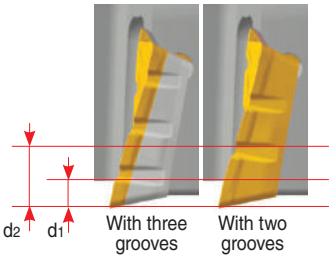


- For optimum machining efficiency, use even numbered flute type cutters

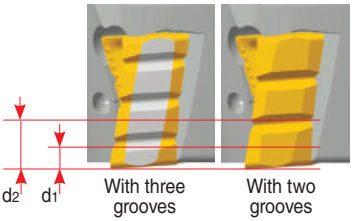


Also applicable to odd numbered flute type cutters

■ The splitter inserts effective in axial depth of cuts ≥ d_1

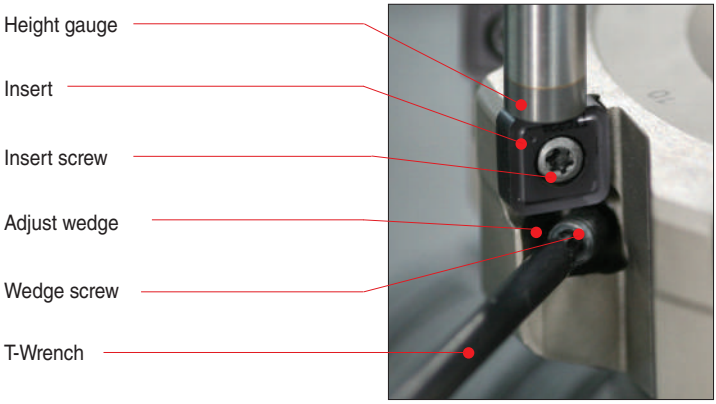


Depth of cut	APKT 17	APKT 12
d_1	3mm	2.4mm
d_2	6.5mm	5.2mm



Depth of cut	ANHX 16
d_1	2.5mm
d_2	6mm

Setting instructions



❶ Move the adjust wedge to its bottom-most position by rotating the wedge screw clockwise.

*Please avoid using too much force.

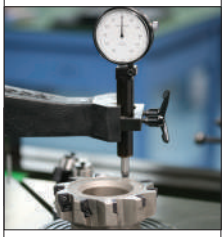
❷ Mount new cutting edge of insert. Make sure that the insert pocket is thoroughly cleaned before mounting insert.

*Please fix the insert screw completely as readjustment is not expected once it is done.

❸ Measure the Runout of the cutter when all inserts are mounted and select the highest insert as a reference.

*Please ensure that insert edge does not get damaged during setting.
Use optimum dial pressure only.

❹ Set the height of cutter, raising the reference insert by turning the wedge screw counter clockwise.

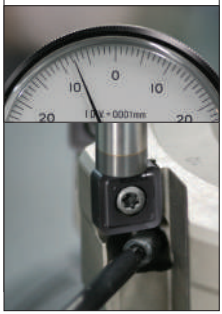


*Increase height by 0.01mm at least from the highest insert.

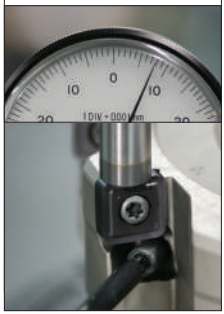
❺ -1 Adjust axial Runout of the remaining inserts with the same process as used with the reference insert.

*Please note that max adjustment height should not exceed 0.1mm(.004")

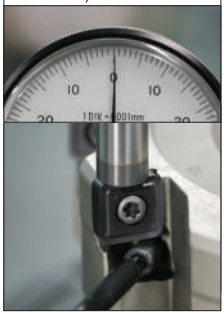
❺ -2 Adjust Runout in the range of 0.005mm rotating the wrench gradually.



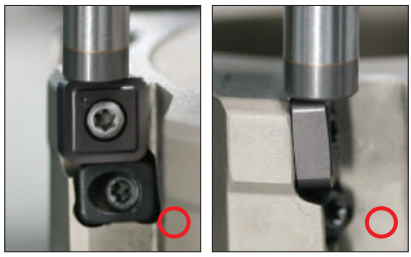
❺ -3 If it is beyond the acceptable range, please reset it with the orderof ❶-❷-❺

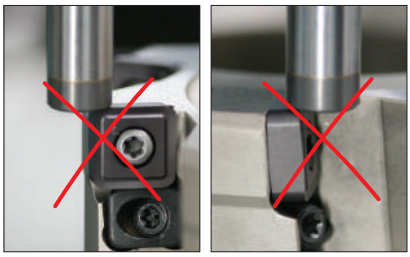


❻ Runout adjustment is completed.(you don't have to clamp the insert screw anymore once it is fixed.)



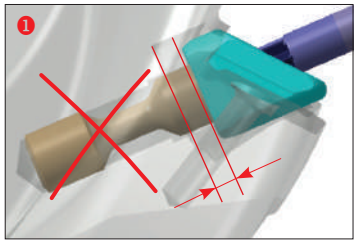
Gauge user guide

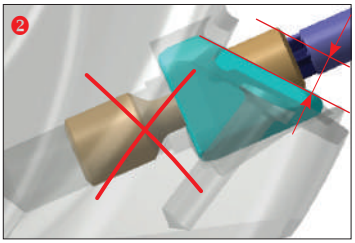


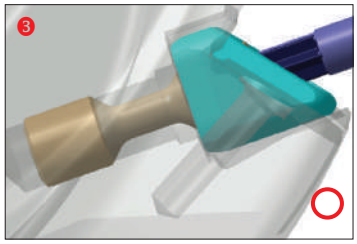


Special precautions

- While loading a new insert corner, ensure that the adjust wedge is in the bottom-most position
  Bottom out the adjust wedge completely before unclamping the insert from cutter
- Clean the insert and pocket thoroughly before mounting fresh insert /corner
- While assembling adjust wedge onto cutter body, please ensure that the adjust wedge is tightened until it reaches the bottom



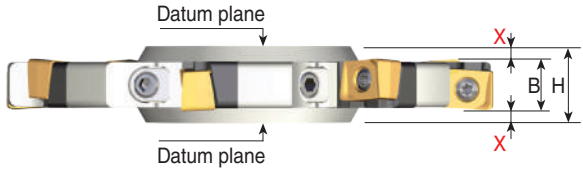




TOPSLOT component names

TOPSLOT setup instructions

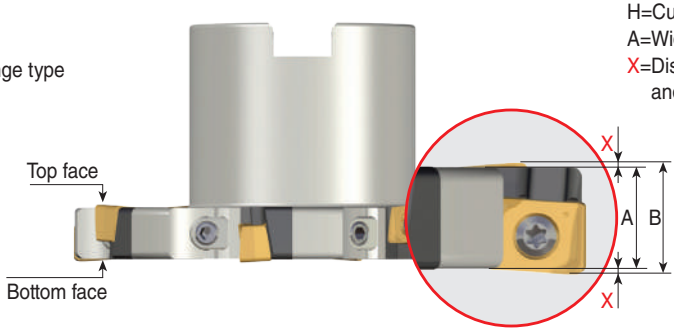
■ Disk type



X=(H-B)/2

B=Cutting width (Target width)
H=Cutter height (Datum)
A=Width of cutter body
X=Distance between insert and cutter body

■ Flange type



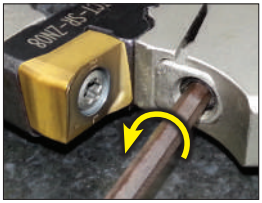
X=(B-A)/2

▶ Setting procedure

■ Disk type

❶ Index unused inserts firmly onto the cartridge.

❷ Unfasten the wedge screw 1 turn counter-clockwise.



❸ After fastening the wedge around 80%, adjust the cartridge to the desired "X" value after setting the datum zero point.

❹ Follow the same method about other cartridges. (the same as opposite side)

❺ After setting all cartridges, sequentially fasten the wedge 100% over two or three times.

- When adjusting cartridge to the "X" value, set the location of cartridge higher than "X" value and then adjust the cartridge to the "X" value.
- Clockwise rotation : cartridge descends.
- Counter-clockwise rotation : cartridge ascends.

■ Flange type

❶ For setting of bottom face, repeat disk type steps 1-4. (The datum is bottom plane of flange type cutter.)

❷ For top face set-up, the use of setting plate is mandatory and the height gauge must be reset to '0' for each insert.

❸ Put the cutter bottom face on the setting plate and unfasten wedge screw 1 turn counter-clockwise

❹ After fastening the wedge around 80%, adjust the cartridge to the desired (A+X) value.

❺ Follow the same method about other cartridges.

❻ After setting all cartridges, sequentially fasten the wedge 100% over two or three times.

- When adjusting cartridge to the "X" value, set the location of cartridge higher than "X" value and then adjust the cartridge to the "X" value.
- Clockwise rotation: cartridge descends.
- Counter-clockwise rotation: cartridge ascends.

Setting notice

■ Important set-up points

- All adjustments must be done on a plane, flat surface.
- For improved accuracy, remove any foreign substances from the insert and insert pocket surfaces before clamping.
- During reassembly wedges and wedge screws, you must apply lubricant of the friction surface. (Fig.1)
- "X" value must be equal for both top and bottom faces when adjusting the width of slot. (Fig.2)
- Width of cut must be adjusted within the range of the laser marked on the cutter. (Fig.3)
  Ex) WIDTH 12-13 / WIDTH 20-23
- When adjusting cartridge to the "X" value, set the location of cartridge higher than "X" value and then adjust the cartridge to the "X" value.

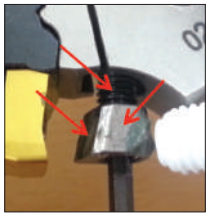


Fig.1 Lubricant

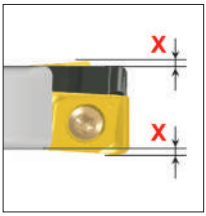
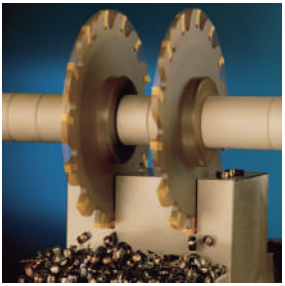


Fig.2 "X" setting

Fig.3 WIDTH

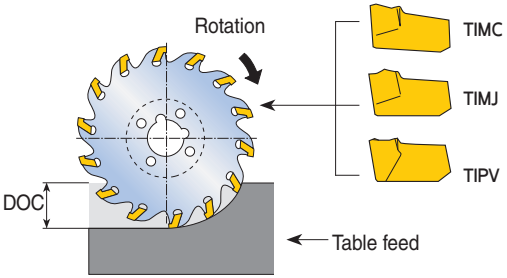
Narrow width slotting cutters

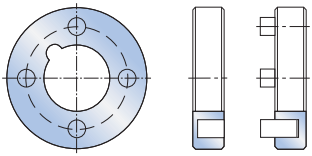


- Metric cutting diameters:
  75mm, 100mm, 125mm, 160mm, 250mm
- Cutting width ranges: 1.6mm - 6.35mm
- Geometry: Positive Rake
- Applications: Slotting and sawing
- Materials: Carbon steels, alloy steels, stainless steels, cast iron, aluminum and exotics

■ Features / Benefits of slotting cutters
- Narrow width applications to 1.6mm
- Simple easy-to-mount inserts
- Secure insert retention self-positioning insert stopper for repeatability
- Drive flange mounting for extra stability
- Minimal radial runout
- Efficient chip evacuation
- Reduced cutting forces
- Improved tool life
- Economical

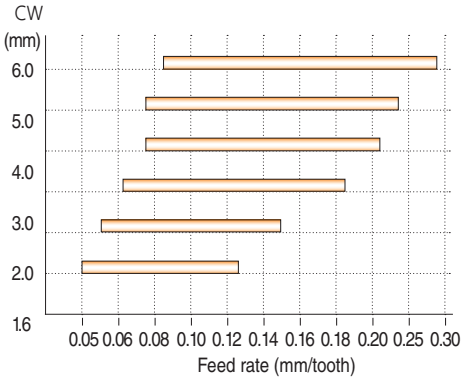
Recommended feed rates for - TSC slotting cutters

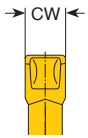




Drive flange set recommended for style 2 cutters

▶ Recommended feed rates (Based on insert width)





Feed rates are for radial
D.O.C. =>1/4 the cutter diameter
For radial DOC <1/4 the cutter diameter
increase feed rates by the following %

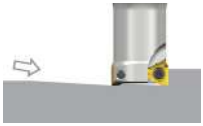
DOC/Cutter diameter	1/4	1/6	1/8	1/10	1/20
Increase feed rate by ->	0%	15%	30%	45%	45%

■ Cutter entry
Climb milling enters the workpiece with a thick chip and exits with a thin chip. Honed inserts are recommended.
Conventional milling enters the workpiece with a thin chip and exits with a thick chip.
Sharp inserts are recommended. Climb milling should be used whenever possible, especially when replacing high speed steel slotting cutters. On machines with backlash eliminators, climb milling is preferred.

■ Cutter mounting
The use of drive flange sets are recommended to prevent denting of arbor drive keys and to provide added stability during increased metal removal rates.

■ Insert mounting
Manually place insert in pocket and seat in place by using a wooden or plastic hammer.
This will ensure self positioning for insert repeatability and minimal radial runout.
Pockets must be clean and free of debris prior to installation.

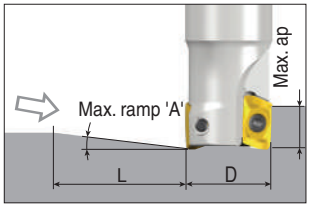
Index for Ramping Data

Series	Insert	Pages
WinMill	AVKT CVK(H)T	E340
TangSpeed	LPK(H)U	E345
MillRush 	3PKT 3PHT	E347
Chase4Mill	4NKT 4NHT	E350
ChaseMill	AXMT APKT	E372
Chase2Mill	ANH(M)X	E379
ChaseAlu	XEVT	E380
ChaseHepta	7EMT	E385

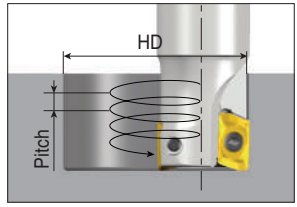
Series	Insert	Pages
Chase10Mill	PTKU	E386
NanRush	HFN	E388
Win4Feed	BLMV	E389
Chase4Feed	BLMP	E390
ChaseFeed	SBMT SRMT	E395
Chase2Mold	RNMU	E401
ChaseMold	RYHX RYMX	E403
CeramicSpeed	BNGX BNGT BCGT	E406

Ramping Data

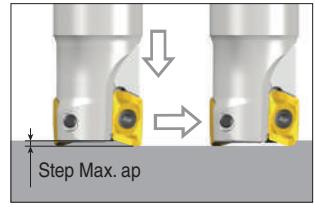
Straight ramping



Helical ramping



Step down



AVKT 10: R0.8

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.	Max. ap
Ø16	10.9	10	52	20		2.4	1.7
					32	9.7	
Ø18	8.3	10	69	24		2.7	2.0
					36	8.2	
Ø20	6.5	10	88	28		2.9	2.0
					40	7.2	
Ø25	4.3	10	133	38		3.1	2.0
					50	5.9	
Ø32	2.9	10	198	52		3.2	2.0
					64	5.1	
Ø40	2.1	10	267	68		3.3	2.0
					80	4.7	
Ø50	1.6	10	347	88		3.4	2.0
					100	4.5	
Ø63	1.2	10	459	114		3.5	2.0
					126	4.3	

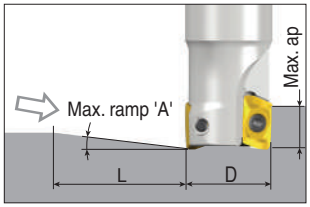
AVKT 10: R1.6

(unit: mm)

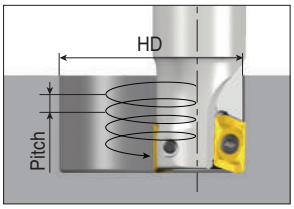
Cutter dia. (D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.	Max. ap
Ø16	10.4	9.8	53	20		2.3	1.5
					32	9.2	
Ø18	7.8	9.8	72	24		2.6	1.7
					36	7.7	
Ø20	6.1	9.8	92	28		2.7	1.7
					40	6.7	
Ø25	3.9	9.8	144	38		2.8	1.7
					50	5.3	
Ø32	2.6	9.8	212	52		2.9	1.7
					64	4.6	
Ø40	2	9.8	281	68		3.1	1.7
					80	4.4	
Ø50	1.5	9.8	374	88		3.1	1.7
					100	4.1	
Ø63	1.1	9.8	488	114		3.2	1.7
					126	4.0	

Ramping Data

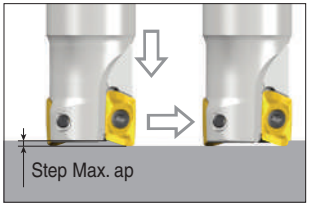
Straight ramping



Helical ramping



Step down



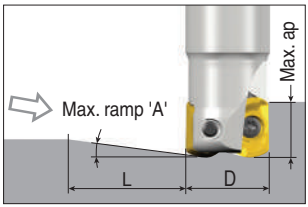
AVKT 10: R3.2

(unit: mm)

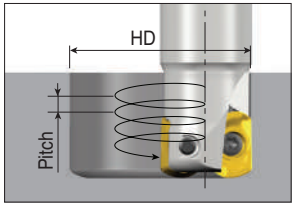
Cutter dia. (D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.	Max. ap
Ø16	8.6	9.5	63	20		1.9	1.1
					32	7.6	
Ø18	6.2	9.5	87	24		2.0	1.4
					36	6.1	
Ø20	4.6	9.5	118	28		2.0	1.4
					40	5.1	
Ø25	2.9	9.5	188	38		2.1	1.4
					50	4.0	
Ø32	1.9	9.5	287	52		2.1	1.4
					64	3.3	
Ø40	1.45	9.5	375	68		2.2	1.4
					80	3.2	
Ø50	1.05	9.5	519	88		2.2	1.4
					100	2.9	
Ø63	0.8	9.5	681	114		2.2	1.4
					126	2.8	

Ramping Data

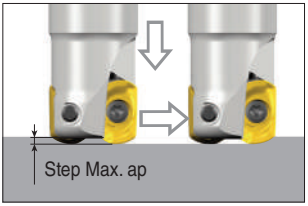
Straight ramping



Helical ramping



Step down

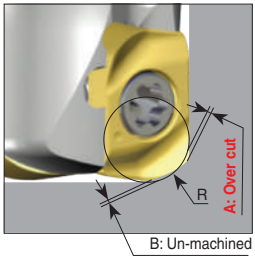


AVKT 1004R-HF

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.	Max. ap
Ø16	7.6	1.0	7	20.5		1.0	0.8
					32	1.0	
Ø18	5.5	1.0	10	24.5		1.0	1.0
					36	1.0	
Ø20	4.2	1.0	14	28.5		1.0	1.0
					40	1.0	
Ø25	2.6	1.0	22	38.5		1.0	1.0
					50	1.0	
Ø32	1.7	1.0	34	52.5		1.0	1.0
					64	1.0	
Ø40	1.2	1.0	48	68.5		1.0	1.0
					80	1.0	
Ø50	0.9	1.0	64	88.5		1.0	1.0
					100	1.0	
Ø63	0.7	1.0	82	114.5		1.0	1.0
					126	1.0	

Programming technical data

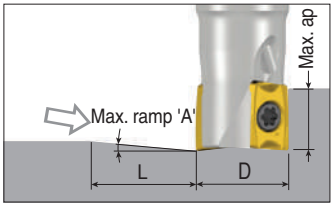


	R Program	A Over cut	B Un machined
AVKT 1004R-HF	1.7	0	0.49
	1.9	0	0.43
	2.0	0.01	0.40
	2.5	0.13	0.24
	3.0	0.30	0.11

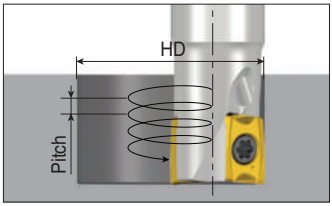
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping



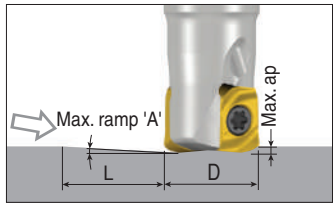
CVK(H)T 05: R0.2

(unit: mm)

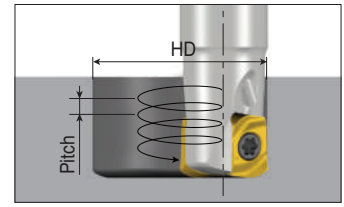
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø6	2.5	5.0	112	8		0.2
					12	0.7
Ø8	2.1	5.0	136	12		0.4
					16	0.8
Ø9	1.7	5.0	164	14		0.4
					18	0.7
Ø10	1.7	5.0	169	16		0.5
					20	0.8
Ø11	1.3	5.0	212	18		0.4
					22	0.7
Ø12	1.3	5.0	220	20		0.5
					24	0.7
Ø13	1.1	5.0	249	22		0.5
					26	0.7
Ø14	1.0	5.0	273	24		0.5
					28	0.7
Ø16	0.9	5	302	28		0.5
					32	0.7
Ø20	0.7	5	382	36		0.6
					40	0.7

Ramping Data

Straight ramping



Helical ramping

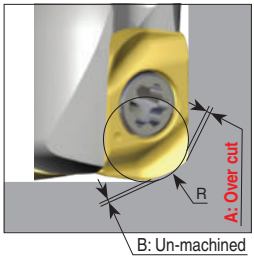


CVKT 05-HF

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø6	0.20	0.5	143	8		0.0
					12	0.1
Ø8	0.45	0.5	64	12		0.1
					16	0.2
Ø9	0.55	0.5	52	14		0.1
					18	0.2
Ø10	0.30	0.5	96	16		0.1
					20	0.1
Ø11	0.35	0.5	82	18		0.1
					22	0.2
Ø12	0.70	0.5	41	20		0.3
					24	0.4
Ø13	0.75	0.5	38	22		0.3
					26	0.5
Ø14	0.85	0.5	34	24		0.4
					28	0.5
Ø16	0.65	0.5	44	28		0.4
					32	0.5
Ø20	0.50	0.5	57	36		0.4
					40	0.5

Programming technical data

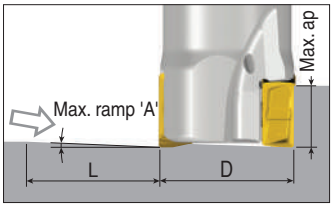


	R Program	A Over cut	B Un-machined
CVKT 05-HF	0.8	0	0.21
	0.9	0	0.18
	1.0	0.02	0.14

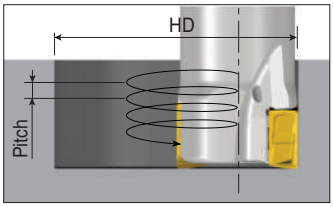
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping



LPK(H)U 05

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø10	1.8	4.6	142	16.8		0.6
					20	0.9
Ø11	1.6	4.6	160	18.8		0.6
					22	0.8
Ø12	1.5	4.6	176	20.8		0.6
					24	0.8
Ø13	1.3	4.6	195	22.8		0.6
					26	0.8
Ø16	1.0	4.6	251	28.8		0.6
					32	0.8
Ø20	0.8	4.6	330	36.8		0.6
					40	0.7
Ø25	0.6	4.6	439	46.8		0.6
					50	0.7
Ø32	0.4	4.6	586	60.8		0.6
					64	0.7

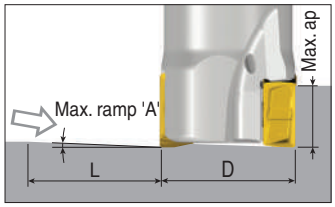
LPK(H)U 09

(unit: mm)

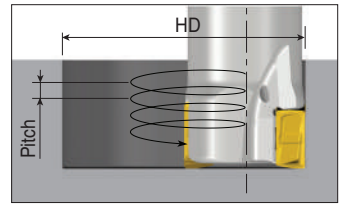
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø20	1.4	8.3	328	33		1.0
					40	1.5
Ø25	1.1	8.3	432	43		1.0
					50	1.5
Ø32	0.8	8.3	594	57		1.1
					64	1.4
Ø40	0.6	8.3	793	73		1.0
					80	1.3
Ø50	0.4	8.3	1057	93		1.0
					100	1.2
Ø63	0.3	8.3	1359	119		1.0
					126	1.2

Ramping Data

Straight ramping



Helical ramping



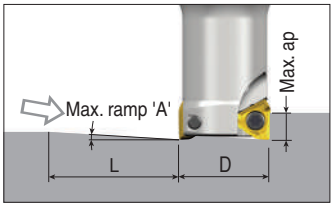
LPKU 14

(unit: mm)

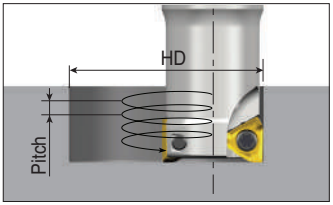
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø40	0.9	12.5	754	69		1.5
					80	2.0
Ø50	0.7	12.5	1023	89		1.5
					100	1.9
Ø63	0.5	12.5	1302	115		1.5
					126	1.9
Ø80	0.4	12.5	1790	149		1.5
					160	1.7
Ø100	0.3	12.5	2387	189		1.4
					200	1.6
Ø125	0.2	12.5	2865	239		1.5
					250	1.7
Ø160	0.2	12.5	3581	309		1.6
					320	1.7
Ø200	0.1	12.5	4775	389		1.5
					400	1.6

Ramping Data

Straight ramping



Helical ramping



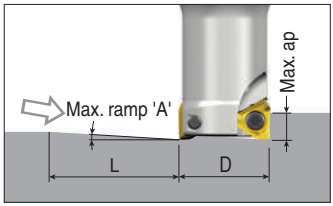
3PKT 04

(unit: mm)

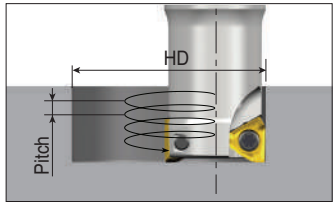
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø8	2.1	3.5	95	13.2		0.6
					16	0.9
Ø10	2.2	3.5	91	17.2		0.8
					20	1.2
Ø11	3.6	3.5	56	19.2		1.6
					22	2.1
Ø12	3.3	3.5	61	21.2		1.6
					24	2.1
Ø13	2.5	3.5	80	23.2		1.4
					26	1.7
Ø14	2.2	3.5	91	25.2		1.3
					28	1.6
Ø16	1.6	3.5	125	29.2		1.1
					32	1.4

Ramping Data

Straight ramping



Helical ramping



3PK(H)T 06 (unit: mm)

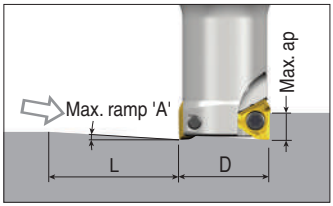
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø12	3.7	4.7	73	19.5	24	1.3 2.1
Ø14	2.8	4.7	96	23.5	28	1.2 1.8
Ø16	2.3	4.7	117	27.5	32	1.2 1.7
Ø17	2.0	4.7	135	29.5	34	1.2 1.6
Ø18	2.0	4.7	135	31.5	36	1.3 1.7
Ø20	1.6	4.7	168	35.5	40	1.2 1.5
Ø21	1.5	4.7	180	37.5	42	1.2 1.5
Ø22	1.5	4.7	180	39.5	44	1.2 1.5
Ø25	1.5	4.7	180	45.5	50	1.4 1.7
Ø30	1.2	4.7	224	55.5	60	1.4 1.7
Ø32	1.2	4.7	224	59.5	64	1.5 1.8
Ø35	1.0	4.7	269	65.5	70	1.4 1.6
Ø40	0.7	4.7	385	75.5	80	1.2 1.3

3PK(H)T 10 (unit: mm)

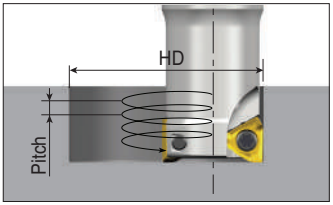
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	7.0	7.0	57	24.7	32	2.8 5.2
Ø20	3.3	7.0	121	33.9	40	2.1 3.1
Ø21	3.2	7.0	125	35.9	42	2.2 3.1
Ø22	3.2	7.0	125	37.9	44	2.4 3.3
Ø25	2.8	7.0	143	43.5	50	2.4 3.3
Ø26	2.6	7.0	154	45.9	52	2.4 3.1
Ø30	2.0	7.0	201	53.9	60	2.2 2.8
Ø32	1.8	7.0	223	57.5	64	2.1 2.7
Ø33	1.7	7.0	236	59.9	66	2.1 2.6
Ø40	1.3	7.0	309	73.7	80	2.0 2.4
Ø50	1.0	7.0	401	93.7	100	2.0 2.3
Ø63	0.8	7.0	502	119.7	126	2.1 2.3

Ramping Data

Straight ramping



Helical ramping



3PK(H)T 15

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø32	3.2	11.0	197	53.5		3.2
					64	4.8
Ø33	3.1	11.0	203	55.5		3.3
					66	4.8
Ø35	3.1	11.0	203	59.5		3.5
					70	5.1
Ø40	2.0	11.0	315	70.1		2.8
					80	3.7
Ø50	1.5	11.0	420	90.1		2.8
					100	3.5
Ø63	1.1	11.0	573	116.1		2.7
					126	3.2
Ø80	0.8	11.0	788	150.3		2.6
					160	3.0
Ø100	0.6	11.0	1051	190.5		2.5
					200	2.8
Ø125	0.5	11.0	1261	240.3		2.7
					250	2.9
Ø160	0.3	11.0	2102	310.3		2.1
					320	2.2
Ø200	0.2	11.0	3153	390.3		1.8
					400	1.9

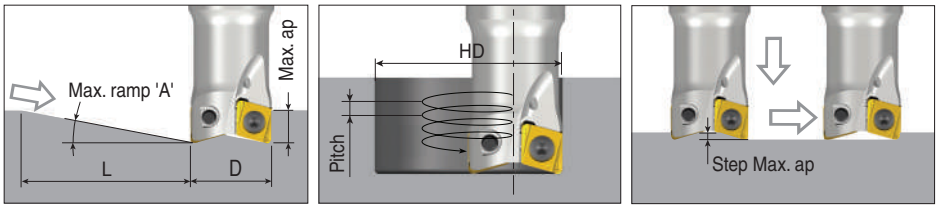
3PK(H)T 19

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø40	3.6	15.0	239	66.7		4.5
					80	6.7
Ø50	2.2	15.0	391	87.9		3.9
					100	5.1
Ø63	1.7	15.0	506	113.9		4
					126	5
Ø80	1.3	15.0	661	147.9		4.1
					160	4.8
Ø100	1.0	15.0	860	187.9		4.1
					200	4.7
Ø125	0.8	15.0	1075	237.9		4.2
					250	4.7
Ø160	0.6	15.0	1433	307.9		4.1
					320	4.5
Ø200	0.4	15.0	2150	387.9		3.5
					400	3.7
Ø250	0.3	15.0	2866	487.9		3.3
					500	3.5

Ramping Data

Straight ramping | Helical ramping | Step down



4NKT 04: R0.2

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø8	4.2	3.5	48	9.9	16	0.4 3.1	0.4
Ø10	4.6	3.5	44	13.9	20	0.8 2.1	0.6
Ø11	5.2	3.5	38	15.9	22	1.2 2.7	0.7
Ø12	4.8	3.5	42	17.9	24	1.3 2.7	0.8
Ø13	5.1	3.5	39	19.9	26	1.6 3.1	0.8
Ø16	4.4	3.5	46	25.9	32	2.0 3.3	1.0
Ø20	3.3	3.5	61	33.9	40	2.1 3.1	1.0
Ø25	2.5	3.5	80	43.9	50	2.2 2.9	1.0
Ø32	1.9	3.5	106	57.9	64	2.3 2.8	1.0
Ø40	1.4	3.5	138	73.9	80	2.3 2.7	1.0

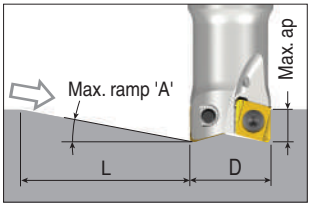
4NKT 04: R0.4

(unit: mm)

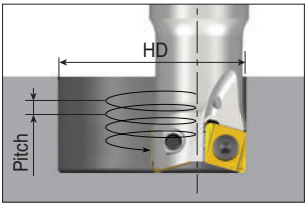
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø8	3.7	3.5	54	9.9	16	0.3 2.8	0.4
Ø10	4.2	3.5	48	13.9	20	0.8 2.0	0.5
Ø11	4.8	3.5	42	15.9	22	1.1 2.5	0.6
Ø12	4.5	3.5	44	17.9	24	1.2 2.5	0.7
Ø13	4.7	3.5	43	19.9	26	1.5 2.9	0.8
Ø16	4.1	3.5	49	25.9	32	1.9 3.1	0.9
Ø20	3.1	3.5	65	33.9	40	2.0 2.9	0.9
Ø25	2.3	3.5	85	43.9	50	2.1 2.7	0.9
Ø32	1.7	3.5	115	57.9	64	2.1 2.6	0.9
Ø40	1.3	3.5	149	73.9	80	2.1 2.5	0.9

Ramping Data

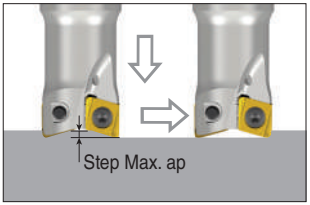
Straight ramping



Helical ramping



Step down



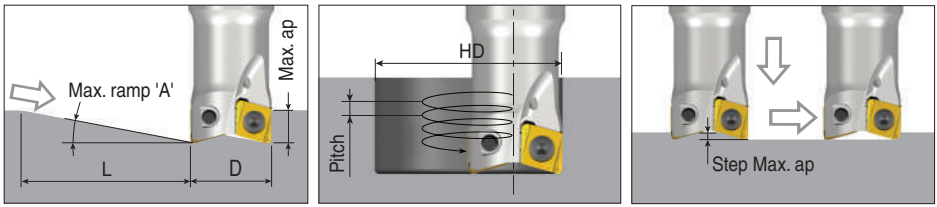
4NKT 04: R0.8

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø8	2.2	3.5	91	9.9		0.2	0.2
					16	1.6	
Ø10	3.0	3.5	67	13.9		0.5	0.4
					20	1.4	
Ø11	3.7	3.5	54	15.9		0.8	0.5
					22	1.9	
Ø12	3.5	3.5	57	17.9		1.0	0.5
					24	2.0	
Ø13	3.9	3.5	51	19.9		1.3	0.6
					26	2.4	
Ø16	3.5	3.5	57	25.9		1.6	0.7
					32	2.6	
Ø20	2.6	3.5	77	33.9		1.7	0.7
					40	2.4	
Ø25	1.9	3.5	103	43.9		1.7	0.7
					50	2.3	
Ø32	1.5	3.5	134	57.9		1.8	0.7
					64	2.2	
Ø40	1.1	3.5	174	73.9		1.8	0.7
					80	2.1	

Ramping Data

Straight ramping | Helical ramping | Step down



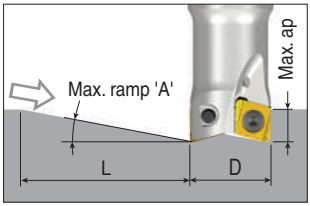
4NKT 06: R0.4

(unit: mm)

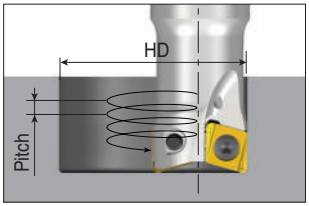
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	4.3	6.2	82	21.5		1.1	0.9
					32	3.2	
Ø17	4.3	6.2	82	23.5		1.3	1.0
					34	3.4	
Ø18	4.7	6.2	75	25.5		1.6	1.1
					36	3.9	
Ø20	4.9	6.2	72	29.5		2.2	1.3
					40	4.6	
Ø21	5.0	6.2	71	31.5		2.5	1.4
					42	4.9	
Ø25	4.9	6.2	72	39.5		3.3	1.6
					50	5.7	
Ø26	4.6	6.2	77	41.5		3.3	1.6
					52	5.6	
Ø32	3.5	6.2	101	53.5		3.5	1.7
					64	5.2	
Ø33	3.4	6.2	104	55.5		3.6	1.7
					66	5.2	
Ø35	3.1	6.2	115	59.5		3.5	1.7
					70	5.1	
Ø36	3.0	6.2	118	61.5		3.6	1.7
					72	5.0	
Ø38	2.8	6.2	127	65.5		3.6	1.7
					76	5.0	
Ø40	2.6	6.2	134	69.5		3.6	1.7
					80	4.9	
Ø43	2.4	6.2	148	75.5		3.6	1.7
					86	4.8	
Ø50	2.0	6.2	173	89.5		3.8	1.7
					100	4.8	
Ø63	1.6	6.2	222	115.5		3.9	1.7
					126	4.7	

Ramping Data

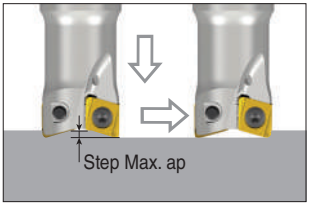
Straight ramping



Helical ramping



Step down



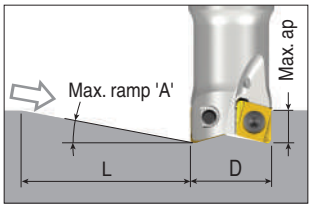
4NKT 06: R0.8

(unit: mm)

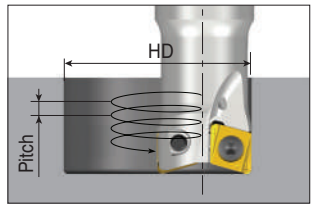
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	3.7	6.0	93	21.5		0.9	0.8
					32	2.8	
Ø17	3.8	6.0	90	23.5		1.2	0.8
					34	3.0	
Ø18	4.2	6.0	82	25.5		1.5	1.0
					36	3.5	
Ø20	4.4	6.0	78	29.5		2.0	1.1
					40	4.1	
Ø21	4.6	6.0	75	31.5		2.3	1.2
					42	4.5	
Ø25	4.6	6.0	75	39.5		3.1	1.5
					50	5.4	
Ø26	4.3	6.0	80	41.5		3.1	1.5
					52	5.2	
Ø32	3.2	6.0	107	53.5		3.2	1.5
					64	4.8	
Ø33	3.1	6.0	111	55.5		3.3	1.5
					66	4.8	
Ø35	2.8	6.0	121	59.5		3.3	1.5
					70	4.6	
Ø36	2.7	6.0	125	61.5		3.3	1.5
					72	4.6	
Ø38	2.5	6.0	135	65.5		3.3	1.5
					76	4.5	
Ø40	2.4	6.0	140	69.5		3.4	1.5
					80	4.6	
Ø43	2.2	6.0	153	75.5		3.4	1.5
					86	4.5	
Ø50	1.9	6.0	181	89.5		3.5	1.5
					100	4.4	
Ø63	1.4	6.0	237	115.5		3.5	1.6
					126	4.3	

Ramping Data

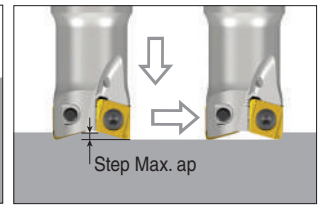
Straight ramping



Helical ramping



Step down



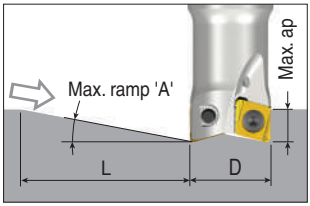
4NKT 06: R1.2

(unit: mm)

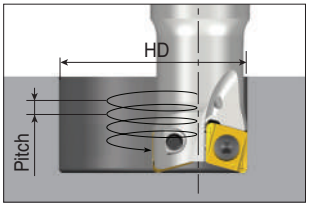
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	3.0	6.0	115	21.5		0.8	0.6
					32	2.2	
Ø17	3.2	6.0	107	23.5		1.0	0.7
					34	2.5	
Ø18	3.6	6.0	95	25.5		1.3	0.8
					36	3.0	
Ø20	3.9	6.0	88	29.5		1.7	1.0
					40	3.6	
Ø21	4.1	6.0	84	31.5		2.0	1.1
					42	4.0	
Ø25	4.2	6.0	82	39.5		2.8	1.3
					50	4.9	
Ø26	3.9	6.0	88	41.5		2.8	1.3
					52	4.7	
Ø32	2.9	6.0	119	53.5		2.9	1.4
					64	4.3	
Ø33	2.8	6.0	123	55.5		2.9	1.4
					66	4.3	
Ø35	2.6	6.0	132	59.5		3.0	1.4
					70	4.2	
Ø36	2.5	6.0	137	61.5		3.0	1.4
					72	4.2	
Ø38	2.3	6.0	146	65.5		3.0	1.4
					76	4.2	
Ø40	2.2	6.0	156	69.5		3.0	1.4
					80	4.1	
Ø43	2.0	6.0	168	75.5		3.1	1.4
					86	4.1	
Ø50	1.7	6.0	202	89.5		3.1	1.4
					100	4.0	
Ø63	1.3	6.0	265	115.5		3.2	1.4
					126	3.8	

Ramping Data

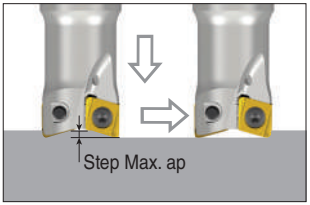
Straight ramping



Helical ramping



Step down



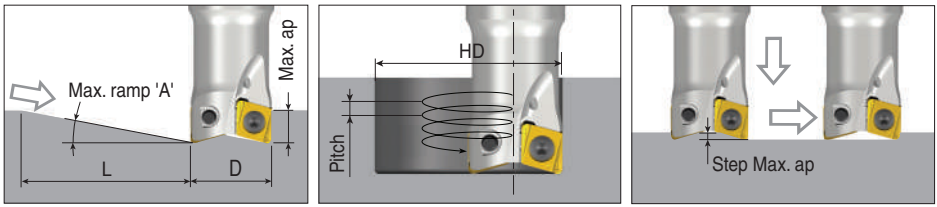
4NKT 06: R1.6

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	2.2	5.8	151	21.5		0.6	0.4
					32	1.6	
Ø17	2.4	5.8	138	23.5		0.7	0.5
					34	1.9	
Ø18	2.8	5.8	119	25.5		1.0	0.6
					36	2.3	
Ø20	3.2	5.8	104	29.5		1.4	0.8
					40	3.0	
Ø21	3.4	5.8	98	31.5		1.7	0.9
					42	3.3	
Ø25	3.7	5.8	90	39.5		2.5	1.1
					50	4.3	
Ø26	3.4	5.8	98	41.5		2.5	1.1
					52	4.1	
Ø32	2.5	5.8	130	53.5		2.6	1.2
					64	3.8	
Ø33	2.4	5.8	136	55.5		2.6	1.2
					66	3.8	
Ø35	2.3	5.8	144	59.5		2.6	1.2
					70	3.8	
Ø36	2.2	5.8	151	61.5		2.6	1.2
					72	3.7	
Ø38	2.0	5.8	162	65.5		2.6	1.2
					76	3.6	
Ø40	1.9	5.8	170	69.5		2.7	1.2
					80	3.6	
Ø43	1.8	5.8	185	75.5		2.7	1.2
					86	3.6	
Ø50	1.5	5.8	222	89.5		2.8	1.2
					100	3.5	
Ø63	1.1	5.8	289	115.5		2.8	1.2
					126	3.4	

Ramping Data

Straight ramping | Helical ramping | Step down



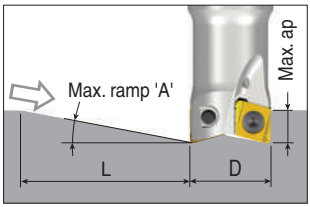
4NKT 06: R2.0

(unit: mm)

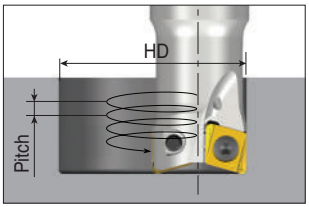
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	1.6	5.6	201	21.5		0.4	0.3
					32	1.2	
Ø17	1.8	5.6	178	23.5		0.5	0.3
					34	1.4	
Ø18	2.3	5.6	139	25.5		0.8	0.5
					36	1.9	
Ø20	2.7	5.6	117	29.5		1.2	0.6
					40	2.6	
Ø21	3.0	5.6	107	31.5		1.5	0.7
					42	2.9	
Ø25	3.3	5.6	97	39.5		2.2	1.0
					50	3.8	
Ø26	3.1	5.6	103	41.5		2.2	1.0
					52	3.8	
Ø32	2.3	5.6	139	53.5		2.3	1.0
					64	3.4	
Ø33	2.2	5.6	146	55.5		2.3	1.0
					66	3.4	
Ø35	2.0	5.6	157	59.5		2.3	1.0
					70	3.3	
Ø36	2.0	5.6	160	61.5		2.4	1.0
					72	3.4	
Ø38	1.8	5.6	173	65.5		2.4	1.0
					76	3.3	
Ø40	1.7	5.6	183	69.5		2.4	1.0
					80	3.3	
Ø43	1.3	5.6	247	75.5		2.0	1.0
					86	2.6	
Ø50	1.3	5.6	238	89.5		2.5	1.0
					100	3.1	
Ø63	1.0	5.6	306	115.5		2.6	1.0
					126	3.1	

Ramping Data

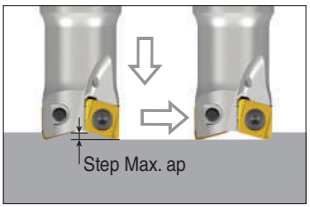
Straight ramping



Helical ramping



Step down



4NHT 04: R0.5-F

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø8	3.4	2.2	37	9.9	16	0.3 1.3	0.3
Ø10	4.0	2.2	31	13.9	20	0.7 1.9	0.5
Ø11	4.6	2.2	27	15.9	22	1.1 2.2	0.6
Ø12	4.3	2.2	29	17.9	24	1.2 2.2	0.7
Ø13	4.6	2.2	27	19.9	26	1.5 2.2	0.8
Ø16	3.9	2.2	32	25.9	32	1.8 2.2	0.9
Ø20	2.9	2.2	43	33.9	40	1.9 2.2	0.9
Ø25	2.2	2.2	57	43.9	50	1.9 2.2	0.9
Ø32	1.6	2.2	76	57.9	64	2.0 2.2	0.9
Ø40	1.3	2.2	97	73.9	80	2.1 2.2	0.9

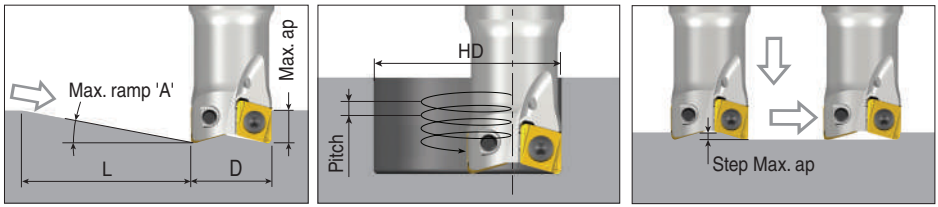
4NHT 04: R1.0-F

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø8	1.5	2.0	74	9.9	16	0.1 0.6	0.1
Ø10	2.5	2.0	45	13.9	20	0.5 1.2	0.3
Ø11	3.3	2.0	35	15.9	22	0.8 1.7	0.4
Ø12	3.1	2.0	37	17.9	24	0.9 1.7	0.5
Ø13	3.5	2.0	33	19.9	26	1.1 2.0	0.5
Ø16	3.0	2.0	38	25.9	32	1.4 2.0	0.6
Ø20	2.2	2.0	51	33.9	40	1.5 2.0	0.7
Ø25	1.7	2.0	65	43.9	50	1.5 2.0	0.7
Ø32	1.3	2.0	88	57.9	64	1.6 1.9	0.7
Ø40	1.0	2.0	115	73.9	80	1.6 1.9	0.7

Ramping Data

Straight ramping | Helical ramping | Step down



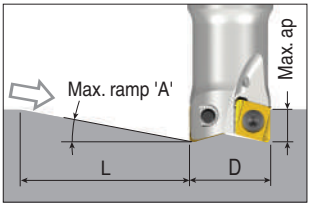
4NHT 06: R0.4

(unit: mm)

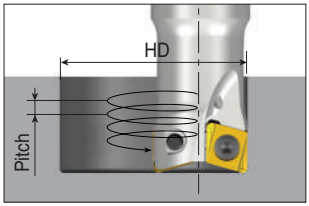
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	2.9	6.0	119	21.5		0.7	0.6
					32	2.2	
Ø17	3.0	6.0	115	23.5		0.9	0.6
					34	2.4	
Ø18	3.4	6.0	101	25.5		1.2	0.8
					36	2.9	
Ø20	3.8	6.0	90	29.5		1.7	0.9
					40	3.5	
Ø21	4.0	6.0	86	31.5		2.0	1.0
					42	3.9	
Ø25	4.1	6.0	84	39.5		2.8	1.3
					50	4.8	
Ø26	3.8	6.0	90	41.5		2.7	1.3
					52	4.6	
Ø32	2.8	6.0	123	53.5		2.8	1.3
					64	4.2	
Ø33	2.7	6.0	127	55.5		2.8	1.3
					66	4.2	
Ø35	2.5	6.0	135	59.5		2.9	1.3
					70	4.2	
Ø36	2.4	6.0	140	61.5		2.9	1.3
					72	4.1	
Ø38	2.3	6.0	149	65.5		2.9	1.3
					76	4.1	
Ø40	2.1	6.0	160	69.5		3.0	1.3
					80	4.0	
Ø43	1.9	6.0	176	75.5		3.0	1.3
					86	3.9	
Ø50	1.6	6.0	208	89.5		3.0	1.3
					100	3.8	
Ø63	1.2	6.0	275	115.5		3.1	1.3
					126	3.7	

Ramping Data

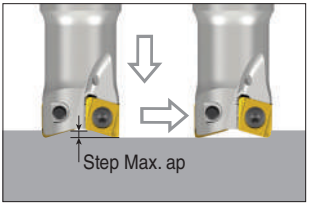
Straight ramping



Helical ramping



Step down



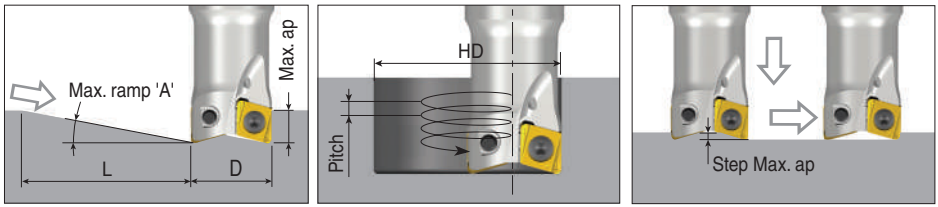
4NHT 06: R0.8

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	2.9	6.0	119	21.5		0.7	0.6
					32	2.2	
Ø17	3.0	6.0	115	23.5		0.9	0.6
					34	2.4	
Ø18	3.5	6.0	98	25.5		1.2	0.8
					36	2.9	
Ø20	3.8	6.0	90	29.5		1.7	0.9
					40	3.5	
Ø21	4.0	6.0	86	31.5		2.0	1.0
					42	3.9	
Ø25	4.1	6.0	84	39.5		2.8	1.3
					50	4.8	
Ø26	3.8	6.0	90	41.5		2.7	1.3
					52	4.6	
Ø32	2.8	6.0	123	53.5		2.8	1.3
					64	4.2	
Ø33	2.7	6.0	127	55.5		2.8	1.3
					66	4.2	
Ø35	2.5	6.0	135	59.5		2.9	1.3
					70	4.2	
Ø36	2.4	6.0	140	61.5		2.9	1.3
					72	4.1	
Ø38	2.3	6.0	149	65.5		2.9	1.3
					76	4.1	
Ø40	2.1	6.0	160	69.5		3.0	1.3
					80	4.0	
Ø43	1.9	6.0	176	75.5		3.0	1.3
					86	3.9	
Ø50	1.6	6.0	208	89.5		3.0	1.3
					100	3.8	
Ø63	1.25	6.0	275	115.5		3.1	1.3
					126	3.7	

Ramping Data

Straight ramping | Helical ramping | Step down



4NHT 06: R0.5-F

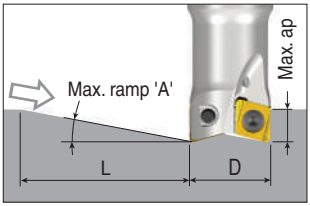
(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	3.5	2.3	38	21.5		0.9	0.8
					32	2.3	
Ø17	3.6	2.3	37	23.5		1.1	0.8
					34	2.3	
Ø18	4.0	2.3	33	25.5		1.4	1.0
					36	2.3	
Ø20	4.3	2.3	31	29.5		1.9	1.2
					40	2.3	
Ø21	4.4	2.3	30	31.5		2.2	1.2
					42	2.3	
Ø25	4.9	2.3	27	39.5		2.3	1.6
					50	2.3	
Ø26	4.6	2.3	29	41.5		2.3	1.6
					52	2.3	
Ø32	3.5	2.3	38	53.5		2.3	1.6
					64	2.3	
Ø33	3.3	2.3	40	55.5		2.3	1.6
					66	2.3	
Ø35	3.1	2.3	42	59.5		2.3	1.6
					70	2.3	
Ø36	3.0	2.3	44	61.5		2.3	1.6
					72	2.3	
Ø38	2.8	2.3	47	65.5		2.3	1.7
					76	2.3	
Ø40	2.6	2.3	51	69.5		2.3	1.7
					80	2.3	
Ø43	2.4	2.3	55	75.5		2.3	1.7
					86	2.3	
Ø50	2.0	2.3	64	89.5		2.3	1.7
					100	2.3	
Ø63	1.7	2.3	78	115.5		2.3	1.7
					126	2.3	

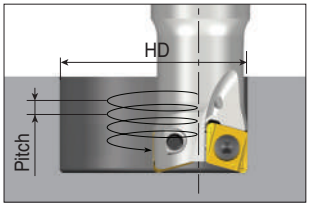
Ramping Data

CHASE4MILL

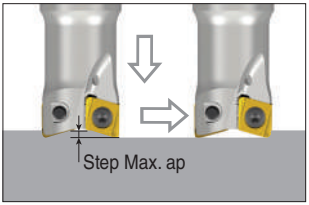
Straight ramping



Helical ramping



Step down



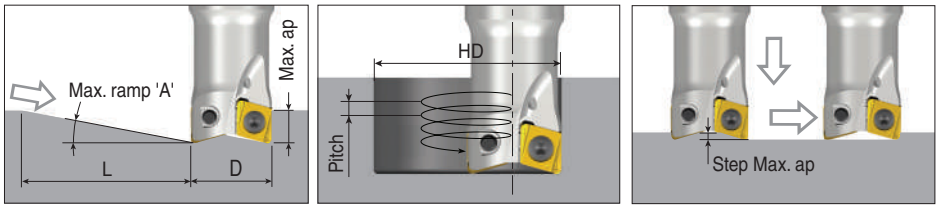
4NHT 06: R0.8-F

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	3.1	1.9	35	21.5		0.8	0.7
					32	1.9	
Ø17	3.2	1.9	34	23.5		1.0	0.7
					34	1.9	
Ø18	3.6	1.9	30	25.5		1.3	0.9
					36	1.9	
Ø20	3.9	1.9	28	29.5		1.7	1.0
					40	1.9	
Ø21	4.1	1.9	27	31.5		1.9	1.1
					42	1.9	
Ø25	4.6	1.9	24	39.5		1.9	1.5
					50	1.9	
Ø26	4.4	1.9	25	41.5		1.9	1.5
					52	1.9	
Ø32	3.3	1.9	33	53.5		1.9	1.5
					64	1.9	
Ø33	3.1	1.9	35	55.5		1.9	1.5
					66	1.9	
Ø35	2.9	1.9	38	59.5		1.9	1.5
					70	1.9	
Ø36	2.8	1.9	39	61.5		1.9	1.5
					72	1.9	
Ø38	2.6	1.9	41	65.5		1.9	1.5
					76	1.9	
Ø40	2.4	1.9	44	69.5		1.9	1.5
					80	1.9	
Ø43	2.2	1.9	48	75.5		1.9	1.5
					86	1.9	
Ø50	1.9	1.9	57	89.5		1.9	1.6
					100	1.9	
Ø63	1.4	1.9	75	115.5		1.9	1.6
					126	1.9	

Ramping Data

Straight ramping | Helical ramping | Step down



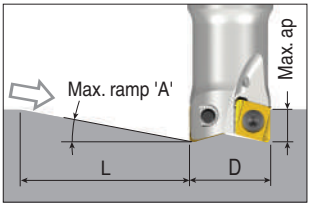
4NHT 06: R1.0-F

(unit: mm)

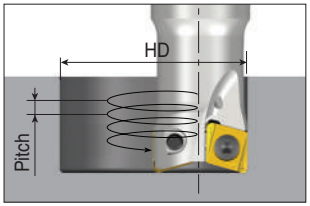
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	2.7	2.1	44	21.5		0.7	0.6
					32	2.1	
Ø17	2.9	2.1	41	23.5		0.9	0.7
					34	2.1	
Ø18	3.3	2.1	36	25.5		1.2	0.8
					36	2.1	
Ø20	3.6	2.1	33	29.5		1.6	1.0
					40	2.1	
Ø21	3.8	2.1	32	31.5		1.9	1.0
					42	2.1	
Ø25	4.4	2.1	27	39.5		2.1	1.4
					50	2.1	
Ø26	4.2	2.1	29	41.5		2.1	1.4
					52	2.1	
Ø32	3.1	2.1	39	53.5		2.1	1.4
					64	2.1	
Ø33	3.0	2.1	40	55.5		2.1	1.4
					66	2.1	
Ø35	2.8	2.1	43	59.5		2.1	1.4
					70	2.1	
Ø36	2.6	2.1	45	61.5		2.1	1.4
					72	2.1	
Ø38	2.5	2.1	48	65.5		2.1	1.5
					76	2.1	
Ø40	2.3	2.1	51	69.5		2.1	1.5
					80	2.1	
Ø43	2.1	2.1	56	75.5		2.1	1.5
					86	2.1	
Ø50	1.8	2.1	67	89.5		2.1	1.5
					100	2.1	
Ø63	1.4	2.1	86	115.5		2.1	1.5
					126	2.1	

Ramping Data

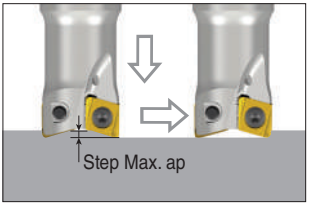
Straight ramping



Helical ramping



Step down



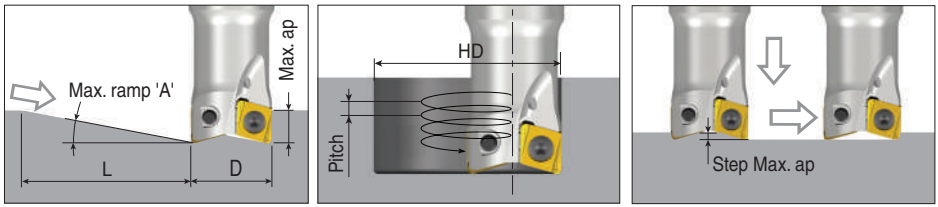
4NHT 06: R1.5-F

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	1.9	3.3	97	21.5		0.5	0.4
					32	1.5	
Ø17	2.1	3.3	88	23.5		0.7	0.5
					34	1.7	
Ø18	2.6	3.3	73	25.5		0.9	0.6
					36	2.2	
Ø20	3.0	3.3	63	29.5		1.3	0.8
					40	2.8	
Ø21	3.2	3.3	59	31.5		1.6	0.9
					42	3.1	
Ø25	3.9	3.3	48	39.5		2.6	1.2
					50	3.3	
Ø26	3.7	3.3	51	41.5		2.7	1.2
					52	3.3	
Ø32	2.7	3.3	70	53.5		2.7	1.2
					64	3.3	
Ø33	2.6	3.3	71	55.5		2.8	1.2
					66	3.3	
Ø35	2.4	3.3	77	59.5		2.8	1.3
					70	3.3	
Ø36	2.3	3.3	80	61.5		2.8	1.3
					72	3.3	
Ø38	2.2	3.3	86	65.5		2.8	1.3
					76	3.3	
Ø40	2.1	3.3	90	69.5		2.9	1.3
					80	3.3	
Ø43	1.9	3.3	100	75.5		2.9	1.3
					86	3.3	
Ø50	1.6	3.3	118	89.5		2.9	1.3
					100	3.3	
Ø63	1.2	3.3	151	115.5		3.1	1.3
					126	3.3	

Ramping Data

Straight ramping | Helical ramping | Step down



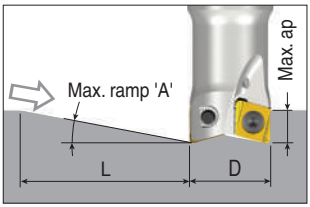
4NHT 06: R2.0-F

(unit: mm)

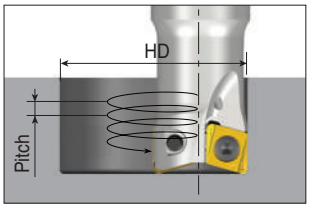
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø16	0.8	3.0	202	21.5		0.2	0.1
					32	0.6	
Ø17	1.1	3.0	156	23.5		0.3	0.2
					34	0.9	
Ø18	1.6	3.0	107	25.5		0.6	0.3
					36	1.3	
Ø20	2.1	3.0	82	29.5		0.9	0.5
					40	2.0	
Ø21	2.3	3.0	73	31.5		1.1	0.6
					42	2.3	
Ø25	3.2	3.0	54	39.5		2.2	0.9
					50	3.0	
Ø26	3.0	3.0	57	41.5		2.2	1.0
					52	3.0	
Ø32	2.2	3.0	76	53.5		2.3	1.0
					64	3.0	
Ø33	2.1	3.0	80	55.5		2.3	1.0
					66	3.0	
Ø35	2.0	3.0	86	59.5		2.3	1.0
					70	3.0	
Ø36	1.9	3.0	88	61.5		2.3	1.0
					72	3.0	
Ø38	1.8	3.0	96	65.5		2.3	1.0
					76	3.0	
Ø40	1.7	3.0	101	69.5		2.3	1.0
					80	3.0	
Ø43	1.5	3.0	111	75.5		2.3	1.0
					86	3.0	
Ø50	1.3	3.0	132	89.5		2.4	1.0
					100	3.0	
Ø63	1.0	3.0	172	115.5		2.4	1.0
					126	2.9	

Ramping Data

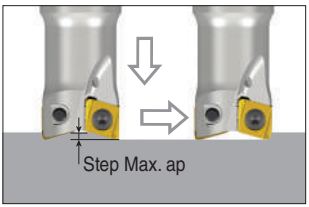
Straight ramping



Helical ramping



Step down



4NKT 09: R0.8

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø20	3.7	8.0	124	25.5		0.9	1.0
					40	3.5	
Ø25	4.9	8.0	93	35.5		2.4	1.6
					50	5.7	
Ø32	4.9	8.0	93	49.5		4.0	2.1
					64	7.3	
Ø40	3.6	8.0	127	65.5		4.3	2.1
					80	6.7	
Ø50	2.7	8.0	170	85.5		4.5	2.1
					100	6.3	
Ø63	2.0	8.0	224	111.5		4.6	2.1
					126	6.0	
Ø80	1.5	8.0	296	145.5		4.7	2.1
					160	5.8	

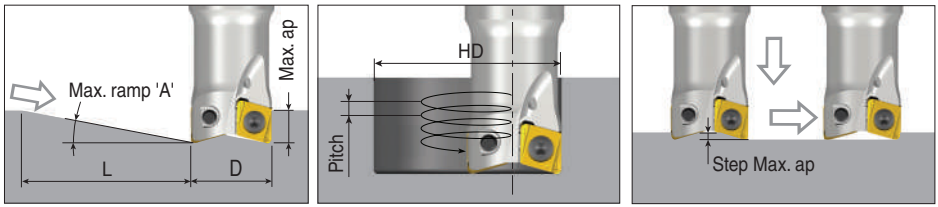
4NKT 09: R1.6

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø20	2.7	8.0	167	25.5		0.7	0.7
					40	2.6	
Ø25	4.1	8.0	112	35.5		2.0	1.3
					50	4.8	
Ø32	4.4	8.0	104	49.5		3.6	1.8
					64	6.6	
Ø40	3.1	8.0	148	65.5		3.7	1.8
					80	5.8	
Ø50	2.3	8.0	195	85.5		3.9	1.8
					100	5.5	
Ø63	1.8	8.0	255	111.5		4.1	1.8
					126	5.3	
Ø80	1.3	8.0	340	145.5		4.1	1.8
					160	5.0	

Ramping Data

Straight ramping | Helical ramping | Step down



4NHT 09: R0.4

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø20	2.9	8.0	155	25.5		0.8	0.8
					40	2.7	
Ø25	4.3	8.0	106	35.5		2.1	1.3
					50	5.0	
Ø32	4.5	8.0	102	49.5		3.7	1.8
					64	6.7	
Ø40	3.2	8.0	143	65.5		3.8	1.8
					80	6.0	
Ø50	2.4	8.0	191	85.5		4.0	1.8
					100	5.6	
Ø63	1.8	8.0	255	111.5		4.1	1.8
					126	5.3	
Ø80	1.3	8.0	340	145.5		4.1	1.8
					160	5.0	

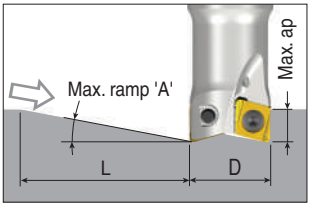
4NHT 09: R0.8

(unit: mm)

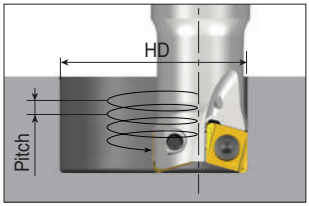
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø20	2.9	8.0	155	25.5		0.8	0.8
					40	2.7	
Ø25	4.3	8.0	106	35.5		2.1	1.3
					50	5.0	
Ø32	4.5	8.0	102	49.5		3.7	1.8
					64	6.7	
Ø40	3.2	8.0	143	65.5		3.8	1.8
					80	6.0	
Ø50	2.4	8.0	191	85.5		4.0	1.8
					100	5.6	
Ø63	1.8	8.0	255	111.5		4.1	1.8
					126	5.3	
Ø80	1.3	8.0	340	145.5		4.1	1.8
					160	5.0	

Ramping Data

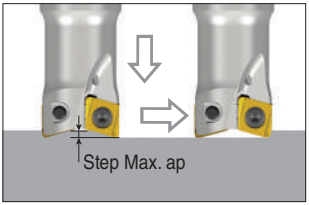
Straight ramping



Helical ramping



Step down



4NKT 11: R0.8

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø25	5.1	10.3	115	31.5		1.5	1.7
					50	6.0	
Ø32	5.3	10.3	111	45.5		3.3	2.4
					64	7.9	
Ø40	5.0	10.3	118	61.5		5.0	2.7
					80	9.3	
Ø50	3.7	10.3	159	81.5		5.4	2.7
					100	8.6	
Ø63	2.7	10.3	219	107.5		5.6	2.7
					126	7.9	
Ø80	2.0	10.3	288	141.5		5.9	2.7
					160	7.6	

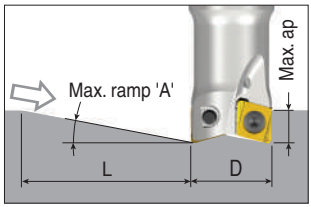
4NKT 14: R0.8

(unit: mm)

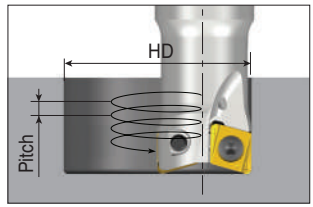
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø32	5.2	13.5	148	39.5		1.8	2.3
					64	7.8	
Ø40	5.2	13.5	148	55.5		3.8	3.0
					80	9.7	
Ø50	5.5	13.5	140	75.5		6.6	3.3
					100	12.8	
Ø63	4.0	13.5	193	101.5		7.2	3.3
					126	11.8	
Ø80	2.9	13.5	267	135.5		7.5	3.3
					160	10.8	

Ramping Data

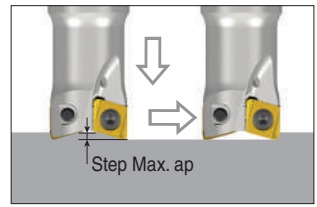
Straight ramping



Helical ramping



Step down



4NKT 11 PNR: R0.8

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø25	4.0	10.3	147	31.5		1.2	1.1
					50	4.7	
Ø32	4.3	10.3	135	45.5		2.7	1.0
					64	6.5	
Ø40	4.5	10.3	131	61.5		4.5	0.9
					80	8.4	
Ø50	3.2	10.3	184	81.5		4.7	0.9
					100	7.5	
Ø63	2.4	10.3	246	107.5		5.0	0.9
					126	7.0	
Ø80	1.8	10.3	328	141.5		5.2	0.9
					160	6.7	

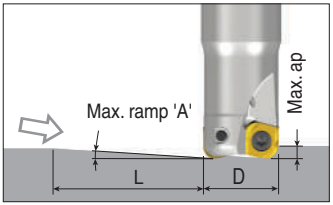
4NKT 14 PNR: R0.8

(unit: mm)

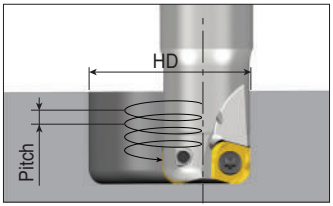
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø32	4.1	13.5	188	39.5		1.4	1.1
					64	6.1	
Ø40	4.3	13.5	180	55.5		3.1	0.9
					80	8.0	
Ø50	4.7	13.5	163	75.5		5.7	0.9
					100	11.1	
Ø63	3.5	13.5	221	101.5		6.3	0.9
					126	10.3	
Ø80	2.6	13.5	297	135.5		6.7	0.9
					160	9.7	

Ramping Data

Straight ramping



Helical ramping



4NKT 04-HF: R1.2 (unit: mm)

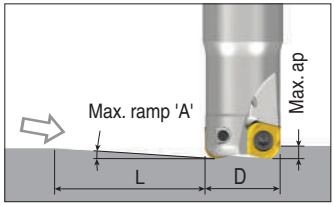
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø8	0.1	0.5	191	9.9		0.0
					16	0.1
Ø10	0.8	0.5	34	13.9		0.2
					20	0.4
Ø11	1.6	0.5	18	15.9		0.4
					22	0.5
Ø12	1.6	0.5	18	17.9		0.4
					24	0.5
Ø13	2.0	0.5	14	19.9		0.5
					26	0.5
Ø16	1.9	0.5	15	25.9		0.5
					32	0.5
Ø20	2.3	0.5	12	33.9		0.5
					40	0.5
Ø25	1.7	0.5	16	43.9		0.5
					50	0.5
Ø32	1.3	0.5	22	57.9		0.5
					64	0.5
Ø40	1.0	0.5	29	73.9		0.5
					80	0.5

4NKT 06-HF: R2.0 (unit: mm)

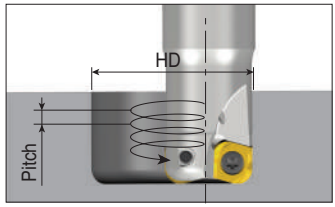
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	0.6	1.0	88	21.4		0.2
					32	0.5
Ø17	0.7	1.0	76	23.4		0.2
					34	0.6
Ø18	1.1	1.0	50	25.4		0.4
					36	1.0
Ø20	1.7	1.0	34	29.4		0.7
					40	1.0
Ø21	1.9	1.0	29	31.4		0.9
					42	1.0
Ø25	2.3	1.0	24	39.4		1.0
					50	1.0
Ø26	3.2	1.0	18	41.4		1.0
					52	1.0
Ø32	2.4	1.0	24	53.4		1.0
					64	1.0
Ø40	1.8	1.0	32	69.4		1.0
					80	1.0
Ø50	1.4	1.0	41	89.4		1.0
					100	1.0
Ø63	1.1	1.0	52	115.4		1.0
					126	1.0

Ramping Data

Straight ramping



Helical ramping



4NKT 09-HF: R3.2 (unit: mm)

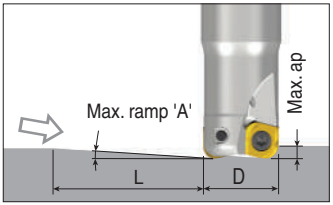
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø20	0.3	1.5	287	25		0.1
					40	0.3
Ø25	1.2	1.5	69	35		0.6
					50	1.5
Ø32	2.4	1.5	35	49		1.5
					64	1.5
Ø40	2.3	1.5	37	65		1.5
					80	1.5
Ø50	1.7	1.5	49	85		1.5
					100	1.5
Ø63	1.3	1.5	66	111		1.5
					126	1.5
Ø80	1.0	1.5	86	145		1.5
					160	1.5

4NKT 11-HF: R4.0 (unit: mm)

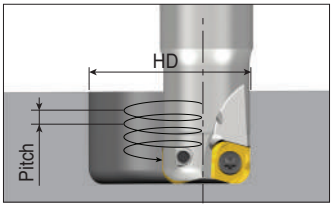
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø25	0.8	2.0	143	31		0.2
					50	0.9
Ø32	2.0	2.0	57	45		1.2
					64	2.0
Ø40	3.4	2.0	34	61		2.0
					80	2.0
Ø50	2.4	2.0	48	81		2.0
					100	2.0
Ø63	1.8	2.0	64	107		2.0
					126	2.0
Ø80	1.3	2.0	85	141		2.0
					160	2.0

Ramping Data

Straight ramping



Helical ramping

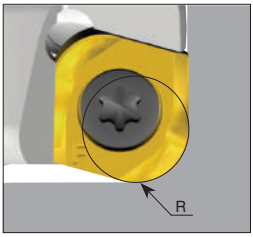


4NKT 14-HF: R5.0

(unit: mm)

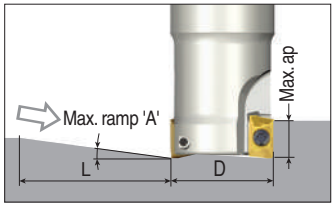
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø32	1.0	3.0	172	39		0.3
					64	1.5
Ø40	1.8	3.0	96	55		1.3
					80	3.0
Ø50	3.9	3.0	44	75		3.0
					100	3.0
Ø63	2.7	3.0	64	101		3.0
					126	3.0
Ø80	1.9	3.0	88	135		3.0
					160	3.0

Programming technical data

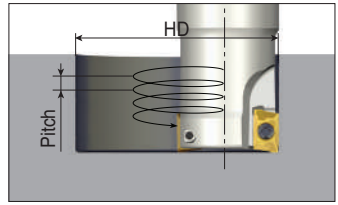


	R Program	A Over cut	B Un-machined
4NKT 040212R-HF	1.2	0	0
4NKT 060320R-HF	2.0	0	0
4NKT 090432R-HF	3.2	0	0
4NKT 110640R-HF	4.0	0	0
4NKT 140750R-HF	5.0	0	0

Straight ramping



Helical ramping



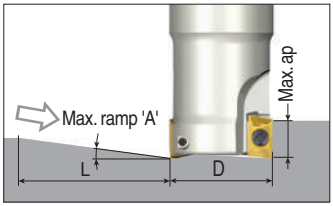
AXMT 06

(unit: mm)

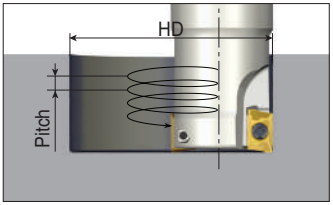
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø8	1.0	5.0	287	9		0.0
					16	0.4
Ø10	8.0	5.0	36	13		1.1
					20	3.7
Ø11	6.0	5.0	48	15		1.1
					22	3.1
Ø12	6.0	5.0	48	17		1.4
					24	3.4
Ø13	5.5	5.0	52	19		1.5
					26	3.3
Ø14	4.8	5.0	60	21		1.6
					28	3.1
Ø15	4.3	5.0	67	23		1.6
					30	3.0
Ø16	4.0	5.0	72	25		1.7
					32	3.0
Ø17	3.5	5.0	82	27		1.6
					34	2.8
Ø18	5.0	5.0	57	29		2.6
					36	4.2
Ø19	4.8	5.0	60	31		2.7
					38	4.3
Ø20	4.0	5.0	72	33		2.4
					40	3.7
Ø21	3.5	5.0	82	35		2.3
					42	3.4
Ø25	3.0	5.0	95	43		2.5
					50	3.5
Ø32	2.0	5.0	143	57		2.3
					64	3.0
Ø40	1.5	5.0	191	73		2.3
					80	2.8

Ramping Data

Straight ramping



Helical ramping



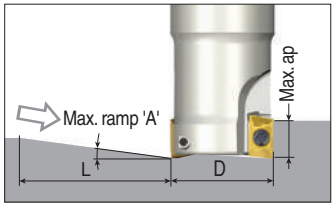
APKT 09

(unit: mm)

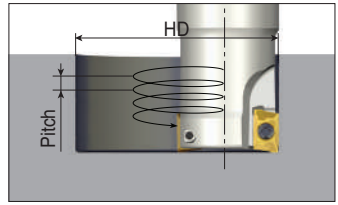
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø10	7.5	9.0	68	14		1.4
					20	3.5
Ø12	7.3	9.0	70	16		1.4
					24	4.1
Ø14	6.0	9.0	86	18		1.1
					28	3.9
Ø16	4.9	9.0	105	21.08		1.2
					32	3.7
Ø17	4.4	9.0	117	23.08		1.2
					34	3.5
Ø18	4.0	9.0	129	25.08		1.3
					36	3.4
Ø20	3.4	9.0	152	29.08		1.4
					40	3.2
Ø21	3.1	9.0	166	31.08		1.5
					42	3.0
Ø22	2.8	9.0	184	33.08		1.4
					44	2.9
Ø25	1.8	9.0	287	39.08		1.2
					50	2.1
Ø26	2.0	9.0	258	41.08		1.4
					52	2.4
Ø30	2.2	9.0	234	49.08		2.0
					60	3.1
Ø32	2.0	9.0	258	53.08		2.0
					64	3.0
Ø33	1.7	9.0	303	55.08		1.7
					66	2.6
Ø40	1.5	9.0	344	69.08		2.0
					80	2.8
Ø50	1.1	9.0	469	89.08		2.0
					100	2.6
Ø63	0.8	9.0	645	115.08		1.9
					126	2.3
Ø80	0.5	9.0	1032	149.08		1.6
					160	1.9

Ramping Data

Straight ramping



Helical ramping



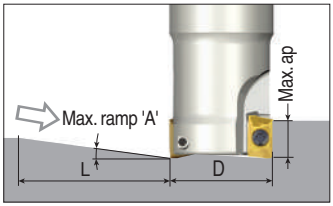
APKT 12

(unit: mm)

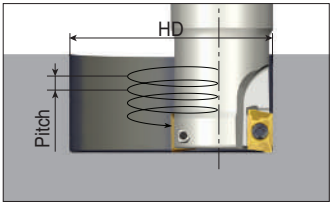
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	12.5	12.0	54	17.5		0.5
					32	9.5
Ø18	9.7	12.0	70	20.9		1.3
					36	8.2
Ø20	6.8	12.0	101	24.9		1.6
					40	6.4
Ø21	6.2	12.0	111	26.9		1.7
					42	6.1
Ø25	8.0	12.0	85	34.9		3.7
					50	9.4
Ø26	7.5	12.0	91	36.9		3.8
					52	9.1
Ø32	5.0	12.0	137	48.9		3.9
					64	7.5
Ø33	4.6	12.0	149	50.9		3.8
					66	7.1
Ø40	3.5	12.0	196	64.9		4.1
					80	6.5
Ø50	2.5	12.0	275	84.9		4.8
					100	5.8
Ø63	1.7	12.0	405	110.9		4.5
					126	5.0
Ø80	1.3	12.0	529	144.9		4.6
					160	4.8

Ramping Data

Straight ramping



Helical ramping



APKT 17

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø20	8.0	16.1	115	22		0.7
					40	7.5
Ø25	5.0	16.1	184	30.6		1.3
					50	5.8
Ø26	4.0	16.1	230	32.6		1.2
					52	4.9
Ø32	9.0	16.1	102	44.6		5.3
					64	13.5
Ø33	9.0	16.1	102	46.6		5.7
					66	13.9
Ø40	5.0	16.1	184	60.6		4.8
					80	9.3
Ø50	4.4	16.1	209	80.6		6.3
					100	10.3
Ø63	3.2	16.1	288	106.6		6.5
					126	9.4
Ø80	2.3	16.1	401	140.6		6.5
					160	8.6
Ø100	1.8	16.1	513	180.6		6.8
					200	8.4
Ø125	1.4	16.1	659	230.6		6.9
					250	8.1
Ø160	1.0	16.1	923	300.6		6.5
					320	7.5
Ø200	0.7	16.1	1318	380.6		5.9
					400	6.5

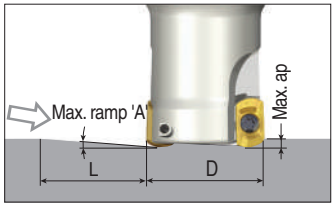
APKT 19

(unit: mm)

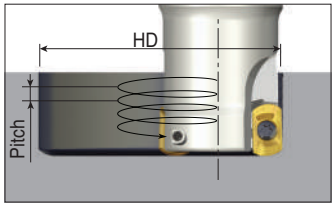
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø40	6.0	17.5	167	56		4.5
					80	11.2
Ø50	4.0	17.5	250	76		4.9
					100	9.3
Ø63	2.9	17.5	346	102		5.3
					126	8.5
Ø80	2.1	17.5	477	136		5.5
					160	7.8
Ø100	1.6	17.5	627	176		5.7
					200	7.5
Ø125	1.2	17.5	736	226		5.6
					250	7.0
Ø160	0.9	17.5	1115	296		5.7
					320	6.7
Ø200	0.7	17.5	1433	376		5.7
					400	6.5

Ramping Data

Straight ramping



Helical ramping

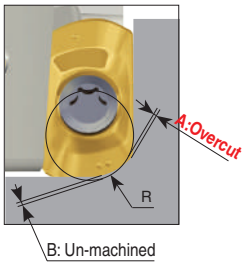


AXMT 0602R-HF

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø8	0.3	0.5	96	14		0.1
					16	0.1
Ø10	0.5	0.5	57	14		0.1
					20	0.2
Ø11	1.0	0.5	29	18		0.3
					22	0.5
Ø12	2.3	0.5	12	18		0.5
					24	0.5
Ø13	4.5	0.5	6	18		0.5
					26	0.5
Ø14	3.5	0.5	8	18		0.5
					28	0.5
Ø15	3.0	0.5	10	26		0.5
					30	0.5
Ø16	2.8	0.5	10	26		0.5
					32	0.5
Ø17	2.5	0.5	11	26		0.5
					34	0.5
Ø18	2.3	0.5	12	26		0.5
					36	0.5
Ø19	2.2	0.5	13	26		0.5
					38	0.5
Ø20	1.9	0.5	15	34		0.5
					40	0.5
Ø21	1.7	0.5	17	34		0.5
					42	0.5
Ø25	1.4	0.5	20	44		0.5
					50	0.5
Ø32	1.0	0.5	29	58		0.5
					64	0.5
Ø40	0.7	0.5	41	74		0.5
					80	0.5

Programming technical data

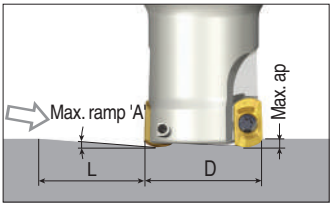


	R Program	A Over cut	B Un-machined
AXMT 0602R-HF	0.9	0	0.22
	1.0	0.01	0.19
	1.5	0.16	0.05
	2.0	0.35	0
APKT 09T3R-HF	1.5	0	0.47
	1.7	0	0.29
	2.0	0.04	0.3
	2.5	0.18	0.15
	3.0	0.36	0.04
APKT 1204R-HF	2	0	0.57
	2.5	0.07	0.42
	3	0.21	0.28
	3.5	0.39	0.15
	4	0.58	0.06

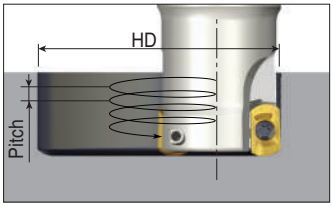
:Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping



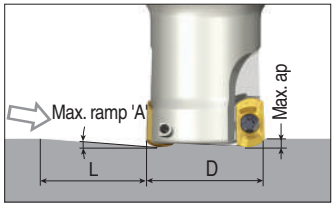
APKT 09T3R-HF

(unit: mm)

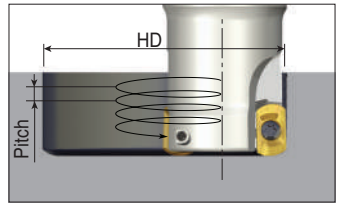
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	3.8	1.0	15	22		1.0
					32	1.0
Ø17	3.5	1.0	16	24		1.0
					34	1.0
Ø18	3.4	1.0	17	26		1.0
					36	1.0
Ø20	3.0	1.0	19	30		1.0
					40	1.0
Ø21	2.3	1.0	25	32		1.0
					42	1.0
Ø22	2.0	1.0	29	34		1.0
					44	1.0
Ø25	2.1	1.0	27	40		1.0
					50	1.0
Ø26	2.0	1.0	29	42		1.0
					52	1.0
Ø30	1.8	1.0	32	50		1.0
					60	1.0
Ø32	1.6	1.0	36	54		1.0
					64	1.0
Ø33	1.5	1.0	38	56		1.0
					66	1.0
Ø40	1.2	1.0	48	70		1.0
					80	1.0
Ø50	0.9	1.0	64	90		1.0
					100	1.0
Ø63	0.5	1.0	115	116		1.0
					126	1.0
Ø80	0.4	1.0	143	150		1.0
					160	1.0

Ramping Data

Straight ramping



Helical ramping



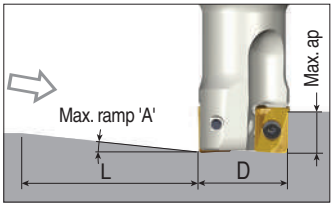
APKT 1204R-HF

(unit: mm)

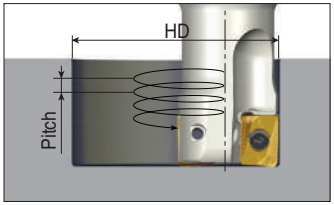
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	3.8	1.2	18	21		0.8
					32	1.2
Ø18	4.0	1.2	17	24		1.1
					36	1.2
Ø20	4.0	1.2	17	27		1.2
					40	1.2
Ø21	3.5	1.2	20	29		1.2
					42	1.2
Ø25	2.5	1.2	27	37		1.2
					50	1.2
Ø26	2.3	1.2	30	39		1.2
					52	1.2
Ø32	1.7	1.2	40	51		1.2
					64	1.2
Ø33	1.7	1.2	40	53		1.2
					66	1.2
Ø40	1.5	1.2	46	67		1.2
					80	1.2
Ø50	1.1	1.2	63	86		1.2
					100	1.2
Ø63	1.0	1.2	69	112		1.2
					126	1.2
Ø80	0.8	1.2	86	146		1.2
					160	1.2

Ramping Data

Straight ramping



Helical ramping



ANH(M)X 11

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø25	1.5	11.0	420	30		0.3
					50	1.7
Ø26	1.4	11.0	450	32		0.4
					52	1.7
Ø32	1.1	11.0	573	44		0.6
					64	1.6
Ø33	1.0	11.0	631	46		0.6
					66	1.5
Ø40	0.8	11.0	788	60		0.7
					80	1.5
Ø50	0.6	11.0	1051	80		0.8
					100	1.4
Ø63	0.4	11.0	1576	106		0.8
					126	1.2
Ø80	0.3	11.0	2102	140		0.8
					160	1.1
Ø100	0.2	11.0	3153	180		0.7
					200	0.9
Ø125	0.2	11.0	3153	230		1.0
					250	1.2

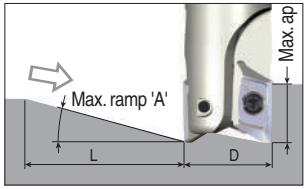
ANH(M)X 16

(unit: mm)

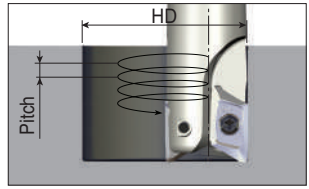
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø32	1.2	15.0	716	44		0.7
					64	1.8
Ø33	1.0	15.0	560	46		0.6
					66	1.5
Ø40	0.9	15.0	955	60		0.8
					80	1.7
Ø50	0.8	15.0	1075	80		1.1
					100	1.9
Ø63	0.6	15.0	1433	106		1.2
					126	1.8
Ø80	0.45	15.0	1911	140		1.3
					160	1.7
Ø100	0.35	15.0	2457	180		1.3
					200	1.6
Ø125	0.25	15.0	3439	230		1.2
					250	1.5
Ø160	0.15	15.0	5732	300		1.0
					320	1.1
Ø200	0.1	15.0	8599	380		0.8
					400	0.9

Ramping Data

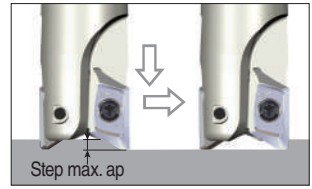
Straight ramping



Helical ramping



Step down



XEVT 16: 0.4R-1.6R

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø25	20.5	16	43	29.1		4.1	4
					50	13.6	4
Ø32	17.5	16	51	43.1		9.3	4
					64	13.6	4
Ø40	11.0	16	82	59.1		9.9	4
					80	13.6	4
Ø50	8.5	16	107	79.1		11.6	4
					100	13.6	4
Ø63	5.5	16	166	105.1		10.8	4
					126	13.6	4
Ø80	4.3	16	213	139.1		11.9	4
					160	13.6	4
Ø100	3.3	16	278	179.1		12.2	4
					200	13.6	4
Ø125	2.5	16	367	229.1		12.1	4
					250	13.6	4
Ø160	1.9	16	483	299.1		12.3	4
					320	13.6	4
Ø200	1.5	16	611	379.1		12.5	4
					400	13.6	4

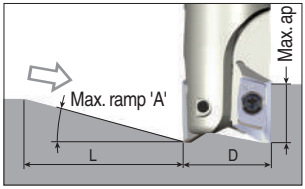
XEVT 16: 2.0R-2.4R

(unit: mm)

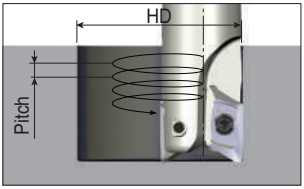
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø25	19.5	15.5	44	29.1		3.9	3.5
					50	13.2	3.5
Ø32	16.5	15.5	52	43.1		8.8	3.5
					64	13.2	3.5
Ø40	10.5	15.5	84	59.1		9.4	3.5
					80	13.2	3.5
Ø50	8.0	15.5	110	79.1		10.9	3.5
					100	13.2	3.5
Ø63	5.0	15.5	177	105.1		9.8	3.5
					126	13.2	3.5
Ø80	3.9	15.5	227	139.1		10.7	3.5
					160	13.2	3.5
Ø100	3.0	15.5	296	179.1		11.1	3.5
					200	13.2	3.5
Ø125	2.3	15.5	386	229.1		11.2	3.5
					250	13.2	3.5
Ø160	1.7	15.5	523	299.1		11.0	3.5
					320	12.7	3.5
Ø200	1.3	15.5	683	379.1		10.8	3.5
					400	12.1	3.5

Ramping Data

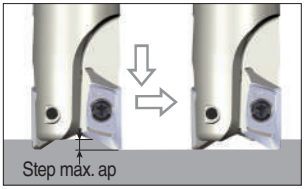
Straight ramping



Helical ramping



Step down



XEVT 16: 3.0R-3.2R

(unit: mm)

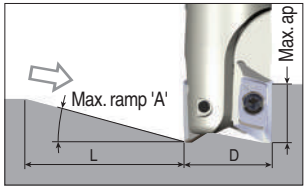
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø25	18.5	14.5	43	29.1		3.7	2.8
					50	12.3	2.8
Ø32	16.0	14.5	51	43.1		8.5	2.8
					64	12.3	2.8
Ø40	9.5	14.5	87	59.1		8.5	2.8
					80	12.3	2.8
Ø50	7.0	14.5	118	79.1		9.5	2.8
					100	12.3	2.8
Ø63	5.0	14.5	166	105.1		9.8	2.8
					126	12.3	2.8
Ø80	3.7	14.5	224	139.1		10.2	2.8
					160	12.3	2.8
Ø100	2.8	14.5	297	179.1		10.3	2.8
					200	12.3	2.8
Ø125	2.1	14.5	396	229.1		10.2	2.8
					250	12.2	2.8
Ø160	1.5	14.5	554	299.1		9.7	2.8
					320	11.2	2.8
Ø200	1.2	14.5	693	379.1		10.0	2.8
					400	11.2	2.8

XEVT 16: 4.0R-5.0R

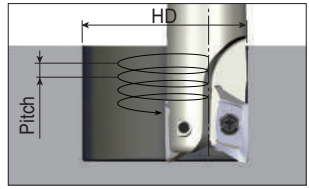
(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø25	17.5	14.5	46	29.1		3.4	2.5
					50	12.3	2.5
Ø32	15.0	14.5	54	43.1		7.9	2.5
					64	12.3	2.5
Ø40	8.5	14.5	97	59.1		7.6	2.5
					80	12.3	2.5
Ø50	6.5	14.5	127	79.1		8.8	2.5
					100	12.3	2.5
Ø63	4.5	14.5	184	105.1		8.8	2.5
					126	12.3	2.5
Ø80	3.3	14.5	252	139.1		9.1	2.5
					160	12.3	2.5
Ø100	2.4	14.5	346	179.1		8.8	2.5
					200	11.2	2.5
Ø125	1.8	14.5	462	229.1		8.7	2.5
					250	10.5	2.5
Ø160	1.4	14.5	594	299.1		9.1	2.5
					320	10.4	2.5
Ø200	1.1	14.5	756	379.1		9.2	2.5
					400	10.2	2.5

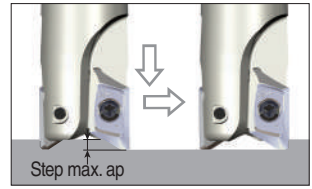
Straight ramping



Helical ramping



Step down



XEVT 22: 0.5R-0.8R

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø32	21.0	21.2	55	38.5		6.7	5.5
					64	18.0	5.5
Ø40	14.0	21.0	84	54.5		9.6	5.5
					80	17.9	5.5
Ø50	9.5	21.0	126	74.5		10.9	5.5
					100	17.9	5.5
Ø63	7.0	21.0	171	100.5		12.3	5.5
					126	17.9	5.5
Ø80	5.0	20.9	239	134.5		12.7	5.5
					160	17.8	5.5
Ø100	3.7	20.9	323	174.5		12.9	5.5
					200	17.3	5.5
Ø125	2.6	20.9	460	224.5		12.1	5.5
					250	15.1	5.5
Ø200	1.6	20.9	749	374.5		13.0	5.5
					400	14.9	5.5

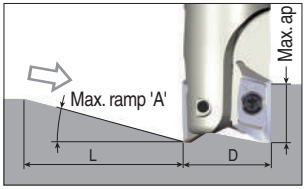
XEVT 22: 1.6R-2.0R

(unit: mm)

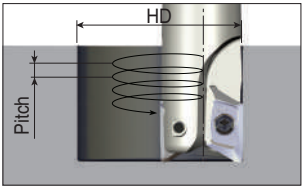
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø32	20.5	21.0	56	38.5		6.5	5.0
					64	17.9	5.0
Ø40	13.5	20.9	87	54.5		9.3	5.0
					80	17.8	5.0
Ø50	9.5	20.9	125	74.5		10.9	5.0
					100	17.8	5.0
Ø63	6.7	20.9	178	100.5		11.8	5.0
					126	17.8	5.0
Ø80	4.7	20.8	253	134.5		12.0	5.0
					160	17.5	5.0
Ø100	3.5	20.8	340	174.5		12.2	5.0
					200	16.3	5.0
Ø125	2.5	20.8	477	224.5		11.6	5.0
					250	14.6	5.0
Ø200	1.5	20.8	795	374.5		12.2	5.0
					400	14.0	5.0

Ramping Data

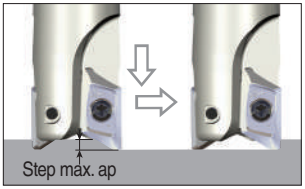
Straight ramping



Helical ramping



Step down



XEVT 22: 3.0R-4.0R

(unit: mm)

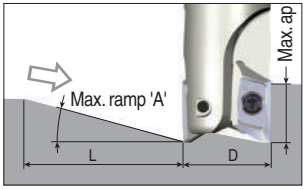
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø32	20.0	20.0	55	38.5		6.3	4.0
					64	17.0	4.0
Ø40	12.3	19.9	91	54.5		8.4	4.0
					80	16.9	4.0
Ø50	8.5	19.9	133	74.5		9.8	4.0
					100	16.9	4.0
Ø63	5.5	19.9	207	100.5		9.6	4.0
					126	16.2	4.0
Ø80	4.0	19.8	283	134.5		10.2	4.0
					160	14.9	4.0
Ø100	3.0	19.8	378	174.5		10.4	4.0
					200	14.0	4.0
Ø125	2.0	19.8	567	224.5		9.3	4.0
					250	11.6	4.0
Ø200	1.0	19.8	1135	374.5		8.1	4.0
					400	9.3	4.0

XEVT 22: 5.0R

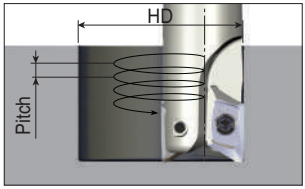
(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø32	19.0	19.5	57	38.5		6.0	3.5
					64	16.6	3.5
Ø40	11.4	19.4	96	54.5		7.8	3.5
					80	16.5	3.5
Ø50	7.5	19.4	147	74.5		8.6	3.5
					100	16.5	3.5
Ø63	5.0	19.4	222	100.5		8.8	3.5
					126	14.7	3.5
Ø80	3.5	19.3	316	134.5		8.9	3.5
					160	13.1	3.5
Ø100	2.5	19.3	442	174.5		8.7	3.5
					200	11.6	3.5
Ø125	1.7	19.3	651	224.5		7.9	3.5
					250	9.9	3.5
Ø200	0.8	19.3	1383	374.5		6.5	3.5
					400	7.4	3.5

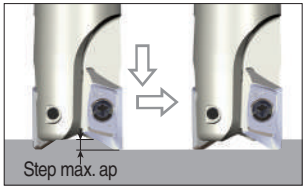
Straight ramping



Helical ramping



Step down



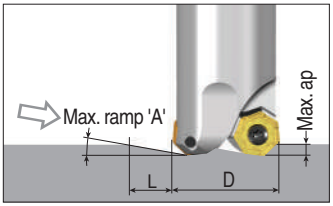
XEVT 22: 6.4R

(unit: mm)

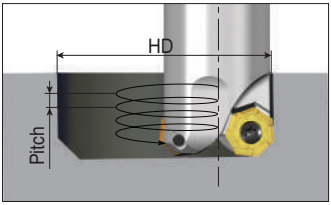
Cutter dia.(D)	Straight ramp down			Helical ramp down			Step down
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.	Max. ap
Ø32	18.0	18.8	58	38.5		5.6	3.0
					64	16.0	3.0
Ø40	10.0	18.7	106	54.5		6.8	3.0
					80	15.9	3.0
Ø50	6.5	18.7	164	74.5		7.4	3.0
					100	15.2	3.0
Ø63	4.5	18.7	238	100.5		7.9	3.0
					126	13.2	3.0
Ø80	3.0	18.6	355	134.5		7.6	3.0
					160	11.2	3.0
Ø100	2.0	18.6	533	174.5		6.9	3.0
					200	9.3	3.0
Ø125	1.5	18.6	711	224.5		7.0	3.0
					250	8.7	3.0
Ø200	0.7	18.6	1523	374.5		5.7	3.0
					400	6.5	3.0

Ramping Data

Straight ramping



Helical ramping

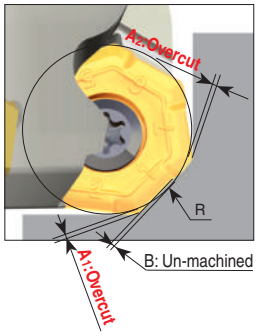


7EMT 06

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø32	29	3.2	6	45.5		3.2
					64	3.2
Ø40	15.5	3.2	12	61.5		3.2
					80	3.2
Ø50	9.5	3.2	19	81.5		3.2
					100	3.2
Ø63	5.5	3.2	33	107.5		3.2
					126	3.2
Ø80	4.0	3.2	46	141.5		3.2
					160	3.2
Ø100	3.0	3.2	61	181.5		3.2
					200	3.2
Ø125	2.0	2.3	66	231.5		3.2
					250	3.2

Programming technical data

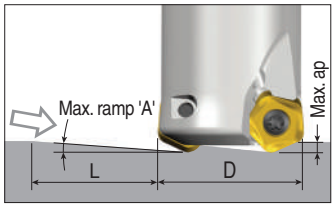


	R Program	A Over cut		B Un-machined
		A_1	A_2	B
7EMT 06	3	0	0	1.77
	4.5	0	0	1.51
	5	0.03	0.02	0.94
	6	0.21	0.19	0.53

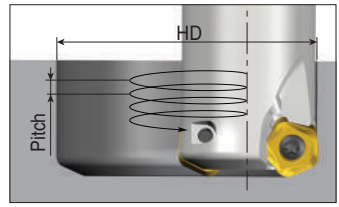
:Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

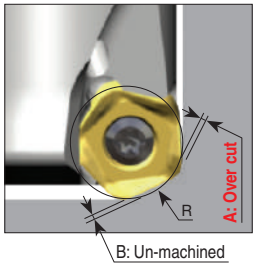


PTKU 05

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø20	1.3	1.5	66	33		0.7
					40	0.9
Ø25	1.1	1.5	78	43		0.8
					50	1.0
Ø26	1.0	1.5	86	45		0.8
					52	0.9
Ø32	1.0	1.5	86	57		1.0
					64	1.1
Ø33	1.0	1.5	86	59		1.0
					66	1.2
Ø40	0.8	1.5	101	73		1.1
					80	1.2
Ø50	0.7	1.5	123	93		1.1
					100	1.2
Ø52	0.7	1.5	123	97		1.2
					104	1.3
Ø63	0.6	1.5	132	119		1.3
					126	1.4
Ø66	0.6	1.5	143	125		1.3
					132	1.4

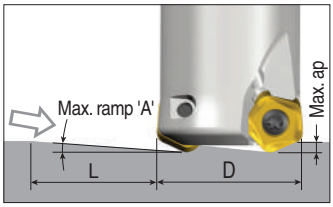
Programming technical data



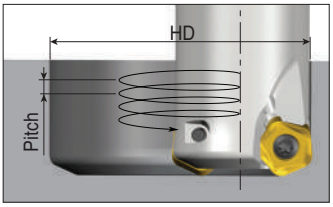
	R Program	A Over cut	B Un-machined
PTKU 05	2.5	0.00	0.83
	2.7	0.00	0.76
	3.0	0.04	0.66

: Recommended program 'R'

Straight ramping



Helical ramping

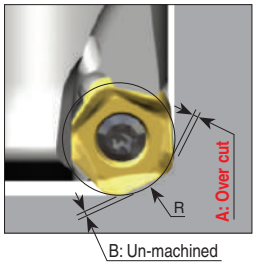


PTKU 10

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø40	1.5	3.0	111	63		1.7
					80	2.2
Ø50	1.9	3.0	88	83		2.8
					100	3.0
Ø63	1.7	3.0	101	109		3.0
					126	3.0
Ø66	2.2	3.0	78	115		3.0
					132	3.0
Ø80	1.5	3.0	115	143		3.0
					160	3.0
Ø100	1.1	3.0	150	183		3.0
					200	3.0
Ø125	0.8	3.0	202	233		3.0
					250	3.0
Ø160	0.6	3.0	265	303		3.0
					320	3.0
Ø200	0.5	3.0	344	383		3.0
					400	3.0

Programming technical data

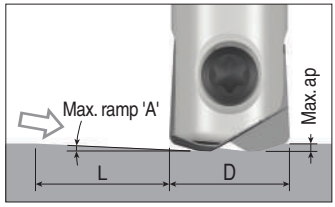


	R Program	A Over cut	B Un-machined
PTKU 10	5.5	0.00	1.45
	6.0	0.09	1.28
	6.5	0.21	1.11

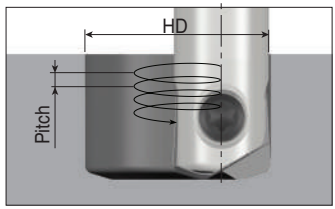
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

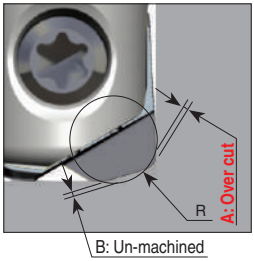


HFN

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø6	2.0	0.3	9	9.6		0.3
					11	0.3
Ø8	2.5	0.5	11	12		0.5
					15	0.5

Programming technical data

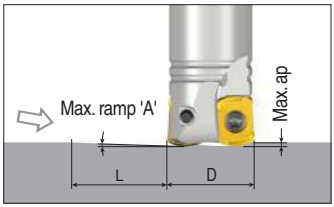


	R Program	A Over cut	B Un-machined
HFN 060	0.8	0.00	0.21
	1.0	0.03	0.16
HFN 080	0.8	0.00	0.38
	1.0	0.00	0.32
	1.2	0.02	0.27

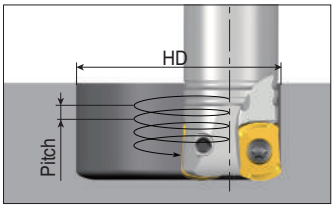
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

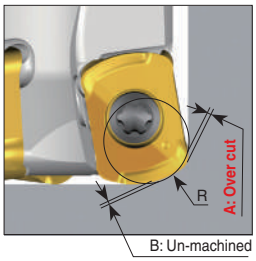


BLMV 06

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø16	5.1	0.7	8	27		0.7
					32	0.7
Ø17	4.5	0.7	9	29		0.7
					34	0.7
Ø18	4.4	0.7	10	31		0.7
					36	0.7
Ø20	2.5	1.0	23	34		1.0
					40	1.0
Ø21	2.3	1.0	25	35		1.0
					42	1.0
Ø22	2.7	1.0	22	39		1.0
					44	1.0
Ø25	2.5	1.0	23	43		1.0
					50	1.0
Ø26	2.2	1.0	26	45		1.0
					52	1.0
Ø30	1.6	1.0	35	55		1.0
					60	1.0
Ø32	1.4	1.0	40	57		1.0
					64	1.0
Ø33	1.3	1.0	43	59		1.0
					66	1.0
Ø35	1.2	1.0	46	63		1.0
					70	1.0
Ø40	1.0	1.0	55	73		1.0
					80	1.0
Ø42	1.0	1.0	58	79		1.0
					84	1.0
Ø50	0.8	1.0	72	93		1.0
					100	1.0
Ø52	0.8	1.0	77	97		1.0
					104	1.0
Ø63	0.6	1.0	96	119		1.0
					126	1.0
Ø66	0.6	1.0	96	127		1.0
					132	1.0

Programming technical data

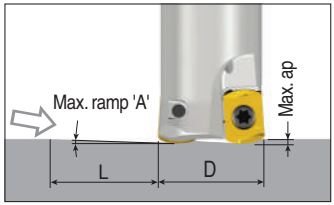


	R Program	A Over cut	B Un-machined
BLMV 06 (Ø16, Ø17)	1.5	0	0.36
	2.0	0.09	0.22
	2.5	0.27	0.10
BLMV 06 (Ø20~)	1.5	0	0.58
	2.0	0	0.41
	2.5	0.12	0.26
	3.0	0.29	0.12

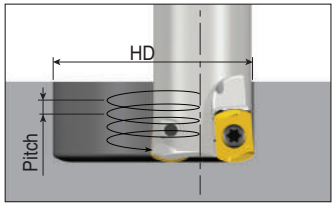
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

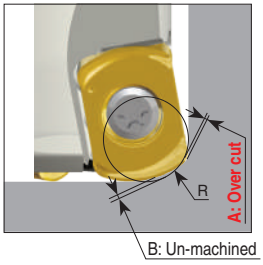


BLMP 04

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø8	0.4	0.5	72	12.6		0.1
					16	0.1
Ø10	0.6	0.5	44	16.6		0.2
					20	0.2
Ø11	0.7	0.5	38	18.6		0.2
					22	0.3
Ø12	1.0	0.5	29	20.6		0.4
					24	0.4
Ø13	1.1	0.5	25	22.6		0.5
					26	0.5
Ø16	1.0	0.5	29	28.6		0.5
					32	0.5
Ø17	1.1	0.5	26	30.6		0.5
					34	0.5
Ø20	1.0	0.5	27	36.6		0.5
					40	0.5
Ø21	0.7	0.5	38	38.6		0.5
					42	0.5
Ø25	0.7	0.5	38	46.6		0.5
					50	0.5
Ø32	0.6	0.5	48	60.6		0.5
					64	0.5

Programming technical data



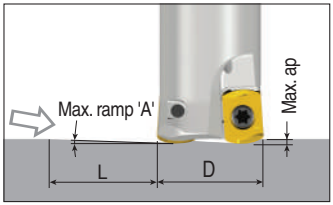
	R Program	A Over cut	B Un-machined
BLMP 04	0.8	0.00	0.28
	0.9	0.00	0.25
	1.0	0.08	0.22

: Recommended program 'R'

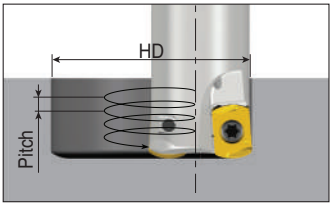
Ramping Data

CHASE4FEED HIGH FEED MILL

Straight ramping



Helical ramping

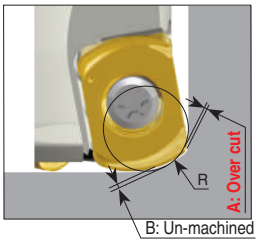


BLMP 06

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	2.0	0.7	13	23		0.7
					32	0.7
Ø17	2.0	0.7	15	25		0.7
					34	0.7
Ø18	2.3	0.7	16	27		0.7
					36	0.7
Ø20	1.5	1.0	38	31		0.8
					40	1.0
Ø21	1.5	1.0	38	33		0.8
					42	1.0
Ø22	1.5	1.0	38	35		1.0
					44	1.0
Ø25	1.3	1.0	41	41		1.0
					50	1.0
Ø26	1.2	1.0	44	43		1.0
					52	1.0
Ø30	1.0	1.0	52	51		1.0
					60	1.0
Ø32	0.9	1.0	57	55		1.0
					64	1.0
Ø33	0.9	1.0	57	57		1.0
					66	1.0
Ø35	0.8	1.0	57	61		1.0
					70	1.0
Ø40	0.7	1.0	64	71		1.0
					80	1.0
Ø42	0.7	1.0	72	75		1.0
					84	1.0
Ø50	0.6	1.0	96	91		1.0
					100	1.0
Ø52	0.6	1.0	96	95		1.0
					104	1.0
Ø63	0.5	1.0	115	117		1.0
					126	1.0
Ø66	0.5	1.0	115	123		1.0
					132	1.0

Programming technical data

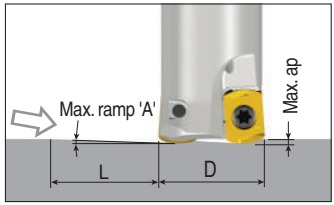


	R Program	A Over cut	B Un-machined
BLMP 06 (Ø16, Ø17, Ø18)	1.5	0	0.35
	2.0	0.1	0.22
	2.5	0.27	0.1
BLMP 06 (Ø20-)	2.0	0	0.42
	2.5	0.12	0.26
	3.0	0.29	0.17

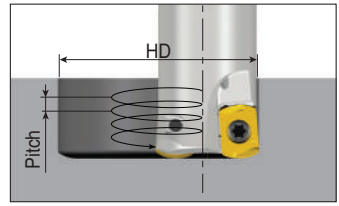
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

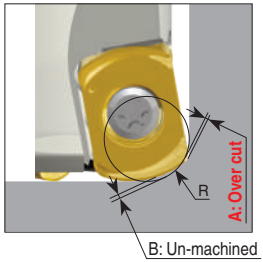


BLMP 09

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø25	2.2	1.5	39	42		1.5
					50	1.5
Ø26	2.2	1.5	39	44		1.5
					52	1.5
Ø30	2.0	1.5	43	52		1.5
					60	1.5
Ø32	2.0	1.5	43	56		1.5
					64	1.5
Ø33	2.0	1.5	43	58		1.5
					66	1.5
Ø35	2.0	1.5	43	60		1.5
					70	1.5
Ø40	1.5	1.5	57	72		1.5
					80	1.5
Ø42	1.5	1.5	57	76		1.5
					84	1.5
Ø50	1.0	1.5	86	92		1.5
					100	1.5
Ø52	1.0	1.5	86	96		1.5
					104	1.5
Ø63	0.9	1.5	96	118		1.5
					126	1.5
Ø66	0.9	1.5	96	124		1.5
					132	1.5
Ø80	0.8	1.5	107	152		1.5
					160	1.5
Ø100	0.7	1.5	123	192		1.5
					200	1.5
Ø125	0.4	1.5	215	240		1.5
					250	1.5

Programming technical data

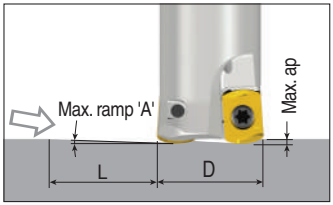


	R Program	A Over cut	B Un-machined
BLMP 09	2.5	0	0.61
	3.0	0.09	0.45
	3.5	0.24	0.30
	4.0	0.41	0.17
	3.0	0.36	0.04

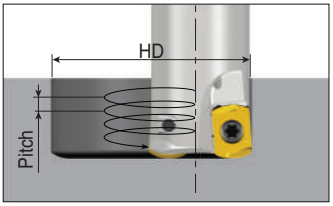
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

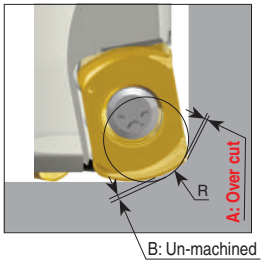


BLMP 11

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø30	0.50	2.0	229	41		0.3
					60	0.7
Ø32	0.50	2.0	229	45		0.3
					64	0.7
Ø33	0.45	2.0	255	47		0.3
					66	0.7
Ø35	0.50	2.0	229	51		0.4
					70	0.8
Ø40	0.55	2.0	208	61		0.5
					80	1.0
Ø42	0.50	2.0	229	65		0.5
					84	1.0
Ø50	0.50	2.0	229	81		0.7
					100	1.2
Ø52	0.45	2.0	255	85		0.7
					104	1.1
Ø63	0.45	2.0	255	107		0.9
					126	1.3
Ø66	0.40	2.0	287	113		0.9
					132	1.2
Ø80	0.35	2.0	328	141		1.0
					160	1.3
Ø100	0.30	2.0	382	181		1.1
					200	1.4
Ø125	0.25	2.0	459	231		1.2
					250	1.5
Ø160	0.20	2.0	573	301		1.3
					320	1.5
Ø200	0.15	2.0	764	381		1.3
					400	1.4

Programming technical data

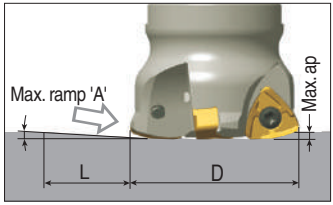


	R Program	A Over cut	B Un-machined
BLMP 11	2.4	0.00	1.09
	3.0	0.00	0.90
	3.2	0.18	0.85

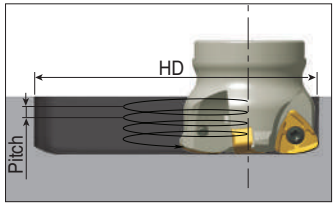
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

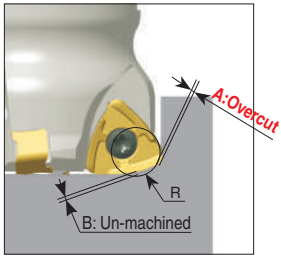


BLMP 13

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø32	0.8	2.0	143	50		0.7
					64	0.9
Ø33	1.1	2.0	104	52		1.0
					66	1.3
Ø35	1.1	2.0	104	56		1.1
					70	1.3
Ø40	1.2	2.0	96	66		1.4
					80	1.7
Ø42	1.1	2.0	104	70		1.3
					84	1.6
Ø50	0.8	2.0	143	86		1.2
					100	1.4
Ø52	0.8	2.0	143	90		1.3
					104	1.5
Ø63	0.6	2.0	191	112		1.2
					126	1.3
Ø66	0.6	2.0	191	118		1.2
					132	1.4
Ø80	0.5	2.0	229	146		1.3
					160	1.4
Ø100	0.4	2.0	287	186		1.3
					200	1.4
Ø125	0.3	2.0	382	236		1.2
					250	1.3
Ø160	0.3	2.0	382	306		1.6
					320	1.7
Ø200	0.2	2.0	573	386		1.3
					400	1.4
Ø250	0.2	2.0	573	486		1.7
					500	1.7

Programming technical data

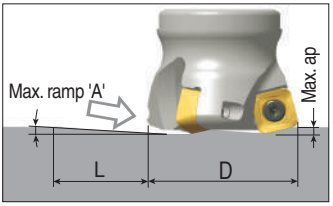


	R Program	A Over cut	B Un-machined
BLMP 13	3.0	0	1.31
	3.5	0	1.17
	4.0	0.04	1.03
	4.5	0.15	0.89
	5.0	0.3	0.76

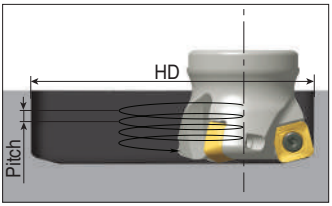
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

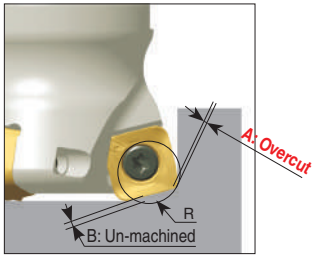


SBMT 06

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	2.2	1.0	25.5	22.8		0.7
					32	1.0
Ø17	2.4	1.0	23.4	24.8		0.9
					34	1.0
Ø20	3.2	1.0	17.9	30.8		1.0
					40	1.0
Ø21	3.1	1.0	18.5	32.8		1.0
					42	1.0
Ø25	2.4	1.0	23.4	40.8		1.0
					50	1.0
Ø32	1.8	1.0	31.8	54.8		1.0
					64	1.0
Ø40	1.3	1.0	42.5	70.8		1.0
					80	1.0
Ø50	1.0	1.0	57.3	90.8		1.0
					100	1.0
Ø63	0.7	1.0	76.4	116.8		1.0
					126	1.0

Programming technical data

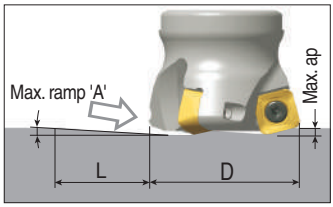


	R Program	A Over cut	B Un-machined
SBMT 06	1.8	0	0.81
	2.0	0	0.77
	2.2	0.01	0.73

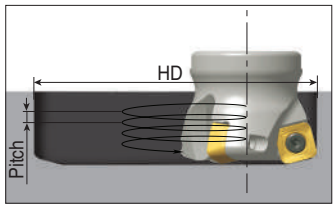
:Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

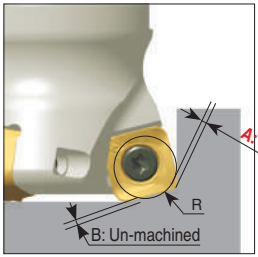


SBMT 09

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø25	1.6	1.2	43	36		1
					50	1.2
Ø26	1.7	1.2	40	38		1.1
					52	1.2
Ø30	3.1	1.2	22	46		1.2
					60	1.2
Ø32	3.9	1.2	18	50		1.2
					64	1.2
Ø33	3.7	1.2	19	52		1.2
					66	1.2
Ø35	3.4	1.2	18	56		1.2
					70	1.2
Ø40	2.8	1.2	25	66		1.2
					80	1.2
Ø42	2.6	1.2	26	70		1.2
					84	1.2
Ø50	2.0	1.2	34	86		1.2
					100	1.2
Ø52	1.9	1.2	38	90		1.2
					104	1.2
Ø63	1.5	1.2	43	112		1.2
					126	1.2
Ø66	1.1	1.2	63	118		1.2
					132	1.2
Ø80	1.2	1.2	63	146		1.2
					160	1.2

Programming technical data

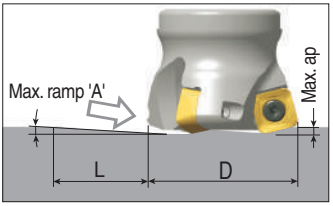


	R Program	A Over cut	B Un-machined
SBMT 09	3.5	0.1	0.81
	3	0	0.9
	2.5	0	0.98
	2	0	1.1

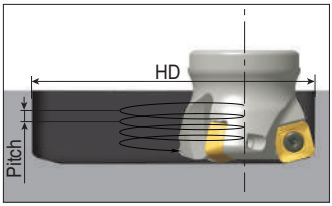
:Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

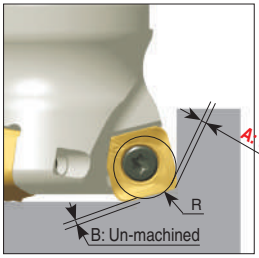


SBMT 13

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø32	7.0	2.0	16	47		2.0
					64	2.0
Ø33	6.9	2.0	17	49		2.0
					66	2.0
Ø35	6.4	2.0	18	53		2.0
					70	2.0
Ø40	5.3	2.0	22	63		2.0
					80	2.0
Ø42	4.4	2.0	26	67		2.0
					84	2.0
Ø50	4.3	2.0	27	83		2.0
					100	2.0
Ø52	4.0	2.0	29	87		2.0
					104	2.0
Ø63	2.9	2.0	40	109		2.0
					126	2.0
Ø80	2.0	2.0	57	143		2.0
					160	2.0
Ø100	1.5	2.0	76	183		2.0
					200	2.0
Ø125	1.1	2.0	104	233		2.0
					250	2.0
Ø160	0.8	2.0	104	303		2.0
					320	2.0
Ø200	0.6	2.0	127	383		2.0
					400	2.0
Ø250	0.5	2.0	164	483		2.0
					500	2.0

Programming technical data

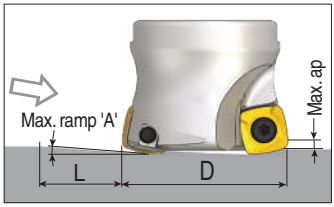


	R Program	A Over cut	B Un-machined
SBMT 13	4.0	0	1.62
	4.5	0	1.51
	5.0	0.04	1.4
	5.5	0.14	1.29
	6.0	0.28	1.18

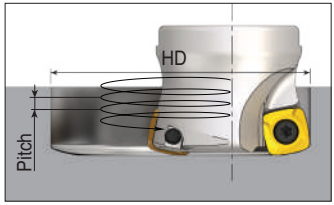
:Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

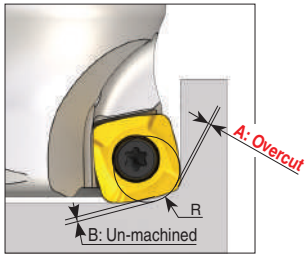


SRMT 07

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø16	1.2	0.7	32.1	23.8		0.5
					32	0.7
Ø17	1.6	0.7	25	25.8		0.7
					34	0.7
Ø20	7.3	0.7	5.4	31.8		0.7
					40	0.7
Ø21	6.6	0.7	6	33.8		0.7
					42	0.7
Ø25	4.7	0.7	8.5	41.8		0.7
					50	0.7
Ø26	4.3	0.7	9.3	43.8		0.7
					52	0.7
Ø32	3.1	0.7	12.9	55.8		0.7
					64	0.7
Ø33	2.9	0.7	13.8	57.8		0.7
					66	0.7
Ø40	2.2	0.7	18.2	71.8		0.7
					80	0.7
Ø50	1.6	0.7	25	91.8		0.7
					100	0.7
Ø63	1.2	0.7	33.4	117.8		0.7
					126	0.7

Programming technical data

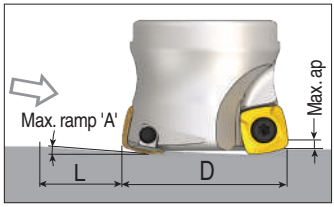


	R Program	A Over cut	B Un-machined
SRMT 07	1.5	0	0.5
	1.6	0	0.48
	1.7	0.01	0.45
	1.8	0.02	0.43
	1.9	0.04	0.41
	2.0	0.07	0.39

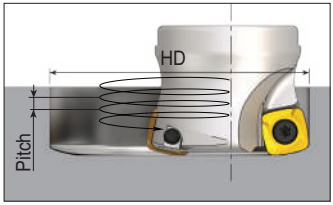
:Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

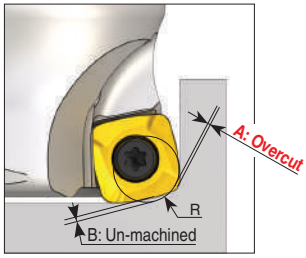


SRMT 10

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø25	0.5	1	114.6	37.6		0.3
					50	0.6
Ø26	0.5	1	104.2	39.6		0.4
					52	0.7
Ø32	6.4	1	8.9	51.6		1.0
					64	1.0
Ø33	6.02	1	9.5	53.6		1.0
					66	1.0
Ø40	4.2	1	13.6	67.6		1.0
					80	1.0
Ø50	3	1	19	87.6		1.0
					100	1.0
Ø52	2.8	1	20.4	91.6		1.0
					104	1.0
Ø63	2.1	1	27.2	113.6		1.0
					126	1.0
Ø66	2	1	28.6	119.6		1.0
					132	1.0
Ø80	1.6	1	35.8	147.6		1.0
					160	1.0

Programming technical data

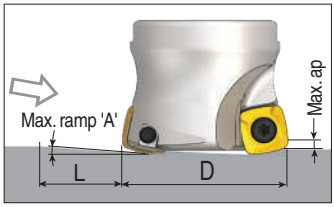


	R Program	A Over cut	B Un-machined
SRMT 10	2.0	0	0.78
	2.1	0	0.76
	2.2	0	0.73
	2.3	0	0.71
	2.4	0	0.69
	2.5	0.01	0.66

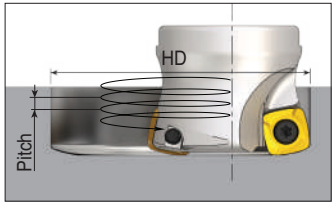
:Recommended program 'R'

Ramping Data

Straight ramping



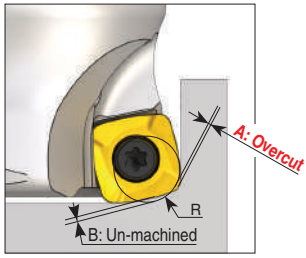
Helical ramping



SRMT 14 (unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø32	1.0	2.0	107	45		0.7
					64	1.8
Ø33	1.2	2.0	92	46.8		0.9
					66	2.0
Ø35	1.6	2.0	71	50.8		1.3
					70	2.0
Ø40	2.5	2.0	44	60.8		2.0
					80	2.0
Ø42	3.4	2.0	33	64.8		2.0
					84	2.0
Ø50	5.5	2.0	20	80.8		2.0
					100	2.0
Ø52	5.1	2.0	22	84.6		2.0
					104	2.0
Ø63	2.9	2.0	39	106.8		2.0
					126	2.0
Ø66	2.6	2.0	44	112.6		2.0
					132	2.0
Ø80	2.0	2.0	57	140.6		2.0
					160	2.0
Ø100	1.4	2.0	81	180.6		2.0
					200	2.0
Ø125	1.1	2.0	104	230.6		2.0
					250	2.0
Ø160	1.0	2.0	114	300.6		2.0
					320	2.0
Ø200	0.8	2.0	143	380.6		2.0
					400	2.0

Programming technical data

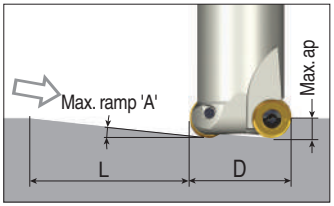


	R Program	A Over cut	B Un-machined
SRMT 14	3.0	0	1.31
	3.5	0	1.18
	3.6	0	1.15
	3.7	0.01	1.13
	4.0	0.03	1.05

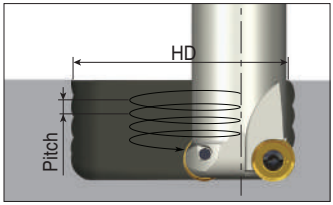
:Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping



RNMU 10

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø25	1.1	5.0	261	33		0.4
					50	1.3
Ø26	1.1	5.0	261	35		0.5
					52	1.3
Ø32	0.9	5.0	318	47		0.6
					64	1.3
Ø33	0.9	5.0	318	49		0.7
					66	1.4
Ø40	0.9	5.0	318	63		1.0
					80	1.7
Ø42	0.9	5.0	318	67		1.0
					84	1.8
Ø50	0.7	5.0	409	83		1.1
					100	1.6
Ø52	0.8	5.0	358	87		1.3
					104	1.9

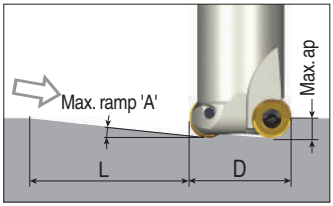
RNMU 12

(unit: mm)

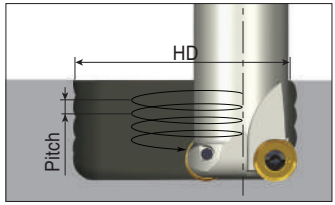
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø32	1.4	6.0	246	42		0.7
					64	2.1
Ø33	1.4	6.0	246	44		0.7
					66	2.2
Ø40	1.3	6.0	265	58		1.1
					80	2.4
Ø50	1.0	6.0	344	78		1.3
					100	2.3
Ø52	1.0	6.0	344	82		1.4
					104	2.4
Ø63	1.0	6.0	344	104		1.9
					126	2.9
Ø66	1.0	6.0	344	110		2.0
					132	3.1
Ø80	0.9	6.0	382	138		2.4
					160	3.4
Ø100	0.7	6.0	491	178		2.5
					200	3.3

Ramping Data

Straight ramping



Helical ramping



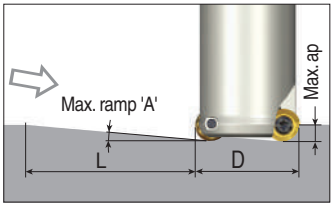
RNMU 16

(unit: mm)

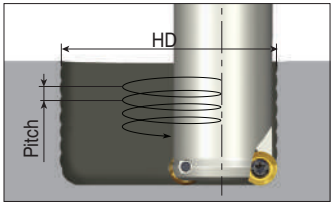
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø40	1.4	8.0	328	52		0.8
					80	2.6
Ø42	1.4	8.0	328	56		0.9
					84	2.7
Ø50	1.3	8.0	353	72		1.3
					100	3.0
Ø52	1.0	8.0	459	76		1.1
					104	2.4
Ø63	1.0	8.0	459	98		1.6
					126	2.9
Ø66	1.0	8.0	459	104		1.8
					132	3.1
Ø80	1.0	8.0	459	132		2.4
					160	3.7
Ø100	0.9	8.0	510	172		3.0
					200	4.2
Ø125	0.9	8.0	510	222		4.1
					250	5.2

Ramping Data

Straight ramping



Helical ramping



RYM(H)X-08 (unit: mm)

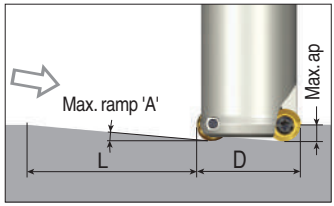
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø16	2.5	4.0	92	18		0.2
					32	1.9
Ø17	2.5	4.0	92	20		0.3
					34	2.0
Ø18	2.5	4.0	92	22		0.5
					36	2.1
Ø20	4.0	4.0	57	26		1.1
					40	3.4
Ø21	4.0	4.0	57	28		1.3
					42	3.4
Ø25	4.0	4.0	57	36		2.1
					50	3.4
Ø26	4.0	4.0	57	38		2.2
					52	3.4
Ø32	4.0	4.0	57	50		3.4
					64	3.4
Ø40	7.0	4.0	33	66		3.4
					80	3.4

RYMX-10 (unit: mm)

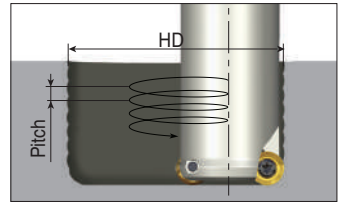
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø20	4.5	5.0	64	22		0.4
					40	4.2
Ø21	4.5	5.0	64	24		0.6
					42	4.4
Ø25	5.0	5.0	57	32		1.6
					50	4.3
Ø26	5.0	5.0	57	34		1.9
					52	4.3
Ø32	5.0	5.0	57	46		3.3
					64	4.3
Ø35	5.0	5.0	57	52		4.0
					70	4.3
Ø40	5.0	5.0	57	62		4.3
					80	4.3
Ø42	5.0	5.0	57	66		4.3
					84	4.3
Ø50	6.5	5.0	44	82		4.3
					100	4.3
Ø52	6.0	5.0	48	86		4.3
					104	4.3
Ø66	4.5	5.0	64	114		4.3
					132	4.3

Ramping Data

Straight ramping



Helical ramping



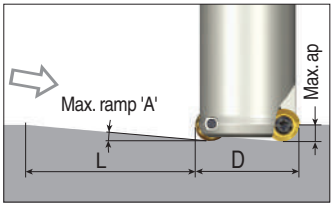
RYMX-12

(unit: mm)

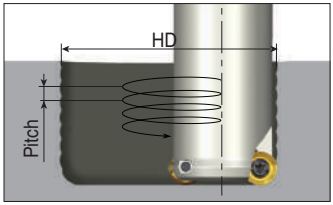
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø25	6.0	6.0	57	28		0.8
					50	5.1
Ø26	6.0	6.0	57	30		1.1
					52	5.1
Ø32	12.0	6.0	28	42		5.1
					64	5.1
Ø33	12.0	6.0	28	44		5.1
					66	5.1
Ø35	12.0	6.0	28	48		5.1
					70	5.1
Ø40	10.0	6.0	34	58		5.1
					80	5.1
Ø42	12.0	6.0	28	62		5.1
					84	5.1
Ø50	9.0	6.0	38	78		5.1
					100	5.1
Ø52	8.0	6.0	43	82		5.1
					104	5.1
Ø55	8.0	6.0	43	88		5.1
					110	5.1
Ø63	7.0	6.0	49	104		5.1
					126	5.1
Ø66	6.5	6.0	53	110		5.1
					132	5.1
Ø80	4.5	6.0	76	138		5.1
					160	5.1
Ø100	3.5	6.0	98	178		5.1
					200	5.1
Ø125	2.5	6.0	137	228		5.1
					250	5.1

Ramping Data

Straight ramping



Helical ramping



RYMX-16 (unit: mm)

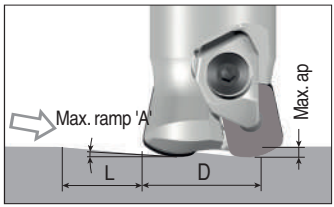
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø32	8.0	8.0	57	34		0.7
					64	6.8
Ø40	9.5	8.0	48	50		4.5
					80	6.8
Ø42	9.0	8.0	51	54		5.1
					84	6.8
Ø50	9.0	8.0	51	70		6.8
					100	6.8
Ø52	9.0	8.0	51	74		6.8
					104	6.8
Ø63	8.5	8.0	54	96		6.8
					126	6.8
Ø66	8.5	8.0	54	102		6.8
					132	6.8
Ø80	6.0	8.0	76	130		6.8
					160	6.8
Ø100	5.0	8.0	91	170		6.8
					200	6.8
Ø125	3.5	8.0	131	220		6.8
					250	6.8
Ø160	3.5	8.0	131	290		6.8
					320	6.8

RYMX-20 (unit: mm)

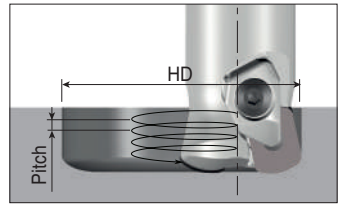
Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø50	8.0	10.0	71	62		4.5
					100	8.5
Ø63	12.5	10.0	45	88		8.5
					126	8.5
Ø80	8.5	10.0	67	122		8.5
					160	8.5
Ø100	6.5	10.0	88	162		8.5
					200	8.5
Ø125	4.5	10.0	127	212		8.5
					250	8.5
Ø160	4.0	10.0	143	282		8.5
					320	8.5
Ø200	2.5	10.0	229	362		8.5
					400	8.5
Ø250	2.4	10.0	239	462		8.5
					500	8.5

Ramping Data

Straight ramping



Helical ramping



BNGX 06

(unit: mm)

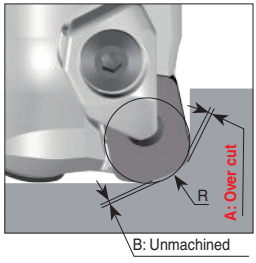
Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø16	0.5	1.0	115	25.6		0.2
					32	0.4
Ø20	0.5	1.0	115	33.4		0.3
					40	0.5
Ø25	0.4	1.0	144	43.4		0.4
					50	0.5
Ø32	0.3	1.0	191	57.3		0.4
					64	0.6

BNGX 09

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø25	1.2	1.5	55	39		0.9
					50	1.1
Ø32	0.6	1.5	132	53		0.6
					64	0.7
Ø40	0.6	1.5	143	69		0.7
					80	0.8
Ø50	0.5	1.5	156	89		0.9
					100	1.0

Programming technical data

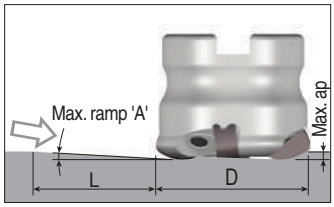


	R Program	A Over cut	B Un-machined
BNGX 06	1.5	0.00	0.60
	2.0	0.00	0.42
	2.5	0.10	0.27
BNGX 09	3.0	0.00	0.61
	3.4	0.00	0.46
	3.5	0.01	0.43
	4.0	0.12	0.26

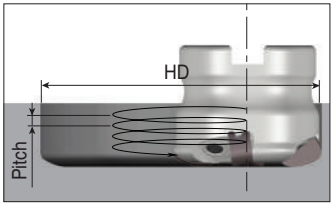
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

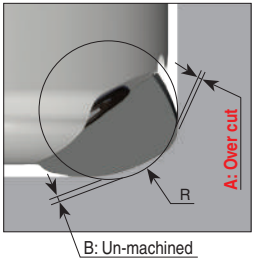


BNGX 12

(unit: mm)

Cutter dia.(D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia.(HD)	Max. dia.(HD)	Max. pitch/rev.
Ø50	0.6	2.5	239	84		1.1
					100	1.0
Ø63	0.5	2.5	287	110		1.1
					126	1.1
Ø80	0.4	2.5	318	144		1.3
					160	1.3

Programming technical data

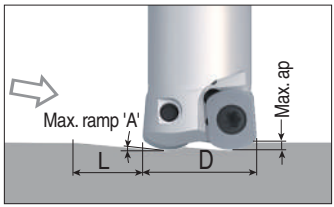


	R Program	A Over cut	B Un-machined
BNGX 12	4.0	0.00	1.18
	4.5	0.00	1.00
	5.0	0.03	0.84

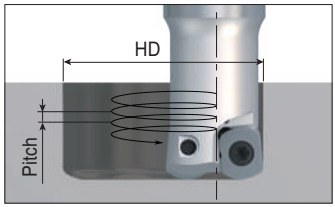
: Recommended program 'R'

Ramping Data

Straight ramping



Helical ramping

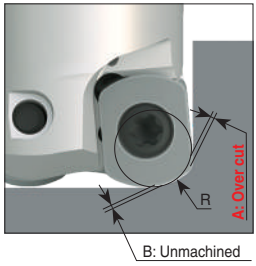


BNGT 06

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø16	0.4	1.0	143.3	26.4		0.23
					32	0.35
Ø20	0.4	1.0	143.3	34.0		0.31
					40	0.44
Ø25	0.5	1.0	114.6	44.0		0.52
					50	0.68
Ø32	0.5	1.0	114.6	58.0		0.71
					64	0.88

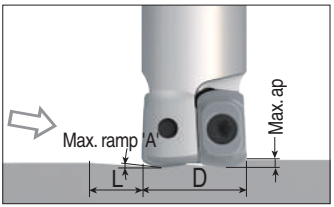
Programming technical data



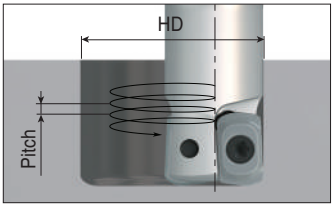
	R Program	A Over cut	B Un-machined
BNGT 06 (D16)	1.7	0.00	0.419
	1.8	0.00	0.384
	1.9	0.001	0.349
	2.0	0.011	0.314
BNGT 06 (D20-)	1.9	0.00	0.431
	2.0	0.00	0.396
	2.1	0.007	0.360

: Recommended program 'R'

Straight ramping



Helical ramping

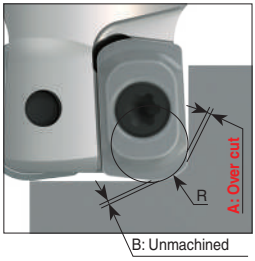


BCGT 04

(unit: mm)

Cutter dia. (D)	Straight ramp down			Helical ramp down		
	Max. ramp (A°)	Max. ap	Min. length (L)	Min. dia. (HD)	Max. dia. (HD)	Max. pitch/rev.
Ø10	1.5	0.5	19.1	17.7		0.50
					20	0.50
Ø12	3.0	0.5	9.5	21.7		0.50
					24	0.50
Ø16	0.8	0.5	33.7	29.5		0.50
					32	0.50
Ø20	0.6	0.5	44.1	37.5		0.50
					40	0.50
Ø25	0.5	0.5	57.3	47.5		0.50
					50	0.50
Ø32	0.4	0.5	71.7	61.5		0.50
					64	0.50
Ø40	0.36	0.5	95.5	77.5		0.50
					80	0.50

Programming technical data



	R Program	A Over cut	B Un-machined
BCGT 04 (-D12)	1.0	0.00	0.158
	1.1	0.00	0.124
	1.2	0.018	0.091
BCGT 04 (D16-)	1.0	0.00	0.186
	1.1	0.00	0.152
	1.2	0.009	0.118

: Recommended program 'R'

TAEGUTEC

TOOLING SYSTEM

TOOLING SYSTEM

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BT MAS	G63
DIN2080	G97
C-ADAPTER	G108
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Collet	G149
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Guide to Icons

Run-out

Surface Hardness

Balance Grade

Taper Shank Grade

Surface Finish Grade

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ER Collet Page

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Straight Collet Page

Pull Stud Page

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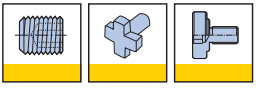


Lock Screw Page

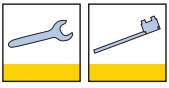
ER-SRK Page

Nut Page

Tap Adapter Page

Cooling Tube Page

Tube Wrench Page



Wrench Page

Driving Ring Page

Induction Heating Unit Page

Thermal Heating Unit Page

Tool Selection Guide

Tooling system

Milling chuck

- DIN69871 G15
- HSK G41
- BT MAS-403 G71
- DIN2080 G100

Collet (NCSR) G164-G166

ST shank G123-G127

Collet (ER) G151-G159

GTIN collet G172-G1734

Collet chuck

- DIN69871 G10-G12
- HSK G35-G39
- BT MAS-403 G65-G68
- DIN2080 G99
- C-ADAPTER G110-G111
- ST shank G123-G127
- MT shank G138

Collet (ER) G151-G159

T-SHRINK Collet G167-G170

T-FLEX collet G171

GTIN collet G172-G173

TSK collet chuck

- DIN69871 G13
- HSK G40
- BT MAS-403 G69

TSK collet G160-G161

TSHRINK chuck

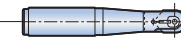
- DIN69871 G19-G20
- HSK G45-G47
- BT MAS-403 G77-G80
- C-ADAPTER G118-G119

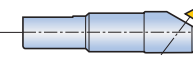
- DIN69871 G21
- HSK G48-G50
- BT MAS-403 G81-G82
- ST shank G136

THYCHUCK chuck

- DIN69871 G22-G23
- HSK G51-G53
- BT MAS-403 G83-G84
- ST Shank G128

THC collet G162-G163



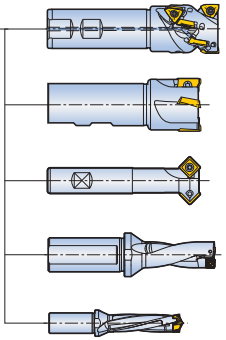


Tool Selection Guide

Tooling system

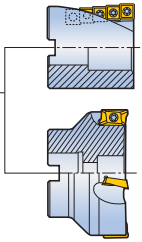
End mill holder

- DIN69871 G16-G18
- HSK G42-G44
- BT MAS-403 G72-G76
- DIN2080 G101
- C-ADAPTER G112-G114



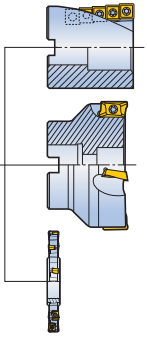
Face mill / Shell end mill arbor

- DIN69871 G24-G25, G27
- HSK G54-G56, G58
- BT MAS-403 G86-G90, G92
- DIN2080 G102-G103
- C-ADAPTER G115, G117



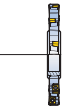
Combi face mill / Combi shell end mill arbor

- DIN69871 G26
- HSK G57
- BT MAS-403 G91
- DIN2080 G104
- C-ADAPTER G116



Slotting cutter arbor

- DIN69871 G28
- BT MAS-403 G85



Centering plug

- DIN2080 G107

Tool Selection Guide

Tooling system

Adapter

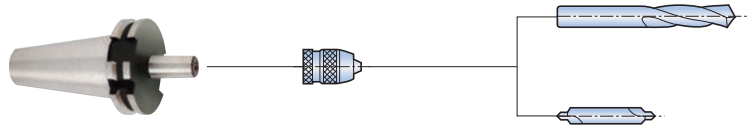
· DIN69871 G31
· BT MAS-403 G94

Morse taper adapter

· DIN69871 G29-G30
· HSK G59
· BT MAS-403 G93-G94
· DIN2080 G105-G106

Drill chuck arbor

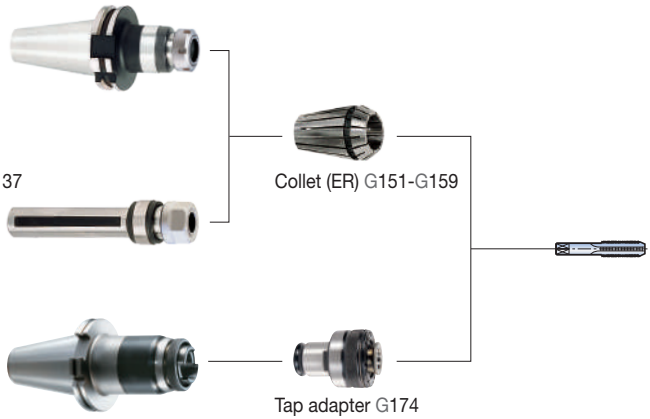
· BT MAS-403 G95
· DIN2080 G107



Tap chuck (GTI)

· DIN69871 G14
· BT MAS-403 G70

· GTI ER collet chuck G137



· DIN69871 G14
· BT MAS-403 G70
· MTA G139

Tap adapter G174

Tool Selection Guide

Tooling system

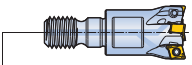
GFI floating reamer chuck (GFI)

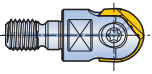
· ST shank G138

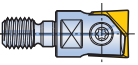
Collet (ER) G151-G159

TFLEXTEC

· DIN69871 G32
· HSK G60-G61
· BT MAS-403 G96
· C-ADAPTER G120
· ST shank G129-G132







ST shank G129-G132

Adapter G133-G135

Blank

· HSK G62
· C-ADAPTER G121

GREEN Typhoon

· ER shank G141
· BT MAS-403 G142
· HSK G143
· C-ADAPTER G144
· ST shank G145

HPC Typhoon

· BT MAS-403 G146
· HSK G147

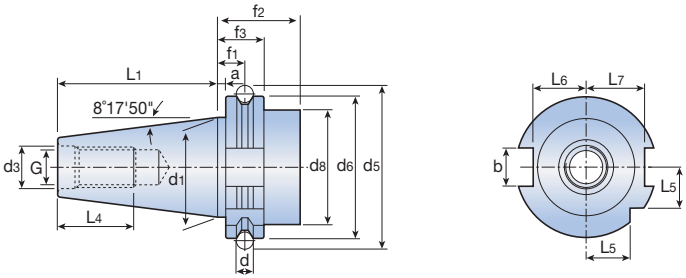
Collet (ER11 SPR EX..AA)
G152, G157, G159

DIN69871

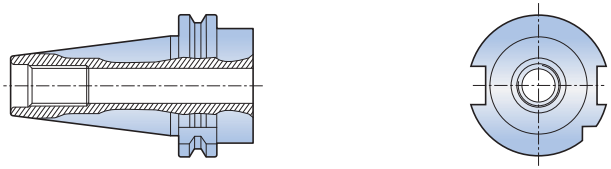
DIN69871 Form A/AD/B/ADB

Standard toolholder

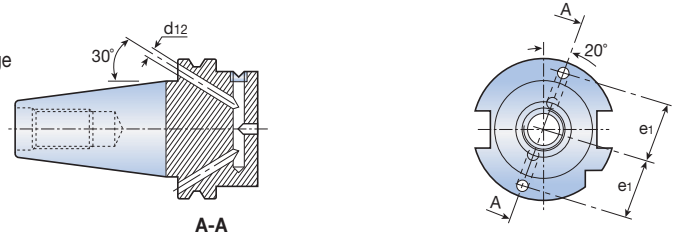
Type “A”



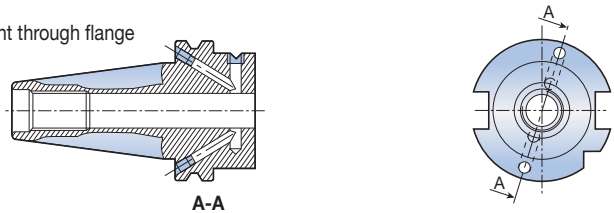
Type “AD”
Coolant hole



Type “B”
Coolant through flange



Type “ADB”
Coolant hole or coolant through flange



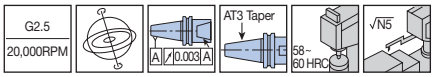
Shank	a ±0.1	b (H12)	d	d1	G	d3 (H7)	d5 ±0.05	d6	d8max	f1 ±0.1
30	3.2	16.1	7	31.75	M12	13	59.30	50.00	45	11.1
40	3.2	16.1	7	44.45	M16	17	72.30	63.55	50	11.1
50	3.2	25.7	7	69.85	M24	25	107.25	97.50	80	11.1

Shank	f2min	f3 -0.1	L1 -0.3	L4min	L5 -0.3	L6 -0.4	L7 -0.4	e1 ±0.1	d12	Taper AT3
30	35	19.1	47.80	24	15.0	16.4	19.0	21	4	0.002
40	35	19.1	68.40	32	18.5	22.8	25.0	27	4	0.003
50	35	19.1	101.75	47	30.0	35.5	37.7	42	6	0.004

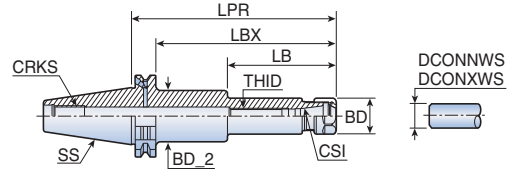
▸ For non-stock items: Supply condition is subject to availability
If not available in stock then MOQ (Minimum order qty) will be applicable

DIN69871-ER

ER collet chucks



DIN69871 form ADB DIN6499



Designation		Dimension (mm)										
		SS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	CRKS	THID
DIN69871 30	**ER 16x63**	30	ER16	0.5	10.0	28	-	63	43.9	28	M12	M10
DIN69871 40	**ER 16x63**	40	ER16	0.5	10.0	28	-	63	43.9	-	M16	M10
	ER 16x100	40	ER16	0.5	10.0	28	-	100	80.9	-	M16	M10
	ER 16x160(1)	40	ER16	0.5	10.0	28	40	160	140.9	85	M16	M10
	ER 20x63	40	ER20	1.0	13.0	34	-	63	43.9	-	M16	M12
	ER 20x100	40	ER20	1.0	13.0	34	-	100	80.9	-	M16	M12
	ER 20x160(1)	40	ER20	1.0	13.0	34	44	160	140.9	19	M16	M12
DIN69871 50	**ER 16x100**	50	ER16	0.5	10.0	28	-	100	80.9	-	M24	M10
	ER 16x160(1)	50	ER16	0.5	10.0	28	40	160	140.9	85	M24	M10
	ER 16x200(1)	50	ER16	0.5	10.0	28	40	200	180.9	110	M24	M10
	ER 20x100	50	ER20	1.0	13.0	34	-	100	80.9	-	M24	M12
	ER 20x160(1)	50	ER20	1.0	13.0	34	45	160	140.9	86	M24	M12

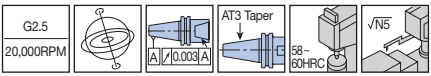
G151-G159 G176-G177 G177-G179 G180 G183

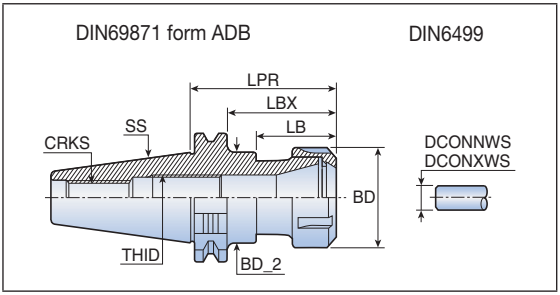
- Add B for coolant through flange
- (1) Balance to G6.3 at 12,000RPM

ADVANCE CUTTING TaeguTec

DIN69871-ER

ER collet chucks



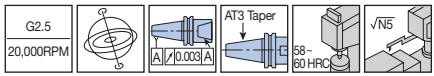


Designation		Dimension (mm)										
		SS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	CRKS	THID
DIN69871 40	**ER 25x65**	40	ER25	1.0	16.0	42	32.4	65	45.9	28.0	M16	M16x2
	ER 25x100	40	ER25	1.0	16.0	42	-	100	80.9	-	M16	M16x2
	ER 25x150	40	ER25	1.0	16.0	42	-	150	130.9	-	M16	M16x2
	ER 32x65	40	ER32	2.0	20.0	50	40.4	65	45.9	32.0	M16	M22x1.5
	ER 32x100	40	ER32	2.0	20.0	50	49.0	100	80.9	35.0	M16	M22x1.5
	ER 32x150	40	ER32	2.0	20.0	50	49.0	150	130.9	35.0	M16	M22x1.5
	ER 40x70	40	ER40	3.0	26.0	63	50.4	70	50.9	32.0	M16	M28x1.5
	ER 40x100	40	ER40	3.0	26.0	63	50.4	100	80.9	32.0	M16	M28x1.5
DIN69871 50	**ER 25x100**	50	ER25	1.0	16.0	42	-	100	80.9	-	M24	M16x2
	ER 25x150	50	ER25	1.0	16.0	42	50.0	150	130.9	80.9	M24	M16x2
	ER 25x200(1)	50	ER25	1.0	16.0	42	55.0	200	180.9	85.0	M24	M16x2
	ER 32x100	50	ER32	2.0	20.0	50	-	100	80.9	-	M24	M22x1.5
	ER 32x150	50	ER32	2.0	20.0	50	-	150	130.9	-	M24	M22x1.5
	ER 32x200(1)	50	ER32	2.0	20.0	50	-	200	180.9	-	M24	M22x1.5
	ER 40x100	50	ER40	3.0	26.0	63	-	100	80.9	-	M24	M28x1.5
	ER 40x150	50	ER40	3.0	26.0	63	-	150	130.9	-	M24	M28x1.5
	ER 40x200(1)	50	ER40	3.0	26.0	63	-	200	180.9	-	M24	M28x1.5
	ER 50x100	50	ER50	10.0	34.0	78	-	100	80.9	-	M24	M36x1.5
	ER 50x150	50	ER50	10.0	34.0	78	-	150	130.9	-	M24	M36x1.5

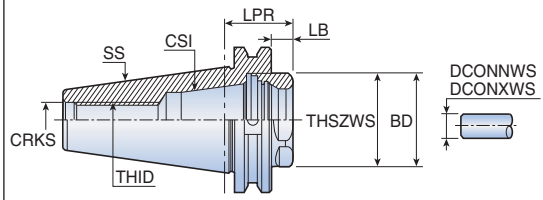
- Add B for coolant through flange
- (1) Balance to G6.3 at 12,000RPM

DIN69871-ER-SHORT

Short ER collet chucks



DIN69871 form AD DIN6499 T-SHORT



Designation	Dimension (mm)									
	SS	CSI	DCONNWS	DCONXWS	BD	LPR	LB	CRKS	THSZWS	THID
DIN69871 40 ER32 SHORT	40	ER32	2.0	20.0	40	25.1	6.0	M16	M40x1.5	-
DIN69871 50 ER32 SHORT	50	ER32	2.0	20.0	40	28.6	9.5	M24	M40x1.5	M22x1.5
ER40 SHORT	50	ER40	3.0	26.0	50	28.6	9.5	M24	M50x1.5	M28x1.5

G151-G159

G167-G173

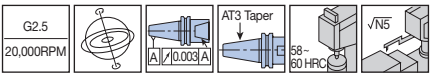
G177-G179

G180

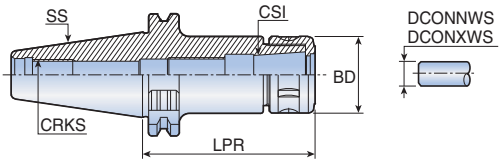
G183

DIN69871-TSK

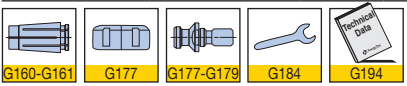
TSK collet chucks



DIN69871 form AD TSK



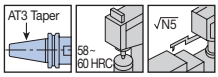
Designation		Dimension (mm)						
		SS	CSI	DCONNWS	DCONXWS	BD	LPR	CRKS
DIN69871 40	**TSK 6-90**	40	TSK6	1.5	6.0	19.5	90	M16
	TSK 6-120	40	TSK6	1.5	6.0	19.5	120	M16
	TSK 10-90	40	TSK10	1.5	10.0	27.5	90	M16
	TSK 10-120	40	TSK10	1.5	10.0	27.5	120	M16
	TSK 16-90	40	TSK16	2.5	16.0	40.0	90	M16
	TSK 16-120	40	TSK16	2.5	16.0	40.0	120	M16
	TSK 25-90	40	TSK25	7.5	25.0	55.0	90	M16
	TSK 25-120	40	TSK25	7.5	25.0	55.0	120	M16
DIN69871 50	**TSK 6-120**(1)	50	TSK6	1.5	6.0	19.5	120	M24
	TSK 6-165(1)	50	TSK6	1.5	6.0	19.5	165	M24
	TSK 6-195(1)	50	TSK6	1.5	6.0	19.5	195	M24
	TSK 10-120(1)	50	TSK10	1.5	10.0	27.5	120	M24
	TSK 10-165(1)	50	TSK10	1.5	10.0	27.5	165	M24
	TSK 10-195(1)	50	TSK10	1.5	10.0	27.5	195	M24
	TSK 16-120(1)	50	TSK16	2.5	16.0	40.0	120	M24
	TSK 16-165(1)	50	TSK16	2.5	16.0	40.0	165	M24
	TSK 16-195(1)	50	TSK16	2.5	16.0	40.0	195	M24
	TSK 25-120(1)	50	TSK25	7.5	25.0	55.0	120	M24
	TSK 25-165(1)	50	TSK25	7.5	25.0	55.0	165	M24
	TSK 25-195(1)	50	TSK25	7.5	25.0	55.0	195	M24

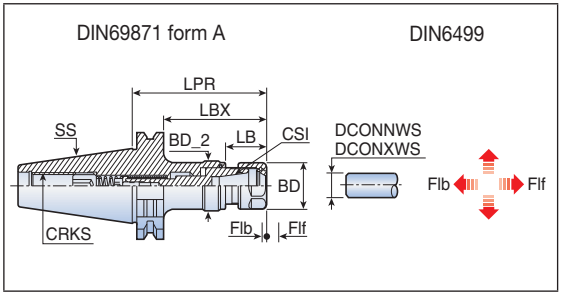


- Add B for coolant through flange
- (1) Balance to G6.3 at 12,000RPM

GTI DIN69871-ER

GTI tap attachments

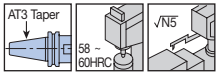


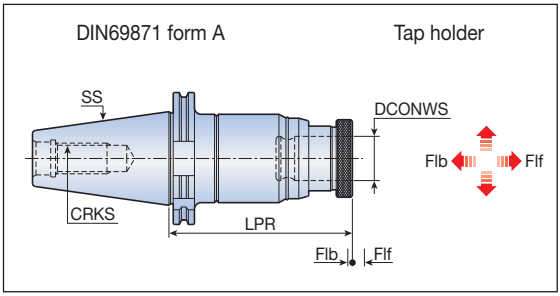


Designation		Dimension (mm)													
		SS	CSI	Tapmin	Tapmax	DCONNWS	DCONXWS	BD_2	BD	LPR	LBX	LB	Flb	Flf	CRKS
GTI DIN69871 40	**ER 16**	40	ER16	M3	M10	0.5	10.0	29.5	28	81.2	62.1	24.6	3	8	M16
	ER 32	40	ER32	M6	M20	2.0	20.0	56.5	50	112.6	93.5	33.0	4	9	M16
	ER 40	40	ER40	M6	M28	3.0	26.0	56.5	63	130.6	111.5	51.0	4	9	M16
GTI DIN69871 50	**ER 16**	50	ER16	M3	M10	0.5	10.0	29.5	28	106.8	87.7	24.6	3	8	M24
	ER 32	50	ER32	M6	M20	2.0	20.0	56.5	50	115.3	96.2	33.0	4	9	M24
	ER 40	50	ER40	M6	M28	3.0	26.0	56.5	63	133.3	114.2	51.0	4	9	M24

DIN69871-TC

Tap holders





Designation		Dimension (mm)								
		SS	Tapmin	Tapmax	DCONWS	LPR	Flb	Flf	Tap adapter	CRKS
DIN69871 40	**TC 12-90**	40	M3	M12	19	90	6.5	12	TA1	M16
	TC 22-142	40	M6	M24	31	142	14.5	13	TA2	M16
DIN69871 50	**TC 12-130**	50	M3	M12	19	130	6.5	12	TA1	M24
	TC 22-142	50	M6	M24	31	142	14.5	13	TA2	M24
	TC 38-190	50	M18	M38	48	190	20.0	20	TA3	M24

G151-G159

G174

G176-G177

G177-G179

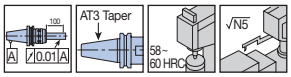
G183

G200

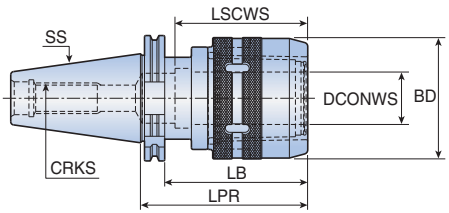
▸ Torque control system

DIN69871-NTMC

Milling chucks



DIN69871 form AD Milling chuck



Designation		Dimension (mm)						
		SS	DCONWS	BD	LPR	LB	LSCWS	CRKS
DIN69871 40	**NTMC 20-90**	40	20	53	90	70.9	82	M16
	NTMC 20-105	40	20	53	105	85.9	95	M16
	NTMC 32-95	40	32	72	95	75.9	85	M16
	NTMC 32-105	40	32	72	105	85.9	95	M16
	NTMC 32-120	40	32	72	120	100.9	105	M16
DIN69871 50	**NTMC 20-105**	50	20	53	105	85.9	105	M24
	NTMC 32-105	50	32	74	105	85.9	110	M24
	NTMC 32-135	50	32	74	135	115.9	125	M24
	NTMC 32-165	50	32	74	165	145.9	125	M24
	NTMC 42-105	50	42	94	105	85.9	120	M24
	NTMC 42-135	50	42	94	135	115.9	130	M24

G164-G166

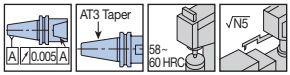
G177-G179

G183

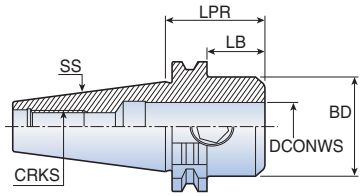
G196

DIN69871-EM

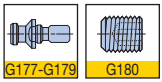
Short end mill holders



DIN69871 form AD DIN6359



Designation	Dimension (mm)					
	SS	DCONWS	BD	LPR	LB	CRKS
DIN69871 40 EM 10x45	40	10	35	45	25.9	M16
EM 12x45	40	12	42	45	25.9	M16
EM 14x45	40	14	44	45	25.9	M16
EM 16x45	40	16	48	45	25.9	M16
EM 18x45	40	18	49	45	25.9	M16
EM 20x45	40	20	49	45	25.9	M16
EM 25x45	40	25	49	45	25.9	M16

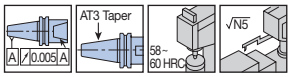


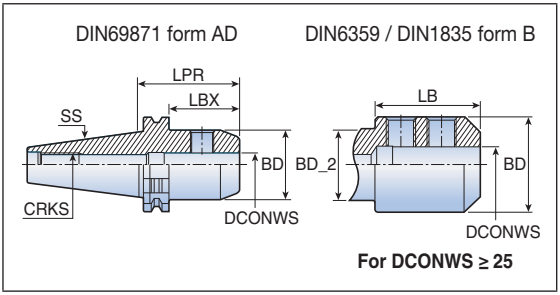
▸ Add B for coolant through flange

ADVANCE CUTTING
TaeguTec

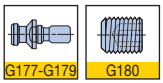
DIN69871-EM

End mill holders





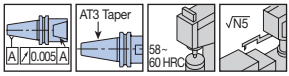
Designation	Dimension (mm)							
	SS	DCONWS	BD	BD_2	LPR	LBX	LB	CRKS
DIN69871 30 EM 20x72	30	20	52	-	72	52.9	-	M12
DIN69871 40 EM 6x50	40	6	25	-	50	30.9	-	M16
EM 8x50	40	8	28	-	50	30.9	-	M16
EM 10x50	40	10	35	-	50	30.9	-	M16
EM 12x50	40	12	42	-	50	30.9	-	M16
EM 14x63	40	14	44	-	63	43.9	-	M16
EM 16x63	40	16	48	-	63	43.9	-	M16
EM 18x63	40	18	50	-	63	43.9	-	M16
EM 20x63	40	20	52	-	63	43.9	-	M16
EM 25x100	40	25	64	49.0	100	80.9	65	M16
EM 32x100	40	32	71	49.0	100	80.9	65	M16
DIN69871 50 EM 6x63	50	6	25	-	63	43.9	-	M24
EM 8x63	50	8	28	-	63	43.9	-	M24
EM 10x63	50	10	35	-	63	43.9	-	M24
EM 12x63	50	12	42	-	63	43.9	-	M24
EM 14x63	50	14	44	-	63	43.9	-	M24
EM 16x63	50	16	48	-	63	43.9	-	M24
EM 18x63	50	18	50	-	63	43.9	-	M24
EM 20x63	50	20	52	-	63	43.9	-	M24
EM 25x80	50	25	65	-	80	60.9	-	M24
EM 32x100	50	32	72	-	100	80.9	-	M24
EM 40x100	50	40	90	79.9	100	80.9	43	M24
EM 50x125	50	50	98	79.9	125	105.9	90	M24

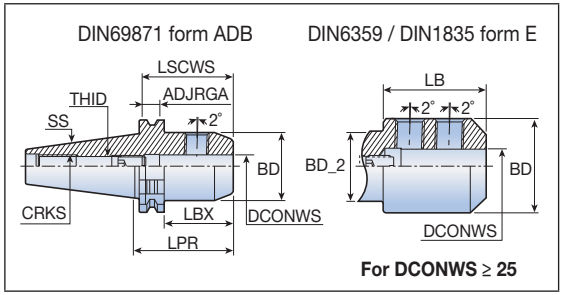


▸ Add B for coolant through flange except DIN69871 30

DIN69871-EM-E

End mill holders - Whistle notch





For DCONWS ≥ 25

Designation		Dimension (mm)										
		SS	DCONWS	BD	BD_2	LPR	LBX	LB	ADJRGA	LSCWS	CRKS	THID
DIN69871 40	**EM 8x50E**	40	8	28	-	50	30.9	-	10	45	M16	M6
	EM 10x50E	40	10	35	-	50	30.9	-	10	49	M16	M8
	EM 12x50E	40	12	42	-	50	30.9	-	10	54	M16	M10
	EM 16x63E	40	16	48	-	63	43.9	-	10	57	M16	M12
	EM 20x63E	40	20	52	-	63	43.9	-	10	59	M16	M16
	EM 25x100E	40	25	64	49	100	80.9	65	10	64	M16	M20x1.5
	EM 32x100E	40	32	71	49	100	80.9	65	10	68	M16	M20x1.5
DIN69871 50	**EM 12x63E**	50	12	42	-	63	43.9	-	10	54	M24	M10
	EM 14x63E	50	14	44	-	63	43.9	-	10	54	M24	M10
	EM 16x63E	50	16	48	-	63	43.9	-	10	57	M24	M12
	EM 20x63E	50	20	52	-	63	43.9	-	10	59	M24	M16
	EM 25x80E	50	25	65	-	80	60.9	-	10	64	M24	M20x1.5
	EM 32x100E	50	32	72	-	100	80.9	-	10	68	M24	M20x1.5
	EM 40x100E	50	40	90	79	100	80.9	43	10	78	M24	M20x1.5

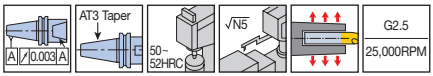
- The adjustment screw has an internal coolant hole
- Add B for coolant through the flange

ADVANCE CUTTING
TaeguTec

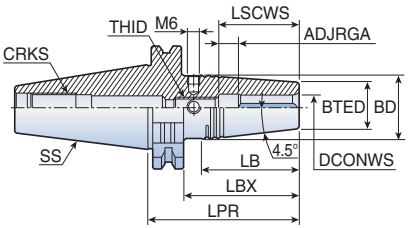
DIN69871-SRKIN-CX

T-SHRINK

CX coolant type thermal shrinking chucks



DIN69871 form AD T-SHRINK



Designation		Dimension (mm)										
		SS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	CRKS	THID
DIN69871 40	**SRKIN 6x80 CX**	40	6	21	27	80	60.9	38	10	34	M16	M5
	SRKIN 8x80 CX	40	8	21	27	80	60.9	38	10	34	M16	M6
	SRKIN 10x80 CX	40	10	24	32	80	60.9	51	9	40	M16	M8
	SRKIN 12x80 CX	40	12	24	32	80	60.9	51	9	45	M16	M10
	SRKIN 14x80 CX	40	14	27	34	80	60.9	45	9	45	M16	M10
	SRKIN 16x80 CX	40	16	27	34	80	60.9	45	9	48	M16	M12
	SRKIN 20x80 CX	40	20	33	42	80	60.9	57	9	49	M16	M16
	SRKIN 25x100 CX	40	25	44	53	100	80.9	57	9	55	M16	M16
DIN69871 50	**SRKIN 6x80 CX**(1)	50	6	21	27	80	61	38	10	34	M24	M5
	SRKIN 8x80 CX(1)	50	8	21	27	80	60.9	38	10	34	M24	M6
	SRKIN 10x80 CX(1)	50	10	24	32	80	60.9	51	9	40	M24	M8
	SRKIN 12x80 CX(1)	50	12	24	32	80	60.9	51	9	45	M24	M10
	SRKIN 14x80 CX(1)	50	14	27	34	80	60.9	45	9	45	M24	M10
	SRKIN 16x80 CX(1)	50	16	27	34	80	60.9	45	9	48	M24	M12
	SRKIN 18x80 CX(1)	50	18	33	42	80	60.9	57	9	48	M24	M12
	SRKIN 20x80 CX(1)	50	20	33	42	80	60.9	57	9	49	M24	M16
	SRKIN 25x100 CX(1)	50	25	44	53	100	80.9	57	9	55	M24	M16
	SRKIN 32x100 CX(1)	50	32	44	53	100	80.9	57	9	59	M24	M16

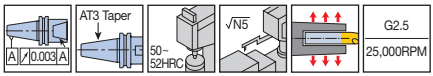
G177-G179 G181 G188-G190 G199

- Only use inductive heating device for T-SHRINK holders
- (1) Balance to G2.5 at 20,000RPM

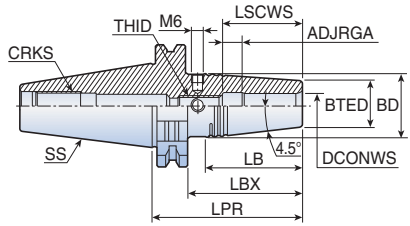
TaeguTec Member IMC Group

DIN69871-SRKIN

Thermal shrinking chucks



DIN69871 form AD T-SHRINK



Designation	Dimension (mm)										
	SS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	CRKS	THID
DIN69871 40 SRKIN 6x80	40	6	21	27	80	60.9	38.0	11	36	M16	M5
SRKIN 8x80	40	8	21	27	80	60.9	38.0	11	36	M16	M6
SRKIN 10x80	40	10	24	32	80	60.9	50.5	11	42	M16	M8
SRKIN 12x80	40	12	24	32	80	60.9	50.5	16	47	M16	M10
SRKIN 14x80	40	14	27	34	80	60.9	44.2	11	47	M16	M10
SRKIN 16x80	40	16	27	34	80	60.9	44.2	11	50	M16	M12
SRKIN 18x80	40	18	33	42	80	60.9	57.0	11	50	M16	M12
SRKIN 20x80	40	20	33	42	80	60.9	57.0	11	52	M16	M16
SRKIN 25x100	40	25	44	53	100	80.9	57.0	11	58	M16	M16
DIN69871 50 SRKIN 6x80(1)	50	6	21	27	80	60.9	38.0	11	36	M24	M5
SRKIN 8x80(1)	50	8	21	27	80	60.9	38.0	11	36	M24	M6
SRKIN 10x80(1)	50	10	24	32	80	60.9	51.0	11	42	M24	M8
SRKIN 12x80(1)	50	12	24	32	80	60.9	51.0	16	47	M24	M10
SRKIN 14x80(1)	50	14	27	34	80	60.9	45.0	11	47	M24	M10
SRKIN 16x80(1)	50	16	27	34	80	60.9	45.0	11	50	M24	M12
SRKIN 18x80(1)	50	18	33	42	80	60.9	57.0	11	50	M24	M12
SRKIN 20x80(1)	50	20	33	42	80	60.9	57.0	11	52	M24	M16
SRKIN 25x100(1)	50	25	44	53	100	80.9	57.0	11	58	M24	M16
SRKIN 32x100(1)	50	32	44	53	100	80.9	57.0	11	62	M24	M16

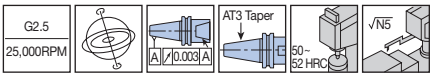
G177-G179 G181 G188-G190 G199

- Only use inductive heating device for T-SHRINK holders
- Add B for coolant through flange
- (1) Balance to G2.5 at 20,000RPM

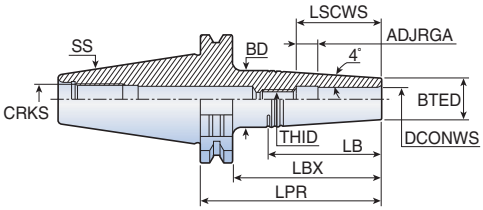
ADVANCE CUTTING TaeguTec

DIN69871-SRK

Thermal shrinking chucks



DIN69871 form AD T-SHRINK



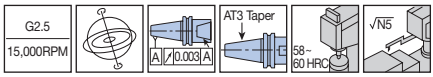
Designation		Dimension (mm)										
		SS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	CRKS	THID
DIN69871 40	**SRK 3x50**	40	3	10	15	69.1	50	35.5	6	16	M16	M6
	SRK 3x85	40	3	10	19	104.1	85	64.1	6	16	M16	M6
	SRK 4x50	40	4	10	15	69.1	50	35.5	6	18	M16	M6
	SRK 4x85	40	4	10	19	104.1	85	64.1	6	18	M16	M6
	SRK 5x50	40	5	10	15	69.1	50	35.5	6	21	M16	M6
	SRK 5x85	40	5	10	19	104.1	85	64.1	6	18	M16	M6
	SRK 6x50	40	6	11	16	69.1	50	35.5	6	24	M16	M8
	SRK 6x85	40	6	11	20	104.1	85	64.1	6	24	M16	M8
	SRK 8x50	40	8	14	20	69.1	50	42.5	6	31	M16	M10
	SRK 8x85	40	8	14	23	104.1	85	63.9	6	31	M16	M10
	SRK 10x50	40	10	16	22	69.1	50	42.4	6	36	M16	M12
	SRK 10x85	40	10	16	24.5	104.1	85	60.3	6	36	M16	M12
	SRK 12x50	40	12	20	26	69.1	50	42.3	10	42	M16	M10
	SRK 12x85	40	12	20	28	104.1	85	56.6	10	42	M16	M10

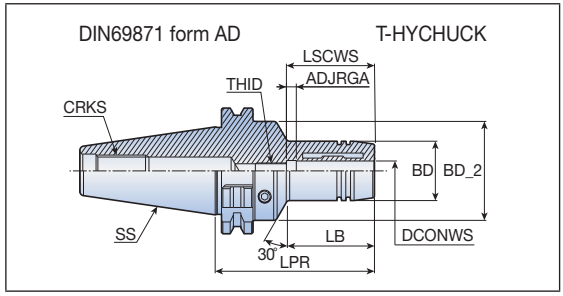
G177-G179 G188-G190 G199

▸ Add B for coolant through the flange

DIN69871-THCG

General hydraulic chucks





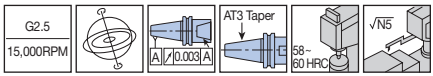
Designation		Dimension (mm)										
		SS	DCONWS	BD	BD_2	LPR	LB	ADJRGA	LSCWS	THID	CRKS	Hex key
DIN69871 40	**THCG 6-80.5**	40	6	26	50	80.5	44	10	37.5	M5X0.8	M16	4.0
	THCG 8-80.5	40	8	28	50	80.5	44	10	37.5	M6X1.0	M16	4.0
	THCG 10-80.5	40	10	30	50	80.5	44	10	42.5	M8X1.0	M16	4.0
	THCG 12-80.5	40	12	32	50	80.5	44	10	47.5	M10X1.0	M16	4.0
	THCG 16-80.5	40	16	38	50	80.5	48	10	52.5	M12X1.0	M16	4.0
	THCG 20-80.5	40	20	42	50	80.5	48	10	52.5	M16X1.0	M16	5.0
	THCG 25-80.5	40	25	55	66	80.5	26	10	61.0	M16X1.0	M16	5.0
	THCG 32-80.5	40	32	62	80	80.5	26	10	65.0	M16X1.0	M16	5.0

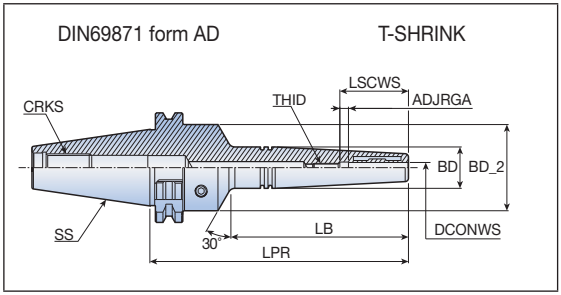
G162-G163 G177-G179 G197-G198

- Consult the user guide for relevant information including: insertion depth and proper use
- Clamping wrench should be ordered separately

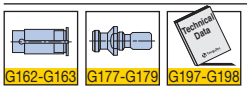
DIN69871-THCS

Slim hydraulic chucks





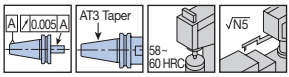
Designation		Dimension (mm)										
		SS	DCONWS	BD	BD_2	LPR	LB	ADJRGA	LSCWS	THID	CRKS	Hex key
DIN69871 40	**THCS 6-150**	40	6	24	50	150	103	10	37.5	M5X0.8	M16	4.0
	THCS 10-150	40	10	28	50	150	104	10	42.5	M8X1.0	M16	4.0
	THCS 12-150	40	12	30	50	150	105	10	47.5	M10X1.0	M16	4.0

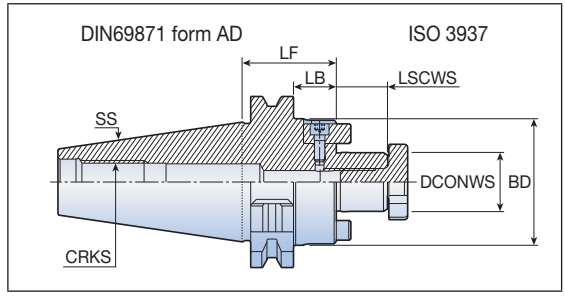


- Consult the user guide for relevant information including: insertion depth and proper use
- Clamping wrench should be ordered separately

DIN69871-SEM

Face mill arbors



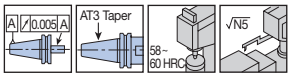


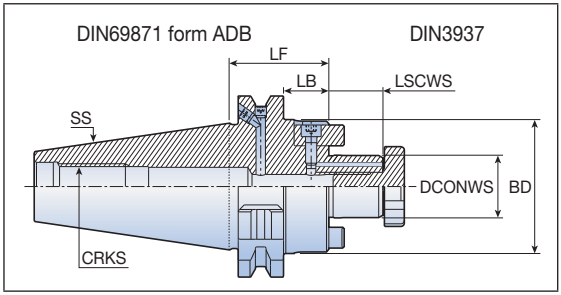
Designation	Dimension (mm)						
	SS	DCONWS	BD	LF	LB	LSCWS	CRKS
DIN69871 30 SEM 22x50	30	22	47	50	30.9	19	M12
SEM 27x50	30	27	58	50	30.9	21	M12
DIN69871 40 SEM 16x35	40	16	38	35	15.9	17	M16
SEM 22x35	40	22	47	35	15.9	19	M16
SEM 27x60	40	27	58	60	40.9	21	M16
SEM 32x60	40	32	66	60	40.9	24	M16
SEM 40x60	40	40	82	60	40.9	27	M16
DIN69871 50 SEM 16x35	50	16	38	35	15.9	17	M24
SEM 22x35	50	22	47	35	15.9	19	M24
SEM 22x50x200	50	22	50	200	180.9	19	M24
SEM 27x35	50	27	58	35	15.9	21	M24
SEM 32x35	50	32	66	35	15.9	24	M24
SEM 32x78x370	50	40	78	370	350.9	24	M24
SEM 40x50	50	40	82	50	30.9	27	M24
SEM 50x60	50	50	95	60	40.9	30	M24

▸ Wrench not included

DIN69871-SEM-C

Face mill arbors with coolant hole



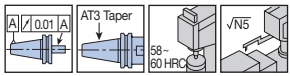


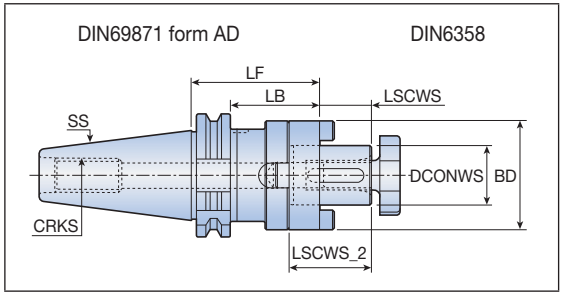
Designation		Dimension (mm)						
		SS	DCONWS	BD	LF	LB	LSCWS	CRKS
DIN69871 40	**SEM 16x35C**	40	16	38	35	15.9	17	M16
	SEM 16x100C	40	16	38	100	80.9	17	M16
	SEM 22x35C	40	22	47	35	15.9	19	M16
	SEM 22x100C	40	22	47	100	80.9	19	M16
	SEM 27x60C	40	27	58	60	40.9	21	M16
	SEM 27x100C	40	27	58	100	80.9	21	M16
	SEM 32x60C	40	32	66	60	40.9	24	M16
DIN69871 50	**SEM 16x35C**	50	16	38	35	15.9	17	M24
	SEM 16x100C	50	16	38	100	80.9	17	M24
	SEM 22x35C	50	22	47	35	15.9	19	M24
	SEM 22x100C	50	22	47	100	80.9	19	M24
	SEM 27x35C	50	27	58	35	15.9	21	M24
	SEM 27x100C	50	27	58	100	80.9	21	M24
	SEM 32x35C	50	32	66	35	15.9	24	M24
	SEM 32x100C	50	32	66	100	80.9	24	M24
DIN69871 50	**SEM 22x48x200C**	50	22	48	200	181.0	19	M24
	SEM 22x61x300C	50	22	61	300	281.0	19	M24
	SEM 27x61x300C	50	27	61	300	281.0	21	M24
	SEM 32x78x370C	50	32	78	370	351.0	24	M24

- If the “B type” option is required, the plug screw must be removed from the flange cooling hole (Use a 2mm hex key)
- Wrench not included

DIN69871-SEMC

Combi shell end mill arbors



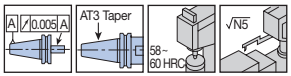


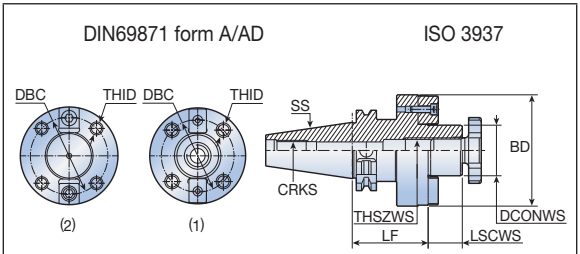
Designation	Dimension (mm)							
	SS	DCONWS	BD	LF	LB	LSCWS	LSCWS_2	CRKS
DIN69871 30 SEMC 16x50	30	16	32	50	30.9	17	27	M12
DIN69871 40 SEMC 16x55	40	16	32	55	35.9	17	27	M16
SEMC 16x100	40	16	32	100	80.9	17	27	M16
SEMC 22x55	40	22	40	55	35.9	19	31	M16
SEMC 22x100	40	22	40	100	80.9	19	31	M16
SEMC 27x55	40	27	48	55	35.9	21	33	M16
SEMC 27x100	40	27	48	100	80.9	21	33	M16
SEMC 32x60	40	32	58	60	45.9	24	38	M16
SEMC 32x100	40	32	58	100	80.9	24	38	M16
SEMC 40x60	40	40	70	60	40.9	27	41	M16
DIN69871 50 SEMC 16x55	50	16	32	55	35.9	17	27	M24
SEMC 16x100	50	16	32	100	80.9	17	27	M24
SEMC 22x55	50	22	40	55	35.9	19	31	M24
SEMC 22x100	50	22	40	100	80.9	19	31	M24
SEMC 27x55	50	27	48	55	35.9	21	33	M24
SEMC 27x100	50	27	48	100	80.9	21	33	M24
SEMC 32x55	50	32	58	55	35.9	24	38	M24
SEMC 32x100	50	32	58	100	80.9	24	38	M24
SEMC 40x55	50	40	70	55	35.9	27	41	M24
SEMC 40x100	50	40	70	10	80.9	27	41	M24
SEMC 50x70	50	50	90	70	50.9	30	46	M24

▸ Wrench not included

DIN69871-FM

Face mill arbors





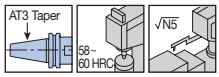
Designation		Dimension (mm)								
		SS	DCONWS	BD	DBC	LF	LSCWS	CRKS	THID	THSZWS
DIN69871 40	**FM 40**[1]	40	40	88	66.7	60	27	M16	M12	M20
DIN69871 50	**FM 40**[1]	50	40	88	66.7	70	27	M24	M12	M20
	FM 60[2]	50	60	128	101.6	70	40	M24	M16	-

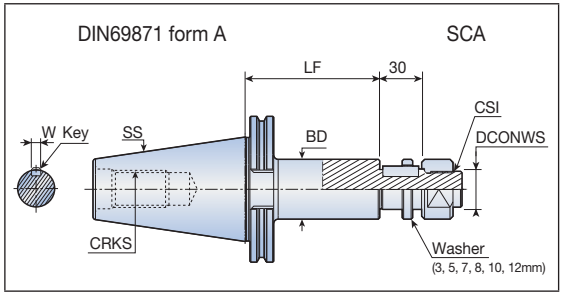
G177-G179 G180 G181

- 4 pcs of mounting screws are included
- [1] Form AD
- [2] Form A

DIN69871-SCA

Slotting cutter arbors





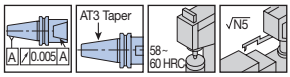
Designation		Dimension (mm)						
		SS	DCONWS	BD	LF	W	CRKS	CSI
DIN69871 40	**SCA-22-75**	40	22	34	75	6	M16	M20x1.5
	SCA-22-120	40	22	34	120	6	M16	M20x1.5
	SCA-27-75	40	27	40	75	7	M16	M24x2.0
	SCA-27-120	40	27	40	120	7	M16	M24x2.0
	SCA-32-90	40	32	46	90	8	M16	M32x2.0
DIN69871 50	**SCA-22-135**	50	22	34	135	6	M24	M20x1.5
	SCA-27-90	50	27	40	90	7	M24	M24x2.0
	SCA-27-135	50	27	40	135	7	M24	M24x2.0
	SCA-32-90	50	32	46	90	8	M24	M36x3.0
	SCA-32-135	50	32	46	135	8	M24	M36x3.0
	SCA-40-90	50	40	55	90	10	M24	M36x3.0
	SCA-40-135	50	40	55	135	10	M24	M36x3.0
	SCA-50-90	50	50	68	90	12	M24	M42x3.0

G177-G179

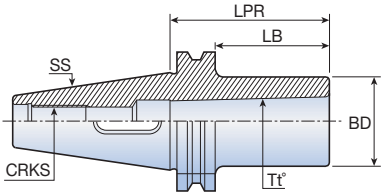
▸ Washers & key are included (Each 3, 5, 7, 8, 10, 12mm)

DIN69871-MT

Morse taper adapters



DIN69871 form A DIN6383

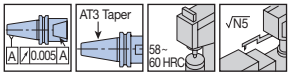


Designation	Dimension (mm)					
	SS	Tt°	BD	LPR	LB	CRKS
DIN69871 40 MT 1x50	40	MT1	25	50	30.9	M16
MT 2x50	40	MT2	32	50	30.9	M16
MT 3x70	40	MT3	40	70	50.9	M16
MT 4x95	40	MT4	48	95	75.9	M16
DIN69871 50 MT 1x45	50	MT1	25	45	25.9	M24
MT 2x60	50	MT2	32	60	40.9	M24
MT 3x65	50	MT3	40	65	45.9	M24
MT 4x95	50	MT4	48	95	75.9	M24
MT 5x105	50	MT5	63	105	85.9	M24

G177-G179

DIN69871-MT-DRW

Morse taper draw bar adapters



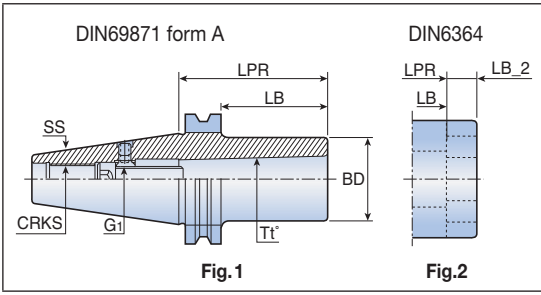


Fig.1 **Fig.2**

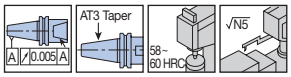
Designation		Dimension (mm)								Fig.
		SS	Tt°	BD	LPR	LB	LB_2	CRKS	G1	
DIN69871 40	**MT1 DRW**	40	MT1	25	50	30.9	-	M16	M6	1
	MT2 DRW	40	MT2	32	50	30.9	-	M16	M10	1
	MT3 DRW	40	MT3	40	70	50.9	-	M16	M12	1
	MT4 DRW(1)	40	MT4	63	110	90.9	15	M16	M16	2
DIN69871 50	**MT1 DRW**	50	MT1	25	45	25.9	-	M24	M6	1
	MT2 DRW	50	MT2	32	60	40.9	-	M24	M10	1
	MT3 DRW	50	MT3	40	65	45.9	-	M24	M12	1
	MT4 DRW(1)	50	MT4	63	85	65.9	15	M24	M16	2
	MT5 DRW(1)	50	MT5	78	118	98.9	18	M24	M20	2

G177-G179

▸ (1) DIN2201

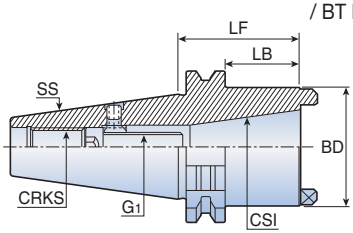
DIN69871-AD

Adapters



DIN69871 form A

DIN2080 / DIN69871/A / BT MAS-403

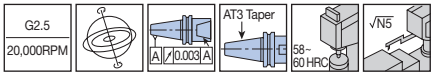


Designation	Dimension (mm)						
	SS	CSI	BD	LF	LB	CRKS	G1
DIN69871 50 AD BT/SK 40	50	BT/SK 40	66	70	50.9	M24	M16

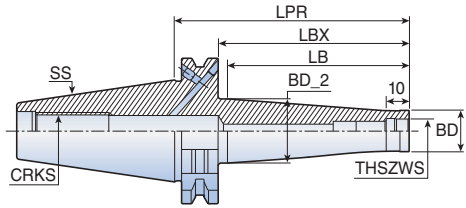
G177-G179

DIN69871-ODP

T-FLEXTEC holders



DIN69871 form ADB T-FLEXTEC



Designation	Dimension (mm)							
	SS	THSZWS	BD	BD_2	LPR	LBX	LB	CRKS
DIN69871 40 ODP 6x58	40	M06	9.8	13.0	58	38.9	32	M16
ODP 6x98	40	M06	9.8	23.0	98	78.9	74	M16
ODP 8x58	40	M08	13.1	15.0	58	38.9	32	M16
ODP 8x98	40	M08	13.1	23.0	98	78.9	74	M16
ODP 10x58	40	M10	18.0	20.0	58	38.9	32	M16
ODP 10x98	40	M10	18.0	28.0	98	78.9	74	M16
ODP 12x58	40	M12	21.0	24.0	58	38.9	32	M16
ODP 12x98	40	M12	21.0	31.0	98	78.9	74	M16
ODP 16x58	40	M16	29.0	28.6	58	38.9	32	M16
ODP 16x98	40	M16	29.0	34.0	98	78.9	74	M16
DIN69871 50 ODP 12x78(1)	50	M12	23.0	30.0	78	58.9	50	M24
ODP 12x128(1)	50	M12	23.0	40.0	128	108.9	100	M24
ODP 12x178(1)	50	M12	23.0	40.0	178	158.9	150	M24
ODP 12x228(1)	50	M12	23.0	46.0	228	208.9	200	M24
ODP 16x78(1)	50	M16	29.0	34.0	78	58.9	50	M24
ODP 16x128(1)	50	M16	29.0	40.0	128	108.9	100	M24
ODP 16x178(1)	50	M16	29.0	55.0	178	158.9	150	M24
ODP 16x228(1)	50	M16	29.0	55.0	228	208.9	200	M24

G177-G179

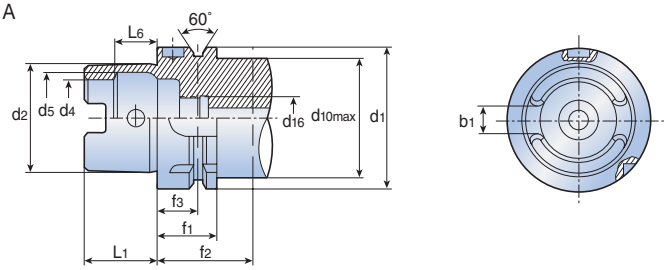
- If the “B type” option is required, the plug screw must be removed from the flange cooling hole (Use a 2mm hex key)
- (1) Balance to G6.3 at 12,000RPM

HSK

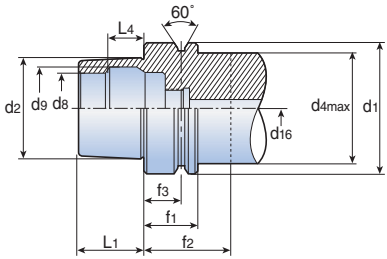
DIN69893 Form A/E/F

Standard toolholder

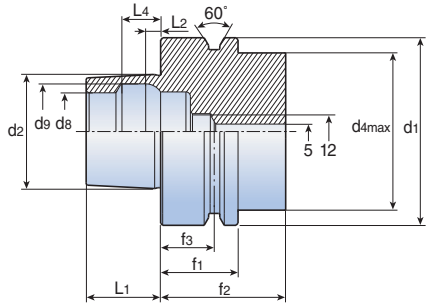
DIN69893 form A



DIN69893 form E



DIN69893 form F



DIN69893 form A

HSK-A	d_1 h10	d_2	d_4 H10	d_5 H11	d_{10max}	d_{16}	L_1 -0.2	L_6 JS10	b_1 ±0.04	f_1 -0.1	f_{2min}	f_3 ±0.1
40	40	30	21	25.5	34	M12x1	20	11.42	8.05	20	35	16
50	50	38	26	32.0	42	M16x1	25	14.13	10.54	26	42	18
63	63	48	34	40.0	53	M18x1	32	18.13	12.54(12.42)	26	42	18
80	80	60	42	50.0	67	M20x1.5	40	22.85	16.04	26	42	18
100	100	75	53	63.0	85	M24x1.5	50	28.56	20.02 (19.9)	29	45	20

DIN69893 form E

HSK-E	d_1 h10	d_2	d_{4max}	d_8 H10	d_9 H11	d_{16}	L_1 -0.2	L_4 JS10	f_1 -0.1	f_{2min}	f_3 ±0.1
32	32	24	26	17	19.0	M10x1	16	8.92	20	35	16
40	40	30	34	21	25.5	M12x1	20	11.42	20	35	16
50	50	38	42	26	32.0	M16x1	25	14.13	26	42	18
63	63	48	53	34	40.0	M18x1	32	18.13	26	42	18

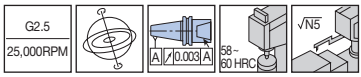
DIN69893 form F

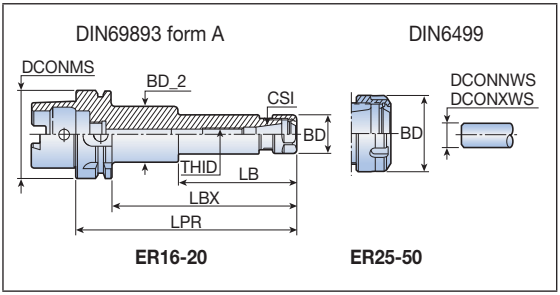
HSK-F	d_1 h10	d_2	d_{4max}	d_8 H10	d_9 H11	L_1 -0.2	L_2	L_4 JS10	f_1 -0.1	f_{2min}	f_3 ±0.1
63	63	38	53	26	32	25	5.0	14.13	26	42	18

- Without crosshole
- For non-stock items: Supply condition is subject to availability
  If not available in stock then MOQ (Minimum order qty) will be applicable

HSK A-ER

ER collet chucks



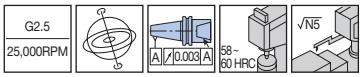


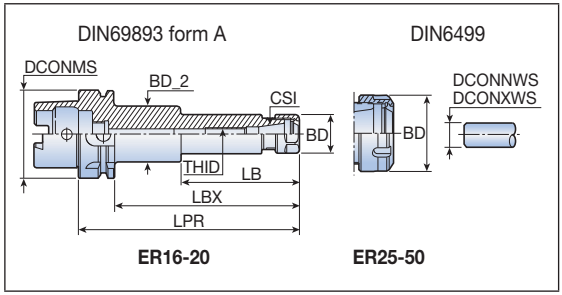
Designation		Dimension (mm)									
		DCONMS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	THID
HSK A 40	**ER 16x60**	40	ER16	0.5	10.0	28	-	60	40	-	-
	ER 16x80	40	ER16	0.5	10.0	28	-	80	60	-	M10
	ER 25x60	40	ER25	1.0	16.0	42	32.4	60	40	28.0	-
	ER 25x80	40	ER25	1.0	16.0	42	32.4	80	60	28.0	M18x1.5
	ER 25x100	40	ER25	1.0	16.0	42	32.4	100	80	28.0	M16
	ER 32x100	40	ER32	2.0	20.0	50	40.4	100	80	31.0	M22x1.5
HSK A 50	**ER 16x100**	50	ER16	0.5	10.0	28	-	100	74	-	M10
	ER 25x80	50	ER25	1.0	16.0	42	32.4	80	54	28.0	M8
	ER 25x100	50	ER25	1.0	16.0	42	41.8	100	74	28.5	M16
	ER 32x100	50	ER32	2.0	20.0	50	40.4	100	74	31.0	M22x1.5
HSK A 63	**ER 16x100**	63	ER16	0.5	10.0	28	-	100	74	-	M10
	ER 16x120	63	ER16	0.5	10.0	28	-	120	94	-	M10
	ER 16x160	63	ER16	0.5	10.0	28	40.0	160	134	85.6	M10
	ER 16X180	63	ER16	0.5	10.0	28	44.2	180	154	84.0	-
	ER 20x100	63	ER20	1.0	13.0	34	-	100	74	-	M12
	ER 20x120	63	ER20	1.0	13.0	34	-	120	94	-	M12
	ER 20x160	63	ER20	1.0	13.0	34	45.0	160	134	85.0	M12
	ER 25x80	63	ER25	1.0	16.0	42	-	80	54	-	M8
	ER 25x100	63	ER25	1.0	16.0	42	-	100	74	-	M16
	ER 25x120	63	ER25	1.0	16.0	42	-	120	94	-	M16
	ER 25x160	63	ER25	1.0	16.0	42	-	160	134	-	M16
	ER 32x80	63	ER32	2.0	20.0	50	40.4	80	54	31.0	-
	ER 32x100	63	ER32	2.0	20.0	50	-	100	74	-	M22x1.5
	ER 32x120	63	ER32	2.0	20.0	50	-	120	94	-	M22x1.5
	ER 32x160	63	ER32	2.0	20.0	50	-	160	134	-	M22x1.5
	ER 40x80	63	ER40	3.0	26.0	63	50.4	80	54	34.0	-
	ER 40x100	63	ER40	3.0	26.0	63	50.4	100	74	34.0	M28x1.5
	ER 40x120	63	ER40	3.0	26.0	63	50.4	120	94	34.0	M28x1.5

G151-G159 G176-G177 G180 G182 G182 G183

HSK A-ER

ER collet chucks



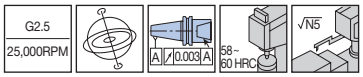


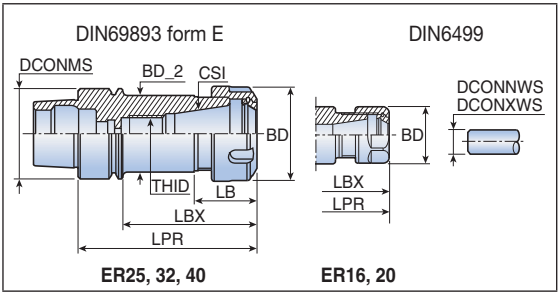
Designation		Dimension (mm)									
		DCONMS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	THID
HSK A 100	**ER 16x100**	100	ER16	0.5	10.0	28	-	100	71	-	M10
	ER 16x160	100	ER16	0.5	10.0	28	40	160	131	85	M10
	ER 20x100	100	ER20	1.0	13.0	34	-	100	71	-	M12
	ER 20x160	100	ER20	1.0	13.0	34	50	160	131	85	M12
	ER 25x100	100	ER25	1.0	16.0	42	-	100	71	-	M16
	ER 25x120	100	ER25	1.0	16.0	42	-	120	91	-	M16
	ER 25x160	100	ER25	1.0	16.0	42	-	160	134	-	M16
	ER 32x100	100	ER32	2.0	20.0	50	-	100	71	-	M22x1.5
	ER 32x120	100	ER32	2.0	20.0	50	-	120	91	-	M22x1.5
	ER 32x160	100	ER32	2.0	20.0	50	-	160	131	-	M22x1.5
	ER 40x100	100	ER40	3.0	26.0	63	-	100	71	-	M28x1.5
	ER 40x120	100	ER40	3.0	26.0	63	-	120	91	-	M28x1.5
	ER 40x160	100	ER40	3.0	26.0	63	-	160	131	-	M28x1.5
	ER 50x100	100	ER50	10.0	34.0	78	-	100	71	-	M22x1.5

G151-G159 G176-G177 G180 G182 G182 G183

HSK E-ER

ER collet chucks



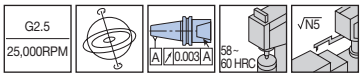


Designation		Dimension (mm)									
		DCONMS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	THID
HSK E 32	**ER 16x60**	32	ER16	0.5	10.0	28	22.4	60	40	21.5	-
	ER 20x60	32	ER20	1.0	13.0	34	25.4	60	40	26.0	-
	ER 25x65	32	ER25	1.0	16.0	42	25.8	65	45	30.0	-
HSK E 40	**ER 16x60**	40	ER16	0.5	10.0	28	-	60	40	-	-
	ER 16x80	40	ER16	0.5	10.0	28	-	80	60	-	M10
	ER 20x80	40	ER20	1.0	13.0	34	-	80	60	-	M12
	ER 25x80	40	ER25	1.0	16.0	42	34.0	80	60	28.0	M18x1.5
	ER 32x80	40	ER32	2.0	20.0	50	40.1	-	60	31.0	M22x1.5
HSK E 50	**ER 16x80**	50	ER16	0.5	10.0	28	-	80	54	-	M10
	ER 16x100	50	ER16	0.5	10.0	28	-	100	74	-	M10
	ER 16x100 M(1)	50	ER16	0.5	10.0	22	-	100	74	-	M10
	ER 20x80	50	ER20	1.0	13.0	34	-	80	54	-	M12
	ER 25x80	50	ER25	1.0	16.0	42	32.4	80	54	28.0	M16
	ER 32x80	50	ER32	2.0	20.0	50	40.4	80	54	31.0	-
	ER 32x100	50	ER32	2.0	20.0	50	40.4	100	74	31.0	M22x1.5
HSK E 63	**ER 16x80**	63	ER16	0.5	10.0	28	-	80	54	-	M10
	ER 16x100	63	ER16	0.5	10.0	28	-	100	74	-	M10
	ER 20x75	63	ER20	1.0	13.0	34	-	75	49	-	-
	ER 32x100	63	ER32	2.0	20.0	50	-	100	75	-	M22x1.5

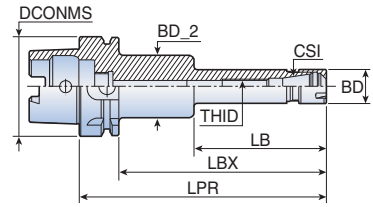
▸ (1) Equipped with nut ER16 MINI

HSK A-ER-M

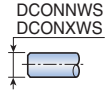
ER mini collet chucks



DIN69893 form A



DIN6499



Designation		Dimension (mm)									
		DCONMS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	THID
HSK A 63	**ER 16x100 M**	63	ER16	0.5	10.0	22	-	100	74	-	M10
	ER 16x120 M	63	ER16	0.5	10.0	22	40	120	94	78	M10
	ER 16x160 M	63	ER16	0.5	10.0	22	40	160	134	85	M10
	ER 20x100 M	63	ER20	1.0	13.0	28	-	100	74	-	M12
	ER 20x120 M	63	ER20	1.0	13.0	28	-	120	94	-	M12
	ER 20x160 M	63	ER20	1.0	13.0	28	45	160	134	85	M12
HSK A 100	**ER 16x100 M**	100	ER16	0.5	10.0	22	-	100	71	-	M10
	ER 16x160 M	100	ER16	0.5	10.0	22	40	160	131	85	M10
	ER 20x100 M	100	ER20	1.0	13.0	28	-	100	71	-	M12
	ER 20x160 M	100	ER20	1.0	13.0	28	45	160	131	85	M12

G151-G159

G176-G177

G180

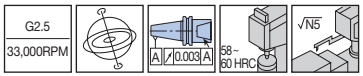
G182

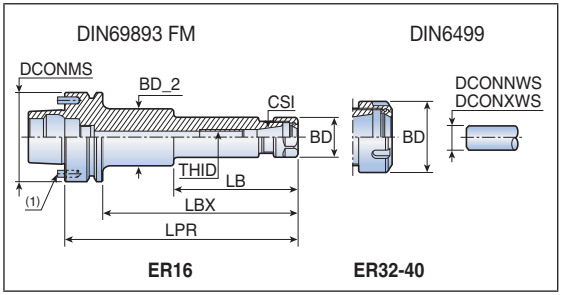
G182

G183

HSK FM-ER

ER collet chucks





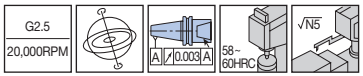
Designation		Dimension (mm)									
		DCONMS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	THID
HSK FM 63	**ER 16x80**	63	ER16	0.5	10.0	28	-	80	54	-	M10
	ER 16x100	63	ER16	0.5	10.0	28	-	100	74	-	M10
	ER 16x120	63	ER16	0.5	10.0	28	-	120	94	-	M10
	ER 16x160	63	ER16	0.5	10.0	28	40	160	134	85.6	M10
	ER 32x80	63	ER32	2.0	20.0	50	-	80	54	-	-
	ER 32x100	63	ER32	2.0	20.0	50	-	100	74	-	M22x1.5
	ER 40x80	63	ER40	3.0	26.0	63	50	80	54	32.0	-
	ER 40x100	63	ER40	3.0	26.0	63	50	100	74	32.0	M28x1.5

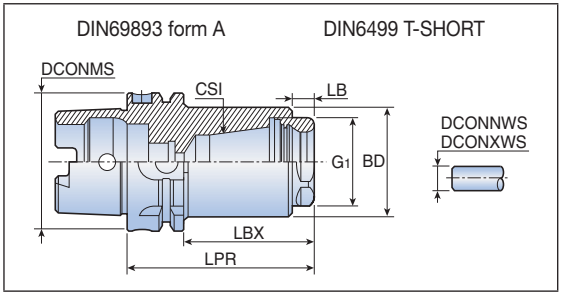
▸ (1) The driving pins can be removed to turn the toolholder into a standard HSK F 63 type

HSK A-ER-SHORT

T-SHORT

Short ER collet chucks



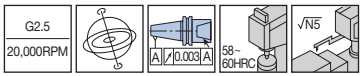


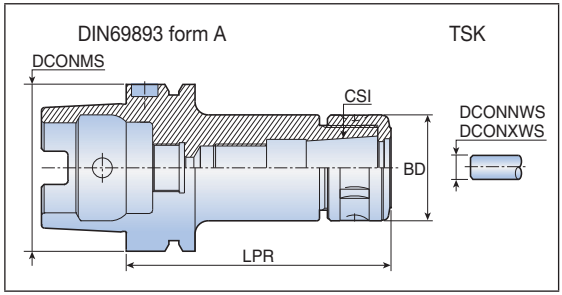
Designation		Dimension (mm)								
		DCONMS	CSI	DCONNWS	DCONXWS	BD	LPR	LBX	LB	G1
HSK A 63	**ER 32 SHORT**	63	ER32	2.0	20.0	50	81.0	55.0	9.5	M40x1.5
HSK A 100	**ER 32 SHORT**	100	ER32	2.0	20.0	50	89.5	60.5	9.5	M40x1.5
	ER 40 SHORT	100	ER40	3.0	26.0	70	104.5	75.5	9.5	M50x1.5

G151-G159 G167-G173 G176-G177 G180 G182 G182 G183

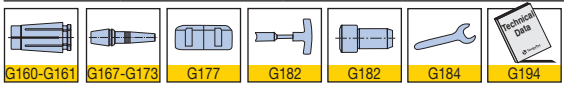
HSK A-TSK

TSK collet chucks





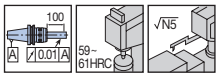
Designation		Dimension (mm)					
		DCONMS	CSI	DCONNWS	DCONXWS	BD	LPR
HSK A 50	**TSK 6-80**	50	TSK6	1.5	6.0	19.5	80
	TSK 10-90	50	TSK10	1.5	10.0	27.5	90
	TSK 16-100	50	TSK16	2.5	16.0	40.0	100
HSK A 63	**TSK 6-80**	63	TSK6	1.5	6.0	19.5	80
	TSK 10-90	63	TSK10	1.5	10.0	27.5	90
	TSK 16-100	63	TSK16	2.5	16.0	40.0	100
	TSK 25-120	63	TSK25	7.5	25.0	55.0	120
HSK A 100	**TSK 6-80**	100	TSK6	1.5	6.0	19.5	80
	TSK 10-90	100	TSK10	1.5	10.0	27.5	90
	TSK 16-100	100	TSK16	2.5	16.0	40.0	100
	TSK 25-120	100	TSK25	7.5	25.0	55.0	120



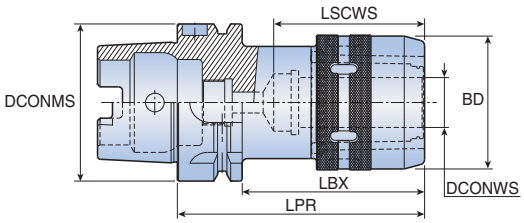
G160-G161 G167-G173 G177 G182 G182 G184 G194

HSK A-NTMC

Milling chucks



DIN69893 form A Milling chuck

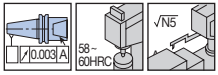


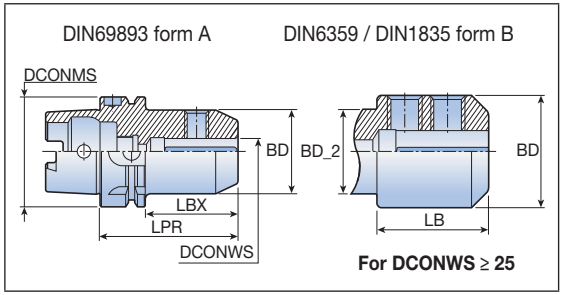
Designation		Dimension (mm)					
		DCONMS	DCONWS	BD	LPR	LBX	LSCWS
HSK A 63	**NTMC 20-105**	63	20	53	105	79	76
	NTMC 25-105	63	25	62	105	79	77
	NTMC 32-130	63	32	72	130	104	100
HSK A 100	**NTMC 20-105**	100	20	53	105	76	77
	NTMC 25-135	100	25	62	135	106	80
	NTMC 32-135	100	32	74	135	106	102
	NTMC 42-135	100	42	94	135	106	112

G164-G166 G182 G182 G183 G196

HSK A-EM-CX

CX coolant type end mill holders



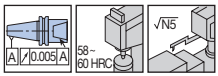


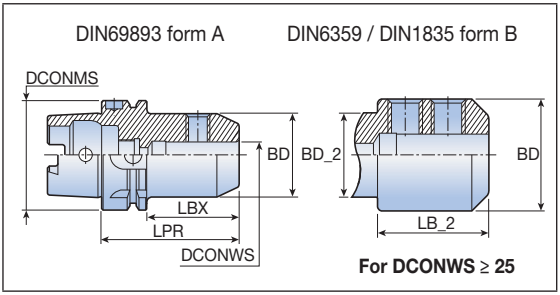
Designation		Dimension (mm)						
		DCONMS	DCONWS	BD	BD_2	LPR	LBX	LB
HSK A 63	**EM 6x100 CX**	63	6	25	-	100	74	-
	EM 6x65 CX	63	6	25	-	65	39	-
	EM 8x65 CX	63	8	28	-	65	39	-
	EM 10x65 CX	63	10	35	-	65	39	-
	EM 12x80 CX	63	12	42	-	80	54	-
	EM 16x100 CX	63	16	48	-	100	74	-
	EM 16x80 CX	63	16	48	-	80	54	-
	EM 20x80 CX	63	20	52	-	80	54	-
	EM 25x110 CX	63	25	65	52.5	110	84	68

G180 G182 G182

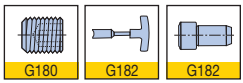
HSK A-EM

End mill holders



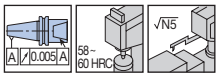


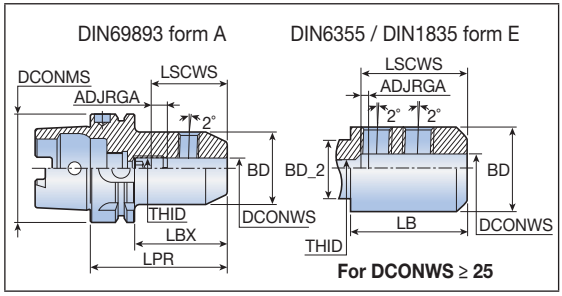
Designation		Dimension (mm)						
		DCONMS	DCONWS	BD	BD_2	LPR	LBX	LB_2
HSK A 50	**EM 8x65**	50	8	28	-	65	39	-
	EM 16x80	50	16	48	-	80	54	-
	EM 20x80	50	20	52	-	80	54	-
HSK A 63	**EM 6x65**	63	6	25	-	65	39	-
	EM 8x65	63	8	28	-	65	39	-
	EM 10x65	63	10	35	-	65	39	-
	EM 12x80	63	12	42	-	80	54	-
	EM 14x80	63	14	44	-	80	54	-
	EM 16x80	63	16	48	-	80	54	-
	EM 18x80	63	18	50	-	80	54	-
	EM 20x80	63	20	52	-	80	54	-
	EM 25x110	63	25	65	52	110	84	65.5
	EM 32x110	63	32	72	52	110	84	65.5
HSK A 100	**EM 8x80**	100	8	28	-	80	51	-
	EM 10x80	100	10	35	-	80	51	-
	EM 12x80	100	12	42	-	80	51	-
	EM 14x80	100	14	44	-	80	51	-
	EM 16x100	100	16	48	-	100	71	-
	EM 20x100	100	20	52	-	100	71	-
	EM 25x100	100	25	65	-	100	71	-
	EM 32x100	100	32	72	-	100	71	-
	EM 40x110	100	40	85	-	110	81	-



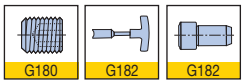
HSK A-EM-E

End mill holders - Whistle notch





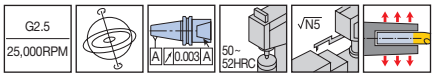
Designation		Dimension (mm)									
		DCONMS	DCONWS	BD	BD_2	LPR	LBX	LB	ADJRGA	LSCWS	THID
HSK A 63	**EM 6x80 E**	63	6	25	-	80	54	-	8	40	M5
	EM 8x80 E	63	8	28	-	80	54	-	5	40	M6
	EM 12x90 E	63	12	42	-	90	64	-	5	49	M10
	EM 16x100 E	63	16	48	-	100	74	-	5	52	M12
	EM 18x100 E	63	18	50	-	100	74	-	8	55	M12
	EM 20x100 E	63	20	52	-	100	74	-	5	54	M16
	EM 25x110 E	63	25	65	52	110	84	65.5	7	61	M16
	EM 32x110 E	63	32	72	52	110	84	65.5	5	63	M20x1.5
HSK A 100	**EM 8x90 E**	100	8	28	-	90	61	-	5	40	M6
	EM 12x100 E	100	12	42	-	100	71	-	10	54	M10
	EM 16x100 E	100	16	48	-	100	71	-	5	52	M12
	EM 18x100 E	100	18	50	-	100	71	-	5	52	M12
	EM 20x110 E	100	20	52	-	110	81	-	5	54	M16
	EM 25x120 E	100	25	65	-	120	91	-	7	61	M20x1.5
	EM 32x120 E	100	32	72	-	120	91	-	5	63	M20x1.5

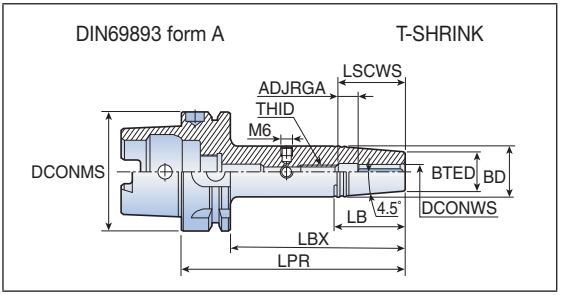


HSK A-SRKIN-CX

T-SHRINK

CX coolant type thermal shrinking chucks





Designation		Dimension (mm)										
		DCONMS	DCONWS	BTED	BD	LPR	LBX	LB	LB_2	ADJRGA	LSCWS	THID
HSK A 63	**SRKIN 6x80 CX**	63	6	21	27	80	54	38.1	49	9	34	M5
	SRKIN 6x120 CX	63	6	21	27	120	94	38.1	89	9	34	M5
	SRKIN 8x80 CX	63	8	21	27	80	54	38.1	49	10	34	M6
	SRKIN 8x120 CX	63	8	21	27	120	94	38.1	89	10	34	M6
	SRKIN 10x85 CX	63	10	24	32	85	59	50.8	57.5	9	40	M8
	SRKIN 10x120 CX	63	10	24	32	120	94	50.8	89	9	40	M8
	SRKIN 12x90 CX	63	12	24	32	90	64	50.8	59	9	45	M10
	SRKIN 12x120 CX	63	12	24	32	120	94	50.8	89	9	45	M10
	SRKIN 14x90 CX	63	14	27	34	90	64	44.5	59	9	45	M10
	SRKIN 16x75 CX	63	16	27	34	75	49	44.5	47	7	46	M5
	SRKIN 16x95 CX	63	16	27	34	95	69	44.5	64	9	48	M12
	SRKIN 16x120 CX	63	16	27	34	120	94	44.5	89	9	48	M12
	SRKIN 18x95 CX	63	18	33	42	95	69	57.2	66	9	48	M12
	SRKIN 20x75 CX	63	20	33	41	75	49	-	47	5	46	M5
	SRKIN 20x100 CX	63	20	33	42	100	74	57.2	69	9	49	M16
	SRKIN 20x120 CX	63	20	33	42	120	94	57.2	89	9	49	M16
	SRKIN 25x85 CX	63	25	44	52.2	85	59	52.1	58.2	9	56	M5
	SRKIN 32x85 CX	63	32	44	52.2	85	59	52.1	58.2	6	56	M5
HSK A 100	**SRKIN 6x85 CX(1)**	100	6	21	27	85	56	38.1	48	10	34	M5
	SRKIN 8x85 CX(1)	100	8	21	27	85	56	38.1	48	10	34	M6
	SRKIN 10x90 CX(1)	100	10	24	32	90	61	50.8	53.9	9	40	M8
	SRKIN 12x95 CX(1)	100	12	24	32	95	66	50.8	59	9	45	M10
	SRKIN 14x95 CX(1)	100	14	27	34	95	66	44.5	58	9	45	M10
	SRKIN 16x100 CX(1)	100	16	27	34	100	71	44.5	63	9	48	M12
	SRKIN 18x100 CX(1)	100	18	33	42	100	71	57.2	67	9	48	M12
	SRKIN 20x105 CX(1)	100	20	33	42	105	76	57.2	69	9	49	M16
	SRKIN 25x115 CX(1)	100	25	44	53	115	86	57.2	81	9	56	M16
	SRKIN 32x120 CX(1)	100	32	44	53	120	91	57.2	89	9	59	M16

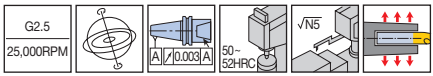
G181 G182 G182 G188-G190 G199

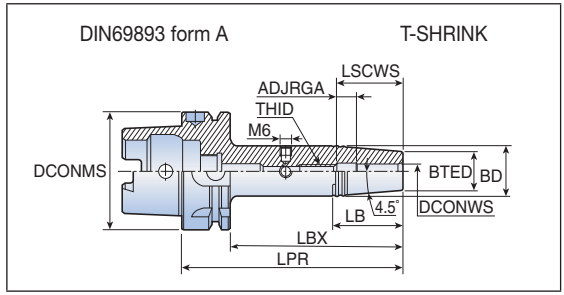
- Use only inductive heating device for T-SHRINK holders
- (1) Balance to G2.5 at 20,000RPM

TaeguTec

HSK A-SRKIN

Thermal shrinking chucks





Designation	Dimension (mm)										
	DCONMS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID	Hex key
HSK A 50 SRKIN 6x80	50	6	21	27	80	54	38	11	36	M5	2.5
HSK A 63 SRKIN 6x80	63	6	21	27	80	54	38	11	36	M5	2.5
SRKIN 6x120	63	6	21	27	120	94	38	11	36	M5	2.5
SRKIN 6x160	63	6	21	27	160	134	38	11	36	M5	2.5
SRKIN 8x80	63	8	21	27	80	54	38	11	36	M6	3.0
SRKIN 8x120	63	8	21	27	120	94	38	11	36	M6	3.0
SRKIN 8x160	63	8	21	27	160	134	38	11	36	M6	3.0
SRKIN 10x85	63	10	24	32	85	54	51	11	42	M8	4.0
SRKIN 10x120	63	10	24	32	120	94	51	11	42	M8	4.0
SRKIN 10x160	63	10	24	32	160	134	51	11	42	M8	4.0
SRKIN 12x90	63	12	24	32	90	64	51	6	42	M8	4.0
SRKIN 12x120	63	12	24	32	120	94	51	11	47	M10	5.0
SRKIN 12x160	63	12	24	32	160	134	51	11	47	M10	5.0
SRKIN 14x90	63	14	27	34	90	64	45	11	47	M10	5.0
SRKIN 14x120	63	14	27	34	120	94	45	11	47	M10	5.0
SRKIN 14x160	63	14	27	34	160	134	45	11	47	M10	5.0
SRKIN 16x75	63	16	27	34	75	49	-	11	50	-	-
SRKIN 16x95	63	16	27	34	95	69	44	11	50	M12	6.0
SRKIN 16x120	63	16	27	34	120	94	44	11	50	M12	6.0
SRKIN 16x160	63	16	27	34	160	134	44	11	50	M12	6.0
SRKIN 18x95	63	18	33	42	95	69	57	11	50	M12	6.0
SRKIN 18x120	63	18	33	42	120	94	57	11	50	M12	6.0
SRKIN 18x160	63	18	33	42	160	134	57	11	50	M12	6.0
SRKIN 20x75	63	20	33	41	75	49	-	9	50	-	-
SRKIN 20x100	63	20	33	42	100	74	57	11	52	M16	8.0
SRKIN 20x120	63	20	33	42	120	94	57	11	52	M16	8.0
SRKIN 20x160	63	20	33	42	160	134	57	11	52	M16	8.0
SRKIN 25x85	63	25	44	53	85	59	-	11	58	-	-

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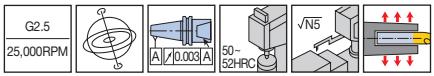
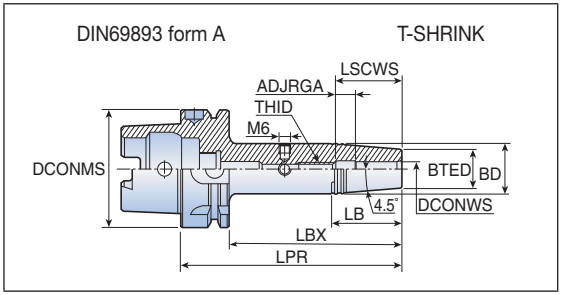
▸ Use only inductive heating device for T-SHRINK holders

HSK A-SRKIN

T-SHRINK

Thermal shrinking chucks





Designation		Dimension (mm)										
		DCONMS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID	Hex key
HSK A 63	**SRKIN 25x115**	63	25	44	53	115	89	55	11	58	M16	8.0
	SRKIN 32x85	63	32	44	53	85	59	-	11	58	-	-
	SRKIN 32x120	63	32	44	53	120	94	55	11	58	M16	8.0
HSK A 100	**SRKIN 6x85**(1)	100	6	21	27	85	56	38	14.5	36.5	M5	2.5
	SRKIN 6x120(1)	100	6	21	27	120	91	38	11	36	M5	2.5
	SRKIN 6x160(1)	100	6	21	27	160	131	38	14.5	36.5	M5	3.0
	SRKIN 8x85(1)	100	8	21	27	85	56	38	10.5	36.5	M6	3.0
	SRKIN 8x120(1)	100	8	21	27	120	91	38	11	36	M6	3.0
	SRKIN 8x160(1)	100	8	21	27	160	131	38	11	36	M6	3.0
	SRKIN 10x90(1)	100	10	24	32	90	61	51	11	42	M8	4.0
	SRKIN 10x120(1)	100	10	24	32	120	91	51	11	42	M8	4.0
	SRKIN 10x160(1)	100	10	24	32	160	131	51	11	42	M8	4.0
	SRKIN 12x95(1)	100	12	24	32	95	66	51	11	47	M10	5.0
	SRKIN 12x120(1)	100	12	24	32	120	91	51	11.5	47.5	M10	5.0
	SRKIN 12x160(1)	100	12	24	32	160	131	51	11	47	M10	5.0
	SRKIN 14x95(1)	100	14	27	34	95	66	45	11	47	M10	5.0
	SRKIN 14x120(1)	100	14	27	34	120	91	45	11	47	M10	5.0
	SRKIN 14x160(1)	100	14	27	34	160	131	45	11	47	M10	5.0
	SRKIN 16x100(1)	100	16	27	34	100	71	45	11	50	M12	6.0
	SRKIN 16x120(1)	100	16	27	34	120	91	45	11	50	M12	6.0
	SRKIN 16x160(1)	100	16	27	34	160	131	45	11	50.5	M12	6.0
	SRKIN 18x100(1)	100	18	33	42	100	71	57	11	50.5	M12	6.0
	SRKIN 20x105(1)	100	20	33	42	105	76	57	11	52.5	M16	8.0
	SRKIN 20x160(1)	100	20	33	42	160	131	57	11	52	M16	8.0
	SRKIN 25x115(1)	100	25	44	53	115	86	57	11	58	M16	8.0
	SRKIN 32x120(1)	100	32	44	53	120	91	57	11	62	M16	8.0

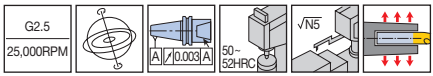
G181 G182 G182 G188-G190 G199

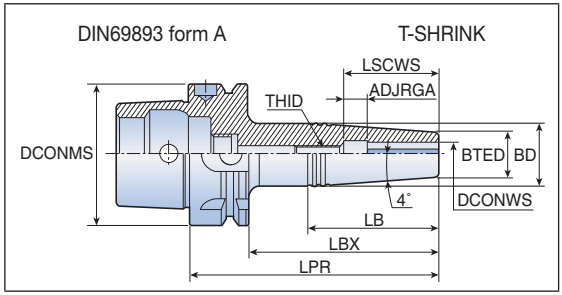
- Use only inductive heating device for T-SHRINK holders
- (1) Balance to G2.5 at 20,000RPM

TaeguTec Member IMC Group

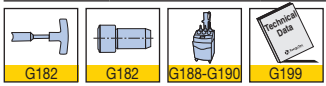
HSK A-SRK-CX

CX coolant type thermal shrinking chucks





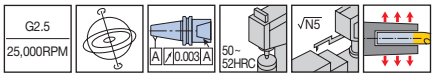
Designation		Dimension (mm)								
		DCONMS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID
HSK A 63	**SRK 3x50 CX**	63	3	10	17	76	50	-	-	-	-
	SRK 3x85 CX	63	3	10	21	111	85	78.7	-	-	-
	SRK 4x50 CX	63	4	10	17	76	50	-	-	-	-
	SRK 4x85 CX	63	4	10	21	111	85	78.7	-	-	-
	SRK 5x50 CX	63	5	10	17	76	50	-	-	-	-
	SRK 5x85 CX	63	5	10	21	111	85	78.7	-	-	-
	SRK 6x50 CX	63	6	11	18	76	50	-	9	27	M5
	SRK 6x85 CX	63	6	11	22	111	85	78.7	9	27	M5
	SRK 8x50 CX	63	8	14	20	76	50	42.9	10	35	M6
	SRK 8x85 CX	63	8	14	23	111	85	64.4	10	35	M6
	SRK 10x50 CX	63	10	16	23	76	50	-	10	40	M6
	SRK 10x85 CX	63	10	16	26	111	85	71.5	9	39	M8
	SRK 12x50 CX	63	12	20	27	76	50	-	10	42	M6
	SRK 12x85 CX	63	12	20	30	111	85	71.5	9	41	M10

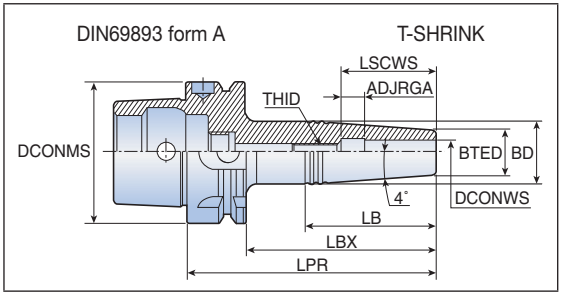


HSK A-SRK

T-SHRINK

Thermal shrinking chucks





Designation		Dimension (mm)										
		DCONMS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID	Hex key
HSK A 63	**SRK 3x50**	63	3	10	17	76	50	-	6	16	M6	3.0
	SRK 3x85	63	3	10	21	111	85	79	6	16	M6	3.0
	SRK 4x50	63	4	10	17	76	50	-	6	18	M6	3.0
	SRK 4x85	63	4	10	21	111	85	79	6	18	M6	3.0
	SRK 5x50	63	5	10	17	76	50	-	6	21	M6	3.0
	SRK 5x85	63	5	10	21	111	85	79	6	21	M6	3.0
	SRK 6x50	63	6	11	18	76	50	-	6	24	M8	4.0
	SRK 6x85	63	6	11	22	111	85	79	6	24	M8	4.0
	SRK 8x50	63	8	14	20	76	50	43	11	36	M6	3.0
	SRK 8x85	63	8	14	23	111	85	64	11	36	M6	3.0
	SRK 10x50	63	10	16	23	76	50	-	11	41	M8	4.0
	SRK 10x85	63	10	16	26	111	85	72	11	41	M8	4.0
	SRK 12x50	63	12	20	27	76	50	-	11	43	M8	4.0
	SRK 12x85	63	12	20	30	111	85	72	11	43	M8	4.0

G182 G182 G188-G190 G199

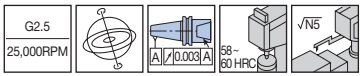
▸ Only use inductive heating device for T-SHRINK holders

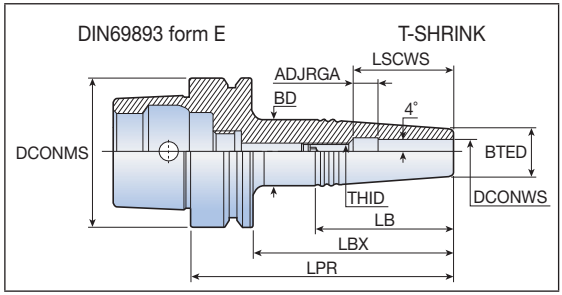
TaeguTec

HSK E-SRK

T-SHRINK

Thermal shrinking chucks





Designation		Dimension (mm)										
		DCONMS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID	Hex key
HSK E 32	**SRK 3x45**	32	3	10	13	65	45	30.0	6	16	M4	2.0
	SRK 4x45	32	4	10	15	65	45	35.0	6	18	M4	2.0
	SRK 6x45	32	6	11	16	65	45	35.0	10	28	M4	2.0
	SRK 10x45	32	12	16	22	65	45	42.0	10	40	M4	2.0
HSK E 40	**SRK 3x45**	40	3	10	13	65	45	30.0	6	16	M5	2.5
	SRK 3x80	40	3	10	19	100	80	64.0	6	16	M5	2.5
	SRK 4x45	40	4	10	15	65	45	35.0	6	18	M5	2.5
	SRK 4x80	40	4	10	19	100	80	64.0	6	18	M5	2.5
	SRK 5x45	40	5	10	15	65	45	35.0	10	25	M4	2.0
	SRK 5x80	40	5	10	19	100	80	64.0	10	25	M4	2.0
	SRK 6x45	40	6	11	16	65	45	35.0	10	28	M5	2.5
	SRK 6x80	40	6	11	20	100	80	64.0	10	28	M5	2.5
	SRK 8x45	40	8	14	20	65	45	42.0	10	35	M5	2.5
	SRK 8x80	40	8	14	23	100	80	64.0	10	35	M6	3.0
	SRK 10x45	40	10	16	22	65	45	42.0	10	40	M5	2.5
	SRK 10x80	40	10	16	24	100	80	60.0	10	40	M8	4.0
	SRK 12x45	40	12	20	26	65	45	42.0	10	42	M5	2.5
	SRK 12x80	40	12	20	28	100	80	56.0	10	42	M10	5.0
HSK E 50	**SRK 3x45**	50	3	10	15	71	45	36.0	6	16	M5	2.5
	SRK 3x80	50	3	10	19	106	80	64.0	6	16	M5	2.5
	SRK 4x45	50	4	10	15	71	45	36.0	6	18	M5	2.5
	SRK 4x80	50	4	10	19	106	80	64.0	6	18	M5	2.5
	SRK 6x45	50	6	11	16	71	45	36.0	10	28	M5	2.5
	SRK 6x80	50	6	11	20	106	80	64.0	10	28	M5	2.5
	SRK 8x45	50	8	14	20	71	45	43.0	10	35	M6	3.0
	SRK 8x80	50	8	14	23	106	80	64.0	10	35	M6	3.0
	SRK 10x45	50	10	16	22	71	45	42.0	7	37	M6	3.0
	SRK 10x80	50	10	16	24	106	80	60.0	10	40	M8	4.0
	SRK 12x45	50	12	20	26	71	45	42.0	7	39	M6	3.0

G182

G182

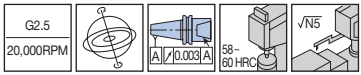
G188-G190

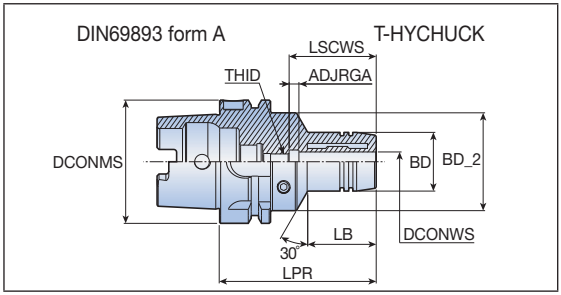
G199

HSK A-THCG

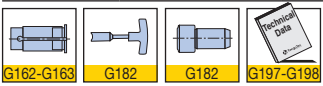
THYCHUCK

General hydraulic chucks





Designation		Dimension (mm)									
		DCONMS	DCONWS	BD	BD_2	LPR	LB	ADJRGA	LSCWS	THID	Hex key
HSK A 63	**THCG 6-70**	63	6	26	50	70	24	10	37.5	M5X0.8	4.0
	THCG 8-70	63	8	28	50	70	24	10	37.5	M6X1.0	4.0
	THCG 10-80	63	10	30	50	80	35	10	42.5	M8X1.0	4.0
	THCG 12-85	63	12	32	50	85	40	10	47.5	M8X1.0	4.0
	THCG 16-90	63	16	38	50	90	46	10	52.5	M8X1.0	4.0
	THCG 20-90	63	20	42	50	90	48	10	52.5	M8X1.0	5.0
	THCG 25-120	63	25	50	-	120	-	10	61.0	M16X1.0	5.0
	THCG 32-125	63	32	60	52.5	125	-	10	65.0	M16X1.0	5.0
HSK A 100	**THCG 6-160**	100	6	26	50	160	104	10	37.5	M5X0.8	4.0
	THCG 6-200	100	6	26	50	200	144	10	37.5	M5X0.8	4.0
	THCG 8-160	100	8	28	50	160	104	10	37.5	M6X1.0	4.0
	THCG 8-200	100	8	28	50	200	144	10	37.5	M6X1.0	4.0
	THCG 10-160	100	10	30	50	160	105	10	42.5	M8X1.0	4.0
	THCG 10-200	100	10	30	50	200	145	10	42.5	M8X1.0	4.0
	THCG 12-160	100	12	32	50	160	105	10	47.5	M10X1.0	4.0
	THCG 12-200	100	12	32	50	200	145	10	47.5	M10X1.0	4.0
	THCG 14-160	100	14	34	50	160	107	10	47.5	M10X1.0	4.0
	THCG 14-200	100	14	34	50	200	147	10	47.5	M10X1.0	4.0
	THCG 16-160	100	16	38	50	160	107	10	52.5	M12X1.0	4.0
	THCG 16-200	100	16	38	50	200	147	10	52.5	M12X1.0	4.0
	THCG 18-160	100	18	40	50	160	108	10	52.5	M12X1.0	4.0
	THCG 18-200	100	18	40	50	200	148	10	52.5	M12X1.0	4.0
	THCG 20-160	100	20	42	50	160	108	10	52.5	M16X1.0	5.0
	THCG 20-200	100	20	42	50	200	148	10	52.5	M16X1.0	5.0
	THCG 25-160	100	25	57	63	160	110	10	61.0	M16X1.0	5.0
	THCG 25-200	100	25	57	63	200	150	10	61.0	M16X1.0	5.0
	THCG 32-160	100	32	63	75	160	110	10	65.0	M16X1.0	5.0
	THCG 32-200	100	32	63	75	200	150	10	65.0	M16X1.0	5.0

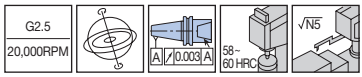


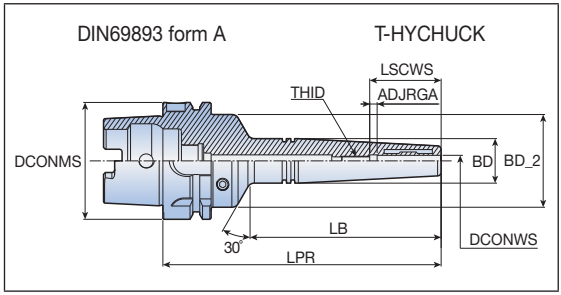
- Consult the user guide for relevant information including: insertion depth and proper use
- Clamping wrench should be ordered separately

HSK A-THCS

THYCHUCK

Slim hydraulic chucks





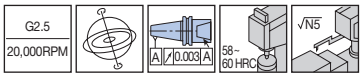
Designation		Dimension (mm)									
		DCONMS	DCONWS	BD	BD_2	LPR	LB	ADJRGA	LSCWS	THID	Hex key
HSK A 63	**THCS 6-150**	63	6	24	50	150	103	10	37.5	M5X0.8	4.0
	THCS 10-150	63	10	28	50	150	104	10	42.5	M8X1.0	4.0
	THCS 12-150	63	12	30	50	150	105	10	47.5	M10X1.0	4.0
HSK A 100	**THCS 6-180**	100	6	24	50	180	120	10	37.5	M5X0.8	4.0
	THCS 8-180	100	8	26	50	180	120	10	37.5	M6X1.0	4.0
	THCS 10-180	100	10	28	50	180	120	10	42.5	M8X1.0	4.0
	THCS 12-180	100	12	30	50	180	120	10	47.5	M10X1.0	4.0
	THCS 14-180	100	14	32	50	180	121	10	47.5	M10X1.0	4.0
	THCS 16-180	100	16	34	50	180	121	10	52.5	M12X1.0	4.0
	THCS 18-180	100	18	36	50	180	122	10	52.5	M12X1.0	4.0
	THCS 20-180	100	20	38	50	180	122	10	52.5	M16X1.0	4.0

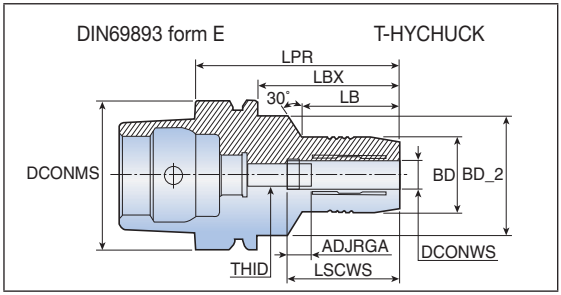
- Consult the user guide for relevant information including: insertion depth and proper use
- Clamping wrench should be ordered separately

HSK E-THC

THYCHUCK

Hydraulic chucks



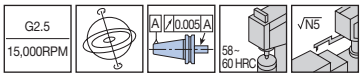


Designation		Dimension (mm)									
		DCONMS	DCONWS	BD	BD_2	LPR	LBX	LB	ADJRGA	LSCWS	THID
HSK E 40	**THC 6-70**	40	6	28	34	70	50	28	10	37.5	M5
	THC 12-80	40	12	34	34	80	60	-	10	47.5	M6

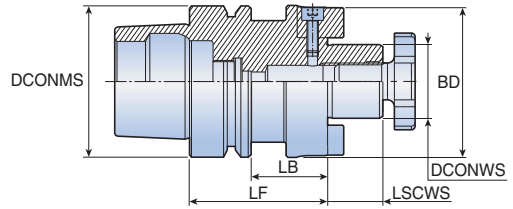
G162-G163 G182 G182 G197-G198

HSK E-SEM

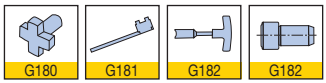
Face mill arbors



DIN69893 form E ISO 3937



Designation	Dimension (mm)					
	DCONMS	DCONWS	BD	LF	LB	LSCWS
HSK E 40 SEM 22x50	40	22	47	50	30	19

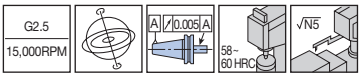


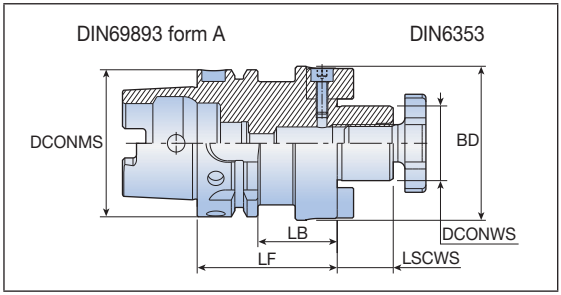
▸ Wrench not included

ADVANCE CUTTING
TaeguTec

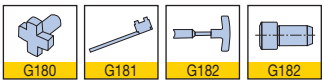
HSK A-SEM

Face mill arbors





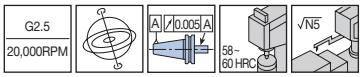
Designation		Dimension (mm)					
		DCONMS	DCONWS	BD	LF	LB	LSCWS
HSK A 63	**SEM 16x50**	63	16	38	50	24	17
	SEM 22x50	63	22	47	50	24	19
	SEM 27x60	63	27	58	60	34	21
	SEM 32x60	63	32	66	60	34	24
	SEM 40x60	63	40	82	60	24	27
HSK A 100	**SEM 22x50**	100	22	47	50	21	19
	SEM 27x50	100	27	58	50	21	21
	SEM 32x50	100	32	66	50	21	24
	SEM 40x60	100	40	82	60	31	27
	SEM 50x70	100	50	95	70	41	30

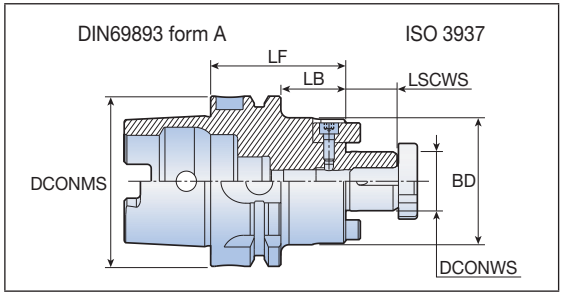


▸ Wrench not included

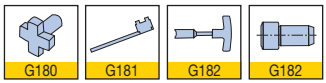
HSK A-SEM-C

Face mill arbors with internal coolant hole





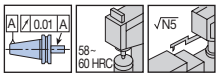
Designation		Dimension (mm)					
		DCONMS	DCONWS	BD	LF	LB	LSCWS
HSK A 63	**SEM 16x50 C**	63	16	38	50	24	17
	SEM 16x100 C	63	16	38	100	74	17
	SEM 22x50 C	63	22	47	50	24	19
	SEM 22x100 C	63	22	47	100	74	19
	SEM 27x60 C	63	27	58	60	34	21
	SEM 27x100 C	63	27	58	100	74	21
	SEM 32x60 C	63	32	66	60	34	24
HSK A 100	**SEM 16x50 C**	100	16	38	50	21	17
	SEM 16x100 C	100	16	38	100	71	17
	SEM 22x50 C	100	22	47	50	21	19
	SEM 22x100 C	100	22	47	100	71	19
	SEM 27x50 C	100	27	58	50	21	21
	SEM 27x100 C	100	27	58	100	71	21
	SEM 32x50 C	100	32	66	50	21	24
	SEM 32x100 C	100	32	66	100	71	24

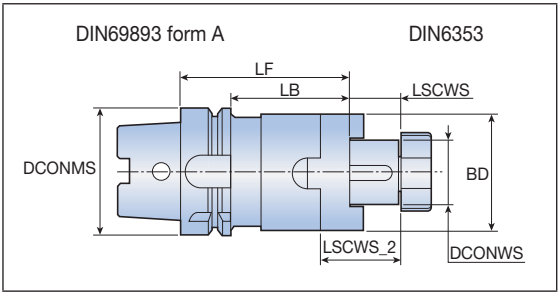


▸ Wrench not included

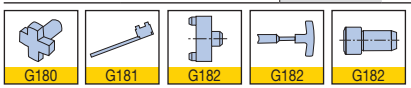
HSK A-SEMC

Combi shell end mill arbors





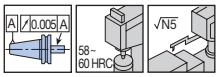
Designation		Dimension (mm)						
		DCONMS	DCONWS	BD	LF	LB	LSCWS	LSCWS_2
HSK A 63	**SEMC 16x60**	63	16	32	60	34	17	21
	SEMC 22x60	63	22	40	60	34	19	31
	SEMC 27x60	63	27	48	60	34	21	33
	SEMC 32x60	63	32	58	60	34	24	38
	SEMC 40x70	63	40	70	70	44	27	41
HSK A 100	**SEMC 16x60**	100	16	32	60	31	17	27
	SEMC 22x60	100	22	40	60	31	19	31
	SEMC 27x60	100	27	48	60	31	21	33
	SEMC 32x60	100	32	58	60	31	24	38
	SEMC 40x70	100	40	70	70	41	27	41
	SEMC 50x80	100	50	90	80	51	30	46

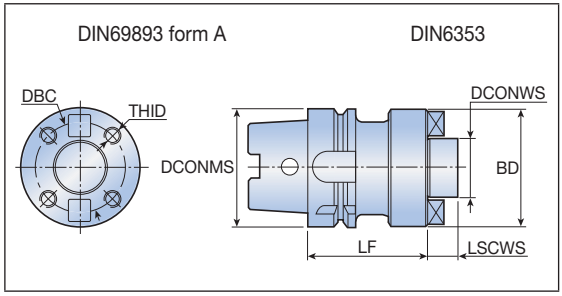


▸ Wrench not included

HSK A-FM

Face mill arbors



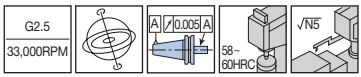


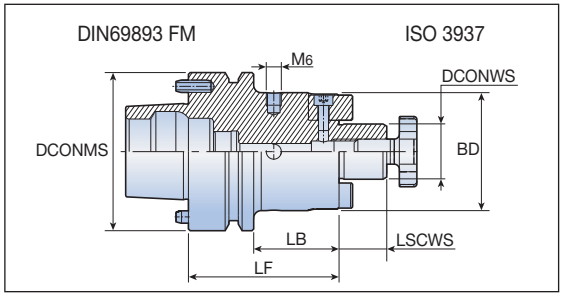
Designation	Dimension (mm)						
	DCONMS	DCONWS	BD	DBC	LF	LSCWS	THID
HSK A 100 FM 60x70	100	60	128	101.6	70	40	M16

▸ Wrench not included

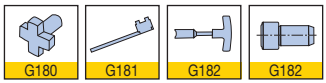
HSK FM-SEM

Face mill arbors - HSK high torque





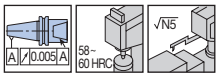
Designation	Dimension (mm)					
	DCONMS	DCONWS	BD	LF	LB	LSCWS
HSK FM 63 SEM 22x60	63	22	47	60	34	19



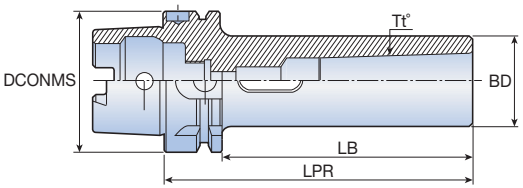
▸ The driving pins can be removed to turn the toolholder into a standard HSK F 63 type

HSK A-MT

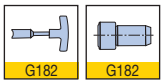
Morse taper adapters



DIN69893 form A DIN6383 / DIN228-2 form D

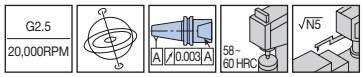


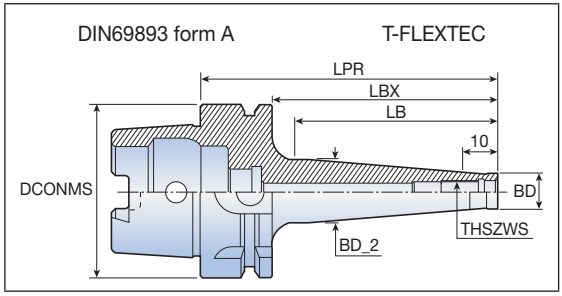
Designation		Dimension (mm)				
		DCONMS	Tt°	BD	LPR	LB
HSK A 63	**MT 1x110**	63	MT1	25	110	84
	MT 2x120	63	MT2	32	120	94
	MT 3x140	63	MT3	40	140	114
	MT 4x160	63	MT4	48	160	134
HSK A 100	**MT 1x110**	100	MT1	25	110	81
	MT 2x120	100	MT2	32	120	91
	MT 3x150	100	MT3	40	150	121
	MT 4x170	100	MT4	48	170	141
	MT 5x200	100	MT5	63	200	171



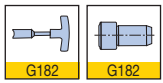
HSK A-ODP

T-FLEXTEC holders





Designation		Dimension (mm)						
		DCONMS	THSZWS	BD	BD_2	LPR	LBX	LB
HSK A 63	**ODP 6x109**	63	M06	9.8	23.0	109	83	75
	ODP 8x59	63	M08	13.1	15.0	59	33	25
	ODP 8x109	63	M08	13.1	23.0	109	83	75
	ODP 10x59	63	M10	18.0	20.0	59	33	25
	ODP 10x109	63	M10	18.0	28.0	109	83	75
	ODP 12x59	63	M12	21.0	24.0	59	33	25
	ODP 12x109	63	M12	21.0	31.0	109	83	75
	ODP 16x59	63	M16	29.0	34.0	59	33	25
	ODP 16x109	63	M16	29.0	34.0	109	83	75
HSK A 100	**ODP 12x87**(1)	100	M12	23.0	30.0	87	58	50
	ODP 12x137(1)	100	M12	23.0	30.0	137	108	100
	ODP 12x187(1)	100	M12	23.0	40.0	187	158	150
	ODP 12x237(1)	100	M12	23.0	46.0	237	208	200
	ODP 16x87(1)	100	M16	29.0	31.5	87	58	50
	ODP 16x137(1)	100	M16	29.0	41.5	137	108	100
	ODP 16x187(1)	100	M16	29.0	55.0	187	158	150
	ODP 16x237(1)	100	M16	29.0	55.0	237	208	200

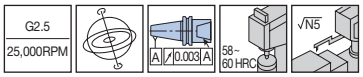


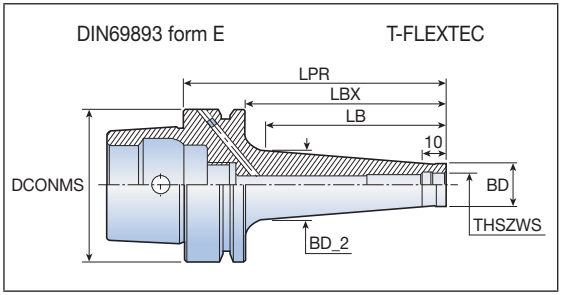
▸ (1) Balance to G6.3 at 12,000RPM

ADVANCE CUTTING
TaeguTec

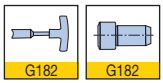
HSK E-ODP

T-FLEXTEC holders



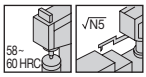


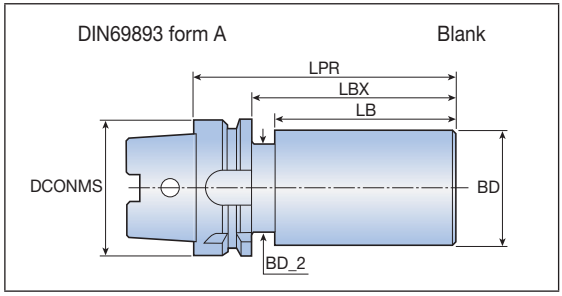
Designation		Dimension (mm)						
		DCONMS	THSZWS	BD	BD_2	LPR	LBX	LB
HSK E 40	**ODP 10x53**	40	M10	18	20	53	33	25
	ODP 10x103	40	M10	18	28	103	83	75
	ODP 12x103	40	M12	21	31	103	83	75
HSK E 50	**ODP 12x59**	50	M12	21	24	59	33	25
	ODP 16x59	50	M16	29	34	59	33	25
	ODP 16x109	50	M16	29	34	109	83	75
HSK E 63	**ODP 10x59**	63	M10	18	20	59	33	25
	ODP 10x109	63	M10	18	28	109	83	75
	ODP 12x59	63	M12	21	24	59	33	25
	ODP 12x109	63	M12	21	31	109	83	75



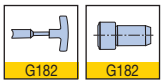
HSK A-B-MN

HSK blanks





Designation	Dimension (mm)					
	DCONMS	BD	BD_2	LPR	LBX	LB
HSK A 100 B16MN 200	100	102	85.0	200	171	154.8



- Material: Case hardened alloy steel
  - Shank hardness 57-60 HRC minimum
  - Nose hardness 22-30 HRC

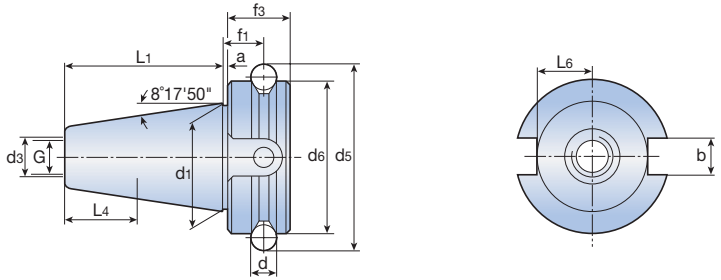
ADVANCE CUTTING
TaeguTec

BT MAS

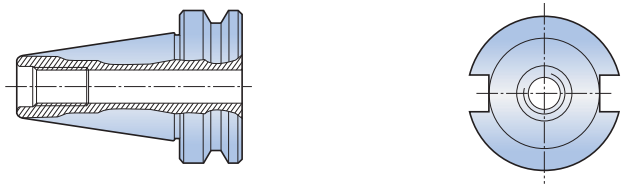
BT MAS 403 Form A/AD/B/ADB

Standard toolholder

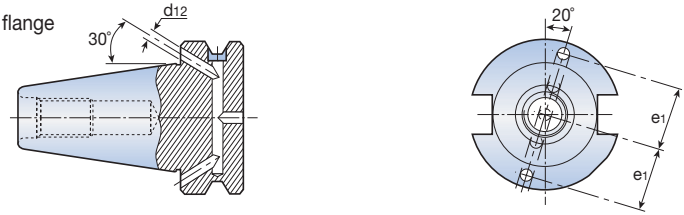
Type “A”



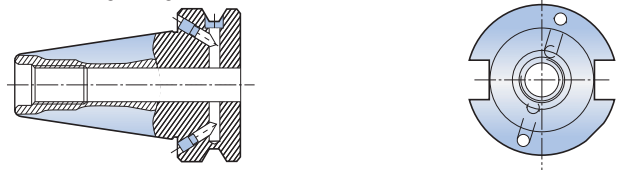
Type “AD”
Coolant hole



Type “B”
Coolant through flange



Type “ADB”
Coolant hole or coolant through flange



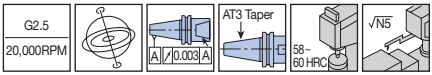
Shank	a ±0.1	b (H12)	d	d1	G	d3 (H8)	d5	d6 (H8)
30	2	16.1	8	31.75	M12	12.5	56.144	46
40	2	16.1	10	44.45	M16	17.0	75.679	63
50	3	25.7	15	69.85	M24	25.0	119.020	100

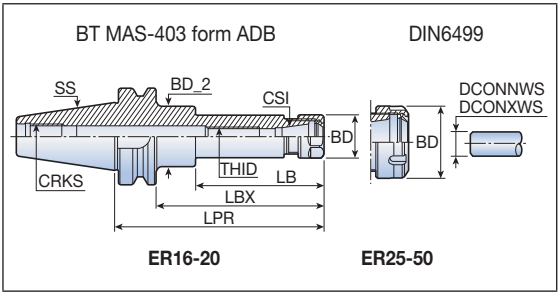
Shank	f1 ±0.1	f3	L1 ±0.2	L4min	L6 -0.2	e1 ±0.1	d12	Taper AT3
30	13.6	20	48.4	24	16.3	21	4	0.002
40	16.6	25	65.4	30	22.6	27	4	0.003
50	23.2	35	101.8	45	35.4	42	6	0.004

▸ For non-stock items: Supply condition is subject to availability
If not available in stock then MOQ (Minimum order qty) will be applicable

BT-ER

ER collet chucks





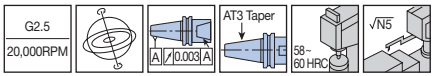
Designation		Dimension (mm)										
		SS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	CRKS	THID
BT30	**ER 16x70**	30	ER16	0.5	10.0	28	-	70	48	-	M12	M10
	ER 16x100	30	ER16	0.5	10.0	28	-	100	78	-	M12	M10
	ER 20x70	30	ER20	1.0	13.0	34	-	70	48	-	M12	M12
	ER 25x60	30	ER25	1.0	16.0	42	-	60	38	-	M12	M16
	ER 32x60	30	ER32	2.0	20.0	50	-	60	38	-	M12	M18x1.5
BT40	**ER 16x70**	40	ER16	0.5	10.0	28	-	70	43	-	M16	M10
	ER 16x100	40	ER16	0.5	10.0	28	-	100	73	-	M16	M10
	ER 16x150	40	ER16	0.5	10.0	28	40	150	123	85	M16	M10
	ER 16x200(1)	40	ER16	0.5	10.0	28	40	200	173	85	M16	M10
	ER 20x70	40	ER20	1.0	13.0	34	-	70	43	-	M16	M12
	ER 20x100	40	ER20	1.0	13.0	34	-	100	73	-	M16	M12
	ER 20x120	40	ER20	1.0	13.0	34	-	120	93	-	M16	M12
	ER 20x150	40	ER20	1.0	13.0	34	-	150	123	-	M16	M12
	ER 25x60	40	ER25	1.0	13.0	42	-	60	33	-	M16	M16
	ER 25x100	40	ER25	1.0	16.0	42	-	100	73	-	M16	M16
	ER 25x150	40	ER25	1.0	16.0	42	-	150	123	-	M16	M16
	ER 32x60	40	ER32	2.0	20.0	50	-	60	33	-	M16	M22x1.5
	ER 32x100	40	ER32	2.0	20.0	50	-	100	73	-	M16	M22x1.5
	ER 32x150	40	ER32	2.0	20.0	50	-	150	123	-	M16	M22x1.5
	ER 32x200(1)	40	ER32	2.0	20.0	50	-	200	162	-	M16	M22x1.6
	ER 40x80	40	ER40	3.0	26.0	63	-	80	53	-	M16	M28x1.5
	ER 40x100	40	ER40	3.0	26.0	63	-	100	73	-	M16	M28x1.5
	ER 40x150	40	ER40	3.0	26.0	63	-	150	123	-	M16	M28x1.5
	ER 50x90	40	ER50	10.0	34.0	78	-	90	63	-	M16	M28x1.5
BT50	**ER 16x100**	50	ER16	0.5	10.0	28	-	100	62	-	M24	M10
	ER 16x125	50	ER16	0.5	10.0	28	-	125	87	-	M24	M10
	ER 16x150	50	ER16	0.5	10.0	28	-	150	112	-	M24	M10
	ER 16x200(1)	50	ER16	0.5	10.0	28	40	200	162	85	M24	M10
	ER 20x100	50	ER20	1.0	10.0	34	-	100	62	-	M24	M12
	ER 20x125	50	ER20	1.0	13.0	34	-	125	87	-	M24	M12
	ER 20x150	50	ER20	1.0	13.0	34	-	150	112	-	M24	M12
	ER 20x200(1)	50	ER20	1.0	13.0	34	50	200	162	86	M24	M12

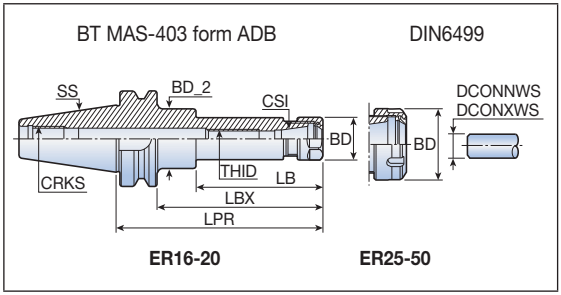
G151-G159 G176-G177 G177-G179 G180 G183

▸ (1) Balance to G6.3 at 12,000RPM

BT-ER

ER collet chucks





Designation		Dimension (mm)										
		SS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	CRKS	THID
BT50	**ER 25x100**	50	ER25	1.0	16.0	42	-	100	62	-	M24	M16
	ER 25x150	50	ER25	1.0	16.0	42	-	150	112	-	M24	M16
	ER 25x200(1)	50	ER25	1.0	16.0	42	55	200	162	87	M24	M16
	ER 32x100	50	ER32	2.0	20.0	50	-	100	62	-	M24	M22x1.5
	ER 32x125	50	ER32	2.0	20.0	50	-	125	87	-	M24	M22x1.5
	ER 32x150	50	ER32	2.0	20.0	50	-	150	112	-	M24	M22x1.5
	ER 32x200(1)	50	ER32	2.0	20.0	50	63	200	162	88	M24	M22x1.5
	ER 40x100	50	ER40	3.0	26.0	63	-	100	62	-	M24	M28x1.5
	ER 40x150	50	ER40	3.0	26.0	63	-	150	112	-	M24	M28x1.5
	ER 40x200(1)	50	ER40	3.0	26.0	63	-	200	162	-	M24	M28x1.5
	ER 50x100	50	ER50	3.0	26.0	78	-	100	62	-	M24	M36x1.5
	ER 50x150	50	ER50	10.0	34.0	78	-	150	112	-	M24	M36x1.5

▸ (1) Balance to G6.3 at 12,000RPM

G151-G159

G176-G177

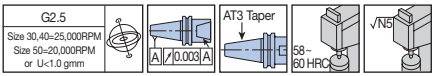
G177-G179

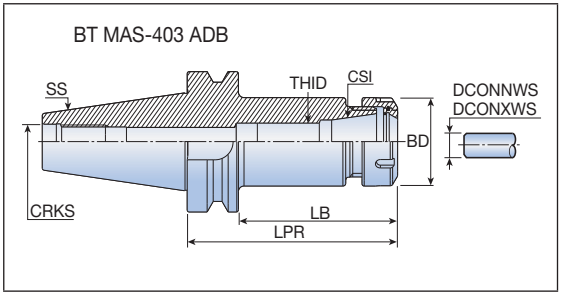
G180

G183

BT-FC-ER

ER collet chucks





Designation		Dimension (mm)								
		SS	CSI	DCONNWS	DCONXWS	BD	LPR	LB	CRKS	THID
BT30	**FC ER16x70**	30	ER16	0.5	10.0	28	70	48	M12	M10
	FC ER16x100	30	ER16	0.5	10.0	28	100	79	M12	M10
	FC ER20x70	30	ER20	1.0	13.0	34	70	48	M12	M12
	FC ER25x60	30	ER25	1.0	16.0	42	60	38	M12	M16
	FC ER32x60	30	ER32	2.0	20.0	50	60	38	M12	M18
BT40	**FC ER16x70**	40	ER16	0.5	10.0	28	70	44	M16	M12
	FC ER16x100	40	ER16	0.5	10.0	28	100	74	M16	M12
	FC ER32x60	40	ER32	2.0	20.0	50	60	34	M16	M22X1.5
	FC ER32x100	40	ER32	2.0	20.0	50	100	74	M16	M22X1.5
	FC ER40x80	40	ER40	3.0	26.0	63	80	54	M16	M28X1.5
BT50	**FC ER16x100**	50	ER16	0.5	10.0	28	100	63.5	M24	M12
	FC ER16x150	50	ER16	0.5	10.0	28	150	113.5	M24	M12
	FC ER32x100	50	ER32	2.0	20.0	50	100	63.5	M24	M22X1.5
	FC ER32x150	50	ER32	2.0	20.0	50	150	113.5	M24	M22X1.5
	FC ER40x100	50	ER40	3.0	26.0	63	100	63.5	M24	M28X1.5
	FC ER40x150	50	ER40	3.0	26.0	63	150	113.5	M24	M28X1.5

G151-G159

G176-G177

G177-G179

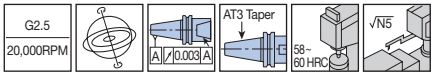
G180

G183

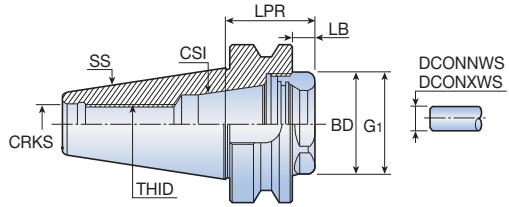
BT-ER-SHORT

T-SHORT

Short ER collet chucks



BT MAS-403 form AD



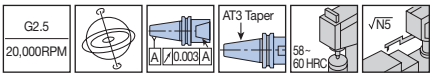
Designation	Dimension (mm)									
	SS	CSI	DCONNWS	DCONXWS	BD	LPR	LB	CRKS	G1	THID
BT30 ER 20 SHORT	30	ER20	1.0	13.0	25	27.2	5.2	M12	M25x1.5	M12
BT40 ER 32 SHORT	40	ER32	2.0	20.0	40	36.5	9.5	M16	M40x1.5	M16
ER 40 SHORT	40	ER40	3.0	26.0	50	46.5	9.5	M16	M50x1.5	M16
BT50 ER 32 SHORT	50	ER32	2.0	20.0	40	47.5	9.5	M24	M40x1.5	M22x1.5
ER 40 SHORT	50	ER40	3.0	26.0	50	47.5	9.5	M24	M50x1.5	M28x1.5

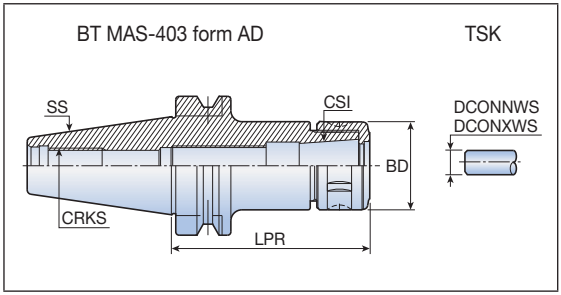
G151-G159 G167-G173 G176-G177 G177-G179 G180 G183

▸ Add B for coolant through flange

BT-TSK

TSK collet chucks





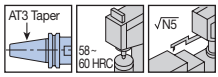
Designation		Dimension (mm)						
		SS	CSI	DCONNWS	DCONXWS	BD	LPR	CRKS
BT30	**TSK 6-90**(1)	30	TSK6	1.5	6.0	19.5	90	M12
	TSK 10-90(1)	30	TSK10	1.5	10.0	27.5	90	M12
BT40	**TSK 6-90**	40	TSK6	1.5	6.0	19.5	90	M16
	TSK 6-120	40	TSK6	1.5	6.0	19.5	120	M16
	TSK 10-90	40	TSK10	1.5	10.0	27.5	90	M16
	TSK 10-120	40	TSK10	1.5	10.0	27.5	120	M16
	TSK 16-90	40	TSK16	2.5	16.0	40.0	90	M16
	TSK 16-120	40	TSK16	2.5	16.0	40.0	120	M16
	TSK 25-90	40	TSK25	7.5	25.0	55.0	90	M16
	TSK 25-120	40	TSK25	7.5	25.0	55.0	120	M16
BT50	**TSK 6-120**(1)	50	TSK6	1.5	6.0	19.5	120	M24
	TSK 6-165(1)	50	TSK6	1.5	6.0	19.5	165	M24
	TSK 6-195(1)	50	TSK6	1.5	6.0	19.5	195	M24
	TSK 10-120(1)	50	TSK10	1.5	10.0	27.5	120	M24
	TSK 10-165(1)	50	TSK10	1.5	10.0	27.5	165	M24
	TSK 16-120(1)	50	TSK16	2.5	16.0	40.0	120	M24
	TSK 16-165(1)	50	TSK16	2.5	16.0	40.0	165	M24
	TSK 16-195(1)	50	TSK16	2.5	16.0	40.0	195	M24
	TSK 25-120(1)	50	TSK25	7.5	25.0	55.0	120	M24
	TSK 25-165(1)	50	TSK25	7.5	25.0	55.0	165	M24
	TSK 25-195(1)	50	TSK25	7.5	25.0	55.0	195	M24

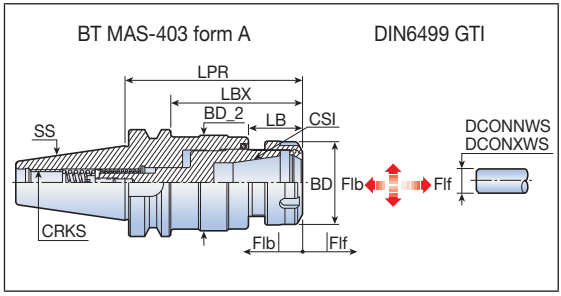
G160-G161 G177 G177-G179 G184 G194

- Add B for coolant through flange
- (1) Balance to G6.3 at 20,000RPM

GTI BT-ER

GTI tap attachments



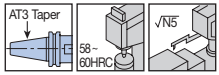


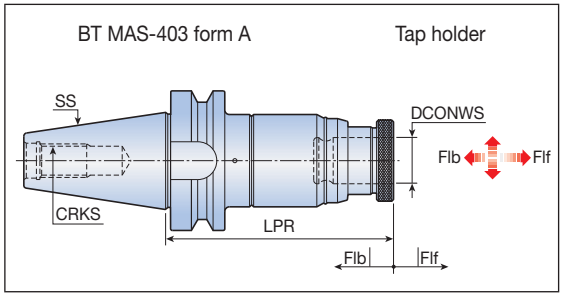
Designation		Dimension (mm)													
		SS	CSI	Tapmin	Tapmax	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	Flf	Flb	CRKS
GTI BT40	**ER16**	40	ER16	M3	M10	0.5	10.0	28	29.5	84.2	52.7	24.6	8	3	M16
	ER32	40	ER32	M6	M20	2.0	20.0	50	56.5	106.8	79.8	33.0	9	4	M16
	ER40	40	ER40	M6	M28	3.0	26.0	63	56.5	124.8	97.8	51.0	9	4	M16
GTI BT50	**ER16**	50	ER16	M3	M10	0.5	10.0	28	29.5	106.8	68.8	24.6	8	3	M24
	ER32	50	ER32	M6	M20	2.0	20.0	50	56.5	114.2	77.2	33.0	9	4	M24
	ER40	50	ER40	M6	M28	3.0	26.0	63	56.5	133.2	95.2	51.0	9	4	M24

▸ No coolant should be induced through the tap chuck as it will cause malfunctioning of the mechanism

BT-TC

Tap holders





Designation	Dimension (mm)								
	SS	Tapmin	Tapmax	DCONWS	LPR	Flb	Flf	Tap adapter	CRKS
BT30 TC 12-105	30	M3	M12	19	105	6.5	12	TA1	M12
BT40 TC 12-95	40	M3	M12	19	95	6.5	12	TA1	M16
TC 12-110	40	M3	M12	19	110	6.5	12	TA1	M16
TC 22-127	40	M6	M24	31	127	14.5	13	TA2	M16
BT50 TC 12-125	50	M6	M12	19	125	6.5	12	TA1	M24
TC 22-142	50	M6	M24	31	142	14.5	13	TA2	M24
TC 38-195	50	M18	M38	48	195	20.0	20	TA3	M24

G151-G159

G174

G176-G177

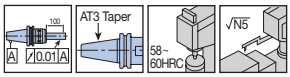
G177-G179

G183

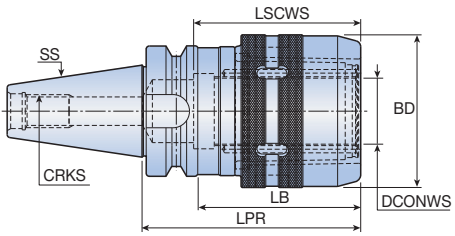
G200

BT-NTMC

Milling chucks



BT MAS-403 form AD Milling chuck



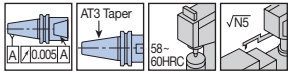
Designation		Dimension (mm)						
		SS	DCONWS	BD	LPR	LB	LSCWS	CRKS
BT30	**NTMC 20-75**	30	20	53	75	51.4	70	M12
	NTMC 25-80	30	25	62	80	58.3	70	M12
BT40	**NTMC 20-80**	40	20	53	80	53	82	M16
	NTMC 20-90	40	20	53	90	63	82	M16
	NTMC 25-90	40	25	62	90	63	85	M16
	NTMC 25-105	40	25	62	105	78	95	M16
	NTMC 32-85	40	32	72	85	56	80	M16
	NTMC 32-105	40	32	72	105	78.5	90	M16
	NTMC 32-120	40	32	72	120	93.5	105	M16
BT50	**NTMC 20-105**	50	20	53	105	67	82	M24
	NTMC 20-135	50	20	53	135	97	82	M24
	NTMC 20-165	50	20	53	165	127	82	M24
	NTMC 25-105	50	25	62	105	67	90	M24
	NTMC 25-135	50	25	62	135	97	90	M24
	NTMC 25-165	50	25	62	165	127	90	M24
	NTMC 32-105	50	32	74	105	67	110	M24
	NTMC 32-120	50	32	74	120	82	125	M24
	NTMC 32-135	50	32	74	135	97	125	M24
	NTMC 32-165	50	32	74	165	127	125	M24
	NTMC 42-120	50	42	94	120	82	125	M24
	NTMC 42-135	50	42	94	135	97	130	M24
	NTMC 42-165	50	42	94	165	127	135	M24

G164-G166 G177-G179 G183 G196

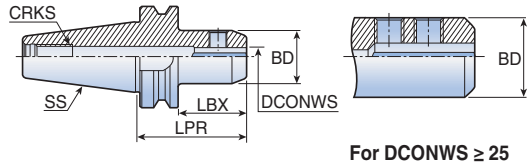
▸ Spanner not included

BT-EM-CX

CX coolant type end mill holders



BT MAS-403 form AD DIN6359 / DIN1835 form B



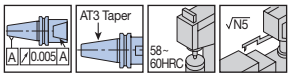
For DCONWS ≥ 25

Designation		Dimension (mm)					
		SS	DCONWS	BD	LPR	LBX	CRKS
BT40	**EM 6x50 CX**	40	6	25	50	23	M16
	EM 8x50 CX	40	8	28	50	23	M16
	EM 10x63 CX	40	10	35	63	36	M16
	EM 12x63 CX	40	12	42	63	36	M16
	EM 16x63 CX	40	16	48	63	36	M16
	EM 20x63 CX	40	20	52	63	36	M16
	EM 25x45 CX	40	25	61	45	18	M16
	EM 25x90 CX	40	25	65	90	63	M16
	EM 32x100 CX	40	32	72	100	65	M16
BT50	**EM 12x80 CX**	50	12	42	80	42	M24
	EM 16x80 CX	50	16	48	80	42	M24
	EM 20x80 CX	50	20	52	80	42	M24
	EM 25x100 CX	50	25	65	100	62	M24
	EM 32x105 CX	50	32	72	105	67	M24
	EM 40x110 CX	50	40	80	110	72	M24

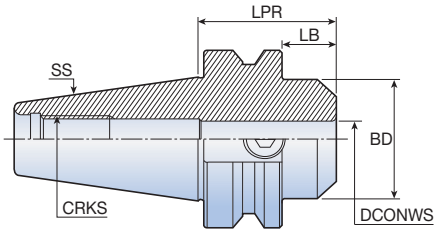
G177-G179 G180

BT-EM

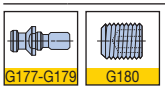
Short end mill holders



BT MAS-403 form AD DIN6359 / DIN1835 form B



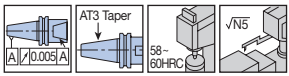
Designation		Dimension (mm)					
		SS	DCONWS	BD	LPR	LB	CRKS
BT40	EM 10x45	40	10	35	45	18	M16
	EM 12x45	40	12	42	45	18	M16
	EM 16x45	40	16	48	45	18	M16
	EM 20x45	40	20	52	45	18	M16
	EM 25x45	40	25	63	45	-	M16



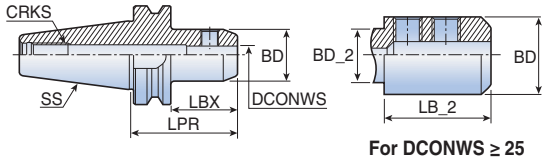
▸ Add B for coolant through flange

BT-EM

End mill holders



BT MAS-403 form ADB DIN6359 / DIN1835 form B



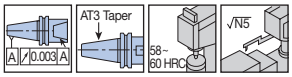
For DCONWS ≥ 25

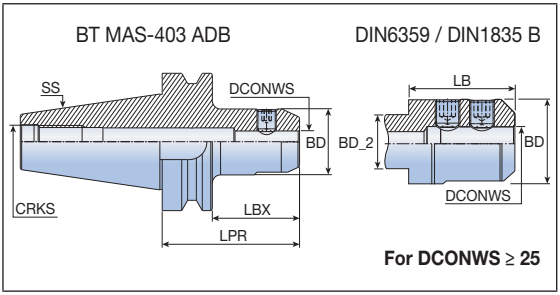
Designation	Dimension (mm)							
	SS	DCONWS	BD	BD_2	LPR	LBX	LB_2	CRKS
BT30 EM 6x50	30	6	25	-	50	28	-	M12
EM 8x60	30	8	28	-	60	38	-	M12
EM 10x60	30	10	35	-	60	38	-	M12
EM 12x60	30	12	42	-	60	38	-	M12
EM 16x60	30	16	46	-	60	38	-	M12
EM 20x80	30	20	52	-	80	58	-	M12
BT40 EM 6x50	40	6	25	-	50	23	-	M16
EM 8x50	40	8	28	-	50	23	-	M16
EM 10x65	40	10	35	-	65	38	-	M16
EM 12x65	40	12	42	-	65	38	-	M16
EM 14x65	40	14	44	-	65	38	-	M16
EM 16x65	40	16	48	-	65	38	-	M16
EM 20x75	40	20	52	-	75	48	-	M16
EM 20X120	40	20	52	-	120	93	-	M16
EM 25x105	40	25	65	61	105	78	68	M16
EM 32x110	40	32	72	61	110	83	73	M16
BT50 EM 6x70	50	6	25	-	70	32	-	M24
EM 8x70	50	8	28	-	70	32	-	M24
EM 10x70	50	10	35	-	70	32	-	M24
EM 12x100	50	12	42	-	100	62	-	M24
EM 14x100	50	14	44	-	100	62	-	M24
EM 16x100	50	16	48	-	100	62	-	M24
EM 18x100	50	18	50	-	100	62	-	M24
EM 20x100	50	20	52	-	100	62	-	M24
EM 25x115	50	25	65	-	115	77	-	M24
EM 32x115	50	32	72	-	115	77	-	M24
EM 40x115	50	40	90	-	115	77	-	M24
EM 50x125	50	50	100	-	125	87	-	M24

G177-G179 G180

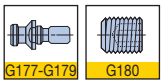
BT-FC-EM

End mill holders



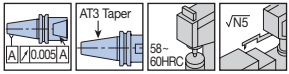


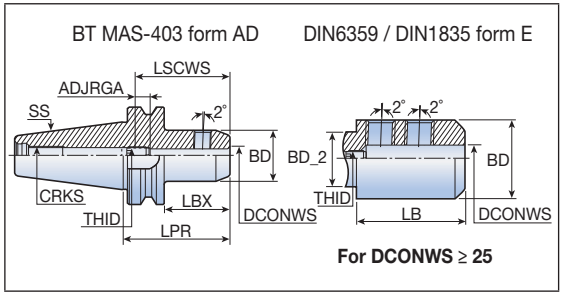
Designation		Dimension (mm)							
		SS	DCONWS	BD	BD_2	LPR	LBx	LB	CRKS
BT30	**FC EM12x60**	30	12	42	-	60	38	-	M12
	FC EM16x60	30	16	45.9	-	60	38	-	M12
	FC EM20x80	30	20	52	44.4	80	58	48	M12
BT40	**FC EM10x65**	40	10	35	-	65	39	-	M16
	FC EM12x65	40	12	42	-	65	39	-	M16
	FC EM16x65	40	16	48	-	65	39	-	M16
	FC EM20x75	40	20	52	-	75	49	-	M16
	FC EM25x105	40	25	65	61	105	79	68	M16
	FC EM32x110	40	32	71	61	110	83	73	M16
BT50	**FC EM12x100**	50	12	42	-	100	62	-	M24
	FC EM16x100	50	16	48	-	100	63.5	-	M24
	FC EM20x100	50	20	52	-	100	63.5	-	M24
	FC EM25x115	50	25	65	-	115	78.5	-	M24
	FC EM32x115	50	32	71	-	115	78.5	-	M24
	FC EM40x115	50	40	90	-	115	78.5	-	M24
	FC EM50x125	50	50	100	-	125	87	-	M24



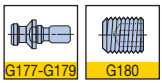
BT-EM-E

End mill holders - Whistle notch





Designation		Dimension (mm)											
		SS	DCONWS	BD	BD_2	LPR	LBx	LB	ADJRGA	LSCWS	CRKS	THID	Hex key
BT40	**EM 16x65E**	40	16	48	-	65	38	-	10	57	M16	M12	6.0
	EM 20x75E	40	20	52	-	75	48	-	10	59	M16	M16	8.0
	EM 25x105E	40	25	65	61	105	78	68	10	64	M16	M20x1.5	10.0
	EM 32x110E	40	32	72	61	110	83	73	10	68	M16	M20x1.5	10.0
BT50	**EM 20x100E**	50	20	52	-	100	62	-	10	59	M24	M16	8.0
	EM 25x115E	50	25	65	-	115	77	-	10	64	M24	M20x1.5	10.0
	EM 32x115E	50	32	72	-	115	77	-	10	68	M24	M20x1.5	10.0
	EM 40x115E	50	40	90	-	115	77	-	10	78	M24	M20x1.5	10.0
	EM 50x125E	50	50	98	-	125	67	-	10	88	M24	M20x1.5	10.0



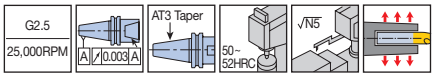
▸ Add B for coolant through flange

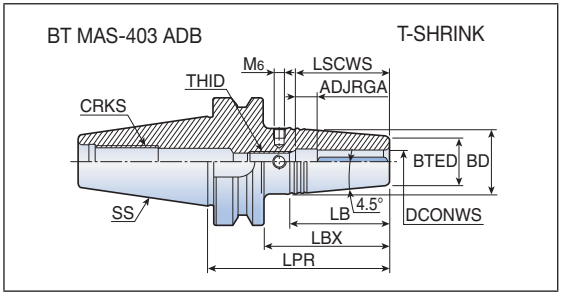
ADVANCE CUTTING
TaeguTec

BT-SRKIN-CX

T-SHRINK

CX coolant type thermal shrinking chucks





Designation		Dimension (mm)											
		SS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	CRKS	THID	Hex key
BT40	**SRKIN 6x90 CX**	40	6	21	27	90	63	38.0	10	34	M16	M5	2.5
	SRKIN 8x90 CX	40	8	21	27	90	63	38.0	10	34	M16	M6	3.0
	SRKIN 10x90 CX	40	10	24	32	90	63	50.8	9	40	M16	M8	4.0
	SRKIN 12x90 CX	40	12	24	32	90	63	50.8	9	45	M16	M10	5.0
	SRKIN 14x90 CX	40	14	27	34	90	63	44.5	9	45	M16	M10	5.0
	SRKIN 16x90 CX	40	16	27	34	90	63	44.5	9	48	M16	M12	6.0
	SRKIN 20x90 CX	40	20	33	42	90	63	57.0	9	49	M16	M16	8.0
	SRKIN 25x110 CX	40	25	44	53	110	83	57.0	9	55	M16	M16	8.0
BT50	**SRKIN 6x100 CX**(1)	50	6	21	27	100	62	38.0	10	34	M24	M5	2.5
	SRKIN 8x100 CX(1)	50	8	21	27	100	62	38.0	10	34	M24	M6	3.0
	SRKIN 10x100 CX(1)	50	10	24	32	100	62	50.8	9	40	M24	M8	4.0
	SRKIN 12x100 CX(1)	50	12	24	32	100	62	50.8	9	45	M24	M10	5.0
	SRKIN 14x100 CX(1)	50	14	27	34	100	62	44.5	9	45	M24	M10	5.0
	SRKIN 16x100 CX(1)	50	16	27	34	100	62	44.5	9	48	M24	M12	6.0
	SRKIN 20x100 CX(1)	50	20	33	42	100	62	57.0	9	49	M24	M16	8.0
	SRKIN 25x120 CX(1)	50	25	44	53	120	82	57.0	9	55	M24	M16	8.0
	SRKIN 32x120 CX(1)	50	32	44	53	120	82	57.0	9	59	M24	M16	8.0

G177-G179 G181 G188-G190 G199

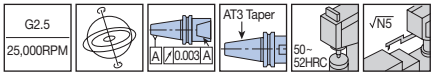
- Only use inductive heating device for T-SHRINK holders
- (1) Balance to G2.5 at 20,000RPM

TaeguTec

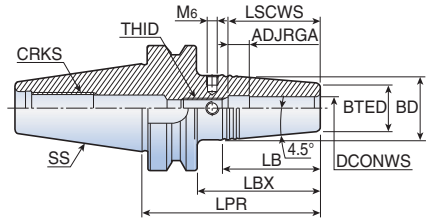
BT-SRKIN

T-SHRINK

Thermal shrinking chucks



BT MAS-403 form AD T-SHRINK



Designation		Dimension (mm)											
		SS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	CRKS	THID	Hex key
BT40	**SRKIN 6x90**	40	6	21	27	90	63	38.0	10	36	M16	M5	2.5
	SRKIN 8x90	40	8	21	27	90	63	38.0	10	36	M16	M6	3.0
	SRKIN 10x90	40	10	24	32	90	63	50.5	10	42	M16	M8	4.0
	SRKIN 12x90	40	12	24	32	90	63	50.5	10	47	M16	M10	5.0
	SRKIN 14x90	40	14	27	34	90	63	44.5	10	47	M16	M10	5.0
	SRKIN 16x90	40	16	27	34	90	63	44.5	10	50	M16	M12	6.0
	SRKIN 18x90	40	18	33	42	90	63	57.0	10	50	M16	M12	6.0
	SRKIN 20x90	40	20	33	42	90	63	57.0	10	52	M16	M16	8.0
	SRKIN 25x110	40	25	44	53	110	83	57.0	10	58	M16	M16	8.0
BT50	**SRKIN 6x100(1)**	50	6	21	27	100	62	38.1	10	36	M24	M5	2.5
	SRKIN 8x100(1)	50	8	21	27	100	62	38.0	10	36	M24	M6	3.0
	SRKIN 10x100(1)	50	10	24	32	100	62	51.0	10	42	M24	M8	4.0
	SRKIN 12x100(1)	50	12	24	32	100	62	51.0	10	47	M24	M10	5.0
	SRKIN 14x100(1)	50	14	27	34	100	62	44.5	10	47	M24	M10	5.0
	SRKIN 16x100(1)	50	16	27	34	100	62	44.5	10	50	M24	M12	6.0
	SRKIN 18x100(1)	50	18	33	42	100	62	57.0	10	50	M24	M12	6.0
	SRKIN 20x100(1)	50	20	33	42	100	62	57.0	10	52	M24	M16	8.0
	SRKIN 25x120(1)	50	25	44	53	120	82	57.0	10	58	M24	M16	8.0
	SRKIN 32x120(1)	50	32	44	53	120	82	57.0	10	58	M24	M16	8.0

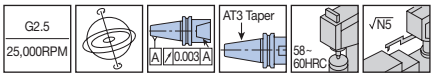
G177-G179 G181 G188-G190 G199

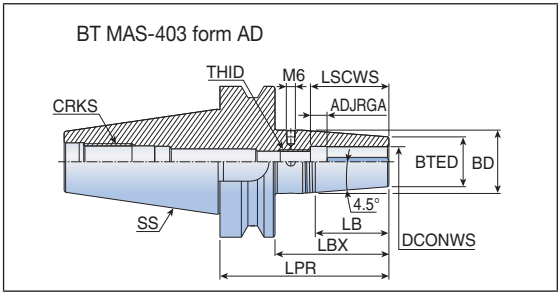
- Only use inductive heating device for T-SHRINK holders
- (1) Balance to G2.5 at 20,000RPM

BT-FC-SRKIN-CX

T-SHRINK

CX coolant type thermal shrinking chucks





Designation		Dimension (mm)										
		SS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	CRKS	THID
BT40 FC	**SRKIN 6x90 CX**	40	6	21	27	90	64	30.1	9	34	M16	M5
	SRKIN 8x90 CX	40	8	21	27	90	64	30.1	10	34	M16	M6
	SRKIN 10x90 CX	40	10	24	32	90	64	42.8	9	40	M16	M8
	SRKIN 12x90 CX	40	12	24	32	90	64	42.8	9	45	M16	M10
	SRKIN 14x90 CX	40	14	27	34	90	64	36.5	9	45	M16	M10
	SRKIN 16x90 CX	40	16	27	34	90	64	36.5	9	48	M16	M12
	SRKIN 20x90 CX	40	20	33	42	90	64	49.2	9	49	M16	M16
	SRKIN 25x110 CX	40	25	44	53	110	84	49.2	9	55	M16	M16

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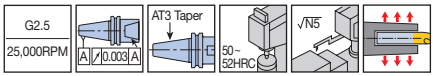
▸ Only use inductive heating device for T-SHRINK holders

TaeguTec

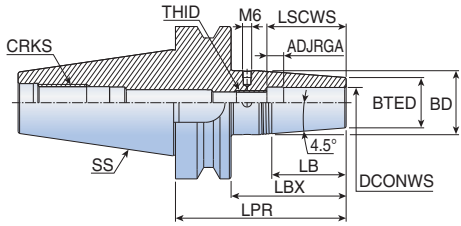
BT-FC-SRKIN

T-SHRINK

Thermal shirinking chucks



BT MAS-403 ADB



Designation		Dimension (mm)											
		SS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID	CRKS	Hex key
BT40 FC	**SRKIN 6x90**	40	6	21	27	90	64	38	11	36	M5	M16	2.5
	SRKIN 8x90	40	8	21	27	90	64	38	11	36	M6	M16	3.0
	SRKIN10x90	40	10	24	32	90	64	50.8	11	42	M8	M16	4.0
	SRKIN12x90	40	12	24	32	90	64	50.8	11	47	M10	M16	5.0
	SRKIN14x90	40	14	27	34	90	64	44.5	11	47	M10	M16	5.0
	SRKIN16x90	40	16	27	34	90	64	44.5	11	50	M12	M16	6.0
	SRKIN18x90	40	18	33	42	90	64	57.2	11	50	M12	M16	6.0
	SRKIN20x90	40	20	33	42	90	64	57.2	11	52	M16	M16	8.0
	SRKIN25x110	40	25	44	53	110	84	57.2	11	58	M16	M16	8.0
BT50 FC	**SRKIN 6x100(1)**	50	6	21	27	100	63.5	38	11	36	M6	M24	2.5
	SRKIN 8x100(1)	50	8	21	27	100	63.5	38	11	36	M5	M24	3.0
	SRKIN10x100(1)	50	10	24	32	100	63.5	50.8	11	42	M8	M24	4.0
	SRKIN12x100(1)	50	12	24	32	100	63.5	50.8	11	47	M10	M24	5.0
	SRKIN14x100(1)	50	14	27	34	100	63.5	44.5	11	47	M10	M24	5.0
	SRKIN16x100(1)	50	16	27	34	100	63.5	44.5	11	50	M12	M24	6.0
	SRKIN20x100(1)	50	20	33	42	100	63.5	57.2	11	52	M16	M24	8.0
	SRKIN25x120(1)	50	25	44	53	120	83.5	57.2	11	58	M16	M24	8.0
	SRKIN32x120(1)	50	32	44	53	120	83.5	57.2	11.5	62	M16	M24	8.0

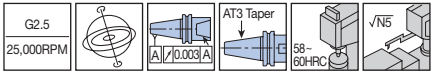
G177-G179 G181 G188-G190 G199

- Only use inductive heating device for T-SHRINK holders
- (1) Balance to G2.5 at 20,000RPM

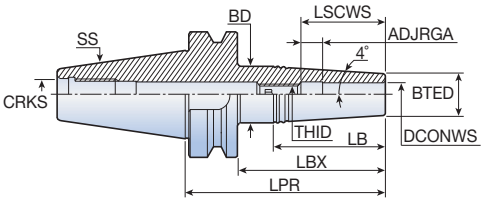
ADVANCE CUTTING TaeguTec

BT-SRK

Thermal shrinking chucks



BT MAS-403 form AD T-SHRINK



Designation		Dimension (mm)											
		SS	DCONWS	BD	BTED	LPR	LBX	LB	ADJRGA	LSCWS	CRKS	THID	Hex key
BT40	**SRK 3x50**	40	3	15.0	10	77	50	35.5	6	16	M16	M6	3.0
	SRK 3x85	40	3	19.0	10	112	85	64.1	6	16	M16	M6	3.0
	SRK 4x50	40	4	15.0	10	77	50	35.5	6	18	M16	M6	3.0
	SRK 4x85	40	4	19.0	10	112	85	64.1	6	18	M16	M6	3.0
	SRK 5x50	40	5	15.0	10	77	50	35.5	6	21	M16	M6	3.0
	SRK 5x85	40	5	19.0	10	112	85	64.1	6	21	M16	M6	3.0
	SRK 6x50	40	6	16.0	11	77	50	35.5	6	24	M16	M8	4.0
	SRK 6x85	40	6	20.0	11	112	85	64.1	6	24	M16	M8	4.0
	SRK 8x50	40	8	20.0	14	77	50	42.5	6	31	M16	M10	5.0
	SRK 8x85	40	8	23.0	14	112	85	63.9	6	31	M16	M10	5.0
	SRK 10x50	40	10	22.0	16	77	50	42.4	6	36	M16	M12	6.0
	SRK 10x85	40	10	24.5	16	112	85	60.2	6	36	M16	M12	6.0
	SRK 12x50	40	12	26.0	20	77	50	42.3	10	42	M16	M10	5.0
	SRK 12x85	40	12	28.0	20	112	85	56.6	10	42	M16	M10	5.0

G177-G179

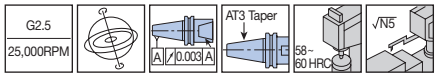
G188-G190

G199

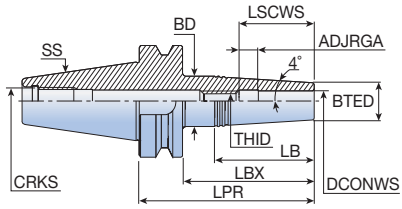
BT-FC-SRK

TSHRINK

Thermal shirinking chucks



BT MAS-403 ADB



Designation		Dimension (mm)											
		SS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID	CRKS	Hex key
BT30 FC	**SRK 3x50**	30	3	9.93	15	72	50	36.3	0	10	M6	M12	3.0
	SRK 4x50	30	4	9.93	15	72	50	36.3	0	12	M6	M12	3.0
	SRK 6x50	30	6	10.88	16	72	50	36.6	0	18	M8	M12	4.0
	SRK 8x50	30	8	13.95	20	72	50	43.3	0	25	M10	M12	5.0
	SRK12x50	30	12	20.03	26	72	50	42.7	10	42	M10	M12	5.0

G177-G179

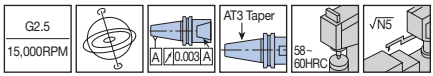
G188-G190

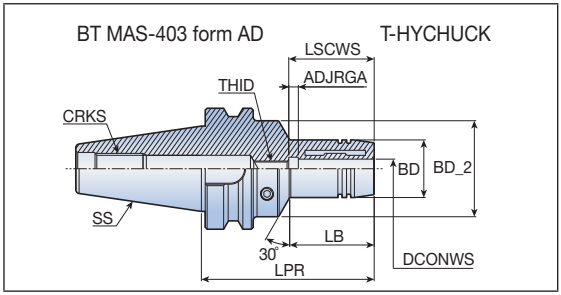
G199

BT-THCG

THYCHUCK

General hydraulic chucks





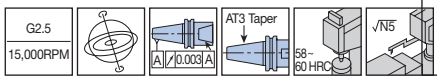
Designation		Dimension (mm)									
		SS	DCONWS	BD	BD_2	LPR	LB	ADJRGA	LSCWS	THID	Hex key
BT30	**THCG 6-70**	30	6	26	44.5	70	28	10	37.5	M5X0.8	4.0
	THCG 8-70	30	8	28	44.5	70	28	10	37.5	M6X1.0	4.0
	THCG 10-75	30	10	30	44.5	75	36	10	42.5	M8X1.0	4.0
	THCG 12-75	30	12	32	44.5	75	36	10	47.5	M10X1.0	4.0
	THCG 16-90	30	16	38	44.5	90	48	10	52.5	M12X1.0	4.0
	THCG 20-90	30	20	42	44.5	90	48	10	52.5	M12X1.0	5.0
BT40	**THCG 6-90**	40	6	26	50	90	44	10	37.5	M5X0.8	4.0
	THCG 8-90	40	8	28	50	90	44	10	37.5	M6X1.0	4.0
	THCG 10-90	40	10	30	50	90	44	10	42.5	M8X1.0	4.0
	THCG 12-90	40	12	32	50	90	44	10	47.5	M10X1.0	4.0
	THCG 16-90	40	16	38	50	90	48	10	52.5	M12X1.0	4.0
	THCG 20-90	40	20	42	50	90	48	10	52.5	M16X1.0	5.0
	THCG 25-100	40	25	57	-	100	-	10	61.0	M16X1.0	5.0
	THCG 32-105	40	32	62	-	105	-	10	65.0	M16X1.0	5.0
BT50	**THCG 6-90**	50	6	26	50	90	32	10	37.5	M5X0.8	4.0
	THCG 10-90	50	10	30	50	90	32	10	42.5	M8X1.0	4.0
	THCG 10-140	50	10	30	50	140	44	10	42.5	M8X1.0	4.0
	THCG 12-90	50	12	32	50	90	32	10	47.5	M10X1.0	4.0
	THCG 16-90	50	16	38	50	90	32	10	52.5	M12X1.0	4.0
	THCG 16-120	50	16	38	50	120	48	10	52.5	M12X1.0	4.0
	THCG 20-90	50	20	42	50	90	32	10	52.5	M16X1.0	5.0
	THCG 20-120	50	20	42	50	120	48	10	52.5	M16X1.0	5.0
	THCG 25-105	50	25	57	-	105	-	10	61.0	M16X1.0	5.0
	THCG 25-150	50	25	57	-	150	-	10	61.0	M16X1.0	5.0
	THCG 32-115	50	32	62	-	115	-	10	65.0	M16X1.0	5.0
	THCG 32-150	50	32	62	-	150	-	10	65.0	M16X1.0	5.0

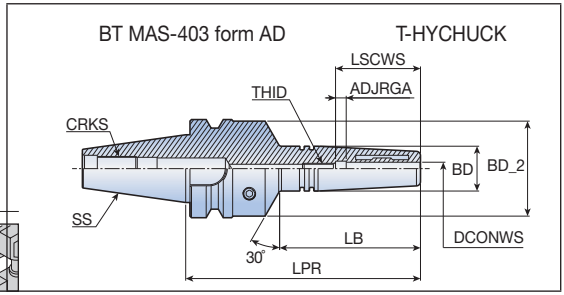
G162-G163 G177-G179 G197-G198

- Consult the user guide for relevant information including: insertion depth and proper use
- Clamping wrench should be ordered separately

BT-THCS

Slim hydraulic chucks





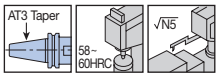
Designation		Dimension (mm)									
		SS	DCONWS	BD	BD_2	LPR	LB	ADJRGA	LSCWS	THID	Hex key
BT30	**THCS 6-110**	30	6	21	44.5	110	66	10	37.5	M5X0.8	4.0
	THCS 8-110	30	8	23	44.5	110	66	10	37.5	M6X1.0	4.0
	THCS 10-110	30	10	25	44.5	110	67	10	42.5	M8X1.0	4.0
	THCS 12-110	30	12	27	44.5	110	67	10	47.5	M8X1.0	4.0
BT40	**THCS 6-150**	40	6	24	50	150	103	10	37.5	M5X0.8	4.0
	THCS 10-150	40	10	28	50	150	104	10	42.5	M8X1.0	4.0
	THCS 12-150	40	12	30	50	150	105	10	47.5	M10X1.0	4.0

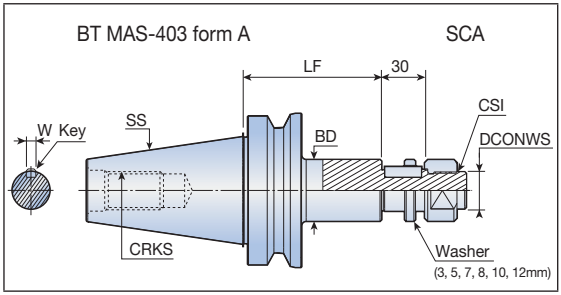
G162-G163 G177-G179 G197-G198

- Consult the user guide for relevant information including: insertion depth and proper use
- Clamping wrench should be ordered separately

BT-SCA

Slotting cutter arbors





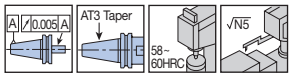
Designation		Dimension (mm)						
		SS	DCONWS	BD	LF	W	CRKS	CSI
BT40	**SCA 22(22.225)-75**	40	22(22.225)	34	75	6(3.18)	M16	M20x1.5
	SCA 22-120	40	22	34	120	6	M16	M20x1.5
	SCA 27(25.4)-75	40	27(25.4)	40	75	7(6.35)	M16	M24x2.0
	SCA 27-120	40	27	40	120	7	M16	M24x2.0
	SCA 32(31.75)-90	40	32(31.75)	46	90	8(7.92)	M16	M30x2.0
BT50	**SCA 22(22.225)-90**	50	22(22.225)	34	90	6(3.18)	M24	M20x1.5
	SCA 27(25.4)-90	50	27(25.4)	40	90	7(6.35)	M24	M24x2.0
	SCA 27-135	50	27	40	135	7	M24	M24x2.0
	SCA 32(31.75)-90	50	32(31.75)	46	90	8(7.92)	M24	M32x2.0
	SCA 40(38.1)-90	50	40(38.1)	55	90	10(9.52)	M24	M36x3.0
	SCA 50-90	50	50	68	90	12	M24	M42x3.0

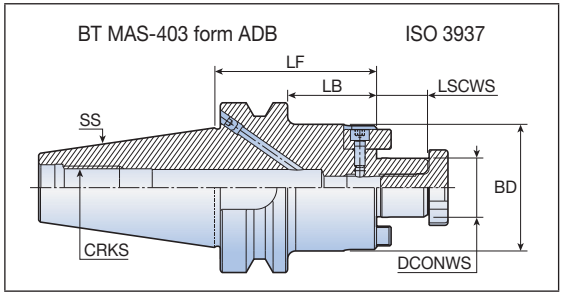
G177-G179

▸ Washers & key are included (Each 3, 5, 7, 8, 10, 12mm)

BT-SEM

Face mill arbors



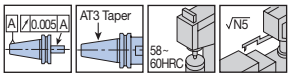


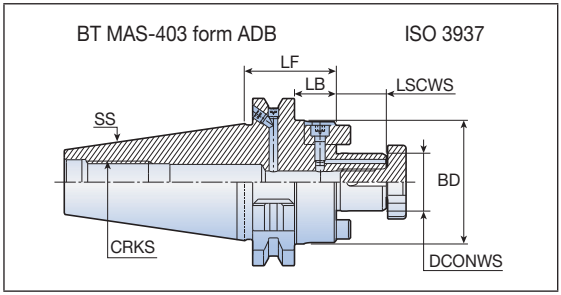
Designation	Dimension (mm)						
	SS	DCONWS	BD	LF	LB	LSCWS	CRKS
BT30 SEM 16x50	30	16	38	50	28	17	M12
SEM 22x50	30	22	47	50	28	19	M12
SEM 27x50	30	27	58	50	18	21	M12
BT40 SEM 16x60	40	16	38	60	33	17	M16
SEM 16x120	40	16	38	120	93	17	M16
SEM 22x60	40	22	47	60	33	19	M16
SEM 22x120	40	22	47	120	93	19	M16
SEM 27x45	40	27	58	45	18	21	M16
SEM 27x105	40	27	58	105	78	21	M16
SEM 32x60	40	32	65	60	23	24	M16
SEM 32x75	40	32	65	75	36	24	M16
SEM 40x60	40	40	82	60	23	27	M16
SEM 40x75	40	40	82	75	38	27	M16
BT50 SEM 16x75	50	16	38	75	37	17	M24
SEM 16x120	50	16	38	120	82	17	M24
SEM 22x50x220	50	22	50	220	182	19	M24
SEM 22x64x320	50	22	64	320	282	19	M24
SEM 22x75	50	22	47	75	37	19	M24
SEM 22x120	50	22	47	120	82	19	M24
SEM 27x60	50	27	58	60	22	21	M24
SEM 27x105	50	27	58	105	67	21	M24
SEM 32x48	50	32	66	48	10	24	M24
SEM 32x75	50	32	66	75	37	24	M24
SEM 40x48	50	40	82	48	10	27	M24
SEM 40x75	50	40	82	75	37	27	M24

▸ Wrench not included

BT-SEM-C

Face mill arbors with internal coolant hole



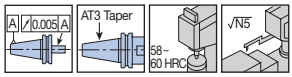


Designation		Dimension (mm)						
		SS	DCONWS	BD	LF	LB	LSCWS	CRKS
BT40	**SEM 16x60C**	40	16	38	60	33	17	M16
	SEM 16x100C	40	16	38	100	73	17	M16
	SEM 22x60C	40	22	47	60	33	19	M16
	SEM 22x100C	40	22	47	100	73	19	M16
	SEM 27x45C	40	27	58	45	18	21	M16
	SEM 27x100C	40	27	58	100	73	21	M16
	SEM 32x60C	40	32	66	60	33	24	M16
BT50	**SEM 16x75C**	50	16	38	75	37	17	M24
	SEM 16x100C	50	16	38	100	62	17	M24
	SEM 22x75C	50	22	47	75	37	19	M24
	SEM 22x100C	50	22	47	100	62	19	M24
	SEM 27x60C	50	27	58	60	22	21	M24
	SEM 27x100C	50	27	58	100	62	21	M24
	SEM 32x75C	50	32	66	75	37	24	M24
	SEM 32x100C	50	32	66	100	62	24	M24
BT50	**SEM 22x48x220C**	50	22	48	220	182	19	M24
	SEM 22x61x320C	50	22	61	320	282	19	M24
	SEM 27x61x320C	50	27	61	320	282	21	M24
	SEM 32x78x390C	50	32	78	390	352	24	M24

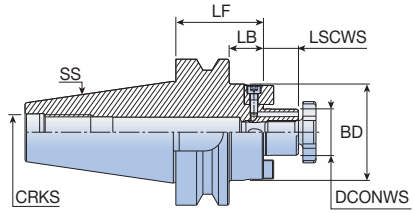
- If the “B type” option is required, the plug screw must be removed from the flange cooling hole (Use a 2mm hex key)
- Wrench not included

BT-FC-SEM-C

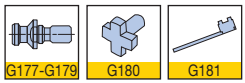
Face mill arbors with internal coolant hole



BT MAS-403 ADB



Designation		Dimension (mm)						
		SS	DCONWS	BD	LF	LB	LSCWS	CRKS
BT30 FC	**SEM16x50C**	30	16	38	50	28	17	M12
	SEM22x50C	30	22	47	50	28	19	M12
	SEM27x50C	30	27	58	50	28	21	M12
BT40 FC	**SEM16x60C**	40	16	38	60	34	17	M16
	SEM22x60C	40	22	47	60	34	19	M16
	SEM22x120C	40	22	47	120	94	19	M16
	SEM27x45C	40	27	58	45	19	21	M16
	SEM32x60C	40	32	66	60	34	24	M16
	SEM32x78x60C	40	32	78	60	34	24	M16
BT50 FC	**SEM16x75C**	50	16	38	75	38.5	17	M24
	SEM16x120C	50	16	38	120	83.5	17	M24
	SEM22x75C	50	22	47	75	38.5	19	M24
	SEM22x120C	50	22	47	120	83.5	19	M24
	SEM27x60C	50	27	58	60	23.5	21	M24
	SEM27x105C	50	27	58	105	68.5	21	M24
	SEM32x60 C	50	32	66	60	23.5	24	M24
	SEM32x78x60C	50	32	78	60	23.5	24	M24
	SEM40x60 C	50	40	82	60	11.5	27	M24

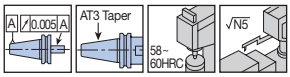


▸ Wrench not included

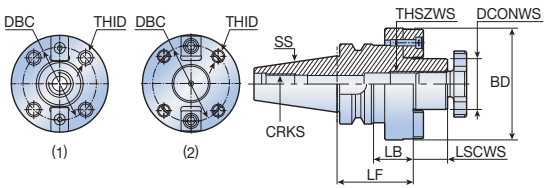
ADVANCE CUTTING
TaeguTec

BT-FM

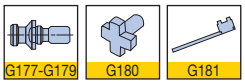
Face mill arbors



BT MAS-403 form A/AD DIN6357



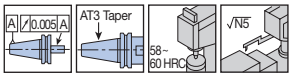
Designation	Dimension (mm)									
	SS	DCONWS	BD	DBC	LF	LB	LSCWS	CRKS	THID	THSZWS
BT40 FM 40(1)	40	40	88	66.7	60	22	27	M16	M12	M20
BT50 FM 40(1)	50	40	88	66.7	50	12	27	M24	M12	M20
FM 60(2)	50	60	128	101.6	88	40	38	M24	M16	-

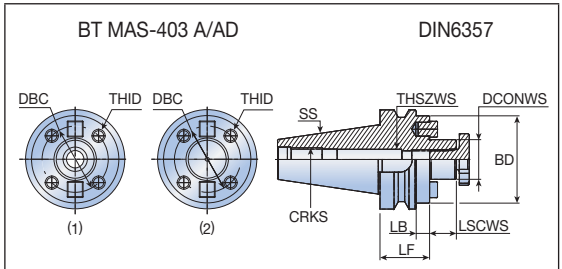


- Wrench not included
- (1) Form AD
- (2) Form A

BT-FC-FM

Face mill arbors





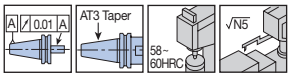
Designation		Dimension (mm)									
		SS	DCONWS	BD	DBC	LF	LB	LSCWS	CRKS	THID	THSZWS
BT40	**FC FM40**[1]	40	40	88	66.7	60	23	27	M16	M12	M20
BT50	**FC FM40**[1]	50	40	88	66.7	50	13.5	27	M24	M12	M20
	FC FM60[2]	50	60	128	101.6	88	41.5	40	M24	M16	-

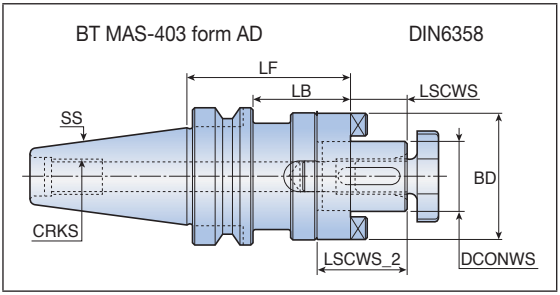
- Wrench not included
- [1] Form AD
- [2] Form A

ADVANCE CUTTING
TaeguTec

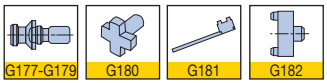
BT-SEMC

Combi shell end mill arbors





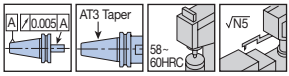
Designation	Dimension (mm)							
	SS	DCONWS	BD	LF	LB	LSCWS	LSCWS_2	CRKS
BT40 SEMC 16x50	40	16	32	50	23	17	27	M16
SEMC 16x100	40	16	32	100	73	17	27	M16
SEMC 22x53	40	22	40	53	26	19	31	M16
SEMC 22x100	40	22	40	100	73	19	31	M16
SEMC 27x55	40	27	48	55	28	21	33	M16
SEMC 27x100	40	27	48	98	73	21	33	M16
SEMC 32x60	40	32	58	60	33	24	38	M16
SEMC 32x100	40	32	58	100	73	24	38	M16
SEMC 40x80	40	40	70	80	53	27	41	M16
BT50 SEMC 16x100	50	16	32	100	62	17	27	M24
SEMC 16x150	50	16	32	150	112	17	27	M24
SEMC 22x68	50	22	40	68	30	19	31	M24
SEMC 22x100	50	22	40	100	62	19	31	M24
SEMC 22x150	50	22	40	150	112	19	31	M24
SEMC 27x78	50	27	48	78	40	21	33	M24
SEMC 27x100	50	27	48	100	62	21	33	M24
SEMC 27x150	50	27	48	150	112	21	33	M24
SEMC 32x78	50	32	58	78	40	24	38	M24
SEMC 32x100	50	32	58	100	62	24	38	M24
SEMC 32x150	50	32	58	150	112	24	38	M24
SEMC 40x78	50	40	70	78	40	27	41	M24
SEMC 40x100	50	40	70	100	62	27	41	M24
SEMC 40x150	50	40	70	150	112	27	41	M24
SEMC 50x79	50	50	90	79	41	30	46	M24
SEMC 50x150	50	50	90	150	112	30	46	M24

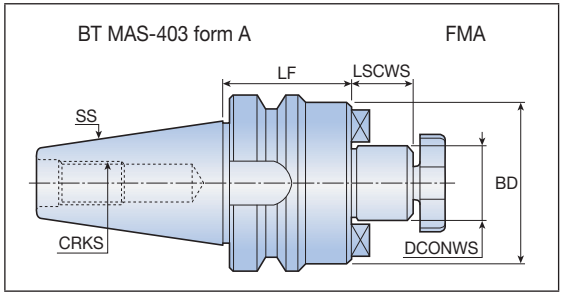


▸ Wrench not included

BT-FMA

Face mill arbors(Type inch)





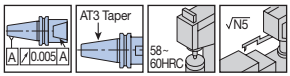
Designation	Dimension (mm)						
	SS	DCONWS	BD	LF	LSCWS	CRKS	Mounting screw
BT40 FMA 25.4-90L	40	25.4	50	90	22	M16	MBA M12
FMA 31.75-75L	40	31.75	60	75	30	M16	MBA M16
FMA 38.1-60L	40	38.1	78	60	34	M16	MBA M20
BT50 FMA 25.4-45L	50	25.4	50	45	22	M24	MBA M12
FMA 25.4-90L	50	25.4	50	90	22	M24	MBA M12
FMA 25.4-150L	50	25.4	50	150	22	M24	MBA M12
FMA 31.75-45L	50	31.75	60	45	30	M24	MBA M16
FMA 38.1-45L	50	38.1	80	45	34	M24	MBA M20
FMA 38.1-75L	50	38.1	80	75	34	M24	MBA M20
FMA 47.625-75L	50	47.625	128	75	38	M24	SH M16x2x40
FMA 50.8-45L	50	50.8	98	45	36	M24	MBA M24
FMA 50.8-75L	50	50.8	98	75	36	M24	MBA M24

G177-G179

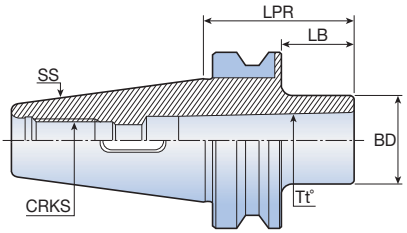
G181

BT-MT

Morse taper adapters



BT MAS-403 form A DIN6383 / DIN228-2 form D

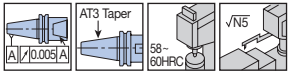


Designation	Dimension (mm)					
	SS	Tt°	BD	LPR	LB	CRKS
BT30 MT 2x60	30	MT2	32	60	38	M12
BT40 MT 1x45	40	MT1	25	45	25	M16
MT 1x120	40	MT1	25	120	25	M16
MT 2x60	40	MT2	32	60	32	M16
MT 2x120	40	MT2	32	120	32	M16
MT 3x75	40	MT3	40	75	40	M16
MT 3x139	40	MT3	40	139	40	M16
MT 4x95	40	MT4	50	95	50	M16
BT50 MT 1x45	50	MT1	25	45	7	M24
MT 1x120	50	MT1	25	120	82	M24
MT 2x45	50	MT2	32	45	7	M24
MT 2x135	50	MT2	32	135	97	M24
MT 2x180	50	MT2	32	180	142	M24
MT 3x45	50	MT3	40	45	7	M24
MT 3x150	50	MT3	40	150	112	M24
MT 3x180	50	MT3	40	180	142	M24
MT 4x75	50	MT4	50	75	37	M24
MT 4x180	50	MT4	50	180	142	M24
MT 5x105	50	MT5	70	105	67	M24

G177-G179

BT-MT-DRW

Morse taper adapters



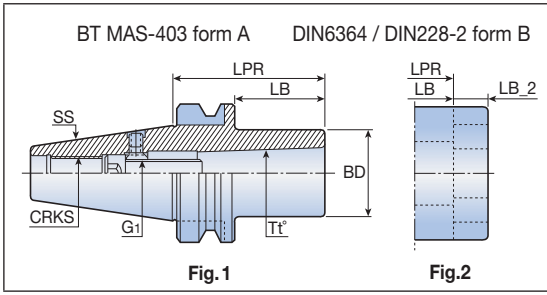


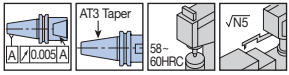
Fig.1 **Fig.2**

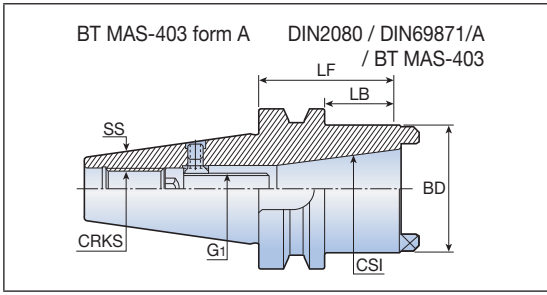
Designation		Dimension (mm)								Fig.
		SS	Tt°	BD	LPR	LB	LB_2	CRKS	G1	
BT40	**MT1 DRW**	40	MT1	25	50	23	-	M16	M6	1
	MT2 DRW	40	MT2	32	50	23	-	M16	M10	1
	MT3 DRW	40	MT3	40	70	43	-	M16	M12	1
	MT4 DRW(1)	40	MT4	63	95	68	15	M16	M16	2
BT50	**MT1 DRW**	50	MT1	25	45	7	-	M24	M6	1
	MT2 DRW	50	MT2	32	60	22	-	M24	M10	1
	MT3 DRW	50	MT3	40	65	27	-	M24	M12	1
	MT4 DRW(1)	50	MT4	63	70	32	15	M24	M16	2
	MT5 DRW(1)	50	MT5	78	100	62	18	M24	M20	2

▸ (1) DIN2201

BT-AD

Adapters



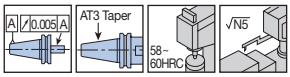


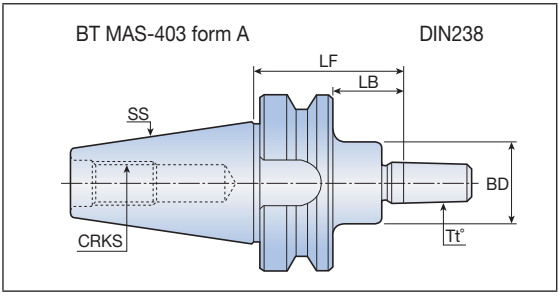
Designation		Dimension (mm)						
		SS	CSI	BD	LF	LB	CRKS	G1
BT50	**AD 40**	50	DIN 2080	63	75	32	M24	M16
	AD BT/SK 40	50	DIN 69871/A, BT MAS	66	75	37	M24	M16

G177-G179

BT-DC

Drill chuck arbors - Jacobs taper arbors





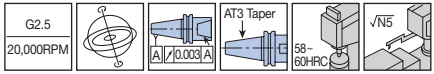
Designation		Dimension (mm)					
		SS	Tt°	BD	LF	LB	CRKS
BT40	**DC B12x45**	40	B12	24	45	18.0	M16
	DC B12x90	40	B12	24	90	63.0	M16
	DC B16x45	40	B16	30	45	18.0	M16
	DC B16x90	40	B16	30	90	63.0	M16
BT50	**DC B12x45**	50	B12	-	45	6.7	M24
	DC B18x45	50	B18	-	45	7.0	M24

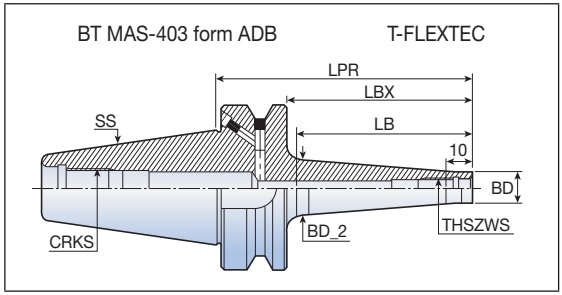
G177-G179

▸ Drill chuck not included

BT-ODP

T-FLEXTEC holders





Designation		Dimension (mm)							
		SS	THSZWS	BD	BD_2	LPR	LBX	LB	CRKS
BT40	**ODP 6x66**	40	M06	9.8	13.0	66	39	30	M16
	ODP 6x106	40	M06	9.8	23.0	106	79	70	M16
	ODP 8x66	40	M08	13.0	15.0	66	39	30	M16
	ODP 10x66	40	M10	18.0	20.0	66	39	30	M16
	ODP 10x106	40	M10	18.0	28.0	106	79	70	M16
	ODP 12x66	40	M12	21.0	24.0	66	39	30	M16
	ODP 12x106	40	M12	21.0	31.0	106	79	70	M16
	ODP 16x66	40	M16	29.0	28.6	66	39	35	M16
	ODP 16x106	40	M16	29.0	34.0	106	79	70	M16
BT50	**ODP 12x94**(1)	50	M12	23.0	30.0	94	56	50	M24
	ODP 12x144(1)	50	M12	23.0	40.0	144	106	100	M24
	ODP 12x194(1)	50	M12	23.0	40.0	194	156	150	M24
	ODP 16x94(1)	50	M16	29.0	34.0	94	56	50	M24
	ODP 16x144(1)	50	M16	29.0	40.0	144	106	100	M24
	ODP 16x194(1)	50	M16	29.0	55.0	194	156	150	M24
	ODP 16x244(1)	50	M16	29.0	55.0	244	206	200	M24

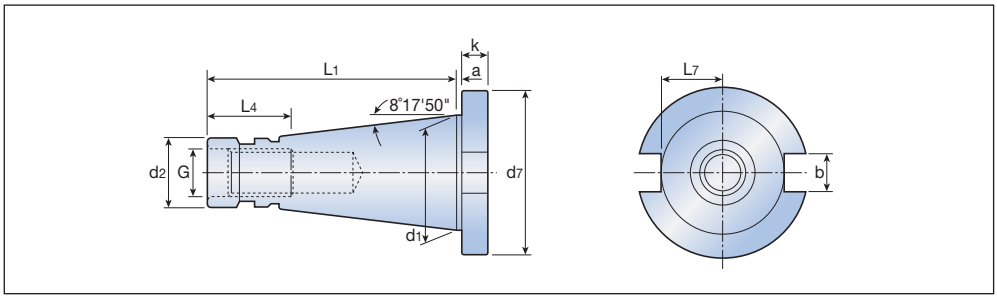
G177-G179

- If the “B type” option is required, the plug screw must be removed from the flange cooling hole (Use a 2mm hex key)
- (1) Balance to G6.3 at 12,000RPM

DIN2080

DIN2080

Standard toolholder

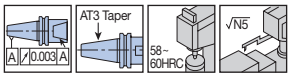


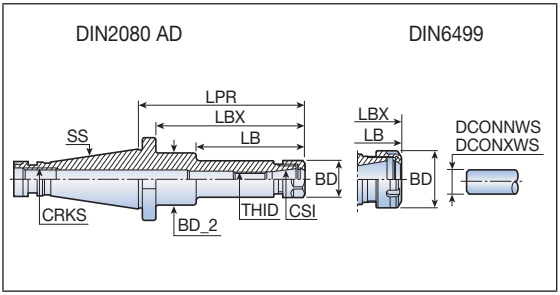
Shank	a ±0.2	b (H12)	d1	d2	G	d7	K ±0.15	L1	L4	L7max	Taper AT3
30	1.6	16.1	31.75	17.4	M12	50.0	8	68.4	24	16.2	0.002
40	1.6	16.1	44.45	25.3	M16	63.0	10	93.4	32	22.5	0.003
50	3.2	25.7	69.85	39.6	M24	97.5	12	126.8	47	35.3	0.004

▸ For non-stock items: Supply condition is subject to availability.
If not available in stock then MOQ (Minimum order qty) will be applicable.

DIN2080-ER

ER collet chucks

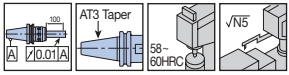


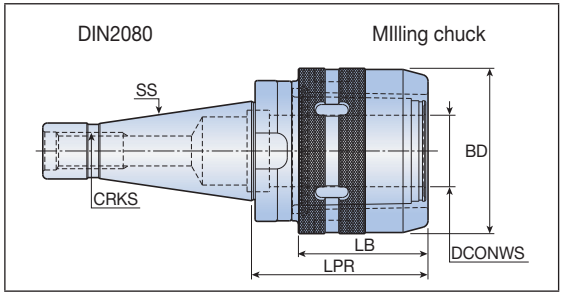


Designation		Dimension (mm)										
		SS	CSI	DCONNWS	DCONXWS	BD	BD_2	LPR	LBX	LB	CRKS	THID
DIN2080 30	**ER 32x55**	30	ER32	2.0	20.0	50	-	55	45.4	-	M12	M18x1.5
	ER 40x83	30	ER40	3.0	26.0	63	-	83	69.4	-	M12	M22x1.5
DIN2080 40	**ER 16x63**	40	ER16	0.5	10.0	28	-	63	51.4	-	M16	M12
	ER 16x100	40	ER16	0.5	10.0	28	-	100	88.4	-	M16	M12
	ER 20x100	40	ER20	1.0	13.0	34	-	100	88.4	-	M16	M12
	ER 25x50	40	ER25	1.0	16.0	42	-	50	38.4	-	M16	M16x1.5
	ER 32x50	40	ER32	2.0	20.0	50	-	50	38.4	-	M16	M22x1.5
	ER 40x55	40	ER40	3.0	26.0	63	-	55	43.4	-	M16	M22x1.5
DIN2080 50	**ER 20x100**	50	ER20	1.0	13.0	34	-	100	84.8	-	M24	M16
	ER 20x160	50	ER20	1.0	13.0	34	-	160	144.8	-	M24	M12
	ER 40x58	50	ER40	3.0	26.0	63	-	58	42.8	-	M24	M28x1.5
	ER 50x63	50	ER50	10.0	34.0	78	-	63	47.8	-	M24	M36x1.5

DIN2080-NTMC

Milling chucks





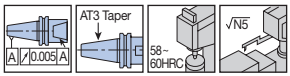
Designation		Dimension (mm)					
		SS	DCONWS	BD	LPR	LB	CRKS
DIN2080 40	**NTMC 25-70**	40	25	62	70	52.5	M16
	NTMC 32-75	40	32	72	75	57.5	M16
DIN2080 50	**NTMC 32-90**	50	32	74	90	71.8	M24
	NTMC 42-90	50	42	94	90	67	M24

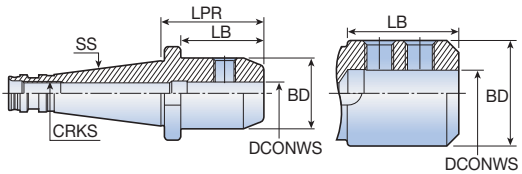
G164-G166 G183 G196

ADVANCE CUTTING TaeguTec

DIN2080-EM

End mill holders



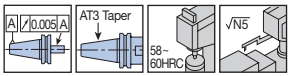


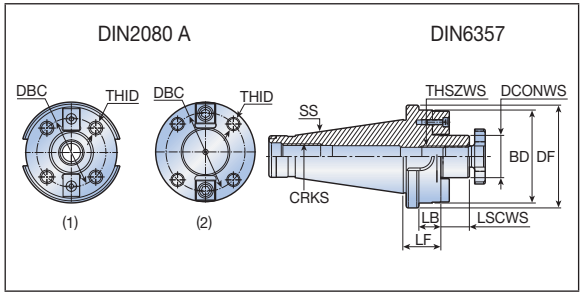
For DCONWS ≥ 25

Designation		Dimension (mm)					
		SS	DCONWS	BD	LPR	LB	CRKS
DIN2080 30	**EM 6x40**	30	6	25	40	30.4	M12
	EM 8x40	30	8	28	40	30.4	M12
	EM 10x40	30	10	35	40	30.4	M12
DIN2080 40	**EM 8x50**	40	8	28	50	38.4	M16
	EM 10x50	40	10	35	50	38.4	M16
	EM 12x50	40	12	42	50	38.4	M16
	EM 20x63	40	20	52	63	51.4	M16
	EM 25x80	40	25	65	80	68.4	M16
	EM 32x80	40	32	72	80	68.4	M16
DIN2080 50	**EM 10x63**	50	10	35	63	47.8	M24
	EM 12x63	50	12	42	63	47.8	M24
	EM 16x63	50	16	48	63	47.8	M24
	EM 25x80	50	25	65	80	64.8	M24
	EM 32x80	50	32	72	80	64.8	M24
	EM 40x90	50	40	90	90	74.8	M24
	EM 50x100	50	50	100	100	84.8	M24

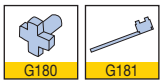
DIN2080-FM

Face mill arbors





Designation		Dimension (mm)										
		SS	DCONWS	DF	BD	DBC	LF	LB	LSCWS	CRKS	THSZWS	THID
DIN2080 50	**FM40**[1]	50	40	97.3	88	66.7	36.0	20.8	27	M24	M20	M12
	FM60[2]	50	60	128.0	-	101.6	35.8	-	40	M24	-	M16

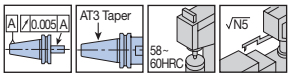


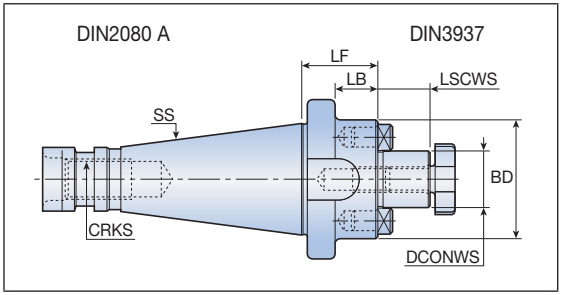
- Wrench not included
- [1] Form AD
- [2] Form A

ADVANCE CUTTING
TaeguTec

DIN2080-SEM

Shell end mill arbors



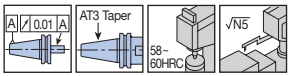


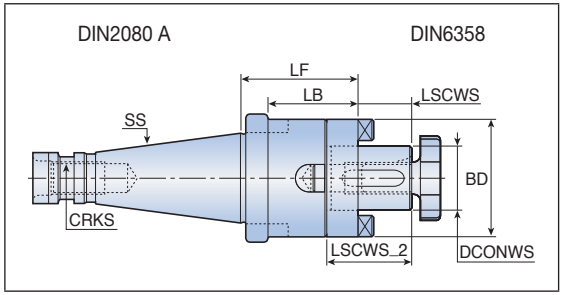
Designation	Dimension (mm)						
	SS	DCONWS	BD	LF	LB	LSCWS	CRKS
DIN2080 30 SEM 22x28	30	22	47	28	18.4	19	M12
DIN2080 40 SEM 16x28	40	16	38	28	16.4	17	M16
SEM 22x27	40	22	47	27	15.4	19	M16
SEM 27x26	40	27	58	26	14.4	21	M16
SEM 32x23	40	32	66	23	11.4	24	M16
SEM 40x34	40	40	82	34	22.4	27	M16
DIN2080 50 SEM 16x38	50	16	38	38	22.8	17	M24
SEM 22x38	50	22	47	38	22.8	19	M24
SEM 27x38	50	27	58	38	22.8	21	M24
SEM 32x36	50	32	66	36	20.8	24	M24
SEM 40x40	50	40	82	40	24.8	27	M24

▸ Wrench not included

DIN2080-SEMC

Combi shell end mill arbors



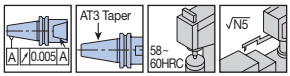


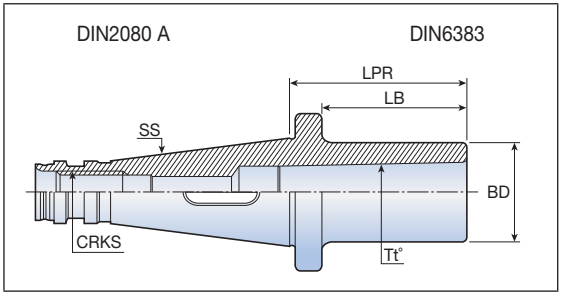
Designation	Dimension (mm)							
	SS	DCONWS	BD	LF	LB	LSCWS	LSCWS_2	CRKS
DIN2080 30 SEMC 16x35	30	16	32	35	25.4	17	27	M12
DIN2080 40 SEMC 22x52	40	22	40	52	40.4	19	31	M16
SEMC 27x52	40	27	48	52	40.4	21	33	M16
SEMC 32x52	40	32	58	52	40.4	24	38	M16
SEMC 40x52	40	40	70	52	40.4	27	41	M16
DIN2080 50 SEMC 16x55	50	16	32	55	39.8	17	27	M24
SEMC 22x55	50	22	40	55	39.8	19	31	M24
SEMC 27x55	50	27	48	55	39.8	21	33	M24
SEMC 32x55	50	32	58	55	39.8	24	38	M24
SEMC 50x55	50	50	90	55	39.8	30	46	M24

▸ Wrench not included

DIN2080-MT

Morse taper adapters

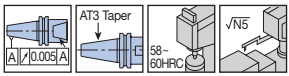




Designation		Dimension (mm)					
		SS	Tt°	BD	LPR	LB	CRKS
DIN2080 40	**MT 3x65**	40	MT3	40	65	53.4	M16
	MT 4x95	40	MT4	48	95	83.4	M16
DIN2080 50	**MT 3x65**	50	MT3	40	65	49.8	M24
	MT 4x70	50	MT4	48	70	54.8	M24
	MT 5x105	50	MT5	63	105	89.2	M24

DIN2080-MT-DRW

Morse taper draw bar adapters



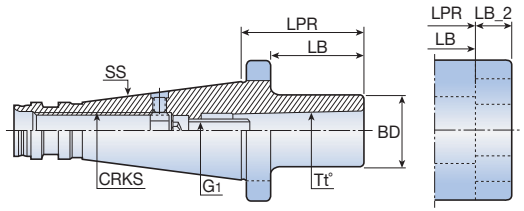


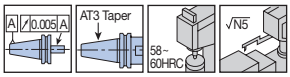
Fig.1 Fig.2

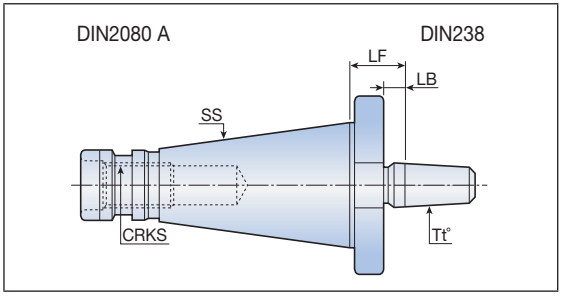
Designation	Dimension (mm)								Fig.
	SS	Tt°	BD	LPR	LB	LB_2	G1	CRKS	
DIN2080 50 MT2 DRW	50	MT2	32	60	44.8	-	M10	M24	1
MT4 DRW	50	MT4	63	80	49.8	15	M16	M24	2
MT5 DRW	50	MT5	78	100	84.4	18	M20	M24	2

▸ MT4 & MT5: DIN2201

DIN2080-DC

Drill chuck arbors - Jacobs taper arbors



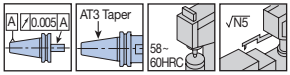


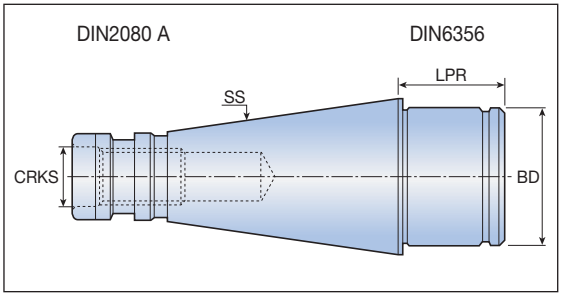
Designation	Dimension (mm)				
	SS	Tt°	LF	LB	CRKS
DIN2080 40 DC B16x22	40	B16	22	10.4	M16

▸ Drill chuck not included

DIN2080-CP

Centering plug



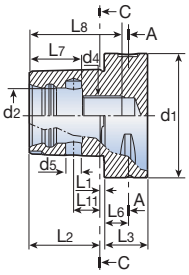


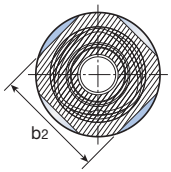
Designation	Dimension (mm)			
	SS	BD	LPR	CRKS
DIN2080 50 CP 60	50	60	39	M24

CADAPTER

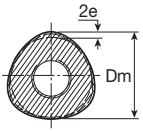
C-ADAPTER ISO 26623-1

Standard toolholder





A-A



C-C

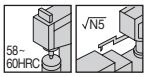
C-ADAPTER	b2	d1 ±0.1	d2	d4	d5 ±0.1	Dm	e
C3	28.3	32	15	M12x1.5	3.6	22	0.70
C4	35.3	40	18	M14x1.5	4.6	28	0.90
C5	44.4	50	21	M16x1.5	6.1	35	1.12
C6	55.8	63	28	M20x2	8.1	44	1.40
C8	71.1	80	32	M20x2	9.1	55	2.00

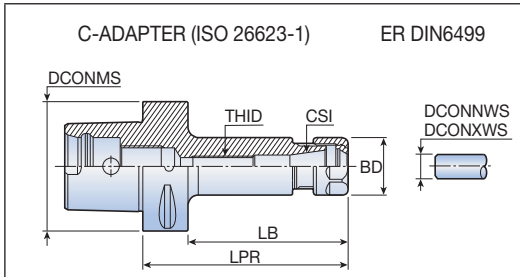
C-ADAPTER	L1	L2 ±0.1	L3min	L6 ±0.15	L7 ±0.15	L8min	L11 ±0.1
C3	2.5	19	15	6	13	25	8.0
C4	2.5	24	20	8	15	30	11.5
C5	3.0	30	20	10	20	37	14.0
C6	3.0	38	22	12	27	47	15.5
C8	3.0	48	30	12	28	48	25.0

▸ For non-stock items: Supply condition is subject to availability.
If not available in stock then MOQ (Minimum order qty) will be applicable.

C-ER

ER collet chucks





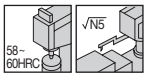
	Designation	Dimension (mm)							
		DCONMS	CSI	DCONNWS	DCONXWS	BD	LPR	LB	THID
C4	ER 16x70	40	ER16	1.0	10.0	28	70	50	M10
	ER 20x35[(1)]	40	ER20	1.0	13.0	34	35	27	-
	ER 20x52	40	ER20	1.0	13.0	34	52	32	-
	ER 25x38[(1)]	40	ER25	1.0	16.0	42	38	30	-
	ER 25x52	40	ER25	1.0	16.0	42	52	32	-
	ER 32x54	40	ER32	2.0	20.0	50	54	34	-
C5	ER 16x100	50	ER16	1.0	10.0	28	100	80	M10
	ER 16x130	50	ER16	1.0	10.0	28	130	110	M10
	ER 20x055	50	ER20	1.0	13.0	34	55	35	-
	ER 20x100	50	ER20	1.0	13.0	34	100	80	M12
	ER 20x130	50	ER20	1.0	13.0	34	130	110	M12
	ER 25x055	50	ER25	1.0	16.0	42	55	35	-
	ER 25x100	50	ER25	1.0	16.0	42	100	80	M16
	ER 32x057	50	ER32	2.0	20.0	50	57	36	-
	ER 32x100	50	ER32	2.0	20.0	50	100	80	M22x1.5
C6	ER 16x100	63	ER16	1.0	10.0	28	100	78	M10
	ER 16x130	63	ER16	1.0	10.0	28	130	108	M10
	ER 16x160	63	ER16	1.0	10.0	28	160	138	M10
	ER 20x060	63	ER20	1.0	13.0	34	60	38	-
	ER 20x100	63	ER20	1.0	13.0	34	100	78	M12
	ER 20x130	63	ER20	1.0	13.0	34	130	108	M12
	ER 20x160	63	ER20	1.0	13.0	34	160	138	M12
	ER 25x060	63	ER25	1.0	16.0	42	60	38	-
	ER 25x100	63	ER25	1.0	16.0	42	100	78	M16
	ER 25x130	63	ER25	1.0	16.0	42	130	108	M16
	ER 25x160	63	ER25	1.0	16.0	42	160	138	M16
	ER 32x060	63	ER32	2.0	20.0	50	60	36	-
	ER 32x100	63	ER32	2.0	20.0	50	100	78	M22x1.5
	ER 32x130	63	ER32	2.0	20.0	50	130	108	M22x1.5
	ER 32x160	63	ER32	2.0	20.0	50	160	138	M22x1.5
	ER 40x065	63	ER40	3.0	26.0	63	65	37	-
	ER 40x100	63	ER40	3.0	26.0	63	100	78	M28x1.5
	ER 40x130	63	ER40	3.0	26.0	63	130	108	M28x1.5

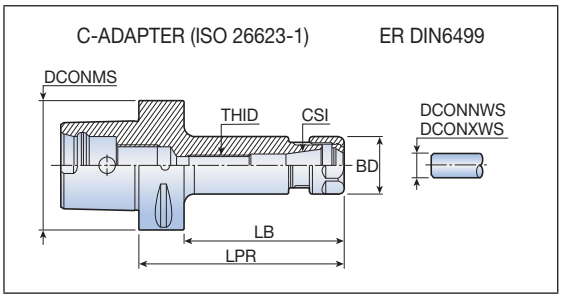
▸ [(1)] Without V grooves, for manual use only

G151-G159 G176-G177 G180 G183

C-ER

ER collet chucks

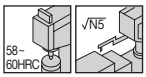


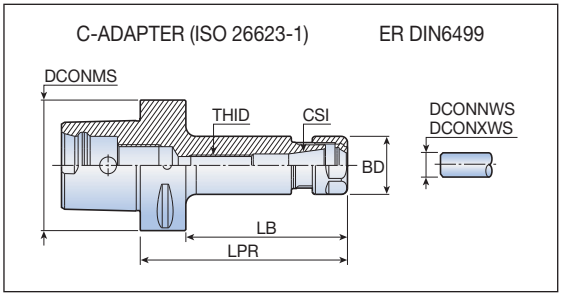


Designation	Dimension (mm)							
	DCONMS	CSI	DCONNWS	DCONXWS	BD	LPR	LB	THID
C8 **ER 32x70**	80	ER32	2.0	20.0	50	70	40	-
ER 32x100	80	ER32	2.0	20.0	50	100	70	M22x1.5
ER 32x160	80	ER32	2.0	20.0	50	160	130	M22x1.5
ER 40x70	80	ER40	3.0	26.0	63	70	40	-
ER 40x100	80	ER40	3.0	26.0	63	100	70	M28x1.5
ER 40x160	80	ER40	3.0	26.0	63	160	130	M28x1.5

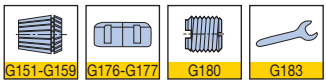
C-ER-M

ER mini collet chucks



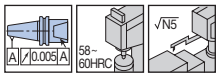


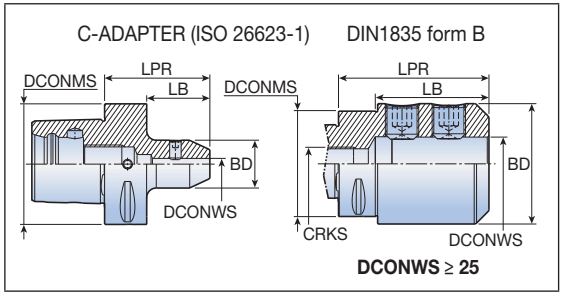
Designation	Dimension (mm)							
	DCONMS	CSI	DCONNWS	DCONXWS	BD	LPR	LB	THID
C4 **ER 16x70 M**	40	ER16	0.5	10.0	22	70	50	M10
C5 **ER 16x100 M**	50	ER16	0.5	10.0	22	100	80	M10
ER 16x130 M	50	ER16	0.5	10.0	22	130	120	M10
C6 **ER 16x100 M**	63	ER16	0.5	10.0	22	100	78	M10
ER 16x130 M	63	ER16	0.5	10.0	22	130	108	M10
ER 16x160 M	63	ER16	0.5	10.0	22	160	138	M10



C-EM

End mill holders

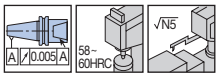


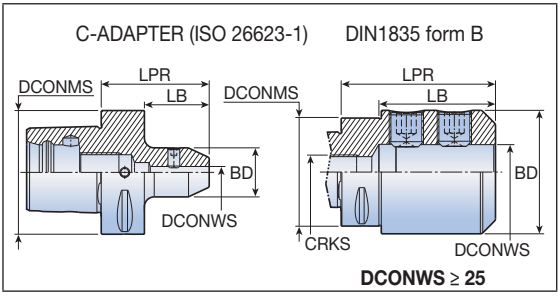


Designation		Dimension (mm)					
		DCONMS	DCONWS	BD	LPR	LB	CRKS
C4	**EM 6x50**	40	6	25	50	30	M14
	EM 8x50	40	8	28	50	30	M14
	EM 10x50	40	10	35	50	30	M14
	EM 12x55	40	12	42	55	35	M14
	EM 14x55	40	14	44	55	35	M14
	EM 16x60	40	16	48	60	40	M14
C5	**EM 6x50**	50	6	25	50	30	M16
	EM 8x50	50	8	28	50	30	M16
	EM 10x55	50	10	35	55	35	M16
	EM 12x60	50	12	42	60	40	M16
	EM 16x60	50	16	48	60	40	M16
	EM 18x60	50	18	50	60	40	M16
	EM 20x60	50	20	52	60	40	M16
	EM 25x85	50	25	65	85	65	M16
C6	**EM 6x55**	63	6	25	55	33	M20
	EM 8x55	63	8	28	55	33	M20
	EM 10x60	63	10	35	60	38	M20
	EM 12x60	63	12	42	60	38	M20
	EM 14x60	63	14	44	60	38	M20
	EM 16x65	63	16	48	65	43	M20
	EM 18x65	63	18	50	65	43	M20
	EM 20x65	63	20	52	65	43	M20
	EM 25x80	63	25	65	80	58	M20
	EM 32x90	63	32	72	90	68	M20
	EM 40x100	63	40	90	100	78	M20

C-EM

End mill holders

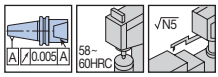


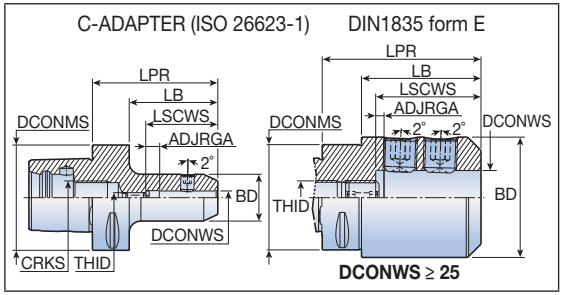


Designation	Dimension (mm)					
	DCONMS	DCONWS	BD	LPR	LB	CRKS
C8 **EM 6x70**	80	6	25	70	40	M20
EM 8x70	80	8	28	70	40	M20
EM 10x70	80	10	35	70	40	M20
EM 12x70	80	12	42	70	40	M20
EM 14x70	80	14	44	70	40	M20
EM 16x70	80	16	48	70	40	M20
EM 20x70	80	20	52	70	40	M20
EM 25x90	80	25	65	90	60	M20
EM 32x95	80	32	72	95	65	M20
EM 40x110	80	40	90	110	80	M20
EM 50x120	80	50	98	120	90	M20

C-EM-E

End mill holders - Whistle notch type

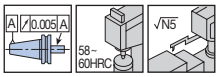


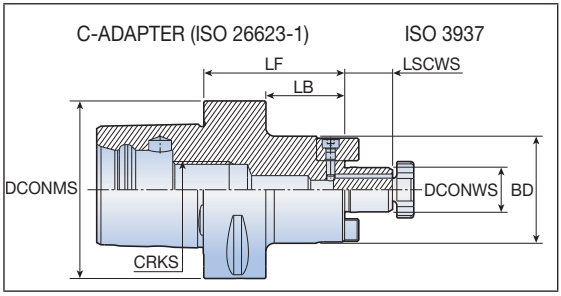


Designation	Dimension (mm)								
	DCONMS	DCONWS	BD	LPR	LB	ADJRGA	LSCWS	CRKS	THID
C4 EM 8x70 E	40	8	28	70	50	8	43	M14	M6
C5 EM 10x70 E	50	10	35	70	50	6	45	M16	M8
EM 12x75 E	50	12	42	75	55	5	49	M16	M10
EM 14x75 E	50	14	44	75	55	5	49	M16	M10
EM 16x80 E	50	16	48	80	60	5	52	M16	M12
EM 18x80 E	50	18	50	80	60	5	52	M16	M12
EM 20x85 E	50	20	52	85	65	6	55	M16	M16
C6 EM 6x75 E	63	6	25	75	53	6	36	M20	M5
EM 8x75 E	63	8	28	75	53	8	43	M20	M6
EM 10x75 E	63	10	35	75	53	7	46	M20	M8
EM 12x80 E	63	12	42	80	58	5	49	M20	M10
EM 14x80 E	63	14	44	80	58	5	49	M20	M10
EM 16x85 E	63	16	48	85	63	5	52	M20	M12
EM 20x85 E	63	20	52	85	63	6	55	M20	M16
EM 25x90 E	63	25	65	90	68	6	60	M20	M20
EM 32x95 E	63	32	72	95	73	5	63	M20	M20
C8 EM 8x65 E	80	8	28	65	35	8	43	M20	M6
EM 10x65 E	80	10	35	65	35	7	46	M20	M8
EM 12x70 E	80	12	42	70	40	5	49	M20	M10
EM 14x70 E	80	14	44	70	40	5	49	M20	M10
EM 16x75 E	80	16	48	75	45	5	52	M20	M12
EM 18x75 E	80	18	50	75	45	5	52	M20	M12
EM 20x80 E	80	20	52	80	50	8	57	M20	M16
EM 25x90 E	80	25	65	90	60	6	60	M20	M20
EM 32x95 E	80	32	72	95	65	6	64	M20	M20

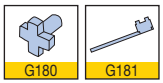
C-SEM-C

Face mill arbors



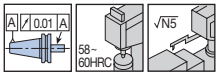


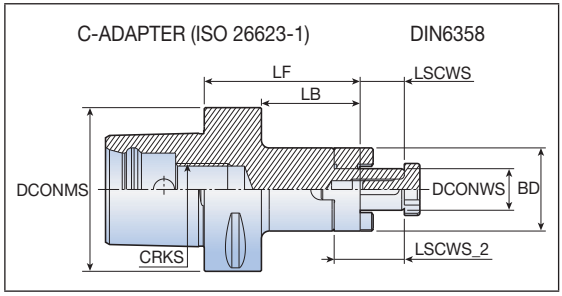
	Designation	Dimension (mm)						
		DCONMS	DCONWS	BD	LF	LB	LSCWS	CRKS
C4	**SEM 16x32 C**	40	16	38	32	12	17	M14
	SEM 16x55 C	40	16	38	55	35	17	M14
	SEM 22x40 C	40	22	47	40	20	19	M14
	SEM 22x55 C	40	22	47	55	35	19	M14
C5	**SEM 16x35 C**	50	16	38	35	15	17	M16
	SEM 16x70 C	50	16	38	70	50	17	M16
	SEM 22x35 C	50	22	47	35	15	19	M16
	SEM 22x70 C	50	22	47	70	50	19	M16
	SEM 27x40 C	50	27	58	40	20	21	M16
	SEM 32x40 C	50	32	63	40	20	24	M16
C6	**SEM 16x50 C**	63	16	38	50	28	17	M20
	SEM 16x100 C	63	16	38	100	78	17	M20
	SEM 22x50 C	63	22	47	50	28	19	M20
	SEM 22x100 C	63	22	47	100	78	19	M20
	SEM 27x60 C	63	27	58	60	38	21	M20
	SEM 27x100 C	63	27	58	100	78	21	M20
	SEM 32x60 C	63	32	66	60	38	24	M20
	SEM 40x60 C	63	40	82	60	38	27	M20
C8	**SEM 16x50 C**	80	16	38	50	20	17	M20
	SEM 16x100 C	80	16	38	100	70	17	M20
	SEM 22x50 C	80	22	47	50	20	19	M20
	SEM 22x100 C	80	22	47	100	70	19	M20
	SEM 27x50 C	80	27	58	50	20	21	M20
	SEM 27x100 C	80	27	58	100	70	21	M20
	SEM 32x50 C	80	32	66	50	20	24	M20
	SEM 32x100 C	80	32	66	100	70	24	M20
	SEM 40x60 C	80	40	82	60	30	27	M20



C-SEMC

Combi shell mill arbors

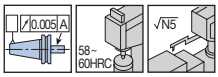


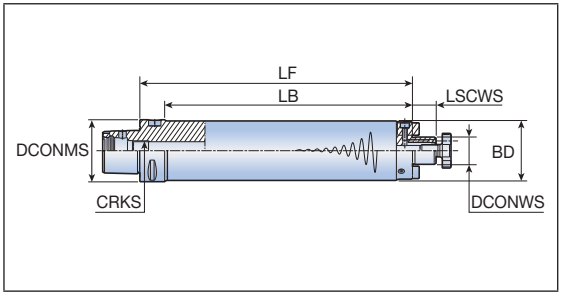


Designation	Dimension (mm)							
	DCONMS	DCONWS	BD	LF	LB	LSCWS	LSCWS_2	CRKS
C4 SEMC 16x45	40	16	32	45	25	17	27	M14
SEMC 22x45	40	22	40	45	25	19	31	M14
C5 SEMC 16x55	50	16	32	55	35	17	27	M16
SEMC 22x65	50	22	40	65	45	19	31	M16
SEMC 27x85	50	27	48	85	65	21	33	M16
C6 SEMC 16x60	63	16	32	60	38	17	27	M20
SEMC 16x100	63	16	32	100	78	17	27	M20
SEMC 22x60	63	22	40	60	38	19	31	M20
SEMC 22x100	63	22	40	100	78	19	31	M20
SEMC 27x60	63	27	48	60	38	21	33	M20
SEMC 27x100	63	27	48	100	78	21	33	M20
SEMC 32x60	63	32	58	60	38	24	38	M20
SEMC 40x70	63	40	70	70	48	27	41	M20

AV C*-SEM

Anti-vibration face mill arbors with coolant holes and C-ADAPTER ISO 26623-1 taper shanks

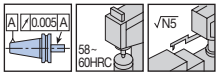


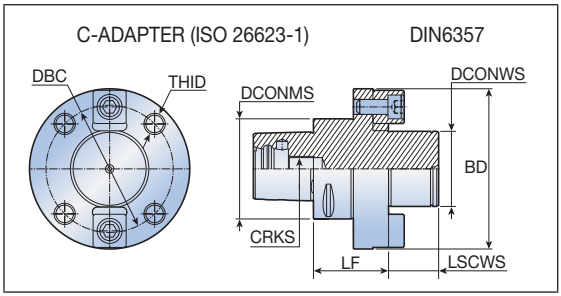


Designation	Dimension (mm)						
	DCONMS	DCONWS	BD	LF	LB	LSCWS	CRKS
AV C5 SEM22 48X220	50	22	48	220	200	19	M16
C5 SEM22 48X270	50	22	48	270	250	19	M16
C6 SEM22 48X270	63	22	48	270	248	19	M20
C6 SEM22 61X260	63	22	61	260	238	19	M20
C6 SEM22 61X310	63	22	61	310	288	19	M20
C6 SEM27 61X250	63	27	61	250	228	21	M20
C6 SEM27 61X300	63	27	61	300	278	21	M20

C-FM

Face mill arbors

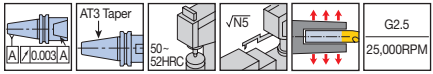




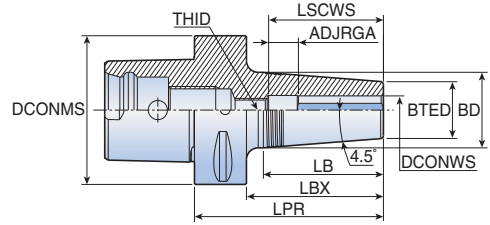
Designation	Dimension (mm)							
	DCONMS	DCONWS	BD	DBC	LF	LSCWS	CRKS	THID
C8 FM 60x60	80	60	128	101.6	20	40	M20	M16

C-SRKIN-CX

CX coolant type thermal shrinking chucks



C-ADAPTER (ISO 26623-1) T-SHRINK



Designation		Dimension (mm)										
		DCONMS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID	Hex key
C6	SRKIN 6x80 CX	63	6	21	27	80	58	38.1	10	34	M5	2.5
	SRKIN 8x80 CX	63	8	21	27	80	58	38.1	10	34	M6	3.0
	SRKIN 10x80 CX	63	10	24	32	80	58	50.8	9	40	M8	4.0
	SRKIN 12x80 CX	63	12	24	32	80	58	50.8	9	45	M10	5.0
	SRKIN 14x85 CX	63	14	27	34	85	63	44.5	9	45	M10	5.0
	SRKIN 16x85 CX	63	16	27	34	85	63	44.5	9	48	M12	6.0
	SRKIN 18x85 CX	63	18	33	42	85	63	57.2	9	48	M12	6.0
	SRKIN 20x85 CX	63	20	33	42	85	63	57.2	9	49	M16	8.0
	SRKIN 25x90 CX	63	25	44	53	90	68	57.2	9	55	M16	8.0
	SRKIN 32x95 CX	63	32	44	53	95	73	57.2	9	59	M16	8.0
C8	SRKIN 6x90 CX	80	6	21	27	90	60	38.1	9	34	M5	2.5
	SRKIN 8x90 CX	80	8	21	27	90	60	38.1	10	34	M6	3.0
	SRKIN 10x90 CX	80	10	24	32	90	60	50.8	9	40	M8	4.0
	SRKIN 12x90 CX	80	12	24	32	90	60	50.8	9	45	M10	5.0
	SRKIN 12x120 CX	80	12	24	32	120	90	50.8	9	45	M10	5.0
	SRKIN 12x160 CX	80	12	24	32	160	130	50.8	9	45	M10	5.0
	SRKIN 16x95 CX	80	16	27	34	95	65	44.5	9	48	M12	6.0
	SRKIN 16x120 CX	80	16	27	34	120	90	44.5	9	48	M12	6.0
	SRKIN 16x160 CX	80	16	27	34	160	130	44.5	9	48	M12	6.0
	SRKIN 20x95 CX	80	20	33	42	95	65	57.2	9	49	M16	8.0
	SRKIN 25x100 CX	80	25	44	53	100	70	57.2	9	55	M16	8.0
	SRKIN 32x115 CX	80	32	44	53	115	85	57.2	9	59	M16	8.0

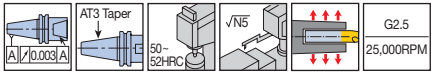
G188-G190 G199

▸ Only use inductive heating device for T-SHRINK holders

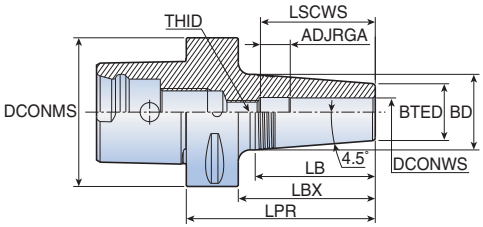
C-SRKIN

T-SHRINK

Thermal shrinking chucks



C-ADAPTER (ISO 26623-1) T-SHRINK



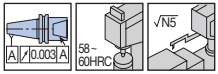
Designation		Dimension (mm)										
		DCONMS	DCONWS	BTED	BD	LPR	LBX	LB	ADJRGA	LSCWS	THID	Hex key
C4	SRKIN 6x75	40	6	21	27	75	55	38.1	11	36	M5	2.5
	SRKIN 8x75	40	8	21	27	75	55	38.1	11	36	M6	3.0
	SRKIN 10x75	40	10	24	32	75	55	50.8	11	42	M8	4.0
	SRKIN 12x75	40	12	24	32	75	55	50.8	11	47	M10	5.0
	SRKIN 14x80	40	14	27	34	80	60	44.5	11	47	M10	5.0
	SRKIN 16x80	40	16	27	34	80	60	44.5	11	50	M12	6.0
	SRKIN 18x80	40	18	33	42	80	60	57.2	11	50	M12	6.0
	SRKIN 20x85	40	20	33	42	85	65	57.2	11	52	M16	8.0
C5	SRKIN 6x75	50	6	21	27	75	55	38.1	11	36	M5	2.5
	SRKIN 8x75	50	8	21	27	75	55	38.1	11	36	M6	3.0
	SRKIN 10x75	50	10	24	32	75	55	50.8	11	42	M8	4.0
	SRKIN 12x75	50	12	24	32	75	55	50.8	11	47	M10	5.0
	SRKIN 14x80	50	14	27	34	80	60	44.5	11	47	M10	5.0
	SRKIN 16x80	50	16	27	34	80	60	44.5	11	50	M12	6.0
	SRKIN 18x80	50	18	33	42	80	60	57.2	11	50	M12	6.0
	SRKIN 20x85	50	20	33	42	85	65	57.2	11	52	M16	8.0
	SRKIN 25x90	50	25	44	53	90	70	57.2	11	58	M16	8.0
C6	SRKIN 6x80	63	6	21	27	80	58	38.1	11	36	M5	2.5
	SRKIN 8x80	63	8	21	27	80	58	38.1	11	36	M6	3.0
	SRKIN 10x80	63	10	24	32	80	58	50.8	11	42	M8	4.0
	SRKIN 12x80	63	12	24	32	80	58	50.8	11	47	M10	5.0
	SRKIN 14x85	63	14	27	34	85	63	44.5	11	47	M10	5.0
	SRKIN 16x85	63	16	27	34	85	63	44.5	11	50	M12	6.0
	SRKIN 18x85	63	18	33	42	85	63	57.2	11	50	M12	6.0
	SRKIN 20x85	63	20	33	42	85	63	57.2	11	52	M16	8.0
	SRKIN 25x90	63	25	44	53	90	68	57.2	11	58	M16	8.0
	SRKIN 32x95	63	32	44	53	95	73	57.2	11	58	M16	8.0

G188-G190 G199

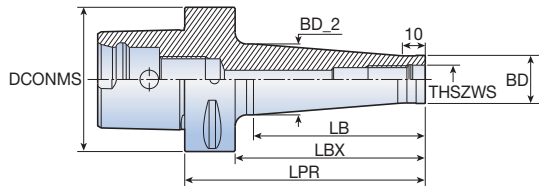
▸ Only use inductive heating device for T-SHRINK holders

C-ODP

T-FLEXTEC holders



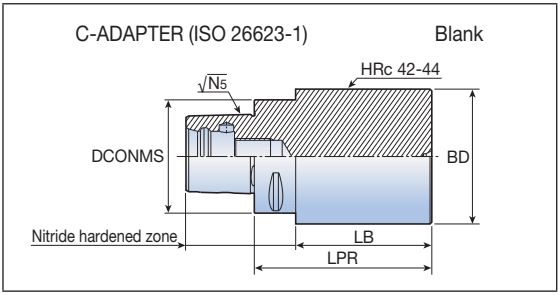
C-ADAPTER (ISO 26623-1) T-FLEXTEC



Designation	Dimension (mm)						
	DCONMS	THSZWS	BD	BD_2	LPR	LBX	LB
C4 ODP 10x53	40	M10	18	23.0	53	33	23
ODP 12x53	40	M12	21	26.0	53	33	23
ODP 16x53	40	M16	29	34.0	53	33	23
C5 ODP 10x53	50	M10	18	19.5	53	33	25
ODP 12x53	50	M12	21	23.5	53	33	25
ODP 12x103	50	M12	21	31.0	103	83	75
ODP 16x53	50	M16	29	29.5	53	33	25
ODP 16x103	50	M16	29	36.0	103	83	75
C6 ODP 10x55	63	M10	18	19.5	55	33	25
ODP 10x105	63	M10	18	28.0	105	83	75
ODP 10x130	63	M10	18	32.0	130	108	100
ODP 12x55	63	M12	21	23.5	55	33	25
ODP 12x105	63	M12	21	31.0	105	83	75
ODP 12x130	63	M12	21	36.0	130	108	100
ODP 16x55	63	M16	29	34.0	55	33	25
ODP 16x105	63	M16	29	34.0	105	83	75
ODP 16x130	63	M16	29	41.0	130	108	100

C-B4340

Blank

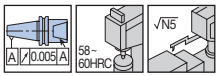


Designation	Dimension (mm)			
	DCONWS	BD	LPR	LB
C4 B4340 040095	40	40	95	75
B4340 060165	40	60	165	144
B4340 080075	40	80	75	54
B4340 100085	40	100	85	64
C5 B4340 050125	50	50	125	105
B4340 075175	50	75	175	154
B4340 090080	50	90	80	59
B4340 110090	50	110	90	69
C6 B4340 075195	63	75	195	172
B4340 110085	63	110	85	62
B4340 130095	63	130	95	72
B4340 120180	63	120	180	157
C8 B4340 080200	80	80	200	170
B4340 120160	80	120	160	129
B4340 130090	80	130	90	59
B4340 145200	80	145	200	169

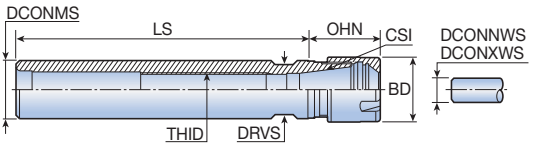
Straight & Morse Taper Shank

ST-ER-M

ER mini collet chucks



Straight shank DIN6499



Designation	Dimension (mm)								
	DCONMS	CSI	DCONNWS	DCONXWS	BD	OHN	LS	THID	DRVS
ST 12x80 ER11 M	12	ER11	0.5	7.0	16	26.5	80	-	11
16x100 ER11 M	16	ER11	0.5	7.0	16	18.5	100	M8	13
16x150 ER11 M	16	ER11	0.5	7.0	16	18.5	150	M8	13
12x80 ER16 M	12	ER16	0.5	10.0	22	36.5	80	-	17
20x100 ER16 M	20	ER16	0.5	10.0	22	25.0	100	M12	17
20x150 ER16 M	20	ER16	0.5	10.0	22	25.0	150	M12	17
20x100 ER20 M	20	ER20	1.0	13.0	28	40.0	100	M12	22
20x150 ER20 M	20	ER20	1.0	13.0	28	40.0	150	M14	22

G151-G159

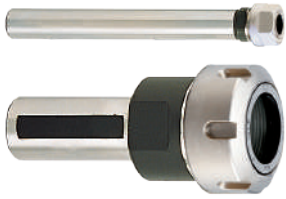
G176-G177

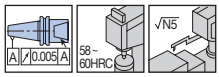
G180

G183

ST-ER(F)

ER collet chucks





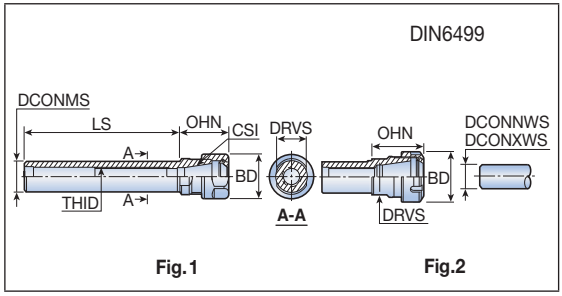


Fig.1 Fig.2

Designation	Dimension (mm)									Fig.
	DCONMS	CSI	DCONNWS	DCONXWS	BD	OHN	LS	THID	DRVS	
ST 16x50 ER11 F	16	ER11	0.5	7.0	19	18.5	50	M8	13	1
20x50 ER11 F	20	ER11	0.5	7.0	19	18.5	50	M10	17	1
20x100 ER11	20	ER11	0.5	7.0	19	18.5	100	M10	17	1
20x150 ER11	20	ER11	0.5	7.0	19	18.5	150	M10	17	1
20x50 ER16 F	20	ER16	0.5	10.0	28	32.3	50	M12	19	1
20x100 ER16	20	ER16	0.5	10.0	28	30.0	100	M12	19	1
20x100 ER16 F	20	ER16	0.5	10.0	28	30.0	100	M12	19	1
20x150 ER16	20	ER16	0.5	10.0	28	30.0	150	M12	19	1
20x50 ER20 F	20	ER20	1.0	13.0	34	42.5	50	M12	22	1
25x100 ER20	25	ER20	1.0	13.0	34	36.0	100	M16	22	1
25x150 ER20	25	ER20	1.0	13.0	34	36.0	150	M16	22	1
20x50 ER25 F	20	ER25	1.0	16.0	42	46.0	50	M12	27	2
20x100 ER25	20	ER25	1.0	16.0	42	46.0	100	M12	27	2
20x100 ER25 F	20	ER25	1.0	16.0	42	46.0	100	M12	27	2
25x50 ER25 F	25	ER25	1.0	16.0	42	46.0	50	M16	27	2
25x100 ER25	25	ER25	1.0	16.0	42	46.0	100	M16	27	2
20x50 ER32 F	20	ER32	2.0	20.0	50	54.0	50	M12	36	2
20x100 ER32	20	ER32	2.0	20.0	50	54.0	100	M12	36	2
25x50 ER32 F	25	ER32	2.0	20.0	50	52.0	50	M16x2	36	2
30x50 ER32 F	30	ER32	2.0	20.0	50	52.0	50	M18x1.5	36	2
32x50 ER32 F	32	ER32	2.0	20.0	50	52.0	50	M18x1.5	36	2
32x150 ER32	32	ER32	2.0	20.0	50	52.0	150	M18x1.5	36	2
40x75 ER32 F	40	ER32	2.0	20.0	50	46.0	75	M22x1.5	44	2
25x50 ER40 F	25	ER40	3.0	26.0	63	60.0	50	M16x2	46	2
30x50 ER40 F	32	ER40	3.0	26.0	63	60.0	50	M22x1.5	46	2
32x50 ER40 F	32	ER40	3.0	26.0	63	60.0	50	M22x1.5	46	2
40x75 ER40 F	40	ER40	3.0	26.0	63	55.0	75	M28x1.5	46	2
50x80 ER40 F	50	ER40	3.0	26.0	63	60.0	80	M28x1.5	55	2
50x80 ER50 F	50	ER50	10.0	34.0	78	77.0	80	M36x1.5	58	2

▸ F: Flat on the shank

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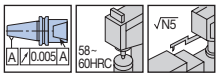
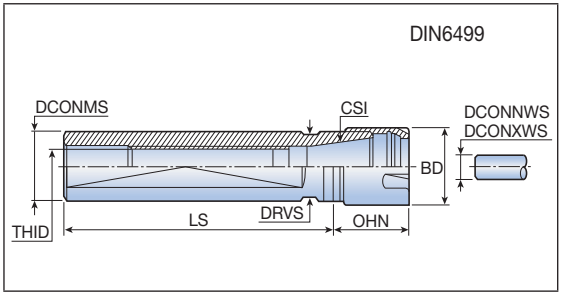
ST-ER-MF

Straight shanks - Mini collet





Designation	Dimension (mm)								
	DCONMS	CSI	DCONNWS	DCONXWS	BD	OHN	LS	THID	DRVS
ST 16x38 ER11 MF	16	ER11	0.5	7.0	16	18.5	38	M8x1	14
16x50 ER11 MF	16	ER11	0.5	7.0	16	18.5	50	M8x1	13
16x140 ER11 MF	16	ER11	0.5	7.0	16	18.5	140	M8x1	14
16x35 ER16 MF	16	ER16	0.5	10.0	22	36.0	35	M8x1	17
20x50 ER16 MF	20	ER16	0.5	10.0	22	26.0	50	M12x1	17
20x70 ER16 MF	20	ER16	0.5	10.0	22	26.0	70	M12x1	17
20x120 ER16 MF	20	ER16	0.5	10.0	22	26.0	120	M12x1	17
20x140 ER16 MF	20	ER16	0.5	10.0	22	26.0	140	M12x1	17
22x38 ER16 MF	22	ER16	0.5	10.0	22	26.0	38	M12x1	19
22x70 ER16 MF	22	ER16	0.5	10.0	22	26.0	70	M12x1	19
22x100 ER16 MF	22	ER16	0.5	10.0	22	28.0	100	M12x1	19
25x65 ER16 MF	25	ER16	0.5	10.0	22	28.0	65	M14x1	22
22x80 ER20 MF	22	ER20	1.0	13.0	28	39.0	80	M12x1	21
25x100 ER20 MF	25	ER20	1.0	13.0	28	28.0	100	M14x1	22
25x154 ER20 MF	25	ER20	1.0	13.0	28	28.0	154	M14x1	22
22x70 ER25 MF	22	ER25	1.0	16.0	35	47.0	70	M12x1	27
25x75 ER25 MF	25	ER25	1.0	16.0	35	48.0	75	M14x1	27
25x145 ER25 MF	25	ER25	1.0	16.0	35	36.0	145	M14x1	27
32x70 ER25 MF	32	ER25	1.0	16.0	35	30.0	70	M18x1	27

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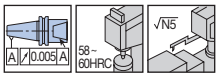
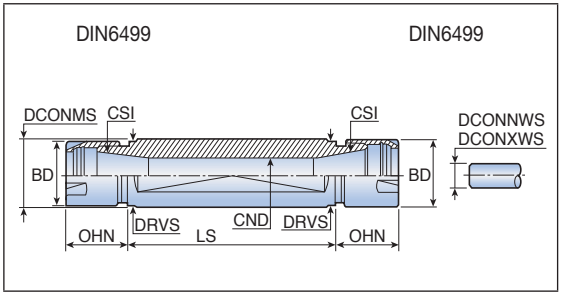
▸ MF: Mini flat shank

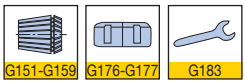
ST-ER-MF D

Straight shanks - Double mini collet





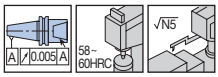
Designation	Dimension (mm)								
	DCONMS	CSI	DCONNWS	DCONXWS	CND	BD	OHN	LS	DRVS
ST 16x50 ER11 MF D	16	ER11	0.5	7.0	7.5	16	18.5	50	14
20x30 ER11 MF D	20	ER11	0.5	7.0	7.5	16	18.5	30	17
20x50 ER11 MF D	20	ER11	0.5	7.0	7.5	16	18.5	50	17
20x55 ER16 MF D	20	ER16	0.5	10.0	10.5	22	25.0	55	17
22x55 ER16 MF D	22	ER16	0.5	10.0	10.5	22	28.0	55	19
22x75 ER16 MF D	22	ER16	0.5	10.0	10.5	22	28.0	75	19
25x62 ER16 MF D	25	ER16	0.5	10.0	10.5	22	28.0	62	22
32x55 ER20 MF D	32	ER20	1.0	13.0	13.5	28	28.0	55	27
32x75 ER20 MF D	32	ER20	1.0	13.0	13.5	28	28.0	75	27

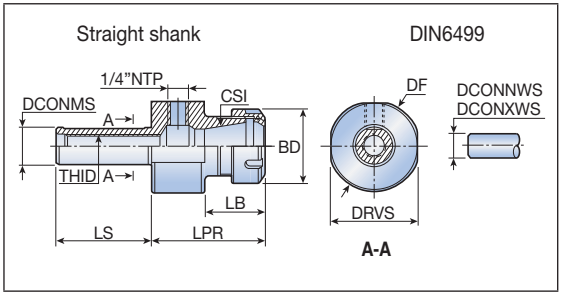


▸ MF D: Mini flat double

ST-ER-S

Straight shanks - Internal coolant





Designation		Dimension (mm)										
		DCONMS	CSI	DCONNWS	DCONXWS	DF	BD	LPR	LB	LS	THID	DRVS
ST	**20x65 ER20 S**	20	ER20	1.0	13.0	40	34	63	31.0	65	M12	34
	20x65 ER25 S	20	ER25	1.0	16.0	54	42	72	32.0	65	M12	51
	25x65 ER32 S	25	ER32	2.0	20.0	63	50	77	41.0	65	M16	59
	32x65 ER32 S	32	ER32	2.0	20.0	63	50	77	41.0	65	M18x1.5	59
	40x75 ER32 S	40	ER32	2.0	20.0	63	50	77	41.0	75	M22x1.5	59

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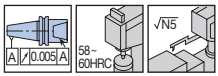
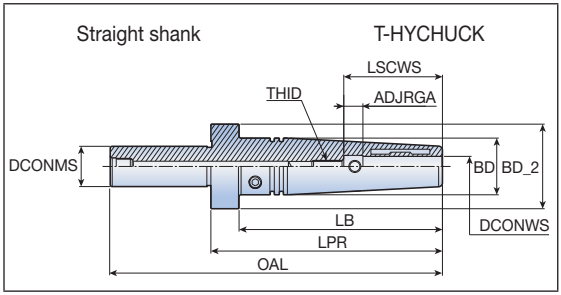
ST-THCR

Adjustable hydraulic chucks





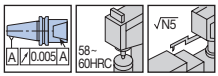
Designation		Dimension (mm)										
		DCONMS	DCONWS	BD	BD_2	LPR	LB	ADJRGA	LSCWS	THID	Hex Key	OAL
ST20	**THCR 6-165**	20	6	24	42	115	101	10	41.0	M5X0.8	4.0	165
	THCR 8-165	20	8	26	42	115	101	10	41.0	M6X1.0	4.0	165
	THCR 10-165	20	10	28	42	115	101	10	48.0	M8X1.0	4.0	165
	THCR 12-165	20	12	30	42	115	101	10	53.0	M10X1.0	4.0	165
	THCR 16-165	20	16	28	42	115	101	10	58.0	M12X1.0	4.0	165
	THCR 20-165	20	20	31.5	42	115	101	10	58.0	M16X1.0	5.0	165
	THCR 20-215	20	20	31.5	42	165	151	10	58.0	M16X1.0	5.0	215

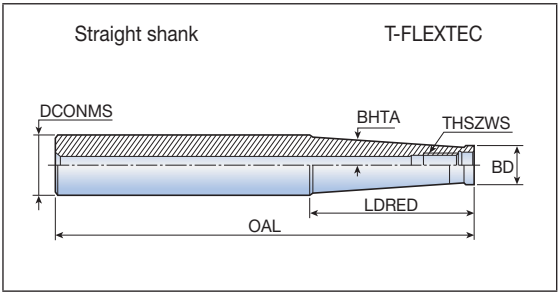
G162-G163 G197-G198

- Consult the user guide for relevant information including: insertion depth and proper use
- Clamping wrench should be ordered separately

S M-L-C

Straight shanks with internal coolant hole

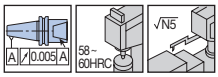


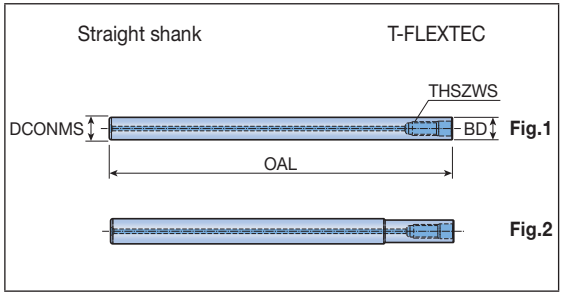


Designation	Dimension (mm)						Shank type
	THSZWS	DCONMS	BD	OAL	LDRED	BHTA	
S M06 - L60 C10	M06	10	9.7	60	20.0	-	C
L105-C12	M06	12	9.7	105	60.0	1.2	C
L125-C16	M06	16	9.7	125	60.0	3.3	C
S M08 - L73 C16	M08	16	13.0	73	25.0	-	C
L128-C 16	M08	16	13.0	128	80.0	0.9	C
L170-C20	M08	20	13.0	170	66.8	3.3	C
S M10 - L80 C20	M10	20	18.0	80	30.0	-	C
L130-C20	M10	20	18.0	130	80.0	0.6	C
L200-C25	M10	25	19.0	200	57.2	3.3	C
S M12 - L86-C25	M12	25	21.0	86	30.0	5.1	C
L200-C32	M12	32	21.0	200	78.0	4.4	C
S M16 - L95-C32	M16	32	29.0	95	35.0	1.7	C
L230-C32	M16	32	29.0	230	50.0	1.8	C

S M-CT-L (M04/06)

Carbide T-FLEXTEC shanks

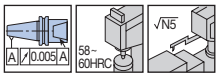


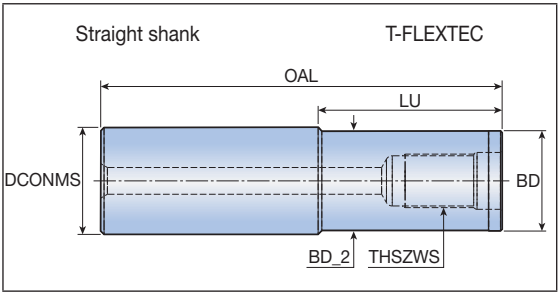


Designation	Dimension (mm)				Coolant hole	Fig.
	THSZWS	DCONMS	BD	OAL		
S M04 - CT08-20-L100	M04	8	7.8	100	●	2
CT08-40-L150-B	M04	8	7.8	150	x	2
S M06 - CT10-L100	M06	10	10	100	●	1
CT10-L150	M06	10	10	150	●	1
CT12-L100	M06	12	12	100	●	1
CT12-L150	M06	12	12	150	●	1

S M-CT-L (M08/10/12/16)

Carbide T-FLEXTEC shanks with internal coolant hole

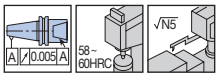


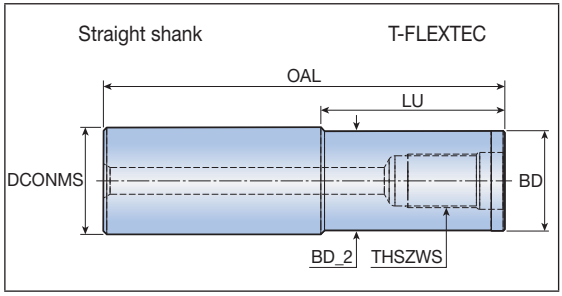


Designation	Dimension (mm)					
	THSZWS	DCONMS	BD	BD_2	OAL	LU
S M08-CT16 - 20-L80	M08	16	15.3	15.3	80	20
40-L100	M08	16	15.3	15.3	100	40
80-L150	M08	16	15.3	15.3	150	80
100-L200	M08	16	13.0	12.5	200	100
140-L200	M08	16	15.3	15.3	200	140
180-L250	M08	16	15.3	15.3	250	180
S M10-CT20 - 20-L80	M10	20	18.5	18.5	80	20
40-L100	M10	20	18.5	18.5	100	40
80-L150	M10	20	18.5	18.5	150	80
100-L200	M10	20	18.5	18.5	200	100
130-L250	M10	20	18.0	17.5	250	130
140-L200	M10	20	18.0	17.5	200	140
140-L200-N	M10	20	18.5	18.5	200	140
180-L250	M10	20	18.0	17.5	250	180
180-L250-N	M10	20	18.5	18.5	250	180
180-L300	M10	20	18.0	17.5	300	180
230-L300	M10	20	18.0	17.5	300	230
S M12-CT25 - 40-L100	M12	25	24	24.0	100	40
80-L150	M12	25	21	20.5	150	80
80-L150-N	M12	25	24	24.0	150	80
100-L200	M12	25	21	20.5	200	100
100-L200-N	M12	25	24	24.0	200	100
130-L250	M12	25	21	20.5	250	130
140-L200	M12	25	21	20.5	200	140
180-L250	M12	25	24	24.0	250	180
180-L250-B	M12	25	21	20.5	250	180
180-L300	M12	25	21	20.5	300	180
180-L300-N	M12	25	24	24.0	300	180
230-L300	M12	25	21	20.5	300	230

S M-CT-L (M08/10/12/16)

Carbide T-FLEXTEC shanks with internal coolant hole

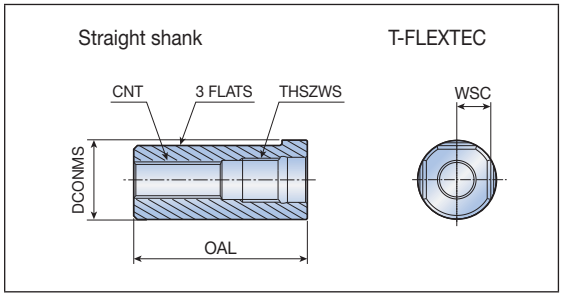




Designation	Dimension (mm)					
	THSZWS	DCONMS	BD	BD_2	OAL	LU
S M16-CT32 - 40-L100	M16	32	29	29.0	100	40
80-L150	M16	32	29	29.0	150	80
100-L200	M16	32	29	29.0	200	100
130-L250	M16	32	29	29.0	250	130
140-L200	M16	32	29	29.0	200	140
180-L250	M16	32	29	29.0	250	180
180-L300	M16	32	29	29.0	300	180
230-L300	M16	32	29	29.0	300	230
230-L350	M16	32	29	29.0	350	230
280-L350	M16	32	29	29.0	350	280

TFLEX-TCD-M12

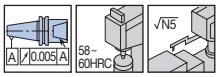
T-FLEXTEC shank

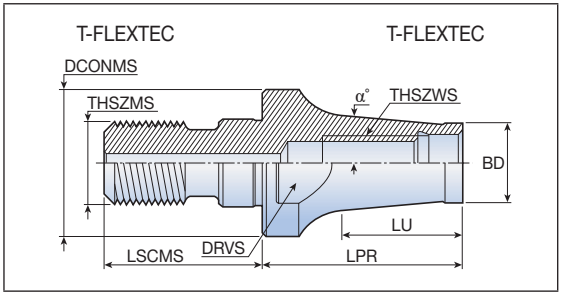


Designation	Dimension (mm)				CNT
	THSZWS	DCONMS	OAL	WSC	
TFLEX 160x36-TCD-M12	M12	16	36	7.5	UNF 5/16
1905x36-TCD-M12	M12	19.05	36	8.5	UNF 5/16
200x36-TCD-M12	M12	20	36	8.5	G 1/8
220x48-TCD-M12	M12	22	48	9.5	G 1/8
250x54-TCD-M12	M12	25	54	11	G 1/8
254x54-TCD-M12	M12	25.4	54	11	G 1/8

CAB M-M

Reducers



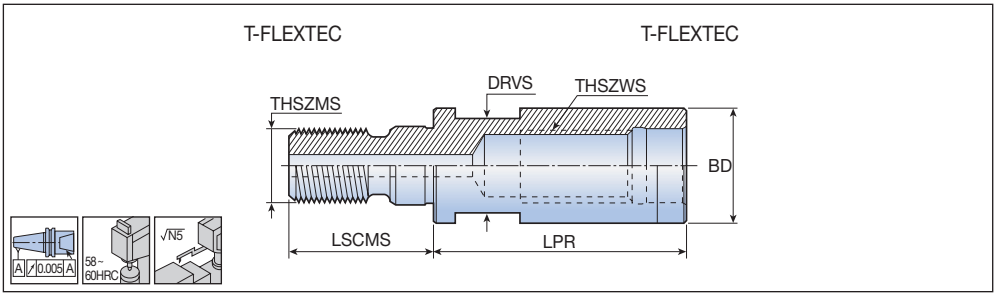


Designation	Dimension (mm)								
	THSZWS	THSZMS	BD	DCONMS	LPR	LSCMS	LU	DRVS	α°
CAB M06M08	M06	M08	9.7	13	30	17.5	24.8	9.5	5.7
M08M10	M08	M10	13.0	18	40	20.0	33.4	15.0	5.2
M10M12	M10	M12	18.0	21	45	22.0	36.4	17.0	2.5
M12M16	M12	M16	21.0	29	50	25.0	42.5	25.0	6.3

▸ With coolant holes

CAB M-M-C

Extensions

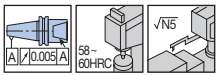


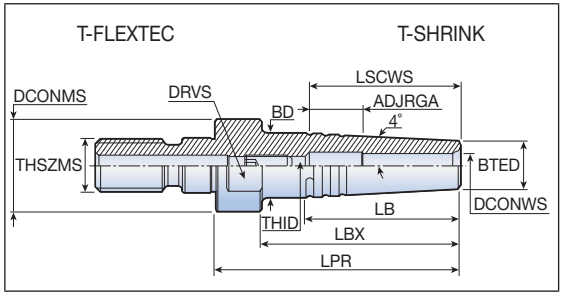
Designation	Dimension (mm)					
	THSZWS	THSZMS	BD	LPR	LSCMS	DRVS
CAB M08M08-C	M08	M08	13	30	17.5	9.6
M10M10-C	M10	M10	18	35	20.0	15.0
M12M12-C	M12	M12	21	40	22.0	17.0
M16M16-C	M16	M16	29	40	25.0	25.0

▸ With coolant holes

CDP M-SRK

Adapters with SRK T-SHRINK





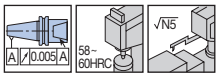
Designation		Dimension (mm)												
		THSZMS	DCONWS	BTED	BD	DCONMS	LPR	LBX	LB	ADJRGA	LSCWS	THID	DRVS	Hex key
CDP M10	**SRK 3x40**	M10	3	10	14	18	40	31.5	29.1	6	16	M4	15	2.0
	SRK 4x40	M10	4	10	14	18	40	31.5	29.1	7	19	M4	15	2.0
	SRK 5x40	M10	5	10	14	18	40	31.5	28.4	10	25	M4	15	2.0
CDP M12	**SRK 3x45**	M12	3	10	14	21	45	36.5	28.8	6	16	M5	18	2.5
	SRK 4x45	M12	4	10	14	21	45	36.5	28.8	6	18	M5	18	2.5
	SRK 5x45	M12	5	10	14	21	45	36.5	28.8	10	25	M5	18	2.5
	SRK 6x45	M12	6	11	15	21	45	36.5	28.4	10	28	M5	18	2.5
	SRK 8x45	M12	8	14	18	21	45	36.5	28.8	10	35	M5	18	2.5
	SRK 10x45	M12	10	16	21	21	45	-	35.6	10	40	M5	18	2.5
	SRK 12x45	M12	12	20	25	21	45	-	36.0	10	42	M5	18	2.5

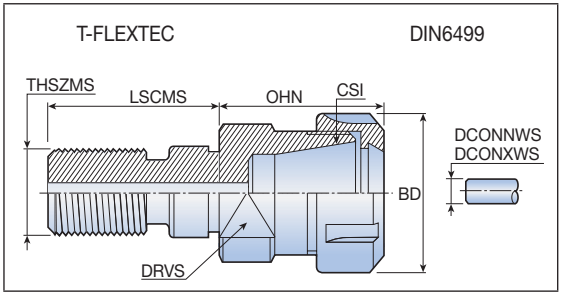
▸ With coolant holes

G188-G190 G199

CDP ER-M

Adapters with ER collet chuck



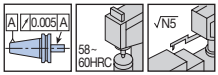


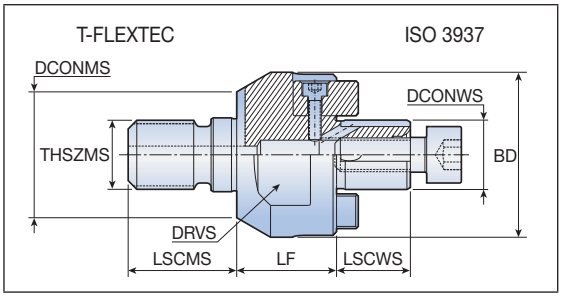
Designation		Dimension (mm)							
		CSI	THSZMS	DCONNWS	DCONXWS	BD	OHN	LSCMS	DRVS
CDP	**ER11 M10 M**	ER11	M10	0.5	7.0	16	27.0	20	15
	ER11 M12 M	ER11	M12	0.5	7.0	16	27.0	22	17
	ER16 M10 M	ER16	M10	0.5	10.0	22	38.1	20	17
	ER16 M12 M	ER16	M12	0.5	10.0	22	37.1	22	17
	ER16 M16	ER16	M16	0.5	10.0	28	36.6	25	25
	ER20 M16	ER20	M16	1.0	13.0	34	45.5	25	25
	ER25 M16	ER25	M16	1.0	16.0	42	44.5	25	28

▸ With coolant holes

CAB M-SEM-C

Shell mill arbors





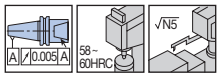
Designation		Dimension (mm)							
		THSZMS	DCONWS	DCONMS	BD	LF	LSCWS	LSCMS	DRVS
CAB	**M16 SEM 16C**	M16	16	29	38	23	17	25	32

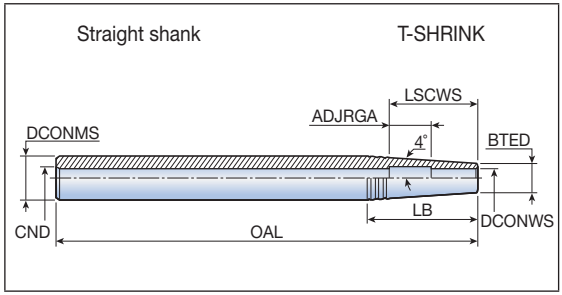
G151-G159 G176-G177 G183

▸ With coolant holes

ST-SRK

Straight shanks with thermal chuck



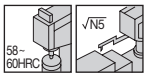


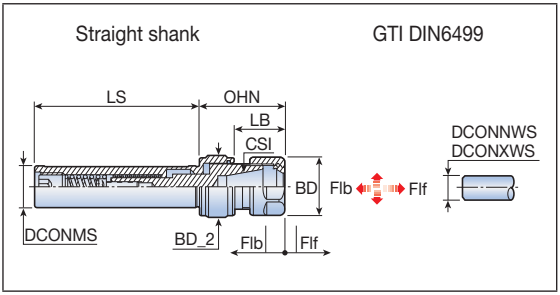
	Designation	Dimension (mm)							
		DCONMS	DCONWS	CND	BTED	OAL	LB	ADJRGA	LSCWS
ST	12x160 SRK3	12	3	4	10	160	14.3	-	10
	12x160 SRK4	12	4	4	10	160	14.3	-	27
	16x160 SRK3	16	3	6	10	160	43.0	-	10
	16x160 SRK4	16	4	6	10	160	43.0	-	12
	16x160 SRK5	16	5	6	10	160	43.0	-	15
	16x160 SRK6	16	6	6	11	160	35.5	17	35
	20x200 SRK5	20	5	6	10	200	71.5	-	15
	20x200 SRK6	20	6	6	11	200	64.5	22	40
	20x200 SRK8	20	8	6	14	200	43.0	15	40
	25x200 SRK6	25	6	8	11	200	100.0	17	35
	25x200 SRK8	25	8	8	14	200	78.6	15	40
	25x200 SRK10	25	10	8	16	200	64.3	20	50
	25x200 SRK12	25	12	8	20	200	35.7	20	52

G188-G190
G199

GTI ER-ST

GTI tap attachments





	Designation	Dimension (mm)												
		DCONMS	CSI	Tap$_{min}$	Tap$_{max}$	DCONNWS	DCONXWS	BD	BD_2	OHN	LB	LS	Flf	Flb
GTI	**ER11 ST16x150 M**	16	ER11	M2	M7	0.5	7.0	16	-	-	19.0	150	6	3
	ER16 ST20x80	20	ER16	M3	M10	0.5	10.0	28	29.5	41.6	24.6	80	8	3
	ER20 ST20x80	20	ER20	M4	M14	1.0	13.0	34	33.5	49.0	28.0	80	8	3
	ER25 ST25x80	25	ER25	M5	M16	1.0	16.0	42	40.5	53.0	32.0	80	9	4
	ER32 ST25x80	25	ER32	M6	M20	1.0	16.0	50	56.5	77.2	32.0	80	9	4
	ER40 ST32x80	32	ER40	M6	M27	2.0	20.0	63	56.5	95.2	51.0	80	9	4

G151-G159

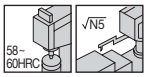
G176-G177

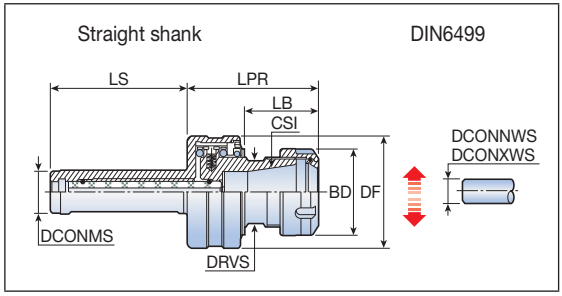
G183

G200

GFI ST-ER

GFI floating reamer ER collet chucks



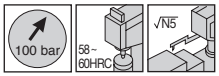


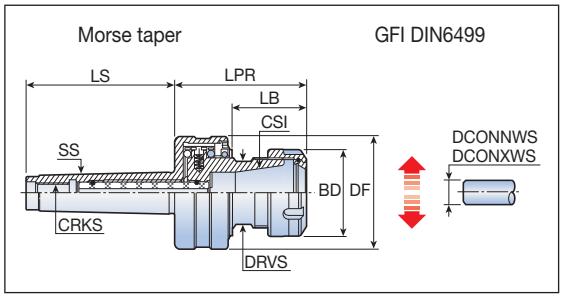
Designation		Dimension (mm)										
		DCONMS	CSI	DCONNWS	DCONXWS	DF	BD	LPR	LB	LS	Radial float	DRVS
GFI	ST20 ER20	20	ER20	1.0	13.0	50	34	55.5	34.5	65	1.0	22
	ST25 ER32	25	ER32	2.0	20.0	65	50	76.9	45.9	80	1.6	36

▸ Max. 2,000RPM

GFI MT-ER

Morse taper GFI reamer holders





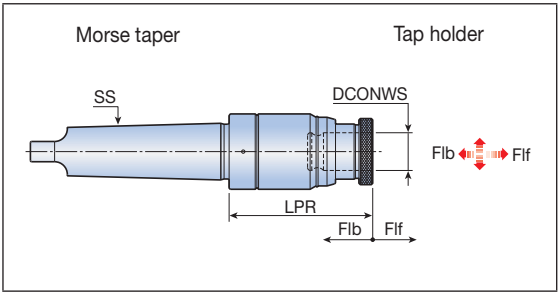
Designation		Dimension (mm)											
		SS	CSI	DCONNWS	DCONXWS	DF	BD	LPR	LB	LS	CRKS	Radial float	DRVS
GFI	MT2 ER20	2	ER20	1.0	13.0	50	34	60.5	34.5	64	M10	1.0	22
	MT3 ER32	3	ER32	2.0	20.0	65	50	81.9	45.9	81	M12	1.6	36

▸ Max. 2,000RPM

G151-G159 G176-G177 G183

MTA-TC

Tap holders - MTA



Designation		Dimension (mm)							
		SS	Tap_{min}	Tap_{max}	DCONWS	LPR	Flb	Flf	Tap adapter
MTA3	**TC12-90**	12	M3	M12	19	90	6.5	12	TA1
	TC22-115	22	M6	M24	31	115	14.5	13	TA2
MTA4	**TC12-105**	12	M3	M12	19	105	6.5	12	TA1

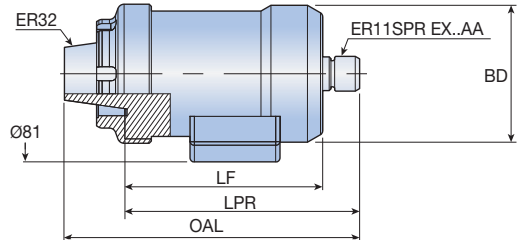
G174 G200

TYPHOON

TJS GJET ER32
S.N 373599061
Min.20-Max.40 bar
42,783 RPM
Connect
List
Disconnect
Help

TJS GJET ER

Coolant driven high-speed compact spindles with ER32 shank



Designation	Dimension (mm)					Kg
	DCONXWS	LF	LPR	OAL	BD	
TJS GJET ER32	7.0	92.0	109.0	136.0	63.0	1.3

- Minimum coolant pressure 20 bar and flow rate 12 ℓ/min
- The spindle provides only external strong coolant jet around the tool
- DCONXWS: Maximum tool shank diameter

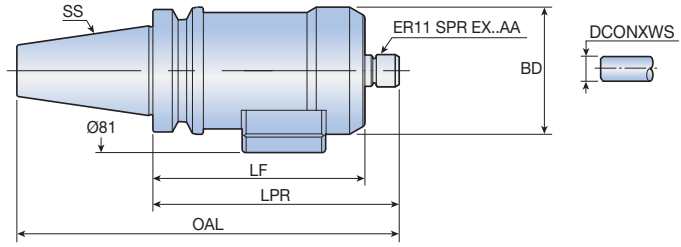
Spare parts

Designation	Mini ER nut	ER wrench	Key	Locking pin	Display*
TJS-GJET-ER32	NUT ER11 GHS	WRENCH ER11 SMS	HW 2.0	TJS SHAFT LOCK KEY	TJS TSD DISPLAY

- *: Optional, sold separately

TJS GJET BT

Coolant driven high-speed compact spindles with BT shank



Designation		Dimension (mm)						Kg
		SS	DCONXWS	LF	LPR	BD	OAL	
TJS	**GJET BT30**	30	7.0	124.0	141.0	63.0	189.4	1.6
	GJET BT40	40	7.0	107.0	124.0	63.0	189.5	1.8

- Minimum coolant pressure 20 bar and flow rate 12 ℓ/min
- The spindle provides only external strong coolant jet around the tool
- DCONXWS: Maximum tool shank diameter

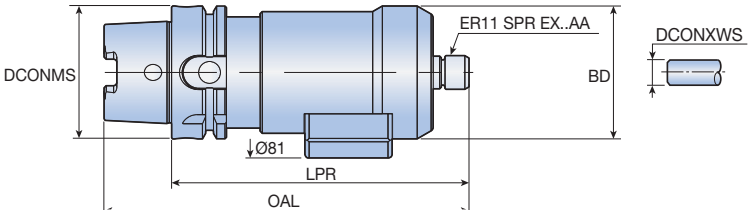
Spare parts

Designation	Mini ER nut	ER wrench	Key	Locking pin	Display*
TJS-GJET-BT	NUT ER11 GHS	WRENCH ER11 SMS	HW 2.0	TJS SHAFT LOCK KEY	TJS TSD DISPLAY

- *: Optional, sold separately

TJS GJET HSK

Coolant driven high-speed compact spindles with HSK shank



Designation	Dimension (mm)					Kg
	DCONMS	DCONXWS	LPR	OAL	BD	
TJS GJET HSK A63	63.0	7.0	141.0	173.0	63.0	1.8

- Minimum coolant pressure 20 bar and flow rate 12 ℓ/min
- The spindle provides only external strong coolant jet around the tool
- DCONXWS: Maximum tool shank diameter

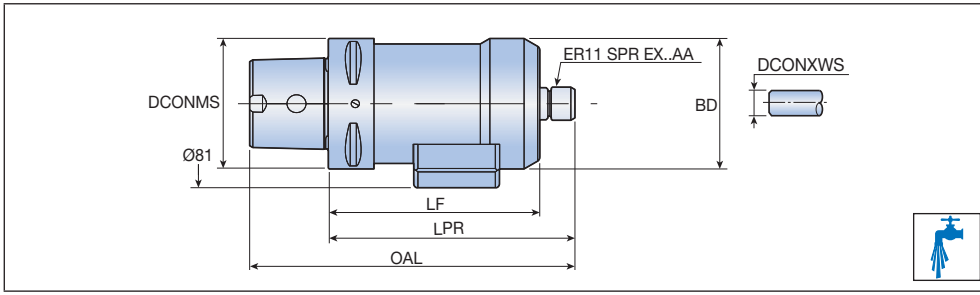
Spare parts

Designation	Mini ER nut	ER wrench	Key	Locking pin	Display*
TJS-GJET-HSK A63	NUT ER11 GHS	WRENCH ER11 SMS	HW 2.0	TJS SHAFT LOCK KEY	TJS TSD DISPLAY

- *: Optional, sold separately

TJS GJET C

Coolant driven high-speed compact spindles with C-ADAPTER shank



Designation	Dimension (mm)						Kg
	DCONMS	DCONXWS	LF	LPR	OAL	BD	
TJS GJET C5	50.0	7.0	112.0	129.0	129.0	63.0	1.5

- Minimum coolant pressure 20 bar and flow rate 12 ℓ/min
- The spindle provides only external strong coolant jet around the tool
- DCONXWS: Maximum tool shank diameter

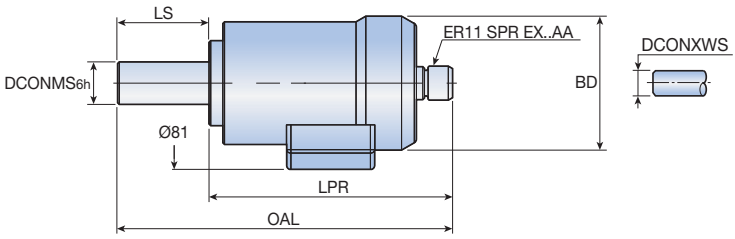
Spare parts

Designation	Mini ER nut	ER wrench	Key	Locking pin	Display*
TJS-GJET-C	NUT ER11 GHS	WRENCH ER11 SMS	HW 2.0	TJS SHAFT LOCK KEY	TJS TSD DISPLAY

- *: Optional, sold separately

TJS GJET ST

Coolant driven high-speed compact spindles with cylindrical shank



Designation		Dimension (mm)						Kg
		DCONMS	DCONXWS	LS	LPR	OAL	BD	
TJS	**GJET ST20**	20.0	7.0	43.0	115.0	158.0	63.0	1.2

- Minimum coolant pressure 20 bar and flow rate 12 ℓ/min
- The spindle provides only external strong coolant jet around the tool
- DCONXWS: Maximum tool shank diameter

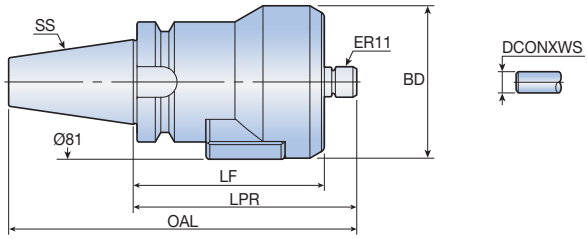
Spare parts

Designation	Mini ER nut	ER wrench	Key	Locking pin	Display*
TJS-GJET-ST	NUT ER11 GHS	WRENCH ER11 SMS	HW 2.0	TJS SHAFT LOCK KEY	TJS TSD DISPLAY

- *: Optional, sold separately

TJS HPC BT

High-pressure coolant driven spindle with BT shank for small diameter cutting tools



Designation	Dimension (mm)						Kg
	SS	DCONXWS	LF	LPR	OAL	BD	
TJS HPC BT40	40	7.0	100.0	117.0	183.0	80	2.0

- Coolant pressure: 40 - 70 bar and flow rate: 16 - 22 ℓ/min
- Rotational spindle speed [rpm]: 25,000 - 45,000 (rev/min)
- The spindle provides only external strong coolant jet around the tool
- DCONXWS: Maximum diameter of tools

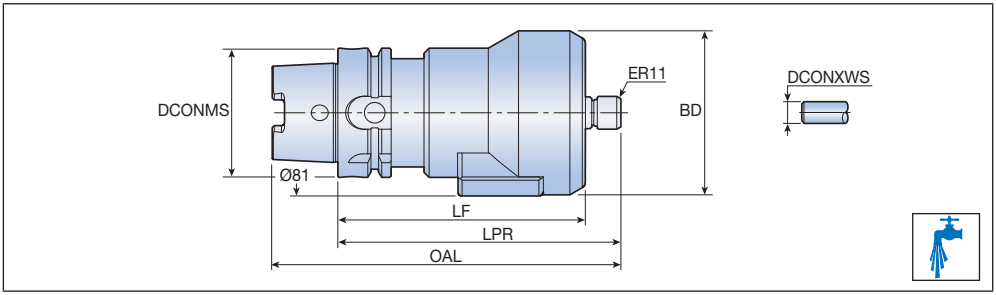
Spare parts

Designation	Mini ER nut	ER wrench	Key	Locking pin	Display*
TJS HPC BT40	NUT ER11 GHS	WRENCH ER11 SMS	HW 2.0	TJS SHAFT LOCK KEY	TJS TSD DISPLAY

- *: Optional, sold separately

TJS HPC HSK A

High-pressure coolant driven spindle with HSK shank for small diameter cutting tools



Designation	Dimension (mm)						Kg
	DCONMS	DCONXWS	LF	LPR	OAL	BD	
TJS HPC HSK A63	63	7.0	121	138	170	80	2.0

- Coolant pressure: 40 - 70 bar and flow rate: 16 - 22 ℓ/min
- Rotational spindle speed [rpm]: 25,000 - 45,000 (rev/min)
- The spindle provides only external strong coolant jet around the tool
- DCONXWS: Maximum diameter of tools

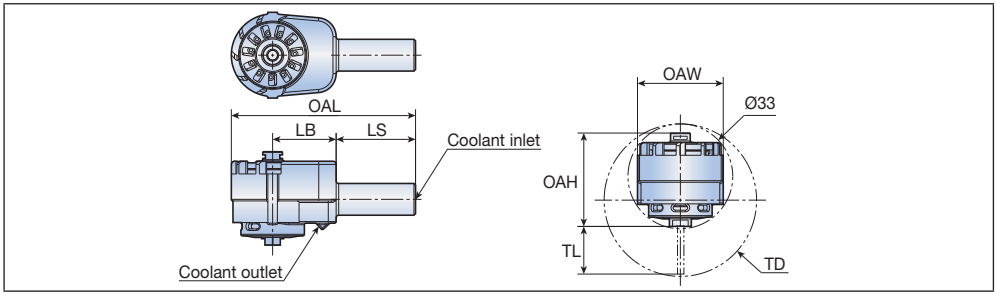
Spare parts

Designation	Mini ER nut	ER wrench	Key	Locking pin	Display*
TJS HPC HSK A63	NUT ER11 GHS	WRENCH ER11 SMS	HW 2.0	TJS SHAFT LOCK KEY	TJS TSD DISPLAY

- *: Optional, sold separately

TJS M90

Coolant driven high-speed compact angular head spindle

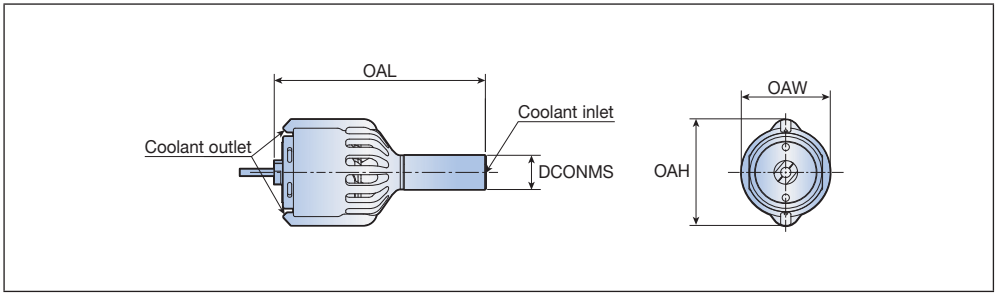


Designation	Dimension (mm)					
	DCONMS	LS	LB	OAL	OAH	OAW
TJS M90-3.0	10	25	20	58	29	27

- Coolant pressure 20 – 40 bar and flow rate 10 - 20 ℓ/min
- Rotational spindle speed [rpm]: 35,000–53,000 (rev/min)
- The spindle provides only external strong coolant jet around the tool
- TD: TL (Tool Length)+33 mm

TJS M00

Coolant driven high-speed compact spindle



Designation	Dimension (mm)				
	DCONMS	LS	OAL	OAH	OAW
TJS M00-3.0	10	23.8	61.8	26	31

- Coolant pressure: 15 - 40 bar and flow rate: 10 - 20 ℓ/min
- Rotational spindle speed [rpm]: 18,000 - 40,000 (rev/min)
- The spindle provides only external strong coolant jet around the tool

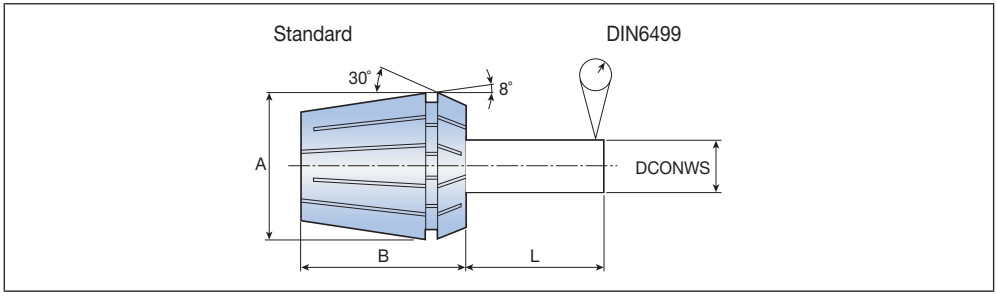
Spare parts

Designation	Ø3 collet	Lock key	Wrench	Nozzle	Collet*
			(1) (2)		
TJS M90-3.0	TJS-COLLET 3.0		TJS MJ90 WRENCH-2430		* TJS-COLLET 1.6 * TJS-COLLET 2.0 * TJS-COLLET 3.175
TJS M00-3.0	TJS-COLLET 3.0	TJS MJ-SHAFTLOCK	TJS MJ-WRENCH COLLET	TJS MJ-PLUG COOLANT	* TJS-COLLET 1.6 * TJS-COLLET 2.0

- *: Optional, sold separately
- (1): For TJS M90, (2): For TJS M00

Collet

Collet



Precision

(mm)

DCONWSrange	L	Run-out		
		Standard precision	Ultra precision	DIN6499
1.0-1.6	**6**	0.01	0.005	-
1.6-3.0	**10**	0.01	0.005	0.015
3.0-6.0	**16**	0.01	0.005	0.015
6.0-10.0	**25**	0.01	0.005	0.015
10.0-18.0	**40**	0.01	0.005	0.020
18.0-26.0	**50**	0.01	0.005	0.020
26.0-34	**60**	-	-	0.025

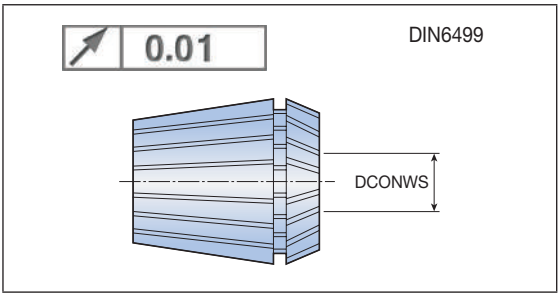
Dimension

(mm)

Type	A	B
ER11	11.5	18
ER16	17.0	27
ER20	21.0	31
ER25	26.0	35
ER32	33.0	40
ER40	41.0	46
ER50	52.0	60

ER-SPR

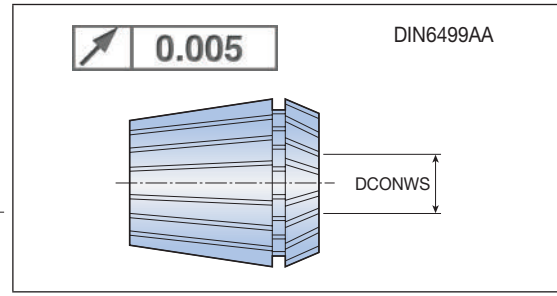
ER spring collets - Precision



DCONWSrange		ER11	ER16	ER20	ER25	ER32	ER40	ER50
0.5-1		ER11 SPR 0.5-1.0	ER16 SPR 0.5-1.0					
1-2	**1-1.5**	1.0-1.5	1.0-1.5	ER20 SPR1.0-1.5	ER25 SPR1.0-1.5			
	1.5-2	1.5-2.0	1.5-2.0	1.5-2.0	1.5-2.0			
2-3	**2-2.5**	2.0-2.5	2-3	2-3	2-3	ER32 SPR 2-3		
	2.5-3	2.5-3.0						
3-4	**3-3.5**	3.0-3.5	3-4	3-4	3-4	3-4	ER40 SPR 3-4	
	3.5-4	3.5-4.0						
4-5	**4-4.5**	4.0-4.5	4-5	4-5	4-5	4-5	4-5	
	4.5-5	4.5-5.0						
5-6	**5-5.5**	5.0-5.5	5-6	5-6	5-6	5-6	5-6	
	5.5-6	5.5-6.0						
6-7	**6-6.5**	6.0-6.5	6-7	6-7	6-7	6-7	6-7	
	6.5-7	6.5-7.0						
7-8			7-8	7-8	7-8	7-8	7-8	
8-9			8-9	8-9	8-9	8-9	8-9	
9-10			9-10	9-10	9-10	9-10	9-10	
10-11				10-11	10-11	10-11	10-11	ER50 SPR 10-12
11-12				11-12	11-12	11-12	11-12	ER50 SPR 10-12
12-13				12-13	12-13	12-13	12-13	12-14
13-14					13-14	13-14	13-14	12-14
14-15					14-15	14-15	14-15	14-16
15-16					15-16	15-16	15-16	14-16
16-17						16-17	16-17	16-18
17-18						17-18	17-18	16-18
18-19						18-19	18-19	18-20
19-20						19-20	19-20	18-20
20-21							20-21	20-22
21-22							21-22	20-22
22-23							22-23	22-24
23-24							23-24	22-24
24-25							24-25	24-26
25-26							25-26	24-26
26-28								26-28
28-30								28-30
30-32								30-32
32-34								32-34

ER-SPR-AA

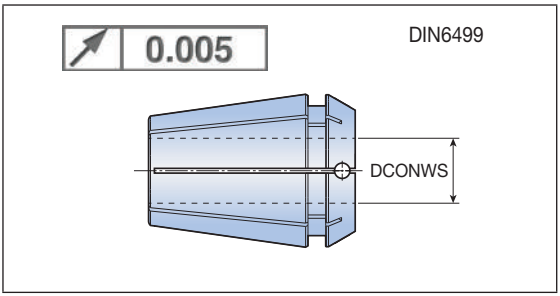
ER spring collets - Ultra precision “AA”



DCONWSrange		ER11	ER16	ER20	ER25	ER32	ER40
0.5-1		ER11 SPR 0.5-1.0AA	ER16 SPR 0.5-1AA				
1-2	**1-1.5**	1.0-1.5AA					
	1.5-2	1.5-2.0AA	1.5-2.0 AA	ER20 SPR 1.5-2.0 AA	ER25 SPR 1.5-2.0 AA		
2-3	**2-2.5**	2.0-2.5AA	2-3AA	2-3AA	2-3AA	ER32 SPR 2-3AA	
	2.5-3	2.5-3.0AA					
3-4	**3-3.5**	3.0-3.5AA	3-4AA	3-4AA	3-4AA	3-4AA	ER40 SPR 3-4AA
	3.5-4	3.5-4.0AA					
4-5	**4-4.5**	4.0-4.5AA	4-5AA	4-5AA	4-5AA	4-5AA	4-5AA
	4.5-5	4.5-5.0AA					
5-6	**5-5.5**	5.0-5.5AA	5-6AA	5-6AA	5-6AA	5-6AA	5-6AA
	5.5-6	5.5-6.0AA					
6-7	**6-6.5**	6.0-6.5AA	6-7AA	6-7AA	6-7AA	6-7AA	6-7AA
	6.5-7	6.5-7.0AA					
7-8			7-8AA	7-8AA	7-8AA	7-8AA	7-8AA
8-9			8-9AA	8-9AA	8-9AA	8-9AA	8-9AA
9-10			9-10AA	9-10AA	9-10AA	9-10AA	9-10AA
10-11				10-11AA	10-11AA	10-11AA	10-11AA
11-12				11-12AA	11-12AA	11-12AA	11-12AA
12-13				12-13AA	12-13AA	12-13AA	12-13AA
13-14					13-14AA	13-14AA	13-14AA
14-15					14-15AA	14-15AA	14-15AA
15-16					15-16AA	15-16AA	15-16AA
16-17						16-17AA	16-17AA
17-18						17-18AA	17-18AA
18-19						18-19AA	18-19AA
19-20						19-20AA	19-20AA
20-21							20-21AA
21-22							21-22AA
22-23							22-23AA
23-24							23-24AA
24-25							24-25AA
25-26							25-26AA

ER-SEAL-AA

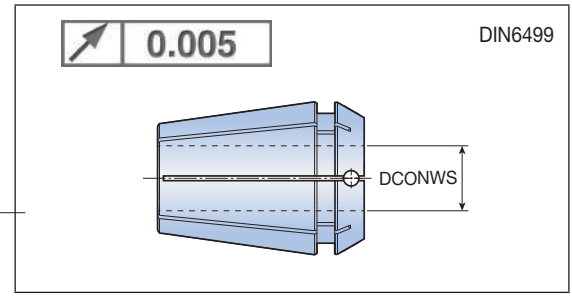
ER sealed collets - Ultra precision



DCONWSrange	ER11	ER16	ER20	ER25	ER32	ER40
3	ER11 SEAL 3 AA	ER16 SEAL 3 AA	ER20 SEAL 3 AA	ER25 SEAL 3 AA	ER32 SEAL 3 AA	
4	4 AA	4 AA	4 AA	4 AA	4 AA	
5	5 AA	5 AA	5 AA	5 AA	5 AA	
6	6 AA	6 AA	6 AA	6 AA	6 AA	ER40 SEAL 6 AA
7		7 AA	7 AA	7 AA	7 AA	
8		8 AA	8 AA	8 AA	8 AA	8 AA
9		9 AA	9 AA	9 AA	9 AA	
10		10 AA	10 AA	10 AA	10 AA	10 AA
11			11 AA	11 AA	11 AA	
12			12 AA	12 AA	12 AA	12 AA
13				13 AA	13 AA	
14				14 AA	14 AA	14 AA
15				15 AA	15 AA	
16				16 AA	16 AA	16 AA
17					17 AA	
18					18 AA	18 AA
19					19 AA	
20					20 AA	20 AA
21						
22						22 AA
23						
24						
25						25 AA

ER-SEAL-AA-JET

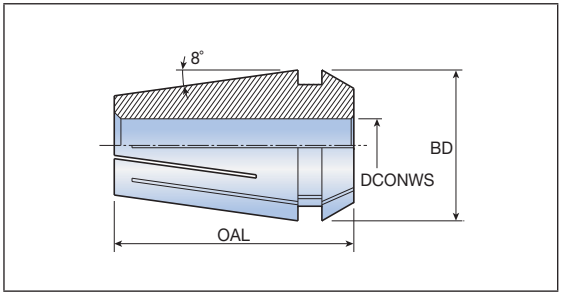
ER sealed jet collets – Ultra precision



DCONWS	ER16	ER20	ER25	ER32	ER40
4	ER16 SEAL 4 AA JET	ER20 SEAL 4 AA JET	ER25 SEAL 4 AA JET	ER32 SEAL 4 AA JET	
5	5 AA JET	5 AA JET	5 AA JET	5 AA JET	
6	6 AA JET	6 AA JET	6 AA JET	6 AA JET	ER40 SEAL 6 AA JET
7	7 AA JET	7 AA JET	7 AA JET	7 AA JET	
8	8 AA JET	8 AA JET	8 AA JET	8 AA JET	8 AA JET
9	9 AA JET	9 AA JET	9 AA JET	9 AA JET	
10	10 AA JET	10 AA JET	10 AA JET	10 AA JET	10 AA JET
11		11 AA JET	11 AA JET	11 AA JET	
12		12 AA JET	12 AA JET	12 AA JET	12 AA JET
13			13 AA JET	13 AA JET	
14			14 AA JET	14 AA JET	14 AA JET
15			15 AA JET	15 AA JET	
16			16 AA JET	16 AA JET	16 AA JET
17				17 AA JET	
18				18 AA JET	18 AA JET
19				19 AA JET	
20				20 AA JET	20 AA JET
21					
22					22 AA JET
23					
24					
25					25 AA JET

EROH

ER collets for internal coolant

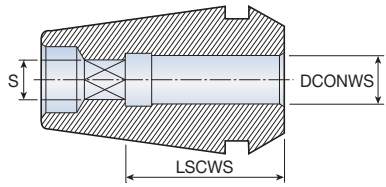


Designation	Dimension (mm)		
	DCONWSrange	BD	OAL
EROH 16	4.0-10.0	17	27.5
EROH 20	6.0-13.0	21	31.5
EROH 25	6.0-16.0	26	34.0
EROH 32	8.0-20.0	33	40.0
EROH 40	10.0-26.0	41	46.0

DCONWS	ER16	ER20	ER25	ER32	ER40
4	EROH 16-4				
5	EROH 16-5				
6	EROH 16-6	EROH 20-6	EROH 25-6		
7	EROH 16-7	EROH 20-7	EROH 25-7		
8	EROH 16-8	EROH 20-8	EROH 25-8	EROH 32-8	
9	EROH 16-9	EROH 20-9	EROH 25-9	EROH 32-9	
10	EROH 16-10	EROH 20-10	EROH 25-10	EROH 32-10	EROH 40-10
11		EROH 20-11	EROH 25-11	EROH 32-11	
12		EROH 20-12	EROH 25-12	EROH 32-12	EROH 40-12
13		EROH 20-13	EROH 25-13	EROH 32-13	
14			EROH 25-14	EROH 32-14	EROH 40-14
15			EROH 25-15	EROH 32-15	
16			EROH 25-16	EROH 32-16	EROH 40-16
17				EROH 32-17	
18				EROH 32-18	EROH 40-18
19				EROH 32-19	
20				EROH 32-20	EROH 40-20
21					
22					EROH 40-22
23					
24					EROH 40-24
25					EROH 40-25
26					

ER TAP (For JIS)

ER type tap collets

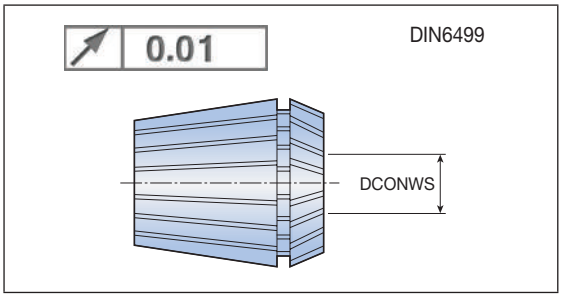


Tap size	Dimension (mm)			ER TAP 16	ER TAP 20	ER TAP 25	ER TAP 32	ER TAP 40
	LSCWS	DCONWS	S					
M4	15	5.0	4.0	ER TAP 16-M4	ER TAP 20-M4	ER TAP 25-M4	ER TAP 32-M4	
M5	15	5.5	4.5	ER TAP 16-M5	ER TAP 20-M5	ER TAP 25-M5	ER TAP 32-M5	
M6	15	6.0	4.5	ER TAP 16-M6	ER TAP 20-M6	ER TAP 25-M6	ER TAP 32-M6	
M8	20	6.2	5.0	ER TAP 16-M8	ER TAP 20-M8	ER TAP 25-M8	ER TAP 32-M8	
M10	20	7.0	5.5	ER TAP 16-M10	ER TAP 20-M10	ER TAP 25-M10	ER TAP 32-M10	ER TAP 40-M10
M12	20	8.5	6.5		ER TAP 20-M12	ER TAP 25-M12	ER TAP 32-M12	ER TAP 40-M12
M14	25	10.5	8.0			ER TAP 25-M14	ER TAP 32-M14	ER TAP 40-M14
M16	25	12.5	10.0			ER TAP 25-M16	ER TAP 32-M16	ER TAP 40-M16
M18	30	14.0	11.0				ER TAP 32-M18	ER TAP 40-M18
M20	30	15.0	12.0				ER TAP 32-M20	ER TAP 40-M20
M22	30	17.0	13.0					ER TAP 40-M22
M24	35	19.0	15.0					ER TAP 40-M24
M27	35	20.0	15.0					ER TAP 40-M27

▸ Tap specification is based on JIS (DIN or ISO standard prepared by special quotation)

SET ER-SPR

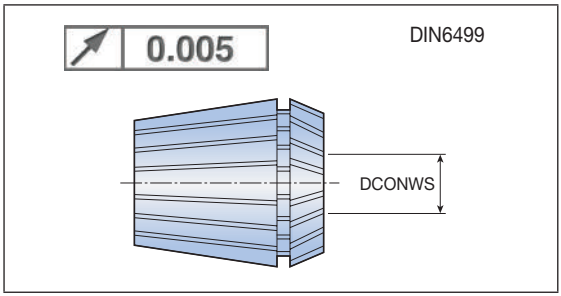
ER spring collet sets



Designation	Pieces / set	DCONWS$_{range}$
SET ER11 SPR 13	13	0.5-7
ER16 SPR 10	10	0.5-10
ER20 SPR 12	12	1-13
ER25 SPR 15	15	1-16
ER32 SPR 18	18	2-20
ER40 SPR 23	23	3-26
ER50 SPR 12	12	10-34

SET ER-SPR-AA

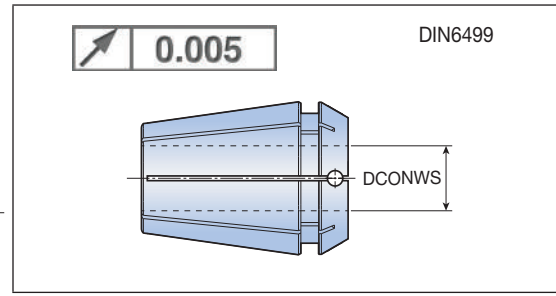
ER spring collet sets – Ultra precision "AA"



Designation	Pieces / set	DCONWS$_{range}$
SET ER11 SPR 13AA	13	0.5-7
ER16 SPR 10AA	10	0.5-10
ER20 SPR 12AA	12	1-13
ER25 SPR 15AA	15	1-16
ER32 SPR 18AA	18	2-20
ER40 SPR 23AA	23	3-26

SET ER-SEAL-AA

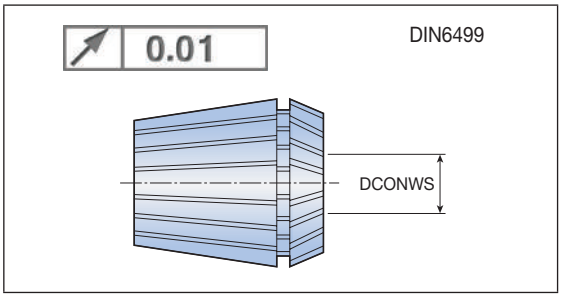
ER sealed collet sets - Ultra precision



Designation	Pieces / set	DCONWS range
SET ER16 SEAL 7 AA	7	4-10
ER20 SEAL 9 AA	9	4-12
ER25 SEAL 13 AA	13	4-16
ER32 SEAL 17 AA	17	4-20
ER40 SEAL 10 AA	10	6-25

SET ER-SPR-EM

ER spring collet sets

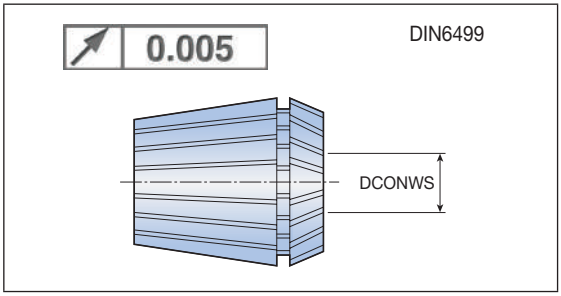


46 ~ 48HRC

Designation	Pieces / set	DCONWS range
SET ER11 SPR 7 EM	7	1,2,3,4,5,6,7
ER16 SPR 8 EM	8	3, 4, 5, 6, 7, 8, 9, 10
ER20 SPR 5 EM	5	4, 6, 8, 10, 12
ER25 SPR 6 EM	6	4, 6, 8, 10, 12, 16
ER32 SPR 6 EM	6	6, 8, 10, 12, 16, 20
ER40 SPR 7 EM	7	6, 8, 10, 12, 16, 20, 25

SET ER-SPR-EM AA

ER spring collet sets – Ultra precision "AA"

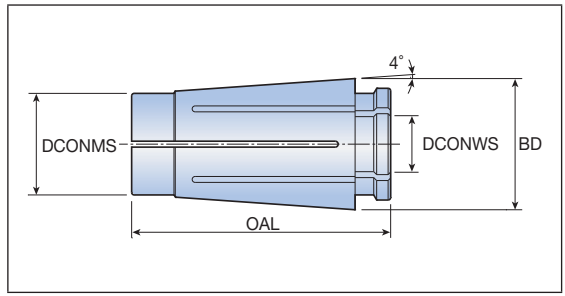


46 ~ 48HRC

Designation	Pieces / set	DCONWS range
SET ER11 SPR 7 EM AA	7	1,2,3,4,5,6,7

TSK

TSK collets

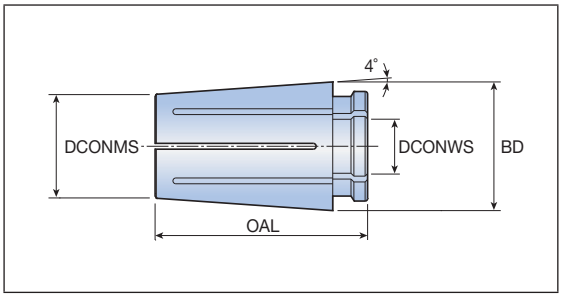


Designation	Dimension (mm)			
	DCONWSrange	BD	DCONMS	OAL
TSK 06	2.0-6.0	10.4	7.5	25.0
TSK 10	2.0-10.0	15.5	12.0	30.6
TSK 16	3.0-16.0	24.6	18.8	45.0
TSK 25	8.0-25.0	35.7	28.8	57.0

DCONWSrange	TSK 06	TSK 10	TSK 16	TSK 25
1.5-2.0	TSK 06-2.0	TSK 10-2.0		
2.5-3.0	TSK 06-3.0	TSK 10-3.0	TSK 16-3.0	
3.5-4.0	TSK 06-4.0	TSK 10-4.0	TSK 16-4.0	
4.5-5.0	TSK 06-5.0	TSK 10-5.0	TSK 16-5.0	
5.5-6.0	TSK 06-6.0	TSK 10-6.0	TSK 16-6.0	
6.5-7.0		TSK 10-7.0	TSK 16-7.0	
7.5-8.0		TSK 10-8.0	TSK 16-8.0	TSK 25-8.0
8.5-9.0		TSK 10-9.0	TSK 16-9.0	
9.5-10.0		TSK 10-10.0	TSK 16-10.0	TSK 25-10.0
10.5-11.0			TSK 16-11.0	
11.5-12.0			TSK 16-12.0	TSK 25-12.0
12.5-13.0			TSK 16-13.0	
13.5-14.0			TSK 16-14.0	TSK 25-14.0
14.5-15.0			TSK 16-15.0	
15.5-16.0			TSK 16-16.0	TSK 25-16.0
16.5-17.0				TSK 25-17.0
17.5-18.0				TSK 25-18.0
18.5-19.0				TSK 25-19.0
19.5-20.0				TSK 25-20.0
20.5-21.0				TSK 25-21.0
21.5-22.0				TSK 25-22.0
22.5-23.0				TSK 25-23.0
23.5-24.0				TSK 25-24.0
24.5-25.0				TSK 25-25.0

TSKC

Internal coolant type collets for TSK chucks

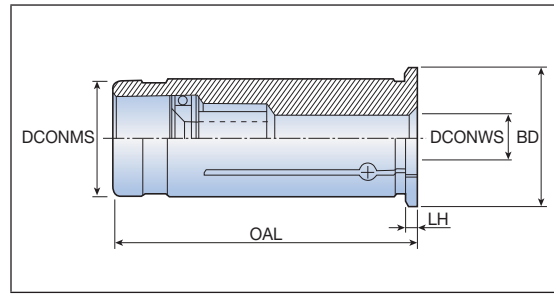


Designation	Dimension (mm)			
	DCONWS range	BD	DCONMS	OAL
TSKC 06	4.0-6.0	10.4	8.00	21.0
TSKC 10	6.0-10.0	15.5	12.50	25.6
TSKC 16	8.0-16.0	24.6	20.12	37.0
TSKC 25	16.0-25.0	35.7	29.70	48.5

DCONWS range	TSKC 06	TSKC 10	TSKC 16	TSKC 25
4	TSKC 06-4.0			
6	TSKC 06-6.0	TSKC 10-6.0		
8		TSKC 10-8.0	TSKC 16-8.0	
9		TSKC 10-9.0		
10		TSKC 10-10.0	TSKC 16-10.0	
12			TSKC 16-12.0	
16			TSKC 16-16.0	TSKC 25-16.0
18				TSKC 25-18.0
20				TSKC 25-20.0
25				TSKC 25-25.0

THC

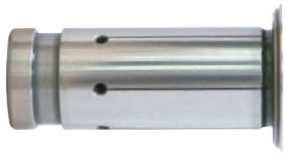
Straight collets for hydraulic chucks

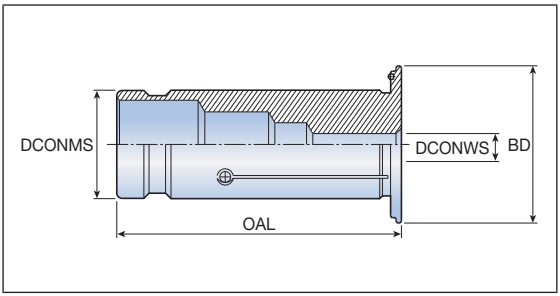


Designation	Dimension (mm)				
	DCONMS	DCONWS	BD	OAL	LH
THC 12-3	12	3	16	46.5	2
12-4	12	4	16	46.5	2
12-5	12	5	16	46.5	2
12-6	12	6	16	46.5	2
12-7	12	7	16	46.5	2
12-8	12	8	16	46.5	2
12-9	12	9	16	46.5	2
20-3	20	3	24	50.5	2
20-4	20	4	24	50.5	2
20-5	20	5	24	50.5	2
20-6	20	6	24	50.5	2
20-7	20	7	24	50.5	2
20-8	20	8	24	50.5	2
20-9	20	9	24	50.5	2
20-10	20	10	24	50.5	2
20-11	20	11	24	50.5	2
20-12	20	12	24	50.5	2
20-13	20	13	24	50.5	2
20-14	20	14	24	50.5	2
20-15	20	15	24	50.5	2
20-16	20	16	24	50.5	2
32-6	32	6	36	60.5	3
32-8	32	8	36	60.5	3
32-10	32	10	36	60.5	3
32-12	32	12	36	60.5	3
32-14	32	14	36	60.5	3
32-16	32	16	36	60.5	3
32-18	32	18	36	60.5	3
32-20	32	20	36	60.5	3
32-25	32	25	36	60.5	3

THC C

Straight collets of internal coolant type for hydraulic chucks

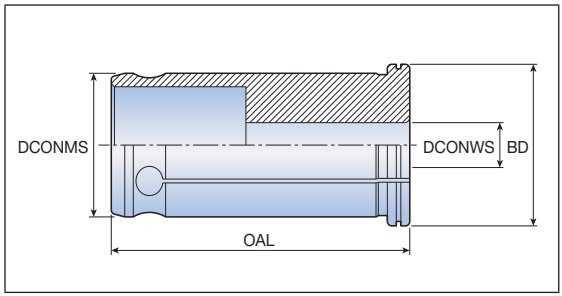




Designation	Dimension (mm)			
	DCONMS	DCONWS	BD	OAL
THC C12-3	12	3	19	47.0
C12-4	12	4	19	47.0
C12-5	12	5	19	47.0
C12-6	12	6	19	47.0
C12-7	12	7	19	47.0
C12-8	12	8	19	47.0
C20-3	20	3	29	52.5
C20-4	20	4	29	52.5
C20-5	20	5	29	52.5
C20-6	20	6	29	52.5
C20-7	20	7	29	52.5
C20-8	20	8	29	52.5
C20-9	20	9	29	52.5
C20-10	20	10	29	52.5
C20-11	20	11	29	52.5
C20-12	20	12	29	52.5
C20-13	20	13	29	52.5
C20-14	20	14	29	52.5
C20-15	20	15	29	52.5
C20-16	20	16	29	52.5
C20-17	20	17	29	52.5
C32-6	32	6	39	63.5
C32-8	32	8	39	63.5
C32-10	32	10	39	63.5
C32-12	32	12	39	63.5
C32-14	32	14	39	63.5
C32-16	32	16	39	63.5
C32-18	32	18	39	63.5
C32-20	32	20	39	63.5
C32-25	32	25	39	63.5

NCSR

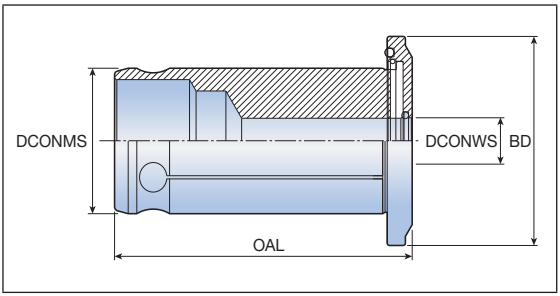
Straight collets for milling chucks: general type



Designation	Dimension (mm)			
	DCONMS	DCONWS	BD	OAL
NCSR 20-6	20	6	25	55
20-8	20	8	25	55
20-10	20	10	25	55
20-12	20	12	25	55
20-16	20	16	25	55
25-6	25	6	29	59
25-8	25	8	29	59
25-10	25	10	29	59
25-12	25	12	29	59
25-16	25	16	29	59
25-20	25	20	29	59
32-6	32	6	36	65
32-8	32	8	36	65
32-10	32	10	36	65
32-12	32	12	36	65
32-16	32	16	36	65
32-20	32	20	36	65
32-25	32	25	36	65
42-6	42	6	45	70
42-8	42	8	45	70
42-10	42	10	45	70
42-12	42	12	45	70
42-16	42	16	45	70
42-20	42	20	45	70
42-25	42	25	45	70
42-32	42	32	45	70

NCSR-C

Straight collets for milling chucks: internal coolant type

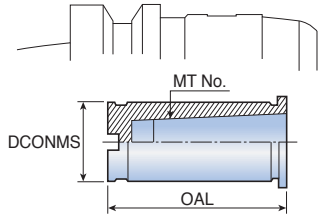


Designation		Dimension (mm)			
		DCONMS	DCONWS	BD	OAL
NCSR	**20-6C**	20	6	34.4	55
	20-8C	20	8	34.4	55
	20-10C	20	10	34.4	55
	20-12C	20	12	34.4	55
	20-16C	20	16	34.4	55
	25-6C	25	6	39.4	59
	25-8C	25	8	39.4	59
	25-10C	25	10	39.4	59
	25-12C	25	12	39.4	59
	25-16C	25	16	39.4	59
	25-20C	25	20	39.4	59
	32-6C	32	6	46	65
	32-8C	32	8	46	65
	32-10C	32	10	46	65
	32-12C	32	12	46	65
	32-16C	32	16	46	65
	32-20C	32	20	46	65

NCMR

Collet for milling chucks - Morse taper adapter for milling chuck

NCMR type

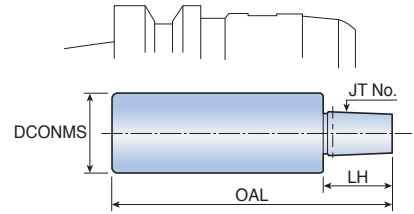


Designation		MT No.	Dimension (mm)		Application chuck
			DCONMS	OAL	
NCMR	**32-1**	1	32	60	NTMC 32
	32-2	2	32	72	NTMC 32
	32-3	3	32	90	NTMC 32
	42-1	1	42	60	NTMC 42
	42-2	2	42	72	NTMC 42
	42-3	3	42	90	NTMC 42
	42-4	4	42	113	NTMC 42

CJA

Collet for milling chucks - Jacobs taper adapter for milling chuck

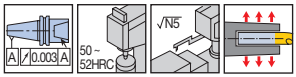
CJA type

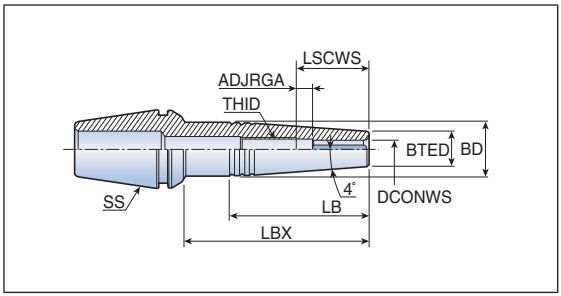


Designation		JT No.	Dimension (mm)			Application chuck
			DCONMS	OAL	LH	
CJA	**32-6**	6	32	118	28	NTMC 32

ER-SRK-CX

CX coolant type T-SHRINK ER collets DIN6499

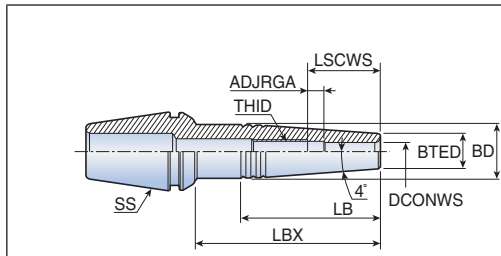




Designation		Dimension (mm)								
		SS	DCONWS	BTED	BD	LBX	LB	ADJRGA	LSCWS	THID
ER32	**SRK 3x35 CX**	ER32	3	10	13.5	35	25.0	-	-	-
	SRK 3x60 CX	ER32	3	10	16.3	60	45.0	-	-	-
	SRK 4x35 CX	ER32	4	10	13.5	35	25.0	-	-	-
	SRK 4x60 CX	ER32	4	10	16.3	60	45.0	-	-	-
	SRK 5x35 CX	ER32	5	10	13.5	35	25.0	-	-	-
	SRK 5x60 CX	ER32	5	10	16.3	60	45.0	-	-	-
	SRK 6x35 CX	ER32	6	11	14.7	35	26.5	7	27	M5
	SRK 6x60 CX	ER32	6	11	17.3	60	45.0	7	27	M5
	SRK 8x35 CX	ER32	8	14	18.9	35	-	7	35	M6
	SRK 8x60 CX	ER32	8	14	20.4	60	45.8	7	35	M6
	SRK 10x35 CX	ER32	10	16	20.9	35	-	7	39	M8
	SRK 10x60 CX	ER32	10	16	22.4	60	45.8	7	39	M8
	SRK 12x35 CX	ER32	12	20	24.0	35	28.6	7	41	M10
	SRK 12x60 CX	ER32	12	20	24.0	60	28.6	7	41	M10

ER-SRK

T-SHRINK ER collets DIN6499

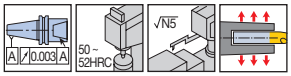


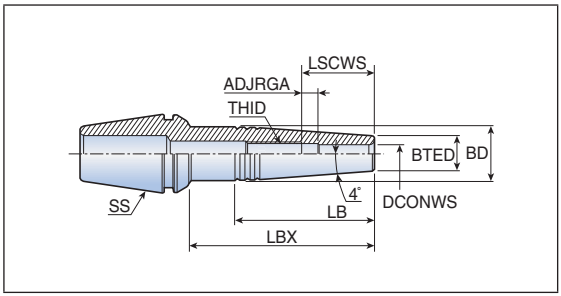
Designation		Dimension (mm)									
		SS	DCONWS	BTED	BD	LBX	LB	ADJRGA	LSCWS	THID	Hex key
ER11	**SRK 3x10[(1)]**	ER11	3	7.6	8.5	10	-	-	10	-	-
	SRK 3x25[(1)]	ER11	3	7.6	8.5	25	-	-	10	-	-
	SRK 4x10[(1)]	ER11	4	7.6	8.5	10	-	-	12	-	-
	SRK 4x25[(1)]	ER11	4	7.6	8.5	25	-	-	12	-	-
ER20	**SRK 3x35**	ER20	3	10	13.5	35	24.5	6	16	M6	3.0
	SRK 3x60	ER20	3	10	13.5	60	24.5	6	16	M6	3.0
	SRK 4x35	ER20	4	10	13.5	35	24.5	6	18	M6	3.0
	SRK 4x60	ER20	4	10	13.5	60	24.5	6	18	M6	3.0
	SRK 5x35	ER20	5	10	13.5	35	24.5	6	21	M6	3.0
	SRK 5x60	ER20	5	10	13.5	60	24.5	6	21	M6	3.0
	SRK 6x35	ER20	6	11	13.5	35	25.5	6	24	M8	4.0
	SRK 6x60	ER20	6	11	13.5	60	29.5	6	24	M8	4.0
ER25	**SRK 3x35**	ER25	3	10	13.5	35	24.5	6	16	M6	3.0
	SRK 3x60	ER25	3	10	16.3	60	44.5	6	16	M6	3.0
	SRK 4x35	ER25	4	10	13.5	35	24.5	6	18	M6	3.0
	SRK 4x60	ER25	4	10	16.3	60	44.5	6	18	M6	3.0
	SRK 5x35	ER25	5	10	13.5	35	24.5	6	21	M6	3.0
	SRK 5x60	ER25	5	10	16.3	60	44.5	6	21	M6	3.0
	SRK 6x35	ER25	6	11	14.7	35	26.0	6	24	M8	4.0
	SRK 6x60	ER25	6	11	17.3	60	44.5	6	24	M8	4.0
	SRK 8x35	ER25	8	14	17.8	35	26.5	5	30	M10	5.0
	SRK 8x60	ER25	8	14	17.9	60	39.5	6	31	M10	5.0

▸ [(1)] To be used only for TYPHOON spindles

ER-SRK

T-SHRINK ER collets DIN6499



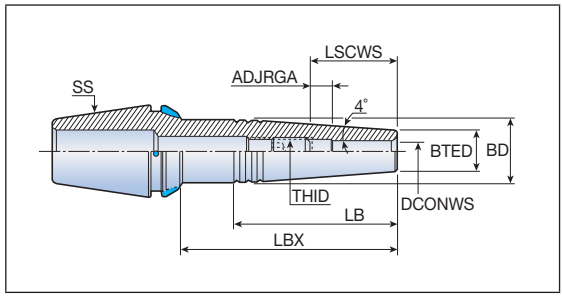


Designation		Dimension (mm)									
		SS	DCONWS	BTED	BD	LBX	LB	ADJRGA	LSCWS	THID	Hex key
ER32	SRK 3x35	ER32	3	10	13.5	35	22.5	6	16	M6	3.0
	SRK 3x60	ER32	3	10	16.3	60	44.5	6	16	M6	3.0
	SRK 3x85	ER32	3	10	19.8	85	70.0	6	16	M6	3.0
	SRK 4x35	ER32	4	10	13.5	35	23.5	6	18	M6	3.0
	SRK 4x60	ER32	4	10	16.3	60	44.5	6	18	M6	3.0
	SRK 4x85	ER32	4	10	19.8	85	70.0	6	18	M6	3.0
	SRK 5x35	ER32	5	10	13.5	35	24.5	6	21	M6	3.0
	SRK 5x60	ER32	5	10	16.3	60	44.5	6	21	M6	3.0
	SRK 5x85	ER32	5	10	19.8	85	70.0	6	21	M6	3.0
	SRK 6x35	ER32	6	11	14.7	35	25.5	6	24	M8	4.0
	SRK 6x60	ER32	6	11	17.3	60	45.0	6	24	M8	4.0
	SRK 6x85	ER32	6	11	20.8	85	69.5	8	26	M8	4.0
	SRK 8x35	ER32	8	14	18.9	35	33.0	6	31	M10	5.0
	SRK 8x60	ER32	8	14	20.4	60	45.0	6	31	M10	5.0
	SRK 8x85	ER32	8	14	23.2	85	65.0	6	31	M10	5.0
	SRK 10x35	ER32	10	16	20.8	35	34.0	5	35	M12	6.0
	SRK 10x60	ER32	10	16	22.4	60	44.5	6	36	M12	6.0
	SRK 10x85	ER32	10	16	23.0	85	49.5	6	36	M12	6.0
	SRK 12x35	ER32	12	20	24.0	35	28.0	-	-	-	-
	SRK 12x60	ER32	12	20	24.0	60	28.0	6	38	M14	6.0
	SRK 12x85	ER32	12	20	24.0	85	28.0	6	38	M14	6.0

▸ Only use inductive heating device for T-SHRINK holders

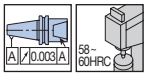
ER-SRK-JET2

T-SHRINK ER collets DIN6499



Designation		Dimension (mm)									
		SS	DCONWS	BTED	BD	LBX	LB	ADJRGA	LSCWS	THID	Hex key
ER20	**SRK 3x35 JET2**	ER20	3	10	13.5	35	24.5	6	16	M6	3.0
	SRK 4x35 JET2	ER20	4	10	13.5	35	24.5	6	18	M6	3.0
	SRK 5x35 JET2	ER20	5	10	13.5	35	24.5	6	21	M6	3.0
	SRK 6x35 JET2	ER20	6	11	13.5	35	25.5	6	24	M8	4.0
ER25	**SRK 3x35 JET2**	ER25	3	10	13.5	35	24.5	6	16	M6	3.0
	SRK 3x60 JET2	ER25	3	10	16.3	60	44.5	6	16	M6	3.0
	SRK 4x35 JET2	ER25	4	10	13.5	35	24.5	6	18	M6	3.0
	SRK 4x60 JET2	ER25	4	10	16.3	60	44.5	6	18	M6	3.0
	SRK 5x35 JET2	ER25	5	10	13.5	35	24.5	6	21	M6	3.0
	SRK 5x60 JET2	ER25	5	10	16.3	60	44.5	6	21	M6	3.0
	SRK 6x35 JET2	ER25	6	11	14.7	35	26.0	6	24	M8	4.0
	SRK 6x60 JET2	ER25	6	11	17.3	60	44.5	6	24	M8	4.0
	SRK 8x35 JET2	ER25	8	14	17.8	35	26.5	5	30	M10	5.0
	SRK 8x60 JET2	ER25	8	14	17.9	60	39.5	6	31	M10	5.0
ER32	**SRK 3x35 JET2**	ER32	3	10	13.5	35	22.5	6	16	M6	3.0
	SRK 3x60 JET2	ER32	3	10	16.3	60	44.5	6	16	M6	3.0
	SRK 3x85 JET2	ER32	3	10	19.8	85	70.0	6	16	M6	3.0
	SRK 4x35 JET2	ER32	4	10	13.5	35	23.5	6	18	M6	3.0
	SRK 4x60 JET2	ER32	4	10	16.3	60	44.5	6	18	M6	3.0
	SRK 4x85 JET2	ER32	4	10	19.8	85	70.0	6	18	M6	3.0
	SRK 5x35 JET2	ER32	5	10	13.5	35	24.5	6	21	M6	3.0
	SRK 5x60 JET2	ER32	5	10	16.3	60	44.5	6	21	M6	3.0
	SRK 5x85 JET2	ER32	5	10	19.8	85	70.0	6	21	M6	3.0
	SRK 6x35 JET2	ER32	6	11	14.7	35	25.5	6	24	M8	4.0
	SRK 6x60 JET2	ER32	6	11	17.3	60	45.0	6	24	M8	4.0
	SRK 6x85 JET2	ER32	6	11	20.8	85	69.5	8	26	M8	4.0
	SRK 8x35 JET2	ER32	8	14	18.8	35	33.0	6	31	M10	5.0
	SRK 8x60 JET2	ER32	8	14	20.4	60	45.0	6	31	M10	5.0
	SRK 8x85 JET2	ER32	8	14	23.2	85	65.0	6	31	M10	5.0
	SRK 10x35 JET2	ER32	10	16	20.8	35	34.0	5	35	M12	6.0
	SRK 10x60 JET2	ER32	10	16	22.4	60	44.5	6	36	M12	6.0
	SRK 10x85 JET2	ER32	10	16	23.0	85	49.5	6	36	M12	6.0
	SRK 12x35 JET2	ER32	12	20	24.0	35	28.0	-	-	-	-
	SRK 12x60 JET2	ER32	12	20	24.0	60	28.0	6	38	M14	6.0
	SRK 12x85 JET2	ER32	12	20	24.0	85	28.0	6	38	M14	6.0

T-FLEXTEC holder



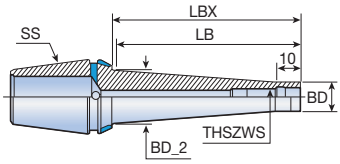


Fig.1

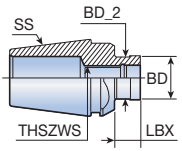
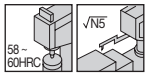


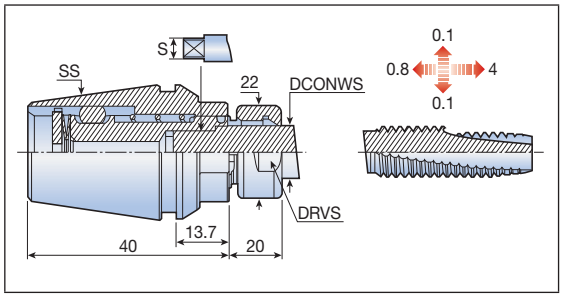
Fig.2

Designation	Dimension (mm)						
	SS	THSZWS	BD	BD_2	LB	LBX	Fig.
ER 25 ODP M12x10	ER25	M12	20.0	20.0	10	10.0	2
32 ODP M12x10	ER32	M12	10.0	10.0	21	20.6	2
32 ODP M12x25	ER32	M12	24.0	25.0	21	24.0	1

GTIN ER

GTIN ER collets





GTIN ER 32 - DIN 371 / 352

Designation		Dimension (mm)					
		SS	DCONWS	Tapmin	Tapmax	S	DRVS
GTIN ER32	DIN 2.50x2.10	ER32	2.5	M1	M1.8	2.1	20
	DIN 2.80x2.10	ER32	2.8	M2	M4	2.1	20
	DIN 3.50x2.70	ER32	3.5	M3	M5	2.7	20
	DIN 4.00x3.00	ER32	4.0	M3.5	M3.5	3.0	20
	DIN 4.50x3.40	ER32	4.5	M4	M6	3.4	20
	DIN 6.00x4.90	ER32	6.0	M5	M8	4.9	20
	DIN 7.00x5.50	ER32	7.0	M7	M10	5.5	20
	DIN 8.00x6.20	ER32	8.0	M8	M8	6.2	20
	DIN 9.00x7.00	ER32	9.0	M12	M12	7.0	20
	DIN 10.00x8.00	ER32	10.0	M10	M10	8.0	20
	DIN 11.00x9.00	ER32	11.0	M14	M14	9.0	20
	DIN 12.00x9.00	ER32	12.0	M16	M16	9.0	20

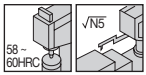
GTIN ER 32 - JIS

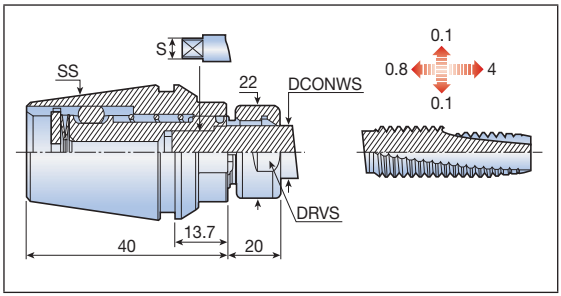
Designation		Dimension (mm)					
		SS	DCONWS	Tapmin	Tapmax	S	DRVS
GTIN ER32	JIS 3.00x2.50	ER32	3.0	M1	M2.6	2.5	20
	JIS 4.00x3.20	ER32	4.0	M3	M3.5	3.2	20
	JIS 5.00x4.00	ER32	5.0	M4	M4	4.0	20
	JIS 6.00x4.50	ER32	6.0	M6	M6	4.5	20
	JIS 6.20x5.00	ER32	6.2	M8	M8	5.0	20
	JIS 7.00x5.50	ER32	7.0	M10	M10	5.5	20
	JIS 8.50x6.50	ER32	8.5	M12	M12	6.5	20
	JIS 10.50x8.00	ER32	10.5	M14	M14	8.0	20
	JIS 12.50x10.00	ER32	12.5	M16	M16	10.0	20

▸ No coolant should be induced through the tap collet, as it will cause malfunctioning of the mechanism

GTIN ER

GTIN ER collets





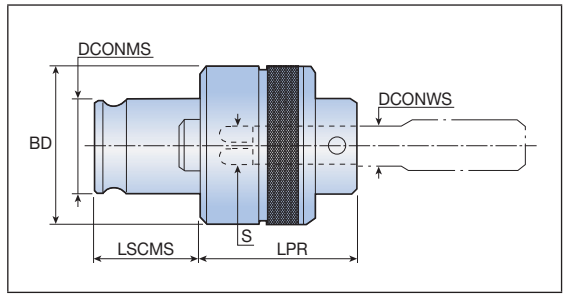
GTIN ER32 - ISO metric ISO 529/2283

Designation		Dimension (mm)					
		SS	DCONWS	Tapmin	Tapmax	S	DRVS
GTIN ER32	**ISO 2.24x1.80**	ER32	2.24	M3	M3	1.80	20
	ISO 2.50x2.00	ER32	2.50	M3.5	M3.5	2.00	20
	ISO 2.80x2.24	ER32	2.80	M2.2	M2.5	2.24	20
	ISO 3.15x2.50	ER32	3.15	M3	M4	2.50	20
	ISO 3.55x2.80	ER32	3.55	M3.5	M4.5	2.80	20
	ISO 4.00x3.15	ER32	4.00	M4	M5	3.15	20
	ISO 4.50x3.55	ER32	4.50	M6	M6	3.55	20
	ISO 5.00x4.00	ER32	5.00	M5	M5	4.00	20
	ISO 5.60x4.50	ER32	5.60	UNC#12-24	UNC (ONLY)	4.50	20
	ISO 6.30x5.00	ER32	6.30	M6	M8	5.00	20
	ISO 7.10x5.60	ER32	7.10	UNC#3/8-16	UNC (ONLY)	5.60	20
	ISO 8.00x6.30	ER32	8.00	M8	M10	6.30	20
	ISO 9.00x7.10	ER32	9.00	M12	M12	7.10	20
	ISO 10.00x8.00	ER32	10.00	M10	M10	8.00	20
	ISO 11.20x9.00	ER32	11.20	M14	M14	9.00	20
	ISO 12.50x10.00	ER32	12.50	M16	M16	10.00	20

▸ No coolant should be induced through the tap collet, as it will cause malfunctioning of the mechanism

TA (For JIS)

Tap adapters



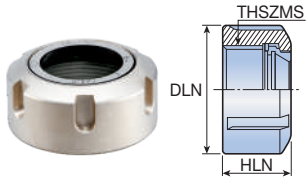
Designation	Dimension (mm)					
	DCONMS	DCONWS	BD	LPR	LSCMS	S
TA 1-M3	19	4.0	32	25	21.5	3.2
1-M4	19	5.0	32	25	21.5	4.0
1-M5	19	5.5	32	25	21.5	4.5
1-M6	19	6.0	32	25	21.5	4.5
1-M8	19	6.2	32	25	21.5	5.0
1-M10	19	7.0	32	25	21.5	5.5
1-M12	19	8.5	32	25	21.5	6.5
2-M6	31	6.0	50	33	35.5	4.5
2-M8	31	6.2	50	33	35.5	5.0
2-M10	31	7.0	50	33	35.5	5.5
2-M12	31	8.5	50	33	35.5	6.5
2-M14	31	10.5	50	33	35.5	8.0
2-M16	31	12.5	50	33	35.5	10.0
2-M18	31	14.0	50	33	35.5	11.0
2-M20	31	15.0	50	33	35.5	12.0
2-M22	31	17.0	50	33	35.5	13.0
2-M24	31	19.0	50	33	35.5	15.0
3-M18	48	14.0	72	45	55.5	11.0
3-M20	48	15.0	72	45	55.5	12.0
3-M22	48	17.0	72	45	55.5	13.0
3-M24	48	19.0	72	45	55.5	15.0
3-M27	48	20.0	72	45	55.5	15.0
3-M30	48	23.0	72	45	55.5	17.0
3-M33	48	25.0	72	45	55.5	19.0
3-M36	48	28.0	72	45	55.5	19.0
3-M38	48	28.0	72	45	55.5	21.0

▸ Based on JIS standard tap

Accessories

NUT ER TOP

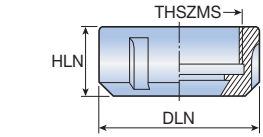
ER - Top™ clamping nuts



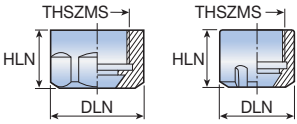
Designation	Dimension (mm)		
	DLN	HLN	THSZMS
NUT ER16 TOP	28	17	M22x1.5
ER20 TOP	34	19	M25x1.5
ER25 TOP	42	20	M32x1.5
ER32 TOP	50	22	M40x1.5
ER40 TOP	63	25	M50x1.5

NUT ER MINI/UM

ER clamping nuts



ER 25, 32, 40, 50 UM



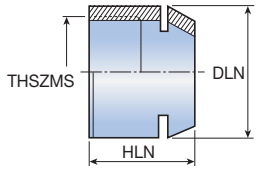
ER 16, 20 UM **ER 11, 16, 20, 25 MINI**

Designation	Dimension (mm)		
	DLN	HLN	THSZMS
NUT ER11 MINI	16	10.8	M13x0.75
ER11 UM	19	11.3	M14x0.75
ER16 MINI	22	18.0	M19x1.0
ER16 UM	28	17.0	M22x1.5
ER20 MINI	28	19.0	M24x1.0
ER20 UM	34	19.0	M25x1.5
ER25 MINI	35	20.0	M30x1.5
ER25 UM	42	20.0	M32x1.5
ER32 UM	50	22.0	M40x1.5
ER40 UM	63	25.0	M50x1.5
ER50 UM	78	55.0	M64x2.0

NUT ER11 GHS

GREEN Typhoon

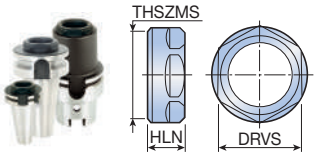
Tightening nuts



Designation	Dimension (mm)			
	DLN	HLN	THSZMS	Wrench
NUT ER11 GHS	16	11.5	M13x0.75	WRENCH ER11 SMS

NUT ER SHORT

T-SHORT nuts



Designation	Dimension (mm)		
	DRVS	HLN	THSZMS
NUT ER20 SHORT	22	10.7	M25x1.5
ER32 SHORT	36	15.0	M40x1.5
ER40 SHORT	46	16.0	M50x1.5

TSKN

TSK clamping nuts

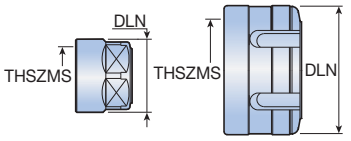
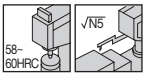


Fig.1 Fig.2

Designation	Dimension (mm)		Fig.
	DLN	THSZMS	
TSKN 6	20	M15x1.0	1
10	28	M21.5x1.0	1
16	40	M32x1.5	2
25	55	M45x1.5	2

PS SK-DIN

Pull studs DIN69872 with JIS63398 retention knob



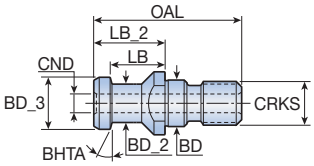


Fig.1

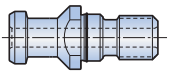


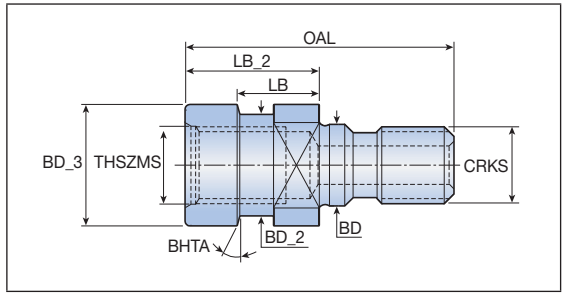
Fig.2

Designation	Dimension (mm)									Fig.
	CRKS	BD	BD_2	BD_3	CND	LB	LB_2	OAL	BHTA	
PS SK30 15 M12 DIN	M12	13	9.0	13.00	-	19.00	24.00	44.0	15	1
PS SK40 15 M16 DIN	M16	17	14.0	19.00	-	20.00	26.00	54.0	15	1
15 M16 DIN O	M16	17	14.0	19.00	-	20.00	26.00	54.0	15	2
15 M16 DIN B	M16	17	14.0	19.00	7.00	20.00	26.00	54.0	15	1
15 M16 DIN OB	M16	17	14.0	19.00	7.00	20.00	26.00	54.0	15	2
PS SK50 15 M24 DIN	M24	25	21.0	28.00	-	25.00	34.00	74.0	15	1
15 M24 DIN O	M24	25	21.0	28.00	-	25.00	34.00	74.0	15	2
15 M24 DIN B	M24	25	21.0	28.00	11.50	25.00	34.00	74.0	15	1

- Coolant holes only in items with a "B" suffix
- Fig. 2: With external O-ring

PS OTT BT/SK

Pull studs OTT system



Designation		Dimension (mm)								
		CRKS	THSZMS	BD	BD_2	BD_3	LB	LB_2	OAL	BHTA
PS OTT	**BT40 M16**	M16	M16	17	21.1	25.0	16.60	28	56	15
	BT50 M24	M24	M24	24	32.0	39.3	13.35	25	65	15
	SK40 M16	M16	M16	17	21.1	25.0	13.60	25	53	15

PS BT-JIS/MAZAK

Pull studs BT-JIS 63398 / ANSI-metric for MAZAK machine

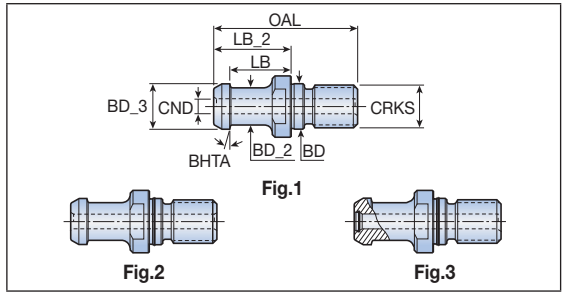


Fig.1

Fig.2

Fig.3

Designation		Dimension (mm)									Fig.
		CRKS	BD	BD_2	BD_3	CND	LB	LB_2	OAL	BHTA	
PS	**BT30 15 M12 JIS B**	M12	13	8.00	12.00	4.0	18.40	23.4	43.0	15	1
	BT40 15 M16 JIS B	M16	17	14.00	19.00	5.5	23.00	29.0	54.0	15	1
	BT40 15 M16 JIS O B	M16	17	14.00	19.00	5.5	23.00	29.0	54.0	15	2
	BT40 15 M16 JIS O B O	M16	17	14.00	19.00	5.5	23.00	29.0	54.0	15	3
	BT50 15 M24 JIS B	M24	25	21.00	28.00	8.0	25.00	34.0	74.0	15	1
	BT40 45 M16 MAZAK B	M16	17	12.45	18.79	7.0	14.02	19.1	44.1	45	1
	BT50 45 M24 MAZAK B	M24	25	20.83	28.95	8.0	17.58	25.2	65.2	45	1

- Fig. 1: Coolant holes only in items with a "B" suffix
- Fig. 2: With external O-ring and coolant hole
- Fig. 3: With external and internal O-rings and coolant hole

PS BT-MAS

Pull studs BT-MAS-metric

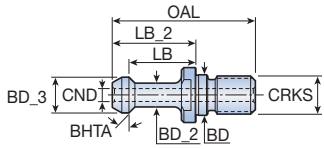


Fig.1

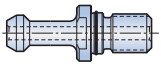


Fig.2

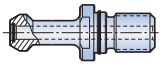


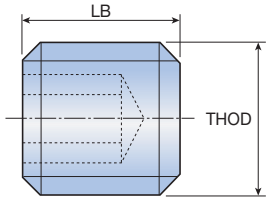
Fig.3

Designation		Dimension (mm)									Fig.
		CRKS	BD	BD_2	BD_3	CND	LB	LB_2	OAL	BHTA	
PS BT30	**45 M12 MAS1**	M12	12.5	7	11	-	18	23	43	45	1
	45 M12 MAS1 B	M12	12.5	7	11	3.0	18	23	43	45	1
	60 M12 MAS2	M12	12.5	7	11	-	18	23	43	30	1
PS BT40	**45 M16 MAS1**	M16	17.0	10	15	-	28	35	60	45	1
	45 M16 MAS1 B	M16	17.0	10	15	5.5	28	35	60	45	1
	60 M16 MAS2	M16	17.0	10	15	-	28	35	60	30	1
	60 M16 MAS2 B	M16	17.0	10	15	5.5	28	35	60	30	1
	90 M16 MAS3	M16	17.0	10	15	-	28	35	60	90	1
	90 M16 MAS3 B	M16	17.0	10	15	5.5	28	35	60	90	1
PS BT50	**45 M24 MAS1**	M24	25.0	17	23	-	35	45	85	45	1
	45 M24 MAS1 B	M24	25.0	17	23	6.0	35	45	85	45	1
	45 M24 MAS1 O B	M24	25.0	17	23	6.0	35	45	85	45	2
	45 M24 MAS1 O B O	M24	25.0	17	23	6.0	35	45	85	45	3
	60 M24 MAS2	M24	25.0	17	23	-	35	45	85	30	1
	60 M24 MAS2 B	M24	25.0	17	23	6.0	35	45	85	30	1
	60 M24 MAS2 OB	M24	25.0	17	23	6.0	35	45	85	60	2
	90 M24 MAS3	M24	25.0	17	23	-	35	45	85	90	1
	90 M24 MAS3 B	M24	25.0	17	23	6.0	35	45	85	90	1

- Fig. 1: Coolant holes only in items with a "B" suffix
- Fig. 2: With external O-ring and coolant hole
- Fig. 3: With external and internal O-rings and coolant hole

SR-DIN

Lock screw DIN1835 B/E for end mill holders



Designation	Dimension (mm)		
	THOD	LB	Used for shanks
SR M6x10 DIN 1835-B	M6	10	6
M8x10 DIN 1835-B	M8	10	8
M10x12 DIN 1835-B	M10	12	10
M12x16 DIN 1835-B	M12	16	12, 14
M14x16 DIN 1835-B	M14	16	16
M16x16 DIN 1835-B	M16	16	20
M18x2x20 DIN 1835-B	M18x2	20	25
M20x2x20 DIN 1835-B	M20x2	20	32, 40
M24x2x25 DIN 1835-B	M24x2	25	50

PRESET ER-JET

Preset screw with oil hole for ER collets

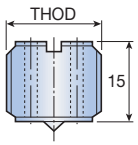


Fig.1

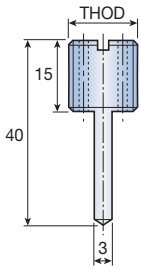
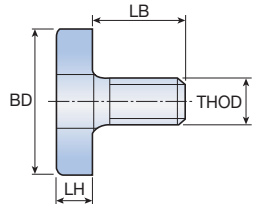


Fig.2

Designation		Dimension (mm)	Fig.
		THOD	
PRESET ER-JET	**8x1.25**	M8x1.25	1
	10x1.5	M10x1.5	1
	12x1.75	M12x1.75	1
	12x1.75L	M12x1.75	2
	16x2	M16x2	1
	16x2L	M16x2	2
	18x1.5	M18x1.5	1
	18x1.5L	M18x1.5	2
	22x1.5	M22x1.5	1
	22x1.5L	M22x1.5	2
	28x1.5	M28x1.5	1

M-CLAMP SCREW SEM

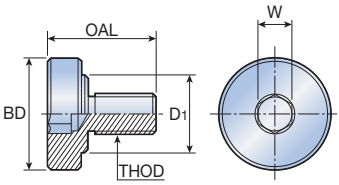
Lock screw DIN6367 for face mIll arbors



Designation	Dimension (mm)				
	S.M.C	THOD	BD	LH	LB
M8 CLAMP SCREW SEM 16	16	M8	20	6	16
M10 CLAMP SCREW SEM 22	22	M10	28	7	18
M12 CLAMP SCREW SEM 27	27	M12	35	8	22
M16 CLAMP SCREW SEM 32	32	M16	42	9	26
M20 CLAMP SCREW SEM 40	40	M20	52	10	30
M24 CLAMP SCREW SEM 50	50	M24	63	12	36

MBA M

Lock screw for FMA

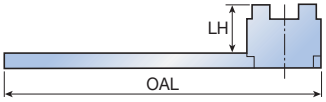


Designation		Dimension (mm)				
		THOD	BD	D1	OAL	W
MBA	M8	M8x1.25	20	15	24	6
	M10	M10x1.5	28	18	28	8
	M12	M12x1.75	33	23	32	10
	M16	M16x2.0	40	23	40	14
	M20	M20x2.5	50	27	50	17

▸ Wrench for MBA screw: L-W □□

WRENCH M-SEMC

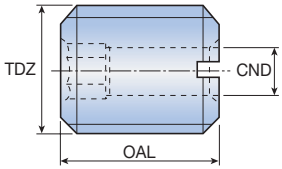
Wrench DIN6368 for face mill and combi shell mill arbors



Designation		Dimension (mm)			
		DRVS	FTDZ	LH	OAL
WRENCH	M8 SEMC 16	16	M8	20	180
	M10 SEMC 22	22	M10	25	200
	M12 SEMC 27	27	M12	32	225
	M16 SEMC 32	32	M16	36	250
	M20 SEMC 40	40	M20	40	280
	M24 SEMC 50	50	M24	50	315

PRESET SCREW

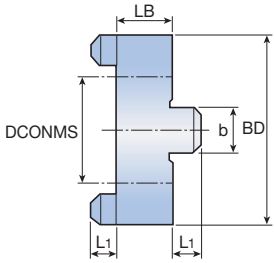
SRKIN thermal shrink collets



Designation		Dimension (mm)				
		TDZ	OAL	CND	Used for shanks	Hex key
PRESET SCREW	M5x18 B	M5	18	2.5	EM E / SRKIN	2.5
	M6x20 B	M6	20	3.0	EM E / SRKIN	3.0
	M8x20 B	M8	20	4.0	EM E / SRKIN	4.0
	M10x18 B	M10	18	5.0	EM E / SRKIN	5.0
	M12x18 B	M12	18	6.0	EM E / SRKIN	6.0
	M16x20 B	M16	20	6.0	EM E / SRKIN	6.0
	M16x25 B	M16	25	6.0	SRKIN	6.0

D·RING SEMC

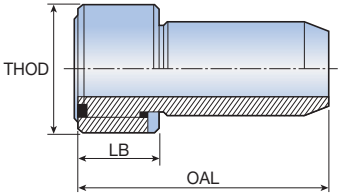
Driving ring DIN6366/1 for combi shell end mill holders



Designation	Dimension (mm)				
	DCONMS	BD	LB	b	L1
16 D · RING SEMC	16	32	10	8	5.0
22 D · RING SEMC	22	40	12	10	5.6
27 D · RING SEMC	27	48	12	12	6.3
32 D · RING SEMC	32	58	14	14	7.0
40 D · RING SEMC	40	70	14	16	8.0
50 D · RING SEMC	50	90	16	18	9.0

COOLING TUBE HSK A

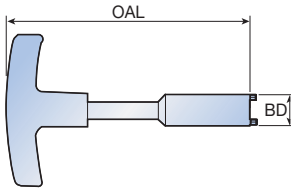
HSK A cooling tube



Designation		Dimension (mm)		
		OAL	LB	THOD
COOLING TUBE	**HSK A 50**	33.0	9.5	M16x1
	HSK A 63	36.5	11.5	M18x1
	HSK A 80	40.0	13.5	M20x1.5
	HSK A 100	44.0	15.5	M24x1.5

WRENCH COOL TUBE HSK A

HSK A cooling tube wrench

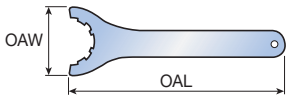


Designation		Dimension (mm)	
		BD	OAL
WRENCH COOL TUBE	**HSK A 50**	15.0	120
	HSK A 63	17.0	122
	HSK A 80	18.5	136
	HSK A 100	22.0	141

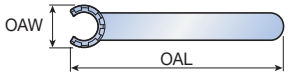
WRENCH ER-MINI/SHORT

ER wrench

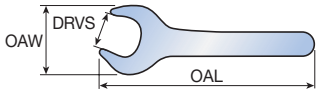
DIN6499



Wrench ER 25, 32, 40, 50



Wrench ER 11, 16, 20, 25 MINI



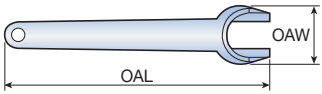
Wrench ER 11, 16, 20, SHORT

Designation		Dimension (mm)		
		OAW	DRVS	OAL
WRENCH	**ER11 MINI**	16.8	-	95
	ER11	32.0	17	95
	ER16 MINI	22.5	-	117
	ER16	42.8	25	143
	ER20 MINI	28.0	-	128
	ER20	53.5	30	172
	ER25 MINI	29.0	-	120
	ER25	70.0	-	207
	ER32	78.0	-	255
	ER40	95.0	-	285
	ER50	110.0	-	350
	ER32 SHORT	75.0	36	303
	ER40 SHORT	94.0	46	378

WRENCH ER11 SMS

Typhoon

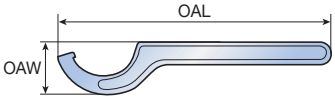
ER11 Tightening wrench



Designation		Dimension (mm)	
		OAW	OAL
WRENCH	**ER11 SMS**	22	100

SPANNER TMC

NTMC milling chuck wrench



Designation		Dimension (mm)	
		OAW	OAL
SPANNER	**TMC 20**	15.8	84.1
	TMC 25	18.1	94.3
	TMC 32	21.7	109.1
	TMC 42	23.2	108.0

TSKS

TSK slim chuck wrench

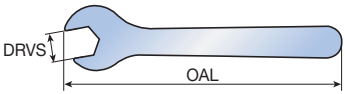


Fig.1

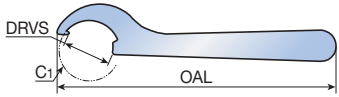


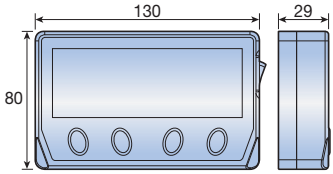
Fig.2

Designation	Dimension (mm)		Fig.
	DRVS	OAL	
TSKS - 6	18.0	174	1
10	25.4	177	1
16	36.0	189	2
25	52.0	228	2

TJS TSD DISPLAY

Typhoon

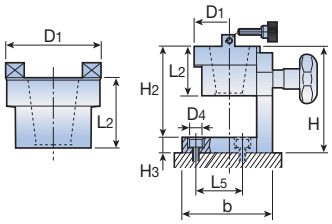
RPM speed display for TYPHOON high-speed spindles



Designation	Machines
TJS TSD DISPLAY	TJS spindles

TOOL CLAMP-ROTARY/FIX

Tool clamp fixture - ISO, DIN69871, BT MAS-403

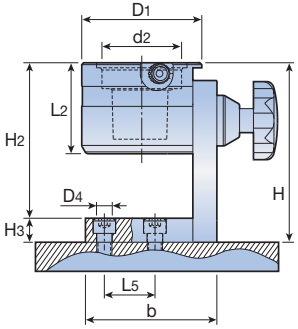


FIX ROTARY

Designation	Dimension (mm)								
	CSI	b	D1	D4	L2	H	H2	H3	L5
TOOL CLAMP 30 ROTARY	ROTARY	104	70	12.5	56	128	109	19	40
40 ROTARY	ROTARY	104	82	12.5	56	128	109	19	40
50 ROTARY	ROTARY	144	103	12.5	71	170	151	19	85
30 FIX	FIX	-	82	-	58	-	-	-	-
40 FIX	FIX	-	82	-	58	-	-	-	-
50 FIX	FIX	-	103	-	71	-	-	-	-

MULTI CLAMP C

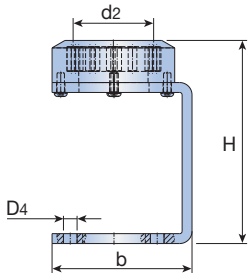
C-ADAPTER rotary clamp



Designation	Dimension (mm)									
	SS	b	d2	D1	D4	L2	L5	H	H2	H3
MULTI CLAMP C5	50	104	50	82	12.5	72	40	142	123	19
C6	63	104	63	95	12.5	72	40	142	123	19
C8	80	104	80	130	12.5	90	85	178	159	19

MULTI CLAMP...UNIVERSAL

Universal rotary tool clamping fixtures - for tapered shanks

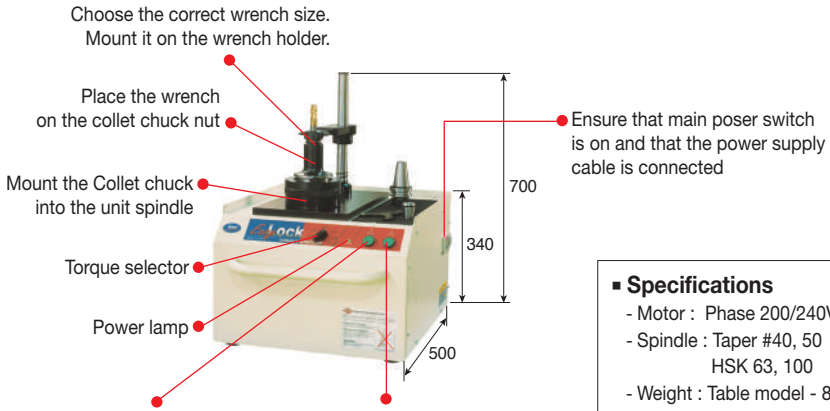


Designation	Dimension (mm)				
	CSI	d2	H	b	D4
MULTI CLAMP 40 UNIVERSAL	40	40	161	112	11
50 UNIVERSAL	50	50	161	112	11
63 UNIVERSAL	63	63	164	113	11
80 UNIVERSAL	80	80	240	150	11
100 UNIVERSAL	100	100	240	150	11

Mounting adapters/holders (tapered types)

Designation		Dimension (mm)				
		HSK A/C/E/F	C-ADAPTER	BT	DIN69871	DIN2080
MULTI CLAMP	**40 UNIVERSAL**	HSK 40	C4	-	-	-
	50 UNIVERSAL	HSK 50	C5	-	DIN69871 30	DIN2080 30
	63 UNIVERSAL	HSK 63	C6	BT 40	DIN69871 40	DIN2080 40
	80 UNIVERSAL	HSK 80	C8	-	-	-
	100 UNIVERSAL	HSK 100	C10	BT 50	-	-

EASYLOCK T.C EU



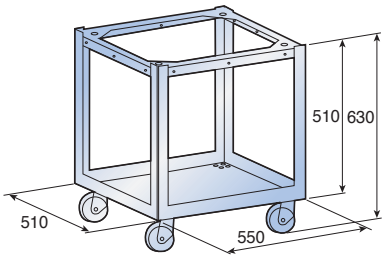
▪ Specifications

- Motor : Phase 200/240V, 50/60HZ(1HP)
- Spindle : Taper #40, 50
  HSK 63, 100
- Weight : Table model - 85kg
  Trolley (Optional) - 15kg

Note: Assemble the collet and cutting tools. By hand, place the nut onto the collet chuck.

Designation	TaeguTec No.	Accssories	
		Standard	Optional
EASYLOCK T.C EU	4651108	TP50 AD 40 EASY	EASY LOCK TROLLEY
		WRENCH ER16 EASY LOCK	TP40 AD 30 EASY
		WRENCH ER20 EASY LOCK	TP50 AD HSK 63 EASY
		WRENCH ER25 EASY LOCK	TP50 AD HSK 100 EASY
		WRENCH ER32 EASY LOCK	WRENCH ER50 EASY LOCK
		WRENCH ER40 EASY LOCK	WRENCH TG100 OPEN EASY

EASYLOCK TROLLEY



Designation	TaeguTec No.
EASYLOCK TROLLEY	4651109

AP Induction Unit

6266950 INDN AP UNIT EU / 6266951 INDN AP UNIT US

Specifications

Model	INDN AP UNIT
Clamping range	Carbide: Ø3-32 mm / HSS: Ø6-32 mm
Max. tool length	400 mm
Max. machine interface	HSK 100 / Taper #50
Cooling type	Liquid, Capacity: 50 L
Max. cooling length	200 mm
Cooling time	30 sec
Dimensions	800x560x1720 mm
Weight	120 kg
Power supply	EU: 400V 50Hz 16A US: 480V 60Hz 15A
Power	11 kW

B.O.M

Item	Item No.	Designation	Q'ty
Clamping ring	6266972	INDN CLAMP RING	1
Cooling concentrate	6266978	COOLANT SYNERGY 905 1L	1
Stop disc	See table	INDN AP DISC…	7
Protective gloves	-	-	1

▶ AP unit adapters and setting discs should be ordered separately

AP unit multi-adapters:

- For the correct positioning of the chuck

Item No.	Designation	Used for
6266966	INDN AP AD 32	HSK 32
6266967	INDN AP AD 40	HSK 40 / C4
6266968	INDN AP AD 50	HSK 50 / C5 / Taper #30
6266969	INDN AP AD 63	HSK 63 / C6 / Taper #40
6266970	INDN AP AD 80	HSK 80 / C8 / Taper #45
6266965	INDN AP AD 100	HSK 100 / C10 / Taper #50

▶ Should be ordered separately

AP unit adapter

AP unit stop discs

AP unit stop discs:

- To avoid coil-tool shank contact

Item No.	Designation	Clamping Dia. (mm)
6266963	INDN AP DISC 3-5 #0	SRKIN Ø3-5 / SRK Ø6
6266964	INDN AP DISC 6-12 #1	SRKIN Ø6-12
6266962	INDN AP DISC 14-20 #2	SRKIN Ø14-22
6266952	INDN AP DISC 25-32 #3	SRKIN Ø25-32
6266960	INDN AP DISC SRK3-5 #5	SRK Ø3-5
6266961	INDN AP DISC SRK8 #8	SRK Ø8
6266959	INDN AP DISC SRK12 #12	SRK Ø10-12

▶ Unit box included

Item No.	Designation	Clamping Dia. (mm)
6266953	INDN AP SPLIT #0	T shape Ø3-5
6266954	INDN AP SPLIT #1	T shape Ø6-12
6266955	INDN AP SPLIT #2	T shape Ø14-22
6266956	INDN AP SPLIT #3	T shape Ø25-32
6266957	INDN AP DISC SHORT 12-22	Short Ø12-22

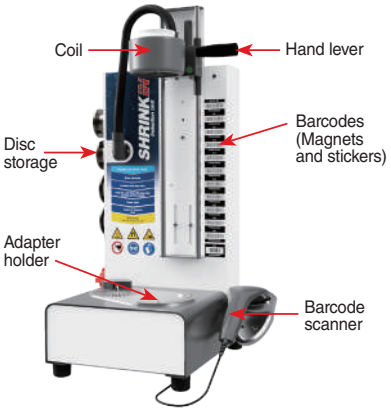
▶ Should be ordered separately

BS Induction Unit

6266979 INDN BS UNIT EU / 6266980 INDN BS UNIT US

Specifications

Model	INDN BS UNIT
Clamping range	Carbide: Ø3-32 mm
Max. tool length	400 mm
Max. machine interface	HSK 100 / Taper #50
Cooling type	Air
Dimensions	320x400x840 mm
Weight	20 kg
Power supply	EU: 400V 50Hz 16A US: 480V 60Hz 15A
Power	8 kW



BS unit adapter

BS unit stop discs

B.O.M

Item	Item No.	Designation	Q'ty
Clamping ring	6267011	INDN BS CLAMP RING	1
Parameter sticker	6267014	INDN BS STICKER SRKIN	1
Stop disc	See table	INDN BS DISC…	5
Blank magnets	-	MAGNET BLANK	12
Barcode scanner	-	-	1
Protective gloves	-	-	1

▶ BS unit adapters, SRK parameter sticker and setting discs should be ordered separately.

BS unit adapters:

- For the correct positioning of the chuck

Item No.	Designation	Used for
6267001	INDN BS AD HSK 32	HSK 32
6267002	INDN BS AD HSK 40	HSK 40
6267003	INDN BS AD HSK 50	HSK 50
6267004	INDN BS AD HSK 63	HSK 63
6267005	INDN BS AD HSK 80	HSK 80
6266999	INDN BS AD HSK 100	HSK 100
6266994	INDN BS AD C3	C3
6266995	INDN BS AD C4	C4
6266996	INDN BS AD C5	C5
6266997	INDN BS AD C6	C6
6266998	INDN BS AD C8	C8
6267006	INDN BS AD TAPER #30	Taper #30
6267008	INDN BS AD TAPER #40	Taper #40
6267010	INDN BS AD TAPER #50	Taper #50

▶ Should be ordered separately

SRK parameter sticker:

Item No.	Designation
6267013	INDN BS STICKER SRK

▶ Should be ordered separately

BS unit stop discs:

- To avoid coil-tool shank contact

Item No.	Designation	Clamping Dia. (mm)
6266993	INDN BS DISC 6-8 #1	SRKIN Ø6-8
6266988	INDN BS DISC 10-14 #2	SRKIN Ø10-14
6266990	INDN BS DISC 16-18 #3	SRKIN Ø16-18
6266991	INDN BS DISC 20 #4	SRKIN Ø20
6266992	INDN BS DISC 25-32 #5	SRKIN Ø25-32

▶ Unit box included

Item No.	Designation	Clamping Dia. (mm)
6266983	INDN BS DISC SRK3 #6	SRK Ø3
6266984	INDN BS DISC SRK4 #7	SRK Ø4
6266985	INDN BS DISC SRK5 #8	SRK Ø5
6266986	INDN BS DISC SRK6 #9	SRK Ø6
6266987	INDN BS DISC SRK8 #10	SRK Ø8
6266981	INDN BS DISC SRK10 #11	SRK Ø10
6266982	INDN BS DISC SRK12 #12	SRK Ø12

▶ Should be ordered separately

Induction unit setting discs

Item No.	Designation	Tool Dia. (mm)	Item No.	Designation	Tool Dia. (mm)
6267028	INDN SETTING DISC 3	3	6267023	INDN SETTING DISC 14	14
6267033	INDN SETTING DISC 4	4	6267024	INDN SETTING DISC 16	16
6267034	INDN SETTING DISC 5	5	6267025	INDN SETTING DISC 18	18
6267037	INDN SETTING DISC 6	6	6267026	INDN SETTING DISC 20	20
6267038	INDN SETTING DISC 8	8	6267027	INDN SETTING DISC 25	25
6267021	INDN SETTING DISC 10	10	6267032	INDN SETTING DISC 32	32
6267022	INDN SETTING DISC 12	12			

▶ Should be ordered separately

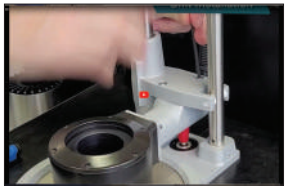
Requirements

- 16A 5-pin industrial socket for AP and BS units

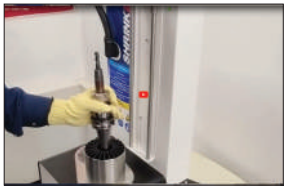
- G3/8 fittings only for AP unit to connect 4 bar air

Installation & Operation video

■ AP induction unit



■ BS induction unit



ER-SEAL collet

■ Application

ER collets are used for applications requiring through coolant, as well as for standard cutting tools such as drills, boring bars, end mills, reamers, taps and special tools.
They provide an effective solution for accurate controled coolant flow.
Front sealing collets are available for advanced high speed machines with through coolant spindles/turrets.
They provide maximum performance, high cutting speeds, extended tool life and high quality surface finish.

■ Features

- A revolutionary high precision front sealing collet with 1.00mm collapsibility that has through coolant capability
- Increased machining efficiency
- Extended tool life
- Has powerful gripping and parallel clamping
- Front sealing provides protection from contamination
- Fast chip removal from work piece

■ Advantages

- High-pressure coolant supply up to 100 bar
- Eliminates coolant flow interference

■ Notes

- For maximum security and clamping power, the cutting tool shank must be inserted into the collet to a minimum depth of 2 x shank diameter
- Suitable for all shank standards

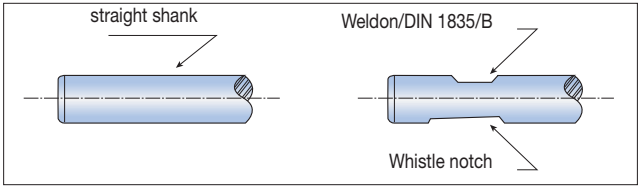
TaeguTec ER coolit sealed collet

■ Two types:

Oil hole collet: ER-SEAL
For straight shank cutting tools with internal coolant supply

JET2 collet: ER-SEAL-JET
With angular double nozzle.
Coolant flow is direct to the cutting edge
- For use with standard straight shank cutting tools (Without coolant hole)

Shank standards



ER - Top clamping nut DIN6499

■ Description

The friction ER Nut has a unique two piece exclusive friction mechanism combining radial and angular self-centering movements.

■ Features

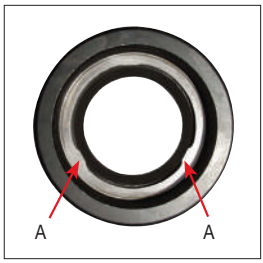
- Unique two piece friction bearing
- Radial and angular float for better concentricity
- Powerful gripping force, 50-100% higher than standard ER nut due to the friction bearing mechanism
- Balanced for higher spindle speed due to unique extractor teeth design
- Compact design: General dimensions and size range are the same as the standard nut sealed design for use with sealed collets.

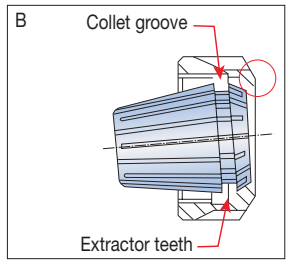
■ Operation

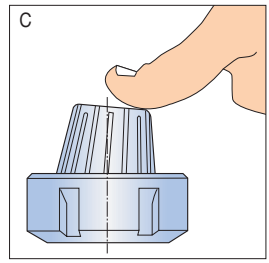
To insert collet: Always assemble the collet into the nut before mounting onto the collet chuck.

■ Inserting procedure

Insert the collet slantwise, fitting the two protruding extractor teeth (A) into the collet groove (B).
Place the two parts onto a clean and horizontal surface.
Press down with your thumb on the back end of the collet until it clicks into place (C).





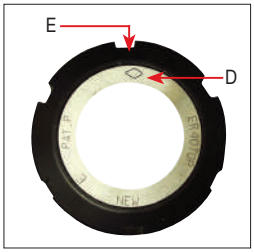


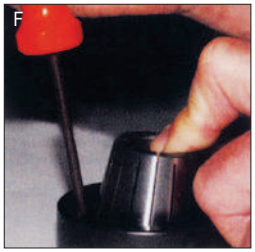
■ Important

Never insert the collet parallel to the extractor ring. This will chip or break the teeth of the extractor.
When unclamping the nut, the collet will self release from the chuck by means of the extractor teeth.

ER - Top clamping nut DIN6499

- Extracting procedure
  1. Align the diamond-shaped engraved logo which is on the silver ring (D) to any of the key slots (E) of the nut.
  2. Place the nut with the collet facing down on a clean and horizontal work surface.
  3. Insert a screwdriver vertically between the nut slots and the collet - on the reverse side of the diamond shaped engraved logo (D).
  4. Tilt the screwdriver outwards while helping the extraction by pushing the back of the collet in the opposite direction (F).





Note:

For maximum performance the clamping nut thread and collet taper must be cleaned and oiled before use.

Recommended clamping torque for standard ER & ER-Top clamping nut.

Nut type	Kg × m
ER-11	5
ER-11M	3
ER-16	7
ER-16M	4
ER-20	12
ER-20M	8
ER-25	20
ER-32	22
ER-40	25
ER-50	35

Important:

The torque is calculated to suit the maximum diameter capacity of each collet. The torque should be gradually reduced when used with a smaller shank size.

TSK slim collet chuck

■ Features & advantages
- Excellent accuracy & good gripping power by gentle taper angle (ER collet : 8°, TSK collet : 4°)
- Slim design for deep and cavity machining
- Suitable on high speed machining
- Variety of TSK collets (Normal & coolant type)
- General machining using drill & end mill

■ Application
- General machining using drill & end mill
- High speed machining for mold & die industry
- Accurate machining using reamer & end mill

■ How to assemble the collet with a nut

a. Assembly device
(Optional, sold separately)

b. Nut

c. Collet

❶ Insert the back end of the collet (c) into the assembly device (a)

❷ Insert the combined part (a+c) in the nut (b)

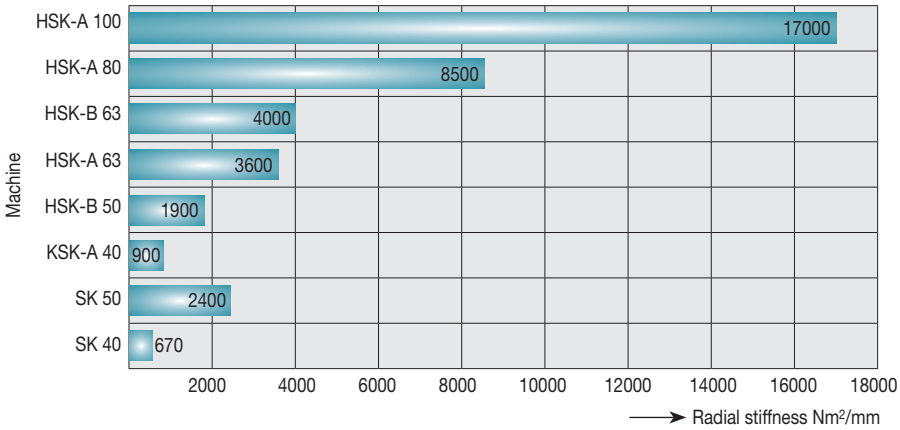
❸ Pluck out the assembly device (a) from the remaining part (b+c)

a. Assembly device	Designation
	TSK 06, TSK 10, TSK 16, TSK 25

HSK (DIN69893) system

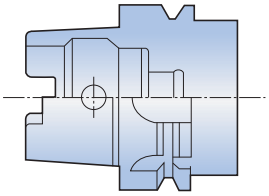
- Features
- DIN standard
- For high speed machining
- Size: #32, 40, 50, 63, 100
- For A.T.C. & manual machine
- Double face contact
- High stiffness

Radial stiffness of different machine tool interface

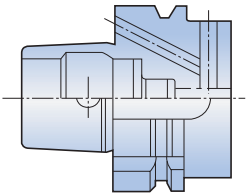


Type

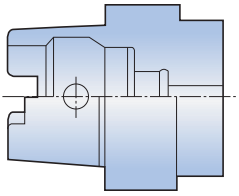
- A type: Automatic tool change



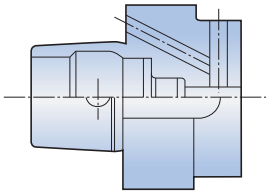
- B type: With coolant through face



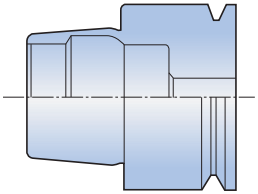
- C type: Manual clamp



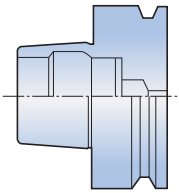
- D type: With coolant through face



- E type: Super high speed



- F type: Ultra high speed

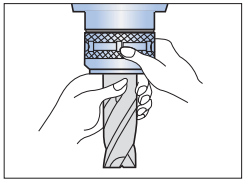


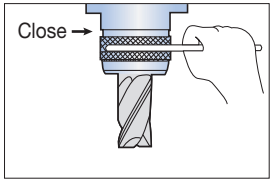
Milling chuck

■ Exceptional gripping power and simple operation

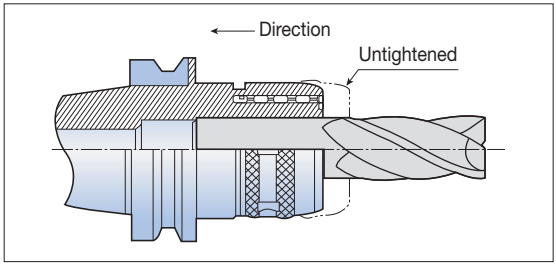
- Torque

Type	Torque (kgf•m)
NTMC 25	180
NTMC 32	360
NTMC 42	520



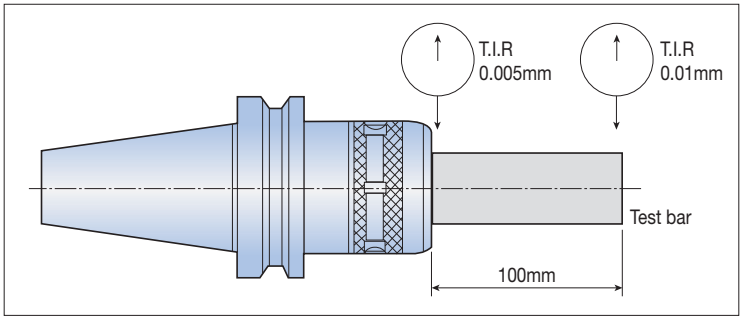


Tighten slightly when collar
is close to body (Avoid hammering)



■ Improved accuracy prolongs tool life

The accuracy and low runout has been achieved by utilizing precise grinding and spiral laser slitting to avoid damage and tool distortion.



▶ Hydraulic chuck

■ Tool Fastening

- As shown in Figure 1, after inserting the tool while observing the Lmax and Lmin of the hydraulic chuck, tighten the clamping screw by rotating it clockwise by the specified torque value.

■ Tool Releasing

- Remove the tool by rotating the clamping screw counter clockwise approximately 3-4 times.

■ Notice

1. Before tightening the tool, remove dust from the inside of the hydraulic chuck and the tool shank, and ensure they are dry and clean. This will improve tool runout and clamping force after fastening.
2. The minimum insertion depth of the tool, Lmin, must be observed when in use.
   This prevents changes in the hydraulic chuck's internal diameter or loss of hydraulic oil.
3. Clamping screws must be fully locked to the recommended torque value.
   This prevents tool breakage, loss of hydraulic oil, and ensures optimal machining performance.
4. A cylindrical shank tool with h6 tolerance is recommended to ensure clamping force.
5. Weldon shank tools must be tightened using collets to prevent changes in the hydraulic chuck's internal diameter and damage.
6. If not used for long periods of time, tools should be removed and stored in a clean condition to minimize loss of hydraulic oil.
7. The clamping screw must not be tightened without the tool inserted to prevent changes in the hydraulic chuck's internal diameter and damage.
8. The vent bolt must not be disassembled by the customer.

Figure 1. Tool structure

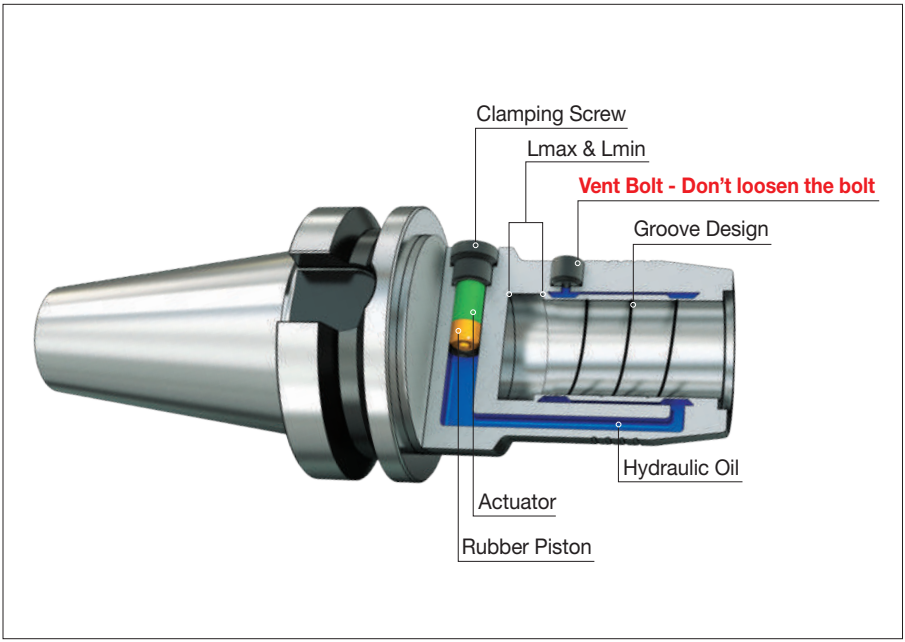


Table 1. Tool insertion minimum and maximum depth

Inner diameter Ø(mm)	Lmin (mm)	Lmax (mm)
6	27.5	37.5
8	27.5	37.5
10	32.5	42.5
12	37.5	47.5
14	37.5	47.5
16	42.5	52.5
18	42.5	52.5
20	42.5	52.5
25	51	61
32	55	65
Only for THCG & THCS product lines. Must check the specification for each product.		

Table 2. Clamping screw recommended tightening torque

Inner diameter Ø(mm)	Tightening torque (N·m)
All diameter	5.5

Table 3. Clamping screw wrench size

Inner diameter Ø(mm)	Wrench size (mm)
6-18	4
20-32	5

Table 4. Tool clamping force

Inner diameter Ø(mm)	Tightening torque (N·m)
6	16
8	23
10	45
12	90
14	110
16	185
18	280
20	430
25	650
32	900

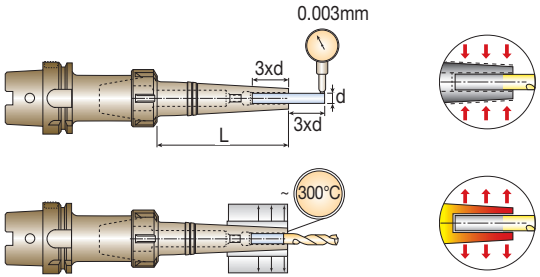
Thermal T-SHRINK chucking system

T-SHRINK chucking system

The thermal T-SHRINK ER collet chucking system is an enhancement to the existing popular ER system. The T-SHRINK collets utilize the thermal shrink phenomena for rigid clamping of solid carbide cutters. This new system provides higher torque, precision runout and better repeatability. The T-SHRINK collets with their slim design and different projection length allows the user to reach into deeper cavities and perform narrow milling applications. TaeguTec offers a complete system for T-SHRINK ER collets, including a uniquely designed heating unit with a portable heating handle. The unit is equipped with a high-tech temperature control for easy and practical use at the machining center or in the tool room.

■ For carbide tools only

L(mm)	Max. T.I.R
35	7㎛
60	9㎛
85	10㎛



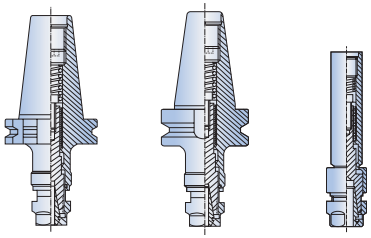
GTI-Tap attachment

■ Description

Short tap chucks for ER collets

■ Application

Axial-float/tension/compression type for CNC milling machines and lathes with reversing motors and rigid tapping



DIN 69871 BT MAS-403 Straight shank

■ Features

- Compensates for machine feed and tap pitch variance
- Floating mechanism compensates for misalignment between tap and workpiece
- Right and left-hands tapping

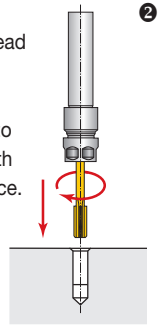
■ Advantages

- Practical and efficient tap holding by the ER spring collet without using drive jaw
- Compact design for minimal clearance applications
- Heavy-duty design for high torque drive ensures the same accuracy as the tap itself

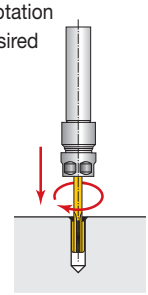
■ Operation

For through and blind hole tapping

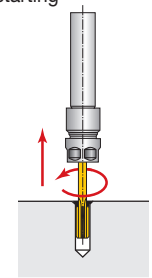
❶ Enter feed rate according to thread pitch (or 1-2% lower), and set spindle to starting point with 0.08mm clearance.



❷ Start spindle forward with right hand rotation until reaching desired depth.

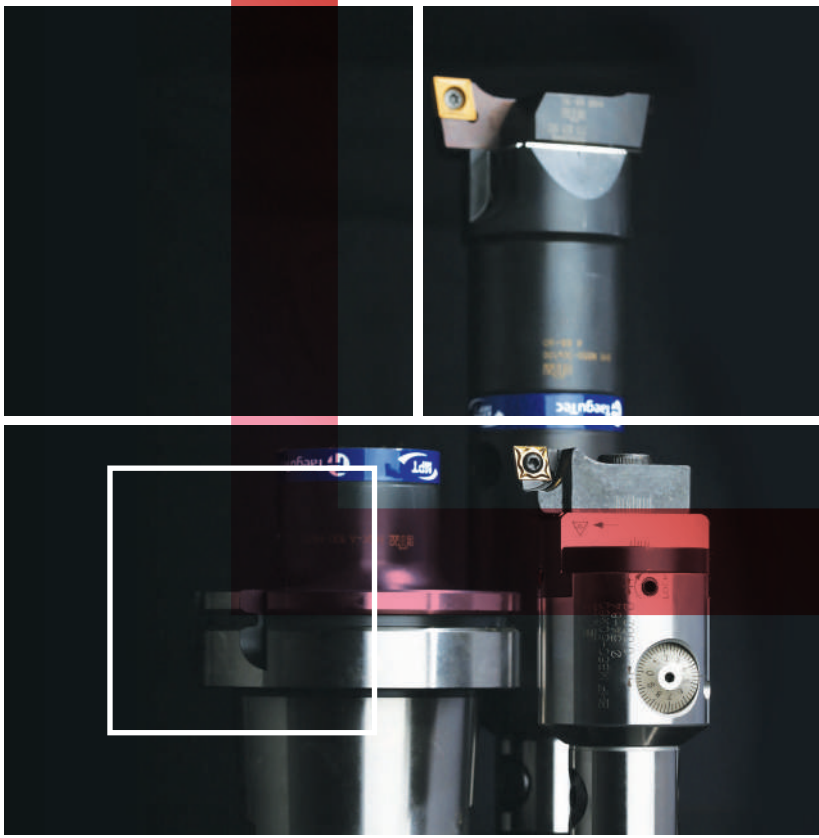


❸ Stop feed and rotation and reverse to starting point.



MPT

MODULAR PRECISION TOOLING



MPT

Modular Precision Tooling

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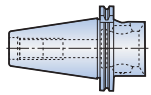
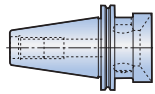
Shanks

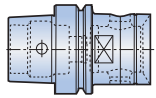
SKA
H6



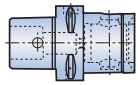
CATM
H7



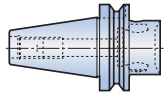
HSK
H8



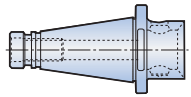
C MB
H9



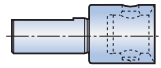
BT/BT-FC
H10-H11



ISOM/ISO
H12

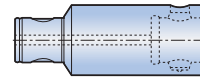


ST
H13-H15

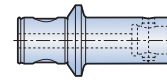


Extensions and reducers

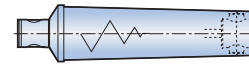
EX H16



RE H17

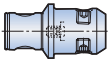


RE AVI H8

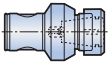


Toolholders

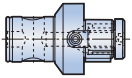
EMH H19



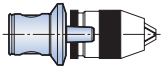
CC H20



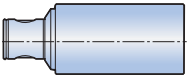
SMH H21



DC H22



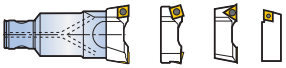
BLANK H22



Boring heads

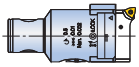
Rough boring heads

BHR H23

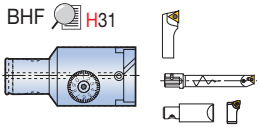


Fine boring heads

BHE H27

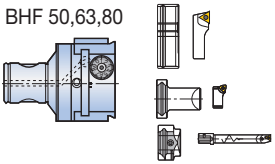


BHF H31



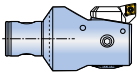
H37

BHF 50,63,80

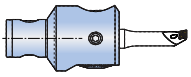


H45

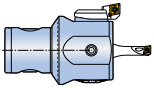
BSFD MB A-G



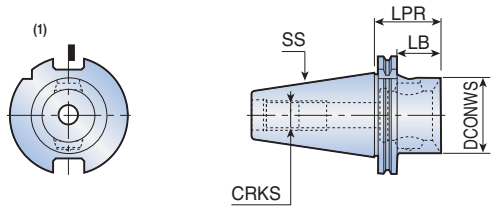
BSFD MB-H



BSFD-V MB-I



SK shank with MB connection



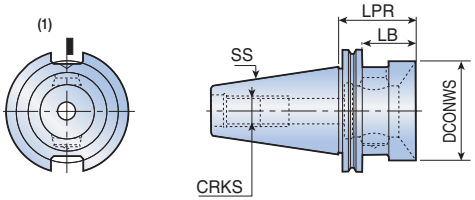
DIN 69871- AD / ISO 7388/1 MB

Designation	Dimension (mm)					CRKS	Kg
	SS	DCONWS	LPR	LB	BD		
SKA 30-MB50	30	MB50	60	41	-	M12	0.7
40-MB40	40	MB40	45	26	-	M16	0.9
40 MB40x120	40	MB40	120	101	44.50	M16	1.7
40-MB50	40	MB50	48	29	-	M16	1.2
40 MB50x120	40	MB50	120	101	-	M16	2.8
40-MB63	40	MB63	80	61	-	M16	1.6
50-MB50	50	MB50	48	29	-	M24	2.8
50 MB50x120	50	MB50	120	101	60.00	M24	4.0
50-MB63	50	MB63	56	37	-	M24	3.0
50 MB63x150	50	MB63	150	131	70.00	M24	2.8
50-MB80	50	MB80	62	43	-	M24	3.6
50 MB80x180	50	MB80	180	161	-	M24	7.9

▸ (1) Cutting edge position

CATM-MB

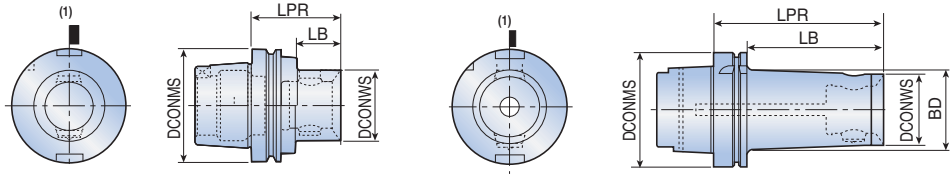
CAT shank with MB connection



Designation	Dimension (mm)				CRKS	Kg
	SS	DCONWS	LPR	LB		
CATM 40-MB50	40	MB50	66	47	M16	1.1
40-MB63	40	MB63	100	81	M16	1.9
50-MB50	50	MB50	48	29	M24	2.9
50-MB80	50	MB80	62	43	M24	3.2

▸ (1) Cutting edge position

HSK shank with MB connection



HSK DIN 69893 MB

Fig.1

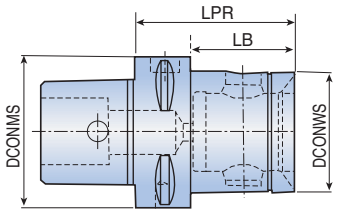
HSK DIN 69893-A MB

Fig.2

Designation	Dimension (mm)					Kg	Fig.
	DCONMS	DCONWS	LPR	LB	BD		
HSK A 50-MB50	50	MB50	66	40	-	0.6	1
63-MB40	63	MB40	60	34	-	1.0	1
63-MB40x120	63	MB40	120	94	46	1.6	2
63-MB50	63	MB50	66	40	-	0.9	1
63-MB50x120	63	MB50	120	94	-	1.1	2
63-MB63	63	MB63	75	49	-	1.1	1
80-MB50	80	MB50	70	44	-	1.5	1
80-MB63	80	MB63	80	54	-	1.8	1
80-MB80	80	MB80	86	60	-	2.1	1
100-MB50	100	MB50	72	43	-	2.0	1
100-MB50x120	100	MB50	120	91	60	4.9	2
100-MB63	100	MB63	82	53	-	2.7	1
100-MB63x150	100	MB63	150	121	70	4.7	2
100-MB80	100	MB80	88	59	-	3.0	1
100-MB80x180	100	MB80	180	151	-	7.3	2

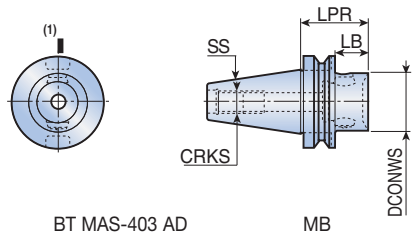
▸ (1) Cutting edge position

C-adapter shank with MB connection



Designation	Dimension (mm)				Kg
	DCONMS	DCONWS	LPR	LB	
C5 MB50x55	50	MB50	55	-	0.7
C6 MB50x67	63	MB50	67	45	1.1
MB63x77	63	MB63	77	-	1.8
C8 MB63x70	80	MB63	70	39	2.3

BT shanks with MB connection



BT MAS-403 AD MB

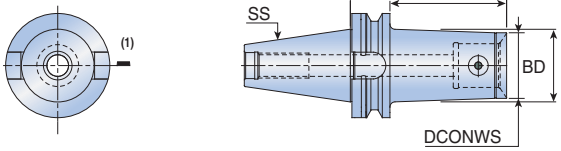
Designation	Dimension (mm)					CRKS	Kg
	SS	DCONWS	LPR	LB	BD		
BT- 30-MB32	30	MB32	32	10.6	-	M12	0.5
30-MB50	30	MB50	60	38.6	-	M12	0.7
40-MB40	40	MB40	45	18	-	M16	0.6
40-MB40x120	40	MB40	120	93	44.5	M16	0.9
40-MB50	40	MB50	48	21	-	M16	0.9
40-MB50x120	40	MB50	120	93	-	M16	1.9
40-MB63	40	MB63	66	39	-	M16	1.2
50-MB50	50	MB50	66	28	-	M24	3.5
50-MB50x120	50	MB50	120	82	60	M24	4.2
50-MB63	50	MB63	75	37	-	M24	3.7
50-MB63x150	50	MB63	150	112	70	M24	5.8
50-MB80	50	MB80	75	37	-	M24	4.0
50-MB80x180	50	MB80	180	142	-	M24	7.5
50-MB110x140	50	MB110	140	102	-	M24	6.8

▸ (1) Cutting edge position

BT-FC-MB

BT-FC shanks with MB connection

DIN6357



Designation		Dimension (mm)					CRKS	Kg
		SS	DCONWS	LPR	BD	LB		
BT40	**FC MB50**	40	50	48	-	21	M16	0.9
	FC MB50X120	40	50	120	-	93	M16	1.9
	FC MB63	40	63	66	-	-	M16	1.2
BT50	**FC MB50**	50	50	66	-	28	M24	3.3
	FC MB50X120	50	50	120	60	82	M24	4.2
	FC MB63	50	63	75	-	37	M24	3.7
	FC MB63X150	50	63	150	70	112	M24	5.8
	FC MB80	50	80	75	-	37	M24	4
	FC MB80X180	50	80	180	-	142	M24	7.5

▸ (1) Cutting edge position

ISO Taper shank with MB connection

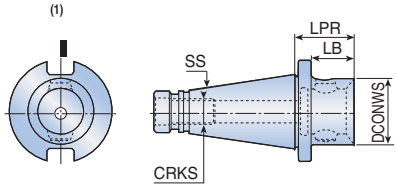


Fig.1

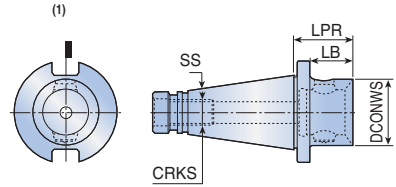


Fig.2

Designation		Dimension (mm)				CRKS	Kg	Fig.
		SS	DCONWS	LPR	LB			
ISOM	**30-MB50**	30	MB50	58	-	M12	0.6	1
	40-MB50	40	MB50	48	36	M16	0.9	1
	40-MB63	40	MB63	60	-	M16	1.2	1
	50-MB50	50	MB50	48	33	M24	2.6	1
	50-MB63	50	MB63	56	41	M24	2.7	1
	50-MB80	50	MB80	60	45	M24	3.2	1
ISO	**40-MB50**	40	MB50	48	36	UNC 5/8"-11	1.0	2
	40-MB63	40	MB63	60	-	UNC 5/8"-11	1.4	2
	50-MB50	50	MB50	48	33	UNC 1"-8	2.8	2
	50-MB63	50	MB63	56	41	UNC 1"-8	2.9	2
	50-MB80	50	MB80	60	45	UNC 1"-8	3.6	2

▸ (1) Cutting edge position

Straight shanks with MB connection

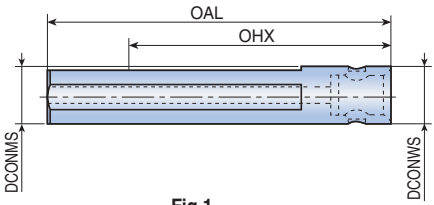


Fig.1

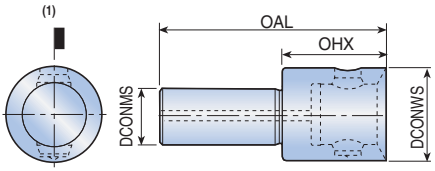
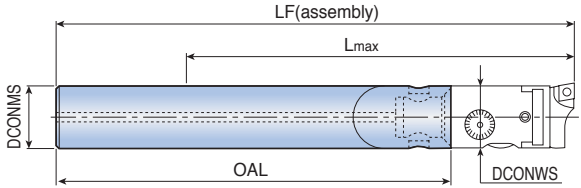


Fig.2

Designation	Dimension (mm)				Kg	Fig.
	DCONMS	DCONWS	OAL	OHX		
ST16-MB16	16	MB16	100	66	0.2	1
20-MB20	20	MB20	125	85	0.3	1
25-MB32	25	MB32	100	35	0.4	2
32-MB50	32	MB50	140	60	1.0	2

▸ (1) Cutting edge position

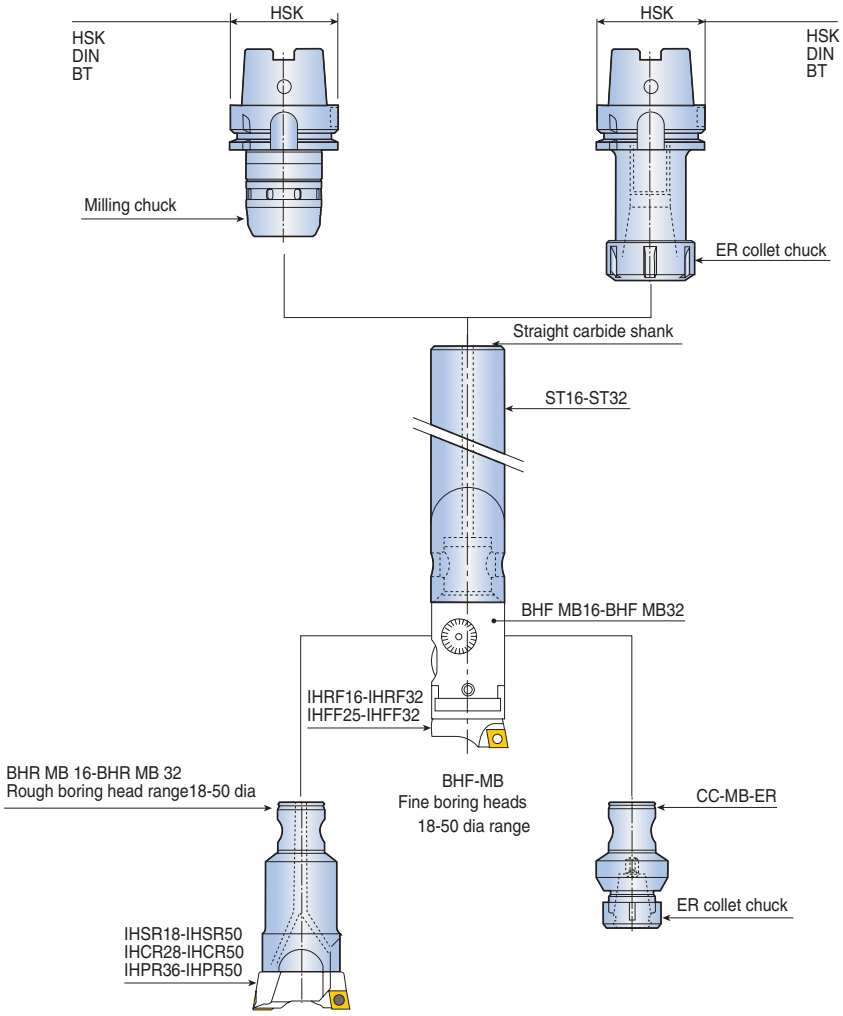
Straight carbide shanks with MB connection



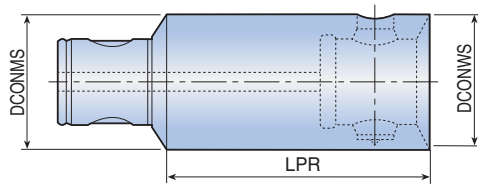
Designation		Dimension (mm)					Kg
		DCONMS	DCONWS	OAL	LF	Lmax	
ST16	**MB16x110E**	16	MB16	110	144	100	0.3
	MB16x140E	16	MB16	140	174	125	0.4
	MB16x170E	16	MB16	170	204	160	0.5
ST20	**MB20x135E**	20	MB20	135	175	125	0.6
	MB20x170E	20	MB20	170	210	160	0.8
	MB20x210E	20	MB20	210	250	200	0.9
ST25	**MB25x160E**	25	MB25	160	210	160	1.0
	MB25x205E	25	MB25	205	255	200	1.3
	MB25x255E	25	MB25	255	305	250	1.6
ST32	**MB32x195E**	32	MB32	195	258	200	2.1
	MB32x250E	32	MB32	250	313	250	2.8
	MB32x315E	32	MB32	315	378	320	3.5

ST-MB straight carbide shank with MB connection assembly options

ST16-ST32 MB16-MB32
Diameter range: 18-50 mm

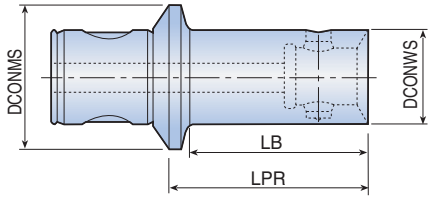


Extensions with MB connection



Designation	Dimension (mm)			Kg
	DCONMS	DCONWS	LPR	
EX 16x25-MB16	MB16	MB16	25	0.4
20x32-MB20	MB20	MB20	32	0.7
25x25-MB25	MB25	MB25	25	0.9
25x40-MB25	MB25	MB25	40	0.2
32x32-MB32	MB32	MB32	32	0.2
32x50-MB32	MB32	MB32	50	0.3
40x40-MB40	MB40	MB40	40	0.4
40x63-MB40	MB40	MB40	63	0.6
50x50-MB50	MB50	MB50	50	0.7
50x80-MB50	MB50	MB50	80	1.1
50x100-MB50	MB50	MB50	100	1.5
63x63-MB63	MB63	MB63	63	1.4
63x100-MB63	MB63	MB63	100	2.2
63x125-MB63	MB63	MB63	125	2.9
80x80-MB80	MB80	MB80	80	3.0
80x125-MB80	MB80	MB80	125	4.6
80x160-MB80	MB80	MB80	160	6.1

Reducers with MB connection



Designation		Dimension (mm)				Kg
		DCONMS	DCONWS	LPR	LB	
RE	**MB20-MB16x20**	MB20	MB16	20	16	0.5
	MB25-MB16x20	MB25	MB16	20	15	0.8
	MB25-MB20x25	MB25	MB20	25	20	0.9
	MB32-MB16x24	MB32	MB16	24	18	1.3
	MB32-MB20x25	MB32	MB20	25	20	1.6
	MB32-MB25x28	MB32	MB25	28	23	2.1
	MB40-MB16x24	MB40	MB16	24	17	3.5
	MB40-MB20x26	MB40	MB20	26	20	0.4
	MB40-MB25x28	MB40	MB25	28	22	0.5
	MB40-MB32x32	MB40	MB32	32	27	0.6
	MB50-MB16x24	MB50	MB16	24	15	1.0
	MB50-MB16x40	MB50	MB16	40	31	1.3
	MB50-MB16x74	MB50	MB16	74	65	1.6
	MB50-MB20x26	MB50	MB20	26	18	3.5
	MB50-MB20x70	MB50	MB20	70	62	0.4
	MB50-MB20x93	MB50	MB20	93	85	0.5
	MB50-MB25x28	MB50	MB25	28	21	0.6
	MB50-MB25x87	MB50	MB25	87	80	0.8
	MB50-MB25x117	MB50	MB25	117	110	3.5
	MB50-MB32x32	MB50	MB32	32	25	0.4
	MB50-MB32x87	MB50	MB32	87	80	0.5
	MB50-MB32x144	MB50	MB32	144	137	0.6
	MB50-MB40x36	MB50	MB40	36	30	0.8
	MB50-MB40x87	MB50	MB40	87	80	0.9
	MB50-MB40x176	MB50	MB40	176	170	1.0
	MB63-MB50x40	MB63	MB50	40	34	1.3
	MB80-MB50x45	MB80	MB50	45	36	1.6
	MB80-MB63x60	MB80	MB63	60	52	1.6

Carbide core reducers with MB connection

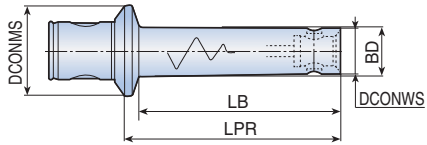


Fig.1

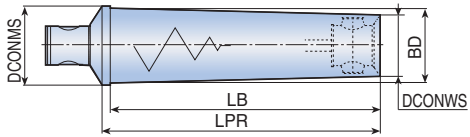


Fig.2

Designation	Dimension (mm)					Kg	Fig.
	DCONMS	DCONWS	BD	LPR	LB		
RE MB50-MB16x74-AVI	MB50	MB16	17.5	74	65	0.4	1
MB50-MB20x93-AVI	MB50	MB20	21.5	93	85	0.5	1
MB50-MB25x117-AVI	MB50	MB25	27	117	110	0.8	1
MB50-MB32x144-AVI	MB50	MB32	35	144	138	1.4	1
MB50-MB40x176-AVI	MB50	MB40	47	176	170	2.5	1
MB63-MB50x220-AVI	MB63	MB50	60	220	214	5.6	1
MB80-MB63x280-AVI	MB80	MB63	77	280	272	10.6	2

Weldon holder with MB connection

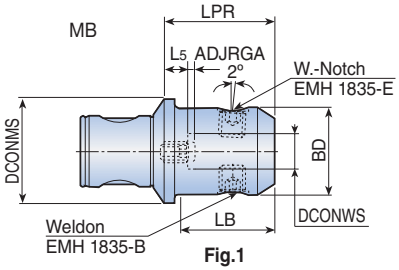


Fig.1

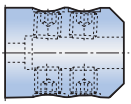


Fig.2

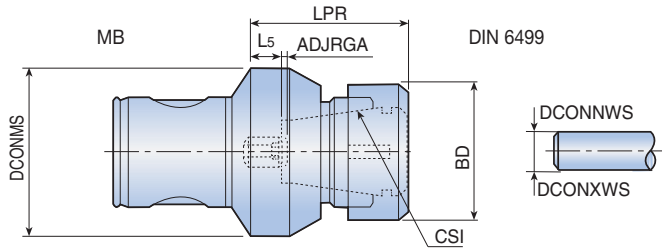
Designation		Dimension (mm)							Kg	Fig.
		DCONMS	DCONWS	BD	LPR	LB	L5	ADJRGA		
EMH	**MB50-6**	MB50	6	25	44	32.5	7	2	0.5	1
	MB50-8	MB50	8	28	44	33	7	2	0.5	1
	MB50-10	MB50	10	35	52	42	11	3	0.7	1
	MB50-12	MB50	12	42	57	48	11	3	0.8	1
	MB50-14	MB50	14	42	57	48	11	3	0.8	1
	MB50-16	MB50	16	48	67	61	17	4	1.1	1
	MB50-20	MB50	20	51	67	-	16	4	1.1	1
	MB50-25	MB50	25	63	80	-	22	4	1.2	2
	MB63-16	MB63	16	48	64	53	14	4	1.4	1
	MB63-20	MB63	20	52	66	56	14	4	1.5	1
	MB63-25	MB63	25	64	74	-	16	4	2.1	2
	MB63-32	MB63	32	72	76	-	14	4	2.5	2
	MB80-40	MB80	40	80	83	-	12	4	3.2	2

Spare Parts

Designation	Preset Screw	Lock Screw
EMH MB50-6	BH EMH PRST M8X8B	SR M6X10 DIN1835B
MB50-8	BH EMH PRST M8X8B	BH EMH M8X9.5
MB50-10	BH EMH PRST M8X10B	BH EMH M10X11.5
MB50-12	BH EMH PRST M8X10B	BH EMH M12X15.5
MB50-14	BH EMH PRST M8X10B	BH EMH M12X15.5
MB50/MB63-16	BH EMH PRST M12X16B	BH EMH M14X15.5
MB50/MB63-20	BH EMH PRST M12X16B	BH EMH M16X15.5
MB50/MB63-25	BH EMH PRST M16X16B	BH EMH M18X19.5
MB63-32	BH EMH PRST M16X16B	BH EMH M20X19.5
MB80-40	-	BH EMH M20X19.5

CC MB-ER

ER Collet chucks with MB connection



Designation	Dimension (mm)							Kg
	DCONMS	CSI	DCONNWS	DCONXWS	BD	LPR	ADJRGA	
CC MB16 ER11M	MB16	ER11	0.5	7.0	16	25	2.5	0.03
MB20 ER16M	MB20	ER16	0.5	10.0	22	32	1.0	0.06
MB32 ER25M	MB32	ER25	1.0	16.0	35	42	1.5	0.25
MB40 ER25	MB40	ER25	1.0	16.0	42	45	5.0	0.25
MB50 ER25	MB50	ER25	1.0	16.0	42	48	7.0	0.70
MB50 ER32	MB50	ER32	2.0	20.0	50	59	7.0	1.00
MB63 ER32	MB63	ER32	2.0	20.0	50	59	12	1.30

Spare Parts

Designation	Press Screw	ER Nut	ER Wrench
CC MB16-ER11M	CC MB16 SCREW	NUT ER11 MINI	WRENCH ER11 MINI
MB20-ER16M	CC MB20 SCREW	NUT ER16 MINI	WRENCH ER16 MINI
MB32-ER25M	CC MB32 SCREW	NUT ER25 MINI	WRENCH ER25 MINI
MB40-ER25	CC MB40 SCREW	NUT ER25 TOP	WRENCH ER25
MB50-ER25	CC MB50 SCREW	NUT ER25 TOP	WRENCH ER25
MB50-ER32	CC MB50 SCREW	NUT ER32 TOP	WRENCH ER32
MB63-ER32	CC MB63 SCREW	NUT ER32 TOP	WRENCH ER32

SMH MB

Shell mill holders with MB connection

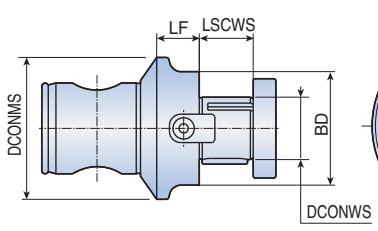


Fig.1

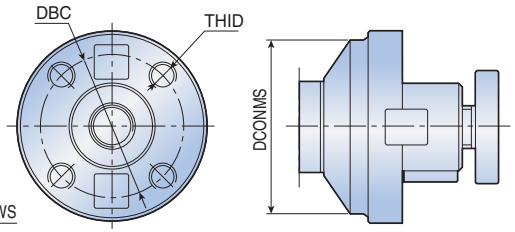


Fig.2

Designation		Dimension (mm)								Kg
		DCONMS	DCONWS	BD	DBC	THID	LF	LSCWS	Fig.	
SMH	**MB40-16**	40	16	32	-	-	15	17	1	0.32
	MB40-22	40	22	40	-	-	13	19	1	0.38
	MB50-16	50	16	32	-	-	15	17	1	0.48
	MB50-22	50	22	40	-	-	15	19	1	0.55
	MB50-27	50	27	50	-	-	15	21	1	0.66
	MB50-32	50	32	60	-	-	15	24	1	0.79
	MB63-22	63	22	60	-	-	15	19	1	1.01
	MB63-27	63	27	60	-	-	15	21	1	1.09
	MB63-32	63	32	70	-	-	15	24	1	1.24
	MB80-32	80	32	88	-	-	24	24	1	2.09
	MB80-40	80	40	88	66.7	M12	24	27	2	2.25
	MB80-50	80	50	90	-	-	24	30	2	2.58
	MB80-60[1]	80	60	128.5	101.6	M16	31.5	40	2	4.19

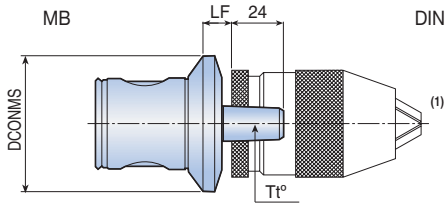
▸ [1]Shell locking screw not supplied

Spare Parts

Designation		Clamp Screw	Dog Drive	Key	Key Screw
SMH	**MB40-22**	M10 CLAMP SCREW SEM 22	BH DOG DRIVE SMH 22	KEY SMH 22	M4x10 SMH KEY SCREW
	MB50-16	M 8 CLAMP SCREW SEM 16	BH DOG DRIVE SMH 16	KEY SMH 16	M3x 8 SMH KEY SCREW
	MB50-22	M10 CLAMP SCREW SEM 22	BH DOG DRIVE SMH 22	KEY SMH 22	M4x10 SMH KEY SCREW
	MB50-27	M12 CLAMP SCREW SEM 27	BH DOG DRIVE SMH 27	KEY SMH 27	M5x12 SMH KEY SCREW
	MB50-32	M16 CLAMP SCREW SEM 32	BH DOG DRIVE SMH 32	KEY SMH 32	M6x16 SMH KEY SCREW
	MB63-27	M12 CLAMP SCREW SEM 27	BH DOG DRIVE SMH 27	KEY SMH 27	M5x12 SMH KEY SCREW
	MB63-32	M16 CLAMP SCREW SEM 32	BH DOG DRIVE SMH 32	KEY SMH 32	M6x16 SMH KEY SCREW
	MB80-32	M16 CLAMP SCREW SEM 32	BH DOG DRIVE SMH 32	KEY SMH 32	M6x16 SMH KEY SCREW
	MB80-40	M20 CLAMP SCREW SEM 40	BH D OG DRIVE SMH 40	KEY SMH 40	M6x18 SMH KEY SCREW

DC MB

Drill chucks with MB connection

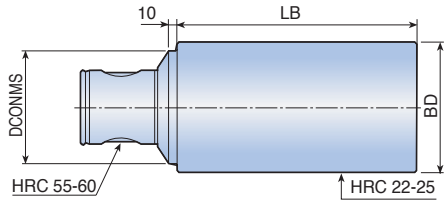


Designation	Dimension (mm)			Kg
	DCONMS	Tt°	LF	
DC **MB50 B16**	MB50	B16	10.0	0.4
MB63 B16	MB63	B16	13.5	0.8

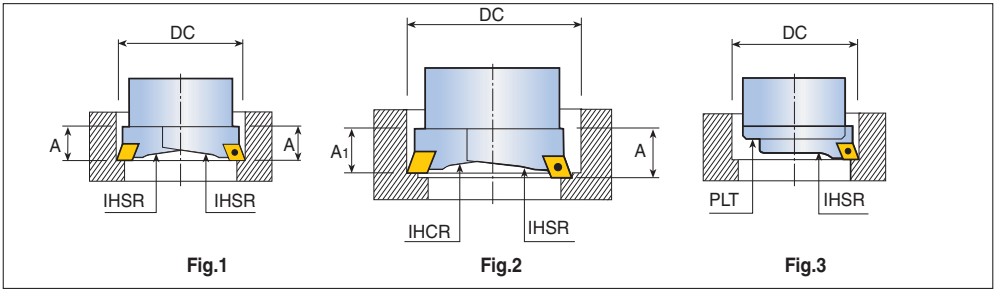
▸ (1)Without drill chuck

BLANK MB

Blanks with MB connection



Designation	Dimension (mm)			Kg
	DCONMS	BD	LB	
BLANK **MB50-63x160**	MB50	63	160	4.4
MB63-80x200	MB63	80	200	8.8
MB80-100x250	MB80	100	250	16.6
MB110-130x250	MB110	130	250	18.0



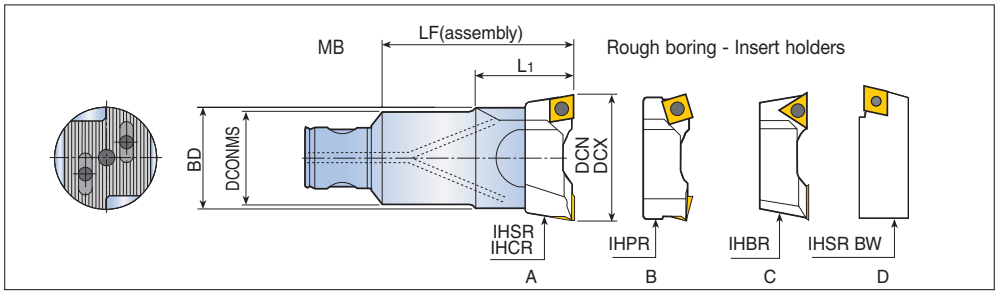
- When using the MPT system, it is strongly recommended that the user utilizes the tool pre-setting equipment provided to set the radial cutting edges. The boring bars that are equipped with two inserts holders are for rough machining and heavy stock removal.
- The bars are applicable to three types of machining scenarious:

- When two IHSR insert holders are on the same plane, the two cutting edges are placed at identical radial distances for high feed rough machining(Fig. 1).
- When each IHCR and IHSR insert is not set on the same plane, each of the two cutting edges is placed at a different radial distance for deep rough machining(Fig. 2).
- If boring bars are set with a single insert holder it allows rough and finish machining with normal chip removal. In this situation, it is strongly recommended that a serrated surface protection plate (PLT) is used(Fig. 3).

Rough boring head diameter range

	0 10 20 30 40 50 60 70 80 90 100 110 120 130 150 200 300 400 600 700 800
BHR MB 16-16x34	18-22
20-20x40	22-28
25-25x50	28-38
32-32x63	35.5-50
40-40x75	50-68
50-50x90	68-90
50-63x105	90-120
63-63x105	90-120
80-80x115	120-200

Rough boring heads 18-200mm range with MB connection



Designation	Dimension (mm)						Insert holders					Kg
	DCONMS	DCN	DCX	BD	LF	L1	Insert holders	A	B	C	D	
BHR **MB16-16x34**	MB16	18	22	16	34	-	IH...18-22	●			●	0.06
MB20-20x40	MB20	22	28	20	40	-	IH...22-28	●			●	0.10
MB25-25x50	MB25	28	38	26	50	-	IH...28-38	●			●	0.18
MB32-32x63	MB32	36	50	34	63	-	IH...36-50	●	●		●	0.36
MB40-40x75	MB40	50	68	45	75	-	IH...50-68	●	●		●	0.70
MB50-50x90	MB50	68	90	65	90	50	IH...68-90	●	●		●	1.49
MB50-63x105	MB50	90	120	85	105	60	IH...90-120	●	●	●	●	1.54
MB63-63x105	MB63	90	120	85	105	63	IH...90-120	●	●	●	●	3.08
MB80-80x115	MB80	120	200	110	115	75	IH...120-800	●	●	●	●	5.38

Spare Parts H60-H67
Cutting Condition H68-H74
H25-H26

Insert holders

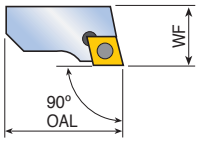


Fig.1

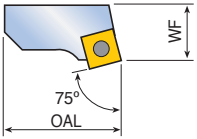


Fig.2

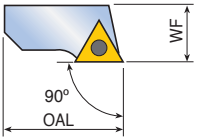
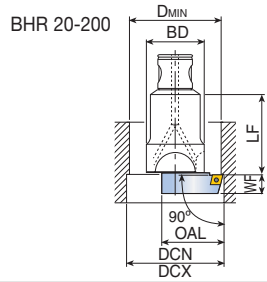


Fig.3

Designation		Dimension (mm)				Spare parts			Fig.
		DCN	DCX	WF	OAL	Insert	Insert screw	Torx key	
IHSR	**18-22**	18	22	8.0	15.0	CCMT 0602...	SR 14-548	T 7	1
	22-28	22	28	9.5	19.0	CCMT 0602...	SR 14-548	T 7	1
	28-38	28	38	12.5	23.0	CCMT 0602...	SR 14-548	T 7	1
	36-50	36	50	15.0	32.0	CCMT 0602...	SR 14-548	T 7	1
	50-68	50	68	19.0	40.0	CCMT 09T3...	SR 16-236	T 15	1
	50-68-12	50	68	19.0	40.0	CCMT 1204..	SR 16-212	T 20	1
	68-90	68	90	22.0	54.0	CCMT 1204..	SR 16-212	T 20	1
	90-120	90	120	27.0	70.5	CCMT 1204...	SR 16-212	T 20	1
	120-160	120	160	32.0	94.5	CCMT 1204..	SR 16-212	T 20	1
	160-800	160	800	32.0	130.0	CCMT 1204..	SR 16-212	T 20	1
IHCR	**28-38**	28	38	12.3	23.0	CCMT 0602..	SR 14-548	T 7	1
	36-50	36	50	14.8	32.0	CCMT 0602...	SR 14-548	T 7	1
	36-50-09	36	50	14.8	32.0	CCMT 09T3..	SR 16-236	T 15	1
	50-68	50	68	18.7	40.0	CCMT 09T3..	SR 16-236	T 15	1
	50-68-12	50	68	18.7	40.0	CCMT 1204..	SR 16-212	T 20	1
	68-90	68	90	21.7	54.0	CCMT 1204..	SR 16-212	T 20	1
	90-120	90	120	26.7	70.5	CCMT 1204..	SR 16-212	T 20	1
	120-160	120	160	31.7	94.5	CCMT 1204..	SR 16-212	T 20	1
	160-800	160	800	31.7	130.0	CCMT 1204..	SR 16-212	T 20	1
IHPR	**36-50**	36	50	15	32.0	SCMT 09T3..	SR 16-236	T 15	2
	50-68	50	68	19	40.0	SCMT 09T3...	SR 16-236	T 15	2
	68-90	68	90	22	54.0	SCMT 1204..	SR 16-212	T 20	2
	90-120	90	120	27	70.5	SCMT 1204..	SR 16-212	T 20	2
	120-160	120	160	32	94.5	SCMT 1204..	SR 16-212	T 20	2
	160-800	160	800	32	130.0	SCMT 1204..	SR 16-212	T 20	2
IHBR	**90-120**	90	120	27	70.5	TCMT 2205..	SR 16-212	T 20	3
	120-160	120	160	32	94.5	TCMT 2205..	SR 16-212	T 20	3
	160-800	160	800	32	130.0	TCMT 2205..	SR 16-212	T 20	3

H54-H57

Back face for BHR and rough boring heads



Designation	Dimension (mm)							Spare parts		
	SS	DCN	DCX	BD	LF	WF	OAL	Insert	Insert screw	Torx key
IHSR 20-24 BW	BHR MB16-16	20	24	16	27.5	8.0	16.0	CCMT 0602..	SR 14-548	T 7
23.5-30 BW	BHR MB20-20	23.5	30	20	32.5	9.5	19.5	CCMT 0602..	SR 14-548	T 7
29.5-40 BW	BHR MB25-20	29.5	40	25	39.0	12.0	24.0	CCMT 0602..	SR 14-548	T 7
39-52 BW	BHR MB32-32	39	52	32	50.0	14.0	32.0	CCMT 09T3..	SR 16-236	T 15
51-70 BW	BHR MB40-40	51	70	40	63.5	17.5	42.0	CCMT 1204..	SR 16-212	T 20
69-92 BW	BHR MB50-50	69	92	55	80.5	21.0	57.0	CCMT 1204..	SR 16-212	T 20
91-122 BW	BHR MB63-63	91	122	72	100.5	25.0	76.0	CCMT 1204..	SR 16-212	T 20
121-162 BW	BHR MB80-80	121	162	95	110.5	28.0	101.0	CCMT 1204..	SR 16-212	T 20
161-802 BW	BHR MB80-80	161	200	95	110.5	28.0	122.0	CCMT 1204..	SR 16-212	T 20

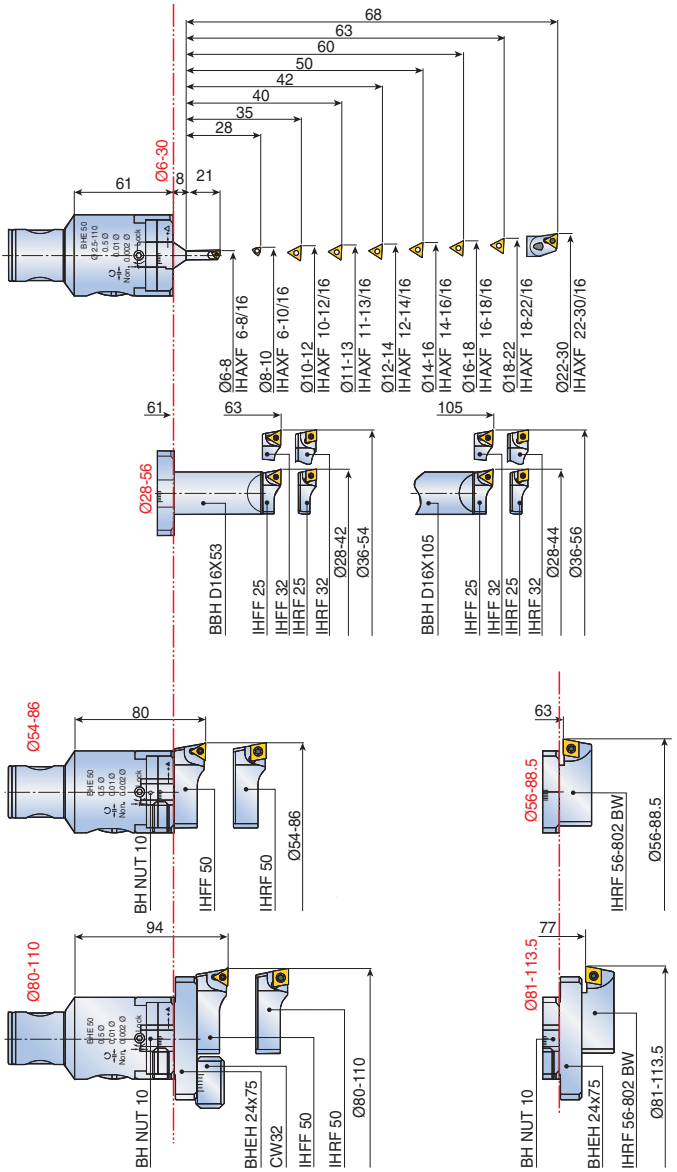
H54-H57

- DCX= Size of the boring head being used
- DMIN= (min bore diameter)= (DCN+BD+1)/2

Fine boring head range: 10µm direct diametric adjustment and 2µm with the vernier scale

BHE MB50-50x80
ø6-113.5

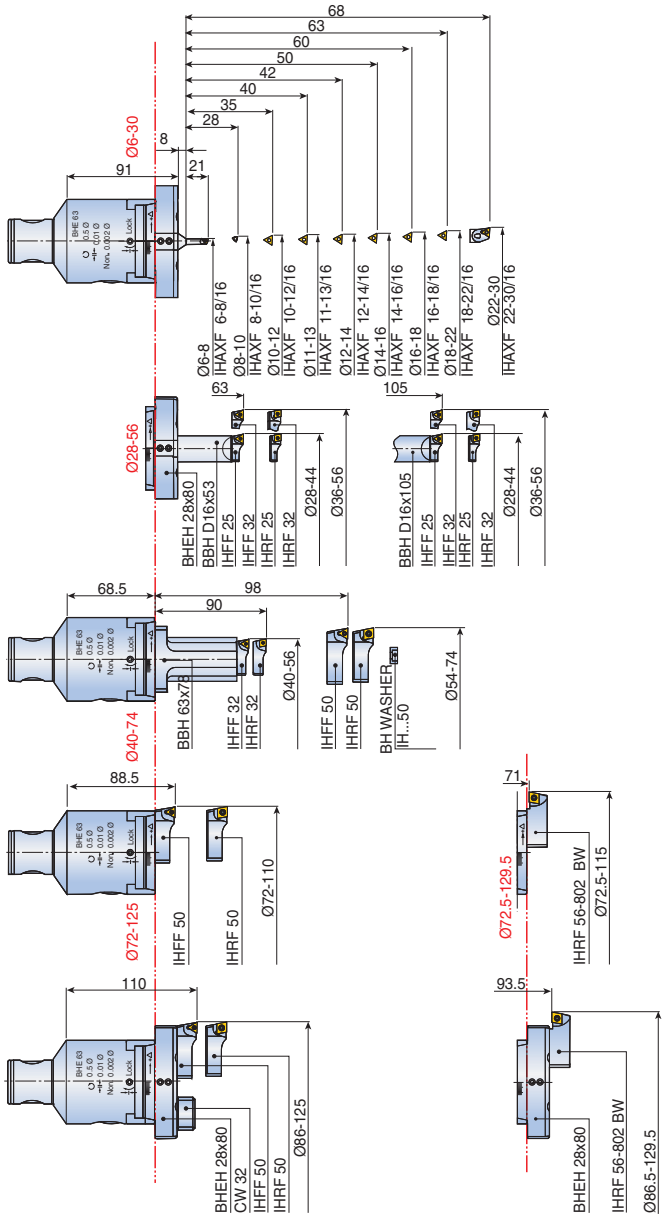
10µm
2µm



Fine boring head range: 10µm direct diametric adjustment and 2µm with the vernier scale

BHE MB63-63x89
ø6-129.5

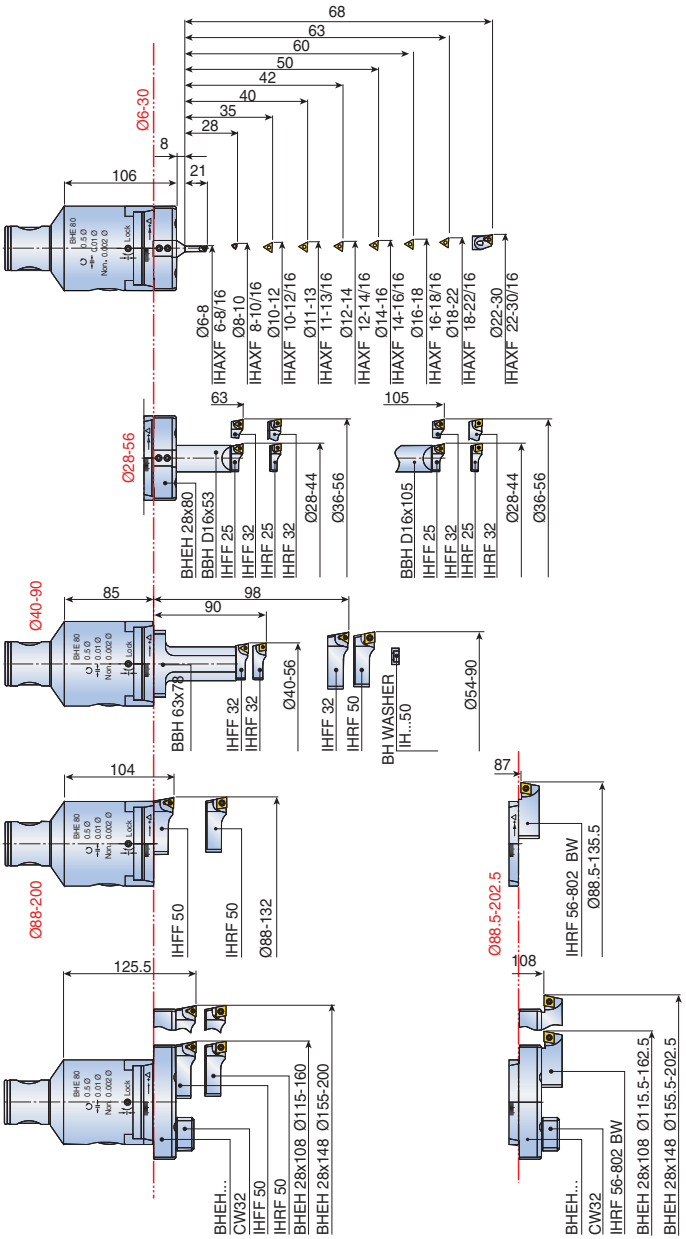
10µm
2µm



Fine boring head range: 10µm direct diametric adjustment and 2µm with the vernier scale

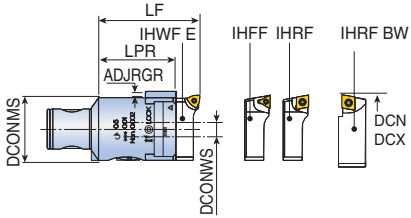
BHE MB80-80x104
ø6-202.5

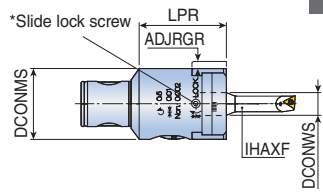
10µm
2µm



10μm direct diametric adjustment and 2μm with the vernier scale

10μm
2μm





BHE MB50-50x80

Designation	Dimension (mm)							Kg
	DCONMS	DCN	DCX	LF	LPR	ADJRGR	DCONWS	
BHE MB16-16-34	MB16	18	24	34.0	26.0	2.0	-	0.1
MB20-20-40	MB20	22	30	40.0	31.5	3.0	-	0.1
MB25-25-50	MB25	28	40	50.0	40.0	3.0	-	0.2
MB32-32-63	MB32	35	53	63.0	51.5	4.0	-	0.4
MB40-40-80	MB40	48	66	80.0	66.0	5.0	-	0.8
MB50-50-80	MB50	2.5	110	80.0	61.0	5.0	16.0	1.1
MB63-63-89	MB63	6.0	125	89.0	69.5	10.0	-	2.1
MB80-80-104	MB80	6.0	200	104.0	84.5	12.0	-	3.8

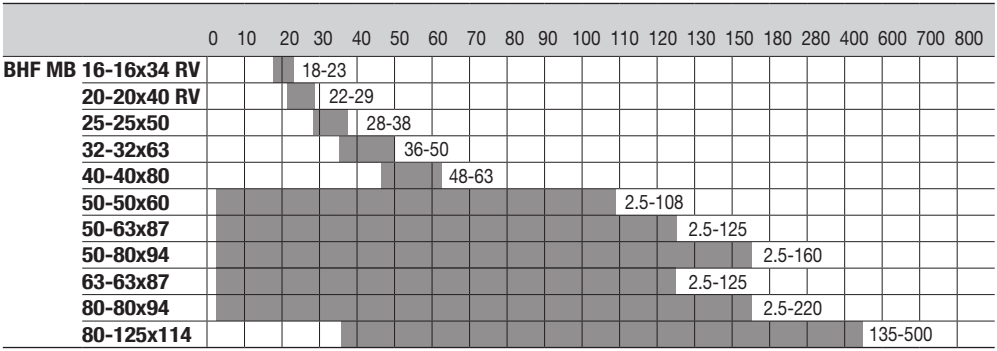
Spare Parts H60-H67
Cutting Condition H68-H74
Slide H42-H44
H38-H41

BHF fine boring heads

These intricate boring heads enable fine radial adjustments as small as 0.002mm whilst accomplishing high precision machining to the strictest of tolerances with a superb surface finish.

2µm

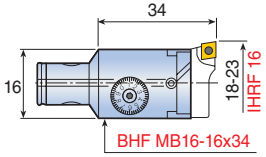
Fine boring head diameter range



BHF MB16-MB40
Diameter range: 18-63

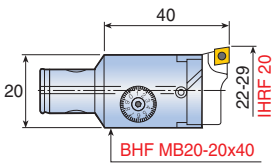
BHF MB16-16x34 RV

18-23



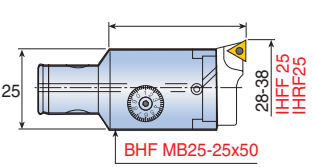
BHF MB20-20x40 RV

22-29



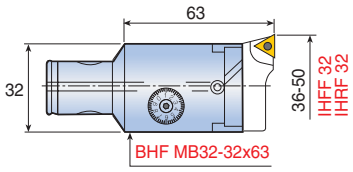
BHF MB25-25x50

28-38



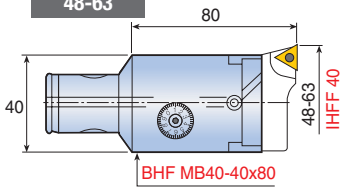
BHF MB32-32x63

36-50



BHF MB40-40x80

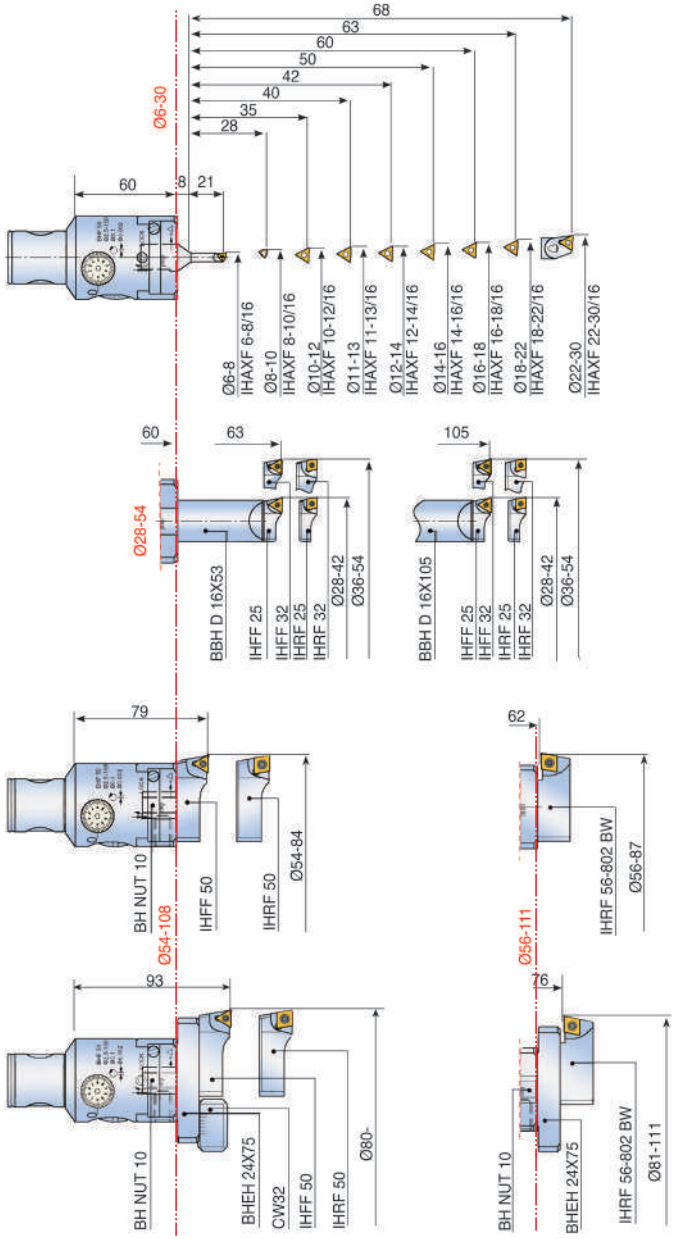
48-63



Fine boring head range: 2µm direct diametric adjustment

BHF MB50-50x60
Diamete

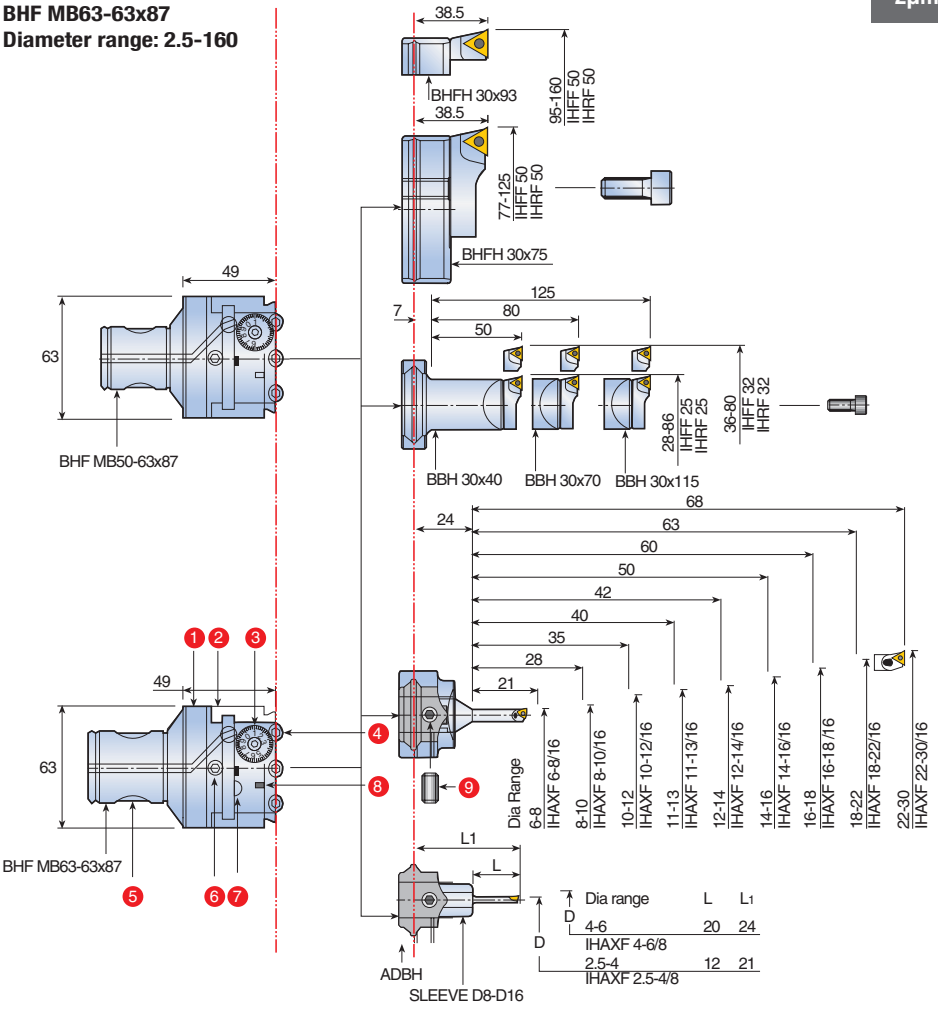
2µm



Fine boring head range: 2µm direct diametric adjustment

BHF MB50-63x87
BHF MB63-63x87
Diameter range: 2.5-160

2µm

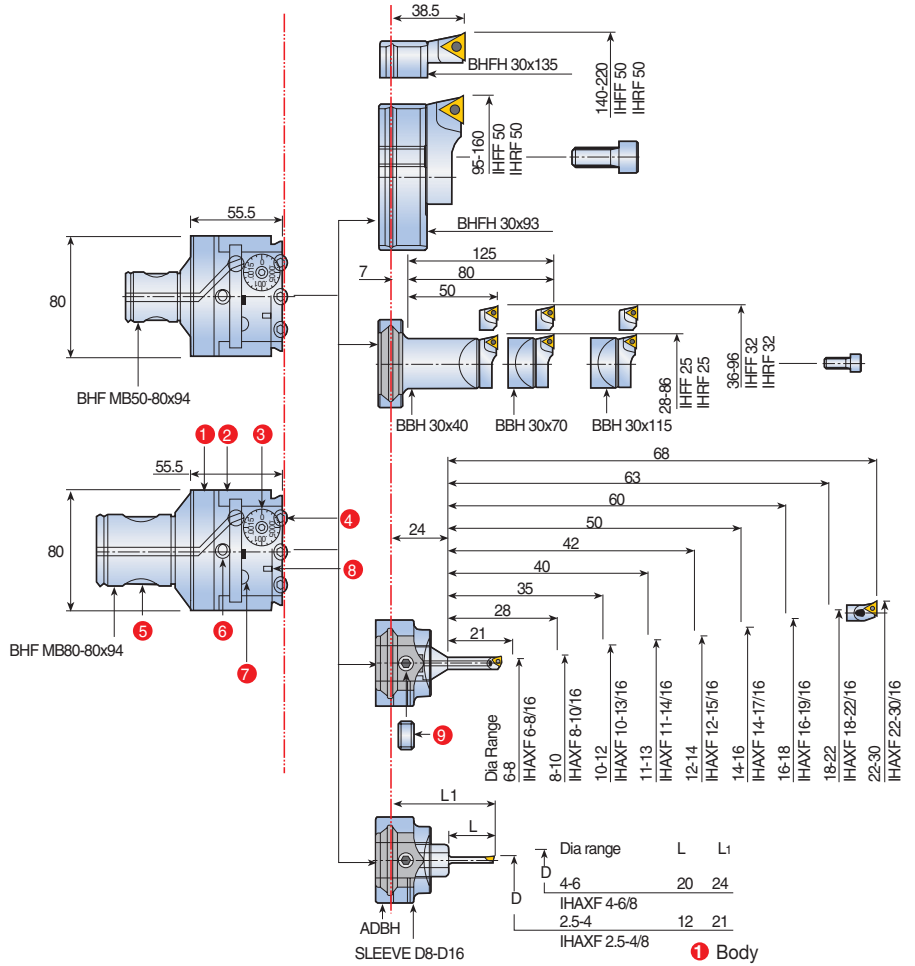


1. Body
2. Tool slide
3. Graduated dial
4. Toolholder locking screw
5. Expanding pin
6. Slide locking screw
7. Coolant nozzle
8. Oiling nipple
9. Toolholder locking screw

Fine boring head range: 2µm direct diametric adjustment

BHF MB50-80x94
BHF MB80-80x94
Diameter range: 2.5-220

2µm

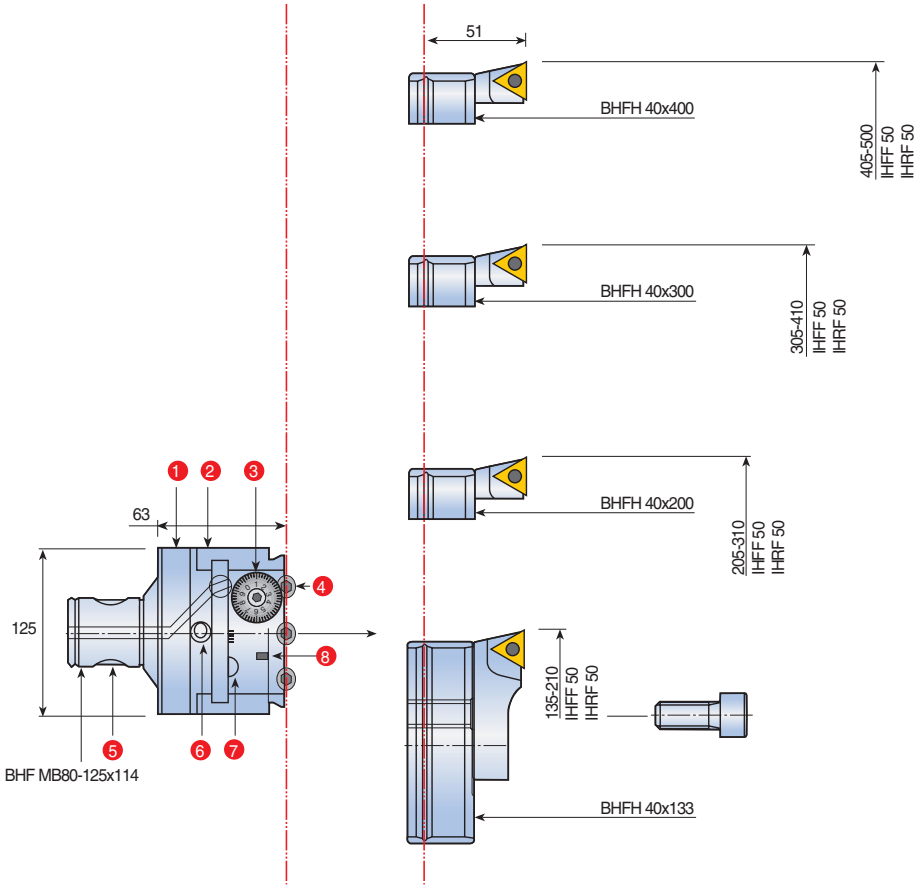


1. Body
2. Tool slide
3. Graduated dial
4. Toolholder locking screw
5. Expanding pin
6. Slide locking screw
7. Coolant nozzle
8. Oiling nipple
9. Toolholder locking screw

Fine boring head range: 2µm direct diametric adjustment

BHF MB80-125x114
Diameter range:135-500

2µm



1. Body
2. Tool slide
3. Graduated dial
4. Toolholder locking screw
5. Expanding pin
6. Slide locking screw
7. Coolant nozzle
8. Oiling nipple

BHF MB16-MB50, Dia.2.5-108

BHF MB: Fine boring heads

2µm

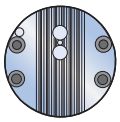


Fig.1

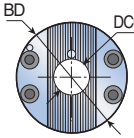
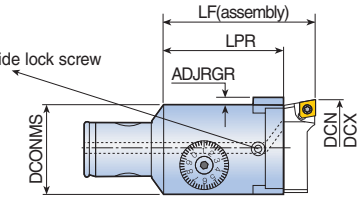


Fig.2



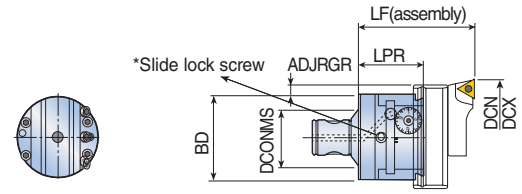
Designation	Dimension (mm)								Insert holder	Kg	Fig
	DCONMS	DCN	DCX	BD	LPR	LF	ADJRGA	DCONWS			
BHF MB16-16x34 RV	MB16	18	23	16	26.0	34	1	-	IH..16	0.1	1
MB20-20x40 RV	MB20	22	29	20	32.5	40	2	-	IH..20	0.1	1
MB25-25x50	MB25	28	38	25	40.0	50	2	-	IH..25	0.2	1
MB32-32x63	MB32	36	50	32	51.5	63	3	-	IH..32	0.4	1
MB40-40x80	MB40	48	63	40	66.0	80	4	-	IH..40	0.8	1
MB50-50x60	MB50	2.5	108	50	60.0	79	4	16	IH..50	1.1	2

Spare Parts H60-H67
Cutting Condition H68-H74
Slide H42-H44
H38-H41

▸ Important: Loosen the *slide lock screw before making any slide adjustment

Fine boring heads

2µm



Designation	Dimension (mm)							Kg
	DCONMS	DCN	DCX	BD	LPR	LF	ADJRGR	
BHF **MB50-63x87**	MB50	2.5	125	63	49	87	5	1.3
MB50-80x94	MB50	2.5	160	80	58	94	5	2.2
MB63-63x87	MB63	2.5	125	63	49	87	5	1.6
MB80-80x94	MB80	2.5	220	80	58	94	5	2.6
MB80-125x114	MB80	135	500	125	63	114	5	5.7

Spare Parts H60-H65 | Cutting Condition H68-H74 | Slide H42-H44 | H38-H41

▸ Important: Loosen the *slide lock screw before making any slide adjustment

IHAXF

Fine Boring Bar

8-16mm boring bar for 2.5-30mm fine boring heads

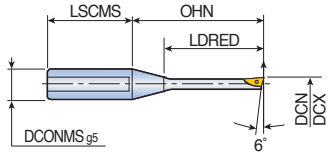


Fig.1

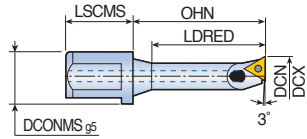


Fig.2

Designation		Dimension (mm)						Coolant hole	Spare parts			Fig.
		DCN	DCX	LDRED	OHN	LSCMS	DCONMS		Insert	Screw	Key	
IHAXF	**2.5-4/8**(1)	2.5	4	12.5	21	22	8	x	Solid	-	-	1
	4-6/8(1)	4	6	20.0	24	24	8	x	Solid	-	-	1
	6-8/16	6	8	21.0	29	22	16	●	WCGT 0201	SR 14-299	T 6	2
	8-10/16	8	10	28.0	36	22	16	●	WCGT 0201	SR 14-299	T 6	2
	10-12/16	10	12	35.0	43	22	16	●	TPGX 0902	SR 14-298	T 8	2
	11-13/16	11	13	40.0	48	22	16	●	TPGX 0902	SR 14-298	T 8	2
	12-14/16	12	14	42.0	48	22	16	●	TPGX 0902	SR 14-298	T 8	2
	14-16/16	14	16	50.0	52	22	16	●	TPGX 0902	SR 14-298	T 8	2
	16-18/16	16	18	50.0	58	22	16	●	TPGX 0902	SR 14-298	T 8	2
	18-22/16	18	22	60.0	63	22	16	●	TPGX 0902	SR 14-298	T 8	2
	22-30/16	22	30	60.0	68	22	16	●	TPGX 0902	SR 14-298	T 8	2

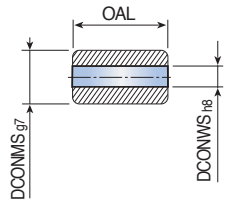
H54-H57

▸ (1) Brazed tool

SLEEVE

Fine Boring Bar

Reducers for fine boring heads

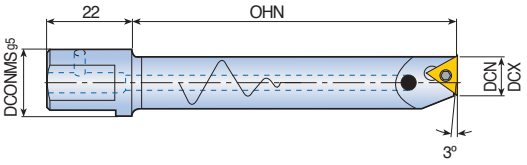


Designation	Dimension (mm)		
	DCONMS	DCONWS	OAL
SLEEVE D8-D16	16	8	23

IHAXF-AVI

Fine Boring Bar

Vibration dampening for fine boring bars – Heavy metal shank

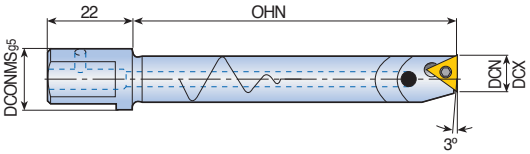


Designation	Dimension (mm)				Spare parts		
	DCN	DCX	OHN	DCONMS	Insert	Screw	Key
IHAXF 6-8-AVI	6	8	36	16	WCGT 0201..	SR 14-299	T 6
8-10-AVI	8	10	48	16	WCGT 0201..	SR 14-299	T 6
10-12-AVI	10	12	60	16	TPGX 0902..	SR 14-298	T 8
12-14-AVI	12	14	72	16	TPGX 0902..	SR 14-298	T 8
14-16-AVI	14	16	84	16	TPGX 0902..	SR 14-298	T 8
16-18-AVI	16	18	96	16	TPGX 0902..	SR 14-298	T 8

IHAXF-E

Fine Boring Bar

Vibration dampening for fine boring bars – Carbide shank



Designation	Dimension (mm)				Spare parts		
	DCN	DCX	OHN	DCONMS	Insert	Screw	Key
IHAXF 6-8-E	6	8	45	16	WCGT 0201..	SR 14-299	T 6
8-10-E	8	10	60	16	WCGT 0201..	SR 14-299	T 6
10-12-E	10	12	75	16	TPGX 0902..	SR 14-298	T 8
12-14-E	12	14	90	16	TPGX 0902..	SR 14-298	T 8
14-16-E	14	16	105	16	TPGX 0902..	SR 14-298	T 8
16-18-E	16	18	120	16	TPGX 0902..	SR 14-298	T 8

H54-H57

Insert holders for mounting on the MB fine boring heads

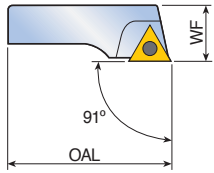


Fig.1

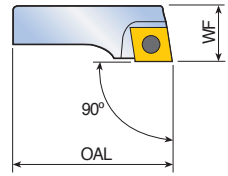
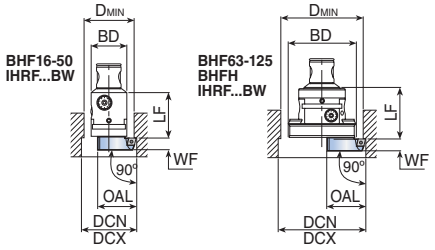


Fig.2

Designation		Dimension (mm)				Spare parts			Fig.
		DCN	DCX	WF	OAL	Insert	Insert screw	Torx key	
IHFF	**25**	28	40	10.0	26.5	TPGX 0902...	SR 14-298	T 8	1
	32	35	53	11.5	34.5	TPGX 0902...	SR 14-298	T 8	1
	40	48	66	14.0	44.0	TPGX 1103...	SR-17979 M3x8	T 8	1
	50	54	86	19.0	52.0	TPGX 1103...	SR-17979 M3x8	T 8	1
IHRF	**16**	18	24	8.0	17	CCGT 0602..	SR 14-548	T 7	2
	20	22	30	8.5	21.0	CCGT 0602..	SR 14-548	T 7	2
	25	28	40	10.0	26.5	CCGT 0602..	SR 14-548	T 7	2
	32	35	53	11.5	34.5	CCGT 0602..	SR 14-548	T 7	2
	40	48	66	14.0	44.0	CCGT 09T3...	SR 16-236	T 15	2
	50	54	86	19.0	52.0	CCGT 09T3...	SR 16-236	T 15	2

Back face for BHF fine boring holders



Designation	Dimension (mm)						Boring heads	Spare parts		
	DCN	DCX	BD	LF	WF	OAL		Insert	Clamping screw	Torx key
IHRF 20-25 BW	20	25	16	27.5	8.0	18.0	BHF MB16-16x34	CCGT 0602..	SR 14-548	T 7
24.5-32 BW	24.5	32	20	33.5	8.5	22.5	BHF MB20-20x40	CCGT 0602..	SR 14-548	T 7
31.5-41.5 BW	31.5	41.5	25	41.5	9.5	28.5	BHF MB25-25x50	CCGT 0602..	SR 14-548	T 7
38.5-51.5 BW	38.5	51.5	32	53.0	11.0	35.5	BHF MB32-32x63	CCGT 0602..	SR 14-548	T 7
50.5-65 BW	50.5	65	40	68.0	13.5	46.0	BHF MB40-40x80	CCGT 09T3..	SR 14-236	T 15
56-802 BW	56	86	50	62.0	17.5	53.0	BHF MB50-50x60	CCGT 09T3..	SR 14-236	T 15
	82	120	75	70.2	17.5	53.0	BHF63+BHFH30x75	CCGT 09T3..	SR 14-236	T 15
	100	142	93	79.5	17.5	53.0	BHF80+BHFH30x93	CCGT 09T3..	SR 14-236	T 15
	140	240	135	98.0	17.5	53.0	BHF125+BHFH40x133	CCGT 09T3..	SR 14-236	T 15

H54-H57

- BD= Size of the boring head being used.
- DMIN= (min bore diameter)= (DCN+BD+1)/2

Slide extensions for fine boring holders

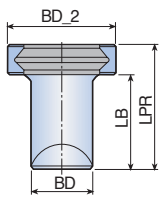


Fig.1

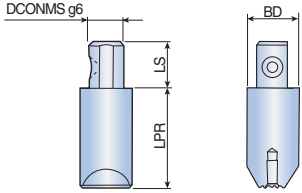


Fig.2

Designation	Dimension (mm)							Kg	Fig.
	BD	DCONMS	LB	LPR	BD_2	OAW	LS		
BBH 30x40	25	-	40	52.5	43	30.5	-	0.3	1
30x70	25	-	70	82.5	43	30.5	-	0.4	1
30x115	27	-	115	127.5	43	30.5	-	0.7	1
40x69	32	-	69	86	56	40	-	0.7	1
40x114	32	-	114	131	56	40	-	1.0	1
40x189	38	-	189	206	56	40	-	2.0	1
BBH D16-53	25	16	-	53	-	-	21.5	0.5	2
D16-105	25	16	-	95	-	-	21.5	0.8	2

Slide for BHF & BHE fine boring holders

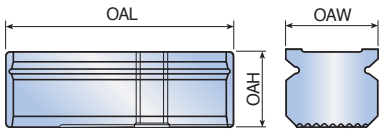


Fig.1

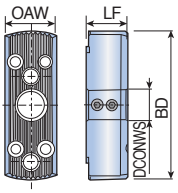
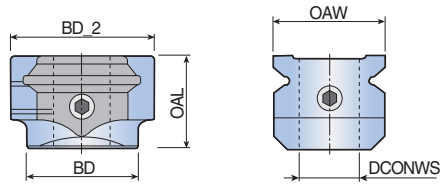


Fig.2

Designation		Dimension (mm)						Kg	Fig.
		OAH	OAL	OAW	BD	LF	DCONWS		
BHFH	**30x75**	25	75	30.5	-	-	-	0.4	1
	30x93	25	93	30.5	-	-	-	0.5	1
	30x135	25	135	30.5	-	-	-	0.7	1
	40x133	40	133	40	-	-	-	1.5	1
	40x200	40	200	40	-	-	-	2.4	1
	40x300	40	300	40	-	-	-	3.5	1
	40x400	40	400	40	-	-	-	4.6	1
BHEH	**24x75**	-	-	24	75	14.5	-	0.2	2
	24x100	-	-	24	100	14.5	-	0.2	2
	28x80	-	-	28	80	22.5	16	0.3	2
	28x108	-	-	28	108	22.5	-	0.5	2
	28x148	-	-	28	148	22.5	-	0.6	2

ADBH

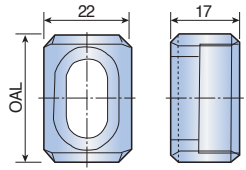
Sleeve for fine boring holders



Designation	Dimension (mm)					Lock Screw	Kg
	BD	BD_2	OAL	OAW	DCONWS		
ADBH 30xD16	30	39	25	30.5	16	SR M8x8 DIN 915	0.2

CW32

Counter balancing weight



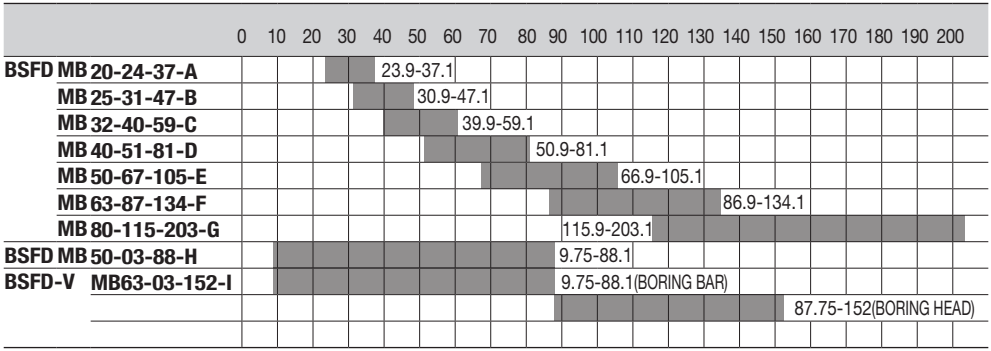
Designation	Dimension (mm)	Kg
	OAL	
CW 32	31.5	0.5

BSFD fine boring heads

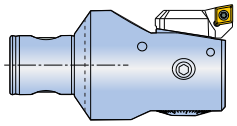
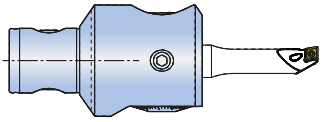
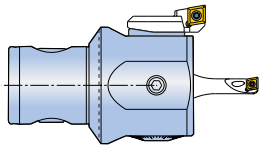
The Boring Heads Feature an MB20 to MB80 Connection. Boring Super Fine Digital Heads from Ø3mm – Ø203.1mm

1μm

Fine boring head diameter range



BSFD

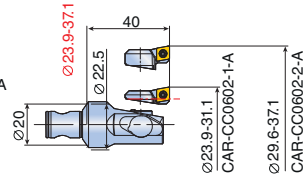
Boring Type		Adapter & Extension	Insert Holder
BSFD MB		-	CAR-CC...
		ADP-V...	CAR-V-CC...
BSFD MB-H		-	BAR-CC...HI
		SH-DX...	BAR-DX-CC...
BSFD-V MB-I		-	BAR-CC...HI
		SH-DX...	BAR-DX-CC...
		ADP-V...	CAR-V-CC...

Digital fine boring head range : 1µm direct diametric adjustment.

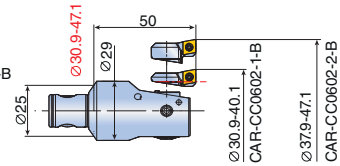
BSFD MB A-F

1µm

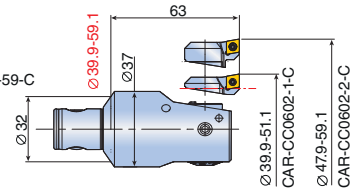
A BSFD MB20-24-37-A



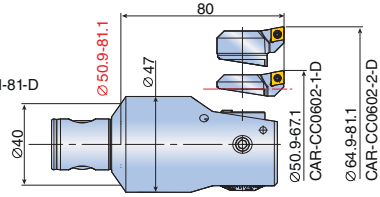
B BSFD MB25-31-47-B



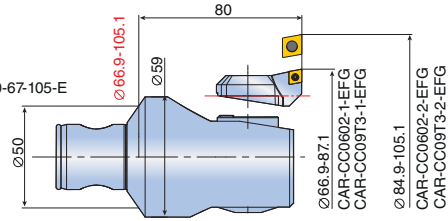
C BSFD MB32-40-59-C



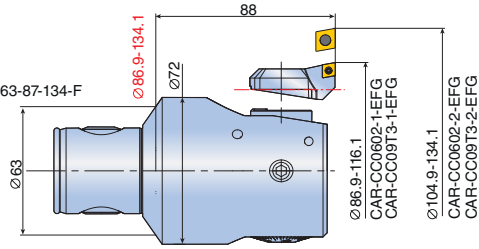
D BSFD MB40-51-81-D



E BSFD MB50-67-105-E



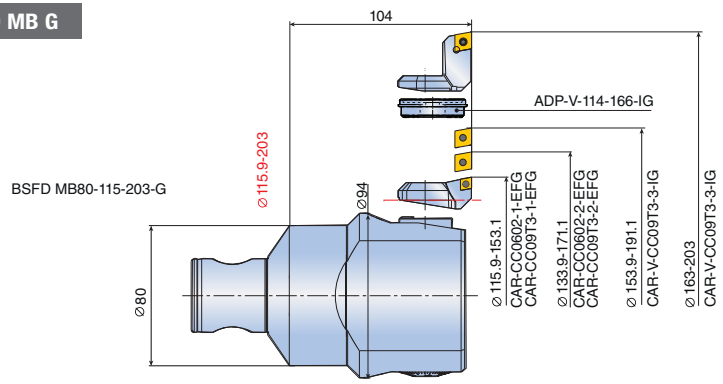
F BSFD MB63-87-134-F



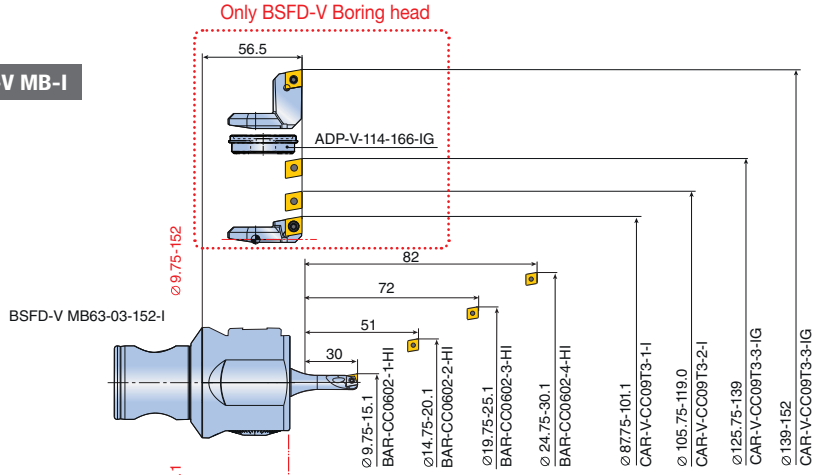
Digital fine boring head range : 1µm direct diametric adjustment.

BSFD MB G

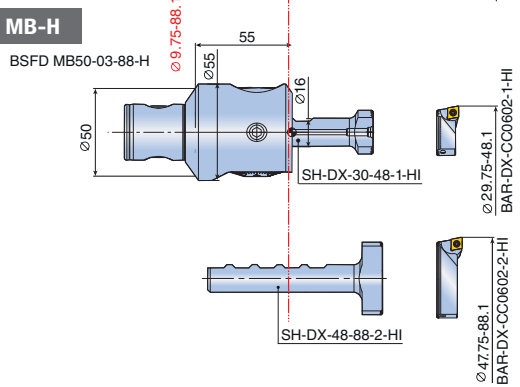
1µm



BSFD-V MB-I



BSFD MB-H

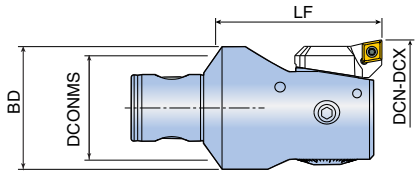


BSFD MB

Fine Boring Heads

Digital fine boring heads with 1 μm accurate adjustment and detachable display

1μm



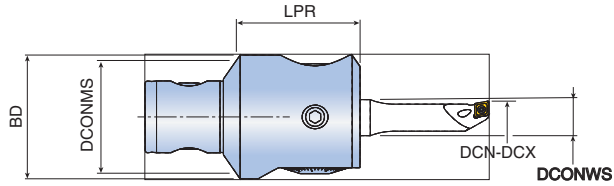
Designation		Dimension (mm)					Insert Holder	Kg
		DCONMS	DCN	DCX	LF	BD		
BSFD	**MB20-24-37-A**	20	23.9	37.1	40	22.5	CAR-CC…A	0.1
	MB25-31-47-B	25	30.9	47.1	50	29	CAR-CC…B	0.2
	MB32-40-59-C	32	39.9	59.1	63	37	CAR-CC…C	0.5
	MB40-51-81-D	40	50.9	81.1	80	47	CAR-CC…D	1.0
	MB50-67-105-E	50	66.9	105.1	80	59	CAR-CC…EFG	1.6
	MB63-87-134-F	63	86.9	134.1	88	72	CAR-CC…EFG	3.1
	MB80-115-203-G	80	115.9	203.1	104	94	CAR-CC…EFG	5.0

BSFD MB-H

Fine Boring Heads

Digital fine boring head with 1 μm accurate adjustment and detachable display

1μm



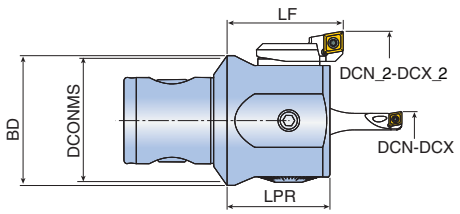
Designation		Dimension (mm)						Insert Holder	Kg
		DCONMS	DCN	DCX	LPR	BD	DCONWS		
BSFD	**MB50-03-88-H**	50	3	88.1	55	50.15	16	BAR-CC…HI	1.1

Spare Parts H60-H67
Cutting Condition H68-H74
H50-H52

BSFD-V MB-I

Digital fine boring vario head with 1 µm accurate adjustment and detachable display

1µm



Designation	Dimension (mm)								Insert Holder	Kg
	LF	DCONMS	DCN	DCX	DCN_2	DCX_2	LPR	BD		
BSFD-V MB63-03-152-I	56.5	63	9.75	88.1	87.75	152	50	63.15	BAR-CC…HI CAR-V…	1.6

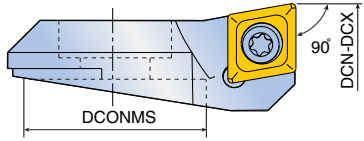
Spare Parts H60-H67
Cutting Condition H68-H74
H50-H52

▸ Note: When using ADP-V-114-116-IG on BSFD-V MB63-03-152-I & CAR-V-CC09T3-3-IG, Maximum diameter is 203mm.

CAR-CC

Fine Boring Insert Holders

Side lock insert holders for BSFD MB boring heads



Designation	Dimension (mm)							
	DCN	DCX	DCN_2	DCX_2	DCN_3	DCX_3	DCONMS	Insert
CAR- CC0602-1-A	23.9	31.1	-	-	-	-	11	CC..0602..
CC0602-2-A	29.6	37.1	-	-	-	-	11	CC..0602..
CC0602-1-B	30.9	40.1	-	-	-	-	13	CC..0602..
CC0602-2-B	37.9	47.1	-	-	-	-	13	CC..0602..
CC0602-1-C	39.9	51.1	-	-	-	-	17	CC..0602..
CC0602-2-C	47.9	59.1	-	-	-	-	17	CC..0602..
CC0602-1-D	51.1	67.1	-	-	-	-	22	CC..0602..
CC0602-2-D	64.9	81.1	-	-	-	-	22	CC..0602..
CC0602-1-EFG	66.9	87.1	86.9	116.1	115.9	153.1	30	CC..0602..
CC09T3-1-EFG	66.9	87.1	86.9	116.1	115.9	153.1	30	CC..09T3..
CC0602-2-EFG	84.9	105.1	104.9	134.1	133.9	171.1	30	CC..0602..
CC09T3-2-EFG	84.9	105.1	104.9	134.1	133.9	171.1	30	CC..09T3..

- DCN_2-DCX_2: for BSFD MB63-87-134-F boring head
- DCN_3-DCX_3: for BSFD MB80-115-203-G boring head

BAR-CC0602-HI

Fine Boring Bar

Indexable boring bars for the BSFD-H/I boring heads

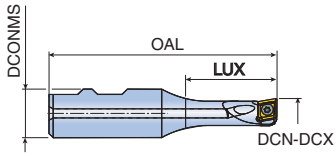


Fig.1

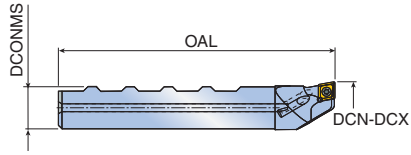
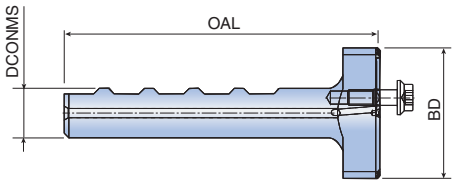


Fig.2

Designation	Dimension (mm)							
	DCN	DCX	LUX	DCONMS	OAL	Fig.	Insert	Coolant hole
BAR- CC0602-1-HI	9.75	15.1	30	16	75	1	CC..0602..	●
CC0602-2-HI	14.75	20.1	51	16	90	1	CC..0602..	●
CC0602-3-HI	19.75	25.1	72	16	105	2	CC..0602..	●
CC0602-4-HI	24.75	30.1	82	16	115	2	CC..0602..	●

SH-DX-HI

Extension shanks for sliding insert holders for BSFD-H/I boring heads

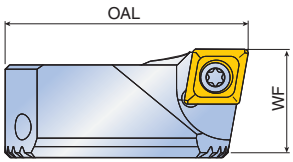


Designation	Dimension (mm)			Insert Holder	Kg
	BD	OAL	DCONMS		
SH-DX-30-48-1-HI	25	103	16	BAR-DX...1-HI	0.18
DX-48-88-2-HI	42	101	16	BAR-DX...2-HI	0.22

BAR-DX-CC...-HI

Fine Boring Insert Holders

Sliding insert holders for BSFD-H/I boring heads



Designation	Dimension (mm)					Extension Shanks
	WF	OAL	DCN	DCX	Insert	
BAR-DX-CC0602-1-HI	12	28.2	29.75	48.1	CC..0602..	SH-DX...1-HI
DX-CC0602-2-HI	14	46.0	47.75	88.1	CC..0602..	SH-DX...2-HI

CAR-V-I/IG

Side lock insert holders for BSFD-V-I boring heads

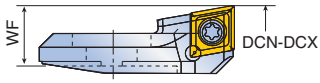


Fig.1

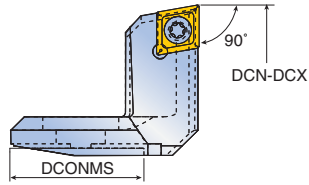


Fig.2

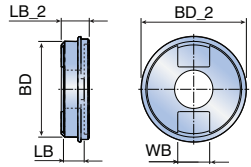
Designation	Dimension (mm)					
	WF	DCN	DCX	DCONMS	Insert	Fig.
CAR- **V-CC09T3-1-I**	13.05	87.75	101.10	30	CC..09T3..	1
V-CC09T3-2-I	22.05	105.75	119.00	30	CC..09T3..	1
V-CC09T3-3-IG	32.05	153.90	191.10	30	CC..09T3..	2

H54

- Note: When using ADP-V-114-116-IG on BSFD-V MB63-03-152-I & CAR-V-CC09T3-3-IG, Maximum diameter is 203mm.

ADP-V-IG

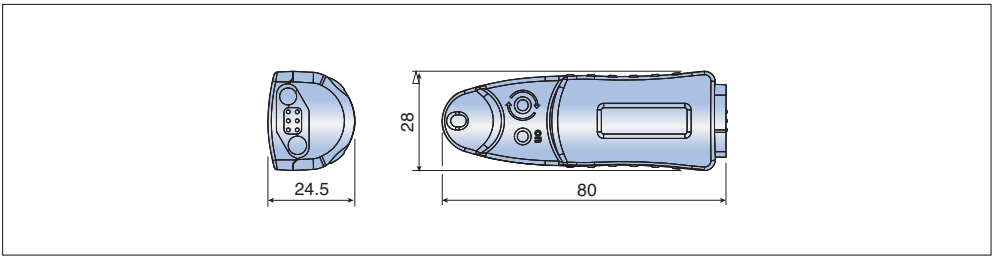
Adapter plate for diameter range extension of the CAR-V-I/IG insert holders



Designation	Dimension (mm)					Insert Holder
	BD	BD_2	LB	LB_2	WB	
ADP- **V-114-166-IG**	30	33	6.5	8.8	10	CAR-V…IG

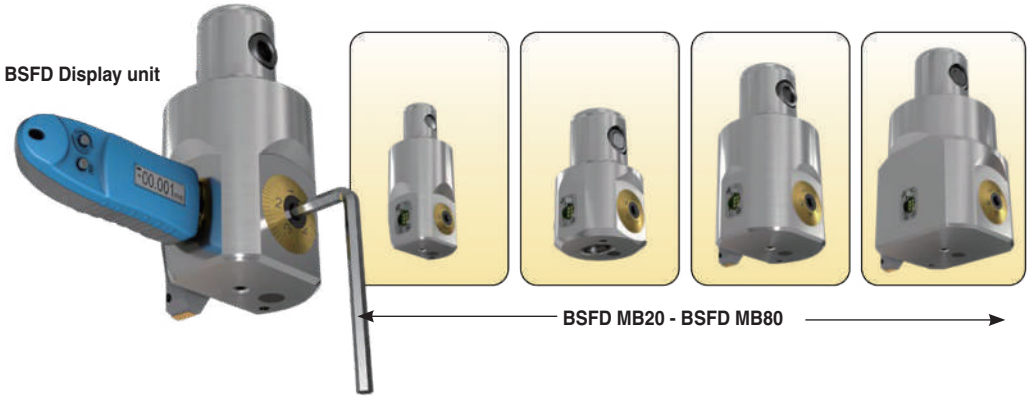
BSFD DISPLAY UNIT

Digital display unit for BSFD boring heads with 1 μm accurate adjustment

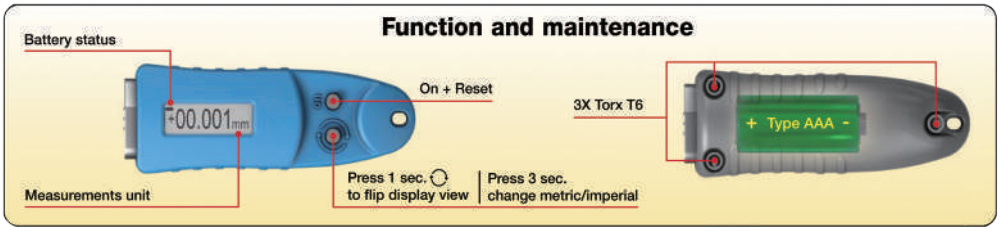


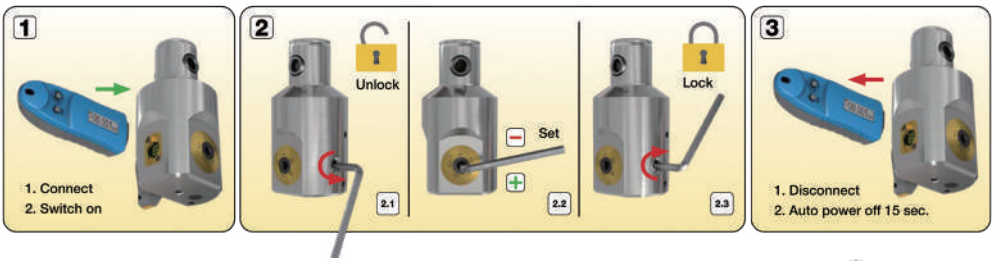
Designation	Dimension (mm)
	Accuracy
BSFD DISPLAY UNIT	0.001

BSFD - Super fine digital boring heads

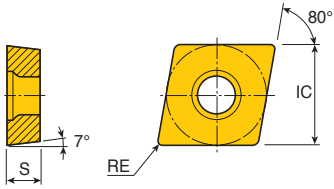


BSFD - Operating instructions





Positive 7° clearance 80° rhombic inserts



Size	Dimension (mm)		
	IC	S	RE
06	6.35	2.38	0.1-0.8
09	9.52	3.97	0.1-0.8
12	12.7	4.76	0.2-1.2

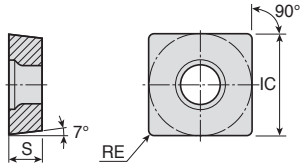
Insert	Designation	Cermet		CVD coated											PVD coated						Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT7025	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT5080	TT8020	TT8080	TT9020	TT9080	TT4430	P20	K10	K20
	CCMT 060204 MT	●	●	●	●			●	●			●	●	●	●	●						●	
	060208 MT	●	●	●	●			●	●					●	●				●				
	09T304 MT	●	●	●	●	●		●	●	●		●	●	●	●	●							
	09T308 MT		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●				
	120404 MT		●	●	●			●	●					●		●							
	120408 MT		●	●	●	●	●	●	●	●		●	●	●	●	●							
	120412 MT			●				●	●					●									
	CCGT 060201 SA														●			●					
	060202 SA														●			●					
	060204 SA														●			●					
	09T301 SA														●			●					
	09T302 SA														●			●		●			
	09T304 SA														●			●	●	●			
	09T308 SA														●			●					
	CCGT 060202 FL																					●	
	060204 FL																					●	
	09T302 FL																					●	
	09T304 FL																					●	
	09T308 FL																					●	
	120402 FL																					●	
	120404 FL																					●	
	120408 FL																					●	

● : Standard items

SCGT

Boring Inserts

Positive 7° clearance inserts for aluminum machining



Size	Dimension (mm)			
	IC	S	RE	
09	9.52	3.97	0.8	
12	12.7	4.76	0.2-0.8	

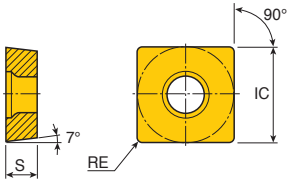
Insert	Designation	Cermet		CVD coated										PVD coated				Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	TT9080	P20	K10	K20
	SCGT 09T308 FL																			●	
	120402 FL																			●	
	120404 FL																			●	
	120408 FL																			●	

● : Standard items

SCMT

Boring Inserts

Positive 7° clearance square inserts



Size	Dimension (mm)		
	IC	S	RE
09	9.52	3.97	0.4-0.8
12	12.7	4.76	0.4-1.2

Insert	Designation	Cermet		CVD coated											PVD coated					Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT7025	TT8105B	TT8115B	TT8125B	TT9225	TT9235	TT5100	TT7100		TT5080	TT6080	TT8020	TT8080	TT9020	P20	K10	K20
	SCMT 09T304 FG							●		●								●				
	09T308 FG	●						●	●	●		●			●		●	●				
	SCMT 09T304 MT	●	●	●	●			●	●	●		●					●					
	09T308 MT		●	●	●	●		●	●	●	●	●	●		●	●	●					
	120404 MT		●	●	●				●			●										
	120408 MT		●	●	●	●		●	●	●	●	●			●		●					
	120412 MT			●	●		●		●								●					

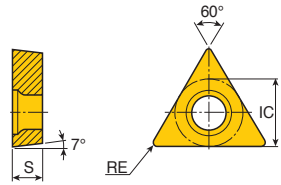
● : Standard items

TaeguTec

TCMT

Boring Inserts

Positive 7° clearance triangular inserts



Size	Dimension (mm)		
	IC	S	RE
22	12.7	4.76	0.8

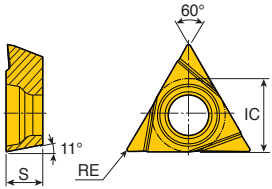
Insert	Designation	Cermet		CVD coated									PVD coated				Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	TT9080	P30	K10	K20
	TCMT 220508-19																		●		

●: Standard items

TPGX

Boring Inserts

Positive 11° clearance triangular inserts

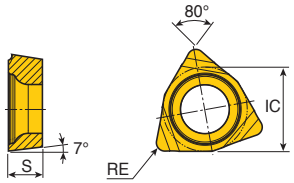


Size	Dimension (mm)		
	IC	S	RE
09	5.56	2.38	0.2-0.4
11	6.35	3.18	0.2-0.4

Insert	Designation	Cermet		CVD coated									PVD coated			Uncoated			
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	P20	P30	K10	K20
Left-hand	**TPGX 090202 L**		●																	●	
	090204 L		●																	●	
	110302 L		●																		
	110304 L		●																	●	

●: Standard items

Positive 7° clearance 80° trigon inserts



Size	Dimension (mm)		
	IC	S	RE
02	3.97	1.59	0.2-0.4

Insert	Designation	Cermet		CVD coated										PVD coated				Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9030	TT9080	P20	K10	K20
Left-hand	**WCGT 020102L**																●				
	020104L																●				

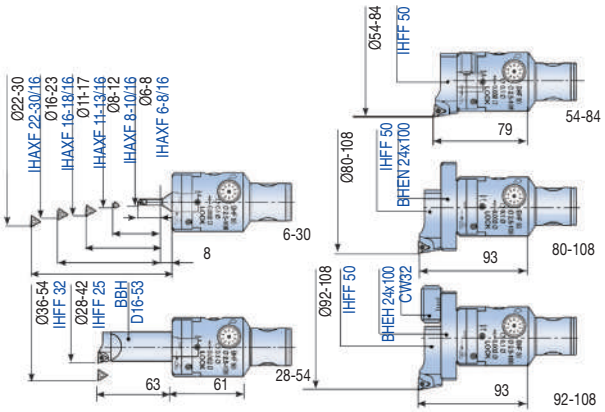
● : Standard items

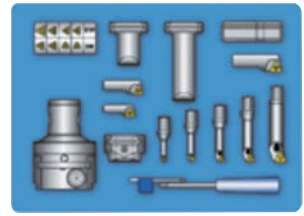
KIT BHF MB50-50 6-140

Kits

6-140mm diameter range

2µm





1 BHF MB50-50x60
1 IHFF 25
1 IHFF 32
1 IHFF 50
1 IHAXF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16
1 BBH D16-53
1 BHEH 24x100
1 CW 32
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L

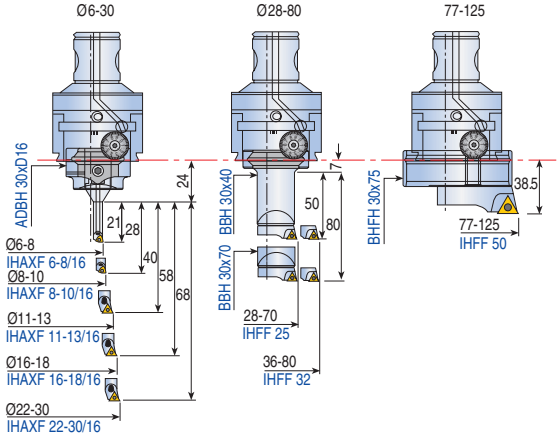
Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-50 6-140	MB50	6-140

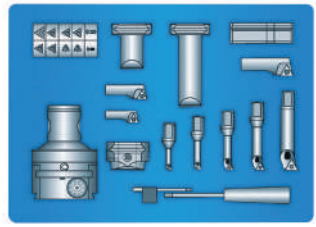
KIT BHF MB50-63/MB63-63

Kits

6-155mm diameter range

2µm





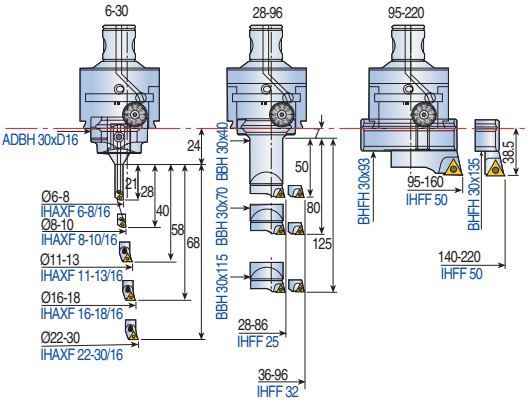
1 BHF MB...-63x87
1 IHAXF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16
1 ADBH 30xD16
1 BBH 30x40
1 BBH 30x70
1 BHFH 30x75
1 IHFF 25
1 IHFF 32
1 IHFF 50
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L
T-8/5
T-6/5

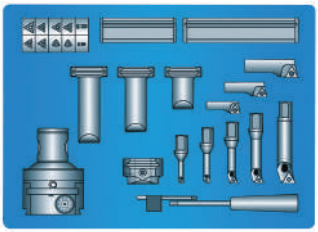
Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-63 6-155	MB50	6-155
MB63-63 6-155	MB63	6-155

KIT BHF MB50-80/80-80

Kit BHF MB50-80 / Kit BHF MB80-80 6-220mm diameter range

2µm





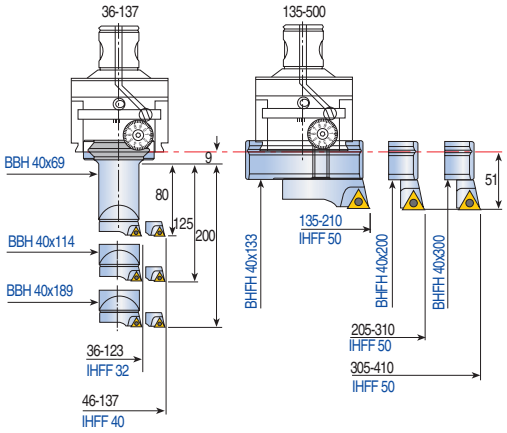
1 BHF MB..-80x94
1 IHAXF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16
1 ADBH 30xD16
1 BBH 30x40
1 BBH 30x70
1 BBH 30x115
1 BHFH 30x93
1 BHFH 30x135
1 IHFF 25
1 IHFF 32
1 IHFF 50
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L
T-8/5
T-6/5

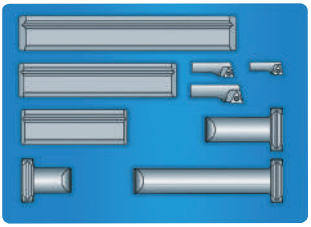
Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-80 6-220	MB50	6-220
MB80-80 6-220	MB80	6-220

KIT BHFH MB80-125

Kit BHFH MB80-125 holder for BHF MB80-125x114,36-410mm diameter range

2µm





1 BBH 40x69
1 BBH 40x114
1 BBH 40x189
1 BHFH 40x133
1 BHFH 40x200
1 BHFH 40x300
1 IHFF 32
1 IHFF 40
1 IHFF 50

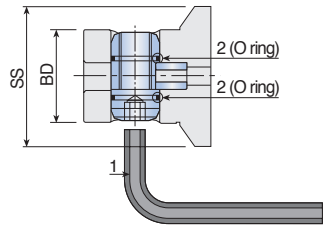
Designation	Dimension (mm)	
	SS	Boring range
KIT BHFH MB80-125	MB80	36-410

▸ 10µm direct diametric adjustment and 2µm by a vernier scale

MB CLAMP

Spare Parts

MB system clamp set

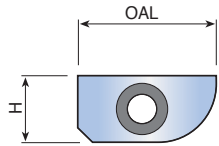


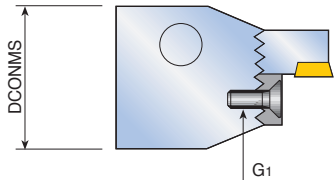
	Designation	Dimension (mm)	
		SS	BD
BH	**MB 14/16 COUPLING SET**	MB14/MB16	10
	MB 20 COUPLING SET	MB20	13
	MB 25 COUPLING SET	MB25	16
	MB 32 COUPLING SET	MB32	20
	MB 40 COUPLING SET	MB40	25
	MB 50 COUPLING SET	MB50	32
	MB 63/80 COUPLING SET	MB63/MB80	42
	MB 110/140 COUPLING SET	MB110/MB140	76

PLT

Spare Parts

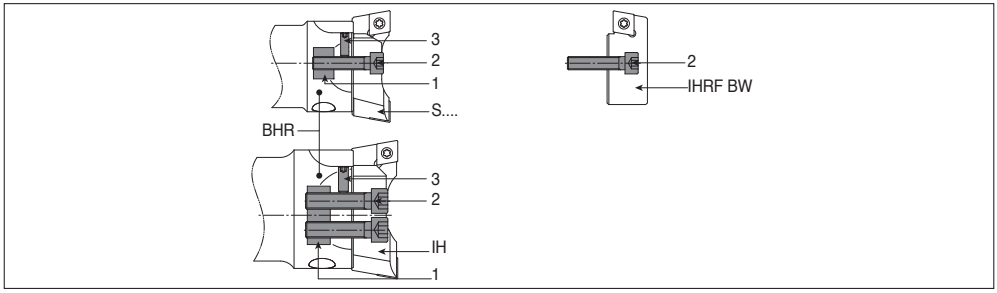
Cover plate



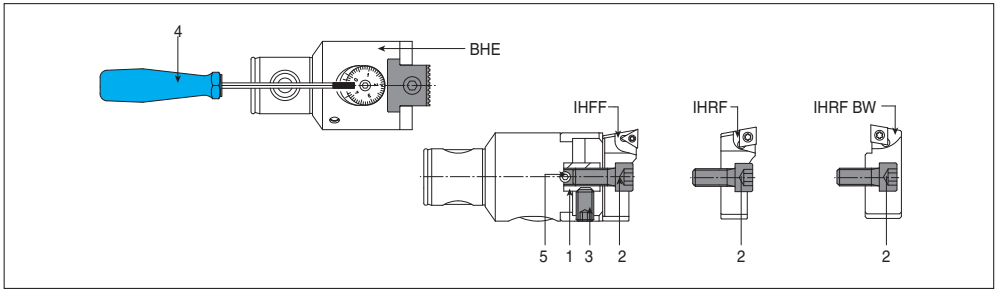


	Designation	Dimension (mm)			
		DCONMS	H	OAL	G1
PLT	**16**	16	7	14	SR M3x12 DIN912
	20	20	8.5	17	SR M4x14 DIN912
	32	32	13.9	28	SR M5x20 DIN7991
	40	40	17.4	35	SR M6x25 DIN7991
	63	63	26.4	62	SR M10x30 DIN7991

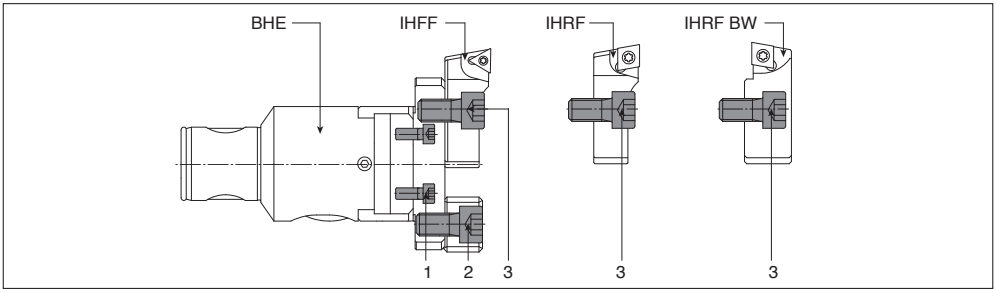
▸ Protects the serrated faces when a single toolholder is being used.



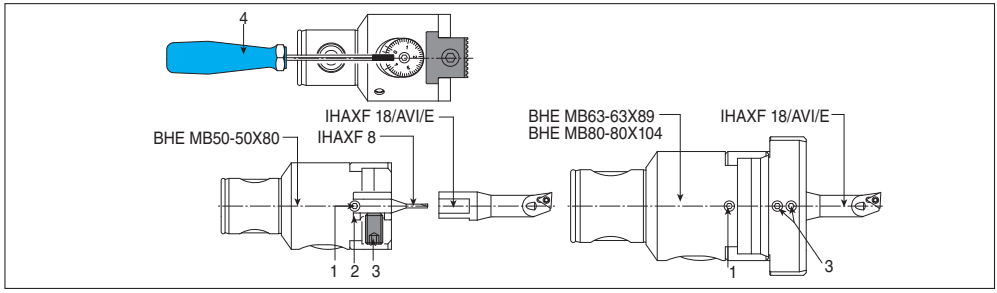
Designation	1	2	3
BHR MB16...16	BH NUT BHR MB16	SR M3x14 DIN 912	SR M3x4 DIN 913
MB20...20	BH NUT BHR MB20	SR M4x15 DIN 912	SR M3x5 DIN 913
MB25...25	BH NUT BHR MB25	SR M4x20 DIN 912	SR M3x8 DIN 913
MB32...32	BH NUT BHR MB32	SR M5x25 DIN 912	SR M4x12 DIN 913
MB40...50	BH NUT BHR MB40	SR M6x30 DIN 912	SR M5x14 DIN 913
MB50...50	BH NUT BHR MB50	SR M8x35 DIN 912	SR M5x12 DIN 913
MB50...63	BH NUT BHR MB63	SR M10x40 DIN 912	SR M6x16 DIN 913
MB63...63	BH NUT BHR MB63	SR M10x40 DIN 912	SR M6x16 DIN 913
MB80...80	BH NUT BHR MB80	SR M12x45 DIN 912	SR M8x25 DIN 913



Designation	1	2	3	4	5
BHE MB14-14x30	-	SR M3x6 DIN 912	-	BH HW 1.5 HANDLE	SR M2.5x3 DIN 913 45H
MB16-16x34	-	SR M3x6 DIN 912	-	-	SR M3x4 DIN 913 45H
MB20-20x40	-	SR M4x8 DIN 912	-	-	SR M3x4 DIN 913 45H
MB25-25x50	-	SR M5x10 DIN 912	-	-	SR M4x6 DIN 913 45H
MB32-32x63	-	SR M6x12 DIN 912	-	BH HW 2.5 HANDLE	SR M4x6 DIN 913 45H
MB40-40x80	-	SR M8x14 DIN 912	-	-	SR M5x10 DIN 913 45H
MB50-50x80	BH NUT 10	SR M10x25 DIN 912	SR M10x16 DIN 913 45H	BH HW 3.0 HANDLE	SR M6x10 DIN 913 45H
MB63-63x89	-	SR M10x20 DIN 912	-	-	SR M6x10 DIN 913 45H
MB80-80x104	-	SR M10x25 DIN 912	-	-	SR M8x12 DIN 913 45H



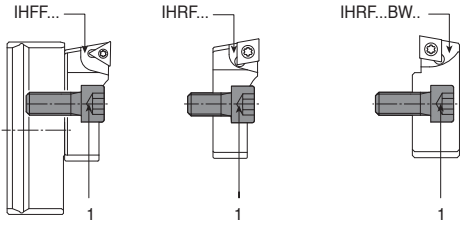
Designation	1	2	3
BHE **MB50-50x80**	SR M5x12 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912
MB63-63x89	SR M5x25 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912
MB80-80x104	SR M5x25 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912



Designation	1	2	3	4
BHE MB50-50x80	SR M6x8 DIN 913	SLEEVE D 8-D16	SR M10x10 DIN 913	BH HW 3.0 HANDLE
MB63-63x89	SR M6x8 DIN 913	-	SR M6x6 DIN 913	BH HW 3.0 HANDLE
MB80-80x104	SR M6x12 DIN 913	-	SR M6x6 DIN 913	BH HW 3.0 HANDLE

BHFH

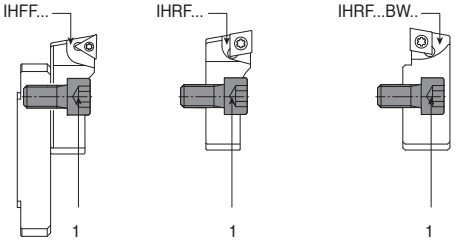
Spare Parts



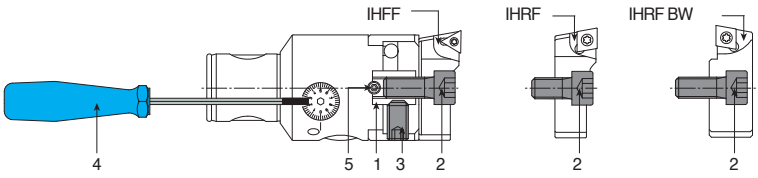
Designation	1
BHFH 30x75	SR M10x18 DIN 912
30x93	SR M10x18 DIN 912
30x135	SR M10x25 DIN 912
40x133	SR M10x18 DIN 912
40x200	SR M10x25 DIN 912
40x300	SR M10x25 DIN 912
40x400	SR M10x25 DIN 912

BHEH

Spare Parts

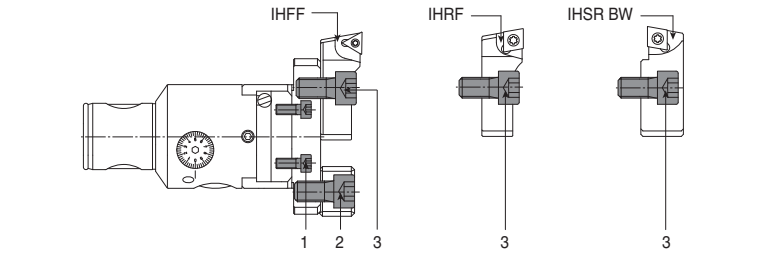


Designation	1
BHEH 24x75	SR M10x20 DIN 912
24x100	SR M10x20 DIN 912
28x80	SR M10x25 DIN 912
28x108	SR M10x25 DIN 912
28x148	SR M10x25 DIN 912

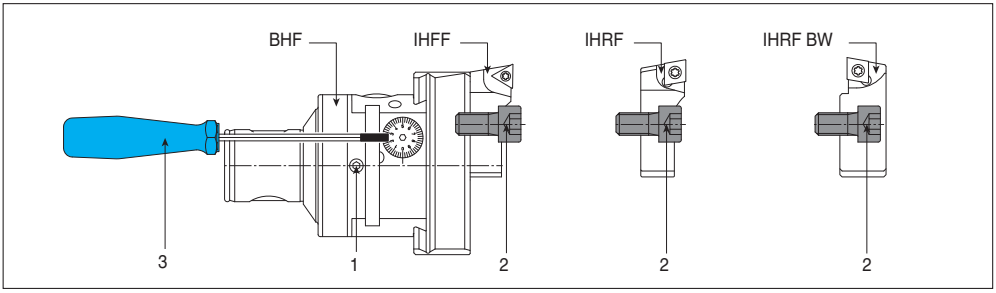


Designation	1	2	3	4	5
BHF...- 16...	-	SR M3x6 DIN 912	-	BH HW 1.5 HANDLE	SR M3x4.5 DIN 913
20...	-	SR M4x8 DIN 912	-	BH HW 1.5 HANDLE	SR M3x4.5 DIN 913
25...	-	SR M5x10 DIN 912	-	BH HW 2.0 HANDLE	SR M4x4 DIN 913
32...	-	SR M6x12 DIN 912	-	BH HW 2.0 HANDLE	SR M4x5 DIN 913
40...	-	SR M8x14 DIN 912	-	BH HW 2.5 HANDLE	SR M5x6 DIN 913 SR
50-60	BH NUT 10	SR M10x25 DIN 912	SR M10x16 DIN 913	BH HW 2.5 HANDLE	SR M5x8 DIN 913

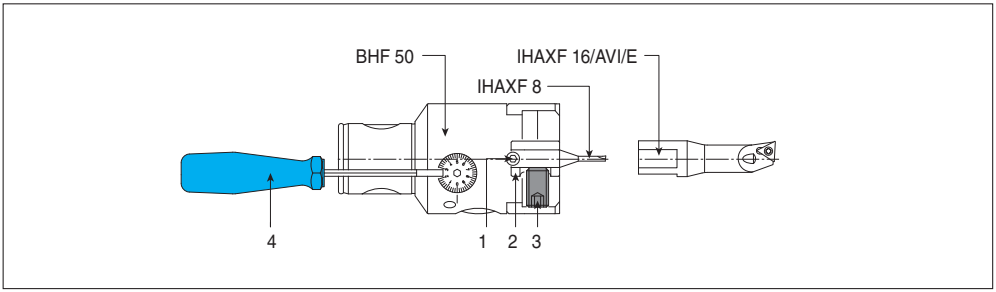
BHF Spare Parts



Designation	1	2	3
BHF...- 50...	SR M5x12 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912



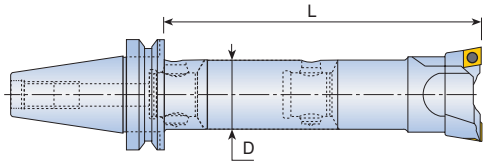
Designation	1	2	3
BHF...- 63...	SR M6x10 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE
80...	SR M6x14 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE
125...	SR M6x22 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE



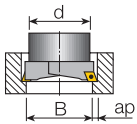
Designation	1	2	3	4
BHF...- 50...	SR M5x8 DIN 913	SLEEVE D8-D16	SR M10x10 DIN 913	BH HW 2.5 HANDLE

Recommended Cutting Conditions

BHR rough boring heads



Cutting depth



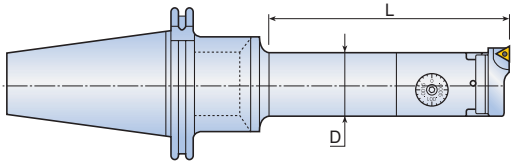
It's advisable to start with
B hole≥boring bar diameter d

B Working range	ap (mm) Steel	ap (mm) Cast iron, Aluminum
18-20	1.5-2	2-2.5
28-50	2-3	2.5-3.5
50-68	3-4	3.5-5
68-200	4-5	5-7
200-500	5-6	6-8

▸ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

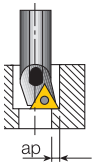
Recommended Cutting Conditions

Fine boring heads



Stability ●●●– Good
●● – Normal
● – Poor

Material	L/D	Stability	Cutting speed (Vc=m/min)	Feed f=mm/rev Insert radius R=0.2	Feed f=mm/rev Insert radius R=0.4	Cutting depth (ap)
Carbon steel HB≤200	L/D=2.5	●●●	200-300	0.05-0.08	0.08-0.10	
	L/D=4	●●	160-250	0.05-0.08	0.08-0.10	
	L/D=6.3	●	70-100	0.05-0.08	-	
Carbon steel HB>200	L/D=2.5	●●●	160-250	0.05-0.08	0.08-0.10	
	L/D=4	●●	150-200	0.05-0.08	0.08-0.10	
	L/D=6.3	●	70-100	0.05-0.08	-	
Stainless steel	L/D=2.5	●●●	150-200	0.05-0.08	0.08-0.10	
	L/D=4	●●	120-180	0.08-0.10	0.08-0.10	
	L/D=6.3	●	70-80	0.05-0.08	0.08-0.10	
Alloyed steel HB 480-550	L/D=2.5	●●●	120-160	0.05-0.08	0.08-0.10	
	L/D=4	●●	100-140	0.05-0.08	0.08-0.10	
	L/D=6.3	●	70-100	0.05-0.08	-	
Cast iron	L/D=2.5	●●●	120-160	0.05-0.08	0.08-0.10	
	L/D=4	●●	100-140	0.05-0.08	0.08-0.10	
	L/D=6.3	●	70-100	0.05-0.08	-	
Aluminum	L/D=2.5	●●●	300-400	0.05-0.08	0.08-0.10	
	L/D=4	●●	250-350	0.05-0.08	0.08-0.10	
	L/D=6.3	●	100-150	0.05-0.08	-	



Recommended Cutting Conditions

Stability ●●● – Good
●● – Normal
● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D18-28		Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.2	1.2-2.5	0.8-1.5	1.5-2.5	0.8-1.5	1.5-3.0
				R (Radius)	0.2	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
P	Carbon steel	HB<200	2.5 ●●●	Vc	150-180	120-150	160-200	140-170	160-200	140-180
				f	0.1-0.2	0.08-0.2	0.15-0.2	0.1-0.175	0.15-0.25	0.08-0.2
			4 ●●●	Vc	140-160	100-140	160-180	120-150	160-180	120-150
				f	0.1-0.18	0.08-0.15	0.1-0.12	0.08-0.1	0.1-0.12	0.08-0.1
			6.3 ●●●	Vc	60-80	40-60	60-90	50-60	70-90	50-70
				f	0.06-0.12	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.1	0.06-0.1
	Carbon steel	HB>200	2.5 ●●●	Vc	130-160	100-130	140-180	120-160	140-180	120-160
				f	0.08-0.15	0.08-0.12	0.08-0.2	0.06-0.12	0.08-0.25	0.08-0.18
			4 ●●●	Vc	110-140	80-110	100-140	80-120	100-140	80-120
				f	0.08-0.12	0.08-0.1	0.08-0.15	0.06-0.15	0.08-0.2	0.06-0.15
			6.3 ●●●	Vc	70-90	60-70	80-100	60-80	80-100	60-80
				f	0.08-0.1	0.06-0.08	0.06-0.1	0.06-0.08	0.08-0.15	0.06-0.1

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D68-120		Boring range D120-200		Boring range D200-500	
				ap (mm)	0.8-1.5	1.5-3.5	0.8-2.0	2.0-3.5	0.8-1.5	2.0-4.0
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8
P	Carbon steel	HB<200	2.5 ●●●	Vc	160-220	150-180	180-250	160-200	220-280	200-220
				f	0.15-0.25	0.08-0.2	0.15-0.3	0.1-0.2	0.15-0.3	0.1-0.15
			4 ●●●	Vc	140-180	120-150	160-200	140-180	N.R.	N.R.
				f	0.08-0.2	0.08-0.15	0.1-0.2	0.08-0.15		
			6.3 ●●●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R.
				f	0.06-0.1	0.06-0.1				
	Carbon steel	HB>200	2.5 ●●●	Vc	140-180	120-160	150-170	100-140	100-140	80-120
				f	0.15-0.3	0.12-0.2	0.15-0.25	0.1-0.2	0.15-0.3	0.1-0.2
			4 ●●●	Vc	120-150	100-140	100-130	80-110	N.R.	N.R.
				f	0.1-0.2	0.1-0.18	0.08-0.2	0.08-0.12		
			6.3 ●●●	Vc	80-100	60-80	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.12	0.08-0.12				

▸ N.R. = Not recommended
▸ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Stability ●●●– Good
●● – Normal
● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D18-28		Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.0	1.0-1.8	0.5-1.0	1.0-1.8	0.5-1.2	1.2-2.0
				R (Radius)	0.2	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
P	**Alloyed steel**	HB<200	2.5 ●●●	Vc	140-160	90-120	150-180	100-130	160-200	140-180
				f	0.08-0.18	0.08-0.15	0.08-0.2	0.08-0.18	0.1-0.25	0.1-0.15
			4 ●●	Vc	100-130	70-100	110-150	90-120	140-180	100-130
				f	0.08-0.15	0.06-0.12	0.08-0.18	0.08-0.15	0.8-0.18	0.08-0.12
			6.3 ●	Vc	80-100	60-90	80-100	70-90	100-140	80-120
				f	0.08-0.15	0.06-0.1	0.06-0.12	0.06-0.12	0.6-0.15	0.08-0.1
	Alloyed steel	HB>200	2.5 ●●●	Vc	130-150	120-140	130-150	120-140	140-170	120-150
				f	0.08-0.18	0.06-0.15	0.08-0.18	0.06-0.15	0.08-0.2	0.08-0.18
			4 ●●	Vc	100-130	100-120	100-130	100-120	120-150	100-120
				f	0.08-0.15	0.06-0.13	0.08-0.15	0.06-0.13	0.08-0.18	0.08-0.15
			6.3 ●	Vc	80-100	70-90	80-100	70-90	100-120	70-90
				f	0.08-0.12	0.06-0.11	0.08-0.12	0.06-0.11	0.08-0.12	0.06-0.11

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D68-120		Boring range D120-200		Boring range D200-500	
				ap (mm)	0.8	2.5	0.8-2.0	2.0-3.5	0.8-2.0	2.0-4.0
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8
P	**Alloyed steel**	HB<200	2.5 ●●●	Vc	160-220	140-180	160-220	140-180	160-220	140-180
				f	0.1-0.3	0.1-0.25	0.1-0.3	0.1-0.25	0.1-0.35	0.1-0.3
			4 ●●	Vc	150-200	120-160	120-160	120-160	N.R.	N.R.
				f	0.1-0.2	0.08-0.18	0.1-0.2	0.08-0.18		
			6.3 ●	Vc	100-140	100-140	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.18	0.08-0.15				
	Alloyed steel	HB>200	2.5 ●●●	Vc	160-200	140-180	140-200	140-180	140-200	140-180
				f	0.1-0.3	0.01-0.25	0.01-0.35	0.01-0.3	0.01-0.35	0.01-0.3
			4 ●●	Vc	140-160	120-140	150-180	120-140	N.R.	N.R.
				f	0.08-0.2	0.08-0.15	0.08-0.12	0.08-0.12		
			6.3 ●	Vc	100-120	70-90	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.16	0.08-0.12				

▸ N.R. = Not recommended
▸ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Stability ●●● – Good
●● – Normal
● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D18-28		Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.0	1.0-1.8	0.5-1.0	1.0-1.8	0.5-1.2	1.2-2.0
				R (Radius)	0.2	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
M	**Stainless steel**	Ferritic & martensitic	2.5 ●●●	Vc	100-150	110-130	120-160	100-150	120-160	110-160
				f	0.08-0.15	0.06-0.12	0.08-0.18	0.06-0.12	0.08-0.25	0.08-0.18
			4 ●●	Vc	90-130	90-120	100-140	90-140	100-150	80-120
				f	0.08-0.12	0.06-0.1	0.08-0.12	0.06-0.1	0.08-0.18	0.08-0.12
			6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
				f	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.15	0.08-0.1
	Stainless steel	Austenitic	2.5 ●●●	Vc	110-130	100-130	120-150	110-140	110-160	100-150
				f	0.08-0.15	0.06-0.12	0.08-0.18	0.06-0.12	0.08-0.25	0.06-0.12
			4 ●●	Vc	80-110	80-110	90-130	90-120	100-150	90-130
				f	0.08-0.12	0.06-0.1	0.08-0.12	0.06-0.1	0.08-0.18	0.06-0.1
			6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
				f	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.15	0.06-0.1
	Stainless steel cast	Ferritic & martensitic	2.5 ●●●	Vc	90-130	100-130	120-150	110-140	120-160	100-150
				f	0.08-0.15	0.06-0.12	0.08-0.18	0.06-0.12	0.08-0.25	0.06-0.12
			4 ●●	Vc	70-110	80-110	90-130	90-120	100-150	90-130
				f	0.08-0.12	0.06-0.1	0.08-0.12	0.06-0.1	0.08-0.18	0.06-0.1
			6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
				f	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.15	0.06-0.1
	Stainless steel cast	Austenitic	2.5 ●●●	Vc	80-120	70-110	100-150	90-140	110-150	100-150
				f	0.08-0.15	0.06-0.12	0.08-0.18	0.06-0.12	0.08-0.25	0.06-0.12
			4 ●●	Vc	70-100	70-100	80-130	70-120	90-140	90-130
				f	0.08-0.12	0.06-0.1	0.08-0.12	0.06-0.1	0.08-0.18	0.06-0.1
			6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
				f	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.15	0.06-0.1

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D68-120		Boring range D120-200		Boring range D200-500	
				ap (mm)	0.8-1.8	1.8-2.5	0.8-2.0	2.0-3.0	0.8-2.0	2.0-3.5
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.2-0.4
M	**Stainless steel**	Ferritic & martensitic	2.5 ●●●	Vc	130-220	120-200	140-220	120-180	150-220	120-200
				f	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25
			4 ●●	Vc	100-160	90-140	120-180	90-140	N.R.	N.R.
				f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18		
			6.3 ●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R
				f	0.08-0.2	0.08-0.15				
	Stainless steel	Austenitic	2.5 ●●●	Vc	120-200	100-160	120-200	100-160	120-200	100-180
				f	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25
			4 ●●	Vc	100-150	90-140	100-160	90-140	N.R.	N.R.
				f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18	0.08-0.18	0.06-0.1
			6.3 ●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.2	0.08-0.15				
	Stainless steel cast	Ferritic & martensitic	2.5 ●●●	Vc	130-200	120-180	140-200	120-160	140-200	120-180
				f	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25
			4 ●●	Vc	110-150	90-150	100-160	90-140	N.R.	N.R.
				f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18		
			6.3 ●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.2	0.08-0.15				
	Stainless steel cast	Austenitic	2.5 ●●●	Vc	130-180	120-180	120-200	100-160	120-200	100-180
				f	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25
			4 ●●	Vc	100-140	90-140	100-160	90-140	N.R.	N.R.
				f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18		
			6.3 ●	Vc	70-190	50-70	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.2	0.08-0.15				

▸ N.R. = Not recommended
▸ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Stability ●●●– Good
●● – Normal
● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D18-28		Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.0	1.0-1.8	0.5-1.0	1.0-1.8	0.5-1.2	1.2-2.0
				R (Radius)	0.2-0.4	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
K	**Gray cast iron GG 10-25**	HB<200	2.5 ●●●	Vc	120-160	100-140	120-180	110-150	120-180	110-150
				f	0.06-0.15	0.06-0.18	0.06-0.15	0.06-0.12	0.08-0.2	0.08-0.12
			4 ●●	Vc	100-140	80-120	100-150	80-120	100-150	80-120
				f	0.06-0.12	0.06-0.1	0.06-0.12	0.06-0.1	0.08-0.12	0.08-0.1
			6.3 ●	Vc	70-100	60-90	70-100	60-90	70-100	60-90
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.08-0.1	0.08-0.1
	Gray cast iron GG 25-40		2.5 ●●●	Vc	140-200	140-200	140-220	160-250	180-220	200-280
				f	0.06-0.15	0.06-0.18	0.06-0.15	0.06-0.18	0.08-0.2	0.1-0.25
			4 ●●	Vc	120-160	120-160	120-180	140-200	140-180	180-220
				f	0.06-0.12	0.06-0.14	0.06-0.12	0.06-0.14	0.08-0.12	0.08-0.2
			6.3 ●	Vc	70-100	60-90	70-100	60-90	60-100	60-120
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.08-0.1	0.08-0.1
	Cast iron GGG	Spheroidal & graphite	2.5 ●●●	Vc	120-180	120-180	120-200	140-220	180-220	180-240
				f	0.06-0.15	0.06-0.18	0.06-0.15	0.06-0.18	0.08-0.18	0.1-0.2
			4 ●●	Vc	120-160	120-160	120-180	140-200	140-200	160-220
				f	0.06-0.12	0.06-0.14	0.06-0.12	0.06-0.14	0.08-0.12	0.08-0.18
			6.3 ●	Vc	60-100	60-90	60-100	60-90	60-90	60-100
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.08-0.1	0.08-0.1

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D18-28		Boring range D28-50		Boring range D50-68	
				ap (mm)	0.8-1.8	1.8-2.5	0.8-2.0	2.0-3.0	0.8-2.0	2.0-3.5
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8
K	**Gray cast iron GG 10-25**	HB<200	2.5 ●●●	Vc	120-200	110-150	150-250	180-280	150-250	180-280
				f	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.35	0.08-0.25	0.08-0.35
			4 ●●	Vc	100-150	80-120	120-170	120-170	N.R.	N.R.
				f	0.08-0.18	0.08-0.2	0.08-0.18	0.08-0.25		
			6.3 ●	Vc	70-100	60-90	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.15	0.08-0.12				
	Gray cast iron GG 25-40		2.5 ●●●	Vc	50-300	250-350	250-350	250-350	250-350	250-350
				f	0.12-0.35	0.12-0.35	0.15-0.3	0.15-0.4	0.15-0.3	0.15-0.4
			4 ●●	Vc	200-270	230-300	200-300	200-270	N.R.	N.R.
				f	0.1-0.25	0.12-0.3	0.15-0.3	0.15-0.35		
			6.3 ●	Vc	70-150	60-120	N.R.	N.R.	N.R.	N.R.
				f	0.1-0.15	0.12-0.25				
	Cast iron GGG	Spheroidal & graphite	2.5 ●●●	Vc	200-240	200-280	200-280	220-300	220-300	220-300
				f	0.12-0.3	0.12-0.3	0.15-0.3	0.15-0.35	0.15-0.3	0.15-0.35
			4 ●●	Vc	160-220	180-240	180-250	200-270	N.R.	N.R.
				f	0.1-0.2	0.12-0.25	0.15-0.25	0.15-0.35		
			6.3 ●	Vc	60-100	60-100	N.R.	N.R.	N.R.	N.R.
				f	0.1-0.15	0.12-0.2				

▸ N.R. = Not recommended
▸ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Stability ●●● – Good
●● – Normal
● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D18-28		Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.5	1.5-2.5	0.5-1.5	1.5-2.5	0.5-2.0	1.2-3.0
				R (Radius)	0.2-0.4	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
N	Aluminum/ Cast	>12si	2.5 ●●●	Vc	200-300	240-350	200-300	240-350	200-300	240-350
				f	0.06-0.2	0.06-0.25	0.06-0.2	0.06-0.25	0.06-0.25	0.06-0.3
			4 ●●	Vc	150-220	150-220	150-220	150-220	150-220	150-220
				f	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2
			6.3 ●	Vc	60-100	60-100	60-100	60-100	60-100	60-100
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1
	Aluminum/ Cast	<12si	2.5 ●●●	Vc	180-250	220-280	180-250	220-280	180-250	220-280
				f	0.06-0.2	0.06-0.25	0.06-0.25	0.06-0.25	0.06-0.25	0.06-0.3
			4 ●●	Vc	120-220	120-220	120-220	120-220	120-220	120-220
				f	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.25
			6.3 ●	Vc	60-100	60-100	60-100	60-100	60-100	60-100
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D68-120		Boring range D120-200		Boring range D200-500	
				ap (mm)	0.8-3.0	1.8-4.0	0.8-3.0	2.0-4.0	0.8-3.0	2.0-4.5
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8
N	Aluminum/ Cast	>12si	2.5 ●●●	Vc	200-300	240-350	200-300	240-350	200-300	240-350
				f	0.06-0.25	0.06-0.3	0.06-0.25	0.06-0.4	0.06-0.25	0.06-0.4
			4 ●●	Vc	150-220	150-220	150-220	150-220	N.R.	N.R.
				f	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2		
			6.3 ●	Vc	60-100	60-100	N.R.	N.R.	N.R.	N.R.
				f	0.06-0.1	0.06-0.1				
	Aluminum/ Cast	<12si	2.5 ●●●	Vc	180-250	220-280	180-250	220-280	180-250	220-280
				f	0.06-0.25	0.06-0.3	0.06-0.3	0.06-0.4	0.06-0.3	0.06-0.4
			4 ●●	Vc	120-220	120-220	120-220	120-220	N.R.	N.R.
				f	0.06-0.2	0.06-0.25	0.06-0.2	0.06-0.25		
			6.3 ●	Vc	60-100	60-100	N.R.	N.R.	N.R.	N.R.
				f	0.06-0.1	0.06-0.1				

▸ N.R. = Not recommended
▸ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Fine boring head BHF 16-50 and BHE operating instructions

■ **Assembly**

- When mounting the BHF boring head, the expanding pin should be kept tightly inside the cylindrical body
- Insert the BHF into the shank
- Tighten the pin ❷ by turning clockwise

The recommended tightening torque guidelines are as follows:

Recommended Torque	(N·m)
BHF MB16 - 16 x 34	2.0 - 2.5
BHF MB20 - 20 x 40	4.0 - 4.5
BHF MB25 - 25 x 50	6.5 - 7.5
BHF MB32 - 32 x 63	7.0 - 8.0
BHF MB40 - 40 x 80	16.0 - 18.0
BHF MB50 - 50 x 60	30.0 - 35.0

- Insert screw ❺ until it completely enters the recess in the sleeve nut or boring bar

■ **Disassembly**

- Loosen the pin ❷ by turning counter-clockwise

■ **Positioning**

- Loosen the screw ❹ before making any slide adjustment
- By turning the graduated dial ❸ counterclockwise, set the tool slide ❼ allowance for a 4mm adjustment
- Lock the tool slide by means of screw ❹, to the desired position
- Lock the screw ❹
- When making any slide adjustment, firstly loosen the screw ❹

■ **Maintenance**

Weekly:

- Lubricate through the oiling nipple ❽ with ISO UN G220 oil

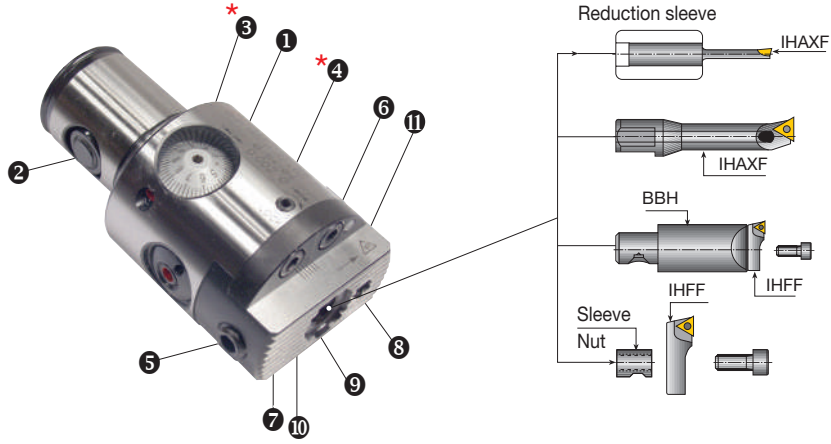
Periodically:

- Clean the conical cylindrical surface and then lubricate
- Grease the expanding pin ❷ with an anti-friction lubricant
- Clean and lubricate the tool slide guideway

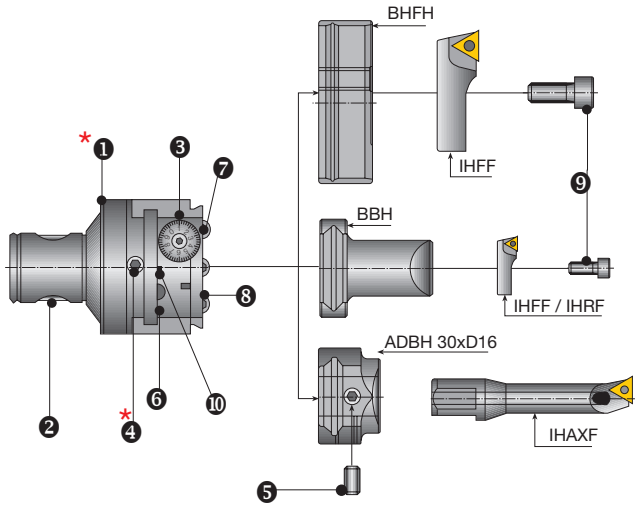
■ **Important note:**

- Toolholder should be firmly affixed to the slide at all times

* Due to back-lash phenomenon, if you pass the required value, turn the dial ❸ in the reverse direction at least one rotation and then re-adjust in the original direction

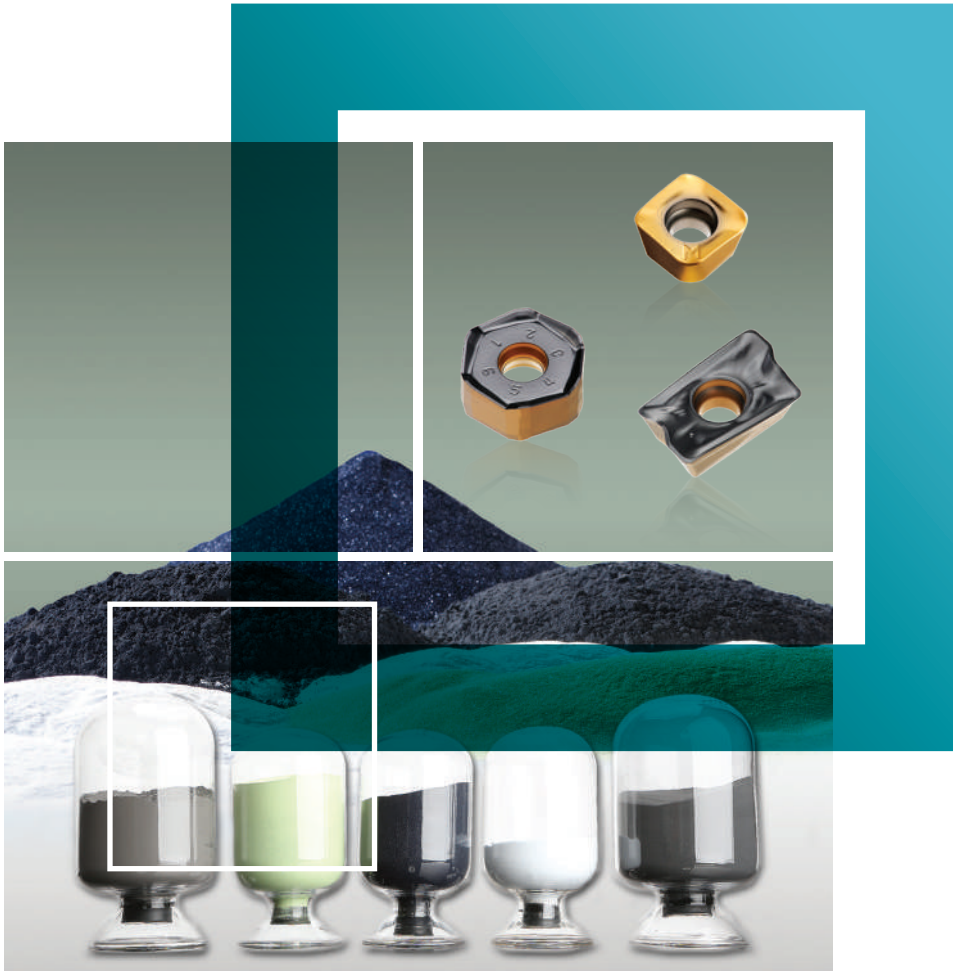


* ❶ Body
❷ Expanding pin
* ❸ Graduated dial
* ❹ Slide locking screw
❺ Toolholder locking screw
❻ Coolant nozzle
❼ Slide holder
❽ Oiling nipple
❾ Tool bore .63H7
❿ Slide adjusting range
Do not exceed the range marks!!
⓫ Cutting edge position mark



* ❶ Body
❷ Expanding pin
❸ Graduated dial
* ❹ Slide locking screw
❺ Toolholder locking screw
❻ Coolant nozzle
❼ Slide holder
❽ Oiling nipple
❾ Toolholder locking screws
❿ Slide adjusting range
Do not exceed the range marks!!

MATERIALS & GRADES



Grade Comparison Table

▶ Milling grades

ISO class	TaeguTec	Sandvik	Walter	Seco	Kennametal	MMC	Sumitomo	Tungaloy	Kyocera	Korloy	Iscar
P	TT5505 TT5515 TT2510 TT7080	GC4330 GC1010 GC4220 GC4230	WKP25S WAM10 WAM20 WHH15X WXM15	MP1501 MP1500 MP2501 MP2500 T250M	KC510M KCPM15	MV1020 MP6120 UP20M	ACP100	T3130 AH3035 AH710		PC2005 PC3700 PC3600 PC3525 PC3530 NC5330 NC5340	IC5600 IC5400 IC903
P	TT5513 TT5520 TT9080 TT5523 TT5525	GC4340 GC1230 GC1130 GC1030 GC4240	WKP25 WKP25S WAM30 WJ30TF	F25M F30M F32M MK2050 MP3000	KC522M KC635M KC633M KC643M	MV1030 MP9120 MP9130 VP15TF MP6130 VP20RT	XCU2500 ACP3000 ACU2500 ACP200	AH110 AH3225 AH725 AH730 GH330 AH120	PR830 PR1225 PR1230 PR9925 PR1825	PC3500 PC5300 PC5535 PC3535 PC210F	IC608 IC808 IC908 IC810
P	TT8080 TT5543 TT8625	GC4240 GC1040	WKP35G WKP35S WKP45S WSM45X WSP45S WSP45G WSP46	F40M MP3501 T350M T60M MS2050 MP2051 MP2050	KC725M KC735M KC935M KCPM20 KCPM40	VP30RT FH7020 F7030	ACP300 ACZ350	AH140 T3130 AH130 AH3135 AH9030	PR1525	UPC830 PC5400 NC5350 NCM535	IC5500 IC830 IC928 IC330 IC328 IC845
M S	TT5515 TT5520 TT9080 TT9030 TT5523	GC1010 GC1130 GC1030 GC2030 S30T GC1025	WXM15 WAM30 WXM35	MS2050 MP3000 MP2501 MP2500 F25M F30M F32M	KC635M KCSM15A KCPM15 KC643M KCSM15 KC633M	MP9120 MP9130 VP15TF VP20RT	XCU2500 ACU2500 ACK300 ACP300 ACM100 ACM200 ACS1000	AH110 AH3225 T3130 AH8015 AH725 AH9130 AH120 AH4035	PR830 PR1210 PR1025 PR1225 PR905 PR1835	PC210F PC5300 PC5535 PC9530 UPC845	IC903 IC608 IC808 IC908 IC380
M S	TT8080 TT5543 TT8020 TT3535 TT3520	GC2040 GC1040 S40T	WJ30RA WSM30 WSM35 WSM35G WSM35S WSM36 WSP45G WSP45S WSM45X WMP45G WSP45G WSP46	MP3501 F40M MS2500 MM4500 MP2051 MP2050	KC725M KCPM40 KCSM40	MP9140 MP7030 MP7130 MP7140 VP30RT MV1030 MC7020	ACM200 ACM300 ACS2500 ACS3000	AH130 AH140 SH730 AH3135	PR1225 PR905 PR1525 PR1535	PC5400 NC5350 PC9540	IC840 IC5820 IC716 IC882 IC830 IC928 IC330 IC328
K	TT7505 TT7515	GC1010 GC3220 GC3330 GC4220	WAK15 WHH15X WXM15	F15M MK1500 MP1500 MH1000	KC915M KCK15 KC643M KCPM15	MC5020 MV1020	ACK3000 ACU2500 ACK200	T1115 AH9130		PC2005 PC8110	IC4100 IC5100 IC903
K	TT5515 TT5520 TT6080 TT5525	GC1020 GC1220 GC4230 GC3040 GC4240 K20D	WKP25S WKP35G WKP35S WKK25G WKK25S	MP3501 F25M MK2000 MK3000 MK2050 F32M	KCKP10 KCK20B KCK15 KC520M KC633M KC643M KCPM15	MV1030 MP8010 VP15TF VP20RT F5010	XCU2500 XCK2000 ACK300 ACZ310	AH110 AH725 AH120 AH8015	PR1810 PR905 PR1210 PR1510	PC6100 PC210F PC6510 NC5330 PC5535 NC5340 NCM535	IC608 IC810 IC808 IC908
H	TT5505 TT5515 TT2510 TT6080 TT9080	GC1010 GC1130 GC1030	WHH15 WHH15X	F15M MH1000 MP1500 MP2051 MP3000 F30M F32M	KC510M KC522M KC635M KC639M KCPM15	MP8010 VP15TF VP20RT F5010		AH710 AH750 AH8005 AH8015 AH9030	PR015S	PC2005 PC2010 PC2015 PC2510 PC2505 PC210F PC5535	IC903 IC608 IC808 IC908
N	K10 UF10 TTA101	H13A H10 GC1030	WNN15 WXN15	F15M F32M F40M	K600 KC410M KC422M		DL1000 DL2000	DS1100 DS1200 GH110	PDL025	PD1005 PD1010	IC1058

Grade Comparison Table

Cermet grades

ISO class	TaeguTec	Sandvik	Kennametal	Sumitomo	Kyocera	Tungaloy	Mitsubishi	Korloy	Seco	NTK	Ceramtec
P	CT7000	CT530	KT1120 KT175	T250A T130A	TN100M TN620M TC60M PV90	NS740	VP45N NX99 NX3035	CN20 CN30	TP1020 C15M	N20 Z15 C50 C7X	SC7015 SC60

Ceramic grades

ISO class	Composition	TaeguTec	Sandvik	Kennametal	Ceramtec	NTK	Kyocera	Sumitomo	Tungaloy
K	Al_2O_3, ZrO_2	AW120	CC620		SN60 SN80	HC1 HW2	KA30		TZ120
	Al_2O_3, TiC	AB30	CC650	KY1615	SH2 SH4	HC2 HC5 HC6	A65	NB90S NB90M	LX21
	Si_3N_4, Al_2O_3, Y_2O_3, AlN	AS500		KY1310 KY3000	SL506 SL508 SL606 SL608	SX9			
	Si_3N_4, ZrO_2, Al_2O_3, Y_2O_3	AS10	CC6090 CC6190	KY1320 KY3500 KYK10	SL500 SL808	SX1 SX6 SX8	KS6000 KS6050	SN2000K SN2100K NS260	FX105 CX710
	CVD coated	SC10	CC1690	KY3400 KYK25	SL550C SL554C SL654C SL658C SL854C SL858C	SP2 SP9	CS7050	NS260C	CXC73
H	Al_2O_3, TiCN	AB20 AB30	CC6050		SH2 SH4	HC2 HC5 HC7			LX10
	PVD coated	AB2010	CC670	KY4400		ZC4 ZC7	A66N PT600M	NB100C	LX11
S	Al_2O_3, SiC whisker	TC430	CC6060 CC6065 CC6160	KY4300		WA1 WA5		WX2000	
	Si_3N_4, TiN	TC3020 TC3030	CC6220 CC6230	KY2100 KY1540 KYS30 KYS25 KYS30P		SX3 SX5 SX7 SX9	KS6030 KS6040	SN1000S SN2000S	TS200 TS300

Grade Comparison Table

▶ CBN grades

ISO class	TaeguTec	Iscar	Tungaloy	Sumitomo	Sandvik	Kennametal	Mitsubishi	Kyocera	Seco
H	TB610	IB10H IB50	BX310	BN1000 BNX10	CB7105 CB7015	KB1610	MBC010	KBN510	CBN010
		IB10HC	BXC30 BXA30	BNC80 BNC100 BNC2010		KB5610 KB9610	MB8025 BC8105 BC8210	KBN10M KBN10C KBN25C	CBN050C CH0550
	TB2015 TB650	IB20H IB55	BX330 BX530	BN250 BN2000 BNX20	CB7115 CB7025	KB1625	MB810	KBN525	CBN100
		IB25HA	BXM10 BXC30 BXA40	BNC160 BNC2020		KB5625	MB820 BC8110 BC8220	KBN05M KBN25M	CBN160C CH2540
	TB670	IB25HC	BX360 BX380	BNX25 BN350	CB7125 CB7135 CB50 CB7525 CB7925		MB825 MB8025 BC8120 BC8220		CBN150 CBN170
			BXM20 BXA20 BXA40 BXC50	BNC200 BNC300			MB835 BC8020 BC8130	KBN30M	CBN060K CBN100P
K	TB7015 TB730	IB90	BX930 BX850 BX950	BN500 BN7500 BN7000	CB50 CB7525	KB1630 KB1345	MB4020 MB710	KBN475 KBN60M KBN65B	CBN200
		IB05S IB10S	BX470 BX480	BN700 BNC500	CB7050	KB5630 KB9640	MB730	KBN65M KBN70M KBN570	CH3515
	TB7020		BX90S BXC90	BNS800	CB7925		MBS140	KBN900	CBN200 CBN300 CBN300P CBN350 CBN400C

▶ PCD grades

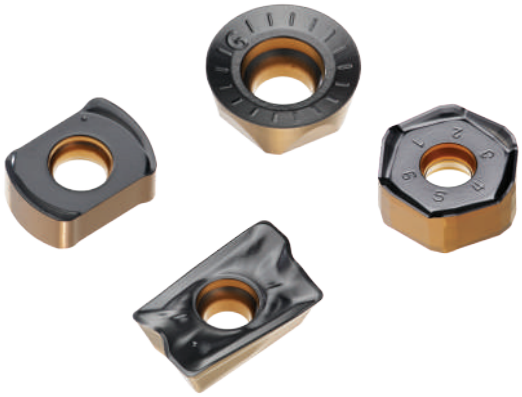
ISO class	TaeguTec	Iscar	Tungaloy	Sumitomo	Sandvik	Kennametal	Mitsubishi	Kyocera	Seco	NTK
N01-N10	TD1010	ID8	DX180 DX160	DA90		KD1405	MD203	KPD230	PCD30M PCD30	
N05-N20	TD1020	ID5	DX140	DA150	CD10	KD1400	MD220	KPD010	PCD20	PD1
N15-N30	TD1030		DX120 DX110	DA2200 DA1000		KD1425	MD205	KPD001	PCD10 PCD05	PD2

SFEED-RUSH Grades

▶ Milling SFEED-RUSH grades

SFEED-RUSH grades have upgraded toughness and chipping resistance through special post-coating treatment process of CVD grades. Through the post-coating treatment process, single color inserts have been transformed into two different colors, on the side and the top (see the illustrations below).

ISO class	Grade	ISO Rage	Insert color
P	TT8625	P30-P45	Upgraded SFEED-RUSH Grade All yellow color — Two colors: yellow and black



Hardness Conversion Table

Vickers 50kg HV	Brinell HB10mm ball LOAD 3000kgf		Rockwell				Shore's HS	Tensile strength N/mm^2 (kgf/mm^2)
	Standard ball	Tungsten carbide ball	A scale 60kgf diamond brale HRA	B scale 100kgf 1/16in ball HRB	C scale 150kgf diamond brale HRC	D scale 100kgf diamond brale HRD		
1900			93.1		80.5			
1800			92.6		79.2			
1700			91.9		77.9			
1600			91.3		76.6			
1500			90.5		75.3			
1450			90.1		74.6			
1400			89.6		74.0			
1350			89.1		73.4			
1300			88.7		72.7			
1250			88.3		72.1			
1200			87.9		71.5			
1150			87.5		70.9			
1100			87.1		70.3			
1050			86.6		69.6			
1000			86.2		68.9			
940			85.6		68.0	76.9	97	
920			85.3		67.5	76.5	96	
900			85.0		67.0	76.1	95	
880		(767)	84.7		66.4	75.7	93	
860		(757)	84.4		65.9	75.3	92	
840		(745)	84.1		65.3	74.8	91	
820		(733)	83.8		64.7	74.3	90	
800		(722)	83.4		64.0	74.8	88	
780		(710)	83.0		63.3	73.3	87	
760		(698)	82.6		62.5	72.6	86	
740		(684)	82.2		61.8	72.1	84	
720		(670)	81.8		61.0	71.5	83	
700		(656)	81.3		60.1	70.8	81	
690		(647)	81.1		59.7	70.5		
680		(638)	80.8		59.2	70.1	80	
670		630	80.6		58.8	69.8		
660		620	80.3		58.3	69.4	79	
650		611	80.0		57.8	69.0		
640		601	79.8		57.3	68.7	77	2205(210)
630		591	79.5		56.8	68.3		2020(206)
620		582	79.2		56.3	67.9	75	1985(202)
610		573	78.9		55.7	67.5		1950(199)
600		564	78.6		55.2	67.0	74	1905(194)
590		554	78.4		54.7	66.7		1860(190)
580		515	78.0		54.1	66.2	72	1825(186)
570		535	77.8		53.6	65.8		1795(183)
560		525	77.4		53.0	65.4	71	1750(179)
550	(505)	517	77.0		52.3	64.8		1750(174)
540	(496)	507	76.7		51.7	64.4	69	1660(169)
530	(488)	497	76.4		51.1	66.2		1620(165)
520	(480)	488	76.1		50.5	63.5	67	1570(160)
510	(473)	479	75.7		49.8	62.9		1530(156)
500	(465)	471	75.3		49.1	62.2	66	1459(153)
490	(456)	460	74.9		48.4	61.6		1460(149)
480	488	452	74.5		47.7	61.3	64	1410(144)

▸ Note: Gray figures come from ASTM E 140 table (Calculated by SAE-ASM-ASTM together)

Vickers 50kg HV	Brinell HB10mm ball LOAD 3000kgf		Rockwell				Shore's HS	Tensile strength N/mm^2 (kgf/mm^2)
	Standard ball	Tungsten carbide ball	A scale 60kgf diamond brale HRA	B scale 100kgf 1/16in ball HRB	C scale 150kgf diamond brale HRC	D scale 100kgf diamond brale HRD		
470	441	442	74.1		46.9	60.7		1570(160)
460	433	433	73.6		46.1	60.1	62	1530(156)
450	425	425	73.3		45.3	59.4		1459(153)
440	415	415	72.8		44.5	58.8	59	1460(149)
430	405	405	72.3		43.6	58.2		1410(144)
420	397	397	71.8		42.7	57.5	57	1370(140)
410	388	388	71.4		41.8	56.8		1330(136)
400	379	379	70.8		40.8	56.0	55	1290(131)
390	369	369	70.3		39.8	55.2		1240(127)
380	360	360	69.8	(110.0)	38.8	54.4	52	1250(123)
370	350	350	69.2		37.7	53.6		1170(120)
360	341	341	68.7	(109.0)	36.6	52.8	50	1130(115)
350	331	331	68.1		35.5	51.9		1095(112)
340	322	322	67.6	(108.0)	34.4	51.1	47	1070(109)
330	313	313	67.0		33.3	50.2		1035(105)
320	303	303	66.4	(107.0)	32.2	49.4	45	1005(103)
310	294	294	65.8		31.0	48.4		980(100)
300	284	284	65.2	(105.5)	29.8	47.5	42	950(97)
295	280	280	64.8		29.2	47.1		935(96)
290	275	275	64.5	(104.5)	28.5	46.5	41	915(94)
285	270	270	64.2		27.8	46.0		905(92)
280	265	265	63.8	(103.5)	27.1	45.3	40	890(91)
275	261	261	63.5		26.4	44.9		875(89)
270	256	256	63.1	(102.0)	25.6	44.3	38	855(87)
265	252	252	62.7		24.8	43.7		840(86)
260	247	247	62.4	(101.0)	24.0	43.1	37	825(84)
255	243	243	62.0		23.1	42.2		805(82)
250	238	238	61.6	99.5	22.2	41.7	36	795(81)
245	233	233	61.2		21.3	41.1		780(79)
240	228	228	60.7	98.1	20.3	40.3	34	765(78)
230	219	219		96.7	(18.0)		33	730(75)
220	209	209		95.0	(15.7)		32	695(71)
210	200	200		93.4	(13.4)		30	670(68)
200	190	190		91.5	(11.0)		29	635(65)
190	181	181		89.5	(8.5)		28	605(62)
180	171	171		87.1	(6.0)		26	580(59)
170	162	162		85.0	(3.0)		25	545(56)
160	152	152		81.7	(0.0)		24	515(53)
150	143	143		78.7			22	490(50)
140	133	133		75.0			21	455(45)
130	124	124		71.2			20	425(44)
127	121			69.8			19	(42)
122	116			67.6			18	(41)
117	111			65.7			15	(39)

▸ Note: Gray figures come from ASTM E 140 table (Calculated by SAE-ASM-ASTM together)

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
1	A 366 (1012) 1008	0.0030	C10	040 A 10 045 M 10 1449 10 CS	AF 34 C 10 XC 10
1		1.0028	Ust 34-2 (S250G1T)		A 34-2
1		1.0034	RSt 34-2 (S250G2T)	1449 34/20 HR, HS, CR, CS	A 34-2 NE
1		1.0035	St185 (Fe 310-0) St 33	Fe 310-0 1449 15 HR, HS	A 33
1	A 570 Gr. 33,36	1.0036	S235JRG1 (Fe 360 B) Ust 37-2	Fe 360 B 4360-40 B	
1		1.0037	S235JR (Fe 360 B) St 37-2	Fe 360 B 4360-40 B	E 24-2
1	1115	1.0038	GS-CK16	030A04 1A	
1	A 570 Gr. 40	1.0044	S275JR (Fe 430 B) St44-2	Fe 430 B FN 1449 43/25 HR, HS 4360-43 B	E 28-2
1		1.0045	S355JR	4360-50 B	E 36-2
1	A 570 Gr.50 A 572 Gr.50	1.0050	E295 (Fe 490-2) St 50-2	Fe 490-2 FN 4360-50 B	A 50-2
1	A 572 Gr. 65	1.0060	E335 (Fe 590-2) St 60-2	Fe 60-2 4360-55 E; 55 C	A 60-2
1		1.0060	St 60-2		
1		1.0070	E360 (Fe 690-2) St 70-2	Fe 690-2 FN	A 70-2
1		1.0112	P235S	1501-164-360B LT20	A37AP
1		1.0114	S235JU;St 37-3 U	4360-40C	E 24-3
1	A 284 Gr.D A 573 Gr.58 A 570 Gr 36;C A 611 Gr. C	1.0116	S235J2G3 (Fe 360 D 1) St 37-3	Fe 360 D1 FF 1449 37/23 CR 4360-40 D	E 24-3 E 24-4
1		1.0130	P265S	1501-164-400B LT 20	A 42 AP
1		1.0143	S275J0; St 44-3 U	4360-43C	E 28-3

SS	UNI	UNE	JIS	KS	GOST
	C 10 1 C 10	F.1511 F.151A	S 10C	SM 10C	10
	Fe 330,Fe 330 B FU		SS 330	SS 330	
	Fe 330 B FU				St2sp
1300	Fe 320	Fe 310-0			St0
1311 1312	FE37BFU	AE 235 B Fe 360 B			16D, 18Kp St3Kp
1311	Fe 360 B 1449 37/23 HR	AE 235 B Fe 360 B	STKM 12A;C	STKM 12A;C	
1325	Fe 330,Fe 330 B FU		SS 330	SS 330	
1412	Fe 430 B Fe 430 B FN	AE 275 B Fe 430 B FN	SM 400 A;B;C	SM 400 A;B;C	St4ps; sp
2172	Fe 510 B	AE 355 B			
1550 2172	Fe 490	a 490-2 Fe 490-2 FN	SS 490	SS 490	ST5ps; sp
1650	Fe 60-2 Fe 590	A 590-2 Fe 590-2 FN	SM 570	SM 570	St6ps; sp
	Fe 60-2				
1655	Fe 70-2 Fe 690	A 690-2 Fe 690-2 FN			
	Fe 360 C	AE 235 C			
	Fe 360 C	AE 235 C			
1312 1313	Fe 360 D1 FF Fe 360 C FN Fe 360 D FF Fe 37-2	AE 235 D Fe 360 D1 FF			St3kp; ps; sp 16D
		SPH 265			
1414-01	Fe 430 D	AE 275 D			

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
1	A 573 Gr. 70 A 611 Gr.D	1.0144	S275J2G3 (Fe 430 D 1) St 44-3	Fe 430 D1 FF 4360-43 C; 43 D	E 28-3 E 28-4
1		1.0149	S275JOH; RoSt 44-2	4360-43C	
1		1.0226	DX51D; St 02 Z	Z2	GC
1	M 1010	1.0301	C10	040 A 10 045 M 10 1449 10 CS	AF 34 C 10 XC 10
1	A 621 (1008)	1.0330	DC 01 St 2; St 12	1449 4 CR 1449 3 CS	 TE
1	A 619 (1008)	1.0333	Ust 3 (DC03G1) Ust 13	1449 2 CR;3 CR	E
1	A 621 (1008)	1.0334	UStW 23 (DD12G1)		SC
1	A 622 (1008)	1.0335	DD13; StW 24	1449 1 HR	3C
1	A 620 (1008)	1.0338	DC04 St4; St 14	1449 1 CR;2 CR	ES
1	A 516 Gr. 65; 55 A 515 Gr. 65;55 A 414 Gr. C A 442 Gr.55	1.0345	P235GH HI	1501 Gr. 141-360 1501 Gr. 161-360; 151-360 1501 Gr. 161-400; 154-360 1501 Gr. 164-360; 161-360	A 37 CP;AP
1	(M) 1020 M 1023	1.0402	C22	055 M 15, 070 M 20 2C/2D 1499 22 HS, CS	AF 42 C 20; XC 25;1 C 22
1	1020	1.0402	C22	050A20 2C/2D	CC20
1	1020;1023	1.0402	C22	055 M 15, 070 M 20 2C	AF 42 C 20; XC 25;1 C 22
1		1.0425	P265GH H II	1501 Gr. 161-400;151-400 1501 Gr. 164-360; 161-400 1501 Gr. 164-400;154-400	A 42 CP; AP
1	A27 65-35	1.0443	GS-45	A1	E 23-45 M
1		1.0539	S355NH;StE 335		TSE 355-4
1		1.0545	S355N; StE 355	4360-50E	E 355 R
1		1.0546	S355NL;TStE 355	4360-50EE	E 355 FP
1		1.0547	S355JOH	4360-50C	TSE 355-3
1		1.0549	S355 NLH;TStE 355		
1		1.0553	S355JO;St 52-3U	4360-50C	E 36-3

SS	UNI	UNE	JIS	KS	GOST
1411, 1412 1414	Fe 430 B, Fe 430 C (FN) Fe 430 D (FF)	AE 275 D Fe 430 D1 FF	SM 400 A;B;C	SM 400 A;B;C	St4kp> ps; sp
1412-04	Fe 430 C	Fe 430 C			
1151 10	FeP 02 G	FeP 02 G			
	C 10 1 C 10	F.1511 F.151.A	S 10C	SM 10C	10
1142	FeP 00 FeP 01	AP 11	SPHD	SPHD	15kp
	FeP 02	AP 02	SPCD	SPCD	
	FeP 12	AP 12	SPHE	SPHE	10kp
	FeP 13	AP 13	SPHE	SPHE	08kp
1147	FeP 04	AP 04	SPCE	SPCE	08jU; JUA
1331 1330	FeE235, Fe 360 1 KW;KG Fe 360 2 KW;KG	A 37 RC I RA II	SGV 410, SGV 450, SGV 48, SPV 450;SPV 480	SGV 410, SGV 450, SGV 480, SPPV 450;SPPV 480	
1450	C 20 C 21, C 25	1 C 22 F.112	S20C	SM 20C	20
1450	C20, C21	F.112	S22C	SM 22C	20
1450	C 20; C 21;C 25	1 C 22F.112	S 20 C;S 22 C	SM 20 C;SM 22C	
1431 1430 1432	Fe 410 1 KW; KG; KT Fe 410 2 KW; KG	A 42 RC I A 42 RC II	SPV 315; SPV 355 SG 295; SGV 410 SGV 450; SGV 480	SPPV 315; SPPV 355 SG 295; SGV 410 SGV 450; SGV 480	16K 20K
1305					
2134-04	Fe 510 B	Fe 355 KGN			
2334-01	FeE 355 KG	AE 355 KG			
2135-01	FeE 355 KT	AE 355 KT			
2172-04	Fe 510 C	Fe 510 C			
2135	Fe 510 D	FeE 355 KTM			
	Fe 510 C				

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
1	A 633 Gr.C A 588	1.0562	P355N StE 355	1501 Gr.225-490A LT 20	FeE 355 KG N E 355 R/FP; A 510 AP
1		1.0565	P355NH; WStE 355	1501-225-490B LT 20	A 510 AP
1		1.0566	P355NL1; TStE 355	1501-225-490A LT 50	A 510 FP
1	1	1.0570	S355J2G3 St 52-3	Fe 510 D1 FF 1449 50/35 HR>HS 4360-50 D	E 36-3 E 36-4
1	1213	1.0715	9 SMn 28 (1SMn30)	230 M 07	S 250
1	1213	1.0715	9 SMn 28	230 M 07	S 250
1	12 L 13	1.0718	9 SMnPb 28 (11SMnPb30)		S 250 Pb
1	1108 1109	1.0721	10 S 20	(210 M 15)	10S20 10F 2
1	11 L 08	1.0722	10 SPb 20		10PbF 2
1	11 L 08	1.0722	10 SPb 20		10PbF 2
1	1215	1.0736	9 SMn 36 11SMn37)		S 300
1	12 L 14	1.0737	9 SMnPb 36 (11SMnPb37)		
1		1.0972	S315MC; QStE 300 TM	1501-40F30	E 315 D
1		1.0976	S355MC; QStE 360 TM	1501-43F35	E 355 D
1		1.0982	S460MC; QStE 460 TM	1501-50F45	
1		1.0984	S500MC; QStE 500 TM		E 490 D
1		1.0986	S500MC; QStE 500 TM	1501 - 60F55	E 560 D
1	1010	1.1121	CK 10 (C10E)	040 A 10	XC 10
1		1.1121	St 37-1	4360 40 A	
1	1015	1.1141	CK 15 (C15E)	040 A 15 32C 080 M 15	XC 12 XC 15 XC 18
1	1020 1023	1.1151	C22E CK 22	055 M 15 (070 M 20)	2 C 22 XC 18 XC 25
1	D 3	1.2080	X 210 Cr 12	BD 3	Z 200 C 12

SS	UNI	UNE	JIS	KS	GOST
2106	FeE 355 KG;KW	AEE 355 KG;DD	SM 490 A;B;C; YA;YB	SM 490 A;B;C; YA;YB	15GF
2106	FeE 355-2				
2107-01	FeE 355-3				
2132, 2133 2134, 2174	17GS 17G1S	AE 355 D Fe 510, D1 FF	SM 490 A;B;C; YA;YB	SM 490 A;B;C; YA;YB	17GS 17G1S
1912	CF SMn 28	F.2111 - 11 SMn 28	SUM 22	SUM 22	
1912	CF 9 SMn 28	11 SMn 28	SUM 22	SUM 22	
1914	CF 9 SMnPb 28	F.2112-11 SMnPb 28	SUM 22 L SUM 23 L, SUM 24 L	SUM 22 L SUM 23 L, SUM 24 L	
	CF 10 S 20	F. 2121 - 10 S 20			
	CF 10 SPb 20	F.2122-10 SPb 20			
	CF 10 SPb 20	10 SPb 20			
	CF 9 Mn 36	F.2113 - 12 SMn 35	SUM25	SUM25	
2642	FeE 355TM				
2662	FeE 490 TM				
	FeE 560 TM				
1265	C 10, 2 C 10 2 C 15	F-1510-C 10 K	S 9 CK S 10 C	S 9 CK S 10 C	08;10
1300					
1370	C 15 C 16	F.1110-C 15 F.1511-C 16 K	S 15 S 15 CK	SM 15C SM 15CK	15
1450	C 20 C 25	F.1120-C 25 K	S 20 C, S 20 CK S 22 C	SM 20 C, SM20 CK SM22 C	20
2642					

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
1	A36		St 44-2	4360 43 A	NFA 35-501 E 28
1			StE 320-3Z	1 501 160	
1	A572-60	1.8900	StE 380	4360 55 E	
2	(M) 1025	1.0406	C 25	070 M 26	1 C 25
2		1.0416	GS-38		20-400 M
2	A 537 Cl.1 A 414 Gr. G A 612	1.0473	P355GH	19 Mn 6	A 52 CP
2	1035	1.0501	C 35	080 A 32, 080 A 35 080 M 36, 1449 40 CS	1 C 35 AF 55 C 35 XC 38
2	1045	1.0503	CF 45 (C45G)	060 A 47 080 M 46	XC 42 H 1 TS
2	1040	1.0511	C 40	080 M 40	1 C 40 AF 60 C 40
2		1.0540	C 50		
2	A27 70-36	1.0551	GS-52	A2	280-480 M
2	A148 80-40	1.0553	GS-60	A3	320-560 M
2	A738	1.0577	S355J2G4 (Fe 510 D 2)	Fe 510 D2 FF 1501 Gr.224-460 1501 Gr. 224-490	A 52 FP
2	1140	1.0726	35 S 20	212 M 36 8M	35MF 6
2	1146	1.0727	45 S 20 (46S20)		45 MF 4
2	1035 1041	1.1157	40Mn4	150 M 36 15	35 M 5 40 M 5
2	1025	1.1158	C25E CK 25	(070 M 25)	2 C 25 XC 25
2	1536	1.1166	34Mn5		
2	1330	1.1170	28Mn6	(150 M 28), (150 M 18)	20 M 5, 28 Mn 6
2	1330	1.1170	28Mn6	150 M 5	20 M 5
2	1330	1.1170	28Mn6	14A	20 M 5
2		1.1178	C30E; CK 30	080M30	XC 32

SS	UNI	UNE	JIS	KS	GOST
1411					
1421					
2145	FeE390KG		S 25C	SM 25C	
	C 25 1 C 25				
1306					
2101 2102	Fe E 355-2	A 52 RC I RA II	SGV 410 SGV 450 SGV 480	SGV 410 SGV 450 SGV 480	
1572 1550	C 35 1 C 35	F.113	S35C	SM35C	35
1672	C 43 C 46		S 45 C	SM 45 C	45
	C 40	1 C 40	S 40 C	SM 40 C	
1674	C 50	1 C 50			
1505					
1606					
2107		A 52 RB II AE 355 D			
1957		F.210.G			
1973					
			S 09CK	SMn 433	
C 25	F.1120 - C 25 K	S 25 C S 28 C	S 25 C	SM 25 C	
	TO.B	SMn 433 H			
1421	C 28 Mn	28 Mn 6	SCMn 1	SCMn 1	30G
2145					
	C 28 Mn		SCMn 1	SCMn 1	
	C 30	2 C 30			

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
2	1035	1.1180	C35R Cm 35	080 A 35	3 C 35 XC 32
2	1035 1038	1.1181	C35E CK 35	080 A 35 (080 M 36)	2 C 35, XC 32 XC 38 H 1
2	1035	1.1181	C35E CK 35	080 A 35 (080 M 36)	
2	1042	1.1191	GS- Ck 45	080 A 46	XC 45
2	1049 1050	1.1206	C50E CK 50	080 M 50	2 C 50 XC 48 H 1; XC 50 H 1
2	1050 1055	1.1213	Cf 53 (C53G)	070 M 55	XC 48 H TS
2	4520	1.5423	22Mo4	1503-245-420	
3		1.0050	St50-2		
3	A 516 Gr.70 A 515 Gr. 70 A 414 Gr.F; G	1.0481	P295GH 17 Mn 4	1501 Gr. 224	a 48 Cp;AP
3	1043	1.0503	C35	060 A 47 080 M 46 1449 50 HS, CS	1 C 45 AF 65 C 45
3	1074	1.0614	C 76 D; D 75-2		XC 75
3	1086	1.0616	C 86 D; D 85-2		XC 80
3	1095	1.0618	C 92 D;D 95-2		XC 90
3	1036 1330	1.1165	30Mn5	120 M 36 (150 M 28)	35 M 5
3	1335	1.1167	30Mn5	150 M 36	40 M 5
3	1040	1.1186	C40E CK 40	060 A 40, 080 A 40 080 M 40	2 C 40 XC 42 H 1
3	1045	1.1191	C45E CK 45	080 M 46 060 A 47	2 C 45 XC 42 H 1 XC 45 XC 48 H 1

SS	UNI	UNE	JIS	KS	GOST
1572		F.1130-C 35 K-1			
1550 1572	C35	F.1130-C 35 K	S 35 C	SM 35 C	35
1572	C36		S 35 C	SM 35 C	
1660	C45	F-1140			
1674	C 50				50
1674	C 53		S 50 C	SM 50 C	50
	16 Mo 5 KG; KW	F.2602- 16 Mo 5	SB 450 M	SB 450 M	SB 480 M
	FE50				
	Fe 510 KG;KT;KW Fe 510-2 KG;KT;KW FeE 295	A 47 RC I RA II	SG 365, SGV 410 SGV 450 SGV 480	SG 365, SGV 410 SGV 450 SGV 480	14G2
1672 1650	C 45 1 C 45	F.114	S 45 C	SM 45 C	45
C 85					
		F.8211-30 Mn 5 f.8311-AM 30 Mn 5	SMn 433 H SCMn 2	SMn 433 H SCMn 2	27ChGSNMDTL 30GSL
2120		F. 1203-36 Mn 6 F. 8212-36 Mn 5	SMn 438 (H) SCMn 3	SMn 438 (H) SCMn 3	35G2 35GL
	C 40		S 40 C	SM 40 C	
1672	C 45 C 46	F.1140-C 45 K F.1142-C48 K	S 45 C S 48 C	S 45 C S 48 C	45

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
3	1049	1.1201	C45R Cm 45	080 M 46		3 C 45 XC 42 H 1 XC 48 H 1
3		1.7242	18 CrMo 4			
3	A 387 Gr. 12 Cl	1.7337	16 CrMo 4 4			
3	A 387 Gr. 12 Cl	1.7337	16 CrMo 4 4			
3		1.7362	12 CrMo 19 5	3606-625		Z 10 CD 5.05
3	A572-60		17 MnV 6	436055 E		NFA 35-501 E 36
4	1055	1.0535	C55	070 M 55		1 C 55 AF 70 C 55
4	1060	1.0601	C60	060 A 62 1449 HS,CS	43D	1 C 60 AF 70 C 55
4	1070	1.0603	C67	080 A 67 1449 70HS		XC65
4	1074 1075	1.0605	C75	1449 80 HS		
4	1055	1.1203	C55E CK 55	060 A 57 070 M 55		2 C 5 XC 55 H 1
4	1055	1.1209	C55R Cm 55	070 M 55		3 C 55 XC 55 H 1
4	1060 1064	1.1221	C60E CK 60	060 A 62	43D	2 C 60 XC 60 H 1
4	1070	1.1231	CK 67 (C67E)	060 A 67		XC 68
4	1074 1075 1078	1.1248	CK 75 (C75E)	060 A 78		XC 75
4	1086	1.1269	CK 85 (C85E)			XC 90
4	1095	1.1274	Ck 101 (C101E)			XC 100
4	W 112	1.1663	C 125 W			Y2 120
4						
5		1.0070	St70-2			
5		1.7238	49 CrMo 4			
5		1.7701	51 CrMoV 4			

SS	UNI	UNE	JIS	KS	GOST
1660	C 45	F.1145-C 45K-1 F.1147C 48 K-1	S 50 C	SM 50 C	
18 CrMo 4					
	A 18 CrMo 4 5 KW				
	A 18 CrMo 4 5 KW				
	16 CrMo 20 5				
2142					
1655	C 55 1 C 55		S 55 C	SM 55 C	55
	C 60 1 C 60		S 58 C	SM 58 C	60(G)
	C 67				
	C 75				75
1655	C 55	F.1150-C 55 K	S 55 C	SM 55 C	55
	C 55	F.1155-C 55 K-1			
1655 1678	C 60		S 58 C	SM 58 C	60 60G, 60GA
1770	C 70				65GA 68GA , 70
774	C 75				75(A)
	C 90				85(A)
	C 100	F-5117	SUP 4	SPS 4	
1870					
2223					
	FE70-2				
	51 CrMoV 4				

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
6	A573-81 65	1.0116	St 37-3	4360 40 B		E 24-U
6	A515 65	1.0345	H1	1 501 161		A 37 CP
6	5120	1.0841	St 52-3	150 M 19		20 MC 5
6	9255	1.0904	55 Si 7	250A53	45	55S7
6	9254	1.0904	55 Si 7	250 A 53		55 S 7
6	9262	1.0961	60SiCr7	1 501 161		60SC6
6	L3	1.2067	100Cr6	BL3		Y100C6
6	L1	1.2108	90 CrSi 5			
6	L2	1.2210	115CrV3			100C3
6		1.2241	51CrV4			
6		1.2311	40 CrMnMo 7			
6	4135	1.2330	35 CrMo 4	708 A 37		34 CD 4
6		1.2419	105WCr6	BO1		105WC13
6	0 1	1.2510	100 MnCrW 4	BS1		8 MO 8
6	S1	1.2542	45 WCrV7			
6	S1	1.255	60WCrV7			55WC20
6	L6	1.2713	55NiCrMoV6			55NCDV7
6	L6	1.2721	50NiCr13			55 NCV 6
6	O2	1.2842	90MnCrV8	BO2		90 MV8
6	E 50100	1.3501	100 Cr 2			55WC20
6	52100	1.3505	100Cr6	2 S 135 535 A 99	31	100 C 6
6		1.5024	46Si7			45 S 7; Y 46 7;46 SI 7
6	9255	1.5025	51Si7			51 S 7 51 Si 7
6	9255	1.5026	55Si7	251 a 58		55 S 7
6	9260	1.5027	60Si7	251 A 60 251 H 60		60 S 7
6	9260 H	1.5028	65Si7			60 S 7
6		1.5120	38 MnSi 4			

SS	UNI	UNE	JIS	KS	GOST
1312	Fe37-3				
1330					
2172	Fe 52	F-431			
2085	55Si8	56Si7			
2090		F-431			
60SiCr8	60SiCr8				
	100Cr6				
2092	105WCR 5				
	107CrV3KU				
	35 cRmO 8 KU				
2234	35CrMo4	34CrMo4	SCM435TK	SCM435TK	
2140	10WCr6	105WCr5			
2140	10WCr6	105WCr5	SKS 31	STS 31	
2710	45 WCrV8 KU	45WCrSi8			
2710	58WCr9KU				
		F.520.S	SKT 4	STF 4	
2550		f-528			
2258	100Cr6	F.1310 - 100 Cr 6	SUJ2	STB 2	SchCh 15
		F. 1451 - 46 SI 7			
2090	48 Si 7	F.1450-50 Si 7			
	50 Si 7				
2085 2090	55 Si 7	F.1440 - 56 Si 7			55S2
	60 Si 7	F. 1441 - 60 Si 7			60S2
			50 P 7 SUP 6	SPS 6	

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
6	A 204 Gr.A 4017	1.5415	16Mo3 15 Mo 3	1503-243 B		15 D 3
6	4419	1.5419	20Mo4	1503-243-430		
6	A 350-LF 5	1.5622	14Ni6			16N6
6	3415	1.5732	1 NilCr10			14 NC 11
6	3310; 3314	1.5752	14NilCr14	655M13	36A	12NC15
6		1.6587	17CrNiMo6	820A16		18NCD6
6		1.6657	14NiCrMo134			
6	5515	1.7015	15 Cr 3	523 M 15		12 C 3
6	5132	1.7033	34Cr4	530A32	18B	32C4
6	5140	1.7035	41C r4	530M40	18	42C4
6	5140	1.7045	42Cr41	530 A 40		42 C 4 TS
6	5115	1.7131	16MnCr5	527 M 17		16 MC 5
6		1.7139	16MnCr5			
6	5515	1.7176	55Cr3	527 A 60	48	55 C 3
6	4135; 4137	1.7220	34CrMo4	708 Aa 37		35 CD 4
6	4142	1.7223	41CrMo4			
6	4140	1.7225	42CrMo4	708 M 0		42 CD 4
6		1.7228	55NiCrMoV6G	823M30	33	
6		1.7262	15CrMo5			12 CD 4
6		1.7321	20 mOcR 4			
6	ASTM A182 F-12	1.7335	13CrMo4 4	1501-620Gr27		
6	A 182-F11;12	1.7335	13 CrMo 4 4	1 501 620 Gr. 27		15 CD 4.5
6	ASTM A 182 F.22	1.7380	10CrMo9 10	1501-622gR31; 45		
6	A182 F-22	1.7380	10 CrMo 9 10	1501-622		12 CD 9.10
6		1.7715	14MoV6 3	1503-660-440		
6	A355A	1.8509	41CrAlMo 7	905 M 39	41B	40 CAD 6.12
7	A570.36	1.0038	S235JRG2 (Fe 360 B) RSt 37-2	Fe 360 B FU 1449 27/23 CR 4360-40 B		E 24-2NE
7	3135	1.5710	36NiCr6	640A35		35NC6

SS	UNI	UNE	JIS	KS	GOST
2912	16Mo3(KG;KW)	F. 2601 - 16 Mo 3			
-2512	G 20 Mo 5 G 22 Mo5		SCPH 11	SCPH 11	
14 Ni 6 KG;KT	F.2641 - 15 Ni 6				
16NiCr11	15NiCr11	SNC415(H)			
		SNC815(H)			
	14NiCrMo13				
	14NiCrMo131				
			SCr415(H)	SCr415(H)	
	34Cr4(KB)	35Cr4	SCr430(H)	SCr430(H)	
	41Cr4	42Cr4	SCr440(H)	SCr440(H)	
2245	41Cr4	42Cr4	SCr440	SCr440	
2511	16MnCr5	16MnCr5			
2127					
2253			SUP9(A)	SPS 9(A)	
2234					
	41CrMo4	42CrMo4	SNB 22-1	SNB 22-1	
2244					
2512	653M31				
2216		12CrMo4			
2625					
	14CrMo4 5	14CrMo45			
2216		12CrMo4	SCM415(H)	SCM415(H)	
2218	12CrMo9,10	TU.H			
		13MoCrV6			
2940	41CrAlMo7	41CrAlMo7			
1312	Fe 360 B FN	AE 235 B FN;FU Fe 360 B FN; FU			St3ps; sp

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
7		1.5755	31 NiCr 14	653 M 31		18 NC 13
7	8620	1.6523	2 NiCrMo2	805M20	362	20 NCD 2
7	8740	1.6546	40 NiCrMo 22	311-Tyre 7		
7	4130	1.7218	25CrMo4	CDS 110		25 CD 4
7		1.7733	24 CrMoV 5 5			20 CDV 6
7		1.7755	GS-45 CrMOV 10 4			
7		1.8070	21 CrMoV 5 11			
8	4142	1.2332	47 CrMo 4	708 M 40	19A	42 CD 4
8	A128 (A)	1.3401	G-X120 Mn 12			Z 120 M 12
8	3435	1.5736	36 NiCr 10			30 NC 11
8	9840	1.6511	36CrNiMo4	816M40	110	40NCD3
8	4340	1.6582	35CrNiM 6	817 M 40	24	35 NCD 6
8		1.7361	32 CeMo12	722 M 24	40B	30 CD 12
8	6150	1.8159	50 CrV 4	735 A 50	47	50CrV4
8		1.8161	58 CrV 4			
8		1.8515	32 CrMo 12	722 M 24	40B	30 CD 12
8		1.8523	39CrMoV13 9	897M39	40C	
9		1.4882	X 50 CrMnNiNbN 21 9			Z 50 CMNNb 21.09
9	3135	1.5710	36NiCr6	640A35	111A	35NC6
9		1.5864	35 niCr 18			
9			31 NiCrMo 13 4	830 m 31		
10	A573-81	1.0144	ST 44-3	4360 43 C		E 28-3
10	A 619	1.0347	DCO3 RSt;RRSt 13	1449 3 CR 1449 2 CR		E
10	M 1015 M 1016 M 1017	1.0401	C15	080 M 15 080 M 15 1449 17 CS		AF 37 C12 XC 18
10		1.0570	ST 52-3	4360 50 B		E 36-3
10	12L13	1.0718	9SMnPb28			S250Pb
10	(12L13)	1.0718	9 SMnPb 28			S 250 Pb

SS	UNI	UNE	JIS	KS	GOST
2506	20NiCrMo2	20NiCrMo2	SNCM220(H)	SNCM220(H)	
	40NiCrMo2(KB)	40NiCrMo2	SNCM240	SNCM240	
2225	25CrMo4(KB)	55Cr3	SCM420/430	SCM420/430	
	21 CrMoV 5 11				
	35 NiCr 9				
2244	42CrMo4	42CrMo4	SCM (440)	SCM (440)	
2183	GX120Mn12	F. 8251-AM-X120Mn12	SCMnH 1, SCMn H 11	SCMnH 1, SCMn H 11	110G13L
	36nlcRmO4(KB)	35NiCrMo4	SUP 10	SPS 10	
2541	35NiCrMo6(KB)		SNCM 447	SNCM 447	
2240	30CrMo12	F.124.A			
2230	50CrV4	51CrV4			
2240	32CrMo12	F.124.A			
	36CrMoV12				
			SNC236	SNC236	
2534		f-1270			
1412			SM 400A;B;C	SM 400A;B;C	
	Fep 02	AP 02			08JU
1350	C15 C16 1 C 15	F.111	S 15 C	SM 15 C	
2132	Fe52BFN/Fe52CFN		SM490A;B;C;YA;YB	SM490A;B;C;YA;YB	
1914	CF9SMnPb28	11SMnPb28			
1914	CF 9 SMnPb 28	11 SMnPb 28	SUM 22L	SUM 22L	

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
10		1.0723	15 S 22 15 S 20	210 A 15 210 M 15	
10		1.2083			
10	H 11	1.2343	x 38 CrMoV 5 1	BH 11	Z 38 CDV 5
10	H 13	1.2344	X 40 CrMoV 5 1	BH 13	Z 40 CDV 5
10	A 2	1.2363	X100 CrMoV 5 1	BA 2	Z 100 CDV 5
10	D 2	1.2379	X 155 CrVMo 12 1	BD2	Z 160 CDV 12
10	HNV3	1.2379	X210Cr12G	BD2	Z160CDV12
10	D 4 (D 6)	1.2436	X 210 CrW 12	BD6	Z 200 CD 12
10	H 21	1.2581	X 30 WCrV 9 3	BH 21	Z 30 WCV 9
10		1.2601	X 165 CrMoV 12		
10	H 12	1.2606	X 37 CrMoW 5 1	BH 12	Z 35 CWDV 5
10	D3	1.3343	S 6-5-2	BM2	Z200C12
10	N08028	1.4563			Z1NCDU31-27-03
10	ASTM A353	1.5662	X8Ni9	1501-509;510	
10	ASM A353	1.5662	X8Ni9	502-650	9 Ni
10	2517	1.5680	12Ni19	12Ni19	Z18N5
10	2515	1.5680	12 Ni 19		Z 18 N 5
11		1.3202	S 12-1-4-5	BT 15	
11		1.3207	S 10-4-3-10	BT 42	Z130WKCDV
11	T15	1.3243	S 6-5-2-5		KCV 06-05-05-04-02
11		1.3246	S 7-4-2-5		Z110 WKCDV 07-05-04
11		1.3247	S 2-10-1-8	BM 42	Z110 DKCWV 09-08-04
11	M 42	1.3249	S 2-9-2-8	BM 34	
11	T 4	1.3255	S 18-1-2-5	BT 4	Z 80 WKCV 18-05-04-0
11	M 2	1.3343	S6-5-2	BM2	Z 85 WDCV
11	M 7	1.3348	S2-9-2		Z 100 DCWV 09-04-02-

SS	UNI	UNE	JIS	KS	GOST
1922		F.210.F	SUM 32	SUM 32	
2314					
	X 37 CrMoV 5 1 KU				
2242	X40CrMoV511KU	F-5318	SKD61	STD61	
2260	X100CrMoV51KU	F-5227	SKD12	STD12	
2310	X165CrMoW12KU	X160CrMoW12KU			
2736					
2312	X215CrW 12 1 KU	F-5213			
	X30WCrV 9 3 KU	F-526	SKD5	STD5	
2310					
	X 35 CrMoW 05 KU	F.537			
2715	X210Cr13KU	X210Cr12	SUH3	STR3	
2584					
	14 Ni 6 KG;KT	XBNiO9			
	X10Ni9	F-2645	SL9N60(53)	SL9N590(520)	
	HS 12-1-5-5	12-1-5-5			
2723	HS 6-5-2-5	6-5-2-5	SKH55	SKH55	
7-4-2-5	HS 7-4-2-5	M 35			
2-10-1-8	HS 2-9-1-8 2-9-2-8	M 41			
2722	HS 652	F-5604	SKH 51	SKH 51	
2782	HS 292	F-5607			

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
11	T 1	1.3355	S 18-0-1	BT 1		Z 80 WCV 18-4-01
11	630	1.4548				Z7CNU17-04
11	HNV 3	1.4718	X45CrSi 9 3	401S45	52	Z45CS9
11	422	1.4935	x20 CrMoWV 12 1			
12	403	1.4000	X6Cr13	403 S 17		Z 6 C 13
12		1.4001	X6Cr14			
12	(410S)	1.4001	X7 Cr 13	(403 S 7)		Z 8 C 13
12	405	1.4002	X6CrA12	405S17		Z8CA12
12	405	1.4002	X6 CrAl 13	405 S 17		Z6CA13
12	416	1.4005	X12CrS 13	416 S 21		Z11 CF 13
12	410; CA-15	1.4006	(G-)X10 Cr 13	410S21	56A	Z10 C 13
12	430	1.4016	X8Cr17	Z8C17		430S15
12	430	1.4016	X6 Cr 17	430 S 15	60	Z 8 C 17
12		1.4027	G-X20Cr14	420 C 29		Z20 C 13M
12		1.4027	G-X 20 Cr 14	420 C 29		Z 20 C 13M
12	420	1.4028	X30 Cr 13	420 S 45		Z 30 C 13
12		1.4086	G-X120Cr29	452C11		
12	430 F	1.4104	X12CrMoS17	420 S 37		Z 10 CF 17
12	440B	1.4112	X90 CrMoV 18			
12	434	1.4113	X6CrMo 17	434 S 17		Z 8 CD 17.01
12		1.4340	G-X40CrNi27 4			
12	S31500	1.4417	X2CrNiM0Si19 5			
12	S31500	1.4417	X2 CrNoMoSi 18 5 3			
12		1.4418	X4 CrNiMo16 5			Z6CND16-04-01
12	XM 8 430 Ti 439	1.4510				Z 4 CT 17
12	430tl	1.4510	X6 CrTi 17			Z 4 CT 17
12		1.4511	X 6 CrNb 17(X 6 CrNb 17			Z 4 CNb 17
12	409	1.4512	X 6 CrTi 12 (X2CrTi12)	LW 19 409 S 19		Z 3 CT 12
12		1.4720	X20CrMo13			

SS	UNI	UNE	JIS	KS	GOST
	X45CrSi8	F322	SUH1	STR1	
2301	X6Cr13	F.3110	SUS403	STS 403	
		F8401			
2301					
	X6CrAl13				
2302	X6CrAl13				
2380	X12 CrSC13	F-3411	SUS 416	SUS 416	
2302	X12Cr13	F.3401	SUS 410	SUS 410	
2320	X8Cr17	F.3113			
2320	X8Cr17	F.3113	SUS 430	SUS 430	
2304					
2383	X10CrS17	F.3117	SUS430F	STS 430F	
2325	X8CrMo17		SUS434	STS 434	
2376					
2376					
2387					
	X 6 CrTi 17	F.3115-X 5 CrTi 17	SUS 430 LK	STS 430 LX	08 Ch17T
	X 6 CrNb 17	F.3122-X 5 CrNb 17	SUS 430 LK	STS 430 LX	
	X 6 CrTi 17		SUH 409	STR 409	

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
12	405	1.4724	X10CrA113	403S17		Z10C13
12	430	1.4742	X10CrA118	439S15	60	Z10CAS18
12	HNV6	1.4747	X80CrNiSi20	443S65	59	Z80CSN20.02
12	446	1.4749	x18 cRn 28			
12	446	1.4762	X10CrA124			Z10CAS24
12	EV 8	1.4871	X 53 CrMnNiN 21 9	349 S 54		Z 52 CMN 21.09
12	302		x12 CrNi 18 9	302 S 31		Z 10 CN 18-09
12	429		X10 CrNi 15			
13	420	1.4021	X20Cr13	420S37		Z 20 C 13
13	420	1.4031	X40 Cr 13			Z 40 C 14
13		1.4034	X46Cr13	420 S 45		Z40 C 14
13	431	1.4057	X20CrNi172	431 S 29	57	Z 15 CN 16.02
13		1.4125	X 105 CrMo 17			Z 100 CD 17
13	CA6-NM	1.4313	G-X4 CrNi 13 4	425 C 11		Z 4 CND 13-04 M
13	630	1.4542	X 5 CrNiCuNb 17 4 (X5CrNiCuNb 16-4)			
13		1.4544		S. 524 S. 526		
13	348	1.4546	X5CrNiNb 18-10	347 S 31 2 S. 130 2 S. 143/144/145 S.525/527		
13		1.4922	x20cRmV12-1			
13		1.4923	X22 CrMoV12 1			
14	304	1.4301	X 5 CrNi 18 9	304 S 15		Z 5 CN 18.09
14	303	1.4305	X10 CrNiS 18 9	303 S 21	58M	Z 8 CNF 18-09
14	304L	1.4306	X2CrNi18 9	304S12		Z2CrNi18 10
14	304L	1.4306	X2 CrNi 18 10	304 S 11		Z 3 CN 19-11
14	CF-8	1.4308	X6 CrNi 18 9	304 C 15	58E	Z 6 CN 18-10 M
14	301	1.4310	X12CrN i17 7	301 S 21		Z 12 CN 17.07

SS	UNI	UNE	JIS	KS	GOST
	X10CrA112	F.311			
	X8Cr17	F.3113	SUS430	STS430	
	X80CrSiNi20	F.320B	SUH4	STR4	
2322	X16Cr26		SUH446	STR446	
	X53CrMnNiN21 9		SUH35,SUH36	STR35,STR36	
2330					
2303	14210				
-2304					
	X40Cr14	F.3405	SUS420J2	STS420J2	
2321	X16CrNi16	F.3427	SUS431	STS431	
	X 105 CrMo 17				
2385	(G)X6CrNi304		SCS5	SSC5	
	X 6 CrNiTi 18 11				08Ch 18N12T
	X 6 CrNiNb 18 11				
2317	x20cRmOnl 12 01				
2332;2333					
2346	X10CrNiS18.09	F.3508	SUS303	STS303	
2352	x2cRnl18 11	F.3503	SCS19	SSC19	
2352	X2CrNi18 11				
2333			SUS304L	STS304L	
2331	X2CrNi18 07	F.3517			

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
14	304 LN	1.4311	X2 CrNiN 18 10	304 S 62		Z 2 CN18.10
14		1.4312	G-X10CrNi18 8	302C25		Z10CN18.9M
14	305	1.4312	X8 CrNi 18 12	305 S 19		
14		1.4332	X2 CrNi 18-8			
14	304	1.4350	X5CrNi18 9	304S15	58E	Z6CN18.09
14	S32304	1.4362	X2 CrNiN 23 4			Z 2 CN 23-04 AZ
14	202	1.4371	X3 CrMnNiN 188 8 7	284 S 16		Z 8 CMN 18- 08-05
14	316	1.4401	X 5 CrNiMo 17 12 2 (X4 CrNiMo 17 -12-2)	316 S 13 316 S 17 316 S 19 316 S 31 316 S 33		Z 3 CND 17 -11-01 Z 6 CND 17-11 Z 6 CND 17-11-02 Z 7 CND 17-11-02 Z 7 CND 17-12-02
14	316L	1.4404	X2 CrNiMo 17 13 2 (X2 CrNiMo 17-12-2) GX 2 CrNiMoN 18-10	316 S 11, 316 S 13 316 S 14, 316 S 31; 316 S 42, S.537;316 C 12, T.75, S. 161		Z 2 CND 17-12 Z 2 CND 18-13 Z 3 CND 17-11-02 Z 3 CND 17-12-02 FF Z 3 CND 18-12-03 Z 3 CND 19.10 M
14	316LN	1.4406	X2 CrNiMoN 17 12 2 (X2CrNiMoN 18-10)	316 S 61 316 S 63		Z2 CND 17-12 AZ
14	CF-8M	1.4408	GX 5 CrNiMoN 7 12 2 G-X 6 CrNiMo 18 10	316 C 16 (LT 196) ANC 4 B		
14		1.4410	G-X10CrNiMo18 9			Z5CNaD20.12M
14	316 Ln	1.4429	X2 CrNiMo 17 -13-3	316 S 62		Z 2 CND 17-13 Az
14	316L	1.4435	X2 CrNiMo18 14 3	316 S 11;316 S 13 316 S 14;316 S 31 LW 22 LWCF 22		Z 3 CND 17-12-03 Z 3 CND 18-14-03
14	316	1.4436	X 5 CrNiMo 17 13 3 (X4CRNIMO 17-13-3	316 S 19; 316 S 31 316 S 33 LW 23 LWCF 23		Z 6 CND 18-12-03 Z 7 CND 18-12-03

SS	UNI	UNE	JIS	KS	GOST
2371	X2CrNiN18 10		SUS304LN	STS304LN	
2332	X5CrNi18 10	F.3551	SUS304	STS304	
2347	X 5 CrNiMo 17 12	F.3534-X 5 CrNiMo 17 12 2	SUS 316	STS 316	
2348	X 2 CrNiMo 17 12 G-X 2 CrNiMo 19 11	F.3533 - X 2 CrNiMo 17 13 2 F.3537 - X 2 CrNiMo 17 13 3	SUS 316 L	STS 316 L	
	X 2 CrNiMoN 17 12	F.3542-X 2 CrNiMoN 17 12 2	SUS316LN	STS316LN	
2343		F.8414-AM-X 7 CrNiMo 20 10	SCS 14	SSC 14	07 Ch 18N10G2S2MSL
2328					
2375	X 2 CrNiMoN 17 13	F.3543-X 2 CrNiMoN 17 13 3	SUS 316 LN	STS 316 LN	
2375	X 2 CrNiMoN 17 13	F.3533-X 2 CrNiMo 17 13 2	SUS 316 L	STS 316 L	O3 Ch 17N14M3
2343	X 5 CrNiMo 117 13 X 8 cRnImO 17 13	F.3543-X 5 CrNiMo 17 12 2 F.3538-X 5 CrNiMo 17 13	SUS 316	STS 316	

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
14	317L	1.4438	X2 CrNiMo 18 16 4 (X2CrNiMo 18-15-4)	317 S 12		Z 2 CND 19-15-04 z 3 cnd 19-15-04
14	(s31726)	1.4439	X2 CrNiMoN 17 13 5			Z 3 CND 18-14-06 AZ
14		1.4440	X 2 CrNiMo 18 13			
14	317	1.4449	X5 CrNiMo 17 13 3	317 S 16		
14	329	1.4449 1.4460	X 4 CrNiMo 27 5 2 (X3CrNiMo27-5-2)			(Z 3 CND 25-07 Az) Z 5 CND 27-05 Az
14	329	1.4460	X8CrNiMo27 5			
14		1.4462	X2CrNiMoN22 5 3	318 S 13		Z 3 CND 22-05 Az (Z 2 CND 24 -08 Az) (Z 3 CND 25-06-03 Az)
14		1.4500	G-X7NiCrMoCuNb25 20			23NCDU25.20M
14	17-7PH	1.4504		316S111		
14	443 444	1.4521	X2CrMoTi18-2	317 S 16		
14	UNS N 08904	1.4539	X1NiCrMoCuN25-20-5			Z 2 NCDU 25-20
14	CN-7M	1.4539	(G-)X1 NiCrMoCu 25 20 5			Z1 NCDU 25-02 M
14	321	1.4541	Z 6 CrNiTi 18-10	321 S 31 321 S 51 (1010;1105) LW 24 LWCF 24		Z 6 CNT 18-10
14	630	1.4542	X5 CrNiCuNb 17 4 (X5 CrNiChNb 16-4)			Z 7 CNU 15-05 Z 7 CNU 17-04
14	17-4PH	1.4542				Z7CNU17-04
14	S31254	1.4547	X1 CrNiMoN 20 18 7			
14	17-4PH	1.4548				Z7CNU17-04
14	347	1.4550	X6 CrNiNb 18 10	347 S 17	58F	Z 6 CNNb 18.10
14		1.4552	G-X7CrNiNb18 9			Z4CNNb19.10M
14	17-7PH	1.4568		316S111		
14	316tTi	1.4571	X6 CrNiMoTi 17 12 2	320 S 31		Z 6 CNDT 17-12002
14		1.4581	G-X 5 CrNiMoNb	318 C 17		Z 4 CNDNb 18.12 M
14	318	1.4583	X 10CrNiMoNb 18 12	303 S 21		Z15CNS20.12

SS	UNI	UNE	JIS	KS	GOST
2367	X2CrNiMo18 16	f.3539-x 2 cRnlmO 18 16 4	SUS317L	STS317L	
	X 5 CrNiMo 18 15		SUS 317	STS 317	
2324		F.3309-X 8 CrNiMo 17 12 2			
		F.3552-X 8 CrNiMo 18 16 4	SUS 329 J 1	STS 329 J 1	
2377			SUS 329 J3L	STS 329 J3L	
	Z8CNA17-07	X2CrNiMo1712			
2326		F.3123-X 2 CrMoTiNb 18 2	SUS 444	STS 444	
2562					
2564					
2337	X 6 CrNiTi 18 11	F.3523 - X 6 CrNiTi 18 10	SUS 321	STS 321	06Ch18N10T 08Ch18N10T 09Ch18N10T 12Ch18N10T
			SCS 24	SSC 24	
			SUS 630	STS 630	
2378					
2338	X6CrNiNb18 11	F.3552	SUS347	STS347	
	Z8CNA17-07	X2CrNiMo1712			
2350					
	x15cRnlsl2 12				

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS	EN	AFNOR
14		1.4585	G-X7CrNiMoCuNb18 18			
14		1.4821	X20CrNiSi25 4			Z20CNS25.04
14		1.4823	G-X40CrNiSi27 4			
14	309	1.4828	X15CrNiSi20 12	309 S 24	58C	Z15CNS20.12
14	309S	1.4833	X6 CrNi 22 13	309 S 13		Z 15 CN 24-13
14	310 S	1.4845	X12 CrNi 25 21	310S24		Z 12 CN 25-20
14	321	1.4878	X6 CrNiTi 18 9	32 1 S 20	58B	Z 6 CNT 18-12 (B)
14	Ss30415	1.4891	X5 CrNiNb 18 10			Z20CNS25.04
14	S30815	1.4893	X8 CrNiNb 11			
14	304H	1.4948	X6 CrNi 18 11	304 S 51		Z 5 CN 18-09
14	660	1.498	X5 NiCrTi 25 15			Zz 8 nctv 25-15 b ff
14			X5 NiCrN 35 25			
14	S31753		X2 CrNiMoN 18 13 4			
14			X2 CrNiMoN 25 22 7			
15	CLASS20	0.6010	GG10			Ft10D
15	A48-20B	0.6010	GG-10			Ft 10 D
15	NO 25 B	0.6015	GG 15	Grade 150		Ft 15 D
15	CLASS25	0.6015	GG 15	Grade 150		Ft 15D
15	A48 25 B	0.6015	GG 15	Grade 150		Ft 15 D
15	A48-30B	0.6020	GG-20	Grade 220		Ft 20 D
15	NO 30 B	0.6020	GG 20	Grade 220		Ft 20 D
15	A436 Type 2	0.6660	GGL-NiCr202	L-NiCuCr202		L-NC 202
15	60-40-18	0.7040	GGG 40	SNG 420/12		FCS 400-12
15	No 20 B		GG 10			Ft 10 D
16	CLASS30	0.6020	GG 20	Grade 220		Ft 20D
16	CLASS45	0.6030	GG 30	Grade 300		Ft 30D
16	A48-45 B	0.6030		Grade 350		Ft 30D
16	A48-50	0.6035	GG-35	Grade 350		Ft 35 D
16	A48-60 B	0.6040	GG40	Grade 400		Ft 40 D
16	100/70/03	0.7070	GGG-70	SNG700/2		FGS 700-2

SS	UNI	UNE	JIS	KS	GOST
	X6CrNiMoTi17 12				
		F.8414	SCS17	SSC17	
2361	X6CrNi25 20	F.331	SUH310	STR310	
2337	X6CrNiTi18 11	F.3553	SUS321	STS321	
2372					
2368					
2333					
2570					
110	G 10				
0110-00					
0115-00	G 15	FG 15	FC150	GC150	
115	G 15	FG 15			
01 15-00	G 14	FG 15			
0120-00					
120	G 20		FC200	GC200	
0523-00					
0717-02	GS 370-17	FGE 38-17	FCD400	GCD400-18,15	
110			FC100	GC100	
120	G 20	FG 20			
130	G 30	FG 30	FC300	GC300	
01 30-00					
135	G 35	FG 35	FC350	GC350	
140					
07 37-01	GGG 70	GGG 70	FCD700	GCD700-2	

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
16		1.4829	X 12 CrNi 22 12		
17		0.7033	GGG35.3		
17		0.7033	GGG-35.3	350/22 L 40	FGS 370/17
17	60-40-18	0.7040	GGG-40	SNG 420/12	FGS 400-12
17	60/40/18	0.7043	GGG-40.3	370/7	FGS 370/17
17	80-55-06	0.7050	GGG50	SNG500/7	FGS 500/7
17	65-45-12	0.7050	GGG-50	SNG 500/7	FGS 500-7
17		0.7652	GGG-NiMn 13 7	S-NiMn 137	S-Mn 137
17	A43D2	0.7660	GGG-NiCr 20 2	Grade S6	S-NC 202
17			GGG 40.3	SNG 370/17	FGS 370-17
18	A48-40 B	0.6025	GG25	Grade260	Ft 25 D
18		0.7060	GGG60	SNG600/3	FGS600-3
18	80/55/06	0.7060	GGG-60	600/3	FGS 600/3
18	A48 40 B				
19		0.8055	GTW55		
19	32510	0.8135	GTS-35-10	B 340/12	MN35-10
19	A47-32510	0.8135	GTS-35-10	B 340/2	Mn 35-10
19	A220-40010	0.8145	GTS-45-06	P 440/7	Mn 450-6
19			GTS-35	B 340/12	
19				8 290/6	MN 32-8
19	32510		GTS-35	B340/12	MN 35-10
20		0.8035	GTM-35	W340/3	MB35-7
20		0.8040	GTW-40	W410/4	MB40-10
20		0.8045			
20		0.8065	GTMW-65		
20	A220-50005	0.8155	GTS-55-04	P 510/4	Mn 550-4
20	50005	0.8155	GTS-55-04	P 510/4	MP 50-5
20	70003	0.8165	GTS-65-02	P 570/3	Mn 650-3
20	90001	0.8170	GTS-70-02	P 690/2	Mn 700-2
20	A220-90001	0.8170	GTS-70-02		Mn 700-2

SS	UNI	UNE	JIS	KS	GOST
0717-15					
0717-15					
0717-02					
0717-15					
0727-02	GGG 50				
	0727-02		FCD 500	GCD 500-7	
0772-00					
0776-00					
0717-12					
125	G 25	FG 25	FC250	GC250	
07 32-03	GGG 60	GGG 60			
0727-03			FCD600	GCD600-3	
		GTW 55			
810		GTS 35			
0815-00					
	0852-00	GMN 45			FCMW370
0810-00					
814			AC4A	AC4A	
08 15			FCMW330	FCMW330	
852		GTM 35			
	GTB40	GTM 40			
	GMB45	GTM 45			
		GTM 65			
0854-00					
0854-00	GMN 55		FCMP490	PMC 490	
0856-00	GMN 65		FCMP590	PMC 590	

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
20		0.8170	GTS-70-02	IP 70-2	
20	1022 1518	1.1133	20Mn5	120 M 19	20 M 5
20	1035	1.1183	Cf 35 (C35G)	080 A 35	XC 38 H 1 TS
20	400 10		GTS-45	P440/7	
20	70003		GTS-65	P 570/3	MP 60-3
21	Al99	3.0205			
21	1000	3.0255	Al99.5	L31/34/36	A59050C
21		3.3315	AlMg1		
22		3.1325	AlCuMg 1		
22		3.1655	AlCuSiPb		
22		3.2315	AlMgSi1		
21	7050	3.4345	AlZnMgCuO,5	L 86	AZ 4 GU/9051
23		3.2381	G-AlSi 10 Mg		
23		3.2382	GD-AlSi10Mg		
23		3.2581	G-AlSi12		
23		3.3561	G-AlMg 5		
23	ZE 41	3.5101	G-MgZn4sE1Zr1	MAG 5	
23	EZ 33	3.5103	MgSE3Zn27r1	MAG 6	G-TR3Z2
23	AZ 81	3.5812	G-MgAl8Zn1	NMAG 1	
23	AZ 91	3.5912	G-MgAl9Zn1	MAG 7	
24		2.1871	G-AlCu 4 TiMg		
24		3.1754	G-AlCu5Ni1,5		
24		3.2163	G-AlSi9Cu3		
24	4218 B	3.2371	G-AlSi 7 Mg		
24	SC64D	3.2373	G-AlSI9MGWA		A-S7G
24		3.2373	G-AlSi 9 Mg		
24	QE 22	3.5106	G-MgAg3SE2Zr1	mag 12	
24	GD-AlSI12		G-ALMG5	LM5	A-SU12
23-24	A360.2	3.2383	G-AlSi0Mg(Cu)	LM9	

SS	UNI	UNE	JIS	KS	GOST
0862-00	GMN 70		FCMP690	PMC 690	
0864-00					
2132	G 22 Mn 3				
	20 Mn 7	F.1515-20 Mn 6	SMnC 420	SMnC 420	
1572	C 36; C 38		S 35 C	SM 35 C	35
08 52					
858			FCMP540	PMC 540	
811-04					
4231			C4BS	C4BS	
4252					
4253					

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
23-24	A356-72			2789;1973	NF A32-201
23-24	356.1			LM25	
23-24	A413.2		G-AlSi12	LM6	
23-24	A413.1		G-AlSi 12 (Cu)	LM20	
23-24	A413.0		GD-AlSi12		
23-24	A380.1		GD-AlSi8Cu3	LM24	
26	C93200	2.1090	G-CuSn 7 5 pb		U-E 7 Z 5 pb 4
26	C83600	2.1096	G-CuSn5ZnPb	LG 2	
26	C83600	2.1098	G-CuSn 2 Znpb		
26	C23000	2.1182	G-CuPb15Sn	LB1	U-pb 15 E 8
26	C93800	2.1182	G-CuPb15Sn		Uu-PB 15e 8
27		2.0240	CuZn 15		
27	C27200	2.0321	CuZn 37	cz 108	CuZn 36, CuZn 37
27	C27700	2.0321	CuZn 37	cz 108	CuZn 36, CuZn 37
27		2.0590	G-CuZn40Fe		
27	C 86500	2.0592	G-CuZn 35 Al 1	U-Z 36 N 3	HTB 1
27	C 86200	2.0596	G-CuZn 34 Al 2	HTB 1	U-Z 36 N 3
27	C 18200	2.1293	CuCrZr	CC 102	U-Cr 0.8 Zr
28		2.0060	E-Cu57		
28		2.0375	CuZn36Pb3		
28	C 94100	2.0596	G-CuZn 34 Al 2	HTB 1	U-Z 36 N 3
28	C 63000	2.0966	CuAl 10 Ni 5 Fe 4	Ca 104	U-A 10 N
28	B-148-52	2.0975	G-CuAl 10 Ni		
28	C 90700	2.105	G-CuSn 10	CT1	
28	C 90800	2.1052	G-CuSn 12	pb 2	UE 12 P
28	C 81500	2.1292	G-CuCrF 35	CC1-FF	
28		2.4764	CoCr20W15Ni		
31	N 08800	1.4558	X 2 NiCrAlTi 32 20	NA 15	
31	N 08031	1.4562	X 1 NiCrMoCu 32 28 7		

SS	UNI	UNE	JIS	KS	GOST
4244			A5052	A5052P	
4261					
4260			ADC12	ALDC12	
4247			A6061	A6061P	
4250			A7075	A7075P	
	C 2700				
	C 2720				

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No.	DIN	BS	EN	AFNOR
31	N 08028	1.4563	X 1 NiCrMoCuN 32 27 4			
31	N 08330	1.4564	X 12 NiCrSi 36 16	NA 17		Z 12 NCS 35.16
31	330	1.4564	X12 NiCrSi 36 16	NA 17		Z 12 NCS 37.18
31		1.4865	G-X40NiCrSi38 18	330 C 40		
31		1.4958	X 5 NiCrAlTi 31 20			
31	AMS 5544	LW2.4668	NiCr19NbMo			NC20K14
32		1.4977	X 40 CoCrNi 20 20			Z 42 CNKDWNb
33	Monel 400	2.4360	NiCu30Fe	NA 13		NU 30
33	5390A	2.4603				NC22FeD
33	Hastelloy C-4	2.4610	NiMo16cR16Ti			
33	Nimonic75	2.4630	NiCr20Ti	HR 5,203-4		NC 20 T
33		2.4630	NiCr20Ti	HR5,203-4		NC20T
33	Inconel 690	2.4642	NiC29Fe			Nnc 30 Fe
33	Inconel 625	2.4856	NiCr22Mo9Nb	NA 21		NC 22 FeDNb
33	5666	2.4856	NiCr22Mo9Nb			Inconel 625
33	Incoloy 825	2.4858	NiCr21Mo	NA 16		NC 21 Fe DU
34	Monel k-500	2.4375	NiCu30 Al	NA 18		NU 30 AT
34	4676	2.4375	NiCu30Al	3072-76		
34		2.4631	NiCr20TiAl	Hr40;601		NC20TA
34	Inconel 718	2.4668	NiCr19FeNbMo			NC 19 Fe Nb
34	Inconel	2.4694	NiCr16fE7TiAl			
34		2.4955	NiFe25Cr20NbTi			
34	5383	LM2.4668	NiCr19Fe19NbMo	HR8		NC19eNB
34	5391	LW2 4670	S-NiCr13A16MoNb	3146-3		NC12AD
34	5660	LW2.4662	NiFe35Cr14MoTi			ZSNCDT42
34	5537C	LW2.4964	CoCr20W15Ni			KC20WN
34	AMS 5772		C0Cr22W14Ni			KC22WN
35	Inconel X-750	2.4669	NiCr15Fe7TiAl			NC 15 TNb A
35	Hastelloy B	2.4685	G-NiMo28			
35	Hastelloy C	2.4810	G-NiMo30			

SS	UNI	UNE	JIS	KS	GOST
2584					
			SUH330	STR 330	
	XG50NiCr39 19		SCH15	HRSC 15	

Material Conversion Table

According to VDI 3323 standard

Material group	AISI/SAE	Material No. DIN		BS EN	AFNOR
35	AMS 5399	2.4973	NiCr19Co11MoTi		NC19KDT
35		3.7115	TiAl5Sn2		
36	R 50250	3.7025	Ti 1	2 TA 1	
36	R 52250	3.7225	Ti 1 pd	TP 1	
36	AMS 5397	LW2 4674	NiCo15Cr10MoAlTi		
37		3.7124	TiCu2	2 TA 21-24	
37	R 54620	3.7145	TiAl6Sn2Zr4Mo2Si		
37		3.7165	TiAl6V4	TA 10-13;TA 28	T-A 6 V
37		3.7185	TiAl4Mo4Sn2	TA 45-51; TA 57	
37		3.7195	TiAl 3 V 2.5		
37			TiAl4Mo4Sn4Si0.5		
37	AMS R54520		TiAl5Sn2.5	TA14/17	T-A5E
37	AMS R56400		TiAl6V4	TA10-13/TA28	T-A6V
37	AMS R56401		TiAl6V4ELI	TA11	
38	W 1	1.1545	C105W1	BW 1A	Y1105
38	W210	1.1545	C105W1	BW2	Y120
38		1.2762	75 CrMoNiW 6 7		
38	440C	1.4125	X105 CrMo 17		Z 100 CD 17
38		1.6746	32 nIcRmO 14 5	832 M 31	35 NCD 14
40	Ni- Hard 2	0.9620	G-X 260 NiCr 4 2	Grade 2 A	
40	Ni- Hard 1	0.9625	G-X 330 Ni Cr 4 2	Grade 2 B	
40	Ni- Hard 4	0.9630	G-X 300 CrNiSi 9 5 2		
40		0.9640	G-X 300 CrMoNi 15 2 1		
40	A 532 III A 25% Cr	0.9650	G-X 260 Cr 27	Grade 3 D	
40	A 532 III A 25% Cr	0.9655	G-X 300 CrNMo 27 1	Grade 3 E	
40		1.2419	105 WCr 6	105WC 13	
40	310	1.4841	X15 CrNiSi 25 20	314 S31	Z 15 CNS 25-20
41		0.9635	G-X 300 CrMo 15 3		
41		0.9645	G-X 260 CrMoNi 20 2 1		
41		0.9655	G-X 300 CrNMo 27 1		

SS	UNI	UNE	JIS	KS	GOST
1880	C100KU	F-5118	SK3	STC 105(STC3)	
2900	C120KU	CF.515	SUP4	SPS 4	
	0512-00				
	0513-00				
	0466-00				
		107 WCr 5 KU			

TaeguTec
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