

C-F



SUMITOMO

CARBIDE - CBN - DIAMOND

22|23

TURNING TOOLS

Inserts | External Holders | Boring Bars | Grooving Holders | Threading Holders

SUMITOMO
ELECTRIC
GROUP

Indexable Inserts for Turning

Negative / Positive Inserts

C1–C96



Inserts

C

D

K

R

S

T

V

W

	ISO Inserts Identification Table.....	C2–3
General-purpose Chipbreaker for M-class Positive Inserts	NGU ^{New}	C4–5
Chipbreaker for Low Carbon and General Steel Turning	NFE / NFB	C6
Chipbreaker for Hardened Steel Turning	NGH	C7
Chipbreaker for Exotic Alloys and Stainless Steel Turning	NEG / NEF	C8–9
Chipbreaker for Stainless Steel Turning	NEM	C10
Positive M Class Chipbreaker	NFB / NLB	C11
Chipbreaker for Steel Turning	(M) NSI	C12
Comparison Chart	Chipbreaker	C13
Selection	Chipbreaker Application Table	C14–19
Negative Inserts	C / 80° Diamond Type (With Hole)	C20–28
	D / 55° Diamond Type (With Hole)	C29–36
	S / Square Type (With Hole)	C37–44
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	T / Triangle Type	C46–54
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Positive Inserts	C / 80° Diamond Type (With Hole)	C63–69
	D / 55° Diamond Type (With Hole)	C70–73
	R / Round Type (With Hole)	C74
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	V / 35° Diamond Type (With Hole)	C90–93
	W / Polygon Type (With Hole)	C94–95

Stock marking chart

- : Euro stock item
- : Japan stock item
- ▲ : To be replaced by new item

☐ : We cannot produce

Note:

Stocking policy may change without prior notice, please consult our sales representative for actual stock situation.

Inserts Identification Table

Inserts
C
D
K
R
S
T
V
W

C **N** **M** **G**

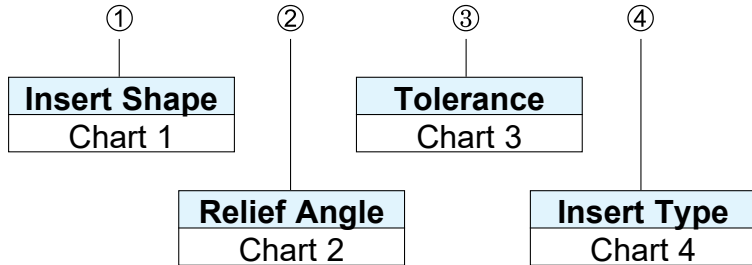


Chart 1: Insert Shape

Symbol	Insert Shape	Angle
C		80°
D		55°
E		75°
F		50°
V		35°
R		Round
S		Square
T		Triangle
W		Trigon
A		85°
B		82°
K		55°
H		Hexagonal
O		Octagonal
P		Pentagonal
L		Rectangular
M		Rhombic

Chart 2: Relief Angle

Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P*	11°
O	Others

* Inserts with a 10° relief angle are sometimes considered as "P"

Chart 3: Tolerance (mm)

Symbol	Nose Height	Inscribed Circle	Thickness
A	± 0,005	± 0,025	± 0,025
F	± 0,005	± 0,013	± 0,025
C	± 0,013	± 0,025	± 0,025
H	± 0,013	± 0,013	± 0,025
E	± 0,025	± 0,025	± 0,025
G	± 0,025	± 0,025	± 0,13
J*	± 0,005	±0,05 – ±0,15	± 0,025
K*	± 0,013	±0,05 – ±0,15	± 0,025
L*	± 0,025	±0,05 – ±0,15	± 0,025
M*	±0,08 – ±0,2	±0,05 – ±0,15	± 0,13
N*	±0,08 – ±0,2	±0,05 – ±0,15	± 0,025
U*	±0,13 – ±0,38	±0,08 – ±0,25	± 0,13

The height "m" on sharp corner.

Chart 4: Insert Hole or Breaker

Symbol	Hole	Hole Style	Chip Breaker	Shape	Symbol	Hole	Hole Style	Chip Breaker	Shape
N	No Hole	—	Nil		A	With Hole	Straight Hole	Nil	
R			One Face		M			One Face	
F			Both Faces		G			Both Faces	
W	With Hole	Straight hole with top end counter-sink (40°-60°)	Nil		B	With Hole	Straight hole with top end counter-sink (70°-90°)	Nil	
T			One Face		H			One Face	
Q	With Hole	Straight hole with top end counter-sink (40°-60°)	Nil		C	With Hole	Straight hole with top end counter-sink (70°-90°)	Nil	
U			Both Faces		J			Both Faces	
					X	—	—	—	Special

● **Tolerance of Nose Height (M-Class)**

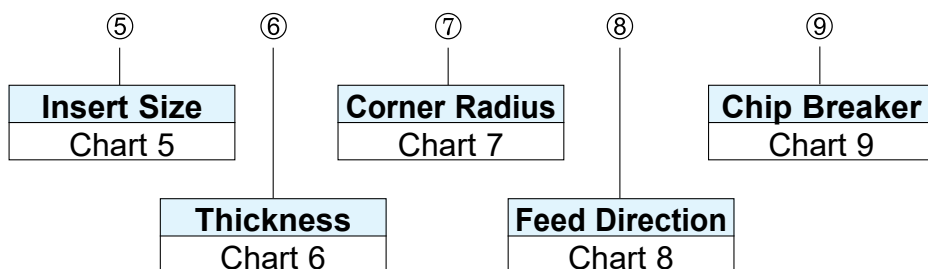
Inscribed Circle	Triangle	Square	80° Diamond	55° Diamond	35° Diamond	Round
6,35	± 0,08	± 0,08	± 0,08	± 0,11	—	—
9,525	± 0,08	± 0,08	± 0,08	± 0,11	± 0,16	—
12,70	± 0,13	± 0,13	± 0,13	± 0,15	—	—
15,875	± 0,15	± 0,15	± 0,15	± 0,18	—	—
19,05	± 0,15	± 0,15	± 0,15	± 0,18	—	—
25,40	± 0,18	± 0,18	± 0,18	—	—	—
31,75	—	± 0,20	—	—	—	—

● **Tolerance of Inscribed Circle (M-Class)**

Inscribed Circle	Triangle	Square	80° Diamond	55° Diamond	35° Diamond	Round
6,35	± 0,05	± 0,05	± 0,05	± 0,05	—	—
9,525	± 0,05	± 0,05	± 0,05	± 0,05	± 0,05	± 0,05
12,70	± 0,08	± 0,08	± 0,08	± 0,08	—	± 0,08
15,875	± 0,10	± 0,10	± 0,10	± 0,10	—	± 0,10
19,05	± 0,10	± 0,10	± 0,10	± 0,10	—	± 0,10
25,40	± 0,13	± 0,13	± 0,13	—	—	± 0,10
31,75	—	± 0,15	—	—	—	± 0,12

Inserts Identification Table

12 04 08 N - GE



Picture of insert shown as example
(ISO Cat. No.)



Inserts

Chart 5: Cutting Edge Length (mm)

Shape	Symbol	Cutting Edge	Inscribed Circle	Shape	Symbol	Cutting Edge	Inscribed Circle	Shape	Symbol	Cutting Edge		Inscribed Circle			
										Neg.	Pos.	Neg.	Pos.		
C	03	3,55	3,50	D	07	7,7	6,35	W	03	3,8		5,56			
	04	4,97	4,30		09	9,7	7,94		04	4,3		6,35			
	06	6,4	6,35		11	11,6	9,525		05	5,4		7,94			
	08	8,0	7,94		15	15,5	12,70		06	6,5		9,525			
	09	9,7	9,525		19	19,4	15,875		08	8,7		12,70			
	12	12,9	12,70						10	10,9		15,875			
	16	16,1	15,875		V	08	8,3		4,76	11		4,3		6,35	
	19	19,3	19,05			09	9,7		5,56	16		6,5		9,525	
	25	25,8	25,4			11	11,1		6,35	08	8,0		8,0		
						16	16,6		9,525	10	10,0		10,0		
			22	22,1		12,7	12	12,0		12,0					
S	06	6,35	6,35	T	06	6,9	3,97	R	12	12,70		12,70			
	S7	7,14	7,14		08	8,2	4,76		15	15,875		15,875			
	07	7,94	7,94		09	9,6	5,56		16	16,0		16,0			
	09	9,525	9,525		11	11,0	6,35		19	19,05		19,05			
	12	12,70	12,70		13	13,7	7,94		20	20,0		20,0			
	15	15,875	15,875		16	16,5	9,525		24	24,0		24,0			
	19	19,05	19,05		22	22,0	12,70		25	25,0		25,0			
	25	25,40	25,40		27	27,5	15,875		25	25,40		25,40			
	31	31,75	31,75		33	33,0	19,05		32	32,0		32,0			

Chart 6: Thickness

Symbol	Thickness (mm)
X1	*
01	1,59
02	2,38
T2	2,78
03	3,18
T3	3,97
04	4,76
05	5,56
06	6,35
07	7,94
09	9,52

Chart 7: Nose Radius

Symbol	Nose Radius (mm)
00	Sharp Point
003	0,03
008	0,08
01	0,1
015	0,15
018	0,18
02	0,2
0,35	0,35
04	0,4
08	0,8
10	1,0
12	1,2
16	1,6
20	2,0
24	2,4
32	3,2
M0	Round Insert (Metric)
00	Round Insert (Imperial)

(*):
CCET03X1 Insert thickness: 1,40
CCET04X1 Insert thickness: 1,80

An "M" after the nose radius indicates a negative tolerance
Example:
CCG T09T302 M NSI AC520U

Chart 8: Feed Direction

Symbol	Direction
R	Right-hand
L	Left-hand
N	Neutral

Chart 9: Chip Breaker

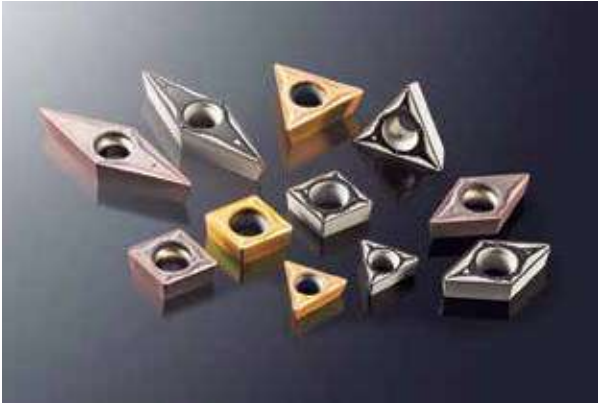
Symbol	Process	Bumpy Type	Standard	Handed
F	Fine Finishing to Finishing	FA, FL, FE, FB, FC FK, FP		FT, FX, FZ FY, FW
S	Light Cut	SE, SEW, SI, SC, SF, SP, SU, SX		SD SDW ST
L		LU, LUW, LB		
G	General	GE, GU, GUW	GZ	UM
U		UG, UP US, UX	UZ	
M	Rough	MP, MU, MX, ME	MC	MM HM
H	Heavy	HG, HP, HF	HU HW	

Other Specials	
Wide Chipbreaker	W
For Countersink	C
For Round insert	RD, RP, RX, RH
For Exotic Alloy	EF, EG, EX, EM
For Aluminium	AW, AG, AX, AY, LD, GD,
For Hardened Steel	FV, LV, GH
For Carburized Layer Removal	SV
For Stainless Steel	EF, EG, EM

Chipbreaker NGU Type

New

For positive Inserts



General Features

Superb versatility handles processes from roughing to finishing.
Stable machining is realised across a range of conditions through excellent cutting edge sharpness and strength.
Item range covers a wide variety of applications.

C

NGU-Chipbreaker for Positive Inserts

D

Excellent chip control performance

K

- Wide chip pocket for various cutting conditions

R

S

Less Vibration

- Improved chip control in a wide application field

T

V

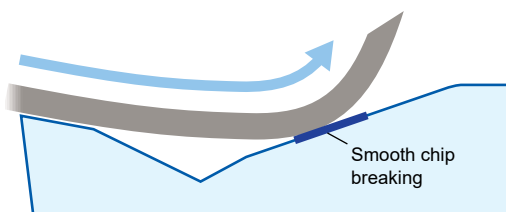
Suppresses chip jamming at high feed rates for ideal chip control

W

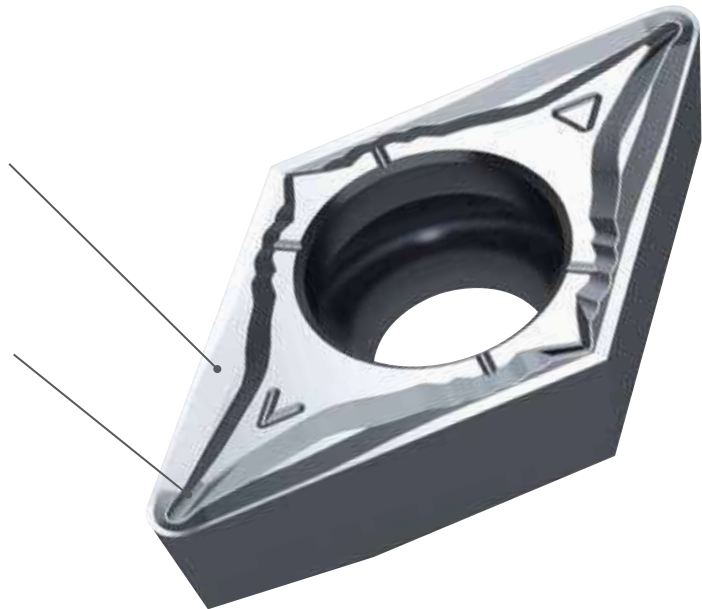


- Wide restraining face enables consistent chip control for light to medium cutting.

- Discharges chips well under high feed conditions and suppresses build-up

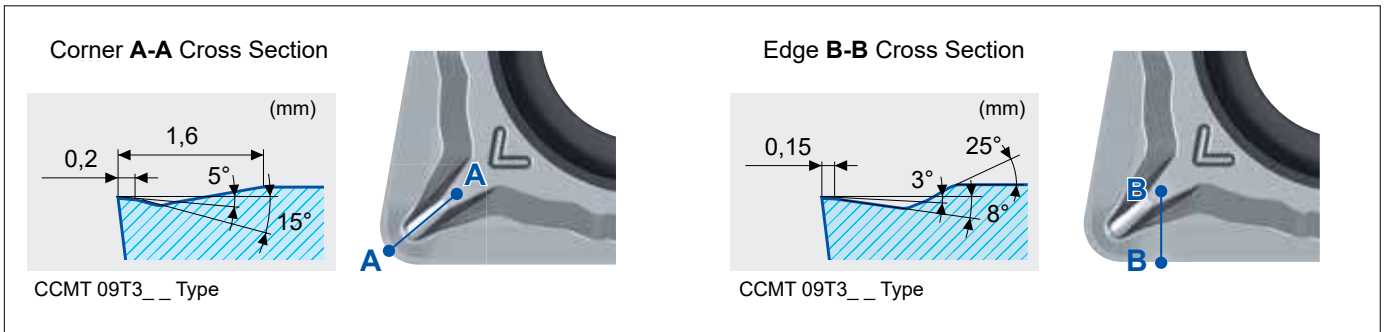


- Achieves stable machining with both versatility and low resistance



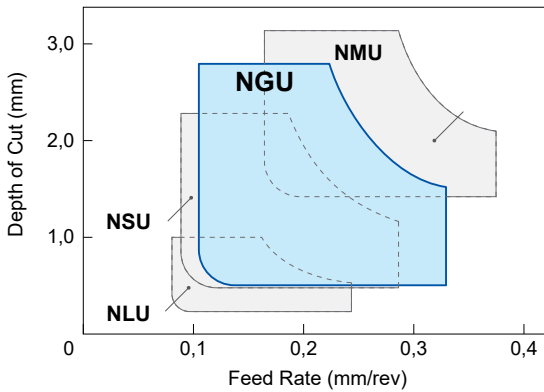
Improved Fracture Resistance

The two step rake angle geometry ensures outstanding sharpness and hardness.



Application Range

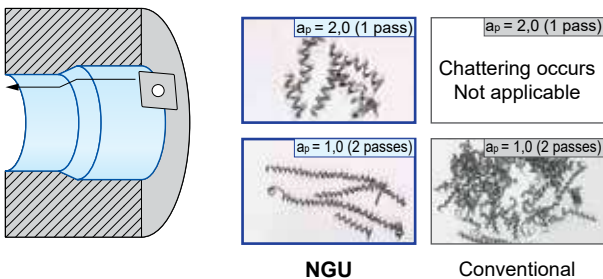
Enhanced application range over conventional products.



Application Examples

24CrMo5, Automotive Parts

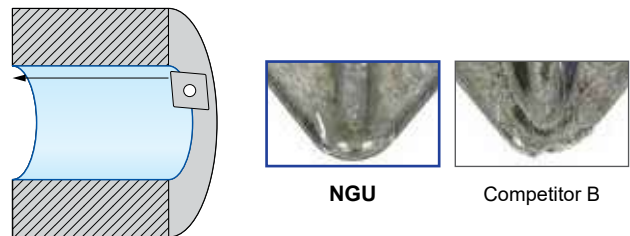
Improves chip entanglement for improved machining efficiency.



Insert: CPMT 090308 NGU (AC8025P)
 Cutting Conditions: $v_c = 200$ m/min, $f = 0,2$ mm/rev, $a_p = 2,0$ mm, wet, internal taper boring

15CrMo5, Fastening Parts

Strong cutting edge design realizes 1,5 times the tool life.

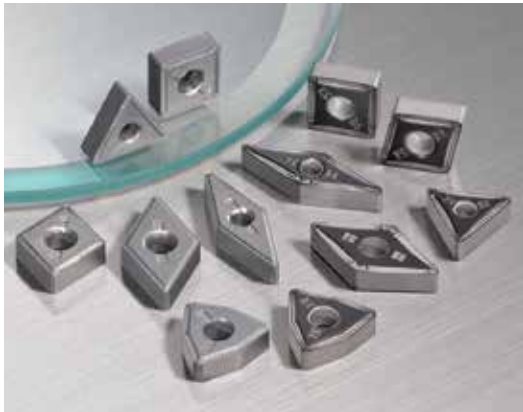


Insert: CCMT 09T308 NGU (AC8025P)
 Cutting Conditions: $v_c = 190$ m/min, $f = 0,25$ mm/rev, $a_p = 1,0$ mm, wet, internal boring

- C
- D
- K
- R
- S
- T
- V
- W

Chipbreaker NFE Type / NFB Type

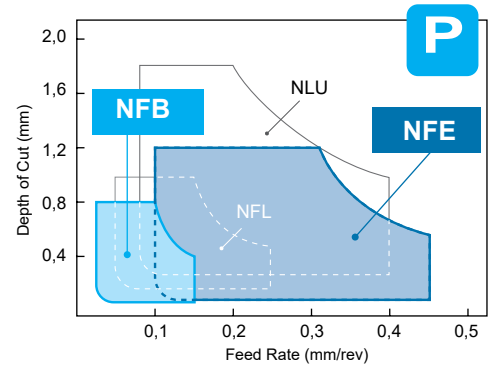
Negative M Class Chipbreakers for Low Carbon and General Steel Turning



General Features

The high performance NFE type, which ensures stable chip control in a wide range of feed rate, has been added to the chipbreaker series for low carbon steel and general steel turning. Extensive product lines are available to meet various machining requirements. A positive insert execution of chipbreaker NFB is also available.

Application Range



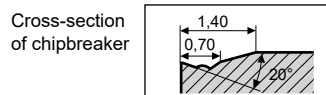
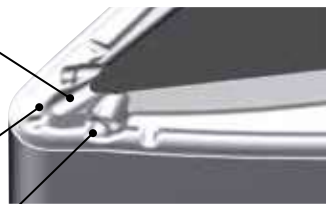
NFE Chipbreaker for Finishing

Supports general purpose machining to high speed machining.

The arc-shaped main breaker ensures stable chip control in a wide feed rate range.

The two step chipbreakers enable stable chip control at a low feed rate of $f = 0,1$ mm/rev.

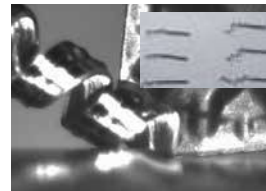
The sub-breaker controls cutting chips in profiling.



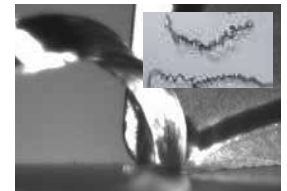
Performance

Work Material: Pipe steel (H240LA, 1.0480)
Insert: CNMG 120408 NFE (AC8025P)
Cutting Conditions: $v_c=200$ m/min, $f=0,4$ mm/rev, $a_p=0,2$ mm, dry

Excellent chip control under low depth of cut and high feed rate condition



NFE Type (AC8025P)

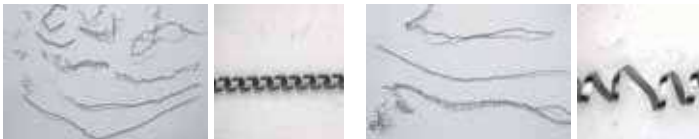


Conventional

Application Examples

Work Material: Deep-draw steel (SPHC440)
Facing Insert: CNMG 120408 NFE (AC8025P)
Cutting Conditions: $v_c = 200$ m/min, $f = 0,15$ mm/rev, $a_p = 0,2-0,5$ mm, wet

Stable chip curling and breaking in facing of gummy steel.



NFE Type (AC8025P)

Competitor

Work Material: C53E, 1.1210, Ø20-100
Exter. Turning+Facing Ins.: DNMG 150412 NFE (AC8025P)
Cutting Conditions: $v_c=180$ m/min, $f=0,25$ mm/rev (radius), $0,45$ mm/rev (straight section), $a_p = 0,3$ mm, wet

Stable chip control even at a variable feed rate in shallow cutting.



NFE Type (AC8025P)



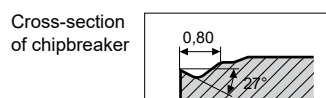
Conventional

NFB Chipbreaker for Low Feed Finishing

Supports low feed machining.

Smooth chipbreaker geometry with a high rake reduces cutting resistance.

The variable rake angle in nose radius makes effective strain on chips and improves the breaking performance.



Application Example

Work Material: Pipe steel (STKM13C)
Internal Turning Insert: DNMG 150404 NFB (T3000Z)
Cutting Conditions: $v_c = 352$ m/min, $f = 0,03-0,2$ mm/rev, $a_p = 0,7$ mm, wet

Small chip curling and control



NFB Type (T3000Z)



Competitor

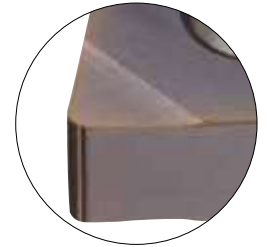


General Features

Enables medium roughing of hardened steel in combination with coating and grade AC503U.

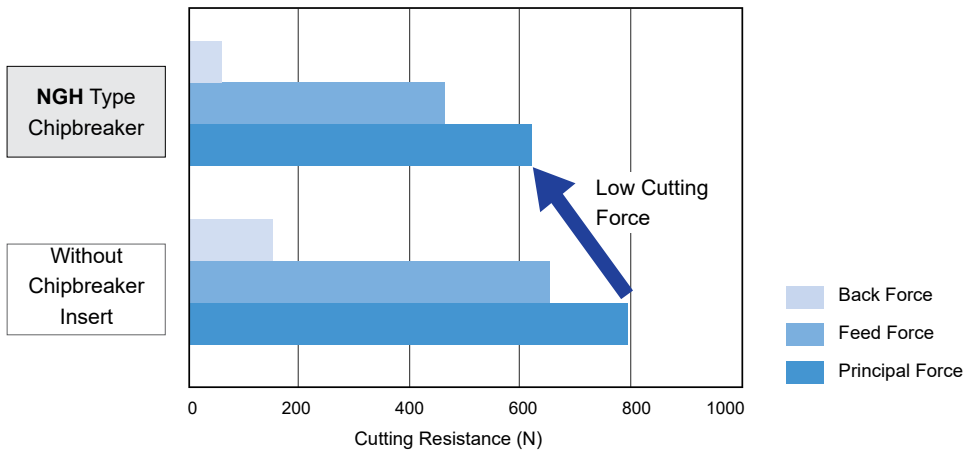
Reduces heat generation and enables deep cutting ($a_p = 1-3$ mm) of hardened steel by using a wide neutral ground chipbreaker (rake angle: 4°) and sharp edge.

Discharges chips smoothly.

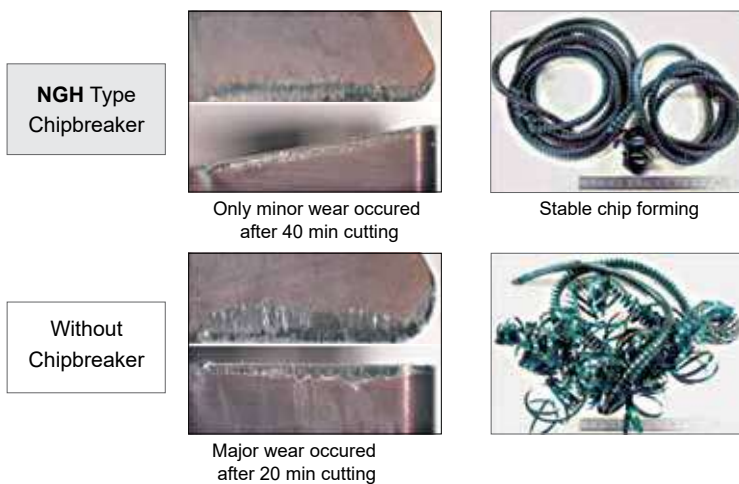


Negative Insert for Rough Cutting NGH Type Chipbreaker

Performance



Application Examples



Work Material: X155CrVMo12-1 (61HRC)
 Insert: TNGG 160404 NGH (AC503U)
 Cutting Conditions: $v_c = 50$ m/min, $f = 0,05$ mm/rev, $a_p = 3,0$ mm, dry

Recommended Cutting Conditions

Application Range	Cutting Speed v_c (m/min)	Feed Rate f (mm/rev)	Depth of Cut a_p (mm)	Recommended Chipbreaker
Finishing	40-100	0,02-0,10	<1	Without chipbreaker
Medium Roughing	20-60	0,02-0,05	1-3	NGH Type

Work Material: Hardened steel (50-62 HRC), X155CrVMo12-1, X40CrVMo5-1, S6-5-2, High-speed powder and high speed steel

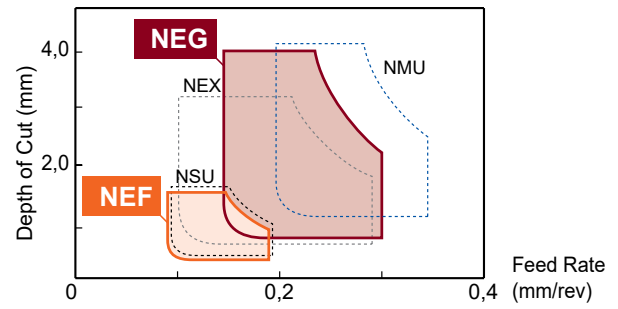
Chipbreaker NEG Type / NEF Type

For Exotic Alloys and Stainless Steel Turning

General Features

NEG/NEF type chipbreaker for exotic alloy machining can be used for Titanium alloys, heat-resistant alloys and a variety of other exotic alloys. They deliver excellent wear resistance and superior chip management. These chipbreakers can solve quality problems caused by the unstable tool life and poor chip control provided by conventional chipbreakers for exotic alloys.

Application Range

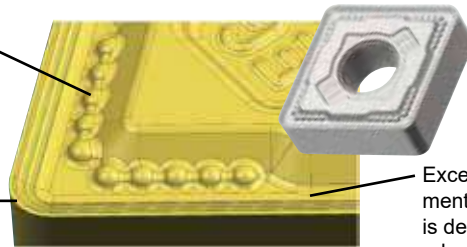


NEG Chipbreaker for Roughing

Provides excellent wear resistance and chip control from general-purpose machining to roughing applications. Reduces damage to insert and eliminates trouble from chips specific to exotic alloys. Also demonstrates very high versatility.

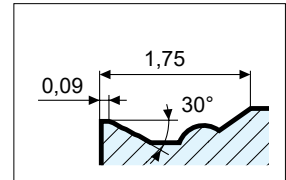
Crater wear advancement is prevented by the round bumps, whilst maintaining excellent control.

The cutting edge maintains the strength slowing the progress of crater wear.



Excellent chip management and wear prevention is delivered by the special rake face design.

Cross Section of Chipbreaker



Cutting Performance – NEG Type

Heat Resistant Alloy

Chipbreaker type: NEG (AC510U)



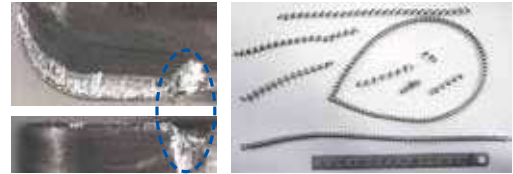
Suppresses the chipping of peripheral cutting edge and notch wear. Excellent chip management.

Work Material: Inconel 718

Insert: CNMG120412

Cutting Data:
 $v_c = 40$ m/min
 $a_p = 2,5$ mm
 $f = 0,2$ mm/rev
wet
 $T_c = 7$ min

Conventional tool (S10)



Notch wear / poor chip control

Titanium Alloy

Chipbreaker type: NEG (AC510U)



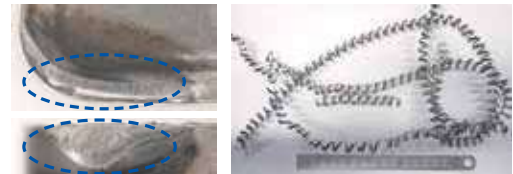
Suppresses crater wear and flank wear. Excellent chip management.

Work Material: Ti-6Al-4V

Insert: CNMG120412

Cutting Data:
 $v_c = 65$ m/min
 $a_p = 2,5$ mm
 $f = 0,2$ mm/rev
wet
 $T_c = 8$ min

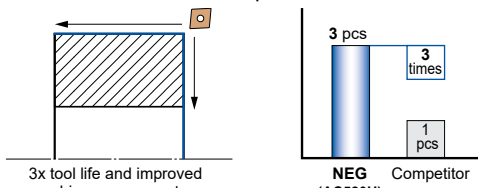
Conventional tool (S10)



Crater wear / flank wear / poor chip control

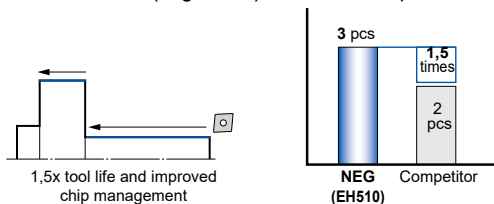
Application Example – NEG Type

Inconel 718, machine component



Insert: CNMG120408 NEG (AC520U)
Cutting Data: $v_c = 50$ m/min, $a_p = 1,5$ mm, $f = 0,3$ mm/rev, wet

Pure Titanium (Ti grade 3), machine component

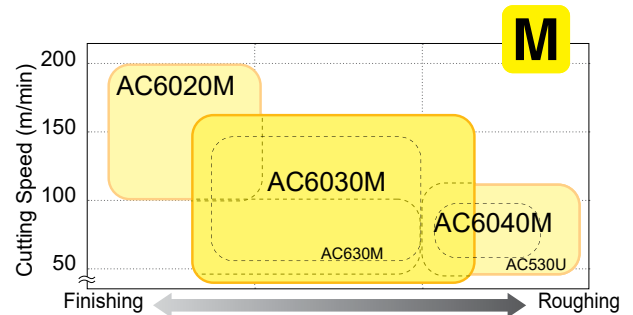
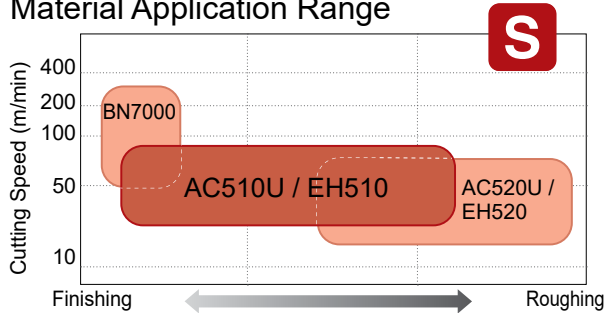


Insert: CNMG120408 NEG (EH510)
Cutting Data: $v_c = 80-100$ m/min, $a_p = 1,0$ mm, $f = 0,25$ mm/rev, wet

Chipbreaker NEG Type / NEF Type

For Exotic Alloys and Stainless Steel Turning

Material Application Range

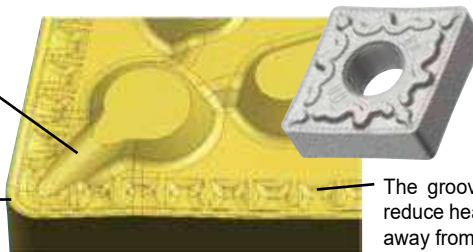


NEF Chipbreaker for Finishing

The NEF chipbreaker reduces chip curl diameter in finishing applications. Provides extremely good chip management not fluctuated by the material in use.

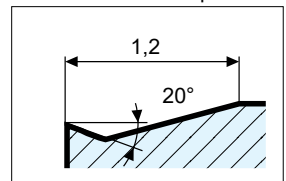
Main chipbreaker that enables good chip control even at low depths of cut.

Sharp edge with 20° rake angle reduces wear.



The grooves on the rake face reduce heat and assist chip flow away from the workpiece.

Cross Section of Chipbreaker



Cutting Performance – NEF Type

Heat Resistant Alloy

Chipbreaker type: NEF (AC510U)



Improvements in chip control and chip removal management based on small curled chips.

Work Material: Inconel 718

Insert: CNMG120408

Cutting Data:
 $v_c = 55$ m/min
 $a_p = 0,3$ mm
 $f = 0,15$ mm/rev
 wet
 $T_c = 8$ min

Conventional tool (S10)



Competitor's product (S10)



There is a problem in the length and the diameter of chips.

Titanium Alloy

Chipbreaker type: NEF (AC510U)



Improvements in chip control and chip removal management based on small curled chips.

Work Material: Ti-6Al-4V

Insert: CNMG120408

Cutting Data:
 $v_c = 80$ m/min
 $a_p = 0,5$ mm
 $f = 0,2$ mm/rev
 wet
 $T_c = 25$ min

Conventional tool (S10)



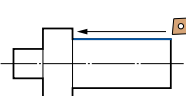
Competitor's product (S10)



There is a problem in the length and the diameter of chips.

Application Example – NEF Type

Inconel 718, shaft component



Great improvement in chip management. Keeps workpieces free of damage. It is possible to omit final polishing process.



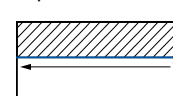
NEF (AC510U)



Conventional tool

Insert: CNMG120408 NEF (AC510U)
 Cutting Data: $v_c = 45$ m/min, $a_p = 0,25$ mm, $f = 0,1$ mm/rev, wet

Duplex stainless steel cover



Improvements in chip management. Suppress damage to finished surface with no entanglement of chips.



NEF (AC510U)



Conventional tool

Insert: CNMG120408 NEF (AC510U)
 Cutting Data: $v_c = 55$ m/min, $a_p = 0,3$ mm, $f = 0,125$ mm/rev, wet

Inserts

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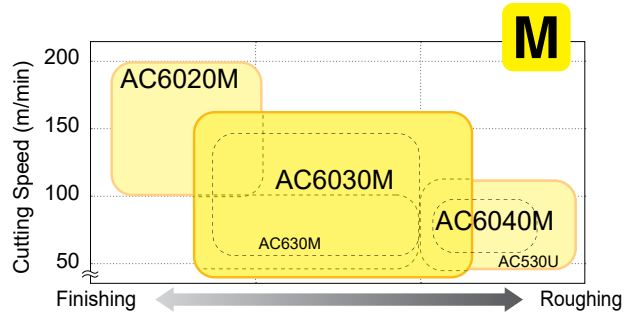
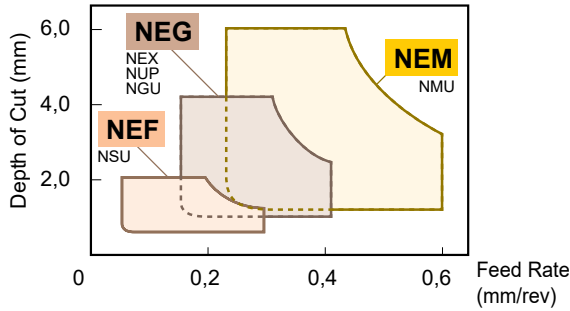
V

W

Chipbreaker NEM Type

Chipbreaker for Stainless Steel Turning

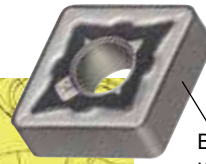
Application Range



NEM Chipbreaker for Rough Cutting

The NEM chipbreaker achieves excellent fracture and crater resistance and ensures extremely stable machining.

Large radius rake face design that reduces crater wear while maintaining the cutting edge strength.



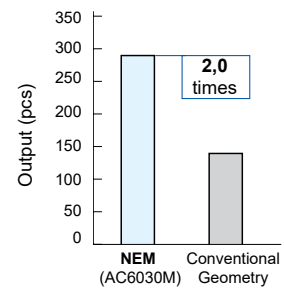
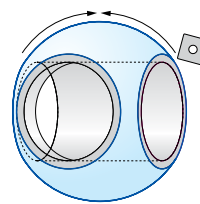
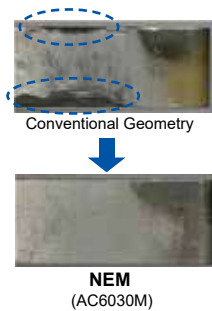
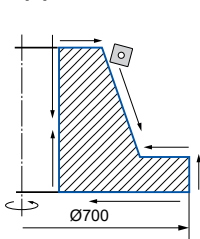
Bright colors for easy identification of used cutting edge.

Reduces boundary damage by eliminating changing points from the cutting edge.

Reduction of Damage

	Reduction of Boundary Damage		Reduction of Crater Wear	
	Cutting Edge	Boundary Wear Comparison	Cross Section	Crater Wear Comparison
Conventional Geometry				
NEM Type				
	The NEM chipbreaker has no changing points on the cutting edge, so boundary damage is reduced.		The NEM chipbreaker smoothly evacuates chips thanks to its large radius rake face design, so crater wear is reduced.	

Application Example



Reduces breakage out of the cutting edge and ensures stable machining.

Reduces crater wear and provides long tool life.

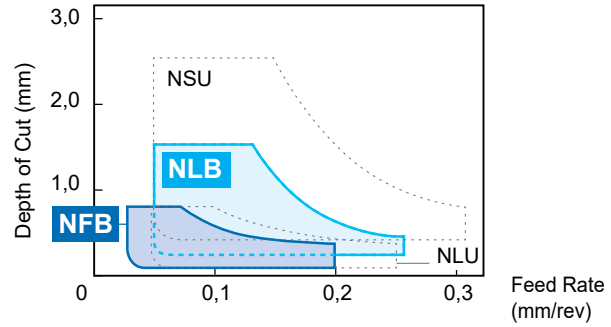
Work Material: X5CrMo17 12 2
 Insert: SNMG190616NEM (AC6030M)
 Cutting Conditions: $v_c = 70$ m/min, $f = 0,5$ mm/rev, $a_p = 3,0-8,0$ mm, wet

Work Material: X5CrNiS18 10
 Insert: SNMG120408NEM (AC6030M)
 Cutting Conditions: $v_c = 100$ m/min, $f = 0,32$ mm/rev, $a_p = 2,0-2,5$ mm, wet

Positive M Class Chipbreakers for Low Carbon and General Steel Turning

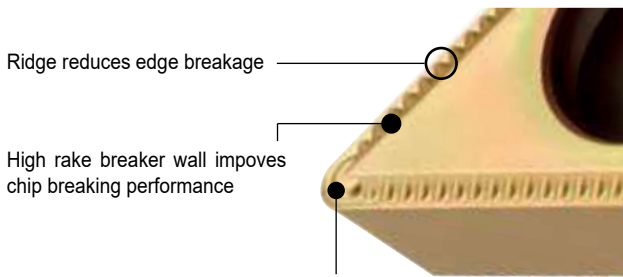
Chipbreaker NFB Type / NLB Type

Application Range

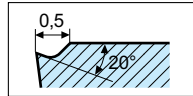


NFB Chipbreaker for Finishing

The NFB type for finishing and the NLB type for light cutting have been added to the chipbreaker series for low carbon and general steel machining in addition to the already present NLU type for finishing and NSU type for light cutting. The NFB and NLB type chipbreakers improve chip control in finishing of low carbon and general steel.

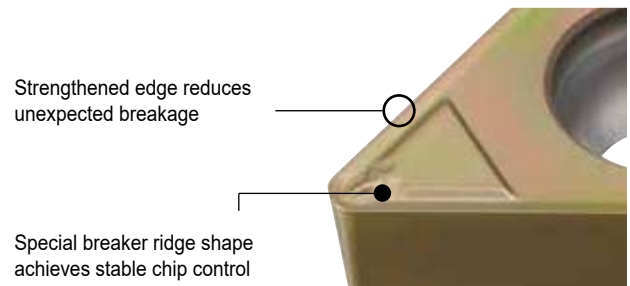


Variable rake angle in nose radius increases chip strain and improves chip breaking performance

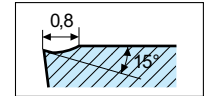


Cross Section of Chipbreaker

NLB Chipbreaker for Light Cutting



Special breaker ridge shape achieves stable chip control

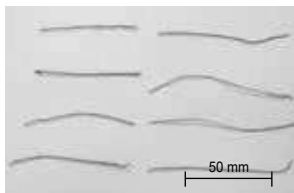


Cross Section of Chipbreaker

Performance

Chip Control

Achieves stable chip control at small cutting depth and low feed.



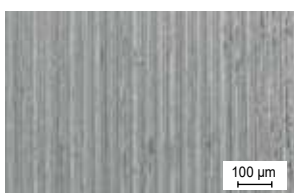
NFB Type Chipbreaker (T1500A)



Competitor's Product

Work Material: Pipe (H240LA), Ø 30 Boring
Insert: TPMT 110304 NFB (T1500A)
Cutting Conditions: $v_c = 100$ m/min, $f = 0,12$ mm/rev, $a_p = 0,1$ mm, wet

Comparison of Surface Roughness of Finished Surfaces



NFB Type Chipbreaker (T1500A)



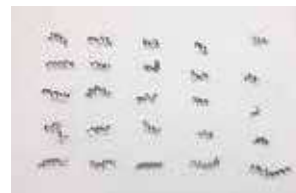
Competitor's Product

Work Material: Pipe (H240LA), Ø 100 Boring
Insert: TPMT 110304 NFB (T1500A)
Cutting Conditions: $v_c = 200$ m/min, $f = 0,07$ mm/rev, $a_p = 0,1$ mm, wet

Performance

Chip Control ①

Achieves stable chip control in light cutting.



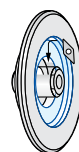
NLB Type Chipbreaker (T1500A)



Competitor's Product

Work Material: Pipe (H240LA), Ø 30 Boring
Insert: TPMT 110304 NLB (T1500A)
Cutting Conditions: $v_c = 200$ m/min, $f = 0,15$ mm/rev, $a_p = 0,5$ mm, wet

Chip Control ②



NLB Type Chipbreaker (T1500A)



Competitor's Product



Doubles the tool life by improving chip control and reducing blemishes on machined surfaces.

Work Material: Hub (C45)
Insert: VBMT 160408 NLB (T1500A)
Cutting Conditions: $v_c = 240$ m/min, $f = 0,25-0,28$ mm/rev, $a_p = 0,6$ mm, wet

Inserts

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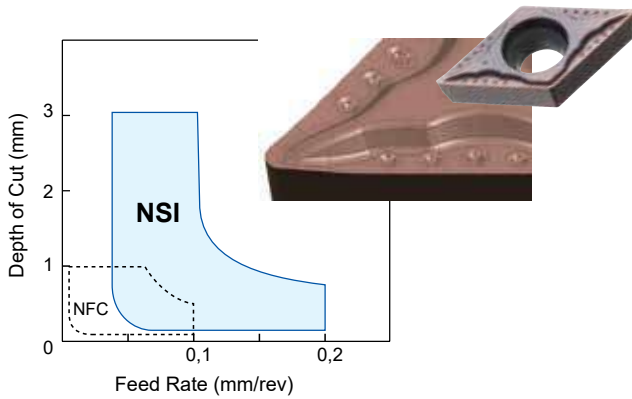
W

Chipbreaker for Steel Turning (M)NSI Type

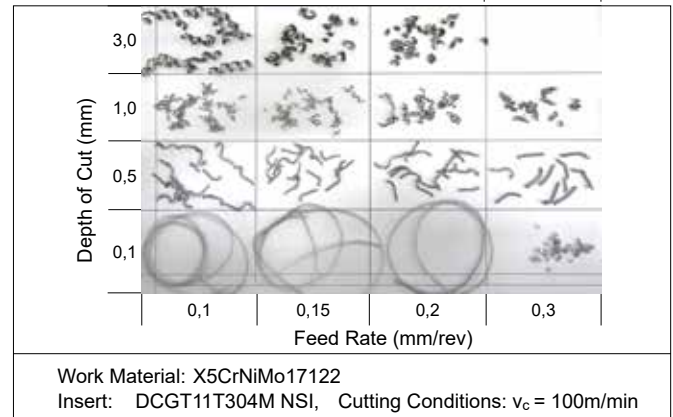
Nose radius with minus tolerance (M)

Example: DCGT 11T304M NSI

Application Range



Cutting Performance



Application Examples

Inconel 718, machine component external turning

Output

150 pcs

100 pcs

NSI (AC510U)

Competitor's Product

1,5 x higher tool life. Improved chip management.

Insert: DCGT11T302M NSI (AC510U)
Cutting Conditions: $v_c = 35\text{ m/min}$, $f = 0,08\text{ mm/rev}$, $a_p = 0,8\text{ mm}$, wet

X5CrNi1810, Shaft component external turning & facing

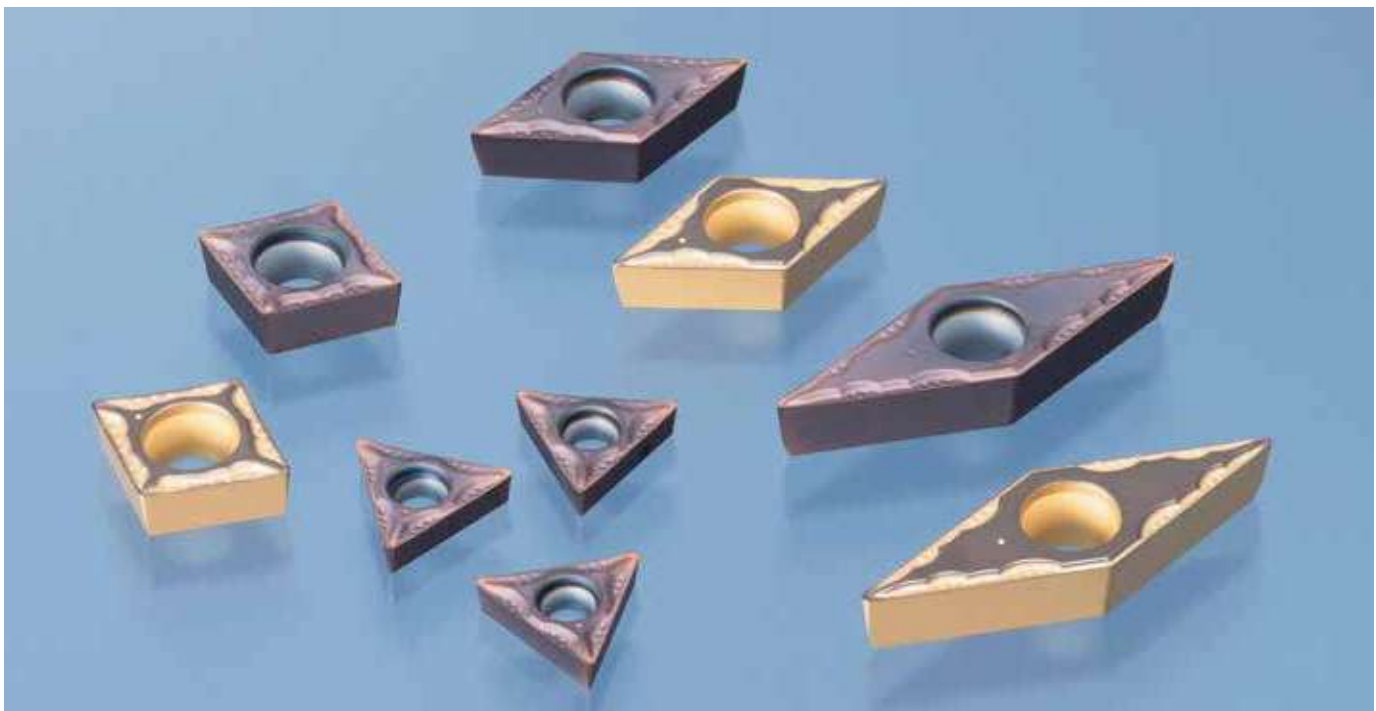
NSI (AC510U)

Conventional Tool

Improved chip management. Suppressing cutting edge adhesion to ensure a stable, long tool life.

Insert: DCGT11T304M NSI (AC520U)
Cutting Conditions: $v_c = 100\text{ m/min}$, $f = 0,08\text{ mm/rev}$, $a_p = 0,5\text{ mm}$, wet

- Sharp designed cutting edge with low-cutting force
- Better chip control in wide range DOC for bar feeder machine
- Combination of high rake edge design and G-class precision offers superior cutting performance
- Suitable for medical parts and high precision machining



Inserts

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Chipbreaker Comparison

■ Negative Type

Class	Application	Sumitomo Electric	Mitsubishi	Tungaloy	Kyocera	NTK	Sandvik	Kennametal	SECO Tools	WALTER	ISCAR
P	Fine Finishing	FA	FH,FP	TF	GP		QF	FF	FF1		SF
		FL, FB	FS,FY	NS,ZF	XP,XF,VF	WM			FF2	FP5	
	Finishing	LU, FE	SA,SY	NM	XQ,CQ,PP	TF1	LC	FN		NF3	
		SU	SH	TS,TSF	HQ	UL,WV	XF,MF	CT	MF2		NF
	Wiper Edge	LUW		AFW, FW	WP,WF		WL,WP		W-FF2		
		SEW	SW	ASW, SW	WQ		WF,WMX	FW	W-MF2	NF	WF
	Finishing to Light Cut	SE, SX	LP	AS,ZM	C,J,XS	ZW1,WR	PF,KF	LF, 33		MP3,NS6	F3P, TF
	Medium Cut	GU □UG□	MA,MV	TM,TQ	HS,PS	ZP	XM,QM	P,MG	M3	MU5	GN
		GE, UX	MH,MP	DM,AM	CS,GS,PQ,PT	Z5	PM,SM,KM	MN, MP1		MP5,NM4,NM6	RF, LF
	Wiper Edge	GUW	MW		WE		WM	MW, RW	W-M3	NM	WG
	Roughing	MU, ME	GH, RP	TH, S	HT,GT,PH	G	PR,XMR,KR	RP	M5,MR7	NM7,NM9,RP5	M3P,NR
		MX, MP	HAS,MT	CH				RN	MR6		
Heavy Cut	HG	HL,HZ,HX	THS,TRS	PX,Standard		QR	RM,MR	R4,R5,M6	NR6,NRF	NM	
	HP	HH,HXD,HR	65			HR,SR	RH	R7,MR7	NR8	TNM	
	HU, HW	HV									
	HF	HCS	TUS			MR		RR9	NRR	R3P	
M	Finishing	SU, EF	LM,SH	SS	MQ,GU	ZF1	MF	FP,FS,LF	MF2	NF4,FM5	F3M
	Light to Medium Cut	EX, EG	GM,MS	SF,SA	MS, MU	ZP	23	MS	MF1,M1	MM5	TF,VL
		GU	MM	SM			MM, SMR	MP	MF3,M3	NM4,MS3	M3M,PP
	Roughing	HM	ES,1M,2M	S				UP	MF4, MF5	NR4, RM5	
EM, MU		GH,RM,HM	SH	TK		MR, MRR		M5,MR3	HU5	MR,R3M	
K	Light Cut	UZ	LK,MA,MK	CM,CF	Standard		KF	UN	M5	NM5	GN
	Medium Cut	GZ □UX□	GH,RK,GK	Standard,CH,33	ZS,GC,KG,KH		KM,KR		MR7	RK5, RK7	
N	Finishing	AX		P	AH			MS			
S	Finishing	EF	LS,FJ	HRF			SF, SGF			NFT	F3S
	Medium Cut	EG, EX	MJ,MS	HMM,SA	SQ		SM, SMC		M1	NMT,NMS	VL
	Roughing	MU	GJ,RS		SG,SX		SMR		MR3,MR4	NRT,HU5	
H	Finishing	FV, GH		HP*							
	Light Cut	LV	BF	HF*	HH*,HL*						
	Carburized Layer Removal	SV	BM	HM*	HD*						

* CBN/PCD tool breaker

■ Positive Type

Class	Application	Sumitomo Electric	Mitsubishi	Tungaloy	Kyocera	NTK	Sandvik	Kennametal	SECO Tools	WALTER	ISCAR
P	Finishing	FC	FJ,AM	01, JRP,JTS	CF,GF,VF	AM3,AZ7,FG	UM		GT-F1	FM4	
		FB, LU (FP, FK)	FP,FM,FV,SQ	PSF,PF,23	GP,XP,MP,PP	ZR	PF,UF,MF,KF	11,UF,MF,KF,XF	FF1	PF4	PF
	Wiper Edge	LUW	SW		WP		WF	FW	W-F1	PF	WF
		SDW					WK,WM	MW	W-F2		WG
	Finishing to Light Cut	SI	SMG	JS,CM,PSS	CK,SKS	YL,1L					
	Light to Medium Cut	LB	LP,LM,SV,MQ	PSS,PS,24	XQ	AM2		LF			
SC				GQ,SK,standard	AF1,CL		MP	MF2			
Medium Cut	SU, GU	SV,MQ	PS,TSF,TM	HQ,XQ,GK	AZ8,AM2,AM5	PM,UM,XM		F1	MP4,MM4,FK6	SM, 14	
M	Finishing	FC	FM,FV	PSF,PF,SS,JSS		AZ7	MF,XF	11,UF	FF1	FM4	PF
	Finishing to Light Cut	SI	SMG			YL,1L,CL	UF	LF,FP			
		LB	LM		MQ				F1		
	Light to Medium Cut	SU, GU	SV		HQ	AM5	MM	MP	MF2	MM4,PS5	SM
Medium Cut	MU	NM,MV	PM			UM,MR,XR,UR	MF	F2,M3,M5	PM5,RM4		
K	Finishing	FC		CF			KF,XF	11,UF		FK6	
	Light to Medium Cut	MU	MK			AF1,FM	KM,UM,XR	FP,LF,MF,MP	M5	MK4,RK4	
N	Finishing	AG,AW,AY	AZ	AL,PP	AH,AP		AL	HP	AL	PM2	AS,AF
	Finishing to Light Cut	LD, GD									
S	Finishing	FC, SI	FS	PSS	PP,MQ		WF,MF		MF2,R2,R3		
	Light to Medium Cut	SU, GU	LS,MS	PS,PM	HQ,GK		UM,PM			FV4,MV4	
H	Finishing	FV		HP*							
	Light Cut	LV	BF*								

Inserts

C

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Chipbreaker Application

Bumpy Breaker	Standard Breaker	Handed Breaker
Break Master (CBN/PCD)	For Chamfering	

Negative Type

Finishing to Medium Cutting

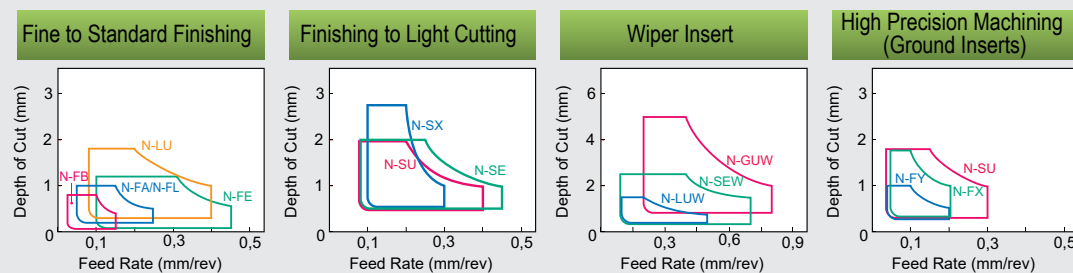
Fine Finishing	N-FB P M K N S H Better chipcontrol under low feed conditions with sharp edge shape. 0,80 $\alpha = 0^\circ$ CNMG1204-0-NFB 	N-FA P M K N S H Profile breaker perfect for fine finishing 1,0 20° $\alpha = 0^\circ$ CNMG1204-0-NFA
	N-FL P M K N S H Optimal breaker for chip management on iron sheeting 1,0 10° $\alpha = 0^\circ$ CNMG1204-0-NFL 	N-FE P M K N S H Good chipcontrol from low to high feed rate 1,40 0,70 20° $\alpha = 0^\circ$ CNMG1204-0-NFE

Breaker Code	N-GU P M K N S H	Work Material
Appearance		Characteristics
Relief angle	$\alpha = 0^\circ$	Cross Section
Stock Items		Cross Section Cat. No.

Finishing	N-LU P M K N S H Effective chip management for fluctuating cut depths and copying 1,5 1,0 10° $\alpha = 0^\circ$ CNMG1204-0-NLU 	N-SP P M K N S H Shows excellent cutting performance in finishing to light cutting 1,3 13° $\alpha = 0^\circ$ CNMG1204-0-NSP 	N-SU P M K N S H Effective in high-speed fine finishing 1,3 13° $\alpha = 0^\circ$ CNMG1204-0-NSU 	N-SE P M K N S H Finishing breaker reduces tool wear on rake face. Effective even for high efficiency machining. 0,1 1,5 17° 5° $\alpha = 0^\circ$ CNMG1204-0-NSE 	N-EF P M K N S H Chipbreaker for exotic alloy finishing with excellent chip management 1,2 20° $\alpha = 0^\circ$ CNMG1204-0-NEF
	NLU-W P M K N S H High performance finishing breaker with wiper edge 1,5 1,0 10° $\alpha = 0^\circ$ CNMG1204-0-NLUW Wiper 	NSE-W P M K N S H New high feed finishing breaker with wiper edge 0,13 1,9 17° 5° $\alpha = 0^\circ$ CNMG1204-0-NSEW Wiper 	L/R-FX P M K N S H Parallel breaker with superior sharp edge 1,5 14° $\alpha = 0^\circ$ TNGG1604-0-LRFX 	L/R-FY P M K N S H Wide type breaker with sharp edge 2,5 15° $\alpha = 0^\circ$ TNGG1604-0-LRFY 	L/R-FT P M K N S H Arc-shaped ground type finishing breaker 0,15 1,35 $\alpha = 0^\circ$ TNGG1103-0-LRFT

Light to Medium	N-SJ P M K N S H Standard breaker with excellent cutting edge strength 0,18 1,2 $\alpha = 0^\circ$ SNMG1204-0-NSJ 	L/R-ST P M K N S H Arc-shaped ground type breaker for light cutting 0,15 1,65 $\alpha = 0^\circ$ TNGG1603-0-LRST
	N-EX P M K N S H Standard breaker designed especially for use with exotic alloys 2,0 16° $\alpha = 0^\circ$ CNMG1204-0-NEX 	N-UP P M K N S H Double positive edge for optimal stainless steel cutting 2,1 10° $\alpha = 0^\circ$ CNMG1204-0-NUP

Chipbreaker Application Range (Insert IC up to $\varnothing 12,7$ mm)



Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

Bumpy Breaker	Standard Breaker	Handed Breaker
Break Master (CBN/PCD)	For Chamfering	

Chipbreaker Application

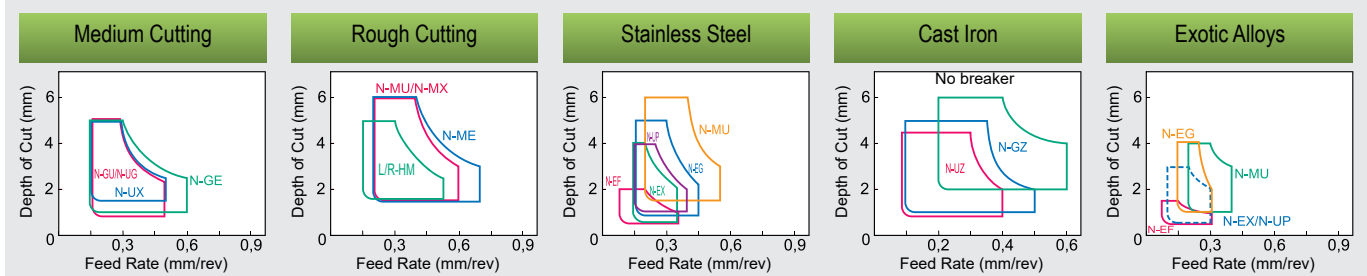
Negative Type

Medium to Rough Cutting

Medium	N-GU Features low cutting resistance and excellent wear resistance $\alpha = 0^\circ$ 	N-GE A versatile breaker with excellent rake surface wear in high efficiency cutting $\alpha = 0^\circ$ 	N-UX Extremely reliable and versatile breaker with strong cutting edge $\alpha = 0^\circ$ 	N-UG Popular and versatile breaker $\alpha = 0^\circ$
	N-EG General-purpose chipbreaker for exotic alloys with good chip control and wear resistance $\alpha = 0^\circ$ 	NGU-W Finishing breaker with wiper edge for high efficiency medium finishing $\alpha = 0^\circ$ 	L/R-UM General-purpose ground type medium cutting breaker $\alpha = 0^\circ$ 	

Medium to Rough	N-EM Achieves excellent fracture and crater resistance $\alpha = 0^\circ$ 	N-MU Economical, double-sided breaker with low cutting resistance for high feed cutting $\alpha = 0^\circ$ 	N-ME Chipbreaker for rough cutting that supports high-feed cutting with reduced rake face wear $\alpha = 0^\circ$ 	N-MX Strong cutting edge for interrupted cutting $\alpha = 0^\circ$
	N-UZ Standard breaker with stable cutting performance $\alpha = 0^\circ$ 	N-GZ Extremely reliable standard breaker with strong cutting edge $\alpha = 0^\circ$ 	L/R-HM Wide, M class, handed breaker with low cutting resistance for medium to rough cutting $\alpha = 0^\circ$ 	

Chipbreaker Application Range (Insert IC up to $\varnothing 12,7$ mm)



Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

Inserts

C

D

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Chipbreaker Application

Bumpy Breaker	Standard Breaker	Handed Breaker
SUMIBORON Break Master	For Chamfering	

Negative Type

Rough Cutting

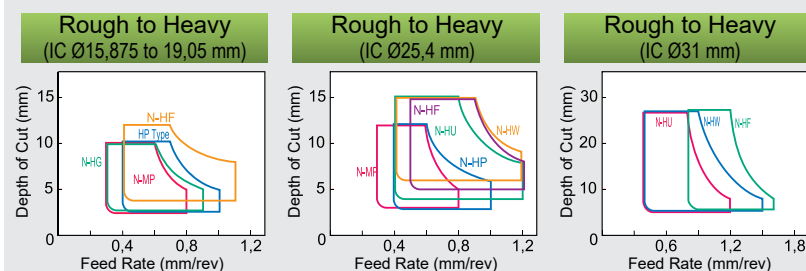
Rough to Heavy	N-HG <p>Excellent chip management for heavy cutting</p> <p>CNMM1606--NHG</p>	N-MP <p>Single-sided breaker with low cutting resistance for rough cutting</p> <p>CNMM1606--NMP</p>	N-HP <p>Strongest cutting edge for heavy cutting</p> <p>CNMM1606--NHP</p>
	N-HU <p>Strong edges and excellent chip management for heavy cutting</p> <p>SNMM2507--NHU</p>	N-HW <p>Two step breaker with excellent chip evacuation for heavy cutting</p> <p>SNMM3109--NHW</p>	N-HF <p>Strong edge chipbreaker for heavy cutting with excellent chip evacuation even in high-feed cutting</p> <p>SNMM1906--NHF</p>

Negative Type





For Hardened Steel

Finishing	N-GH <p>For cutting hardened steel with low cutting force and excellent chip control</p> <p>CNMG1204--NGH</p>
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Chipbreaker Application Range


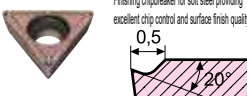

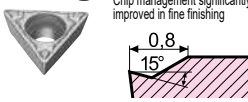

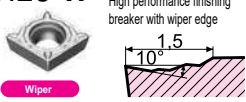

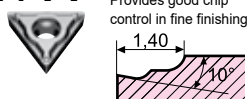

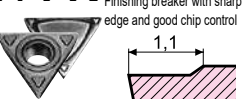

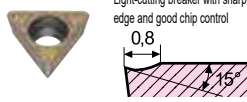

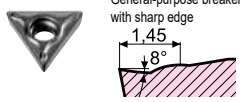

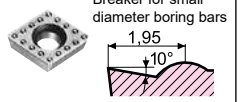

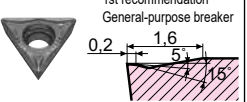

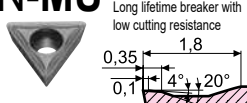

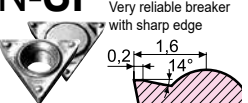


Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).


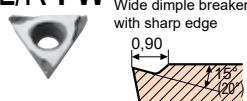

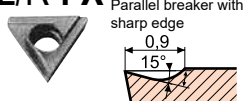

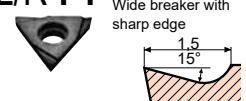

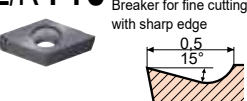

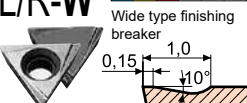

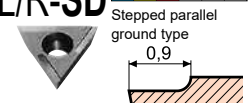

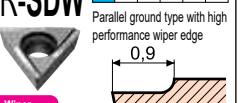
 Bumpy Breaker	 Standard Breaker	 Handed Breaker
 Break Master (CBN/PCD)		

Chipbreaker Application

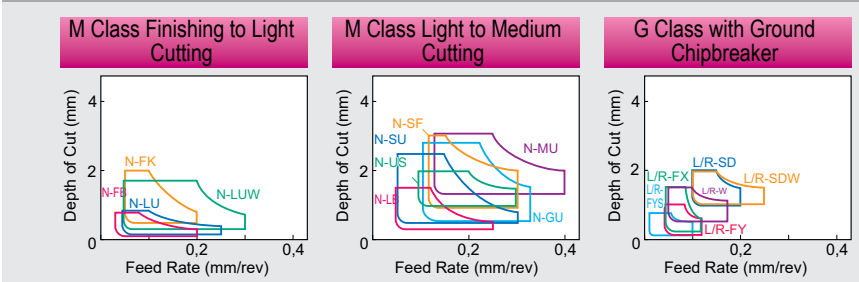
Positive Type Medium to Rough Cutting

Finish to Light	N-FB  Finishing chipbreaker for soft steel providing excellent chip control and surface finish quality.  $\alpha = 5^\circ, 7^\circ, 11^\circ$ CCMT09T3--NFB	N-LU  Chip management significantly improved in fine finishing.  $\alpha = 5^\circ, 7^\circ, 11^\circ$ CCMT09T3--NLU	NLU-W  High performance finishing breaker with wiper edge.  $\alpha = 7^\circ, 11^\circ$ CCMT09T3--NLUW	N-FP  Provides good chip control in fine finishing.  $\alpha = 7^\circ$ CCMT09T3--NFP	N-FK  Finishing breaker with sharp edge and good chip control.  $\alpha = 11^\circ$ TPMT1604--NFK	
	Light to Medium	N-LB  Light-cutting breaker with sharp edge and good chip control.  $\alpha = 5^\circ, 7^\circ, 11^\circ$ CCMT09T3--NLB	N-SU  General-purpose breaker with sharp edge.  $\alpha = 5^\circ, 7^\circ, 11^\circ$ TPMT1103--NSU	N-US  Breaker for small diameter boring bars.  $\alpha = 11^\circ$ CPMH0903--NSU	N-UG  1st recommendation General-purpose breaker.  $\alpha = 5^\circ, 7^\circ, 11^\circ$ CCMT09T3--NUG	
		N-MU  Long lifetime breaker with low cutting resistance.  $\alpha = 7^\circ, 11^\circ$ TPMT1604--NMU	N-SF  Very reliable breaker with sharp edge.  $\alpha = 11^\circ$ TPMT1604--NSF			

Positive Type G Class with Ground Chipbreaker

Finish to Light	L/R-FW  Wide dimple breaker with sharp edge.  $\alpha = 5^\circ, 11^\circ$ TPMT1102--LRFW	L/R-FX  Parallel breaker with sharp edge.  $\alpha = 5^\circ, 7^\circ, 11^\circ$ TPGT1103--LRFX	L/R-FY  Wide breaker with sharp edge.  $\alpha = 5^\circ, 7^\circ, 11^\circ$ TPGT1103--LRFY	L/R-FYS  Breaker for fine cutting with sharp edge.  $\alpha = 5^\circ, 7^\circ$ CCGT04X1--LRFYS
	L/R-W  Wide type finishing breaker.  $\alpha = 5^\circ, 11^\circ$ TPGT1103--LRW	L/R-SD  Stepped parallel ground type.  $\alpha = 7^\circ, 11^\circ$ TPGT1103--LRNSD	L/R-SDW  Parallel ground type with high performance wiper edge.  $\alpha = 11^\circ$ TPGX1103--LRSDW	

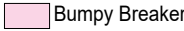



Chipbreaker Application Range



Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).










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Chipbreaker Application

 Bumpy Breaker	 Standard Breaker	 Handed Breaker
 SUMIBORON Break Master		







Positive Type

G Class

Finish to Light	N-FC*  Peripheral grinding 3D breaker with good chip control and sharp edge  $\alpha = 7^\circ, 11^\circ$ CCGT09T3---NFC	N-SI*  Sharper-edge breaker for a wide range of cutting applications from finishing to light cutting  $\alpha = 7^\circ$ CCGT09T3---NSI	N-SC*  Two step breaker for light cutting  $\alpha = 7^\circ$ TCGT1103---NSC	* Remarks: N-FC, N-SI and N-SC have minus tolerance indicated by "M" after the nose radius. Example: DCGT 11T302 M NSI AC520U
				










Positive Type

Round Inserts

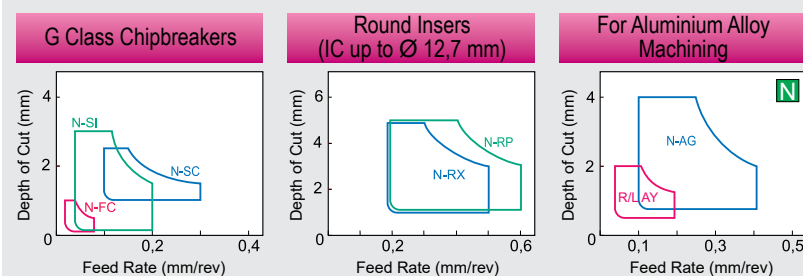
Round	N-RX  Round, bumpy type insert with excellent chip management  $\alpha = 7^\circ$ RCMX1606MON-RX	N-RP  Standard breaker for copying  $\alpha = 7^\circ$ RCMX1606MON-RP
		

Positive Type

For Al - Alloy Machining

Finishing	N-AG  Al breaker for mirror finish and anti-adhesion  $\alpha = 7^\circ$ CCGT09T3---NAG	N-AW  Finishing Al breaker with sharp edge  $\alpha = 7^\circ$ VCGT1604---NAW	R/L-AY  Al breaker for excellent machined surface quality  $\alpha = 5^\circ, 7^\circ, 11^\circ$ CCGT09T3---AY
			

Chipbreaker Application Range

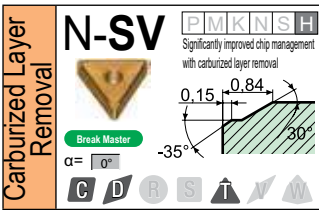
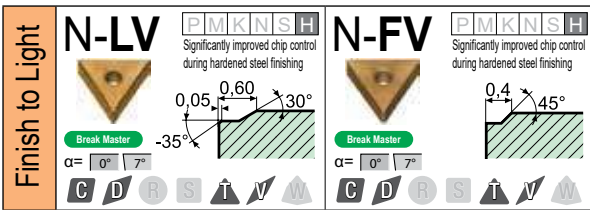


Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

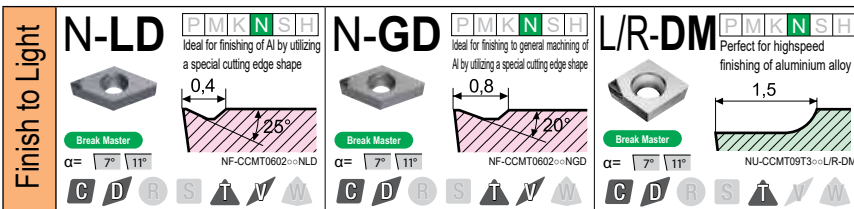
Chipbreaker Application

Bumpy Breaker
 Standard Breaker
 Handed Breaker

SUMIBORON Insert CBN



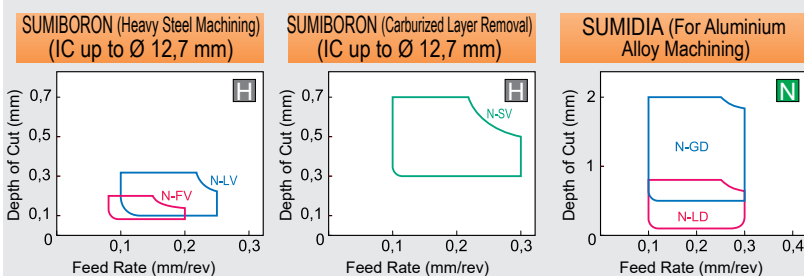
SUMIDIA Insert PCD



Inserts

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-
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Chipbreaker Application Range



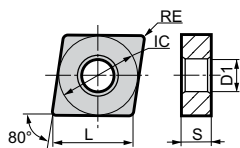
Indicated chipbreaker application ranges and shapes are representative values only. Actual values may change according to the actual catalogue number. For details, refer to stock pages (from Chapter B onward).

C DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)					
CN	L	IC	S	D ₁	
0903..	9,7	9,525	3,18	3,81	
0904..	9,7	9,525	3,18	3,81	
1204..	12,9	12,7	4,76	5,16	



⇨ D12, D18
D41

⇨ E8

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

CNMG

Carbide											Cermets		Carbide												
Coated											Coated		Uncoated												
P	M	F _M	K	H	S	P _M	P	K	S	N															
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class, Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1			
Fine Finishing	 NFB	CNMG 090304 NFB CNMG 090308 NFB CNMG 090404 NFB CNMG 090408 NFB	0,4																													
			0,8																													
			0,4																													
			0,8																													
Fine Finishing	 NFA	CNMG 120402 NFA CNMG 120404 NFA CNMG 120408 NFA	0,2																													
			0,4																													
			0,8																													
Fine Finishing	 NFL	CNMG 090308 NFL CNMG 120404 NFL CNMG 120408 NFL	0,8																													
			0,4																													
			0,8																													
Fine Finishing	 NFE	CNMG 090304 NFE CNMG 090308 NFE CNMG 090404 NFE CNMG 090408 NFE	0,4																													
			0,8																													
			0,4																													
			0,8																													
			0,8																													
			1,2																													
Finishing	 NLU	CNMG 090304 NLU CNMG 090308 NLU	0,4																													
			0,8																													
			0,2																													
			0,4																													
			0,8																													
			1,2																													
Finishing	 NLU-W	CNMG 120404 NLU-W CNMG 120408 NLU-W CNMG 120412 NLU-W	0,4																													
			0,8																													
			1,2																													
			1,2																													
Finishing	 NEF	CNMG 090404 NEF CNMG 090408 NEF	0,4																													
			0,8																													
			0,4																													
			1,2																													

● = Euro stock
○ = Stock item in Japan

Neg. Inserts

C

D

K

R

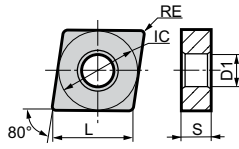
S

T

V

W

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)					
CN	L	IC	S	D ₁	
0903..	9,7	9,525	3,18	3,81	
0904..	9,7	9,525	3,18	3,81	
09T3..	9,7	9,525	3,97	3,81	
1204..	12,9	12,7	4,46	5,16	
1606..	16,1	15,875	6,35	6,35	



⇨ D12, D18
D41

⇨ E8

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

CNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide			
				Coated										Coated	Uncoated	Uncoated			
				P	M	M	K	H	S	P	M	P	K	S	N				
Finishing	<p>NSU</p> <p>Depth of cut (mm) vs Feed rate (mm/rev) graph</p>	CNMG 090304 NSU	0,4	○	●	●	●	●	●	●	●	●	●	●	●	●			
		CNMG 090308 NSU	0,8	●	○	○	○	○	○	○	○	○	○	○	○	○	○		
		CNMG 09T304 NSU	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
		CNMG 09T308 NSU	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
		CNMG 090404 NSU	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
		CNMG 090408 NSU	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
		CNMG 090412 NSU	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
		CNMG 120402 NSU	0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
		CNMG 120404 NSU	0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
		CNMG 120408 NSU	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
		CNMG 120412 NSU	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
		Finishing	<p>NSE</p> <p>Depth of cut (mm) vs Feed rate (mm/rev) graph</p>	CNMG 120404 NSE	0,4	●	●	●	○	○	○	○	○	○	○	○	○	○	
CNMG 120408 NSE	0,8			●	●	●	○	○	○	○	○	○	○	○	○	○	○		
CNMG 120412 NSE	1,2			●	●	●	○	○	○	○	○	○	○	○	○	○	○		
CNMG 090404 NSE-W	0,4			○	○	○	○	○	○	○	○	○	○	○	○	○	○		
CNMG 090408 NSE-W	0,8			○	○	○	○	○	○	○	○	○	○	○	○	○	○		
CNMG 120404 NSE-W	0,4			●	●	○	○	○	○	○	○	○	○	○	○	○	○		
CNMG 120408 NSE-W	0,8			●	●	○	○	○	○	○	○	○	○	○	○	○	○		
CNMG 120412 NSE-W	1,2			○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Finishing	<p>NSX</p> <p>Depth of cut (mm) vs Feed rate (mm/rev) graph</p>			CNMG 120404 NSX	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	
				CNMG 120408 NSX	0,8	●	●	●	○	○	○	○	○	○	○	○	○	○	○
				CNMG 120412 NSX	1,2	●	○	○	○	○	○	○	○	○	○	○	○	○	○
				Medium Cut	<p>NGU</p> <p>Depth of cut (mm) vs Feed rate (mm/rev) graph</p>	CNMG 090304 NGU	0,4	○	○	●	○	○	○	○	○	○	○	○	○
		CNMG 090308 NGU	0,8			○	○	●	○	○	○	○	○	○	○	○	○	○	○
		CNMG 090404 NGU	0,4			○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMG 090408 NGU	0,8			○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMG 090412 NGU	1,2			○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMG 120404 NGU	0,4			●	●	●	●	●	○	○	○	○	○	○	○	○	○
		CNMG 120408 NGU	0,8			●	●	●	●	●	○	○	○	○	○	○	○	○	○
		CNMG 120412 NGU	1,2			●	●	●	●	●	○	○	○	○	○	○	○	○	○
		CNMG 120416 NGU	1,6			○	○	○	○	○	○	○	○	○	○	○	○	○	○
CNMG 160608 NGU	0,8	●	●			○	○	○	○	○	○	○	○	○	○	○	○		
CNMG 160612 NGU	1,2	●	●			○	○	○	○	○	○	○	○	○	○	○	○		
CNMG 160616 NGU	1,6	●	●			○	○	○	○	○	○	○	○	○	○	○	○		
CNMG 120408 NGU-W	0,8	●	●	○	○	○	○	○	○	○	○	○	○	○	○				
CNMG 120412 NGU-W	1,2	●	●	○	○	○	○	○	○	○	○	○	○	○	○				
CNMG 160612 NGU-W	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○				

● = Euro stock
○ = Stock item in Japan

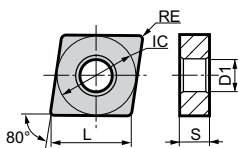
- Neg. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

C DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
CN	L	IC	S	D ₁
0903..	9,7	9,525	3,18	3,81
0904..	9,7	9,525	3,18	3,81
09T3..	9,7	9,525	3,97	3,81
1204..	12,9	12,7	4,46	5,16
1606..	16,1	15,875	6,35	6,35
1906..	19,3	19,05	6,35	7,94



⇨ D12, D18
D41

⇨ E8

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

CNMG

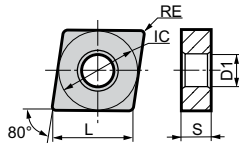
Carbide										Cermets		Carbide													
Coated										Coated		Uncoated													
P	M	F _M	K	H	S	P _M	P	K	S	N															
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1							
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	NGE	CNMG 120404 NGE	0,4	●	●	●	●																													
		CNMG 120408 NGE	0,8	●	●	●	●																													
		CNMG 120412 NGE	1,2	●	●	●	●																													
		CNMG 120416 NGE	1,6	●	●	●	○																													
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	NUG	CNMG 160608 NGE	0,8	○	○	○	○																													
		CNMG 160612 NGE	1,2	●	●	●	●																													
		CNMG 160616 NGE	1,6	●	●	●	●																													
		CNMG 190612 NGE	1,2	●	●	●	○																													
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	NEG	CNMG 190616 NGE	1,6	○	●	●	○																													
		CNMG 090304 NUG	0,4			○	○																													
		CNMG 090308 NUG	0,8			○	○																													
		CNMG 090404 NUG	0,4			○	○																													
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	NEX	CNMG 090408 NUG	0,8			○	○																													
		CNMG 09T304 NUG	0,4			○	○																													
		CNMG 09T308 NUG	0,8			○	○																													
		CNMG 120404 NUG	0,4	●	●	●	●																													
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	NEX	CNMG 120408 NUG	0,8	●	●	●	●																													
		CNMG 120412 NUG	1,2	●	●	●	●																													
		CNMG 120416 NUG	1,6	●	●	●	○																													
		CNMG 160608 NUG	0,8	○	●	●	○																													
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	NEX	CNMG 160612 NUG	1,2	○	●	●	○																													
		CNMG 160616 NUG	1,6	○	○	○	○																													
		CNMG 190608 NUG	0,8	○	○	○	○																													
		CNMG 190612 NUG	1,2	○	○	○	○																													
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	NEX	CNMG 190616 NUG	1,6	○	○	○	○																													
		CNMG 120404 NEX	0,4																																	
		CNMG 120408 NEX	0,8																																	
		CNMG 120412 NEX	1,2																																	
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	NEX	CNMG 160612 NEX	1,2																																	
		CNMG 190612 NEX	1,2																																	

● = Euro stock
○ = Stock item in Japan

80° Diamond Type 0° Relief
With Insert Hole



CN	Dimensions (mm)			
	L	IC	S	D ₁
1204..	12,9	12,7	4,46	5,16
1606..	16,1	15,875	6,35	6,35
1906..	19,3	19,05	6,35	7,94
2509..	25,8	25,4	9,52	9,2



- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel



● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide		
				Coated										Coated	Uncoated	Uncoated		
				P	M	P	K	H	S	P	M	P	K	S	N			
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	 NUP	CNMG 120404 NUP	0,4	●	●	●	●	●	●	●	●	●	●	●	●	●		
		CNMG 120408 NUP	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120412 NUP	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160612 NUP	1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	 NEM	CNMG 120408 NEM	0,8	○	●	●	●	●	●	●	●	●	●	●	●	●		
		CNMG 120412 NEM	1,2	○	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 120416 NEM	1,6	○	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160608 NEM	0,8	○	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160612 NEM	1,2	○	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 160616 NEM	1,6	○	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190612 NEM	1,2	○	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190616 NEM	1,6	○	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNMG 190624 NEM	2,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		CNMG 250924 NEM	2,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Stock item in Japan

Neg. Inserts

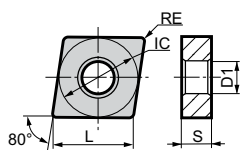


C DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)					
CN	L	IC	S	D ₁	
1204..	12,9	12,7	4,76	5,16	
1606..	16,1	15,875	6,35	6,35	
1906..	19,3	19,05	6,35	7,94	
2509..	25,8	25,4	9,52	9,2	



⇨ D12, D18
D41

⇨ E8

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

CNMG

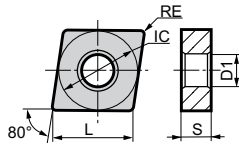
	Carbide													Cermets		Carbide															
	Coated													Coated	Uncoated	Uncoated															
	P	P	M	M	K	H	S	P	P	K	S	N	P	Uncoated	K	S	N														
Application	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1					
RE	0,8	1,2	1,6	0,8	1,2	1,6	0,8	1,2	1,6	2,4	2,4	0,8	1,2	1,6	2,4	0,8	1,2	1,6	2,4	0,8	1,2	1,6	2,4	0,8	1,2	1,6	2,4	0,8	1,2	1,6	2,4
Depth of cut (mm)	8	6	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Feed rate (mm/rev)	0,2	0,4	0,6	0,2	0,4	0,6	0,2	0,4	0,6	0,2	0,4	0,6	0,2	0,4	0,6	0,2	0,4	0,6	0,2	0,4	0,6	0,2	0,4	0,6	0,2	0,4	0,6	0,2	0,4	0,6	

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE		
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NMU	CNMG 120408 NMU	0,8		
		CNMG 120412 NMU	1,2		
		CNMG 120416 NMU	1,6		
		CNMG 160608 NMU	0,8		
		CNMG 160612 NMU	1,2		
		CNMG 160616 NMU	1,6		
		CNMG 190608 NMU	0,8		
		CNMG 190612 NMU	1,2		
		CNMG 190616 NMU	1,6		
		CNMG 190624 NMU	2,4		
		CNMG 250924 NMU	2,4		
		Roughing Depth of cut (mm) Feed rate (mm/rev)	 NME	CNMG 120408 NME	0,8
CNMG 120412 NME	1,2				
CNMG 120416 NME	1,6				
CNMG 160608 NME	0,8				
CNMG 160612 NME	1,2				
CNMG 160616 NME	1,6				
CNMG 190612 NME	1,2				
CNMG 190616 NME	1,6				
CNMG 190624 NME	2,4				
CNMG 250924 NME	2,4				
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NUX			CNMG 090304 NUX	0,4
				CNMG 090308 NUX	0,8
		CNMG 120404 NUX	0,4		
		CNMG 120408 NUX	0,8		
		CNMG 120412 NUX	1,2		
		CNMG 120416 NUX	1,6		
		CNMG 160608 NUX	0,8		
		CNMG 160612 NUX	1,2		
		CNMG 160616 NUX	1,6		
		CNMG 190608 NUX	0,8		
		CNMG 190612 NUX	1,2		
		CNMG 190616 NUX	1,6		
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NMX	CNMG 120408 NMX	0,8		
		CNMG 120412 NMX	1,2		
		CNMG 120416 NMX	1,6		
		CNMG 160608 NMX	0,8		
		CNMG 160612 NMX	1,2		
		CNMG 160616 NMX	1,6		
CNMG 190612 NMX	1,2				
CNMG 190616 NMX	1,6				

● = Euro stock
○ = Stock item in Japan

80° Diamond Type 0° Relief
With Insert Hole



CN	Dimensions (mm)			
	L	IC	S	D ₁
0904..	9,7	9,525	3,18	3,81
1204..	12,9	12,7	4,76	5,16
1606..	16,1	15,875	6,35	6,35
1906..	19,3	19,05	6,35	7,94



⇨ D12, D18
D41

⇨ E8

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel



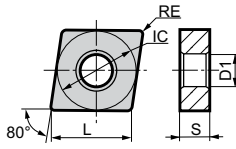
● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide															
				Coated													Coated	Uncoated	Uncoated															
				P	M	M	K	H	S	S	P	M	P	K	S	N																		
Roughing Depth of cut (mm) 6 4 2 0 0,2 0,4 0,6 0,8 Feed rate (mm/rev) NGZ	ISO 090408 NGZ ISO 120404 NGZ ISO 120408 NGZ ISO 120412 NGZ ISO 120416 NGZ ISO 160608 NGZ ISO 160612 NGZ ISO 160616 NGZ ISO 190612 NGZ ISO 190616 NGZ	0,8 1,2 0,4 0,8 1,2 1,6 0,8 1,2 1,6 1,2 1,6	● ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC500S	AC501S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1					
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
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				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Stock item in Japan



80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
CN	L	IC	S	D ₁
1906..	19,3	19,05	6,35	7,94
2509..	25,8	25,4	9,52	9,2



⇨ D12, D18

⇨ E8

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

CNMM

● M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Heavy Roughing		CNMM 190616 NHU CNMM 190624 NHU	1,6 2,4
		CNMM 250924 NHU	2,4
		CNMM 250924 NHW	2,4
Heavy Roughing		CNMM 190616 NHF CNMM 190624 NHF	1,6 2,4
		CNMM 250924 NHF	2,4
		CNMM 250932 NHF	3,2

Carbide													Cermet		Carbide											
Coated													Coated	Uncoated	Uncoated											
P	M	M	P	K	H	S	P	M	P	K	S	N														
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC505S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1	
●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

- Neg. Inserts
- -
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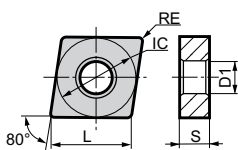
● = Euro stock
 ○ = Stock item in Japan

C DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

80° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)					
CN	L	IC	S	D ₁	
1204..	12,9	12,7	4,76	5,16	
1606..	16,1	15,875	6,35	6,35	
1906..	19,3	19,05	6,35	7,94	



⇨ D12, D18

⇨ E8

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

CNMA / CNGA / CNMX

Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide															
				Coated										Coated	Uncoated	Uncoated															
				P	M	F _M	K	H	S	P _M	P	K	S	N																	
Roughing		CNMA 120404	0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
		CNMA 120408	0,8																												
		CNMA 120412	1,2																												
		CNMA 120416	1,6																												
		CNMA 160608	0,8																												
		CNMA 160612	1,2																												
		CNMA 160616	1,6																												
		CNMA 190612	1,2																												
		CNMA 190616	1,6																												
Medium Cut		CNGA 120402	0,2																												
		CNGA 120404	0,4																												
		CNGA 120408	0,8																												
Heavy Roughing		CNMX 120408 L	0,8		●	●																									
		CNMX 120408 R	0,8		●	●																									

CNGG

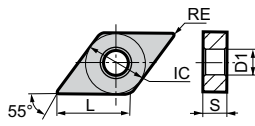
Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide															
				Coated										Coated	Uncoated	Uncoated															
				P	M	F _M	K	H	S	P _M	P	K	S	N																	
Finishing		CNGG 120402 NSU	0,2	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
		CNGG 120404 NSU	0,4																												
		CNGG 120408 NSU	0,8																												
Finishing		CNGG 120402 NGH	0,2																												
		CNGG 120404 NGH	0,4																												
		CNGG 120408 NGH	0,8																												
Finishing		CNGG 120402 NEF	0,2																												
		CNGG 120404 NEF	0,4																												
		CNGG 120408 NEF	0,8																												
For Aluminum		CNGG 120402 LAX	0,2																												
		CNGG 120404 LAX	0,4																												
		CNGG 120408 LAX	0,8																												
		CNGG 120402 RAX	0,2																												
CNGG 120404 RAX	0,4																														
CNGG 120408 RAX	0,8																														

● G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Finishing		CNGG 120402 NSU	0,2
		CNGG 120404 NSU	0,4
		CNGG 120408 NSU	0,8
Finishing		CNGG 120402 NGH	0,2
		CNGG 120404 NGH	0,4
		CNGG 120408 NGH	0,8
Finishing		CNGG 120402 NEF	0,2
		CNGG 120404 NEF	0,4
		CNGG 120408 NEF	0,8
For Aluminum		CNGG 120402 LAX	0,2
		CNGG 120404 LAX	0,4
		CNGG 120408 LAX	0,8
		CNGG 120402 RAX	0,2
CNGG 120404 RAX	0,4		
CNGG 120408 RAX	0,8		

● = Euro stock
 ○ = Stock item in Japan

55° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
DN	L	IC	S	D ₁
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇨ D13, D19
D41

⇨ E9

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

DNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide										Cermets		Carbide						
				Coated										Coated	Uncoated	Uncoated						
				P	M	M	K	H	S	P	P	K	S	N								
Fine Finishing	 NFB	DNMG 110404 NFB DNMG 110408 NFB DNMG 150404 NFB DNMG 150408 NFB DNMG 150604 NFB DNMG 150608 NFB	0,4																			
			0,8																			
			0,4																			
Fine Finishing	 NFA	DNMG 150404 NFA DNMG 150408 NFA DNMG 150604 NFA DNMG 150608 NFA	0,4																			
			0,8																			
			0,4																			
Fine Finishing	 NFL	DNMG 150404 NFL DNMG 150408 NFL DNMG 150412 NFL DNMG 150604 NFL DNMG 150608 NFL	0,4																			
			0,8																			
			1,2																			
Fine Finishing	 NFE	DNMG 110404 NFE DNMG 110408 NFE DNMG 110412 NFE DNMG 150402 NFE DNMG 150404 NFE DNMG 150408 NFE DNMG 150412 NFE DNMG 150602 NFE DNMG 150604 NFE DNMG 150608 NFE DNMG 150612 NFE	0,4																			
			0,8																			
			1,2																			
Finishing	 NLU	DNMG 110404 NLU DNMG 110408 NLU DNMG 150402 NLU DNMG 150404 NLU DNMG 150408 NLU DNMG 150412 NLU DNMG 150604 NLU DNMG 150608 NLU DNMG 150612 NLU	0,4																			
			0,8																			
			0,4																			

● = Euro stock
 ○ = Stock item in Japan

Neg. Inserts

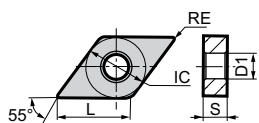


DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

55° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
DN	L	IC	S	D ₁
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇨ D13, D19
D41

⇨ E9

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

DNMG

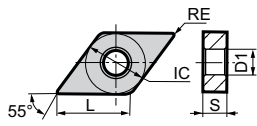
Carbide											Cermert		Carbide	
Coated											Coated	Uncoated	Uncoated	
P	M	K	H	S	F _M	M	K	H	S	F _M	P	K	S	N

M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC505S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1				
Finishing		DNMG 110404 NEF	0,4	●	●	●	●	●	●	●						○	○	○	○														
		DNMG 110408 NEF	0,8	●	●	●	●	●	●	●	●						○	○	○	○													
		DNMG 110412 NEF	1,2	○	○	○	○	○	○	○	○							○	○	○	○												
		DNMG 150404 NEF	0,4	○	○	○	○	○	○	○	○	●						○	○	○	○								●	●			
		DNMG 150408 NEF	0,8	○	○	○	○	○	○	○	○	●						○	○	○	○								●	●			
		DNMG 150412 NEF	1,2	○	○	○	○	○	○	○	○	○						○	○	○	○												
Finishing		DNMG 110404 NSU	0,4	●	●	●	○	○	○	○							○	○	○														
		DNMG 110408 NSU	0,8	●	●	●	○	○	○	○								○	○	○													
		DNMG 110412 NSU	1,2	○	○	○	○	○	○	○	○								○	○	○												
		DNMG 150402 NSU	0,2					○	○	○	○							○	○	○													
		DNMG 150404 NSU	0,4					○	○	○	○							○	○	○													
		DNMG 150408 NSU	0,8					○	○	○	○							○	○	○													
Finishing		DNMG 110408 NSE	0,8	●	○	○	○																										
		DNMG 150404 NSE	0,4	●	○	○	○																○	○	○	○	○	○	○	○	○	○	
		DNMG 150408 NSE	0,8	○	○	○	○																○	○	○	○	○	○	○	○	○	○	○
		DNMG 150412 NSE	1,2	○	○	○	○																○	○	○	○	○	○	○	○	○	○	○
		DNMG 150604 NSE	0,4	●	●	●	●											○	○	○													
		DNMG 150608 NSE	0,8	●	●	●	●											○	○	○													
Finishing		DNMG 150404 NSX	0,4	○	○	○	○															○	○	○									
		DNMG 150408 NSX	0,8	○	○	○	○																○	○	○								
		DNMG 150412 NSX	1,2	○	○	○	○																○	○	○								
		DNMG 150604 NSX	0,4																				○	○	○								
		DNMG 150608 NSX	0,8	●																			○	○	○								
																							○	○	○								
Medium Cut		DNMG 110404 NGU	0,4	●	●	●	○	○	○	○																							
		DNMG 110408 NGU	0,8	●	●	●	○	○	○	○																							
		DNMG 110412 NGU	1,2	○	○	○	○	○	○	○	○																						
		DNMG 150404 NGU	0,4	○	○	○	○	○	○	○	○							○	○	○													
		DNMG 150408 NGU	0,8	○	○	○	○	○	○	○	○							○	○	○													
		DNMG 150412 NGU	1,2	○	○	○	○	○	○	○	○							○	○	○													

● = Euro stock
○ = Stock item in Japan

55° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
DN	L	IC	S	D ₁
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇨ D13, D19
D41

⇨ E9

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

DNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide			
				Coated										Coated	Uncoated	Uncoated			
				P	M	P _M	K	H	S	P _M	P	K	S	N					
Medium Cut 		DNMG 110408 NGE DNMG 110412 NGE DNMG 150404 NGE DNMG 150408 NGE DNMG 150412 NGE DNMG 150416 NGE DNMG 150604 NGE DNMG 150608 NGE DNMG 150612 NGE DNMG 150616 NGE	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,6	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Medium Cut 		DNMG 110404 NUG DNMG 110408 NUG DNMG 150404 NUG DNMG 150408 NUG DNMG 150412 NUG DNMG 150604 NUG DNMG 150608 NUG DNMG 150612 NUG DNMG 150616 NUG	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Medium Cut 		DNMG 110408 NEG DNMG 110412 NEG DNMG 150404 NEG DNMG 150408 NEG DNMG 150412 NEG DNMG 150604 NEG DNMG 150608 NEG DNMG 150612 NEG	0,8	○	●	●	○	○	○	○	○	○	○	○	○	○	○		
			1,2	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
Medium Cut 		DNMG 110404 NEX DNMG 110408 NEX DNMG 150404 NEX DNMG 150408 NEX DNMG 150412 NEX DNMG 150604 NEX DNMG 150608 NEX DNMG 150612 NEX	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			

● = Euro stock
○ = Stock item in Japan

Neg. Inserts

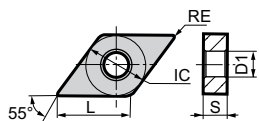


DIAMOND TYPE

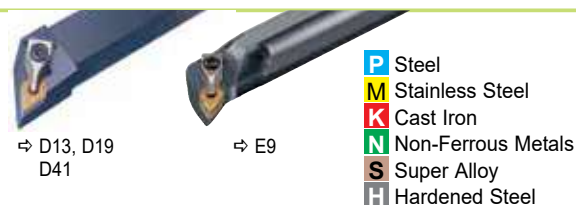
INSERTS FOR TURNING

Negative Inserts

55° Diamond Type 0° Relief With Insert Hole



Dimensions (mm)				
DN	L	IC	S	D1
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16


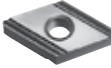
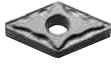




- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DNMG

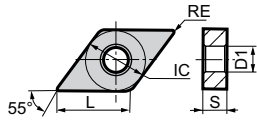
	Carbide											Cermets		Carbide													
	Coated											Coated	Uncoated	Uncoated													
	P	M	M	M	K	H	S	P	P	K	S	N															
	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC505S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Medium Cut	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Medium Cut	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Roughing	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Roughing	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Roughing	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut		DNMG 150404 NUP	0,4
		DNMG 150408 NUP	0,8
		DNMG 150412 NUP	1,2
Medium Cut		DNMG 150604 NUP	0,4
		DNMG 150608 NUP	0,8
		DNMG 150612 NUP	1,2
Roughing		DNMG 150404 NMU	0,4
		DNMG 150408 NMU	0,8
		DNMG 150412 NMU	1,2
		DNMG 150416 NMU	1,6
		DNMG 150608 NMU	0,8
Roughing		DNMG 150408 NEM	0,8
		DNMG 150412 NEM	1,2
		DNMG 150416 NEM	1,6
		DNMG 150608 NEM	0,8
		DNMG 150612 NEM	1,2
Roughing		DNMG 150408 NME	0,8
		DNMG 150412 NME	1,2
		DNMG 150416 NME	1,6
		DNMG 150608 NME	0,8
		DNMG 150612 NME	1,2
		DNMG 150616 NME	1,6

● = Euro stock
○ = Stock item in Japan

55° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
DN	L	IC	S	D ₁
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇨ D13, D19
D41

⇨ E9

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

DNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide					
				Coated													Coated	Uncoated	Uncoated					
				P	M	M	P	K	H	S	P	M	P	K	S	N								
Roughing	<p>L/RHM</p>	DNMG 150404 LHM DNMG 150408 LHM DNMG 150404 RHM DNMG 150408 RHM	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing	<p>NUX</p>	DNMG 110408 NUX DNMG 150404 NUX DNMG 150408 NUX DNMG 150412 NUX DNMG 150604 NUX DNMG 150608 NUX DNMG 150612 NUX DNMG 150616 NUX	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing	<p>NMX</p>	DNMG 150408 NMX DNMG 150412 NMX DNMG 150608 NMX DNMG 150612 NMX	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
0,8	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1,2	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Roughing	<p>NGZ</p>	DNMG 110408 NGZ DNMG 110412 NGZ DNMG 150404 NGZ DNMG 150408 NGZ DNMG 150412 NGZ DNMG 150608 NGZ DNMG 150612 NGZ	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
Roughing	<p>NUZ</p>	DNMG 150404 NUZ DNMG 150408 NUZ DNMG 150412 NUZ DNMG 150608 NUZ DNMG 150612 NUZ	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		

● = Euro stock
○ = Stock item in Japan

- Neg. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

DIAMOND TYPE

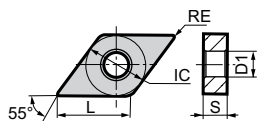
INSERTS FOR TURNING

Negative Inserts

55° Diamond Type

0° Relief

With Insert Hole



Dimensions (mm)				
DN	L	IC	S	D ₁
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇨ D13, D19

⇨ E9

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DNMM

Application	Shape	ISO Cat. No.	RE	Carbide												Cermet		Carbide		
				Coated												Coated	Uncoated	Uncoated		
				P	M	M	K	H	S	P	M	P	K	S	N	P	K	S	N	
Heavy Roughing		DNMM 150404 NMP DNMM 150408 NMP DNMM 150412 NMP DNMM 150416 NMP DNMM 150604 NMP DNMM 150608 NMP DNMM 150612 NMP DNMM 150616 NMP	0,4 0,8 1,2 1,6 0,4 0,8 1,2 1,6	AC8015P AC8020P AC8025P AC8035P AC6020M AC6030M AC6040M AC630M AC4010K AC4015K AC420K AC503U AC5005S AC5015S AC5025S AC1030U AC530U T1500Z T2500Z T3000Z T1000A T1500A G10E EH510 EH520 H1	● ○ ○ ○ ○ ● ● ● ● ○	● ○ ○ ○ ○ ● ● ● ● ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○	● ○ ○ ○ ○ ● ○ ○ ○ ○		
Heavy Roughing		DNMM 150608 NHG DNMM 150612 NHG DNMM 150616 NHG	0,8 1,2 1,6	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●			
Heavy Roughing		DNMM 150404 NHP DNMM 150408 NHP DNMM 150412 NHP DNMM 150416 NHP DNMM 150604 NHP DNMM 150608 NHP DNMM 150612 NHP DNMM 150616 NHP	0,4 0,8 1,2 1,6 0,4 0,8 1,2 1,6	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○	○ ○ ○ ○ ○ ○ ○ ○ ○ ○		

M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Heavy Roughing		DNMM 150404 NMP DNMM 150408 NMP DNMM 150412 NMP DNMM 150416 NMP DNMM 150604 NMP DNMM 150608 NMP DNMM 150612 NMP DNMM 150616 NMP	0,4 0,8 1,2 1,6 0,4 0,8 1,2 1,6
Heavy Roughing		DNMM 150608 NHG DNMM 150612 NHG DNMM 150616 NHG	0,8 1,2 1,6
Heavy Roughing		DNMM 150404 NHP DNMM 150408 NHP DNMM 150412 NHP DNMM 150416 NHP DNMM 150604 NHP DNMM 150608 NHP DNMM 150612 NHP DNMM 150616 NHP	0,4 0,8 1,2 1,6 0,4 0,8 1,2 1,6

● = Euro stock
○ = Stock item in Japan

Neg. Inserts

C

D

K

R

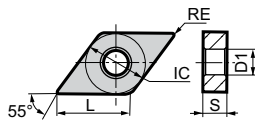
S

T

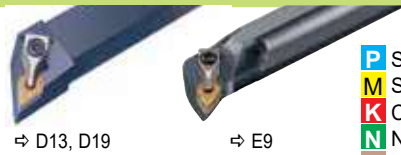
V

W

55° Diamond Type 0° Relief
With Insert Hole



DN	Dimensions (mm)			
	L	IC	S	D ₁
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16
1506..	15,5	12,7	6,35	5,16



⇨ D13, D19

⇨ E9

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

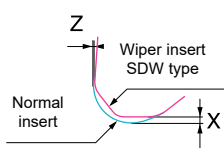
DNMA / DNMX

Flat Inserts and One Side Handed Inserts

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Roughing		DNMA 150404 DNMA 150408 DNMA 150412 DNMA 150608 DNMA 150612	0,4 0,8 1,2 0,8 1,2
		DNMX 150608 L	0,8
		DNMX 150608 R	0,8
Finishing	 "Wiper" W type NSE-W Depth of cut (mm) Feed rate (mm/rev)	DNMX 110404 NSE-W DNMX 110408 NSE-W DNMX 110412 NSE-W DNMX 150404 NSE-W DNMX 150408 NSE-W DNMX 150412 NSE-W DNMX 150604 NSE-W DNMX 150608 NSE-W DNMX 150612 NSE-W	0,4 0,8 1,2 0,4 0,8 1,2 0,4 0,8 1,2

Carbide													Cermert		Carbide										
Coated													Coated	Uncoated	Uncoated										
P	M	M	P	K	H	S	P	M	P	K	S	N													
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC500S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1



(Note) The cutting point position of the SDW type does not follow the ISO standard.
 Wenn using on a boring holder with a 93° approach angle, there is a need to revise the cutting point position (refer to right table) relative to using standard inserts.

r	Compensation (mm)	
	X (Diam. change)	Z
0,4	-0,14 (Ø: -0,28)	-0,02
0,8	-0,14 (Ø: -0,28)	-0,02
1,2	-0,1 (Ø: -0,2)	-0,03

● = Euro stock
 ○ = Stock item in Japan

Neg. Inserts

C

D

K

R

S

T

V

W

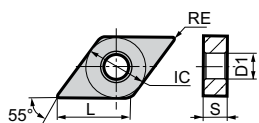
DIAMOND TYPE

INSERTS FOR TURNING

Negative Inserts

55° Diamond Type

0° Relief
With Insert Hole



Dimensions (mm)				
DN	L	IC	S	D ₁
1104..	11,6	9,525	4,76	3,81
1504..	15,5	12,7	4,76	5,16



⇨ D13, D19

⇨ E9

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DNGA

	Carbide										Cermert		Carbide	
	Coated										Coated	Uncoated	Uncoated	
	P	M	M	K	H	S	P	P	K	S	N			
AC8015P	●													
AC8020P	●													
AC8025P	●													
AC8035P	●													
AC6020M		●												
AC6030M		●												
AC6040M		●												
AC630M		●												
AC4010K				●										
AC4015K				●										
AC420K				●										
AC503U					●									
AC5005S						●								
AC5015S						●								
AC5025S						●								
AC1030U							●							
AC530U							●							
T1500Z								●						
T2500Z								●						
T3000Z								●						
T1000A								●						
T1500A								●						
G10E									●					
EH510										●				
EH520											●			
H1												●		

G-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut		DNGA 150402	0,2
		DNGA 150404	0,4
		DNGA 150408	0,8

DNGG

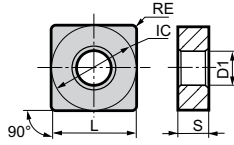
	Carbide										Cermert		Carbide	
	Coated										Coated	Uncoated	Uncoated	
	P	M	M	K	H	S	P	P	K	S	N			
AC8015P	●													
AC8020P	●													
AC8025P	●													
AC8035P	●													
AC6020M		●												
AC6030M		●												
AC6040M		●												
AC630M		●												
AC4010K				●										
AC4015K				●										
AC420K				●										
AC503U					●									
AC5005S						●								
AC5015S						●								
AC5025S						●								
AC1030U							●							
AC530U							●							
T1500Z								●						
T2500Z								●						
T3000Z								●						
T1000A								●						
T1500A								●						
G10E									●					
EH510										●				
EH520											●			
H1												●		

G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Finishing Depth of cut (mm) Feed rate (mm/rev)	 NEF	DNGG 150404 NEF	0,4
		DNGG 150408 NEF	0,8
Finishing Depth of cut (mm) Feed rate (mm/rev)	 NSU	DNGG 150402 NSU	0,2
		DNGG 150404 NSU	0,4
		DNGG 150408 NSU	0,8
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	 L/RUM	DNGG 110404 LUM	0,4
		DNGG 110408 LUM	0,8
	 RUM	DNGG 110404 RUM	0,4
		DNGG 110408 RUM	0,8
		DNGG 150404 RUM	0,4
		DNGG 150408 RUM	0,8
Finishing Depth of cut (mm) Feed rate (mm/rev)	 NGH	DNGG 150402 NGH	0,2
		DNGG 150404 NGH	0,4
		DNGG 150408 NGH	0,8
For Aluminum Depth of cut (mm) Feed rate (mm/rev)	 L/RAX	DNGG 150402 LAX	0,2
		DNGG 150404 LAX	0,4
		DNGG 150408 LAX	0,8
For Aluminum Depth of cut (mm) Feed rate (mm/rev)	 RAX	DNGG 150402 RAX	0,2
		DNGG 150404 RAX	0,4
		DNGG 150408 RAX	0,8

● = Euro stock
○ = Stock item in Japan

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)				
SN	L	IC	S	D ₁
1204..	12,7	12,7	4,76	5,16



- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermets		Carbide	
				Coated													Coated	Uncoated	Uncoated	
				P	M	M	K	H	S	P	M	T	P	K	S	N				
Fine Finishing	 NFB Depth of cut (mm) vs Feed rate (mm/rev) graph	SNMG 120404 NFB SNMG 120408 NFB	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Fine Finishing	 NFL Depth of cut (mm) vs Feed rate (mm/rev) graph	SNMG 120408 NFL	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Fine Finishing	 NFE Depth of cut (mm) vs Feed rate (mm/rev) graph	SNMG 120404 NFE SNMG 120408 NFE SNMG 120412 NFE	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing	 NLU Depth of cut (mm) vs Feed rate (mm/rev) graph	SNMG 120408 NLU SNMG 120412 NLU	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,2	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing	 NSU Depth of cut (mm) vs Feed rate (mm/rev) graph	SNMG 120408 NSU SNMG 120412 NSU	0,8	●	●	○	●	●	●	○	○	○	○	○	○	○	○	○	○	
			1,2	●	●	○	●	●	●	○	○	○	○	○	○	○	○	○	○	○
Finishing	 NSE Depth of cut (mm) vs Feed rate (mm/rev) graph	SNMG 120408 NSE SNMG 120412 NSE	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,2	●	●	○	●	●	●	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
 ○ = Stock item in Japan

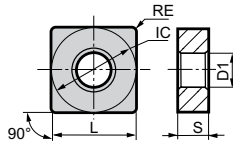
- Neg. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

S SQUARE TYPE

INSERTS FOR TURNING

Negative Inserts

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)				
SN	L	IC	S	D ₁
0903..	9,525	9,525	3,18	3,81
1204..	12,7	12,7	4,76	5,16
1506..	15,875	15,875	6,35	6,35



- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SNMG

Carbide											Cermets		Carbide				
Coated											Coated		Uncoated		Uncoated		
P	P	M	M	F _M	K	H	S	P _M	P	P	K	S	N				

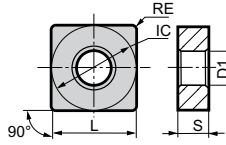
● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1			
Finishing	 NEF	SNMG 120404 NEF SNMG 120408 NEF	0,4	○	○	○	○	●	●	●																						
			0,8	○	●	●	○												○	○	○											
Finishing	 NSJ	SNMG 090304 NSJ SNMG 120404 NSJ	0,4																													
			0,4																										○			
Finishing	 NSX	SNMG 120404 NSX SNMG 120408 NSX SNMG 120412 NSX	0,4																													
			0,8	○	○	○																										
			1,2	○	○	○																										
Medium Cut	 NGU	SNMG 090304 NGU SNMG 090308 NGU SNMG 120404 NGU SNMG 120408 NGU SNMG 120412 NGU SNMG 120416 NGU SNMG 150608 NGU SNMG 150612 NGU SNMG 150616 NGU	0,4																													
			0,8	○	●	●	○																									
			0,4	●	●	●	○																									
			0,8	●	●	●	●																									
			1,2	●	●	●	●																									
Medium Cut	 NGE	SNMG 120408 NGE SNMG 120412 NGE SNMG 120416 NGE SNMG 150608 NGE SNMG 150612 NGE SNMG 150616 NGE	0,8	○	●	●	○																									
			1,2	○	●	●	●																									
			1,6	○	●	●	○																									
			0,8	○	○	○	○																									

- Neg. Inserts
- C
- D
- K
- R
- S
- T
- V
- W

● = Euro stock
 ○ = Stock item in Japan

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)				
SN	L	IC	S	D ₁
0903..	9,525	9,525	3,18	3,81
1204..	12,7	12,7	4,76	5,16
1506..	15,875	15,875	6,35	6,35
1906..	19,05	19,05	6,35	7,94
2509..	25,4	25,4	9,52	9,2



⇒ D14, D20~21
D41 ⇒ E10

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide										Cermets		Carbide	
				Coated										Coated	Uncoated	Uncoated	
				P	M	M	K	H	S	P	M	P	K	S	N		
<p>Medium Cut</p> <p>NUG</p>		SNMG 090308 NUG	0,8			○	●										
		SNMG 120408 NUG	0,8			○	●										
		SNMG 120412 NUG	1,2			○	●										
		SNMG 120416 NUG	1,6	●			○										
		SNMG 150612 NUG	1,2				○										
		SNMG 190612 NUG	1,2				○										
		SNMG 190616 NUG	1,6				○										
	SNMG 250924 NUG	2,4				○											
<p>Medium Cut</p> <p>L/RUM</p>		SNMG 120404 LUM	0,4														
		SNMG 120408 LUM	0,8														
		SNMG 120412 LUM	1,2														
		SNMG 120404 RUM	0,4														
	SNMG 120408 RUM	0,8															
<p>Medium Cut</p> <p>NEG</p>		SNMG 120404 NEG	0,4	○	●	○	○										
		SNMG 120408 NEG	0,8	○	●	○	○										
		SNMG 120412 NEG	1,2	○	●	○	○										
		SNMG 150608 NEG	0,8	○	○	○	○										
		SNMG 150612 NEG	1,2	○	○	○	○										
		SNMG 150616 NEG	1,6	○	○	○	○										
	SNMG 190612 NEG	1,2	○	○	○	○											
	SNMG 190616 NEG	1,6	○	○	○	○											
<p>Medium Cut</p> <p>NEX</p>		SNMG 120404 NEX	0,4														
		SNMG 120408 NEX	0,8														
		SNMG 120412 NEX	1,2														
		SNMG 150612 NEX	1,2														
		SNMG 190612 NEX	1,2														
	SNMG 190616 NEX	1,6															
<p>Medium Cut</p> <p>NUP</p>		SNMG 120404 NUP	0,4		●	●	●										
		SNMG 120408 NUP	0,8		●	●	●										
		SNMG 120412 NUP	1,2														

● = Euro stock
○ = Stock item in Japan

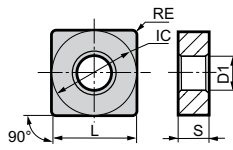


S SQUARE TYPE

INSERTS FOR TURNING

Negative Inserts

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)				
SN	L	IC	S	D ₁
0903..	9,525	9,525	3,18	3,81
1204..	12,7	12,7	4,46	5,16
1506..	15,875	15,875	6,35	6,35
1906..	19,05	19,05	6,35	7,94
2509..	25,4	25,4	9,52	9,2



⇨ D14, D20~21
D41

⇨ E10

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SNMG

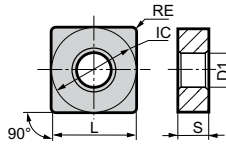
Carbide										Cermets		Carbide													
Coated										Coated	Uncoated	Uncoated													
P	P	M	M	K	H	S	P	P	P	K	S	N													
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NUX	SNMG 090308 NUX	0,8				○																								
		SNMG 120404 NUX	0,4				○																								
		SNMG 120408 NUX	0,8	●	●	●	●																								
		SNMG 120412 NUX	1,2	●	●	●	●																								
		SNMG 120416 NUX	1,6	○	○	○	○																								
		SNMG 190612 NUX	1,2	○	○	○	○																								
SNMG 190616 NUX	1,6	○	○	○	○																										
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NMU	SNMG 120408 NMU	0,8	●	●	●	●	●	●	●	●						●	●	●												
		SNMG 120412 NMU	1,2	○	○	○	○	○	○	○	○	○						○	○	○											
		SNMG 120416 NMU	1,6	●	○	○	○	●	●	●	●	●																			
		SNMG 150608 NMU	0,8	○	○	○	○											●	●	●	○	○									
		SNMG 150612 NMU	1,2	○	○	○	○										●	●	●	○	○										
		SNMG 150616 NMU	1,6	●	○	○	○	●	●	●	●	●	●					○	○	○	○	○									
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NEM	SNMG 190612 NMU	1,2	●	●	●	●	●	●	●	●						○	○	○	○	○										
		SNMG 190616 NMU	1,6	●	●	●	●	●	●	●	●	●						○	○	○	○	○									
		SNMG 190624 NMU	2,4	○	○	○	○	○	○	○	○	○						○	○	○	○	○									
		SNMG 250924 NMU	2,4	○	○	○	○	●										○	○	○	○	○									
		SNMG 120408 NEM	0,8	○	●	●	●	○	●	●	●	●						○	○	○	○	○									
		SNMG 120412 NEM	1,2	●	●	●	●	●	●	●	●	●						○	○	○	○	○									
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NME	SNMG 150608 NEM	0,8	○	○	○	○	○	○	○	○						○	○	○	○	○										
		SNMG 150612 NEM	1,2	○	○	○	○	○	○	○	○	○						○	○	○	○	○									
		SNMG 150616 NEM	1,6	○	○	○	○	○	○	○	○	○						○	○	○	○	○									
		SNMG 190612 NEM	1,2	○	○	○	○	○	○	○	○	○						○	○	○	○	○									
		SNMG 190616 NEM	1,6	○	○	○	○	○	○	○	○	○						○	○	○	○	○									
		SNMG 190624 NEM	2,4	○	○	○	○	○	○	○	○	○						○	○	○	○	○									
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NME	SNMG 120408 NME	0,8	○	●	●	●								○	○															
		SNMG 120412 NME	1,2	○	○	○	○									○	○														
		SNMG 120416 NME	1,6	○	○	○	○									○	○														
		SNMG 150608 NME	0,8	○	○	○	○									○	○														
		SNMG 150612 NME	1,2	○	○	○	○									○	○														
		SNMG 150616 NME	1,6	○	○	○	○									○	○														
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NME	SNMG 190612 NME	1,2	○	○	○	○								○	○															
		SNMG 190616 NME	1,6	○	○	○	○									○	○														
		SNMG 190624 NME	2,4	○	○	○	○									○	○														
		SNMG 250924 NME	2,4	○	○	○	○									○	○														

● = Euro stock
○ = Stock item in Japan

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)				
SN	L	IC	S	D ₁
1204..	12,7	12,7	4,46	5,16
1506..	15,875	15,875	6,35	6,35
1906..	19,05	19,05	6,35	7,94



⇒ D14, D20~21
D41

⇒ E10

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SNMG

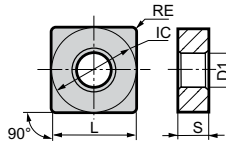
● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermets		Carbide	
				Coated													Coated	Uncoated	Uncoated	
				P	M	M	K	H	S	P	M	P	K	S	N					
Roughing	 L/RHM	SNMG 120408 LHM	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		SNMG 120408 RHM	0,8	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing	 NMX	SNMG 120408 NMX	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		SNMG 120412 NMX	1,2	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○	○	
		SNMG 120416 NMX	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		SNMG 150612 NMX	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SNMG 150616 NMX	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
SNMG 190612 NMX	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
SNMG 190616 NMX	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Roughing	 NGZ	SNMG 120408 NGZ	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		SNMG 120412 NGZ	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		SNMG 120416 NGZ	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		SNMG 150612 NGZ	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SNMG 150616 NGZ	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
SNMG 190612 NGZ	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
SNMG 190616 NGZ	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Roughing	 NUZ	SNMG 120408 NUZ	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		SNMG 120412 NUZ	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		SNMG 120416 NUZ	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		SNMG 150612 NUZ	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SNMG 150616 NUZ	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
SNMG 190612 NUZ	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
SNMG 190616 NUZ	1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

● = Euro stock
○ = Stock item in Japan

- Neg. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)				
SN	L	IC	S	D ₁
1906..	19,05	19,05	6,35	7,94
2507..	25,4	25,4	7,94	9,2
2509..	25,4	25,4	9,52	9,2
3109..	31,75	31,75	9,52	8,8



⇒ D14, D20~21

⇒ E10

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SNMM

● M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide												
				Coated													Coated	Uncoated	Uncoated												
				P	M	M	K	H	S	P	M	P	K	S	N																
				AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC505S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1		
Heavy Roughing 	NHU NHW	SNMM 190616 NHU	1,6																												
		SNMM 250724 NHU	2,4	○	●	●																									
		SNMM 250924 NHU	2,4	○	○	○																									
		SNMM 310924 NHU	2,4	○	○	○																									
		SNMM 190616 NHW	1,6									●																			
		SNMM 250724 NHW	2,4		○	●	●					●																			
		SNMM 250924 NHW	2,4		○	●	●					●																			
Heavy Roughing 	NHF	SNMM 190616 NHF	1,6																												
		SNMM 190624 NHF	2,4			○	○																								
		SNMM 250724 NHF	2,4			○	○																								
		SNMM 250732 NHF	3,2			○	○																								
		SNMM 250924 NHF	2,4			○	●					●																			
Heavy Roughing 	NHF	SNMM 250932 NHF	3,2			○	○																								
		SNMM 310924 NHF	2,4			○	○																								

● = Euro stock
 ○ = Stock item in Japan

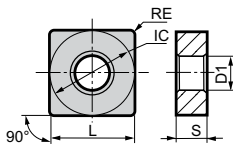
- Neg. Inserts
- -
 -
 -
 -
 -
 -
 -

S SQUARE TYPE

INSERTS FOR TURNING

Negative Inserts

90° Square Type 0° Relief
With Insert Hole



Dimensions (mm)					
SN	L	IC	S	D ₁	
0903..	9,525	9,525	3,18	3,81	
1204..	12,7	12,7	4,76	5,16	
1506..	15,875	15,875	6,35	6,35	
1906..	19,05	19,05	6,35	7,94	



⇨ D14, D20-21
D25

⇨ E10

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SNMA/SNGA

	Carbide												Cermet		Carbide											
	Coated												Coated	Uncoated	Uncoated											
	P	P	M	M	K	H	S	P	M	P	K	S	N	P	K	S	N									
Application	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
Shape																										
ISO Cat. No.	SNMA 120404 SNMA 120408 SNMA 120412 SNMA 120416 SNMA 120420 SNMA 150612 SNMA 150616 SNMA 190612 SNMA 190616 SNGA 120404 SNGA 120408 SNGA 120412																									
RE	0,4	0,8	1,2	1,6	2,0				○	○	○												○			
Medium Cut																										
ISO Cat. No.	SNGA 120404 SNGA 120408 SNGA 120412																									
RE	0,4	0,8	1,2																							

● G/M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Roughing		SNMA 120404 SNMA 120408 SNMA 120412 SNMA 120416 SNMA 120420 SNMA 150612 SNMA 150616 SNMA 190612 SNMA 190616	0,4 0,8 1,2 1,6 2,0 1,2 1,6 1,2 1,6
Medium Cut		SNGA 120404 SNGA 120408 SNGA 120412	0,4 0,8 1,2

SNGG

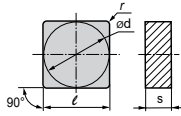
	Carbide												Cermet		Carbide												
	Coated												Coated	Uncoated	Uncoated												
	P	P	M	M	K	H	S	P	M	P	K	S	N	P	K	S	N										
Application	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Shape																											
ISO Cat. No.	SNGG 090304 LST SNGG 090308 LST SNGG 090304 RST SNGG 090308 RST SNGG 120404 LUM SNGG 120408 LUM SNGG 120404 RUM SNGG 120408 RUM SNGG 120404 LAX SNGG 120404 RAX SNGG 120408 RAX																										
RE	0,4	0,8	0,4	0,8	0,4	0,8	0,4	0,8						○	○						○	○				○	○

● G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Light Cutting	 L/RST	SNGG 090304 LST SNGG 090308 LST SNGG 090304 RST SNGG 090308 RST	0,4 0,8 0,4 0,8
Medium Cut	 L/RUM	SNGG 120404 LUM SNGG 120408 LUM SNGG 120404 RUM SNGG 120408 RUM	0,4 0,8 0,4 0,8
For Aluminum	 L/RAX	SNGG 120404 LAX SNGG 120404 RAX SNGG 120408 RAX	0,4 0,4 0,8

● = Euro stock
○ = Stock item in Japan

90° Square Type 0° Relief
Without Insert Hole



Dimensions (mm)				
SN	L	IC	S	D ₁
1204..	12,7	12,7	4,76	5,16



- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SN_N ○○○○○○

● G/M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut		SNGN 120408	0,8
Medium Cut		SNMN 120408 SNMN 120412 SNMN 120416	0,8 1,2 1,6

Carbide										Cermet		Carbide													
Coated										Coated	Uncoated	Uncoated													
P	M	M	P	K	H	S	P	M	P	K	S	N													
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC505S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1

Neg. Inserts



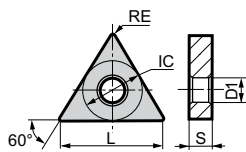
● = Euro stock
○ = Stock item in Japan

T TRIANGLE TYPE

INSERTS FOR TURNING

Negative Inserts

60° Triangle Type 0° Relief
With Insert Hole



Dimensions (mm)				
TN	L	IC	S	D ₁
1604..	16,5	9,525	4,76	3,81



⇒ D15, D22~23
D42

⇒ E12

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TNMG

Carbide												Cermets		Carbide											
Coated												Coated		Uncoated		Uncoated									
P	P	M	M	F _M	K	H	S	S	P _M	P _M	P	P	K	S	N										
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Fine Finishing	 NFB	TNMG 160402 NFB TNMG 160404 NFB TNMG 160408 NFB	0,2 0,4 0,8						○	○											○	○	○	○	○					
Fine Finishing	 NFA	TNMG 160402 NFA TNMG 160404 NFA TNMG 160408 NFA	0,2 0,4 0,8																			●	●	○	○	●				
Fine Finishing	 NFL	TNMG 160404 NFL TNMG 160408 NFL	0,4 0,8			○					○											●	●	○	○	●				
Fine Finishing	 NFE	TNMG 160402 NFE TNMG 160404 NFE TNMG 160408 NFE TNMG 160412 NFE	0,2 0,4 0,8 1,2	○	○	○	○	○	○	○	○											○	○	○	○	○				
Finishing	 NLU	TNMG 160402 NLU TNMG 160404 NLU TNMG 160408 NLU TNMG 160412 NLU	0,2 0,4 0,8 1,2	●	●	●	○	○	○	○	○											○	○	○	○	○	●			
Finishing	 NEF	TNMG 160404 NEF TNMG 160408 NEF	0,4 0,8	○	●	●	○	●	●	●	●					○	○	○									○	○		
Finishing	 NSU	TNMG 160402 NSU TNMG 160404 NSU TNMG 160408 NSU TNMG 160412 NSU	0,2 0,4 0,8 1,2	●	●	●	●	●	●	●	○					○	○	○				○	○	○	○	○	●			

● = Euro stock
○ = Stock item in Japan

Neg. Inserts

C

D

K

R

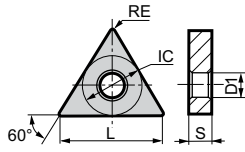
S

T

V

W

60° Triangle Type 0° Relief
With Insert Hole



Dimensions (mm)					
TN	L	IC	S	D ₁	
1603..	16,5	9,525	3,18	3,81	
1604..	16,5	9,525	4,76	3,81	
2204..	22,0	12,7	4,76	5,16	



⇒ D15, D22~23
D42

⇒ E12

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermets		Carbide	
				Coated													Coated	Uncoated	Uncoated	
				P	M	M	K	H	S	P	M	P	K	S	N					
Finishing	 NSE	TNMG 160404 NSE TNMG 160408 NSE TNMG 160412 NSE TNMG 220404 NSE TNMG 220408 NSE TNMG 220412 NSE	0,4	●	●	●	○													
			0,8	●	●	●	○													
			1,2	●	●	●	○													
Finishing	 NSX	TNMG 160304 NSX TNMG 160308 NSX TNMG 160404 NSX TNMG 160408 NSX TNMG 220404 NSX TNMG 220408 NSX TNMG 220412 NSX	0,4	○	○															
			0,8	○	○	○														
			1,2	○	○	○														
Medium Cut	 NGU	TNMG 160404 NGU TNMG 160408 NGU TNMG 160412 NGU TNMG 160416 NGU TNMG 220404 NGU TNMG 220408 NGU TNMG 220412 NGU	0,4	●	●	●	●	●	○	○										
			0,8	●	●	●	●	●	○	○										
			1,2	●	●	●	●	●	○	○										
Medium Cut	 NGE	TNMG 160404 NGE TNMG 160408 NGE TNMG 160412 NGE TNMG 220408 NGE TNMG 220412 NGE	0,4	●	●	○														
			0,8	●	●	○														
			1,2	●	●	○														

● = Euro stock
○ = Stock item in Japan

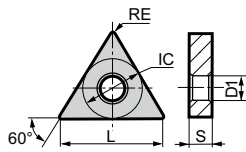
- Neg. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

T TRIANGLE TYPE

INSERTS FOR TURNING

Negative Inserts

60° Triangle Type 0° Relief
With Insert Hole



Dimensions (mm)				
TN	L	IC	S	D ₁
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16



⇒ D15, D22~23
D42

⇒ E12

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TNMG

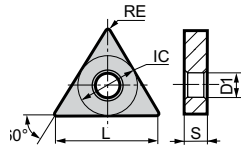
Carbide										Cermets		Carbide												
Coated										Coated	Uncoated	Uncoated												
P	M	M	K	H	S	P	P	K	S	N														
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	 NUG	TNMG 160404 NUG TNMG 160408 NUG TNMG 160412 NUG TNMG 160416 NUG	0,4 0,8 1,2 1,6	● ● ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○	○ ○ ○ ○		
		TNMG 220408 NUG TNMG 220412 NUG	0,8 1,2	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	 L/RUM	TNMG 160404 LUM TNMG 160408 LUM	0,4 0,8	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
		TNMG 220404 LUM TNMG 220408 LUM	0,4 0,8	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	 NEG	TNMG 160404 RUM TNMG 160408 RUM	0,4 0,8	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
		TNMG 220404 RUM TNMG 220408 RUM	0,4 0,8	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○	○ ○
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	 NEX	TNMG 160404 NEG TNMG 160408 NEG TNMG 160412 NEG	0,4 0,8 1,2	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○
		TNMG 160404 NEX TNMG 160408 NEX TNMG 160412 NEX	0,4 0,8 1,2	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○
Medium Cut Depth of cut (mm) Feed rate (mm/rev)	 NUP	TNMG 160404 NEG TNMG 160408 NEG TNMG 160412 NEG	0,4 0,8 1,2	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○	○ ○ ○
		TNMG 220408 NUP	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Stock item in Japan

60° Triangle Type 0° Relief
With Insert Hole



Dimensions (mm)					
TN	L	IC	S	D ₁	
1604..	16,5	9,525	4,76	3,81	
2204..	22,0	12,7	4,76	5,16	
2706..	27,5	15,875	6,35	6,35	
3309..	33,0	19,05	9,52	7,93	



⇒ D15, D22~23
D42

⇒ E12

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide												Cermets		Carbide
				Coated												Coated	Uncoated	Uncoated
				P	M	M	K	H	S	P	M	P	K	S	N			
Roughing	<p>NUX</p>	TNMG 160404 NUX TNMG 160408 NUX TNMG 160412 NUX TNMG 220408 NUX TNMG 220412 NUX	0,4	○	●	●	○											
			0,8	●	●	●	○											
			1,2	●	●	●	○											
Roughing	<p>NMU</p>	TNMG 160408 NMU TNMG 160412 NMU TNMG 220408 NMU TNMG 220412 NMU TNMG 220416 NMU TNMG 270612 NMU TNMG 270616 NMU	0,8	●	●	●	○											
			1,2	●	●	●	○											
			0,8	●	●	●	○											
			1,2	●	●	●	○											
			1,6	●	●	●	○											
Roughing	<p>NEM</p>	TNMG 160408 NEM TNMG 160412 NEM TNMG 330924 NEM	0,8	○	●	○	○											
			1,2	○	○	○	○											
			2,4				○											
Roughing	<p>NME</p>	TNMG 160408 NME TNMG 160412 NME TNMG 220408 NME TNMG 220412 NME TNMG 220416 NME	0,8	○	●	●	○											
			1,2	●	●	●	○											
			0,8	○	○	○	○											
			1,2	○	○	○	○											
			1,6	○	○	○	○											
Roughing	<p>NMX</p>	TNMG 160408 NMX TNMG 160412 NMX TNMG 220408 NMX TNMG 220412 NMX	0,8	○	○	○	○											
			1,2	○	●	●	○											
			0,8	○	○	○	○											
			1,2	○	○	○	○											

● = Euro stock
○ = Stock item in Japan

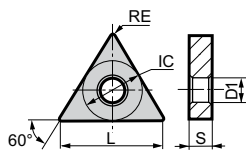
- Neg. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

T TRIANGLE TYPE

INSERTS FOR TURNING

Negative Inserts

60° Triangle Type 0° Relief
With Insert Hole



Dimensions (mm)					
TN	L	IC	S	D ₁	
1604..	16,5	9,525	4,76	3,81	
2204..	22,0	12,7	4,76	5,16	
2706..	27,5	15,875	6,35	6,35	



⇒ D15, D22~23
D42

⇒ E12

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TNMG

	Carbide										Cermets		Carbide												
	Coated										Coated	Uncoated	Uncoated												
	P	M	F _M	K	H	S	P _M	P	K	S	N														
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NGZ	TNMG 160404 NGZ TNMG 160408 NGZ TNMG 160412 NGZ	0,4 0,8 1,2									○	○	○																	
		TNMG 220408 NGZ TNMG 220412 NGZ TNMG 220416 NGZ	0,8 1,2 1,6										○	○	○																
													○	○	○																
Roughing Depth of cut (mm) Feed rate (mm/rev)	 L/RHM	TNMG 160404 LHM TNMG 160408 LHM	0,4 0,8	○	○	○	○	●	○							○	○	○													
		TNMG 220404 LHM TNMG 220408 LHM	0,4 0,8	○	○	○	○	●	○							○	○	○													
		TNMG 160404 RHM TNMG 160408 RHM	0,4 0,8	●	○	○	○	●	○							○	○	○													
		TNMG 220404 RHM TNMG 220408 RHM	0,4 0,8	○	○	○	○	○	○							○	○	○													
Roughing Depth of cut (mm) Feed rate (mm/rev)	 NUZ	TNMG 160404 NUZ TNMG 160408 NUZ TNMG 160412 NUZ TNMG 160416 NUZ TNMG 160420 NUZ	0,4 0,8 1,2 1,6 2,0			○	○					○	○	○																	
		TNMG 220408 NUZ TNMG 220412 NUZ TNMG 220416 NUZ	0,8 1,2 1,6			○	●						○	○	○																
													○	○	○																
		TNMG 270608 NUZ TNMG 270612 NUZ TNMG 270616 NUZ	0,8 1,2 1,6			○	○																								

● = Euro stock
○ = Stock item in Japan

Neg. Inserts

C

D

K

R

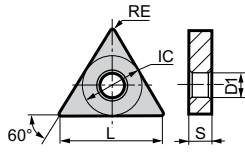
S

T

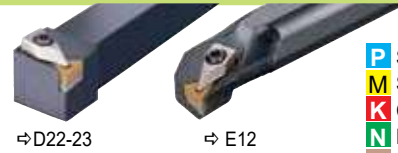
V

W

60° Triangle Type 0° Relief
With Insert Hole



Dimensions (mm)					
TN	L	IC	S	D ₁	
1604..	16,5	9,525	4,76	3,81	
2204..	22,0	12,7	4,76	5,16	
2706..	27,5	15,875	6,35	6,35	



- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TNMM

● M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Heavy Roughing	<p>NMP</p>	TNMM 160404 NMP TNMM 160408 NMP TNMM 160412 NMP	0,4
			0,8
			1,2
		TNMM 220408 NMP TNMM 220412 NMP TNMM 220416 NMP	0,8
			1,2
			1,6
Heavy Roughing	<p>NHG</p>	TNMM 160408 NHG TNMM 160412 NHG	0,8
			1,2
			1,6
		TNMM 220408 NHG TNMM 220412 NHG TNMM 220416 NHG	0,8
			1,2
			1,6
Heavy Roughing	<p>NHP</p>	TNMM 160408 NHP TNMM 160412 NHP	0,8
			1,2
			1,6
		TNMM 220408 NHP TNMM 220412 NHP TNMM 220416 NHP	0,8
			1,2
			1,6

Carbide													Cermets		Carbide										
Coated													Coated	Uncoated	Uncoated										
P	M	K	H	S	P	M	P	K	S	N	P	K	S	N											
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

TNMN

● M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut		TNMN 160408 TNMN 160412 TNMN 160416	0,8 1,2 1,6

Carbide													Cermets		Carbide										
Coated													Coated	Uncoated	Uncoated										
P	M	K	H	S	P	M	P	K	S	N	P	K	S	N											
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● = Euro stock
 ○ = Stock item in Japan

T TRIANGLE TYPE

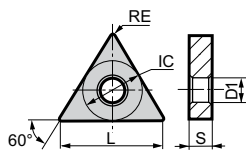
INSERTS FOR TURNING

Negative Inserts

60° Triangle Type

0° Relief

With Insert Hole



Dimensions (mm)					
TN	L	IC	S	D ₁	
1604..	16,5	9,525	4,76	3,81	
2204..	22,0	12,7	4,76	5,16	



⇒ D15, D22~23

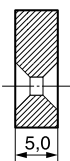
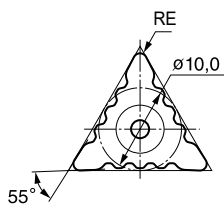
⇒ E12

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TNMA

Application	Shape	ISO Cat. No.	RE	Carbide											Cermets		Carbide																	
				Coated											Coated	Uncoated	Uncoated																	
				P	M	M	K	H	S	P	M	P	K	S	N																			
Roughing		TNMA 160404 TNMA 160408 TNMA 160412 TNMA 160416 TNMA 160420 TNMA 220408 TNMA 220412 TNMA 220416	0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1					
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			2,0	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,6	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● G/M-Class No Chipbreaker



⇒ D11

⇒ E11

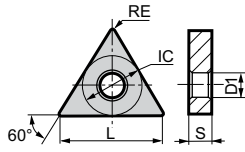
TRM

Application	Shape	ISO Cat. No.	RE	Carbide											Cermets		Carbide															
				Coated											Coated	Uncoated	Uncoated															
				P	M	M	K	H	S	P	M	P	K	S	N																	
Fine Finishing		TRM 551704 -FL TRM 551708 -FL	0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1			
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Finishing	 	TRM 551704 -LU TRM 551708 -LU TRM 551712 -LU TRM 551704 -SU TRM 551708 -SU TRM 551712 -SU	0,4	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Light Cut	 	TRM 551704 -GU TRM 551708 -GU TRM 551712 -GU	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● M-Class Bumpy Chipbreaker

- = Euro stock
- = Stock item in Japan

60° Triangle Type 0° Relief
With Insert Hole



Dimensions (mm)					
TN	L	IC	S	D ₁	
1103..	11,0	6,35	3,18	2,26	
1603..	16,5	9,525	3,18	3,81	
1604..	16,5	9,525	4,76	3,81	



⇒ D15, D22~23

⇒ E12

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TNGG

● G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide												Cermets		Carbide		
				Coated												Coated	Uncoated	Uncoated		
				P	M	K	H	S	P	M	T	P	K	S	N					
Finishing	 L/RFT Depth of cut (mm) vs Feed rate (mm/rev) graph	TNGG 110302 LFT	0,2																	
		TNGG 110304 LFT	0,4																	
		TNGG 110302 RFT	0,2																	
		TNGG 110304 RFT	0,4																	
Light Cutting	 L/RST Depth of cut (mm) vs Feed rate (mm/rev) graph	TNGG 160302 LST	0,2																	
		TNGG 160304 LST	0,4																	
		TNGG 160308 LST	0,8																	
		TNGG 160402 LST	0,2																	
		TNGG 160404 LST	0,4																	
		TNGG 160408 LST	0,8																	
		TNGG 160412 LST	1,2																	
		TNGG 160302 RST	0,2																	
		TNGG 160304 RST	0,4																	
		TNGG 160308 RST	0,8																	
		TNGG 160402 RST	0,2																	
		TNGG 160404 RST	0,4																	
		TNGG 160408 RST	0,8																	
		TNGG 160412 RST	1,2																	
Finishing	 NSU Depth of cut (mm) vs Feed rate (mm/rev) graph	TNGG 160402 NSU	0,2																	
		TNGG 160404 NSU	0,4																	
		TNGG 160408 NSU	0,8																	
Finishing	 L/RFY Depth of cut (mm) vs Feed rate (mm/rev) graph	TNGG 160401 LFY	0,1																	
		TNGG 160402 LFY	0,2																	
		TNGG 160404 LFY	0,4																	
		TNGG 160408 LFY	0,8																	
		TNGG 160412 LFY	1,2																	
		TNGG 160401 RFY	0,1																	
		TNGG 160402 RFY	0,2																	
		TNGG 160404 RFY	0,4																	
		TNGG 160408 RFY	0,8																	
		TNGG 160412 RFY	1,2																	
Finishing	 L/RFX Depth of cut (mm) vs Feed rate (mm/rev) graph	TNGG 160402 LFX	0,2																	
		TNGG 160404 LFX	0,4																	
		TNGG 160408 LFX	0,8																	
		TNGG 160402 RFX	0,2																	
		TNGG 160404 RFX	0,4																	
		TNGG 160408 RFX	0,8																	

● = Euro stock
 ○ = Stock item in Japan

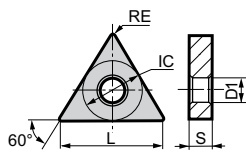
- Neg. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

T TRIANGLE TYPE

INSERTS FOR TURNING

Negative Inserts

60° Triangle Type 0° Relief
With Insert Hole



Dimensions (mm)				
TN	L	IC	S	D ₁
1103..	11,0	6,35	3,18	2,26
1604..	16,5	9,525	4,76	3,81
2204..	22,0	12,7	4,76	5,16



⇨ D15, D22~23

⇨ E12

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TNGG

Application	Shape	ISO Cat. No.	RE	Carbide										Cermets		Carbide					
				Coated										Coated	Uncoated	Uncoated					
				P	M	M	P	K	H	S	P	M	P	K	S	N					
Medium Cut	L/RUM	TNGG 160402 LUM	0,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		TNGG 160404 LUM	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 160408 LUM	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 160412 LUM	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 220404 LUM	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 220408 LUM	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	RUM	TNGG 160402 RUM	0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 160404 RUM	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 160408 RUM	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 160412 RUM	1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 220404 RUM	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 220408 RUM	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing	NGH	TNGG 160402 NGH	0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		TNGG 160404 NGH	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		TNGG 160408 NGH	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
For Aluminum	L/RAX	TNGG 160402 LAX	0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		TNGG 160404 LAX	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 160408 LAX	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	RAX	TNGG 160402 RAX	0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 160404 RAX	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGG 160408 RAX	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

TNGA

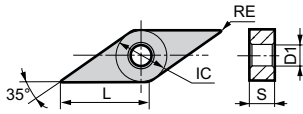
Application	Shape	ISO Cat. No.	RE	Carbide										Cermets		Carbide						
				Coated										Coated	Uncoated	Uncoated						
				P	M	M	P	K	H	S	P	M	P	K	S	N						
Medium Cut		TNGA 110308	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		TNGA 160402	0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGA 160404	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		TNGA 160408	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● G-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut		TNGA 110308	0,8
		TNGA 160402	0,2
		TNGA 160404	0,4
		TNGA 160408	0,8

- = Euro stock
- = Stock item in Japan

35° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
VN	L	IC	S	D ₁
1604..	16,6	9,525	4,76	3,81



⇒ D16

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

VNMA ○○○○○○

● M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Roughing		VNMA 160404	0,4
		VNMA 160408	0,8
		VNMA 160412	1,2

Carbide Coated										Cermets		Carbide Uncoated													
P	M	K	H	S	F	M	P	K	S	N	Coated	Uncoated	Coated	Uncoated											
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

VNMG ○○○○○○ □ □

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Fine Finishing	 NFB Depth of cut (mm) vs Feed rate (mm/rev) graph	VNMG 160404 NFB VNMG 160408 NFB	0,4 0,8
Fine Finishing	 NFA Depth of cut (mm) vs Feed rate (mm/rev) graph	VNMG 160404 NFA VNMG 160408 NFA	0,4 0,8
Fine Finishing	 NFL Depth of cut (mm) vs Feed rate (mm/rev) graph	VNMG 160404 NFL VNMG 160408 NFL	0,4 0,8
Fine Finishing	 NFE Depth of cut (mm) vs Feed rate (mm/rev) graph	VNMG 160402 NFE VNMG 160404 NFE VNMG 160408 NFE VNMG 160412 NFE	0,2 0,4 0,8 1,2
Finishing	 NLU Depth of cut (mm) vs Feed rate (mm/rev) graph	VNMG 160402 NLU VNMG 160404 NLU VNMG 160408 NLU VNMG 160412 NLU	0,2 0,4 0,8 1,2
Medium Cut	 NEF Depth of cut (mm) vs Feed rate (mm/rev) graph	VNMG 160402 NEF VNMG 160404 NEF VNMG 160408 NEF	0,2 0,4 0,8

Carbide Coated										Cermets		Carbide Uncoated													
P	M	K	H	S	F	M	P	K	S	N	Coated	Uncoated	Coated	Uncoated											
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

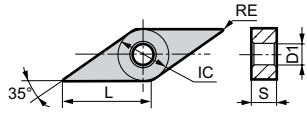
● = Euro stock
○ = Stock item in Japan

- Inserts
- C
- D
- K
- R
- S
- T
- V
- W

DIAMOND TYPE INSERTS FOR TURNING

Negative Inserts

35° Diamond Type 0° Relief
With Insert Hole



Dimensions (mm)				
VN	L	IC	S	D ₁
1604..	16,6	9,525	4,76	3,81



⇨ D16

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

VNMG

Carbide										Cermets		Carbide				
Coated										Coated		Uncoated		Uncoated		
P	P	M	M	F _M	K	H	S	P _M	P _M	P	P	K	S	N		

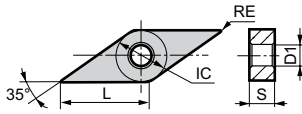
● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1			
Finishing	 NSU	VNMG 160402 NSU VNMG 160404 NSU VNMG 160408 NSU	0,2	●	●	●	○	●	●	●	○					○	○	○	○	○	○	○	○	○	○	○						
			0,4	●	●	●	○	●	●	●	○						○	○	○	○	○	○	○	○	○	○	○					
Medium Cut	 NSE	VNMG 160404 NSE VNMG 160408 NSE	0,4	○	○	○	○														○	○	○	○	○							
			0,8	●	●	●	○																○	○	○	○	○					
Medium Cut	 NSX	VNMG 160404 NSX VNMG 160408 NSX	0,4	○	○	○	○															○	○			○						
			0,8	○	○	○	○																○	○			○					
Medium Cut	 NGU	VNMG 160404 NGU VNMG 160408 NGU VNMG 160412 NGU	0,4	●	●	●	○	●	●	●	○	○					○	○	○	○		○	○			○						
			0,8	●	●	●	○	●	●	●	○	○					○	○	○	○	○		○	○			○					
			1,2	○	●	●	○	●	●	●	○	○						○	○	○	○	○		○	○			○				
Medium Cut	 NGE	VNMG 160404 NGE VNMG 160408 NGE VNMG 160412 NGE	0,4	○	○	○	○																									
			0,8	○	●	●	○																									
			1,2	○	○	○	○																									
Medium Cut	 NUG	VNMG 160404 NUG VNMG 160408 NUG VNMG 160412 NUG	0,4				○	○																								
			0,8				○	○																								
			1,2	●			○	○																								
Medium Cut	 NEG	VNMG 160404 NEG VNMG 160408 NEG VNMG 160412 NEG	0,4	○	○	○	○	●	●	●	○					○	○	○	○									○	○			
			0,8	○	●	●	○	●	●	●	○					○	○	○	○	○									○	○		
			1,2	○	●	●	○	●	●	●	○					○	○	○	○	○	○									○	○	
Medium Cut	 NEX	VNMG 160404 NEX VNMG 160408 NEX	0,4					●	●	●	○					●	●	●	○													
			0,8					●	●	●	○						●	●	●	○			○									

● = Euro stock
○ = Stock item in Japan

35° Diamond Type

0° Relief
With Insert Hole



Dimensions (mm)				
VN	L	IC	S	D ₁
1604..	16,6	9,525	4,76	3,81



⇒ D16

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

VNMG

M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut	NUP	VNMG 160404 NUP VNMG 160408 NUP	0,4 0,8
Medium Cut	NUX	VNMG 160404 NUX VNMG 160408 NUX VNMG 160412 NUX	0,4 0,8 1,2
Medium Cut	NGZ	VNMG 160404 NGZ VNMG 160408 NGZ VNMG 160412 NGZ	0,4 0,8 1,2
Medium Cut	NUZ	VNMG 160404 NUZ VNMG 160408 NUZ VNMG 160412 NUZ	0,4 0,8 1,2

Carbide												Cermets		Carbide													
Coated												Coated	Uncoated	Uncoated													
P	M	M	M	K	H	S	P	P	K	S	N																
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
●	●	●	●	●	●	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

VNGG

G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Finishing	NSU	VNGG 160402 NSU VNGG 160404 NSU VNGG 160408 NSU	0,2 0,4 0,8
Medium Cut	NEF	VNGG 160402 NEF VNGG 160404 NEF	0,2 0,4
Medium Cut	L/RAX	VNGG 160402 LAX VNGG 160404 LAX VNGG 160408 LAX VNGG 160402 RAX VNGG 160404 RAX VNGG 160408 RAX	0,2 0,4 0,8 0,2 0,4 0,8

Carbide												Cermets		Carbide													
Coated												Coated	Uncoated	Uncoated													
P	M	M	M	K	H	S	P	P	K	S	N																
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Stock item in Japan

Neg. Inserts



W TRIGON TYPE

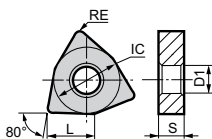
INSERTS FOR TURNING

Negative Inserts

80° Trigon Type

0° Relief

With Insert Hole



Dimensions (mm)				
WN	L	IC	S	D ₁
0604..	6,5	9,525	4,76	3,81
0804..	8,7	12,7	4,76	5,16



⇒ D17, D24
D42

⇒ E13

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

WNMG

Carbide											Cermets		Carbide											
Coated											Coated		Uncoated		Uncoated									
P	M	K	H	S	P	M	K	S	N	P	K	S	N											
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class Double Sided Bumpy Chipbreaker

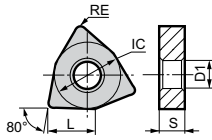
Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
Fine Finishing	 NFB Depth of cut (mm) vs Feed rate (mm/rev) graph for NFB.	WNMG 060404 NFB WNMG 060408 NFB WNMG 080402 NFB WNMG 080404 NFB WNMG 080408 NFB	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Fine Finishing	 NFA Depth of cut (mm) vs Feed rate (mm/rev) graph for NFA.	WNMG 080402 NFA WNMG 080404 NFA WNMG 080408 NFA	0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Fine Finishing	 NFL Depth of cut (mm) vs Feed rate (mm/rev) graph for NFL.	WNMG 080404 NFL WNMG 080408 NFL	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Fine Finishing	 NFE Depth of cut (mm) vs Feed rate (mm/rev) graph for NFE.	WNMG 060404 NFE WNMG 060408 NFE WNMG 080402 NFE WNMG 080404 NFE WNMG 080408 NFE WNMG 080412 NFE	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Finishing	 NLU Depth of cut (mm) vs Feed rate (mm/rev) graph for NLU.	WNMG 060404 NLU WNMG 060408 NLU WNMG 060412 NLU WNMG 080404 NLU WNMG 080408 NLU WNMG 080412 NLU	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,4	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Finishing	 NLU-W Depth of cut (mm) vs Feed rate (mm/rev) graph for NLU-W.	WNMG 060404 NLU-W WNMG 060408 NLU-W WNMG 080404 NLU-W WNMG 080408 NLU-W WNMG 080412 NLU-W	0,4	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
			0,8	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,4	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	

● = Euro stock
○ = Stock item in Japan

W TRIGON TYPE

INSERTS FOR TURNING

80° Trigon Type 0° Relief
With Insert Hole



Dimensions (mm)					
WN	L	IC	S	D ₁	
0604..	6,5	9,525	4,76	3,81	
06T3..	6,5	9,525	3,97	3,81	
0804..	8,7	12,7	4,76	5,16	



→ D17, D24
D42

→ E13

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

WNMG

Carbide												Cermets		Carbide		
Coated												Coated	Uncoated	Uncoated		
P	M	K	N	S	H	S	P	M	P	K	S	N	P	K	S	N

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC500S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Finishing	NEF	WNMG 060404 NEF WNMG 060408 NEF	0,4 0,8	○	●	○	○	●	●	●						○	○	○												
		WNMG 080404 NEF WNMG 080408 NEF	0,4 0,8	○	●	○	○	●	●	●	●						○	○	○									●	●	
Finishing	NSU	WNMG 060404 NSU WNMG 060408 NSU WNMG 060412 NSU	0,4 0,8 1,2	●	●	○	○	●	○	○	●							●	●				○							
		WNMG 06T304 NSU WNMG 06T308 NSU	0,4 0,8			○																								
Finishing	NSE	WNMG 080404 NSE WNMG 080408 NSE WNMG 080412 NSE	0,4 0,8 1,2	●	●	○	○	●	○	○												○	○	○	○	○				
		WNMG 060404 NSE-W WNMG 060408 NSE-W	0,4 0,8	○	○	○	○	○	○	○																				
Finishing	NSE-W	WNMG 080404 NSE-W WNMG 080408 NSE-W WNMG 080412 NSE-W	0,4 0,8 1,2	●	●	●	●	●	●	●												○	○	○	○	○				
		WNMG 080404 NSX WNMG 080408 NSX WNMG 080412 NSX	0,4 0,8 1,2	○	○	○	○	○	○	○													○	○	○	○	○			
Medium Cut	NGU	WNMG 060404 NGU WNMG 060408 NGU WNMG 060412 NGU	0,4 0,8 1,2	●	●	○	○	●	○	○	●	○	○	○								○	○	○	○	○				
		WNMG 080404 NGU WNMG 080408 NGU WNMG 080412 NGU	0,4 0,8 1,2	●	●	●	●	●	●	●	●						○	○	○	○			○	○	○	○	○			
Medium Cut	NGU-W	WNMG 060408 NGU-W	0,8	○	○	○																								
		WNMG 080408 NGU-W WNMG 080412 NGU-W	0,8 1,2	●	●	●						●	●				○	○	○	○			○	○	○	○	○			

● = Euro stock
○ = Stock item in Japan

Neg. Inserts



W TRIGON TYPE

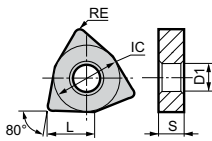
INSERTS FOR TURNING

Negative Inserts

80° Trigon Type

0° Relief

With Insert Hole



Dimensions (mm)				
WN	L	IC	S	D ₁
0604..	6,5	9,525	4,76	3,81
06T3..	6,5	9,525	3,97	3,81
0804..	8,7	12,7	4,76	5,16



⇨ D17, D24
D42

⇨ E13

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

WNMG

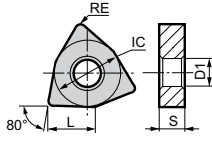
	Carbide													Cermets		Carbide											
	Coated													Coated	Uncoated	Uncoated											
	P	P	M	M	K	H	S	P	P	K	S	N															
Application	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Medium Cut	●	○	○	○																							
Medium Cut	●	○	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							
Medium Cut	○	●	○	○																							

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut		WNMG 060408 NGE WNMG 060412 NGE WNMG 080404 NGE WNMG 080408 NGE WNMG 080412 NGE WNMG 080416 NGE	0,8 1,2 0,4 0,8 1,2 1,6
Medium Cut		WNMG 060404 NUG WNMG 060408 NUG WNMG 06T304 NUG WNMG 06T308 NUG WNMG 080404 NUG WNMG 080408 NUG WNMG 080412 NUG	0,4 0,8 0,4 0,8 0,4 0,8 1,2
Medium Cut		WNMG 060408 NEG WNMG 060412 NEG WNMG 080404 NEG WNMG 080408 NEG WNMG 080412 NEG	0,8 1,2 0,4 0,8 1,2
Medium Cut		WNMG 060404 NEX WNMG 060408 NEX WNMG 080404 NEX WNMG 080408 NEX WNMG 080412 NEX	0,4 0,8 0,4 0,8 1,2
Medium Cut		WNMG 080408 NUP WNMG 080412 NUP	0,8 1,2
Medium Cut		WNMG 080408 NEM WNMG 080412 NEM	0,8 1,2

● = Euro stock
○ = Stock item in Japan

80° Trigon Type 0° Relief
With Insert Hole



Dimensions (mm)				
WN	L	IC	S	D ₁
0604..	6,5	9,525	4,76	3,81
0804..	8,7	12,7	4,76	5,16



⇒ D17, D24
D42

⇒ E13

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

WNMG

● M-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide										Cermets		Carbide	
				Coated										Coated	Uncoated	Uncoated	
				P	M	P	K	H	S	P	M	P	K	S	N		
Roughing	 Depth of cut (mm) vs Feed rate (mm/rev) graph	WNMG 080404 NUX WNMG 080408 NUX WNMG 080412 NUX	0,4	○	●	●	●	●	●	●	●	●	●	●	●	●	
			0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
			1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Roughing	 Depth of cut (mm) vs Feed rate (mm/rev) graph	WNMG 060408 NMU WNMG 060412 NMU WNMG 080408 NMU WNMG 080412 NMU WNMG 080416 NMU	0,8	●	○	●	●	●	●	●	●	●	●	●	●	●	
			1,2	●	○	●	●	●	●	●	●	●	●	●	●	●	●
			0,8	●	●	●	●	●	●	●	○	○	○	○	○	○	○
Roughing	 Depth of cut (mm) vs Feed rate (mm/rev) graph	WNMG 060408 NME WNMG 060412 NME WNMG 080408 NME WNMG 080412 NME WNMG 080416 NME	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	●	●	●	●	●	●	●	○	○	○	○	○	○	○
Roughing	 Depth of cut (mm) vs Feed rate (mm/rev) graph	WNMG 080408 NMX WNMG 080412 NMX	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	●	●	●	●	●	●	●	○	○	○	○	○	○	○
Roughing	 Depth of cut (mm) vs Feed rate (mm/rev) graph	WNMG 060408 NGZ WNMG 060412 NGZ WNMG 080404 NGZ WNMG 080408 NGZ WNMG 080412 NGZ	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing	 Depth of cut (mm) vs Feed rate (mm/rev) graph	WNMG 080404 NUZ WNMG 080408 NUZ WNMG 080412 NUZ	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Stock item in Japan

Neg. Inserts



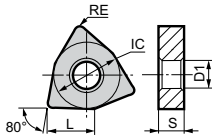
W TRIGON TYPE

INSERTS FOR TURNING

Negative Inserts

80° Trigon Type

0° Relief
With Insert Hole



Dimensions (mm)				
WN	L	IC	S	D ₁
0804..	8,7	12,7	4,76	5,16



- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

WNMM

● M-Class One Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide		
				Coated													Coated	Uncoated	Uncoated		
				P	M	F	K	H	S	F	M	P	K	S	N	P	K	S	N		
Heavy Roughing		WNMM 080408 NMP WNMM 080412 NMP	0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
			1,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Heavy Roughing		WNMM 080408 NHG WNMM 080412 NHG	0,8	●																	
			1,2		●																

WNMA

● M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide		
				Coated													Coated	Uncoated	Uncoated		
				P	M	F	K	H	S	F	M	P	K	S	N	P	K	S	N		
Roughing		WNMA 080408 WNMA 080412 WNMA 080416	0,8																		
			1,2																		
			1,6																		

WNGG

● G-Class Double Sided Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide		
				Coated													Coated	Uncoated	Uncoated		
				P	M	F	K	H	S	F	M	P	K	S	N	P	K	S	N		
Finishing		WNGG 080404 NSU	0,4																		

● = Euro stock
○ = Stock item in Japan

Neg. Inserts

C

D

K

R

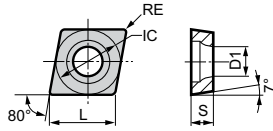
S

T

V

W

80° Diamond Type 7° Relief
With Insert Hole



Dimensions (mm)					
CC	L	IC	S	D ₁	
03X1..	3,55	3,5	1,4	1,9	
04X1..	4,37	4,3	1,8	2,3	
0602..	6,4	6,35	2,38	2,8	
09T3..	9,7	9,525	3,97	4,4	



⇨ D31

⇨ E14

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel



● E-Class

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide				
				Coated													Coated	Uncoated	Uncoated				
				P	M	M	K	H	S	S	P	P	P	P	K	S	N	K	S	N			
Finishing Depth of cut (mm) Feed rate (mm/rev) L/RFY	CCET 03X1003 LFY CCET 03X101 LFY CCET 03X102 LFY CCET 03X104 LFY CCET 04X1003 LFY CCET 04X101 LFY CCET 04X102 LFY CCET 04X104 LFY CCET 060201 LFY CCET 060202 LFY CCET 09T301 LFY CCET 09T302 LFY	0,03	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
		0,1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,03	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,03	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	0,03	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	0,1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	0,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	0,03	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	0,1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	0,2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	0,4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	

● = Euro stock
 ○ = Japan stock

Pos. Inserts



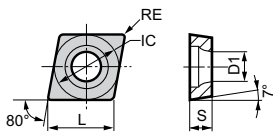
C DIAMOND TYPE

INSERTS FOR TURNING

7° Positive Inserts

80° Diamond Type

7° Relief
With Insert Hole



Dimensions (mm)				
CC	L	IC	S	D ₁
03X1..	3,55	3,5	1,4	1,9
04X1..	4,37	4,3	1,8	2,3
0602..	6,4	6,35	2,38	2,8
09T3..	9,7	9,525	3,97	4,4



⇨ D31

⇨ E14

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CCGT

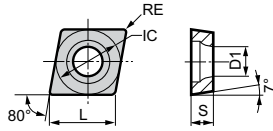
	Carbide											Cermets		Carbide													
	Coated											Coated	Uncoated	Uncoated													
	P	P	M	M	K	H	S	P	M	P	K	S	N														
Application	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
RE																											
Finishing																											
Depth of cut (mm)																											
Feed rate (mm/rev)																											
Shape																											
ISO Cat. No.																											
RE																											
Depth of cut (mm)																											
Feed rate (mm/rev)																											
Shape																											
ISO Cat. No.																											
RE																											
Depth of cut (mm)																											
Feed rate (mm/rev)																											
Shape																											
ISO Cat. No.																											
RE																											
Depth of cut (mm)																											
Feed rate (mm/rev)																											
Shape																											
ISO Cat. No.																											
RE																											
Depth of cut (mm)																											
Feed rate (mm/rev)																											

G-Class

Application	Shape	ISO Cat. No.	RE
Finishing		<p>CCGT 060201M NFC CCGT 060202M NFC CCGT 060204M NFC</p> <p>CCGT 09T301M NFC CCGT 09T302M NFC CCGT 09T304M NFC</p>	<p><0,1</p> <p><0,2</p> <p><0,4</p> <p><0,1</p> <p><0,2</p> <p><0,4</p>
Finishing		<p>CCGT 0602003 LFX CCGT 060201 LFX CCGT 060202 LFX CCGT 060204 LFX</p> <p>CCGT 09T3003 LFX CCGT 09T301 LFX CCGT 09T302 LFX CCGT 09T304 LFX CCGT 09T308 LFX</p>	<p>0,03</p> <p>0,1</p> <p>0,2</p> <p>0,4</p> <p>0,03</p> <p>0,1</p> <p>0,2</p> <p>0,4</p> <p>0,8</p>
Finishing		<p>CCGT 0602003 RFX CCGT 060201 RFX CCGT 060202 RFX CCGT 060204 RFX</p> <p>CCGT 09T3003 RFX CCGT 09T301 RFX CCGT 09T302 RFX CCGT 09T304 RFX CCGT 09T308 RFX</p>	<p>0,03</p> <p>0,1</p> <p>0,2</p> <p>0,4</p> <p>0,03</p> <p>0,1</p> <p>0,2</p> <p>0,4</p> <p>0,8</p>
Finishing		<p>CCGT 03X1003 LFYS CCGT 03X101 LFYS CCGT 03X102 LFYS CCGT 03X104 LFYS</p> <p>CCGT 04X1003 LFYS CCGT 04X101 LFYS CCGT 04X102 LFYS CCGT 04X104 LFYS</p>	<p>0,03</p> <p>0,1</p> <p>0,2</p> <p>0,4</p> <p>0,03</p> <p>0,1</p> <p>0,2</p> <p>0,4</p>
Finishing		<p>CCGT 03X1003 RFYS CCGT 03X101 RFYS CCGT 03X102 RFYS CCGT 03X104 RFYS</p> <p>CCGT 04X1003 RFYS CCGT 04X101 RFYS CCGT 04X102 RFYS CCGT 04X104 RFYS</p>	<p>0,03</p> <p>0,1</p> <p>0,2</p> <p>0,4</p> <p>0,03</p> <p>0,1</p> <p>0,2</p> <p>0,4</p>

- = Euro stock
- = Japan stock

80° Diamond Type 7° Relief
With Insert Hole



Dimensions (mm)				
CC	L	IC	S	D ₁
03X1..	3,55	3,5	1,4	1,9
04X1..	4,37	4,3	1,8	2,3
0602..	6,4	6,35	2,38	2,8
0903..	9,7	9,525	3,18	4,4
09T3..	9,7	9,525	3,97	4,4
1204..	12,9	12,7	4,76	5,5



⇨ E14

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

CCGT

● G-Class

Application	Shape	ISO Cat. No.	RE
Finishing Depth of cut (mm) Feed rate (mm/rev) 	L/RFY	CCGT 03X101 LFY CCGT 03X102 LFY CCGT 03X104 LFY CCGT 04X101 LFY CCGT 04X102 LFY CCGT 04X104 LFY	0,1 0,2 0,4 0,1 0,2 0,4
		CCGT 03X101 RFY CCGT 03X102 RFY CCGT 03X104 RFY CCGT 04X101 RFY CCGT 04X102 RFY CCGT 04X104 RFY	0,1 0,2 0,4 0,1 0,2 0,4
Light Cut Depth of cut (mm) Feed rate (mm/rev) 	NAG	CCGT 060202 NAG CCGT 060204 NAG CCGT 09T302 NAG CCGT 09T304 NAG CCGT 09T308 NAG CCGT 120404 NAG CCGT 120408 NAG	0,2 0,4 0,2 0,4 0,8 0,4 0,8
Light cut Depth of cut (mm) Feed rate (mm/rev) 	NSI	CCGT 09T301M NSI CCGT 09T302M NSI CCGT 09T304M NSI	<0,1 <0,2 <0,4
Light cut Depth of cut (mm) Feed rate (mm/rev) 	NSC	CCGT 0602003 NSC CCGT 09T3003 NSC CCGT 060201M NSC CCGT 060202M NSC CCGT 060204M NSC CCGT 080201M NSC CCGT 080202M NSC CCGT 090301M NSC CCGT 090302M NSC CCGT 09T301M NSC CCGT 09T302M NSC CCGT 09T304M NSC CCGT 09T308M NSC	0,03 0,03 <0,1 <0,2 <0,4 <0,1 <0,2 <0,1 <0,1 <0,2 <0,1 <0,2 <0,4 <0,8
For Aluminum Depth of cut (mm) Feed rate (mm/rev) 	L/RAY	CCGT 060202 LAY CCGT 060204 LAY CCGT 09T301 LAY CCGT 09T302 LAY CCGT 09T304 LAY CCGT 060201 RAY CCGT 060202 RAY CCGT 060204 RAY CCGT 09T301 RAY CCGT 09T302 RAY CCGT 09T304 RAY	0,2 0,4 0,1 0,2 0,4 0,1 0,2 0,4 0,1 0,2 0,4

Carbide												Cermet		Carbide												
Coated												Coated	Uncoated	Uncoated												
P	M	K	N	S	H	P	M	P	K	S	N	P	K	S	N											
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503J	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1	
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○

● = Euro stock
 ○ = Japan stock

- Pos. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

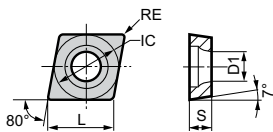
C DIAMOND TYPE

INSERTS FOR TURNING

7° Positive Inserts

80° Diamond Type

7° Relief
With Insert Hole



Dimensions (mm)				
CC	L	IC	S	D ₁
0602..	6,4	6,35	2,38	2,8
09T3..	9,7	9,525	3,97	4,4
1204..	12,9	12,7	4,76	5,5



⇨ D31

⇨ E14

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CCMT

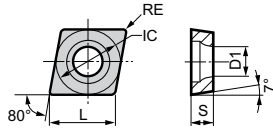
Carbide											Cermets		Carbide												
Coated											Coated		Uncoated		Uncoated										
P	M	M	M	K	H	S	P	P	K	S	N	P	K	S	N										
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Finishing	 NFB	CCMT 060202 NFB	0,2																											
		CCMT 060204 NFB	0,4																											
		CCMT 09T302 NFB CCMT 09T304 NFB CCMT 09T308 NFB	0,2 0,4 0,8																											
Finishing - Light Cut	 NFP	CCMT 060202 NFP	0,2																											
		CCMT 060204 NFP CCMT 060208 NFP	0,4 0,8	●																										
		CCMT 09T302 NFP CCMT 09T304 NFP CCMT 09T308 NFP	0,2 0,4 0,8																											
Finishing	 NLU	CCMT 060202 NLU	0,2	●	●	●		●	●	●	●										●	○	○	○	○					
		CCMT 060204 NLU	0,4	●	●	●		●	●	●	●											●	○	○	○	○				
		CCMT 09T302 NLU CCMT 09T304 NLU CCMT 09T308 NLU	0,2 0,4 0,8	●	●	●		●	●	●	●											●	○	○	○	○				
Finishing	 NLU-W	CCMT 09T304 NLU-W	0,4	●	●	●		●			●										●	●	●	●	○					
		CCMT 09T308 NLU-W	0,8	●	●	●		●			●											●	●	●	●	○				
Light Cut	 NLB	CCMT 060202 NLB	0,2	○	○	○	○	○	○	○	○										○	○	○	○	○					
		CCMT 060204 NLB CCMT 060208 NLB	0,4 0,8	○	○	○	○	○	○	○	○											○	○	○	○	○				
		CCMT 09T302 NLB CCMT 09T304 NLB CCMT 09T308 NLB	0,2 0,4 0,8	○	○	○	○	○	○	○	○											○	○	○	○	○				
Light Cut	 NSU	CCMT 060202 NSU	0,2	●	●	●	●	●	●	●	●					○	○	○	○		●	●	●	●	●					
		CCMT 060204 NSU CCMT 060208 NSU	0,4 0,8	●	●	●	●	●	●	●	●						○	○	○	○		●	●	●	●	●				
		CCMT 09T302 NSU CCMT 09T304 NSU CCMT 09T308 NSU	0,2 0,4 0,8	○	●	●	●	●	●	●	●	○					○	○	○	○		●	●	●	●	●				
Light Cut	 NSU	CCMT 120404 NSU	0,4	●	●	●	●	●	●	●	●					○	○	○	○		●	●	●	●	●					
		CCMT 120408 NSU	0,8	●	●	●	●	●	●	●	●						○	○	○	○		●	●	●	●	●				

● = Euro stock
○ = Japan stock

80° Diamond Type 7° Relief
With Insert Hole



Dimensions (mm)				
C	L	IC	S	D ₁
0602..	6,4	6,35	2,38	2,8
0803..	8,0	7,94	3,18	3,4
0903..	9,7	9,525	3,18	4,4
09T3..	9,7	9,525	3,97	4,4
1204..	12,9	12,7	4,76	5,5



⇒ E15

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

CCMT/-W

● M-Class

Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide																	
				Coated										Coated	Uncoated	Uncoated																	
				P	M	M	K	H	S	P	P	K	S	N																			
Light Cut	NUS	CCMT 09T308 NUS	0,8	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC505S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1				
				●																													
							○																										
							●	●	●																								
Light Cut	NSC	CCMT 060204 NSC CCMT 080304 NSC CCMT 090308 NSC CCMT 120408 NSC	0,4 0,4 0,8 0,8																														
							○																										
							●	●																									
							○	○																									
Light Cut	NSK	CCMT 060204 NSK CCMT 060208 NSK CCMT 09T304 NSK CCMT 09T308 NSK CCMT 120404 NSK CCMT 120408 NSK CCMT 120412 NSK	0,4 0,8 0,4 0,8 0,4 0,8 1,2	●	●	●	●																										
							○																										
							●	●	●	●																							
							○	○																									
Roughing - Light Cut	NGU	CCMT 060204 NGU New CCMT 060208 NGU New CCMT 09T304 NGU New CCMT 09T308 NGU New CCMT 120408 NGU New	0,4 0,8 0,4 0,8 0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
							○																										
							●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
							○	○																									
Roughing	NMU	CCMT 09T304 NMU CCMT 09T308 NMU	0,4 0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
							○																										
Roughing	CCMW	CCMW 060204 CCMW 09T304 CCMW 09T308	0,4 0,4 0,8									○	○	○																			
															○	○	○																

● = Euro stock
○ = Japan stock

Pos. Inserts



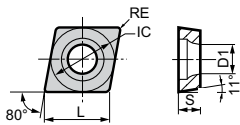
C DIAMOND TYPE

INSERTS FOR TURNING

11° Positive Inserts

80° Diamond Type

11° Relief
With Insert Hole



Dimensions (mm)				
CP	L	IC	S	D ₁
0802..	8,0	7,94	2,38	3,4
0903..	9,7	9,525	3,18	4,4
1204..	12,9	12,7	4,76	5,5



⇨ E15

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CPGT ○○○○ NSD

● G-Class

Application	Shape	ISO Cat. No.	RE	Carbide											Cermets		Carbide																
				Coated											Coated	Uncoated	Uncoated																
				P	M	M	K	H	S	P	M	P	K	S	N																		
Finishing ~ Light Cut Depth of cut (mm) Feed rate (mm/rev)		CPGT 080202 NSD CPGT 080204 NSD CPGT 080208 NSD CPGT 090302 NSD CPGT 090304 NSD CPGT 090308 NSD CPGT 120402 NSD CPGT 120404 NSD CPGT 120408 NSD	0,2	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1				
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

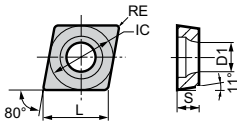
CPMT ○○○○-■

● M-Class

Application	Shape	ISO Cat. No.	RE	Carbide											Cermets		Carbide																
				Coated											Coated	Uncoated	Uncoated																
				P	M	M	K	H	S	P	M	P	K	S	N																		
Finishing Depth of cut (mm) Feed rate (mm/rev)		CPMT 080204 NFB CPMT 090304 NFB CPMT 090308 NFB	0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1				
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing Depth of cut (mm) Feed rate (mm/rev)		CPMT 080204 NLU CPMT 090304 NLU CPMT 090308 NLU	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing Depth of cut (mm) Feed rate (mm/rev)		CPMT 090304 NLU-W CPMT 090308 NLU-W	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Light Cut Depth of cut (mm) Feed rate (mm/rev)		CPMT 080204 NLB CPMT 090304 NLB CPMT 090308 NLB	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Japan stock

80° Diamond Type 11° Relief
With Insert Hole



Dimensions (mm)				
CP	L	IC	S	D ₁
0602..	6,4	6,35	2,38	2,8
0802..	8,0	7,94	2,38	3,4
0903..	9,7	9,525	3,18	4,4
09T3..	9,7	9,525	3,97	4,4
1204..	12,9	12,7	4,76	5,5
1604..	16,1	15,875	4,76	6,5



⇒ E15

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

CPMT/-H

● M-Class

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide		
				Coated											Coated	Uncoated	Uncoated		
				P	M	M	K	H	S	S	P	P	K	S	N				
Light Cut NSU		CPMT 080204 NSU CPMT 080208 NSU CPMT 090304 NSU CPMT 090308 NSU	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Light Cut NUS		CPMT 060204 NUS CPMT 080308 NUS CPMT 09T308 NUS CPMH 120408 NUS CPMH 160408 NUS	0,4			●										○			
			0,8			●													
			0,8			●													
			0,8					●											
Light-Medium Cut NGU		CPMT 090304 NGU New CPMT 090308 NGU New	0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Light-Medium Cut NMU		CPMT 080204 NMU CPMT 080208 NMU CPMT 090304 NMU CPMT 090308 NMU	0,4	○	○	○													
			0,8	○	○	○													
			0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Japan stock

Pos.
Inserts



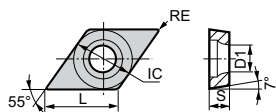
DIAMOND TYPE

INSERTS FOR TURNING

7° Positive Inserts

55° Diamond Type

7° Relief
With Insert Hole



Dimensions (mm)				
DC	L	IC	S	D ₁
0702..	7,7	6,35	2,38	2,8
11T3..	11,6	9,525	3,97	4,4



⇒ D32-33

⇒ E16-17

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

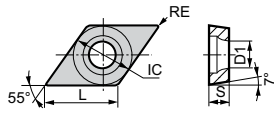
DCGT

Application	Shape	ISO Cat. No.	RE	Carbide										Cermets		Carbide							
				Coated										Coated	Uncoated	Uncoated							
				P	M	K	H	S	N	P	K	S	N	P	K	S	N						
Finishing Depth of cut (mm) Feed rate (mm/rev)	NFC	DCGT 070201M NFC	<0,1																				
		DCGT 070202M NFC	<0,2																				
		DCGT 070204M NFC	<0,4																				
		DCGT 11T301M NFC	<0,1																				
	DCGT 11T302M NFC	<0,2																					
	DCGT 11T304M NFC	<0,4																					
	Finishing Depth of cut (mm) Feed rate (mm/rev)	L/RFX	DCGT 0702003 LFX	0,03																			
			DCGT 070201 LFX	0,1																			
			DCGT 070202 LFX	0,2																			
			DCGT 070204 LFX	0,4																			
		DCGT 11T3003 LFX	0,03																				
		DCGT 11T301 LFX	0,1																				
DCGT 11T302 LFX		0,2																					
DCGT 11T304 LFX		0,4																					
Finishing Depth of cut (mm) Feed rate (mm/rev)		L/RFX	DCGT 0702003 RFX	0,03																			
			DCGT 070201 RFX	0,1																			
			DCGT 070202 RFX	0,2																			
			DCGT 070204 RFX	0,4																			
	DCGT 11T3003 RFX	0,03																					
	DCGT 11T301 RFX	0,1																					
	DCGT 11T302 RFX	0,2																					
	DCGT 11T304 RFX	0,4																					
	Finishing Depth of cut (mm) Feed rate (mm/rev)	L/RFYS	DCGT 0702003 LFYS	0,03																			
			DCGT 070201 LFYS	0,1																			
			DCGT 070202 LFYS	0,2																			
			DCGT 070204 LFYS	0,4																			
DCGT 11T3003 LFYS		0,03																					
DCGT 11T301 LFYS		0,1																					
DCGT 11T302 LFYS		0,2																					
DCGT 11T304 LFYS		0,4																					
Finishing Depth of cut (mm) Feed rate (mm/rev)		L/RFYS	DCGT 0702003 RFYS	0,03																			
			DCGT 070201 RFYS	0,1																			
			DCGT 070202 RFYS	0,2																			
			DCGT 070204 RFYS	0,4																			
	DCGT 11T3003 RFYS	0,03																					
	DCGT 11T301 RFYS	0,1																					
	DCGT 11T302 RFYS	0,2																					
	DCGT 11T304 RFYS	0,4																					

● = Euro stock
○ = Japan stock

Pos. Inserts
C
D
K
R
S
T
V
W

55° Diamond Type 7° Relief
With Insert Hole



Dimensions (mm)				
DC	L	IC	S	D ₁
0702..	7,7	6,35	2,38	2,8
11T3..	11,6	9,525	3,97	4,4



⇨ D32-33

⇨ E16-17

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

DCGT

● G-Class

Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide																	
				Coated										Coated	Uncoated	Uncoated																	
				P	M	K	H	S	P	P	K	S	N																				
				AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1				
Finishing Depth of cut (mm) Feed rate (mm/rev)		DCGT 0702003 LFY	0,03																														
			0,1																														
			0,2																														
			0,4																														
			DCGT 11T3003 LFY	0,03																													
DCGT 11T301 LFY	0,1																																
DCGT 11T302 LFY	0,2																																
DCGT 11T304 LFY	0,4																																
Finishing Depth of cut (mm) Feed rate (mm/rev)		DCGT 0702003 RFY	0,03																														
			0,1																														
			0,2																														
			0,4																														
			DCGT 11T3003 RFY	0,03																													
DCGT 11T301 RFY	0,1																																
DCGT 11T302 RFY	0,2																																
DCGT 11T304 RFY	0,4																																
Finishing ~ Light Cut Depth of cut (mm) Feed rate (mm/rev)		DCGT 070202 LSD	0,2																														
			0,4																														
		DCGT 11T304 LSD	0,4																														
			0,8																														
		DCGT 11T308 LSD	0,8																														
Finishing ~ Light Cut Depth of cut (mm) Feed rate (mm/rev)		DCGT 070202 RSD	0,2																														
			0,4																														
		DCGT 11T304 RSD	0,4																														
			0,8																														
		DCGT 11T308 RSD	0,8																														
Light Cut Depth of cut (mm) Feed rate (mm/rev)		DCGT 070202 NAG	0,2																														
			0,4																														
		DCGT 11T302 NAG	0,2																														
			0,4																														
		DCGT 11T304 NAG	0,4																														
DCGT 11T308 NAG	0,8																																

● = Euro stock
 ○ = Japan stock

- Pos. Inserts
- -
 -
 -
 -
 -
 -
 -

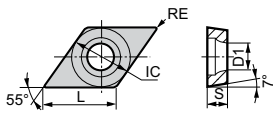
DIAMOND TYPE

INSERTS FOR TURNING

7° Positive Inserts

55° Diamond Type

7° Relief
With Insert Hole



Dimensions (mm)				
DC	L	IC	S	D ₁
0702..	7,7	6,35	2,38	2,8
0902..	9,7	7,94	2,38	3,4
1103..	11,6	9,525	3,18	4,4
11T3..	11,6	9,525	3,97	4,4



⇒ D32-33

⇒ E16-17

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

DCGT/-W

Carbide											Cermets		Carbide											
Coated											Coated	Uncoated	Uncoated											
P	M	M	M	K	H	S	P	P	K	S	N	P	K	S	N									
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

G-Class

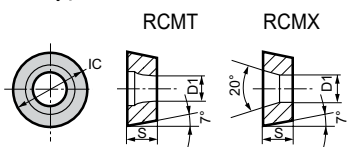
Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
Light Cut Depth of cut (mm) Feed rate (mm/rev)	 NSI	DCGT 070201M NSI	<0,1								●						●	●	●	●	●	○	○	○						
		DCGT 070202M NSI	<0,2								●							●	●	●	●	●	○	○	○					
		DCGT 070204M NSI	<0,4								●							●	●	●	●	●	○	○	○					
		DCGT 11T301M NSI	<0,1									●						●	●	●	●	●	○	○	○					
		DCGT 11T302M NSI	<0,2									●						●	●	●	●	●	○	○	○					
		DCGT 11T304M NSI	<0,4									●						●	●	●	●	●	○	○	○					
DCGT 11T308M NSI	<0,8									●						●	●	●	●	●	○	○	○							
Light cut Depth of cut (mm) Feed rate (mm/rev)	 NSC	DCGT 0702003 NSC	0,03																		○	○		○	○					
		DCGT 11T3003 NSC	0,03																			○	○	●		○	○			
		DCGT 070201M NSC	<0,1																			●	●	●	●	●				
		DCGT 070202M NSC	<0,2																			●	●	●	●	●				
		DCGT 070204M NSC	<0,4																			●	●	●	●	●				
		DCGT 090201M NSC	<0,1																				○	○	○	○	○			
DCGT 090202M NSC	<0,2																				○	○	○	○	○					
For Aluminum Depth of cut (mm) Feed rate (mm/rev)	 L/RAY	DCGT 11T301 LAY	0,1																										○	
		DCGT 11T302 LAY	0,2																											○
		DCGT 11T304 LAY	0,4																											○
		DCGT 070202 RAY	0,2																											○
DCGT 070204 RAY	0,4																												○	
Light Cut		DCGW 070202	0,2																										○	
		DCGW 070204	0,4																											○
		DCGW 070208	0,8																											○
Light Cut		DCGW 11T302	0,2																										○	
		DCGW 11T304	0,4																											○
		DCGW 11T308	0,8																											○

● = Euro stock
○ = Japan stock

R ROUND TYPE INSERTS FOR TURNING

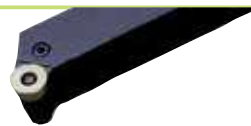
7° Positive Inserts

Round Type Inserts 7° Relief With Insert Hole



RC--	L	IC	S	D ₁
1003	-	10,0	3,18	3,6
10T3	-	10,0	3,97	3,6
12	-	12,0	4,76	4,2
16	-	16,0	6,35	5,2
20	-	20,0	6,35	6,5
25	-	25,0	7,94	7,2
32	-	32,0	9,52	9,5

(M0: IC is metric)



Lever lock holders for RCMX
⇒ D34-35

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

RCMT ○○○○M0 ○-■

● M-Class Bumpy Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide			
				Coated											Coated	Uncoated	Uncoated			
				P	M	M	K	H	S	P	P	K	S	N						
Roughing NRX		RCMT 1003M0 NRX	-	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		RCMT 10T3M0 NRX	-	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMT 1204M0 NRX	-	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMT 1606M0 NRX	-	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMT 2006M0 NRX	-	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMT 2507M0 NRX	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Roughing NRH		RCMT 1204M0 NRH	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
		RCMT 1606M0 NRH	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMT 2006M0 NRH	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

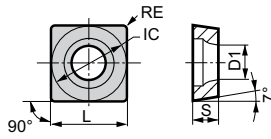
RCMX ○○○○M0 ○-■

● M-Class Grooved Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide			
				Coated											Coated	Uncoated	Uncoated			
				P	M	M	K	H	S	P	P	K	S	N						
Roughing NRP		RCMX 1003M0 NRP	-	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	
		RCMX 1204M0 NRP	-	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMX 1606M0 NRP	-	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMX 2006M0 NRP	-	○	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMX 2507M0 NRP	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		RCMX 3209M0 NRP	-	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Japan stock

90° Square Type 7° Relief
With Insert Hole



Dimensions (mm)					
SC	L	IC	S	D ₁	
0702..	7,94	7,94	2,38	3,4	
0903..	9,525	9,525	3,18	4,4	
09T3..	9,525	9,525	3,97	4,4	
1204..	12,7	12,7	4,76	5,5	



⇨ D36

"S ... SSKC" - Type
 (⇨ Stock in Japan)

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SCGT ○○○○○○ - ■■

● G-Class

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide
				Coated													Coated	Uncoated	Uncoated
				P	M	M	K	H	S	P	P	P	P	P	P	P	K	S	N
Finishing Depth of cut (mm) Feed rate (mm/rev)	 L/RFX	SCGT 09T302 LFX	0,2																
		SCGT 09T304 LFX	0,4																
		SCGT 120404 LFX	0,4																
		SCGT 09T302 RFX	0,2																
		SCGT 09T304 RFX	0,4																
		SCGT 120404 RFX	0,4																
Light Cut Depth of cut (mm) Feed rate (mm/rev)	 NSC	SCGT 070201M NSC	<0,1																
		SCGT 070202M NSC	<0,2																
		SCGT 090301M NSC	<0,1																
		SCGT 090302M NSC	<0,2																
		SCGT 09T301M NSC	<0,1																
		SCGT 09T302M NSC	<0,2																

● = Euro stock
 ○ = Japan stock

Pos. Inserts



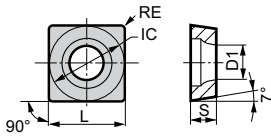
S SQUARE TYPE

INSERTS FOR TURNING

7° Positive Inserts

90° Square Type

7° Relief
With Insert Hole



Dimensions (mm)				
SC	L	IC	S	D ₁
09T3..	9,525	9,525	3,97	4,4
1204..	12,7	12,7	4,76	5,5



⇨ D36

"S ... SSKC" - Type
(⇨ Stock in Japan)

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

SCMT/-W

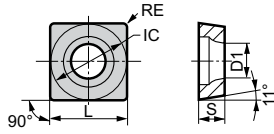
Carbide										Cermets		Carbide		
Coated										Coated	Uncoated	Uncoated		
P	M	M	M	K	H	S	P	P	K	S	N			

● M-Class

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Finishing Depth of cut (mm) Feed rate (mm/rev)		SCMT 09T304 NFB SCMT 09T308 NFB	0,4 0,8																											
		SCMT 120404 NFP	0,4																											
Finishing Depth of cut (mm) Feed rate (mm/rev)		SCMT 09T304 NFP SCMT 09T308 NFP	0,4 0,8																											
		SCMT 120404 NFP	0,4																											
Finishing Depth of cut (mm) Feed rate (mm/rev)		SCMT 09T304 NLU SCMT 09T308 NLU	0,4 0,8	○	○	○		○	○																					
		SCMT 120412 NLU	1,2	●	●																									
Light Cut Depth of cut (mm) Feed rate (mm/rev)		SCMT 09T304 NLB SCMT 09T308 NLB	0,4 0,8	○	○	○		○	○																					
		SCMT 120404 NSU SCMT 120408 NSU	0,4 0,8	○	○	○		○	○																					
Light Cut Depth of cut (mm) Feed rate (mm/rev)		SCMT 09T304 NSU SCMT 09T308 NSU	0,4 0,8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		SCMT 120404 NSU SCMT 120408 NSU	0,4 0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Light Cut Depth of cut (mm) Feed rate (mm/rev)		SCMT 09T304 NSK SCMT 09T308 NSK	0,4 0,8		●	●	●																							
		SCMT 120404 NSK SCMT 120408 NSK SCMT 120412 NSK	0,4 0,8 1,2		●	●	●																							
Light-Medium Cut Depth of cut (mm) Feed rate (mm/rev)		SCMT 09T304 NGU SCMT 09T308 NGU	0,4 0,8	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		SCMT 120408 NGU	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Light-Medium Cut Depth of cut (mm) Feed rate (mm/rev)		SCMT 09T308 NMU	0,8	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		SCMT 120408 NMU SCMT 120412 NMU	0,8 1,2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		SCMW 09T308	0,8									○	○	○																
		SCMW 120408 SCMW 120412	0,8 1,2										○	○	○															

● = Euro stock
○ = Japan stock

90° Square Type 11° Relief
With Insert Hole



Dimensions (mm)				
SP	L	IC	S	D ₁
0602..	6,35	6,35	2,38	2,8
0703..	7,94	7,94	3,18	3,4
0903..	9,525	9,525	3,18	3,4
09T3..	9,525	9,525	3,97	4,4
1204..	12,7	12,7	4,76	5,5
1504..	15,875	15,875	4,76	6,5



⇨ E18

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SPMT/-H

● M-Class

Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide																
				Coated										Coated	Uncoated	Uncoated																
				P	M	K	H	S	P	P	K	S	N																			
				AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1			
Finishing	 NFB Depth of cut (mm) vs Feed rate (mm/rev) graph for NFB.	SPMT 090304 NFB SPMT 090308 NFB	0,4																													
			0,8																				○	●	○	○	○	○				
Finishing	 NLU Depth of cut (mm) vs Feed rate (mm/rev) graph for NLU.	SPMT 090304 NLU SPMT 090308 NLU	0,4																													
			0,8	○	○	○		○	○															○	○	○	○	○				
Finishing	 NFK Depth of cut (mm) vs Feed rate (mm/rev) graph for NFK.	SPMT 090304 NFK	0,4																													
Light Cut	 NUS Depth of cut (mm) vs Feed rate (mm/rev) graph for NUS.	SPMT 060204 NUS SPMT 070308 NUS SPMT 09T308 NUS	0,4									○																				
			0,8										○																			
			0,8										○																			
Light Cut	 NUS Depth of cut (mm) vs Feed rate (mm/rev) graph for NUS.	SPMH 090308 NUS SPMH 120408 NUS SPMH 150408 NUS	0,8								○																					
			0,8									○																				
			0,8									○																				
Light - Medium Cut	 NLB Depth of cut (mm) vs Feed rate (mm/rev) graph for NLB.	SPMT 090304 NLB SPMT 090308 NLB	0,4		○	○	○	○	○	○																						
			0,8		○	○	○	○	○															○	○	○	○	○				
Light - Medium Cut	 NSF Depth of cut (mm) vs Feed rate (mm/rev) graph for NSF.	SPMT 090304 NSF SPMT 090308 NSF	0,4			○	○																									
			0,8			○	○	●																								

● = Euro stock
 ○ = Japan stock

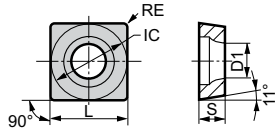
- Pos. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

S SQUARE TYPE

INSERTS FOR TURNING

11° Positive Inserts

90° Square Type 11° Relief
With Insert Hole



Dimensions (mm)				
SP	L	IC	S	D ₁
0703..	7,94	7,94	3,18	3,4
0903..	9,525	9,525	3,18	3,4



- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SPGW

Application	Shape	ISO Cat. No.	RE	Carbide										Cermert		Carbide																		
				Coated										Coated	Uncoated	Uncoated																		
				P	M	M	K	H	S	P	M	P	K	S	N																			
Light Cut		SPGW 090304 T	0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1					

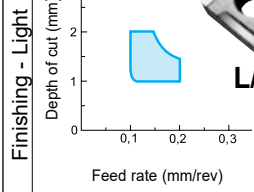
● G-Class No Chipbreaker

C

SPGT

Application	Shape	ISO Cat. No.	RE	Carbide										Cermert		Carbide																		
				Coated										Coated	Uncoated	Uncoated																		
				P	M	M	K	H	S	P	M	P	K	S	N																			
Finishing - Light Cut	 L/RSD	SPGT 090302 LSD SPGT 090304 LSD SPGT 090308 LSD	0,2 0,4 0,8	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1					

● G-Class



T

V

● = Euro stock
 ○ = Japan stock

Pos. Inserts

D

K

R

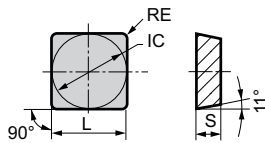
S

T

V

W

90° Square Type 11° Relief
Without Insert Hole



Dimensions (mm)				
SP	L	IC	S	D ₁
0903..	9,525	9,525	3,18	-
1203..	12,7	12,7	3,18	-
1504..	15,875	15,875	4,76	-



"S ... CSKP...09/12" - Type
 (⇒ Stock in Japan)

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

SPMR

● M-Class

Application	Shape	ISO Cat. No.	RE
Finishing	 NFK	SPMR 090304 NFK SPMR 090308 NFK	0,4 0,8
		SPMR 120304 NFK SPMR 120308 NFK	0,4 0,8
Light-Medium Cut	 NSF	SPMR 090304 NSF SPMR 090308 NSF	0,4 0,8
		SPMR 120304 NSF SPMR 120308 NSF SPMR 120312 NSF	0,4 0,8 1,2
		SPMR 090304 NUJ SPMR 090308 NUJ	0,4 0,8
Light-Medium Cut	 NUJ	SPMR 120304 NUJ SPMR 120308 NUJ	0,4 0,8

Carbide												Cermets		Carbide											
Coated												Coated	Uncoated	Uncoated											
P	M	M	M	K	H	S	P	M	P	K	S	N	P	U	K	S	N								
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

SP_N

● G/M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut		SPGN 090304 SPGN 090308 SPGN 090308T SPGN 120304 SPGN 120308	0,4 0,8 0,8 0,4 0,8
		SPMN 090304 SPMN 090308	0,4 0,8
		SPMN 120304 SPMN 120308 SPMN 120312	0,4 0,8 1,2
		SPMN 150408	0,8

Carbide												Cermets		Carbide											
Coated												Coated	Uncoated	Uncoated											
P	M	M	M	K	H	S	P	M	P	K	S	N	P	U	K	S	N								
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● = Euro stock
 ○ = Japan stock

- Pos. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

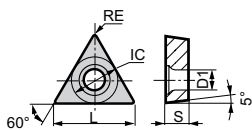
T TRIANGLE TYPE

INSERTS FOR TURNING

5° Positive Inserts

60° Triangle Type

5° Relief
With Insert Hole



Dimensions (mm)				
TB	L	IC	S	D ₁
0601..	6,9	3,97	1,59	2,2



⇒ E20

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TBGT

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide												
				Coated											Coated	Uncoated	Uncoated												
				P	M	K	H	S	N	P	K	S	N	P	K	S	N												
Finishing Depth of cut (mm) Feed rate (mm/rev)		TBGT 060102 LFW TBGT 060104 LFW	0,2 0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
		TBGT 060102 RFW TBGT 060104 RFW	0,2 0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing Depth of cut (mm) Feed rate (mm/rev)		TBGT 060102 LFX TBGT 060104 LFX	0,2 0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
		TBGT 060102 RFX TBGT 060104 RFX	0,2 0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing Depth of cut (mm) Feed rate (mm/rev)		TBGT 060101 LFY TBGT 060102 LFY TBGT 060104 LFY	0,1 0,2 0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
		TBGT 060101 RFY TBGT 060102 RFY TBGT 060104 RFY	0,1 0,2 0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Finishing-Light Cut Depth of cut (mm) Feed rate (mm/rev)		TBGT 060102 LW TBGT 060104 LW	0,2 0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
		TBGT 060102 RW TBGT 060104 RW	0,2 0,4	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
For Aluminum Depth of cut (mm) Feed rate (mm/rev)		TBGT 060101 LAY	0,1	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
		TBGT 060101 RAY	0,1	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

TBGW

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide												
				Coated											Coated	Uncoated	Uncoated												
				P	M	K	H	S	N	P	K	S	N	P	K	S	N												
Light Cut		TBGW 060102 TBGW 060204	0,2 0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
				○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● G-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Light Cut		TBGW 060102 TBGW 060204	0,2 0,4

- = Euro stock
- = Japan stock

Pos. Inserts

C

D

K

R

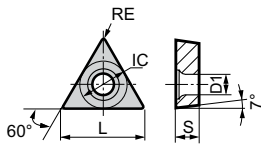
S

T

V

W

60° Triangle Type 7° Relief
With Insert Hole



Dimensions (mm)				
TC	L	IC	S	D ₁
0802..	8,2	4,76	2,38	2,3
0902..	9,62	5,56	2,38	2,5
1102..	11,0	6,35	2,38	2,8
16T3..	16,5	9,525	3,97	4,3



- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TCGT

● G-Class

Application	Shape	ISO Cat. No.	RE	Carbide										Cermet		Carbide															
				Coated										Coated	Uncoated	Uncoated															
				P	M	K	H	S	P	P	P	K	S	N																	
				AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503J	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
Finishing	 L/RFX 	TCGT 090201 LFX TCGT 090202 LFX	0,1 0,2																												
		TCGT 110201 LFX TCGT 110202 LFX	0,1 0,2																												
		TCGT 110301 LFX TCGT 110302 LFX TCGT 110304 LFX	0,1 0,2 0,4																												
		TCGT 090201 RFX TCGT 090202 RFX	0,1 0,2																												
		TCGT 110201 RFX TCGT 110202 RFX	0,1 0,2																												
		TCGT 110301 RFX TCGT 110302 RFX TCGT 110304 RFX	0,1 0,2 0,4																												
Finishing	 L/RFY 	TCGT 090201 LFY TCGT 090202 LFY	0,1 0,2																												
		TCGT 110201 LFY TCGT 110202 LFY	0,1 0,2																												
		TCGT 090201 RFY TCGT 090202 RFY	0,1 0,2																												
		TCGT 110201 RFY TCGT 110202 RFY	0,1 0,2																												
Light cut	 NSI 	TCGT 110204M NSI	<0,4																												
Light Cut	 NAG 	TCGT 110202 NAG TCGT 110204 NAG	0,2 0,4																												
		TCGT 16T304 NAG TCGT 16T308 NAG	0,4 0,8																												
		TCGT 080201M NSC TCGT 080202M NSC	<0,1 <0,2																												
Light Cut	 NSC 	TCGT 090201M NSC TCGT 090202M NSC	<0,1 <0,2																												
		TCGT 110201M NSC TCGT 110202M NSC TCGT 110204M NSC	<0,1 <0,2 <0,4																												
		TCGT 110301M NSC TCGT 110302M NSC	<0,1 <0,2																												

● = Euro stock
 ○ = Japan stock

- Pos. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

T TRIANGLE TYPE

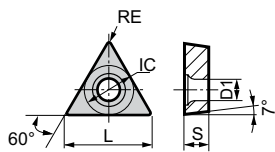
INSERTS FOR TURNING

7° Positive Inserts

60° Triangle Type

7° Relief

With Insert Hole



Dimensions (mm)				
TC	L	IC	S	D ₁
0902...	9,6	5,56	2,38	2,5
1102...	11,0	6,35	2,38	2,8
16T3...	16,5	9,525	3,97	4,3



⇨ D37

⇨ E19

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TCMT/-W

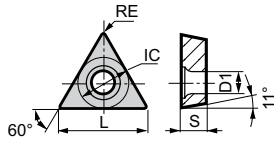
Carbide											Cermets		Carbide												
Coated											Coated	Uncoated	Uncoated												
P	P	M	M	K	H	S	P	P	K	S	N														
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1			
Finishing	 NFB	TCMT 110204 NFB TCMT 110208 NFB	0,4																													
			0,8																													
Finishing	 NFP	TCMT 090202 NFP TCMT 090204 NFP TCMT 090208 NFP	0,2																													
			0,4																													
			0,8																													
			0,2																													
Finishing	 NLU	TCMT 110204 NLU TCMT 110208 NLU	0,4	○	●	●															●	○	○	○	○	○						
			0,8	○	○	○																	○	○	○	○	○					
Light Cut	 NLB	TCMT 110204 NLB TCMT 110208 NLB	0,4		○	○	○	○	○	○												○	○	○	○	○						
			0,8		○	○	○	○	○	○														○	○	○	○	○				
Light Cut	 NSU	TCMT 110204 NSU TCMT 110208 NSU	0,4	●	●	●	●	●	●	●	●						○	○	○		●	●	●	●								
			0,8	●	●	●	●	●	●	●	●	●						○	○	○		●	●	●	●							
Light Cut	 NSK	TCMT 110204 NSK TCMT 110208 NSK	0,4		●	●																										
			0,8		●	●																										
Light Cut	 TCMW	TCMT 16T304 NSK TCMT 16T308 NSK TCMT 16T312 NSK	0,4																													
			0,8																													
			0,4																													
			0,8																													
Light Cut	 TCMW	TCMW 16T304 TCMW 16T308 TCMW 16T312	0,4									○	○																			
			0,8											○	○																	

● = Euro stock
○ = Japan stock

60° Triangle Type 11° Relief
With Insert Hole



Dimensions (mm)				
TP	L	IC	S	D ₁
0802..	8,2	4,76	2,38	2,4
0902..	9,6	5,56	2,38	2,8
1103..	11,0	6,35	3,18	3,4
1603..	16,5	9,525	3,18	4,4



⇒ E20

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TPGT

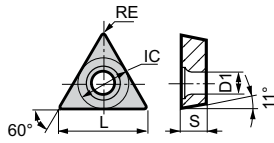
● G-Class

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide													
				Coated											Coated	Uncoated	Uncoated													
				P	M	K	H	S	P	P	K	S	N																	
				AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1	
Finishing	NFC	TPGT 110302M NFC TPGT 110304M NFC	<0,2																											
			<0,4																											
Finishing	L/RFW	TPGT 080202 LFW TPGT 080204 LFW	0,2																											
			0,4																											
		0,2																												
			0,4																											
Finishing	L/RFX	TPGT 080202 LFX TPGT 080204 LFX		0,2																										
			0,4																											
		0,4																												
			0,2																											
		0,4																												
			0,8																											
		0,2																												
			0,4																											
		0,8																												
			0,4																											
		0,8																												
			Finishing	RFX	TPGT 080202 RFX TPGT 080204 RFX	0,2																								
0,4																														
0,2																														
	0,4																													
0,8																														
	0,2																													
0,4																														
	0,8																													
0,4																														
	0,8																													

● = Euro stock
 ○ = Japan stock

- Pos. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

60° Triangle Type 11° Relief
With Insert Hole



Dimensions (mm)				
TP	L	IC	S	D ₁
0802..	8,2	4,76	2,38	2,4
1103..	11,0	6,35	3,18	3,4
1604..	16,5	9,525	4,76	4,4



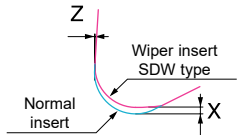
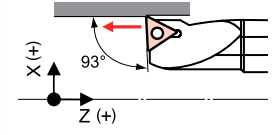
⇒ E20

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TPGT/-X ○○○○○○-□□

● G-Class Handed Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide													Cermet		Carbide
				Coated													Coated	Uncoated	Uncoated
				P	M	K	H	S	P	P	P	K	S	N					
Finishing-Light Cutting	L/RW	TPGT 080202 LW	0,2																
		TPGT 080204 LW	0,4																
		TPGT 110302 LW	0,2																
		TPGT 110304 LW	0,4																
		TPGT 160402 LW	0,2																
		TPGT 160404 LW	0,4																
	L/RSD	TPGT 080202 RW	0,2																
		TPGT 080204 RW	0,4																
		TPGT 110302 RW	0,2																
		TPGT 110304 RW	0,4																
		TPGT 160404 RW	0,4																
		L/RSDW	TPGT 110302 LSD	0,2															
TPGT 110304 LSD	0,4																		
TPGT 110308 LSD	0,8																		
TPGT 160402 LSD	0,2																		
TPGT 160404 LSD	0,4																		
TPGT 160408 LSD	0,8																		
L/RSDW	TPGX 110304 L-SDW	0,4																	
	TPGX 110308 L-SDW	0,8																	
	TPGX 160404 L-SDW	0,4																	
	TPGX 160408 L-SDW	0,8																	
	TPGX 110304 R-SDW	0,4																	
	TPGX 110308 R-SDW	0,8																	
L/RSDW	TPGX 160404 R-SDW	0,4																	
	TPGX 160408 R-SDW	0,8																	



(Note) The cutting point position of the SDW type does not follow the ISO standard. Wenn using on a boring holder with a 93° approach angle, there is a need to revise the cutting point position (refer to right table) relative to using standard inserts.

RE	Compensation (mm)	
	X (Diam. change)	Z
0,4	+0,12 (Ø: +0,24)	-0,02
0,8	+0,12 (Ø: +0,24)	-0,02

- = Euro stock
- = Japan stock

Pos. Inserts

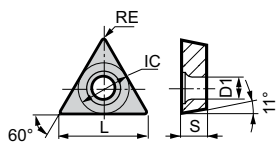


T TRIANGLE TYPE

INSERTS FOR TURNING

11° Positive Inserts

60° Triangle Type 11° Relief
With Insert Hole



Dimensions (mm)					
TP	L	IC	S	D ₁	
0802..	8,2	4,76	2,38	2,4	
0902..	9,6	5,56	2,38	2,8	
1103..	11,0	6,35	3,18	3,4	
1603..	16,5	9,525	3,18	4,4	
1604..	16,5	9,525	4,76	4,4	



⇒ E20

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

TPMT

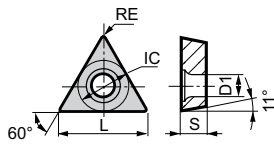
Carbide										Cermets		Carbide													
Coated										Coated	Uncoated	Uncoated													
P	M	M	K	H	S	P	P	K	S	N															
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● M-Class

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
Finishing 	NFB 	TPMT 080202 NFB	0,2																												
		TPMT 080204 NFB	0,4																												
		TPMT 090202 NFB	0,2																												
		TPMT 090204 NFB	0,4																												
		TPMT 110302 NFB	0,2																												
		TPMT 110304 NFB	0,4																												
Light Cut 	NLB 	TPMT 160308 NFB	0,8																												
		TPMT 160304 NFB	0,4																												
		TPMT 160308 NFB	0,8																												
		TPMT 160404 NFB	0,4																												
		TPMT 160408 NFB	0,8																												
		TPMT 160404 NFB	0,4																												
Finishing 	NFK 	TPMT 160304 NLB	0,4																												
		TPMT 160308 NLB	0,8																												
		TPMT 160404 NLB	0,4																												
		TPMT 160408 NLB	0,8																												
		TPMT 110304 NFK	0,4																												
		TPMT 110308 NFK	0,8																												
Finishing 	NLU 	TPMT 160404 NFK	0,4																												
		TPMT 160408 NFK	0,8																												
		TPMT 080202 NLU	0,2																												
		TPMT 080204 NLU	0,4																												
		TPMT 090202 NLU	0,2																												
		TPMT 090204 NLU	0,4																												

● = Euro stock
○ = Japan stock

60° Triangle Type 11° Relief
With Insert Hole



Dimensions (mm)					
TP	L	IC	S	D ₁	
0802..	8,2	4,76	2,38	2,4	
1103..	11,0	6,35	3,18	3,4	
1604..	16,5	9,525	4,76	4,4	



⇒ E20

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TPMT

● M-Class

Application	Shape	ISO Cat. No.	RE		
Light Cut 	 NSU	TPMT 080202 NSU	0,2		
		TPMT 080204 NSU	0,4		
		TPMT 110302 NSU	0,2		
		TPMT 110304 NSU	0,4		
		TPMT 110308 NSU	0,8		
		TPMT 160404 NSU	0,4		
Light -Medium Cut 	 NGU	TPMT 110304 NGU New	0,4		
		TPMT 110308 NGU New	0,8		
		TPMT 160404 NGU New	0,4		
		TPMT 160408 NGU New	0,8		
		Light -Medium Cut 	 NMU	TPMT 110304 NMU	0,4
				TPMT 110308 NMU	0,8
TPMT 160404 NMU	0,4				
TPMT 160408 NMU	0,8				

Carbide													Cermet		Carbide										
Coated													Coated	Uncoated	Uncoated										
P	M	K	H	S	P	M	P	K	S	N															
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503J	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

- Pos. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

TPMT/H NSF

● M-Class

Application	Shape	ISO Cat. No.	RE	
Light -Medium Cut 	 NSF	TPMH 110304 NSF	0,4	
		TPMH 110308 NSF	0,8	
		TPMT 160404 NSF	0,4	
		TPMT 160408 NSF	0,8	

Carbide													Cermet		Carbide										
Coated													Coated	Uncoated	Uncoated										
P	M	K	H	S	P	M	P	K	S	N															
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503J	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

- = Euro stock
- = Japan stock

T TRIANGLE TYPE

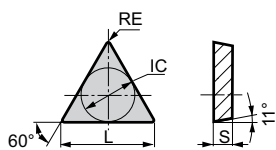
INSERTS FOR TURNING

5°/11° Positive Inserts

60° Triangle Type

5°/11° Relief
Without Insert Hole

Dimensions (mm)				
TP/TB	L	IC	S	D ₁
0601..	6,9	3,97	1,59	-
0902..	9,6	5,56	2,38	-
1103..	11,0	6,35	3,18	-
1603..	16,5	9,525	3,18	-
2204..	22,0	12,7	4,75	-



- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TPGR

● G-Class Handed Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide															
				Coated											Coated	Uncoated	Uncoated															
				P	M	F _M	K	H	S	P _M		P	K	S	N																	
Finishing-Light Cut	L-W	TPGR 090202 LW	0,2	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1			
		TPGR 090204 LW	0,4																													
		TPGR 090208 LW	0,8																													
		TPGR 110302 LW	0,2																													
		TPGR 110304 LW	0,4																													
		TPGR 110308 LW	0,8																													
	R-W	TPGR 160302 LW	0,2																													
		TPGR 160304 LW	0,4																													
		TPGR 160308 LW	0,8																													
		TPGR 090202 RW	0,2																													
		TPGR 090204 RW	0,4																													
		TPGR 090208 RW	0,8																													

TBG

● G-Class No Chipbreaker/ Handed Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide												
				Coated											Coated	Uncoated	Uncoated												
				P	M	F _M	K	H	S	P _M		P	K	S	N														
Finishing - Light-Cut		TBGN 060104	0,4	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1
		TBGR 060104 LW	0,4																										

TPGN

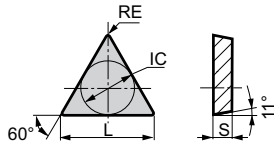
● G-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE	Carbide											Cermet		Carbide														
				Coated											Coated	Uncoated	Uncoated														
				P	M	F _M	K	H	S	P _M		P	K	S	N																
Light Cut		TPGN 090202	0,2	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
		TPGN 090208	0,8																												
		TPGN 110302	0,2																												
		TPGN 110304	0,4																												
		TPGN 110308	0,8																												
		TPGN 160302	0,2																												
	TPGN 160304	0,4																													
	TPGN 160308	0,8																													
	TPGN 160312	1,2																													
	TPGN 220404	0,4																													

- = Euro stock
- = Japan stock

60° Triangle Type

11°/20° Relief
Without Insert Hole



Dimensions (mm)				
TP	L	IC	S	D ₁
0902..	9,6	5,56	2,38	-
1103..	11,0	6,35	3,18	-
1603..	16,5	9,525	3,18	-
2204..	22,0	12,7	4,76	-



- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

TPMR

● M-Class

Application	Shape	ISO Cat. No.	RE
Finishing Depth of cut (mm) Feed rate (mm/rev)		TPMR 090204 NFK	0,4
		TPMR 110302 NFK	0,2
		TPMR 110304 NFK	0,4
		TPMR 110308 NFK	0,8
		TPMR 160304 NFK	0,2
Light-Medium Cut Depth of cut (mm) Feed rate (mm/rev)		TPMR 110304 NSF	0,4
		TPMR 110308 NSF	0,8
		TPMR 160304 NSF	0,4
		TPMR 160308 NSF	0,8
		TPMR 160312 NSF	1,2
Light-Medium Cut Depth of cut (mm) Feed rate (mm/rev)		TPMR 110304 NUJ	0,4
		TPMR 110308 NUJ	0,8
		TPMR 160304 NUJ	0,4
		TPMR 160308 NUJ	0,8

Carbide													Cermets		Carbide											
Coated													Coated	Uncoated	Uncoated											
P	M	K	H	S	P	M	P	K	S	N																
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

TPMN

● M-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Medium Cut		TPMN 110304	0,4
		TPMN 110308	0,8
		TPMN 160304	0,4
		TPMN 160308	0,8
		TPMN 160312	1,2
		TPMN 220404	0,4
		TPMN 220408	0,8
		TPMN 220412	1,2

Carbide													Cermets		Carbide											
Coated													Coated	Uncoated	Uncoated											
P	M	K	H	S	P	M	P	K	S	N																
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

TEGN

● E-Class No Chipbreaker

Application	Shape	ISO Cat. No.	RE
Light-Medium Cut		TEGN 160308	0,8

Carbide													Cermets		Carbide											
Coated													Coated	Uncoated	Uncoated											
P	M	K	H	S	P	M	P	K	S	N																
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

● = Euro stock
○ = Japan stock

Pos. Inserts



DIAMOND TYPE

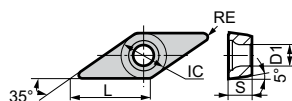
INSERTS FOR TURNING

5° Positive Inserts

35° Diamond Type

5° Relief
With Insert Hole

Dimensions (mm)				
VB	L	IC	S	D ₁
1102..	11,0	6,35	2,38	2,38
1103..	11,1	6,35	3,18	2,8
1604..	16,6	9,525	4,76	4,4






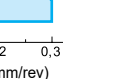





⇒ D38

⇒ E21-22

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

VBMT/-W ○○○○○○○○-□□

Application	Shape	ISO Cat. No.	RE	Carbide											Cermert		Carbide													
				Coated											Coated	Uncoated	Uncoated													
				P	M	P _M	K	H	S	P _M	P	K	S	N			K	S	N											
Finishing	 NFB	VBMT 110302 NFB VBMT 110304 NFB VBMT 110308 NFB VBMT 160404 NFB VBMT 160408 NFB	0,2 0,4 0,8 0,4 0,8	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
Finishing	 NFP	VBMT 110202 NFP VBMT 110204 NFP VBMT 160404 NFP VBMT 160408 NFP	0,2 0,4 0,4 0,8																		●		●	●	●					
Finishing	 NLU	VBMT 110302 NLU VBMT 110304 NLU VBMT 110308 NLU VBMT 160404 NLU VBMT 160408 NLU	0,2 0,4 0,8 0,4 0,8		○	●	●	●		○											○	○	○	○	○					
Light Cut	 NLB	VBMT 110302 NLB VBMT 110304 NLB VBMT 110308 NLB VBMT 160404 NLB VBMT 160408 NLB VBMT 160412 NLB	0,2 0,4 0,8 0,4 0,8 1,2		○	○	○	○	○	○												○	○	○	○	○				
Light Cut	 NSU	VBMT 110204 NSU VBMT 110208 NSU VBMT 110302 NSU VBMT 110304 NSU VBMT 110308 NSU VBMT 160404 NSU VBMT 160408 NSU VBMT 160412 NSU	0,4 0,8 0,2 0,4 0,8 0,4 0,8 1,2		●	●	●	●	●	●	●						○					●	●	●	●	○				
Light Cut	 NSK	VBMT 110204 NSK VBMT 110208 NSK VBMT 160404 NSK VBMT 160406 NSK VBMT 160408 NSK VBMT 160412 NSK	0,4 0,8 0,4 0,6 0,8 1,2				●										●	●												
Light - Medium Cut	 NGU	VBMT 110304 NGU VBMT 110308 NGU VBMT 160404 NGU VBMT 160408 NGU	0,4 0,8 0,4 0,8		○	○	○	○	○	○												○	○	○	○	○				
Light - Medium Cut	 NMU	VBMT 160408 NMU	0,8		●						●																			
Light Cut	 VBMW	VBMT 160404 VBMW 160408	0,4 0,8									○	○																	

● = Euro stock
○ = Japan stock

Pos.
Inserts

C

D

K

R

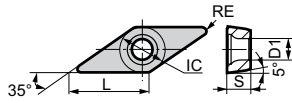
S

T

V

W

35° Diamond Type 5° Relief
With Insert Hole



Dimensions (mm)					
VB	L	IC	S	D ₁	
1103..	11,1	6,35	3,18	2,8	
1604..	16,6	9,525	4,76	4,4	



⇨ D38

⇨ E21-22

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

VBGT

● G-Class

Application	Shape	ISO Cat. No.	RE				
Finishing	 L/RFX	VBGT 110301 LFX VBGT 110302 LFX VBGT 110304 LFX	0,1 0,2 0,4				
		VBGT 160402 LFX VBGT 160404 LFX	0,2 0,4				
		VBGT 110301 RFX VBGT 110302 RFX VBGT 110304 RFX	0,1 0,2 0,4				
		VBGT 160402 RFX VBGT 160404 RFX	0,2 0,4				
		Finishing	 L/RFYS	VBGT 1103003 LFYS VBGT 110301 LFYS VBGT 110302 LFYS VBGT 110304 LFYS VBGT 110308 LFYS	0,03 0,1 0,2 0,4 0,8		
				VBGT 1103003 RFYS VBGT 110301 RFYS VBGT 110302 RFYS VBGT 110304 RFYS VBGT 110308 RFYS	0,03 0,1 0,2 0,4 0,8		
Finishing	 L/RFY			VBGT 110301 LFY VBGT 110302 LFY VBGT 110304 LFY	0,1 0,2 0,4		
				VBGT 110301 RFY VBGT 110302 RFY VBGT 110304 RFY	0,1 0,2 0,4		
				Light Cut	 NSI	VBGT 110301M NSI VBGT 110302M NSI VBGT 110304M NSI VBGT 110308M NSI	<0,1 <0,2 <0,4 <0,8
						VBGT 160401M NSI VBGT 160402M NSI VBGT 160404M NSI VBGT 160408M NSI	<0,1 <0,2 <0,4 <0,8
For Aluminum	 L/RAY	VBGT 110301 LAY VBGT 110302 LAY VBGT 110304 LAY	0,1 0,2 0,4				
		VBGT 160402 LAY VBGT 160404 LAY	0,2 0,4				
		VBGT 110301 RAY VBGT 110302 RAY VBGT 110304 RAY	0,1 0,2 0,4				
		VBGT 160402 RAY VBGT 160404 RAY	0,2 0,4				

Carbide													Cermet		Carbide											
Coated													Coated	Uncoated	Uncoated											
P	M	M	M	K	H	S	P	P	P	P	P	P	K	S	N											
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503J	AC505S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1	
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○	○	○	○	○	○	○	○	○

● = Euro stock
 ○ = Japan stock

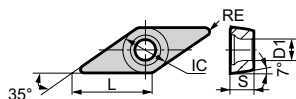
- Pos. Inserts
- C
 - D
 - K
 - R
 - S
 - T
 - V
 - W

DIAMOND TYPE INSERTS FOR TURNING

7° Positive Inserts

35° Diamond Type

7° Relief
With Insert Hole



Dimensions (mm)				
VC	L	IC	S	D ₁
0802..	8,3	4,76	2,38	2,3
1103..	11,1	6,35	3,18	2,8
1604..	16,6	9,525	4,76	4,4
2205..	20,2	12,7	5,56	5,5



⇒ D39

"S...- SV...C" - Type
(⇒ Stock in Japan)

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

VCGT

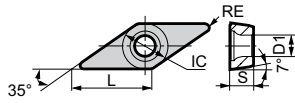
	Carbide										Cermets		Carbide														
	Coated										Coated	Uncoated	Uncoated														
	P	P	M	M	K	H	S	P	P	K	S	N	K	S	N												
Application	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1	
RE																											
Finishing																											
Light Cut																											

● G-Class

Application	Shape	ISO Cat. No.	RE
Finishing	 NFC	VCGT 080204M NFC	<0,4
		VCGT 110301M NFC	<0,1
		VCGT 110302M NFC	<0,2
		VCGT 110304M NFC	<0,4
Finishing	 L/RFX	VCGT 110301 LFX	0,1
		VCGT 110302 LFX	0,2
		VCGT 110304 LFX	0,4
Finishing	 L/RFY	VCGT 110301 RFX	0,1
		VCGT 110302 RFX	0,2
		VCGT 110304 RFX	0,4
Finishing	 L/RFY	VCGT 110301 LFY	0,1
		VCGT 110302 LFY	0,2
		VCGT 110304 LFY	0,4
Finishing	 L/RFY	VCGT 110301 RFY	0,1
		VCGT 110302 RFY	0,2
		VCGT 110304 RFY	0,4
Light Cut	 NAG	VCGT 110302 NAG	0,2
		VCGT 110304 NAG	0,4
		VCGT 220530 NAG	3,0
Light Cut	 NSI	VCGT 110301M NSI	<0,1
		VCGT 110302M NSI	<0,2
		VCGT 110304M NSI	<0,4
		VCGT 110308M NSI	<0,8
		VCGT 160401M NSI	<0,1
		VCGT 160408M NSI	<0,8

- = Euro stock
- = Japan stock

35° Diamond Type 7° Relief
With Insert Hole



Dimensions (mm)					
VC	L	IC	S	D ₁	
0802..	8,3	4,76	2,38	2,3	
1103..	11,1	6,35	3,18	2,8	
1604..	16,6	9,525	4,76	4,4	



⇒ D39

"S...- SV...C" - Type
 (⇒ Stock in Japan)

- P Steel
- M Stainless Steel
- K Cast Iron
- N Non-Ferrous Metals
- S Super Alloy
- H Hardened Steel

VCMT

● M-Class

Application	Shape	ISO Cat. No.	RE	Carbide										Cermets		Carbide		
				Coated										Coated	Uncoated	Uncoated		
				P	M	M	K	H	S	P	P	K	S	N				
Finishing	 NFB	VCMT 080202 NFB	0,2															
		VCMT 080204 NFB	0,4															
		VCMT 160404 NFB	0,4															
VCMT 160408 NFB	0,8																	
Finishing	 NLU	VCMT 160404 NLU	0,4	○	○	○												
		VCMT 160408 NLU	0,8	○	○	○												
Light Cut	 NLB	VCMT 080202 NLB	0,2	○	○	○	○	○										
		VCMT 080204 NLB	0,4	○	○	○	○	○										
		VCMT 160404 NLB	0,4	○	○	○	○	○										
VCMT 160408 NLB	0,8	○	○	○	○	○												
Light Cut	 NSU	VCMT 080204 NSU	0,4			○	○	●	○					○				
		VCMT 110302 NSU	0,2				●	●	●									
		VCMT 110304 NSU	0,4				●	●	●									
VCMT 110308 NSU	0,8				●	●	●											
VCMT 160404 NSU	0,4	●	●	●	●	●	○			●	●	●						
VCMT 160408 NSU	0,8	●	●	●	●	●	○			○	○	○						
Light Cut	 NSK	VCMT 160404 NSK	0,4	●	●	●												
		VCMT 160408 NSK	0,8	●	●	●												
Light - Medium Cut	 NGU	VCMT 160404 NGU New	0,4	●	●	○	○	○	○		●							
		VCMT 160408 NGU New	0,8	●	●	○	○	○	○									

● = Euro stock
 ○ = Japan stock

Pos. Inserts



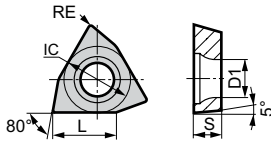
W TRIGON TYPE

INSERTS FOR TURNING

5° Positive Inserts

80° Trigon Type

5° Relief
With Insert Hole



Dimensions (mm)				
WB	L	IC	S	D ₁
0601..	3,2	3,97	1,59	2,2
0802..	4,6	4,76	2,38	2,4



⇒ E23

- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

WBGT

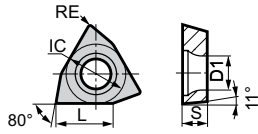
Carbide											Cermets		Carbide												
Coated											Coated	Uncoated	Uncoated												
P	M	M	M	K	H	S	P	P	K	S	N	P	K	S	N										
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1

● G-Class Handed Chipbreaker

Application	Shape	ISO Cat. No.	RE	AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC5005S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH520	H1		
Finishing Depth of cut (mm) Feed rate (mm/rev)	 L/RFW	WBGT 060102 LFW WBGT 060104 LFW	0,2 0,4																												
		WBGT 080202 LFW WBGT 080204 LFW	0,2 0,4																												
		WBGT 060102 RFW WBGT 060104 RFW	0,2 0,4																												
		WBGT 080202 RFW WBGT 080204 RFW	0,2 0,4																												
		WBGT 060102 LFX WBGT 060104 LFX	0,2 0,4																												
		WBGT 080202 LFX WBGT 080204 LFX	0,2 0,4																												
Finishing Depth of cut (mm) Feed rate (mm/rev)	 L/RFX	WBGT 060102 RFX WBGT 060104 RFX	0,2 0,4																												
		WBGT 080202 RFX WBGT 080204 RFX	0,2 0,4																												
		WBGT 0601003 LFY	0,03																												
		WBGT 060101 LFY WBGT 060102 LFY WBGT 060104 LFY	0,1 0,2 0,4																												
		WBGT 080201 LFY WBGT 080202 LFY WBGT 080204 LFY	0,1 0,2 0,4																												
		WBGT 060101 RFY WBGT 060102 RFY WBGT 060104 RFY	0,1 0,2 0,4																												
Finishing ~ Light Cut Depth of cut (mm) Feed rate (mm/rev)	 L/RW	WBGT 060102 LW WBGT 060104 LW	0,2 0,4																												
		WBGT 060102 RW WBGT 060104 RW	0,2 0,4																												

● = Euro stock
○ = Japan stock

80° Trigon Type 11° Relief
With Insert Hole



Dimensions (mm)				
WP	L	IC	S	D ₁
1102..	4,3	6,35	2,38	2,8
1603..	6,5	9,525	3,18	4,4



- P** Steel
- M** Stainless Steel
- K** Cast Iron
- N** Non-Ferrous Metals
- S** Super Alloy
- H** Hardened Steel

WPMT ○○○○ NLB

● M-Class

Application	Shape	ISO Cat. No.	RE
Light Cut Depth of cut (mm) Feed rate (mm/rev)	 NLB	WPMT 110204 NLB	0,4
		WPMT 160308 NLB	0,8

Carbide													Cermets		Carbide										
Coated													Coated	Uncoated	Uncoated										
P	M	M	P	K	H	S	P	P	K	S	N														
AC8015P	AC8020P	AC8025P	AC8035P	AC6020M	AC6030M	AC6040M	AC630M	AC4010K	AC4015K	AC420K	AC503U	AC505S	AC5015S	AC5025S	AC1030U	AC530U	T1500Z	T2500Z	T3000Z	T1000A	T1500A	G10E	EH510	EH620	H1

Pos. Inserts



● = Euro stock
○ = Japan stock

External Holders

D



D1–D46



External Holders


Selection	Turning Holder Series	D2–7
ISO	Turning Holder Identification Table	D8
	Calculation of The Cutting Edge Position	D9
T-REX Tool Holders	SumiTura T-REX Tool Holders	D10–11
For High Performance Turning	D Type Double Clamp Holders	
	DC Type Holders	D12
	DD Type Holders	D13
	DS Type Holders	D14
	DT Type Holders	D15
	DV Type Holders	D16
	DW Type Holders	D17
For General Turning	P Type Lever Lock and M Type Top & Hole Clamp Holders	
	PC Type Holders	D18
	PD Type Holders	D19
	PS Type Holders	D20–21
	PT / MT Type Holders	D22–23
	PW / MW Type Holders	D24
For Solid CBN Inserts	C Type Clamp On Holders	D25–26
	X Type Dimple Lock Holders	D27
Selection	Mini Holders Series	D28–29
Special for Back Facing	SBT Type Mini Holders	D30
Small Product Turning	PC / SC Type Mini Holders	D31
	PD / SD Type Mini Holders	D32–33
	PR Type Holders	D34
	SR Type Holders	D35
	SS Type Mini Holders	D36
	ST Type Mini Holders	D37
	SV Type Copying Holders	D38–39
For High Performance Turning	Polygon-Shank Holders	D40
	D Type Double Clamp Holders	
	PSC**DC Type Holders	D41
	PSC**DD Type Holders	D41
	PSC**DS Type Holders	D41
	PSC**DT Type Holders	D42
	PSC**DW Type Holders	D42
For General Turning	S Type Screw Clamp	
	PSC**SC Type Holders	D43
	PSC**SD Type Holders	D43
	PSC**SS Type Holders	D43
	PSC**ST Type Holders	D44
	PSC**SV Type Holders	D44–45

External Tool Holder Series

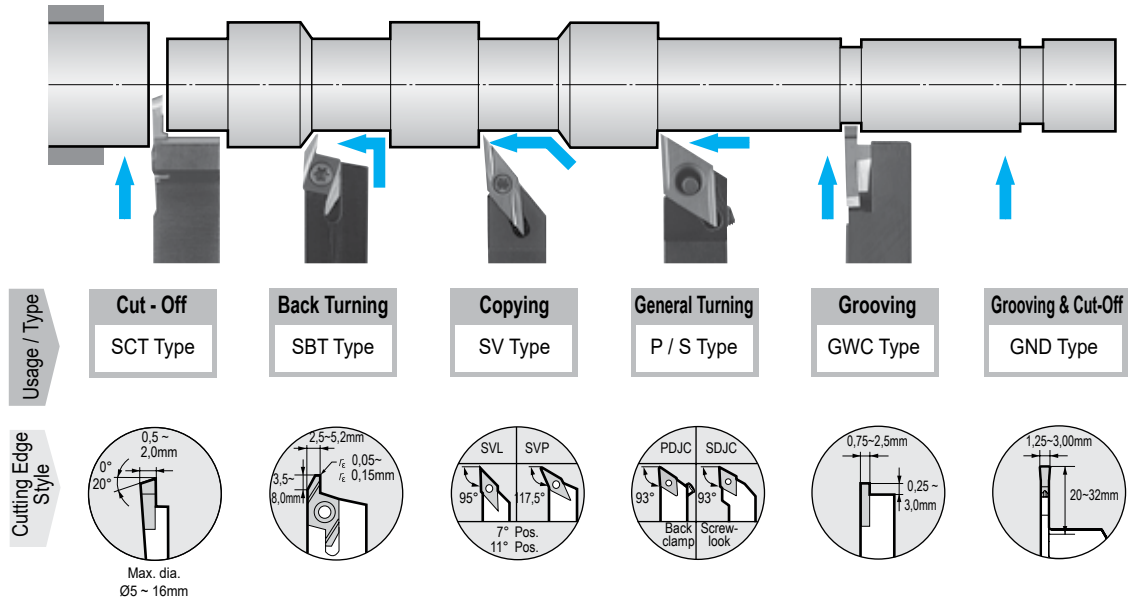
According to Applications

External Holders

Application	For Neg. Inserts	For Pos. Inserts	Special Type for Hardened Steel
General Turning	P Type Lever Lock Type  ⇨ D18–D22	P Type Lever Lock Type  ⇨ D31, D32	D Type Double Lock Type  ⇨ D12–D17 ⇨ D41–D42
	M Type Double Lock Type  ⇨ D23–D24	S Type Screw On Type  D31–D33 ⇨ D35–D37 ⇨ D43–D45	C Type Top Clamp Type  ⇨ D25–D26
Copying	T-REX  ⇨ D10–D11	S Type Screw On Type  ⇨ D38–D39 ⇨ D43–D45	D Type Double Lock Type  ⇨ D13, D16 ⇨ D41
	GNDS, GNDM, GNDMS Type General Grooving  ⇨ F18, F22, F24 ⇨ F46–F49	GNDL, GNDLS Type Deep Grooving  ⇨ F18, F28 ⇨ F46–F49	GNDF, GNDFS Type Axial Grooving  ⇨ F34, F36 ⇨ F46–F49
Parting-Off Grooving	SCT and GWC Type  ⇨ F50–F54 ⇨ F51	Sumi Grip and Sumi Grip Jr.  ⇨ F55–F60	GWB Type Hard Grooving  ⇨ M54 ⇨ M55
	SSTE and SSTI Type Pitch { 0,5–3 mm / 48–8 Threads/inch }  ⇨ F62–F69	THE Type Pitch { 0,8–3 mm / 24–10 Threads/inch }  ⇨ Stock in Jp.	BNGG-TT Type Hard Threading Pitch 1–3 mm  ⇨ M56

 Available in Polygon-Shank-Design

External Turning



External Holders

Holder Selection for Autolathe

	Offset - 0 mm Type Holders	Offset - 0,5 mm Type Holders
Tooling		
Features	Program correction is not necessary.	The position of cutting edge can be put in near guide bush through a program correction.
Holder Types	SDJC-X, SDAC-X, SDLC-X, SCAC-X, SVJC-X (⇒ Stock in Japan)	PDJC, SDJC, SDAC, PCLC, SCAC, STAC, SVLC

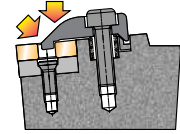


External Tool Holder Series

Lever Lock System

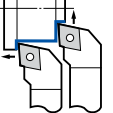
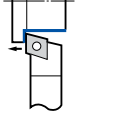
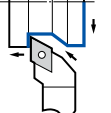
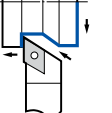
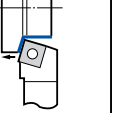
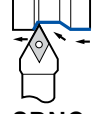
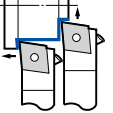
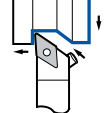
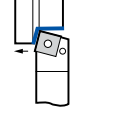
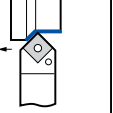
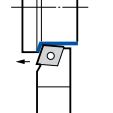
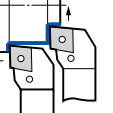
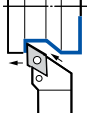
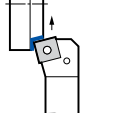
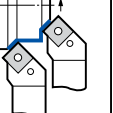
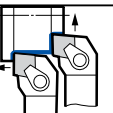
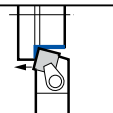
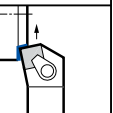
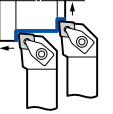
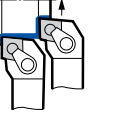
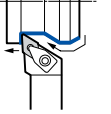
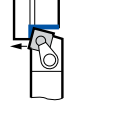
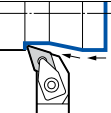
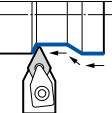
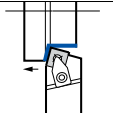


Double Lock (D)

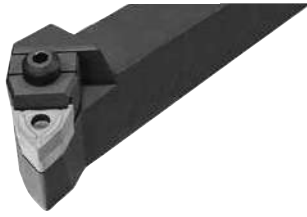


D Type "Double Clamp" Holders for high performance machining

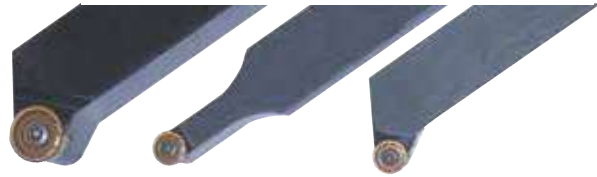
TOOLING SELECTION

Application		General Turning & Facing	General Turning & Copying		General Turning		
			80° Diamond Type	55° Diamond Type	T-REX 55°	90° Square Type	
Insert Type System		80° Diamond Type		55° Diamond Type	T-REX 55°	90° Square Type	
Screw Lock System	S Type Mini Holder	 SCLC ⇨ D31	 SCAC ⇨ D31	 SDJC ⇨ D32	 SDAC ⇨ D33	 SSBC ⇨ D36	
		—	—	 SDNC ⇨ D33	—	—	
Lever Lock System	P Type (* Side Lever Lock Type)	 PCLC (*) ⇨ D31	—	 PDJC (*) ⇨ D32	—	 PSBN ⇨ D20	 PSDN ⇨ D20
		 PCBN ⇨ D18	 PCLN ⇨ D18	 PDJN ⇨ D19	—	 PSKN ⇨ D21	 PSSN ⇨ D21
Top-On Clamp System	C & M Type	 CCLN ⇨ D25	—	—	—	 CSBN ⇨ D25	 CSKN ⇨ D25
Double Lock (D) Dimple Lock (X)	D & X Type	 DCLN ⇨ D12	 XCLN ⇨ D27	 DDJN ⇨ D13	—	 XSBN ⇨ D27	—
		—	—	 DDHN ⇨ D13	 DDNN ⇨ D13	—	 DSBN ⇨ D14

Top-On Clamp System



Screw Lock System



TOOLING SELECTION

Application		General Turning			Copying		General Turning	Special Turning	
Insert Type		60° Triangle Type			35° Diamond Type		80° Trigon Type	Round and Special Purpose Inserts	
System									
Screw Lock System	S Type Mini Holder			—			—		
		⇨ D37	⇨ D37		SVJB ⇨ D38 SVLC ⇨ D39	⇨ D38		⇨ D35	⇨ D35
		—	—	—		—	—		—
					SVPB ⇨ D38 SVPC ⇨ D39			⇨ D30	
Lever Lock System	P Type				—	—			
		⇨ D22	⇨ D22	⇨ D22			⇨ D24	⇨ D34	⇨ D34
		—	—	—	—	—	—	—	—
Top-On Clamp System	C & M Type			—	—	—			
		⇨ D23	⇨ D23				⇨ D24	⇨ D26	⇨ D26
		—	—	—	—	—	—	—	—
Double Lock (D) Dimple Lock (X)	D & X Type			—		—		—	—
		⇨ D15	⇨ D15		⇨ D16		⇨ D17		
			—	—			—	—	—
		⇨ D15			⇨ D16	⇨ D16			

External Tool Holder Series



Polygon - Shank Holder - Produced According to ISO 26623-1

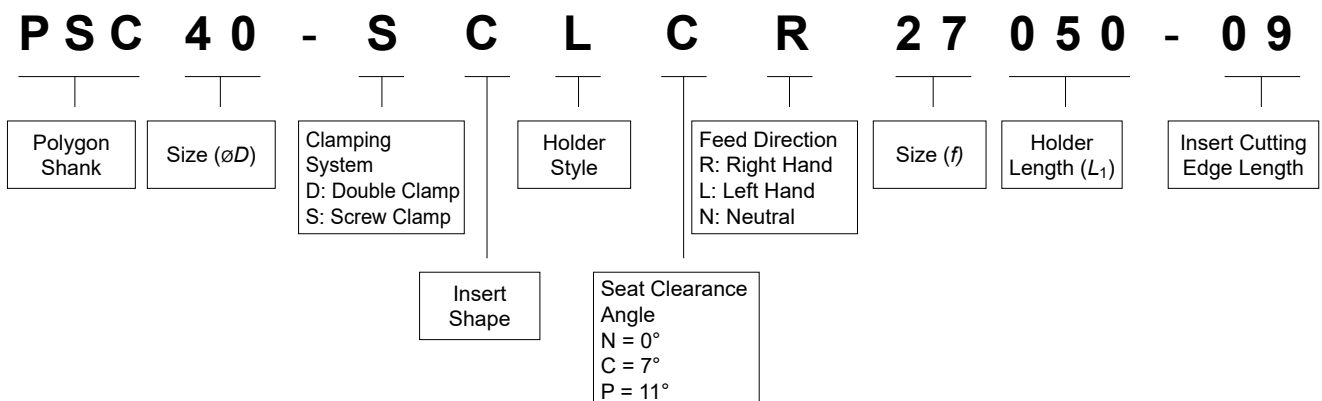


Negative Insert Type

TOOLING SELECTION

Application			General Turning & Facing		General Turning & Copying			General Turning	
Insert Type System			80° Diamond Type		55° Diamond Type		T-REX 55°	90° Square Type	
Screw Lock System	S Type Mini Holder		SCLC ⇒ D43	—	SDJC ⇒ D43	—	—	—	SSBC ⇒ D43
			—	—	SDHC ⇒ D43	—	—	SRSCR	—
Double Lock (D)	D Type		DCLN ⇒ D41	—	DDJN ⇒ D41	—	—	—	—
			—	—	DDHN ⇒ D41	—	—	DSBN ⇒ D41	—


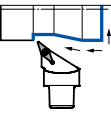
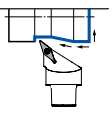
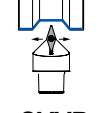
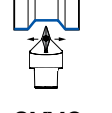
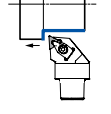
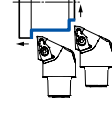
Classification System for Polygon - Shank Holder





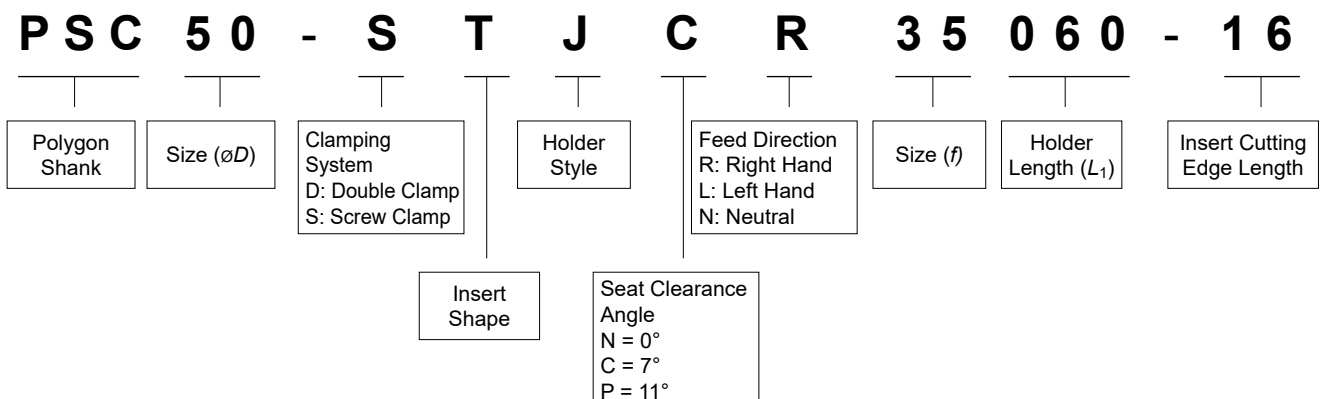
Positive Insert Type

TOOLING SELECTION

Application		General Turning			Copying		General Turning	Special Turning	
Insert Type		60° Triangle Type			35° Diamond Type		80° Trigon Type	Round and Special Purpose Inserts	
System									
Screw Lock System	S Type Mini Holder	 STJC ⇨ D44	-	-	 SVJB ⇨ D44 SVHB ⇨ D44	 SVJC ⇨ D45 SVHC ⇨ D45	-	-	-
		-	-	-	 SVVB ⇨ D44	 SVVC ⇨ D45	-	-	-
Double Lock (D)	D Type	 DTJN ⇨ D42	-	-	-	-	 DWLN ⇨ D42	-	-
		-	-	-	-	-	-	-	-

External Holders

Classification System for Polygon - Shank Holder



ISO Holders Identification

■ Catalogue Classification System for Tool Holders

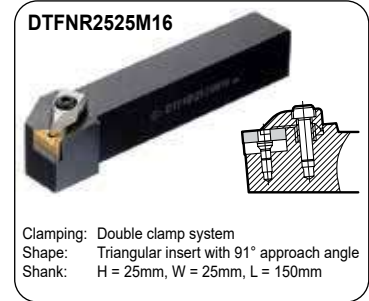
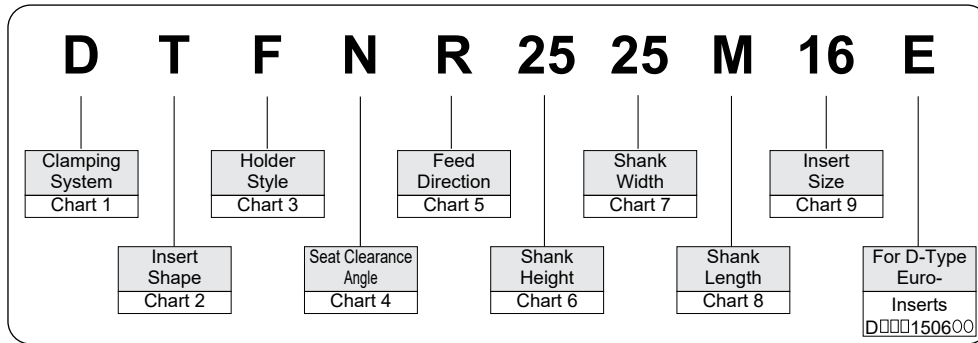


Chart 1

Clamping System					
Symbol	Clamp Types	Example of Structure	Symbol	Clamp Types	Example of Structure
C	Top Clamp		M	Top & Hole Clamp Type	
D	Double Clamp		P	Lever Lock Type (Insert is Supported by 1 face)	
E	Pin Lock Type (Insert is supported by 1 face)		S	Screw Clamp Type	

Chart 2

Insert Shape					
Symbol	Insert Shape	Symbol	Insert Shape	Symbol	Insert Shape
A	Parallelogram 85°	M	Rhombic 86°		
B	Parallelogram 82°	O	Octagonal		
C	Diamond 80°	P	Pentagonal		
D	Diamond 55°	R	Round		
E	Diamond 75°	S	Square		
F	Diamond 50°	T	Triangular		
H	Hexagonal	V	Diamond 35°		
K	Parallelogram 55°	W	Trigon		
L	Rectangular				

Chart 4

Seat Clearance Angle	
Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special Angle

Chart 5

Feed Direction					
Symbol	Right Hand Feed	Symbol	Neutral Feed	Symbol	Left Hand Feed
R		N		L	

Chart 3

Holder Style					
Symbol	Shape	Offset	Symbol	Shape	Offset
A		Nil	L		With Offset
B		Nil	N		Nil
D		Nil	R		With Offset
E		Nil	S		With Offset
F		With Offset	T		With Offset
G		With Offset	U		With Offset
J		With Offset	W		With Offset
K		With Offset	Y		With Offset

Chart 6

Shank Height		Shank Width	
Symbol	Height (mm)	Symbol	Width (mm)
	12		12
	16		16
	20		20
	25		25
	32		32
	40		40
	50		50
00	Round shank,		Shank Diameter is Shown for Round Shank,

2 digits are used for each dimension in mm.

Chart 7

Chart 8

Shank Length	
Symbol	Length (mm)
F	80
H	100
K	125
M	150
N	160
P	170
Q	180
S	250
T	300
U	350

For some Products, a Hyphen is used Instead of an alphabet.

Chart 9

Cutting Edge	
Symbol	Length (mm)
Eg. for Triangle Inserts:	
06	6,9
08	8,2
09	9,6
11	11,0
16	16,5
22	22,0
27	27,5
33	33,0

For Round Inserts:	
Symbol	Length (mm)
10	10
12	12
16	16
20	20
25	25
32	32

■ Cutting Edge Dimensions by Corner Radius

(This table shows X and Y dimensions based on 0° approach angle cutting edge inclination)

Holders			Dimensions(mm)			Holders			Dimensions(mm)		
Symbol	Shapes	Corner Shapes	RE	X	Y	Symbol	Shapes	Corner Shapes	RE	X	Y
A			0,4	0,291	–	K			0,4	0,024	0,089
			0,8	0,581	–				0,8	0,048	0,178
			1,2	0,872	–				1,2	0,072	0,268
			1,6	1,162	–				1,6	0,096	0,357
			2,4	1,743	–				2,4	0,143	0,535
B			0,4	0,089	0,024	L			0,4	0,040	0,040
			0,8	0,178	0,048				0,8	0,079	0,079
			1,2	0,268	0,072				1,2	0,119	0,119
			1,6	0,357	0,096				1,6	0,159	0,159
			2,4	0,535	0,143				2,4	0,238	0,238
D			0,4	0,164	0,164	N			0,4	0,463	0,263
			0,8	0,329	0,329				0,8	0,925	0,471
			1,2	0,493	0,493				1,2	1,388	0,707
			1,6	0,658	0,658				1,6	1,850	0,943
			2,4	0,986	0,986				2,4	2,776	1,414
E			0,4	0,396	0,229	S			0,4	0,164	0,164
			0,8	0,793	0,458				0,8	0,329	0,329
			1,2	1,190	0,687				1,2	0,493	0,493
			1,6	1,587	0,916				1,6	0,658	0,658
			2,4	2,381	1,374				2,4	0,986	0,986
F			0,4	–	0,291	T			0,4	0,396	0,229
			0,8	–	0,581				0,8	0,793	0,458
			1,2	–	0,872				1,2	1,190	0,687
			1,6	–	1,162				1,6	1,587	0,916
			2,4	–	1,743				2,4	2,381	1,374
G			0,4	0,291	–	U			0,4	0,253	0,058
			0,8	0,581	–				0,8	0,506	0,116
			1,2	0,872	–				1,2	0,759	0,175
			1,6	1,162	–				1,6	1,013	0,233
			2,4	1,743	–				2,4	1,519	0,350
J			0,4	0,344	0,033	Y			0,4	0,002	0,033
			0,8	0,687	0,079				0,8	0,005	0,066
			1,2	1,031	0,118				1,2	0,008	0,099
			1,6	1,375	0,157				1,6	0,011	0,132
			2,4	2,062	0,236				2,4	0,017	0,198

● Calculation of the Nose Radius Dimensions

(Unit in mm)

Insert Shape	Calculation
	$B = \frac{3}{2}A - RE$
	$B = (\sqrt{2}-1) \times (\frac{A}{2} - RE)$
	$B = \{ \frac{1}{\sin(\theta/2)} - 1 \} \times (\frac{A}{2} - RE)$

Figures of „A“ and „RE“ to calculate Figure „B“

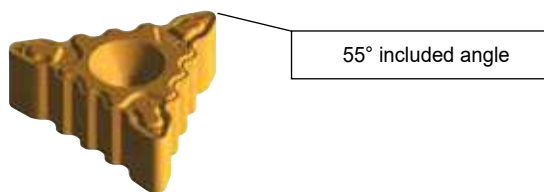
I.C. size (inch)	„A“ dimensions (mm)	Nose symbol	Size (inch)	„RE“ dimension (mm)
–	5/32	02	(0)	0,203
–	6/32	04	1/64	0,397
–	7/32	08	2/64	0,794
2/8	8/32	12	3/64	1,191
–	(0)	16	4/64	1,588
3/8	–	24	6/64	2,389
4/8	–			
5/8	–			
6/8	–			
8/8	–			

SumiTurn T-REX Tool Holders

RIGIDITY - ECONOMY - PRECISION



- T-REX clamping for maximum rigidity 50 % more cutting edges than a DNMG Insert



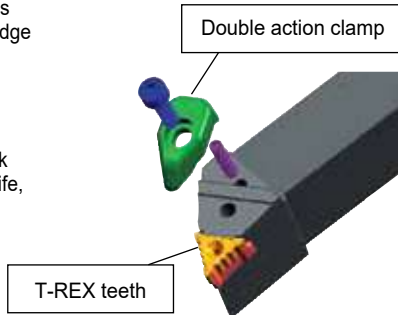
Advantages

● T-REX Inserts for Maximum Economy

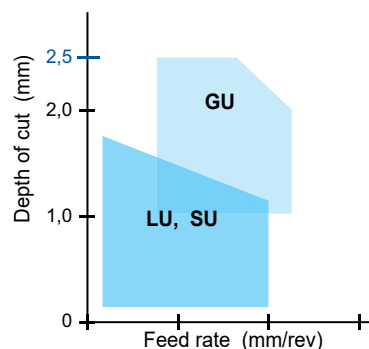
With 6 cutting edges and a 55 degree included angle - T-Rex is the intelligent alternative to profile turning with a traditional 4 edge DNMG insert.

● Biting Performance from T-REX Teeth

The double clamp tool holder and powerful teeth of T-REX lock the insert to eliminate movement, dramatically improving tool life, machining accuracy, and cutting edge security.

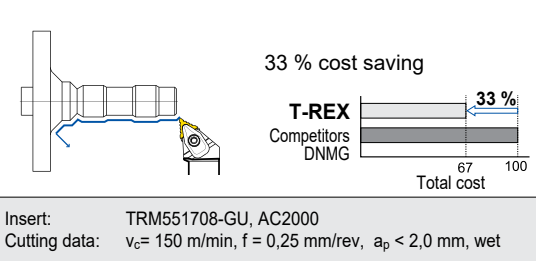


Application Range

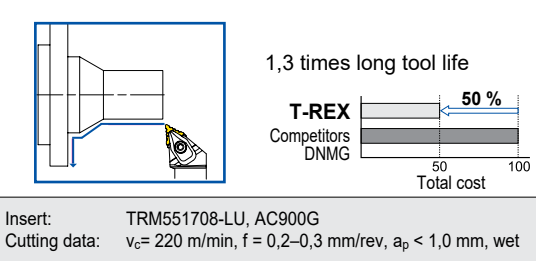


Application Examples

● 20Cr4 Shaft



● 25CrMo4 Gear



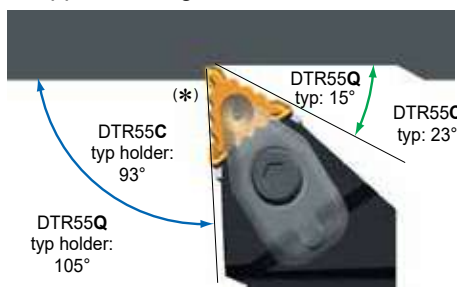
Recommendations

● Depth of Cut



Max. $a_p = 2,5$ mm

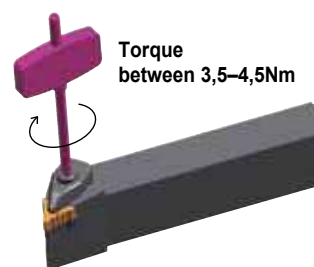
● Approach Angle



(*) Angle of major cutting edge

C-Type: 95,5°
Q-Type: 107,5°

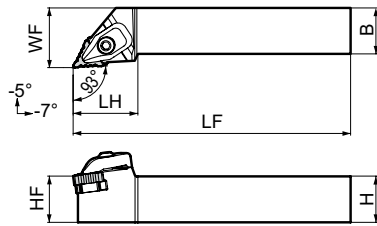
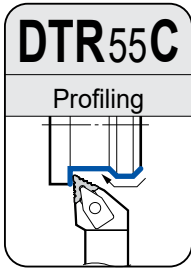
● Insert Clamping



Recommended Tightening Torque (N·m)

● = Euro stock
○ = Japan stock

External Turning & Copying



■ Holders

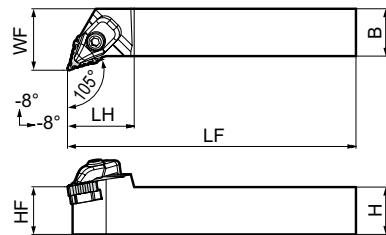
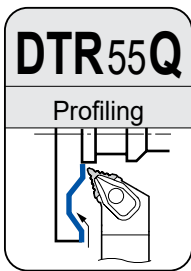
Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)					
	R	L	H	HF	B	LF	LH	WF
DTR 55C-R/L 2020-K17	●	●	20	20	20	125	35	25
DTR 55C-R/L 2525-M17	●	●	25	25	25	150	35	32

■ Spare Parts

Clamp	Spring	Screw	Shim	Screw	Wrench	Wrench
TRCP3	S-SP4-20	BX0520 3,5-4,5 (Nm)	TRW5505	BFTX0307N 2,0 (Nm)	TSW040	TRX10 ^(*)

^(*)Note: Wrench (TRX) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)					
	R	L	H	HF	B	LF	LH	WF
DTR 55Q-R/L 2020-K17	●	●	20	20	20	125	35	28,5
DTR 55Q-R/L 2525-M17	●	●	25	25	25	150	35	32

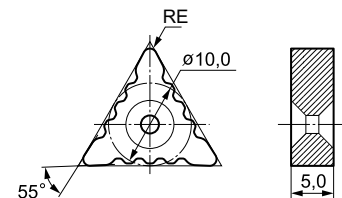
■ Spare Parts

Clamp	Spring	Screw	Shim	Screw	Wrench	Wrench
TRCP3	S-SP4-20	BX0520 3,5-4,5 (Nm)	TRW5505	BFTX0307N 2,0 (Nm)	TSW040	TRX10 ^(*)

^(*)Note: Wrench (TRX) for shim clamp screw is not included.

■ Inserts

Applic.	Shape	Ordering No.	RE	Coated Carbide			Coated Cermet
				AC8015P	AC8025P	AC630M	T3000Z
Fine Finishing	FL	TRM 551704-FL	0,4		○		○
		551708-FL	0,8		○		○
Finishing	LU	TRM 551704-LU	0,4	●	○		○
		551708-LU	0,8	●	○		○
		551712-LU	1,2		○		○
Finishing	SU	TRM 551704-SU	0,4		○	●	○
		551708-SU	0,8		○	●	○
		551712-SU	1,2		○		
Light Cut	GU	TRM 551704-GU	0,4		○	●	
		551708-GU	0,8		○	●	
		551712-GU	1,2		○	○	



Application **P** Steel
M Stainless steel

External Tool Holders D Type (Double Clamp)

Tool Holders for neg. Inserts CN

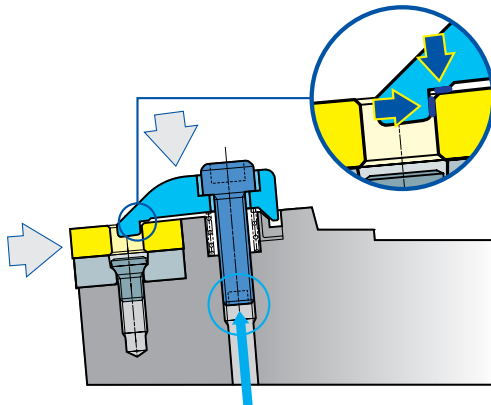


■ Characteristics

Insert is clamping firmly for improved fracture resistance.
High indexing accuracy improves machining accuracy.
Insert can be changed from below the holder.
Suitable for high efficiency machining and interrupted cutting in hardened steel.

■ Clamp Mechanism

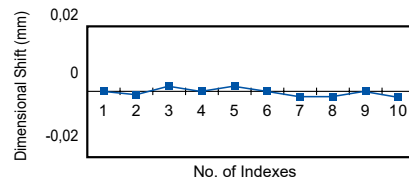
Secured in two directions and supported by two faces.



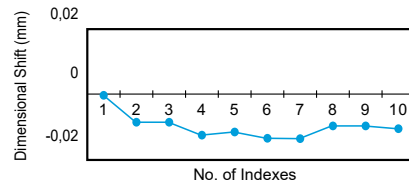
Insert can be changed from below the holder.

■ Index Accuracy Comparison (Length Wise)

D Type Tool Holders



Lever Lock



General Turning and Facing



■ Inserts

Eg.

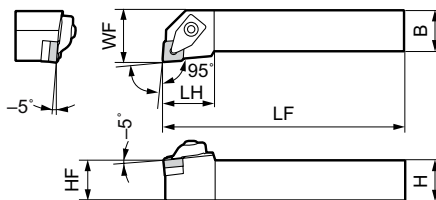
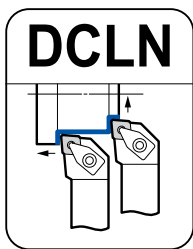
N-GU

- ① CNMG 120408 N-GU
- ② CNMG 160608 N-GU
- ③ CNMM 190612 N-HG
- ④ CNMM 250924 N-HU

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench (TRX)	Wrench (TRD)	Insert
	SCP2	5,0 (N·m)	CNS1204	BFTX0409N 3,4 (N·m)	TRX15 ^(*)	LH040 LH025	①
	SCP3	5,0 (N·m)	CNS1606	BFTX0509N 5,0 (N·m)	TRX20 ^(*)	LH040 LH025	②
	SCP5	5,0 (N·m)	CNS1906	BFTX0511N 5,0 (N·m)	TRX20 ^(*)	LH040 LH025	③
	SCP6	6,0 (N·m)	CNS2509	BFTX0615N 7,5 (N·m)	TRD25 ^(*)	LH060	④

(*) Note: Wrench (TRX / TRD) for shim clamp screw is not included.



■ Holders

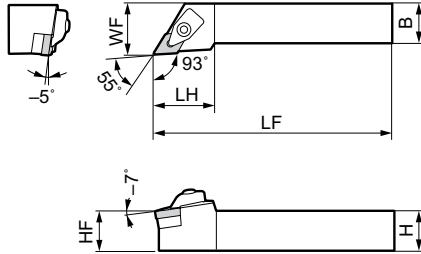
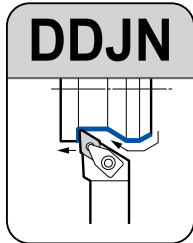
Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)					
	R	L	H	HF	B	LF	LH	WF
DCLN R/L 2020 K12	●	●	20	20	20	125	32	25
DCLN R/L 2525 M12	●	●	25	25	25	150	32	32
DCLN R/L 2525 M16	●	●	25	25	25	150	32	32
DCLN R/L 3232 P16	●	●	32	32	32	170	32	40
DCLN R/L 3232 P19	●	●	32	32	32	170	42	40
DCLN R/L 4040 S19	●	●	40	40	40	250	42	50
DCLN R/L 4040 S25	○	●	40	40	40	250	53	50

● = Euro stock
○ = Japan stock

(N·m) Recommended Tightening Torque (N·m)

General Turning and Copying



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF								
DDJN R/L 2020 K15	○	●	20	20	20	125	38	25	SCP2	5,0 (Nm)	DNS1504	BFTX0409N	TRX15 ^(*)	LH040	①	
DDJN R/L 2020 K15E	●	●	20	20	20	125	38	25			DNS1506				②	
DDJN R/L 2525 M15	○		25	25	25	150	38	32			DNS1504				①	
DDJN R/L 2525 M15E	●	●	25	25	25	150	38	32			DNS1506				②	

(*) Note: Wrench (TRX) for shim clamp screw is not included.

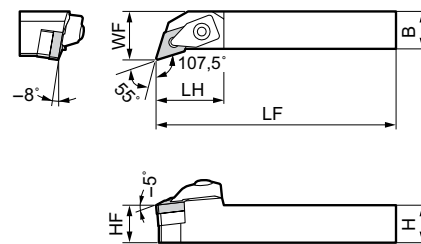
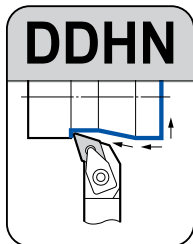
■ Inserts

Eg.

N-GU

- ① DNMG 150408 N-GU
- ② DNMG 150608 N-GU

■ Spare Parts



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF								
DDHN R/L 2020 K15E	●	●	20	20	20	125	35	25	SCP2	5,0 (Nm)	DNS1506	BFTX0409N	TRX15 ^(*)	LH040	②	
DDHN R/L 2525 M15E	●	●	25	25	25	150	35	32							②	

(*) Note: Wrench (TRX) for shim clamp screw is not included.

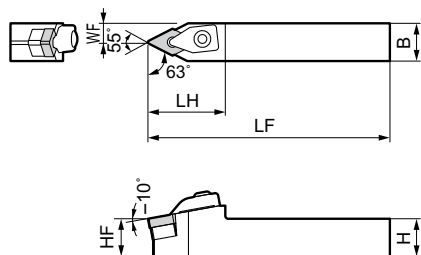
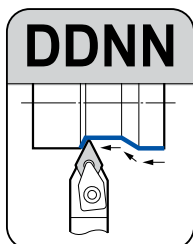
■ Inserts

Eg.

N-GU

- ② DNMG 150608 N-GU

■ Spare Parts



■ Holders

Above figures show right hand tools.

Cat. No.	Stock	Dimensions (mm)						Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
		H	HF	B	LF	LH	WF								
DDNN N 2020 K15E	●	20	20	20	125	40	10,5	SCP2	5,0 (Nm)	DNS1506	BFTX0409N	TRX15 ^(*)	LH040	②	
DDNN N 2525 M15E	●	25	25	25	150	40	13,0							②	

(*) Note: Wrench (TRX) for shim clamp screw is not included.

■ Inserts

Eg.

N-GU

- ② DNMG 150608 N-GU

■ Spare Parts

External Tool Holders D Type (Double Clamp)

Tool Holders for neg. Inserts SN

General Turning and Facing



■ Inserts

Eg.

N-UZ, N-HU

- ① SNMG 190612 N-UZ
- ② SNMM 250724 N-HU
- ③ SNMM 250924 N-HU

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench TRX	Wrench TRD	Insert
SCP2		5,0 ^(Nm)	SNS1204	BFTX0409N	TRX15 ^(*)	LH040, LH025	
SCP5		5,0 ^(Nm)	SNS1906	BFTX0511N 5,0 ^(Nm)	TRX20 ^(*)	LH040, LH025	①
SCP6		6,0 ^(Nm)	SNS2507 SNS2509	BFTX0615N 7,5 ^(Nm)	TRD25 ^(*)	LH060	② ③

^(*) Note: Wrench (TRX / TRD) for shim clamp screw is not included.

■ Inserts

Eg.

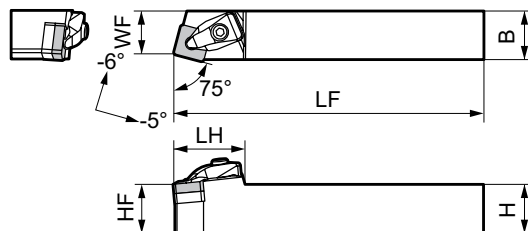
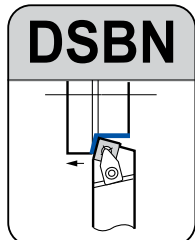
N-UZ, N-HU

- ① SNMG 190612 N-UZ
- ② SNMM 250724 N-HU
- ③ SNMM 250924 N-HU

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench TRX	Wrench TRD	Insert
SCP5		5,0 ^(Nm)	SNS1906	BFTX0511N 5,0 ^(Nm)	TRX20 ^(*)	LH040, LH025	①
SCP6		6,0 ^(Nm)	SNS2507 SNS2509	BFTX0615N 7,5 ^(Nm)	TRD25 ^(*)	LH060	② ③

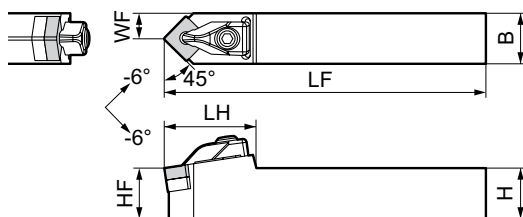
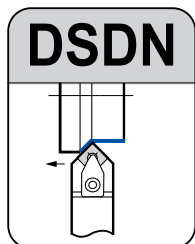
^(*) Note: Wrench (TRX / TRD) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
DSBN R/L 2525 M12	○	○	25	25	25	150	36	22	
DSBN R/L 3232 P19	●	●	32	32	32	170	45	27	
DSBN R/L 4040 S2507	○	○	40	40	40	250	58	35	
DSBN R/L 4040 S2509	○	○	40	40	40	250	58	35	



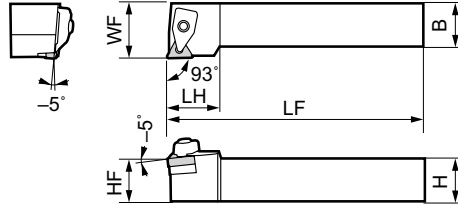
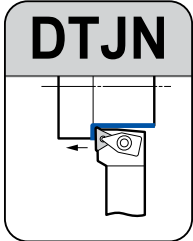
■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	H	HF	B	LF	LH	WF			
DSDN N 3232 P19	●	32	32	32	170	50	16		
DSDN N 4040 S2507		40	40	40	250	63	20		
DSDN N 4040 S2509		40	40	40	250	63	20		

^(*) Note: Wrench (TRX / TRD) for shim clamp screw is not included.

General Turning and Facing



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)					
	R	L	H	HF	B	LF	LH	WF
DTJN R/L 2020 K16	●		20	20	20	125	31	25
DTJN R/L 2525 M16	●	●	25	25	25	150	31	32

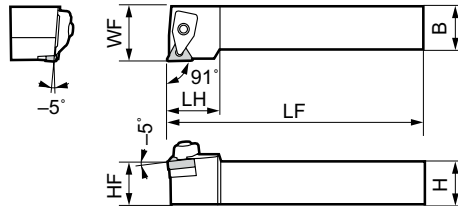
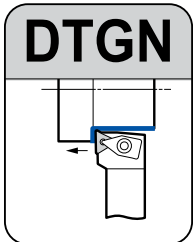
■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP1		5,0 ^(Nm)	TNS1604	BFTX0307N 2,0 ^(Nm)	TRX10 ^(*)	LH040	①

(*) Note: Wrench (TRX) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)					
	R	L	H	HF	B	LF	LH	WF
DTGN R/L 2020 K16	○		20	20	20	125	31	25
DTGN R/L 2525 M16	●		25	25	25	150	31	32

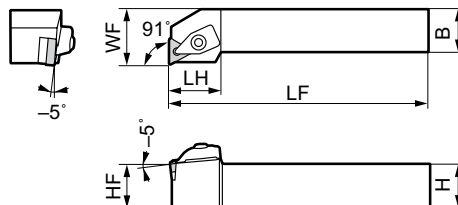
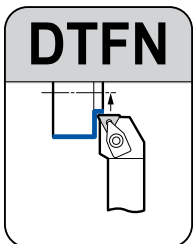
■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP1		5,0 ^(Nm)	TNS1604	BFTX0307N 2,0 ^(Nm)	TRX10 ^(*)	LH040	①

(*) Note: Wrench (TRX) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)					
	R	L	H	HF	B	LF	LH	WF
DTFN R/L 2020 K16	○	○	20	20	20	125	30	25
DTFN R/L 2525 M16	●	●	25	25	25	150	30	32

■ Inserts



■ Spare Parts

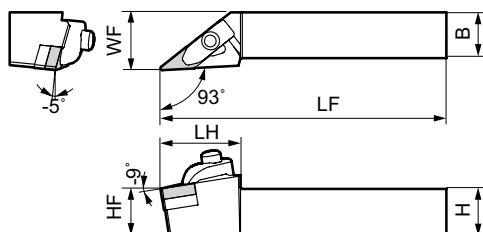
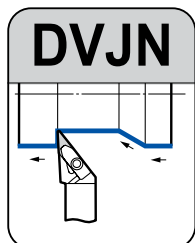
Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP1		5,0 ^(Nm)	TNS1604	BFTX0307N 2,0 ^(Nm)	TRX10 ^(*)	LH040	①

(*) Note: Wrench (TRX) for shim clamp screw is not included.

External Tool Holders D Type (Double Clamp)

Tool Holders for neg. Inserts VN

General Turning and Copying

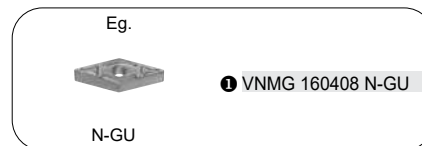


■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)					
	R	L	H	HF	B	LF	LH	WF
DVJN R/L 2020 K16	●	●	20	20	20	125	35	25
DVJN R/L 2525 M16	●	●	25	25	25	150	35	32

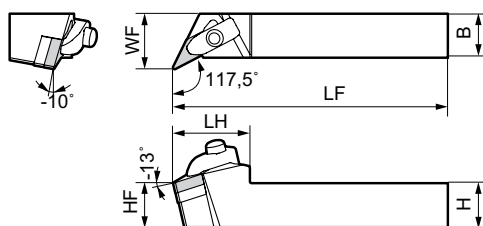
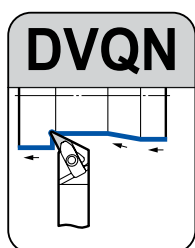
■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP4		5,0 ^(Nm)	VNS1604	BFTX0307N 2,0 ^(Nm)	TRX10 ^(*)	LH040 LH025	

(*) Note: Wrench (TRX) for shim clamp screw is not included.

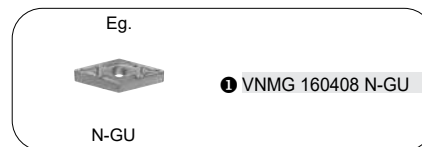


■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)					
	R	L	H	HF	B	LF	LH	WF
DVQN R/L 2020 K16	●	●	20	20	20	125	35	25
DVQN R/L 2525 M16	●	●	25	25	25	150	35	32

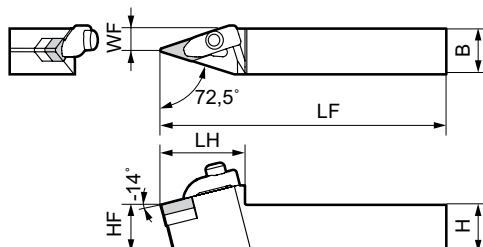
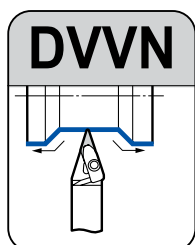
■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP4		5,0 ^(Nm)	VNS1604	BFTX0307N 2,0 ^(Nm)	TRX10 ^(*)	LH040 LH025	

(*) Note: Wrench (TRX) for shim clamp screw is not included.



■ Holders

Above figures show right hand tools.

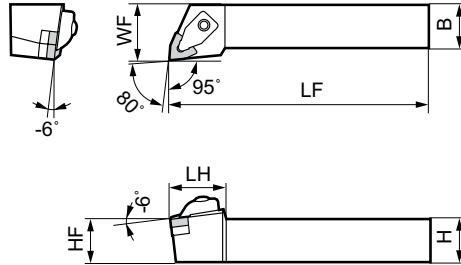
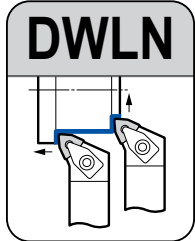
Cat. No.	Stock	Dimensions (mm)					
		H	HF	B	LF	LH	WF
DVVN N 2020 K16	●	20	20	20	125	37	10,0
DVVN N 2525 M16	●	25	25	25	150	37	12,5

■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP4		5,0 ^(Nm)	VNS1604	BFTX0307N 2,0 ^(Nm)	TRX10 ^(*)	LH040 LH025	

(*) Note: Wrench (TRX) for shim clamp screw is not included.

General Turning and Facing



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
DWLN R/L 2020 K08	●	●	20	20	20	125	32	25	
DWLN R/L 2525 M08	●	●	25	25	25	150	32	32	

■ Inserts



■ Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench	Insert
SCP2		5,0 (NPT)	WNS0804	BFTX0409N 3,4 (NPT)	TRX15 ^(*)	LH040 LH025	1

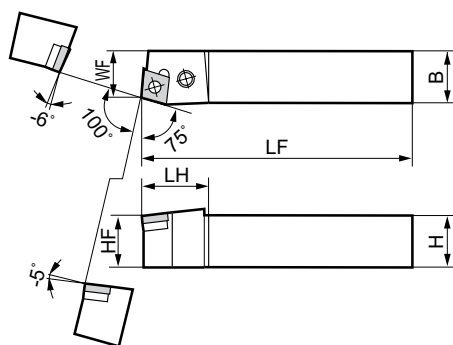
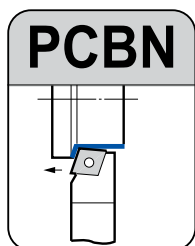
^(*)Note: Wrench (TRX) for shim clamp screw is not included.

External Tool Holders P Type (Lever Lock)

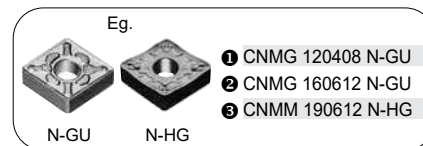
Tool Holders for neg. Inserts CN



General Turning and Facing



■ Inserts

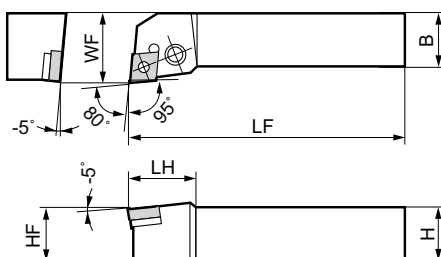
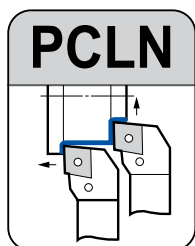


■ Spare Parts

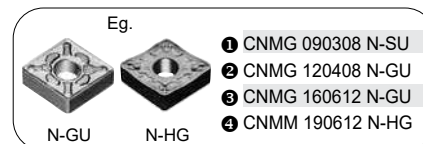
Cat. No.	Stock		Dimensions (mm)							Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF							
PCBN R/L 2020 K12	●	○	20	20	20	125	27	17		LCL4SD	LCS42BS-SD	LSC42SD	LSP4SD	LH030	1
PCBN R/L 2525 M12	●	●	25	25	25	150	27,7	22							
PCBN R/L 3225 P12		●	32	32	25	170	27,7	22							
PCBN R/L 2525 M16		●	25	25	25	150	31,7	22		LCL5SD	LCS5B-SD	LSC53SD	LSP5SD	LH030	2
PCBN R/L 3225 P16			32	32	25	170	31,7	22							
PCBN R/L 3232 P19	●	●	32	32	32	170	37,9	27		LCL6SD	LCS6B-SD	LSC63SD	LSP6SD	LH040	3

■ Holders

Above figures show right hand tools.



■ Inserts



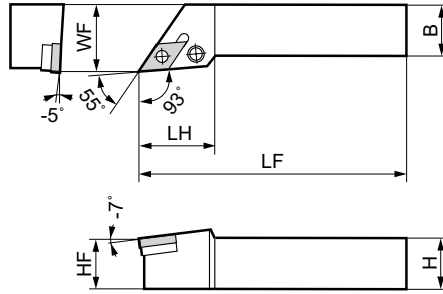
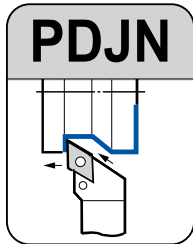
■ Spare Parts

Cat. No.	Stock		Dimensions (mm)							Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF							
PCLN R/L 1616 H09	●	●	16	16	16	100	25,7	20		LCL3SD	LCS3TB-SD	LSC32SD	LSP3SD	LH025	1
PCLN R/L 2020 K09	●		20	20	20	125	27	25							
PCLN R/L 2525 M09			25	25	25	150	27	32							
PCLN R/L 1616 H12	●	●	16	16	16	100	26,1	20			LCS 4CA				
PCLN R/L 2020 K12	●	○	20	20	20	125	27,4	25		LCL4SD	LCS42BS-SD	LSC42SD	LSP4SD	LH030	2
PCLN R/L 2525 M12	●	●	25	25	25	150	28	32							
PCLN R/L 3225 P12	●	●	32	32	25	170	28	32							
PCLN R/L 2525 M16	●		25	25	25	150	32,6	32		LCL5SD	LCS5B-SD	LSC53SD	LSP5SD	LH030	3
PCLN R/L 3225 P16	●		32	32	25	170	32,6	32							
PCLN R/L 3232 P16	●	●	32	32	32	170	32,6	40							
PCLN R/L 2525 M19	●	●	25	25	25	150	37	32							
PCLN R/L 3225 P19	○		32	32	32	170	38	32		LCL6SD	LCS6B-SD	LSC63SD	LSP6SD	LH040	4
PCLN R/L 3232 P19			32	32	32	170	38	40							
PCLN R/L 4040 S19			40	40	40	250	37,8	50							

■ Holders

Above figures show right hand tools.

General Turning and Facing

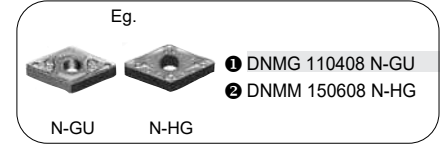


■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
PDJN R/L 1616 H11	●		16	16	16	100	30	20	
PDJN R/L 2020 K11	●	●	20	20	20	125	30	25	
PDLN R/L 2525 M11	●	●	25	25	25	150	30	32	
PDJN R/L 2020 K15	●	●	20	20	20	125	34,7	25	
PDJN R/L 2525 M15	●	●	25	25	25	150	34,7	32	
PDJN R/L 3225 P15	●	●	32	32	25	170	34,7	32	

■ Inserts



■ Spare Parts

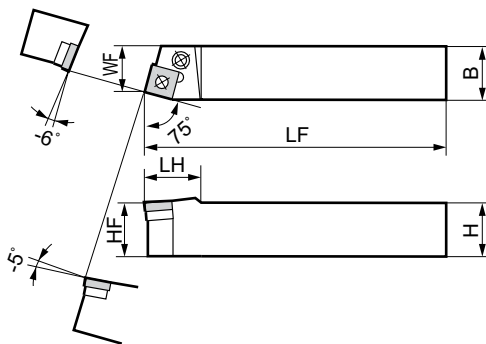
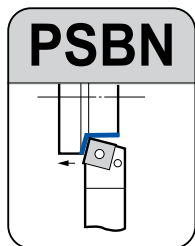
Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3D-SD	LCS3TB-SD	LSD32SD	LSP3SD	LH025	1
LCL4D-SD	LCS5DB-SD	LSD42SD	LSP4SD	LH030	2

External Tool Holders P Type (Lever Lock)

Tool Holders for neg. Inserts SN



General Turning and Chamfering



■ Inserts

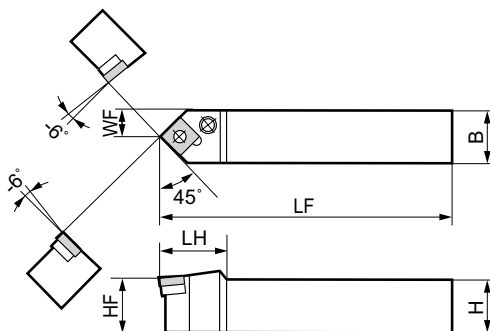
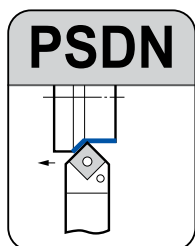


■ Spare Parts

Cat. No.	Stock		Dimensions (mm)							Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF							
PSBN R/L 2020 K12	●		20	20	20	125	27,5	17	LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	1	
PSBN R/L 2525 M12	●	●	25	25	25	150	27,5	22	LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	2	
PSBN R/L 2525 M15		●	25	25	25	150	32	22	LCL6SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	3	
PSBN R/L 3225 P15	●	●	32	32	25	170	32	22							
PSBN R/L 3232 P19	●	●	32	32	32	170	39,2	27							

■ Holders

Above figures show right hand tools.



■ Inserts



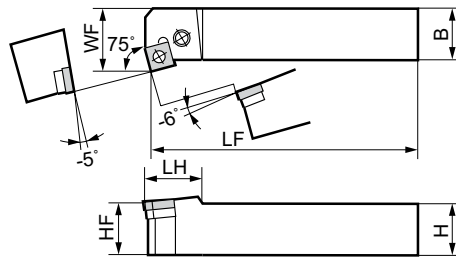
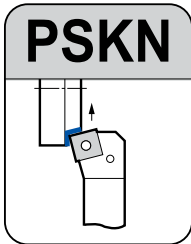
■ Spare Parts

Cat. No.	Stock		Dimensions (mm)							Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
	H	HF	B	LF	LH	WF									
PSDN N 1616 H09	●		16	16	16	100	21	8,3	LCL3SD	LCS 3TB-SD	LSS32SD	LSP3SD	LH025	1	
PSDN N 2020 K12	●		20	20	20	125	27,6	10,3	LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	2	
PSDN N 2525 M12	●		25	25	25	150	27,6	12,8	LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	2	
PSDN N 3225 P12	●		32	32	25	170	27,6	12,8	LCL6SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	3	
PSDN N 3225 P19			32	32	25	170	40,6	13							
PSDN N 3232 P19	●		32	32	32	170	40,6	16,5							

■ Holders

● = Euro stock

General Turning and Facing



■ Holders

Above figures show right hand tools.

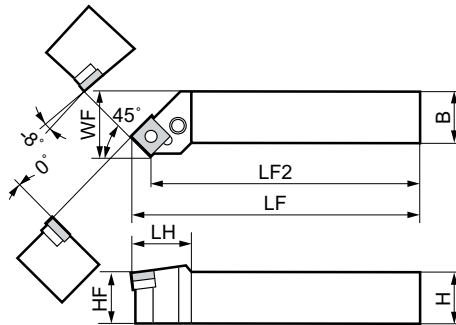
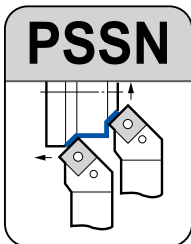
Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
PSKN R/L 2020 K12	●		20	20	20	125	22,7	17	
PSKN R/L 2525 M12	●	●	25	25	25	150	22,7	32	
PSKN R/L 2525 M15			25	25	25	150	32	32	
PSKN R/L 3225 P15			32	32	25	170	32	32	
PSKN R/L 3232 P19			32	32	32	170	33,7	40	

■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	1
LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	2
LCL6SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	3



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LF2	LH	WF
PSSN R/L 2020 K12	●	●	20	20	20	125	116,7	29,3	25
PSSN R/L 2525 M12	●	●	25	25	25	150	141,7	29,3	32
PSSN R/L 3225 P12	●		32	32	25	170	161,7	29,3	32
PSSN R/L 2525 M15	●	●	25	25	25	150	139,8	32	32
PSSN R/L 3225 P15			32	32	25	170	159,8	32	32
PSSN R/L 3232 P15	●		32	32	32	170	159,8	32	40
PSSN R/L 3232 P19	●	●	32	32	32	170	157,5	40,2	40

■ Inserts



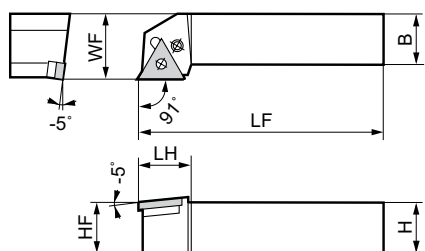
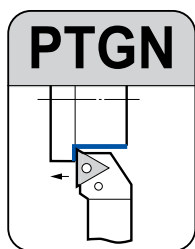
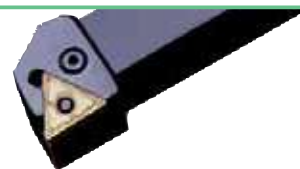
■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	1
LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	2
LCL6SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	3

External Tool Holders P Type (Lever Lock)

Tool Holders for neg. Inserts TN

General Turning and Facing

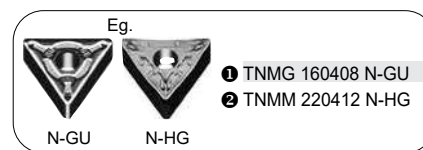


■ Holders

Above figures show right hand tools.

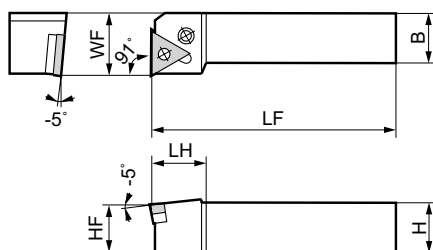
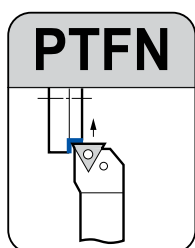
Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
PTGN R/L 1616 H16	●		16	16	16	100	20	20	
PTGN R/L 2020 K16	●	●	20	20	20	125	20	25	
PTGN R/L 2525 M16	●	●	25	25	25	150	22,2	32	
PTGN R/L 2525 M22	●	●	25	25	25	150	28,7	32	
PTGN R/L 3225 P22	●		32	32	25	170	28,7	32	
PTGN R/L 3232 P22	●		32	32	32	170	28,7	32	

■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS3TB-SD	LST317SD	LSP3SD	LH025	①
LCL4SD	LCS42BS-SD	LST42SD	LSP4SD	LH030	②

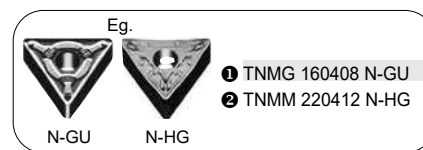


■ Holders

Above figures show right hand tools.

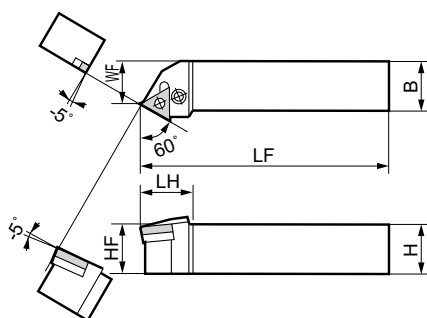
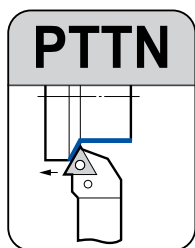
Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
PTFN R/L 1616 H16			16	16	16	100	19,7	20	
PTFN R/L 2020 K16	●	●	20	20	20	125	20,2	25	
PTFN R/L 2525 M16	●	●	25	25	25	150	20,2	32	
PTFN R/L 2525 M22	●		25	25	25	150	25,2	32	
PTFN R/L 3225 P22	●		32	32	25	170	25,2	32	

■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS3TB-SD	LST317SD	LSP3SD	LH025	①
LCL4SD	LCS42BS-SD	LST42SD	LSP4SD	LH030	②

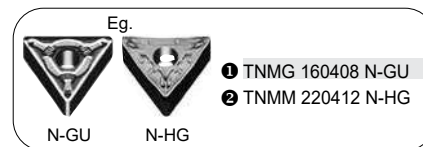


■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
PTTN R/L 2020 K16	○		20	20	20	125	25,9	17	
PTTN R/L 2525 M16	●		25	25	25	150	25,9	22	
PTTN R/L 3225 P22			31	32	25	170	31,9	22	

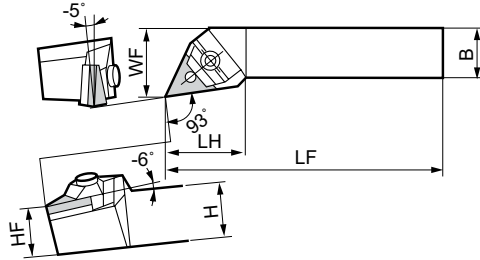
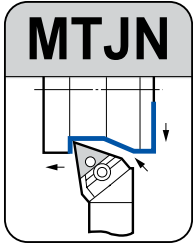
■ Inserts



■ Spare Parts

Lever pin	Clamp bolt	Shim	Shim pin	Wrench	Insert
LCL3SD	LCS3TB-SD	LST317SD	LSP3SD	LH025	①
LCL4SD	LCS42BS-SD	LST42SD	LSP4SD	LH030	②

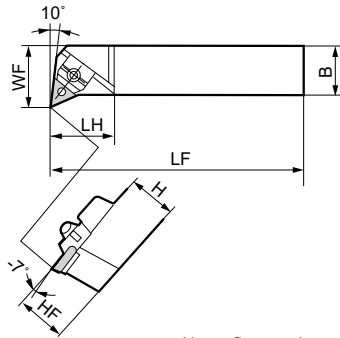
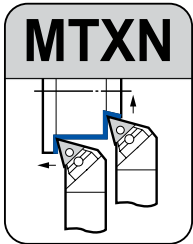
General Turning and Copying



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
MTJN R/L 2020-33 (K16)	●	●	20	20	20	125	37	25	
MTJN R/L 2525-33 (M16)	●	●	25	25	25	150	37	32	
MTJN R/L 2525-43 (M22)	●	●	25	25	25	150	37	32	
MTJN R/L 3225-43 (P22)	○	○	32	32	25	170	37	32	



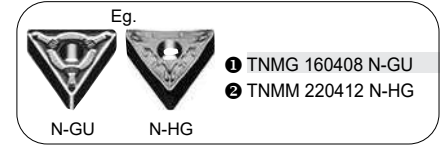
■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
MTXN R/L 2020-33 (K16)	○	○	20	20	20	125	32	25	
MTXN R/L 2525-33 (M16)	○	○	25	25	25	150	32	32	
MTXN R/L 2525-43 (M22)			25	25	25	150	38	32	



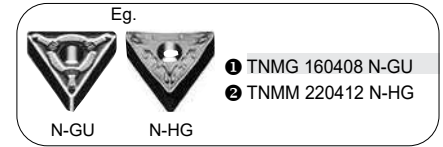
■ Inserts



■ Spare Parts

Wedge	Shim pin	Shim	Clamp bolt	Nut	Ring	Wrench	Insert
MMW30	MP317 MP320	STW323	BHA0525 4,0 _(mm)	CPM32N	ER04	LH030	①
MMW40	MP420	STW434	BHA0625 4,5 _(mm)	CPM43N	ER05	LH030 LH040	②

■ Inserts

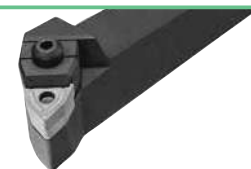


■ Spare Parts

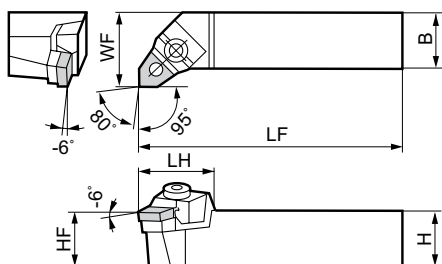
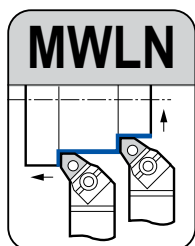
Wedge	Shim pin	Shim	Clamp bolt	Nut	Ring	Wrench	Insert
MMW30	MP317 MP320	STW323	BHA0525 4,0 _(mm)	CPM32N	ER04	LH030	①
MMW40	MP420	STW434	BHA0625 4,5 _(mm)	CPM43N	ER05	LH030, 040	②

External Tool Holders M Type (Wedge Clamp)

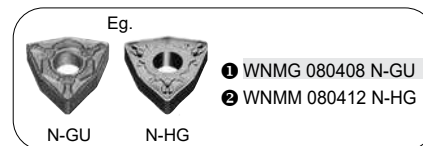
Tool Holders for neg. Inserts WN



General Turning and Facing



■ Inserts



■ Spare Parts

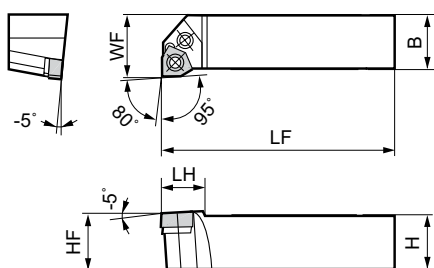
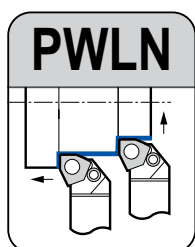
							Insert
Wedge	Shim pin	Shim	Clamp bolt	Nut	Ring	Wrench	
MWW40	MP416 MP420	SWW433	BHA0625 4,5 ^{mm}	CPM43S CPM43N	ER04	LH030 LH040	1, 2

■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
MWLN R/L 2020-43 (K08)	●	●	20	20	20	125	32	25	
MWLN R/L 2525-43 (M08)	●	●	25	25	25	150	32	32	
MWLN R/L 3225-43 (P08)	○	○	32	32	25	170	32	32	

P Type Lever Lock Holders



■ Inserts



■ Spare Parts

					Insert
Lever pin	Clamp bolt	Shim	Shim pin	Wrench	
LCL3SD	LCS3TB-SD	LSW317	LSP3SD	LH025	1

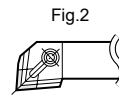
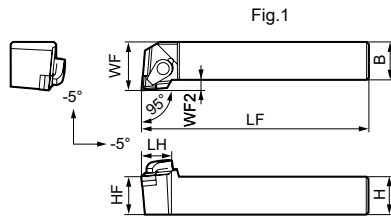
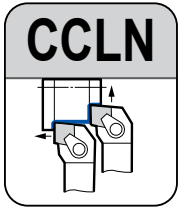
■ Holders

Above figures show right hand tools.

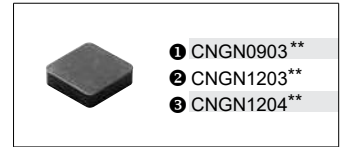
Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
PWLN R/L 2020 K06 (PWLN R/L 2020-33)	●	○	20	20	20	125	27	25	
PWLN R/L 2525 M06	●		25	25	25	150	27	32	

External Tool Holders for Solid SUMIBORON

C Type Top Clamp Holders



Inserts



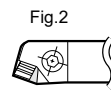
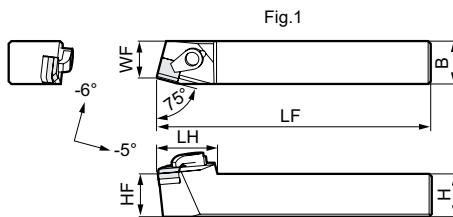
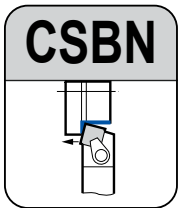
Holdings

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)								Fig.	Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF	WF2									
CCLN R/L 2525 M09			25	25	25	150	25	32	7	1		CCM8UL	CBC0903	WB8-22T	SCN0903	SPP3	LT27	1
CCLN R/L 2525 M12-03			25	25	25	150	30	32	7	1			CBC4		SCND433			2
CCLN R/L 2525 M12-04			25	25	25	150	30	32	7	2		CCM8-LONG	CBC4	WB8-30	SCND433	SPP3	LH040	3

Spare Parts

Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Wrench	Insert



Inserts



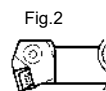
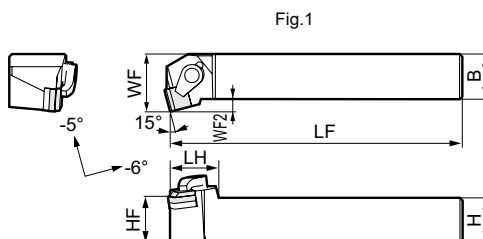
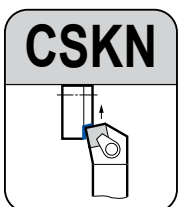
Holdings

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)								Fig.	Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF	WF2										
CSBN R/L 2525 N09			25	25	25	160	30	21,5	-	1		CCM8UL	CBS13	WB8-22T	SSN0903	-	-	LH040	1
CSBN R/L 2525 N12-03			25	25	25	160	35	21,5	-	1			CBS14		SSND423				2
CSBN R/L 2525 N12-04			25	25	25	160	33	21,5	-	2		DC-RL1	CBD 4 RL	BH 0830 RL	SSND423	SPP3	DSP5	LH040	3

Spare Parts

Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert



Inserts



Holdings

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)								Fig.	Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF	WF2										
CSKN R/L 2525 N09			25	25	25	160	25	32	7	1		CCM8UL	CBS13	WB8-22T	SSN0903	-	-	LH040	1
CSKN R/L 2525 N12-03			25	25	25	160	25	32	7	1			CBS14		SSND423				2
CSKN R/L 2525 N12-04			25	25	25	160	21	32	7	2		DC-RL1	CBD 4 RL	BH 0830 RL	SSND423	SPP3	DSP5	LH040	3

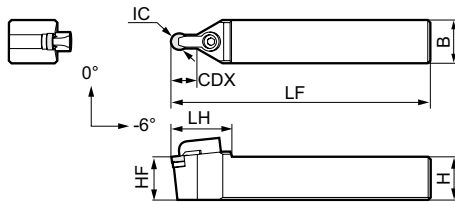
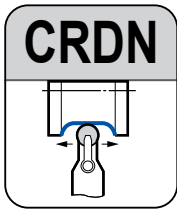
Spare Parts

Clamp	Insert protector	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert

External Holders for neg. Inserts

External Tool Holders for Solid SUMIBORON

C Type Top Clamp Holders



■ Inserts

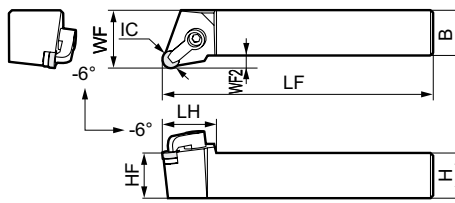
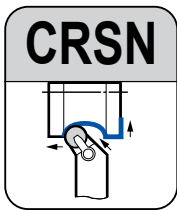


■ Holders

Cat. No.	Stock	Dimensions (mm)						
		H	HF	B	LF	LH	WF	CDX
CRDNN 2525 M09	●	25	25	25	150	35	-	15
CRDNN 2525 M12-03		25	25	25	150	35	-	20
CRDNN 2525 M12-04	●	25	25	25	150	35	-	20

■ Spare Parts

Clamp	Double screw	Shim	Shim pin	Wrench	Insert
CCM8-LONG	WB8-22T	SRND32	SPP3	LT27	1
		SRND42			2
					3



■ Inserts



■ Holders

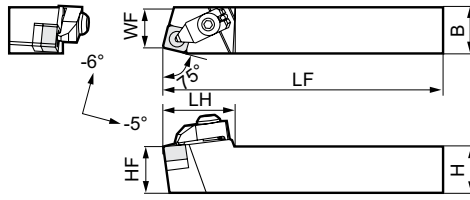
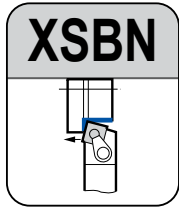
Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	WF2
CRSN R/L 2525 M09	●	●	25	25	25	150	30	32	7
CRSN R/L 2525 M12-03			25	25	25	150	30	32	7
CRSN R/L 2525 M12-04	●	●	25	25	25	150	30	32	7

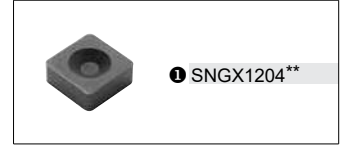
■ Spare Parts

Clamp	Double screw	Shim	Shim pin	Wrench	Insert
CCM8-LONG	WB8-22T	SRND32	SPP3	LT27	1
		SRND42			2
					3

X Type Dimple Lock Holders



■ Inserts



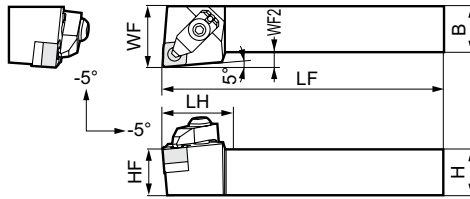
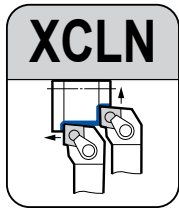
■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	
XSBN R/L 2525 N12			25	25	25	160	38	21,5	

■ Spare Parts

Clamp	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert
DSLX8	BH0825	SSND423	SPP3	GSP10	LH050	①



■ Inserts



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	WF2
XCLN R/L 2525 N12			25	25	25	150	33	32	7

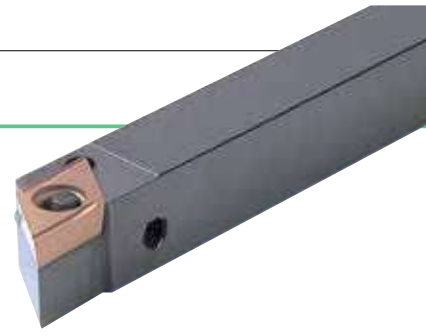
■ Spare Parts

Clamp	Clamp bolt	Shim	Shim pin	Spring	Wrench	Insert
DSLX8	BH0825	SCND433	SPP3	GSP10	LH050	①

External Holders for neg. Inserts

External Mini Holders

External Holders
for pos. Inserts



Back-Turning Tool Holder SBT Type

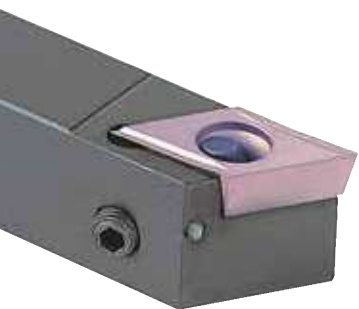
Sharp cutting edges with good surface finish.
Max. reach of insert 8,0 mm, edge width 2,5 mm



Cut-off Tool Holder SCT Type

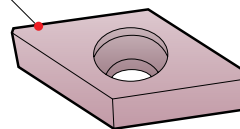
Easy insert change by just loosening the screw
from the back.

Max. cut-off dia. \varnothing 5 mm, \varnothing 12 mm, \varnothing 16 mm

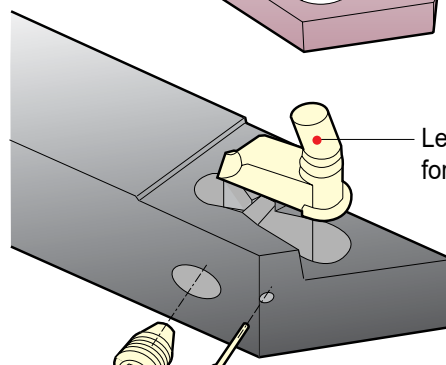


PDJCR type
lever lock holder

Wear-resistant tool materials;
T1500A (Cermet) and
AC530U (2000 layers
coated carbide grade)



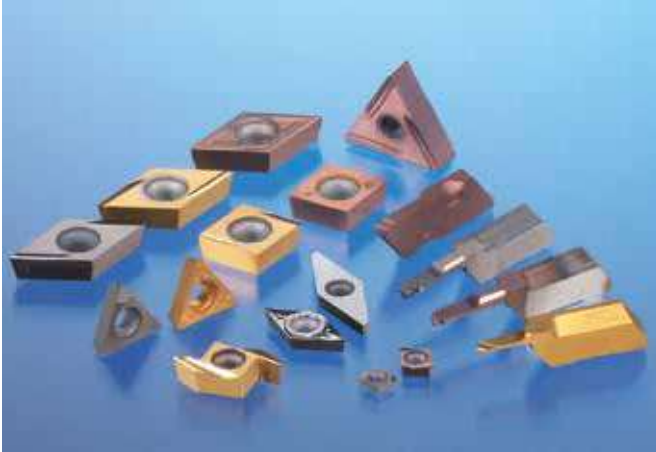
Sharp cutting edge
(RE = 0,03
0,1 and 0,2 mm)



Lever lock clamping
for 7° positive inserts

Easy access
side locking screw

External Mini Holders



In 1984, Sumitomo Electric Hardmetal first released the Mini Tool Holder series for the machining of small components in small NC autolathes.

A full range of insert grades comprising of the Cermet T1500A, SUMIBORON BN2000, SUMIDIA DA1000 and especially AC530U, was also introduced to meet a variety of machining requirements.

External Holders
for pos. Inserts

Grade Selection

Category	Application Range			Work Material					
	High Precision	Finish-Light Cut	Medium Cut	P General Steel	M Stainless Steel	K Cast Iron	S Heat Resistant Alloy	H Hardened Steel	N Non-Ferrous Metal
Coated Carbide (PVD)	ACZ150			⊙	⊙				○
	AC5015S			○	⊙	○	⊙		
	AC5025S			○	⊙	○	⊙		
	AC530U			⊙	⊙	○	○		○
	AC1030U			⊙	⊙	○	○		○
Cermet/Coated Cermet	T1000A			⊙	○	⊙			○
	T1500A / T1500Z			⊙	○	○			○
Carbide	BL130			○	○	○			○
	H1			○	○	○	○		⊙
	EH510			○	○	○	⊙		○
CBN (SUMIBORON)	BN1000 / BN2000							⊙	
	BN7000					⊙	○		
SUMIDIA	DA1000								⊙

⊙ Preferred Choice ○ Suitable

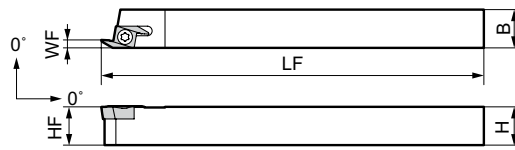
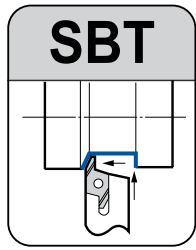
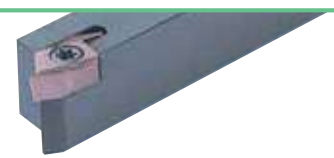
Recommended Cutting Conditions

Work Material	P Free Cutting Steel		P Carbon Steel		M Stainless Steel		S Heat Resistant Alloy		H Hardened Steel		N Aluminium		N Brass	
	v _c (m/min)	f (mm/rev)	v _c (m/min)	f (mm/rev)	v _c (m/min)	f (mm/rev)	v _c (m/min)	f (mm/rev)	v _c (m/min)	f (mm/rev)	v _c (m/min)	f (mm/rev)	v _c (m/min)	f (mm/rev)
ACZ150	50-200	0,02-0,10	50-150	0,01-0,08	50-150	0,01-0,05					70-300	0,05-0,20	70-300	0,05-0,20
AC5015S	50-200	0,02-0,15	50-200	0,02-0,10	*50-200	*0,02-0,10							70-300	0,05-0,20
AC5025S	50-200	0,02-0,15	50-200	0,02-0,10	*50-200	*0,02-0,10	30-100	0,02-0,10					70-300	0,05-0,20
AC530U	50-200	0,02-0,15	50-200	0,02-0,10	*50-200	*0,02-0,10	30-100	0,02-0,10					70-300	0,05-0,20
AC1030U	50-200	0,02-0,15	50-200	0,02-0,10	*50-200	*0,02-0,10							70-300	0,05-0,20
T1000A	50-200	0,02-0,15	50-200	0,02-0,10	*50-150	*0,02-0,10					70-300	0,05-0,20	70-300	0,05-0,20
T1500A	50-200	0,02-0,15	50-200	0,02-0,10	*50-150	*0,02-0,10					70-300	0,05-0,20	70-300	0,05-0,20
T1500Z	50-200	0,02-0,15	50-200	0,02-0,10	*50-150	*0,02-0,10					70-300	0,05-0,20	70-300	0,05-0,20
BN1000									120-300	0,03-0,15				
BN2000									50-200	0,03-0,20				
BN7000							50-200	0,05-0,20						
DA1000											70-300	0,02-0,10	70-300	0,02-0,10

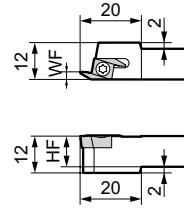
* Please use maximal possible C/speed

External Mini Tool Holders SBT Type

Special Mini Holders for Back Facing



SBT35 R1010:



■ Spare Parts

■ Holders

Above figures show right hand tools.

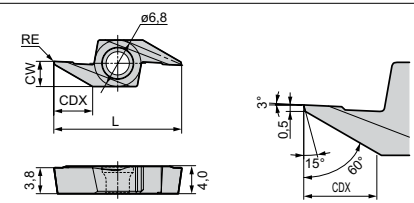
Cat. No.	Stock	Dimensions (mm)						Screw	Wrench	Insert	
		H	HF	B	LF	WF					
SBT 35-R 1010	●	10	10	10	120	7,5					
SBT 35-R 1212	●	12	12	12	120	9,5		BFTX0307N	2,0	TRX10	BTR 35_ _
SBT 35-R 1616	●	16	16	16	120	13,5					

■ Inserts

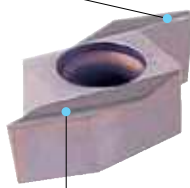
Coated carbide

Uncoated Cermet

BTR	Cat. No.	Stock			Dimensions (mm)			
		AC1030U	AC530U	T1500A	L	CDX	CW	RE
		BTR 3505	○	○	○	15	3,5	2,5
BTR 3515	○	○	○	15	3,5	2,5	0,15	



Sharp cutting edge with 15° rake angle



Wide groove breaker for smooth chip evacuation

● Surface roughness comparison

BTR 3505	P10 des Wettbewerbs
Work Material: C45 Insert: BTR3505 (ACZ310) Cutting Data: $v_c = 80$ m/min, $f = 0,04$ mm/rev $a_p = 3,0$ mm, wet	

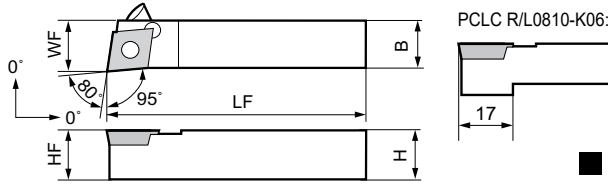
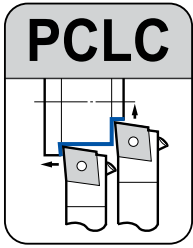
■ Recommended Cutting Data (SBT type)

Work Material	Tooling	v_c (m/min)	f (mm/rev)
General steel	Grooving	50–150	0,02–0,05
	Back facing		0,02–0,10
Free-cutting steel	Grooving	50–150	0,02–0,10
	Back facing		0,02–0,15
Stainless steel	Grooving	50–150	0,02–0,04
	Back facing		0,02–0,06

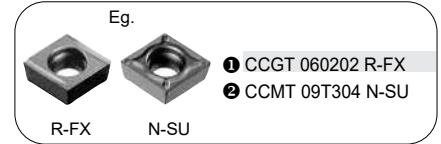
● = Euro stock
○ = Japan stock

Recommended Tightening Torque (N·m)

P Type Lever Lock Holders



Inserts

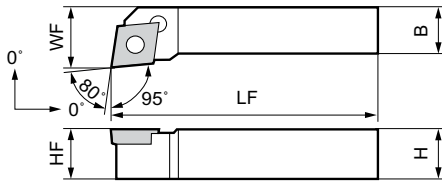
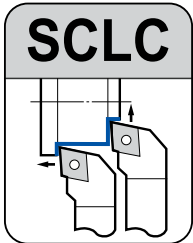


Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Lever pin	Clamp screw	Side pin	Wrench	Insert
	R	L	H	HF	B	LF	WF							
PCLC R/L 0810 K06			8	8	10	125	10,5			LCL 06	BTT 0407	LP 07	TH 020	1
PCLC R/L 1010 K06	●	○	10	10	10	125	10,5					LP 06		2
PCLC R/L 1212 K09	●	●	12	12	12	150	12,5			LCL 09	BTT 0411			
PCLC R/L 1616 K09	●		16	16	16	150	16,5							

S Type Screw Lock Holders



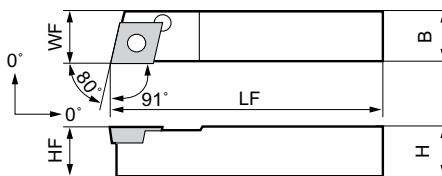
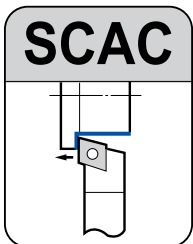
Inserts



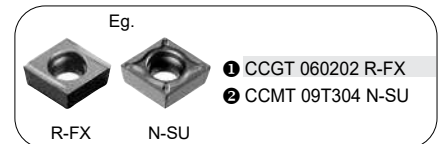
Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	Wrench	Insert	
	R	L	H	HF	B	LF	WF						
SCLC R/L 0808 D06			8	8	8	60	10			BFTX02506N	1,5	TRX08	1
SCLC R/L 1010 E06	●	●	10	10	10	70	12						
SCLC R/L 1212 F09	●	●	12	12	12	80	16			BFTX0409N	3,4	TRX15	2
SCLC R/L 1616 H09	●	●	16	16	16	100	20						
SCLC R/L 2020 H09	●		20	20	20	100	25			BFTX0511N	5,0	TRX20	3
SCLC R/L 2020 K09	●	●	20	20	20	125	25						
SCLC R/L 2020 K12	●	●	20	20	20	125	25						
SCLC R/L 2525 M12	●	●	20	25	25	150	32						



Inserts



Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	Wrench	Insert	
	R	L	H	HF	B	LF	WF						
SCAC R/L 0808 D06			8	8	8	60	8,5			BFTX02506N	1,5	TRX08	1
SCAC R/L 1010 E06	●		10	10	10	70	10,5						
SCAC R/L 1212 F09	●		12	12	12	80	12,5			BFTX0409N	3,4	TRX15	2

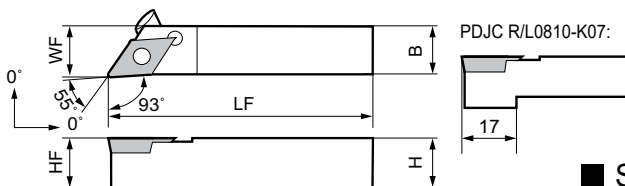
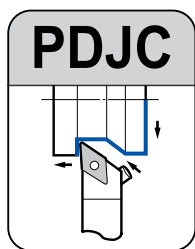
External Holders
for pos. Inserts

External Mini Tool Holders PD/SD Type

Mini Holders for 7° DC ___ pos. Inserts



P Type Lever Lock Holders



■ Inserts



■ Holders

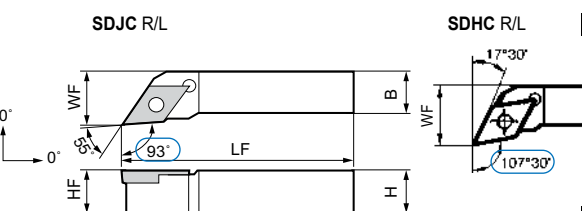
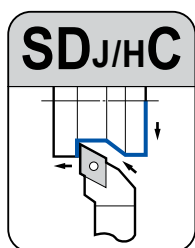
Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Lever pin	Clamp screw	Side pin	Wrench	Insert
	R	L	H	HF	B	LF	WF							
PDJC R/L 0810 K07	●		8	8	10	125	10,5			LCL 06	BTT 0407	LP 04	TH 020	1
PDJC R/L 1010 K07	●	●	10	10	10	125	10,5					LP 07		
PDJC R/L 1212 M11	●	●	12	12	12	150	12,5			LCL 09	BTT 0411	LP 07		2
PDJC R/L 1616 M11	●	○	16	16	16	150	16,5							

■ Spare Parts

Lever pin	Clamp screw	Side pin	Wrench	Insert
LCL 06	BTT 0407	LP 04	TH 020	1
LCL 09	BTT 0411	LP 07		

S Type Screw Lock Holders



■ Inserts



■ Holders

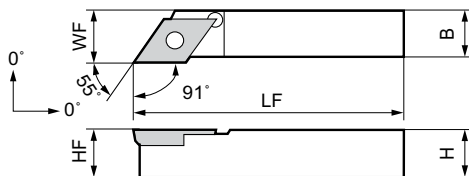
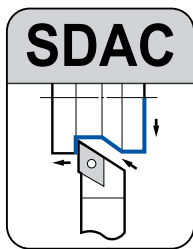
Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	Torque (N·m)	Wrench	Insert
	R	L	H	HF	B	LF	WF						
SDJC R/L 1010 E07	●		10	10	10	70	12			BFTX02506N	1,5	TRX08	1
SDJC R/L 1212 F07	●	●	12	12	12	80	16						
SDJC R/L 1616 H07	●	●	16	16	16	100	20						
SDJC R/L 2020 K07	●	●	20	20	20	125	25						
SDJC R/L 1212 F11	●	●	12	12	12	80	16			BFTX0409N	3,4	TRX15	2
SDJC R/L 1616 H11	●	●	16	16	16	100	20						
SDJC R/L 2020 K11	●	●	20	20	20	125	25						
SDJC R/L 2525 M11	●	●	25	25	25	150	32						
SDHC R/L 1616 H11	●	●	16	16	16	100	20			BFTX0409N	3,4	TRX15	2
SDHC R/L 2020 K11	●	●	20	20	20	125	25						
SDHC R/L 2525 M11	●	●	25	25	25	150	32						

■ Spare Parts

Screw	Torque (N·m)	Wrench	Insert
BFTX02506N	1,5	TRX08	1
BFTX0409N	3,4	TRX15	2
BFTX0409N	3,4	TRX15	2

S Type Screw Lock Holders



■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	Nm	Wrench	Insert
	R	L	H	HF	B	LF	WF						
SDAC R/L 0808 D07			8	8	8	60	8,5			BFTX02506N	1,5	TRX08	①
SDAC R/L 1010 E07	●		10	10	10	70	10,5						
SDAC R/L 1212 F11	●	●	12	12	12	80	12,5						

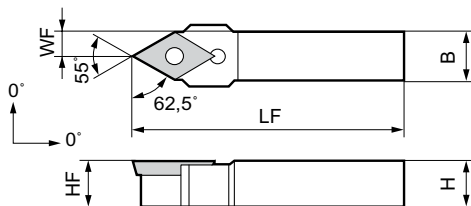
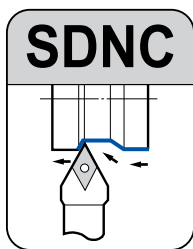


■ Inserts



■ Spare Parts

Screw	Wrench	Insert
BFTX02506N	TRX08	①
BFTX0409N	TRX15	②



■ Holders

Cat. No.	Stock	Dimensions (mm)							Screw	Nm	Wrench	Insert
		H	HF	B	LF	WF						
SDNCN 0808 D07	●	8	8	8	60	4,2			BFTX02506N	1,5	TRX08	①
SDNCN 1010 E07	●	10	10	10	70	5,2						
SDNCN 1212 F07	●	12	12	12	80	6,2						
SDNCN 1616 H07		16	16	16	100	8,2			BFTX0409N	3,4	TRX15	②
SDNCN 2020 K07	●	20	20	20	125	10,2						
SDNCN 1212 F11	●	12	12	12	80	6,5						
SDNCN 1616 H11	●	16	16	16	100	8,5						
SDNCN 2020 K11	●	20	20	20	125	10,5						
SDNCN 2525 M11	●	25	25	25	150	13						

■ Inserts



■ Spare Parts

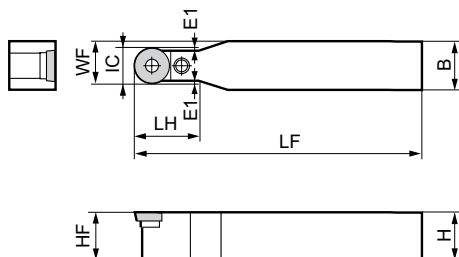
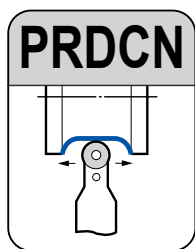
Screw	Wrench	Insert
BFTX02506N	TRX08	①
BFTX0409N	TRX15	②

External Tool Holders PR Type

External Holders for 7° RC ___ pos. Inserts



P Type Lever Lock Holders



■ Inserts

Eg.

N-RP

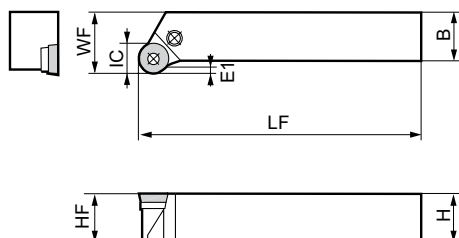
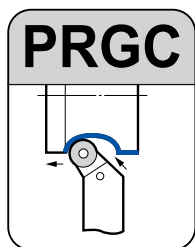
- ① RCOO1003M0 N-RO
- ② RCOO1204M0 N-RO
- ③ RCOO1606M0 N-RO
- ④ RCOO2006M0 N-RO

■ Spare Parts

						Insert
	LCL10	LCS10	LSR10	LSP10	LH020	①
	LCL12	LCS12	LSR12	LSP10	LH025	②
	LCL16	LCS16	LSR16	LSP16	LH025	③
	LCL20	LCS20	LSR20	LSP20	LH030	④

■ Holders

Cat. No.	Stock	Dimensions (mm)								Lever pin	Clamp screw	Shim	Shim pin	Wrench	Insert
		H	HF	B	LF	LH	WF	E1	IC						
PRDC N 2020 M10	●	20	20	20	150	22	15,0	1,0	10	LCL10	LCS10	LSR10	LSP10	LH020	①
PRDC N 2525 M10	●	25	25	25	150	22	17,5	1,0	10	LCL10	LCS10	LSR10	LSP10	LH020	①
PRDC N 2525 M12	●	25	25	25	150	24	18,5	1,2	12	LCL12	LCS12	LSR12	LSP10	LH025	②
PRDC N 3225 Q12	●	32	32	25	180	24	18,5	1,2	12	LCL12	LCS12	LSR12	LSP10	LH025	②
PRDC N 3225 Q16	●	32	32	25	180	28	20,5	1,5	16	LCL16	LCS16	LSR16	LSP16	LH025	③
PRDC N 3232 Q20	●	32	32	32	180	32	26,5	1,7	20	LCL20	LCS20	LSR20	LSP20	LH030	④



■ Inserts

Eg.

N-RP

- ① RCOO 1003M0 N-RO
- ② RCOO 1204M0 N-RO
- ③ RCOO 1606M0 N-RO
- ④ RCOO 2006M0 N-RO

■ Spare Parts

						Insert
	LCL10	LCS10	LSR10	LSP10	LH020	①
	LCL12	LCS12	LSR12	LSP10	LH025	②
	LCL16	LCS16	LSR16	LSP16	LH025	③
	LCL20	LCS20	LSR20	LSP20	LH030	④

■ Holders

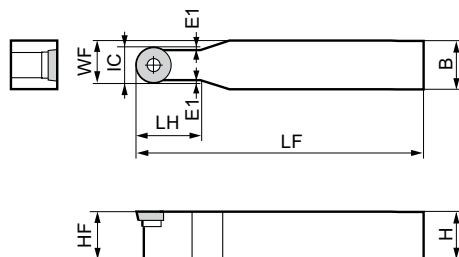
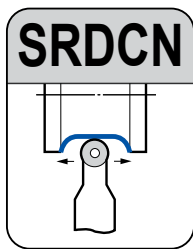
Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)								Lever pin	Clamp screw	Shim	Shim pin	Wrench	Insert
	R	L	H	HF	B	LF	WF	E1	IC							
PRGC R/L 2020 K10	●		20	20	20	125	25	1,5	10	LCL10	LCS10	LSR10	LSP10	LH020	①	
PRGC R/L 2525 M10	●	●	25	25	25	150	32	1,5	10	LCL10	LCS10	LSR10	LSP10	LH020	①	
PRGC R/L 2020 K12			20	20	20	125	25	2,5	12	LCL12	LCS12	LSR12	LSP10	LH025	②	
PRGC R/L 2525 M12	○	●	25	25	25	150	32	2,5	12	LCL12	LCS12	LSR12	LSP10	LH025	②	
PRGC R/L 3225 P12			32	32	25	170	32	2,5	12	LCL12	LCS12	LSR12	LSP10	LH025	②	
PRGC R/L 2525 M16	●		25	25	25	150	32	3,0	16	LCL16	LCS16	LSR16	LSP16	LH025	③	
PRGC R/L 3225 P16	●		32	32	25	170	32	3,0	16	LCL16	LCS16	LSR16	LSP16	LH025	③	
PRGC R/L 3232 P20	●		32	32	32	170	40	4,0	20	LCL20	LCS20	LSR20	LSP20	LH030	④	

● = Euro stock
○ = Japan stock

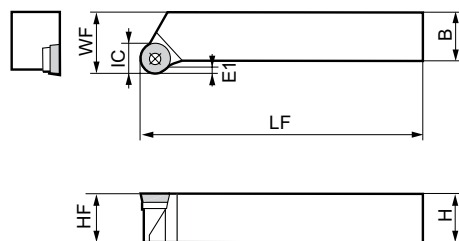
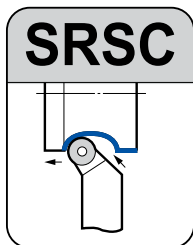
Recommended Tightening Torque (N·m)

S Type Screw Lock Holders



■ Holders

Cat. No.	Stock	Dimensions (mm)								Screw	Shim	Screw	Wrench	Wrench	Insert
		H	HF	B	LF	LH	WF	E1	IC						
SRDC N 2020 K10T3	●	20	20	20	125	25	15,0	1,0	10	BFTX03510-SD	SRNS 103-SD	BW 0508F-SD	TRX 15 IP-35	LH 035	①
SRDC N 2525 M10T3	●	25	25	25	150	25	17,5	1,0	10	2,0 C_{min}	SRNS 123-SD				
SRDC N 2525 M12	●	25	25	25	150	28	18,5	1,2	12	BFTX03512-SD	SRNS 123-SD	BW 0810F-SD	LT 20 IP	LH 050	②
SRDC N 3225 P12	●	32	32	25	170	28	18,5	1,2	12	2,0 C_{min}	SRNS 164-SD				
SRDC N 2525 M16	●	25	25	25	150	35	20,5	1,5	16	BFTX0517-SD	SRNS 164-SD	BW 0912F-SD	LT 25 IP	LH 060	③
SRDC N 3225 P16	●	32	32	25	170	35	20,5	1,5	16	5,0 C_{min}	SRNS 204-SD				
SRDC N 3232 P20	●	32	32	32	170	40	26,0	1,7	20	BFTX0618-SD 7,5 C_{min}	SRNS 204-SD	BW 0912F-SD	LT 25 IP	LH 060	④



■ Holders

Cat. No.	Stock		Dimensions (mm)								Screw	Shim	Screw	Wrench	Wrench	Insert
	R	L	H	HF	B	LF	WF	E1	IC							
SRSC R/L 2020 K10T3	●	●	20	20	20	125	25	1,5	10	BFTX 03510-SD	SRNS 103-SD	BW 0508F-SD	TRX 15 IP-35	LH 035	①	
SRSC R/L 2525 M10T3	●	●	25	25	25	150	32	1,5	10	2,0 C_{min}	SRNS 123-SD					
SRSC R/L 2525 M12	●	●	25	25	25	150	32	2,5	12	BFTX 03512-SD	SRNS 123-SD	BW 0810F-SD	LT 20 IP	LH 050	②	
SRSC R/L 3225 P12	●	●	32	32	25	170	32	2,5	12	2,0 C_{min}	SRNS 164-SD					
SRSC R/L 3225 P16	●	●	32	32	25	170	32	3,0	16	BFTX 0517-SD 5,0 C_{min}	SRNS 164-SD	BW 0912F-SD	LT 25 IP	LH 060	③	
SRSC R/L 3232 P20	●	●	32	32	32	170	40	4,0	20	BFTX 0618-SD 7,5 C_{min}	SRNS 204-SD				BW 0912F-SD	LT 25 IP








■ Inserts


Eg.  N-RX

- RCO01003M0
- ① RCO010T3M0 N-R0
- ② RCO01204M0 N-R0
- ③ RCO01606M0 N-R0
- ④ RCO02006M0 N-R0

■ Spare Parts





					Insert
BFTX03510-SD	SRNS 103-SD	BW 0508F-SD	TRX 15 IP-35	LH 035	①
BFTX03512-SD	SRNS 123-SD	BW 0810F-SD	LT 20 IP	LH 050	②
BFTX0517-SD	SRNS 164-SD	BW 0912F-SD	LT 25 IP	LH 060	③
BFTX0618-SD 7,5 C_{min}	SRNS 204-SD	BW 0912F-SD	LT 25 IP	LH 060	④

■ Inserts

Eg.  N-RX

- RCO01003M0
- ① RCO010T3M0 N-R0
- ② RCO01204M0 N-R0
- ③ RCO01606M0 N-R0
- ④ RCO02006M0 N-R0

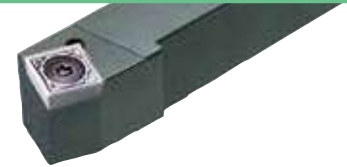
■ Spare Parts

					Insert
BFTX 03510-SD	SRNS 103-SD	BW 0508F-SD	TRX 15 IP-35	LH 035	①
BFTX 03512-SD	SRNS 123-SD	BW 0810F-SD	LT 20 IP	LH 050	②
BFTX 0517-SD 5,0 C_{min}	SRNS 164-SD	BW 0912F-SD	LT 25 IP	LH 060	③
BFTX 0618-SD 7,5 C_{min}	SRNS 204-SD	BW 0912F-SD	LT 25 IP	LH 060	④

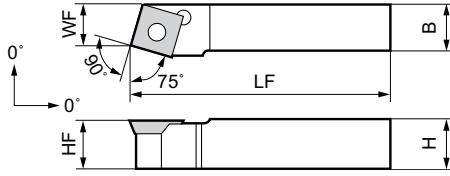
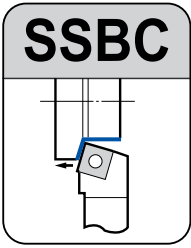
External Holders
for pos. Inserts

External Mini Tool Holders SS Type

Mini Holders for 7° SC__ pos. Inserts



S Type Screw Lock Holders



■ Inserts



■ Spare Parts

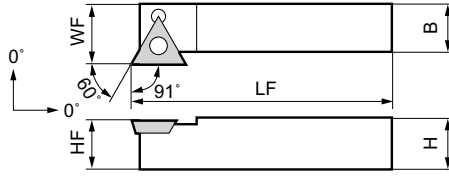
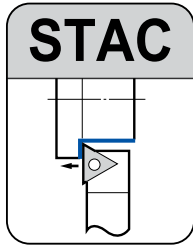
■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	⌚ (N·m)	Wrench	Insert
	R	L	H	HF	B	LF	WF						
SSBC R/L 1010 E07			10	10	10	70	9			BFTX0307N	2,0	TRX10	①
SSBC R/L 1212 F09			12	12	12	80	11			BFTX0409N	3,4	TRX15	②
SSBC R/L 1616 H09	●	●	16	16	16	100	13			BFTX0511N	5,0	TRX20	③
SSBC R/L 2020 K12			20	20	20	125	17						
SSBC R/L 2525 M12			25	25	25	150	22						

External Holders for pos. Inserts

S Type Screw Lock Holders



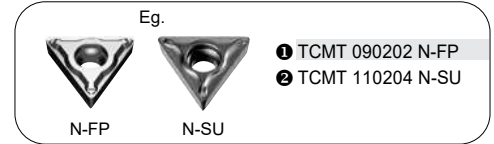
■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	Nm	Wrench	Insert
	R	L	H	HF	B	LF	WF						
STAC R/L 0808 D09			8	8	8	60	8,5			BFTX02205N	1,1	TRX06	①
STAC R/L 1212 F11	●		12	12	12	80	12,5			BFTX02506N	1,5	TRX08	②

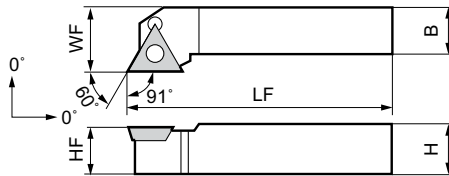
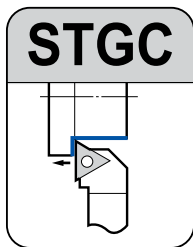


■ Inserts



■ Spare Parts

Screw	Nm	Wrench	Insert
BFTX02205N	1,1	TRX06	①
BFTX02506N	1,5	TRX08	②

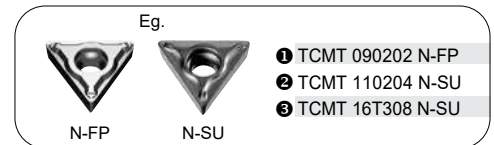


■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	Nm	Wrench	Insert
	R	L	H	HF	B	LF	WF						
STGC R/L 0808 D09			8	8	8	60	10			BFTX02205N	1,1	TRX06	①
STGC R/L 1010 E09	●		10	10	10	70	12			BFTX02506N	1,5	TRX08	②
STGC R/L 1212 F11	●		12	12	12	80	16			BFTX02506N	1,5	TRX08	②
STGC R/L 1616 H11	●	●	16	16	16	100	20			BFTX0409N	3,4	TRX15	③
STGC R/L 1616 H16	●	●	16	16	16	100	20			BFTX0409N	3,4	TRX15	③
STGC R/L 2020 K16	●	●	20	20	20	125	25			BFTX0409N	3,4	TRX15	③
STGC R/L 2525 M16			25	25	25	150	32			BFTX0409N	3,4	TRX15	③

■ Inserts



■ Spare Parts

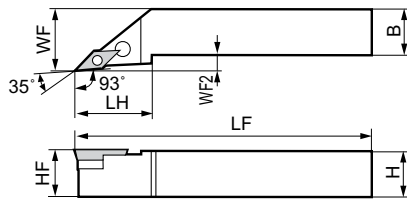
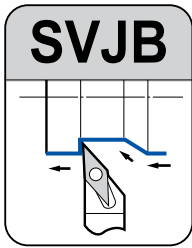
Screw	Nm	Wrench	Insert
BFTX02205N	1,1	TRX06	①
BFTX02506N	1,5	TRX08	②
BFTX0409N	3,4	TRX15	③

External Holders
for pos. Inserts

External Mini Tool Holders SV Type

Mini Holders for 5° VB pos. Inserts

S Type Screw Lock Holders



■ Holders

Above figures show right hand tools.

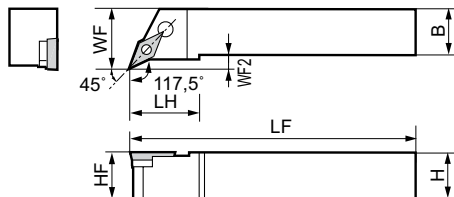
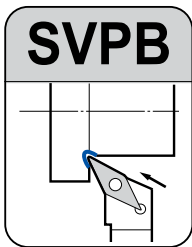
Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	WF2
SVJB R/L 1212 F11	●	●	12	12	12	80	25	16	4,5
SVJB R/L 1616 H11	●	●	16	16	16	100	25	20	4,5
SVJB R/L 2020 K16	●	●	20	20	20	125	41	25	5,0
SVJB R/L 2525 M16	●	●	25	25	25	150	41	32	7,0
SVJB R/L 3225 P16	●	●	32	32	25	170	41	32	7,0

■ Inserts



■ Spare Parts

Stopper	Nut	Shim	Wrench	ScREW	WRENCH	Insert
-	-	-	-	BFTX02508NV 1,5 ^(N·m)	TRX08	1
VP20	CPV33N	SVP32	LH025	BFTX03508 2,0 ^(N·m)	TRX10	2
VP25						
VP32						



■ Holders

Above figures show right hand tools.

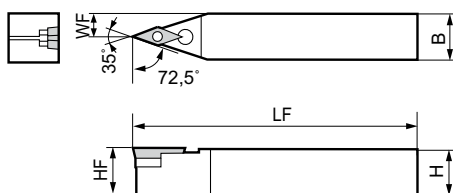
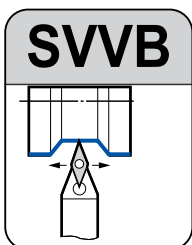
Cat. No.	Stock		Dimensions (mm)						
	R	L	H	HF	B	LF	LH	WF	WF2
SVPB R/L 1212 F11	●		12	12	12	80	25	16	4,5
SVPB R/L 1616 H11	●	●	16	16	16	100	25	20	4,5
SVPB R/L 2020 K16	●	●	20	20	20	125	36	25	5,0
SVPB R/L 2525 M16	●	●	25	25	25	150	36	32	7,0
SVPB R/L 3225 P16	●	●	32	32	25	170	36	32	7,0

■ Inserts



■ Spare Parts

Stopper	Nut	Shim	Wrench	ScREW	WRENCH	Insert
-	-	-	-	BFTX02508NV 1,5 ^(N·m)	TRX08	1
VP20	CPV33N	SVP32	LH025	BFTX03508 2,0 ^(N·m)	TRX10	2
VP25						
VP32						



■ Holders

Cat. No.	Stock	Dimensions (mm)						
		H	HF	B	LF	LH	WF	
SVVB M 1212 F11	●	12	12	12	80	-	6	
SVVB N 1616 H11	●	16	16	16	100	-	8	
SVVB N 2020 K16	●	20	20	20	125	-	10	
SVVB N 2525 M16	●	25	25	25	150	-	12,5	
SVVB N 3225 P16	●	32	32	25	170	-	12,5	

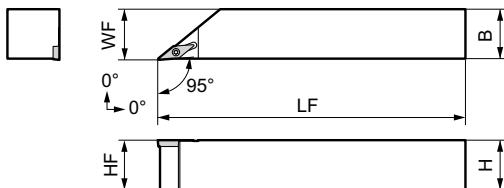
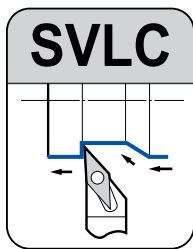
■ Inserts



■ Spare Parts

Stopper	Nut	Shim	Wrench	ScREW	WRENCH	Insert
-	-	-	-	BFTX02508NV 1,5 ^(N·m)	TRX08	1
VP20	CPV33N	SVP32	LH025	BFTX03508 2,0 ^(N·m)	TRX10	2
VP25						
VP32						

S Type Screw Lock Holders



■ Inserts

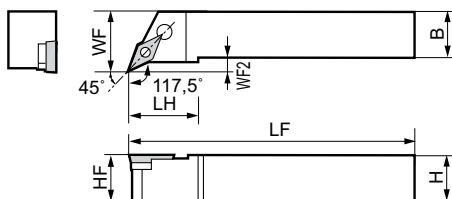
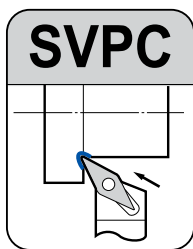


■ Spare Parts

■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	Nm	Wrench	Insert
	R	L	H	HF	B	LF	WF						
SVLC R/L 1010 H11	●	●	10	10	10	100	10,5			BFTX02508NV	1,5	TRX08	1
SVLC R/L 1212 H11	●	●	12	12	12	100	12,5						
SVLC R/L 1616 H11	●	●	16	16	16	100	16,5						
SVLC R/L 2020 K11	○	○	20	20	20	125	20,5						
SVLC R/L 2525 M11	●	○	25	25	25	150	25,5						



■ Inserts



■ Spare Parts

■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Screw	Nm	Wrench	Insert
	R	L	H	HF	B	LF	LH	WF	WF2				
SVPC R/L 1010 H11	○	○	10	10	10	100	-	14,5	4,5	BFTX02508NV	1,5	TRX08	1
SVPC R/L 1212 H11	●	●	12	12	12	100	-	16,5	4,5				
SVPC R/L 1616 H11	●	●	16	16	16	100	-	20,5	4,5				

External Tool Holders

Polygon - Shank Holder



■ Features

The Sumitomo polygon shank holders enable an extremely high stiffness connection between machine and tool. The conical polygon can take high bending and torque moments based on the combination of the face contact to the spindle.

This self-guiding coupling system offers high precision and a repeatability of $\pm 2 \mu\text{m}$ in X, Y and Z axis. While using this easy and quick coupling system it is possible to gain higher machine utilization time as the set-up and tool change times are reduced.

The compact design and the high stiffness connection to the spindle offer a versatile use e.g. on multi-task machines, machining centers and turning-milling centers.



■ Characteristics

- original SUMITOMO D-type double clamping system
- compact design
- monoblock system - no additional interfaces
- precise positioning; self-guiding with high repeatability
- high stiffness supported by face contact of holder
- carbide shims to prevent holders from damage
- simple tool holder change and low-maintenance operation
- internal coolant supply directly to the cutting edge
- Polygon shank and insert seat hardened for long holder life

Polygon - shank holder - produced according to ISO 26623-1

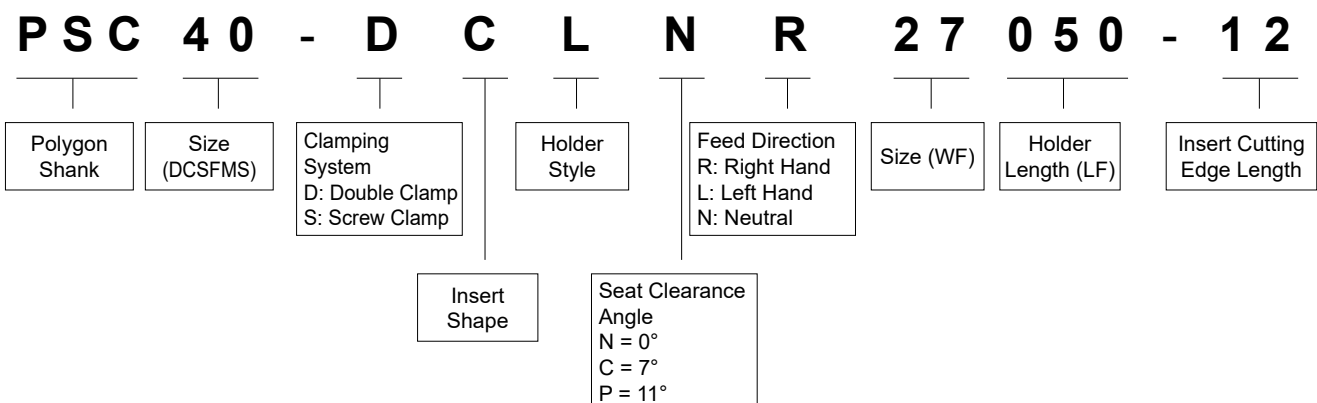
Negative Insert Type



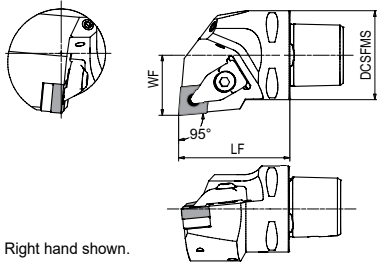
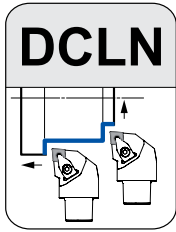
Positive Insert Type



■ Classification System for Polygon - Shank Holder



General Turning, Copying and Facing

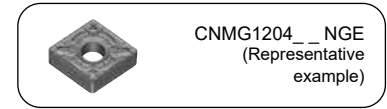


Right hand shown.

■ Holders

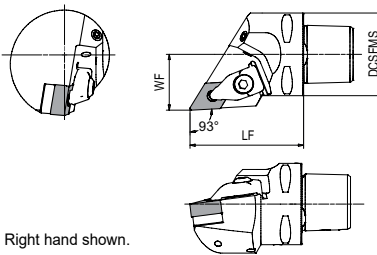
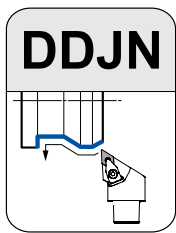
Cat. No.	Stock		Dimensions (mm)			Applicable Insert
	R	L	LF	WF	DCSFMS	
PSC40 DCLN R/L 27050-12	●	●	50	27	40	CN□□ 1204
PSC50 DCLN R/L 35060-12	●	●	60	35	50	

■ Inserts



■ Spare Parts

Clamp Set	N-m		Shim	Shim Screw	Shim Wrench	Wrench
SCP-2	5,0		CNS1204	BFTX0409N	TRX15 (*)	LH040



Right hand shown.

■ Holders

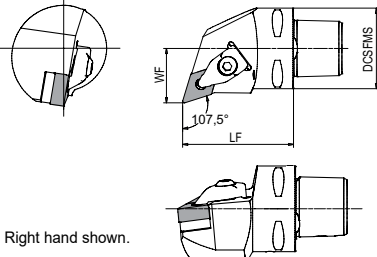
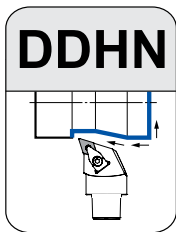
Cat. No.	Stock		Dimensions (mm)			Applicable Insert
	R	L	LF	WF	DCSFMS	
PSC40 DDJN R/L 27055-15	●	●	55	27	40	DN□□ 1506
PSC50 DDJN R/L 35060-15	●	●	60	35	50	

■ Inserts



■ Spare Parts

Clamp Set	N-m		Shim	Shim Screw	Shim Wrench	Wrench
SCP-2	5,0		DNS1506	BFTX0409N	TRX15 (*)	LH040

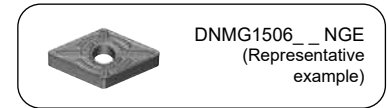


Right hand shown.

■ Holders

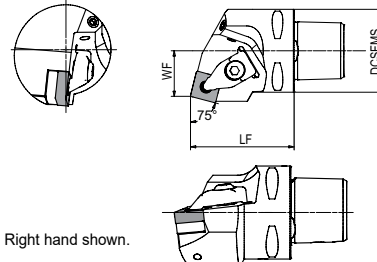
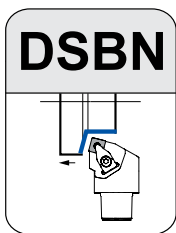
Cat. No.	Stock		Dimensions (mm)			Applicable Insert
	R	L	LF	WF	DCSFMS	
PSC40 DDHN R/L 27055-15	●	●	55	27	40	DN□□ 1506
PSC50 DDHN R/L 35060-15	●	●	60	35	50	

■ Inserts



■ Spare Parts

Clamp Set	N-m		Shim	Shim Screw	Shim Wrench	Wrench
SCP-2	5,0		DNS1506	BFTX0409N	TRX15 (*)	LH040

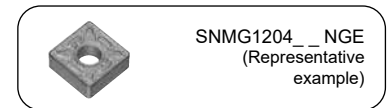


Right hand shown.

■ Holders

Cat. No.	Stock		Dimensions (mm)			Applicable Insert
	R	L	LF	WF	DCSFMS	
PSC40 DSBN R/L 22050-12		●	50	22	40	SN□□ 1204
PSC50 DSBN R/L 27060-12	●		60	27	50	

■ Inserts



■ Spare Parts

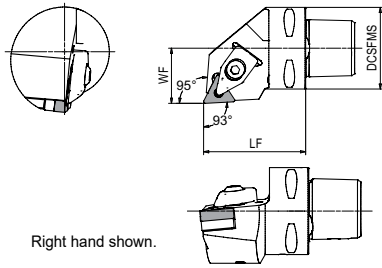
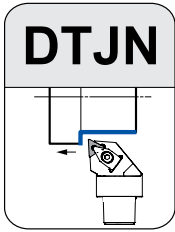
Clamp Set	N-m		Shim	Shim Screw	Shim Wrench	Wrench
SCP-2	5,0		SNS1204	BFTX0409N	TRX15 (*)	LH040

(*) Item is sold separately.

External Tool Holders Polygon - Shank Holder

Negative Insert Type

General Turning and Facing

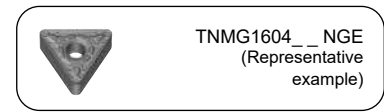


Right hand shown.

■ Holders

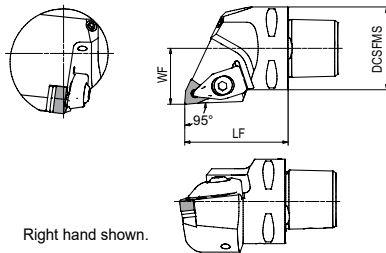
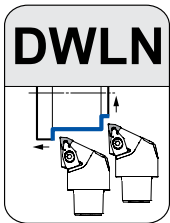
Cat. No.	Stock		Dimensions (mm)			Applicable Insert
	R	L	LF	WF	DCSFMS	
PSC40 DTJN R/L 27050-16	●		50	27	40	TN□□ 1604
PSC50 DTJN R/L 35060-16	●		60	35	50	

■ Inserts



■ Spare Parts

Clamp Set	$\text{N}\cdot\text{m}$	Shim	Shim Screw	Shim Wrench	Wrench
SCP-1	5,0	TNS1604	BFTX0307N	TRX15 (*)	LH040

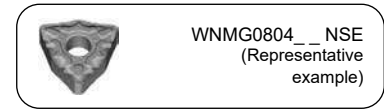


Right hand shown.

■ Holders

Cat. No.	Stock		Dimensions (mm)			Applicable Insert
	R	L	LF	WF	DCSFMS	
PSC40 DWLN R/L 27050-06	●	●	50	27	40	WN□□ 06
PSC50 DWLN R/L 35060-06	●		60	35	50	
PSC40 DWLN R/L 27050-08	●	●	50	27	40	WN□□ 08
PSC50 DWLN R/L 35060-08	●		60	35	50	

■ Inserts



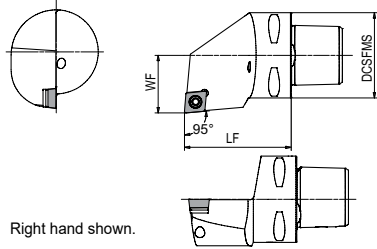
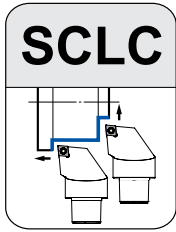
■ Spare Parts

Clamp Set	$\text{N}\cdot\text{m}$	Shim	Shim Screw	Shim Wrench	Wrench
SCP-1	5,0	WNS0604	BFTX0307N	TRX15 (*)	LH040
SCP-2	5,0	WNS0804	BFTX0409N	TRX15 (*)	LH040

(*) Item is sold separately.

External Holders
for neg. Inserts

General Turning, Copying and Facing

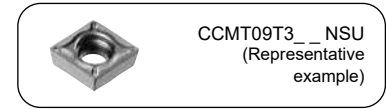


Right hand shown.

■ Holders

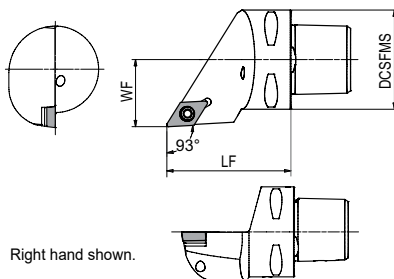
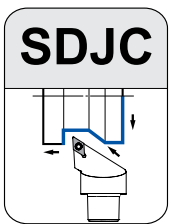
Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	L ₁	f	DCSFMS	
PSC40 SCLC R/L 27050-09	●	●		50	27	40	CC□□ 09T3
PSC50 SCLC R/L 35060-09	●	●		60	35	50	

■ Inserts



■ Spare Parts

Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
CCS09T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*

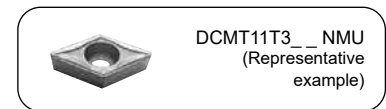


Right hand shown.

■ Holders

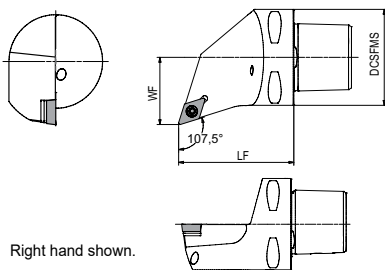
Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SDJC R/L 27050-11	●	●		50	27	40	DC□□ 11T3
PSC50 SDJC R/L 35060-11	●	●		60	35	50	

■ Inserts



■ Spare Parts

Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
DCS11T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*

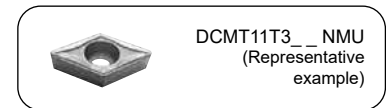


Right hand shown.

■ Holders

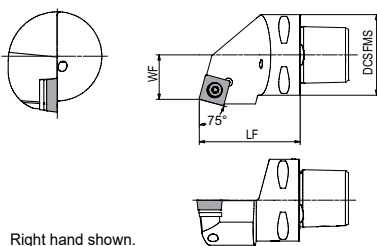
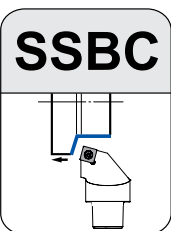
Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SDHC R/L 27050-11	●	●		50	27	40	DC□□ 11T3
PSC50 SDHC R/L 35060-11	●	●		60	35	50	

■ Inserts



■ Spare Parts

Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
DCS11T3	KGBS1111	KSS1111	3,5	LT15K	LH035K*

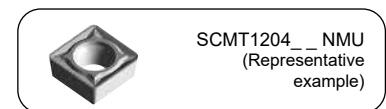


Right hand shown.

■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SSBC R/L 22050-12				50	22	40	SC□□ 1204
PSC50 SSBC R/L 27060-12	●			60	27	50	

■ Inserts



■ Spare Parts

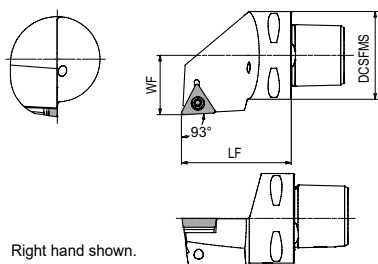
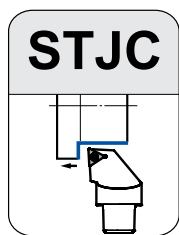
Shim	Shim Screw	Insert Screw	(N·m)	Wrench	Shim Wrench
SCS1204	KGBS1221	KSS1221	4,5	LT15K	LH045K*

(*) Item is sold separately.

External Tool Holders Polygon - Shank Holder

Positive Insert Type

General Turning, Copying and Facing

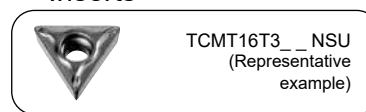


Right hand shown.

■ Holders

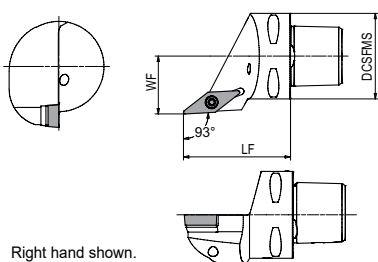
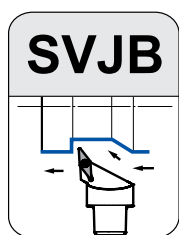
Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 STJC R/L 27050-16	●			50	27	40	TC□□ 16T3
PSC50 STJC R/L 35060-16				60	35	50	

■ Inserts



■ Spare Parts

TCS16T3	KGBS1111	KSS1111	3,5	LH035K*

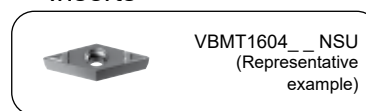


Right hand shown.

■ Holders

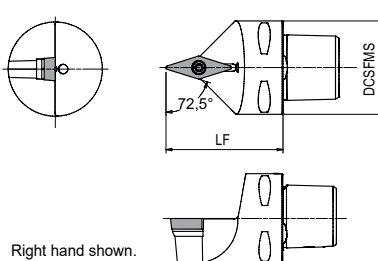
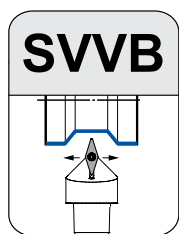
Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SVJB R/L 27050-16	●	●		50	27	40	VB□□ 1604
PSC50 SVJB R/L 35060-16		●		60	35	50	

■ Inserts



■ Spare Parts

VCS1604	KGBS1111	KSS1111	3,5	LH035K*

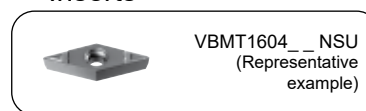


Right hand shown.

■ Holders

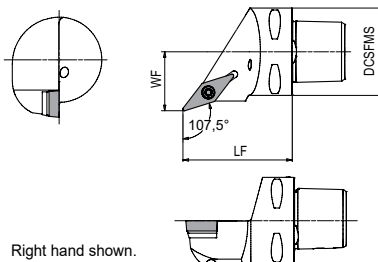
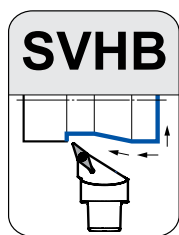
Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SVVB N 00050-16			●	50		40	VB□□ 1604
PSC50 SVVB N 00060-16				60		50	

■ Inserts



■ Spare Parts

VCS1604	KGBS1111	KSS1111	3,5	LH035K*

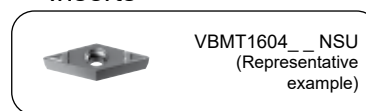


Right hand shown.

■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SVHB R/L 27050-16	●	●		50	27	40	VB□□ 1604
PSC50 SVHB R/L 35060-16	●			60	35	50	

■ Inserts



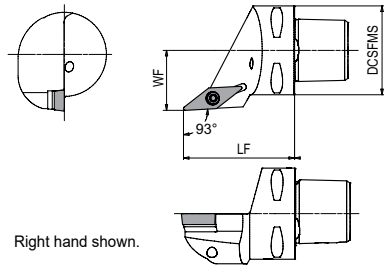
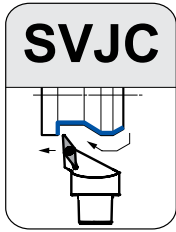
■ Spare Parts

VCS1604	KGBS1111	KSS1111	3,5	LH035K*

(*) Item is sold separately.

External Holders
for pos. Inserts

General Turning, Copying and Facing



■ Holders

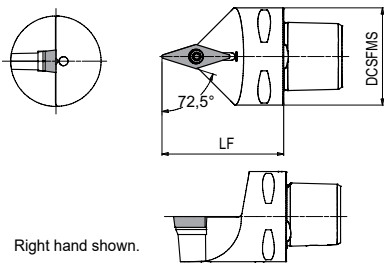
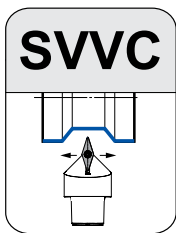
Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SVJC R/L 27050-16	●			50	27	40	VC□□ 1604
PSC50 SVJC R/L 35060-16	●	●		60	35	50	

■ Inserts



■ Spare Parts

Shim	Shim Screw	Insert Screw	Wrench	Shim Wrench
VCS1604	KGBS1111	KSS1111	3,5	LT15K



■ Holders

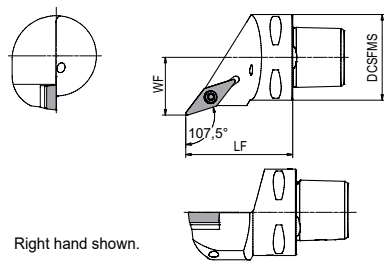
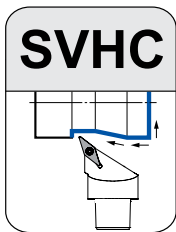
Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SVVC N 00050-16				50		40	VC□□ 1604
PSC50 SVVC N 00060-16				60		50	

■ Inserts



■ Spare Parts

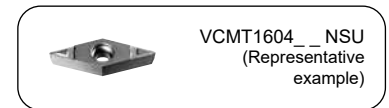
Shim	Shim Screw	Insert Screw	Wrench	Shim Wrench
VCS1604	KGBS1111	KSS1111	3,5	LT15K



■ Holders

Cat. No.	Stock			Dimensions (mm)			Applicable Insert
	R	L	N	LF	WF	DCSFMS	
PSC40 SVHC R/L 27050-16	●	●		50	27	40	VC□□ 1604
PSC50 SVHC R/L 35060-16				60	35	50	

■ Inserts



■ Spare Parts

Shim	Shim Screw	Insert Screw	Wrench	Shim Wrench
VCS1604	KGBS1111	KSS1111	3,5	LT15K

(*) Item is sold separately.

Boring Bars

E1-E24



Boring Bars

Selection	Boring Tool Selection Table	E2-4
ISO	Boring Tool Identification Table	E5
Features	Boring Tool Series	E6-7

Boring Bars for Negative Insert Type :

CN_ _ :	D...DCLN / S...PCLN	E8
DN_ _ :	D...DDUN / S...PDUN	E9
SN_ _ :	S...PSKN	E10
SumiTurn T-Rex	S...DTR	E11
TN_ _ :	D...DTFN / S...PTFN	E12
WN_ _ :	D...DWLN / S...WMLN	E13

Boring Bars for Positive Insert Type :

X-Bar for CC_ _ :	B/D...SCLC	E14
CC_ _ :	S ... SCLC	E14
CP_ _ :	S/C...SCLP	E15
X-Bar for DC_ _ :	B/D...SDUC / SDQC	E16-17
DC_ _ :	S ... SDQC / SDUC	E16-17
SP_ _ :	S/C...SSKP	E18
TC_ _ :	S ... STFC	E19
X-Bar for TP_ _ :	B/D...STUP	E20
TP_ _ :	S/C...STUP	E20
X-Bar for VB_ _ :	D ... SVUB / SVZB	E21
VB_ _ :	S ... SVQB / SVUB / SVZB	E22
WB_ _ :	S/C...SWUB	E23

Very Small Dia. Boring	BXBR...R(-NB)	E24
------------------------	---------------------	-----

Boring Tools Selection

According to Applications / Bore Diameter

BORING TOOLS

Coloured boxes indicate available size.

Application	Type	Boring Depth (L/D)			Applicable Insert	Tooling	Min. Bore Diameter (mm)																							
		Shank					(Min. cutting diameter is shown when not matched in this table.)																							
		Steel	Carbide	X-Bar (Steel)			2	2.5	3	3.5	4	4.5	5	6	7	8	10	12	13	14	16	18	20	22	25	28	35	44	54	70
Very Small Dia. Boring	BXBR ⇒ E24			-5	Special boring bar		○	○	○	○	○	○																		
	DABB ⇒ M57			-2	Sumidia brazed			●	●	●	●	●																		
Stop Boring	BSME ⇒ M48-M50			-4	Sumiboron brazed		●	●	●	●	●																			
	SEXC ⇒ M48,49,51			-3	Sumiboron insert					●	●	●																		
	BNBB ⇒ M52			-5	Sumiboron brazed				●	●	●	●	●																	
	BNB ⇒ M53			-4	Sumiboron insert									●	●	●	●	●												
	S/C-SWUB ⇒ E23			-3	-8	Trigon Type 5° Pos.							●																	
	S-STFC ⇒ E19			-3													●	●	●	●	●			●	●	●	●			
	B/D-STUP ⇒ E20			-6											●	●	●	●	●	●	●			●	●	●	●			
	S-STUP(B) ⇒ E20			-3		Triangle Type 5° & 11° Pos.									●	●	●	●	●	●	●			●	●	●	●			
	C-STUP ⇒ E20			-8											●	●	●	●	●	●	●	●	●	●	●	●	●			
	CTFP ⇒ Stock in Japan			-3		Triangle 11° Pos.													○	○	○					○	○			
	D-DTFN ⇒ E12			-6																						●	●	●		
	S-PTFN ⇒ E12					Triangle Neg. Type																				●	●	●		
	Bottom Facing	BNZ ⇒ M53			-5		Sumiboron insert											●	●	●	●	●	●							
		S-SCLP ⇒ E15			-3													●	●	●	●	●	●	●	●	●	●	●		
B-SCLP ⇒ Stock in Japan				-6		80° Diamond 11° Pos. Type												○	○	○										
C-SCLP ⇒ E15				-8															●	●	●	●	●	●	●	●	●			
B/D-SCLC ⇒ E14				-6															●	●	●	●	●	●	●	●	●			
S-SCLC ⇒ E14				-3		80° Diamond 7° Pos. Type														●	●	●	●	●	●	●	●	●		
C-SCLC ⇒ Stock in Japan				-8															○	○	○	○	○	○	○	○	○			
D-DCLN ⇒ E8				-6																							●	●	●	
S-PCLN ⇒ E8				-3		80° Diamond Neg. Type																					●	●	●	●
D-DWLN ⇒ E13				-6																								●	●	●
S-MWLN ⇒ E13			-3		Trigon Neg. Type																						●	●	●	

● = Eurostock
○ = Japanstock

Boring Tools Selection

■ BORING TOOLS

Coloured boxes indicate available size.

Application	Type	Boring Depth (L/D)			Applicable Insert	Tooling	Min. Bore Diameter (mm)																									
		Shank					6	8	10	12	13	14	16	18	20	22	25	28	32	34	35	40	44	50	54	70						
		Steel	Carbide	X-Bar (Steel)																												
Copying	B/D-SDUC ⇒ E16			-6	55° Diamond 7° Pos. Type							●	●	●	●	●																
	S-SDUC ⇒ E16		-3													●	●	●	●													
	C-SDUC ⇒ Stock in Japan			-8											○	○	○	○														
	B/D-SDQC ⇒ E17			-6																												
	S-SDQC ⇒ E17		-3																													
	D-SVUB ⇒ E21			-6	35° Diamond Type 5° & 7° Pos.												●	●	27													
	S-SVUB ⇒ E22		-3																	●	●	27										
	S-SVQB ⇒ E22		-3																		●	●	27									
	B/C-SVQB ⇒ Stock in Japan			-8		-6																○	○									
	D-SVZB ⇒ E21			-6																												
	S-SVZB ⇒ E22																															
	D-DDUN ⇒ E9			-6																												
	S-PDUN ⇒ E9		-3		55° Diamond Neg. Type																											
	Through Boring	S-SSKP ⇒ E18		-3		55° Diamond Neg. Type																										
C-SSKP ⇒ E18				-8																												
SSKC ⇒ Stock in Japan			-3		Square Type 7° Pos.																											
CSKP ⇒ Stock in Japan			-3		Square Type 11° Pos.																											
S-PSKN ⇒ E10			-3		Square Neg. Type																											
Grooving	GNDI ⇒ F12/F38																															
	GNDIS ⇒ F12/F40																															

Boring Bars

Boring Tool Series

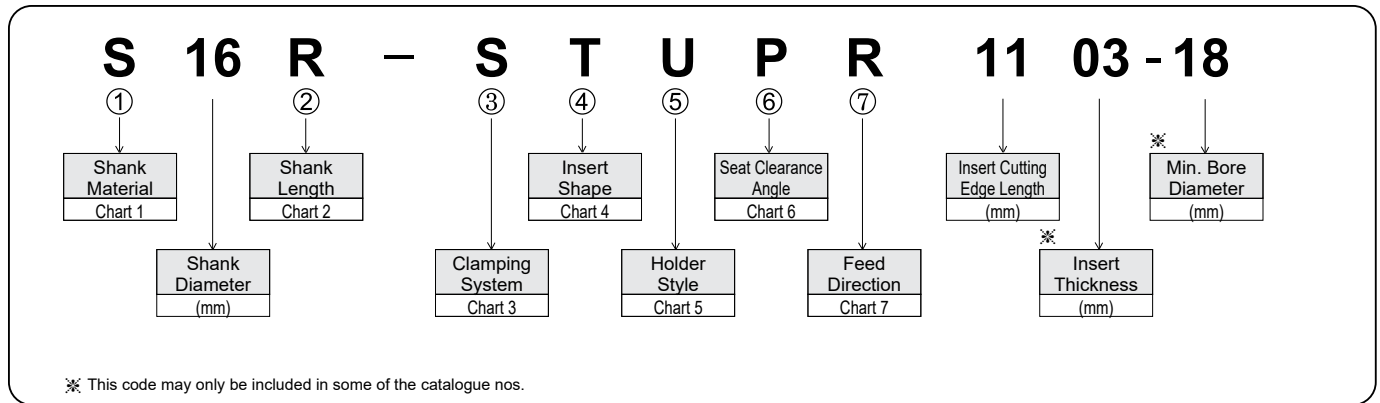
TOOLING SELECTION

Application		Stop Boring		Bottom Facing		Trough Boring	Copying		
Insert Type System	Triangle	Poligon / Others	80° Diamond		Square	55° T-REX	55° Diamond	35° Diamond	
	Screw Lock	Steel	 S-STFC ⇨ E19 S-STUP (B) ⇨ E20	 S-SWUB ⇨ E23	 S-SCLC ⇨ E14	 S-SCLP ⇨ E15	 S-SSKP ⇨ E18	—	 S-SDUC ⇨ E16 S-SDQC ⇨ E17
Anti-vibration		 B-STUP ⇨ E20	—	 B-SCLC ⇨ E14	—	—	—	 B-SDUC ⇨ E16 B-SDQC ⇨ E17	—
Anti-vibration with Oil Hole		 D-STUP ⇨ E20	—	 D-SCLC ⇨ E14	—	—	—	 D-SDUC ⇨ E16 D-SDQC ⇨ E17	 D-SVUB ⇨ E21 D-SVZB ⇨ E21
Carbide		 C-STUP ⇨ E20 (C-STUB) ⇨ E20	 C-SWUB ⇨ E23	—	 C-SCLP ⇨ E15	 C-SSKP ⇨ E18	—	—	—
Lever Lock	Steel	 S-PTFN ⇨ E12	—	 S-PCLN ⇨ E8	—	 S-PSKN ⇨ E10	—	 S-PDUN ⇨ E9	—
	Anti-vibration with Oil Hole	 D-DTFN ⇨ E12	 D-DWLN ⇨ E13	 D-DCLN ⇨ E8	—	—	—	 D-DDUN ⇨ E9	—
Top Clamp	Steel	—	 S-MWLN ⇨ E13	—	—	—	 S-DTR ⇨ E11	—	—
	Carbide	 BNB ⇨ M53	 BNBB ⇨ M52	 BNZ ⇨ M53	—	 BXBR ⇨ E24			
CBN	Carbide	 BSME ⇨ M48	 SEXC ⇨ M51	—	—	—	—	—	—

Boring Bars

Boring Tools Identification

■ Catalogue Classification System For Boring Holders



① Chart 1

Shank Material	
S	Steel
B	Steel with Anti-vibration Mechanism without Oil Hole
C	Carbide
D	Steel with Anti-vibration Mechanism with Oil Hole
E	Carbide with Oil Hole

② Chart 2

Shank Length			
Symbol	Length (mm)	Symbol	Length (mm)
F	80	P	170
G	90	Q	180
H	100	R	200
J	110	S	250
K	125	T	300
L	140	U	350
M	150	V	400
N	160	W	450

③ Chart 3

Clamping System					
Symbol	System	Structure	Symbol	System	Structure
C	Top Clamp		M	Top & Hole Clamp Type	
D	Double Clamp		P	Lever Lock Type (Insert is Supported by 1 face)	
E	Pin Lock Type (Insert is supported by 1 face)		S	Screw Clamp Type	

⑦ Chart 7

Feed Direction	
Symbol	Feed Direction
R	Right Hand Feed
L	Left Hand Feed
N	Neutral Feed

④ Chart 4

Insert Shape			
Symbol	Insert Shape	Symbol	Insert Shape
A	Parallelogram 85°	M	Rhombic 86°
B	Parallelogram 82°	O	Octagonal
C	Diamond 80°	P	Pentagonal
D	Diamond 55°	R	Round
E	Diamond 75°	S	Square
F	Diamond 50°	T	Triangular
H	Hexagonal	V	Diamond 35°
K	Parallelogram 55°	W	Trigon
L	Rectangular		

⑤ Chart 5

Holder Style					
Symbol	Shape	Offset	Symbol	Shape	Offset
A		Nil	N		Nil
B		Nil	Q		With Offset
D		Nil	R		With Offset
E		Nil	S		With Offset
F		With Offset	T		With Offset
G		With Offset	U		With Offset
J		With Offset	W		With Offset
K		With Offset	Y		With Offset
L		With Offset	Z		With Offset

⑥ Chart 6

Seat Clearance Angle	
Symbol	Relief Angle
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
O	Special Angle

Boring Bars

Boring Tool Series



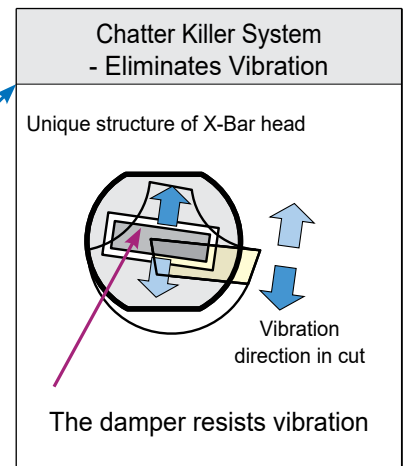
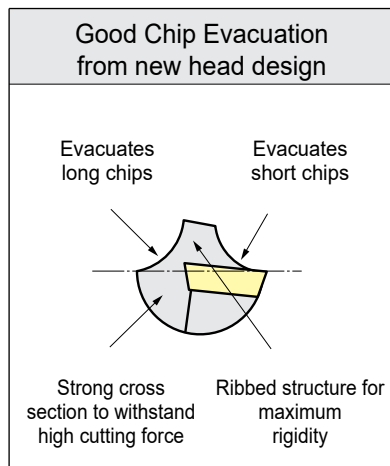
General Features

Since being the first in 1976 to introduce indexable boring bars, Sumitomo Electric has been continuously developing a comprehensive range which includes the SEC-Small Hole boring bar series, high rigidity boring head series, with either steel / carbide shanks, and the latest anti-vibration mechanism - SumiTurn X-Bar series coupled with a wide variety of insert grades and chipbreakers, cover a whole range of process requirements.

Features

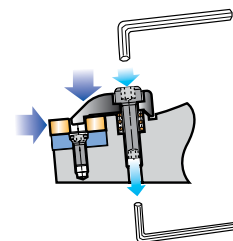
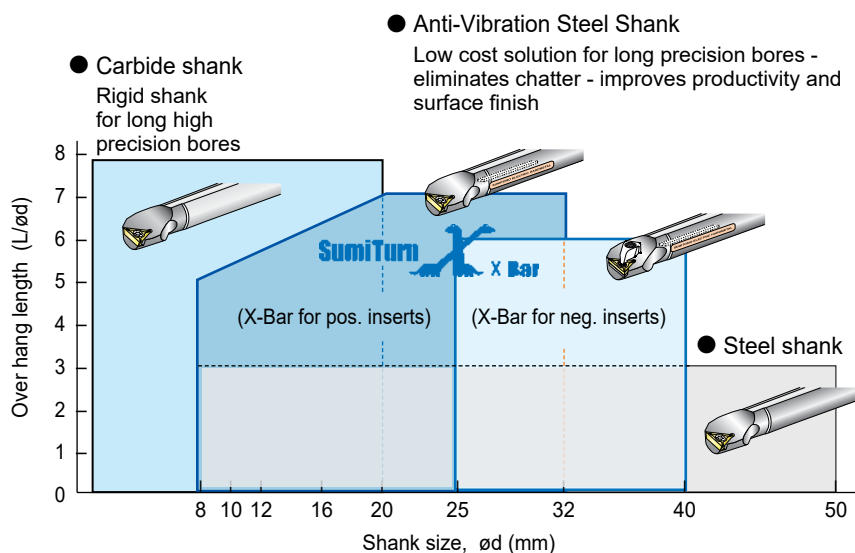
- Wide selection for various boring operations
- Minimum bore diameter from \varnothing 5,5 mm onwards
- New anti-vibration boring bars, SumiTurn X-Bar.
- High rigidity head-design for small boring bars
- Wide selection of grades and chipbreakers available for various processes and work materials

Series SumiTurn X Bar



- New negative type "X Bar" with high performance double clamping system

Application Guide



SumiTurn X Bar

ATTENTION:

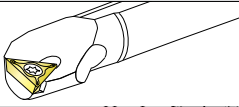
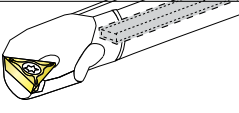
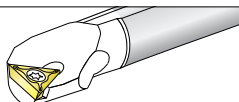
Please keep this area free to get the effect of "X Bar" chattering killer system

Min. over hang length = $3,5 \times \varnothing d$

Boring Bars

Boring Tool Series

Recommended Over Hang Length / Shank Diameter (L/D)

Type of boring bar		Over hang length (L/D)										
		1	2	3	4	5	6	7	8	9	10	
<ul style="list-style-type: none"> ● Steel Shank Rigid head design for low cost hole boring.		[Shaded area from 1 to 3]										
<ul style="list-style-type: none"> ● Anti-Vibration Type Shank Chatter killer system eliminates vibration - improves productivity - improves quality		(X-Bar for pos. inserts) (X-Bar for neg. inserts)										
<ul style="list-style-type: none"> ● Carbide Shank High rigidity shank for high accuracy hole boring.		[Shaded area from 1 to 10]										

Grades

Tool Material	Process	Work Material										
		High Precision	Finish-Light Cut	Medium Cut	P General Steel	M Stainless Steel	K Cast Iron	S Heat Resistant Alloy	H Hardened Steel	N Non-Ferrous Metal	Sintered Alloy	
Coated Carbide	CVD	AC8015P				○						
		New AC8020P				○						
		AC8025P				○						
		AC8035P				○						
		AC6020M				○	○					
		AC6030M				○	○					
		AC4010K				○		○				
		AC4015K				○		○				
	AC420K				○		○					
	PVD	ACZ150				○	○					
		AC5015S				○	○					
		AC5025S				○	○					
		AC530U				○	○					
		AC1030U				○	○					
AC6040M					○	○						
Cermet Coated Cermet	T1000A				○	○						
	T1500A/T1500Z				○	○						
	T2500Z				○	○						
Carbide	G10E				○	○						
SumiBoron	BN1000				○	○						
	BN2000				○	○						
	BNC2010				○	○						
	New BNC2115				○	○						
	BNC2020				○	○						
	New BNC2125				○	○						
	BN7000				○	○						
SumiDia	BN7115				○	○						
	DA1000				○	○						
	DA150				○	○						

○ Preferred choice ○ Suitable

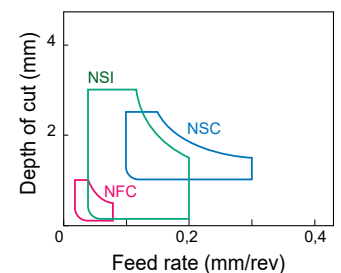
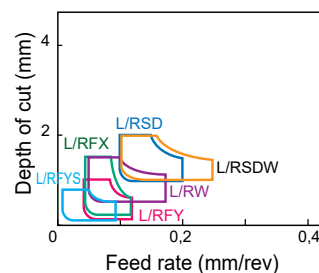
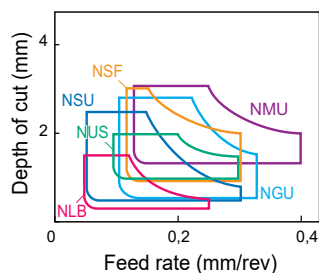
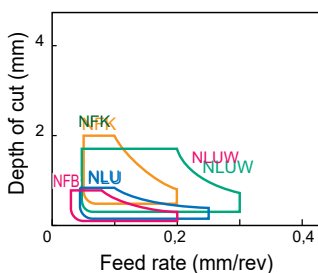
Recommended Chip Breakers

● M-Class Finish-Light-Cut

● M-Class Light-Medium-Cut

● G-Class Ground Typ

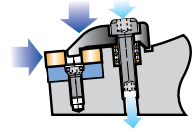
● G-Class Breaker



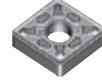
D...DCLN / S...PCLN Type



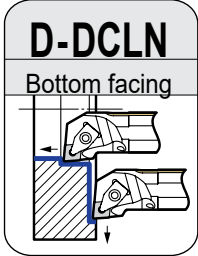
SumiTurn X Bar



Insert (eg.)



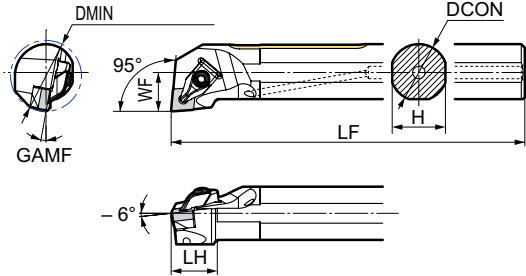
N-GU



D-DCLN

Bottom facing

Anti-vibration D type with oil hole



Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim screw	Wrench	Wrench
SCP-2			CNS1203B	BFTX0307N	TRX10 ^(*)	LH040
			CNS1204B	BFTX0409N ③ 3.4	TRX15 ^(*)	LH025

Holdings

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Insert (eg.)
	R	L	ϕD_{min}	ϕd	h	l_1	l_2	f	γ	
D25T - DCLN R/L 1204-32	●	●	32	25	23	300	26	17	-12°	CN□□1204□□
D32T - DCLN R/L 1204-40	●	●	40	32	30	300	26	22	-10°	
D40U - DCLN R/L 1204-50	●	●	50	40	37	350	26	27	-10°	

(*) Note: Wrench (TRX type) for shim screw is not included.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

Holdings

Tool holders (P type) with lever-lock system	Cat. No.	Stock		Dimensions (mm)							Image
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
<p>S - PCLN R/L</p>	S20S - PCLN R/L09	●	●	25	20	18	250	29	13	-11°	CN__0903__
	S25T - PCLN R/L09	●		30	25	23	300	33	17	-10°	
	S25T - PCLN R/L12	●	●	32	25	23	300	42	17	-10°	CN__1204__
	S32U - PCLN R/L12	●	●	40	32	30	350	49	22	-11°	
	S40V - PCLN R/L12	●	●	50	40	37	400	56	27	-10°	
	S32U - PCLN R/L16			40	32	30	350	56	22	-11°	CN__1606__
	S40V - PCLN R/L16	●	●	50	40	37	400	56	27	-10°	
	S50W - PCLN R/L16			63	50	47	450	56	35	-11°	
	S50W - PCLN R/L19			63	50	47	450	63	35	-11°	CN__1906__

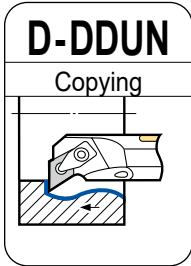
All figures show right hand tools.

Applicable Inserts

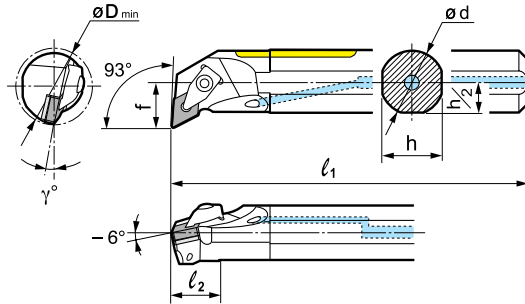
Spare Parts

Holder	Carbides, Cermets		CBN, PCD	Lever pin	Clamp bolt	Shim	Shim pin	Wrench
	Double sided	One sided						
S - PCLN R/L								
S.....09	CNMG 0903__ NGU	-	-	LCL3C-SD	LCS3B-SD	-	-	LH020
S25T.....12	CNMG 1204__ NGU	CNMM 1204__ NMP	CNGA 1204__	LCL4C-SD	LCS4B-SD	-	-	LH025
S32U.....12	CNMG 1204__ NGU	CNMM 1204__ NMP	CNGA 1204__	LCL4T-SD	LCS41BS-SD	LSC42SD	LSP4SD	LH030
S40V.....12	CNMG 1204__ NGU	CNMM 1204__ NMP	CNGA 1204__	LCL4SD	LCS42BS-SD	LSC42SD	LSP4SD	LH030
S.....16	CNMG 1606__ NGU	CNMM 1606__ NMP	-	LCL5SD	LCS5B-SD	LSC53SD	LSP5SD	LH030
S.....19	CNMG 1906__ NGU	CNMM 1906__ NMP	-	LCL5C-SD	LCS6B-SD	LSC63SD	LSP6SD	LH040

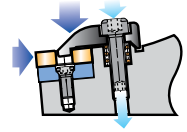
Boring Bars for neg. insert



Anti-vibration D type with oil hole



SumiTurn X Bar



Insert (eg.)



N-GU

Spare Parts

Cat. No..	Stock	Dimensions (mm)	Insert (eg.)	Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench
D32T - DDUN R/L 1104-40	● ○	ϕD_{min} 40 ϕd 32 30 300 26 22 γ -10°	DN□□1104□□		SCP-1		DNS1104B	BFTX0307N	TRX10(*)	
D32T - DDUN R/L 1506-40	● ●	ϕD_{min} 40 ϕd 32 30 300 26 22 γ -12°	DN□□1506□□		SCP-2		DNS1506B	BFTX0409N ③ 3.4	TRX15(*)	LH040 LH025
D40U - DDUN R/L 1506-50	● ●	ϕD_{min} 50 ϕd 40 37 350 26 27 γ -12°	DN□□1506□□							

(*) Note: Wrench (TRX type) for shim screw is not included.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

■ Holders

Above figures show right hand tools.

■ Holders

Tool holders (P type) with lever-lock system	Cat. No.	Stock	Dimensions (mm)							DN__ 1104__		
			R	L	ϕD_{min}	d	h	l_1	l_2		f	γ
	S25T - PDUN R/L 11	● ●			32	25	23	300	35	17	-11°	DN__ 1104__
	S32U - PDUN R/L 15 04	● ●	40	32	30	350	40	22	-11°	DN__ 1504__		
	S40V - PDUN R/L 15	● ●	50	40	37	400	56	27	-11°	DN__ 1506__		
	S50W - PDUN R/L 15		63	50	47	450	63	35	-10°			

All figures show right hand tools.

■ Applicable Inserts

■ Spare Parts

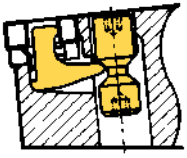
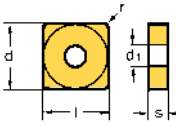
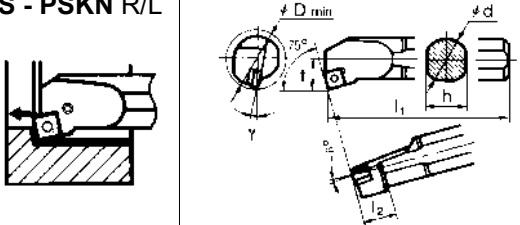
Holder	Carbides, Cermets		CBN, PCD	Lever pin	Clamp bolt	Shim	Shim pin	Wrench
	Double sided	One sided						
S - PDUN R/L								
S25T11	DNMG 1104__ NGU	-	DNGA 1104__	LCL3DB-SD	LCS3DB-SD	-	-	LH020
S32U15 04	DNMG 1504__ NGU	DNMM 1504__ NMP	DNGA 1504__	LCL4D-SD	LCS5DB-SD	LSD42SD	LSP4SD	LH030
S40V15	DNMG 1506__ NGU	DNMM 1506__ NMP	DNGA 1506__	LCL4D-SD	LCS5DB-SD	LSD42SD	LSP4SD	LH030
S50W....15	DNMG 1506__ NGU	DNMM 1506__ NMP	DNGA 1506__	LCL4D-SD	LCS5DB-SD	LSD42SD	LSP4SD	LH030

Boring Bars S...PSKN Type

For Negative SN __ - Inserts ($\alpha = 0^\circ$)



■ Holders


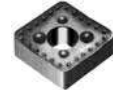






 Tool holders (P type) with lever-lock system	Cat. No.	Stock		Dimensions (mm)							
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - PSKN R/L 	S25T - PSKN R/L 12	●		32	25	23	300	42	17	-11°	SN __ 1204 __
	S32U - PSKN R/L 12	●		40	32	30	350	45	22	-10°	
	S40V - PSKN R/L 12	●	●	50	40	37	400	50	27	-10°	
	S40V - PSKN R/L 15	●		63	40	47	400	60	35	-10°	SN __ 1506 __
	S50W - PSKN R/L 15			63	50	47	450	60	35	-10°	
	S50W - PSKN R/L 19			63	50	47	450	60	35	-9°	SN __ 1906 __

All figures show right hand tools.

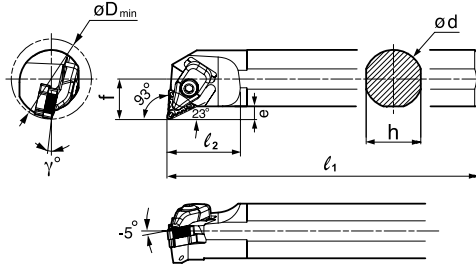
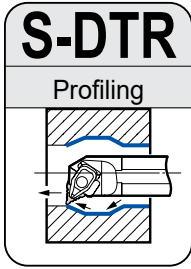
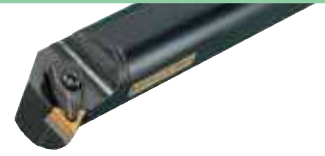
Boring Bars
for neg. insert

■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets		CBN	Lever pin	Clamp bolt	Shim	Shim pin	Wrench	
	Double sided	One sided							
S - PSKN R/L									
S25T....12	SNMG 0903 __ NGU	-	-	LCL4C-SD	LCS4B-SD	-	-	LH025	
S32U....12	SNMG 1204 __ NGU	SNMM 1204 __ NMP	SNGA 1204 __	LCL4T-SD	LCS41BS-SD	LSS42SD	LSP4SD	LH030	
S40V....12	SNMG 1204 __ NGU	SNMM 1204 __ NMP	SNGA 1204 __	LCL4SD	LCS42BS-SD	LSS42SD	LSP4SD	LH030	
S....15	SNMG 1506 __ NGU	SNMM 1506 __ NMP	-	LCL5SD	LCS5B-SD	LSS53SD	LSP5SD	LH030	
S....19	SNMG 1906 __ NGU	SNMM 1906 __ NMP	-	LCL5C-SD	LCS6B-SD	LSS63SD	LSP6SD	LH040	

Internal Turning & Copying



Spare Parts

Clamp	Spring	Screw	Shim	Screw	Wrench	Wrench
TRCP3	S-SP4-20	BX0520	TRW5505	BFTX0307N 2.0	TSW040	TRX10 ^(*)

■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							
	R	L	ϕD_{min}	ϕd	h	l_1	l_2	f	γ	e
S32S-DTR55C R/L-17	●		44	32	30	250	40	22	-12°	7
S40T-DTR55C R/L-17	●	○	50	40	37	300	40	25	-10°	6,2

(*) Note: Wrench (TRX10) for shim is not included.

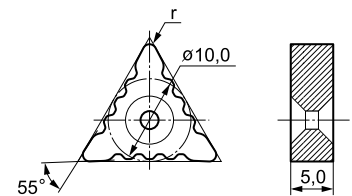
■ Advantages

● T-REX Inserts for Maximum Economy

With 6 cutting edges and a 55 degree included angle - T-Rex is the intelligent alternative to profile turning with a traditional 4 edge DNMG insert.

■ Inserts

Applic.	Shape	Cat. No.	r	Coated Carbide			Coated Cermet
				AC8015P	AC8025P	AC630M	T3000Z
Fine Finishing		TRM 551704-FL	0,4		○		○
		551708-FL	0,8		○		○
Finishing		TRM 551704-LU	0,4	●	○		○
		551708-LU	0,8	●	○		○
		551712-LU	1,2		○		○
		TRM 551704-SU	0,4		○	●	○
		551708-SU	0,8		○	●	○
551712-SU	1,2		○				
Light Cut		TRM 551704-GU	0,4		○	●	
		551708-GU	0,8		○	●	
		551712-GU	1,2		○		

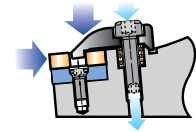


Application **P** Steel
M Stainless steel

Boring Bars
for neg. Insert



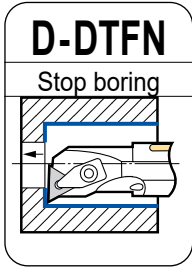
SumiTurn X Bar



Insert (eg.)



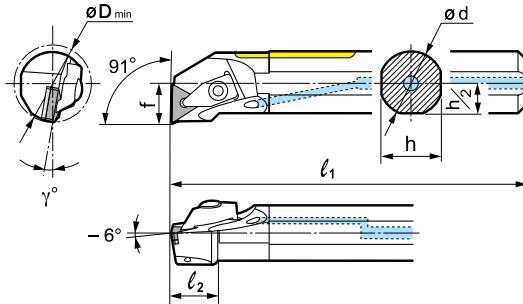
N-GU



D-DTFN

Stop boring

Anti-vibration D type with oil hole



Spare Parts

Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench
SCP-1			TNS1603B TNS1604B	BFTX0307N 6mm 2.0	TRX10 ^(*)	LH040 LH025

■ Holders

Above figures show right hand tools.

Cat. No.	Stock		Dimensions (mm)							Insert (eg.)
	R	L	ϕD_{min}	ϕd	h	l_1	l_2	f	γ	
D25T - DTFN R/L 1604-32	●	●	32	25	23	300	21	17	-12°	TN□□1604□□
D32T - DTFN R/L 1604-40	●	●	40	32	30	300	26	22	-10°	
D40U - DTFN R/L 1604-50	●	●	50	40	37	350	26	27	-10°	

(*) Note: Wrench (TRX type) for shim screw is not included.

■ Holders

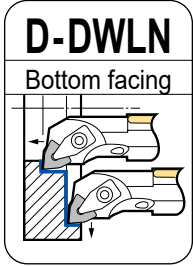
Tool holders (P type) with lever-lock system	Cat. No.	Stock		Dimensions (mm)							Image
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
<p>S - PTFN R/L</p>	S20S - PTFN R/L 11			25	20	18	250	30	13	-12°	TN__1103__
	S25T - PTFN R/L 16	●	●	32	25	23	300	43,3	17	-13°	TN__1604__
	S32U - PTFN R/L 16	●	●	40	32	30	350	49,6	27	-12°	
	S40V - PTFN R/L 16	●		50	40	37	400	49,5	27	-11°	
	S50W - PTFN R/L 16			63	50	47	450	56	35	-10°	TN__2204__
	S40V - PTFN R/L 22	●		50	40	37	400	59	27	-11°	
	S50W - PTFN R/L 22			63	50	47	450	66	35	-10°	

All figures show right hand tools.

■ Applicable Inserts

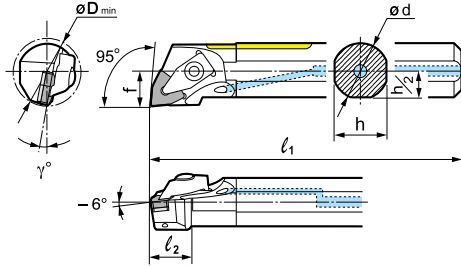
■ Spare Parts

Holder	Carbides, Cermets		CBN	Lever pin	Clamp bolt	Shim	Shim pin	Wrench
	Double sided	One sided						
S - PTFN R/L								
S...11	-	-	-	LCL3T-SD	LCS3B-SD	-	-	LH020
S...16	TNMG 1604__ NGU	TNMM 1604__ NMP	TNGA 1604__	LCL3SD	LCS3TB-SD	LST317SD	LSP3SD	LH025
S...22	TNMG 2204__ NGU	TNMM 2204__ NMP	TNGA 2204__	LCL4SD	LCS42BS-SD	LST42SD	LSP4SD	LH030

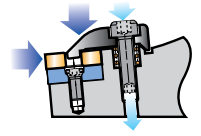


D-DWLN Bottom facing

Anti-vibration D type
with oil hole



Sumitomo X Bar



Insert (eg.)



N-GU

Spare Parts

■ Holders

Above figures show right hand tools.

Cat. No.	Stock		ϕD_{min}	Dimensions (mm)							Insert (eg.)	Clamp	Spring	Clamp bolt	Shim	Shim Screw	Wrench	Wrench
	R	L		ϕd	h	l_1	l_2	f	γ									
D25T - DWLN R/L 0804-32	●	●	32	25	23	300	26	17	-12°	WN□□0804□□	SCP-2			WNS0803B	BFTX0307N	TRX10 (*)		
D32T - DWLN R/L 0804-40	●	●	40	32	30	300	26	22	-10°					WNS0804B	BFTX0409N ③ 3.4	TRX15 (*)	LH040	LH025
D40U - DWLN R/L 0804-50	●	●	50	40	37	350	26	27	-10°									

(*) Note: Wrench (TRX type) for shim screw is not included.

■ Holders

Tool holders (M type) with wedge clamp system	Cat. No.	Stock		Dimensions (mm)							Image
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
	S25R - MWLN R/L 08	●	●	32	25	23	200	28	17	-15°	WNMG 0804 __
	S32S - MWLN R/L 08	●	●	40	32	30	250	28	22	-14°	
	S40T - MWLN R/L 08	●	●	50	40	37	300	28	27	-12°	

All figures show right hand tools.

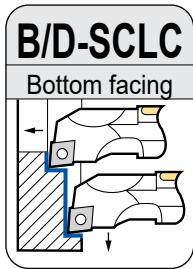
■ Applicable Inserts

■ Spare Parts

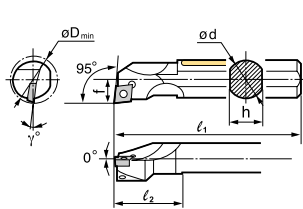
Holder	Carbides, Cermets		Clamp	Double screw	Pin	Shim	Wrench	
	Double sided	One sided						
S - MWLN R/L								
S...08	WNMG 0804 __ NGU	WNMM 0804 __ NMP	HE060011W	WB 6-16	HE060011P	HE060011E	LH025, LH030	

Boring Bars B/D/S...SCLC Type

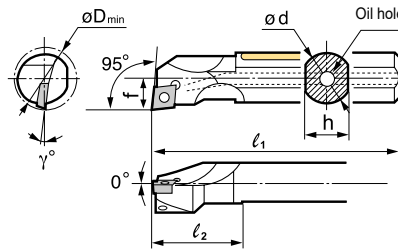
For Positive CC__ - Inserts ($\alpha = 7^\circ$)



B Type (Fig.1)
Min. Bore Dia.



D Type (Fig.2)



Insert (ex.)



■ Holders

Steel shank	Cat. No.	Stock		ϕD_{min}	Dimensions (mm)						Fig.	Insert (ex.)	Screw	Wrench	
		R	L		ϕd	h	ℓ_1	f	ℓ_2	γ					
Anti-vibration B type	B08H - SCLC R/L 0602-10	●	●	10	8	7	100	5,5	19	-13°	1.	CC□T 0602□□	BFTX02505N	TRX08	
	B10K - SCLC R/L 0602-12	●	●	12	10	9	125	6	21	-12°			BFTX02506N		
Anti-vibration D type with oil hole	D12M - SCLC R/L 0602-14	●	●	14	12	11	150	7	25	-10°	2.	CC□T 09T3□□	BFTX0407N	TRX15	
	D16R - SCLC R/L 09T3-18	●	●	18	16	15	200	11	30	-8°			BFTX0409N		
	D20S - SCLC R/L 09T3-22	●	●	22	20	18	250	13	30	-7°			BFTX0511N		
	D25T - SCLC R/L 1204-32	●	●	32	25	23	300	17	38	-6°			◎ 5.0		TRX20
	D32T - SCLC R/L 1204-40	●	●	40	32	30	300	20	53	-6°			◎ 5.0		

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

■ Holders

Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							
		R	L	ϕD_{min}	d	h	ℓ_1	ℓ_2	f	γ	
S - SCLC R/L 	S10K - SCLC R/L 06			13	10	9	125	9	7	-12°	CC__ 0602__
	S12M - SCLC R/L 06			16	12	11	150	11	9	-10°	
	S16R - SCLC R/L 06	●	●	20	16	15	200	15	11	-8°	
	S16R - SCLC R/L 09			20	16	15	200	15	11	-8°	CC__ 09T3__
	S20S - SCLC R/L 09			25	20	18	250	20	13	-7°	
	S25T - SCLC R/L 12			32	25	23	300	20	17	-6°	CC__ 1204__
	S32U - SCLC R/L 12	●	●	40	32	30	350	25	22	-10°	
	S40V - SCLC R/L 12	●	●	50	40	37	400	25	27	-8°	

All figures show right hand tools.

■ Applicable Inserts

■ Spare Parts

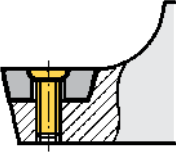
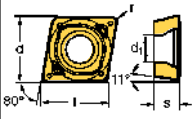
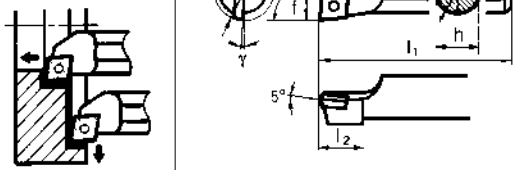
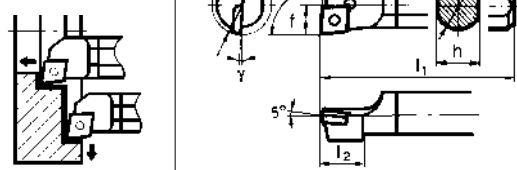
Holder	Carbides, Cermets		Screw	$\overset{\text{N}\cdot\text{m}}{\curvearrowright}$	Wrench			
S - SCLC R/L								
S.....06	CCMT 0602__ NFP	CCGW 0602__	-	BFTX02505N	1,1	TRX08		
S16R.....09	CCMT 09T3__ NFP	CCGW 09T3__	-	BFTX0407N	3,0	TRX15		
S20S.....09	CCMT 09T3__ NFP	CCGW 09T3__	-	BFTX0409N	3,4	TRX15		
S.....12	CCMT 1204__ NFP	CCGW 1204__	-	BFTX0511N	5,0	TRX20		

● = Euro stock
○ = Japan stock

$\overset{\text{N}\cdot\text{m}}{\curvearrowright}$ Recommended Tightening Torque (N·m)







■ Holders

 Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - SCLP R/L Steel shank 	S10K - SCLP R/L 08	●	●	12	10	9	125	12	6	-5°	CP_T 0802__
	S12M - SCLP R/L 08	●	●	16	12	11	150	15	8	-3°	
	S16R - SCLP R/L 09		●	20	16	15	200	18	10	-3°	CP_T 0903__
	S20S - SCLP R/L 09	●	●	25	20	18	250	18	12,5	0	
	S25T - SCLP R/L 12	○	○	28	25	22	300	17,4	14	-3°	CP_T 1204__
C - SCLP R/L Carbide shank 	C10Q - SCLP R/L 08	●		12	10	9	180	15	6	-5°	CP_T 0802__
	C12R - SCLP R/L 08			16	12	11	200	15	8	-2°	
	C16S - SCLP R/L 09	●		20	16	15	250	15	10	-2°	CP_T 0903__

All figures show right hand tools.

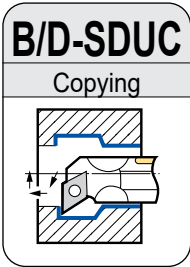
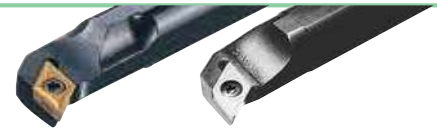
■ Applicable Inserts

■ Spare Parts

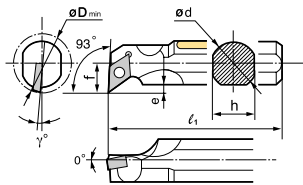
Holder	Carbides, Cermets	CBN	Screw	N·m	Wrench				
S/C-SCLP R/L									
S/C 10.....08	CPGT 0802__ NSD	CPMW 0802__	BFTX 0305 A	-	TRX 10				
S/C 12.....08	CPGT 0802__ NSD	CPMW 0802__	BFTX 0305 A	-	TRX 10				
S/C 16.....09	CPGT 0903__ NSD	CPMW 0903__	BFTX 0407 A	3,4	TRX 15				
S 20.....09	CPGT 0903__ NSD	CPMW 0903__	BFTX 0407 A	3,4	TRX 15				
S 25.....12	CPGT 1204__ NSD	-	BFTX 0509 A	5,0	TRX 20				

Boring Bars B/D/S...SDUC Type

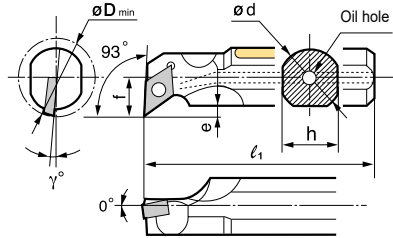
For Positive DC __ - Inserts ($\alpha = 7^\circ$)



B Type (Fig.1)
Min. Bore Dia.



D Type (Fig.2)



Insert (ex.)



■ Holders

Steel shank	Cat. No.	Stock		ϕD_{min}	Dimensions (mm)						Fig.	Insert (ex.)	Screw	Wrench
		R	L		ϕd	h	ℓ_1	f	e	γ				
Anti-vibration B type	B10M - SDUC R/L 0702-13	●	●	13	10	9	150	7	2,5	-8°	1.	DC□T 0702□□	BFTX02506N 1,5 (N·m)	TRX08
	D12M - SDUC R/L 0702-16	●	●	16	12	11	150	9	3,5	-8°				
Anti-vibration D type with oil hole	D16R - SDUC R/L 0702-20	●	●	20	16	15	200	11	4,0	-6°	2.	DC□T 11T3□□	BFTX0409N 3,4 (N·m)	TRX15
	D20S - SDUC R/L 11T3-25	●	●	25	20	18	250	13	4,5	-6°				
	D25S - SDUC R/L 11T3-32	●	●	32	25	22	250	17	7,0	-6°				
	D32T - SDUC R/L 11T3-40	●	●	40	32	30	300	22	8,0	-6°				

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

■ Holders

Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							Fig.
		R	L	ϕD_{min}	d	h	ℓ_1	f	e	γ	
	S10K - SDUC R/L 07	●	●	13	10	9	125	7	2,5	-8°	DC__ 0702__
	S12M - SDUC R/L 07	●	●	16	12	11	150	9	3,5	-8°	
	S16R - SDUC R/L 07	●	●	20	16	15	200	11	4	-6°	
	S20S - SDUC R/L 11	●	●	25	20	18	250	13	4,5	-6°	DC__ 11T3__
	S25T - SDUC R/L 11	●	●	32	25	22	300	17	7,5	-6°	
	S32U - SDUC R/L 11	●	●	40	32	30	350	22	11	-6°	

All figures show right hand tools.

■ Applicable Inserts

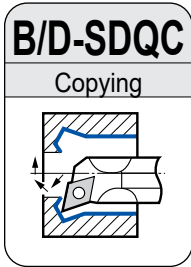
■ Spare Parts

Holder	Carbides, Cermets		CBN, PCD	Screw	(N·m)	Wrench			
S - SDUC R/L S - SDQC R/L									
S10K.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S12M.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S16R.....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S.....11	DCMT 11T3__ NFP	DCMT 11T3__ NSK	DCGW 11T3__	BFTX0409N	3,4	TRX15			

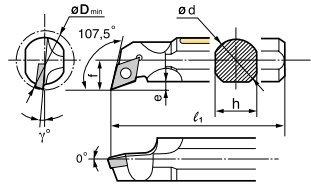
● = Euro stock

(N·m) Recommended Tightening Torque (N·m)

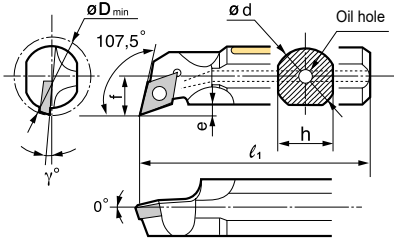
Boring Bars for pos. insert



B Type (Fig.1)
Min. Bore Dia.



D Type (Fig.2)



Insert (ex.)



■ Spare Parts

Screw	Wrench
BFTX02506N 1,5 $\text{C}_{(Nm)}$	TRX08
BFTX0409N 3,4 $\text{C}_{(Nm)}$	TRX15

■ Holders

Steel shank	Cat. No.	Stock		Dimensions (mm)							Fig.	Insert (ex.)	Screw	Wrench
		R	L	ϕD_{min}	ϕd	h	ℓ_1	f	e	γ				
Anti-vibration B type	B10M - SDQC R/L 0702-13	●	●	13	10	9	150	7	2,5	-8°	1.	DCIT 070200	BFTX02506N 1,5 $\text{C}_{(Nm)}$	TRX08
Anti-vibration D type with oil hole	D12M - SDQC R/L 0702-16	●	●	16	12	11	150	9	3,5	-8°	2.			
	D16R - SDQC R/L 0702-20	●	●	20	16	15	200	11	4,0	-6°				
	D20S - SDQC R/L 11T3-25	●	●	25	20	18	250	13	4,5	-6°				
	D25S - SDQC R/L 11T3-32	●	●	32	25	22	250	17	7,0	-6°				
	D32T - SDQC R/L 11T3-40	●	●	40	32	30	300	22	7,0	-10°				

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

All figures show right hand tools.

■ Holders

Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							Insert (ex.)
		R	L	ϕD_{min}	d	h	ℓ_1	f	e	γ	
<p>S - SDQC R/L</p>	S10K - SDQC R/L-07	●	●	13	10	9	125	7	2,5	-8°	DC__ 0702__
	S12M - SDQC R/L-07	●	●	16	12	11	150	9	3,5	-8°	
	S16R - SDQC R/L-07	●	●	20	16	15	200	11	4	-6°	
	S20S - SDQC R/L-11	●	●	25	20	18	250	13	4,5	-6°	DC__ 11T3__
	S25T - SDQC R/L-11	●	●	32	25	22	300	17	7	-6°	

All figures show right hand tools.

■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets		CBN, PCD	Screw	$\text{C}_{(Nm)}$	Wrench			
S - SDUC R/L S - SDQC R/L									
S10K....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S12M....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S16R....07	DCMT 0702__ NFP	DCMT 0702__ NSK	DCGW 0702__	BFTX02506N	1,5	TRX08			
S....11	DCMT 11T3__ NFP	DCMT 11T3__ NSK	DCGW 11T3__	BFTX0409N	3,4	TRX15			

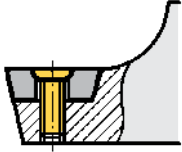
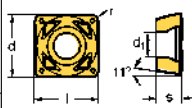
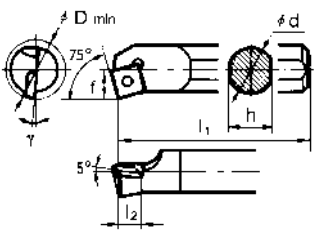
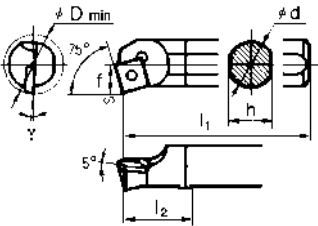
Boring Bars
for pos. Insert

Boring Bars S/C...SSKP Type

For Positive SP__ - Inserts ($\alpha = 11^\circ$)



■ Holders





 Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - SSKP R/L Steel shank 	S12M - SSKP R/L 09	○		16	12	11	150	9	8	-6°	SP_T 0903__
	S16R - SSKP R/L 09	●	●	20	16	15	200	6,8	10	-4°	
	S20S - SSKP R/L 09	●	○	25	20	18	250	8,5	12,5	-2°	
	S25T - SSKP R/L 09	●		28	25	22	300	5	14	0	
C - SSKP R/L Carbide shank 	C12R - SSKP R/L 09	●		16	12	11	200	25	8	-6°	SP_T 0903__
	C16S - SSKP R/L 09	●		20	16	15	250	30	10	-4°	

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.
SPGT figure shows left hand tool.

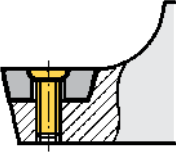
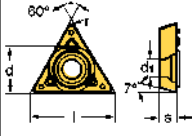
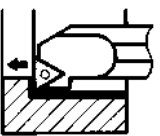
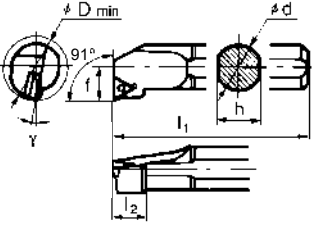
■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets	CBN		Screw	$\overset{\curvearrowright}{(N\cdot m)}$	Wrench			
S/C-SSKP R/L									
S/C 12.....09	SPGT 0903__ L/R-SD	SPGW 0903__		BFTX 0307 A	2,0	TRX 10			
S/C 16.....09									
S 20.....09									
S 25.....09									








■ Holders

	Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							
			R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - STFC R/L 		S10K - STFC R/L 09	●	●	13	10	9	125	-	10,5	-12°	TC__ 0902__
		S12M - STFC R/L 11	●	●	16	12	11	150	10	9	-10°	TC__ 1102__
		S16R - STFC R/L 11	●	●	20	16	15	200	12	11	-6°	
		S20S - STFC R/L 11	●	●	25	20	18	250	14	13	-3°	
		S25T - STFC R/L 16	●		32	25	23	300	18	17	-6°	TC__ 16T3__
		S32U - STFC R/L 16	●		40	32	30	350	20	22	-10°	
		S40V - STFC R/L 16			50	40	37	400	25	27	-8°	

All figures show right hand tools.

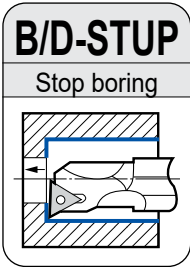
■ Applicable Inserts

■ Spare Parts

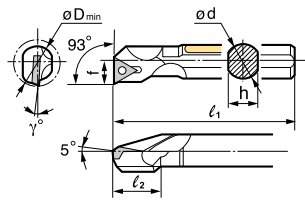
Holder	Carbides, Cermets		CBN, PCD	Screw	\curvearrowright (N·m)	Wrench			
S - STFC R/L									
S.....09	TCMT 0902__ NFP	-	TCGW 0902__	BFTX02205N	0,5	TRX06			
S.....11	TCMT 1102__ NFP	TCMT 1102__ NSK	TCGW 1102__	BFTX02506N	1,5	TRX08			
S.....16	TCMT 16T3__ NFP	TCMT 16T3__ NSK	TCGW 16T3__	BFTX0409N	3,4	TRX15			

Boring Bars B/D/S/C...STUP(B) Type

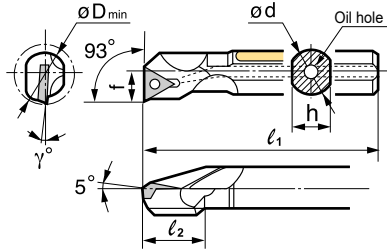
For Positive TB / TP ___ - Inserts ($\alpha = 5, 11^\circ$)



B Type (Fig.1)
Min. Bore Dia.



D Type (Fig.2)



Insert (ex.)



Spare Parts



■ Holders

Steel shank	Cat. No.	Stock		ϕD_{min}	Dimensions (mm)						Fig.	Insert (ex.)	Screw	Wrench
		R	L		ϕd	h	l_1	f	l_2	γ				
Anti-vibration B type	B08H - STUP R/L 0802-10	●	●	10	8	7	100	5	13	-10°	1.	TP□T 0802□□	BFTX0204A ≤ 0.5	TRX06
	B10K - STUP R/L 1103-12	●	●	12	10	9	125	6	15	-8°				
Anti-vibration D type with oil hole	D12M - STUP R/L 1103-14	●	●	14	12	11	150	7	17	-7°	2.	TP□T 1103□□	BFTX0306A ≤ 2.0	TRX10
	D16R - STUP R/L 1103-18	●	●	18	16	15	200	9	18	-4°				
	D20S - STUP R/L 1103-22	●	●	22	20	18	250	11	18	-3°				
	D25T - STUP R/L 1604-28	●	●	28	25	22	300	14	18	-2°				
	D32T - STUP R/L 1604-40	●	●	40	32	30	300	20	13	-2°				
												BFTX0307A ≤ 2.0		
												TP□T 1604□□	BFTX0410A ≤ 3.4	TRX15

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

■ Holders

Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							Fig.	
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ		
S - STUP/B R/L Steel shank	S08H - STUP R/L 06-01	●	●	8	8	7	100	30	4	-12°		
	S08H - STUP R/L 08-02	●	●	10	8	7	100	13	5	-10°		
	S10K - STUP R/L 11-03	●	●	12	10	9	125	15	6	-8°		
	S12M - STUP R/L 11-03	●	●	16	12	11	150	17	8	-6°		
	S16R - STUP R/L 11-03			20	16	15	200	18	10	-2°		
	S20S - STUP R/L 16			25	20	18	250	18	12.5	-3°		
	S25T - STUP R/L 16	●	●	28	25	22	300	18	14	-2°		
C - STUP/B R/L Carbide shank	C08M - STUP R/L 06	●	●	8	8	7	150	50	4	-12°	TB_T 0601__	
	C08M - STUP R/L 08	●	●	10	8	7	150	18	5	-10°		TP_T 0802__
	C10Q - STUP R/L 11	●	●	12	10	9	180	19	6	-8°		TP_T 1103__
	C12R - STUP R/L 11	●	●	16	12	11	200	25	8	-6°		
	C16S - STUP R/L 11	●	●	20	16	15	250	30	10	-4°		

■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets	CBN, PCD	Screw	\leq (N·m)	Wrench
S/C-STU_ R/L					
S/C 08.....06-01	TBGT 0601__ L/R-W	-	BFTX 0204 A	0,5	TRX 06
S/C 08.....08-02	TPGT 0802__ L/R-W	TPMW 0802__	BFTX 0204 A	0,5	TRX 06
S/C 10.....11-03	TPGT 1103__ L/R-W	TPGW 1103__	BFTX 0306 A	2,0	TRX 10
S/C 12/16.....11-03	TPGT 1103__ L/R-W	TPGW 1103__	BFTX 0307 A	2,0	TRX 10
S 20/25.....16	TPGT 1604__ L/R-W	TPGW 1604__	BFTX 0410 A	3,4	TRX 15

Boring Bars for pos. insert



Anti-vibration D type
with oil hole

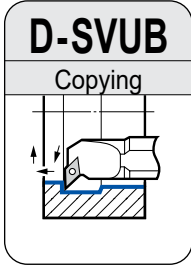


Fig.1

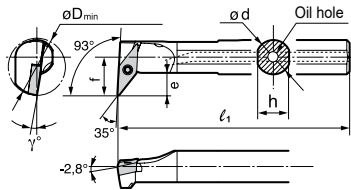
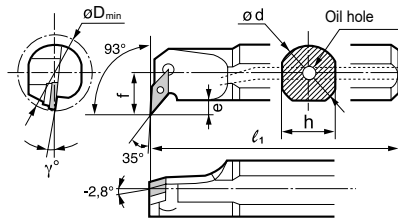


Fig.2



Insert (ex.)



■ Spare Parts

	Pin	Clamp screw	Shim	Screw	Wrench	Wrench
D16R - SVUB R/L 1103-22	-	-	-	BFTX02508NV	TRX08	-
D20S - SVUB R/L 1103-27	-	-	-	BFTX03508	TRX10	-
D25T - SVUB R/L 1604-35	-	-	-	BFTX03508	TRX10	-
D32T - SVUB R/L 1604-40	VP32B	BH03504	SVP32	2.0	TRX10	LH020

■ Holders

Above figures show right hand tools.

Cat. No.	Stock		ϕD_{min}	Dimensions (mm)						Fig.	Insert (ex.)	Pin	Clamp screw	Shim	Screw	Wrench	Wrench
	R	L		ϕd	h	ℓ_1	f	e	γ								
D16R - SVUB R/L 1103-22	●	●	22	16	15	200	13	5	-7°	1.	VB□□ 1103□□	-	-	-	BFTX02508NV	TRX08	-
D20S - SVUB R/L 1103-27	●	●	27	20	18	250	15	5	-5°	1.	VB□□ 1103□□	-	-	-	BFTX03508	TRX10	-
D25T - SVUB R/L 1604-35	●	●	35	25	23	300	20,5	9	-7,5°	2.	VB□□ 1604□□	-	-	-	BFTX03508	TRX10	-
D32T - SVUB R/L 1604-40	●	●	40	32	30	300	22	9	-7,5°	2.	VB□□ 1604□□	VP32B	BH03504	SVP32	2.0	TRX10	LH020

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.



Anti-vibration D type
with oil hole

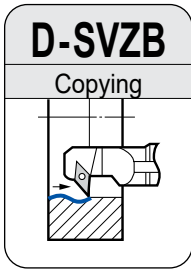


Fig.1

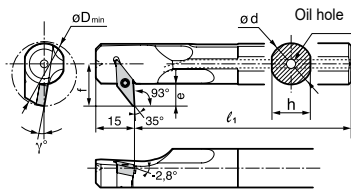
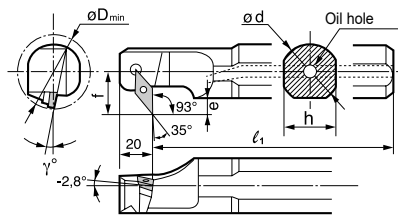


Fig.2



Insert (ex.)



■ Spare Parts

	Pin	Clamp screw	Shim	Screw	Wrench	Wrench
D16R - SVZB R/L 1103-22	-	-	-	BFTX02508NV	TRX08	-
D20S - SVZB R/L 1103-27	-	-	-	BFTX03508	TRX10	-
D25T - SVZB R/L 1604-35	-	-	-	BFTX03508	TRX10	-
D32T - SVZB R/L 1604-40	VP32B	BH03504	SVP32	2.0	TRX10	LH020

■ Holders

Above figures show right hand tools.

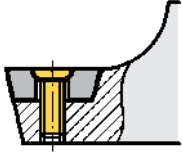

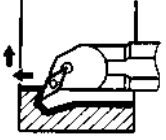
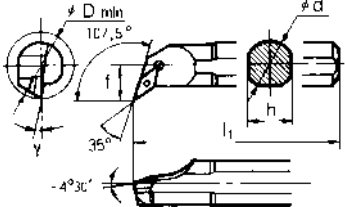
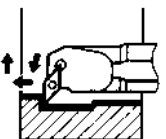
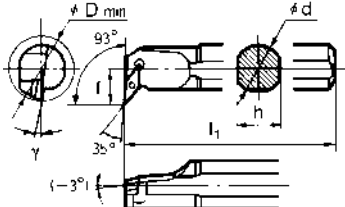
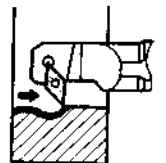
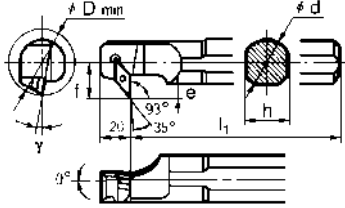
Cat. No.	Stock		ϕD_{min}	Dimensions (mm)						Fig.	Insert (ex.)	Pin	Clamp screw	Shim	Screw	Wrench	Wrench
	R	L		ϕd	h	ℓ_1	f	e	γ								
D16R - SVZB R/L 1103-22	●	●	22	16	15	200	13	5	-7°	1.	VB□□ 1103□□	-	-	-	BFTX02508NV	TRX08	-
D20S - SVZB R/L 1103-27	●	●	27	20	18	250	15	5	-5°	1.	VB□□ 1103□□	-	-	-	BFTX03508	TRX10	-
D25T - SVZB R/L 1604-35	●	●	35	25	23	300	20,5	9	-7,5°	2.	VB□□ 1604□□	-	-	-	BFTX03508	TRX10	-
D32T - SVZB R/L 1604-40	●	●	40	32	30	300	22	9	-7,5°	2.	VB□□ 1604□□	VP32B	BH03504	SVP32	2.0	TRX10	LH020

Boring Bars S...SVQB / SVUB, SVZB Type

For Positive VB__ - Inserts ($\alpha = 5^\circ$)












■ Holders

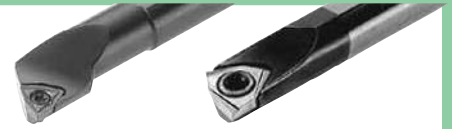
	Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							
			R	L	ϕD_{min}	d	h	l_1	f	γ	e	
S - SVQB R/L 		S16R - SVQB R/L 11	●	●	22	16	15	200	13	-6,5°	VB__ 1102__	
		S20S - SVQB R/L 11	●	●	27	20	18	250	15	-6,5°		
		S25T - SVQB R/L 16	●	●	35	25	23	300	20,5	-6,5°	VB__ 1604__	
		S32U - SVQB R/L 16	●	●	40	32	30	350	22	-6,5°		
		S40V - SVQB R/L 16			50	40	37	400	27	-6,5°		
S - SVUB R/L 		S16R - SVUB R/L 11	●	●	22	16	15	200	13	-7,5°	VB__ 1102__	
		S20S - SVUB R/L 11	●	●	27	20	18	250	15	-7,5°		
		S25T - SVUB R/L 16	●	●	35	25	23	300	20,5	-7,5°	VB__ 1604__	
		S32U - SVUB R/L 16	●	●	40	32	30	350	22	-7,5°		
		S40V - SVUB R/L 16			50	40	37	400	27	-7,5°		
S - SVZB R/L 		S16R - SVZB R/L 11	●	●	22	16	15	200	13	-7,5°	VB__ 1102__	
		S20S - SVZB R/L 11	●	●	27	20	18	250	15	-7,5°		
		S25T - SVZB R/L 16	●	●	35	25	23	300	20,5	-7,5°	VB__ 1604__	
		S32U - SVZB R/L 16	●	●	40	32	30	350	22	-7,5°		

All figures show right hand tools.

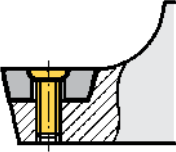
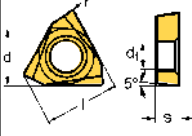
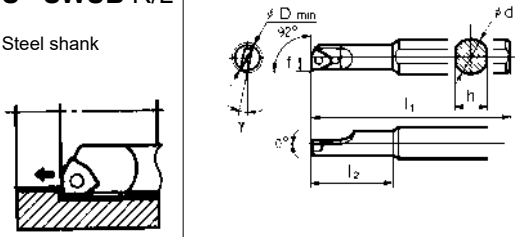
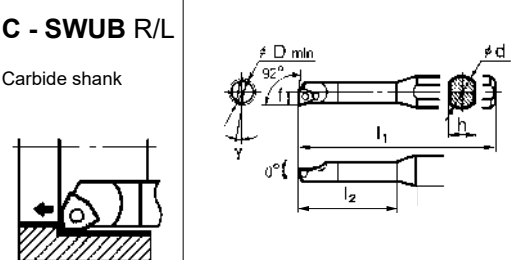
■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets		CBN	Pin	Clamp bolt	Shim	Screw	Wrench	Wrench
									
S16R	VBMT 1102__ NFP	VBMT 1102__ NSK	-	-	-	-	BFTX02506N	TRX08	-
S20S	VBMT 1102__ NFP	VBMT 1102__ NSK	-	-	-	-	⊕ 1,5	TRX08	-
S25T	VBMT 1604__ NFP	VBMT 1604__ NSK	VBGW 1604__	-	-	-	BFTX03508 ⊕ 2,0	TRX10	-
S32U	VBMT 1604__ NFP	VBMT 1604__ NSK	VBGW 1604__	VP32B	BH03504	SVP32		TRX10	LH020
S40V	VBMT 1604__ NFP	VBMT 1604__ NSK	VBGW 1604__	VP40B	BH03504	SVP32		TRX10	LH020



■ Holders




 Tool holders (S type) with screw-lock system	Cat. No.	Stock		Dimensions (mm)							
		R	L	ϕD_{min}	d	h	l_1	l_2	f	γ	
S - SWUB R/L Steel shank 	S08H - SWUB R/L 06-01	●	●	5,5	8	7	100	18	3	-12°	WBGT 0601__
C - SWUB R/L Carbide shank 	C08K - SWUB R/L 06		●	5,5	8	7	125	30	3	-12°	WBGT 0601__

All figures show right hand tools.

Remarks: Right handed tool holders are applicable with left handed or neutral inserts.
Left handed tool holders are applicable with right handed or neutral inserts.

■ Applicable Inserts

■ Spare Parts

Holder	Carbides, Cermets	CBN	Screw	$\text{N}\cdot\text{m}$	Wrench				
S/C-SWUBR/L									
S/C 08.....R 06	WBGT 0601__ LW	-	BFTX 0203 N	0,5	TRX 06				
S/C 08.....L 06	WBGT 0601__ RW	-	BFTX 0203 N	0,5	TRX 06				

Solid Carbide Boring Bars BXBR Type



SumiSmall

■ Characteristics

- Economical, two-cornered insert.
- Maximum boring depth 5D (5 times the shank diameter)
- Usable at any desired overhang.
- Shank size = min. bore diameter for easy selection.
(Available from ϕ 2 mm to ϕ 5 mm in 0,5 mm increments.)
- KBMX Type cutting edge used, no breaker versions also available in stock.

Small Hole Finishing

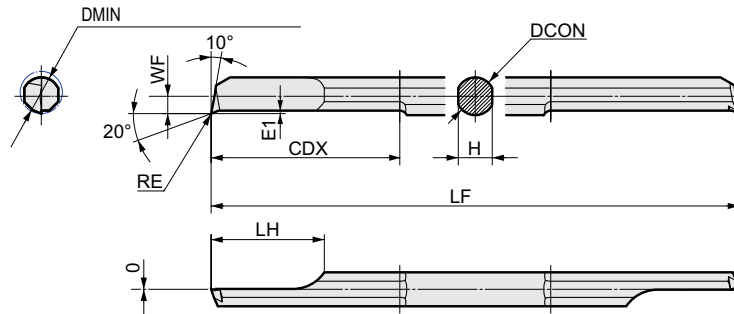
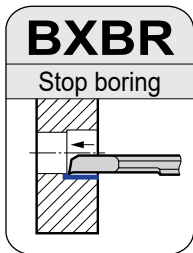


Figure shows tool with breaker.

■ Solid Carbide Bar

	Cat. No.	Stock		DMIN	Dimensions (mm)								Applicable Sleeve
		ACZ150	AC530U		DCON	H	LF	WF	LH	CDX	E1	RE	
With Breaker	BXBR 02005 R	○		2,0	2,0	1,8	50	0,80	6,0	10,0	0,20	0,05	HBX 2016
	02020 R	○		2,0	2,0	1,8	50	0,80	6,0	10,0	0,20	0,20	HBX 2016
	BXBR 02505 R	○		2,5	2,5	2,2	50	1,05	7,5	12,5	0,20	0,05	HBX 2516
	02520 R	○		2,5	2,5	2,2	50	1,05	7,5	12,5	0,20	0,20	HBX 2516
	BXBR 03005 R	○		3,0	3,0	2,7	50	1,30	9,0	15,0	0,25	0,05	HBX 3016
	03020 R	○		3,0	3,0	2,7	50	1,30	9,0	15,0	0,25	0,20	HBX 3016
	BXBR 03505 R	○		3,5	3,5	3,1	60	1,55	10,5	17,5	0,25	0,05	HBX 3516
	03520 R	○		3,5	3,5	3,1	60	1,55	10,5	17,5	0,25	0,20	HBX 3516
	BXBR 04005 R	○		4,0	4,0	3,6	60	1,80	12,0	20,0	0,35	0,05	HBX 4016
	04020 R	○		4,0	4,0	3,6	60	1,80	12,0	20,0	0,35	0,20	HBX 4016
No Breaker	BXBR 04505 R	○		4,5	4,5	4,1	70	2,05	13,5	22,5	0,35	0,05	HBX 4516
	04520 R	○		4,5	4,5	4,1	70	2,05	13,5	22,5	0,35	0,20	HBX 4516
	BXBR 05005 R	○		5,0	5,0	4,5	70	2,30	15,0	25,0	0,40	0,05	HBX 5016
	05020 R	○		5,0	5,0	4,5	70	2,30	15,0	25,0	0,40	0,20	HBX 5016
	BXBR 02005 R-NB		○	2,0	2,0	1,8	50	0,80	6,0	10,0	0,20	0,05	HBX 2016
	02020 R-NB		○	2,0	2,0	1,8	50	0,80	6,0	10,0	0,20	0,20	HBX 2016
	BXBR 02505 R-NB			2,5	2,5	2,2	50	1,05	7,5	12,5	0,20	0,05	HBX 2516
	02520 R-NB		○	2,5	2,5	2,2	50	1,05	7,5	12,5	0,20	0,20	HBX 2516
	BXBR 03005 R-NB		○	3,0	3,0	2,7	50	1,30	9,0	15,0	0,25	0,05	HBX 3016
	03020 R-NB		○	3,0	3,0	2,7	50	1,30	9,0	15,0	0,25	0,20	HBX 3016
BXBR 03505 R-NB			3,5	3,5	3,1	60	1,55	10,5	17,5	0,25	0,05	HBX 3516	
03520 R-NB		○	3,5	3,5	3,1	60	1,55	10,5	17,5	0,25	0,20	HBX 3516	
BXBR 04005 R-NB		○	4,0	4,0	3,6	60	1,80	12,0	20,0	0,35	0,05	HBX 4016	
04020 R-NB		○	4,0	4,0	3,6	60	1,80	12,0	20,0	0,35	0,20	HBX 4016	
BXBR 04505 R-NB		○	4,5	4,5	4,1	70	2,05	13,5	22,5	0,35	0,05	HBX 4516	
04520 R-NB		○	4,5	4,5	4,1	70	2,05	13,5	22,5	0,35	0,20	HBX 4516	
BXBR 05005 R-NB		○	5,0	5,0	4,5	70	2,30	15,0	25,0	0,40	0,05	HBX 5016	
05020 R-NB		○	5,0	5,0	4,5	70	2,30	15,0	25,0	0,40	0,20	HBX 5016	

■ Adaptor Sleeve (Optional)

	Cat. No.	Stock	DCB (mm)	Applicable Bar
	HBX 2016	○	2,0	BXBR 02000 R(-NB)
	HBX 2516	○	2,5	BXBR 02500 R(-NB)
	HBX 3016	○	3,0	BXBR 03000 R(-NB)
	HBX 3516	○	3,5	BXBR 03500 R(-NB)
	HBX 4016	○	4,0	BXBR 04000 R(-NB)
	HBX 4516	○	4,5	BXBR 04500 R(-NB)
	HBX 5016	○	5,0	BXBR 05000 R(-NB)

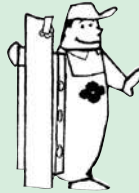
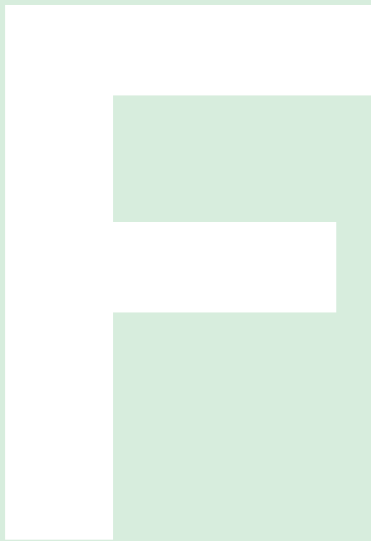
* BXBR bars can be used with HBB type sleeves. Commercially available sleeves may also be used.

■ Spare Parts (For sleeve)

Screw	(N·m)	Setting Screw	Wrench
BFTX 0409 N	3,4	BT 06035 T	TRD 15

Grooving & Parting-Off Threading Holders

F1-F70



GND Type Grooving Tools Selection Guide	Expansion GND	F 2-17
External Grooving, for Small Lathes	Expansion GNDM / GNDL	F18
Internal Grooving, for Small Lathes	Expansion GNDM-J / GNDL-J New	F20
For Shallow Grooves	Expansion GNS	F22
External Multi Purpose/L-Styled Holder	Expansion GNDM / GNDMS	F24
External Multi Purpose Grooving/Internal Coolant	Expansion GNDM JE	F26
External Deep Grooving and Cut-Off	Expansion GNDL / GNDLS	F28
External Deep Grooving and Cut-Off/Internal Coolant	Expansion GNDL JE	F30
Necking	Expansion GNDN	F32
Face Grooving/L-Styled Holder	Expansion GNDF / GNDFS	F34
Internal Grooving/L-Styled Holder	Expansion GNDI / GNDIS	F38
Internal Grooving for Small Diameters	New SSH-Series	F42-44
ISO-PSC Polygon Modular Grooving System Holders	Expansion PSC-GNDCM	F46
ISO-PSC Polygon Modular Grooving System Inserts	Expansion PSC-GNDCF	F48
"SumiTurn B-Groove" Holders	GWC / GWCS	F50
"SumiTurn B-Groove" Inserts	PSC / GWCI / TGA-BF	F51
"SumiTurn B-Groove" Inserts	Expansion TGA R/L (E)	F52
"SumiTurn B-Groove" Inserts	Expansion TGA R/L R, TGA R/L T	F53
Parting-Off Mini Holders	SCT	F54
Sumi-Grip	F55
"Sumi-Grip Jr." Steel Type	STFH / STFS R/L	F56
Sumi-Grip Jr. Inserts	WCF (NTL)	F57
"Sumi-Grip" Carbide Blade Type	WCFH / WCF S R/L	F58
Sumi-Grip Inserts	WCF (NTL)	F60
Threading Tools	New SSTE / SSTI	F62-69
Inserts for External Threading Holders	SSTE	F64
Inserts for Internal Threading Holders	SSTI	F65

Grooving, Parting-Off & Threading

Grooving Tool Holders GND Series



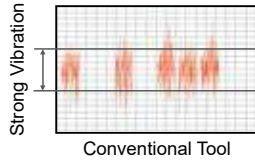
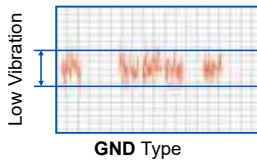
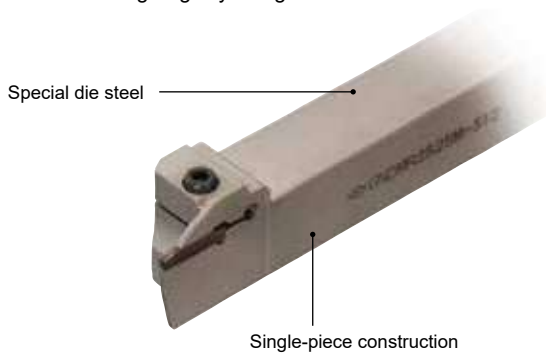
New

New series of internal coolant-type holders for small lathes

Cutting Performance

Eliminates Vibration

Reduces vibration up to 30 % compared to conventional grades thanks to its high-rigidity design.



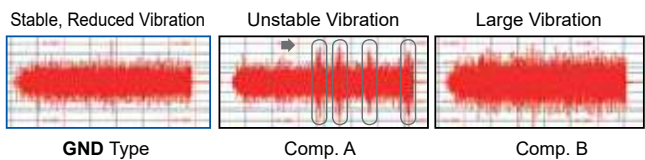
Work Material:	15CrMo5
Holder:	GNDL R2525M 220
Insert:	GCM N2002 GG
Cutting Conditions:	$v_c = 100$ m/min, $f = 0,10$ mm/rev, $a_p = 20$ mm, wet

Characteristics

- Wide range of application processes
Applicable for grooving, turning, copying, facing, boring and cut-off.
- Achieving stable tool life
An array of chipbreakers improves the efficiency in chip control in various applications and prevents unexpected damages caused by chip blockade.
- Achieving smooth cutting and high efficiency machining
Holders utilizing one-piece body construction made of special steel, reduce vibration by 30 % during machining as compared to conventional types.
- Achieving high precision grooving widths with moulded inserts
Grooving insert width tolerance of $\pm 0,03$ mm over the entire range

Ensures both, high rigidity and good chip evacuation

Internal

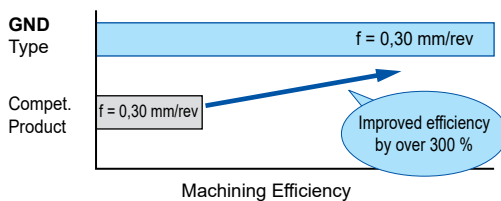


Work Material:	15CrMo5
Holder:	GNDI R2532 T306
Insert:	GCM N3002 GG
Cutting Conditions:	$v_c = 100$ m/min, $f = 0,05$ mm/rev, $a_p = 3,0$ mm, wet

Application Examples

Substantially improved machining efficiency!

High rigidity holder enables high load machining at high feed rate.



Work Material:	42CrMo4
Holder:	GNDL R2525M 320
Insert:	GCM N3002 GG (AC530U)
Cutting Conditions:	$v_c = 130$ m/min, $f = 0,30$ mm/rev, wet

Stable and long tool life ensures reliable functionality even on automatic production lines!

Reduction of chattering prevents unexpected breakage.



Work Material:	C53
Holder:	GNDM L2525M 618
Insert:	GCM N6030 RG (AC530U)
Cutting Conditions:	$v_c = 130$ m/min, $f = 0,30$ mm/rev, wet

Grooving Tool Holders GND Series

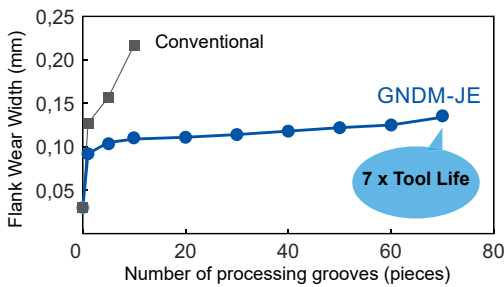
Internal Coolant Grooving Tool Holder GNDM-J(E) / GNDL-J(E) Type and Grade-Expansion

New **Expansion**

- Newly developed 2-hole coolant design optimizes cooling of the insert and improves chip removal, extending tool life and allowing for improved speeds and feeds in production.
- Grooving width range from 2,0 to 6,0 mm
- Introducing new holders for small lathes with grooving width of 2,0 to 3,0 mm
- Achieves both high efficiency in high speed machining and extension of tool life due to internal coolant supply to the cutting edge.
- Improves chip control by applying direct coolant from cutting edge side.
- 4 more grades **AC8025P**, **AC8035P**, **AC5015S** and **AC5025S** available.
- The new grades expand the application in steel materials in direction of high speed with the grade **AC8025P** and for more toughness with the grade **AC8035P**.
- In the area for machining heat-resistance alloys and exotic alloys as Inconel and Hastelloy, we recommend the grade **AC5025S** as the first choice and the grade **AC5015S** for high-speed machining in continues cut.



Wear Resistance



Upper coolant hole improves chip control.

Lower coolant hole improves wear resistance.



Chip Control



Coolant Pressure: 7 MPA



Coolant Pressure: 1 MPA



External Coolant

Work Material:	Ti-6Al-4V
Holder:	GNDM R2525K 312JE
Insert:	GCM N3002 GG (AC530U)
Cutting Conditions:	$v_c = 60$ m/min, $f = 0,1$ mm/rev, $a_p = 5,0$ mm, wet

CF Type Chipbreaker for Cut-Off

- Lead angle of $10^\circ/15^\circ$ for improved sharpness in cut-off machining.
- Asymmetrical chipbreaker design provides excellent chip control even in difficult to machine conditions.



GCMN20003 CF 10



GCMN20003 CF 15



Competitor

Work Material:	St42-3
Holder:	GNDM R2525M 220
Insert:	GCM N3002 CF-10, 15 (AC1030U)
Cutting Conditions:	$n = 2000$ min ⁻¹ , $f = 0,08$ mm/rev, wet

Grooving Tool Holders

GND Series

■ Inserts - Chipbreaker Series

Achieving stability and longer tool life. A variety of chipbreakers ensures outstanding chip control performance in many different types of applications.

Grooving / Turning			Grooving / Cut-Off			Cut-Off		Profiling	Necking	Non Ferrous Metals
General Type	Low Feed Type	General Type	Low Feed Type	Low Cutting Force Type	Cut-Off Type	Low Cutting Force Type	General Type	General Type	General Type	
MG	ML	GG	GL	GF	CG	CF	RG	RN	GA	
Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	
Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	Grooving Width (mm)	
1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	1,25 1,5 2,0	
3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	3,0 4,0 5,0	
6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	6,0 7,0 8,0	
Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	Grade	
AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	
AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	
AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	
AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	
AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	
H10	H10	H10	H10	H10	H10	H10	H10	H10	H10	

■ Stock * Only use with GNDIS


■ Recommended Cutting Conditions

Work Material	P Carbon Steel / Alloy Steel	M Stainless Steel	K Cast Iron	S Exotic Alloy	N								
Grade	AC830P AC8025P AC8035P	AC520U AC530U AC1030U	AC830P AC5015S AC5025S	AC425K AC520U AC530U AC1030U	AC520U AC5015S AC5025S AC530U AC1030U	H10							
Cutting Speed (m/min)	80-200	80-200	50-200	50-200	70-150	70-150	50-150	80-200	60-200	50-200	20-80	20-60	150-300


Please see cutting data page 13

■ Excellent Chip Control

Grooving




GND Type
(GG Type Chipbreaker)




Conventional Tool

Work Material:	15CrMo5
Holder:	GNDL R2525M 320
Insert:	GCM N3002 GG
Cutting Conditions:	$v_c=100$ m/min, $f=0,15$ mm/rev, $a_p=12,0$ mm, wet

Turning




GND Type
(ML Type Chipbreaker)




Conventional Tool

Work Material:	15CrMo5
Holder:	GNDM R2525M 312
Insert:	GCM N3002 ML
Cutting Conditions:	$v_c=100$ m/min, $f=0,10$ mm/rev, $a_p=0,5$ mm, wet

Cut-Off




GND Type
(CG Type Chipbreaker)




Conventional Tool

Work Material:	X5CrMo17122 (Ø 30 mm)
Holder:	GNDL R2525M 220
Insert:	GCM R2002 CG 05
Cutting Conditions:	$v_c=100$ m/min, $f=0,15$ mm/rev, wet

Profiling



GND Type
(RG Type Chipbreaker)







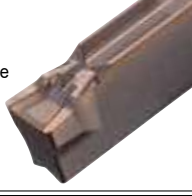

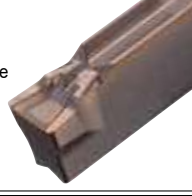






Conventional Tool

Work Material:	15CrMo5
Holder:	GNDM R2525M 312
Insert:	GCM N3015 RG
Cutting Conditions:	$v_c=100$ m/min, $f=0,15$ mm/rev, $a_p=0,1$ mm, wet


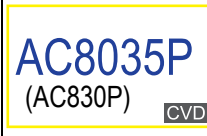
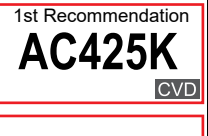
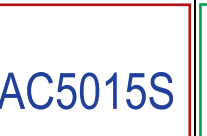



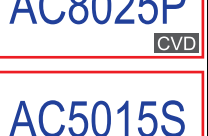

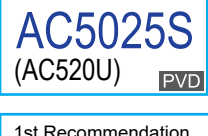
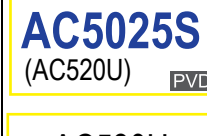
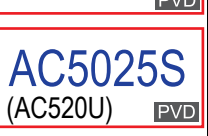
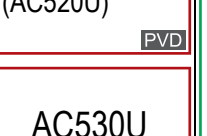
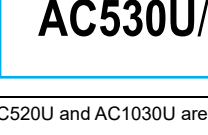
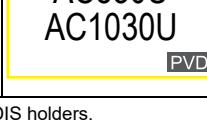
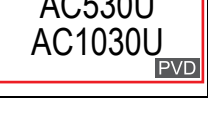
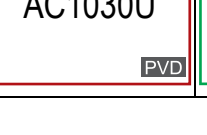
Grooving Tool Holders GND Series

Chipbreaker Selection

	Grooving / Turning	Grooving	Cut-Off
1st Recommendation	MG General Feed 	GG General Feed 	GG General Feed 
2nd Recommendation	ML Low Feed Good Chip Control 	GL General Feed Good Chip Control 	CG General Feed Feed Direction Front Cutting Edge Angle 5° 
	GF Low Cutting Force 	GF Low Cutting Force Feed Direction Front Cutting Edge Angle 10°/15° 	GF Low Cutting Force 
	Profiling / Radius Grooving Outside Diameter	Necking / Radius Grooving Internal Profiling	For Non Ferrous Metals
Recommendation	RG General Feed 1st Recommendation 	RN General Feed 2nd Recommendation w = 2 mm 	RN General Feed 
			GA General Feed 

Grade Selection

New

Cutting Process	P Steel	M Stainless Steel	K Cast Iron	S Exotic Alloy	N Non Ferrous Metals
Continuous, high speed ↑ ↓ Interrupted, unstable	AC8025P CVD 	AC8035P (AC830P) CVD 	AC425K CVD 	AC5015S PVD 	H10 Uncoated Carbide 
	AC8035P (AC830P) CVD 	AC5015S PVD 	AC8025P CVD 	AC5025S (AC520U) PVD 	
	AC5025S (AC520U) PVD 	AC5025S (AC520U) PVD 	AC5015S PVD 	AC5025S (AC520U) PVD 	
	AC530U/AC1030U PVD 	AC530U/AC1030U PVD 	AC5025S (AC520U) PVD 	AC530U/AC1030U PVD 	

Only AC520U and AC1030U are stocked for inserts of GNDIS holders.

Grooving Tool Holders GND Series

For External Machining (Straight Type)

Turning / Profiling

Grooving / Cut-Off

GNDS
Straight Type

Shank Size
Height x Width
20 mm x 20 mm
25 mm x 25 mm

→ 22

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG|ML|GG|GL|GF|CG|CF|RG|RN|GA

GNDM
Straight Type

Shank Size
Height x Width
20 mm x 20 mm
25 mm x 25 mm
32 mm x 25 mm
32 mm x 32 mm

→ 24

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG|ML|GG|GL|GF|CG|CF|RG|RN|GA

GNDM-JE
Straight Type

Shank Size
Height x Width
20 mm x 20 mm
25 mm x 25 mm

→ 26

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG|ML|GG|GL|GF|CG|CF|RG|RN|GA

GNDL
Straight Type

Shank Size
Height x Width
20 mm x 20 mm
25 mm x 25 mm
32 mm x 25 mm
32 mm x 32 mm

→ 28

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG|ML|GG|GL|GF|CG|CF|RG|RN|GA

GNDL-JE
Straight Type

Shank Size
Height x Width
20mm x 20mm
25mm x 25mm

→ 30

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG|ML|GG|GL|GF|CG|CF|RG|RN|GA

Series for External Machining (Straight Type)

Type	Shank Size		Cutting Width (mm)								Series	Max. Grooving Depth (mm)						Ref. Page	Applicable Chipbreaker													
	Height	Width	1,25	1,5	2	3	4	5	6	7		8	5	10	15	20	25		30	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA			
Straight Type	20	20	1,25	1,5								GNDM	10						24													
			1,25	1,5									GNDL	16						28												
					2									GNDS	6						22											
					2									GNDM	10						24											
					2									GNDM-JE	10						26											
					2									GNDL	20						28											
				2									GNDL-JE	20						30												
					3								GNDS	6						22												
					3								GNDM	12						24												
					3								GNDM-JE	12						26												
					3								GNDL	20						28												
					3								GNDL-JE	20						30												
					4							GNDS	10						22													
					4							GNDM	18						24													
					4							GNDM-JE	18						26													
					4							GNDL	25						28													
					4							GNDL-JE	25						30													
						5	6					GNDS	10						22													
						5	6					GNDM	18						24													
						5	6					GNDM-JE	18						26													
						5	6					GNDL	25						28													
						5	6					GNDL-JE	25						30													
								7	8			GNDM	18						24													
								7	8			GNDL	25						28													
	32	25*			3						GNDM	12						24														
				3								GNDL	20						28													
					4							GNDM	18						24													
					4							GNDL	25						28													
						5	6					GNDM	18						24													
						5	6					GNDL	25						28													
		32					7	8			GNDM	18						24														
							7	8			GNDL	25						28														

■ Stock

* Make to order item (32x25mm)

◎ 1st Recommendation

○ 2nd Recommendation

Grooving Tool Holders GND Series

For External Machining (L Type)

Turning / Profiling

GNDMS

L Type
Shank Size
Height x Width
20 mm x 20 mm
25 mm x 25 mm

→ F24

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG|ML|GG|GL|GF|CG|CF|RG|RN|GA

Grooving / Cut-Off

GNDLS

L Type
Shank Size
Height x Width
20 mm x 20 mm
25 mm x 25 mm

→ F28

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG|ML|GG|GL|GF|CG|CF|RG|RN|GA

Series for External Machining (L Type)

Type	Shank Size Height x Width	Cutting Width (mm)								Series	Max. Grooving Depth (mm)						Ref. Page	Applicable Chipbreaker															
		1,25	1,5	2	3	4	5	6	7		8	5	10	15	20	25		30	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA					
L Type	20	20			2						GNDLS	16						F28															
					3							GNDMS	10						F24														
					3							GNDLS	16						F28														
					4							GNDMS	12						F24														
					5							GNDMS	12						F24														
					2							GNDLS	18						F28														
	25	25			3						GNDMS	12						F24															
					3						GNDLS	18						F28															
					4							GNDMS	14						F24														
					4							GNDLS	23						F28														
					5	6						GNDMS	14						F24														
					5	6						GNDLS	23						F28														

Stock: 2, 3, 4, 5, 6, 7, 8

1st Recommendation: (circled) 2, 3, 4, 5, 6, 7, 8, 10, 12, 14, 18, 23

2nd Recommendation: (open circle) 16, 18

Cassettes for Radial Machining

Grooving

GNDCM

Cassette
Applicable Holder
SumiPolygon
PSC 00 (Straight)
PSC 90 (L Type)

→ F46

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG|ML|GG|GL|GF|CG|CF|RG|RN|GA

Radial Grooving Cassettes

Type	Applicable Holders	Cutting Width (mm)								Series	Max. Grooving Depth (mm)						Ref. Page	Applicable Chipbreaker													
		1,25	1,5	2	3	4	5	6	7		8	5	10	15	20	25		30	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA			
Cassette	GND00			2						GNDCM	12						F46														
				3						GNDCM	12																				
	GND90			4						GNDCM	18																				
				5	6					GNDCM	18																				

Stock: 2, 3, 4, 5, 6, 7, 8

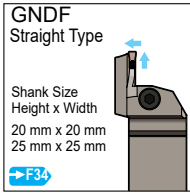
1st Recommendation: (circled) 2, 3, 4, 5, 6, 7, 8, 12, 18

2nd Recommendation: (open circle) 12, 18

Grooving Tool Holders GND Series

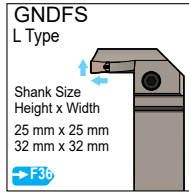
For Face Machining

Grooving / Turning / Profiling



Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG ML GG GL GF CG CF RGRN GA



Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker
MG ML GG GL GF CG CF RGRN GA

Series for Face Machining

Type	Shank Size Height x Width	Cutting Width (mm)						Series	Max. Grooving Depth (mm)	Bore (mm)	Ref. Page	Applicable Chipbreaker								
		3	4	5	6	7	8					MG	ML	GG	GL	GF	CG	CF	RGRN	GA
Straight Type	20	20	3						12	ø35, ø45	F34	○	○	○	○				○	○
			3						12	ø40, ø55		○	○	○	○				○	○
			3						18	ø50, ø70		○	○	○	○				○	○
			3						18	ø65, ø100		○	○	○	○				○	○
			3						18	ø90, ø150		○	○	○	○				○	○
			3						18	ø140, ø200		○	○	○	○				○	○
	25	25	4						18	ø40, ø55	F34	○	○	○	○				○	○
			4						23	ø50, ø70		○	○	○	○				○	○
			4						23	ø65, ø90		○	○	○	○				○	○
			4						23	ø85, ø130		○	○	○	○				○	○
			4						23	ø125, ø200		○	○	○	○				○	○
			4						23	ø180, ø300		○	○	○	○				○	○
25	25	5						23	ø50, ø70	F34	○	○	○	○				○	○	
		5						23	ø65, ø90		○	○	○	○				○	○	
		5						23	ø85, ø130		○	○	○	○				○	○	
		5						23	ø125, ø200		○	○	○	○				○	○	
		5						23	ø180, ø300		○	○	○	○				○	○	
		5						23	ø280, ø1.000		○	○	○	○				○	○	
L Type	20	20				6			23	ø50, ø75	F34	○	○	○	○				○	○
						6			23	ø70, ø110		○	○	○	○				○	○
						6			23	ø100, ø200		○	○	○	○				○	○
						6			23	ø180, ø300		○	○	○	○				○	○
						6			23	ø280, ø1.000		○	○	○	○				○	○
						6			23	ø450~		○	○	○	○				○	○
L Type	25	25				6			20	ø70, ø100	F36	○	○	○	○				○	○
						6			20	ø100, ø200		○	○	○	○				○	○
						6			20	ø180, ø300		○	○	○	○				○	○
						6			20	ø280, ø1.000		○	○	○	○				○	○
						6			20	ø450~		○	○	○	○				○	○
						6			20	ø280, ø1.000		○	○	○	○				○	○

Stock

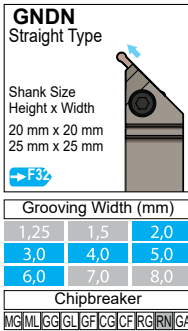
Make to order item

○ 1st Recommendation

○ 2nd Recommendation

Grooving Tool Holders GND Series

For Necking



Series for Necking

Straight Type	Shank Size	Cutting Width (mm)					Series	Max. Grooving Depth (mm)	Min. Bore (mm)	Ref. Page	Applicable Chipbreaker								
		2	3	4	5	6					MG	ML	GG	GL	GF	CG	CF	FR	RN
20	20	2	3	4	5	6	GNDN	2,0	 ø20 ø20 ø30 ø30 ø30	F32									
25	25			4	5	6		2,5 3,0 3,5 4,0											

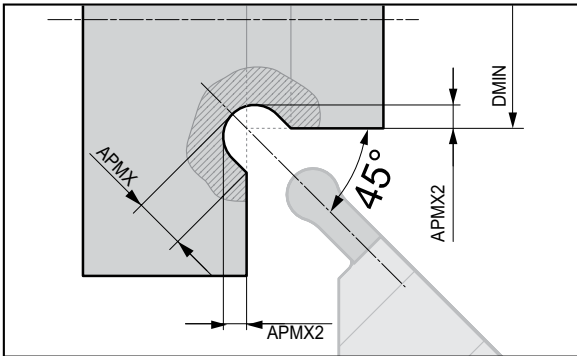
Stock

Tips for Necking

Notes for Undercutting

Recommended Chipbreaker: **RN**

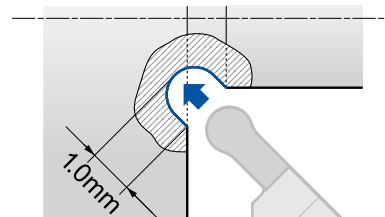
Distance between Workpiece and Necking



Edge Width CW (mm)	Depth of Necking APMX (mm)	Distance between Workpiece and Necking APMX2 (mm)
2,0	1,50	0,64
3,0	2,00	0,79
4,0	3,00	1,29
5,0	3,50	1,44
6,0	4,00	1,59

The recommended cutting conditions for necking are the same as grooving with RN type chipbreaker and edge width. To prevent interference with the work material, do not use the holder for less than the minimum cutting diameter (DMIN) as specified for GNGN type holders.

Chip Shape



Work Material: 34CrMo4
 Holder: GNDN R2020K 325-020
 Insert: GCM N3015 RN
 Cutting Conditions: $v_c = 100\text{m/min}$, $f = 0,1\text{mm/rev}$
 Depth of Necking = 1,0mm, wet

Grooving Tool Holders GND Series

Cassettes for Face Machining

Face Grooving / Turning / Profiling

GNDCF

Cassette
Applicable
Holder
SumiPolygon
PSC 00 (Straight)
PSC 90 (L Type)

→ F48

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker

MG ML GG GL GF CG CF RG RN GA

■ Face Grooving Cassettes

Type	Cutting Width (mm)							Series	Max. Grooving Depth (mm)					Bore (mm)					Ref. Page	Applicable Chipbreaker																	
	3	4	5	6	7	8	5		10	15	20	25	30	50	100	150	200	250		300	1.000	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA						
Straight Type	3							GNDCF R/L	12					ø40 ø55					F48	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	3								15					ø50 ø75						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	3								15					ø65 ø100						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
	3								18					ø90 ø150						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	3								18					ø140 ø200						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4								18					ø40 ø55						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	4								18					ø50 ø70						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4								18					ø65 ø90						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4								18					ø85 ø130						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4								18					ø125 ø200						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	4								18					ø180 ø300						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5								18					ø50 ø70						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5								18					ø65 ø90						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5								18					ø85 ø130						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5								18					ø125 ø200						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	5								18					ø180 ø300						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6								18					ø50 ø75						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6								18					ø70 ø110						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6								18					ø100 ø200						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6								18					ø180 ø300						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	6								18					ø280 ø1.000						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Stock

Make to order item

1st Recommendation

2nd Recommendation

Grooving Tool Holders

GND Series

For Internal Machining ($\geq \varnothing 14$ mm)

Grooving / Turning / Copying

GNDIS
Straight Type

$\varnothing 12$ mm
 $\varnothing 16$ mm
 $\varnothing 20$ mm
 F40

Grooving Width (mm)		
1,5	2,0	3,0

Chipbreaker

ML	GF
----	----

For Internal Machining ($\geq \varnothing 32$ mm)

Grooving / Turning / Copying

GNDI
Straight Type

$\varnothing 25$ mm
 $\varnothing 32$ mm
 $\varnothing 40$ mm
 F38

Grooving Width (mm)		
1,25	1,5	2,0
3,0	4,0	5,0
6,0	7,0	8,0

Chipbreaker

MG	ML	GG	GL	GF	CG	CF	RG	RN	GA
----	----	----	----	----	----	----	----	----	----

Series for Internal Machining ($\geq \varnothing 14$ mm)

Type	Shank Size $\varnothing D_s$ (mm)	Cutting Width (mm)			Series	Max. Grooving Depth (mm)	Min. Bore (mm)	Ref. Page	Applicable Chipbreaker	
		1,5	2	3					ML	GF
Straight Type	$\varnothing 12$	1,5			GNDIS	2,6	$\varnothing 14$	F40		<input type="radio"/>
		1,5				3,6	$\varnothing 14$			<input type="radio"/>
			2	3		2,6	$\varnothing 14$		<input type="radio"/>	<input type="radio"/>
	$\varnothing 16$	1,5			GNDIS	3,6	$\varnothing 16$			<input type="radio"/>
		1,5				4,6	$\varnothing 20$			<input type="radio"/>
			2	3		3,6	$\varnothing 16$		<input type="radio"/>	<input type="radio"/>
$\varnothing 20$	1,5			GNDIS	4,6	$\varnothing 20$		<input type="radio"/>		
		2	3		6,6	$\varnothing 25$	<input type="radio"/>	<input type="radio"/>		
		2	3		6,6	$\varnothing 25$	<input type="radio"/>	<input type="radio"/>		

Stock

GNDIS type: use smaller GXM type inserts

1st Recommendation

Series for Internal Machining ($\geq \varnothing 32$ mm)

Type	Shank Size $\varnothing D_s$ (mm)	Cutting Width (mm)					Series	Max. Grooving Depth (mm)	Min. Bore (mm)	Ref. Page	Applicable Chipbreaker									
		2	3	4	5	6					MG	ML	GG	GL	GF	CG	CF	RG	RN	GA
Straight Type	$\varnothing 25$	2					GNDI	6	$\varnothing 32$	F38	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	
		3	4	5				6	$\varnothing 32$		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	
		2						6	$\varnothing 32$		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	
	$\varnothing 32$	3	4	5				10	$\varnothing 40$		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	
		3	4	5	6			11	$\varnothing 50$		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>	
												<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>				<input type="radio"/>	<input type="radio"/>

Stock

1st Recommendation

2nd Recommendation

Grooving Tool Holders GND Series

Chipbreaker Selection Guide

Groov. Width (mm)	Recommended Cutting Conditions		Nose Radius (mm)	Chipbreaker
	Grooving	Turning		
1,25			0,05	MGMLGGGLGFCCFCFRGRNGA
1,5			0,05	MGMLGGGLGFCCFCFRGRNGA
2,0			0,03	MGMLGGGLGFCCFCFRGRNGA
			0,2	MGMLGGGLGFCCFCFRGRNGA
			0,4	MGMLGGGLGFCCFCFRGRNGA
			1,0	MGMLGGGLGFCCFCFRGRNGA
3,0			0,03	MGMLGGGLGFCCFCFRGRNGA
			0,2	MGMLGGGLGFCCFCFRGRNGA
			0,4	MGMLGGGLGFCCFCFRGRNGA
			1,5	MGMLGGGLGFCCFCFRGRNGA
4,0			0,2	MGMLGGGLGFCCFCFRGRNGA
			0,4	MGMLGGGLGFCCFCFRGRNGA
			0,8	MGMLGGGLGFCCFCFRGRNGA
			2,0	MGMLGGGLGFCCFCFRGRNGA
5,0			0,2	MGMLGGGLGFCCFCFRGRNGA
			0,4	MGMLGGGLGFCCFCFRGRNGA
			0,8	MGMLGGGLGFCCFCFRGRNGA
			2,5	MGMLGGGLGFCCFCFRGRNGA
6,0			0,2	MGMLGGGLGFCCFCFRGRNGA
			0,4	MGMLGGGLGFCCFCFRGRNGA
			0,8	MGMLGGGLGFCCFCFRGRNGA
			3,0	MGMLGGGLGFCCFCFRGRNGA
7,0			0,2	MGMLGGGLGFCCFCFRGRNGA
			0,4	MGMLGGGLGFCCFCFRGRNGA
			0,8	MGMLGGGLGFCCFCFRGRNGA
			3,5	MGMLGGGLGFCCFCFRGRNGA
8,0			0,2	MGMLGGGLGFCCFCFRGRNGA
			0,4	MGMLGGGLGFCCFCFRGRNGA
			0,8	MGMLGGGLGFCCFCFRGRNGA
			4,0	MGMLGGGLGFCCFCFRGRNGA

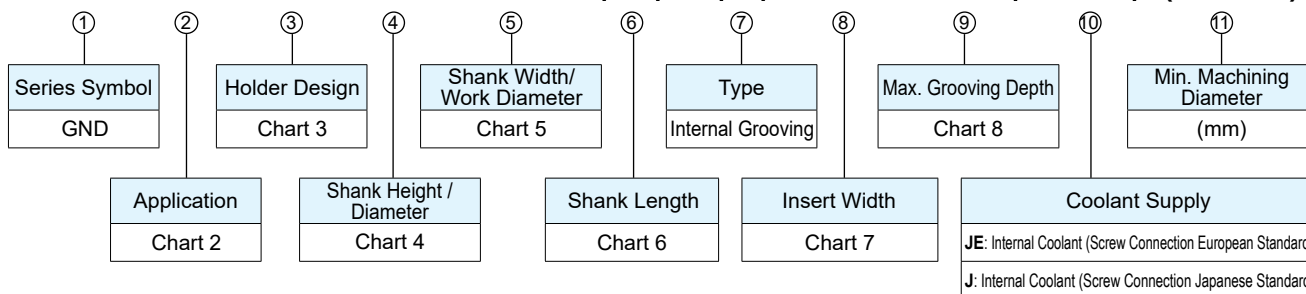
Recommended Cutting Conditions

Work Material	P Carbon Steel, Alloy Steel					M Stainless Steel			K Cast Iron				S Exotic Alloy		N
Grade	AC8025P	AC8035P AC830P	AC5015S AC520U	AC5025S AC530U AC1030U	T2500A	AC8035P AC830P	AC5015S AC520U	AC5025S AC530U AC1030U	AC8025P	AC425K	AC5015S AC520U	AC5025S AC530U AC1030U	AC5015S AC520U	AC5025S AC530U AC1030U	H10
Cutting Speed (m/min)	80-250	80-200	80-200	50-200	50-200	70-150	70-150	50-150	80-200	80-200	60-200	50-200	20-80	20-60	150-300

Grooving Tool Holders GND Series

Identification Details – Holders

GND M R 25 25 (M) - (T) 3 12 (J/JE) (- 035)



② Application		
Symbol	Application	
S	External Multi-Purpose	Grooving/Cut Off/ Turning/Profiling
M	External Multi-Purpose	Grooving/Cut Off/ Turning/Profiling
L	External Grooving	Grooving/Cut Off
MS	External L-Styled (Side Cut) Multi-Purpose	Grooving/Turning/Profiling
LS	External L-Styled (Side Cut) Deep Grooving	Grooving
N	Necking	Necking
I	Internal Grooving	Grooving/Turning/ Profiling
IS	Internal Grooving	Grooving/Turning/ Profiling
F	Face Grooving	Grooving/Turning/ Profiling
FS	L-Shaped Tools for Facing	Grooving/Turning/ Profiling
CM	Cassette for Polygon Holder	Radial Grooving
CF	Cassette for Polygon Holder	Face Grooving

③ Holder Design	
Symbol	Direction
R	Right
L	Left

④ Shank Height / Diameter		
Application	Symbol	Height (mm)
External/ Face Grooving (Shank Height)	10	10
	12	12
	16	16
	20	20
	25	25
Internal Grooving (Shank Diameter)	25	25
	32	32
	40	40

⑤ Shank Width / Work Diameter		
Application	Symbol	Width (mm)
External/ Face Grooving (Shank Width)	10	10
	12	12
	16	16
	20	20
	25	25
Internal Grooving (Shank Diameter)	32	32
	40	40
	50	50

⑥ Shank Length	
Symbol	Length (mm)
JX	120
K	125
M	150
P	170

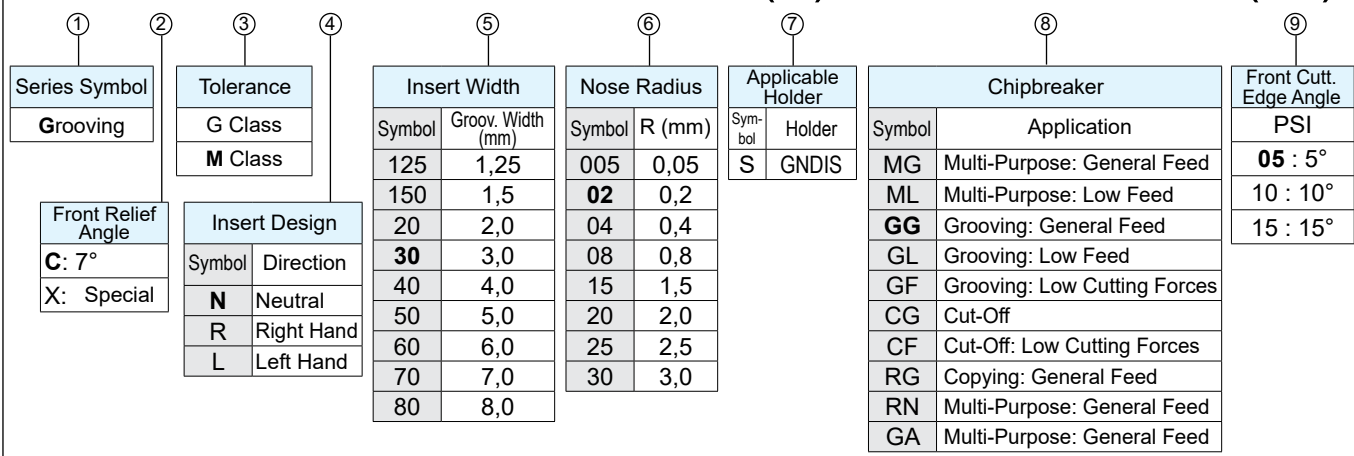
⑧ Insert Width	
Symbol	Groov. Width (mm)
1,25	1,25
1,5	1,5
2	2,0
3	3,0
4	4,0
5	5,0
6	6,0
7	7,0
8	8,0

⑨ Max. Grooving Depth			
Symbol	Groov. Depth (mm)	Symbol	Groov. Depth (mm)
06	6,0	20	20,0
08	8,0	23	23,0
10	10,0	25	25,0
11	11,0		
12	12,0		
12,5	12,5		
14	14,0		
16	16,0		
18	18,0		

To ensure maximum rigidity, use the multi-purpose type holder to machine the maximum grooving depth.

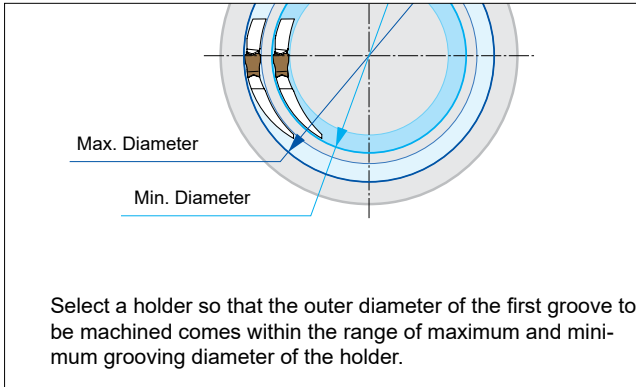
Identification Details – Inserts

G C M N 30 02 (S) - G G - (05)



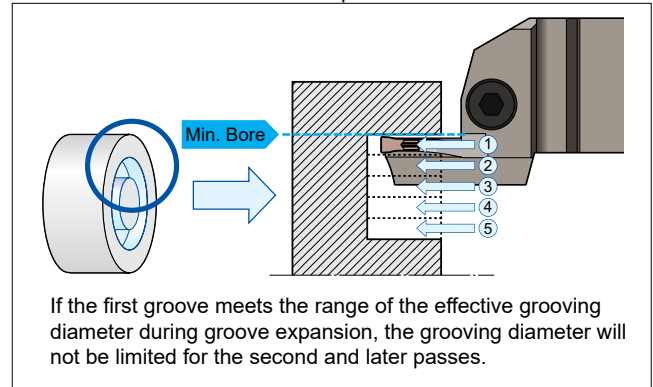
Key Points for Face Machining

Holder Selection



Precautions for Groove Expansion

Recommended Chipbreaker: **MG, ML, GG, GL, GF**

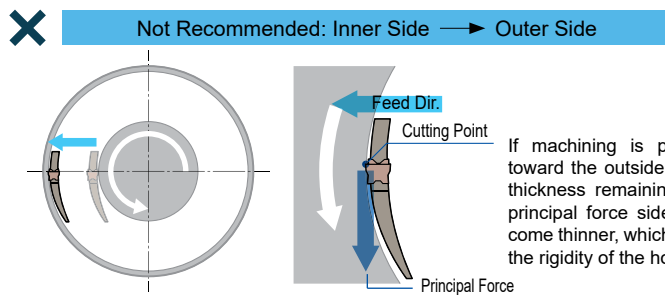
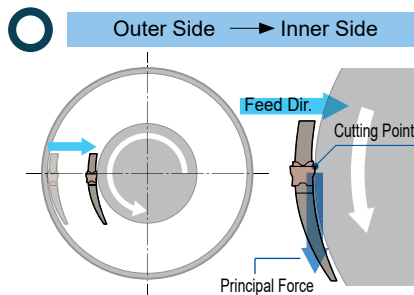


Precautions for Turning

Recommended Chipbreaker:

MG, ML

Considering the rigidity of the holder, we recommend machining from the outside to the inside.



- If the first groove meets the range of the effective grooving diameter in face turning, the grooving diameter will not be limited for the second and later passes.
- Select the chipbreaker of the lower limit side of the recommended cutting conditions and straight chips before evacuation. (In face grooving, broken chips easily get stuck in grooves, which causes problems.)
- When breaking chips, step feed is required.

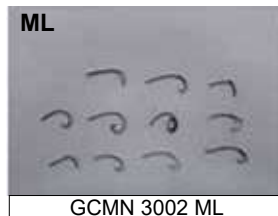
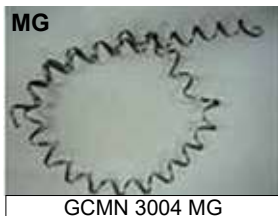
Key Points for Internal Machining

Precautions for Internal Machining

Recommended Chipbreaker:

ML, GL

If the prepared hole diameter is small, use an ML or GL low-feed chipbreaker, each of which reduces chip curl diameter, to ensure adequate chip evacuation.



Work Material: 15CrMo5 (Ø 25 mm)
Holder: GNDI R2532 T306
Insert: GCM N300 □-□□
Cutting Conditions: $v_c=100$ m/min, $f=0,10$ mm/rev, $a_p=3,0$ mm, wet



! Chip shapes differ between internal and external machining even under the same cutting conditions.

Work Material: 15CrMo5
Holder: GNDL R2525M 320
Insert: GCM N3002 GG
Cutting Conditions: $v_c=100$ m/min, $f=0,10$ mm/rev, $a_p=5$ mm, wet

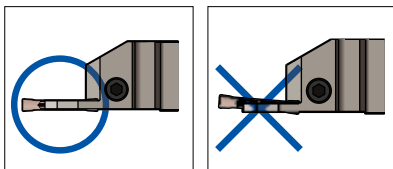
Grooving Tool Holders GND Series

Precautions for Grooving Tool Holders GND Series

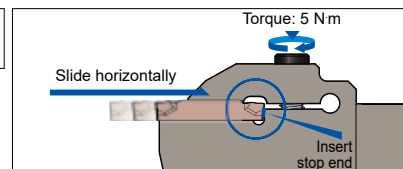
Notes on how to Attach Inserts

- Remove any foreign particles or oil from the insert seat before attaching the insert.
- Ensure the seat location is clean and free of damage.
- Slide the insert level over its seat.
- Push the insert with its opposite end (the holder side) firmly against the insert stop end.
- The recommended tightening torque is 5 N.m. Tightening above the recommended torque may damage the insert or the holder which could cause injury and other accidents.

③ Attach insert on the seat flat.



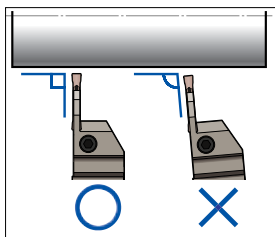
④ Push insert fully into place.



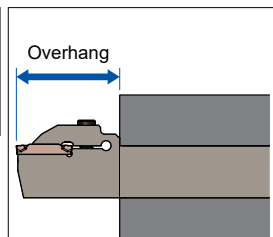
Notes on how to Apply Holders

- Remove any foreign particles or oil from the tool post before attaching the holder.
- Ensure the seat location is clean and free of damage.
- Attach the holder so that the insert is perpendicular to the workpiece.
- Set holder with shortest possible overhang.
- When grooving or turning, adjust the center height of the cutting edge to as close ± 0 mm as possible. (Within $\pm 0,1$ mm is recommended)
- Incorrect center height adjustment may cause chattering. (In cut-off applications, adjust the center height of the cutting edge to a value from 0,0 to +0,2 mm). A lower center height will result in larger nip at the center.

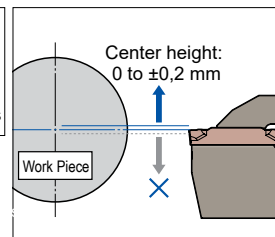
③ Attach at right angle to workpiece.



④ Set with short overhang

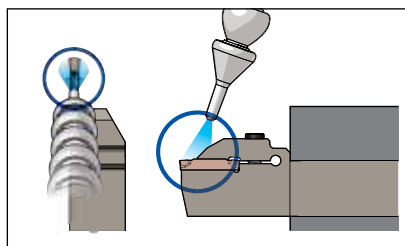


⑥ Center height adjustment in cut-off applications



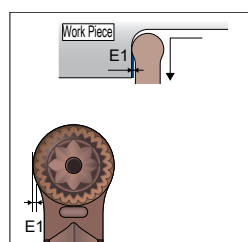
Notes on Setting Coolant Supply Nozzle

Set the coolant supply nozzle so that coolant can be supplied from the top of the upper clamp unit.



Maximum Depth of Cut

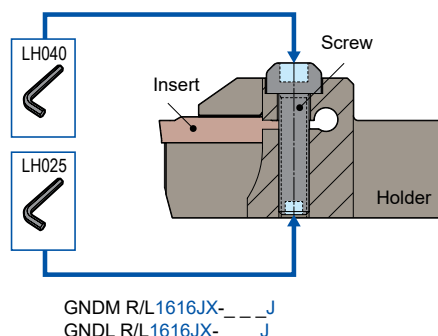
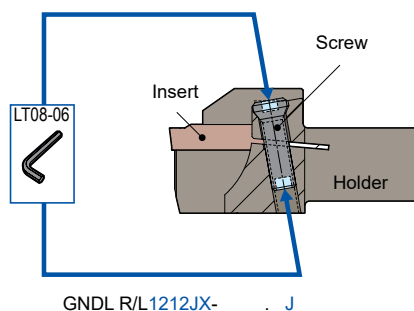
Maximum depth of cut when pulling up with RG chipbreaker



Grooving Width (mm)	Max. Depth of Cut (mm)
CW	E1
3,0	0,15
4,0	0,20
5,0	0,25
6,0	0,30
7,0	0,35
8,0	0,40

Key Points of Internal Coolant-Type Holders for Small Lathes

The insert for internal coolant-type 12 mm and 16 mm holders for small lathes can be replaced from either the top or bottom.



Key Points for Connecting Hoses and Connectors

■ Connecting Hoses and Connectors

GNDM-JE (European standard)

Apply sealant such as commercial sealing tape to the piping connection parts.
GNDM-JE type holders have a plug (XP02-E) mounted on the holder back end at shipping. (see fig. 1)
When piping from the holder back end, mount a grub screw (BT0505-E) on the bottom of the holder for use. (see fig. 2)

Fig. 1 Piping from bottom

Fig. 2 Piping from back end

■ Connecting Hoses and Connectors (for Small Lathes)

GNDM-J (Japanese standard)

Apply sealant such as commercial sealing tape to the piping connection parts.
Refer to the figure below for mounting the plug during piping.

Piping from side (when shipped)

Piping from rear

Hoseless coolant support products (when shipped)

* The plug will protrude a few millimeters when mounted to the side.

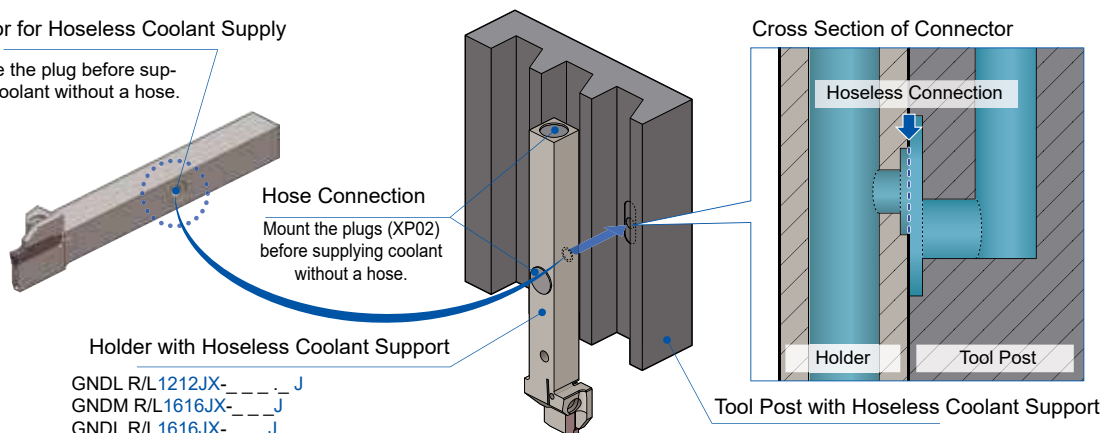
* 1 The plug will protrude a few millimeters when mounted to the side.
* 2 A plug is attached when shipped. Remove this plug before supplying coolant without a hose.

Holder with Hoseless Coolant Support

Direct coolant supply from the tool post is possible without a hose

Connector for Hoseless Coolant Supply

Remove the plug before supplying coolant without a hose.

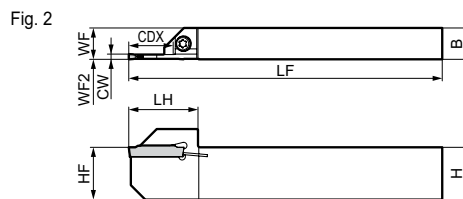
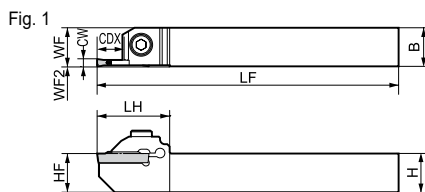
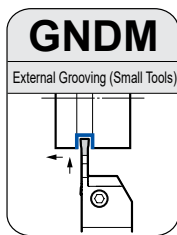


GNDL R/L1212JX-__J
GNDM R/L1616JX-__J
GNDL R/L1616JX-__J

Grooving Tool Holders GNDM / GNDL Type

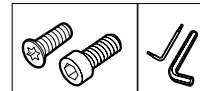
Expansion

External General-Purpose Type for Small Lathes (Grooving, Turning, Profiling)



Above figures show right hand tools.

Spare Parts



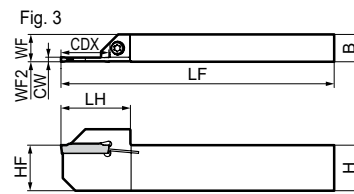
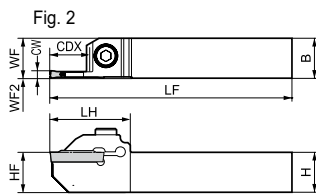
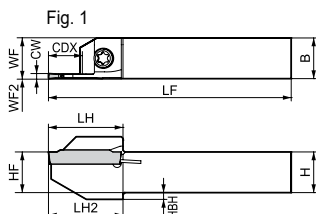
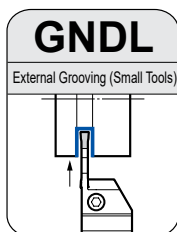
Use the multi-purpose profiling insert for turning (wide grooves).

■ Holders

Cat. No.	Stock		Dimensions (mm)							Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Fig.	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	LH	WF2								
GNDM R/L 1616 JX 1.2508	●	●	16	16	120	(16)	16	26	0	1,25	8,0	16	1	GCM N125005 GF	BX0515	4,0	LH040
GNDM R/L 1616 JX 1.510	●	●	16	16	120	(16)	16	26	0	1,50	10,0	20					
GNDM R/L 1616 JX 212	●	●	16	16	120	(16)	16	30	0	2,00	12,0	24					
GNDM R/L 1616 JX 312	●	●	16	16	120	(16)	16	30	0	3,00	12,0	24					
GNDM R/L 2012 JX 217 New	○	○	20	12	120	(12)	20	26,5	0	2,00	17,0	34	2	GCM □20○-□□	BFTX0414	3,0	LT15-10
GNDM R/L 2012 JX 317 New	○	○	20	12	120	(12)	20	26,5	0	3,00	17,0	34					

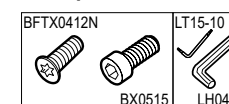
Select holders and inserts with the same grooving width (CW).

External Grooving / Cut-Off for Small Lathes



Above figures show right hand tools.

■ Spare Parts



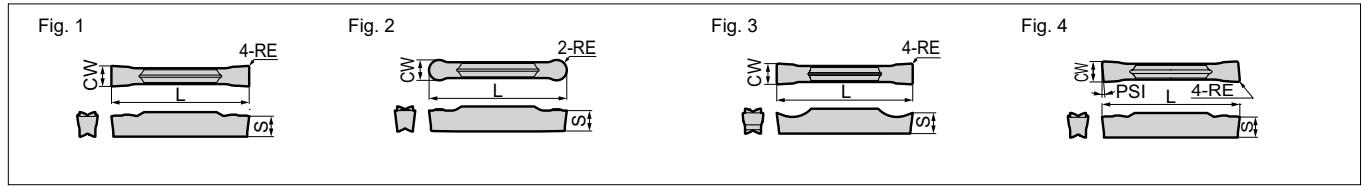
■ Holders

Cat. No.	Stock		Dimensions (mm)									Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Fig.	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	HBH	LH	LH2	WF2								
GNDL R/L 1010 JX 1.2510	●	●	10	10	120	(10)	10	2,0	18	18,3	0	1,25	10,0	20	1	GCM N125005 GF	BFTX0412N	3,0	LT15-10
GNDL R/L 1010 JX 1.510	●	●	10	10	120	(10)	10	2,0	18	18,3	0	1,50	10,0	20					
GNDL R/L 1010 JX 210	●	●	10	10	120	(10)	10	2,0	22	22,3	0	2,00	10,0	20					
GNDL R/L 1010 JX 310	●	●	10	10	120	(10)	10	2,0	22	22,3	0	3,00	10,0	20					
GNDL R/L 1212 JX 1.2512	●	●	12	12	120	(12)	12	2,0	19	19,3	0	1,25	12,0	24	1	GCM N125005 GF	BFTX0412N	3,0	LT15-10
GNDL R/L 1212 JX 1.512	●	●	12	12	120	(12)	12	2,0	19	19,3	0	1,50	12,0	24					
GNDL R/L 1212 JX 212.5	●	●	12	12	120	(12)	12	2,0	22	22,3	0	2,00	12,5	25					
GNDL R/L 1212 JX 312.5	●	●	12	12	120	(12)	12	2,0	22	22,3	0	3,00	12,5	25					
GNDL R/L 1616 JX 1.2512.5	○	●	16	16	120	(16)	16	-	28	-	0	1,25	12,5	25	2	GCM N125005 GF	BFTX0515	4,0	LH040
GNDL R/L 1616 JX 1.512.5	●	●	16	16	120	(16)	16	-	28	-	0	1,50	12,5	25					
GNDL R/L 1616 JX 216	●	●	16	16	120	(16)	16	-	32	-	0	2,00	16,0	32					
GNDL R/L 1616 JX 316	●	●	16	16	120	(16)	16	-	32	-	0	3,00	16,0	32					
GNDL R/L 2012 JX 221 New	○	○	20	12	120	(12)	20	-	30,5	-	0	2,00	21,0	42	3	GCM □20○-□□	BFTX0414	3,0	LT15-10
GNDL R/L 2012 JX 321 New	○	○	20	12	120	(12)	20	-	30,5	-	0	3,00	21,0	42					

Select holders and inserts with the same grooving width (CW).

Inserts for GNDM / GNDL (Small Tools)

Coated Carbide Cermet Carbide



Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3002 MG N3004 MG	●	●	●	○	●	●	○	●	—	3,0	±0.03 ±0.03	0,2 0,4	21,1 21,1	3,8 3,8	1
GCM N2002 ML N3002 ML N3004 ML	—	—	—	—	●	●	○	●	○	2,0 3,0	±0.03 ±0.03 ±0.03	0,2 0,2 0,4	21,1 21,1 21,1	3,6 3,8 3,8	1

Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
								Cutting Width	Tolerance				
GCM N2002 GG N3002 GG N3004 GG	●	●	●	●	○	●	—	2,0 3,0	±0.03 ±0.03 ±0.03	0,2 0,2 0,4	21,1 21,1 21,1	3,6 3,8 3,8	1
GCM N2002 GL N2004 GL N3002 GL N3004 GL	●	●	●	●	○	●	—	2,0 3,0	±0.03 ±0.03 ±0.03 ±0.03	0,2 0,4 0,2 0,4	21,1 21,1 21,1 21,1	3,6 3,6 3,8 3,8	1
GCM N125005 GF N150005 GF	—	—	—	—	—	●	—	1,25 1,5	±0.03 ±0.03	0,05 0,05	17,4 17,4	3,2 3,7	1
GCM N2002 GF N2004 GF N3002 GF N3004 GF	—	—	●	●	○	○	—	2,0 3,0	±0.03 ±0.03 ±0.03 ±0.03	0,2 0,4 0,2 0,4	21,1 21,1 21,1 21,1	3,6 3,6 3,8 3,8	1

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3015 RG	●	●	●	●	●	○	○	○	—	3,0	±0.03	1,5	21,1	3,8	2

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N2010 RN N3015 RN	—	—	—	—	●	●	○	○	—	2,0 3,0	±0.03 ±0.03	1,0 1,5	21,7 22,6	3,6 3,8	2

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCG N2002 GA N3002 GA	○	2,0 3,0	±0.025 ±0.025	0,2 0,2	21,1 21,1	3,6 3,8	3

Cut-Off Machining (Handed Edge)

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	PSI	CW		RE	L	S	Fig.
									Cutting Width	Tolerance				
GCM R2002 CG 05 L2002 CG 05	●	●	●	●	○	●	—	5° 5°	2,0 2,0	±0.03 ±0.03	0,2 0,2	21,1 21,1	3,6 3,6	4
GCM R3002 CG 05 L3002 CG 05	●	●	●	●	○	●	—	5° 5°	3,0 3,0	±0.03 ±0.03	0,2 0,2	21,3 21,3	3,8 3,8	
GCM R4002 CG 05 L4002 CG 05	●	●	●	●	○	●	—	5° 5°	4,0 4,0	±0.04 ±0.04	0,2 0,2	26,7 26,7	4,0 4,0	
GCM R2003 CF 10 L2003 CF 10	—	—	●	●	—	●	—	10° 10°	2,0 2,0	±0.08 ±0.08	0,03 0,03	22,4 22,4	3,6 3,6	4
GCM R3003 CF 10 L3003 CF 10	—	—	●	●	—	●	—	10° 10°	3,0 3,0	±0.08 ±0.08	0,03 0,03	22,4 22,4	3,8 3,8	
GCM R2003 CF 15 L2003 CF 15	—	—	●	●	—	●	—	15° 15°	2,0 2,0	±0.08 ±0.08	0,03 0,03	22,4 22,4	3,6 3,6	
GCM R3003 CF 15 L3003 CF 15	—	—	●	●	—	●	—	15° 15°	3,0 3,0	±0.08 ±0.08	0,03 0,03	22,4 22,4	3,8 3,8	

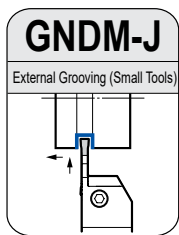
GCM R: Right hand GCM L: Left hand
Combine the insert with a holder such that the width of cut (CW) matches.

Grooving Tool Holders GNDM-J/GNDL-J Type

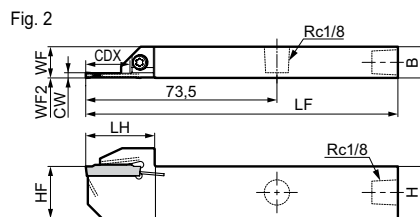
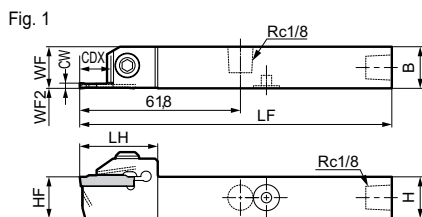


Holder with Internal Coolant

External Multi-Purpose Type for Small Lathes (Grooving, Turning, Profiling)

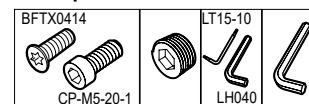


Use the multi-purpose profiling insert for turning (wide grooves).



Above figures show right hand tools.

Spare Parts

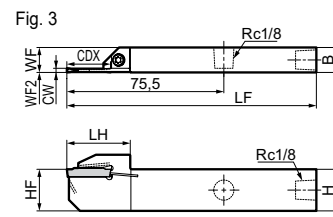
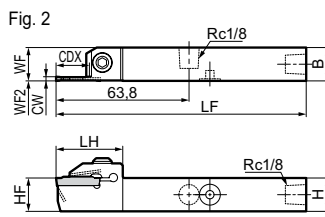
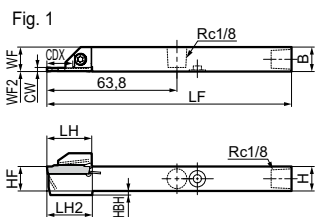
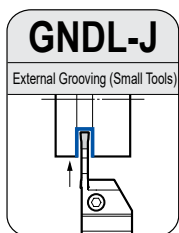


■ Holders

Cat. No.	Stock		Dimensions (mm)									Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Fig.	Applicable Insert	Screw / Cap Screw	Plug	Wrench for Upper Surface	Wrench for Lower Surface
	R	L	H	B	LF	WF	HF	LH	WF2	CW	CDX									
GNDM R/L 1616 JX 212 J	○	○	16	16	120 (16)	16	30,0	0	2,0	12,0	24	1	GC □ 2000-□□	CP-M5-20-1	5,0	XP02	LH040	LH025		
GNDM R/L 1616 JX 312 J	○	○	16	16	120 (16)	16	30,0	0	3,0	12,0	24	1	GC □ 3000-□□	CP-M5-20-1	5,0	XP02	LH040	LH025		
GNDM R/L 2012 JX 217 J	○	○	20	12	120 (12)	20	26,5	0	2,0	17,0	34	2	GC □ 2000-□□	BFTX0414	3,0	XP02	LT15-10			
GNDM R/L 2012 JX 317 J	○	○	20	12	120 (12)	20	26,5	0	3,0	17,0	34	2	GC □ 3000-□□	BFTX0414	3,0	XP02	LT15-10			

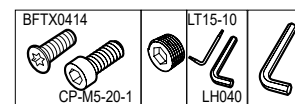
Select holders and inserts with the same grooving width (CW).

External Grooving / Cut-Off for Small Lathes



Above figures show right hand tools.

■ Spare Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)									Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Fig.	Applicable Insert	Screw / Cap Screw	Plug	Wrench for Upper Surface	Wrench for Lower Surface
	R	L	H	B	LF	WF	HF	HBH	LH	LH2	WF2									
GNDL R/L 1212 JX 212.5 J	○	○	12	12	120 (12)	12	2,0	22,0	22,3	0	2,0	12,5	25	1	GCM □ 2000-□□	BFTX0415T8R	1,5	XP02	LT08-06	
GNDL R/L 1212 JX 312.5 J	○	○	12	12	120 (12)	12	2,0	22,0	22,3	0	3,0	12,5	25	1	GC □ 3000-□□	BFTX0415T8R	1,5	XP02	LT08-06	
GNDL R/L 1616 JX 216 J	○	○	16	16	120 (16)	16	-	32,0	-	0	2,0	16,0	32	2	GC □ 2000-□□	CP-M5-20-1	5,0	XP02	LH040	LH025
GNDL R/L 1616 JX 316 J	○	○	16	16	120 (16)	16	-	32,0	-	0	3,0	16,0	32	2	GC □ 3000-□□	CP-M5-20-1	5,0	XP02	LH040	LH025
GNDL R/L 2012 JX 221 J	○	○	20	12	120 (12)	20	-	30,5	-	0	2,0	21,0	42	3	GCM □ 2000-□□	BFTX0414	3,0	XP02	LT15-10	
GNDL R/L 2012 JX 321 J	○	○	20	12	120 (12)	20	-	30,5	-	0	3,0	21,0	42	3	GCM □ 3000-□□	BFTX0414	3,0	XP02	LT15-10	

Select holders and inserts with the same grooving width (CW).

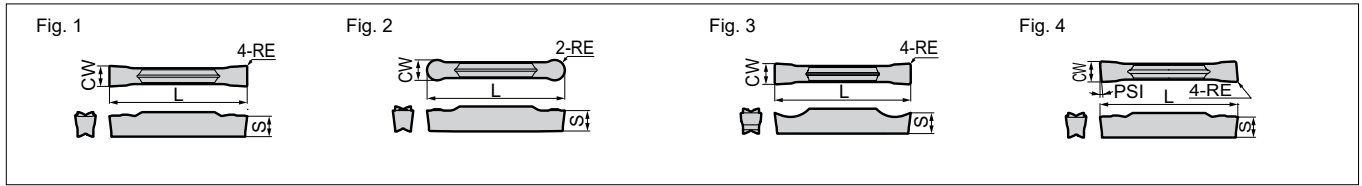
■ Parts (Hoses and Connectors)

See page 21

Grooving Tool Holders GNDM-J / GNDL-J Type

Inserts for GNDM-J / GNDL-J (Small Tools)

Coated Carbide Cermet Carbide



● Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3002 MG N3004 MG	●	●	●	○	●	●	○	●	○	3,0	±0.03	0,2	21,1	3,8	1
											±0.03	0,4	21,1	3,8	
GCM N2002 ML N3002 ML N3004 ML	-	-	-	-	●	●	○	●	○	2,0	±0.03	0,2	21,1	3,6	1
											±0.03	0,2	21,1	3,8	
											±0.03	0,4	21,1	3,8	

● Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.	
								Cutting Width	Tolerance					
GCM N2002 GG N3002 GG N3004 GG	●	●	●	●	○	●	○	2,0	±0.03	0,2	21,1	3,6	1	
										±0.03	0,4	21,1		3,8
											±0.03	0,4		21,1
GCM N2002 GL N2004 GL N3002 GL N3004 GL	●	●	●	●	○	●	○	2,0	±0.03	0,2	21,1	3,6	1	
										±0.03	0,4	21,1		3,6
										±0.03	0,2	21,1		3,8
										±0.03	0,4	21,1		3,8
GCM N125005 GF N150005 GF	-	-	-	-	-	●	-	1,25	±0.03	0,05	17,4	3,2	1	
										±0.03	0,05	17,4		3,7
GCM N2002 GF N2004 GF N3002 GF N3004 GF	-	-	●	●	○	○	○	2,0	±0.03	0,2	21,1	3,6	1	
										±0.03	0,4	21,1		3,6
										±0.03	0,2	21,1		3,8
										±0.03	0,4	21,1		3,8

● External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3015 RG	●	●	●	○	●	●	○	●	○	3,0	±0.03	1,5	21,1	3,8	2

● Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N2010 RN N3015 RN	-	-	-	○	●	●	○	○	-	2,0	±0.03	1,0	21,7	3,6	2
											±0.03	1,5	22,6	3,8	

● Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCG N2002 GA N3002 GA	○	2,0	±0.025	0,2	21,1	3,6	3
		3,0	±0.025	0,2	21,1	3,8	

● Cut-Off Machining (Handed Edge)

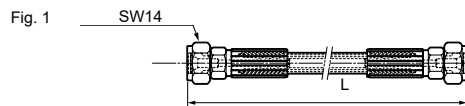
Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	PSI	CW		RE	L	S	Fig.
									Cutting Width	Tolerance				
GCM R2002 CG 05 L2002 CG 05	●	●	●	●	○	●	-	5°	2,0	±0.03	0,2	21,1	3,6	4
GCM R3002 CG 05 L3002 CG 05	●	●	●	●	○	●	-	5°	3,0	±0.03	0,2	21,3	3,8	
GCM R4002 CG 05 L4002 CG 05	●	●	●	●	○	●	-	5°	4,0	±0.04	0,2	26,7	4,0	
								5°	4,0	±0.04	0,2	26,7	4,0	
GCM R2003 CF 10 L2003 CF 10	-	-	●	●	-	●	-	10°	2,0	±0.08	0,03	22,4	3,6	4
GCM R3003 CF 10 L3003 CF 10	-	-	●	●	-	●	-	10°	3,0	±0.08	0,03	22,4	3,8	
GCM R2003 CF 15 L2003 CF 15	-	-	●	●	-	●	-	15°	2,0	±0.08	0,03	22,4	3,6	
GCM R3003 CF 15 L3003 CF 15	-	-	●	●	-	●	-	15°	3,0	±0.08	0,03	22,4	3,8	

GCM R: Right hand GCM L: Left hand
Combine the insert with a holder such that the width of cut (CW) matches.

Parts (Hoses and Connectors)

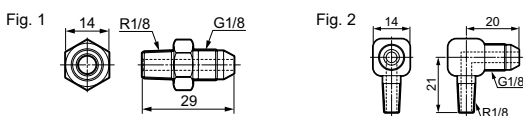
● Parts Hoses



Cat. No.	Stock	L (mm)	Screw Standard	Screw Standard	Fig.
J-HOSE-G1/8-G1/8-200-E	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300-E	●	300	G1/8	G1/8	1

Hoses are sold separately.

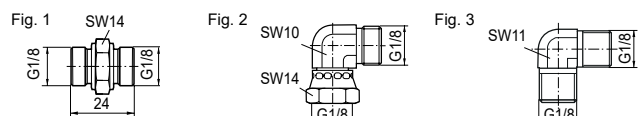
● Parts (Connector) on Holder Side



Cat. No.	Stock	Screw Standard	Screw Standard	Fig.
J-G1/8-R1/8-00	○	G1/8	R1/8	1
J-G1/8-R1/8-90	○	G1/8	R1/8	2

Connectors are sold separately.

● Parts (Connector) on Machine Side

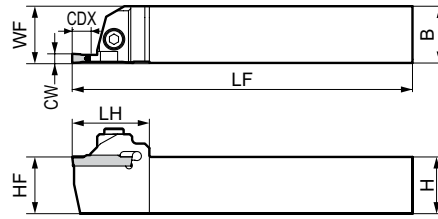
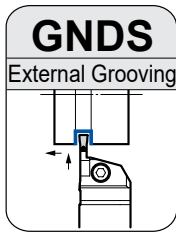


Cat. No.	Stock	Screw Standard	Screw Standard	Fig.
J-G1/8-G1/8-00-E	●	G1/8	G1/8	1
J-G1/8-G1/8F-90-E	●	G1/8	G1/8	2
J-G1/8-G1/8-90-E	●	G1/8	G1/8	3

Connectors are sold separately.

Grooving Tool Holders GNDS Type

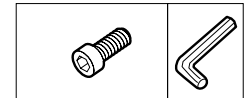
External Multi-Purpose Shallow Grooves Type (Grooving, Turning, Profiling)



Use the multi-purpose profiling insert for turning (wide grooves).

Above figures show right hand tools.

■ Spare Parts



■ Holders

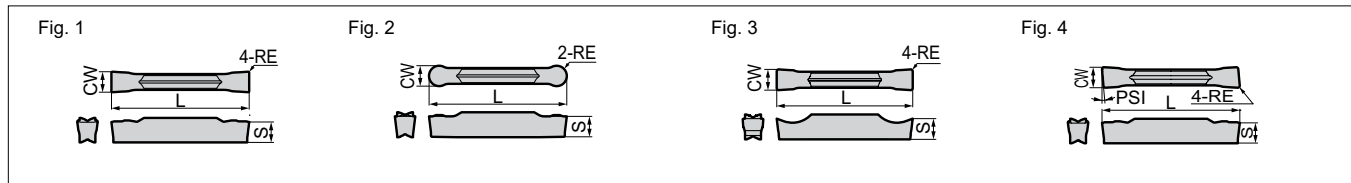
Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	LH						
GNDS R/L 2020 K 206	●	●	20	20	125	20	20	30	2,0	6	GCM □2000-□□	BX0520	5,0	LH040
GNDS R/L 2020 K 306	●	●	20	20	125	20	20	30	3,0	6	GCM □3000-□□			
GNDS R/L 2020 K 410	●	●	20	20	125	20	20	34	4,0	10	GCM □4000-□□			
GNDS R/L 2020 K 510	●	●	20	20	125	20	20	34	5,0	10	GCM N5000-□□			
GNDS R/L 2020 K 610	●	●	20	20	125	20	20	34	6,0	10	GCM N6000-□□			
GNDS R/L 2525 M 206	●	●	25	25	150	25	25	30	2,0	6	GCM □2000-□□			
GNDS R/L 2525 M 306	●	●	25	25	150	25	25	30	3,0	6	GCM □3000-□□			
GNDS R/L 2525 M 410	●	●	25	25	150	25	25	34	4,0	10	GCM □4000-□□			
GNDS R/L 2525 M 510	●	●	25	25	150	25	25	34	5,0	10	GCM N5000-□□			
GNDS R/L 2525 M 610	●	●	25	25	150	25	25	34	6,0	10	GCM N6000-□□			

Select holders and inserts with the same grooving width (CW).

Grooving Tool Holders GNDS Type

Inserts for GNDS

Coated Carbide Cermet Carbide



● Grooving / Traversing

Dimensions (mm)

Cat. No.	CW								Fig.						
	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U		T2500A	Cutting Width	Tolerance	RE	L	S
GCM N3002 MG	●	●	●	○	●	●	●	●	-	3,0	±0.03	0,2	21,1	3,8	1
N3004 MG	●	●	●	○	●	●	●	●	-	3,0	±0.03	0,4	21,1	3,8	
N4002 MG	●	●	●	○	●	●	●	●	-	4,0	±0.03	0,2	26,4	4,0	
N4004 MG	●	●	●	○	●	●	●	●	-	4,0	±0.03	0,4	26,4	4,0	
N4008 MG	●	●	●	○	●	●	●	●	-	4,0	±0.03	0,8	26,4	4,0	
N5004 MG	●	●	●	○	●	●	●	●	-	5,0	±0.03	0,4	26,4	4,1	
N5008 MG	●	●	●	○	●	●	●	●	-	5,0	±0.03	0,8	26,4	4,1	
N6004 MG	●	●	●	○	●	●	●	●	-	6,0	±0.03	0,4	26,4	4,5	
N6008 MG	●	●	●	○	●	●	●	●	-	6,0	±0.03	0,8	26,4	4,5	
GCM N2002 ML	-	-	-	-	●	●	●	●	○	2,0	±0.03	0,2	21,1	3,6	1
N3002 ML	●	●	●	○	●	●	●	●	○	3,0	±0.03	0,2	21,1	3,8	
N3004 ML	●	●	●	○	●	●	●	●	○	3,0	±0.03	0,4	21,1	3,8	
N4002 ML	●	●	●	○	●	●	●	●	○	4,0	±0.03	0,2	26,4	4,0	
N4004 ML	●	●	●	○	●	●	●	●	○	4,0	±0.03	0,4	26,4	4,0	
N4008 ML	●	●	●	○	●	●	●	●	○	4,0	±0.03	0,8	26,4	4,0	
N5004 ML	●	●	●	○	●	●	●	●	○	5,0	±0.03	0,4	26,4	4,1	
N5008 ML	●	●	●	○	●	●	●	●	○	5,0	±0.03	0,8	26,4	4,1	
N6004 ML	●	●	●	○	●	●	●	●	○	6,0	±0.03	0,4	26,4	4,5	
N6008 ML	●	●	●	○	●	●	●	●	○	6,0	±0.03	0,8	26,4	4,5	

● Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	CW								Fig.					
	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	Cutting Width		Tolerance	RE	L	S	
GCM N2002 GG	●	●	●	●	●	●	●	-	2,0	±0.03	0,2	21,1	3,6	1
N3002 GG	●	●	●	●	○	●	●	-	3,0	±0.03	0,2	21,1	3,8	
N3004 GG	●	●	●	●	○	●	●	-	3,0	±0.03	0,4	21,1	3,8	
N4002 GG	●	●	●	●	○	●	●	-	4,0	±0.03	0,2	26,4	4,0	
N4004 GG	●	●	●	●	○	●	●	-	4,0	±0.03	0,4	26,4	4,0	
N5002 GG	●	●	●	●	○	●	●	-	5,0	±0.03	0,2	26,4	4,1	
N5004 GG	●	●	●	●	○	●	●	-	5,0	±0.03	0,4	26,4	4,1	
N6002 GG	●	●	●	●	○	●	●	-	6,0	±0.03	0,2	26,4	4,5	
N6004 GG	●	●	●	●	○	●	●	-	6,0	±0.03	0,4	26,4	4,5	
GCM N2002 GL	●	●	●	●	○	●	●	-	2,0	±0.03	0,2	21,1	3,6	1
N2004 GL	●	●	●	●	○	●	●	-	2,0	±0.03	0,4	21,1	3,6	
N3002 GL	●	●	●	●	○	●	●	-	3,0	±0.03	0,2	21,1	3,8	
N3004 GL	●	●	●	●	○	●	●	-	3,0	±0.03	0,4	21,1	3,8	
N4002 GL	●	●	●	●	○	●	●	-	4,0	±0.03	0,2	26,4	4,0	
N4004 GL	●	●	●	●	○	●	●	-	4,0	±0.03	0,4	26,4	4,0	
N5002 GL	●	●	●	●	○	●	●	-	5,0	±0.03	0,2	26,4	4,1	
N5004 GL	●	●	●	●	○	●	●	-	5,0	±0.03	0,4	26,4	4,1	
N6002 GL	●	●	●	●	○	●	●	-	6,0	±0.03	0,2	26,4	4,5	
N6004 GL	●	●	●	●	○	●	●	-	6,0	±0.03	0,4	26,4	4,5	
GCM N2002 GF	-	-	●	●	○	●	●	○	2,0	±0.03	0,2	21,1	3,6	1
N2004 GF	-	-	●	●	○	●	●	○	2,0	±0.03	0,4	21,1	3,6	
N3002 GF	●	●	●	●	○	●	●	○	3,0	±0.03	0,2	21,1	3,8	
N3004 GF	●	●	●	●	○	●	●	○	3,0	±0.03	0,4	21,1	3,8	
N4002 GF	●	●	●	●	○	●	●	○	4,0	±0.03	0,2	26,4	4,0	
N4004 GF	●	●	●	●	○	●	●	○	4,0	±0.03	0,4	26,4	4,0	
N5002 GF	●	●	●	●	○	●	●	○	5,0	±0.03	0,2	26,4	4,1	
N5004 GF	●	●	●	●	○	●	●	○	5,0	±0.03	0,4	26,4	4,1	
N6002 GF	●	●	●	●	○	●	●	○	6,0	±0.03	0,2	26,4	4,5	
N6004 GF	●	●	●	●	○	●	●	○	6,0	±0.03	0,4	26,4	4,5	

● External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	CW								Fig.						
	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U		T2500A	Cutting Width	Tolerance	RE	L	S
GCM N3015 RG	●	●	●	●	●	●	○	●	○	3,0	±0.03	1,5	21,1	3,8	2
N4020 RG	●	●	●	●	●	●	○	●	○	4,0	±0.03	2,0	26,4	4,0	
N5025 RG	●	●	●	●	●	●	○	●	○	5,0	±0.03	2,5	27,2	4,1	
N6030 RG	●	●	●	●	●	●	○	●	○	6,0	±0.03	3,0	27,5	4,5	

● Cut-Off Machining (Handed Edge)

Dimensions (mm)

Cat. No.	CW								PSI	Fig.				
	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Cutting Width			Tolerance	RE	L	S
GCM R2002 CG 05	●	●	●	●	○	●	-	5°	2,0	±0.03	0,2	21,1	3,6	4
L2002 CG 05	●	●	●	●	○	●	-	5°	2,0	±0.03	0,2	21,1	3,6	
GCM R3002 CG 05	●	●	●	●	○	●	-	5°	3,0	±0.03	0,2	21,3	3,8	
L3002 CG 05	●	●	●	●	○	●	-	5°	3,0	±0.03	0,2	21,3	3,8	
GCM R4002 CG 05	●	●	●	●	○	●	-	5°	4,0	±0.04	0,2	26,7	4,0	
L4002 CG 05	●	●	●	●	○	●	-	5°	4,0	±0.04	0,2	26,7	4,0	
GCM R2003 CF 10	-	-	●	●	-	●	-	10°	2,0	±0.08	0,03	22,4	3,6	
L2003 CF 10	-	-	●	●	-	●	-	10°	2,0	±0.08	0,03	22,4	3,6	
GCM R3003 CF 10	-	-	●	●	-	●	-	10°	3,0	±0.08	0,03	22,4	3,8	
L3003 CF 10	-	-	●	●	-	●	-	10°	3,0	±0.08	0,03	22,4	3,8	
GCM R2003 CF 15	-	-	●	●	-	●	-	15°	2,0	±0.08	0,03	22,4	3,6	4
L2003 CF 15	-	-	●	●	-	●	-	15°	2,0	±0.08	0,03	22,4	3,6	
GCM R3003 CF 15	-	-	●	●	-	●	-	15°	3,0	±0.08	0,03	22,4	3,8	
L3003 CF 15	-	-	●	●	-	●	-	15°	3,0	±0.08	0,03	22,4	3,8	

GCM R: Right hand GCM L: Left hand
Combine the insert with a holder such that the width of cut (CW) matches.

● Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	CW								Fig.						
	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U		T2500A	Cutting Width	Tolerance	RE	L	S
GCM N2010 RN	-	-	-	-	●	●	○	●	-	2,0	±0.03	1,0	21,7	3,6	2
N3015 RN	●	●	●	○	●	●	○	●	-	3,0	±0.03	1,5	22,6	3,8	
N4020 RN	●	●	●	○	●	●	○	●	-	4,0	±0.03	2,0	28,2	4,0	
N5025 RN	●	●	●	○	●	●	○	●	-	5,0	±0.03	2,5	28,3	4,1	
N6030 RN	●	●	●	○	●	●	○	●	-	6,0	±0.03	3,0	28,3	4,5	

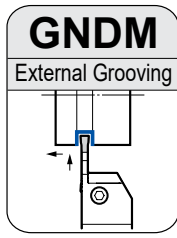
● Non-Ferrous Metals

Dimensions (mm)

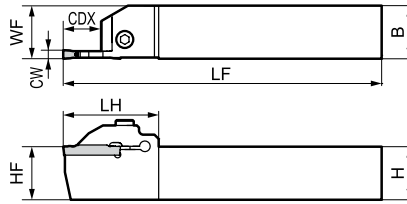
Cat. No.	H1	CW				Fig.	
		Cutting Width	Tolerance	RE	L		S
GCG N2002 GA	○	2,0	±0.025	0,2	21,1	3,6	3
N3002 GA	○	3,0	±0.025	0,2	21,1	3,8	
N4004 GA	○	4,0	±0.025	0,4	26,4	4,0	
N5004 GA	○	5,0	±0.025	0,4	26,4	4,1	
N6004 GA	○	6,0	±0.025	0,4	26,4	4,5	

Grooving Tool Holders GNDM / GNDMS Type

External Multi-Purpose Type (Grooving, Turning, Profiling)



Use for multi-purpose or profiling insert for turning (wide grooves).



Above figures show right hand tools.

Spare Parts

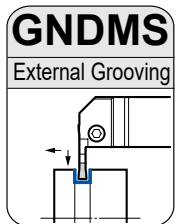


■ Holders

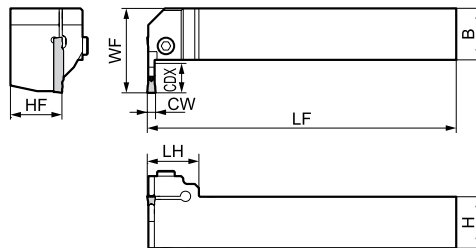
Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cut-Off Dia (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	LH							
GNDM R/L 2020 K 1.2510	●	●	20	20	125	20	20	34,0	1,25	10	20	GCM N125005 GF	BX0520	5,0	LH040
GNDM R/L 2020 K 1.510	●	●	20	20	125	20	20	34,0	1,50	10	20	GCM N150005 GF			
GNDM R/L 2020 K 210	●	●	20	20	125	20	20	33,6	2,00	10	20	GCM □2000-□□			
GNDM R/L 2020 K 312	●	●	20	20	125	20	20	36,6	3,00	12	24	GCM □3000-□□			
GNDM R/L 2020 K 418	●	●	20	20	125	20	20	45,0	4,00	18	36	GCM □4000-□□			
GNDM R/L 2020 K 518	●	●	20	20	125	20	20	45,0	5,00	18	36	GCM N5000-□□			
GNDM R/L 2020 K 618	●	●	20	20	125	20	20	45,0	6,00	18	36	GCM N6000-□□			
GNDM R/L 2525 M 1.2510	●	●	25	25	150	25	25	36,0	1,25	10	20	GCM N125005 GF			
GNDM R/L 2525 M 1.510	●	●	25	25	150	25	25	36,0	1,50	10	20	GCM N150005 GF			
GNDM R/L 2525 M 210	●	●	25	25	150	25	25	33,6	2,00	10	20	GCM N2000-□□			
GNDM R/L 2525 M 312	●	●	25	25	150	25	25	36,6	3,00	12	24	GCM □3000-□□			
GNDM R/L 2525 M 418	●	●	25	25	150	25	25	45,0	4,00	18	36	GCM □4000-□□			
GNDM R/L 2525 M 518	●	●	25	25	150	25	25	45,0	5,00	18	36	GCM N5000-□□			
GNDM R/L 2525 M 618	●	●	25	25	150	25	25	45,0	6,00	18	36	GCM N6000-□□			
GNDM R/L 3225 P 312			32	25	170	25	32	36,6	3,00	12	24	GCM □3000-□□	BX0620	6,0	LH050
GNDM R/L 3225 P 418			32	25	170	25	32	45,0	4,00	18	36	GCM □4000-□□			
GNDM R/L 3225 P 518			32	25	170	25	32	45,0	5,00	18	36	GCM N5000-□□			
GNDM R/L 3225 P 618			32	25	170	25	32	45,0	6,00	18	36	GCM N6000-□□			
GNDM R/L 3225 P 718			32	25	170	25	32	50,0	7,00	18	36	GCM N7000-□□			
GNDM R/L 3225 P 818			32	25	170	25	32	50,0	8,00	18	36	GCM N8000-□□			
GNDM R/L 3232 P 312	●	●	32	32	170	32	32	36,6	3,00	12	24	GCM □3000-□□	BX0620	6,0	LH050
GNDM R/L 3232 P 418	●	●	32	32	170	32	32	45,0	4,00	18	36	GCM □4000-□□			
GNDM R/L 3232 P 518	●	●	32	32	170	32	32	45,0	5,00	18	36	GCM N5000-□□			
GNDM R/L 3232 P 618	●	●	32	32	170	32	32	45,0	6,00	18	36	GCM N6000-□□			
GNDM R/L 3232 P 718	●	●	32	32	170	32	32	50,0	7,00	18	36	GCM N7000-□□			
GNDM R/L 3232 P 818	●	●	32	32	170	32	32	50,0	8,00	18	36	GCM N8000-□□			

Select holders and inserts with the same grooving width (CW).

External L-Styled (Side Cut) Multi-Purpose Type (Grooving, Turning, Profiling)

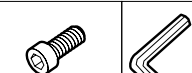


Use for multi-purpose or profiling insert for turning (wide grooves).



Above figures show right hand tools.

Spare Parts



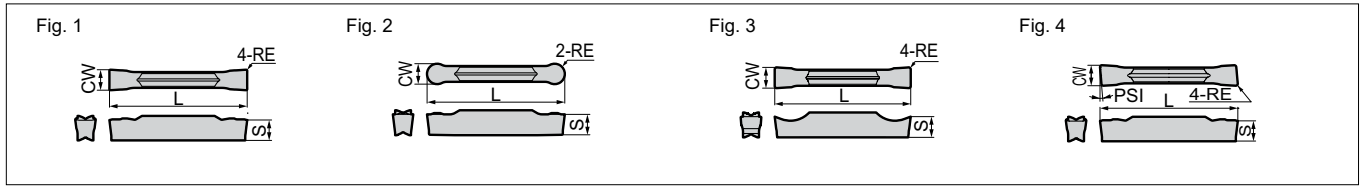
■ Holders

Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	LH						
GNDMS R/L 2020 K 310	●	○	20	20	125	32	20	25	3,0	10	GCM □3000-□□	BX0520	5,0	LH040
GNDMS R/L 2020 K 412	●	●	20	20	125	34	20	25	4,0	12	GCM □4000-□□			
GNDMS R/L 2020 K 512	●	○	20	20	125	34	20	25	5,0	12	GCM N5000-□□			
GNDMS R/L 2525 M 312	●	●	25	25	150	39	25	25	3,0	12	GCM □3000-□□			
GNDMS R/L 2525 M 414	●	●	25	25	150	41	25	25	4,0	14	GCM □4000-□□			
GNDMS R/L 2525 M 514	●	●	25	25	150	41	25	25	5,0	14	GCM N5000-□□			
GNDMS R/L 2525 M 614	●	●	25	25	150	41	25	25	6,0	14	GCM N6000-□□			

Select holders and inserts with the same grooving width (CW).

Inserts for GNDM / GNDMS

Coated Carbide Cermet Carbide



Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3002 MG	●	●	○	○	●	●	○	○	○	3,0	±0.03	0,2	21,1	3,8	1
N3004 MG	●	●	○	○	●	●	○	○	○	±0.03	0,4	21,1	3,8		
N4002 MG	●	●	○	○	●	●	○	○	○	±0.03	0,2	26,4	4,0		
N4004 MG	●	●	○	○	●	●	○	○	○	±0.03	0,4	26,4	4,0		
N4008 MG	●	●	○	○	●	●	○	○	○	±0.03	0,8	26,4	4,0		
N5004 MG	●	●	○	○	●	●	○	○	○	±0.03	0,4	26,4	4,1		
N5008 MG	●	●	○	○	●	●	○	○	○	±0.03	0,8	26,4	4,1		
N6004 MG	●	●	○	○	●	●	○	○	○	±0.03	0,4	26,4	4,5		
N6008 MG	●	●	○	○	●	●	○	○	○	±0.03	0,8	26,4	4,5		
N7004 MG	●	●	○	○	●	●	○	○	○	±0.04	0,4	28,8	5,5		
N7008 MG	●	●	○	○	●	●	○	○	○	±0.04	0,8	28,8	5,5		
N8004 MG	●	●	○	○	●	●	○	○	○	±0.04	0,4	28,8	6,0		
N8008 MG	●	●	○	○	●	●	○	○	○	±0.04	0,8	28,8	6,0		
GCM N2002 ML	○	○	○	○	○	○	○	○	○	2,0	±0.03	0,2	21,1	3,6	1
N3002 ML	●	●	○	○	●	●	○	○	○	±0.03	0,2	21,1	3,8		
N3004 ML	●	●	○	○	●	●	○	○	○	±0.03	0,4	21,1	3,8		
N4002 ML	●	●	○	○	●	●	○	○	○	±0.03	0,2	26,4	4,0		
N4004 ML	●	●	○	○	●	●	○	○	○	±0.03	0,4	26,4	4,0		
N4008 ML	●	●	○	○	●	●	○	○	○	±0.03	0,8	26,4	4,0		
N5004 ML	●	●	○	○	●	●	○	○	○	±0.03	0,4	26,4	4,1		
N5008 ML	●	●	○	○	●	●	○	○	○	±0.03	0,8	26,4	4,1		
N6004 ML	●	●	○	○	●	●	○	○	○	±0.03	0,4	26,4	4,5		
N6008 ML	●	●	○	○	●	●	○	○	○	±0.03	0,8	26,4	4,5		
N7004 ML	●	●	○	○	●	●	○	○	○	±0.04	0,4	28,8	5,5		
N7008 ML	●	●	○	○	●	●	○	○	○	±0.04	0,8	28,8	5,5		
N8004 ML	●	●	○	○	●	●	○	○	○	±0.04	0,4	28,8	6,0		
N8008 ML	●	●	○	○	●	●	○	○	○	±0.04	0,8	28,8	6,0		

Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
								Cutting Width	Tolerance				
GCM N2002 GG	●	●	●	●	○	○	○	2,0	±0.03	0,2	21,1	3,6	1
N3002 GG	●	●	●	●	○	○	○	±0.03	0,2	21,1	3,8		
N3004 GG	●	●	●	●	○	○	○	±0.03	0,4	21,1	3,8		
N4002 GG	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,0		
N4004 GG	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,0		
N5002 GG	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,1		
N5004 GG	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,1		
N6002 GG	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,5		
N6004 GG	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,5		
N7004 GG	●	○	●	●	○	○	○	±0.04	0,4	28,8	5,5		
N8004 GG	●	●	●	●	○	○	○	±0.04	0,4	28,8	6,0		
GCM N2002 GL	●	●	●	●	○	○	○	2,0	±0.03	0,2	21,1	3,6	1
N2004 GL	●	●	●	●	○	○	○	±0.03	0,4	21,1	3,6		
N3002 GL	●	●	●	●	○	○	○	±0.03	0,2	21,1	3,8		
N3004 GL	●	●	●	●	○	○	○	±0.03	0,4	21,1	3,8		
N4002 GL	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,0		
N4004 GL	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,0		
N5002 GL	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,1		
N5004 GL	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,1		
N6002 GL	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,5		
N6004 GL	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,5		
N7004 GL	●	○	●	●	○	○	○	±0.04	0,4	28,8	5,5		
N8004 GL	●	○	●	●	○	○	○	±0.04	0,4	28,8	6,0		
GCM N125005 GF	-	-	-	-	-	-	-	1,25	±0.03	0,05	17,4	3,2	1
N150005 GF	-	-	-	-	-	-	-	±0.03	0,05	17,4	3,7		
GCM N2002 GF	-	-	●	●	○	○	○	2,0	±0.03	0,2	21,1	3,6	1
N2004 GF	-	-	●	●	○	○	○	±0.03	0,4	21,1	3,6		
N3002 GF	●	●	●	●	○	○	○	±0.03	0,2	21,1	3,8		
N3004 GF	●	●	●	●	○	○	○	±0.03	0,4	21,1	3,8		
N4002 GF	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,0		
N4004 GF	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,0		
N5002 GF	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,1		
N5004 GF	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,1		
N6002 GF	●	●	●	●	○	○	○	±0.03	0,2	26,4	4,5		
N6004 GF	●	●	●	●	○	○	○	±0.03	0,4	26,4	4,5		
N7002 GF	●	●	●	●	○	○	○	±0.04	0,2	28,8	5,5		
N7004 GF	●	●	●	●	○	○	○	±0.04	0,4	28,8	5,5		
N8002 GF	●	●	●	●	○	○	○	±0.04	0,2	28,8	6,0		
N8004 GF	●	●	●	●	○	○	○	±0.04	0,4	28,8	6,0		

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3015 RG	●	●	○	○	●	●	○	○	○	3,0	±0.03	1,5	21,1	3,8	2
N4020 RG	●	●	○	○	●	●	○	○	○	±0.03	2,0	26,4	4,0		
N5025 RG	●	●	○	○	●	●	○	○	○	±0.03	2,5	27,2	4,1		
N6030 RG	●	●	○	○	●	●	○	○	○	±0.03	3,0	27,5	4,5		
N7035 RG	●	●	○	○	●	●	○	○	○	±0.04	3,5	29,1	5,5		
N8040 RG	●	●	○	○	●	●	○	○	○	±0.04	4,0	29,3	6,0		

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N2010 RN	○	○	○	○	○	○	○	○	○	2,0	±0.03	1,0	21,7	3,6	2
N3015 RN	●	●	○	○	●	●	○	○	○	±0.03	1,5	22,6	3,8		
N4020 RN	●	●	○	○	●	●	○	○	○	±0.03	2,0	28,2	4,0		
N5025 RN	●	●	○	○	●	●	○	○	○	±0.03	2,5	28,3	4,1		
N6030 RN	●	●	○	○	●	●	○	○	○	±0.03	3,0	28,3	4,5		

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCG N2002 GA	○	2,0	±0.025	0,2	21,1	3,6	3
N3002 GA	○	3,0	±0.025	0,2	21,1	3,8	
N4004 GA	○	4,0	±0.025	0,4	26,4	4,0	
N5004 GA	○	5,0	±0.025	0,4	26,4	4,1	
N6004 GA	○	6,0	±0.025	0,4	26,4	4,5	

Cut-Off Machining (Handed Edge)

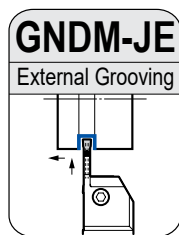
Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Psi	CW		RE	L	S	Fig.
									Cutting Width	Tolerance				
GCM R2002 CG 05	●	●	●	●	○	○	○	5°	2,0	±0.03	0,2	21,1	3,6	4
L2002 CG 05	●	●	●	●	○	○	○	5°	2,0	±0.03	0,2	21,1	3,6	
GCM R3002 CG 05	●	●	●	●	○	○	○	5°	3,0	±0.03	0,2	21,3	3,8	
L3002 CG 05	●	●	●	●	○	○	○	5°	3,0	±0.03	0,2	21,3	3,8	
GCM R4002 CG 05	●	●	●	●	○	○	○	5°	4,0	±0.04	0,2	26,7	4,0	
L4002 CG 05	●	●	●	●	○	○	○	5°	4,0	±0.04	0,2	26,7	4,0	
GCM R2003 CF 10	-	-	●	●	-	-	●	10°	2,0	±0.08	0,03			

Grooving Tool Holders GNDM-JE Type

Holder with Internal Coolant

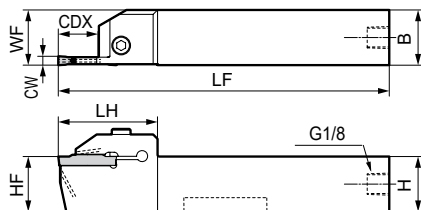
External Multi-Purpose Type (Grooving, Turning, Profiling)



Internal Coolant



Use for multi-purpose or profiling insert for turning (wide grooves).



Above figures show right hand tools.

Spare Parts

Cap Screw	Plug and Sealing	Grub Screw*	Spanner	
BX0520	6,0	XP02-E	BT0505-E	LH040

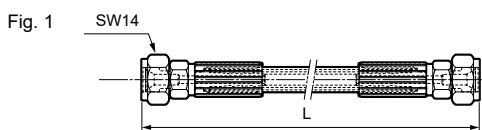
Holders

Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Applicable Insert	Cap Screw	Plug and Sealing	Grub Screw*	Spanner	
	R	L	H	B	LF	WF	HF	LH									CW
GNDM R/L 2020 X 210 JE	●	●	20	20	100	20	20	33,6	2,00	10	20	GC □ 2000-□□	BX0520	6,0	XP02-E	BT0505-E	LH040
GNDM R/L 2020 X 312 JE	●	●	20	20	100	20	20	36,6	3,00	12	24	GC □ 3000-□□					
GNDM R/L 2020 X 418 JE	●	●	20	20	110	20	20	45,0	4,00	18	36	GC □ 4000-□□					
GNDM R/L 2020 X 518 JE	●	●	20	20	110	20	20	45,0	5,00	18	36	GC □ N5000-□□					
GNDM R/L 2020 X 618 JE	●	●	20	20	110	20	20	45,0	6,00	18	36	GC □ N6000-□□					
GNDM R/L 2525 X 210 JE	●	●	25	25	100	25	25	33,6	2,00	10	20	GC □ 2000-□□					
GNDM R/L 2525 X 312 JE	●	●	25	25	100	25	25	36,6	3,00	12	24	GC □ 3000-□□					
GNDM R/L 2525 X 418 JE	●	●	25	25	110	25	25	45,0	4,00	18	36	GC □ 4000-□□					
GNDM R/L 2525 X 518 JE	●	●	25	25	110	25	25	45,0	5,00	18	36	GC □ N5000-□□					
GNDM R/L 2525 X 618 JE	●	●	25	25	110	25	25	45,0	6,00	18	36	GC □ N6000-□□					

Select holders and inserts with the same grooving width (CW).

*Grub screws are sold separately (M5x5)

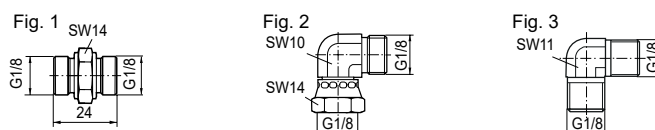
Parts (Hose)



Cat. No.	Stock	L (mm)	Srew Standard	Srew Standard	Fig.
J-HOSE-G1/8-G1/8-200-E	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300-E	●	300	G1/8	G1/8	1

Hoses are sold separately.

Parts (Connector)

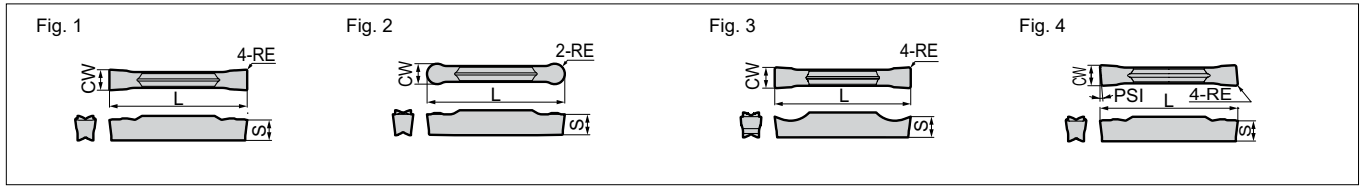


Cat. No.	Stock	Srew Standard	Srew Standard	Fig.
J-G1/8-G1/8-00-E	●	G1/8	G1/8	1
J-G1/8-G1/8F-90-E	●	G1/8	G1/8	2
J-G1/8-G1/8-90-E	●	G1/8	G1/8	3

Connectors are sold separately.

Inserts for GNDM-JE

Coated Carbide Cermet Carbide



● Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3002 MG	●	●	●	○	●	●	○	●	—	3,0	±0,03	0,2	21,1	3,8	1
N3004 MG	●	●	●	○	●	●	○	●	—	3,0	±0,03	0,4	21,1	3,8	
N4002 MG	●	●	●	○	●	●	○	●	—	4,0	±0,03	0,2	26,4	4,0	
N4004 MG	●	●	●	○	●	●	○	●	—	4,0	±0,03	0,4	26,4	4,0	
N4008 MG	●	●	●	○	●	●	○	●	—	4,0	±0,03	0,8	26,4	4,0	
N5004 MG	●	●	●	○	●	●	○	●	—	5,0	±0,03	0,4	26,4	4,1	
N5008 MG	●	●	●	○	●	●	○	●	—	5,0	±0,03	0,8	26,4	4,1	
N6004 MG	●	●	●	○	●	●	○	●	—	6,0	±0,03	0,4	26,4	4,5	
N6008 MG	●	●	●	○	●	●	○	●	—	6,0	±0,03	0,8	26,4	4,5	
GCM N2002 ML	—	—	—	—	●	●	○	○	—	2,0	±0,03	0,2	21,1	3,6	1
N3002 ML	●	●	●	○	●	●	○	○	—	3,0	±0,03	0,2	21,1	3,8	
N3004 ML	●	●	●	○	●	●	○	○	—	3,0	±0,03	0,4	21,1	3,8	
N4002 ML	●	●	●	○	●	●	○	○	—	4,0	±0,03	0,2	26,4	4,0	
N4004 ML	●	●	●	○	●	●	○	○	—	4,0	±0,03	0,4	26,4	4,0	
N4008 ML	●	●	●	○	●	●	○	○	—	4,0	±0,03	0,8	26,4	4,0	
N5004 ML	●	●	●	○	●	●	○	○	—	5,0	±0,03	0,4	26,4	4,1	
N5008 ML	●	●	●	○	●	●	○	○	—	5,0	±0,03	0,8	26,4	4,1	
N6004 ML	●	●	●	○	●	●	○	○	—	6,0	±0,03	0,4	26,4	4,5	
N6008 ML	●	●	●	○	●	●	○	○	—	6,0	±0,03	0,8	26,4	4,5	

● Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
								Cutting Width	Tolerance				
GCM N2002 GG	●	●	●	●	○	○	—	2,0	±0,03	0,2	21,1	3,6	1
N3002 GG	●	●	●	●	○	○	—	3,0	±0,03	0,2	21,1	3,8	
N3004 GG	●	●	●	●	○	○	—	3,0	±0,03	0,4	21,1	3,8	
N4002 GG	●	●	●	●	○	○	—	4,0	±0,03	0,2	26,4	4,0	
N4004 GG	●	●	●	●	○	○	—	4,0	±0,03	0,4	26,4	4,0	
N5002 GG	●	●	●	●	○	○	—	5,0	±0,03	0,2	26,4	4,1	
N5004 GG	●	●	●	●	○	○	—	5,0	±0,03	0,4	26,4	4,1	
N6002 GG	●	●	●	●	○	○	—	6,0	±0,03	0,2	26,4	4,5	
N6004 GG	●	●	●	●	○	○	—	6,0	±0,03	0,4	26,4	4,5	
GCM N2002 GL	●	●	●	●	○	○	—	2,0	±0,03	0,2	21,1	3,6	1
N2004 GL	●	●	●	●	○	○	—	2,0	±0,03	0,4	21,1	3,6	
N3002 GL	●	●	●	●	○	○	—	3,0	±0,03	0,2	21,1	3,8	
N3004 GL	●	●	●	●	○	○	—	3,0	±0,03	0,4	21,1	3,8	
N4002 GL	●	●	●	●	○	○	—	4,0	±0,03	0,2	26,4	4,0	
N4004 GL	●	●	●	●	○	○	—	4,0	±0,03	0,4	26,4	4,0	
N5002 GL	●	●	●	●	○	○	—	5,0	±0,03	0,2	26,4	4,1	
N5004 GL	●	●	●	●	○	○	—	5,0	±0,03	0,4	26,4	4,1	
N6002 GL	●	●	●	●	○	○	—	6,0	±0,03	0,2	26,4	4,5	
N6004 GL	●	●	●	●	○	○	—	6,0	±0,03	0,4	26,4	4,5	
GCM N2002 GF	—	—	●	●	○	○	—	2,0	±0,03	0,2	21,1	3,6	1
N2004 GF	—	—	●	●	○	○	—	2,0	±0,03	0,4	21,1	3,6	
N3002 GF	●	●	●	●	○	○	—	3,0	±0,03	0,2	21,1	3,8	
N3004 GF	●	●	●	●	○	○	—	3,0	±0,03	0,4	21,1	3,8	
N4002 GF	●	●	●	●	○	○	—	4,0	±0,03	0,2	26,4	4,0	
N4004 GF	●	●	●	●	○	○	—	4,0	±0,03	0,4	26,4	4,0	
N5002 GF	●	●	●	●	○	○	—	5,0	±0,03	0,2	26,4	4,1	
N5004 GF	●	●	●	●	○	○	—	5,0	±0,03	0,4	26,4	4,1	
N6002 GF	●	●	●	●	○	○	—	6,0	±0,03	0,2	26,4	4,5	
N6004 GF	●	●	●	●	○	○	—	6,0	±0,03	0,4	26,4	4,5	

● External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3015 RG	●	●	●	●	●	○	○	○	—	3,0	±0,03	1,5	21,1	3,8	2
N4020 RG	●	●	●	●	●	○	○	○	—	4,0	±0,03	2,0	26,4	4,0	
N5025 RG	●	●	●	●	●	○	○	○	—	5,0	±0,03	2,5	27,2	4,1	
N6030 RG	●	●	●	●	●	○	○	○	—	6,0	±0,03	3,0	27,5	4,5	

● Cut-Off Machining (Handed Edge)

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	PSI	CW		RE	L	S	Fig.
									Cutting Width	Tolerance				
GCM R2002 CG 05	●	●	●	●	○	○	—	5°	2,0	±0,03	0,2	21,1	3,6	4
L2002 CG 05	●	●	●	●	○	○	—	5°	2,0	±0,03	0,2	21,1	3,6	
GCM R3002 CG 05	●	●	●	●	○	○	—	5°	3,0	±0,03	0,2	21,3	3,8	
L3002 CG 05	●	●	●	●	○	○	—	5°	3,0	±0,03	0,2	21,3	3,8	
GCM R4002 CG 05	●	●	●	●	○	○	—	5°	4,0	±0,04	0,2	26,7	4,0	
L4002 CG 05	●	●	●	●	○	○	—	5°	4,0	±0,04	0,2	26,7	4,0	
GCM R2003 CF 10	—	—	●	●	—	—	●	10°	2,0	±0,08	0,03	22,4	3,6	
L2003 CF 10	—	—	●	●	—	—	●	10°	2,0	±0,08	0,03	22,4	3,6	
GCM R3003 CF 10	—	—	●	●	—	—	●	10°	3,0	±0,08	0,03	22,4	3,8	
L3003 CF 10	—	—	●	●	—	—	●	10°	3,0	±0,08	0,03	22,4	3,8	
GCM R2003 CF 15	—	—	●	●	—	—	●	15°	2,0	±0,08	0,03	22,4	3,6	4
L2003 CF 15	—	—	●	●	—	—	●	15°	2,0	±0,08	0,03	22,4	3,6	
GCM R3003 CF 15	—	—	●	●	—	—	●	15°	3,0	±0,08	0,03	22,4	3,8	
L3003 CF 15	—	—	●	●	—	—	●	15°	3,0	±0,08	0,03	22,4	3,8	

GCM R: Right hand GCM L: Left hand
Combine the insert with a holder such that the width of cut (CW) matches.

● Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N2010 RN	—	—	—	—	●	●	○	○	—	2,0	±0,03	1,0	21,7	3,6	2
N3015 RN	●	●	●	○	●	●	○	○	—	3,0	±0,03	1,5	22,6	3,8	
N4020 RN	●	●	●	○	●	●	○	○	—	4,0	±0,03	2,0	28,2	4,0	
N5025 RN	●	●	●	○	●	●	○	○	—	5,0	±0,03	2,5	28,3	4,1	
N6030 RN	●	●	●	○	●	●	○	○	—	6,0	±0,03	3,0	28,3	4,5	

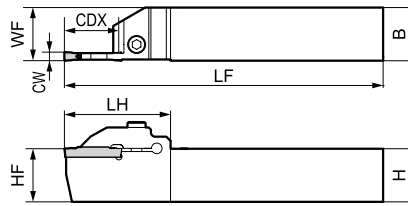
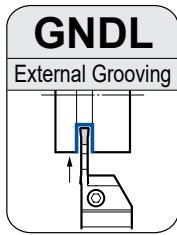
● Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCG N2002 GA	○	2,0	±0,025	0,2	21,1	3,6	3
N3002 GA	○	3,0	±0,025	0,2	21,1	3,8	
N4004 GA	○	4,0	±0,025	0,4	26,4	4,0	
N5004 GA	○	5,0	±0,025	0,4	26,4	4,1	
N6004 GA	○	6,0	±0,025	0,4	26,4	4,5	

Grooving Tool Holders GNDL / GNDLS Type

External Deep Grooving and Cut-Off



Above figures show right hand tools.

Spare Parts

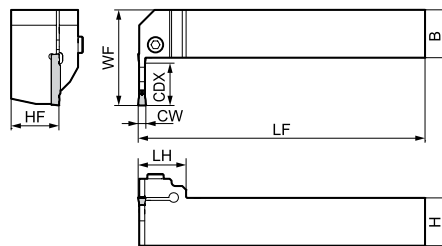
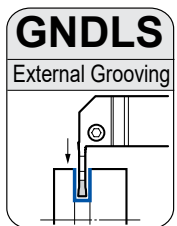


■ Holders

Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cut-Off Dia (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	LH							
GNDL R/L 2020 K 1.2516	●	●	20	20	125	20	20	38,0	1,25	16	32	GCM N125005 GF	BX0520	5,0	LH040
GNDL R/L 2020 K 1.516	●	●	20	20	125	20	20	38,0	1,50	16	32	GCM N150005 GF			
GNDL R/L 2020 K 220	●	●	20	20	125	20	20	44,5	2,00	20	40	GCM □20○-□□			
GNDL R/L 2020 K 320	●	●	20	20	125	20	20	44,5	3,00	20(18)	40	GCM □30○-□□			
GNDL R/L 2020 K 425	●	●	20	20	125	20	20	50,0	4,00	25(23)	50	GCM □40○-□□			
GNDL R/L 2020 K 525	●	●	20	20	125	20	20	50,0	5,00	25(23)	50	GCM N50○-□□			
GNDL R/L 2020 K 625	●	●	20	20	125	20	20	50,0	6,00	25(23)	50	GCM N60○-□□			
GNDL R/L 2525 M 1.2516	●	●	25	25	150	25	25	40,0	1,25	16	32	GCM N125005 GF			
GNDL R/L 2525 M 1.516	●	●	25	25	150	25	25	40,0	1,50	16	32	GCM N150005 GF			
GNDL R/L 2525 M 220	●	●	25	25	150	25	25	44,5	2,00	20	40	GCM □20○-□□			
GNDL R/L 2525 M 320	●	●	25	25	150	25	25	44,5	3,00	20(18)	40	GCM □30○-□□			
GNDL R/L 2525 M 425	●	●	25	25	150	25	25	50,0	4,00	25(23)	50	GCM □40○-□□			
GNDL R/L 2525 M 525	●	●	25	25	150	25	25	50,0	5,00	25(23)	50	GCM N50○-□□			
GNDL R/L 2525 M 625	●	●	25	25	150	25	25	50,0	6,00	25(23)	50	GCM N60○-□□			
GNDL R/L 3225 P 320			32	25	170	25	32	44,5	3,00	20(18)	40	GCM □30○-□□	BX0520	6,0	LH050
GNDL R/L 3225 P 425			32	25	170	25	32	50,0	4,00	25(23)	50	GCM □40○-□□			
GNDL R/L 3225 P 525			32	25	170	25	32	50,0	5,00	25(23)	50	GCM N50○-□□			
GNDL R/L 3225 P 625			32	25	170	25	32	50,0	6,00	25(23)	50	GCM N60○-□□			
GNDL R/L 3225 P 725			32	25	170	25	32	50,0	7,00	25(23)	50	GCM N70○-□□			
GNDL R/L 3225 P 825			32	25	170	25	32	50,0	8,00	25(23)	50	GCM N80○-□□			
GNDL R/L 3232 P 320	●	●	32	32	170	32	32	44,5	3,00	20(18)	40	GCM □30○-□□	BX0620	6,0	LH050
GNDL R/L 3232 P 425	●	●	32	32	170	32	32	50,0	4,00	25(23)	50	GCM □40○-□□			
GNDL R/L 3232 P 525	●	●	32	32	170	32	32	50,0	5,00	25(23)	50	GCM N50○-□□			
GNDL R/L 3232 P 625	●	●	32	32	170	32	32	50,0	6,00	25(23)	50	GCM N60○-□□			
GNDL R/L 3232 P 725	●	●	32	32	170	32	32	50,0	7,00	25(23)	50	GCM N70○-□□			
GNDL R/L 3232 P 825	●	●	32	32	170	32	32	50,0	8,00	25(23)	50	GCM N80○-□□			

Select holders and inserts with the same grooving width (CW). Dimensions in parentheses are for applications that use copying inserts (RG type breakers).

External L-Styled (Side Cut) Grooving



Above figures show right hand tools.

■ Spare Parts



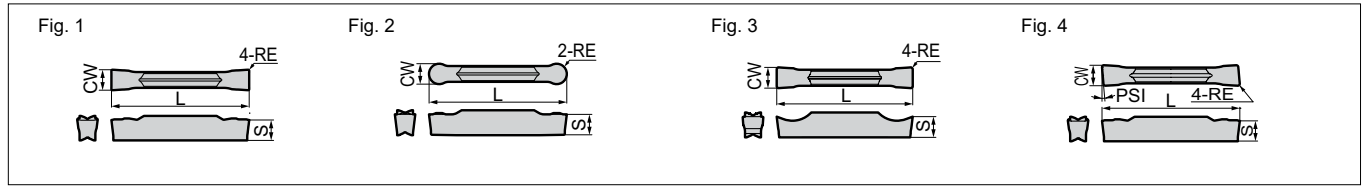
■ Holders

Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	LH						
GNDLS R/L 2020 K 216	●	●	20	20	125	38	20	25	2,0	16	GCM □20○-□□	BX0520	5,0	LH040
GNDLS R/L 2020 K 316	○	●	20	20	125	38	20	25	3,0	16	GCM □30○-□□			
GNDLS R/L 2525 M 218	●	●	25	25	150	45	25	25	2,0	18	GCM □20○-□□			
GNDLS R/L 2525 M 318	●	●	25	25	150	45	25	25	3,0	18	GCM □30○-□□			
GNDLS R/L 2525 M 423	●	●	25	25	150	50	25	25	4,0	23	GCM □40○-□□			
GNDLS R/L 2525 M 523	○	○	25	25	150	50	25	25	5,0	23	GCM N50○-□□			
GNDLS R/L 2525 M 623	●	○	25	25	150	50	25	25	6,0	23	GCM N60○-□□			

Select holders and inserts with the same grooving width (CW).

Inserts for GNDL / GNDLS

Coated Carbide Cermet Carbide



Grooving / Traversing

Dimensions (mm)

Cat. No.	Holder							CW		RE	L	S	Fig.
	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	Cutting Width	Tolerance				
GCM N3002 MG	●	●	○	○	●	●	●	3,0	±0.03	0,2	21,1	3,8	1
N3004 MG	●	●	○	○	●	●	●	3,0	±0.03	0,4	21,1	3,8	
N4002 MG	●	●	○	○	●	●	●	4,0	±0.03	0,2	26,4	4,0	
N4004 MG	●	●	○	○	●	●	●	4,0	±0.03	0,4	26,4	4,0	
N4008 MG	●	●	○	○	●	●	●	4,0	±0.03	0,8	26,4	4,0	
N5004 MG	●	●	○	○	●	●	●	5,0	±0.03	0,4	26,4	4,1	
N5008 MG	●	●	○	○	●	●	●	5,0	±0.03	0,8	26,4	4,1	
N6004 MG	●	●	○	○	●	●	●	6,0	±0.03	0,4	26,4	4,5	
N6008 MG	●	●	○	○	●	●	●	6,0	±0.03	0,8	26,4	4,5	
N7004 MG	●	●	○	○	●	●	●	7,0	±0.04	0,4	28,8	5,5	
N7008 MG	●	●	○	○	●	●	●	7,0	±0.04	0,8	28,8	5,5	
N8004 MG	●	●	○	○	●	●	●	8,0	±0.04	0,4	28,8	6,0	
N8008 MG	●	●	○	○	●	●	●	8,0	±0.04	0,8	28,8	6,0	
GCM N2002 ML	-	-	-	-	○	○	○	2,0	±0.03	0,2	21,1	3,6	1
N3002 ML	●	●	○	○	●	●	○	3,0	±0.03	0,2	21,1	3,8	
N3004 ML	●	●	○	○	●	●	○	3,0	±0.03	0,4	21,1	3,8	
N4002 ML	●	●	○	○	●	●	○	4,0	±0.03	0,2	26,4	4,0	
N4004 ML	●	●	○	○	●	●	○	4,0	±0.03	0,4	26,4	4,0	
N4008 ML	●	●	○	○	●	●	○	4,0	±0.03	0,8	26,4	4,0	
N5004 ML	●	●	○	○	●	●	○	5,0	±0.03	0,4	26,4	4,1	
N5008 ML	●	●	○	○	●	●	○	5,0	±0.03	0,8	26,4	4,1	
N6004 ML	●	●	○	○	●	●	○	6,0	±0.03	0,4	26,4	4,5	
N6008 ML	●	●	○	○	●	●	○	6,0	±0.03	0,8	26,4	4,5	
N7004 ML	●	●	○	○	●	●	○	7,0	±0.04	0,4	28,8	5,5	
N7008 ML	●	●	○	○	●	●	○	7,0	±0.04	0,8	28,8	5,5	
N8004 ML	●	●	○	○	●	●	○	8,0	±0.04	0,4	28,8	6,0	
N8008 ML	●	●	○	○	●	●	○	8,0	±0.04	0,8	28,8	6,0	

Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	Holder							CW		RE	L	S	Fig.
	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	Cutting Width	Tolerance				
GCM N2002 GG	●	●	●	●	○	○	○	2,0	±0.03	0,2	21,1	3,6	1
N3002 GG	●	●	●	●	○	○	○	3,0	±0.03	0,2	21,1	3,8	
N3004 GG	●	●	●	●	○	○	○	3,0	±0.03	0,4	21,1	3,8	
N4002 GG	●	●	●	●	○	○	○	4,0	±0.03	0,2	26,4	4,0	
N4004 GG	●	●	●	●	○	○	○	4,0	±0.03	0,4	26,4	4,0	
N5002 GG	●	●	●	●	○	○	○	5,0	±0.03	0,2	26,4	4,1	
N5004 GG	●	●	●	●	○	○	○	5,0	±0.03	0,4	26,4	4,1	
N6002 GG	●	●	●	●	○	○	○	6,0	±0.03	0,2	26,4	4,5	
N6004 GG	●	●	●	●	○	○	○	6,0	±0.03	0,4	26,4	4,5	
N7004 GG	●	○	●	●	○	○	○	7,0	±0.04	0,4	28,8	5,5	
N8004 GG	●	○	●	●	○	○	○	8,0	±0.04	0,4	28,8	6,0	
GCM N2002 GL	●	●	●	●	○	○	○	2,0	±0.03	0,2	21,1	3,6	
N2004 GL	●	●	●	●	○	○	○	2,0	±0.03	0,4	21,1	3,6	
N3002 GL	●	●	●	●	○	○	○	3,0	±0.03	0,2	21,1	3,8	
N3004 GL	●	●	●	●	○	○	○	3,0	±0.03	0,4	21,1	3,8	
N4002 GL	●	●	●	●	○	○	○	4,0	±0.03	0,2	26,4	4,0	
N4004 GL	●	●	●	●	○	○	○	4,0	±0.03	0,4	26,4	4,0	
N5002 GL	●	●	●	●	○	○	○	5,0	±0.03	0,2	26,4	4,1	
N5004 GL	●	●	●	●	○	○	○	5,0	±0.03	0,4	26,4	4,1	
N6002 GL	●	●	●	●	○	○	○	6,0	±0.03	0,2	26,4	4,5	
N6004 GL	●	●	●	●	○	○	○	6,0	±0.03	0,4	26,4	4,5	
N7004 GL	●	○	●	●	○	○	○	7,0	±0.04	0,4	28,8	5,5	
N8004 GL	●	○	●	●	○	○	○	8,0	±0.04	0,4	28,8	6,0	
GCM N125005 GF	-	-	-	-	○	○	○	1,25	±0.03	0,05	17,4	3,2	1
N150005 GF	-	-	-	-	○	○	○	1,5	±0.03	0,05	17,4	3,7	
GCM N2002 GF	-	-	-	-	○	○	○	2,0	±0.03	0,2	21,1	3,6	1
N2004 GF	-	-	-	-	○	○	○	2,0	±0.03	0,4	21,1	3,6	
N3002 GF	●	●	●	●	○	○	○	3,0	±0.03	0,2	21,1	3,8	
N3004 GF	●	●	●	●	○	○	○	3,0	±0.03	0,4	21,1	3,8	
N4002 GF	●	●	●	●	○	○	○	4,0	±0.03	0,2	26,4	4,0	
N4004 GF	●	●	●	●	○	○	○	4,0	±0.03	0,4	26,4	4,0	
N5002 GF	●	●	●	●	○	○	○	5,0	±0.03	0,2	26,4	4,1	
N5004 GF	●	●	●	●	○	○	○	5,0	±0.03	0,4	26,4	4,1	
N6002 GF	●	●	●	●	○	○	○	6,0	±0.03	0,2	26,4	4,5	
N6004 GF	●	●	●	●	○	○	○	6,0	±0.03	0,4	26,4	4,5	
N7002 GF	●	●	●	●	○	○	○	7,0	±0.04	0,2	28,8	5,5	
N7004 GF	●	●	●	●	○	○	○	7,0	±0.04	0,4	28,8	5,5	
N8002 GF	●	●	●	●	○	○	○	8,0	±0.04	0,2	28,8	6,0	
N8004 GF	●	●	●	●	○	○	○	8,0	±0.04	0,4	28,8	6,0	

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	Holder							CW		RE	L	S	Fig.
	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	Cutting Width	Tolerance				
GCM N3015 RG	●	●	○	○	●	●	○	3,0	±0.03	1,5	21,1	3,8	2
N4020 RG	●	●	○	○	●	●	○	4,0	±0.03	2,0	26,4	4,0	
N5025 RG	●	●	○	○	●	●	○	5,0	±0.03	2,5	27,2	4,1	
N6030 RG	●	●	○	○	●	●	○	6,0	±0.03	3,0	27,5	4,5	
N7035 RG	●	●	○	○	●	●	○	7,0	±0.04	3,5	29,1	5,5	
N8040 RG	●	●	○	○	●	●	○	8,0	±0.04	4,0	29,3	6,0	

Cut-Off Machining (Handed Edge)

Dimensions (mm)

Cat. No.	Holder							PSI	CW		RE	L	S	Fig.
	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U		Cutting Width	Tolerance				
GCM R2002 CG 05	●	●	●	●	○	○	-	5°	2,0	±0.03	0,2	21,1	3,6	4
L2002 CG 05	●	●	●	●	○	○	-	5°	2,0	±0.03	0,2	21,1	3,6	
GCM R3002 CG 05	●	●	●	●	○	○	-	5°	3,0	±0.03	0,2	21,3	3,8	
L3002 CG 05	●	●	●	●	○	○	-	5°	3,0	±0.03	0,2	21,3	3,8	
GCM R4002 CG 05	●	●	●	●	○	○	-	5°	4,0	±0.04	0,2	26,7	4,0	
L4002 CG 05	●	●	●	●	○	○	-	5°	4,0	±0.04	0,2	26,7	4,0	
GCM R20003 CF 10	-	-	-	-	-	-	●	10°	2,0	±0.08	0,03	22,4	3,6	4
L20003 CF 10	-	-	-	-	-	-	●	10°	2,0	±0.08	0,03	22,4	3,6	
GCM R30003 CF 10	-	-	-	-	-	-	●	10°	3,0	±0.08	0,03	22,4	3,8	
L30003 CF 10	-	-	-	-	-	-	●	10°	3,0	±0.08	0,03	22,4	3,8	
GCM R20003 CF 15	-	-	-	-	-	-	●	15°	2,0	±0.08	0,03	22,4	3,6	
L20003 CF 15	-	-	-	-	-	-	●	15°	2,0	±0.08	0,03	22,4	3,6	
GCM R30003 CF 15	-	-	-	-	-	-	●	15°	3,0	±0.08	0,03	22,4	3,8	
L30003 CF 15	-	-	-	-	-	-	●	15°	3,0	±0.08	0,03	22,4	3,8	

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	H ¹	Holder							CW		RE	L	S	Fig.
		AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	Cutting Width	Tolerance				
GCM N2010 RN	○	-	-	-	-	○	○	2,0	±0.03	1,0	21,7	3,6	2	
N3015 RN	○	●	●	○	○	○	○	3,0	±0.03	1,5	22,6	3,8		
N4020 RN	○	●	●	○	○	○	○	4,0	±0.03	2,0	28,2	4,0		
N5025 RN	○	●	●	○	○	○	○	5,0	±0.03	2,5	28,3	4,1		
N6030 RN	○	●	●	○	○	○	○	6,0	±0.03	3,0	28,3	4,5		

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H ¹	Holder							CW		RE	L	S	Fig.
		AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	Cutting Width	Tolerance				
GCG N2002 GA	○	○	-	-	-	-	-	2,0	±0.025	0,2	21,1	3,6	3	
N3002 GA	○	○	-	-	-	-	-	3,0	±0.025	0,2	21,1	3,8		
N4004 GA	○	○	-	-	-	-	-	4,0	±0.025	0,4	26,4	4,0		
N5004 GA	○	○	-	-	-	-	-	5,0	±0.025	0,4	26,4	4,1		
N6004 GA	○	○	-	-	-	-	-	6,0	±0.025	0,4	26,4	4,5		

GCM R: Right hand

GCM L: Left hand

Combine the insert with a holder such that the width of cut (CW) matches.

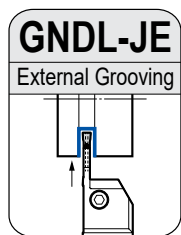
Select holders and inserts with the same grooving width (CW).

Grooving Tool Holders

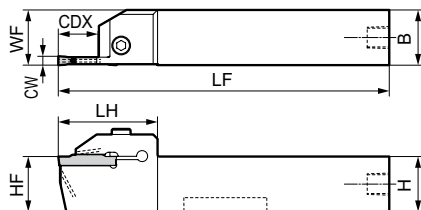
GNDL-JE Type

Holder with Internal Coolant

External Deep Grooving and Cut-Off



Internal Coolant



Above figures show right hand tools.

■ Holders

Cat. No.	Stock		Dimensions (mm)						Grooving Width (mm)	Max. Groov. Depth (mm)	Max. Cutt-Off Dia (mm)	Applicable Insert	Cap Screw	Ⓝ(N·m)	Plug and Sealing	Grub Screw*	Spanner
	R	L	H	B	LF	WF	HF	LH									
GNDL R/L 2020 X 220 JE	●	●	20	20	110	20	20	44,5	2,00	20	40	GC□ □2000-□□	BX0520	6,0	XP02-E	BT0505-E	LH040
GNDL R/L 2020 X 320 JE	●	●	20	20	110	20	20	44,5	3,00	20	40	GC□ □3000-□□					
GNDL R/L 2020 X 425 JE	●	●	20	20	115	20	20	50,0	4,00	25	50	GC□ □4000-□□					
GNDL R/L 2020 X 525 JE	●	●	20	20	115	20	20	50,0	5,00	25	50	GC□ N5000-□□					
GNDL R/L 2020 X 625 JE	●	●	20	20	115	20	20	50,0	6,00	25	50	GC□ N6000-□□					
GNDL R/L 2525 X 220 JE	●	●	25	25	110	25	25	44,5	2,00	20	40	GC□ □2000-□□					
GNDL R/L 2525 X 320 JE	●	●	25	25	110	25	25	44,5	3,00	20	40	GC□ □3000-□□					
GNDL R/L 2525 X 425 JE	●	●	25	25	115	25	25	50,0	4,00	25	50	GC□ □4000-□□					
GNDL R/L 2525 X 525 JE	●	●	25	25	115	25	25	50,0	5,00	25	50	GC□ N5000-□□					
GNDL R/L 2525 X 625 JE	●	●	25	25	115	25	25	50,0	6,00	25	50	GC□ N6000-□□					

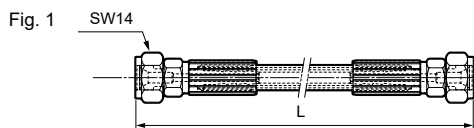
Select holders and inserts with the same grooving width (CW).

*Grub screws are sold separately (M5x5)

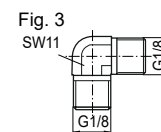
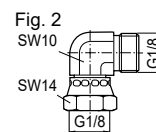
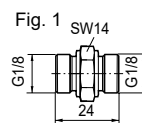
■ Spare Parts

Cap Screw	Plug and Sealing	Grub Screw*	Spanner

■ Parts (Hose)



■ Parts (Connector)



Cat. No.	Stock	L (mm)	Srew Standard	Srew Standard	Fig.
J-HOSE-G1/8-G1/8-200-E	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300-E	●	300	G1/8	G1/8	1

Hoses are sold separately.

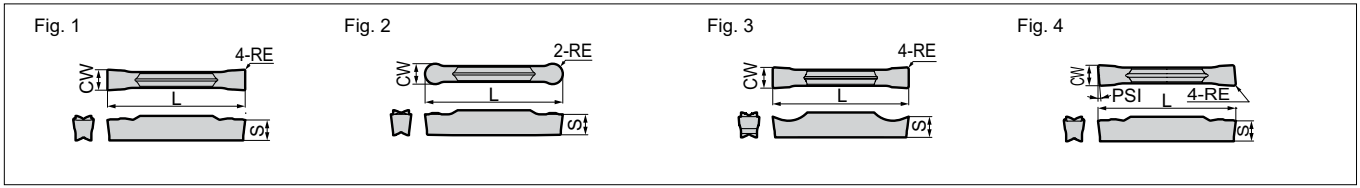
Cat. No.	Stock	Srew Standard	Srew Standard	Fig.
J-G1/8-G1/8-00-E	●	G1/8	G1/8	1
J-G1/8-G1/8F-90-E	●	G1/8	G1/8	2
J-G1/8-G1/8-90-E	●	G1/8	G1/8	3

Connectors are sold separately.

Grooving Tool Holders GNDL-JE Type

Inserts for GNDL-JE

Coated Carbide Cermet Carbide



Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3002 MG	●	●	●	○	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	1
N3004 MG	●	●	●	○	●	●	○	●	—	±0.03	0,4	21,1	3,8		
N4002 MG	●	●	●	○	●	●	○	●	—	±0.03	0,2	26,4	4,0		
N4004 MG	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N4008 MG	●	●	●	○	●	●	○	●	—	±0.03	0,8	26,4	4,0		
N5004 MG	●	●	●	○	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N5008 MG	●	●	●	○	●	●	○	●	—	±0.03	0,8	26,4	4,1		
N6004 MG	●	●	●	○	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	
N6008 MG	●	●	●	○	●	●	○	●	—	±0.03	0,8	26,4	4,5		
GCM N2002 ML	—	—	—	—	●	●	○	●	—	2,0	±0.03	0,2	21,1	3,6	1
N3002 ML	●	●	●	○	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	
N3004 ML	●	●	●	○	●	●	○	●	—	±0.03	0,4	21,1	3,8		
N4002 ML	●	●	●	○	●	●	○	●	—	±0.03	0,2	26,4	4,0		
N4004 ML	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N4008 ML	●	●	●	○	●	●	○	●	—	±0.03	0,8	26,4	4,0		
N5004 ML	●	●	●	○	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N5008 ML	●	●	●	○	●	●	○	●	—	±0.03	0,8	26,4	4,1		
N6004 ML	●	●	●	○	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	
N6008 ML	●	●	●	○	●	●	○	●	—	±0.03	0,8	26,4	4,5		

Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
								Cutting Width	Tolerance				
GCM N2002 GG	●	●	●	●	○	●	—	2,0	±0.03	0,2	21,1	3,6	1
N3002 GG	●	●	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	
N3004 GG	●	●	●	●	○	●	—	±0.03	0,4	21,1	3,8		
N4002 GG	●	●	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 GG	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,0		
N5002 GG	●	●	●	●	○	●	—	5,0	±0.03	0,2	26,4	4,1	
N5004 GG	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,1		
N6002 GG	●	●	●	●	○	●	—	6,0	±0.03	0,2	26,4	4,5	
N6004 GG	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,5		
GCM N2002 GL	●	●	●	●	○	●	—	2,0	±0.03	0,2	21,1	3,6	1
N2004 GL	●	●	●	●	○	●	—	±0.03	0,4	21,1	3,6		
N3002 GL	●	●	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	
N3004 GL	●	●	●	●	○	●	—	±0.03	0,4	21,1	3,8		
N4002 GL	●	●	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 GL	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,0		
N5002 GL	●	●	●	●	○	●	—	5,0	±0.03	0,2	26,4	4,1	
N5004 GL	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,1		
N6002 GL	●	●	●	●	○	●	—	6,0	±0.03	0,2	26,4	4,5	
N6004 GL	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,5		
GCM N2002 GF	—	—	●	●	○	●	—	2,0	±0.03	0,2	21,1	3,6	1
N2004 GF	—	—	●	●	○	●	—	±0.03	0,4	21,1	3,6		
N3002 GF	●	●	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	
N3004 GF	●	●	●	●	○	●	—	±0.03	0,4	21,1	3,8		
N4002 GF	●	●	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 GF	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,0		
N5002 GF	●	●	●	●	○	●	—	5,0	±0.03	0,2	26,4	4,1	
N5004 GF	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,1		
N6002 GF	●	●	●	●	○	●	—	6,0	±0.03	0,2	26,4	4,5	
N6004 GF	●	●	●	●	○	●	—	±0.03	0,4	26,4	4,5		

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3015 RG	●	●	●	●	●	○	●	●	○	3,0	±0.03	1,5	21,1	3,8	2
N4020 RG	●	●	●	●	●	○	●	●	○	4,0	±0.03	2,0	26,4	4,0	
N5025 RG	●	●	●	●	●	○	●	●	○	5,0	±0.03	2,5	27,2	4,1	
N6030 RG	●	●	●	●	●	○	●	●	○	6,0	±0.03	3,0	27,5	4,5	

Cut-Off Machining (Handed Edge)

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	PSI	CW		RE	L	S	Fig.
									Cutting Width	Tolerance				
GCM R2002 CG 05	●	●	●	●	○	●	—	5°	2,0	±0.03	0,2	21,1	3,6	4
L2002 CG 05	●	●	●	●	○	●	—	5°	2,0	±0.03	0,2	21,1	3,6	
GCM R3002 CG 05	●	●	●	●	○	●	—	5°	3,0	±0.03	0,2	21,3	3,8	
L3002 CG 05	●	●	●	●	○	●	—	5°	3,0	±0.03	0,2	21,3	3,8	
GCM R4002 CG 05	●	●	●	●	○	●	—	5°	4,0	±0.04	0,2	26,7	4,0	
L4002 CG 05	●	●	●	●	○	●	—	5°	4,0	±0.04	0,2	26,7	4,0	
GCM R2003 CF 10	—	—	●	●	—	—	●	10°	2,0	±0.08	0,03	22,4	3,6	
L2003 CF 10	—	—	●	●	—	—	●	10°	2,0	±0.08	0,03	22,4	3,6	
GCM R3003 CF 10	—	—	●	●	—	—	●	10°	3,0	±0.08	0,03	22,4	3,8	
L3003 CF 10	—	—	●	●	—	—	●	10°	3,0	±0.08	0,03	22,4	3,8	
GCM R2003 CF 15	—	—	●	●	—	—	●	15°	2,0	±0.08	0,03	22,4	3,6	4
L2003 CF 15	—	—	●	●	—	—	●	15°	2,0	±0.08	0,03	22,4	3,6	
GCM R3003 CF 15	—	—	●	●	—	—	●	15°	3,0	±0.08	0,03	22,4	3,8	
L3003 CF 15	—	—	●	●	—	—	●	15°	3,0	±0.08	0,03	22,4	3,8	

GCM R: Right hand

GCM L: Left hand

Combine the insert with a holder such that the width of cut (CW) matches.

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N2010 RN	—	—	—	—	●	●	○	●	—	2,0	±0.03	1,0	21,7	3,6	2
N3015 RN	●	●	●	○	●	●	○	●	—	3,0	±0.03	1,5	22,6	3,8	
N4020 RN	●	●	●	○	●	●	○	●	—	4,0	±0.03	2,0	28,2	4,0	
N5025 RN	●	●	●	○	●	●	○	●	—	5,0	±0.03	2,5	28,3	4,1	
N6030 RN	●	●	●	○	●	●	○	●	—	6,0	±0.03	3,0	28,3	4,5	

Non-Ferrous Metals

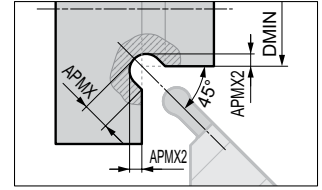
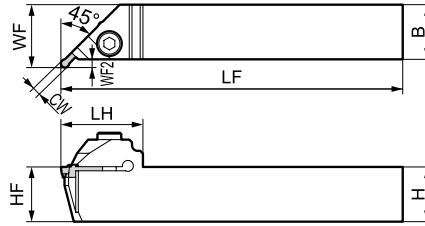
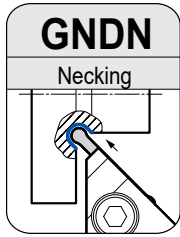
Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCG N2002 GA	○	2,0	±0.025	0,2	21,1	3,6	3
N3002 GA	○	3,0	±0.025	0,2	21,1	3,8	
N4004 GA	○	4,0	±0.025	0,4	26,4	4,0	
N5004 GA	○	5,0	±0.025	0,4	26,4	4,1	
N6004 GA	○	6,0	±0.025	0,4	26,4	4,5	

Grooving Tool Holders

GNDN Type

Necking



Above figures show right hand tools.

Spare Parts



■ Holders

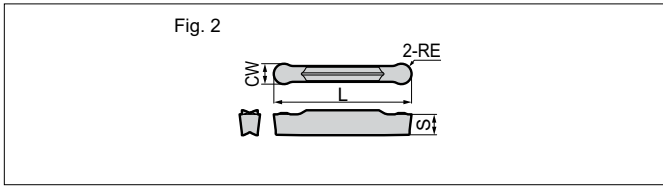
Cat. No.	Stock		Dimensions (mm)							Min. Bore (mm)	Groov. Width (mm)	APMX	APMX2	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	LH	WF2								
GNDN R/L2020 K 215-020	○	○	20	20	125	23	20	30	3,0	20	2,0	1,5	0,64	GCM N2010 RN			
GNDN R/L2020 K 320-020	○	○	20	20	125	23	20	30	3,0	20	3,0	2,0	0,79	GCM N3015 RN			
GNDN R/L2020 K 430-030	○	○	20	20	125	24	20	32	4,0	30	4,0	3,0	1,29	GCM N4020 RN	BX0520	5,0	LH040
GNDN R/L2020 K 535-030	○	○	20	20	125	25	20	35	5,0	30	5,0	3,5	1,44	GCM N5025 RN			
GNDN R/L2020 K 640-030	○	○	20	20	125	25	20	35	5,0	30	6,0	4,0	1,59	GCM N6030 RN			
GNDN R/L2525 M 215-020	○	○	25	25	150	28	25	30	3,0	20	2,0	1,5	0,64	GCM N2010 RN			
GNDN R/L2525 M 320-020	○	○	25	25	150	28	25	30	3,0	20	3,0	2,0	0,79	GCM N3015 RN			
GNDN R/L2525 M 430-030	○	○	25	25	150	29	25	32	4,0	30	4,0	3,0	1,29	GCM N4020 RN	BX0520	5,0	LH040
GNDN R/L2525 M 535-030	○	○	25	25	150	30	25	35	5,0	30	5,0	3,5	1,44	GCM N5025 RN			
GNDN R/L2525 M 640-030	○	○	25	25	150	30	25	35	5,0	30	6,0	4,0	1,59	GCM N6030 RN			

Select holders and inserts with the same grooving width (CW).

■ Inserts for GNDN

Coated Carbide

Cermet



● Profiling / Radius Grooving / Necking

Dimensions (mm)



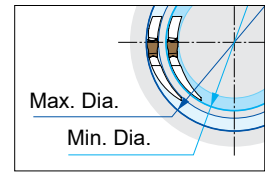
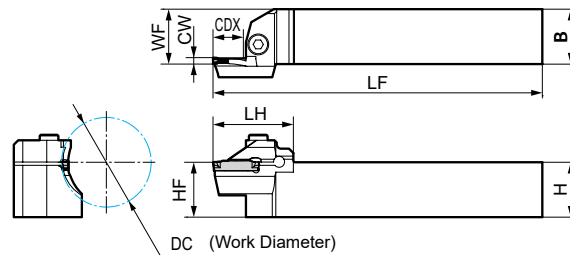
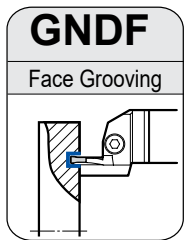
Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N2010 RN	—	—	—	—	●	●	○	○	—	2,0	±0,03	1,0	21,7	3,6	2
N3015 RN	●	●	●	○	●	●	○	○	—	3,0	±0,03	1,5	22,6	3,8	
N4020 RN	●	●	●	○	●	●	○	○	—	4,0	±0,03	2,0	28,2	4,0	
N5025 RN	●	●	●	○	●	●	○	○	—	5,0	±0,03	2,5	28,3	4,1	
N6030 RN	●	●	●	○	●	●	○	○	—	6,0	±0,03	3,0	28,3	4,5	

Select holders and inserts with the same grooving width (CW).

Grooving Tool Holders

GNDF Type

Face Grooving



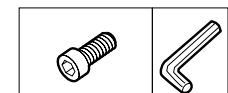
Work diameters in the stock indicate external diameters of face grooving.

Use for multi-purpose or profiling insert for turning (wide grooves).

Above figures show right hand tools.

■ Holders

■ Spare Parts

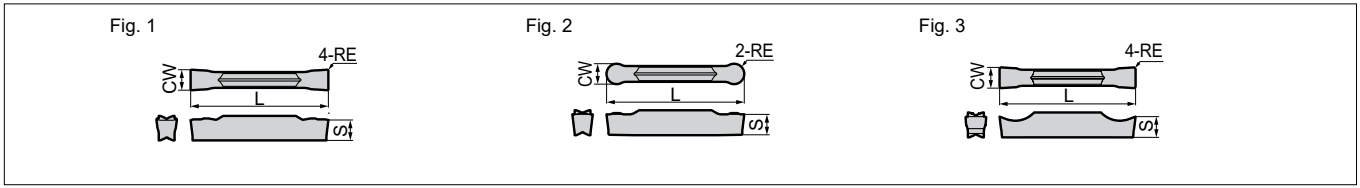


Cat. No.	Stock		Dimensions (mm)						Work Dia. (mm)	Groov. Width (mm)	Max. Cut-off Dia. (mm)	Applicable Insert	Cap Screw	N-m	Spanner
	R	L	H	B	LF	WF	HF	LH							
GNDF R/L 2020 K 312-035	●	●	20	20	125	20	20	35,6	35-45	3,0	12	GCM N300O-□□	BX0520	5,0	LH040
GNDF R/L 2020 K 312-040	●	●	20	20	125	20	20	35,6	40-55	3,0	12				
GNDF R/L 2020 K 318-050	●	●	20	20	125	20	20	41,6	50-70	3,0	18				
GNDF R/L 2020 K 318-065	●	●	20	20	125	20	20	41,6	65-100	3,0	18				
GNDF R/L 2020 K 318-090	●	●	20	20	125	20	20	41,6	90-150	3,0	18				
GNDF R/L 2020 K 318-140	●	●	20	20	125	20	20	41,6	140-200	3,0	18				
GNDF R/L 2020 K 318-180	●	●	20	20	125	20	20	41,6	180-300	3,0	18				
GNDF R/L 2020 K 418-040	●	●	20	20	125	20	20	41,6	40-55	4,0	18	GCM N400O-□□	BX0520	5,0	LH040
GNDF R/L 2020 K 423-050	●	●	20	20	125	20	20	46,6	50-70	4,0	23				
GNDF R/L 2020 K 423-065	●	●	20	20	125	20	20	46,6	65-90	4,0	23				
GNDF R/L 2020 K 423-085	●	○	20	20	125	20	20	46,6	85-130	4,0	23				
GNDF R/L 2020 K 423-125	○	●	20	20	125	20	20	46,6	125-200	4,0	23				
GNDF R/L 2020 K 423-180	○	○	20	20	125	20	20	46,6	180-300	4,0	23				
GNDF R/L 2020 K 423-280	○	○	20	20	125	20	20	46,6	280-1000	4,0	23				
GNDF R/L 2020 K 523-050	○	○	20	20	125	20	20	46,6	50-70	5,0	23	GCM N500O-□□	BX0520	5,0	LH040
GNDF R/L 2020 K 523-065	○	●	20	20	125	20	20	46,6	65-90	5,0	23				
GNDF R/L 2020 K 523-085	●	○	20	20	125	20	20	46,6	85-130	5,0	23				
GNDF R/L 2020 K 523-125	●	●	20	20	125	20	20	46,6	125-200	5,0	23				
GNDF R/L 2020 K 523-180	○	○	20	20	125	20	20	46,6	180-300	5,0	23				
GNDF R/L 2020 K 523-280	○	○	20	20	125	20	20	46,6	280-1000	5,0	23				
GNDF R/L 2020 K 623-050	○	○	20	20	125	20	20	46,6	50-75	6,0	23	GCM N600O-□□	BX0520	5,0	LH040
GNDF R/L 2020 K 623-070	○	○	20	20	125	20	20	46,6	70-110	6,0	23				
GNDF R/L 2020 K 623-100	○	●	20	20	125	20	20	46,6	100-200	6,0	23				
GNDF R/L 2020 K 623-180	○	○	20	20	125	20	20	46,6	180-300	6,0	23				
GNDF R/L 2020 K 623-280	○	○	20	20	125	20	20	46,6	280-1000	6,0	23				
GNDF R/L 2525 M 312-035	●	●	25	25	150	25	25	35,6	35-45	3,0	12				
GNDF R/L 2525 M 312-040	●	●	25	25	150	25	25	35,6	40-55	3,0	12				
GNDF R/L 2525 M 318-050	●	●	25	25	150	25	25	41,6	50-70	3,0	18				
GNDF R/L 2525 M 318-065	●	●	25	25	150	25	25	41,6	65-100	3,0	18				
GNDF R/L 2525 M 318-090	●	●	25	25	150	25	25	41,6	90-150	3,0	18				
GNDF R/L 2525 M 318-140	●	●	25	25	150	25	25	41,6	140-200	3,0	18				
GNDF R/L 2525 M 318-180	●	●	25	25	150	25	25	41,6	180-300	3,0	18				
GNDF R/L 2525 M 418-040	●	●	25	25	150	25	25	41,6	40-55	4,0	18	GCM N400O-□□	BX0520	5,0	LH040
GNDF R/L 2525 M 423-050	●	●	25	25	150	25	25	46,6	50-70	4,0	23				
GNDF R/L 2525 M 423-065	●	●	25	25	150	25	25	46,6	65-90	4,0	23				
GNDF R/L 2525 M 423-085	●	●	25	25	150	25	25	46,6	85-130	4,0	23				
GNDF R/L 2525 M 423-125	●	●	25	25	150	25	25	46,6	125-200	4,0	23				
GNDF R/L 2525 M 423-180	●	●	25	25	150	25	25	46,6	180-300	4,0	23				
GNDF R/L 2525 M 423-280	●	●	25	25	150	25	25	46,6	280-1000	4,0	23				
GNDF R/L 2525 M 523-050	●	●	25	25	150	25	25	46,6	50-70	5,0	23	GCM N500O-□□	BX0520	5,0	LH040
GNDF R/L 2525 M 523-065	●	●	25	25	150	25	25	46,6	65-90	5,0	23				
GNDF R/L 2525 M 523-085	●	●	25	25	150	25	25	46,6	85-130	5,0	23				
GNDF R/L 2525 M 523-125	●	●	25	25	150	25	25	46,6	125-200	5,0	23				
GNDF R/L 2525 M 523-180	●	●	25	25	150	25	25	46,6	180-300	5,0	23				
GNDF R/L 2525 M 523-280	●	●	25	25	150	25	25	46,6	280-1000	5,0	23				
GNDF R/L 2525 M 623-050	●	○	25	25	150	25	25	46,6	50-75	6,0	23	GCM N600O-□□	BX0520	5,0	LH040
GNDF R/L 2525 M 623-070	●	●	25	25	150	25	25	46,6	70-110	6,0	23				
GNDF R/L 2525 M 623-100	●	●	25	25	150	25	25	46,6	100-200	6,0	23				
GNDF R/L 2525 M 623-180	○	●	25	25	150	25	25	46,6	180-300	6,0	23				
GNDF R/L 2525 M 623-280	●	●	25	25	150	25	25	46,6	280-1000	6,0	23				

Select holders and inserts with the same grooving width (CW).

Inserts for GNDF

Coated Carbide Cermet Carbide



● Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3002 MG	●	●	●	○	●	●	○	●	—	3,0	±0,03	0,2	21,1	3,8	1
N3004 MG	●	●	●	○	●	●	○	●	—	±0,03	0,4	21,1	3,8		
N4002 MG	●	●	●	○	●	●	○	●	—	±0,03	0,2	26,4	4,0		
N4004 MG	●	●	●	○	●	●	○	●	—	4,0	±0,03	0,4	26,4	4,0	
N4008 MG	●	●	●	○	●	●	○	●	—	±0,03	0,8	26,4	4,0		
N5004 MG	●	●	●	○	●	●	○	●	—	5,0	±0,03	0,4	26,4	4,1	
N5008 MG	●	●	●	○	●	●	○	●	—	±0,03	0,8	26,4	4,1		
N6004 MG	●	●	●	○	●	●	○	●	—	6,0	±0,03	0,4	26,4	4,5	
N6008 MG	●	●	●	○	●	●	○	●	—	±0,03	0,8	26,4	4,5		
GCM N2002 ML	—	—	—	—	●	●	○	●	—	2,0	±0,03	0,2	21,1	3,6	1
N3002 ML	●	●	●	○	●	●	○	●	—	3,0	±0,03	0,2	21,1	3,8	
N3004 ML	●	●	●	○	●	●	○	●	—	±0,03	0,4	21,1	3,8		
N4002 ML	●	●	●	○	●	●	○	●	—	±0,03	0,2	26,4	4,0		
N4004 ML	●	●	●	○	●	●	○	●	—	4,0	±0,03	0,4	26,4	4,0	
N4008 ML	●	●	●	○	●	●	○	●	—	±0,03	0,8	26,4	4,0		
N5004 ML	●	●	●	○	●	●	○	●	—	5,0	±0,03	0,4	26,4	4,1	
N5008 ML	●	●	●	○	●	●	○	●	—	±0,03	0,8	26,4	4,1		
N6004 ML	●	●	●	○	●	●	○	●	—	6,0	±0,03	0,4	26,4	4,5	
N6008 ML	●	●	●	○	●	●	○	●	—	±0,03	0,8	26,4	4,5		

● Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
								Cutting Width	Tolerance				
GCM N3002 GG	●	●	●	●	○	●	—	3,0	±0,03	0,2	21,1	3,8	1
N3004 GG	●	●	●	●	○	●	—	±0,03	0,4	21,1	3,8		
N4002 GG	●	●	●	●	○	●	—	±0,03	0,2	26,4	4,0		
N4004 GG	●	●	●	●	○	●	—	4,0	±0,03	0,4	26,4	4,0	
N5002 GG	●	●	●	●	○	●	—	5,0	±0,03	0,2	26,4	4,1	
N5004 GG	●	●	●	●	○	●	—	±0,03	0,4	26,4	4,1		
N6002 GG	●	●	●	●	○	●	—	6,0	±0,03	0,2	26,4	4,5	
N6004 GG	●	●	●	●	○	●	—	±0,03	0,4	26,4	4,5		
GCM N3002 GL	●	●	●	●	○	●	—	3,0	±0,03	0,2	21,1	3,8	1
N3004 GL	●	●	●	●	○	●	—	±0,03	0,4	21,1	3,8		
N4002 GL	●	●	●	●	○	●	—	4,0	±0,03	0,2	26,4	4,0	
N4004 GL	●	●	●	●	○	●	—	±0,03	0,4	26,4	4,0		
N5002 GL	●	●	●	●	○	●	—	5,0	±0,03	0,2	26,4	4,1	
N5004 GL	●	●	●	●	○	●	—	±0,03	0,4	26,4	4,1		
N6002 GL	●	●	●	●	○	●	—	6,0	±0,03	0,2	26,4	4,5	
N6004 GL	●	●	●	●	○	●	—	±0,03	0,4	26,4	4,5		
GCM N3002 GF	●	●	●	●	○	●	—	3,0	±0,03	0,2	21,1	3,8	1
N3004 GF	●	●	●	●	○	●	—	±0,03	0,4	21,1	3,8		
N4002 GF	●	●	●	●	○	●	—	4,0	±0,03	0,2	26,4	4,0	
N4004 GF	●	●	●	●	○	●	—	±0,03	0,4	26,4	4,0		
N5002 GF	●	●	●	●	○	●	—	5,0	±0,03	0,2	26,4	4,1	
N5004 GF	●	●	●	●	○	●	—	±0,03	0,4	26,4	4,1		
N6002 GF	●	●	●	●	○	●	—	6,0	±0,03	0,2	26,4	4,5	
N6004 GF	●	●	●	●	○	●	—	±0,03	0,4	26,4	4,5		

Combine the insert with a holder such that the width of cut (CW) matches.

● Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3015 RG	●	●	●	●	●	●	○	●	○	3,0	±0,03	1,5	21,1	3,8	2
N4020 RG	●	●	●	●	●	●	○	●	○	4,0	±0,03	2,0	26,4	4,0	
N5025 RG	●	●	●	●	●	●	○	●	—	5,0	±0,03	2,5	27,2	4,1	
N6030 RG	●	●	●	●	●	●	○	●	—	6,0	±0,03	3,0	27,5	4,5	

● Non-Ferrous Metals

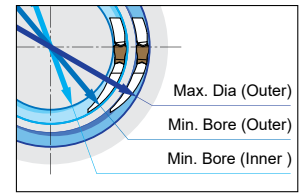
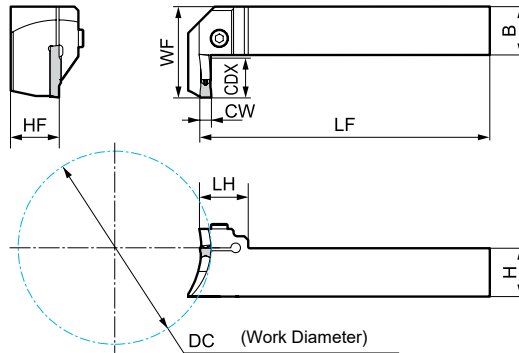
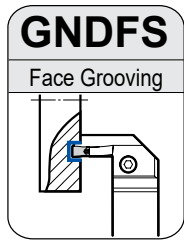
Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCG N3002 GA	○	3,0	±0,025	0,2	21,1	3,8	3
N4004 GA	○	4,0	±0,025	0,4	26,4	4,0	
N5004 GA	○	5,0	±0,025	0,4	26,4	4,1	
N6004 GA	○	6,0	±0,025	0,4	26,4	4,5	

Grooving Tool Holders

GNDFS Type

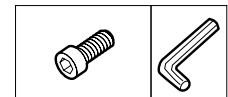
Face Grooving L-Styled (Non-Adjustable Type)



Use the multi-purpose copying inserts for turning (wide grooves).

Above figures show right hand tools.

Spare Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)						Work Dia. (mm)	Min. Bore Ø Inner (mm)	Groov. Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	H	B	LF	WF	HF	LH								
GNDFS R/L2525M 620 070			25	25	150	47	25	25	70-100	58	6,0	20	GC□ N60○○-□□	BX0520	5,0	LH040
GNDFS R/L2525M 620 100			25	25	150	47	25	25	100-200	88	6,0	20				
GNDFS R/L2525M 620 180			25	25	150	47	25	25	180-300	168	6,0	20				
GNDFS R/L2525M 620 280			25	25	150	47	25	25	280-1000	268	6,0	20				
GNDFS R/L2525M 620 450			25	25	150	47	25	25	>450	438	6,0	20				
GNDFS R/L3232P 620 070			32	32	170	54	32	25	70-100	58	6,0	20	GC□ N60○○-□□	BX0620	6,0	LH050
GNDFS R/L3232P 620 100			32	32	170	54	32	25	100-200	88	6,0	20				
GNDFS R/L3232P 620 180			32	32	170	54	32	25	180-300	168	6,0	20				
GNDFS R/L3232P 620 280			32	32	170	54	32	25	280-1000	268	6,0	20				
GNDFS R/L3232P 620 450			32	32	170	54	32	25	>450	438	6,0	20				
GNDFS R/L2525M 820 070			25	25	150	47	25	30	70-100	54	8,0	20	GCM N80○○-□□	BX0620	6,0	LH050
GNDFS R/L2525M 820 100			25	25	150	47	25	30	100-200	84	8,0	20				
GNDFS R/L2525M 820 180			25	25	150	47	25	30	180-300	164	8,0	20				
GNDFS R/L2525M 820 280			25	25	150	47	25	30	280-1000	264	8,0	20				
GNDFS R/L2525M 820 450			25	25	150	47	25	30	>450	434	8,0	20				
GNDFS R/L3232P 820 070			32	32	170	54	32	30	70-100	54	8,0	20	GCM N80○○-□□	BX0620	6,0	LH050
GNDFS R/L3232P 820 100			32	32	170	54	32	30	100-200	84	8,0	20				
GNDFS R/L3232P 820 180			32	32	170	54	32	30	180-300	164	8,0	20				
GNDFS R/L3232P 820 280			32	32	170	54	32	30	280-1000	264	8,0	20				
GNDFS R/L3232P 820 450			32	32	170	54	32	30	>450	434	8,0	20				

Select holders and inserts with the same grooving width (CW).

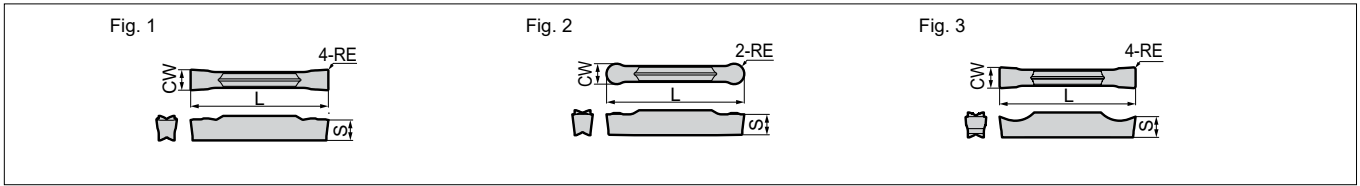
● = Euro stock
○ = Japan stock

□ = Not available

Ⓝ Recommended Tightening Torque (N·m)

Inserts for GNDFS

Coated Carbide Cermet Carbide



● Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N6004 MG	●	●	●	○	●	●	○	●	—	6,0	±0,03	0,4	26,4	4,5	1
N6008 MG	●	●	●	○	●	●	○	●	—	6,0	±0,03	0,8	26,4	4,5	
N8004 MG	●	●	●	○	●	●	○	●	—	8,0	±0,04	0,4	28,8	6,0	
N8008 MG	●	●	●	○	●	●	○	●	—	8,0	±0,04	0,8	28,8	6,0	
GCM N6004 ML	●	●	●	○	●	●	○	●	—	6,0	±0,03	0,4	26,4	4,5	1
N6008 ML	●	●	●	○	●	●	○	●	—	6,0	±0,03	0,8	26,4	4,5	
N8004 ML	●	●	●	○	●	●	○	●	—	8,0	±0,04	0,4	28,8	6,0	
N8008 ML	●	●	●	○	●	●	○	●	—	8,0	±0,04	0,8	28,8	6,0	

● Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
								Cutting Width	Tolerance				
GCM N6002 GG	●	●	●	●	○	●	—	6,0	±0,03	0,2	26,4	4,5	1
N6004 GG	●	●	●	●	○	●	—	8,0	±0,04	0,4	28,8	6,0	
GCM N6002 GL	●	●	●	●	○	●	—	6,0	±0,03	0,2	26,4	4,5	1
N6004 GL	●	●	●	●	○	●	—	8,0	±0,03	0,4	26,4	4,5	
N8004 GL	●	○	●	●	○	●	—	8,0	±0,04	0,4	28,8	6,0	
GCM N6002 GF	●	●	●	●	○	●	—	6,0	±0,03	0,2	26,4	4,5	1
N6004 GF	●	●	●	●	○	●	—	6,0	±0,03	0,4	26,4	4,5	
N8002 GF	●	●	●	●	○	●	—	8,0	±0,04	0,2	28,8	6,0	
N8004 GF	●	●	●	●	○	●	—	8,0	±0,04	0,4	28,8	6,0	

● Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N6030 RN	●	●	●	●	●	●	○	●	—	6,0	±0,03	3,0	28,3	4,5	2

Combine the insert with a holder such that the width of cut (CW) matches.

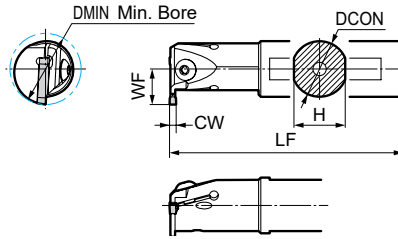
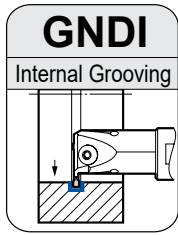
● Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H1									CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCG N6004 GA	○									6,0	±0,025	0,4	26,4	4,5	3

Grooving Tool Holders GNDI Type

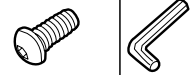
Internal Grooving



Use for multi-purpose or profiling insert for turning (wide grooves).

Above figures show right hand tools.

Spare Parts



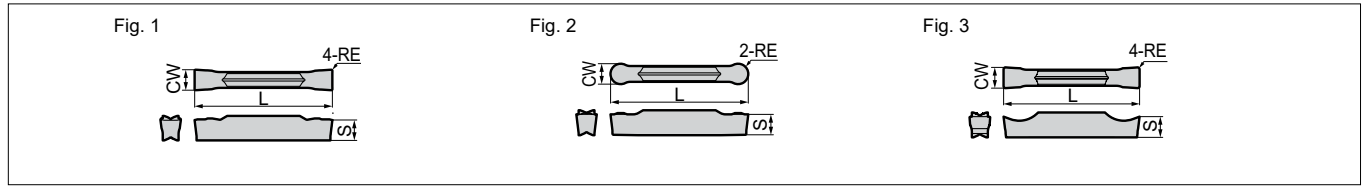
Holders

Cat. No.	Stock		Dimensions (mm)				Min. Bore (mm)	Groov. Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	N·m	Spanner
	R	L	DCON	H	LF	WF							
GNDI R/L 2532 T 206	●	●	25	23	200	16	32	2,0	6	GCM N2000-□□	BH0516	5,0	LH030
GNDI R/L 3240 T 210	●	●	32	30	250	26	40	2,0	10	GCM N2000-□□	BH0616	6,0	LH040
GNDI R/L 2532 T 306	●	●	25	23	200	16	32	3,0	6	GCM N3000-□□	BH0516	5,0	LH030
GNDI R/L 3240 T 310	●	●	32	30	250	26	40	3,0	10	GCM N3000-□□	BH0616	6,0	LH040
GNDI R/L 4050 T 311	●	●	40	38	300	31	50	3,0	11	GCM N3000-□□	BH0616	6,0	LH040
GNDI R/L 2532 T 406	●	●	25	23	200	19	32	4,0	6	GCM N4000-□□	BH0516	5,0	LH030
GNDI R/L 3240 T 410	●	●	32	30	250	26	40	4,0	10	GCM N4000-□□	BH0616	6,0	LH040
GNDI R/L 4050 T 411	●	●	40	38	300	31	50	4,0	11	GCM N4000-□□	BH0616	6,0	LH040
GNDI R/L 2532 T 506	●	○	25	23	200	19	32	5,0	6	GCM N5000-□□	BH0516	5,0	LH030
GNDI R/L 3240 T 510	●	●	32	30	250	26	40	5,0	10	GCM N5000-□□	BH0616	6,0	LH040
GNDI R/L 4050 T 511	●	●	40	38	300	31	50	5,0	11	GCM N5000-□□	BH0616	6,0	LH040
GNDI R/L 4050 T 611	●	●	40	38	300	31	50	6,0	11	GCM N6000-□□	BH0616	6,0	LH040

Select holders and inserts with the same grooving width (CW).

■ GNDI Inserts

Coated Carbide Cermet Carbide



● Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3002 MG	●	●	●	○	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	1
N3004 MG	●	●	●	○	●	●	○	●	—	3,0	±0.03	0,4	21,1	3,8	
N4002 MG	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 MG	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N4008 MG	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,8	26,4	4,0	
N5004 MG	●	●	●	○	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N5008 MG	●	●	●	○	●	●	○	●	—	5,0	±0.03	0,8	26,4	4,1	
N6004 MG	●	●	●	○	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	
N6008 MG	●	●	●	○	●	●	○	●	—	6,0	±0.03	0,8	26,4	4,5	
GCM N2002 ML	—	—	—	—	—	—	—	—	—	2,0	±0.03	0,2	21,1	3,6	
N3002 ML	●	●	●	○	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	
N3004 ML	●	●	●	○	●	●	○	●	—	3,0	±0.03	0,4	21,1	3,8	
N4002 ML	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 ML	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N4008 ML	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,8	26,4	4,0	
N5004 ML	●	●	●	○	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N5008 ML	●	●	●	○	●	●	○	●	—	5,0	±0.03	0,8	26,4	4,1	
N6004 ML	●	●	●	○	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	
N6008 ML	●	●	●	○	●	●	○	●	—	6,0	±0.03	0,8	26,4	4,5	

● Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
								Cutting Width	Tolerance				
GCM N2002 GG	●	●	●	●	○	●	—	2,0	±0.03	0,2	21,1	3,6	1
N3002 GG	●	●	●	●	○	●	—	2,0	±0.03	0,2	21,1	3,8	
N3004 GG	●	●	●	●	○	●	—	3,0	±0.03	0,4	21,1	3,8	
N4002 GG	●	●	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 GG	●	●	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N5002 GG	●	●	●	●	○	●	—	5,0	±0.03	0,2	26,4	4,1	
N5004 GG	●	●	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N6002 GG	●	●	●	●	○	●	—	6,0	±0.03	0,2	26,4	4,5	
N6004 GG	●	●	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	
GCM N2002 GL	●	●	●	●	○	●	—	2,0	±0.03	0,2	21,1	3,6	
N2004 GL	●	●	●	●	○	●	—	2,0	±0.03	0,4	21,1	3,6	
N3002 GL	●	●	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	
N3004 GL	●	●	●	●	○	●	—	3,0	±0.03	0,4	21,1	3,8	
N4002 GL	●	●	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 GL	●	●	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N5002 GL	●	●	●	●	○	●	—	5,0	±0.03	0,2	26,4	4,1	
N5004 GL	●	●	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N6002 GL	●	●	●	●	○	●	—	6,0	±0.03	0,2	26,4	4,5	
N6004 GL	●	●	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	
GCM N2002 GF	—	—	●	●	○	●	—	2,0	±0.03	0,2	21,1	3,6	1
N2004 GF	—	—	●	●	○	●	—	2,0	±0.03	0,4	21,1	3,6	
N3002 GF	●	●	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	
N3004 GF	●	●	●	●	○	●	—	3,0	±0.03	0,4	21,1	3,8	
N4002 GF	●	●	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 GF	●	●	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N5002 GF	●	●	●	●	○	●	—	5,0	±0.03	0,2	26,4	4,1	
N5004 GF	●	●	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N6002 GF	●	●	●	●	○	●	—	6,0	±0.03	0,2	26,4	4,5	
N6004 GF	●	●	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	

Combine the insert with a holder such that the width of cut (CW) matches.

● External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3015 RG	●	●	●	●	●	●	○	●	—	3,0	±0.03	1,5	21,1	3,8	2
N4020 RG	●	●	●	●	●	●	○	●	—	4,0	±0.03	2,0	26,4	4,0	
N5025 RG	●	●	●	●	●	●	○	●	—	5,0	±0.03	2,5	27,2	4,1	
N6030 RG	●	●	●	●	●	●	○	●	—	6,0	±0.03	3,0	27,5	4,5	

● Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N2010 RN	—	—	—	—	●	●	○	●	—	2,0	±0.03	1,0	21,7	3,6	2
N3015 RN	●	●	●	○	●	●	○	●	—	3,0	±0.03	1,5	22,6	3,8	
N4020 RN	●	●	●	○	●	●	○	●	—	4,0	±0.03	2,0	28,2	4,0	
N5025 RN	●	●	●	○	●	●	○	●	—	5,0	±0.03	2,5	28,3	4,1	
N6030 RN	●	●	●	○	●	●	○	●	—	6,0	±0.03	3,0	28,3	4,5	

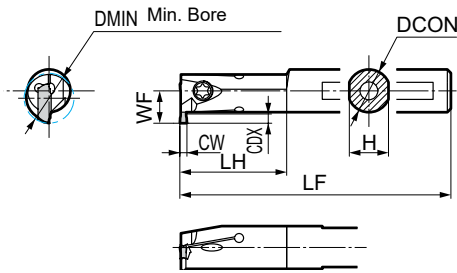
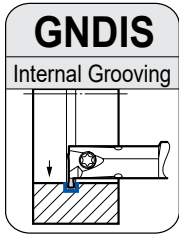
● Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCG N2002 GA	○	2,0	±0.025	0,2	21,1	3,6	3
N3002 GA	○	3,0	±0.025	0,2	21,1	3,8	
N4004 GA	○	4,0	±0.025	0,4	26,4	4,0	
N5004 GA	○	5,0	±0.025	0,4	26,4	4,1	
N6004 GA	○	6,0	±0.025	0,4	26,4	4,5	

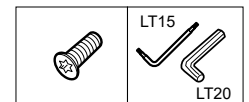
Grooving Tool Holders GNDIS Type

Internal Grooving



Above figures show right hand tools.

■ Spare Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)					Min. Bore (mm)	Groov. Width (mm)	Max. Groov. Depth (mm)	Applicable Insert	Cap Screw	Spanner
	R	L	DCON	H	LF	LH	WF						
GNDIS R/L 1214 T 1526	○	○	12	11	150	30	9,0	14	1,5	2,6	GXM N150005S GF		
GNDIS R/L 1214 T 1536	○	○	12	11	150	30	10,0	14	1,5	3,6	GXM N150005S GF	BFTX0409N	3,4 LT15
GNDIS R/L 1616 T 1536	○	○	16	15	160	35	11,5	16	1,5	3,6	GXM N150005S GF		
GNDIS R/L 1620 T 1546	○	○	16	15	160	40	14,5	20	1,5	4,6	GXM N150005S GF		
GNDIS R/L 2025 T 1566	○	○	20	19	180	40	19,0	25	1,5	6,6	GXM N150005S GF	BFTX0511N	5,0 LT20
GNDIS R/L 1214 T 2026	○	○	12	11	150	30	9,0	14	2,0	2,6	GXM N2002S-□□		
GNDIS R/L 1214 T 2036	○	○	12	11	150	30	10,0	14	2,0	3,6	GXM N2002S-□□	BFTX0409N	3,4 LT15
GNDIS R/L 1616 T 2036	○	○	16	15	160	35	11,5	16	2,0	3,6	GXM N2002S-□□		
GNDIS R/L 1620 T 2046	○	○	16	15	160	40	14,5	20	2,0	4,6	GXM N2002S-□□		
GNDIS R/L 2025 T 2066	○	○	20	19	180	40	19,0	25	2,0	6,6	GXM N2002S-□□	BFTX0511N	5,0 LT20
GNDIS R/L 1214 T 3026	○	○	12	11	150	30	9,0	14	3,0	2,6	GXM N3002S-□□		
GNDIS R/L 1214 T 3036	○	○	12	11	150	30	10,0	14	3,0	3,6	GXM N3002S-□□	BFTX0409N	3,4 LT15
GNDIS R/L 1616 T 3036	○	○	16	15	160	35	11,5	16	3,0	3,6	GXM N3002S-□□		
GNDIS R/L 1620 T 3046	○	○	16	15	160	40	14,5	20	3,0	4,6	GXM N3002S-□□		
GNDIS R/L 2025 T 3066	○	○	20	19	180	40	19,0	25	3,0	6,6	GXM N3002S-□□	BFTX0511N	5,0 LT20

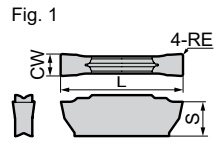
Select holders and inserts with the same grooving width (CW).

Only GXM inserts can be used.

Grooving Tool Holders GNDIS Type

■ Inserts for GNDIS

■ Coated Carbide



● Grooving / Traversing

Dimensions (mm)

Cat. No.	AC520U	AC1030U	CW		RE	L	S	Fig.
			Cutting Width	Tolerance				
GXM N2002S ML	○	○	2,0	±0,03	0,2	11,1	3,1	1
N3002S ML	○	○	3,0	±0,03	0,2	11,1	3,1	

Select holders and inserts with the same grooving width (CW).

● Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC520U	AC1030U	CW		RE	L	S	Fig.
			Cutting Width	Tolerance				
GXM N150005S GF	○	○	1,5	±0,03	0,2	21,1	3,6	1
N2002S GF	○	○	2,0	±0,03	0,2	21,1	3,8	
N3002S GF	○	○	3,0	±0,03	0,4	21,1	3,8	

GCM and GCG inserts are not compatible.

■ Recommended Cutting Conditions

Work Material	P Carbon Steel / Alloy Steel		M Stainless Steel		K Cast Iron		S Exotic Alloy	
Grade	AC520U	AC1030U	AC520U	AC1030U	AC520U	AC1030U	AC520U	AC1030U
Cutting Speed (m/min)	80–200	50–200	70–150	50–150	60–200	50–200	20–80	20–60

■ Grooving / Cut-Off Machining / Necking

Chipbreaker		Feed Rate (mm/rev)	
		ML	GF
Width of Cut CW (mm)	1,5	–	0,02–0,10
	2,0	0,03–0,12	0,03–0,12
	3,0	0,05–0,15	0,05–0,15

■ Traversing

Chipbreaker		ML	
		Feed Rate (mm/rev)	Depth of Cut (mm)
Width of Cut CW (mm)	2,0	0,03–0,12	0,2–0,8
	3,0	0,05–0,15	0,3–1,2

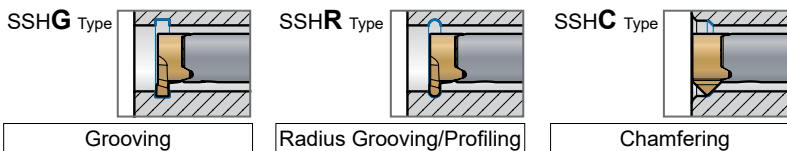
Grooving Tool Holders

SSH Series

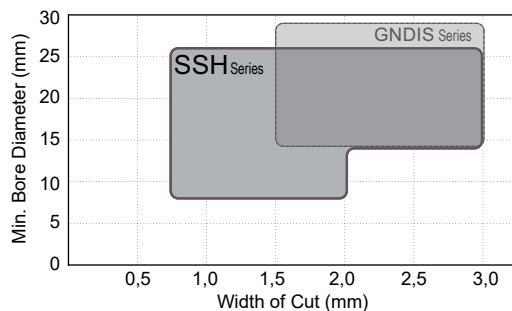


■ Features

Tough carbide body for stable machining.
 Internal coolant supply for outstanding chip evacuation.
 Adopts AC1030U for excellent machined surface quality.
 In addition to grooving applications, we have a lineup of 12 items for circlip groove machining.



■ Application Range



Width of Cut: 0,74 mm – 3,00 mm
 Min. Bore Diameter: Ø 8,0 mm
 Max. Groove Depth: to 4,0 mm
 Holder: Carbide body (internal coolant supply)
 Insert: Grade AC1030U



Grooving & Parting-Off

■ Chip Control



SSH Series

Stable and smooth evacuation of curled chips even on small diameters.



Easy chip removal



Competitor

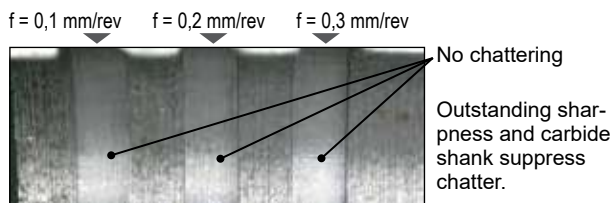
Evacuation from grooves is poor, inviting sudden breakage.



No chip evacuation space

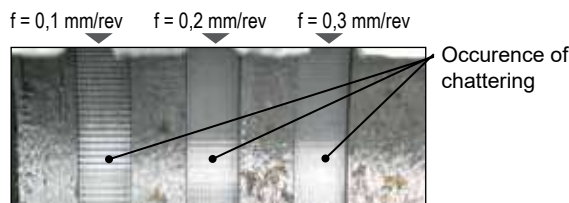
Work Material: C45 Cutting Conditions: $v_c = 50$ m/min, $f = 0,02$ mm/rev, $a_p = 1,0$ mm, wet (oil-based)
 Cutting Diameter: Ø 13 mm

■ Chatter Resistance



SSH Series

No chattering
 Outstanding sharpness and carbide shank suppress chatter.

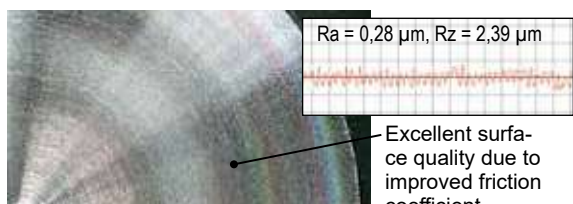


Competitor

Occurrence of chattering

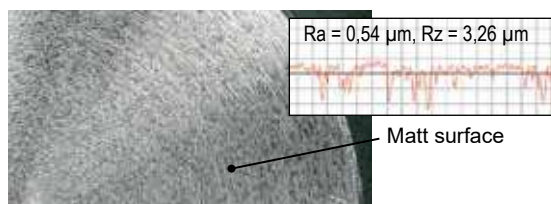
Work Material: C45 Cutting Conditions: $v_c = 100$ m/min, $f = 0,01, 0,02, 0,03$ mm/rev, $a_p = 0,2$ mm, wet (oil-based)
 Cutting Diameter: Ø 13 mm

■ Machined Surface Quality



SSH Series

Excellent surface quality due to improved friction coefficient.

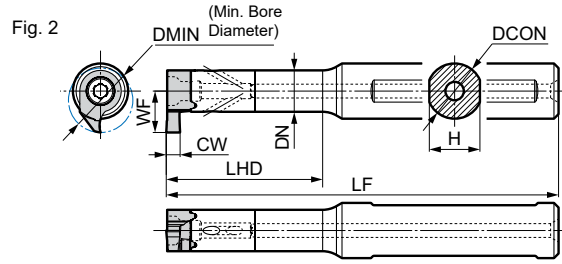
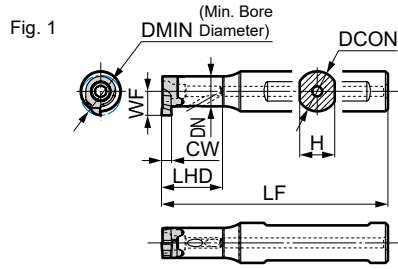
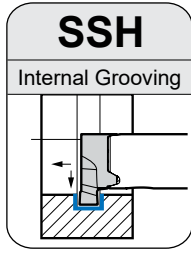


Competitor

Matt surface

Work Material: 42CrMo4 Cutting Conditions: $v_c = 180$ m/min, $f = 0,02$ mm/rev, $a_p = 0,2$ mm, wet (oil-based)
 Cutting Diameter: Ø 30 mm

Grooving Tool Holders SSH Series



Holder

Dimensions (mm)

Parts

Cat. No.	Stock	DCON	DN	H	LF*	LHD	DMIN	CW	Fig.	Applicable Insert	Flat Screw		Wrench	
											(N·m)	TRX08IP	LT15IP	
E08D SSHM N125 08	○	8	6	7	60	12,5	8	0,74-2,00	1	SSH_R/L 08 ...	BFTX02608IPS	1,2	TRX08IP	
E08E SSHM N210 08	○	8	6	7	70	21,0	8	0,74-2,00	1					
E12E SSHM N125 08	○	12	6	11	70	12,5	8	0,74-2,00	1					
E12F SSHM N210 08	○	12	6	11	80	21,0	8	0,74-2,00	1					
E12G SSHM N300 08	○	12	6	11	90	30,0	8	0,74-2,00	1					
E12H SSHM N420 08	○	12	6	11	100	42,0	8	0,74-2,00	1	SSH_R/L 14 ...	BFTX0412IPS	5,0	LT15IP	
E12X SSHM N195 14	○	12	9	11	75	19,5	14	0,74-3,00	2					
E12H SSHM N340 14	○	12	9	11	100	34,0	14	0,74-3,00	2					
E12J SSHM N450 14	○	12	9	11	110	45,0	14	0,74-3,00	2					
E12X SSHM N640 14	○	12	9	11	130	64,0	14	0,74-3,00	2					
E16F SSHM N195 14	○	16	9	14	80	19,5	14	0,74-3,00	2	SSH_R/L 14 ...	BFTX0412IPS	5,0	LT15IP	
E16H SSHM N340 14	○	16	9	14	100	34,0	14	0,74-3,00	2					
E16J SSHM N450 14	○	16	9	14	110	45,0	14	0,74-3,00	2					
E16X SSHM N640 14	○	16	9	14	130	64,0	14	0,74-3,00	2					

* The LF dimensions above are dimensions with SSHG/SSHR type insert mounted. Refer to the insert stock table for WF dimensions.

Inserts (E08_SSHM N___-08 / E12_SSHM N___-08)

Dimensions (mm)

Applications	Cat. No.	AC1030U Coated Carbide		CW	CDX	RE	WF3	WF	S	E2	Fig.	Applicable Holder	Fig. 1 (For Grooving)
		R	L										
Grooving	SSHG R/L 0807400	○	○	0,74	1,0	-	3,2	4,80	3,6	0,4	1	E08_SSHM N___ 08 E12_SSHM N___ 08	
	R/L 0808400	○	○	0,84	1,0	-	3,2	4,80	3,6	0,4	1		
	R/L 0809400	○	○	0,94	1,0	-	3,2	4,80	3,6	0,4	1		
	R/L 0810000	○	○	1,00	1,0	-	3,2	4,80	3,1	-	1		
	R/L 0810010	○	○	1,00	1,0	0,10	3,2	4,80	3,1	-	2		
	R/L 0811900	○	○	1,19	1,0	-	3,2	4,80	3,1	-	1		
	R/L 0813900	○	○	1,39	1,0	-	3,2	4,80	3,0	-	1		
	R/L 0815000	○	○	1,50	1,0	-	3,2	4,80	3,0	-	1		
	R/L 0815010	○	○	1,50	1,0	0,10	3,2	4,80	3,0	-	2		
	R/L 0816900	○	○	1,69	1,0	-	3,2	4,80	3,0	-	1		
Radius Grooving/ Profiling	R/L 0820000	○	○	2,00	1,0	-	3,2	4,80	3,0	-	1		
	R/L 0820010	○	○	2,00	1,0	0,10	3,2	4,80	3,0	-	2		
	R/L 0820020	○	○	2,00	1,0	0,20	3,2	4,80	3,0	-	2		
	SSHR R/L 08080	○	○	0,80	1,0	0,40	3,2	4,80	3,1	-	3		
	R/L 08100	○	○	1,00	1,0	0,50	3,2	4,80	3,1	-	3		
	R/L 08120	○	○	1,20	1,0	0,60	3,2	4,80	3,1	-	3		
R/L 08150	○	○	1,50	1,0	0,75	3,2	4,80	3,0	-	3			
Chamfering	R/L 08180	○	○	1,80	1,0	0,90	3,2	4,80	3,0	-	3		
	R/L 08200	○	○	2,00	1,0	1,00	3,2	4,80	3,0	-	3		
Chamfering	SSHC R/L 08454502	○	○	-	1,4	0,20	1,8	4,65	3,6	-	4		

* Refer to the holder stock table for the DMIN dimensions above.

WF, WF3, E2: Cutting Edge Distance

Fig. shows right hand (R) tools.

Grooving Tool Holders

SSH Series



Inserts (E12_SSHM N___-14 / E16_SSHM N___-14)

Dimensions (mm)

Applications	Cat. No.	AC1030U Coated Carbide		CW	CDX	RE	WF3	WF	S	E2	Fig.	Applicable Holder	Fig. 1 (For Grooving)
		R	L										
Grooving	SSHG R/L 1407400	○	○	0,74	1,2	-	5,3	9,0	5,5	0,2	1	E12_SSHM N___-14 E16_SSHM N___-14	
	R/L 1408400	○	○	0,84	1,3	-	5,3	9,0	5,5	0,2	1		
	R/L 1409400	○	○	0,94	1,5	-	5,3	9,0	5,5	0,2	1		
	R/L 1410000	○	○	1,00	1,6	-	5,3	9,0	5,5	0,2	1		
	R/L 1410010	○	○	1,00	1,6	0,10	5,3	9,0	5,5	0,2	2		
	R/L 1411900	○	○	1,19	4,0	-	5,3	9,0	5,2	-	1		
	R/L 1413900	○	○	1,39	4,0	-	5,3	9,0	5,1	-	1		
	R/L 1415000	○	○	1,50	4,0	-	5,3	9,0	5,1	-	1		
	R/L 1415010	○	○	1,50	4,0	0,10	5,3	9,0	5,1	-	2		
	R/L 1416900	○	○	1,69	4,0	-	5,3	9,0	5,1	-	1		
	R/L 1420000	○	○	2,00	4,0	-	5,3	9,0	5,1	-	1		
	R/L 1420010	○	○	2,00	4,0	0,10	5,3	9,0	5,1	-	2		
	R/L 1420020	○	○	2,00	4,0	0,20	5,3	9,0	5,1	-	2		
	R/L 1425000	○	○	2,50	4,0	-	5,3	9,0	5,1	-	1		
	R/L 1425010	○	○	2,50	4,0	0,10	5,3	9,0	5,1	-	2		
	R/L 1425020	○	○	2,50	4,0	0,20	5,3	9,0	5,1	-	2		
R/L 1430000	○	○	3,00	4,0	-	5,3	9,0	5,1	-	1			
R/L 1430010	○	○	3,00	4,0	0,10	5,3	9,0	5,1	-	2			
R/L 1430020	○	○	3,00	4,0	0,20	5,3	9,0	5,1	-	2			
SSHR R/L 14100	○	○	1,00	1,6	0,50	5,3	9,0	5,2	-	3			
R/L 14120	○	○	1,20	4,0	0,60	5,3	9,0	5,2	-	3			
R/L 14150	○	○	1,50	4,0	0,75	5,3	9,0	5,1	-	3			
R/L 14180	○	○	1,80	4,0	0,90	5,3	9,0	5,1	-	3			
R/L 14200	○	○	2,00	4,0	1,00	5,3	9,0	5,1	-	3			
R/L 14220	○	○	2,20	4,0	1,10	5,3	9,0	5,1	-	3			
R/L 14250	○	○	2,50	4,0	1,25	5,3	9,0	5,1	-	3			
R/L 14300	○	○	3,00	4,0	1,50	5,3	9,0	5,1	-	3			

Fig. shows right hand (R) tools.

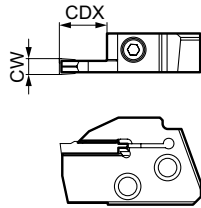
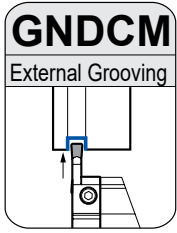
* Refer to the holder stock table for the DMIN dimensions above.
WF, WF3, E2: Cutting Edge Distance

○ = Japan stock

Recommended Cutting Conditions

Work Material	P Carbon Steel/Alloy Steel	M Stainless Steel	S Cast Iron
Cutting Speed v_c (m/min)	20-200	15-80	20-160
Feed Rate f (mm/rev)	0,01-0,03	0,01-0,03	0,01-0,03

ISO-PSC Polygon Modular GND Grooving System



General Features

New grades and chipbreakers have been added to the already established GND grooving system with polygon shank and a flexible and economical cassette system for inserts. An array of chipbreakers improves the efficiency in chip control in various applications such as grooving, turning, profiling and cut-off.

Advantages

- GND inserts for soft grooving from 2,0 - 6,0 mm width
- Expanded grade selection with 9 different chipbreakers for a wide application range
- Provides excellent chip control
- Achieves stable long tool life

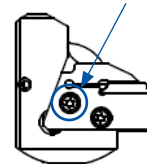
Cassette

Cat. No.	R	L	CW (mm)	CDX (mm)	Inserts	Cap Screw	Tightening Torque (N·m)	Spanner
GND MCM R/L 212	●	●	2	12	GCM □2000-□□	BX0512	5,0	LH040
GND MCM R/L 312	●	●	3		GCM □3000-□□			
GND MCM R/L 418	●	●	4	GCM □4000-□□				
GND MCM R/L 518	●	●	5	GCM □5000-□□				
GND MCM R/L 618	●	●	6	GCM □6000-□□				
				GCM □6000-□□				

Handling

ATTENTION

To fix the cassette on the holder, please clamp the cassette at first with the inner torx screw.



Holder

PSC_GM00
(straight)

PSC_GM90
(L-style)

Note:
The right handed PSC40/50GM90R holder needs a left cassette.
The left handed PSC40/50GM90L holder needs a right cassette.

Style	Cat. No.	R	L	DCSFMS (mm)	WF (mm)	LF (mm)	Cap Screw	Tightening Torque (N·m)	Spanner
Straight	PSC40GM00 R/L	●	●	40	22	80*	BFTX0619N	7,5	LT25
	PSC50GM00 R/L	●	●	50	27				
L-Style	PSC40GM90 R/L	●	●	40	42*	52,5			
	PSC50GM90 R/L	●	●	50	47*	55,0			

* Dimension when using radial grooving cassettes.

Identification Details - Polygon-Toolholder

PSC	40	-	G	M	00	R
Polygonshank	Shank Diameter (DCSFMS)		Series Symbol GND	Application External Multi-Purpose	Style 00 = Straight 90 = L-Style	Holder Design R = Right L = Left

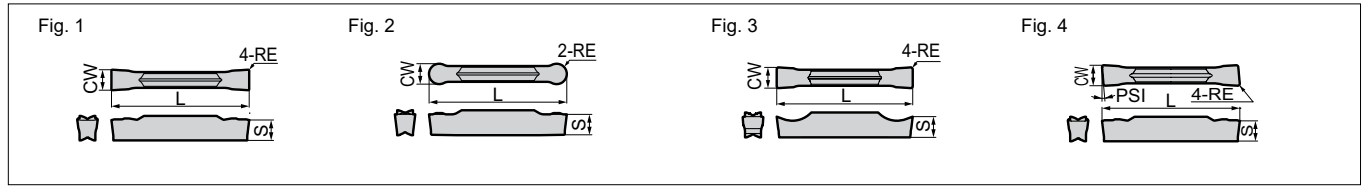
Identification Details - Cassette

GND	C	M	L	3	12
Series Symbol GND	Cassette	Application External Multi-Purpose	Holder Design R = Right L = Left	Grooving Width	Max. Grooving Depth



Inserts for GNDCM

Coated Carbide Cermet Carbide



Grooving / Traversing

Dimensions (mm)

Cat. No.	Material							CW		RE	L	S	Fig.		
	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A					Cutting Width	Tolerance
GCM N3002 MG	●	●	○	○	●	●	●	○	○	3,0	±0,03	0,2	21,1	3,8	1
N3004 MG	●	●	○	○	●	●	●	○	○	±0,03	0,4	21,1	3,8		
N4002 MG	●	●	○	○	●	●	●	○	○	±0,03	0,2	26,4	4,0		
N4004 MG	●	●	○	○	●	●	●	○	○	±0,03	0,4	26,4	4,0		
N4008 MG	●	●	○	○	●	●	●	○	○	±0,03	0,8	26,4	4,0		
N5004 MG	●	●	○	○	●	●	●	○	○	±0,03	0,4	26,4	4,1		
N5008 MG	●	●	○	○	●	●	●	○	○	±0,03	0,8	26,4	4,1		
N6004 MG	●	●	○	○	●	●	●	○	○	±0,03	0,4	26,4	4,5		
N6008 MG	●	●	○	○	●	●	●	○	○	±0,03	0,8	26,4	4,5		
GCM N2002 ML	○	○	○	○	○	○	○	○	○	2,0	±0,03	0,2	21,1	3,6	1
N3002 ML	○	○	○	○	○	○	○	○	○	±0,03	0,2	21,1	3,8		
N3004 ML	○	○	○	○	○	○	○	○	○	±0,03	0,4	21,1	3,8		
N4002 ML	○	○	○	○	○	○	○	○	○	±0,03	0,2	26,4	4,0		
N4004 ML	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,0		
N4008 ML	○	○	○	○	○	○	○	○	○	±0,03	0,8	26,4	4,0		
N5004 ML	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,1		
N5008 ML	○	○	○	○	○	○	○	○	○	±0,03	0,8	26,4	4,1		
N6004 ML	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,5		
N6008 ML	○	○	○	○	○	○	○	○	○	±0,03	0,8	26,4	4,5		

Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	Material							CW		RE	L	S	Fig.		
	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	Cutting Width	Tolerance						
GCM N2002 GG	●	●	●	●	○	○	○	○	○	2,0	±0,03	0,2	21,1	3,6	1
N3002 GG	●	●	●	●	○	○	○	○	○	±0,03	0,2	21,1	3,8		
N3004 GG	●	●	●	●	○	○	○	○	○	±0,03	0,4	21,1	3,8		
N4002 GG	●	●	●	●	○	○	○	○	○	±0,03	0,2	26,4	4,0		
N4004 GG	●	●	●	●	○	○	○	○	○	±0,03	0,4	26,4	4,0		
N5002 GG	●	●	●	●	○	○	○	○	○	±0,03	0,2	26,4	4,1		
N5004 GG	●	●	●	●	○	○	○	○	○	±0,03	0,4	26,4	4,1		
N6002 GG	●	●	●	●	○	○	○	○	○	±0,03	0,2	26,4	4,5		
N6004 GG	●	●	●	●	○	○	○	○	○	±0,03	0,4	26,4	4,5		
GCM N2002 GL	○	○	○	○	○	○	○	○	○	2,0	±0,03	0,2	21,1	3,6	1
N2004 GL	○	○	○	○	○	○	○	○	○	±0,03	0,4	21,1	3,6		
N3002 GL	○	○	○	○	○	○	○	○	○	±0,03	0,2	21,1	3,8		
N3004 GL	○	○	○	○	○	○	○	○	○	±0,03	0,4	21,1	3,8		
N4002 GL	○	○	○	○	○	○	○	○	○	±0,03	0,2	26,4	4,0		
N4004 GL	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,0		
N5002 GL	○	○	○	○	○	○	○	○	○	±0,03	0,2	26,4	4,1		
N5004 GL	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,1		
N6002 GL	○	○	○	○	○	○	○	○	○	±0,03	0,2	26,4	4,5		
N6004 GL	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,5		
GCM N2002 GF	○	○	○	○	○	○	○	○	○	2,0	±0,03	0,2	21,1	3,6	1
N2004 GF	○	○	○	○	○	○	○	○	○	±0,03	0,4	21,1	3,6		
N3002 GF	○	○	○	○	○	○	○	○	○	±0,03	0,2	21,1	3,8		
N3004 GF	○	○	○	○	○	○	○	○	○	±0,03	0,4	21,1	3,8		
N4002 GF	○	○	○	○	○	○	○	○	○	±0,03	0,2	26,4	4,0		
N4004 GF	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,0		
N5002 GF	○	○	○	○	○	○	○	○	○	±0,03	0,2	26,4	4,1		
N5004 GF	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,1		
N6002 GF	○	○	○	○	○	○	○	○	○	±0,03	0,2	26,4	4,5		
N6004 GF	○	○	○	○	○	○	○	○	○	±0,03	0,4	26,4	4,5		

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	Material							CW		RE	L	S	Fig.		
	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A					Cutting Width	Tolerance
GCM N3015 RG	●	●	○	○	●	●	○	○	○	3,0	±0,03	1,5	21,1	3,8	2
N4020 RG	●	●	○	○	●	●	○	○	○	4,0	±0,03	2,0	26,4	4,0	
N5025 RG	●	●	○	○	●	●	○	○	○	5,0	±0,03	2,5	27,2	4,1	
N6030 RG	●	●	○	○	●	●	○	○	○	6,0	±0,03	3,0	27,5	4,5	

Cut-Off Machining (Handed Edge)

Dimensions (mm)

Cat. No.	Material							PSI	CW		RE	L	S	Fig.
	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U		Cutting Width	Tolerance				
GCM R2002 CG 05	●	●	●	●	○	○	○	5°	2,0	±0,03	0,2	21,1	3,6	4
L2002 CG 05	●	●	●	●	○	○	○	5°	2,0	±0,03	0,2	21,1	3,6	
GCM R3002 CG 05	●	●	●	●	○	○	○	5°	3,0	±0,03	0,2	21,3	3,8	
L3002 CG 05	●	●	●	●	○	○	○	5°	3,0	±0,03	0,2	21,3	3,8	
GCM R4002 CG 05	●	●	●	●	○	○	○	5°	4,0	±0,04	0,2	26,7	4,0	
L4002 CG 05	●	●	●	●	○	○	○	5°	4,0	±0,04	0,2	26,7	4,0	
GCM R2003 CF 10	○	○	○	○	○	○	○	10°	2,0	±0,08	0,03	22,4	3,6	
L2003 CF 10	○	○	○	○	○	○	○	10°	2,0	±0,08	0,03	22,4	3,6	
GCM R3003 CF 10	○	○	○	○	○	○	○	10°	3,0	±0,08	0,03	22,4	3,8	4
L3003 CF 10	○	○	○	○	○	○	○	10°	3,0	±0,08	0,03	22,4	3,8	
GCM R2003 CF 15	○	○	○	○	○	○	○	15°	2,0	±0,08	0,03	22,4	3,6	
L2003 CF 15	○	○	○	○	○	○	○	15°	2,0	±0,08	0,03	22,4	3,6	
GCM R3003 CF 15	○	○	○	○	○	○	○	15°	3,0	±0,08	0,03	22,4	3,8	4
L3003 CF 15	○	○	○	○	○	○	○	15°	3,0	±0,08	0,03	22,4	3,8	

GCM R: Right hand GCM L: Left hand
Combine the insert with a holder such that the width of cut (CW) matches.

Profiling / Radius Grooving / Necking

Dimensions (mm)

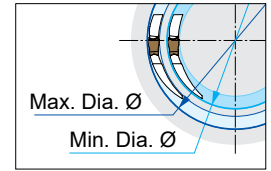
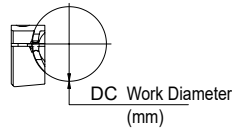
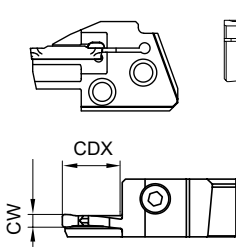
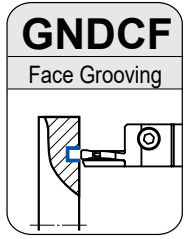
Cat. No.	Material							CW		RE	L	S	Fig.		
	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A					Cutting Width	Tolerance
GCM N2010 RN	○	○	○	○	○	○	○	○	○	2,0	±0,03	1,0	21,7	3,6	2
N3015 RN	○	○	○	○	○	○	○	○	○	3,0	±0,03	1,5	22,6	3,8	
N4020 RN	○	○	○	○	○	○	○	○	○	4,0	±0,03	2,0	28,2	4,0	
N5025 RN	○	○	○	○	○	○	○	○	○	5,0	±0,03	2,5	28,3	4,1	
N6030 RN	○	○	○	○	○	○	○	○	○	6,0	±0,03	3,0	28,3	4,5	

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCG N2002 GA	○	2,0	±0,025	0,2	21,1	3,6	3
N3002 GA	○	3,0	±0,025	0,2	21,1	3,8	
N4004 GA	○	4,0	±0,025	0,4	26,4	4,0	
N5004 GA	○	5,0	±0,025	0,4	26,4	4,1	
N6004 GA	○	6,0	±0,025	0,4	26,4	4,5	

ISO-PSC Polygon Modular GND Grooving System



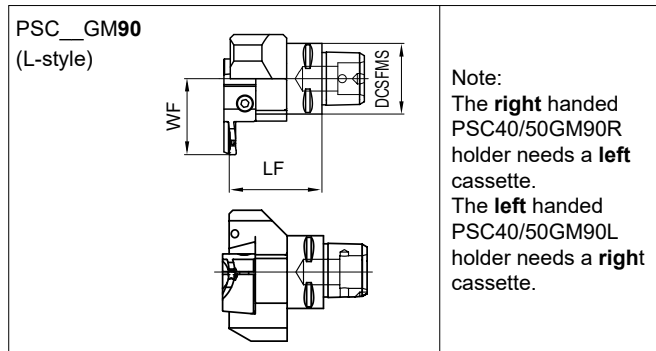
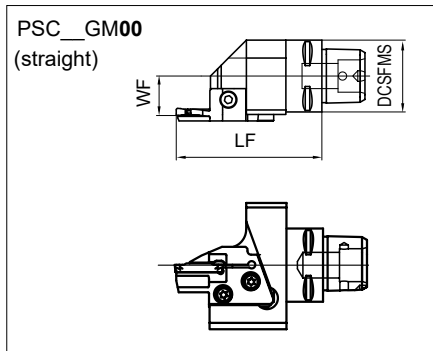
Work diameters in the stock indicate external diameters of face grooving.

Above figures show right hand tools.

■ Cassette

Cat. No.	R	L	CW (mm)	Diameter Range (mm)	DC (mm)	CDX (mm)	Inserts	Cap Screw	Tightening Torque (N·m)	Spanner
GNDCF R/L 312-040	●	●	3	40-200	40-55	12	GC□ N3000-□□	BX0512	5,0	LH040
GNDCF R/L 315-050	●	●			50-70	15				
GNDCF R/L 315-065	●	●			65-100	15				
GNDCF R/L 318-090	●	□			90-150	18				
GNDCF R/L 318-140	●	□			140-200	18				
GNDCF R/L 418-040	●	●	4	40-300	40-55	18	GC□ N4000-□□		6,0	
GNDCF R/L 418-050	●	□			50-70	18				
GNDCF R/L 418-065	●	●			65-90	18				
GNDCF R/L 418-085	●	□			85-130	18				
GNDCF R/L 418-125	□	□			125-200	18				
GNDCF R/L 418-180	●	□	180-300	18						
GNDCF R/L 518-050	□	□	5	50-300	50-70	18	GC□ N5000-□□	6,0		
GNDCF R/L 518-065	□	□			65-90	18				
GNDCF R/L 518-085	□	□			85-130	18				
GNDCF R/L 518-125	●	□			125-200	18				
GNDCF R/L 518-180	□	□			180-300	18				
GNDCF R/L 618-050	□	□	6	50-1000	50-75	18	GC□ N6000-□□	6,0		
GNDCF R/L 618-070	□	□			70-110	18				
GNDCF R/L 618-100	□	□			100-200	18				
GNDCF R/L 618-180	□	□			180-300	18				
GNDCF R/L 618-280	□	□			280-1000	18				

■ Holder

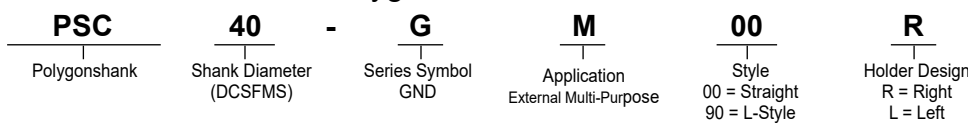


Note:
The **right** handed PSC40/50GM90R holder needs a **left** cassette.
The **left** handed PSC40/50GM90L holder needs a **right** cassette.

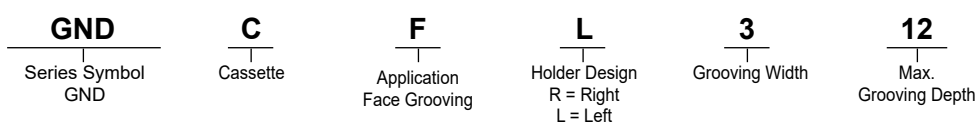
Style	Cat. No.	R	L	DCSFMS (mm)	WF (mm)	LF (mm)	Cap Screw	Tightening Torque (N·m)	Spanner
Straight	PSC40GM00 R/L	●	●	40	22	81*	BFTX0619N	7,5	LT25
	PSC50GM00 R/L	●	●	50	27				
L-Style	PSC40GM90 R/L	●	●	40	43*	52,5			
	PSC50GM90 R/L	●	●	50	48*	55,0			

* Dimension when using face grooving cassettes.

■ Identification Details - Polygon-Toolholder

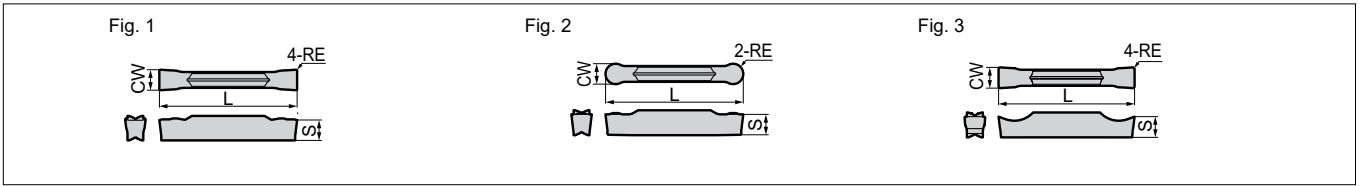


■ Identification Details - Cassette



■ Inserts for GNDCF

Coated Carbide Cermet Carbide



● Grooving / Traversing

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3002 MG	●	●	●	○	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	1
N3004 MG	●	●	●	○	●	●	○	●	—	3,0	±0.03	0,4	21,1	3,8	
N4002 MG	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 MG	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N4008 MG	●	●	●	○	●	●	○	●	—	4,0	±0.03	0,8	26,4	4,0	
N5004 MG	●	●	●	○	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N5008 MG	●	●	●	○	●	●	○	●	—	5,0	±0.03	0,8	26,4	4,1	
N6004 MG	●	●	●	○	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	
N6008 MG	●	●	●	○	●	●	○	●	—	6,0	±0.03	0,8	26,4	4,5	
GCM N3002 ML	●	●	●	○	●	●	○	●	○	3,0	±0.03	0,2	21,1	3,8	1
N3004 ML	●	●	●	○	●	●	○	●	○	3,0	±0.03	0,4	21,1	3,8	
N4002 ML	●	●	●	○	●	●	○	●	○	4,0	±0.03	0,2	26,4	4,0	
N4004 ML	●	●	●	○	●	●	○	●	○	4,0	±0.03	0,4	26,4	4,0	
N4008 ML	●	●	●	○	●	●	○	●	○	4,0	±0.03	0,8	26,4	4,0	
N5004 ML	●	●	●	○	●	●	○	●	○	5,0	±0.03	0,4	26,4	4,1	
N5008 ML	●	●	●	○	●	●	○	●	○	5,0	±0.03	0,8	26,4	4,1	
N6004 ML	●	●	●	○	●	●	○	●	○	6,0	±0.03	0,4	26,4	4,5	
N6008 ML	●	●	●	○	●	●	○	●	○	6,0	±0.03	0,8	26,4	4,5	

● Grooving / Cut-Off Machining

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
								Cutting Width	Tolerance				
GCM N3002 GG	●	●	●	●	○	●	—	3,0	±0.03	0,2	21,1	3,8	1
N3004 GG	●	●	●	●	○	●	—	3,0	±0.03	0,4	21,1	3,8	
N4002 GG	●	●	●	●	○	●	—	4,0	±0.03	0,2	26,4	4,0	
N4004 GG	●	●	●	●	○	●	—	4,0	±0.03	0,4	26,4	4,0	
N5002 GG	●	●	●	●	○	●	—	5,0	±0.03	0,2	26,4	4,1	
N5004 GG	●	●	●	●	○	●	—	5,0	±0.03	0,4	26,4	4,1	
N6002 GG	●	●	●	●	○	●	—	6,0	±0.03	0,2	26,4	4,5	
N6004 GG	●	●	●	●	○	●	—	6,0	±0.03	0,4	26,4	4,5	
GCM N3002 GL	●	●	●	●	○	●	○	3,0	±0.03	0,2	21,1	3,8	1
N3004 GL	●	●	●	●	○	●	○	3,0	±0.03	0,4	21,1	3,8	
N4002 GL	●	●	●	●	○	●	○	4,0	±0.03	0,2	26,4	4,0	
N4004 GL	●	●	●	●	○	●	○	4,0	±0.03	0,4	26,4	4,0	
N5002 GL	●	●	●	●	○	●	○	5,0	±0.03	0,2	26,4	4,1	
N5004 GL	●	●	●	●	○	●	○	5,0	±0.03	0,4	26,4	4,1	
N6002 GL	●	●	●	●	○	●	○	6,0	±0.03	0,2	26,4	4,5	
N6004 GL	●	●	●	●	○	●	○	6,0	±0.03	0,4	26,4	4,5	
GCM N3002 GF	●	●	●	●	○	●	○	3,0	±0.03	0,2	21,1	3,8	1
N3004 GF	●	●	●	●	○	●	○	3,0	±0.03	0,4	21,1	3,8	
N4002 GF	●	●	●	●	○	●	○	4,0	±0.03	0,2	26,4	4,0	
N4004 GF	●	●	●	●	○	●	○	4,0	±0.03	0,4	26,4	4,0	
N5002 GF	●	●	●	●	○	●	○	5,0	±0.03	0,2	26,4	4,1	
N5004 GF	●	●	●	●	○	●	○	5,0	±0.03	0,4	26,4	4,1	
N6002 GF	●	●	●	●	○	●	○	6,0	±0.03	0,2	26,4	4,5	
N6004 GF	●	●	●	●	○	●	○	6,0	±0.03	0,4	26,4	4,5	

Combine the insert with a holder such that the width of cut (CW) matches.

● Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	CW		RE	L	S	Fig.
										Cutting Width	Tolerance				
GCM N3015 RN	●	●	●	○	●	●	○	●	—	3,0	±0.03	1,5	22,6	3,8	2
N4020 RN	●	●	●	○	●	●	○	●	—	4,0	±0.03	2,0	28,2	4,0	
N5025 RN	●	●	●	○	●	●	○	●	—	5,0	±0.03	2,5	28,3	4,1	
N6030 RN	●	●	●	○	●	●	○	●	—	6,0	±0.03	3,0	28,3	4,5	

● Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H1	CW		RE	L	S	Fig.
		Cutting Width	Tolerance				
GCM N3002 GA	○	3,0	±0.025	0,2	21,1	3,8	3
N4004 GA	○	4,0	±0.025	0,4	26,4	4,0	
N5004 GA	○	5,0	±0.025	0,4	26,4	4,1	
N6004 GA	○	6,0	±0.025	0,4	26,4	4,5	

SumiTurn B-Groove Insert TGA-BF Type

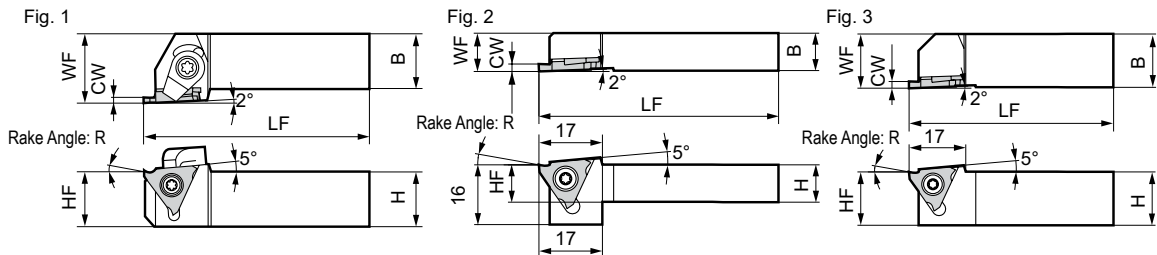
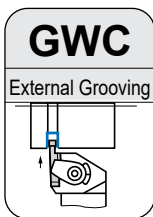


■ Characteristics

- Outstanding chip control when grooving
- Excellent chip control when finishing wide grooves using axial feed
- Grooving inserts from 1,5–4,5 mm wide
- Grade AC530U with Super ZX ultra hard coating for steels, stainless steels and cast iron increases productivity and extends tool life

External Grooving

Figures show right hand tools.



The rake angle R varies depending on the insert grade. For details, see the table at the lower part of page F47.

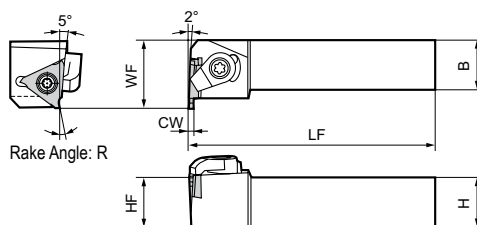
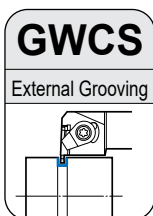
■ Spare Parts

Screw	Wrench	Clamp	Screw	Wrench
BFTX 0409N	3,4 TRX15	-	-	-
BFTX 0409N	3,4 TRX15	CCM 6B -L/R	WB 6-20 -T/TL	5,0 LT20
BFTX 0511N	5,0 TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0 LT27

■ Holders

Right handed tool holders are applicable with **right** handed inserts (TGA-R), left handed clamp plates (CCM__L) and right handed screws 8WB__T)

Cat. No.	Stock		Dimensions (mm)					Fig.	Grooving Width CW (mm)	Maximum Grooving Depth (mm)	Applicable Insert Group No.	Screw	Wrench	Clamp	Screw	Wrench		
	R	L	H	B	LF	WF	HF											
GWC R/L 1010-3	○	○	10	10	125	10	10	2	0,33–2,80	0,8–2,5	①	BFTX 0409N	3,4	TRX15	-	-	-	
GWC R/L 1212-3	○	○	12	12	125	12	12	2	0,33–2,80	0,8–2,5	①	BFTX 0409N	3,4	TRX15	-	-	-	
GWC R/L 1616-3	●	○	16	16	125	16	16	3	0,33–2,80	0,8–2,5	①	BFTX 0409N	3,4	TRX15	CCM 6B -L/R	WB 6-20 -T/TL	5,0	LT20
GWC R/L 2020-3	○	○	20	20	125	20	20	1	0,33–2,80	0,8–2,5	①	BFTX 0409N	3,4	TRX15	CCM 6B -L/R	WB 6-20 -T/TL	5,0	LT20
GWC R/L 2525-3	○	●	25	20	150	30	25	1	0,33–2,80	0,8–2,5	①	BFTX 0409N	3,4	TRX15	CCM 6B -L/R	WB 6-20 -T/TL	5,0	LT20
GWC R/L 2020-15	●	●	20	20	125	25	20	1	1,25–1,45	2,0	②	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWC R/L 2020-25	●	○	20	20	125	25	20	1	1,50–2,30	3,5	③	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWC R/L 2020-35	●	●	20	20	125	25	20	1	2,50–4,80	5,0	④	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWC R/L 2525-15	●	○	25	25	150	30	25	1	1,25–1,45	2,0	②	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWC R/L 2525-25	●	●	25	25	150	30	25	1	1,50–2,30	3,5	③	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWC R/L 2525-35	●	●	25	25	150	30	25	1	2,50–4,80	5,0	④	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27



The rake angle R varies depending on the insert grade. For details, see the table at the lower part of page F47.

Figures show right hand tools.

■ Spare Parts

Screw	Wrench	Clamp	Screw	Wrench
BFTX 0409N	3,4 TRX15	CCM 6B -L/R	WB 6-20 -T/TL	5,0 LT20
BFTX 0511N	5,0 TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0 LT27

■ Holders

Right handed tool holders are applicable with **left** handed inserts (TGA-L), right handed clamp plates (CCM__R) and left handed screws (WB__TL)

Cat. No.	Stock		Dimensions (mm)					Fig.	Grooving Width CW (mm)	Maximum Grooving Depth (mm)	Applicable Insert Group No.	Screw	Wrench	Clamp	Screw	Wrench		
	R	L	H	B	LF	WF	HF											
GWCS R/L 2020-3	○		20	20	125	25	20		0,33–2,80	0,8–2,5	①	BFTX 0409N	3,4	TRX15	CCM 6B -L/R	WB 6-20 -T/TL	5,0	LT20
GWCS R/L 2525-3			25	25	150	30	25		0,33–2,80	0,8–2,5	①	BFTX 0409N	3,4	TRX15	CCM 6B -L/R	WB 6-20 -T/TL	5,0	LT20
GWCS R/L 2020-15	○	○	20	20	125	27	20		1,25–1,45	2,0	②	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWCS R/L 2020-25	○	○	20	20	125	27	20		1,50–2,30	3,5	③	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWCS R/L 2020-35	○	○	20	20	125	27	20		2,50–4,80	5,0	④	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWCS R/L 2525-15	○	○	25	25	150	32	25		1,25–1,45	2,0	②	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWCS R/L 2525-25	○	○	25	25	150	32	25		1,50–2,30	3,5	③	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27
GWCS R/L 2525-35	○	○	25	25	150	32	25		2,50–4,80	5,0	④	BFTX 0511N	5,0	TRX20	CCM 8U -L/R	WB 8-22 -T/TL	5,0	LT27

ISO-PSC Polygon Modular



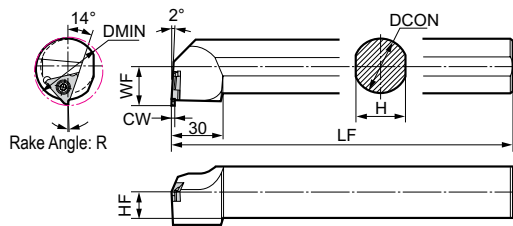
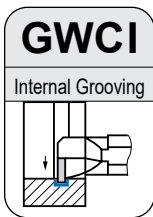
Holder

Cat. No.	R	L	Ø (mm)	F (mm)	L (mm)	Cap Screw	α_{min}	Spanner
PSC 40 GM00 R/L	●	●	40	22	80,0	BFTX0619N	7,5	LT25
PSC 50 GM00 R/L	●	●	50	27	80,0			
PSC 40 GM90 R/L	●	●	40	42	52,5			
PSC 50 GM90 R/L	●	●	50	47	55,0			

Cassette

Cat. No.	R	L	Grooving Width (mm)	Grooving Depth (mm)	Insert	Insert Screw	Spanner	Spring	Clamp Finger	Cap Screw	α_{min}	Spanner
GWCCM R/L 25	●	●	1,5-2,3	3,9	TGA□4□□□BF	BFTX0511N	TRX20		SCP4A		3,0	LH030
GWCCM R/L 35	●	●	2,5-4,5	5,4	TGA□4□□□BF	5,0 α_{min}						

Internal Grooving



The rake angle R varies depending on the insert grade. For details, see the table at the lower part of page F39.

Figures show right hand tools.

Spare Parts



Holder

Right handed tool holders are applicable with left handed inserts (TGA-L).

Cat. No.	Stock		Dimensions (mm)						Grooving width CW (mm)	Maximum Grooving Depth (mm)	Applicable Insert Group No.	Screw	α_{min}	Wrench
	R	L	DMIN	DCON	LF	H	HF	WF						
GWCI R/L 325	○	○	35	25	100	23	11,5	17,5	0,33-2,80	0,8-2,0	①	BFTX0409N	3,4	TRX 15
GWCI R/L 432	○	○	40	32	250	30	15,0	17,5	1,25-4,80	2,0-2,5	②③④	BFTX0511N	5,0	TRX 20

Inserts

Cat. No.	Coated		Dimensions (mm)				Fig.	Applicable holder & insert group				
	AC530U	() CDX: presents max. depth	CW	CDX	RE	E2						
	R	L										
TGA R/L 4140BF01	○	○	1,40	2,5 (2,0-1,7)	0,1	0,300	2	②				
TGA R/L 4150BF	●	●	1,50	3,9	0,2	0,250	2	③				
TGA R/L 4165BF	○	○	1,65			0,175						
TGA R/L 4175BF	○	○	1,75			0,125						
TGA R/L 4185BF	○	○	1,85			0,075						
TGA R/L 4200BF	●	●	2,00			0			1			
TGA R/L 4220BF	○	○	2,20									
TGA R/L 4230BF	○	○	2,30									
TGA R/L 4250BF	●	●	2,50	5,4	0,3	0	1	④				
TGA R/L 4265BF	○	○	2,65									
TGA R/L 4270BF	○	○	2,70									
TGA R/L 4280BF	○	○	2,80									
TGA R/L 4300BF	●	●	3,00									
TGA R/L 4320BF	○	○	3,20									
TGA R/L 4330BF	○	○	3,30									
TGA R/L 4350BF	●	●	3,50									
TGA R/L 4370BF	○	○	3,70									
TGA R/L 4390BF	○	○	3,90									
TGA R/L 4400BF	●	●	4,00						0,4			
TGA R/L 4410BF	○	○	4,10									
TGA R/L 4420BF	○	○	4,20									
TGA R/L 4430BF	○	○	4,30									
TGA R/L 4440BF	○	○	4,40									
TGA R/L 4450BF	●	○	4,50									

Notice: Please note the cutting edge position E2, for grooving widths below 1,85 mm..

(Note 2) Figures show right hand tools.

Recommended Cutting Conditions

● Grooving

Wet condition is recommended.

Work Material	General Steel	Stainless Steel	
Cutting speed (m/min)	50-180	50-160	
Groove width (mm)	1,5-2,3	2,5-3,3	3,5-4,5
Feed rate (mm/rev)	0,03-0,12	0,04-0,12	0,05-0,12
Depth of cut (mm)	Ext.	-3,5	-5,0
	Int.	-2,5	

● Axial Feed

Feed direction for axial feed

Wet condition is recommended.

Work Material	General Steel	Stainless Steel	
Cutting speed (m/min)	50-180	50-160	
Feed rate (mm/rev)	0,03-0,10	0,05-0,10	0,07-0,12
Depth of cut (mm)	-0,3	-0,5	-0,7

Rake Angle with a Holder Fitted (E)

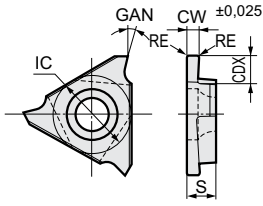
Grooving	AC530U	H1	T2500Z T3000Z	T1500A	BN2000	DA2200
External GWC, GWCS	10°	20°	10°	5°	0°	10°
Internal GWCI	1°	11°	1°	-4°	-9°	1°

*) Please select applicable inserts for the holders by using matching group numbers.

SumiTurn Groove Insert TGA Type



■ Square Edged Grooving Insert



This figure shows right handed tools.

Grade		Cutting Edge	GAN
Coated Carbide	AC530U	Honing	15°
Carbide	H1	Sharp	25°
Coated Cermet	T2500Z,T3000Z	Honing	15°
Cermet	T1500A	Sharp	10°
SUMIBORON	BN2000	K-Land	5°
SUMIDIA	DA2200	Sharp	15°

* See page F47 for the rake angle with a holder fitted.

Dimensions (mm)

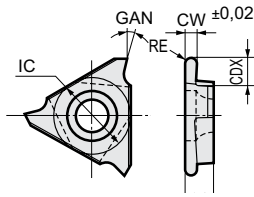
Cat. No. (The part numbers of T1500A end with E)	AC530U		H1		T2500Z		T3000Z		T1500A		BN2000		DA2200		CW	Max. Groove Depth		CDX	RE	IC	S	Insert /Holder Group No.*							
	R	L	R	L	R	L	R	L	R	L	R	L	R	L		External	Internal												
																	External						Internal						
TGA R/L 3033 (E)	○		○		○	○									0,33	0,8	0,5	1,0	0,05										
TGA R/L 3050 (E)	○	○	○		○	○	○								0,50	1,2	0,8	1,4											
TGA R/L 3075 (E)	○	○	○		○	○									0,75	2,0	1,5	2,5	0,1 (T1500A 0,2)	9,525	3,18	①							
R/L 3095 (E)	○	○			○	○									0,95														
R/L 3100 (E)	○	○	○	○	○	○	○		○	○					1,00														
R/L 3110 (E)	○	○			○	○									1,10														
R/L 3125 (E)	○	○	○		○	○	○		○	○					1,25														
R/L 3135 (E)	○	○			○	○	○		○						1,35														
R/L 3145 (E)	○	○	○		○	○									1,45														
R/L 3150 (E)	○	○	○		○	○									1,50														
R/L 3165 (E)	○	○			○	○									1,65														
R/L 3175 (E)	○	○			○	○	○								1,75														
R/L 3185 (E)	○	○			○	○									1,85														
TGA R/L 3200 (E)	○	○	○		○	○	○	○	○						2,00								2,5	2,0	3,0				
R/L 3220 (E)		○			○	○									2,20														
R/L 3230 (E)					○	○									2,30														
R/L 3250 (E)	○		○		○	○									2,50														
R/L 3265 (E)					○	○									2,65														
R/L 3270 (E)					○	○									2,70														
R/L 3280 (E)	○				○	○									2,80														
TGA R/L 4125 (E)	○	○			○	○					□		○		1,25	2,0	1,7	2,5											
R/L 4145 (E)	○	○			○	○									1,45														②
TGA R/L 4150 (E)	○	○	○	○	○	○						○	○		1,50	3,5	2,5	3,9	0,2 *2			③							
R/L 4165 (E)		○			○	○									1,65														
R/L 4175 (E)					○	○									1,75														
R/L 4185 (E)		○	○	○	○	○									1,85														
R/L 4200 (E)	○	○			○	○						○	○		2,00														
R/L 4220 (E)		○			○	○									2,20														
R/L 4230 (E)	○	○			○	○									2,30														
TGA R/L 4250 (E)	○		○		○	○				○		○			2,50	5,0 *1	2,5	5,4 *1	0,3 *2	12,70	4,76	④							
R/L 4265 (E)	○		○		○	○									2,65														
R/L 4270 (E)					○	○									2,70														
R/L 4280 (E)	○				○	○									2,80														
R/L 4300 (E)	○	○			○	○				○		○	○		3,00														
R/L 4320 (E)					○	○									3,20														
R/L 4330 (E)	○				○	○									3,30														
TGA R/L 4350 (E)	○				○	○					□				3,50								5,0	2,5	5,4	0,4 *2			④
R/L 4370 (E)					○	○									3,70														
R/L 4390 (E)					○	○									3,90														
R/L 4400 (E)	○				○	○					○		□		4,00														
R/L 4410 (E)					○	○									4,10														
R/L 4420 (E)					○	○									4,20														
R/L 4430 (E)					○	○									4,30														
R/L 4440 (E)					○	○									4,40														
R/L 4450 (E)			○		○	○									4,50														
R/L 4480 (E)					○	○									4,80														

* See the group numbers of GWC, GWCS and GWC1 types on page F46 and F47 to find applicable holders. Inserts and holders that have corresponding group numbers can be used together.

*1: CDX for SUMIBORON and SUMIDIA = 4,4, maximum groove depth 4,0 (2,5 during internal machining)

*2: RE for SUMIBORON = 0,2, RE for SUMIDIA = 0,1

Round Edged Grooving Insert



This figure shows right handed tools.

Grade		Cutting Edge	GAN
Coated Carbide	AC530U	Honing	15°
Carbide	H1	Sharp	25°
Coated Cermet	T2500Z, T3000Z	Honing	15°
Cermet	T1500A	Sharp	10°
SUMIBORON	BN2000	K-Land	5°
SUMIDIA	DA2200	Sharp	15°

* See page F47 for the rake angle with a holder fitted.

Dimensions (mm)

Cat. No.	AC530U		H1		T2500Z		T3000Z		T1500A		BN2000		DA2200		CW	Max. Groove Depth		CDX	RE	IC	S	Insert /Holder Group No.*
	R	L	R	L	R	L	R	L	R	L	R	L	R	L		External	Internal					
TGA R/L 4050 R	○	○			○										1,00	2,0	1,7	2,5	0,50	12,70	4,76	②
TGA R/L 4075 R	○	○			○									1,50	3,5	2,5	3,9	0,75	③			
R/L 4100 R	○	○			○								2,00	1,00					④			
TGA R/L 4125 R	○	○			○								2,50	5,0 ^{*1}	2,5	5,4 ^{*1}	1,25	④				
R/L 4150 R	○	○			○		○				□		3,00					1,50				
R/L 4200 R	○	○			○								4,00					2,00				

* See the group numbers of GWC, GWCS and GWCI types on page F46 and F47 to find applicable holders. Inserts and holders that have corresponding group numbers can be used together.

*1 CDX for SUMIBORON and SUMIDIA = 4,4, maximum groove depth 4,0 (2,5 during internal machining)

Recommended Cutting Conditions

Work Material	P General Steel	M Stainless Steel	N Non-Ferrous Metal	H Hardened Steel					
Grade	AC530U	T2500Z, T3000Z	T1500A	AC530U	T2500Z, T3000Z	T1500A	H1	DA2200	BN2000
Cutting Speed (m/min)	50–200	100–180	100–180	50–200	80–150	80–120	200–300	200–300	80–120
Feed Rate (mm/rev)	0,02–0,10	0,05–0,10	0,05–0,08	0,02–0,10	0,05–0,08	0,05–0,08	0,05–0,15	0,05–0,15	0,03–0,07

Insert Blanks

(Incomplete products. Machine them to meet your edge width, nose radius and rake angle requirements.)

Fig. 1

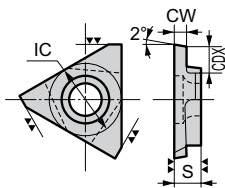
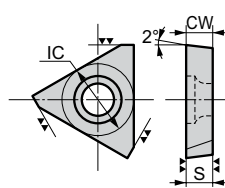


Fig. 2



This figure shows right handed tools.

Dimensions (mm)

Cat. No.	KH03		H1		EH510		T1500A		CW	CDX	IC	S	Fig.
	R	L	R	L	R	L	R	L					
TGA R/L 3 T18									1,85	(3,4)			1
R/L 3 T23							○	○	2,35	(3,4)	9,525	3,18	
R/L 3 T31	○								3,18	–			
TGA R/L 4 T22									2,20	(4,8)			1
R/L 4 T37									3,75	(6,2)	12,70	4,76	
R/L 4 T47	○						○		4,76	–			

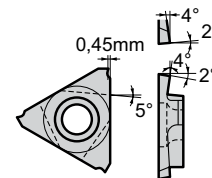
Note: CDX values in parentheses are for reference only.

Notes for Machining an Insert

Make the cutting edge so that the rake angle, back taper, etc. as shown in fig. 3. When you have installed an insert into a holder, it becomes a cutting blade element as shown in fig. 4.

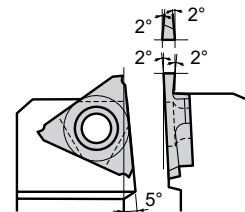
Suggested Shape

Fig. 3



Cutting blade element during holder installation

Fig. 4



Parting-Off Mini Holders SCT Type



Parting-Off
Tools

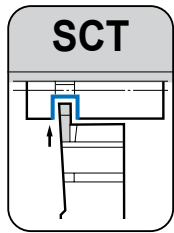


Fig. 1

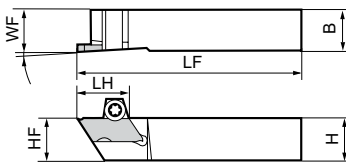
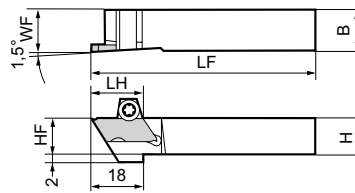
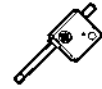


Fig. 2



Above figures show right hand tools.

■ Spare Parts



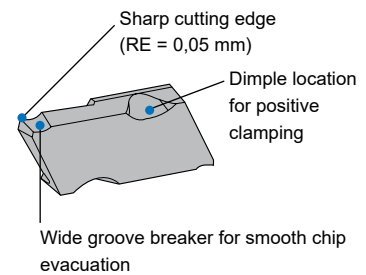
■ Holders

Cat. No.	Stock	Dimensions (mm)						Applicable inserts	Fig.	Screw	Wrench
		H	B	LF	WF	HF	LH				
SCT R 1010	●	10	10	120	10	10	15	CT R05_--- CT R12_---	1	BFTX0410T8L	TRX 08
SCT R 1212	●	12	12	120	12	12	15				
SCT R 1616	●	16	16	120	16	16	15				
SCT R 101016	○	10	10	120	10	10	18	CT R16_---	2		
SCT R 121216	○	12	12	120	12	12	18				
SCT R 161616	○	16	16	120	16	16	18	1			
SCT L 1010	●	10	10	120	10	10	15	CT L05_--- CT L12_---	1	BFTX0410T8R	TRX 08
SCT L 1212	●	12	12	120	12	12	15				
SCT L 1616	●	16	16	120	16	16	15				
SCT L 101016	○	10	10	120	10	10	18	CT L16_---	2		
SCT L 121216	○	12	12	120	12	12	18				
SCT L 161616	○	16	16	120	16	16	18	1			

■ Inserts

Installation Conditions for Holder	For Right Handed Holder (SCTR)			For Left Handed Holder (SCTL)		
	CTR_R	CTR_N	CTR_L	CTL_R	CTL_N	CTL_L
Insert Shape and Dimensions						

Cat. No.	AC1030U			AC530U			Max. Cut-Off Ø (mm)	CW	RE	L	S	Chip Breaker	Applicable Holder			
	R	N	L	R	N	L										
CTR 050505 R/N/L	○		○	○	○	○	5	0,5	0,05	19	7	With Chip Breaker	SCT R1010 SCT R1212 SCT R1616			
CTR 050500 R/N/L	○	○		○	○	○	5	0								
CTR 121005 R/N/L	○	○	○	○	○	○	12	1,0	0,05							
CTR 121505 R/N/L	●	●	○	○	○	○	12	1,5								
CTR 122005 R/N/L	●	●		○	○	○	12	2,0								
CTR 121000 R/N/L	○	○	○	○	○	○	12	1,0	0							
CTR 121500 R/N/L	○	○		○	○	○	12	1,5								
CTR 122000 R/N/L	○	○		○	○	○	12	2,0								
CTR 161005 R/N/L	○	○		○	○	○	16	1,0	0,05				23,1	8,3	Without Chip Breaker	SCT R101016 SCT R121216 SCT R161616
CTR 161505 R/N/L	○	○		○	○	○	16	1,5								
CTR 162005 R/N/L	○	○	○	○	○	○	16	2,0								
CTR 161000 R/N/L	○	○	○	○	○	○	16	1,0	0							
CTR 161500 R/N/L	○	○		○	○	○	16	1,5								
CTR 162000 R/N/L	○	○		○	○	○	16	2,0								
CTR 050500 R/N/L NB							5	0,5		19	7	Without Chip Breaker	SCT R1010 SCT R1212 SCT R1616			
CTR 121000 R/N/L NB	○			○			12	1,0								
CTR 121500 R/N/L NB	○			○			12	1,5								
CTR 122000 R/N/L NB	○			○			12	2,0								
CTR 161000 R/N/L NB							16	1,0		23,1	8,3	Without Chip Breaker	SCT R101016 SCT R121216 SCT R161616			
CTR 161500 R/N/L NB							16	1,5								
CTR 162000 R/N/L NB	○			○			16	2,0								



● Surface Finish Comparison

SCT	Competitor's tool
Work Material: X6Cr17 (ø8 mm)	
Insert: CTR 121005 R, (b =1,0 mm)	
Cutting Data: v _c = 45 m/min	
f = 0,02 mm/rev, wet	

Parting-Off Holders Sumi-Grip



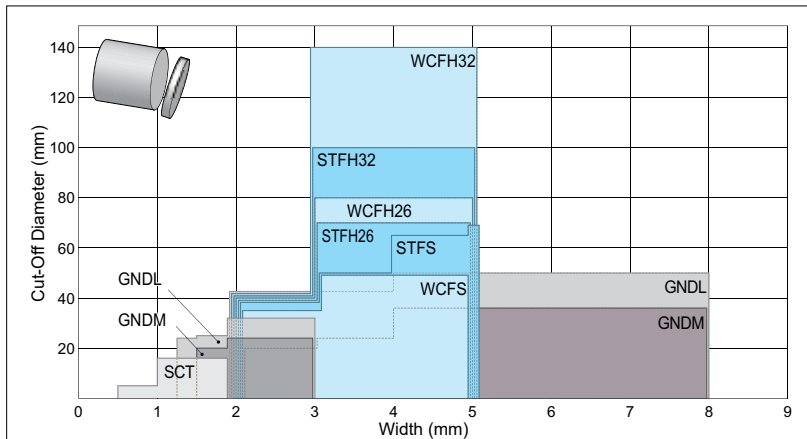
■ Characteristics

- Holders available in carbide (SumiGrip) and steel (SumiGrip JR).
- Capable on interrupted machining.
- Can be used for cut-off, grooving and chamfering applications.

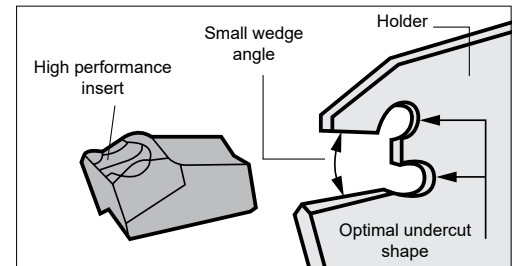
■ Type

- Tool block type
STFH (steel) / WCFH (carbide)
- Shank type
STFS (steel) / WCFS (carbide)

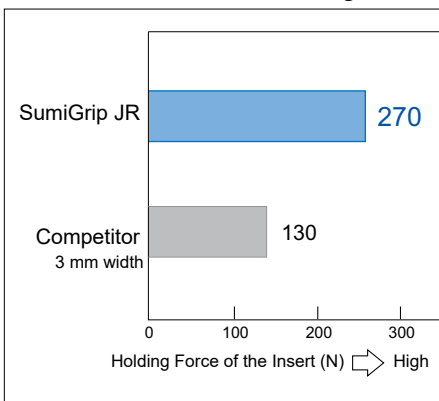
■ Cut-Off



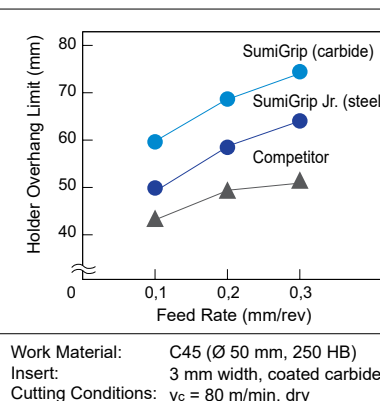
■ Features of Design



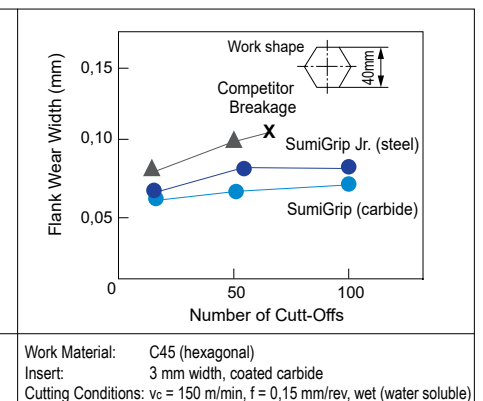
■ Twice the Insert Holding Force



■ Low Vibration



■ Wear Resistance



■ GG Type/GF Type/CF Type Chipbreaker, Grade AC1030U

Utilizing grooving tool GND type chipbreaker series for excellent chip control.

Low cutting force chipbreaker GF type (neutral) or CF type (left or right handed) inserts, coupled with a carbide blade, enables stable machining and prevents chattering even when machining stainless steel.

Achieving stable and longer tool life with the new AC1030U grade.

GG	GF	CF
Neutral	Neutral	L/R handed
General purpose	Exotic alloy, Low cutting force	Exotic alloy, Low cutting force

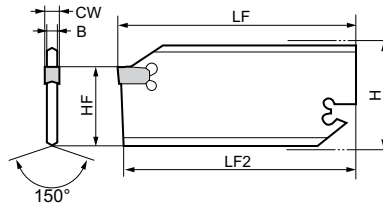
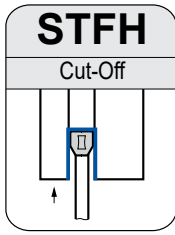
■ Performance (Chipbreaker)



Parting-Off Holders

Sumi-Grip Jr.

Cut-Off (Steel Holder/Tool Block Type)



Above figures show right hand tools.

Parts



■ Holders

Cat. No.	Stock	Dimensions (mm)						Max. Cut-Off Dia.	Applicable Inserts	Applicable Tool Blocks	Wrench
		H	B	LF	HF	LF2	CW				
STFH 26-2	●	26	1,6	109	21,4	108	2,0	40	WCF_2_	SBN 20-26 SBU 20-26	SL 4
26-3	●	26	2,4	109	21,4	108	3,0	70	WCF_3_		
26-4	●	26	3,4	109	21,4	108	4,0	70	WCF_4_		
26-5	●	26	4,3	109	21,4	108	5,0	70	WCF_5_		
STFH 32-2	●	32	1,6	149	25,0	148	2,0	40	WCF_2_	SBN 20-32 SBN 25-32 SBU 20-32 SBU 25-32	SL 4
32-3	●	32	2,4	149	25,0	148	3,0	100	WCF_3_		
32-4	●	32	3,4	149	25,0	148	4,0	100	WCF_4_		
32-5	●	32	4,3	149	25,0	148	5,0	100	WCF_5_		

■ Tool Blocks

■ Parts

Cat. No.	Stock	Dimensions (mm)					Applicable Carbide Blades
		H	Ha	Hb	Hc	L	
SBN 20-26	●	45	20	20	10,0	80	STFH 26_
SBN 20-32	●	50	20	20	13,5	100	STFH 32_
SBN 25-26	□	48	25	25	10,0	80	STFH 26_
SBN 25-32	●	50	25	25	8,5	110	STFH 32_

Clamp	Screw	Wrench
BWS 30	WB 8-20	LH 040

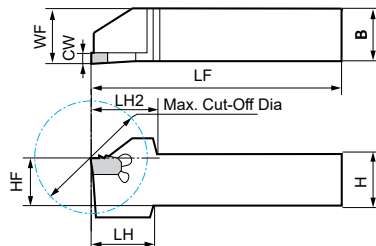
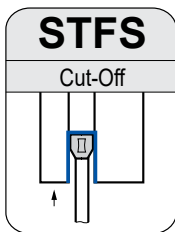
Cat. No.	Stock	Dimensions (mm)					Applicable Carbide Blades
		H	Ha	Hb	Hc	L	
SBU 20-26	●	45	20	20	10,0	80	STFH 26_
SBU 20-32	●	50	20	20	13,5	100	STFH 32_
SBU 25-26	□	48	25	25	10,0	80	STFH 26_
SBU 25-32	●	50	25	25	8,5	110	STFH 32_

Wedge		
SBU20-26	SBU20-32	SBU25-32
BCS 15	BCS 20	BCS 25

Screw	Wrench
BX 0622	LH 050

*Tool blocks selection guide see page F46

Cut-Off (Steel Holder/Shank Type)



■ Parts



■ Holders

Cat. No.	Stock		Dimensions (mm)							Max. Cut-Off Dia.	Applicable Inserts	Wrench	
	R	L	H	B	LF	WF	HF	LH	LH2				CW
STFS R/L 1010-2	○		10	10	86	10	10	17	17	2,0	28	WCF_2_	SL 4
R/L 1212-2	●	●	12	12	110	12	12	18	18	2,0	30		
R/L 1616-2	●	○	16	16	110	16	16	-	19	2,0	32		
R/L 2020-2	●	○	20	20	125	20	20	-	24	2,0	40		
STFS R/L 1616-3	●	○	16	16	110	16	16	20	22	3,0	35	WCF_3_	SL 4
R/L 2012-3	○		20	12	110	12	20	-	24	3,0	40		
R/L 2020-3	●	●	20	20	125	20	20	-	30	3,0	50		
R/L 2525-3	●	●	25	25	150	25	25	-	30	3,0	50		
STFS R/L 2020-4	●	●	20	20	125	20	20	-	33	4,0	55	WCF_4_	SL 4
R/L 2525-4	●	●	25	25	150	25	25	-	38	4,0	65		
STFS R/L 2020-5	○		20	20	125	20	20	-	35	5,0	60	WCF_5_	SL 4
R/L 2525-5	○	○	25	25	150	25	25	-	40	5,0	70		

● = Euro stock
○ = Japan stock

□ = Delivery on request

Parting-Off Holders Sumi-Grip Jr. Inserts

Inserts

Neutral (N)		Right Handed (R)		Left Handed (L)						
		* WCF_2T: 2_RE=0,15								
External Appearance	Cat. No.	AC830P	AC225	AC1030U	T1500A	A30	G10E	CW	Applicable Holder	
WCF N _ GG General purpose 	WCF N2 GG	●						2,0	STFH __ 2	STFS R/L ___ 2
	N3 GG	●						3,0	STFH __ 3	STFS R/L ___ 3
	N4 GG	●						4,0	STFH __ 4	STFS R/L ___ 4
	N5 GG	●						5,0	STFH __ 5	STFS R/L ___ 5
WCF N _ GF Exotic alloy Low feed 	WCF N2 GF			○				2,0	STFH __ 2	STFS R/L ___ 2
	N3 GF			○				3,0	STFH __ 3	STFS R/L ___ 3
	N4 GF			○				4,0	STFH __ 4	STFS R/L ___ 4
	N5 GF			○				5,0	STFH __ 5	STFS R/L ___ 5
WCF __ CF Exotic alloy Low feed 	WCF R3 CF			○				3,0	STFH __ 3	STFS R/L ___ 3
	L3 CF			○				3,0		
	R4 CF							4,0	STFH __ 4	STFS R/L ___ 4
	L4 CF			○				4,0		
WCF _ 2T Small diameter Low cutting force 	WCF N2T	●						2,0		
	R2T	●						2,0	STFH __ 2	STFS R/L ___ 2
	L2T	●						2,0		
WCF __ Without chip breaker General steel 	WCF N3	●						3,0		
	R3	●						3,0	STFH __ 3	STFS R/L ___ 3
	L3	●						3,0		
	WCF N4	●						4,0		
	R4	●						4,0	STFH __ 4	STFS R/L ___ 4
	L4	●						4,0		
	WCF N5	●						5,0		
	R5	●						5,0	STFH __ 5	STFS R/L ___ 5
	L5	●						5,0		
	WCF __ A Exotic alloy Low feed 	WCF N2A	●	●		○			2,0	STFH __ 2
WCF N3A		●	●					3,0		
R3A		●	●					3,0	STFH __ 3	STFS R/L ___ 3
L3A		●	●					3,0		
WCF N4A		○	●				○	4,0		
R4A			●					4,0	STFH __ 4	STFS R/L ___ 4
L4A			●					4,0		
WCF N5A			●					5,0		
R5A		○					5,0	STFH __ 5	STFS R/L ___ 5	
L5A	●						5,0			
WCF __ B Cast iron Light alloys 	WCF N3B						●	3,0		
	R3B						●	3,0	STFH __ 3	STFS R/L ___ 3
	L3B						●	3,0		
	WCF N4B						●	4,0		
	R4B						○	4,0	STFH __ 4	STFS R/L ___ 4
	L4B						○	4,0		
	WCF N5B						○	5,0		
	R5B							5,0	STFH __ 5	STFS R/L ___ 5
L5B							5,0			

Recommended Cutting Conditions

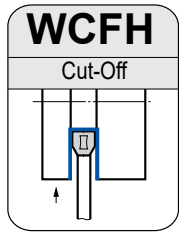
Work Material		Cutting Speed (m/min)					
		AC830P	AC225	AC1030U	T1500A	A30	G10
Steel	General Steel	80-200	80-200	50-200	80-200	50-120	-
	Soft Steel	100-230	100-230	50-230	100-230	70-150	-
	Die Steel	60-150	60-150	50-150	60-150	50-120	-
Stainless Steel		70-150	70-150	50-150	-	70-130	-
Cast Iron		-	-	50-200	-	-	50-120
Non-Ferrous Metal		-	-	200-500	-	-	200-500

Chip Breaker		Feed Rate (mm/rev)										
		Neutral					Left or Right Handed					
		GG	GF	Without Chip Breaker	T	A	B	Without Chip Breaker	CF	T	A	B
		General Purpose	Exotic Alloy Low Cutting Force	General Steel	Small Diam. Low Cutting Force	Exotic Alloy Low Feed	Cast Iron Light Alloys	General Steel	Exotic Alloy Low Cutting Force	Small Diam. Low Cutting Force	Exotic Alloy Low Feed	Cast Iron Light Alloys
Groove Width	2,0	0,05-0,20	0,03-0,12	-	0,03-0,10	0,03-0,12	-	-	-	0,03-0,10	-	-
W	3,0	0,08-0,25	0,04-0,15	0,08-0,25	-	0,04-0,15	0,05-0,15	0,08-0,25	0,08-0,12	-	0,04-0,15	0,05-0,15
(mm)	4,0	0,10-0,30	0,05-0,18	0,10-0,30	-	0,05-0,18	0,05-0,18	0,10-0,30	0,10-0,30	-	0,05-0,18	0,05-0,18
	5,0	0,10-0,35	0,05-0,20	0,10-0,30	-	0,05-0,20	0,06-0,20	0,10-0,20	0,10-0,30	-	-	0,06-0,20

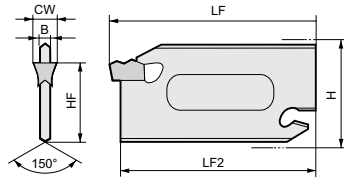
Parting-Off Holders

Sumi-Grip Series

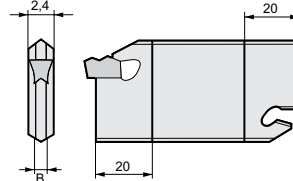
Cut-Off (Carbide Holder/Tool Block Type)



CW: 3 mm
4 mm
5 mm



CW: 2 mm



(WCFH 32-2)

Parts



Above figures show right hand tools.

■ Holders

Cat. No.	Stock	Dimensions (mm)						Max. Cut-Off Dia.	Applicable Inserts	Applicable Tool Blocks	Wrench
		H	B	LF	HF	LF2	CW				
WCFH 26-2	●	26	1,7	110	21,4	109,0	2,0	40	WCF_2_	SBN 20-26 SBU 20-26	SL 1
26-3	●	26	2,4	110	21,4	108,5	3,0	70	WCF_3_		
26-4	●	26	3,4	110	21,4	108,5	4,0	70	WCF_4_		
26-5	●	26	4,3	110	21,4	108,5	5,0	70	WCF_5_		
WCFH 32-2	●	32	1,7	150	25,0	149,0	2,0	40	WCF_2_	SBN 20-32 SBN 25-32 SBU 20-32 SBU 25-32	SL 2 SL 1
32-3	●	32	2,4	150	25,0	148,5	3,0	100	WCF_3_		
32-4	●	32	3,4	150	25,0	148,5	4,0	100	WCF_4_		
32-5	●	32	4,3	150	25,0	148,5	5,0	100	WCF_5_		

See F48 for applicable inserts.

■ Tool Blocks

■ Parts

SBN Type, Mono-block Type		Cat. No.	Stock	Dimensions (mm)					Applicable Carbide Blades
H	Ha			Hb	Hc	L			
●	45	20	20	10,0	80	WCFH 26_			
●	50	20	20	13,5	100	WCFH 32_			
□	48	25	25	10,0	80	WCFH 26_			
●	50	25	25	8,5	110	WCFH 32_			

Clamp	Screw	Wrench
BWS 30	WB 8-20	LH 040

SBU Type, Separate Type		Cat. No.	Stock	Dimensions (mm)					Applicable Carbide Blades
H	Ha			Hb	Hc	L			
●	45	20	20	10,0	80	WCFH 26_			
●	50	20	20	13,5	100	WCFH 32_			
□	48	25	25	10,0	80	WCFH 26_			
●	50	25	25	8,5	110	WCFH 32_			

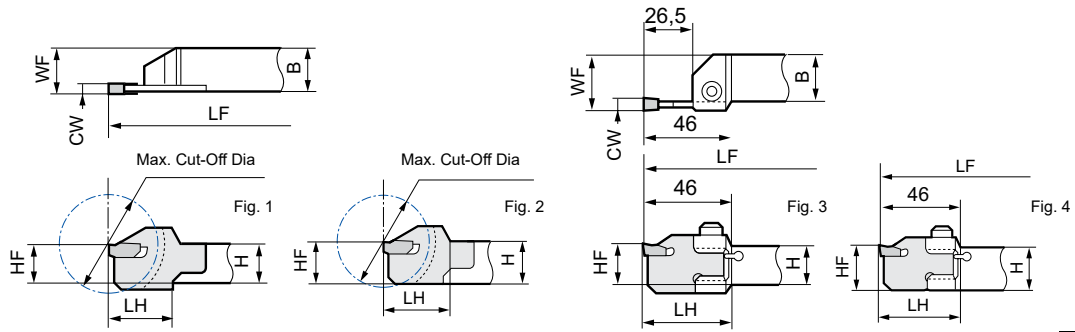
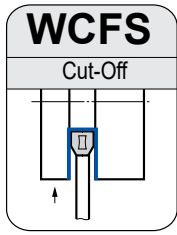
Wedge		
20-26 SBU 25-26	SBU20-32	SBU25-32
BCS 15	BCS 20	BCS 25
Screw	Wrench	
BX 0622	LH 050	

■ Tool Block Type Selection Guide

Tool Block (Mono-Block Type)	<h4>SBN Type</h4> <p>This tool block can be used for the machining tool post A shown on the right.</p>	<h4>A</h4> General Purpose Lathe, etc. SBN Type, SBU Type <p>(Overhead clamp)</p>	<h4>B</h4> Turret Type Tool Post, etc. SBU Type <p>(Side clamp)</p>
Tool Block (Separate Type)	<h4>SBU Type</h4> <p>This tool block can be used for the machining tool posts A and B shown on the right. Since the clamp is large it has a large scope even when the holder has a long overhang.</p>		

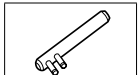
Parting-Off Holders Sumi-Grip Series

Cut-Off (Carbide Holder/Shank Type)



Parts

Above figures show right hand tools.



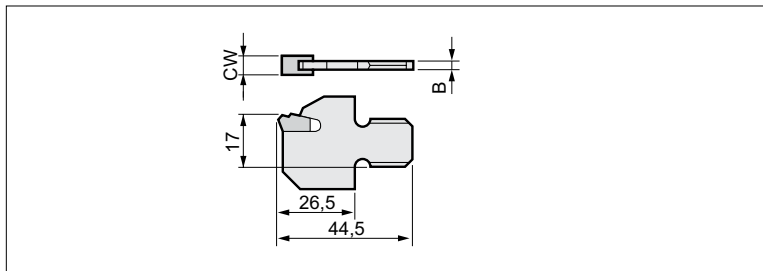
Holders

	Cat. No.	Stock		Dimensions (mm)							Max. Cut-Off Dia.	Applicable Blades	Applicable Inserts	Fig.	Wrench
		R	L	H	B	LF	WF	HF	LH	CW					
Brazed Type	WCFS R/L 1010-2	●		10	10	86	10	10	10	2,0	28	—	WCF_2_2	1	SL 2
	R/L 1212-2	●		12	12	110	12	12	18	2,0	30	—	WCF_2_1	1	
	R/L 1616-2	○	○	16	16	100	16	16	25	2,0	35	—	WCF_2_2	2	SL 1
	R/L 1616-3			16	16	100	16	16	25	3,0	35	—	WCF_3_2	2	
Clamp Type	WCFS R/L 20-3	●	●	20	20	125	23	20	46	3,0	50	WCFH17-3	WCF_3_3	3	SL 1
	R/L 20-4	●		20	20	125	24	20	46	4,0	50	WCFH17-4	WCF_4_3	3	
	R/L 20-5	○		20	20	125	25	20	46	5,0	50	WCFH17-5	WCF_5_3	3	
	WCFS R/L 25-3	●		25	25	150	28	25	46	3,0	50	WCFH17-3	WCF_3_4	4	
	R/L 25-4		○	25	25	150	29	25	46	4,0	50	WCFH17-4	WCF_4_4	4	
	R/L 25-5			25	25	150	30	25	46	5,0	50	WCFH17-5	WCF_5_4	4	

See F48 for applicable inserts.

Blade included in holder.

Blades



Cat. No.	Stock	Dimensions (mm)		Applicable Blades
		CW	B	
WCFH 17-3	●	3	2,4	WCFS R/L 20-3, 25-3
WCFH 17-4	○	4	3,4	WCFS R/L 20-4, 25-4
WCFH 17-5		5	4,3	WCFS R/L 20-5, 25-5

Parts

Cap Screw	Wrench	Applicable Holders
BX0622	LH050	All clamp type holders.

Parting-Off Holders

Sumi-Grip Inserts

Inserts

Neutral (N)		Right Handed (R)		Left Handed (L)							
						* WCF_2T: 2_RE=0,15					
External Appearance	Cat. No.	AC830P	AC225	AC1030U	T1500A	A30	G10E	CW	Applicable Holder		
WCF N_GG General purpose 	WCF N2 GG	●						2,0	STFH __ 2	STFS R/L	2
	N3 GG	●						3,0	STFH __ 3	STFS R/L	3
	N4 GG	●						4,0	STFH __ 4	STFS R/L	4
	N5 GG	●						5,0	STFH __ 5	STFS R/L	5
WCF N_GF Exotic alloy Low feed 	WCF N2 GF			○				2,0	STFH __ 2	STFS R/L	2
	N3 GF			○				3,0	STFH __ 3	STFS R/L	3
	N4 GF			○				4,0	STFH __ 4	STFS R/L	4
	N5 GF			○				5,0	STFH __ 5	STFS R/L	5
WCF __ CF Exotic alloy Low feed 	WCF R3 CF			○				3,0	STFH __ 3	STFS R/L	3
	L3 CF			○				3,0			
	R4 CF							4,0	STFH __ 4	STFS R/L	4
	L4 CF			○				4,0			
WCF _2T Small diameter Low cutting force 	WCF N2T	●						2,0			
	R2T	●						2,0	STFH __ 2	STFS R/L	2
	L2T	●						2,0			
WCF __ Without chip breaker General steel 	WCF N3	●						3,0			
	R3	●						3,0	STFH __ 3	STFS R/L	3
	L3	●						3,0			
	WCF N4	●						4,0			
	R4	●						4,0	STFH __ 4	STFS R/L	4
	L4	●						4,0			
	WCF N5	●						5,0			
	R5	●						5,0	STFH __ 5	STFS R/L	5
L5	●						5,0				
WCF __ A Exotic alloy Low feed 	WCF N2A		●					2,0	STFH __ 2	STFS R/L	2
	WCF N3A	●	●		○			3,0			
	R3A		●					3,0	STFH __ 3	STFS R/L	3
	L3A		●					3,0			
	WCF N4A	○	●				○	4,0			
	R4A		●					4,0	STFH __ 4	STFS R/L	4
	L4A		●					4,0			
WCF N5A		●					5,0				
R5A		○					5,0	STFH __ 5	STFS R/L	5	
L5A	●						5,0				
WCF __ B Cast iron Light alloys 	WCF N3B						●	3,0			
	R3B						●	3,0	STFH __ 3	STFS R/L	3
	L3B						●	3,0			
	WCF N4B						●	4,0			
	R4B						○	4,0	STFH __ 4	STFS R/L	4
	L4B							4,0			
	WCF N5B						○	5,0			
R5B							5,0	STFH __ 5	STFS R/L	5	
L5B							5,0				

Recommended Cutting Conditions

Work Material		Cutting Speed (m/min)					
		AC830P	AC225	AC1030U	T1500A	A30	G10
Steel	General Steel	80-200	80-200	50-200	80-200	50-120	-
	Soft Steel	100-230	100-230	50-230	100-230	70-150	-
	Die Steel	60-150	60-150	50-150	60-150	50-120	-
Stainless Steel		70-150	70-150	50-150	-	70-130	-
Cast Iron		-	-	50-200	-	-	50-120
Non-Ferrous Metal		-	-	200-500	-	-	200-500

Chip Breaker		Feed Rate (mm/rev)										
		Neutral						Left or Right Handed				
		GG	GF	Without Chip Breaker	T	A	B	Without Chip Breaker	CF	T	A	B
Groove Width W (mm)	2,0	0,05-0,20	0,03-0,12	-	0,03-0,10	0,03-0,12	-	-	-	0,03-0,10	-	-
	3,0	0,08-0,25	0,04-0,15	0,08-0,25	-	0,04-0,15	0,05-0,15	0,08-0,25	0,08-0,12	-	0,04-0,15	0,05-0,15
	4,0	0,10-0,30	0,05-0,18	0,10-0,30	-	0,05-0,18	0,05-0,18	0,10-0,30	0,10-0,30	-	0,05-0,18	0,05-0,18
	5,0	0,10-0,35	0,05-0,20	0,10-0,30	-	0,05-0,20	0,06-0,20	0,10-0,20	0,10-0,30	-	-	0,06-0,20

● = Euro stock
○ = Japan stock

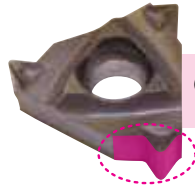
Threading Tools

SSTE / SSTI Type



Features

- High-precision inserts with/without wiper flat for threading, supporting a wide range of applications from general industrial machinery to pipes and aerospace devices
- Stable chip control through use of a 3D molded chipbreaker.
- Ground cutting edge flank for improved cutting edge sharpness, resulting in high quality threads

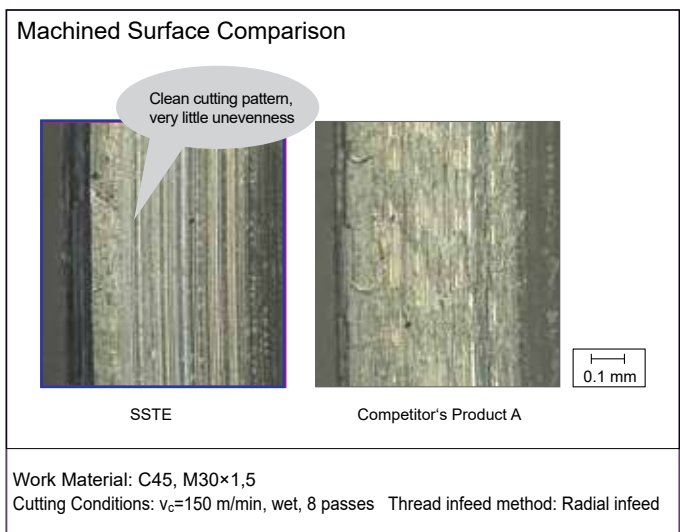
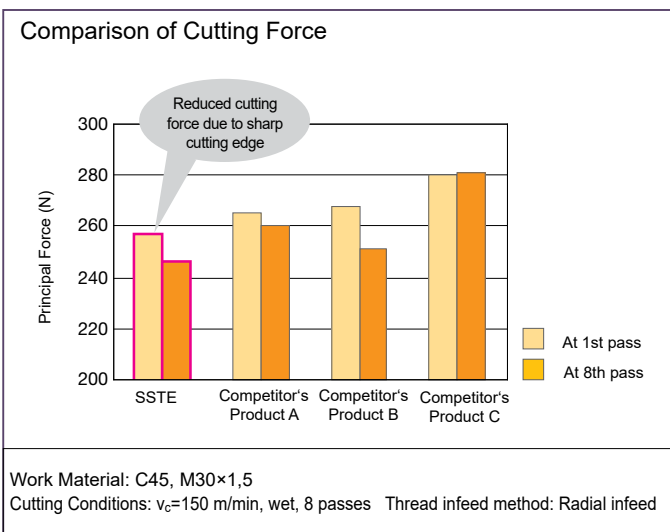


Ground flanks around cutting edge

Product Range

Applications	Type	Wiper Flat	External/ Internal	Pitch																Insert Cat. No. Example:			
				Pitch (mm)	TPI (Threads/Inch)																		
					48	36	32	28	27	24	20	19	18	16	14	13	12	11	10		8		
General Industrial Use	60° General-purpose Thread	No	External	0.5 ————— 3.0		48 to 8																16ER A60-CB	
			Internal	0.5 ————— 3.0		48 to 8																16IR A60-CB	
	55° General-purpose Thread		External			48 to 8																16ER A55-CB	
			Internal			48 to 8																16IR A55-CB	
	60° ISO Metric Thread		External	0.75 1.0 1.25 1.5 1.75 2.0 2.5 3.0																		16ER 075ISO-CB	
			Internal	0.75 1.0 1.25 1.5 1.75 2.0 2.5 3.0																		16IR 075ISO-CB	
60° Unified Thread	External																			16ER 32UN-CB			
	Internal																			16IR 32UN-CB			
	Pipe Coupling for Gas, Water and Water Faucets	55° Parallel Thread for Pipe/Whitworth	Yes	External																			16ER 36W-CB
				Internal																			16IR 28W-CB
60° American NPT	External	External																			16ER 27NPT-CB		
		Internal																			16IR 27NPT-CB		
	Steam, Gas and Water Supply Pipes	55° Taper Thread for Pipe BSPT	Yes	External																			16ER 28BSPT-CB
				Internal																			16IR 28BSPT-CB
60° American NPTF	External	External																			16ER 27NPTF-CB		
		Internal																			16IR 27NPTF-CB		
For Aerospace Equipment	UNJ 60°	Yes	External																			16ER 32UNJ-CB	
			Internal																			16IR 32UNJ-CB	

Application Examples



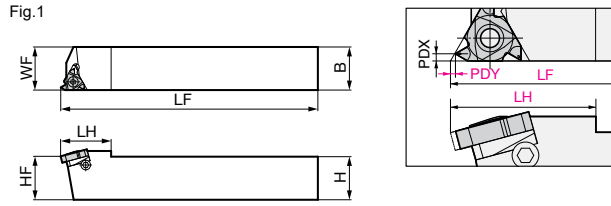
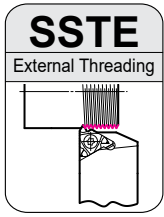
Threading Holders

Threading Tools

SSTE / SSTI Type



Screw-on for External Diameter



The values for dimensions LF and LH below are only for reference.
The actual value is the value below minus the PDY value for the corresponding insert on F65.

Holder

Parts

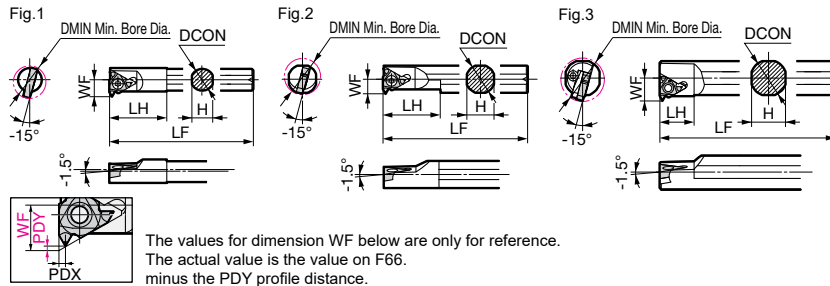
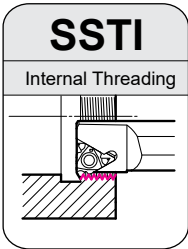
Dimensions (mm)

Cat. No.	Stock	Height H	Width B	Overall Length LF	Head LH	Cutting Edge		Fig						
						Functional Width WF	Height HF		Screw	Shim Screw	Flat Washer	Shim	Wrench	
SSTE R1616H16	●	16	16	100	20,5	16	16	1						
SSTE R2020K16	●	20	20	125	30,0	20	20	1	BFTX0312N	2,0	BX0304*1	PW3	YE3	TRX10
SSTE R2525M16	●	25	25	150	30,0	25	25	1						

*1 Shim screw wrench is sold separately.



Screw-on for Internal Diameter



The values for dimension WF below are only for reference.
The actual value is the value on F66 minus the PDY profile distance.

Holder

Parts

Dimensions (mm)

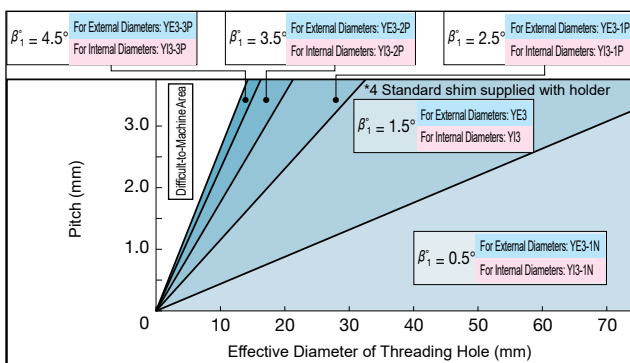
Cat. No.	Stock	Diameter DCON	Height H	Overall Length LF	Head LH	Functional Width WF	Min. Bore Dia. DMIN*2	Fig						
									Screw	Shim Screw	Flat Washer	Shim	Wrench	
SSTI R1812M16*3	●	12	11,0	150	32,0	10,2	18	1						
SSTI R2016M16*3	●	16	15,0	150	63,5	9,2	20	2	BFTX03085N	2,0	-	-	-	
SSTI R2420Q16	●	20	18,0	180	19,0	13,5	24	3						
SSTI R3125S16	●	25	23,0	250	14,3	16,5	31	3	BFTX0312N	2,0	BX0304*1	PW3	YI3	TRX10
SSTI R3732S16	●	32	30,0	250	14,3	20,0	37	3						

*1 Shim screw wrench is sold separately. *2 The minimum bore diameter is the diameter of the prepared hole. *3 Left-hand threads are not available.

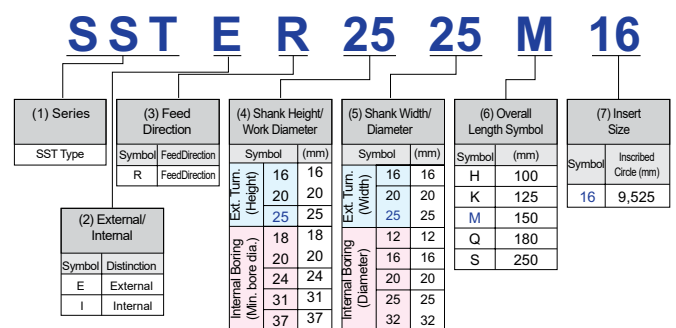
Shim and Selection Criteria

Applications	Recommended Lead Angle (T ₁)	External Turning		Internal Boring	
		Cat. No.	Stock	Cat. No.	Stock
Right-hand Thread	4,5°	YE3-3P	○	YI3-3P	○
	3,5°	YE3-2P	○	YI3-2P	○
	2,5°	YE3-1P	○	YI3-1P	○
	1,5°	YE3*4	○	YI3*4	○
	0,5°	YE3-1N	○	YI3-1N	○
Left-hand Thread	-0,5°	YE3-2N	○	YI3-2N	○
	-1,5°	YE3-3N	○	YI3-3N	○

*4 Standard shim supplied with holder.



Holder Identification Code

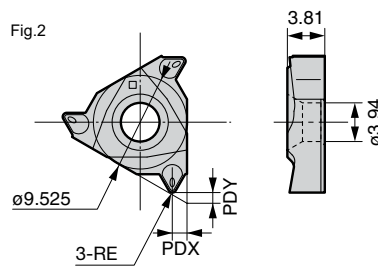
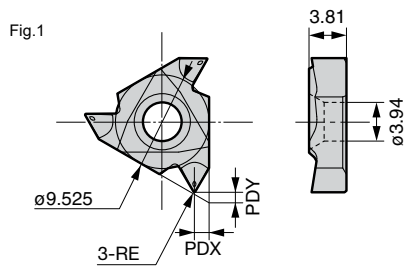


Details of Shim Selection → F67

Threading Inserts SSTE Type



Threading Inserts for External Diameter Machining



60°/55° General-purpose Threads (Without Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16ER A60-CB	●	0,5-1,5	16 - 48	0,8	0,6	0,09	5	1
	16ER AG60-CB	●	0,5-3,0	8 - 48	1,5	1,1	0,10		
	16ER G60-CB	○	2,0-3,0	8 - 14	1,5	1,1	0,20		
55°	16ER A55-CB	●	—	16 - 48	0,8	0,5	0,05	5	1
	16ER AG55-CB	●	—	8 - 48	1,5	1,1	0,08		
	16ER G55-CB	○	—	8 - 14	1,5	1,1	0,22		

60° American NPT (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16ER 27NPT-CB	○	—	27	0,8	0,6	0,06	5	2
	16ER 18NPT-CB	○	—	18	0,8	0,6	0,06		2
	16ER 14NPT-CB	○	—	14	1,5	1,0	0,08		2
	16ER 115NPT-CB	○	—	11,5	1,5	1,0	0,08		2
	16ER 08NPT-CB	○	—	8	1,5	1,1	0,13		2

60° ISO Metric Thread (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16ER 075 ISO-CB	●	0,75	—	0,5	1,0	0,09	5	2
	16ER 100 ISO-CB	●	1,00	—	0,8	0,6	0,14		2
	16ER 125 ISO-CB	●	1,25	—	0,8	0,7	0,15		2
	16ER 150 ISO-CB	●	1,50	—	0,8	0,7	0,20		2
	16ER 175 ISO-CB	●	1,75	—	1,5	1,0	0,23		2
	16ER 200 ISO-CB	●	2,00	—	1,5	1,1	0,26		2
	16ER 250 ISO-CB	●	2,50	—	1,5	1,2	0,33		2
	16ER 300 ISO-CB	●	3,00	—	1,5	1,1	0,41		2

55° Taper Thread for Pipe/BSPT (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
55°	16ER 28BSPT-CB	○	—	28	0,8	0,6	0,13	5	2
	16ER 19BSPT-CB	○	—	19	0,8	0,6	0,18		2
	16ER 14BSPT-CB	○	—	14	1,5	1,3	0,25		2
	16ER 11BSPT-CB	○	—	11	1,5	1,0	0,31		2

60° American NPTF (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16ER 27NPTF-CB	○	—	27	0,8	0,6	0,06	5	2
	16ER 18NPTF-CB	○	—	18	0,8	0,6	0,06		2
	16ER 14NPTF-CB	○	—	14	1,5	1,0	0,13		2
	16ER 115NPTF-CB	○	—	11,5	1,5	1,0	0,12		2

60° Unified Thread (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16ER 32UN-CB	○	—	32	0,5	1,0	0,10	5	2
	16ER 28UN-CB	○	—	28	0,8	0,7	0,11		2
	16ER 24UN-CB	○	—	24	0,8	0,7	0,13		2
	16ER 20UN-CB	○	—	20	0,8	0,7	0,16		2
	16ER 18UN-CB	○	—	18	0,8	0,7	0,18		2
	16ER 16UN-CB	○	—	16	0,8	0,8	0,20		2
	16ER 14UN-CB	○	—	14	1,5	1,2	0,23		2
	16ER 13UN-CB	○	—	13	1,5	1,1	0,26		2
	16ER 12UN-CB	○	—	12	1,5	1,0	0,27		2
	16ER 10UN-CB	○	—	10	1,5	1,2	0,33		2
	16ER 08UN-CB	○	—	8	1,5	1,2	0,42		2

60° UNJ (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16ER 32UNJ-CB	○	—	32	0,5	1,0	0,13	5	2
	16ER 28UNJ-CB	○	—	28	0,8	0,6	0,15		2
	16ER 24UNJ-CB	○	—	24	0,8	0,6	0,18		2
	16ER 20UNJ-CB	○	—	20	0,8	0,7	0,21		2
	16ER 18UNJ-CB	○	—	18	0,8	0,6	0,23		2
	16ER 16UNJ-CB	○	—	16	0,8	0,6	0,25		2
	16ER 14UNJ-CB	○	—	14	1,5	1,1	0,29		2
	16ER 12UNJ-CB	○	—	12	1,5	1,1	0,34		2
	16ER 10UNJ-CB	○	—	10	1,5	1,1	0,40		2

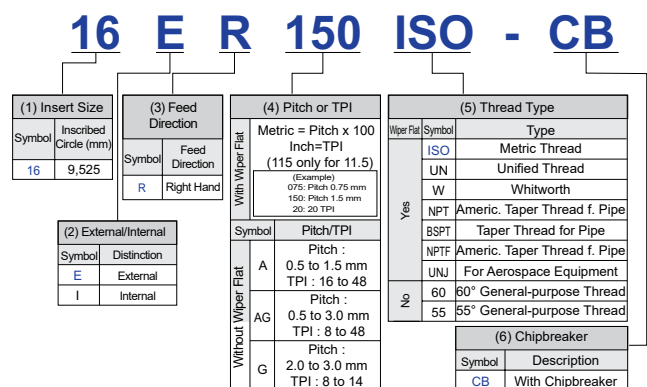
55° Parallel Thread for Pipe/Whitworth (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
55°	16ER 36W-CB	○	—	36	0,5	1,0	0,10	5	2
	16ER 32W-CB	○	—	32	0,5	1,0	0,11		2
	16ER 28W-CB	○	—	28	0,8	0,6	0,12		2
	16ER 24W-CB	○	—	24	0,8	0,6	0,15		2
	16ER 20W-CB	○	—	20	0,8	0,6	0,18		2
	16ER 19W-CB	○	—	19	0,8	0,6	0,18		2
	16ER 18W-CB	○	—	18	0,8	0,6	0,19		2
	16ER 16W-CB	○	—	16	0,8	0,6	0,22		2
	16ER 14W-CB	○	—	14	1,5	1,0	0,25		2
	16ER 12W-CB	○	—	12	1,5	1,1	0,29		2
	16ER 11W-CB	○	—	11	1,5	1,1	0,32		2
	16ER 10W-CB	○	—	10	1,5	1,1	0,35		2
	16ER 08W-CB	○	—	8	1,5	1,1	0,43		2

For these inserts, only SSTE Type holders can be used.

- = Euro stock
- = Japan stock

Insert Identification Table

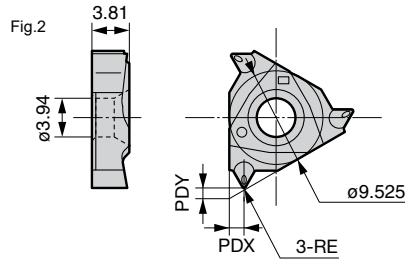
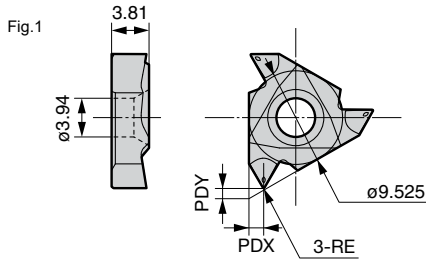


New

Threading Inserts SSTI Type



Threading Inserts for Inner Diameter Machining



60°/55° General-purpose Threads (Without Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16IR A60-CB	●	0,5-1,5	16-48	0,8	0,5	0,09	5	1
	16IR AG60-CB	●	0,5-3,0	8-48	1,5	1,1	0,10		
	16IR G60-CB	○	2,0-3,0	8-14	1,5	1,1	0,18		
55°	16IR A55-CB	●	—	16-48	0,8	0,5	0,05	5	1
	16IR AG55-CB	●	—	8-48	1,5	1,1	0,08		
	16IR G55-CB	○	—	8-14	1,5	1,1	0,20		

60° American NPT (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16IR 27NPT-CB	○	—	27	0,8	0,6	0,06	5	2
	16IR 18NPT-CB	○	—	18	0,8	0,6	0,06		
	16IR 14NPT-CB	○	—	14	1,5	1,1	0,08		
	16IR 115NPT-CB	○	—	11,5	1,5	1,0	0,08		
	16IR 08NPT-CB	○	—	8	1,5	1,0	0,13		

60° ISO Metric Thread (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16IR 075 ISO-CB	●	0,75	—	0,5	0,9	0,04	5	2
	16IR 100 ISO-CB	●	1,00	—	0,8	0,6	0,06		
	16IR 125 ISO-CB	●	1,25	—	0,8	0,6	0,07		
	16IR 150 ISO-CB	●	1,50	—	0,8	0,6	0,09		
	16IR 175 ISO-CB	●	1,75	—	1,5	1,0	0,10		
	16IR 200 ISO-CB	●	2,00	—	1,5	1,1	0,13		
	16IR 250 ISO-CB	●	2,50	—	1,5	1,1	0,15		
	16IR 300 ISO-CB	●	3,00	—	1,5	1,1	0,19		

55° Taper Thread for Pipe/BSPT (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
55°	16IR 28BSPT-CB	○	—	28	0,8	0,6	0,13	5	2
	16IR 19BSPT-CB	○	—	19	0,8	0,6	0,18		

60° American NPTF (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16IR 27NPTF-CB	○	—	27	0,8	0,6	0,06	5	2
	16IR 18NPTF-CB	○	—	18	0,8	0,6	0,08		
	16IR 14NPTF-CB	○	—	14	1,5	1,0	0,13		
	16IR 115NPTF-CB	○	—	11,5	1,5	1,0	0,08		
	16IR 08NPTF-CB	○	—	8	1,5	1,1	0,13		

60° Unified Thread (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16IR 32UN-CB	○	—	32	0,5	0,9	0,04	5	2
	16IR 28UN-CB	○	—	28	0,8	0,6	0,06		
	16IR 24UN-CB	○	—	24	0,8	0,7	0,06		
	16IR 20UN-CB	○	—	20	0,8	0,6	0,08		
	16IR 18UN-CB	○	—	18	0,8	0,6	0,08		
	16IR 16UN-CB	○	—	16	0,8	0,7	0,09		
	16IR 14UN-CB	○	—	14	1,5	1,1	0,13		
	16IR 13UN-CB	○	—	13	1,5	1,1	0,11		
	16IR 12UN-CB	○	—	12	1,5	1,1	0,13		
	16IR 10UN-CB	○	—	10	1,5	1,1	0,15		
16IR 08UN-CB	○	—	8	1,5	1,1	0,20			

60° UNJ (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
60°	16IR 32UNJ-CB	○	—	32	0,5	0,9	0,04	5	2
	16IR 28UNJ-CB	○	—	28	0,8	0,6	0,05		
	16IR 24UNJ-CB	○	—	24	0,8	0,6	0,06		
	16IR 20UNJ-CB	○	—	20	0,8	0,6	0,06		
	16IR 18UNJ-CB	○	—	18	0,8	0,6	0,06		
	16IR 16UNJ-CB	○	—	16	0,8	0,6	0,09		
	16IR 14UNJ-CB	○	—	14	1,5	1,1	0,09		
	16IR 12UNJ-CB	○	—	12	1,5	1,1	0,11		
	16IR 10UNJ-CB	○	—	10	1,5	1,1	0,15		

55° Parallel Thread for Pipe/Whitworth (With Wiper Flat) Dimensions (mm)

Included Angle	Cat. No.	AC530U	Pitch		X Direction	Y Direction	Corner Radius RE	Pcs/Pack	Fig
			mm	Threads/Inch					
55°	16IR 28W-CB	○	—	28	0,8	0,6	0,12	5	2
	16IR 24W-CB	○	—	24	0,8	0,6	0,14		
	16IR 20W-CB	○	—	20	0,8	0,6	0,18		
	16IR 19W-CB	○	—	19	0,8	0,6	0,18		

For these inserts, only SSTI Type holders can be used.

Insert Identification Table

16 I R 150 ISO - CB

(1) Insert Size		(3) Feed Direction		(4) Pitch or TPI		(5) Thread Type	
Symbol	Inscribed Circle (mm)	Symbol	Feed Direction	Symbol	Pitch/TPI	Wiper Flat	Symbol
16	9.525	R	Right Hand	With Wiper Flat	Metric = Pitch x 100 Inch = TPI (115 only for 11.5) <small>(Example) 075: Pitch 0.75 mm 150: Pitch 1.5 mm 20: 20 TPI</small>	Yes	ISO
(2) External/Internal						No	UN
Symbol	Distinction					Type	
I	Internal					Metric Thread	
						Unified Thread	
						Whitworth	
						NPT Americ. Taper Thread f. Pipe	
						BSPT Taper Thread for Pipe	
						NPTF Americ. Taper Thread f. Pipe	
						UNJ For Aerospace Equipment	
						60 60° General-purpose Thread	
						55 55° General-purpose Thread	
						(6) Chipbreaker	
						Symbol	
						Description	
						CB With Chipbreaker	

Threading Holders

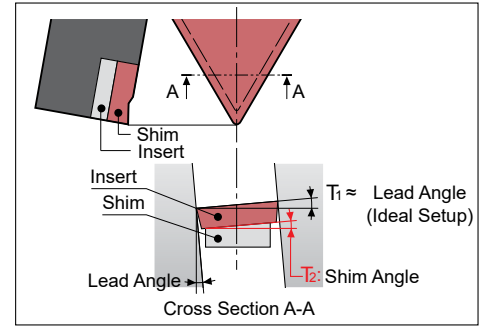
Threading Tools

SSTE / SSTI Type

Shim Selection

If the pitch is large or thread diameter is small, the lead angle of the thread becomes larger and the effective relief angle of the leading edge becomes smaller. It is ideal to set the threading insert so that both right and left relief angles are equal.

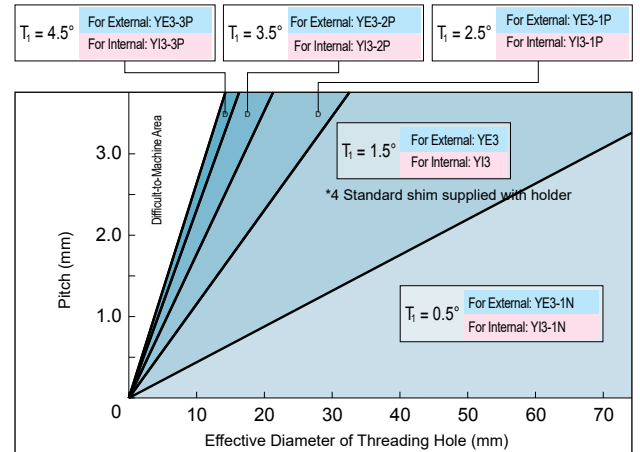
Therefore, it is necessary to select an appropriate shim based on the thread pitch and effective diameter using the table below.



Shim Selection Procedure

- (1) Choose from [Right-Hand Thread / Left-Hand Thread] in the table.
- (2) Locate the required threading „pitch“.
- (3) Locate the cell with the required „Effective Diameter“ range.
- (4) Confirm the part no. at the „Shim“ row above the corresponding „Effective Diameter“ cell located previously. If the shim part no. is different from the one currently in use, change to the correct one.

Example: When machining an M16×2,0 external right-hand thread, the pitch diameter is 14.701 mm. In the table below, locate [2,0] mm under the "Pitch" column and then move along the row to the right to locate the required "Effective Diameter" range [11,4 - 17,4] mm. As such, the correct shim should be [YE3-1P], shown in the corresponding cell under the "Internal" row below.



Pitch (mm)

Right-hand/Left-hand Thread	For Right-hand Thread					For Left-hand Thread		
Lead Angle	4,5°	3,5°	2,5°	1,5°	0,5°	-0,5°	-1,5°	
Shim	External	YE3-3P	YE3-2P	YE3-1P	YE3*	YE3-1N	YE3-2N	YE3-3N
	Internal	YI3-3P	YI3-2P	YI3-1P	YI3*	YI3-1N	YI3-2N	YI3-3N
Shim Angle (Ti)	3°	2°	1°	0°	-1°	-2°	-3°	
Pitch (mm)	Effective Diameter (mm)							
0,5	1,9 - 2,2	2,2 - 2,8	2,8 - 4,3	4,3 - 11,4	> 11,4	> 11,4	11,4 - 4,3	
0,75	2,8 - 3,3	3,3 - 4,3	4,3 - 6,5	6,5 - 17,1	> 17,1	> 17,1	17,1 - 6,5	
1,0	3,8 - 4,3	4,3 - 5,7	5,7 - 8,7	8,7 - 22,8	> 22,8	> 22,8	22,8 - 8,7	
1,25	4,7 - 5,4	5,4 - 7,1	7,1 - 10,9	10,9 - 28,5	> 28,5	> 28,5	28,5 - 10,9	
1,5	5,7 - 6,5	6,5 - 8,5	8,5 - 13,0	13,0 - 34,2	> 34,2	> 34,2	34,2 - 13,0	
1,75	6,6 - 7,6	7,6 - 10,0	10,0 - 15,2	15,2 - 39,9	> 39,9	> 39,9	39,9 - 15,2	
2,0	7,6 - 8,7	8,7 - 11,4	11,4 - 17,4	17,4 - 45,6	> 45,6	> 45,6	45,6 - 17,4	
2,5	9,5 - 10,8	10,8 - 14,2	14,2 - 21,7	21,7 - 57,0	> 57,0	> 57,0	57,0 - 21,7	
3,0	11,4 - 13,0	13,0 - 17,1	17,1 - 26,0	26,0 - 68,4	> 68,4	> 68,4	68,4 - 26,0	

TPI (Threads/Inch)

Right-hand/Left-hand Thread	For Right-hand Thread					For Left-hand Thread		
Lead Angle	4,5°	3,5°	2,5°	1,5°	0,5°	-0,5°	-1,5°	
Shim	External	YE3-3P	YE3-2P	YE3-1P	YE3*	YE3-1N	YE3-2N	YE3-3N
	Internal	YI3-3P	YI3-2P	YI3-1P	YI3*	YI3-1N	YI3-2N	YI3-3N
Shim Angle (Ti)	3°	2°	1°	0°	-1°	-2°	-3°	
TPI (Threads/Inch)	Effective Diameter (mm)							
32	3,0 - 3,3	3,3 - 4,6	4,6 - 6,9	6,9 - 18,0	> 18,0	> 18,0	18,0 - 6,9	
28	3,0 - 3,8	3,8 - 5,1	5,1 - 7,9	7,9 - 20,8	> 20,8	> 20,8	20,8 - 7,9	
27	3,6 - 4,1	4,1 - 5,3	5,3 - 8,1	8,1 - 21,3	> 21,3	> 21,3	21,3 - 8,1	
24	4,1 - 4,6	4,6 - 6,1	6,1 - 9,1	9,1 - 24,4	> 24,4	> 24,4	24,4 - 9,1	
20	4,8 - 5,6	5,6 - 7,1	7,1 - 10,9	10,9 - 29,0	> 29,0	> 29,0	29,0 - 10,9	
18	5,3 - 6,1	6,1 - 8,1	8,1 - 12,4	12,4 - 32,5	> 32,5	> 32,5	32,5 - 12,4	
16	5,8 - 6,9	6,9 - 8,9	8,9 - 13,7	13,7 - 35,8	> 35,8	> 35,8	35,8 - 13,7	
14	6,9 - 7,9	7,9 - 10,2	10,2 - 15,7	15,7 - 41,1	> 41,1	> 41,1	41,1 - 15,7	
13	7,4 - 8,4	8,4 - 11,2	11,2 - 17,0	17,0 - 44,7	> 44,7	> 44,7	44,7 - 17,0	
12	8,1 - 9,1	9,1 - 12,2	12,2 - 18,5	18,5 - 48,8	> 48,8	> 48,8	48,8 - 18,5	
11,5	8,4 - 9,7	9,7 - 12,4	12,4 - 19,3	19,3 - 50,3	> 50,3	> 50,3	50,3 - 19,3	
11	8,9 - 9,9	9,9 - 13,2	13,2 - 20,1	20,1 - 52,6	> 52,6	> 52,6	52,6 - 20,1	
10	9,7 - 10,9	10,9 - 14,5	14,5 - 22,1	22,1 - 57,9	> 57,9	> 57,9	57,9 - 22,1	
9	10,7 - 12,2	12,2 - 16,0	16,0 - 24,4	24,4 - 64,3	> 64,3	> 64,3	64,3 - 24,4	
8	11,9 - 13,7	13,7 - 18,0	18,0 - 27,7	27,7 - 72,4	> 72,4	> 72,4	72,4 - 27,7	

* SSTE Type/SSTI Type holders are shipped with shims for a lead angle of $Y_1 = 1,5^\circ$ (SSTE Type: **YE3**, SSTI Type: **YI3**).

Shims for lead angles of $Y_1 = -1,5^\circ, -0,5^\circ, 0,5^\circ, 2,5^\circ, 3,5^\circ$, and $4,5^\circ$ are sold separately.

* Shims are not needed for SSTI R1812M16 and SSTI R2016M16. (The holders are already provided with the standard holder inclination of $1,5^\circ$.)

Threading Holders

Threading Tools

SSTE / SSTI Type

Shim Replacement

<p>1</p> <p>Shim Shim Set Screw</p>	<p>2</p>	<p>3</p>	<p>4</p>
<p>Remove the insert to expose the shim.</p>	<p>Loosen the shim set screw by one to two turns.</p>	<p>Remove the shim and attach a different shim that matches the lead.</p>	<p>Tighten the shim set screw (recommended tightening torque 1,0 to 1,5 Nm).</p>

Wiper Flat

Without Wiper Flat	With Wiper Flat
<p>Work Material</p> <p>Insert (Without Wiper Flat)</p>	<p>Work Material</p> <p>Finishing Allowance</p> <p>Wiper Flat</p> <p>Insert (With Wiper Flat)</p>
<ul style="list-style-type: none"> • Performs threading without machining thread ridges (the machined surface from the previous process is left unworked.) • Enables machining of threads with different pitch widths with the same insert • Finishing of the internal (or external) diameter is required before the threading process. • Fine burrs are easily formed on edges of ridges. 	<ul style="list-style-type: none"> • Enables machining of workpieces into shapes compliant with thread standards • Only specific thread specifications and pitch can be machined • In order to finish a thread with the wiper flat, a finishing allowance of 0,1 mm on each side is required. • Edges of ridges can be rounded off.

Infeed Method

The modified flank infeed is recommended for the SSTE type/SSTI type.

This infeed method, which features reduced chip curl diameters and stable chip control, can also decrease chipping on trailing edges that often occurs in radial infeed machining. (1° is recommended for the modification angle.)

<p>● Impact of the Infeed Method on Chip Shapes</p> <p>Work Material: X5CrMo17-12-2, M30 x 1,5 Cutting Conditions: $v_c = 60$ mm/min, wet, 8 Passes</p>	
<p>Modified Flank Infeed</p> <p>Leading Edge</p> <p>Trailing Edge</p> <p>Feed Direction</p> <p>50 mm</p> <p>Reduced curl diameters ensure smooth, stable chip control (performance)</p>	<p>Radial Infeed Machining</p> <p>Feed Direction</p> <p>50 mm</p> <p>Large curl diameters cause unstable chip control.</p>

Threading Tools

SSTE Type

■ SSTE Type Guidelines for Depth of Cut

External Metric Threads (Depth of cut per pass: mm)

Pitch (mm)	0,75	1,00	1,25	1,50	1,75	2,00	2,50	3,00
Overall Depth of Cut (mm)	0,48	0,64	0,80	0,92	1,10	1,26	1,57	1,87
No. of Passes	4	5	7	8	10	12	14	16
1	0,24	0,25	0,25	0,28	0,28	0,30	0,38	0,40
2	0,12	0,15	0,15	0,15	0,15	0,16	0,19	0,22
3	0,07	0,11	0,12	0,12	0,12	0,13	0,15	0,15
4	0,05	0,08	0,09	0,10	0,10	0,10	0,10	0,13
5		0,05	0,08	0,09	0,10	0,09	0,10	0,12
6			0,06	0,07	0,09	0,09	0,09	0,10
7			0,05	0,06	0,08	0,08	0,09	0,10
8				0,05	0,07	0,07	0,08	0,09
9					0,06	0,07	0,08	0,09
10					0,05	0,06	0,07	0,08
11						0,06	0,07	0,08
12						0,05	0,06	0,07
13							0,06	0,07
14							0,05	0,06
15								0,06
16								0,05

External Unified Threads (Depth of cut per pass: mm)

Threads/Inch	32	28	24	20	18	16	14	13	12	11	10	9	8
Overall Depth of Cut (mm)	0,50	0,57	0,67	0,80	0,89	1,00	1,15	1,23	1,34	1,46	1,60	1,78	2,00
No. of Passes	4	4	5	7	8	10	11	12	12	14	14	16	16
1	0,24	0,25	0,25	0,26	0,26	0,28	0,28	0,30	0,30	0,30	0,38	0,38	0,40
2	0,14	0,17	0,19	0,15	0,15	0,15	0,15	0,18	0,18	0,18	0,20	0,20	0,25
3	0,07	0,10	0,12	0,10	0,12	0,10	0,12	0,13	0,13	0,13	0,15	0,13	0,19
4	0,05	0,05	0,06	0,09	0,10	0,09	0,10	0,10	0,12	0,12	0,12	0,12	0,16
5			0,05	0,08	0,08	0,08	0,10	0,08	0,11	0,11	0,10	0,11	0,14
6				0,07	0,07	0,07	0,09	0,08	0,10	0,10	0,09	0,10	0,12
7				0,05	0,06	0,07	0,08	0,07	0,09	0,08	0,09	0,10	0,11
8					0,05	0,06	0,07	0,07	0,08	0,08	0,08	0,09	0,10
9						0,05	0,06	0,06	0,07	0,07	0,08	0,09	0,09
10						0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,08
11							0,05	0,05	0,05	0,06	0,07	0,08	0,07
12								0,05	0,05	0,06	0,06	0,07	0,07
13										0,05	0,06	0,07	0,06
14										0,05	0,05	0,06	0,06
15												0,05	0,05
16												0,05	0,05

No. of passes and depths of cut in the table above are general guidelines only. Increase or decrease depending on conditions. However, the maximum depth of cut should be kept to 0,5mm or less.

When using an insert with a wiper flat, add machining allowance to the total depth of cut.

■ Recommended Cutting Conditions

Work Material	P Carbon Steel	P Alloy Steel (up to 330HB)	M Stainless Steel	K Grey Cast Iron (up to 330HB)	K Ductile Cast Iron	S Titanium Alloy
Cutting Speed v_c (m/min)	75–150	75–135	60–120	90–180	75–135	24–90

■ SSTI Type Guidelines for Depth of Cut

Internal Metric Threads (Depth of cut per pass: mm)

Pitch (mm)	0,75	1,00	1,25	1,50	1,75	2,00	2,50	3,00
Overall Depth of Cut (mm)	0,49	0,58	0,74	0,89	1,04	1,18	1,47	1,76
No. of Passes	4	5	8	10	11	12	14	16
1	0,20	0,22	0,22	0,25	0,25	0,25	0,30	0,30
2	0,12	0,14	0,14	0,12	0,17	0,18	0,19	0,20
3	0,12	0,10	0,09	0,08	0,10	0,12	0,15	0,17
4	0,05	0,07	0,07	0,08	0,08	0,10	0,12	0,14
5		0,05	0,06	0,07	0,08	0,09	0,10	0,12
6			0,06	0,07	0,07	0,08	0,09	0,11
7			0,05	0,06	0,07	0,07	0,08	0,10
8			0,05	0,06	0,06	0,07	0,08	0,10
9				0,05	0,06	0,06	0,07	0,08
10				0,05	0,05	0,06	0,07	0,08
11					0,05	0,05	0,06	0,07
12						0,05	0,06	0,07
13							0,05	0,06
14							0,05	0,06
15								0,05
16								0,05

Internal Unified Threads (Depth of cut per pass: mm)

Threads/Inch	32	28	24	20	18	16	14	13	12	11	10	9	8
Overall Depth of Cut (mm)	0,43	0,49	0,57	0,69	0,76	0,86	0,98	1,06	1,15	1,25	1,37	1,53	1,72
No. of Passes	4	4	5	7	8	10	11	12	12	14	14	16	16
1	0,20	0,20	0,20	0,22	0,22	0,22	0,25	0,25	0,27	0,27	0,27	0,30	0,30
2	0,10	0,16	0,16	0,12	0,13	0,13	0,15	0,15	0,16	0,16	0,18	0,18	0,22
3	0,08	0,08	0,09	0,09	0,10	0,08	0,10	0,10	0,12	0,12	0,16	0,16	0,18
4	0,05	0,05	0,07	0,08	0,08	0,08	0,08	0,08	0,10	0,10	0,12	0,11	0,15
5			0,05	0,07	0,07	0,07	0,07	0,08	0,09	0,08	0,10	0,09	0,12
6				0,06	0,06	0,07	0,07	0,07	0,08	0,08	0,09	0,09	0,11
7				0,05	0,05	0,06	0,06	0,07	0,07	0,07	0,08	0,08	0,10
8					0,05	0,06	0,06	0,06	0,06	0,07	0,07	0,08	0,09
9						0,05	0,05	0,06	0,06	0,06	0,06	0,07	0,08
10						0,04	0,05	0,05	0,05	0,06	0,06	0,07	0,07
11							0,04	0,05	0,05	0,05	0,05	0,06	0,06
12								0,04	0,04	0,05	0,05	0,06	0,06
13										0,04	0,04	0,05	0,05
14										0,04	0,04	0,05	0,05
15												0,04	0,04
16												0,04	0,04

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■ Recommended Cutting Conditions

Work Material	P Carbon Steel	P Alloy Steel (up to 330HB)	M Stainless Steel	K Grey Cast Iron (up to 330HB)	K Ductile Cast Iron	S Titanium Alloy
Cutting Speed v_c (m/min)	75–150	75–135	60–120	90–180	75–135	24–90

