

SEC-Grooving Tool Holders **GND** series

Rev. 18



High precision machining with a cutting width tolerance of $\pm 0.03\text{mm}$
(width of cut 1.25 to 6mm / lead angle 0° , 5°)

Available in 10 chipbreaker styles and 11 insert grades for diverse machining applications

-  **Grade for non-ferrous metal machining DL1500 lineup**
-  **Grades for exotic alloy machining AC5015S/AC5025S lineup (for GNDIS type)**



SEC-Grooving Tool Holders

GND series

High Rigidity Body

The SEC-Grooving Tool Holders GND series uses a mono-block structure die steel body to achieve excellent grooving, as well as suppression of chatter for stable machining in turning / profiling / facing work.

Diverse Chipbreakers

The SEC-Grooving Tool Holders GND series lineup includes 10 chip-breaker styles suited to various machining applications. Stable chip evacuation is possible in a variety of processes

VIDEO OF CUTTING

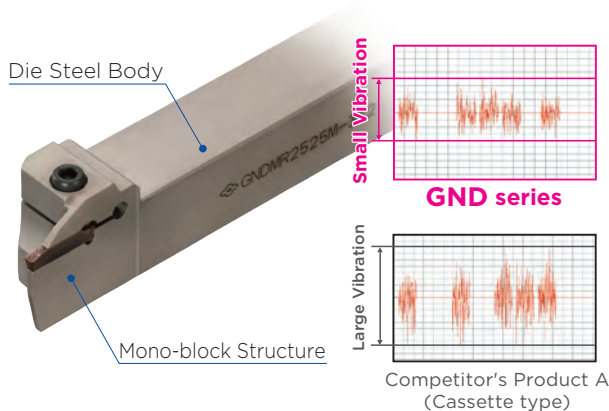


Grooving / Traverse Cutting	Grooving / Cut-off	Cut-off	Profiling	Profiling / Necking	Non-Ferrous Metals
General-purpose	Low Feed	General-purpose	Low Feed	Low Cutting Force	General-purpose
General-purpose	Low Feed	General-purpose	Low Cutting Force	General-purpose	General-purpose

SEC-Grooving Tool Holders GND series Cutting Performance

Reduced chatter

High-rigidity design reduces chatter by up to 30% as compared to conventional tools.

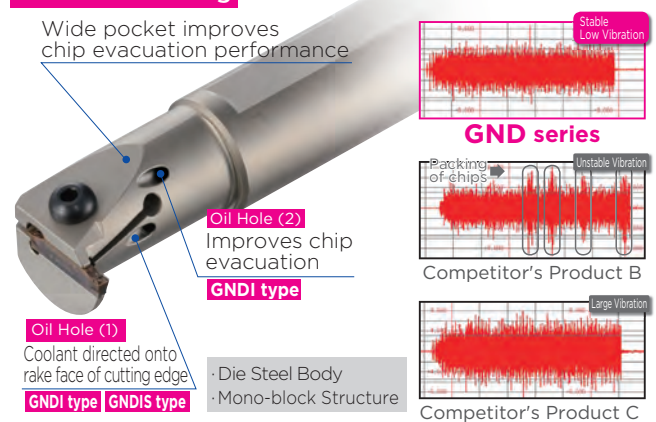


Work Material: SCM415
Holder: GNDL R2525M-220 Insert: GCM N2002-GG
Cutting Conditions: $vc=100\text{m/min}$ $f=0.10\text{mm/rev}$ $ap=20.0\text{mm}$ Wet

Both high rigidity and good chip evacuation performance

Internal Grooving

Wide pocket improves chip evacuation performance

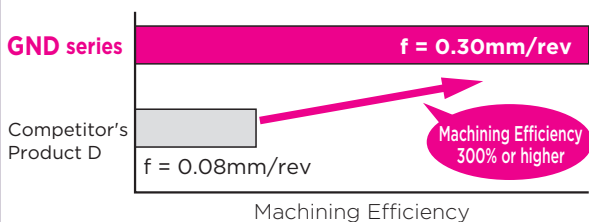


Work Material: SCM415
Holder: GNDI R2532-T306 Insert: GCM N3002-GG
Cutting Conditions: $vc=100\text{m/min}$ $f=0.05\text{mm/rev}$ $ap=3.0\text{mm}$ Wet

Cutting Performance

Substantially improved machining efficiency

High-rigidity holder enables grooving at high feed rates



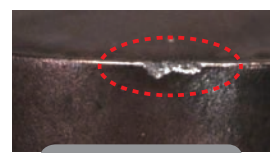
Work Material: SCM435
Holder: GNDL R2525M-320 Insert: GCM N3002-GG(AC530U)
Cutting Conditions: $vc=130\text{m/min}$ $f=0.30\text{mm/rev}$ Wet

Long, stable tool life ensures reliable functionality even on automatic production lines!

Reduction of chatter prevents unexpected breakage



Normal wear
GND series

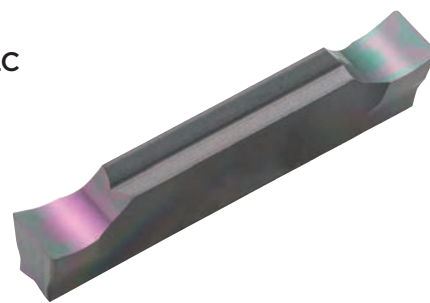


Fracture
Competitor's Product E

Work Material: S53C
Holder: GNDM L2525M-618 Insert: GCM N6030-RG(AC530U)
Cutting Conditions: $vc=130\text{m/min}$ $f=0.3\text{mm/rev}$ Wet

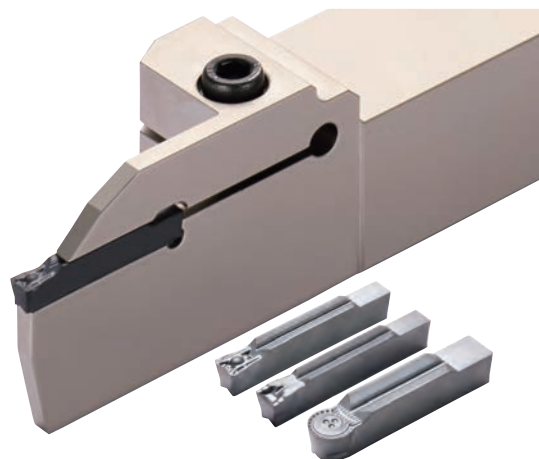
■ DL1500 Grade for Non-Ferrous Metal Grooving *New*

- DL1500 grade for grooving of non-ferrous metals, utilising DLC Coat with a low coefficient of friction and excellent adhesion resistance, is now available as a series

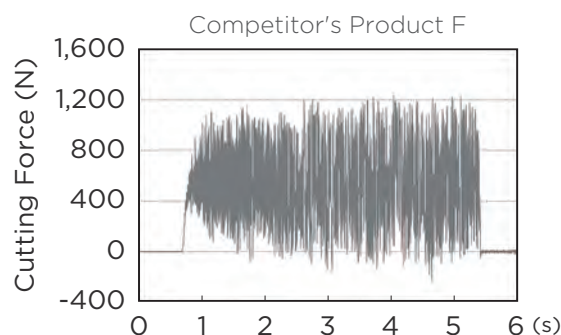
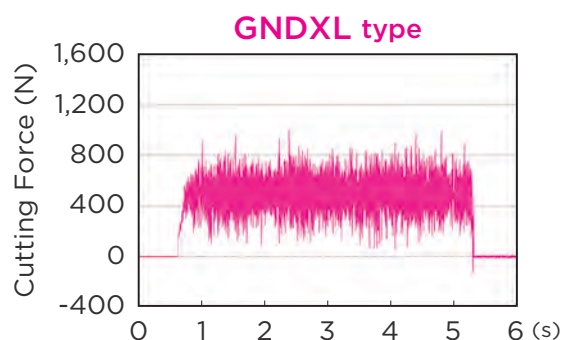


■ New Holders for Deep Grooves GNDXL type *P32*

- SEC-Grooving Tool Holders GND series lineup includes holders for deep grooves with groove depths of up to 32mm
- Mono-block high-rigidity body and insert realise superb vibration resistance with extra-strong clamp-on specifications
- Shank size lineup includes 20mm square and 25mm square
- Dedicated 1-cornered inserts for deep grooving with widths of cut from 3.0 to 6.0mm are stocked (2.0mm is a made-to-order item)
- Chipbreaker lineup includes ML type / GF type / RN type



● Vibration Resistance

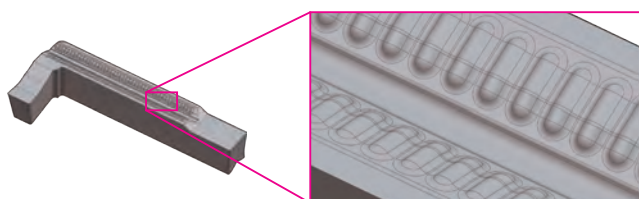


Work Material: SUS316 Holder: GNDXL R2525M-332 Insert: GCMN3002-GF1 (AC530U) Cutting Conditions: $v_c = 100\text{m/min}$ $f = 0.10\text{mm/rev}$ $a_p = 10\text{mm}$ Wet (External Coolant Supply)

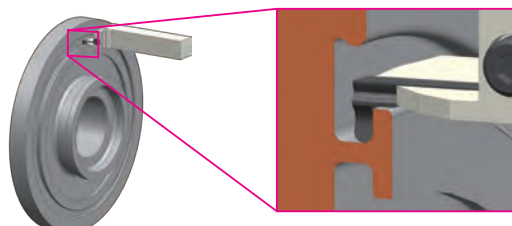
■ 90° Insert for Special Grooving (made-to-order item)

- Ideal for grooving in narrow spaces
- Widths of cut from 2.0mm to 5.0mm available as made-to-order items
- Various cutting edge designs possible with ground type inserts
- Utilises an unique insert fallout prevention design

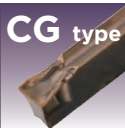
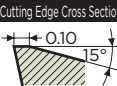
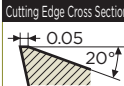
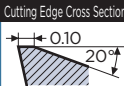
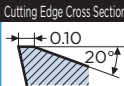
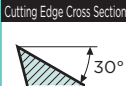
Usage Example: Aerospace Engine Disc



Grip effect for extra-strong clamping



GND series 90° Insert Request Form *P47*

Grooving / Traverse Cutting			Grooving / Cut-off			Cut-off		Profiling	Profiling Necking	Non-Ferrous Metals	
General-purpose			Low Feed			General-purpose		General-purpose	General-purpose	General-purpose	
MG type			ML type			GG type		GL type	GF type	CG type	
											
Standard chipbreaker for traverse cutting			For low-feed chip control			1st recommendation for grooving		For low-feed chip control	For low cutting force and chip control at low feeds	1st recommendation for cut-off machining	
Cutting Edge Cross Section			Cutting Edge Cross Section			Cutting Edge Cross Section		Cutting Edge Cross Section	Cutting Edge Cross Section	Cutting Edge Cross Section	
											
Edge Widths in Stock (mm)			Edge Widths in Stock (mm)			Edge Widths in Stock (mm)		Edge Widths in Stock (mm)	Edge Widths in Stock (mm)	Edge Widths in Stock (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	
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	
Stacked Grades			Stacked Grades			Stacked Grades		Stacked Grades	Stacked Grades	Stacked Grades	
AC8025P AC8035P			AC8025P AC8035P			AC8025P AC8035P		AC8025P AC8035P	AC8025P AC8035P	AC8025P AC8035P	
AC830P AC425K			AC830P AC425K			AC830P AC425K		AC830P AC425K	AC830P AC425K	AC830P AC425K	
AC5015S AC5025S			AC5015S AC5025S			AC5015S AC5025S		AC5015S AC5025S	AC5015S AC5025S	AC5015S AC5025S	
AC520U AC530U			AC520U AC530U			AC520U AC530U		AC520U AC530U	AC520U AC530U	AC520U AC530U	
AC1030U T2500A			AC1030U T2500A			AC1030U T2500A		AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	
DL1500 H10			DL1500 H10			DL1500 H10		DL1500 H10	DL1500 H10	DL1500 H10	
*: GNDIS type Only			*: GNDIS type Only			*: GNDIS type Only		*: GNDIS type Only	*: GNDIS type Only	*: GNDIS type Only	
Lead Angle 5°			Lead Angle 5°			Lead Angle 5°		Lead Angle 5°	Lead Angle 5°	Lead Angle 5°	
Lead Angle 10° / 15°			Lead Angle 10° / 15°			Lead Angle 10° / 15°		Lead Angle 10° / 15°	Lead Angle 10° / 15°	Lead Angle 10° / 15°	

Grooving	Traverse cutting
GND series (GG type Chipbreaker) Conventional Tool	GND series (ML type Chipbreaker) Conventional Tool
Work Material: SCM415 Holder: GNDL R2525M-320, Insert: GCM N3002-GG Cutting Conditions: $vc = 100\text{m/min}$, $f = 0.15\text{mm/rev}$, $ap = 12.0\text{mm Wet}$	Work Material: SCM415 Holder: GNDM R2525M-312 Insert: GCM N3002-ML Cutting Conditions: $vc = 100\text{m/min}$, $f = 0.10\text{mm/rev}$, $ap = 0.5\text{mm Wet}$

Cut-off	Profiling
GND series (CG type Chipbreaker) Competitor's Product	GND series (RG type Chipbreaker) Conventional Tool
Work Material: SUS316 (ø30mm) Holder: GNDL R2525M-220 Insert: GCM R2002-CG-05 Cutting Conditions: $vc = 100\text{m/min}$, $f = 0.15\text{mm/rev}$ Wet	Work Material: SCM415 Holder: GNDM R2525M-312 Insert: GCM N3015-RG Cutting Conditions: $vc = 100\text{m/min}$, $f = 0.15\text{mm/rev}$, $ap = 0.1\text{mm}$ Wet

Chipbreaker Selection

	Grooving / Traverse Cutting	Grooving	Cut-off
1st Recommendation	MG type General-purpose 	GG type General-purpose 	GG type General-purpose
2nd Recommendation	ML type Low Feed Chip Control Emphasised Cutting Edge Width: Up to 4.0mm Cutting Edge Width: 5.0mm and greater 	GL type General-purpose Chip Control Emphasised 	GL type General-purpose Chip Control Emphasised
	GF type Low Cutting Force 	GF type Low Cutting Force 	GF type Low Cutting Force
	CG type General-purpose Feed Direction Lead Angle 5° 	CF type Low Cutting Force Feed Direction Lead Angle 10°/15° 	

	External Profiling / External Radius Grooving	Facing / Internal Profiling / Radius Grooving / Necking	Non-Ferrous Metals
Recommendation	RG type General-purpose 1st Recommendation 	RN type General-purpose 2nd Recommendation 2mm Width Supported 	GA type General-purpose For Non-Ferrous Metals

Insert Grade Selection

Application	P Steel	M Stainless Steel	K Cast Iron	S Exotic Alloy	N Non-Ferrous Metals
Continuous / High-speed	AC8025P CVD AC8035P (AC830P) CVD T2500A Cermet AC5025S (AC520U) PVD AC530U/AC1030U PVD	AC8035P (AC830P) CVD AC5015S PVD AC5025S (AC520U) PVD AC530U AC1030U PVD	AC425K CVD AC8025P CVD AC5015S PVD AC5025S (AC520U) PVD AC530U AC1030U PVD	AC5015S PVD AC5025S (AC520U) PVD AC530U AC1030U PVD	DL1500 PVD H10 Uncoated Carbide
Interrupted / Unstable					

Only AC5015S / AC5025S / AC520U / AC1030U inserts are stocked for GNDIS type holders.



For External Turning (For Small Lathes)

SumiSmall

Traverse Cutting / Profiling (Cut-off)

Grooving / Cut-off (Traverse Cutting)

GNDM type
Straight type

Shank Size (H x W)
16 x 16mm
20 x 12mm

P18

Available Edge Widths (mm)

1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

GNDM-J type
Straight type
With Indexable Head
Internal Coolant Supply

Shank Size (H x W)
16 x 16mm
20 x 12mm

P20

Available Edge Widths (mm)

1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

GNDL type
Straight type

Shank Size (H x W)
10 x 10mm
12 x 12mm
16 x 16mm
20 x 12mm

P18

Available Edge Widths (mm)

1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

GNDL-J type
Straight type
With Indexable Head
Internal Coolant Supply

Shank Size (H x W)
12 x 12mm
16 x 16mm
20 x 12mm

P20

Available Edge Widths (mm)

1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

For External Turning For Small Lathes series

MG: Multi-functional / General-purpose type ML: Multi-functional / Low-feed type GG: Grooving / General-purpose type GL: Grooving / Low-feed type GF: Grooving / Low cutting force type
CG: Cut-off / General-purpose type CF: Cut-off / Low cutting force type RG: Profiling / General-purpose type RN: Facing / Necking / General-purpose type GA: Non-Ferrous Metal / General-purpose type

Type	Shank Size (mm)		Cutting Edge Width (mm)								Series	Max. Groove Depth (mm)						Ref. Page	Applicable Chipbreakers													
	Height H	Width B	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			
For Small Lathes	10	10	1.25	1.5								GNDL	10							P18					⊙							
					2									10							P18	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙		
						3								10							P18	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
		12	1.25	1.5									GNDL	12							P18					⊙						
					2									12.5							P18	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙		
						2								12.5							P20	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
	12	12				3						GNDL	12.5							P18	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙			
							3						12.5							P20	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		
													12.5							P20	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		
		16	16	1.25									GNDM	8							P18					⊙						
				1.25	1.5									GNDL	12.5							P18					⊙					
					1.5										GNDM	10							P18					⊙				
				2							GNDM	12									P18		⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
					2							GNDM-J	12								P20	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙		
						2							GNDL	16							P18	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙		
	20	12					2							GNDL-J	16							P20	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙	
								3				GNDM			12							P18	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
								3					GNDM-J		12							P20	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
								3			GNDL			16							P18	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
									3			GNDL-J		17							P20	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙		
										2			GNDL	21							P18	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙		
										GNDL-J	21									P20	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙			
											GNDM	17								P18	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		
												GNDM-J	17							P20	⊙	⊙	⊙	⊙	⊙	⊙		⊙	⊙			
										GNDL			21							P18	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		
											GNDL-J		21							P20	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙		

⬢: In Stock

⊙: Best ○: Suitable

Indexable Heads Tooling News No.551 APM series



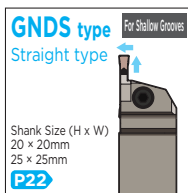
For External Turning (Straight Type, Groove Depth up to 25mm)

For External Machining
(Straight Edge type Groove Depth up to 32mm)

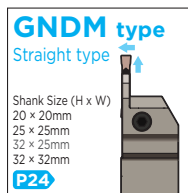
Traverse Cutting / Profiling (Cut-off)

Grooving / Cut-off (Traverse Cutting)

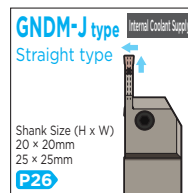
Grooving / Cut-off (Traverse Cutting)



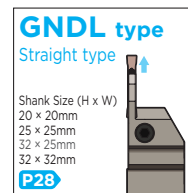
Available Edge Widths (mm)		
1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

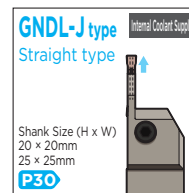
Available Edge Widths (mm)		
1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

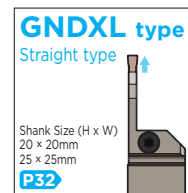
Available Edge Widths (mm)		
1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

Available Edge Widths (mm)		
1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

Available Edge Widths (mm)		
1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

Available Edge Widths (mm)		
2.0	3.0	4.0
5.0	6.0	

Applicable Chipbreaker
ML GF RN

Inserts are dedicated products.

For External Machining Straight type series
(Groove Depth up to 25mm)

MG: Multi-functional / General-purpose type ML: Multi-functional / Low-feed type GG: Grooving / General-purpose type GL: Grooving / Low-feed type GF: Grooving / Low cutting force type
CG: Cut-off / General-purpose type CF: Cut-off / Low cutting force type RG: Profiling / General-purpose type RN: Facing / Necking / General-purpose type GA: Non-Ferrous Metal / General-purpose type

Type	Shank Size (mm)		Cutting Edge Width (mm)								Series	Max. Groove Depth (mm)							Ref. Page	Applicable Chipbreakers												
	Height H	Width B	1.25	1.5	2	3	4	5	6	7		8	5	10	15	20	25	30		35	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA		
Straight type	20	20	1.25	1.5								GNDM								P24					⊙							
			1.25	1.5									GNDL								P28					⊙						
		25			2								GNDM								P22					⊙						
					2								GNDM-J								P24					⊙						
		25			2								GNDM-J								P26					⊙						
					2								GNDL								P28					⊙						
		25			2								GNDL-J								P30					⊙						
					3								GNDM								P22	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
		25			3								GNDM-J								P24	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
					3								GNDL								P26	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
		32	25			3								GNDL							P28	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
						3								GNDL-J							P30	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
	32				4								GNDM							P22	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
					4								GNDM-J								P24	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
	32				4								GNDL							P26	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
					4								GNDL-J								P28	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
	32				5	6							GNDM								P22	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
					5	6							GNDM-J								P24	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
	32				5	6							GNDL								P26	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
					5	6							GNDL-J								P28	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
	32				7	8							GNDM								P30	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙
					7	8							GNDL								P24	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙

In stock *: Made-to-order item (Shank size (height x width) 32 x 25mm)

©: Best ○: Suitable

For External Machining Straight type series
(Groove Depth up to 32mm)

ML: Multi-functional / Low-feed type GF: Grooving / Low cutting force type RN: Facing / Necking / General-purpose type

Type	Shank Size (mm) Height H x Width B	Cutting Edge Width (mm)					Series	Max. Groove Depth (mm)							Ref. Page	Applicable Chipbreakers (GNDXL type Dedicated)		
		2	3	4	5	6		5	10	15	20	25	30	35		ML	GF	RN
Straight Edge type	20	2					GNDXL								P32			
	25	3	4	5	6										P32			

In Stock : Made-to-order item Note: Only dedicated 1-cornered inserts (insert part number suffix [1]) can be used for GNDXL type. ©: Best ○: Suitable



For External Machining (L type)

Traverse Cutting / Profiling (Cut-off)

Grooving / Cut-off (Traverse Cutting)

GNDMS type
L type

Shank Size (H x W)
20 x 20mm
25 x 25mm

P24

Available Edge Widths (mm)		
1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

GNDLS type
L type

Shank Size (H x W)
20 x 20mm
25 x 25mm

P28

Available Edge Widths (mm)		
1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

For External Machining
L type series

MG: Multi-functional / General-purpose type ML: Multi-functional / Low-feed type GG: Grooving / General-purpose type GL: Grooving / Low-feed type GF: Grooving / Low cutting force type
CG: Cut-off / General-purpose type CF: Cut-off / Low cutting force type RG: Profiling / General-purpose type RN: Facing / Necking / General-purpose type GA: Non-Ferrous Metal / General-purpose type

Type	Shank Size (mm)		Cutting Edge Width (mm)								Series	Max. Groove Depth (mm)						Ref. Page	Applicable Chipbreakers											
	Height H	Width B	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				P28		○	○	○	○	○	○	○		○	○	
					3							GNDMS		10					P24	○	○	○	○	○	○	○	○	○	○	○
					3							GNDLS		16					P28	○	○	○	○	○	○	○	○	○	○	○
						4						GNDMS		12					P24	○	○	○	○	○	○		○	○	○	○
							5					GNDMS		12					P24	○	○	○	○	○			○	○	○	○
	25	25			2							GNDLS		18					P28		○	○	○	○	○	○		○	○	
					3							GNDMS		12					P24	○	○	○	○	○	○	○	○	○	○	○
					3							GNDLS		18					P28	○	○	○	○	○	○		○	○		
						4						GNDMS		14					P24	○	○	○	○	○	○		○	○		
						4						GNDLS		23					P28	○	○	○	○	○	○		○	○		
							5	6				GNDMS		14					P24	○	○	○	○	○			○	○	○	○
					5	6			GNDLS		23					P28	○	○	○	○	○			○	○	○	○			

In Stock

◎: Best ○: Suitable



For External Turning (SumiPolygon Cassette)

Grooving / Cut-off / Traverse Cutting / Profiling

GNDCM type
Cassette

Applicable Holder
SumiPolygon
GND00 (Straight)
GND90 (L-Shape)

P44

Available Edge Widths (mm)		
1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

SumiPolygon Cassette series

MG: Multi-functional / General-purpose type ML: Multi-functional / Low-feed type GG: Grooving / General-purpose type GL: Grooving / Low-feed type GF: Grooving / Low cutting force type
CG: Cut-off / General-purpose type CF: Cut-off / Low cutting force type RG: Profiling / General-purpose type RN: Facing / Necking / General-purpose type GA: Non-Ferrous Metal / General-purpose type

Type	Applicable SumiPolygon Holders	Cutting Edge Width (mm)							Series	Max. Groove Depth (mm)						Ref. Page	Applicable Chipbreakers									
		1.25	1.5	2	3	4	5	6		5	10	15	20	25	30		MG	ML	GG	GL	GF	CG	CF	RG	RN	GA
Cassette	GND00 (Straight)			2					GNDCM			12				P44										
				3								12				P44										
	GND90 (L type)				4							18				P44										
					5	6						18				P44										

In Stock

◎: Best ○: Suitable



For Necking



For Facing

Necking

Grooving / Traverse Cutting / Profiling

GNDN type
Straight type

Shank Size (H x W)
20 x 20mm
25 x 25mm

P34

Available Edge Widths (mm)

1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

GNDF type
Straight type

Shank Size (H x W)
20mm x 20mm
25mm x 25mm

P36

Available Edge Widths (mm)

1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

GNDFS type
L type

Shank Size (H x W)
25mm x 25mm
32mm x 32mm

P38

Available Edge Widths (mm)

1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

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

Necking series

MG: Multi-functional / General-purpose type ML: Multi-functional / Low-feed type GG: Grooving / General-purpose type GL: Grooving / Low-feed type GF: Grooving / Low cutting force type
CG: Cut-off / General-purpose type CF: Cut-off / Low cutting force type RG: Profiling / General-purpose type RN: Facing / Necking / General-purpose type GA: Non-Ferrous Metal / General-purpose type

Type	Shank Size (mm)		Cutting Edge Width (mm)						Series	Max. Groove Depth (mm)						Min. Bore Dia. (mm)	Ref. Page	Applicable Chipbreakers											
	Height H	Width B	2	3	4	5	6	5		10	15	20	25	30	MG			ML	GG	GL	GF	CG	CF	RG	RN	GA			
Straight type	20	20	2					GNDN	1.5		2.0						ø20	P34											
	20	20		3												ø20	P34												
	25	25			4											ø30	P34												
	25	25				5										ø30	P34												
							6				4.0					ø30	P34												

: In Stock

©: Best

: In Stock

©: Best

For Facing
Straight / L type series

MG: Multi-functional / General-purpose type ML: Multi-functional / Low-feed type GG: Grooving / General-purpose type GL: Grooving / Low-feed type GF: Grooving / Low cutting force type
CG: Cut-off / General-purpose type CF: Cut-off / Low cutting force type RG: Profiling / General-purpose type RN: Facing / Necking / General-purpose type GA: Non-Ferrous Metal / General-purpose type

Type	Shank Size (mm)		Cutting Edge Width (mm)						Series	Max. Groove Depth (mm)						Machining Diameter (mm)										Ref. Page	Applicable Chipbreakers									
	Height H	Width B	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	20	20	3						GNDF		12																									
			3																																	
			3																																	
			3																																	
			3																																	
			3																																	
			4							GNDF		18																								
			4																																	
			4																																	
			4																																	
			4																																	
			4																																	
	25	25	4						GNDF		23																									
			5																																	
			5																																	
			5																																	
			5																																	
			5																																	
L type	25	25				6		GNDFS		20																										
						6																														
						6																														
						6																														
						6																														
						6																														
	32	32						GNDFS		20																										

In StockMade-to-order item

© Res

: In Stock : Made-to-order item

©: Best



For Internal Machining (Bore Dia.: ø14mm ~)

Grooving / Traverse Cutting / Profiling



Available Edge Widths (mm)

1.5	2.0	3.0
-----	-----	-----

Applicable Chipbreaker

ML	GF
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Inserts are dedicated products.



For Internal Machining (Bore Dia.: ø32mm ~)

Grooving / Traverse Cutting / Profiling



Available Edge Widths (mm)

1.25	1.5	2.0
3.0	4.0	5.0
6.0	7.0	8.0

Applicable Chipbreaker

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

For Internal Machining

(Bore Diameter ø14mm ~)

ML: Multi-functional / Low-feed type GF: Grooving / Low cutting force type

Type	Shank Size DCON (mm)	Cutting Edge Width (mm)			Series	Max. Groove Depth (mm)	Min. Bore Dia. (mm)	Ref. Page	Applicable Chipbreakers (Dedicated to GNDIS type)	
		1.5	2	3					ML	GF
Straight type	ø12	1.5			GNDIS	2.6	ø14	P40		⊙
		1.5				3.6	ø14	P40		⊙
			2	3		2.6	ø14	P40	⊙	⊙
			2	3		3.6	ø14	P40	⊙	⊙
	ø16	1.5			GNDIS	3.6	ø16	P40		⊙
		1.5				4.6	ø20	P40		⊙
			2	3		3.6	ø16	P40	⊙	⊙
			2	3		4.6	ø20	P40	⊙	⊙
	ø20	1.5			GNDIS	6.6	ø25	P40		⊙
			2	3		6.6	ø25	P40	⊙	⊙

: In Stock

Note: Only dedicated GXM inserts can be used for GNDIS types.

⊙: Best

For Internal Machining

(Bore Diameter ø32mm ~)

MG: Multi-functional / General-purpose type ML: Multi-functional / Low-feed type GG: Grooving / General-purpose type GL: Grooving / Low-feed type GF: Grooving / Low cutting force type CG: Cut-off / General-purpose type CF: Cut-off / Low cutting force type RG: Profiling / General-purpose type RN: Facing / Necking / General-purpose type GA: Non-Ferrous Metal / General-purpose type

Type	Shank Size DCON (mm)	Cutting Edge Width (mm)					Series	Max. Groove Depth (mm)	Min. Bore Dia. (mm)	Ref. Page	Applicable Chipbreakers									
		2	3	4	5	6					MG	ML	GG	GL	GF	CG	CF	RG	RN	GA
Straight type	ø25	2					GNDI	6	ø32	P42	⊙	⊙	⊙	⊙	⊙				⊙	⊙
			3	4	5			6	ø32	P42	⊙	⊙	⊙	⊙	⊙				⊙	⊙
	ø32	2					GNDI	6	ø32	P42	⊙	⊙	⊙	⊙	⊙				⊙	⊙
			3	4	5			10	ø40	P42	⊙	⊙	⊙	⊙	⊙				⊙	⊙
Straight type	ø40		3	4	5	6	GNDI	11	ø50	P42	⊙	⊙	⊙	⊙	⊙				⊙	⊙

: In Stock

⊙: Best ○: Suitable

Width of Cut (mm)	Recommended Cutting Conditions		Corner Radius (mm)	Applicable Insert
	Grooving / Cut-off (Necking)	Traverse Cutting		
1.25	Chipbreaker GF Feed Rate f (mm/rev)	—	0.05	MG ML GG GL GF CG CF RG RN GA
1.5	Chipbreaker GF Feed Rate f (mm/rev)	—	0.05	MG ML GG GL GF CG CF RG RN GA
2.0	Chipbreaker ML GG GL GF CG CF RG RN GA Feed Rate f (mm/rev)	Depth of Cut ap (mm) Feed Rate f (mm/rev)	0.03	MG ML GG GL GF CG CF RG RN GA
			0.2	MG ML GG GL GF CG CF RG RN GA
			0.4	MG ML GG GL GF CG CF RG RN GA
			1.0	MG ML GG GL GF CG CF RG RN GA
3.0	Chipbreaker MG ML GG GL GF CG CF RG RN GA Feed Rate f (mm/rev)	Depth of Cut ap (mm) Feed Rate f (mm/rev)	0.03	MG ML GG GL GF CG CF RG RN GA
			0.2	MG ML GG GL GF CG CF RG RN GA
			0.4	MG ML GG GL GF CG CF RG RN GA
			1.5	MG ML GG GL GF CG CF RG RN GA
4.0	Chipbreaker MG ML GG GL GF CG CF RG RN GA Feed Rate f (mm/rev)	Depth of Cut ap (mm) Feed Rate f (mm/rev)	0.2	MG ML GG GL GF CG CF RG RN GA
			0.4	MG ML GG GL GF CG CF RG RN GA
			0.8	MG ML GG GL GF CG CF RG RN GA
			2.0	MG ML GG GL GF CG CF RG RN GA
5.0	Chipbreaker MG ML GG GL GF CG CF RG RN GA Feed Rate f (mm/rev)	Depth of Cut ap (mm) Feed Rate f (mm/rev)	0.2	MG ML GG GL GF CG CF RG RN GA
			0.4	MG ML GG GL GF CG CF RG RN GA
			0.8	MG ML GG GL GF CG CF RG RN GA
			2.5	MG ML GG GL GF CG CF RG RN GA
6.0	Chipbreaker MG ML GG GL GF CG CF RG RN GA Feed Rate f (mm/rev)	Depth of Cut ap (mm) Feed Rate f (mm/rev)	0.2	MG ML GG GL GF CG CF RG RN GA
			0.4	MG ML GG GL GF CG CF RG RN GA
			0.8	MG ML GG GL GF CG CF RG RN GA
			3.0	MG ML GG GL GF CG CF RG RN GA
7.0	Chipbreaker MG ML GG GL GF CG CF RG RN GA Feed Rate f (mm/rev)	Depth of Cut ap (mm) Feed Rate f (mm/rev)	0.2	MG ML GG GL GF CG CF RG RN GA
			0.4	MG ML GG GL GF CG CF RG RN GA
			0.8	MG ML GG GL GF CG CF RG RN GA
			3.5	MG ML GG GL GF CG CF RG RN GA
8.0	Chipbreaker MG ML GG GL GF CG CF RG RN GA Feed Rate f (mm/rev)	Depth of Cut ap (mm) Feed Rate f (mm/rev)	0.2	MG ML GG GL GF CG CF RG RN GA
			0.4	MG ML GG GL GF CG CF RG RN GA
			0.8	MG ML GG GL GF CG CF RG RN GA
			4.0	MG ML GG GL GF CG CF RG RN GA

For face grooving, use cutting conditions closer to the lower limit of the recommended cutting conditions to ensure that chips are long.

In cut-off applications, reduce the feed rate to around 30% to 50% near the centre of the workpiece.

As there is less space for chip evacuation when machining internal diameters (particularly small bore diameters), ML/GL/GF type chipbreakers are recommended. Modifications to inserts and holders are required to perform operations such as radius grooving when using the RG type chipbreaker with the GNDF type holder for facing. Use GNDXL type holders at feed rate 80% or below.

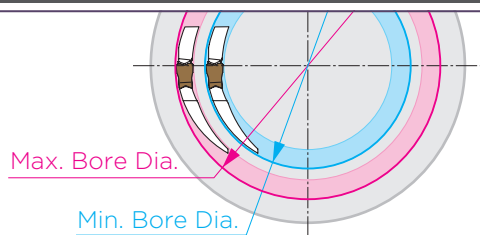
Recommended Cutting Conditions

Recommended Cutting Conditions for GNDIS type P41

Work Material	P Carbon Steel / Alloy Steel					M Stainless Steel			K Cast Iron				S Exotic Alloy		N Non-Ferrous Metal
Tool Grades	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 DL1500
Cutting Speed vc (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

Key Points for Facing

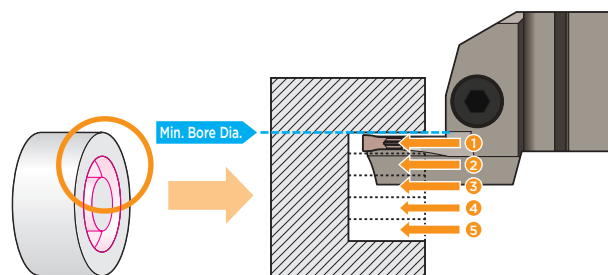
Holder Selection



- Select a holder with which the outer diameter of the first groove to be machined is between the **maximum** and **minimum** grooving diameters of the holder.
- If the turning start point is within the effective work diameter range, the work diameter will not be limited for subsequent passes.
- Select the lower limit of the recommended cutting conditions for the chipbreaker and **ensure long chips for evacuation purposes**. (In face grooving, **very short chips easily get stuck in grooves**, which causes problems.)
- For breaking chips, step feed is required.

Precautions for Groove Expansion

Recommended Chipbreakers **MG ML GG GL GF GA**

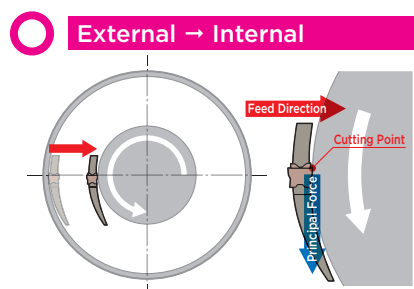


- If the first groove is within the effective work diameter range during groove expansion via plunging, the work diameter will not be limited for subsequent passes.

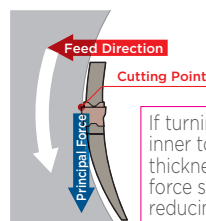
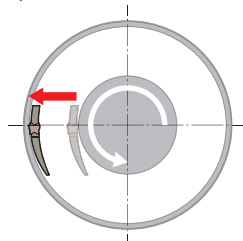
Precautions for Traverse Cutting

Recommended Chipbreakers **MG ML RN**

Considering the rigidity of the holder, we recommend turning from the outside to the inside.



✗ Internal → External



If turning is performed from the inner to the outer diameter, the wall thickness remaining on the principal force side will become thinner, reducing the rigidity of the holder.

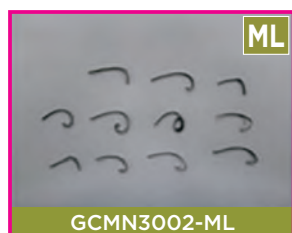
- If the turning start point for traverse face cutting operation is within the effective work diameter range, the work diameter will not be limited for traverse cutting.

Key Points in Internal Machining

Precautions for Internal Machining

Recommended Chipbreakers **ML GL GF**

If the prepared hole diameter is small, use an **ML** type or **GL** type low-feed chipbreaker, both of which reduce chip curl diameter, to ensure adequate chip evacuation.



Work Material: SCM415 Prepared Hole Diameter: $\phi 25\text{mm}$ Holder: GNDI R2532-T306 Insert: GCM N300O-OO
Cutting Conditions: $vc=100\text{m/min}$ $f=0.1\text{mm/rev}$ $ap=3.0\text{mm}$ Wet

Internal Machining



External Machining



Chip shapes differ between internal machining and external machining even under the same cutting conditions.

Work Material: SCM415
Holder: GNDL R2525M-320 Insert: GCM N3002-GG
Cutting Conditions: $vc=100\text{m/min}$ $f=0.10\text{mm/rev}$ $ap=5.0\text{mm}$ Wet

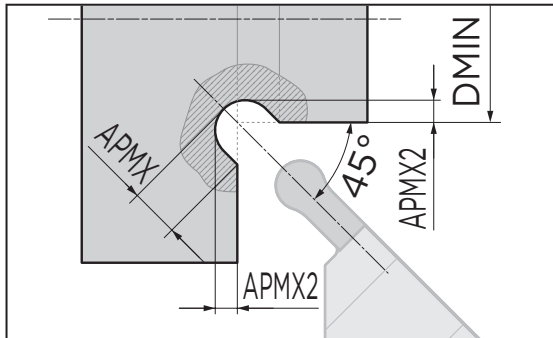


Key Points for Necking

Precautions for Necking

Recommended Chipbreaker **RN**

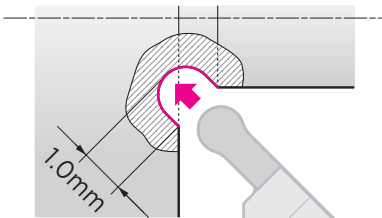
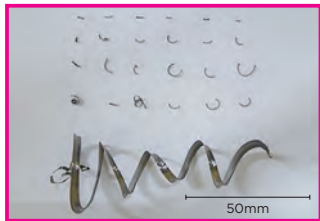
Distance from Work Material to Necking Depth



Width of Cut CW (mm)	Necking Depth APMX (mm)	Distance from Work Material to Necking Depth APMX2 (mm)
2.0	1.5	0.64
3.0	2.0	0.79
4.0	3.0	1.29
5.0	3.5	1.44
6.0	4.0	1.59

- For necking, these conditions are recommended for each width of cut when grooving with RN type chipbreakers.
- To prevent interference with the work material, the work diameter for each GNDN type holder should be set to the minimum bore diameter (DMIN) or less.

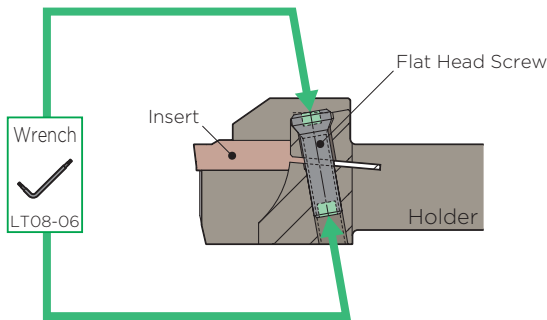
Chip Shape



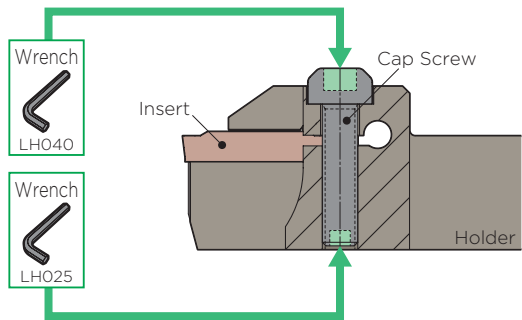
Work Material : SCM435 Groove Width: 3.0mm
Holder : GNDN R2020K-320-020
Insert : GCMN3015-RN
Cutting Conditions : vc=100m/min f=0.1mm/rev
Necking Depth =1.0mm Wet

Key Points in Internal Coolant Supply Holders For Small Lathes

- 12mm and 16mm square Internal Coolant Supply Holders for Small Lathes enable insert exchange from both top and bottom.



12mm square holder: **GNDL R/L1212JX-000.OJ**

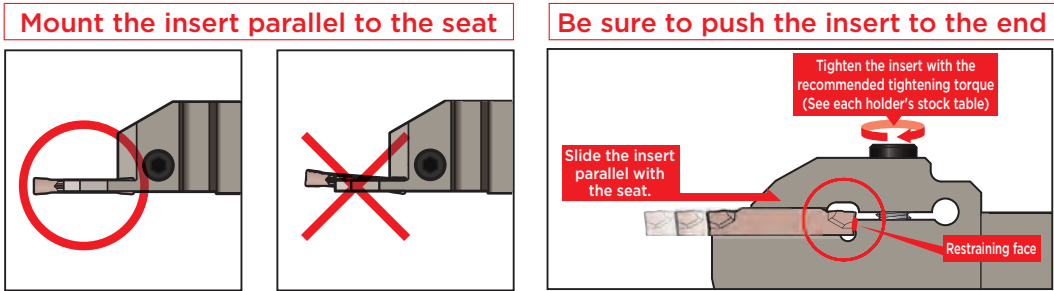


16mm square holder: **GNDM R/L1616JX-000J**
GNDL R/L1616JX-000J

Precautions for SEC-Grooving Tool Holders GND series

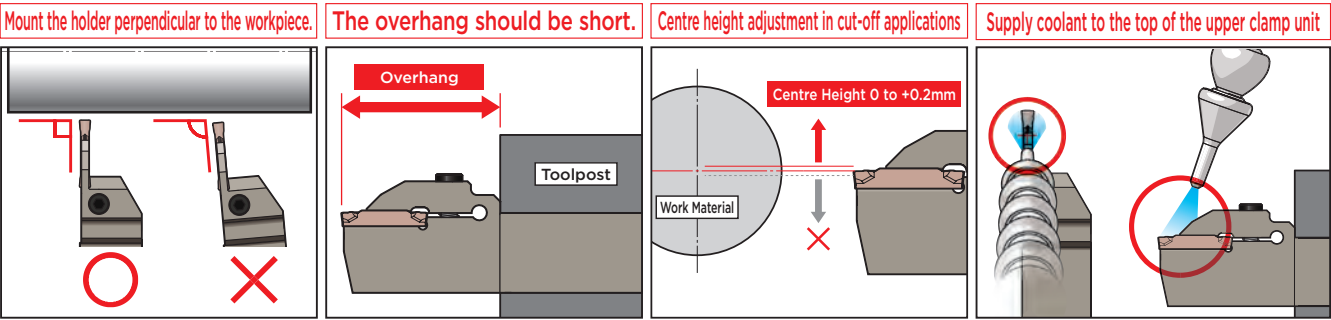
■ Insert Mounting Precautions

- (1) Remove any dust, etc. from the insert seat, bolt, and bolt hole before attaching the insert.
- (2) Remove any scratches or burrs found on the insert seat.
- (3) Mount the insert by sliding it parallel to the seat.
- (4) Clamp the insert with the opposite side (holder side) of the cutting edge secured on the constraining surface.
- (5) **Tighten the insert with the recommended tightening torque.** If the insert is tightened with excessive torque, it may be damaged, leading to injury.
- (6) When exchanging the insert, adjust the cutting edge offset value.

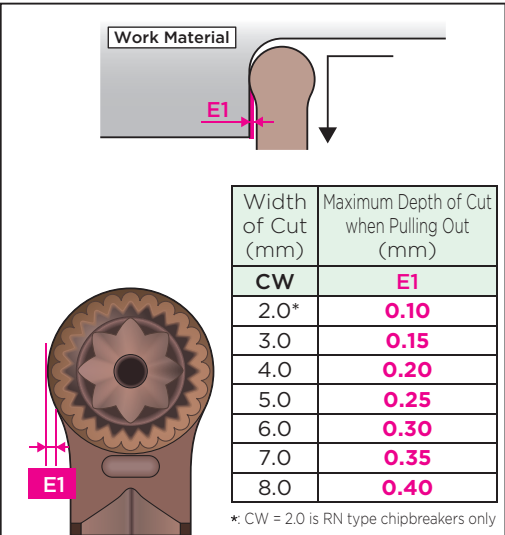


■ Precautions when Mounting Holders

- (1) Remove any dust and oil from the toolpost before setting the holder.
- (2) Remove any scratches or burrs found on the toolpost.
- (3) Place the holder so that the insert is perpendicular to the workpiece. Failure to do so may bend the machined surface or cause chattering.
- (4) The overhang of the holder should be as short as possible.
- (5) When grooving or traverse cutting, adjust the centre height of the cutting edge to as close to $\pm 0\text{mm}$ as possible. (Within $\pm 0.1\text{mm}$ is recommended.)
Incorrect centre height adjustment may cause chattering. In cut-off applications, adjust the centre height of the cutting edge to a value from 0 to $+0.2\text{mm}$.
A lower centre height will result in a larger pip at the centre.
- (6) Position the coolant supply nozzle so that the coolant can be directed at the top of the upper clamp unit.

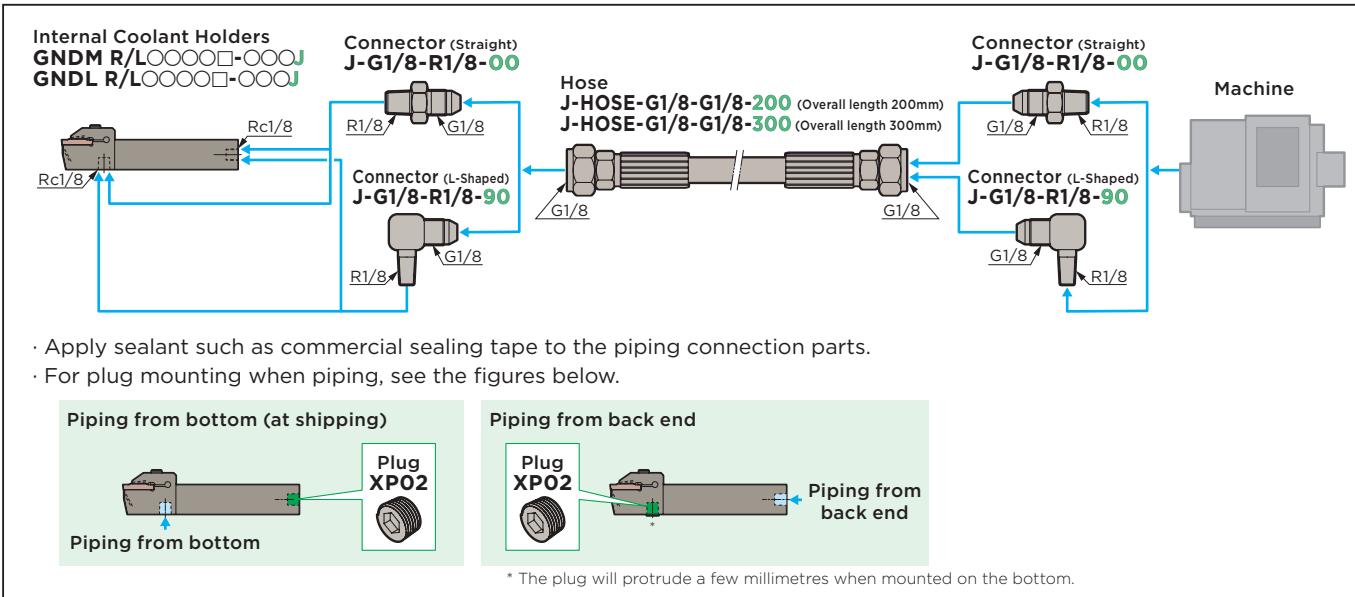


■ Depth of Cut when Pulling Out with RG/RN type Chipbreakers

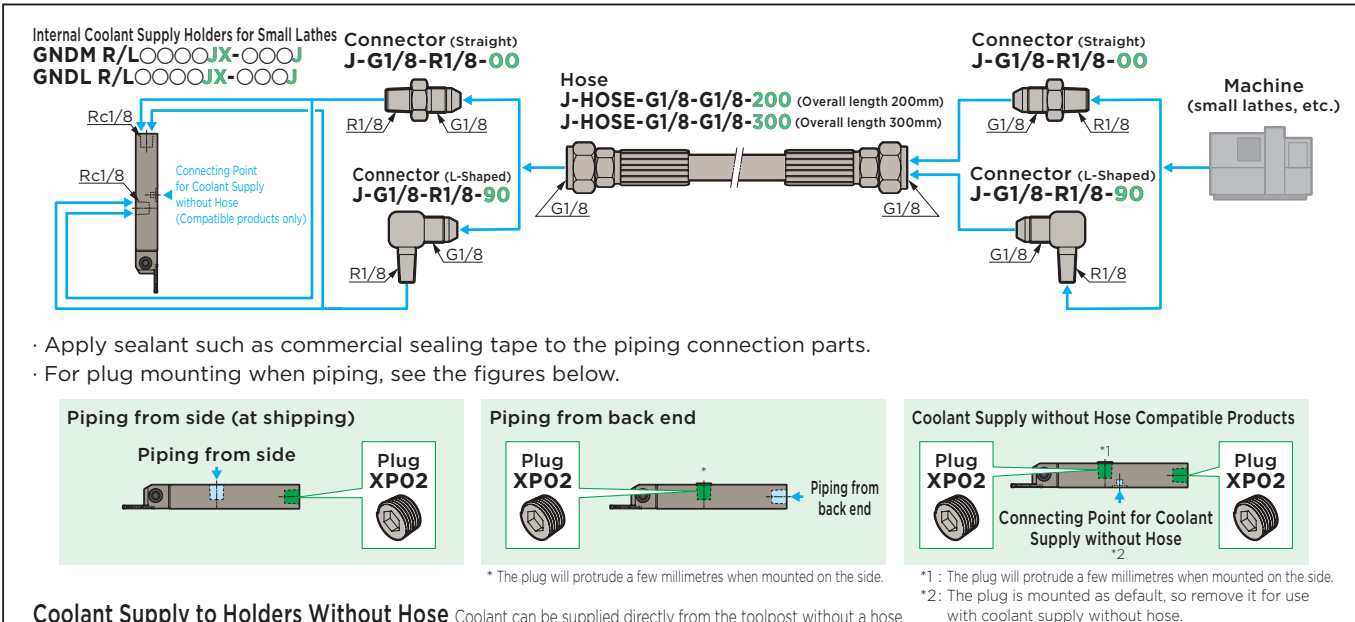


Precautions for SEC-Grooving Tool Holders GND series

■ Piping Method for Hoses and Connectors



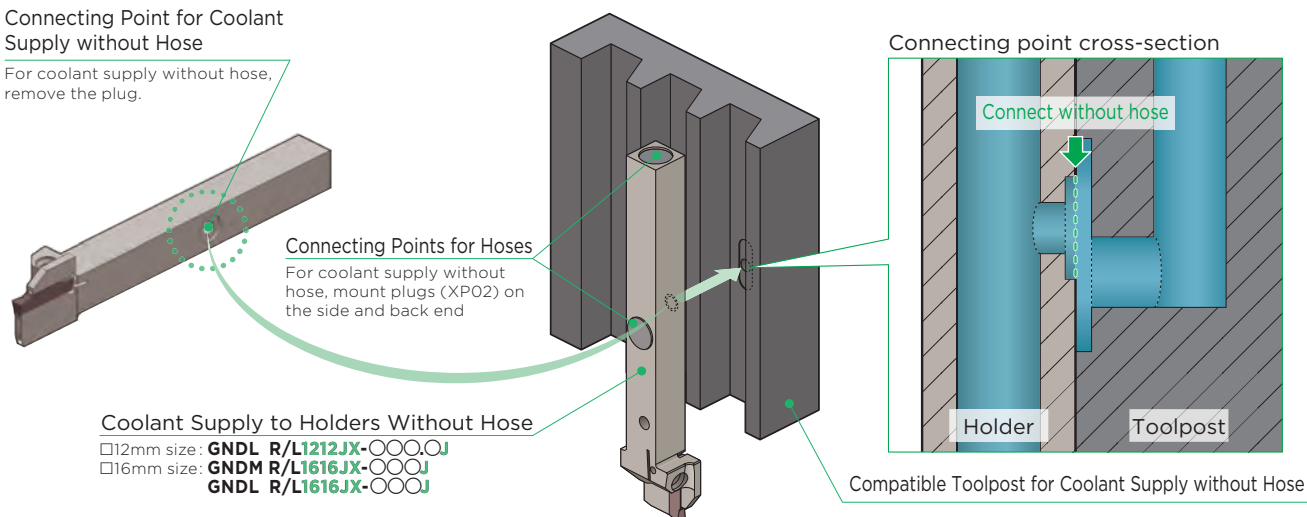
■ Piping Method for Hoses and Connectors (For Small Lathes)



Coolant Supply to Holders Without Hose

Connecting Point for Coolant Supply without Hose

For coolant supply without hose, remove the plug.



■ Identification Code

Holders

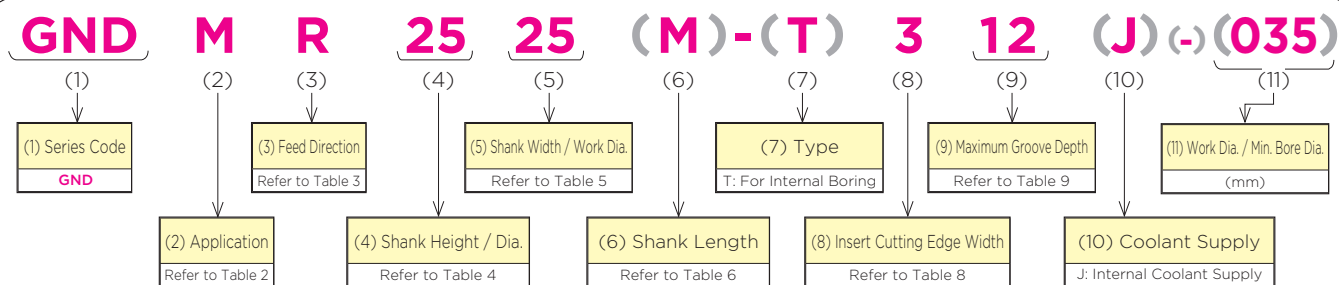


Table 2

(2) Application		
Symbol	Applications	
S	For External Multi-Functional Machining	Traverse Cutting / Profiling (Grooving / Cut-off)
M	For External Multi-Functional Machining	Traverse Cutting / Profiling (Grooving / Cut-off)
L	For External Machining	Grooving / Cut-off (Traverse Cutting / Profiling)
XL	For External Deep Grooving	Grooving / Cut-off
MS	For External Multi-Functional Machining L type Holder (Side Cut)	Grooving / Traverse Cutting / Profiling
LS	For External Machining L type Holder (Side Cut)	Grooving
N	For Necking	Necking
F	For Face Machining	Grooving / Traverse Cutting / Profiling
FS	For Face Machining L type	Grooving / Traverse Cutting / Profiling
I	For Internal Machining	Grooving / Traverse Cutting / Profiling
IS	For Internal Machining	Grooving / Traverse Cutting / Profiling
CM	SumiPolygon Cassette	Grooving / Cut-off Traverse Cutting / Profiling

Refer to P44 for SumiPolygon Cassette.

Table 3

(3) Feed Direction	
Symbol	Feed Direction
R	Right-handed
L	Left-handed

Table 4

(4) Shank Height / Dia.	
Applications	Height / Dia. (mm)
For External Turning / Facing (Shank Height)	10
	12
	16
	20
For Internal Machining (Shank Diameter)	25
	32
	40

Table 5

(5) Shank Width / Work Dia.	
Applications	Width / Work Diameter (mm)
For External Turning / Facing (Shank Width)	10
	12
	16
	20
For Internal Machining (Min. Bore Diameter)	25
	32
	40
	50

Table 6

(6) Shank Length	
Symbol	Length (mm)
JX	120
K	125
M	150
P	170

Table 8

(8) Insert Cutting Edge Width *			
Symbol	Width of Cut (mm)	Symbol	Width of Cut (mm)
1.25	1.25	5	5.0
1.5	1.5	6	6.0
2	2.0	7	7.0
3	3.0	8	8.0
4	4.0		

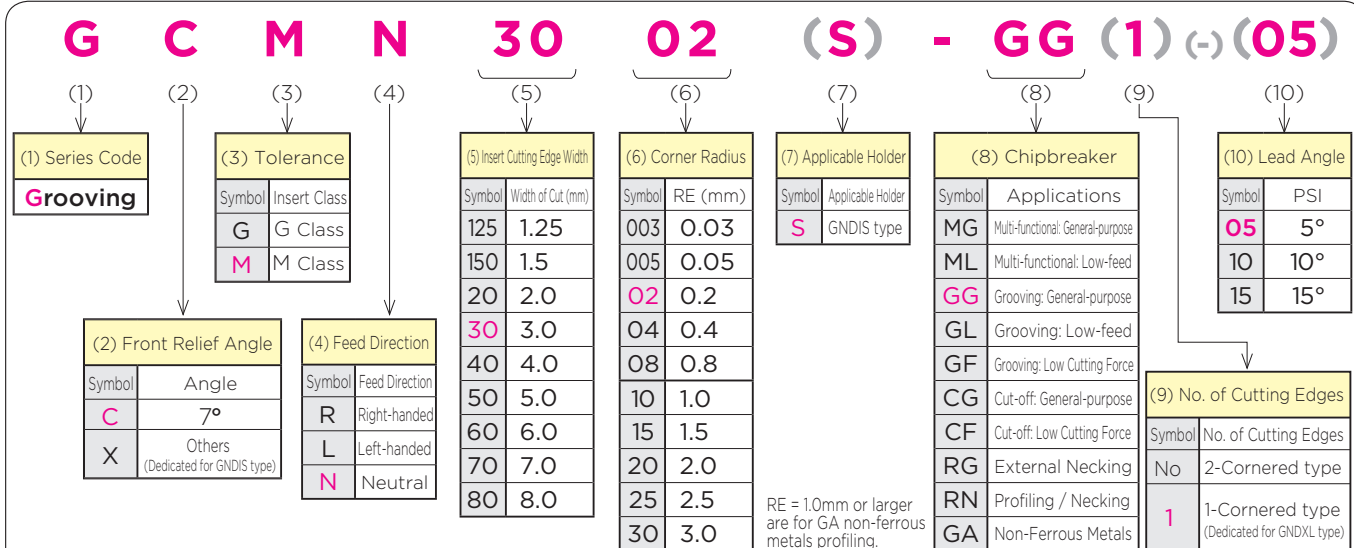
*Excluding GNDIS type.

Table 9

(9) Maximum Groove Depth *			
Symbol	Depth (mm)	Symbol	Depth (mm)
06	6.0	14	14.0
08	8.0	16	16.0
10	10.0	18	18.0
11	11.0	20	20.0
12	12.0	23	23.0
12.5	12.5	25	25.0

*Excluding GNDN type / GNDIS type.

Insert



■ Precautionary Notes on Tool Selection

- Select the largest shank size possible.
- It is recommended to mount the holder upside down.
- Select a chipbreaker according to the cutting conditions.
- To ensure adequate chip evacuation, select the smallest corner radius possible unless restrictions apply.
- To ensure rigidity, use a multi-functional type holder if possible, so long as the maximum grooving depth can be achieved.



*For traverse cutting (groove expansion), use a multi-functional or profiling insert.

For Small Lathes, External Multi-Functional (Grooving, Traverse Cutting and Profiling) Clamp-on

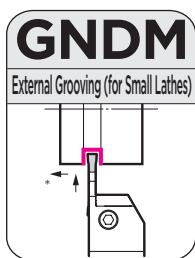


Fig 1

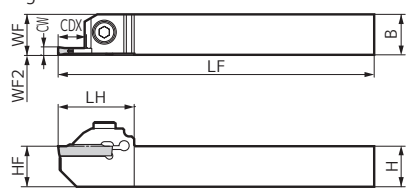


Fig 2

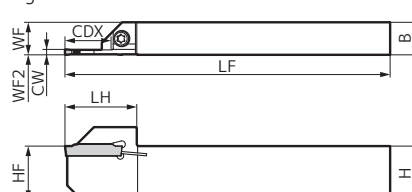


Figure shows right-handed (R) tool.

Sumi Small

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Head LH	Offset WF2	Width of Cut CW	Maximum Groove Depth CDX	Max. Cut-off Dia.	Applicable Insert	Fig	Cap Screw		Wrench
	R	L													BX0515 BFTX0414	N-m	
GNDM R/L1616JX-1.2508	●	●	16	16	120	(16)	16	26	0	1.25	8.0	16	GCM N125005-GF	1	BX0515	4.0	LT15-10 LH040
R/L1616JX-1.510	●	●	16	16	120	(16)	16	26	0	1.50	10.0	20	GCM N150005-GF	1			
R/L1616JX-212	●	●	16	16	120	(16)	16	30	0	2.00	12.0	24	GCM N20005-GF	1			
R/L1616JX-312	●	●	16	16	120	(16)	16	30	0	3.00	12.0	24	GCM N30005-GF	1			
GNDM R/L2012JX-217	●	●	20	12	120	(12)	20	26.5	0	2.00	17.0	34	GCM N20005-GF	2	BFTX0414	3.0	LT15-10
R/L2012JX-317	●	●	20	12	120	(12)	20	26.5	0	3.00	17.0	34	GCM N30005-GF	2			

Select holders and inserts with matching width of cut (CW). Refer to P19 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.



For Small Lathes, External Grooving & Cut-off Clamp-on

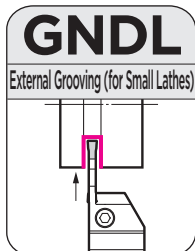


Fig 1

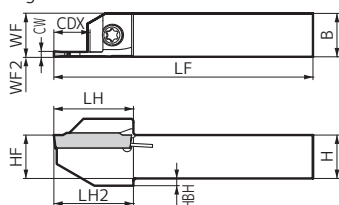


Fig 2

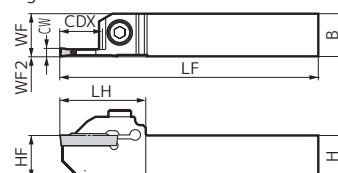


Fig 3

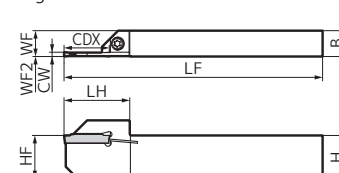


Figure shows right-handed (R) tool.

Sumi Small

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Step HBH	Head LH	Head LH2	Offset WF2	Width of Cut CW	Maximum Groove Depth CDX	Max. Cut-off Dia.	Applicable Insert	Fig	Flat Head Screw / Cap Screw		Wrench
	R	L															BFTX0412N BFTX0414	N-m	
GNDL R/L1010JX-1.2510	●	●	10	10	120	(10)	10	2.0	18	18.3	0	1.25	10.0	20	GCM N125005-GF	1	BFTX0412N	3.0	LT15-10
R/L1010JX-1.510	●	●	10	10	120	(10)	10	2.0	18	18.3	0	1.50	10.0	20	GCM N150005-GF	1			
R/L1010JX-210	●	●	10	10	120	(10)	10	2.0	22	22.3	0	2.00	10.0	20	GCM N20005-GF	1			
R/L1010JX-310	●	●	10	10	120	(10)	10	2.0	22	22.3	0	3.00	10.0	20	GCM N30005-GF	1			
GNDL R/L1212JX-1.2512	●	●	12	12	120	(12)	12	2.0	19	19.3	0	1.25	12.0	24	GCM N125005-GF	1	BFTX0412N	3.0	LT15-10
R/L1212JX-1.512	●	●	12	12	120	(12)	12	2.0	19	19.3	0	1.50	12.0	24	GCM N150005-GF	1			
R/L1212JX-212.5	●	●	12	12	120	(12)	12	2.0	22	22.3	0	2.00	12.5	25	GCM N20005-GF	1			
R/L1212JX-312.5	●	●	12	12	120	(12)	12	2.0	22	22.3	0	3.00	12.5	25	GCM N30005-GF	1			
GNDL R/L1616JX-1.2512.5	●	●	16	16	120	(16)	16	—	28	—	0	1.25	12.5	20	GCM N125005-GF	2	BX0515	4.0	LH040
R/L1616JX-1.512.5	●	●	16	16	120	(16)	16	—	28	—	0	1.50	12.5	25	GCM N150005-GF	2			
R/L1616JX-216	●	●	16	16	120	(16)	16	—	32	—	0	2.00	16.0	32	GCM N20005-GF	2			
R/L1616JX-316	●	●	16	16	120	(16)	16	—	32	—	0	3.00	16.0	32	GCM N30005-GF	2			
GNDL R/L2012JX-221	●	●	20	12	120	(12)	20	—	30.5	—	0	2.00	21.0	42	GCM N20005-GF	3	BFTX0414	3.0	LT15-10
R/L2012JX-321	●	●	20	12	120	(12)	20	—	30.5	—	0	3.00	21.0	42	GCM N30005-GF	3			

Select holders and inserts with matching width of cut (CW). Refer to P19 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

● mark: Standard stocked item Recommended Tightening Torque (N-m)

Expansion

Inserts for GNDM type (For Small Lathes)/GNDL type (For Small Lathes)

(Coated Carbide / Cermet / Cemented Carbide / DLC)

Fig 1

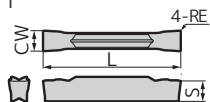


Fig 2 (Figure shows right-handed (R) tool.)



Fig 3

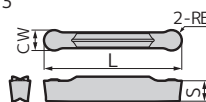
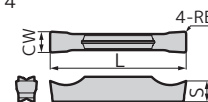


Fig 4



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
										Width of Cut	Tolerance					
GCM N3002-MG	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-MG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	5	1
GCM N2002-ML	●	●	●	●	●	●	●	●	●	2.0	±0.03	0.2	21.1	3.6	5	1
GCM N3002-ML	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-ML	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	5	1

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
										Width of Cut	Tolerance					
GCM N2002-GG	●	●	▲	●	●	●	●	●	●	2.0	±0.03	0.2	21.1	3.6	5	1
GCM N3002-GG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GG	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	5	1
GCM N2002-GL	●	●	●	●	●	●	●	●	●	2.0	±0.03	0.2	21.1	3.6	5	1
N2004-GL	●	●	●	●	●	●	●	●	●	2.0	±0.03	0.4	21.1	3.6	5	1
GCM N3002-GL	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GL	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	5	1
GCM N125005-GF	●	●	●	●	●	●	●	●	●	1.25	±0.03	0.05	17.4	3.2	1	1
GCM N150005-GF	●	●	●	●	●	●	●	●	●	1.5	±0.03	0.05	17.8	3.7	1	1
GCM N2002-GF	●	●	●	●	●	●	●	●	●	2.0	±0.03	0.2	21.1	3.6	5	1
N2004-GF	●	●	●	●	●	●	●	●	●	2.0	±0.03	0.4	21.1	3.6	5	1
GCM N3002-GF	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GF	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	5	1

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Lead Angle PSI	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
									Width of Cut	Tolerance					
GCM R2002-CG-05	●	▲	●	●	●	●	●	5°	2.0	±0.03	0.2	21.1	3.6	5	2
L2002-CG-05	●	▲	●	●	●	●	●	5°	2.0	±0.03	0.2	21.1	3.6	5	2
GCM R3002-CG-05	●	▲	●	●	●	●	●	5°	3.0	±0.03	0.2	21.3	3.8	5	2
L3002-CG-05	●	▲	●	●	●	●	●	5°	3.0	±0.03	0.2	21.3	3.8	5	2
GCM R20003-CF-10	●	●	●	●	●	●	●	10°	2.0	±0.08	0.03	22.4	3.6	5	2
L20003-CF-10	●	●	●	●	●	●	●	10°	2.0	±0.08	0.03	22.4	3.6	5	2
GCM R30003-CF-10	●	●	●	●	●	●	●	10°	3.0	±0.08	0.03	22.4	3.8	5	2
L30003-CF-10	●	●	●	●	●	●	●	10°	3.0	±0.08	0.03	22.4	3.8	5	2
GCM R20003-CF-15	●	●	●	●	●	●	●	15°	2.0	±0.08	0.03	22.4	3.6	5	2
L20003-CF-15	●	●	●	●	●	●	●	15°	2.0	±0.08	0.03	22.4	3.6	5	2
GCM R30003-CF-15	●	●	●	●	●	●	●	15°	3.0	±0.08	0.03	22.4	3.8	5	2
L30003-CF-15	●	●	●	●	●	●	●	15°	3.0	±0.08	0.03	22.4	3.8	5	2

GCM R: Right-handed, GCM L: Left-handed

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
										Width of Cut	Tolerance					
GCM N3015-RG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	3

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
									Width of Cut	Tolerance					
GCM N2010-RN	●	●	●	●	●	●	●	●	2.0	±0.03	1.0	21.7	3.6	5	3
N3015-RN	●	●	▲	●	●	●	●	●	3.0	±0.03	1.5	22.6	3.8	5	3

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H10	DL1500						Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
								Width of Cut	Tolerance					
GCG N2002-GA	●	●	●	●	●	●	●	2.0	±0.025	0.2	21.1	3.6	5	4
N3002-GA	●	●	●	●	●	●	●	3.0	±0.025	0.2	21.1	3.8	5	4

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	MG	Multi-functional / General-purpose	Cut-off (Handed Edge)	CG	Cut-off / General-purpose
	ML	Multi-functional / Low feed		CF	Cut-off / Low cutting force
Grooving / Grooving / General-purpose	GG	Grooving / General-purpose		RG	Profiling / General-purpose
Grooving / Grooving / Low feed	GL	Grooving / Low feed		RN	Facing / Necking / General-purpose
Grooving / Cut-off	GF	Grooving / Low cutting force		GA	Non-Ferrous Metals / General-purpose

Chipbreaker Selection **P5** Precautions for Use **P14** Recommended Cutting Conditions **P11**

Select holders and inserts with matching width of cut (CW). Not usable with GNDXL type / GNDIS type holders.

● mark: Standard stocked item ● mark: Standard stocked item (new product/expanded item) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability) Blank: Made-to-order item —mark: Not available

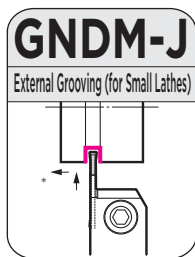


Fig 1

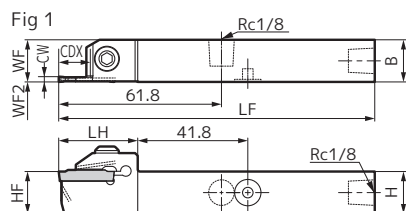
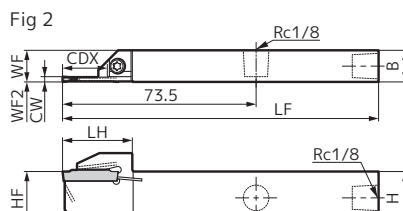


Fig 2



Sumi Small

Figure shows right-handed (R) tool.

*For traverse cutting (groove expansion), use a multi-functional or profiling insert.

Holder

Dimensions (mm)

Cat. No.	Stock		Height	Width	Overall Length	Cutting Edge Distance	Cutting Edge Height	Head	Offset	Width of Cut	Maximum Groove Depth	Max. Cut-off Dia.	Applicable Insert	Fig	Flat Head Screw / Cap Screw		Plug	Top Hex Wrench	Bottom Hex Wrench
	R	L	H	B	LF	WF	HF	LH	WF2	CW	CDX								
GNDM R/L1616JX-212J	●	●	16	16	120	(16)	16	30.0	0	2.0	12.0	24	GCC □2000-□□	1	CP-M5-20-1	5.0	XP02	LH040	LH025
R/L1616JX-312J	●	●	16	16	120	(16)	16	30.0	0	3.0	12.0	24	GCC □3000-□□						
GNDM R/L2012JX-217J	●	●	20	12	120	(12)	20	26.5	0	2.0	17.0	34	GCC □2000-□□	2	BFTX0414	3.0	XP02	LT15-10	—
R/L2012JX-317J	●	●	20	12	120	(12)	20	26.5	0	3.0	17.0	34	GCC □3000-□□						

Select holders and inserts with matching width of cut (CW). Refer to P21 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

Indexable Heads Tooling News No.551 APM series

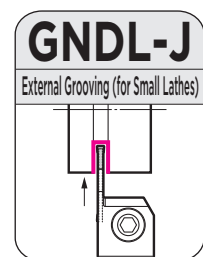


Fig 1

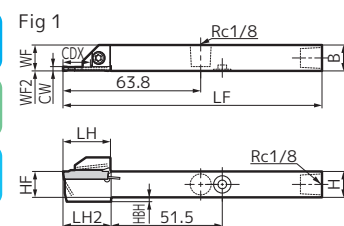


Fig 2

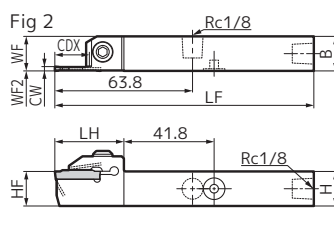


Fig 3

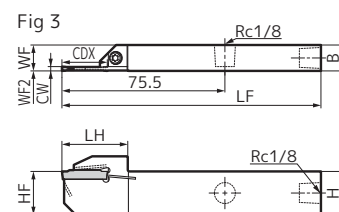


Figure shows right-handed (R) tool.

Sumi Small

Holder

Dimensions (mm)

Cat. No.	Stock		Height	Width	Overall Length	Cutting Edge Distance	Cutting Edge Height	Step	Head	Head	Offset	Width of Cut	Maximum Groove Depth	Max. Cut-off Dia.	Applicable Insert	Fig	Flat Head Screw / Cap Screw		Plug	Top Hex Wrench	Bottom Hex Wrench
	R	L																			
GNDL R/L1212JX-212.5J	●	●	12	12	120	(12)	12	2.0	22.0	22.3	0	2.0	12.5	25	GCC □2000-□□	1	BFTX0415T8R	1.5	XP02	LT08-06	←
R/L1212JX-312.5J	●	●	12	12	120	(12)	12	2.0	22.0	22.3	0	3.0	12.5	25	GCC □3000-□□						
GNDL R/L1616JX-216J	●	●	16	16	120	(16)	16	—	32.0	—	0	2.0	16.0	32	GCC □2000-□□	2	CP-M5-20-1	5.0	XP02	LH040	LH025
R/L1616JX-316J	●	●	16	16	120	(16)	16	—	32.0	—	0	3.0	16.0	32	GCC □3000-□□						
GNDL R/L2012JX-221J	●	●	20	12	120	(12)	20	—	30.5	—	0	2.0	21.0	42	GCC □2000-□□	3	BFTX0414	3.0	XP02	LT15-10	—
R/L2012JX-321J	●	●	20	12	120	(12)	20	—	30.5	—	0	3.0	21.0	42	GCC □3000-□□						

Select holders and inserts with matching width of cut (CW). Refer to P21 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

Indexable Heads Tooling News No.551 APM series

Fig 1

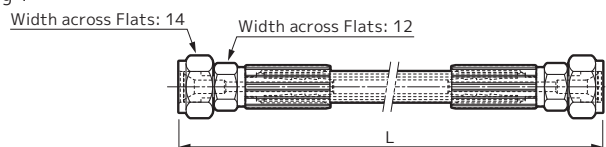


Fig 1

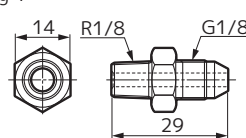
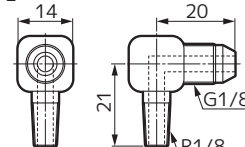


Fig 2



Parts (Hose)

Dimensions (mm)

Cat. No.	Stock	L	Screw Standard	Screw Standard	Fig
J-HOSE-G1/8-G1/8-200	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300	●	300	G1/8	G1/8	1

Hoses are sold separately.

Piping Method for Hoses and Connectors P15

Parts (Connector)

Dimensions (mm)

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.

Piping Method for Hoses and Connectors P15

● mark: Standard stocked item Recommended Tightening Torque (N·m)



Inserts for GNDM-J type (For Small Lathes)/GNDL-J type (For Small Lathes)

 Coated Carbide / Cermet / Cemented Carbide / DLC

Fig 1

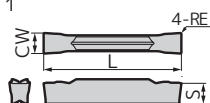


Fig 2 (Figure shows right-handed (R) tool.)

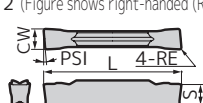


Fig 3

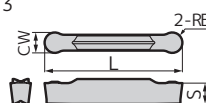
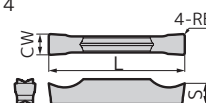


Fig 4



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius		Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE	L	S			
GCM N3002-MG	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1	
N3004-MG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8		1	
GCM N2002-ML	—	—	—	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	1		
GCM N3002-ML	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1	
N3004-ML	●	●	—	—	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8		1	

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE	L	S		
GCM N2002-GG		●	▲		●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
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		1
GCM N2002-GL		●	▲		●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
N2004-GL		●			●	●	●	●	—	2.0	±0.03	0.4	21.1	3.6		1
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	1	
GCM N2002-GF	—	—	—	—	●	●	●	●	●	2.0	±0.03	0.2	21.1	3.6	5	1
N2004-GF	—	—	—	—	●	●	●	●	●	2.0	±0.03	0.4	21.1	3.6		1
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	1	

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Lead Angle	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
									Width of Cut	Tolerance					
GCM R2002-CG-05	●	▲	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	2
L2002-CG-05	●	▲	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		2
GCM R3002-CG-05	●	▲	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8	5	2
L3002-CG-05	●	▲	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		2
GCM R20003-CF-10	—	—	●	●	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	5	2
L20003-CF-10	—	—	●	●	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		2
GCM R30003-CF-10	—	—	●	●	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8	5	2
L30003-CF-10	—	—	●	●	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		2
GCM R20003-CF-15	—	—	●	●	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6	5	2
L20003-CF-15	—	—	●	●	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		2
GCM R30003-CF-15	—	—	●	●	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8	5	2
L30003-CF-15	—	—	●	●	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		2

GCM R: Right-handed, GCM L: Left-handed

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
										Width of Cut	Tolerance					
GCM N3015-RG	●	●	▲	—	●	●	●	●	—	3.0	+0.03	1.5	21.1	3.8	5	3

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
									Width of Cut	Tolerance	RE	L	S			
GCM N2010-RN	—	—	—	—	●	●	●	●	—	2.0	±0.03	1.0	21.7	3.6	5	3
N3015-RN	—	—	—	—	●	●	●	●	—	3.0	±0.03	1.5	22.6	3.8	5	3

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H10	DL1500						Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
								Width of Cut	Tolerance	RE	L	S		
GCG N2002-GA	●	●						2.0	±0.025	0.2	21.1	3.6	5	4
N3002-GA	●	●						3.0	±0.025	0.2	21.1	3.8		

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	MG	Multi-functional / General-purpose	Cut-off (Handed Edge)	CG	Cut-off / General-purpose
	ML	Multi-functional / Low feed		CF	Cut-off / Low cutting force
Grooving / General-purpose	GG	Grooving / General-purpose	External Profiling / External Radius Grooving	RG	Profiling / General-purpose
Grooving / Low feed	GL	Grooving / Low feed	Profiling / Radius Grooving / Necking	RN	Facing / Necking / General-purpose
Cut-off	GF	Grooving / Low cutting force	For Non-Ferrous Metals	GA	Non-Ferrous Metals / General-purpose

Chipbreaker Selection **P5** / Precautions for Use **P14** / Recommended Cutting Conditions **P11**

Select holders and inserts with matching width of cut (CW). Not usable with GNDXL type / GNDIS type holders.

● mark: Standard stocked item ● mark: Standard stocked item (new product/expanded item) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability) Blank: Made-to-order item —mark: Not available



*For traverse cutting (groove expansion), use a multi-functional or profiling insert.

External Multi-Functional, Shallow Grooves (Grooving, Traverse Cutting and Profiling) Clamp-on

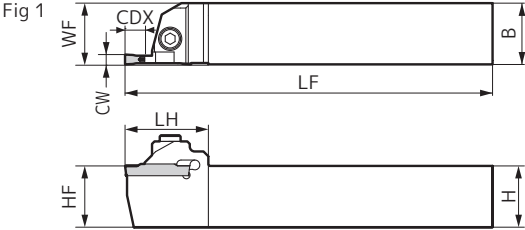
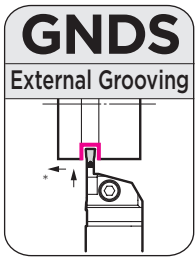


Figure shows right-handed (R) tool.

Holder

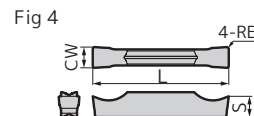
Parts

Dimensions (mm)

Cat. No.	Stock		Height	Width	Overall Length	Cutting Edge Distance	Cutting Edge Height	Head	Width of Cut	Maximum Groove Depth	Max. Cut-off Dia.	Applicable Insert	Fig	Cap Screw		Wrench
	R	L	H	B	LF	WF	HF	LH	CW	CDX						
GND R/L2020K-206	●	●	20	20	125	20	20	30	2.0	6	12	GC □2000-□□	1	BX0520	5.0	LH040
R/L2020K-306	●	●	20	20	125	20	20	30	3.0	6	12	GC □3000-□□	1			
R/L2020K-410	●	●	20	20	125	20	20	34	4.0	10	20	GC □4000-□□	1			
R/L2020K-510	●	●	20	20	125	20	20	34	5.0	10	20	GC □5000-□□	1			
R/L2020K-610	●	●	20	20	125	20	20	34	6.0	10	20	GC □6000-□□	1			
GND R/L2525M-206	●	●	25	25	150	25	25	30	2.0	6	12	GC □2000-□□	1	BX0520	5.0	LH040
R/L2525M-306	●	●	25	25	150	25	25	30	3.0	6	12	GC □3000-□□	1			
R/L2525M-410	●	●	25	25	150	25	25	34	4.0	10	20	GC □4000-□□	1			
R/L2525M-510	●	●	25	25	150	25	25	34	5.0	10	20	GC □5000-□□	1			
R/L2525M-610	●	●	25	25	150	25	25	34	6.0	10	20	GC □6000-□□	1			

Select holders and inserts with matching width of cut (CW). Refer to P23 for applicable inserts.
The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

Inserts for GNDS type



(Coated Carbide / Cermet / Cemented Carbide / DLC)

Dimensions (mm)

Cat. No.		AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius			Overall Length	Thickness	Pcs/Pack	Fig.
											Width of Cut	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		1		
GCM N4002-MG		●	●	■	●	●	■	■	●	—	4.0	±0.03	0.2	26.4	4.0		1		
N4004-MG		●	●	■	●	●	■	■	●	—	4.0	±0.03	0.4	26.4	4.0		1		
N4008-MG		●	●	▲	●	●	■	●	●	—	4.0	±0.03	0.8	26.4	4.0	5	1		
GCM N5004-MG		●	●	■	●	●	■	■	●	—	5.0	±0.03	0.4	26.4	4.1		1		
N5008-MG		●	●	▲	●	●	■	●	●	—	5.0	±0.03	0.8	26.4	4.1		1		
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		1		
GCM N2002-ML		—	—	—	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6		1		
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		1		
GCM N4002-ML		●	●	■	●	●	■	■	●	—	4.0	±0.03	0.2	26.4	4.0		1		
N4004-ML		●	●	▲	●	●	■	■	●	—	4.0	±0.03	0.4	26.4	4.0		1		
N4008-ML		●	●	■	●	●	■	■	●	—	4.0	±0.03	0.8	26.4	4.0	5	1		
GCM N5004-ML		●	●	▲	●	●	■	■	●	—	5.0	±0.03	0.4	26.4	4.1		1		
N5008-ML		●	●	■	●	●	■	■	●	—	5.0	±0.03	0.8	26.4	4.1		1		
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		1		

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius		Overall Length	Thickness	Pcs/Pack	Fig.
										Width of Cut	Tolerance	RE	L				
GCM N2002-GG		●	▲		●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6		5	1
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			1
GCM N4002-GG		●	▲		●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0			1
N4004-GG		●	▲		●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1	
GCM N5002-GG		●	▲		●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1	
N5004-GG		●	▲		●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		1	
GCM N6002-GG		●	▲		●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		1	
N6004-GG		●	▲		●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		1	
GCM N2002-GL		●	▲		●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6		5	1
N2004-GL		●			●	●	●	●	—	2.0	±0.03	0.4	21.1	3.6			1
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			1
GCM N4002-GL		●	▲		●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		1	
N4004-GL		●			●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1	
GCM N5002-GL		●	▲		●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1	
N5004-GL		●			●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		1	
GCM N6002-GL		●	▲		●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		1	
N6004-GL					●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		1	
GCM N125005-GF		—	—	—	—	—	—	●	—	1.25	±0.03	0.05	17.4	3.5		5	1
GCM N150005-GF		—	—	—	—	—	—	●	—	1.5	±0.03	0.05	17.8	3.7			1
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			1
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		1	
GCM N4002-GF		●	▲		●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		1	
N4004-GF		●			●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1	
GCM N5002-GF		●	▲		●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1	
N5004-GF		●			●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		1	
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		1	

Dimensions (mm)

Cat. No.		AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Lead Angle	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fic	
										PSI	Width of Cut						
											Tolerance						RE
GCM R2002-CG-05	●	▲	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	2		
L2002-CG-05	●	▲	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		2		
GCM R3002-CG-05	●	▲	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		2		
L3002-CG-05	●	▲	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		2		
GCM R4002-CG-05	●	▲	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		2		
L4002-CG-05	●	▲	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		2		
GCM R20003-CF-10	—	—	●	●	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	5	2	
L20003-CF-10	—	—	●	●	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		2	
GCM R30003-CF-10	—	—	●	●	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		2	
L30003-CF-10	—	—	●	●	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		2	
GCM R20003-CF-15	—	—	●	●	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		2	
L20003-CF-15	—	—	●	●	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		2	
GCM R30003-CF-15	—	—	●	●	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8	2		
L30003-CF-15	—	—	●	●	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8			

GCM R: Right-handed, GCM L: Left-handed

g Dimensions (mm)

Cat. No.		AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius			Overall Length	Thickness	Pcs/Pack	Fid
											Width of Cut	Tolerance	RE	L	S				
GCM N3015- RG	●	●	●	▲	●	●	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	3	3	
N4020- RG	●	●	●	▲	●	●	●	●	●	●	4.0	±0.03	2.0	26.4	4.0		3	3	
GCM N5025- RG	●	●	●	▲	●	●	●	●	●	●	5.0	±0.03	2.5	27.2	4.1		3	3	
N6030- RG	●	●	●	▲	●	●	●	●	●	●	6.0	±0.03	3.0	27.5	4.5		3	3	

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
									Width of Cut	Tolerance					
GCM N2010-RN	—	—	—	—	●	●	●	●	2.0	± 0.03	1.0	21.7	3.6	5	3
N3015-RN	●	●	▲	●	●	●	●	●	3.0	± 0.03	1.5	22.6	3.8		3
N4020-RN	●	●	▲	●	●	●	●	●	4.0	± 0.03	2.0	28.2	4.0		3
N5025-RN	●	●	▲	●	●	●	●	●	5.0	± 0.03	2.5	28.3	4.1		3
N6030-RN	●	●	▲	●	●	●	●	●	6.0	± 0.03	3.0	28.3	4.5		3

Dimensions (mm)

Cat. No.	H10	DL1500						Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
								CW						
								Width of Cut	Tolerance					
GCG N2002- GA	●	●						2.0	±0.025	0.2	21.1	3.6	5	4
N3002- GA	●	●						3.0	±0.025	0.2	21.1	3.8		4
GCG N4004- GA	●	●						4.0	±0.025	0.4	26.4	4.0		4
N5004- GA	●	●						5.0	±0.025	0.4	26.4	4.1		4
N6004- GA	●	●						6.0	±0.025	0.4	26.4	4.5		4

Type	Symbol	Application	Type	Symbol	Application
Grooving /	MG	Multi-functional / General-purpose	Cut-off /	CG	Cut-off / General-purpose
Traverse Cutting	ML	Multi-functional / Low feed	(Handed Edge)	CF	Cut-off / Low cutting force
Grooving /	GG	Grooving / General-purpose	External Profiling / External Radius Grooving	RG	Profiling / General-purpose
Cut-off	GL	Grooving / Low feed	Profiling / Radius Grooving / Necking	GN	Facing / Necking / General-purpose
	GF	Grooving / Low cutting force	For Non-Ferrous Metals	GA	For Non-Ferrous Metals / General-purpose

Select holders and inserts with matching width of cut (CW). Not usable with GNDXL type / GNDIS type holders.

● mark: Standard stocked item ● mark: Standard stocked item (new product/expanded item) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability) Blank: Made-to-order item —mark: Not available



*For traverse cutting (groove expansion), use a multi-functional or profiling insert.

External Multi-Functional
(Grooving, Traverse Cutting and Profiling)
Clamp-on

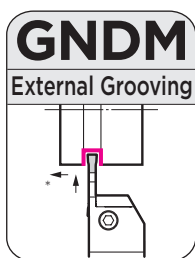


Fig 1

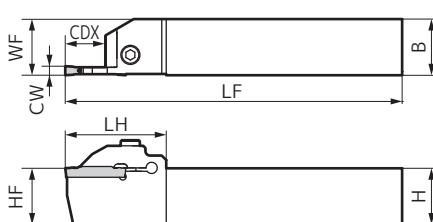


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Head LH	Width of Cut CW	Maximum Groove Depth CDX	Max. Cut-off Dia.	Applicable Insert	Fig	Cap Screw		Wrench
	R	L												BX0520 		
GNDM R/L2020K-1.2510	●	●	20	20	125	20	20	34.0	1.25	10	20	GCM N125005-GF	1	BX0520	5.0	LH040
R/L2020K-1.510	●	●	20	20	125	20	20	34.0	1.50	10	20	GCM N150005-GF	1			
R/L2020K-210	●	●	20	20	125	20	20	33.6	2.00	10	20	GC □2000-□□	1			
R/L2020K-312	●	●	20	20	125	20	20	36.6	3.00	12	24	GC □3000-□□	1			
R/L2020K-418	●	●	20	20	125	20	20	45.0	4.00	18	36	GC □4000-□□	1			
R/L2020K-518	●	●	20	20	125	20	20	45.0	5.00	18	36	GC □5000-□□	1			
R/L2020K-618	●	●	20	20	125	20	20	45.0	6.00	18	36	GC □6000-□□	1			
GNDM R/L2525M-1.2510	●	●	25	25	150	25	25	36.0	1.25	10	20	GCM N125005-GF	1	BX0520	5.0	LH040
R/L2525M-1.510	●	●	25	25	150	25	25	36.0	1.50	10	20	GCM N150005-GF	1			
R/L2525M-210	●	●	25	25	150	25	25	33.6	2.00	10	20	GC □2000-□□	1			
R/L2525M-312	●	●	25	25	150	25	25	36.6	3.00	12	24	GC □3000-□□	1			
R/L2525M-418	●	●	25	25	150	25	25	45.0	4.00	18	36	GC □4000-□□	1			
R/L2525M-518	●	●	25	25	150	25	25	45.0	5.00	18	36	GC □5000-□□	1			
R/L2525M-618	●	●	25	25	150	25	25	45.0	6.00	18	36	GC □6000-□□	1			
GNDM R/L3225P-312			32	25	170	25	32	36.6	3.00	12	24	GC □3000-□□	1	BX0520	5.0	LH040
R/L3225P-418			32	25	170	25	32	45.0	4.00	18	36	GC □4000-□□	1			
R/L3225P-518			32	25	170	25	32	45.0	5.00	18	36	GC □5000-□□	1			
R/L3225P-618			32	25	170	25	32	45.0	6.00	18	36	GC □6000-□□	1			
R/L3225P-718			32	25	170	25	32	50.0	7.00	18	36	GCM N7000-□□	1	BX0620	6.0	LH050
R/L3225P-818			32	25	170	25	32	50.0	8.00	18	36	GCM N8000-□□	1			
GNDM R/L3232P-312	●	●	32	32	170	32	32	36.6	3.00	12	24	GC □3000-□□	1	BX0620	6.0	LH050
R/L3232P-418	●	●	32	32	170	32	32	45.0	4.00	18	36	GC □4000-□□	1			
R/L3232P-518	●	●	32	32	170	32	32	45.0	5.00	18	36	GC □5000-□□	1			
R/L3232P-618	●	●	32	32	170	32	32	45.0	6.00	18	36	GC □6000-□□	1			
R/L3232P-718	●	●	32	32	170	32	32	50.0	7.00	18	36	GCM N7000-□□	1			
R/L3232P-818	●	●	32	32	170	32	32	50.0	8.00	18	36	GCM N8000-□□	1			

Select holders and inserts with matching width of cut (CW). Refer to P25 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.



*For traverse cutting (groove expansion), use a multi-functional or profiling insert.

External L-Shaped (Side Cut), Multi-Functional
(Grooving, Traverse Cutting and Profiling)
Clamp-on

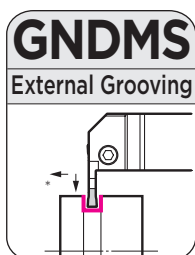


Fig 1

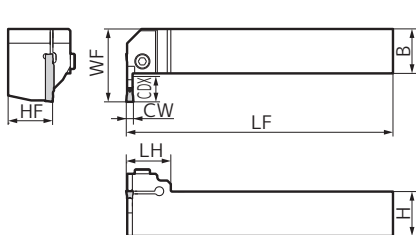


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Head LH	Width of Cut CW	Maximum Groove Depth CDX	Applicable Insert	Fig	Cap Screw		Wrench
	R	L													
GNDMS R/L2020K-310	●	●	20	20	125	32	20	25.0	3.0	10	GC □3000-□□	1	BX0520	5.0	LH040
R/L2020K-412	●	●	20	20	125	34	20	25.0	4.0	12	GC □4000-□□	1			
R/L2020K-512	●	●	20	20	125	34	20	25.0	5.0	12	GC □5000-□□	1			
GNDMS R/L2525M-312	●	●	25	25	150	39	25	25.0	3.0	12	GC □3000-□□	1	BX0520	5.0	LH040
R/L2525M-414	●	●	25	25	150	41	25	25.0	4.0	14	GC □4000-□□	1			
R/L2525M-514	●	●	25	25	150	41	25	25.0	5.0	14	GC □5000-□□	1			
R/L2525M-614	●	●	25	25	150	41	25	25.0	6.0	14	GC □6000-□□	1			

Select holders and inserts with matching width of cut (CW). Refer to P25 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

● mark: Standard stocked item Blank: Made-to-order item Recommended Tightening Torque (N·m)



Inserts for GNDM type/GNDMS type

(Coated Carbide / Cermet / Cemented Carbide / DLC)

Fig 1

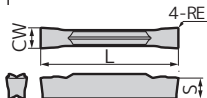


Fig 2 (Figure shows right-handed (R) tool.)

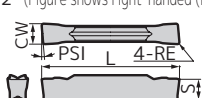


Fig 3

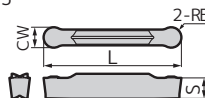
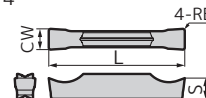


Fig 4



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
										Width of Cut	Tolerance					
GCM N3002-MG	●	●	●	●	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	1	1
N3004-MG	●	●	▲	●	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	1	1
GCM N4002-MG	●	●	●	●	●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0	1	1
N4004-MG	●	●	●	●	●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0	1	1
N4008-MG	●	●	▲	●	●	●	●	●	—	4.0	±0.03	0.8	26.4	4.0	1	1
GCM N5004-MG	●	●	●	●	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	1	1
N5008-MG	●	●	▲	●	●	●	●	●	—	5.0	±0.03	0.8	26.4	4.1	5	1
GCM N6004-MG	●	●	●	●	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	1	1
N6008-MG	●	●	▲	●	●	●	●	●	—	6.0	±0.03	0.8	26.4	4.5	1	1
GCM N7004-MG	●	●	●	●	●	●	●	●	—	7.0	±0.04	0.4	28.8	5.5	1	1
N7008-MG	●	●	▲	●	●	●	●	●	—	7.0	±0.04	0.8	28.8	5.5	1	1
GCM N8004-MG	●	●	●	●	●	●	●	●	—	8.0	±0.04	0.4	28.8	6.0	1	1
N8008-MG	●	●	▲	●	●	●	●	●	—	8.0	±0.04	0.8	28.8	6.0	1	1
GCM N2002-ML	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1
N3002-ML	—	—	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1
N3004-ML	—	—	●	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1
GCM N4002-ML	—	—	—	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	1	1
N4004-ML	—	—	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	1	1
N4008-ML	—	—	●	—	—	—	—	—	—	4.0	±0.03	0.8	26.4	4.0	1	1
GCM N5004-ML	—	—	—	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	5	1
N5008-ML	—	—	—	—	—	—	—	—	—	5.0	±0.03	0.8	26.4	4.1	1	1
GCM N6004-ML	—	—	—	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1
N6008-ML	—	—	—	—	—	—	—	—	—	6.0	±0.03	0.8	26.4	4.5	1	1
GCM N7004-ML	—	—	—	—	—	—	—	—	—	7.0	±0.04	0.4	28.8	5.5	1	1
N7008-ML	—	—	—	—	—	—	—	—	—	7.0	±0.04	0.8	28.8	5.5	1	1
GCM N8004-ML	—	—	—	—	—	—	—	—	—	8.0	±0.04	0.4	28.8	6.0	1	1
N8008-ML	—	—	—	—	—	—	—	—	—	8.0	±0.04	0.8	28.8	6.0	1	1

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
										Width of Cut	Tolerance					
GCM N2002-GG	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1
GCM N3002-GG	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1
N3004-GG	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1
GCM N4002-GG	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	1	1
N4004-GG	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	1	1
GCM N5002-GG	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	5	1
N5004-GG	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1
GCM N6002-GG	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1
N6004-GG	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1
GCM N7004-GG	—	●	▲	—	—	—	—	—	—	7.0	±0.04	0.4	28.8	5.5	1	1
GCM N8004-GG	—	●	▲	—	—	—	—	—	—	8.0	±0.04	0.4	28.8	6.0	1	1
GCM N2002-GL	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1
N2004-GL	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.4	21.1	3.6	1	1
GCM N3002-GL	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1
N3004-GL	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1
GCM N4002-GL	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	1	1
N4004-GL	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	1	1
GCM N5002-GL	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	5	1
N5004-GL	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1
GCM N6002-GL	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1
N6004-GL	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1
GCM N7004-GL	—	●	▲	—	—	—	—	—	—	7.0	±0.04	0.4	28.8	5.5	1	1
GCM N8004-GL	—	●	▲	—	—	—	—	—	—	8.0	±0.04	0.4	28.8	6.0	1	1
GCM N125005-GF	—	—	—	—	—	—	—	—	—	1.25	±0.03	0.05	17.4	3.2	1	1
GCM N150005-GF	—	—	—	—	—	—	—	—	—	1.5	±0.03	0.05	17.8	3.7	1	1
GCM N2002-GF	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1
N2004-GF	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.4	21.1	3.6	1	1
GCM N3002-GF	—	—	—	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1
N3004-GF	—	—	—	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1
GCM N4002-GF	—	—	—	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	1	1
N4004-GF	—	—	—	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	1	1
GCM N5002-GF	—	—	—	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	5	1
N5004-GF	—	—	—	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1
GCM N6002-GF	—	—	—	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1
N6004-GF	—	—	—	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1
GCM N7002-GF	—	—	—	—	—	—	—	—	—	7.0	±0.04	0.2	28.8	5.5	1	1
N7004-GF	—	—	—	—	—	—	—	—	—	7.0	±0.04	0.4	28.8	5.5	1	1
GCM N8002-GF	—	—	—	—	—	—	—	—	—	8.0	±0.04	0.2	28.8	6.0	1	1
N8004-GF	—	—	—	—	—	—	—	—	—	8.0	±0.04	0.4	28.8	6.0	1	1

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.		AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Lead Angle	PSI	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
											Width of Cut	Tolerance					
GCM R2002-CG-05	●	▲	●	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	2	
L2002-CG-05	●	▲	●	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		2	
GCM R3002-CG-05	●	▲	●	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		2	
L3002-CG-05	●	▲	●	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		2	
GCM R4002-CG-05	●	▲	●	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	2		
L4002-CG-05	●	▲	●	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	2		
GCM R20003-CF-10	—	—	—	●	●	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	5	2	
L20003-CF-10	—	—	—	●	●	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		2	
GCM R30003-CF-10	—	—	—	●	●	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		2	
L30003-CF-10	—	—	—	●	●	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		2	
GCM R20003-CF-15	—	—	—	●	●	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6	5	2	
L20003-CF-15	—	—	—	●	●	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		2	
GCM R30003-CF-15	—	—	—	●	●	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		2	
L30003-CF-15	—	—	—	●	●	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8	2		



*For traverse cutting (groove expansion), use a multi-functional or profiling insert.

External Multi-Functional
(Grooving, Traverse Cutting and Profiling)
Internal Coolant Supply, Clamp-on

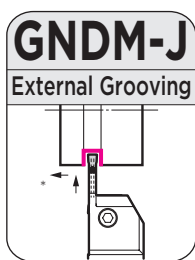


Fig 1

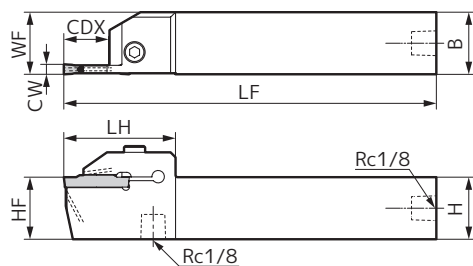


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height	Width	Overall Length	Cutting Edge Distance	Cutting Edge Height	Head	Width of Cut	Maximum Groove Depth	Max. Cut-off Dia.	Applicable Insert	Fig	Cap Screw	Plug	Wrench
	R	L	H	B	LF	WF	HF	LH	CW	CDX						
GNDM R/L2020K-210J	●	●	20	20	125	20	20	33.6	2.00	10	20	GC□□2000-□□	1	BX0520	6.0	XP02
R/L2020K-312J	●	●	20	20	125	20	20	36.6	3.00	12	24	GC□□3000-□□	1			
R/L2020K-418J	●	●	20	20	125	20	20	45	4.00	18	36	GC□□4000-□□	1			
R/L2020K-518J	●	●	20	20	125	20	20	45	5.00	18	36	GC□ N5000-□□	1			
R/L2020K-618J	●	●	20	20	125	20	20	45	6.00	18	36	GC□ N6000-□□	1			
GNDM R/L2525K-210J	●	●	25	25	125	25	25	33.6	2.00	10	20	GC□□2000-□□	1	BX0520	6.0	XP02
R/L2525K-312J	●	●	25	25	125	25	25	36.6	3.00	12	24	GC□□3000-□□	1			
R/L2525K-418J	●	●	25	25	125	25	25	45	4.00	18	36	GC□□4000-□□	1			
R/L2525K-518J	●	●	25	25	125	25	25	45	5.00	18	36	GC□ N5000-□□	1			
R/L2525K-618J	●	●	25	25	125	25	25	45	6.00	18	36	GC□ N6000-□□	1			

Select holders and inserts with matching width of cut (CW). Refer to P27 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

Fig 1

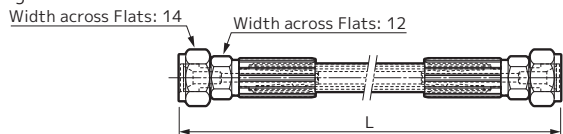


Fig 1

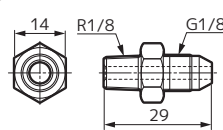
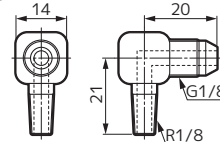


Fig 2



Parts (Hose)

Dimensions (mm)

Cat. No.	Stock	L	Screw Standard	Screw Standard	Fig
J-HOSE-G1/8-G1/8-200	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300	●	300	G1/8	G1/8	1

Hoses are sold separately.

Piping Method for Hoses and Connectors **P15**

Parts (Connector)

Dimensions (mm)

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.

Piping Method for Hoses and Connectors **P15**



Inserts for GNDM-J type

(Coated Carbide / Cermet / Cemented Carbide / DLC)

Fig 1

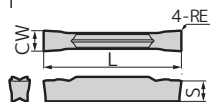


Fig 2 (Figure shows right-handed (R) tool.)

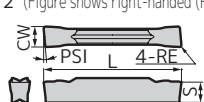


Fig 3

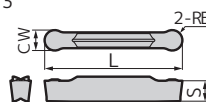
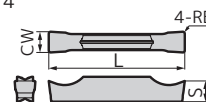


Fig 4



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE	L	S			
GCM N3002-MG	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-MG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-MG	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.2	26.4	4.0	1	1	1
N4004-MG	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.4	26.4	4.0	1	1	1
N4008-MG	●	●	▲	●	●	●	●	●	●	4.0	±0.03	0.8	26.4	4.0	5	1	1
GCM N5004-MG	●	●	●	●	●	●	●	●	●	5.0	±0.03	0.4	26.4	4.1	1	1	1
N5008-MG	●	●	▲	●	●	●	●	●	●	5.0	±0.03	0.8	26.4	4.1	1	1	1
GCM N6004-MG	●	●	●	●	●	●	●	●	●	6.0	±0.03	0.4	26.4	4.5	1	1	1
N6008-MG	●	●	▲	●	●	●	●	●	●	6.0	±0.03	0.8	26.4	4.5	1	1	1
GCM N2002-ML	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1	1
N3002-ML	—	—	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-ML	—	—	●	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-ML	—	—	●	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	1	1	1
N4004-ML	—	—	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	5	1	1
N4008-ML	—	—	●	—	—	—	—	—	—	4.0	±0.03	0.8	26.4	4.0	1	1	1
GCM N5004-ML	—	—	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1	1
N5008-ML	—	—	●	—	—	—	—	—	—	5.0	±0.03	0.8	26.4	4.1	1	1	1
GCM N6004-ML	—	—	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1	1
N6008-ML	—	—	●	—	—	—	—	—	—	6.0	±0.03	0.8	26.4	4.5	1	1	1

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE	L	S			
GCM N2002-GG	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1	1
GCM N3002-GG	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-GG	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-GG	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	1	1	1
N4004-GG	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	5	1	1
GCM N5002-GG	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	1	1	1
N5004-GG	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1	1
GCM N6002-GG	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1	1
N6004-GG	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1	1
GCM N2002-GL	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1	1
N2004-GL	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.4	21.1	3.6	1	1	1
GCM N3002-GL	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-GL	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-GL	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	5	1	1
N4004-GL	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	1	1	1
GCM N5002-GL	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	1	1	1
N5004-GL	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1	1
GCM N6002-GL	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1	1
N6004-GL	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1	1
GCM N125005-GF	—	—	—	—	—	—	—	—	—	1.25	±0.03	0.05	17.4	3.2	1	1	1
GCM N150005-GF	—	—	—	—	—	—	—	—	—	1.5	±0.03	0.05	17.8	3.7	1	1	1
GCM N2002-GF	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1	1
N2004-GF	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.4	21.1	3.6	1	1	1
GCM N3002-GF	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-GF	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-GF	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	5	1	1
N4004-GF	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	1	1	1
GCM N5002-GF	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	1	1	1
N5004-GF	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1	1
GCM N6002-GF	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1	1
N6004-GF	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1	1

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Lead Angle	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
											Width of Cut	Tolerance	RE	L	S			
GCM R2002-CG-05	●	▲	●	●	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	2	2	2
L2002-CG-05	●	▲	●	●	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	2	2	2
GCM R3002-CG-05	●	▲	●	●	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8	5	2	2
L3002-CG-05	●	▲	●	●	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8	2	2	2
GCM R4002-CG-05	●	▲	●	●	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	2	2	2
L4002-CG-05	●	▲	●	●	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	2	2	2
GCM R20003-CF-10	—	—	—	—	—	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	2	2	2
L20003-CF-10	—	—	—	—	—	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	2	2	2
GCM R30003-CF-10	—	—	—	—	—	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8	2	2	2
L30003-CF-10	—	—	—	—	—	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8	5	2	2
GCM R20003-CF-15	—	—	—	—	—	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6	2	2	2
L20003-CF-15	—	—	—	—	—	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6	2	2	2
GCM R30003-CF-15	—	—	—	—	—	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8	2	2	2
L30003-CF-15	—	—	—	—	—	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8	2	2	2

GCM R: Right-handed, GCM L: Left-handed

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE	L	S			
GCM N3015-RG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	3	3
N4020-RG	●	●	▲	●	●	●	●	●	●	4.0	±0.03	2.0	26.4	4.0	5	3	3
GCM N5025-RG	●	●	▲	●	●	●	●	●	●	5.0	±0.03	2.5	27.2	4.1	3	3	3
N6030-RG	●	●	▲	●	●	●	●	●	●	6.0	±0.03	3.0	27.5	4.5	3	3	3

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC8
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External Deep Grooving and Cut-off
Clamp-on

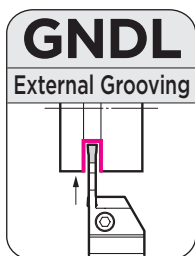


Fig 1

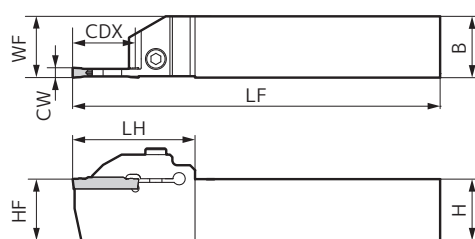


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Head Length LH	Width of Cut CW	Maximum Groove Depth CDX	Max. Cut-off Dia.	Applicable Insert	Fig	Cap Screw		Wrench
	R	L												BX0520 	N-m 	
GNDL R/L2020K-1.2516	●	●	20	20	125	20	20	38.0	1.25	16	32	GCM N125005-GF	1	BX0520 	5.0	LH040
R/L2020K-1.516	●	●	20	20	125	20	20	38.0	1.50	16	32	GCM N150005-GF	1			
R/L2020K-220	●	●	20	20	125	20	20	44.5	2.00	20(18)	40	GCM □2000-□□	1			
R/L2020K-320	●	●	20	20	125	20	20	44.5	3.00	20(18)	40	GCM □3000-□□	1			
R/L2020K-425	●	●	20	20	125	20	20	50.0	4.00	25(23)	50	GCM □4000-□□	1			
R/L2020K-525	●	●	20	20	125	20	20	50.0	5.00	25(23)	50	GCM □5000-□□	1			
R/L2020K-625	●	●	20	20	125	20	20	50.0	6.00	25(23)	50	GCM □6000-□□	1			
GNDL R/L2525M-1.2516	●	●	25	25	150	25	25	40.0	1.25	16	32	GCM N125005-GF	1	BX0520 	5.0	LH040
R/L2525M-1.516	●	●	25	25	150	25	25	40.0	1.50	16	32	GCM N150005-GF	1			
R/L2525M-220	●	●	25	25	150	25	25	44.5	2.00	20(18)	40	GCM □2000-□□	1			
R/L2525M-320	●	●	25	25	150	25	25	44.5	3.00	20(18)	40	GCM □3000-□□	1			
R/L2525M-425	●	●	25	25	150	25	25	50.0	4.00	25(23)	50	GCM □4000-□□	1			
R/L2525M-525	●	●	25	25	150	25	25	50.0	5.00	25(23)	50	GCM □5000-□□	1			
R/L2525M-625	●	●	25	25	150	25	25	50.0	6.00	25(23)	50	GCM □6000-□□	1			
GNDL R/L3225P-320			32	25	170	25	32	44.5	3.00	20(18)	40	GCM □3000-□□	1	BX0520 	5.0	LH040
R/L3225P-425			32	25	170	25	32	50.0	4.00	25(23)	50	GCM □4000-□□	1			
R/L3225P-525			32	25	170	25	32	50.0	5.00	25(23)	50	GCM □5000-□□	1			
R/L3225P-625			32	25	170	25	32	50.0	6.00	25(23)	50	GCM □6000-□□	1	BX0620 	6.0	LH050
R/L3225P-725			32	25	170	25	32	50.0	7.00	25(23)	50	GCM □7000-□□	1			
R/L3225P-825			32	25	170	25	32	50.0	8.00	25(23)	50	GCM □8000-□□	1			
GNDL R/L3232P-320	●	●	32	32	170	32	32	44.5	3.00	20(18)	40	GCM □3000-□□	1	BX0620 	6.0	LH050
R/L3232P-425	●	●	32	32	170	32	32	50.0	4.00	25(23)	50	GCM □4000-□□	1			
R/L3232P-525	●	●	32	32	170	32	32	50.0	5.00	25(23)	50	GCM □5000-□□	1			
R/L3232P-625	●	●	32	32	170	32	32	50.0	6.00	25(23)	50	GCM □6000-□□	1			
R/L3232P-725	●	●	32	32	170	32	32	50.0	7.00	25(23)	50	GCM □7000-□□	1			
R/L3232P-825	●	●	32	32	170	32	32	50.0	8.00	25(23)	50	GCM □8000-□□	1			

Select holders and inserts with matching width of cut (CW). Dimensions in parentheses under maximum groove depth are for profiling inserts (RG type / RN type chipbreakers). Refer to P29 for applicable inserts. The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.



External L-Shaped (Side Cut), Grooving
Clamp-on

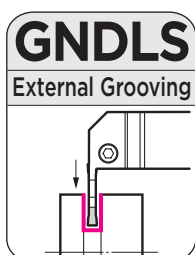


Fig 1

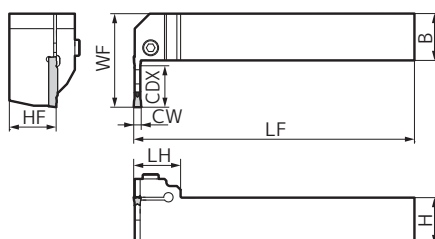


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Head Length LH	Width of Cut CW	Maximum Groove Depth CDX	Applicable Insert	Fig	Cap Screw		Wrench
	R	L												N-m 	
GNDLS R/L2020K-216	●	●	20	20	125	38	20	25	2.0	16	GCM □2000-□□	1	BX0520 	5.0	LH040
R/L2020K-316	●	●	20	20	125	38	20	25	3.0	16	GCM □3000-□□	1			
GNDLS R/L2525M-218	●	●	25	25	150	45	25	25	2.0	18	GCM □2000-□□	1	BX0520 	5.0	LH040
R/L2525M-318	●	●	25	25	150	45	25	25	3.0	18	GCM □3000-□□	1			
R/L2525M-423	●	●	25	25	150	50	25	25	4.0	23	GCM □4000-□□	1			
R/L2525M-523	●	●	25	25	150	50	25	25	5.0	23	GCM □5000-□□	1			
R/L2525M-623	●	●	25	25	150	50	25	25	6.0	23	GCM □6000-□□	1			

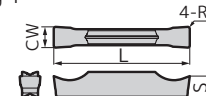
Select holders and inserts with matching width of cut (CW). Refer to P29 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

● mark: Standard stocked item Blank: Made-to-order item Recommended Tightening Torque (N·m)

(Coated Carbide / Cermet / Cemented Carbide / DLC)

Fig 4



Dimensions (mm)

Cat. No.	AC8035P	AC830P	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Lead Angle	Width of Cut CW		Corner Radius	Overall Length			thickness	Pcs/Pack	Fig
									Width of Cut	Tolerance		RE	L	S			
GCM R2002- CG-05	●	▲	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	2		
L2002- CG-05	●	▲	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		2		
GCM R3002- CG-05	●	▲	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		2		
L3002- CG-05	●	▲	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		2		
GCM R4002- CG-05	●	▲	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	2	2		
L4002- CG-05	●	▲	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		2		
GCM R20003- CF-10	—	—	●	●	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	5	2		
L20003- CF-10	—	—	●	●	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		2		
GCM R30003- CF-10	—	—	●	●	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		2		
L30003- CF-10	—	—	●	●	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		2		
GCM R20003- CF-15	—	—	●	●	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6	5	2		
L20003- CF-15	—	—	●	●	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		2		
GCM R30003- CF-15	—	—	●	●	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		2		
L30003- CF-15	—	—	●	●	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		2		

GCM R: Right-handed, GCM L: Left-handed

Dimensions (mm)

Dimensions (mm)

Dimensions (mm)

Dimensions (mm)

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving /	MG	Multi-functional / General-purpose	Cut-off /	CG	Cut-off / General-purpose
Traverse Cutting	ML	Multi-functional / Low feed	(Handed Edge)	CF	Cut-off / Low cutting force
	GG	Grooving / General-purpose	External Profiling / External Radius Grooving	RG	Profiling / General-purpose
Grooving /	GL	Grooving / Low feed	Profiling / Radius Grooving / Necking	GN	Facing / Necking / General-purpose
Cut-off	GF	Grooving / Low cutting force	For Non-Ferrous Metals	GA	Non-Ferrous Metals / General-purpose

Chipbreaker Selection  P5 Precautions for Use  P14 Recommended Cutting Conditions  P11

Select holders and inserts with matching width of cut (CW). Not usable with GNDXL type / GNDIS type holders.

● mark: Standard stocked item ● mark: Standard stocked item (new product/expanded item) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability) Blank: Made-to-order item —mark: Not available



External Deep Grooving and Cut-Off
Internal Coolant Supply,
Clamp-on

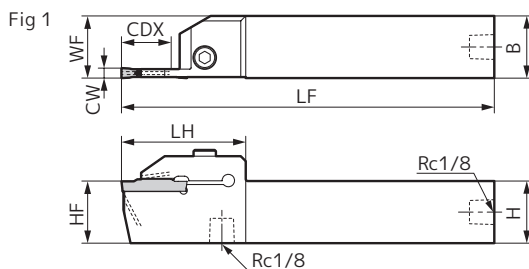
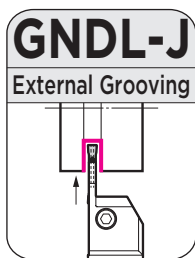


Figure shows right-handed (R) tool.

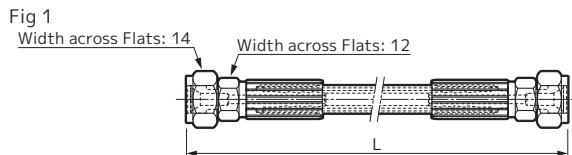
Holder

Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Head LH	Width of Cut CW	Maximum Groove Depth CDX	Max. Cut-off Dia.	Applicable Insert	Fig	Parts		
	R	L												Cap Screw	Plug	Wrench
GNDL R/L2020K-220J	●	●	20	20	125	20	20	44.5	2.00	20(18)	40	GC □ □2000-□ □	1	BX0520	6.0	XP02
R/L2020K-320J	●	●	20	20	125	20	20	44.5	3.00	20(18)	40	GC □ □3000-□ □	1			
R/L2020K-425J	●	●	20	20	125	20	20	50	4.00	25(23)	50	GC □ □4000-□ □	1			
R/L2020K-525J	●	●	20	20	125	20	20	50	5.00	25(23)	50	GC □ N5000-□ □	1			
R/L2020K-625J	●	●	20	20	125	20	20	50	6.00	25(23)	50	GC □ N6000-□ □	1			
GNDL R/L2525K-220J	●	●	25	25	125	25	25	44.5	2.00	20(18)	40	GC □ □2000-□ □	1	BX0520	6.0	XP02
R/L2525K-320J	●	●	25	25	125	25	25	44.5	3.00	20(18)	40	GC □ □3000-□ □	1			
R/L2525K-425J	●	●	25	25	125	25	25	50	4.00	25(23)	50	GC □ □4000-□ □	1			
R/L2525K-525J	●	●	25	25	125	25	25	50	5.00	25(23)	50	GC □ N5000-□ □	1			
R/L2525K-625J	●	●	25	25	125	25	25	50	6.00	25(23)	50	GC □ N6000-□ □	1			

Select holders and inserts with matching width of cut (CW). Dimensions in parentheses under maximum groove depth are for profiling inserts (RG type / RN type chipbreakers).

Refer to P31 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

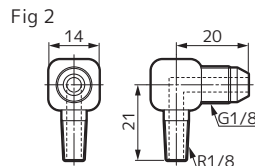
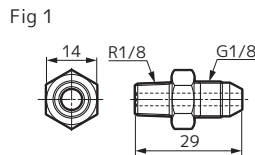


Parts (Hose)

Cat. No.	Stock	L	Screw Standard	Screw Standard	Fig
J-HOSE-G1/8-G1/8-200	●	200	G1/8	G1/8	1
J-HOSE-G1/8-G1/8-300	●	300	G1/8	G1/8	1

Hoses are sold separately.

Piping Method for Hoses and Connectors **P15**



Parts (Connector)

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.

Piping Method for Hoses and Connectors **P15**



Inserts for GNDL-J type

 Coated Carbide / Cermet / Cemented Carbide / DLC

Fig 1

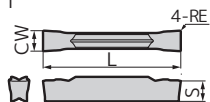


Fig 2 (Figure shows right-handed (R) tool.)

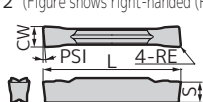


Fig 3

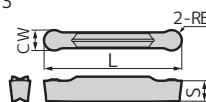
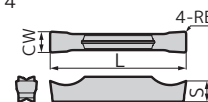


Fig 4



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE	L	S			
GCM N3002-MG	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-MG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-MG	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.2	26.4	4.0	1	1	1
N4004-MG	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.4	26.4	4.0	1	1	1
N4008-MG	●	●	▲	●	●	●	●	●	●	4.0	±0.03	0.8	26.4	4.0	5	1	1
GCM N5004-MG	●	●	●	●	●	●	●	●	●	5.0	±0.03	0.4	26.4	4.1	1	1	1
N5008-MG	●	●	▲	●	●	●	●	●	●	5.0	±0.03	0.8	26.4	4.1	1	1	1
GCM N6004-MG	●	●	●	●	●	●	●	●	●	6.0	±0.03	0.4	26.4	4.5	1	1	1
N6008-MG	●	●	▲	●	●	●	●	●	●	6.0	±0.03	0.8	26.4	4.5	1	1	1
GCM N2002-ML	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1	1
N3002-ML	—	—	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-ML	—	—	●	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-ML	—	—	●	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	1	1	1
N4004-ML	—	—	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	5	1	1
N4008-ML	—	—	●	—	—	—	—	—	—	4.0	±0.03	0.8	26.4	4.0	1	1	1
GCM N5004-ML	—	—	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1	1
N5008-ML	—	—	●	—	—	—	—	—	—	5.0	±0.03	0.8	26.4	4.1	1	1	1
GCM N6004-ML	—	—	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1	1
N6008-ML	—	—	●	—	—	—	—	—	—	6.0	±0.03	0.8	26.4	4.5	1	1	1

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE	L	S			
GCM N2002-GG	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1	1
GCM N3002-GG	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-GG	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-GG	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	1	1	1
N4004-GG	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	5	1	1
GCM N5002-GG	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	1	1	1
N5004-GG	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1	1
GCM N6002-GG	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1	1
N6004-GG	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1	1
GCM N2002-GL	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1	1
N2004-GL	—	●	▲	—	—	—	—	—	—	2.0	±0.03	0.4	21.1	3.6	1	1	1
GCM N3002-GL	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-GL	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-GL	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	5	1	1
N4004-GL	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	1	1	1
GCM N5002-GL	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	1	1	1
N5004-GL	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1	1
GCM N6002-GL	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1	1
N6004-GL	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1	1
GCM N12500S-GF	—	—	—	—	—	—	—	—	—	1.25	±0.03	0.05	17.4	3.2	1	1	1
GCM N15000S-GF	—	—	—	—	—	—	—	—	—	1.5	±0.03	0.05	17.8	3.7	1	1	1
GCM N2002-GF	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	1	1	1
N2004-GF	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.4	21.1	3.6	1	1	1
GCM N3002-GF	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	1	1	1
N3004-GF	—	●	▲	—	—	—	—	—	—	3.0	±0.03	0.4	21.1	3.8	1	1	1
GCM N4002-GF	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.2	26.4	4.0	5	1	1
N4004-GF	—	●	▲	—	—	—	—	—	—	4.0	±0.03	0.4	26.4	4.0	1	1	1
GCM N5002-GF	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.2	26.4	4.1	1	1	1
N5004-GF	—	●	▲	—	—	—	—	—	—	5.0	±0.03	0.4	26.4	4.1	1	1	1
GCM N6002-GF	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.2	26.4	4.5	1	1	1
N6004-GF	—	●	▲	—	—	—	—	—	—	6.0	±0.03	0.4	26.4	4.5	1	1	1

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	AC1030U	Lead Angle	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
											Width of Cut	Tolerance	RE	L	S			
GCM R2002-CG-05	●	▲	●	●	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	2	2	2
L2002-CG-05	—	—	—	—	—	—	—	—	—	5°	2.0	±0.03	0.2	21.1	3.6	2	2	2
GCM R3002-CG-05	●	▲	●	●	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8	5	2	2
L3002-CG-05	—	—	—	—	—	—	—	—	—	5°	3.0	±0.03	0.2	21.3	3.8	2	2	2
GCM R4002-CG-05	●	▲	●	●	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	2	2	2
L4002-CG-05	—	—	—	—	—	—	—	—	—	5°	4.0	±0.04	0.2	26.7	4.0	2	2	2
GCM R20003-CF-10	—	—	—	—	—	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	2	2	2
L20003-CF-10	—	—	—	—	—	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	2	2	2
GCM R30003-CF-10	—	—	—	—	—	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8	2	2	2
L30003-CF-10	—	—	—	—	—	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8	5	2	2
GCM R20003-CF-15	—	—	—	—	—	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6	2	2	2
L20003-CF-15	—	—	—	—	—	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6	2	2	2
GCM R30003-CF-15	—	—	—	—	—	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8	2	2	2
L30003-CF-15	—	—	—	—	—	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8	2	2	2

GCM R: Right-handed, GCM L: Left-handed

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE	L	S			
GCM N3015-RG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	3	3
N4020-RG	●	●	▲	●	●	●	●	●	●	4.0	±0.03	2.0	26.4	4.0	5	3	3
GCM N5025-RG	●	●	▲	●	●	●	●	●	●	5.0	±0.03	2.5	27.2	4.1	3	3	3
N6030-RG	●	●	▲	●	●	●	●	●	●	6.0	±0.03	3.0	27.5	4.5	3	3	3

Profiling / Radius Grooving / Necking

Dimensions (mm)

||
||
||



External Deep Grooving and Cut-off
Clamp-on

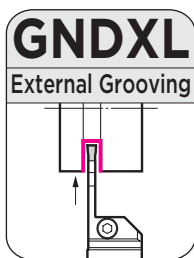


Fig 1

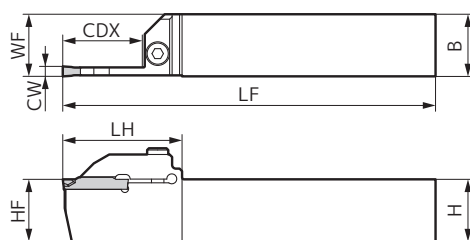


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

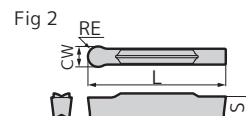
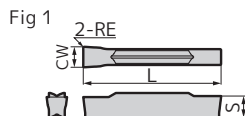
Cat. No.	Stock		Height H	Width B	Overall Length LF	Cutting Edge Distance WF	Cutting Edge Height HF	Head LH	Width of Cut CW	Maximum Groove Depth CDX	Max. Cut-off Dia.	Applicable Insert	Fig	Cap Screw		Wrench
	R	L														
GNDXL R/L2020K-226			20	20	125	20	20	42.0	2.0	26	52	GCM N2002-GF1	1	BX0520	5.0	LH040
R/L2020K-332	●	●	20	20	125	20	20	48.0	3.0	32	64	GCM N3000-□□1	1			
R/L2020K-432	●	●	20	20	125	20	20	48.0	4.0	32	64	GCM N4000-□□1	1			
R/L2020K-532	●	●	20	20	125	20	20	48.0	5.0	32	64	GCM N5000-□□1	1			
R/L2020K-632	●	●	20	20	125	20	20	48.0	6.0	32	64	GCM N6000-□□1	1			
GNDXL R/L2525M-226			25	25	150	25	25	42.0	2.0	26	52	GCM N2002-GF1	1	BX0520	5.0	LH040
R/L2525M-332	●	●	25	25	150	25	25	48.0	3.0	32	64	GCM N3000-□□1	1			
R/L2525M-432	●	●	25	25	150	25	25	48.0	4.0	32	64	GCM N4000-□□1	1			
R/L2525M-532	●	●	25	25	150	25	25	48.0	5.0	32	64	GCM N5000-□□1	1			
R/L2525M-632	●	●	25	25	150	25	25	48.0	6.0	32	64	GCM N6000-□□1	1			

Select holders and inserts with matching width of cut (CW). Only 1-cornered inserts can be used. Refer to P33 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

Inserts for GNDXL type (1-cornered)

(Coated Carbide)



Grooving / Traverse Cutting (1-cornered)

Dimensions (mm)

Cat. No.	AC5015S	AC5025S	AC530U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
				Width of Cut	Tolerance					
GCM N3002-ML1	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
N4004-ML1	●	●	●	4.0	±0.03	0.4	26.4	4.0		1
N5004-ML1	●	●	●	5.0	±0.03	0.4	26.4	4.1		1
N6004-ML1	●	●	●	6.0	±0.03	0.4	26.4	4.5		1

Profiling / Radius Grooving (1-cornered)

Dimensions (mm)

Cat. No.	AC5015S	AC5025S	AC530U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
				Width of Cut	Tolerance					
GCM N3015-RN1	●	●	●	3.0	±0.03	1.5	22.6	3.8	5	2
N4020-RN1				4.0	±0.03	2.0	28.2	4.0		2
N5025-RN1				5.0	±0.03	2.5	28.3	4.1		2
N6030-RN1	●	●	●	6.0	±0.03	3.0	28.3	4.5		2

Grooving / Cut-off (1-cornered)

Dimensions (mm)

Cat. No.	AC5015S	AC5025S	AC530U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
				Width of Cut	Tolerance					
GCM N2002-GF1				2.0	±0.03	0.2	21.1	3.6	5	1
N3002-GF1	●	●	●	3.0	±0.03	0.2	21.1	3.8		1
N4002-GF1	●	●	●	4.0	±0.03	0.2	26.4	4.0		1
N5002-GF1	●	●	●	5.0	±0.03	0.2	26.4	4.1		1
N6002-GF1	●	●	●	6.0	±0.03	0.2	26.4	4.5		1

Select holders and inserts with matching width of cut (CW). Use in combination with GNDXL type holders. Not usable with GNDIS type holders.

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	ML1	Multi-functional / Low feed	Profiling / Radius Grooving	RN1	General-purpose
Grooving / Cut-off	GF1	Grooving / Low cutting force			

Chipbreaker Selection **P5** Precautions for Use **P14** Recommended Cutting Conditions **P11**

Note: Dimensions in red have changed from those in Tooling News No.492 GND series (Rev. 17).

● mark: Standard stocked item Blank: Made-to-order item

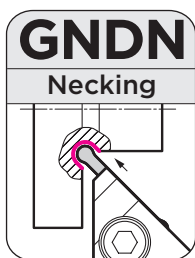
Necking
Clamp-on

Fig 1

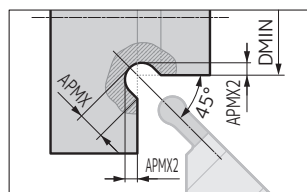
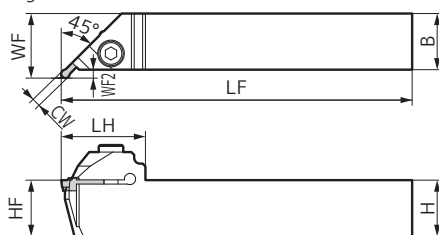


Figure shows right-handed (R) tool.

Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height	Width	Overall Length	Cutting Edge Distance	Cutting Edge Height	Head	Offset	Min. Bore Dia.	Width of Cut	APMX	APMX2	Applicable Insert	Fig	Cap Screw		Wrench
	R	L																
GNDN R/L2020K-215-020	●	●	20	20	125	23	20	35	3.0	20	2.0	1.5	0.64	GCM N2010-RN	1	BX0520	5.0	LH040
R/L2020K-320-020	●	●	20	20	125	23	20	35	3.0	20	3.0	2.0	0.79	GCM N3015-RN	1			
R/L2020K-430-030	●	●	20	20	125	24	20	37	4.0	30	4.0	3.0	1.29	GCM N4020-RN	1			
R/L2020K-535-030	●	●	20	20	125	25	20	40	5.0	30	5.0	3.5	1.44	GCM N5025-RN	1			
R/L2020K-640-030	●	●	20	20	125	25	20	40	5.0	30	6.0	4.0	1.59	GCM N6030-RN	1	BX0520	5.0	LH040
GNDN R/L2525M-215-020	●	●	25	25	150	28	25	35	3.0	20	2.0	1.5	0.64	GCM N2010-RN	1			
R/L2525M-320-020	●	●	25	25	150	28	25	35	3.0	20	3.0	2.0	0.79	GCM N3015-RN	1			
R/L2525M-430-030	●	●	25	25	150	29	25	37	4.0	30	4.0	3.0	1.29	GCM N4020-RN	1			
R/L2525M-535-030	●	●	25	25	150	30	25	40	5.0	30	5.0	3.5	1.44	GCM N5025-RN	1	BX0520	5.0	LH040
R/L2525M-640-030	●	●	25	25	150	30	25	40	5.0	30	6.0	4.0	1.59	GCM N6030-RN	1			

Select holders and inserts with matching width of cut (CW). Refer to P35 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

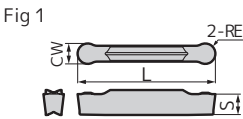
Identification Code

GND N R 20 20 K - 2 15 - 020

Series Code Application Feed Shank Shank Shank Width APMX Min. Bore
Symbol Height Direction Height Width Length of Cut x10 (mm) Dia. (mm)
: Necking (mm) (mm) (mm) (mm) (mm)

Inserts for GNDN type

(Coated Carbide)



Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
									Width of Cut	Tolerance					
GCM N2010-RN									2.0	±0.03	1.0	21.7	3.6	5	1
N3015-RN									3.0	±0.03	1.5	22.6	3.8		1
N4020-RN									4.0	±0.03	2.0	28.2	4.0		1
N5025-RN									5.0	±0.03	2.5	28.3	4.1		1
N6030-RN									6.0	±0.03	3.0	28.3	4.5		1

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application
Profiling / Radius Grooving / Necking	RN	Facing / Necking / General-purpose

Chipbreaker Selection **P5** Precautions for Use **P14** Recommended Cutting Conditions **P11**

Select holders and inserts with matching width of cut (CW). Not usable with GNDXL type / GNDIS type holders.

● mark: Standard stocked item —mark: Not available



*For traverse cutting (groove expansion), use a multi-functional or profiling insert.

Face Grooving
Clamp-on

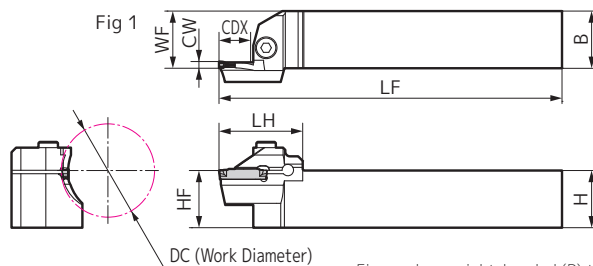
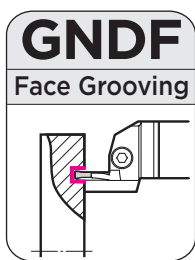
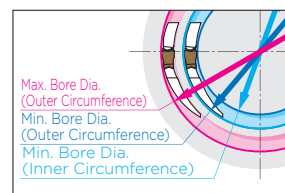


Figure shows right-handed (R) tool.
Use a right-handed (R) tool for reverse rotation.



Holder

Parts

Dimensions (mm)

Cat. No.	Stock		Height	Width	Overall Length	Cutting Edge Distance	Cutting Edge Height	Head	Work Dia.	Min. Bore Dia. Inner Circumference	Width of Cut	Maximum Groove Depth	Applicable Insert	Fig	Cap Screw		Wrench
	R	L															
GNDF R/L2020K-312-035	●	●	20	20	125	20	20	35.6	35 to 45	29	3.0	12	GC□ N300□-□□	1	BX0520	5.0	LH040
R/L2020K-312-040	●	●	20	20	125	20	20	35.6	40 to 55	34	3.0	12		1			
R/L2020K-318-050	●	●	20	20	125	20	20	41.6	50 to 70	44	3.0	18		1			
R/L2020K-318-065	●	●	20	20	125	20	20	41.6	65 to 100	59	3.0	18		1			
R/L2020K-318-090	●	●	20	20	125	20	20	41.6	90 to 150	84	3.0	18		1			
R/L2020K-318-140	●	●	20	20	125	20	20	41.6	140 to 200	134	3.0	18		1			
R/L2020K-318-180	●	●	20	20	125	20	20	41.6	180 to 300	174	3.0	18		1			
GNDF R/L2020K-418-040	●	●	20	20	125	20	20	41.6	40 to 55	32	4.0	18	GC□ N400□-□□	1	BX0520	5.0	LH040
R/L2020K-423-050	●	●	20	20	125	20	20	46.6	50 to 70	42	4.0	23		1			
R/L2020K-423-065	●	●	20	20	125	20	20	46.6	65 to 90	57	4.0	23		1			
R/L2020K-423-085	●	●	20	20	125	20	20	46.6	85 to 130	77	4.0	23		1			
R/L2020K-423-125	●	●	20	20	125	20	20	46.6	125 to 200	117	4.0	23		1			
R/L2020K-423-180	●	●	20	20	125	20	20	46.6	180 to 300	172	4.0	23		1			
R/L2020K-423-280	●	●	20	20	125	20	20	46.6	280 to 1000	272	4.0	23		1			
GNDF R/L2020K-523-050	●	●	20	20	125	20	20	46.6	50 to 70	40	5.0	23	GC□ N500□-□□	1	BX0520	5.0	LH040
R/L2020K-523-065	●	●	20	20	125	20	20	46.6	65 to 90	55	5.0	23		1			
R/L2020K-523-085	●	●	20	20	125	20	20	46.6	85 to 130	75	5.0	23		1			
R/L2020K-523-125	●	●	20	20	125	20	20	46.6	125 to 200	115	5.0	23		1			
R/L2020K-523-180	●	●	20	20	125	20	20	46.6	180 to 300	170	5.0	23		1			
R/L2020K-523-280	●	●	20	20	125	20	20	46.6	280 to 1000	270	5.0	23		1			
GNDF R/L2020K-623-050	●	●	20	20	125	20	20	46.6	50 to 75	38	6.0	23	GC□ N600□-□□	1	BX0520	5.0	LH040
R/L2020K-623-070	●	●	20	20	125	20	20	46.6	70 to 110	58	6.0	23		1			
R/L2020K-623-100	●	●	20	20	125	20	20	46.6	100 to 200	88	6.0	23		1			
R/L2020K-623-180	●	●	20	20	125	20	20	46.6	180 to 300	168	6.0	23		1			
R/L2020K-623-280	●	●	20	20	125	20	20	46.6	280 to 1000	268	6.0	23		1			
GNDF R/L2525M-312-035	●	●	25	25	150	25	25	35.6	35 to 45	29	3.0	12	GC□ N300□-□□	1	BX0520	5.0	LH040
R/L2525M-312-040	●	●	25	25	150	25	25	35.6	40 to 55	34	3.0	12		1			
R/L2525M-318-050	●	●	25	25	150	25	25	41.6	50 to 70	44	3.0	18		1			
R/L2525M-318-065	●	●	25	25	150	25	25	41.6	65 to 100	59	3.0	18		1			
R/L2525M-318-090	●	●	25	25	150	25	25	41.6	90 to 150	84	3.0	18		1			
R/L2525M-318-140	●	●	25	25	150	25	25	41.6	140 to 200	134	3.0	18		1			
R/L2525M-318-180	●	●	25	25	150	25	25	41.6	180 to 300	174	3.0	18		1			
GNDF R/L2525M-418-040	●	●	25	25	150	25	25	41.6	40 to 55	32	4.0	18	GC□ N400□-□□	1	BX0520	5.0	LH040
R/L2525M-423-050	●	●	25	25	150	25	25	46.6	50 to 70	42	4.0	23		1			
R/L2525M-423-065	●	●	25	25	150	25	25	46.6	65 to 90	57	4.0	23		1			
R/L2525M-423-085	●	●	25	25	150	25	25	46.6	85 to 130	77	4.0	23		1			
R/L2525M-423-125	●	●	25	25	150	25	25	46.6	125 to 200	117	4.0	23		1			
R/L2525M-423-180	●	●	25	25	150	25	25	46.6	180 to 300	172	4.0	23		1			
R/L2525M-423-280	●	●	25	25	150	25	25	46.6	280 to 1000	272	4.0	23		1			
GNDF R/L2525M-523-050	●	●	25	25	150	25	25	46.6	50 to 70	40	5.0	23	GC□ N500□-□□	1	BX0520	5.0	LH040
R/L2525M-523-065	●	●	25	25	150	25	25	46.6	65 to 90	55	5.0	23		1			
R/L2525M-523-085	●	●	25	25	150	25	25	46.6	85 to 130	75	5.0	23		1			
R/L2525M-523-125	●	●	25	25	150	25	25	46.6	125 to 200	115	5.0	23		1			
R/L2525M-523-180	●	●	25	25	150	25	25	46.6	180 to 300	170	5.0	23		1			
R/L2525M-523-280	●	●	25	25	150	25	25	46.6	280 to 1000	270	5.0	23		1			
GNDF R/L2525M-623-050	●	●	25	25	150	25	25	46.6	50 to 75	38	6.0	23	GC□ N600□-□□	1	BX0520	5.0	LH040
R/L2525M-623-070	●	●	25	25	150	25	25	46.6	70 to 110	58	6.0	23		1			
R/L2525M-623-100	●	●	25	25	150	25	25	46.6	100 to 200	88	6.0	23		1			
R/L2525M-623-180	●	●	25	25	150	25	25	46.6	180 to 300	168	6.0	23		1			
R/L2525M-623-280	●	●	25	25	150	25	25	46.6	280 to 1000	268	6.0	23		1			

Select holders and inserts with matching width of cut (CW). Refer to P37 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.



Inserts for GNDF type

(Coated Carbide / Cermet / Cemented Carbide / DLC)

Fig 1

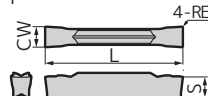


Fig 2

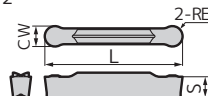
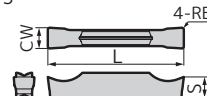


Fig 3



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.		AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
											Width of Cut	Tolerance					
GCM N3002-MG	●	●	●	●	●	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-MG	●	●	▲	●	●	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		1
GCM N4002-MG	●	●	●	●	●	●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		1
N4004-MG	●	●	●	●	●	●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1
N4008-MG	●	●	▲	●	●	●	●	●	●	—	4.0	±0.03	0.8	26.4	4.0		1
GCM N5004-MG	●	●	●	●	●	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	5	1
N5008-MG	●	●	▲	●	●	●	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		1
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		1
GCM N3002-ML	●	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8		5
N3004-ML	●	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	1	
GCM N4002-ML	●	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.2	26.4	4.0	1	
N4004-ML	●	●	▲	●	●	●	●	●	●	●	4.0	±0.03	0.4	26.4	4.0	1	
N4008-ML	●	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.8	26.4	4.0	1	
GCM N5004-ML	●	●	●	▲	●	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	5	1
N5008-ML	●	●	●	●	●	●	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		1
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		1

Grooving / Cut-off

Dimensions (mm)

Cat. No.		AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
											Width of Cut	Tolerance					
GCM N3002-GG		●	▲			●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GG		●	▲			●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		1
GCM N4002-GG		●	▲			●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		1
N4004-GG		●	▲			●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1
GCM N5002-GG		●	▲			●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1
N5004-GG		●	▲			●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	1	
GCM N6002-GG		●	▲			●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5	1	
N6004-GG		●	▲			●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	1	
GCM N3002-GL		●	▲			●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GL		●				●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		1
GCM N4002-GL		●	▲			●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		1
N4004-GL		●				●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1
GCM N5002-GL		●	▲			●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1
N5004-GL		●				●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	1	
GCM N6002-GL		●	▲			●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5	1	
N6004-GL		●				●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	1	
GCM N3002-GF		●	▲			●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
N3004-GF		●				●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8		1
GCM N4002-GF		●	▲			●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		1
N4004-GF		●				●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1
GCM N5002-GF		●	▲			●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1
N5004-GF		●				●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	1	
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	1	

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
									Width of Cut	Tolerance					
GCM N3015-RN	●	●	▲	●	●	●	●	●	3.0	±0.03	1.5	22.6	3.8	5	2
N4020-RN	●	●	▲	●	●	●	●	●	4.0	±0.03	2.0	28.2	4.0		2
N5025-RN	●	●	▲	●	●	●	●	●	5.0	±0.03	2.5	28.3	4.1		2
N6030-RN	●	●	▲	●	●	●	●	●	6.0	±0.03	3.0	28.3	4.5		2

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H10	DL1500						Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
								Width of Cut	Tolerance	RE	L	S		
GCG N3002-GA	●	●						3.0	±0.025	0.2	21.1	3.8	5	3
GCG N4004-GA	●	●						4.0	±0.025	0.4	26.4	4.0		3
N5004-GA	●	●						5.0	±0.025	0.4	26.4	4.1		3
N6004-GA	●	●						6.0	±0.025	0.4	26.4	4.5		3

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	MG	Multi-functional / General-purpose	Profiling / Radius Grooving / Necking	RN	Facing / Necking / General-purpose
	ML	Multi-functional / Low feed	For Non-Ferrous Metals	GA	Non-Ferrous Metals / General-purpose
Grooving / Cut-off	GG	Grooving / General-purpose			
	GL	Grooving / Low feed			
	GF	Grooving / Low cutting force			

Chipbreaker Selection **P5** Precautions for Use **P14** Recommended Cutting Conditions **P11**

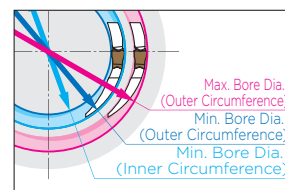
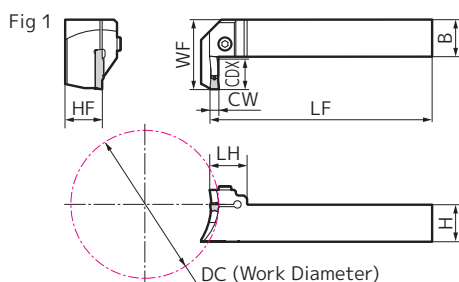
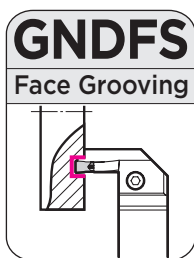
Select holders and inserts with matching width of cut (CW). Not usable with GNDXL type / GNDIS type holders.

● mark: Standard stocked item ● mark: Standard stocked item (new product/expanded item) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability) Blank: Made-to-order item —mark: Not available



*For traverse cutting (groove expansion), use a multi-functional or profiling insert.

Deep Face Grooving L-Shaped (Side Cut) Clamp-on



Holder

Figure shows right-handed (R) tool.

Parts

Dimensions (mm)

Cat. No.	Stock		Height	Width	Overall Length	Cutting Edge Distance	Cutting Edge Height	Head	Work Dia.	Min. Bore Dia. Inner Circumference	Width of Cut	Maximum Groove Depth	Applicable Insert	Fig	Cap Screw		Wrench
	R	L	H	B	LF	WF	HF	LH	DC		CW	CDX			BX0520	BX0620	
GNDFS R/L2525M-620-070			25	25	150	47	25	25	70 to 100	58	6.0	20	GC□ N60□□-□□	1	BX0520	5.0	LH040
R/L2525M-620-100			25	25	150	47	25	25	100 to 200	88	6.0	20		1			
R/L2525M-620-180			25	25	150	47	25	25	180 to 300	168	6.0	20		1			
R/L2525M-620-280			25	25	150	47	25	25	280 to 1000	268	6.0	20		1			
R/L2525M-620-450			25	25	150	47	25	25	450 up	438	6.0	20		1			
GNDFS R/L3232P-620-070			32	32	170	54	32	25	70 to 100	58	6.0	20	GC□ N60□□-□□	1	BX0620	6.0	LH050
R/L3232P-620-100			32	32	170	54	32	25	100 to 200	88	6.0	20		1			
R/L3232P-620-180			32	32	170	54	32	25	180 to 300	168	6.0	20		1			
R/L3232P-620-280			32	32	170	54	32	25	280 to 1000	268	6.0	20		1			
R/L3232P-620-450			32	32	170	54	32	25	450 up	438	6.0	20		1			
GNDFS R/L2525M-820-070			25	25	150	47	25	30	70 to 100	54	8.0	20	GCM N80□□-□□	1	BX0620	6.0	LH050
R/L2525M-820-100			25	25	150	47	25	30	100 to 200	84	8.0	20		1			
R/L2525M-820-180			25	25	150	47	25	30	180 to 300	164	8.0	20		1			
R/L2525M-820-280			25	25	150	47	25	30	280 to 1000	264	8.0	20		1			
R/L2525M-820-450			25	25	150	47	25	30	450 up	434	8.0	20		1			
GNDFS R/L3232P-820-070			32	32	170	54	32	30	70 to 100	54	8.0	20	GCM N80□□-□□	1	BX0620	6.0	LH050
R/L3232P-820-100			32	32	170	54	32	30	100 to 200	84	8.0	20		1			
R/L3232P-820-180			32	32	170	54	32	30	180 to 300	164	8.0	20		1			
R/L3232P-820-280			32	32	170	54	32	30	280 to 1000	264	8.0	20		1			
R/L3232P-820-450			32	32	170	54	32	30	450 up	434	8.0	20		1			

Select holders and inserts with matching width of cut (CW). Refer to P39 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.



Inserts for GNDFS type

(Coated Carbide / Cermet / Cemented Carbide / DLC)

Fig 1

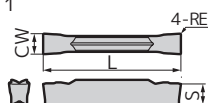


Fig 2

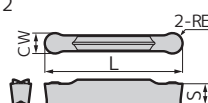
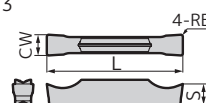


Fig 3



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.		AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
											Width of Cut	Tolerance					
GCM N6004-MG	●	●	●	●	●	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	5	1
N6008-MG	●	●	▲	●	●	●	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		1
GCM N8004-MG	●	●	●	●	●	●	●	●	●	—	8.0	±0.04	0.4	28.8	6.0	5	1
N8008-MG	●	●	▲	●	●	●	●	●	●	—	8.0	±0.04	0.8	28.8	6.0		1
GCM N6004-ML	●	●	▲	●	●	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	5	1
N6008-ML	●	●	●	●	●	●	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		1
GCM N8004-ML	●	●	▲	●	●	●	●	●	●	—	8.0	±0.04	0.4	28.8	6.0	5	1
N8008-ML	●	●	●	●	●	●	●	●	●	—	8.0	±0.04	0.8	28.8	6.0		1

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance					
GCM N6002-GG	●	●	▲	●	●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5	5	1
N6004-GG	●	●	▲	●	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		1
GCM N8004-GG	●	●	●	●	●	●	●	●	—	8.0	±0.04	0.4	28.8	6.0	5	1
GCM N6002-GL	●	●	▲	●	●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		1
N6004-GL	●	●	●	●	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	5	1
GCM N8004-GL	●	●	▲	●	●	●	●	●	—	8.0	±0.04	0.4	28.8	6.0		1
GCM N6002-GF	●	●	▲	●	●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5	5	1
N6004-GF	●	●	●	●	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		1
GCM N8002-GF	●	●	▲	●	●	●	●	●	—	8.0	±0.04	0.2	28.8	6.0	5	1
N8004-GF	●	●	●	●	●	●	●	●	—	8.0	±0.04	0.4	28.8	6.0		1

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
									Width of Cut	Tolerance					
GCM N6030-RN	●	●	▲	●	●	●	●	●	6.0	+0.03	3.0	28.3	4.5	5	2

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H10	DL 1500						Width of Cut CW		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
								Width of Cut	Tolerance	RE	L	S		
										6.0	+0.025	0.4		
GCG N6004-GA	●	●											5	3

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving / Traverse Cutting	MG	Multi-functional / General-purpose	Profiling / Radius Grooving / Necking	RN	Facing / Necking / General-purpose
	ML	Multi-functional / Low feed	For Non-Ferrous Metals	GA	Non-Ferrous Metals / General-purpose
Grooving / Cut-off	GG	Grooving / General-purpose			
	GL	Grooving / Low feed			
	GF	Grooving / Low cutting force			

Chipbreaker Selection **P5** Precautions for Use **P14** Recommended Cutting Conditions **P11**

Select holders and inserts with matching width of cut (CW). Not usable with GNDXL type / GNDIS type holders.

● mark: Standard stocked item ● mark: Standard stocked item (new product/expanded item) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability) Blank: Made-to-order item —mark: Not available



Internal Grooving
Clamp-on

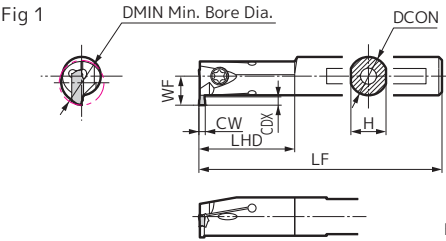
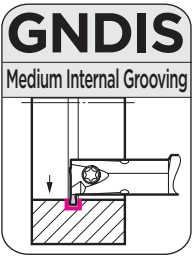


Figure shows right-handed (R) tool.

Holder

Parts Dimensions (mm)

Cat. No.	Stock		Diameter	Height	Overall Length	Head	Cutting Edge Distance	Min. Bore Dia.	Width of Cut	Maximum Groove Depth	Applicable Insert	Fig	Flat Head Screw		Wrench
	R	L													
GNDIS R/L1214-T1526	●	●	12	11	150	30	9.0	14	1.5	2.6	GXM N150005S-GF	1			LT15
R/L1214-T1536	●	●	12	11	150	30	10.0	14	1.5	3.6		1			
R/L1616-T1536	●	●	16	15	160	35	11.5	16	1.5	3.6		1			
GNDIS R/L1620-T1546	●	●	16	15	160	40	14.5	20	1.5	4.6	GXM N2002S-□□	1			LT20
R/L2025-T1566	●	●	20	19	180	40	19.0	25	1.5	6.6		1			
GNDIS R/L1214-T2026	●	●	12	11	150	30	9.0	14	2.0	2.6		1			
R/L1214-T2036	●	●	12	11	150	30	10.0	14	2.0	3.6	GXM N3002S-□□	1			LT15
R/L1616-T2036	●	●	16	15	160	35	11.5	16	2.0	3.6		1			
GNDIS R/L1620-T2046	●	●	16	15	160	40	14.5	20	2.0	4.6		1			
R/L2025-T2066	●	●	20	19	180	40	19.0	25	2.0	6.6	GXM N3002S-□□	1			LT20
GNDIS R/L1214-T3026	●	●	12	11	150	30	9.0	14	3.0	2.6		1			
R/L1214-T3036	●	●	12	11	150	30	10.0	14	3.0	3.6		1			
R/L1616-T3036	●	●	16	15	160	35	11.5	16	3.0	3.6	GXM N3002S-□□	1			LT15
GNDIS R/L1620-T3046	●	●	16	15	160	40	14.5	20	3.0	4.6		1			
R/L2025-T3066	●	●	20	19	180	40	19.0	25	3.0	6.6		1			LT20

Select holders and inserts with matching width of cut (CW). **Only GXM inserts can be used.** Refer to P41 for applicable inserts.
The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P41.

Identification Code

GND IS R 12 14 - T 15 26

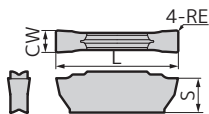
Series Code	Application Symbol:	Feed Direction	Shank Dia. (mm)	Min. Bore Dia. (mm)	For Internal Grooving	Width of Cut x 10 (mm)	Maximum Groove Depth x 10 (mm)
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Inserts for GNDIS type

(Coated Carbide)

Fig 1



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC5015S	AC5025S	AC520U	AC1030U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
					Width of Cut	Tolerance					
GXM N2002S-ML	●	●	●	●	2.0	±0.03	0.2	11.1	3.1	5	1
N3002S-ML	●	●	●	●	3.0	±0.03	0.2	11.1	3.1	5	1

Select holders and inserts with matching width of cut (CW). GCM/GCG inserts are not compatible.

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC5015S	AC5025S	AC520U	AC1030U	Width of Cut CW		Corner Radius RE	Overall Length L	Thickness S	Pcs/Pack	Fig
					Width of Cut	Tolerance					
GXM N150005S-GF	—	—	—	●	1.5	±0.03	0.05	11.1	3.1	5	1
GXM N2002S-GF	●	●	●	●	2.0	±0.03	0.2	11.1	3.1	5	1
N3002S-GF	●	●	●	●	3.0	±0.03	0.2	11.1	3.1	5	1

Recommended Cutting Conditions (GNDIS)

Work Material	P Carbon Steel / Alloy Steel		M Stainless Steel		K Cast Iron		S Exotic Alloy	
Insert Grade	AC5015S	AC5025S	AC5015S	AC5025S	AC5015S	AC5025S	AC5015S	AC5025S
Cutting Speed vc (m/min)	80-200	50-200	70-150	50-150	60-200	50-200	20-80	20-60

Grooving / Cut-off / Necking

Chipbreaker		Feed Rate f (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

Traverse Cutting

Chipbreaker		ML	
		Feed Rate f (mm/rev)	Depth of Cut ap (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

Precautions for Use P14



Internal Grooving
Clamp-on

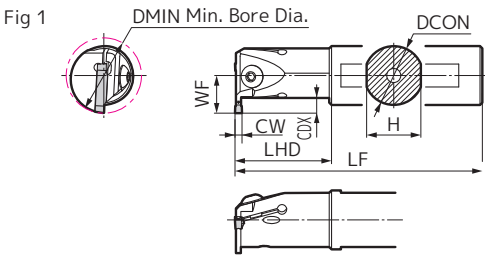
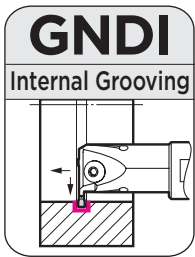


Figure shows right-handed (R) tool.

Holder

Parts Dimensions (mm)

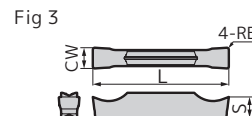
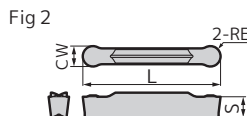
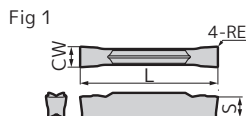
Cat. No.	Stock		Diameter	Height	Head	Overall Length	Cutting Edge Distance	Min. Bore Dia.	Width of Cut	Maximum Groove Depth	Applicable Insert	Fig	Bolt			Wrench
	R	L														
GNDI R/L2532-T206	●	●	25	23	40	200	16	32	2.0	6	GC□ N20○○-□□	1	BH0516	5.0	LH030	
GNDI R/L3240-T210	●	●	32	30	50	250	26	40	2.0	10		1	BH0616	6.0	LH040	
GNDI R/L2532-T306	●	●	25	23	40	200	16	32	3.0	6	GC□ N30○○-□□	1	BH0516	5.0	LH030	
GNDI R/L3240-T310	●	●	32	30	50	250	26	40	3.0	10		1	BH0616	6.0	LH040	
GNDI R/L4050-T311	●	●	40	38	60	300	31	50	3.0	11		1				
GNDI R/L2532-T406	●	●	25	23	40	200	19	32	4.0	6	GC□ N40○○-□□	1	BH0516	5.0	LH030	
GNDI R/L3240-T410	●	●	32	30	50	250	26	40	4.0	10		1	BH0616	6.0	LH040	
GNDI R/L4050-T411	●	●	40	38	60	300	31	50	4.0	11		1				
GNDI R/L2532-T506	●	●	25	23	40	200	19	32	5.0	6	GC□ N50○○-□□	1	BH0516	5.0	LH030	
GNDI R/L3240-T510	●	●	32	30	50	250	26	40	5.0	10		1	BH0616	6.0	LH040	
GNDI R/L4050-T511	●	●	40	38	60	300	31	50	5.0	11		1				
GNDI R/L4050-T611	●	●	40	38	60	300	31	50	6.0	11	GC□ N60○○-□□	1	BH0616	6.0	LH040	

Select holders and inserts with matching width of cut (CW). Refer to P43 for applicable inserts.
The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.



Inserts for GNDI type

(Coated Carbide / Cermet / Cemented Carbide / DLC)



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.		AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW		Corner Radius			Overall Length	Thickness	Pcs/Pack	Fig
											Width of Cut	Tolerance	RE	L	S				
GCM N3002-MG	●	●	●	●	●	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1		
N3004-MG	●	●	▲	●	●	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		1		
GCM N4002-MG	●	●	●	●	●	●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		1		
N4004-MG	●	●	●	●	●	●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1		
N4008-MG	●	●	▲	●	●	●	●	●	●	—	4.0	±0.03	0.8	26.4	4.0	1			
GCM N5004-MG	●	●	●	▲	●	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	1			
N5008-MG	●	●	●	●	●	●	●	●	●	—	5.0	±0.03	0.8	26.4	4.1	1			
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	1			
GCM N2002-ML	—	—	—	—	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	1			
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	1			
GCM N4002-ML	●	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.2	26.4	4.0	1			
N4004-ML	●	●	▲	●	●	●	●	●	●	●	4.0	±0.03	0.4	26.4	4.0	1			
N4008-ML	●	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.8	26.4	4.0	1			
GCM N5004-ML	●	●	▲	●	●	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	1			
N5008-ML	●	●	●	●	●	●	●	●	●	—	5.0	±0.03	0.8	26.4	4.1	1			
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	1			

Profiling / Radius Grooving / Necking

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
									CW	Tolerance					
GCM N2010-RN	—	—	—	—	●	●	●	●	2.0	±0.03	1.0	21.7	3.6	5	2
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		2
N5025-RN	●	●	▲	—	●	●	●	●	5.0	±0.03	2.5	28.3	4.1		2
N6030-RN	●	●	▲	—	●	●	●	●	6.0	±0.03	3.0	28.3	4.5		2

Non-Ferrous Metals

Dimensions (mm)

Cat. No.	H10	DL1500						Width of Cut		Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
								CW	Tolerance					
GCG N2002-GA	●	●						2.0	±0.025	0.2	21.1	3.6	5	3
N3002-GA	●	●						3.0	±0.025	0.2	21.1	3.8		3
GCG N4004-GA	●	●						4.0	±0.025	0.4	26.4	4.0		3
N5004-GA	●	●						5.0	±0.025	0.4	26.4	4.1		3
N6004-GA	●	●						6.0	±0.025	0.4	26.4	4.5	3	

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut		Corner Radius	Overall Length			Thickness	Pcs/Pack	Fig
										CW	Tolerance		RE	L	S			
GCM N2002-GG		●	▲		●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6		5	1	
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			1	
GCM N4002-GG		●	▲		●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0			1	
N4004-GG		●	▲		●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1		
GCM N5002-GG		●	▲		●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1		
N5004-GG		●	▲		●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		1		
GCM N6002-GG		●	▲		●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		1		
N6004-GG		●	▲		●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		1		
GCM N2002-GL		●	▲		●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6		5	1	
N2004-GL		●	●		●	●	●	●	—	2.0	±0.03	0.4	21.1	3.6			1	
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			1	
GCM N4002-GL		●	▲		●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		1		
N4004-GL		●	●		●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		1		
GCM N5002-GL		●	▲		●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1		
N5004-GL		●	●		●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		1		
GCM N6002-GL		●	▲		●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		1		
N6004-GL		●	●		●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		1		
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		1		
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		1		
GCM N4002-GF		●	▲		●	●	●	●	●	4.0	±0.03	0.2	26.4	4.0		1		
N4004-GF		●	●		●	●	●	●	●	4.0	±0.03	0.4	26.4	4.0		1		
GCM N5002-GF		●	▲		●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		1		
N5004-GF		●	●		●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		1		
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		1		

Part Number Suffix Code (Chipbreakers)

Type	Symbol	Application	Type	Symbol	Application
Grooving /	MG	Multi-functional / General-purpose	Profiling / Radius Grooving / Necking	RN	Facing / Necking / General-purpose
Traverse Cutting	ML	Multi-functional / Low feed	For Non-Ferrous Metals	GA	Non-Ferrous Metals / General-purpose
Grooving /	GG	Grooving / General-purpose			
Cut-off	GL	Grooving / Low feed			
	GF	Grooving / Low cutting force			

Chipbreaker Selection **P5** Precautions for Use **P14** Recommended Cutting Conditions **P11**

Select holders and inserts with matching width of cut (CW). Not usable with GNDXL type / GNDIS type holders.

● mark: Standard stocked item ● mark: Standard stocked item (new product/expanded item) ▲ mark: To be replaced by a new product, made to order, or discontinued (please confirm stock availability) Blank: Made-to-order item —mark: Not available

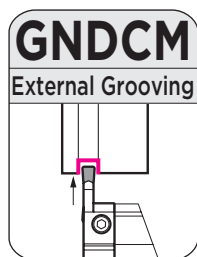
SumiPolygon Cassette for External Grooving
Clamp-on

Fig 1

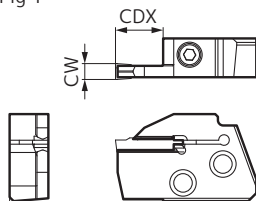


Figure shows right-handed (R) tool.

SumiPolygon GND series Cassettes

Parts

Dimensions (mm)

Cat. No.	Stock		Width of Cut CW	Maximum Groove Depth CDX	Applicable Insert	Applicable Holder	Fig	Cap Screw		Wrench
	R	L								
GNDCM R/L 212	●	●	2	12	GC□□2000-□□	PSC00GND000000 R/L	1			
R/L 312	●	●	3	12	GC□□3000-□□		1			
R/L 418	●	●	4	18	GC□□4000-□□		1			
R/L 518	●	●	5	18	GC□N5000-□□		1			
R/L 618	●	●	6	18	GC□N6000-□□		1			
						PSC00GND00000090 R/L	1	BX0512	5.0	LH040

Select holders and inserts with matching width of cut (CW). Refer to P45 for applicable inserts.

The maximum groove depth CDX is the figure during grooving. For maximum depth of cut during traverse cutting and profiling, refer to P11.

Cassette Identification Code

GNDCM R 2 12

Series Code Feed Direction Width of Cut (mm) Maximum Groove Depth (mm)

Fig 1

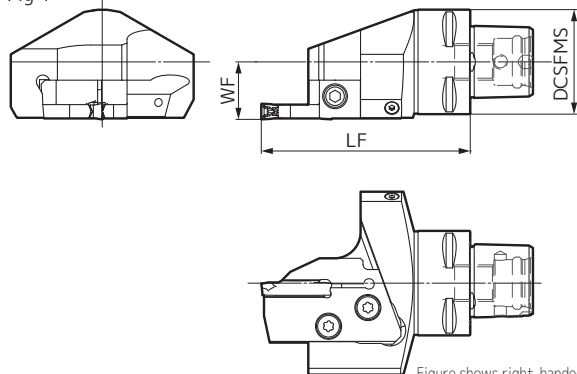


Figure shows right-handed (R) tool.

Fig 1

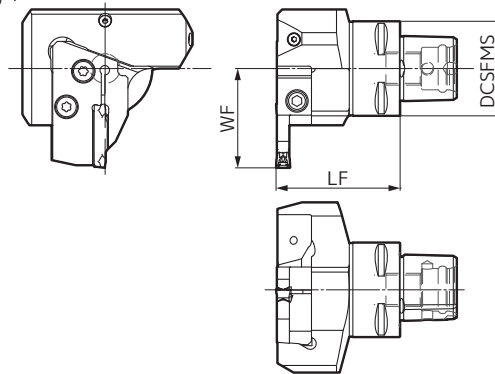


Figure shows right-handed (R) tool.

SumiPolygon GND series Tool Holder (Straight)

Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge WF	Overhang LF	Mounting DCS-FMS	Applicable Cassettes	Fig	Flat Head Screw		Wrench
	R	L								
PSC40 GND 228000 R/L	●	●	22	80	40	GNDCM R/LO00	1			
PSC50 GND 278000 R/L	●	●	27	80	50		1			
PSC63 GND 338000 R/L	●	●	33	80	63		1			
								BFTX0619N	7.5	TT25

Inserts and cassettes are not included with the holders.

SumiPolygon GND series Tool Holder (L type)

Parts

Dimensions (mm)

Cat. No.	Stock		Cutting Edge WF	Overhang LF	Mounting DCS-FMS	Applicable Cassettes	Fig	Flat Head Screw		Wrench
	R	L								
PSC40 GND 425290 R/L	●	●	42	52.5	40	GNDCM L/RO00	1			
PSC50 GND 475590 R/L	●	●	47	55	50		1			
PSC63 GND 545790 R/L	●	●	54	57	63		1			
								BFTX0619N	7.5	TT25

Inserts and cassettes are not included with the holders.

Holder Identification Code

PSC40 GND 42 52 90 R

SumiPolygon Shank Size Series Code: GND series WF Dimension (mm) LF Dimension (mm) 00: Straight 90: L type Feed Direction



Inserts for GNDCM type

Fig 1

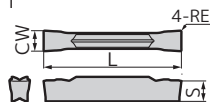


Fig 2 (Figure shows right-handed (R) tool.)

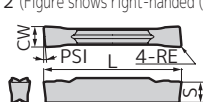


Fig 3

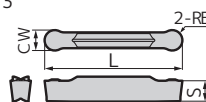
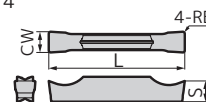


Fig 4



Grooving / Traverse Cutting

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE					
GCM N3002-MG	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	3.8	1	1
N3004-MG	●	●	▲	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	3.8	1	1
GCM N4002-MG	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.2	26.4	4.0	4.0	1	1
N4004-MG	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.4	26.4	4.0	4.0	1	1
N4008-MG	●	●	▲	●	●	●	●	●	●	4.0	±0.03	0.8	26.4	4.0	4.0	5	1
GCM N5004-MG	●	●	●	●	●	●	●	●	●	5.0	±0.03	0.4	26.4	4.1	4.1	1	1
N5008-MG	●	●	▲	●	●	●	●	●	●	5.0	±0.03	0.8	26.4	4.1	4.1	1	1
GCM N6004-MG	●	●	●	●	●	●	●	●	●	6.0	±0.03	0.4	26.4	4.5	4.5	1	1
N6008-MG	●	●	▲	●	●	●	●	●	●	6.0	±0.03	0.8	26.4	4.5	4.5	1	1
GCM N2002-ML	—	—	—	—	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	3.6	1	1
GCM N3002-ML	—	—	▲	—	—	—	—	—	—	3.0	±0.03	0.2	21.1	3.8	3.8	1	1
N3004-ML	●	●	●	●	●	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	3.8	1	1
GCM N4002-ML	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.2	26.4	4.0	4.0	1	1
N4004-ML	●	●	▲	●	●	●	●	●	●	4.0	±0.03	0.4	26.4	4.0	4.0	5	1
N4008-ML	●	●	●	●	●	●	●	●	●	4.0	±0.03	0.8	26.4	4.0	4.0	1	1
GCM N5004-ML	●	●	▲	●	●	●	●	●	●	5.0	±0.03	0.4	26.4	4.1	4.1	1	1
N5008-ML	●	●	●	●	●	●	●	●	●	5.0	±0.03	0.8	26.4	4.1	4.1	1	1
GCM N6004-ML	●	●	▲	●	●	●	●	●	●	6.0	±0.03	0.4	26.4	4.5	4.5	1	1
N6008-ML	●	●	●	●	●	●	●	●	—	6.0	±0.03	0.8	26.4	4.5	4.5	1	1

Grooving / Cut-off

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE					
GCM N2002-GG	—	●	▲	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	3.6	1	1
GCM N3002-GG	—	●	▲	—	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	3.8	1	1
N3004-GG	—	●	●	—	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	3.8	1	1
GCM N4002-GG	—	●	▲	—	●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0	4.0	1	1
N4004-GG	—	●	●	—	●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0	4.0	5	1
GCM N5002-GG	—	●	▲	—	●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1	4.1	1	1
N5004-GG	—	●	●	—	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	4.1	1	1
GCM N6002-GG	—	●	▲	—	●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5	4.5	1	1
N6004-GG	—	●	●	—	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	4.5	1	1
GCM N2002-GL	—	●	▲	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	3.6	1	1
N2004-GL	—	●	●	—	●	●	●	●	—	2.0	±0.03	0.4	21.1	3.6	3.6	1	1
GCM N3002-GL	—	●	▲	—	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	3.8	1	1
N3004-GL	—	●	●	—	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	3.8	1	1
GCM N4002-GL	—	●	▲	—	●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0	4.0	5	1
N4004-GL	—	●	●	—	●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0	4.0	1	1
GCM N5002-GL	—	●	▲	—	●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1	4.1	1	1
N5004-GL	—	●	●	—	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	4.1	1	1
GCM N6002-GL	—	●	▲	—	●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5	4.5	1	1
N6004-GL	—	●	●	—	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	4.5	1	1
GCM N12500S-GF	—	—	—	—	—	—	—	—	—	1.25	±0.03	0.05	17.4	3.2	3.2	1	1
GCM N15000S-GF	—	—	—	—	—	—	—	—	—	1.5	±0.03	0.05	17.8	3.7	3.7	1	1
GCM N2002-GF	—	—	—	—	●	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	3.6	1	1
N2004-GF	—	—	—	—	●	●	●	●	—	2.0	±0.03	0.4	21.1	3.6	3.6	1	1
GCM N3002-GF	—	●	▲	—	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	3.8	1	1
N3004-GF	—	●	●	—	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	3.8	1	1
GCM N4002-GF	—	●	▲	—	●	●	●	●	—	4.0	±0.03	0.2	26.4	4.0	4.0	5	1
N4004-GF	—	●	●	—	●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0	4.0	1	1
GCM N5002-GF	—	●	▲	—	●	●	●	●	—	5.0	±0.03	0.2	26.4	4.1	4.1	1	1
N5004-GF	—	●	●	—	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1	4.1	1	1
GCM N6002-GF	—	●	▲	—	●	●	●	●	—	6.0	±0.03	0.2	26.4	4.5	4.5	1	1
N6004-GF	—	●	●	—	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5	4.5	1	1

(Coated Carbide/ Cermet/ Cemented Carbide / DLC)

Cut-off (Handed Edge)

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Lead Angle	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
											Width of Cut	Tolerance	RE					
GCM R2002-CG-05	●	●	▲	—	●	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	3.6	2	2
L2002-CG-05	—	—	—	—	—	—	—	—	—	5°	2.0	±0.03	0.2	21.1	3.6	3.6	2	2
GCM R3002-CG-05	●	●	▲	—	●	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8	3.8	5	2
L3002-CG-05	—	—	—	—	—	—	—	—	—	5°	3.0	±0.03	0.2	21.3	3.8	3.8	2	2
GCM R4002-CG-05	●	●	▲	—	●	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	4.0	2	2
L4002-CG-05	—	—	—	—	—	—	—	—	—	5°	4.0	±0.04	0.2	26.7	4.0	4.0	2	2
GCM R20003-CF-10	—	—	—	—	—	—	—	—	—	10°	2.0	±0.08	0.03	22.4	3.6	3.6	2	2
L20003-CF-10	—	—	—	—	—	—	—	—	—	10°	2.0	±0.08	0.03	22.4	3.6	3.6	2	2
GCM R30003-CF-10	—	—	—	—	—	—	—	—	—	10°	3.0	±0.08	0.03	22.4	3.8	3.8	2	2
L30003-CF-10	—	—	—	—	—	—	—	—	—	10°	3.0	±0.08	0.03	22.4	3.8	3.8	5	2
GCM R20003-CF-15	—	—	—	—	—	—	—	—	—	15°	2.0	±0.08	0.03	22.4	3.6	3.6	2	2
L20003-CF-15	—	—	—	—	—	—	—	—	—	15°	2.0	±0.08	0.03	22.4	3.6	3.6	2	2
GCM R30003-CF-15	—	—	—	—	—	—	—	—	—	15°	3.0	±0.08	0.03	22.4	3.8	3.8	2	2
L30003-CF-15	—	—	—	—	—	—	—	—	—	15°	3.0	±0.08	0.03	22.4	3.8	3.8	2	2

GCM R: Right-handed, GCM L: Left-handed

External Profiling / External Radius Grooving

Dimensions (mm)

Cat. No.	AC8025P	AC8035P	AC830P	AC425K	AC5015S	AC5025S	AC520U	AC530U	T2500A	Width of Cut CW			Corner Radius	Overall Length	Thickness	Pcs/Pack	Fig
										Width of Cut	Tolerance	RE					
GCM N3015-RG	●	●	▲	—	●	●	●	●	—	3.0	±0.03	1.5	21.1	3.8	3.8	5	3
N4020-RG	●	●	▲	—	●	●	●	●	—	4.0	±0.03	2.0	26.4	4.0	4.0	3	3
GCM N5025-RG	●	●	▲	—	●	●	●	●	—	5.0	±0.03	2.5	27.2	4.1	4.1	3	3
N6030-RG	●	●	▲	—	●	●	●	●	—	6.0	±0.03	3.0	27.5	4.5	4.5	3	3

SEC-Grooving Tool Holders GND series Special Grooving Insert Request Form

Applicable Tool Holders (Width of Cut 2 to 6mm)
External Grooving: GNDS type (→P22), GNDM type (→P18, P20, P24, P26), GNDMS type (→P24), GNDL type (→P18, P20, P28, P30),
GNDLS type (→P28), GNDCM type (→P44) *GNDXL types cannot be used as the insert shape is different
Internal Grooving: GNDI type (→P42) *GNDIS types cannot be used as the insert shape is different
Face Grooving: GNDF type (→P36), GNDFS type (→P38)

Special inserts with ground chipbreaker (customised width of cut and insert corner radius) can be made-to-order. To order, fill out the form below (indicate your preference by circling the item or specify dimensions), and send it to a Sumitomo Electric Hardmetal dealer or distributor. (Make a copy of this form.)
For grooving inserts with shape, width of cut or grade other than those listed below, contact your nearest Sumitomo Electric Hardmetal sales office (refer to the back of this catalog).

Your Company / Contact Information (Phone / Fax / Address, etc.)

Shape	Item	Description
	Width of Cut CW (2.00 to 6.59mm)	mm
	Corner Radius RER	mm
	Corner Radius REL	mm
	Grade (Select from right)*1	AC5015S / AC5025S / AC530U / AC520U / EH520 / H10 / KH03 / CBN Grade / PCD Grade
	Grooving Depth CDX *2	mm
	*1: If H10 is selected as the grade, the cutting edge will have a sharp edge. *2: Set the chipbreaker width based on CDX. The actual groove depth can only be less than or equal to the maximum groove depth configurable by each holder.	

Form instructions

- 1. The applicable standard holder depends on the width of cut. Refer to the chart on the right for manufacturable widths of cut and corner radius range for facing. (If using a corner radius exceeding this for facing, modification is required to prevent the holder from interfering with the work material.)
- 2. The corner radius maximum value for external and internal grooving is 1/2 the width of cut.
- 3. Width of cut (CW) tolerance is ±0.025mm when manufactured.
- 4. WF dimensions for each holder are the CWS value for the applicable holder standard insert width of cut as follows.
(Standard holder dimension WF) + (WF - CWS) / 2
- 5. For inch widths of cut, inserts can also be supplied partially unground.
Contact your local sales office for details.

Width of Cut CW (Nominal Value)	Applicable Standard Holder	Corner radius (RER, REL) maximum value when used for facing (standard holder applicable)
2.00 to 2.59mm	2mm Width Holder	0.2mm
2.60 to 3.59mm	3mm Width Holder	0.4mm
3.60 to 4.59mm	4mm Width Holder	0.8mm
4.60 to 5.59mm	5mm Width Holder	
5.60 to 6.59mm	6mm Width Holder	

SEC-Grooving Tool Holders GND series 90° Insert Request Form

Applicable holders: Inquire along with inserts.

To order, fill out the form below (indicate your preference by circling the item or specify dimensions), and send it to a Sumitomo Electric Hardmetal dealer or distributor. (Make a copy of this form.)
For grooving inserts with shape, width of cut or grade other than those listed below, contact your nearest Sumitomo Electric Hardmetal sales office (refer to the back of this catalog).

Your Company / Contact Information (Phone / Fax / Address, etc.)

Shape	Item	Description
	Width of Cut CW (2.00 to 5.00mm)	mm
	Corner Radius RER	mm
	Corner Radius REL	mm
	Grade (Select from right)	EH510 / EH520 / AC5015S / AC5025S
	Grooving Depth CDX	mm
	Cutting Edge Position L (5.80mm up) (Enter the maximum allowable value)	mm
	Feed Direction	Right-handed / Left-handed
	Insert Thickness (Select from right)	Standard / High rigidity

Machined positions on workpiece and machining method (Select one of the options below and enter the machining diameter)		
Face Grooving	External Grooving	Internal Grooving
Work Dia.: mm	Work Dia.: mm	Work Dia.: mm

■ Application Examples

S15C Automotive Component Grooving		P
		Point · Machining efficiency · Tool life
GND series 1.2 sec/pc Competitor's Product 3.6 sec/pc Cutting Time (sec/pc)		Holders GNDM R2525K-312J Insert GCM N3004-GG Width of Cut: 3.0mm Cutting Conditions vc=152 (91) m/min f=0.10 (0.05) mm/rev ap=9.5mm Wet → Internal Coolant Supply 2.1MPa (*) indicates value for competitors' products
GND series 1,000 pcs Competitor's Product 250 pcs Tool Life (pcs.)		
· Double the feed rate of conventional tools, with no chatter · 1.5 times the cutting speed thanks to an internal coolant holder, achieving 4 times longer tool life		

SCM440 Office Machine Component Grooving		P
		Point · Chip control · Machining efficiency
GND series (Continuous Feed) Conventional Tool (Step Feed)		Holders GNDL R2525M-320 Insert GCM N3002-GG Width of Cut: 3.0mm Cutting Conditions vc=90m/min f=0.1mm/rev Wet
· Excellent chip control performance · 20% greater machining efficiency		

SCr420H Gearshaft Grooving		P
		Point · High rigidity · Chatter · Chip control
GND series Conventional Tool		Holders GNDM R2525M-312 Insert GCM N3004-GG Width of Cut: 3.0mm Cutting Conditions vc=100m/min f=0.12mm/rev Wet
· Stable cutting without chattering or vibration · Excellent chip control performance		

SUS304 Measuring Component Grooving		M
		Point · High rigidity · Chatter · Chip control
· Stable cutting without chattering or vibration · Excellent chip control performance		Holders GNDL R2525M-320 Insert GCM N3002-GG Width of Cut: 3.0mm Cutting Conditions vc=60m/min f=0.025mm/rev Wet

Sintered Ferrous Material Crank Sprocket Gear Grooving / Finishing		Sintered Alloy
		Point · High rigidity · Chatter · Chip control · Wear resistance
GND series 90 pcs Conventional Tool 70 pcs Able to continue		Holders GNDL R2525M-220 Insert GCM N2002-GG Width of Cut: 2.0mm Cutting Conditions vc=100m/min f=0.08mm/rev Wet
· Stable cutting without chattering or vibration · Excellent chip control performance · Excellent wear resistance increasing tool life by 130% or more		

■ Application Examples

S48C Tempered Machine Component Cut-off P	
	Point · High rigidity · Chatter · Fracture resistance Holders GNDL R2525M-320 Insert GCM N3002-GG Width of Cut: 3.0mm Cutting Conditions n=1,600min⁻¹ vc=200m/min f=0.05mm/rev Wet
· Stable cutting without chattering or vibration · Excellent fracture resistance · Stable fracture resistance	

S45C Valve Cut-off P	
	Point · High rigidity · Chatter · Chip control Holders GNDM R2525M-312 Insert GCM N3002-ML Width of Cut: 3.0mm Cutting Conditions vc=150m/min f=0.05 to 0.15mm/rev Wet
· Stable cutting without chattering or vibration · Stable chip control	

SCM435 Tempered Hydraulic Component Cut-off P	
	Point · Chip control · Wear resistance Holders GNDL R2525M-320 Insert GCM N3002-GG Width of Cut: 3.0mm Cutting Conditions n=4,000min⁻¹ vc=200m/min f=0.05mm/rev Wet
· Stable chip control · Excellent wear resistance	

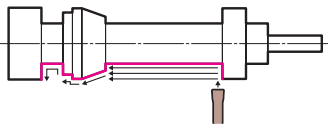
SCM435 Crank Cut-off P	
	Point · High rigidity · Chatter · Chip control Holders GNDL R2525M-320 Insert GCM N3002-GG Width of Cut: 3.0mm Cutting Conditions vc=115m/min f=0.30mm/rev Wet
· Improved machining efficiency · Stable cutting without chattering or vibration · Stable chip control	

SKD61 (45 to 48HRC) Machine Component Cut-off P	
	Point · High rigidity · Chatter · Chip control Holders GNDL R2525M-425 Insert GCM N4002-GG Width of Cut: 4.0mm Cutting Conditions vc=50m/min f=0.03mm/rev Wet
· Stable cutting without chattering or vibration · Excellent chip control performance · Unexpected fractures prevented	

SKD61 (60HRC) Die Steel Cut-off P	
	Point · Chatter · Integrated Tools · Deep Grooving (Cut-off) Holders GNDXL R2525M-332 New Insert GCM N3002-ML1 Width of Cut: 3.0mm Cutting Conditions vc=30m/min f=0.05mm/rev ap=25mm/rev Wet
· Reducing the number of tools by integrating internal boring + external cut-off to only external cut-off · Tool integration reduces cutting time to 1/3	

Application Examples

S45C Equivalent Automotive Component Grooving / Traverse Cutting **P**



Point

- Machined surface
- Tool life

Holders
GNDM R2020K-418J

Insert
GCM N4004-ML

Width of Cut: 4.0mm

Cutting Conditions
n=2,500min⁻¹
f=0.1mm/rev
ap=0.5 to 2.0mm
Wet → Internal Coolant Supply (Normal Pressure)

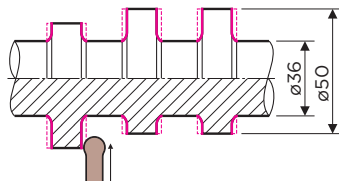
GND series 1,500 pcs

Competitor's Product 500 pcs

Tool Life (pcs.)

- Internal coolant supply effectively cools the cutting edge, achieving 3 times longer tool life
- Cutting edge sharpness is maintained and machined surface blemishes are improved

S53C Camshaft Grooving / Finishing (Continuous to Heavy Interrupted) **P**



Point

- High rigidity
- Chatter
- Chip control
- Fracture resistance

Holders
GNDM L2525M-618

Insert
GCM N6030-RG

Width of Cut: 6.0mm

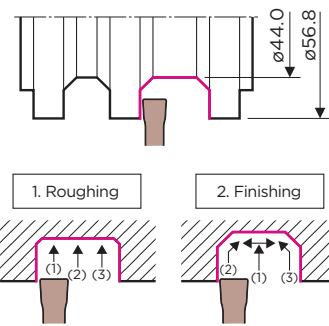
Cutting Conditions
vc=130m/min
f=0.36mm/rev
Wet

GND series Normal wear

Conventional Tool Chipping / Large wear

- Stable cutting without chattering or vibration
- Excellent fracture resistance
- Stable chip control

SCr415 Gearshaft Grooving / Profiling **P**



Point

- High rigidity
- Chatter
- Chip control

Holders
GNDM R2020K-518

Insert
GCM N5008-MG

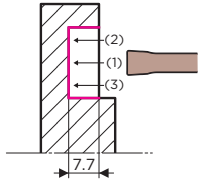
Width of Cut: 5.0mm

Cutting Conditions
vc=150m/min
f=0.1mm/rev
Wet

1. Roughing 2. Finishing

- Stable cutting without chattering or vibration
- Excellent chip control performance

Cast Stainless Steel Turbine Housing Face Grooving / Groove Expansion **M**



Point

- High rigidity
- Tool life

Holders
GNDS L2525M-410

Insert
GCM N4004-GF

Width of Cut: 4.0mm

Cutting Conditions
vc=80m/min
f=0.1mm/rev
ap= up to 7.7mm
Dry

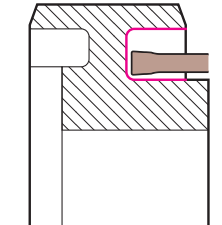
GND series 40 pcs

Competitor's Product 8 pcs

Tool Life (pcs.)

- Stable cutting without chattering or vibration
- Excellent wear resistance for 5 times longer tool life

Sintered Component Clutch Hub Face Grooving **Sintered Alloy**



Point

- Machining efficiency
- Chatter

Holders
GNDF R2020K-523-050

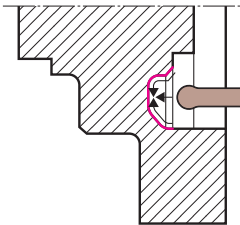
Insert
GCM N5008-MG

Width of Cut: 5.0mm

Cutting Conditions
n=500min⁻¹
vc=100m/min
f=0.05mm/rev
Wet

- Reduces cycle time by up to 20%
- Stable cutting without chattering or vibration

SCM420H Automotive Component Face Profiling **P**



Point

- High rigidity
- Chip control
- Wear resistance

Holders
GNDF R2525M-423-125

Insert
GCM N4020-RN

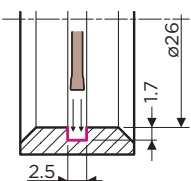
Width of Cut: 4.0mm

Cutting Conditions
vc=200m/min
f=0.14mm/rev
Wet

- Excellent chip control performance
- Stable cutting without chattering or vibration

■ Application Examples

S45CD Motorcycle Transmission Component (Collar) Internal Grooving P



GND series **1,100 pcs**

Competitor's Product A 900 pcs

Competitor's Product B 600 pcs

Tool Life (pcs.)

Point

- Tool life
- Chip control

Holders
GNDIS R1620-T2046

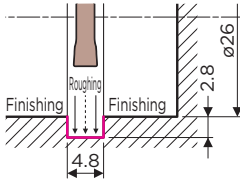
Insert
GXM N2002S-GF

Width of Cut: 2.0mm

Cutting Conditions
vc=150m/min
f=0.03mm/rev
ap=1.7mm
Wet

• Realises stable chip control and longer tool life with high-rigidity tool and 3D chipbreaker

SCM420 Automotive Component (Coupling) Internal Grooving P




Point

- Machining efficiency
- Chip control

Holders
GNDIS R1620-T2046

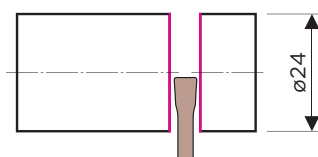
Insert
GXM N2002S-GF

Width of Cut: 2.0mm

Cutting Conditions
vc = Roughing 50 to Finishing 80m/min
f = Roughing 0.07 to Finishing 0.05mm/rev

• Excellent chip control eliminates the need for stepped roughing that is required with competitor's products

SCM415 Valve Spool Cut-off P




Point

- Tool life
- Chip control

SumiSmall

Holders
GNDL R1212JX-1.2512

Insert
GCMN125005-GF

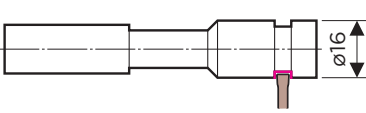
Width of Cut: 1.25mm

Cutting Conditions
n=2,000min⁻¹
f=0.05mm/rev
Wet

• Slight damage and able to continue even after cutting 7,500 pcs

• Excellent chip control performance

Sintered Component Tap Component Grooving P



GND series **50 pcs**

Competitor's Product 30 pcs

Tool Life (pcs.)

Point

- Tool life
- Chip control

SumiSmall

Holders
GNDL L2020K-220J

Insert
GCM N2002-GF

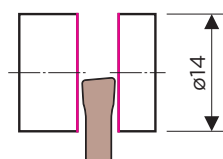
Width of Cut: 2.0mm

Cutting Conditions
vc=90m/min
f=0.02mm/rev
ap=2.0mm
Wet → Internal Coolant Supply 1.5MPa

• Coolant supply from near the cutting edge directly to the cutting point, achieves 1.7 times longer tool life

• Internal coolant supply realises stable chip control even at low feed machining

SCM435H Machine Component Cut-off P



GND series **1,800 pcs**

Competitor's Product 1,000 pcs

Tool Life (pcs.)

Point

- Machined surface
- Tool life

SumiSmall

Holders
GNDM R2020K-210

Insert
GCM R20003-CF-15

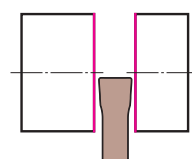
Width of Cut: 2.0mm

Cutting Conditions
n=2,500min⁻¹
f=0.04mm/rev
Wet

• Excellent chip control improves machined surface

• Outstanding cutting edge sharpness for 1.8 times longer tool life

Pure Iron Automotive Component Cut-off P



GND series **10,000 pcs**

Competitor's Product 2,500 pcs

Tool Life (pcs.)

Point

- Machining efficiency
- Tool life

SumiSmall

Holders
GNDM R1616JX-216J (Special)

Insert
GCM N2002-GF

Width of Cut: 2.0mm

Cutting Conditions
vc= up to 145m/min
f=0.06mm/rev
ap=5.0mm
Wet → Internal Coolant Supply (Normal Pressure)

• Internal coolant supply effectively cools the cutting edge, achieving 4 times longer tool life

• Tool change reduced, enabling longer automatic operation

• Improved productivity by changing to high-speed conditions

■ Application Examples

SUM23 Free-cutting Steel Machine Component Cut-off **P**

Point

- Tool life
- Central burrs

SumiSmall

Holders
GNDL R1212JX-212.5

Insert
GCM R20003-CF-10

Width of Cut: 2.0mm

Cutting Conditions
vc=122m/min
f=0.05mm/rev
ap=6.35mm
Wet

Tool Life (pcs.)

· Excellent cutting edge sharpness for 1.2 times longer tool life

· Central burrs eliminated with handed insert

SUS303 Hollow Round Bar Pipe Cut-off **M**

Point

- Machining efficiency
- Chatter

SumiSmall

Holders
GNDL R2020K-220

Insert
GCMR2002-CG-05

Width of Cut: 2.0mm

Cutting Conditions
n=1,000min⁻¹
vc=140m/min
f=0.03mm/rev
Wet

· Sharp cutting edge provides stable cutting

· Stable chip control for stable cutting

Stainless Steel Round Bar Cut-off **M**

Point

- Tool life
- Adhesion resistance

SumiSmall

Holders
GNDM L2020K-312

Insert
GCMN3002-GF

Width of Cut: 3.0mm

Cutting Conditions
n=1,000min⁻¹
f=0.15→0.03mm/rev
Wet

· Suppressed adhesion fracture achieves 150% tool life

· Stable cutting without chattering or vibration

< SAFETY NOTES >



- Very hot or lengthy chips may be discharged while the machine is in operation. Therefore, machine guards, safety goggles or other protective covers must be used. Fire safety precautions must also be considered.
- Please handle with care as this product has sharp edges.
- Improper cutting conditions or mis-handling of the tool may result in breakages or projectiles. Therefore, please use the tool within its recommended conditions.
- When using non-water soluble cutting oil, precautions against fire must be taken and please ensure that a fire extinguisher is placed near the machine.

 **Sumitomo Electric Industries, Ltd.**

Hardmetal Division

Global Marketing Department : 1-1-1, Koyakita, Itami,
Hyogo 664-0016, Japan

<https://www.sumitool.com/global>