

SEC-Grooving Tool Holders GND Series


Stable Machining through
Outstanding Chip Control and
Chattering Resistance Performance

High-precision machining with a cutting width tolerance of $\pm 0.03\text{mm}$
(for cutting widths of 1.25 to 6mm, and front cutting edge angles of 0° or 5°).
Available in 10 chipbreaker styles with 7 grades for a wide range of machining applications.

- Expanded Polygon Tapered Shank SUMIPOLYGON GND00 / GND90 / GND00M Type
- Expanded GNDM-J / GNDL-J Type Holders with Internal Coolant Capabilities
- Expanded CF Type Chipbreakers for Cut-Off Machining

Expanded
Expanded
Expanded

SEC-Grooving Tool GND Series

High-Rigidity Body

With an integrated structure, GND Type SEC-Grooving Tools adopt die steel for not only grooving but also turning, copying, and facing, thereby preventing chattering and ensuring stable cutting.

Various Chipbreakers

The GND Type SEC-Grooving Tool lineup includes 10 chipbreaker varieties for any given application. This ensures stable chip control in a variety of situations.

VIDEO OF CUTTING



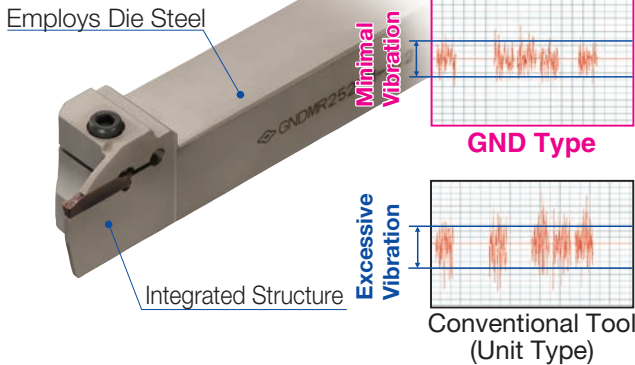
Grooving / Traversing	Grooving / Cut-Off			Cut-Off	External Copying	Copying / Necking	Multi-Purpose
General Purpose	Low Feed	General Purpose	Low Feed	Low Cutting Force	General Purpose	Low Cutting Force	General Purpose
General Purpose	Low Feed	General Purpose	Low Feed	Low Cutting Force	General Purpose	Low Cutting Force	General Purpose
General Purpose	Low Feed	General Purpose	Low Feed	Low Cutting Force	General Purpose	Low Cutting Force	Non-Ferrous Metals

Cutting Performance of GND Type SEC-Grooving Tools

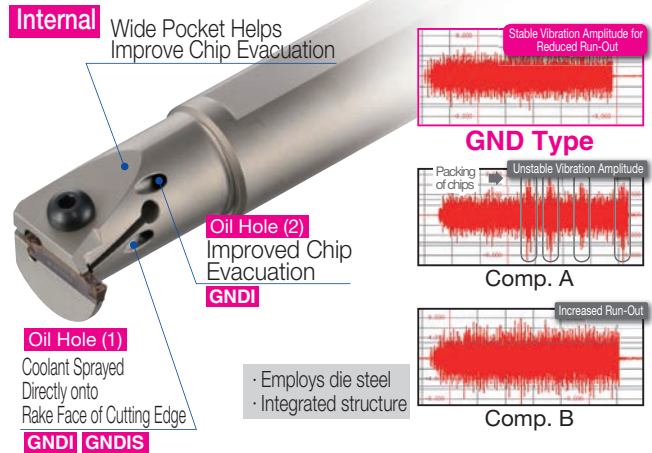
Reduces Chattering

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

Employs Die Steel



Ensures Both High Rigidity and Good Chip Evacuation



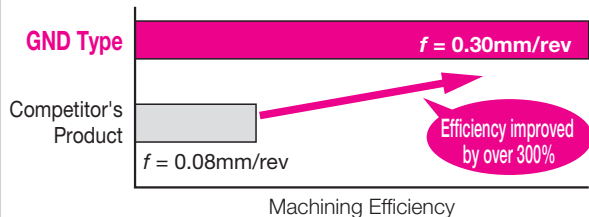
Work Material : SCM415
Holder : GNDL R2525M-220 Insert : GCM N2002-GG
Cutting Conditions : $v_c=100\text{m/min}$ $f=0.10\text{mm/rev}$ $a_p=20.0\text{mm}$ Wet

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

Application Examples

Substantially Improved Machining Efficiency!

High-rigidity holder for high-load machining even at high feed rates



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

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

Reduced chattering for less unexpected breakage



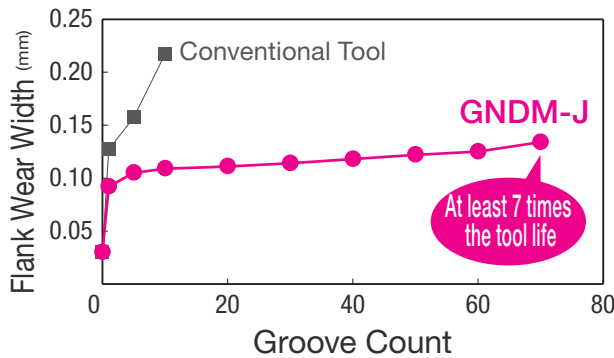
Work Material : S53C
Holder : GNDM L2525M-618 Insert : GCM N6030-RG(AC530U)
Cutting Conditions : $v_c=130\text{m/min}$ $f=0.3\text{mm/rev}$ Wet

Internal Coolant-Type Holder
GNDM-J Type/GNDL-J Type *New*

- Expansion of GND Type SEC-Grooving Tools with the addition of holders with internal coolant capabilities
- Compatible with cutting widths of 2.0 to 6.0 mm
- Efficient coolant supply to the cutting edge during grooving for better efficiency with high-speed machining and longer insert tool life
- Direct coolant supply near the cutting edge for improved chip control



●Wear Resistance

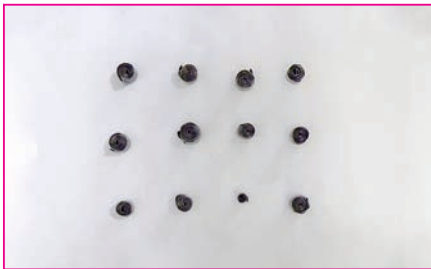


Top coolant hole for improved chip control

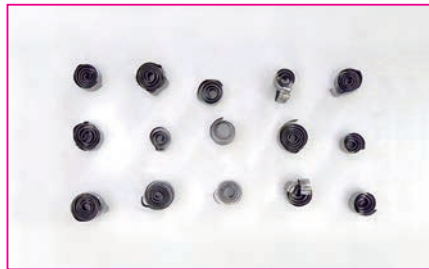
Lower coolant hole effective for wear control



●Chip Control



Coolant Pressure : **7MPa**



Coolant Pressure : **1MPa**



External Coolant

Work Material : Ti-6Al-4V Holder : GNDM R2525K-312J Insert : GCMN3002-GG(AC530U)
 Cutting Conditions : $v_c=60\text{m/min}$ $f=0.1\text{mm/rev}$ $a_p=5.0\text{mm}$ Wet

Chipbreakers for Cut-Off Machining

GF Type *New*



- New cut-off chipbreakers with lead angles of 10° or 15°
- Asymmetric chipbreaker design for outstanding chip control even with inserts with a lead angle, which makes chip control difficult



GCMR20003-CF-10



GCMR20003-CF-15



Competitor's Product

Work Material : SS400 Holder : GNDM R2525M-220 Insert : GCMN20003-CF-10,15 (AC1030U)
 Cutting Conditions : $n=2,000\text{min}^{-1}$ $f=0.08\text{mm/rev}$ Wet

■ Achieving Stability and Longer Tool Life...A variety of chipbreakers ensure outstanding chip control performance in many different applications.

Grooving / Traversing			Grooving / Cut-Off			Cut-Off		Copying		Copying / Necking	Non-Ferrous Metals
General Purpose	Low Feed	General Purpose	Low Feed	Low Cutting Force	General Purpose	Low Cutting Force	General Purpose	General Purpose	General Purpose	General Purpose	
MG Type	ML Type	GG Type	GL Type	GF Type	CG Type	CF Type <i>New</i>	RG Type	RN Type	GA Type		
Standard traversing chipbreaker	For low-feed chip control	First recommendation for grooving	For low-feed chip control	For low cutting force and chip control at low-feed	First recommendation for cut-off	For low-feed chip control	For external copying, R grooving	For facing/internal copying/R grooving/necking	Ideal for aluminium alloy machining		
Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	Cross Section of Cutting Edge	
Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	Cutting Widths (mm) in Stock	
1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	1.25 1.5 2.0	
3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	3.0 4.0 5.0	
6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	6.0 7.0 8.0	
Stock Grade	Stock Grade	Stock Grade	Stock Grade	Stock Grade	Stock Grade	Stock Grade	Stock Grade	Stock Grade	Stock Grade	Stock Grade	
AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	AC830P AC425K	
AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	AC520U AC530U	
AC1030U T2500A	*AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	*AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	AC1030U T2500A	
H10	H10	H10	H10	H10	H10	H10	H10	H10	H10	H10	
	*: For GNDIS Type only			*: For GNDIS Type only		Front Cutting Edge Angle : 5°		Front Cutting Edge Angle : 10°/15°			

■ Improved Chip Control

Grooving



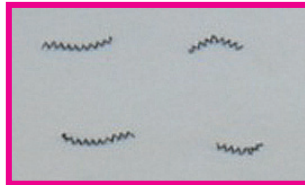
GND Type
(GG Type Chipbreaker)




Conventional Tool

Work Material : SCM415
 Holder : GNDL R2525M-320 Insert : GCM N3002-GG
 Cutting Conditions : $v_c=100\text{m/min}$ $f=0.15\text{mm/rev}$ $a_p=12.0\text{mm}$ Wet

Traversing




GND Type
(ML Type Chipbreaker)




Conventional Tool

Work Material : SCM415
 Holder : GNDM R2525M-312 Insert : GCM N3002-ML
 Cutting Conditions : $v_c=100\text{m/min}$ $f=0.10\text{mm/rev}$ $a_p=0.5\text{mm}$ Wet

Cut-Off




GND Type
(CG Type Chipbreaker)




Competitor's Product

Work Material : SUS316 ($\phi 30\text{mm}$)
 Holder : GNDL R2525M-220 Insert : GCM R2002-CG-05
 Cutting Conditions : $v_c=100\text{m/min}$ $f=0.15\text{mm/rev}$ Wet

Copying



GND Type
(RG Type Chipbreaker)



Conventional Tool

Work Material : SCM415
 Holder : GNDM R2525M-312 Insert : GCM N3015-RG
 Cutting Conditions : $v_c=100\text{m/min}$ $f=0.15\text{mm/rev}$ $a_p=0.1\text{mm}$ Wet

■ Chipbreaker Selection

	Grooving / Traversing	Grooving	Cut-Off
1st Recommendation	MG Type General Purpose 	GG Type General Purpose 	GG Type General Purpose
2nd Recommendation	ML Type Low Feed Emphasis on Chip Control 	GL Type General Purpose Emphasis on Chip Control 	CG Type General Purpose Directional, Front Cutting Edge Angle : 5°
		GF Type Low Cutting Force 	GL Type General Purpose Emphasis on Chip Control
		GF Type Low Cutting Force 	CF Type <i>New</i> Low Cutting Force Directional, Front Cutting Edge Angle : 10° / 15°

	External Copying / External R Grooving	Facing/Internal Copying / R Grooving/Necking	Non-Ferrous Metals
Recommended	RG Type General Purpose 1st Recommendation 	RN Type General Purpose 2nd Recommendation, 2mm width-compatible 	GA Type General Purpose Non-Ferrous Metals

■ Insert Grade Selection


	P Steel	M Stainless Steel	K Cast Iron	S Exotic Alloy	N Non-ferrous Metal
1st Recommendation	AC530U/AC1030U (AC1030U: For GNDIS Type only) PVD	AC530U/AC1030U (AC1030U: For GNDIS Type only) PVD	AC425K (GNDIS Type: AC520U) CVD	AC520U PVD	H10 (GNDIS Type: Not Available) Uncoated Cemented Carbide
2nd Recommendation	AC520U PVD	AC520U PVD	AC520U PVD		
	AC830P (GNDIS Type: Not Available) CVD	AC830P (GNDIS Type: Not Available) CVD	AC530U/AC1030U (AC1030U: For GNDIS Type only) PVD	AC530U/AC1030U (AC1030U: For GNDIS Type only) PVD	

External Grooving (Straight Type)

Traversing / Copying

Grooving / Cut-Off

GNDM Type
Straight Type
For Small Lathes



Shank Size (LxW)
□ 16x16mm

P14


GNDS Type
Straight Type
Shallow Grooves



Shank Size (LxW)
□ 20x20mm
□ 25x25mm

P16

GNDM Type
Straight Type



Shank Size (LxW)
□ 20x20mm
□ 25x25mm
□ 32x25mm
□ 32x32mm

P18

GNDM-J Type
Straight Type
Internal Coolant Supply



Shank Size (LxW)
□ 20x20mm
□ 25x25mm

P20


GNDL Type
Straight Type
For Small Lathes



Shank Size (LxW)
□ 10x10mm
□ 12x12mm
□ 16x16mm

P14


GNDL Type
Straight Type



Shank Size (LxW)
□ 20x20mm
□ 25x25mm
□ 32x25mm
□ 32x32mm

P22

GNDL-J Type
Straight Type
Internal Coolant Supply



Shank Size (LxW)
□ 20x20mm
□ 25x25mm

P24

Applicable Cutting Width (mm)			Applicable Cutting Width (mm)			Applicable Cutting Width (mm)			Applicable Cutting Width (mm)			Applicable Cutting Width (mm)			Applicable Cutting Width (mm)			Applicable Cutting Width (mm)																																																			
1.25	1.5	2.0	1.25	1.5	2.0	1.25	1.5	2.0	1.25	1.5	2.0	1.25	1.5	2.0	1.25	1.5	2.0	1.25	1.5	2.0	1.25	1.5	2.0	1.25	1.5	2.0																																											
3.0	4.0	5.0	3.0	4.0	5.0	3.0	4.0	5.0	3.0	4.0	5.0	3.0	4.0	5.0	3.0	4.0	5.0	3.0	4.0	5.0	3.0	4.0	5.0	3.0	4.0	5.0	3.0	4.0	5.0																																								
6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0	6.0	7.0	8.0																																					
Applicable Chipbreaker			Applicable Chipbreaker			Applicable Chipbreaker			Applicable Chipbreaker			Applicable Chipbreaker			Applicable Chipbreaker			Applicable Chipbreaker																																																			
MG	ML	GG	GL	GF	CG	CF	RG	RN	GA	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA

External Grooving Straight Type Series

- MG**: Multi-Purpose, General Purpose Type
- ML**: Multi-Purpose, 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**: Facing/Necking, General Purpose Type
- RN**: Facing/Necking, Low Feed Type
- GA**: Facing/Necking, General Purpose Type

Type	Shank Size (mm) Height: Width (H) (B)	Cutting Width (mm)								Series	Max. Grooving Depth (mm)					Ref. Page	Applicable Chipbreaker																				
		1.25	1.5	2	3	4	5	6	7		8	5	10	15	20		25	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA										
For Small Lathes	10	10	1.25	1.5							GNDL For Small Lathes	10					P14																				
					2								GNDL For Small Lathes	10					P14																		
						3							GNDL For Small Lathes	10					P14																		
	12	12	1.25	1.5								GNDL For Small Lathes	12					P14																			
					2								GNDL For Small Lathes	12.5					P14																		
						3							GNDL For Small Lathes	12.5					P14																		
	16	16	1.25									GNDM For Small Lathes	8					P14																			
			1.25	1.5									GNDL For Small Lathes	12.5					P14																		
				1.5									GNDM For Small Lathes	10					P14																		
					2									GNDM For Small Lathes	12					P14																	
						2								GNDL For Small Lathes	16					P14																	
							3							GNDM For Small Lathes	12					P14																	
Straight Type	20	20	1.25	1.5								GNDL For Small Lathes	16					P14																			
			1.25	1.5									GNDL For Small Lathes	16					P14																		
					2									GNDM	10					P18																	
						2								GNDS	6					P16																	
							2							GNDM	10					P18																	
								2						GNDM-J Internal Coolant Supply	10					P20																	
	25	25					2						GNDL For Small Lathes	20					P22																		
								2					GNDL-J Internal Coolant Supply	20					P24																		
									3					GNDS	6					P16																	
										3				GNDM	12					P18																	
											3			GNDM-J Internal Coolant Supply	12					P20																	
												3			GNDL For Small Lathes	20					P22																
	32	20	20										GNDL-J Internal Coolant Supply	20					P24																		
														GNDL For Small Lathes	20					P22																	
															GNDL For Small Lathes	25					P22																
															GNDL-J Internal Coolant Supply	25					P24																
		25	25											GNDS	10					P16																	
															GNDM	18					P18																
														GNDM-J Internal Coolant Supply	18					P20																	
														GNDL For Small Lathes	25					P22																	
														GNDL-J Internal Coolant Supply	25					P24																	
														GNDS	10					P16																	
32	32											GNDM	18					P18																			
													GNDL For Small Lathes	25					P22																		
													GNDM	18					P18																		
													GNDL For Small Lathes	25					P22																		
													GNDM	18					P18																		
													GNDL For Small Lathes	25					P22																		

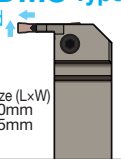
□ : Stock * : Made-to-order item (Shank Size : □ 32x25mm) ◎ : 1st Recommendation ○ : 2nd Recommendation Red Text : Expanded Item

External Grooving (L-Shaped)

Traversing / Copying

Grooving / Cut-Off

GNDMS Type
 L-Shaped



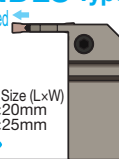
Shank Size (LxW)
 □ 20x20mm
 □ 25x25mm

P18

Applicable Cutting Width (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-Shaped



Shank Size (LxW)
 □ 20x20mm
 □ 25x25mm

P22

Applicable Cutting Width (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

External Grooving L-Shaped Series

MG : Multi-Purpose, General Purpose Type
 ML : Multi-Purpose, 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 : Copying, General Purpose Type
 RN : Facing/Necking, General Purpose Type
 GA : Non-ferrous Metal, General Purpose Type

Type	Shank Size (mm)		Cutting Width (mm)								Series	Max. Grooving Depth (mm)						Ref. Page	Applicable Chipbreaker																					
	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-Shaped	20	20			2																																			
						3																																		
						3																																		
								4																																
									4																															
										5																														
	25	25			2																																			
						3																																		
						3																																		
								4																																
								4																																
									4																															
							5																																	
							5																																	
								6																																
									6																															


■ : Stock

◎ : 1st Recommendation ○ : 2nd Recommendation Red Text : Expanded Item

External Grooving (SUMIPOLYGON Cassette)

Grooving

GNDCM Type
 Cassette



Applicable Holder
 SUMIPOLYGON
 GND00 (Straight)
 GND90 (L-Shaped)

P36

Applicable Cutting Width (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-Purpose, General Purpose Type
 ML : Multi-Purpose, 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 : Copying, General Purpose Type
 RN : Facing/Necking, General Purpose Type
 GA : Non-ferrous Metal, General Purpose Type

Type	Applicable SUMIPOLYGON Holder	Cutting Width (mm)								Series	Max. Grooving Depth (mm)						Ref. Page	Applicable Chipbreaker																			
		1.25	1.5	2	3	4	5	6	7		8	5	10	15	20	25		30	MG	ML	GG	GL	GF	CG	CF	RG	RN	GA									
Cassette	GND00 GND90			2																																	
					3																																
						4																															
							5																														

■ : Stock

◎ : 1st Recommendation ○ : 2nd Recommendation Red Text : Expanded Item



For Necking

Necking

GNDN Type
Straight Type

Shank Size (LxW)
 □ 20x20mm
 □ 25x25mm

P26

Applicable Cutting Width (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 Facing

Grooving / Traversing / Copying

GNDF Type
Straight Type

Shank Size (LxW)
 □ 20mmx20mm
 □ 25mmx25mm

P28

Applicable Cutting Width (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-Shaped

Shank Size (LxW)
 □ 25mmx25mm
 □ 32mmx32mm

P30

Applicable Cutting Width (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-Purpose, General Purpose Type
- ML : Multi-Purpose, 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 : Copying, General Purpose Type
- RN : Facing/Necking, General Purpose Type
- GA : Non-ferrous Metal, General Purpose Type

Type	Shank Size (mm) Height (H) / Width (B)	Cutting Width (mm)						Series	Max. Grooving Depth (mm) 5 10 15 20 25 30	Min. Work Dia. (mm) ø20 ø20 ø30 ø30 ø30	Ref. Page	Applicable Chipbreaker									
		2	3	4	5	6	MG					ML	GG	GL	GF	CG	CF	RG	RN	GA	
Straight Type	20 20	2						GNDN	1.5		P26										
		3						GNDN	2.0		P26										
		4						GNDN	3.0		P26										
		5						GNDN	3.5		P26										
		6						GNDN	4.0		P26										

Stock

⊙ : 1st Recommendation

Straight/L-Shaped Series for Facing

- MG : Multi-Purpose, General Purpose Type
- ML : Multi-Purpose, 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 : Copying, General Purpose Type
- RN : Facing/Necking, General Purpose Type
- GA : Non-ferrous Metal, General Purpose Type

Type	Shank Size (mm) Height (H) / Width (B)	Cutting Width (mm)								Series	Max. Grooving Depth (mm) 5 10 15 20 25 30	Work Diameter (mm) ø35 ø45 ø40 ø55 ø50 ø70 ø65 ø100 ø90 ø150 ø140 ø200 ø180 ø300 ø40 ø55 ø50 ø70 ø65 ø90 ø85 ø130 ø125 ø200 ø180 ø300 ø280 ø1,000 ø50 ø70 ø70 ø110 ø100 ø200 ø180 ø300 ø280 ø1,000 ø70 ø100 ø100 ø200 ø180 ø300 ø280 ø1,000 ø70 ø100 ø100 ø200 ø180 ø300 ø280 ø1,000 ø450-	Ref. Page	Applicable Chipbreaker								
		3	4	5	6	7	8	MG	ML					GG	GL	GF	CG	CF	RG	RN	GA	
Straight Type	20 20	3								GNDF	12	ø35 ø45	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	12	ø40 ø55	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	18	ø50 ø70	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	18	ø65 ø100	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	18	ø90 ø150	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	18	ø140 ø200	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	18	ø180 ø300	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	18	ø280 ø1,000	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	18	ø40 ø55	P28	⊙	⊙	⊙	⊙				⊙	⊙
		3								GNDF	18	ø50 ø70	P28	⊙	⊙	⊙	⊙				⊙	⊙
	3								GNDF	18	ø65 ø90	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø85 ø130	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø125 ø200	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø180 ø300	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø280 ø1,000	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø40 ø55	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø50 ø70	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø65 ø90	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø85 ø130	P28	⊙	⊙	⊙	⊙				⊙	⊙	
	3								GNDF	18	ø125 ø200	P28	⊙	⊙	⊙	⊙				⊙	⊙	
3								GNDF	18	ø180 ø300	P28	⊙	⊙	⊙	⊙				⊙	⊙		
3								GNDF	18	ø280 ø1,000	P28	⊙	⊙	⊙	⊙				⊙	⊙		
L-Shaped	20 20	6							GNDFS	20	ø70 ø100	P30	⊙	⊙	⊙	⊙				⊙	⊙	
		6							GNDFS	20	ø100 ø200	P30	⊙	⊙	⊙	⊙				⊙	⊙	
		6							GNDFS	20	ø180 ø300	P30	⊙	⊙	⊙	⊙				⊙	⊙	
		6							GNDFS	20	ø280 ø1,000	P30	⊙	⊙	⊙	⊙				⊙	⊙	
		6							GNDFS	20	ø450-	P30	⊙	⊙	⊙	⊙				⊙	⊙	
	25 25	8							GNDFS	20	ø70 ø100	P30	⊙	⊙	⊙	⊙				⊙	⊙	
		8							GNDFS	20	ø100 ø200	P30	⊙	⊙	⊙	⊙				⊙	⊙	
		8							GNDFS	20	ø180 ø300	P30	⊙	⊙	⊙	⊙				⊙	⊙	
		8							GNDFS	20	ø280 ø1,000	P30	⊙	⊙	⊙	⊙				⊙	⊙	
		8							GNDFS	20	ø450-	P30	⊙	⊙	⊙	⊙				⊙	⊙	

Stock Made-to-order item

⊙ : 1st Recommendation, ○ : 2nd Recommendation



Boring (Diameter : ϕ 14mm or more)

Grooving / Traversing / Copying

GNDIS Type
 Straight Type

Shank Diameter
 ϕ 12mm
 ϕ 16mm
 ϕ 20mm

P32

Applicable Cutting Width (mm)

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

Applicable Chipbreaker

ML	GF
----	----

Dedicated inserts are used with this model.



Boring (Diameter : ϕ 32mm or more)

Grooving / Traversing / Copying

GNDI Type
 Straight Type

Shank Diameter
 ϕ 25mm
 ϕ 32mm
 ϕ 40mm

P34

Applicable Cutting Width (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
----	----	----	----	----	----	----	----	----	----

Boring Series (Diameter : ϕ 14mm or more)

ML : Multi-Purpose, Low Feed Type **GF** : Grooving, Low Cutting Force Type

Type	Shank Size D <small>CON</small> (mm)	Cutting Width (mm)			Series	Max. Grooving Depth (mm)						Min. Work Dia. (mm)	Ref. Page	Applicable Chipbreaker (for GNDIS Type)	
		1.5	2	3		5	10	15	20	25	30			ML (For GNDIS Type)	GF (For GNDIS Type)
Straight Type	ϕ 12	1.5			GNDIS	2.6						ϕ 14	P32		⊙
		1.5			GNDIS	3.6						ϕ 14	P32		⊙
		2	3		GNDIS	2.6						ϕ 14	P32	⊙	⊙
	ϕ 16	1.5			GNDIS	3.6						ϕ 16	P32		⊙
		1.5			GNDIS	4.6						ϕ 20	P32		⊙
		2	3		GNDIS	3.6						ϕ 16	P32	⊙	⊙
ϕ 20	2	3		GNDIS	4.6						ϕ 20	P32	⊙	⊙	
	1.5			GNDIS	6.6						ϕ 25	P32		⊙	
	2	3		GNDIS	6.6						ϕ 25	P32	⊙	⊙	

Stock

Note : Only GXM inserts can be used for GNDIS Type.

⊙ : 1st Recommendation

Boring Series (Diameter : ϕ 32mm or more)

MG : Multi-Purpose, General Purpose Type **ML** : Multi-Purpose, 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** : Copying, General Purpose Type **RN** : Facing/Necking, General Purpose Type **GA** : Non-ferrous Metal, General Purpose Type

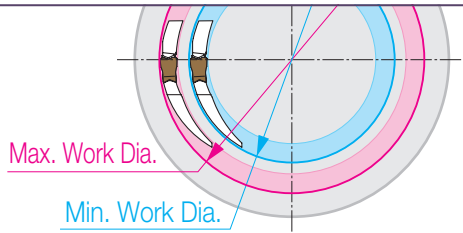
Type	Shank Size D <small>CON</small> (mm)	Cutting Width (mm)						Series	Max. Grooving Depth (mm)						Min. Work Dia. (mm)	Ref. Page	Applicable Chipbreaker										
		2	3	4	5	6	5		10	15	20	25	30	MG			ML	GG	GL	GF	CG	CF	RG	RN	GA		
Straight Type	ϕ 25	2					GNDI	6						ϕ 32	P34	⊙	⊙	⊙	⊙	⊙						⊙	⊙
		3	4	5			GNDI	6						ϕ 32	P34	⊙	⊙	⊙	⊙	⊙						⊙	⊙
	ϕ 32	2					GNDI	6						ϕ 32	P34	⊙	⊙	⊙	⊙	⊙						⊙	⊙
		3	4	5			GNDI	10						ϕ 40	P34	⊙	⊙	⊙	⊙	⊙						⊙	⊙
ϕ 40	3	4	5	6		GNDI	11						ϕ 50	P34	⊙	⊙	⊙	⊙	⊙						⊙	⊙	

Stock

⊙ : 1st Recommendation, ○ : 2nd Recommendation

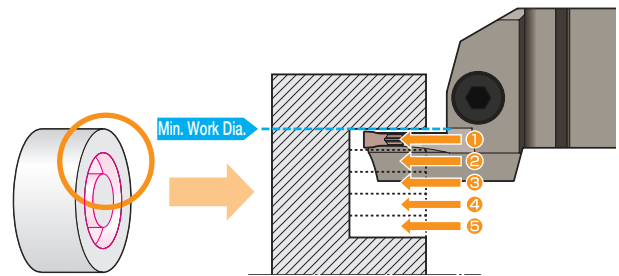
Key Points in Facing

Holder Selection



- Select a holder that ensures the outer diameter of the first groove to be machined falls within the range of the **maximum** and **minimum** grooving diameters of the holder.
- If the machining start point falls within the range of the effective grooving diameter, the grooving diameter will not be limited for the second and following passes.

Precautions for Groove Expansion Recommended Chipbreaker **MG ML GG GL GF GA**

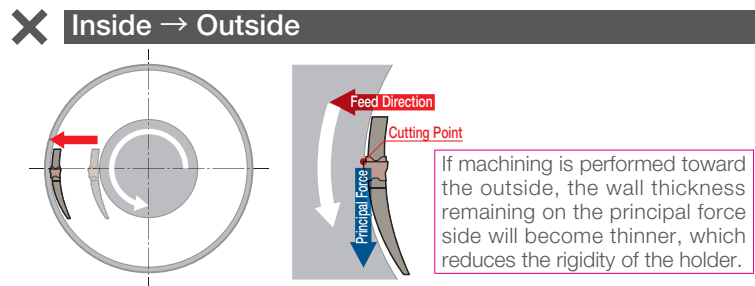
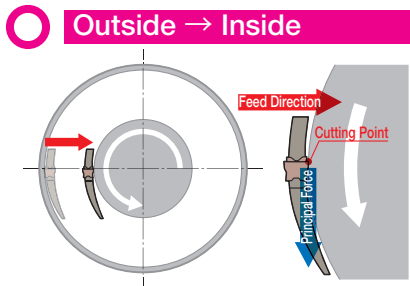


- If the first groove meets the range of the effective grooving diameter during groove expansion in plunge cutting, the grooving diameter will not be limited for the second and later passes.

Precautions for Traversing

Recommended Chipbreaker **MG ML RN**

Considering the rigidity of the holder, machining from the outside to the inside is recommended.



If machining is performed toward the outside, the wall thickness remaining on the principal force side will become thinner, which reduces the rigidity of the holder.

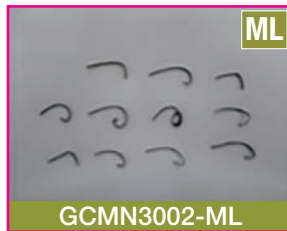
- If the machining start point falls within the range of the effective grooving diameter when face traversing, the grooving diameter will not be limited for the second and following passes.
- Select a chipbreaker on the lower limit of the recommended cutting conditions, and **straighten chips before evacuation**. (In face grooving, **broken chips easily get stuck in grooves**, which causes problems.)
- When breaking chips, step feeding is required.

Key Points for Internal Machining

Precautions for Internal Machining

Recommended Chipbreaker **ML GL GF**

If the prepared hole diameter is small, use an **ML Type** or **GL Type** low-feed chipbreaker—each of which reduces chip curl diameter—to ensure adequate chip evacuation.

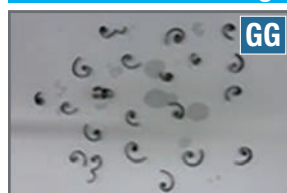


Work Material : SCM415 Bore Diameter : $\phi 25\text{mm}$ Holder : GNDI R2532-T306 Insert : GCM N300○-○○
Cutting Conditions : $v_c=100\text{m/min}$ $f=0.1\text{mm/rev}$ $a_p=3.0\text{mm}$ Wet

Internal Machining



External Machining



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

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

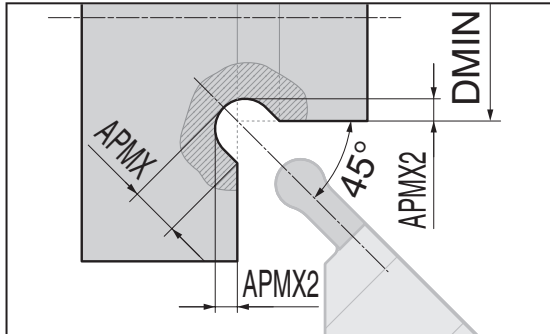


Key Points in Necking

Precautions for Necking

Recommended Chipbreaker **RN**

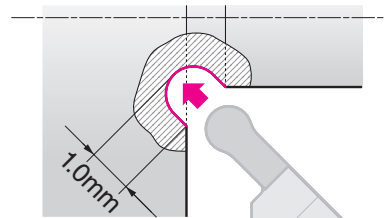
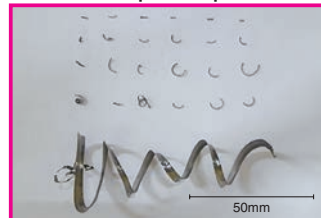
Distance from Work Material to Necking Depth



Cutting Width 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

- When necking, RN Type chipbreaker grooving conditions are recommended for each cutting width.
- To prevent interference with the work material, do not use a work diameter less than the minimum work diameter (DMIN) set for each GNDN Type holder.

Chip Shape

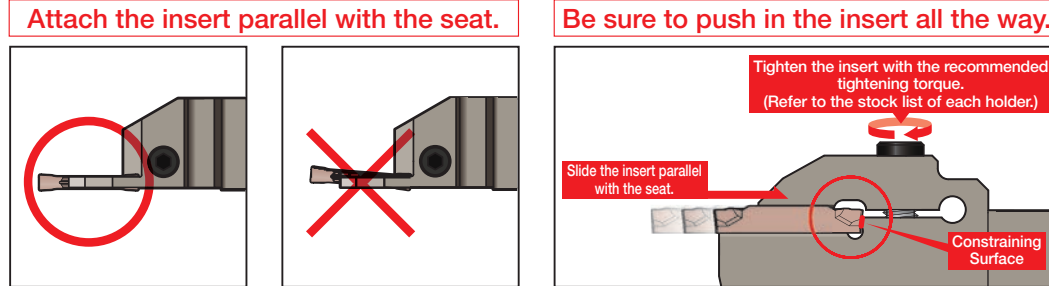


Work Material : SCM435, Grooving Width : 3.0mm
 Holder : GNDN R2020K-325-020 Insert : GCMN3015-RN
 Cutting Conditions : $v_c=100\text{m/min}$ $f=0.1\text{mm/rev}$
 Necking Depth=1.0mm Wet

SEC-Grooving Tools GND Type – Important Notes

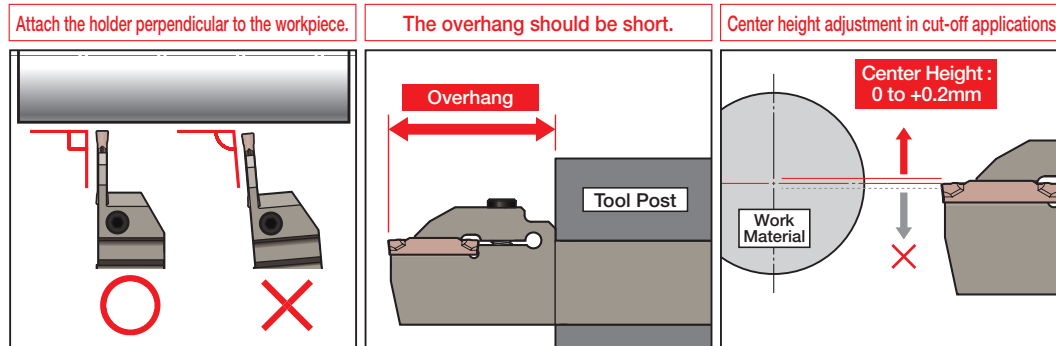
■ Precautions when Attaching Inserts

- ① Remove any dust and oil from the insert seat before attaching the insert.
- ② If there are scratches or burrs on the insert seat, scrape them away.
- ③ Attach the insert by sliding it parallel along 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.** Tightening the insert with excessive torque may cause the insert to break, which may lead to injury.



■ Precautions when Setting Holders

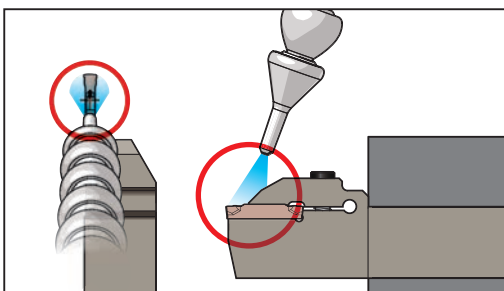
- ① Remove any dust and oil from the tool post before setting the holder.
- ② If there are scratches or burrs on the tool post, scrape them away.
- ③ Set the holder so that the insert becomes perpendicular to the workpiece. Failure to do so may result in chattering or a curved surface finish.
- ④ The overhang of the holder should be as short as possible.
- ⑤ When grooving or traversing, adjust the center height of the cutting edge to as close to ± 0 mm as possible. (± 0.1 mm is recommended.) Incorrect center height adjustment may cause chattering. In cut-off applications, adjust the center height of the cutting edge to a value from 0.0 to +0.2mm. A lower center height will result in larger central burrs.



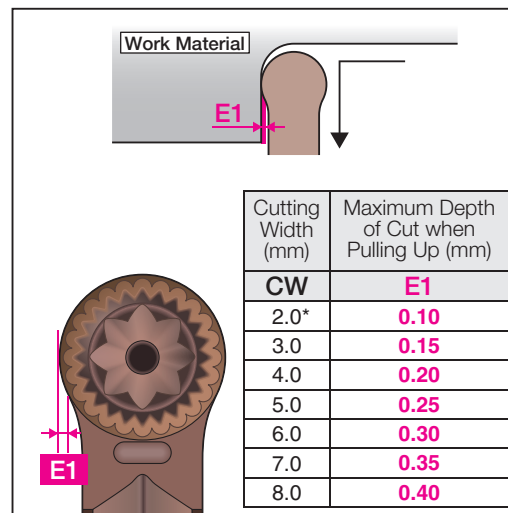
■ Precautions when Setting the Coolant Supply Nozzle

- ① Set the coolant supply nozzle so that coolant can be supplied from the top of the upper clamp unit.

Apply coolant to the top of the upper clamp unit.



■ Depth of Cut when Pulling Up with RG / RN Type Chipbreakers



* : Only RN Type chipbreakers will have a cutting width of 2.0.

Cutting Width (mm)	Recommended Cutting Conditions		Corner Radius (mm)	Insert Cat. No.
	Grooving / Cut-Off (Necking)	Traversing		
1.25		—	0.05	GCM N125005-GF
1.5		—	0.05	GCM N150005-GF
2.0			0.02	GCM R/L20002-CF-10 GCM R/L20002-CF-15
			0.2	GCM N2002-ML GCM N2002-GG GCM N2002-GL GCM N2002-GF GCM R/L2002-CG-05 GCG N2002-GA
			1.0	GCM N2010-RN
3.0			0.02	GCM R/L30002-CF-10 GCM R/L30002-CF-15
			0.2	GCM N3002-ML GCM N3002-GG GCM N3002-GL GCM N3002-GF GCM R/L3002-CG-05 GCG N3002-GA
			0.4	GCM N3004-MG GCM N3004-GG
4.0			1.5	GCM N3015-RG GCM N3015-RN
			0.2	GCM N4002-GG GCM N4002-GL GCM N4002-GF GCM R/L4002-CG-05
			0.4	GCM N4004-ML GCM N4004-GG GCG N4004-GA GCM N4008-MG
5.0			2.0	GCM N4020-RG GCM N4020-RN
			0.2	GCM N5002-GG GCM N5002-GL GCM N5002-GF
			0.4	GCM N5004-ML GCM N5004-GG GCG N5004-GA GCM N5008-MG
6.0			0.8	GCM N5025-RG GCM N5025-RN
			0.2	GCM N6002-GG GCM N6002-GL GCM N6002-GF
			0.4	GCM N6004-ML GCM N6004-GG GCG N6004-GA GCM N6008-MG
7.0			3.0	GCM N6030-RG GCM N6030-RN
			0.2	GCM N7002-GF
			0.4	GCM N7004-ML GCM N7004-GG GCM N7004-GL GCM N7004-GF
8.0			0.8	GCM N7008-MG GCM N7035-RG
			0.2	GCM N8002-GF
			0.4	GCM N8004-ML GCM N8004-GG GCM N8004-GL GCM N8004-GF
			0.8	GCM N8008-MG
			4.0	GCM N8040-RG

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

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

Because there is less space for chip evacuation when machining internal diameters (particularly small bore diameters), ML, GL, or GF Type chipbreakers are recommended.

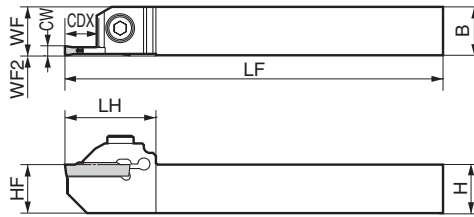
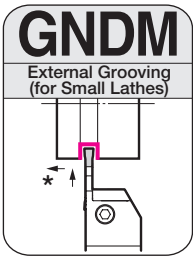
Modifications to inserts and holders are required to perform machining such as R-grooving when using an RG Type chipbreaker with a GND F Type holder for facing.

Recommended Cutting Conditions, GNDIS Type P33

Recommended Cutting Conditions

Work Material	P Carbon Steel / Alloy Steel				M Stainless Steel			K Cast Iron			S Exotic Alloy		N Non-ferrous Metal
Insert Grade	AC830P	AC520U	AC530U AC1030U	T2500A	AC830P	AC520U	AC530U AC1030U	AC425K	AC520U	AC530U AC1030U	AC520U	AC530U AC1030U	H10
Cutting Speed V_c (m/min)	80~200	80~200	50~200	50~200	70~150	70~150	50~150	80~200	60~200	50~200	20~80	20~60	150~300

External Multi-purpose Type for Small Lathes (Grooving / Traversing / Copying)



Figures show right-hand tools.

■ Holders

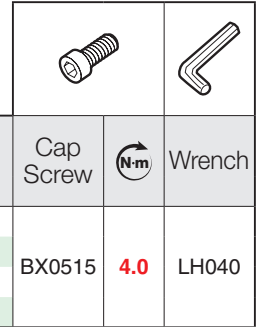
* Use a multi-purpose copying insert for traversing (groove expansion).

Dimensions (mm)

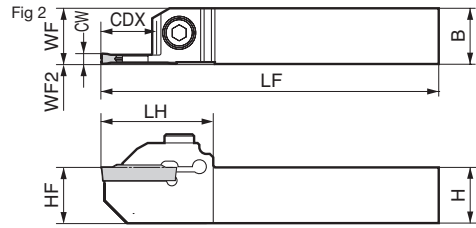
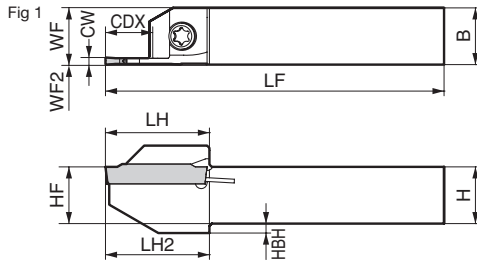
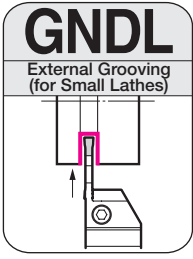
Cat. No.	Stock		Height H	Width B	Total Length LF	Edge Distance WF	Cutting Edge Height HF	Head LH	Offset WF2	Cutting Width CW	Max. Grooving Depth CDX	Max. Cut-off Dia.	Applicable Insert	Cap Screw	N·m	Wrench
	R	L														
GNDM R/L1616JX-1.2508	●	●	16	16	120	(16)	16	26	0	1.25	8.0	16	GCM N125005-GF	BX0515	4.0	LH040
GNDM R/L1616JX-1.510	●	●	16	16	120	(16)	16	26	0	1.50	10.0	20	GCM N150005-GF			
GNDM R/L1616JX-212	●	●	16	16	120	(16)	16	30	0	2.00	12.0	24	GC□□200□-□□			
GNDM R/L1616JX-312	●	●	16	16	120	(16)	16	30	0	3.00	12.0	24	GC□□300□-□□			

Use an insert and a holder with the same cutting width (CW). Refer to page 15 for applicable inserts.

■ Parts



External Grooving / Cut-Off for Small Lathes



Figures show right-hand tools.

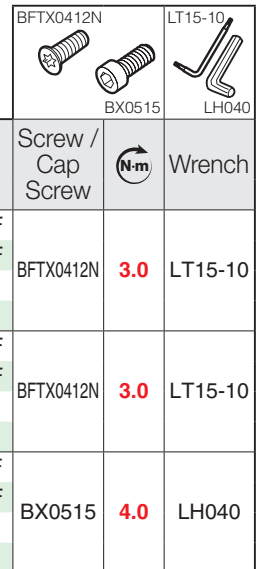
■ Holders

Dimensions (mm)

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

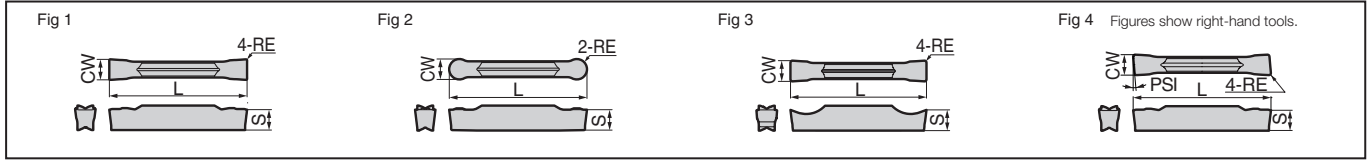
Use an insert and a holder with the same cutting width (CW). Refer to page 15 for applicable inserts.

■ Parts



■ Inserts for GNDM Type (For Small Lathes) / GNDL Type (For Small Lathes)

(Yellow) Coated Carbide / (Pink) Cermet / (White) Cemented Carbide



● Grooving / Traversing (mm)

Appearance	Cat. No.	Stock					Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	T2500A	CW						
							Cutting Width	Tolerance					
MG General Purpose	GCM N3004-MG	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
ML Low Feed	GCM N2002-ML N3002-ML	—	—	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
		●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		

● External Copying / External R Grooving (mm)

Appearance	Cat. No.	Stock					Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	T2500A	CW						
							Cutting Width	Tolerance					
RG General Purpose	GCM N3015-RG	●	●	●	●	—	3.0	±0.03	1.5	21.1	3.8	5	2

● Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						Cutting Width	Tolerance					
GG General Purpose	GCM N2002-GG N3002-GG	●	●	—	—	2.0	±0.03	0.2	21.1	3.6	5	1
		●	●	—	—	3.0	±0.03	0.2	21.1	3.8		
GL Low Feed	GCM N2002-GL N3002-GL	●	●	—	—	2.0	±0.03	0.2	21.1	3.6	5	1
		●	●	—	—	3.0	±0.03	0.2	21.1	3.8		
GF Low Cutting Force	GCM N125005-GF N150005-GF	—	—	●	—	1.25	±0.03	0.05	17.4	3.2	5	1
		—	—	●	—	1.5	±0.03	0.05	17.4	3.7		
	GCM N2002-GF N3002-GF	●	●	●	—	2.0	±0.03	0.2	21.1	3.6		
		●	●	●	—	3.0	±0.03	0.2	21.1	3.8		

● Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock					Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	T2500A	CW						
							Cutting Width	Tolerance					
RN General Purpose	GCM N2010-RN N3015-RN	—	—	●	●	—	2.0	±0.03	1.0	21.7	3.6	5	2
		●	●	●	●	—	3.0	±0.03	1.5	22.4	3.8		

● Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock					Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10					CW						
							Cutting Width	Tolerance					
GA General Purpose	GCG N2002-GA N3002-GA	●					2.0	±0.025	0.2	21.1	3.6	5	3
		●					3.0	±0.025	0.2	21.1	3.8		

● Cut-Off (Directional) (mm)

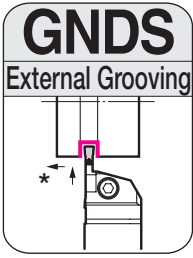
Appearance	Cat. No.	Stock					Front Cutting Edge Angle (Psi)	Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	AC1030U			CW						
								Cutting Width	Tolerance					
CG General Purpose	GCM R2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	4	
	L2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6			
	R3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8			
	L3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8			
CF Low Cutting Force	GCM R2003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	5	4	
	L2003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6			
	R3003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8			
	L3003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8			
	R2003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6			
	L2003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6			
	R3003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8			
	L3003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8			

GCM R : Right hand GCM L : Left-Handed

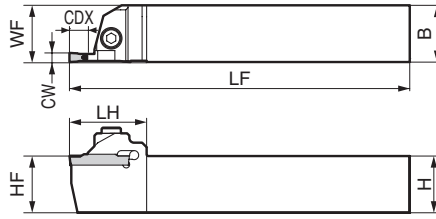
Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. Recommended Cutting Conditions P13

● : Standard stocked item ● : Standard stocked item (expanded item) Blank : Made-to-order item — : Not available.

External Multi-purpose Type for Shallow Grooves (Grooving / Traversing / Copying)



* Use a multi-purpose copying insert for traversing (groove expansion).



Figures show right-hand tools.
 Dimensions (mm)

■ Holders

■ Parts

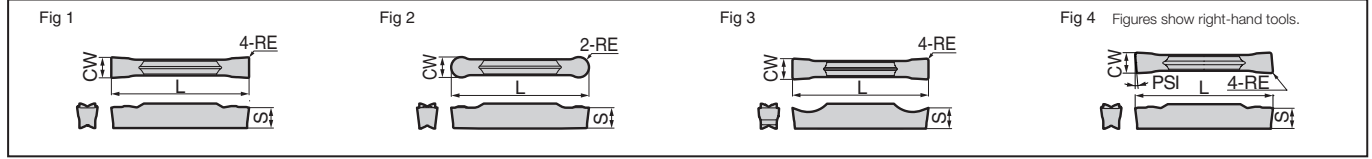
Cap Screw	Wrench
BX0520	LH040

Cat. No.	Stock		Height		Width		Total Length	Edge Distance	Cutting Edge Height	Head	Cutting Width	Max. Grooving Depth	Applicable Insert	
	R	L	H	B	LF	WF	HF	LH	CW	CDX				
GND R/L2020K-206	●	●	20	20	125	20	20	30	2.0	6	GC□□2000-□□	BX0520	5.0	LH040
GND R/L2020K-306	●	●	20	20	125	20	20	30	3.0	6	GC□□3000-□□			
GND R/L2020K-410	●	●	20	20	125	20	20	34	4.0	10	GC□□4000-□□			
GND R/L2020K-510	●	●	20	20	125	20	20	34	5.0	10	GC□ N5000-□□			
GND R/L2020K-610	●	●	20	20	125	20	20	34	6.0	10	GC□ N6000-□□			
GND R/L2525M-206	●	●	25	25	150	25	25	30	2.0	6	GC□□2000-□□			
GND R/L2525M-306	●	●	25	25	150	25	25	30	3.0	6	GC□□3000-□□			
GND R/L2525M-410	●	●	25	25	150	25	25	34	4.0	10	GC□□4000-□□			
GND R/L2525M-510	●	●	25	25	150	25	25	34	5.0	10	GC□ N5000-□□			
GND R/L2525M-610	●	●	25	25	150	25	25	34	6.0	10	GC□ N6000-□□			

Use an insert and a holder with the same cutting width (CW). Refer to page 17 for applicable inserts.

GNDS Type Inserts

(Coated Carbide / Cermet / Cemented Carbide)



Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
MG General Purpose	GCM N3004-MG	●	●	●	●	3.0	±0.03	0.4	21.1	3.8	5	1
	GCM N4008-MG	●	●	●	●	4.0	±0.03	0.8	26.4	4.0		
	N5008-MG	●	●	●	●	5.0	±0.03	0.8	26.4	4.1		
	N6008-MG	●	●	●	●	6.0	±0.03	0.8	26.4	4.5		
ML CW=40mm CW=50mm Low Feed	GCM N2002-ML	—	—	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-ML	●	●	●	●	3.0	±0.03	0.2	21.1	3.8		
	GCM N4004-ML	●	●	●	●	4.0	±0.03	0.4	26.4	4.0		
	N5004-ML	●	●	●	●	5.0	±0.03	0.4	26.4	4.1		
N6004-ML	●	●	●	●	6.0	±0.03	0.4	26.4	4.5			

External Copying / External R Grooving (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RG General Purpose	GCM N3015-RG	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	2
	N4020-RG	●	●	●	●	4.0	±0.03	2.0	26.4	4.0		
	N5025-RG	●	●	●	●	5.0	±0.03	2.5	27.2	4.1		
	N6030-RG	●	●	●	●	6.0	±0.03	3.0	27.5	4.5		

Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						Cutting Width	Tolerance					
GG General Purpose	GCM N2002-GG	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GG	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GG	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GG	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GG	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N3004-GG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		
GL Low Feed	GCM N2002-GL	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GL	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GL	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GL	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
N6002-GL	●	●	●	—	6.0	±0.03	0.2	26.4	4.5			
GF Low Cutting Force	GCM N2002-GF	—	—	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GF	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GF	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GF	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
N6002-GF	●	●	●	—	6.0	±0.03	0.2	26.4	4.5			

Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RN General Purpose	GCM N2010-RN	—	—	●	●	2.0	±0.03	1.0	21.7	3.6	5	2
	N3015-RN	●	●	●	●	3.0	±0.03	1.5	22.4	3.8		
	N4020-RN	●	●	●	●	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	●	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	●	6.0	±0.03	3.0	28.1	4.5		

Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10				CW						
						Cutting Width	Tolerance					
GA General Purpose	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		
	GCG N4004-GA	●				4.0	±0.025	0.4	26.4	4.0		
	N5004-GA	●				5.0	±0.025	0.4	26.4	4.1		
	N6004-GA	●				6.0	±0.025	0.4	26.4	4.5		

Cut-Off (Directional) (mm)

Appearance	Cat. No.	Stock				Front Cutting Edge Angle PSI	Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	AC1030U		CW						
							Cutting Width	Tolerance					
CG General Purpose	GCM R2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	4
	L2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		
	R3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	L3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	R4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
	L4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
CF Low Cutting Force	GCM R2003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	5	4
	L2003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		
	R3003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	L3003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	R2003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	L2003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	R3003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		
	L3003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		

GCM R : Right hand GCM L : Left-Handed

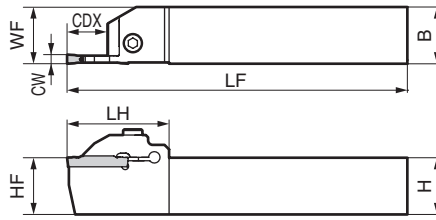
Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. Recommended Cutting Conditions P13

● : Standard stocked item ● : Standard stocked item (expanded item) Blank : Made-to-order item — : Not available.

External Multi-purpose Type (Grooving / Traversing / Copying)



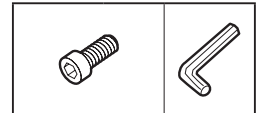
* Use a multi-purpose copying insert for traversing (groove expansion).



Figures show right-hand tools.
 Dimensions (mm)

■ Holders

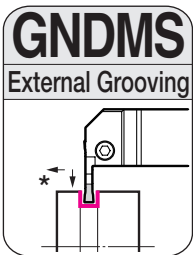
■ Parts



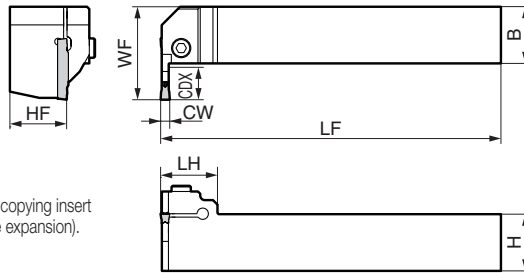
Cat. No.	Stock		Height	Width	Total Length	Edge Distance	Cutting Edge Height	Head	Cutting Width	Max. Grooving Depth	Max. Cut-off Dia.	Applicable Insert	Cap Screw	N·m	Wrench
	R	L													
GNDM R/L2020K-1.2510	●	●	20	20	125	20	20	34.0	1.25	10	20	GCM N125005-GF	BX0520	5.0	LH040
GNDM R/L2020K-1.510	●	●	20	20	125	20	20	34.0	1.50	10	20	GCM N150005-GF			
GNDM R/L2020K-210	●	●	20	20	125	20	20	33.6	2.00	10	20	GC□□2000-□□			
GNDM R/L2020K-312	●	●	20	20	125	20	20	36.6	3.00	12	24	GC□□3000-□□			
GNDM R/L2020K-418	●	●	20	20	125	20	20	45.0	4.00	18	36	GC□□4000-□□			
GNDM R/L2020K-518	●	●	20	20	125	20	20	45.0	5.00	18	36	GC□□5000-□□			
GNDM R/L2020K-618	●	●	20	20	125	20	20	45.0	6.00	18	36	GC□□6000-□□			
GNDM R/L2525M-1.2510	●	●	25	25	150	25	25	36.0	1.25	10	20	GCM N125005-GF			
GNDM R/L2525M-1.510	●	●	25	25	150	25	25	36.0	1.50	10	20	GCM N150005-GF			
GNDM R/L2525M-210	●	●	25	25	150	25	25	33.6	2.00	10	20	GC□□2000-□□			
GNDM R/L2525M-312	●	●	25	25	150	25	25	36.6	3.00	12	24	GC□□3000-□□			
GNDM R/L2525M-418	●	●	25	25	150	25	25	45.0	4.00	18	36	GC□□4000-□□			
GNDM R/L2525M-518	●	●	25	25	150	25	25	45.0	5.00	18	36	GC□□5000-□□			
GNDM R/L2525M-618	●	●	25	25	150	25	25	45.0	6.00	18	36	GC□□6000-□□			
GNDM R/L3225P-312			32	25	170	25	32	36.6	3.00	12	24	GC□□3000-□□			
GNDM R/L3225P-418			32	25	170	25	32	45.0	4.00	18	36	GC□□4000-□□			
GNDM R/L3225P-518			32	25	170	25	32	45.0	5.00	18	36	GC□□5000-□□			
GNDM R/L3225P-618			32	25	170	25	32	45.0	6.00	18	36	GC□□6000-□□			
GNDM R/L3225P-718			32	25	170	25	32	50.0	7.00	18	36	GCM N7000-□□			
GNDM R/L3225P-818			32	25	170	25	32	50.0	8.00	18	36	GCM N8000-□□			
GNDM R/L3232P-312	●	●	32	32	170	32	32	36.6	3.00	12	24	GC□□3000-□□			
GNDM R/L3232P-418	●	●	32	32	170	32	32	45.0	4.00	18	36	GC□□4000-□□			
GNDM R/L3232P-518	●	●	32	32	170	32	32	45.0	5.00	18	36	GC□□5000-□□			
GNDM R/L3232P-618	●	●	32	32	170	32	32	45.0	6.00	18	36	GC□□6000-□□			
GNDM R/L3232P-718	●	●	32	32	170	32	32	50.0	7.00	18	36	GCM N7000-□□			
GNDM R/L3232P-818	●	●	32	32	170	32	32	50.0	8.00	18	36	GCM N8000-□□			

Use an insert and a holder with the same cutting width (CW). Refer to page 19 for applicable inserts.

L-Shaped (Side Cut) Tools for External Multi-Purpose Machining (Grooving / Traversing / Copying)



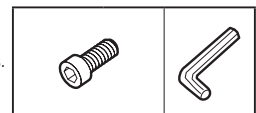
* Use a multi-purpose copying insert for traversing (groove expansion).



Figures show right-hand tools.

■ Holders

■ Parts



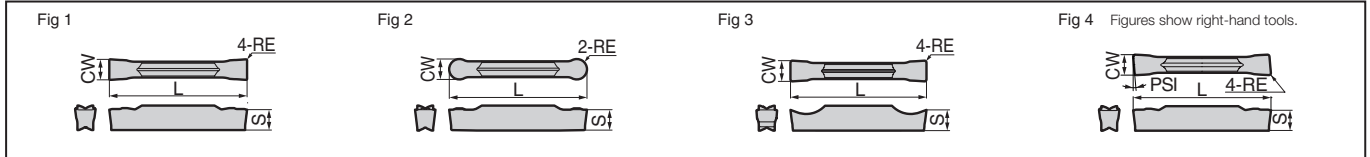
Cat. No.	Stock		Height	Width	Total Length	Edge Distance	Cutting Edge Height	Head	Cutting Width	Max. Grooving Depth	Applicable Insert	Cap Screw	N·m	Wrench
	R	L												
GNDMS R/L2020K-310	●	●	20	20	125	32	20	25	3.0	10	GC□□3000-□□	BX0520	5.0	LH040
GNDMS R/L2020K-412	●	●	20	20	125	34	20	25	4.0	12	GC□□4000-□□			
GNDMS R/L2020K-512	●	●	20	20	125	34	20	25	5.0	12	GC□□5000-□□			
GNDMS R/L2525M-312	●	●	25	25	150	39	25	25	3.0	12	GC□□3000-□□			
GNDMS R/L2525M-414	●	●	25	25	150	41	25	25	4.0	14	GC□□4000-□□			
GNDMS R/L2525M-514	●	●	25	25	150	41	25	25	5.0	14	GC□□5000-□□			
GNDMS R/L2525M-614	●	●	25	25	150	41	25	25	6.0	14	GC□□6000-□□			

Use an insert and a holder with the same cutting width (CW). Refer to page 19 for applicable inserts.

● : Standard stocked item Blank : Made-to-order item : Recommended tightening torque (N·m)

GNDM / GNDMS Type Inserts

(Coated Carbide / Cermet / Cemented Carbide)



Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig	
		AC830P	AC425K	AC520U	AC530U	T2500A	CW						
							Cutting Width						Tolerance
MG General Purpose	GCM N3004-MG	●	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5 1	
	GCM N4008-MG	●	●	●	●	—	4.0	±0.03	0.8	26.4	4.0		
	N5008-MG	●	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		
	N6008-MG	●	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		
	GCM N7008-MG	●	●	●	●	—	7.0	±0.04	0.8	28.75	5.5		
	N8008-MG	●	●	●	●	—	8.0	±0.04	0.8	28.75	6.0		
ML CW=4.0mm Low Feed	GCM N2002-ML	—	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	5 1	
	N3002-ML	●	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	GCM N4004-ML	●	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		
	N5004-ML	●	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		
	N6004-ML	●	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		
	GCM N7004-ML	●	●	●	●	—	7.0	±0.04	0.4	28.75	5.5		
N8004-ML	●	●	●	●	—	8.0	±0.04	0.4	28.75	6.0			

External Copying / External R Grooving (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig	
		AC830P	AC425K	AC520U	AC530U	T2500A	CW						
							Cutting Width						Tolerance
RG General Purpose	GCM N3015-RG	●	●	●	●	—	3.0	±0.03	1.5	21.1	3.8	5 2	
	N4020-RG	●	●	●	●	—	4.0	±0.03	2.0	26.4	4.0		
	N5025-RG	●	●	●	●	—	5.0	±0.03	2.5	27.2	4.1		
	N6030-RG	●	●	●	●	—	6.0	±0.03	3.0	27.5	4.5		
	GCM N7035-RG	●	●	●	●	—	7.0	±0.04	3.5	29.05	5.5		
	N8040-RG	●	●	●	●	—	8.0	±0.04	4.0	29.25	6.0		

Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig	
		AC830P	AC425K	AC520U	AC530U	T2500A	CW						
							Cutting Width						Tolerance
RN General Purpose	GCM N2010-RN	—	—	—	—	—	2.0	±0.03	1.0	21.7	3.6	5 2	
	N3015-RN	●	●	●	●	—	3.0	±0.03	1.5	22.4	3.8		
	N4020-RN	●	●	●	●	—	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	●	—	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	●	—	6.0	±0.03	3.0	28.1	4.5		

Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						Cutting Width	Tolerance					
GG General Purpose	GCM N2002-GG	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5 1	
	N3002-GG	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GG	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GG	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GG	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N3004-GG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		
GL Low Feed	N4004-GG	●	●	●	—	4.0	±0.03	0.4	26.4	4.0	5 1	
	N5004-GG	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		
	N6004-GG	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		
	GCM N7004-GG	●	●	●	—	7.0	±0.04	0.4	28.75	5.5		
	N8004-GG	●	●	●	—	8.0	±0.04	0.4	28.75	6.0		
	GCM N2002-GL	●	●	●	—	2.0	±0.03	0.2	21.1	3.6		
GF Low Cutting Force	N3002-GL	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5 1	
	N4002-GL	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GL	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GL	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N7004-GL	●	●	●	—	7.0	±0.04	0.4	28.75	5.5		
	N8004-GL	●	●	●	—	8.0	±0.04	0.4	28.75	6.0		
GF Low Cutting Force	GCM N125005-GF	—	—	●	—	1.25	±0.03	0.05	17.4	3.2	5 1	
	N150005-GF	—	—	●	—	1.5	±0.03	0.05	17.4	3.7		
	GCM N2002-GF	—	●	●	—	2.0	±0.03	0.2	21.1	3.6		
	N3002-GF	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GF	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GF	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GF	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N7002-GF	●	●	●	—	7.0	±0.04	0.2	28.75	5.5		
	N8002-GF	●	●	●	—	8.0	±0.04	0.2	28.75	6.0		
	GCM N7004-GF	●	●	●	—	7.0	±0.04	0.4	28.75	5.5		
	N8004-GF	●	●	●	—	8.0	±0.04	0.4	28.75	6.0		

Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						Cutting Width	Tolerance					
GA General Purpose	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		
	GCG N4004-GA	●	—	—	—	4.0	±0.025	0.4	26.4	4.0		
	N5004-GA	●	—	—	—	5.0	±0.025	0.4	26.4	4.1		
	N6004-GA	●	—	—	—	6.0	±0.025	0.4	26.4	4.5		

Cut-Off (Directional) (mm)

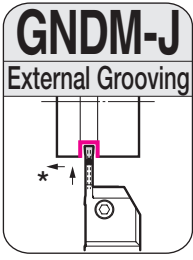
Appearance	Cat. No.	Stock				Front Cutting Edge Angle PSI	Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	AC1030U		CW						
							Cutting Width	Tolerance					
CG General Purpose	GCM R2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5 4	
	L2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		
	R3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	L3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	R4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
	L4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
CF Low Cutting Force	GCM R2003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	5 4	
	L2003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		
	R3003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	L3003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	R2003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	L2003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	R3003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		
	L3003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		

GCM R : Right hand GCM L : Left-Handed

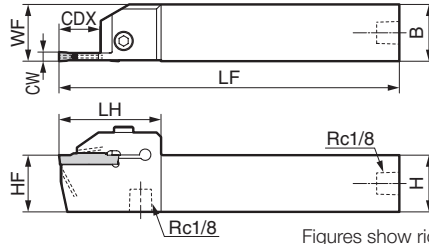
Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. Recommended Cutting Conditions P13

● : Standard stocked item ● : Standard stocked item (expanded item) Blank : Made-to-order item — : Not available.

External Multi-purpose Type (Grooving / Traversing / Copying) with Internal Coolant



New



Figures show right-hand tools.

■ **Holders**

* Use a multi-purpose copying insert for traversing (groove expansion).

Dimensions (mm)

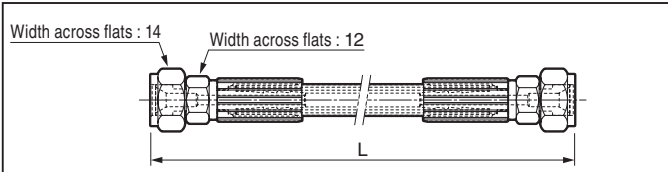
Cat. No.	Stock		Height H	Width B	Total Length LF	Edge Distance WF	Cutting Edge Height HF	Head LH	Cutting Width CW	Max. Grooving Depth CDX	Max. Cut-off Dia.	Applicable Insert
	R	L										
GNDM R/L2020K-210J <i>New</i>	●	●	20	20	125	20	20	33.6	2.00	10	20	GC □ 20 ○ □ □ □
GNDM R/L2020K-312J <i>New</i>	●	●	20	20	125	20	20	36.6	3.00	12	24	GC □ 30 ○ □ □ □
GNDM R/L2020K-418J <i>New</i>	●	●	20	20	125	20	20	45.0	4.00	18	36	GC □ 40 ○ □ □ □
GNDM R/L2020K-518J <i>New</i>	●	●	20	20	125	20	20	45.0	5.00	18	36	GC □ N50 ○ □ □ □
GNDM R/L2020K-618J <i>New</i>	●	●	20	20	125	20	20	45.0	6.00	18	36	GC □ N60 ○ □ □ □
GNDM R/L2525K-210J <i>New</i>	●	●	25	25	125	25	25	33.6	2.00	10	20	GC □ 20 ○ □ □ □
GNDM R/L2525K-312J <i>New</i>	●	●	25	25	125	25	25	36.6	3.00	12	24	GC □ 30 ○ □ □ □
GNDM R/L2525K-418J <i>New</i>	●	●	25	25	125	25	25	45.0	4.00	18	36	GC □ 40 ○ □ □ □
GNDM R/L2525K-518J <i>New</i>	●	●	25	25	125	25	25	45.0	5.00	18	36	GC □ N50 ○ □ □ □
GNDM R/L2525K-618J <i>New</i>	●	●	25	25	125	25	25	45.0	6.00	18	36	GC □ N60 ○ □ □ □

■ **Parts**

Cap Screw	N·m	Plug	Wrench
BX0520	5.0	XP02	LH040

Use an insert and a holder with the same cutting width (CW). Refer to page 21 for applicable inserts.

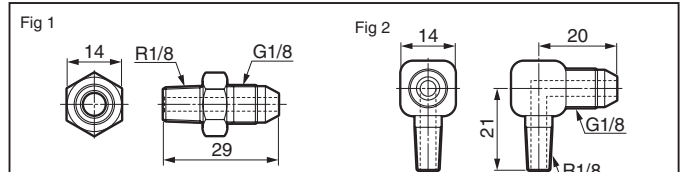
■ **Parts (Hoses)**



Cat. No.	Stock	Dimensions (mm)		
		L	Screw Standard	Screw Standard
J-HOSE-G1/8-G1/8-200	●	200	G1/8	G1/8
J-HOSE-G1/8-G1/8-300	●	300	G1/8	G1/8

Hoses are sold separately.

■ **Parts (Connectors)**

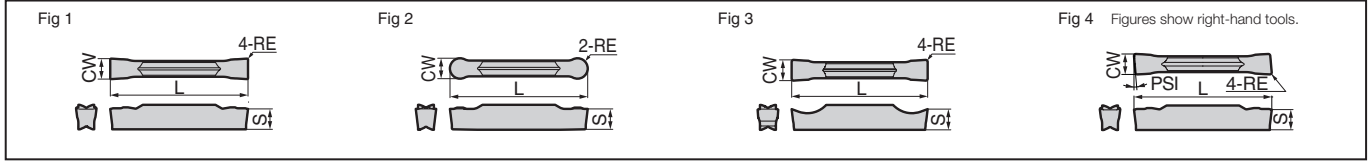


Cat. No.	Stock	Dimensions (mm)		Fig
		Screw Standard	Screw Standard	
J-G1/8-R1/8-00	●	G1/8	R1/8	1
J-G1/8-R1/8-90	●	G1/8	R1/8	2

Connectors are sold separately.

■ GNDM-J Inserts

(Coated Carbide / Cermet / Cemented Carbide)



● Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
MG General Purpose	GCM N3004-MG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
	N4008-MG	●	●	●	—	4.0	±0.03	0.8	26.4	4.0		
	N5008-MG	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		
	N6008-MG	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		
ML 3.0mm-5.0mm Low Feed	GCM N2002-ML	—	—	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-ML	●	●	●	●	3.0	±0.03	0.2	21.1	3.8		
	N4004-ML	●	●	●	●	4.0	±0.03	0.4	26.4	4.0		
	N5004-ML	●	●	●	●	5.0	±0.03	0.4	26.4	4.1		
N6004-ML	●	●	●	—	6.0	±0.03	0.4	26.4	4.5			

● External Copying / External R Grooving (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RG General Purpose	GCM N3015-RG	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	2
	N4020-RG	●	●	●	●	4.0	±0.03	2.0	26.4	4.0		
	N5025-RG	●	●	●	—	5.0	±0.03	2.5	27.2	4.1		
	N6030-RG	●	●	●	—	6.0	±0.03	3.0	27.5	4.5		

● Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						Cutting Width	Tolerance					
GG General Purpose	GCM N2002-GG	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GG	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GG	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GG	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GG	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N3004-GG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		
GL Low Feed	GCM N2002-GL	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GL	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GL	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GL	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GL	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N2002-GF	—	●	●	—	2.0	±0.03	0.2	21.1	3.6		
GF Low Cutting Force	N3002-GF	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
	N4002-GF	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GF	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GF	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		

● Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RN General Purpose	GCM N2010-RN	—	—	●	●	2.0	±0.03	1.0	21.7	3.6	5	2
	N3015-RN	●	●	●	●	3.0	±0.03	1.5	22.4	3.8		
	N4020-RN	●	●	●	●	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	●	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	●	6.0	±0.03	3.0	28.1	4.5		

● Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10				CW						
						Cutting Width	Tolerance					
GA General Purpose	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		
	GCG N4004-GA	●				4.0	±0.025	0.4	26.4	4.0		
	N5004-GA	●				5.0	±0.025	0.4	26.4	4.1		
	N6004-GA	●				6.0	±0.025	0.4	26.4	4.5		

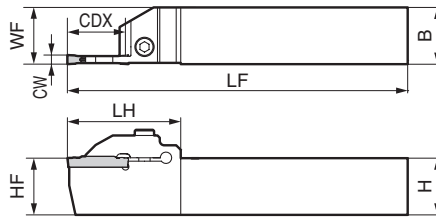
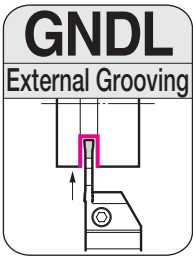
● Cut-Off (mm)

Appearance	Cat. No.	Stock				Front Cutting Edge Angle	Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	AC1030U		CW						
							Cutting Width	Tolerance					
CG General Purpose	GCM R2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	4
	GCM L2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		
	GCM R3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	GCM L3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	GCM R4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
	GCM L4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
CF Low Cutting Force	GCM R20003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6	5	4
	GCM L20003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		
	GCM R30003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	GCM L30003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	GCM R20003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	GCM L20003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	GCM R30003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		
	GCM L30003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		

Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. Recommended Cutting Conditions P13

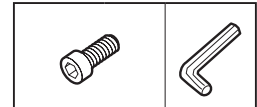
● : Standard stocked item ● : Standard stocked item (expanded item) Blank : Made-to-order item — : Not available.

External Deep Grooving & Cut-Off



Figures show right-hand tools.

Parts



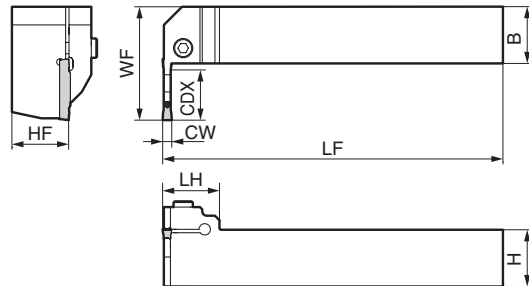
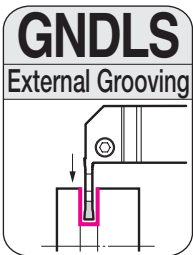
■ Holders

Dimensions (mm)

Cat. No.	Stock		Height	Width	Total Length	Edge Distance	Cutting Edge Height	Head	Cutting Width	Max. Grooving Depth	Max. Cut-off Dia.	Applicable Insert	Cap Screw	N·m	Wrench
	R	L													
GNDL R/L2020K-1.2516	●	●	20	20	125	20	20	38.0	1.25	16	32	GCM N125005-GF	BX0520	5.0	LH040
GNDL R/L2020K-1.516	●	●	20	20	125	20	20	38.0	1.50	16	32	GCM N150005-GF			
GNDL R/L2020K-220	●	●	20	20	125	20	20	44.5	2.00	20(18)	40	GC□□2000-□□			
GNDL R/L2020K-320	●	●	20	20	125	20	20	44.5	3.00	20(18)	40	GC□□3000-□□			
GNDL R/L2020K-425	●	●	20	20	125	20	20	50.0	4.00	25(23)	50	GC□□4000-□□			
GNDL R/L2020K-525	●	●	20	20	125	20	20	50.0	5.00	25(23)	50	GC□ N5000-□□			
GNDL R/L2020K-625	●	●	20	20	125	20	20	50.0	6.00	25(23)	50	GC□ N6000-□□			
GNDL R/L2525M-1.2516	●	●	25	25	150	25	25	40.0	1.25	16	32	GCM N125005-GF			
GNDL R/L2525M-1.516	●	●	25	25	150	25	25	40.0	1.50	16	32	GCM N150005-GF			
GNDL R/L2525M-220	●	●	25	25	150	25	25	44.5	2.00	20(18)	40	GC□□2000-□□			
GNDL R/L2525M-320	●	●	25	25	150	25	25	44.5	3.00	20(18)	40	GC□□3000-□□			
GNDL R/L2525M-425	●	●	25	25	150	25	25	50.0	4.00	25(23)	50	GC□□4000-□□			
GNDL R/L2525M-525	●	●	25	25	150	25	25	50.0	5.00	25(23)	50	GC□ N5000-□□			
GNDL R/L2525M-625	●	●	25	25	150	25	25	50.0	6.00	25(23)	50	GC□ N6000-□□			
GNDL R/L3225P-320			32	25	170	25	32	44.5	3.00	20(18)	40	GC□□3000-□□			
GNDL R/L3225P-425			32	25	170	25	32	50.0	4.00	25(23)	50	GC□□4000-□□			
GNDL R/L3225P-525			32	25	170	25	32	50.0	5.00	25(23)	50	GC□ N5000-□□			
GNDL R/L3225P-625			32	25	170	25	32	50.0	6.00	25(23)	50	GC□ N6000-□□			
GNDL R/L3225P-725			32	25	170	25	32	50.0	7.00	25(23)	50	GCM N7000-□□			
GNDL R/L3225P-825			32	25	170	25	32	50.0	8.00	25(23)	50	GCM N8000-□□			
GNDL R/L3232P-320	●	●	32	32	170	32	32	44.5	3.00	20(18)	40	GC□□3000-□□			
GNDL R/L3232P-425	●	●	32	32	170	32	32	50.0	4.00	25(23)	50	GC□□4000-□□			
GNDL R/L3232P-525	●	●	32	32	170	32	32	50.0	5.00	25(23)	50	GC□ N5000-□□			
GNDL R/L3232P-625	●	●	32	32	170	32	32	50.0	6.00	25(23)	50	GC□ N6000-□□			
GNDL R/L3232P-725	●	●	32	32	170	32	32	50.0	7.00	25(23)	50	GCM N7000-□□			
GNDL R/L3232P-825	●	●	32	32	170	32	32	50.0	8.00	25(23)	50	GCM N8000-□□			

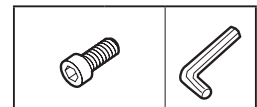
Use an insert and a holder with the same cutting width (CW). Dimensions in parentheses under maximum grooving depth are for applications that use copying inserts (RG / RN Type breakers). Refer to page 23 for applicable inserts.

L-Shaped (Side Cut) Tools for External Grooving



Figures show right-hand tools.

Parts



■ Holders

Dimensions (mm)

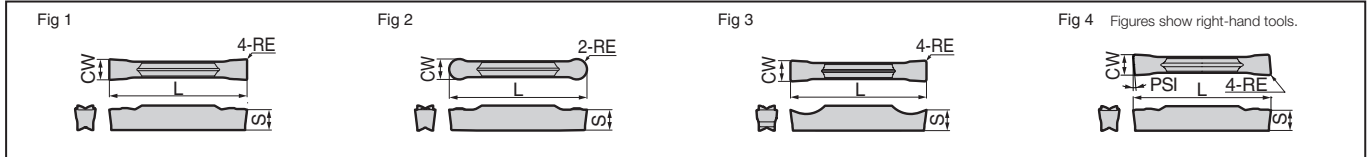
Cat. No.	Stock		Height	Width	Total Length	Edge Distance	Cutting Edge Height	Head	Cutting Width	Max. Grooving Depth	Applicable Insert	Cap Screw	N·m	Wrench
	R	L												
GNDLS R/L2020K-216	●	●	20	20	125	38	20	25	2.0	16	GC□□2000-□□	BX0520	5.0	LH040
GNDLS R/L2020K-316	●	●	20	20	125	38	20	25	3.0	16	GC□□3000-□□			
GNDLS R/L2525M-218	●	●	25	25	150	45	25	25	2.0	18	GC□□2000-□□			
GNDLS R/L2525M-318	●	●	25	25	150	45	25	25	3.0	18	GC□□3000-□□			
GNDLS R/L2525M-423	●	●	25	25	150	50	25	25	4.0	23	GC□□4000-□□			
GNDLS R/L2525M-523	●	●	25	25	150	50	25	25	5.0	23	GC□ N5000-□□			
GNDLS R/L2525M-623	●	●	25	25	150	50	25	25	6.0	23	GC□ N6000-□□			

Use an insert and a holder with the same cutting width (CW). Refer to page 23 for applicable inserts.

● : Standard stocked item Blank : Made-to-order item : Recommended tightening torque (N·m)

■ GNDL / GNDLS Type Inserts

(Coated Carbide / Cermet / Cemented Carbide)



● Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						RE	L					
MG General Purpose	GCM N3004-MG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
	GCM N4008-MG	●	●	●	—	4.0	±0.03	0.8	26.4	4.0		
	N5008-MG	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		
	N6008-MG	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		
	GCM N7008-MG	●	●	●	—	7.0	±0.04	0.8	28.75	5.5		
	N8008-MG	●	●	●	—	8.0	±0.04	0.8	28.75	6.0		
ML CW=4.0mm Low Feed	GCM N2002-ML	—	—	—	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-ML	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	GCM N4004-ML	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		
	N5004-ML	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		
	N6004-ML	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		
	GCM N7004-ML	●	●	●	—	7.0	±0.04	0.4	28.75	5.5		
N8004-ML	●	●	●	—	8.0	±0.04	0.4	28.75	6.0			

● External Copying / External R Grooving (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						RE	L					
RG General Purpose	GCM N3015-RG	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	2
	N4020-RG	●	●	●	●	4.0	±0.03	2.0	26.4	4.0		
	N5025-RG	●	●	●	—	5.0	±0.03	2.5	27.2	4.1		
	N6030-RG	●	●	●	—	6.0	±0.03	3.0	27.5	4.5		
	GCM N7035-RG	●	●	●	—	7.0	±0.04	3.5	29.05	5.5		
	N8040-RG	●	●	●	—	8.0	±0.04	4.0	29.25	6.0		

● Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						RE	L					
RN General Purpose	GCM N2010-RN	—	—	—	—	2.0	±0.03	1.0	21.7	3.6	5	2
	N3015-RN	●	●	●	—	3.0	±0.03	1.5	22.4	3.8		
	N4020-RN	●	●	●	—	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	—	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	—	6.0	±0.03	3.0	28.1	4.5		

● Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						RE	L					
GG General Purpose	GCM N2002-GG	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GG	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GG	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GG	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GG	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N3004-GG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		
GL Low Feed	N4004-GG	●	●	●	—	4.0	±0.03	0.4	26.4	4.0	5	1
	N5004-GG	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		
	N6004-GG	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		
	GCM N7004-GG	●	●	●	—	7.0	±0.04	0.4	28.75	5.5		
	N8004-GG	●	●	●	—	8.0	±0.04	0.4	28.75	6.0		
	GCM N2002-GL	●	●	●	—	2.0	±0.03	0.2	21.1	3.6		
GF Low Cutting Force	N3002-GL	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
	N4002-GL	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GL	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GL	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N7004-GL	●	●	●	—	7.0	±0.04	0.4	28.75	5.5		
	N8004-GL	●	●	●	—	8.0	±0.04	0.4	28.75	6.0		
GF Low Cutting Force	GCM N125005-GF	—	—	●	—	1.25	±0.03	0.05	17.4	3.2	5	1
	N150005-GF	—	—	●	—	1.5	±0.03	0.05	17.4	3.7		
	GCM N2002-GF	—	●	●	—	2.0	±0.03	0.2	21.1	3.6		
	N3002-GF	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GF	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GF	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GF	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N7002-GF	●	●	●	—	7.0	±0.04	0.2	28.75	5.5		
	N8002-GF	●	●	●	—	8.0	±0.04	0.2	28.75	6.0		
	GCM N7004-GF	●	●	●	—	7.0	±0.04	0.4	28.75	5.5		
	N8004-GF	●	●	●	—	8.0	±0.04	0.4	28.75	6.0		

● Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10				CW						
						RE	L					
GA General Purpose	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		
	GCG N4004-GA	●	—	—	—	4.0	±0.025	0.4	26.4	4.0		
	N5004-GA	●	—	—	—	5.0	±0.025	0.4	26.4	4.1		
	N6004-GA	●	—	—	—	6.0	±0.025	0.4	26.4	4.5		

● Cut-Off (Directional) (mm)

Appearance	Cat. No.	Stock				Front Cutting Edge Angle PSI	Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	AC1030U		CW						
							RE	L					
CG General Purpose	GCM R2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	4
	L2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		
	R3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	L3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	R4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
	L4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
CF Low Cutting Force	GCM R2003-CF-10	—	—	●	—	10°	2.0	±0.08	0.03	22.4	3.6	5	4
	L2003-CF-10	—	—	●	—	10°	2.0	±0.08	0.03	22.4	3.6		
	R3003-CF-10	—	—	●	—	10°	3.0	±0.08	0.03	22.4	3.8		
	L3003-CF-10	—	—	●	—	10°	3.0	±0.08	0.03	22.4	3.8		
	R2003-CF-15	—	—	●	—	15°	2.0	±0.08	0.03	22.4	3.6		
	L2003-CF-15	—	—	●	—	15°	2.0	±0.08	0.03	22.4	3.6		
	R3003-CF-15	—	—	●	—	15°	3.0	±0.08	0.03	22.4	3.8		
	L3003-CF-15	—	—	●	—	15°	3.0	±0.08	0.03	22.4	3.8		

GCM R : Right hand GCM L : Left-Handed

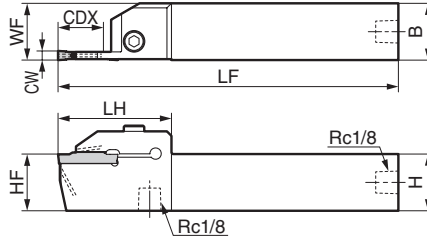
Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. Recommended Cutting Conditions P13

● : Standard stocked item ● : Standard stocked item (expanded item) Blank : Made-to-order item — : Not available.

External Deep Grooving / Cut-Off Type with Internal Coolant



New



Figures show right-hand tools.

■ **Holders**

Dimensions (mm)

Cat. No.	Stock		Height		Width		Total Length	Edge Distance	Cutting Edge Height	Head	Cutting Width	Max. Grooving Depth	Max. Cut-off Dia.	Applicable Insert
	R	L	H	B	LF	WF								
GNDL R/L2020K-220J <i>New</i>	●	●	20	20	125	20	20	44.5	2.00	20(18)	40	GC□ 20○□	BX0520	
GNDL R/L2020K-320J <i>New</i>	●	●	20	20	125	20	20	44.5	3.00	20(18)	40	GC□ 30○□		
GNDL R/L2020K-425J <i>New</i>	●	●	20	20	125	20	20	50	4.00	25(23)	50	GC□ 40○□		
GNDL R/L2020K-525J <i>New</i>	●	●	20	20	125	20	20	50	5.00	25(23)	50	GC□ N50○□		
GNDL R/L2020K-625J <i>New</i>	●	●	20	20	125	20	20	50	6.00	25(23)	50	GC□ N60○□		
GNDL R/L2525K-220J <i>New</i>	●	●	25	25	125	25	25	44.5	2.00	20(18)	40	GC□ 20○□		
GNDL R/L2525K-320J <i>New</i>	●	●	25	25	125	25	25	44.5	3.00	20(18)	40	GC□ 30○□		
GNDL R/L2525K-425J <i>New</i>	●	●	25	25	125	25	25	50	4.00	25(23)	50	GC□ 40○□		
GNDL R/L2525K-525J <i>New</i>	●	●	25	25	125	25	25	50	5.00	25(23)	50	GC□ N50○□		
GNDL R/L2525K-625J <i>New</i>	●	●	25	25	125	25	25	50	6.00	25(23)	50	GC□ N60○□		

■ **Parts**

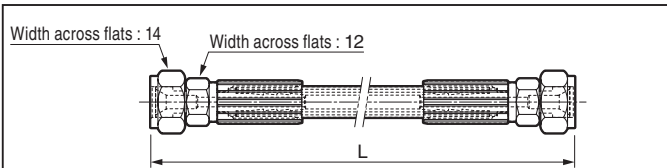
Cap Screw	N·m	Plug	Wrench
BX0520	5.0	XP02	LH040

Use an insert and a holder with the same cutting width (CW).

Dimensions in parentheses under maximum grooving depth are for applications that use copying inserts (RG / RN Type breakers).

Refer to page 25 for applicable inserts.

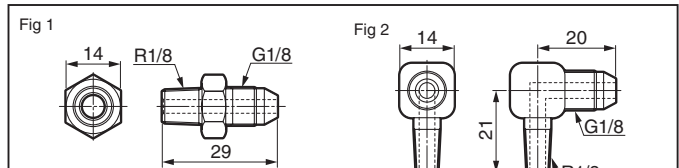
■ **Parts (Hoses)**



Cat. No.	Stock	Dimensions (mm)		
		L	Screw Standard	Screw Standard
J-HOSE-G1/8-G1/8-200	●	200	G1/8	G1/8
J-HOSE-G1/8-G1/8-300	●	300	G1/8	G1/8

Hoses are sold separately.

■ **Parts (Connectors)**

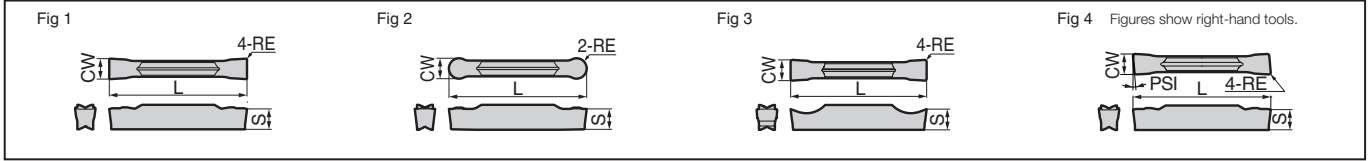


Cat. No.	Stock	Dimensions (mm)		Fig
		Screw Standard	Screw Standard	
J-G1/8-R1/8-00	●	G1/8	R1/8	1
J-G1/8-R1/8-90	●	G1/8	R1/8	2

Connectors are sold separately.

■ GNDL-J Inserts

(Coated Carbide / Cermet / Cemented Carbide)



● Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
MG General Purpose	GCM N3004-MG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
	N4008-MG	●	●	●	—	4.0	±0.03	0.8	26.4	4.0		
	N5008-MG	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		
	N6008-MG	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		
ML 3.0mm Low Feed	GCM N2002-ML	—	—	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-ML	●	●	●	●	3.0	±0.03	0.2	21.1	3.8		
	N4004-ML	●	●	●	●	4.0	±0.03	0.4	26.4	4.0		
	N5004-ML	●	●	●	●	5.0	±0.03	0.4	26.4	4.1		
	N6004-ML	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		

● External Copying / External R Grooving (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RG General Purpose	GCM N3015-RG	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	2
	N4020-RG	●	●	●	●	4.0	±0.03	2.0	26.4	4.0		
	N5025-RG	●	●	●	—	5.0	±0.03	2.5	27.2	4.1		
	N6030-RG	●	●	●	—	6.0	±0.03	3.0	27.5	4.5		

● Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						Cutting Width	Tolerance					
GG General Purpose	GCM N2002-GG	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GG	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GG	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GG	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GG	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N3004-GG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		
GL Low Feed	GCM N2002-GL	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GL	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GL	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GL	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
GF Low Cutting Force	GCM N2002-GF	—	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GF	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GF	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GF	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GF	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		

● Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RN General Purpose	GCM N2010-RN	—	—	●	●	2.0	±0.03	1.0	21.7	3.6	5	2
	N3015-RN	●	●	●	●	3.0	±0.03	1.5	22.4	3.8		
	N4020-RN	●	●	●	●	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	●	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	●	6.0	±0.03	3.0	28.1	4.5		

● Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10				CW						
						Cutting Width	Tolerance					
GA General Purpose	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		
	GCG N4004-GA	●				4.0	±0.025	0.4	26.4	4.0		
	N5004-GA	●				5.0	±0.025	0.4	26.4	4.1		
	N6004-GA	●				6.0	±0.025	0.4	26.4	4.5		

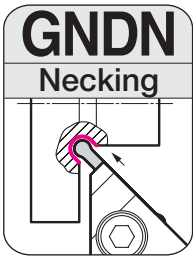
● Cut-Off (mm)

Appearance	Cat. No.	Stock				Front Cutting Edge Angle	Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	AC1030U		CW						
							Cutting Width	Tolerance					
CG General Purpose	GCM R2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	4
	GCM L2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		
	GCM R3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	GCM L3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	GCM R4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
CF Low Cutting Force	GCM L4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	5	4
	GCM R20003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		
	GCM L20003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		
	GCM R30003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	GCM L30003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	GCM R20003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	GCM L20003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	GCM R30003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		
	GCM L30003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		

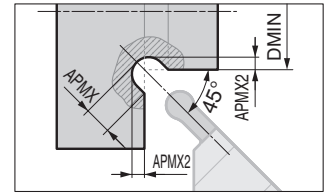
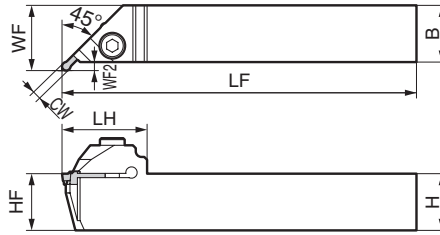
Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. Recommended Cutting Conditions P13

● : Standard stocked item ● : Standard stocked item (expanded item) Blank : Made-to-order item — : Not available.

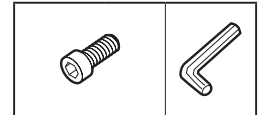
For Necking



New



Parts



■ Holders

Figures show right-hand tools.

Dimensions (mm)

Cat. No.	Stock		Height H	Width B	Total Length LF	Edge Distance WF	Cutting Edge Height HF	Head LH	Offset WF2	Min. Work Dia. DMIN	Cutting Width CW	APMX	APMX2	Applicable Insert	Cap Screw	N·m	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			
GNDN R/L2020K-320-020	●	●	20	20	125	23	20	35	3.0	20	3.0	2.0	0.79	GCM N3015-RN			
GNDN R/L2020K-430-030	●	●	20	20	125	24	20	37	4.0	30	4.0	3.0	1.29	GCM N4020-RN	BX0520	5.0	LH040
GNDN R/L2020K-535-030	●	●	20	20	125	25	20	40	5.0	30	5.0	3.5	1.44	GCM N5025-RN			
GNDN R/L2020K-640-030	●	●	20	20	125	25	20	40	5.0	30	6.0	4.0	1.59	GCM N6030-RN			
GNDN R/L2525M-215-020	●	●	25	25	150	28	25	35	3.0	20	2.0	1.5	0.64	GCM N2010-RN			
GNDN R/L2525M-320-020	●	●	25	25	150	28	25	35	3.0	20	3.0	2.0	0.79	GCM N3015-RN			
GNDN R/L2525M-430-030	●	●	25	25	150	29	25	37	4.0	30	4.0	3.0	1.29	GCM N4020-RN	BX0520	5.0	LH040
GNDN R/L2525M-535-030	●	●	25	25	150	30	25	40	5.0	30	5.0	3.5	1.44	GCM N5025-RN			
GNDN R/L2525M-640-030	●	●	25	25	150	30	25	40	5.0	30	6.0	4.0	1.59	GCM N6030-RN			

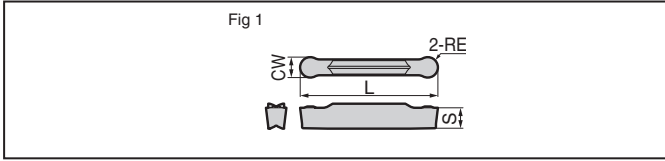
Use an insert and a holder with the same cutting width (CW). Refer to page 27 for applicable inserts.



■ Identification Details


GND N R 20 20 K - 2 15 - 020

Cutter Series Application : Necking Direction Shank Height (mm) Shank Width (mm) Shank Length Cutting Width (mm) APMX x10 (mm) Min. Work Dia. (mm)

■ **GNDN Type Inserts** ( Coated Carbide)



● **Copying / R Grooving / Necking** (mm)  

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance	RE	L	S		
 RN General Purpose	GCM N2010-RN	—	—	●	●	2.0	±0.03	1.0	21.7	3.6	5	1
	N3015-RN	●	●	●	●	3.0	±0.03	1.5	22.4	3.8		
	N4020-RN	●	●	●	●	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	●	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	●	6.0	±0.03	3.0	28.1	4.5		

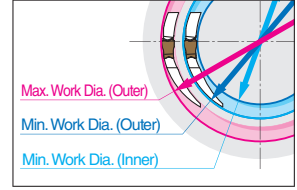
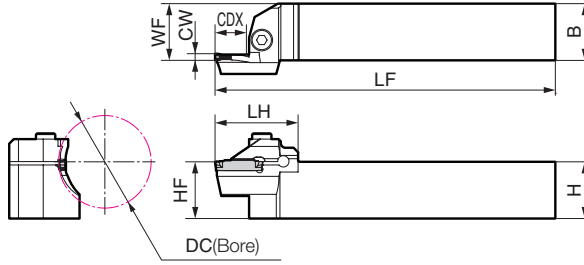
Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. **Recommended Cutting Conditions** 

● : Standard stocked item — : Not available.

Face Grooving

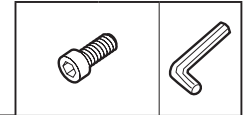


*Use a multi-purpose copying insert for traversing (groove expansion).



Figures show right-hand tools.

Parts



■ Holders

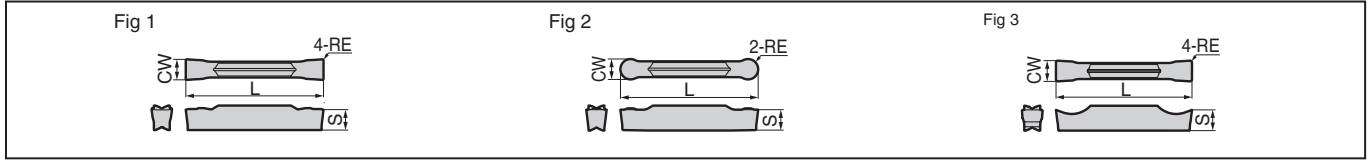
Cat. No.	Stock		Height	Width	Total Length	Edge Distance	Cutting Edge Height	Head	Bore	Dimensions (mm)			Applicable Insert	Cap Screw	Wrench	
	R	L								H	B	LF				WF
GND R/L2020K-312-035	●	●	20	20	125	20	20	35.6	35-45	29	3.0	12	GC□ N300□-□□	BX0520	5.0	LH040
GND R/L2020K-312-040	●	●	20	20	125	20	20	35.6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

Use an insert and a holder with the same cutting width (CW). Refer to page 29 for applicable inserts.

● : Standard stocked item (N·m) : Recommended tightening torque (N·m)

GNDF Type Inserts

(Coated Carbide / Cermet / Cemented Carbide)



● Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
MG General Purpose	GCM N3004-MG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
	GCM N4008-MG	●	●	●	—	4.0	±0.03	0.8	26.4	4.0		
	N5008-MG	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		
	N6008-MG	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		
ML CW=40mm CW=50mm Low Feed	GCM N3002-ML	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
	GCM N4004-ML	●	●	●	●	4.0	±0.03	0.4	26.4	4.0		
	N5004-ML	●	●	●	●	5.0	±0.03	0.4	26.4	4.1		
	N6004-ML	●	●	●	●	6.0	±0.03	0.4	26.4	4.5		

● Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RN General Purpose	GCM N3015-RN	●	●	●	●	3.0	±0.03	1.5	22.4	3.8	5	2
	N4020-RN	●	●	●	●	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	●	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	●	6.0	±0.03	3.0	28.1	4.5		

● Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10				CW						
						Cutting Width	Tolerance					
GA General Purpose	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		
	N5004-GA	●				5.0	±0.025	0.4	26.4	4.1		
	N6004-GA	●				6.0	±0.025	0.4	26.4	4.5		

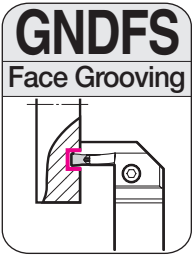
● Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						Cutting Width	Tolerance					
GG General Purpose	GCM N3002-GG	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
	N4002-GG	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GG	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GG	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
GL Low Feed	GCM N3002-GL	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
	N4002-GL	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GL	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GL	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
GF Low Cutting Force	GCM N3002-GF	●	●	●	●	3.0	±0.03	0.2	21.1	3.8	5	1
	N4002-GF	●	●	●	●	4.0	±0.03	0.2	26.4	4.0		
	N5002-GF	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GF	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		

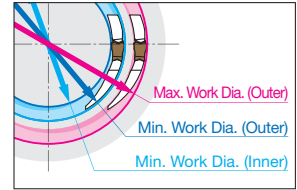
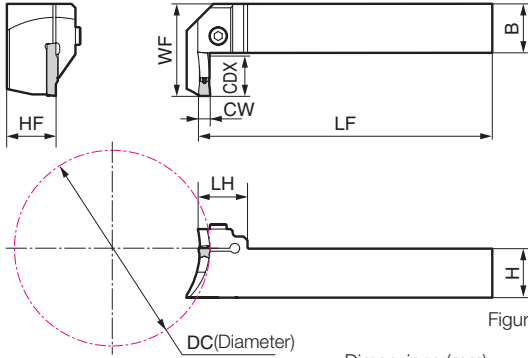
Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. **Recommended Cutting Conditions**

● : Standard stocked item Blank : Made-to-order item — : Not available.

L-Shaped (Side Cut) Facing Tools for Deep Grooving

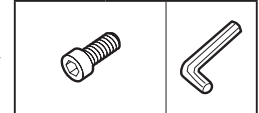


*Use a multi-purpose copying insert for traversing (groove expansion).



■ Holders

■ Parts



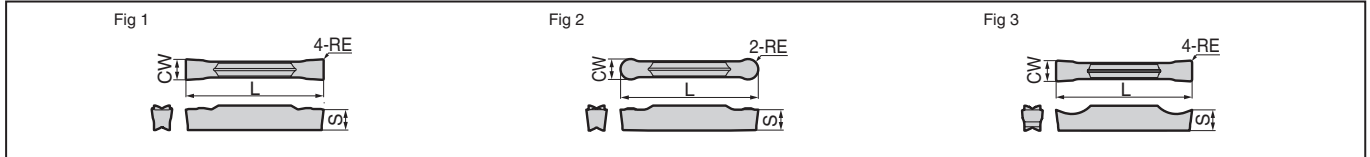
Figures show right-hand tools.

Cat. No.	Stock		Height	Width	Total Length	Edge Distance	Cutting Edge Height	Head	Bore	Min. Work Dia. (Inner)	Cutting Width		Max. Grooving Depth	Applicable Insert	Cap Screw	N·m	Wrench
	R	L									CW	CDX					
GNDFS R/L2525M-620-070			25	25	150	47	25	25	70~100	58	6.0	20	GC□ N60□□-□□	BX0520	5.0	LH040	
GNDFS R/L2525M-620-100			25	25	150	47	25	25	100~200	88	6.0	20					
GNDFS R/L2525M-620-180			25	25	150	47	25	25	180~300	168	6.0	20					
GNDFS R/L2525M-620-280			25	25	150	47	25	25	280~1000	268	6.0	20					
GNDFS R/L2525M-620-450			25	25	150	47	25	25	450~	438	6.0	20					
GNDFS R/L3232P-620-070			32	32	170	54	32	25	70~100	58	6.0	20	GC□ N60□□-□□	BX0620	6.0	LH050	
GNDFS R/L3232P-620-100			32	32	170	54	32	25	100~200	88	6.0	20					
GNDFS R/L3232P-620-180			32	32	170	54	32	25	180~300	168	6.0	20					
GNDFS R/L3232P-620-280			32	32	170	54	32	25	280~1000	268	6.0	20					
GNDFS R/L3232P-620-450			32	32	170	54	32	25	450~	438	6.0	20					
GNDFS R/L2525M-820-070			25	25	150	47	25	30	70~100	54	8.0	20	GCM N80□□-□□	BX0620	6.0	LH050	
GNDFS R/L2525M-820-100			25	25	150	47	25	30	100~200	84	8.0	20					
GNDFS R/L2525M-820-180			25	25	150	47	25	30	180~300	164	8.0	20					
GNDFS R/L2525M-820-280			25	25	150	47	25	30	280~1000	264	8.0	20					
GNDFS R/L2525M-820-450			25	25	150	47	25	30	450~	434	8.0	20					
GNDFS R/L3232P-820-070			32	32	170	54	32	30	70~100	54	8.0	20	GCM N80□□-□□	BX0620	6.0	LH050	
GNDFS R/L3232P-820-100			32	32	170	54	32	30	100~200	84	8.0	20					
GNDFS R/L3232P-820-180			32	32	170	54	32	30	180~300	164	8.0	20					
GNDFS R/L3232P-820-280			32	32	170	54	32	30	280~1000	264	8.0	20					
GNDFS R/L3232P-820-450			32	32	170	54	32	30	450~	434	8.0	20					

Use an insert and a holder with the same cutting width (CW). Refer to page 31 for applicable inserts.

GNDFS Type Inserts

(Coated Carbide / Cemented Carbide)



Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
MG General Purpose	GCM N6008-MG	●	●	●	●	6.0	±0.03	0.8	26.4	4.5	5	1
	GCM N8008-MG	●	●	●	●	8.0	±0.04	0.8	28.75	6.0		
ML Low Feed	GCM N6004-ML	●	●	●	●	6.0	±0.03	0.4	26.4	4.5	5	1
	N8004-ML	●	●	●	●	8.0	±0.04	0.4	28.75	6.0		

Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RN General Purpose	GCM N6030-RN	●	●	●	●	6.0	±0.03	3.0	28.1	4.5	5	2

Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
GG General Purpose	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		
	N8004-GG	●	●	●	●	8.0	±0.04	0.4	28.75	6.0		
GL Low Feed	GCM N6002-GL	●	●	●	●	6.0	±0.03	0.2	26.4	4.5	5	1
	GCM N8004-GL	●	●	●	●	8.0	±0.04	0.4	28.75	6.0		
GF Low Cutting Force	GCM N6002-GF	●	●	●	●	6.0	±0.03	0.2	26.4	4.5	5	1
	GCM N8002-GF	●	●	●	●	8.0	±0.04	0.2	28.75	6.0		
	N8004-GF	●	●	●	●	8.0	±0.04	0.4	28.75	6.0		

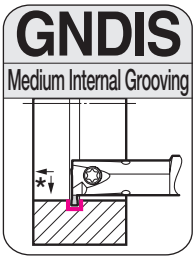
Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10				CW						
						Cutting Width	Tolerance					
GA General Purpose	GCG N6004-GA	●				6.0	±0.025	0.4	26.4	4.5	5	3

Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. **Recommended Cutting Conditions** P13

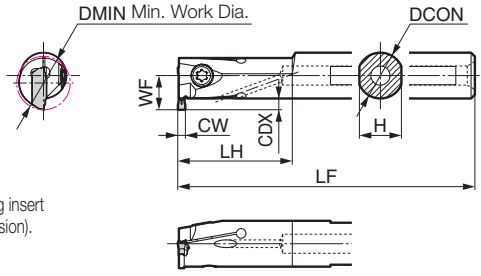
● : Standard stocked item Blank : Made-to-order item.

Internal Grooving

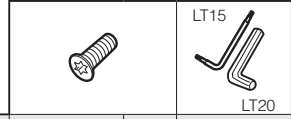


New

*Use a multi-purpose copying insert for traversing (groove expansion).



Parts



■ Holders

Dimensions (mm)

Cat. No.	Stock		Diameter	Height	Total Length	Head	Edge Distance	Min. Work Dia.	Cutting Width	Max. Grooving Depth	Applicable Insert	Screw	N·m	Wrench
	R	L	DCON	H	LF	LH	WF	DMIN	CW	CDX				
GNDIS R/L1214-T1526	●	●	12	11	150	30	9.0	14	1.5	2.6	GXM N150005S-GF			
GNDIS R/L1214-T1536	●	●	12	11	150	30	10.0	14	1.5	3.6	GXM N150005S-GF	BFTX0409N	3.4	LT15
GNDIS R/L1616-T1536	●	●	16	15	160	35	11.5	16	1.5	3.6	GXM N150005S-GF			
GNDIS R/L1620-T1546	●	●	16	15	160	40	14.5	20	1.5	4.6	GXM N150005S-GF			
GNDIS R/L2025-T1566	●	●	20	19	180	40	19.0	25	1.5	6.6	GXM N150005S-GF	BFTX0511N	5.0	LT20
GNDIS R/L1214-T2026	●	●	12	11	150	30	9.0	14	2.0	2.6	GXM N2002S-□□			
GNDIS R/L1214-T2036	●	●	12	11	150	30	10.0	14	2.0	3.6	GXM N2002S-□□	BFTX0409N	3.4	LT15
GNDIS R/L1616-T2036	●	●	16	15	160	35	11.5	16	2.0	3.6	GXM N2002S-□□			
GNDIS R/L1620-T2046	●	●	16	15	160	40	14.5	20	2.0	4.6	GXM N2002S-□□			
GNDIS R/L2025-T2066	●	●	20	19	180	40	19.0	25	2.0	6.6	GXM N2002S-□□	BFTX0511N	5.0	LT20
GNDIS R/L1214-T3026	●	●	12	11	150	30	9.0	14	3.0	2.6	GXM N3002S-□□			
GNDIS R/L1214-T3036	●	●	12	11	150	30	10.0	14	3.0	3.6	GXM N3002S-□□	BFTX0409N	3.4	LT15
GNDIS R/L1616-T3036	●	●	16	15	160	35	11.5	16	3.0	3.6	GXM N3002S-□□			
GNDIS R/L1620-T3046	●	●	16	15	160	40	14.5	20	3.0	4.6	GXM N3002S-□□			
GNDIS R/L2025-T3066	●	●	20	19	180	40	19.0	25	3.0	6.6	GXM N3002S-□□	BFTX0511N	5.0	LT20

Use an insert and a holder with the same cutting width (CW). Only GXM inserts can be used. Refer to page 33 for applicable inserts.

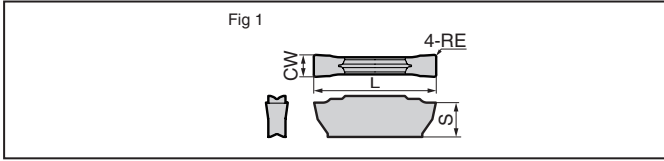
■ Identification Details

GND IS R 12 14 - T 15 26

Cutter Series	Application Direction : Boring	Direction	Shank Diameter (mm)	Min. Work Dia. (mm)	Boring	Cutting Width x 10 (mm)	Max. Grooving Depth x 10 (mm)
---------------	--------------------------------	-----------	---------------------	---------------------	--------	-------------------------	-------------------------------

● : Standard stocked item : Recommended tightening torque (N·m)

■ **GNDIS Type Inserts** (Coated Carbide)



● **Grooving / Traversing** (mm)

Appearance	Cat. No.	Stock		Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC520U	AC1030U	CW						
				Cutting Width	Tolerance					
ML Low Feed	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		

● **Grooving / Cut-Off** (mm)

Appearance	Cat. No.	Stock		Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC520U	AC1030U	CW						
				Cutting Width	Tolerance					
GF Low Cutting Force	GXM N150005S-GF	—	●	1.5	±0.03	0.05	11.1	3.1	5	1
	N2002S-GF	●	●	2.0	±0.03	0.2	11.1	3.1		
	N3002S-GF	●	●	3.0	±0.03	0.2	11.1	3.1		

Use an insert and a holder with the same cutting width (CW). GCM and GCG inserts are not compatible.

■ **Recommended Cutting Conditions (GNDIS)**

Work Material	P Carbon Steel / Alloy Steel	M Stainless Steel	K Cast Iron	S Exotic Alloy
Insert Grade	AC520U AC1030U	AC520U AC1030U	AC520U AC1030U	AC520U AC1030U
Cutting Speed v_c (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
Cutting Width CW (mm)	1.5	—	0.02~0.10
	2.0	0.03~0.12	0.03~0.12
	3.0	0.05~0.15	0.05~0.15

■ **Traversing**

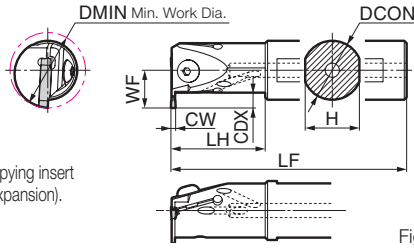
Chipbreaker		ML	
		Feed Rate f (mm/rev)	Depth of Cut a_p (mm/rev)
Cutting Width CW (mm)	2.0	0.03~0.12	0.2~0.8
	3.0	0.05~0.15	0.3~1.2

● : Standard stocked item (expanded item) — : Not available.

Internal Grooving



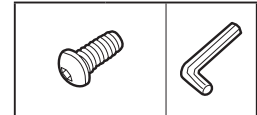
*Use a multi-purpose copying insert for traversing (groove expansion).



Figures show right-hand tools.

■ Holders

■ Parts

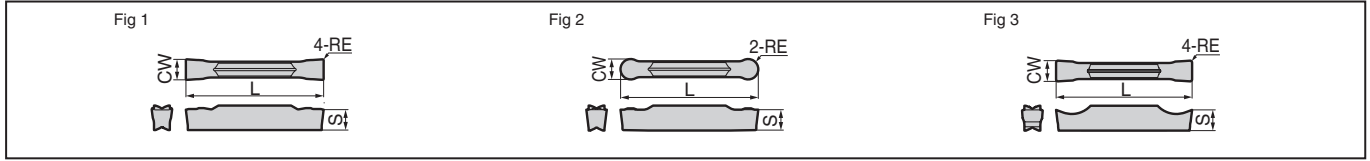


Cat. No.	Stock		Diameter		Height	Total Length	Head	Edge Distance	Min. Work Dia.	Cutting Width	Max. Grooving Depth	Applicable Insert	Clamp Bolt	N·m	Wrench
	R	L	DCON	H	LF	LH	WF	DMIN	CW	CDX					
GNDI R/L2532-T206	●	●	25	23	200	40	16	32	2.0	6	GC□ N200○-□□	BH0516	5.0	LH030	
GNDI R/L3240-T210	●	●	32	30	250	50	26	40	2.0	10	GC□ N200○-□□	BH0616	6.0	LH040	
GNDI R/L2532-T306	●	●	25	23	200	40	16	32	3.0	6	GC□ N300○-□□	BH0516	5.0	LH030	
GNDI R/L3240-T310	●	●	32	30	250	50	26	40	3.0	10	GC□ N300○-□□	BH0616	6.0	LH040	
GNDI R/L4050-T311	●	●	40	38	300	60	31	50	3.0	11	GC□ N300○-□□	BH0616	6.0	LH040	
GNDI R/L2532-T406	●	●	25	23	200	40	19	32	4.0	6	GC□ N400○-□□	BH0516	5.0	LH030	
GNDI R/L3240-T410	●	●	32	30	250	50	26	40	4.0	10	GC□ N400○-□□	BH0616	6.0	LH040	
GNDI R/L4050-T411	●	●	40	38	300	60	31	50	4.0	11	GC□ N400○-□□	BH0616	6.0	LH040	
GNDI R/L2532-T506	●	●	25	23	200	40	19	32	5.0	6	GC□ N500○-□□	BH0516	5.0	LH030	
GNDI R/L3240-T510	●	●	32	30	250	50	26	40	5.0	10	GC□ N500○-□□	BH0616	6.0	LH040	
GNDI R/L4050-T511	●	●	40	38	300	60	31	50	5.0	11	GC□ N500○-□□	BH0616	6.0	LH040	
GNDI R/L4050-T611	●	●	40	38	300	60	31	50	6.0	11	GC□ N600○-□□	BH0616	6.0	LH040	

Use an insert and a holder with the same cutting width (CW). Refer to page 28 for applicable inserts.

GNDI Type Inserts

(Coated Carbide / Cermet / Cemented Carbide)



Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
MG General Purpose	GCM N3004-MG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
	N4008-MG	●	●	●	—	4.0	±0.03	0.8	26.4	4.0		
	N5008-MG	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		
	N6008-MG	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		
ML CW=40mm CW=50mm Low Feed	GCM N2002-ML	—	—	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-ML	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	GCM N4004-ML	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		
	N5004-ML	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		
N6004-ML	●	●	●	—	6.0	±0.03	0.4	26.4	4.5			

External Copying / External R Grooving (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RG General Purpose	GCM N3015-RG	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	2
	N4020-RG	●	●	●	●	4.0	±0.03	2.0	26.4	4.0		
	N5025-RG	●	●	●	—	5.0	±0.03	2.5	27.2	4.1		
	N6030-RG	●	●	●	—	6.0	±0.03	3.0	27.5	4.5		

Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						Cutting Width	Tolerance					
GG General Purpose	GCM N2002-GG	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GG	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GG	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GG	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GG	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N3004-GG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		
GL Low Feed	GCM N2002-GL	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GL	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GL	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GL	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
N6002-GL	●	●	●	—	6.0	±0.03	0.2	26.4	4.5			
GF Low Cutting Force	GCM N2002-GF	—	—	●	●	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GF	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GF	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GF	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GF	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N3004-GG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		

Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						Cutting Width	Tolerance					
RN General Purpose	GCM N2010-RN	—	—	●	●	2.0	±0.03	1.0	21.7	3.6	5	2
	N3015-RN	●	●	●	●	3.0	±0.03	1.5	22.4	3.8		
	N4020-RN	●	●	●	●	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	—	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	—	6.0	±0.03	3.0	28.1	4.5		

Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10				CW						
						Cutting Width	Tolerance					
GA General Purpose	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		
	GCG N4004-GA	●				4.0	±0.025	0.4	26.4	4.0		
	N5004-GA	●				5.0	±0.025	0.4	26.4	4.1		
	N6004-GA	●				6.0	±0.025	0.4	26.4	4.5		

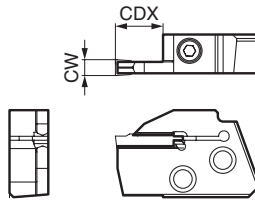
Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders. **Recommended Cutting Conditions** P13

● : Standard stocked item Blank : Made-to-order item — : Not available.

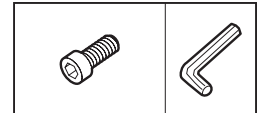
External Grooving SUMIPOLYGON



New



Parts



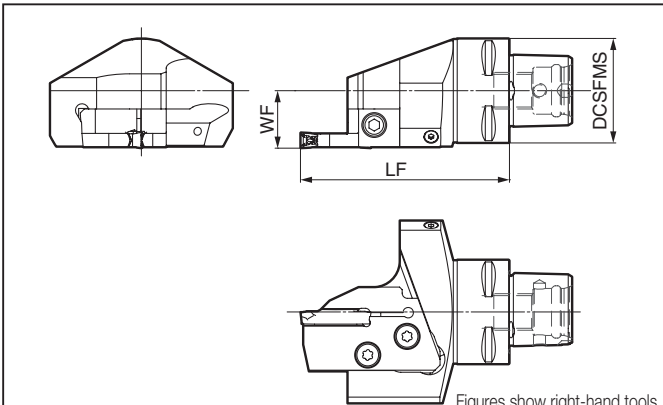
Figures show right-hand tools.

SUMIPOLYGON GND Type Cassette

Cat. No.	Stock		Cutting Width	Max. Grooving Depth	Applicable Insert	Applicable Holder	Cap Screw	N·m	Wrench
	R	L	CW	CDX					
GNDCM R/L 212	●	●	2	12	GC□□20○○-□□	PSC○○GND○○○○○○00 R/L PSC○○GND○○○○○○90 R/L	BX0512	5.0	LH040
GNDCM R/L 312	●	●	3	12	GC□□30○○-□□				
GNDCM R/L 418	●	●	4	18	GC□□40○○-□□				
GNDCM R/L 518	●	●	5	18	GC□N50○○-□□				
GNDCM R/L 618	●	●	6	18	GC□N60○○-□□				

Use an insert and a holder with the same cutting width (CW). Refer to page 37 for applicable inserts.

SUMIPOLYGON GND Type Holder (Straight)

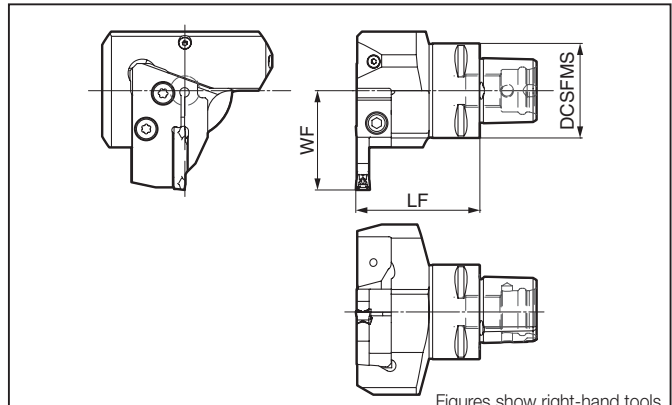


Figures show right-hand tools.

Cat. No.	Stock		Cutting Edge	Overhang	Attachment	Applicable Cassette
	R	L	WF	LF	DCSFMS	
PSC40 GND 228000 R/L	●	●	22	80	40	GNDCM R/L○○○
PSC50 GND 278000 R/L	●	●	27	80	50	
PSC63 GND 338000 R/L	●	●	33	80	63	

Inserts and cassettes are sold separately.

SUMIPOLYGON GND Type Holder (L-Shaped)



Figures show right-hand tools.

Cat. No.	Stock		Cutting Edge	Overhang	Attachment	Applicable Cassette
	R	L	WF	LF	DCSFMS	
PSC40 GND 425290 R/L	●	●	42	52.5	40	GNDCM R/L○○○
PSC50 GND 475590 R/L	●	●	47	55	50	
PSC63 GND 545790 R/L	●	●	54	57	63	

Inserts and cassettes are sold separately.

Identification Details for Cassettes

GNDCM R 2 12

Cutter Series Direction Cutting Width (mm) Max. Grooving Depth (mm)

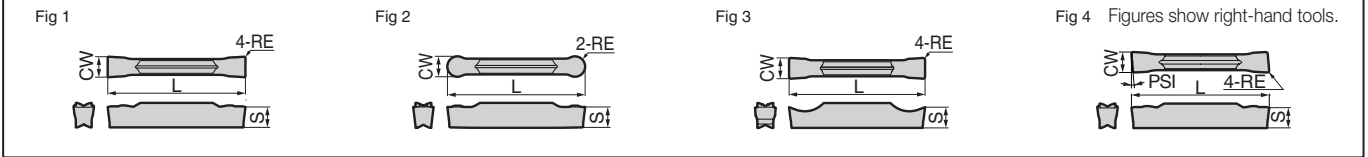
Identification Details for Holder

PSC40 GND 42 52 90 R

SUMIPOLYGON Shank Size Cutter Series : GND Type WF Dimension (mm) LF Dimension (mm) 00: Straight 90: L-shaped Direction

GNDCM Insert

(Coated Carbide / Cermet / Cemented Carbide)



Grooving / Traversing (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						RE	L S					
MG General Purpose	GCM N3004-MG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8	5	1
	N4008-MG	●	●	●	—	4.0	±0.03	0.8	26.4	4.0		
	N5008-MG	●	●	●	—	5.0	±0.03	0.8	26.4	4.1		
	N6008-MG	●	●	●	—	6.0	±0.03	0.8	26.4	4.5		
ML Low Feed	GCM N2002-ML	—	—	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-ML	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4004-ML	●	●	●	—	4.0	±0.03	0.4	26.4	4.0		
	N5004-ML	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		
	N6004-ML	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		

External Copying / External R Grooving (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						RE	L S					
RG General Purpose	GCM N3015-RG	●	●	●	●	3.0	±0.03	1.5	21.1	3.8	5	2
	N4020-RG	●	●	●	●	4.0	±0.03	2.0	26.4	4.0		
	N5025-RG	●	●	●	—	5.0	±0.03	2.5	27.2	4.1		
	N6030-RG	●	●	●	—	6.0	±0.03	3.0	27.5	4.5		

Copying / R Grooving / Necking (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC425K	AC520U	AC530U	CW						
						RE	L S					
RN General Purpose	GCM N2010-RN	—	—	●	●	2.0	±0.03	1.0	21.7	3.6	5	2
	N3015-RN	—	—	●	●	3.0	±0.03	1.5	22.4	3.8		
	N4020-RN	●	●	●	●	4.0	±0.03	2.0	28.0	4.0		
	N5025-RN	●	●	●	●	5.0	±0.03	2.5	28.1	4.1		
	N6030-RN	●	●	●	●	6.0	±0.03	3.0	28.1	4.5		

Grooving / Cut-Off (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	T2500A	CW						
						RE	L S					
GG General Purpose	GCM N2002-GG	●	●	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GG	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GG	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GG	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GG	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
	GCM N3004-GG	●	●	●	—	3.0	±0.03	0.4	21.1	3.8		
GL Low Feed	N4004-GG	●	●	●	—	4.0	±0.03	0.4	26.4	4.0	5	1
	N5004-GG	●	●	●	—	5.0	±0.03	0.4	26.4	4.1		
	N6004-GG	●	●	●	—	6.0	±0.03	0.4	26.4	4.5		
	GCM N2002-GL	●	●	●	—	2.0	±0.03	0.2	21.1	3.6		
GF Low Cutting Force	N3002-GL	●	●	●	—	3.0	±0.03	0.2	21.1	3.8	5	1
	N4002-GL	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GL	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GL	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		
GF Low Cutting Force	GCM N2002-GF	—	—	●	—	2.0	±0.03	0.2	21.1	3.6	5	1
	N3002-GF	●	●	●	—	3.0	±0.03	0.2	21.1	3.8		
	N4002-GF	●	●	●	—	4.0	±0.03	0.2	26.4	4.0		
	N5002-GF	●	●	●	—	5.0	±0.03	0.2	26.4	4.1		
	N6002-GF	●	●	●	—	6.0	±0.03	0.2	26.4	4.5		

Non-Ferrous Metals (mm)

Appearance	Cat. No.	Stock				Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		H10				CW						
						RE	L S					
GA General Purpose	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		
	GCG N4004-GA	●	—	—	—	4.0	±0.025	0.4	26.4	4.0		
	N5004-GA	●	—	—	—	5.0	±0.025	0.4	26.4	4.1		
	N6004-GA	●	—	—	—	6.0	±0.025	0.4	26.4	4.5		

Cut-Off (mm)

Appearance	Cat. No.	Stock				Front Cutting Edge Angle	Cutting Width		Corner Radius	Total Length	Thickness	Package	Fig
		AC830P	AC520U	AC530U	AC1030U		CW						
							RE	L S					
CG General Purpose	GCM R2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6	5	4
	GCM L2002-CG-05	●	●	●	—	5°	2.0	±0.03	0.2	21.1	3.6		
	GCM R3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	GCM L3002-CG-05	●	●	●	—	5°	3.0	±0.03	0.2	21.3	3.8		
	GCM R4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0		
CF Low Cutting Force	GCM L4002-CG-05	●	●	●	—	5°	4.0	±0.04	0.2	26.7	4.0	5	4
	GCM R2003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		
	GCM L2003-CF-10	—	—	—	●	10°	2.0	±0.08	0.03	22.4	3.6		
	GCM R3003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	GCM L3003-CF-10	—	—	—	●	10°	3.0	±0.08	0.03	22.4	3.8		
	GCM R2003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	GCM L2003-CF-15	—	—	—	●	15°	2.0	±0.08	0.03	22.4	3.6		
	GCM R3003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		
	GCM L3003-CF-15	—	—	—	●	15°	3.0	±0.08	0.03	22.4	3.8		

Use an insert and a holder with the same cutting width (CW). Cannot be used with GNDIS Type holders.

● : Standard stocked item ● : Standard stocked item (expanded item) Blank : Made-to-order item — : Not available.

SEC-Grooving Tools GND Type Series — Special Grooving Insert Estimate Sheet

Applicable Holders (For Cutting Widths of 2 to 6mm)

External Grooving: GNDs Type (→P16), GNDM Type (→P14, P18, P20), GNDMS Type (→P18), GNDL Type (→P14, P22, P24), GNDLS Type (→P22)

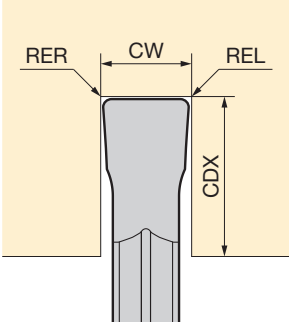
Boring : GNDI Type (→P34) *GNDIS Type cannot be used because of a difference in insert shape.

Facing : GNDF Type (→P28), GNDFS Type (→P30)

Requests for ground breakers for custom inserts (with varying cutting width or corner R) are accepted. To order, fill out the form below (indicate 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 a different shape, cutting width, cutting edge treatment, or insert grade not listed below, contact your nearest Sumitomo Electric Hardmetal dealer or distributor.

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

Shape	Items	Remarks
	Cutting Width (mm)(2.00~6.59mm)	
	Corner Radius RER (mm)	
	Corner Radius REL (mm)	
	Grade (Choose from options to right)*1	AC530U · AC520UEH520 · H10 · KH03
	Grooving Depth CDX (mm)*2	
		*1 Selecting a grade of H10 will result in a sharp cutting edge. *2 Set the chipbreaker width according to CDX. The actual grooving depth must be less than or equal to the maximum grooving depth set for each standard holder.

Form instructions

- The applicable standard holder will vary depending on the cutting width. Refer to the table to the right for manufacturable cutting widths, and corner radius ranges during facing. (Additional holder work may be necessary to prevent interference with the work material when rounding corners beyond this range during facing.)
- The maximum corner radius during external/internal machining is 1/2 the cutting width.
- The cutting width CW tolerance during manufacturing is $\pm 0.025\text{mm}$.
- Dimension WF for each holder can be determined as follows with CWS as the applicable holder standard insert cutting width.

$$\frac{(\text{Standard holder dimension WF}) + (\text{WF} - \text{CWS})}{2}$$
- Unpolished inserts may be available for inch size cutting widths.

Cutting Width CW (Nominal)	Applicable Standard Holder	Max. corner radius (RER, REL) when used for facing (when using a standard holder)
2.00~2.59mm	2mmWidth Holder	0.2mm
2.60~3.59mm	3mmWidth Holder	0.4mm
3.60~4.59mm	4mmWidth Holder	0.8mm
4.60~5.59mm	5mmWidth Holder	
5.60~6.59mm	6mmWidth Holder	

Contact us for details.

Identification Details

Holder

GND M R 25 25 (M)-(T) 3 12 (J)- (035)

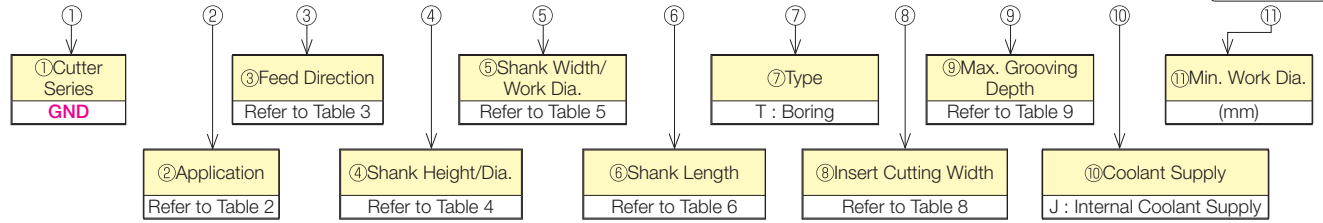


Table 2

②Application		
Symbol	Application	
S	External Multi-Purpose Machining	Grooving / Cut-off / Traversing / Copying
M	External Multi-Purpose Machining	Grooving / Cut-off / Traversing / Copying
L	External Grooving	Grooving / Cut-Off
MS	L-Shaped (Side Cut) Tools for External Multi-Purpose Machining	Grooving / Traversing / Copying
LS	L-Shaped (Side Cut) Tools for External Grooving	Grooving
N	Necking	Necking
F	Facing	Grooving / Traversing / Copying
FS	L-Shaped Tools for Facing	Grooving / Traversing / Copying
I	Boring	Grooving / Traversing / Copying
IS	Boring	Grooving / Traversing / Copying

Table 3

③Feed Direction	
Symbol	Direction
R	Right-Handed
L	Left-Handed

Table 4

④Shank Height/Dia.		
Application	Symbol	Height(mm)
External Grooving / Facing (Shank Height)	10	10
	12	12
	16	16
	20	20
	25	25
Boring (Shank Diameter)	32	32
	40	40

Table 5

⑤Shank Width/Work Dia.		
Application	Symbol	Height(mm)
External Grooving / Facing (Shank Height)	10	10
	12	12
	16	16
	20	20
	25	25
Boring (Min. Work Dia.)	32	32
	40	40
	50	50

Table 6

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

Table 8

⑧Insert Cutting Width*			
Symbol	Cutting Width(mm)	Symbol	Cutting Width(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		

Table 9

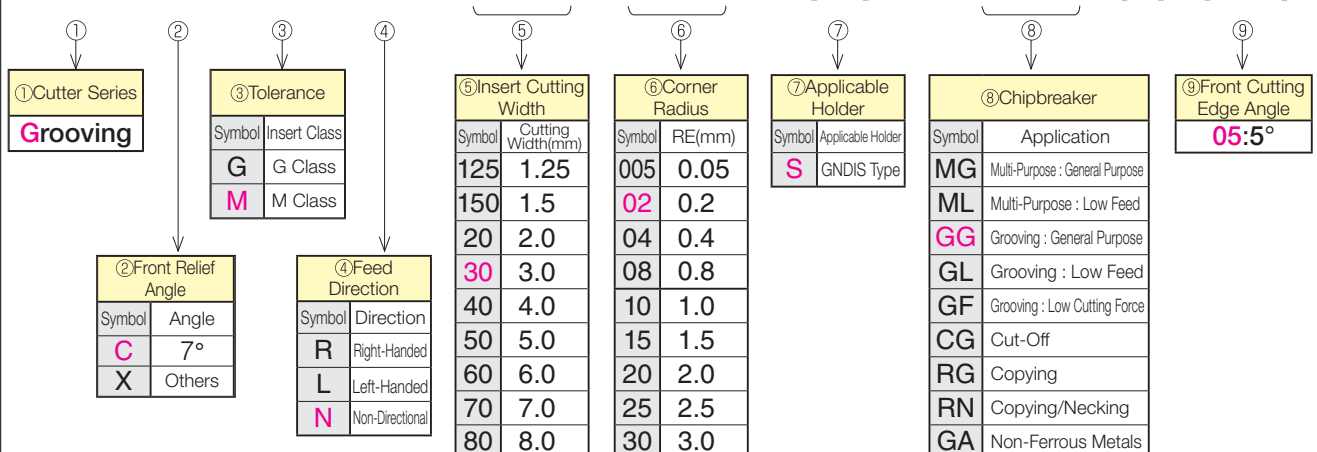
⑨Max. Grooving Depth*			
Symbol	Depth(mm)	Symbol	Depth(mm)
06	6.0	14	14.0
08	8.0	16	16.0
10	10.0	18	18.0
11	11.0	20	20.0
12	12.0	23	23.0
12.5	12.5	25	25.0

*Excluding GNDIS Type.

*Excluding GNDN/GNDIS Type.

Insert

G C M N 30 02 (S) - GG (-) (05)



①Cutter Series
Grooving

③Tolerance	
Symbol	Insert Class
G	G Class
M	M Class

②Front Relief Angle	
Symbol	Angle
C	7°
X	Others

④Feed Direction	
Symbol	Direction
R	Right-Handed
L	Left-Handed
N	Non-Directional

⑤Insert Cutting Width	
Symbol	Cutting Width(mm)
125	1.25
150	1.5
20	2.0
30	3.0
40	4.0
50	5.0
60	6.0
70	7.0
80	8.0

⑥Corner Radius	
Symbol	RE(mm)
005	0.05
02	0.2
04	0.4
08	0.8
10	1.0
15	1.5
20	2.0
25	2.5
30	3.0

Inserts with an RE of 1.0 mm or larger are for copying.

⑦Applicable Holder	
Symbol	Applicable Holder
S	GNDIS Type

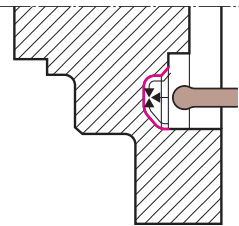
⑧Chipbreaker	
Symbol	Application
MG	Multi-Purpose : General Purpose
ML	Multi-Purpose : Low Feed
GG	Grooving : General Purpose
GL	Grooving : Low Feed
GF	Grooving : Low Cutting Force
CG	Cut-Off
RG	Copying
RN	Copying/Necking
GA	Non-Ferrous Metals

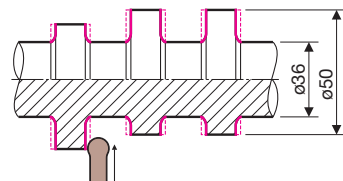
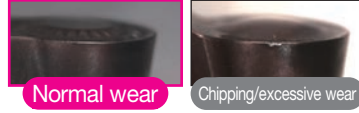
⑨Front Cutting Edge Angle	
	05:5°

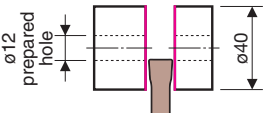
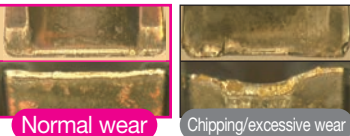
Cautions for Tool Selection

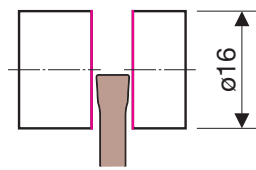
- Select as large a shank size as possible.
- Use of a reverse tool is recommended.
- Select the chipbreaker according to the working conditions.
- To ensure adequate chip control, unless restrictions apply, select the smallest corner radius possible.
- To ensure rigidity, use a Multi-Purpose Type holder whenever possible so long as the maximum grooving depth can be secured.

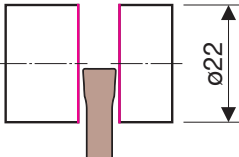
■ Application Examples

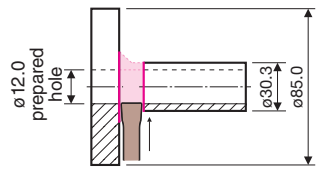
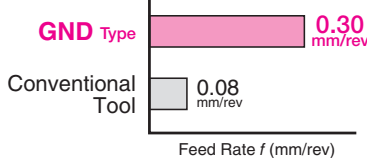
SCM420H Automotive Component Face Copying	
	<p>Point</p> <ul style="list-style-type: none"> · High rigidity · Chip control · Wear resistance
	<p>Holder GNDF R2525M-423-125</p> <p>Insert GCM N4020-RG</p> <p>Cutting Width : 4.0mm</p> <p>Cutting Conditions $v_c=200\text{m/min}$ $f=0.14\text{mm/rev}$ Wet</p>
<ul style="list-style-type: none"> · Excellent chip control of GND Type · Stable cutting without chattering or vibration 	

S53C Cam Shaft Grooving/Finishing(Continuous to Heavy Interrupted Cutting)	
	<p>Point</p> <ul style="list-style-type: none"> · High rigidity · Chattering · Chip control · Fracture resistance
	<p>Holder GNDM L2525M-618</p> <p>Insert GCM N6030-RG</p> <p>Cutting Width : 6.0mm</p> <p>Cutting Conditions $v_c=130\text{m/min}$ $f=0.36\text{mm/rev}$ Wet</p>
 <p>Normal wear Chipping/excessive wear</p> <p>GND Type Conventional Tool</p>	<ul style="list-style-type: none"> · Stable cutting without chattering or vibration · Excellent fracture resistance · Stable chip control

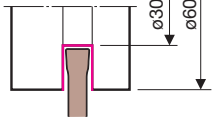

S48C Tempered Material Machine Component Cut-Off	
	<p>Point</p> <ul style="list-style-type: none"> · High rigidity · Chattering · Fracture resistance
	<p>Holder GNDL R2525M-320</p> <p>Insert GCM N3002-GG</p> <p>Cutting Width : 3.0mm</p> <p>Cutting Conditions $n=1,600\text{min}^{-1}$ $v_c=200\text{m/min}$ $f=0.05\text{mm/rev}$ Wet</p>
 <p>Normal wear Chipping/excessive wear</p> <p>GND Type Conventional Tool</p>	<ul style="list-style-type: none"> · Stable cutting without chattering or vibration · Excellent fracture resistance · Stable fracture resistance

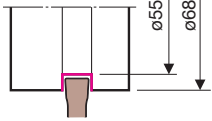

SCM435 Tempered Material Hydraulic Component Cut-Off	
	<p>Point</p> <ul style="list-style-type: none"> · Chip control · Wear resistance
	<p>Holder GNDL R2525M-320</p> <p>Insert GCM N3002-GG</p> <p>Cutting Width : 3.0mm</p> <p>Cutting Conditions $n=4,000\text{min}^{-1}$ $v_c=200\text{m/min}$ $f=0.05\text{mm/rev}$ Wet</p>
<ul style="list-style-type: none"> · Stable chip control · Excellent wear resistance 	

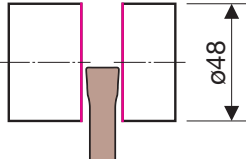
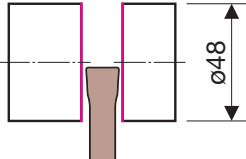
S45C Valve Material Cut-Off	
	<p>Point</p> <ul style="list-style-type: none"> · High rigidity · Chattering · Chip control
	<p>Holder GNDM R2525M-312</p> <p>Insert GCM N3002-ML</p> <p>Cutting Width : 3.0mm</p> <p>Cutting Conditions $v_c=150\text{m/min}$ $f=0.05$ to 0.15mm/rev Wet</p>
<ul style="list-style-type: none"> · Stable cutting without chattering or vibration · Stable chip control 	

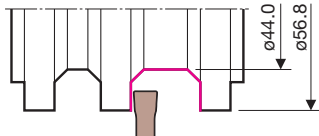
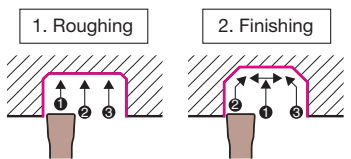
SCM435 Crank Cut-Off	
	<p>Point</p> <ul style="list-style-type: none"> · High rigidity · Chattering · Chip control
	<p>Holder GNDL R2525M-320</p> <p>Insert GCM N3002-GG</p> <p>Cutting Width : 3.0mm</p> <p>Cutting Conditions $v_c=115\text{m/min}$ $f=0.30\text{mm/rev}$ Wet</p>
 <p>GND Type 0.30 mm/rev</p> <p>Conventional Tool 0.08 mm/rev</p> <p>Feed Rate f (mm/rev)</p>	<ul style="list-style-type: none"> · Improved efficiency · Stable cutting without chattering or vibration · Stable chip control

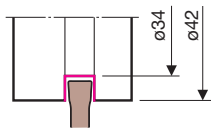
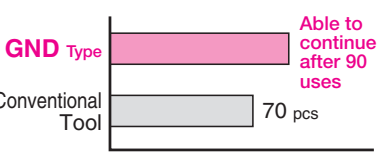
■ Application Examples

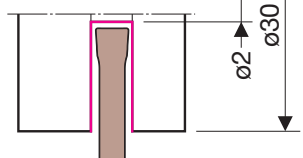
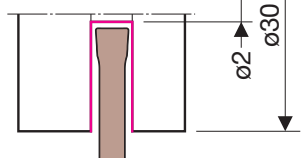
SCM440 Office Machine Components Grooving	
	<p>Point</p> <ul style="list-style-type: none"> • Chip control • Machining efficiency
 <p>GND Type (Continuous Feed)</p> <p>Conventional Tool (Step Feed)</p>	<p>Holder GNDL R2525M-320</p> <p>Insert GCM N3002-GG</p> <p>Cutting Width : 3.0mm</p> <p>Cutting Conditions $v_c=90\text{m/min}$ $f=0.1\text{mm/rev}$ Wet</p>
<ul style="list-style-type: none"> • Excellent chip control of GND Type • Machining efficiency improved by 20% 	

SCr420H Gear Shaft Grooving	
	<p>Point</p> <ul style="list-style-type: none"> • High rigidity • Chattering • Chip control
 <p>GND Type</p> <p>Conventional Tool</p>	<p>Holder GNDM R2525M-312</p> <p>Insert GCM N3004-GG</p> <p>Cutting Width : 3.0mm</p> <p>Cutting Conditions $v_c=100\text{m/min}$ $f=0.12\text{mm/rev}$ Wet</p>
<ul style="list-style-type: none"> • Stable cutting without chattering or vibration • Excellent chip control of GND Type 	

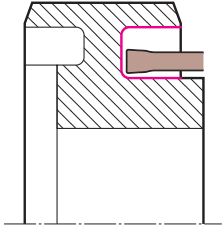
SKD61 (45 to 48 HRC) Machine Component Cut-Off	
	<p>Point</p> <ul style="list-style-type: none"> • High rigidity • Chattering • Chip control
 <p>GND Type</p> <p>Conventional Tool</p>	<p>Holder GNDL R2525M-425</p> <p>Insert GCM N4002-GG</p> <p>Cutting Width : 4.0mm</p> <p>Cutting Conditions $v_c=50\text{m/min}$ $f=0.03\text{mm/rev}$ Wet</p>
<ul style="list-style-type: none"> • Stable cutting without chattering or vibration • Excellent chip control of GND Type • Less unexpected breakage 	

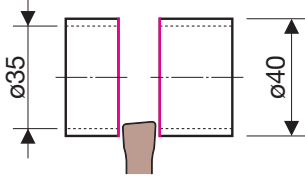
SCr415 Gear Shaft Grooving / Pocketing	
	<p>Point</p> <ul style="list-style-type: none"> • High rigidity • Chattering • Chip control
 <p>1. Roughing</p> <p>2. Finishing</p>	<p>Holder GNDM R2020K-518</p> <p>Insert GCM N5008-MG</p> <p>Cutting Width : 5.0mm</p> <p>Cutting Conditions $v_c=150\text{m/min}$ $f=0.1\text{mm/rev}$ Wet</p>
<ul style="list-style-type: none"> • Stable cutting without chattering or vibration • Excellent chip control of GND Type 	

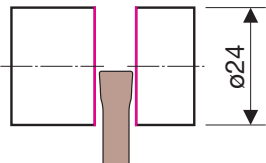
Iron-Based Sintered Material Crank Sprocket Gear Grooving/Finishing	
	<p>Point</p> <ul style="list-style-type: none"> • High rigidity • Chattering • Chip control • Wear resistance
 <p>GND Type</p> <p>Conventional Tool</p> <p>Able to continue after 90 uses</p> <p>70 pcs</p>	<p>Holder GNDL R2525M-220</p> <p>Insert GCM N2002-GG</p> <p>Cutting Width : 2.0mm</p> <p>Cutting Conditions $v_c=100\text{m/min}$ $f=0.08\text{mm/rev}$ Wet</p>
<ul style="list-style-type: none"> • Stable cutting without chattering or vibration • Excellent chip control of GND Type • Excellent wear resistance for 130% or more tool life 	

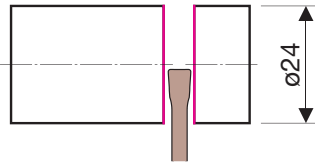

SUS304 Measuring Component Grooving	
	<p>Point</p> <ul style="list-style-type: none"> • High rigidity • Chattering • Chip control
 <p>GND Type</p> <p>Conventional Tool</p>	<p>Holder GNDL R2525M-320</p> <p>Insert GCM N3002-GG</p> <p>Cutting Width : 3.0mm</p> <p>Cutting Conditions $v_c=60\text{m/min}$ $f=0.025\text{mm/rev}$ Wet</p>
<ul style="list-style-type: none"> • Stable cutting without chattering or vibration • Excellent chip control of GND Type 	

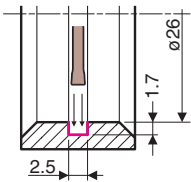
Application Examples

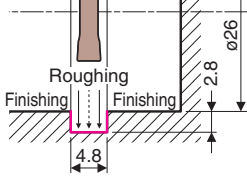

Sintered Clutch Hub Face Grooving	
	Point • Machining efficiency • Chattering
	Holder GNDF R2020K-523-050 Insert GCM N5008-MG Cutting Width : 5.0mm Cutting Conditions $n = 500\text{min}^{-1}$ $v_c = 100\text{m/min}$ $f = 0.05\text{mm/rev}$ Wet
• Reduces cycle time by up to 20% • Stable cutting without chattering or vibration	

SUS303 Hollow Round Pipe Material Cut-Off	
	Point • Machining efficiency • Chattering
	Holder GNDL R2020K-220 Insert GCMR2002-CG-05 Cutting Width : 2.0mm Cutting Conditions $n = 1,000\text{min}^{-1}$ $v_c = 140\text{m/min}$ $f = 0.03\text{mm/rev}$ Wet
• Sharp cutting edge provides stable cutting • Stable chip control for stable cutting	

Stainless Steel Round Bar Cut-Off	
	Point • Tool life • Adhesion resistance
	Holder GNDM L2020K-312 Insert GCMN3002-GF Cutting Width : 3.0mm Cutting Conditions $n = 1,000\text{min}^{-1}$ $f = 0.15 \rightarrow 0.03\text{mm/rev}$ Wet
GND Type: 1,500 pcs Conventional Tool: 1,000 pcs	
• Reduced adhesion breakage for 150% longer tool life • Stable cutting without chattering or vibration	

SCM415 Valve Spool Cut-Off	
	Point • Tool life • Chip control
	Holder GNDL R1212JX-1.2512 Insert GCMN125005-GF Cutting Width : 1.25mm Cutting Conditions $n = 2,000\text{min}^{-1}$ $f = 0.05\text{mm/rev}$ Wet
	
• Able to continue with minimal damage even after 7,500 pcs • Excellent chip control	

S45CD Motorcycle Transmission Part (Collar) Internal Grooving	
	Point • Tool life • Chip control
	Holder GNDIS R1620-T2046 Insert GXM N2002S-GF Cutting Width : 2.0mm Cutting Conditions $v_c = 150\text{m/min}$ $f = 0.03\text{mm/rev}$ $a_p = 1.7\text{mm}$ Wet
GND Type: 1,100 pcs Comp.A: 900 pcs Comp.B: 600 pcs	Tool Life (pcs)
• Long tool life through stable chip control using a high-rigidity tool and 3D breaker	

SCM420 Automotive Component (Coupling) Internal Grooving	
	Point • Machining efficiency • Chip control
	Holder GNDIS R1620-T2046 Insert GXM N2002S-GF Cutting Width : 2.0mm Cutting Conditions $v_c = \text{Roughing : } 50 \text{ to } 80\text{m/min}$ $f = \text{Roughing : } 0.07 \text{ to } 0.05\text{mm/rev}$ $a_p = 2.8\text{mm}$ Wet
	
• Good chip control eliminates the need for step machining in the roughing process performed with a competitor's product	

MEMO

A large grid of dotted lines for writing a memo. The grid consists of 20 columns and 30 rows of small squares, providing a structured space for text entry.



- 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.

< SAFETY NOTES >

- 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

Tel: +81-72-772-4535 Fax: +81-72-771-0088

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