

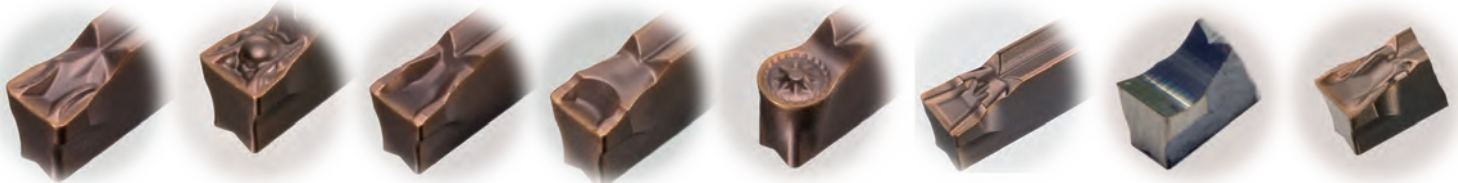
High Rigidity Body

The GND series is designed for grooving and features a single-piece construction made of special steel. This design reduces chatter and also delivers steady performance for turning, profiling, and facing.

Wide Range of Chipbreakers

The GND lineup features 8 types of chipbreakers for various machining applications. Offers consistent chip control under various conditions.

Grooving Tool Holders GND Type



Multi-Purpose/General Feed
MG Chipbreaker

Multi-Purpose/Low Feed
ML Chipbreaker

Grooving/General Feed
GG Chipbreaker

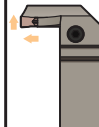
Grooving/Low Feed
GL Chipbreaker

Profiling/General Feed
RG Chipbreaker

Low Cutting Force
GF Chipbreaker

For Non-Ferrous Material
GA Chipbreaker

For Cut-off Applications
CG Chipbreaker

GNDM Straight Type 	Shank Size Range Inch ☐ .750" x .750" ☐ 1.00" x 1.00" ☐ 1.25" x 1.25" Metric ☐ 16 x 16mm ☐ 20 x 20mm ☐ 25 x 25mm ☐ 32 x 25mm ☐ 32 x 32mm	Seat Size Availability <table><tr><td>1.25</td><td>1.5</td><td>2.0</td></tr><tr><td>3.0</td><td>4.0</td><td>5.0</td></tr><tr><td>6.0</td><td>7.0</td><td>8.0</td></tr></table> Applicable Breaker <table><tr><td>MG</td><td>ML</td><td>GG</td><td>GL</td></tr><tr><td>GA</td><td>GF</td><td>RG</td><td>CG</td></tr></table>	1.25	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	MG	ML	GG	GL	GA	GF	RG	CG	Application   	Page # Inch: pg. 283 Metric pg. 287	GNDI Straight Type 	Shank Size Range Inch ☐ ø1.00" ☐ ø1.25" ☐ ø1.50" Metric ☐ ø25mm ☐ ø32mm ☐ ø40mm	Seat Size Availability <table><tr><td>1.25</td><td>1.5</td><td>2.0</td></tr><tr><td>3.0</td><td>4.0</td><td>5.0</td></tr><tr><td>6.0</td><td>7.0</td><td>8.0</td></tr></table> Applicable Breaker <table><tr><td>MG</td><td>ML</td><td>GG</td><td>GL</td></tr><tr><td>GA</td><td>GF</td><td>RG</td><td>CG</td></tr></table>	1.25	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	MG	ML	GG	GL	GA	GF	RG	CG	Application   	Page # pg. 291
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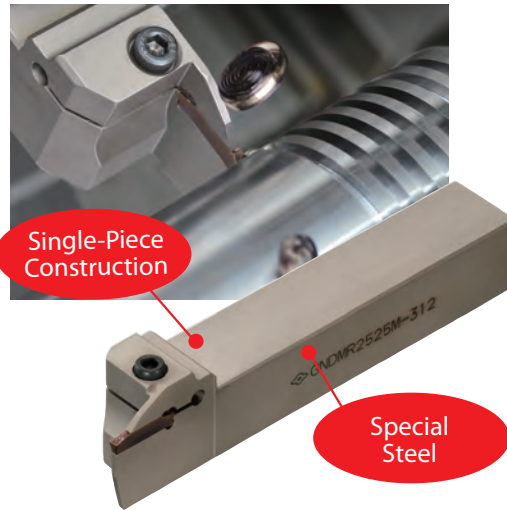
Grooving Toolholders

GND Series - Features & Benefits

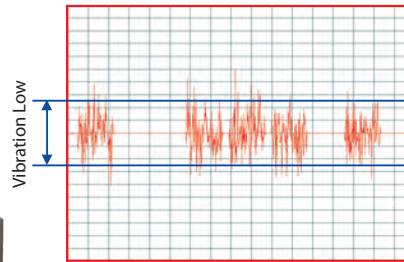
GROOVING TOOLHOLDERS

GND SERIES

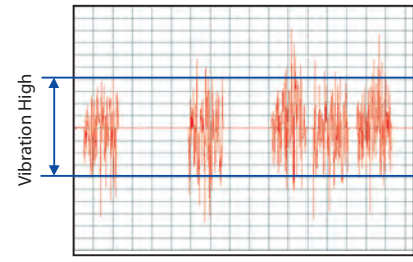
Eliminates Vibration



High rigid design reduces vibration by as much as 30% over conventional types



GND
GND Type



Conventional Tool (Unit Type)

4115 Steel Part Material
GNDL R2525M-220 Holder
GCM N2002-GG Insert
 $v_c=328$ SFM, $f=0.004$ IPR, $a_p=0.78"$, Wet Cutting Conditions

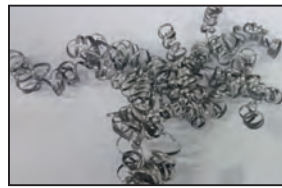
Excellent Chip Control

Special chipbreakers for various machining applications (grooving, turning, profiling)

Grooving



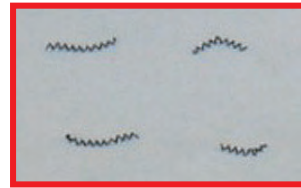
GND Type (GG Type Chipbreaker)



Conventional Tool

4115 Steel Part Material
GNDL R2525M-320 Holder
GCM N3002-GG Insert
 $v_c=328$ SFM, $f=0.006$ IPR, $a_p=0.472"$, Wet Cutting Conditions

Turning



GND Type (ML Type Chipbreaker)



Conventional Tool

4115 Steel Part Material
GNDM R2525M-312 Holder
GCM N3002-ML Insert
 $v_c=328$ SFM, $f=0.004$ IPR, $a_p=0.020"$, Wet Cutting Conditions



GND Type (RG Type Chipbreaker)



Conventional Tool

4115 Steel Part Material
GNDM R2525M-312 Holder
GCM N3015-RG Insert
 $v_c=328$ SFM, $f=0.005$ IPR, $a_p=0.039"$, Wet Cutting Conditions



GND Type (RG Type Chipbreaker)



Conventional Tool

4115 Steel Part Material
GNDM R2525M-312 Holder
GCM N3015-RG Insert
 $v_c=328$ SFM, $f=0.006$ IPR, $a_p=0.004"$, Wet Cutting Conditions

Improved Precision

Our precision sintering technology delivers $\pm 0.03\text{mm}$ accuracy for all grooving widths (from 2.0 to 6.0 mm).

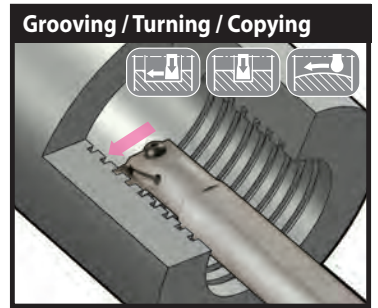
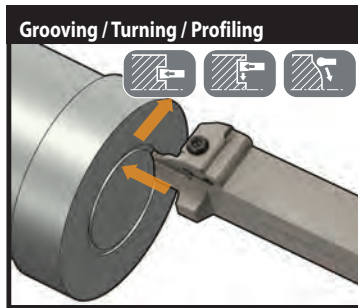
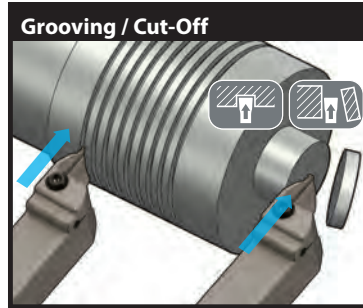
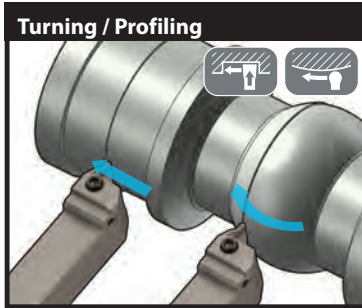


GND Type Holder Selection Guide

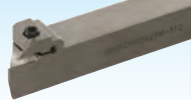
External Grooving

Face Grooving

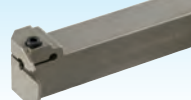
Internal Grooving

Threading,
Grooving, &
Cut-Off Holders**GNDM Type / GNDMS Type**

Perfect for turning and profiling. Can also be used for grooving.

GNDM

Straight Type

GNDMS

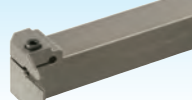
L Style

GNDL Type / GNDLS Type

Perfect for grooving and cut-off applications. Handles deep grooving with ease.

GNDL

Straight Type

GNDLS

L-Style

GNDF Type / GNDFS Type

For facing work.

GNDF

Straight Type

GNDFS

L Type

GNDI Type

for internal grooving.

GNDI

Straight Type

GND Type Chipbreaker Selection

Grooving/Turning				Grooving/Cut-Off				Copying
General Purpose Type	Low Feed Type	General Purpose Type	Low Feed Type	Low Cutting Force Type	Low Cutting Force Type	Cut-Off Type	General Purpose Type	
Standard insert for turning	For low-feed chip management	First choice for grooving	For low-feed chip management	Applicable to ultra-thin grooving	For Non-ferrous Materials	Ideal for cut-off applications	Perfect for copying	
MG Type	ML Type	GG Type	GL Type	GF Type	GA Type <i>New</i>	CG Type	RG Type	
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	
0.10 15°	0.05 20°	0.10 20°	0.10 20°	30°	20°	25°	0.05 25°	

Recommended Cutting Conditions

Part Material	P				M			K						S		N
	Carbon Steel/ Alloy Steel				Stainless Steel			Gray Cast Iron			Ductile Cast Iron			Exotic Alloy		Non-ferrous
Grade	AC830P	AC520U	AC530U	T2500A (Cermet)	AC830P	AC520U	AC530U	AC425K	AC520U	AC530U	AC425K	AC520U	AC530U	AC520U	AC530U	H10
Speed (SFM)	260-650	260-650	165-650	350-750	230-500	230-500	165-500	260-650	200-650	165-650	400-600	200-500	165-500	65-260	65-200	500-1000

Grooving & Cutoff	Breaker		MG	ML	GG	GL	RG	CG	GA	Turning	Breaker		MG		ML		RG		
			Feed (ipr)	Feed (ipr)	Feed (ipr)	Feed (ipr)	Feed (ipr)	Feed (ipr)	Feed (ipr)				Feed (ipr)	Feed (ipr)	Depth (in)	Depth (in)	Feed (ipr)	Depth (in)	Feed (ipr)
	Seat Size	2	-	-	.002-.010	.001-.006	-	.002-.008	.002-.010			Seat Size	3	.003-.010	.016-.06	.002-.007	.012-.060	.004-.016	.012-.048
		3	.003-.008	.001-.006	.004-.012	.002-.008	.003-.006	.003-.010	.004-.012				4	.004-.012	.020-.08	.002-.008	.016-.080	.006-.018	.024-.064
		4	.004-.010	.002-.008	.006-.014	.003-.009	.004-.008	.004-.012	.006-.014				5	.005-.014	.030-.10	.003-.010	.020-.100	.008-.020	.030-.080
		5	.005-.012	.003-.010	.008-.016	.004-.010	.006-.010	-	.008-.016				6	.006-.016	.040-.12	.004-.012	.020-.120	.012-.024	.040-.090
		6	.006-.014	.004-.012	.008-.018	.005-.012	.008-.012	-	.008-.018				7	.007-.016	.048-.014	.005-.014	.028-.014	.014-.026	.048-.098
		7	.007-.016	.005-.014	.008-.020	.006-.014	.010-.014	-	-				8	.008-.018	.060-.016	.006-.016	.028-.016	.014-.028	.060-.120
		8	.008-.018	.006-.016	.008-.022	.007-.016	.014-.016	-	-										

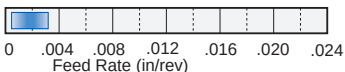
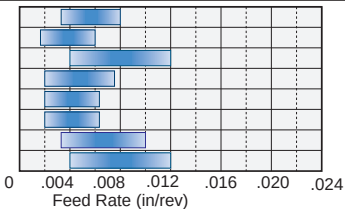
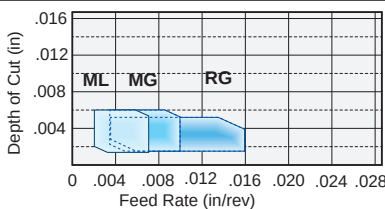
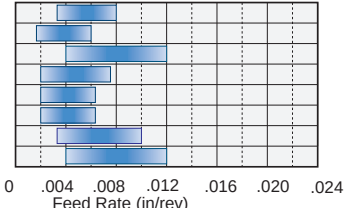
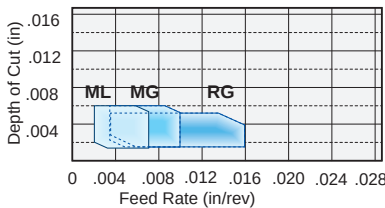
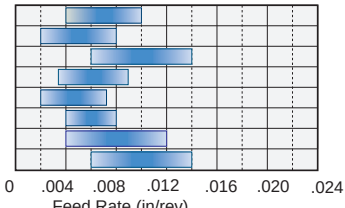
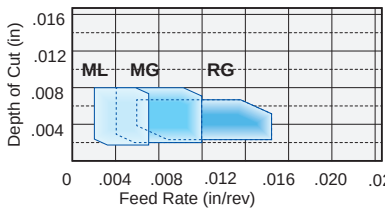
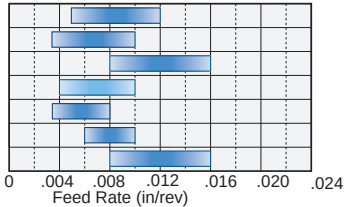
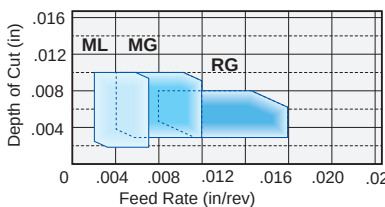
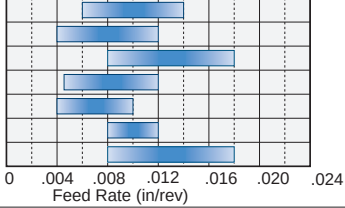
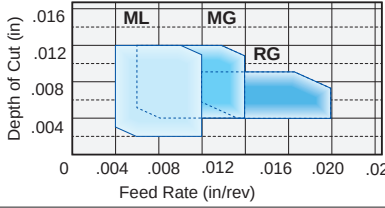
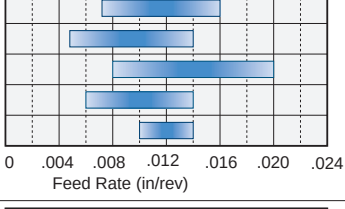
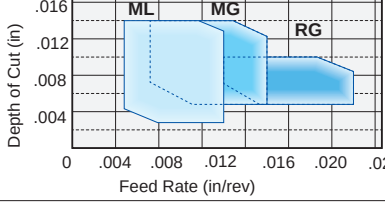
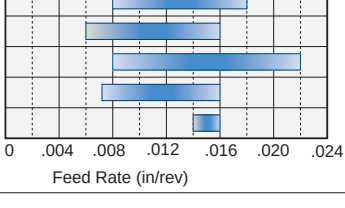
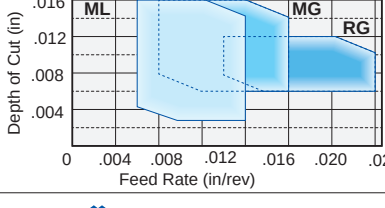
Grooving Toolholders

GND Series - Chipbreaker Selection

GROOVING TOOLHOLDERS

GND SERIES

Chipbreaker Selection Guide

Groov. Width (mm)	Recommended Cutting Conditions		Nose Radius (mm)	Inserts
	Grooving	Turning		
1.25	Chipbreaker GF 		.008	GCM N12505 GF
1.5	Chipbreaker GF 		.008	GCM N150005 GF
2.0	Chipbreaker MG ML GG GL GF RG CG GA 		.008	GCM N2002 GG GCM N2002 GL GCM N2002 GF GCM R/L2002 CG05
3.0	Chipbreaker MG ML GG GL GF RG CG GA 		.008	GCM N3002 ML GCM N3002 GG GCM N3002 GL GCM N3002 GF GCM R/L3002 CG05
			.016	GCM N3004 MG
			.060	GCM N3015 RG
4.0	Chipbreaker MG ML GG GL GF RG CG GA 		.008	GCM N4002 GG GCM N4002 GL GCM N4002 GF GCM R/L4002 CG05
			.016	GCM N4004 ML
			.032	GCM N4004 GG
			.078	GGCM N 4008 MG
5.0	Chipbreaker MG ML GG GL GF RG CG GA 		.008	GCM N5002 GG GCM N5002 GL GCM N5002 GF
			.016	GCM N5004 ML
			.032	GCM N5004 GG
			.098	GCM N5008 MG
6.0	Chipbreaker MG ML GG GL GF RG CG GA 		.008	GCM N6002 GG GCM N6002 GL GCM N6002 GF
			.016	GCM N6004 ML
			.032	GCM N6004 GG
			.118	GCM N6008 MG
7.0	Chipbreaker MG ML GG GL GF RG 		.008	GCM N7004 ML GCM N7004 GG GCM N7004 GL
			.032	GCM N7008 MG
			.134	GCM N7035 RG
8.0	Chipbreaker MG ML GG GL GF RG 		.016	GCM N8004 ML GCM N8004 GG GCM N8004 GL
			.032	GCM N8008 MG
			.160	GCM N8040 RG

Threading,
Grooving, &
Cut-Off Holders



Nomenclature for OD Groover GND Series**GND M R/L 16 3 M -075**

#1- 3

#4

#5

#6

#7

#8

#9

#1-3 Series Name
#1 Groove #2 New #3 Depth

#4 Application
M: Multi-function
L: Deep Groove
MS: 90° Multi
LS: 90° Deep

#5 Handedness
R: Right Handed
L: Left Handed

#6 Shank Size*16
12: 0.750 x 0.750"
16: 1.000 x 1.000"
20: 1.250 x 1.250"

#7 Seat Size
2
3
4
5
6
7
8

#8 Overall Length
K: 5.0"
M: 6.0"
P: 7.0"

#9 Max Groove Depth*100
050: 0.50"
070: 0.70"
075: 0.75"
090: 0.90"
100: 1.00"

Nomenclature for Face Grooving Holders**GND F R/L 16 3 M -075 -035**

#1- 3

#4

#5

#6

#7

#8

#9

#10

#1-3 Series Name
#1 Groove #2 New #3 Depth

#4 Application
F: Face Groover
FS: 90° Face

#5 Handedness
R: Right Handed
L: Left Handed

#6 Shank Size*16
12: 0.750 x 0.750"
16: 1.000 x 1.000"
20: 1.250 x 1.250"

#7 Seat Size
2
3
4
5
6
8

#8 Overall Length
K: 5.0"
M: 6.0"
P: 7.0"

#9 Max Groove Depth*100
050: 0.50"
070: 0.70"
075: 0.75"
090: 0.90"

#10 Min.Part Diam. mm (Inch)
035: 35mm (1.378")
040: 40mm (1.575")
045: 45mm (1.772")
050: 50mm (1.969")
065: 65mm (2.559")
085: 85mm (3.346")

#10 Min.Part Diam. mm (Inch) (cont.)
090: 90mm (3.543")
100: 100mm (3.937")
125: 125mm (4.921")
140: 140mm (5.512")
180: 180mm (7.087")
280: 280mm (11.024")

Insert Nomenclature**GCM N 3 125 R0.5 -GG -AC530U**

#1- 3

#4

#5

#6

#7

#8

#9

#1-3 Series Name
#1 G: Grooving Insert
#2 C: 7° Relief Angle
#3 M: Molded Tolerance

#4 Handedness
R: Right Handed
L: Left Handed
N: Neutral

#5 Seat Size
2
3
4
5
6
7
8

#6 Groove Width*100
094: 0.094"
125: 0.125"
187: 0.187"
250: 0.250"

#7 Corner Radius in 64ths
R0.5: 0.5/64 = 0.0078"
R1.0: 1/64 = 0.0156"
R2.0: 2/64 = 0.0312"

#8 Chipbreaker
GG: Std. Feed Deep Groove
GL: Low Feed Deep Groove
MG: Std. Feed Traverse
ML: Low Feed Traverse
RG: Full Radius Profiling
GF: Low Cutting Force

*Note: Items with the RG chipbreaker have a radius equal to 1/2 the width (Ex: GCMN3125-RG = 0.0625")

#9: Grade
AC520U: Universal Grade For most materials
AC530U: Universal Grade For most materials
AC830P: Tough CVD Grade For steels
AC425K: CVD Grade For Cast and Ductile Irons
T2500A: finishing of steels and stainless steels
H10: for non-ferrous materials



Grooving Toolholders

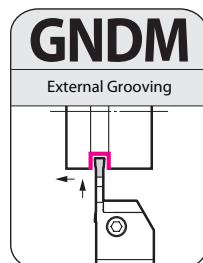
GND Series - Inch

GROOVING TOOLHOLDERS

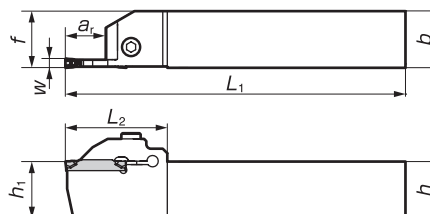
GND SERIES

Series: GNDM • GNDMS

External Multi-Purpose (Grooving / Turning / Profiling)



Use for multi-purpose or profiling insert for turning (widening).

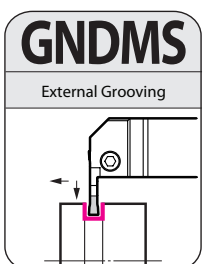


Above figures show right hand tools

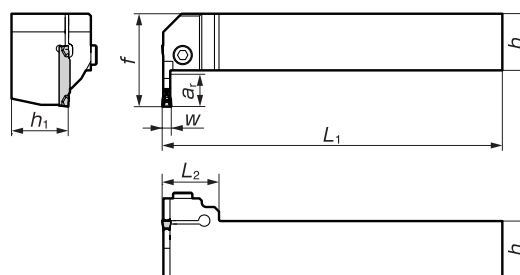
Catalog Number	Dimensions (in)						Groove Width	Max. Groove depth	Seat Size		
	h	b	L1	f	h1	L2					
GNDM L/R 122K-050	.750	.750	5.000	.750	.750	1.441	.094	.500	2	BX0520	LH040
GNDM L/R 123K-050	.750	.750	5.000	.750	.750	1.441	.125	.500	3		
GNDM L/R 124K-070	.750	.750	5.000	.750	.750	1.772	.157	.700	4		
GNDM L/R 125K-070	.750	.750	5.000	.750	.750	1.772	.1875	.700	5		
GNDM L/R 126K-070	.750	.750	5.000	.750	.750	1.772	.250	.700	6		
GNDM L/R 162K-050	1.000	1.000	6.000	1.000	1.000	1.441	.094	.500	2		
GNDM L/R 163M-050	1.000	1.000	6.000	1.000	1.000	1.441	.125	.500	3		
GNDM L/R 164M-070	1.000	1.000	6.000	1.000	1.000	1.772	.157	.700	4		
GNDM L/R 165M-070	1.000	1.000	6.000	1.000	1.000	1.772	.1875	.700	5		
GNDM L/R 166M-070	1.000	1.000	6.000	1.000	1.000	1.772	.250	.700	6		
GNDM L/R 203P-050	1.250	1.250	6.750	1.250	1.250	1.441	.125	.500	3	BX0620	LH050
GNDM L/R 204P-070	1.250	1.250	6.750	1.250	1.250	1.772	.157	.700	4		
GNDM L/R 205P-070	1.250	1.250	6.750	1.250	1.250	1.772	.1875	.700	5		
GNDM L/R 206P-070	1.250	1.250	6.750	1.250	1.250	1.772	.250	.700	6		
GNDM L/R 207P-070	1.250	1.250	6.750	1.250	1.250	2.000	.275	.700	7		
GNDM L/R 208P-070	1.250	1.250	6.750	1.250	1.250	2.000	.315	.700	8		

Please see page 296 for applicable inserts

External L-Styled (Side Cut) Multi-Purpose (Grooving / Turning / Profiling)



Use for multi-purpose or profiling insert for turning (widening).

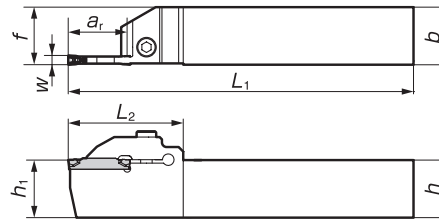
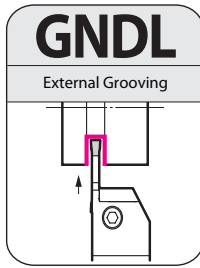


Above figures show right hand tools

Catalog Number	Dimensions (in)						Groove Width	Max. Groove depth	Seat Size		
	h	b	L1	f	h1	L2					
GNDMS L/R 123K-040	.750	.750	5.000	1.222	.750	1.000	.125	.4000	3	BX0520	LH040
GNDMS L/R 124K-050	.750	.750	5.000	1.300	.750	1.000	.157	.5000	4		
GNDMS L/R 125K-050	.750	.750	5.000	1.300	.750	1.000	.1875	.5000	5		
GNDMS L/R 163M-050	1.000	1.000	6.000	1.551	1.000	1.000	.125	.5000	3		
GNDMS L/R 164M-055	1.000	1.000	6.000	1.630	1.000	1.000	.157	.5500	4		
GNDMS L/R 165M-055	1.000	1.000	6.000	1.630	1.000	1.000	.1875	.5500	5		
GNDMS L/R 166M-055	1.000	1.000	6.000	1.630	1.000	1.000	.250	.5500	6		

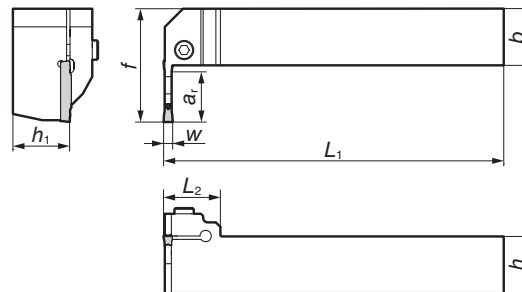
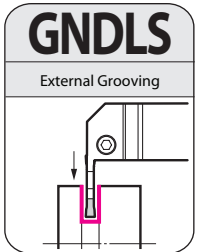
Please see page 296 for applicable inserts



External Deep Grooving / Cut-Off

Above figures show right hand tools

Catalog Number	Dimensions (in)						Groove Width W (inch)	Max. Groove depth ar (inch)	Seat Size		
	h	b	L1	f	h1	L2					
GNDL L/R 122K-075	.750	.750	5.000	.750	.750	1.752	.094	.750	2	BX0520	LH040
GNDL L/R 123K-075	.750	.750	5.000	.750	.750	1.752	.125	.750	3		
GNDL L/R 124K-100	.750	.750	5.000	.750	.750	1.969	.157	1.000	4		
GNDL L/R 125K-100	.750	.750	5.000	.750	.750	1.969	.1875	1.000	5		
GNDL L/R 126K-100	.750	.750	5.001	.750	.750	1.969	.250	1.000	6		
GNDL L/R 162M-075	1.000	1.000	6.000	1.000	1.000	1.752	.094	.750	2		
GNDL L/R 163M-075	1.000	1.000	6.000	1.000	1.000	1.752	.125	.750	3		
GNDL L/R 164M-100	1.000	1.000	6.000	1.000	1.000	1.969	.157	1.000	4		
GNDL L/R 165M-100	1.000	1.000	6.000	1.000	1.000	1.969	.187	1.000	5		
GNDL L/R 166M-100	1.000	1.000	6.000	1.000	1.000	1.969	.250	1.000	6		
GNDL L/R 203P-090	1.250	1.250	6.750	1.250	1.250	1.752	.125	0.900	3	BX0620	LH050
GNDL L/R 204P-100	1.250	1.250	6.750	1.250	1.250	2.000	.157	1.000	4		
GNDL L/R 205P-100	1.250	1.250	6.750	1.250	1.250	2.000	.1875	1.000	5		
GNDL L/R 206P-100	1.250	1.250	6.750	1.250	1.250	2.000	.250	1.000	6		
GNDL L/R 207P-100	1.250	1.250	6.750	1.250	1.250	2.000	.275	1.000	7		
GNDL L/R 208P-100	1.250	1.250	6.750	1.250	1.250	2.000	.315	1.000	8		

*Please see page 296 for applicable inserts***External L-Style (Side Cut) Grooving**

Above figures show right hand tools

Catalog Number	Dimensions (in)						Groove Width W (inch)	Max. Groove depth ar (inch)	Seat Size		
	h	b	L1	f	h1	L2					
GNDLS L/R 122K-060	.750	.750	5.000	1.459	.750	1.000	.094	.600	2	BX0520	LH040
GNDLS L/R 123K-060	.750	.750	5.000	1.459	.750	1.000	.125	.600	3		
GNDLS L/R 124K-070	.750	.750	6.000	1.787	.750	1.000	.157	.700	4		
GNDLS L/R 162M-070	1.000	1.000	6.000	1.787	1.000	1.000	.094	.700	2		
GNDLS L/R 163M-070	1.000	1.000	6.000	1.787	1.000	1.000	.125	.700	3		
GNDLS L/R 164M-090	1.000	1.000	6.000	1.984	1.000	1.000	.157	.900	4		
GNDLS L/R 165M-090	1.000	1.000	6.000	1.984	1.000	1.000	.1875	.900	5		
GNDLS L/R 166M-090	1.000	1.000	6.000	1.984	1.000	1.000	.250	.900	6		

Please see page 296 for applicable inserts

Grooving Toolholders

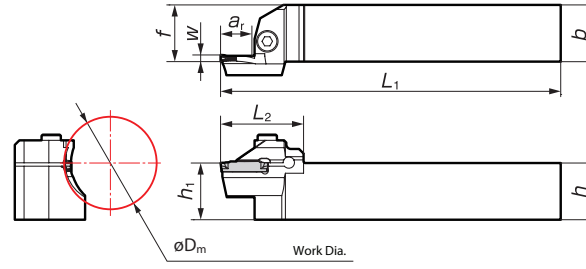
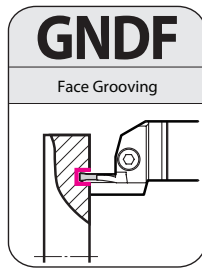
GND Series - Inch

GROOVING TOOLHOLDERS

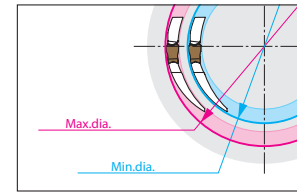
GND SERIES

Series: GNDF

Face Grooving



Above figures show right hand tools



Work diameters in stock table indicate external diameter of face groove.

Catalog Number	Dimensions (in)						Work Dia. ϕD_m		Grooving width	Max. Grooving Depth ar (inch)	Seat Size		
	h	b	L1	f	h1	L2	Min.	Max.					
GNDF L/R 123K-050-035	.750	.750	5.000	.750	.750	1.402	1.378	1.772	.125	.500	3	BX0520	LH040
GNDF L/R 123K-050-040	.750	.750	5.000	.750	.750	1.402	1.575	2.165	.125	.500	3		
GNDF L/R 123K-070-050	.750	.750	5.000	.750	.750	1.638	1.969	2.756	.125	.700	3		
GNDF L/R 123K-070-065	.750	.750	5.000	.750	.750	1.638	2.559	3.397	.125	.700	3		
GNDF L/R 123K-070-090	.750	.750	5.000	.750	.750	1.638	3.543	5.906	.125	.700	3		
GNDF L/R 123K-070-140	.750	.750	5.000	.750	.750	1.638	5.512	7.874	.125	.700	3		
GNDF L/R 123K-070-180	.750	.750	5.000	.750	.750	1.638	7.087	11.811	.125	.700	3	BX0520	LH040
GNDF L/R 124K-070-040	.750	.750	5.000	.750	.750	1.638	1.575	2.165	.157	.700	4		
GNDF L/R 124K-090-050	.750	.750	5.000	.750	.750	1.835	1.969	2.756	.157	.900	4		
GNDF L/R 124K-090-065	.750	.750	5.000	.750	.750	1.835	2.559	3.543	.157	.900	4		
GNDF L/R 124K-090-085	.750	.750	5.000	.750	.750	1.835	3.346	5.118	.157	.900	4		
GNDF L/R 124K-090-125	.750	.750	5.000	.750	.750	1.835	4.921	7.874	.157	.900	4		
GNDF L/R 124K-090-180	.750	.750	5.000	.750	.750	1.835	7.087	11.811	.157	.900	4	BX0520	LH040
GNDF L/R 124K-090-280	.750	.750	5.000	.750	.750	1.835	11.024	39.370	.157	.900	4		
GNDF L/R 125K-090-050	.750	.750	5.000	.750	.750	1.835	1.969	2.756	.1875	.900	5		
GNDF L/R 125K-090-065	.750	.750	5.000	.750	.750	1.835	2.559	3.543	.1875	.900	5		
GNDF L/R 125K-090-085	.750	.750	5.000	.750	.750	1.835	3.346	5.118	.1875	.900	5		
GNDF L/R 125K-090-125	.750	.750	5.000	.750	.750	1.835	4.921	7.874	.1875	.900	5		
GNDF L/R 125K-090-180	.750	.750	5.000	.750	.750	1.835	7.087	11.811	.1875	.900	5	BX0520	LH040
GNDF L/R 125K-090-280	.750	.750	5.000	.750	.750	1.835	11.024	39.370	.1875	.900	5		
GNDF L/R 126K-090-050	.750	.750	5.000	.750	.750	1.835	1.969	2.953	.250	.900	6		
GNDF L/R 126K-090-070	.750	.750	5.000	.750	.750	1.835	2.756	4.331	.250	.900	6		
GNDF L/R 126K-090-100	.750	.750	5.000	.750	.750	1.835	3.397	7.874	.250	.900	6	BX0520	LH040
GNDF L/R 126K-090-180	.750	.750	5.000	.750	.750	1.835	7.087	11.811	.250	.900	6		
GNDF L/R 126K-090-280	.750	.750	5.000	.750	.750	1.835	11.024	39.370	.250	.900	6		
GNDF L/R 163M-050-035	1.000	1.000	6.000	1.000	1.000	1.402	1.378	1.772	.125	.500	3	BX0520	LH040
GNDF L/R 163M-050-040	1.000	1.000	6.000	1.000	1.000	1.402	1.575	2.165	.125	.500	3		
GNDF L/R 163M-070-050	1.000	1.000	6.000	1.000	1.000	1.638	1.969	2.756	.125	.700	3		
GNDF L/R 163M-070-065	1.000	1.000	6.000	1.000	1.000	1.638	2.559	3.397	.125	.700	3		
GNDF L/R 163M-070-090	1.000	1.000	6.000	1.000	1.000	1.638	3.543	5.906	.125	.700	3		
GNDF L/R 163M-070-140	1.000	1.000	6.000	1.000	1.000	1.638	5.512	7.874	.125	.700	3		
GNDF L/R 163M-070-180	1.000	1.000	6.000	1.000	1.000	1.638	7.087	11.811	.125	.700	3	BX0520	LH040
GNDF L/R 164M-070-040	1.000	1.000	5.000	.750	.750	1.638	1.575	2.165	.157	.700	4		
GNDF L/R 164M-090-050	1.000	1.000	5.000	.750	.750	1.835	1.969	2.756	.157	.900	4		
GNDF L/R 164M-090-065	1.000	1.000	5.000	.750	.750	1.835	2.559	3.543	.157	.900	4		
GNDF L/R 164M-090-085	1.000	1.000	5.000	.750	.750	1.835	3.346	5.118	.157	.900	4		
GNDF L/R 164M-090-125	1.000	1.000	5.000	.750	.750	1.835	4.921	7.874	.157	.900	4		
GNDF L/R 164M-090-180	1.000	1.000	5.000	.750	.750	1.835	7.087	11.811	.157	.900	4	BX0520	LH040
GNDF L/R 164M-090-280	1.000	1.000	5.000	.750	.750	1.835	11.024	39.370	.157	.900	4		
GNDF L/R 165M-090-050	1.000	1.000	6.000	1.000	1.000	1.835	1.969	2.756	.1875	.900	5		
GNDF L/R 165M-090-065	1.000	1.000	6.000	1.000	1.000	1.835	2.559	3.543	.1875	.900	5		
GNDF L/R 165M-090-085	1.000	1.000	6.000	1.000	1.000	1.835	3.346	5.118	.1875	.900	5		
GNDF L/R 165M-090-125	1.000	1.000	6.000	1.000	1.000	1.835	4.921	7.874	.1875	.900	5		
GNDF L/R 165M-090-180	1.000	1.000	6.000	1.000	1.000	1.835	7.087	11.811	.1875	.900	5	BX0520	LH040
GNDF L/R 165M-090-280	1.000	1.000	6.000	1.000	1.000	1.835	11.024	39.370	.1875	.900	5		
GNDF L/R 166M-090-050	1.000	1.000	6.000	1.000	1.000	1.835	1.969	2.953	.250	.900	6		
GNDF L/R 166M-090-070	1.000	1.000	6.000	1.000	1.000	1.835	2.756	4.331	.250	.900	6		
GNDF L/R 166M-090-100	1.000	1.000	6.000	1.000	1.000	1.835	3.397	7.874	.250	.900	6		
GNDF L/R 166M-090-180	1.000	1.000	6.000	1.000	1.000	1.835	7.087	11.811	.250	.900	6		
GNDF L/R 166M-090-280	1.000	1.000	6.000	1.000	1.000	1.835	11.024	39.370	.250	.900	6		

Please see page 296 for applicable inserts



Nomenclature for OD Groover GND Series (METRIC)**GND M R/L 2525 M - 3 12**

#1-3 #4 #5 #6 #7 #8 #9

#1-3 Series Name	#4 Application	#5 Handedness	#6 Shank Size (mm)	#7 Overall Length	#8 Seat Size	#9 Max Groove Depth (mm)
#1 Groove #2 New #3 Depth	M: Multi-function L: Deep Groove MS: 90° Multi LS: 90° Deep S: Shallow Groove	R: Right Handed L: Left Handed	1010: 10 x 10 mm 1212: 12 x 12 mm 1616: 16 x 16 mm 2020: 20 x 20 mm 2525: 25 x 25 mm 3232: 32 x 32 mm	JX: 120 mm K: 125 mm M: 150 mm P: 170 mm	1.25 1.5 2 3 4 5 6 7 8	10 12 12.5 14 16 18 20 23 25

Nomenclature for Face Grooving Holders**GND F R/L 2525 M - 3 18 - 090**

#1-3 #4 #5 #6 #7 #8 #9 #10

#1-3 Series Name	#4 Application	#5 Handedness	#6 Shank Size (mm)	#7 Overall Length	#8 Seat Size	#9 Max Groove Depth (mm)
#1 Groove #2 New #3 Depth	F: Face Groover FS: 90° Face	R: Right Handed L: Left Handed	2020: 20 x 20 mm 2525: 25 x 25 mm 3232: 32 x 32 mm	K: 125 mm M: 150 mm P: 170 mm	2 3 4 5 6 8	12 18 23

#10 Min.Part Diam. mm (Inch)	#10 Min.Part Diam. mm (Inch) (cont.)
035: 35mm (1.378")	090: 90mm (3.543")
040: 40mm (1.575")	100: 100mm (3.937")
045: 45mm (1.772")	125: 125mm (4.921")
050: 50mm (1.969")	140: 140mm (5.512")
065: 65mm (2.559")	180: 180mm (7.087")
085: 85mm (3.346")	280: 280mm (11.024")

Insert Nomenclature (METRIC)**GCM N 30 02 -GG -AC530U**

#1-3 #4 #5 #6 #7 #8

#1-3 Series Name	#4 Handedness	#5 Seat Size & Groove Width	#6 Corner Radius *10	#7 Chipbreaker	#8: Grade
#1 G: Grooving Insert #2 C: 7° Relief Angle #3 M: Molded Tolerance	R: Right Handed L: Left Handed N: Neutral	# Seat Groove Width 20 2 2.0 mm 30 3 3.0 mm 40 4 4.0 mm 50 5 5.0 mm 60 6 6.0 mm 70 7 7.0 mm 80 8 8.0 mm	02 =0.2mm 04 =0.4mm 08 =0.8mm	GG: Std. Feed Deep Groove GL: Low Feed Deep Groove MG: Std. Feed Traverse ML: Low Feed Traverse RG: Full Radius Profiling GF: Low Cutting Force GA: Non-ferrous Material	AC520U: Universal Grade For most materials AC530U: Universal Grade For most materials AC830P: Tough CVD Grade For steels AC425K: CVD Grade For Cast and Ductile Irons T2500A: finishing of steels and stainless steels H10: for non-ferrous materials



Grooving Toolholders

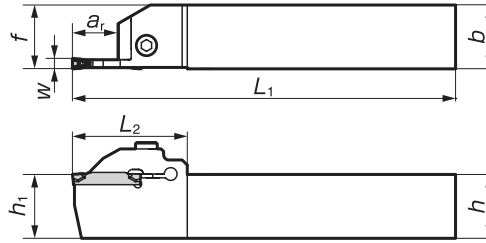
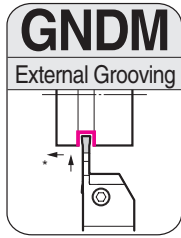
GND Series - Metric

GROOVING TOOLHOLDERS

GND SERIES

Series: GNDM • GNDMS

External Multi-purpose Type (Grooving, Turning, and Copying)



Above figures show right hand tools

* Use the multi-purpose copying insert for turning (wide grooves).

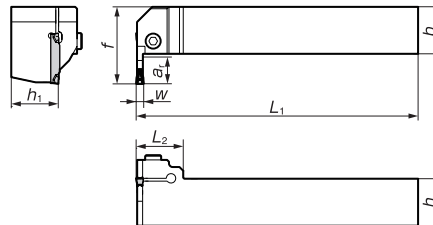
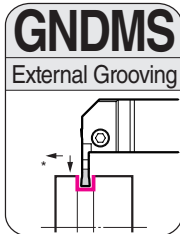
■ Holders

■ Spare Parts

Catalog Number	Dimensions (mm)						Groove Width	Max. Groove Depth a _r (mm)	Seat Size	Cap Screw	Recommended Tightening Torque (N-m)	Wrench				
	h	b	L ₁	f	h ₁	L ₂	W(mm)									
GNDM R/L1616JX-1.510	16	16	120	16	16	26.0	1.5	10	1.5	BX0515	5.0	LH040				
GNDM R/L1616JX-212	16	16	120	16	16	30.0	2.0	12	2							
GNDM R/L1616JX-312	16	16	120	16	16	30.0	3.0	12	3							
GNDM R/L2020K-312	20	20	125	20	20	36.6	3.0	12	3	BX0520			5.0	LH040		
GNDM R/L2020K-418	20	20	125	20	20	45.0	4.0	18	4							
GNDM R/L2020K-518	20	20	125	20	20	45.0	5.0	18	5							
GNDM R/L2020K-618	20	20	125	20	20	45.0	6.0	18	6							
GNDM R/L2525M-312	25	25	150	25	25	36.6	3.0	12	3							
GNDM R/L2525M-418	25	25	150	25	25	45.0	4.0	18	4							
GNDM R/L2525M-518	25	25	150	25	25	45.0	5.0	18	5	BX0620					6.0	LH050
GNDM R/L2525M-618	25	25	150	25	25	45.0	6.0	18	6							
GNDM R/L3232P-312	32	32	170	32	32	36.6	3.0	12	3							
GNDM R/L3232P-418	32	32	170	32	32	45	4.0	18	4							
GNDM R/L3232P-518	32	32	170	32	32	45	5.0	18	5							
GNDM R/L3232P-618	32	32	170	32	32	45	6.0	18	6							
GNDM R/L3232P-718	32	32	170	32	32	50	7.0	18	7	BX0620	6.0	LH050				
GNDM R/L3232P-818	32	32	170	32	32	50	8.0	18	8							

Select holders and inserts with the same grooving widths (w). Refer to page 296 for applicable inserts.

External L-Styled (Side Cut) Multi-purpose Type (Grooving, Turning, and Copying)



Above figures show right hand tools

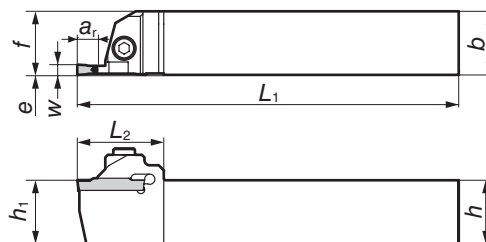
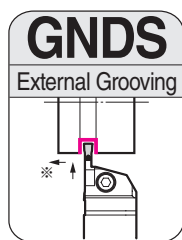
■ Holders * Use the multi-purpose copying insert for turning (wide grooves).

■ Spare Parts

Catalog Number	Dimensions (mm)						Groove Width	Max. Groove Depth	Seat Size	Cap Screw	Recommended Tightening Torque (N-m)	Wrench
	h	b	L ₁	f	h ₁	L ₂	W(mm)	a _r (mm)				
GNDMS R/L 2020K-310	20	20	125	32	20	25	3.0	10	3	BX0520	5.0	LH040
GNDMS R/L 2020K-412	20	20	125	34	20	25	4.0	12	4			
GNDMS R/L 2020K-512	20	20	125	34	20	25	5.0	12	5			
GNDMS R/L 2525M-312	25	25	150	39	25	25	3.0	12	3			
GNDMS R/L 2525M-414	25	25	150	41	25	25	4.0	14	4			
GNDMS R/L 2525M-514	25	25	150	41	25	25	5.0	14	5			
GNDMS R/L 2525M-614	25	25	150	41	25	25	6.0	14	6			

Select holders and inserts with the same grooving widths (w). Refer to page 296 for applicable inserts.



External Multi-purpose Shallow Grooves Type (Grooving, Turning, and Copying)

Above figures show right hand tools

■ **Holders**

* Use the multi-purpose copying insert for turning (wide grooves).

■ **Spare Parts**

Catalog Number	Dimensions (mm)						Groove Width	Max. Groove Depth a_r (mm)	Seat Size	Cap Screw	Recommended Tightening Torque (N-m)	Wrench
	h	b	L_1	f	h_1	L_2	W(mm)					
GNDS R/L2020K-206	20	20	125	20	20	30.0	2.0	6	2	BX0520	5.0	LH040
GNDS R/L2020K-306	20	20	125	20	20	30.0	3.0	6	3			
GNDS R/L2020K-410	20	20	125	20	20	34.0	4.0	10	4			
GNDS R/L2020K-510	20	20	125	20	20	34.0	5.0	10	5			
GNDS R/L2020K-610	20	20	125	20	20	34.0	6.0	10	6			
GNDS R/L2525M-206	25	25	150	25	25	30.0	2.0	6	2			
GNDS R/L2525M-306	25	25	150	25	25	30.0	3.0	6	3			
GNDS R/L2525M-410	25	25	150	25	25	34.0	4.0	10	4			
GNDS R/L2525M-510	25	25	150	25	25	34.0	5.0	10	5			
GNDS R/L2525M-610	25	25	150	25	25	34.0	6.0	10	6			

Select holders and inserts with the same grooving widths (w). Refer to page 296 for applicable inserts.



Grooving Toolholders

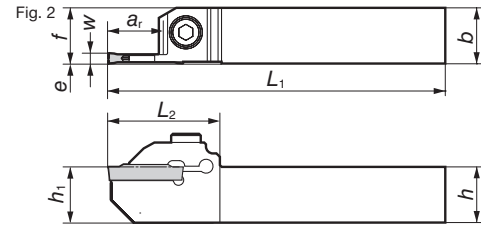
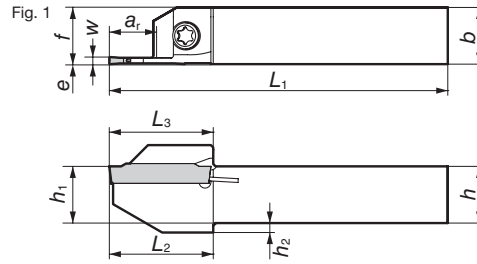
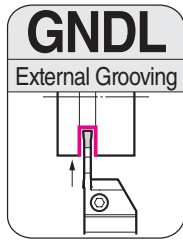
GND Series - Metric

GROOVING TOOLHOLDERS

GND SERIES

Series: GNDL • GNDLS

External Deep Grooving & Cut-Off



■ Holders

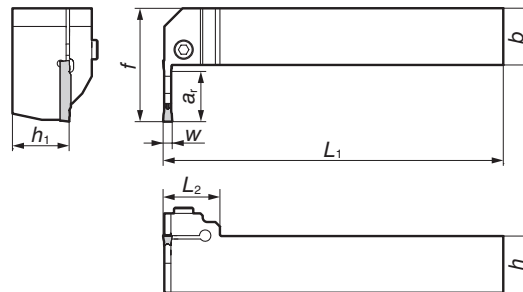
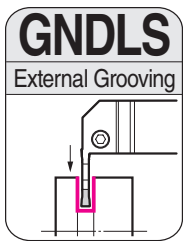
Above figures show right hand tools

■ Spare Parts

Catalog Number	Dimensions (mm)							Groove Width	Max. Groove Depth a _r (mm)	Seat Size	Cap Screw	Recommended Tightening Torque (N-m)	Wrench	
	h	b	L ₁	f	h ₁	L ₂	h ₂	W(mm)						
GNDL R/L1010JX-210	10	10	120	10	10	22.0	2.0	2.0	10	2	BFTX0412N		LT15-10	
GNDL R/L1010JX-310	10	10	120	10	10	22.0	2.0	3.0	10	3				
GNDL R/L1212JX-212.5	12	12	120	12	12	22.0	2.0	2.0	12.5	2				
GNDL R/L1212JX-312.5	12	12	120	12	12	22.0	2.0	3.0	12.5	3				
GNDL R/L1616JX-216	16	16	120	16	16	32.0	-	2.0	16	2	BX0515		LH040	
GNDL R/L1616JX-316	16	16	120	16	16	32.0	-	3.0	16	3				
GNDL R/L2020K-220	20	20	125	20	20	44.5	-	2.0	20	2	BX0520	5.0		
GNDL R/L2020K-320	20	20	125	20	20	44.5	-	3.0	20(18)	3				
GNDL R/L2020K-425	20	20	125	20	20	50.0	-	4.0	25(23)	4				
GNDL R/L2020K-525	20	20	125	20	20	50.0	-	5.0	25(23)	5				
GNDL R/L2020K-625	20	20	125	20	20	50.0	-	6.0	25(23)	6				
GNDL R/L2525M-220	25	25	150	25	25	44.5	-	2.0	20	2				
GNDL R/L2525M-320	25	25	150	25	25	44.5	-	3.0	20(18)	3				
GNDL R/L2525M-425	25	25	150	25	25	50.0	-	4.0	25(23)	4				
GNDL R/L2525M-525	25	25	150	25	25	50.0	-	5.0	25(23)	5				
GNDL R/L2525M-625	25	25	150	25	25	50.0	-	6.0	25(23)	6				
GNDL R/L3232P-320	32	32	170	32	32	44.5	-	3.0	20	3	BX0620	6.0		LH050
GNDL R/L3232P-425	32	32	170	32	32	50	-	4.0	25	4				
GNDL R/L3232P-525	32	32	170	32	32	50	-	5.0	25	5				
GNDL R/L3232P-625	32	32	170	32	32	50	-	6.0	25	6				
GNDL R/L3232P-725	32	32	170	32	32	50	-	7.0	25	7				
GNDL R/L3232P-825	32	32	170	32	32	50	-	8.0	25	8				

Select holders and inserts with the same grooving widths (w). Dimensions in parentheses under maximum grooving depth are for applications that use copying inserts (RG Type Breakers). Refer to page 296 for applicable inserts.

External L-Styled (Side Cut) Grooving



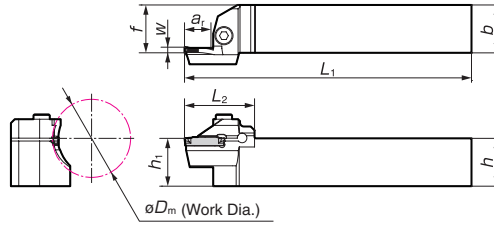
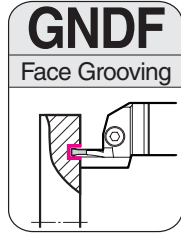
■ Holders

Above figures show right hand tools

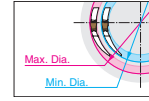
■ Spare Parts

Catalog Number	Dimensions (mm)						Groove Width	Max. Groove Depth a _r (mm)	Seat Size	Cap Screw	Recommended Tightening Torque (N-m)	Wrench
	h	b	L ₁	f	h ₁	L ₂	W(mm)					
GNDLS R/L2020K-216	20	20	125	38	20	25	2.0	16	2	BX0520	5.0	LH040
GNDLS R/L2020K-316	20	20	125	38	20	25	3.0	16	3			
GNDLS R/L2525M-218	25	25	150	45	25	25	2.0	18	2			
GNDLS R/L2525M-318	25	25	150	45	25	25	3.0	18	3			
GNDLS R/L2525M-423	25	25	150	50	25	25	4.0	23	4			
GNDLS R/L2525M-523	25	25	150	50	25	25	5.0	23	5			
GNDLS R/L2525M-623	25	25	150	50	25	25	6.0	23	6			



Face Grooving

Above figures show right hand tools



Work diameters in the stock table indicate external diameters of face grooves.

■ Holders

* Use the multi-purpose copying insert for turning (wide grooves).

■ Spare Parts

Catalog Number	Dimensions (mm)						Work Dia. (mm)	Groove Width	Max. Groove Depth a_r (mm)	Seat Size	Cap Screw	Recommended Tightening Torque (N-m)	Wrench
	h	b	L ₁	f	h ₁	L ₂	ΦD_m	W(mm)					
GNDF R/L2020K-312-035	20	20	125	20	20	35.6	35 to 45	3.0	12	3	BX0520	5.0	LH040
GNDF R/L2020K-312-040	20	20	125	20	20	35.6	40 to 55	3.0	12				
GNDF R/L2020K-318-050	20	20	125	20	20	41.6	50 to 70	3.0	18				
GNDF R/L2020K-318-065	20	20	125	20	20	41.6	65 to 100	3.0	18				
GNDF R/L2020K-318-090	20	20	125	20	20	41.6	90 to 150	3.0	18				
GNDF R/L2020K-318-140	20	20	125	20	20	41.6	140 to 200	3.0	18				
GNDF R/L2020K-318-180	20	20	125	20	20	41.6	180 to 300	3.0	18	4	BX0520	5.0	LH040
GNDF R/L2020K-418-040	20	20	125	20	20	41.6	40 to 55	4.0	18				
GNDF R/L2020K-423-050	20	20	125	20	20	46.6	50 to 70	4.0	23				
GNDF R/L2020K-423-065	20	20	125	20	20	46.6	65 to 90	4.0	23				
GNDF R/L2020K-423-085	20	20	125	20	20	46.6	85 to 130	4.0	23				
GNDF R/L2020K-423-125	20	20	125	20	20	46.6	125 to 200	4.0	23				
GNDF R/L2020K-423-180	20	20	125	20	20	46.6	180 to 300	4.0	23	5	BX0520	5.0	LH040
GNDF R/L2020K-423-280	20	20	125	20	20	46.6	280 to 1000	4.0	23				
GNDF R/L2020K-523-050	20	20	125	20	20	46.6	50 to 70	5.0	23				
GNDF R/L2020K-523-065	20	20	125	20	20	46.6	65 to 90	5.0	23				
GNDF R/L2020K-523-085	20	20	125	20	20	46.6	85 to 130	5.0	23				
GNDF R/L2020K-523-125	20	20	125	20	20	46.6	125 to 200	5.0	23				
GNDF R/L2020K-523-180	20	20	125	20	20	46.6	180 to 300	5.0	23	6	BX0520	5.0	LH040
GNDF R/L2020K-523-280	20	20	125	20	20	46.6	280 to 1000	5.0	23				
GNDF R/L2020K-623-050	20	20	125	20	20	46.6	50 to 75	6.0	23				
GNDF R/L2020K-623-070	20	20	125	20	20	46.6	70 to 110	6.0	23				
GNDF R/L2020K-623-100	20	20	125	20	20	46.6	100 to 200	6.0	23				
GNDF R/L2020K-623-180	20	20	125	20	20	46.6	180 to 300	6.0	23	3	BX0520	5.0	LH040
GNDF R/L2020K-623-280	20	20	125	20	20	46.6	280 to 1000	6.0	23				
GNDF R/L2525M-312-035	25	25	150	25	25	35.6	35 to 45	3.0	12				
GNDF R/L2525M-312-040	25	25	150	25	25	35.6	40 to 55	3.0	12				
GNDF R/L2525M-318-050	25	25	150	25	25	41.6	50 to 70	3.0	18				
GNDF R/L2525M-318-065	25	25	150	25	25	41.6	65 to 100	3.0	18	4	BX0520	5.0	LH040
GNDF R/L2525M-318-090	25	25	150	25	25	41.6	90 to 150	3.0	18				
GNDF R/L2525M-318-140	25	25	150	25	25	41.6	140 to 200	3.0	18				
GNDF R/L2525M-318-180	25	25	150	25	25	41.6	180 to 300	3.0	18				
GNDF R/L2525M-418-040	25	25	150	25	25	41.6	40 to 55	4.0	18				
GNDF R/L2525M-423-050	25	25	150	25	25	46.6	50 to 70	4.0	23	5	BX0520	5.0	LH040
GNDF R/L2525M-423-065	25	25	150	25	25	46.6	65 to 90	4.0	23				
GNDF R/L2525M-423-085	25	25	150	25	25	46.6	85 to 130	4.0	23				
GNDF R/L2525M-423-125	25	25	150	25	25	46.6	125 to 200	4.0	23				
GNDF R/L2525M-423-180	25	25	150	25	25	46.6	180 to 300	4.0	23				
GNDF R/L2525M-423-280	25	25	150	25	25	46.6	280 to 1000	4.0	23	6	BX0520	5.0	LH040
GNDF R/L2525M-523-050	25	25	150	25	25	46.6	50 to 70	5.0	23				
GNDF R/L2525M-523-065	25	25	150	25	25	46.6	65 to 90	5.0	23				
GNDF R/L2525M-523-085	25	25	150	25	25	46.6	85 to 130	5.0	23				
GNDF R/L2525M-523-125	25	25	150	25	25	46.6	125 to 200	5.0	23				
GNDF R/L2525M-523-180	25	25	150	25	25	46.6	180 to 300	5.0	23				
GNDF R/L2525M-523-280	25	25	150	25	25	46.6	280 to 1000	5.0	23	6	BX0520	5.0	LH040
GNDF R/L2525M-623-050	25	25	150	25	25	46.6	50 to 75	6.0	23				
GNDF R/L2525M-623-070	25	25	150	25	25	46.6	70 to 110	6.0	23				
GNDF R/L2525M-623-100	25	25	150	25	25	46.6	100 to 200	6.0	23				
GNDF R/L2525M-623-180	25	25	150	25	25	46.6	180 to 300	6.0	23				
GNDF R/L2525M-623-280	25	25	150	25	25	46.6	280 to 1000	6.0	23				

Select holders and inserts with the same grooving widths (w). Refer to page 296 for applicable inserts.



Grooving Toolholders

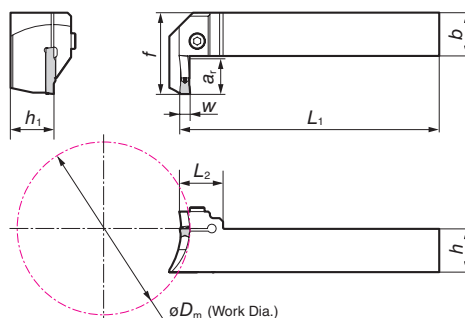
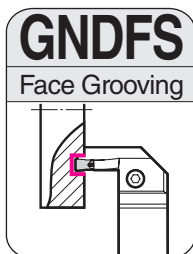
GND Series

GROOVING TOOLHOLDERS

GND SERIES

Series: GNDFS • GNDI

Face Grooving



■ Spare Parts

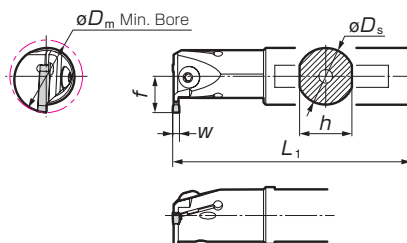
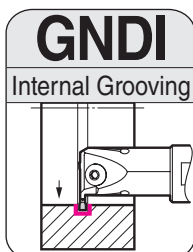
Cap Screw	Recommended Tightening Torque (N-m)	Wrench
BX0520	5.0	LH040
BX0620	6.0	LH050
BX0620	6.0	LH050

Catalog Number	Dimensions (mm)						Work Dia. (mm)	Groove Width	Max. Groove Depth
	h	b	L1	f	h1	L2	øDm	w	a _r (mm)
GNDFS R/L2525M-620-070	25	25	150	47	25	25	70to100	6.0	20
GNDFS R/L2525M-620-100	25	25	150	47	25	25	100to200	6.0	20
GNDFS R/L2525M-620-180	25	25	150	47	25	25	180to300	6.0	20
GNDFS R/L2525M-620-280	25	25	150	47	25	25	280to1000	6.0	20
GNDFS R/L2525M-620-450	25	25	150	47	25	25	From 450	6.0	20
GNDFS R/L3232P-620-070	32	32	170	54	32	25	70to100	6.0	20
GNDFS R/L3232P-620-100	32	32	170	54	32	25	100to200	6.0	20
GNDFS R/L3232P-620-180	32	32	170	54	32	25	180to300	6.0	20
GNDFS R/L3232P-620-280	32	32	170	54	32	25	280to1000	6.0	20
GNDFS R/L3232P-620-450	32	32	170	54	32	25	From 450	6.0	20
GNDFS R/L2525M-820-070	25	25	150	47	25	30	70to100	8.0	20
GNDFS R/L2525M-820-100	25	25	150	47	25	30	100to200	8.0	20
GNDFS R/L2525M-820-180	25	25	150	47	25	30	180to300	8.0	20
GNDFS R/L2525M-820-280	25	25	150	47	25	30	280to1000	8.0	20
GNDFS R/L2525M-820-450	25	25	150	47	25	30	From 450	8.0	20
GNDFS R/L3232P-820-070	32	32	170	54	32	30	70to100	8.0	20
GNDFS R/L3232P-820-100	32	32	170	54	32	30	100to200	8.0	20
GNDFS R/L3232P-820-180	32	32	170	54	32	30	180to300	8.0	20
GNDFS R/L3232P-820-280	32	32	170	54	32	30	280to1000	8.0	20
GNDFS R/L3232P-820-450	32	32	170	54	32	30	From 450	8.0	20

Select holders and inserts with the same grooving widths (w).

GNDFS products made to order

Internal Grooving



■ Metric Holders

Catalog Number	Dimensions (mm)					Max. Groove Depth	Seat Size
	Shank Diameter	h	Overall L1	f	Min. Bore Dm	a _r (mm)	
GNDIR/L2532-T206	25	23	200	16	32	6	2
GNDIR/L2532-T306	25	23	200	16	32	6	3
GNDIR/L2532-T406	25	23	200	16	32	6	4
GNDIR/L2532-T506	25	23	200	16	32	6	5
GNDIR/L3240-T210	32	30	250	26	40	10	2
GNDIR/L3240-T310	32	30	250	26	40	10	3
GNDIR/L3240-T410	32	30	250	26	40	10	4
GNDIR/L3240-T510	32	30	250	26	40	10	5
GNDIR/L4050-T311	40	38	300	31	50	11	3
GNDIR/L4050-T411	40	38	300	31	50	11	4
GNDIR/L4050-T511	40	38	300	31	50	11	5
GNDIR/L4050-T611	40	38	300	31	50	11	6

■ Inch Holders

Catalog Number	Dimensions (in)					Max Groove Depth	Seat Size
	Shank Diameter	h	Overall L1	f	Min. Bore Dm	W (inch)	
GNDIR/L162T-25	1.000	0.906	8.000	0.630	1.250	0.250	2
GNDIR/L163T-25	1.000	0.906	8.000	0.630	1.250	0.250	3
GNDIR/L164T-25	1.000	0.906	8.000	0.630	1.250	0.250	4
GNDIR/L165T-25	1.000	0.906	8.000	0.630	1.250	0.250	5
GNDIR/L166T-25	1.000	0.906	8.000	0.630	1.250	0.250	6
GNDIR/L202T-40	1.250	1.181	10.000	1.024	1.575	0.400	2
GNDIR/L203T-40	1.250	1.181	10.000	1.024	1.575	0.400	3
GNDIR/L204T-40	1.250	1.181	10.000	1.024	1.575	0.400	4
GNDIR/L205T-40	1.250	1.181	10.000	1.024	1.575	0.400	5
GNDIR/L206T-40	1.250	1.181	10.000	1.024	1.575	0.400	6
GNDIR/L243T-43	1.500	1.421	12.000	1.145	2.000"	0.430	3
GNDIR/L244T-43	1.500	1.421	12.000	1.145	2.000"	0.430	4
GNDIR/L245T-43	1.500	1.421	12.000	1.145	2.000"	0.430	5
GNDIR/L246T-43	1.500	1.421	12.000	1.145	2.000"	0.430	6



GND SERIES

Series: Polygon Shank GND

Features and Benefits

- ISO Polygon shank holder
- Economic cassettes
- Compact and stable construction
- Repeatability of $\pm 2 \mu\text{m}$ interface
- Internal coolant supply directly from the holder to the cutting edge

Grooving Toolholders

Polygon Shank GND Series - Metric



Product Range - Holders

Application	Series	Shape	Grooving Width (mm)					Grooving Depth (mm)
			2	3	4	5	6	
External Grooving 	PSC_0M00R/L Straight		2	3				12
					4	5	6	18
	PSC_0M90R/L L-Style		2	3				12
					4	5	6	18

Note: 2mm Grooving width - please use only for grooving not for turning!

Identification Details - Polygon-Toolholder

PSC	40	-	G	M	00	R
Polygonshank	Shank Diameter (Ø D)	Series Symbol GND	Application External Multi-Purpose	Style 00 = Straight 90 = L-Style	Holder Design R = Right L = Left	

Identification Details - Cassette

GND	C	M	L	3	12
Series Symbol GND	Cassette	Application External Multi-Purpose	Holder Design R = Right L = Left	Grooving Width	Max. Grooving Depth



Selection Chart

Cassette	Grooving Width (mm)					Max. Grooving Depth	Chipbreaker							
	2	3	4	5	6		MG	ML	GG	GL	GF	RG	CG	GA
GNDCM R	Stock					12	○	○	○	○	○		○	○
GNDCM L						12	○	○	○	○	○		○	○
GNDCM R		Stock				12	○	○	○	○	○	○	○	○
GNDCM L			Stock			12	○	○	○	○	○	○	○	○
GNDCM R				Stock		18	○	○	○	○	○	○	○	○
GNDCM L					Stock	18	○	○	○	○	○	○	○	○
GNDCM R					Stock	18	○	○	○	○	○	○		○
GNDCM L						18	○	○	○	○	○	○		○

Stock

○ Recommendation



Grooving Toolholders

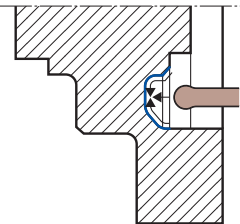
Polygon Shank GND Series - Metric

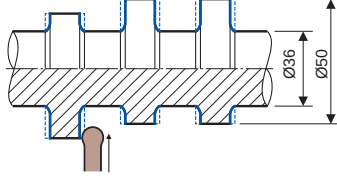
GROOVING TOOLHOLDERS

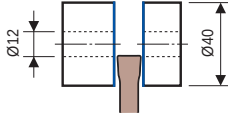
GND SERIES

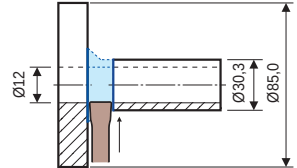
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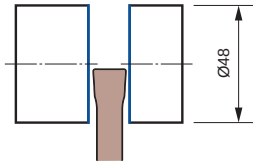
Application Examples

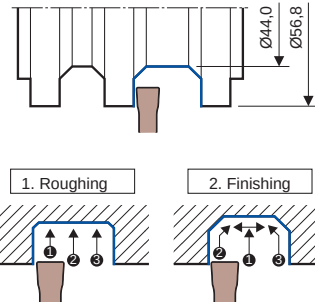
4120 Steel, Automotive Part, Face Profiling	
	Target: - Higher rigidity - Vibration reduction - Chip control - Wear resistance performance
	Holder: GDNF R2525M 423-125 Insert: GCM N4020 RG Grooving width: 0.16" (4mm) Cutting conditions: $v_c = 650$ SFM $f = .006$ IPR wet
Stable machining free of vibration! Excellent chip control using the GND type.	

1053 Steel, Cam Shaft Grooving / Finishing (Contin. to Heavy Interrupted)	
	Target: - Higher rigidity - Vibration reduction - Chip control - Fracture resistance
	Holder: GNDM L2525M 618 Insert: GCM N6030 RG Grooving width: 0.24" (6mm) Cutting conditions: $v_c = 430$ SFM $f = .014$ IPR wet
Stable machining free of vibration! Excellent fracture resistance Stable chip control	

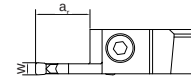
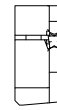
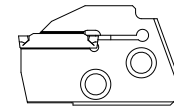
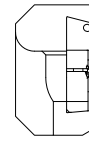
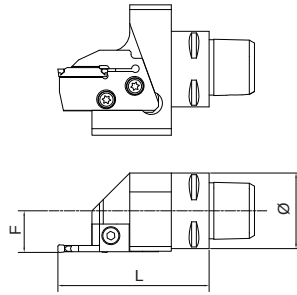
1048 Steel, Machine Part, Cut-Off	
	Target: - Higher rigidity - Vibration reduction - Fracture resistance
	Holder: GNDL R2525M 320 Insert: GCM N3002 GG Grooving width: 0.12" (3mm) Cutting conditions: $n = 1600$ min ⁻¹ $v_c = 650$ SFM $f = .002$ IPR wet
Stable machining free of vibration! Excellent fracture resistance Stable fracture resistance	

4137 Steel, Crank, Cut-Off	
	Target: - Higher rigidity - Vibration reduction - Chip control
	Holder: GNDL R2525M 320 Insert: GCM N3002 GG Grooving width: 0.12" (3mm) Cutting conditions: $v_c = 380$ SFM $f = .012$ IPR wet
Improved efficiency Stable machining free of vibration! Stable chip control	

Hardened Steel (45-48HRC), Machine Part, Cut-Off	
	Target: - Higher rigidity - Vibration reduction - Chip control
	Holder: GNDL R2525M 425 Insert: GCM N4002 GG Grooving width: .16" (4mm) Cutting conditions: $v_c = 170$ SFM $f = .0012$ IPR wet
Stable machining free of vibration! Excellent chip control using the GND type. No more unexpected breakage!	

5120 Steel, Gear Shaft, Grooving / Pocketing	
	Target: - Higher rigidity - Vibration reduction - Chip control
	Holder: GNDM R2020K 518 Insert: GCM N5008 MG Grooving width: .20" (5mm) Cutting conditions: $v_c = 500$ SFM $f = .004$ IPR wet
Stable machining free of vibration! Excellent chip control using the GND type.	



External Multi-Purpose Type (Grooving, Turning, Profiling)

Use for multi-purpose or profiling insert for turning (wide grooves).

Above figures show right hand tools.

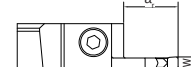
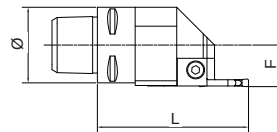
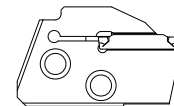
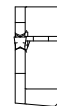
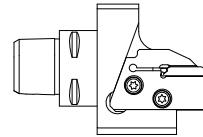
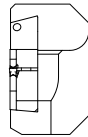
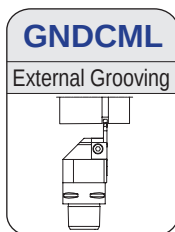
Holder (Right Hand)

Cat. No.	Stock	Ø	Direction	F	L	Cap Screw	Tightening Torque (N·m)	Wrench
PSC40GM00R	★	40 mm	right	22 mm	80 mm	BFTX0619N	7.5	TRD25
PSC50GM00R	★	50mm	right	27 mm	80 mm			

Cassette

Cat. No.	Stock	Direction	Grooving Width w (mm)	Grooving Depth a _r (mm)	Inserts	Cap Screw	Tightening Torque (N·m)	Wrench
GNDCMR212	★	right	2	12	GCM □2002-□□	BX0515	5.0	LH040
GNDCMR312	★	right	3	12	GCM □30□□-□□		6.0	
GNDCMR418	★	right	4	18	GCM □40□□-□□			
GNDCMR518	★	right	5	18	GCM □50□□-□□			
GNDCMR618	★	right	6	18	GCM □60□□-□□			

★: Worldwide Warehouse Item



Use for multi-purpose or profiling insert for turning (wide grooves).

Above figures show right hand tools.

Holder

Cat. No.	Stock	Ø	Direction	F	L	Cap Screw	Tightening Torque (N·m)	Wrench
PSC40GM00L	★	40 mm	left	22 mm	80 mm	BFTX0619N	7.5	TRD25
PSC50GM00L	★	50 mm	left	27 mm	80 mm			

Cassette

Cat. No.	Stock	Direction	Grooving Width w (mm)	Grooving Depth a _r (mm)	Inserts	Cap Screw	Tightening Torque (N·m)	Wrench
GNDCML212	★	left	2	12	GCM □2002-□□	BX0515	5.0	LH040
GNDCML312	★	left	3	12	GCM □30□□-□□		6.0	
GNDCML418	★	left	4	18	GCM □40□□-□□			
GNDCML518	★	left	5	18	GCM □50□□-□□			
GNDCML618	★	left	6	18	GCM □60□□-□□			

★: Worldwide Warehouse Item



Grooving Toolholders

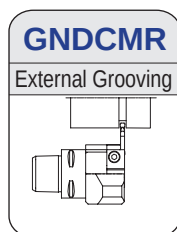
Polygon Shank GND Series - Metric

GROOVING TOOLHOLDERS

GND SERIES

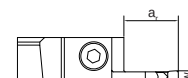
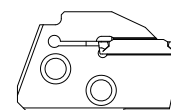
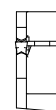
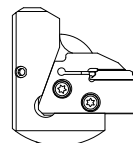
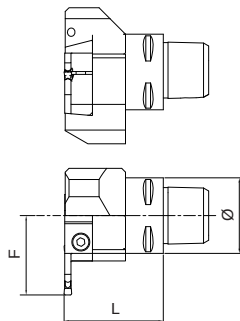
Series: Polygon Shank GND

External Multi-Purpose Type (Grooving, Turning, Profiling)



Use for multi-purpose or profiling insert for turning (wide grooves).

Holder



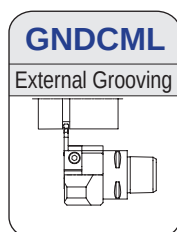
Above figures show right handed holder with a left handed cassette.

Cat. No.	Stock	Ø	Direction	F	L	Cap Screw	Tightening Torque (N·m)	Wrench
PSC40GM90R	★	40 mm	right	22 mm	80 mm	BFTX0619N	7.5	TRD25
PSC50GM90R	★	50 mm	right	27 mm	80 mm			

Cassette

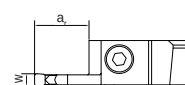
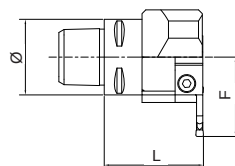
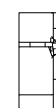
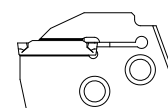
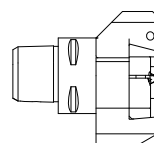
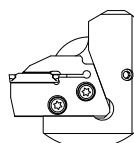
Cat. No.	Stock	Direction	Grooving Width w (mm)	Grooving Depth a _r (mm)	Inserts	Cap Screw	Tightening Torque (N·m)	Wrench
GNDCML212	★	left	2	12	GCM □2002-□□	BX0515	5.0	LH040
GNDCML312	★	left	3	12	GCM □30□□-□□		6.0	
GNDCML418	★	left	4	18	GCM □40□□-□□			
GNDCML518	★	left	5	18	GCM □50□□-□□			
GNDCML618	★	left	6	18	GCM □60□□-□□			

★: Worldwide Warehouse Item



Use for multi-purpose or profiling insert for turning (wide grooves).

Holder



Above figures show left handed holder with a right handed cassette.

Cat. No.	Stock	Ø	Direction	F	L	Cap Screw	Tightening Torque (N·m)	Wrench
PSC40GM90L	★	40 mm	left	22 mm	80 mm	BFTX0619N	7.5	TRD25
PSC50GM90L	★	50 mm	left	27 mm	80 mm			

Cassette

Cat. No.	Stock	Direction	Grooving Width w (mm)	Grooving Depth a _r (mm)	Inserts	Cap Screw	Tightening Torque (N·m)	Wrench
GNDCMR212	★	right	2	12	GCM □2002-□□	BX0515	5.0	LH040
GNDCMR312	★	right	3	12	GCM □30□□-□□		6.0	
GNDCMR418	★	right	4	18	GCM □40□□-□□			
GNDCMR518	★	right	5	18	GCM □50□□-□□			
GNDCMR618	★	right	6	18	GCM □60□□-□□			

★: Worldwide Warehouse Item



GROOVING TOOLHOLDERS

GND SERIES

Series: GCM Inserts

Grooving Toolholders

GND Series - Inserts

Fig. 1

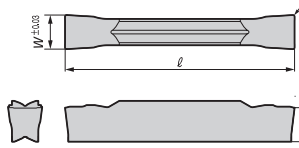
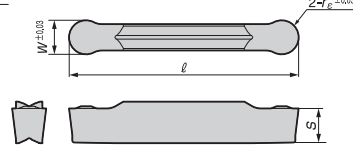


Fig. 2



Multi Purpose General Feed MG Chipbreaker Multi Purpose Low Feed ML Chipbreaker Grooving / General Feed GG Chipbreaker Grooving / Low Feed GL Chipbreaker Profiling / General Feed RG Chipbreaker Low Cutting Force GF Chipbreaker For Non-Ferrous Material GF Chipbreaker For Cut Off Applications CO Chipbreaker

Threading,
Grooving, &
Cut-Off Holders

Type	Cat. No.	Coated Carbide				Cermet	Uncoated Carbide	Dimensions (inch)					Figure
		S		K	P		N	W	rE	ℓ	Seat	S	
		AC520U	AC530U	AC425K	AC830P	T2500A	H10						
Deep Grooving Cut Off	General Feed GG Type	GCMN2002-GG	●	●	●	●		.078	.0078	.831	2	.142	1
		GCMN2094R0.5-GG	●	●	●	●		.094	.0078	.831	2	.142	
		GCMN3002-GG	●	●	●	●		.118	.0078	.831	3	.150	
		GCMN3004-GG	●	●	●	●		.118	.0156	.831	3	.150	
		GCMN3125R0.5-GG	●	●	●	●		.125	.0078	.831	3	.150	
		GCMN4002-GG	●	●	●	●		.157	.0078	1.039	4	.157	
		GCMN4004-GG	●	●	●	●		.157	.0156	1.039	4	.157	
		GCMN5187R0.5-GG	●	●	●	●		.187	.0078	1.039	5	.161	
		GCMN5002-GG	●	●	●	●		.197	.0078	1.039	5	.161	
		GCMN5004-GG	●	●	●	●		.197	.0156	1.039	5	.161	
		GCMN6002-GG	●	●	●	●		.236	.0078	1.039	6	.177	
		GCMN6004-GG	●	●	●	●		.236	.0156	1.039	6	.177	
		GCMN6250R0.5-GG	●	●	●	●		.250	.0078	1.039	6	.177	
		GCMN6250R1.0-GG	●	●	●	●		.250	.0156	1.039	6	.177	
		GCMN7004-GG	●	●	●	●		.276	.0156	1.132	7	.217	
		GCMN8004-GG	●	●	●	●		.315	.0156	1.132	8	.236	
	Low Feed GL Type	GCMN2002-GL	●	●	●	●		.078	.0078	.831	2	.142	
		GCMN2094R0.5-GL	●	●	●	●		.094	.0078	.831	2	.142	
		GCMN3002-GL	●	●	●	●		.118	.0078	.831	3	.150	
		GCMN3125R0.5-GL	●	●	●	●		.125	.0078	.831	3	.150	
		GCMN4002-GL	●	●	●	●		.157	.0078	1.039	4	.157	
		GCMN5187R0.5-GL	●	●	●	●		.187	.0078	1.039	5	.161	
		GCMN5002-GL	●	●	●	●		.197	.0078	1.039	5	.161	
		GCMN6002-GL	●	●	●	●		.236	.0078	1.039	6	.177	
		GCMN6250R0.5-GL	●	●	●	●		.250	.0078	1.039	6	.177	
		GCMN7004-GL	●	●	●	●		.276	.0156	1.132	7	.217	
		GCMN8004-GL	●	●	●	●		.315	.0156	1.132	8	.236	
Multi function (traversing)	General Feed MG Type	GCMN3004-MG	●	●	●	●		.118	.0156	.831	3	.150	
		GCMN3125R1.0-MG	●	●	●	●		.125	.0156	.831	3	.150	
		GCMN4008-MG	●	●	●	●		.157	.0312	1.039	4	.157	
		GCMN5187R2.0-MG	●	●	●	●		.187	.0312	1.039	5	.161	
		GCMN5008-MG	●	●	●	●		.197	.0312	1.039	5	.161	
		GCMN6008-MG	●	●	●	●		.236	.0312	1.039	6	.177	
		GCMN6250R2.0-MG	●	●	●	●		.250	.0312	1.039	6	.177	
		GCMN7008-MG	●	●	●	●		.276	.0313	1.132	7	.217	
		GCMN8008-MG	●	●	●	●		.315	.0313	1.132	8	.236	
	Low Feed ML Type	GCMN3002-ML	●	●	●	●		.118	.0078	.831	3	.150	
		GCMN3125R0.5-ML	●	●	●	●		.125	.0078	.831	3	.150	
		GCMN4004-ML	●	●	●	●		.157	.0156	1.039	4	.157	
		GCMN5187R1.0-ML	●	●	●	●		.187	.0156	1.039	5	.161	
		GCMN5004-ML	●	●	●	●		.197	.0156	1.039	5	.161	
		GCMN6004-ML	●	●	●	●		.236	.0156	1.039	6	.177	
		GCMN6250R1.0-ML	●	●	●	●		.250	.0156	1.039	6	.177	
		GCMN7004-ML	●	●	●	●		.276	.0313	1.132	7	.217	
		GCMN8004-ML	●	●	●	●		.315	.0313	1.132	8	.236	
Profiling	General Feed RG Type	GCMN3015-RG	●	●	●	●		.118	.059	.831	3	.150	2
		GCMN3125-RG	●	●	●	●		.125	.0625	.831	3	.150	
		GCMN4020-RG	●	●	●	●		.157	.078	1.039	4	.157	
		GCMN5187-RG	●	●	●	●		.187	.0938	1.039	5	.161	
		GCMN5025-RG	●	●	●	●		.197	.098	1.039	5	.161	
		GCMN6030-RG	●	●	●	●		.236	.118	1.039	6	.177	
		GCMN6250-RG	●	●	●	●		.250	.125	1.039	6	.177	
		GCMN7035-RG	●	●	●	●		.276	.138	1.144	7	.217	
		GCMN8040-RG	●	●	●	●		.315	.157	1.152	8	.236	

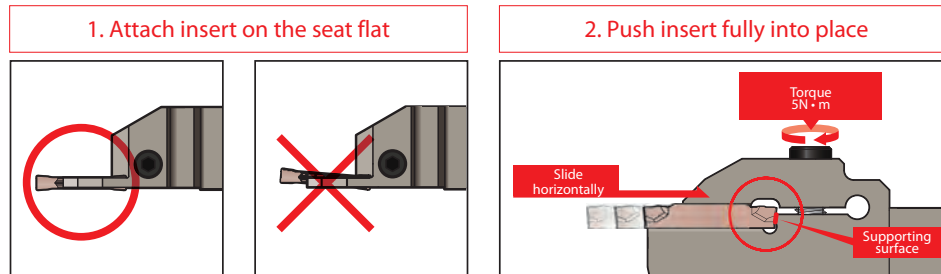


GND Series - Inserts Cont'd

Type		Cat. No.	Coated Carbide								Cermet		Uncoated Carbide		Dimensions (inch)					Figure
			S				K		P		N		W	r _s	ℓ	Seat	S			
			AC520U	AC530U	AC425K	AC830P	T2500A	H10												
For Non-ferrous Materials	GA Type	GCGN2002-GA										●	.078	.0078	.831	2	.142	1		
		GCGN3002-GA									●	.118	.0078	.831	3	.150				
		GCGN4004-GA								●	.157	.0156	1.039	4	.157					
		GCGN5004-GA							●	.197	.0156	1.039	5	.161						
		GCGN6004-GA						●	.236	.0156	1.039	6	.177							
Type		Cat. No.	R	L	R	L	R	L	R	L	R	L	Dimensions (inch)							
Cut-off (Handed)	CG-05 Type	GCM_2002-CG-05	●	●	●	●	●	●	●	●			.078	.0078	.831	2	.142	1		
		GCM_3002-CG-05	●	●	●	●	●	●	●	●			.118	.0078	.831	3	.150			
		GCM_4002-CG-05	●	●	●	●	●	●	●	●			.157	.0078	1.039	4	.157			

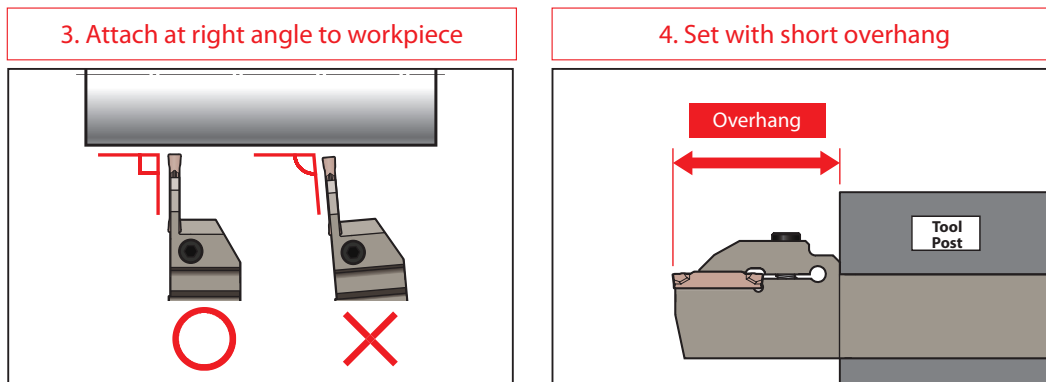
Notes on Attaching Inserts

- Remove any debris or oil from the insert seat before attaching the insert.
- Grind off any burr or flaws on the insert seat.
- Slide the insert flat over its seat.
- Clamp the insert with its opposite end (the holder side) firmly against the supporting surface.
- The recommended tightening torque is **5 N•m**. Tightening above the recommended torque may damage the insert which could cause injury and other accidents.



Notes on Attaching Holders

- Remove any debris or oil from the tool post before attaching the holder.
- Grind off any burr or flaws on the tool post.
- Attach the insert so that it is perpendicular to the workpiece.
- Set holder with shortest possible overhang.



Notes on Setting Coolant Supply Nozzle

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

