
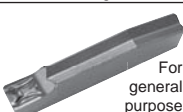







Inserts for Grooving and Cut-off

GDM / GDMS / GDG

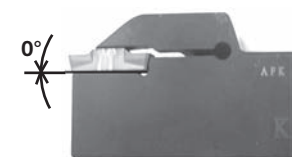

Classification of usage	P	Carbon steel / Alloy steel	●	●	☺	
	M	Stainless Steel		●	☺	
	K	Cast Iron			●	
	N	Non-ferrous Metals				●
	S	Titanium Alloy				●
● : Continuous-Light Interruption / 1st Choice ☺ : Continuous-Light Interruption / 2nd Choice ● : Continuous / 1st Choice ○ : Continuous / 2nd Choice	H	Hard Materials (~ 40HRC)				
		Hard Materials (40HRC ~)				

Shape	Description	Dimension (mm)					Angle (°)	Cermet	MEGACOAT	Carbide	Ref. Page for Toolholder					
		W	rε	M	L	H						θ	TN90	PR1225	PR1215	GW15
Grooving and Traversing For general purpose 2-Edge 	GDM 2420N-020GM 3020N-020GM 3020N-040GM 4020N-020GM 4020N-040GM 4020N-080GM 5020N-040GM 5020N-080GM 6020N-040GM 6020N-080GM 8030N-080GM	2.4	0.2	1.95	20	4.3	-	●	●	●						
		3.0	0.2	2.3				●	●	●						
		±0.03	0.4					●	●	●						
		4.0	0.2					●	●	●						
		0.4	3.3	●				●	●							
		0.8		●				●	●							
		±0.04	0.4	4.2				●	●	●						
		0.8		●				●	●							
		0.4	5.2	●				●	●							
		0.8		●				●	●							
Grooving and Traversing For general purpose 1-Edge 	GDMS 2220N-020GM 3020N-040GM 4020N-040GM 5020N-080GM 6020N-080GM	2.2	0.2	1.75	20	4.3	-	●	●	●						
		3.0	0.4	2.3				●	●	●						
		±0.03	0.4	3.3				●	●	●						
		4.0	0.8	4.2				●	●	●						
		±0.04	0.8	5.2				●	●	●						
		6.0	0.8					●	●	●						
Grooving and Traversing Low Feed 2-Edge 	GDM 2420N-020GL 3020N-020GL 3020N-040GL 4020N-020GL 4020N-040GL 5020N-040GL 6020N-040GL	2.4	0.2	1.95	20	4.3	-	●	●	●						
		3.0	0.2	2.3				●	●	●						
		±0.03	0.4					●	●	●						
		4.0	0.2	3.3				●	●	●						
		0.4		●				●	●							
		±0.04	0.4	4.2				●	●	●						
		0.4	5.2	●				●	●							
		0.4		●				●	●							
Grooving Low cutting force 2-Edge 	GDG 2520N-020GS 3020N-020GS 3520N-020GS 4020N-040GS 5020N-040GS 6020N-040GS 8030N-040GS	2.5	0.2	2.0	20	4.3	-	●	●	●	●					
		3.0	0.2	2.3				●	●	●	●					
		±0.02	2.8					●	●	●	●					
		3.5	0.4	3.3				●	●	●	●					
		4.0	0.4	4.2				●	●	●	●					
		±0.02	0.4	5.2				●	●	●	●					
		6.0	0.4					●	●	●	●					
		8.0	6.0	30				5.5	●	●	●	●				
Full-R / Copying 2-Edge 	GDM 3020N-150R-CM 4020N-200R-CM 5020N-250R-CM 6020N-300R-CM	3.0	1.5	2.3	20	4.3	-	●	●	●						
		±0.03	2.0	3.3				●	●	●						
		±0.04	2.5	4.2				●	●	●						
		3.0	5.2	●				●	●							
Grooving and Cut-Off High feed rate 2-Edge 	GDM 2020N-020PH 3020N-030PH 4020N-030PH	2.0	0.2	1.5	20	4.3	-	●	●	●						
		±0.03	0.3	2.3				●	●	●						
		0.3	3.3	●				●	●							
		Grooving and Cut-Off High feed rate 1-Edge 	GDMS 2020N-020PH 3020N-030PH 4020N-030PH	2.0				0.2	1.5	20	-	-	●	●	●	
				±0.03				0.3	2.3				●	●	●	
				0.3				3.3	●				●	●		


Recommended Cutting Conditions **G29**

◆ Note for the holder and insert combination of KGD type (new) and KGM type (conventional)

● Insert setting angle for grooving toolholders

KGD...0°	Conventional tools KGM...5°
	


New Insert
GDM



↓

New Toolholder
KGD

Conventional Insert
GMM



↓

Conventional Toolholder
KGM

Installing conventional inserts to the new toolholder is not recommended.

● : Std. Item

GDM / GDMS

Classification of usage ● : Continuous-Light Interruption / 1st Choice ◐ : Continuous-Light Interruption / 2nd Choice ● : Continuous / 1st Choice ○ : Continuous / 2nd Choice	P	Carbon steel / Alloy steel		●	◐	
	M	Stainless Steel		●	◐	
	K	Cast Iron			●	
	N	Non-ferrous Metals				
	S	Titanium Alloy				
H	Hard Materials (~ 40HRC) Hard Materials (40HRC ~)					

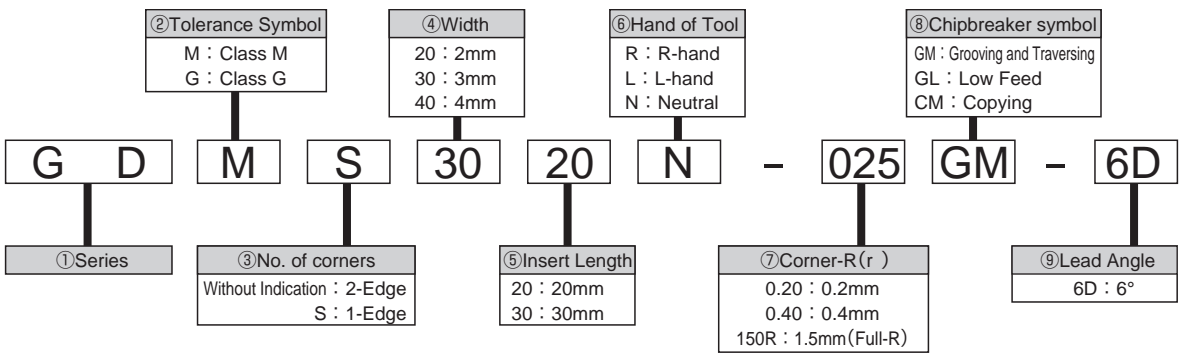
Shape	Description	Dimension (mm)					Angle (°)	Cermet	MEGACOAT	Carbide	Ref. Page for Toolholder				
		W	rε	M	L	H						TN90	PR1225	PR1215	GW15
Handed insert shows R-hand. Cut-Off 2-Edge 2-Edge 1-Edge 1-Edge	GDM 2020N-020PM 2520N-020PM 3020N-025PM 4020N-030PM	2.0	±0.03	0.2	1.5	20	-		●	●					
		2.5		0.2	1.95				●	●					
		3.0		0.25	2.3				●	●					
		4.0		0.3	3.3				●	●					
	GDM 2020R-020PM-6D 2520R-020PM-6D 3020R-025PM-6D	2.0	±0.03	0.2	1.5	20	6°		●	●					
		2.5		0.2	1.95				●	●					
		3.0		0.25	2.3				●	●					
		4.0		0.3	3.3				●	●					
	GDMS 2020N-020PM 3020N-025PM 4020N-030PM	2.0	±0.03	0.2	1.5	20	-		●	●					
		3.0		0.25	2.3				●	●					
		4.0		0.3	3.3				●	●					
		4.0		0.3	3.3				●	●					
GDMS 2020R-020PM-6D 3020R-025PM-6D 4020R-030PM-6D	2.0	±0.03	0.2	1.5	20	6°		●	●						
	3.0		0.25	2.3				●	●						
	4.0		0.3	3.3				●	●						
	4.0		0.3	3.3				●	●						

Note 1. Using the PM chipbreaker (for cut-off) for grooving cannot create a flat bottom (See the right figure).



Recommended Cutting Conditions ● **G29**

◆ Indication of Description



■ Setting the inserts

1. Use compressed air or other measures to remove chips from the insert mounting part see (Fig. 1).
2. Put the insert into the holder and push it until it makes contact with the back end of the holder's surface (see Fig. 2 and 3).
3. Keeping the insert fit to the surface, tighten the insert clamp bolt at an appropriate torque.
4. Make sure that there is no gap between the insert and the back end of the holder's surface and that the insert is set straight.

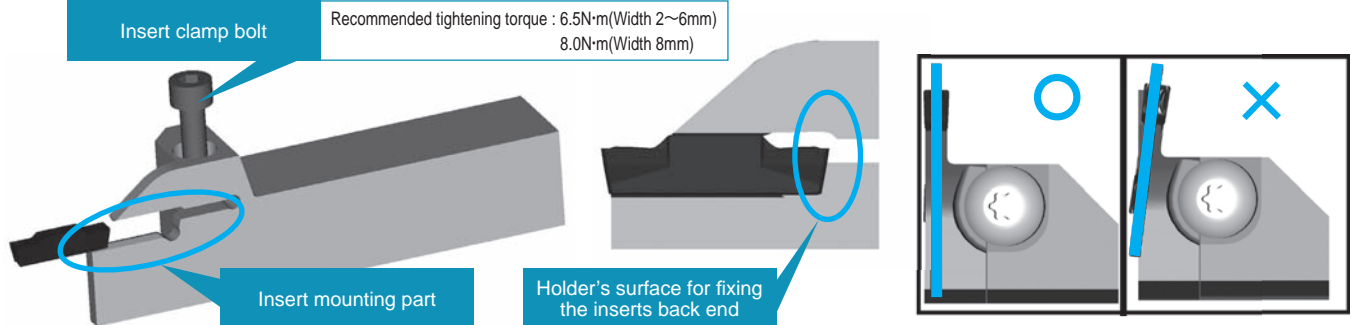


Fig. 1

Fig. 2

Fig. 3

● : Std. Item