

GY/GW Inserts

DURABLE AND EASY TO USE
GROOVING AND CUT-OFF TOOLS



New Line-up

NEW

Low Feed Breaker

GS Breaker for Lead Angles 8° and 15°

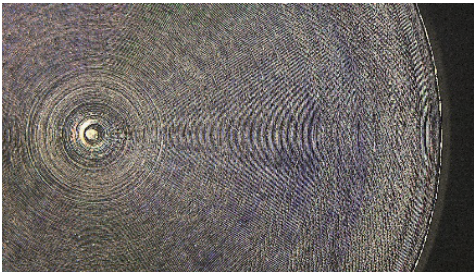
By improving dimensional accuracy, the amount of remaining center pip is reduced and good surface finishes are achieved.



Cutting Performance

SUS304 Comparison of Cutting Off and Remaining Material

GY
GS Breaker

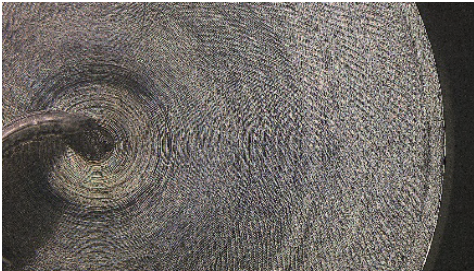


Completely cut off



Remaining pip in the center : ϕ .019 inch
RZ : .0004 inch

Conventional A

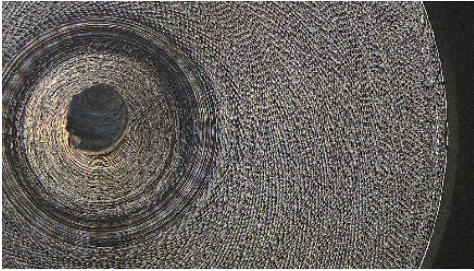


Not completely cut off



Remaining pip in the center : ϕ .023 inch
RZ : .0017 inch

Conventional B



Not completely cut off



Remaining pip in the center : ϕ .056 inch
RZ : .0006 inch

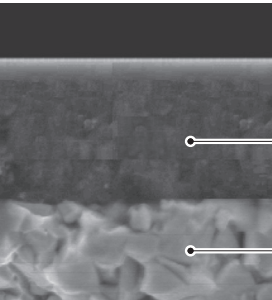
<Cutting Conditions>
Workpiece Material : AISI 304 ϕ .630 inch
Tool : Cutting Width CW=.079 inch
Lead Angle 15°
Cutting Speed : vc=330 SFM
Feed per Rev. : f=.0012 IPR
Cutting Mode : Wet Cutting

Turning Inserts for Difficult-to-cut Materials

PVD Coated Grade

MP9015/MP9025

Excellent Wear Resistance when Machining Heat Resistant Super Alloys



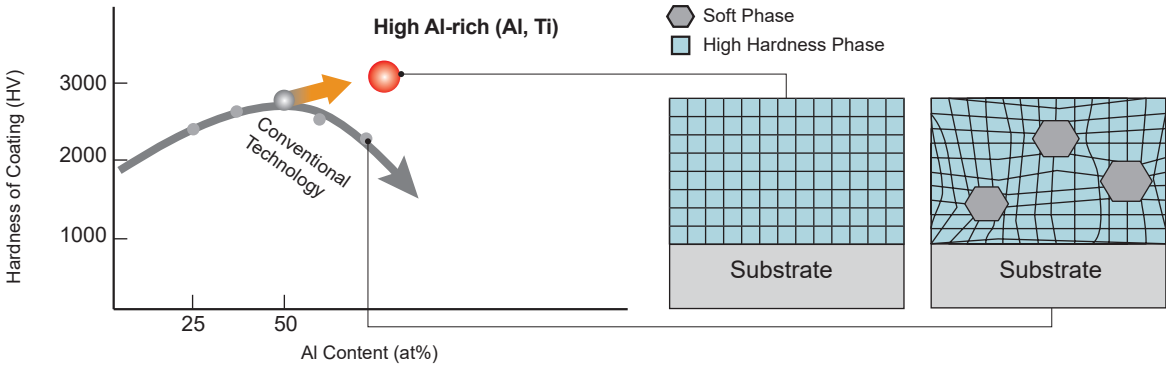
High Al-rich (Al, Ti)N Single Layer Coating Technology

Special Cemented Carbide Substrate

MP9015/MP9025

High Al and Conventional Coating Comparison

The high Al-rich (Al, Ti)N single layer coating provides stabilization of the high hardness phase and succeeds in dramatically improving wear, crater and welding resistance.

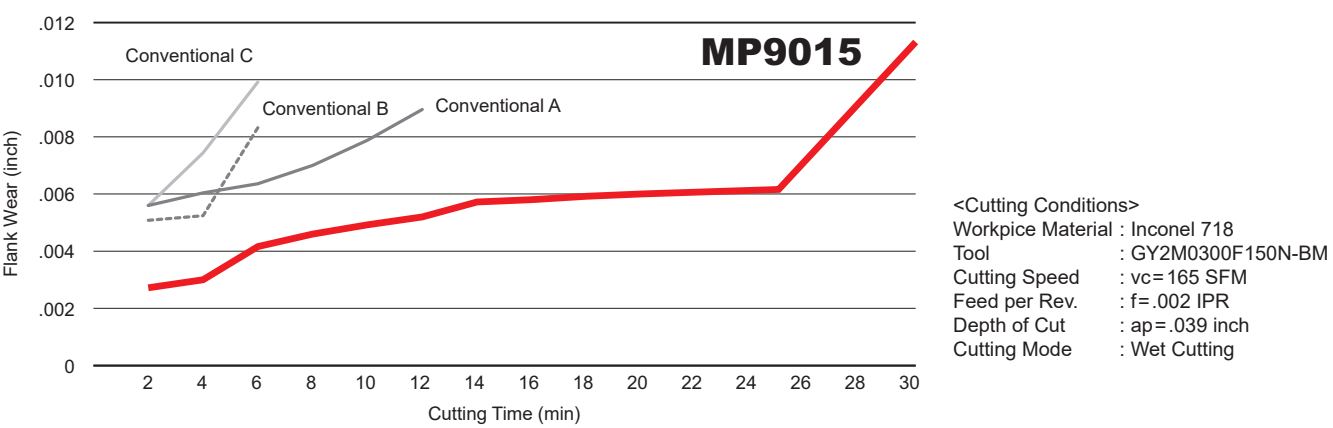


ISO Grade	Grade	Concept	Application
S10	MP9015	High hardness grade focusing on wear resistance.	Heat Resistant Alloys
S30	MP9025	First recommended grade focusing on fracture resistance.	Heat Resistant Alloys

Cutting Performance

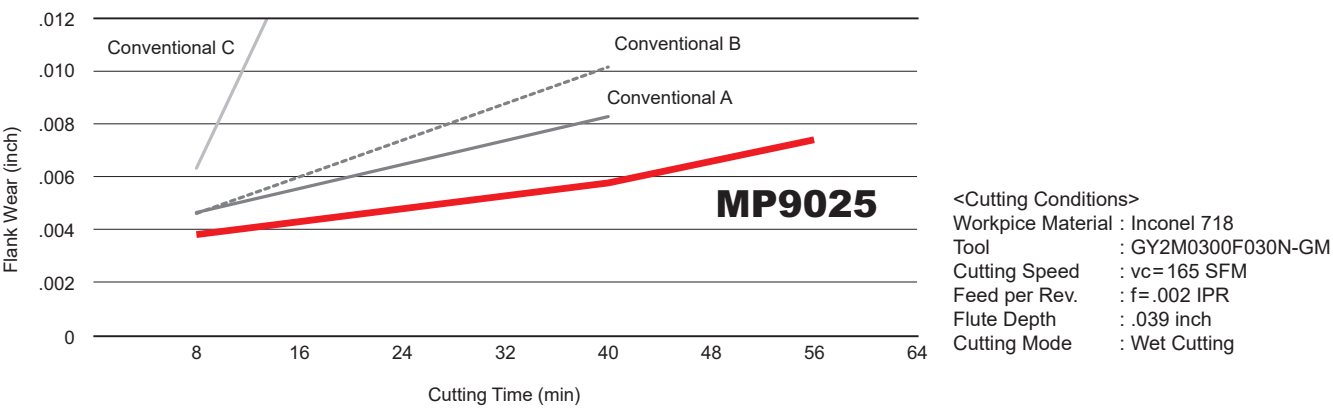
Cross Feed Machining of Inconel 718 - Comparison of Wear Resistance

MP9015 exhibits 1.5 times more wear resistance than conventional products.



Groove Machining of Inconel 718 - Comparison of Wear Resistance

MP9025 has excellent wear resistance.



GY/GW Series Insert Grades

GY Series

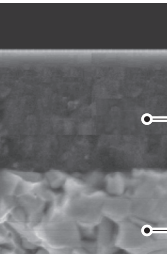
	P Steel	M Stainless Steel	K Cast Iron	N Aluminum Alloy	S Heat Resistant Alloy / Titanium Alloy	H Hardened Steel
Stable Cutting	NX2525 MY5015 VP10RT VP20RT	VP10RT VP20RT	MY5015 VP10RT VP20RT	RT9010	MP9015 RT9010 MP9025	BC8110 MB8025
Unstable Cutting						

GW Series

	P Steel	M Stainless Steel	K Cast Iron	S Heat Resistant Alloy / Titanium Alloy
Stable Cutting	MY5015 VP10RT VP20RT VP30RT	VP10RT VP20RT VP30RT	MY5015 VP10RT VP20RT	VP10RT VP20RT
Unstable Cutting				

GY/GW Series Insert Grades

MP9000 Series

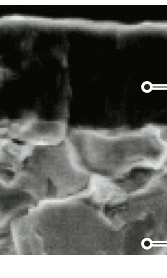


The high Al-rich (Al, Ti)N single layer coating provides stabilization of the high hardness phase and succeeds in dramatically improving wear, crater and welding resistance.

High Al-rich (Al, Ti)N Single Layer Coating

Special Cemented Carbide Substrate

VP20RT

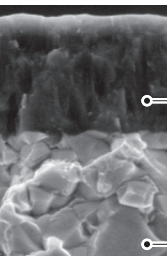


PVD coated grade suitable for a wide range of applications. The combination of a special tough cemented carbide substrate with MIRACLE coating provides an excellent balance of wear and fracture resistance.

MIRACLE Coating

Tough Cemented Carbide Substrate (90.5HRA)

VP10RT

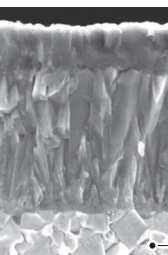


PVD coated grade with a cemented carbide substrate harder than VP20RT. For use on difficult-to-cut materials and for extending tool life.

MIRACLE Coating

Tough Cemented Carbide Substrate (92.0HRA)

MY5015



MY5015 is a CVD coated grade with excellent wear resistance even at high temperatures. It provides longer tool life when machining cast and ductile cast irons. Also suitable for high speed continuous cutting of steels.

CVD Coated Carbide

Tough Cemented Carbide Substrate

RT9010

RT9010 is a non-coated cemented carbide grade. Suitable for processing non-ferrous metals.

NX2525 is a cermet grade for finish machining of steel and for good surface finishes at lower cutting speeds.

NX2525

BC8110

BC8110 is a coated grade for continuous cutting, which provides longer life when machining hardened steels.

MB8025

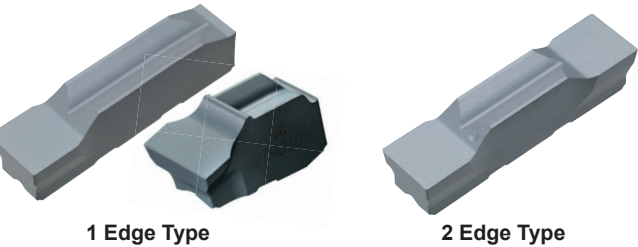
MB8025 is a sintered CBN grade for hardened steels.

RT9010/RT9020 for insert blank

RT9020 is the first recommendation for blank inserts due to the tougher carbide substrate's suitability over a wider range of applications. RT9010 is a harder substrate and is ideal for long tool life on stable applications. A coating layer is recommended for machining steels, stainless and cast irons.

Blank Inserts

Blank inserts for custom grinding.

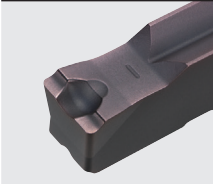
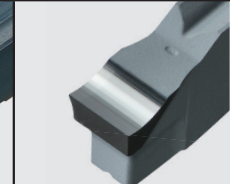


* Insert blank is not suitable for machining without grinding.

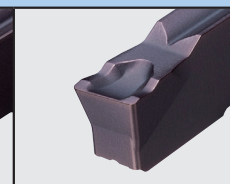
GY Series

Breaker System

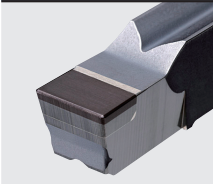
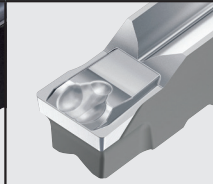
Grooving / Cutting Off

 GU Breaker (For Gummy Steel)	 GS Breaker (Low feeds)	 GM Breaker (Medium feeds)	 GL Breaker (For Aluminum Alloys)
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Cutting Off

 R08-GS Breaker (Low feeds)	 R15-GS Breaker (Low feeds)	 GM Breaker (Medium feeds)	 R/L05-GM Breaker (Medium feeds)
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Grooving

 GFGS (For hardened steel)	 MF Breaker (G class)	 MS Breaker (Low feeds)	 MM Breaker (Medium feeds)
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For Multifunctional Grooving

 BM Breaker
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For Grooving / Cutting Off
GL Breaker (For Aluminum Alloys)

G Class Breaker

Improved chip control by narrowing the breaker width

High Rake Angle

Achieves low cutting resistance

Sharp Edge

Improved welding resistance for aluminum alloys

For Multifunctional Grooving
MF Breaker (For Finish Machining)

Efficient chip breaking when cross-feed machining.

Chips are controlled when finish machining.

GW Series

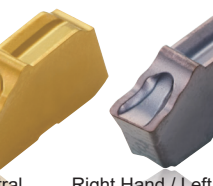
Breaker System Offering Excellent Chip Disposal Properties

Low Feeds

 Neutral	 Right Hand (5°)	 Right Hand (8°)
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GS Breaker

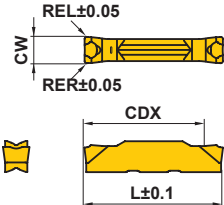
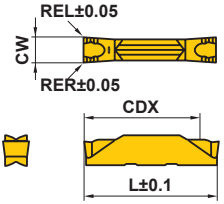
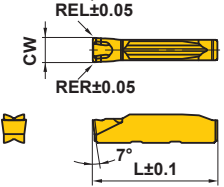
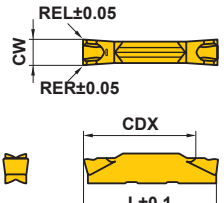
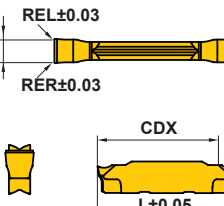
Medium Feeds

 Neutral	 Right Hand / Left Hand (5°)
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GM Breaker

GY Series Inserts

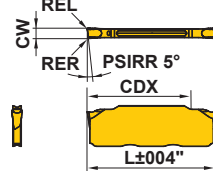
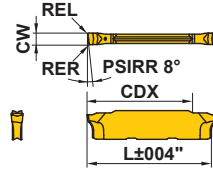
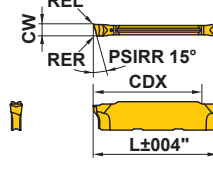
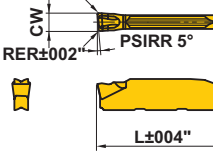
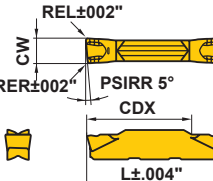
(inch)

Applications	Geometry	Order Number	Stock								Seat Size	CW			RER/L	CDX	*2 L
			Coated				Cermet		Carbide			Cutting Width	Tolerance				
			MP9015	MP9025	VP10RT	VP20RT	MY5015	NX2525	RT9010	RT9020							
														inch			
For Grooving / Cutting Off	GU Breaker (For gummy steel) 	GY2M0200D020N-GU			●	●	●				D	.079	(2.00)	±.0012	.008	.776	.815
		GY2M0239E020N-GU			●	●	●				E	.094	(2.39)	±.0012	.008	.780	.815
		GY2M0250E020N-GU			●	●	●				E	.098	(2.50)	±.0012	.008	.768	.815
		GY2M0300F030N-GU			●	●	●				F	.118	(3.00)	±.0012	.012	.760	.815
		GY2M0318F030N-GU			●	●	●				F	.125	(3.18)	±.0012	.012	.760	.815
		GY2M0400G030N-GU			●	●	●				G	.157	(4.00)	±.0016	.012	.953	1.010
		GY2M0475H040N-GU			●	●	●				H	.187	(4.75)	±.0016	.016	.953	1.010
		GY2M0500H040N-GU			●	●	●				H	.197	(5.00)	±.0016	.016	.953	1.010
		GY2M0600J040N-GU			●	●	●	●			J	.236	(6.00)	±.0016	.016	.953	1.010
		GY2M0635J040N-GU			●	●	●	●			J	.250	(6.35)	±.0016	.016	.953	1.010
	GS Breaker (Low feeds) 	NEW GY2M0120B010N-GS			●	●					B	.047	(1.20)	±.0012	.004	.480	.579
		GY2M0150C010N-GS			●	●	●				C	.059	(1.50)	±.0012	.004	.528	.579
		GY2M0200D020N-GS			●	●	●	●			D	.079	(2.00)	±.0012	.008	.736	.815
		GY2M0239E020N-GS			●	●	●	●			E	.094	(2.39)	±.0012	.008	.728	.815
		GY2M0250E020N-GS			●	●	●	●			E	.098	(2.50)	±.0012	.008	.728	.815
		GY2M0300F020N-GS			●	●	●	●			F	.118	(3.00)	±.0012	.008	.728	.815
		GY2M0318F020N-GS			●	●	●	●			F	.125	(3.18)	±.0012	.008	.728	.815
		GY2M0400G020N-GS			●	●	●	●			G	.157	(4.00)	±.0016	.008	.941	1.010
		GY2M0475H030N-GS			●	●	●	●			H	.187	(4.75)	±.0016	.012	.941	1.010
		GY2M0500H030N-GS			●	●	●	●			H	.197	(5.00)	±.0016	.012	.945	1.010
		GY2M0600J030N-GS			●	●	●	●			J	.236	(6.00)	±.0016	.012	.949	1.010
		GY2M0635J030N-GS			●	●	●	●			J	.250	(6.35)	±.0016	.012	.949	1.010
	GY2M0800K030N-GS			●	●	●	●			K	.315	(8.00)	±.0016	.012	1.146	1.201	
	GM Breaker (Medium feeds) 	GY1M0200D020N-GM	●	●	●	●	●				D	.079	(2.00)	±.0012	.008	—	.815
		GY1M0250E020N-GM	●	●	●	●	●				E	.098	(2.50)	±.0012	.008	—	.815
		GY1M0300F030N-GM	●	●	●	●	●				F	.118	(3.00)	±.0012	.012	—	.815
		GY1M0400G030N-GM	●	●	●	●	●				G	.157	(4.00)	±.0016	.012	—	1.010
		GY1M0500H040N-GM	●	●	●	●	●				H	.197	(5.00)	±.0016	.016	—	1.010
	GM Breaker (Medium feeds) 	GY2M0150C020N-GM	●	●	●	●	●				C	.059	(1.50)	±.0012	.008	.547	.579
		GY2M0200D020N-GM	●	●	●	●	●				D	.079	(2.00)	±.0012	.008	.764	.815
		GY2M0239E020N-GM	●	●	●	●	●				E	.094	(2.39)	±.0012	.008	.764	.815
		GY2M0250E020N-GM	●	●	●	●	●				E	.098	(2.50)	±.0012	.008	.764	.815
GY2M0300F030N-GM		●	●	●	●	●				F	.118	(3.00)	±.0012	.012	.764	.815	
GY2M0318F030N-GM		●	●	●	●	●				F	.125	(3.18)	±.0012	.012	.764	.815	
GY2M0400G030N-GM		●	●	●	●	●				G	.157	(4.00)	±.0016	.012	.961	1.010	
GY2M0475H040N-GM		●	●	●	●	●				H	.187	(4.75)	±.0016	.016	.957	1.010	
GY2M0500H040N-GM		●	●	●	●	●				H	.197	(5.00)	±.0016	.016	.957	1.010	
GY2M0600J040N-GM		●	●	●	●	●				J	.236	(6.00)	±.0016	.016	.957	1.010	
GY2M0635J040N-GM		●	●	●	●	●				J	.250	(6.35)	±.0016	.016	.957	1.010	
GY2M0800K050N-GM		●	●	●	●	●				K	.315	(8.00)	±.0016	.020	1.154	1.201	
GL Breaker (For Aluminum Alloys) 	GY2G0200D005N-GL							●		D	.079	(2.00)	±.0008	.002	.768	.829	
	GY2G0250E005N-GL							●		E	.098	(2.50)	±.0008	.002	.752	.829	
	GY2G0300F005N-GL							●		F	.118	(3.00)	±.0008	.002	.744	.829	

*2 The dimension depends on the breaker. Refer to the page 12 "L dimension tolerance conversion table".

● : USA Stock (10 inserts in one case) (CBN inserts are with 1 piece in one case.)

(inch)

Applications	Geometry	Order Number	Stock					Seat Size	CW			Corner R				CDX	*2 L
			Coated						Tolerance	REL	Tolerance	RER	Tolerance				
			MP9015	MP9025	VP10RT	VP20RT	MY5015										
														inch	(mm)		
For Cutting off	R05-GS Breaker NEW (Low feeds) 	GY2M0120B010R05-GS			●	●		B	.047	(1.20)	±.0012	.004	±.0020	.004	±.002	.481	
	R08-GS Breaker NEW (Low feeds) 	GY2G0150C010R08-GS			●	●		C	.059	(1.50)	±.0008	.004	±.0012	.004	—	.519	.598
		GY2G0200D020R08-GS			●	●		D	.079	(2.00)	±.0012	.008	±.0020	.008	—	.742	.839
		GY2G0250E020R08-GS			●	●		E	.098	(2.50)	±.0012	.008	±.0020	.008	—	.750	.846
		GY2G0300F020R08-GS			●	●		F	.118	(3.00)	±.0012	.008	±.0020	.008	—	.733	.846
	R15-GS Breaker NEW (Low feeds) 	GY2G0150C003R15-GS			●	●		C	.059	(1.50)	±.0008	.0012	+0.012, -.0008	.004	—	.519	.598
		GY2G0150C010R15-GS			●	●		C	.059	(1.50)	±.0008	.004	±.0012	.004	—	.519	.598
		GY2G0200D003R15-GS			●	●		D	.079	(2.00)	±.0012	.0012	+0.012, -.0008	.004	—	.742	.839
		GY2G0200D010R15-GS			●	●		D	.079	(2.00)	±.0012	.004	±.0012	.004	—	.742	.839
		GY2G0250E003R15-GS			●	●		E	.098	(2.50)	±.0012	.0012	+0.012, -.0008	.004	—	.750	.846
		GY2G0250E020R15-GS			●	●		E	.098	(2.50)	±.0012	.008	±.0020	.004	—	.750	.846
		GY2G0300F003R15-GS			●	●		F	.118	(3.00)	±.0012	.0012	+0.012, -.0008	.004	—	.733	.846
		GY2G0300F020R15-GS			●	●		F	.118	(3.00)	±.0012	.008	±.0020	.004	—	.733	.846
	R/L05-GM Breaker 	GY1M0200D020R05-GM			●	●		D	.079	(2.00)	±.0012	.008	±.0020	.008	±.002	—	.819
		GY1M0200D020L05-GM			●	●		D	.079	(2.00)	±.0012	.008	±.0020	.008	±.002	—	.819
		GY1M0300F030R05-GM			●	●		F	.118	(3.00)	±.0012	.012	±.0020	.012	±.002	—	.819
		GY1M0300F030L05-GM			●	●		F	.118	(3.00)	±.0012	.012	±.0020	.012	±.002	—	.819
	R/L05-GM Breaker 	GY2M0200D020R05-GM			●	●		D	.079	(2.00)	±.0012	.008	±.0020	.008	±.002	.768	.819
		GY2M0200D020L05-GM			●	●		D	.079	(2.00)	±.0012	.008	±.0020	.008	±.002	.768	.819
		GY2M0250E020R05-GM			●	●		E	.098	(2.50)	±.0012	.008	±.0020	.008	±.002	.768	.820
		GY2M0250E020L05-GM			●	●		E	.098	(2.50)	±.0012	.008	±.0020	.008	±.002	.768	.820
		GY2M0300F030R05-GM			●	●		F	.118	(3.00)	±.0012	.012	±.0020	.012	±.002	.768	.821
		GY2M0300F030L05-GM			●	●		F	.118	(3.00)	±.0012	.012	±.0020	.012	±.002	.768	.821
	GY2M0400G030R05-GM			●	●		G	.157	(4.00)	±.0016	.012	±.0020	.012	±.002	.965	1.018	
	GY2M0400G030L05-GM			●	●		G	.157	(4.00)	±.0016	.012	±.0020	.012	±.002	.965	1.018	
	GY2M0500H040R05-GM			●	●		H	.197	(5.00)	±.0016	.016	±.0020	.016	±.002	.965	1.022	
	GY2M0500H040L05-GM			●	●		H	.197	(5.00)	±.0016	.016	±.0020	.016	±.002	.965	1.022	

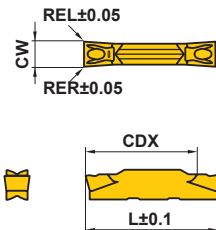
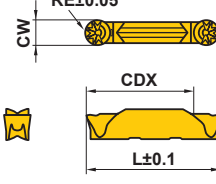
GY Series Inserts

(inch)

Applications	Geometry	Order Number	Stock												Seat Size	CW		RER/L	CDX	*2 L	LE
			Coated				Cermet	Carbide		CBN	Cutting Width	Tolerance									
			MP9015	MP9025	VP10RT	VP20RT	MY5015	NX2525	RT9010	RT9020			BC8110	MB8025							
			inch	(mm)																	
For Grooving	Flat Top (For hardened steel)	GY1G0200D020N-GFGS										●	D	.079	(2.00)	±.0012	.008	—	.815	.106	
		GY1G0239E020N-GFGS										●	E	.094	(2.39)	±.0012	.008	—	.815	.106	
		GY1G0250E020N-GFGS										●	E	.098	(2.50)	±.0012	.008	—	.815	.106	
		GY1G0300F020N-GFGS										●	F	.118	(3.00)	±.0012	.008	—	.815	.106	
		GY1G0318F020N-GFGS										●	F	.125	(3.18)	±.0012	.008	—	.815	.106	
		GY1G0400G020N-GFGS										●	●	G	.157	(4.00)	±.0012	.008	—	1.010	.106
		GY1G0475H020N-GFGS										●	●	H	.187	(4.75)	±.0012	.008	—	1.010	.106
		GY1G0500H020N-GFGS										●	●	H	.197	(5.00)	±.0012	.008	—	1.010	.106
		GY1G0600J020N-GFGS										●	●	J	.236	(6.00)	±.0012	.008	—	1.010	.106
For Multifunctional Grooving	MF Breaker (Finishing)	GY2G0200D020N-MF			●	●		●		●			D	.079	(2.00)	±.0008	.008	.768	.829	—	
	*1	GY2G0224D015N-MF			●	●		●		●			D	.088	(2.24)	±.0008	.006	.780	.829	—	
		GY2G0239E020N-MF			●	●		●		●			E	.094	(2.39)	±.0008	.008	.756	.829	—	
		GY2G0250E020N-MF			●	●		●		●			E	.098	(2.50)	±.0008	.008	.764	.829	—	
	*1	GY2G0274E020N-MF			●	●		●		●			E	.108	(2.74)	±.0008	.008	.776	.829	—	
		GY2G0300F020N-MF			●	●		●		●			F	.118	(3.00)	±.0008	.008	.768	.829	—	
		GY2G0300F040N-MF			●	●		●		●			F	.118	(3.00)	±.0008	.016	.760	.829	—	
		GY2G0318F020N-MF			●	●		●		●			F	.125	(3.18)	±.0008	.008	.768	.829	—	
		GY2G0318F040N-MF			●	●		●		●			F	.125	(3.18)	±.0008	.016	.760	.829	—	
	*1	GY2G0324F020N-MF			●	●		●		●			F	.128	(3.24)	±.0008	.008	.768	.829	—	
		GY2G0400G020N-MF			●	●		●		●			G	.157	(4.00)	±.0008	.008	.980	1.022	—	
		GY2G0400G040N-MF			●	●		●		●			G	.157	(4.00)	±.0008	.016	.972	1.022	—	
		GY2G0400G080N-MF			●	●		●		●			G	.157	(4.00)	±.0008	.031	.957	1.022	—	
	*1	GY2G0424G020N-MF			●	●		●		●			G	.167	(4.24)	±.0008	.008	.980	1.022	—	
		GY2G0475H020N-MF			●	●		●		●			H	.187	(4.75)	±.0008	.008	.961	1.022	—	
		GY2G0475H040N-MF			●	●		●		●			H	.187	(4.75)	±.0008	.016	.953	1.022	—	
		GY2G0475H080N-MF			●	●		●		●			H	.187	(4.75)	±.0008	.031	.937	1.022	—	
		GY2G0500H020N-MF			●	●		●		●			H	.197	(5.00)	±.0008	.008	.961	1.022	—	
		GY2G0500H040N-MF			●	●		●		●			H	.197	(5.00)	±.0008	.016	.953	1.022	—	
		GY2G0500H080N-MF			●	●		●		●			H	.197	(5.00)	±.0008	.031	.937	1.022	—	
	*1	GY2G0524H020N-MF			●	●		●		●			H	.206	(5.24)	±.0008	.008	.961	1.022	—	
		GY2G0600J020N-MF			●	●		●		●			J	.236	(6.00)	±.0008	.008	.961	1.022	—	
		GY2G0600J040N-MF			●	●		●		●			J	.236	(6.00)	±.0008	.016	.953	1.022	—	
		GY2G0600J080N-MF			●	●		●		●			J	.236	(6.00)	±.0008	.031	.937	1.022	—	
	*1	GY2G0631J020N-MF			●	●		●		●			J	.248	(6.31)	±.0008	.008	.961	1.022	—	
		GY2G0635J020N-MF			●	●		●		●			J	.250	(6.35)	±.0008	.008	.961	1.022	—	
		GY2G0635J040N-MF			●	●		●		●			J	.250	(6.35)	±.0008	.016	.953	1.022	—	
		GY2G0635J080N-MF			●	●		●		●			J	.250	(6.35)	±.0008	.031	.937	1.022	—	
	MS Breaker (Low feeds)	GY2M0200D020N-MS			●	●	●	●					D	.079	(2.00)	±.0012	.008	.752	.815	—	
		GY2M0250E020N-MS			●	●	●	●					E	.098	(2.50)	±.0012	.008	.752	.815	—	
		GY2M0300F020N-MS			●	●	●	●					F	.118	(3.00)	±.0012	.008	.756	.815	—	
		GY2M0300F040N-MS			●	●	●	●					F	.118	(3.00)	±.0012	.016	.744	.815	—	
		GY2M0400G020N-MS			●	●	●	●					G	.157	(4.00)	±.0016	.008	.953	1.010	—	
		GY2M0400G040N-MS			●	●	●	●					G	.157	(4.00)	±.0016	.016	.941	1.010	—	
		GY2M0500H040N-MS			●	●	●	●					H	.197	(5.00)	±.0016	.016	.941	1.010	—	
GY2M0500H080N-MS				●	●	●	●					H	.197	(5.00)	±.0016	.031	.925	1.010	—		
GY2M0600J040N-MS				●	●	●	●					J	.236	(6.00)	±.0016	.116	.941	1.010	—		
GY2M0600J080N-MS				●	●	●	●					J	.236	(6.00)	±.0016	.031	.925	1.010	—		
GY2M0800K080N-MS				●	●	●						K	.315	(8.00)	±.0016	.031	1.122	1.201	—		

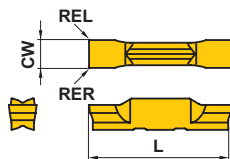
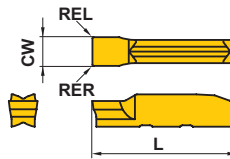
*1 Circlip corresponding width of cut
● : USA Stock ★ : Stocked in Japan
(10 inserts in one case) (CBN inserts are available in 1 piece in one case.)

(inch)

Applications	Geometry	Order Number	Stock										Seat Size	CW			RE RER/L	CDX	*2 L
			Coated					Cermet	Carbide	CBN	Cutting Width	Tolerance							
			MP9015	MP9025	VP10RT	VP20RT	MY5015	NX2525	RT9010	RT9020				MB8025					
															inch	(mm)			
For Multifunctional Grooving	MM Breaker (Medium feeds) 	GY2M0200D020N-MM	●	●	●	●	●	●					D	.079	(2.00)	±.0012	.008	.752	.815
		GY2M0250E020N-MM	●	●	●	●	●	●					E	.098	(2.50)	±.0012	.008	.752	.815
		GY2M0300F020N-MM	●	●	●	●	●	●					F	.118	(3.00)	±.0012	.008	.752	.815
		GY2M0300F040N-MM	●	●	●	●	●	●					F	.118	(3.00)	±.0012	.016	.744	.815
		GY2M0300F080N-MM	●	●	●	●	●	●					F	.118	(3.00)	±.0012	.031	.728	.815
		GY2M0400G020N-MM	●	●	●	●	●	●					G	.157	(4.00)	±.0016	.008	.949	1.010
		GY2M0400G040N-MM	●	●	●	●	●	●					G	.157	(4.00)	±.0016	.016	.941	1.010
		GY2M0400G080N-MM	●	●	●	●	●	●					G	.157	(4.00)	±.0016	.031	.925	1.010
		GY2M0500H040N-MM	●	●	●	●	●	●					H	.197	(5.00)	±.0016	.016	.941	1.010
		GY2M0500H080N-MM	●	●	●	●	●	●					H	.197	(5.00)	±.0016	.031	.925	1.010
		GY2M0600J040N-MM	●	●	●	●	●	●					J	.236	(6.00)	±.0016	.016	.941	1.010
		GY2M0600J080N-MM	●	●	●	●	●	●					J	.236	(6.00)	±.0016	.031	.925	1.010
		GY2M0800K080N-MM	●	●	●	●	●	●					K	.315	(8.00)	±.0016	.031	1.122	1.201
		GY2M0800K120N-MM	●	●	●	●	●	●					K	.315	(8.00)	±.0016	.047	1.106	1.201
For Copying / For Recessing	BM Breaker 	GY2M0200D100N-BM	●	●	●	●	●	●					D	.079	(2.00)	±.0012	.039	.768	.815
		GY2M0250E125N-BM	●	●	●	●	●	●					E	.098	(2.50)	±.0012	.049	.760	.815
		GY2M0300F150N-BM	●	●	●	●	●	●					F	.118	(3.00)	±.0012	.059	.748	.823
		GY2M0318F159N-BM	●	●	●	●	●	●					F	.125	(3.18)	±.0012	.063	.744	.823
		GY2M0400G200N-BM	●	●	●	●	●	●					G	.157	(4.00)	±.0016	.079	.921	1.016
		GY2M0475H238N-BM	●	●	●	●	●	●					H	.187	(4.75)	±.0016	.094	.902	1.016
		GY2M0500H250N-BM	●	●	●	●	●	●					H	.197	(5.00)	±.0016	.098	.898	1.016
		GY2M0600J300N-BM	●	●	●	●	●	●					J	.236	(6.00)	±.0016	.118	.886	1.020
		GY2M0635J318N-BM	●	●	●	●	●	●					J	.250	(6.35)	±.0016	.125	.878	1.020
		GY2M0800K400N-BM	●	●	●	●	●	●					K	.315	(8.00)	±.0016	.157	1.043	1.213

GY Series Inserts

Blank Inserts (inch)

Applications	Geometry	Order Number	Stock			Seat Size	CW			RER/L	L
			Cermet		Carbide		Grooving Width		Tolerance		
			NX2525	RT9010			inch	(mm)			
*1		GY2B0220D020N	★	★	★	D	.087	(2.20)	± .0039	.008	.829
		GY2B0250D020N	★	★	★	D	.100	(2.55)	± .0039	.008	.838
		GY2B0270E020N	★	★	★	E	.106	(2.70)	± .0039	.008	.829
		GY2B0300E020N	★	★	★	E	.120	(3.05)	± .0039	.008	.838
		GY2B0340F020N	★	★	★	F	.134	(3.40)	± .0039	.008	.829
		GY2B0360F020N	★	★	★	F	.144	(3.65)	± .0039	.008	.838
		GY2B0420G020N	★	★	★	G	.165	(4.20)	± .0039	.008	1.024
		GY2B0460G020N	★	★	★	G	.183	(4.65)	± .0039	.008	1.031
		GY2B0520H020N	★	★	★	H	.205	(5.20)	± .0039	.008	1.024
		GY2B0560H020N	★	★	★	H	.222	(5.65)	± .0039	.008	1.031
		GY2B0655J020N	★	★	★	J	.258	(6.55)	± .0039	.008	1.025
		GY2B0680J020N	★	★	★	J	.270	(6.85)	± .0039	.008	1.031
		GY2B0880K020N		★	★	K	.348	(8.85)	± .0039	.008	1.216
Blank		GY1B0220D020N	★	★	★	D	.087	(2.20)	± .0039	.008	.830
		GY1B0270E020N	★	★	★	E	.106	(2.70)	± .0039	.008	.831
		GY1B0340F020N	★	★	★	F	.134	(3.40)	± .0039	.008	.827
		GY1B0420G020N	★	★	★	G	.165	(4.20)	± .0039	.008	1.018
		GY1B0520H020N	★	★	★	H	.205	(5.20)	± .0039	.008	1.020
		GY1B0655J020N	★	★	★	J	.258	(6.55)	± .0039	.008	1.020

*1 Insert blank is not suitable for machining without grinding.

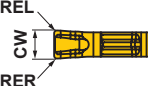
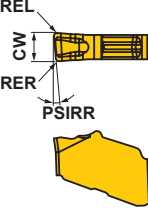
Gy Series L Dimension Tolerance Conversion Table (inch)

Cutting Width CW	Dimensions L	*2 Dimensional tolerance versus standard dimension (L) of each breaker									
		GU	GS/GM	MS/MM	R05-GS	R08/15-GS	R/L-GM	Flat Top	MF	BM	GL
.047", 1.20 mm	.579		0		0						
.059", 1.50 mm	.579		0			.020					
.079", 2.00 mm	.815	0	0	0		.024	.004	0	.014	.008	.014
.088", 2.24 mm	*3 (.815)								.014		
.094", 2.39 mm	.815	0	0					0	.014		
.098", 2.50 mm	.815	0	0	0		.031	.005	0	.014	.008	.014
.108", 2.74 mm	*3 (.815)								.014		
.118", 3.00 mm	.815	0	0	0		.031	.006	0	.014	.008	.014
.125", 3.18 mm	.815	0	0					0	.014	.008	
.128", 3.24 mm	*3 (.815)								.014		
.157", 4.00 mm	1.010	0	0	0			.008	0	.012	.006	
.167", 4.24 mm	*3 (1.010)								.012		
.187", 4.75 mm	1.010	0	0					0	.012	.006	
.197", 5.00 mm	1.010	0	0	0				.012	.012	.006	
.206", 5.24 mm	*3 (1.010)								.012		
.236", 6.00 mm	1.010	0	0	0				0	.012	.010	
.248", 6.31 mm	*3 (1.010)								.012		
.250", 6.35 mm	1.010	0	0						.012	.010	
.315", 8.00 mm	1.201		0	0						.012	

*1 This value is used at the described holder dimension.
*2  when there is no applicable breaker.
*3 The standard dimensions shown here use an approximate insert width.

● : USA Stock ★ : Stocked in Japan
(10 inserts in one case)

GW Series Inserts (inch)

Application	Order Number	Stock				CW			RER REL	PSIRR PSIRL	Geometry
		Coating				Cutting Width		Tolerance			
		MY5015	VP10RT	VP20RT	VP30RT						
Grooving, Cutting Off	GW1M0200D020N-GS		●	●	●	.079	(2.00)	±.0012	.008	—	
Grooving, Cutting Off	GW1M0239E020N-GS		●	●	●	.094	(2.39)	±.0012	.008	—	
Grooving, Cutting Off	GW1M0300F020N-GS		●	●	●	.118	(3.00)	±.0012	.008	—	
Grooving, Cutting Off	GW1M0400G020N-GS		●	●	●	.157	(4.00)	±.0016	.008	—	
Grooving, Cutting Off	GW1M0500H030N-GS		●	●	●	.197	(5.00)	±.0016	.012	—	
Grooving, Cutting Off	GW1M0200D020N-GM	●	●	●	●	.079	(2.00)	±.0012	.008	—	
Grooving, Cutting Off	GW1M0239E020N-GM	●	●	●	●	.094	(2.39)	±.0012	.008	—	
Grooving, Cutting Off	GW1M0300F030N-GM	●	●	●	●	.118	(3.00)	±.0012	.012	—	
Grooving, Cutting Off	GW1M0400G030N-GM	●	●	●	●	.157	(4.00)	±.0016	.012	—	
Grooving, Cutting Off	GW1M0500H040N-GM	●	●	●	●	.197	(5.00)	.0016	.016	—	
Cutting off, Low Feed	GW1M0200D020R05-GS		●	●	●	.079	(2.00)	±.0012	.008	5	
Cutting off, Low Feed	GW1M0239E020R05-GS		●	●	●	.094	(2.39)	±.0012	.008	5	
Cutting off, Low Feed	GW1M0300F020R05-GS		●	●	●	.118	(3.00)	±.0012	.008	5	
Cutting off Low Feed, Lead Angle 8°	GW1M0200D003R08-GS		●	●	●	.079	(2.00)	±.0012	.0012	8	
Cutting off Low Feed, Lead Angle 8°	GW1M0239E003R08-GS		●	●	●	.094	(2.39)	±.0012	.0012	8	
Cutting off Low Feed, Lead Angle 8°	GW1M0300F003R08-GS		●	●	●	.118	(3.00)	±.0012	.0012	8	
Cutting Off	GW1M0200D020R05-GM		●	●	●	.079	(2.00)	±.0012	.008	5	
Cutting Off	GW1M0200D020L05-GM		●	●	●	.079	(2.00)	±.0012	.008	5	
Cutting Off	GW1M0239E020R05-GM		●	●	●	.094	(2.39)	±.0012	.008	5	
Cutting Off	GW1M0239E020L05-GM		●	●	●	.094	(2.39)	±.0012	.008	5	
Cutting Off	GW1M0300F030R05-GM		●	●	●	.118	(3.00)	±.0012	.012	5	
Cutting Off	GW1M0300F030L05-GM		●	●	●	.118	(3.00)	±.0012	.012	5	
Cutting Off	GW1M0400G030R05-GM		●	●	●	.157	(4.00)	±.0016	.012	5	
Cutting Off	GW1M0400G030L05-GM		●	●	●	.157	(4.00)	±.0016	.012	5	
Cutting Off	GW1M0500H040R05-GM		●	●	●	.197	(5.00)	±.0016	.016	5	
Cutting Off	GW1M0500H040L05-GM		●	●	●	.197	(5.00)	±.0016	.016	5	

Right hand insert shown.

Blank Inserts (inch)

Geometry	Order Number	Carbide		Seat Size	CW			RER	REL
		RT9010	RT9020		Grooving Width		Tolerance		
					inch	(mm)			
1 Edge Type REL CW RER 	GW1B0320D020N	★	★	D	.128	(3.24)	±0.10	.008	.008
	GW1B0440F020N	★	★	F	.175	(4.44)	±0.10	.008	.008
	GW1B0540G020N	★	★	G	.214	(5.44)	±0.10	.008	.008
	GW1B0640H020N	★	★	H	.254	(6.44)	±0.10	.008	.008

* Insert blank is not suitable for machining without grinding.

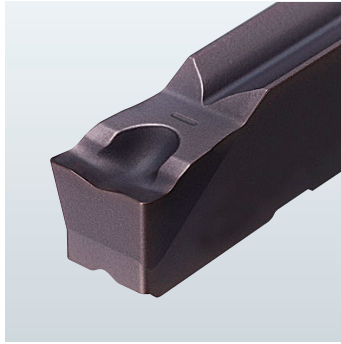
Correct Use of GY Series GS Breaker

First Recommendation

Reduction of Cutting Resistance

Lead Angle
PSIRR=0°

Improved Fracture Resistance



Cutting Off of Holes and Small Parts

Reduction of Burrs and Core Residue

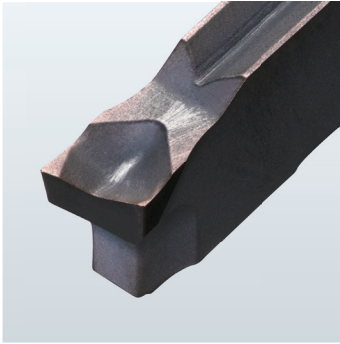
Lead Angle
PSIRR=8°

Improved Fracture Resistance



Lead Angle
PSIRR=15°

Improved Fracture Resistance



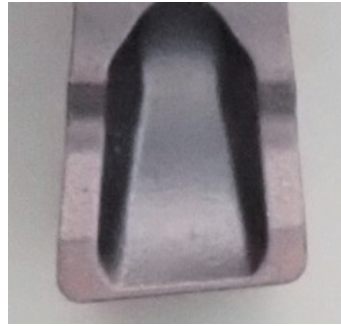
Correct Use of GW Series Inserts

First Recommendation

Improved Fracture Resistance

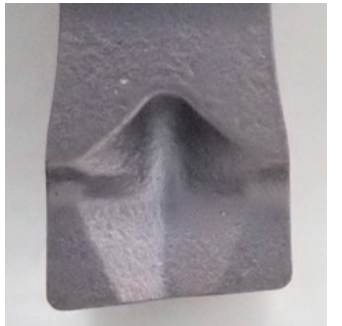
GM Breaker
PSIRR=5°

Reduction of Cutting Resistance



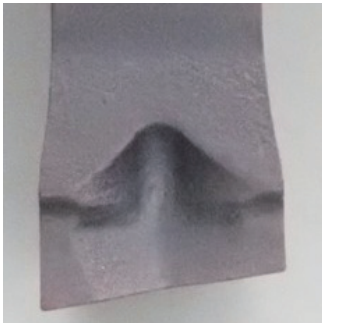
GS Breaker
PSIRR=5°

Improved Fracture Resistance



GS Breaker
PSIRR=8°

Improved Fracture Resistance



Recommended Cutting Speed [For External Grooving / Cutting Off]

	Workpiece Material	Properties	Grade	Cutting Speed vc (SFM)					
				165	330	490	655	820	985
P	Mild Steels	Hardness ≤160HB	VP20RT		330		720		
			VP10RT		360		755		
			NX2525		295		690		
	Carbon Steels Alloy Steels	Hardness 160—280HB	VP20RT		260		590		
			VP10RT		295		620		
			MY5015		360		820		
			NX2525		230		560		
		Hardness 280HB≤	VP20RT	195	460				
			VP10RT	230	490				
			MY5015		295		690		
			NX2525	180	440				
	Stainless Steels	Hardness ≤270HB	VP20RT	195	460				
			VP10RT	230	490				
K	Gray Cast Irons	Tensile Strength ≤300MPa	VP20RT		260		590		
			VP10RT		295		620		
			MY5015			460		985	
	Ductile Cast Irons	Tensile Strength ≤800MPa	VP20RT	195	460				
			VP10RT	230	490				
			MY5015		295		690		
S	Heat Resistant Alloys Titanium Alloys	—	MP9015	130	330				
			MP9025	100	295				
			VP20RT	100	195				
			VP10RT/ RT9010	130	230				
H	Hardened Steels	50HRC≤	BC8110/MB8025		260	395			

Note 1) For MP9015, MP9025, VP10RT, VP20RT and MY5015, wet cutting is recommended.

Workpiece Material		Properties	Grade	Cutting Speed v_c (SFM)					
				165	330	655	985	1310	1640
N	Aluminum Alloys	Content Si<5%	RT9010			6551640			
	Aluminum Alloys	Content 5%≤Si≤10%	RT9010			6551640			
	Aluminum Alloys	Content Si>10%	RT9010		330	655			

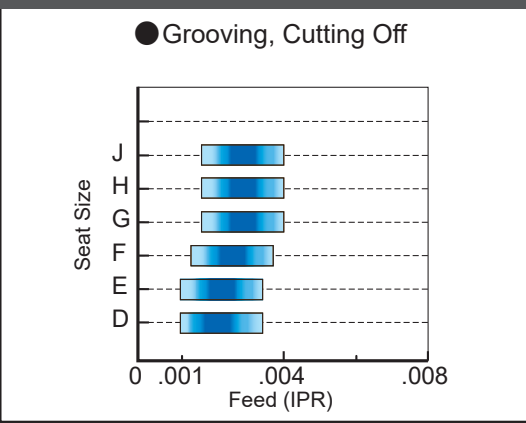
Cut-off & Grooving System

Recommended Cutting Conditions [For External Grooving / Cutting Off]

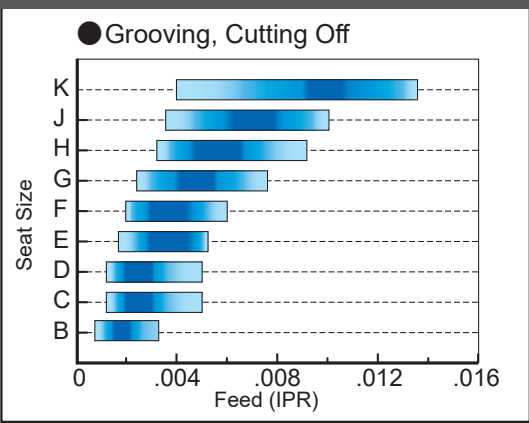
Recommended cutting conditions when combining a GYHR/L2525M00/90-M25R/L modular holder and GYM25R/LA- modular blade.

Recommended feed rate and depth of cut

GU Breaker

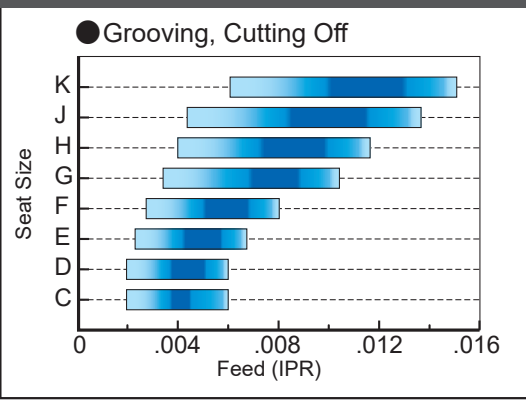


GS Breaker

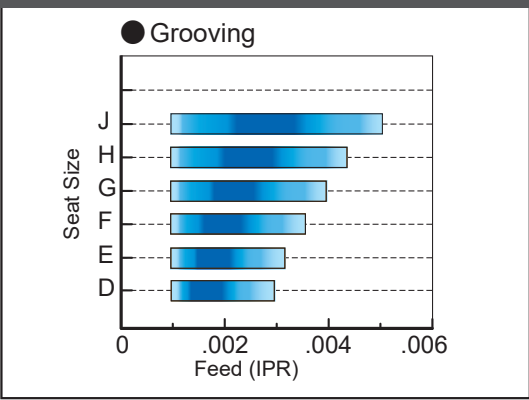


Seat Size	
Insert Width	
B	.047", 1.20 mm
C	.059", 1.50 mm
D	.079", 2.00 mm
	.088", 2.24 mm
E	.094", 2.39 mm
	.098", 2.50 mm
	.108", 2.74 mm
F	.118", 3.00 mm
	.125", 3.18 mm
	.128", 3.24 mm
G	.157", 4.00 mm
	.167", 4.24 mm
H	.187", 4.75 mm
	.197", 5.00 mm
	.206", 5.24 mm
J	.236", 6.00 mm
	.248", 6.31 mm
	.250", 6.35 mm
K	.315", 8.00 mm

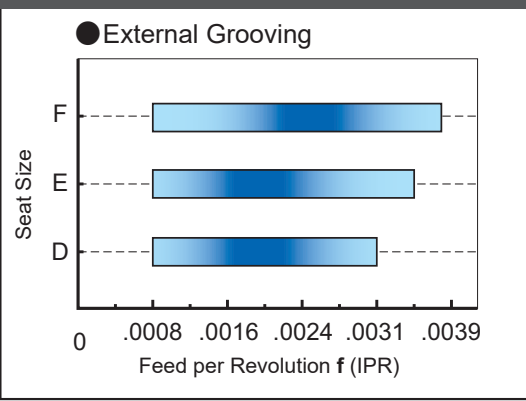
GM Breaker



Flat Top GFGS (CBN)



GL Breaker

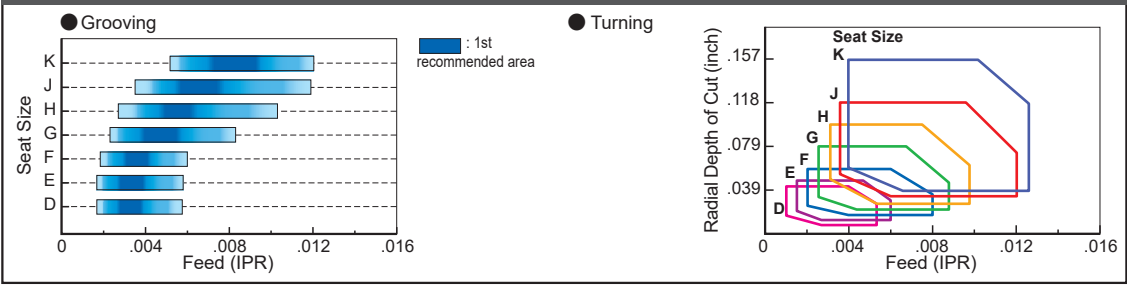


1st recommended area

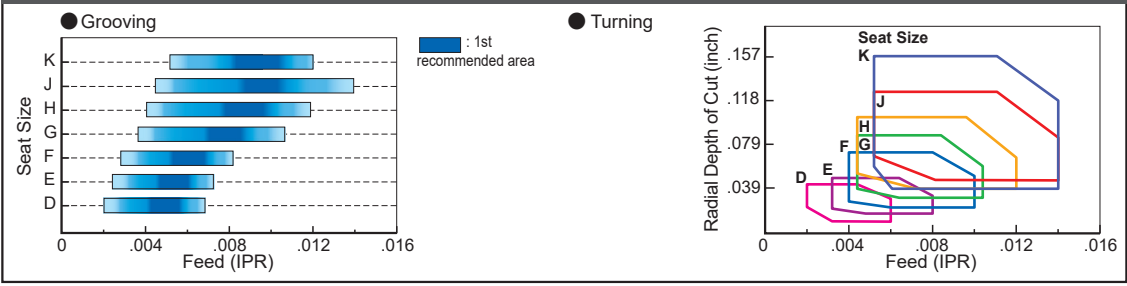
MF Breaker



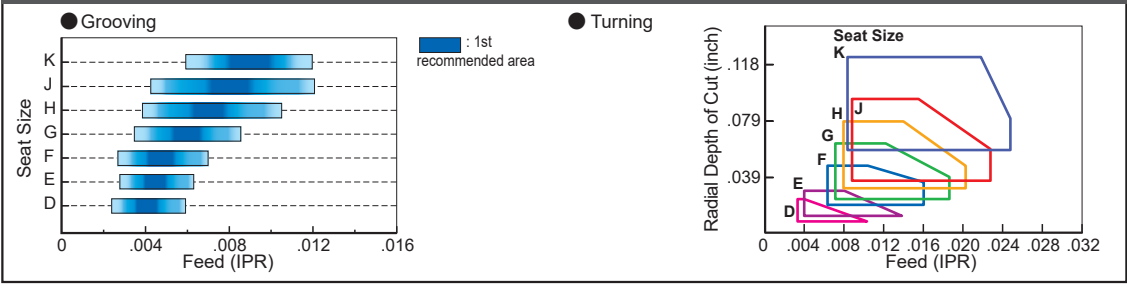
MS Breaker



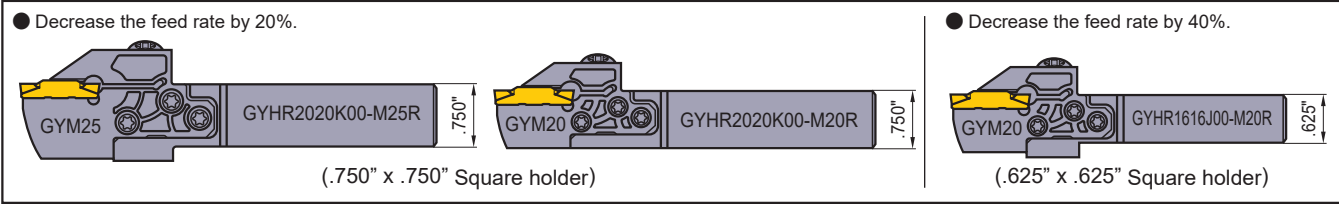
MM Breaker



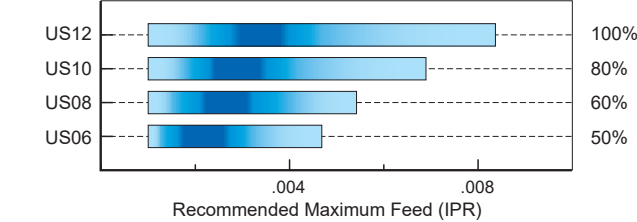
BM Breaker



Note 1) Lower the recommended cutting speed given in the table by 20% and 40% respectively when combining the following modular holders and modular blades.



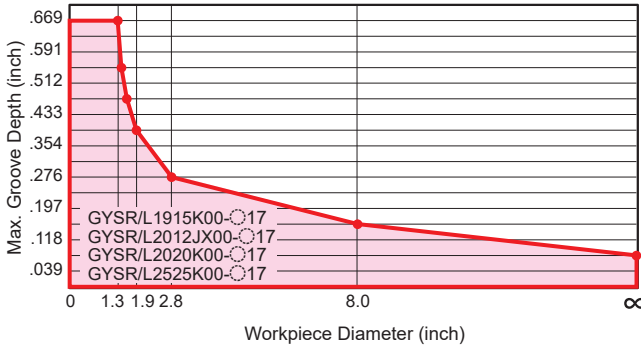
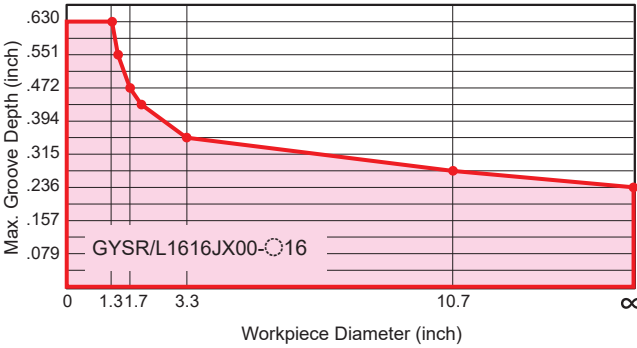
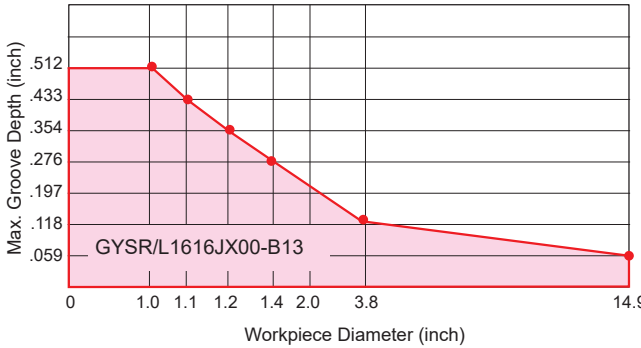
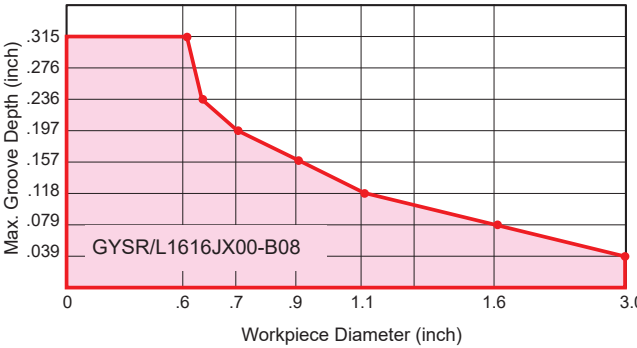
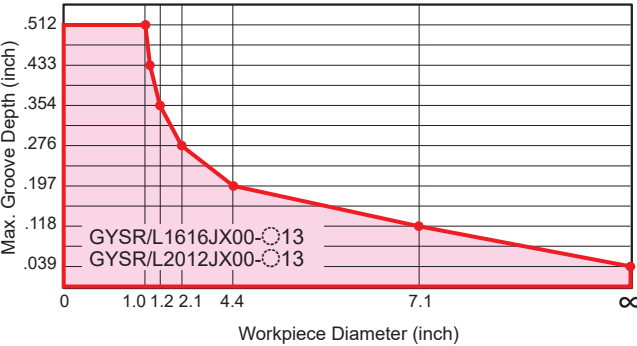
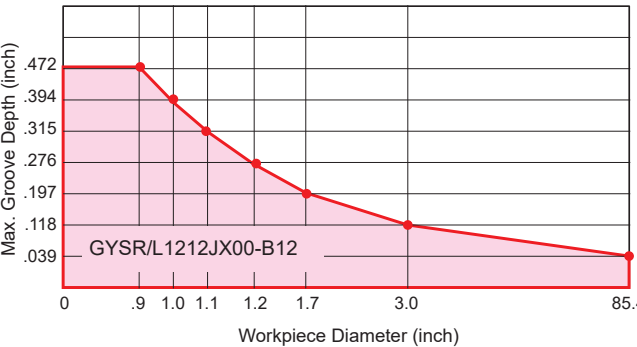
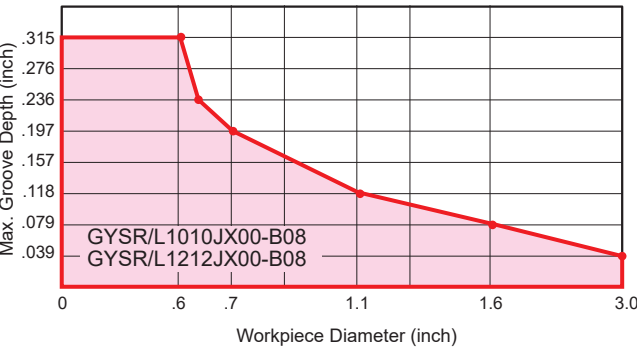
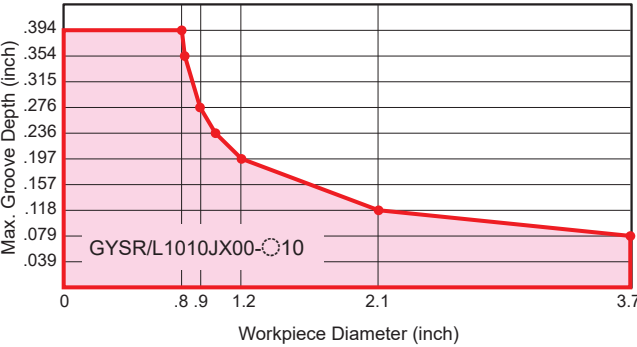
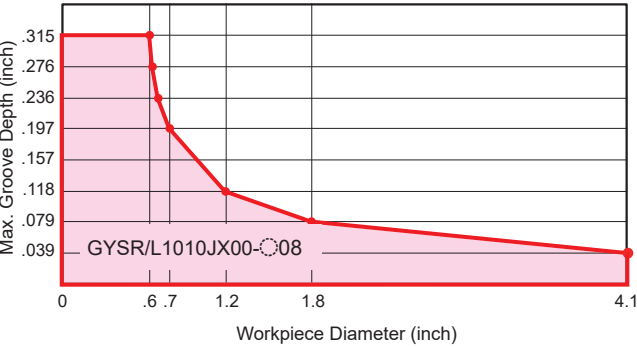
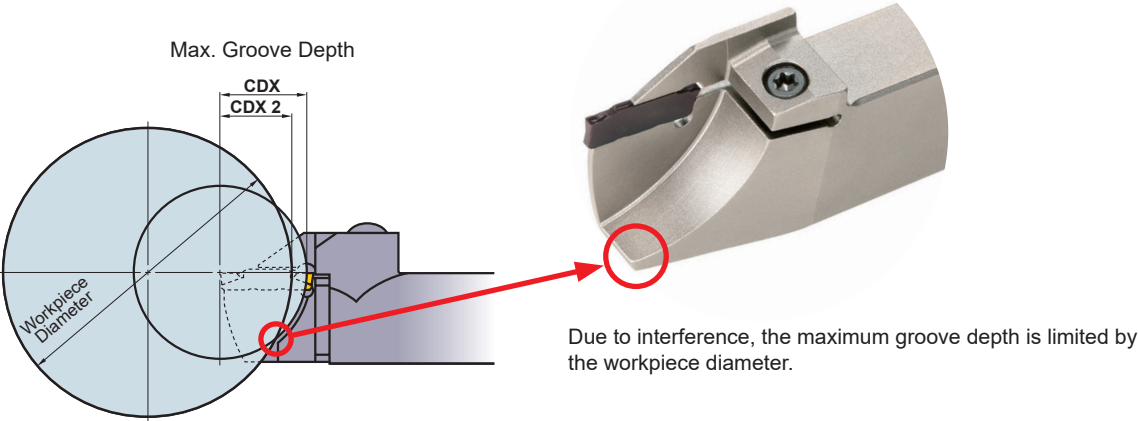
In the case of mono block type holder for Swiss style lathes



Please refer to the tables above on recommended cutting conditions for external grooving and cutting off. Apply the percentage ratio shown on each shank size with the values in the table.

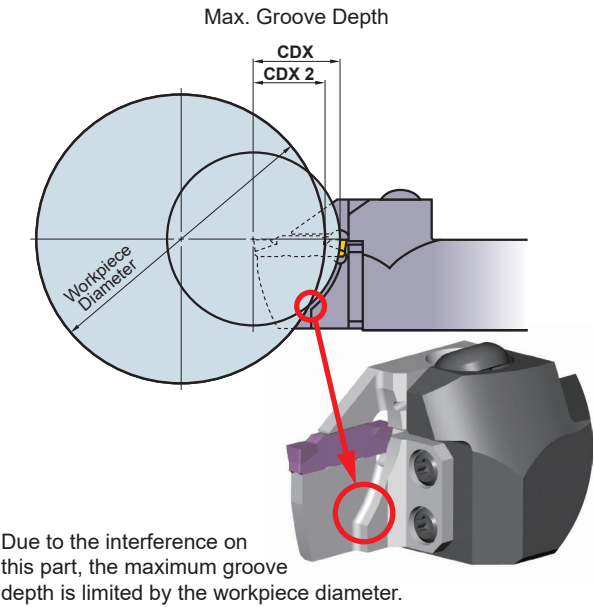
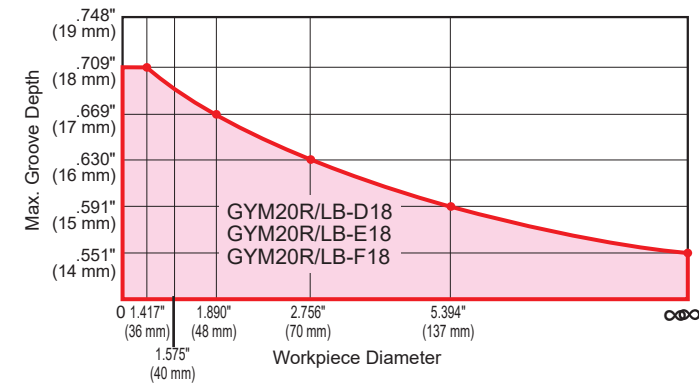
LIMITATION OF THE MAXIMUM GROOVE DEPTH [For External Grooving]

•In The Case of Mono Block Type Holder for Swiss-Type Lathes
The maximum groove depth is limited by the workpiece diameter.



Limitation of The Maximum Groove Depth [For External Grooving]

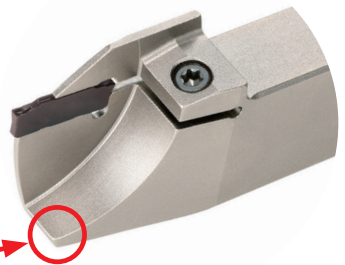
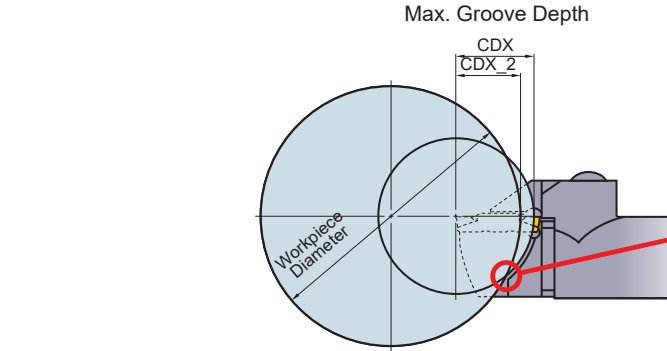
- When using the modular blade GYM○○R/LA-○○○
The maximum groove depth is not limited by the workpiece diameter.
- When using the modular blade GYM○○R/LB-○○○
The maximum groove depth is limited by the workpiece diameter.



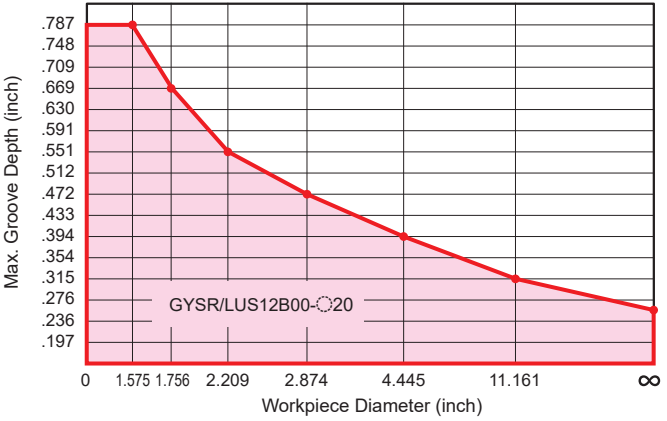
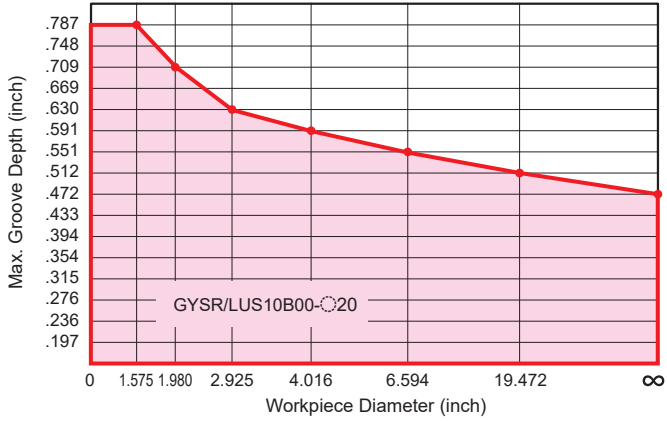
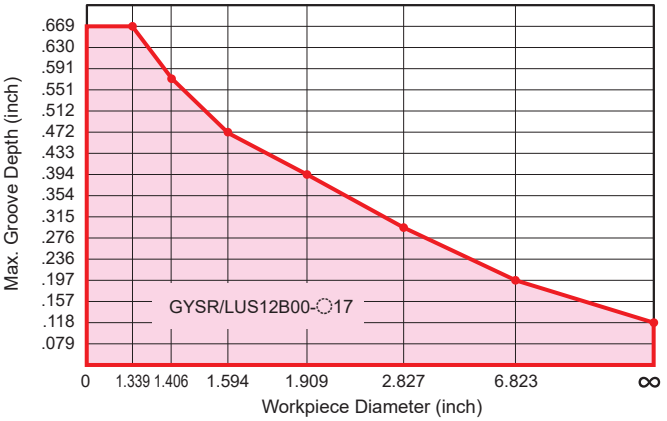
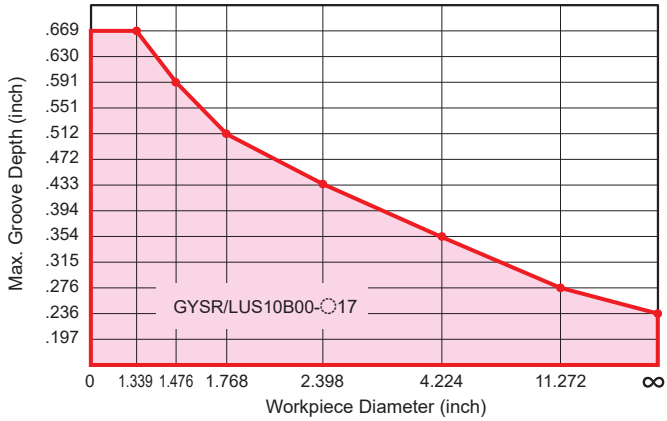
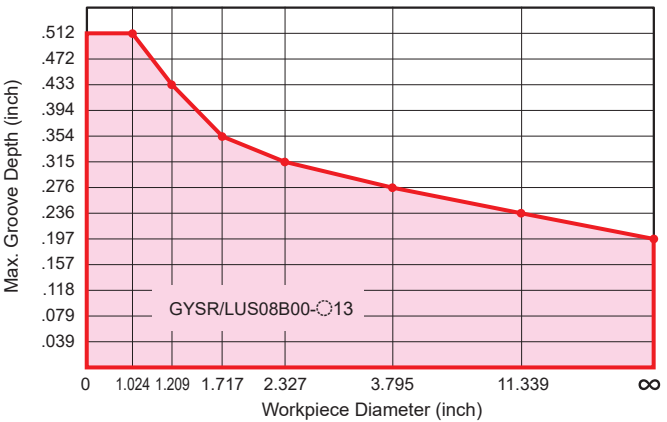
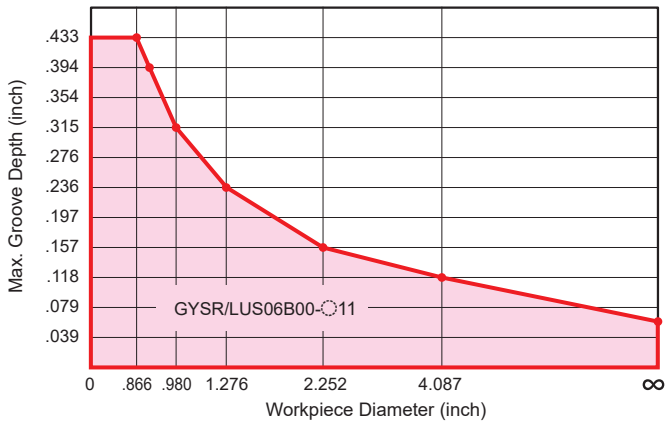
Due to the interference on this part, the maximum groove depth is limited by the workpiece diameter.

LIMITATION OF THE MAXIMUM GROOVE DEPTH [For External Grooving]

- For Swiss-Type lathes mono block holder
The maximum groove depth is limited by the workpiece diameter.



Due to the interference on this part, the maximum groove depth is limited by the workpiece diameter.



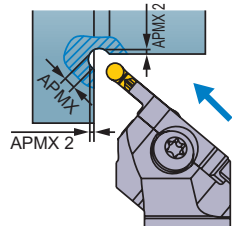
Cut-off & Grooving System

Recommended Cutting Speed [For External Recessing]

	Workpiece Material	Properties	Grade	Cutting Speed vc (SFM)				
				165	330	490	655	820
P	Mild Steels	Hardness ≤180HB	VP20RT		260	590		
			VP10RT		295	620		
	Carbon Steels Alloy Steels	Hardness 180—280HB	VP20RT	195	460			
			VP10RT	230	490			
			MY5015		295	690		
			NX2525	180	440			
	Carbon Steels Alloy Steels	Hardness 280—350HB	VP20RT	165	360			
			VP10RT	195	395			
			MY5015		260	525		
			NX2525	150	345			
M	Stainless Steels	Hardness ≤350HB	VP20RT	165	360			
			VP10RT	195	395			
K	Gray Cast Irons	Tensile Strength ≤350MPa	VP20RT	195	460			
			VP10RT	230	490			
			MY5015		295	690		
	Ductile Cast Irons	Tensile Strength ≤800MPa	VP20RT	165	360			
			VP10RT	195	395			
S	Heat Resistant Alloys Titanium Alloys	—	MP9015	130	330			
			MP9025	100	295			
			VP20RT	100	195			
			VP10RT	130	230			

Note 1) For MP9015, MP9025, VP10RT, VP20RT and MY5015, wet cutting is recommended.

Distance from Work Surface Recess Depth

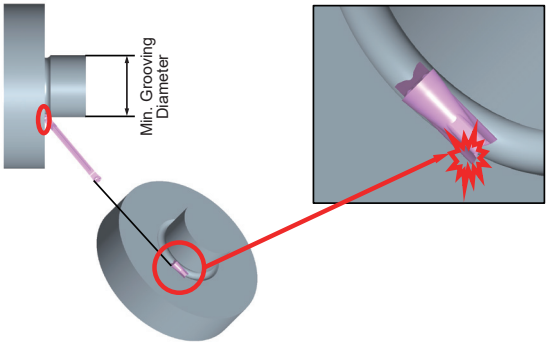


Grooving Width CW	Recessing Depth APMX	Distance workpiece to the recess depth APMX2
.079", 2.00 mm	.059", 1.50 mm	.025", 0.646 mm
.098", 2.50 mm	.069", 1.75 mm	.028", 0.720 mm
.118", 3.00 mm	.079", 2.00 mm	.031", 0.793 mm
.125", 3.18 mm	.082", 2.09 mm	.032", 0.819 mm
.157", 4.00 mm	.098", 2.50 mm	.037", 0.939 mm
.187", 4.75 mm	.113", 2.88 mm	.041", 1.049 mm
.197", 5.00 mm	.118", 3.00 mm	.043", 1.086 mm
.236", 6.00 mm	.138", 3.50 mm	.049", 1.232 mm
.250", 6.35 mm	.145", 3.68 mm	.051", 1.283 mm

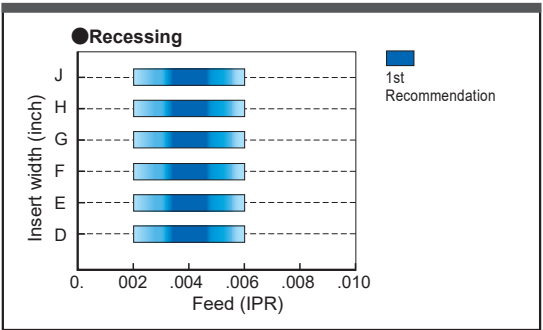
BM Breaker

Minimum grooving diameter

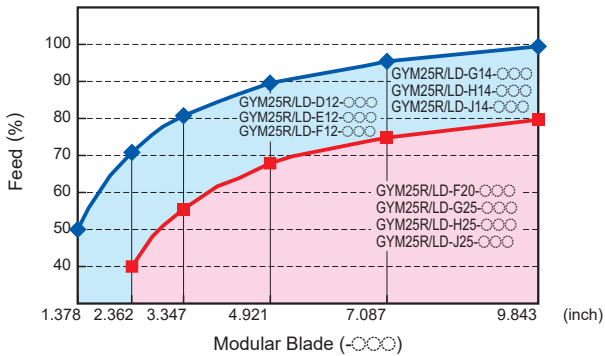
Ensure the tool is suitable for the diameter being machined. Refer to the Min. Grooving Diameter as shown in the table on the “page number” to avoid a collision with the workpiece shown below.



Recommended feed rate and depth of cut



Relationship Between The Modular Blade and Feed Per Rotation [For Face Grooving]



Note 1) Adjust the feed per rotation in the cutting conditions to the percentage shown in the table above.

Recommended Cutting Speed [For Face Grooving]

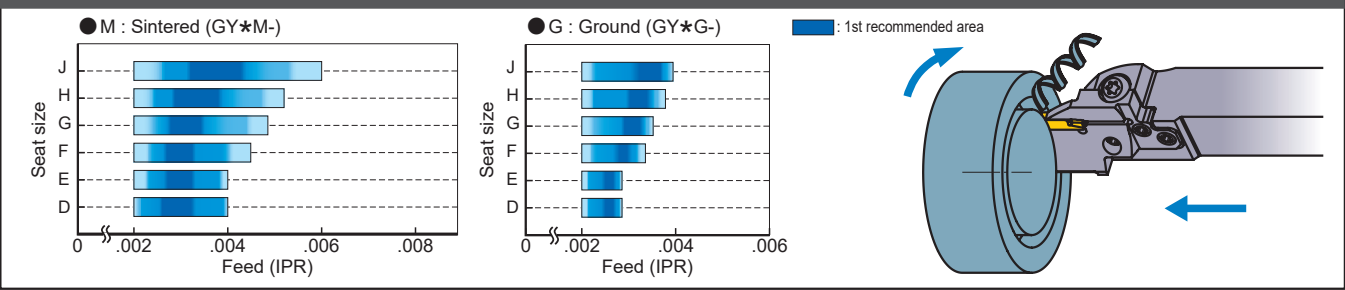
	Workpiece Material	Properties	Grade	Cutting Speed (SFM)					
				165	330	490	655	820	985
P	Mild Steels	Hardness ≤160HB	VP20RT		260	590			
			VP10RT		295	620			
			NX2525		230	560			
	Carbon Steels Alloy Steels	Hardness 160—280HB	VP20RT	195	460				
			VP10RT	230	490				
			MY5015		295	690			
		Hardness 280HB≤	NX2525	180	440				
			VP20RT	165	360				
			VP10RT	195	395				
			MY5015		260	525			
			NX2525	150	345				
M	Stainless Steels	Hardness ≤270HB	VP20RT	165	360				
			VP10RT	195	395				
K	Gray Cast Irons	Tensile Strength ≤300MPa	VP20RT	195	460				
			VP10RT	230	490				
			MY5015		295	690			
	Ductile Cast Irons	Tensile Strength ≤800MPa	VP20RT	165	360				
			VP10RT	195	395				
			MY5015		260	525			
S	Heat Resistant Alloys Titanium Alloys	—	MP9015	130	330				
			MP9025	100	295				
			VP20RT	100	195				
			VP10RT	130	230				
			RT9010	130	230				
H	Hardened Steels	Hardness 50HRC≤	BC8110		195	330			
			MB8025		195	330			

Note 1) For MP9015, MP9025, VP10RT, VP20RT and MY5015, wet cutting is recommended.

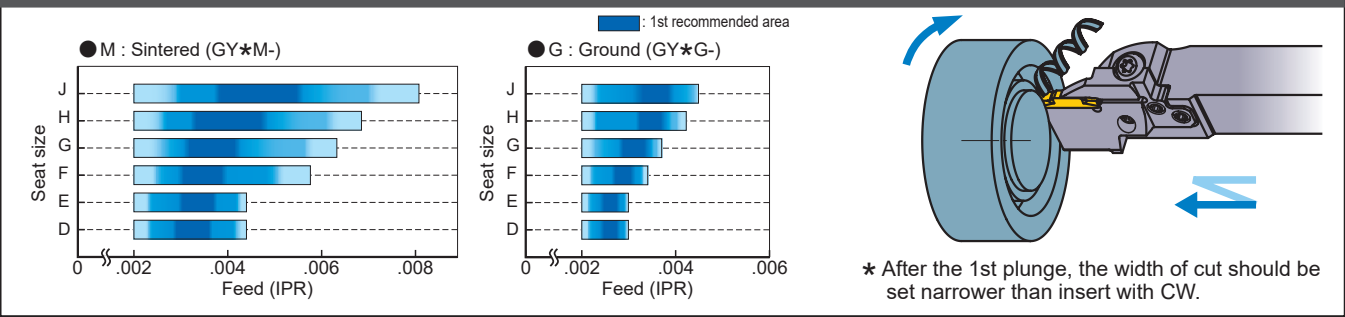
Cut-off & Grooving System

Recommended Cutting Conditions [For Face Grooving]

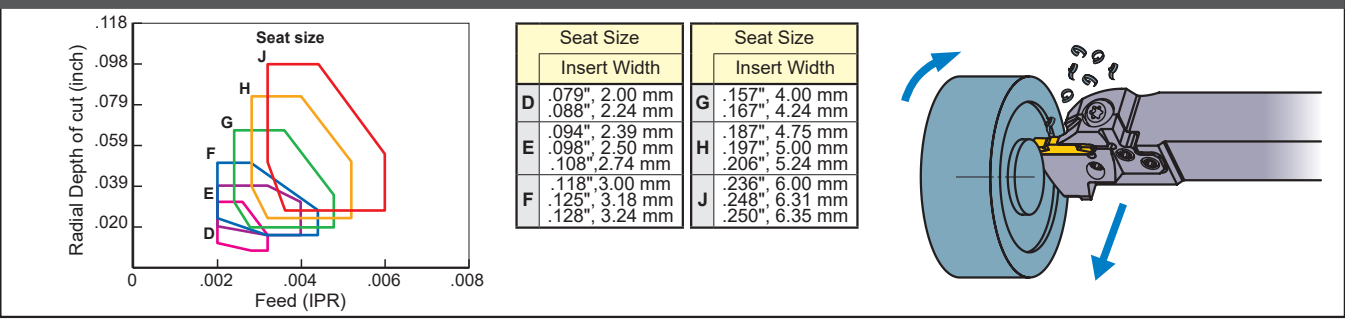
Grooving



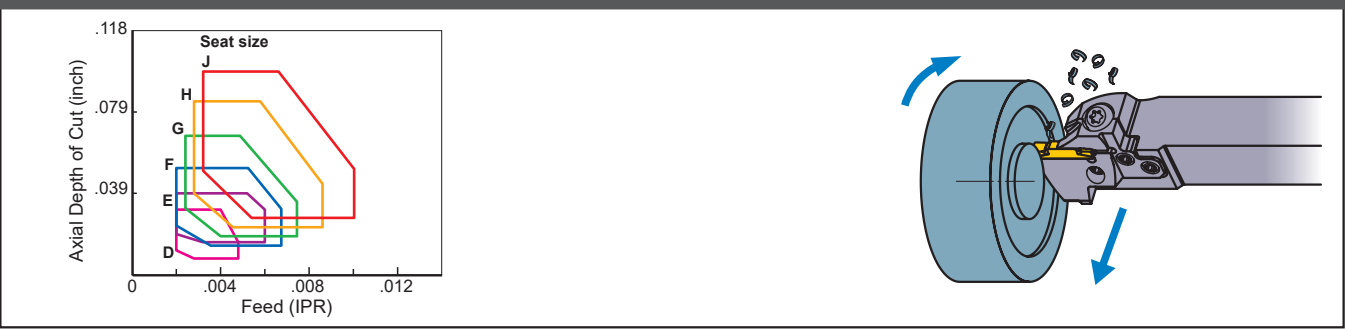
Plunging



Traverse Machining (MF Breaker)



Traverse Machining (MM/MS Breaker)



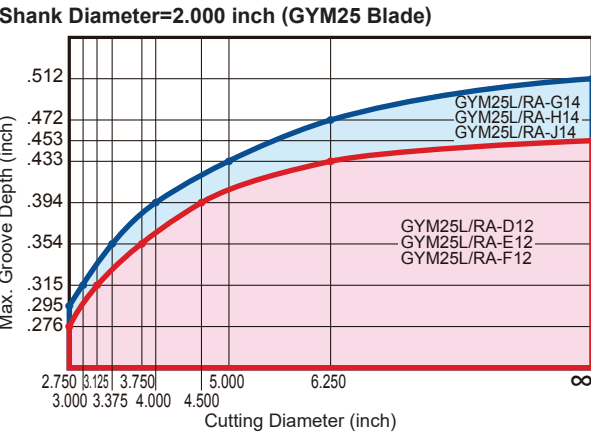
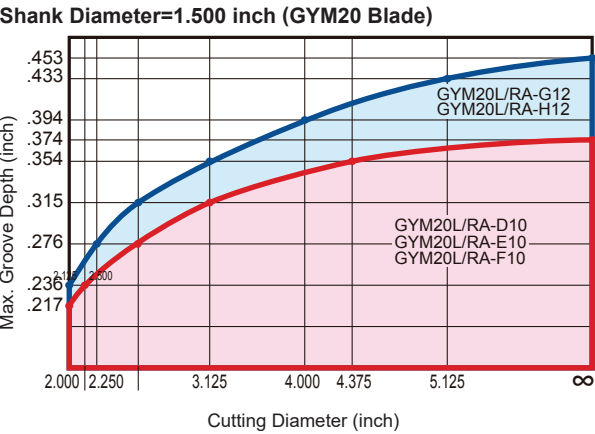
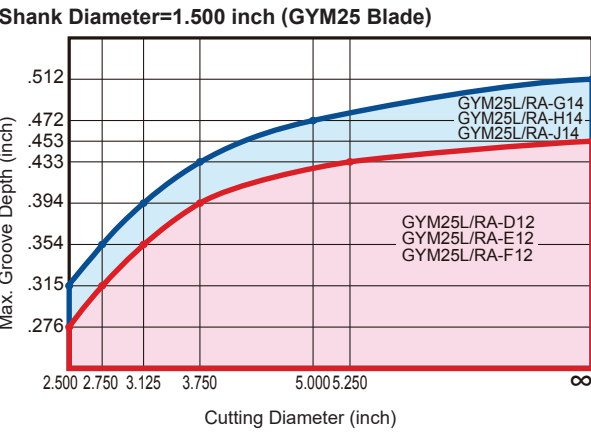
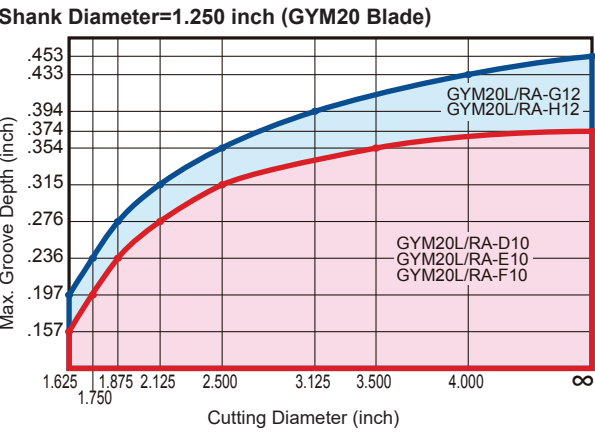
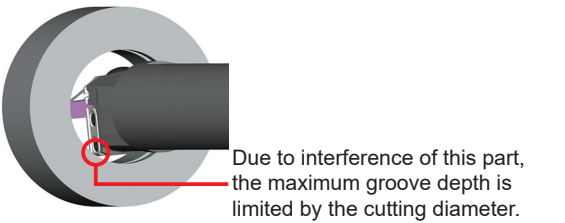
Traverse Machining (BM Breaker)



Note 1) GL chip breaker is not recommended for face grooving.

Limitation of The Maximum Groove Depth [For Internal Grooving]

- When using the mono block type
The maximum groove depth is not limited by the cutting diameter.
- When using the modular blade type
The maximum groove depth is limited by the cutting diameter.



Cut-off & Grooving System

Recommended Cutting Speed [For Internal Grooving]

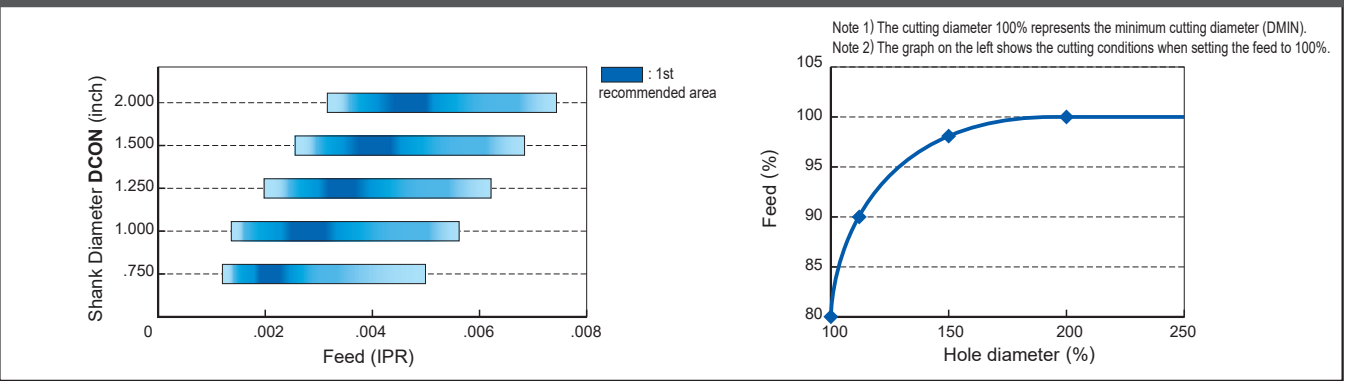
	Workpiece Material	Properties	Grade	Cutting Speed (SFM)				
				165	330	490	655	820
P	Mild Steels	Hardness ≤160HB	VP20RT		260	590		
			VP10RT		295	620		
			NX2525		230	560		
	Carbon Steels Alloy Steels	Hardness 160—280HB	VP20RT		195	460		
			VP10RT		230	490		
			MY5015		295	690		
		Hardness 280HB≤	NX2525		180	440		
			VP20RT		165	360		
			VP10RT		195	395		
M	Stainless Steels	Hardness ≤270HB	VP20RT		165	360		
			VP10RT		195	395		
K	Gray Cast Irons	Tensile Strength ≤300MPa	VP20RT		195	460		
			VP10RT		230	490		
			MY5015		295	690		
	Ductile Cast Irons	Tensile Strength ≤800MPa	VP20RT		165	360		
			VP10RT		195	395		
			MY5015		260	525		
S	Heat Resistant Alloys Titanium Alloys	—	MP9015		130	330		
			MP9025		100	295		
			VP20RT		100	195		
			VP10RT/RT9010		130	230		
H	Hardened Steels	50HRC≤	BC8110/MB8025		195	330		

Note 1) For MP9015, MP9025, VP10RT, VP20RT and MY5015, wet cutting is recommended.

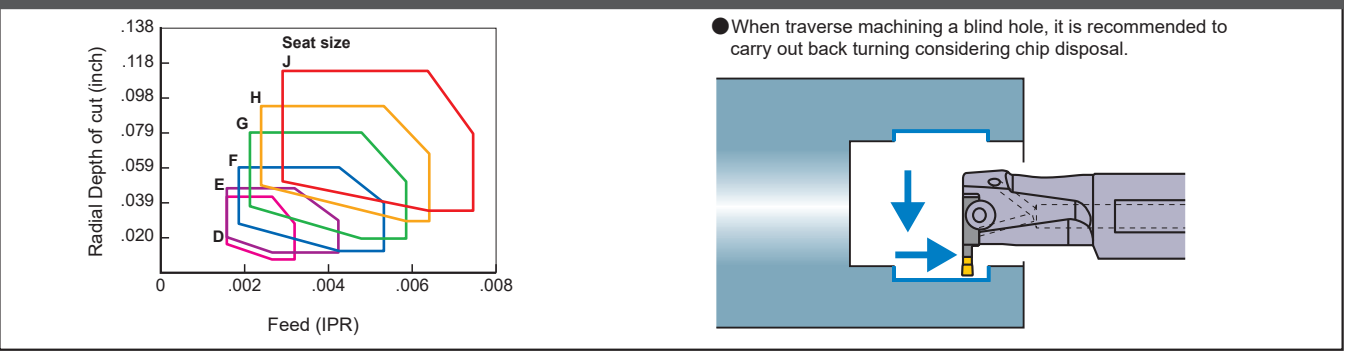
Workpiece Material		Properties	Grade	Cutting Speed v_c (SFM)					
				165	330	655	985	1310	1640
N	Aluminum Alloys	Content Si<5%	RT9010			490		1310	
	Aluminum Alloys	Content 5%≤Si≤10%	RT9010			490		1310	
	Aluminum Alloys	Content Si>10%	RT9010		260	525			

Recommended Cutting Conditions [For Internal Grooving]

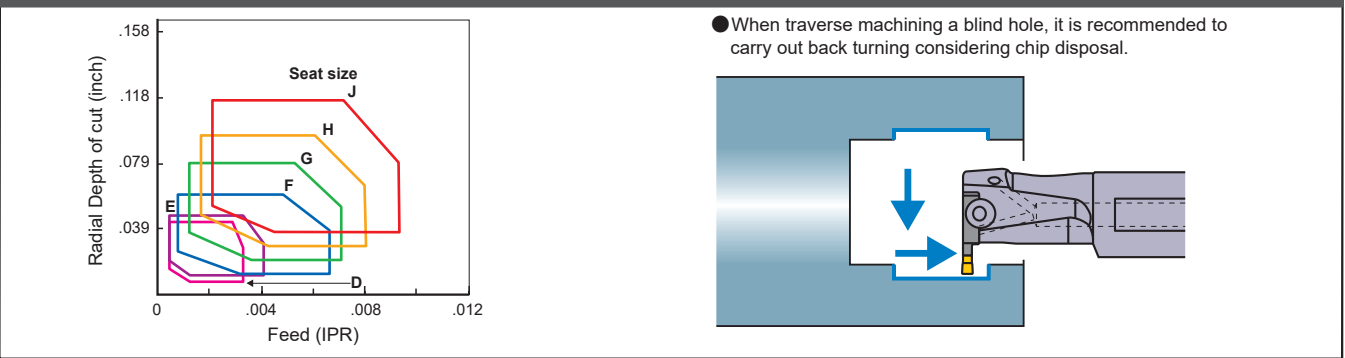
Grooving



Traverse Machining (MF Breaker)

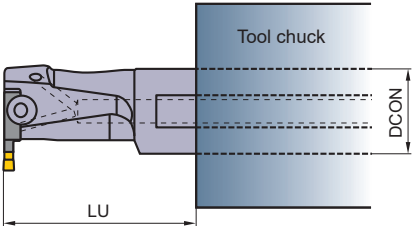


Traverse Machining (MM/MS Breaker)



Note 1) The above cutting conditions are for when using the tool overhang (LU) 1.6-2.0 times larger than the shank diameter (DCON). (L/D=1.6-2.0)
When using L/D larger than 2.0, reduce the cutting conditions.

Seat Size	
Insert Width	
D	.079" 2.00 mm .088" 2.24 mm
E	.094" 2.39 mm .098" 2.50 mm .108" 2.74 mm
F	.118" 3.00 mm .125" 3.18 mm .128" 3.24 mm
G	.157" 4.00 mm .167" 4.24 mm
H	.187" 4.75 mm .197" 5.00 mm .206" 5.24 mm
J	.236" 6.00 mm .248" 6.31 mm .250" 6.35 mm



GW Series

Recommended Cutting Conditions

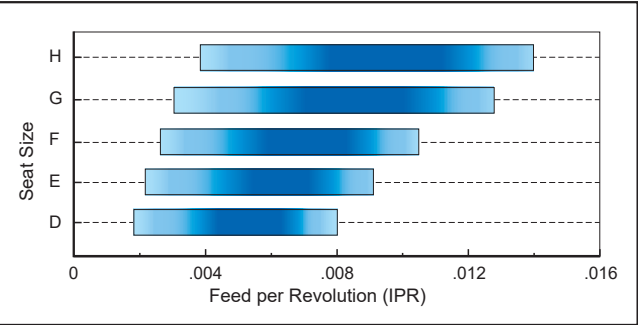
Cutting Speed

Work Material	Properties	Grade	Cutting Speed vc (SFM)					
			165	330	490	655	820	985
P	Mild Steels	Hardness ≤160HB	VP20RT	330		785		
				360		820		
	Carbon Steels Alloy Steels	Hardness 160—280HB	VP20RT	260		655		
			VP10RT	295		690		
			VP30RT	195		590		
			MY5015	360		820		
		Hardness ≥280HB	VP20RT	195		525		
			VP10RT	230		560		
			VP30RT	130		460		
			MY5015	295		690		
M	Stainless Steels	Hardness ≤270HB	VP20RT	195		590		
			VP10RT	230		620		
			VP30RT	130		525		
K	Gray Cast Irons	Tensile Strength ≤300MPa	VP20RT	260		655		
			VP10RT	295		690		
			MY5015	460		985		
	Ductile Cast Irons	Tensile Strength ≤800MPa	VP20RT	195		525		
			VP10RT	230		560		
			MY5015	295		690		
S	Heat Resistant Alloys Titanium Alloys	—	VP20RT	100 195				
			VP10RT	130 230				

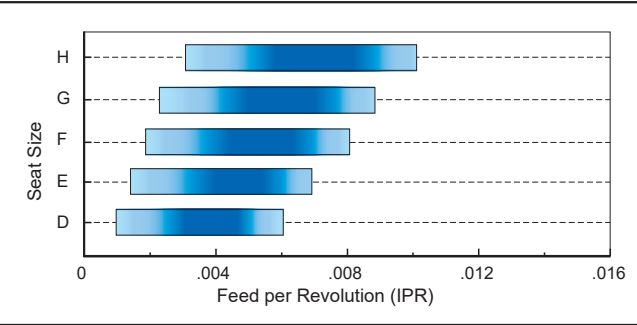
Note 1) VP20RT is the first recommended grade for materials.
Note 2) For VP10RT, VP20RT, VP30RT and MY5015, wet cutting is recommended.

Feed per Revolution

GM Breaker



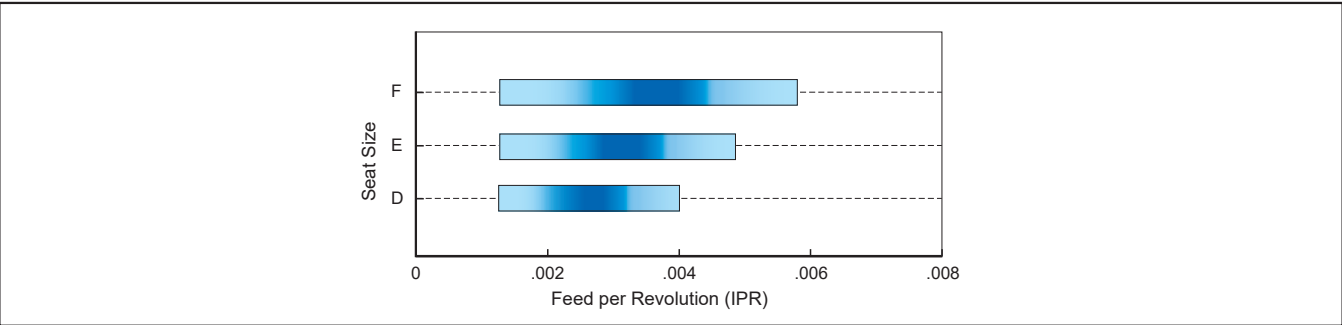
GS Breaker



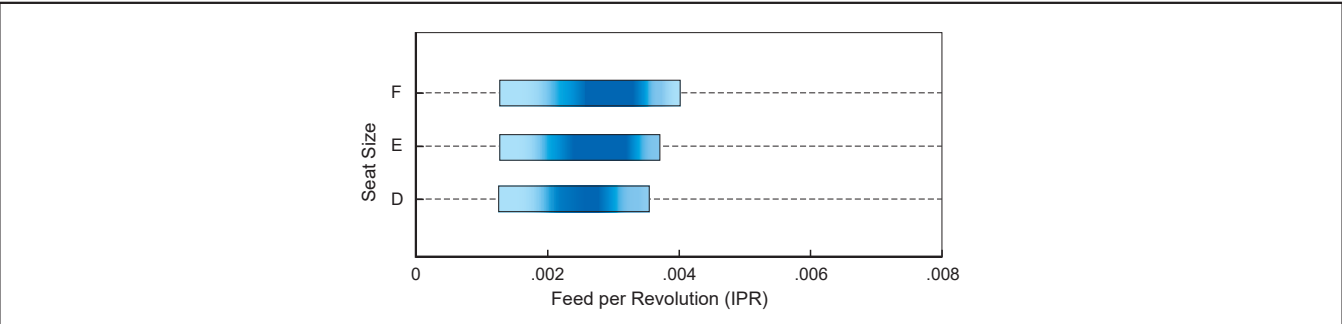
Chip Breaker	Feed per Revolution (IPR)				
	Seat Size D	Seat Size E	Seat Size F	Seat Size G	Seat Size H
GM Breaker	.0020 – .0079	.0024 – .0091	.0028 – .0102	.0031 – .0126	.0039 – .0138
GS Breaker	.0012 – .0059	.0016 – .0067	.0020 – .0079	.0024 – .0087	.0031 – .0098

Cutting Off Feed per Revolution

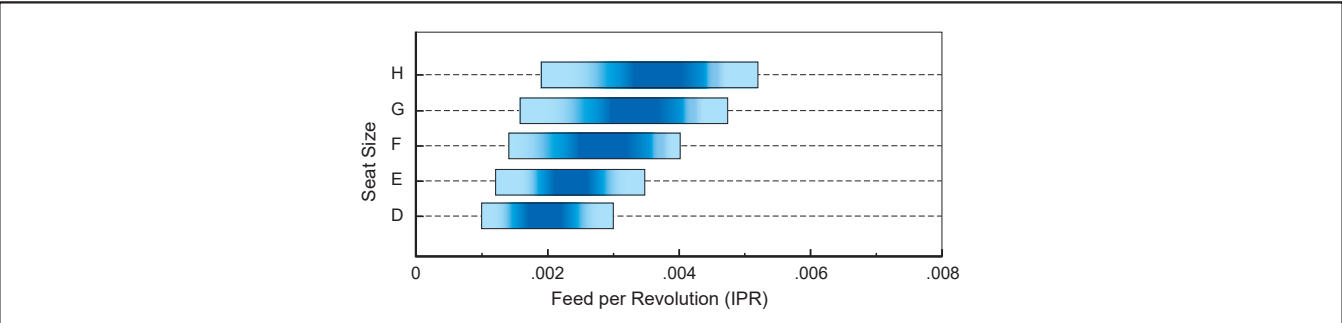
R05-GS Breaker



R08-GS Breaker



R/L05-GM Breaker



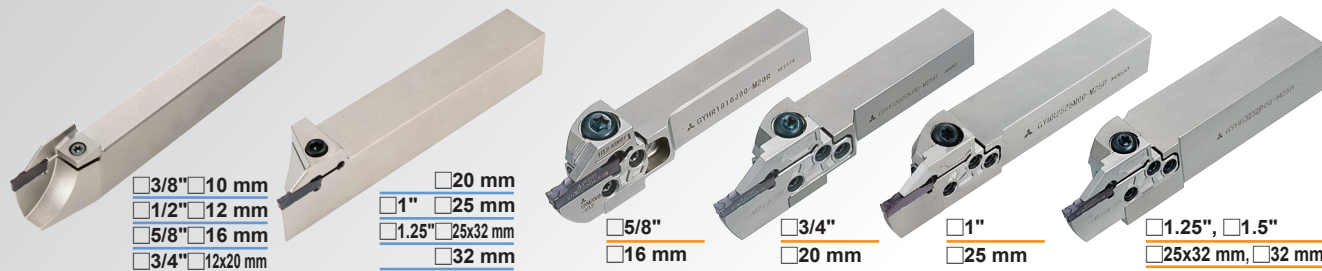
Chip Breaker	PSIPR	Hand	Feed per Revolution (IPR)				
			Seat Size D	Seat Size E	Seat Size F	Seat Size G	Seat Size H
R05-GS	5°	R	.0012 – .0039	.0012 – .0047	.0012 – .0055	—	—
R08-GS	8°	R	.0012 – .0031	.0012 – .0035	.0012 – .0055	—	—
R05-GM	5°	R/L	.0020 – .0059	.0024 – .0067	.0028 – .0079	.0031 – .0091	.0039 – .0102

GY Series

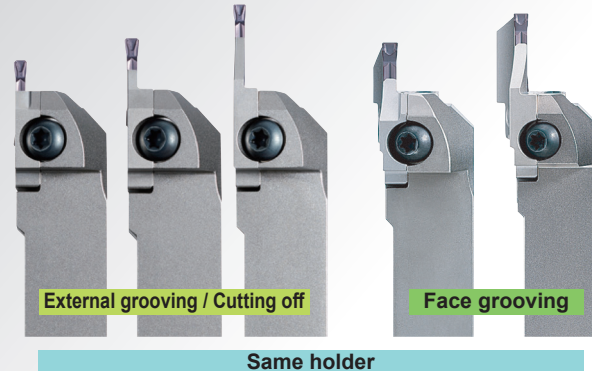
A wide selection of holders and inserts available for diverse grooving and cutting off applications

External • Face holders

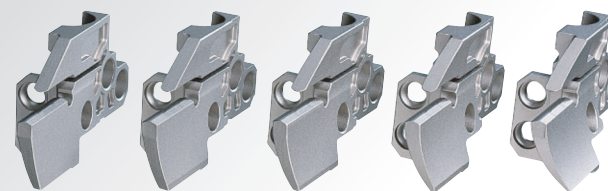
Corresponding blades to a variety of modular holders with different shank sizes



A wide selection of holders and inserts available for diverse grooving and cutting off applications

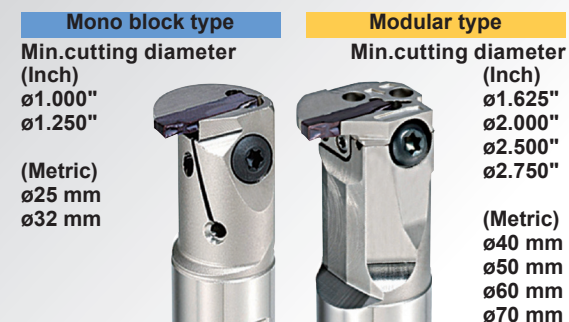


Applicable for various diameters of face grooves by the wide array of modular blades with different grooving diameters

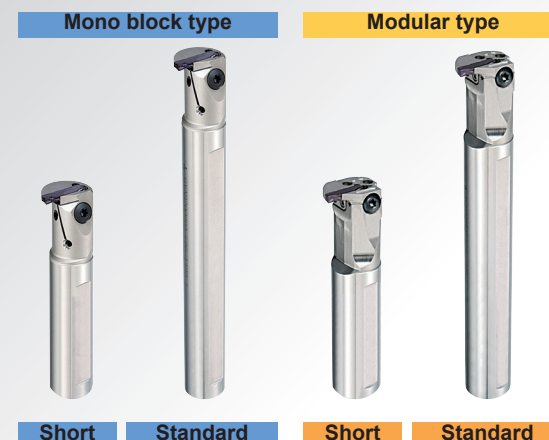


Internal holders

A wide range of holders available from minimum diameter of $\varnothing 25$ mm



Short shank types are standard stocked

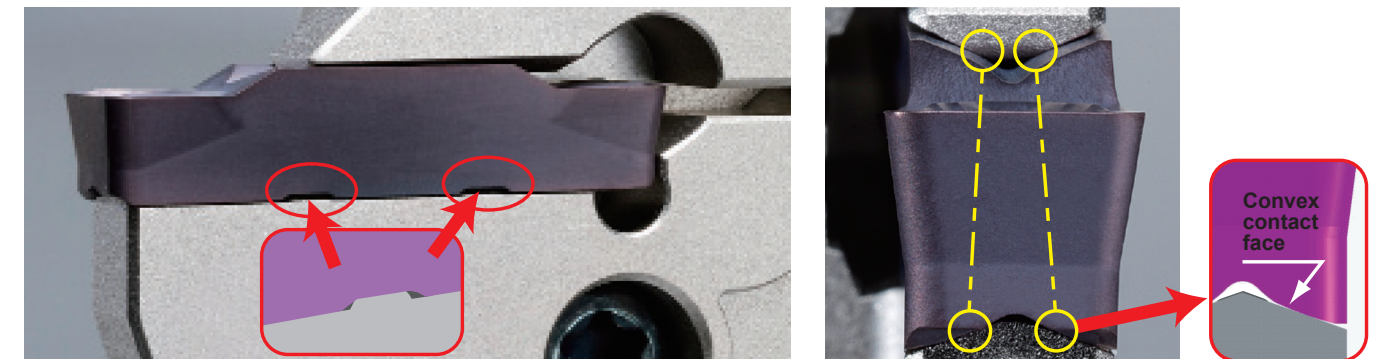


Original insert design leading the way to new grooving and cutting off applications

Highly reliable insert clamping

Safety keys prevent insert movement.

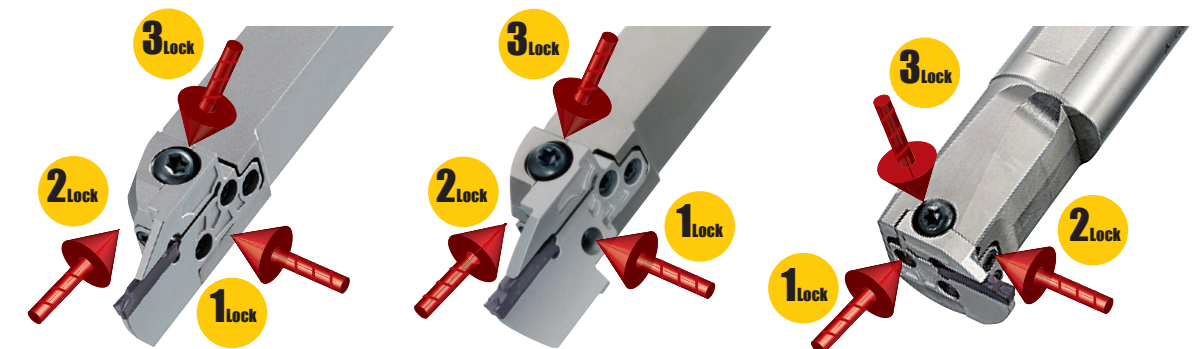
The convex geometry ensures high precision clamping.



New TRI-LOCK System for increased stability and performance!

TRI-LOCK System

The TRI-LOCK system ensures the blade is securely fixed in 3 directions (side, front and top), giving high rigidity for stable grooving and cutting off performance.



A WIDE SELECTION OF INSERTS

● Selection of groove widths



● Different corner radii available



GW Series

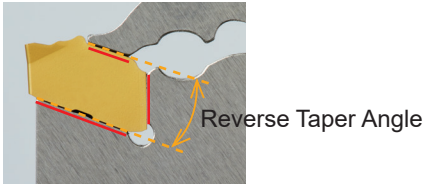
Easy to Utilize Configuration that Improves Tool Handling

Clamp

Simple insert clamping method offering high rigidity.

To prevent the insert from being pulled out during machining a reverse taper angle has been designed from the front of the insert. Additionally the design also includes 3 large locating faces between the insert and the blade offering increased cutting edge reliability. The blade itself is made from a special alloy steel to suit this application.

In respect to insert indexing, a unique wrench is supplied to ensure ease when changing the insert.



Voice of Developer

Just how easy is it to set an insert?

With the use of a unique wrench, it is possible to locate and remove the insert with one simple action making it easier for use in the workplace.

Through Coolant Blade

Increased wear resistance due to the use of 2 through coolant ejection holes.

2 through coolant holes supply the coolant to both the rake and flank face, leading to effective cutting edge cooling and increased wear resistance.

Additionally this blade can also be used for both low pressure and high pressure coolant (1000 PSI).



Voice of Developer

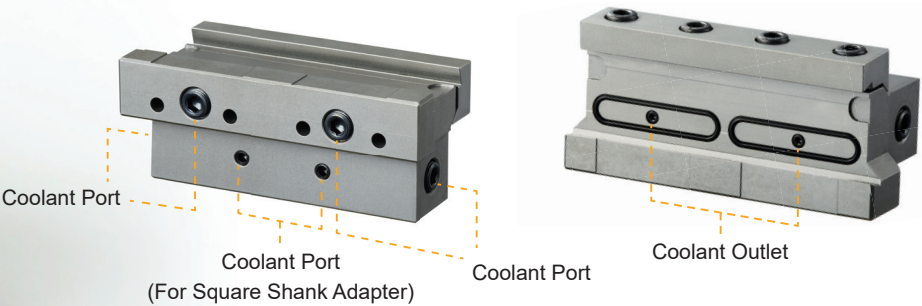
How is it possible to reduce heat generation?

The 2 coolant holes used in the blade are capable of using high coolant pressures of up (1000 PSI). This is achieved by using as large as possible through coolant hole diameter. The ejection holes are located close to the cutting edge to improve the cutting edge cooling effect and increasing wear resistance.

Coolant Ports

Flexible set up possible with the use of 6 coolant ports.

There are 6 coolant ports designed into the tool block. This makes it easier for the end user to set up the tool block and blade to a configuration that suits their needs. If necessary it is also possible to use coolant hose. The ejection type coolant also improves cutting edge cooling and chip evacuation.



Voice of Developer

Possible set up to suit the requirements of the workplace environment.

One of the objectives of this product is to respond to the customers complaints that “the product did not fit and could not be used”. Starting with the coolant outlet that prevents leaks even when oil quantity or overhangs change. Everything from the material and the shape of the O-ring, to the length of the hose has been tailored to the effective use in the workplace.

Cutting Off & Grooving System

C009A 2019-2020

General Catalog



B225A TOOL NEWS

GW Series



Memo



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Fax: 248.308.2627

FOR YOUR SAFETY

- Don't handle inserts and chips without gloves.
- Please machine within the recommended application range and exchange expired tools with new ones in advance of breakage.
- Please use safety covers and wear safety glasses.
- When using compounded cutting oils, please take fire precautions.
- When attaching inserts or spare parts, please use only the correct wrench or driver.
- When using rotating tools, please make a trial run to check run-out, vibration and abnormal sounds etc.

www.mmc-carbide.com/us

Tools specifications subject to change without notice.

B255A-G-US-2022.10