

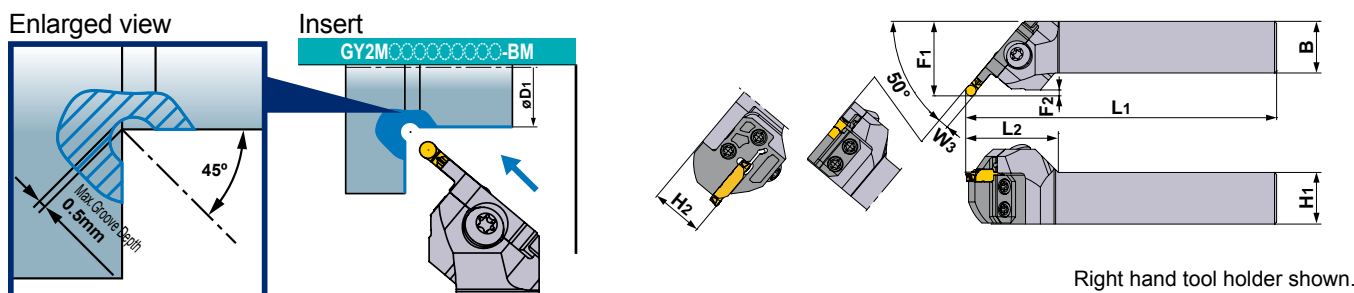
Grooving System

GY

Holders and blades for recessing now available.



EXTERNAL RECESSING



Right hand tool holder shown.

Seat Size	Insert Width W ₃ (mm)	Hand (R/L)	Max. Groove Depth (mm)	Min. Grooving Diameter D ₁ (mm)	ID	Order Number				Dimensions (mm)				Insert Geometry			
						Modular Blade	Stock	Modular Holder	Stock	H ₁	B	L ₁	L ₂		H ₂	F ₁	F ₂
D	2.00	R	0.5	30	(3E1R3D1)	GYM20LC-D005	●	GYHR2020K50-M20L	●	20	20	125	40	20	32	1.6	● GY2M0200D100N-BM
			0.5	30	(3G1R4D1)	GYM25LC-D005	●	GYHR2525M50-M25L	●	25	25	150	45	25	35	1.6	
		L	0.5	30	(3E1L3D1)	GYM20RC-D005	●	GYHL2020K50-M20R	●	20	20	125	40	20	32	1.6	
			0.5	30	(3G1L4D1)	GYM25RC-D005	●	GYHL2525M50-M25R	●	25	25	150	45	25	35	1.6	
E	2.50	R	0.5	30	(3E1R3E1)	GYM20LC-E005	●	GYHR2020K50-M20L	●	20	20	125	40	20	32	1.8	● GY2M0250E125N-BM
			0.5	30	(3G1R4E1)	GYM25LC-E005	●	GYHR2525M50-M25L	●	25	25	150	45	25	35	1.8	
		L	0.5	30	(3E1L3E1)	GYM20RC-E005	●	GYHL2020K50-M20R	●	20	20	125	40	20	32	1.8	
			0.5	30	(3G1L4E1)	GYM25RC-E005	●	GYHL2525M50-M25R	●	25	25	150	45	25	35	1.8	
F	3.00 3.18	R	0.5	30	(3E1R3F1)	GYM20LC-F005	●	GYHR2020K50-M20L	●	20	20	125	40	20	32	2.0	● GY2M0300F150N-BM
			0.5	30	(3G1R4F1)	GYM25LC-F005	●	GYHR2525M50-M25L	●	25	25	150	45	25	35	2.0	
		L	0.5	30	(3E1L3F1)	GYM20RC-F005	●	GYHL2020K50-M20R	●	20	20	125	40	20	32	2.0	
			0.5	30	(3G1L4F1)	GYM25RC-F005	●	GYHL2525M50-M25R	●	25	25	150	45	25	35	2.0	
G	4.00	R	0.5	20	(3E1R3G1)	GYM20LC-G005	●	GYHR2020K50-M20L	●	20	20	125	40	20	32	2.4	● GY2M0400G200N-BM
			0.5	20	(3G1R4G1)	GYM25LC-G005	●	GYHR2525M50-M25L	●	25	25	150	45	25	35	2.4	
		L	0.5	20	(3E1L3G1)	GYM20RC-G005	●	GYHL2020K50-M20R	●	20	20	125	40	20	32	2.4	
			0.5	20	(3G1L4G1)	GYM25RC-G005	●	GYHL2525M50-M25R	●	25	25	150	45	25	35	2.4	
H	4.75 5.00	R	0.5	20	(3E1R3H1)	GYM20LC-H005	●	GYHR2020K50-M20L	●	20	20	125	40	20	33	2.8	● GY2M0475H238N-BM GY2M0500H250N-BM
			0.5	20	(3G1R4H1)	GYM25LC-H005	●	GYHR2525M50-M25L	●	25	25	150	45	25	36	2.8	
		L	0.5	20	(3E1L3H1)	GYM20RC-H005	●	GYHL2020K50-M20R	●	20	20	125	40	20	33	2.8	
			0.5	20	(3G1L4H1)	GYM25RC-H005	●	GYHL2525M50-M25R	●	25	25	150	45	25	36	2.8	
J	6.00 6.35	R	0.5	20	(3G1R4J1)	GYM25LC-J005	●	GYHR2525M50-M25L	●	25	25	150	44	25	36	3.4	● GY2M0600J300N-BM GY2M0635J318N-BM
		L	0.5	20	(3G1L4J1)	GYM25RC-J005	●	GYHL2525M50-M25R	●	25	25	150	44	25	36	3.4	

* The blade for external grooving and face grooving cannot be used due to interference with the workpiece.

* Dimensions shown are when the gauge insert is used. If other insert geometries are used then L₁, L₂, F₁ and F₂ values may vary.

* For modular blades and modular holders, please order separately.

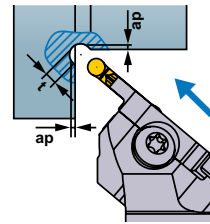
* Please use left hand modular blades for right hand modular holders, and right hand modular blades for left hand modular holders.

● : Inventory maintained.

INSERTS

Application	Geometry	Order Number	Stock				Seat Size	Dimensions (mm)				
			Coated		Cermet			W3		Re	(Max.) ar	L2
			VP10RT	VP20RT	MY5015	NX2525		Grooving Width	Tolerance			
For Copying and Recessing		GY2M0200D100N-BM	●	●	●	●	D	2.00	±0.03	1.00	19.5	20.90
		0250E125N-BM	●	●	●	●	E	2.50	±0.03	1.25	19.3	20.90
		0300F150N-BM	●	●	●	●	F	3.00	±0.03	1.50	19.0	20.90
		0318F159N-BM	●	●	●	●	F	3.18	±0.03	1.59	18.9	20.90
		0400G200N-BM	●	●	●	●	G	4.00	±0.04	2.00	23.4	25.80
		0475H238N-BM	●	●	●	●	H	4.75	±0.04	2.38	22.9	25.80
		0500H250N-BM	●	●	●	●	H	5.00	±0.04	2.50	22.8	25.80
		0600J300N-BM	●	●	●	●	J	6.00	±0.04	3.00	22.5	25.90
		0635J318N-BM	●	●	●	●	J	6.35	±0.04	3.18	22.3	25.90

Distance from the workpiece to the recess depth



Grooving Width W (mm)	Recessing Depth t (mm)	Distance workpiece to the recess depth ap (mm)
2.00	1.50	0.646
2.50	1.75	0.72
3.00	2.00	0.793
3.18	2.09	0.819
4.00	2.50	0.939
4.75	2.88	1.049
5.00	3.00	1.086
6.00	3.50	1.232
6.35	3.68	1.283

● : Inventory maintained. (10 inserts in one case)

RECOMMENDED CUTTING SPEED

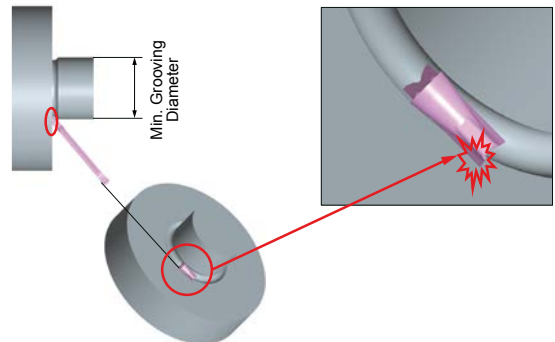
Work Material	Hardness	Grade	Cutting Speed (m/min)				
			50	100	150	200	250
P Mild Steel (SS400, S10C.) Carbon Steel Alloy Steel (S45C, SCM440)	≤180HB	VP20RT		80	180		
		VP10RT		90	190		
		VP20RT	60	140			
	180-280HB	VP10RT	70	150			
		MY5015		90	210		
		NX2525	55	135			
280-350HB	VP20RT	50	110				
	VP10RT	60	120				
	MY5015		80	160			
	NX2525	45	105				
M Stainless Steel (SUS304)	≤350HB	VP20RT	50	110			
		VP10RT	60	120			
K Gray Cast Iron (FC300) Ductile Cast Iron (FCD700)	≤350MPa	VP20RT	60	140			
		VP10RT	70	150			
		MY5015		90	210		
	≤800MPa	VP20RT	50	110			
		VP10RT	60	120			
		MY5015	80	160			
S Titanium Alloy (Ti6Al4V) Heat Resistant Alloy (Inconel718)		VP20RT	30	60			
		VP10RT	40	70			
		VP20RT	30	60			
		VP10RT	40	70			

(Note 1) VP20RT is the first recommended grade for materials other than hardened steel.
 (Note 2) For VP10RT, VP20RT and MY5015, wet cutting is recommended.

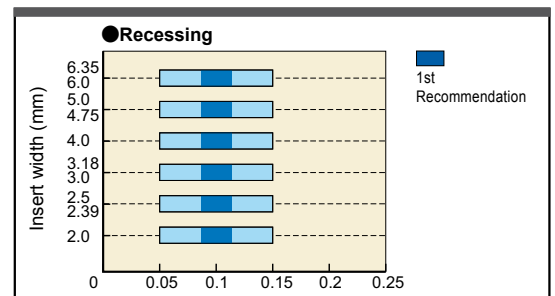
BM BREAKER

Minimum grooving diameter

Ensure the tool is suitable for the diameter being machined. Refer to the Min. Grooving Diameter D1 as shown in the table on the first page to avoid a collision with the workpiece as shown below.



Recommended feed rate and depth of cut



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MMC HARTMETALL GmbH
 Comeniusstr. 2, 40670 Meerbusch, Germany
 Tel. +49-2159-9189-0 Fax +49-2159-918966
 e-mail admin@mmchg.de

MITSUBISHI MATERIALS ESPAÑA, S.A.
 Calle Emperador 2, 46136 Museros/Valencia, Spain
 Tel. +34-96-144-1711 Fax +34-96-144-3786
 e-mail mme@mmevalencia.com

MMC HARDMETAL RUSSIA OOO LTD.
 UL. Bolschaja Semenovskaya, 11, bld 5, 107023 Moscow, Russia
 Tel. +7-495-72558-85 Fax +7-495-98139-73
 e-mail info@mmc-carbide.ru

MMC HARDMETAL U.K. LTD.
 Mitsubishi House, Galena Close, Tamworth, Staffs. B77 4AS, U.K.
 Tel. +44-1827-312312 Fax +44-1827-312314
 e-mail sales@mitsubishicarbide.co.uk

MMC ITALIA S.r.l.
 V.le Delle Industrie 2, 20020 Arese (Milano), Italy
 Tel. +39-02 93 77 03 1 Fax +39-02 93 58 90 93
 e-mail info@mmc-italia.it

MMC METAL FRANCE s.a.r.l.
 6, Rue Jacques Monod, 91400 Orsay, France
 Tel. +33-1-69 35 53 53 Fax +33-1-69 35 53 50
 e-mail mmsales@mmc-metal-france.fr

MMC HARDMETAL POLAND SP. z o.o.
 Al. Armii Krajowej 61, 50-541 Wrocław, Poland
 Tel. +48-71335-16-20 Fax +48-71335-16-21
 e-mail sales@mitsubishicarbide.com.pl