CARBIDE

YG

Being the best through innovation



X5070 END MILLS

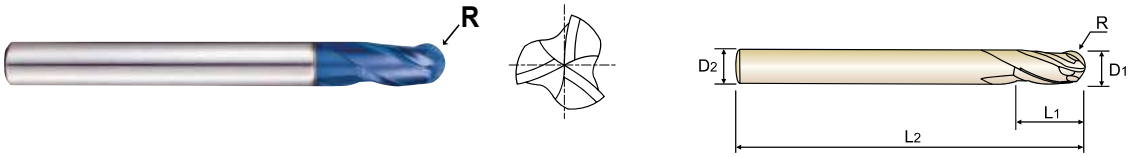
- High Hardened Steels HRc45 to HRc70, High Speed Machining, Dry Cutting

X5070 END MILLS

G8A59 SERIES PLAIN SHANK

CARBIDE, 3 FLUTE BALL NOSE

- Designed to machine high hardened materials.
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
- Excellent workpiece finish.
- Designed for high precision milling operation.
- Higher wear-resistance.



NG | 3 | BLUE | 30° | R ±0.005 (R1.5~R3) | R ±0.010 (R4~R10) | PLAIN

P.655

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Overall Length
		Metric	Inch			
	R	D_1		D_2	L_1	L_2
G8A59030	R1.5	3.0	.1181	6	8	60
G8A59040	R2.0	4.0	.1575	6	8	70
G8A59050	R2.5	5.0	.1969	6	10	80
G8A59060	R3.0	6.0	.2362	6	12	90
G8A59080	R4.0	8.0	.3150	8	14	100
G8A59100	R5.0	10.0	.3937	10	18	100
G8A59120	R6.0	12.0	.4724	12	22	110
G8A59160	R8.0	16.0	.6299	16	30	140
G8A59200	R10.0	20.0	.7874	20	38	160

The original bright blue color may discolor during use, however, the performance will not be negatively affected

Size	Radius Tolerance (mm)	Mill Dia. Tolerance (mm)	Shank Dia. Tolerance
up to R3	±0.005	0~-0.012	h6
over R3	±0.010	0~-0.015	

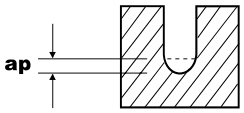
◎ : Excellent ○ : Good

P					H	M	K	N					S	
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Stainless Steels	Cast Iron	Copper	Graphite	Aluminum	Acrylic	CFRP	Titanium	High Temperature Alloy
~HRc20	HRc20~30	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
		○	○	◎	◎									

CARBIDE, 2 FLUTE BALL NOSE for RIB PROCESSING

G8A46, G8A54 SERIES

MATERIAL	P						H			N		
	ALLOY STEELS HEAT RESISTANT STEELS			HARDENED STEELS			HIGH HARDENED STEELS			COPPER		
HARDNESS	HRc30 ~ HRc45			HRc45 ~ HRc55			HRc55 ~ HRc65					
DIAMETER	RPM	FEED	ap (mm)	RPM	FEED	ap (mm)	RPM	FEED	ap (mm)	RPM	FEED	ap (mm)
R0.1 × 0.2	50000	11.8~13.8	0.006~0.016	50000	10.4~12.2	0.005~0.013	50000	8.9~10.4	0.005~0.012	50000	17.9~20.9	0.010~0.022
R0.15 × 0.3	48000~50000	18.9~20.5	0.010~0.017	48000~50000	17.3~18.1	0.008~0.014	46000~50000	15.4~16.5	0.007~0.013	48000~50000	27.2~31.1	0.002~0.023
R0.2 × 0.4	48000~50000	28.4~31.1	0.013~0.032	48000~50000	17.7~21.7	0.011~0.026	46000~50000	15.8~18.1	0.010~0.024	48000~50000	39.4~45.3	0.019~0.048
R0.25 × 0.5	34100~49500	23.6~34.3	0.007~0.028	31900~35200	19.3~21.3	0.005~0.023	31900~35200	17.3~18.9	0.005~0.021	49000~50000	39.4~55.1	0.010~0.042
R0.3 × 0.6	28600~40700	23.2~33.5	0.007~0.034	26400~29700	18.9~21.3	0.006~0.028	26400~29700	15.8~18.9	0.006~0.025	42000~50000	43.3~66.9	0.011~0.050
R0.4 × 0.8	22000~30800	25.2~35.0	0.016~0.064	19800~22000	19.3~21.7	0.013~0.052	19800~22000	17.3~19.7	0.012~0.048	31000~50000	43.3~88.6	0.024~0.096
R0.5 × 1.0	17600~24200	23.6~33.5	0.008~0.080	15400~17600	18.5~21.3	0.007~0.065	15400~17600	17.3~19.7	0.006~0.060	24000~49500	43.3~86.6	0.012~0.120
R0.6 × 1.2	14300~18700	23.2~30.7	0.024~0.032	12000~14000	18.9~21.3	0.020~0.026	12000~14000	16.5~18.9	0.018~0.024	28500~38500	58.3~76.8	0.036~0.048
R0.75 × 1.5	11000~14300	22.8~29.9	0.031~0.048	10000~11500	18.9~21.3	0.025~0.039	10000~11500	16.5~18.9	0.023~0.036	17000~28500	43.3~76.8	0.046~0.072
R1.0 × 2.0	8500~11000	23.2~31.5	0.024~0.160	7900~8800	18.5~20.9	0.020~0.130	7900~8800	17.3~18.9	0.018~0.120	12600~24000	43.3~84.7	0.036~0.240
R1.5 × 3.0	5700~8200	28.7~39.4	0.064~0.240	5300~5800	23.2~25.6	0.052~0.195	5300~5800	21.7~24.4	0.048~0.120	11900~17000	72.8~106.3	0.096~0.360
R2.0 × 4.0	4300~6200	26.8~39.0	0.080~0.320	3950~4400	21.7~24.4	0.065~0.026	3850~4400	20.9~22.4	0.060~0.240	6600~12500	49.6~98.4	0.120~0.480

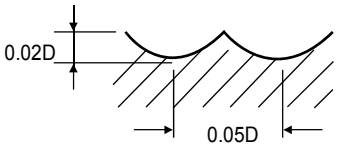


RPM = rev./min.
FEED = inch/min.

CARBIDE, 3 FLUTE BALL NOSE

G8A59 SERIES

MATERIAL	P				H					
	ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HIGH HARDENED STEELS					
HARDNESS	HRc30 ~ HRc45		HRc45 ~ HRc55		HRc55 ~ HRc60		HRc60 ~ HRc65		HRc65 ~ HRc70	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R1.5 × 3.0	32000	338.6	26840	228.4	19840	168.5	18680	159.1	12780	108.7
R2.0 × 4.0	24080	303.2	20130	213.8	14880	152.8	14220	143.7	9580	98.4
R2.5 × 5.0	20000	285.4	16780	213.8	12400	145.3	11670	136.6	8000	93.3
R3.0 × 6.0	18000	337.4	15200	244.9	12200	177.2	11100	150.8	7590	96.9
R4.0 × 8.0	13500	289.4	11300	206.7	9200	156.7	8320	131.9	5690	83.9
R5.0 × 10.0	10800	257.1	9100	180.7	7350	135.8	6660	113.0	4550	77.2
R6.0 × 12.0	9050	240.2	7590	167.7	6130	125.6	5530	94.5	3800	64.6
R8.0 × 16.0	6700	181.1	5690	128.0	4600	97.6	4160	70.9	2850	48.4
R10.0×20.0	5400	141.7	4550	103.2	3670	78.0	3300	56.7	2280	38.6



RPM = rev./min.
FEED = inch/min.