CARBIDE

YG

Being the best through innovation

X-POWER END MILLS

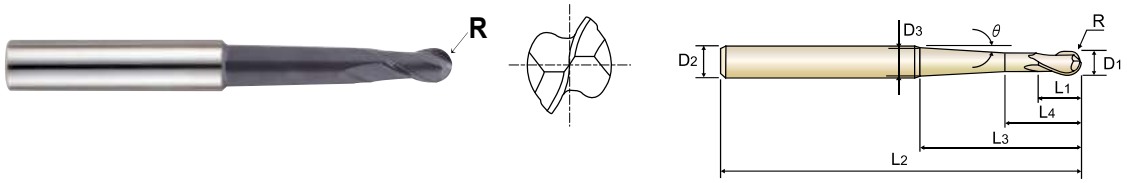
- Medium Steels to High Hardened Steels up to HRc70

X-POWER END MILLS

EM902 SERIES PLAIN SHANK

CARBIDE, 2 FLUTE BALL NOSE with TAPER NECK

▶ High efficiency milling is possible in deep slotting with projection of the end mill being long.



MG | 2 | 30° | R ±0.01 | PLAIN

P.925

◇ Call for Availability

Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter		Shank Diameter	Length of Cut	Under Neck Parallel Length	Length Below Shank	Overall Length	Neck Diameter	Neck Taper Angle
		Metric	Inch							
	R (±0.01)	D1		D2	L1	L4	L3	L2	D3	θ
EM902010	R0.5	1.0	.0394	6	2	4	23	60	2.0	1° 30′
EM902901	R0.5	1.0	.0394	6	2	4	23	60	4.3	5°
EM902902	R0.5	1.0	.0394	6	2	4	42	80	5.0	3°
EM902020	R1.0	2.0	.0787	6	4	6	23	60	2.9	1° 30′
EM902903	R1.0	2.0	.0787	6	4	6	23	60	5.0	5°
EM902904	R1.0	2.0	.0787	6	4	6	41	80	5.7	3°
EM902030	R1.5	3.0	.1181	6	6	8	32	70	5.6	3°
EM902905	R1.5	3.0	.1181	6	6	8	52	90	5.3	1° 30′
EM902040	R2.0	4.0	.1575	6	8	10	28	70	6.0	3°
EM902906	R2.0	4.0	.1575	6	8	10	49	90	6.0	1° 30′
EM902050	R2.5	5.0	.1969	8	10	12	41	90	8.0	3°
EM902907	R2.5	5.0	.1969	8	10	12	61	110	7.6	1° 30′
EM902060	R3.0	6.0	.2362	8	12	15	34	90	8.0	3°
EM902908	R3.0	6.0	.2362	8	12	15	53	110	8.0	1° 30′
EM902080	R4.0	8.0	.3150	10	14	17	36	100	10.0	3°
EM902909	R4.0	8.0	.3150	10	14	17	55	120	10.0	1° 30′
EM902100	R5.0	10.0	.3937	12	18	21	40	110	12.0	3°
EM902910	R5.0	10.0	.3937	12	18	21	59	130	12.0	1° 30′
EM902120	R6.0	12.0	.4724	16	22	25	63	140	16.0	3°
EM902911	R6.0	12.0	.4724	16	22	25	83	160	15.0	1° 30′

Mill Dia. Tolerance(mm)	Shank Dia. Tolerance
0~-0.03	h6

◎ : 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 with TAPER NECK

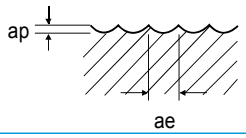
EM963, EM902 SERIES

■ NORMAL SPEED

MATERIAL	P					
	ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	HRc30 ~ HRc40		HRc45 ~ HRc50		HRc50 ~ HRc55	
STRENGTH	1000 ~ 1250N/mm^2		1250 ~ 1750N/mm^2		1750 ~ 2000N/mm^2	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
R1/32 × 1/16	9700	8.3	13800	19.9	13600	17.9
R1/16 × 1/8	8000	14.6	10200	34.6	9800	33.5
R3/32 × 3/16	5840	18.1	7500	34.6	7200	33.5
R1/8 × 1/4	5040	19.7	6900	36.2	6500	34.6
R5/32 × 5/16	3540	20.9	5600	33.1	5300	31.5
R3/16 × 3/8	3020	22.4	4850	31.5	4650	30.3
R1/4 × 1/2	2350	20.9	4350	31.5	4150	30.3

ap: D1/16~D1/4 =.008″
D5/16~D1/2 =.012″
ae: 0.2×D

ap: D1/16~D1/8 = 0.05×D
D3/16~D5/16 = .010″
D3/8~D1/2 = .012″
ae: 0.1×D



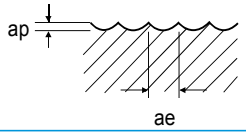
RPM = rev./min.
FEED = inch/min.

■ HIGH SPEED

MATERIAL	P					
	ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~ HRc45		HRc45 ~ HRc50		HRc50 ~ HRc55	
STRENGTH	1500N/mm^2		1250 ~ 1750N/mm^2		1750 ~ 2000N/mm^2	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
R1/32 × 1/16	18400	21.9	13800	28.9	13600	30.1
R1/16 × 1/8	16800	31.5	10200	55.1	9800	51.2
R3/32 × 3/16	16800	56.7	7500	52.0	7200	49.2
R1/8 × 1/4	16800	72.8	6900	55.1	6500	53.1
R5/32 × 5/16	12600	89.4	5600	49.2	5300	45.3
R3/16 × 3/8	10930	96.1	4850	45.3	4650	43.3
R1/4 × 1/2	8400	82.7	4350	44.5	4150	41.3

ap: D1/16~D1/4 =.008″
D5/16~D1/2 =.012″
ae: 0.05×D

ap: D1/16~D1/8 = 0.05×D
D3/16~D5/16 = .010″
D3/8~D1/2 = .012″
ae: 0.05×D



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