X-POWER END MILLS

EM876 SERIES PLAIN SHANK
GLATTER ZYLINDERSCHAFT

EM877 SERIES FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

CARBIDE, 2 FLUTE SHORT LENGTH BALL NOSE
VOLLHARTMETALL, 2 SCHNEIDEN KURZ STIRNRADIUS

- ▶ Economic type with short overall length.
- ▶ Radius tolerance ±0.02mm & short length of cut.

- ▶ Günstige Variante, kurze Gesamlänge.
- ▶ Radius Toleranz ±0.02mm und kurze Schneidenlänge.

P.892

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R (±0.02)				
EM876010	—	R0.5	1.0	3	3	38
EM876012	—	R0.6	1.2	3	3	38
EM876015	—	R0.75	1.5	3	3	38
EM876020	EM877020	R1.0	2.0	6	3	50
EM876025	EM877025	R1.25	2.5	6	4	50
EM876030	EM877030	R1.5	3.0	6	4	50
EM876040	EM877040	R2.0	4.0	6	5	54
EM876050	EM877050	R2.5	5.0	6	6	54
EM876060	EM877060	R3.0	6.0	6	7	54
EM876070	EM877070	R3.5	7.0	8	8	58
EM876080	EM877080	R4.0	8.0	8	9	58
EM876090	EM877090	R4.5	9.0	10	10	66
EM876100	EM877100	R5.0	10.0	10	11	66
EM876120	EM877120	R6.0	12.0	12	12	73
EM876140	EM877140	R7.0	14.0	14	14	75
EM876160	EM877160	R8.0	16.0	16	16	82
EM876180	EM877180	R9.0	18.0	18	18	84
EM876200	EM877200	R10.0	20.0	20	20	92
EM876250	EM877250	R12.5	25.0	25	25	104

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

◎ : Excellent ○ : Good

Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel	Acrylic	CFRP
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
○	◎	◎	◎	○	○			○						

X-POWER END MILLS

RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

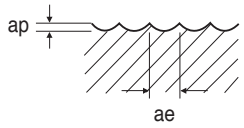
CARBIDE, 2 FLUTE BALL NOSE
VOLLHARTMETALL, 2 SCHNEIDEN STIRNRADIUS

EM876, EM877, EM813, EM823, EM878, EM879 SERIES

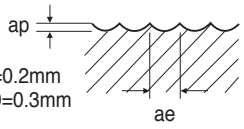
■ NORMAL SPEED

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON				ALLOY STEELS HEAT RESISTANT STEELS				HARDENED STEELS			
HARDNESS	~ HRc30				HRc30 ~ HRc40				HRc45 ~ HRc65			
STRENGTH	~ 1000N/mm²				1000 ~ 1250N/mm²				1500N/mm² ~			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R0.5 × 1.0	15760	250	50	0.008	12720	200	40	0.008	5800	90	20	0.008
R0.75 × 1.5	15760	350	75	0.011	12140	270	55	0.011	5320	120	25	0.011
R1.0 × 2.0	14400	750	90	0.026	10700	490	65	0.023	4680	150	30	0.016
R1.25 × 2.5	14400	750	115	0.026	10700	490	85	0.023	4680	150	35	0.016
R1.5 × 3.0	13100	680	125	0.026	10000	460	95	0.023	4520	150	45	0.017
R2.0 × 4.0	10500	740	130	0.035	8400	530	105	0.032	4200	180	55	0.021
R2.5 × 5.0	9140	820	145	0.045	7300	580	115	0.040	3680	180	60	0.024
R3.0 × 6.0	8490	1020	160	0.060	6900	830	130	0.060	3180	190	60	0.030
R4.0 × 8.0	7160	1290	180	0.090	5770	920	145	0.080	2470	220	62	0.045
R5.0 × 10.0	6370	1530	200	0.120	5090	1020	160	0.100	2040	225	65	0.055
R6.0 × 12.0	5840	1750	220	0.150	4640	1110	175	0.120	1750	245	65	0.070
R8.0 × 16.0	4770	1720	240	0.180	3780	1060	190	0.140	1350	245	70	0.091
R10.0 × 20.0	4140	1660	260	0.200	3260	1040	205	0.160	1110	250	70	0.113

ap: D1~D6=0.2mm
D8~D20=0.3mm
ae: 0.2 × D



ap: D1~D6=0.2mm
D8~D20=0.3mm
ae: 0.1 × D

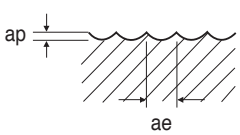


RPM = rev./min. Vc = m/min.
FEED = mm/min. fz = mm/t

■ HIGH SPEED

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON				HARDENED STEELS			
HARDNESS	~ HRc45				HRc45 ~ HRc65			
STRENGTH	~ 1500N/mm²				1500N/mm² ~			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R0.5 × 1.0	25000	1300	80	0.026	25000	800	80	0.016
R0.75 × 1.5	23000	1400	110	0.030	23000	860	110	0.019
R1.0 × 2.0	21000	1480	130	0.035	21000	940	130	0.022
R1.25 × 2.5	21000	1760	165	0.042	19000	980	150	0.026
R1.5 × 3.0	21000	2000	200	0.048	17000	1040	160	0.031
R2.0 × 4.0	21000	2940	265	0.070	13660	1160	170	0.042
R2.5 × 5.0	21000	3600	330	0.086	12000	1200	190	0.050
R3.0 × 6.0	21000	4000	395	0.095	10500	1250	200	0.060
R4.0 × 8.0	16700	4000	420	0.120	8360	1250	210	0.075
R5.0 × 10.0	14000	3900	440	0.139	7000	1200	220	0.086
R6.0 × 12.0	12200	3900	460	0.160	6100	1160	230	0.095
R8.0 × 16.0	9550	3450	480	0.181	4770	1000	240	0.105
R10.0 × 20.0	7960	3180	500	0.200	3980	920	250	0.116

ap: D1~D6=0.2mm
D8~D20=0.3mm
ae: 0.05 × D



RPM = rev./min. Vc = m/min.
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