



EM815 SERIES

PLAIN SHANK
GLATTER ZYLINDERSCHAFT

EM825 SERIES

FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

CARBIDE, 4 FLUTE LONG LENGTH BALL NOSE VOLLHARTMETALL, 4 SCHNEIDEN LANG STIRNRADIUS

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- For copy - milling machines.
- 4 Flute design - higher feed than EM813, EM823 series

- Zur Bearbeitung: Werkzeugstählen, Legierten Stählen, Stahlguß und gehärteten Stählen.
- Kopierbearbeitungen.
- 4 Schneiden - Höherer Vorschub als bei EM 813, EM 823 serien.



P.669

Unit : mm

EDP No.		Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT	R (±0.01)				
EM815010	—	R0.5	1.0	4	2.5	50
EM815901	EM825901	R0.5	1.0	6	2.5	50
EM815015	—	R0.75	1.5	4	4	50
EM815902	EM825902	R0.75	1.5	6	4	50
EM815020	EM825020	R1.0	2.0	6	5	50
EM815030	EM825030	R1.5	3.0	6	8	60
EM815040	EM825040	R2.0	4.0	6	8	70
EM815050	EM825050	R2.5	5.0	6	10	80
EM815060	EM825060	R3.0	6.0	6	12	90
EM815070	EM825070	R3.5	7.0	8	14	90
EM815080	EM825080	R4.0	8.0	8	14	100
EM815090	EM825090	R4.5	9.0	10	18	100
EM815100	EM825100	R5.0	10.0	10	18	100
EM815120	EM825120	R6.0	12.0	12	22	110
EM815140	EM825140	R7.0	14.0	14	26	110
EM815903	EM825903	R7.0	14.0	16	26	110
EM815160	EM825160	R8.0	16.0	16	30	140
EM815180	EM825180	R9.0	18.0	18	34	140
EM815200	EM825200	R10.0	20.0	20	38	160
EM815250	EM825250	R12.5	25.0	25	50	180

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
~HB225	HB225~325	HRC30~40	HRC40~45	HRC45~55	HRC55~70							
○	◎	◎	◎	○	○			○				

CARBIDE, 4 FLUTE LONG BALL NOSE

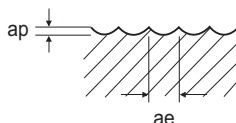
VOLLHARTMETALL, 4 SCHNEIDEN LANG STIRNRADIUS

EM815, EM825 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/mm ²		1000 ~ 1250N/mm ²		1500N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
R0.5 × 1.0	15760	380	12720	300	5800	130
R0.75 × 1.5	15760	530	12140	410	5320	180
R1.0 × 2.0	15760	800	11560	480	4840	160
R1.5 × 3.0	13100	1020	10000	690	4520	220
R2.0 × 4.0	10500	1110	8400	800	4200	270
R2.5 × 5.0	9140	1230	7300	870	3680	270
R3.0 × 6.0	8490	1530	6900	1250	3180	280
R4.0 × 8.0	7160	1950	5770	1380	2470	330
R5.0 × 10.0	6370	2300	5090	1530	2040	340
R6.0 × 12.0	5840	2600	4640	1650	1750	370
R8.0 × 16.0	4770	2600	3780	1600	1350	370
R10.0 × 20.0	4140	2500	3260	1560	1110	375

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



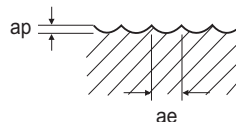
ap: D1~D6=0.2mm
D8~D20=0.3mm
ae: 0.1 × D

RPM = rev./min.
FEED = mm/min.

■ HIGH SPEED

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		HARDENED STEELS	
HARDNESS	~ HRC45		HRC45 ~ HRC65	
STRENGTH	~ 1500N/mm ²		1500N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED
R0.5 × 1.0	25000	1950	25000	1200
R0.75 × 1.5	23000	2100	23000	1290
R1.0 × 2.0	21000	2200	21000	1400
R1.5 × 3.0	21000	3000	17000	1560
R2.0 × 4.0	21000	4400	13660	1740
R2.5 × 5.0	21000	5400	12000	1800
R3.0 × 6.0	21000	6000	10500	1880
R4.0 × 8.0	16700	6000	8360	1880
R5.0 × 10.0	14000	5850	7000	1800
R6.0 × 12.0	12200	5850	6100	1740
R8.0 × 16.0	9550	5180	4770	1500
R10.0 × 20.0	7960	4770	3980	1380

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



RPM = rev./min.
FEED = mm/min.