

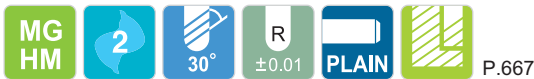
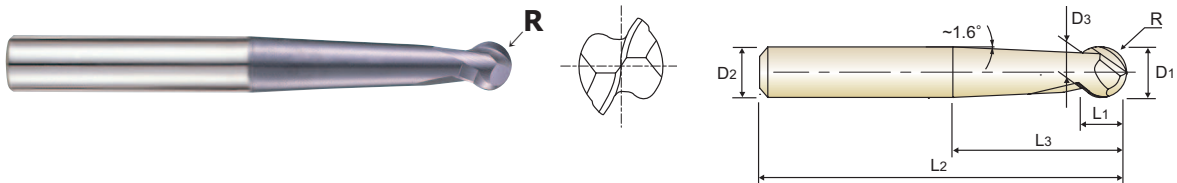


PLAIN SHANK
GLATTER ZYLINDERSCHAFT

CARBIDE, 2 FLUTE LONG LENGTH BALL NOSE-MMC
VOLLHARTMETALL, 2 SCHNEIDEN LANG STIRANRADIUS-MMC

- ▶ Designed for copy milling.
- ▶ Increased feed rates.
- ▶ 15° inclination.
- ▶ Easy to regrind.
- ▶ Radius Tolerance ±0.01mm.

- ▶ Geeignet zum Kopierfräsen.
- ▶ Höhere Vorschub möglich.
- ▶ 15° Neigung.
- ▶ Leicht nachschleifbar.
- ▶ Radius Toleranz ±0.01 mm.



● **2 FLUTE LONG LENGTH- SPHERE VERSION**
● **2 SCHNEIDEN LANG-KUGELFORM**

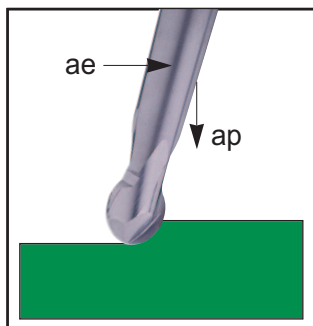
Unit : mm

EDP No.	Radius of Ball Nose	Mill Diameter	Shank Diameter	Length of Cut	Length Below Shank	Overall Length	Neck Diameter
PLAIN	R (±0.01)	D1	D2	L1	L3	L2	D3
EM863030	R1.5	3.0	6	2.3	30	80	2.5
EM863040	R2.0	4.0	6	3.1	30	80	3.3
EM863050	R2.5	5.0	6	3.9	38	80	4.1
EM863060	R3.0	6.0	6	4.9	28	100	4.7
EM863080	R4.0	8.0	8	6.3	33	100	6.5
EM863100	R5.0	10.0	10	7.9	40	100	8.2
EM863120	R6.0	12.0	12	9.5	49	100	9.8
EM863160	R8.0	16.0	16	12.4	59	150	13.4

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

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							
○	○	○	○	○	○			○				

◎ : Excellent ○ : Good

CARBIDE, 2 FLUTE BALL NOSE MMC
VOLLHARTMETALL, 2 SCHNEIDEN STIRNRADIUS MMC


▶ $ap = 0.05 \times D$
▶ $ae = 0.02 \times D$

EM669, EM863 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
R1.5 × 3.0	35000	2800	33000	2600	12000	900
R2.0 × 4.0	26000	2300	25000	2200	9000	800
R2.5 × 5.0	21000	2100	20000	2000	7000	700
R3.0 × 6.0	17000	1900	16000	1800	6000	650
R4.0 × 8.0	13000	1700	12000	1600	4500	550
R5.0 × 10.0	10500	1450	10000	1400	3500	500
R6.0 × 12.0	9000	1400	8000	1300	3000	450
R8.0 × 16.0	6000	1200	5500	1100	2000	400

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

■ HIGH 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
R1.5 × 3.0	47000	3700	44000	3500	17000	1400
R2.0 × 4.0	35000	3200	33000	3000	13000	1200
R2.5 × 5.0	28000	2800	27000	2600	10000	1100
R3.0 × 6.0	23000	2600	22000	2400	8000	950
R4.0 × 8.0	18000	2300	17000	2100	6000	850
R5.0 × 10.0	14000	2000	13000	1900	5000	750
R6.0 × 12.0	12000	1800	11000	1800	4000	700
R8.0 × 16.0	9000	1600	8000	1500	3300	600

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