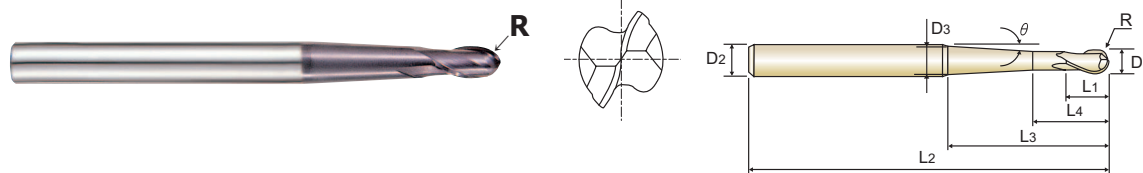


CARBIDE, 2 FLUTE BALL NOSE with TAPER NECK
VOLLHARTMETALL, 2 SCHNEIDEN STIRNRADIUS mit KONISCH ABGESETZTEM SCHAFTTEIL

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

► Effizientes Tiefnutenfräsen von tiefliegenden Bereichen möglich.



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
PLAIN	FLAT	R (±0.01)	D1	D2	L1	L4	L3	L2	D3	θ
EM902010	EM904010	R0.5	1.0	6	2	4	23	60	2	1°30'
EM902901	EM904901	R0.5	1.0	6	2	4	23	60	4.3	5°
EM902902	EM904902	R0.5	1.0	6	2	4	42	80	5	3°
EM902020	EM904020	R1.0	2.0	6	4	6	23	60	2.9	1°30'
EM902903	EM904903	R1.0	2.0	6	4	6	23	60	5	5°
EM902904	EM904904	R1.0	2.0	6	4	6	41	80	5.7	3°
EM902030	EM904030	R1.5	3.0	6	6	8	32	70	5.6	3°
EM902905	EM904905	R1.5	3.0	6	6	8	52	90	5.3	1°30'
EM902040	EM904040	R2.0	4.0	6	8	10	28	70	6	3°
EM902906	EM904906	R2.0	4.0	6	8	10	49	90	6	1°30'
EM902050	EM904050	R2.5	5.0	8	10	12	41	90	8	3°
EM902907	EM904907	R2.5	5.0	8	10	12	61	110	7	1°30'
EM902060	EM904060	R3.0	6.0	8	12	15	34	90	8	3°
EM902908	EM904908	R3.0	6.0	8	12	15	53	110	8	1°30'
EM902080	EM904080	R4.0	8.0	10	14	17	36	100	10	3°
EM902909	EM904909	R4.0	8.0	10	14	17	55	120	10	1°30'
EM902100	EM904100	R5.0	10.0	12	18	21	40	110	12	3°
EM902910	EM904910	R5.0	10.0	12	18	21	59	130	12	1°30'
EM902120	EM904120	R6.0	12.0	16	22	25	63	140	16	3°
EM902911	EM904911	R6.0	12.0	16	22	25	83	160	15	1°30'

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

◎ : Excellent ○ : Good

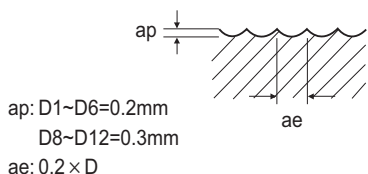
Carbon Steels	Alloy Steels	Prehardened Steels	Hardened Steels		High Hardened Steels	Copper	Graphite	Cast Iron	Aluminum	Stainless Steels	Titanium	Inconel
~HB225	HB225~325	HRC30~40	HRc40~45	HRc45~55	HRc55~70							
○	○	◎	◎	○								

CARBIDE, 2 FLUTE BALL NOSE with TAPER NECK
VOLLHARTMETALL, 2 SCHNEIDEN STIRNRADIUS mit KONISCH ABGESETZTEM SCHAFTTEIL

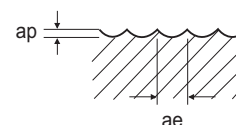
EM902, EM904 SERIES

■ NORMAL SPEED

MATERIAL	ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	HRC30 ~ HRC40		HRC40 ~ HRC50		HRC50 ~ HRC55	
STRENGTH	1000 ~ 1250N/mm ²		1250 ~ 1750N/mm ²		1750 ~ 2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
R0.5 × 1.0	10180	160	16000	370	16000	320
R1.0 × 2.0	9250	260	11500	640	11300	590
R1.5 × 3.0	8000	370	10200	880	9800	850
R2.0 × 4.0	6720	420	8500	880	8200	850
R2.5 × 5.0	5840	460	7500	880	7200	850
R3.0 × 6.0	5500	660	6900	920	6500	880
R4.0 × 8.0	4600	740	5600	840	5300	800
R5.0 × 10.0	4070	820	4850	800	4650	770
R6.0 × 12.0	3700	890	4350	800	4150	770



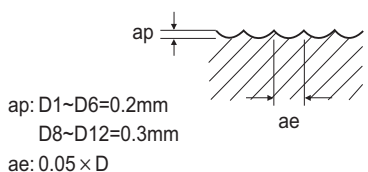
ap: D1~D4=0.05 × D
D5~D8=0.25mm
D10~D12=0.30mm
ae: 0.1 × D



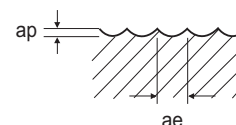
RPM = rev./min.
FEED = mm/min.

■ HIGH SPEED

MATERIAL	NON-ALLOY STEELS ALLOY STEELS CAST IRON		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
R0.5 × 1.0	20000	1040	16000	620	16000	550
R1.0 × 2.0	16800	1200	11500	850	11400	980
R1.5 × 3.0	16800	1600	10200	1400	9800	1300
R2.0 × 4.0	16800	2350	8500	1350	8200	1300
R2.5 × 5.0	16800	2880	7500	1320	7200	1250
R3.0 × 6.0	16800	3200	6900	1400	6600	1350
R4.0 × 8.0	13400	3200	5600	1250	5300	1150
R5.0 × 10.0	11200	3100	4800	1150	4600	1100
R6.0 × 12.0	9800	3100	4350	1130	4150	1050



ap: D1~D4=0.05 × D
D5~D8=0.25mm
D10~D12=0.30mm
ae: 0.05 × D



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