

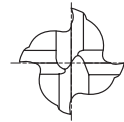
PLAIN SHANK
GLATTER ZYLINDERSCHAFT

FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

CARBIDE, 4 FLUTE LONG LENGTH VOLLHARTMETALL, 4 SCHNEIDEN LANG

- ▶ Designed to machine tool steels, alloy steels, mold steels and other hardened materials.
- ▶ 4 flute allows for better workpiece finishes.
- ▶ Increased production.

- ▶ Zur Bearbeitung: Werkzeugstählen, Legierten Stählen, Stahlguß und gehärteten Stählen.
- ▶ 4 Schneiden erzeugen eine bessere Oberfläche des Werkstücks.
- ▶ Höhere Produktivität.



Unit : mm

EDP No.	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
EM817020	2.0	4	8	40
EM817030	3.0	6	12	50
EM817040	4.0	6	15	50
EM817050	5.0	6	20	60
EM817060	6.0	6	20	60
EM817080	8.0	8	25	70
EM817100	10.0	10	30	90
EM817120	12.0	12	30	90
EM817140	14.0	16	40	110
EM817160	16.0	16	50	110
EM817180	18.0	20	50	110
EM817200	20.0	20	55	110
EM817250	25.0	25	75	140

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	Acrylic	CFRP
~HB225	HB225~325	HRc30~40	HRc40~45	HRc45~55	HRc55~70									
○	◎	◎	◎	○				○						

◎ : Excellent ○ : Good

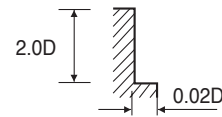
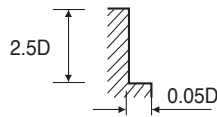


**RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN**

**CARBIDE, 4 FLUTE LONG - SIDE CUTTING
VOLLHARTMETALL, 4 SCHNEIDEN LANG - SEITENFRÄSEN**

EM817, EM827 SERIES

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON				ALLOY STEELS HEAT RESISTANT STEELS				HARDENED STEELS				HARDENED STEELS			
HARDNESS	~ HRc30				HRc30 ~ HRc45				HRc45 ~ HRc55				HRc55 ~ HRc65			
STRENGTH	~ 1000N/mm ²				1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²				2000N/mm ² ~			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
2.0	8820	200	55	0.006	5040	80	30	0.004	3150	45	20	0.004				
3.0	6170	230	60	0.009	3570	100	35	0.007	2200	55	20	0.006	1890	30	20	0.004
4.0	5000	280	65	0.014	2840	115	35	0.010	1790	60	20	0.008	1470	35	20	0.006
5.0	4270	360	65	0.021	2420	140	40	0.014	1580	70	25	0.011	1260	40	20	0.008
6.0	3680	430	70	0.029	2100	180	40	0.021	1370	90	25	0.016	1160	50	20	0.011
8.0	2800	460	70	0.041	1580	180	40	0.028	1050	90	25	0.021	840	50	20	0.015
10.0	2350	460	75	0.049	1370	180	45	0.033	840	90	25	0.027	670	50	20	0.019
12.0	1920	360	70	0.047	1160	160	45	0.034	700	70	25	0.025	560	40	20	0.018
16.0	1620	320	80	0.049	890	125	45	0.035	560	60	30	0.027	440	35	20	0.020
20.0	1180	230	75	0.049	680	90	45	0.033	420	45	25	0.027	340	25	20	0.018



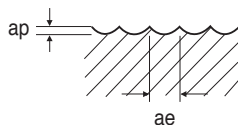
RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/t

**CARBIDE, 2 FLUTE MINIATURE BALL NOSE
VOLLHARTMETALL, 2 SCHNEIDEN MINI STIRNRADIUS**

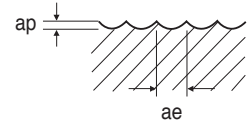
EM865 SERIES

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON				HARDENED STEELS			
HARDNESS	HRc30 ~ HRc45				HRc45 ~ HRc55			
STRENGTH	1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²			
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
R0.3 × 0.6	30000	510	55	0.009	30000	360	55	0.006
R0.4 × 0.8	27000	560	70	0.010	27000	330	70	0.006
R0.5 × 1.0	25000	560	80	0.011	25000	340	80	0.007
R0.6 × 1.2	24000	570	90	0.012	24000	350	90	0.007
R0.75 × 1.5	23000	600	110	0.013	23000	370	110	0.008
R1.0 × 2.0	19000	570	120	0.015	19000	320	120	0.008
R1.5 × 3.0	14000	480	130	0.017	14000	280	130	0.010

D < 1 D ≥ 1
ap = 0.05 × D ap = 0.075 × D
ae = 0.15 × D ae = 0.15 × D



D < 1 D ≥ 1
ap = 0.05 × D ap = 0.05 × D
ae = 0.1 × D ae = 0.15 × D



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

HSS

CBN
END MILLS

i-Xmill
END MILLS

i-HS mill
END MILLS

X5070
END MILLS

4G MILL
END MILLS

X-SPEED
ROUGHER
END MILLS

X-POWER
END MILLS

JET-POWER
END MILLS

TN MILL
END MILLS

V7 Mill
END MILLS

ALU-POWER
END MILLS

CRX S
END MILLS

D-POWER
GRAPHITE
END MILLS

D-POWER
CFRP
END MILLS

ROUTERS

K-2 CARBIDE
END MILLS

GENERAL
CARBIDE
END MILLS

TANK-POWER
END MILLS

GENERAL
HSS
END MILLS

MILLING
CUTTERS

TECHNICAL
DATA