

PLAIN SHANK
GLATTER ZYLINDERSCHAFT

FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

CARBIDE, 4 FLUTE LONG LENGTH CORNER RADIUS VOLLHARTMETALL, 4 SCHNEIDEN LANG ECKENRADIUS

- ▶ 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 erlauben bessere Oberflächengüte des Werkstücks.
- ▶ Gesteigerte Productivität.



Unit : mm

EDP No.		Corner Radius R	Mill Diameter	Shank Diameter	Length of Cut	Overall Length
PLAIN	FLAT					
EM819030	EM829030	RO.3	3.0	6	12	50
EM819040	EM829040	RO.3	4.0	6	15	50
EM819911	EM829911	RO.5	4.0	6	15	50
EM819050	EM829050	RO.3	5.0	6	20	60
EM819912	EM829912	RO.5	5.0	6	20	60
EM819913	EM829913	RO.3	6.0	6	20	60
EM819060	EM829060	RO.5	6.0	6	20	60
EM819901	EM829901	R1.0	6.0	6	20	60
EM819914	EM829914	RO.3	8.0	8	25	70
EM819080	EM829080	RO.5	8.0	8	25	70
EM819902	EM829902	R1.0	8.0	8	25	70
EM819903	EM829903	R1.5	8.0	8	25	70
EM819904	EM829904	R2.0	8.0	8	25	70
EM819915	EM829915	RO.3	10.0	10	30	90
EM819100	EM829100	RO.5	10.0	10	30	90
EM819905	EM829905	R1.0	10.0	10	30	90
EM819906	EM829906	R1.5	10.0	10	30	90
EM819907	EM829907	R2.0	10.0	10	30	90
EM819120	EM829120	RO.5	12.0	12	30	90
EM819908	EM829908	R1.0	12.0	12	30	90
EM819909	EM829909	R1.5	12.0	12	30	90
EM819910	EM829910	R2.0	12.0	12	30	90
EM819160	EM829160	RO.5	16.0	16	50	110
EM819916	EM829916	R1.0	16.0	16	50	110
EM819917	EM829917	R1.5	16.0	16	50	110
EM819918	EM829918	R2.0	16.0	16	50	110
EM819200	EM829200	RO.5	20.0	20	55	110
EM819919	EM829919	R1.0	20.0	20	55	110
EM819920	EM829920	R1.5	20.0	20	55	110
EM819921	EM829921	R2.0	20.0	20	55	110

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									
○	◎	◎	◎	○				○		○				

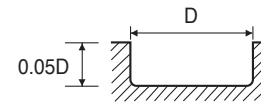
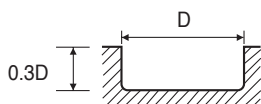


**RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN**

**CARBIDE, 2 FLUTE LONG CORNER RADIUS - SLOTTING
VOLLHARTMETALL, 2 SCHNEIDEN LANG ECKENRADIUS - NUTENFRÄSEN**

EM818, EM828 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
3.0	6620	140	60	0.011	4280	70	40	0.008	2640	35	25	0.007	1870	18	20	0.005
4.0	5360	170	65	0.016	3410	85	45	0.012	2150	40	25	0.009	1470	20	20	0.007
5.0	4580	210	70	0.023	2900	100	45	0.017	1900	50	30	0.013	1260	25	20	0.010
6.0	3950	250	75	0.032	2520	125	50	0.025	1640	60	30	0.018	1160	35	20	0.015
8.0	3000	270	75	0.045	1900	125	50	0.033	1260	60	30	0.024	840	35	20	0.021
10.0	2520	270	80	0.054	1640	125	50	0.038	1010	60	30	0.030	670	35	20	0.026
12.0	2060	210	80	0.051	1390	115	50	0.041	840	50	30	0.030	550	25	20	0.023
16.0	1740	190	85	0.055	1070	90	55	0.042	670	40	35	0.030	440	20	20	0.023
20.0	1260	140	80	0.056	820	60	50	0.037	500	30	30	0.030	340	15	20	0.022

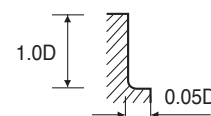
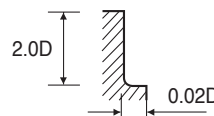
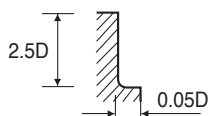


RPM = rev./min.
FEED = mm/min.
Vc = m/min.
fz = mm/t

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

EM819, EM829 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
3.0	6620	170	60	0.006	4280	130	40	0.008	2640	65	25	0.006	1870	30	20	0.004
4.0	5360	210	65	0.010	3410	150	45	0.011	2150	70	25	0.008	1470	35	20	0.006
5.0	4580	215	70	0.012	2900	180	45	0.016	1900	85	30	0.011	1260	40	20	0.008
6.0	3950	215	75	0.014	2520	180	50	0.018	1640	85	30	0.013	1160	50	20	0.011
8.0	3000	230	75	0.019	1900	180	50	0.024	1260	85	30	0.017	840	50	20	0.015
10.0	2520	230	80	0.023	1640	180	50	0.027	1010	85	30	0.021	670	50	20	0.019
12.0	2060	180	80	0.022	1390	160	50	0.029	840	70	30	0.021	550	40	20	0.018
16.0	1740	160	85	0.023	1070	125	55	0.029	670	60	35	0.022	440	35	20	0.020
20.0	1260	115	80	0.023	820	90	50	0.027	500	45	30	0.023	340	25	20	0.018



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