



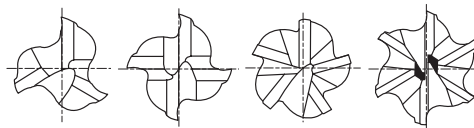
PLAIN SHANK
GLATTER ZYLINDERSCHAFT

FLAT SHANK
SEITLICHE MITNAHMEFLÄCHEN

CARBIDE, MULTI FLUTE 45° HELIX LONG LENGTH ROUGHING - FINE
VOLLHARTMETALL, MULTI SCHNEIDEN 45° RECHTSSPIRALE LANG SCHRUPPFRÄSER - FEIN

- ▶ Ultra micro grain carbide
- ▶ High chip removal and minimizing breakages of cutting edges.
- ▶ Suitable for low hardness materials (under HRC45), alloy steels, tool steels, carbon steels, prehardened steels, stainless steels, etc

- ▶ Ultra Feinstkorn - Vollhartmetall
- ▶ Schnelle Spanausfuhr und Minimierung von Abbrechen von Schneidkanten.
- ▶ zur Bearbeitung von: Werkstoffen bis 45 HRC, rostfreien Stählen, Titan und Nickellegierungen..

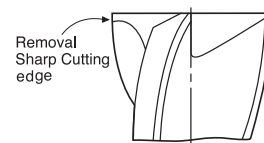


Unit : mm

EDP No.		Mill Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flute
PLAIN	FLAT	h10	h6			
EH919040	EH920040	4.0	6	11	57	3
EH919050	EH920050	5.0	6	13	57	4
EH919060	EH920060	6.0	6	16	57	4
EH919070	EH920070	7.0	8	16	63	4
EH919080	EH920080	8.0	8	16	63	4
EH919090	EH920090	9.0	10	19	72	4
EH919100	EH920100	10.0	10	22	72	4
EH919120	EH920120	12.0	12	26	83	4
EH919140	EH920140	14.0	14	26	83	5
EH919160	EH920160	16.0	16	32	92	5
EH919200	EH920200	20.0	20	38	104	6
EH919250	EH920250	25.0	25	45	121	6

Tolerances according to DIN 7160 & 7161
Toleranzen nach DIN 7160 & 7161

Tolerance range in μm / Toleranzwerte in μm					
Nominal-Diameter in mm / Nennmaßbereich in mm					
	from 1 to 3 von 1 bis 3	over 3 to 6 über 3 bis 6	over 6 to 10 über 6 bis 10	over 10 to 18 über 10 bis 18	over 18 to 30 über 18 bis 30
h10	0 - 40	0 - 48	0 - 58	0 - 70	0 - 84
h6	0 - 6	0 - 8	0 - 9	0 - 11	0 - 13



◎ : 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									
○	◎	◎	○							◎	◎	○		

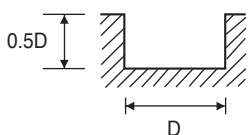


RECOMMENDED CUTTING CONDITIONS
EMPFOHLENE SCHNEIDKONDITIONEN

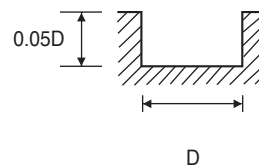
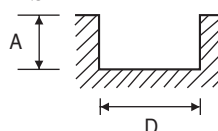
CARBIDE, MULTI FLUTE ROUGHING - SLOTING
VOLLHARTMETALL, MULTI SCHNEIDEN SCHRUPPFÄSER

EH919, EH920 SERIES

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				STAINLESS STEELS TITANIUM ALLOY				INCONEL			
	~ HRC30				HRC30 ~ HRC45											
HARDNESS	1000N/mm ²				1000 ~ 1500N/mm ²											
STRENGTH																
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
4.0	23400	1390	294	0.020	18600	500	234	0.009	12600	340	158	0.009	3600	115	45	0.011
6.0	15600	1390	294	0.022	12400	500	234	0.010	8400	340	158	0.010	2400	115	45	0.012
8.0	11600	1390	292	0.030	9200	500	231	0.014	6300	340	158	0.013	1800	110	45	0.015
10.0	9200	1390	289	0.038	7600	500	239	0.016	5100	340	160	0.017	1300	115	41	0.022
12.0	8000	1440	302	0.045	6000	480	226	0.020	4200	340	158	0.020	1200	115	45	0.024
14.0	6800	1440	299	0.042	5200	500	229	0.019	3600	340	158	0.019	900	80	40	0.018
16.0	6000	1440	302	0.048	4800	460	241	0.019	3300	310	166	0.019	800	65	40	0.016
20.0	4800	1300	302	0.045	3600	340	226	0.016	2400	220	151	0.015	660	60	41	0.015
25.0	4300	1290	338	0.050	3200	370	251	0.019	2160	250	170	0.019	600	65	47	0.018



A: $\varnothing 4$ - $\varnothing 10$: $0.25 \times D$
 $\varnothing 12$ - $\varnothing 16$: $0.15 \times D$
 $\varnothing 18$ - $\varnothing 25$: $0.10 \times D$



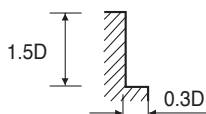
※ The FEED, in long & long reach types, should be reduced by around 50%

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

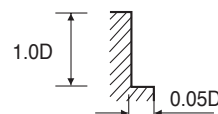
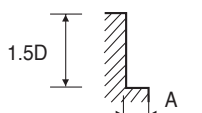
CARBIDE, MULTI FLUTE ROUGHING - SIDE CUTTING
VOLLHARTMETALL, MULTI SCHNEIDEN SCHRUPPFÄSER

EH919, EH920 SERIES

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS				CARBON STEELS ALLOY STEELS TOOL STEELS				STAINLESS STEELS TITANIUM ALLOY				INCONEL			
	~ HRC30				HRC30 ~ HRC45											
HARDNESS	1000N/mm ²				1000 ~ 1500N/mm ²											
STRENGTH																
DIAMETER	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz	RPM	FEED	Vc	fz
4.0	23400	2320	294	0.033	18600	840	234	0.015	12600	570	158	0.015	3600	190	45	0.018
6.0	15600	2320	294	0.037	12400	840	234	0.017	8400	570	158	0.017	2400	190	45	0.020
8.0	11600	2320	292	0.050	9200	840	231	0.023	6300	570	158	0.023	1800	180	45	0.025
10.0	9200	2320	289	0.063	7600	840	239	0.028	5100	570	160	0.028	1300	190	41	0.037
12.0	8000	2400	302	0.075	6000	800	226	0.033	4200	570	158	0.034	1200	190	45	0.040
14.0	6800	2400	299	0.071	5200	840	229	0.032	3600	570	158	0.032	900	130	40	0.029
16.0	6000	2400	302	0.080	4800	760	241	0.032	3300	510	166	0.031	800	110	40	0.028
20.0	4800	2160	302	0.075	3600	560	226	0.026	2400	360	151	0.025	660	100	41	0.025
25.0	4300	2150	338	0.083	3200	620	251	0.032	2160	410	170	0.032	600	110	47	0.031



A: $\varnothing 4$ - $\varnothing 10$: $0.15 \times D$
 $\varnothing 12$ - $\varnothing 16$: $0.10 \times D$
 $\varnothing 18$ - $\varnothing 25$: $0.05 \times D$



※ The FEED, in long & long reach types, should be reduced by around 50%

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