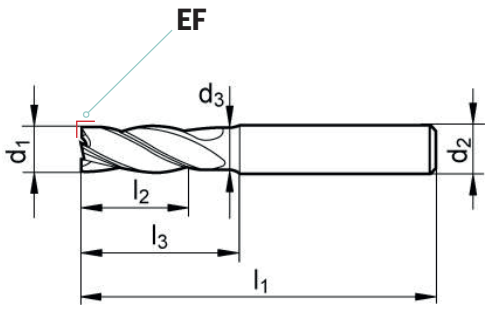
VHM HPC-Schaftfräser UNI

HPC-Schaftfräser mit ungleichem Drall und ungleicher Teilung zur universellen Schrupp- und Schlichtbearbeitung.



MERKMALE		VORTEILE
VHM-Feinstkorn	mit Kantenschutzfase EF	extrem ruhiger Lauf
Zylinderschaft nach DIN 6535 HB	Kantenverrundung der Schneide	reduziert Schwingungen
AlCrN beschichtet	Zentrumschnitt	höhere Vorschübe und Schnitttiefen möglich
mit Freistellung	ungleiche Schneidenteilung	optimiert auch zum trochoidalen Fräsen
ungleicher Drallwinkel 35°/38°		definierte Kantenverrundung für höchste Standzeiten

HPC 1,5 x D

Artikel-Nr.	Preis €	Ød1	L2	L3/AP	L1	Ød3	Schaft-Ød2	EF	Schneiden
WK16080	11,50	6.0	10.0	17.0	54.0	5.5	6.0	0.15	4
WK16081	14,00	8.0	12.0	21.0	58.0	7.5	8.0	0.15	4
WK16082	22,00	10.0	14.0	24.0	66.0	9.5	10.0	0.15	4
WK16083	29,00	12.0	16.0	26.0	73.0	11.5	12.0	0.30	4
WK16084	46,00	16.0	22.0	32.0	82.0	15.5	16.0	0.30	4
WK16085	75,00	20.0	26.0	40.0	92.0	19.5	20.0	0.30	4

HPC 2 x D

Artikel-Nr.	Preis €	Ød1	L2	L3/AP	L1	Ød3	Schaft-Ød2	EF	Schneiden
WK16001	18,00	1.0	2.5	5.0	57.0	0.8	6.0	0.07	4
WK16002	18,00	2.0	5.0	10.0	57.0	1.8	6.0	0.1	4
WK16003	13,00	3.0	8.0	15.0	57.0	2.8	6.0	0.1	4
WK16004	13,00	4.0	11.0	17.0	57.0	3.8	6.0	0.15	4
WK16005	13,00	5.0	13.0	19.0	57.0	4.8	6.0	0.15	4
WK16006	13,00	6.0	13.0	21.0	57.0	5.8	6.0	0.2	4
WK16007	16,50	8.0	19.0	27.0	63.0	7.6	8.0	0.2	4
WK16008	24,50	10.0	22.0	32.0	72.0	9.5	10.0	0.3	4
WK16009	32,00	12.0	26.0	38.0	83.0	11.5	12.0	0.35	4
WK16010	45,00	14.0	26.0	38.0	83.0	13.5	14.0	0.35	4
WK16011	52,00	16.0	32.0	44.0	92.0	15.5	16.0	0.4	4
WK16012	74,00	18.0	32.0	44.0	92.0	17.5	18.0	0.4	4
WK16013	84,00	20.0	38.0	54.0	104.0	19.5	20.0	0.50	4
WK16014	149,00	25.0	45.0	65.0	121.0	24.5	25.0	0.60	4

HPC 3 x D

Artikel-Nr.	Preis €	Ød1	L2	L3/AP	L1	Ød3	Schaft-Ød2	EF	Schneiden
WK16086	21,50	6.0	23.0	29.0	66.0	5.5	6.0	0.15	4
WK16087	28,50	8.0	29.0	39.0	75.0	7.5	8.0	0.15	4
WK16088	35,50	10.0	30.0	40.0	80.0	9.5	10.0	0.15	4
WK16089	47,50	12.0	36.0	49.0	90.0	11.5	12.0	0.30	4
WK16090	90,00	16.0	55.0	68.0	115.0	15.5	16.0	0.30	4
WK16091	135,00	20.0	65.0	76.0	126.0	19.5	20.0	0.30	4

Empfohlene Schnittdaten

	MATERIAL	Hardness	ap max xD	ae max xD	Vc (m/min)	fz (mm/z) Ø 3	4	5	6	8	10	12	14	16	20
	SLOTTING														
P	Steels, Alloy Steels and Tool Steels	<850 N/mm²	1	1	120-150	0.015	0.020	0.025	0.030	0.040	0.050	0.060	0.070	0.080	0.100
	Steels, Alloy Steels and Tool Steels	850-1200 N/mm²	1	1	80-100	0.110	0.015	0.019	0.022	0.028	0.034	0.039	0.044	0.049	0.059
	Steels, Alloy Steels and Tool Steels	<1400 N/mm²	≤ 1	1	80-100	0.011	0.014	0.018	0.021	0.028	0.035	0.042	0.049	0.056	0.070
M	Stainless Steel : Easy To Machine	<750 N/mm²													
	Stainless Steel : Difficult To Machine	<950 N/mm²													
K	Cast Irons, Grey, Spher., Melleable	<300 HB	1	1	80-120	0.110	0.015	0.019	0.022	0.028	0.034	0.039	0.044	0.049	0.059
N	Aluminium, Aluminiums Alloys	<6% Si													
S	Titanium , Titanium Alloys	<1100N/mm²													
S	HRSA (Nickel Alloys, Co. Alloys)	<1300N/mm²	0.5	1	30-40	0.009	0.012	0.012	0.017	0.022	0.026	0.030	0.034	0.038	0.046
	SIDE MILLING														
P	Steels, Alloy Steels and Tool Steels	<850 N/mm²	1	0.3	150-180	0.015	0.020	0.025	0.030	0.040	0.050	0.060	0.070	0.080	0.100
	Steels, Alloy Steels and Tool Steels	850-1200 N/mm²	1	0.3	100-150	0.012	0.016	0.020	0.024	0.032	0.040	0.048	0.056	0.064	0.080
	Steels, Alloy Steels and Tool Steels	<1400 N/mm²													
M	Stainless Steel : Easy To Machine	<750 N/mm²													
	Stainless Steel : Difficult To Machine	<950 N/mm²													
K	Cast Irons, Grey, Spher., Melleable	<300 HB	1	0.3	100-150	0.014	0.018	0.022	0.026	0.034	0.041	0.047	0.052	0.058	0.071
N	Aluminiums, Aluminiums Alloys	<6% Si													
S	Titanium , Titanium Alloys	<1100N/mm²													
S	HRSA (Nickel Alloys, Co. Alloys)	<1300N/mm²	1	0.3	40-45	0.017	0.022	0.027	0.032	0.042	0.050	0.057	0.064	0.064	0.078
	HELICAL MILLING														
P	Steels, Alloy Steels and Tool Steels	<850 N/mm²	5°	0.3	120	0.010	0.012	0.015	0.018	0.024	0.030	0.032	0.035	0.040	0.048
	Steels, Alloy Steels and Tool Steels	850-1200 N/mm²	4°	0.3	80	0.009	0.011	0.014	0.016	0.021	0.026	0.029	0.033	0.037	0.045
	Steels, Alloy Steels and Tool Steels	<1400 N/mm²	3°	0.3	70	0.010	0.012	0.015	0.018	0.024	0.030	0.032	0.035	0.040	0.048
M	Stainless Steel : Easy To Machine	<750 N/mm²													
	Stainless Steel : Difficult To Machine	<950 N/mm²													
K	Cast Irons, Grey, Spher., Melleable	<300 HB													
N	Aluminiums, Aluminiums Alloys	<6% Si													
S	Titanium , Titanium Alloys	<1100N/mm²													
S	HRSA (Nickel Alloys, Co. Alloys)	<1300N/mm²													
	TROCHOIDAL MILLING														
P	Steels, Alloy Steels and Tool Steels	<850 N/mm²	2	0.1	200				0.061	0.079	0.095	0.108	0.122	0.135	0.164
	Steels, Alloy Steels and Tool Steels	850-1200 N/mm²	2	0.1	130				0.055	0.071	0.085	0.097	0.109	0.122	0.148
	Steels, Alloy Steels and Tool Steels	<1400 N/mm²	2	0.1	80				0.049	0.063	0.076	0.086	0.097	0.108	0.131
M	Stainless Steel : Easy To Machine	<750 N/mm²													
	Stainless Steel : Difficult To Machine	<950 N/mm²													
K	Cast Irons, Grey, Spher., Melleable	<300 HB	2	0.1	130				0.055	0.071	0.085	0.097	0.109	0.122	0.148
N	Aluminiums, Aluminiums Alloys	<6% Si													
S	Titanium , Titanium Alloys	<1100N/mm²													
S	HRSA (Nickel Alloys, Co. Alloys)	<1300N/mm²	1.5	0.1	50				0.067	0.087	0.104	0.119	0.134	0.149	0.181