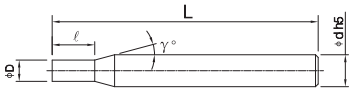
HSXEF 4-Flute Power End Mill



UMG AHX 4 45° Spiral Angle Arc Back Angle <65 HRC

∅D	D Tol. [mm]
D<3	0~-0.010
3<D<6	0~-0.012
6<D<10	0~-0.015
10<D<18	0~-0.018
D>18	0~-0.020

Unit : mm

Type No.	Dia.	Length of Cut	Neck Taper Angle	Overall Length	Shank Dia.
	φD	ℓ	γ/°	L	φd
HSXEF4010 0450	1	3	12	50	4
HSXEF4010 0650	1	3	12	50	6
HSXEF4012 0450	1.2	3.5	11	50	4
HSXEF4014 0450	1.4	4	11	50	4
HSXEF4015 0450	1.5	4	11	50	4
HSXEF4015 0650	1.5	4	11	50	6
HSXEF4016 0450	1.6	5	11	50	4
HSXEF4020 0450	2	6	11	50	4
HSXEF4020 0650	2	6	11	50	6
HSXEF4025 0450	2.5	8	11	50	4
HSXEF4025 0650	2.5	8	11	50	6
HSXEF4030 0450	3	8	11	50	4
HSXEF4030 0650	3	8	11	50	6
HSXEF4030 0675	3	12	11	75	6
HSXEF4040 0450	4	11	–	50	4
HSXEF4040 0475	4	15	–	75	4
HSXEF4040 0650	4	11	11	50	6
HSXEF4040 0675	4	15	11	75	6
HSXEF4050 0650	5	13	11	50	6
HSXEF4050 0675	5	18	11	75	6
HSXEF4060 0650	6	16	–	50	6
HSXEF4060 0660	6	16	–	60	6
HSXEF4060 0675	6	20	–	75	6
HSXEF4060 06100	6	20	–	100	6
HSXEF4080 0860	8	20	–	60	8
HSXEF4080 0875	8	20	–	75	8
HSXEF4080 08100	8	25	–	100	8
HSXEF4080 08125	8	28	–	125	8

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Unit : mm

Type No.	Dia.	Length of Cut	Neck Taper Angle	Overall Length	Shank Dia.
	ϕD	ℓ	γ/°	L	ϕd
HSXEF4100 1075	10	25	-	75	10
HSXEF4100 10100	10	30	-	100	10
HSXEF4100 10125	10	35	-	125	10
HSXEF4120 1275	12	30	-	75	12
HSXEF4120 12100	12	35	-	100	12
HSXEF4120 12125	12	42	-	125	12
HSXEF4160 16100	16	45	-	100	16
HSXEF4160 16150	16	50	-	150	16
HSXEF4200 20100	20	45	-	100	20
HSXEF4200 20150	20	55	-	150	20

TABLE OF RECOMMENDED MILLING MATERIALS

◎ Very suitable ○ Suitable

CARBON STEELS ALLOY STEELS PREHARDENED STEELS TOOL STEELS	PREHARDENED STEELS、HARDENED STEELS				STAINLESS STEELS	CAST IRON DUCTILE CAST IRON	COPPER ALLOYS	ALUMINUM ALLOY	GRAPHITE	TITANIUM ALLOY	HEAT RESISTANT ALLOYS	PLASTIC
~40HRC	~45HRC	~55HRC	~60HRC	~65HRC	~35HRC	~350HB						
○	○	◎	◎	○	○	○	○			○	○	

Cutting Parameter

HSXEF 4-Flute Power End Mill Side Milling

Workpiece	Pre-Hardened Steels (30-45HRC)				Hardened Steels (45-55HRC)				Hardened Steels (55-65HRC)			
Type No.	n min⁻¹	Vf mm/min	ap mm	ae mm	n min⁻¹	Vf mm/min	ap mm	ae mm	n min⁻¹	Vf mm/min	ap mm	ae mm
HSXEF4010	15000	600	2	0.05	12000	480	2	0.03	10500	200	1	0.02
HSXEF4012	13500	660	2.4	0.05	10800	528	2.4	0.03	9450	200	1.2	0.02
HSXEF4015	12000	720	3	0.05	9600	576	3	0.03	8400	250	1.5	0.02
HSXEF4016	11800	750	3.2	0.05	9440	600	3.2	0.03	8260	250	1.6	0.02
HSXEF4020	10000	800	4	0.05	8000	640	4	0.03	7000	300	2	0.03
HSXEF4025	8500	850	5	0.05	6800	680	5	0.03	5950	350	2.5	0.03
HSXEF4030	7500	900	6	0.05	6000	720	6	0.03	5250	400	3	0.03
HSXEF4040	6800	1000	8	0.1	5440	800	8	0.03	4760	440	4	0.03
HSXEF4050	6000	1200	10	0.1	4800	960	10	0.05	4200	500	5	0.05
HSXEF4060	5000	1500	12	0.1	4000	1200	12	0.05	3500	550	6	0.05
HSXEF4080	4200	2000	16	0.1	3360	1600	16	0.05	2940	600	8	0.05
HSXEF4100	4000	2500	20	0.1	3200	2000	20	0.05	2800	600	10	0.06
HSXEF4120	3800	3000	24	0.1	3040	2400	24	0.1	2660	500	12	0.1
HSXEF4140	3500	2600	28	0.1	2800	2080	28	0.1	2450	500	14	0.1
HSXEF4160	3200	2500	32	0.1	2560	2000	32	0.1	2240	500	16	0.1
HSXEF4200	3000	2000	40	0.1	2400	1600	40	0.1	2100	500	20	0.1