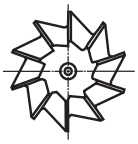
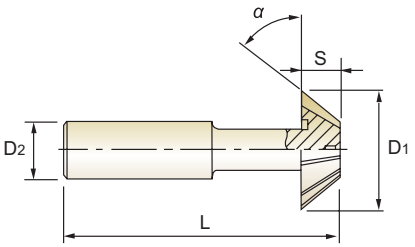
HSS-E, DOVETAIL CUTTERS TYPE “B”, “D”, “F”

HSS-E, WINKELFRÄSER FORM “B”, “D”, “F”
FRAISE HSS-E POUR QUEUE D'ARRONDE TYPE "B", "D", "F"
FRESE AD ANGOLO CONVERGENTE TIPO “B”, “D”, “F”







HSS-E | DIN 1833 | N | 0° | DIN 1835A | DIN 1835B | UNCOATED

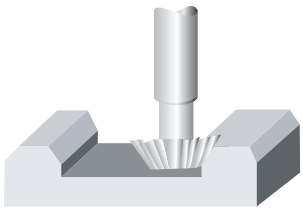
p.C793

Unit : mm

EDP No.		Cutter Diameter	Width of Face	Divergent Taper Angle	Shank Diameter	Overall Length	No. of Teeth
PLAIN	FLAT	D_1(js16)	S(js14)	α(±15´)	D_2(h6)	L(js18)	Z
ML03201601	ML13201601	16.0	4	45°	12	60	6
ML03202001	ML13202001	20.0	5	45°	12	63	6
ML03202201	ML13202201	22.0	6	45°	12	67	6
ML03202501	ML13202501	25.0	6.3	45°	16	67	8
ML03202801	ML13202801	28.0	7.5	45°	16	67	8
ML03203201	ML13203201	32.0	8	45°	16	71	10
ML03203801	ML13203801	38.0	10	45°	16	80	12
ML04201601	ML14201601	16.0	6.3	60°	12	60	6
ML04202001	ML14202001	20.0	8	60°	12	63	6
ML04202201	ML14202201	22.0	9	60°	12	67	6
ML04202501	ML14202501	25.0	10	60°	16	67	8
ML04202801	ML14202801	28.0	11	60°	16	67	8
ML04203201	ML14203201	32.0	12.5	60°	16	71	10
ML04203801	ML14203801	38.0	16	60°	16	80	12

Tolerances according to DIN 7160 & 7161

	Nominal-Diameter in mm						
	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50	over 50 to 80	over 80 to 120
	Tolerance range in mm						
js16	±0.375	±0.45	±0.55	±0.65	±0.80	±0.95	±1.10
js14	±0.15	±0.18	±0.215	±0.26	±0.31	±0.37	±0.435
js18	±0.90	±1.10	±1.35	±1.65	±1.95	±2.30	±2.70
	Tolerance range in μm						
h6	0 / -8	0 / -9	0 / -11	0 / -13	0 / -16	0 / -19	0 / -22



◎ : Excellent ○ : Good

ISO	P											M			K					
Material Description	Non-alloy steel					Low alloy steel				High alloyed steel, and tool steel		Stainless steel			Grey cast iron		Nodular cast iron		Malleable cast iron	
VDI 3323	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HRc		13	25	28	32	10	29	32	38	15	35	15	23	10	10	26	3	25		21
HB	125	190	250	270	300	180	275	300	350	200	325	200	240	180	180	260	160	250	130	230
Recommended	◎	◎	◎	◎	◎	◎	◎	◎	○	◎	○									

ISO	N										S							H			
Material Description	Aluminum-wrought alloy		Aluminum-cast, alloyed			Copper and Copper Alloys (Bronze / Brass)			Non Metallic Materials		Heat Resistant Super Alloys					Titanium Alloys		Hardened steel		Chilled Cast Iron	Hardened Cast Iron
VDI 3323	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
HRc											15	30	25	38	34			55	60	42	55
HB	60	100	75	90	130	110	90	100			200	280	250	350	320	400 Rm	1050 Rm	550	630	400	550
Recommended	○	○	○	○	○																