

7M
METRIC SERIES

TOLERANCES (mm)

DC = +0,000/+0,050

DCON = h_6

STEELS
STAINLESS STEELS
CAST IRON
HIGH TEMP ALLOYS
TITANIUM
HARDENED STEELS

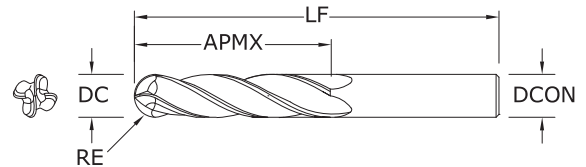
For patent
information visit
www.ksptpatents.com

mm				EDP NO.
CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	Ti-NAMITE-X
3,0	25,0	75,0	3,0	70551
4,0	25,0	75,0	4,0	70552
5,0	25,0	75,0	5,0	70553
6,0	25,0	75,0	6,0	70554
8,0	25,0	75,0	8,0	70555
10,0	38,0	100,0	10,0	70556
12,0	50,0	100,0	12,0	70557
12,0	75,0	150,0	12,0	70558
14,0	75,0	150,0	14,0	70559
16,0	75,0	150,0	16,0	70560
18,0	75,0	150,0	18,0	70561
20,0	75,0	150,0	20,0	70562
25,0	75,0	150,0	25,0	70563

- Variable pitch allows for improved chatter suppression along with improved surface finish and enhanced tool life
- Raised land and increased core diameter designed to enhance tool life and decrease tool deflection
- Recommended for materials ≤ 45 HRc (≤ 420 Bhn)


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 METRIC SERIES

- Variable pitch allows for improved chatter suppression along with improved surface finish and enhanced tool life
- Raised land and increased core diameter designed to enhance tool life and decrease tool deflection
- Ball nose design ideal for finishing operations in complex workpieces
- Recommended for materials $\leq 45 \text{ HRc}$ ($\leq 420 \text{ Bhn}$)



mm				EDP NO.
CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	Ti-NAMITE-X
3,0	25,0	75,0	3,0	70527
4,0	25,0	75,0	4,0	70529
5,0	25,0	75,0	5,0	70531
6,0	25,0	75,0	6,0	70533
8,0	25,0	75,0	8,0	70535
10,0	38,0	100,0	10,0	70537
12,0	50,0	100,0	12,0	70539
12,0	75,0	150,0	12,0	70540
14,0	75,0	150,0	14,0	70542
16,0	75,0	150,0	16,0	70544
18,0	75,0	150,0	18,0	70546
20,0	75,0	150,0	20,0	70548
25,0	75,0	150,0	25,0	70550

RE = 1/2 Cutting Diameter (DC)

TOLERANCES (mm)

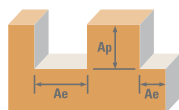
 DC = $+0,000/+0,050$

 DCON = h_6

 RE = $+0,000/-0,025$

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Series 7M, 7MB Metric	Hardness	Finish	Ae x DC	Ap x DC	Vc (m/min)	DC • mm									
						3	6	8	10	12	16	20	25		
P	CARBON STEELS 1018, 1040, 1080, 1090, 10L50, 1140, 1212, 12L15, 1525, 1536	≤ 275 Bhn or ≤ 28 HRc	Finish 	≤ 0.02	≤ 2	146	RPM	15511	7755	5816	4653	3878	2908	2327	1861
						(117-176)	Fz	0.0166	0.043	0.075	0.093	0.110	0.125	0.147	0.160
						Feed (mm/min)	1030	1334	1745	1731	1706	1454	1368	1191	
	ALLOY STEELS 4140, 4150, 4320, 5120, 5150, 8630, 86L20, 50100	≤ 375 Bhn or ≤ 40 HRc	Finish 	≤ 0.02	≤ 2	84	RPM	8886	4443	3332	2666	2222	1666	1333	1066
						(67-101)	Fz	0.0122	0.034	0.051	0.069	0.082	0.091	0.109	0.120
						Feed (mm/min)	434	604	680	736	729	606	581	512	
M	STAINLESS STEELS (FREE MACHINING) 303, 416, 420F, 430F, 440F	≤ 275 Bhn or ≤ 28 HRc	Finish 	≤ 0.02	≤ 2	128	RPM	13572	6786	5089	4072	3393	2545	2036	1629
						(102-154)	Fz	0.0086	0.024	0.040	0.048	0.058	0.065	0.077	0.087
						Feed (mm/min)	467	651	814	782	787	662	627	567	
	STAINLESS STEELS (DIFFICULT) 304, 304L, 316, 316L	≤ 275 Bhn or ≤ 28 HRc	Finish 	≤ 0.02	≤ 2	88	RPM	9371	4686	3514	2811	2343	1757	1406	1125
						(71-106)	Fz	0.0082	0.022	0.037	0.045	0.048	0.060	0.072	0.078
						Feed (mm/min)	307	412	520	506	450	422	405	351	
STAINLESS STEELS (PH) 13-8 PH, 15-5 PH, 17-4 PH, Custom 450	≤ 325 Bhn or ≤ 35 HRc	Finish 	≤ 0.02	≤ 2	81	RPM	8563	4282	3211	2569	2141	1606	1284	1028	
					(65-97)	Fz	0.0070	0.019	0.029	0.040	0.048	0.055	0.064	0.070	
					Feed (mm/min)	240	325	372	411	411	353	329	288		
K	CAST IRONS (LOW & MEDIUM ALLOY) Gray, Malleable, Ductile	≤ 220 Bhn or ≤ 19 HRc	Finish 	≤ 0.02	≤ 2	184	RPM	19550	9775	7331	5865	4887	3666	2932	2346
						(148-221)	Fz	0.0132	0.036	0.052	0.075	0.089	0.099	0.117	0.130
						Feed (mm/min)	1032	1408	1525	1759	1740	1452	1372	1220	
	CAST IRONS (HIGH ALLOY) Gray, Malleable, Ductile	≤ 260 Bhn or ≤ 26 HRc	Finish 	≤ 0.02	≤ 2	142	RPM	15026	7513	5635	4508	3756	2817	2254	1803
						(113-170)	Fz	0.0132	0.036	0.052	0.075	0.089	0.099	0.117	0.130
						Feed (mm/min)	793	1082	1172	1352	1337	1116	1055	938	
S	SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 601, 617, 625, Incoloy, Monel 400	≤ 300 Bhn or ≤ 32 HRc	Finish 	≤ 0.02	≤ 2	24	RPM	2585	1293	969	776	646	485	388	310
						(20-29)	Fz	0.0072	0.019	0.029	0.037	0.046	0.053	0.061	0.085
						Feed (mm/min)	74	98	112	90	119	103	95	105	
	SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 718, X-750, Incoloy, Waspaloy, Hastelloy, Rene	≤ 400 Bhn or ≤ 43 HRc	Finish 	≤ 0.02	≤ 2	20	RPM	2100	1050	788	630	525	394	315	252
						(16-24)	Fz	0.0075	0.016	0.021	0.030	0.038	0.044	0.051	0.070
						Feed (mm/min)	63	67	66	76	80	69	64	71	
	TITANIUM ALLOYS Pure Titanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si	≤ 350 Bhn or ≤ 38 HRc	Finish 	≤ 0.02	≤ 2	91	RPM	9694	4847	3635	2908	2424	1818	1454	1163
						(73-110)	Fz	0.0091	0.024	0.040	0.050	0.060	0.070	0.080	0.088
						Feed (mm/min)	353	465	51	59	582	509	465	409	
TITANIUM ALLOYS (DIFFICULT) Ti10Al2Fe3Al, Ti5Al5V5Mo3Cr, Ti7Al4Mo, Ti3Al8V6Cr4Zr4Mo, Ti6Al6V6Sn, Ti15V3 Cr3Sn3Al	≤ 440 Bhn or ≤ 47 HRc	Finish 	≤ 0.02	≤ 2	32	RPM	3393	1696	1272	1018	848	636	509	407	
					(26-38)	Fz	0.0082	0.019	0.029	0.037	0.046	0.053	0.061	0.085	
					Feed (mm/min)	111	129	148	151	156	135	124	138		
H	TOOL STEELS A2, D2, H13, L2, M2, P20, S7, T15, W2	≤ 375 Bhn or ≤ 40 HRc	Finish 	≤ 0.02	≤ 2	70	RPM	7432	3716	2787	2230	1858	1394	1115	892
						(56-84)	Fz	0.0070	0.019	0.040	0.043	0.048	0.057	0.064	0.070
						Feed (mm/min)	208	282	446	384	357	318	285	250	

Bhn (Brinell) HRC (Rockwell C)
rpm = (Vc x 1000) / (DC x 3.14)
mm/min = Fz x 4 x rpm
reduce speed and feed for materials harder than listed
feed rates listed have chip thinning adjustments included where applicable
refer to the SGS Tool Wizard® for complete technical information (www.kyocera-sgtool.com)