

**ZH1MCRS •
ZH1MCR**
METRIC SERIES

TOLERANCES (mm)

6 DIAMETER

DC = +0,000/-0,030

DCON = h_6

RE = +0,000/-0,050

>6-10 DIAMETER

DC = +0,000/-0,040

DCON = h_6

RE = +0,000/-0,050

>10-20 DIAMETER

DC = +0,000/-0,050

DCON = h_6

RE = +0,000/-0,050

HIGH TEMP ALLOYS

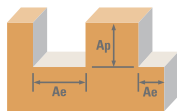
TITANIUM

For patent
information visit
www.ksptpatents.com

mm					EDP NO.	
CUTTING DIAMETER DC	LENGTH OF CUT APMX	OVERALL LENGTH LF	SHANK DIAMETER DCON	CORNER RADIUS RE	Ti-NAMITE-A (AlTiN)	Ti-NAMITE-A (AlTiN) W/FLAT
6,0	10,0	54,0	6,0	0,50	—	42712
6,0	13,0	57,0	6,0	0,5	46450	—
6,0	13,0	57,0	6,0	1,0	46451	—
6,0	13,0	57,0	6,0	1,5	46452	—
8,0	12,0	58,0	8,0	0,50	—	42713
8,0	19,0	63,0	8,0	0,5	46453	—
8,0	19,0	63,0	8,0	1,0	46454	—
8,0	19,0	63,0	8,0	1,5	46455	—
10,0	14,0	66,0	10,0	0,50	—	42714
10,0	22,0	72,0	10,0	0,5	46456	—
10,0	22,0	72,0	10,0	1,0	46457	—
10,0	22,0	72,0	10,0	1,5	46458	—
10,0	22,0	72,0	10,0	2,0	46459	—
12,0	16,0	73,0	12,0	0,75	—	42715
12,0	26,0	83,0	12,0	0,5	46460	46471
12,0	26,0	83,0	12,0	1,0	46461	46472
12,0	26,0	83,0	12,0	1,5	46462	46473
12,0	26,0	83,0	12,0	2,0	46463	46474
12,0	26,0	83,0	12,0	3,0	46464	46475
16,0	22,0	82,0	16,0	1,00	—	42716
16,0	32,0	92,0	16,0	1,5	46465	46476
16,0	32,0	92,0	16,0	2,0	46466	46477
16,0	32,0	92,0	16,0	3,0	46467	46478
16,0	32,0	92,0	16,0	4,0	46482	46483
20,0	26,0	92,0	20,0	1,00	—	42717
20,0	38,0	104,0	20,0	3,0	46468	46479
20,0	38,0	104,0	20,0	4,0	46469	46480
20,0	38,0	104,0	20,0	5,0	46470	46481

- The original Z-Carb design with an enhanced core and higher helix suited for the demands of high temperature alloys
- Unequal flute spacing helps to disrupt the rhythmic pattern created by the cutting edge helping to suppress damaging harmonics
- Optimal material removal rates through increased feed and depths of cut for difficult to machine materials
- Enhanced corner geometry with tight tolerance corner radii
- Recommended for materials ≤ 45 HRc (≤ 420 Bhn)

Z-Carb-HTA



Series ZH1MCRS, ZH1MCR Metric	Hardness		Ae x DC	Ap x DC	Vc (m/min)	DC • mm				
						6	10	12	20	
SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 601, 617, 625, Incoloy, Monel 400	≤ 300 Bhn or ≤ 32 HRc	Profile 	≤ 0.5	≤ 1.5	26	RPM	1373	824	687	412
					(21-31)	Fz	0.017	0.032	0.041	0.053
		Slot 	1	≤ 1	21	RPM	1131	679	565	339
					(17-26)	Fz	0.017	0.032	0.041	0.053
	≤ 400 Bhn or ≤ 43 HRc	Profile 	≤ 0.5	≤ 1.5	(17-26)	Fz	0.012	0.024	0.029	0.037
					Feed (mm/min)	54	65	66	50	
		Slot 	1	≤ 1	17	RPM	889	533	444	267
					(13-20)	Fz	0.012	0.024	0.029	0.037
TITANIUM ALLOYS Pure Titanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si	≤ 350 Bhn or ≤ 38 HRc	Profile 	≤ 0.5	≤ 1.5	66	RPM	3474	2084	1737	1042
					(52-79)	Fz	0.019	0.041	0.049	0.057
		Slot 	1	≤ 1	52	RPM	2747	1648	1373	824
					(41-62)	Fz	0.019	0.041	0.049	0.057
	≤ 440 Bhn or ≤ 47 HRc	Profile 	≤ 0.5	≤ 1.5	23	RPM	1212	727	606	364
					(18-27)	Fz	0.019	0.041	0.049	0.057
		Slot 	1	≤ 1	18	RPM	969	582	485	291
					(15-22)	Fz	0.019	0.041	0.049	0.057
Cr3Sn3Al					Feed (mm/min)	74	95	95	66	

Bhn (Brinell) HRc (Rockwell C)

rpm = (Vc x 1000) / (DC x 3.14)

ipm = Fz x 4 x rpm

reduce speed and feed for materials harder than listed

reduce feed and Ae when finish milling (.02 x DC maximum)

feed rates listed have chip thinning adjustments included where applicable

refer to the SGS Tool Wizard® for complete technical information (www.kyocera-sgstool.com)