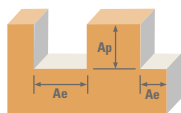










FRACTIONAL Z-Carb-HTA



Series ZH1CR Fractional	Hardness	Ae x DC	Ap x DC	Vc (sfm)	Diameter (DC) (inch)					
					1/4	3/8	1/2	3/4	1	
SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 601, 617, 625, Incoloy, Monel 400	Profile  ≤ 300 Bhn or ≤ 32 HRc	≤ 0.5	≤ 1.5	85	RPM	1299	866	649	433	325
				(68-102)	Fz	0.0007	0.0012	0.0017	0.0020	0.0023
					Feed (ipm)	3.6	4.2	4.4	3.5	3.0
	Slot 	1	≤ 1	70	RPM	1070	713	535	357	267
				(56-84)	Fz	0.0007	0.0012	0.0017	0.0020	0.0023
					Feed (ipm)	3.0	3.4	3.6	2.9	2.5
SUPER ALLOYS (NICKEL, COBALT, IRON BASE) Inconel 718, X-750, Incoloy, Waspaloy, Hastelloy, Rene	Profile  ≤ 400 Bhn or ≤ 43 HRc	≤ 0.5	≤ 1.5	70	RPM	1070	713	535	357	267
				(56-84)	Fz	0.0005	0.0009	0.0012	0.0014	0.0016
					Feed (ipm)	2.1	2.6	2.6	2.0	1.7
	Slot 	1	≤ 1	55	RPM	840	560	420	280	210
				(44-66)	Fz	0.0005	0.0009	0.0012	0.0014	0.0016
					Feed (ipm)	1.7	2.0	2.0	1.6	1.3
TITANIUM ALLOYS Pure Titanium, Ti6Al4V, Ti6Al2Sn4Zr2Mo, Ti4Al4Mo2Sn0.5Si	Profile  ≤ 350 Bhn or ≤ 38 HRc	≤ 0.5	≤ 1.5	215	RPM	3285	2190	1643	1095	821
				(172-258)	Fz	0.0008	0.0015	0.0020	0.0024	0.0028
					Feed (ipm)	10.5	13.1	13.1	10.5	9.2
	Slot 	1	≤ 1	170	RPM	2598	1732	1299	866	649
				(136-204)	Fz	0.0008	0.0015	0.0020	0.0024	0.0028
					Feed (ipm)	8.3	10.4	10.4	8.3	7.3
TITANIUM ALLOYS (DIFFICULT) Ti10Al2Fe3Al, Ti5Al5V5Mo3Cr, Ti7Al4Mo, Ti3Al8V6Cr4Zr4Mo, Ti6Al6V6Sn, Ti15V3 Cr3Sn3Al	Profile  ≤ 440 Bhn or ≤ 47 HRc	≤ 0.5	≤ 1.5	75	RPM	1146	764	573	382	287
				(60-90)	Fz	0.0008	0.0015	0.0020	0.0024	0.0028
					Feed (ipm)	3.7	4.6	4.6	3.7	3.2
	Slot 	1	≤ 1	60	RPM	917	611	458	306	229
				(48-72)	Fz	0.0008	0.0015	0.0020	0.0024	0.0028
					Feed (ipm)	2.9	3.7	3.7	2.9	2.6

Bhn (Brinell) HRc (Rockwell C)

$\text{rpm} = \text{Vc} \times 3.82 / \text{DC}$

$\text{ipm} = \text{Fz} \times 4 \times \text{rpm}$

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-sgstoool.com)