T/EXP

Standard cutting conditions

05·06 type

Work material	Insert grades	Cutting speed *Vc* (SFM)	Feed per tooth *fz* (in/t)	ø.750 (z = .078)	ø1.00 (z = .078)	ø1.25 (z = .078, .118)	ø1.50 (z = .118)	ø2.00 (z = .157)
Carbon Steels (1018,1055) <300HB	**AH120 (T3130)**	330 ~ 820	.020 ~ .078	Vc = 500 SFM, fz = .031 in/t ap = .039 in, ae = .039D in	Vc = 500 SFM, fz = .039 in/t ap = .039 in, ae = .039D in			
				When plunging in small depth: fz = .008 in/t				
Alloy steels (4140, 4340) < 300 HB	**AH120 (T3130)**	330 ~ 650	.020 ~ .078	Vc = 425 SFM, fz = .031 in/t ap = .039 in, ae = .039D in	Vc = 425 SFM, fz = .039 in/t ap = .039 in, ae = .039D in			
				When plunging in small depth: fz = .008 in/t				
Prehardened steels (P20, H13) 30 ~ 40HRC	**AH120 (T3130)**	260 ~ 500	.020 ~ .039	Vc = 330 SFM, fz = .020 in/t ap = .039 in, ae = .039D in	Vc = 330 SFM, fz = .020 in/t ap = .039 in, ae = .039D in			
				When plunging in small depth: fz = .004 in/t				
Stainless steels (304, 316)	**AH130 AH140**	330 ~ 650	.020 ~ .078	Vc = 425 SFM, fz = .031 in/t ap = .039 in, ae = .039D in	Vc = 425 SFM, fz = .039 in/t ap = .039 in, ae = .039D in			
				When plunging in small depth: fz = .008 in/t				
Cast irons (CLASS 25-40)	**AH120**	330 ~ 820	.032 ~ .098	Vc = 500 SFM, fz = .039 in/t ap = .039 in, ae = .039D in	Vc = 590 SFM, fz = .059 in/t ap = .039 in, ae = .039D in			
				When plunging in small depth: fz = .008 in/t				
Hard materials (A980) 40 ~ 50HRC	**AH730**	200 ~ 330	.020 ~ .078	Vc = 230 SFM, fz = .028 in/t ap = .028 in, ae = .039D in	Vc = 230 SFM, fz = .028 in/t ap = .028 in, ae = .039D in			
				When plunging in small depth: fz = .004 in/t				

08 type

Work material	Insert grades	Cutting speed *Vc* (SFM)	Feed per tooth *fz* (in/t)	ø.750 (z = .078)	ø2.00 (z = .118)	ø2.50 (z = .157)	ø3.00 (z = .197)	ø4.00 (z = .236)	ø5.00 (z = .275)	ø6.00 (z = .315)
Carbon Steels (1018,1055) <300HB	**AH120 (T3130)**	330 ~ 820	.020 ~ .078	Vc = 590 SFM, fz = .039 in/t ap = .039 in, ae = 130 in	Vc = 650 SFM, fz = .059 in/t ap = .039 in, ae = .039D in					
				When plunging in small depth: fz = .008 in/t						
Alloy steels (4140, 4340) < 300 HB	**AH120 (T3130)**	330 ~ 650	.020 ~ .078	Vc = 425 SFM, fz = .039 in/t ap = .039 in, ae = 130 in	Vc = 500 SFM, fz = .059 in/t ap = .039 in, ae = .039D in					
				When plunging in small depth: fz = .008 in/t						
Prehardened steels (P20, H13) 30 ~ 40HRC	**AH120 (T3130)**	260 ~ 500	.020 ~ .039	Vc = 330 SFM, fz = .020 in/t ap = .039 in, ae = 130 in	Vc = 120 SFM, fz = .031 in/t ap = .039 in, ae = .039D in					
				When plunging in small depth: fz = .004 in/t						
Stainless steels (304, 316)	**AH130 AH140**	330 ~ 650	.020 ~ .078	Vc = 425 SFM, fz = .039 in/t ap = .039 in, ae = 130 in	Vc = 500 SFM, fz = .059 in/t ap = .039 in, ae = .039D in					
				When plunging in small depth: fz = .008 in/t						
Cast irons (CLASS 25-40)	**AH120**	500 ~ 820	.032 ~ .098	Vc = 590 SFM, fz = .059 in/t ap = .039 in, ae = 130 in	Vc = 650 SFM, fz = .078 in/t ap = .039 in, ae = .039D in					
				When plunging in small depth: fz = .008 in/t						
Hard materials (A980) 40 ~ 50HRC	**AH730**	200 ~ 330	.020 ~ .039	Vc = 230 SFM, fz = .078 in/t, ap = .087 in, ae = .039D in						
				When plunging in small depth: fz = .004 in/t						

Note: • The above values of cutting speed show the standard speed when overhang length of tool is below 3D. The cutting speed and the feed rate should be set at the lower limit values when overhang length of tool exceeds 3D.
• Thick and heavy chips are discharged by these TAC mills. Use internal air supply or air-blast in order to prevent tool failure.

09 type

Work material	Insert grades	Cutting speed *Vc* (SFM)	Feed per tooth *fz* (in/t)	ø2.00 (z = .078)	ø2.50 (z = .118)	ø3.00 (z = .157)	ø4.00 (z = .197)	ø5.00 (z = .236)	ø6.00 (z = .275)
Carbon Steels (1018,1055) <300HB	**AH120 (T3130)**	330 ~ 820	.020 ~ .078	Vc = 650 SFM, fz = .059 in/t, ap = 2.0 in, ae = .039D in					
				When plunging in small depth: fz = .008 in/t					
Alloy steels (4140, 4340) < 300 HB	**AH120 (T3130)**	330 ~ 650	.020 ~ .078	Vc = 500 SFM, fz = .059 in/t, ap = 2.0 in, ae = .039D in					
				When plunging in small depth: fz = .008 in/t					
Prehardened steels (P20, H13) 30 ~ 40HRC	**AH120 (T3130)**	260 ~ 500	.020 ~ .039	Vc = 120 SFM, fz = .031 in/t, ap = 2.0 in, ae = .039D in					
				When plunging in small depth: fz = .004 in/t					
Stainless steels (304, 316)	**AH130 AH140**	330 ~ 650	.020 ~ .078	Vc = 500 SFM, fz = .059 in/t, ap = 2.0 in, ae = .039D in					
				When plunging in small depth: fz = .008 in/t					
Cast irons (CLASS 25-40)	**AH120**	500 ~ 820	.032 ~ .098	Vc = 650 SFM, fz = .078 in/t, ap = 2.0 in, ae = .039D in					
				When plunging in small depth: fz = .008 in/t					
Hard materials (A980) 40 ~ 50HRC	**AH730**	200 ~ 330	.020 ~ .039	Vc = 230 SFM, fz = .028 in/t, ap = .028 in, ae = .039D in					
				When plunging in small depth: fz = .004 in/t					

Notes : The cutting speed and feed should be set to 70 to 80 % of the value shown in the above table when overhang length of tool exceeds 3D.