



List 53000 - PHOENIX® PSEL: SA/FA

List 78029 - PHOENIX® PSEL: SS

List 53001 - PHOENIX® PSEL: Bore

List 78028 - PHOENIX® PSEL: Bore

Work Material	Tensile Strength - Hardness	Insert Size			
		ZD T11...		ZDKT15...	
		Side Milling		Side Milling	
		Aa: 1.1-1.5D • Ar: 0.1D Max		Aa: 1.1-1.5D • Ar: 0.1D Max	
		Milling Speed Vc (SFM)	Feed Per Tooth fz(in/t)	Milling Speed Vc (SFM)	Feed Per Tooth fz(in/t)
P Mild Steels, Carbon Steels (1010, 1018)	~180 HB	525 (330 - 655)	0.010 (0.008 - 0.016)	525 (330 - 655)	0.012 (0.008 - 0.016)
	~280 HB	495 (330 - 655)	0.008 (0.006 - 0.012)	495 (330 - 655)	0.010 (0.006 - 0.012)
		425 (260 - 590)	0.008 (0.006 - 0.012)	425 (260 - 590)	0.010 (0.006 - 0.012)
M Stainless Steels(Dry) (304SS, 420SS)	~250 HB	495 (330 - 655)	0.005 (0.004 - 0.012)	495 (330 - 655)	0.006 (0.004 - 0.012)
	~250 HB	260 (195 - 395)	0.005 (0.004 - 0.012)	260 (195 - 395)	0.006 (0.004 - 0.012)
K Cast Iron (FC250)	~350 N/mm ²	525 (330 - 985)	0.008 (0.008 - 0.014)	525 (330 - 985)	0.010 (0.008 - 0.014)
	~800 N/mm ²	525 (330 - 820)	0.006 (0.008 - 0.012)	525 (330 - 820)	0.008 (0.008 - 0.012)
N Aluminum Alloys (6061, 7075)	~13% Si	985 (655 - 3280)	0.010 (0.004 - 0.016)	985 (655 - 3280)	0.012 (0.004 - 0.016)
S Heat Resistant Alloys (Inconel 718)	-	115 (85 - 195)	0.006 (0.004 - 0.012)	115 (85 - 195)	0.007 (0.004 - 0.012)
	-	130 (100 - 395)	0.006 (0.004 - 0.012)	130 (100 - 395)	0.007 (0.004 - 0.012)
H Pre-hardened Steel (P20, Stavax)	40 - 43 HRC	330 (130 - 495)	0.006 (0.004 - 0.012)	330 (130 - 495)	0.007 (0.004 - 0.012)
	43 - 48 HRC	195 (130 - 395)	0.005 (0.002 - 0.008)	195 (130 - 395)	0.006 (0.002 - 0.008)

Cutting Conditions Adjustment Ratio

Depth of Cut	Width of Cut	Milling Speed Ratio	Feed Rate Ratio
Aa	Ar Max		
< 0.2D	1D	0.8	0.5
0.25-0.3D	0.7D	0.8	0.6
0.4-0.5D	0.5D	0.9	0.7
0.6-0.7D	0.3D	0.9	0.8
0.8-1.0D	0.2D	1.0	0.9
1.1-1.5D	0.1D	1.0	1.0

Ex: For Ø1.250" PSEL with ZDKT11 inserts, Aa = 1.150", side milling in 1050 carbon steel:
Vc = 492 SFM x 1.0 = 492 SFM
fz = 0.008 in/t x 0.9 = 0.007 in/t
Ar = 0.2 x 1.250" = 0.250" Max

