

Recommended Cutting Speeds/Feeds

Recommended Cutting Speeds for Dapra SBN Cutters

MATERIAL GROUP	EXAMPLE	F1 (uncoated)	FP-GLH	FP-HM/TS	FPT	
PLAIN STEELS	< 3%C	1008, 1018, 12L14	300-600	800-1200	800-1200	.002-.007
	3%-6%C	1040, 1045, 1055				
	5%-1.5%C	1060, 1070, 1095				
ALLOY STEELS	Mo	4012, 4320, 4340		600-1000	600-1000	
	Cr	52100, 5120				
	NiCrMo	8620, 8622, 8640				
TOOL & DIE STEELS	A2, D2, P20, W2, H13, S7					
HARDENED STEELS		N/R	250-600	250-600	.002-.005	
STAINLESS STEELS	Ferritic/Martensitic	403, 416, 430, 430F, 434, 446, S44400	150-300	400-900	500-900	.002-.006
	Austenitic	304L, 303, 304, 316L		300-800	300-800	
	Precipitation Hardening (PH)	15-5PH, 17-4PH, custom, 455, PH13-8 Mo, AM355		250-700	250-700	
CAST IRON	Gray	A48 Class xx B, A436 Type 2	350-600	600-1000	600-1000 (HM)	.003-.008
	Malleable	A47, A220, SAE J148		400-850	400-900 (HM)	
	Ductile	60-40-18, 100-70-03, SAE J434				
ALUMINUM ALLOYS	2024-T4, 6061-T6, 7075-T6	1000+	1000+	1000+	.005-.010	
COPPER ALLOYS	CuNi: refer to High-Temp. Alloys below J463, B121, Ampco 21, Wearite 4-13	300-600	500-800	500-800		
HIGH-TEMP. ALLOYS	Inconel 617, Monel K500, Waspaloy, CuNi 70-30	50-125	50-150	50-150	.002-.004	
TITANIUM ALLOYS	Ti99.9, Alpha Alloy, Ti-6Al-4V	100-200	100-250	100-250	.002-.005	
CARBON GRAPHITE		700-1000 1200+ FPDL	1200+	1200+	.004-.010	

Other coatings available upon request.

Refer to the Diameter and Feed Rate Adjustment charts on page 89 for accurate RPM and IPM calculations.

** Best choice grades shown in **bold text**.

SPEED

Lower Speed Ranges for: Heavier cuts, harder materials, larger diameter tools

Medium Speed Ranges for: Semi-finishing

Higher Speed Ranges for: Lighter cuts, softer materials, smaller diameter tools

FEED

Lower Feed Ranges for: Heavier cuts, harder materials, smaller diameter tools

Higher Feed Ranges for: Lighter cuts, softer materials, larger diameter tools

The parameters provided are suggested operating parameters. Actual speeds and feeds will depend on many variables, such as rigidity, workpiece hardness, tool extension, machine accuracy, Depth of Cut, etc. Start at the middle of the SFM range and the low end of the FPT range. Next, increase FPT to optimize productivity and tool life. Higher SFM will provide higher output but will reduce tool life. Try different combinations to find the parameters that best suit your needs.