



ALLIANCECNC

ECO DRILL Speed & Feed Chart

Material Type	Cutting Speed SFM		Feed / REV.				
			Tool Diameter				
	Internal Coolant	External Coolant	.200" [5MM]	.315" [8MM]	.400" [10MM]	.625" [16MM]	.750" [20MM]
General Structural Steel [A36]	360-280	330-250	.004" [.10 MM]	.006"-.008" [.15-.20 MM]	.008"-.010" [.20-.25 MM]	.010"-.012" [.25-.30 MM]	.012"-.016" [.30-.41 MM]
Low Carbon, Free Cutting Steel [1018]	450-375	420-280	.006" [.15 MM]	.010" [.25 MM]	.012" [.30 MM]	.016" [.41 MM]	.020" [.51 MM]
Heat-Treatable Steel [1045 / 1140 / 1145]	360-270	300-240	.004"-.006" [.10-.15 MM]	.006"-.010" [.20-.25 MM]	.010"-.012" [.25-.30 MM]	.012"-.016" [.30-.41 MM]	.016"-.020" [.41-.51 MM]
High Alloy, Case Hardening Steel [4140 / 4142-5140]	360-280	320-160	.003"-.006" [.08-.15 MM]	.005"-.010" [.13-.25 MM]	.006"-.012" [.15-.30 MM]	.008"-.016" [.20-.41 MM]	.010"-.020" [.25-.51 MM]
Stainless Steel [303 / 316, 17-4PH, 416 / 420]	280-230	240-200	.002"-.004" [.05-.10 MM]	.003"-.006" [.08-.15 MM]	.004"-.008" [.10-.13 MM]	.005"-.010" [.13-.25 MM]	.006"-.012" [.15-.30 MM]
Cast Iron	600-400	520-360	.006" [.15 MM]	.010" [.25 MM]	.012" [.30 MM]	.016" [.41 MM]	.020" [.51 MM]
Titanium Alloys 6AL4V Inconel, Incoloy, Rene	130-100	110-90	.002"-.003" [.05-.08 MM]	.003"-.004" [.08-.10 MM]	.004"-.005" [.10-.13 MM]	.005"-.006" [.13-.15 MM]	.006"-.008" [.15-.20 MM]
Aluminum Alloys	800-600	640-480	.008" [.20 MM]	.012" [.30 MM]	.016" [.41 MM]	.020" [.51 MM]	.024" [.61 MM]
Brass, Bronze	800-700	700-600	.004"-.006" [.10-.15 MM]	.006"-.010" [.15-.25 MM]	.008"-.12" [.20-.30 MM]	.010"-.016" [.25-.41 MM]	.012"-.020" [.30-.51 MM]
No Lead Brass	500-420	420-360	.004"-.006" [.10-.15 MM]	.006"-.010" [.15-.25 MM]	.008"-.12" [.20-.30 MM]	.010"-.016" [.25-.41 MM]	.012"-.020" [.30-.51 MM]



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