

HSS Drill Feeds & Speeds

	Materials	Point Angle	Speed SFM	Twist Drill Recommended Feed Rates by Diameter								
				1/8" - 1/4"	1/4" - 5/16"	3/8" - 7/16"	1/2" - 9/16"	5/8"-11/16"	3/4" - 13/16"	7/8" - 1 1/8"	1 1/4" - 1 1/2"	Over 1 1/2"
NONFERROUS MATERIALS	Aluminum & Aluminum Alloys	118	200-300	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Brass	111	150-250	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Bronze	118	100-200	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Copper	118	100-200	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
STAINLESS STEEL	Stainless steel 200-300 series	135-140	20-40	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Stainless steel 400 series and PH	118	30-60	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
HIGH TEMP ALLOYS	Inconel 600 series	135-140	15-30	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Inconel X	135-140	10-15	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Hastelloy	135-140	15-30	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Titanium & Titanium Alloys	135-140	20-30	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	A-286	135-140	15-25	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Monel	118	40-50	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
STEELS	Steel < 180 HB	118	80-110	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Steel 180-280 HB	118	45-70	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Steel 280-380 HB	135-140	30-45	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Steel >380 HB	135-140	15-25	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
CAST IRON	Gray cast iron < 180 HB	90	100-150	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Gray cast iron 180-200 HB	118	70-100	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Gray cast iron - > 200 HB	118	50-70	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Ductile/Nodular cast iron	118	70-80	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up
	Cast Iron - chilled	135-140	25-35	.003" - .006"	.006" - .010"	.008" - .012"	.010" - .014"	.012" - .016"	.013" - .018"	.015" - .025"	.020" - .040"	.025" and up