

Reamer Cutting Data - Inch

Workpiece Material Group	I S O	Hardness	vc-SFM	Reamer Diameter				
				f-IPR				
				≥ 1/16	>1/16 - 1/8	>1/8 - 1/4	>1/4 - 1/2	>1/2 - 1
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc	200-300	.0005-.0030	.0020-.0060	.0040-.0100	.0060-.0150	.0100-.0300
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	P	28 to 38 Rc	125-200	.0005-.0020	.0020-.0040	.0040-.0060	.0060-.0100	.0100-.0200
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A 128, D2, D3, D4, D5, D7	P	28 to 44 Rc	50-125	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100
Stainless Steel - Free Machining / Austenitic 304/316	M	up to 28 Rc	120-190	.0005-.0020	.0020-.0040	.0040-.0060	.0060-.0100	.0100-.0200
Stainless Steel - Ferritic / Martensitic	M	up to 28 Rc	80-120	.0002-.0020	.0010-.0040	.0020-.0060	.0040-.0100	.0060-.0200
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	up to 28 Rc	60-100	.0002-.0020	.0010-.0040	.0020-.0060	.0040-.0100	.0060-.0200
Inconel 625/718	S	≤ 40 Rc	40-70	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100
Stellite / Cobalt Chrome	S	≤ 40 Rc	30-45	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100
Titanium 6Al-4V	S	≤ 40 Rc	35-50	.0002-.0020	.0010-.0040	.0020-.0060	.0040-.0100	.0060-.0200
Cast Iron - Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	150-250	.0002-.0020	.0010-.0040	.0020-.0060	.0040-.0100	.0060-.0200
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB	125-200	.0005-.0020	.0020-.0040	.0040-.0060	.0060-.0100	.0100-.0200
Cast Iron - (Martensitic) Hard	K		50-75	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100
Aluminum/Aluminum Alloys	N		500-1000	.0005-.0030	.0020-.0060	.0040-.0100	.0060-.0150	.0100-.0300
Brass/Bronze Free Machining	N		250-400	.0005-.0020	.0020-.0040	.0040-.0060	.0060-.0100	.0100-.0200
Brass/Bronze (Hard)	N		150-250	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100
Magnesium/Magnesium Alloys/Plastics/Bakelite Plastic - Glass Filled	N		500-1000	.0005-.0030	.0020-.0060	.0040-.0100	.0060-.0150	.0100-.0300
Copper/Hard Bronze	N		100-150	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100
Hardened Steels	H	23-32 Rc	125-200	.0005-.0020	.0020-.0040	.0040-.0060	.0060-.0100	.0100-.0200
Hardened Steels	H	32-43 Rc	50-125	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100
Hardened Steels	H	43-52 Rc	35-50	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100
Hardened Steels	H	50+ Rc	15-35	.0002-.0010	.0010-.0020	.0020-.0040	.0040-.0060	.0060-.0100

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

For product information, call your local distributor.

Reamer Cutting Data - Metric

Workpiece Material Group	I S O	Hardness	vc-m/min	Reamer Diameter (mm)				
				f-mm/rev				
				≥ 1.5	>1.5 - 3.0	>3.0 - 6.0	>6.0 - 12.0	>12.0 - 25.0
Free Machining & Low Carbon Steels 1006, 1008, 1015, 1018, 1020, 1022, 1025, 1117, 1140, 1141, 11L08, 11L14, 1213, 12L13, 12L14, 1215, 1330	P	up to 28 Rc	60-90	.010-.080	.050-.150	.100-.250	.150-.380	.250-.760
Medium Carbon & High Carbon Steels, Alloy Steels & Easy to Machine Tool Steels 1030, 1035, 1040, 1045, 1050, 1052, 1055, 1060, 1085, 1095, 1541, 1551, 9255, 2515, 3135, 3415, 4130, 4137, 4140, 4150, 4320, 4340, 4520, 5015, 5115, 5120, 5132, 5140, 5155, 6150, 8620, 9262, 9840, 52100, O1, O2, O6, S2, W1 to W310	P	28 to 38 Rc	40-60	.010-.050	.050-.100	.100-.150	.150-.250	.250-.510
Tool Steels & Die Steels O7, M1, M2, M3, M4, M7, T1, T2, T4, T5, T8, T15, A2, A3, A6, A7, H10, H11, H12, H13, H19, H21, L3, L6, L7, P2, P20, S1, S5, S7, 52100, A 128, D2, D3, D4, D5, D7	P	28 to 44 Rc	15-40	.010-.030	.030-.050	.050-.100	.100-.150	.150-.250
Stainless Steel - Free Machining / Austenitic 304/316	M	up to 28 Rc	35-60	.010-.050	.050-.100	.100-.150	.150-.250	.250-.500
Stainless Steel - Ferritic / Martensitic	M	up to 28 Rc	25-35					
Stainless Steel - Moderately Difficult 301, 302, 303 High Tensile, 304, 304L, 305, 420, 15-5PH, 17-4PH, 17-7PH	M	up to 28 Rc	20-30	.010-.050	.030-.100	.050-.150	.100-.250	.150-.500
Inconel 625/718	S	≤ 40 Rc	15-20	.010-.030	.030-.050	.050-.100	.100-.150	.150-.250
Stellite / Cobalt Chrome	S	≤ 40 Rc	10-15					
Titanium 6Al-4V	S	≤ 40 Rc	10-15	.010-.050	.030-.100	.050-.150	.100-.250	.150-.500
Cast Iron - Gray CG, ASTM A48, CLASS 20, 25, 30, 35, SAE J431C, GRADES G1800, G3000, G3500, GG 10, 15, 20, 25, 30, 35, 40	K	up to 240 HB	45-75	.010-.050	.030-.100	.050-.150	.100-.250	.150-.500
Cast Iron - Ductile & Malleable CGI 60-40-18, 65-45-12, D4018, D4512, D5506, 32510, 35108, M3210, M4504, M5503, 250, 300, 350, 400, 450	K	over 240 HB	40-60	.010-.050	.050-.100	.100-.150	.150-.250	.250-.500
Cast Iron - (Martensitic) Hard	K		15-25	.010-.030	.030-.050	.050-.100	.100-.150	.150-.250
Aluminum/Aluminum Alloys	N		150-300	.010-.080	.050-.150	.100-.250	.150-.380	.250-.760
Brass/Bronze Free Machining	N		75-120	.010-.050	.050-.100	.100-.150	.150-.250	.250-.500
Brass/Bronze (Hard)	N		45-75					
Magnesium/Magnesium Alloys/Plastics/Bakelite Plastic - Glass Filled	N		150-300	.010-.080	.050-.150	.100-.250	.150-.380	.250-.760
Copper/Hard Bronze	N		30-45	.010-.030	.030-.050	.050-.100	.100-.150	.150-.250
Hardened Steels	H	23-32 Rc	40-60	.010-.050	.050-.100	.100-.150	.150-.250	.250-.500
Hardened Steels	H	32-43 Rc	15-40					
Hardened Steels	H	43-52 Rc	10-15	.010-.030	.030-.050	.050-.100	.100-.150	.150-.250
Hardened Steels	H	50+ Rc	5-10	.010-.030	.030-.050	.050-.100	.100-.150	.150-.250

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