

RPM = $\frac{SFM}{DIAM. \text{ in.}} \times 3.82$ IPM = IPR x RPM

HOLE DEPTH in. $\times 60 = \text{Cut Time}$ mm = in. x 25.40

m/min. = SFM $\div 3.28$ Bar = PSI $\div 14.50$
mm/rev. = IPR $\times 25.40$ Liter = Gal. $\div 3.79$

Series # 6400

Material group	Hardness	SFM	Feed Rate - IPR							
			0.0197 in. 0.500 mm	0.0315 in. 0.800 mm	0.0394 in. 1.000 mm	0.0591 in. 1.500 mm	0.0787 in. 2.000 mm	0.0984 in. 2.500 mm	0.1181 in. 3.000 mm	
Common structural steels	≤ 20 HRC	330	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118	
	≤ 32 HRC	330	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118	
Free-cutting steels	≤ 25 HRC	330	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118	
	≤ 32 HRC	295	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106	
Unalloyed heat-treatable steels	≤ 20 HRC	295	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118	
	≤ 25 HRC	295	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118	
	≤ 32 HRC	295	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106	
Alloyed heat-treatable steels	≤ 32 HRC	295	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106	
	≤ 43 HRC	230	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
Unalloyed case hardened steels	≤ 25 HRC	330	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106	
Alloyed case hardened steels	≤ 32 HRC	280	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106	
	≤ 43 HRC	230	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
Nitriding steels	≤ 32 HRC	230	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
	≤ 43 HRC	195	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
Tool steels	≤ 25 HRC	165	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
	≤ 43 HRC	195	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
High speed steels	≤ 43 HRC	195	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035	
Spring steels	≤ 38 HRC	195	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035	
Stainless steels	sulphured austenitic martensitic	≤ 28 HRC	100	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035
		≤ 36 HRC	50	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024
		≤ 46 HRC	100	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035
Hardened steels	≤ 48 HRC									
	≤ 66 HRC									
Special alloys	≤ 54 HRC	35	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024	
Cast iron	≤ 23 HRC	425	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142	
	≤ 38 HRC	425	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142	
Spheroidal graphite iron and malleable cast iron	≤ 23 HRC	425	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142	
	≤ 38 HRC	395	0.0024	0.0035	0.0043	0.0067	0.0091	0.0110	0.0134	
Chilled cast iron	≤ 38 HRC									
Ti and Ti-alloys	≤ 25 HRC	50	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024	
	≤ 43 HRC	50	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024	
Aluminum and Al-alloys	≤120HB	230	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142	
Al wrought alloys	≤200HB	230	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142	
	Al cast alloys	≤ 10% Si ≤ 24% Si	≤180HB ≤180HB	445 445	0.0009 0.0009	0.0013 0.0013	0.0017 0.0017	0.0026 0.0026	0.0036 0.0036	0.0047 0.0047
Magnesium alloys	≤120HB									
Copper	low-alloyed ≤ 80 HB									
Brass	short-chipping long-chipping	≤180HB ≤180HB								
	short-chipping	≤180HB								
Bronze	short-chipping	≤ 25 HRC								
Bronze	long-chipping	≤ 25 HRC ≤ 32 HRC								

Series # 6401

Material group	Hardness	SFM	Feed Rate - IPR							
			0.0197 in. 0.500 mm	0.0315 in. 0.800 mm	0.0394 in. 1.000 mm	0.0591 in. 1.500 mm	0.0787 in. 2.000 mm	0.0984 in. 2.500 mm	0.1181 in. 3.000 mm	
Common structural steels	≤ 20 HRC	330	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
	≤ 32 HRC	330	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
Free-cutting steels	≤ 25 HRC	330	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
	≤ 32 HRC	295	0.0014	0.0020	0.0028	0.0039	0.0055	0.0067	0.0083	
Unalloyed heat-treatable steels	≤ 20 HRC	295	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
	≤ 25 HRC	295	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094	
	≤ 32 HRC	295	0.0014	0.0020	0.0028	0.0039	0.0055	0.0067	0.0083	
Alloyed heat-treatable steels	≤ 32 HRC	295	0.0014	0.0020	0.0028	0.0039	0.0055	0.0067	0.0083	
	≤ 43 HRC	230	0.0012	0.0016	0.0016	0.0035	0.0047	0.0059	0.0071	
Unalloyed case hardened steels	≤ 25 HRC	330	0.0014	0.0020	0.0028	0.0039	0.0055	0.0067	0.0083	
Alloyed case hardened steels	≤ 32 HRC	280	0.0014	0.0020	0.0028	0.0039	0.0055	0.0067	0.0083	
	≤ 43 HRC	230	0.0012	0.0016	0.0016	0.0035	0.0047	0.0059	0.0071	
Nitriding steels	≤ 32 HRC	230	0.0012	0.0016	0.0016	0.0035	0.0047	0.0059	0.0071	
	≤ 43 HRC	195	0.0012	0.0016	0.0016	0.0035	0.0047	0.0059	0.0071	
Tool steels	≤ 25 HRC	165	0.0012	0.0016	0.0016	0.0035	0.0047	0.0059	0.0071	
	≤ 43 HRC	195	0.0012	0.0016	0.0016	0.0035	0.0047	0.0059	0.0071	
High speed steels	≤ 43 HRC	195	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035	
Spring steels	≤ 38 HRC	195	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035	
Stainless steels	sulphured austenitic martensitic	≤ 28 HRC	100	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035
		≤ 36 HRC	50	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024
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Cast iron	≤ 23 HRC	425	0.0022	0.0031	0.0043	0.0063	0.0087	0.0106	0.0130	
	≤ 38 HRC	425	0.0022	0.0031	0.0043	0.0063	0.0087	0.0106	0.0130	
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	short-chipping	≤180HB								
Bronze	short-chipping	≤ 25 HRC								
Bronze	long-chipping	≤ 25 HRC ≤ 32 HRC								