Series # 736

Material group	Hardness HRC	Hardness BHN	SFM	Feed Rate - IPR .5 mm	1.0 mm	2.0 mm	2.5 mm	3.15 mm	4.0 mm	5.0 mm	6.3 mm	8 mm
Common structural steels	- ≤ 32	≤ 150 ≤ 301	230 195	0.0003 0.0003	0.0006 0.0006	0.0016 0.0016	0.0020 0.0020	0.0025 0.0025	0.0031 0.0031	0.0031 0.0031	0.0039 0.0039	0.0049 0.0049
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	230 230	0.0003 0.0003	0.0006 0.0006	0.0016 0.0016	0.0020 0.0020	0.0025 0.0025	0.0031 0.0031	0.0031 0.0031	0.0039 0.0039	0.0049 0.0049
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	195 165 150	0.0003 0.0003 0.0003	0.0006 0.0006 0.0005	0.0016 0.0016 0.0013	0.0020 0.0020 0.0016	0.0025 0.0025 0.0020	0.0031 0.0031 0.0025	0.0031 0.0031 0.0025	0.0039 0.0039 0.0031	0.0049 0.0049 0.0039
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	115 65	0.0003 0.0003	0.0006 0.0005	0.0016 0.0013	0.0020 0.0016	0.0025 0.0020	0.0031 0.0025	0.0031 0.0025	0.0039 0.0031	0.0049 0.0039
Unalloyed case hardened steels	≤ 25	≤ 255	195	0.0004	0.0006	0.0020	0.0025	0.0031	0.0039	0.0039	0.0049	0.0063
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	115 65	0.0003 0.0003	0.0006 0.0005	0.0016 0.0013	0.0020 0.0016	0.0025 0.0020	0.0031 0.0025	0.0031 0.0025	0.0039 0.0031	0.0049 0.0039
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	80 65	0.0003 0.0003	0.0006 0.0005	0.0016 0.0013	0.0020 0.0016	0.0025 0.0020	0.0031 0.0025	0.0031 0.0025	0.0039 0.0031	0.0049 0.0039
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	80 50	0.0003 0.0003	0.0005 0.0005	0.0013 0.0013	0.0016 0.0016	0.0020 0.0020	0.0025 0.0025	0.0025 0.0025	0.0031 0.0031	0.0039 0.0039
High speed steels	≤ 43	≤ 402	50	0.0003	0.0005	0.0013	0.0016	0.0020	0.0025	0.0025	0.0031	0.0039
Spring steels	≤ 38	≤ 354	50	0.0002	0.0003	0.0010	0.0013	0.0016	0.0020	0.0020	0.0025	0.0031
Hardened steels	≤ 48 ≤ 66	≤ 460 -										
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	100 65 50	0.0003 0.0003 0.0003	0.0005 0.0005 0.0005	0.0013 0.0013 0.0013	0.0016 0.0016 0.0016	0.0020 0.0020 0.0020	0.0025 0.0025 0.0025	0.0025 0.0025 0.0025	0.0031 0.0031 0.0031	0.0039 0.0039 0.0039
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	165 165	0.0005 0.0004	0.0007 0.0006	0.0025 0.0020	0.0031 0.0025	0.0039 0.0031	0.0049 0.0039	0.0049 0.0039	0.0063 0.0049	0.0079 0.0063
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	195 165	0.0005 0.0004	0.0007 0.0006	0.0025 0.0020	0.0031 0.0025	0.0039 0.0031	0.0049 0.0039	0.0049 0.0039	0.0063 0.0049	0.0079 0.0063
Chilled cast iron	≤ 38	≤ 354										
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301										
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402										
Special alloys	≤ 54	≤ 549	35	0.0002	0.0002	0.0008	0.0010	0.0013	0.0016	0.0016	0.0020	0.0025
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402	35 35	0.0002 0.0002	0.0003 0.0003	0.0010 0.0010	0.0013 0.0013	0.0016 0.0016	0.0020 0.0020	0.0020 0.0020	0.0025 0.0025	0.0031 0.0031
Aluminium and Al-alloys	-	≤ 120	525	0.0006	0.0008	0.0031	0.0039	0.0049	0.0063	0.0063	0.0079	0.0098
Al wrought alloys	-	≤ 200	525	0.0006	0.0008	0.0031	0.0039	0.0049	0.0063	0.0063	0.0079	0.0098
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180	330 330	0.0005 0.0005	0.0007 0.0007	0.0025 0.0025	0.0031 0.0031	0.0039 0.0039	0.0049 0.0049	0.0049 0.0049	0.0063 0.0063	0.0079 0.0079
Magnesium alloys	-	≤ 120	460	0.0005	0.0007	0.0025	0.0031	0.0039	0.0049	0.0049	0.0063	0.0079
Copper, low-alloyed	-	≤ 150	395	0.0004	0.0006	0.0020	0.0025	0.0031	0.0039	0.0039	0.0049	0.0063
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180	460 295	0.0004 0.0004	0.0006 0.0006	0.0020 0.0020	0.0025 0.0025	0.0031 0.0031	0.0039 0.0039	0.0039 0.0039	0.0049 0.0049	0.0063 0.0063
Bronze, short-chipping	- ≤ 25	≤ 180 ≤ 255	230 195	0.0003 0.0003	0.0006 0.0006	0.0016 0.0016	0.0020 0.0020	0.0025 0.0025	0.0031 0.0031	0.0031 0.0031	0.0039 0.0039	0.0049 0.0049
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301	130 115	0.0003 0.0003	0.0006 0.0006	0.0016 0.0016	0.0020 0.0020	0.0025 0.0025	0.0031 0.0031	0.0031 0.0031	0.0039 0.0039	0.0049 0.0049
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK			130 195	0.0003 0.0004	0.0006 0.0006	0.0016 0.0020	0.0020 0.0025	0.0025 0.0031	0.0031 0.0039	0.0031 0.0039	0.0039 0.0049	0.0049 0.0063

Series # 768

Material group	Hardness HRC	Hardness BHN	SFM	Feed Rate - IPR 1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm
Common structural steels	- ≤ 32	≤ 150 ≤ 301											
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301											
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301											
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Unalloyed case hardened steels	≤ 25	≤ 255											
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402											
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402											
High speed steels	≤ 43	≤ 402											
Spring steels	≤ 38	≤ 354											
Hardened steels	≤ 48 ≤ 66	≤ 460 -											
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435											
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	260 130		0.0065 0.0020	0.0100 0.0030	0.0125 0.0040	0.0160 0.0050	0.0180 0.0055	0.0200 0.0065			
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354											
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549	295		0.0065	0.0100	0.0125	0.0160	0.0180	0.0200			
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402											
Aluminium and Al-alloys	-	≤ 120	1080		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Al wrought alloys	-	≤ 200											
Al cast alloys ≤ 10 % Si ≤ 24 % Si	- -	≤ 180 ≤ 180	920		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150	360		0.0050	0.0080	0.0100	0.0125	0.0125	0.0140			
Brass, short-chipping long-chipping	- -	≤ 180 ≤ 180	260		0.0040	0.0065	0.0080	0.0100	0.0100	0.0110			
Bronze, short-chipping	- ≤ 25	≤ 180 ≤ 255											
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301											
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK													