

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

для размещения заказа - guhring@guhring-tools.ru  
 HOLE DEPTH in. x 60 = Cut Time  
 IPM mm = in. x 25.40

$$\text{m/min.} = \text{SFM} \div 3.28 \quad \text{Bar} = \text{PSI} \div 14.50$$

$$\text{mm/rev.} = \text{IPR} \times 25.40 \quad \text{Liter} = \text{Gal.} \div 3.79$$

# Series # 670

Material group	Hardness	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	≤100 Bhn >100-260 Bhn	90 70	0.0015 0.0012	0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080	•	•	•	•	•	•
Free-cutting steels	≤24 Rc >24-30 Rc	90 70	0.0015 0.0012	0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080	•	•	•	•	•	•
Unalloyed heat-treatable steels	≤16 Rc 16-24 Rc 24-30 Rc	90 70 50	0.0012 0.0012 0.0010	0.0030 0.0030 0.0025	0.0050 0.0050 0.0040	0.0065 0.0065 0.0050	0.0080 0.0080 0.0065	•	•	•	•	•	•
Alloyed heat-treatable steels	24-30 Rc >30-38 Rc	45 30	0.0010 0.0007	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	•	•	•	•	•	•
Unalloyed case hardened steels	≤230 Bhn	90	0.0015	0.0040	0.0065	0.0080	0.0100	•	•	•	•	•	•
Alloyed case hardened steels	24-30 Rc >30-38 Rc	35 30	0.0010 0.0007	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	•	•	•	•	•	•
Nitriding steels	≥24-30 Rc >30-38 Rc	30 25	0.0010 0.0007	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	•	•	•	•	•	•
Tool steels	≤24 Rc >24-30 Rc	35 25	0.0010 0.0007	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	•	•	•	•	•	•
High speed steels	≥14-30 Rc	25	0.0007	0.0020	0.0030	0.0040	0.0050	•	•	•	•	•	•
Spring steels	≤330 Bhn	15	0.0005	0.0015	0.0025	0.0030	0.0040	•	•	•	•	•	•
Stainless steels, sulphured austenitic martensitic	≤24 Rc 25 ≤24 Rc	30 25 30	0.0010 0.0007 0.0007	0.0025 0.0020 0.0020	0.0040 0.0030 0.0030	0.0050 0.0040 0.0040	0.0065 0.0050 0.0050	•	•	•	•	•	•
Hardened steels	≤40-48 Rc >48-60 Rc	• •	• •	• •	• •	• •	• •	•	•	•	•	•	•
Special alloys	≤38 Rc	15	0.0005	0.0015	0.0025	0.0030	0.0040	•	•	•	•	•	•
Cast iron	≤240 Bhn <300 Bhn	90 70	0.0015 0.0015	0.0040 0.0040	0.0065 0.0065	0.0080 0.0080	0.0100 0.0100	•	•	•	•	•	•
Spheroidal graphite iron and malleable cast iron	≤240 Bhn <300 Bhn	80 55	0.0015 0.0015	0.0040 0.0040	0.0065 0.0065	0.0080 0.0080	0.0100 0.0100	•	•	•	•	•	•
Chilled cast iron	≤350 Bhn	15	0.0007	0.0020	0.0030	0.0040	0.0050	•	•	•	•	•	•
Ti and Ti-alloys	≤24 Rc >24-38 Rc	25 15	0.0005 0.0005	0.0015 0.0015	0.0025 0.0025	0.0030 0.0030	0.0040 0.0040	•	•	•	•	•	•
Aluminium and Al-alloys	≤120 Bhn	225	0.0017	0.0050	0.0080	0.0100	0.0125	•	•	•	•	•	•
Al wrought alloys	≤150 Bhn	225	0.0017	0.0050	0.0080	0.0100	0.0125	•	•	•	•	•	•
Al cast alloys ≤ 10 % Si > 10 % Si	≤200 Bhn ≤200 Bhn	180 145	0.0017 0.0015	0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	•	•	•	•	•	•
Magnesium alloys	≤150 Bhn	225	0.0015	0.0040	0.0065	0.0080	0.0100	•	•	•	•	•	•
Copper, low-alloyed	≤120 Bhn	90	0.0012	0.0030	0.0050	0.0065	0.0080	•	•	•	•	•	•
Brass, short-chipping long-chipping	≤200 Bhn ≤200 Bhn	• 115	• 0.0012	• 0.0030	• 0.0050	• 0.0065	• 0.0080	•	•	•	•	•	•
Bronze, short-chipping	≤200 Bhn >200-260 Bhn	90 80	0.0010 0.0010	0.0025 0.0025	0.0040 0.0040	0.0050 0.0050	0.0065 0.0065	•	•	•	•	•	•
Bronze, long-chipping	≤24 Rc >24-30 Rc	70 55	0.0010 0.0010	0.0025 0.0025	0.0040 0.0040	0.0050 0.0050	0.0065 0.0065	•	•	•	•	•	•
Duroplastics	-	45	0.0010	0.0025	0.0040	0.0050	0.0065	•	•	•	•	•	•
Thermoplastics	-	70	0.0012	0.0030	0.0050	0.0065	0.0080	•	•	•	•	•	•
Reinforced plastics - Kevlar	-	•	•	•	•	•	•	•	•	•	•	•	•
Reinforced plastics - GFK / CFK	-	•	•	•	•	•	•	•	•	•	•	•	•

# Series # 671

Material group	Hardness	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	≤100 Bhn >100-260 Bhn	90 70	0.0015 0.0012	0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080	•	•	•	•	•	•
Free-cutting steels	≤24 Rc >24-30 Rc	90 70	0.0015 0.0012	0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080	•	•	•	•	•	•
Unalloyed heat-treatable steels	≤16 Rc 16-24 Rc 24-30 Rc	90 70 50	0.0012 0.0012 0.0010	0.0030 0.0030 0.0025	0.0050 0.0050 0.0040	0.0065 0.0065 0.0050	0.0080 0.0080 0.0065	•	•	•	•	•	•
Alloyed heat-treatable steels	24-30 Rc >30-38 Rc	45 30	0.0010 0.0007	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	•	•	•	•	•	•
Unalloyed case hardened steels	≤230 Bhn	90	0.0015	0.0040	0.0065	0.0080	0.0100	•	•	•	•	•	•
Alloyed case hardened steels	24-30 Rc >30-38 Rc	35 30	0.0010 0.0007	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	•	•	•	•	•	•
Nitriding steels	≥24-30 Rc >30-38 Rc	30 25	0.0010 0.0007	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	•	•	•	•	•	•
Tool steels	≤24 Rc >24-30 Rc	35 25	0.0010 0.0007	0.0025 0.0020	0.0040 0.0030	0.0050 0.0040	0.0065 0.0050	•	•	•	•	•	•
High speed steels	≥14-30 Rc	25	0.0007	0.0020	0.0030	0.0040	0.0050	•	•	•	•	•	•
Spring steels	≤330 Bhn	15	0.0005	0.0015	0.0025	0.0030	0.0040	•	•	•	•	•	•
Stainless steels, sulphured austenitic martensitic	≤24 Rc 25 ≤24 Rc	30 25 30	0.0010 0.0007 0.0007	0.0025 0.0020 0.0020	0.0040 0.0030 0.0030	0.0050 0.0040 0.0040	0.0065 0.0050 0.0050	•	•	•	•	•	•
Hardened steels	≤40-48 Rc >48-60 Rc	• •	• •	• •	• •	• •	• •	•	•	•	•	•	•
Special alloys	≤38 Rc	15	0.0005	0.0015	0.0025	0.0030	0.0040	•	•	•	•	•	•
Cast iron	≤240 Bhn <300 Bhn	90 70	0.0015 0.0015	0.0040 0.0040	0.0065 0.0065	0.0080 0.0080	0.0100 0.0100	•	•	•	•	•	•
Spheroidal graphite iron and malleable cast iron	≤240 Bhn <300 Bhn	80 55	0.0015 0.0015	0.0040 0.0040	0.0065 0.0065	0.0080 0.0080	0.0100 0.0100	•	•	•	•	•	•
Chilled cast iron	≤350 Bhn	15	0.0007	0.0020	0.0030	0.0040	0.0050	•	•	•	•	•	•
Ti and Ti-alloys	≤24 Rc >24-38 Rc	25 15	0.0005 0.0005	0.0015 0.0015	0.0025 0.0025	0.0030 0.0030	0.0040 0.0040	•	•	•	•	•	•
Aluminium and Al-alloys	≤120 Bhn	225	0.0017	0.0050	0.0080	0.0100	0.0125	•	•	•	•	•	•
Al wrought alloys	≤150 Bhn	225	0.0017	0.0050	0.0080	0.0100	0.0125	•	•	•	•	•	•
Al cast alloys ≤ 10 % Si > 10 % Si	≤200 Bhn ≤200 Bhn	180 145	0.0017 0.0015	0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	•	•	•	•	•	•
Magnesium alloys	≤150 Bhn	225	0.0015	0.0040	0.0065	0.0080	0.0100	•	•	•	•	•	•
Copper, low-alloyed	≤120 Bhn	90	0.0012	0.0030	0.0050	0.0065	0.0080	•	•	•	•	•	•
Brass, short-chipping long-chipping	≤200 Bhn ≤200 Bhn	• 115	• 0.0012	• 0.0030	• 0.0050	• 0.0065	• 0.0080	•	•	•	•	•	•
Bronze, short-chipping	≤200 Bhn >200-260 Bhn	90 80	0.0010 0.0010	0.0025 0.0025	0.0040 0.0040	0.0050 0.0050	0.0065 0.0065	•	•	•	•	•	•
Bronze, long-chipping	≤24 Rc >24-30 Rc	70 55	0.0010 0.0010	0.0025 0.0025	0.0040 0.0040	0.0050 0.0050	0.0065 0.0065	•	•	•	•	•	•
Duroplastics	-	45	0.0010	0.0025	0.0040	0.0050	0.0065	•	•	•	•	•	•
Thermoplastics	-	70	0.0012	0.0030	0.0050	0.0065	0.0080	•	•	•	•	•	•
Reinforced plastics - Kevlar	-	•	•	•	•	•	•	•	•	•	•	•	•
Reinforced plastics - GFK / CFK	-	•	•	•	•	•	•	•	•	•	•	•	•