

GARR TOOL Drill Selector Guide

Fractional

Type	Rc Hardness	RECOMMENDED SFM BY SERIES						
		1100, 1120	4000	1200, 1205, 1520, 1600, 1400	1500, 1510, 1300	1700	1700K	1800H
COBALT BASE ALLOYS / Kobaltlegierungen / Aleaciones del cobalto / Alliages de cobalt / Leghe del cobalto / 钴基合金								
Powdered Metal, Stellite, Hs-21, Haynes 25/188, X-40, L-605	< 35 > 35	80 - 120 -	80 - 120 -	100 - 150 80 - 110	100 - 150 80 - 110	- -	- -	- -
NICKEL BASE ALLOYS / Nickellegierungen / Aleaciones de níquel / Alliage de nickel / Leghe di nichel / 高镍基合金								
Invar, Kovar, Inconel-625/718, Waspalloy, Rene, Hastalloy, A286	< 35 > 35	100 - 125 -	100 - 125 -	125 - 150 100 - 125	125 - 175 100 - 125	- -	- -	- -
IRON BASE ALLOYS / Eisenlegierungen / Aleaciones ferrosas / Alliages ferreux / Leghe ferrose / 铁基合金								
Incoloy 800-802, Multimet N-155, Timkin 16-25-6, Carpenter 22-b3	< 35 > 35	150 - 175 -	150 - 175 -	150 - 200 150 - 175	175 - 200 150 - 200	- -	- -	- -
MONEL / 铜-镍合金								
Monel - 65% Nickel		-	-	100 - 150	100 - 150	-	-	-
TITANIUM ALLOYS / Titanlegierungen / Aleaciones de Titanio / Alliage de Titane / Leghe di Titanio / 钛合金								
Commercially Pure, 6Al-4V, Astm 1/2/3, 6Al-25N-4Zr-2Mo-Si		125 - 175	125 - 175	150 - 200	150 - 200	-	-	-
STAINLESS STEELS / Rostfreie Stähle / Acero Inoxidable / Acier Inoxydable / Acciaio Inox / 不锈钢合金								
(Precipitation) 13/8, 15/5, 17-4, pH Types	< 35 > 35	- -	125 - 150 -	125 - 175 80 - 125	150 - 200 100 - 150	- -	- -	- -
(Austenitic) Inox, 200 Series, 300 Series	< 35 > 35	- -	125 - 150 -	100 - 175 100 - 125	150 - 200 125 - 150	- -	- -	- -
(Austenitic) 304L, 316L, Nitronic 50, Inox	< 35 > 35	- -	100 - 125 -	80 - 100 60 - 90	90 - 125 80 - 100	- -	- -	- -
(Martensitic) 400 Series	< 35 > 35	- -	125 - 150 -	100 - 150 80 - 125	125 - 175 100 - 140	- -	- -	- -
HIGH STRENGTH TOOL STEELS / Hochfeste Werkzeugstähle / Herramienta aceros de alto dureza / Aciers à outils à haute résistance / Acciaio da utensili molto duro / 高强度工具钢								
4140, 4340, 6150, 5210, A2, D2, P20, H11, H13, S2, O1	< 35 > 35	- -	125 - 150 -	100 - 175 80 - 130	125 - 175 80 - 130	- -	- -	- -
MEDIUM ALLOY TOOL STEELS / Mittel Legierte Werkzeugstähle / Aceros herramienta medios de la aleación / Aciers à outils alliés / Acciaio da utensili di media durezza / 中碳合金钢								
200, 250, 300	< 35 > 35	- -	125 - 150 -	125 - 175 100 - 150	125 - 175 100 - 150	- -	- -	- -
CARBON STEELS / Kohlenstoffstahl / Acero de carbón / Acier du carbone / Acciaio al carbonio / 碳钢								
Platinum, A36, 1000's, 1100's, 1300's	< 35 > 35	- -	125 - 150 -	125 - 175 100 - 125	150 - 200 100 - 175	- -	- -	- -
CAST MATERIAL / Gegossenes Material / Material bastidor vertidos / Materiaux fontes / Materiale fuso / 铸造件								
Steel		150 - 200	150 - 200	125 - 175	-	150 - 250	175 - 300	-
Ductile Iron		200 - 400	200 - 400	125 - 200	150 - 250	175 - 300	200 - 400	-
Gray Iron		175 - 300	175 - 300	100 - 200	150 - 250	175 - 300	200 - 400	-
Aluminum		200 - 400	200 - 400	150 - 300	-	250 - 400	300 - 450	500 - 700
ALUMINUM / Aluminium / Aluminio / Aluminium / Alluminio / 铝								
Aircraft Grade (6061, 7075)		-	300	250 - 500	-	-	-	500 - 700
MAGNESIUM / Magnesium / Magnesio / Magnésium / Magnesio / 镁								
		-	300	200 - 500	-	-	-	200 - 400
COPPER / Kupfer / Cobre / Cuivre / Rame / 铜								
Copper Alloys		-	300	150 - 300	-	-	-	-
BRASS, BRONZE / Messing, Bronze / Latón, Bronce / Laiton, Bronze / Ottone, Bronzo / 黄铜, 青铜								
Brass, Aluminum/Bronze, Low Silicon Bronze		-	-	150 - 300 125 - 200	- -	- -	- -	200 - 400 200 - 400
COMPOSITE MATERIAL / Verbundwerkstoffe / Material compuesto / Materiaux composites / Materiale composito / 复合材料								
Glass Epoxy, Fiberglass, Plastics, Graphite, G10		200	200	150 - 300	150 - 300	-	-	-

NOTE - ABOVE ARE STARTING PARAMETERS ONLY. HIGHER RESULTS MAY BE ACHIEVED WITH OPTIMUM CONDITIONS.