



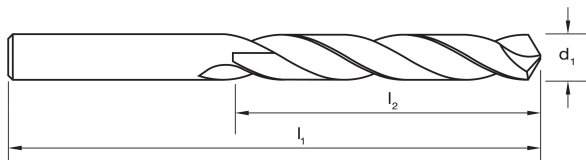
D109-Sets -Heavy Duty Cobalt - Jobber Drills - Sets - Sutton Tools -Heavy Duty Cobalt

Sutton Tools Heavy Duty Cobalt Jobber Drills are industrial quality for drilling materials that have high hardness and tensile strength such as cast iron, bronze, hard steel & stainless steel. These drill bits feature a thick core for increased rigidity in hard materials.

Features:

- 135° Split Point (drills > 2mm & 3/32) - Enables accurate positioning and less drilling pressure
- Thick Core - For increased rigidity in hard materials
- Precision Engineered Parallel Shank - For accurate hole size
- Made from HSS Cobalt - The 5% cobalt formula improves abrasive & heat resistance, for increased strength at higher cutting temperatures
- Colour Tempered Surface Finish - Enables identification of cobalt tool material

Range:



Item #	Description	Pieces	Range	Case
D109S2	S2	21	1/16 – 3/8 x 1/64 rises	ABS
D109S3	S3	29	1/16 – 1/2 x 1/64 rises	ABS
D109SM2	SM2	19	1.0 – 10.0mm x 0.5mm rises	ABS
D109SM3	SM3	25	1.0 – 13.0mm x 0.5mm rises	ABS

Applications:

ISO	VDI	Description	Condition	Hardness	Strength	Optimal
P	1	Steel - Non-alloy, cast & free cutting (~ 0.15 %C)	Annealed	125HB	440MPa	
P	2	Steel - Non-alloy, cast & free cutting (~ 0.45 %C)	Annealed	190HB	640MPa	
P	3	Steel - Non-alloy, cast & free cutting (~ 0.45 %C)	Quenched & Tempered	250MPa	840MPa	●
P	4	Steel - Non-alloy, cast & free cutting (~ 0.75 %C)	Annealed	270MPa	910MPa	○
P	5	Steel - Non-alloy, cast & free cutting (~ 0.75 %C)	Quenched & Tempered	300MPa	1010MPa	●
P	6	Steel - Low alloy & cast < 5% of alloying elements	Annealed	180HB	610MPa	
P	7	Steel - Low alloy & cast < 5% of alloying elements	Quenched & Tempered	275MPa	930MPa	●
P	8	Steel - Low alloy & cast < 5% of alloying elements	Quenched & Tempered	300MPa	1010MPa	●
P	9	Steel - Low alloy & cast < 5% of alloying elements	Quenched & Tempered	350MPa	1180MPa	○
P	10	Steel - High alloy, cast & tool	Annealed	200MPa	680MPa	○
P	11	Steel - High alloy, cast & tool	Hardened & Tempered	325MPa	1100MPa	○
P	12	Steel - Corrosion resistant & cast - Ferritic / Martensitic	Annealed	200HB	680MPa	
P	13	Steel - Corrosion resistant & cast - Martensitic	Quenched & Tempered	240HB	810MPa	
M	14.1	Stainless Steel - Austenitic	Age Hardened	180MPa	610MPa	○
M	14.2	Stainless Steel - Duplex		250MPa	840MPa	○
M	14.3	Stainless Steel - Precipitation Hardening		250HB	840MPa	
K	15	Cast Iron, Grey (GG) - Ferritic / Pearlitic		180MPa	610MPa	○
K	16	Cast Iron, Grey (GG) - Pearlitic		260MPa	880MPa	○
K	17	Cast Iron, Nodular (GGG) - Ferritic		160MPa	570MPa	○
K	18	Cast Iron, Nodular (GGG) - Pearlitic		250MPa	840MPa	○
K	19	Cast Iron, Malleable - Ferritic		130MPa	460MPa	○
K	20	Cast Iron, Malleable - Pearlitic		230MPa	780MPa	○
N	21	Aluminum & Magnesium, wrought alloy - Non Heat Treatable		60HB	210MPa	
N	22	Aluminum & Magnesium, wrought alloy - Heat Treatable	Age Hardened	100HB	360MPa	
N	23	Aluminum & Magnesium, cast alloy ≤12% Si - Non Heat Treatabl		75HB	270MPa	
N	24	Aluminum & Magnesium, cast alloy ≤12% Si - Heat Treatable	Age Hardened	90HB	320MPa	
N	25	Aluminum & Magnesium, cast alloy >12% Si - Non Heat Treatabl		130HB	460MPa	
N	26	Copper & Copper alloys (Brass/Bronze) - Free cutting, Pb > 1		110HB	390MPa	
N	27	Copper & Copper alloys (Brass/Bronze) - Brass (CuZn, CuSnZn)		90MPa	320MPa	●
N	28	Copper & Copper alloys (Brass/Bronze) - Bronze (CuSn)		100HB	360MPa	
N	29	Non-metallic - Thermosetting & fiber-reinforced plastics				
N	30	Non-metallic - Hard rubber, wood etc.				
S	31	High temperature alloys - Fe based	Annealed	200HB	680MPa	
S	32	High temperature alloys - Fe based	Age Hardened	280HB	950MPa	
S	33	High temperature alloys - Ni / Co based	Annealed	250HB	840MPa	
S	34	High temperature alloys - Ni / Co based	Age Hardened	350HB	1180MPa	
S	35	High temperature alloys - Ni / Co based	Cast	320HB	1080MPa	
S	36	Titanium & Titanium alloys - CP Titanium			400MPa	
S	37.1	Titanium & Titanium alloys - Alpha alloys			860MPa	
S	37.2	Titanium & Titanium alloys - Alpha / Beta alloys	Annealed		960MPa	
S	37.3	Titanium & Titanium alloys - Alpha / Beta alloys	Age Hardened		1170MPa	
S	37.4	Titanium & Titanium alloys - Beta alloys	Annealed		830MPa	
S	37.5	Titanium & Titanium alloys - Beta alloys	Age Hardened		1400MPa	
H	38.1	Hardened steel	Hardened & Tempered	45		○
H	38.2	Hardened steel	Hardened & Tempered	55HRC		

KEY

● Optimal ○ Effective



Steel



Stainless



Cast Iron



Non-Ferous Metals



Titanium & Super Alloys



Hard Materials

Applications:

ISO	VDI	Description	Condition	Hardness	Strength	Optimal
H	39.1	Hardened steel	Hardened & Tempered	58HRC		
H	39.2	Hardened steel	Hardened & Tempered	62HRC		
H	40	Cast Iron - Chilled	Cast	400MPa	1350MPa	o
H	41	Cast Iron	Hardened & Tempered	55HRC		

KEY

☒ Optimal ☐ Effective
 P Steel
 M Stainless
 K Cast Iron
 N Non-Ferrous Metals
 S Titanium & Super Alloys
 H Hard Materials

Trade/DIY Applications:

Wood		Metal		Specialty		Masonry	
Soft Wood	o	Steel	•	PVC Plastic	o	Masonry	
Hard Wood	o	Hard Steel	•	Acrylic		Plasterboard	
Wood & Nails	o	Stainless Steel	•	mineral rock wool		Compressed Fibre	
Chipboard	o	Aluminium	o	foams (EPS, PUR),		Cement	
Plywood	o	Copper / Brass	o	Polystyrene		Cement Sheet	
MDF	o		o	Leather		Ceramic Tile	
Green Wood		Cast Iron	•	Rubber		Hebel	
		Sheet Metal	o	Fibreglass		Brick	
Sandwich Construction	o	Precious Metals		Carbon Fibre		Concrete	
Pallet	o			Glass		Reinforced Concrete	
Window Frame	o	Metal Pipe	•	Laminate		Stone	
						Granite	
						Marble	

KEY

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