



**suttontools**

## D188 - REDUCED SHANK DRILLS - Sutton Tools

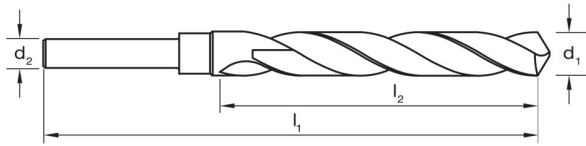
Sutton Tools Reduced Shank Drills are designed to increase the drilling capacity of drill chucks and for slow speed (350 RPM or less), large scale boring. Reduced shanks suit 13mm drill chucks. All drills have a 152mm overall length and 86mm flute length.

### Features:

- Common Length 6" (152mm) overall length with a 3-3/8" (86mm) flute length
- Reduced shanks suit 13mm drill chucks
- 118° standard point for general purpose applications
- Made from M2 High Speed Steel (HSS) offering the best combination of strength, heat & wear resistance
- Blue surface finish for ferrous applications. The steam oxide finish prevents chip build-up on the cutting edges and reduces cutting friction, especially in low carbon steels

DRILLS > REDUCED SHANK

Range:



Item #	Description	Pieces	Range	Case
D188RS16	-	16	17/32, 9/16, 19/32, 5/8, 21/32, 11/16, 23/32, 3/4, 25/32, 13/16, 27/32, 7/8, 29/32, 15/16, 31/32, 1 with 1/2" shanks	Plastic
D188RS4	-	4	5/8, 3/4, 7/8, 1"	Foam
D188RS4M	-	4	16, 18, 22, 25mm	Foam
D188S8R	-	8	9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1"	Plastic
D188SM8R	-	8	14, 15, 16, 16.5, 18, 20, 22, 25mm	Plastic

## DRILLS > REDUCED SHANK

### 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	250HB	840MPa	○
P	4	Steel - Non-alloy, cast & free cutting (~ 0.75 %C)	Annealed	270HB	910MPa	○
P	5	Steel - Non-alloy, cast & free cutting (~ 0.75 %C)	Quenched & Tempered	300HB	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	275HB	930MPa	○
P	8	Steel - Low alloy & cast < 5% of alloying elements	Quenched & Tempered	300HB	1010MPa	○
P	9	Steel - Low alloy & cast < 5% of alloying elements	Quenched & Tempered	350HB	1180MPa	○
P	10	Steel - High alloy, cast & tool	Annealed	200HB	680MPa	○
P	11	Steel - High alloy, cast & tool	Hardened & Tempered	325HB	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	180HB	610MPa	○
M	14.2	Stainless Steel - Duplex		250HB	840MPa	○
M	14.3	Stainless Steel - Precipitation Hardening		250HB	840MPa	○
K	15	Cast Iron, Grey (GG) - Ferritic / Pearlitic		180HB	610MPa	○
K	16	Cast Iron, Grey (GG) - Pearlitic		260HB	880MPa	○
K	17	Cast Iron, Nodular (GGG) - Ferritic		160HB	570MPa	○
K	18	Cast Iron, Nodular (GGG) - Pearlitic		250HB	840MPa	○
K	19	Cast Iron, Malleable - Ferritic		130HB	460MPa	○
K	20	Cast Iron, Malleable - Pearlitic		230HB	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)		90HB	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	45HRC		
H	38.2	Hardened steel	Hardened & Tempered	55HRC		

### KEY

● Optimal ○ Effective | **P** Steel **M** Stainless **K** Cast Iron **N** Non-Ferous Metals **S** Titanium & Super Alloys **H** Hard Materials

### Trade/DIY Applications:

Wood

Metal

Specialty

Masonry

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

**KEY**

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