



suttontools

D136 - CENTRE DRILLS - Sutton Tools

For drilling 60° centre holes in the end of shafts

Features:

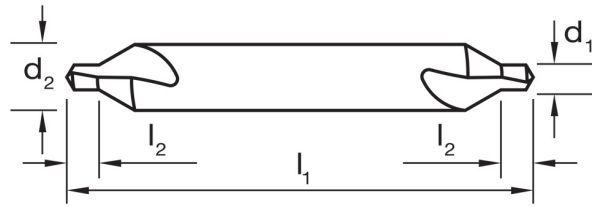
- Centre Drill Plain
- Refer to Carbide Drill section for VHM Centre Drills

Specifications:

Designation: N
Material: HSS
Finish: Brt
Point Angle: 60°
Standard: ANSI B94-11

DRILLS > CENTRE

Range:



Item #	d1 (mm)	d1 (inch)	l1	l2	d2
D1360001	1.19	3/64	32	1.19	1/8
D1360002	1.98	5/64	48	1.19	3/16
D1360003	2.78	7/64	51	2.78	1/4
D1360004	3.18	1/8	54	3.18	5/16
D1360005	4.76	3/16	70	4.76	7/16
D1360006	5.56	7/32	76	5.56	1/2
D1360007	6.35	1/4	83	6.35	5/8
D1360008	7.94	5/16	89	7.94	3/4

DRILLS > CENTRE

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