



## D185 -Jobber Drills - Inox -Sutton Tools -Inox

Sutton Tools Inox jobber drills are an industrial quality drilling solution specially designed for superior performance in stainless steel. Tailored to overcome the difficult-to-machine material properties of stainless steel, Inox drill bits have a fast spiral, short flute and unique stepped core design providing a smooth and effortless cutting action never before seen. For added wear resistance, these drill bits feature the latest generation Futura Nano PVD coated tip. Inox drill bits have been independently tested to achieve 70% more tool life in stainless steel compared to standard drill bits.

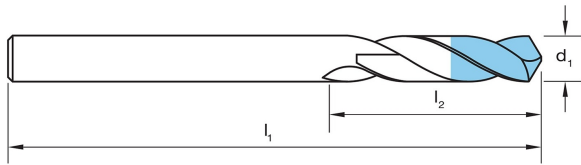
### Features:

- Specialised design achieves 70% more life in stainless steel than standard drill bits
- Futura Nano PVD coated tip for ultimate wear resistance
- Short flute with fast spiral for maximum rigidity & swarf control
- Unique point and stepped core designed for superb penetration and minimal work hardening
- Made from M2 High Speed Steel (HSS) offering the best combination of strength, heat & wear resistance

### Specifications:

|                         |        |
|-------------------------|--------|
| <b>Designation:</b>     | VA     |
| <b>Material:</b>        | HSS    |
| <b>Finish:</b>          | TiAlN  |
| <b>Max Cut Depth:</b>   | 3xD    |
| <b>Shank Form:</b>      | A      |
| <b>Helix Angle:</b>     | R40    |
| <b>Point Tolerance:</b> | H8     |
| <b>Point Angle:</b>     | 135°   |
| <b>Point Form:</b>      | Form A |
| <b>Cutting Edges:</b>   | ul     |
| <b>Standard:</b>        | DIN338 |

Range:



| Item #   | Diameter d1 (mm) | Length l1 (mm) | Length l2 (mm) |
|----------|------------------|----------------|----------------|
| D1850100 | 1.00             | 34             | 8              |
| D1850150 | 1.50             | 40             | 11             |
| D1850200 | 2.00             | 49             | 14             |
| D1850250 | 2.50             | 57             | 16             |
| D1850300 | 3.00             | 61             | 18             |
| D1850330 | 3.30             | 65             | 20             |
| D1850350 | 3.50             | 70             | 22             |
| D1850400 | 4.00             | 75             | 25             |
| D1850420 | 4.20             | 75             | 25             |
| D1850450 | 4.50             | 80             | 28             |
| D1850500 | 5.00             | 86             | 32             |
| D1850550 | 5.50             | 93             | 36             |
| D1850600 | 6.00             | 93             | 36             |
| D1850650 | 6.50             | 101            | 40             |
| D1850680 | 6.80             | 109            | 45             |
| D1850700 | 7.00             | 109            | 45             |
| D1850750 | 7.50             | 109            | 45             |
| D1850800 | 8.00             | 117            | 51             |
| D1850850 | 8.50             | 117            | 51             |
| D1850900 | 9.00             | 125            | 57             |
| D1850950 | 9.50             | 125            | 57             |
| D1851000 | 10.00            | 133            | 63             |
| D1851020 | 10.20            | 133            | 63             |
| D1851050 | 10.50            | 133            | 63             |
| D1851100 | 11.00            | 142            | 71             |
| D1851150 | 11.50            | 142            | 71             |
| D1851200 | 12.00            | 151            | 78             |
| D1851250 | 12.50            | 151            | 78             |
| D1851300 | 13.00            | 151            | 78             |

## Applications:

| ISO | VDI  | Description                                                   | Condition           | Hardness | Strength | Optimal |
|-----|------|---------------------------------------------------------------|---------------------|----------|----------|---------|
| P   | 1    | Steel - Non-alloy, cast & free cutting (~ 0.15 %C)            | Annealed            | 125MPa   | 440MPa   | ●       |
| P   | 2    | Steel - Non-alloy, cast & free cutting (~ 0.45 %C)            | Annealed            | 190MPa   | 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 | 300HB    | 1010MPa  |         |
| P   | 6    | Steel - Low alloy & cast < 5% of alloying elements            | Annealed            | 180MPa   | 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 | 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            | 200MPa   | 680MPa   | ○       |
| P   | 13   | Steel - Corrosion resistant & cast - Martensitic              | Quenched & Tempered | 240MPa   | 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                     |                     | 250MPa   | 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      |                     | 60MPa    | 210MPa   | ●       |
| N   | 22   | Aluminum & Magnesium, wrought alloy - Heat Treatable          | Age Hardened        | 100MPa   | 360MPa   | ●       |
| N   | 23   | Aluminum & Magnesium, cast alloy ?12% Si - Non Heat Treatable |                     | 75MPa    | 270MPa   | ●       |
| N   | 24   | Aluminum & Magnesium, cast alloy ?12% Si - Heat Treatable     | Age Hardened        | 90MPa    | 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% |                     | 110MPa   | 390MPa   | ○       |
| N   | 27   | Copper & Copper alloys (Brass/Bronze) - Brass (CuZn, CuSnZn)  |                     | 90HB     | 320MPa   |         |
| N   | 28   | Copper & Copper alloys (Brass/Bronze) - Bronze (CuSn)         |                     | 100MPa   | 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



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                | 400HB    | 1350MPa  |         |
| H   | 41   | Cast Iron           | 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       | ●                   |
| Hard Wood             | ○ | Hard Steel      |   | Acrylic           | Plasterboard        |
| Wood & Nails          | ○ | Stainless Steel | ● | mineral rock wool | Compressed Fibre    |
| Chipboard             | ○ | Aluminium       | ● | foams (EPS, PUR), | Cement              |
| Plywood               | ○ | Copper / Brass  | ○ | Polystyrene       | Cement Sheet        |
| MDF                   | ○ | Cast Iron       |   | Leather           | Ceramic Tile        |
| Green Wood            |   | Sheet Metal     | ● | Rubber            | Hebel               |
| Sandwich Construction | ○ | Precious Metals |   | Fibreglass        | Brick               |
| Pallet                | ○ | Metal Pipe      | ○ | Carbon Fibre      | Concrete            |
| Window Frame          | ○ |                 |   | Glass             | Reinforced Concrete |
|                       |   |                 |   | Laminate          | Stone               |
|                       |   |                 |   |                   | Granite             |
|                       |   |                 |   |                   | Marble              |

#### KEY

☒ Optimal
 ☐ Effective