

DRILLS



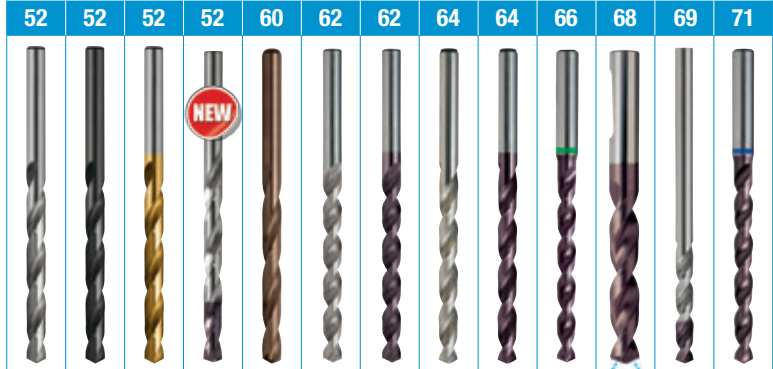
HSS Drills

Efficient hole production

- Stub Series
- Jobber Series
- Long Series
- Extra Long Series
- Spotting

| ISO | VDI | Material Group | Sutton |
|-----|-----|--|--------|
| P | A | Steel | N |
| M | R | Stainless Steel | VA |
| K | F | Cast Iron | GG |
| N | N | Non-Ferrous Metals, Aluminiums & Coppers | Al W |
| S | S | Titaniums & Super Alloys | Ti Ni |
| H | H | Hard Materials (≥ 45 HRC) | H |

Page



| Catalogue Code | D101 | D102 | D103 | D179 | D109 | D158 | D163 | D200 | D165 | D168 | D182 | D180 | D169 | |
|--------------------|---------|------|------|-------|-------------|------|-------|------|-----------|--------|-------|-----------|--------|----|
| Material | HSS | | | | HSS Co | | | | SPM | HSS Co | | HSS | HSS Co | |
| Surface Finish | Brt | Blu | TiN | TiAlN | Colour Temp | Brt | TiAlN | Brt | TiAlN | | | TiAlN Tip | TiAlN | |
| Sutton Designation | N | | | | Hard Mat. | NH | | WN | | UNI | NH | VA | VA | |
| Standard | DIN 338 | | | | | | | | ~ DIN 338 | | - | ~ DIN 338 | | |
| Depth of Cut | ≤ 5xØ | | | | | | | | | | ≤ 3xØ | | ≤ 5xØ | |
| Shank Tolerance | - | | h9 | | - | | h9 | | | h7 | | h9 | | h7 |

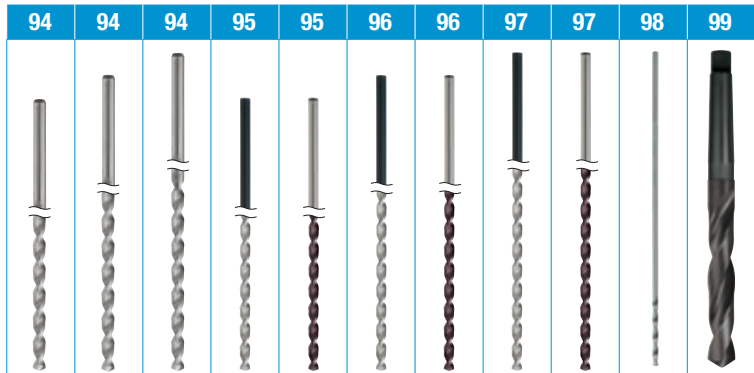
| ISO | VDI ³³²³ | Material | Condition | HB | N/mm ² | | | | | | | | | | | | | |
|------|------------------------------------|--|-------------------------|------|-------------------|------|---|---|---|---|---|---|---|---|---|---|---|---|
| P | 1 | Steel - Non-alloy, cast & free cutting | ~ 0.15 %C | A | 125 | 440 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 2 | | ~ 0.45 %C | A | 190 | 640 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ |
| | 3 | | | QT | 250 | 840 | ○ | ● | ● | ● | ● | ○ | ● | ● | ● | ● | ○ | ○ |
| | 4 | | ~ 0.75 %C | A | 270 | 910 | ○ | ● | ● | ● | ○ | ● | ● | ● | ● | ○ | ○ | ○ |
| | 5 | | QT | 300 | 1010 | | ○ | ○ | ○ | ● | ○ | ● | ○ | ● | ○ | | | |
| | 6 | Steel - Low alloy & cast < 5% of alloying elements | A | 180 | 610 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ | |
| | 7 | | QT | 275 | 930 | ○ | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 8 | | QT | 300 | 1010 | | ○ | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 9 | | QT | 350 | 1180 | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 10 | Steel - High alloy, cast & tool | A | 200 | 680 | ○ | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| | 11 | | HT | 325 | 1100 | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| 12 | Steel - Corrosion resistant & cast | Ferritic / Martensitic | A | 200 | 680 | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| 13 | | Martensitic | QT | 240 | 810 | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| M | 14.1 | Stainless Steel | Austenitic | AH | 180 | 610 | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 14.2 | | Duplex | | 250 | 840 | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 14.3 | | Precipitation Hardening | | 250 | 840 | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| K | 15 | Cast Iron - Grey (GG) | Ferritic / Pearlitic | | 180 | 610 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 16 | | Pearlitic | | 260 | 880 | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 17 | Cast Iron - Nodular (GGG) | Ferritic | | 160 | 570 | ○ | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 18 | | Pearlitic | | 250 | 840 | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 19 | Cast Iron - Malleable | Ferritic | | 130 | 460 | | ○ | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| 20 | Pearlitic | | | 230 | 780 | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | |
| N | 21 | Aluminum & Magnesium - wrought alloy | Non Heat Treatable | | 60 | 210 | ● | ○ | | | ● | | ● | ○ | ○ | ○ | ○ | |
| | 22 | | Heat Treatable | AH | 100 | 360 | ● | ○ | | | ● | | ● | ○ | ○ | ○ | ○ | |
| | 23 | Aluminum & Magnesium - cast alloy ≤12% Si | Non Heat Treatable | | 75 | 270 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 24 | | Heat Treatable | AH | 90 | 320 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 25 | Al & Mg - cast alloy >12% Si | Non Heat Treatable | | 130 | 460 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 26 | Copper & Cu alloys (Brass/Bronze) | Free cutting, Pb > 1% | | 110 | 390 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 27 | | Brass (CuZn, CuSnZn) | | 90 | 320 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 28 | | Bronze (CuSn) | | 100 | 360 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 29 | Non-metallic - Thermosetting & fiber-reinforced plastics | | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 30 | Non-metallic - Hard rubber, wood etc. | | | | | | | | | | | | | | | | |
| S | 31 | High temp. alloys | Fe based | A | 200 | 680 | | | | | | | | | | | ○ | |
| | 32 | | | AH | 280 | 950 | | | | | | | | | | | | ○ |
| | 33 | | Ni / Co based | A | 250 | 840 | | | | | | | | | | | | ○ |
| | 34 | | | AH | 350 | 1180 | | | | | | | | | | | | ○ |
| | 35 | | | C | 320 | 1080 | | | | | | | | | | | | ○ |
| | 36 | Titanium & Ti alloys | CP Titanium | | 400 | MPa | | | | | | | | | | | | ○ |
| 37.1 | Alpha alloys | | | 860 | MPa | | | | | | | | | | | | ○ | |
| 37.2 | Alpha / Beta alloys | | A | 960 | MPa | | | | | | | | | | | | | ○ |
| 37.3 | | | AH | 1170 | MPa | | | | | | | | | | | | | ○ |
| 37.4 | Beta alloys | | A | 830 | MPa | | | | | | | | | | | | | ○ |
| 37.5 | | AH | 1400 | MPa | | | | | | | | | | | | | ○ | |
| H | 38.1 | Hardened steel | HT | 45 | HRC | | | | | | | | | | | | ○ | |
| | 38.2 | | HT | 55 | HRC | | | | | | | | | | | | ○ | |
| | 39.1 | | HT | 58 | HRC | | | | | | | | | | | | | ○ |
| | 39.2 | | HT | 62 | HRC | | | | | | | | | | | | | ○ |
| | 40 | Cast Iron | Chilled | C | 400 | 1350 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 41 | HT | | | 55 | HRC | | | | | | | | | | | | | ○ |

Condition: A (Annealed), AH (Age Hardened), C (Cast), HT (Hardened & Tempered), QT (Quenched & Tempered)

● Optimal ○ Effective

| ISO | VDI | Material Group | Sutton |
|-----|-----|--|--------|
| P | A | Steel | N |
| M | R | Stainless Steel | VA |
| K | F | Cast Iron | GG |
| N | N | Non-Ferrous Metals, Aluminiums & Coppers | Al W |
| S | S | Titaniums & Super Alloys | Ti Ni |
| H | H | Hard Materials (≥ 45 HRC) | H |

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| Catalogue Code | D197 | D198 | D199 | D191 | D194 | D192 | D195 | D193 | D196 | D187 | D115 | |
|--------------------|--------|--------|--------|------------|-------|------------|--------|------------|--------|-------------|---------|--|
| Material | HSS | | | HSS Co | | HSS | HSS Co | | HSS | HSS Co | | |
| Surface Finish | Br | | | Ni+Blu | TiAIN | Ni+Blu | TiAIN | | Ni+Blu | TiAIN | Br Blu | |
| Sutton Designation | N | | | NH | | | | | | | | |
| Standard | - | | | DIN 1869-1 | | DIN 1869-2 | | DIN 1869-3 | | ANSI B94-11 | DIN 345 | |
| Depth of Cut | ≤ 10xØ | ≤ 12xØ | ≤ 14xØ | ≤ 10xØ | | ≤ 12xØ | | ≤ 14xØ | | | ≤ 5xØ | |
| Shank Tolerance | h9 | | | | | | | | | | | |

| ISO | VDI 3323 | Material | Condition | HB | N/mm² | | | | | | | | | | | | |
|------|---------------------------------------|--|-------------------------|------|-------|------|---|---|---|---|---|---|---|---|---|---|---|
| P | 1 | Steel - Non-alloy, cast & free cutting | ~ 0.15 %C | A | 125 | 440 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | 2 | | ~ 0.45 %C | A | 190 | 640 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | 3 | | ~ 0.75 %C | QT | 250 | 840 | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ |
| | 4 | | | A | 270 | 910 | ○ | ○ | ○ | ● | ● | ● | ● | ● | ○ | ○ | ○ |
| | 5 | QT | | 300 | 1010 | | | | ○ | ● | ○ | ● | ○ | ● | ○ | ○ | ○ |
| | 6 | Steel - Low alloy & cast < 5% of alloying elements | A | 180 | 610 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ | ○ |
| | 7 | | QT | 275 | 930 | ○ | ○ | ○ | ○ | ● | ○ | ● | ○ | ● | ○ | ○ | ○ |
| | 8 | | QT | 300 | 1010 | | | | ○ | ● | ○ | ● | ○ | ● | ○ | ○ | ○ |
| | 9 | | QT | 350 | 1180 | | | | | ○ | | ○ | | ○ | | | |
| | 10 | Steel - High alloy, cast & tool | A | 200 | 680 | | | | ○ | ● | ○ | ● | ○ | ● | ○ | ○ | ○ |
| | 11 | | HT | 325 | 1100 | | | | | ○ | | ○ | | ○ | | | |
| 12 | Steel - Corrosion resistant & cast | Ferritic / Martensitic | A | 200 | 680 | | | | ○ | | ○ | | ○ | | | | |
| 13 | | Martensitic | QT | 240 | 810 | | | | ○ | | ○ | | ○ | | | | |
| M | 14.1 | Stainless Steel | Austenitic | AH | 180 | 610 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 14.2 | | Duplex | | 250 | 840 | | | | | | | | | | | |
| | 14.3 | | Precipitation Hardening | | 250 | 840 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| K | 15 | Cast Iron - Grey (GG) | Ferritic / Pearlitic | | 180 | 610 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 16 | | Pearlitic | | 260 | 880 | | | | ○ | ● | ○ | ○ | ● | ○ | ○ | ○ |
| | 17 | Cast Iron - Nodular (GGG) | Ferritic | | 160 | 570 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 18 | | Pearlitic | | 250 | 840 | | | | ○ | ● | ○ | ○ | ● | ○ | ○ | ○ |
| | 19 | Cast Iron - Malleable | Ferritic | | 130 | 460 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 20 | Pearlitic | | | 230 | 780 | | | | ○ | ● | ○ | ○ | ● | ○ | ○ | ○ | |
| N | 21 | Aluminum & Magnesium - wrought alloy | Non Heat Treatable | | 60 | 210 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | |
| | 22 | | Heat Treatable | AH | 100 | 360 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 23 | Aluminum & Magnesium - cast alloy ≤12% Si | Non Heat Treatable | | 75 | 270 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 24 | | Heat Treatable | AH | 90 | 320 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 25 | Al & Mg - cast alloy >12% Si | Non Heat Treatable | | 130 | 460 | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 26 | Copper & Cu alloys (Brass/Bronze) | Free cutting, Pb > 1% | | 110 | 390 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 27 | | Brass (CuZn, CuSnZn) | | 90 | 320 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 28 | | Bronze (CuSn) | | 100 | 360 | | | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | 29 | Non-metallic - Thermosetting & fiber-reinforced plastics | | | | | | | | ○ | | ○ | | ○ | | | |
| 30 | Non-metallic - Hard rubber, wood etc. | | | | | | | | | | | | | | | | |
| S | 31 | High temp. alloys | Fe based | A | 200 | 680 | | | | | | | | | | | |
| | 32 | | | AH | 280 | 950 | | | | | | | | | | | |
| | 33 | | Ni / Co based | A | 250 | 840 | | | | | | | | | | | |
| | 34 | | | AH | 350 | 1180 | | | | | | | | | | | |
| | 35 | | | C | 320 | 1080 | | | | | | | | | | | |
| | 36 | Titanium & Ti alloys | CP Titanium | | 400 | MPa | | | | | | | | | | | |
| 37.1 | Alpha alloys | | | 860 | MPa | | | | | | | | | | | | |
| 37.2 | Alpha / Beta alloys | | A | 960 | MPa | | | | | | | | | | | | |
| 37.3 | | | AH | 1170 | MPa | | | | | | | | | | | | |
| 37.4 | Beta alloys | | A | 830 | MPa | | | | | | | | | | | | |
| 37.5 | | AH | 1400 | MPa | | | | | | | | | | | | | |
| H | 38.1 | Hardened steel | HT | 45 | HRC | | | | | | | | | | | | |
| | 38.2 | | HT | 55 | HRC | | | | | | | | | | | | |
| | 39.1 | | HT | 58 | HRC | | | | | | | | | | | | |
| | 39.2 | | HT | 62 | HRC | | | | | | | | | | | | |
| | 40 | Cast Iron | Chilled | C | 400 | 1350 | | | ○ | ● | ○ | ● | ○ | ● | ○ | ○ | |
| 41 | | HT | 55 | HRC | | | | | | | | | | | | | |

Condition: A (Annealed), AH (Age Hardened), C (Cast), HT (Hardened & Tempered), QT (Quenched & Tempered)

● Optimal ○ Effective

suttontools



D101SM1



D101SM2



D101SM3



D101SM30



D101SM41



D102SM1



D102SM2



D102SM3



D102SM30



D102SM41



D103SM2



D103SM3



D109SM2



D109SM3



D102SM99



D101 SRKM2



D101 SRKM3



D101SM7



D101SM8



D102SM8



D101S1



D101S2



D101S3



D101S30



D101S31



D102S1



D102S2



D102S3



D101S7



D102S8



D103S2



D103S3



D109S2



D109S3



D101 SRK1



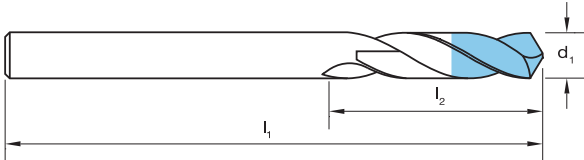
D101 SRK2



D101 SRK3

suttontools

- Short flute length jobber drill
- Cost effective solution for austenitic stainless steels and soft materials
- Unique stepped core for excellent penetration
- TiAlN tip for good wear resistance



| | |
|-----------------------|------------------|
| Catalogue Code | D180 |
| Discount Group | A0420 |
| Material | HSS |
| Surface Finish | TiAlN Tip |
| Sutton Designation | VA |
| Geometry | R40 |
| Point Type | 130° |
| Shank Form (DIN 1835) | - |

| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | Item # |
|-------------|---------------------|----------------|----------------|-----------|
| 0100 | 1.0 | 34 | 8 | D180 0100 |
| 0150 | 1.5 | 40 | 11 | D180 0150 |
| 0200 | 2.0 | 49 | 14 | D180 0200 |
| 0250 | 2.5 | 57 | 16 | D180 0250 |
| 0300 | 3.0 | 61 | 18 | D180 0300 |
| 0310 | 3.1 | 65 | 20 | D180 0310 |
| 0318 | 3.18 1/8 | 65 | 20 | • |
| 0320 | 3.2 | 65 | 20 | D180 0320 |
| 0325 | 3.25 | 65 | 20 | D180 0325 |
| 0330 | 3.3 | 65 | 20 | D180 0330 |
| 0340 | 3.4 | 70 | 22 | D180 0340 |
| 0350 | 3.5 | 70 | 22 | D180 0350 |
| 0357 | 3.57 9/64 | 70 | 22 | • |
| 0360 | 3.6 | 70 | 22 | D180 0360 |
| 0370 | 3.7 | 70 | 22 | D180 0370 |
| 0375 | 3.75 | 75 | 25 | D180 0375 |
| 0380 | 3.8 | 75 | 25 | D180 0380 |
| 0390 | 3.9 | 75 | 25 | D180 0390 |
| 0397 | 3.97 5/32 | 75 | 25 | • |
| 0400 | 4.0 | 75 | 25 | D180 0400 |
| 0410 | 4.1 | 75 | 25 | D180 0410 |
| 0420 | 4.2 | 75 | 25 | D180 0420 |
| 0425 | 4.25 | 75 | 25 | D180 0425 |
| 0430 | 4.3 | 80 | 28 | D180 0430 |
| 0437 | 4.37 11/64 | 80 | 28 | • |
| 0440 | 4.4 | 80 | 28 | D180 0440 |
| 0450 | 4.5 | 80 | 28 | D180 0450 |
| 0460 | 4.6 | 80 | 28 | D180 0460 |
| 0470 | 4.7 | 80 | 28 | D180 0470 |
| 0475 | 4.75 | 80 | 28 | D180 0475 |
| 0476 | 4.76 3/16 | 86 | 32 | • |
| 0480 | 4.8 | 86 | 32 | D180 0480 |
| 0490 | 4.9 | 86 | 32 | D180 0490 |
| 0500 | 5.0 | 86 | 32 | D180 0500 |
| 0510 | 5.1 | 86 | 32 | D180 0510 |
| 0516 | 5.16 13/64 | 86 | 32 | • |
| 0520 | 5.2 | 86 | 32 | D180 0520 |
| 0525 | 5.25 | 86 | 32 | D180 0525 |
| 0530 | 5.3 | 86 | 32 | D180 0530 |
| 0540 | 5.4 | 93 | 36 | D180 0540 |

| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | Item # |
|-------------|---------------------|----------------|----------------|-----------|
| 0550 | 5.5 | 93 | 36 | D180 0550 |
| 0556 | 5.56 7/32 | 93 | 36 | • |
| 0560 | 5.6 | 93 | 36 | D180 0560 |
| 0570 | 5.7 | 93 | 36 | D180 0570 |
| 0575 | 5.75 | 93 | 36 | D180 0575 |
| 0580 | 5.8 | 93 | 36 | D180 0580 |
| 0590 | 5.9 | 93 | 36 | D180 0590 |
| 0595 | 5.95 15/64 | 93 | 36 | • |
| 0600 | 6.0 | 93 | 36 | D180 0600 |
| 0610 | 6.1 | 101 | 40 | D180 0610 |
| 0620 | 6.2 | 101 | 40 | D180 0620 |
| 0625 | 6.25 | 101 | 40 | D180 0625 |
| 0630 | 6.3 | 101 | 40 | D180 0630 |
| 0635 | 6.35 1/4 | 101 | 40 | • |
| 0640 | 6.4 | 101 | 40 | D180 0640 |
| 0650 | 6.5 | 101 | 40 | D180 0650 |
| 0660 | 6.6 | 101 | 40 | D180 0660 |
| 0670 | 6.7 | 101 | 40 | D180 0670 |
| 0675 | 6.75 17/64 | 101 | 40 | D180 0675 |
| 0680 | 6.8 | 109 | 45 | D180 0680 |
| 0690 | 6.9 | 109 | 45 | D180 0690 |
| 0700 | 7.0 | 109 | 45 | D180 0700 |
| 0710 | 7.1 | 109 | 45 | D180 0710 |
| 0714 | 7.14 9/32 | 109 | 45 | • |
| 0720 | 7.2 | 109 | 45 | D180 0720 |
| 0725 | 7.25 | 109 | 45 | D180 0725 |
| 0730 | 7.3 | 109 | 45 | D180 0730 |
| 0740 | 7.4 | 109 | 45 | D180 0740 |
| 0750 | 7.5 | 109 | 45 | D180 0750 |
| 0754 | 7.54 19/64 | 117 | 51 | • |
| 0760 | 7.6 | 117 | 51 | D180 0760 |
| 0770 | 7.7 | 117 | 51 | D180 0770 |
| 0775 | 7.75 | 117 | 51 | D180 0775 |
| 0780 | 7.8 | 117 | 51 | D180 0780 |
| 0790 | 7.9 | 117 | 51 | D180 0790 |
| 0794 | 7.94 5/16 | 117 | 51 | • |
| 0800 | 8.0 | 117 | 51 | D180 0800 |
| 0810 | 8.1 | 117 | 51 | D180 0810 |
| 0820 | 8.2 | 117 | 51 | D180 0820 |
| 0825 | 8.25 | 117 | 51 | D180 0825 |

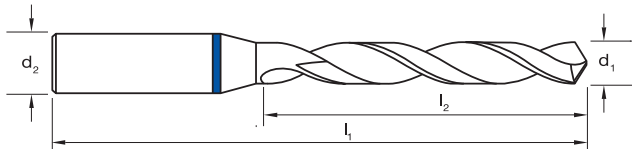
| ISO | P | | | | | | | | | | M | | | | | K | | | | | N | | | | | S | | | | | H | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|----|----|----|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|------|------|------|------|------|------|------|------|----|----|--|--|--|--|--|--|
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14.1 | 14.2 | 14.3 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37.1 | 37.2 | 37.3 | 37.4 | 37.5 | 38.1 | 38.2 | 39.1 | 39.2 | 40 | 41 | | | | | | |
| D180 | ● | ● | ○ | ○ | ○ | ● | ○ | | | | ○ | ○ | | ○ | ● | ● | ○ | | | | | | | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | | | | | | | | | | | | | | | | | | | | | | | | |

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

• Available on request as special manufacture. Subject to lead time.

suttontools

- High performance drill
- Excellent solution for austenitic stainless steels and most long chipping materials
- Optimised geometry ensures no work hardening and high productivity
- Endmill shank for greater accuracy
- TiAIN for longer tool life



| | |
|--------------------|----------------|
| Catalogue Code | D169 |
| Discount Group | A1502 |
| Material | HSS Co |
| Surface Finish | TiAIN |
| Sutton Designation | VA |
| Geometry | R40 |
| Point Type | 4 Facet Form C |
| Shank Tolerance | h7 |

| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | d ₂ | Point Angle | Form | Item # |
|-------------|---------------------|----------------|----------------|----------------|-------------|------|-----------|
| 0833 | 8.33 21/64 | 117 | 75 | 10 | 120° | | D169 0833 |
| 0840 | 8.4 | 117 | 75 | 10 | 120° | | D169 0840 |
| 0850 | 8.5 | 117 | 75 | 10 | 120° | | D169 0850 |
| 0860 | 8.6 | 125 | 81 | 10 | 120° | | D169 0860 |
| 0870 | 8.7 | 125 | 81 | 10 | 120° | | D169 0870 |
| 0873 | 8.73 11/32 | 125 | 81 | 10 | 120° | | D169 0873 |
| 0880 | 8.8 | 125 | 81 | 10 | 120° | | D169 0880 |
| 0890 | 8.9 | 125 | 81 | 10 | 120° | | D169 0890 |
| 0900 | 9.0 | 125 | 81 | 10 | 120° | | D169 0900 |
| 0910 | 9.1 | 125 | 81 | 10 | 120° | | D169 0910 |
| 0913 | 9.13 23/64 | 125 | 81 | 10 | 120° | | D169 0913 |
| 0920 | 9.2 | 125 | 81 | 10 | 120° | | D169 0920 |
| 0930 | 9.3 | 125 | 81 | 10 | 120° | | D169 0930 |
| 0940 | 9.4 | 125 | 81 | 10 | 120° | | D169 0940 |
| 0950 | 9.5 | 125 | 81 | 10 | 120° | | D169 0950 |
| 0953 | 9.52 3/8 | 133 | 87 | 10 | 120° | | D169 0953 |
| 0955 | 9.55 | 133 | 87 | 10 | 120° | | D169 0955 |
| 0960 | 9.6 | 133 | 87 | 10 | 120° | | D169 0960 |
| 0970 | 9.7 | 133 | 87 | 10 | 120° | | D169 0970 |
| 0980 | 9.8 | 133 | 87 | 10 | 120° | | D169 0980 |
| 0990 | 9.9 | 133 | 87 | 10 | 120° | | D169 0990 |
| 0992 | 9.92 25/64 | 133 | 87 | 10 | 120° | | D169 0992 |
| 1000 | 10.0 | 133 | 87 | 10 | 120° | | D169 1000 |
| 1010 | 10.1 | 133 | 87 | 10 | 120° | | D169 1010 |
| 1020 | 10.2 | 133 | 87 | 10 | 120° | | D169 1020 |
| 1030 | 10.3 | 133 | 87 | 10 | 120° | | D169 1030 |
| 1032 | 10.32 13/32 | 133 | 87 | 10 | 120° | | D169 1032 |
| 1040 | 10.4 | 133 | 87 | 10 | 120° | | D169 1040 |
| 1050 | 10.5 | 133 | 87 | 10 | 120° | | D169 1050 |
| 1060 | 10.6 | 133 | 87 | 12 | 120° | | D169 1060 |
| 1070 | 10.7 | 142 | 94 | 12 | 120° | | D169 1070 |
| 1072 | 10.72 27/64 | 142 | 94 | 12 | 120° | | D169 1072 |
| 1080 | 10.8 | 142 | 94 | 12 | 120° | | D169 1080 |
| 1090 | 10.9 | 142 | 94 | 12 | 120° | | D169 1090 |
| 1100 | 11.0 | 142 | 94 | 12 | 120° | | D169 1100 |
| 1110 | 11.1 | 142 | 94 | 12 | 120° | | D169 1110 |
| 1111 | 11.11 7/16 | 142 | 94 | 12 | 120° | | D169 1111 |
| 1120 | 11.2 | 142 | 94 | 12 | 120° | | D169 1120 |
| 1130 | 11.3 | 142 | 94 | 12 | 120° | | D169 1130 |
| 1140 | 11.4 | 142 | 94 | 12 | 120° | | D169 1140 |

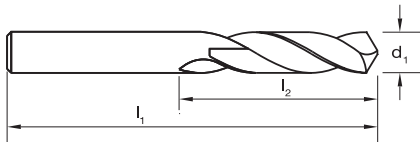
| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | d ₂ | Point Angle | Form | Item # |
|-------------|---------------------|----------------|----------------|----------------|-------------|------|-----------|
| 1150 | 11.5 | 142 | 94 | 12 | 120° | | D169 1150 |
| 1151 | 11.51 29/64 | 142 | 94 | 12 | 120° | | D169 1151 |
| 1160 | 11.6 | 142 | 94 | 12 | 120° | | D169 1160 |
| 1170 | 11.7 | 142 | 94 | 12 | 120° | | D169 1170 |
| 1180 | 11.8 | 142 | 94 | 12 | 120° | | D169 1180 |
| 1190 | 11.9 | 151 | 94 | 12 | 120° | | D169 1190 |
| 1191 | 11.91 15/32 | 151 | 101 | 12 | 120° | | D169 1191 |
| 1200 | 12.0 | 151 | 101 | 12 | 120° | | D169 1200 |
| 1210 | 12.1 | 151 | 101 | 12 | 120° | | D169 1210 |
| 1220 | 12.2 | 151 | 101 | 12 | 120° | | D169 1220 |
| 1230 | 12.3 | 151 | 101 | 12 | 120° | | D169 1230 |
| 1231 | 12.3 31/64 | 151 | 101 | 12 | 120° | | D169 1231 |
| 1240 | 12.4 | 151 | 101 | 12 | 120° | C | D169 1240 |
| 1250 | 12.5 | 151 | 101 | 12 | 120° | C | D169 1250 |
| 1260 | 12.6 | 151 | 101 | 12 | 120° | C | D169 1260 |
| 1270 | 12.7 | 151 | 101 | 12 | 120° | C | D169 1270 |
| 1269 | 12.7 1/2 | 151 | 101 | 12 | 120° | C | D169 1269 |
| 1280 | 12.8 | 151 | 101 | 12 | 120° | C | D169 1280 |
| 1290 | 12.9 | 151 | 101 | 12 | 120° | C | D169 1290 |
| 1300 | 13.0 | 151 | 101 | 12 | 120° | C | D169 1300 |
| 1350 | 13.5 | 160 | 108 | 16 | 120° | A | D169 1350 |
| 1400 | 14.0 | 160 | 108 | 16 | 120° | A | D169 1400 |
| 1450 | 14.5 | 169 | 114 | 16 | 120° | A | D169 1450 |
| 1500 | 15.0 | 169 | 114 | 16 | 120° | A | D169 1500 |
| 1550 | 15.5 | 178 | 120 | 16 | 120° | A | D169 1550 |
| 1600 | 16.0 | 178 | 120 | 16 | 120° | A | D169 1600 |
| 1650 | 16.5 | 184 | 125 | 20 | 120° | A | D169 1650 |
| 1700 | 17.0 | 184 | 125 | 20 | 120° | A | D169 1700 |
| 1750 | 17.5 | 191 | 130 | 20 | 120° | A | D169 1750 |
| 1800 | 18.0 | 191 | 130 | 20 | 120° | A | D169 1800 |
| 1850 | 18.5 | 198 | 135 | 20 | 120° | A | D169 1850 |
| 1900 | 19.0 | 198 | 135 | 20 | 120° | A | D169 1900 |
| 1950 | 19.5 | 205 | 140 | 20 | 120° | A | D169 1950 |
| 2000 | 20.0 | 205 | 140 | 20 | 120° | A | D169 2000 |

| ISO | P | | | | | | | | | | M | | | | | K | | | | | N | | | | | | | | | | S | | | | | | | | | | H | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|----|----|----|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|------|------|------|------|------|------|------|------|----|----|
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14.1 | 14.2 | 14.3 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37.1 | 37.2 | 37.3 | 37.4 | 37.5 | 38.1 | 38.2 | 39.1 | 39.2 | 40 | 41 |
| D169 | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

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

● Optimal ○ Effective

- Rigid twist drill
- Self centring point geometry
- For use in automatic lathes & hand drilling machines



| | |
|--------------------|-------------------|
| Catalogue Code | D186 |
| Discount Group | A1002 |
| Material | HSS |
| Surface Finish | Blu |
| Sutton Designation | Ferrous Materials |
| Geometry | R30 |
| Point Type | 118° Form C >3mm |
| Order Quantity | Bulk 10 |

| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | Item # |
|-----------|---------------------|----------------|----------------|-----------|
| 0100 | 1.0 | 26 | 6 | D186 0100 |
| 0110 | 1.1 | 28 | 7 | D186 0110 |
| 0120 | 1.2 | 30 | 8 | D186 0120 |
| 0130 | 1.3 | 30 | 8 | D186 0130 |
| 0140 | 1.4 | 32 | 9 | D186 0140 |
| 0150 | 1.5 | 32 | 9 | D186 0150 |
| 0160 | 1.6 | 34 | 10 | D186 0160 |
| 0170 | 1.7 | 34 | 10 | D186 0170 |
| 0180 | 1.8 | 36 | 11 | D186 0180 |
| 0190 | 1.9 | 36 | 11 | D186 0190 |
| 0200 | 2.0 | 38 | 12 | D186 0200 |
| 0210 | 2.1 | 40 | 13 | D186 0210 |
| 0220 | 2.2 | 40 | 13 | D186 0220 |
| 0230 | 2.3 | 40 | 13 | D186 0230 |
| 0240 | 2.4 | 43 | 14 | D186 0240 |
| 0250 | 2.5 | 43 | 14 | D186 0250 |
| 0260 | 2.6 | 43 | 14 | D186 0260 |
| 0270 | 2.7 | 46 | 16 | D186 0270 |
| 0280 | 2.8 | 46 | 16 | D186 0280 |
| 0290 | 2.9 | 46 | 16 | D186 0290 |
| 0300 | 3.0 | 46 | 16 | D186 0300 |
| 0310 | 3.1 | 49 | 18 | D186 0310 |
| 0320 | 3.2 | 49 | 18 | D186 0320 |
| 0330 | 3.3 | 49 | 18 | D186 0330 |
| 0340 | 3.4 | 52 | 20 | D186 0340 |
| 0350 | 3.5 | 52 | 20 | D186 0350 |
| 0360 | 3.6 | 52 | 20 | D186 0360 |
| 0370 | 3.7 | 52 | 20 | D186 0370 |
| 0380 | 3.8 | 55 | 22 | D186 0380 |
| 0390 | 3.9 | 55 | 22 | D186 0390 |
| 0400 | 4.0 | 55 | 22 | D186 0400 |
| 0410 | 4.1 | 55 | 22 | D186 0410 |
| 0420 | 4.2 | 55 | 22 | D186 0420 |
| 0430 | 4.3 | 58 | 24 | D186 0430 |
| 0440 | 4.4 | 58 | 24 | D186 0440 |
| 0450 | 4.5 | 58 | 24 | D186 0450 |
| 0460 | 4.6 | 58 | 24 | D186 0460 |
| 0470 | 4.7 | 58 | 24 | D186 0470 |
| 0480 | 4.8 | 62 | 26 | D186 0480 |
| 0490 | 4.9 | 62 | 26 | D186 0490 |

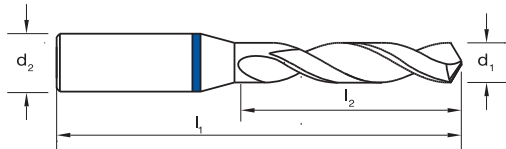
| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | Item # |
|-----------|---------------------|----------------|----------------|-----------|
| 0500 | 5.0 | 62 | 26 | D186 0500 |
| 0510 | 5.1 | 62 | 26 | D186 0510 |
| 0520 | 5.2 | 62 | 26 | D186 0520 |
| 0530 | 5.3 | 62 | 26 | D186 0530 |
| 0540 | 5.4 | 66 | 28 | D186 0540 |
| 0550 | 5.5 | 66 | 28 | D186 0550 |
| 0560 | 5.6 | 66 | 28 | D186 0560 |
| 0570 | 5.7 | 66 | 28 | D186 0570 |
| 0580 | 5.8 | 66 | 28 | D186 0580 |
| 0590 | 5.9 | 66 | 28 | D186 0590 |
| 0600 | 6.0 | 66 | 28 | D186 0600 |
| 0610 | 6.1 | 70 | 31 | D186 0610 |
| 0620 | 6.2 | 70 | 31 | D186 0620 |
| 0630 | 6.3 | 70 | 31 | D186 0630 |
| 0640 | 6.4 | 70 | 31 | D186 0640 |
| 0650 | 6.5 | 70 | 31 | D186 0650 |
| 0660 | 6.6 | 70 | 31 | D186 0660 |
| 0670 | 6.7 | 70 | 31 | D186 0670 |
| 0680 | 6.8 | 74 | 34 | D186 0680 |
| 0690 | 6.9 | 74 | 34 | D186 0690 |
| 0700 | 7.0 | 74 | 34 | D186 0700 |
| 0710 | 7.1 | 74 | 34 | D186 0710 |
| 0720 | 7.2 | 74 | 34 | D186 0720 |
| 0730 | 7.3 | 74 | 34 | D186 0730 |
| 0740 | 7.4 | 74 | 34 | D186 0740 |
| 0750 | 7.5 | 74 | 34 | D186 0750 |
| 0760 | 7.6 | 79 | 37 | D186 0760 |
| 0770 | 7.7 | 79 | 37 | D186 0770 |
| 0780 | 7.8 | 79 | 37 | D186 0780 |
| 0790 | 7.9 | 79 | 37 | D186 0790 |
| 0800 | 8.0 | 79 | 37 | D186 0800 |
| 0810 | 8.1 | 79 | 37 | D186 0810 |
| 0820 | 8.2 | 79 | 37 | D186 0820 |
| 0830 | 8.3 | 79 | 37 | D186 0830 |
| 0840 | 8.4 | 79 | 37 | D186 0840 |
| 0850 | 8.5 | 79 | 37 | D186 0850 |
| 0860 | 8.6 | 84 | 40 | D186 0860 |
| 0870 | 8.7 | 84 | 40 | D186 0870 |
| 0880 | 8.8 | 84 | 40 | D186 0880 |
| 0890 | 8.9 | 84 | 40 | D186 0890 |

| ISO | P | | | | | | | | | | | | M | | | K | | | | | N | | | | | | | | | | S | | | | | | | | | | H | | | | | | | | | | | | | | |
|----------|---|---|---|---|---|---|---|---|---|----|----|----|----|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|------|------|------|------|------|------|------|------|----|----|---|---|---|---|---|---|
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14.1 | 14.2 | 14.3 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37.1 | 37.2 | 37.3 | 37.4 | 37.5 | 38.1 | 38.2 | 39.1 | 39.2 | 40 | 41 | | | | | | |
| D186 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

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

● Optimal ○ Effective

- High performance drill
- Excellent solution for austenitic stainless steels and most long chipping materials
- Optimised geometry ensures no work hardening and high productivity
- Endmill shank for greater accuracy
- TiAIN for longer tool life



| | |
|--------------------|---------------|
| Catalogue Code | D153 |
| Discount Group | A1502 |
| Material | HSS Co |
| Surface Finish | TIAIN |
| Sutton Designation | VA |
| Geometry | R40 |
| Point Type | 4 Facet |
| Shank Tolerance | h7 |

| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | d ₂ | Point Angle | Form | Item # |
|-------------|---------------------|----------------|----------------|----------------|-------------|------|-----------|
| 0556 | 5.56 7/32 | 66 | 28 | 6 | 120° | | D153 0556 |
| 0560 | 5.6 | 66 | 28 | 6 | 120° | | D153 0560 |
| 0565 | 5.65 | 66 | 28 | 6 | 120° | | D153 0565 |
| 0570 | 5.7 | 66 | 28 | 6 | 120° | | D153 0570 |
| 0580 | 5.8 | 66 | 28 | 6 | 120° | | D153 0580 |
| 0590 | 5.9 | 66 | 28 | 6 | 120° | | D153 0590 |
| 0595 | 5.95 15/64 | 66 | 28 | 6 | 120° | | D153 0595 |
| 0600 | 6.0 | 66 | 28 | 6 | 120° | | D153 0600 |
| 0610 | 6.1 | 70 | 31 | 8 | 120° | | D153 0610 |
| 0620 | 6.2 | 70 | 31 | 8 | 120° | | D153 0620 |
| 0630 | 6.3 | 70 | 31 | 8 | 120° | | D153 0630 |
| 0635 | 6.35 1/4 | 70 | 31 | 8 | 120° | | D153 0635 |
| 0640 | 6.4 | 70 | 31 | 8 | 120° | | D153 0640 |
| 0650 | 6.5 | 70 | 31 | 8 | 120° | | D153 0650 |
| 0660 | 6.6 | 70 | 31 | 8 | 120° | | D153 0660 |
| 0670 | 6.7 | 70 | 31 | 8 | 120° | | D153 0670 |
| 0676 | 6.76 17/64 | 74 | 34 | 8 | 120° | | D153 0676 |
| 0680 | 6.8 | 74 | 34 | 8 | 120° | | D153 0680 |
| 0690 | 6.9 | 74 | 34 | 8 | 120° | | D153 0690 |
| 0700 | 7.0 | 74 | 34 | 8 | 120° | | D153 0700 |
| 0710 | 7.1 | 74 | 34 | 8 | 120° | | D153 0710 |
| 0714 | 7.14 9/32 | 74 | 34 | 8 | 120° | | D153 0714 |
| 0720 | 7.2 | 74 | 34 | 8 | 120° | | D153 0720 |
| 0730 | 7.3 | 74 | 34 | 8 | 120° | | D153 0730 |
| 0740 | 7.4 | 74 | 34 | 8 | 120° | | D153 0740 |
| 0750 | 7.5 | 74 | 34 | 8 | 120° | | D153 0750 |
| 0754 | 7.54 19/64 | 79 | 37 | 8 | 120° | | D153 0754 |
| 0755 | 7.55 | 79 | 37 | 8 | 120° | | D153 0755 |
| 0760 | 7.6 | 79 | 37 | 8 | 120° | | D153 0760 |
| 0770 | 7.7 | 79 | 37 | 8 | 120° | | D153 0770 |
| 0780 | 7.8 | 79 | 37 | 8 | 120° | | D153 0780 |
| 0790 | 7.9 | 79 | 37 | 8 | 120° | | D153 0790 |
| 0794 | 7.94 5/16 | 79 | 37 | 8 | 120° | | D153 0794 |
| 0800 | 8.0 | 79 | 37 | 8 | 120° | | D153 0800 |
| 0810 | 8.1 | 79 | 37 | 10 | 120° | | D153 0810 |
| 0820 | 8.2 | 79 | 37 | 10 | 120° | | D153 0820 |
| 0830 | 8.3 | 79 | 37 | 10 | 120° | | D153 0830 |
| 0833 | 8.33 21/64 | 79 | 37 | 10 | 120° | | D153 0833 |
| 0840 | 8.4 | 79 | 37 | 10 | 120° | | D153 0840 |
| 0850 | 8.5 | 79 | 37 | 10 | 120° | | D153 0850 |

| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | d ₂ | Point Angle | Form | Item # |
|-------------|---------------------|----------------|----------------|----------------|-------------|------|-----------|
| 0860 | 8.6 | 84 | 40 | 10 | 120° | | D153 0860 |
| 0870 | 8.7 | 84 | 40 | 10 | 120° | | D153 0870 |
| 0873 | 8.73 11/32 | 84 | 40 | 10 | 120° | | D153 0873 |
| 0880 | 8.8 | 84 | 40 | 10 | 120° | | D153 0880 |
| 0890 | 8.9 | 84 | 40 | 10 | 120° | | D153 0890 |
| 0900 | 9.0 | 84 | 40 | 10 | 120° | | D153 0900 |
| 0910 | 9.1 | 84 | 40 | 10 | 120° | | D153 0910 |
| 0913 | 9.13 23/64 | 84 | 40 | 10 | 120° | | D153 0913 |
| 0920 | 9.2 | 84 | 40 | 10 | 120° | | D153 0920 |
| 0930 | 9.3 | 84 | 40 | 10 | 120° | | D153 0930 |
| 0940 | 9.4 | 84 | 40 | 10 | 120° | | D153 0940 |
| 0950 | 9.5 | 84 | 40 | 10 | 120° | | D153 0950 |
| 0953 | 9.53 3/8 | 89 | 43 | 10 | 120° | | D153 0953 |
| 0955 | 9.55 | 89 | 43 | 10 | 120° | | D153 0955 |
| 0960 | 9.6 | 89 | 43 | 10 | 120° | | D153 0960 |
| 0970 | 9.7 | 89 | 43 | 10 | 120° | | D153 0970 |
| 0980 | 9.8 | 89 | 43 | 10 | 120° | | D153 0980 |
| 0990 | 9.9 | 89 | 43 | 10 | 120° | | D153 0990 |
| 0992 | 9.92 25/64 | 89 | 43 | 10 | 120° | | D153 0992 |
| 1000 | 10.0 | 89 | 43 | 10 | 120° | | D153 1000 |
| 1010 | 10.1 | 89 | 43 | 10 | 120° | | D153 1010 |
| 1020 | 10.2 | 89 | 43 | 10 | 120° | | D153 1020 |
| 1030 | 10.3 | 89 | 43 | 10 | 120° | | D153 1030 |
| 1032 | 10.32 13/32 | 89 | 43 | 10 | 120° | | D153 1032 |
| 1040 | 10.4 | 89 | 43 | 10 | 120° | | D153 1040 |
| 1050 | 10.5 | 89 | 43 | 10 | 120° | | D153 1050 |
| 1060 | 10.6 | 89 | 43 | 12 | 120° | | D153 1060 |
| 1070 | 10.7 | 95 | 47 | 12 | 120° | | D153 1070 |
| 1072 | 10.72 27/64 | 95 | 47 | 12 | 120° | | D153 1072 |
| 1080 | 10.8 | 95 | 47 | 12 | 120° | | D153 1080 |
| 1090 | 10.9 | 95 | 47 | 12 | 120° | | D153 1090 |
| 1100 | 11.0 | 95 | 47 | 12 | 120° | | D153 1100 |
| 1110 | 11.1 | 95 | 47 | 12 | 120° | | D153 1110 |
| 1111 | 11.11 7/16 | 95 | 47 | 12 | 120° | | D153 1111 |
| 1120 | 11.2 | 95 | 47 | 12 | 120° | | D153 1120 |
| 1125 | 11.25 | 95 | 47 | 12 | 120° | | D153 1125 |
| 1130 | 11.3 | 95 | 47 | 12 | 120° | | D153 1130 |
| 1140 | 11.4 | 95 | 47 | 12 | 120° | | D153 1140 |
| 1150 | 11.5 | 95 | 47 | 12 | 120° | | D153 1150 |
| 1151 | 11.51 29/64 | 95 | 47 | 12 | 120° | | D153 1151 |

| ISO | P | | | | | | | | | | M | | | | | K | | | | | N | | | | | S | | | | | H | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|----|----|----|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|------|------|------|------|------|------|------|------|----|----|---|---|---|---|---|
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14.1 | 14.2 | 14.3 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37.1 | 37.2 | 37.3 | 37.4 | 37.5 | 38.1 | 38.2 | 39.1 | 39.2 | 40 | 41 | | | | | |
| D153 | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

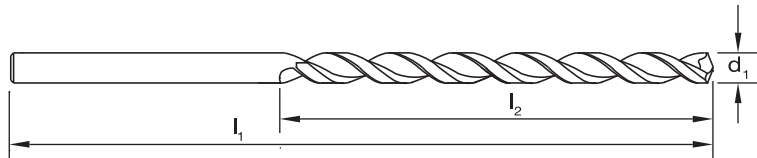
P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metals S Titanium & Super Alloys H Hard Materials

● Optimal ○ Effective

Drills Long Series, DHL

suttontools

- High performance drill
- Suitable for materials up to 1200N/mm²
- Point geometry ensures high strength
- Parabolic flute design for optimal chip transportation
- Less pecking required over standard drills
- TiAIN for longer tool life



| | | |
|--------------------|-------------|--------------|
| Catalogue Code | D170 | D171 |
| Discount Group | A0504 | A0508 |
| Material | HSS Co | HSS Co |
| Surface Finish | Brt | TIAIN |
| Sutton Designation | NH | NH |
| Geometry | R40 | R40 |
| Point Type | 130° Form B | 130° Form B |
| Shank Tolerance | - | - |

| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | Point Form | Item # | Item # |
|---------------|---------------------|----------------|----------------|------------|-----------|-----------|
| 0100 † | 1.0 | 56 | 33 | A | D170 0100 | D171 0100 |
| 0110 † | 1.1 | 60 | 37 | A | D170 0110 | D171 0110 |
| 0120 † | 1.2 | 65 | 41 | A | D170 0120 | D171 0120 |
| 0130 † | 1.3 | 65 | 41 | A | D170 0130 | D171 0130 |
| 0140 † | 1.4 | 70 | 45 | A | D170 0140 | D171 0140 |
| 0150 † | 1.5 | 70 | 45 | A | D170 0150 | D171 0150 |
| 0160 † | 1.6 | 76 | 50 | A | D170 0160 | D171 0160 |
| 0170 † | 1.7 | 76 | 50 | A | D170 0170 | D171 0170 |
| 0180 † | 1.8 | 80 | 53 | A | D170 0180 | D171 0180 |
| 0190 † | 1.9 | 80 | 53 | A | D170 0190 | D171 0190 |
| 0200 † | 2.0 | 85 | 56 | B | D170 0200 | D171 0200 |
| 0210 † | 2.1 | 85 | 56 | B | D170 0210 | D171 0210 |
| 0220 † | 2.2 | 90 | 59 | B | D170 0220 | D171 0220 |
| 0230 † | 2.3 | 90 | 59 | B | D170 0230 | D171 0230 |
| 0240 † | 2.4 | 95 | 62 | B | D170 0240 | D171 0240 |
| 0250 † | 2.5 | 95 | 62 | B | D170 0250 | D171 0250 |
| 0260 † | 2.6 | 95 | 62 | B | D170 0260 | D171 0260 |
| 0270 † | 2.7 | 100 | 66 | B | D170 0270 | D171 0270 |
| 0280 † | 2.8 | 100 | 66 | B | D170 0280 | D171 0280 |
| 0290 † | 2.9 | 100 | 66 | B | D170 0290 | D171 0290 |
| 0300 | 3.0 | 100 | 66 | | D170 0300 | D171 0300 |
| 0310 | 3.1 | 106 | 69 | | D170 0310 | D171 0310 |
| 0320 | 3.2 | 106 | 69 | | D170 0320 | D171 0320 |
| 0330 | 3.3 | 106 | 69 | | D170 0330 | D171 0330 |
| 0340 | 3.4 | 112 | 73 | | D170 0340 | D171 0340 |
| 0350 | 3.5 | 112 | 73 | | D170 0350 | D171 0350 |
| 0360 | 3.6 | 112 | 73 | | D170 0360 | D171 0360 |
| 0370 | 3.7 | 112 | 73 | | D170 0370 | D171 0370 |
| 0380 | 3.8 | 119 | 78 | | D170 0380 | D171 0380 |
| 0390 | 3.9 | 119 | 78 | | D170 0390 | D171 0390 |
| 0400 | 4.0 | 119 | 78 | | D170 0400 | D171 0400 |
| 0410 | 4.1 | 119 | 78 | | D170 0410 | D171 0410 |
| 0420 | 4.2 | 119 | 78 | | D170 0420 | D171 0420 |
| 0430 | 4.3 | 126 | 82 | | D170 0430 | D171 0430 |
| 0440 | 4.4 | 126 | 82 | | D170 0440 | D171 0440 |
| 0450 | 4.5 | 126 | 82 | | D170 0450 | D171 0450 |
| 0460 | 4.6 | 126 | 82 | | D170 0460 | D171 0460 |
| 0470 | 4.7 | 126 | 82 | | D170 0470 | D171 0470 |
| 0480 | 4.8 | 132 | 87 | | D170 0480 | D171 0480 |
| 0490 | 4.9 | 132 | 87 | | D170 0490 | D171 0490 |

| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | Point Form | Item # | Item # |
|-------------|---------------------|----------------|----------------|------------|-----------|-----------|
| 0500 | 5.0 | 132 | 87 | | D170 0500 | D171 0500 |
| 0510 | 5.1 | 132 | 87 | | D170 0510 | D171 0510 |
| 0520 | 5.2 | 132 | 87 | | D170 0520 | D171 0520 |
| 0530 | 5.3 | 132 | 87 | | D170 0530 | D171 0530 |
| 0540 | 5.4 | 139 | 91 | | D170 0540 | D171 0540 |
| 0550 | 5.5 | 139 | 91 | | D170 0550 | D171 0550 |
| 0560 | 5.6 | 139 | 91 | | D170 0560 | D171 0560 |
| 0570 | 5.7 | 139 | 91 | | D170 0570 | D171 0570 |
| 0580 | 5.8 | 139 | 91 | | D170 0580 | D171 0580 |
| 0590 | 5.9 | 139 | 91 | | D170 0590 | D171 0590 |
| 0600 | 6.0 | 139 | 91 | | D170 0600 | D171 0600 |
| 0610 | 6.1 | 148 | 97 | | D170 0610 | D171 0610 |
| 0620 | 6.2 | 148 | 97 | | D170 0620 | D171 0620 |
| 0630 | 6.3 | 148 | 97 | | D170 0630 | D171 0630 |
| 0640 | 6.4 | 148 | 97 | | D170 0640 | D171 0640 |
| 0650 | 6.5 | 148 | 97 | | D170 0650 | D171 0650 |
| 0660 | 6.6 | 148 | 97 | | D170 0660 | D171 0660 |
| 0670 | 6.7 | 148 | 97 | | D170 0670 | D171 0670 |
| 0680 | 6.8 | 156 | 102 | | D170 0680 | D171 0680 |
| 0690 | 6.9 | 156 | 102 | | D170 0690 | D171 0690 |
| 0700 | 7.0 | 156 | 102 | | D170 0700 | D171 0700 |
| 0710 | 7.1 | 156 | 102 | | D170 0710 | D171 0710 |
| 0720 | 7.2 | 156 | 102 | | D170 0720 | D171 0720 |
| 0730 | 7.3 | 156 | 102 | | D170 0730 | D171 0730 |
| 0740 | 7.4 | 156 | 102 | | D170 0740 | D171 0740 |
| 0750 | 7.5 | 156 | 102 | | D170 0750 | D171 0750 |
| 0760 | 7.6 | 165 | 109 | | D170 0760 | D171 0760 |
| 0770 | 7.7 | 165 | 109 | | D170 0770 | D171 0770 |
| 0780 | 7.8 | 165 | 109 | | D170 0780 | D171 0780 |
| 0790 | 7.9 | 165 | 109 | | D170 0790 | D171 0790 |
| 0800 | 8.0 | 165 | 109 | | D170 0800 | D171 0800 |
| 0810 | 8.1 | 165 | 109 | | D170 0810 | D171 0810 |
| 0820 | 8.2 | 165 | 109 | | D170 0820 | D171 0820 |
| 0830 | 8.3 | 165 | 109 | | D170 0830 | D171 0830 |
| 0840 | 8.4 | 165 | 109 | | D170 0840 | D171 0840 |
| 0850 | 8.5 | 165 | 109 | | D170 0850 | D171 0850 |
| 0860 | 8.6 | 175 | 115 | | D170 0860 | D171 0860 |
| 0870 | 8.7 | 175 | 115 | | D170 0870 | D171 0870 |
| 0880 | 8.8 | 175 | 115 | | D170 0880 | D171 0880 |
| 0890 | 8.9 | 175 | 115 | | D170 0890 | D171 0890 |

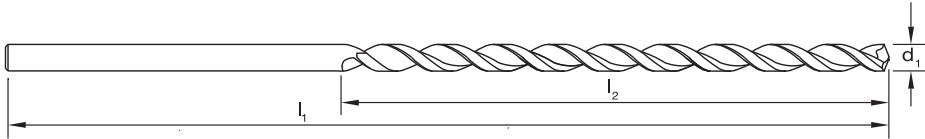
| ISO | P | | | | | | | | | | | | | M | | | K | | | | | | | N | | | | | | | | | | S | | | | | | | | | | H | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|----|----|----|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|------|------|------|------|------|------|------|------|----|----|
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14.1 | 14.2 | 14.3 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37.1 | 37.2 | 37.3 | 37.4 | 37.5 | 38.1 | 38.2 | 39.1 | 39.2 | 40 | 41 |
| D170 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| D171 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

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

† Sizes <3.0 point type: 130° 4 Facet

suttontools

- Suitable for materials up to 700N/mm²
- Point geometry ensures high strength
- Parabolic flute design for optimal chip transportation
- Less pecking required over standard drills



| | |
|--------------------|-------------|
| Discount Group | A0502 |
| Material | HSS |
| Surface Finish | Brt |
| Sutton Designation | N |
| Geometry | R40 |
| Point Type | 130° Form B |
| Shank Tolerance | - |

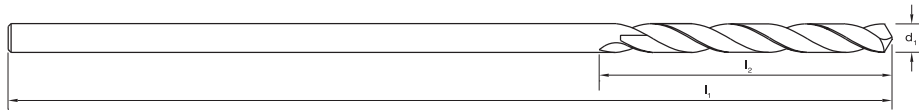
| Size Ref. | d ₁ (h8) | | l ₁ | l ₂ | Item # |
|---------------------------|---------------------|--|----------------|----------------|-------------|
| 8" Overall Length | | | | | D197 |
| 0318 | 3.18 1/8 | | 200 | 140 | D197 0318 |
| 0476 | 4.76 3/16 | | 200 | 140 | D197 0476 |
| 0635 | 6.35 1/4 | | 200 | 140 | D197 0635 |
| 0794 | 7.94 5/16 | | 200 | 140 | D197 0794 |
| 0953 | 9.53 3/8 | | 200 | 140 | D197 0953 |
| 10" Overall Length | | | | | D198 |
| 0476 | 4.76 3/16 | | 250 | 190 | D198 0476 |
| 0635 | 6.35 1/4 | | 250 | 190 | D198 0635 |
| 0794 | 7.94 5/16 | | 250 | 190 | D198 0794 |
| 0953 | 9.53 3/8 | | 250 | 190 | D198 0953 |
| 1270 | 12.70 1/2 | | 250 | 190 | D198 1270 |
| 12" Overall Length | | | | | D199 |
| 0635 | 6.35 1/4 | | 300 | 230 | D199 0635 |
| 0794 | 7.94 5/16 | | 300 | 230 | D199 0794 |
| 0953 | 9.53 3/8 | | 300 | 230 | D199 0953 |
| 1111 | 11.11 7/16 | | 300 | 230 | D199 1111 |
| 1270 | 12.70 1/2 | | 300 | 230 | D199 1270 |

| ISO | P | | | | | | | | | | | | | M | | | K | | | | | N | | | | | | | | | | S | | | | | | | | | | H | | | | | | | | | | | | |
|----------|---|---|---|---|---|---|---|---|---|----|----|----|----|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|------|------|------|------|------|------|------|------|----|----|---|---|---|---|---|
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14.1 | 14.2 | 14.3 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37.1 | 37.2 | 37.3 | 37.4 | 37.5 | 38.1 | 38.2 | 39.1 | 39.2 | 40 | 41 | | | | | |
| D197 | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

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

suttontools

- Aircraft extension drill
- For long reach applications



| | |
|--------------------|---------------|
| Catalogue Code | D187 |
| Discount Group | A0502 |
| Material | HSS |
| Surface Finish | Brt |
| Sutton Designation | N |
| Geometry | R30 |
| Point Type | 118° Standard |
| Packaging | Carded |

| Size Ref. | d ₁ | | l ₁ | l ₂ | Item # |
|-------------|----------------|-------------|----------------|----------------|-----------|
| 0318 | 3.18 | 1/8 | 300 | 35 | D187 0318 |
| 0476 | 4.76 | 3/16 | 300 | 57 | D187 0476 |
| 0635 | 6.35 | 1/4 | 300 | 72 | D187 0635 |
| 0794 | 7.94 | 5/16 | 300 | 86 | D187 0794 |
| 0953 | 9.52 | 3/8 | 300 | 95 | D187 0953 |
| 1111 | 11.11 | 7/16 | 300 | 106 | D187 1111 |
| 1269 | 12.70 | 1/2 | 300 | 117 | D187 1269 |

| ISO | P | | | | | | | | | | M | | | K | | | | | N | | | | | | | | | | S | | | | | | | | | | H | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|----|----|----|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|------|------|------|------|------|------|------|------|----|----|---|
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14.1 | 14.2 | 14.3 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37.1 | 37.2 | 37.3 | 37.4 | 37.5 | 38.1 | 38.2 | 39.1 | 39.2 | 40 | 41 | |
| D187 | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

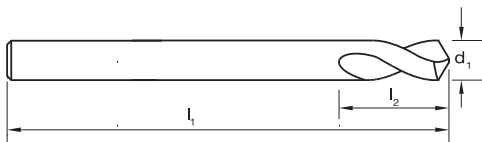
P Steel M Stainless Steel K Cast Iron N Non-Ferrous Metals S Titanium & Super Alloys H Hard Materials

● Optimal ○ Effective

Drills Panel, Single Ended

suttontools

- Rigid design for through hole drilling
- Ideal for rivet holes in sheet metal fabrication
- Recommended for shallow holes no deeper than 1-1/4 x d₁



| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | d ₂ | Rivet Size | Item # | Item # | Item # |
|---|---------------------|----------------|----------------|----------------|--------------|-------------|-------------|-----------|
| 0318 | 3.18 1/8 | 54 | 19 | 3.18 | 3.00 | D121 0318 | D124 0318 | D127 0318 |
| 0326 | 3.26 #30 | 54 | 19 | 3.26 | 3.18 (1/8") | D121 0326 | D124 0326 | D127 0326 |
| 0409 | 4.09 #20 | 54 | 22 | 4.09 | 3.97 (5/32") | D121 0409 | D124 0409 | D127 0409 |
| 0485 | 4.85 #11 | 54 | 22 | 4.85 | 4.76 (3/16") | D121 0485 | D124 0485 | D127 0485 |
| Stub 118° Point (Discount Group A1002) | | | | | | D123 | D126 | |
| 0318 | 3.18 1/8 | 1-7/8 | 7/8 | 3.18 | 3.00 | D123 0318 | | |
| 0326 | 3.26 #30 | 49 | 24 | 3.26 | 3.18 (1/8") | D123 0326 | D126 0326 | |
| 0409 | 4.09 #20 | 54 | 27 | 4.09 | 3.97 (5/32") | D123 0409 | D126 0409 | |
| 0485 | 4.85 #11 | 57 | 30 | 4.85 | 4.76 (3/16") | D123 0485 | D126 0485 | |

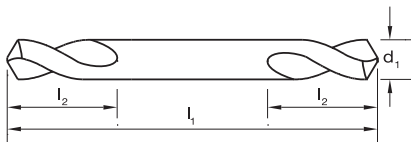


| Catalogue Code | D121 | D124 | D127 |
|----------------------------|--------------------|----------------|------------------------|
| Discount Group | A0802 | A0802 | A0806 |
| Material | HSS | HSS | HSS |
| Surface Finish | Brt | Blu | TiN |
| Sutton Designation | Non Ferrous | Ferrous | Tough Materials |
| Geometry | - | - | - |
| Point Type | 135° Standard | 135° Standard | 135° Standard |
| Packaging & Order Quantity | Bulk (10) | Bulk (10) | 1 |

Drills Panel, Double Ended

suttontools

- Double ended rigid design for through hole drilling
- Ideal for rivet holes in sheet metal fabrication
- Recommended for shallow holes no deeper than 1-1/4 x d₁
- Tupooint drills require fully tightened chuck jaws



| Size Ref. | d ₁ (h8) | l ₁ | l ₂ | d ₂ | Rivet Size | Item # | Item # | Item # | Item # |
|-------------|---------------------|----------------|----------------|----------------|--------------|-----------|-----------|-----------|-----------|
| 0318 | 3.18 1/8 | 54 | 19 | 3.18 | 3.00 | D122 0318 | D125 0318 | D128 0318 | D130 0318 |
| 0326 | 3.26 #30 | 54 | 19 | 3.26 | 3.18 (1/8") | D122 0326 | D125 0326 | D128 0326 | D130 0326 |
| 0409 | 4.09 #20 | 54 | 22 | 4.09 | 3.97 (5/32") | D122 0409 | D125 0409 | D128 0409 | D130 0409 |
| 0485 | 4.85 #11 | 54 | 22 | 4.85 | 4.76 (3/16") | D122 0485 | D125 0485 | D128 0485 | D130 0485 |



| Catalogue Code | D122 | D125 | D128 | D130 |
|----------------------------|--------------------|----------------|------------------------|---------------------|
| Discount Group | A0802 | A0802 | A0806 | A0802 |
| Material | HSS | HSS | HSS | HSS Co |
| Surface Finish | Brt | Blu | TiN | Colour Temp |
| Sutton Designation | Non Ferrous | Ferrous | Tough Materials | Tough Steels |
| Geometry | - | - | - | - |
| Point Type | 135° Standard | 135° Standard | 135° Standard | 135° Standard |
| Packaging & Order Quantity | Bulk (10) | Bulk (10) | 1 | Bulk (10) |

| ISO | P | | | | | | | | | | | | | M | | | K | | | | N | | | | | | | S | | | | | | | H | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|----|----|----|----|------|------|------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------|------|------|------|------|------|------|------|------|----|----|---|---|---|---|---|---|---|---|
| VDI 3323 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14.1 | 14.2 | 14.3 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37.1 | 37.2 | 37.3 | 37.4 | 37.5 | 38.1 | 38.2 | 39.1 | 39.2 | 40 | 41 | | | | | | | | |
| D122 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| D125 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| D128 | ● | ● | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| D130 | ● | ● | ● | ● | ● | ● | ● | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

