



Solid Carbide Drills



▶ **SOLID CARBIDE DRILLS GENERAL**
with / without Coolant Holes (3XD, 5XD, 8XD)

CDG315, CDG515, CDG815 (with coolant holes)

CDG305, CDG307, CDG505 (without coolant holes)

- Application : Drilling into general steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.
- Advantage : Self centering - Center drilling is not required
 Excellent positioning - Bush is not necessary
 Special design - Reaming is not required
 - Good chip removal
 - Powerful drilling



▶ **SOLID CARBIDE DRILLS HIGH FEED**
with Coolant Holes (3XD, 5XD)

CDF315, CDF515

- Application : Carbon steels, Alloy steels (~HRC35), Cast iron.
- Advantage : Increases productivity due to 1.5 to 2 times faster feeding speed than 2-flute drill. Multi-Layer coating delivers much better productivity and reliability. Self-Centering.



▶ **SOLID CARBIDE DRILLS INOX**
with Coolant Holes (3XD, 5XD, 8XD)

CDS315, CDS515, CDS815

- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes the superior centering and chip curl.
- Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.



▶ **SOLID CARBIDE DRILLS ALU**
with Coolant Holes (3XD, 5XD, 8XD)

CDA315, CDA515, CDA815

- Good chip treatment due to flute geometry & chip space.
- Better finish & built-up edge preventive.



▶ **SOLID CARBIDE DRILLS CFRP**

CDC305

- Special Point Type improve hole quality for Composite Material.
-> Minimized Burr and Delamination at Entry / Exit Hole.
- Outstanding Performance.
- Long tool life and increased Productivity by Diamond coating.



▶ **SOLID CARBIDE DRILLS MQL TYPE**
with Coolant Holes (10XD, 15XD, 20XD, 25XD, 30XD)

CDM010, CDM015, CDM020

CDMS10, CDMS15, CDMS20, CDMS25, CDMS30

- Application : Drilling steels in general, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.
- Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL (Minimum Quantity Lubrication).
 Excellent positioning - Bush is not necessary.
 Special design - Good chip removal
 Powerful drilling



▶ **SOLID CARBIDE DRILLS**
for **HIGH HARDENED STEELS (HRc50~70)**

CDH909

- Application : Drilling for High Hardened Steels, Quenched Steels, Tempered Steels (Under HRc70)
- Advantage : Special Design
 Minimum of cutting load through special thinning
 Good chip removal
 Powerful Drilling



APPLICATION TABLE

● - Excellent
○ - Good

| Item | Length | Page | Carbon Steels | Alloy Steels | Prehardened Steels | Hardened Steels | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|------|--------|------|---------------|--------------|--------------------|-----------------|--------|-----------|----------|------------------|----------|-------------|------|
| | | | ~HB225 | HB225-325 | HRC30-45 | HRC45-55 | HRC55- | | | | | | |

Solid Carbide Drills - General (with coolant holes)

| | | | | | | | | | | | | | |
|--------|------------------|-----|---|---|---|--|--|---|--|---|--|--|--|
| CDG315 | SHORT (3xD) | P03 | ○ | ● | ● | | | ○ | | ○ | | | |
| CDG515 | LONG (5xD) | P05 | ○ | ● | ● | | | ○ | | ○ | | | |
| CDG815 | EXTRA LONG (8xD) | P07 | ○ | ● | ● | | | ○ | | ○ | | | |

Solid Carbide Drills - General (without coolant holes)

| | | | | | | | | | | | | | |
|--------|-------------|-----|---|---|---|--|--|---|--|---|--|--|--|
| CDG305 | STUB (3xD) | P09 | ○ | ● | ● | | | ○ | | ○ | | | |
| CDG307 | SHORT (3xD) | P11 | ○ | ● | ● | | | ○ | | ○ | | | |
| CDG505 | LONG (5xD) | P13 | ○ | ● | ● | | | ○ | | ○ | | | |

Solid Carbide Drills - HIGH FEED (with coolant holes)

| | | | | | | | | | | | | | |
|--------|-------------|-----|---|---|---|--|--|---|--|---|--|--|--|
| CDF315 | SHORT (3xD) | P16 | ● | ● | ○ | | | ○ | | ● | | | |
| CDF515 | LONG (5xD) | P16 | ● | ● | ○ | | | ○ | | ● | | | |

Solid Carbide Drills - INOX (with coolant holes)

| | | | | | | | | | | | | | |
|--------|------------------|-----|---|---|---|--|--|--|---|---|---|---|--|
| CDS315 | SHORT (3xD) | P18 | ● | ● | ○ | | | | ○ | ● | ○ | ○ | |
| CDS515 | LONG (5xD) | P20 | ● | ● | ○ | | | | ○ | ● | ○ | ○ | |
| CDS815 | EXTRA LONG (8xD) | P22 | ● | ● | ○ | | | | ○ | ● | ○ | ○ | |

Solid Carbide Drills - ALU (with coolant holes)

| | | | | | | | | | | | | | |
|--------|------------------|-----|--|--|--|--|--|--|---|--|--|--|--|
| CDA315 | SHORT (3xD) | P25 | | | | | | | ● | | | | |
| CDA515 | LONG (5xD) | P27 | | | | | | | ● | | | | |
| CDA815 | EXTRA LONG (8xD) | P29 | | | | | | | ● | | | | |

Solid Carbide Drills - CFRP

| | | | | | | | | | | | | | |
|--------|--|-----|--|--|--|--|--|--|--|--|--|--|---|
| CDC305 | | P32 | | | | | | | | | | | ● |
|--------|--|-----|--|--|--|--|--|--|--|--|--|--|---|

Solid Carbide Drills - MQL Type (with coolant holes)

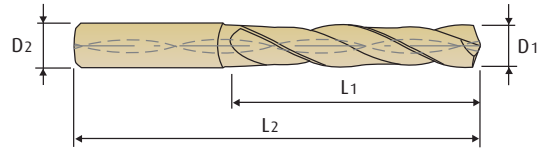
| | | | | | | | | | | | | | |
|--------|-------------------|-----|---|---|---|--|--|---|--|--|--|---|--|
| CDM010 | EXTRA LONG (10xD) | P33 | ● | ● | ○ | | | ○ | | | | ○ | |
| CDMS10 | | P35 | | | | | | | | | | | |
| CDM015 | EXTRA LONG (15xD) | P34 | ● | ● | ○ | | | ○ | | | | ○ | |
| CDMS15 | | P35 | | | | | | | | | | | |
| CDM020 | EXTRA LONG (20xD) | P34 | ● | ● | ○ | | | ○ | | | | ○ | |
| CDMS20 | | P35 | | | | | | | | | | | |
| CDMS25 | EXTRA LONG (25xD) | P36 | ● | ● | ○ | | | ○ | | | | ○ | |
| CDMS30 | EXTRA LONG (30xD) | P36 | ● | ● | ○ | | | ○ | | | | ○ | |

Solid Carbide Drills for High Hardened Steels

| | | | | | | | | | | | | | |
|--------|--|-----|--|--|--|---|---|--|--|--|--|--|--|
| CDH909 | | P38 | | | | ● | ● | | | | | | |
|--------|--|-----|--|--|--|---|---|--|--|--|--|--|--|

CDG315 Series (Short)

3xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

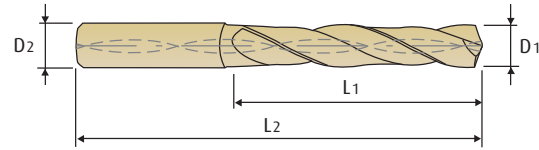
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG315030 | 3.0 | 6 | 20 | 62 |
| CDG315031 | 3.1 | 6 | 20 | 62 |
| CDG315032 | 3.2 | 6 | 20 | 62 |
| CDG315033 | 3.3 | 6 | 20 | 62 |
| CDG315034 | 3.4 | 6 | 20 | 62 |
| CDG315035 | 3.5 | 6 | 20 | 62 |
| CDG315036 | 3.6 | 6 | 20 | 62 |
| CDG315037 | 3.7 | 6 | 20 | 62 |
| CDG315038 | 3.8 | 6 | 24 | 66 |
| CDG315039 | 3.9 | 6 | 24 | 66 |
| CDG315040 | 4.0 | 6 | 24 | 66 |
| CDG315041 | 4.1 | 6 | 24 | 66 |
| CDG315042 | 4.2 | 6 | 24 | 66 |
| CDG315043 | 4.3 | 6 | 24 | 66 |
| CDG315044 | 4.4 | 6 | 24 | 66 |
| CDG315045 | 4.5 | 6 | 24 | 66 |
| CDG315046 | 4.6 | 6 | 24 | 66 |
| CDG315047 | 4.7 | 6 | 24 | 66 |
| CDG315048 | 4.8 | 6 | 28 | 66 |
| CDG315049 | 4.9 | 6 | 28 | 66 |
| CDG315050 | 5.0 | 6 | 28 | 66 |
| CDG315051 | 5.1 | 6 | 28 | 66 |
| CDG315052 | 5.2 | 6 | 28 | 66 |
| CDG315053 | 5.3 | 6 | 28 | 66 |
| CDG315054 | 5.4 | 6 | 28 | 66 |
| CDG315055 | 5.5 | 6 | 28 | 66 |
| CDG315056 | 5.6 | 6 | 28 | 66 |
| CDG315057 | 5.7 | 6 | 28 | 66 |
| CDG315058 | 5.8 | 6 | 28 | 66 |
| CDG315059 | 5.9 | 6 | 28 | 66 |
| CDG315060 | 6.0 | 6 | 28 | 66 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG315061 | 6.1 | 8 | 34 | 79 |
| CDG315062 | 6.2 | 8 | 34 | 79 |
| CDG315063 | 6.3 | 8 | 34 | 79 |
| CDG315064 | 6.4 | 8 | 34 | 79 |
| CDG315065 | 6.5 | 8 | 34 | 79 |
| CDG315066 | 6.6 | 8 | 34 | 79 |
| CDG315067 | 6.7 | 8 | 34 | 79 |
| CDG315068 | 6.8 | 8 | 34 | 79 |
| CDG315069 | 6.9 | 8 | 34 | 79 |
| CDG315070 | 7.0 | 8 | 34 | 79 |
| CDG315071 | 7.1 | 8 | 41 | 79 |
| CDG315072 | 7.2 | 8 | 41 | 79 |
| CDG315073 | 7.3 | 8 | 41 | 79 |
| CDG315074 | 7.4 | 8 | 41 | 79 |
| CDG315075 | 7.5 | 8 | 41 | 79 |
| CDG315076 | 7.6 | 8 | 41 | 79 |
| CDG315077 | 7.7 | 8 | 41 | 79 |
| CDG315078 | 7.8 | 8 | 41 | 79 |
| CDG315079 | 7.9 | 8 | 41 | 79 |
| CDG315080 | 8.0 | 8 | 41 | 79 |
| CDG315081 | 8.1 | 10 | 47 | 89 |
| CDG315082 | 8.2 | 10 | 47 | 89 |
| CDG315083 | 8.3 | 10 | 47 | 89 |
| CDG315084 | 8.4 | 10 | 47 | 89 |
| CDG315085 | 8.5 | 10 | 47 | 89 |
| CDG315086 | 8.6 | 10 | 47 | 89 |
| CDG315087 | 8.7 | 10 | 47 | 89 |
| CDG315088 | 8.8 | 10 | 47 | 89 |
| CDG315089 | 8.9 | 10 | 47 | 89 |
| CDG315090 | 9.0 | 10 | 47 | 89 |
| CDG315091 | 9.1 | 10 | 47 | 89 |



CDG315 Series (Short) 3xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG315092 | 9.2 | 10 | 47 | 89 |
| CDG315093 | 9.3 | 10 | 47 | 89 |
| CDG315094 | 9.4 | 10 | 47 | 89 |
| CDG315095 | 9.5 | 10 | 47 | 89 |
| CDG315096 | 9.6 | 10 | 47 | 89 |
| CDG315097 | 9.7 | 10 | 47 | 89 |
| CDG315098 | 9.8 | 10 | 47 | 89 |
| CDG315099 | 9.9 | 10 | 47 | 89 |
| CDG315100 | 10.0 | 10 | 47 | 89 |
| CDG315101 | 10.1 | 12 | 55 | 102 |
| CDG315102 | 10.2 | 12 | 55 | 102 |
| CDG315103 | 10.3 | 12 | 55 | 102 |
| CDG315104 | 10.4 | 12 | 55 | 102 |
| CDG315105 | 10.5 | 12 | 55 | 102 |
| CDG315106 | 10.6 | 12 | 55 | 102 |
| CDG315107 | 10.7 | 12 | 55 | 102 |
| CDG315108 | 10.8 | 12 | 55 | 102 |
| CDG315109 | 10.9 | 12 | 55 | 102 |
| CDG315110 | 11.0 | 12 | 55 | 102 |
| CDG315111 | 11.1 | 12 | 55 | 102 |
| CDG315112 | 11.2 | 12 | 55 | 102 |
| CDG315113 | 11.3 | 12 | 55 | 102 |
| CDG315114 | 11.4 | 12 | 55 | 102 |

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG315115 | 11.5 | 12 | 55 | 102 |
| CDG315116 | 11.6 | 12 | 55 | 102 |
| CDG315117 | 11.7 | 12 | 55 | 102 |
| CDG315118 | 11.8 | 12 | 55 | 102 |
| CDG315119 | 11.9 | 12 | 55 | 102 |
| CDG315120 | 12.0 | 12 | 55 | 102 |
| CDG315125 | 12.5 | 14 | 60 | 107 |
| CDG315130 | 13.0 | 14 | 60 | 107 |
| CDG315135 | 13.5 | 14 | 60 | 107 |
| CDG315140 | 14.0 | 14 | 60 | 107 |
| CDG315145 | 14.5 | 16 | 65 | 115 |
| CDG315150 | 15.0 | 16 | 65 | 115 |
| CDG315155 | 15.5 | 16 | 65 | 115 |
| CDG315160 | 16.0 | 16 | 65 | 115 |
| CDG315165 | 16.5 | 18 | 73 | 123 |
| CDG315170 | 17.0 | 18 | 73 | 123 |
| CDG315175 | 17.5 | 18 | 73 | 123 |
| CDG315180 | 18.0 | 18 | 73 | 123 |
| CDG315185 | 18.5 | 20 | 79 | 131 |
| CDG315190 | 19.0 | 20 | 79 | 131 |
| CDG315195 | 19.5 | 20 | 79 | 131 |
| CDG315200 | 20.0 | 20 | 79 | 131 |

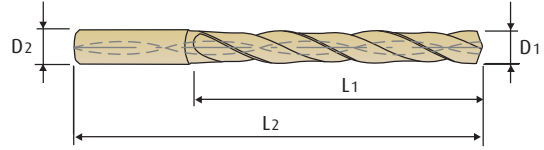
Unit:mm

• Other shank types are available on your request.

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRc30~45 | Hardened Steels HRc45~55 HRc55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ○ | ● | ● | | | ○ | | ○ | | | |

● : Excellent
○ : Good

CDG515 Series (Long) 5xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

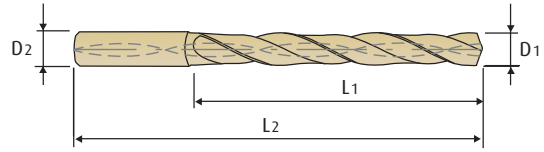
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG515010 | 1.0 | 3 | 8 | 55 |
| CDG515011 | 1.1 | 3 | 12 | 55 |
| CDG515012 | 1.2 | 3 | 12 | 55 |
| CDG515013 | 1.3 | 3 | 12 | 55 |
| CDG515014 | 1.4 | 3 | 12 | 55 |
| CDG515015 | 1.5 | 3 | 16 | 55 |
| CDG515016 | 1.6 | 3 | 16 | 55 |
| CDG515017 | 1.7 | 3 | 16 | 55 |
| CDG515018 | 1.8 | 3 | 16 | 55 |
| CDG515019 | 1.9 | 3 | 16 | 55 |
| CDG515020 | 2.0 | 4 | 21 | 57 |
| CDG515021 | 2.1 | 4 | 21 | 57 |
| CDG515022 | 2.2 | 4 | 21 | 57 |
| CDG515023 | 2.3 | 4 | 21 | 57 |
| CDG515024 | 2.4 | 4 | 21 | 57 |
| CDG515025 | 2.5 | 4 | 21 | 57 |
| CDG515026 | 2.6 | 4 | 21 | 57 |
| CDG515027 | 2.7 | 4 | 21 | 57 |
| CDG515028 | 2.8 | 4 | 21 | 57 |
| CDG515029 | 2.9 | 4 | 21 | 57 |
| CDG515030 | 3.0 | 6 | 28 | 66 |
| CDG515031 | 3.1 | 6 | 28 | 66 |
| CDG515032 | 3.2 | 6 | 28 | 66 |
| CDG515033 | 3.3 | 6 | 28 | 66 |
| CDG515034 | 3.4 | 6 | 28 | 66 |
| CDG515035 | 3.5 | 6 | 28 | 66 |
| CDG515036 | 3.6 | 6 | 28 | 66 |
| CDG515037 | 3.7 | 6 | 28 | 66 |
| CDG515038 | 3.8 | 6 | 36 | 74 |
| CDG515039 | 3.9 | 6 | 36 | 74 |
| CDG515040 | 4.0 | 6 | 36 | 74 |
| CDG515041 | 4.1 | 6 | 36 | 74 |
| CDG515042 | 4.2 | 6 | 36 | 74 |
| CDG515043 | 4.3 | 6 | 36 | 74 |
| CDG515044 | 4.4 | 6 | 36 | 74 |
| CDG515045 | 4.5 | 6 | 36 | 74 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG515046 | 4.6 | 6 | 36 | 74 |
| CDG515047 | 4.7 | 6 | 36 | 74 |
| CDG515048 | 4.8 | 6 | 44 | 82 |
| CDG515049 | 4.9 | 6 | 44 | 82 |
| CDG515050 | 5.0 | 6 | 44 | 82 |
| CDG515051 | 5.1 | 6 | 44 | 82 |
| CDG515052 | 5.2 | 6 | 44 | 82 |
| CDG515053 | 5.3 | 6 | 44 | 82 |
| CDG515054 | 5.4 | 6 | 44 | 82 |
| CDG515055 | 5.5 | 6 | 44 | 82 |
| CDG515056 | 5.6 | 6 | 44 | 82 |
| CDG515057 | 5.7 | 6 | 44 | 82 |
| CDG515058 | 5.8 | 6 | 44 | 82 |
| CDG515059 | 5.9 | 6 | 44 | 82 |
| CDG515060 | 6.0 | 6 | 44 | 82 |
| CDG515061 | 6.1 | 8 | 53 | 91 |
| CDG515062 | 6.2 | 8 | 53 | 91 |
| CDG515063 | 6.3 | 8 | 53 | 91 |
| CDG515064 | 6.4 | 8 | 53 | 91 |
| CDG515065 | 6.5 | 8 | 53 | 91 |
| CDG515066 | 6.6 | 8 | 53 | 91 |
| CDG515067 | 6.7 | 8 | 53 | 91 |
| CDG515068 | 6.8 | 8 | 53 | 91 |
| CDG515069 | 6.9 | 8 | 53 | 91 |
| CDG515070 | 7.0 | 8 | 53 | 91 |
| CDG515071 | 7.1 | 8 | 53 | 91 |
| CDG515072 | 7.2 | 8 | 53 | 91 |
| CDG515073 | 7.3 | 8 | 53 | 91 |
| CDG515074 | 7.4 | 8 | 53 | 91 |
| CDG515075 | 7.5 | 8 | 53 | 91 |
| CDG515076 | 7.6 | 8 | 53 | 91 |
| CDG515077 | 7.7 | 8 | 53 | 91 |
| CDG515078 | 7.8 | 8 | 53 | 91 |
| CDG515079 | 7.9 | 8 | 53 | 91 |
| CDG515080 | 8.0 | 8 | 53 | 91 |
| CDG515081 | 8.1 | 10 | 61 | 103 |



CDG515 Series (Long) 5xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG515082 | 8.2 | 10 | 61 | 103 |
| CDG515083 | 8.3 | 10 | 61 | 103 |
| CDG515084 | 8.4 | 10 | 61 | 103 |
| CDG515085 | 8.5 | 10 | 61 | 103 |
| CDG515086 | 8.6 | 10 | 61 | 103 |
| CDG515087 | 8.7 | 10 | 61 | 103 |
| CDG515088 | 8.8 | 10 | 61 | 103 |
| CDG515089 | 8.9 | 10 | 61 | 103 |
| CDG515090 | 9.0 | 10 | 61 | 103 |
| CDG515091 | 9.1 | 10 | 61 | 103 |
| CDG515092 | 9.2 | 10 | 61 | 103 |
| CDG515093 | 9.3 | 10 | 61 | 103 |
| CDG515094 | 9.4 | 10 | 61 | 103 |
| CDG515095 | 9.5 | 10 | 61 | 103 |
| CDG515096 | 9.6 | 10 | 61 | 103 |
| CDG515097 | 9.7 | 10 | 61 | 103 |
| CDG515098 | 9.8 | 10 | 61 | 103 |
| CDG515099 | 9.9 | 10 | 61 | 103 |
| CDG515100 | 10.0 | 10 | 61 | 103 |
| CDG515101 | 10.1 | 12 | 71 | 118 |
| CDG515102 | 10.2 | 12 | 71 | 118 |
| CDG515103 | 10.3 | 12 | 71 | 118 |
| CDG515104 | 10.4 | 12 | 71 | 118 |
| CDG515105 | 10.5 | 12 | 71 | 118 |
| CDG515106 | 10.6 | 12 | 71 | 118 |
| CDG515107 | 10.7 | 12 | 71 | 118 |
| CDG515108 | 10.8 | 12 | 71 | 118 |
| CDG515109 | 10.9 | 12 | 71 | 118 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG515110 | 11.0 | 12 | 71 | 118 |
| CDG515111 | 11.1 | 12 | 71 | 118 |
| CDG515112 | 11.2 | 12 | 71 | 118 |
| CDG515113 | 11.3 | 12 | 71 | 118 |
| CDG515114 | 11.4 | 12 | 71 | 118 |
| CDG515115 | 11.5 | 12 | 71 | 118 |
| CDG515116 | 11.6 | 12 | 71 | 118 |
| CDG515117 | 11.7 | 12 | 71 | 118 |
| CDG515118 | 11.8 | 12 | 71 | 118 |
| CDG515119 | 11.9 | 12 | 71 | 118 |
| CDG515120 | 12.0 | 12 | 71 | 118 |
| CDG515125 | 12.5 | 14 | 77 | 124 |
| CDG515130 | 13.0 | 14 | 77 | 124 |
| CDG515135 | 13.5 | 14 | 77 | 124 |
| CDG515140 | 14.0 | 14 | 77 | 124 |
| CDG515145 | 14.5 | 16 | 83 | 133 |
| CDG515150 | 15.0 | 16 | 83 | 133 |
| CDG515155 | 15.5 | 16 | 83 | 133 |
| CDG515160 | 16.0 | 16 | 83 | 133 |
| CDG515165 | 16.5 | 18 | 93 | 143 |
| CDG515170 | 17.0 | 18 | 93 | 143 |
| CDG515175 | 17.5 | 18 | 93 | 143 |
| CDG515180 | 18.0 | 18 | 93 | 143 |
| CDG515185 | 18.5 | 20 | 101 | 153 |
| CDG515190 | 19.0 | 20 | 101 | 153 |
| CDG515195 | 19.5 | 20 | 101 | 153 |
| CDG515200 | 20.0 | 20 | 101 | 153 |

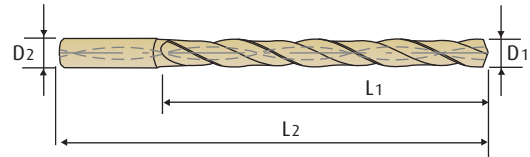
• Other shank types are available on your request.

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRc30~45 | Hardened Steels HRc45~55 HRc55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ○ | ● | ● | | | ○ | | ○ | | | |

● : Excellent
○ : Good

CDG815 Series (Extra Long)

8xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

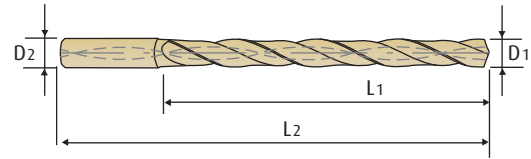
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG815030 | 3.0 | 6 | 34 | 72 |
| CDG815031 | 3.1 | 6 | 34 | 72 |
| CDG815032 | 3.2 | 6 | 34 | 72 |
| CDG815033 | 3.3 | 6 | 34 | 72 |
| CDG815034 | 3.4 | 6 | 34 | 72 |
| CDG815035 | 3.5 | 6 | 34 | 72 |
| CDG815036 | 3.6 | 6 | 34 | 72 |
| CDG815037 | 3.7 | 6 | 34 | 72 |
| CDG815038 | 3.8 | 6 | 43 | 81 |
| CDG815039 | 3.9 | 6 | 43 | 81 |
| CDG815040 | 4.0 | 6 | 43 | 81 |
| CDG815041 | 4.1 | 6 | 43 | 81 |
| CDG815042 | 4.2 | 6 | 43 | 81 |
| CDG815043 | 4.3 | 6 | 43 | 81 |
| CDG815044 | 4.4 | 6 | 43 | 81 |
| CDG815045 | 4.5 | 6 | 43 | 81 |
| CDG815046 | 4.6 | 6 | 43 | 81 |
| CDG815047 | 4.7 | 6 | 43 | 81 |
| CDG815048 | 4.8 | 6 | 57 | 95 |
| CDG815049 | 4.9 | 6 | 57 | 95 |
| CDG815050 | 5.0 | 6 | 57 | 95 |
| CDG815051 | 5.1 | 6 | 57 | 95 |
| CDG815052 | 5.2 | 6 | 57 | 95 |
| CDG815053 | 5.3 | 6 | 57 | 95 |
| CDG815054 | 5.4 | 6 | 57 | 95 |
| CDG815055 | 5.5 | 6 | 57 | 95 |
| CDG815056 | 5.6 | 6 | 57 | 95 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG815057 | 5.7 | 6 | 57 | 95 |
| CDG815058 | 5.8 | 6 | 57 | 95 |
| CDG815059 | 5.9 | 6 | 57 | 95 |
| CDG815060 | 6.0 | 6 | 57 | 95 |
| CDG815061 | 6.1 | 8 | 76 | 114 |
| CDG815062 | 6.2 | 8 | 76 | 114 |
| CDG815063 | 6.3 | 8 | 76 | 114 |
| CDG815064 | 6.4 | 8 | 76 | 114 |
| CDG815065 | 6.5 | 8 | 76 | 114 |
| CDG815066 | 6.6 | 8 | 76 | 114 |
| CDG815067 | 6.7 | 8 | 76 | 114 |
| CDG815068 | 6.8 | 8 | 76 | 114 |
| CDG815069 | 6.9 | 8 | 76 | 114 |
| CDG815070 | 7.0 | 8 | 76 | 114 |
| CDG815071 | 7.1 | 8 | 76 | 114 |
| CDG815072 | 7.2 | 8 | 76 | 114 |
| CDG815073 | 7.3 | 8 | 76 | 114 |
| CDG815074 | 7.4 | 8 | 76 | 114 |
| CDG815075 | 7.5 | 8 | 76 | 114 |
| CDG815076 | 7.6 | 8 | 76 | 114 |
| CDG815077 | 7.7 | 8 | 76 | 114 |
| CDG815078 | 7.8 | 8 | 76 | 114 |
| CDG815079 | 7.9 | 8 | 76 | 114 |
| CDG815080 | 8.0 | 8 | 76 | 114 |
| CDG815081 | 8.1 | 10 | 95 | 142 |
| CDG815082 | 8.2 | 10 | 95 | 142 |
| CDG815083 | 8.3 | 10 | 95 | 142 |



CDG815 Series (Extra Long) 8xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG815084 | 8.4 | 10 | 95 | 142 |
| CDG815085 | 8.5 | 10 | 95 | 142 |
| CDG815086 | 8.6 | 10 | 95 | 142 |
| CDG815087 | 8.7 | 10 | 95 | 142 |
| CDG815088 | 8.8 | 10 | 95 | 142 |
| CDG815089 | 8.9 | 10 | 95 | 142 |
| CDG815090 | 9.0 | 10 | 95 | 142 |
| CDG815091 | 9.1 | 10 | 95 | 142 |
| CDG815092 | 9.2 | 10 | 95 | 142 |
| CDG815093 | 9.3 | 10 | 95 | 142 |
| CDG815094 | 9.4 | 10 | 95 | 142 |
| CDG815095 | 9.5 | 10 | 95 | 142 |
| CDG815096 | 9.6 | 10 | 95 | 142 |
| CDG815097 | 9.7 | 10 | 95 | 142 |
| CDG815098 | 9.8 | 10 | 95 | 142 |
| CDG815099 | 9.9 | 10 | 95 | 142 |
| CDG815100 | 10.0 | 10 | 95 | 142 |
| CDG815101 | 10.1 | 12 | 114 | 162 |
| CDG815102 | 10.2 | 12 | 114 | 162 |
| CDG815103 | 10.3 | 12 | 114 | 162 |
| CDG815104 | 10.4 | 12 | 114 | 162 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG815105 | 10.5 | 12 | 114 | 162 |
| CDG815106 | 10.6 | 12 | 114 | 162 |
| CDG815107 | 10.7 | 12 | 114 | 162 |
| CDG815108 | 10.8 | 12 | 114 | 162 |
| CDG815109 | 10.9 | 12 | 114 | 162 |
| CDG815110 | 11.0 | 12 | 114 | 162 |
| CDG815111 | 11.1 | 12 | 114 | 162 |
| CDG815112 | 11.2 | 12 | 114 | 162 |
| CDG815113 | 11.3 | 12 | 114 | 162 |
| CDG815114 | 11.4 | 12 | 114 | 162 |
| CDG815115 | 11.5 | 12 | 114 | 162 |
| CDG815116 | 11.6 | 12 | 114 | 162 |
| CDG815117 | 11.7 | 12 | 114 | 162 |
| CDG815118 | 11.8 | 12 | 114 | 162 |
| CDG815119 | 11.9 | 12 | 114 | 162 |
| CDG815120 | 12.0 | 12 | 114 | 162 |
| CDG815125 | 12.5 | 14 | 133 | 178 |
| CDG815130 | 13.0 | 14 | 133 | 178 |
| CDG815135 | 13.5 | 14 | 133 | 178 |
| CDG815140 | 14.0 | 14 | 133 | 178 |

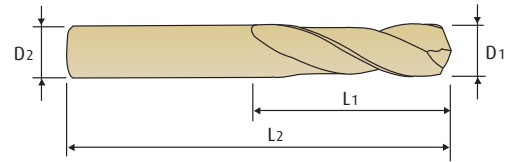
• Other shank types are available on your request.

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRC30~45 | Hardened Steels HRC45~55 HRC55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ○ | ● | ● | | | ○ | | ○ | | | |

● : Excellent
○ : Good

CDG305 Series (STUB)

3xD



D1=D2

Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

| Part Number TiAlN | Drill Diameter D1 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|--------------------|----------------------|
| CDG305030 | 3.0 | 16 | 46 |
| CDG305031 | 3.1 | 18 | 49 |
| CDG305032 | 3.2 | 18 | 49 |
| CDG305033 | 3.3 | 18 | 49 |
| CDG305034 | 3.4 | 20 | 52 |
| CDG305035 | 3.5 | 20 | 52 |
| CDG305036 | 3.6 | 20 | 52 |
| CDG305037 | 3.7 | 20 | 52 |
| CDG305038 | 3.8 | 22 | 55 |
| CDG305039 | 3.9 | 22 | 55 |
| CDG305040 | 4.0 | 22 | 55 |
| CDG305041 | 4.1 | 22 | 55 |
| CDG305042 | 4.2 | 22 | 55 |
| CDG305043 | 4.3 | 24 | 58 |
| CDG305044 | 4.4 | 24 | 58 |
| CDG305045 | 4.5 | 24 | 58 |
| CDG305046 | 4.6 | 24 | 58 |
| CDG305047 | 4.7 | 24 | 58 |
| CDG305048 | 4.8 | 26 | 62 |
| CDG305049 | 4.9 | 26 | 62 |
| CDG305050 | 5.0 | 26 | 62 |
| CDG305051 | 5.1 | 26 | 62 |
| CDG305052 | 5.2 | 26 | 62 |
| CDG305053 | 5.3 | 26 | 62 |
| CDG305054 | 5.4 | 28 | 66 |
| CDG305055 | 5.5 | 28 | 66 |
| CDG305056 | 5.6 | 28 | 66 |

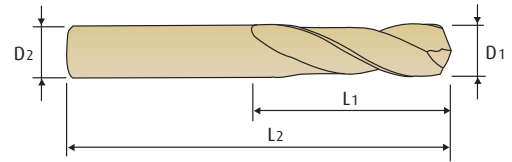
Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|--------------------|----------------------|
| CDG305057 | 5.7 | 28 | 66 |
| CDG305058 | 5.8 | 28 | 66 |
| CDG305059 | 5.9 | 28 | 66 |
| CDG305060 | 6.0 | 28 | 66 |
| CDG305061 | 6.1 | 31 | 70 |
| CDG305062 | 6.2 | 31 | 70 |
| CDG305063 | 6.3 | 31 | 70 |
| CDG305064 | 6.4 | 31 | 70 |
| CDG305065 | 6.5 | 31 | 70 |
| CDG305066 | 6.6 | 31 | 70 |
| CDG305067 | 6.7 | 31 | 70 |
| CDG305068 | 6.8 | 34 | 74 |
| CDG305069 | 6.9 | 34 | 74 |
| CDG305070 | 7.0 | 34 | 74 |
| CDG305071 | 7.1 | 34 | 74 |
| CDG305072 | 7.2 | 34 | 74 |
| CDG305073 | 7.3 | 34 | 74 |
| CDG305074 | 7.4 | 34 | 74 |
| CDG305075 | 7.5 | 34 | 74 |
| CDG305076 | 7.6 | 37 | 79 |
| CDG305077 | 7.7 | 37 | 79 |
| CDG305078 | 7.8 | 37 | 79 |
| CDG305079 | 7.9 | 37 | 79 |
| CDG305080 | 8.0 | 37 | 79 |
| CDG305081 | 8.1 | 37 | 79 |
| CDG305082 | 8.2 | 37 | 79 |
| CDG305083 | 8.3 | 37 | 79 |



CDG305 Series (STUB)

3xD



D1=D2

Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

| Part Number TiAlN | Drill Diameter D1 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|--------------------|----------------------|
| CDG305084 | 8.4 | 37 | 79 |
| CDG305085 | 8.5 | 37 | 79 |
| CDG305086 | 8.6 | 40 | 84 |
| CDG305087 | 8.7 | 40 | 84 |
| CDG305088 | 8.8 | 40 | 84 |
| CDG305089 | 8.9 | 40 | 84 |
| CDG305090 | 9.0 | 40 | 84 |
| CDG305091 | 9.1 | 40 | 84 |
| CDG305092 | 9.2 | 40 | 84 |
| CDG305093 | 9.3 | 40 | 84 |
| CDG305094 | 9.4 | 40 | 84 |
| CDG305095 | 9.5 | 40 | 84 |
| CDG305096 | 9.6 | 43 | 89 |
| CDG305097 | 9.7 | 43 | 89 |
| CDG305098 | 9.8 | 43 | 89 |
| CDG305099 | 9.9 | 43 | 89 |
| CDG305100 | 10.0 | 43 | 89 |
| CDG305102 | 10.2 | 43 | 89 |
| CDG305105 | 10.5 | 43 | 89 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|--------------------|----------------------|
| CDG305110 | 11.0 | 47 | 95 |
| CDG305115 | 11.5 | 47 | 95 |
| CDG305120 | 12.0 | 51 | 102 |
| CDG305130 | 13.0 | 51 | 102 |
| CDG305135 | 13.5 | 54 | 107 |
| CDG305140 | 14.0 | 54 | 107 |
| CDG305145 | 14.5 | 56 | 111 |
| CDG305150 | 15.0 | 56 | 111 |
| CDG305155 | 15.5 | 58 | 115 |
| CDG305160 | 16.0 | 58 | 115 |
| CDG305165 | 16.5 | 60 | 119 |
| CDG305170 | 17.0 | 60 | 119 |
| CDG305175 | 17.5 | 62 | 123 |
| CDG305180 | 18.0 | 62 | 123 |
| CDG305185 | 18.5 | 64 | 127 |
| CDG305190 | 19.0 | 64 | 127 |
| CDG305195 | 19.5 | 66 | 131 |
| CDG305200 | 20.0 | 66 | 131 |

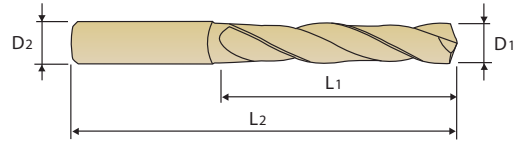
• Other shank types are available on your request.

● - Excellent
○ - Good

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRC30~45 | Hardened Steels HRC45~55 HRC55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ○ | ● | ● | | | ○ | | ○ | | | |

CDG307 Series (Short)

3xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG307030 | 3.0 | 6 | 20 | 62 |
| CDG307031 | 3.1 | 6 | 20 | 62 |
| CDG307032 | 3.2 | 6 | 20 | 62 |
| CDG307033 | 3.3 | 6 | 20 | 62 |
| CDG307034 | 3.4 | 6 | 20 | 62 |
| CDG307035 | 3.5 | 6 | 20 | 62 |
| CDG307036 | 3.6 | 6 | 20 | 62 |
| CDG307037 | 3.7 | 6 | 20 | 62 |
| CDG307038 | 3.8 | 6 | 24 | 66 |
| CDG307039 | 3.9 | 6 | 24 | 66 |
| CDG307040 | 4.0 | 6 | 24 | 66 |
| CDG307041 | 4.1 | 6 | 24 | 66 |
| CDG307042 | 4.2 | 6 | 24 | 66 |
| CDG307043 | 4.3 | 6 | 24 | 66 |
| CDG307044 | 4.4 | 6 | 24 | 66 |
| CDG307045 | 4.5 | 6 | 24 | 66 |
| CDG307046 | 4.6 | 6 | 24 | 66 |
| CDG307047 | 4.7 | 6 | 24 | 66 |
| CDG307048 | 4.8 | 6 | 28 | 66 |
| CDG307049 | 4.9 | 6 | 28 | 66 |
| CDG307050 | 5.0 | 6 | 28 | 66 |
| CDG307051 | 5.1 | 6 | 28 | 66 |
| CDG307052 | 5.2 | 6 | 28 | 66 |
| CDG307053 | 5.3 | 6 | 28 | 66 |
| CDG307054 | 5.4 | 6 | 28 | 66 |
| CDG307055 | 5.5 | 6 | 28 | 66 |
| CDG307056 | 5.6 | 6 | 28 | 66 |
| CDG307057 | 5.7 | 6 | 28 | 66 |
| CDG307058 | 5.8 | 6 | 28 | 66 |
| CDG307059 | 5.9 | 6 | 28 | 66 |
| CDG307060 | 6.0 | 6 | 28 | 66 |

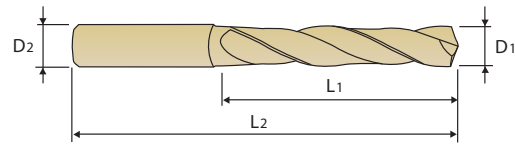
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG307061 | 6.1 | 8 | 34 | 79 |
| CDG307062 | 6.2 | 8 | 34 | 79 |
| CDG307063 | 6.3 | 8 | 34 | 79 |
| CDG307064 | 6.4 | 8 | 34 | 79 |
| CDG307065 | 6.5 | 8 | 34 | 79 |
| CDG307066 | 6.6 | 8 | 34 | 79 |
| CDG307067 | 6.7 | 8 | 34 | 79 |
| CDG307068 | 6.8 | 8 | 34 | 79 |
| CDG307069 | 6.9 | 8 | 34 | 79 |
| CDG307070 | 7.0 | 8 | 34 | 79 |
| CDG307071 | 7.1 | 8 | 41 | 79 |
| CDG307072 | 7.2 | 8 | 41 | 79 |
| CDG307073 | 7.3 | 8 | 41 | 79 |
| CDG307074 | 7.4 | 8 | 41 | 79 |
| CDG307075 | 7.5 | 8 | 41 | 79 |
| CDG307076 | 7.6 | 8 | 41 | 79 |
| CDG307077 | 7.7 | 8 | 41 | 79 |
| CDG307078 | 7.8 | 8 | 41 | 79 |
| CDG307079 | 7.9 | 8 | 41 | 79 |
| CDG307080 | 8.0 | 8 | 41 | 79 |
| CDG307081 | 8.1 | 10 | 47 | 89 |
| CDG307082 | 8.2 | 10 | 47 | 89 |
| CDG307083 | 8.3 | 10 | 47 | 89 |
| CDG307084 | 8.4 | 10 | 47 | 89 |
| CDG307085 | 8.5 | 10 | 47 | 89 |
| CDG307086 | 8.6 | 10 | 47 | 89 |
| CDG307087 | 8.7 | 10 | 47 | 89 |
| CDG307088 | 8.8 | 10 | 47 | 89 |
| CDG307089 | 8.9 | 10 | 47 | 89 |
| CDG307090 | 9.0 | 10 | 47 | 89 |
| CDG307091 | 9.1 | 10 | 47 | 89 |

Unit:mm



CDG307 Series (Short)

3xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG307092 | 9.2 | 10 | 47 | 89 |
| CDG307093 | 9.3 | 10 | 47 | 89 |
| CDG307094 | 9.4 | 10 | 47 | 89 |
| CDG307095 | 9.5 | 10 | 47 | 89 |
| CDG307096 | 9.6 | 10 | 47 | 89 |
| CDG307097 | 9.7 | 10 | 47 | 89 |
| CDG307098 | 9.8 | 10 | 47 | 89 |
| CDG307099 | 9.9 | 10 | 47 | 89 |
| CDG307100 | 10.0 | 10 | 47 | 89 |
| CDG307101 | 10.1 | 12 | 55 | 102 |
| CDG307102 | 10.2 | 12 | 55 | 102 |
| CDG307103 | 10.3 | 12 | 55 | 102 |
| CDG307104 | 10.4 | 12 | 55 | 102 |
| CDG307105 | 10.5 | 12 | 55 | 102 |
| CDG307106 | 10.6 | 12 | 55 | 102 |
| CDG307107 | 10.7 | 12 | 55 | 102 |
| CDG307108 | 10.8 | 12 | 55 | 102 |
| CDG307109 | 10.9 | 12 | 55 | 102 |
| CDG307110 | 11.0 | 12 | 55 | 102 |
| CDG307111 | 11.1 | 12 | 55 | 102 |
| CDG307112 | 11.2 | 12 | 55 | 102 |
| CDG307113 | 11.3 | 12 | 55 | 102 |
| CDG307114 | 11.4 | 12 | 55 | 102 |
| CDG307115 | 11.5 | 12 | 55 | 102 |
| CDG307116 | 11.6 | 12 | 55 | 102 |
| CDG307117 | 11.7 | 12 | 55 | 102 |
| CDG307118 | 11.8 | 12 | 55 | 102 |

Unit:mm

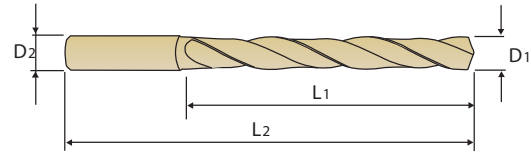
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG307119 | 11.9 | 12 | 55 | 102 |
| CDG307120 | 12.0 | 12 | 55 | 102 |
| CDG307123 | 12.3 | 14 | 60 | 107 |
| CDG307125 | 12.5 | 14 | 60 | 107 |
| CDG307128 | 12.8 | 14 | 60 | 107 |
| CDG307130 | 13.0 | 14 | 60 | 107 |
| CDG307135 | 13.5 | 14 | 60 | 107 |
| CDG307138 | 13.8 | 14 | 60 | 107 |
| CDG307140 | 14.0 | 14 | 60 | 107 |
| CDG307145 | 14.5 | 16 | 65 | 115 |
| CDG307148 | 14.8 | 16 | 65 | 115 |
| CDG307150 | 15.0 | 16 | 65 | 115 |
| CDG307155 | 15.5 | 16 | 65 | 115 |
| CDG307158 | 15.8 | 16 | 65 | 115 |
| CDG307160 | 16.0 | 16 | 65 | 115 |
| CDG307165 | 16.5 | 18 | 73 | 123 |
| CDG307168 | 16.8 | 18 | 73 | 123 |
| CDG307170 | 17.0 | 18 | 73 | 123 |
| CDG307175 | 17.5 | 18 | 73 | 123 |
| CDG307178 | 17.8 | 18 | 73 | 123 |
| CDG307180 | 18.0 | 18 | 73 | 123 |
| CDG307185 | 18.5 | 20 | 79 | 131 |
| CDG307190 | 19.0 | 20 | 79 | 131 |
| CDG307195 | 19.5 | 20 | 79 | 131 |
| CDG307198 | 19.8 | 20 | 79 | 131 |
| CDG307200 | 20.0 | 20 | 79 | 131 |

• Other shank types are available on your request.

● : Excellent
○ : Good

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRc30~45 | Hardened Steels HRc45~55 HRc55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ○ | ● | ● | | | ○ | | ○ | | | |

CDG505 Series (Long) 5xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

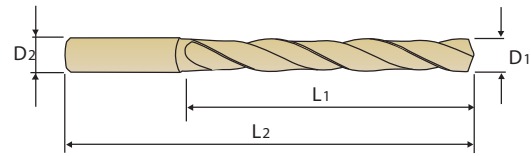
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG505010 | 1.0 | 3 | 8 | 55 |
| CDG505011 | 1.1 | 3 | 12 | 55 |
| CDG505012 | 1.2 | 3 | 12 | 55 |
| CDG505013 | 1.3 | 3 | 12 | 55 |
| CDG505014 | 1.4 | 3 | 12 | 55 |
| CDG505015 | 1.5 | 3 | 16 | 55 |
| CDG505016 | 1.6 | 3 | 16 | 55 |
| CDG505017 | 1.7 | 3 | 16 | 55 |
| CDG505018 | 1.8 | 3 | 16 | 55 |
| CDG505019 | 1.9 | 3 | 16 | 55 |
| CDG505020 | 2.0 | 4 | 21 | 57 |
| CDG505021 | 2.1 | 4 | 21 | 57 |
| CDG505022 | 2.2 | 4 | 21 | 57 |
| CDG505023 | 2.3 | 4 | 21 | 57 |
| CDG505024 | 2.4 | 4 | 21 | 57 |
| CDG505025 | 2.5 | 4 | 21 | 57 |
| CDG505026 | 2.6 | 4 | 21 | 57 |
| CDG505027 | 2.7 | 4 | 21 | 57 |
| CDG505028 | 2.8 | 4 | 21 | 57 |
| CDG505029 | 2.9 | 4 | 21 | 57 |
| CDG505030 | 3.0 | 6 | 28 | 66 |
| CDG505031 | 3.1 | 6 | 28 | 66 |
| CDG505032 | 3.2 | 6 | 28 | 66 |
| CDG505033 | 3.3 | 6 | 28 | 66 |
| CDG505034 | 3.4 | 6 | 28 | 66 |
| CDG505035 | 3.5 | 6 | 28 | 66 |
| CDG505036 | 3.6 | 6 | 28 | 66 |
| CDG505037 | 3.7 | 6 | 28 | 66 |
| CDG505038 | 3.8 | 6 | 36 | 74 |
| CDG505039 | 3.9 | 6 | 36 | 74 |
| CDG505040 | 4.0 | 6 | 36 | 74 |
| CDG505041 | 4.1 | 6 | 36 | 74 |
| CDG505042 | 4.2 | 6 | 36 | 74 |
| CDG505043 | 4.3 | 6 | 36 | 74 |
| CDG505044 | 4.4 | 6 | 36 | 74 |
| CDG505045 | 4.5 | 6 | 36 | 74 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG505046 | 4.6 | 6 | 36 | 74 |
| CDG505047 | 4.7 | 6 | 36 | 74 |
| CDG505048 | 4.8 | 6 | 44 | 82 |
| CDG505049 | 4.9 | 6 | 44 | 82 |
| CDG505050 | 5.0 | 6 | 44 | 82 |
| CDG505051 | 5.1 | 6 | 44 | 82 |
| CDG505052 | 5.2 | 6 | 44 | 82 |
| CDG505053 | 5.3 | 6 | 44 | 82 |
| CDG505054 | 5.4 | 6 | 44 | 82 |
| CDG505055 | 5.5 | 6 | 44 | 82 |
| CDG505056 | 5.6 | 6 | 44 | 82 |
| CDG505057 | 5.7 | 6 | 44 | 82 |
| CDG505058 | 5.8 | 6 | 44 | 82 |
| CDG505059 | 5.9 | 6 | 44 | 82 |
| CDG505060 | 6.0 | 6 | 44 | 82 |
| CDG505061 | 6.1 | 8 | 53 | 91 |
| CDG505062 | 6.2 | 8 | 53 | 91 |
| CDG505063 | 6.3 | 8 | 53 | 91 |
| CDG505064 | 6.4 | 8 | 53 | 91 |
| CDG505065 | 6.5 | 8 | 53 | 91 |
| CDG505066 | 6.6 | 8 | 53 | 91 |
| CDG505067 | 6.7 | 8 | 53 | 91 |
| CDG505068 | 6.8 | 8 | 53 | 91 |
| CDG505069 | 6.9 | 8 | 53 | 91 |
| CDG505070 | 7.0 | 8 | 53 | 91 |
| CDG505071 | 7.1 | 8 | 53 | 91 |
| CDG505072 | 7.2 | 8 | 53 | 91 |
| CDG505073 | 7.3 | 8 | 53 | 91 |
| CDG505074 | 7.4 | 8 | 53 | 91 |
| CDG505075 | 7.5 | 8 | 53 | 91 |
| CDG505076 | 7.6 | 8 | 53 | 91 |
| CDG505077 | 7.7 | 8 | 53 | 91 |
| CDG505078 | 7.8 | 8 | 53 | 91 |
| CDG505079 | 7.9 | 8 | 53 | 91 |
| CDG505080 | 8.0 | 8 | 53 | 91 |
| CDG505081 | 8.1 | 10 | 61 | 103 |



CDG505 Series (Long) 5xD



Application : Drilling into general steels, cast steels, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metals, non-ferrous light metals, abrasive plastics.

- Advantage :
- Self centering
 - Excellent positioning
 - Special design
 - Center drilling is not required
 - Bush is not necessary
 - Reaming is not required
 - Good chip removal
 - Powerful drilling

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG505082 | 8.2 | 10 | 61 | 103 |
| CDG505083 | 8.3 | 10 | 61 | 103 |
| CDG505084 | 8.4 | 10 | 61 | 103 |
| CDG505085 | 8.5 | 10 | 61 | 103 |
| CDG505086 | 8.6 | 10 | 61 | 103 |
| CDG505087 | 8.7 | 10 | 61 | 103 |
| CDG505088 | 8.8 | 10 | 61 | 103 |
| CDG505089 | 8.9 | 10 | 61 | 103 |
| CDG505090 | 9.0 | 10 | 61 | 103 |
| CDG505091 | 9.1 | 10 | 61 | 103 |
| CDG505092 | 9.2 | 10 | 61 | 103 |
| CDG505093 | 9.3 | 10 | 61 | 103 |
| CDG505094 | 9.4 | 10 | 61 | 103 |
| CDG505095 | 9.5 | 10 | 61 | 103 |
| CDG505096 | 9.6 | 10 | 61 | 103 |
| CDG505097 | 9.7 | 10 | 61 | 103 |
| CDG505098 | 9.8 | 10 | 61 | 103 |
| CDG505099 | 9.9 | 10 | 61 | 103 |
| CDG505100 | 10.0 | 10 | 61 | 103 |
| CDG505101 | 10.1 | 12 | 71 | 118 |
| CDG505102 | 10.2 | 12 | 71 | 118 |
| CDG505103 | 10.3 | 12 | 71 | 118 |
| CDG505104 | 10.4 | 12 | 71 | 118 |
| CDG505105 | 10.5 | 12 | 71 | 118 |
| CDG505106 | 10.6 | 12 | 71 | 118 |
| CDG505107 | 10.7 | 12 | 71 | 118 |
| CDG505108 | 10.8 | 12 | 71 | 118 |
| CDG505109 | 10.9 | 12 | 71 | 118 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDG505110 | 11.0 | 12 | 71 | 118 |
| CDG505111 | 11.1 | 12 | 71 | 118 |
| CDG505112 | 11.2 | 12 | 71 | 118 |
| CDG505113 | 11.3 | 12 | 71 | 118 |
| CDG505114 | 11.4 | 12 | 71 | 118 |
| CDG505115 | 11.5 | 12 | 71 | 118 |
| CDG505116 | 11.6 | 12 | 71 | 118 |
| CDG505117 | 11.7 | 12 | 71 | 118 |
| CDG505118 | 11.8 | 12 | 71 | 118 |
| CDG505119 | 11.9 | 12 | 71 | 118 |
| CDG505120 | 12.0 | 12 | 71 | 118 |
| CDG505125 | 12.5 | 14 | 77 | 124 |
| CDG505130 | 13.0 | 14 | 77 | 124 |
| CDG505135 | 13.5 | 14 | 77 | 124 |
| CDG505140 | 14.0 | 14 | 77 | 124 |
| CDG505145 | 14.5 | 16 | 83 | 133 |
| CDG505150 | 15.0 | 16 | 83 | 133 |
| CDG505155 | 15.5 | 16 | 83 | 133 |
| CDG505160 | 16.0 | 16 | 83 | 133 |
| CDG505165 | 16.5 | 18 | 93 | 143 |
| CDG505170 | 17.0 | 18 | 93 | 143 |
| CDG505175 | 17.5 | 18 | 93 | 143 |
| CDG505180 | 18.0 | 18 | 93 | 143 |
| CDG505185 | 18.5 | 20 | 101 | 153 |
| CDG505190 | 19.0 | 20 | 101 | 153 |
| CDG505195 | 19.5 | 20 | 101 | 153 |
| CDG505200 | 20.0 | 20 | 101 | 153 |

• Other shank types are available on your request.

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRc30~45 | Hardened Steels HRc45~55 HRc55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ○ | ● | ● | | | ○ | | ○ | | | |

● : Excellent
○ : Good

CDG315, CDG515, CDG815 Series

Unit:mm

| Work Material | Non-Alloy Steels | | Alloy Steels | | Soft Grey Cast Iron | | Hard Grey Cast Iron | |
|----------------|---|------|--|------|---|------|---|------|
| Strength | < 700 N/mm ² | | < 1000 N/mm ² | | < HB240, GG25 | | < HB300, GG40 | |
| Drilling Speed | ø1.0~ø2.9 : 50~100 m/min ø3.0~ : 130~150 m/min | | ø1.0~ø2.9 : 40~90 m/min ø3.0~ : 115~135 m/min | | ø1.0~ø2.9 : 80~160 m/min ø3.0~ : 230~250 m/min | | ø1.0~ø2.9 : 50~100 m/min ø3.0~ : 140~160 m/min | |
| Diameter | N | S | N | S | N | S | N | S |
| 1.0 | 16250 | 0.05 | 14800 | 0.05 | 26600 | 0.05 | 17300 | 0.05 |
| 2.0 | 16250 | 0.07 | 14800 | 0.07 | 26600 | 0.07 | 17300 | 0.07 |
| 3.0 | 16000 | 0.16 | 14500 | 0.16 | 26000 | 0.16 | 17000 | 0.16 |
| 4.0 | 12000 | 0.17 | 11000 | 0.17 | 20000 | 0.17 | 13000 | 0.17 |
| 5.0 | 9550 | 0.18 | 8600 | 0.18 | 16000 | 0.18 | 10000 | 0.18 |
| 6.0 | 8000 | 0.20 | 7200 | 0.20 | 13000 | 0.20 | 8500 | 0.20 |
| 7.0 | 6800 | 0.22 | 6100 | 0.22 | 11500 | 0.22 | 7300 | 0.22 |
| 8.0 | 6000 | 0.24 | 5400 | 0.24 | 9900 | 0.24 | 6400 | 0.24 |
| 9.0 | 5300 | 0.27 | 4800 | 0.27 | 8800 | 0.27 | 5700 | 0.27 |
| 10.0 | 4800 | 0.30 | 4300 | 0.30 | 8000 | 0.30 | 5100 | 0.30 |
| 12.0 | 4000 | 0.33 | 3600 | 0.33 | 6600 | 0.33 | 4250 | 0.33 |
| 14.0 | 3400 | 0.36 | 3050 | 0.36 | 5700 | 0.36 | 3650 | 0.36 |
| 16.0 | 3000 | 0.39 | 2700 | 0.39 | 5000 | 0.39 | 3200 | 0.39 |
| 18.0 | 2650 | 0.42 | 2400 | 0.42 | 4400 | 0.42 | 2850 | 0.42 |
| 20.0 | 2400 | 0.45 | 2150 | 0.45 | 4000 | 0.45 | 2550 | 0.45 |

- Recommend to reduce the feed rate as following:
 CDG315(3xD) : Feed 100%
 CDG515(5xD) : Feed 85%
 CDG815(8xD) : Feed 70%

N = R.P.M
 S = Feed per Revolution (mm/rev.)

Solid Carbide Drills without Coolant Holes, TiAlN Coated

CDG305, CDG307, CDG505 Series

Unit:mm

| Work Material | Non-Alloy Steels | | Alloy Steels | | Soft Grey Cast Iron | | Hard Grey Cast Iron | |
|----------------|---|------|--|------|---|------|---|------|
| Strength | < 700 N/mm ² | | < 1000 N/mm ² | | < HB240, GG25 | | < HB300, GG40 | |
| Drilling Speed | ø1.0~ø2.9 : 50~100 m/min ø3.0~ : 130~150 m/min | | ø1.0~ø2.9 : 40~90 m/min ø3.0~ : 115~135 m/min | | ø1.0~ø2.9 : 80~160 m/min ø3.0~ : 230~250 m/min | | ø1.0~ø2.9 : 50~100 m/min ø3.0~ : 140~160 m/min | |
| Diameter | N | S | N | S | N | S | N | S |
| 1.0 | 13000 | 0.04 | 11250 | 0.04 | 21300 | 0.04 | 14200 | 0.04 |
| 2.0 | 13000 | 0.06 | 11250 | 0.06 | 21300 | 0.06 | 14200 | 0.06 |
| 3.0 | 13000 | 0.13 | 11000 | 0.13 | 21000 | 0.13 | 14000 | 0.13 |
| 4.0 | 9500 | 0.14 | 8400 | 0.14 | 16000 | 0.14 | 10500 | 0.14 |
| 5.0 | 7600 | 0.15 | 6700 | 0.15 | 13000 | 0.15 | 8300 | 0.15 |
| 6.0 | 6400 | 0.17 | 5600 | 0.17 | 11000 | 0.17 | 6900 | 0.17 |
| 7.0 | 5500 | 0.19 | 4800 | 0.19 | 9100 | 0.19 | 5900 | 0.19 |
| 8.0 | 4800 | 0.21 | 4200 | 0.21 | 8000 | 0.21 | 5200 | 0.21 |
| 9.0 | 4200 | 0.23 | 3700 | 0.23 | 7100 | 0.23 | 4600 | 0.23 |
| 10.0 | 3800 | 0.25 | 3350 | 0.25 | 6400 | 0.25 | 4150 | 0.25 |
| 12.0 | 3200 | 0.27 | 2800 | 0.27 | 5300 | 0.27 | 3450 | 0.27 |
| 14.0 | 2750 | 0.29 | 2400 | 0.29 | 4550 | 0.29 | 3000 | 0.29 |
| 16.0 | 2400 | 0.31 | 2100 | 0.31 | 4000 | 0.31 | 2600 | 0.31 |
| 18.0 | 2100 | 0.33 | 1850 | 0.33 | 3550 | 0.33 | 2300 | 0.33 |
| 20.0 | 1900 | 0.35 | 1650 | 0.35 | 3200 | 0.35 | 2100 | 0.35 |

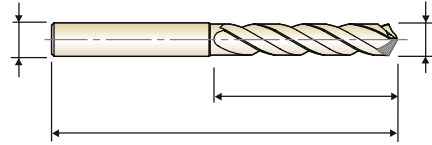
- Recommend to reduce the feed rate as following:
 CDG305(3xD) : Feed 100%
 CDG307(3xD) : Feed 100%
 CDG505(5xD) : Feed 85%

N = R.P.M
 S = Feed per Revolution (mm/rev.)



CDF315 Series (Short)

3xD



Application : Carbon steels, Alloy steels (~HRC35), Cast iron.
 Advantage : Increases productivity due to 1.5 to 2 times faster feeding speed than 2 flute drill.
 Multi-Layer coating delivers much better productivity and reliability.
 Self-Centering.

| Part Number H-Coating | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|--------------------------|----------------------|----------------------|--------------------|----------------------|
| CDF315050 | 5.0 | 6 | 28 | 66 |
| CDF315051 | 5.1 | 6 | 28 | 66 |
| CDF315052 | 5.2 | 6 | 28 | 66 |
| CDF315053 | 5.3 | 6 | 28 | 66 |
| CDF315055 | 5.5 | 6 | 28 | 66 |
| CDF315058 | 5.8 | 6 | 28 | 66 |
| CDF315060 | 6.0 | 6 | 28 | 66 |
| CDF315065 | 6.5 | 8 | 34 | 79 |
| CDF315068 | 6.8 | 8 | 34 | 79 |
| CDF315070 | 7.0 | 8 | 34 | 79 |
| CDF315080 | 8.0 | 8 | 41 | 79 |

Unit:mm

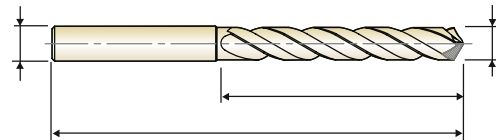
| Part Number H-Coating | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|--------------------------|----------------------|----------------------|--------------------|----------------------|
| CDF315085 | 8.5 | 10 | 47 | 89 |
| CDF315090 | 9.0 | 10 | 47 | 89 |
| CDF315100 | 10.0 | 10 | 47 | 89 |
| CDF315102 | 10.2 | 12 | 55 | 102 |
| CDF315105 | 10.5 | 12 | 55 | 102 |
| CDF315110 | 11.0 | 12 | 55 | 102 |
| CDF315120 | 12.0 | 12 | 55 | 102 |
| CDF315130 | 13.0 | 14 | 60 | 107 |
| CDF315140 | 14.0 | 14 | 60 | 107 |
| CDF315150 | 15.0 | 16 | 65 | 115 |
| CDF315160 | 16.0 | 16 | 65 | 115 |

● Other shank types are available on your request.

Solid Carbide High Feed Drills with Coolant Holes

CDF515 Series (Long)

5xD



Application : Carbon steels, Alloy steels (~HRC35), Cast iron.
 Advantage : Increases productivity due to 1.5 to 2 times faster feeding speed than 2 flute drill.
 Multi-Layer coating delivers much better productivity and reliability.
 Self-Centering.

| Part Number H-Coating | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|--------------------------|----------------------|----------------------|--------------------|----------------------|
| CDF515050 | 5.0 | 6 | 44 | 82 |
| CDF515051 | 5.1 | 6 | 44 | 82 |
| CDF515052 | 5.2 | 6 | 44 | 82 |
| CDF515053 | 5.3 | 6 | 44 | 82 |
| CDF515055 | 5.5 | 6 | 44 | 82 |
| CDF515058 | 5.8 | 6 | 44 | 82 |
| CDF515060 | 6.0 | 6 | 44 | 82 |
| CDF515065 | 6.5 | 8 | 53 | 91 |
| CDF515068 | 6.8 | 8 | 53 | 91 |
| CDF515070 | 7.0 | 8 | 53 | 91 |
| CDF515080 | 8.0 | 8 | 53 | 91 |

Unit:mm

| Part Number H-Coating | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|--------------------------|----------------------|----------------------|--------------------|----------------------|
| CDF515085 | 8.5 | 10 | 61 | 103 |
| CDF515090 | 9.0 | 10 | 61 | 103 |
| CDF515100 | 10.0 | 10 | 61 | 103 |
| CDF515102 | 10.2 | 12 | 71 | 118 |
| CDF515105 | 10.5 | 12 | 71 | 118 |
| CDF515110 | 11.0 | 12 | 71 | 118 |
| CDF515120 | 12.0 | 12 | 71 | 118 |
| CDF515130 | 13.0 | 14 | 77 | 124 |
| CDF515140 | 14.0 | 14 | 77 | 124 |
| CDF515150 | 15.0 | 16 | 83 | 133 |
| CDF515160 | 16.0 | 16 | 83 | 133 |

● Other shank types are available on your request.

| Carbon Steels ~HB225 | Alloy Steels HB225-325 | Prehardened Steels HRC30-45 | Hardened Steels HRC45-55 HRC55- | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ● | ● | ○ | | | ● | | | | ○ | |

● Excellent
○ Good

CDF315, CDF515 Series

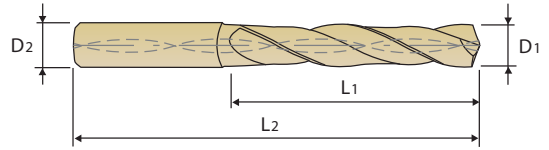
Unit:mm

| Work Material | Carbon Steels, Alloy Steels | | | Alloy Steels | | | Cast Iron | | | Ductile Cast Iron | | |
|----------------|-----------------------------|----------|------|--------------|----------|------|-----------|----------|------|-------------------|----------|------|
| Hardness | ~HRC20 | | | HRC20~35 | | | - | | | - | | |
| Drilling Speed | 100 m/min | | | 75 m/min | | | 100 m/min | | | 80 m/min | | |
| Diameter | RPM | min Feed | max | RPM | min Feed | max | RPM | min Feed | max | RPM | min Feed | max |
| 5.0 | 6370 | 0.20 | 0.25 | 4780 | 0.20 | 0.25 | 6370 | 0.23 | 0.30 | 5100 | 0.20 | 0.25 |
| 6.0 | 5310 | 0.24 | 0.30 | 3980 | 0.24 | 0.30 | 5310 | 0.27 | 0.36 | 4250 | 0.24 | 0.30 |
| 7.0 | 4550 | 0.28 | 0.35 | 3420 | 0.28 | 0.35 | 4550 | 0.32 | 0.42 | 3640 | 0.28 | 0.35 |
| 8.0 | 3980 | 0.32 | 0.40 | 2990 | 0.32 | 0.40 | 3980 | 0.36 | 0.48 | 3190 | 0.32 | 0.40 |
| 9.0 | 3540 | 0.36 | 0.45 | 2660 | 0.36 | 0.45 | 3540 | 0.41 | 0.54 | 2840 | 0.36 | 0.45 |
| 10.0 | 3190 | 0.40 | 0.50 | 2390 | 0.40 | 0.50 | 3190 | 0.45 | 0.60 | 2550 | 0.40 | 0.50 |
| 11.0 | 2900 | 0.44 | 0.55 | 2180 | 0.44 | 0.50 | 2900 | 0.50 | 0.66 | 2320 | 0.44 | 0.55 |
| 12.0 | 2660 | 0.48 | 0.60 | 2000 | 0.48 | 0.54 | 2660 | 0.54 | 0.72 | 2130 | 0.48 | 0.60 |
| 13.0 | 2450 | 0.52 | 0.65 | 1840 | 0.52 | 0.59 | 2450 | 0.59 | 0.78 | 1960 | 0.52 | 0.65 |
| 14.0 | 2280 | 0.56 | 0.70 | 1710 | 0.56 | 0.63 | 2280 | 0.63 | 0.84 | 1820 | 0.56 | 0.70 |
| 16.0 | 1990 | 0.56 | 0.72 | 1500 | 0.56 | 0.64 | 1990 | 0.64 | 0.80 | 1600 | 0.56 | 0.72 |

N = R.P.M
S = Feed per Revolution (mm/rev.)



CDS315 Series (Short)
3xD



- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes the superior centering and chip curl.
- Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.

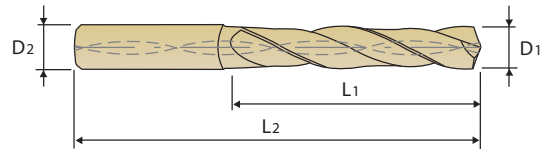
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS315030 | 3.0 | 6 | 20 | 62 |
| CDS315031 | 3.1 | 6 | 20 | 62 |
| CDS315032 | 3.2 | 6 | 20 | 62 |
| CDS315033 | 3.3 | 6 | 20 | 62 |
| CDS315034 | 3.4 | 6 | 20 | 62 |
| CDS315035 | 3.5 | 6 | 20 | 62 |
| CDS315036 | 3.6 | 6 | 20 | 62 |
| CDS315037 | 3.7 | 6 | 20 | 62 |
| CDS315038 | 3.8 | 6 | 24 | 66 |
| CDS315039 | 3.9 | 6 | 24 | 66 |
| CDS315040 | 4.0 | 6 | 24 | 66 |
| CDS315041 | 4.1 | 6 | 24 | 66 |
| CDS315042 | 4.2 | 6 | 24 | 66 |
| CDS315043 | 4.3 | 6 | 24 | 66 |
| CDS315044 | 4.4 | 6 | 24 | 66 |
| CDS315045 | 4.5 | 6 | 24 | 66 |
| CDS315046 | 4.6 | 6 | 24 | 66 |
| CDS315047 | 4.7 | 6 | 24 | 66 |
| CDS315048 | 4.8 | 6 | 28 | 66 |
| CDS315049 | 4.9 | 6 | 28 | 66 |
| CDS315050 | 5.0 | 6 | 28 | 66 |
| CDS315051 | 5.1 | 6 | 28 | 66 |
| CDS315052 | 5.2 | 6 | 28 | 66 |
| CDS315053 | 5.3 | 6 | 28 | 66 |
| CDS315054 | 5.4 | 6 | 28 | 66 |
| CDS315055 | 5.5 | 6 | 28 | 66 |
| CDS315056 | 5.6 | 6 | 28 | 66 |
| CDS315057 | 5.7 | 6 | 28 | 66 |
| CDS315058 | 5.8 | 6 | 28 | 66 |
| CDS315059 | 5.9 | 6 | 28 | 66 |
| CDS315060 | 6.0 | 6 | 28 | 66 |

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS315061 | 6.1 | 8 | 34 | 79 |
| CDS315062 | 6.2 | 8 | 34 | 79 |
| CDS315063 | 6.3 | 8 | 34 | 79 |
| CDS315064 | 6.4 | 8 | 34 | 79 |
| CDS315065 | 6.5 | 8 | 34 | 79 |
| CDS315066 | 6.6 | 8 | 34 | 79 |
| CDS315067 | 6.7 | 8 | 34 | 79 |
| CDS315068 | 6.8 | 8 | 34 | 79 |
| CDS315069 | 6.9 | 8 | 34 | 79 |
| CDS315070 | 7.0 | 8 | 34 | 79 |
| CDS315071 | 7.1 | 8 | 41 | 79 |
| CDS315072 | 7.2 | 8 | 41 | 79 |
| CDS315073 | 7.3 | 8 | 41 | 79 |
| CDS315074 | 7.4 | 8 | 41 | 79 |
| CDS315075 | 7.5 | 8 | 41 | 79 |
| CDS315076 | 7.6 | 8 | 41 | 79 |
| CDS315077 | 7.7 | 8 | 41 | 79 |
| CDS315078 | 7.8 | 8 | 41 | 79 |
| CDS315079 | 7.9 | 8 | 41 | 79 |
| CDS315080 | 8.0 | 8 | 41 | 79 |
| CDS315081 | 8.1 | 10 | 47 | 89 |
| CDS315082 | 8.2 | 10 | 47 | 89 |
| CDS315083 | 8.3 | 10 | 47 | 89 |
| CDS315084 | 8.4 | 10 | 47 | 89 |
| CDS315085 | 8.5 | 10 | 47 | 89 |
| CDS315086 | 8.6 | 10 | 47 | 89 |
| CDS315087 | 8.7 | 10 | 47 | 89 |
| CDS315088 | 8.8 | 10 | 47 | 89 |
| CDS315089 | 8.9 | 10 | 47 | 89 |
| CDS315090 | 9.0 | 10 | 47 | 89 |
| CDS315091 | 9.1 | 10 | 47 | 89 |

Unit:mm

CDS315 Series (Short)

3xD



- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes the superior centering and chip curl.
- Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS315092 | 9.2 | 10 | 47 | 89 |
| CDS315093 | 9.3 | 10 | 47 | 89 |
| CDS315094 | 9.4 | 10 | 47 | 89 |
| CDS315095 | 9.5 | 10 | 47 | 89 |
| CDS315096 | 9.6 | 10 | 47 | 89 |
| CDS315097 | 9.7 | 10 | 47 | 89 |
| CDS315098 | 9.8 | 10 | 47 | 89 |
| CDS315099 | 9.9 | 10 | 47 | 89 |
| CDS315100 | 10.0 | 10 | 47 | 89 |
| CDS315101 | 10.1 | 12 | 55 | 102 |
| CDS315102 | 10.2 | 12 | 55 | 102 |
| CDS315103 | 10.3 | 12 | 55 | 102 |
| CDS315104 | 10.4 | 12 | 55 | 102 |
| CDS315105 | 10.5 | 12 | 55 | 102 |
| CDS315106 | 10.6 | 12 | 55 | 102 |
| CDS315107 | 10.7 | 12 | 55 | 102 |
| CDS315108 | 10.8 | 12 | 55 | 102 |
| CDS315109 | 10.9 | 12 | 55 | 102 |
| CDS315110 | 11.0 | 12 | 55 | 102 |
| CDS315111 | 11.1 | 12 | 55 | 102 |
| CDS315112 | 11.2 | 12 | 55 | 102 |
| CDS315113 | 11.3 | 12 | 55 | 102 |
| CDS315114 | 11.4 | 12 | 55 | 102 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS315115 | 11.5 | 12 | 55 | 102 |
| CDS315116 | 11.6 | 12 | 55 | 102 |
| CDS315117 | 11.7 | 12 | 55 | 102 |
| CDS315118 | 11.8 | 12 | 55 | 102 |
| CDS315119 | 11.9 | 12 | 55 | 102 |
| CDS315120 | 12.0 | 12 | 55 | 102 |
| CDS315125 | 12.5 | 14 | 60 | 107 |
| CDS315130 | 13.0 | 14 | 60 | 107 |
| CDS315135 | 13.5 | 14 | 60 | 107 |
| CDS315140 | 14.0 | 14 | 60 | 107 |
| CDS315145 | 14.5 | 16 | 65 | 115 |
| CDS315150 | 15.0 | 16 | 65 | 115 |
| CDS315155 | 15.5 | 16 | 65 | 115 |
| CDS315160 | 16.0 | 16 | 65 | 115 |
| CDS315165 | 16.5 | 18 | 73 | 123 |
| CDS315170 | 17.0 | 18 | 73 | 123 |
| CDS315175 | 17.5 | 18 | 73 | 123 |
| CDS315180 | 18.0 | 18 | 73 | 123 |
| CDS315185 | 18.5 | 20 | 79 | 131 |
| CDS315190 | 19.0 | 20 | 79 | 131 |
| CDS315195 | 19.5 | 20 | 79 | 131 |
| CDS315200 | 20.0 | 20 | 79 | 131 |

- Other shank types are available on your request.

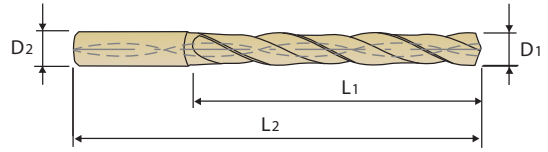
| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRC30~45 | Hardened Steels HRC45~55 HRC55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ● | ● | ○ | | | | ○ | ● | ○ | ○ | |

●: Excellent
○: Good



CDS515 Series (Long)

5xD



- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes the superior centering and chip curl.
- Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.

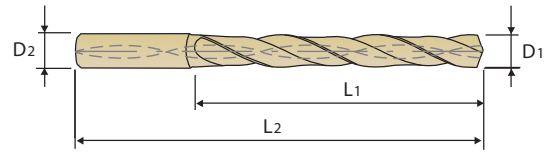
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS515010 | 1.0 | 3 | 8 | 55 |
| CDS515011 | 1.1 | 3 | 12 | 55 |
| CDS515012 | 1.2 | 3 | 12 | 55 |
| CDS515013 | 1.3 | 3 | 12 | 55 |
| CDS515014 | 1.4 | 3 | 12 | 55 |
| CDS515015 | 1.5 | 3 | 16 | 55 |
| CDS515016 | 1.6 | 3 | 16 | 55 |
| CDS515017 | 1.7 | 3 | 16 | 55 |
| CDS515018 | 1.8 | 3 | 16 | 55 |
| CDS515019 | 1.9 | 3 | 16 | 55 |
| CDS515020 | 2.0 | 4 | 21 | 57 |
| CDS515021 | 2.1 | 4 | 21 | 57 |
| CDS515022 | 2.2 | 4 | 21 | 57 |
| CDS515023 | 2.3 | 4 | 21 | 57 |
| CDS515024 | 2.4 | 4 | 21 | 57 |
| CDS515025 | 2.5 | 4 | 21 | 57 |
| CDS515026 | 2.6 | 4 | 21 | 57 |
| CDS515027 | 2.7 | 4 | 21 | 57 |
| CDS515028 | 2.8 | 4 | 21 | 57 |
| CDS515029 | 2.9 | 4 | 21 | 57 |
| CDS515030 | 3.0 | 6 | 28 | 66 |
| CDS515031 | 3.1 | 6 | 28 | 66 |
| CDS515032 | 3.2 | 6 | 28 | 66 |
| CDS515033 | 3.3 | 6 | 28 | 66 |
| CDS515034 | 3.4 | 6 | 28 | 66 |
| CDS515035 | 3.5 | 6 | 28 | 66 |
| CDS515036 | 3.6 | 6 | 28 | 66 |
| CDS515037 | 3.7 | 6 | 28 | 66 |
| CDS515038 | 3.8 | 6 | 36 | 74 |
| CDS515039 | 3.9 | 6 | 36 | 74 |
| CDS515040 | 4.0 | 6 | 36 | 74 |
| CDS515041 | 4.1 | 6 | 36 | 74 |
| CDS515042 | 4.2 | 6 | 36 | 74 |
| CDS515043 | 4.3 | 6 | 36 | 74 |
| CDS515044 | 4.4 | 6 | 36 | 74 |
| CDS515045 | 4.5 | 6 | 36 | 74 |

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS515046 | 4.6 | 6 | 36 | 74 |
| CDS515047 | 4.7 | 6 | 36 | 74 |
| CDS515048 | 4.8 | 6 | 44 | 82 |
| CDS515049 | 4.9 | 6 | 44 | 82 |
| CDS515050 | 5.0 | 6 | 44 | 82 |
| CDS515051 | 5.1 | 6 | 44 | 82 |
| CDS515052 | 5.2 | 6 | 44 | 82 |
| CDS515053 | 5.3 | 6 | 44 | 82 |
| CDS515054 | 5.4 | 6 | 44 | 82 |
| CDS515055 | 5.5 | 6 | 44 | 82 |
| CDS515056 | 5.6 | 6 | 44 | 82 |
| CDS515057 | 5.7 | 6 | 44 | 82 |
| CDS515058 | 5.8 | 6 | 44 | 82 |
| CDS515059 | 5.9 | 6 | 44 | 82 |
| CDS515060 | 6.0 | 6 | 44 | 82 |
| CDS515061 | 6.1 | 8 | 53 | 91 |
| CDS515062 | 6.2 | 8 | 53 | 91 |
| CDS515063 | 6.3 | 8 | 53 | 91 |
| CDS515064 | 6.4 | 8 | 53 | 91 |
| CDS515065 | 6.5 | 8 | 53 | 91 |
| CDS515066 | 6.6 | 8 | 53 | 91 |
| CDS515067 | 6.7 | 8 | 53 | 91 |
| CDS515068 | 6.8 | 8 | 53 | 91 |
| CDS515069 | 6.9 | 8 | 53 | 91 |
| CDS515070 | 7.0 | 8 | 53 | 91 |
| CDS515071 | 7.1 | 8 | 53 | 91 |
| CDS515072 | 7.2 | 8 | 53 | 91 |
| CDS515073 | 7.3 | 8 | 53 | 91 |
| CDS515074 | 7.4 | 8 | 53 | 91 |
| CDS515075 | 7.5 | 8 | 53 | 91 |
| CDS515076 | 7.6 | 8 | 53 | 91 |
| CDS515077 | 7.7 | 8 | 53 | 91 |
| CDS515078 | 7.8 | 8 | 53 | 91 |
| CDS515079 | 7.9 | 8 | 53 | 91 |
| CDS515080 | 8.0 | 8 | 53 | 91 |
| CDS515081 | 8.1 | 10 | 61 | 103 |

Unit:mm

CDS515 Series (Long)

5xD



- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes the superior centering and chip curl.
- Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS515082 | 8.2 | 10 | 61 | 103 |
| CDS515083 | 8.3 | 10 | 61 | 103 |
| CDS515084 | 8.4 | 10 | 61 | 103 |
| CDS515085 | 8.5 | 10 | 61 | 103 |
| CDS515086 | 8.6 | 10 | 61 | 103 |
| CDS515087 | 8.7 | 10 | 61 | 103 |
| CDS515088 | 8.8 | 10 | 61 | 103 |
| CDS515089 | 8.9 | 10 | 61 | 103 |
| CDS515090 | 9.0 | 10 | 61 | 103 |
| CDS515091 | 9.1 | 10 | 61 | 103 |
| CDS515092 | 9.2 | 10 | 61 | 103 |
| CDS515093 | 9.3 | 10 | 61 | 103 |
| CDS515094 | 9.4 | 10 | 61 | 103 |
| CDS515095 | 9.5 | 10 | 61 | 103 |
| CDS515096 | 9.6 | 10 | 61 | 103 |
| CDS515097 | 9.7 | 10 | 61 | 103 |
| CDS515098 | 9.8 | 10 | 61 | 103 |
| CDS515099 | 9.9 | 10 | 61 | 103 |
| CDS515100 | 10.0 | 10 | 61 | 103 |
| CDS515101 | 10.1 | 12 | 71 | 118 |
| CDS515102 | 10.2 | 12 | 71 | 118 |
| CDS515103 | 10.3 | 12 | 71 | 118 |
| CDS515104 | 10.4 | 12 | 71 | 118 |
| CDS515105 | 10.5 | 12 | 71 | 118 |
| CDS515106 | 10.6 | 12 | 71 | 118 |
| CDS515107 | 10.7 | 12 | 71 | 118 |
| CDS515108 | 10.8 | 12 | 71 | 118 |
| CDS515109 | 10.9 | 12 | 71 | 118 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS515110 | 11.0 | 12 | 71 | 118 |
| CDS515111 | 11.1 | 12 | 71 | 118 |
| CDS515112 | 11.2 | 12 | 71 | 118 |
| CDS515113 | 11.3 | 12 | 71 | 118 |
| CDS515114 | 11.4 | 12 | 71 | 118 |
| CDS515115 | 11.5 | 12 | 71 | 118 |
| CDS515116 | 11.6 | 12 | 71 | 118 |
| CDS515117 | 11.7 | 12 | 71 | 118 |
| CDS515118 | 11.8 | 12 | 71 | 118 |
| CDS515119 | 11.9 | 12 | 71 | 118 |
| CDS515120 | 12.0 | 12 | 71 | 118 |
| CDS515125 | 12.5 | 14 | 77 | 124 |
| CDS515130 | 13.0 | 14 | 77 | 124 |
| CDS515135 | 13.5 | 14 | 77 | 124 |
| CDS515140 | 14.0 | 14 | 77 | 124 |
| CDS515145 | 14.5 | 16 | 83 | 133 |
| CDS515150 | 15.0 | 16 | 83 | 133 |
| CDS515155 | 15.5 | 16 | 83 | 133 |
| CDS515160 | 16.0 | 16 | 83 | 133 |
| CDS515165 | 16.5 | 18 | 93 | 143 |
| CDS515170 | 17.0 | 18 | 93 | 143 |
| CDS515175 | 17.5 | 18 | 93 | 143 |
| CDS515180 | 18.0 | 18 | 93 | 143 |
| CDS515185 | 18.5 | 20 | 101 | 153 |
| CDS515190 | 19.0 | 20 | 101 | 153 |
| CDS515195 | 19.5 | 20 | 101 | 153 |
| CDS515200 | 20.0 | 20 | 101 | 153 |

- Other shank types are available on your request.

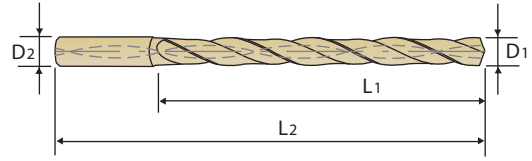
| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRc30~45 | Hardened Steels HRc45~55 HRc55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ● | ● | ○ | | | | ○ | ● | ○ | ○ | |

● : Excellent
○ : Good



CDS815 Series (Extra Long)

8xD



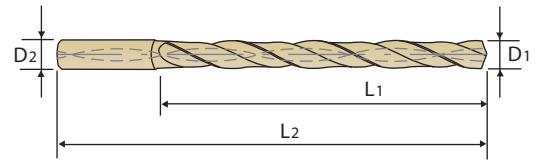
- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes the superior centering and chip curl.
- Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS815030 | 3.0 | 6 | 34 | 72 |
| CDS815031 | 3.1 | 6 | 34 | 72 |
| CDS815032 | 3.2 | 6 | 34 | 72 |
| CDS815033 | 3.3 | 6 | 34 | 72 |
| CDS815034 | 3.4 | 6 | 34 | 72 |
| CDS815035 | 3.5 | 6 | 34 | 72 |
| CDS815036 | 3.6 | 6 | 34 | 72 |
| CDS815037 | 3.7 | 6 | 34 | 72 |
| CDS815038 | 3.8 | 6 | 43 | 81 |
| CDS815039 | 3.9 | 6 | 43 | 81 |
| CDS815040 | 4.0 | 6 | 43 | 81 |
| CDS815041 | 4.1 | 6 | 43 | 81 |
| CDS815042 | 4.2 | 6 | 43 | 81 |
| CDS815043 | 4.3 | 6 | 43 | 81 |
| CDS815044 | 4.4 | 6 | 43 | 81 |
| CDS815045 | 4.5 | 6 | 43 | 81 |
| CDS815046 | 4.6 | 6 | 43 | 81 |
| CDS815047 | 4.7 | 6 | 43 | 81 |
| CDS815048 | 4.8 | 6 | 57 | 95 |
| CDS815049 | 4.9 | 6 | 57 | 95 |
| CDS815050 | 5.0 | 6 | 57 | 95 |
| CDS815051 | 5.1 | 6 | 57 | 95 |
| CDS815052 | 5.2 | 6 | 57 | 95 |
| CDS815053 | 5.3 | 6 | 57 | 95 |
| CDS815054 | 5.4 | 6 | 57 | 95 |
| CDS815055 | 5.5 | 6 | 57 | 95 |
| CDS815056 | 5.6 | 6 | 57 | 95 |

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS815057 | 5.7 | 6 | 57 | 95 |
| CDS815058 | 5.8 | 6 | 57 | 95 |
| CDS815059 | 5.9 | 6 | 57 | 95 |
| CDS815060 | 6.0 | 6 | 57 | 95 |
| CDS815061 | 6.1 | 8 | 76 | 114 |
| CDS815062 | 6.2 | 8 | 76 | 114 |
| CDS815063 | 6.3 | 8 | 76 | 114 |
| CDS815064 | 6.4 | 8 | 76 | 114 |
| CDS815065 | 6.5 | 8 | 76 | 114 |
| CDS815066 | 6.6 | 8 | 76 | 114 |
| CDS815067 | 6.7 | 8 | 76 | 114 |
| CDS815068 | 6.8 | 8 | 76 | 114 |
| CDS815069 | 6.9 | 8 | 76 | 114 |
| CDS815070 | 7.0 | 8 | 76 | 114 |
| CDS815071 | 7.1 | 8 | 76 | 114 |
| CDS815072 | 7.2 | 8 | 76 | 114 |
| CDS815073 | 7.3 | 8 | 76 | 114 |
| CDS815074 | 7.4 | 8 | 76 | 114 |
| CDS815075 | 7.5 | 8 | 76 | 114 |
| CDS815076 | 7.6 | 8 | 76 | 114 |
| CDS815077 | 7.7 | 8 | 76 | 114 |
| CDS815078 | 7.8 | 8 | 76 | 114 |
| CDS815079 | 7.9 | 8 | 76 | 114 |
| CDS815080 | 8.0 | 8 | 76 | 114 |
| CDS815081 | 8.1 | 10 | 95 | 142 |
| CDS815082 | 8.2 | 10 | 95 | 142 |
| CDS815083 | 8.3 | 10 | 95 | 142 |

Unit:mm

CDS815 Series (Extra Long)
8xD



- The tool has the special flute shape and geometry for suitable machining of stainless steels.
- Excellent chip evacuation due to better surface treatment.
- Point R-thinning makes the superior centering and chip curl.
- Applied TiAlN coating, achieves the better surface finish of material to be cut and longer tool life.

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS815084 | 8.4 | 10 | 95 | 142 |
| CDS815085 | 8.5 | 10 | 95 | 142 |
| CDS815086 | 8.6 | 10 | 95 | 142 |
| CDS815087 | 8.7 | 10 | 95 | 142 |
| CDS815088 | 8.8 | 10 | 95 | 142 |
| CDS815089 | 8.9 | 10 | 95 | 142 |
| CDS815090 | 9.0 | 10 | 95 | 142 |
| CDS815091 | 9.1 | 10 | 95 | 142 |
| CDS815092 | 9.2 | 10 | 95 | 142 |
| CDS815093 | 9.3 | 10 | 95 | 142 |
| CDS815094 | 9.4 | 10 | 95 | 142 |
| CDS815095 | 9.5 | 10 | 95 | 142 |
| CDS815096 | 9.6 | 10 | 95 | 142 |
| CDS815097 | 9.7 | 10 | 95 | 142 |
| CDS815098 | 9.8 | 10 | 95 | 142 |
| CDS815099 | 9.9 | 10 | 95 | 142 |
| CDS815100 | 10.0 | 10 | 95 | 142 |
| CDS815101 | 10.1 | 12 | 114 | 162 |
| CDS815102 | 10.2 | 12 | 114 | 162 |
| CDS815103 | 10.3 | 12 | 114 | 162 |
| CDS815104 | 10.4 | 12 | 114 | 162 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDS815105 | 10.5 | 12 | 114 | 162 |
| CDS815106 | 10.6 | 12 | 114 | 162 |
| CDS815107 | 10.7 | 12 | 114 | 162 |
| CDS815108 | 10.8 | 12 | 114 | 162 |
| CDS815109 | 10.9 | 12 | 114 | 162 |
| CDS815110 | 11.0 | 12 | 114 | 162 |
| CDS815111 | 11.1 | 12 | 114 | 162 |
| CDS815112 | 11.2 | 12 | 114 | 162 |
| CDS815113 | 11.3 | 12 | 114 | 162 |
| CDS815114 | 11.4 | 12 | 114 | 162 |
| CDS815115 | 11.5 | 12 | 114 | 162 |
| CDS815116 | 11.6 | 12 | 114 | 162 |
| CDS815117 | 11.7 | 12 | 114 | 162 |
| CDS815118 | 11.8 | 12 | 114 | 162 |
| CDS815119 | 11.9 | 12 | 114 | 162 |
| CDS815120 | 12.0 | 12 | 114 | 162 |
| CDS815125 | 12.5 | 14 | 133 | 178 |
| CDS815130 | 13.0 | 14 | 133 | 178 |
| CDS815135 | 13.5 | 14 | 133 | 178 |
| CDS815140 | 14.0 | 14 | 133 | 178 |

- Other shank types are available on your request.

●: Excellent
○: Good

| Carbon Steels ~HB225 | Alloy Steels HB225-325 | Prehardened Steels HRC30-45 | Hardened Steels HRC45-55 HRC55- | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ● | ● | ○ | | | | ○ | ● | ○ | ○ | |



CDS315, CDS515, CDS815 Series

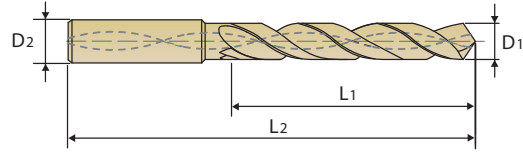
Unit:mm

| Work Material | Stainless Steels | | Stainless Steels | | Aluminum | | Aluminum | | Titanium Ti Alloy | | Carbon Steels Alloy Steels | | Non Ferrous | |
|----------------|-------------------------|------|-------------------------|------|---------------|------|---------------|------|-------------------|------|----------------------------|------|---------------|------|
| | < 800 N/mm ² | | > 800 N/mm ² | | < 10 % Si | | > 10 % Si | | | | | | | |
| Drilling Speed | 60~70 m/min | | 35~45 m/min | | 200~220 m/min | | 155~175 m/min | | 40~50 m/min | | 105~125 m/min | | 130~150 m/min | |
| Diameter | N | S | N | S | N | S | N | S | N | S | N | S | N | S |
| 1.0 | 12000 | 0.02 | 6200 | 0.02 | 48000 | 0.04 | 38000 | 0.03 | 8100 | 0.01 | 26000 | 0.02 | 38000 | 0.02 |
| 1.5 | 9000 | 0.03 | 5400 | 0.02 | 43000 | 0.05 | 32000 | 0.04 | 7500 | 0.01 | 18000 | 0.03 | 25500 | 0.03 |
| 2.5 | 7000 | 0.04 | 4200 | 0.03 | 25500 | 0.08 | 19500 | 0.06 | 4500 | 0.02 | 10800 | 0.05 | 15500 | 0.05 |
| 3.0 | 7400 | 0.04 | 4700 | 0.02 | 23000 | 0.12 | 18500 | 0.10 | 5300 | 0.03 | 13000 | 0.04 | 16000 | 0.08 |
| 4.0 | 5600 | 0.05 | 3600 | 0.03 | 17500 | 0.18 | 13900 | 0.15 | 4000 | 0.04 | 10000 | 0.05 | 11900 | 0.10 |
| 5.0 | 4400 | 0.05 | 2800 | 0.03 | 14000 | 0.20 | 11000 | 0.18 | 3200 | 0.05 | 8000 | 0.05 | 9500 | 0.12 |
| 6.0 | 3700 | 0.06 | 2400 | 0.04 | 11700 | 0.25 | 9300 | 0.25 | 2650 | 0.06 | 6600 | 0.06 | 8000 | 0.15 |
| 8.0 | 2800 | 0.08 | 1800 | 0.06 | 8800 | 0.30 | 7000 | 0.30 | 2000 | 0.07 | 5000 | 0.08 | 6000 | 0.18 |
| 10.0 | 2200 | 0.10 | 1400 | 0.08 | 7000 | 0.40 | 5600 | 0.35 | 1600 | 0.08 | 4000 | 0.10 | 4800 | 0.22 |
| 12.0 | 1900 | 0.12 | 1200 | 0.10 | 5800 | 0.50 | 4600 | 0.40 | 1300 | 0.10 | 3300 | 0.12 | 4000 | 0.26 |
| 14.0 | 1600 | 0.15 | 1000 | 0.12 | 5000 | 0.60 | 4000 | 0.50 | 1100 | 0.12 | 2800 | 0.15 | 3400 | 0.30 |
| 16.0 | 1400 | 0.20 | 900 | 0.15 | 4380 | 0.80 | 3500 | 0.60 | 1000 | 0.14 | 2500 | 0.20 | 3000 | 0.40 |
| 18.0 | 1250 | 0.22 | 800 | 0.17 | 3900 | 1.00 | 3100 | 0.70 | 900 | 0.16 | 2200 | 0.22 | 2650 | 0.45 |
| 20.0 | 1120 | 0.24 | 720 | 0.19 | 3500 | 1.20 | 2800 | 0.80 | 800 | 0.18 | 2000 | 0.24 | 2400 | 0.50 |

- Recommend to reduce the feed rate as following:
 CDS315(3xD) : Feed 100%
 CDS515(5xD) : Feed 100%
 CDS815(8xD) : Feed 85%

N = R.P.M
 S = Feed per Revolution (mm/rev.)

CDA315 Series (Short)
3xD



- Good chip treatment due to flute geometry & chip space.
- Better finish & built-up edge prevention.

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA315030 | 3.0 | 6 | 20 | 62 |
| CDA315031 | 3.1 | 6 | 20 | 62 |
| CDA315032 | 3.2 | 6 | 20 | 62 |
| CDA315033 | 3.3 | 6 | 20 | 62 |
| CDA315034 | 3.4 | 6 | 20 | 62 |
| CDA315035 | 3.5 | 6 | 20 | 62 |
| CDA315036 | 3.6 | 6 | 20 | 62 |
| CDA315037 | 3.7 | 6 | 20 | 62 |
| CDA315038 | 3.8 | 6 | 24 | 66 |
| CDA315039 | 3.9 | 6 | 24 | 66 |
| CDA315040 | 4.0 | 6 | 24 | 66 |
| CDA315041 | 4.1 | 6 | 24 | 66 |
| CDA315042 | 4.2 | 6 | 24 | 66 |
| CDA315043 | 4.3 | 6 | 24 | 66 |
| CDA315044 | 4.4 | 6 | 24 | 66 |
| CDA315045 | 4.5 | 6 | 24 | 66 |
| CDA315046 | 4.6 | 6 | 24 | 66 |
| CDA315047 | 4.7 | 6 | 24 | 66 |
| CDA315048 | 4.8 | 6 | 28 | 66 |
| CDA315049 | 4.9 | 6 | 28 | 66 |
| CDA315050 | 5.0 | 6 | 28 | 66 |
| CDA315051 | 5.1 | 6 | 28 | 66 |
| CDA315052 | 5.2 | 6 | 28 | 66 |
| CDA315053 | 5.3 | 6 | 28 | 66 |
| CDA315054 | 5.4 | 6 | 28 | 66 |
| CDA315055 | 5.5 | 6 | 28 | 66 |
| CDA315056 | 5.6 | 6 | 28 | 66 |
| CDA315057 | 5.7 | 6 | 28 | 66 |
| CDA315058 | 5.8 | 6 | 28 | 66 |
| CDA315059 | 5.9 | 6 | 28 | 66 |
| CDA315060 | 6.0 | 6 | 28 | 66 |

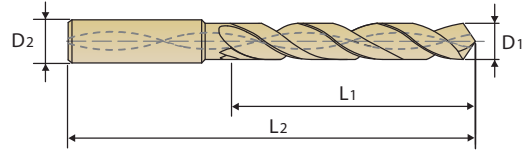
Unit:mm

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA315061 | 6.1 | 8 | 34 | 79 |
| CDA315062 | 6.2 | 8 | 34 | 79 |
| CDA315063 | 6.3 | 8 | 34 | 79 |
| CDA315064 | 6.4 | 8 | 34 | 79 |
| CDA315065 | 6.5 | 8 | 34 | 79 |
| CDA315066 | 6.6 | 8 | 34 | 79 |
| CDA315067 | 6.7 | 8 | 34 | 79 |
| CDA315068 | 6.8 | 8 | 34 | 79 |
| CDA315069 | 6.9 | 8 | 34 | 79 |
| CDA315070 | 7.0 | 8 | 34 | 79 |
| CDA315071 | 7.1 | 8 | 41 | 79 |
| CDA315072 | 7.2 | 8 | 41 | 79 |
| CDA315073 | 7.3 | 8 | 41 | 79 |
| CDA315074 | 7.4 | 8 | 41 | 79 |
| CDA315075 | 7.5 | 8 | 41 | 79 |
| CDA315076 | 7.6 | 8 | 41 | 79 |
| CDA315077 | 7.7 | 8 | 41 | 79 |
| CDA315078 | 7.8 | 8 | 41 | 79 |
| CDA315079 | 7.9 | 8 | 41 | 79 |
| CDA315080 | 8.0 | 8 | 41 | 79 |
| CDA315081 | 8.1 | 10 | 47 | 89 |
| CDA315082 | 8.2 | 10 | 47 | 89 |
| CDA315083 | 8.3 | 10 | 47 | 89 |
| CDA315084 | 8.4 | 10 | 47 | 89 |
| CDA315085 | 8.5 | 10 | 47 | 89 |
| CDA315086 | 8.6 | 10 | 47 | 89 |
| CDA315087 | 8.7 | 10 | 47 | 89 |
| CDA315088 | 8.8 | 10 | 47 | 89 |
| CDA315089 | 8.9 | 10 | 47 | 89 |
| CDA315090 | 9.0 | 10 | 47 | 89 |
| CDA315091 | 9.1 | 10 | 47 | 89 |

- Other shank types are available on your request.



CDA315 Series (Short) 3xD



- Good chip treatment due to flute geometry & chip space.
- Better finish & built-up edge prevention.

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA315092 | 9.2 | 10 | 47 | 89 |
| CDA315093 | 9.3 | 10 | 47 | 89 |
| CDA315094 | 9.4 | 10 | 47 | 89 |
| CDA315095 | 9.5 | 10 | 47 | 89 |
| CDA315096 | 9.6 | 10 | 47 | 89 |
| CDA315097 | 9.7 | 10 | 47 | 89 |
| CDA315098 | 9.8 | 10 | 47 | 89 |
| CDA315099 | 9.9 | 10 | 47 | 89 |
| CDA315100 | 10.0 | 10 | 47 | 89 |
| CDA315101 | 10.1 | 12 | 55 | 102 |
| CDA315102 | 10.2 | 12 | 55 | 102 |
| CDA315103 | 10.3 | 12 | 55 | 102 |
| CDA315104 | 10.4 | 12 | 55 | 102 |
| CDA315105 | 10.5 | 12 | 55 | 102 |
| CDA315106 | 10.6 | 12 | 55 | 102 |
| CDA315107 | 10.7 | 12 | 55 | 102 |
| CDA315108 | 10.8 | 12 | 55 | 102 |
| CDA315109 | 10.9 | 12 | 55 | 102 |
| CDA315110 | 11.0 | 12 | 55 | 102 |
| CDA315111 | 11.1 | 12 | 55 | 102 |
| CDA315112 | 11.2 | 12 | 55 | 102 |
| CDA315113 | 11.3 | 12 | 55 | 102 |
| CDA315114 | 11.4 | 12 | 55 | 102 |

Unit:mm

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA315115 | 11.5 | 12 | 55 | 102 |
| CDA315116 | 11.6 | 12 | 55 | 102 |
| CDA315117 | 11.7 | 12 | 55 | 102 |
| CDA315118 | 11.8 | 12 | 55 | 102 |
| CDA315119 | 11.9 | 12 | 55 | 102 |
| CDA315120 | 12.0 | 12 | 55 | 102 |
| CDA315125 | 12.5 | 14 | 60 | 107 |
| CDA315130 | 13.0 | 14 | 60 | 107 |
| CDA315135 | 13.5 | 14 | 60 | 107 |
| CDA315140 | 14.0 | 14 | 60 | 107 |
| CDA315145 | 14.5 | 16 | 65 | 115 |
| CDA315150 | 15.0 | 16 | 65 | 115 |
| CDA315155 | 15.5 | 16 | 65 | 115 |
| CDA315160 | 16.0 | 16 | 65 | 115 |
| CDA315165 | 16.5 | 18 | 73 | 123 |
| CDA315170 | 17.0 | 18 | 73 | 123 |
| CDA315175 | 17.5 | 18 | 73 | 123 |
| CDA315180 | 18.0 | 18 | 73 | 123 |
| CDA315185 | 18.5 | 20 | 79 | 131 |
| CDA315190 | 19.0 | 20 | 79 | 131 |
| CDA315195 | 19.5 | 20 | 79 | 131 |
| CDA315200 | 20.0 | 20 | 79 | 131 |

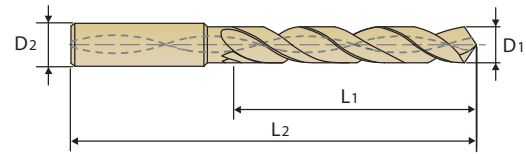
- DLC coating is available on your request.
- Other shank types are available on your request.

| Carbon Steels ~HB225 | Alloy Steels HB225-325 | Prehardened Steels HRC30-45 | Hardened Steels HRC45-55 HRC55- | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| | | | | | | ● | | | | |

● : Excellent
○ : Good

CDA515 Series (Long)

5xD



- Good chip treatment due to flute geometry & chip space.
- Better finish & built-up edge prevention.

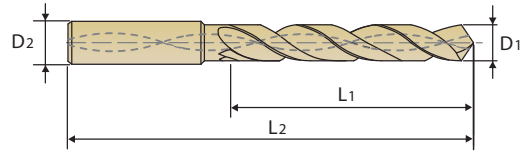
| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA515030 | 3.0 | 6 | 28 | 66 |
| CDA515031 | 3.1 | 6 | 28 | 66 |
| CDA515032 | 3.2 | 6 | 28 | 66 |
| CDA515033 | 3.3 | 6 | 28 | 66 |
| CDA515034 | 3.4 | 6 | 28 | 66 |
| CDA515035 | 3.5 | 6 | 28 | 66 |
| CDA515036 | 3.6 | 6 | 28 | 66 |
| CDA515037 | 3.7 | 6 | 28 | 66 |
| CDA515038 | 3.8 | 6 | 36 | 74 |
| CDA515039 | 3.9 | 6 | 36 | 74 |
| CDA515040 | 4.0 | 6 | 36 | 74 |
| CDA515041 | 4.1 | 6 | 36 | 74 |
| CDA515042 | 4.2 | 6 | 36 | 74 |
| CDA515043 | 4.3 | 6 | 36 | 74 |
| CDA515044 | 4.4 | 6 | 36 | 74 |
| CDA515045 | 4.5 | 6 | 36 | 74 |
| CDA515046 | 4.6 | 6 | 36 | 74 |
| CDA515047 | 4.7 | 6 | 36 | 74 |
| CDA515048 | 4.8 | 6 | 44 | 82 |
| CDA515049 | 4.9 | 6 | 44 | 82 |
| CDA515050 | 5.0 | 6 | 44 | 82 |
| CDA515051 | 5.1 | 6 | 44 | 82 |
| CDA515052 | 5.2 | 6 | 44 | 82 |
| CDA515053 | 5.3 | 6 | 44 | 82 |
| CDA515054 | 5.4 | 6 | 44 | 82 |
| CDA515055 | 5.5 | 6 | 44 | 82 |
| CDA515056 | 5.6 | 6 | 44 | 82 |
| CDA515057 | 5.7 | 6 | 44 | 82 |
| CDA515058 | 5.8 | 6 | 44 | 82 |
| CDA515059 | 5.9 | 6 | 44 | 82 |
| CDA515060 | 6.0 | 6 | 44 | 82 |

Unit:mm

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA515061 | 6.1 | 8 | 53 | 91 |
| CDA515062 | 6.2 | 8 | 53 | 91 |
| CDA515063 | 6.3 | 8 | 53 | 91 |
| CDA515064 | 6.4 | 8 | 53 | 91 |
| CDA515065 | 6.5 | 8 | 53 | 91 |
| CDA515066 | 6.6 | 8 | 53 | 91 |
| CDA515067 | 6.7 | 8 | 53 | 91 |
| CDA515068 | 6.8 | 8 | 53 | 91 |
| CDA515069 | 6.9 | 8 | 53 | 91 |
| CDA515070 | 7.0 | 8 | 53 | 91 |
| CDA515071 | 7.1 | 8 | 53 | 91 |
| CDA515072 | 7.2 | 8 | 53 | 91 |
| CDA515073 | 7.3 | 8 | 53 | 91 |
| CDA515074 | 7.4 | 8 | 53 | 91 |
| CDA515075 | 7.5 | 8 | 53 | 91 |
| CDA515076 | 7.6 | 8 | 53 | 91 |
| CDA515077 | 7.7 | 8 | 53 | 91 |
| CDA515078 | 7.8 | 8 | 53 | 91 |
| CDA515079 | 7.9 | 8 | 53 | 91 |
| CDA515080 | 8.0 | 8 | 53 | 91 |
| CDA515081 | 8.1 | 10 | 61 | 103 |
| CDA515082 | 8.2 | 10 | 61 | 103 |
| CDA515083 | 8.3 | 10 | 61 | 103 |
| CDA515084 | 8.4 | 10 | 61 | 103 |
| CDA515085 | 8.5 | 10 | 61 | 103 |
| CDA515086 | 8.6 | 10 | 61 | 103 |
| CDA515087 | 8.7 | 10 | 61 | 103 |
| CDA515088 | 8.8 | 10 | 61 | 103 |
| CDA515089 | 8.9 | 10 | 61 | 103 |
| CDA515090 | 9.0 | 10 | 61 | 103 |
| CDA515091 | 9.1 | 10 | 61 | 103 |



CDA515 Series (Long)
5xD



- Good chip treatment due to flute geometry & chip space.
- Better finish & built-up edge prevention.

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA515092 | 9.2 | 10 | 61 | 103 |
| CDA515093 | 9.3 | 10 | 61 | 103 |
| CDA515094 | 9.4 | 10 | 61 | 103 |
| CDA515095 | 9.5 | 10 | 61 | 103 |
| CDA515096 | 9.6 | 10 | 61 | 103 |
| CDA515097 | 9.7 | 10 | 61 | 103 |
| CDA515098 | 9.8 | 10 | 61 | 103 |
| CDA515099 | 9.9 | 10 | 61 | 103 |
| CDA515100 | 10.0 | 10 | 61 | 103 |
| CDA515101 | 10.1 | 12 | 71 | 118 |
| CDA515102 | 10.2 | 12 | 71 | 118 |
| CDA515103 | 10.3 | 12 | 71 | 118 |
| CDA515104 | 10.4 | 12 | 71 | 118 |
| CDA515105 | 10.5 | 12 | 71 | 118 |
| CDA515106 | 10.6 | 12 | 71 | 118 |
| CDA515107 | 10.7 | 12 | 71 | 118 |
| CDA515108 | 10.8 | 12 | 71 | 118 |
| CDA515109 | 10.9 | 12 | 71 | 118 |
| CDA515110 | 11.0 | 12 | 71 | 118 |
| CDA515111 | 11.1 | 12 | 71 | 118 |
| CDA515112 | 11.2 | 12 | 71 | 118 |
| CDA515113 | 11.3 | 12 | 71 | 118 |
| CDA515114 | 11.4 | 12 | 71 | 118 |

Unit:mm

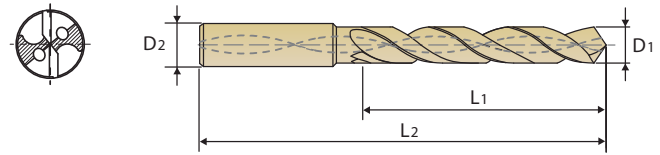
| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA515115 | 11.5 | 12 | 71 | 118 |
| CDA515116 | 11.6 | 12 | 71 | 118 |
| CDA515117 | 11.7 | 12 | 71 | 118 |
| CDA515118 | 11.8 | 12 | 71 | 118 |
| CDA515119 | 11.9 | 12 | 71 | 118 |
| CDA515120 | 12.0 | 12 | 71 | 118 |
| CDA515125 | 12.5 | 14 | 77 | 124 |
| CDA515130 | 13.0 | 14 | 77 | 124 |
| CDA515135 | 13.5 | 14 | 77 | 124 |
| CDA515140 | 14.0 | 14 | 77 | 124 |
| CDA515145 | 14.5 | 16 | 83 | 133 |
| CDA515150 | 15.0 | 16 | 83 | 133 |
| CDA515155 | 15.5 | 16 | 83 | 133 |
| CDA515160 | 16.0 | 16 | 83 | 133 |
| CDA515165 | 16.5 | 18 | 93 | 143 |
| CDA515170 | 17.0 | 18 | 93 | 143 |
| CDA515175 | 17.5 | 18 | 93 | 143 |
| CDA515180 | 18.0 | 18 | 93 | 143 |
| CDA515185 | 18.5 | 20 | 101 | 153 |
| CDA515190 | 19.0 | 20 | 101 | 153 |
| CDA515195 | 19.5 | 20 | 101 | 153 |
| CDA515200 | 20.0 | 20 | 101 | 153 |

- DLC coating is available on your request.
- Other shank types are available on your request.

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRc30~45 | Hardened Steels HRc45~55 HRc55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| | | | | | | ● | | | | |

● : Excellent
○ : Good

CDA815 Series (Extra Long) 8xD



- Good chip treatment due to flute geometry & chip space.
- Better finish & built-up edge prevention.

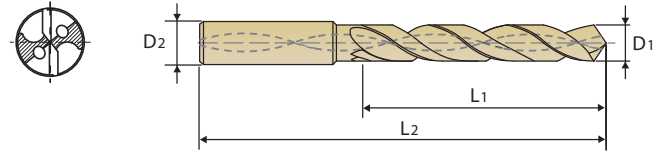
| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA815030 | 3.0 | 6 | 34 | 72 |
| CDA815031 | 3.1 | 6 | 34 | 72 |
| CDA815032 | 3.2 | 6 | 34 | 72 |
| CDA815033 | 3.3 | 6 | 34 | 72 |
| CDA815034 | 3.4 | 6 | 34 | 72 |
| CDA815035 | 3.5 | 6 | 34 | 72 |
| CDA815036 | 3.6 | 6 | 34 | 72 |
| CDA815037 | 3.7 | 6 | 34 | 72 |
| CDA815038 | 3.8 | 6 | 43 | 81 |
| CDA815039 | 3.9 | 6 | 43 | 81 |
| CDA815040 | 4.0 | 6 | 43 | 81 |
| CDA815041 | 4.1 | 6 | 43 | 81 |
| CDA815042 | 4.2 | 6 | 43 | 81 |
| CDA815043 | 4.3 | 6 | 43 | 81 |
| CDA815044 | 4.4 | 6 | 43 | 81 |
| CDA815045 | 4.5 | 6 | 43 | 81 |
| CDA815046 | 4.6 | 6 | 43 | 81 |
| CDA815047 | 4.7 | 6 | 43 | 81 |
| CDA815048 | 4.8 | 6 | 57 | 95 |
| CDA815049 | 4.9 | 6 | 57 | 95 |
| CDA815050 | 5.0 | 6 | 57 | 95 |
| CDA815051 | 5.1 | 6 | 57 | 95 |
| CDA815052 | 5.2 | 6 | 57 | 95 |
| CDA815053 | 5.3 | 6 | 57 | 95 |
| CDA815054 | 5.4 | 6 | 57 | 95 |
| CDA815055 | 5.5 | 6 | 57 | 95 |
| CDA815056 | 5.6 | 6 | 57 | 95 |
| CDA815057 | 5.7 | 6 | 57 | 95 |

Unit:mm

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA815058 | 5.8 | 6 | 57 | 95 |
| CDA815059 | 5.9 | 6 | 57 | 95 |
| CDA815060 | 6.0 | 6 | 57 | 95 |
| CDA815061 | 6.1 | 8 | 76 | 114 |
| CDA815062 | 6.2 | 8 | 76 | 114 |
| CDA815063 | 6.3 | 8 | 76 | 114 |
| CDA815064 | 6.4 | 8 | 76 | 114 |
| CDA815065 | 6.5 | 8 | 76 | 114 |
| CDA815066 | 6.6 | 8 | 76 | 114 |
| CDA815067 | 6.7 | 8 | 76 | 114 |
| CDA815068 | 6.8 | 8 | 76 | 114 |
| CDA815069 | 6.9 | 8 | 76 | 114 |
| CDA815070 | 7.0 | 8 | 76 | 114 |
| CDA815071 | 7.1 | 8 | 76 | 114 |
| CDA815072 | 7.2 | 8 | 76 | 114 |
| CDA815073 | 7.3 | 8 | 76 | 114 |
| CDA815074 | 7.4 | 8 | 76 | 114 |
| CDA815075 | 7.5 | 8 | 76 | 114 |
| CDA815076 | 7.6 | 8 | 76 | 114 |
| CDA815077 | 7.7 | 8 | 76 | 114 |
| CDA815078 | 7.8 | 8 | 76 | 114 |
| CDA815079 | 7.9 | 8 | 76 | 114 |
| CDA815080 | 8.0 | 8 | 76 | 114 |
| CDA815081 | 8.1 | 10 | 95 | 142 |
| CDA815082 | 8.2 | 10 | 95 | 142 |
| CDA815083 | 8.3 | 10 | 95 | 142 |
| CDA815084 | 8.4 | 10 | 95 | 142 |
| CDA815085 | 8.5 | 10 | 95 | 142 |



CDA815 Series (Extra Long) 8xD



- Good chip treatment due to flute geometry & chip space.
- Better finish & built-up edge prevention.

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA815086 | 8.6 | 10 | 95 | 142 |
| CDA815087 | 8.7 | 10 | 95 | 142 |
| CDA815088 | 8.8 | 10 | 95 | 142 |
| CDA815089 | 8.9 | 10 | 95 | 142 |
| CDA815090 | 9.0 | 10 | 95 | 142 |
| CDA815091 | 9.1 | 10 | 95 | 142 |
| CDA815092 | 9.2 | 10 | 95 | 142 |
| CDA815093 | 9.3 | 10 | 95 | 142 |
| CDA815094 | 9.4 | 10 | 95 | 142 |
| CDA815095 | 9.5 | 10 | 95 | 142 |
| CDA815096 | 9.6 | 10 | 95 | 142 |
| CDA815097 | 9.7 | 10 | 95 | 142 |
| CDA815098 | 9.8 | 10 | 95 | 142 |
| CDA815099 | 9.9 | 10 | 95 | 142 |
| CDA815100 | 10.0 | 10 | 95 | 142 |
| CDA815101 | 10.1 | 12 | 114 | 162 |
| CDA815102 | 10.2 | 12 | 114 | 162 |
| CDA815103 | 10.3 | 12 | 114 | 162 |
| CDA815104 | 10.4 | 12 | 114 | 162 |
| CDA815105 | 10.5 | 12 | 114 | 162 |

Unit:mm

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDA815106 | 10.6 | 12 | 114 | 162 |
| CDA815107 | 10.7 | 12 | 114 | 162 |
| CDA815108 | 10.8 | 12 | 114 | 162 |
| CDA815109 | 10.9 | 12 | 114 | 162 |
| CDA815110 | 11.0 | 12 | 114 | 162 |
| CDA815111 | 11.1 | 12 | 114 | 162 |
| CDA815112 | 11.2 | 12 | 114 | 162 |
| CDA815113 | 11.3 | 12 | 114 | 162 |
| CDA815114 | 11.4 | 12 | 114 | 162 |
| CDA815115 | 11.5 | 12 | 114 | 162 |
| CDA815116 | 11.6 | 12 | 114 | 162 |
| CDA815117 | 11.7 | 12 | 114 | 162 |
| CDA815118 | 11.8 | 12 | 114 | 162 |
| CDA815119 | 11.9 | 12 | 114 | 162 |
| CDA815120 | 12.0 | 12 | 114 | 162 |
| CDA815125 | 12.5 | 14 | 133 | 178 |
| CDA815130 | 13.0 | 14 | 133 | 178 |
| CDA815135 | 13.5 | 14 | 133 | 178 |
| CDA815140 | 14.0 | 14 | 133 | 178 |

- DLC coating is available on your request.
- Other shank types are available on your request.

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRc30~45 | Hardened Steels HRc45~55 HRc55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| | | | | | | ● | | | | |

● : Excellent
○ : Good

CDA315, CDA515, CDA815 Series

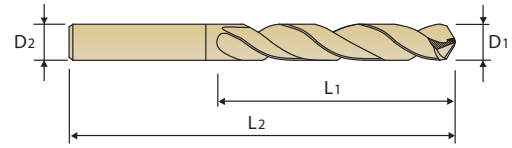
Unit:mm

| Work Material | Aluminum Alloy Casting Aluminum Die Casting | | Wrought Aluminum Alloy | |
|---------------|--|---------|------------------------|----------|
| | N | S | N | S |
| Ø3.0 ~Ø 6.0 | 8,000~15,000 | 0.2~0.5 | 8,000~15,000 | 0.15~0.3 |
| ~ Ø10.0 | 6,000~10,500 | 0.3~1.0 | 6,000~10,500 | 0.2~0.4 |
| ~ Ø14.0 | 4,500~5,800 | 0.3~1.0 | 4,500~5,800 | 0.2~0.4 |
| ~ Ø20.0 | 3,200~4,600 | 0.3~1.0 | 3,200~4,600 | 0.2~0.4 |

N = R.P.M
S = Feed per Revolution (mm/rev.)



CDC305 Series



- Special Point Type improve hole quality for Composite Material
- Minimized Burr and Delamination at Entry / Exit Hole.
- Outstanding Performance.
- Long tool life and increased Productivity by Diamond coating.

Unit:mm

| Part Number Diamond Coated | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------------------------|----------------------|----------------------|--------------------|----------------------|
| CDC305025 | 2.5 | 6 | 24 | 66 |
| CDC305030 | 3.0 | 6 | 28 | 66 |
| CDC305040 | 4.0 | 6 | 36 | 74 |
| CDC305050 | 5.0 | 6 | 44 | 82 |
| CDC305060 | 6.0 | 6 | 44 | 82 |
| CDC305080 | 8.0 | 8 | 53 | 91 |
| CDC305090 | 9.0 | 10 | 61 | 103 |
| CDC305100 | 10.0 | 10 | 61 | 103 |
| CDC305110 | 11.0 | 12 | 71 | 118 |
| DI473120 | 12.0 | 12 | 71 | 118 |

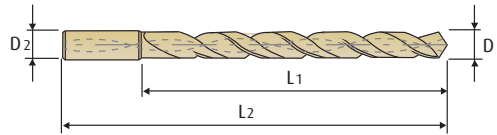
Cutting Condition

| Work Material Diameter | Speed (m/min) | CFRP RPM | Feed (mm/rev) |
|------------------------|---------------|-----------------|---------------|
| 2.5 | 100 ~ 150 | 12,700 ~ 19,000 | 0.03 ~ 0.07 |
| 3.0 | 100 ~ 150 | 10,600 ~ 15,900 | 0.03 ~ 0.07 |
| 4.0 | 100 ~ 150 | 8,000 ~ 11,900 | 0.03 ~ 0.07 |
| 5.0 | 100 ~ 150 | 6,370 ~ 9,500 | 0.03 ~ 0.07 |
| 6.0 | 100 ~ 150 | 5,300 ~ 8,000 | 0.03 ~ 0.07 |
| 8.0 | 100 ~ 150 | 4,000 ~ 6,000 | 0.03 ~ 0.07 |
| 9.0 | 100 ~ 150 | 3,500 ~ 5,300 | 0.03 ~ 0.07 |
| 10.0 | 100 ~ 150 | 3,200 ~ 4,700 | 0.03 ~ 0.07 |
| 11.0 | 100 ~ 150 | 2,900 ~ 4,300 | 0.03 ~ 0.07 |
| 12.0 | 100 ~ 150 | 2,700 ~ 3,900 | 0.03 ~ 0.07 |

●: Excellent
○: Good

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRC30~45 | Hardened Steels HRC45~55 HRC55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| | | | | | | | | | | ● |

CDM010 Series 10xD



Application : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.
 Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL (Minimum Quantity Lubrication)
 Excellent positioning - Bush is not necessary
 Special design - Good chip removal
 - Powerful drilling

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDM010030 | 3.0 | 3 | 39 | 90 |
| CDM010033 | 3.3 | 4 | 46 | 97 |
| CDM010035 | 3.5 | 4 | 46 | 97 |
| CDM010040 | 4.0 | 4 | 52 | 103 |
| CDM010042 | 4.2 | 5 | 59 | 112 |
| CDM010045 | 4.5 | 5 | 59 | 112 |
| CDM010050 | 5.0 | 5 | 65 | 118 |
| CDM010055 | 5.5 | 6 | 72 | 127 |
| CDM010060 | 6.0 | 6 | 78 | 133 |
| CDM010065 | 6.5 | 7 | 85 | 141 |
| CDM010068 | 6.8 | 7 | 91 | 147 |
| CDM010070 | 7.0 | 7 | 91 | 147 |
| CDM010075 | 7.5 | 8 | 98 | 155 |

| Part Number | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|-------------|-------------------|-------------------|-----------------|-------------------|
| CDM010080 | 8.0 | 8 | 104 | 161 |
| CDM010085 | 8.5 | 9 | 111 | 169 |
| CDM010090 | 9.0 | 9 | 117 | 175 |
| CDM010095 | 9.5 | 10 | 124 | 182 |
| CDM010100 | 10.0 | 10 | 130 | 188 |
| CDM010105 | 10.5 | 11 | 137 | 201 |
| CDM010110 | 11.0 | 11 | 143 | 207 |
| CDM010115 | 11.5 | 12 | 150 | 215 |
| CDM010120 | 12.0 | 12 | 156 | 221 |
| CDM010125 | 12.5 | 13 | 163 | 229 |
| CDM010130 | 13.0 | 13 | 169 | 235 |
| CDM010135 | 13.5 | 14 | 176 | 243 |
| CDM010140 | 14.0 | 14 | 182 | 249 |

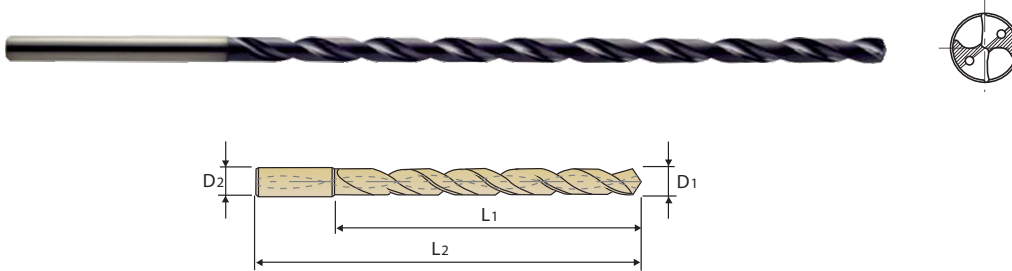
Unit:mm

| Carbon Steels ~HB225 | Alloy Steels HB225-325 | Prehardened Steels HRC30-45 | Hardened Steels HRC45-55 HRC55- | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|----------------------|------------------------|-----------------------------|-----------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ● | ● | ○ | | | ○ | | | | ○ | |

●: Excellent
○: Good



CDM015, CDM020 Series
15xD, 20xD



Application : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.
 Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL (Minimum Quantity Lubrication)
 Excellent positioning - Bush is not necessary
 Special design - Good chip removal
 - Powerful drilling

15xD

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDM015030 | 3.0 | 3 | 54 | 105 |
| CDM015035 | 3.5 | 4 | 63 | 114 |
| CDM015040 | 4.0 | 4 | 72 | 123 |
| CDM015045 | 4.5 | 5 | 81 | 134 |
| CDM015050 | 5.0 | 5 | 90 | 143 |
| CDM015055 | 5.5 | 6 | 99 | 154 |
| CDM015060 | 6.0 | 6 | 108 | 163 |
| CDM015070 | 7.0 | 7 | 126 | 182 |
| CDM015080 | 8.0 | 8 | 144 | 201 |
| CDM015090 | 9.0 | 9 | 162 | 220 |
| CDM015100 | 10.0 | 10 | 180 | 238 |
| CDM015110 | 11.0 | 11 | 198 | 262 |
| CDM015120 | 12.0 | 12 | 216 | 281 |

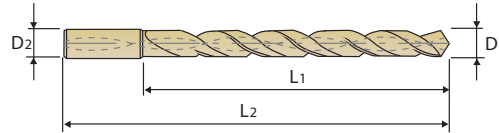
20xD

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDM020030 | 3.0 | 3 | 69 | 120 |
| CDM020035 | 3.5 | 4 | 81 | 132 |
| CDM020040 | 4.0 | 4 | 92 | 143 |
| CDM020045 | 4.5 | 5 | 104 | 157 |
| CDM020050 | 5.0 | 5 | 115 | 168 |
| CDM020055 | 5.5 | 6 | 127 | 182 |
| CDM020060 | 6.0 | 6 | 138 | 193 |
| CDM020070 | 7.0 | 7 | 161 | 217 |
| CDM020080 | 8.0 | 8 | 184 | 241 |
| CDM020090 | 9.0 | 9 | 207 | 265 |
| CDM020100 | 10.0 | 10 | 230 | 288 |
| CDM020120 | 12.0 | 12 | 276 | 341 |

| Carbon Steels ~HB225 | Alloy Steels HB225-325 | Prehardened Steels HRC30-45 | Hardened Steels HRC45-55 HRC55- | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ● | ● | ○ | | | ○ | | | | ○ | |

●: Excellent
○: Good

CDMS10, CDMS15, CDMS20 Series
10xD, 15xD, 20xD



Application : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.
 Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL (Minimum Quantity Lubrication)
 Excellent positioning - Bush is not necessary
 Special design - Good chip removal
 - Powerful drilling

10xD

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDMS10030 | 3.0 | 6 | 40 | 80 |
| CDMS10033 | 3.3 | 6 | 47 | 87 |
| CDMS10035 | 3.5 | 6 | 47 | 87 |
| CDMS10040 | 4.0 | 6 | 53 | 93 |
| CDMS10042 | 4.2 | 6 | 60 | 100 |
| CDMS10045 | 4.5 | 6 | 60 | 100 |
| CDMS10050 | 5.0 | 6 | 66 | 106 |
| CDMS10055 | 5.5 | 6 | 73 | 113 |
| CDMS10060 | 6.0 | 6 | 79 | 119 |
| CDMS10065 | 6.5 | 8 | 86 | 126 |
| CDMS10068 | 6.8 | 8 | 92 | 132 |
| CDMS10075 | 7.5 | 8 | 99 | 139 |
| CDMS10080 | 8.0 | 8 | 105 | 145 |
| CDMS10085 | 8.5 | 10 | 112 | 156 |
| CDMS10090 | 9.0 | 10 | 118 | 162 |
| CDMS10095 | 9.5 | 10 | 126 | 170 |
| CDMS10100 | 10.0 | 10 | 132 | 176 |
| CDMS10105 | 10.5 | 12 | 139 | 188 |
| CDMS10110 | 11.0 | 12 | 145 | 195 |
| CDMS10115 | 11.5 | 12 | 152 | 201 |
| CDMS10120 | 12.0 | 12 | 158 | 207 |
| CDMS10125 | 12.5 | 14 | 165 | 214 |
| CDMS10130 | 13.0 | 14 | 171 | 220 |
| CDMS10135 | 13.5 | 14 | 178 | 227 |
| CDMS10140 | 14.0 | 14 | 184 | 233 |

15xD

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDMS15030 | 3.0 | 6 | 55 | 95 |
| CDMS15035 | 3.5 | 6 | 64 | 104 |
| CDMS15040 | 4.0 | 6 | 73 | 113 |
| CDMS15045 | 4.5 | 6 | 82 | 122 |
| CDMS15050 | 5.0 | 6 | 91 | 131 |
| CDMS15055 | 5.5 | 6 | 100 | 140 |
| CDMS15060 | 6.0 | 6 | 109 | 149 |
| CDMS15070 | 7.0 | 8 | 127 | 167 |
| CDMS15080 | 8.0 | 8 | 145 | 185 |
| CDMS15090 | 9.0 | 10 | 163 | 207 |
| CDMS15100 | 10.0 | 10 | 182 | 226 |
| CDMS15110 | 11.0 | 12 | 200 | 249 |
| CDMS15120 | 12.0 | 12 | 218 | 267 |

20xD

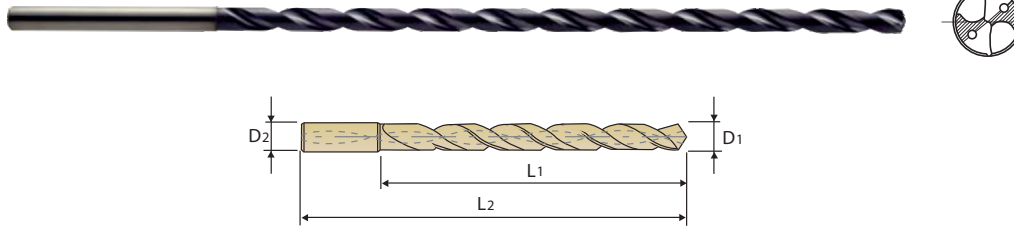
| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDMS20030 | 3.0 | 6 | 70 | 110 |
| CDMS20035 | 3.5 | 6 | 82 | 122 |
| CDMS20040 | 4.0 | 6 | 93 | 133 |
| CDMS20045 | 4.5 | 6 | 105 | 145 |
| CDMS20050 | 5.0 | 6 | 116 | 156 |
| CDMS20055 | 5.5 | 6 | 128 | 168 |
| CDMS20060 | 6.0 | 6 | 139 | 179 |
| CDMS20070 | 7.0 | 8 | 162 | 202 |
| CDMS20080 | 8.0 | 8 | 185 | 225 |
| CDMS20090 | 9.0 | 10 | 208 | 252 |
| CDMS20100 | 10.0 | 10 | 232 | 276 |
| CDMS20110 | 11.0 | 12 | 255 | 304 |
| CDMS20120 | 12.0 | 12 | 278 | 327 |

| Carbon Steels ~HB225 | Alloy Steels HB225-325 | Prehardened Steels HRc30-45 | Hardened Steels HRc45-55 HRc55- | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ● | ● | ○ | | | ○ | | | | ○ | |

● : Excellent
○ : Good



CDMS25, CDMS30 Series
25xD, 30xD



Application : Drilling steels in general, cast steels, cast iron, non-ferrous heavy metals, non-ferrous light metals.
 Advantage : Non step drilling up to 10 times of drill diameter. Available for processing MQL (Minimum Quantity Lubrication)
 Excellent positioning - Bush is not necessary
 Special design - Good chip removal
 - Powerful drilling

25xD

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDMS25030 | 3.0 | 6.0 | 85 | 125 |
| CDMS25035 | 3.5 | 6.0 | 99 | 139 |
| CDMS25040 | 4.0 | 6.0 | 113 | 153 |
| CDMS25045 | 4.5 | 6.0 | 127 | 167 |
| CDMS25050 | 5.0 | 6.0 | 141 | 181 |
| CDMS25055 | 5.5 | 6.0 | 155 | 195 |
| CDMS25060 | 6.0 | 6.0 | 169 | 209 |
| CDMS25070 | 7.0 | 8.0 | 197 | 237 |
| CDMS25080 | 8.0 | 8.0 | 225 | 265 |
| CDMS25090 | 9.0 | 10.0 | 253 | 297 |
| CDMS25100 | 10.0 | 10.0 | 282 | 326 |

30xD

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDMS30030 | 3.0 | 6.0 | 100 | 140 |
| CDMS30035 | 3.5 | 6.0 | 117 | 157 |
| CDMS30040 | 4.0 | 6.0 | 133 | 173 |
| CDMS30045 | 4.5 | 6.0 | 150 | 190 |
| CDMS30050 | 5.0 | 6.0 | 166 | 206 |
| CDMS30055 | 5.5 | 6.0 | 183 | 223 |
| CDMS30060 | 6.0 | 6.0 | 199 | 239 |
| CDMS30070 | 7.0 | 8.0 | 232 | 272 |
| CDMS30080 | 8.0 | 8.0 | 265 | 305 |

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRC30~45 | Hardened Steels HRC45~55 HRC55~ | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|--------------------------------------|--|-----------|----------|------------------|----------|-------------|------|
| ● | ● | ○ | | | ○ | | | | ○ | |

●: Excellent
○: Good

CDM010, CDM015, CDM020, CDMS10, CDMS15, CDMS20 Series

| Work Material | Carbon Steels Alloy Steels | | Cast Iron | | Ductile Cast Iron | |
|----------------|----------------------------|-------------|-----------------------------|-------------|-----------------------------|-------------|
| Strength | ~ 1060 N/mm ² | | 250 ~ 350 N/mm ² | | 400 ~ 500 N/mm ² | |
| Drilling Speed | 63~125 m/min | | 63~125 m/min | | 60~80 m/min | |
| Diameter | N | S | N | S | N | S |
| 3.0 | 7500 | 0.06 ~ 0.12 | 7500 | 0.06 ~ 0.12 | 7500 | 0.06 ~ 0.12 |
| 4.0 | 6400 | 0.08 ~ 0.16 | 6400 | 0.08 ~ 0.16 | 5600 | 0.08 ~ 0.16 |
| 5.0 | 5800 | 0.10 ~ 0.20 | 5800 | 0.10 ~ 0.20 | 4500 | 0.10 ~ 0.20 |
| 6.0 | 4800 | 0.12 ~ 0.24 | 4800 | 0.12 ~ 0.24 | 3800 | 0.12 ~ 0.24 |
| 8.0 | 3600 | 0.16 ~ 0.28 | 3600 | 0.16 ~ 0.28 | 2800 | 0.16 ~ 0.28 |
| 10.0 | 2900 | 0.20 ~ 0.35 | 2900 | 0.20 ~ 0.35 | 2300 | 0.20 ~ 0.35 |
| 12.0 | 2400 | 0.24 ~ 0.42 | 2400 | 0.24 ~ 0.42 | 1900 | 0.24 ~ 0.42 |
| 14.0 | 2050 | 0.28 ~ 0.46 | 2050 | 0.28 ~ 0.46 | 1600 | 0.28 ~ 0.46 |

N = R.P.M
S = Feed per Revolution (mm/rev.)

CDMS25, CDMS30 Series

| Work Material | Carbon Steels Alloy Steels | | Cast Iron | | Ductile Cast Iron | |
|----------------|----------------------------|-----------|-----------------------------|-----------|-----------------------------|-----------|
| Strength | ~ 1060 N/mm ² | | 250 ~ 350 N/mm ² | | 400 ~ 500 N/mm ² | |
| Drilling Speed | 50~110 m/min | | 50~110 m/min | | 40~70 m/min | |
| Diameter | N | S | N | S | N | S |
| 3.0 | 6400 | 0.06~0.12 | 6400 | 0.06~0.12 | 6400 | 0.06~0.12 |
| 4.0 | 5500 | 0.08~0.16 | 5500 | 0.08~0.16 | 4700 | 0.08~0.16 |
| 5.0 | 4900 | 0.10~0.20 | 4900 | 0.10~0.20 | 3800 | 0.10~0.20 |
| 6.0 | 4200 | 0.12~0.24 | 4200 | 0.12~0.24 | 3200 | 0.12~0.24 |
| 8.0 | 3000 | 0.16~0.28 | 3000 | 0.16~0.28 | 2400 | 0.16~0.28 |
| 10.0 | 2500 | 0.20~0.35 | 2500 | 0.20~0.35 | 1900 | 0.20~0.35 |

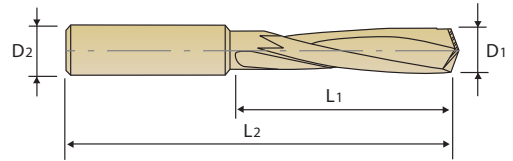
N = R.P.M
S = Feed per Revolution (mm/rev.)

1. Guide Drilling should be done as Diameter +0.1mm between 3xD and 5xD depth.
2. For main Drilling, proceed with low RPM at Guide Drilling segment. (RPM 300, Feed 400mm/min)
3. Just before the end of Guide Drilling segment, reduce feed to zero and increase the RPM according to Recommended Cutting Condition chart.
4. After then, proceed main drilling by increasing feed without step drilling.
5. When coming out from Guide Drilling start point after drilling, RPM should be reduced as 300 and feed should be 1000 mm/min.
6. When coming out from Guide Drilling segment to the outside, the feed should be decreased as 50%.



Solid Carbide Drills for High Hardened Steels HRC50~70

CDH909 Series



Application : Drilling for high hardened steels (Quenched steels, Tempered steels (Under HRC70)).

Advantage : Special design
 Minimum of cutting load through special thinning.
 Good chip removal.
 Powerful Drilling.

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDH909026 | 2.6 | 3 | 14 | 44 |
| CDH909030 | 3.0 | 3 | 16 | 46 |
| CDH909033 | 3.3 | 4 | 18 | 48 |
| CDH909034 | 3.4 | 4 | 20 | 50 |
| CDH909035 | 3.5 | 4 | 20 | 50 |
| CDH909040 | 4.0 | 4 | 22 | 52 |
| CDH909042 | 4.2 | 6 | 25 | 65 |
| CDH909043 | 4.3 | 6 | 28 | 68 |
| CDH909044 | 4.4 | 6 | 28 | 68 |
| CDH909045 | 4.5 | 6 | 28 | 68 |
| CDH909050 | 5.0 | 6 | 32 | 72 |
| CDH909051 | 5.1 | 6 | 32 | 72 |
| CDH909052 | 5.2 | 6 | 32 | 72 |
| CDH909055 | 5.5 | 6 | 35 | 75 |
| CDH909060 | 6.0 | 6 | 35 | 75 |
| CDH909065 | 6.5 | 8 | 40 | 80 |
| CDH909068 | 6.8 | 8 | 45 | 85 |
| CDH909069 | 6.9 | 8 | 45 | 85 |

Unit:mm

| Part Number TiAlN | Drill Diameter D1 | Shank Diameter D2 | Flute Length L1 | Overall Length L2 |
|----------------------|----------------------|----------------------|--------------------|----------------------|
| CDH909070 | 7.0 | 8 | 45 | 85 |
| CDH909075 | 7.5 | 8 | 45 | 85 |
| CDH909080 | 8.0 | 8 | 50 | 98 |
| CDH909085 | 8.5 | 10 | 50 | 98 |
| CDH909086 | 8.6 | 10 | 57 | 105 |
| CDH909088 | 8.8 | 10 | 57 | 105 |
| CDH909090 | 9.0 | 10 | 57 | 105 |
| CDH909095 | 9.5 | 10 | 57 | 105 |
| CDH909100 | 10.0 | 10 | 63 | 111 |
| CDH909102 | 10.2 | 12 | 63 | 111 |
| CDH909103 | 10.3 | 12 | 63 | 111 |
| CDH909105 | 10.5 | 12 | 63 | 111 |
| CDH909108 | 10.8 | 12 | 71 | 119 |
| CDH909110 | 11.0 | 12 | 71 | 119 |
| CDH909115 | 11.5 | 12 | 71 | 119 |
| CDH909120 | 12.0 | 12 | 71 | 119 |
| CDH909140 | 14.0 | 14 | 77 | 125 |

● : Excellent
○ : Good

| Carbon Steels ~HB225 | Alloy Steels HB225~325 | Prehardened Steels HRc30~45 | Hardened Steels | | Cast Iron | Aluminum | Stainless Steels | Titanium | Mild Steels | CFRP |
|-------------------------|---------------------------|--------------------------------|-----------------|--------|-----------|----------|------------------|----------|-------------|------|
| | | | HRc45~55 | HRc55~ | | | | | | |
| | | | ● | ● | | | | | | |

Solid Carbide Drills for High Hardened Steels
 HRc50 ~ HRc70, TiAlN Coated

CDH909 Series

| Work Material | Hardened Steels | | | | | |
|----------------|-----------------|--------|-------------|--------|------------|--------|
| | HRc50 ~ 55 | | HRc55 ~ 60 | | HRc60 ~ 70 | |
| Drilling Speed | 14~22 m/min | | 10~16 m/min | | 8~13 m/min | |
| Diameter | N | S | N | S | N | S |
| 3.0 | 1900 | ~ 0.04 | 1330 | ~ 0.04 | 1250 | ~ 0.04 |
| 4.0 | 1430 | ~ 0.04 | 1000 | ~ 0.04 | 950 | ~ 0.04 |
| 5.0 | 1150 | ~ 0.04 | 800 | ~ 0.04 | 750 | ~ 0.04 |
| 6.0 | 960 | ~ 0.04 | 670 | ~ 0.04 | 630 | ~ 0.04 |
| 8.0 | 720 | ~ 0.04 | 500 | ~ 0.04 | 480 | ~ 0.04 |
| 10.0 | 570 | ~ 0.04 | 400 | ~ 0.04 | 380 | ~ 0.04 |
| 12.0 | 480 | ~ 0.04 | 330 | ~ 0.04 | 320 | ~ 0.04 |
| 14.0 | 438 | ~ 0.04 | 282 | ~ 0.04 | 272 | ~ 0.04 |

N = R.P.M
 S = Feed per Revolution (mm/rev.)



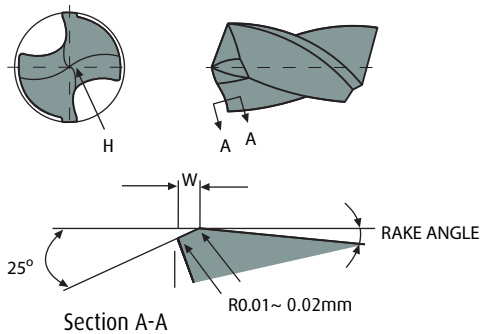
Characteristic of Solid Carbide DRILL

- Brisloy's Drill Series are suitable for high speed and accurate drilling operations by special design and high quality.
- Good performance for Steels, Cast Irons, Tool steels, Alloy steels and Stainless steels.
- Rapid chip evacuation and excellent chip breaking can be achieved by special designed cutting edges on point and chip breakers on leading edges.
- High accuracy and stability.
- Longer tool life due to TiAlN coating.
- Self-centering

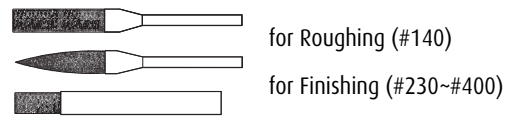


Honing Guide of Solid Carbide DRILL

Dimension of Honing



Scraper

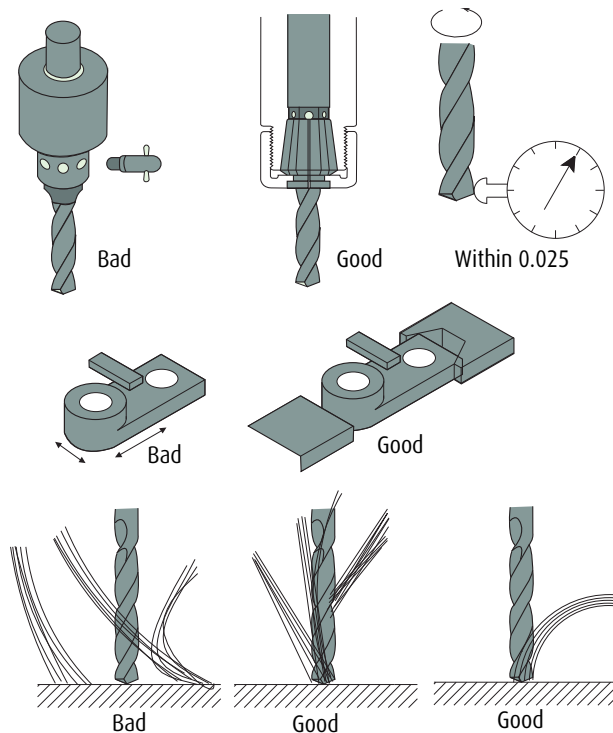


| Work Material | Alloy Steels | Mild Steels | Cast Iron |
|---------------|--------------|-------------|-----------|
| W(mm) | 0.15~0.2 | 0.1-0.15 | 0.03 |

- The dimension W of stocked products is 0.1-0.15.

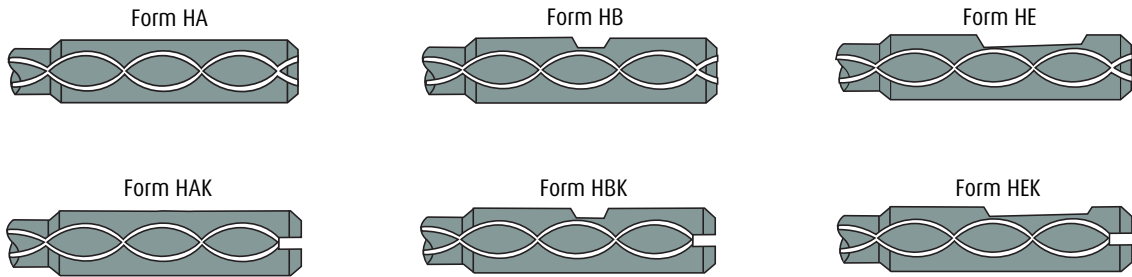


Use of Solid Carbide DRILL



- Chucking with spring collet correctly.
- Radial run out at cutting lip must not exceed 0.025 mm.
- Tighten clamp of work piece.
- Supply coolant enough to the entrance of holes.
- In using Solid Carbide Drill with Coolant holes, high pressure coolant is needed.

4 Shank Type Solid Carbide DRILL with Coolant Holes



- Shank Type of stocked products is Form HA.
- If you need other Shank Type, we can supply them.

5 ISO Tolerance

$\mu\text{m}=1/1000\text{mm}$

| Diameter (mm) | 1 - 3 from to | 3 - 6 over to | 6 - 10 over to | 10 - 18 over to | 18 - 30 over to | 30 - 50 over to |
|----------------------------------|------------------|------------------|-------------------|--------------------|--------------------|--------------------|
| Tolerance range in μm | | | | | | |
| h6 | 0 - 6 | 0 - 8 | 0 - 9 | 0 - 11 | 0 - 13 | 0 - 16 |
| h7 | 0 - 10 | 0 - 12 | 0 - 15 | 0 - 18 | 0 - 21 | 0 - 25 |
| h8 | 0 - 14 | 0 - 18 | 0 - 22 | 0 - 27 | 0 - 33 | 0 - 39 |
| m7 | + 12 + 2 | + 16 + 4 | + 21 + 6 | + 25 + 7 | + 29 + 8 | + 34 + 9 |



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