

2 Flutes UNIMAX DRILL Short Flute



Size $\phi 0.3 \sim \phi 2$

UTDSX



Material Applications (★ Highly Recommended ● Recommended ○ Suggested)

| Work Material | | | | | | | | | | | | | | | | | | |
|----------------------------|-------------------------------|---------------------------------|----------------------------------|---|--------|--------|--------|--------|-----------|-----------------|----------|--------|----------|-----------------------|-----------------|-----------------------|------------------|---------------------------------------|
| Structural Steels SS400 | Carbon Steels S45C S55C | Alloy Steels SK / SCM SUS | Prehardened Steels NAK HPM | Hardened Steels | | | | | Cast Iron | Aluminum Alloys | Graphite | Copper | Plastics | Glass Filled Plastics | Titanium Alloys | Heat Resistant Alloys | Cemented Carbide | Hard Brittle (Non-Metallic) Materials |
| | | | | ~50HRC | ~55HRC | ~60HRC | ~65HRC | ~70HRC | | | | | | | | | | |
| ● | ● | ● | ○ | Contact sales when drilling over 45HRC. | | | | | ○ | ● | | ○ | | | | ○ | ○ | |

- φ3mm Shank V Series
- UDC-PCD Series
- CBN Series
- Square
- Long Neck Square
- Radius
- Long Neck Radius
- Taper Neck Radius
- Ball / Long Shank Ball
- Long Neck Ball
- Taper Neck Ball
- Taper
- Barrel
- Spiral V Cutter
- Drill
- Technical Data

Total 35 models

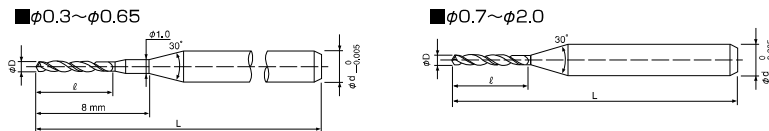
Unit (mm)

| Model Number | Diameter ϕD | Flute Length ℓ | Overall Length L | Shank Diameter ϕd | Suggested Retail Price ¥ |
|----------------|-------------------|---------------------|------------------|-------------------------|--------------------------|
| UTDSX 2030-015 | 0.3 | 1.5 | 38 | 3 | 3,470 |
| UTDSX 2035-018 | 0.35 | 1.8 | 38 | 3 | 3,860 |
| UTDSX 2040-020 | 0.4 | 2 | 38 | 3 | 3,470 |
| UTDSX 2045-023 | 0.45 | 2.3 | 38 | 3 | 3,860 |
| UTDSX 2050-025 | 0.5 | 2.5 | 38 | 3 | 3,860 |
| UTDSX 2055-028 | 0.55 | 2.8 | 38 | 3 | 3,070 |
| UTDSX 2060-030 | 0.6 | 3 | 38 | 3 | 2,670 |
| UTDSX 2065-033 | 0.65 | 3.3 | 38 | 3 | 3,070 |
| UTDSX 2070-035 | 0.7 | 3.5 | 38 | 3 | 2,670 |
| UTDSX 2075-038 | 0.75 | 3.8 | 38 | 3 | 3,070 |
| UTDSX 2080-040 | 0.8 | 4 | 38 | 3 | 2,670 |
| UTDSX 2085-043 | 0.85 | 4.3 | 38 | 3 | 3,070 |
| UTDSX 2090-045 | 0.9 | 4.5 | 38 | 3 | 2,670 |
| UTDSX 2095-048 | 0.95 | 4.8 | 38 | 3 | 3,070 |
| UTDSX 2100-050 | 1 | 5 | 38 | 3 | 2,480 |
| UTDSX 2105-053 | 1.05 | 5.3 | 38 | 3 | 2,480 |
| UTDSX 2110-055 | 1.1 | 5.5 | 38 | 3 | 2,480 |
| UTDSX 2115-058 | 1.15 | 5.8 | 38 | 3 | 2,480 |
| UTDSX 2120-060 | 1.2 | 6 | 38 | 3 | 2,480 |
| UTDSX 2125-063 | 1.25 | 6.3 | 38 | 3 | 2,480 |
| UTDSX 2130-065 | 1.3 | 6.5 | 38 | 3 | 2,480 |
| UTDSX 2135-068 | 1.35 | 6.8 | 38 | 3 | 2,480 |
| UTDSX 2140-070 | 1.4 | 7 | 38 | 3 | 2,480 |
| UTDSX 2145-073 | 1.45 | 7.3 | 38 | 3 | 2,480 |
| UTDSX 2150-075 | 1.5 | 7.5 | 38 | 3 | 2,480 |
| UTDSX 2155-078 | 1.55 | 7.8 | 38 | 3 | 2,480 |
| UTDSX 2160-080 | 1.6 | 8 | 38 | 3 | 2,480 |
| UTDSX 2165-083 | 1.65 | 8.3 | 38 | 3 | 2,670 |
| UTDSX 2170-085 | 1.7 | 8.5 | 38 | 3 | 2,670 |
| UTDSX 2175-088 | 1.75 | 8.8 | 38 | 3 | 2,670 |
| UTDSX 2180-090 | 1.8 | 9 | 38 | 3 | 2,670 |
| UTDSX 2185-093 | 1.85 | 9.3 | 38 | 3 | 2,670 |
| UTDSX 2190-095 | 1.9 | 9.5 | 38 | 3 | 2,670 |
| UTDSX 2195-098 | 1.95 | 9.8 | 38 | 3 | 2,670 |
| UTDSX 2200-100 | 2 | 10 | 38 | 3 | 2,670 |

Features

A highly efficient and economic drill for both mass and prototype production of parts.
 UT MICRO COAT offers excellent performance for cutting soft materials.
 The new drill design and X thinning offer stable drilling performance with increased tool life.
 The 130° point angle ensures reduced burring of the drilled hole.
 The high rigidity short flute is perfect for high accuracy drilling and pilot hole drilling.

Diameter Tolerance: 0/-0.01 mm
 Point Angle: 130°

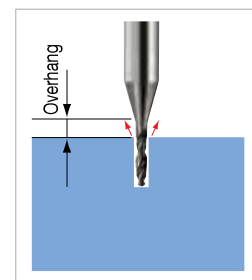


Drilling Conditions for UTDSX

| WORK MATERIAL | STRUCTURAL STEELS SS400 | | CARBON STEELS S50C | | ALLOY STEELS SCM / SUS | | ALUMINUM ALLOYS A5052 / ADC12 | |
|---------------|------------------------------------|--------------------|------------------------------------|--------------------|------------------------------------|--------------------|------------------------------------|--------------------|
| Velocity | Vc=20~35 m/min | | Vc=20~35 m/min | | Vc=15~20 m/min | | Vc=20~60 m/min | |
| Diameter (mm) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) |
| 0.3 | 20,000 | 100 | 20,000 | 100 | 16,000 | 80 | 20,000 | 200 |
| 0.4 | 17,400 | 130 | 17,400 | 180 | 12,000 | 90 | 20,000 | 440 |
| 0.5 | 15,900 | 150 | 15,900 | 250 | 9,500 | 100 | 20,000 | 680 |
| 0.6 | 14,100 | 170 | 14,100 | 300 | 8,000 | 110 | 20,000 | 920 |
| 0.7 | 12,800 | 180 | 12,800 | 340 | 6,700 | 110 | 20,000 | 1,160 |
| 0.8 | 11,900 | 200 | 11,900 | 380 | 6,300 | 120 | 20,000 | 1,400 |
| 0.9 | 10,500 | 200 | 10,500 | 390 | 6,000 | 130 | 17,500 | 1,430 |
| 1 | 9,500 | 200 | 9,500 | 400 | 6,000 | 150 | 16,000 | 1,500 |
| 1.5 | 7,300 | 220 | 7,300 | 500 | 4,500 | 180 | 13,000 | 1,960 |
| 2 | 5,600 | 230 | 5,600 | 560 | 3,000 | 160 | 9,500 | 2,030 |
| Peck Amount | 0.3D | | 0.5D | | 0.3D | | 1.0D | |

Note:

- Recommend shallower drilling than flute length (under ϕ 1:1D, ϕ 1 and over: 0.5D).
- Recommend water soluble or oil coolant.
- Recommend oil coolant for Titanium Alloys and Heat Resistant Alloys.



φ3mm Shank
V Series

UDC-PCD
Series

CBN
Series

Square

Long Neck
Square

Radius

Long Neck
Radius

Taper Neck
Radius

Ball / Long
Shank Ball

Long Neck
Ball

Taper Neck
Ball

Taper

Barrel

Spiral
V Cutter

Drill

Technical Data