

2 Flutes UT COAT



Size $\phi 0.2 \sim \phi 2.5$

C-CTE2000

Super
MG

UT
COAT

25°

30°

Flatland

Shank Dia
0/-0.005

$\phi 0.2 \sim \phi 0.4$ $\phi 0.5 \sim \phi 2.5$

Material Applications (★ Highly Recommended ● Recommended ○ Suggested)

| Work Material | | | | | | | | | | | | | | | | | |
|-------------------------------|---------------------------------|----------------------------------|-----------------|--------|--------|--------|--------|-----------|-----------------|----------|--------|----------|-----------------------|-----------------|-----------------------|------------------|---------------------------------------|
| 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 | | | | | | | | | | |
| ● | ● | ● | ● | ● | | | | | | ○ | | | | | | | |

Features

Extensive line up of tapered design from 30° to 15° of half included angle. Refer to page 568 for 4 flute C-CTE.

- 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 108 models

Unit (mm)

| Model Number | Tip Diameter | Half Included Angle | Length of Cut | Dia. at Large End | Overall Length | Shank Diameter | Suggested Retail Price ¥ |
|---------------|--------------|---------------------|---------------|-------------------|----------------|----------------|--------------------------|
| C-CTE 2002-1 | 0.2 | 30° | 0.8 | 0.21 | 38 | 3 | 15,500 |
| C-CTE 2002-2 | | 1° | | 0.23 | 38 | 3 | 15,500 |
| C-CTE 2002-3 | | 1°30' | | 0.24 | 38 | 3 | 15,500 |
| C-CTE 2002-4 | | 2° | | 0.26 | 38 | 3 | 15,500 |
| C-CTE 2002-6 | | 3° | | 0.28 | 38 | 3 | 15,500 |
| C-CTE 2002-8 | | 4° | | 0.31 | 38 | 3 | 16,500 |
| C-CTE 2002-10 | | 5° | | 0.34 | 38 | 3 | 18,500 |
| C-CTE 2002-14 | | 7° | | 0.40 | 38 | 3 | 20,000 |
| C-CTE 2002-20 | | 10° | | 0.48 | 38 | 3 | 22,000 |
| C-CTE 2003-1 | | 0.3 | | 30° | 1.2 | 0.32 | 38 |
| C-CTE 2003-2 | 1° | | 0.34 | 38 | | 3 | 13,000 |
| C-CTE 2003-3 | 1°30' | | 0.36 | 38 | | 3 | 13,000 |
| C-CTE 2003-4 | 2° | | 0.38 | 38 | | 3 | 13,000 |
| C-CTE 2003-6 | 3° | | 0.43 | 38 | | 3 | 13,000 |
| C-CTE 2003-8 | 4° | | 0.47 | 38 | | 3 | 14,000 |
| C-CTE 2003-10 | 5° | | 0.51 | 38 | | 3 | 15,000 |
| C-CTE 2003-14 | 7° | | 0.59 | 38 | | 3 | 16,500 |
| C-CTE 2003-20 | 10° | | 0.72 | 38 | | 3 | 18,500 |

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Unit (mm)

| Model Number | Tip Diameter | Half Included Angle | Length of Cut | Dia. at Large End | Overall Length | Shank Diameter | Suggested Retail Price ¥ |
|---------------|--------------|---------------------|---------------|-------------------|----------------|----------------|--------------------------|
| C-CTE 2004-1 | 0.4 | 30' | 1.6 | 0.43 | 38 | 3 | 13,000 |
| C-CTE 2004-2 | | 1° | | 0.46 | 38 | 3 | 13,000 |
| C-CTE 2004-3 | | 1°30' | | 0.48 | 38 | 3 | 13,000 |
| C-CTE 2004-4 | | 2° | | 0.51 | 38 | 3 | 13,000 |
| C-CTE 2004-6 | | 3° | | 0.57 | 38 | 3 | 13,000 |
| C-CTE 2004-8 | | 4° | | 0.62 | 38 | 3 | 14,000 |
| C-CTE 2004-10 | | 5° | | 0.68 | 38 | 3 | 15,000 |
| C-CTE 2004-14 | | 7° | | 0.79 | 38 | 3 | 16,500 |
| C-CTE 2004-20 | | 10° | | 0.96 | 38 | 3 | 18,500 |
| C-CTE 2005-1 | | 0.5 | | 30' | 2 | 0.53 | 38 |
| C-CTE 2005-2 | 1° | | 0.57 | 38 | | 3 | 12,960 |
| C-CTE 2005-3 | 1°30' | | 0.60 | 38 | | 3 | 12,960 |
| C-CTE 2005-4 | 2° | | 0.64 | 38 | | 3 | 12,960 |
| C-CTE 2005-6 | 3° | | 0.71 | 38 | | 3 | 12,960 |
| C-CTE 2005-8 | 4° | | 0.78 | 38 | | 3 | 14,040 |
| C-CTE 2005-10 | 5° | | 0.85 | 38 | | 3 | 15,120 |
| C-CTE 2005-14 | 7° | | 0.99 | 38 | | 3 | 17,280 |
| C-CTE 2005-20 | 10° | | 1.21 | 38 | | 3 | 18,360 |
| C-CTE 2005-24 | 12° | | 1.35 | 38 | | 3 | 18,960 |
| C-CTE 2005-30 | 15° | 1.57 | 38 | 3 | 19,680 | | |
| C-CTE 2006-1 | 0.6 | 30' | 2 | 0.63 | 38 | 3 | 12,120 |
| C-CTE 2006-2 | | 1° | | 0.67 | 38 | 3 | 12,120 |
| C-CTE 2006-3 | | 1°30' | | 0.70 | 38 | 3 | 12,120 |
| C-CTE 2006-4 | | 2° | | 0.74 | 38 | 3 | 12,120 |
| C-CTE 2006-5 | | 2°30' | | 0.77 | 38 | 3 | 12,120 |
| C-CTE 2006-6 | | 3° | | 0.81 | 38 | 3 | 12,120 |
| C-CTE 2006-10 | | 5° | | 0.95 | 38 | 3 | 14,280 |
| C-CTE 2006-14 | | 7° | | 1.09 | 38 | 3 | 16,440 |
| C-CTE 2006-20 | | 10° | | 1.31 | 38 | 3 | 17,520 |
| C-CTE 2006-24 | | 12° | | 1.45 | 38 | 3 | 18,000 |
| C-CTE 2006-30 | 15° | 1.67 | 38 | 3 | 18,600 | | |
| C-CTE 2008-1 | 0.8 | 30' | 3 | 0.85 | 38 | 3 | 12,120 |
| C-CTE 2008-2 | | 1° | | 0.90 | 38 | 3 | 12,120 |
| C-CTE 2008-3 | | 1°30' | | 0.96 | 38 | 3 | 12,120 |
| C-CTE 2008-4 | | 2° | | 1.01 | 38 | 3 | 12,120 |
| C-CTE 2008-5 | | 2°30' | | 1.06 | 38 | 3 | 12,120 |
| C-CTE 2008-6 | | 3° | | 1.11 | 38 | 3 | 12,120 |
| C-CTE 2008-10 | | 5° | | 1.32 | 38 | 3 | 14,280 |
| C-CTE 2008-14 | | 7° | | 1.54 | 38 | 3 | 16,440 |
| C-CTE 2008-20 | | 10° | | 1.86 | 38 | 3 | 17,520 |
| C-CTE 2008-24 | | 12° | | 2.08 | 38 | 3 | 18,000 |
| C-CTE 2008-30 | 15° | 2.41 | 38 | 3 | 18,600 | | |
| C-CTE 2010-1 | 1 | 30' | 4 | 1.07 | 45 | 4 | 9,480 |
| C-CTE 2010-2 | | 1° | | 1.14 | 45 | 4 | 9,480 |
| C-CTE 2010-3 | | 1°30' | | 1.21 | 45 | 4 | 9,480 |

Ø3mm Shank
V SeriesUDC-PCD
SeriesCBN
Series

Square

Long Neck
Square

Radius

Long Neck
RadiusTaper Neck
RadiusBall / Long
Shank BallLong Neck
BallTaper Neck
Ball

Taper

Barrel

Spiral
V Cutter

Drill

Technical Data

Next Page ➡

2 Flutes UTCOAT

Unit (mm)

| Model Number | Tip Diameter | Half Included Angle | Length of Cut | Dia. at Large End | Overall Length | Shank Diameter | Suggested Retail Price ¥ | | |
|---------------|--------------|---------------------|---------------|-------------------|----------------|----------------|--------------------------|---|--------|
| C-CTE 2010-4 | 1 | 2° | 4 | 1.28 | 45 | 4 | 9,480 | | |
| C-CTE 2010-5 | | 2°30' | | 1.35 | 45 | 4 | 9,480 | | |
| C-CTE 2010-6 | | 3° | | 1.42 | 45 | 4 | 9,720 | | |
| C-CTE 2010-8 | | 4° | | 1.56 | 45 | 4 | 11,760 | | |
| C-CTE 2010-10 | | 5° | | 1.70 | 45 | 4 | 11,760 | | |
| C-CTE 2010-14 | | 7° | | 1.98 | 45 | 4 | 15,720 | | |
| C-CTE 2010-20 | | 10° | | 2.41 | 45 | 4 | 16,800 | | |
| C-CTE 2010-24 | | 12° | | 2.70 | 45 | 4 | 18,000 | | |
| C-CTE 2010-30 | | 15° | | 3.14 | 50 | 6 | 18,720 | | |
| C-CTE 2015-1 | | 1.5 | | 30' | 5 | 1.59 | 45 | 4 | 9,480 |
| C-CTE 2015-2 | 1° | | 1.67 | 45 | | 4 | 9,480 | | |
| C-CTE 2015-3 | 1°30' | | 1.76 | 45 | | 4 | 9,480 | | |
| C-CTE 2015-4 | 2° | | 1.85 | 45 | | 4 | 9,480 | | |
| C-CTE 2015-5 | 2°30' | | 1.94 | 45 | | 4 | 9,480 | | |
| C-CTE 2015-6 | 3° | | 2.02 | 45 | | 4 | 9,720 | | |
| C-CTE 2015-8 | 4° | | 2.20 | 45 | | 4 | 11,760 | | |
| C-CTE 2015-10 | 5° | | 2.37 | 45 | | 4 | 11,760 | | |
| C-CTE 2015-14 | 7° | | 2.73 | 45 | | 4 | 15,720 | | |
| C-CTE 2015-20 | 10° | | 3.26 | 45 | | 4 | 16,800 | | |
| C-CTE 2015-24 | 12° | | 3.63 | 45 | | 4 | 18,000 | | |
| C-CTE 2015-30 | 15° | | 4.18 | 50 | | 6 | 18,720 | | |
| C-CTE 2020-1 | 2 | | 30' | 6 | | 2.10 | 45 | 4 | 9,480 |
| C-CTE 2020-2 | | | 1° | | | 2.21 | 45 | 4 | 9,480 |
| C-CTE 2020-3 | | | 1°30' | | | 2.31 | 45 | 4 | 9,480 |
| C-CTE 2020-4 | | 2° | 2.42 | | 45 | 4 | 9,480 | | |
| C-CTE 2020-5 | | 2°30' | 2.52 | | 45 | 4 | 9,480 | | |
| C-CTE 2020-6 | | 3° | 2.63 | | 45 | 4 | 9,720 | | |
| C-CTE 2020-8 | | 4° | 2.84 | | 45 | 4 | 10,080 | | |
| C-CTE 2020-10 | | 5° | 3.05 | | 45 | 4 | 11,200 | | |
| C-CTE 2020-14 | | 7° | 3.47 | | 45 | 4 | 15,720 | | |
| C-CTE 2020-20 | | 10° | 4.12 | | 50 | 6 | 18,720 | | |
| C-CTE 2020-24 | | 12° | 4.55 | | 50 | 6 | 19,680 | | |
| C-CTE 2020-30 | | 15° | 5.22 | | 50 | 6 | 20,640 | | |
| C-CTE 2025-1 | | 2.5 | 30' | | 8 | 2.64 | 45 | 4 | 10,800 |
| C-CTE 2025-2 | | | 1° | | | 2.78 | 45 | 4 | 10,800 |
| C-CTE 2025-3 | | | 1°30' | | | 2.92 | 45 | 4 | 10,800 |
| C-CTE 2025-4 | 2° | | 3.06 | 45 | | 4 | 10,800 | | |
| C-CTE 2025-5 | 2°30' | | 3.20 | 45 | | 4 | 10,800 | | |
| C-CTE 2025-6 | 3° | | 3.34 | 45 | | 4 | 10,800 | | |
| C-CTE 2025-8 | 4° | | 3.62 | 45 | | 4 | 11,100 | | |
| C-CTE 2025-10 | 5° | | 3.90 | 45 | | 4 | 11,400 | | |
| C-CTE 2025-14 | 7° | | 4.45 | 45 | | 6 | 13,340 | | |
| C-CTE 2025-20 | 10° | | 5.32 | 50 | | 6 | 24,150 | | |
| C-CTE 2025-24 | 12° | | 5.90 | 50 | | 8 | 26,400 | | |
| C-CTE 2025-30 | 15° | | 6.79 | 50 | | 8 | 27,500 | | |

- φ3mm Shark 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

Milling Conditions for C-CTE (2 Flutes)

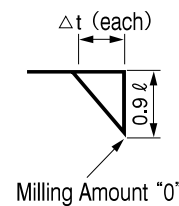
| WORK MATERIAL | | CARBON STEELS ALLOY STEELS (~325HB) | | TOOL STEELS PREHARDENED STEELS (30~40HRC) | | PREHARDENED STEELS HARDENED STEELS (40~50HRC) | |
|---------------|-------------------|---|--------------------|---|--------------------|---|--------------------|
| Model Number | Tip Diameter (mm) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) | Spindle Speed (min ⁻¹) | Feed Rate (mm/min) |
| 2002 | 0.2 | 32,000 | 45 | 25,000 | 30 | 18,000 | 20 |
| 2003 | 0.3 | 30,000 | 50 | 23,000 | 30 | 16,200 | 25 |
| 2004 | 0.4 | 28,000 | 60 | 21,000 | 35 | 14,500 | 25 |
| 2005 | 0.5 | 25,500 | 70 | 19,100 | 40 | 12,700 | 25 |
| 2006 | 0.6 | 21,300 | 70 | 15,900 | 40 | 10,600 | 25 |
| 2008 | 0.8 | 15,900 | 100 | 11,900 | 60 | 8,000 | 40 |
| 2010 | 1 | 12,800 | 150 | 9,600 | 110 | 6,400 | 70 |
| 2015 | 1.5 | 8,500 | 150 | 6,400 | 110 | 4,300 | 70 |
| 2020 | 2 | 6,400 | 150 | 4,800 | 110 | 3,200 | 70 |
| 2025 | 2.5 | 5,100 | 150 | 3,800 | 110 | 2,600 | 70 |

Milling Amount for Side Milling (mm)

 ℓ = Length of Cut Δt = \tan Half Included Taper Angle $\times 0.9 \ell$

Note:

- Recommend water soluble or oil coolant.
- Recommend wet coolant for Copper.



φ3mm Shank
V Series

UDC-PCD
Series

CBN
Series

Square
Long Neck
Square

Radius

Radius
Long Neck
Radius
Taper Neck
Radius

Ball / Long
Shank Ball

Ball
Long Neck
Ball
Taper Neck
Ball

Taper
Taper

Barrel

Spiral
V Cutter

Drill

Technical Data