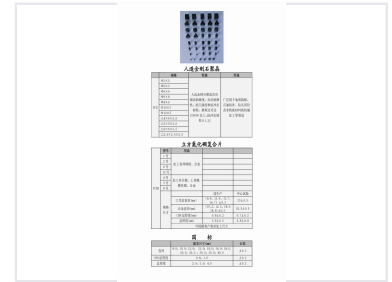


# PCD/PCBN Composite Cutting Tools

These are artificial diamond polycrystalline (PCD) and cubic boron nitride composite (PCBN) cutting tools. They are available in multiple sizes and specifications to meet customer requirements.



## Overview

### High-Performance Composite Cutting Tools

These PCD (Polycrystalline Diamond) and PCBN (Polycubic Boron Nitride) composite cutting tools are engineered for demanding industrial applications. PCD tools offer exceptional hardness, wear resistance, and impact toughness, making them ideal for geological exploration, oil drilling, and non-ferrous material machining. PCBN variants are specialized for high-precision machining of hardened steels, tool steels, die steels, and various alloys, providing reliable performance in rigorous manufacturing environments.

## PCD Specifications

Available PCD Sizes | 3x2, 3x3, 3x6, 3x8, 3x6, 10x3, 10x5, 4x2.6, 5x2.6, 6x3.5, 2.5x2.5x2.5

## PCBN Specifications

### PCBN Grade Applications

Grade/Type	Primary Application
No. 1, No. 2	Cast iron and alloys
No. 4, No. 5, No. 8	Quenched steel, tool steel, die steel, and alloys
No. 6, No. 12	General machining

### PCBN Technical Dimensions

Parameter	Value (mm)
Working Layer Diameter	9.6, 11.6, 13.7, 16.7 (±0.3) / 33 (±0.5)
Alloy Diameter	10.2, 12.2, 14.5, 18.5 (±0.3)
CBN Layer Thickness	0.9 (±0.2), 0.7 (±0.2)
Total Thickness	3.9 (±0.2), 5.8 (±0.8)

## National Standard Specifications

### National Standard Dimensions

- Diameters: 8.0, 10.0, 12.0, 13.0, 14.0, 16.0, 18.0, 20.0, 25.0, 30.0, 35.0, 40.0 mm (±0.3 mm tolerance)
- CBN Layer Thickness: 0.8, 1.0 mm (±0.2 mm tolerance)
- Total Thickness: 2.0, 3.0, 4.0 mm (±0.2 mm tolerance)

## Performance Metrics

### PCD Material Performance

**100000 min**

Wear Ratio

**1.3 J**

Impact Toughness