

# PCD

## Cutting Tools

**48**  
HOUR  
REAMERS



**CUSTOM • QUICK SHIP**



Proudly made  
in Rockford, IL

**TECm**

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www.TECmTools.com



Reamers, Inserts,  
Endmills, Tool Bits  
and MORE!



ABOUT TECm



*Precision... Value... Reliability*



When it comes to machining, precise and high-quality tooling delivered quickly is an absolute must.

This is especially true of PCD cutting material used to machine non-ferrous metals.

TECm engineers and production staff take pride in the quality of our PCD tooling, which is produced on our state-of-the-art Wire EDM's, CNC tool and cutter grinders, EWAG grinders, and EDM Hole Drilling machines.

In our environmentally controlled facility we adhere to the strictest quality-control measures. In turn our tools are accurate and highly repeatable.

TECm's staff can provide you with three-dimensional design service, problem solving, and some of the best pricing in the industry.

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THE TECm ADVANTAGE

Edge preparation with any cutting tool is key to its performance. PCD tools are no exception. Because of TECm's precision edge preparation process, you can achieve longer life, no break in period, and superior finishes with TECm tools

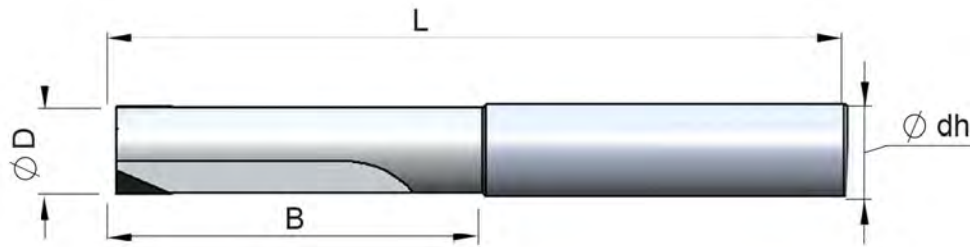
PCD tools are run at very high RPM's. Because of this, the tools must be balanced to achieve maximum performance. All of TECm's PCD round tools have been precision balanced.

To be able to inspect our tools to the tightest requirements TECm uses laser micrometers that are accurate to 0.00003".

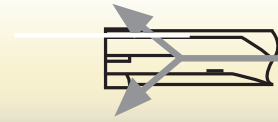
# 2 FLUTE REAMERS

TECm PCD Reamers  
 2 cutting edges  
 Internal coolant supply  
 Solid carbide

0.3780-0.7913 inch  
 9.601-20.100 mm



## PCD Reamer Coolant Options



Option 1



Option 2

## Order Example:

Part Number	Number of Flutes	Coolant Option	Size (Inch)
2-1-5572	2	1	0.5572

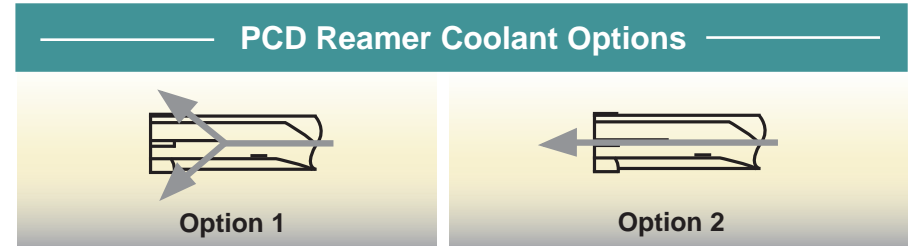
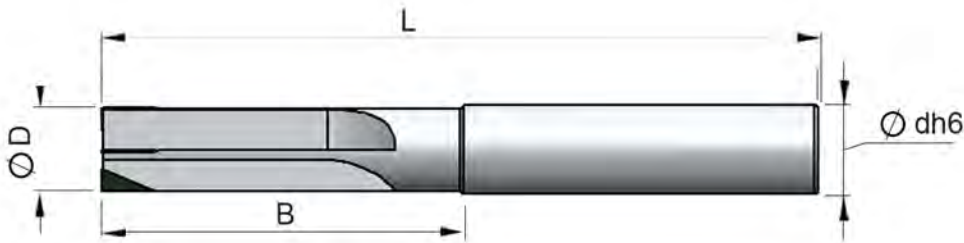
Cutting Diameter (ØD")	Length (L")	Neck Length (b)	Shank Diameter (Ødh6)
0.3780-0.3976	3.346	1.575	10mm
0.3977-0.4567	3.740	1.969	12mm
0.4568-0.5552	3.740	1.969	14mm
0.5553-0.5945	3.858	1.969	16mm
0.5946-0.6339	3.858	1.969	16mm
0.6340-0.7126	4.252	2.362	18mm
0.7127-0.7913	4.331	2.362	20mm

*Dimensions in inches unless otherwise specified*

# 4 FLUTE REAMERS

TECm PCD Reamers  
 4 cutting edges  
 Internal coolant supply  
 Solid carbide

0.3780-0.7913 inch  
 9.601-20.100 mm



## Order Example:

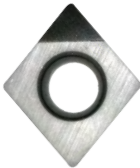
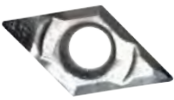


Part Number	Number of Flutes	Coolant Option	Size (Inch)
4-1-5572	4	1	0.5572

Cutting Diameter (ØD")	Length (L")	Neck Length (b)	Shank Diameter (Ødh6)
0.3780-0.3976	3.346	1.575	10mm
0.3977-0.4567	3.740	1.969	12mm
0.4568-0.5552	3.740	1.969	14mm
0.5553-0.5945	3.858	1.969	16mm
0.5946-0.6339	3.858	1.969	16mm
0.6340-0.7126	4.252	2.362	18mm
0.7127-0.7913	4.331	2.362	20mm

*Dimensions in inches unless otherwise specified*

## DIAMOND INSERTS

TECm stocks a variety of PCD tipped tooling. All stocked inserts are tipped with BiMod grade PCD.

STOCKED TURNING INSERTS <i>(BiMod Grade)</i>				
	Positive	Part Number	Negative	Part Number
	CCGW 21.50	600000	CNGA 431	601000
	CCGW 21.51	600050	CNGA 432	601050
	CCGW 32.50	600100		
	CCGW 32.50.5	600150		
	CCGW 32.51	600200		
	CPGW 21.50	600250		
	CPGW 21.51	600300		
	CPGW 32.50	600350		
	CPGW 32.51	600400		
	DCGW 21.50.5	600450	DNGA 431	601100
	DCGW 21.51	600500	DNGA 432	601150
	DCGW 32.50.5	600550		
	DCGW 32.51	600600		
	TPGW 21.50.5	600650	TNGA 431	601200
	TPGW 21.51	600700		
	TPGW 32.50	600750		
	TPGW 32.51	600800		
	VCGW 331	600850	VNGA 331	601250
	VCGW 332	600900	VNGA 332	601300
	VCGW 333	600950	VNGA 333	601350

# SAVE MONEY

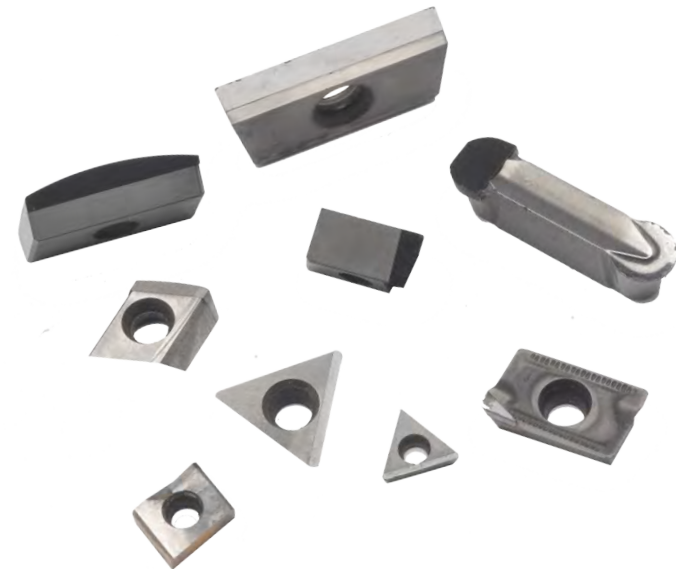
*by retipping inserts*

Don't see your insert listed? Save money by having us tip or re-tip your used inserts.

Whether it's milling, turning, or grooving, we haven't met an insert we can't tip.

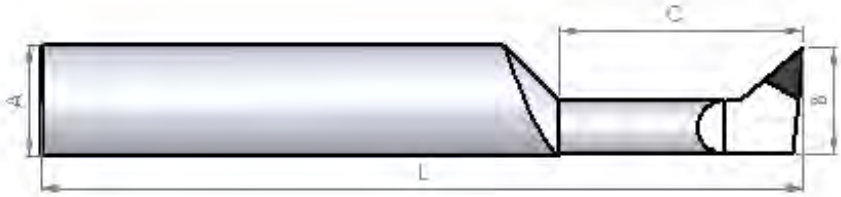
Send us your new or used carbide inserts. We don't care whose brand they are, we tip them all!

*10 to 20 times the life of carbide!*



## Standard Polycrystalline Tipped Carbide Boring Bars

Ask us how to dramatically cut cycle time

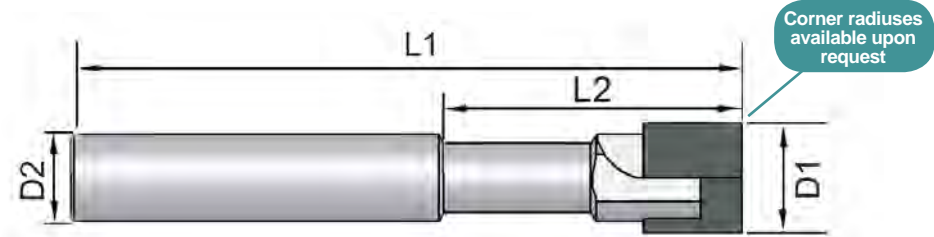


Part #	"A"	"B"	"C"	"L"
150001	0.187	0.120	0.350	2.500
150002	0.187	0.140	0.400	2.500
150003	0.187	0.140	0.500	2.500
150004	0.187	0.160	0.500	2.500
150005	0.187	0.160	0.900	2.500
150006	0.250	0.200	1.000	2.500

Dimensions in inches unless otherwise specified

**Delivery: Stock**  
**Custom sizes quoted on request**  
**Also available in CBN upon request**

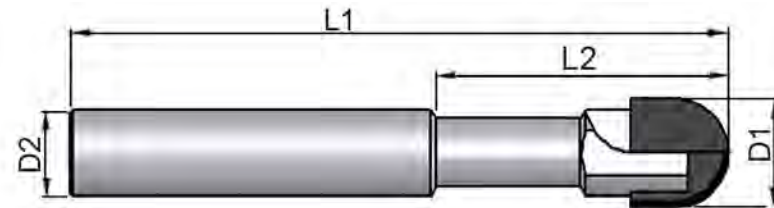
## SQUARE ENDMILLS



Cutter Diameter	Depth of Cut	No. of Flutes	Shank Diameter	Overall Length	Part Number
$D_1 + .000"/-0.002"$	$L_2 + .050"/-0.000"$		$D_2$	$L_1$	
1/4	1.000"	2	1/4	2-1/2	130250
3/8	1.187"	2	3/8	2-1/2	130375
1/2	1.312"	2	1/2	3	130500

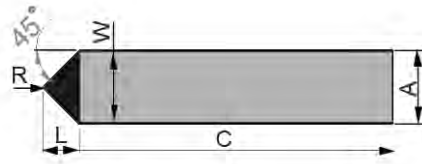
## BALL ENDMILLS

Need fast turnaround?  
**No problem**



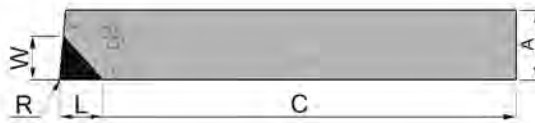
Cutter Diameter	Depth of Cut	No. of Flutes	Shank Diameter	Overall Length	Part Number
$D_1 + .000"/-0.002"$	$L_2 + .050"/-0.000"$		$D_2$	$L_1$	
1/4	1.000"	2	1/4	2-1/2	120250
3/8	1.187"	2	3/8	2-1/2	120375
1/2	1.312"	2	1/2	3	120500

## Style D



Dimensions							Part Number
Shank			Tip			PCD Tipped	
A	B	C	W	L	R		
3/8	3/8	2 1/2	3/8	3/16	0.010	100000	

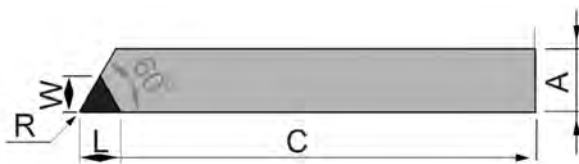
## Styles AR and AL



Style AR Shown

Dimensions							Part Number	
Shank			Tip			PCD Tipped		
A	B	C	W	L	R	Right Hand	Left Hand	
3/8	3/8	2 1/2	15/64	15/16	0.010	100017	100016	

## Styles ARMod and ALMod



Style ARMod Shown

Dimensions							Part Number	
Shank			Tip			PCD Tipped		
A	B	C	W	L	R	Right Hand	Left Hand	
3/8	3/8	2 1/2	1/4	1/4	0.010	100019	100020	

### Delivery: Stock

Custom sizes quoted on request

Also available in CBN upon request

Dimensions in inches unless otherwise specified

## BiMod

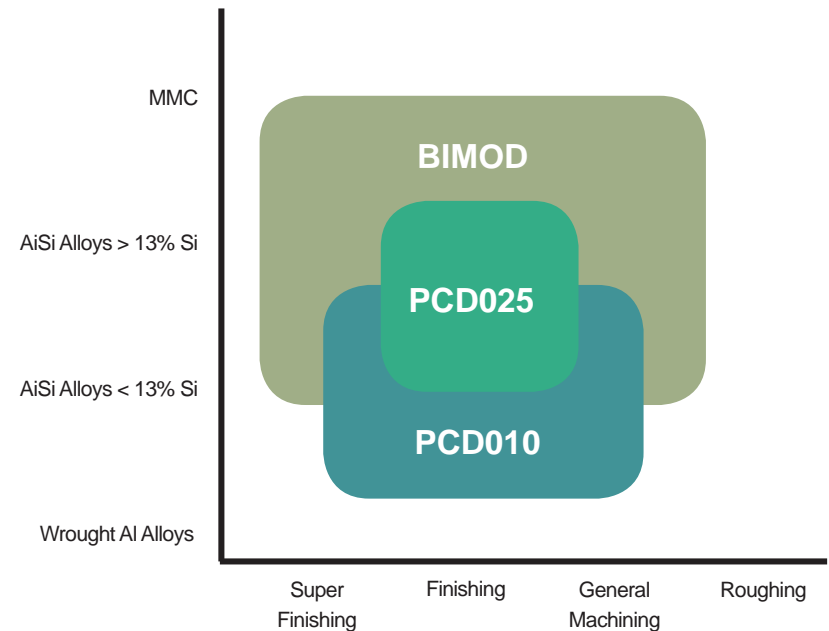
A bi-modal diamond grain structure which delivers high abrasion resistance and toughness with good edge sharpness. BiMod diamond is ideal for severe applications such as metal matrix composites, milling of high (>13%) Si/Al alloys and bimetals, fiberglass, and other highly abrasive materials.

## PCD010

A 10 micron diamond grain structure is ideal where roughing and finishing are performed with a single tool. Highly recommended for low-medium content aluminum alloys.

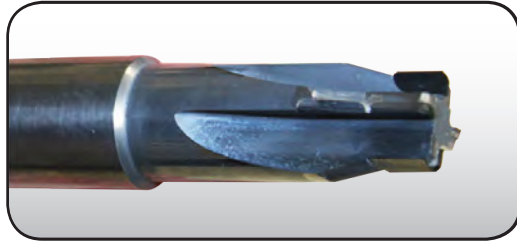
## PCD025

A 25 micron diamond grain structure is ideal for machining high silicon aluminum alloys, metal matrix composites, tungsten carbides and ceramics.



## PCD Tipped Counterbore

Used by an Aerospace company to ream out a hole and then chamfer it.



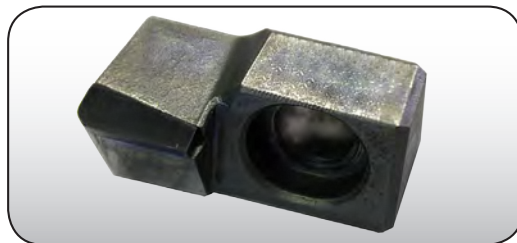
## PCD Tipped Step Drill

Used by an engine manufacturer to ream out and chamfer an engine port hole.



## PCD Tipped Tooling Cartridge

Created for an engine manufacturer to mill the face of an engine block.



Also available in CBN upon request.

## Looking for something else?



## TECm also makes custom tools.

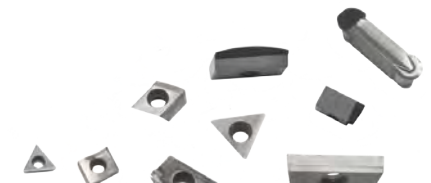
TECm is your full-service form and special tooling provider for the manufacturing industry. Check out our website to view our additional capabilities and brochures.

From standard blanks to a fully custom order, we will return your quote in 48 hours and deliver in 7 to 10 days in most cases.

We want to be your trusted source for tooling, from concept through delivery and beyond.

Contact us at 815-316-2304, visit our website at [www.TECmTools.com](http://www.TECmTools.com) or send us an email at [Sales@TECmTools.com](mailto:Sales@TECmTools.com).

—The TECm Team





Proudly made  
in Rockford, IL



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TOOLING & MACHINING  
ASSOCIATION



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