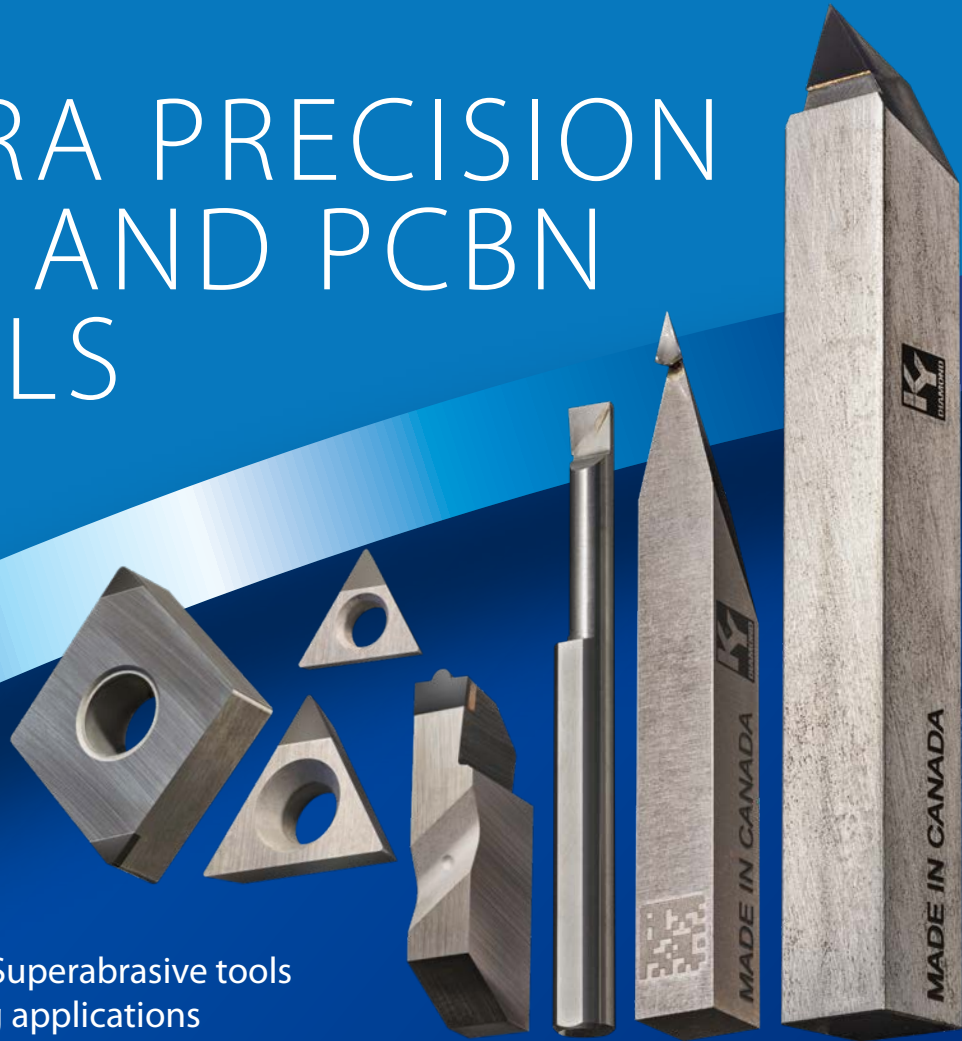
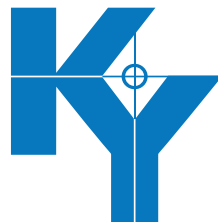


REDEFINING THE EDGE

ULTRA PRECISION PCD AND PCBN TOOLS



PCD and CBN Superabrasive tools
for demanding applications



DIAMOND

www.kydiamond.ca

Ultra precision Diamond Tools Manufacturer

PCD TOOLS

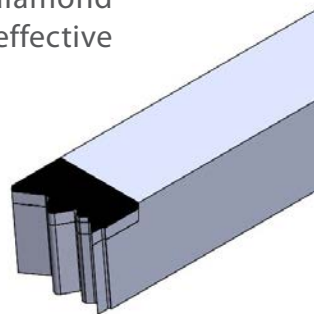
Polycrystalline Diamond



PCD tooling offers much longer lifetime and more consistent results than traditional carbide tooling. PCD is a fine diamond powder that is mixed in a metal matrix and is available in different grit sizes and concentrations depending on the machining application. It's hardness and extreme toughness make it a very durable long-lasting tool. Since the diamond is randomly oriented, this further adds to it's durability. PCD is an excellent cost-effective material that can be used for machining:



- Aluminum and other non-ferrous metals typically used in the automotive industry (engine blocks, transmission bodies, wheels)
- Medium density fiberboard (MDF) and other "wood-like" materials
- Composites such as Carbon fiber reinforced polymers (CFRP)
- Green ceramics
- Aerospace component manufacturing
- Titanium alloys, Tungsten Carbide
- Graphite (i.e. for EDM molds)



ADVANTAGES OVER TRADITIONAL TOOLING:

- PCD tools stay sharper longer, and can also be run at about 10 times the speed that would be used for carbide tooling. So the parts are made quicker, reducing lead times and opening up production capacity.
- Surface finish of processing parts are much better than with carbide, sometimes eliminating the need for further finishing.
- Many design features including chip breakers, K-lands etc. can be incorporated.
- Turning tool inserts and solid shank tools, reamers, drills, form tools, wear parts, dressing tools... can be produced.

PCBN TOOLS

Polycrystalline Cubic Boron Nitride

PCBN tools are typically used for ferrous materials where PCD is not an option. It is similar to PCD in that it is a fine powder that bonded in a matrix, but can withstand higher temperatures than traditional PCD. PCBN is typically used for machining very hard materials (>45 HRC):

- Tool steel
- Nitrided alloy steel
- Chilled or hardened Cast Irons
- High-speed roughing of grey cast irons

Our sales and design teams will work together with you to develop the optimum tool for your specific application.

PCVD TOOLS

Polycrystalline CVD diamond tools are also offered. These tools sometimes offer an advantage over PCD tools, as there is no binder. 100% diamond in a random crystal orientation makes for an extremely durable and tough tool. These are free-standing thick CVD diamond plates, not just a coating over carbide.

OUR UNMATCHED CAPABILITIES, YOUR ADVANTAGE

Established in 1976, K&Y was originally set up as a diamond tool company for the Jewelry industry. Since then, the company has become a key supplier of PCD, PCBN and natural diamond tools used for precision machining, form tools, and wear parts.

Unhindered from heavy corporate bureaucracy (an advantage of being family owned), K&Y Diamond proactively invests in capital equipment and state-of-the-art technologies. The most recent equipment for producing tools is used, and equipment is often further enhanced in-house. The company is



owned and driven by the innovative Rene Guillaume who learned the business from his father. Rene began working with diamonds while in his teens, and has been building forward-looking polishing and metrology techniques for over 30 years. Rene plays a significant role in the industry as an inducer of technical advancement. Our metrology equipment is the most recent available. We welcome the opportunity to work with you on your next challenging tool application.



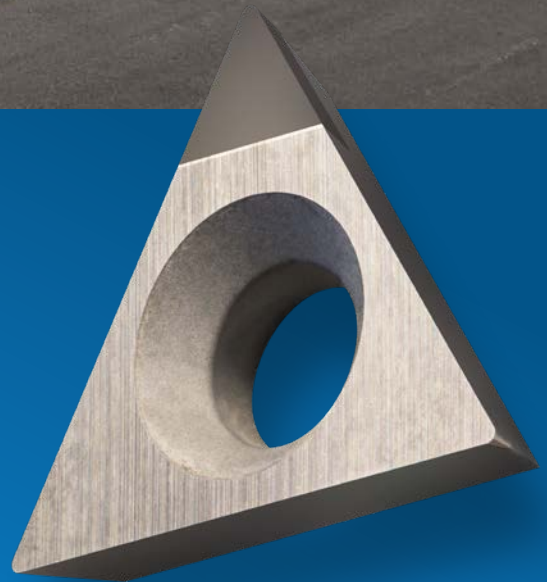
STATE OF THE ART LABORATORY



TOOL REPAIR/RELAP

Depending on the tool design, we can either reprofile your tools or relap (regrind) them. Our experienced and dedicated team ensures that the process is flawless and quick. When your repaired tools are shipped back to you, they will perform as new.

We are grateful for all of our loyal customers and look forward to meeting your needs and expectations as we continue redefining the edge!



K&Y Diamond

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USA Customers, please send all tools for repair to:

NFI Industries

c/o K&Y Diamond Ltd.
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Champlain, NY, USA 12919