Run 2-5x faster on hard-to-machine materials

For titanium and other hard-to-machine alloys, our breakthrough Cryogenic Machining Technology enables your machines to run faster, greener and more cost-effectively than ever before. Our patented technology uses liquid nitrogen to keep cutting temperatures significantly lower so you can increase tool life, reduce your environmental impact and realize a healthier profit.

Find out more at 5me.com/cryo or call (586) 473-5070 to set up your demo at our North American Tech Center.
Make easier work of your hardest-to-machine materials

Compacted Graphite Iron
- 5x increase in finishing cutting speed
- 10x increase in tool life

Titanium
- 2x increase in semi-finish cutting speed
- 3x equivalent tool life*

Steel Alloys
- 1.6x increase in semi-finish cutting speed
- and equivalent tool life*

Composites (Drilling & Trimming)
- 40x increase in tool life
  - Keeps resin below critical temp during machining
  - Reduced fiber pullout
  - Temporarily increases material strength for cleaner shear and exit quality
  - Enables deep hold drilling in structural composites

Greener and Cleaner
Our cryogenic system utilizes liquid nitrogen as a coolant, which evaporates into a non-toxic, non-greenhouse gas during the machining process so there’s:
  - No need for mist collection, filtration or collection of waste coolant
  - No energy costs associated with coolant fans, pumps and drives
  - No contamination of equipment or workpieces, which eliminates the need for secondary processes
  - No slippery work surfaces or toxic fumes so your workforce can breathe easy too

An Easy Retrofit
Almost any machine can be retrofit to utilize our state-of-the-art cryogenic cooling technology.

Key Applications
- Aerospace
  - Aero-structure, Aero-engine
- Auto/Truck
  - Cylinder Blocks, Cylinder Heads, Crankshafts, Rods, Turbo Components
- Medical Devices
  - Joint Replacement, Appliances, Surgical Instrumentation
- Energy
  - Fracking Pumps, Subsea, Turbines, Clad Hardware

This breakthrough technology was developed in partnership with the U.S. Navy, U.S. Air Force, Creare, NavAir and Lockheed Martin.

* Compared with flood coolant

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