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## **Precitech Introduces Nanoform® Xtc to Diamond Turn Tungsten Carbide And Other Hard-to-Machine Materials with Laser-Assisted Machining**

**KEENE, NH, June 13, 2017 – Precitech, a global manufacturer of innovative ultraprecision machining solutions, introduces the Nanoform® Xtc for diamond turning tungsten carbide and other hard-to-machine materials. Micro-LAM's Optimus T+1, a laser-assisted machining tool, along with specific characteristics of the Nanoform Xtc, enables it to perform this exclusive process.**

“Diamond turning has many advantages over the conventional method **for grinding tungsten carbide,**” states Jeff Roblee, Divisional Vice President of Technologies for Precitech. “With **demonstrated feed rates of up to 6 mm per minute, finishing a standard test part takes less than a minute. Additionally, diamond turning is a deterministic process, and well-known techniques can be used to quickly manufacture even complex diffractive (kinoform) molds and lens arrays.**”

**Diamond turning of hard materials, such as tungsten carbide, requires the superior dynamic stiffness of dove-tail slides. The Nanoform Xtc with its exclusive dove-tail slide design can generate surfaces under 5 nm Sa and 150 nm PV. Compared to traditional grinding, a part requiring minimum post polishing can be made in minutes, instead of hours.**

**Optimus T+1 is an innovative solution that uses a laser beam passed through an optically transparent diamond tool. The laser is delivered precisely at the tool-workpiece interface. “The system improves part quality with a thermal softening effect that reduces the brittleness and enhances the machinability of the material. This creates a better surface finish and significantly reduces surface and subsurface damage,” states Deepak Ravindra, Founder and CEO of Micro-LAM, Inc.**



The Nanoform Xtc has been tested on standard- and high-grade (binderless) tungsten carbide, and surface finish and form accuracy have been shown to be significantly improved over a ground surface. In addition to tungsten carbide, the Nanoform Xtc and the Optimus T+1 have been demonstrated effective on infrared (IR) materials such as silicon (Si), zinc sulfide (ZnS), calcium fluoride (CaF<sub>2</sub>), germanium (Ge), and zinc selenide (ZnSe).

#### About Precitech

Precitech is a global manufacturer of innovative ultra precision machining solutions. It designs and manufactures machine tools for turning, milling, and grinding. Its precision machines produce rotationally symmetric, asymmetric, freeform and sculpted geometries, achieving form tolerances in the sub-micron range and nanometer surface finishes when equipped with diamond tooling.

Precitech is a unit of AMETEK Ultra Precision Technologies, a division of AMETEK, Inc., a leading global manufacturer of electronic instruments and electromechanical devices with annual sales of approximately \$4.0 billion. For more information about Precitech's line of ultra precision machining systems, contact Precitech, 44 Blackbrook Road, Keene, NH 03431, USA. Tel: (603) 357-2511. Fax: (603) 358-6174. E-mail: [mike.tanniru@ametek.com](mailto:mike.tanniru@ametek.com), Web site: [www.precitech.com](http://www.precitech.com).

#### About Micro-LAM

Micro-LAM, Inc. offers cutting edge technology that increases productivity and part quality, while reducing tooling and finishing costs for companies that manufacture precision optical components such as lens, telescopic mirrors, infrared imaging systems, molds, laser components and more. Micro-LAM provides an easily retrofittable system that delivers precision machining capabilities for advance engineered ceramics, semiconductors, optical crystals, metals and more, leading to greater efficiency and improved profitability.

For more information about Micro-LAM's laser-assisted machining system, contact Micro-LAM, Inc., 5960 S. Sprinkle Rd., Portage, MI 49002, USA. Tel: (269) 288-4100. E-mail: [deepak.ravindra@micro-lam.com](mailto:deepak.ravindra@micro-lam.com) , Web site: [www.micro-lam.com](http://www.micro-lam.com)

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