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OptiPro an optics expert in several different areas

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JAMIE GERMANO staff photographer

OptiPro process technician Adam Farnung of Rochester removes a piece from an Ultraform deterministic asphere polisher at the Wayne County company.

The Rochester Top 100, which annually recognizes the fastest-growing privately held companies in the nine-county region, is sponsored by the Rochester Business Alliance and KPMG. Here is an edited interview with OptiPro Systems President Michael Bechtold.

Please tell us about your company's three main areas of expertise.

OptiPro's three main business segments are:

Designing and building computer-controlled grinding, polishing and measuring machines, which are used for the manufacturing of precision optics. These optical components are used for many high-tech applications, including military, night vision, surveillance, cinematography and space exploration.

Second, distributing Computer Numerically Controlled (CNC) machine tools in New York state which are used in the tool and die, injection molding and component manufacturing sectors.

OptiPro also is the exclusive distributor in western New York for Mastercam, a PC-based CAD/CAM software. This Computer Aided Manufacturing software is used for programming everything from basic to complex multi-axis CNC machines.

Which represents the largest segment of your business?

The largest segment is our optics division. Of our 36 employees, over 80 percent are dedicated to this area. In fact, we added five engineers last year. The optics division employs scientists and technicians as well as mechanical, electrical and software engineers.

This segment of our business is responsible for the design, build and sales of our own OptiPro product line. We are developing three new products, which will be released in the first quarter of 2011.

It is also responsible for research for the U.S. Navy and U.S. Army through 14 Small Business Innovative Research (SBIR) grants to date in which we work to develop innovative solutions for grinding, polishing and measuring next-generation military optical component needs.

OptiPro has been very fortunate to have developed partnerships with local universities and colleges. We currently have contracts with both the University of Rochester and Rochester Institute of Technology in assisting us with our SBIR efforts.

Most recently, Monroe Community College utilized OptiPro's staff and facilities for their Advanced CNC Optics course.

You have patented UltraForm polishing equipment that polishes aspheric and freeform optics. What are the advantages of these types of optics over the typical spherical and flat optics? Why are they becoming more common?

In addition to improving the imaging of optical systems, a single aspheric lens can often replace a much more complex multi-lens system. The resulting device is better, smaller and lighter, which is extremely important in military applications such as for missile guidance systems. Aspheres are also used in telescopes, motion pictures and scientific research instruments.

Freeform optics are being used especially in areas where stealth and aerodynamic qualities are required.

To answer why these optics are becoming more common, it is actually because there are now ways to manufacture them more accurately at a competitive price.

Tell us about your UltraSurf measurement system? What makes it unique?

UltraSurf is capable of measuring both surface form errors and surface roughness errors for both aspheres and freeform optics. OptiPro UltraSurf is "best in class" for non-contact measuring of complex and radically shaped optics. This unique system can also measure the inside and outside of hemispheric and bullet-shaped missile domes simultaneously with one scan.

What is the biggest challenge facing your company?

Time utilization, to make sure we are as lean and focused as possible. In today's competitive world, we are constantly challenged to provide "better for less," and this isn't easy. We are very fortunate to have a dedicated, awesome team of engineers, technicians, scientists and support personnel.

As a small company we look for the people who are willing to multi-task and wear multiple hats.

What is on the horizon for OptiPro?

We are very optimistic about the future. Let's face it, everything is moving toward better ways to gather, focus, transmit and bend light. Our new products are providing innovative solutions that allow these once absurd shapes to actually be manufactured, and that's exciting for us and our customers.

We are proud to be supporting our military in the efforts to help keep our soldiers safer while also creating capabilities for complex medical scanning systems and future space exploration.

OptiPro is in the development stages for several new machines, which will be key products in keeping United States manufactures competitive in the global market.

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OPTIPRO SYSTEMS, NO. 37

Machine tool and software distributor, manufacturer of grinding and polishing equipment for precision optics industry.

Year founded: 1981.

Location: 6368 Dean Parkway, Ontario, Wayne County.

Executive: Michael Bechtold, president.

Employees: 36.

Web: www.optipro.com