

Workholding Fixture Specialists

Toner Machining Technologies utilizes SolidWorks (3D modeling design software), AutoCAD and CosmosWorks (finite element analysis software) and has developed a structured design process that includes customer input in all phases.

A design checklist is utilized to ensure that key features are always considered prior to the fixture design. When the initial concept is complete, a customer review is held to verify that locating points and specific process needs are met. Customers approve the final design and TMT personnel review all component details before prints are released to the shop.

Upon project completion, customers receive a detailed manual (hard copy and CD) which includes finalized drawings, operation and maintenance instructions, spare part listings, pneumatic and electrical schematics and final inspection results.

“Workholding fixture design and manufacturing is fundamental to our precision machining business,” said Jim Toner. “We specialize in turnkeys and workholding fixtures for vertical and horizontal machining centers as well as other conventional machine tools. We also build fixtures for



precision rotary trunnion applications, where indexing and alignment accuracy is essential,” said Jim Toner.

“In our designs we offer internal plumbing of hydraulic components and custom guarding in order to reduce chip build-up and we provide hydraulic filters on all fixtures as a standard feature,” said Jim Toner. “We interface hydraulic inputs from an overhead rotary, the machine pallet or a stand-alone pump source and provide part sensing and part presence capabilities as well,” said Jim Toner.

“A major key to our fixture building success is our loyal customer base. We have a continuing relationship with key customers such as Arvin Meritor, Eaton, Dana, Getrag, Sypris, Caterpillar, Haldex, ZF Lemforder, Stanadyne and GE,” said Jim Toner.

TMT recently completed its 11th set of self-centering fixtures for Caterpillar. Each project consisted of two self-centering hydraulic fixtures

for a 500 mm pallet machine tool. The completed fixtures were 1,200 mm high and weighed 1,500 lbs each.

The self-centering feature was accomplished by utilizing a custom rack and pinion arrangement with hardened ways and slides with independent centering and clamping cylinders to maximize process repeatability.

Clamping cylinders were individually checked to minimize forced motion and hydraulic float. The hydraulic source was a customized overhead CPH unit that provided constant hydraulic pressure during all machine operations.

Toner attributes their turnkey and workholding success to the fact that TMT offers extensive contract machining services using fixtures that they design and build. “When we have an innovative idea for a fixture design, we can experiment on fixtures and parts that we run as part of our contract machining business. I like to think that our ability to perform research and development in a real world scenario gives us a great competitive edge when it comes to building great fixtures,” said Jim Toner.

TMT maintains equipment and staffing to manufacture precise fixture components. All parts are inspected in a controlled quality lab using precision inspection equipment including a Zeiss CMM. Every fixture is pressure and duty tested prior to shipment and all results are logged in the fixture manual.



Committed To Our Customers' Success

Great People—Quality Workmanship



When Jim and Iris Toner opened the doors of Toner Machining Technologies in 2001 they could only dream of the tremendous success and growth they would experience over the next five years.

They quickly outgrew their 7,000 square-foot startup plant and in 2002 the husband and wife team moved to their current facility in the former Drexel Heritage Machine Shop on Fleming Drive in Morganton. Toner Machining Technologies (TMT) set a new benchmark for small industry when they achieved ranking in the Top 100 Fastest Growing Companies in America for two consecutive years (Entrepreneur Magazine and Dunn & Bradstreet).

This expansion and recognition, Jim and Iris are quick to tell visitors, is the result of teamwork. Jim Toner credits their team, approximately 40 employees, for the company's ability to attract a diverse and loyal customer base including companies such as GE, Arvin Meritor, Sypris, Eaton, Rockwell and Caterpillar.

“It takes great people to make a great company and from the start we have had some of the finest employees in North Carolina,” Jim Toner said.

“We believe in the continuous pursuit of quality in everything we do. It is important to properly identify the needs of our customers and their specific requirements so we can meet or exceed their expectations. We strive to expand on the traditions of trust, sharing, innovation, responsiveness and quality by adding technologies which will allow us to have a significant impact on manufacturing processes and efficiency for the metal working industries,” said Jim Toner.

TMT also works closely with universities in North Carolina to develop sales and marketing strategies which will position TMT for potential markets in the U.S. and Asia.



“Gus”

PRECISION MACHINING

Specializing in design and build of workholding fixtures and complete turnkeys.

Contract machining, grinding and prototype services.

Committed to the active pursuit of excellence.

Dedicated to continuous improvement of our quality system in order to exceed customers' requirements and expectations.

Striving to establish long-term customer relationships through a determined pursuit of excellence in quality, responsiveness and innovation.

ISO 9001:2000 Certified

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One of TMT's latest achievements is the successful implementation of Global Shop Solutions Manufacturing Enterprise Resource Planning software (GSERP).

The GSERP system combines all tasks relating to day to day operations into one central software and database package featuring real time updating and 100% traceability. Starting with a customer's request for quotes, all information goes into GSERP and is readily available to the management team. Essentially, the software provides a better way to respond to customer inquiries, provide more precise quotes and provide an accurate delivery schedule.

GSERP allows TMT to answer customer inquiries concerning all facets of a project instantaneously. Data concerning quotes, sales orders, work orders, purchasing, project scheduling, inventory, shipping, receiving, accounts payable, accounts receivable, general ledger, payroll and quality is entered into the database and updated in real time.

With all employees scanning data onto work orders via a barcode system, TMT can literally track a project's progress by the minute for vital information such as material certifications, operator, work center and manufacturing dates and times. This information is quickly available to the customer's quality department.

GSERP facilitates more accurate quotes. Financial and manufacturing data on repeat parts is available or TMT can access the library of projects previously manufactured and reference similar parts. All of this information allows TMT to really "sharpen our pencils" and zero in on pricing.

In today's manufacturing world, on time delivery is the primary concern of most companies. Utilizing the Global Shop System to route every component manufactured gives TMT the ability to view project progress, machine capacity and due dates through a master schedule.

Using GSERP, TMT can tell customers exactly where their part is and approximately how much time remains in the manufacturing process.

Simultaneously, having the entire scope of the shop's workload readily available allows TMT to plan and schedule projects to meet delivery expectations.

-- striving to establish long-term customer relationships through excellence in quality, responsiveness and innovation



Experience & Expertise

Toner Machining Technologies is a precision machining company designing and building custom machines and gages for major manufacturing plants in the US, Mexico and Canada.

TMT utilizes SolidWorks[®] (3D modeling design software), AutoCAD[®] and CosmosWorks[®] (finite element analysis software to determine and reduce high stress concentration areas).

Toner Machining Technologies can handle small to large quantity production requirements with state-of-the-art CNC contract machining and grinding departments. TMT employees routinely machine and grind parts that have a wide variety of print requirements maintaining very close tolerances.

TMT uses its knowledge and experience of machining, grinding, workholding and gaging to produce world class, quality parts.

-- enabling customers to precisely manufacture and measure their products



TMT—A Family Tradition

TMT President Jim Toner has been in the precision machining business for more than 28 years. In 1979, he left Controlled Machining in Deerfield Beach, FL, and moved to Morganton, NC, to work with Emery Corporation. During his years at Emery, he rose to the position of Plant Manager for Caterpillar's Precision Grinding Division.

Jim Toner left Emery in 1987 to participate in the startup of James Tool. At James Tool he served as company VP and Plant Manager and later, as president. During his 13 years at James Tool, he handled the majority of sales for the company's larger accounts, prepared most of the quotes for potential jobs and performed related duties.

In January of 2001, Jim and Iris founded Toner Machining Technologies, Inc. Their son, Trent, joined the business in May 2004, after graduating from NC State University where he earned a BS in Mechanical Engineering.

The Toner team includes graduate engineers, highly skilled machinists and assemblers and talented support specialists. The group averages over 20 years experience in tool-making and related fields.



- Design and build workholding fixtures, gages & special machines
- Complete turnkey solutions
- Stereolithography (Rapid Prototyping)
- Contract CNC machining
- Precision prototype machining
- Wire EDM services
- Engineering services
- Welding & fabrication