STAMPING/PRESSES

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A PERFECT FIT

Servo technology helps fabricator grow its business, invest in its team and attract new blood

merican manufacturing is in our blood," says Stephen Serling. The Quality Metal Stamping vice-president is fourth generation in a family-owned business that is grounded in a family-oriented work culture. For nearly a century, the ability to embrace change and think outside the box has helped the company reinvent itself and take its business from shoes to that of a custom metal solutions provider.

"My great-grandfather Lou Serling started Serling Last Corporation in 1932," says Stephen Serling. "He made wooden shoe lasts for shoemakers in Long Island, New York. When my grandfather David Serling took over, he expanded the company globally. He designed and introduced the first plastic shoe last, which had a metal heel plate that was stamped on a small press."

In 1961, a 50,000-sq.-ft. factory was built in Henderson, Tennessee, to serve shoe manufacturers in Tennessee, Arkansas and



Quality Metal Stamping's 75,000-sq.-ft. facility is a one-stop-shop solution for some of the nation's largest OEMs.

Missouri. Quality Tool & Die was formed in 1976 to take on additional tool and die and stamping work. The company soon began to ship metal stampings nationwide. In 1995, Stephen Serling's father, Robert Serling,



changed the company's name to Quality Metal Stamping. The shoe last business was sold in 1997 with attention shifting to full-time cultivation of the company's metalworking expertise.

The fabricator's production facility has since grown to 75,000 sq. ft. and houses a state-of-the-art tool and die shop, design and engineering services, stamping, fabrication, robotic welding, automated assembly, rapid prototyping, machining and powder coating, among other services.

GROWTH

"I came to the company with an ambitious vision for growth," says Stephen Serling, who joined the business in 2010, followed by his brother Colin in 2019. "We both are passionate about developing QMS into a powerhouse for the metalforming industry. We have diversified our customer base into a wide variety of industries that serve



Stephen Serling, Quality Metal Stamping

some of the nation's largest OEMs. We have expanded our manufacturing capabilities and developed a culture of innovation. We pride ourselves on our ability to provide one-stop-shop solutions."

AIDA

2000

Increased customer demand to achieve higher processing and quality standards, along with escalating expectations for faster speed to market and competitive costs, prompted QMS to consider servo press technology. Research led the company to Dayton, Ohio-based AIDA-America Corp.

"As an organization, we recognize that in order to stay competitive we need to invest in the latest metalforming technology," says Serling. "That meant considering a servo press versus a conventional mechanical press. We felt AIDA offered the best in the market."

The fabricator installed an AIDA 200-ton DSF-C1-2000A gap frame servo press with a coil feed line in 2020. Part sizes from 2 in. The AIDA 200-ton DSF-C1-2000A gap frame servo press allows operators to control the stroke and achieve consistent precision parts that hold tight tolerances.

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to 12-in. square are stamped from hot and cold roll steel, stainless, galvanized, aluminum and pre-paint for markets that include appliance, HVAC, construction, heavy trucking, furniture, and lawn and garden.

QMS runs more than 300 active stamping dies. The AIDA direct drive gap frame servo press gives operators the flexibility to improve efficiency on different dies in strokes per minute and control of speed for deep draw work and other processes.

High-volume jobs that were previously run on a mechanical press at 50 strokes per minute operate at 105 strokes per minute on the servo press, boosting output by more than 50 percent. But higher throughput is not the only consideration Serling notes.

"More and more customers expect a job shop to add downstream value," he says. "They want a finished part or assembly to arrive at their plant. In addition, several parts we stamp go to automated assembly cells. These parts have to be accurate. The ability to control the stroke with the servo press gives us consistent precision parts that can hold tight tolerances. Consistency is key for us."

NEXT GENERATION

"Our ongoing efforts to continually improve our servo press control systems, like the DSF-C1-A series standard AIDA/Allen-Bradley control installed on the new QMS press, help optimize productivity and part quality," says Matt Shetler, director of marketing for AIDA-America. "We've combined our control systems with proprietary technology developed and produced in-house like

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An infinite number of programmable slide motion profiles helps boost throughput and improve part quality.

our low-speed, high-torque servo motors. The QMS servo press was built with our next-generation motor configuration. These servo motors generate press speeds that are five to 10 percent higher. Our capacitor-based energy conservation feature and optimization servo press management system, freely programmable stroke profiles, and CNC hand wheel control to assist with precise die setup also work together to support production of parts with tighter tolerance requirements."

While machine technology like the servo press is closely tied to a company's ability to execute the actions needed to meet customer expectations, Serling is also looking ahead at ways to build the next generation of business leaders.

"Exposing young people to manufacturing as a desirable career path is important for us at QMS," says Serling. "We have invested in apprenticeship programs and partnered with local schools for internships.

"Advanced equipment like the direct drive servo press is a critical component to attracting the next generation," he continues. "We're working closely with AIDA on the acquisition of our next servo press. Our investment in cutting-edge technology and the investment in our passionate team is our competitive advantage. Our people are the key to what we believe is a bright future." FFJ

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