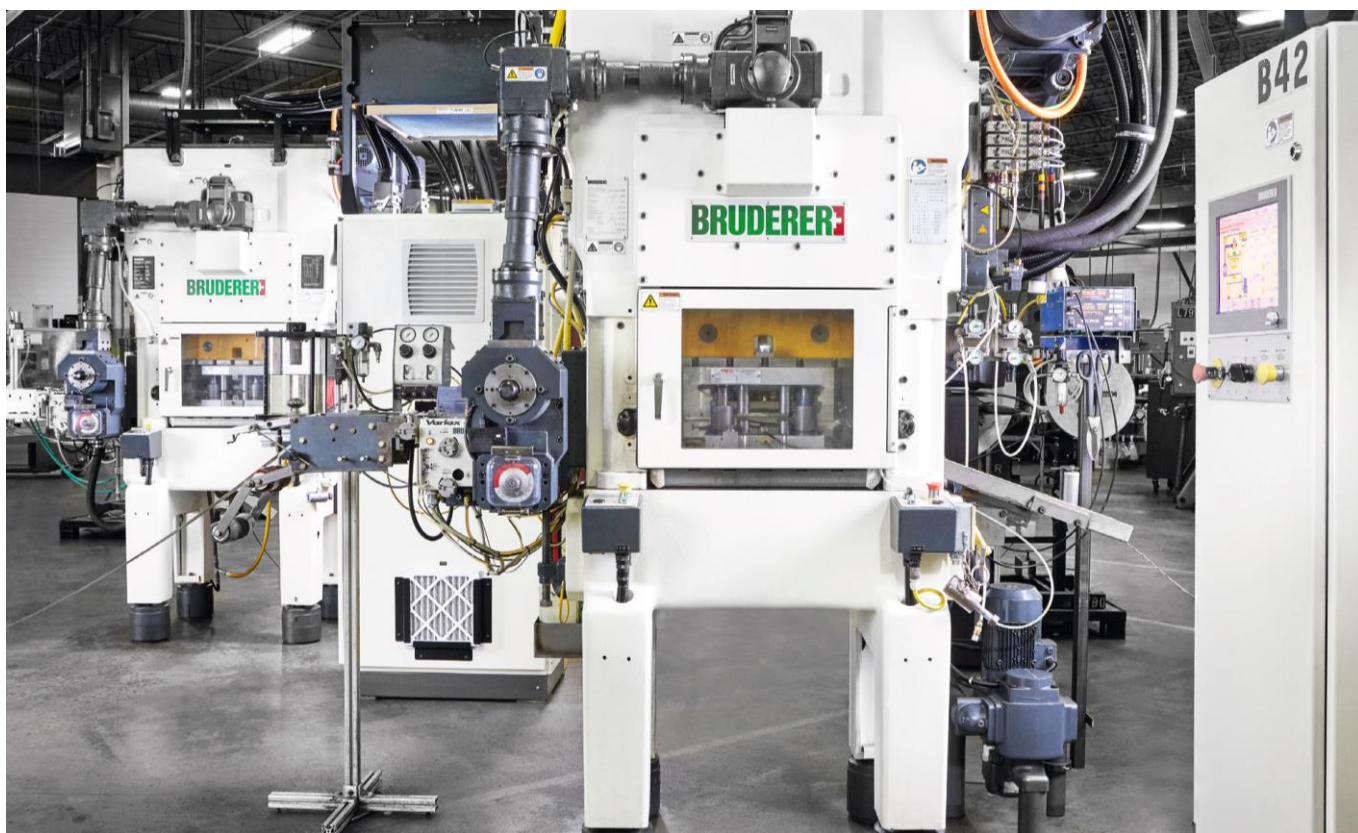


STAMPER



Thomas Engineering Company: big things in small packages.

The US-based Thomas Engineering Company is a big international player when it comes to stamping small and miniature parts. They deliver high-quality precision parts in the closest of tolerances to customers around the world in a timely fashion, and BRUDERER plays a role in this success story.

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Small stamped parts make for big success.

The Thomas Engineering Company of Brooklyn Park, Minnesota has established itself as a specialist manufacturer of small and miniature precision stamped parts from sheet metal. Over the years, they have consistently used their vast expertise and experience to do the impossible for their customers.

When tool-maker William J. Thomas founded the company in 1962, his main aim was to develop and manufacture tools with which he could stamp the most complex miniature and micro-miniature as well as medium-sized metal parts with ultra-high precision. Over 50 years on, Thomas Engineering Company has become one of the leading innovators, developers and manufacturers in this field of stamping for customers all around the world. Indeed the Brooklyn Park company has made a name for itself when it comes to the timely delivery of large quantities of the smallest parts stamped to the closest of tolerances.

Creating solutions.

The more difficult or seemingly impossible a task is, the more the 50 employees are in their element. The comprehensive range of Thomas Engineering Company services includes Rapid Prototyping – a department specialised in developing and executing test series of up to 5,000 stamped parts in just five to ten working days. “Customers come with their ideas, sometimes in the form of simple hand-drawn sketches, sometimes with CAD data,” explains managing director Tim Aberwald. “Our specialised prototyping team then gets to work looking for the most suitable manufacturing solution. The smallest parts are made from a strip thickness of less than 0.03 mm and have to respect the finest tolerances. The Thomas Engineering Company has extensive experience in this sector, making it a preferred partner for the rapid implementation of precision parts for customers developing new and innovative products. This means that all stakeholders on both sides are always at the cutting edge of technology. In recent years, one of the most demanding projects saw us combine three parts in one – a task we managed with aplomb.”

Global reputation.

The main market for the stamped parts made by the Thomas Engineering Company is firms in the electronics, medical, telecommunications and automotive sectors in Asia, Europe, North and South America.

In the electronics field, where equipment is becoming ever smaller and at the same time more functional and with greater levels of performance, demands for precision and electronic connectors are increasing. These parts are stamped at up to 1,500 strokes per minute and sent by the million every month all around the world.

In the medical sector, where high-quality material is machined at the closest of tolerances, parts stamped by the Thomas Engineering Company are used in surgical blades and in monitoring equipment to cite two examples.

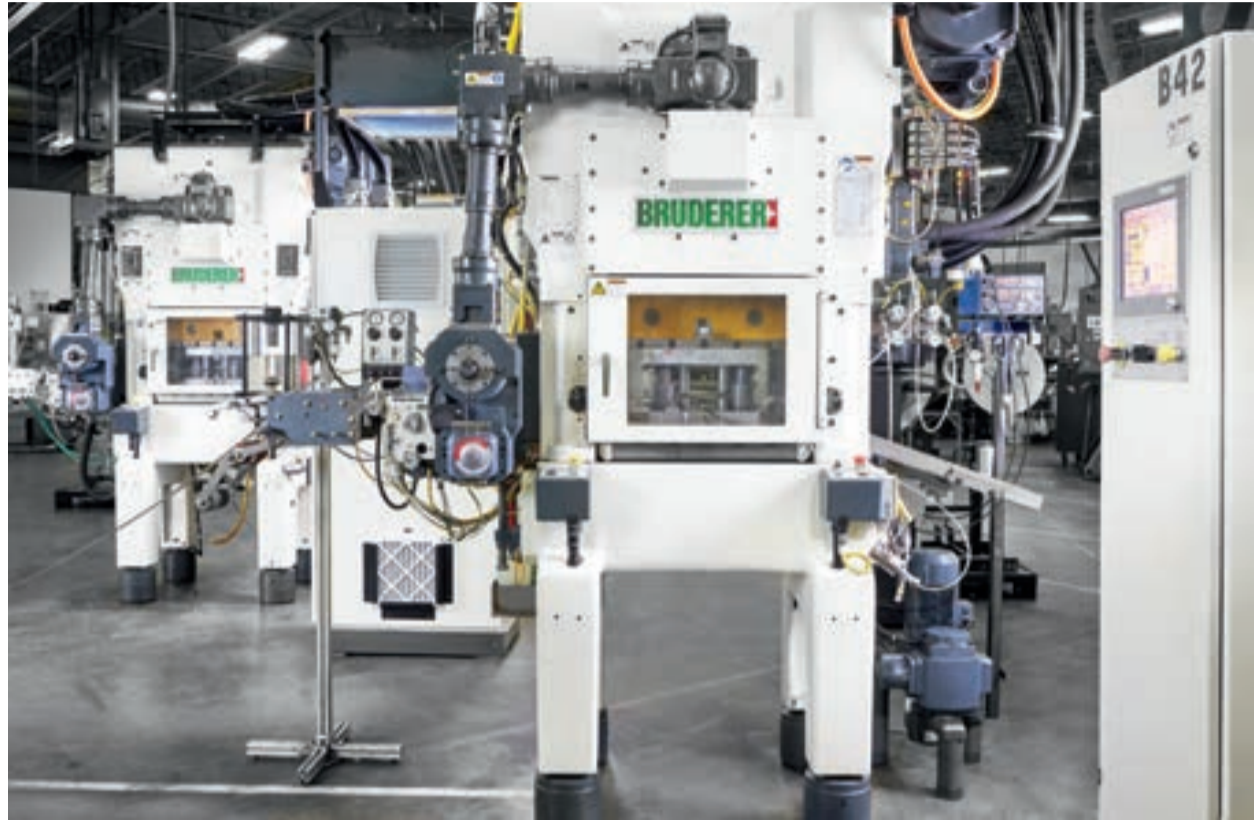
For jobs from the automotive industry, the BRUDERER high-performance automatic stamping presses are put to the test: in the space of a couple of minutes they can be stamping out 60,000 parts per minute with speeds of up to 1,500 strokes. The parts are then used for example in electronic components, ignitions and fuel supply for vehicles. Creative solutions are often the order of the day, and thanks to its CAD-software supported tool production, the Thomas Engineering Company can deliver millions of high-quality parts every month to the required close tolerances at incredibly competitive costs.

The demands of customers in the telecommunications sector are totally different yet equally as exacting. The parts stamped in Brooklyn Park are used in the cell-phone and satellite sectors as well as for customers in the computer and aviation industry.

Good tools make for top-class parts.

The company buildings occupy some 8,000 square metres, with around 3,000 square metres for tool manufacturing, construction and prototype construction alone, producing several million stamped parts every month. The firm’s 50 employees work in a highly modern environment, and are well trained and highly experienced.

Tool manufacturing sees a team of 12 developing and manufacturing cutting-edge stamping tools for in-house production. Ultra-modern CAD software means that development and lead times can be kept to a minimum. One of the specialities



Precise and reliable: BRUDERER high-performance automatic stamping presses.

of the Thomas Engineering Company is the development and manufacturing of high-speed carbide composite tools. The company also trains its own staff in tool manufacturing, with tool-makers having a four-year apprenticeship and die-setters two years of training.

Top-quality stamping the core competency.

The 30 BRUDERER high-performance automatic stamping presses are used in the production process to manufacture millions of parts every month. The first of these, a BSTA 30, dates back to 1965 while the most recent – a BSTA 510-125 – was delivered in September 2015 and is used to stamp high-precision parts for the medical sector. “Once again, the main reason here for choosing BRUDERER was the precision, the reliability and the long tool life that we can achieve with the automatic stamping presses,” says managing director Tim Aberwald.

The company also offers clients other elements in the manufacturing process, including spot welding, riveting, plating and finishing, deburring and heat treating of stamped parts as well as part and sub-assembly and a variety of packaging solutions. In this way, each customer gets products which correspond to the specific requirements of their industry and their equipment.

Quality at the closest tolerances.

Thomas Engineering Company relies on Total Quality Management for quality assurance at every step of the stamping process, beginning with first-class raw materials and going right through to the finished product. The company is ISO 9001:2008-certified, and uses programmable non-contact visual control systems in the production process to reduce testing times, eliminate errors, provide statistical data in real time and constantly monitor quality.

“We specialise in the stamping of miniature, micro and ultra-thin as well as medium-sized parts,” explains CEO Su Lien. “We can process virtually every metal and any alloy, including aluminium, brass, bronze, copper, Inconel alloys, steel, stainless steel and titanium, with 22 – 75 tonnes of pressing force and speeds of up to 1,500 strokes per minute. We can maintain tolerances of 0.005 mm at strip widths of up to 0.025 mm whilst maintaining high standards of quality, thanks to our BRUDERER automatic stamping presses used in combination with our own tools. This obviously means that we can stamp in a highly cost-efficient way, and on the rare occasions when we need a replacement part, it arrives in no time at all. All of these reasons make BRUDERER a top-class partner for us.”

Like other innovative players in the stamping field, the Thomas Engineering Company sees the trend towards ever smaller and more complex parts persisting in the future. “We have highly-qualified, specialised and very experienced staff,” states CEO Su Lien. “If we continue to combine our competencies with those of innovative and reliable partners like BRUDERER, we will be able to overcome any future challenges with similar success.”

