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Partnership for excellence in plastics processing

EVCO Plastics and Kistler: strategic partners for zero-defect
production in injection molding



Anna Bartz (left), Director of Communications at EVCO: "With Kistler's help, we can offer our clients solutions they didn't even know before."

EVCO Plastics always wants to offer its customers added value for their injection-molded parts, so this leading US-based manufacturer partners with Kistler to ensure consistent excellence in plastics processing. For a current project in the medical sector, EVCO has opted for cavity pressure sensors from Kistler together with the ComoNeo process monitoring system – and in this application, ComoNeo's MULTIFLOW feature plays a particularly important part.

Technological advances and ever-higher customer expectations are accelerating the journey towards zero-defect production in almost every industry. This is certainly true in the injection molding sector, where manufacturers can exploit opportunities for optimization and added-value manufacturing by instrumenting a mold with cavity pressure sensors and process monitoring equipment. EVCO Plastics is a globally recognized leader in injection molding and many additional technologies. This family-run business – founded in Wisconsin in 1964 – has a workforce of over 1,800 employees spread across eleven facilities in the US, China and Mexico. Anna Bartz, Director of Communications at EVCO, points out: "Together with our customers and partners, we take plastics processing to the next level. Following some recent growth, we now operate more than 260 molding machines. But we not only offer excellence in injection molding – in terms of state-of-the-art technology, close cooperation, tight tolerances and high quality demand – but also technologies and services across the entire value chain, such as automation, packaging, labelling and more."

Precision Molding is one of EVCO's four main divisions, with products and solutions covering diverse industries ranging from agriculture and powersports to packaging and consumer goods.

"We're involved in just about everything except automotive parts and implantable devices – but medical technology is an important business for us, accounting for roughly 20 percent of our annual sales," Bartz continues. Consequently, two EVCO sites are equipped with an ISO Class 8 Clean Room: EVCO headquarters in Deforest, Wisconsin, and the Chinese production facility in Dongguan.

ComoNeoMULTIFLOW: automatic hot runner balancing

Mike Busser had his own plastics company for micro-precision parts before joining EVCO, where he has now been in post as Innovation Center Manager for over three years. He reports: "Requirements in medical device manufacturing are exceptionally high in terms of norms and regulations. We want to offer our customers added-value solutions: the trend is clearly towards zero defect – and that's where Kistler comes in." The two companies



With support from Kistler sensors and systems, leading US-based manufacturer EVCO takes plastics processing to the next level for many industries including the medtech sector.

first made contact at K 2019 in Düsseldorf, where EVCO was in search of optimization potential for their medtech projects. At this trade fair, they were introduced to cavity pressure sensors from Kistler as well as its ComoNeo process monitoring and control system – including ComoNeoMULTIFLOW, a feature that enables hot runner balancing for multi-cavity molds based on precise cavity pressure measurement. “MULTIFLOW detects the different filling statuses in each cavity, and automatically adapts the temperature of the injection nozzles,” Busser explains. “We’re currently using the system for zero-defect manufacturing of a component for a medical diagnostic kit. But in principle, all our molds now have a pocket for Kistler sensors. Now that the Kistler team in the US has supplied us with the portable ComoNeo, we’re able to use it flexibly for different projects.”

Multiple benefits thanks to integrated measurement technology

The current solution at EVCO operates with sixteen 9011C load cell washers from Kistler – one for each cavity at end-of-fill, mounted indirectly using a sleeve. Connecting cables can be exchanged independently of the sensor in case of damage or transmission problems, and non-compliant parts are separated robotically for each cavity. The team of process engineers headed by Mike Busser also installed a diagnostic tool that can monitor the status of the mold and its integrated Kistler measurement system at any time. “This unique solution has truly helped us to achieve zero defect for our customer. It wouldn’t have been possible without the tremendous support of Kistler US – namely Jim Flom, Curtis Krick and Mike Prisby, who are now part of the family. By using ComoNeo, we’ve not only eliminated challenges with core shift, but also ramped up productivity and reduced cycle time.”

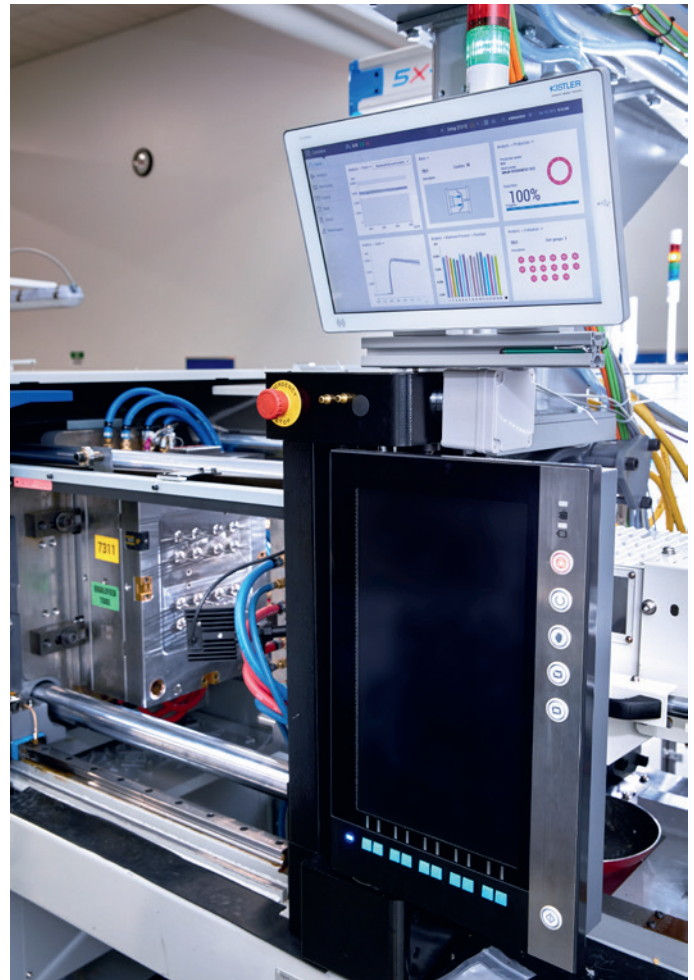
“Requirements in medical device manufacturing are exceptionally high in terms of norms and regulations. The trend is clearly towards zero defect – and that’s where Kistler comes in.”

Mike Busser, Innovation Center Manager at EVCO

Given these convincing results and overall customer satisfaction, a strategic partnership between the two companies is ready to go live. Anna Bartz again: “Our growth and the success story with Kistler are just about to take off. With Kistler’s help, we can offer our clients solutions they didn’t even know before. For example, we’re already looking into projects for our large parts business, and there’s an upcoming opportunity with a big and globally present medical device supplier where we can count on Kistler – for sure.”

Progress and innovation together with partners and clients

Another key element of a joint approach from EVCO and Kistler will be customer education. Kistler solutions are not yet as well known or widely present in the US as in other markets, so a Tech Center demonstrating all the technologies and opportunities both parties can offer to a larger audience would be a major step forward for injection molding and plastics processing in general. As Busser notes, this could leverage huge potential for EVCO clients in the Americas and beyond. “We can do more – that’s always our attitude and message towards our customers.



ComoNeo from Kistler integrated in a molding machine at EVCO: with the MULTIFLOW feature, users can monitor and control multi-cavity molds on the basis of precise cavity pressure measurements.

Together with Kistler, we’re able to offer them solutions for needs they didn’t know they had – but, of course, this requires some education beforehand.” James Flom, Field Sales Engineer Plastics at Kistler, comments: “We embrace the idea of jointly educating new and existing clients, and we’re excited about the many new opportunities and programs”.

Meanwhile, injection molding as a technology is certainly not standing still: at EVCO, engineers are looking into ways of continuing to improve traceability, down to each single part and its manufacturing footprint (including a complete record of conditions) – even for high-volume lots with millions of parts. “Here, we already acquire valuable data from the ComoDataCenter, but there’s still some way to go before we can assign that data to every single produced part – with a QR code, for example,” Busser explains. Liquid Silicone Rubber (or LSR) is another innovation that EVCO is pursuing. This unique material offers new opportunities for industry in general and the medtech sector in particular. “There are plenty of possible applications, but also a lot of skepticism in the market because of the difference in technology. But – with Kistler as an asset in our pocket – we’re optimistic that we will overcome the remaining obstacles and go to market before the end of 2022,” Busser concludes.

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