

Flexibility is in the DNA

The partnership between futronic and Forma Glas has meanwhile endured through several exciting projects. And the success story continues: a control system for a derelict rotary blowing machine has now been developed by futronic on behalf of the Austrian engineering firm. The company is also venturing into unknown territory with an automation solution for the first Forma Glas crack-off machine.

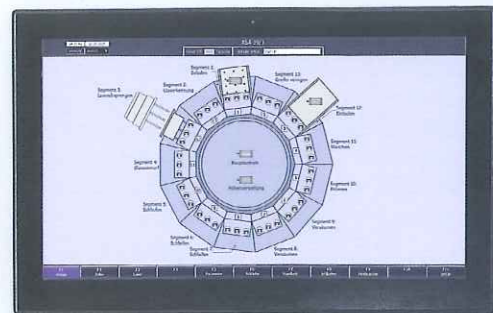
The story begins at a glassworks in China. A rotary blowing machine stands in the basement of one of the factory buildings; the machine is European-built but the control cabinet belonging to it was never actually delivered. The glass manufacturer eventually decided to contact Forma Glas, the Austrian supplier. Forma Glas is an engineering company specialised in the development and production of precisely this kind of rotary blowing machine for the tableware sector – and a close, longstanding cooperation partner of futronic.

“We didn’t know the machine at all, so it was a real challenge”

At the end of 2016, the request was passed on to the Tettngang firm and futronic’s technicians made their first trip to the Far East. They inspected and measured the machine, tested the sensors and actuators, and documented which electronic components were available and which were lacking. The futronic specialist returned to Germany tasked with providing the rotary blowing machine with a suitable control system and

ultimately bringing it back to life again. “It was a rather unusual mission, of course”, admits Stephan Pies, the man responsible for the project at futronic. “We didn’t know the machine at all. But it was a challenge we accepted gladly.”

Pies knew what he was doing because the futronic portfolio also includes a blow machine control system (FBC). The technology for the FBC is derived from the Siemens SIMOTION motion control system. It was developed by futronic in cooperation with Forma Glas and is therefore tailored to the Austrian company’s machines. On the other hand, “Our controls have always been based on open, non-proprietary architecture, which means they can be customised to machines from different manufacturers”, Pies explains. “You could say this flexibility is part of our DNA.” Not surprisingly, the design, software adaptation and assembly were completed without any problems. And following a successful trial run, the control cabinet housing the machine control system left Tettngang in the summer, headed for China. The cold run and commissioning are scheduled for spring 2018.



Stephan Pies, futronic Sales Manager

“You could say flexibility is part of our DNA”

The developers at futronic were still busy working on the rotary blowing machine control system for the customer in the Far East when the story took a new turn. That same customer asked Forma Glas to also supply a so-called crack-off machine. This machine is an elementary component of any stemware production line, for instance, alongside the blow moulding and press machines. It cracks off the glass goblets to size, then grinds, washes and finally polishes them. It was only last year that the Austrians took the decision to develop crack-off machines of their own. The idea was that Forma Glas should in future be in a position to offer complete tableware production lines. The automation of the machines and equipment is to be entrusted to a proven partner: futronic.

The ASA13/3, as the new crack-off machine has been christened by Forma Glas, is likewise designed as a rotary blowing machine. Three glasses are always processed in parallel at its 13 different sections – from loading via the actual crack-off section (section 3) to cleaning and, last but not least, the take-out (vacuum gripper). The glass is measured and cracked off using advanced CO₂ laser technology. The Siemens SIMOTION control system is accommodated in the main cabinet. Once again, a slip ring is used to transmit data and power to the tower distributor cabinet on the top, rotating part of the machine. The tower then distributes this data and power to the valves and drives for the 52 servo motors at the 13 processing sections, for example.

The FBC and FPC served as inspiration for the development of the control and drive system, which has been named the futronic Crack-off Machine Control System (FCC). “The FCC is what you might call a hybrid of our controls and drives for the blow moulding and press machines that have been doing a great job in Forma Glas’ rotary blowing machines for several years now”, Pies adds. The developers at futronic can resort to tried-and-tested technology and components, in other words, such as a Jetter touch panel PC, which visua-

lises the software for the operator, or the SIMOTION S120 axis system for regenerative feedback of excess power.

The integration of the laser unit with glass detection function and three parallel laser cutters was a new challenge, however. What’s more, the design of the tower distributor cabinet is such that the space it provides is limited; the control system must therefore be easy to integrate into the Siemens technology and take up as little room as possible. “That’s why we chose a Parker PSD servo drive”, says Pies.

The development, design and assembly of the FCC, too, are going absolutely according to plan in spite of the very tight time frame; the control and drives have been successfully tested by futronic and have also passed the cold run at Forma Glas. The complete crack-off machine is now being shipped to China, where it is due to be integrated in the production line and put into operation at the end of the year.

“With a partner like Forma Glas, we’re not afraid to venture into unknown territory”

Both the end customer and Forma Glas are already very happy with the fruits of the partnership. Stephan Pies never expected anything else. He knows he can rely one hundred percent on his developers and technicians, some of whom can look back on decades-long experience and enormous expertise in automation. “Nothing is routine here and no two projects are the same”, he comments. “We’ve always had the courage to take on new challenges and tread new ground from the outset.” And with a partner like Forma Glas at futronic’s side, “we’re not afraid to venture into unknown territory”.