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## USER REPORT

BILORA Kunststofftechnik GmbH, Germany

### **BILORA utilizes Insider solution with integrated auxiliaries from WITTMANN BATTENFELD**

***Since March 2019, BILORA Kunststofftechnik GmbH in Germany has been operating two injection molding machines with Insider solution from WITTMANN BATTENFELD. These machines recommend themselves by their compactness, reliability and efficiency.***

The origins of BILORA now date back an impressive number of 111 years to 1909, when Metallwarenfabrik Kürbi & Niggeloh was founded in Barmen-Rittershausen. Then, this company manufactured tubular tripods, pendant luminaires, music stands and other metal goods. Today's corporate headquarters in Radevormwald were built and officially opened in 1911. In 1956, the company's production output exceeded 1 million cameras.

The first plastics injection molding machine was purchased in 1961. The management had recognized the advantages of this new technology, and at this point the potential inherent in these materials originally frowned on as "cheap plastic" had already long been realized. Plastics were now able to compete with metals. Engaging in plastics injection molding resulted in numerous advantages, such as low-cost production of individual parts, virtually complete elimination of downstream finishing, perfect surfaces, light part weights and dispensing with numerous steps in assembly work. In 1994, the new company KÜRBI & NIGGELOH BILORA GmbH was founded, which now exclusively engaged in manufacturing plastic products. In 2016, this company was renamed BILORA Kunststofftechnik GmbH.

Today, BILORA produces a wide range of different parts made of engineering plastics by mono- and two-component injection molding in both small and large-production lots, using 40 injection molding machines with clamping forces from 150 to 2,000 kN. BILORA's product portfolio also includes metal/plastic composites, such as are used, for example, in the automotive industry.

Many of the molded parts undergo further processing, including pad and screen printing, assembly of components (as well as functional tests if desired by customers)

or shelf-ready sales packaging. Plastic parts for machine construction are frequently subjected to mechanical downstream finishing at BILORA, since the small numbers of units would not justify an investment in elaborate molds. The use of ERP and MES systems ensures complete traceability of every single batch.

For its in-house mold-making shop, the company has invested in a CNC machining center and a wire EDM machine. The company also operates its own design department supported by CAD/CAM applications.

## **BILORA und WITTMANN BATTENFELD**

The cooperation with WITTMANN BATTENFELD started several years ago with the installation of a special parts removal technology. BILORA invested in various WITTMANN robot systems from the W8 and W9 series, which were retrofitted to existing injection molding machines. BILORA produces its own parts removal grippers equipped with security query systems and some additional functionalities. Convenient facilities for easy integration and control of the removal grippers by the robot's control system ensure optimal utilization of the available options. The reliability of the equipment and the good support provided by WITTMANN BATTENFELD were the decisive factors prompting BILORA's subsequent decision to acquire WITTMANN single- and dual-circuit temperature controllers (for water with temperatures up to 160 °C), as well as DRYMAX dryers and DOSIMAX dosing systems.

In March 2019, two servo-hydraulic *SmartPower* injection molding machines from WITTMANN BATTENFELD, with 600 kN and 900 kN clamping force respectively, were installed at BILORA – both models designed as Insider cells. An Insider cell comes with an integrated handling system for the molded parts, including a transfer conveyor belt, as well as a protective encasement firmly connected to the machine. Compared to conventional systems, these integrated fixtures reduce the work cell's footprint by up to 50 %. BILORA appreciates the machines from WITTMANN BATTENFELD for their integrated auxiliaries as well as their compact design, moreover, they have also proved extremely reliable and efficient. Michael Müller, Managing Director of BILORA, comments: "The Insider machines from WITTMANN BATTENFELD recommend themselves primarily by their space-saving design, the good balance between mold space, clamping force and injection units, as well as CE compliance without any need for additional protective devices outside the machine, full integration of the robots, and last, but not least, the excellent user-friendliness, which we have already come to know and appreciate from the previously installed robot systems. With these solutions, WITTMANN BATTENFELD is helping us to continue manufacturing our products efficiently and with a high quality standard "



**Fig. 1:** *SmartPower 60* and *SmartPower 90*, equipped as Insider cells.  
(Photo: WITTMANN BATTENFELD)

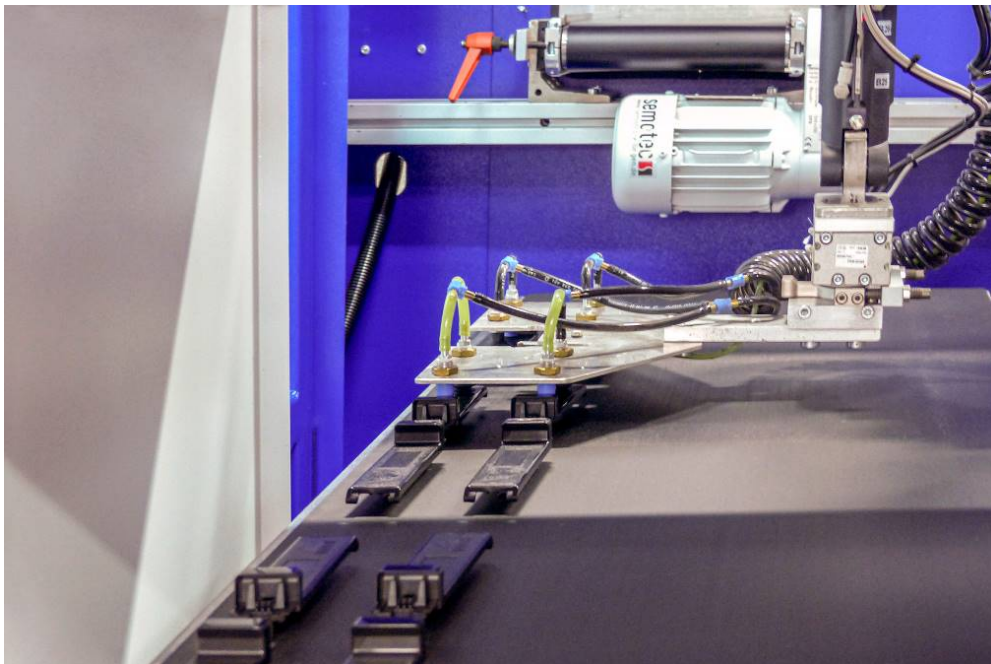


**Fig. 2:** from the left: Jörg Schröder, WITTMANN BATTENFELD Sales, Michael Müller, Managing Director of BILORA  
(Photo: WITTMANN BATTENFELD; please note: this picture was taken before the outbreak of the Corona pandemic)





**Fig. 3:** WITMANN TEMPRO plus D temperature controllers integrated in Insider cells  
(Photo: WITMANN BATTENFELD)



**Fig. 4:** Parts depositing by WITMANN robot  
(Photo: WITMANN BATTENFELD)

## The WITTMANN Group

The WITTMANN Group is a globally leading manufacturer of injection molding machines, robots and auxiliary equipment for processing a great variety of plasticizable materials – both plastic and non-plastic. The group of companies has its headquarters in Vienna, Austria and consists of two main divisions: WITTMANN BATTENFELD and WITTMANN. Following the principles of environmental protection, conservation of resources and circular economy, the WITTMANN Group engages in state-of-the-art process technology for maximum energy efficiency in injection molding, and in processing standard materials and materials with a high content of recyclates and renewable raw materials. The products of the WITTMANN Group are designed for horizontal and vertical integration into a Smart Factory and can be interlinked to form an intelligent production cell.

The companies of the group jointly operate eight production plants in five countries, and the additional sales companies at their 34 different locations are present in all major industrial markets around the world.

WITTMANN BATTENFELD pursues the continued strengthening of its market position as a manufacturer of injection molding machines and supplier of comprehensive modern machine technology in modular design. The product range of WITTMANN includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, temperature controllers and chillers. The combination of the individual areas under the umbrella of the WITTMANN Group enables perfect integration – to the advantage of injection molding processors with an increasing demand for seamless interlocking of processing machines, automation and auxiliaries.

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