

NEWS RELEASE*[Witt-NR-12-2018_EcoPower-160-clothes-hanger-application]*

July 10, 2018

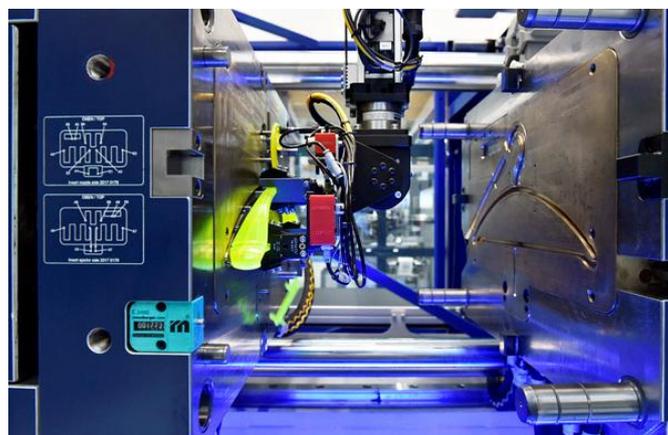
Customizing through automation

There is a trend in the plastics industry towards customizing normally mass-produced plastic parts, which includes features such as customized imprints with logos, letterings and other decorative elements. At its 10th anniversary celebration on 13 and 14 June in Kottlingbrunn (Lower Austria), WITTMANN BATTENFELD demonstrated a typical example of producing high-quality coat hangers including a customized print.

In this application, the coat hangers are molded on an all-electric WITTMANN BATTENFELD **EcoPower 160/750** injection molding machine, using the **AIRMOULD®** internal gas pressure process. A **W918** robot laid out for a total load capacity of 6 kg takes care of parts handling. The WITTMANN robot models from the **W918** series are available with different stroke lengths; the combination 620/1200/2000 (demolding/vertical/horizontal stroke) is frequently used as standard. The **W918** model for this application is also equipped with **B/C servo rotational axes**. This provides additional rotation options of 270° around the vertical axis and 180° around the horizontal axis, to provide such additional degrees of freedom for programming the robot's movements.

Customized printing on parts

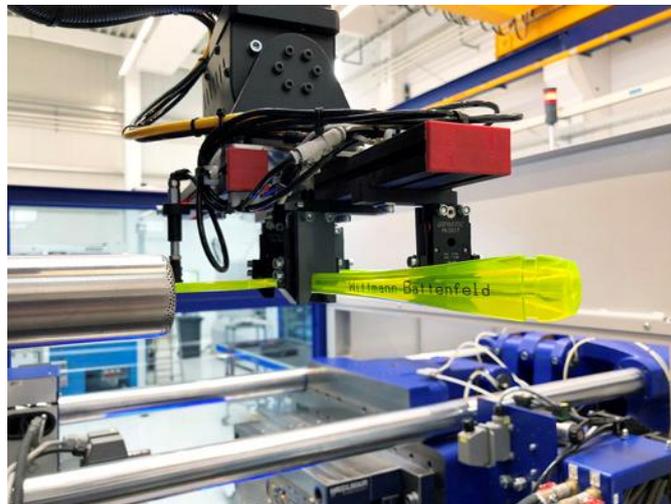
Following parts removal, the **W918** robot positions the broad upper edge of the coat hanger just below an inkjet nozzle mounted directly on the horizontal axis of the robot. As the next step, the robot starts a parallel movement past the inkjet nozzle, while simultaneously triggering the printing process "in flight". Printing on the inscription area proceeds at the synchronized speed of the **W918** robot, so that it normally does not affect the cycle time of the injection molding machine.



Removal of the injection-molded part from the mold.



Printing on the part with an inkjet nozzle (shown on the left).



The printed finished part prior to final depositing.

After printing, the ink dries within a few seconds, and after that the finished part no longer needs any special type of handling. The text (or theme) to be printed on the part only needs to be transmitted to the printer a few seconds before the printing process is started, and it can vary from one part to the next.

Retrieval of numbers and codes

This printing technique can be applied to inscriptions with batch or serial numbers in the form of either barcodes or QR codes. These can be consecutive serial numbers or numbers allocated by random generators, which provide no indication whatsoever about preceding or following parts, nor do they allow conclusions to be drawn about production figures. In the latter case, the relevant number is preferably printed on a less visible spot, and the relevant quality parameters can be matched with the serial number and saved centrally together with it. An authorized person can retrieve these data via a web query at any time, even after a number of years. The availability of the data only depends on storage programming and can extend over the warranty period for the finished product, or over its typical lifetime period.

WITTMANN 4.0 generates quality data sets

The coordination of the quality parameters to be saved – and consequently the availability of a complete and detailed data set – can be implemented very easily with **WITTMANN 4.0** production cells. **WITTMANN 4.0** enables automatic recognition of any peripherals connected to a WITTMANN BATTENFELD **B8** machine control system, and consequently automatic compiling of all relevant data into a complete quality data set. In addition to the machine's injection molding parameters, the current parameter settings and actual values of the peripheral devices connected to it are collected and linked to each other by central storage. This data set enables targeted readout of individual molded parts as required, which can be achieved by setting freely definable filter parameters. This type of approach supports, for example, the implementation of product recalls, since the period of time during which the parts affected in each case were produced can be defined very precisely. On the whole, this method provides a low-cost alternative to comprehensive traceability of individual parts.

The WITTMANN Group is a worldwide leader in the manufacturing of injection molding machines, robots and peripheral equipment for the plastics industry. Headquartered in Vienna/Austria, the WITTMANN Group consists of two main divisions, WITTMANN BATTENFELD and WITTMANN, which operate 8 production facilities in 5 countries, including 34 direct subsidiary offices located in all major plastics markets around the world.

WITTMANN BATTENFELD focuses on the independent market growth in the manufacturing of state-of-the-art injection molding machines and process technology, providing a modern and comprehensive range of machinery in a modular design that meets the actual and future requirements of the plastic injection molding market. WITTMANN's product range includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, mold temperature controllers and chillers. With this comprehensive range of peripheral equipment, WITTMANN can provide plastics processors with solutions that cover all production requirements, ranging from autonomous work cells to integrated plant-wide systems.

The syndication of the WITTMANN Group has led to connectivity between all product lines, providing the advantage plastics processors have been looking for in terms of a seamless integration of injection molding machines, automation and auxiliary equipment – all occurring at a progressive rate.

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