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## PRESS RELEASE

WITTMANN BATTENFELD at the Fakuma 2017

### **WITTMANN BATTENFELD with highly dynamic *EcoPower Xpress* at the Fakuma 2017**

***Under the motto “be smart”, WITTMANN BATTENFELD will showcase the standard version of its new all-electric high-speed machine from 17 to 21 October at the Fakuma 2017 in hall B1, booth 1204.***

With the new *EcoPower Xpress* 400/3300+, WITTMANN BATTENFELD will present its all-electric high-speed machine designed primarily for the requirements of the packaging industry and for thin-walled applications. This machine will be available on the market from the autumn of this year in the clamping force sizes of 400 and 500 t with injection units in 3 sizes for injection speeds of up to 600 mm/s and injection pressures of up to 2,500 bar. It replaces the TM Xpress, the high-speed hydraulic toggle lever machine model from WITTMANN BATTENFELD. A special feature is its high injection dynamism with up to 1,500 mm/s<sup>2</sup> acceleration.

The *EcoPower Xpress* is a fully electric high-speed machine whose highly dynamic drive axes for injection, closing and opening are laid out for fast movements as well as extreme control accuracy. The injection process is handled by a rack-and-pinion gear unit driven via a dual motor system. Thanks to the minimal rotatory masses involved in this drive solution, extreme acceleration and speed values can be achieved, which exceed those of conventional hydraulic solutions and their electric screw drives. In combination with the high-precision control of its servo-electric drive, the high-speed injection aggregate of the *EcoPower Xpress* reaches ultimate precision, repeatability, acceleration and speed. All of this comes with an extremely low energy consumption, which is even further reduced by KERS, the kinetic energy recovery system patented by WITTMANN BATTENFELD, which transforms deceleration energy into electrical energy and uses it within the machine.

All main movements of the *EcoPower Xpress* as well as the mold height adjustment function of its clamping unit are driven by water-cooled servo motors. For the secondary movements such as the ejector, nozzle stroke or core pulls, a servo-

hydraulic aggregate is used in the standard version. A highly dynamic servo-electric ejector is available as an option. The newly developed dual 5-point toggle lever system with a self-locking function in the end position offers an optimal solution in terms of both kinematics and energy efficiency. All linear movements, such as the moving platen and cross-head strokes are also effected via low-friction linear guides. Moreover, the newly designed central grease lubrication system ensures excellent cleanness and virtually zero maintenance requirements for the entire clamping unit.

A typical feature of the *EcoPower Xpress* is its modular concept. The machine's clamping and injection units are self-contained modules and can be freely combined with each other as parts of a modular system. The machine stands out by its extremely low central height and optimal access to the mold area and the injection unit. Various technical details have been adjusted to the specific requirements of thin-wall and packaging technology. For example, the distance between tie-bars and the opening stroke of the *EcoPower Xpress* have been significantly increased compared to the TM Xpress. This provides ideal conditions for the production of relatively flat parts in multi-cavity molds as well as bulky hollow vessels such as buckets with IML applications. The fixed mold platen is made of steel to ensure lowest possible platen deflection rates.

The machine's robust design in conjunction with its water-cooled servo motors and encapsulated direct drives also keep the machine's noise emissions extremely low.

The *EcoPower Xpress* thus stands for high performance with optimized use of energy, low noise emissions and maximal cleanness, thus making a vital contribution to sustainability in plastics processing.

At the Fakuma, WITTMANN BATTENFELD will demonstrate the functionality of this highly dynamic machine model on an *EcoPower Xpress* 400/3300+ manufacturing HDPE closing caps within a cycle time of 2.7 seconds in a 96-cavity mold supplied by the French company Plasticsud. The caps will be cooled with the cap cooler from Eisbär, Austria and then deposited in boxes.

The specific energy consumption of 0.39 kWh/kg reaches an extremely low level.



**Fig. 1:** EcoPower Xpress 400 – the new, highly dynamic all-electric series



**Fig. 2:** Toggle lever bolts



**Fig. 3:** Highly dynamic ejector for quickest demolding (photo: Plastisud)



**Fig. 4:** Caps – produced with a 96-cavity mold supplied by Plasticsud

## **The WITTMANN Group**

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 more than 33 direct subsidiary offices located in all major plastics markets around the world.

WITTMANN BATTENFELD focuses on 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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