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PRESS RELEASE

WITTMANN BATTENFELD at the K 2025 in Düsseldorf

“Smart Choices – Smart Savings” with solutions from WITTMANN BATTENFELD

At the K 2025 from 8 to 15 October, WITTMANN will present to its visitors at booth No. B22 in hall 15 a wide range of smart solutions in the field of injection molding technology under the motto of “Smart Choices – Smart Savings”. In line with the Group’s overall concept of “It’s all WITTMANN”, the entire product portfolio of the WITTMANN Group will be presented for the first time at the K fair on common booth. WITTMANN will also be present at The Power of Plastics Forum, outdoor area E06, and on a partner company’s booth as well.

Under the motto of “Smart Choices – Smart Savings”, the WITTMANN Group will demonstrate to its visitors how smart choices produce smart savings – saving valuable resources as well as the pocket book. As the Group’s machine manufacturer, WITTMANN BATTENFELD will lead trade visitors through the program of injection molding machines and other equipment.

At its **booth B22 in hall 15**, WITTMANN BATTENFELD will present the following equipment:

The highlight – the new MacroPower with a one-piece machine body

The **highlight** of this presentation will be **the new MacroPower 500/3400**. Although the machines of the MacroPower series from WITTMANN BATTENFELD have always scored by their small footprint and consequently modest space requirements on customers’ production floors, the new MacroPower stands out by even greater compactness. This has been achieved by a completely new design with a space-saving, one-piece machine body. The machine’s injection unit also comes with a new design and is now pivotable. These features help users primarily to save the valuable resource of **time**. Firstly, the one-piece machine body facilitates installation and set-up of the machine on the customer’s site, and secondly, the pivotable injection aggregate, accessible from both the machine’s front and rear sides, makes screw changes much easier. The new MacroPower is fitted with the Unilog B8X control system, which includes several control system components developed inhouse.

These make it possible to reach a higher internal clock frequency and consequently shorter response times to sensor signals, resulting in a higher reproducibility of parts with the familiar ease of use and visualization. The MacroPower with a one-piece machine body will be available from the K 2025 onward in sizes from 400 – 600 t.

On the new **MacroPower 500/3400**, a box known as “HAIBOX” will be produced from a type of PP delivered by Borealis, using a single-cavity mold supplied by Haidlmair, Austria. The machine will be equipped with a WITTMANN IML unit. The labels coming from Viapiani, Italy, will be inserted on both long sides of the box. Following parts removal, a thermal photo of every shot is taken by a thermal imaging camera and then compared with the reference picture from the approval process. The pictures are checked by the TD14.0 software from SKZ, Germany, evaluating any deviations from normal temperature differences. If the temperature is outside the tolerance margin, a signal is sent to the robot to have the respective part sorted out. Next, the good parts are placed on a conveyor belt.

WITTMANN multi-component technology

Another machine from the **MacroPower** series will be shown with **multi-component technology**. This machine, a **MacroPower 650/2250H/1330H Combimould** with a **rotary table 1500 mm in diameter**, saves **space** on the production floor, and that not only due to the small footprint, which is a characteristic of all MacroPower machines, but also on account of its two horizontal injection aggregates. On this machine, a foldable laundry basket will be manufactured from PP and TPR, using a 1+1-cavity mold supplied by ATA Kalip ve Plastik, Turkey. The machine is equipped with a Primus 148T robot from WITTMANN, which removes the parts and deposits them on a conveyor belt.

The new EcoPrimus – efficiency meets economy

The second **highlight** of the WITTMANN Group in terms of injection molding machines to be presented at the K fair is the **new EcoPrimus**. As an all-electric machine model, its savings potential lies primarily in the use of electric **energy**. In the EcoPrimus, efficiency and economy are ideally combined. The EcoPrimus is a standardized model from the EcoPower series. It is the perfect answer to the current demands of the market, which is dominated by applications requiring only a small range of options. This machine comes with the latest-generation control system from the WITTMANN Group, i.e. Unilog B8X. The EcoPrimus has been released for sale from the K 2025 onwards in size 100, that is, with 1,000 kN clamping force.

On an **EcoPrimus 100/525**, closing caps for medical applications will be produced using a 24-cavity mold with an unscrewing device supplied by HTW, Austria. The parts are removed and deposited on a conveyor belt by a W918 robot from WITTMANN, then passed on to a tubular bag machine from Ravizza Packaging, Italy, and packaged.

Liquid silicone processing

Highly efficient use of **energy** will be demonstrated at the WITTMANN booth by another machine model from the EcoPower series. The exhibit involved here will be an **EcoPower 110/350** adapted for **LSR processing**. On this machine, a pump housing for sealing liquids will be manufactured from liquid silicone with a 2-cavity mold supplied by Elmet, Austria. A special device used here will be the Elmet TOP 5100 dosing pump – designed for maximum process stability and cost efficiency of LSR processing in mass production. The parts are removed and deposited on a conveyor belt by a W918 robot from WITTMANN.

A space-saving SmartPower Insider model

Furthermore, WITTMANN BATTENFELD will show a machine with particularly **modest space requirements** in the form of a servo-hydraulic **SmartPower 160/1000** laid out as an **Insider cell**. In this work cell, the WITTMANN parts removal robot, here a W918, the conveyor belt and the auxiliary equipment for upstream and downstream processing are all integrated inside the machine, thus presenting the entire system as a single compact unit. The machine is equipped with an all-electric injection unit to combine the advantages of the servo-hydraulic SmartPower in terms of its flexible, generous mold space with those of the all-electric EcoPower in the form of highly dynamic regulation for optimal shot-to-shot repeatability. What is more, the new WITTMANN WFC plus flow controller with Net8 control will be used as part of this system. The functionality of the SmartPower 160 Insider will be demonstrated at the fair by producing aerosol spray caps from PP with an 8-cavity mold supplied by HTW, Austria.

Micro injection molding with a 3D-molded tool containing nano structures

Micro injection molding, too, will be presented at the WITTMANN booth by an impressive application. The all-electric **MicroPower** specially designed for injection molding of smallest possible micro parts is not only compact and energy efficient, but also helps to save **material**. The unique design of this machine makes it possible to move the injection plunger all the way down to the parting line of the mold. This

reduces the melt cushion to a minimum. The resulting elimination of the sprue bar not only leads to significant material savings, but also makes precise control of the molded part possible, since the transmission of pressure is achieved via an extremely short flow path inside the gate. This improves both repeatability and process stability. All of this makes the MicroPower the ideal solution for virtually complete prevention of waste in manufacturing micro parts.

At the WITTMANN booth, a lab-on-a-chip will be made from transparent PP on a MicroPower **15/10**, which comes equipped with the new WITTMANN robot model W9VS2 specially designed for this machine. The production takes place inside 3D-printed 2-cavity mold inserts supplied by the Austrian company NanoVoxel, which are integrated in a basic tool box from Ernst Wittner GmbH. A special feature of the molded part with a size of 18 x 8 x 3 mm are its structures measuring 0.04 x 0.04 x 0.1 mm with corner radii down to 0.005 mm.

Vertical injection molding with highly automated machinery

And last, but not least, WITTMANN BATTENFELD will exhibit a vertical machine from the **VPower** series. The machines from this series stand out by their 2-tie-bar rotary table concept, which offers optimal accessibility by dispensing with a central tie-bar. Another attractive feature of this machine is its high speed, by which it saves **time** in the production process. This is achieved partly by generously dimensioned rotary tables fitted with a 2-bar portal clamping unit with two external traveling cylinders for fast opening and closing – and partly by the rotary tables operating with servo-electric drives for minimal rotation times and precise positioning.

At the K, a decorated structural component will be manufactured on a **VPower 160/525 R 1600** with an **automation system** supplied by WITTMANN Germany from the natural fiber-based material NFPP, in a joint project staged by the companies LEONHARD KURZ, FRIMO Innovative Technologies, Polyvlies and WITTMANN BATTENFELD. The natural fiber mat, combined in advance with a decorative foil, is picked up by a gripper of the WITTMANN robot from the feeding station, inserted into the machine and then over-molded with a contour. Next, the finished part is removed by the robot and turned over in a separate station. Then, the robot takes the finished part to the printing station. Here, a QR code containing further information on the application and the partners is printed on. At the quality inspection station, the dimensional accuracy of the overmolding is checked by a camera, before the finished part is deposited on a conveyor belt.

All machines present at the WITTMANN booth will be supplied via a central materials handling system and regulated via a central material control system.

In addition to the presentation of the machines mentioned above, visitors to the fair will find detailed information about the **TEMI+ MES** program and the **iMAGOxt** energy management software at a separate **TEMI+ workplace**, where they can also receive specific advice about improvements in energy management and resulting cost cuts at their own companies.

In addition, WITTMANN will demonstrate at its booth No. B22 in hall 15 the use of AI in servicing with a knowledge-based expert system for technical queries and troubleshooting – **AIM4Help**. AIM4Help is made available as first-level support via a web portal and offers a wide range of possibilities for supporting help with all kinds of questions concerning the operation and setup of WITTMANN appliances, including error analysis.

The Power of Plastics Forum, outdoor area E06:

The guiding theme of this year's K – "The Power of Plastics! Green – Smart – Responsible" – is reflected in the entire equipment from WITTMANN BATTENFELD. At the VDMA Power of Plastics Forum, outdoor area E06, located between the halls 15 and 16, two machines will be shown, which take these aspects into account in a special way.

Firstly, a machine from the **servo-hydraulic SmartPower** series will be shown. It stands out by its high level of **energy efficiency**. On this machine, a **SmartPower 350/1670**, processing of an alternative material will be demonstrated. In cooperation with the innovation company Wafflerie, based in the United Arab Emirates, WITTMANN BATTENFELD will demonstrate the production of an ice cream cone made from patented plant-based natural material. Developed by Wafflerie, the material consists entirely of food-grade, plant-based ingredients. It is not only compostable, but also fully edible – safe for both humans and animals. The material expands when injected into the heated mold, forming a porous, waffle-like structure – similar in principle to expanded polystyrene (EPS). The resulting product features excellent insulation, lightness, and a pleasant texture. The molded cones are removed by a Primus 128 robot and placed onto a conveyor. The 4-cavity mold was developed by German precision tooling specialist Precupa. Compared to traditionally baked waffle cones, the injection-molded version offers more consistent quality, greater mechanical strength, and longer shelf life – making it an ideal solution for food-safe, edible packaging.

The second machine is an all-electric **EcoPower DC Insider model**. This machine technology offers its users a considerable amount of savings potential in **energy costs**. On the one hand, these can be kept down by direct use of solar power, and

on the other hand, the direct current can easily be stored in conventional batteries and thus kept available as an ideal means to balance out expensive current peaks and to increase the security of supply. During the fair, the machine on display, an **EcoPower 180/750+ DC Insider**, will operate independently of the exhibition power supply network via a solar energy storage unit consisting of latest ecological salt battery technology supplied by inesco. The battery has a total capacity of 45 kWh, more than enough for uninterrupted machine operation throughout an entire 8-hour trade fair day.

An **EcoPower 180/750+ DC Insider** cell with an integrated WX142 DC robot model from WITTMANN will be shown producing a “wild pot” – a container made of 100% PCR material, using a single-cavity mold supplied by Haidlmair, Austria. The PCR material consists of what is known as “wild plastic”, which has been collected jointly from the environment by the German company WILDPLASTIC® and its partners in Senegal, then cleaned and sorted locally to produce regrind according to industrial standards. By building up recycling systems, WILDPLASTIC® supports protection of the environment and fair trade relationships with its local partners. The post-consumer recyclate will be processed by Cellmould foam injection molding. In this way, material and energy will be saved with a simultaneous reduction of the part weight. Moreover, an attractive marble batch marbling effect will be generated, which will offer product designers some new creative options. In this application, TagTec technology will be used, which gives every wild pot its own DNA. By this technology, some markers blended into the material and normally invisible to the eye – named TagTec identity batch – are made visible by a special source of light, and a reference picture is taken and saved. Via a QR code, information about the origin of the material, the manufacturing process and production data, etc. relating to the product can be retrieved.

Partner booth of Momenive, hall 6, booth No. B15

At the Momenive booth No. B15, a machine from the SmartPower series in LIM design will be shown. On a **SmartPower 120/350**, Momenive will demonstrate the production of a Frisbee disk using a single-cavity mold with a 4-way valve gate and ACH SERVOSHOT 2G electric nozzle regulation from ACH Solution, Austria. In this application, a preform made of Ultramid B3S from BASF will be over-molded with Siloprene LSR 2740 from Momenive.



Fig. 1: MacroPower 500/3400 with one-piece machine body



Fig. 2: HAIBOX (Picture: Haidlmair)



Figs. 3a+b: Foldable laundry basket made of PP and TPE – produced by a multi-component process
(Pictures: ATA Kalip ve Plastik)



Fig. 4: Closing cap for small eye drop bottles – produced on the new EcoPower Primus



Fig. 5: Aerosol spray caps – produced on a space-saving SmartPower 160 Insider cell



Fig. 6: MicroPower 15/10

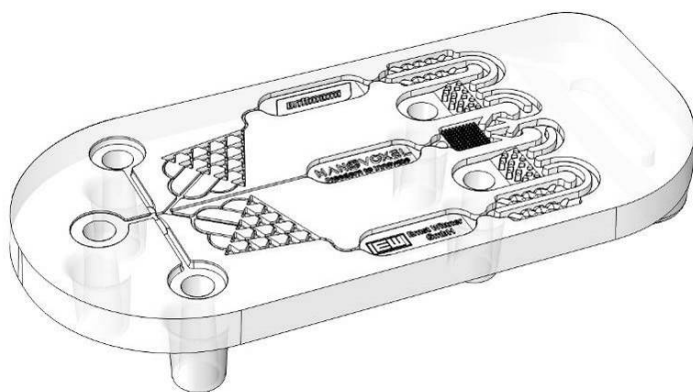


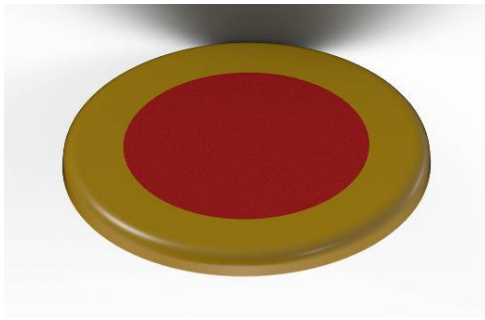
Fig. 7: Lab-on-a-chip



Fig. 8: VPower 160



Fig. 9: EcoPower 180/750 DC



Figs. 10a+b: Frisbee disk – produced on a SmartPower 120/350 LIM at the booth of Momenitive
(Pictures: Momenitive)

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 ten production plants in seven countries, and the additional sales companies at their 35 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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