



Düsseldorf – October 16–23, 2019

WITTMANN at the K: Hall 10, Booth A04

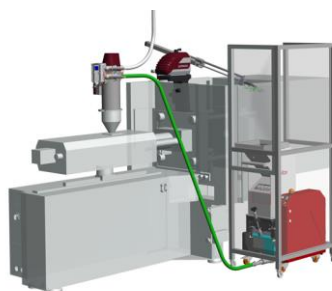
WITTMANN at the K 2019

The WITTMANN Group is once more using the K in Düsseldorf to present its numerous new product developments in many different areas. From 16 to 23 October, the company will showcase its latest innovations in the fields of automation and auxiliaries on its booth A04 in hall 10.

CIRCULAR ECONOMY

Inline recycling solutions from WITTMANN

As a complete system supplier of automation and auxiliary equipment – and in particular as a manufacturer of granulators – WITTMANN is in the unique position to be able to offer functionally optimized work cells for recycling and immediate re-use of plastic materials: inline recycling fully in line with the principles of a circular economy, which is the main theme of this year's K in Düsseldorf. Here, users can choose from a wide range of possible equipment and model variants for effective sorting and regrinding of sprue and rejects, and returning them to the production process in a targeted way.



*Drawing of an inline recycling cell
with sprue picker, granulator and material loader*

The basic version of a WITTMANN inline recycling cell consists of the **WP80** pneumatic sprue picker from WITTMANN, the new **G-Max 9** granulator and a **FEEDMAX S3** standalone loader with a metering valve. For grinding harder and fiberglass-reinforced plastics, a screenless granulator from the WITTMANN's **S-Max** series is used. Depending on the required degree of accuracy for the dosage of regrind, the WITTMANN inline recycling cell can be extended by adding a **GRAVIMAX** blender. Using a WITTMANN **GRAVIMAX** ensures that the machine is not fed an excessive amount of regrind at any time. Another option is using a servo

picker instead of the **WP80** sprue picker equipped with pneumatic cylinders as standard – for example a WITTMANN **WS80**, or the small servo-driven **PRIMUS 10** machine. A WITTMANN BATTENFELD injection molding machine from the **PowerSeries** will compensate any fluctuations in process behavior during metering and injection with the help of the **HiQ-Melt** and **HiQ-Flow®** process technologies. One of WITTMANN's exhibition highlights at this year's K will be the presentation of the numerous options offered by the inline recycling cells.

RECYCLING

The new G-Max 9

The **G-Max 9** granulator is suitable for inline recycling of soft to medium-hard rejects and sprue consisting of TPU, PP or PE – to be used on injection molding machines with clamping forces of up to 90 tons.

Depending on the type of application, there are three material hoppers of different heights to choose from for the **G-Max 9**. This modular design concept enables adjustment of the beside-the-press granulator to the varying process technology requirements it has to meet.



G-Max 9 granulator with low, medium-height and standard-height material hopper

G-Max 9 material hoppers and their applications:

- Low material hopper for use below a chute connected to the machine. The granulator is fed directly from the machine; no further handling is required here.
- Medium-height material hopper for use below a conveyor belt or drum separator. For small to medium-sized sprue.
- Standard-height material hopper for a beside-the-press application with a sprue picker or robot.

For optimal cutting performance and maximum efficiency, the cutting rotor of the **G-Max 9** comes with 3 × 3 knives arranged in a staggered position, which produce a clean, uniform granulate. Changing knives is extremely easy and comfortable. The material sifters of the **G-Max 9** are available with holes in different sizes, that is, with diameters of 4, 5, 6 or 8 mm. This ensures suitability for varying materials and throughput rates. The tiltable material hopper facilitates cleaning and servicing of the appliance enormously. So, changing a sifter can be carried out without tools, and the maintenance periods are shortened to a minimum.

The new **G-Max 9** can handle a material throughput of up to 20 kg/h (depending on the form of parts, pieces of sprue, sifter size and quality of material); it operates with a low noise level and is extremely energy-efficient.

MATERIAL HANDLING I

New GRAVIMAX gravimetric blender

At the K 2019, WITTMANN will demonstrate the latest new development of its gravimetric blenders from the **GRAVIMAX** series. At the beginning, material throughputs of up to about 60 kg/h could be achieved, but the latest models of the **G** series are now designed for applications requiring material throughputs of more than 700 kg per hour. While the two smaller appliances can process metering quantities of 1kg and 3kg respectively, which may consist of up to four components, the new **GRAVIMAX G76** is able to handle 7 kg per dosing cycle and to blend in up to six components.



GRAVIMAX G76

In spite of the large quantity of material, **RTLS** real-time weighing technology makes it possible to reach a reproducible dosing accuracy of 0.05 % in the ratio of virgin material to additive. The material containers of the **GRAVIMAX G76** are virtually free of interfering edges, so that they do not obstruct the free material flow. From these material containers, each component is metered into a weighing container by pneumatic dosing sliders. Depending on the material, the dosing sliders can either be opened for a set period of time to let the material flow freely, or they are opened in pulsed intervals until the desired quantity of material has been reached, which particularly favors constant dosing results. After weighing, the materials flow into a spherical mixing container, where they are mixed into a homogeneous blend by a spiral-shaped device. Thanks to the **GraviLog** software developed in close cooperation with WITTMANN customers, various different material quantities and dosing deviations can be documented, and compound formulations can be administered. **GRAVIMAX G76** is also capable of bidirectional data exchange via OPC UA.

MATERIAL HANDLING II

Extension of the ATON segmented wheel dryer series

WITTMANN has been successful for more than ten years in the field of material drying with its segmented wheel technology, a technology continuously refined over time in order to adjust it to changing needs and requirements on the market. While the original overriding goal was to achieve a constant dew point behavior even under the most difficult conditions, users very soon started to demand particularly energy-efficient solutions. To cater to the increasing trend towards production equipment integration, an interface solution was created for **WITTMANN 4.0**, and the WITTMANN dryers were also equipped with larger touch screens. WITTMANN **ATON** segmented wheel dryers were laid out as compact beside-the-press appliances which could handle a dry air volume ranging from 30 to 120 m³/h.



ATON H1000 battery dryer

The experience gathered over the last ten years has now led to the development of a battery dryer model with a segmented wheel, which will be presented for the first time at this year's K. The **ATON H1000** battery dryer, already frequency-controlled in the standard version, is the first segmented wheel dryer for central plants. It can handle a dry air volume of 1,000 m³/h, which is capable of drying 500 to 600 kg of plastic granulate per hour. The **ECO wheel** drying wheel, consisting of numerous segments, is loosely filled with a desiccant. Similar to the compact appliances, it is rotated via a low-maintenance chain drive. In this way, a molecular sieve which is always fresh is available for the air to be dried, in order to maintain a constant, low dew point.



Front of the ATON H1000, close-up view

The **ATON H1000** comes with several different adjustment options, including dew point-controlled drying. The different **ambiLED** light colors inform operators in the simplest way and at a glance about the current status of the dryer. The appliance is extremely easy to operate via its plain text touch screen user interface, where the temperatures and the dew point are displayed clearly and easy to read.

TEMPERING

New TEMPRO plus D100 temperature controller

Industry – and especially the injection molding sector – is very strongly influenced in this age of digitization by the fact that most customers require from their suppliers not only absolute high quality but also thorough documentation. Due to continuous further improvement, the high-end temperature controllers of the **TEMPRO plus D** series from WITTMANN, with an excellent reputation worldwide, have been able to satisfy all of these requirements. Here, the 16,000 **TEMPRO plus D** temperature controllers shipped to all parts of the world so far speak for themselves.

Requirements analyses in a great variety of production sectors have pointed to a demand for pressurized temperature controllers for a maximum temperature of 100°C. To meet this demand, WITTMANN will introduce the new temperature controller model **TEMPRO plus D100** at this year's K in Düsseldorf. With this appliance, WITTMANN underscores once more the significance of this series and its expertise in product development.



TEMPRO plus D100

The new **TEMPRO plus D100** belongs to the range of temperature controllers recommended for use as components of **WITTMANN 4.0** production cells.

WITTMANN 4.0 is the name of the solution from the WITTMANN Group, which leads into the world of *Industry 4.0*. Consequently, **TEMPRO plus D100** can be fully integrated in the control system of a WITTMANN BATTENFELD injection molding machine.

The new temperature controller is capable of 9 kW heat output and stands out by its magnet-coupled stainless steel pump, which ensures sufficient flow quantities. The pump capacity is 0.5 kW, with a maximum flow quantity of 40 l/min and a maximum pressure of 4.5 bars. The **TEMPRO plus D100** is equipped with a wear-resistant, maintenance-free flow quantity measurement device as standard. Like all other WITTMANN temperature controllers, **TEMPRO plus D100** also offers an extensive choice of additional equipment options in order to configure the absolutely perfect temperature controller tailored to fit every conceivable application.

AUTOMATION**PRIMUS 16T**

In addition to various other novelties in the robot sector, WITTMANN will roll out two new appliances of the **PRIMUS** series at this year's K. The smaller of the two appliances from this series is called **PRIMUS 16T**. The Z and X axes of this appliance are based on the already well-known **PRIMUS 16**, what makes the difference is the Y axis, which is telescopic. This is why the **PRIMUS 16T** is specially recommended for use in confined surroundings. Thanks to its telescopic system, it is possible in most cases to dispense with external protection of cranes, which saves costs. With its nominal load capacity of 5 kg, the **PRIMUS 16T** enables safe handling of heavy grippers for six or eight cavities.

**PRIMUS 16T****PRIMUS 48/48T**

In 2018, WITTMANN presented for the first time a **PRIMUS** robot with a movable X axis. The **PRIMUS 26/26T** introduced then combined the advantages of two appliances and made it possible to install **PRIMUS** solutions on injection molding machines with up to 900 t clamping force. Now the series is being extended once more. With the start of the K 2019, the **PRIMUS 48/48T** will be released for sale. This appliance is laid out for injection molding machines ranging from 500 to 1200 t in clamping force. Its horizontal strokes can reach a maximum of 9 m, which means that several pallet bays can be arranged beside the injection molding machine, or a place for parts depositing can be positioned behind the machine's clamping unit. To further enhance its flexibility, the robot comes with a continuous drilling pattern as standard. The demolding axis offers a maximum stroke of 1,200 mm, the vertical range is from 1,400 to 2,000 mm, with the vertical axis made telescopic from a stroke of 1,600 mm upwards to provide a further increase in stability. Within the range from 1,400 to 1,600 mm, customers can choose between the **PRIMUS 48** single axis and the **PRIMUS 48T** telescopic version.

Both versions have the same load capacity of 20 kg. The **PRIMUS 48/48T** comes with a completely re-designed vertical tube, whose rigidity values are comparable to those of the **WX** appliances. On the vertical tube of **PRIMUS 48/48T**, only the quick couplers for vacuum, compressed air and gripper feedback are visible, the hosing is concealed inside.

The WITTMANN Group is a worldwide leader in the production of injection molding machines, robots and peripheral equipment for the plastics processing industry, headquartered in Vienna/Austria and consisting of two main divisions: WITTMANN BATTENFELD and WITTMANN. These two divisions jointly operate the companies of the WITTMANN Group with eight production plants in five countries. Additional sales and service companies are active in 34 facilities in important plastics markets around the world.

WITTMANN BATTENFELD pursues the further expansion of its market position as an injection molding machine manufacturer and specialist for state-of-the-art plastic processing technologies. As a supplier of comprehensive, modern machine technology in modular design, the company meets both present and future market demands for plastics injection molding equipment.

The WITTMANN product portfolio includes robots and automation systems, material handling systems, dryers, gravimetric and volumetric blenders, granulators, temperature controllers and chillers. With this diversified range of peripheral units, WITTMANN offers plastics processors solutions to cover all production requirements, ranging from independent production cells to integrated plant-wide systems.

The integration of these various segments under the umbrella of the WITTMANN Group has led to complete connectivity between the various product lines. This integration has greatly benefited plastics processing users, who are increasingly looking for seamless production, including automation and peripheral functions.

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