

NEWS RELEASE

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**WITTMANN presents innovations
at the Fakuma 2021**

The WITTMANN Group is taking the opportunity to present its most recent product developments in a great variety of different areas at the Fakuma in Friedrichshafen. The company will showcase its latest innovations in automation and peripherals from 12 to 16 October at its booth No. 1204 in hall B1.

Extension of SONIC robot series

In 2019, the **SONIC** robot series was launched to replace the high-speed robots from the **UHS** series. **SONIC** robots come with a new design and are equipped with the ultra-modern R9 robot control system. The new **SONIC 108** for use on small injection molding machines with clamping forces from 50 t upwards now joins the appliances already on the market for clamping forces from 150 to 500 t.

**WITTMANN SONIC 108**

In contrast to the larger **SONIC** models, the **SONIC 108** has been fitted out with a fixed demolding axis, which has proved extremely advantageous for small injection molding machines. Short overhangs and a compact control cabinet simplify the CE-compliant housing of the automation cell. During the active demolding stroke movement above the mold space, no axis elements are pushed towards the injection unit, which substantially simplifies the enclosure especially in the area behind the fixed clamping plate of the machine.

The **SONIC 108** has been optimized for high-speed parts removal in packaging and pick-and-place applications. It is designed for cycle times below 4 s, with IN/OUT times kept below 0.9 s. To facilitate this type of high-speed removal, the drive system concept has been completely revised, with **SONIC 108** still able to handle payloads up to 2 kg. The familiar WITTMANN functions, such as **iVac** vacuum control with

blow-off function, axis activation, **SmartRemoval** and digital visualization of the axial movements are part of the appliance's standard equipment. Use as an insider is also possible (i. e. for parts depositing inside the IMM's protective housing). For the market launch at the FAKUMA 2021, where the **SONIC 108** will be presented for the first time, the appliance will be available with horizontal strokes of up to 1,500 mm and vertical strokes of up to 1,000 mm.

WX153 robot: new automation option for the medium clamping force range

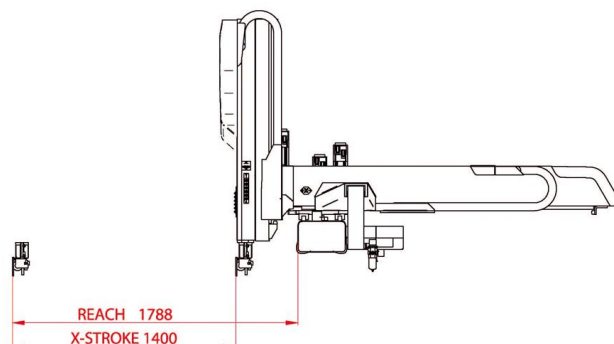
Available from now on: the upgraded **WX153** robot from WITTMANN – the ideal automation solution for injection molding applications on machines with clamping forces from 500 to 1,300 tons.



WX153 robot

The new automation solution for injection molding applications in the medium and higher clamping force range is based on the newly upgraded **WX153** robot from WITTMANN. The system consists of a cartesian axial structure with a mobile X-axis serving as demolding axis.

A horizontal stroke of up to 18 m and a vertical stroke of up to 2,600 mm are possible. An X-stroke of up to 1,400 mm is available for parts removal. This 1,400 mm demolding stroke provides a maximum reach of about 1,790 mm. In this context, the term “reach” designates the maximum distance between the horizontal axis and the mounting plate of the swivel axis at the lower end of the vertical axis. The reach is an essential parameter for the layout of robot systems.



This diagram very clearly illustrates the difference

between the reach and the X-stroke

Internal tubing and/or wiring in the vertical Y-tube, easily accessible lubrication points and the integrated control cabinet at the rear of the horizontal carrier are part of the **WX153** robot's standard equipment. The control cabinet has invariably its original dimensions regardless of the number of additional axes attached.

Three additional axes can be mounted to each robot at the end of its vertical axis to drive the removal gripper. Moreover, WITTMANN is able to build tandem robot solutions as well, that is, two traversing units acting together on the main carrier. Even in such cases, an add-on control cabinet can be dispensed with; so the space provided for it beside the injection molding machine can be used for any necessary auxiliaries other than automation equipment.

Various optimizations still enable the **WX153** to operate with a gripper weighing more than 20 kg even when using three (!) additional axes. Compared to the previous device concept, this equals a possible increase in weight by more than 30 %.

TEMPRO basic Large 120: new and powerful temperature controller

For efficiency in operation, injection molding production with large and heavy molds requires high heating capacity on the one hand, and correspondingly high flow rates in the cooling channels on the other hand. The new WITTMANN **TEMPRO basic Large 120** temperature controller is the perfect solution for such tasks.



*The new TEMPRO basic Large 120
temperature controller from WITTMANN*

First of all, this temperature controller offers a maximum heating capacity of 36 kW, a value which ensures an optimal heating time for the mold from both the technical and the economical point of view. This is of special importance whenever very fast heating is necessary, for example after a mold change.

The heat accumulated in the hot steel of the mold plus the additional heat input from the melt caused by the injection molding process must be extracted again from the mold circuit as fast as possible via the cooling channels. This is the only way to establish a homogeneous heat transfer inside the mold, which benefits the entire process. To create ideal conditions in this respect, the **TEMPRO basic Large 120** is optionally equipped with a new frequency-controlled pump. This pump model, known as the **SpeedDrive** pump, comes with an output of 4 kW, can handle a maximum flow rate of 300 l/min and generates a maximum pressure of 5 bar. With the

SpeedDrive pump, users are able to set the correct parameters for further process regulation – motor speed, flow rate, pump pressure and differential temperature. An approach which makes a vital contribution to process stability. Automatic adjustment of the parameter settings within a certain tolerance margin also optimizes the uptime of the equipment in production. Using a **SpeedDrive** pump can be seen as a synonym for energy-efficient pump operation, since it is generally sufficient to operate the pump under partial load to comply with the selected parameter settings.

The development of the new **TEMPRO basic Large 120** was prompted by increasing tendencies on the market towards the necessity for fast heating of large molds, while simultaneously providing the subsequently required high cooling performance. After all, such a solution must also contribute to optimizing the cycle time. Consequently, the cooling function of **TEMPRO basic Large 120** has taken the form of an extremely effective direct cooling system for the mold water.

One example for the phenomenal cooling performance of **TEMPRO basic Large 120**: a differential temperature of 60 °C between mold water and cooling water is the result of an extremely high cooling performance of 175 kW!

As an option, a stainless steel vortex flow measurement device is available for the temperature controller, with a measurement range from 20 to 400 l/min to cover all conceivable applications.

TEMPRO plus D200 for high-temperature applications

Numerous new applications require very special solutions for mold tempering. This is why the **TEMPRO plus D** range of temperature controllers from WITTMANN, well known and proven on the market worldwide, has now been extended by adding the new **TEMPRO plus D200** model – a water tempering device for temperatures up to 200 °C.



***TEMPRO plus D200 temperature controller
for high-temperature applications***

With this appliance, WITTMANN has responded to the general market trend towards higher process temperatures, and also fulfilled the wish expressed by numerous customers for water temperature controllers to handle high-temperature applications. High water temperatures – and the resulting high pressure levels – place particularly heavy demands on the wear resistance of molds and mechanical components, a fact constantly kept in mind throughout the development of **TEMPRO plus D200**.

CARD primus compressed air dryers with VacuJet loader

The new compressed air dryers from the **CARD** series have been an integral part of the WITTMANN product portfolio since 2020.

This successful series of appliances is being extended by two new additions, the **CARD primus 10** and the **CARD primus 20**. **CARD primus** appliances are offered as package solutions, each including a **VacuJet** material loader with delivery hose and suction lance as well as the actual compressed air dryer. They come with drying silos of either 10 or 20 l capacity and are suitable for temperatures of up to 200 °C. On these appliances, the desired drying temperature can be set via a touch screen operating panel, and at the end of the pre-drying phase a signal is issued to release an automatic production start-up. The material drying data can be exported via a USB port or via OPC UA.



***CARD primus 20 compressed air dryer
with FIT control and VacuJet loader***

With the integrated week timer, the use of the dryers can be ideally adapted to ongoing production planning, and they are ready to run immediately as soon as dried material is required. In the **CARD primus** models, the compressed air consumption is very finely and precisely adjusted to the actual demand by an intelligent digital air volume control system.

Loading the dryer via a **VacuJet** loader ensures a continuous material supply, and the dryer recognizes automatically when the drying temperature must be lowered. If the interval between two conveying cycles exceeds a certain period of time, this is interpreted as “no material consumption”, and the dryer then starts the necessary actions to protect the material and to reduce energy consumption.

CARD dryers can be mounted directly onto the machine feed. In combination with a claw flange, the appliances can be pushed into a parking or emptying position.

If quick-change adapters are used on **CARD** dryers, this will save time when transferring the dryers from one machine to another.

From typical small-quantity applications all the way to downstream drying directly on the consumer: **CARD** dryers cover an extremely wide range of applications – and ultimately offer an unbeatable price-performance ratio, especially as **CARD primus** package solutions.

Overworked G-Max 23 and G-Max 33 beside-the-press granulators

The **G-Max** series of compact beside-the-press granulators is specifically designed for closed-loop material recycling of sprues/runners that are discharged from injection molding machines up to 500 tons clamping force. The WITTMANN **G-Max** series packs a lot of smart engineering into a very compact footprint in order to operate quietly and efficiently, grinding soft to medium-hard plastic sprues and defective parts made of PP, PE, ABS, and PU.

The design of the **G-Max** series of granulators has been standardized, based on the design of **G-Max 13**. Accordingly, the models **G-Max 23** and **G-Max 33** now come with larger hopper openings, and customers are now given a choice between a fixed and a rotatable version of material outlets.

The granulators of the **G-Max** series are driven by a Poly-V belt transmission. And for small beside-the-press granulators, only WITTMANN is able to offer a belt drive with an automatic tensioning system.



G-Max beside-the-press granulator

The material screens of the **G-Max** series are available with screen perforation in different sizes. This ensures suitability for varying materials and throughputs. The tiltable material hopper simplifies cleaning and servicing of the appliance enormously. For instance, a screen change can be carried out without tools, and the time required for servicing is reduced to a minimum.

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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WITTMANN at the Fakuma show: Hall B1, Booth 1204