

PRESS RELEASE

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WITTMANN automation technology at the Fakuma 2024: Top performance combined with efficiency

Performance and efficiency are the overriding themes behind the impressive product presentations and live demonstrations at the WITTMANN booth in hall B1 during the Fakuma 2024. Automation technology will be represented with a wide range of solutions to illustrate performance and efficiency side by side. Here, top performance plus efficiency means less compressed air and energy consumption, compact integration, light-weight construction, easy operation and fast teach-in processes.

Compressed air consumption significantly reduced

The product developers at WITTMANN have made a special point of focusing on compressed air consumption, since compressed air is the most expensive form of energy in most production plants. With EcoVacuum, WITTMANN is now offering a vacuum solution for linear robots, by which – depending on the specific application – the consumption of compressed air can be cut down considerably. The resulting efficiency boost is achieved through demand-based vacuum control. Following vacuum build-up, the Venturi nozzle will only come on again before the negative pressure becomes too low to hold the part safely in place. The vacuum limit values can be calculated individually for each specific part.

The largest energy saving potential is possible when handling inserts or molded parts with a smooth surface. For structured surfaces, however, the vacuum must be readjusted more often. During the Fakuma, a Primus 128 linear robot will demonstrate how EcoVacuum works in practice. EcoVacuum is now available for the entire range of WITTMANN robots.

A compact package deal

Added performance and more efficiency across the entire range of robots results from the new servo-driven rotary axes, which WITTMANN will present at the Fakuma 2024. Even more compact and lighter combined rotation sequences have now become possible, thus extending the fields of application.

The weight saved in this way provides a higher load capacity for both grippers and parts, so that in many applications smaller robot models can be used than were normal previously. Various combinations of axes will be shown at the fair, including A-, B- and C-servo-axe combinations for a wide range of different applications. On the whole, the WITTMANN linear robot models with their new axes and combinations of axes are now able to cover an even greater diversity of applications.

It can do more than just sprue removing

More flexibility is also provided by the WX90 sprue removal system, available from now on in a stand-alone version with a robot interface (Euromap 67) and control cabinet of its own for use on injection molding machines of all brands.

Thanks to its energy efficient servo axes, the appliance is amortized in injection molding plants within a short time. This can be clearly seen by comparison with a pneumatic sprue picker, which consumes about 11 m³ of compressed air per hour with a cycle time of 6 seconds. At a 7-bar operating pressure, this comes up to a cost of 5 cents per cubic meter of compressed air, including expenses for preparatory steps and servicing. By contrast, the servo-driven WX90 consumes only 0.18 kWh of electricity for the same application. Based on an electricity price of 0.20€/kWh, the pay-back period in three-shift operation is no more than about two years.

A further advantage compared to pneumatic sprue pickers are the appliance's very smooth, accurate and yet fast movements. With these, the WX90 can do considerably more than a common sprue-picker. The robot is also able to handle simple pick-and-place tasks.

When the WX90 is part of a WITTMANN production cell, not only the parameters of the machine are set automatically from reading in the mold data set, but also the process sequence of the sprue removal system. This simplifies and accelerates machine setup, thus contributing further to the high level of overall efficiency.

Camera integration made easy

As a supplier of both individual products and integrated complete solutions, WITTMANN is thinking out of the box and going way beyond its own horizon. At the Fakuma 2024 this is clearly shown by an example of camera integration. Due to the absence of standardization, the integration of camera systems, for example for position detection or quality checks, long presented a great challenge.

Now WITTMANN has put an end to that for selected camera systems. Via an interface developed by WITTMANN, cameras coming from the relevant manufacturers are now able to communicate with the robot system. This increases the performance of the production cell. During the five days of the fair, a W918 robot will demonstrate live how effectively this works in practice.

The operating panel of the camera software is visualized on the WITTMANN R9 robot Teachbox. In this way, various entries can be made directly on the robot's operating terminal, and measurement results can also be retrieved there.

Generally, WITTMANN attaches great importance to easy programming and operation of all robot series, to ensure stable processes and safe injection molding operations even in times of skilled labor shortage. One contributing factor here is the QuickNew wizard. This animated program editor, available for all robots with R9 control systems, considerably simplifies the teach-in process even for highly complex handling tasks.

The WITTMANN Group at the Fakuma 2024: hall B1, booth 1204



Fig. 1a-c: More compact and lighter: the new servo-driven rotary axes enhance the performance and efficiency of WITTMANN robots. (Photos: WITTMANN)



Fig. 2: The WX90 servo appliance with a compact control cabinet is now available as a stand-alone unit and can be used on all brands of injection molding machines. (Photo: WITTMANN)



Fig. 3a+b: Camera integration made easy: WITTMANN has developed its own interfaces for this purpose. (Photos: WITTMANN)

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 six 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, gravi-

metric 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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