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WITTMANN WX90: Super-fast payback and flexible use on all brands of injection molding machines

At the Fakuma 2023, WITTMANN launched the WX90, a new servo-driven parts removal device which excels by its great flexibility and dynamism. This innovation was presented as part of an Insider work cell with a WITTMANN injection molding machina. For the Competence Days 2024, WITTMANN has been adding a standalone version of this device. This means that plastics processors will now be able to benefit from the advantages of the new WX90, regardless of the machine brands installed on their production floor.



The WX90 servo device with a compact control cabinet can be used on all brands of injection molding machines.



The new WX90 is much more than just a sprue picker. With its servo-driven and freely programmable axes, this robot also performs simple parts removal and handling tasks very efficiently with extremely quiet, precise movements and great dynamism. Similar to all robot models from WITTMANN, the servo motors of the WX90 are also equipped with absolute encoders.

For fitting out injection molding machines of all conceivable brands with the WX90, the newly presented appliance comes with its own control cabinet in extremely compact design flanged directly onto the console of the WX90. In this way, the control cabinet takes up no additional floor space.

More dynamism for a higher output

As is the case with all WITTMANN robots, the appliance is operated via the proven R9 Teachbox. Its 10.1" touch screen enables significantly more comfortable programming than is possible with pneumatic pickers operating with mechanical end stops. In contrast to the pneumatic sprue pickers from WITTMANN, the operating range of the control system has been extended to include not only the servo axes, but also numerous additional options already well proven in WITTMANN robots. The freely programmable servo axes enable optimally coordinated movements to minimize intervention times. Added to this are high acceleration rates, whereby the WX90 shortens handling times, thus increasing the output in many applications.

A further efficiency factor is the low energy consumption of the WX90. Since compressed air is one of the most expensive sources of energy, the purchase of a servo-driven WX90 pays off much faster than the acquisition of an appliance with pneumatic cylinders.

For example, with pneumatic sprue pickers, a compressed air consumption rate of approx.11 m³/h must be calculated for a cycle time of 6 seconds. With an estimated electricity price of $0.20 \notin kWh$ and 7 bar operating pressure, and taking into account the cost of maintenance and servicing, an average cost of about 5 cents per cubic meter of compressed air can be expected. The servo-driven WX90, by contrast, would show an electricity consumption of just 0.18 kWh for the same application. So, its payback period in 3-shift operation would be no more than about two years.

Parts depositing behind the fixed mold platen, too

For flexible adjustment of the WX90 to specific handling tasks, WITTMANN offers the new servo appliance in many different variants. The vertical axis, for example, is available in three lengths ranging from 500 to 1,000 mm, and the parts removal axis



in two lengths with a maximum stroke of 400 mm. The horizontal rotation axis comes with a pivoting range from 0° to 100° as standard, thus enabling parts depositing even behind the fixed mold platen. As part of the standard package, the WX90 is also equipped with a gripper. A vacuum unit or a gripper valve can be retrofitted as options.

Ideally, the WX90 is used on injection molding machines with clamping forces ranging from 35 to 150 tons.

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 36 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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