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PRESS INFORMATION

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Innovation in Automation Systems for Injection Molders Is the Theme for Sepro Group at Fakuma 2023

Sepro Group is bringing a total of 13 robots to the Fakuma 2023 trade fair as they demonstrate technical innovations that can help plastic injection molders increase productivity during challenging times. Sepro is exhibiting in Hall A1 on Stand 1203 at the plastics trade fair being held in Friedrichshafen, Germany, October 17 – 21.

“Automation is the key to success for plastics injection-molders,” says Charles de Forges, CEO of Sepro Group. “The shortage of both skilled and unskilled labor, high energy and materials prices, environmental pressures, and uncertainty in the Asian manufacturing arena, are all major concern for molders. Fortunately, robotic automation offers at least a partial solution to each of these, by reducing dependence on manual labor, increasing efficiency, reducing waste, and reducing production costs. At Fakuma 2023, Sepro is presenting several innovations to demonstrate what’s possible through the intelligent application of automation.”

Sepro Smart Automation

“Today’s injection molder needs more than a robot,” de Forges explains. “Twenty-five years ago, a stand-alone robot that could eliminate the need for a human operator to manually remove a part from a mold could give a real boost to quality and productivity. However, the highly technical applications and intensely competitive environment we see today demand much more. Robots must be teamed with other automated equipment – insert-feeding, assembly, marking, inspection, and packaging systems and the like – to provide a more complete automation solution. Integrated molding cells increase productivity and quality, reduce labor requirements, and add value by pulling secondary operations out of the customers plant and into the molding operation. This is what we see as the future of robotic automation.”

To demonstrate the potential of this approach at Fakuma, Sepro is operating a cell that features a Sepro 5X-15 Cartesian robot with servo-driven wrist, and a 6X-140.2 articulated-arm robot serving an operating 110-ton Milacron IMM. The robots and peripheral equipment are all controlled by the Sepro Visual+ controller.

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Sepro Connect Centralized Data

Operational data from the two robots and the injection-molding machine in that integrated cell is collected for storage and analysis by the new Sepro Connect dashboard. To demonstrate the full possibilities of Sepro Connect, another dashboard pulls information from various cells operating in many different locations. The display at Fakuma will show data from the Sepro booth, from a remote customer site, the Sepro technical center in France, and from Sepro robots running on the Fakuma stands of IMM manufacturers Sumitomo Demag, Milacron, Billion and Borsche.

The dashboard provides real-time insights into production processes. Users can log in from almost anywhere to see an overview of all the connected cells, their working status, their production progress, scheduled maintenance, and energy consumption figures. All data is stored in a secure cloud solution.

The system compares quality, availability, productivity, and energy data to critical thresholds and generates intelligent alerts so a user can take proactive measures to prevent problems before they happen. Alerts are also generated when energy consumption deviates from target to help businesses reduce their environmental footprint and operational costs.

Innovations in Speed

Also operating during Fakuma will be the fastest top-entry robot Sepro has ever built. The ThundeRbot, as it has been named, is a concept machine that demonstrates how Sepro engineers innovate to overcome challenges to achieve a specific objective – in this case, the shortest possible cycle time. The specially modified Success 11 robot offers Z-axis acceleration rates that are 2.6 times faster than the base unit. At the show, the ThundeRbot, can be seen operating on a Demag molding machine producing small cups. The overall cycle time is just 3.07 seconds and mold-open time – during which the robot arm enters the mold, removes the part, and exits again – is a mere 0.79 seconds. It demonstrates several design concepts that could become part of the next generation of Sepro robots.

Modular Robotic Solutions

Not every molder requires a lightning-fast robot or a complex manufacturing cell, of course, and Fakuma gives Sepro an opportunity to present its full range of robots and related components that can be assembled quickly and easily to meet any production need. These include a 3-axis-servo S5 Picker, the general-purpose Success 5 and Success 11C robots, the affordable 5-axis-servo Success 11X, and a 6X60 6-axis articulated-arm robot.

Other modular elements include various examples of safety guarding and fencing, which can be seen in the integrated cell and the ThundeRbot demonstration, along with conveyors and an expanded array of end-of-arm tooling newly available thanks to Sepro's recent acquisition of Garbe Automatism.

13 Robots in All

In addition to the 8 robots on display in the Sepro booth, 5 injection-molding machine manufacturers will also display Sepro equipment.

For instance, Sumitomo Demag (Hall B1-1105) has equipped an IntElect 180-250 molding machine with a SDR 22X, the Demag version of a 5-axis Sepro Success 22X. The robot removes 256 tiny liquid silicone rubber (LSR) parts with full cavity separation. Borsche (Hall A1-1432) is showing a Success 11 (8U) removing a PP frisbee from BD130 machine. Guarding and other peripherals are also from Sepro. Other exhibitors running Sepro robots are:

- Ferromatik Milacron (Hall B3-3302) is operating a Success 33 TE with Sepro guarding and other peripherals.
- Billion (Hall B3-3104) has an S5-25 on display.
- The fifth IMM maker prefers not to be identified.

About Sepro Group

Sepro Group has grown with the industry to become a leader in the automation of plastic injection molding processes. In its almost fifty-year history, Sepro Group has equipped more than 40,000 plastic injection molding machines worldwide. Sepro Group designs, develops and manufactures smart solutions and systems for the automation of plastic injection lines. Our modular solutions optimize and automate the take-out of parts from any type of new or existing machine, thanks to its modularity and our controller - Visual - which can operate the complete cell. Our platform was specially designed for the world of injection molding. It offers features to facilitate robot programming for complex movements or multi-axis management. Visual is the universal control platform that drives Sepro robots, from 3-axis to 6-axis robots. As a global company with subsidiaries and distributors in all key markets in Europe, Americas and Asia, Sepro Group is able to support our customers worldwide with a proven track record of excellence in after-sales service.

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