

Sumitomo (SHI) Demag launches first own-label robot series

SAM-C presents two "handle&place" robot applications at Fakuma 2021

Schwaig, September 2021 - Sumitomo (SHI) Demag Plastics Machinery GmbH, Schwaig, will present its first own-branded robot series solution to trade visitors at its Fakuma 2021 booth. Based on two compact "handle&place" solutions, the new SAM-C (Sumitomo Demag. Automation. Machine – Cartesian) development will initially comprise four payload sizes - three, five, ten and 20 kg – with the SAM platform expanding in phases over the next two years adding further robot kinematics and functional elements.

"With SAM-C, we have succeeded in engineering the smallest automated injection moulding cell, comprising robot and material handling technology," explains Jürgen Schulze, Director Automation. Highlighting further advantages of this compact footprint, fully automated moulding production line, Schulze explains: "We offer high system availability with minimal repair and maintenance work, thanks to Sumitomo (SHI) Demag's in-house servo motor technology and low-maintenance drive and guide technology. With the corresponding vacuum technology, the systems also deliver significant energy-savings."

Expansion of the automation strategy

Sumitomo (SHI) Demag is expanding and strengthening its range of robotic solutions. The partnership with Sepro is being expanded internationally, and the range of robots is being significantly strengthened with the addition of the company's proprietary robots. Central components, such as the drives, are sourced from the Sumitomo Drive Technologies subsidiary - the Lafert Group in Italy.

The new SAM robots have been designed specifically for injection moulding machines with clamping force sizes between 50 and 500 tons, and for standard applications with cycle times of 10 seconds and higher. Customers benefit from process and system technology from a single supplier source, complete with hardware and software control integration of robot technology into the injection moulding unit and production-optimised robotic mechanics fully customised to Sumitomo (SHI) Demag machines. "With our SAM robots, customers benefit from an attractive price-performance ratio incorporating full injection moulding and automation, including CE marking conformity," says Schulze.

With the IO-Link communication system, intelligent sensors and actuators can be connected to the automation system. This means the SAM series fully meets future Industry 4.0 and Smart Manufacturing requirements. Additionally, the robots all incorporate the company's "myConnect" web-based software solution. This central platform gives customers direct access to a wide range of fully networked support

services, helping to better manage inefficiencies, reduce costs, optimise total cost of ownership, troubleshoot errors and minimise downtime.

Strategically optimised to our machines

Sumitomo (SHI) Demag has been using robot technology to automate its injection moulding machines since the middle of the 1990s. Until now, the company relied on external partner solutions. Including since 2009 a standard SDR Sepro robot. To-date, these robotics have been applied in various sizes for a wide variety of processing applications. Schulze emphasises: "This partnership will be maintained as an essential element within the new Sumitomo Robotics platform, which pulls together all of our automation activities. However, with our own-branded SAM robots, we are adding a new element to achieve our strategic goal - optimised system technology engineered specifically for Sumitomo (SHI) Demag injection moulding machines."

Responding to increasing demands from the market, including medical, healthcare, aerospace, automotive, electronics and packaging sectors, Sumitomo (SHI) Demag has focused its efforts on developing scalable units with more automation functional elements. Aside from robotics, the company has paid specific attention on conveyor belts and safety features, plus the application of unique manufacturing solutions specific to the injection moulding process, including handling, storage and buffer systems.

IntElect robots with a range of motions

Value is always the most important consideration with robotics. Any automation solution needs to solve the specific challenge, be scalable and offer a good return on investment. Often as a result of increased output, enhanced quality, repeatable precision and reduced waste.

"Standardised production solutions that can be used flexibly, less workforce interventions, low maintenance and complete units that fit inside the smallest existing production footprint are among the key considerations requested by plastic moulding customers. Our new robotic platform fulfils this brief entirely," explains Schulze.

Two "handle&place" solutions are being showcased at Fakuma 2021. The SAM-C10 features on an LSR IntElect 130 ton LSR application. In the second exhibit, Sumitomo (SHI) Demag demonstrates the automation of In Mould Decoration (IMD) within an IntElect 220 ton production cell. The design of the vertical axis being the key differential design feature . "For the IMD application height optimisation is achieved using a compact telescope axis," announces the Automation Director.

Images/Captions



Figure 1: SAM-C: Sumitomo (SHI) Demag's first own-label robot series



Figure 2: Based on two compact "handle&place" solutions, the new SAM-C development will be released at FAKUMA 2021

→ Save the Date – Invitation to our Press Conference

You are invited to join our press conference FAKUMA! Come hear our executives talk about the latest Sumitomo (SHI) Demag developments and how we are getting ready for the future.

Wednesday, October 13, at 9.00am
Room Oesterreich, Conference Center West, 1. Floor

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Sumitomo (SHI) Demag Plastics Machinery GmbH

Sumitomo (SHI) Demag has shaped the development of the plastics industry from its very beginning. As a specialist for injection moulding machines for plastics processing, Sumitomo (SHI) Demag and its Japanese parent company are leading the industry.

The global development and production network of Sumitomo Heavy Industries and Sumitomo (SHI) Demag is comprised of four facilities in Japan, Germany and China with more than 3,000 employees. The product portfolio includes all-electric, hydraulic and hybrid injection moulding machines with clamping forces

of between 180 and 15.000 kN. With more than 125,000 installed machines, Sumitomo (SHI) Demag is present in important global markets and ranks among the largest manufacturers of injection moulding machines in the world.

At Sumitomo's headquarters in Chiba, Japan, the company manufactures machines with clamping forces in the small to medium range. Nearly 95 % of all delivered machines are equipped with an all-electric drive concept. Sumitomo (SHI) Demag's German facilities in Schwaig and Wiehe produce the Systec Servo range with hybrid drive as well as the EI-Exis SP and Systec SP range of high-speed, high-performance machines. The all-electric IntElect range for international customers is also being produced in Germany.

As early as 1998, Sumitomo (SHI) Demag set up its first production site in Ningbo/China. In 2015, the Chinese subsidiary Demag Plastics Machinery (Ningbo) Co., Ltd. installed a new facility with a 13,000 m² floor space. It is earmarked for the production of the Systec C range with clamping forces of between 500 and 10,000 kN for the Asian market.

In addition to injection moulding machines, Sumitomo (SHI) Demag offers customised and standardised systems for the part handling automation, technical and process solutions for special applications, tailored services and service concepts as well as a range of financial options to support investment in injection moulding machines.

With its comprehensive sales and service network of subsidiaries and agencies, Sumitomo (SHI) Demag is present in all major markets.

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