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PRESS INFORMATION

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Sepro Robots for Big Molding Machines Make a Grand Entrance at NPE 2015

Three new lines of Sepro robots for plastics injection-molding machines with 800 to 5000 tons of clamping capacity are making their global debut at NPE 2015, March 23 – 27, in Orlando FL. Sepro America, Warrendale, PA, is exhibiting in booth W263 and is demonstrating a model 7X45 five-axis robot from the premium 7X Line. At the same time, Sepro is also announcing two 3-axis families of big robots, the technological S7 Line, and the Strong line of universal robots.

“These new large robots complete the transformation of the full Sepro product line, which we began in 2008,” explains Jean-Michel Renaudeau, CEO of the Sepro Group, La Roche sur Yon, France. “Over the last six years – since NPE 2009 and the depths of the financial crisis – we have completely redesigned our portfolio to deliver all-servo robots that are faster and more powerful, with longer strokes and larger payloads than previous generations. We’ve added 5- and 6-axis products in all size ranges, in-mold labeling solutions, a dual-arm unit, a servo sprue picker and new, user-friendly controls. We firmly believe Sepro is the only company that really offers what we refer to as ‘Your Free Choice in Robots.’”

The new large robots improve upon the Sepro G4 Line, which previously covered high-tonnage molding applications. In general, the new S7 and 7X robots have longer kick (Y-axis) strokes, longer vertical (Z-axis) strokes and can handle larger payloads than their G4 predecessors.

The advanced SLS (Sepro linear system with cam follower rails) guidance system on the horizontal beam and vertical arm provide rigidity and reliability even at maximum acceleration and speed. The vertical arm is an aluminum profile for compact, lightweight

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strength. Control of the servo motor and braking reduces noise and energy consumption, while minimizing maintenance (no need to balance cylinders).

S7 3-AXIS ROBOTS

The S7 Line, which Sepro refers to as a “technical” range, includes three different models: the S7-45 for molding machines from 800 to 1300 tons, the S7-55 for machines from 1200 to 2500 tons and the S7-75 for machines from 2300 to 5000 tons. They feature Sepro’s highest level of quality and can be adapted easily to customer requirements for axial configurations (where the main X-axis beam runs parallel rather than perpendicular to the centerline of the molding machine), as well as extended vertical (LV) and kick (LD) strokes and heavy-payload (HL) options. Compared to the previous generation G4 units, the new S7 Lines have a standard kick stroke that is 10 to 15% longer, and a vertical stroke that is 4 to 10% longer. Payload capacities are up to 50% greater. A full list of specifications is presented in the following table.

	<u>S7 45</u>	<u>S7 55</u>	<u>S7 75</u>
IMM SIZE	800-1300 T	1200-2500 T	2300-5000 T
HORIZONTAL (X)	3000-10000 mm	3500-10000 mm	4000-10000 mm
KICK (Y)	1100 mm (1300 LD)	1500 mm (1700 LD)	2000 mm (LD on request)
VERTICAL (Z)	2200 mm (2500 LV)	2500 mm (3000 LV)	3600 mm (No LV)
PAYLOAD	30 kg (40 HL)	40 kg (60 HL)	75 kg (No HL)
ROTATION	R1(C) pneumatic 0 - 90°		

Modules for the X, Y and Z axes are built separately, simplifying transport and assembly.

7X 5-AXIS ROBOTS

The 7X Line is based on the same basic mechanical platform as the S7 3-axis robot, but adds a 2-axis servo-driven wrist developed in partnership Stäubli Robotics. Unlike pneumatic wrists, which can only move in a continuous arc from 0° to 90° or 0° to 180°, the 7X wrists can move from 0 to 180° and 0 to 270° or any part of those rotations with absolute precision.

Servo motors have positional encoders that recognize exactly where the drive shaft is at any moment. Then the system control can integrate positional signals from all of the servo motors on all 5 axes so that it knows exactly where the gripper and part are in space at all times. This allows the robot to complete very complicated motions in all axes simultaneously and do it very precisely and with perfect repeatability. The servo wrist can grip and position parts at any angle making the robot much easier to set up and operate and allowing for simpler end-of-arm tooling.

STRONG LINE ROBOTS

The Strong Line robots extend the range of Sepro's economical robots – otherwise represented in the smaller Success Range – to serve machines up to 2800 tons.

Built with all the quality and reliability of all Sepro robots, the Strong Lines make 3-axis servo speed and precision available to molders who have applications that require simple pick-and-place functionality and simple downstream operations. The design approach and production methods allow Sepro to make an affordable robot with enhanced capabilities.

	<u>STRONG 40</u>	<u>STRONG 50</u>	<u>STRONG 60</u>
IMM SIZE	700-1000 T	1000-1600 T	1600-2800 T
HORIZONTAL (X)	2500-10000 mm	3000-10000 mm	3500-10000 mm
KICK (Y)	1100 mm	1300 mm	1600 mm
VERTICAL (Z)	1600 mm (Direct) 2000 mm(LV)	2000 mm (Telesc.) (2500 LV)	2500 mm (Telesc.) (3000 LV)
PAYLOAD	20 kg (15 kg LV)	40 kg (35 kg LV)	50 kg (40 kg LV)
ROTATION	R1(C) pneumatic 0-90°		

VISUAL & TOUCH CONTROLS

All these new robots are operated using the same easy-to-use control platform, which was developed by Sepro especially for injection-molding applications. The 5-axis 7X robots benefit from the application of the Visual 3 robot control, Sepro's newest, fastest and most powerful control. Visual 2 controls are standard on advanced S7 Line 3-axis robots, and Strong can use the basic Touch 2 control or the Visual 2 can be specified when applications require a more powerful control. All controls have the same user interface with large, easy-to-read and -navigate 10-inch touch-sensitive screen that makes operation simple and intuitive. A joystick allows operators to actually steer the robot to fine-tune its movements.

ABOUT SEPRO

Providing automation sales, engineering and service throughout the United States and Canada, Sepro America, LLC, is a wholly owned daughter company of Sepro Robotique, La Roche sur Yon, France. Sepro is a global company, with in-depth engineering and manufacturing capabilities, strong technical and marketing partnerships, unmatched service and support, and a diverse product offering. Founded in 1973, Sepro Robotique was one of the first companies in the world to develop Cartesian beam robots for injection-molding machines, introducing its first CNC controlled "manipulator" in 1981. Today, Sepro is one of the largest independent sellers of Cartesian robots. Customers around the world are

supported by daughter companies in Germany, Spain, Benelux, the United Kingdom, the United States, Mexico, Brazil and China. Numerous direct sales and service offices as well as independent business partners, distributors and service hubs extend Sepro's network to over 40 other countries. To date, Sepro has equipped more than 25,000 injection-molding machines worldwide. The company's global turnover in 2014 was €79.2 million.

Ends



This Sepro 7X45 robot is one of three models in the 7X Line of 5-axis robots for IMMs from 800 to 5000 tons of clamp.

*Click this link to download a high-resolution image:
https://dl.dropboxusercontent.com/u/51716465/Sepro/7XLine_HD.tif*