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PRESS INFORMATION

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New Robots are Tougher, Stronger, More Capable; Sepro America Introduces First Model in S5 Range

Offering longer strokes, bigger payloads and a rigid structure designed for speed, the first Cartesian beam robots in the new S5 product line are now available from Sepro America LLC. The Model S5-35, a mid-size robot designed for plastics injection-molding machines with 350 to 700 tons of clamp, is the first model available. Other sizes, for smaller and larger molding machines, are scheduled to debut later this year and in 2011.

Compared to a robot of comparable size in the existing Generation 4 (G4) range, the S5-35 offers a standard payload of 15 kg (33 lb), a 25% increase. The 900-mm (35.5-inch) demolding or strip stroke is 12.5% longer than the maximum available on the current G4 unit. This means the S5-35 can handle parts with deeper draw. At the same time, however, the wrist and arm are actually 10% smaller so the mold does not need to open as far and cycle times can be reduced.

This increased level of performance is achieved without limiting speed, which is pegged at 3.5 m/sec (11.5 ft/sec) on the horizontal stroke. Other important specifications include a 2000 to 7000 mm (79 to 275 inches) horizontal stroke and a 1400-mm (55-inch) vertical stroke that can be extended with an optional telescopic arm to 1800 mm (70 inches).

“The S5 is Sepro’s fifth generation of robots,” explains Jim Healy, Vice President, Sales & Marketing for Sepro America. “It takes advantage of everything we’ve learned about meeting the needs of the world’s most demanding injection molders. It is designed using a platform concept, with common subassemblies that help us achieve economies of scale while reducing manufacturing lead times. Yet it is a true ‘industrial robot’ built for rigidity, speed and reliability.”

(More)

Key features and options include:

- Compact control cabinet mounted on the beam to reduce floor-space requirements.
- Rigid single-piece frame structure with prismatic linear guide rails adapted rapid acceleration of the moving parts.
- Powerful servomotors that ensure maximum acceleration and minimum mold-open times.
- Precision CNC rotations allow precise positioning and great flexibility required for complex applications (insert placing, stacking, etc.).
- Simultaneous motion on all three axes.
- Sepro-exclusive 'Y-free' function, which provides for the programmed release of the strip-axis motor, allowing free movement of the robot arm and load-free ejector tracking.
- Multiple vacuum and pressure circuits to allow degating, selective part placement and other functions;
- Optional elastic wrist allows for minor positioning inaccuracies while softening contact between the gripper and mold. If too much force is applied, a built-in sensor stops the robot before damage is done.

ADVANCED CONTROL

The S5 robots are equipped with the top-of-the-line Sepro Visual 2 controller as standard equipment. At its core is a high-speed PLC, featuring scan rates as fast as 100 milliseconds. A large, easy-to-read and -navigate 10-inch touch-sensitive LCD screen makes operation simple and intuitive, while giving users access to full system documentation. A joystick on the hand-held operator pendant is used to steer the robot to fine-tune its movements. Almost unlimited connectivity means users can upload and download information via Ethernet, USB connection or even Wi-Fi.

With the optional Automation Pack, the standard 100ms PLC function is increased to 20ms to facilitate the most advanced automation including stacking, insert positioning and loading, fabric overmolding, in-mold labeling, post-mold fixturing and finishing, and more. It can even manage intelligent peripheral equipment including vision, bar coding and RFID devices. A PC editor/monitor function, which works in a familiar Windows® environment, makes it easy to fine-tune complex programs.

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 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. It has had a substantial presence in North America since 1989. Today, the company exports 80% of its sales and enjoys a 25% market share in Europe. Sepro truly is a global player with operations not only in Europe and North America, but also in South America and Asia.