

**PRESS RELEASE**

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**EI-Exis SP Demonstrates Speed and Precision  
With Waterfall of Over 150,000 Bottle Caps Per Hour**

- **New energy-efficient, ultra-high-speed hybrid producing 96 high-precision water bottle caps every 2.3 seconds**

**[Booth 2103, NPE 2012, Orlando, FL]...**

Sumitomo (SHI) Demag introduced the EI-Exis SP to the North American market today with two ultra-high-speed, high-precision demonstrations.



An EL-EXIS SP 450/920-3000 (500 U.S. tons) is molding 1- gram HDPE water bottle caps on a 2.3-second cycle in a 96-cavity SCHÖTTLI AG (NPE Booth 49000) hot-runner mold.



The ultra-high-speed of the EI-Exis SP will be easily recognizable as the machine demo will be producing 150,260 caps per hour (or what would amount to 3,606,260 caps in a 24-hour period).

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To show the exceptional precision capabilities of the EI-Exis SP, the demonstration also includes an IMDVista vision inspection system checking the parts' inner and outer diameters, seal area and tamper evident band.

**The Machine**

Available in model sizes from 165 to 825 U.S. tons, the EI-Exis SP (Speed-Performance) has been designed for high-speed production of applications such as thin-walled food packaging, closures for beverages, cartridges, plant pots and buckets. Taking a "best of both worlds" approach to injection molding, the hybrid series combines speed and performance with:

- Ultra-high-speed injection via hydraulic accumulator and servo-valve
- Energy efficient electric screw drive for maximum plasticizing capacity and melt homogeneity, and a clamping unit with AC servo drive and hydrostatic transmission for fast, energy-efficient mold open/close

Some of the design improvements for the Speed-Performance series include:

- Up to 30% more energy efficient operation than other high-speed hybrid designs
- Up to 30% increase in injection speed over predecessor EI-Exis S model, achieving up to 1000 mm/sec dependent on configuration
- 25 millisecond acceleration from 0 to an injection speed of 800 mm/s
- A position-regulated servo valve in combination with a high-resolution path measuring system that supports precise and rapid transfer from injection to hold pressure
- Expanded opening stroke for models 330 to 500 U.S. tons to meet requirements for molding deeper containers such as buckets
- New NC5 Plus control which has been redesigned with unique functions for high-speed operation and optimization of energy use

**In-Mold Labeling Demonstration**

To further demonstrate the exceptional speed, precision and applications flexibility of the EI-Exis SP, a second model size is included in the booth.

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This demo is a full in-mold-labeling cell that features complete coverage of the plastic surface using a unique process developed by Marbach moulds and automation GmbH (NPE booth #223). A special feature of Marbach's IML process is that the banner label and the base label are inserted overlapping around a radius, thereby providing complete coverage of the plastic surface with the label reaching up to a high level on the sealing edge. In this way, barrier functions can be integrated into the packaging by means of labels.



The Marbach-developed process uses a "full cover label placer" that inserts the banner and base label in a single stroke. Previous IML solutions required a partition on the container base that meant that full coverage with the label in the injection mold was not possible.

For the demonstration, a Marbach double-cavity IML hot-runner mold will be run on an EI-Exis SP 200 (220 U.S. tons). The compact production cell manufactures the 15.4 g containers from PP in a 3-second cycle. The highly precise mold stop position of the EI-Exis SP ensures the exact positioning of the labels despite the high production speed. The demonstration also highlights the new NC5 Plus control's capabilities including:

- activeEcon which produces detailed energy consumption analyses of all machine movements for each individual shot and supports optimization of energy use
- activeAdjust which optimizes mold and ejector movements and cutoff from injection pressure to hold pressure
- activeQ+ which ensures mold protection during both mold opening and closing

"The EI-Exis SP raises the bar for *overall* productivity in high-speed and thin-wall applications," said Jim Mitchell, Executive Vice President. "This degree of overall productivity even provides a cost-effective IM solution for some packaging applications that may have previously been reserved

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for thermoforming."

Sumitomo (SHI) Demag is a worldwide group of companies dedicated to helping plastics processors compete more effectively in the global market. The company manufactures a wide range of high-precision IM machines for diverse applications. Its all-electric platform spans from 8 to 606 US tons, including micro to mid-sized, high-speed, high-duty, vertical, insert, high-speed multi-shot and disc molding machine series. Ultra-high-speed hybrid machines are offered for packaging and other thin-wall applications, plus high-performance hydraulic and toggle machines, including configurable multi-component models, are offered up to 2248 US tons. Equally important, Sumitomo (SHI) Demag has an extensive worldwide network, ensuring customers of sales, parts, training, service and processing support when and where it is needed.

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