

PRESS RELEASE

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Sumitomo (SHI) Demag Brings 556 U.S. Ton All-Electric to NPE for Automotive, Gas-Assist Demo

[NPE Booth W3045, Orlando, FL – May 7, 2018]...

Sumitomo (SHI) Demag Plastics Machinery North America, Inc. brought an SE500EV-A^{HD} all-electric to NPE 2018 to demonstrate how the fast clamp speed and robust specs are making this machine a game changer for automotive and other market segments molding mid-to-large sized parts.

To demonstrate the machine's capabilities, it will be molding a 23.5-inch, long-flow-length, gas-assist (N) automotive-type part with a single-cavity hot runner mold on loan from Sajar Plastics in OH. With gas assist, the HDPE part is 0.150 in thick and weighs 22.6 oz. Without gas assist it weighs 23.9 oz.

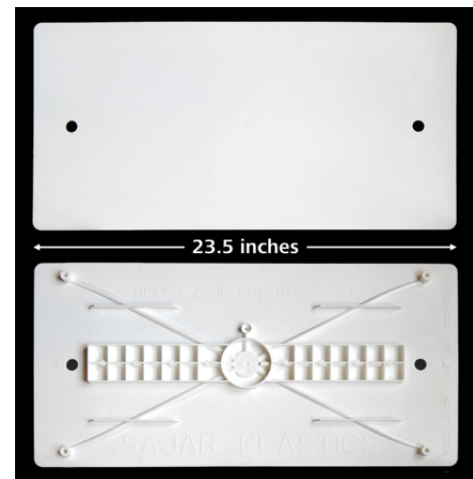
"Mid-to-large tonnage automotive molders have been some of the last ones to consider all-electric machines for a variety of reasons. The main reason is there hasn't been a good solution to replace their 400-600 ton hydraulic 'workhorse' with a true all-electric," said Tony Marchelletta, Regional Manager. "However, the larger SEEV-A^{HD} models address the typical shortcomings of the all-electric

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[Above] The 562 U.S. ton SEEV-A^{HD} machine is the largest all-electric machine the company has ever brought to an NPE.

[Below] The long-flow-length, gas-assist part demo includes a Sepro America take-out robot, ReThink Robotics collaborative robot and a laser engraving demonstration by Control Laser.



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for these types of applications. They have much larger mold space, high/long hold pressures and can be easily equipped to handle molds with multiple hydraulic functions such as cores and valve gates. On top of this, there is no longer a large price disparity between a fully equipped hydraulic/hybrid and the SEEV-A^{HD}.”

The Show machine’s robust specs include 562 U.S. tons clamping force, a maximum shot weight of 61.3 oz, a maximum injection pressure of 27,122 psi, tie-bar clearance of 36.22 x 36.22 inches and a maximum mold open/close speed of 45.94 in/s.

“While most large-part automotive molders don’t look at dry cycle rates and clamp speeds like one would in a packaging application, with clamp speeds of 46 inches per second on the SE500EVA-^{HD}, a molder can easily save seconds of cycle time while maintaining the same process required to produce a quality part. When you combine this with greatly reduced start-up time and a reduction of wasted material, a molder can easily produce 5-10% more product by making no other changes to their production environment,” Marchelletta said.

Designed to allow bigger molds in smaller machines, the SEEV-A^{HD} provides:

- Tie-bar spacing that is the highest among machines of the same class
- Square configuration of tie-bar spacing that allows molds to be loaded from the side
- Mold and ejector specs, linear guidance system and base rigidity to handle larger, heavier and more complex molds up to 16,500 lbs

The combination of machine’s specs and Z-Molding’s FFC (Flow Front Control) System enable complete, consistent filling for large, long flow length parts.

The SEEV-A^{HD}’s unmatched power savings are the result of:

- Advanced servomotor technology with reduced motor friction and rotational resistance
- Reduced sliding friction for mold open/close via use of linear guides and bush-less tie bars for the clamp
- The toggle link design (lock-up design) that eliminates power consumption during clamp hold

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- New, selectable energy-saving control mode that gradually reduces holding pressure

Developed for high-duty applications, the injection motor provides the ability to consistently maintain high hold pressure for an extended period of time (up to 40% or in some cases a higher percentage of the cycle) — an important factor for avoiding sink marks and improving dimensional stability of thick-wall parts.

The high-contact-force (nozzle touch) system with 3 adjustable settings provides pressures comparable to hybrid or hydraulic machine.

“For years Sumitomo Demag precision automotive customers have benefited from our SE machine’s technology and performance. But we wanted to bring the SE500EV-A^{HD} to NPE 2018 to remind other automotive suppliers that we also offer a wide range of solutions for larger, thick walled parts that would typically run in a hydraulic machine,” said Marchelletta. “Whether they are running a class-A surface part or an under-hood structural part with long hold pressures, they can benefit from our Z-Molding technology, reduced cycle times, faster start-up, and the dramatic reduction in energy consumption of our SEEV-A platform all-electrics.”

As part of the company’s **Productivity⁺** theme, a gas-assist process was chosen due to advantages such as: larger/more complex designs, lightweighting of heavy parts, increased stiffness-to-weight ratio, packing out areas where resin shrinks, less residual stress and consistent surface/texture/cosmetics.

Other contributors to the NPE molding demo include: NOVA Chemicals (resin); Clariant and Artemis Polymer Processing (colorant); Maximator AIM Inc. (gas unit); Frigel North America, Inc. (chiller); Maguire Products, Inc. (loader); All World Machinery (dryer and corepull unit); Avalon Vision Solutions (vision system); Gammaflux L.P. (hot runner); and MAC Automation Concepts (resin bins).

The SE500EV-A^{HD} is just one of Sumitomo (SHI) Demag’s 12 diverse machine demos at NPE highlighting the **Productivity⁺** benefits that expand molding capabilities and increase

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profitability for molders. To see all of the company's NPE demos, attendees are encouraged to visit the following booths:

Sumitomo (SHI) Demag	Booth W3045
RJG Inc.	Booth W3383
Yushin America, Inc.	Booth W2173
Gammaflux L.P. (Männer molds)	Booth W763
Canon Virginia, Inc.	Booth W223

Sumitomo (SHI) Demag's worldwide group of companies is 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 (SE, SR and CL series) spans from 8 to 935 U.S. tons, including micro to mid-sized, high-speed, packaging, high-duty, vertical, insert and high-speed multi-shot machine series. Ultra-high-speed hybrid machines (EI-Exis SP and Systec SP series) are offered in models from 165 to 825 U.S. tons for packaging and other thin-wall applications. Configurable, high-performance hydraulic and toggle machines (Systec Series), including multi-component models, are also provided for applications from 39 to 2248 U.S. 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.

Information on the North American operations of Sumitomo (SHI) Demag can be found at www.sumitomo-shi-demag.us.

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