

## PRESS RELEASE

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# SEEV-A Platform Introduction Features Two New All-Electric Machine Series, Five Molding Demos

**[Strongsville, OH – April 27, 2016]**... Sumitomo (SHI) Demag Plastics Machinery North America, Inc. opened a two-day event today in its Strongsville, OH Technology Center to introduce the North American market to the new SEEV-A Platform of advanced all-electric injection molding machines. The event, which provided technical presentations plus five molding demonstrations on SEEV-A Platform machines from 56 to 562 U.S. tons, was the market's first opportunity to see the new machines in action.

“The vast range of injection-molded parts in use today cannot be solved with a *one-size* or a *one-type-fits-all* machinery solution,” said John F. Martich III, V.P. and Chief Operating Officer of Sumitomo (SHI) Demag's U.S. operations. “What's so exciting about the SEEV-A Platform, however, is that through innovations and applied technologies, molders can rely on this single, consistent platform for an exceedingly diverse range of applications. For machines from 50 to 600 tons, for fractional-gram micro-molded parts all the way up to shots sizes over 75 ounces, the SEEV-A Platform delivers the complete suite of productivity benefits associated with our advanced all-electric technology, Z-Molding, the new NC-10 control and many other advanced technologies unique to Sumitomo (SHI) Demag.”

“We invited molders and the media here today so that they could

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*The new SEEV-A<sup>HD</sup> all-electric machine series is available in eight model sizes from 247 to 562 U.S. tons.*



*The new SEEV-A all-electric machine series is available in five model sizes from 56 to 202 U.S. tons.*

## SEEV-A Platform Introduction...continued

see, firsthand, the amazing applications flexibility of this platform as well as the real-world solutions it provides — solutions for challenges all molders face such as ease of use, reducing downtime and scrap, improving cycle time and quality control,” Martich said.

The SEEV-A Platform builds on the global success of Sumitomo (SHI) Demag’s SE machines with innovative new technologies, enhanced specifications and optimized Z-Molding capabilities.

The SEEV-A<sup>HD</sup> (242 to 562 U.S. tons) combines robust, best-in-class specs and exclusive technologies, allowing bigger, heavier and more complex molds to run in smaller, more efficient machines with exceptional precision and fast, smooth clamp speeds. For added applications flexibility, larger diameter screws and optional higher speed injection packages are available.

The new SEEV-A advances Sumitomo Demag’s popular flagship model, the SE-EV, with new capabilities and technologies, redefining molding stability, precision and energy-efficient high-speed performance in the 56 to 202 U.S. ton range.

Optimized Z-Molding sets both machine series apart from other machines in their tonnage range:

- Z-Molding’s Flow Front Control (FFC) system achieves complete and balanced filling with **reduced injection pressure**. FFC takes advantage of the energy in the flow front of the resin to complete filling in an even fashion as opposed to forcing material into open areas and flashing areas that were already filled.
- Z-Molding’s Minimum Clamping Molding (MCM) system **reduces clamp force requirements** and ensures optimized venting of gases. MCM automatically detects the minimum point at which the mold halves are completely parallel and surface pressure is evenly distributed across the mold faces.
- Z-Molding’s Simple Process Setting (SPS) system provides fast, guided setup, and ease of use and machine optimization

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## SEEV-A Platform Introduction...continued

To highlight the platform's applications flexibility, the company:

- Made technical presentations focusing on the benefits of the new platform for automotive, medical and packaging and closures applications
- Ran molding demonstrations on five new models from 56 to 562 U.S. tons.

## SEEV-A<sup>HD</sup> Series Molding Demonstrations



An **SE500EV-A<sup>HD</sup>** (562 U.S. tons) ran a 31.1-inch, 14.1-ounce, PC automotive headlamp lens on a 54-second cycle. The hot runner system and mold were supplied by HRSflow and incorporate their new sequential molding technology: the FLEXflow servo-driven valve-gate system. This technology, together with the precision injection (FFC) and clamp (MCM) control of the machine, ensured the consistent filling, very high aesthetics and clarity of this challenging, long-flow-length part. The molding demo also highlighted the ability of the SEEV-A<sup>HD</sup> to run much larger and heavier molds in a smaller, more efficient machine. Other companies contributing to the demo included: PolyOne Corporation (resin); Conair Group (loader and dryer); Advantage Engineering (thermolators); and MAC Automation Concepts (conveyors).

An **SE385EV-A<sup>HD</sup>** (433 U.S. tons) ran a two-cavity, hot-runner mold, for five-gallon snap-on bucket lids, on a 14.5-second cycle. Each of the LLDPE lids weighed 12.2 ounces. The molding demo highlighted the Double Center Press Platen (DCPP) design which ensures even distribution of surface pressure on both the moving and stationary

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## SEEV-A Platform Introduction...continued

sides of the mold. With its recently improved design, surface pressure inconsistencies in the center of the mold have been decreased an additional 15%. Contributors to the molding demo included: Encore Industries (mold, hot runner and mold temperature controller); Dow Chemical (resin); Frigel North America, Inc. (chiller); Conair Group (loader); and MAC Automation Concepts (conveyors).

**An SE250EV-A<sup>HD</sup>** (281 U.S. tons) molded thin-wall, 50 ml medical vials of TOTAL Petrochemicals PP (LX5 15). The 11.5-gram parts ran on an 11.2-second cycle. The 16-cavity, hot runner mold, built by CAVAFORM International, LLC, uses an INCOE Corporation hot-runner system with patented Opti-flo technology that manages the high and low shear laminates. The technology provides homogeneous melt distribution and balanced filling to all cavities while avoiding invasive and restrictive mixers. The molding demo highlighted the SEEV-A Platform's new algorithm-based S-MOVE technology that replaces multi-step mold open/close speed settings with an optimized speed pattern that is both smoother (less vibration) and **15% faster**. This, combined with exceptionally fast clamp open/close speeds, can significantly shorten cycle times. The SEEV-AHD's Clamp Force Feedback Control system was also highlighted. This system continually monitors and adjusts clamp tonnage, automatically compensating for any thermal expansion of the mold and keeping clamping force stable. It also provides for extremely accurate and repeatable full-stroke mold protection — without the need to slow down the clamp. Other companies contributing to the demo included: Conair Group (loader); Frigel North America, Inc. (chiller); and MAC Automation Concepts (conveyors).



## SEEV-A Series Molding Demonstrations

To demonstrate the precision, speed and applications flexibility of the new SEEV-A Series, the company ran two molding demonstrations on the largest and smallest tonnage models in the series.

**An SE180EV-A** all-electric (202 U.S. tons) ran thin-wall, medical dosing cups on a **sub 3-second cycle**. The 1.8-gram parts were molded of PP (#3944MR-COPR-NT from TOTAL Petrochemicals). The 8-cavity, hot-

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## SEEV-A Platform Introduction...continued

runner valve-gate mold was supplied by Caco Pacific and was designed and manufactured using their “proprietary conformal cooling” in the cores and cavities. The mold includes a Gammaflux hot-runner system with the option to mechanically shut off an individual valve stem. Other companies contributing to the demonstration included: Plastrac Inc. (loader); Frigel North America, Inc. (chiller); and MAC Automation Concepts (conveyors).

SEEV-A features highlighted by the medical molding demo included:

- Multi-toggle clamp force control, a standard feature, used to improve venting of gases and reduce cycle time as shown by this high-speed, high-precision, thin-wall molding demo
- New algorithm-based S-MOVE technology (see previous page)
- The clean molding environment, ideally suited for medical molding applications, that is provided by bushing-free, grease-free tie bars, self-contained lubrication on the linear rails and automatic grease supply through a valve-type distribution system

**An SE50EV-A** ran an eight-cavity, cold-runner mold, on an 18-second cycle, molding two sizes of PMMA paper clips: one size weighing .79 grams and the other size weighing 1.35 grams. Other contributors to this molding demo were Autoload, Inc. (loader) and MAC Automation Concepts (conveyors).

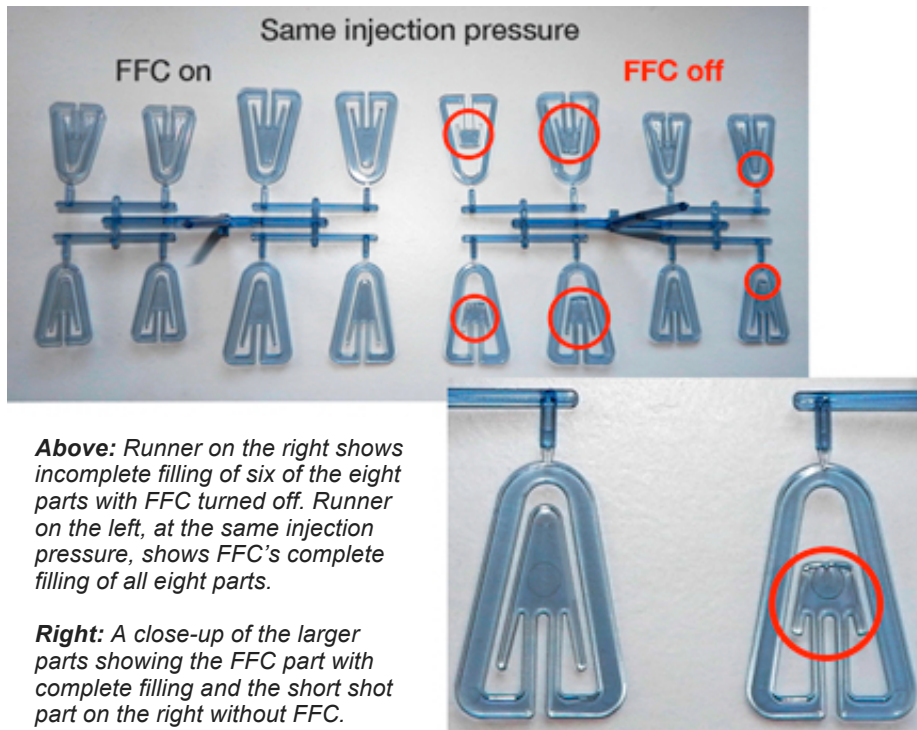
This molding demo highlighted the ease of use and capabilities of Z-Molding’s Flow Front Control (FFC) system.

The FFC control was switched on and off to show the effect on the parts in this unbalanced or “family” mold in which four of the parts are 70% bigger than the other four parts. The system takes advantage of the energy and viscoelastic properties in the flow front of the resin to complete filling in an even fashion as opposed to forcing material into open areas and thus flashing the areas that are already filled. See next page for photo.



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## SEEV-A Platform Introduction...continued



**Above:** Runner on the right shows incomplete filling of six of the eight parts with FFC turned off. Runner on the left, at the same injection pressure, shows FFC's complete filling of all eight parts.

**Right:** A close-up of the larger parts showing the FFC part with complete filling and the short shot part on the right without FFC.

### Rapid Return on Investment

Molders can expect a rapid return on investment with SEEV-A Platform machines due to:

- Significant energy savings due to exceptionally energy-efficient, low-inertia motors and low-friction design improvements
- Reduced water and grease use
- Faster start-up
- Reduced scrap
- Faster cycle times
- Reduced downtime
- Quick mold change
- Minimized preventive maintenance
- Ability for unmanned and lights out operation

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

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## **SEEV-A Platform Introduction...continued**

machines for diverse applications. Its all-electric platform (SE 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](http://www.sumitomo-shi-demag.us).

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