

PRESS RELEASE

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New SEEV-A^{HD} All-Electric Machine Series Challenges Electric, Hybrid and Hydraulic Machines for Mid-Sized Molding Applications

- **8 model sizes from 247 to 562 U.S. tons**
- **Best-in-class specs plus advanced technologies allow bigger parts/molds to run on smaller machines with all-electric precision, speed and efficiency**



New SEEV-A^{HD} all-electric machine series

[Strongsville, OH – January 4, 2016]...Sumitomo (SHI) Demag introduced its new SEEV-A^{HD} Series of mid-sized all-electric machines to the North American market today. The SEEV-A^{HD}, with 8 model sizes ranging from 247 to 562 U.S. tons, combines significantly increased specifications with advanced technologies resulting in a substantially different mid-sized machine series that:

- Brings the precision, productivity and profitability benefits of all-electric injection molding machine technology to applications with larger, heavier and more complex molds
- Efficiently handles higher injection requirements that would typically have been run on a hybrid or hydraulic machine
- Allows bigger parts to run on smaller machines
- “Meets or beats” specifications of other competitors’ next model size up all-electrics

[MORE]

New SEEV-A^{HD} All-Electric Machine Series...continued

“Sumitomo introduced its first mid-sized all-electric machine in 1997, and today there are several other manufacturers with models in the 200 to 600 ton range,” said John F. Martich III, V.P. and Chief Operating Officer of Sumitomo (SHI) Demag’s U.S. operations. “But this machine series is profoundly different, and it opens up all-electric precision and profitability to a much wider range of molders and applications. It will *end* any perception of mid-sized all-electrics being lightweight or unable to handle bigger, heavier molds.”

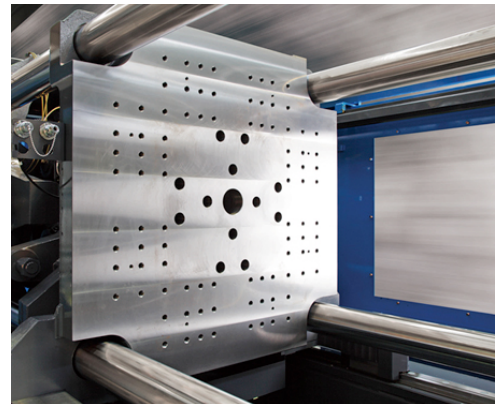
A Unique Combination

What makes the SEEV-A^{HD} different from other mid-size machines is the unique combination of robust, best-in-class specifications with exclusive technologies that **reduce** injection and clamp force requirements. This combination is key to the SEEV-A^{HD}’s capability to compete with other manufacturers’ next model size up machines and to handle larger parts and molds with ease.

The Specifications and Design Features

Increased specifications and modified and/or advanced design features can be found from end to end on the SEEV-A^{HD}:

- Tie bar spacing was increased an average of **8%** in the traverse direction and **15%** in the longitudinal direction compared with the predecessor SE-HDZ Series, and is the highest among machines of the same class. The square configuration of the tie bar spacing also allows molds to be loaded from the side.
- Bushing-free tie bars keep the mold area clean and free of grease
- The mold opening stroke is 25 mm wider than the SE-HDZ and the mold thickness range can be optionally extended 100 mm for all model sizes and 200 mm for some model sizes

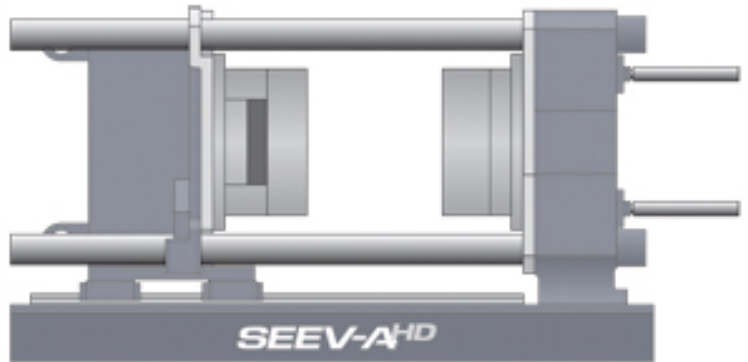


Significantly larger mold area and bushing-free tie bars

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New SEEV-A^{HD} All-Electric Machine Series...continued

- The ejector stroke is 220 mm for all model sizes, and is the largest among all machines of the same class
- A stronger, more rigid frame construction has increased the allowable maximum mold weight by an average of **22%** compared with the SE-HDZ
- The new linear guidance system is supplied as a standard feature to ensure that even heavy molds open and close smoothly and parallelism is maintained
- The improved Double Center Press Platen (DCPP) design further reduces surface pressure inconsistencies inside the mold by **15%**
- The Clamp Force Feedback Control system automatically compensates for any thermal expansion of the mold
- The series is available with larger injection units with higher duty motors and drives capable of higher and longer peak injection pressures. Hold pressures, up to 33,359 psi (2345 kgf/cm²) exactly match injection pressures, and all models are equipped to deliver full power for up to 40% of the cycle.
- For added application flexibility, an optional high-duty filling specification for thin-walled products raises the maximum injection speed to 220 mm/s
- A greater choice of screw diameters is provided including large diameter screws up to 90 mm (dependent on injection unit size)
- The high-contact-force (nozzle touch) system, with selectable settings of 4.5, 5.6 and 6.7 tons, is equal to a hydraulic or hybrid machine and ensures compatibility with various mold types (hot runner, cold runner, floating sprue bushings, etc.)
- NC-10 control improved with wider viewing angle and increased touchscreen sensitivity



A more rigid base and new linear guidance system ensure that even heavy molds maintain excellent parallelism.



The NC-10's screen now has a wider viewing angle and increased touchscreen sensitivity. This, together with the Simple Process Setting (SPS) system, ensures user-friendly operation.

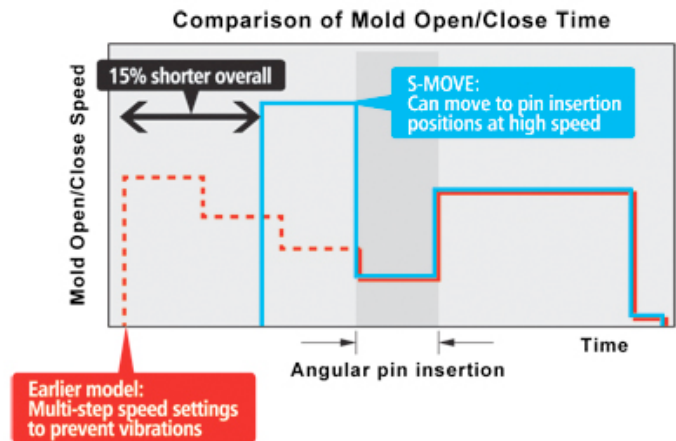
Sumitomo (SHI) Demag Exclusive Technologies

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New SEEV-A^{HD} All-Electric Machine Series...continued

Sumitomo Demag exclusive technologies that are used in the SEEV-A^{HD} include:

- A new technology called S-MOVE that replaces multi-step mold open/close speed settings with an optimized speed pattern that is both smoother and **15%** faster. This, combined with exceptionally fast clamp open/close speeds up to 56.6 in/s (1438 mm/s), can significantly shorten cycle times.
- 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 thus flashing the areas that were already filled.
- Z-Molding's Minimum Clamping Molding (MCM) system **reduces clamp force requirements** and ensures optimized venting of gases and flash-free molding. MCM allows the machine to automatically detect the minimum point at which the mold halves are completely parallel and defines the threshold where flash-free molding can occur and the optimum point at which the best cavity venting exists.
- Z-Molding's Simple Process Setting (SPS) system that provides fast, guided setup, ease of use and machine optimization



New S-MOVE technology reduces vibration and optimizes clamp speed for mold opening/closing that is smoother and 15% faster.

Rapid Return on Investment

"In addition to the application flexibility and inherent cost competitiveness due to the ability to run larger molds on smaller machines, molders will benefit substantially from the overall productivity and profitability of this new machine series," said Martich. "The ROI will be exceptionally fast."

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New SEEV-A^{HD} All-Electric Machine Series...continued

Additional factors contributing to the rapid ROI include:

- 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 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.

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