

New energy efficient Multi-Component moulding machine delivers highest flexibility

Schwaig, September 12, 2019 - Sumitomo (SHI) Demag Plastics Machinery GmbH has launched a highly competitive, energy efficient all-electric Multi-Component machine. The new IntElect Multi is available to customers globally from September 2019.

Catering to brand leaders seeking innovative and creative ways to integrate multiple colours, resins and sensory features into products, in addition to maximising productivity, the machine's energy efficiency helps moulders to conserve valuable resources.

With its dynamic motor design, the IntElect range, now comprising the Multi machine, provides up to a 20% increase in production output, up to 60% reduction in energy consumption and faster machine return-on-investment (ROI) - typically around 18 months.

Product manager Peter Gladigau explains: *"The IntElect Multi is our most advanced Multi-Component moulding machine yet. Featuring direct drives, it delivers the highest level of precision and repeatability for multi-component moulding. This ultimately offers shorter cycle times compared to hydraulic concepts. Additionally, the series fills a vital gap for multi-component moulders seeking greater production flexibility using a more compact and energy efficient machine."*

Sizing up options

Currently available in three machine sizes - 100, 130 and 180 ton - injection moulders can now opt for a machine that delivers the level of flexibility and precision required for high volume multi-component manufacturing. Additional machine sizes will follow in time. From small to big shot weights, simultaneous to sequenced multi-component moulding, the all-electric IntElect can handle every type of application effortlessly.

When co-injecting multiple materials, the number of cavities mostly double. In addition, rotating the mould 180° by turntable requires more mould space. The IntElect Multi has been adapted to fit a mould measuring up to 800mm in height and support a turning diameter of up to 825 mm, with a tie bar clearance of 570 mm¹. *"Compactness is a big consideration for moulders. Most parts produced on a multi-component machine are high volume but relatively small, e.g. automotive and electronic connector housings. Previously, moulders may have opted for a larger machine to accommodate the tool and turntable. By increasing the mould space, Sumitomo (SHI) Demag has addressed this issue,"* says Peter.

¹ 180 ton IntElect Multi

Enhanced safety

Given the complexity and value of multi-component tools, the IntElect Multi includes an advanced mould safety system as standard. Featuring high resolution sensors built into the toggle system itself, the signals produced are so accurate the machine can detect even the slightest change in force patterns and respond accordingly. The safety system monitors the mould closing sequence, closing force and mould speed.

Additionally, the machines assist moulders to monitor the ejector force. Through this, the machine can detect parts and mould elements that have jammed, issues that arise with wear in the ejector system, as well as broken ejector rods.

On trend ... Available now

The launch of the highly precise IntElect Multi addresses a rising global movement towards more complex parts that feature two different materials.

Combining materials is especially popular in the personal care market. Some of the most common examples include disposable razors and toothbrushes. *“As manufacturers look to boost their market position, they will for different ways enhance the consumer experience,”* adds Peter.

The machine also offers a solution for sandwich moulding, which from a circular economy standpoint offers more options to integrate recycled materials for the inner parts of components.

Additionally, moulders can use an inner foam material wrapped in a rigid plastic, resulting in a lighter weight component and savings on materials, or alternatively combine hard and soft materials to improve the aesthetics and comfort of parts. Another option, covering an inner glass fibre material with an unfilled material delivers increased stiffness and creates a brilliant surface. All of these multi-component variations are feasible on the new IntElect Multi.

According to the latest report issued by Transparency Market Research, the market for Multi-Component moulding is anticipated to reach US\$ 11.58 billion by 2024². Although popular in the manufacturing of automotive parts, the report predicts that the medical, consumer goods, electrical and electronics segments will experience the biggest growth in the next five years.

Peter agrees with these forecasts, commenting: *“For a number of moulded applications today, aesthetics are increasingly important for design differentiation. Additional benefits are also achieved for durability and functionality.”*

² <https://www.transparencymarketresearch.com/pressrelease/2-shot-injection-molding-market.htm>

Crediting Sumitomo (SHI) Demag's prowess in all-electric machines - currently the company has installed more than 65,000 all-electric machines globally - Peter emphasises the significance of the optimised motor design. *"When working with two materials, perfecting the injection process control is even more critical given that a second material is being injected on top of the first shot."*

Geared towards top dynamics, precision and repeatability, the IntElect drive technology is equally critical for the smooth and fast rotation of the mould. The machine's integrated turntable perfects this 180° motion, ensuring components are positioned perfectly to receive the second shot, all within less than one second of the turning time.

The IntElect Multi is now available to customers worldwide. As with the entire IntElect range, additional machine sizes will be added to complete the portfolio.

Images/captions



Notes to the editor

Press release issued for Sumitomo (SHI) Demag Plastics Machinery GmbH by:

Lucy Benbow	T +44 (0) 7971 987761	E lucy.benbow@glohouse.co.uk
Sarah Willington	T +44 (0) 1403 240127	E sarah.willington@glohouse.co.uk

Contact

Amely Groner, Marketing Manager
Sumitomo (SHI) Demag Plastics Machinery GmbH
T +49 911 5061-5005
E amely.groner@dpg.com

Sumitomo (SHI) Demag Plastics Machinery GmbH

Sumitomo (SHI) Demag has shaped the development of the plastics industry from its very beginning. As a specialist for injection moulding machines for plastics processing, Sumitomo (SHI) Demag and its Japanese parent company are leading the industry.

The global development and production network of Sumitomo Heavy Industries and Sumitomo (SHI) Demag is comprised of four facilities in Japan, Germany and China with more than 3,000 employees. The product portfolio includes all-electric, hydraulic and hybrid injection moulding machines with clamping forces of between 180 and 15.000 kN. With more than 125,000 installed machines, Sumitomo (SHI) Demag is present in important global markets and ranks among the largest manufacturers of injection moulding machines in the world.

At Sumitomo's headquarters in Chiba, Japan, the company manufactures machines with clamping forces in the small to medium range. Nearly 95 % of all delivered machines are equipped with an all-electric drive concept. Sumitomo (SHI) Demag's German facilities in Schwaig and Wiehe produce the Systec Servo range with hybrid drive as well as the EI-Exis SP and Systec SP range of high-speed, high-performance machines. The all-electric IntElect range for international customers is also being produced in Germany.

As early as 1998, Sumitomo (SHI) Demag set up its first production site in Ningbo/China. In 2015, the Chinese subsidiary Demag Plastics Machinery (Ningbo) Co., Ltd. installed a new facility with a 13,000 m² floor space. It is earmarked for the production of the Systec C range with clamping forces of between 500 and 10,000 kN for the Asian market.

In addition to injection moulding machines, Sumitomo (SHI) Demag offers customised and standardised systems for the part handling automation, technical and process solutions for special applications, tailored services and service concepts as well as a range of financial options to support investment in injection moulding machines.

With its comprehensive sales and service network of subsidiaries and agencies, Sumitomo (SHI) Demag is present in all major markets.