



Injection Moulding of Packaging with Improved Clamping Forces: ENGEL at K 2007

Schwertberg / Austria: September 2007 – injection moulding machine manufacturer ENGEL will be demonstrating newly dimensioned ENGEL speed high-performance machines for injection moulding of plastic packaging at the world's leading plastics fair, K 2007, from 24th to 31st October in Düsseldorf, Germany. One new addition to the product range is the ENGEL speed 500 with a clamping force of 5,000 kN which will be demonstrating the production of a 1 litre container for ice-cream using a 4+4 cavity stack mould. The fastest IML system on the market, a model with a clamping force of 1,800 kN will be producing decorated, round cups with an original product seal.

Packaging is the field of application that accounts for the largest volume in plastics. Many types of packaging are produced in quantities of multiple millions and with extremely thin walls. Today, packaging places the most exacting demands on all the components of an injection moulding machine. ENGEL's response to the packaging industry's needs is the ENGEL speed high-performance injection moulding machine. As of K 2007 there will be four ENGEL speed models with clamping forces ranging from 1,800 to 5,000 kN. The most fascinating thing about them is their extremely short dry cycle times.

The newly developed five-point dual-toggle lever offers excellent motion dynamics and smooth acceleration and braking characteristics. Active Speed Setup guarantees smooth running of the machine despite fast movements. After setting the opening stroke and speed, the machine sets all remaining parameters autonomously. The moving mould mounting platen is not mounted on tie-bars but on a moving carriage on the machine frame. Screw advance speeds of up to 1.000 mm/s guarantee precise and reproducible



filling of moulded parts with extremely thin walls. The new IL 3560 (90) inline injection unit can also be equipped with barrier screws for improved plastification despite high output levels

The Fastest IML System on the Market

The ENGEL speed 180/55 machine exhibited at K 2700 with a clamping force of 1,800 kN will be producing round cups with an original product seal while at the same time decorating the cups using in-mould labelling (IML). With a cycle time of less than 3.5 seconds, the machine achieves an output of over 2000 cups per hour. The 2-cavity mould was produced by Otto Hofstetter AG, Uznach/Switzerland; the high-speed parts removal robot is by Beck Automation, Oberengstringen/Switzerland, and the polypropylene, Moplen EPV648V, is by Basell.

High Performance Now Available for Greater Clamping Forces

The new, and up to now biggest, ENGEL packaging machine, the 5,000 kN ENGEL speed 500/90, will be manufacturing 1.1 litre containers for ice-cream using a 4+4-cavity stack mould by Otto Männer, Bahlingen/Germany. A high-speed, linear ENGEL speedy ERS 31 parts removal robot, that accesses the separating layer horizontally, will be demoulding the cups from both separating layers. The machine's output is approx. 7,400 ice-cream containers.

Versatile Machines, Processes and Applications

Besides the high-performance ENGEL speed injection moulding machines for the packaging industry, ENGEL will also be exhibiting the dual-platen ENGEL duo machine series, tiebar-less ENGEL victory machines, the fully-electric ENGEL e-motion precision machine, the compact, fully-electric ENGEL e-max and ENGEL elast machines, which specialise in elastomer processing.

ENGEL at K 2007 in Düsseldorf:
Hall 15 Booth 15 C 58 (main booth)
Hall 10 Booth 10 D 42 (automation technology)



ENGEL speed 180/55 with a clamping force of 1,800 kN for production of round cups



Round polypropylene cups with original product seal, produced and decorated with a cycle time of 3.7 seconds in a 2-cavity mould at K 2007 by means of in-mould labelling on an ENGEL speed 180/55



ENGEL speed 500/90 with a clamping force of 5,000 kN for production of ice containers



Polypropylene ice-cream container with a volume of 1.1 litres, manufactured in a 4+4-cavity stack mould on an ENGEL speed 500/90 high-speed machine

Bilder: ENGEL



Engel Austria GmbH

The Engel brand denotes the world's biggest manufacturer of injection moulding machines and, at the same time, one of the world's leading plastics processing machine manufacturers. Today, the Engel Group offers its customers a single-source for a full range of plastics processing technology modules for: injection moulding machines for thermoplastics and elastomers, moulds and automation, with the assurance that individual components are competitive and successful on world markets. With eight production plants in Europe, North America and Asia (China, Korea), subsidiaries in 17 countries, and representatives in over 70 countries, Engel offers its customers the best-of-breed, global support they need to compete and succeed with new technologies, and leading-edge production systems.



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