## ENGEL at FIP 2022 in France

# Compact, precise, and economical

Schwertberg/Austria – February 2022

**All-electric injection moulding machines combine maximum precision with low energy consumption. At FIP 2022 from April 5 to 8 in Lyon, France, injection moulding machine manufacturer and system solution provider ENGEL is demonstrating how the benefits of all-electric injection moulding machines can be leveraged in a cost-efficient way.**

The quality of many parts with strict requirements depends on the precision of the injection step and the movements of the mould mounting platens during opening and closing. All-electric injection moulding machines are therefore the preferred solution in this application segment, where cost-effectiveness is a decisive factor in choosing a machine. In the form of the e-mac, ENGEL has an all-electric injection moulding machine in its portfolio that combines high power and energy efficiency with an extremely compact machine design for comparatively little capital outlay.

During the four days of the trade fair, an ENGEL e-mac 465/180 injection moulding machine that integrates an ENGEL viper 20 robot is demonstrating the performance this series offers by producing breakfast boxes from polypropylene.

### Completely servo-electric for a high overall efficiency level

Among the all-electric injection moulding machines on the market, the new generation e-mac machines are among the most compact worldwide in their respective performance segment across the entire series. Thanks to an optimized toggle lever geometry, the e-mac 465/180 on show at FIP, for example, is 450 mm shorter than the previous 180-tonne version, without reducing the opening stroke. This guarantees a high productivity per unit of area – a factor that has already become a key efficiency indicator for many corporations.

All movements of the ENGEL e-mac – including the nozzle movement and ejection – are performed by servo-electric drives. This means that the machine achieves very high overall efficiency level. If required, a servo-hydraulic unit can be integrated into the machine frame without requiring additional space.

The ENGEL e-mac injection unit was redeveloped from scratch with a focus on even better dynamics. It is available in three power classes to precisely adapt the machine to requirements with a view to maximum overall efficiency.

In addition to the precise electric machine movements, the intelligent assistance systems of the iQ product family such as iQ weight control and iQ clamp control ensure high process stability and optimal process settings.

For precision applications with cycle times of more than four seconds, the e-mac is often the most economical solution in the field of all-electric injection moulding machines. It is deployed in a wide range of applications, from technical moulding, through packaging and medical technologies to teletronics.

**Parallel motion for shorter cycle times**

Also, the automation in the production cell on show at FIP makes a major contribution to the high overall efficiency. An ENGEL viper 20 linear robot is removing the boxes from the mould. ENGEL's viper series linear robots impress with their high load-bearing capacity, high dynamics and shortest part handling times. Thanks to the iQ vibration control software feature, they combine a low weight with maximum stability and precision.

Where ENGEL supplies the injection moulding machine and robot from a single source, the control units of the two systems form a single unit. There is no need for the machine operator to familiarize themselves with differences in the operating logic; this in turn simplifies the programming and control of complex process sequences and reduces the risk of input errors. On top of this, integrating the control unit results in a shorter cycle time in many applications. Since the machine and the robot access a shared database, the robot can coordinate its movements with those of the machine and start part take-off while the mould is still opening.

### MES for newcomers and advanced users

At FIP 2022, ENGEL will also be presenting smart connectivity solutions for linking injection moulding machines and production cells within the enterprise. TIG authentig, the MES (Manufacturing Execution System) by ENGEL subsidiary TIG is tailored to the specific requirements of the injection moulding industry down to the last detail. It ensures transparency in order to, for example, utilise the total capacity of the machines or correlate productivity indicators and economic objectives.

### Turnkey solutions from a single source

Founded in 1945, ENGEL has steadily developed over the course of its history from an injection moulding machine manufacturer to a system expert. As a single source supplier, the family-owned company provides turnkey production cells for sophisticated applications that not only include the injection moulding machines, but also the automation, process technology and Industry 4.0 technologies, the mould and other peripheral units. In addition to the injection moulding machines, various types of robots, process technologies and peripheral units also stem from ENGEL's own development and production. And ENGEL integrates other systems in collaboration with contracting partners. As the system supplier, ENGEL bears overall responsibility for the complete production solution, and this includes the components implemented in collaboration with partners.

## ENGEL at FIP 2022 in Lyon: Hall 5.1, Stand L02+K03



During FIP, an ENGEL e-mac injection moulding machine is demonstrating the performance this series offers by producing breakfast boxes from polypropylene.


ENGEL's viper series linear robots impress with maximum stability and dynamics.

Pictures: ENGEL

**ENGEL AUSTRIA GmbH**

ENGEL is one of the global leaders in the manufacture of plastics processing machines. Today, the ENGEL Group offers a full range of technology modules for plastics processing as a single source supplier: injection moulding machines for thermoplastics and elastomers together with automation, with individual components also being competitive and successful in the market. With nine production plants in Europe, North America and Asia (China and Korea), and subsidiaries and representatives in more than 85 countries, ENGEL offers its customers the excellent global support they need to compete and succeed with new technologies and leading-edge production systems.

Contact for journalists:
Ute Panzer, Vice President Marketing and Communications, ENGEL AUSTRIA GmbH,
Ludwig-Engel-Straße 1, A-4311 Schwertberg/Austria,
Tel.: +43 (0)50/620-3800, Fax: -3009, E-mail: ute.panzer@engel.at

Susanne Zinckgraf, Manager Public Relations, ENGEL AUSTRIA GmbH,
Ludwig-Engel-Strasse 1, A-4311 Schwertberg, Austria
PR Office: Theodor-Heuss-Strasse 85, D-67435 Neustadt, Germany,
tel.: +49 (0)6327 976 9902, fax: -03, e-mail: susanne.zinckgraf@engel.at

Contact for readers:
ENGEL AUSTRIA GmbH, Ludwig-Engel-Strasse 1, A-4311 Schwertberg, Austria,
Tel.: +43 (0)50 6200, fax: -3009, e-mail: sales@engel.at



www.engelglobal.com