

## ENGEL at Plastpol 2026

### Intelligent production solutions for stable manufacturing processes

*Schwertberg/Austria – April 2026*

**At PLASTPOL 2026, taking place in Kielce, Poland, from 19 to 22 May, the ENGEL Group shows how intelligent injection moulding solutions improve process stability, efficiency and cost-effectiveness in a targeted manner. ENGEL is focusing its trade fair presentation on production solutions that enable processors to respond more quickly to deviations on the basis of data, reduce scrap and make their manufacturing operations more robust.**

At the ENGEL Group's stand, visitors can see how integrated injection moulding solutions equipped with digital systems help processors stabilise production, reduce scrap, respond more quickly to process deviations and increase overall equipment effectiveness. ENGEL presents comprehensive digitalisation solutions ranging from data acquisition and remote access to real-time process analysis, self-optimising control loops and intelligent operator support in production.

#### **All-electric ENGEL e-mac for medical technology: high process reliability with low energy consumption**

In the medical sector, ENGEL presents an all-electric e-mac 200 injection moulding machine with a clamping force of 2,000 kN. The machine produces a component for a medical auto-injector from random PP with white masterbatch. The mould has 32 cavities, the part weight is 0.396 g and the cycle time is less than 10 seconds. The production cell features iQ weight control, which optimises injection volume in real time by automatically compensating for fluctuations in melt viscosity within the same shot. This ensures consistently high part quality and maximum process stability and, as a result, increases OEE.



*Image 1: The compact all-electric ENGEL e-mac 200 in cleanroom design combines high precision with low energy consumption and requires only a small footprint. This supports stable and cost-effective production of demanding medical components.*

For additional stability in ongoing operation, ENGEL uses further digital assistance systems from the inject AI family. With iQ clamp control, the system reduces clamping force by up to 33% through automatic optimisation of the clamping force. This protects the mould, lowers energy consumption and increases mould service life for a reliable series production process.

In this production cell, iQ flow control supports the automatic adjustment of mould temperature control and continuously adapts the pump speed of the temperature control units during the ongoing process. This keeps thermal conditions stable, further reduces scrap and lowers energy consumption in production by up to 18%. This demand-based optimisation of mould temperature control stabilises processes and sustainably reduces production costs as well as CO<sub>2</sub> emissions.

In addition, ENGEL presents the Parameter Limits feature on this exhibit. It prevents process parameters from being changed outside the defined process window. This helps avoid operator errors and use personnel resources efficiently.

This exhibit also features iQ process observer. Using AI, it analyses more than 1,000 process parameters, detects deviations at an early stage and provides specific recommendations for action. For processors, this means greater transparency, faster responses to process changes and higher process reliability. Thanks to this well-founded root cause analysis, the effort involved in troubleshooting is reduced by up to 30 minutes per machine. This also helps address the shortage of skilled labour and frees up valuable resources.

The finished parts are removed by an ENGEL viper linear robot and placed on an automatic conveyor belt. The robot is fully integrated into the CC300 machine control system. In combination with iQ motion control, its movements automatically adapt to the machine sequence. This helps further reduce cycle time and energy consumption.

### **WINTEC t-win: automated production and higher productivity per unit area**

Another highlight at the stand is a WINTEC t-win 4500 two-platen injection moulding machine with a clamping force of 4,500 kN in a production cell with a fully integrated viper linear robot.

The high-performance WINTEC t-win two-platen injection moulding machines stand for high platen rigidity, low operating costs, low energy consumption and a small footprint.



*Image 2: The WINTEC t-win 4500 combines high clamping force with a compact two-platen design, supporting cost-effective production with a small footprint.*

The WINTEC t-win is designed for applications with large moulds and high clamping forces. The two-platen machine combines robust construction with short cycle times and high cost-effectiveness. Short-stroke pressure cushions, synchronous locking and the servo-hydraulic drive all contribute to this. In production, processors benefit from a compact machine layout, good maintenance accessibility and energy-efficient operation. This reduces total operating costs and allows investments to pay back more quickly.

iQ weight control also supports process stability in this exhibit.

At the trade fair stand, this production cell manufactures PP lunch boxes with a shot weight of 176 g and a cycle time of 35 seconds. It uses a two-cavity family mould in which the lunch box and the lid are produced at the same time.

After injection moulding, a viper 20 linear robot fully integrated into the C30 machine control system removes the finished individual parts from the mould and places them on an automatic conveyor belt.



*Image 3: The PP lunch boxes produced on the WINTEC t-win show how stable processes, efficient part removal and high productivity per unit area can be combined cost-effectively in an automated production cell.*

This WINTEC production cell clearly shows how automation, process stability and compact system concepts can be combined particularly cost-effectively for standard applications. For processors, this opens up targeted potential to improve efficiency, productivity per unit area and unit cost efficiency.

### **End-to-end digital solutions with clear benefits for processors**

At the Expert Corner of the stand, ENGEL also presents the MES authentig and shopfloor monitoring. authentig connects injection moulding machines, makes production data and KPIs available in real time and thus helps reduce set-up times, scrap and downtime. shopfloor monitoring creates a real-time overview of machine statuses and key figures across locations, enabling processors to respond more quickly to deviations and improve their OEE in a targeted way.

### **Visit us at Stand 6-03**

Images: ENGEL

### **ENGEL AUSTRIA GmbH**

ENGEL is one of the global leaders in the manufacture of injection moulding 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 twelve production plants in Europe, North America, Mexico and Asia (China, Korea and India), 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.

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