

ENGEL at Swiss Plastics Expo 2026: Digitalisation as the key for the Swiss precision market

Schwertberg, Austria – December 2025

Swiss Plastics Expo in Lucerne from 20 to 22 January 2026 is an important showcase for Switzerland as a high-technology location. In a market environment characterised by the highest precision, a zero-defect strategy and an acute shortage of skilled labour, ENGEL presents forward-looking solutions. The focus of the trade fair appearance is the evolution of digitalisation from inject 4.0 to inject AI, together with the world's first autonomous injection-moulding cell. ENGEL demonstrates how Swiss plastics processors can sustainably secure and further strengthen their global competitiveness through efficiency, process stability and the intelligent use of artificial intelligence (AI).



inject AI: the answer to Swiss quality requirements and cost pressure

Swiss industry, particularly in medical technology and in demanding technical components, is built on its commitment to quality. At the same time, high labour costs and the general shortage of skilled

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ENGEL AUSTRIA GmbH | A-4311 Schwertberg | tel: +43 (0)50 620 0 | fax: +43 (0)50 620 3009
sales@engel.at | www.engelglobal.com

workers present ongoing challenges. This is precisely where ENGEL addresses these requirements with the new inject AI framework. It transfers the proven intelligent assistance systems, around 20,000 of which are already in use worldwide, into a new era of autonomy. "We integrate decades of application engineering expertise directly into the machine control system and make this expert knowledge usable for every employee," explains Gerhard Dimmler, CTO of ENGEL. In industries such as medical technology, where validation and process documentation are critical, ENGEL's digital assistance systems also provide seamless traceability and increased reproducibility, alongside the minimisation of scrap and the reduction of energy consumption.

For the Swiss market, this represents a double dividend: on the one hand, broader process knowledge is made systematically available and can be used independently of individual key personnel. This is particularly relevant in Switzerland, where labour costs for highly qualified technicians account for a significant share of production costs. Every hour saved in troubleshooting or manual optimisation has a direct impact on operating results. On the other hand, AI-supported optimisation enables a level of process consistency that has not previously been achievable. The iQ process observer, for example, continuously analyses more than 1,000 parameters, proactively detects even the smallest deviations and provides actionable recommendations before scrap is produced. Complemented by the ENGEL Virtual Assistant (EVA), which operates as a 24/7 support tool, and the AI-based part finder for spare parts identification, ENGEL creates an ecosystem that increases efficiency across the entire value chain.

The autonomous injection-moulding cell: consistent precision at the push of a button

The highlight in Lucerne is an autonomous manufacturing cell based on an all-electric ENGEL e-mac 80 injection moulding machine. Due to its precision and energy efficiency, the e-mac series is already the first choice for many Swiss processors when it comes to compact systems. However, this cell does more than just produce parts, it regulates itself. The vision of an autonomous, self-regulating injection-moulding cell becomes an industrial reality here. Instead of setting abstract parameters such as pressures and speeds, the operator defines the required quality characteristics of the end product. The cell then automatically adjusts the process and ensures that the specified part quality is maintained.



Quality control with reduced material and energy consumption: the compact autonomous injection-moulding cell from ENGEL based on an all-electric e-mac 80 injection-moulding machine, ENGEL compact cell automation and inline quality monitoring.

This aspect is of major importance not only for cost reasons but also with regard to the sustainability targets to which many Swiss companies have committed themselves. At the same time, continuous monitoring ensures stable, process-optimised production, even when processing recyclates, supported by systems such as iQ weight control plus.

With its presence at Swiss Plastics Expo 2026, ENGEL specifically addresses the needs of the demanding Swiss market. The inject AI solutions on display are the key to tackling the shortage of skilled labour, reducing production costs and not only defending the “Swiss Made” quality promise in a globalised world, but actively expanding it as a technological advantage.

Visit ENGEL at Swiss Plastics Expo: Hall 1 / Stand A 1001

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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.

Contact for journalists:

Tobias Neumann, Press Officer, ENGEL AUSTRIA GmbH
Ludwig-Engel-Strasse 1, A-4311 Schwertberg, Austria
Tel.: +43 (0)50 6207 3807 email: tobias.neumann@engel.at

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