

UNISIGN EXPERIENCE @WORK



General machining

Case study



Application

Complete machining of components for large injection-moulding machines

Material

Steel

Customer

ENGEL Austria GmbH

Machine type

3x UNICOM6000

Benefits

- Total machining solution for milling, drilling and vertical turning operations
- High availability
- A highly responsive service-driven organisation
- Measure without changing tools – measuring probe on a separate slide (optional)

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A total machining solution with three UNICOM6000 machines connected together via an FMS

About our customer

ENGEL is a global supplier of machines and automation solutions for injection-moulding processes. With its nine production sites, the company is represented at strategically important locations in Europe, North America and Asia. Three of those production facilities are located in Austria. The company produces small and medium-sized machines at its main factory in Schwertberg, while its robots are produced at its facility in Dietach and large machinery in St. Valentin.

Gerhard Aigner is the company's Production Manager in St. Valentin and explains how the level of in-house manufacturing is high.

“Here in St. Valentin, we also produce the parts and core components for the large machines from our duo range, which are used in the production of large plastic components, particularly for the automotive, teletronics and technical moulding sectors. While the types of components produced include vehicle dashboards for well-known car manufacturers, the frames used in televisions from well-known brands are also produced on ENGEL-duo-machines.”

Best total solution

“For a long time we used two individual machines to machine components for large machines.” As Gerhard Aigner explains, “That approach has always allowed us to produce components to a high quality, but over time, the machines themselves had come to the end of their machine life cycle. So, in order to take our production





to a higher level, we decided to implement a total solution concept by linking three UNICOM6000 machines to a pallet-handling and warehousing system – a Fastems Flexible Manufacturing System (FMS). Of all suppliers we considered, Unisign was the one that came up with the most effective total solution.” A one-off contract was issued for the solution as a whole (3x UNICOM with an FMS), and the lead role was entrusted to Unisign.

The three machines are operated by two employees. As Gerhard Aigner explains, “Our aim is to operate for as many hours as possible without human supervision. This total concept for drilling and milling enables us to be very flexible. From our point of view, it therefore represents a good, cost-effective solution that will keep us competitive.”

Visits to reference sites

ENGEL has been a Unisign customer for decades now. “When this investment was imminent, we immediately got in touch with Unisign,” says Gerhard Aigner. “One of the first things we did was schedule appointments to carry out two reference visits: to

another Unisign customer in Austria, and to Unisign itself in Panningen. When making those visits, I got a good feeling straight away. What impressed us above all was the fact that the quality management system forms an integral part of the process.”

Measuring without changing tools

Gerhard Aigner continues, “During our reference visit, we were able to see the automatically deployable measuring probe on a separate slide in action, which Unisign offers for its UNICOM6000 machines. While other manufacturers offer machines with similar specifications, none of them can keep pace with the machine from Unisign. With its measuring probe on a separate slide, the Unisign machine can carry out a reference measurement without the need for a tool change. This, in itself, is that certain something that makes it stand out and enhances the quality.”

The other additional options that ENGEL purchased included the extended Y-axis and a larger vertical clearance. As Gerhard Aigner explains, “The extended Y-axis turns these machines into full-service machining centres

that are capable of covering a significant range.”

Test machining

The Unisign machines are used to machine large turned and milled components that conventional horizontal turning machines cannot tackle in a cost-effective way. As Gerhard Aigner explains, “These are components with a diameter of up to 2000 mm that weigh up to 5 tonnes. With the UNICOM6000 machines, we are able to manufacture 90% of our product range in a cost-effective way. We apply very close tolerances when producing our components. When we asked if they would carry out test machining for us in their own production facility using our binding tolerances and time requirements, Unisign didn’t even hesitate. Other suppliers, on the other hand, wasted no time in declining our request. During the preliminary acceptance stage, Unisign met all of our criteria in full, both in terms of time and quality.”

Service and support

ENGEL’s experiences with Unisign have been very positive, confirms Gerhard Aigner. “Unisign has lived up to its promises. Throughout this project, we have received very good support, including from Unisign’s regional sales and service partner, Steindl, which has actually been providing outstanding service in its role for decades. For us, this after-sales support is an important factor. As a company, we need service technicians to be dispatched quickly, so that we can maintain and if possible, enhance, our high level of technical availability. In that regard, we know we can rely on Unisign and, on a local level, on Steindl, its regional sales and service partner.”

