

UNISIGN EXPERIENCE

@WORK



General Machining

Case study



Application

Finishing of special forged components (e.g. rings and flanges)

Material

Steel

Customer

Brück GmbH, Germany

Machine type

UNIPOINT6000, UNIPOINT7000, UNIPOINT8000, UNICOM6000

Benefits

- Machining of large components that require a high degree of accuracy
- Flexibility of staffing thanks to universal controls
- Easy to program and simple to use
- High-quality service provided by Unisign experts

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Unisign machines – the first choice for high-precision finishing

About our customer

Brück is one of the leading specialists in the production of bespoke forged components that satisfy the most exacting needs. The company fulfils orders from well-known customers across all industries. Its products are also 100% “Made in Germany”. Brück’s forging workshops, heat treatment plants and machining facility are all located on its 15-hectare production campus in Saarbrücken-Ensheim, which is where the components are also welded and assembled. The company manufactures products such as seamless hot-rolled rings, flanges and specialist forged iron components according to the customer’s specifications. Brück possesses an impressive range of machinery, including more than 100 CNC machines, and is capable of producing assemblies of up to 250 tonnes total weight with very

strict manufacturing tolerances. Even large components can be produced in just a single process.

7 Unisign machines

As a master craftsman in the drilling/machining centres department, Sergej Koval has worked with Unisign machines from the very beginning. The first machine, a Uniport 8000, was purchased in 2006 and is still in use in the milling department to this day. The other six Unisign machines owned by Brück are located in the drilling/machining centres department. All six of them are fitted with a turning station for drilling and turning rings and other components. As Sergej Koval explains: “Our department carries out machining work on short production-runs and individual pieces alike. But every one of those, without exception, is a





large component. Here at Brück, a component weighing 3 tonnes is classed as a small component. To give just one example: Wind turbines contain large rings that control the power transmission system. Rings of that type are the sort of products we typically produce.”

First choice for precision

At Brück, the Unisign machines are used to perform finishing work only. Sergej Koval continues: “The CNC machines from Unisign are very precise. Once a component has been forged, it is heat-treated, pre-treated and pre-turned, and only then is it sent to us for finishing. Whenever precision is at stake or whenever complex components are being produced, the Unisign machines are always our first choice for machining.”

User-friendly

Sergej Koval continues: “We are very satisfied with the Unisign machines. What we like

about them the most is that programming and using the machines is very easy.

The design of the machines from Unisign is also well-thought-out from start to finish. They consistently use specific configurations, without exception. That is why the machines from Unisign are so user-friendly.”

Workforce planning is more flexible

In the past few years, Brück has acquired new Unisign machines on a regular basis. As Sergej Koval explains, he and his colleagues feel that the universal structure of the various Unisign machines is a major advantage: “The fact that the various Unisign machines are operated in an almost identical way means that I have greater flexibility in assigning my staff. An operator can be deployed at many different positions within the machining process. If, for example, a standstill occurs in one part of the process, I can simply move one of the workers from one machine to the other.”

Expertise

“Our people also enjoy working on the Unisign machines,” said Koval. “Everyone who comes into direct contact with the Unisign machines is always full of praise. Of course, malfunctions do occur from time to time, and no machine can continue operating forever. But whenever anything happens that we can’t resolve immediately in-house, we have a more or less direct line to the Service department at Unisign. If a machine needs attention from a Unisign technician, the company always sends someone who knows what exactly they are doing. Based on my own experience, I would recommend CNC machines from Unisign to others without any hesitation at all.”

General specifications

UNIPORT6000

Work area

X-axis, longitudinal travel: 4000 – 28000+ mm
Y-axis, cross travel: 1500 – 5000 mm
Z-axis, spindle stroke: 1000 / 1250 mm
Horizontal clearance of portal: 1500–5000 mm
Vertical clearance of portal: 1300 / 1550 mm

Main spindle and horizontal spindle

Power: (S6-40%) 36 / 54 kW
(S1-100%) 26 / 39 kW

Speed: 6000 rpm

Torque: 720 / 1000 Nm

Tooling

Tool holder: HSK100A / SK 50 / Capto C8
Number of tool pockets: # 28 – 214
Tool change time: 10 sec.

Axis drive and feed system

Rapid transverse / Feed rate
X, Y, Z-axis: 40,000 mm/min

