

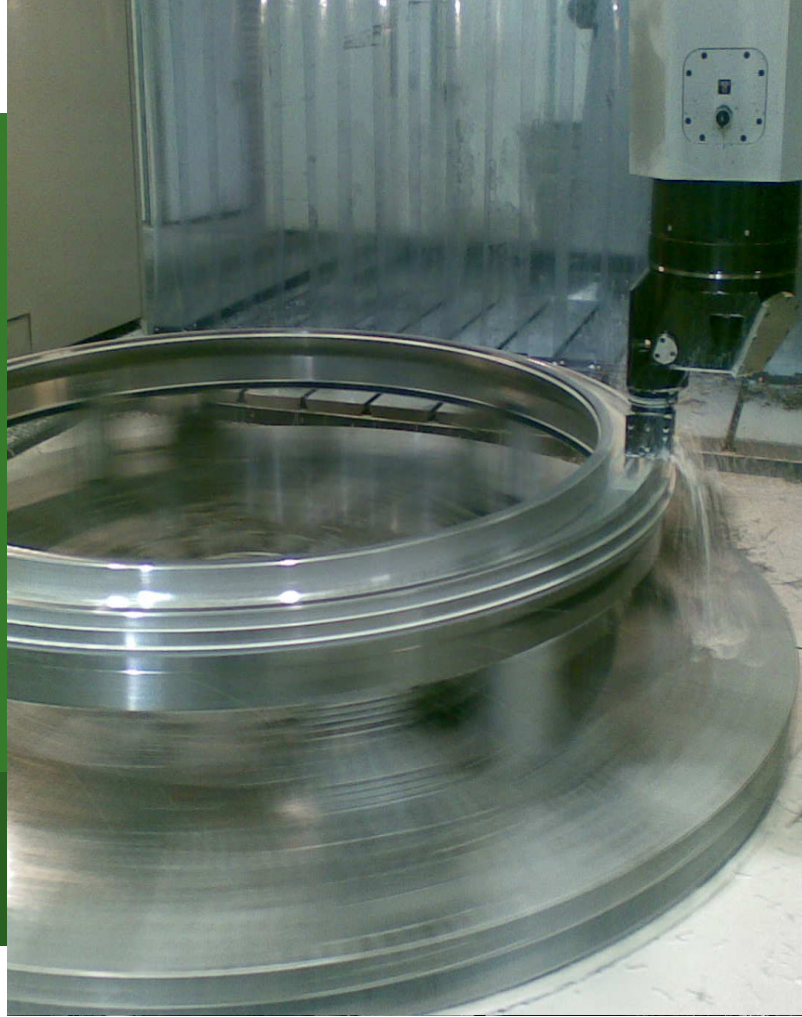
UNISIGN EXPERIENCE

@WORK



## General industry

Case study



### Application

High-precision machining of large, complex components

### Material

Steel and aluminium amongst others

### Customer

Gontermann & Simon GmbH & Co KG, Germany

### Machine type

UNIPORT6000 (5x)

### Benefits

- Portal machines that offer a high degree of accuracy
- Simultaneous 5-axis machining and vertical turning
- Ideal for the machining of large, heavy components
- Extremely user-friendly

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## UNIPORT6000 – indispensable for high-precision machining

### About our customer

Carolin Herzmeit (Managing Director) belongs to the second generation of the family-owned company Gontermann & Simon in Netphen, Germany. Together with her husband, she has been responsible for the company's day-to-day operations since 2018. Carolin herself describes the company as a 'dedicated contractor specialising in milling and turning'.

She further explains: "We specialise in machining workpieces that require the highest degree of accuracy. With our 39-strong team, we manufacture components for exacting customers from the wind industry and mechanical engineering sectors, amongst others. We specialise in turning and milling large-scale components with a turned diameter

of 800 mm to 3000 mm and a unit weight of up to 16 tonnes. We manufacture both individual and series-produced components." To undertake such complex machining tasks, Gontermann & Simon can rely on a range of state-of-the-art machinery, including CNC machines and a 3D measuring machine. These also include 5 UNIPORT6000 machines, the first of which was purchased in 2005. In subsequent years, Gontermann & Simon expanded its range of machinery until it included 4 UNIPORT6000 machines in total. Its fifth machine is scheduled for delivery this year (2022).

### Flagships

The company's UNIPORT6000 machines are used to process products such as housings, machine tables, turntables and through





covers for a variety of customers. Carolin Herzmeit: “The Unisign machines are our flagships. They actually play a significant role in our production process, as they allow us to carry out almost the full range of processes on our components. Moreover we do not need to move workpieces across onto other machines afterwards, as we can process them from start to finish on our UNIPORT6000 machines.”

### Expanding the possibilities

Before 2005, when Gontermann & Simon did not yet own any CNC machines from Unisign, its machining process looked very different. “Back then, our customer base was completely different and we were not working for the wind sector at all,” explains Carolin Herzmeit. “Purchasing our Unisign machines opened up new doors for us in the precision-machining domain. The UNIPORT6000 machines allowed us to machine components more quickly and accurately, bringing many new customers to our door. So, we have never replaced any of our CNC machines. The UNIPORT6000 machines simply expanded the range of manufacturing processes we could offer our customers.”



### Custom configuration

Carolin Herzmeit: “Our working relationship with Unisign is something we are very happy with. From submitting the order and constructing the machine to accepting the finished product – the entire customer journey takes place in a pleasant and personal way. And one thing that’s worthy of praise is the fact that a member of Unisign’s team will come out to us very quickly if ever we experience a problem with one of our machines. Someone is always on hand to help us quickly and effectively with any problems we may have.”

When purchasing our first UNIPORT6000, we had a few special requirements. For Unisign, that was no problem at all. The team at Unisign genuinely helped us to define our needs and configured the machine to meet our requirements. Since then, the configuration we requested at the time has even become part of Unisign’s standard range.

### Certainty

Customers very much appreciate the fact that Gontermann & Simon not only has one UNIPORT6000 machine in its production hall, but a number of them. “That allows us to offer our customers a considerable degree of certainty. If one of the machines malfunctions, we can simply switch production to another machine.” Herzmeit is also full of praise about how user-friendly the Unisign machines are. “An employee who is familiar with one of the machines therefore knows how to operate them all. One of the benefits of this is that it makes training new colleagues a lot easier.”

### Retrofitting

Even the company’s oldest UNIPORT6000 machine that dates back to 2005 is still in use at Gontermann & Simon. Carolin Herzmeit: “When it comes down to it, these are actually very robust machines and the fact that we have just purchased our fifth machine is a testament to that. All five machines are in use and play a part in our everyday production processes. Even the oldest machine will continue to be used, as it is still one of the most accurate machines in our production hall. For that reason, we decided to retrofit that machine and give it an upgrade. Unisign’s upgrading service is something we also value greatly, as it will enable us to ensure the high degree of accuracy our customers have come to expect.”

### 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

Portal horizontal clearance: 1500 - 5000 mm

Portal vertical clearance: 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 and Z-axis: 40,000 mm/min

