



## Forging steel since 1891.

We develop, produce and market sophisticated, customer-specific product solutions made of steel.

Over 125 years of experience makes us experts when it comes to closed-die forging, heat treatment, metallurgy, welding processes, machining and manufacturing of components.



### Forging methods:

- Closed-die forging
- Hot extrusion

### Process reliability:

- Simulation of the processes
- Automation
- In-process quality assurance

### Advantages and properties of forged components:

Optimised weight and increased fatigue strength.

### Due to:

Defined grain structure, high ductility, high core density.

**Climate protection is an important concern for us. Our portfolio includes a wide range of products that are being used in an increasing number of wind turbines.**

**Please get in touch for further information and our tailor-made solutions.**



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### SD MACHINING

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IN WIND TURBINES 



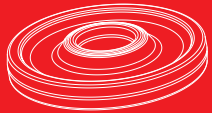
## Partner of the wind power industry

- Closed-die forging
- Heat treatment
- Machining
- Hot extrusion
- Welding
- Manufacturing of components





## Range of products for the wind power industry



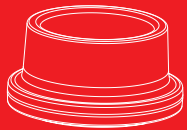
### Spur wheels

Ø 320 - 860 mm  
w 30 - 590 kg



### Planet carriers

Ø 315 - 825 mm  
w 30 - 890 kg



### Flanged hollow wheels

Ø 245 - 800 mm  
w 20 - 680 kg



### Drive shafts (extrusion)

Ø 185 - 285 mm  
w 40 - 160 kg



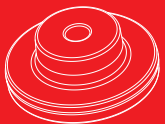
### Planet wheel

Ø 210 - 660 mm  
w 33 - 800 kg



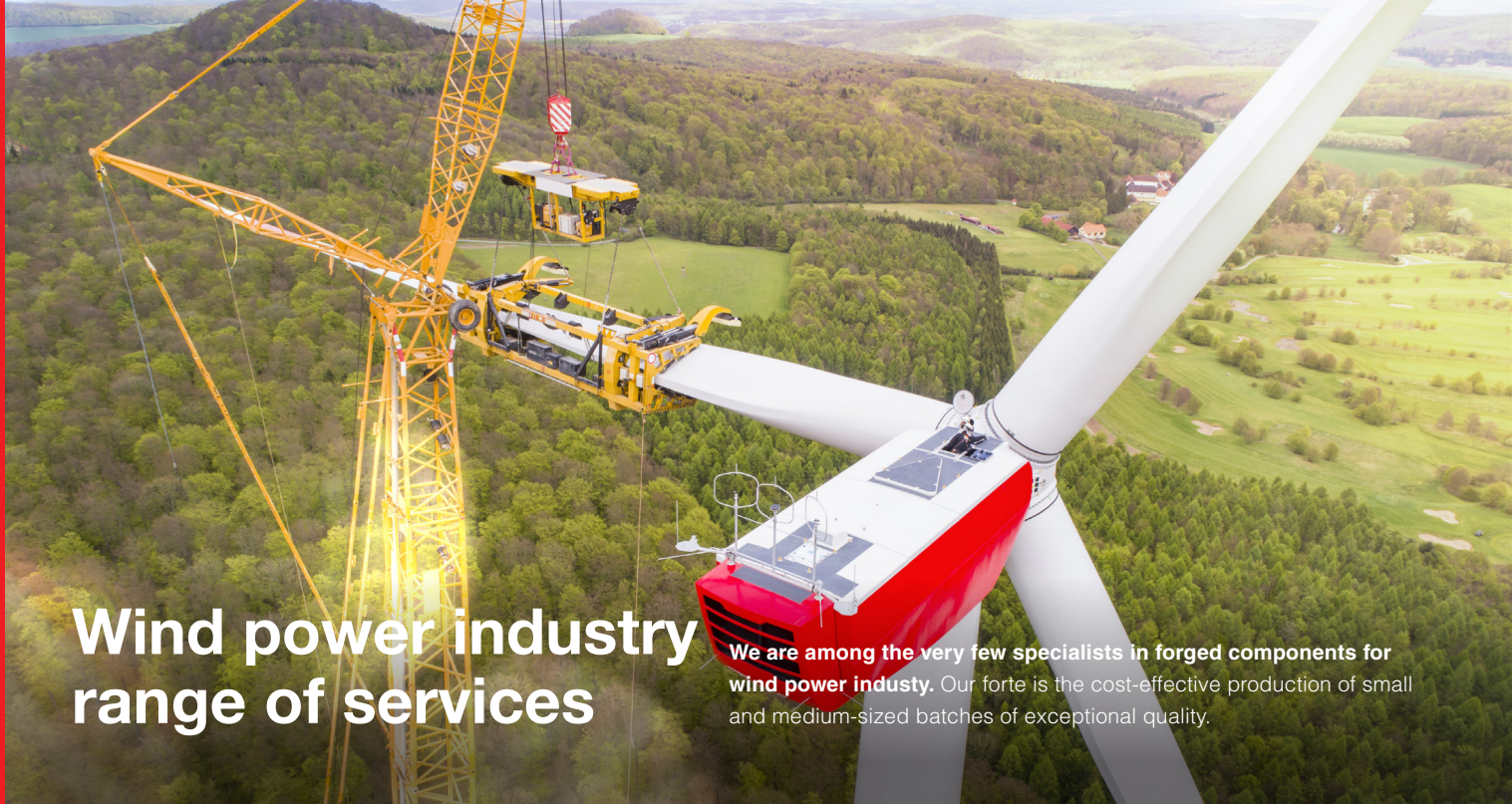
### Blocks

axb 200x200 - 400x630 mm  
w 30 - 600 kg



### Clutch Hubs

Ø 325 - 680 mm  
w 37 - 410 kg



## Wind power industry range of services

We are among the very few specialists in forged components for wind power industry. Our forte is the cost-effective production of small and medium-sized batches of exceptional quality.

### Machining

Machinery specialised for:

Turning	up to Ø 1.300 x 950 mm
Milling (X/Y/Z)	1.050 mm / 510 mm / 510 mm
Machining centres	up to Ø 920 x 1.800 mm

### Materials engineering

Steel grades:

Carbon steels  
Quenched and tempered steels / case-hardened steels  
Austenitic steels  
Ferritic / martensitic steels (stainless)  
Duplex steels (stainless)

Heat treatment:

+QT (hardening and tempering)  
+N (normalising)  
+FP (isothermal annealing)  
+A (soft annealing)  
+AT (solution annealing)

### Quality management

Certificates:

DIN EN ISO 9001:2015  
DIN EN ISO 14001:2015  
DIN EN ISO 50001:2018

Approvals:

American Bureau of Shipping  
Bureau Veritas  
DNV • GL  
Lloyd's Register  
DIN EN 15085-2 CL1  
AD 2000-Merkblatt W0  
DGRL 2014/68/EU  
KTA 3201.1 Abs. 3 u. KTA 3211.1 Abs. 3

### Testing methods

Our own laboratory offers destructive and non-destructive testing.

### 3D measurement

X-axis: 1.200 mm  
Y-axis: 2.000 mm  
Z-axis: 1.000 mm