

#### WICHMANN

• DRIVE SHAFTS•

TECHNOLOGY

DRIVEN BYU



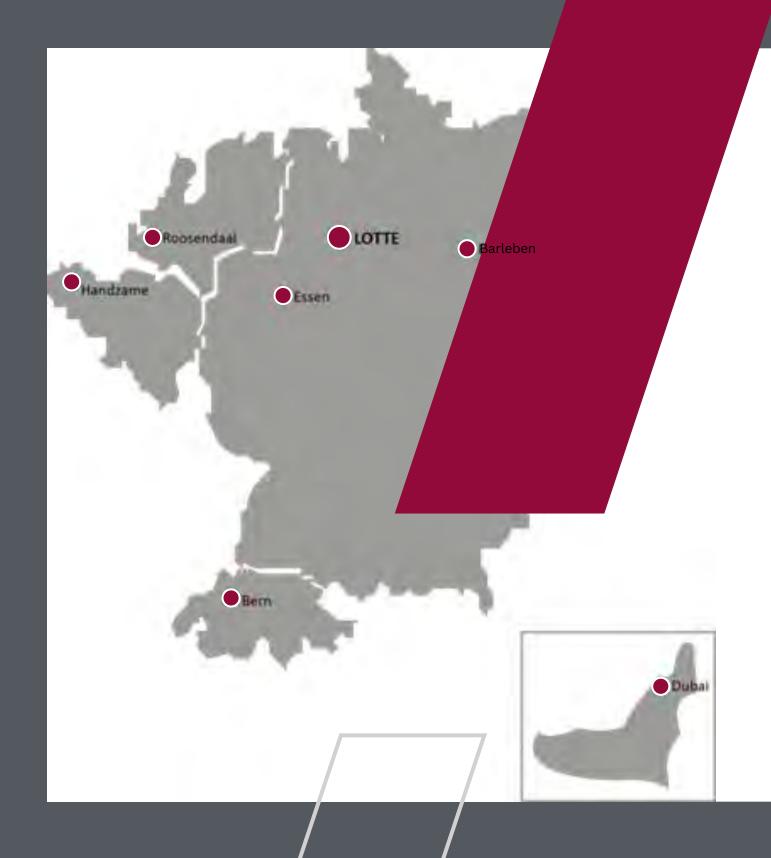
www.wichmann-gelenkwellen.de





The WiCHMANN group is a high-performance organisation in the area of development, production and maintenance of cardan shafts for commercial and industrial applications of all kinds (paper mills, steel mills & railway vehicles).

#### WICHMANN



### FAMILY-RUN BUSINESS SINCE 1980

- Owner-managed family business in the second generation
- Company foundation in 1980 by Horst Wichmann
- 7 production sites in Germany, Netherlands, Belgium, Switzerland and United Arab Emirates; headquarter in Lotte near Osnabrueck, Germany.
- Activities:
- -> Commercial vehicle replacement business
- -> Industrial OEM segment & replacement business

#### Our Company Professional Team

#### WICHMANN







### OUR HEADQUATER in Lotte







- Unsplitted bearing eyes
- Maintenance-free function
- Highest possible strength and minimum deformation under load
- Certified welding process
- Engineering for specail solutions
- Specific material selection and treatment
- Serval Certifications

### WiCHMANN Certifications

With our certified expertise, we ensure that your drive shafts work reliably and efficiently - for trouble-free mobility in all areas.

DIN ISO 14001:2015 - Environmental management standard

**DIN EN 50001:2018 -** Energy management

**DIN ISO 9001:2015 -** Quality management standard

**DIN EN 15085-2 CL1 - Welding of new rail vehicles and parts of rail vehicles** 

**DIN 27201-6 -** Welding repair of rail vehicles and vehicle parts

**DIN EN ISO 3834-2 -** Quality requirements for welding manufacturing companies



### WICHMANN SERVICE CONCEPT INDUSTRY

As a specialist in cardan shafts, Wichmann GmbH offers customized solutions for a wide range of industrial and mobile applications. Whether heavy-duty traffic, high-performance machines or complex production plants - our high-quality cardan shafts ensure reliable power transmission, long service life and maximum operational safety.



**Papermachines** 



Steel and Rolling Mills



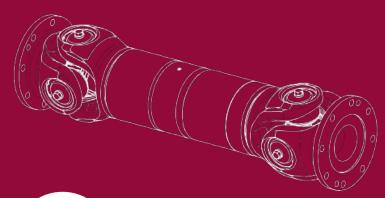
Railway Vehicles



**General Machinery** 

#### WICHMANN

## Product Series/Designs

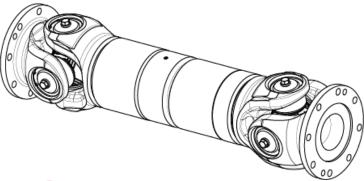


S

052 00 - 076 00

52 - 76 mm

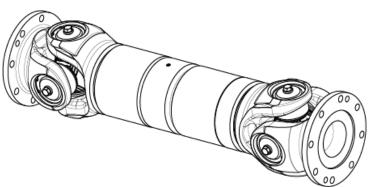
75 - 300 Nm





100 00 - 144 00

100 – 144 mm 700 – 2 300 Nm





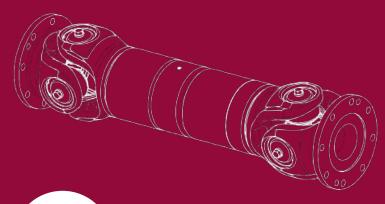
158 00 - 204 00

158 – 204 mm 2 900 – 11 000 Nm

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#### WICHMANN

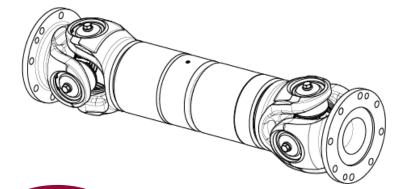
# Product Series/Designs





215 00 - 285 80

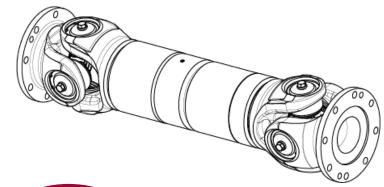
215 – 285 mm 14 500 – 35 000 Nm





315 10 - 550 00

315 – 550 mm 50 000 – 625 000 Nm





620 00 - 840 00

620 – 840 mm 800 000 – 1600 000 Nm

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•ELECTRIC•

TECHNOLOGY

DRIVENB





- 80 years of experience founded by Franz Wölfer
- Focus on squirrel cage motors
- Internal and external cooling options
- Motors were wind manually
- Smaller size and higher power allow us to offer more competitive pricing
- Simpler control systems than standard products
- Smaller motors consume less power, resulting in lower lifecycle costs
- Low downtime due to manual work, special wire, and superior quality

## WiCHMANN E Business Areas

Since 1945, Wölfer has been developing and manufacturing electric motors for use in hoisting equipment, in and on ships as well as in general mechanical engineering. We apply our extensive know-how to produce highly efficient motors for individually adapted drive mechanism solutions.



## WiCHMANN E Business Areas



**Lifting Applications** 



**Marine Applications** 



**General Machinery** 

# WiCHMANN E Lifting Applications



**Container Cranes** 



**Goliath Cranes** 



**Tower Cranes** 

## WiCHMANN E Container Cranes



**STS Cranes** 



**RTG Cranes** 

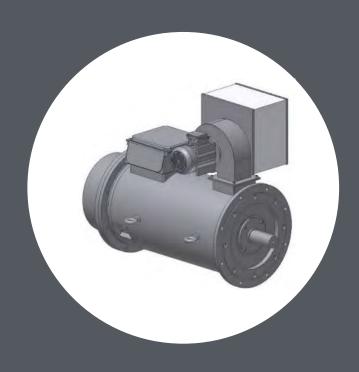


RMG Cranes



**Straddle Carrier** 

#### Construction types – IEC classification and different protection classes



IP 23
Inner Cooled
Steel welded housing



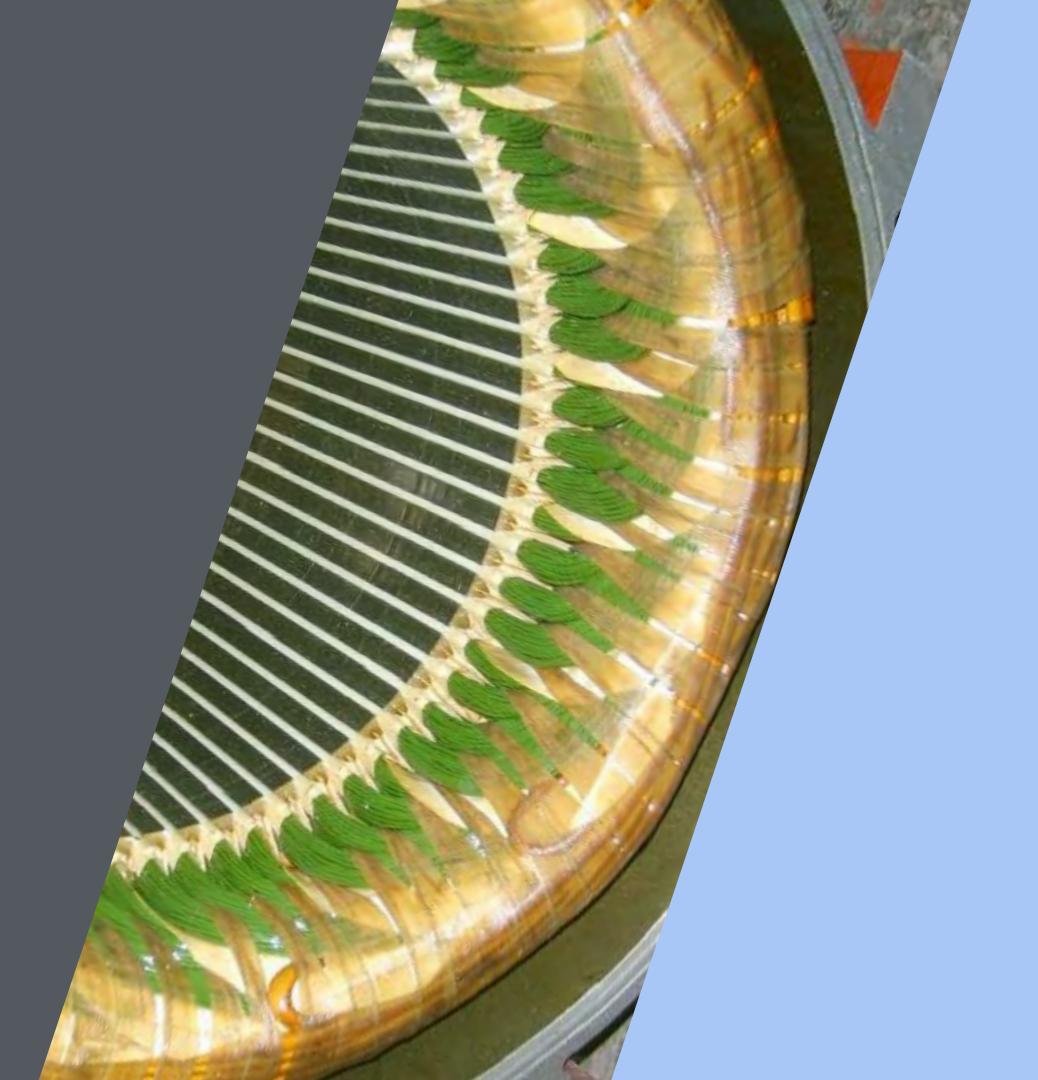
IP 54 – 56 Outer Cooled Grey cast Iron housing



IP 67
Water Cooled
Steel welded housing

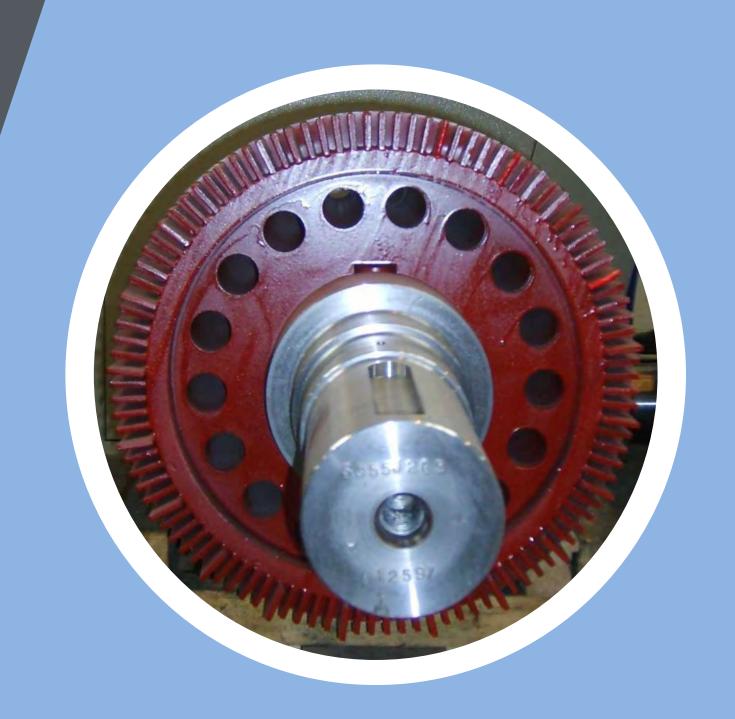
# WiCHMANN E Windings

- insulation system developed for inverter operation
- Special wires resistant against partial discharges



### WiCHMANN E Rotor

- lowest moments of inertia
- high pull-out torques
- shortest acceleration times
- low currents during start and operation



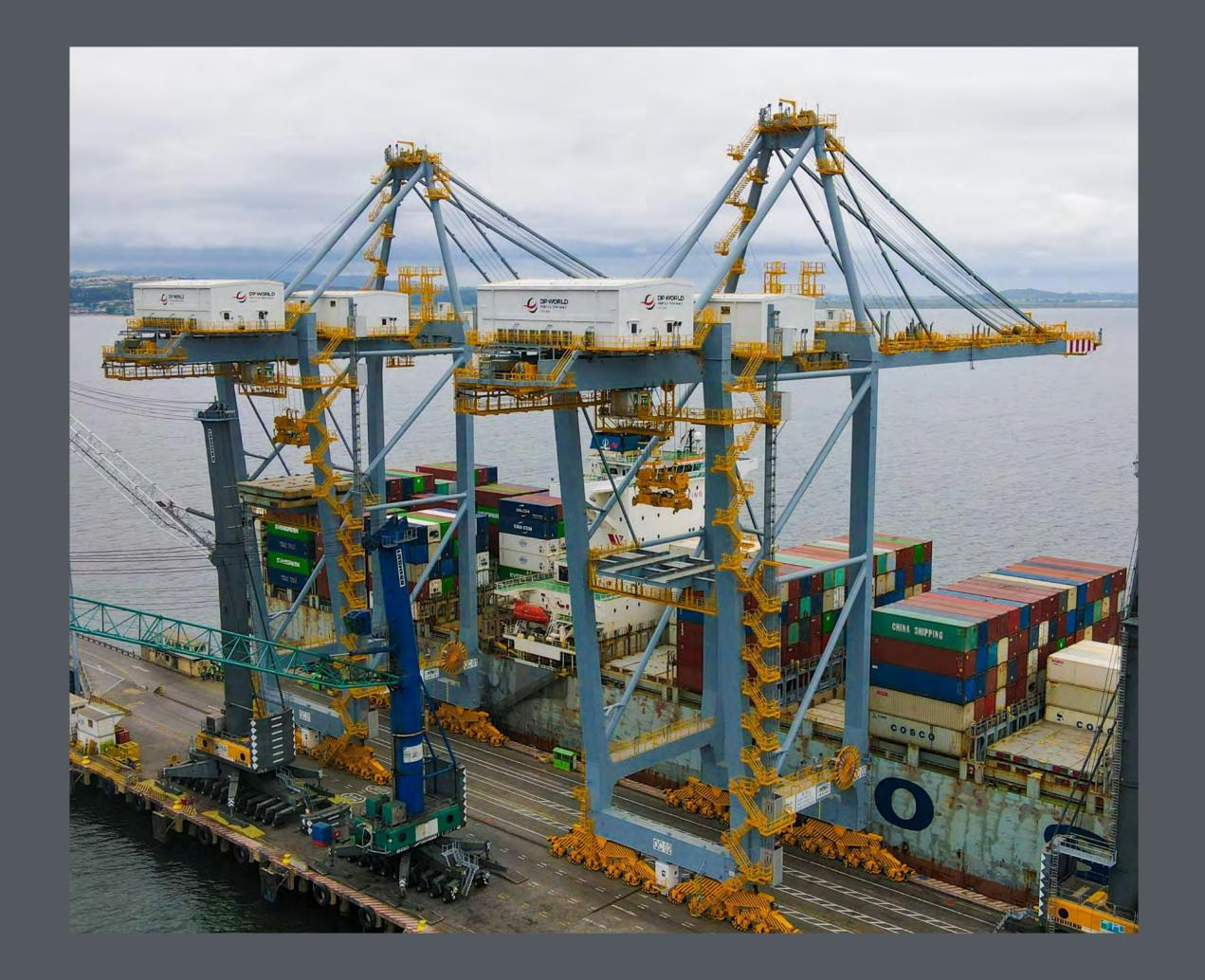
## WiCHMANN E Additional equipment

- Brake
- Encoder (specified by customer)
- Two shaft ends
- Anti-condensation heater
- All kind of winding protection
- Preparation for bearing monitoring and vibration monitoring
- Insulated bearings



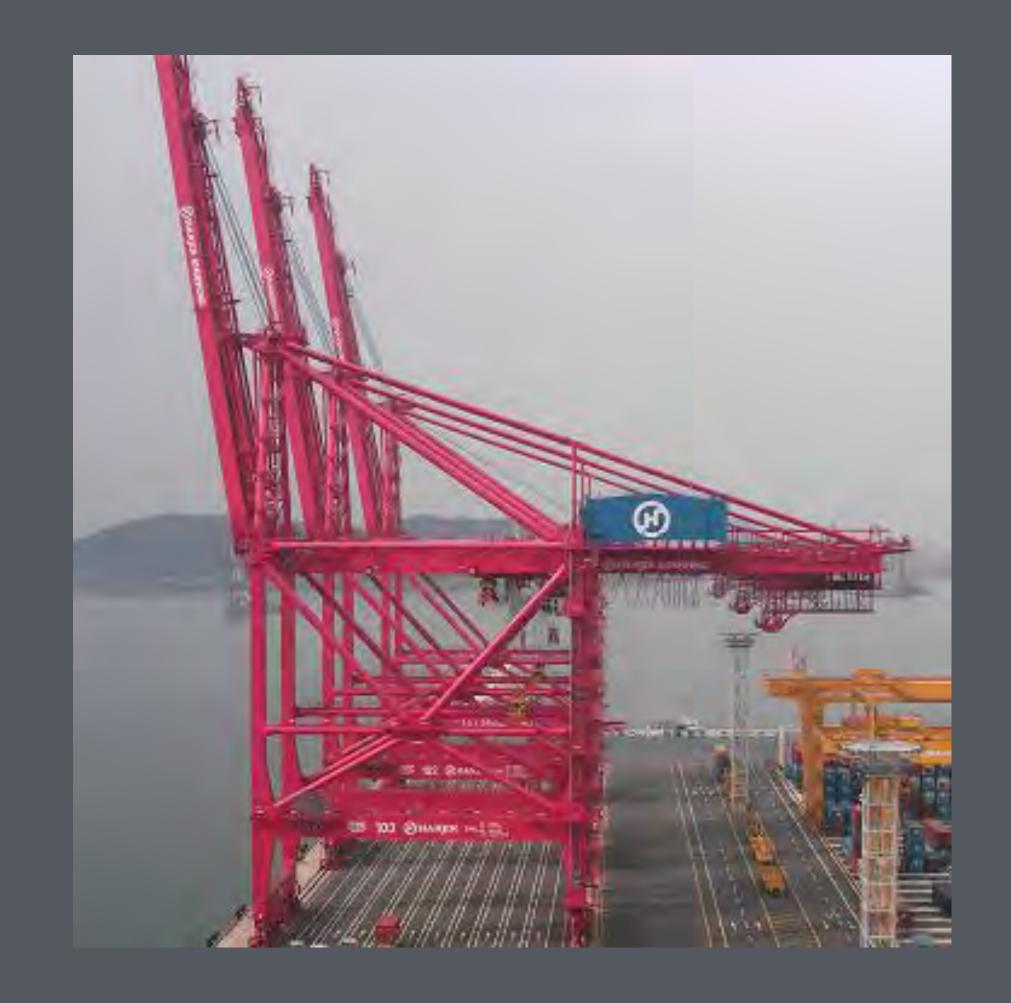
### WiCHMANN E References

DP World
Super Post Panamax STS cranes



### WiCHMANN E References

Newport Terminal Busan – Korea Electrical OEM – ABB



#### References

RTG-Crane in Ningbo - China, Kone

Hoist:

Motor type: DRKF 315 L-6bbbT

Power: 1 x 210 kW

Trolley:

Motor type: DRK0 180 M-4bSFB10HT

Power: 2 x 15 kW

**Gantry:** 

Motor type: DRK0 200 L-4bSFB25HT

Power: 4 x 30 kW



### WiCHMANN E References

SPLEIPNIR with 2 x 10.000 t cranes by Huismann / Netherlands



### Summary

- 80 years of expertise in custom designed motors
- Lower moment of inertia
- Lower starting current
- Shorter acceleration time
- Robust design, smaller weight and frame size
- Energy savings
- Lifting more containers per hour
- Possibility to use smaller cables and inverters due to lower currents



### Thank You