



**Wölfer by
Wichmann E
technology driven
by us**

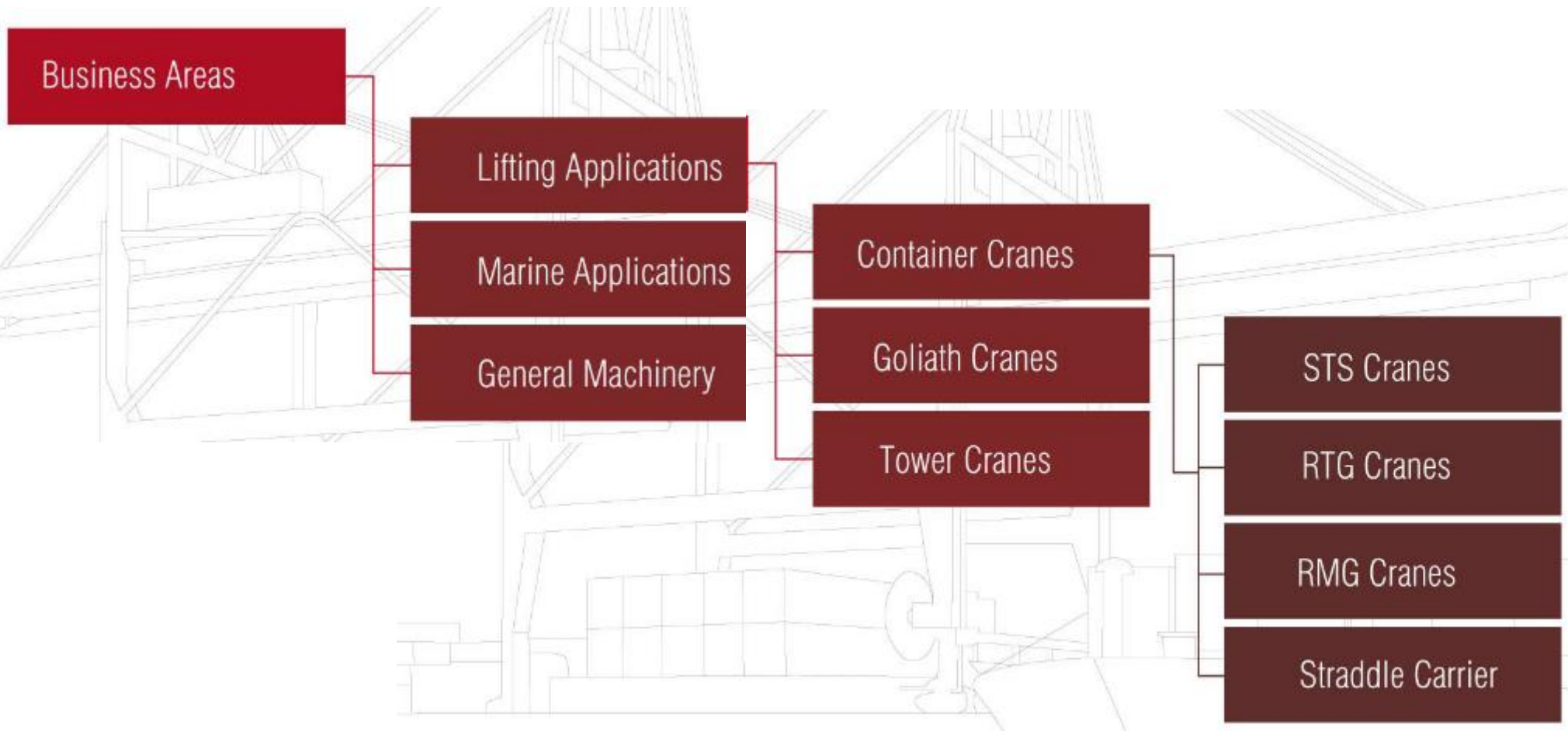


1 Company history



- **1945:** Founded by engineer Franz Wölfer
- **1955:** Production slipring motors for lifting applications
- **1960:** First squirrel-sage motors
- **1985:** Motors for inverter operation
- **2008:** New test field up to 2.100 kW
- **2016:** First test of water jacked cooled motors
- **2022:** Production launch of IP 67 waterproof motors
- **2023:** Wölfer becomes part of Wichmann Group -> Wölfer by Wichmann E GmbH

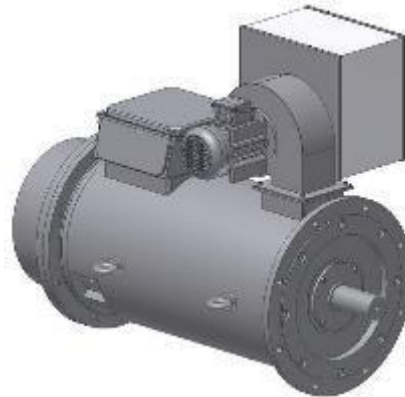
Lifting applications are our core business - since **79 years!**



Construction types – IEC classification and different protection classes

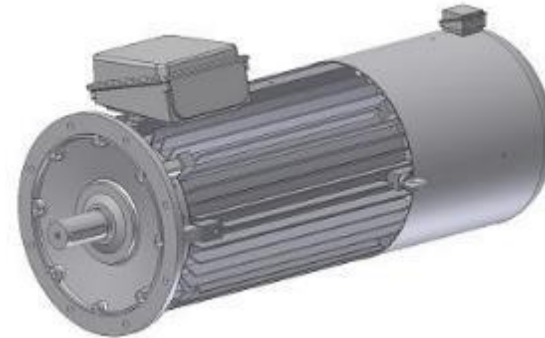
IP 23

Inner cooled
Steel welded housing



IP 55

Outer cooled
Grey cast Iron housing



IP 67

Watertight motors
Steel welded housing



2 Products

Windings

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



Rotor

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



Wide variety of additional equipment!



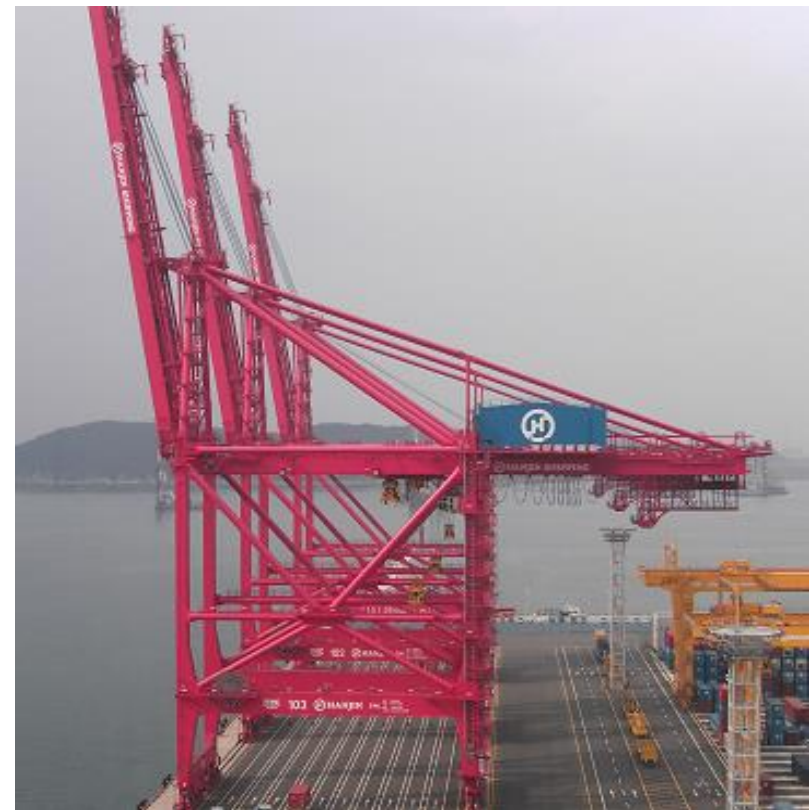
- Brake
- Encoder (specified by customer)
- Two shaft ends, special flanges
- Anti-condensation heater
- All kind of winding protection
- Preparation for bearing monitoring and vibration monitoring
- Insulated bearings, standard \geq frame size 315

3 References

DP World
Super Post Panamax STS cranes



Newport Terminal Busan – Korea
Electrical OEM – ABB



RTG-Crane in Ningbo – China, Konecranes (former Noell)



Hoist:

Motor type: DRKF 315 L-6bbbT

Power: 1 x 210 kW

Trolley:

Motor type: DRKO 180 M-4bSFB10HT

Power: 2 x 15 kW

Gantry:

Motor type: DRKO 200 L-4bSFB25HT

Power: 4 x 30 kW

3 References

AGV – Konecranes (former Gottwald)– CTA – Hamburg, Germany



3 References marine applications

SSCV SPLEIPNIR a semi-submersible crane vessel
with 2 x 10.000 t cranes by Huismann / Netherlands
195 Wölfer motors installed



Summary

- 79 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

