



## Consulting and Engineering



Design & Construction of Gearboxes and complete Drive Systems according to your application requirements and challenges

**Our commitment:**

Highest reliability and efficiency of gear & drive solutions for harsh environments

## Special Gear Service



24/7 EMERGENCY SUPPORT   
☎ +49 151 123 55 987

- On-site repair & maintenance Service
- Highly skilled & experienced service technicians worldwide available
- Inspection and failure analysis
- Upgrades and modifications of existing solutions
- Spare Parts emergency supply

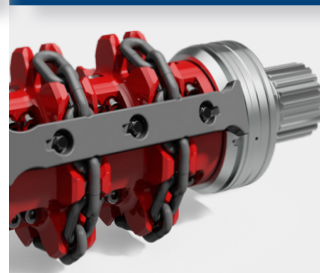
## Heavy Duty Gearboxes and Drive Units



Innovative Industry Solutions:

- Mining (Underground / Surface)
- Steel Industry
- Chemical Sector
- Crane and Material Handling
- Energy Industry
- Mechanical Engineering Industry
- Pit & Quarry Industry
- Marine and Ship Technology
- Water, hydropower
- Wind power
- Test systems in R&D, EOL, Racing

## Component supply



- One-off-, batch-, series production
  - Gears
  - Gear assemblies
  - Spur-, helical-, double-helical-, Ring gears
  - Complete gear sets / -stages
- Spare parts for gearboxes and drive systems
  - Chain tensioners
  - Sprockets
  - Coupling-break systems
  - Motors

## Turning & Gear Cutting



- Vertical Turning: max. Ø 1,800 mm (71"), height 1,200 mm (47.2")
- Horizontal Turning: max. Ø 730 mm (28.8"), length 3,020 mm (119")
- Gear Hobbing: max. Ø 1,600 mm (63"), module 30
- Gear Shaping / Milling max. Ø 1,600 mm (63"), module 20

## Drilling / Milling & Machining Centers



- High-performance 5-Axis Machinery with automatic tool & pallet changers
- Portal Milling: dimensions max. 3,000 mm (118") x 1,600 mm (63") x 1,350 mm (53"), unit weight: 6,000 kgs (13,227 lbs)
- Drilling: dimensions max. 3,000 mm (118") x 2,000 mm (78.7") x 1,500 mm (59") x 600 mm (23.6"), A-axis 360°, max. unit weight 12,000 kgs (26,456 lbs)
- Machining Centers: dimensions max. 1,050 mm (41") x 995 mm (39.2") x 1,020 mm (40.16"), max. unit weight 6,000 kgs (13,227 lbs)

## Heat Treatment & Hardening



In-house capacity:

- Shaft Furnaces: Ø 1,900 mm (75"), max. batch weight 10,000 kgs (22,046 lbs)
- Blast Furnaces: Ø 1,400 mm (55"), max. batch weight 10,000 kgs (22,046 lbs)
- Tempering Furnaces max. batch weight 10,000 kgs (22,046 lbs)
- Polymer Quenching
- Shot Blasting in-house

## Toothflank & Multi-function Grinding



- 0-Point clamping
- **Multi-function grinding accuracy 5 µm (0,0002")**
- Max. module 35
- Max. table load 6,000 kgs (13,227 lbs)
- Climate controlled
- **Quality DIN 2 / AGMA 15**

## Quality Assurance



- **Climate controlled 3D-Measuring**
- **Grind burn test (Nital-etching)** According to US Standard ANSI / AGMA 207-B-92

## Gearbox Assembly & Testing



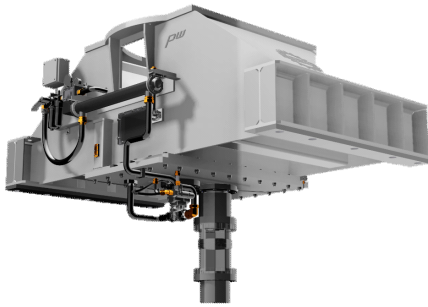
- Assembly area: 1,200 m<sup>2</sup> (12, 917 sqft)
- Lifting equipment: 50,000 kgs (110,231 lbs)
- Three gearbox test beds
- Load Testing

20,000 m<sup>2</sup> (215,280 sqft) state-of-the-art manufacturing ♦ 50 CNC-controlled machines

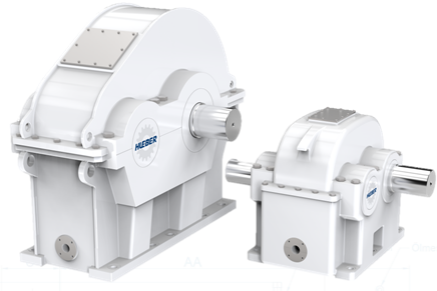


# Exemplary Applications: Gearboxes & Components

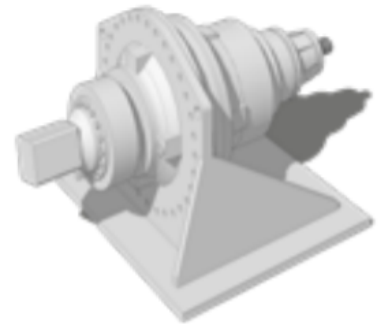
## Industry Solutions



Gearboxes for horizontal, vertical and inclined water pumps & hydro turbines



Turbo Gearboxes for turbo generator & boiler feed pump

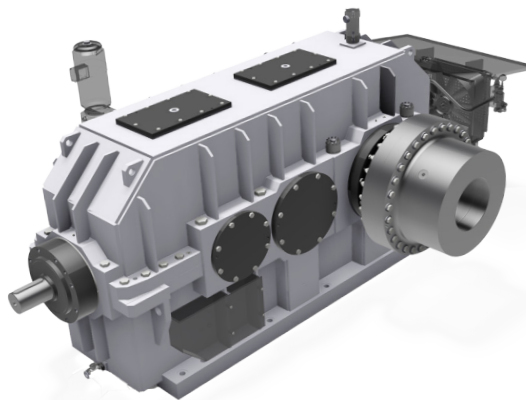


Planetary gearbox for Sugar mill

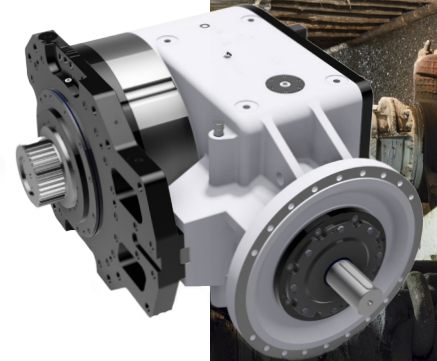
## Mining (Underground / Surface)



Gearboxes for Roadheaders / Cutting, Underground Mining



Gearboxes for Crushers, Surface Mining



Gearboxes for Chain Conveyors, Underground Mining

## Component Production



Wind turbine pinion Shaft

Planetary gear sets

Helical gears