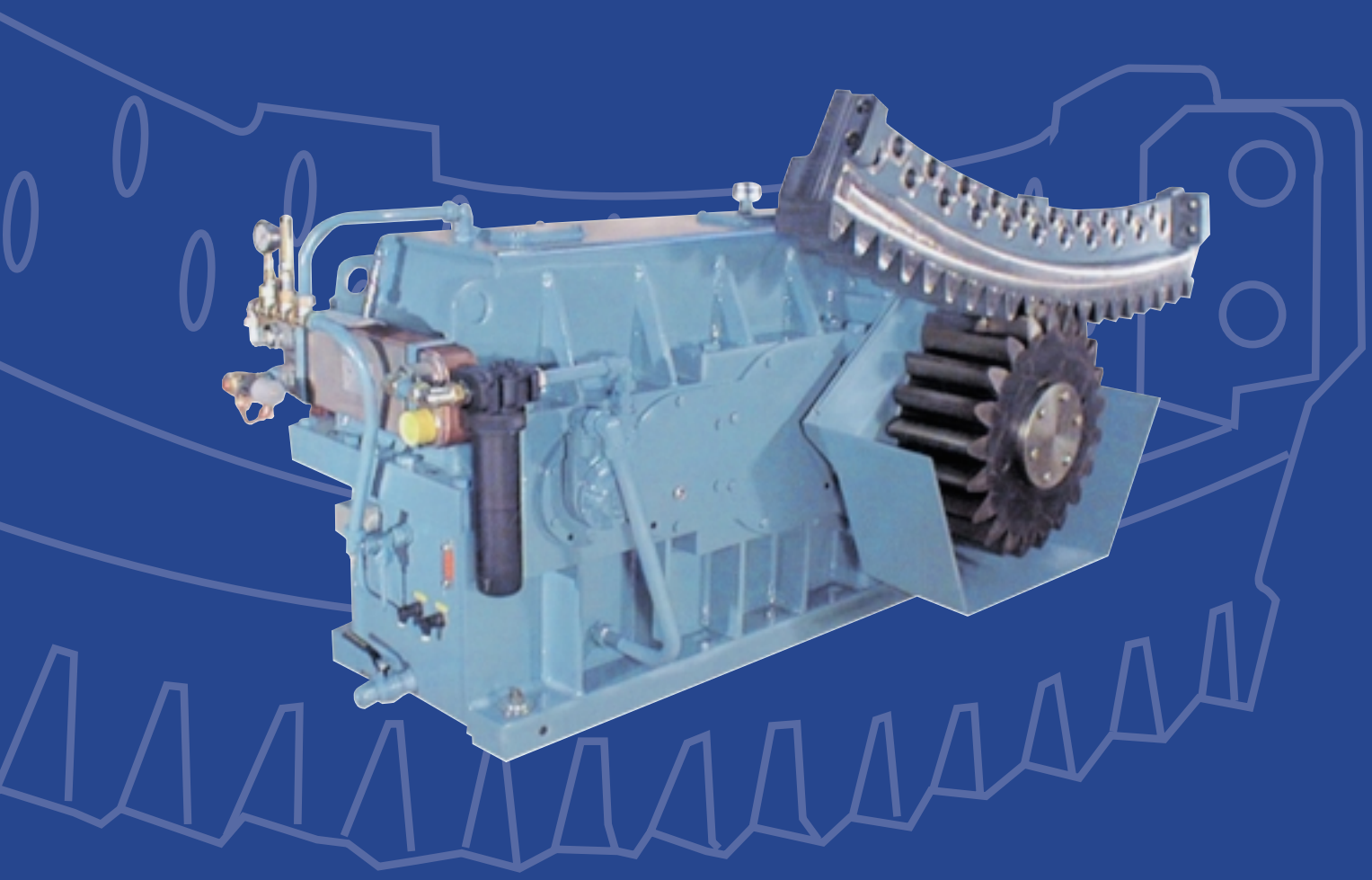
Kumera Power Transmissions

Rotating Drums, Kilns, Mills...



KUMERA
DRIVES

Kumera Expertise

Kumera Corporation has more than fifty years of experience in supplying mechanical drives for a variety of processes in mining and metallurgy, wood processing and mineral industry as well as in hazardous waste incineration.

A drive unit complete with a segmental girth gear and an auxiliary diesel drive for a lime kiln on test run at the workshop, to be shipped to China.

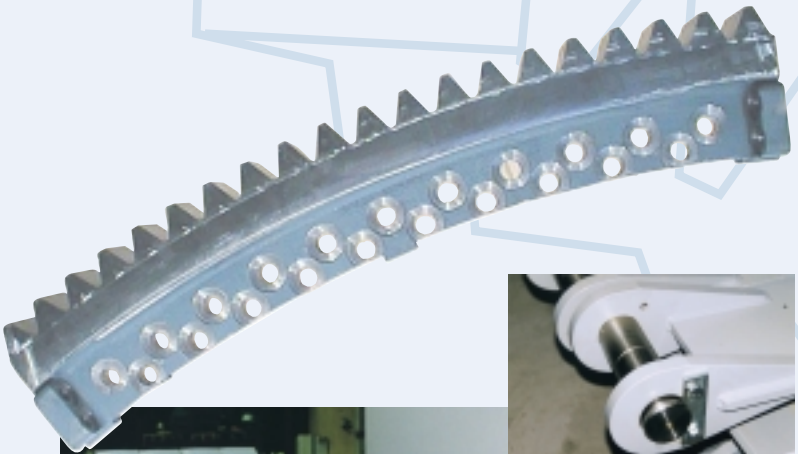
Segmental girth gear design and power transmission capacity

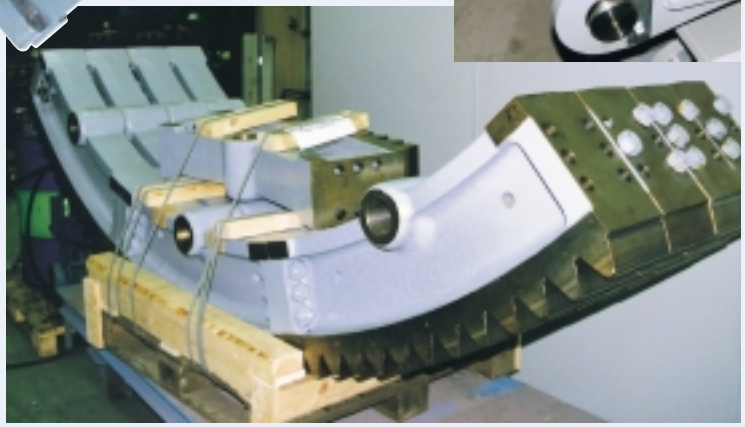
For technological reasons, girth gears are made from segments. These can be long segments, in which the whole girth gear is divided into 2 - 4 parts, which are joined by bolts, or short segments, in which the girth gear is divided into e.g. 8 - 16 parts.

Significant benefits in fabrication of girth gears from short segments:

- Improved material strength characteristics.
- Better machinability of material.
- Manufacture by smaller, more precise machines and tools.
- Exchangeability of segments leads to lower spare parts costs.
- Possibility of machining of teeth for optimal relief.
- Shorter delivery times.

A drive unit with an auxiliary drive for a leca bebble dryer drum.





Girth gear from segments

The gear segments are made of special nodular cast iron (GGG-, DIN). Also other materials can be used. The pinions are made of case carbonizing steel, which first undergoes a heat treatment and is then tooth ground. The gear calculation is performed according to the international standards DIN, ISO or AGMA.

A rotary dryer for copper concentrate driven by Kumera gear LD-4630E with maintenance drive KFA-3140. Drum Ø 3.6 x 38 m, capacity 160 tons/hour.

Modification of microgeometry for error compensation

Manufacturing errors occurring in machining and deformations due to loading, which have a harmful effect on tooth contact, are eliminated by reliefs. This means that changes (reliefs), which can be optimally calculated, are made on the theoretical form (involute and helix angle) of a tooth. Consequently, bending and elasticity under loading do not cause high edge stresses, which might lead to damage. Instead, the loading spreads evenly along the whole width and height of the teeth.

The Kumera steam dryer is the first one designed especially for the drying of abrasive materials.

Delivery and installation supervision of 4 copper ore grinding mills, Ø 5.3 x 7.8 m.

Deliveries for a drive

Upon delivery, the girth gears are equipped with the bolts needed for mounting. The pinion can be installed either on the output shaft of the gear unit or on a separate foundation by means of additional bearings and a coupling between the pinion and the gear unit.

All customers are provided with necessary instructions for the mounting and starting of the equipment. We are also prepared to assist our customers with the commissioning process by supplying installation or supervision services.

Kumera Drives in Industrial Applications

Special gear units for a rubber tyre supported debarking drum.

A drive unit for a kiln burning hazardous waste.

Main drive unit of a 3.7 x 7.9 m copper converter.

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