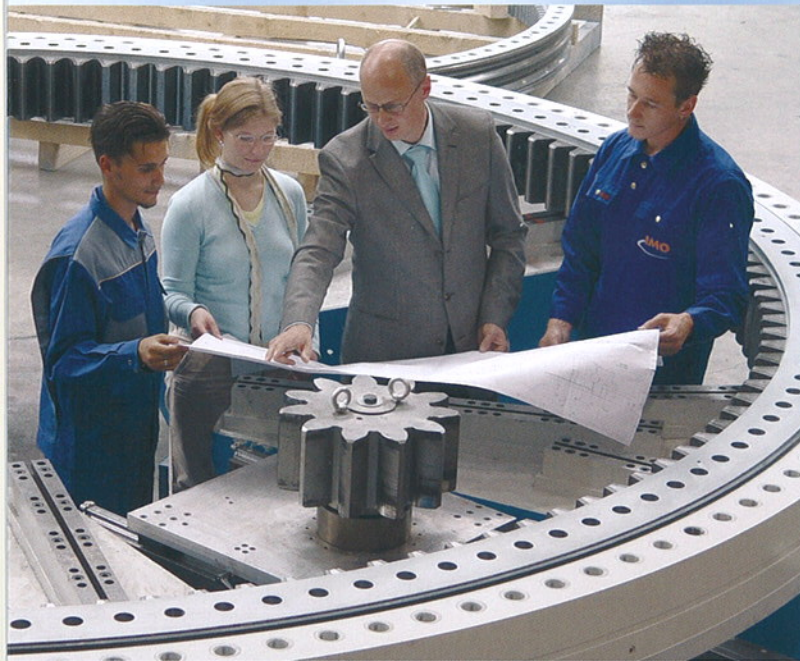


Strong Partner
Strong Partner





The IMO Group in the metropolitan region of Nuremberg with headquarters located in Gremsdorf has more than 20 years of experience in designing and manufacturing Slewing Rings and Slew Drives.

We are certified according to the standards DIN EN ISO 9001, 14001 and OHSAS 18001. Several times, IMO has achieved awards for its product innovations at Exhibitions for Ideas-Invention-New Products. In our sector we are one of the leading suppliers.



IMO Ball and Roller Slewing Rings as well as **IMO Slew Drives** are quality products made in Gremsdorf, Germany and distributed worldwide.

Depending on the application and type, large diameter **IMO Slewing Rings** can be up to 6 meters in diameter and weigh more than 20 tons. They are used for various applications, including construction machinery, agriculture & forestry, tunneling & mining, ship building, conveyor & transportation systems, and medical technology. Additionally, IMO is a leading supplier of blade, yaw, and main bearings for on- and offshore wind turbines, and even provides blade bearings for tidal stream systems.

Worm or pinion driven **IMO Slew Drives** consist of a ball or roller slewing ring, a drive train, and a completely enclosed and sealed housing. These convenient, ready-to-install systems can replace complex systems with multiple parts to reduce design and assembly time. They are used around the world for steering in equipment such as gantry cranes and heavy-duty transporters, as well as for rotating, tilting, and positioning in machinery, including construction equipment and slew drilling rigs. IMO Slew Drives are also used within the renewable energy industry in small wind turbines, solar trackers, and solar thermal tower plants.

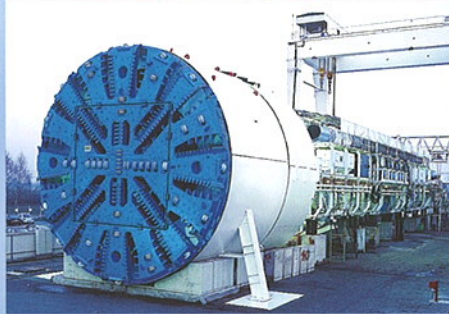


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Applications



Øywind Hagen/StatOilHydro



Slew Drives

Self-contained Slew Drive systems including slew bearing, gear drive and motor

- Easy, drop-in installation of complete system, no adjusting or sub-assembly of components
- Totally enclosed housings provide protected operation and reduced maintenance
- Compact envelope
- High reliability and long operating life
- Smooth 360 deg. operation, without lurching or jumping, even at slow speed operations or in backdriving modes
- Units are easy to order – one part number = complete Slew Drive system
- Wide range of standard sizes available from stock
- Deliverable with hydraulic or electric motors included
- Provides clean, attractive installation
- Wide application possibilities
- Corrosion protected version available

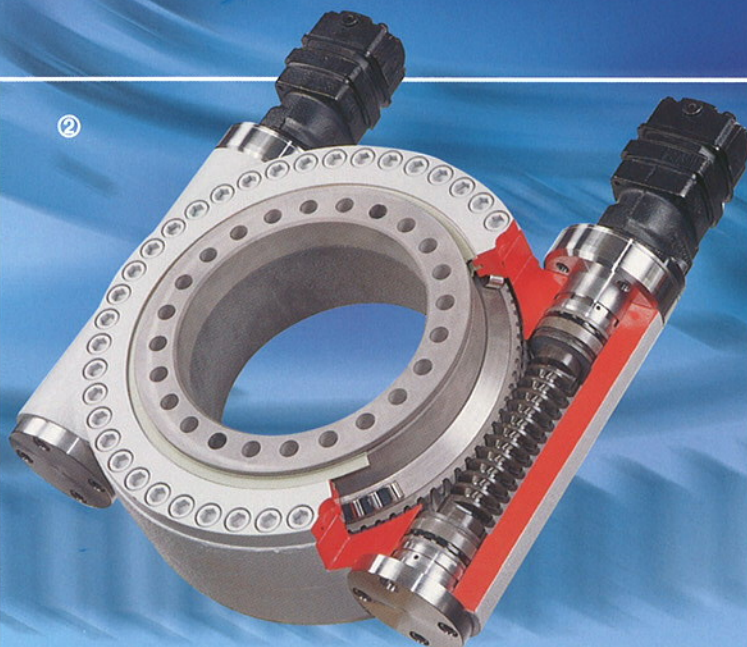
Slew Drives



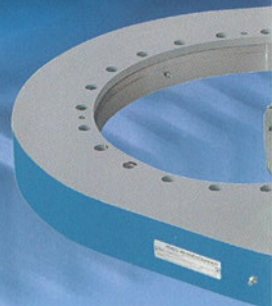
①



②

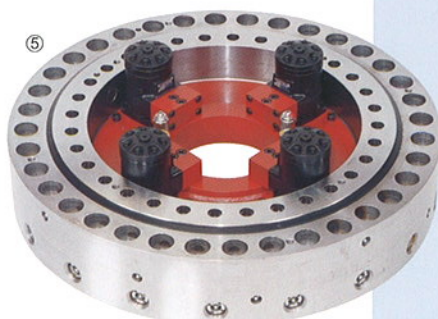
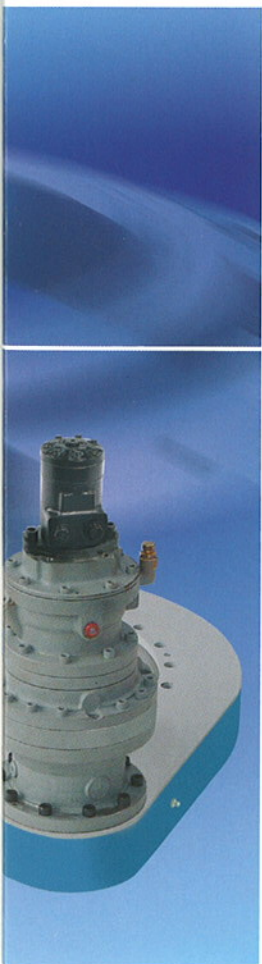


③



① Worm driven Slew Drives for light duty applications

- Torque capacity up to 446,502 Nm (329,322 ft-lb) and moment loads up to 1000 kNm (737,560 ft-lb)
- Available in 7 sizes (diameters of 156, 223, 343, 419, 478, 625 and 713 mm – approx. 6, 9, 14, 17, 19, 25 and 28 in) with one or double raceway bearing configurations
- Flat, lightweight design (unit weights ranging from 30 to 1,500 kg – 66 to 3,307 lb)
- Typical applications include manlift platforms, truck unloading cranes, municipal vehicle attachments, turntables, forklift rotators, solar tracking systems, handling equipment and many more



② Worm driven Slew Drives for heavy duty applications

- Provides the highest drive and holding torque available on the market
- Designed torque capacity up to 672,000 Nm (495,640 ft-lb) and moment loads up to 2,600 kNm (1,900,000 ft-lb)
- Eight standard sizes (inner ring PCD include 146, 220, 300, 373, 490, 645, 700 and 750 mm – approx. 6, 9, 12, 15, 19, 25, 28 and 30 in)
- Unit weights from 65 kg to 2,500 kg (143 to 5511 lb)
- Units can be assembled with one or two motors (two motors provide double the torque capacity) or without a motor
- Applications include cranes, positioning systems, excavator attachments, mining equipment
- Ideal for use as 360 deg. steering gears on large, harbour mobile cranes, straddle carriers, gantry cranes, ship hoists and heavy load transporters

③ Spur gear driven Slew Drives

- Torque capacity up to 51,888 Nm (38,271 ft-lb) and moment load capacity up to 548 kNm (404,183 ft-lb)
- 23 standard sizes with diameters from 229 to 1,091 mm (9 to 43 in)
- Units assembled with single or multiple motors
- Ideal for use on harvesters, light duty cranes, packaging equipment, machine tool changers, handling equipment



④ Special designs

- Units can be modified to meet specific customer specifications
- Worm or pinion driven slewing options
- Brakes and positioning sensors can be added to basic units
- Units can be modified for continuous operation or severe environmental conditions
- Special construction materials can be included to meet customer specifications

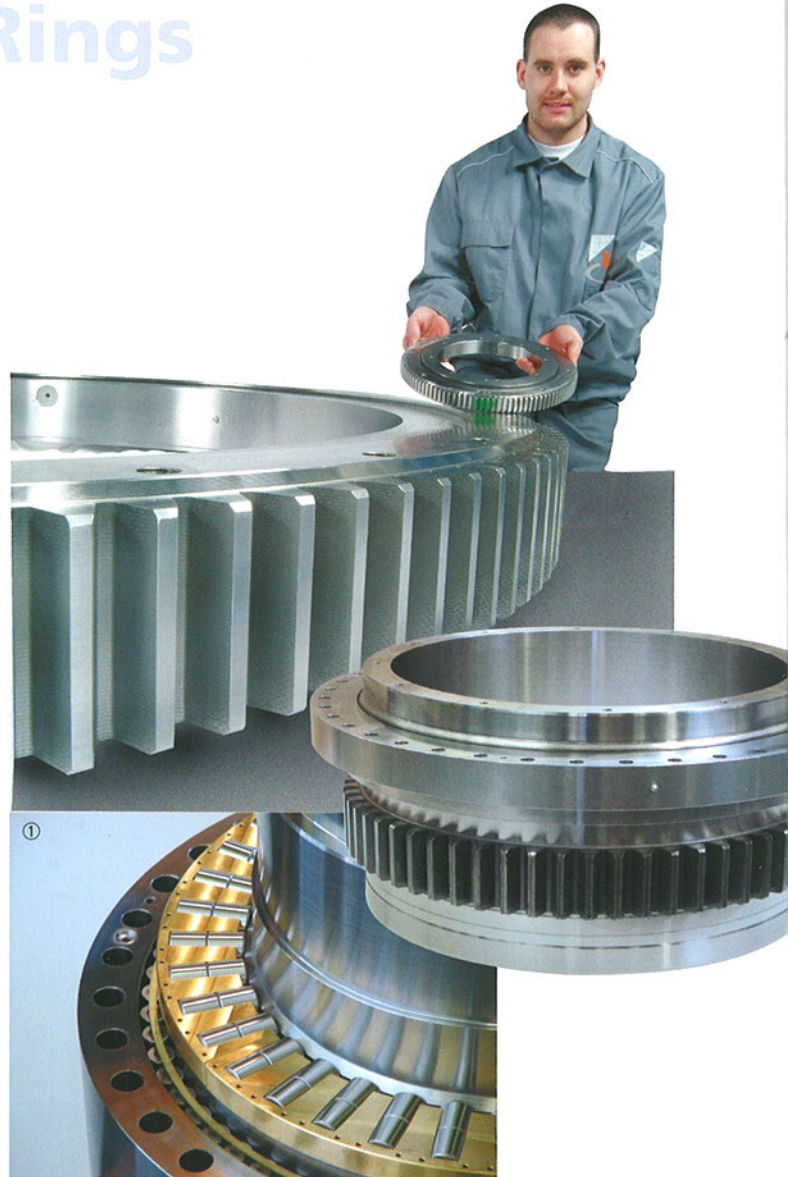
⑤ Subsystems

- Basic unit designs can be modified to provide special functions or connect to customer specific components such as valves, hydraulic connections, adaptation plates, sensors, etc.
- Internal overload protection systems available upon request

IMO Slewing Rings

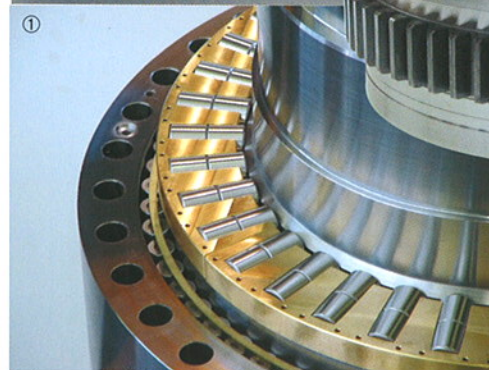
Large-diameter anti-friction bearings designed to handle simultaneously occurring axial, radial and moment loads

- Replaces traditional systems using fixed and floating bearings or king-pins.
- Integrated mounting holes
- Available with integral internal or external gearing of bearing rings (module 1 to 30 mm)
- Sealed raceways, lubrication included
- Ball or Roller Slewing Ring configurations
- Available in diameters from 100 to 6,000 mm (4 to 236 in)
- Standard or custom configurations
- IMO Slewing Rings are certified to meet DIN EN 10204 requirements for materials, dimensions and operating specifications



① Roller Slewing Rings

- 3-row-roller Slewing Rings or cross roller designs
- Rolling elements with diameters from 16 to 100 mm (0.63 to 3.94 in)
- Roller bearing retention cages can be provided in steel, bronze or synthetic materials, as required to meet operating conditions
- Designed to provide the combination of the highest capacity in the smallest configuration
- Ideal in high precision installations, or in applications where extra stiffness or low steady frictional torque is required

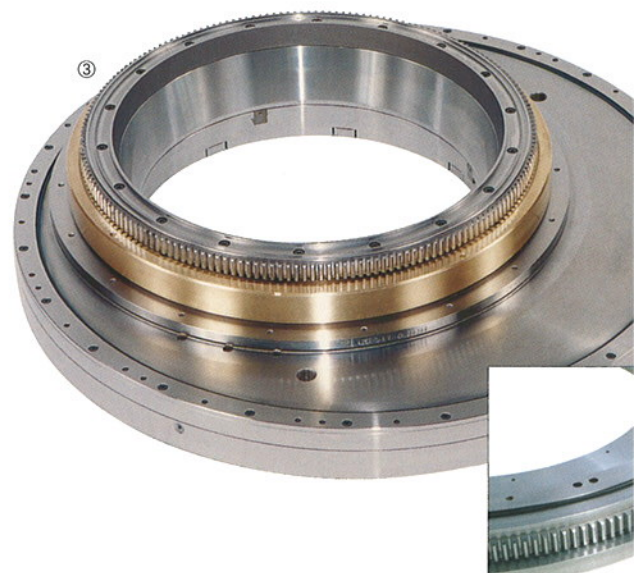


Slewing Rings



② Ball Slewing Rings

- Single and double row configurations
- Ball diameters from 12 to 80 mm (0.47 to 3.15 in)
- Standard or precision grade units in stock
- Pre-loaded bearings available
- Excellent service in severe duty environments requiring rugged designs



Service

- Express Service for urgently needed replacement parts
- Rapid prototyping including customized designs
- Approvals for Slewing Ring materials, bolt/stress calculations and final bearing dimensions/properties from certifying authorities including, but not limited to, DNV, Bureau Veritas, Lloyd's Register of Shipping

Accessories

- Gear rims available in diameters up to 6,000 mm (236 in) and modules up to 30 mm (1.18 in)
- Customer specified pinions

③ Special bearings

- Capable of modifying standard designs to meet individual customer specific specifications, e.g. custom mounting hole patterns or prototypes
- Ball and Roller Slewing Rings available as well as roller/ball combination bearings
- Extreme temperature or vacuum environment options are available
- Special surface treatments or paints available upon request
- Special bearing cages for high operating speeds
- Special sealing systems for extreme operating conditions
- Special lubrications for specific environments, for example food industry
- Stainless steel bearing rings available
- Light weight, precision slew bearings made from aluminium rings and using steel wire races are also available upon request

④ Subsystems

- Integration of special parts/functions onto Slewing Rings to create a subsystem, e.g. mounting flanges doweled with slew bearing
- Assembly of multiple Slewing Rings into one integral bearing unit
- Customized condition monitoring systems integrated in the Slewing Rings





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References:
in excerpts

