LGDX Lateral Gear Unit
Designed for longevity
Next level side drives

Our MAAG LGDX Lateral Gear Unit delivers high performance with long-lasting operating time – all within a small footprint. The clever approach to lubrication and ingenious reversible housing makes this gear unit the perfect fit for your grinding process.

Key benefits

- Design based on proven technology and experience
- Compact mill arrangement reduces foundation vibration risk
- Enhanced lifespan thanks to smart lubrication and symmetric casing
- Perfect fit for replacement and overhauls
- Usable in single and dual arrangements
The latest redesign of our lateral side drive improves an already high-quality product. Our MAAG LGDX Gear Unit now has the longest possible lifetime, which we achieve by maintaining our proven gear philosophy, updating the casing design and developing a clever lubrication concept.

Our unique symmetrical gear casing gives you the flexibility to install the side drive at the center line or 40° below your mill. The latter reduces construction cost by cutting down on foundation height. In addition, the low, compact foundation is less sensitive to vibration, which contributes to the continued smooth operation of your mill.

**Design**

Our MAAG LGDX is a three-stage parallel shaft gear driving your ball mill directly with two output pinions and reduces the speed of the main drive motor to precisely the required mill speed. The mechanical torque split of the MAAG LGDX Gear Unit guarantees an equal load distribution between the two output pinions.

Self-alignment of the pinions ensures full tooth contact to the girth gear and adapts to movements and run outs.

### Selection chart for a Lateral Gear Drive system

*Formula:* 

\[ P/n2p = P/(n2 \times (Z2 : Z2p)) \]

*Example:* 

4750kW/158.59 rpm  
= 15.33 rpm \times (300:29)
Efficient side drive – ideal solution for ball mills in small spaces

Symmetrical casing for high flexibility
The unique symmetrical casing design provides you with the flexibility to install our LGDX on centre line or at 40° below the mill.

Our LGDX is built symmetrically and detachable from its foot. The gearbox can be flipped, placed in two different positions around the mill and offers a twin-drive availability.

The symmetrical design permits a pivoting of the whole unit and prolongs the lifetime by approx. 40%.

Smart lubrication leads to longer lifetime
We have extended the lifetime of our LGDX Gear Unit by approx. 40% through a clever lubrication concept and the ability to flip over the gear unit and operate it in reverse.

The MAAG LGDX includes two independent lubrication systems, one which services the girth gear and intakes more dust and dirt, and a second which supplies oil for the fast rotating gearing and bearings. The second circuit stays clean and will therefore provide longer lifetime and less maintenance for the gear unit.

For replacement projects, the existing lubrication unit can be reused with minor modifications and only a small unit for the closed circuit will be distributed.

Girth gear
We build our fabricated girth gears using forged gear rim material and bodies made in an electro-welded structure. The uniform and homogenous crystal structure of the forged rims guarantees identical material properties throughout the entire toothing.

Casting defects like hot tears, porosity or shrinkage are excluded – increasing the wear resistance and resulting in a stronger and more reliable girth gears.

The connection to the mill is adaptable to customer needs. The T-section of the girth gear gives the system an additional flexibility to absorb misalignment between the mill and the LGDX gear unit.
Experienced in replacement and overhaul projects

Irrespective of the original manufacturer
Every gearbox has a limited lifetime. Apart from the obvious reasons age and malfunction, there are other considerations to a replacement
- Increased plant efficiency
- Increasing spare parts and maintenance costs
- Modernization of plant
- Avoiding unscheduled downtime/“running until it fails”

The unique modular design of the LGDX offers a very high flexibility to adapt to most existing interfaces and foundations. Gearbox foot and interface to girth gear guard are highly customisable.

The existing lubrication unit can be reused with minor modifications and only a small unit for the closed circuit will be distributed. Whenever feasible existing adjacent components such as couplings or auxiliary drives will be reused – if this is not possible very good alternatives are available.

Benefits of a replacement
- New warranty after recommissioning through MAAG specialists
- Saving of future maintenance costs
- Improved reliability
- Newest technology installed
- Low spare part diversity

We find out the best solution for you – case by case!
Rely on over hundred years of experience! Our replacement service guarantees you a great cost-performance ratio with the least possible downtime of your cement line with outstanding service to support your business success!
Quality policy

Our certification according to the latest ISO 9001:2008 standards and our commitment to create strong relationships with our customers, suppliers and employees has the clear target to establish us as a trustworthy, reliable and professional partner. This commitment includes providing the markets with high quality and high value solutions, products and services to support productivity and sustainability of our customer.

With our process management system, we endeavor to meet and exceed quality standards and provide adequate resources to support the quality system.

Our quality policy centers on the importance of meeting our customers’ requirements. To reach that our management continuously reviews and establishes the quality objectives and our employees are committed to the company’s Management System, as well to the continual improvement of the system and the entire organization. Each employee is aware of the vision and strategy we pursue and works in a culture of opportunity.

With our suppliers and external partners, we cultivate an open communication and collaborate on performance-oriented results.

Precision is a question of quality

Our products are known for their high reliability. Manufactured in state-of-the-art production plants, enriched with many years of experience, supported by a wide range of services.
As part of the global FLSmidth Group, the business continues to be the preferred full-service provider for the heavy-duty industry. As leading technical developer of drive solutions for the cement and minerals industries we remain focused on our customers productivity.

Engineering and production
Since introducing with great success in 1966 the technology of mill gear units to the cement industry we have sold over 6000 MAAG™ gear units and 1000 girth gears. In today’s setup, Engineering and Production take place in 4 modern plants located in Italy, Switzerland, Poland and India.

Our strength
We support our customer’s expectations with highly efficient products. The key of success lies in the combination of modularized solutions and compact design. Careful material selection and unique production accuracy enables our gear units to increase customers sustainability. The continuous incorporation of experience, new technical solutions and latest manufacturing techniques into the production process combined with intensive development and training of our engineers assure best understanding of how to design and operate a gear unit to lengthen its life cycle. A constant willingness to innovate and close collaborations with our customers have led to ensure that MAAG gear units operate reliably through-out the world under toughest conditions.

Product range
Today’s product range includes various drive solutions and maintenance systems for all types of applications needed in various industries. We also manufacture single components such as bevel sets, girth gears and various replacement parts.

All MAAG gear units are available as standard solutions or customized to its specific application.

A pioneer of modern gear technology

For more than 100 years, the MAAG® Gear brand has successfully lived up to its founding vision and values.