

MAAG® Open gears

Geared parts for heavy-duty use in cement and mining



Durable girth gear and pinions

Manufactured using state-of-the-art processes and high-quality source materials, our line of MAAG® Girth gears and pinions are fit-for-purpose and for a lifetime– ensuring long-lasting, high-performance for your mill or kiln.



Key benefits



Long-lasting, heavy-duty girth gear



Expert customisations



No risk of inclusions and other irregularities



Long service life



The diversity to fulfil your demands



Made to order – and match your need

Get the best from your mill or kiln with our girth gears

Heavy-duty comminution requires heavy-duty equipment – and our MAAG® Girth gears are up to the task. Manufactured using state-of-the-art processes and high-quality source materials, our line of girth gears is ensuring high-performance for your mill or kiln.

Introduction

Our comprehensive expertise in forged gear ring technology comes from our more than 50 years of experience, as well as our collaborations with leading mill suppliers and technical universities. As a member of the American Gear Manufacturers Association (AGMA), we are actively involved in defining the standards for gear-rating calculations, service factors and other design standards. We continuously invest in technology and knowledge – along with steadily strengthening our network of partners.

Over 1,000 MAAG Girth gears are in service around the world – delivering optimal reliability for the cement and mineral industries. Applications for MAAG Girth gears also extend into the chemical processing, ceramic industries and food processing and pulp and paper.

Technology

We build our fabricated girth gears using forged gear rim material and bodies made in an electro-welded structure. Compared to girth gears with cast base material, the manufacturing process is more sophisticated, as well as more reliable. 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 – resulting in a stronger and more reliable girth gear. When supplying ductile cast iron or cast-iron girth gears, we source the raw material from world-leading foundries – working closely with them to ensure the highest quality.



Tailor-made pinions that round up your open gears

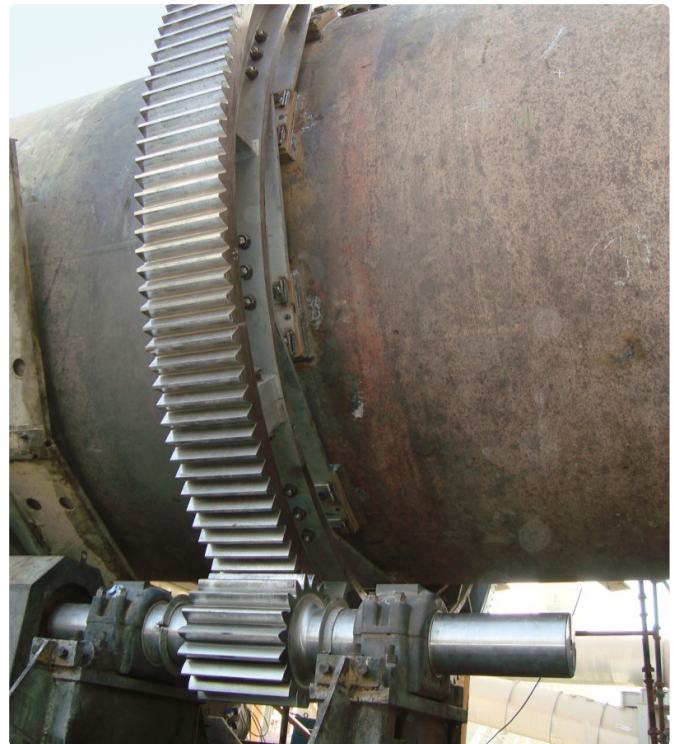
Manufactured with maximum precision, our MAAG® Pinions are customised for your mill and kiln drive application and designed to work harmoniously with our girth gears – delivering smooth, reliable operations.

In addition to our girth gear development, we design and manufacture pinions and have improved pinion technology. The correct combination of material, hardness and finishing between pinion and gears is crucial ensuring the installed equipment has a long service life.

Engineered for success

Our team of engineers carefully consider how to implement the required tooth flank modification for the gearing of various pinions with new installation – ensuring that MAAG Pinions are fit-for-purpose and deliver maximum output with minimum noise disruption. Through precise manufacturing techniques, we implement profile and longitudinal modifications for pinions as required by your mill or kiln drives. If a pinion replacement requires a higher performance or different speed, we will take responsibility for the design of the new gearing. As we have developed, improved and patented several heat treatment processes, we can safely call ourselves leaders in the field of heat treatment. Our modern heat treatment facilities ensure the best material quality and characteristics, producing dependable top-notch pinions. Pinions are as varied as their applications. Our pinion designs include:

- Self-aligning,
- Spur, helical or double helical toothing,
- Bored or integral,
- Forged alloyed steel,
- Through-hardened, quenched and tempered,
- Carburised and ground,
- Induction-hardened, and nitride



Heat treatment

As we have developed, improved and patented several heat treatment processes, we can safely call ourselves leaders in the field of heat treatment. Our modern heat treatment facilities ensure the best material quality and characteristics, producing dependable top-notch pinions.

Engineered for success

While our modern manufacturing processes are impressive, it's really our highly-skilled engineers and operators who make our girth gears and pinions stellar. Our engineers and machine operators are trained in sophisticated engineering software, allowing them to meet your precise specifications by creating high-quality girth gears and pinions made from a variety of materials. Depending on your needs, we can manufacture all geared components of the entire power train or individual components.

Based on engineering analysis and many years of experience, we can also propose design improvements to increase part reliability – delivering smooth operations for your mill or kiln long into the future.

Our customers rely on MAAG products, which undergo strict tests such as NDT-QA inspection, NON-destructive testing and Ultrasonic testing, magnetic particle and penetrant testing. We comply with the following international standards: UNI EN ISO, AWS, ASTM, ASME and DIN.

The continuous investment in our modern machine shops guarantees state-of-the-art girth gear production, in a wide-range of sizing:

External gears

- Maximum diameter: 10,000 mm
- Face width: 850 mm
- Maximum module: 50 by hobbling

Internal gears

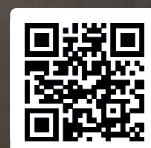
- Maximum diameter: 6,500 mm
- Face width: 400 mm
- Maximum module: 25.4



Home of Precision Engineering

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

Evolving demands in heavy-duty industries are driving the need for more efficient, reliable, and sustainable gear technologies. At MAAG, we are dedicated to providing high-precision solutions that respond to this need and enhance the productivity, sustainability and reliability of our clients' operations in cement, mining, and beyond. With a rich history of innovation and a robust product portfolio, we stand as trusted partners, committed to our mission of driving progress through precision. Discover how MAAG can help you elevate your business.



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