

# Bierens gears for mining

## **Bierens innovates, produces, revises and reconstructs**

Since 1880 Bierens Companies has become the gear specialist for over 70 years. Our customers know our ongoing care and passion for the profession. That is the foundation of our history, the basis for our future. Bierens has become the market leader in gears, gearboxes, custom made mechanical drives, special machines and overhaul work. Bierens manufactures prototypes and supplies large and small series and products in limited edition for also the mining industry, such as a gearbox for a special excavator or the drive for a crane.

### **POWER BY PRECISION**



For many years Bierens is certified for NEN-EN-ISO 14001 and 9001 and is positioned in the highest quality market place. The accuracy of Bierens gears is stated in deviations of up to 2 microns. This precision is achieved by a conscious Lean & Mean choice for another way to work: from 2D drawings or model direct NC codes are being generated. This will reduce work preparation time and innovative and high-performance gear solutions can be manufactured quickly in our own workshop.

More about Bierens? Please contact: telephone +31 13 5360025 or visit: [www.bierens.com](http://www.bierens.com)



*The gears for the mining industry produced by Bierens are specially manufactured from high quality material*

## The driving force in the mining **High-performance gears**

The mining industry puts extremely high demands on material that is used, for example, to crush huge stones or to dig off the soil. The strength and durability of such high-load machines start with the drive. Gears are an essential element in, for example, cranes, vibration blocks (dam walls), conveyor belts, elevators, vibrating screens, excavators and stone crushers. The more precise the gears are matched to each other, the longer the lifetime and the higher the return of the drive. The accuracy of the Bierens gears is that high (DIN-class 1 to 4) that the gears no longer need to be paired. That is why you will find the Bierens gears and gearboxes in the highest demanding industrial applications, such as mining.

For over decades Bierens is the reliable supplier of gearboxes and individual gear sets for the mining industry in Germany, the Netherlands and South Africa. International players like ThyssenKrupp, Kawasaki Mining, Pekrun and IMS rely on the quality of Bierens gears.

### **Technological support**

Bierens as gear manufacturer offers a lot of flexibility because the technique has been developed for 100% in their own workshop and the production takes place in the same location. This provides the shortest possible lines between customer's demand, development, planning, production and delivery. In situations where innovative custom solutions are required, the engineering department of the customer can count on the support of the Technology & Development department of Bierens.



### **Bierens companies in NL and BE worldwide successful through:**

- Product leadership: highest precision in gears
- Operational excellence: direct data input to gear manufacturing machines
- Customer intimacy: transparency and partnering
- ... And our passion for gears



## CONTINUOUS FOCUS ON PRECISION

### Bierens Gears in Maintenance & Overhaul

Our high-tech production methodology, based on our own software and decades of experience, is unique in the world and allows us to produce efficiently – quickly and for a reasonable price – and extremely accurately in accordance with customers needs. The maintenance and overhaul of the drives of copper mills are a good example:

- The great ring gear, the outer ring outside on the drum is ground on site with special grinding equipment; no disassembly or transport of the, sometimes bigger than 5 meter, ring gear is required.
- The new drive pinion is designed and milled according to the new gear geometry after grinding of the ring gear.
- The new accuracy of the renewed mill drive creates:
  - A higher efficiency.
  - Lower energy costs from 5 to 7%, even more when overhauled to the S-gear design.
  - Less noise and less heat.
- New alignment is part of the overhaul.



Gears for copper mills



Gears for cement industry

**Gear sets for stone crushers, cement industry and corresponding conveyor belts in HPG-quality. These gear sets are manufactured by Bierens and delivered all over the world.**

Bierens is specialized in (high-performance) gears and gearboxes for the mining sector. For over 100 years Bierens supplies large and small series and is equipped for making prototypes. Replacing damaged gears is another field in which Bierens is the right partner for you. Experience the passion, profession and personal attention of the gear specialist who knows, like no other, what it is all about!

## CONTINUOUS FOCUS ON INNOVATION



### Bierens S-gear in new application

The load of heavy gears in trucks is often too extreme for long lasting operation. The Bierens way of manufacturing gears, the 5-axis free form milling, also creates opportunities for new forms of gears: the S-gear. Within the same dimensions as other gears the S-gear can transfer 42% higher power in the same application. The damage or fractures in these gears as a result of too heavy load is reduced to a minimum. The advantages:


- Higher availability, lower repair pool.
- Less investments on such high-costs assets.
- Higher reliability, lower costs.



## Large, larger, largest...

In Tilburg we have organized our technology and development center for both the production locations Tilburg and Ghent (Belgium). The highest quality gears can be manufactured in Tilburg up to a diameter of 1600 millimeters. In Ghent Bierens makes them even larger - up to a diameter of 3400 millimeters.

The self developed mathematical calculated numeric codes for the 5-axis milling centers is also the basic for the optimized contact pattern. The running tests for the contact pattern is a standard quality check to prove that customer specifications are met.

[www.bierens.com](http://www.bierens.com) | Bierens on LinkedIn: <http://bit.ly/bierenslinkedin>  Follow



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