



# RKB bearings for every step of the cement production process

RKB manufactures bearings that offer efficiency and reliability at every step of the cement production process, from the initial stages of mining and quarrying to the final product. RKB products are integral to various stages, ensuring seamless operations and optimal performance. Consequently, over the years, the cement industry has become a significant sector in terms of sales share for the RKB Group.

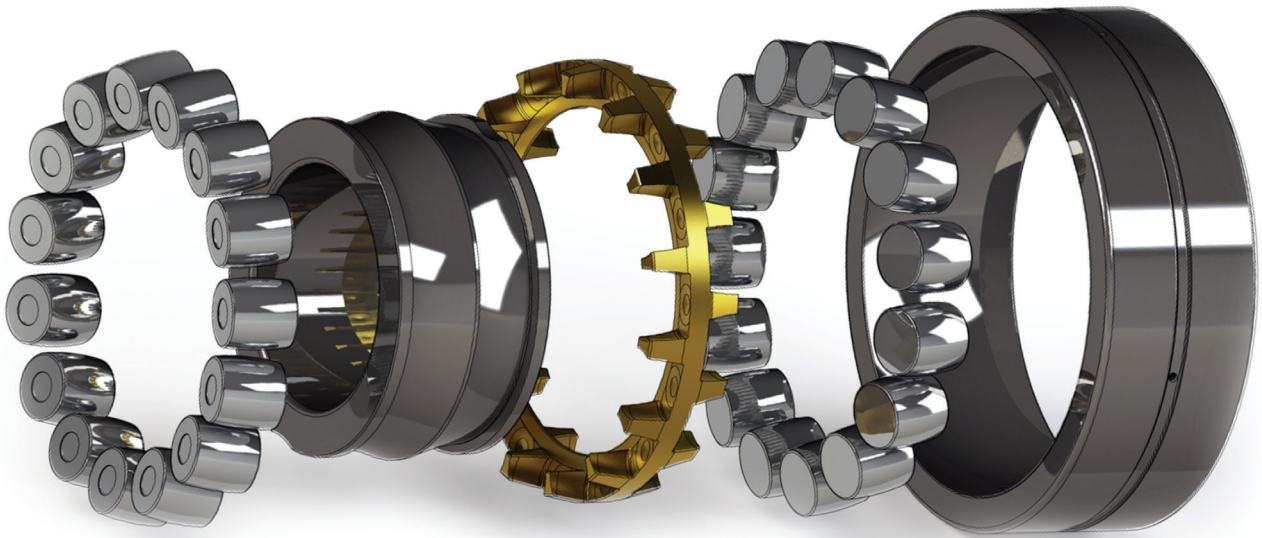
## Mining and processing

The cement production process begins with the mining and quarrying of limestone, the primary raw material. This stage involves using heavy machinery such as excavators, earth-moving equipment, and off-road dumper trucks. RKB bearings are manufactured to withstand the extreme conditions and heavy loads encountered in

these operations for smooth and efficient limestone extraction.

Once the limestone is extracted, it undergoes primary and secondary crushing to reduce its size for further processing. This involves the use of jaw crushers and cone crushers, which are critical for breaking down the material. RKB bearings are engineered to handle

the high impact and continuous load of these crushing operations, maintaining durability and performance. The crushed limestone, along with other additives like iron ore and bauxite, is transported via conveyors and bulk handling systems. RKB bearings support the smooth operation of these systems, ensuring that materials are efficiently moved through the production line without interruption.



### Grinding and homogenization

The next stage involves the grinding of raw materials in mills such as ball mills, ball mills, and vertical roller mills (VRM). These mills require bearings that can handle heavy loads, high vibration and shock loads. RKB provides bearings that ensure the reliable operation of these mills, contributing to the effective grinding of materials into fine powder.

The ground materials are then homogenized before further processing. During the homogenization and preheating stages, RKB bearings guarantee that the mixing and heating processes run smoothly, maintaining consistency in the raw meal before it moves to the kiln.

### Clinker production and processing

One of the most critical stages in cement production is the calcination and burning of the raw meal in rotary kilns to form clinker. This high-temperature process requires bearings that can withstand extreme heat and maintain stability under thermal stress. RKB's specialized bearings are produced to perform reliably in these harsh conditions for the continuous and efficient production of clinker.

After the clinker is formed, it needs to be cooled and stored before further

processing. RKB bearings support the cooling equipment and storage systems so that the clinker is properly managed and ready for the next stage of production.

### Final grinding and packaging

The cooled clinker is then ground into fine cement powder in finishing mills such as ball mills, VRMs, and horizontal pressure grinding rollers (HPGR). RKB bearings help ensure the smooth operation of these mills, contributing to the final quality of the cement.

Finally, the finished cement is packaged in bulk or bags for distribution. The packaging process involves mixers and other machinery that rely on RKB bearings for efficient operation so that the cement is properly packaged and ready for transport to various construction sites and concrete production facilities.

By choosing RKB bearings, cement manufacturers can achieve optimal performance and maintain the highest standards of operational excellence, reducing maintenance and operating costs.

RKB offers on-site support, help with bearing selection, failure investigation and technical support related to bearing applications and equipment reliability.

**“** *Our bearings can be found in various machinery, including high pressure grinding rolls (HPGR), vibrating screens, apron feeders, separators, cone crushers, jaw crushers, hammer crushers, vertical roller mills (VRM), horizontal mills, roller presses, ball mills, rotary kilns, gearboxes, conveyors, concrete mixer trucks, and bucket wheel excavators. RKB bearings for the cement industry are designed to withstand the harsh operating conditions encountered during production.* **”**

**Mahomed Chothia, Senior Engineer**

### RKB Bearing Industries

Leveraging decades of experience, RKB possesses the specialized knowledge and skills required to design and produce industrial bearings from 1 mm bore diameter to over 2,000 mm outer diameter. With a global distribution footprint reaching over 70 countries, RKB provides value-driven solutions characterized by impressive operational adaptability, top tier services, huge stock reserves, quick shipping times, and the hallmark quality expected of a premium-bearing provider.