



Improved performance in food processing preparation areas

Benefits

- Improved reliability and productivity from extended bearing service life
- Increased load carrying capacity and speed limits enable improved bearing performance
- Reduced bearing wear and downtime due to special seals that prevent contaminant ingress
- Decreased maintenance costs through enhanced bearing performance
- Improved lubrication due to lower bearing operating temperature

Typical applications

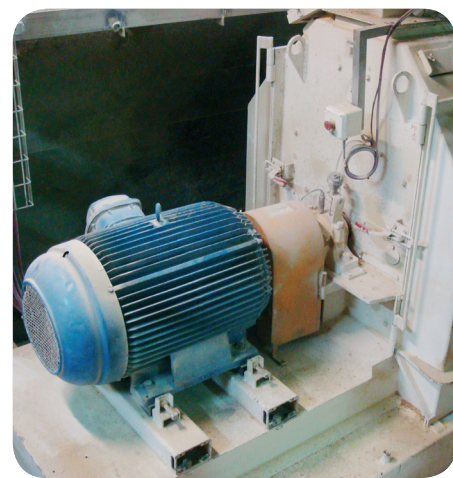
- Defibrators
- Shredders
- Knives
- Mills
- Peelers
- Mixers

CARB toroidal roller bearings, SNL housings and seals help improve reliability, reduce costs

Food processors face significant challenges to machine reliability and productivity, especially in the raw material preparation process. As industry capacity demands growth, plant operators are looking for solutions to increase the efficiency of processing equipment such as shredders, knives, hammer mills, peelers and other machines. But, the environment of these plants makes this especially challenging, as humidity, dust and powder, peel and dirt coming from the product can enter the bearing housings, affecting lubrication and performance.

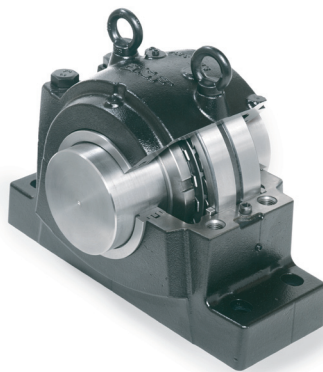
SKF offers a solution with the CARB toroidal roller bearing combined with SNL housings and seals:

- The CARB bearing accommodates misalignment and axial shaft displacement, without inducing additional axial forces or friction. As a result, friction and vibration levels – and heat generated by the bearing – are all reduced, as is power consumption. Equipment operates with higher reliability and the service life of the lubricants is extended.



Component upgrades in equipment such as cane shredders can significantly reduce downtime

- Built for heavy-duty applications, SNL housings provide ease of maintenance and an improved design to accommodate condition monitoring equipment.
- Special seals designed for various lubricant types and running conditions minimize the risk of contamination to further extend bearing service life.



A combination of a CARB toroidal roller bearing, SNL housing and seals can accommodate extreme running conditions

For more information about SKF products and solutions for the food and beverage industries, contact your SKF Authorized Distributor or local SKF representative.



Increase the return on your maintenance investment with SKF

The whole idea behind the SKF 360° Solution programme is to help you get more out of your plant machinery. Whether your goals include lowering maintenance costs, raising productivity, or improving safety, hygiene and sustainability, SKF can assist. Following is an example of the SKF 360° Solution programme at work in the food and beverage industries.

Sugar and ethanol producer achieves significant increase in MTBR with CARB solution

A sugar and ethanol processor was experiencing reduced bearing service life in a cane shredder. The machine was equipped with two spherical roller bearings, and operated under difficult conditions. Temperatures of 50°- 60°C in the bearing position, heavy loads combined with induced axial forces, a running speed of 650-700 rpm, and a very contaminated environment all affected the bearing performance, resulting in bearing wear and decreased service life. In order to maintain reliable operation during the prime processing season, preventive replacements were done as soon as important wear was apparent.

SKF recommended replacing the existing non-locating bearing with a CARB



bearing, while keeping the locating spherical roller bearing in the other position. As a result, Mean Time Between Repairs (MTBR) has increased dramatically over the 49 months experienced with the previous bearing arrangements. After installation, the CARB bearing solution was still operating trouble-free after 70 months, providing the processor with reliable operation during seasons, and a 43% increase in MTBR.



During the eight seasons, the CARB bearing solution was running, the bearing positions were monitored and significant reductions were identified in operating temperature and vibration levels. Combined with the elimination of internal axial forces, this contributed to increased reliability, longer system life, reduced repositioning costs and other decreases in maintenance expenses.

Summary *over 70 months

Increased MTBR of 43%, from 49 to 70 months

Value of increased MTBR €216 000

* All figures are rounded off and based on customer estimates.

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