

# SKF self-aligning ball bearings for light- to medium-load conveyors

## Features

- Self-aligning up to a maximum of 3 degrees depending on series and design
- Virtually no risk of sliding during start-ups and light-load conditions
- Extremely low friction offers minimum operating temperature combined with high speed capability
- Sealed versions provide robust protection in harsh environments
- E design bearings with optimized internal geometry offer maximum load capacity

## Benefits

- Long and reliable bearing service life
- Lower maintenance and operating costs
- Increased uptime and productivity
- Increased energy efficiency
- Reduced vibration and noise

## Applications

- Snub pulleys
- Take-up pulleys
- Bend pulleys
- Tail pulleys



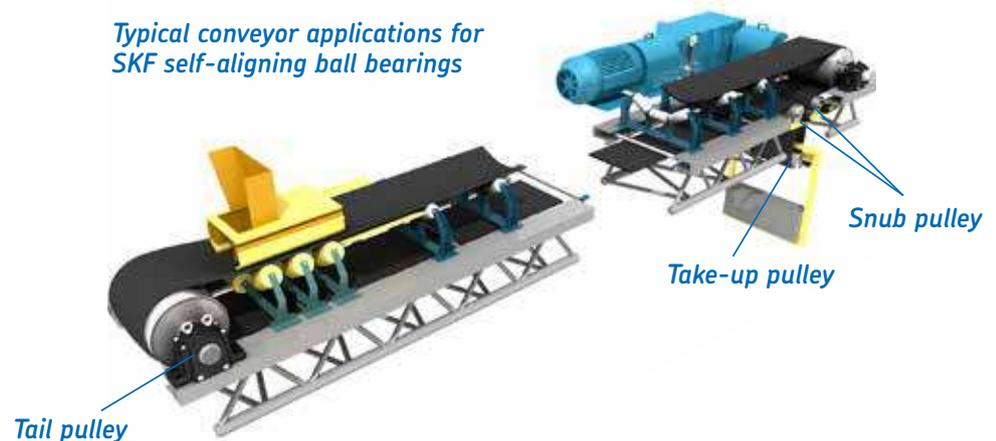
## Misalignment compensation enables high speed and long life

For heavy-duty conveyors in industries such as mining, high load carrying capacity is a critical factor in the selection of bearings. However, for light- to medium-load conveyor applications, low maintenance, high speed rating and the ability to accept dynamic misalignments are more important factors.

SKF self-aligning ball bearings are an ideal choice for light- to medium-load conveyor applications as they manage varying loads well with minimal friction, enabling higher conveyor speeds and longer bearing service life.

Depending on the series and design, SKF self-aligning ball bearings can accommodate a maximum of up to 3 degrees of misalignment without affecting performance. In addition, they generate less frictional heat and can accommodate higher speeds than other types of self-aligning rolling bearings. An exceptionally low minimum load requirement virtually eliminates sliding during start-up and light-load conditions. This reduces the risk of bearing damage, improving reliability, extending bearing service life and reducing maintenance costs.

### Typical conveyor applications for SKF self-aligning ball bearings





## A large range of products to meet your needs

SKF self-aligning ball bearings are available with either a parallel or tapered bore in both open and sealed designs to meet the needs of light- to medium-load conveyor pulleys. Sealed bearings are available in series 22 and 23 and are suitable for contaminated operating conditions. Critical to operational efficiency, all of these bearings are readily available from SKF.



Open design

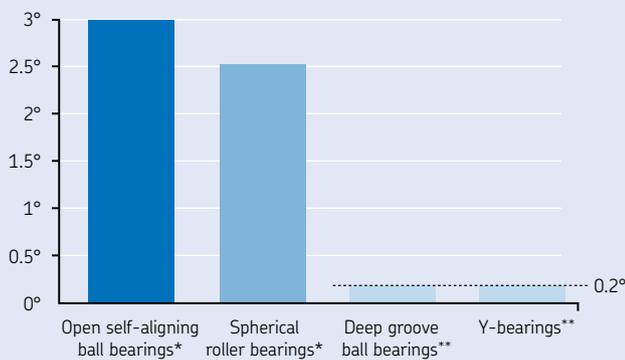


Sealed design



Tapered bore design

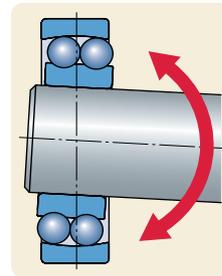
### Maximum permissible misalignment



\* Maximum permissible misalignment may be less for certain bearing series and versions, e.g. sealed bearings.

\*\* These bearings are not self-aligning. Permissible dynamic misalignment is limited and depends primarily on size design and operating internal clearance. Y-bearing units can accommodate initial misalignment up to 5 degrees.

## Managing misalignment



With uneven loads and changes in conveyor belt position, pulley bearings may become misaligned. The chart at left shows the maximum misalignment that can typically be accommodated by various open bearing types. Optimally sized SKF open self-aligning ball bearings can compensate for up to 3 degrees of misalignment, depending on the series.

SKF sealed self-aligning ball bearings can accommodate up to 1.5 degrees of misalignment.

## E design bearings for maximum load capacity

Depending on the size of bearing required, SKF self-aligning ball bearings are available with an optimized internal design that carries the designation suffix "E". These bearings incorporate more and/or larger balls and have a basic dynamic load rating up to 30% higher than standard bearings. SKF can help you select the correct self-aligning ball bearing type - sealed or open versions - to deliver long, reliable service life with minimal maintenance.



Basic design



E design

© SKF is a registered trademark of the SKF Group.

© SKF Group 2014

The contents of this publication are the copyright of the publisher and may not be reproduced (even extracts) unless prior written permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein. Any cost savings and revenue increases in this publication are based on results experienced by SKF customers and do not constitute a guarantee that any future results will be the same.

PUB BU/P2 14753 EN · June 2014

Certain image(s) used under license from Shutterstock.com.

