

# SKF self-aligning ball bearings for agricultural applications

## 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
- Lower operating temperatures

## Applications

- Agricultural attachments
- Mowers
- Mulchers



## Run cooler, quieter and longer by managing misalignment

When an idea is good, it stands the test of time. Case in point: SKF self-aligning ball bearings. More than 100 years ago, this ingenious bearing type was invented by SKF founder Sven Wingquist, specifically to solve an alignment problem in textile machinery.

Today, SKF self-aligning ball bearings are solving the same problem for many industries, including agricultural attachments. Because of the changing contour of the terrain and the nature of agricultural applications, misalignment is simply a fact of life. Depending on the series and design, SKF self-aligning ball bearings can accommodate up to 3 degrees of misalignment without affecting performance. As a result, they do not suffer damage, service life is not compromised and the high maintenance costs associated with failed bearings are avoided. In addition, they generate less frictional heat and can accommodate higher speeds than other types of self-aligning rolling bearings. This results in longer lubricant life and smoother, quieter operation.

### Ideal for mowers and mulchers

SKF self-aligning ball bearings are ideal for a wide range of agricultural applications, including mowers which require a rigid support between the cylinder and the bed in order to cut grass evenly. Sealed versions of these bearings provide protection from moisture and contamination in wet, muddy environments.

Self-aligning ball bearings also provide improved performance in mulching applications where organic matter is shredded and used to fertilize the soil, rather than left to rot. Self-aligning ball bearings are used on both the rotor shaft and the supporting roller. The radial load carrying capacity of self-aligning ball bearings is ideal for the rotor shaft, since the bearings are exposed to a predominantly radial load from the drive belt and the cutting operation. On the supporting roller, self-aligning ball bearings accommodate the varying alignments that the bearings are subjected to due to the rough and changing ground surface over which the machine travels.



## 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. Sealed bearings are available in series 22 and 23 and are suitable for contaminated operating conditions. Selection of the correct self-aligning ball bearing for agricultural equipment should be based on consideration of the application speed, dynamic misalignment and maintenance goals. Critical to operational efficiency, all of these bearing types are readily available from SKF.



Open design

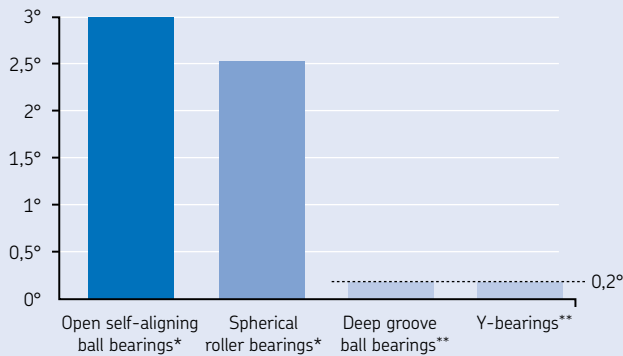


Sealed design



Tapered bore design

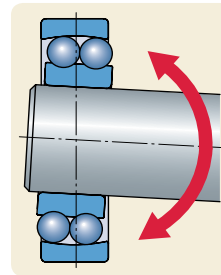
### Maximum permissible misalignment



\* 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



The chart to the 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 a long, reliable service life with minimal maintenance.



Basic design



E design

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