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- › [SKF](#) /
- › [SKF 305806 C-2Z Radial Ball Bearing User Manual](#)

SKF 305806 C-2Z

SKF 305806 C-2Z Radial Ball Bearing User Manual

Comprehensive guide for installation, operation, and maintenance.

PRODUCT OVERVIEW

The SKF 305806 C-2Z is a high-quality angular contact ball bearing designed for applications requiring the accommodation of combined radial and axial loads. Its robust construction ensures reliable performance in various industrial settings.

Angular contact ball bearings feature inner and outer ring raceways that are displaced relative to each other along the bearing axis. This design allows them to handle both radial and axial forces simultaneously. The bearing's axial load capacity increases with its contact angle, which is defined by the angle between the line connecting the ball's contact points on the raceways and a line perpendicular to the bearing axis.



Figure 1: The SKF 305806 C-2Z Radial Ball Bearing. This image shows the complete bearing assembly, highlighting its metallic construction and sealed design.

SPECIFICATIONS

Attribute	Value
Model Number	305806 C-2Z
Brand	SKF
Bearing Type	Angular Contact Ball Bearing
Material	Alloy Steel
Bore Diameter	30.000 mm
Outside Diameter	72.000 mm
Width/Thickness	23.800 mm
Number of Rows	2

Seal Type	Shielded (2Z - non-contact)
Lubricant	Grease
Tolerance Group	Normal (PN)
Internal Clearance/Preload Group	CN
Certification	ABEC 7
Item Weight	476 g
Product Dimensions (L x W x H)	8 x 3 x 8 cm

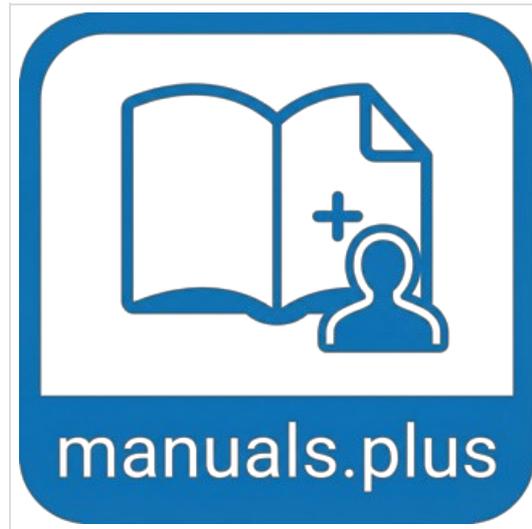


Figure 2: Technical drawing of the SKF 305806 C-2Z bearing, showing detailed dimensions and specifications for precise integration.

SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of the SKF 305806 C-2Z bearing. Always ensure a clean working environment and use appropriate tools.

- Preparation:** Clean the shaft and housing thoroughly. Remove any burrs, rust, or contaminants. Ensure all surfaces are smooth and free from defects.
- Mounting Method:** For bearings with a cylindrical bore, press fitting is typically used. Apply even pressure to the inner ring when mounting onto a shaft, or to the outer ring when mounting into a housing. Never apply force through the rolling elements.
- Heating (Optional):** For easier mounting, the bearing can be heated to a maximum of 80°C (176°F) using an induction heater or oil bath. Do not exceed this temperature to avoid damaging the lubricant or material.
- Alignment:** Ensure the bearing is perfectly aligned with the shaft and housing during installation to prevent premature wear and failure.
- Lubrication:** This bearing comes pre-lubricated with grease and is sealed (2Z). No initial lubrication is required.

Note: Consult engineering drawings and specific application requirements for precise fit and tolerance guidelines.

OPERATING GUIDELINES

The SKF 305806 C-2Z bearing is designed for reliable operation under specified load and speed conditions. Adhering to these guidelines will maximize its service life.

- **Load Capacity:** This angular contact ball bearing is optimized for combined radial and axial loads. Ensure that the applied loads do not exceed the bearing's dynamic and static load ratings. Refer to SKF's technical documentation for detailed load tables.
- **Speed Limits:** Operate the bearing within its permissible speed limits. Exceeding these limits can lead to excessive heat generation, lubricant degradation, and premature failure.
- **Temperature Range:** The operating temperature should remain within the limits of the bearing material and lubricant. For standard grease, typical operating temperatures are between -30°C and +120°C (-22°F and +248°F).
- **Vibration and Noise:** Monitor the bearing for unusual vibration or noise during operation. These can be indicators of improper installation, misalignment, or impending failure.
- **Environmental Conditions:** Protect the bearing from excessive moisture, dust, and corrosive substances. Although sealed, extreme conditions can compromise its integrity.

MAINTENANCE

The SKF 305806 C-2Z bearing is a sealed unit (2Z), meaning it is pre-lubricated for life and generally requires minimal maintenance. However, periodic inspection is recommended.

- **Inspection:** Regularly inspect the bearing and its surrounding components for signs of wear, damage, or contamination. Look for discoloration, unusual noise, or excessive heat.
- **Cleaning:** Keep the area around the bearing clean to prevent contaminants from entering, especially if the seals are compromised.
- **Re-lubrication:** As a sealed bearing, the 305806 C-2Z typically does not require re-lubrication under normal operating conditions. If the seals are damaged or the bearing is exposed to extreme conditions, consult SKF technical support for guidance on re-lubrication.
- **Storage:** Store spare bearings in their original packaging in a cool, dry, and vibration-free environment to prevent damage and corrosion.

TROUBLESHOOTING

This section provides common issues and their potential solutions for the SKF 305806 C-2Z bearing.

Problem	Possible Cause	Solution
Excessive Noise	Contamination, improper lubrication, misalignment, excessive load, worn bearing.	Inspect for contaminants, check alignment, verify load, replace bearing if worn.
Overheating	Excessive speed, insufficient lubrication, misalignment, excessive preload.	Reduce speed, check for proper lubrication (though sealed), correct alignment, adjust preload if applicable.
Vibration	Imbalance, misalignment, loose fit, damaged bearing.	Check for balance, correct alignment, ensure proper fit, replace damaged bearing.
Premature Failure	Improper installation, overloading, contamination, material fatigue.	Review installation procedures, verify load calculations, ensure clean environment, replace bearing.

If issues persist, contact SKF technical support for further assistance.

WARRANTY AND SUPPORT

SKF products are manufactured to high-quality standards. For specific warranty information regarding the SKF 305806 C-2Z bearing, please refer to the official SKF warranty policy available on their website or contact your local SKF distributor.

For technical support, product inquiries, or assistance with specific applications, please visit the official SKF website or contact their customer service department. You can find contact details and additional resources at the [SKF Store on Amazon.de](#) or the main SKF corporate website.

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