

TIMKEN 34306

Timken 34306 Tapered Roller Bearing User Manual

Model: 34306 | Brand: TIMKEN

PRODUCT OVERVIEW

The Timken 34000 Series single cone with a stamped steel cage is designed to pair with a single cup (outer ring, sold separately) to form a complete single tapered roller bearing. This assembly is engineered to effectively support both radial and axial loads in various applications. The cone assembly maintains its structural integrity without contracting or expanding within an operating temperature range of -54 to 120 degrees C (-65 to 250 degrees F). Constructed from Timken's high-alloy steel, it offers exceptional durability, heat tolerance, and resistance to deformation under heavy loads. The integrated stamped steel cage ensures proper spacing of the rollers, minimizing friction, vibration, and noise during operation. As a separable tapered roller bearing unit, its open design facilitates easy lubrication and precise adjustments. This single tapered roller bearing is ideal for high-load, moderate-speed applications, including automotive axle systems and conveyor systems in demanding industries such as mining, construction, and agriculture.

Key Features

- Single cone (inner ring) for connecting to compatible cups (outer rings, sold separately) to form a complete single tapered roller bearing.
- Supports both radial and axial loads between a rotating and non-rotating member.
- Operating temperatures range from -54 to 120 degrees C (-65 to 250 degrees F).
- Stamped steel cage evenly spaces rollers for reduced friction, vibration, and noise.
- Open configuration for lubrication applied in place.



Figure 1: The Timken 34306 Tapered Roller Bearing, single cone assembly.

SETUP AND INSTALLATION

Pre-Installation Checks

- Inspect the bearing for any signs of damage, such as nicks, burrs, or corrosion.
- Ensure that all mating components, including the shaft and housing bore, are thoroughly clean and free of any debris or burrs.
- Verify that the dimensions of the shaft and housing correspond to the bearing specifications.

Installation Procedure

1. Clean all surfaces that will come into contact with the bearing.
2. Apply a thin, even film of compatible lubricant to the bearing surfaces, especially the rollers and raceways.
3. Using appropriate installation tools, press fit the cone (inner ring) onto the shaft. Avoid direct impact on the rollers or cage, which can cause damage.
4. Install the cup (outer ring, sold separately) into the housing bore, ensuring it is seated squarely and fully.
5. Carefully assemble the cone and cup, ensuring proper alignment.
6. Adjust the bearing setting (end play or preload) according to the specific requirements of your application and equipment manufacturer's guidelines.

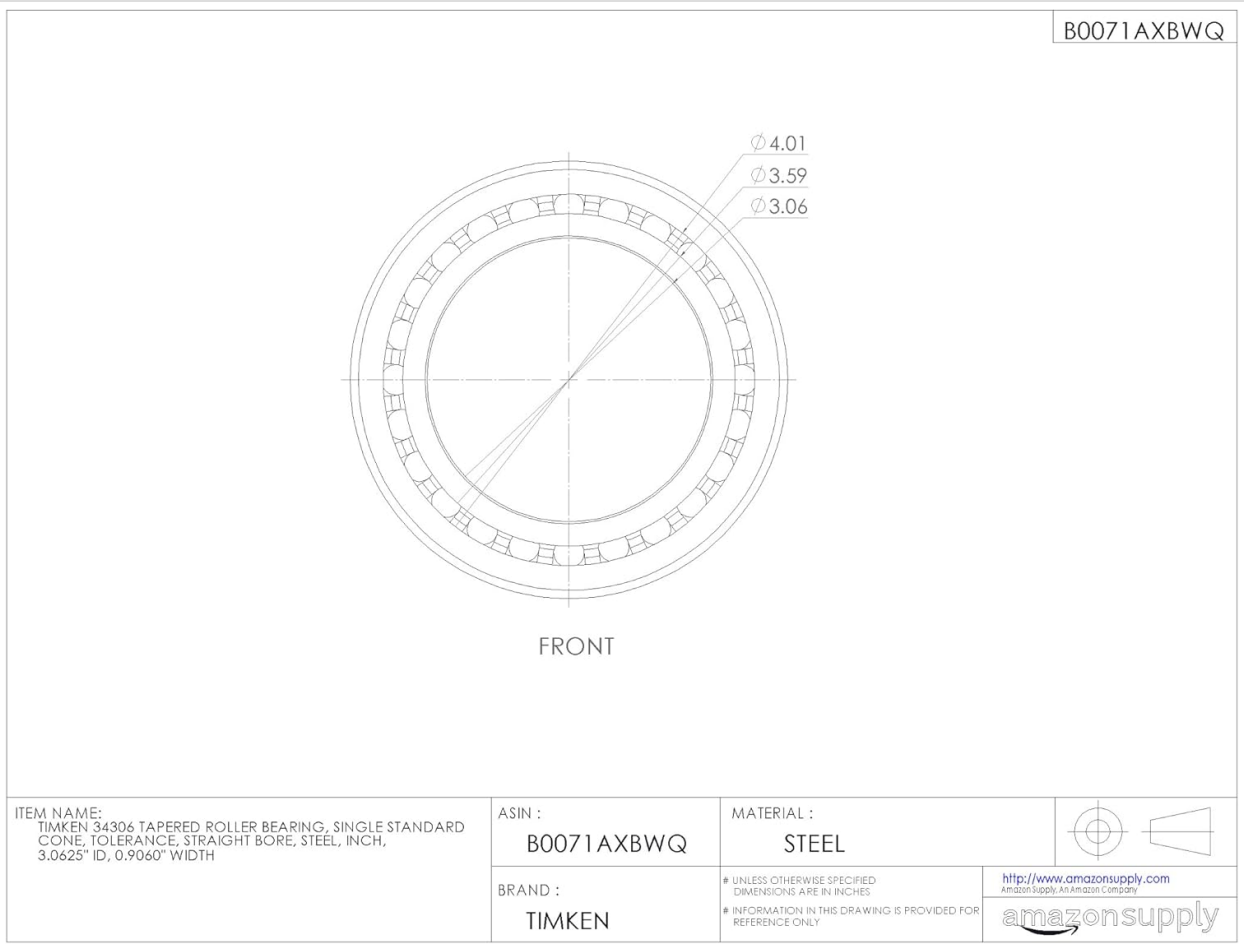


Figure 2: Front view technical drawing of the Timken 34306 Tapered Roller Bearing, showing key dimensions.

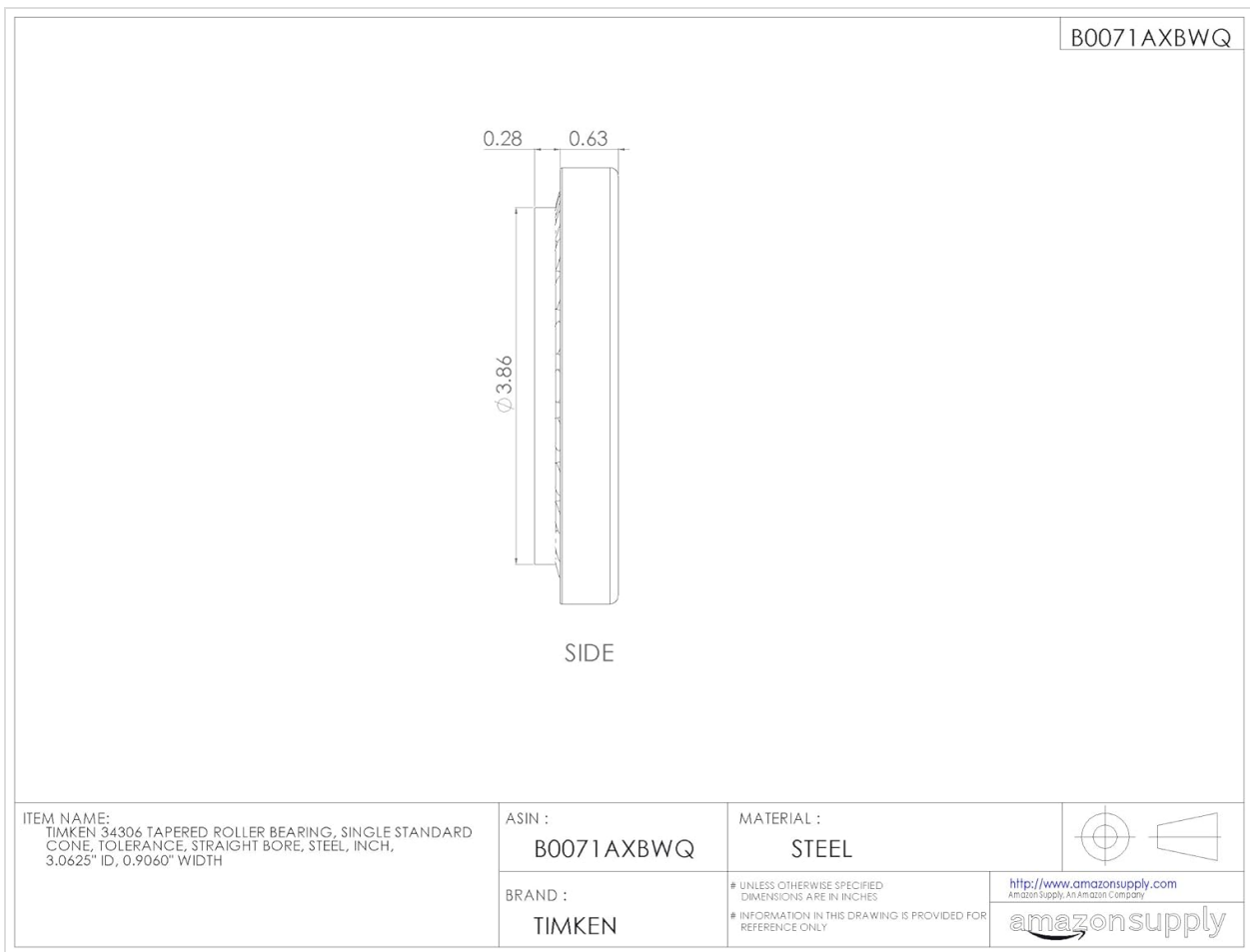


Figure 3: Side view technical drawing of the Timken 34306 Tapered Roller Bearing, illustrating its profile and width.

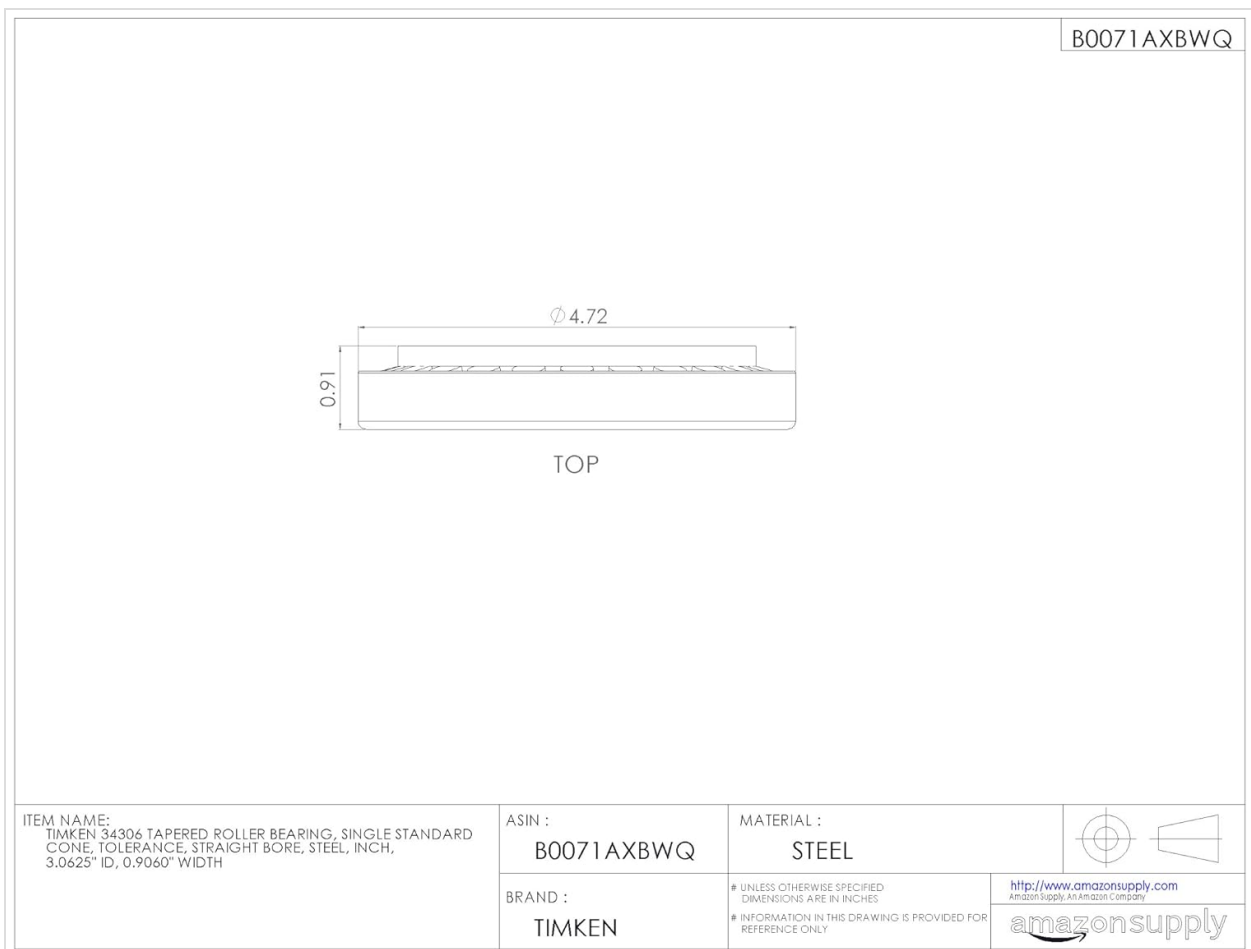


Figure 4: Top view technical drawing of the Timken 34306 Tapered Roller Bearing, showing the overall diameter.

OPERATION GUIDELINES

The Timken 34306 tapered roller bearing is engineered for reliable performance in high-load, moderate-speed applications. Adhering to the following guidelines will ensure optimal operation and longevity:

- This bearing is designed to effectively support both radial and axial loads, making it versatile for various mechanical systems.
- Maintain operating temperatures within the specified range of -54 to 120 degrees C (-65 to 250 degrees F) to prevent material degradation and ensure consistent performance.
- Proper and consistent lubrication is paramount for the bearing's optimal performance, reducing friction and extending its service life.
- Always operate the bearing within its specified load and speed limits to prevent premature wear and potential failure. Consult technical specifications for precise limits.

MAINTENANCE AND LUBRICATION

Lubrication

The Timken 34306 bearing features an open configuration, which means lubrication must be applied in place during installation and periodically throughout its service life.

- **Compatible Lubricant:** Grease is the recommended lubricant for this bearing.
- Regularly inspect the condition of the lubricant. If it appears discolored, contaminated, or degraded, replenish or replace it immediately.
- Always use a high-quality grease that is suitable for tapered roller bearings and the specific operating environment (temperature, moisture, load).

Inspection

- Periodically check the bearing for any visible signs of wear, such as pitting, spalling, or corrosion on the raceways and rollers.
- Listen for any unusual noise or vibration during operation, which can indicate a problem with lubrication, contamination, or damage.
- Ensure that the bearing setting (end play or preload) remains within the specified tolerances to prevent excessive wear or overheating.

TROUBLESHOOTING

This section provides guidance on common issues that may arise during the operation of your Timken 34306 Tapered Roller Bearing.

Problem	Possible Cause	Solution
Excessive Noise	Lack of lubrication, improper installation, contamination, bearing damage.	Check and replenish lubrication. Re-install bearing correctly, ensuring proper alignment and setting. Clean or replace if contaminated or damaged.
Overheating	Insufficient lubrication, excessive load, improper bearing setting (too tight), misalignment.	Verify adequate lubrication. Reduce applied load if exceeding limits. Adjust bearing setting to recommended end play or preload. Correct misalignment.

Problem	Possible Cause	Solution
Premature Wear	Contamination (dirt, moisture), improper or insufficient lubrication, misalignment, excessive vibration.	Ensure clean operating environment. Use correct type and amount of lubricant. Correct misalignment. Address sources of excessive vibration.

TECHNICAL SPECIFICATIONS

Detailed specifications for the Timken 34306 Tapered Roller Bearing.

Specification	Value
Brand	TIMKEN
Model Number	34306
Material	Alloy Steel
Bearing Type	Tapered Roller Bearing
Inner Diameter (ID)	3.0625 inches
Width	0.9060 inches
Item Weight	1.3 pounds (0.59 Kilograms)
Operating Temperature Range	-54 to 120 degrees C (-65 to 250 degrees F)
Compatible Lubricant	Grease
UPC	053893268606
Product Dimensions (L x W x H)	1 x 1 x 1 inches
Manufacturer Part Number	34306





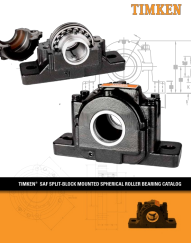
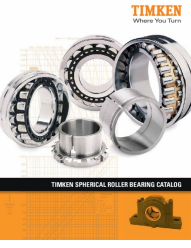
WARRANTY AND SUPPORT

For detailed warranty information, technical assistance, or any product-related inquiries regarding your Timken 34306 Tapered Roller Bearing, please contact TIMKEN customer service directly or visit their official website. Timken is committed to providing high-quality products and support.

[Visit Timken Official Website](#)

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Related Documents - 34306

	<p><u>Timken Engineering Manual: Comprehensive Guide to Bearing Selection and Application</u></p> <p>This Timken Engineering Manual provides in-depth information on bearing types, selection processes, fitting practices, operating conditions, lubrication, and storage. Essential resource for engineers and professionals in mechanical power transmission.</p>
	<p><u>Timken Bearing Specification Guide: Comprehensive Catalog for Automotive & Industrial Applications</u></p> <p>The official Timken Bearing Specification Guide provides detailed information on a wide range of bearings, seals, and hub assemblies. Essential for identifying and selecting the correct components for automotive and industrial applications.</p>
	<p><u>Timken® SNT Plummer Block Catalog: Industrial Bearing Solutions</u></p> <p>Explore the Timken® SNT Plummer Block Catalog, featuring robust industrial bearing solutions. Discover detailed specifications, installation guides, and application information for high-performance bearings designed for demanding environments.</p>
	<p><u>Timken SAF Split-Block Housed Units Catalog and Technical Guide</u></p> <p>Explore the Timken SAF Split-Block Housed Units Catalog, featuring detailed specifications, engineering data, mounting instructions, and lubrication guides for high-capacity spherical roller bearings. Essential for industrial applications.</p>
	<p><u>Timken® SAF Split-Block Mounted Spherical Roller Bearing Catalog</u></p> <p>Comprehensive catalog detailing Timken® SAF Split-Block Mounted Spherical Roller Bearings, including engineering specifications, mounting instructions, lubrication guidelines, and product dimensions for various series and applications.</p>
	<p><u>Timken Spherical Roller Bearing Catalog: Engineering, Applications, and Specifications</u></p> <p>This Timken Spherical Roller Bearing Catalog provides detailed engineering information, product specifications, typical applications, and handling guidelines for industrial bearings. Discover solutions for heavy loads and harsh environments, including bearing types, installation practices, and lubrication advice.</p>