

SKF TKSA 11

SKF TKSA 11 Shaft Alignment Tool User Manual

Model: TKSA 11

1. INTRODUCTION

The SKF TKSA 11 is an innovative shaft alignment tool designed for precise and reliable measurement of shaft misalignment. This compact and easy-to-use instrument utilizes a single measuring unit and a mobile application to guide users through the alignment process. It is compatible with both Android and iOS devices, offering a flexible solution for various industrial applications. This manual provides essential information for the proper setup, operation, and maintenance of your TKSA 11 tool.

2. PRODUCT OVERVIEW

The SKF TKSA 11 system consists of a measuring unit, a stylus pen, and the dedicated TKSA 11 application for smart devices. Its design emphasizes portability and ease of use, making complex alignment tasks more accessible.

2.1 Key Features

- **Compatibility:** Works seamlessly with Android and iOS smartphones and tablets.
- **Portability:** Lightweight and compact design for easy transport and use in various environments.
- **Guided Alignment:** The TKSA 11 app provides intuitive, step-by-step instructions for accurate alignment.
- **Stylus Pen:** Included for precise touch screen input, especially useful in industrial settings.

2.2 Components

The TKSA 11 package typically includes the following items:

- SKF TKSA 11 Measuring Unit
- Shaft Brackets with Chains
- Extension Rods (if applicable)
- Stylus Pen
- USB Charging Cable
- Quick Start Guide
- Carrying Case



Figure 1: The SKF TKSA 11 Shaft Alignment Tool and its components neatly organized within its protective carrying case. The case contains the measuring unit, shaft brackets, chains, and other accessories.

3. SETUP

Before beginning any alignment procedure, ensure all components are present and in good condition. Charge the measuring unit fully before first use.

3.1 Charging the Measuring Unit

1. Connect the USB charging cable to the TKSA 11 measuring unit.
2. Plug the other end of the cable into a suitable USB power adapter (not included) or a computer USB port.
3. Allow the unit to charge until the indicator light shows a full charge.

3.2 Installing the TKSA 11 App

1. For Android devices, download the "SKF TKSA 11" app from the Google Play Store.
2. For iOS devices, download the "SKF TKSA 11" app from the Apple App Store.
3. Ensure your device meets the minimum system requirements for the app.

3.3 Mounting the Measuring Unit

The measuring unit is mounted on one shaft, and the reflector (part of the bracket assembly) on the other shaft. Ensure the shafts are clean and free from obstructions.

1. Attach the shaft brackets to each shaft using the provided chains. Ensure they are securely fastened.
2. Mount the TKSA 11 measuring unit onto one bracket.
3. Mount the reflector onto the other bracket.
4. Adjust the positions so the laser beam from the measuring unit hits the center of the reflector. Use extension rods if necessary for larger shaft diameters or coupling gaps.

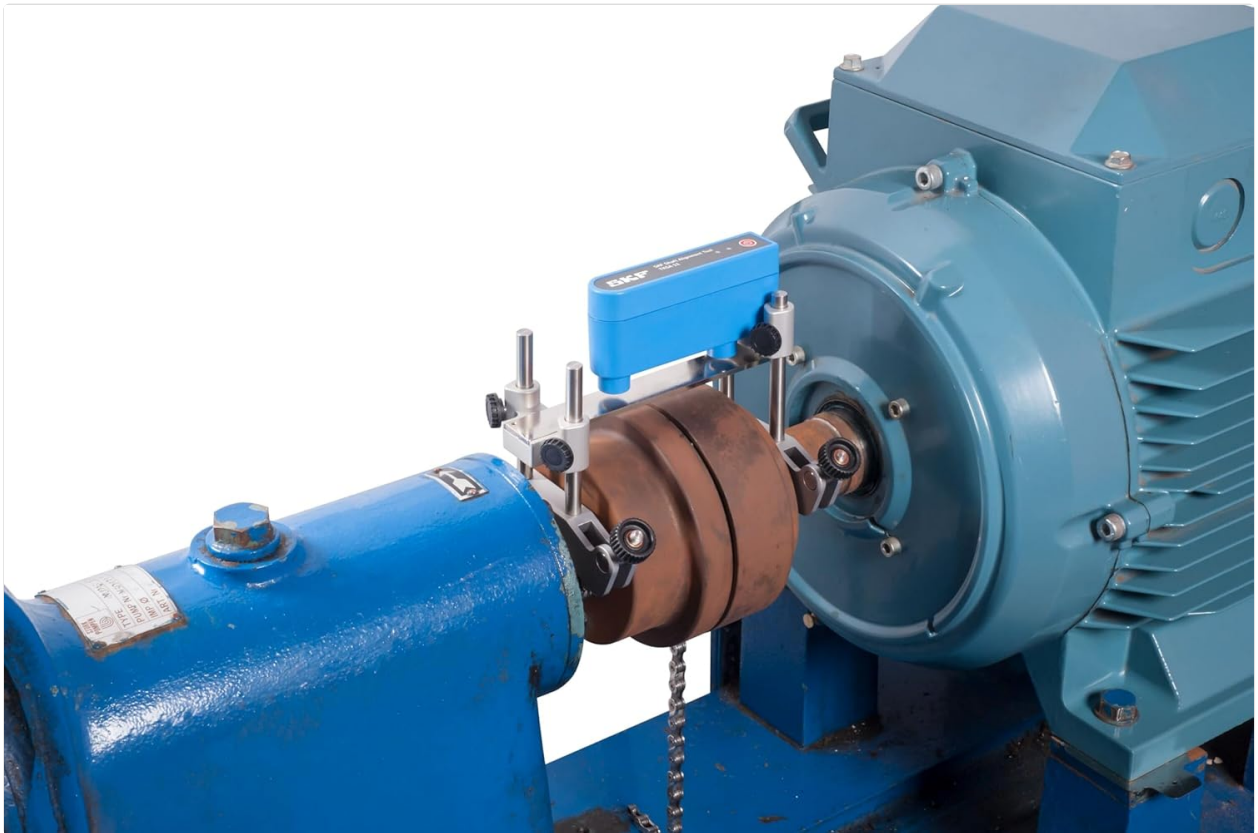


Figure 2: The SKF TKSA 11 measuring unit and reflector mounted on two shafts, ready for alignment measurement. The blue measuring unit is visible on the right shaft, with the reflector on the left.



Figure 3: A technician interacting with the SKF TKSA 11 app on a smartphone while performing shaft alignment. The measuring unit is attached to the machinery in the background.

4. OPERATING INSTRUCTIONS

The TKSA 11 app guides you through the entire alignment process. Follow the on-screen instructions carefully.

4.1 Connecting to the App

1. Turn on the TKSA 11 measuring unit.
2. Enable Bluetooth on your smart device.
3. Open the SKF TKSA 11 app. The app will automatically search for and connect to the measuring unit.

4.2 Performing an Alignment

1. **Start New Measurement:** In the app, select "New Measurement" to begin.
2. **Input Dimensions:** Enter the required dimensions, such as coupling diameter and distances to the feet of the machine. The app provides visual aids for this.
3. **Measure Positions:** Rotate the shafts to the indicated positions (e.g., 9, 12, and 3 o'clock) and take measurements as prompted by the app. The app will display real-time feedback.
4. **View Results:** After taking all measurements, the app will calculate and display the current alignment status, showing both vertical and horizontal misalignment.
5. **Adjust Machine:** The app will provide clear instructions on how much to move the machine's feet (shims for vertical, horizontal adjustment for horizontal) to achieve proper alignment.
6. **Verify Alignment:** After adjustments, re-measure to confirm the alignment is within tolerance.

7. **Generate Report:** The app allows you to generate a detailed alignment report, which can be saved or shared.



Figure 4: Two smartphones displaying the SKF TKSA 11 application interface during a shaft alignment procedure. The screens show graphical representations of the shafts and the alignment status.

5. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your SKF TKSA 11 tool.

5.1 Cleaning

- Wipe the measuring unit and brackets with a soft, damp cloth after each use.
- Ensure the laser aperture and reflector surface are clean and free from dust or debris. Use a lens cleaning cloth if necessary.
- Do not use abrasive cleaners or solvents.

5.2 Storage

- Store the TKSA 11 and its components in the provided carrying case when not in use.
- Keep the case in a dry, cool environment, away from direct sunlight and extreme temperatures.

5.3 Battery Care

- Charge the measuring unit regularly, even if not in frequent use, to maintain battery health.
- Avoid completely draining the battery before recharging.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your SKF TKSA 11.

- **Issue: Measuring unit does not power on.**
 - **Solution:** Ensure the battery is charged. Connect to a power source and allow it to charge for at least 30 minutes before attempting to power on again.
- **Issue: App cannot connect to the measuring unit.**
 - **Solution:** Verify Bluetooth is enabled on your smart device. Ensure the measuring unit is powered on and within range. Restart both the app and the measuring unit.
- **Issue: Inaccurate measurements or "No Signal" error.**
 - **Solution:** Check that the laser beam is hitting the center of the reflector. Clean the laser aperture and reflector surface. Ensure the shafts are stable and not vibrating during measurement. Verify that the measuring unit and reflector are securely mounted.
- **Issue: App crashes or freezes.**
 - **Solution:** Close and restart the app. Ensure your smart device's operating system and the TKSA 11 app are updated to the latest versions. Clear the app's cache if the issue persists.

If problems persist, contact SKF customer support for further assistance.

7. SPECIFICATIONS

Technical specifications for the SKF TKSA 11 Shaft Alignment Tool.

Feature	Specification
Model	TKSA 11
Compatibility	Android and iOS devices (via dedicated app)
Measuring Principle	Single laser line with reflector
Measurement Distance	0.07 to 0.85 m (0.23 to 2.8 ft)
Shaft Diameter Range	20 to 150 mm (0.8 to 5.9 in), extendable with optional chains
Communication	Bluetooth 4.0 LE
Battery Type	Rechargeable Li-ion
Battery Operating Time	Up to 18 hours
Operating Temperature	0 to 45 °C (32 to 113 °F)
Storage Temperature	-20 to 60 °C (-4 to 140 °F)
Measuring Unit Weight	Approx. 0.5 kg (1.1 lbs)
Total System Weight (with case)	Approx. 2.5 kg (5.5 lbs)

Note: Specifications are subject to change without notice. Refer to the official SKF website or product documentation for the most current information.

8. WARRANTY AND SUPPORT

SKF products are manufactured to high standards and are backed by a limited warranty. For specific warranty

terms and conditions, please refer to the warranty card included with your product or visit the official SKF website.

8.1 Customer Support





For technical assistance, troubleshooting not covered in this manual, or service inquiries, please contact SKF customer support through their official website or the contact information provided in your product documentation.

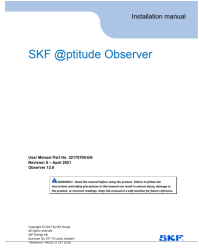

SKF Official Website: www.skf.com

When contacting support, please have your product model (TKSA 11) and serial number ready.

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Related Documents - TKSA 11

	<p>SKF TKSA 71/PRO Shaft Alignment Tool</p> <p>The SKF TKSA 71/PRO is a high-end shaft alignment tool designed for professional use in harsh industrial environments. It features ultra-compact measuring units, intuitive software, and a comprehensive set of accessories for various alignment applications.</p>
	<p>SKF TKSA 51 Shaft Alignment Tool - User Manual and Specifications</p> <p>Comprehensive user manual for the SKF TKSA 51 shaft alignment tool, detailing its features, technical specifications, setup, operation, and maintenance. Learn how to perform precise shaft alignments for industrial machinery.</p>
	<p>SKF TKBA 40 Belt Alignment Tool User Manual</p> <p>This user manual provides comprehensive instructions for operating the SKF TKBA 40 Belt Alignment Tool, detailing its technical specifications, application range, troubleshooting, and maintenance procedures.</p>
	<p>SKF Изделия для Технического Обслуживания и Смазочные Материалы</p> <p>Каталог SKF, посвященный изделиям и материалам для технического обслуживания подшипников. Охватывает монтаж, демонтаж, смазывание, выверку и мониторинг состояния для продления срока службы подшипников.</p>

 <p>Installation manual</p> <p>SKF @ptitude Observer</p> <p>SKF</p>	<p>SKF @ptitude Observer 13.0 Installation Manual</p> <p>Comprehensive installation guide for SKF @ptitude Observer 13.0 software, detailing system requirements, software and SQL Server Express installation, database setup, monitor service configuration, and network settings for condition monitoring.</p>
 <p>SKF Dynamic Motor Analyzer EXP4000</p> <p>SKF</p>	<p>SKF Dynamic Motor Analyzer EXP4000 User Manual</p> <p>User manual for the SKF Dynamic Motor Analyzer EXP4000, detailing its features, intended use, software license agreement, and support information.</p>