SKF Shaft Alignment Tool TKSA 51

Comprehensive and intuitive shaft alignment utilising tablets and smart phones



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The TKSA 51 shaft alignment tool provides high measurement flexibility and performance suitable for entry-level to expert alignment jobs. Designed to work with the SKF shaft alignment apps on a tablet or smart phone, this intuitive tool is easy to use and requires no special training.

The included accessories enable use of the TKSA 51 for a wide range of alignment applications with horizontal and vertical shafts, such as motors, drives, fans, pumps, gearboxes and more. The apps include tutorial videos to show operators how to perform accurate measurements.

- **Measurement flexibility** - The well-known, three-position measurement gains additional flexibility as measurements can start at any angle and require a total minimal rotation of only 40 degrees. This enables operators to perform alignments of applications with limited space.
- **Automatic reports** - Alignment reports are generated automatically and can be customised with notes, a machine picture and a signature via touchscreen. The reports can be easily exported as PDF files and shared with other mobile apps.
- **Comprehensive and compact** - A range of included components, such as magnetic mounting brackets and extension rods and chains, increase the TKSA 51's versatility, yet it remains compact, lightweight and easy to carry.
- **3-D live view** - This feature enables intuitive positioning of the heads for quick alignment measurements and displays the horizontal and vertical alignment correction live. The apps enable 3-D rotation of the virtual motor to correspond with the actual machine position view.
- **Disturbance compensation** - Measurement values are averaged over time to provide greater accuracy in presence of external disturbances.

Alignment applications

The TKSA 51 uses dedicated apps for alignments of horizontal and vertical shaft and the correction of soft foot. The apps are icon-driven and very easy to use. All apps are free of charge and features a fully functional demonstration mode that allows the alignment process to be experienced before purchasing the instrument.

Shaft alignment

Vertical shaft alignment

Soft foot

Technical data

Designation	TKSA 51
Sensors and communication	20 mm *(0.8 in.)* PSD with line laser Class 2 Inclinometer ±0.1°; Bluetooth 4.0 LE
System measuring distance	0,07 to 5 m *(0.23 to 16.4 ft)*
Measuring errors	<1% ±10 µm
Housing material	Anodized Aluminum front and PC/ABS plastic back cover
Operating time	Up to 8 hours, rechargeable Li-ion battery fast charging: 10 min. charging for 1h usage
Dimensions	52 × 64 × 50 mm *(2.1 × 2.5 × 2 in.)*
Weight	190 g *(0.4 lb)*
Operating device	Samsung Galaxy Tab Active 2 and iPad Mini recommended iPad, iPod Touch, iPhone SE, Galaxy S6 or above (all not included)
Software/App update	Apple AppStore or on Google Play Store
Operating system requirements	Apple iOS 9 or Android OS 4.4.2 (and above)
Alignment method	Alignment of horizontal and vertical shafts, 3 position measurement 9 -12 -3, automatic measurement, measurement (with min. 40° rotation), soft foot
Live correction values	Vertical and horizontal
Extra features	Machine library, QR code reading, target values, disturbance compensation, 3D machine free view, screen rotation on tablets, automatic .pdf report
Fixture	2 × V-brackets with chains, width 15 mm *(0.6 in.)*
Shaft diameters	20 to 150 mm *(0.8 to 5.9 in.)* 450 mm *(17.7 in.)* with extension chains (included)
Max. coupling height [1]	45 mm *(1.8 in.)* with standard rods plus 120 mm *(4.7 in.)* per set of extension rods
Power adapter	Charging via micro USB port (5V) Micro USB to USB split charging cable supplied Compatible with 5V USB chargers (not included)
Operating temperature	0 to 45 °C *(32 to 113 °F)*
IP rating	IP 54
Carrying case dimensions	355 × 250 × 110 mm *(14 × 9.8 × 4.3 in.)*
Total weight (incl. case)	2,9 kg *(6.4 lb)*
Calibration certificate	Supplied with 2 years validity
Case content	2 measuring units (M&S); 2 shaft brackets with chains 480 mm *(18.9 in.)*, threaded rods 80 mm *(3.2 in.)* and magnets; 4 threaded extension rods 120 mm *(4.7 in.)*; 2 extension chains 980 mm *(38.6 in.)*; micro USB to USB split charging cable; measuring tape; printed certificate of calibration and conformance; quick start guide (EN); SKF carrying case; 2 × A5 sheets with 6 × QR code stickers per sheet (total of 12 x stickers)

[1] Depending on the coupling, the brackets can be mounted on the coupling, reducing the coupling heigt limitation.

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