

# SKF Shaft Alignment Tool TKSA 71

Versatility and performance for professional alignment





## TKSA 71 delivers precision and durability

Designed for professional alignment in harsh industrial environments, the TKSA 71 complements SKF's offering with a high-end shaft alignment tool. The instrument is very versatile with ultra-compact measuring units for use in extremely narrow spaces. Its dedicated software applications enable different types of alignments, including horizontal and vertical shafts, spacer shafts and machine trains. Superior alignment performance and long-term industrial durability are achieved with an innovative instrument design that offers high measurement accuracy and excellent protection against dust and water in harsh environments.

### TKSA 71 advantages:

- **Easy-to-use** - Intuitive software applications, guided alignment processes and explanatory videos
- **Wide range of applications** - Comprehensive accessories and dedicated software applications
- **Superior alignment performance** - Up to 10 m measurement distance, disturbance compensation, measurement flexibility, only 40° total rotation, automatic measurement and customised alignments with target values
- **Protection against harsh environments** - Completely sealed measuring units (IP67) to withstand dust and water
- **Ultra-compact measuring units** - Use in extremely narrow spaces
- **Robust carrying case** - Excellent protection, convenient transport and wireless in-case charging



### Complete system for your alignment needs

The TKSA 71 base model includes standard accessories for most alignment tasks. It is supplied in a rugged case that meets most airline requirements for cabin luggage.

The TKSA 71/PRO model includes additional accessories such as sliding brackets, magnetic bases and offset brackets that are useful for more demanding alignment jobs. This model is supplied in a larger, rugged trolley case.

**Measuring device:** (1) Measuring units (M & S) with standard V-bracket, (2) Wireless charging pods with USB cable, (3) Tape measure

**Standard accessories:** (4) Extension chains, (5) Extension rods, (6) Mounting magnets

**Advanced accessories:** (7) Sliding brackets, (8) Offset brackets, (9) Additional extension rods, (10) Magnetic bases



# Alignment applications

The TKSA 71 functions quickly and intuitively using six software apps tailored for different alignment jobs. Designed for use without prior training, these simple-to-use apps are available free of charge for both Android and iOS platforms. Common features include comprehensive, automatic reports, export and sharing options, machine library with QR code identification, instructional videos within the app, built-in tolerance guidelines, 3-D live view, disturbance compensation and a fully functional demonstration mode.



## Shaft alignment

Easy and intuitive alignments of horizontal shafts with additional features including automatic measurement, minimal 40° total rotation, 9-12-3 guidance and alignment customisation with target values<sup>1)</sup>.



## Soft foot

Assists technician in verifying that machine is standing evenly on all four feet. The app supports the operator identifying and correcting a soft foot<sup>1)</sup>.



## Vertical shaft alignment

Easy and intuitive alignment of vertical shaft machines with shimming support for different bolt configurations<sup>1)</sup>.



## Spacer shaft alignment

Accommodates special requirements of spacer shafts and facilitates the alignment process<sup>2)</sup>.



## Machine train shaft alignment

Enables operator to align three connected machines, giving a complete overview of machine train alignment and allowing the operator to select stationary feet<sup>2)</sup>.



## Values

Allows the shaft alignment tool to be used as digital dial gauges; operators can record absolute, zeroed and halved readings to perform customised alignments with manual calculations<sup>2)</sup>.

<sup>1)</sup> Compatible with: TKSA 51, TKSA 71, TKSA 71/PRO

<sup>2)</sup> Compatible with: TKSA 71, TKSA 71/PRO

## TKSA 71

- Measuring units with wireless charging pods
- Carrying case meets most airlines' carry-on requirements
- Standard accessories

## TKSA 71/PRO

- Measuring units with wireless charging pods
- Trolley case with additional storage space
- Standard and advanced accessories



TKSA 71

TKSA 71/PRO

## Contents

### TKSA 71

2 × TKSA 71 measuring units (M & S)  
 2 × Standard V-brackets with chains 480 mm (18.9 in.), rods 80 mm (3.1 in.) and magnets  
 2 × Extensions chains 1m (3.3 ft.)  
 1 × USB to Micro USB split charging cable  
 2 × Wireless charging pads  
 1 × Measuring tape 5 m (16.4 ft.)  
 1 × Printed certificate of calibration and conformance  
 1 × Printed quick start guide (English)  
 4 × Extension rods 120 mm (4.7 in.)  
 1 × Rugged carrying case (IP67), 365 × 295 × 170 mm (14.4 × 11.6 × 6.7 in.)

### TKSA 71/PRO

2 × TKSA 71 measuring units (M & S)  
 2 × Standard V-brackets with chains 480 mm (18.9 in.), rods 80 mm (3.1 in.) and magnets  
 2 × Extensions chains 1m (3.3 ft.)  
 1 × USB to Micro USB split charging cable  
 2 × Wireless charging pads  
 1 × Measuring tape 5 m (16.4 ft.)  
 1 × Printed certificate of calibration and conformance  
 1 × Printed quick start guide (English)  
 8 × Extension rods 120 mm (4.7 in.)  
 2 × Magnetic bases (TKSA MAGBASE),  
 2 × Sliding brackets (TKSA 51-SLDBK)  
 2 × Offset brackets 50 mm (2 in.)  
 1 × Large, rugged trolley case (IP67), 610 × 430 × 265 mm (24 × 16.9 × 10.4 in.)

## Technical data

Designation	TKSA 71, TKSA 71/PRO		
Sensors and communication	20 mm (0.8 in) 2nd gen. PSD with line laser Class 2 inclinometer ±0.1°; Bluetooth 4.0 LE	Fixture	2 × V-brackets with chains, width 15 mm (0.6 in.)
System measuring distance	0,04 to 10 m (0.13 to 32.8 ft)	Shaft diameters	20 to 150 mm diameter (0.8 to 5.9 in.), 450 mm (17.7 in.) with extension chains (included)
Measuring errors	<1% ±10 µm	Max. coupling height <sup>1)</sup>	45 mm (1.8 in.) with standard rods plus 120 mm (4.7 in.) per set of extension rods
Housing material	Anodized aluminum front and PC/ABS plastic back cover	Power adapter	Wireless charging via supplied charging pods micro USB to USB split charging cable supplied
Operating time	Up to 8 hours, rechargeable Li-ion battery, wireless fast charging, 10 min. charging for 1h usage	Operating temperature	0 to 45 °C (32 to 113 °F)
Dimensions	52 × 64 × 33 mm (2.1 × 2.5 × 1.3 in.)	IP rating	IP67 for measuring units and carrying case
Weight	130 g (0.3 lbs)	Carrying case dimensions	TKSA 71 carrying case: 365 × 295 × 170 mm (14.4 × 11.6 × 6.7 in.) TKSA 71/PRO trolley case: 610 × 430 × 265 mm (24 × 16.9 × 10.4 in.)
Operating device	Samsung Galaxy Tab Active 2 and iPad Mini recommended iPad, iPod Touch iPhone SE, Galaxy S6 or above (all not included)	Total weight (incl. case)	TKSA 71: 3,9 kg (8.6 lb) TKSA 71/PRO: 12,5 kg (27.6 lb)
Software/App update	Apple AppStore or on Google Play store	Calibration certificate	Supplied with 2 years validity
Operating system requirements	Apple iOS 9 or Android OS 4.4.2 (and above)	Case content	2 measuring units (M&S); 2 shaft brackets with chains 480 mm (18.9 in.), threaded rods 80 mm (3.1 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); industrial rugged case (IP 67); 2 × A5 sheets with 6 × QR code stickers per sheet (total of 12 × stickers); Additionally with TKSA 71/PRO: 4 threaded extension rods 120 mm (4.7 in.); 2 offset brackets 50 mm (2 in.); 2 sliding brackets; 2 magnetic bases
Alignment method	Alignment of horizontal and vertical shafts, 3 position measurement 9 -12 -3, automatic measurement, measurement (with min. 40° rotation), soft foot, machine trains, values, spacer shafts		
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		

<sup>1)</sup> Depending on the coupling, the brackets can be mounted on the coupling, reducing the coupling height limitation.

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