

# SKF Shaft Alignment System

## TKSA 60

Wireless laser shaft alignment tool  
with built-in alignment expertise



### Introduction

The TKSA 60 is an extremely rugged wireless laser shaft alignment tool that can be used in harsh environments. The system provides instant expertise by providing a built-in step-by-step alignment process, from preparation, inspection and evaluation through correction, reporting and analysis. The system incorporates the latest alignment knowledge based on decades of SKF experience of rotating equipment.

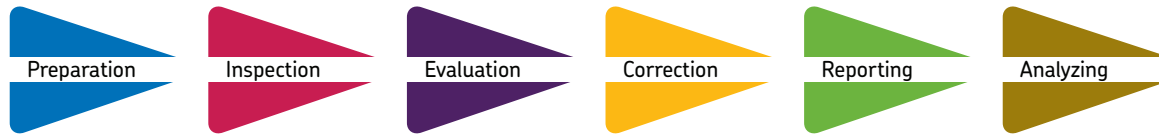
### Standard features

- Built-in wireless technology
- "Swap view" – enables graphics to be swapped from one side of the machine to the other to accommodate the user's position
- Built-in accelerometer in both measuring units
- Energy efficiency indicator
- Fast template
- Horizontal and vertical alignment
- Laser or manual soft foot check



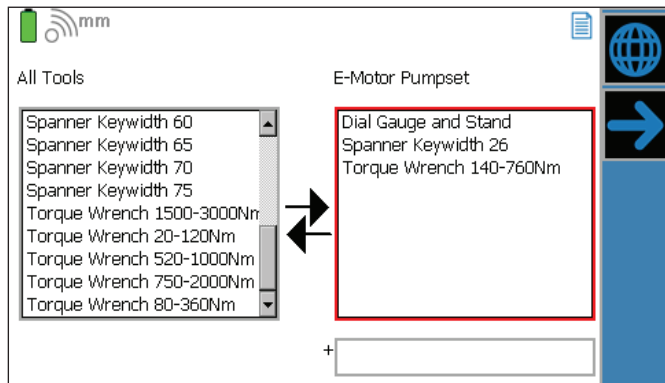
## Built-in pre-defined alignment process

The TKSA 60 integrates a pre-defined alignment process into a portable instrument. It provides users with step-by-step instructions on how to perform alignment in the most effective and efficient sequence.

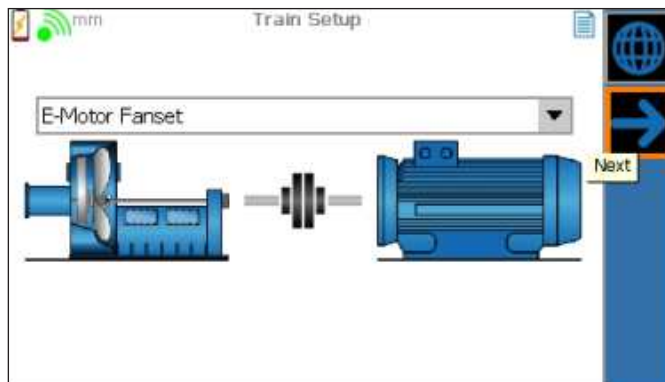


### Preparation

- The right tools and materials at the right place at the right time
  - The system reminds users of the correct tools and materials to use, before carrying out the alignment job.

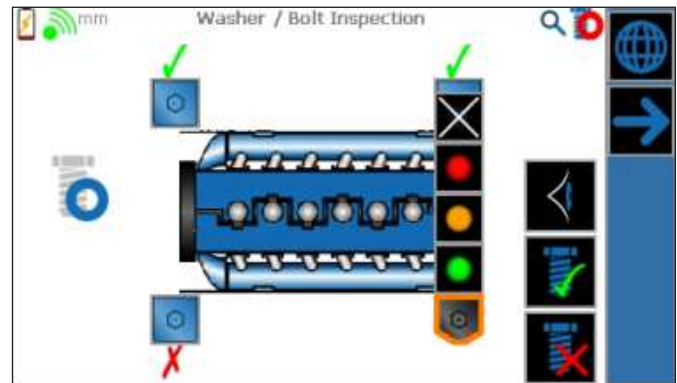


- Fast template
  - Create a job template that specifies the machine setup, inspection activities, applicable tolerances and required tools that can be re-used at any time.

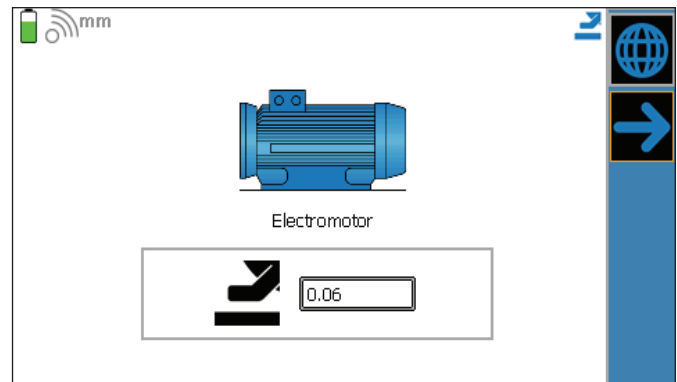


### Inspection

- Visual inspection
  - Inspection fields are provided for oil level, leakages, foundation bolt status and wear indications, etc.



- Soft foot check
  - The system gives users the choice to find, correct and record soft foot conditions by either laser or by feeler gauges.

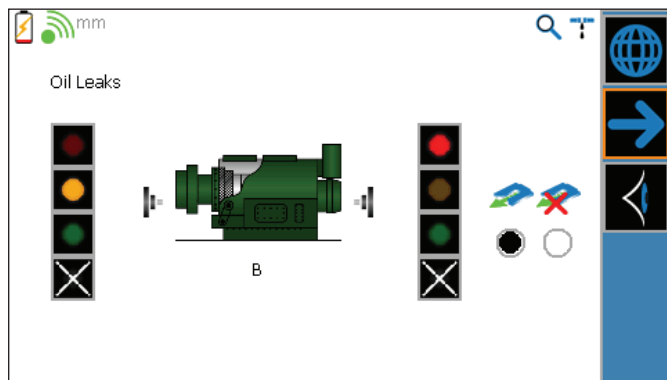


- Horizontal and vertical shaft alignment
  - Measurements are performed at any of three positions, with a shaft rotation of as little as 30 degrees.



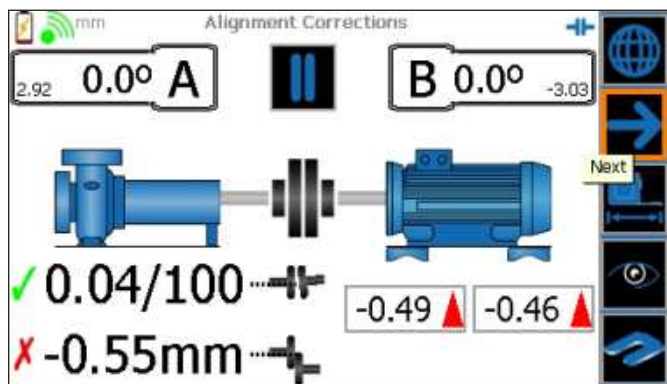
## Evaluation

- The system assists users to compare inspection results with the information saved in the fast template so as to identify and prioritize corrective actions.



## Correction

- Real-time correction
  - The system displays the live actual value and direction for accurate misalignment correction.



## Reporting

- Results in graphical format
  - The results are shown in graphical format and the file can be easily downloaded to a USB memory stick from the display unit.
- The results show the machine conditions “as-found” and “as-corrected”. Desired targets and tolerances are also displayed.
- Energy efficiency
  - The system reports estimated extra energy consumption due to misalignment.

## Analyzing

- Alignment reports are recorded in the system, which helps users periodically compare the alignment history and monitor the machine's health trend.

## Standard programs

The following standard programs are available for the TKSA 60:



- Horizontal alignment



- Vertical alignment



- Soft foot by laser



- Soft foot manually



- Chocking arrangement



- Bolt torque input



- Fast template



- Database

## Technical data

### Complete system

- Measure distance\*: Up to 10 m (33.0 ft.)
- Relative humidity: 10 to 90%
- Temperature range: -10 to +50 °C (+14 to +122 °F)
- Weight (with case): 7.3 kg (16.1 lb.)



\* Range can be compromised when operating in bright sunlight.

### Display unit

- Display: 4.3 inch backlit color LCD, daylight viewable
- Power: Rechargeable Li-ion battery and external power supply
- Operating time on battery: Typical ten hours continuous operation
- Storage memory: 64 MB
- Housing: PC / ABS plastic with integrated lockable stand
- Dimensions (height × width × depth): 234 × 132 × 48 mm (9.2 × 5.2 × 1.9 in.)
- Weight: 680 g (23.9 oz.)
- Environment protection: IP 65
- Connectivity: Low-power, industrial wireless network, 802.15.4 compliant
  - USB: Host v1.1, device v1.1
- Drop test: 1.2 m (3.9 ft.) to MIL-STD-810F

### Measuring units (A, B)

- Type of laser: Red diode laser
- Laser wavelength: 635 nm
- Laser safety class: Class II
- Laser output power: <1 mW
- Displacement measurement accuracy: ±5 µm, ±0.5%
- Detector: Linear CCD with length 36 mm (1.4 in.)
- Relative accelerometer accuracy\*: ±0.1° (at 24 °C / 75 °F)
- Accelerometer resolution: 0.1°



\* Relative accelerometer accuracy is the difference between the angles reported by the two measurement units when held at the same absolute angle.

- Thermal sensors: ±2 °C (±3.5 °F)
- Housing material: Chassis, aluminium sides, glass filled PBT
- Dimensions (height × width × depth): 96 × 93 × 36 mm (3.8 × 3.7 × 1.4 in.)
- Weight: 326 g (11.5 oz.)
- Environment protection: IP 65
- Ambient light protection: Optical filtering and ambient light signal rejection
- Power supply: 2x AA alkaline batteries or rechargeable battery

### Rod / fixing bar

- Length: 4 off 90 mm, 4 off 150 mm, can be screwed together to increase length

### Standard shaft diameter

- Up to 300 mm (11.8 in.)

## Ordering information

The TKSA 60 Shaft Alignment System consists of:

- Display unit TKSA 60-DISPLAYUNIT, one (1) each
- Measuring unit TKSA 60/80 V2-HA and TKSA 60/80 V2-HB, one (1) each
- Mechanical shaft fixtures, two (2) each
- Adjustable chains with tightening pin, two (2) each
- Rods, four (4) each
  - 90 mm
  - 150 mm
- Measuring tape, one (1) each
- Screw driver, one (1) each
- Tommy bar, two (2) each
- USB cable, one (1) each
- Charger for display unit, one (1) each
- Quick start guide, one (1) each
- CD with instructions for use, one (1) each
- Extension chain, two (2) each

For a tailored solution for available applications, please contact your local SKF sales office.

Please contact:

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