



## Shaft alignment tool TMEA 2

### Application

Perfect alignment of machinery shafts is crucial to prevent premature bearing failure, shaft fatigue, sealing problems and vibrations. It further reduces the risk of over-heating and excessive energy consumption. The SKF shaft alignment tool TMEA 2 offers an easy and accurate way of adjusting two units of rotating machinery so that the shafts of the units are in a straight line.

### Description

The TMEA 2 consists of two measuring units and a display unit. The measuring units are fitted with magnetic brackets for attachment to the shafts, but can also be attached using chains. Both measuring units emit a laser line, which is projected on the position sensor detector and a line scale on the other unit. The measuring units are also equipped with spirit levels, which allows easy positioning in the 9, 12 and 3 o'clock positions. The display unit is operated using just 5 buttons, including the on/off button and provides clear "real-time" of both coupling and feet values during the alignment process. After measuring shaft misalignment, alignment is easily performed by adjusting the moveable machine(s).



### Display unit

- A** Connector for measuring unit on Stationary machine
- B** Connector for measuring unit on Movable machine
- C** LCD Display
- D** ON/OFF button
- E** Increase (+) button
- F** Next button
- G** Previous button
- H** Decrease (-) button
- J** Machine dimensions (A,B and C) / Measured values (S and M)
- K** Rear feet values
- L** Front feet values
- M** Indication of parallel coupling value direction
- N** Indication of angular coupling value direction
- P** Position (9/12/3 o'clock) of measuring units
- R** Low battery
- S** Imperial or metric units



### Magnetic/ mechanical fixture with measuring unit

- A** Position sensor detector

**B** Spirit levels

**C** Wheel for vertical fine adjustment of laser line

**D** Warning LED

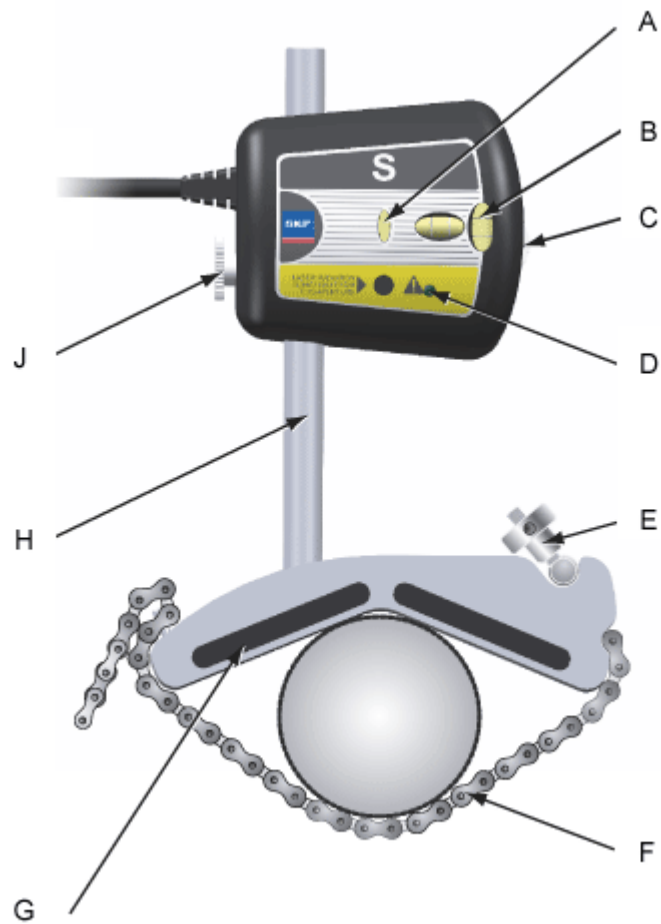
**E** Chain fixation screw

**F** Locking chain

**G** Magnetic / mechanical fixture

**H** Connection rod

**J** Release / tightening knob



## Tool components

**The following components are included with the TMEA 2 tools:**

Display unit

2 measuring units with spirit levels

2 magnetic / mechanical shaft fixtures

2 locking chains

5 sets of shims

Measuring tape

Instructions for use

Set of alignment reports

Carrying case



## Technical data

### Measuring units

**Housing material**

**Type of laser**

**Laser wave length**

**Laser class**

**Maximum laser power**

**Maximum distance between measuring units brackets**

**Minimum distance between measuring units brackets**

**Type of detectors**

**Cable length**

**Dimensions**

**Weight**

ABS plastic

Diode laser

670 - 675 nm

2

1 mW

850 mm (2.8 ft)

70 mm (2.7 in)

Single axis PSD, 8.5 x 0.9 mm (0.3 x .04 in)

1,6 m (5.2 ft)

87 x 79 x 39 mm (3.4 x 3.1 x 1.5 in)

210 gram (7.3 oz)

**Display unit:**

<b>Housing material</b>	ABS plastic
<b>Display type</b>	LCD 35 x 48 mm (1.4 x 1.9 in)
<b>Battery type</b>	2 x 1,5V LR14 Alkaline
<b>Operating time</b>	20 hours continuous operation
<b>Displayed resolution</b>	0,01 mm (0.1 mil for 'inch' setting)
<b>Dimensions</b>	230 x 81 x 62 mm (9.1 x 3.2 x 2.4 in)
<b>Weight</b>	300 g (10.5 oz)
<b>Shims</b>	
<b>Size</b>	50 x 50 mm (2.0 x 2.0 in)
<b>Thickness</b>	0.05 - 0.10 - 0.25 - 0.50 - 1.00 mm
<b>Slot width</b>	13 mm
<b>Complete system:</b>	
<b>Shaft diameter range</b>	40 - 500 mm (1.6 - 20 in) Magnetic: 40-500 mm (1.6 - 20 in) Chain: 40-150 mm (1.6 - 5.9 in) Optional chain: 150-500 mm (5.9 - 20 in)
<b>Accuracy of system</b>	< 2% / ± 0,01 mm
<b>Temperature range</b>	0 - 40 °C (32 - 104 °F)
<b>Operating humidity</b>	< 90 %
<b>Carrying case dimensions</b>	390 x 340 x 95 mm (15.4 x 13.4 x 3.7 in)
<b>Total weight (incl. case)</b>	3.7 kg (8.1 lb)
<b>Calibration certificate</b>	Valid for two years
<b>Warranty</b>	12 months

**Replacement parts and accessories**

<b>Designation</b>	<b>Description</b>
<b>TMEA 2</b>	Shaft Alignment Tool
<b>TMEA 2-DU</b>	Display unit (TMEA 2 system)
<b>TMEA 2-MU</b>	Set of measuring units Movable and Stationary (TMEA 2 system)
<b>TMEA C1</b>	Locking chains, set (500 mm) + tightening tool
<b>TMEA C2</b>	Extension chains set (1020 mm)
<b>TMEA F2</b>	1 chain fixture, complete
<b>TMEA MF</b>	1 magnetic fixture, complete with chain
<b>TMEA F7</b>	Set with 3 pairs of connection rods (short: 150 mm, medium: 220 mm, long: 320 mm)
<b>TMAS 340</b>	Kit of 340 pre-cut machinery shims
<b>TMAS 360</b>	Kit of 360 pre-cut machinery shims
<b>TMAS 510</b>	Kit of 510 pre-cut machinery shims
<b>TMAS 720</b>	Kit of 720 pre-cut machinery shims
<b>TMAS 360A</b>	Kit of pre-cut machinery shims with 2 sets of each TMAS 2, TMAS 3 and TMAS 4 series

