

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

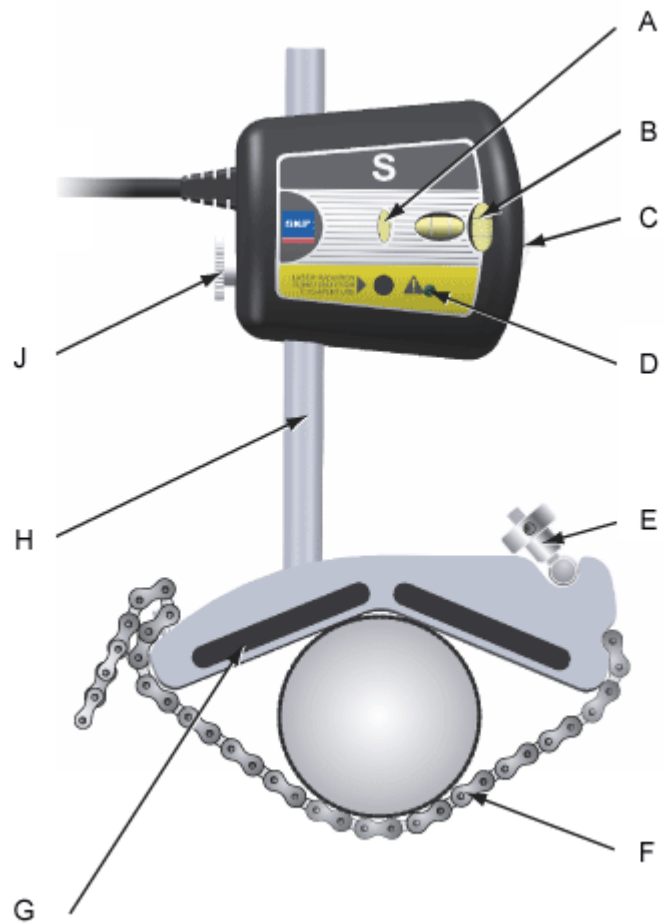
E Chain fixation screw

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 .004 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:

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

Replacement parts and accessories

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

