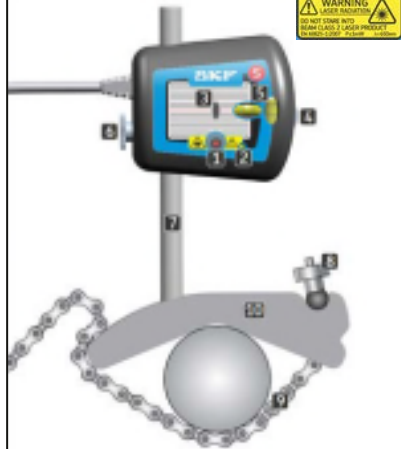


TKSA 20 Display Unit (Annex 1)



- 1 Connector for MU on Stationary machine
- 2 Connector for MU on Movable machine

TKSA 20 Measuring Unit (Annex 2) Movable / Stationary



- 1 Laser emission
- 2 Laser warning signal
- 3 Laser detector
- 4 Vertical fine adjustment
- 5 Spirit levels
- 6 Release / Tightening knob
- 7 Connection rod
- 8 Chain fixation screw
- 9 Locking chain
- 10 Mechanical fixture

Guideline for the maximum acceptable misalignment (Annex 3)

rpm	$\text{mm}/100 \text{ mm}$	mm	0.001"/1"	0.001"
0 - 1000	0.10	0.13	1.0	5.1
1000 - 2000	0.08	0.10	0.8	3.9
2000 - 3000	0.07	0.07	0.7	2.8
3000 - 4000	0.06	0.05	0.6	2.0
4000 - 6000	0.05	0.03	0.5	1.2

Measurement unit setting

The tool is delivered with a pre-selection for measurements in millimeters (metric).

To change into inches (imperial), press the “-” key while switching on the unit.

To revert back to millimeters, press the “+” key while switching on the unit.

Safety recommendations

- Always turn off the power of the drive machine before you start working.
- Do not expose the equipment to rough handling or heavy impacts.
- Always read and follow the operating instructions.
- The tool uses two laser diodes with an output power below 1 mW (class 2). Still, never stare directly into the laser transmitter.
- Calibrate the equipment regularly.
- Never aim the laser line into someone’s eyes.
- Opening the housing of the measuring unit may result in hazardous light exposure and voids warranty.
- The equipment should not be used in areas where there is a risk for explosion.
- Do not expose the equipment to high humidity or direct contact with water.
- All repair work should be taken care of by an SKF repair shop.



EC Declaration of conformity

We, SKF Maintenance Products, Kelvinbaan 16, 3439 MT Nieuwegein, The Netherlands, declare that the

SKF Shaft Alignment Tool TKSA 20

has been designed and manufactured in accordance with EMC DIRECTIVE 2004/108/EC as outlined in the harmonized norm for Emission: EN 61000-6-3:2007 Immunity: EN 61000-6-2:2005, EN 61000-4-2, -3

Directive RoHS, 2002/95/EC

The laser is classified in accordance with the EN 60825-1:2007. The laser complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007

The Netherlands, March 2010

Sebastien David
Manager Product Development and Quality

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SKF Maintenance Products

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Quick Start Guide

SKF Shaft Alignment Tool TKSA 20

1/ Attach the Measuring Units (MU) on the shafts (see fig. 1 and Annex 2)

The MU marked "S" on the Stationary machine.
The MU marked "M" on the Movable machine, usually the motor.
Connect the MU to the correct sockets on the Display Unit (see Annex 1).

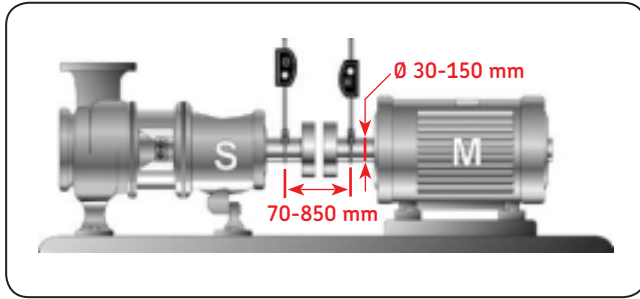
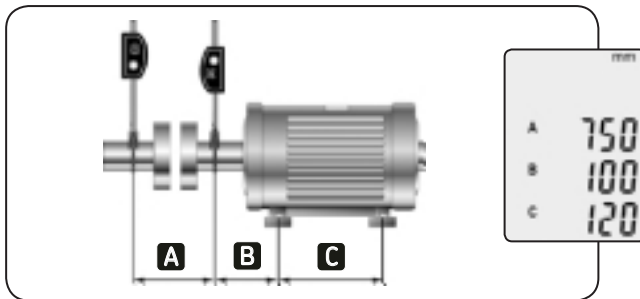


Fig. 1

2/ Switch the Display Unit (DU) ON

Aim the laser lines so that they hit the centre of the target of the opposite MU.
Use the vertical fine adjustment wheel if required. (see Annex 2).

3/ Input dimensions



- Measure the A, B and C distances of the application.
- Adjust each value displayed on the screen by using the + and - keys.
- Confirm the setting of each value by pressing

4/ Measure the alignment status

Rotate the shafts, to position the MU's, as indicated by the blinking circle symbol on the display during each step (see fig 2).

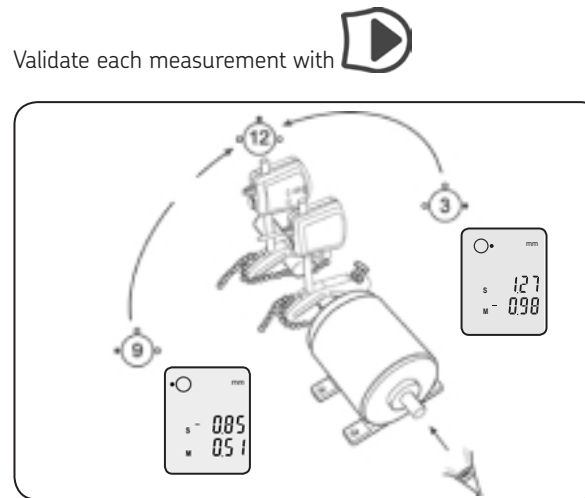


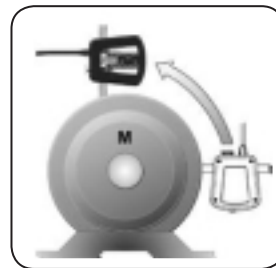
Fig. 2 Measuring positions

5/ Live results

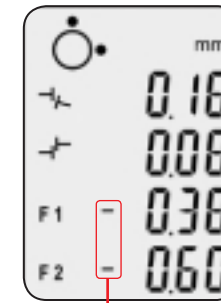
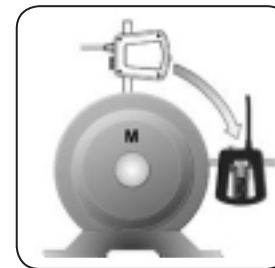
Live alignment values are displayed on the DU.
Live vertical values are displayed when the MU's are in the 12 o'clock position.
Live horizontal values are displayed when the MU's are in the 3 o'clock position.

Position of the Measuring Units

Vertical result / adjustment
12 o'clock



Horizontal result/ adjustment
3 o'clock



Coupling values: check acceptable misalignment table (see Annex 3)

Angular : measured in mm/100 mm or 0.001"/1".

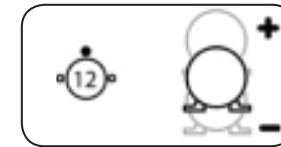
Parallel or offset.

Feet values: relative position of the feet of the movable machine.

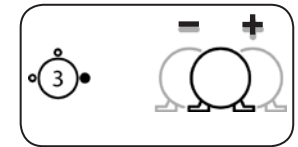
F1: front feet / F2: rear feet

Relative position of the feet

Alignment correction



Add/remove shims



Move sideways

While aligning, observe the live coupling values displayed on the screen.

Coupling values must be within the maximum acceptable misalignment value (see Annex 3), or within the tolerance given by the original equipment manufacturer.

6/ Checking the soft foot

It is recommended to check the movable machine for soft foot before starting the alignment.

After operation 1 to 3 are performed, position the MU's to the 12 o'clock position.

Press + and - simultaneously to enter the soft foot mode.

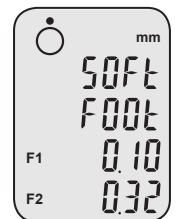
Press "next" to zero the feet values displayed.

To check a foot, loosen the foot bolt. Monitor the F1 value in case of a front foot, the F2 value in case of a rear foot. Register this value.

If the value is less than 0.05 mm (2 mils), the support is good. Re-tighten the bolt and check another foot.

If the value is more than 0.05 mm (2 mils) this foot can be the soft foot. Tighten back the bolt and check the diagonally opposite foot. The soft foot is the one with the largest deviation.

When all feet are checked, correct the soft foot, if any.



Soft foot display