



# SKF Shaft Alignment Tools

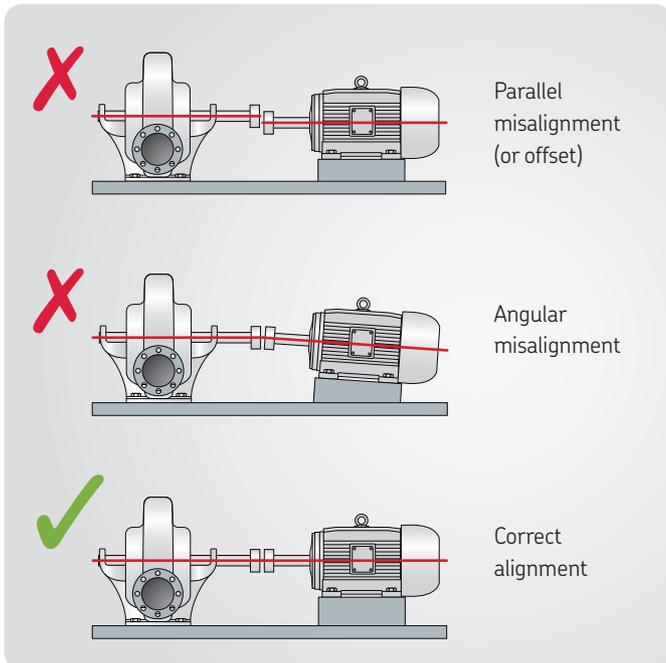




Accurate shaft alignment really matters

## Reduce machinery breakdowns and increase your uptime

It's a fact. Shaft misalignment is a major contributor to rotating machinery breakdowns. Accurately aligning shafts can prevent a large number of machinery breakdowns and reduce unplanned downtime that results in a loss of production. In today's challenging environment of reducing costs and optimising assets, the necessity of accurate shaft alignment is now greater than ever.



### What is shaft misalignment?

Machines need to be aligned in both the horizontal and vertical plane. The misalignment can be caused by both parallel or angular misalignment. The possible consequences of shaft misalignment are serious to any company's bottom line and include:

- Increased friction and thereby energy consumption
- Premature bearing and seal failure
- Premature shaft and coupling failure
- Excessive seal lubricant leakage
- Failure of coupling and foundation bolts
- Increased vibration and noise



## What methods can be used to align shafts?

In general, it's clear that laser alignment systems are quicker and easier to use than dial indicators, have better accuracy and don't require special skills to get accurate results virtually every time.

### Which type of laser alignment system should be considered?

Before purchasing a system, identify the applications where it is to be used and make a list of requirements. Buying an expensive system that can accommodate virtually every need can be a costly mistake, as the technicians need to be skilled in using it.

The majority of alignment tasks consist of such things as a horizontally placed electric motor with a pump or fan with a single coupling. For such

tasks, the technician needs a system that is quick and easy to use and doesn't need a long set up time.

### What can SKF offer?

SKF has developed, after extensive consultation with users, a range of affordable, easy to use shaft alignment tools that are suitable for a majority of alignment tasks.

	Straight edge	Dial indicators	Laser shaft alignment
Accuracy	--	++	++
Speed	++	--	+
Ease of use	++	--	+

New technology makes shaft alignment easier and more affordable

## SKF Shaft Alignment Tool TKSA 11



Mobile devices allow high resolution graphics, intuitive usage, automatic software updates and display unit choice.

The SKF TKSA 11 is an innovative shaft alignment tool that uses smartphones and tablets and intuitively guides the user through the shaft alignment process. With a focus on the core alignment tasks, the TKSA 11 is designed to be a very easy-to-use instrument that is especially suitable for alignment learners and compact applications. The SKF TKSA 11 is the first instrument on the market that uses inductive proximity sensors, enabling accurate and reliable shaft alignment to be affordable for every budget.

- Live view of the instrument and motor position makes the measurement and horizontal alignment intuitive and easy.
- The TKSA 11 app offers a fully functional demonstration mode allowing the complete alignment process to be experienced without the need to purchase the TKSA 11.
- The TKSA 11 is designed to give a fast return on its investment and is also affordable for almost every budget.
- By using inductive proximity sensors, the measurement is no longer affected by bright sunlight, the influence of backlash is reduced and the instrument becomes more robust. All enabling the TKSA 11 to deliver accurate and reliable shaft alignments.
- Automatic alignment reports give a complete overview of the alignment process and results. Reports can easily be shared via email or cloud services.



The intuitive and affordable laser shaft alignment system

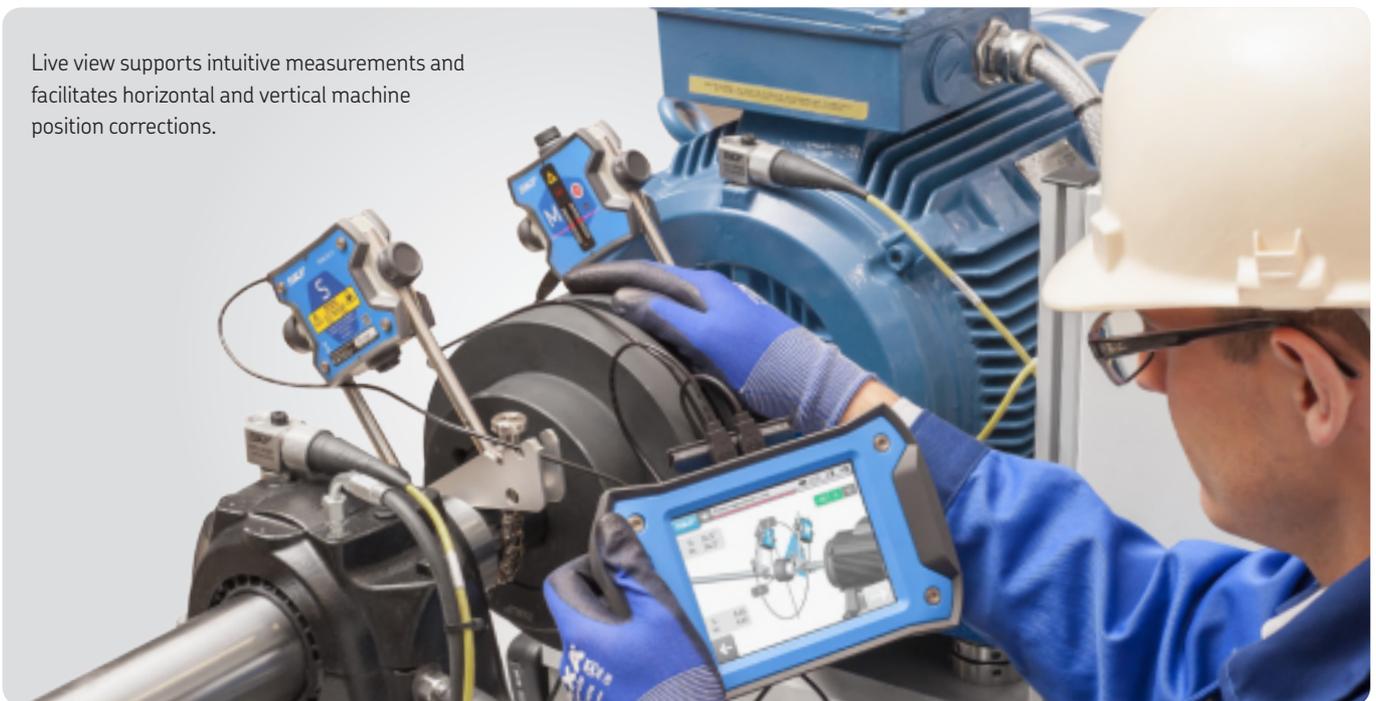
## SKF Shaft Alignment Tool TKSA 31

The TKSA 31 is SKF's most affordable solution for easy laser shaft alignment. The ergonomic display unit with touch screen makes the instrument very easy to use and the built-in machine library helps storing alignment reports for multiple machines. Large sized laser detectors in the measuring heads reduce the need for pre-alignments and the embedded soft foot tool helps establish the foundation for a successful alignment. Additional functions such as live view and automatic measurement support fast and effective alignment tasks and make the TKSA 31 an innovative laser shaft alignment tool that is affordable for almost every budget.

- Easy measurements can be performed by using the well-known three position measurement (9-12-3 o'clock) with additional positioning flexibility of 40° around each measurement position.
- High affordability is achieved by focussing on the standard shaft alignment process and essential functions to allow quick and effective shaft alignments.
- "Automatic measurement" enables hands-free measurements by detecting the position of the heads and only taking a measurement when the heads are in the right position.
- Automatic reports are generated after each alignment and can be customised with notes about the application. All reports can be exported as pdf files.
- The machine library gives an overview of all machines and alignment reports. It simplifies the machine identification and improves the alignment workflow.



Live view supports intuitive measurements and facilitates horizontal and vertical machine position corrections.



The advanced laser shaft alignment system with enhanced measuring and reporting capabilities

## SKF Shaft Alignment Tool TKSA 41



Free measurement allows alignment measurements to start at any angle and finish with an angular sweep of just 90°.



Machine library gives an overview of all machines and alignment reports.

The TKSA 41 is an advanced laser alignment solution for achieving accurate shaft alignments. With two wireless measurement units, large sized detectors and powerful lasers, the instrument performs precise measurements in even the most challenging conditions. The ergonomic display unit with intuitive touch screen navigation makes your alignments fast and easy, whilst innovative features, like the “free measurement”, increase the alignment performance. With the focus on improving alignment practices, the SKF Shaft Alignment Tool, TKSA 41, is one of the industry’s best value alignment solutions.

- Wireless communication improves instrument handling and allows alignments of difficult to reach applications from a safe position.
- Automatic measurement enables hands-free measurements by detecting the head position and taking a measurement when the heads are rotated into the right position.
- Automatic reports are generated after each alignment. The reports can be customised with notes and pictures from the built-in camera for the most comprehensive overview. All reports can be exported as pdf files.
- Live view supports intuitive measurements and facilitates horizontal and vertical alignments.
- The simplicity of the TKSA 41 provides greater confidence for the performance of alignment tasks on all types of horizontal rotating machines.
- QR codes can be used to further simplify machine identification and improve the alignment workflow.

Comprehensive and intuitive shaft alignment utilising tablets and smart phones

## SKF Shaft Alignment Tool TKSA 51

The TKSA 51 shaft alignment tool provides high measurement flexibility and performance suitable for entry-level to expert alignment jobs. Designed to work with the shaft alignment for TKSA 51 app on a tablet or smart phone, this intuitive tool is easy to use and requires no special training. The included accessories enable use of the TKSA 51 for a wide range of alignment applications, such as motors, drives, fans, pumps, gearboxes and more. The tool's mobile app includes tutorial videos to show operators how to perform accurate measurements.

- **Measurement flexibility** - The well-known, three-position measurement gains additional flexibility as measurements can start at any angle and require a total minimal rotation of only 40 degrees. This enables operators to perform alignments of applications with limited space.
- **Automatic reports** - Alignment reports are generated automatically and can be customised with notes, a machine picture and a signature via touchscreen. These reports can be exported as PDF files and shared with other mobile apps.
- **Comprehensive and compact** - A range of included components, such as magnetic mounting brackets and extension rods and chains, increase the TKSA 51's versatility, yet it remains compact, lightweight and easy to carry.
- **3-D live view** - This feature enables intuitive positioning of heads for quick alignment measurements and displays live when horizontal/vertical alignment correction is achieved. The app enables 3-D rotation of the virtual motor to correspond with the actual machine position.
- **Disturbance compensation** - Measurement values are averaged over time to provide accuracy in presence of vibration or other external disturbances.
- **Fully functional demo mode** - The app can be downloaded easily, and its demonstration mode allows the shaft alignment process to be experienced before purchasing the TKSA 51.



Of the TKSA family of products, the TKSA 51 shaft alignment tool is suitable for the broadest range of applications. Its compact, lightweight design, high measurement flexibility and included accessories enable use of the instrument on virtually any machine, even in difficult-to-reach locations. Protective cases can be used on tablets and smart phones and do not affect the functionality of the TKSA 51.



## TKSA 60

The wireless laser shaft alignment tool with built-in alignment expert.

The TKSA 60 is an extremely rugged wireless laser shaft alignment tool that can be used in harsh environments. The system provides instant expertise with 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 and decades of SKF experience of rotating equipment.

## TKSA 80

The advanced laser shaft alignment tool to increase your alignment knowledge.

For effective machine alignment, the measurement is only 5% of the process. Users often find themselves encountering difficulties by skipping some important alignment steps. The TKSA 80 system has a complete built-in alignment process to increase users' knowledge of alignment. The programme takes users from preparation and evaluation all the way through to correction and finally a report of the result. With a 7 inch screen, the TKSA 80 can accommodate large machine train alignment jobs. It offers a unique database to store the machine set-up data for future use, visual inspections on oil leakage, oil level, foundation bolt status and wear indications.



Shaft alignment is recommended for almost every industry, as it enables machine uptime to be significantly improved and maintenance costs to be reduced.

	TKSA 11	TKSA 31	TKSA 41	TKSA 51	TKSA 60	TKSA 80
<b>User interface</b> Input and interaction with the display device.	iOS & Android	touch screen	touch screen	iOS & Android	keypad	keypad & touchscreen
<b>Measurement type</b> The "9-12-3" measurement demands pre-defined measurement positions, whereas the "free" measurement allows free user selectable measurement positions.	9-12-3	9-12-3	free	free	free	free
<b>Automatic measurement</b> Alignment measurements can be performed hands-free without display unit interaction.		✓	✓	✓		
<b>Wireless measuring heads</b>	✓		✓	✓	✓	✓
<b>Measurement distance</b> Maximum possible distance between the brackets of the measuring heads.	18,5 cm	2 m*	4 m	5 m	10 m	10 m
<b>Minimal shaft rotation</b> Describes the minimal required total shaft rotation angle to perform alignment measurements.	180°	140°	90°	40°	60°	60°
<b>Live positioning</b> Electronic inclinometers show the angular position of the measuring heads, enabling easy and fast positioning.	✓	✓	✓	✓	✓	✓
<b>Live alignment</b> Live feet values are shown to facilitate the horizontal motor movement and vertical chock adjustment.	horizontal only	✓	✓	✓	✓	✓
<b>Soft foot</b> The soft foot tool helps to find and correct a soft foot, so that the machine can stand evenly on all feet.		✓	✓	✓**	✓	✓
<b>Automatic report</b> Reports are automatically generated after each alignment and can be exported as PDF files.	✓	✓	✓	✓	✓	✓
<b>Camera</b> Machine picture(s) can be taken and added to alignment reports.	✓		✓	✓		
<b>Machine library</b> Overview of all registered machines and previous alignment reports.		✓	✓		✓	✓
<b>QR code recognition</b> QR labels can be used to simplify the machine identification and increase the usage convenience.			✓			
<b>Swap view</b> Enables graphics to be rotated or swapped (from one side of the machine to the other) to accommodate the user position.	fixed angle	fixed angle	fixed angle	free 3D rotation	2D swap	2D swap
<b>Target values</b> Using target values for alignment, it is possible to compensate for thermal expansion or similar influences.				✓	✓	✓
<b>Disturbance compensation</b> Measurement values are averaged over time, allowing accurate measurements in the presence of vibration or similar external disturbances.				✓		
<b>Vertical machine alignment</b> Alignment of machines with vertical shafts.					✓	✓
<b>Machine train alignment</b> Enables the alignment of up to 5 machines in a line.						✓
<b>Run-out check</b> The system reminds users to perform a simple measurement to look for bent shafts.						✓

\* With USB cables supplied \*\* With separate app: "Soft Foot for TKSA 51"

Technical data	TKSA 11	TKSA 31	TKSA 41
Measuring Unit(s)			
Sensors & communication	2x Inductive proximity sensors Inclinometer ±0.5°, Bluetooth 4.0 LE	29 mm (1.1 in.) CCD with red line laser Class 2 Inclinometer ±0.5°, Wired, USB cables	29 mm (1.1 in.) CCD with line laser Class 2 Inclinometer ±0.5°; Bluetooth 4.0 LE and wired, USB cables
System measuring distance	0 to 185 mm (0 to 7.3 ft)	0,07 to 2 m (0.23 to 6.6 ft) Up to 4 m (13.1 ft) possible with longer cables	0,07 to 4 m (0.23 to 13.1 ft)
Measuring errors	<2%	<0,5% ±5 µm	< 0,5% ±5 µm
Housing material	PC/ABS plastic	20% Glass filled Polycarbonate	20% Glass filled Polycarbonate
Operating time	Up to 18 hours continuous operation, 1 900 mAh rechargeable LiPo battery	N/A	Up to 16 hours of continuous use, 2 000 mAh rechargeable LiPo battery
Dimensions	105 × 55 × 55 mm (4.1 × 2.2 × 2.2 in.)	120 × 90 × 36 mm (4.7 × 3.5 × 1.4 in.)	120 × 90 × 36 mm (4.7 × 3.5 × 1.4 in.)
Weight	155 g (0.34 lb)	180 g (0.4 lb)	220 g (0.5 lb)
Operating device			
Operating device	iPod touch 5th generation, iPhone 4S, iPhone 5, iPad mini, iPad 3rd generation or above. Galaxy S4, Galaxy Tab Active (all not included)	5.6" colour resistive touchscreen LCD display. High Impact PC/ABS with overmould	5.6" colour resistive touchscreen LCD display. High Impact PC/ABS with overmould
Software/App update	Apple AppStore or on Google Play Store	via USB stick	via USB stick
Operating system requirements	Apple iOS 8 or Android OS 4.4.2 (and above)	N/A	N/A
DU Operating time	N/A	7 hours of continuous use (100% backlight) 5 000 mAh rechargeable LiPo battery	8 hours of continuous use (100% backlight) 5 000 mAh rechargeable LiPo battery
Dimensions	N/A	205 × 140 × 60 mm (8.1 × 5.5 × 2.4 in.)	205 × 140 × 60 mm (8.1 × 5.5 × 2.4 in.)
Weight	N/A	420 g (0.9 lb)	640 g (1.4 lb)
Complete system			
Alignment method	Alignment of horizontal shafts 3 position measurement 9–12–3	Alignment of horizontal shafts 3 position measurement 9–12–3 (with min. 140° rotation), automatic measurement	Alignment of horizontal shafts 3 position measurement 9–12–3, automatic measurement, free measurement (with min. 90° rotation)
Live correction values	Only for horizontal	Vertical and horizontal	Vertical and horizontal
Soft foot correction	No	Laser soft foot	Laser soft foot
Extra features	No	Screen orientation flip	QR code reading, Screen orientation flip
Fixture	2x V-brackets with chains, width 15 mm (0.6 in)	2x V-brackets with chains, width 21 mm (0.8 in.)	2x V-brackets with chains, width 21 mm (0.8 in.)
Shaft diameters	20 to 160 mm (0.8 to 6.3 in.)	20 to 150 mm (0.8 to 5.9 in.) 300 mm (11.8 in.) with optional extension chains (not included)	20 to 150 mm (0.8 to 5.9 in.) 300 mm (11.8 in.) with optional extension chains (not included)
Max. coupling height*	55 mm (2.2 in.)	105 mm (4.2 in.), 195 mm (7.7 in.) with optional extension rods (not included)	195 mm (7.7 in.)
Power adapter	Charging via micro USB port (5V) Micro USB to USB charging cable supplied Compatible with 5V USB chargers (not included)	Input: 100V–240V 50/60Hz AC power supplier Output: DC 12V 3A with EU, US, UK, AUS adapters	Input: 100V–240V 50/60Hz AC power supplier Output: DC 12V 3A with EU, US, UK, AUS adapters
Operating temperature	0 to 45 °C (32 to 113 °F)	0 to 45 °C (32 to 113 °F)	0 to 45 °C (32 to 113 °F)
IP rating	IP54	IP54	IP54
Carrying case dimensions	355 × 250 × 110 mm (14 × 9.8 × 4.3 in.)	530 × 110 × 360 mm (20.9 × 4.3 × 14.2 in.)	530 × 110 × 360 mm (20.9 × 4.3 × 14.2 in.)
Total weight (incl. case)	2,1 kg (4.6 lb)	4,75 kg (10.5 lb)	4.75 kg (10.5 lb)
Calibration certificate	Supplied with 2 years validity	Supplied with 2 years validity	Supplied with 2 years validity
Case content	Measuring unit; 3 reference bars; 2 shaft brackets with chains 480 mm (18.9 in.) and rods 80 mm (3.1 in.); micro USB to USB charging cable; measuring tape 2 m (6.6 ft.); printed certificate of calibration and conformance; printed quick start guide (EN); SKF carrying case	2 measuring units (M&S); display unit; 2 shaft brackets with chains 400 mm (15.8 in.) and threaded rods 150 mm (5.9 in.); chain tightening rod; power supply with country adapters; 2 micro USB to USB cables; measuring tape; printed certificate of calibration and conformance; printed quick start guide (EN); SKF carrying case	2 measuring units (M&S); display unit; 2 shaft brackets with chains 400 mm (15.8 in.) and threaded rods 150 mm (5.9 in.); chain tightening rod; 4 threaded extension rods 90 mm (3.5 in.); power supply with country adapters; 2 micro USB to USB cables; measuring tape; printed certificate of calibration and conformance; printed quick start guide (EN); SKF carrying case

\* Depending on the coupling, the brackets can be mounted on the coupling, reducing the coupling height limitation.

TKSA 51	TKSA 60	TKSA 80
20 mm (0.8 in.) PSD with line laser Class 2 Inclinometer ±0.1°; Bluetooth 4.0 LE	36 mm (1.4 in) CCD with line laser Class 2 Inclinometer ±0.1°; Wireless 802.15.4	36 mm (1.4 in) CCD with line laser Class 2 Inclinometer ±0.1°; Wireless 802.15.4
0,07 to 5 m (0.23 to 16.4 ft)	0,07 to 10 m (0.23 to 32.8 ft)	0,07 to 10 m (0.23 to 32.8 ft)
<1% ±10 µm	< 0,5% ±5 µm	< 0,5% ±5 µm
Anodized Aluminum front and PC/ABS plastic back cover	Aluminum chassis glass filled PBT	Aluminum chassis glass filled PBT
Up to 10 hours continuous use 2 000 mAh rechargeable Li-ion battery	Up to 8 hours continuous use 2× AA Alkaline batteries or rechargeable battery (NiMH)	Up to 8 hours continuous use 2× AA Alkaline batteries or rechargeable battery (NiMH)
52 × 64 × 50 mm (2.1 × 2.5 × 2 in.)	96 × 93 × 36 mm (3.8 × 3.7 × 1.4 in.)	96 × 93 × 36 mm (3.8 × 3.7 × 1.4 in.)
190 g (0.4 lb)	326 g (0.7 lb)	326 g (0.7 lb)
Galaxy Tab Active and iPad mini recommended. iPad 3rd generation, iPod touch 5th generation, iPhone 4S, Galaxy S4 or above (all not included)	4.3" colour LCD display High impact PC/ABS plastic	7" colour resistive touchscreen LCD display with keypad. High impact PC/ABS plastic
Apple AppStore or on Google Play Store	via PC / USB stick	via PC / USB stick
Apple iOS 8 or Android OS 4.4.2 (and above)	N/A	N/A
N/A	10 hours of continuous use (100% backlight) Li-ion rechargeable battery	10 hours of continuous use (100% backlight) Li-ion rechargeable battery
N/A	234 × 132 × 48 mm (9.2 × 5.2 × 1.9 in.)	276 × 160 × 53 mm (9.2 × 5.2 × 1.9 in.)
N/A	680 g (1.5 lb)	1 060 g (2.4 lb)
Alignment of horizontal shafts 3 position measurement 9–12–3, automatic measurement, free measurement (with min. 40° rotation)	Alignment of horizontal and vertical shafts 3 position measurement 9–12–3, free measurement (with min. 60° rotation)	Alignment of horizontal and vertical shafts 3 position measurement 9–12–3, free measurement (with min. 60° rotation)
Vertical and horizontal	Vertical and horizontal	Vertical and horizontal
Soft Foot App	Laser soft foot & Feeler gauge inspection	Laser soft foot & Feeler gauge inspection
Target values, Screen flip (plus portrait on tablets)	Target values, inspections	Target values, inspections, machine train alignment
2x V-brackets with chains, width 15 mm (0.6 in.)	2x V-brackets with chains, width 21 mm (0.8 in.)	2x V-brackets with chains, width 21 mm (0.8 in.)
20 to 150 mm (0.8 to 5.9 in.) 450 mm (17.7 in.) with extension chains (included)	20 to 150 mm (0.8 to 5.9 in.) 300 mm (11.8 in.) with extension chains (included)	20 to 150 mm (0.8 to 5.9 in.) 300 mm (11.8 in.) with extension chains (included)
170 mm (6.7 in.)	195 mm (7.7 in.)	195 mm (7.7 in.)
Charging via micro USB port (5V) Micro USB to USB split charging cable supplied Compatible with 5V USB chargers (not included)	Input: 100V–240V 50/60Hz AC power supplier Output: DC 12V 3A with EU, US, UK, AUS adapters	Input: 100V–240V 50/60Hz AC power supplier Output: DC 12V 3A with EU, US, UK, AUS adapters
0 to 45 °C (32 to 113 °F)	–10 to +50 °C (14 to 122 °F)	–10 to +50 °C (14 to 122 °F)
IP54	IP65	IP65
355 × 250 × 110 mm (14 × 9.8 × 4.3 in.)	540 × 200 × 410 mm (21.3 × 7.9 × 16.1 in.)	540 × 200 × 410 mm (21.3 × 7.9 × 16.1 in.)
2,9 kg (6.4 lb)	7,3 kg (16.1 lb)	7,64 kg (16.84 lb)
Supplied with 2 years validity	Supplied with 1 years validity	Supplied with 1 years validity
2 measuring units (M&S); 2 shaft brackets with chains 480 mm (18.9 in.), threaded rods 80 mm (3.2 in.) and magnets; chain tightening rod; 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); SKF carrying case	2 measuring units (M&S); display unit; 2 shaft brackets with chains 400 mm (15.8 in.) and threaded rods 150 mm (5.9 in.); chain tightening rod; 4 extension rods 90 mm (3.5 in.); power supply with country adapters; USB cable; measuring tape; screw driver; CD with instructions for use; printed certificate of calibration and conformance; quick start guide (EN); carrying case	2 measuring units (M&S); display unit; 2 shaft brackets with chains 400 mm (15.8 in.) and threaded rods 150 mm (5.9 in.); chain tightening rod; 4 extension rods 90 mm (3.5 in.); power supply with country adapters; USB cable; measuring tape; screw driver; CD with instructions for use; printed certificate of calibration and conformance; quick start guide (EN); carrying case



For accurate vertical machinery alignment

## SKF Machinery Shims TMAS series

Accurate machine adjustment is an essential element of any alignment process. SKF single slot pre-cut shims are available in five different dimensions and in ten different thicknesses.

- Made of high quality stainless steel, allowing re-use
- Easy to fit and to remove
- Close tolerances for accurate alignment
- Thickness clearly marked on each shim
- Fully de-burred
- Pre-cut shims are supplied in packs of 10 and complete kits are also available



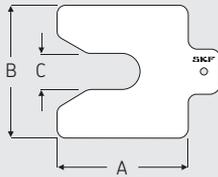
		Thickness (mm)								
		0,05	0,10	0,20	0,25	0,40	0,50	0,70	1,00	2,00

Designation	Size (mm)	Quantities								
TMAS 50/KIT	50 × 50	20	20	20	20	20	20	20	20	10
TMAS 75/KIT	75 × 75	20	20	20	20	20	20	20	20	10
TMAS 100/KIT	100 × 100	20	20	20	20	20	20	20	20	10
TMAS 340	100 × 100	20	20	20	20	20	20	20	20	10
	125 × 125	20	20	20	20	20	20	20	20	10
TMAS 360	50 × 50	20	20	–	20	–	20	–	20	20
	75 × 75	20	20	–	20	–	20	–	20	20
	100 × 100	20	20	–	20	–	20	–	20	20
TMAS 380	50 × 50	20	20	20	20	20	20	20	20	20
	75 × 75	20	20	20	20	20	20	20	20	20
TMAS 510	50 × 50	20	20	20	20	20	20	20	20	10
	75 × 75	20	20	20	20	20	20	20	20	10
	100 × 100	20	20	20	20	20	20	20	20	10
TMAS 720 *	50 × 50	20	20	20	20	20	20	20	20	20
	75 × 75	20	20	20	20	20	20	20	20	20
	100 × 100	20	20	20	20	20	20	20	20	10
	125 × 125	20	20	20	20	20	20	20	20	10

\* Consists of TMAS 340 + TMAS 380

### Technical data

Each pack designation consists of 10 shims.



### A 50 mm B 50 mm C 13 mm

Pack designation	Thickness (mm)
TMAS 50-005	0,05
TMAS 50-010	0,10
TMAS 50-020	0,20
TMAS 50-025	0,25
TMAS 50-040	0,40
TMAS 50-050	0,50
TMAS 50-070	0,70
TMAS 50-100	1,00
TMAS 50-200	2,00
TMAS 50-300	3,00

### A 75 mm B 75 mm C 21 mm

Pack designation	Thickness (mm)
TMAS 75-005	0,05
TMAS 75-010	0,10
TMAS 75-020	0,20
TMAS 75-025	0,25
TMAS 75-040	0,40
TMAS 75-050	0,50
TMAS 75-070	0,70
TMAS 75-100	1,00
TMAS 75-200	2,00
TMAS 75-300	3,00

### A 100 mm B 100 mm C 32 mm

Pack designation	Thickness (mm)
TMAS 100-005	0,05
TMAS 100-010	0,10
TMAS 100-020	0,20
TMAS 100-025	0,25
TMAS 100-040	0,40
TMAS 100-050	0,50
TMAS 100-070	0,70
TMAS 100-100	1,00
TMAS 100-200	2,00
TMAS 100-300	3,00

### A 125 mm B 125 mm C 45 mm

Pack designation	Thickness (mm)
TMAS 125-005	0,05
TMAS 125-010	0,10
TMAS 125-020	0,20
TMAS 125-025	0,25
TMAS 125-040	0,40
TMAS 125-050	0,50
TMAS 125-070	0,70
TMAS 125-100	1,00
TMAS 125-200	2,00
TMAS 125-300	3,00

### A 200 mm B 200 mm C 55 mm

Pack designation	Thickness (mm)
TMAS 200-005	0,05
TMAS 200-010	0,10
TMAS 200-020	0,20
TMAS 200-025	0,25
TMAS 200-040	0,40
TMAS 200-050	0,50
TMAS 200-070	0,70
TMAS 200-100	1,00
TMAS 200-200	2,00
TMAS 200-300	3,00



## The universal adjustable re-useable chock

# SKF Vibracon

SKF Vibracon is a machinery mounting chock that is easily and accurately adjusted.

The chock accommodates the angular difference, up to 4°, between machine and the mounting base without expensive machining of the base or the extra work of installing epoxy resin chocks. The self-levelling capability, combined with the height adjustment feature, eliminates the possibility of a soft foot in the production line throughout the life cycle of the machinery.



Stainless Steel  
SS series



Surface treated  
carbon steel  
CSTR series

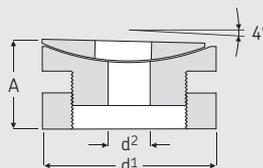


Surface treated  
alloy steel low profile  
ASTR series

### Dimensions

Designation	A min	A max	d <sup>1</sup>	d <sup>2</sup>
SM12-SS	30	38	60	17
SM16-SS	35	45	80	21
SM20-SS	40	50	100	25
SM24-SS	45	57	120	31
SM30-SS	50	62	140	37
SM36-SS	55	67	160	44
SM42-SS	60	72	190	50
SM48-SS	70	85	220	60
SM56-SS	75	90	230	66
SM64-SS	80	95	250	74

Designation	A min	A max	d <sup>1</sup>	d <sup>2</sup>
SM12-CSTR	30	38	60	17
SM16-CSTR	35	45	80	21
SM20-CSTR	40	50	100	25
SM24-CSTR	45	57	120	31
SM30-CSTR	50	62	140	37
SM36-CSTR	55	67	160	44
SM42-CSTR	60	72	190	50
SM48-CSTR	70	85	220	60
SM56-CSTR	75	90	230	66
SM64-CSTR	80	95	250	74



Designation	A min	A max	d <sup>1</sup>	d <sup>2</sup>
SM16LP-ASTR	20	30	80	21
SM20LP-ASTR	20	30	100	25
SM24LP-ASTR	20	30	120	31
SM30LP-ASTR	20	30	140	37
SM36LP-ASTR	30	40	160	44
SM42LP-ASTR	35	45	190	50

# Accessories

The SKF Shaft Alignment Tools TKSA series are comprehensive tools and suitable for many alignment jobs. The following accessories are available to further expand the usability and allow alignments of an even wider range of applications



### Extensions chains

Extension chains can be connected to the supplied mounting chains to increase their length. Longer chains enable alignments with larger shaft or coupling diameters. If one set of extension chains is not enough, two sets can be combined or a magnetic V-bracket can be used.



### Rods

Additional rods can be attached to the supplied rods to make the rods longer. Such an extension of rods is useful for applications with large coupling diameters where the laser lines of the measuring heads need to look over the coupling.



### Magnetic V-brackets

Magnetic V-brackets are mounted on the shaft or coupling with strong magnets. They are used for mounting the measuring units on the shaft flange or on the side of the coupling when chains cannot be used. Magnetic brackets might not allow stable mounting on small shafts.



### Spindle brackets

Spindle brackets are used to mount the measuring units on spindle of lathes for example.



### Sliding brackets

Sliding brackets can be used for alignments of shafts that cannot be rotated. The sliding bracket have wheels that slide on the shaft.



### Offset brackets

Offset brackets are used when the space for the alignment is too limited to mount the measuring heads on the original bracket. The offset brackets are mounted on the rods of mounted bracket and allow an offset of the measuring heads parallel to the shaft to increase the available space.

### Magnetic base

Measuring units can be mounted directly on large diameter shafts with the magnetic base. It is more convenient to use the magnetic base on large shaft diameters than multiple extension chains.



Photos are for illustrative purposes and vary by product.

Ordering designations		Compatible with					
Extension chains	Content and description	TKSA 11	TKSA 31	TKSA 41	TKSA 51	TKSA 60	TKSA 80
TKSA 11-EXTCH	2 × Extension chains of 480 mm (18.9 in.) for shaft diameters up to 320 mm (12.6 in.)	✓			✓		
TKSA 41-EXTCH	2 × Extension chains of 500 mm (19.7 in.) for shaft diameters up to 300 mm (11.8 in.)		✓	✓			
TKSA 51-EXTCH	2 × Extension chains of 1 m (3.3 ft.) for shaft diameters up to 450 mm (17.7 in.)	✓			✓		
TKSA 60/80-EXTCHAIN	2 × Extension chains of 500 mm (19.7 in.) for shaft diameters up to 300 mm (11.8 in.)					✓	✓
<b>Rods</b>							
TKSA ROD90	4 × threaded rods of 90 mm (3.5 in.)		✓	✓		✓	✓
TKSA ROD150	4 × threaded rods of 150 mm (5.9 in.)		✓	✓		✓	✓
TKSA 51-ROD80	4 × threaded rods of 80 mm (3.1 in.)	✓*			✓		
TKSA 51-ROD120	4 × threaded rods of 120 mm (4.7 in.)	✓*			✓		
<b>Magnetic V-brackets</b>							
TKSA MAGVBK	2 × Magnetic V-brackets, supplied without rods or chains		✓	✓		✓	✓
TKSA 51-VBK	1 × Standard V-bracket, supplied with 2x threaded rods of 80 mm (3.2 in.), 1x standard chain of 480 mm (18.9 in.) and 4 × magnets	✓			✓		
<b>Spindle brackets</b>							
TKSA 51-SPDBK	1 × Spindle bracket, supplied with 2 × threaded rods of 80 mm (3.2 in.)	✓			✓		
<b>Sliding brackets</b>							
TKSA 51-SLDBK	1 × Adjustable sliding bracket for use with shaft diameters >30 mm (1.2 in.) or bore diameters >120 mm (4.7 in.), supplied without rods	✓**			✓		
TKSA SLDBK	2 × Wheels to be used with standard V-Bracket (TKSAVBK), supplied without V-bracket		✓	✓		✓	✓
<b>Offset brackets</b>							
TKSA EXT50	2 × Offset brackets of 50 mm (2 in.) compatible with standard (TKSAVBK) and magnetic V-brackets (TKSA MAGVBK) and magnetic base (TKSA MAGBASE)		✓	✓		✓	✓
TKSA EXT100	2 × Offset brackets of 100 mm (3.9 in.) compatible with standard (TKSAVBK) and magnetic V-brackets (TKSA MAGVBK) and magnetic base (TKSA MAGBASE)		✓	✓		✓	✓
TKSA 51-EXT50	1 × Offset bracket 50 mm (2 in.), supplied with 2 × rods 80 mm (3.2 in.)	✓			✓		
<b>Magnetic base</b>							
TKSA MAGBASE	2 × Magnetic bases IMPORTANT: Offset bracket (TKSA EXT50 or TKSA EXT100) is required for usage and needs to be ordered separately.		✓	✓		✓	✓
<b>Other accessories</b>							
TKSA 11-EBK	2 × Extendable V-brackets, supplied with 4x threaded rods of 120 mm (4.7 in.) and 4 × threaded rods of 80 mm (3.1 in.), supplied without chains	✓					
TKSA VBK	2 × Standard V-brackets, supplied without rods or chains		✓	✓		✓	✓
TKSA 41-QR	5 × A4 sheets with 12 × QR code stickers per sheet (total of 60 × stickers)			✓			

\* Requires extendable V-Bracket set TKSA 11-EBK for usage with TKSA 11.

\*\* Requires additional rods TKSA 51-ROD80 or TKSA 51-ROD120 for usage with TKSA 11.

## Contact and support

SKF offers comprehensive support for the complete range of TKSA shaft alignment instruments. The support includes software updates, warranty, calibration services, training, repair, technical support and an online self help portal. Additional offers and services might be available from our partners.

Latest news and product information about the SKF alignment range can be found on [www.skf.com/alignment](http://www.skf.com/alignment)

Please contact your local SKF distributor for more information.

All SKF Authorise Distributors can be found on [www.skf.com/group/our-company/find-a-distributor/index.html](http://www.skf.com/group/our-company/find-a-distributor/index.html)

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