



Products for Machine Alignment

Technical Product Information

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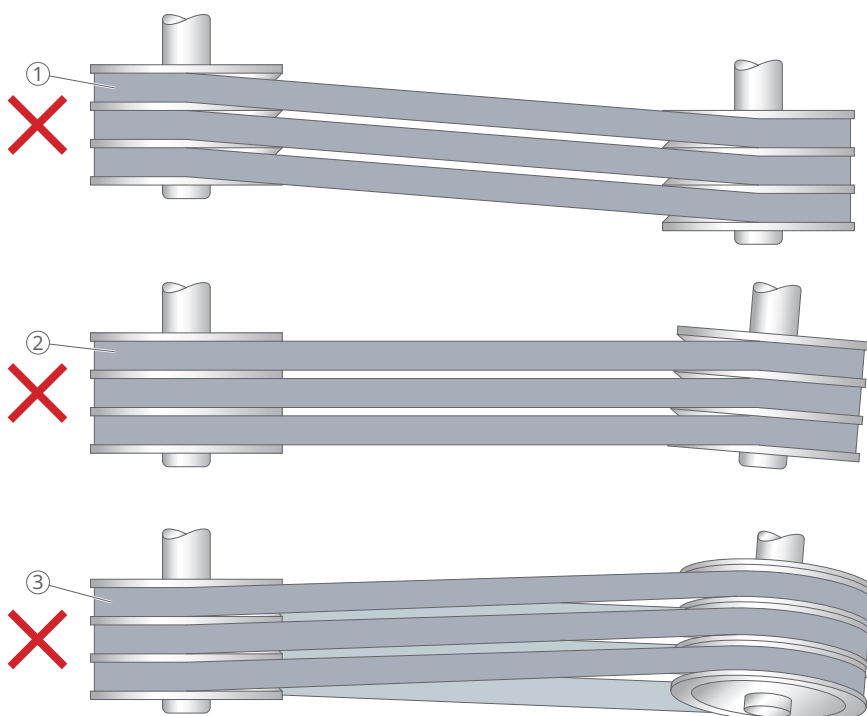
1 Alignment

Correct alignment increases machine life and reduces the risk of unplanned machine downtime. Vibrations, energy consumption and consequently the temperature of the machine are reduced. In particular, bearings, seals, lubricants, drive belts, belt pulleys, drive chains, sprockets and couplings are placed under less strain. With the products presented here, Schaeffler assists in the rapid and precise alignment and adjustment of belt drives and chain drives, as well as accurate machine shaft alignment.

1.1 Aligning belts

If pulleys are not correctly aligned, either parallel misalignment, angular misalignment, or a combination of both defects is present. If multiple belts are used, angular misalignment causes variations in the tension of each belt, leading to uneven wear.

1 Belt misalignment

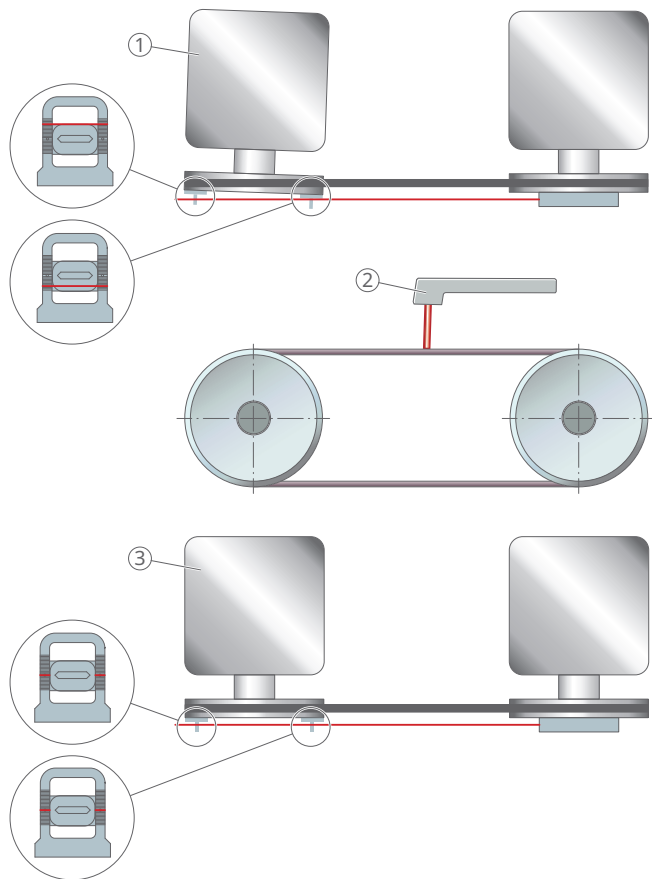


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1	Parallel misalignment	2	Angular misalignment
3	Parallel misalignment and angular misalignment		

If parallel misalignment is present, belt pulleys are aligned by moving the machine. To compensate for angular misalignment, the machine feet on one side must be raised. Inserting shims under the machine feet is a proven method for adjusting the height. During alignment, the belts are tensioned simultaneously. After alignment, the belt tension is measured and the belts are tensioned to the manufacturer's specifications. The alignment is then checked again and the belt pulleys are readjusted as required.

2 Aligning the belt



001B5DAD

1	Measuring and adjusting the alignment	2	Measuring and adjusting belt tension
3	Checking alignment		

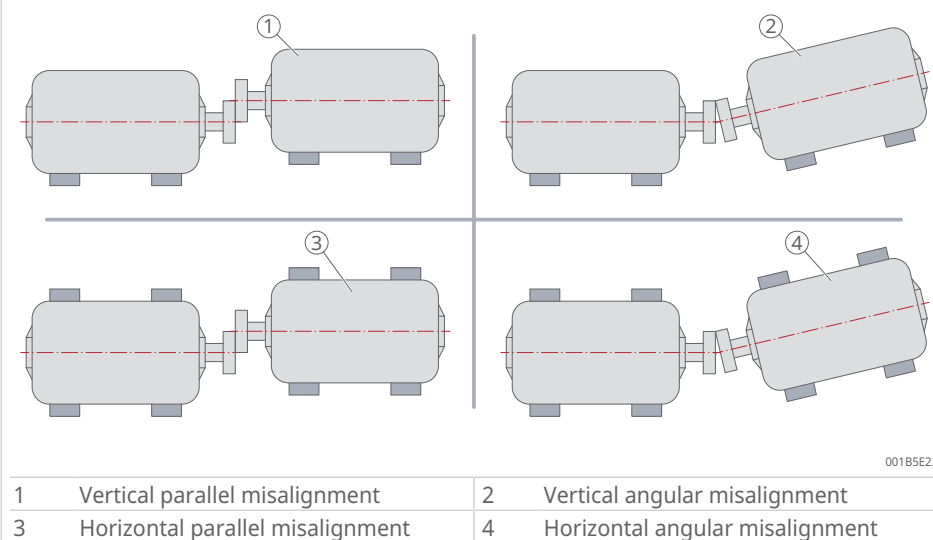
1 Tools

Step	Tool
Measuring and adjusting the alignment	LASER-SMARTY3, tools for vibration-free lifting and moving of machines, SHIMs if required, and torque wrench
Measuring and adjusting belt tension	LASER-TRUMMY2, vibration-free tools for lifting and moving machines, torque wrench
Checking alignment	LASER-SMARTY3

1.2 Aligning shafts

If interconnected machines are not correctly aligned, errors occur in both the horizontal and vertical planes in the form of angular and parallel misalignment. In many cases, multiple errors occur simultaneously.

3 Shaft misalignment



The two machines are connected via a coupling. In shaft alignment, the movable machine is positioned so that the rotational axes of both machine shafts are aligned as precisely as possible. Typical applications include electric motors combined with pumps, ventilators and compressors.

Measurements with LASER-EQUILIGN2 show all errors in the planes in the form of horizontal and vertical parallel misalignment, as well as angular deviations in the form of horizontal and vertical angular misalignment. The tablet displays the current condition as well as the correction values required in the horizontal and vertical planes.

Further information

PLA001 | Shaft Alignment with LASER-EQUILIGN2 |
<https://www.schaeffler.de/std/2026>

2 LASER-SMARTY3

2.1 Description

The LASER-SMARTY3 line laser assists with the alignment of belt pulleys, idler pulleys and chain sprockets with a diameter over 60 mm and a measuring distance of up to 10 m. The line laser has 2 power levels (LS1, LS2) for improved function in bright light conditions and at long distances.

The alignment of belt pulleys and chain sprockets reduces wear and energy losses in tension drives, their bearings and seals, reducing the risk of unplanned machine downtime and minimising repair costs.

Line lasers have the following features:

- Angular errors and parallelism misalignment between the two pulleys are made visible by the target markers.
- Horizontally and vertically mounted belt pulleys can be aligned.
- Alignment is significantly faster and more precise than with conventional methods.
- Alignment can be carried out by one person working alone.
- Laser and target markers are attached to the belt pulleys by magnetism.

2 Ordering number and ordering designation

Quantity	Description	Ordering number	Ordering designation
1	Product, complete	301252106-0000-1	LASER-SMARTY3

Further information

BA 97 | Measuring device for the alignment of belt drives |
<https://www.schaeffler.de/std/1FC1>



medias | Product catalogue |
LASER-SMARTY3 |
<https://www.schaeffler.de/std/203D>

2.2 Scope of delivery

4 Scope of delivery LASER-SMARTY3



2.3 Spare part

3 Ordering number and ordering designation

Quantity	Description	Ordering number	Ordering designation
1	Optical target marker, attached by magnetism	056652020-0000-10	LASER-SMARTY2.TARGET

2.4 Mounting and adjustment

The product can be mounted in just a few seconds. The laser is attached to one of the two belt pulleys. The two target markers are applied to the opposite belt pulley. The laser emits a beam, which hits the target markers and indicates how the machine is to be aligned.

5 Mounting

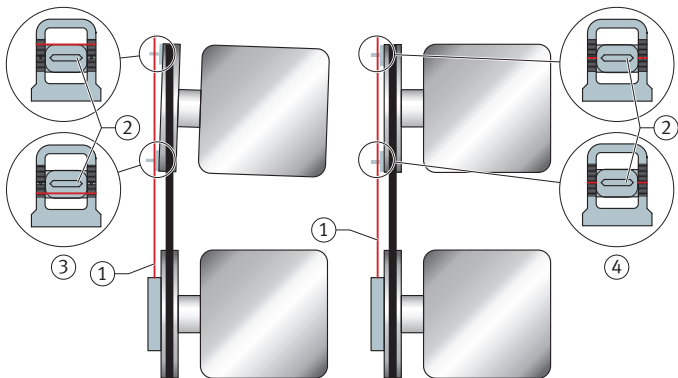


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- | | | | |
|---|-------|---|---------------------------|
| 1 | Laser | 2 | Target marker, electronic |
|---|-------|---|---------------------------|

The laser beam can be clearly seen on the target markers. Once the laser beam hits the slots on the target markers after moving the machine, the machine is correctly aligned.

6 Adjustment



00019C07

- | | | | |
|---|--------------|---|---------------------|
| 1 | Laser beam | 2 | Target marker, slot |
| 3 | Not parallel | 4 | Correct alignment |

2.5 Calibration

We recommend, in accordance with ISO 9001, that the product should be checked or calibrated at intervals of no more than 2 years. The product can be sent to Schaeffler for calibration. Please contact Schaeffler before sending the product:
service.smt@schaeffler.com.

2.6 Technical data

4 Technical data

Characteristic		Comment
Beam angle		60°
Laser safety class		2
Pulley diameter		> 60 mm
Measurement distance	LS1	40 mm ... 3 m
	LS2	0,5 m ... 10 m
Output power	LS1	< 0,6 mW
	LS2	< 4,8 mW
Battery type		R6 (AA) 1,5 V
Battery operation		12 h (continuous operation)
Material		ABS plastic, hard ionised aluminium
Dimensions (W×H × D)		145 mm×86 mm×30 mm
Weight		265 g
Area of application		Indoor use (contamination level 2)
Calibration accuracy		Laser and reference plane
Parallelism		< 0,05°
Parallel offset value		< 0,2 mm

3 LASER-TRUMMY2

3.1 Description

The LASER-TRUMMY2 belt tension measuring instrument is a robust optical-electronic manual measuring instrument for belt tension (strand force). The correct belt tension is an essential prerequisite for achieving the maximum operating life of the belt drive and drive components. The product comprises a plug probe without cable for direct connection, a measurement probe with cable for difficult to access locations and a measuring instrument. All the parts of the belt tension measuring device are supplied in a case. The simple and reliable user menu is given in several languages. The measurement is performed while the machine is stationary. Depending on the presetting, the measuring instrument displays either the natural frequency in Hz or the strand force in N. The displayed measurement value can be compared with the nominal value specified by the respective belt drive manufacturer. The nominal value is dependent on the characteristics of the drive.

5 Ordering number and ordering designation

Quantity	Description	Ordering number	Ordering designation
1	Complete product ¹⁾	056652895-0000-10	LASER-TRUMMY2

¹⁾ Transport case, measurement probe with cable, plug probe, measuring instrument and 9 V battery

Further information

BA 21 | LASER-TRUMMY2 |
<https://www.schaeffler.de/std/2014>



medias | Product catalogue |
LASER-TRUMMY2 |
<https://www.schaeffler.de/std/203E>

3.2 Scope of delivery

7 Scope of delivery LASER-TRUMMY2



001982A8

1	Transport case	2	Measurement probe with cable, cable length 1 m
3	Plug probe	4	Measuring instrument
5	9 V battery		

3.3 Spare parts

6 Ordering number and ordering designation

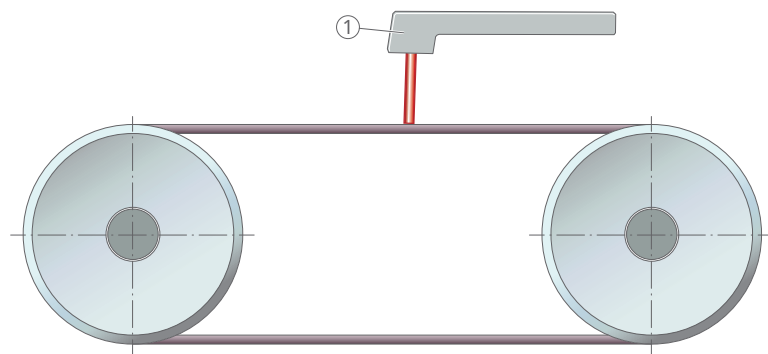
Quantity	Description	Ordering number	Ordering designation
1	Measurement probe with cable	096754443-0000-10	LASER-TRUMMY2.CABLE-PROBE#N1
1	Plug probe	096768657-0000-10	LASER-TRUMMY2.PLUG-PROBE#N1

3

3.4 Application

Before calculating the belt tension, the belt mass and belt length must be entered. Vibration of the belt is then induced. The measuring instrument measures the natural frequency by means of clock pulse light and uses this to determine the belt tension. This technique is less prone to disruptive influences in comparison with measurement using sound waves.

8 Measurement



001B6658

1 LASER-TRUMMY2 and measurement probe with cable

3.5 Calibration

We recommend, in accordance with ISO 9001, that the product should be checked or calibrated at intervals of no more than 2 years. The product can be sent to Schaeffler for calibration. Please contact Schaeffler before sending the product:
service.smt@schaeffler.com.

3.6 Technical data

Characteristic		Property
Measurement range		10 Hz ... 800 Hz
Minimal free belt strand		> 150 mm
Digital sampling error		< 1 %
Display error		±1 Hz
Total error		< 5 %
Temperature	Nominal value	+20 °C
	Operation	+10 °C ... +50 °C
	Transport	-5 °C ... +50 °C
Housing		ABS, plastic
Dimensions	Product	80 mm×126 mm×37 mm
	Case	255 mm×210 mm×60 mm
Display		2 LCD lines, 16 characters
Switching between languages		10
Input limits	Free strand length	up to 9,990 m
	Belt mass	up to 9,999 kgm
Power supply	Designation	9 V battery
	ANSI	1604DPP3
	IEC	6LR61/AM-6
	Dimensions	48,5 mm×26,2 mm×17 mm
Calibration recommended		≤ 2 a (years, periodic)

4 LASER-EQUILIGN2

4.1 Description

The LASER-EQUILIGN2 laser alignment system is suitable for aligning horizontal machines. The system does not support vertical machines, cardan shaft drives or machine trains. Typical applications include coupled and uncoupled shafts in motors, pumps, ventilators and gearboxes. The laser/sensor unit and reflector of the LASER-EQUILIGN2 can be quickly and easily installed on the machine. The use of single-laser technology allows the system to measure with exceptional precision, as the laser beam measures via the roof prism with double the angular resolution. This is particularly advantageous for applications with short shafts, where the laser and sensor are positioned only a short distance apart.

The laser alignment system has the following features:

- more precise (1/100 mm) and faster alignment of horizontal machines compared with conventional methods
- 8" tablet with touchscreen operation, even when wearing gloves.
- RFID machine identification
- high-resolution camera for documentation
- Active Clock measurement mode for coupled shafts:
This measurement mode records 3 or 4 measurement points in 8 possible positions.
- Static Clock measurement mode for uncoupled shafts
- PDF report with images

Communication with the tablet, which is waterproof and shock-resistant to IP68, takes place via Bluetooth. As the system is battery-powered, all components work wirelessly. A clear menu structure makes operation by tablet simple and intuitive, even for untrained personnel. The user is guided step by step through the alignment process and receives clear alignment instructions. Operator guidance enhances safety and improves alignment quality. The Live Move function provides additional orientation, monitoring the movement of all axes in real time using a traffic light system, where red indicates *outside of tolerance*, yellow indicates *within the acceptable range* and green indicates *within the optimal range*.

7 Ordering number and ordering designation

Quantity	Description	Ordering number	Ordering designation
1	Product, complete	096035269-0000-10	LASER-EQUILIGN2
1	Product, complete, for Canada only	096866314-0000-10	LASER-EQUILIGN2-CA

Further information

BA 55 | LASER-EQUILIGN2 |
<https://www.schaeffler.de/std/2015>

BA 55-01 | LASER-EQUILIGN2 |
<https://www.schaeffler.de/std/2016>



medias | Product catalogue |
 LASER-EQUILIGN2 |
<https://www.schaeffler.de/std/2035>

4.2 Alignment

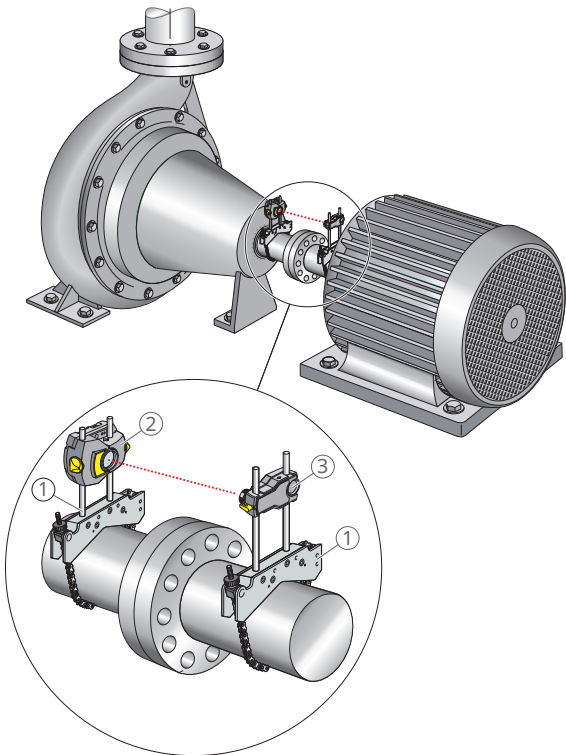
8 Tools

Step		Tool
-	Mounting the measuring components	-
↔	Entering the machine data	Tape measure and LASER-EQUILIGN2
-	Adjusting the laser beam	LASER-EQUILIGN2
↻	Measurement	LASER-EQUILIGN2
📏	Soft foot measurement and, where necessary, insertion of shims	LASER-EQUILIGN2, feeler gauge and shims
↻	Measurement	LASER-EQUILIGN2
📏	Vertical machine alignment	Feeler gauge, hydraulic wedge spreader, shims and torque wrench
📏	Horizontal machine alignment	Hydraulic wedge spreader and torque wrench
↻	Control measurement	LASER-EQUILIGN2

4.2.1 Mounting the measuring components

Once the brackets have been fitted to both shafts, the laser/sensor unit is mounted in one bracket and the reflector in the other.

9 Measuring components

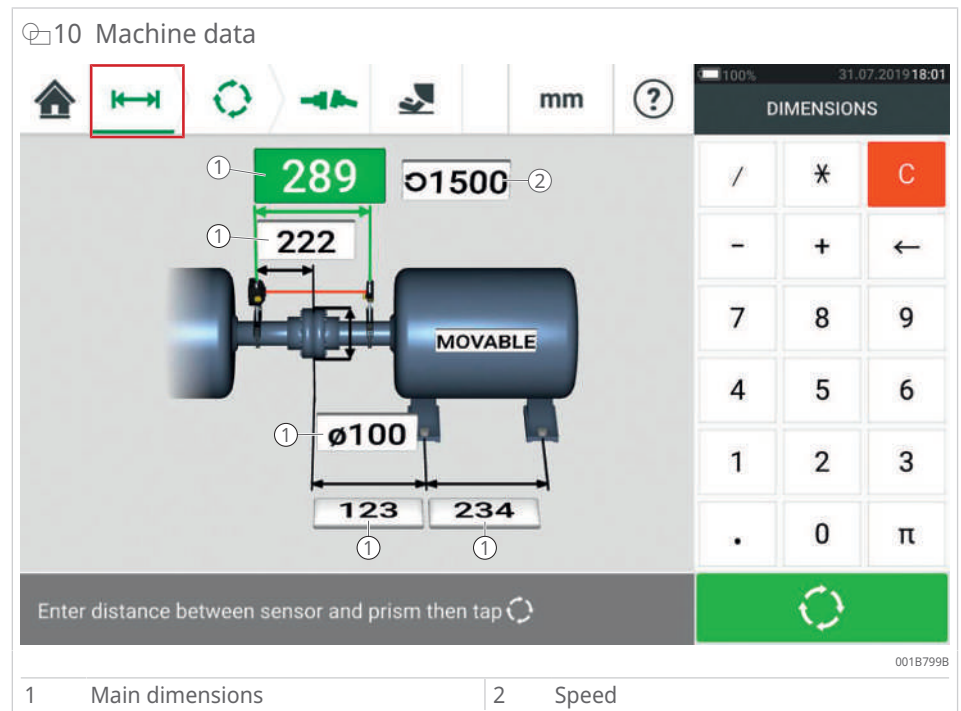


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1	Bracket	2	Laser/sensor unit
3	Reflector		

4.2.2 Entering the machine data

The main dimensions and machine speed are entered.



4.2.3 Adjusting the laser beam

The laser/sensor unit is switched on and the contact point of the laser beam is aligned with the cross-hair of the reflector's protective cap by moving the unit. Following this approximate adjustment, fine adjustment is performed via the app.

4.2.4 Measurement

Coupled shafts are measured in Active Clock mode. The first measurement is taken after tapping the *M* symbol.

One of the displayed machine feet is selected on retrieval of the menu item. The shaft with the laser/sensor unit is then rotated into a horizontal position. Once the foot screw has been loosened, the system waits until the measurement values have stabilised. The measurement values are then stored and the foot screw is re-tightened. The tablet displays all of the measurement results once all of the machine feet have been measured. The user decides where shims need to be inserted according to the soft foot type.

Further information

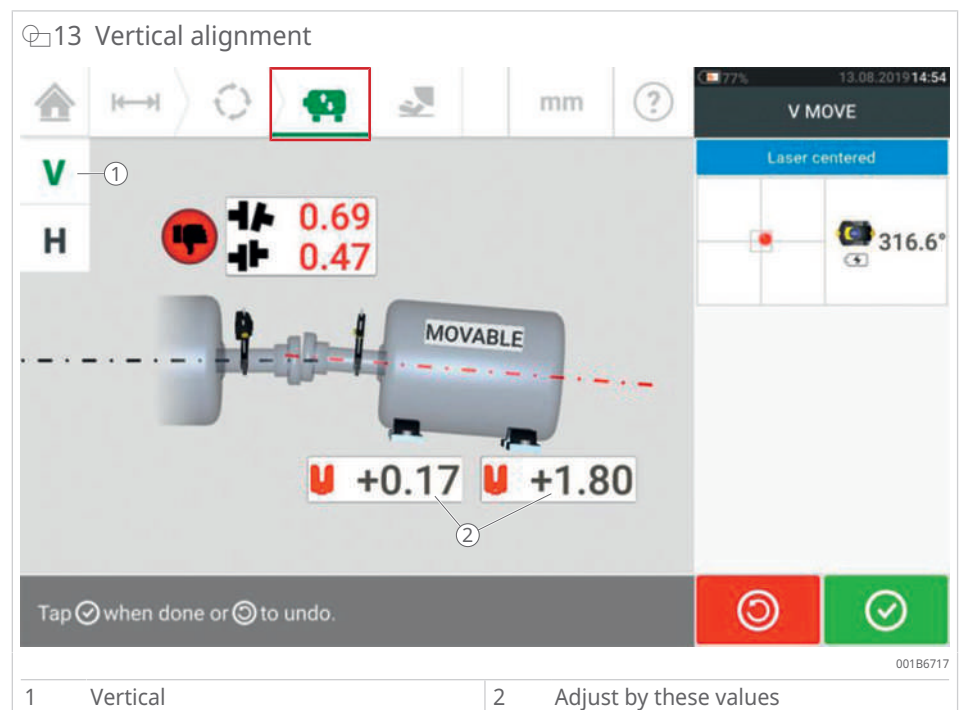
PLA001 | Shaft Alignment with LASER-EQUILIGN2 |
<https://www.schaeffler.de/std/2026>

4.2.6 Measurement

Once soft foot has been eliminated, the machine alignment changes. The measurement is now repeated.

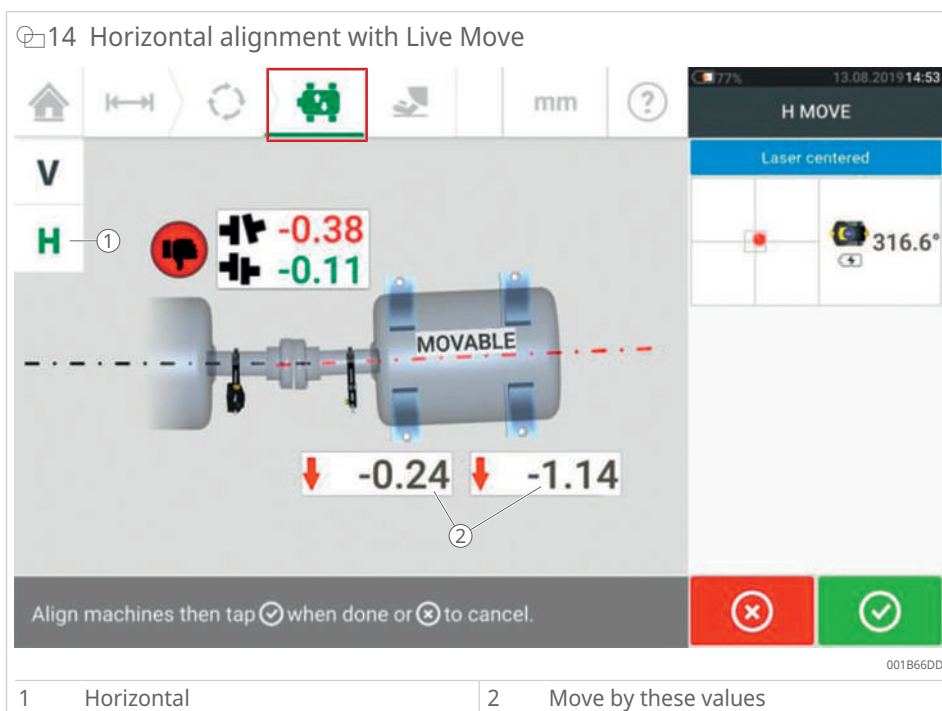
4.2.7 Vertical machine alignment

Once the laser/sensor unit is in the correct position, vertical measurement begins. The foot screws are loosened and shims are inserted or removed as indicated.



4.2.8 Horizontal machine alignment

Live Move mode is activated. The machine is moved as indicated. The foot screws are tightened once all values are within the tolerance range.



4.2.9 Control measurement

A control measurement allows the user to check that all values are within the tolerance ranges. If the values lie outside of the tolerance ranges, the alignment process is repeated.

4.3 Scope of delivery

15 Scope of deliveryLASER-EQUILIGN2LASER-EQUILIGN2-CA



001B5C99

1	Tablet	2	Reflector
3	Laser/sensor unit	4	Charger with 5 adapters
5	USB-A to USB-C cable for data transfer	6	Micro-USB cable for charging the sensor
7	USB-C cable for charging the tablet	8	Tape measure
9	Allen key, W 4 mm	10	Shaft bracket for laser/sensor unit and reflector
11	Chain, length 600 mm, for shaft diameters ≤ 200 mm	12	Post, length 150 mm
13	Case	-	Microfibre cloth
-	BA55, quick reference guide, German and English	-	BA 55-1, safety instructions, multi-lingual
-	Case		

4.4 Spare parts

The Allen key is standardised and can be obtained from trade outlets. All other parts are available as spare parts. Parts not listed can be supplied as spare parts on request.

9 Ordering number and ordering designation

Quantity	Description	Ordering number	Ordering designation
1	Post, length 150 mm	097975818-0000-10	LASER.POST150#E
1	Bracket ¹⁾	081743963-0000-10	LASER.BRACKET#S
1	Chain, length 600 mm	097975206-0000-10	LASER.CHAIN600#E

¹⁾ including 2 posts, length 115 mm each

4.5 Accessories

A comprehensive range of accessories is available in order to expand the possible applications of the base device. The accessories can be ordered as individual items.

16 Accessories



00185CF2

1	Post, length 300 mm	2	Chain, length 1500 mm
3	Magnetic holder, incl. 2 posts		

10 Ordering number and ordering designation

Quantity	Description	Ordering number	Ordering designation
1	Post, length 300 mm	097975621-0000-10	LASER.POST300#E
1	Chain, length 1500 mm ¹⁾	097975184-0000-10	LASER.CHAIN1500#E
1	Magnetic holder ²⁾	081745060-0000-10	LASER.BRACKET-MAGNET#S

¹⁾ for shaft diameters ≤ 500 mm
²⁾ for confined spaces and shaft diameters > 500 mm. Including 2 posts, length 115 mm each

4.6 Calibration

We recommend, in accordance with ISO 9001, that the product should be checked or calibrated at intervals of no more than 2 years. The product can be sent to Schaeffler for calibration. Please contact Schaeffler before sending the product:

service.smt@schaeffler.com.

4.7 Technical data

11 System

Characteristic	Description
case dimensions	$\approx 500 \text{ mm} \times 410 \text{ mm} \times 140 \text{ mm}$ $\approx 19 \frac{45}{64} \text{ inch} \times 16 \frac{1}{64} \text{ inch} \times 5 \frac{1}{2} \text{ inch}$
weight	$\approx 7,8 \text{ kg}$ $\approx 17,2 \text{ lbs}$

12 Tablet

Characteristic	Description	
Operating system	Kiosked Android Operation System	
CPU	Processor	Exynos 7 Octa, 1,6 GHz Octa-Core (Cortex®-A53)
	Memory	3 GB RAM, 16 GB Flash
Display	Technology	TFT Integrated photometer for automatic adjustment of display brightness to environment to extend battery life
	Resolution	1280 px×800 px
	Size	203,1 mm 8 inch
Connectivity	Wi-Fi	802.11 a/b/g/n/ac (2,4 GHz + 5 GHz)
	Wireless	4.2
	RFID	NFC
Camera resolution	Main camera	8 MP, auto-focus
	Front camera	5 MP
Protection class	IP68 dustproof, submersible up to 1,5 m and shock-resistant	
Temperature range	Operation	-20 °C ... +50 °C
		-4 °F ... +122 °F
Power supply	Battery	Lithium-ion, rechargeable 3,8 V/4450 mAh/16,91 Wh
	Operating time	up to 11 h
dimensions	$\approx 256 \text{ mm} \times 149 \text{ mm} \times 35 \text{ mm}$ $\approx 10 \frac{5}{64} \text{ inch} \times 5 \frac{55}{64} \text{ inch} \times 1 \frac{3}{8} \text{ inch}$	
weight, with dust cap	$\approx 710 \text{ g}$ $\approx 1,6 \text{ lbs}$	

13 Laser/sensor unit

Characteristic		Description
Measurement principle		Coaxial, reflected laser beam
LED indicator		1 LED for laser status and battery status 1 LED for wireless communication
Power supply	Battery	Lithium-ion, rechargeable 3,7 V/5 Wh
	Operating time	10 h, with continuous use
	charging time with charging device	≈ 2,5 h for 90 % ≈ 3,5 h for 100 %
	charging time with USB connector	≈ 3 h for 90 % ≈ 4 h for 100 %
Protection class		IP65, dustproof, resistant to water jets and shock-resistant
	Relative humidity	10 % ... 90 %
Protection against ambient light		Yes
Temperature range	Operation	-10 °C ... +55 °C +14 °F ... +122 °F
		0 °C ... +40 °C +32 °F ... +104 °F
	Storage	-20 °C ... +80 °C +4 °F ... +140 °F
		dimensions
weight, with dust cap		≈ 177 g ≈ 7,4 oz.
Detector	Measurement range	Unlimited, dynamically expandable
	Resolution	1 µm 0,04 mil
		Angle
	Accuracy, average	> 98 %
Inclinometer	Measurement range	0° ... 360°
	Resolution	0,1°
	Error at T _a = +22 °C	0,3 %, full scale
Laser	Type	Semiconductor laser diode
	Wavelength	630 nm ... 680 nm, red, visible light
	Safety class	Class 2 according to IEC 60825-1:2014 The laser complies with 21 CFR 1040.10 and 21 CFR 1040.11, except for deviations in accordance with Laser Notice No. 50 of 24 June 2007.
	Beam power	< 1 mW
	Beam divergence	< 0,3 mrad
External interface		Wireless communication
max. transmission distance with direct line of sight		30 m 98 ft
Country-specific approvals		 https://www.schaeffler.de/std/2042

14 Reflector

Characteristic		Description
Type		90° roof prism
Accuracy, average		> 99 %
Protection class		IP67 dustproof, submersible and shock-resistant
Temperature range	Operation	-20 °C ... +60 °C
		-4 °F ... +140 °F
	Storage	-20 °C ... +80 °C
		-4 °F ... +176 °F
dimensions		≈ 100 mm×41 mm×35 mm ≈ 4 inch×1 5⁄8 inch×1 3⁄8 inch
weight, with dust cap		≈ 65 g ≈ 2,3 oz.

5 SHIMs

5.1 Description

Shims are used to eliminate vertical misalignment or soft feet.

These solid shims made from corrosion-resistant high-grade steel are reusable. They are available in 6 sizes, with each size available in the following 12 thicknesses: 0,025 mm, 0,05 mm, 0,1 mm, 0,2 mm, 0,25 mm, 0,4 mm, 0,5 mm, 0,7 mm, 1 mm, 2 mm and 3 mm. The edges are deburred and the corners are rounded.

Fully layered, fully laminated high-grade steel (peelable) shims can be manually removed layer by layer. Removed layers cannot be reused. A fully layered, fully laminated shim consists of 12 removable layers. Layers are removed until the desired thickness is achieved. 8 layers have a thickness of 0,1 mm, while the other 4 layers have a thickness of 0,05 mm. These 2 thicknesses allow an exact adjustment of the overall thickness of between 1 mm and 0,05 mm. Fully layered, fully laminated shims are available in 4 sizes.

Shim assortments are available from Schaeffler in cases. Technical data for solid shims, fully layered and fully laminated shims, and shim assortments are listed in the product tables.

Further information



medias | Product catalogue |
SHIMs |
<https://www.schaeffler.de/std/203F>

5.2 Scope of delivery

All shims are available as individual sizes in packs of 10. A selection of shims is available in a case.

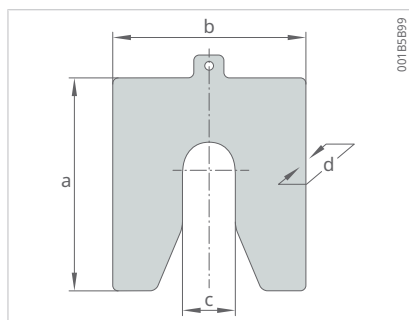
5.3 Product tables

5.3.1 Explanations

a	mm	Height
A	–	Shim type A
b	mm	Width
B	–	Shim type B
c	mm	Slot diameter
C	–	Shim type C
d	mm	Sheet thickness
D	–	Shim type D
E	–	Shim type E

5.3.2 Cases

High-grade steel, corrosion-resistant
Individual sizes in packs of 10



Shim



Case ABC,
420 mm×330 mm×180 mm

Ordering designation	Case	Ordering number	Type				
			A	B	C	D	E
			a = b = 50 c = 13	a = b = 75 c = 21	a = b = 100 c = 32	a = b = 125 c = 45	a = b = 200 c = 55
			mm				
SHIMS-CASE-AB-10/9	ABC	303497777-0000-10	✓	✓	-	-	-
SHIMS-CASE-AB-10/10	ABC	303497785-0000-10	✓	✓	-	-	-
SHIMS-CASE-AB-10/11	ABC	303497793-0000-10	✓	✓	-	-	-
SHIMS-CASE-AB-10/12	ABC	303497807-0000-10	✓	✓	-	-	-
SHIMS-CASE-BC-10/9	ABC	303497688-0000-10	-	✓	✓	-	-
SHIMS-CASE-BC-10/10	ABC	303497696-0000-10	-	✓	✓	-	-
SHIMS-CASE-BC-10/11	ABC	303497700-0000-10	-	✓	✓	-	-
SHIMS-CASE-BC-10/12	ABC	303497718-0000-10	-	✓	✓	-	-
SHIMS-CASE-CD-10/9	ABCD	303498030-0000-10	-	-	✓	✓	-
SHIMS-CASE-CD-10/10	ABCD	303498048-0000-10	-	-	✓	✓	-
SHIMS-CASE-CD-10/11	ABCD	303498064-0000-10	-	-	✓	✓	-
SHIMS-CASE-CD-10/12	ABCD	303498072-0000-10	-	-	✓	✓	-
SHIMS-CASE-ABC-10/9	ABC	303497645-0000-10	✓	✓	✓	-	-
SHIMS-CASE-ABC-10/10	ABC	300692170-0000-10	✓	✓	✓	-	-
SHIMS-CASE-ABC-10/11	ABC	303498722-0000-10	✓	✓	✓	-	-
SHIMS-CASE-ABC-10/12	ABC	303498730-0000-10	✓	✓	✓	-	-
SHIMS-CASE-ABCD-10/9	ABCD	303497645-0000-10	✓	✓	✓	✓	-
SHIMS-CASE-ABCD-10/10	ABCD	300692196-0000-10	✓	✓	✓	✓	-
SHIMS-CASE-ABCD-10/11	ABCD	303497653-0000-10	✓	✓	✓	✓	-
SHIMS-CASE-ABCD-10/12	ABCD	303497670-0000-10	✓	✓	✓	✓	-
SHIMS-CASE-E-10/9	E	303498080-0000-10	-	-	-	-	✓
SHIMS-CASE-E-10/10	E	300692560-0000-10	-	-	-	-	✓
SHIMS-CASE-E-10/11	E	303498102-0000-10	-	-	-	-	✓
SHIMS-CASE-E-10/12	E	303498110-0000-10	-	-	-	-	✓



Roller case ABCD,
550 mm×340 mm×240mm



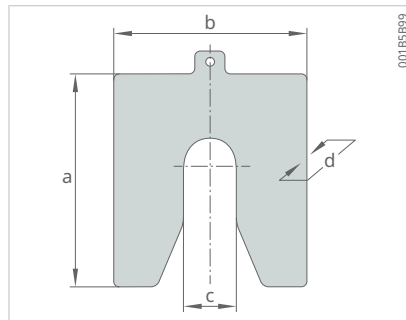
Roller case E,
550 mm×340 mm×240 mm

Total quantity	Quantity											
	d											
	0,025	0,05	0,1	0,15	0,2	0,25	0,4	0,5	0,7	1	2	3
	mm											
180	–	10	10	–	10	10	10	10	10	10	10	–
200	–	10	10	–	10	10	10	10	10	10	10	10
220	10	10	10	–	10	10	10	10	10	10	10	10
240	10	10	10	10	10	10	10	10	10	10	10	10
180	–	10	10	–	10	10	10	10	10	10	10	–
200	–	10	10	–	10	10	10	10	10	10	10	10
220	10	10	10	–	10	10	10	10	10	10	10	10
240	10	10	10	10	10	10	10	10	10	10	10	10
180	–	10	10	–	10	10	10	10	10	10	10	–
200	–	10	10	–	10	10	10	10	10	10	10	10
220	10	10	10	–	10	10	10	10	10	10	10	10
240	10	10	10	10	10	10	10	10	10	10	10	10
270	–	10	10	–	10	10	10	10	10	10	10	–
300	–	10	10	–	10	10	10	10	10	10	10	10
330	10	10	10	–	10	10	10	10	10	10	10	10
360	10	10	10	10	10	10	10	10	10	10	10	10
360	–	10	10	–	10	10	10	10	10	10	10	–
400	–	10	10	–	10	10	10	10	10	10	10	10
440	10	10	10	–	10	10	10	10	10	10	10	10
480	10	10	10	10	10	10	10	10	10	10	10	10
90	–	10	10	–	10	10	10	10	10	10	10	–
100	–	10	10	–	10	10	10	10	10	10	10	10
110	10	10	10	–	10	10	10	10	10	10	10	10
120	10	10	10	10	10	10	10	10	10	10	10	10

5.3.3 Shims

High-grade steel, corrosion-resistant

Individual sizes in packs of 10



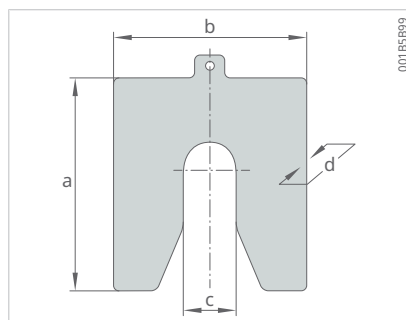
Shim

Ordering designation	Ordering number	Quantity	a	b	c	d
			mm	mm	mm	mm
SHIMS-35-005-MN-35×30×0.05	300750587-0000-10	10	35	30	9	0,05
SHIMS-35-010-MP-35×30×0.10	300751257-0000-10	10	35	30	9	0,1
SHIMS-35-015-MQ-35×30×0.15	300751273-0000-10	10	35	30	9	0,15
SHIMS-35-020-MR-35×30×0.20	300750595-0000-10	10	35	30	9	0,2
SHIMS-35-025-MS-35×30×0.25	300750609-0000-10	10	35	30	9	0,25
SHIMS-35-040-MT-35×30×0.40	300750617-0000-10	10	35	30	9	0,4
SHIMS-35-050-MU-35×30×0.50	300751222-0000-10	10	35	30	9	0,5
SHIMS-35-070-MV-35×30×0.70	300751230-0000-10	10	35	30	9	0,7
SHIMS-35-100-MW-35×30×1.00	300751249-0000-10	10	35	30	9	1
SHIMS-50-0025-AK-50×50×0.025	300753241-0000-10	10	50	50	13	0,025
SHIMS-50-005-AN-50×50×0.05	300753250-0000-10	10	50	50	13	0,05
SHIMS-50-010-AP-50×50×0.10	300753268-0000-10	10	50	50	13	0,1
SHIMS-50-015-AQ-50×50×0.15	300753276-0000-10	10	50	50	13	0,15
SHIMS-50-020-AR-50×50×0.20	300753284-0000-10	10	50	50	13	0,2
SHIMS-50-025-AS-50×50×0.25	300766076-0000-10	10	50	50	13	0,25
SHIMS-50-040-AT-50×50×0.40	300753292-0000-10	10	50	50	13	0,4
SHIMS-50-050-AU-50×50×0.50	300753306-0000-10	10	50	50	13	0,5
SHIMS-50-070-AV-50×50×0.70	300753314-0000-10	10	50	50	13	0,7
SHIMS-50-100-AW-50×50×1.00	300753527-0000-10	10	50	50	13	1
SHIMS-50-200-AX-50×50×2.00	300753535-0000-10	10	50	50	13	2
SHIMS-50-300-AY-50×50×3.00	300753543-0000-10	10	50	50	13	3
SHIMS-75-0025-BK-75×75×0.025	300752539-0000-10	10	75	75	21	0,025
SHIMS-75-005-BN-75×75×0.05	300752547-0000-10	10	75	75	21	0,05
SHIMS-75-010-BP-75×75×0.10	300752555-0000-10	10	75	75	21	0,1
SHIMS-75-015-BQ-75×75×0.15	300752563-0000-10	10	75	75	21	0,15
SHIMS-75-020-BR-75×75×0.20	300752571-0000-10	10	75	75	21	0,2
SHIMS-75-025-BS-75×75×0.25	300752580-0000-10	10	75	75	21	0,25
SHIMS-75-040-BT-75×75×0.40	300752598-0000-10	10	75	75	21	0,4
SHIMS-75-050-BU-75×75×0.50	300752601-0000-10	10	75	75	21	0,5
SHIMS-75-070-BV-75×75×0.70	300752610-0000-10	10	75	75	21	0,7
SHIMS-75-100-BW-75×75×1.00	300752628-0000-10	10	75	75	21	1
SHIMS-75-200-BX-75×75×2.00	300752636-0000-10	10	75	75	21	2
SHIMS-75-300-BY-75×75×3.00	300752644-0000-10	10	75	75	21	3
SHIMS-100-0025-CK-100×100×0.025	300752920-0000-10	10	100	100	32	0,025
SHIMS-100-005-CN-100×100×0.05	300752938-0000-10	10	100	100	32	0,05
SHIMS-100-010-CP-100×100×0.10	300752946-0000-10	10	100	100	32	0,1
SHIMS-100-015-CQ-100×100×0.15	300752954-0000-10	10	100	100	32	0,15
SHIMS-100-020-CR-100×100×0.20	300752962-0000-10	10	100	100	32	0,2
SHIMS-100-025-CS-100×100×0.25	300752970-0000-10	10	100	100	32	0,25
SHIMS-100-040-CT-100×100×0.40	300752989-0000-10	10	100	100	32	0,4

5.3.3 Shims

High-grade steel, corrosion-resistant

Individual sizes in packs of 10

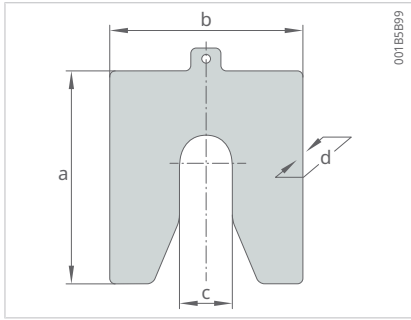


Shim

Ordering designation	Ordering number	Quantity	a	b	c	d
			mm	mm	mm	mm
SHIMS-100-050-CU-100×100×0.50	300752997-0000-10	10	100	100	32	0,5
SHIMS-100-070-CV-100×100×0.70	300753004-0000-10	10	100	100	32	0,7
SHIMS-100-100-CW-100×100×1.00	300753012-0000-10	10	100	100	32	1
SHIMS-100-200-CX-100×100×2.00	300753128-0000-10	10	100	100	32	2
SHIMS-100-300-CY-100×100×3.00	300753136-0000-10	10	100	100	32	3
SHIMS-125-0025-DK-125×125×0.025	300752180-0000-10	10	125	125	45	0,025
SHIMS-125-005-DN-125×125×0.05	300752199-0000-10	10	125	125	45	0,05
SHIMS-125-010-DP-125×125×0.10	300752202-0000-10	10	125	125	45	0,1
SHIMS-125-015-DQ-125×125×0.15	300752210-0000-10	10	125	125	45	0,15
SHIMS-125-020-DR-125×125×0.20	300752849-0000-10	10	125	125	45	0,2
SHIMS-125-025-DS-125×125×0.25	300752865-0000-10	10	125	125	45	0,25
SHIMS-125-040-DT-125×125×0.40	300752873-0000-10	10	125	125	45	0,4
SHIMS-125-050-DU-125×125×0.50	300752881-0000-10	10	125	125	45	0,5
SHIMS-125-070-DV-125×125×0.70	300752890-0000-10	10	125	125	45	0,7
SHIMS-125-100-DW-125×125×1.00	300752911-0000-10	10	125	125	45	1
SHIMS-125-200-DX-125×125×2.00	300753322-0000-10	10	125	125	45	2
SHIMS-125-300-DY-125×125×3.00	300753330-0000-10	10	125	125	45	3
SHIMS-200-0025-EK-200×200×0.025	300752660-0000-10	10	200	200	55	0,025
SHIMS-200-005-EN-200×200×0.05	300752679-0000-10	10	200	200	55	0,05
SHIMS-200-010-EP-200×200×0.10	300752687-0000-10	10	200	200	55	0,1
SHIMS-200-015-EQ-200×200×0.15	300752695-0000-10	10	200	200	55	0,15
SHIMS-200-020-ER-200×200×0.20	300752709-0000-10	10	200	200	55	0,2
SHIMS-200-025-ES-200×200×0.25	300752725-0000-10	10	200	200	55	0,25
SHIMS-200-040-ET-200×200×0.40	300752733-0000-10	10	200	200	55	0,4
SHIMS-200-050-EU-200×200×0.50	300752741-0000-10	10	200	200	55	0,5
SHIMS-200-070-EV-200×200×0.70	300752750-0000-10	10	200	200	55	0,7
SHIMS-200-100-EW-200×200×1.00	300752776-0000-10	10	200	200	55	1
SHIMS-200-200-EX-200×200×2.00	300752784-0000-10	10	200	200	55	2
SHIMS-200-300-EY-200×200×3.00	300752792-0000-10	10	200	200	55	3

5.3.4 Shims

High-grade steel, corrosion-resistant
Individual sizes in packs of 10
Fully layered, fully laminated
(peelable)



Shim

Ordering designation	Ordering number	Quantity	a	b	c	d
			mm	mm	mm	mm
SHIMS-RVS-35×30	302925902-0000-10	10	35	30	9	1
SHIMS-RVS-50×50	302925910-0000-10	10	50	50	13	1
SHIMS-RVS-75×75	302926020-0000-10	10	75	75	21	1
SHIMS-RVS-100×100	302926038-0000-10	10	100	100	32	1

6 Tools

For alignment, we recommend additional tools.

17 Additional tools



15 Tools

Tool	Application
1	to measure the axial play of the coupling and the thickness of the shims
2	to measure soft foot
3	to move the machine without damaging the machine or measuring instruments
4	to correctly tighten the fastening bolts

6.1 TL and TLS wedge spreaders

TL and TLS wedge spreaders are hydraulically actuated tools. A mechanical hydraulic pump presses hydraulic oil into the wedge. The wedge applies large forces and moves the machine without jolting.

Further information



medias | Product catalogue |
Wedge spreaders TL, TLS |
<https://www.schaeffler.de/std/2040>

6.2 Feeler gauges

Feeler gauges are used for the manual measurement and verification of soft foot.

Further information



medias | Product catalogue |
FEELER-GAUGE-100, FEELER-GAUGE-300 |
<https://www.schaeffler.de/std/2041>

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