TKBA 11

# SKF Belt Alignment Tool

## Precision tool allowing pulley and chain drive alignment


Belt-driven machinery is used in many industries and applications – including HVAC equipment, milling machines, compressors and camshafts.

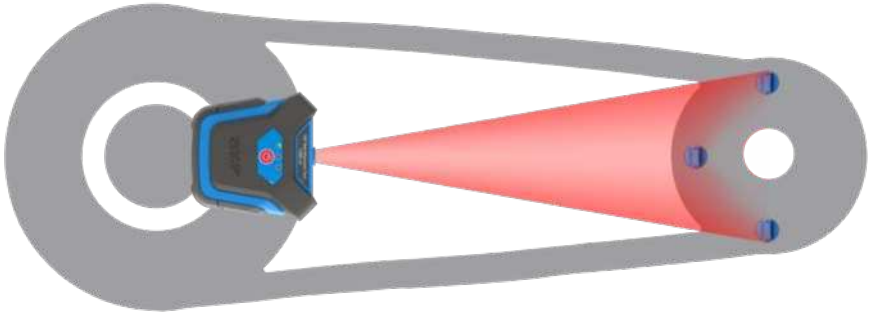
Aligning belt drives and chain drives accurately helps to reduce wear on belts, pulleys, chains and sprockets. As well as extending belt and pulley life, precise alignment also reduces machine vibration. Typical benefits of this include improved machine performance, a reduction in unscheduled downtime and lower energy costs.

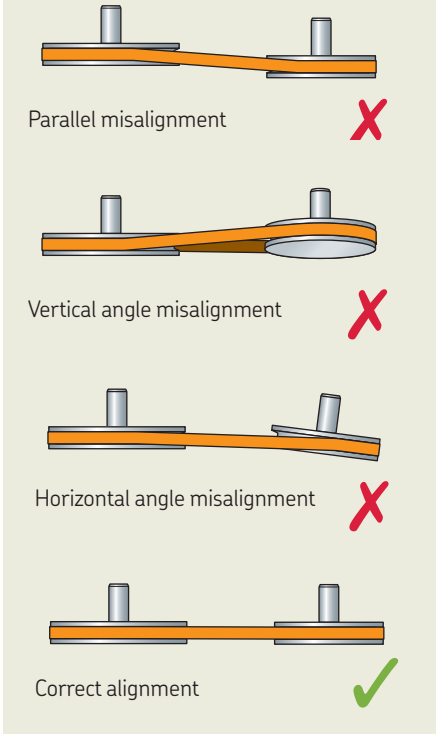
SKF's TKBA 11 Belt alignment tool is part of a series of tools offering a simple way to do this. It accurately aligns pulleys and sprockets and corrects for various types of misalignment.

The tool has two components; a laser-emitting unit and three passive targets. Each is attached quickly and easily – using a powerful magnet – to the inside or outside face of a belt pulley or chain sprocket. The TKBA 11 can be applied to most machines that use V belts, banded belts and ribbed belts – as well as those with chain sprockets.

A laser line is projected from the emitting unit to the passive targets - which are mounted on the opposite pulley. The tool then corrects for vertical angle, horizontal angle and parallel misalignment – including combinations of all three.

The TKBA 11 uses a red laser diode and can be used for distances up to 3 m *(10 ft)*. A sturdy housing, made from ABS and 2K polymers and an aluminium base helps ensure assembly stability and accuracy during alignment. It runs on 3 × AAA batteries for 32 hours of continuous operation. All components of the TKBA 11 – a single red laser emitter, three passive targets and three AAA batteries – are supplied in a sturdy carrying case.





# Accurate alignment of pulleys and sprockets

Belt drives are found in a variety of applications, including HVAC, pump installations, paper mills, flour mills, lathe machine, milling machines and conveyors. Sprocket drives are often used in agricultural machinery, compressors and engine camshafts.
TKBA Belt alignment tools are commonly used in power plants, recycling facilities, chemical plants and food & beverage production.

Key benefits of the TKBA 11 include:

- One laser emitter with three passive targets
- Uses a red laser diode and can be used for distances up to 3 m (10 ft).
- Fast, easy attachment
- Simplified alignment process
- Simultaneous adjustment of tension and alignment
- Applicable to most machines using V belts, banded belts, ribbed belts – as well as chain sprockets

## Technical data

| Designation | TKBA 11 |
|---|---|
| **Emitter unit** | |
| Type of laser | Red laser diode |
| Laser | 1 × Built-in class 2 laser, <1 mW, 635 nm |
| Laser line length | 2.4 m at 2 m *(7.9 ft at 6.6 ft)* |
| Measurement accuracy angular | Better than 0.02° at 2 m *(6.6 ft)* |
| Measurement accuracy offset | Better than 0.5 mm *(1/50" in.)* |
| Measurement distance | 50 mm to 3 m *(2 in to 10 ft)* |
| Control | Laser ON/OFF |
| Housing material | ABS + 2K and Aluminium base powder coat finish |
| **Receiver units** (Passive targets) | |
| Housing material | ABS |
| **Fixtures** | |
| Mounting | Magnetic, side mounted |
| Battery | 3 × AAA Alkaline type IEC LR03 |
| Operation time | 32h (continuous operation) |

| | |
|---|---|
| **Operating requirements** | |
| Operating temperature | 0 to 40 °C *(32 to 104 °F)* |
| Storage temperature | -20 to 60 °C *(-4 to 140 °F)* |
| Relative humidity | 10 to 90% RH non-condensing |
| IP rating | IP 40 |
| **Dimensions** | |
| Emitter unit | 98 × 97 × 52 mm *(3.86 × 3.82 × 2.05 in.)* |
| Receiver units | 40 × 25mm *(1.57 × 0.98 in.)* |
| Carrying case | 260 × 85 × 180 mm *(10.2 × 3.3 × 7.1 in.)* |
| **Weight** | |
| Emitter unit | 250 gr *(0.55 lb)* with batteries |
| Receiver units (3 pcs) | 35 gr *(0.08 lb)* |
| Total (incl. case) | 0.84 kg *(1.85 lb)* |
| **Case contents** | 1 × TKBA 11 emitter unit<br>3 × TKBA-TARGET passive targets<br>3 × AAA batteries<br>1 × Printed Instructions for use |

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Scan (or click) the code for the SKF Belt Alignment Tools comparison table

TKBA 21

# SKF Belt Alignment Tool

## Advanced tool allowing belt pulley and chain drive alignment



Belt-driven machinery is used in many industries and applications – including HVAC equipment, milling machines, compressors and camshafts.

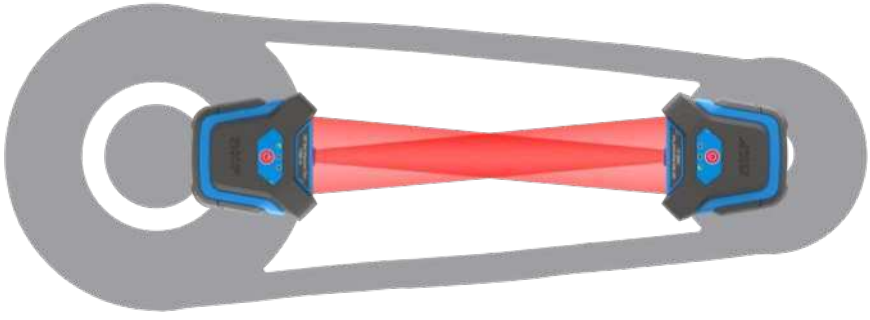
Aligning belt drives and chain drives accurately helps to reduce wear on belts, pulleys, chains and sprockets. As well as extending belt and pulley life, precise alignment also reduces machine vibration. Typical benefits of this include improved machine performance, a reduction in unscheduled downtime and lower energy costs.

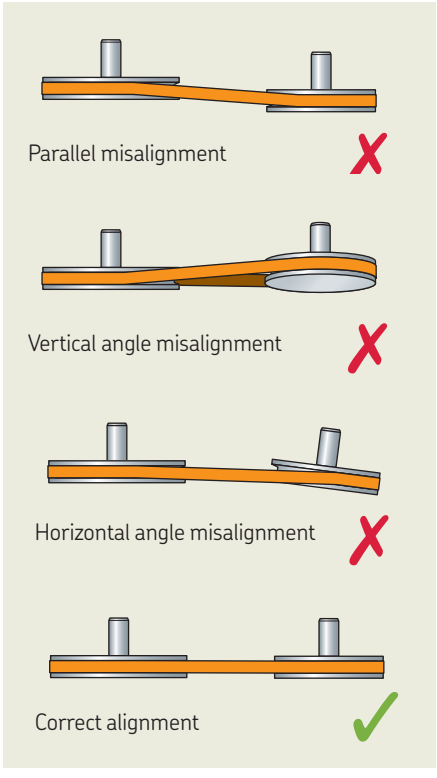
SKF's TKBA 21 Belt alignment tool is part of a series of tools offering a simple way to do this. It accurately aligns pulleys and sprockets and corrects for various types of misalignment.

The tool has two components: a laser-transmitting unit and a receiver unit. Each is attached quickly and easily – using a powerful magnet – to the inside or outside face of a belt pulley or chain sprocket. The TKBA 21 can be applied to most machines that use V belts, banded belts and ribbed belts – as well as those with chain sprockets.

A laser line is projected from the transmitter to the receiver – which is mounted on the opposite pulley. The tool then corrects for vertical angle, horizontal angle and parallel misalignment – including combinations of all three.

The TKBA 21 uses two red laser diodes for distances up to 3 m *(10 ft)*. Sturdy housings, made from ABS and 2K polymers and an aluminium base help ensure assembly stability and accuracy during alignment. All components of the TKBA 21 – two red laser transmitter/receiver units and six AAA batteries – are supplied in a sturdy carrying case.





## Accurate alignment of pulleys and sprockets

Belt drives are found in a variety of applications, including HVAC, pump installations, paper mills, flour mills, lathe machine, milling machines and conveyors. Sprocket drives are often used in agricultural machinery, compressors and engine camshafts.
TKBA belt alignment tools are commonly used in power plants, recycling facilities, chemical plants and food & beverage production.

Key benefits of the TKBA 21 include:

- Two laser transmitter/receiver units
- Uses red laser diodes and can be used for distances up to 3 m *(10 ft)*.
- Fast, easy attachment – using powerful magnets
- Simplified alignment process
- Simultaneous adjustment of tension and alignment
- Applicable to most machines using V belts, banded belts, ribbed belts – as well as chain sprockets

### Technical data

| Designation | TKBA 21 |
|---|---|
| **Transmitter/receiver units** | |
| Type of laser | Red laser diode |
| Laser | 1 × Built-in class 2 laser, <1 mW, 635 nm |
| Laser line length | 2.4 m at 2 m *(7.9 ft at 6.6 ft)* |
| Measurement accuracy angular | Better than 0.02° at 2 m *(6.6 ft)* |
| Measurement accuracy offset | Better than 0.5 mm *(1/50" in.)* |
| Measurement distance | 50 mm to 3 m *(2 in to 10 ft)* |
| Control | Laser ON/OFF |
| Housing material | ABS + 2K and Aluminium base powder coat finish |
| **Fixtures** | |
| Mounting | Magnetic, side mounted |
| Battery | 3 × AAA Alkaline type IEC LR03 |
| Operation time | 32h (continuous operation) |

| | |
|---|---|
| **Operating requirements** | |
| Operating temperature | 0 to 40 °C *(32 to 104 °F)* |
| Storage temperature | -20 to 60 °C *(-4 to 140 °F)* |
| Relative humidity | 10 to 90% RH non-condensing |
| IP rating | IP 40 |
| **Dimensions** | |
| Transmitter/receiver units | 98 × 97 × 52 mm *(3.86 × 3.82 × 2.05 in.)* |
| Carrying case | 360 × 110 × 260 mm *(14.2 × 4.3 × 10.2 in.)* |
| **Weight** | |
| Transmitter/receiver units | 250 gr *(0.55 lb)* with batteries each |
| Total (incl. case) | 1.62 kg *(3.57 lb)* |
| **Case contents** | 2 × TKBA 21 transmitter/receiver units<br>6 × AAA batteries<br>1 × Printed Instructions for use |

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TKBA 31

# SKF Belt Alignment Tool


## Pro advanced tool allowing pulley and chain drive alignment

Belt-driven machinery is used in many industries and applications – including HVAC equipment, milling machines, compressors and camshafts.

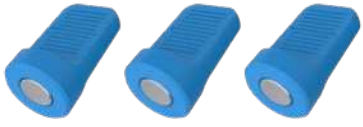
Aligning belt drives and chain drives accurately helps to reduce wear on belts, pulleys, chains and sprockets. As well as extending belt and pulley life, precise alignment also reduces machine vibration. Typical benefits of this include improved machine performance, a reduction in unscheduled downtime and lower energy costs.

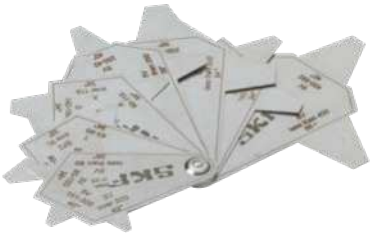
SKF's TKBA 31 Belt alignment tool is part of a series of tools offering a simple way to do this. It accurately aligns pulleys and sprockets and corrects for various types of misalignment

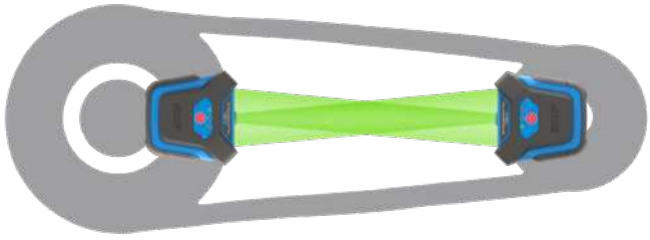

The tool has two components: a laser-transmitting unit and a receiver unit. Each is attached quickly and easily – using a powerful magnet – to the inside or outside face of a belt pulley or chain sprocket. The TKBA 31 can be applied to most machines that use V belts, banded belts and ribbed belts – as well as those with chain sprockets.

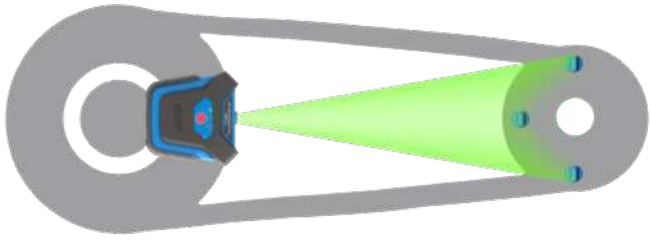
A laser line is projected from the transmitter to the receiver – which is mounted on the opposite pulley. The tool then corrects for vertical angle, horizontal angle and parallel misalignment – including combinations of all three.

The TKBA 31 uses a highly visible green laser diode. It can operate over distances up to 6 m *(20 ft)* – and can even be used outdoors in sunny conditions. Sturdy housings, made from ABS and 2K polymers and an aluminium base help ensure assembly stability and accuracy during alignment. All components of the TKBA 31, including two green laser transmitter/receivers, three passive targets, wear check gauge, tension checkers and six AAA batteries, are supplied in a sturdy carrying case.







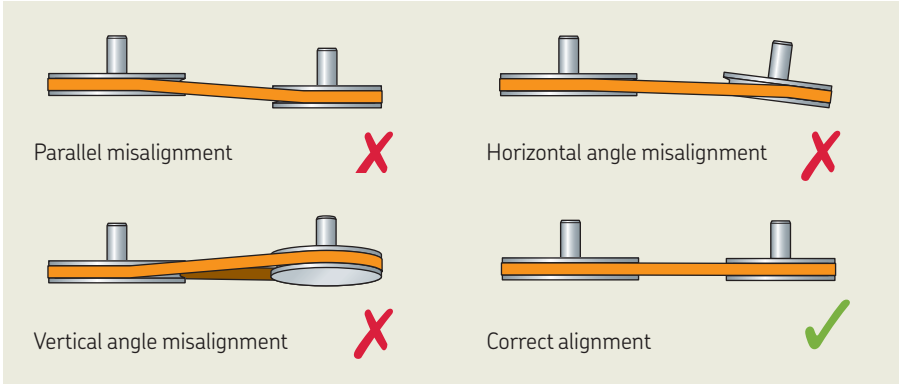


# Accurate alignment of pulleys and sprockets

Belt drives are found in a variety of applications, including HVAC, pump installations, paper mills, flour mills, lathe machine, milling machines and conveyors. Sprocket drives are often used in agricultural machinery, compressors and engine camshafts.
TKBA belt alignment tools are commonly used in power plants, recycling facilities, chemical plants and food & beverage production.

Key benefits of the TKBA 31 include:

- Two laser transmitter/receiver units
- Each unit uses a green laser diode and can be used for distances up to 6 m *(20 ft)* – including outdoors in sunny conditions
- Three targets
- Three belt tension checkers
- Wear check gauge
- Fast, easy attachment – using powerful magnets
- Simplified alignment process
- Simultaneous adjustment of tension and alignment
- Applicable to most machines using V belts, banded belts, ribbed belts – as well as chain sprockets




## Technical data

| Designation | TKBA 31 |
|---|---|
| **Transmitter/receiver units** | |
| Type of laser | Green laser diode |
| Laser | 1 × Built-in class 2 laser, < 1mW, 520 nm |
| Laser line length | 2.4 m at 2 m *(7.9 ft at 6.6 ft)* |
| Measurement accuracy angular | Better than 0.02° at 2 m *(6.6 ft)* |
| Measurement accuracy offset | Better than 0.5 mm *(1/50" in.)* |
| Measurement distance | 50 mm to 6 m *(2 in to 20 ft)* |
| Control | Laser ON/OFF |
| Housing material | ABS + 2K and Aluminium base powder coat finish |
| **Receiver units** (Passive targets) | |
| Housing material | ABS |
| **Fixtures** | |
| Mounting | Magnetic, side mounted |
| Battery | 3 × AAA Alkaline type IEC LR03 |
| Operation time | 6h (continuous operation) |

| | |
|---|---|
| **Operating requirements** | |
| Operating temperature | 0 to 40 °C *(32 to 104 °F)* |
| Storage temperature | -20 to 60 °C *(-4 to 140 °F)* |
| Relative humidity | 10 to 90% RH non-condensing |
| IP rating | IP 40 |
| **Dimensions** | |
| Transmitter/receiver units | 98 × 97 × 52 mm *(3.86 × 3.82 × 2.05 in.)* |
| Receiver units (Passive targets) | 40 × 25 mm *(1.57 × 0.98 in.)* |
| Carrying case | 360 × 110 × 260 mm *(14.2 × 4.3 × 10.2 in.)* |
| **Weight** | |
| Transmitter/receiver units | 250 gr *(0.55 lb)* with batteries each |
| Passive targets (3 pcs) | 35 gr *(0.08 lb)* |
| Total (incl. case) | 1.88 kg *(4.14 lb)* |
| **Case contents** | 2 × TKBA 31 transmitter/receiver units<br>3 × TKBA-TARGET passive targets<br>6 × AAA batteries<br>3 × Belt tension checkers of different loads<br>1 × Pulley groove gauge<br>1 × Printed Instructions for use |

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TKBA 40

# SKF Belt Alignment Tool

## High-accuracy tool for V-belt pulley alignment

Belt-driven machinery must be precisely aligned in order to increase belt and pulley life – and reduce both machine vibration and energy costs.

SKF's TKBA 40 Belt alignment tool offers a straightforward way to do this, by accurately aligning the grooves of V-belt pulleys. It can correct for vertical angle, horizontal angle and parallel misalignment.

The tool has two components – a laser-emitting unit and a receiver unit. It uses powerful magnets and V-guides to fit to the pulley's grooves, allowing the TKBA 40 to be attached quickly and easily.

The TKBA 40 offers a number of key benefits to the user:

- Fast, easy attachment – using powerful magnets
- Simplified alignment process
- Ability to align a wide range of V-belt pulleys, as four sizes of V-guide are supplied
- Simultaneous adjustment of tension and alignment
- Aligns grooves – rather than faces – of V-belt pulley, for optimum alignment of pulleys of dissimilar widths or faces

The TKBA 40 has a number of user-friendly features:

- Optional extra: a special side adaptor allows alignment of multi-ribbed and timing belt pulleys, as well as sprockets
- Maximum operating distance of 6 m *(20 ft)* accommodates many applications
- Relies on red laser diode, and supplied in sturdy carrying case
- Runs on 2 × AAA batteries for 20 hours' continuous operation

The laser unit emits a laser line that is projected onto the receiver unit. A three-dimensional target area on the receiver unit allows easy detection of the type of misalignment and how to correct it. Belt alignment is achieved when the laser line coincides with the three reference lines on the receiver unit.

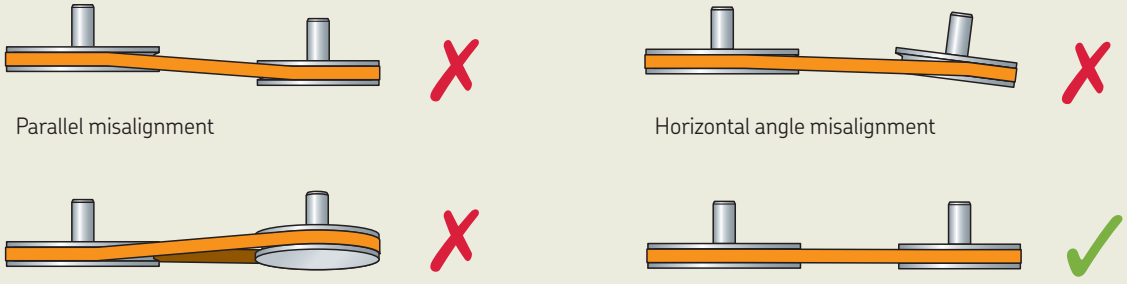
Scan (or click) the code for the SKF Belt Alignment Tools comparison table

## Highly accurate method for aligning V-belt pulleys

The TKBA 40 is supplied with four sizes of V-guide – to fit pulley grooves of most widths and types. Exchanging a V-guide for a smaller or larger one is a straightforward operation.
The TKBA 40 can be applied to a number of end-use applications:

**Belt drives**
- HVAC
- Pump installations
- Paper mills
- Flour mills
- Lathe machine
- Milling machines
- Conveyors

**Sprocket drives**
- Agricultural machinery
- Compressors
- Engine camshafts




### Technical data

| Designation | TKBA 40 |
|---|---|
| **Emitter unit** | |
| Type of laser | Red laser diode |
| Laser | 1 × Built-in class 2 laser, <1 mW, 632 nm |
| Laser line length | 3 m at 2 m *(9.8 ft at 6.6 ft)* |
| Measurement accuracy angular | Better than 0,2° |
| Measurement accuracy offset | Better than 0,5 mm *(0.02 in.)* |
| Measurement distance | 50 mm to 6 000 mm *(2 in. to 20 ft)* |
| Control | Laser on/off switch |
| Housing material | Extruded aluminium |
| **Receiver unit** | |
| Housing material | Aluminium |
| **Fixtures** | |
| Mounting | Magnetic, groove mounted<br>(optional side adapter TMEB A2) |
| V-guides | Size 1: 22 mm, short rods (3 × pairs)<br>Size 2: 22 mm, long rods (3 × pairs)<br>Size 3: 40 mm, short rods (3 × pairs)<br>Size 4: 40 mm, long rods (3 × pairs) |
| Battery | 2 × AAA Alkaline type IEC LR03 |
| Operation time | 20 hours continuous operation |
| **Operating requirements** | |
| Operating temperature | 0 to 40 °C *(32 to 104 °F)* |
| Storage temperature | –20 to +65 °C *(–4 to +150 °F)* |
| Relative humidity | 10 to 90% RH non-condensing |
| IP rating | IP 40 |
| Calibration certificate | Valid for two years |
| **Dimensions** | |
| Emitter unit | 70 × 74 × 61 mm *(2.8 × 2.9 × 2.4 in.)* |
| Receiver unit | 96 × 74 × 61 mm *(3.8 × 2.9 × 2.4 in.)* |
| Carrying case | 260 × 85 × 180 mm *(10.2 × 3.3 × 7.1 in.)* |
| **Weight** | |
| Emitter unit | 320 g *(0.7 lb)* |
| Receiver unit | 270 g *(0.6 lb)* |
| Total (incl. case) | 1,2 kg *(2.7 lb)* |
| **Case contents** | 1 × TKBA 40 emitter unit<br>1 × TKBA 40 receiver unit<br>2 × AA batteries<br>4 × Sizes of V-guides, 3 × of each size<br>1 × Printed instructions for use<br>1 × Calibration certificate |

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