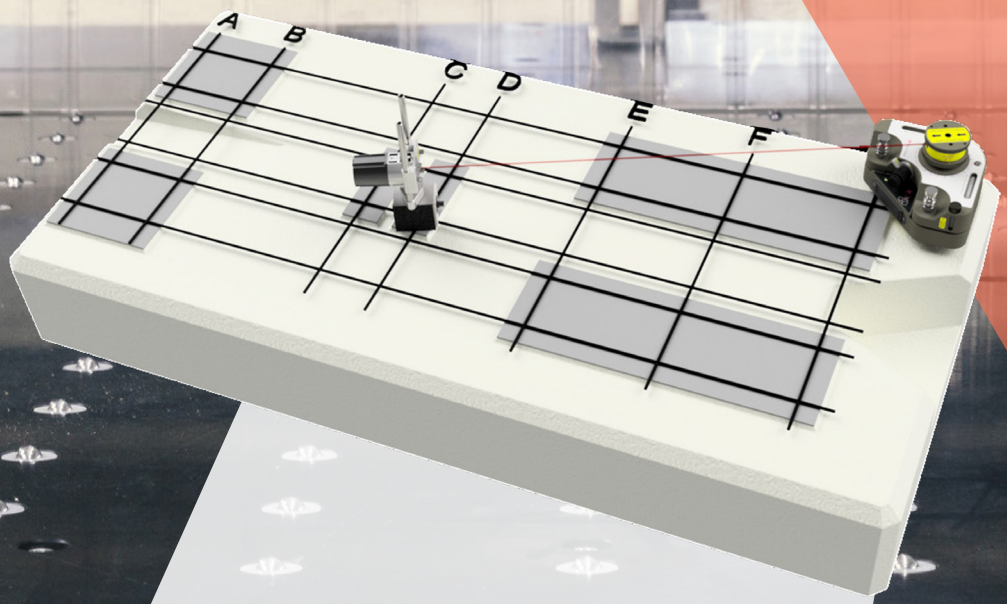
NXA Geometry

ULTIMATE ALIGNMENT SOLUTION

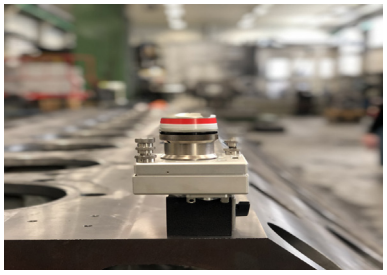


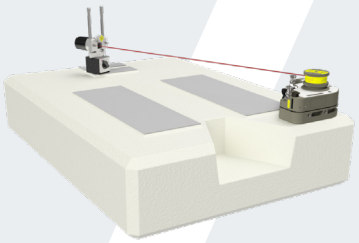
acoem
CREATING ENVIRONMENTS OF POSSIBILITY

NXA Geometry

ACOEM has a long history of developing geometric applications that come with an industry leading user friendliness.

The NXA Geometry is characterized by versatility with regards to both its hardware and software. The multitude of applications made possible by the fixture kits are numerous, such as rectangular and circular flatness, straightness for full- and halfbore, etc.





The NXA Geometry Packages

Versatility in Software

The Acoem NXA Geometry packages are characterized by their user friendliness and versatility. They contain software for straightness and flatness measurements, such as:

- Standard straightness
- Straightness for full and half bore applications
- Flatness measurements of foundations and machine beds when installing machines. Flatness measurements can be done with both rectangular and circular configurations.

User Friendly Graphic User Interface

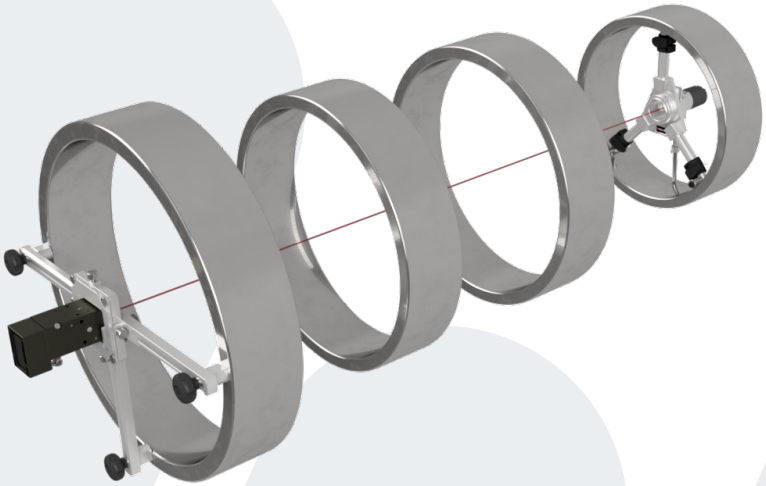
Our Graphical User Interface, Your Guide
We have developed a patented adaptive user interface for the Acoem NXA platform. This adaptive user interface guides the user throughout the job in logical and easy to follow steps. It will deliver measurement and correction values based on what the system finds during the measurement, thus minimizing the risk of operator errors.

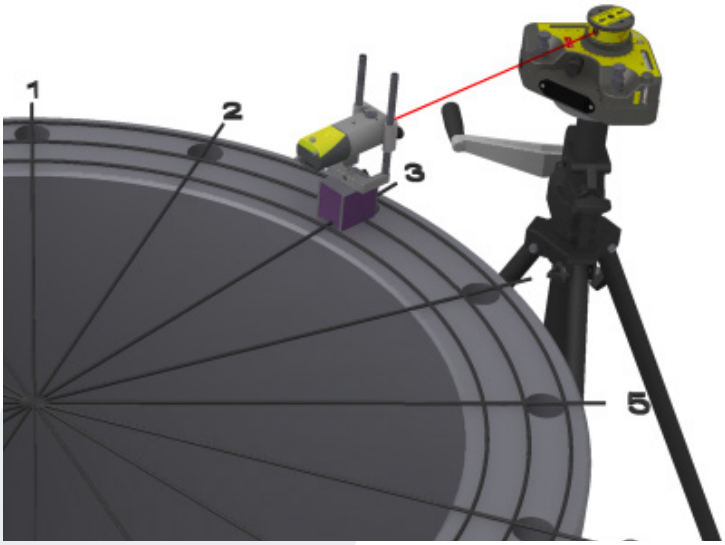
Versatility in Hardware

The Acoem NXA Geometry is available in two versions, basic and full. The basic version contains display unit, receiver and selected optional transmitter. Acoem NXA Geometry Full is a copy of the basic version, with one exception; it has two receivers. A second receiver used as reference is helpful during measurements over long distances and over a long period of time. You can then easily verify that the measurement set up is stable and has not been moved or disturbed in any way during the measurement process.

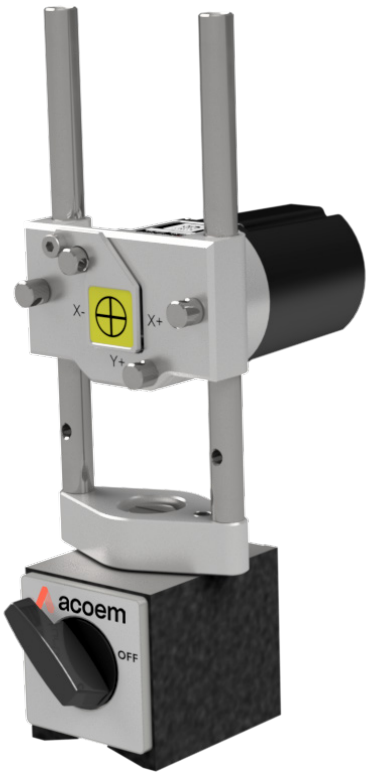
On-Site Evaluation and Report of Results

On-site evaluation of measurement results means that you can process saved measurement results in order to choose the best reference with our feature Best Fit. This will result in as few corrections as possible. The PDF report function provides a fast on site reporting available for converting saved measurement reports into PDF files. This eliminates the need to take a laptop/PC on site.





- Dual-axis live adjustment
- 6,5” industrial-strength touch screen
- Instant battery check in both on and off mode
- Integrated Bluetooth for wireless communication between display unit and smart sensors
- IP65 sealed rubberized frame
- Icon-based and color-coded user interface
- Animated arrows indicating adjustment orientation



- Dual-axis 20 mm PSD detector
- Slim design
- Rechargeable Li-Ion batteries
- Target integrated in fixture
- Integrated direction coordinates
- Inclinometer with high accuracy
- Integrated Bluetooth for wireless communication between display unit and smart sensor
- Instant battery check in both on and off mode

Measurements with the NXA Geometry Flatness

Rectangular Flatness

Typical applications are measurements of e.g. machine beds and machine foundations. For the latter application, it is particularly beneficial to combine flatness measurement with shaft alignment when installing rotating machinery. Prior to installing the machine, you check the foundation's surface for possible irregularities, a so called pre-alignment check. The geometric measurement, regardless of method starts out with a configuraton of the measurement object. When the registration of measurement points is done, you will have a view of the measurement results, color coded, for easier interpretation. As you proceed to the adjustment phase of the measurement process, you have a live view with arrows indicating the adjustment orientation.

Rectangular flatness across machine foundation.

Circular Flatness

A typical application is the measurement of flanges, e g wind turbine towers and machine foundations.

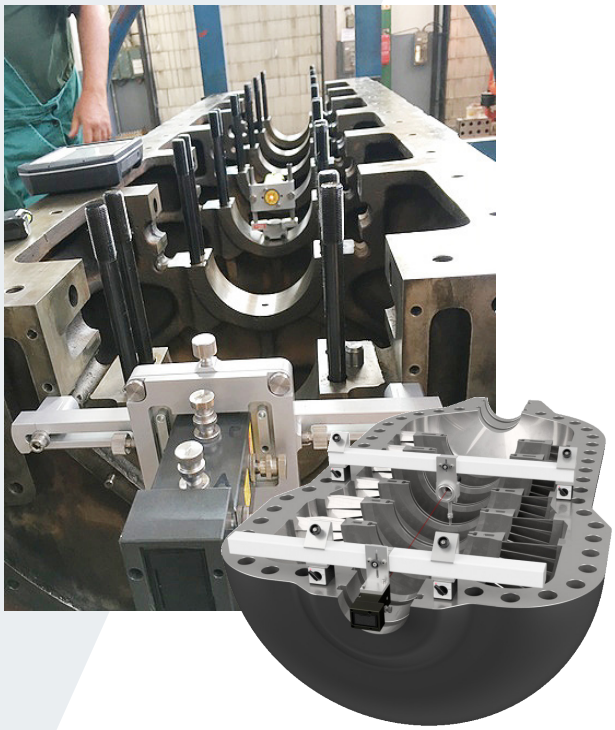
Measurements with the NXA Geometry Straightness

Straightness with One Single Point

Typical applications are measurements of machine guides, linear bearings, machine ways, and guide rails.

Straightness with Double Points (the Clock Method)

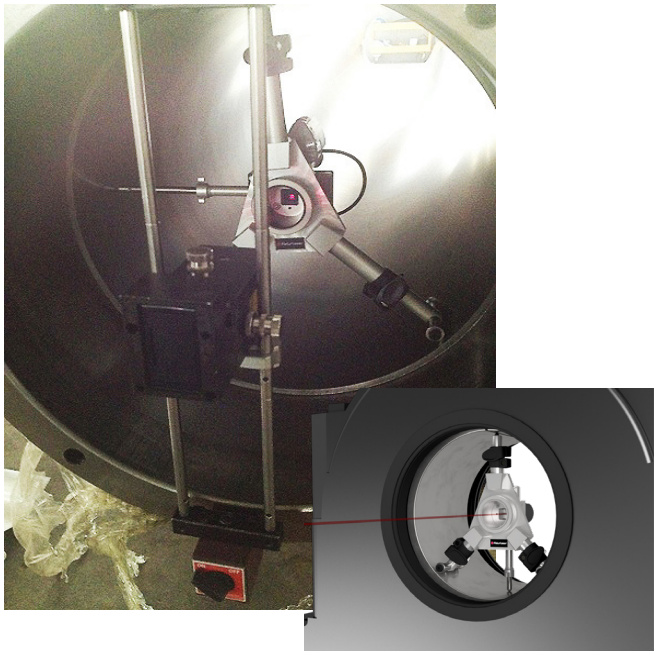
Typical applications are straightness measurements in bearing journals for e.g. compressors, turbines or machinery with split casings.



Straightness with Multi-Points (the Arc Angle Method)

Typical applications are fullbore measurements of bearing journals in diesel engines, compressors or gear boxes.

Measurements of bearing journals in split machine casings.



The NXA Geometry Packages

NXA Geometry Basic R2

- Display unit
- R2 sensor/receiver
- R2 sensor holder, cc 60 mm
- Rotational magnet base for the sensor holder
- Tape measure, 5 m
- 2 pcs of angled universal tools
- Power supply with 2 pcs of power cables US, EU
- Power supply with 2 USB ports, adapter plugs and USB cable A-micro B, 1,5 m
- USB memory
- NXA User Manual (GB)
- NXA Geometry User Manual (GB)

NXA Geometry Full R2

- Display unit
- 2 pcs of R2 sensor/receivers
- 2 pcs of R2 receiver holders, cc 60 mm
- 2 pcs of rotational magnet bases for the sensor holder
- Tape measure, 5 m
- 2 pcs of angled universal tools
- Power supply with 2 pcs of power cables US, EU
- Power supply with 2 USB ports, adapter plugs and USB cable A-micro B, 1,5 m
- USB memory
- NXA User Manual (GB)
- NXA Geometry User Manual (GB)

Complete your NXA Geometry package by choosing from the following transmitters:

T220

- For applications such as straightness, flatness, and squareness
- Robust design for measurement stability a high measurement accuracy
- Measuring distance up to 50 m
- Micrometer screw for rotational adjustment of the turret
- Built-in spirit levels and micrometer screws for adjustment of the laser transmitter
- Battery powered laser transmitter

T21

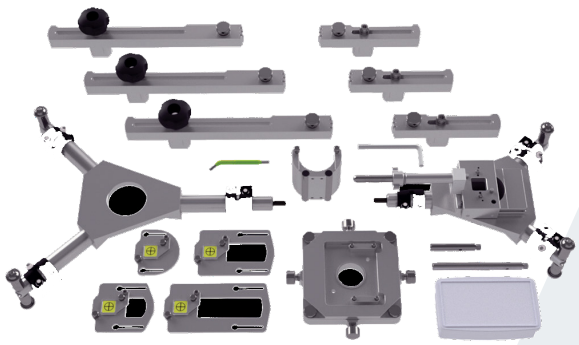
- For applications such as straightness, flatness, and squareness
- Compact design for measurement stability
- Measuring distance up to 20 m
- Manual adjustment of the laser turret
- Battery powered transmitter

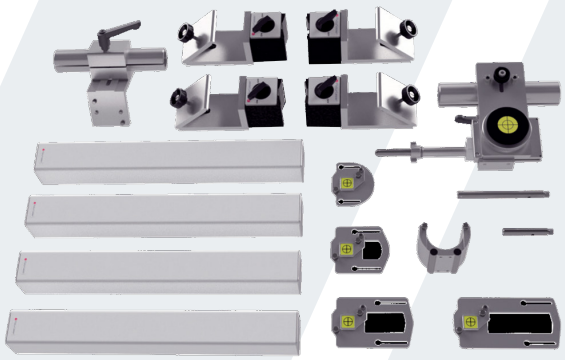
T110 / T111

- For straightness applications
- Rigid design for measurement stability
- Laser range up to 50 m
- Micrometer screw for adjustment of the laser transmitter in both horizontal and vertical level
- Powered by battery or AC-adapter

Bore Fixture Packages for the NXA Geometry

Two complete fixture kits are available for half- and fullbore measurements with the NXA Geometry package. Each kit contains fixtures for various bore diameters, ranging from ø80 mm up to ø1700 mm. One accessory kit is also available for each respective bore fixture package.





Fullbore fixture package, ø 80 - 620 mm (non-magnetic materials)

- **3 pcs of arms and magnets, ø 180 - 300 mm**
- **Bore receiver fixture, ø 80 - 300 mm**
- **3 pcs of arms and magnets, ø 300 - 600**
- **XY table**
- **Rotational unit for non-magnetic bore**
- **Non-magnetic bore fixture, ø 290 - 400 mm**
- **Non-magnetic bore fixture, ø 400 - 620 mm**
- **4 pcs of rods, ø 10 mm, length 60 - 120 mm**

Accessory kit
4 pcs extension legs for fullbore, ø 620 - 1500 mm (non-magnetic materials)

Halfbore fixture package, ø 80 - 750 mm

- **Bore receiver fixture, ø 80 - 300 mm**
- **4 pcs of arms for halfbore, 400 mm**
- **Expanding joint for bore**
- **Magnetic base for transmitter profile**
- **Rotational unit for bore (non-magnetic materials)**
- **Mounting plate for rotation unit**
- **4 pcs of rods, ø 10 mm, length 60 - 120 mm**

Accessory kit
Extension arms for halfbore, ø 750 - 1500 mm

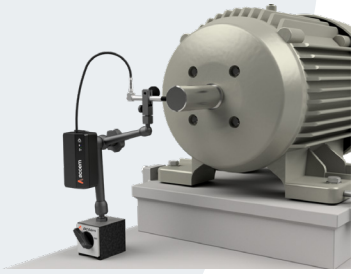
Accessories

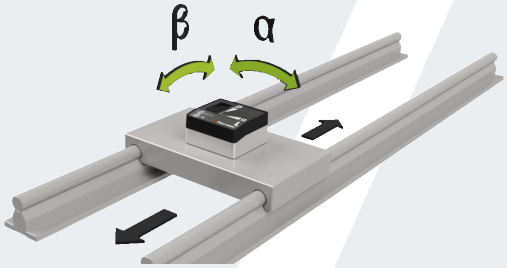
The ROP, Level and the angular prism will render a greater versatility and unique capabilities to the NXA Geometry platform.

ROP

The ROP is a battery-powered displacement probe connecting wirelessly via Bluetooth to the NXA display unit. It can be used for:

- checking bearing clearances
- checking axial and radial runout on flanges
- measurement during the positioning of machine components





Level

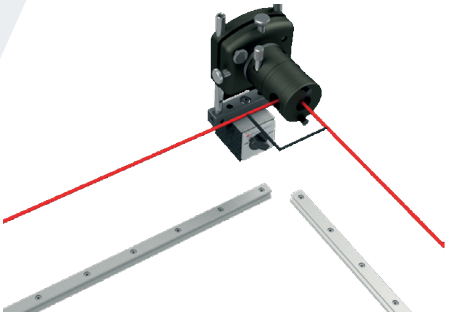
The Level is a battery-powered two-axis measuring sensor that connects wirelessly via Bluetooth to the NXA Pro display unit. It can be used:

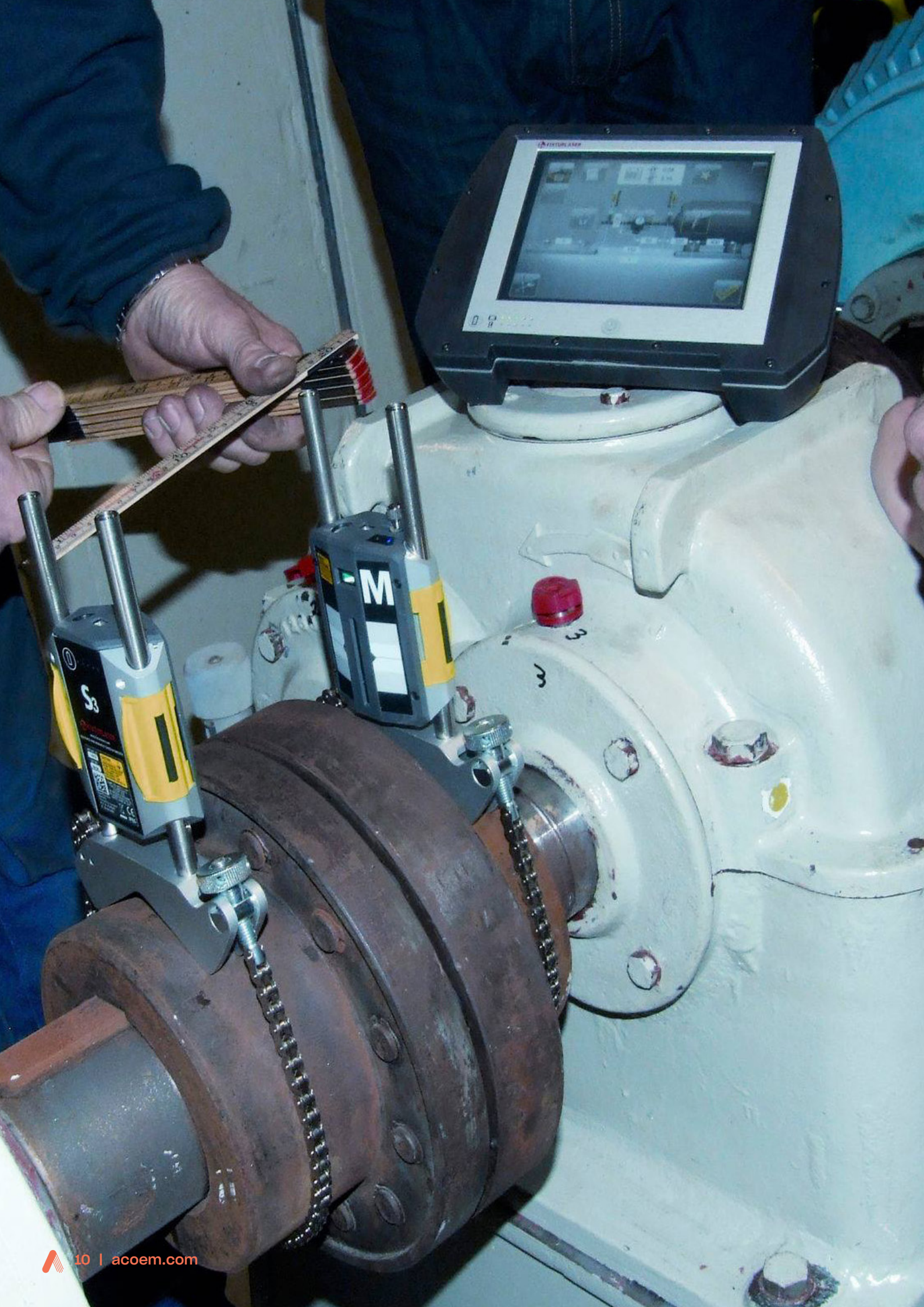
- as a digital level
- for levelling machines machine parts during installation
- for measuring twist on linear guideways
- for measuring parallelism between machine foundations.

Angular Prism

The angular prism is used for measurement of perpendicularity and parallelism together with any transmitter, R2 sensor and a display unit. It is useful when measuring e g:

- parallelity between two linear guides
- perpendicularity of flanges
- squareness between linear guides/machine components





NXA Geometry - Technical specifications

DISPLAY UNIT	
Operating Temp	-10 to 50°C (14 to 122°F)
Storage temp	-20 to 70°C (-4 to 158°F)
Weight	1,2 kg (2,6 lbs) with battery
Dimensions	124 mm x 158 mm x 49mm (4,9 in x 6,2 in x 1,9 in)
Environmental protection	P 65 (Dust tight and protected against water jets)
Display size	6,5" (165 mm) diagonal (133 x 100 mm)
Battery charging time (system off, room temperature)	1 hour charge – 5 hours operating time
Operating time	10 hours continuous use (with 50% LCD back light)

R2 SENSOR / RECEIVER	
Operating Temp	temperature: 0 to 50°C (32 to 122°F)
Storage temp	-20 to 70°C (-4 to 158°F)
Weight	116 g (4.1 oz)
Dimensions	57 x 50 x 40 mm (2.2 x 2.0 x 1.6 in)
Detector size	20 mm x 20 mm (0.8 in x 0.8 in)
Measurement accuracy	1% ± 3 µm
Detector resolution	1 µm
Detector	2-axes PSD
Wireless communication	Class 1 Bluetooth transceiverwith multi-drop capability
Communication range	10 m (33 ft)
Operating time	12 hours continuous use

TRANSMITTER T110 / 111 (BATTERY OR AC-ADAPTER)	
Operating Temp	temperature: 0 to 50°C (32 to 122°F)
Storage temp	-20 to 70°C (-4 to 158°F)
Weight	1100 g
Laser class	Class 2
Dimensions	60 x 60 x 140 mm (2.4 x 2.4 x 5.5 in)
Measuring distance	Up to 50 meters (164 feet)
Power supply	2 batteries type LR6
Operating time	15 hours continuous use

T220 TRANSMITTER	
Operating Temp	temperature: 0 to 50°C (32 to 122°F)
Storage temp	-20 to 70°C (-4 to 158°F)
Weight	3500 g
Laser class	Class 2
Dimensions	175 x 175 x 115 mm (6.9 x 6.9 x 4.5 in)
Measuring distance	Up to 50 meters (164 feet)
Laser sweep flatness	±0,02 mm/m
Spirit level resolution	0.02 mm/m
Angular prism accuracy	±0,02 mm/m
Power supply	4 batteries type LR6
Operating time	15 hours continuous use

T21 TRANSMITTER	
Operating Temp	temperature: 0 to 50°C (32 to 122°F)
Storage temp	-20 to 70°C (-4 to 158°F)
Weight	1150 g
Laser class	Class 2
Dimensions	100 x 103 x 109 mm (3.9 x 4.1 x 4.3 in)
Measuring distance	Up to 20 meters (66 feet)
Laser sweep flatness	±0,02 mm/m
Spirit level resolution	0,3 mm/m
Angular prism accuracy	±0,02 mm/m
Power supply	2 batteries type LR6
Operating time	15 hours continuous use

About **Acoem**

Creating environments of possibility

At Acoem, we create environments of possibility - helping organisations find the right balance between progress and preservation - safeguarding businesses and assets, and maximising opportunities while conserving the planet's resources. We deliver unrivalled, interoperable AI-powered sensors and ecosystems that empower our customers to make enlightened decisions based on accurate information.

Together with 150 distributors, our 800+ employees work across 27 offices, 5 manufacturing facilities and 3 R&D centres in 11 countries to provide trusted, holistic data solutions for customers worldwide.

Acoem links possibilities with protection.

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