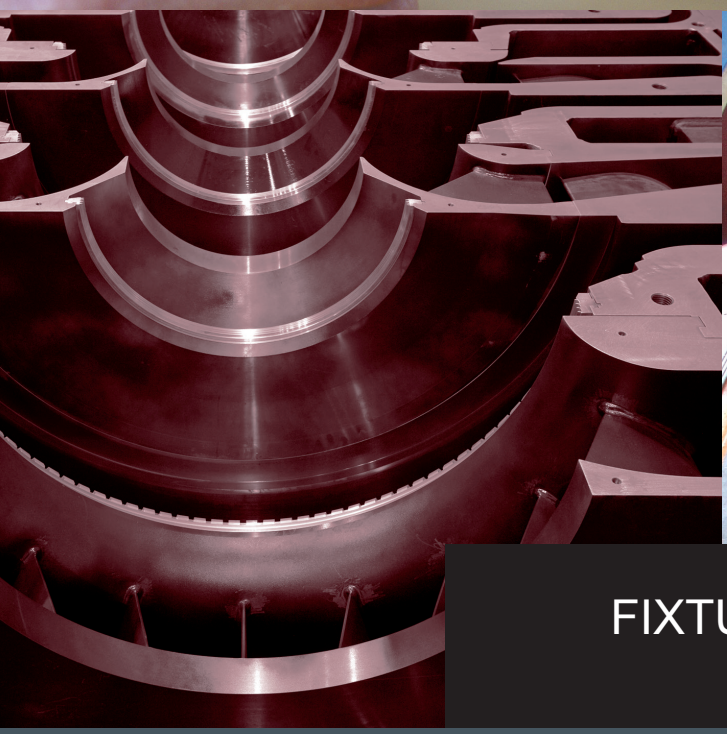


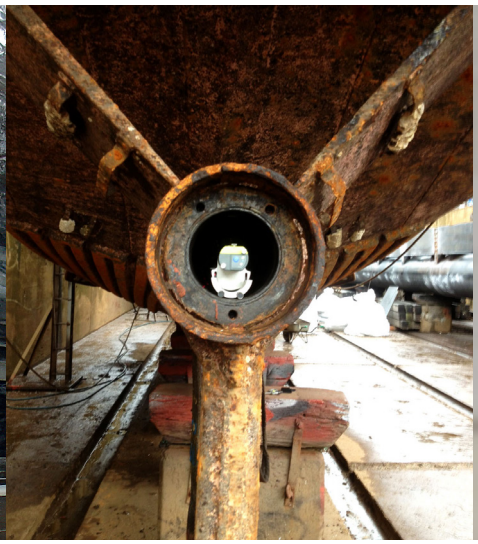
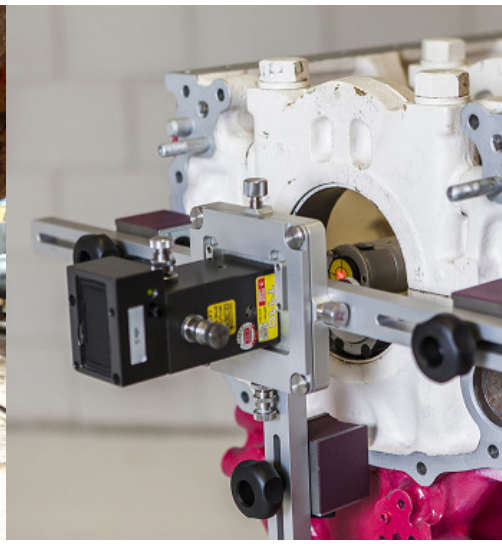
FIXTURLASER Geometry Measurements

Fixturlaser

Brand of ACOEM

Welcome to our world

Since the very beginning in 1984, Fixturlaser (brand of ACOEM) has helped industries throughout the world to achieve more profitable and sustainable production. We have reached where we are today by having the courage to think beyond the norm and follow slightly unconventional paths. We have had the courage to make mistakes and find new directions. Through our resolve, ambition and knowledge we have become a global player and a leader in innovative, user-friendly shaft alignment.

Fixturlaser NXA Geometry
The Fixturlaser NXA Geometry package is characterized by its user friendliness and versatility. It contains software for straightness and flatness measurements, such as:

- Standard straightness for measurement of e.g. machine beds, guideways or support structures.
- Straightness for full and half bore applications when measuring e.g. bearing journals for compressors and turbines with split casings.
- All these straightness measurement methods are available to you during the entire measurement process; e.g. if you start by measuring one point as full bore, you can choose to measure the next one as either standard straightness or as half bore.
- Flatness measurements of foundations and machine beds when installing machines. Measurements on foundations can be done with both rectangular and circular configurations.

User Friendly Graphic User Interface
The graphic user interface is intuitive and 3D animated, with icons and color coded symbols to guide you throughout the measurement and adjustment process.

Live and Micron Resolution Values
You have live values during measurement and simultaneous live adjustment, in both vertical and horizontal orientation (X and Y values), during the adjustment process. Measurement results are displayed in micron resolution.

Green Benefits
Precision geometric measurements will result in fewer unplanned stoppages and correctly installed machinery will result in lower operating costs. By minimizing wear, production stoppages and costs, you will also contribute to a more sustainable environment!

Fixturlaser

Fixturlaser NXA Geometry

Some features relating to the geometry applications are:

Best Fit:
You have the option to allow the system to calculate a reference line or plane, which illustrates the best fit, i.e. the least deviation for each measurement point in relation to the reference line or plane that has the least deviation of the measurement points.

Express Navigation:
When you select which points to measure, you will find that the highlighted measurement point is surrounded by its neighbor points enabling you to choose them without exiting the measurement screen.

Use of Reference Sensor:
With an additional sensor, you can use it as a reference sensor and zero it at the start of the measurement process. You are then able to control, without exiting the measurement screen, that the transmitter has not been moved during the actual measurement, which would cause incorrect measurement values.

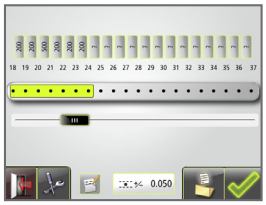
The Touch and Release:
The system gives you full freedom to record your measurements in any order you want. The touch and release function makes it easy to select the point to measure. Touch the screen, slide your finger across the display and release the finger at the point you want to measure. Together with the color screen and the graphical interface, you can very quickly manoeuver in your configuration even if many measuring points have to be registered.

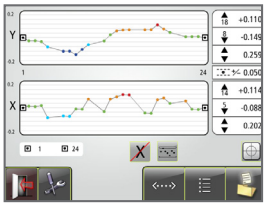
Fixturlaser

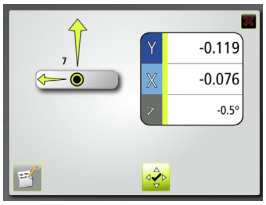
Geometric Applications

Straightness

The straightness application is measured in two axis, where the laser beam is used as reference.The deviation in distance between the laser beam and the measurement object is measured in two or more positions with the use of a receiver.
The program allows for up to 99 points to be measured.
Typical applications are measurements of machine guides, machine beds, machine ways, and guide rails.

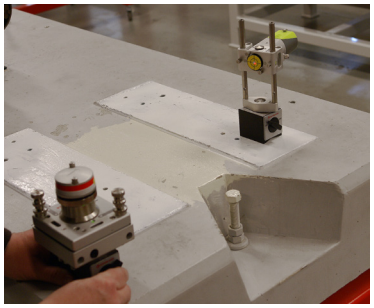


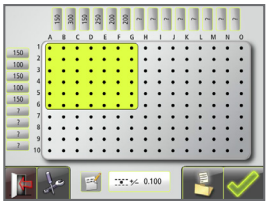


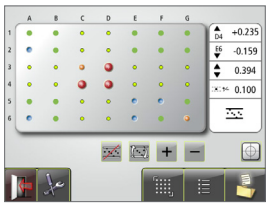


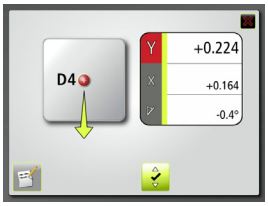
Flatness

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. First you check the foundation's surface for possible irregularities, a so called pre-alignment check. If any, adjust these. Install the machine and check for possible misalignment with a laser based shaft alignment tool like the Fixturlaser NXA system.
The program allows for up to 150 points (10 x 15) to be measured.



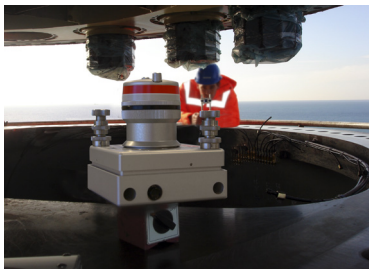


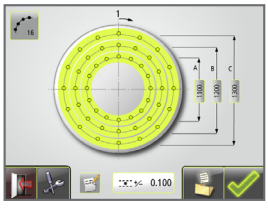


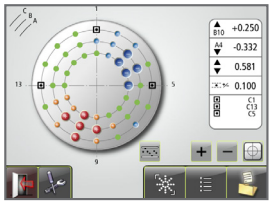


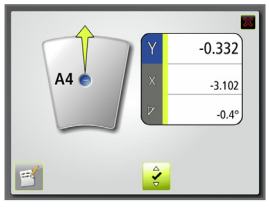
Flatness

This application uses a laser plane as reference. The deviation in distance between the laser plane and the measurement object is measured in one or more positions with the use of the receiver.
The program allows for up to three circles with 99 points on each circle to be measured.
A typical application is the measurement of flanges and machine foundations.









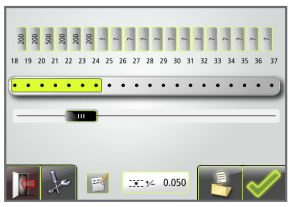
Fixturlaser

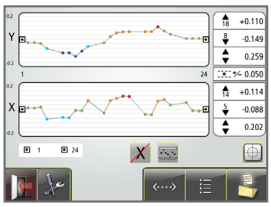
Geometric Applications

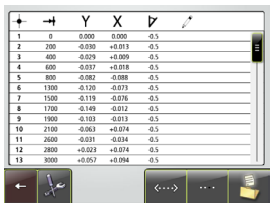
In the straightness measurement programs, straightness can be measured in two axes. The laser beam is used as reference and the deviation in distance between the laser beam and the measurement object is measured in two or more positions, with the use of the receiver.

Straightness

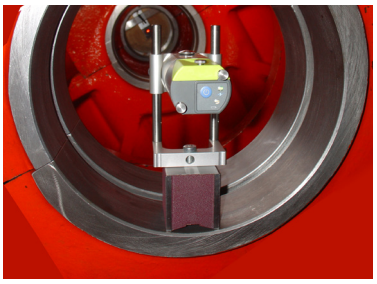
The laser beam is set roughly parallel to a surface or an object. Up to 99 measurement points can be recorded by moving the receiver in different positions along the measurement object. The straightness of the object can be evaluated by choosing two points as reference or making a best fit calculation. The measurement can be made as a single or dual axis measurement.



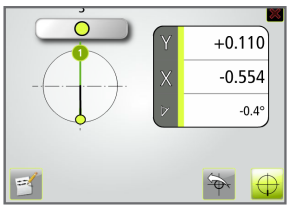


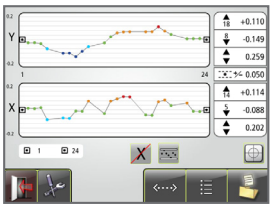


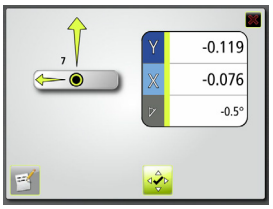
Straightness with the Clock Method



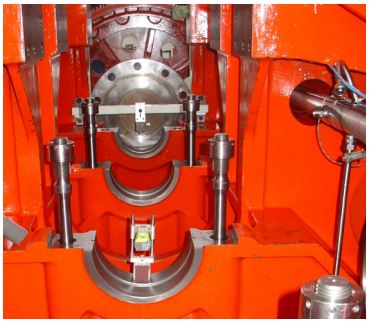
Straightness with the clock method is used to determine the center position of full bores, horizontally or vertically. The laser beam is set roughly to the center line and each bore center is measured by rotating the receiver 180 degrees in each bore. Typical applications are bore measurements of bearing journals in diesel engines, compressors or gear boxes.



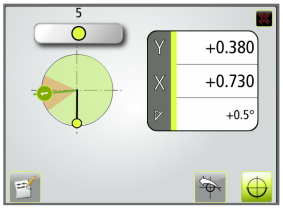


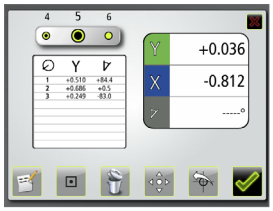


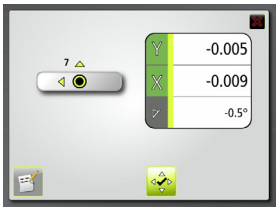
Straightness with the Arc Angle Method



Straightness with the Arc Angle method is used to determine the center position of full or half bores, with a horizontal center line. The laser beam is set roughly to the center line and each bore center is measured by rotating the receiver in three or up to nine positions in each bore. Typical applications are straightness measurements in bearing journals for e.g. compressors, turbines or machinery with split casings.







Fixturlaser

The Fixturlaser NXA Geometry Packages

The Fixturlaser NXA Geometry Basic and Full packages include the following software:

- Standard straightness for measurement of e.g. machine beds, guideways or support structures.
- Straightness for full and half bore applications when measuring e.g. bearing journals in gear boxes, diesel engines, compressors, and turbines with split casings.
- Flatness measurements, both rectangular and circular, of foundations and machine beds when installing machines.

FIXTURLASER NXA Geometry Basic

FIXTURLASER NXA Geometry Full

Complete the package with a choice from these 4 transmitters

T21
The 21 laser transmitter is battery powered. The laser transmitter has a built-in angular prism in a turret allowing the creation of a 360° laser plane. Laser beam levelling can be made in the X and Y coordinates. The turret can easily be detached giving a laser beam perpendicular to the X-Y plane.

T220
Battery powered laser transmitter of diode type with built-in spirit levels and an angular prism. It is equipped with micrometer screws for adjustment of the laser beam in horizontal and vertical level. The optical head can be rotated 360° in order to project a reference plane with the laser beam.

T110
Battery powered laser transmitter with built-in micrometer screws for adjustment of the laser beam in horizontal and vertical level.

T111
Laser transmitter with built-in micrometer screws for adjustment of the laser beam in horizontal and vertical level. The T111 is powered by the supplied AC-adapter (110/230 Volts).

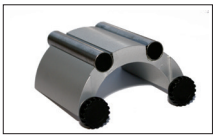
Fixturlaser RS sensor unit

A reference receiver, a second receiver, is used in applications where you want to check that the reference, the laser beam, has not moved during the measurement sequence. The reference receiver is normally mounted at far distance from the laser transmitter to more easily detect any movements of the laser. When the laser beam is adjusted to its final position and the reference is established, the values from the reference receiver are set to zero in the Sensor Display. It is possible, at any time during the measurement, to enter the Sensor Display and check that the values are still zero.

Fixturlaser

Bore Fixture Kits

Two different fixture kits are available for full and half bore measurements with the Fixturlaser NXA Geometry package. Each kit contains fixtures for various bore diameters, ranging from ø80 mm up to ø1600 mm.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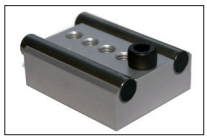
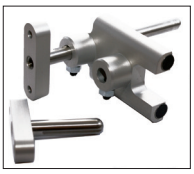

2.


3.

BORE Fixture kit Ø 80-500 mm
1. Fixture, RM/RS bore ø80-140mm
2. Magnet, low profile
3. Fixture, RM/RS w level 93-170 mm
4. Magnetic probe
6 . Transmitter fixture, 400 mm arm
7. Expander joint
8. Magnetic base
9. Receiver holder cc 80 mm


4.

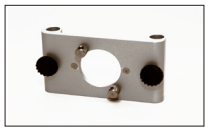

5.


6.

BORE Fixture kit Ø 300-1600 mm
3. Fixture, RM/RS w level 93-170 mm
4. Magnetic probe
5. Magnetic base half bore
6 . Transmitter fixture, 400 mm arm
7. Expander joint
8. Magnetic base
9. Receiver holder cc 80 mm
10. Extension fixture 100-300 mm


7.


8.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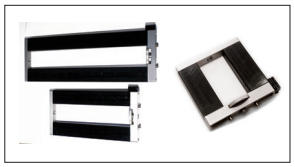
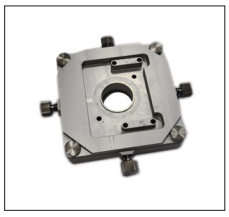

10.

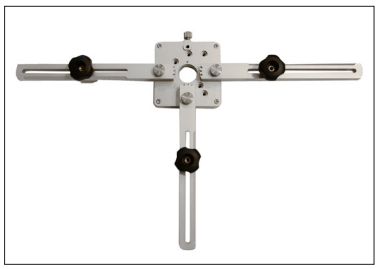
1. Fixture, RM/RS bore ø80-140mm 2. Magnet, low profile 3. Fixture, RM/RS w level 93-170 mm 4. Magnetic probe 5. Magnetic base half bore 6. Transmitter fixture, 400 mm arm 7. Expander joint 8. Magnetic base 9. Receiver holder cc 80 mm 10. Extension fixture 100-300 mm

Accessories

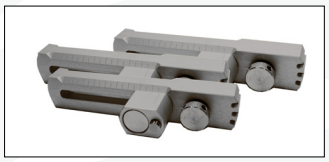


XY table
Bracket for fine adjustment of the laser transmitter

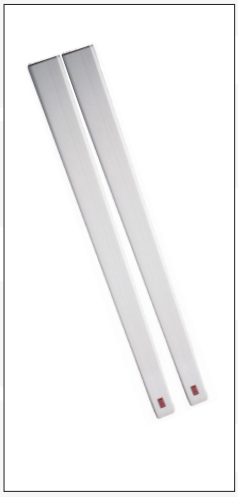
3 long arms with magnets for XY table, ø300 - 600 mm
Long arms for XY table



XY table including long arms
Centering bracket for laser transmitter during bore measurement



3 short arms and magnets for XY table, ø180 - 300 mm
Short arms for XY table



Fixtures for transmitter 800 mm
Arms for transmitter fixture 800 mm

Fixturlaser

Display Unit

Weight:	1,2 kg (2,6 lbs) with battery
Dimensions:	124 mm x 158 mm x 49 mm (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)
Gyroscope:	6-Axis MEMS Inertial Motion Sensor with drift compensation and automatic field calibration
Battery charging time (system off, room temperature):	1 hour charge – 5 hours operating time
Operating time:	10 hours continuous use (with 50% LCD backlight)

T110 Transmitter

Operating Temp:	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 continuously

XA RM Sensor Unit

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

BT2 Wireless Unit

Weight:	190 g (6.7 oz) with batteries
Dimensions:	82 mm x 50 mm x 40 mm (3.2 in x 2.0 in x 1.6 in)
Wireless communication:	Class II Bluetooth transmitter
Communication range:	10 m (33 ft)
Power supply:	3 AA (LR6) batteries
Operating time:	10 hours continuously

T21 Transmitter

Operating Temp:	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
Angular prism accuracy:	±0,02 mm/m
Power supply:	2 batteries type LR6
Operating time:	15 hours continuously

T220 Transmitter

Operating Temp:	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
Angular prism accuracy:	±0,02 mm/m
Power supply:	4 batteries type LR6
Operating time:	15 hours continuously

ACOEM AB is a global player and leader in developing innovative, user-friendly equipment for shaft alignment. By helping industries worldwide to become perfectly aligned, and eliminating anything that might not be, we minimize unnecessary wear and production stoppages. This will ultimately make our customers more profitable and our environment more sustainable.

LIFETIME WARRANTY

ISO 9001
ISO 14001

CAUTION

acoem

P.O. Box 7 SE - 431 21 Mölndal - SWEDEN
Tel: +46 31 706 28 00 - Fax: +46 31 706 28 50
E-mail: info@acoem.se - www.fixturlaser.com

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