



fixturlaser.co.uk



- ✓ Express Machine Health Check
- ✓ Bearing Defender & Library
- ✓ Machine Defender with Accurex™
- ✓ Horizontal Shaft Alignment
- ✓ Vertical Shaft Alignment

Enhanced Mechanic Solution

Empowering the Mechanic with automatic, on-the-spot machine diagnostics combined with a precision shaft alignment tool makes the RT-200 a truly unique maintenance product.


With a detailed report of the machine's health, the road to corrective action for the mechanic is now shorter than ever, guaranteeing both production uptime and product quality.


Guide-U™


Our patented icon-based, color-coded, graphics user interface is your measurement Guide to measure, align and document each job. In order to minimise the risk of operator errors, we further refined our process driven icon-based, adaptive user interface for the RT-200 system.

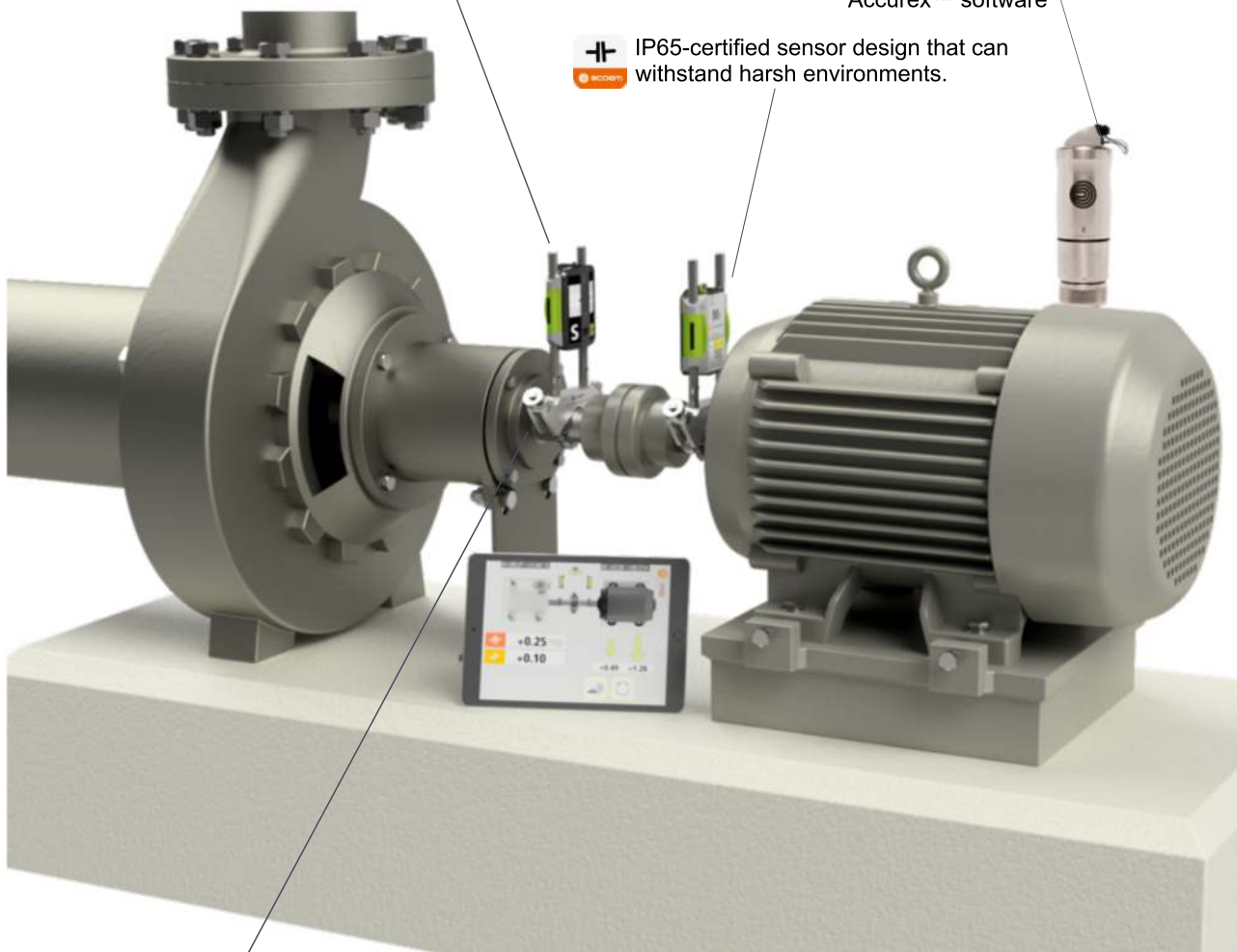
This adaptive user interface guides the user throughout the job, in logical, easy to follow steps. It will deliver measurement and correction values based on what the system finds during the measurement process. This eliminates confusion for the less-experienced user and provides ease of access throughout the measurement and correction processes.


To add to the enhanced user experience, we have given the interface a game-like 3D graphic look facilitating unmistakable interpretation of all features and functionality.

 30 mm digital sensor detectors + line lasers eliminate rough alignment and make for the shortest setup time

 Patented Wireless Triaxial Measurement Detects faults on machines more accurately and reliably than any previous automatic diagnostic tool thanks to the patented Accurex™ software

 IP65-certified sensor design that can withstand harsh environments.



 Pre-mounted fixtures and small sensors provide for quick setup, especially on machines with limited space.

Leading Edge Technology for Innovative Shaft Alignment

Fixturlaser realised an industry-first with the introduction of touch screens in 1996 and we have maintained this edge by continuing to introduce game-changing technologies that include being first to the market with:-

- ✓ The PDF function provides fast on site report
- ✓ Easy to use 3D graphics user interface
- ✓ Dual digital sensor with dual, visible line lasers
- ✓ Wireless communication between display unit and smart sensors
- ✓ Inclinometers in both smart sensors

BEARING DEFENDER

Bearing Health Status in Seconds

ISO 10816-3

ACOEM has 30+ years of experience in the predictive maintenance of rotating machinery. Our worldwide presence includes more than 65 countries with solutions used throughout a wide range of industries.

ACOEM BEARING DEFENDER BEARING HEALTH STATUS IN SECONDS

Easy to use and incredibly fast, a first level of bearing health assessment can be achieved by all levels of personnel. It provides an easy leverage of improvement on your reliability program, especially when the reliability teams' resources are stretched and needing to focus on the most critical assets. With its unique measuring performance, the Bearing Defender will advise you if it is safe for your machine to continue spinning without risk.

A first level warning indicates automatically an abnormal behaviour resulting from bearing defects, unbalance or misalignment, or other faults. Combining data from three axes, even faults occurring in a single axis can be detected with one measurement.



Machine Defender

Machine Defender's unique automatic machine diagnostic tool Accurex™ is built into the system's firmware. The patented machine diagnostics feature provides unbeatable fast, relevant and reliable results for a wide range of machine problems such as unbalance, alignment errors, cavitation, structural resonances, bearing problems, and more. Machine Defenders machine diagnostic function differs from all other systems.

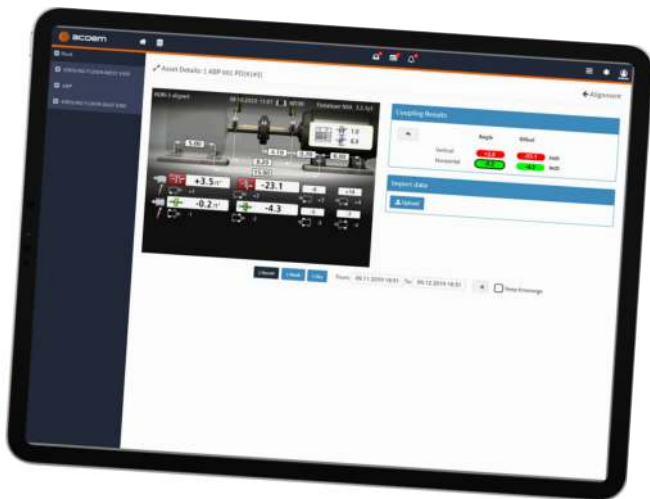


Hassle Free Shaft Alignment

No doubt and no guessing games thanks to the industry-first use of two smart sensors with dual visible laser beams and inclinometers, monitoring both shaft positions simultaneously.

Did you interrupt the laser beam or move the machine's position out of detector range? Not a problem, our smart sensors will resume with an updated machine position and always deliver live values to you with our very own TPS™.





Accurex™

Patented software to detect:-

- ✓ Unbalance
- ✓ Misalignment
- ✓ Bearing defects – wear, lubrication
- ✓ Shock/modulation (mounting, clearance, friction)
- ✓ Structural resonance
- ✓ Gear wear
- ✓ Shock/modulation (gear)
- ✓ Pump cavitation



GuideU



Ease Of Use – Thanks to our patented, color-coded and icon-based user interface, the operation of the RT-300 is intuitive and adaptive minimizing the risk of operator errors and wrong interpretations of the result.

ComboTool – Combining Accurex™ machine diagnostics with several pre-alignment tools, and precision shaft alignment, the RT-300 provides the mechanic with the power of the machines' health, shortening time from fault diagnostics to corrective actions. Mechanics know what to do and when to do it!



TPS™ – Wireless alignment sensors with high tolerances for detrimental external factors, such as vibrations and ambient light, and delivers the most accurate and precise measurement values compared to any other system. Measurement values are automatically registered throughout the entire measurement process. Line laser with 30 mm sensor virtually eliminates rough alignment, a huge time saver. Very compact, only 33,5 mm in width, the sensor units will fit in the tightest spots. The sensor units contain gyroscopes and supports the Vertizont™ method, i.e. vertical and horizontal adjustments in one shot.



Adaptive User Interface Working with Smart Sensors

The RT-200 comes with an adaptive user interface that guides you throughout the measurement of your machines. The smart sensors we have developed includes the latest technologies on the market, enhancing the measurement performance to an industry-first level.



The PDF function provides fast on site reports that are easy to create & perfect for sharing with relevant parties.

True Position Sensing

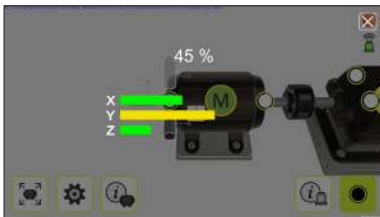
The RT-200 always shows you the exact shaft positions, no doubts, no guessing games, thanks to more of our industry-first technologies. Through the use of two smart sensors using dual visible line lasers and digital inclinometers, we are able to monitor both shaft positions simultaneously, enabling our unique feature True Position Sensing. With TPS™ you always know where you are at and when the job is complete & ensuring the job is done right every time.

Interrupt the laser beam or move the machine's position out of detector range? Not a problem, our smart sensors will resume with an updated machine position and always deliver true, live values to you.

Machine Defender



Fast, accurate machinery diagnostics in few simple steps.



Bearing Defender

-  Good
No action required
-  Fair
Monitor the evolution
-  Critical
Schedule corrective action

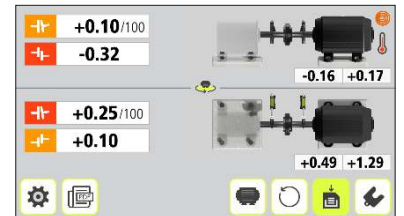
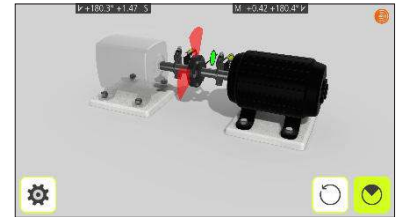
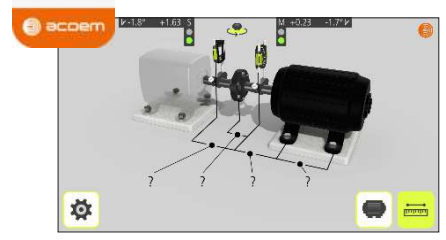
The Bearing Defender takes just 10 secs to capture, process & display the resulting data from a measurement and that's for all three axes.

A full vibration reading of the bearing is displayed in addition to the smart indicators.

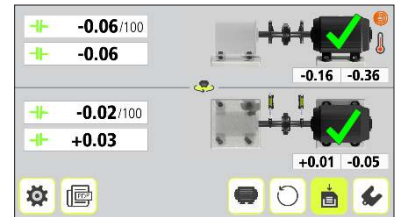
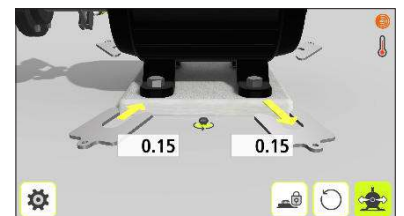
Bearing health is ascertained against the internal library of more than 30,000 bearings.



Shaft Alignment



Adaptive user interface that guides you throughout the measurement and alignment of your machines.



Fixturlaser RT-200 - In the Case



Magnetic base ON/OFF - WLS - Sensor, M7/S7 - Rod kit NXA - 2 pcs. Chain 8 mm 60 links (L=970 mm). Tape measure 5 m - 2 pcs. V-bracket complete - 2 pcs. Angled universal tool - Ext power cable EUR 2m - Extension fixture 49mm. Ext power cable US 2m. USB-cable A-mini B 2m - USB-cable A-micro B 1,5m - Sensor stand (without magnetic base). Power supply 5 USB-ports 5 VDC.



Feet lock function

If the moveable machine's feet are bolt bound, to perform proper alignment in these cases, the Feet Lock function can be used. This function allows you to select which feet are locked and which feet are adjustable.



VertiZontal™ Moves

Measure Once, Correct in Both Planes. Fixturlaser's VertiZontal™ Compound Moves feature displays exactly how much a misaligned machine needs to be adjusted for both parallel & angular misalignment in both planes.



Softcheck™

Measure directly on the foot with the Fixturlaser Run-Out Probe and obtain exact shim values to eliminate the Softfoot condition.



Target Values

Pre-set target values used for your alignment work when you need to compensate for the machine's thermal growth.



PDF Reports

Generate a PDF report whilst still at the machine's side, ideal for sharing alignment results with relevant parties.



Accurex™

Like no other, Fixturlaser RT-300's Accurex™ allows maintenance personnel, of all levels, to check the health of rotating machinery, in a matter of minutes. It requires no special training or certification to operate, generating straightforward machine diagnostic reports indicating both confidence, severity levels.



**Fixturlaser
TPS**



**Fixturlaser
Guide-U**

S7/ M7

Housing Material:	Anodized Aluminum frame and high impact ABS plastic overmolded with TPE rubber
Operating Temp:	-10 to 50°C (14 to 122°F)
Storage Temp:	-20 to 70°C (-4 to 158°F)
Battery Charging Temp:	0 to 40°C (32 to 104°F)
Relative humidity:	10 – 90%
Weight:	M7: 212 g (7,5 oz) S7: 188 g (6,6 oz)
Dimensions:	92mm x 77mm x 33mm (3,6 in x 3,0 in x 1,3 in)
Environmental protection:	IP 65 (Dust tight and protected against water jets)
Laser:	650 nm class II diode laser
Laser line fan angle:	6°
Laser line divergence (full angle):	0.25 mrad
Laser power:	< 1 mW
Measurement distance:	Up to 10m
Detector:	2nd gen. digital sensor
Detector length:	30mm (1,2 in)
Detector resolution:	1 µm
Measurement accuracy:	0,3% ± 7 µm
Signal processing:	Digital signal processing with Sidespot rejection, edge detection, ambient light elimination and anti-vibration mode
Inclinometer:	Dual High Performance MEMS inclinometers
Inclinometer resolution:	0,01°
Inclinometer accuracy:	±0,2°
Wireless communication:	Class I Bluetooth transmitter
Communication range:	10 m (33 ft)
Charging:	5V, 0,5A
Power supply:	High performance Li Ion battery or external power.
Operating time:	17 hours continuous use (measuring)
Battery Charging time (system off, room temperature):	8 h



WLS

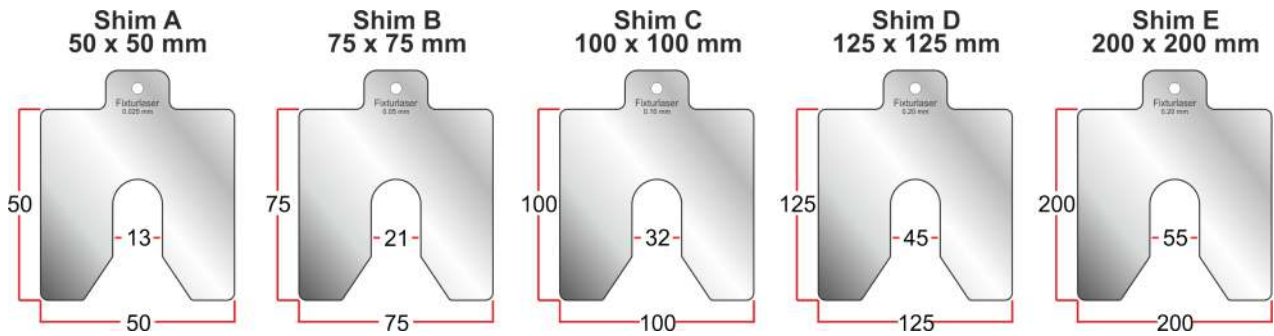
Three axial measurements:	Synchronous acquisition in X, Y and Z directions
Sampling frequency:	51.2 kHz on all axes (Fmax 20kHz)
Full bandwidth:	20 kHz on all axes
Accuracy:	+/- 5% @ 120 Hz, 1g
Dimensions:	Ø42 x H116 mm
Weight:	373 g
Mounting:	M6 threaded hole
Housing material:	Stainless steel
Operating temperature range:	-20°C to 60°C
Resistance to shocks:	5,000 g peak
Protection:	IP65
Battery Type:	Li-Ion
Operating lifetime:	8 hours
Rechargeable:	By USB (power supply adapter in standard delivery)
Charging time:	~8 hours with the standard 500 mA charge current.
Wireless protocol:	Wi-Fi Point to point 2.4GHz
Wireless range:	Up to 25 meters line of sight depending on the environment.

ACOEM PATENTS:-

US Pat. No. 9,921,136
 US Pat. No. 10,533,920
 SE 537833
 US 10060719
 EP 2920547
 US 7460977



Fixturlaser Shims & Shimscases



Shimcase 1



Shimcase 3



Shimcase 4



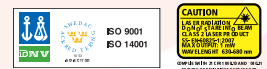
Shim Type	X	Y	Z	Available Shim Thickness - t								
				1	2	3	4	5	6	7	8	9
Shim A	50	50	13	0.05	0.10	0.20	0.25	0.40	0.50	0.70	1.00	2.00
Shim B	75	75	21	0.05	0.10	0.20	0.25	0.40	0.50	0.70	1.00	2.00
Shim C	100	100	32	0.05	0.10	0.20	0.25	0.40	0.50	0.70	1.00	2.00
Shim D	125	125	45	0.05	0.10	0.20	0.25	0.40	0.50	0.70	1.00	2.00
Shim E	200	200	55	-	0.10	-	0.25	-	0.50	0.70	1.00	2.00

Accurate positioning of rotating machines is the aim of the shaft alignment process. It goes to follow, then, that precision shims are an essential element of this exercise.

Fixturlaser shims are available in 5 sizes ranging from A through E:-

- ✓ Made from AISI 304 stainless steel
- ✓ Easily identified by permanent marking
- ✓ Have an extraction and insertion tab for easy positioning
- ✓ Available in 5 machine foot sizes and 9 thickness options
- ✓ Are burr-free with rounded corners to ensure safe handling
- ✓ Ensure consistent support over the entire surface of the shim
- ✓ Pre-cut shims are $\pm 4x$ more cost effective than homemade shims

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 minimise unnecessary wear and unplanned production stoppages. This will ultimately make our customers more profitable and our environment more sustainable.



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