Acoem **AT-400**

DUAL PRECISION AT EVERY TURN

Available on the App Store

GET IT ON Google Play

Acoem's tools optimize machine performance through precise shaft alignment.

Dual Precision Alignment with AT-400

Acoem **AT-400**

The Acoem AT-400 is a cutting-edge **alignment solution** designed to provide robust precision for machinery alignment. With dual-axis sensor technology, the AT-400 ensures accurate alignment for compressors, blowers, fans, turbines, pumps, gearboxes, and more.

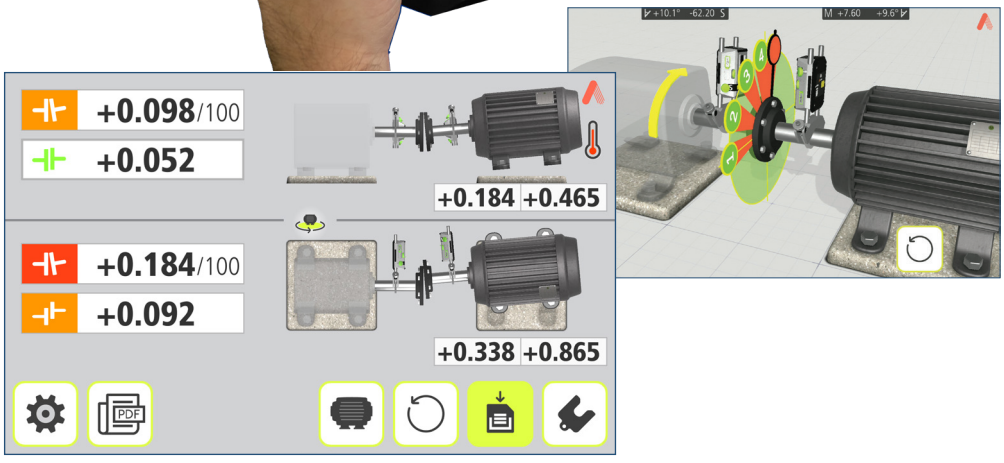
Featuring a long measurement distance of up to **20 meters** and a **high-resolution point laser** detection system (0.001 mm), this system is perfect for those seeking unmatched reliability and ease of use in critical maintenance tasks.

Exclusive feature that only we offer!

GuideU™ - The Future of Shaft Alignment

GuideU™ is an advanced 3D graphical user interface that transforms shaft alignment. Our patented, customizable system features an intuitive, icon-driven, and color-coded display, simplifying everything from measurement and alignment to documentation and reporting.

GuideU™ delivers precise measurements, real-time 3D alignment transitions, and accurate correction values. It minimizes the risk of human error by guiding operators with clear, visual, and logical step-by-step instructions, making the alignment process both simple and efficient.



More possibilities!

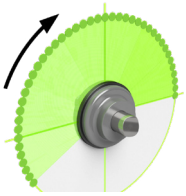
DualXL PSD Sensors

With dimensions of **20x20 mm** and an impressive **0.001 mm resolution**, the detector excels in accurate position sensing and various measurement tasks, proving optimal for diverse applications.

Exceptional 20-Meter Range

Acoem M9 & S9 sensors feature **2-Axis PSD**, **20m range**, Integrated Display.
6-Axis MEMS IMS Gyro enables precise Vertical Tri-point measurement.

Measuring methods.

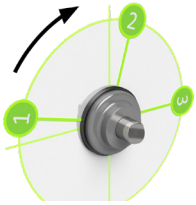


Dual Sweep Method

The Dual Sweep method automates the measurement recording during a sweep of the shafts, providing a convenient way to assess alignment on coupled machines. By recording numerous points, a precise result is ensured.

Dual Sweep Express Method

This measurement method is similar to the classic Dual Sweep method, however, data recording halts automatically when shaft rotation ceases.



Tripoint™ method

In the Tripoint method, the alignment condition can be calculated by taking three points while rotating the shaft at least 60°. In this method, all points are taken manually.

Multipoint method

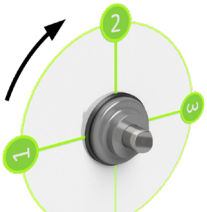
This function enables measurement initiation from any position on the rotation, allowing recording of multiple points for optimized calculations. Ideal for turbine and sliding bearing applications.

TRIPOINT Express™ method

This method seamlessly incorporates the Tripoint approach, offering the added advantage of fully automated measurements throughout the process.

Multipoint Express method

Our method follows the classic Multipoint method approach, but with the advantage of automated measurements for greater convenience.



Clock™ method

In the Clock method, machinery positions are calculated by taking three points with 180° of rotation.

Acoem M9/S9 sensors

Acoem M9/S9 sensors deliver precision measurement with advanced dual-axis technology. Housed in durable cases for easy installation, they ensure fast setup, high accuracy, and optimal performance, backed by Acoem's proven reliability.

Simultaneous Horizontal & Vertical Measurements: M9 & S9 sensors measure both dimensions at once for comprehensive analysis.

High Precision: 0.001mm resolution captures even the smallest variations.

Thin & Lightweight: The thinnest 2-axis sensors, weighing just 305g, for easy use and mobility.

Wide Measurement Range: Capable of measuring up to 20 meters (65 ft) without losing accuracy.

Durable Design: Sliding covers protect the sensors during storage, extending their lifespan.

Large Detector: 20x20 mm² detector with high resolution, ideal for detailed measurement tasks.

Lifetime Warranty

With the Acoem AT-400, you get a lifetime warranty that reflects our confidence in its quality. We're not just offering a product but a reliable solution you can depend on for years to come. Built to last, the AT-400 ensures precision and durability where it matters most.

Cloud Connectivity

The Acoem AT-400's cloud connectivity lets users send alignment reports to Acoem's portal with one touch, streamlining data management and documentation.

VertiZontal™

Streamlines machine alignment

The VertiZontal™ UI simplifies machine alignment by instantly showing the necessary shim adjustments, eliminating the need for additional measurements, and saving time while maintaining accuracy.

Acoem AT display unit -

8-Inch Sunlight-Readable Capacitive Multi-Touch Display

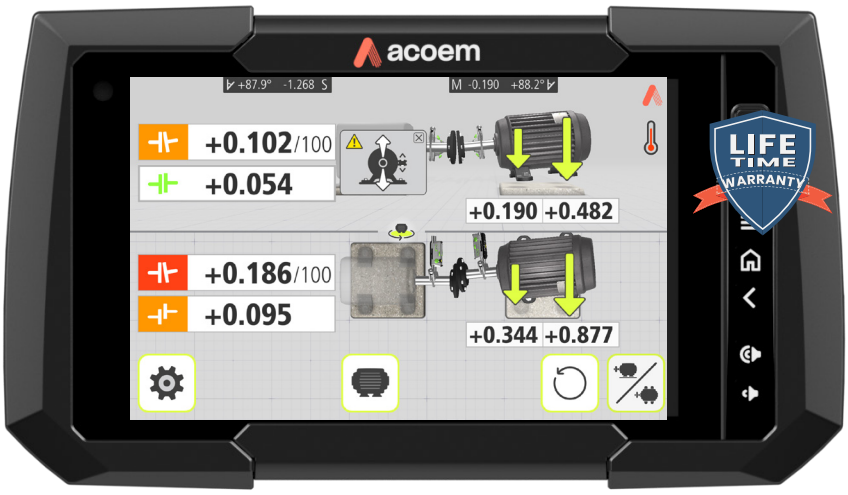
The Acoem AT display unit is packed with advanced features and our intuitive **GuideU™** user interface, designed to minimize environmental impact while ensuring durability with a lifetime warranty. Elevate your efficiency with its cutting-edge functionality and user-friendly design.

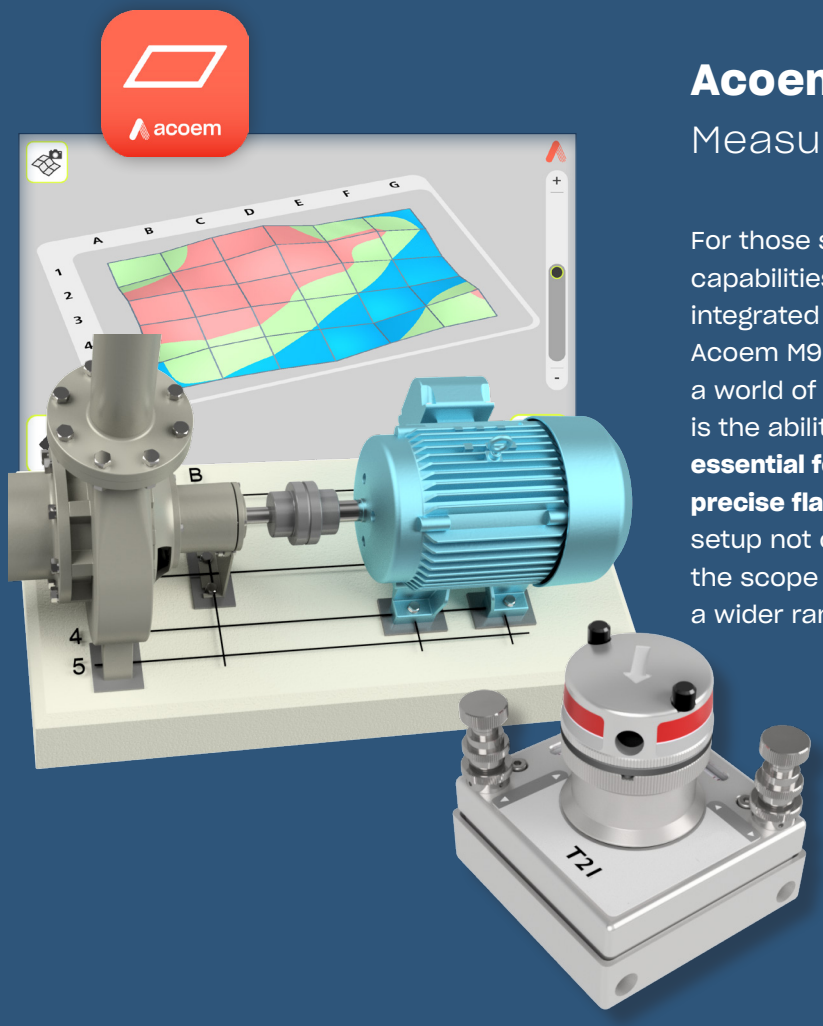
Durable Design: Super-hardened Gorilla Glass protects against scratches and impacts.

Responsive Modes: Features rain and glove modes for reliable touch input.

Rugged Rating: IP67 rated for waterproof and dust-tight performance.

Temperature Range: Operates from -20°C to 60°C (-4°F to 140°F) for extreme conditions.





Acoem AT-400 Ultimate

Measuring flatness

For those seeking to extend their measurement capabilities, the ACOEM AT-400 Ultimate, when integrated with the **Acoem T21,** and leveraging the Acoem M9 sensor as a receiving component, open up a world of possibilities. One of the exciting expansions is the ability to **measure rectangular flatness - an essential feature for applications where achieving precise flatness** is critical. This comprehensive setup not only enhances precision but also broadens the scope of your measurement capabilities to address a wider range of dimensional assessment needs.

Measurement Programs

Horizontal Shaft Alignment
Determine and correct the relative position of two horizontally mounted machines that are connected, so that the rotational centers of the shafts are collinear.

Vertical Shaft Alignment
Determine and correct the relative position of two vertically/flange mounted machines that are connected, so that the rotational centers of the shafts are collinear.

Flatness
Using the Acoem T21 when paired with the M9 sensor, the deviation in distance between the laser plane and the measurement object can be measured in one or more positions.

Vital functions

Effortlessly navigate through our user-friendly interface, **GuideU™,** designed to make it a breeze to follow and understand.

Get the position of both the shafts in real time with Acoem **True Live™** feature.

Acoem AT-400 toolpack -
Automated alignment functions

OL2R measures machine movements between hot and cold conditions, calculates thermal growth (OL2R brackets is needed)

Shim Simulator shows how different shim adjustments affect coupling errors.

Get better automatic guidance for a base-bound or bolt-bound situation with the **FeetLock™** function

Align machines in horizontal and vertical direction in only one move with Acoem **VertiZontal™** feature and save time

The **Multiple Feet function** is useful for machines with more than two pairs of feet to ensure proper alignment.

SoftCheck™ Check for a soft foot condition by ensuring the motor is resting firmly on all its feet.

Target Values Once you have determined the machine's thermal expansion, this program will allow you to pre-set target values prior to starting your alignment work.

Spacer Shaft Alignment This program guides alignment for spacer shaft-driven machines (or those using membrane couplings).

DUAL VIEW for large machines, enabling real-time alignment visualization in both horizontal and vertical directions simultaneously.

Instantly generate an automatic **PDF report** from the field on the mobile device, and add logo

Take pictures of your machines and setup to illustrate automatically in the report

What's Included

Each Acoem AT-400 D is delivered with the following included hardware:

ACOEM AT-400 D

- Acoem S9
- Acoem M9
- Acoem AT DU
- Rod kit
- Magnetic base ON-OFF
- Extension fixture 49mm
- Chain 8 mm 60 links (L=970 mm)
- Magnetic v-bracket 2
- Tape measure 5 m
- Acoem usb
- V-bracket complete 2
- Angled universal tool 2
- USB-cable A-mini B 2m
- Power supply 4 USB-ports 5 VDC
- Quick Guide AT

Hardware Type	M9 1-1216, S9 1-1217
Physical	
Housing Material	Anodized Aluminum frame and high impact ABS plastic.
Weight	M9: 306 g (10,8 oz) S9: 306 g (10,8 oz)
Dimensions	TD9: 100mm x 77,3mm x 43mm (3,9 in x 3,0 in x 1,7 in)
Environment	
Operating Temp	-10 to 50 °C (14 to 122 °F)
Environmental protection	IP65 (Dust tight and protected against watere jets)
Sensor Technology	
Laser power	< 1 mW
Measurement distance	63 mm to 20 m
Detector	2-axis PSD
Detector sizeword	20 mm x 20 mm (0,79 in x 0,79 in)
Detector resolution	1 µm
Measurement accuracy	1% ± 3 µm
Inclinometer	Dual High Performance MEMS inclinometers
Inclinometer resolution	0,01 °
Inclinometer accuracy	±0,1 °
Gyroscope	6-Axis MEMS Inertial Motion Sensor with drift compensation and automatic field calibration
Gyroscope accuracy	±1 °
Battery	
Operating time	8 hours continuous use (measuring)
Charging	8 h
ACOEM Alignment Display	

A sunlight-readable, 8-inch capacitive multi-touch display with super-hardened Gorilla Glass, plus rain and glove mode.

IP67 ruggedness rating (including the ports) for fullywaterproof and dust-tight performance.

Wide operating temperatures of -20°C to 60°C (-4°F to 140°F).

Aligning with diverse applications

While the AT-400 is versatile enough to diagnose alignment issues in various machinery, its exceptional capabilities truly stand out in challenging environments.

Critical & complex applications

Energy generation turbines	Compressors	Cooling towers
Maritime equipment	Non-rotatable shaft situations	Complex machine train setup

Ideal for heavy machineries in industrial sectors such as

Oil & Gas	Paper processing	Mining
Medical device	Automotive manufacturing	Aerospace

About Acoem

As a pioneer in industrial measurement technology, Acoem offers a comprehensive range of products, including advanced shaft alignment tools. Our solutions empower businesses to achieve maximum efficiency and reliability.**Acoem links possibilities with protection.**

For more information visit acoem.com

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