

Horizontal Alignment
Vertical Alignment

AT-200

Technical Datasheet

Introducing the new generation of smart shaft alignment solutions

- **Fast and accurate results** powered by Intelligent sensor technology
- **Ease of use** on industry standard tablet
- **One system - multiple users** with their personal devices
- **Integration and connectivity** providing easy data sharing capabilities
- **Scalable** evolution in the global Augmented Mechanics Ecosystem



Providing faster and more accurate shaft alignment results



Easily verify the presence of soft foot with the **SoftCheck™** feature to make a reliable alignment



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 significant time



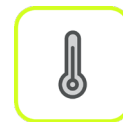
Automatic alignment quality assessment according to **Tolerances** based on tolerances with graphical and color coded results



Univalled shaft alignment precision with down to 0.3% accuracy in the values displayed



Easily align your rotating assets following the highly visual Acoem **GuideU™** interface. Universal, colour coded and icon based graphics will empower the operator and leave no room for human errors in the alignment process



Easily Manage thermal growth with Cold and Hot alignment **Target values**



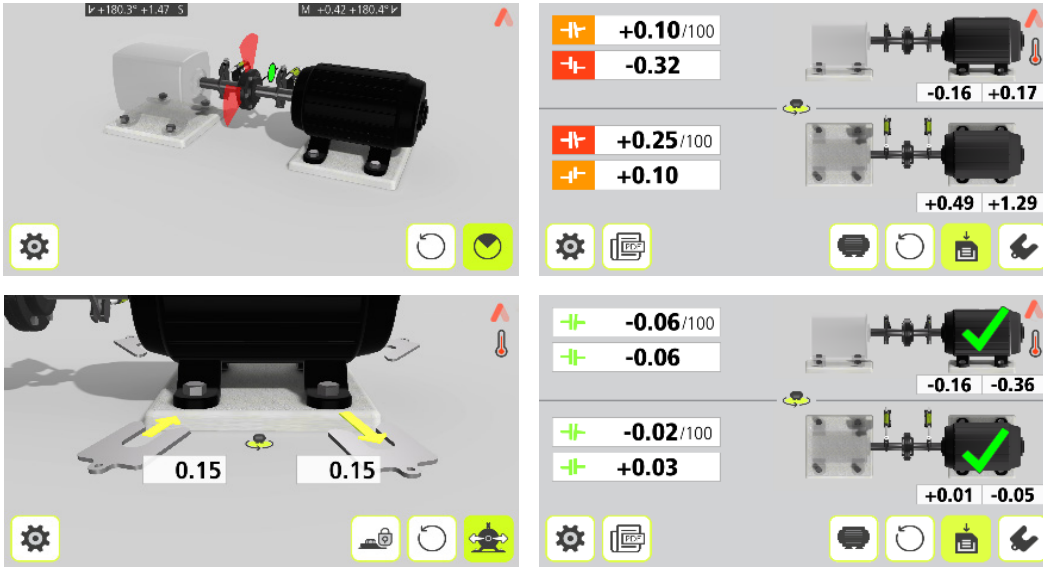
Get the position of both the shafts in real time with Acoem **True Live™** feature



Remove industrial environment disturbance (light, vibration) with the smart digital filtering provided with our sensor technology

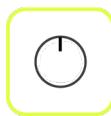


The spacer shaft function is used when the alignment is performed on machinery using a membrane coupling.



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.



Clock™ method

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



EXPRESS™ method

In the Express Mode method, the alignment condition can be calculated by recording three points while rotating the shafts at least 60°.

Instantly share illustrated reports from your mobile device



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



Centralize and share your reports with your team, consolidate your plant's alignment status, and assign alignment tasks to team members.



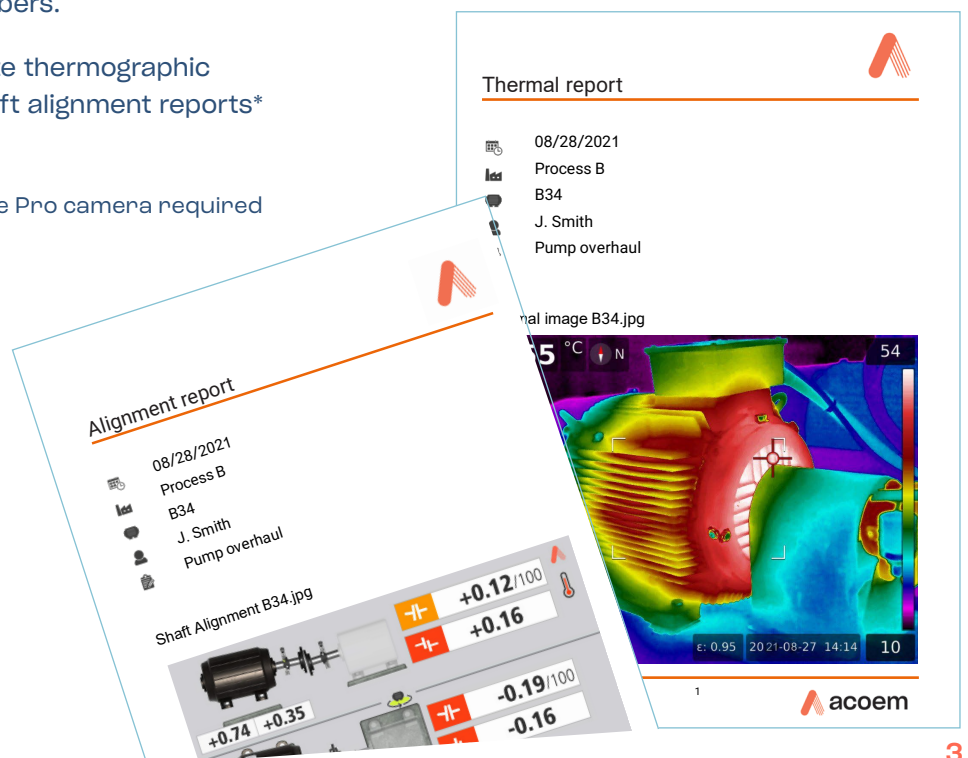
Share your reports by all communication means available on the mobile devices (email, what's app...)



Seamlessly Integrate thermographic pictures in your shaft alignment reports*



*Smart license and FLIR One Pro camera required



Sensor Specifications

Hardware Type	M7 1-1216, S7 1-1217
Physical	
Housing Material	Anodized Aluminum frame and high impact ABS plastic over molded with TPE rubber
Weight	M7: 212 g (7,5 oz), S7: 186 g (6,6 oz)
Dimensions	92 mm x 77 mm x 33 mm (3,6 in x 3,0 in x 1,3 in)
Environment	
Operating Temp	-10 to 50 °C (14 to 122 °F)
Storage Temp	-20 to 70 °C (-4 to 158 °F)
Long term storage Temp Room Temp	18 to 28 °C (64 to 82 °F)
Battery Charging Temp	0 to 40 °C (32 to 104 °F)
Relative humidity	10 – 90 %
Environmental protection	IP65 (Dust tight and protected against water jets)
Sensing Technology	
Laser	650 nm class II diode laser
Laser line fan angle	6 °
Laser line width (1 / e ²)	1,6 mm
Laser line divergence (full angle)	0,25 mrad
Laser power	< 1 mW
Measurement distance	Up to 10 m
Detector	2nd gen. scientific grade CCD
Detector length	30 mm (1,2 in)
Detector angular subtense	30 mrad/m (3mm/100mm per meter)
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
Ambient light protection	Optical filtering and digital ambient light signal elimination
Inclinometer	Dual High Performance MEMS inclinometers
Inclinometer resolution	0,01 °
Inclinometer accuracy	±0,2 °
Gyroscope	6-Axis MEMS Inertial Motion Sensor with drift compensation and automatic field calibration
Gyroscope accuracy	±1 °
Battery	
Type	High performance Li Ion rechargeable battery or external power
Operating time	±1 °
Charging	±1 °
Battery Charging time (system off)	±1 °
Battery Capacity	±1 °
LED indicators	±1 °
Communication	
Wireless communication	Class I Bluetooth transmitter
Communication range	10 m (33 ft)
Connectors	1 USB Mini port (IP67)
Handheld Algiz RT8 (optinal)	
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 fully waterproof and dust-tight performance.	
Wide operating temperatures of -20°C to 60°C (-4°F to 140°F).	

Packaging & Deliverables

Each AT-200 is delivered with the following package:

- Sensor, M7/S7
- Magnetic base ON/OFF
- Rod kit NXA
- Chain 8 mm 60 links (L=970 mm)
- Tape measure 5 m
- V-bracket complete
- Angled universal tool - 2 pcs
- 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
- Power supply 5 USB-ports 5 VDC



Part of the Augmented Mechanics Ecosystem

Build your own Augmented Mechanics solution and complete your shaft alignment tool with complementary applications on the same mobile device



Acoem Prealignment app designed to remove the complexity of your laser alignment process, making it faster and more reliable



Acoem Bearing Defender app providing quick first-level information on bearing health based on vibration readings in just few a matter of seconds



Acoem Machine Defender app, AI-powered vibration diagnostics instantly in the field for most rotating equipments in industrial environment



FLIR One Pro app, helping you to better understand your machines and providing seamless report illustration to attest of the correct alignment

Freely Download the Horizontal and Vertical Shaft alignment apps!

