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Machine Defender True PreAlignment Vertical Alignment

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**Horizontal Alignment** 



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# **Augmented Mecanic Solution**

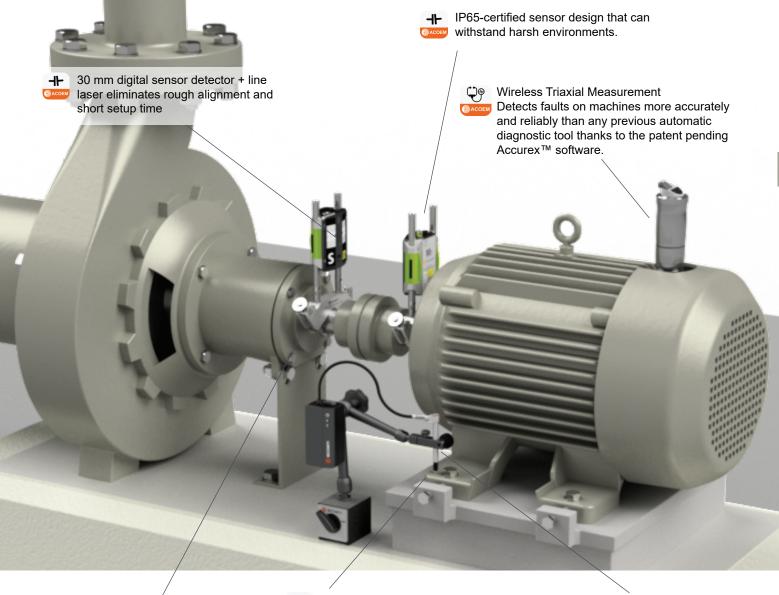
#### Empowering the mechanic

On-the-spot machine diagnostics with a complete precision shaft alignment tool and a cloud connection to save reports and look up historical data, combined into one tool makes the RT-300 a truly unique maintenance product. With a detailed report of the machine's health, the road to action and correction for the mechanic is shorter than ever, guaranteeing both production and product guality.

#### Our Graphical User Interface, Your Measurement Guide Our patented icon-based and color-coded user interface makes it easy to measure, align, and document each job. In order to minimize the risk of operator errors, we developed an icon-driven, adaptive user interface for the RT-300 system.

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 process. This eliminates confusion for less-experienced users and provides ease of access throughout a measurement with the

RT-300 system. To add to the enhanced user experience, we have given the interface a game-like 3D graphic look facilitating unmistakable interpretation of any error.



--- Premounted fixtures and small sensors provides quick setup also on machins with limited space.

High Precision & Wireless probe. Measures directly on the machine foot.



LVDT sensor with ± 2,5 mm measurement range and high precision (within 0.005 mm).





# **ACOEM Cloud** – ACOEM makes the industry smarter by taking advantage of the opportunities that digitalization and mobility create for traditional industry. Data describing the status of machines must be collected. For this purpose, measurement results and other information supplied by RT 300 need to be linked to a central collection point, ACOEM Cloud.

Connection, collection and correlation allow a new type of collaboration between people and between people and machines.





Machine Defender – Machine Defenders unique automatic machine diagnostic Accurex<sup>™</sup> is built into the system. 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.



**Pre-Alignment** – the smart displacement probe for safe and reliable measurement of axial and radial runout. The Pre-alignment probe performs a multitude of applications that will improve your machines' health and life time, e g:

- Axial and radial runout checks on flanges and shafts through measuring eccentric or skewed mounting of coupling hubs, and/or checking for bent shafts – RunOut
- Checking movements directly on machine feet, i e soft foot True SoftCheck, an industy-first function
- Checking bearing clearances LiftCheck
- Checking movements due to pipe strain
- Thermal growth measurements on machine casings



**Shaft Alignment** — No doubts, no guessing games, thanks to the industry-first use of technologies of two smart sensors with 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.

# Alignment Intelligence

Edge Technology for Innovative Shaft Alignment FIXTURLASER realized 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:

- 3D graphics
- Dual digital sensor with visible line lasers
- Wireless communication between display unit and smart sensors
- Inclinometers in both smart sensors
- Gyroscopes in both smart sensors
- Gyroscopes in the display box that enable the patented walk-around OmniView™ feature in our user interface



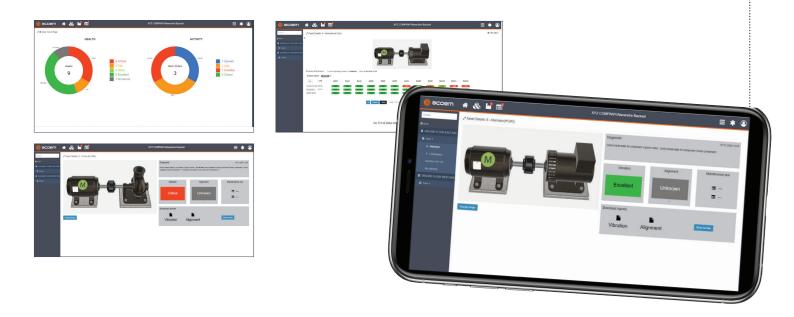






### Connected – ACOEM Cloud

Stay connected to co-workers and customers! Thanks to the ACOEM cloud instant reporting and instant sharing is easy. The ACOEM dashboard gives you an oversight of your machine park's health status and the possibility to create work orders based on machine health data.





**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 AccurexTM 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!

**True Live** – 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 VertizontalTM method, i.e. vertical and horizontal adjustments in one shot.



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## True Live

You Always Know Your Machine's Position with a

Adaptive User Interface Working with Smart Sensors

The RT-300 comes with an adaptive user interface that guides you throughout the measurement of your machines. The smart sensors we have developed include the latest technologi on the market, enhancing the measurement performance to an industry-first level.



Fast, accurate machinery diagnostics in few simple steps.



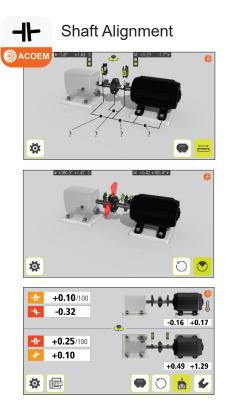




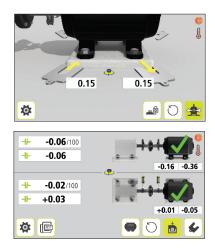


ACOEM system. The RT-300 will always show you the exact machine position. No doubts, no guessing games, thanks to another of our industry-first technologies, the use of two smart sensors with laser beams and inclinometers monitoring both shaft positions simultaneously.

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.



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





The PDF report function provides a fast on site reporting available for converting saved measurement reports into PDF files.



Magnetic base ON/OFF - P1 (Run-Out Probe) - 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 - Adjustable probe tip



#### Feet lock function

This function allows you to select which feet are locked and which feet are adjustable. Feet Lock is available both in shimming and alignment.



#### VertiZontal™ Moves

Measure Once, Move in Two Directions The VertiZontal™ Moves feature displays exactly how much a misaligned machine needs to be adjusted, by adding or removing shims to the machine's feet.



#### Softcheck™

Possible to measure directly on the foot and obtain exact shim values to eliminate the softfoot condition.



#### Run-Out

Check run-out of the coupling and on a piston rod, crank, or other components on a reciprocating machine.



#### Target Values

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

#### PDF REPORT



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The PDF report function provides a fast on site reporting available for converting saved measurement reports into PDF files.

#### **Bearing Clearance**

Measure loosen flanges, and check for pipe strain influence at the shafts

#### Accurex™ Automatic ma

Automatic machine diagnosis - alignment errors, cavitation, structural resonances, bearing problems, and more.





#### S7/ M7

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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 wi detection, ambient light elin	th Sidespot rejection, edge nination and anti-vibration mod∉
Inclinometer:	Dual High Performance ME	MS 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 lon battery or external power.	
Operating time:	17 hours continuous use (measuring)	
Battery Charging time (sys- tem 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-lon	
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 enviror ment.	









ACOEM France – Lyon Headquarters 200 chemin des Ormeaux 69578 Limonest Cedex France Tél : +33 4 72 52 48 00 Tél : +1 804 379 2250 www.acoem.com

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





ISO 9001