FLUKE Reliability

TECHNICAL DATA

ROTALIGN® touch

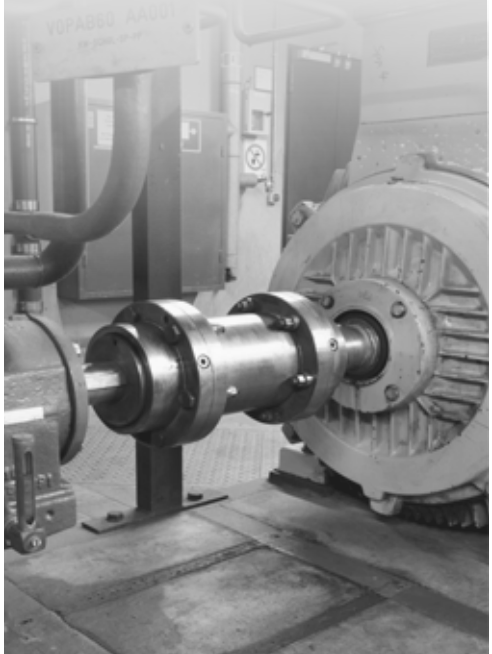
Unrivaled precision alignment

PRÜFTECHNIK

ADAPTIVE ALIGNMENT
Adaptive alignment is a combination of software and hardware evolutions, enabling maintenance and reliability teams to address the full variety of horizontal, angular, and vertical alignment challenges.

With adaptive alignment, work is completed faster, results are far better, and team capacity is unlocked.

As the industry-wide standard setting alignment system, ROTALIGN® touch offers a full set of adaptive alignment features to deliver new levels of accuracy, speed, and elimination of human errors.



Introducing ROTALIGN® touch
ROTALIGN® touch is the first laser shaft alignment system on the market to combine high precision on-site measuring tasks and cloud connectivity for worldwide data access and transfer.

It features the unique sensALIGN® 7 laser and sensor heads offering a full range of everyday alignment routines up to expert degree alignment jobs – such as cardan shaft alignment or aligning up to six sequential couplings in a row. The single-laser technology enables unrivaled precision, even in harshest conditions and on highly demanding jobs.

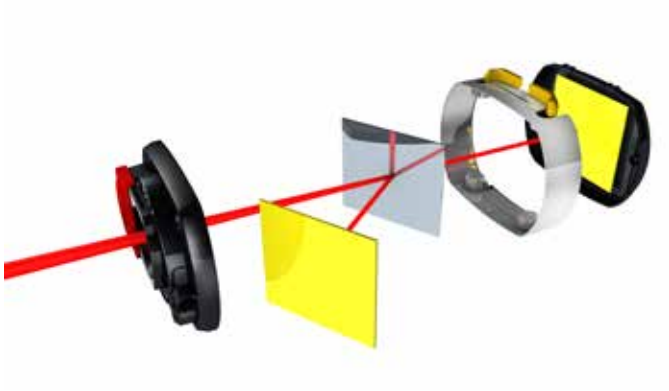
ROTALIGN® touch was designed by some of the world's leading alignment experts to solve problems in the easiest way possible. The intuitively guided user interface can be operated by almost anyone – users just need to follow the three steps of shaft alignment: dimension, measure, and result.

Key benefits at a glance

- **Advanced features will address any shaft alignment situation**
  ROTALIGN® touch can help solve virtually any alignment challenge. It can handle alignment issues on standard machines such as motor-pump assets up to large steam turbines, and everything in between.
- **Adaptability saves time and effort**
  The guided user interface fully adapts to all your needs by displaying colored real 3D machine models with tablet-like navigation for full control of your measurements.
- **Leverage enhanced communication options to increase visibility**
  An integrated RFID tag reader helps identify the asset needing inspection and remediation. Machine data notifications can be pushed to computers worldwide to the PRUFTECHNIK ARC 4.0 cloud transfer and then into the ARC 4.0 PC software.

ROTALIGN® touch is pioneering adaptive alignment and thus setting a new benchmark.

A look behind the curtain



The differentiator behind single-laser technology is located in the sensor housing: A single laser beam is split into two, hitting two separate detectors with an unvariable distance.

Why precision alignment is so crucial:

- Increased power consumption-to-load ratio
- Longer machine lifecycle
- Less vibration – leading to less wear
- Decreased power consumption
- Lower temperatures on bearing, coupling, and lubrication
- Lower costs for spare parts storing

Single-laser technology: The secret sauce in precision alignment

The sensALIGN® laser/sensor technology is based on the inherent PRUFTECHNIK single-laser technology providing highly precise measurement results combined with the easiest mounting and measuring in the field. sensALIGN® 7 sensor includes two HD large position sensitive detectors (PSD) and MEMS inclinometers. Combining these with the detector extension capability (InfiniRange) enables the ability to measure and document the initial alignment condition, no matter how serious the misalignment is. This technology allows the simultaneous monitoring of the machine corrections in vertical and horizontal directions, starting from any angular position where the sensor comes to a stop.

With sensALIGN® 7, the toughest alignment applications become manageable. Intelligent alignment features enable technicians to approach complex alignments with confidence: intelliSWEEP® filters out any poor measurement data resulting from difficult measuring conditions.

Whether it is a cardan shaft, a vertical pump or a turbomachine train, ROTALIGN® touch is the tool for the job. It is equipped with these powerful intelligent features: vertiSWEEP®, In-situ Cardan Shaft, Live Trend, Simultaneous Live Move, Multicoupling Measure, Move and Live Trend.

Geared for IIoT and ready to unlock your full team capacity

Adaptive alignment solutions such as ROTALIGN® touch enable the sharing of alignment and related data via the cloud transfer to ARC 4.0 PC software. This spurs a new level of collaboration between technicians on site and managers in the office, for strategy consultation, reliability trending, and more. ROTALIGN® touch unlocks the capacity for more teamwork to address alignment challenges.

ASI – Active Situational Intelligence

Typically when aligning a critical machine, quick work doesn't always mean high accuracy. That's because attempts to be "quick" often erode at quality and accuracy, particularly in alignment sitations. The result can be errors and failures. But ROTALIGN® touch is equipped with Active Situational Intelligence (ASI), a groundbreaking prob-lem-solving technology. ASI helps the user avoid mistakes while working quickly to measure and align machines.

The intuitive user interface supports the user from the begin-ning to the results stage. In real time, the user can survey the intelliSWEEP® process, the measurement quality, and also the physical positions in horizontal and vertical directions of the machine during the entire alignment process.

The preciseness of a measurement depends largely on the accuracy of the measurement method. But environmental circumstances (e.g., vibrations) or human influences (e.g., too fast or jerky of a shaft rotation) sometimes impact the result. Active Situ-ational Intelligence (ASI) software in a ROTALIGN® touch device filters these impacts, calculates them out in real time, and produces a acceptable and repeatable result. Thus, accurate alignment measurements can be taken even under harshest conditions.

ROTALIGN® touch is ready to tackle alignment challenges in any industry

ROTALIGN® touch is designed to withstand any industrial environment, no matter what and where. This premium laser shaft alignment system can be used independently throughout all branches and industries on virtually all industrial assets that are driven by a coupled rotating shaft. ROTALIGN® touch adapts to any asset.

Want to see how ROTALIGN® touch adapts to your asset(s)? Contact us at PRUFTECHNIK.com and we will get back to you promptly to offer our expertise and engineering power.

FLUKE
Reliability

ROTALIGN® touch device

General specifications		
CPU	Processor	1.0 GHz quad core ARM® Cortex-A9
	Memory	2 GB RAM, 1 GB Internal Flash, 32 GB SD-Card Memory
Display	Technology	Projective capacitive multi-touch screen
	Type	Transmissive (sunlight-readable) backlit TFT color graphic display Optically bonded, protective industrial display, integrated light sensor for automated adjustment of the brightness to the display
	Resolution	800 x 480 Pixel
	Dimensions	178 mm (7") diagonal
LED indicators		3 LEDs for battery status, 1 LED for WiFi communication
Power supply	Operating time	12 hours typical use (based upon an operating cycle of 25% measurement, 25% computation, 50% 'sleep' mode)
	Battery	Lithium-ion rechargeable battery 3.6 V / 80 Wh
	AC adapter/ charger	12 V / 36 W; standard barrel connector (5.5 x 2.1 x 11 mm)
External interface		USB host for memory stick
		USB slave for PC communication, charging (5 V DC / 1.5 A) RS-232 (serial) for sensor, RS-485 (serial) for sensor
		I-Data for sensor
		Integrated Bluetooth® wireless communication (covers direct line of sight distances of up to 30 m / 100 ft depending on the prevailing environmental conditions)
		Integrated Wireless LAN IEEE 802.11 b/g/n up to 72.2 Mbps (depending on configuration)
		Integrated RFID with read and write capabilities (depending on con-figuration)
Environmental protection	IP 65	(dustproof and water jets resistant) as defined in regulation DIN EN 60529 (VDE 0470-1), shockproof
	Relative humidity	10% to 90%
Drop test		1 m (3 1/4 ft)
Temperature range	Operation	0°C to 40°C (32°F to 104°F)
	Charging	0°C to 40°C (32°F to 104°F)
	Storage	-10°C to 50°C (14°F to 122°F)
Dimensions		Approx. 273 x 181 x 56 mm (10 3/4" x 7 1/8" x 2 3/16")
Weight		Approx. 1.88 kg (4.1 lbs)
Camera		5 MP built-in (depending on configuration)
LEDs:		Risk Group 1 according to IEC 62471:2006
CE conformity		Refer to the CE compliance certificate in www.pruftechnik.com
Carrying case	Standard	HPX® Harz, drop tested (2 m / 6 1/2 ft.)
	Dimensions	Approx. 551 x 358 x 226 mm (21 11/16" x 14 3/32" x 8 29/32")
	Weight	Including all standard parts - Approx. 11 kg (24.3 lb)
FCC compliance		Requirements fulfilled (refer to the provided document 'Safety and general information')

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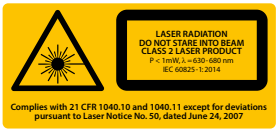

sensALIGN® 7 sensor

General specifications		
CPU	Type	1.0 GHz quad core ARM® Cortex-A9
LED indicators		4 LEDs for laser adjustment
		1 LED for Bluetooth® communication 1 LED for battery status
Power supply	Operating time	12 hours continuous use
	Battery	Lithium Polymer rechargeable battery 3.7 V / 1.6 Ah 6 Wh
Environmental protection	IP 65	(dustproof and water jets resistant) – as defined in regulation DIN EN 60529 (VDE 0470-1), shockproof
	Relative humidity	10% to 90%
Ambient light protection		Optical and active electronic digital compensation
Temperature range	Operation	-10°C to 50°C (14°F to 122°F)
	Charging	0°C to 40°C (32°F to 104°F)
	Storage	-20°C to 60°C (-4°F to 140°F)
Dimensions		Approx. 103 x 84 x 60 mm (4 1/16" x 3 5/16" x 2 3/8")
Weight		Approx. 310 g (10.9 oz)
Measurement range		Unlimited, dynamically extendible
Measurement resolution		1 µm
Measurement error		< 1.0%
Inclinometer resolution		0.1°
Inclinometer error		± 0.25% full scale
Vibration measurement		mm/s, RMS, 10Hz to 1kHz, 0 mm/s – 5000/f mm/s² (f in Hertz [1/s])
External interface		Integrated Bluetooth® Class 1 wireless communication, RS232, RS485, I-Data
CE conformity		Refer to the CE compliance certificate in www.pruftechnik.com

sensALIGN® 7 laser

General specifications		
Type		Semiconductor laser
LED indicators		1 LED for laser transmission 1 LED for battery status
Power supply	Operating time	70 hours continuous use
	Battery	Lithium Polymer rechargeable battery 3.7 V / 1.6 Ah 6 Wh AC adapter/charger: 5 V / 3 A
Environmental protection	IP 65	(dustproof and water jets resistant) – as defined in regulation DIN EN 60529 (VDE 0470-1), shockproof
	Relative humidity	10% to 90%
Temperature range	Operation	-10°C to 50°C (14°F to 122°F)
	Charging	0°C to 40°C (32°F to 104°F)
	Storage	-20°C to 60°C (-4°F to 140°F)
Dimensions		Approx. 103 x 84 x 60 mm (4 1/16" x 3 5/16" x 2 3/8")
Weight		Approx. 330 g [11.6 oz]
Beam power		< 1mW
Beam divergence		0.3 mrad
Wavelength		630 – 680 nm (red, visible)
Laser class		Class 2 according to IEC 60825-1:2014 The laser complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007. Safety precaution: Do not look into laser beam
Inclinometer resolution		0.1°
Inclinometer error		± 0.25% full scale
CE conformity		Refer to the CE compliance certificate in www.pruftechnik.com