

TECHNICAL DATA

RotAlign™ Touch

Unrivalled precision alignment



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.

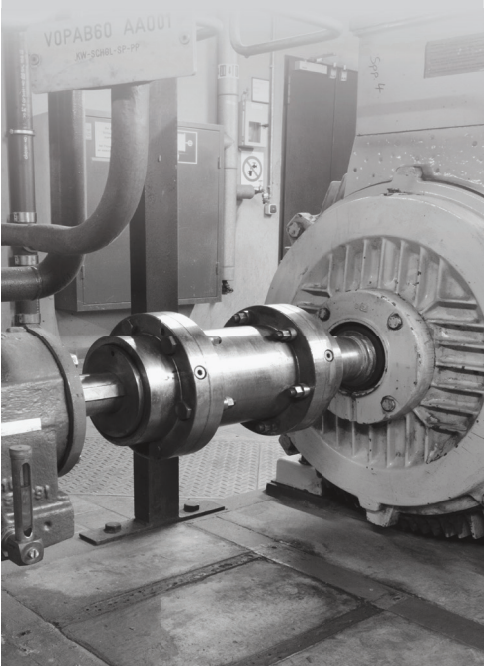
It features the unique SensAlign™ 7 laser and sensor heads offering a full range of everyday alignment routines up to expert degree alignment jobs – such as cardan shaft alignment or aligning up to six sequential couplings in a row. The single-laser technology enables unrivalled precision, even in harshest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

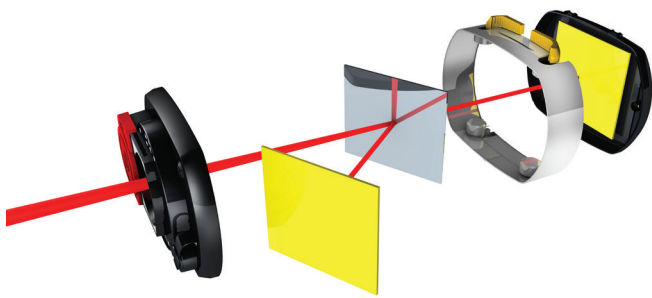
Key benefits at a glance

- 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 motorpump 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 Prüftechnik 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 Prüftechnik 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.

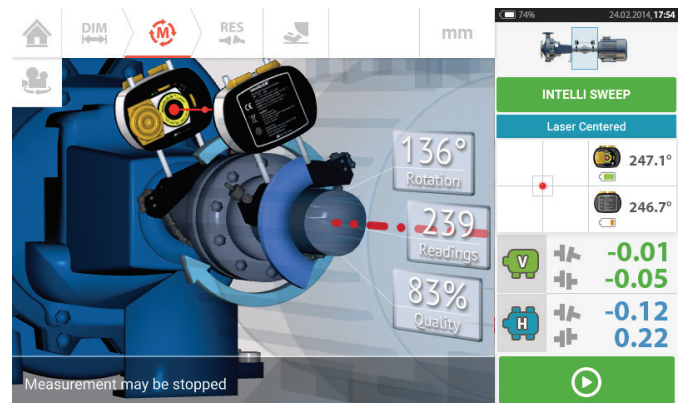
Whether it is a cardan shaft, a vertical pump or a turbomachine train, RotAlign™ Touch is the tool for the job. It is equipped with these powerful intelligent features: vertiSWEEP®, In-situ Cardan Shaft, Live Trend, Simultaneous Live Move, Multicoupling Measure, Move and Live Trend.

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 situations. The result can be errors and failures. But RotAlign™ Touch is equipped with Active Situational Intelligence (ASI), a groundbreaking problem-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 beginning 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 Situational Intelligence (ASI) software in a RotAlign™ Touch device filters these impacts, calculates them out in real time, and produces an 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 Prueftechnik.com and we will get back to you promptly to offer our expertise and engineering power.

Shaft Alignment Tablet

General specifications		
CPU	Processor:	Octa-Core (8): 2.2 GHz (2) and 1.8 GHz (6)
	Memory:	4 GB LPDDR4X SDRAM/64 GB UFS Flash
Display	Technology:	Corning® Gorilla® Glass
	Resolution:	600 nits, color WXGA 1280x800
	Dimensions:	8 inch/20.3 cm
Power Supply:	Operating time:	Up to 11 hours
	Battery:	6100 mAh 3.87 V rechargeable Li-Ion Polymer; (23.61 Wh)
	Charging:	USB-C
Connectivity	Wifi:	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v/w/mc/ax 2x2 MU-MIMO; Wi-Fi® certified; IPv4, IPv6 (Wi-Fi 6)
	Bluetooth:	Bluetooth v5.1 / 2.1+EDR Class 2 (Bluetooth LE)
	RFID:	Integrated RFID with read and write capabilities Docking connector (charge and data) USB-C side port (tablet charging and data only)
Environmental protection	IP 65:	Dustproof and water jets resistant
	Relative humidity	5% to 95% non-condensing
Drop test		1.2 m (4 ft)
Temperature range	Operation:	-20°C to 50°C (-4°F to 122°F)
	Storage:	-40°C to 70°C (-40°F to 158°F)
Dimensions		267 mm L x 171 mm H x 35 mm D 10 33/64" x 6 47/64" x 1 3/8"
Weight		930 g/2.1 lbs
Camera	Rear:	Rear: Image capture: 13 MP auto-focus camera with user controllable LED flash
	Front:	5MP
CE conformity		Refer to the CE compliance certificate in www.pruftechnik.com
Carrying case	Standard Dimensions Weight	HPX® Harz, drop tested (2 m / 6 1/2 ft.) Approx. 551 x 358 x 226 mm (21 11/16" x 14 3/32" x 8 29/32") Including all standard parts - Approx. 11 kg (24.3 lb)



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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 typical 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