TECHNICAL DATA

RotAlign™ Elite

Unrivaled precision alignment

Adaptive Alignment represents a breakthrough in precision maintenance—merging intelligent software with next-generation hardware to tackle the full spectrum of alignment challenges, from horizontal and angular to vertical. This smart technology empowers reliability teams to work faster, smarter, and with greater confidence, unlocking new levels of operational efficiency and team productivity.

As the benchmark for innovation in alignment systems, RotAlign™ Elite delivers a comprehensive suite of adaptive features that redefine accuracy and speed. With built-in intelligence to minimize human error and streamline workflows, it sets a new industry standard for performance and reliability in machine alignment.



Introducing RotAlign™ Elite

RotAlign Elite, the all new successor to the premium RotAlign Touch with SensAlign 7 delivers high-precision alignment solutions with a single sensor and dual detectors that extend optical distance for enhanced accuracy. Its adjustable laser accommodates all machine types, ensuring versatile and efficient alignment across diverse industrial applications. The system also includes direct emailing with customizable reporting features and a built-in Return on Investment (ROI) calculator, empowering users to assess operational cost-effectiveness with confidence.

Designed for advanced alignment tasks, RotAlign Elite supports complex configurations including up to 14-train machines , multi-coupling setups, and in-situ cardan shaft alignment. Key features such as pass mode, move simulator, advanced vertical alignment, softfoot diagnosis, Intelli modes, and integrated vibration measurement enable comprehensive diagnostics and maintenance. With live trend monitoring, users gain real-time insights into machine performance, helping to optimize uptime and reliability.

RotAlign™ Elite 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

- **Streamlined Setup:** Single-laser technology simplifies installation with just one sensor and laser, reducing setup time and complexity.
- **High-Precision Alignment:** Dual optical planes and Freeze-Frame Measurement ensure accurate results over long distances—even with extreme misalignments—without manual pre-alignments.
- **Real-Time Corrections:** Simultaneous live move capability enables technicians to view and adjust alignment in both vertical and horizontal planes instantly, minimizing errors and saving time.



RotAlign™ Elite is pioneering adaptive alignment and thus setting a new benchmark.

FLUKE®

Shaft Alignment App



One tablet, total flexibility.

Whether you're working with multiple sensor types or upgrading to meet growing operational needs, RotAlign™ Elite supports a unified tablet platform across the product range.

Customers can choose between a locked version for dedicated use or an unlocked version that enables full tablet functionality, including the capability to install 3rd party applications such as CMMS, Vibration or Thermal Imaging.

For even more flexibility, an Android app version is available, allowing users to leverage their existing devices for alignment.

Customizable Reports

Create tailored reports with ease using RotAlign™ Elite's flexible reporting options. Choose from pre-installed full or short templates or use your own custom layouts. Select exactly what data and graphics to include, rearrange major sections to suit your workflow, and save personalized templates for future use—ensuring every report meets your team's needs with precision and efficiency.



Built-in ROI Calculator

The integrated ROI calculator in the RotAlign™ Elite app provides instant visibility into the financial benefits of precision alignment. By calculating savings from reduced downtime, extended equipment lifespan, and improved energy efficiency, users can quantify the value of each alignment task. This feature supports informed decision-making, helps justify maintenance investments, and enhances operational efficiency—all within a single, user-friendly interface.



RotAlign™ Elite is built for connected reliability, enabling seamless cloud-based data sharing with ARC 4.0 PC software. This connectivity bridges the gap between field technicians and reliability teams, enhancing collaboration and performance tracking.

By integrating alignment data into broader reliability workflows, RotAlign™ Elite helps teams work smarter and faster—unlocking full capacity to solve alignment challenges with precision and insight.

Tailored feature bundles.

RotAlign™ Elite offers Starter, Starter Plus, Advanced and Expert feature bundles, so teams can select the level of capability that matches their expertise and operational requirements.

Upgrades can be performed anytime, in the field

— ensuring your alignment solution grows seamlessly with your business needs.

	Starter	Starter Plus	Advanced	Expert
Short-Flex, Spacer & Cardan Shaft	✓	✓	✓	✓
Live Move H and V	✓	✓	✓	✓
SoftFoot & Vertical Alignment	✓	✓	✓	✓
8-Point Active clock, Continuous Sweep, MultiPoint PassMode	✓	✓	✓	✓
Static Feet & Multiple Feet	✓	✓	✓	✓
Quality Factor, SD & Post Processing by Edit Points	✓	✓	✓	✓
Thermal Growth & Coupling Targets	✓	✓	✓	✓
3 to 6 Machine Trains	✓	✓	✓	✓
Move Simulator		✓	✓	✓
Advanced Vertical with VertiSweep		✓	✓	✓
Softfoot Diagnose		✓	✓	✓
In-Sit Cardan Shaft			✓	✓
Intelli modes			✓	✓
Vibration			✓	✓
14-train machines				✓
Multi-coupling				✓
Live Trend				✓

A look behind the curtain

Single-laser technology: The secret sauce in precision alignment

RotAlign™ Elite's single-laser technology is the core of precision alignment, integrating dual HD position-sensitive detectors (PSDs), MEMS inclinometers, and Freeze-Frame extension to deliver accurate data—even under extreme misalignment. Technicians can simultaneously monitor corrections in both vertical and horizontal directions from any angular position, eliminating manual pre-alignments and streamlining the process.

Packed with intelligent features like IntelliSweep™, VertiSweep™, In-situ Cardan Shaft, Simultaneous Live Move, Multi-coupling Measure, and Live Trend, RotAlign™ Elite transforms complex alignment tasks into efficient operations. It provides real-time insights and adaptive control across diverse machinery—from cardan shafts to turbomachines—setting new benchmarks for speed, precision, and reliability.



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.



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.

ASI – Active Situational Intelligence

Speed doesn't always equal accuracy—especially when aligning critical machinery. Rushing can compromise precision and lead to costly errors. RotAlign™ Elite overcomes this with Active Situational Intelligence (ASI), a breakthrough technology that enables fast, accurate alignment by actively guiding users and minimizing mistakes during measurement and correction.

The accuracy of a measurement depends heavily on the method used, but external factors like vibrations or inconsistent shaft rotation can distort results. RotAlign™ Elite's Active Situational Intelligence (ASI) analytics compensates for these influences in real time—filtering out environmental and human-induced errors to deliver reliable, repeatable alignment measurements, even in challenging conditions.

RotAlign™ Elite is built to perform in any industry, anywhere. Engineered for durability and precision, this advanced laser shaft alignment system thrives in the toughest industrial environments. From manufacturing plants to energy facilities, it adapts seamlessly to any asset driven by a coupled rotating shaft—delivering consistent, high-performance alignment across sectors.

TECHNICAL DATA

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:	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	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)

TECHNICAL DATA

RotaAlign™ Elite Sensor

General specifications		
Type	6-axis	2 planes (4 displacement axes and 2 angles)
Measurement	Optical range	20 x 20 mm (0.79 x 0.79 in.)
	Area	Unlimited, dynamically extendible
	Resolution	1 µm (0.04 mil); Angular 5 µRad
	Error	< 1%
	Transmitted rate	Approx. 20 Hz
Inclinometer	Resolution	0.1°
	Error	Roll +-0.5°; Pitch +- 2°
Vibration measurement	Velocity RMS 10 Hz to 1 kHz, 0 mm/s – 5000/f • mm/s^2 (f in Hertz [1/s])	
LED indicators	4 LEDs for laser adjustment; 1 LED for battery and charge status; 1 LED for BT communication	
Power supply	Battery	Lithium-Ion rechargeable battery 3.6 V, 8 Wh
	Operating time	55 hours (continuous use)
	Charging time	4.5 h for up to 80%; 6.5 h for up to 100%
	Charging	USB-C
External interface	Integrated low power 2.4 GHz Radio (BT LE); USB 2.0 Full Speed	
Radio transmission distance	Up to 50 m (160 ft) direct line of sight	
Environmental protection	IP 65	Dustproof and water jets resistant, 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 50°C (-4°F to 122°F)
Dimensions	Approx. 104 x 85 x 59 mm (4 1/8” x 3 3/8” x 2 5/16”)	
Weight	Approx. 313 g (11 oz)	
CE conformity	Refer to the CE compliance certificate in www.pruftechnik.com	

TECHNICAL DATA

RotaAlign™ Elite Laser

General specifications		
Type	Semiconductor laser diode	
Laser	Power	< 1 mW
	Divergence	0.3 mrad
	Wavelength	630-640 nm (red, visible)
	Separation distance	Up to 10 m
	Adjustment	Yes
	Safety class	Class 2 according to IEC 60825-1:2014 Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice No. 56, dated May 8, 2019. Safety precaution: Do not look into laser beam
Inclinometer	Resolution	0.1°
	Error	Roll +-5°
LED indicators	1 LED for battery and charge status	
Power supply	Battery	Lithium-Ion rechargeable battery 3.6 V, 8 Wh
	Operating time	90 hours (continuous use)
	Charging time	4.5 h for up to 80%; 6.5 h for up to 100%
	Charging	USB-C
Environmental protection	IP 65	Dustproof and water jets resistant, 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 50°C (-4°F to 122°F)
Dimensions	Approx. 104 x 85 x 59 mm (4 1/8” x 3 3/8” x 2 5/16”)	
Weight	Approx. 320 g (11.3 oz)	
CE conformity	Refer to the CE compliance certificate in www.pruftechnik.com	



Fluke. Keeping your world up and running.™

www.pruftechnik.com
fds-support@fluke.com

©2026 Fluke Corporation.
Specifications subject to change without notice.
01/2026 250835-en

Modification of this document is not permitted without written permission from Fluke Corporation.