



FLUKE®



TBE

TBE Anlagendiagnostik GmbH
SV | Ingenieurbüro | Condition Monitoring

RotAlign Elite EX: Precision Alignment for Hazardous Environments



Best-in-Class Technology Now Available for EX Products

The RotAlign Elite EX brings world-renowned RotAlign technology to explosive atmospheres for the first time, offering a "no compromise" solution for measurement quality and efficiency.

Featuring a **unique single-laser, double-detector** principle, this system provides a best-in-class solution that saves time and costs across multiple levels

Why Choose RotAlign Elite EX?

- **Superior Certification:** Fully certified for Gas and Dust ATEX Class 1 and North American Class 1 Div 1, increasing adoption possibilities across global sites
- **Faster, Easier Setup:** The single-laser technology requires only one sensor and one laser, greatly simplifying the installation of measurement equipment
- **Eliminate Guesswork:** High-precision sensors with Freeze-Frame Measurement handle large misalignments, documenting initial conditions without the need for manual pre-alignments
- **Simultaneous Live Move:** Technicians can monitor alignment corrections in real time across both vertical and horizontal planes simultaneously.
- **One-Move Precision:** Prevent divergence and maintain contact over long distances to avoid repetitive adjustments, reducing errors and saving valuable time

Fluke EX Alignment Tools help you move from reactive to predictive maintenance.



Increase Asset
Lifespan



Cut Maintenance
Costs by 40%



Maximise Uptime
and Revenue

Why Choose Fluke Laser Alignment Technology?



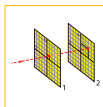
Single-laser technology

Fluke laser alignment systems leverage technology that uses only a single laser beam. Coupled with double detectors, this makes them easy to install and guarantees maximum precision, even in the event of extreme angular misalignments.



Active Situational Intelligence

Active Situational Intelligence (ASI) is a groundbreaking problem-solving technology, exclusive to the Adaptive Alignment systems from Fluke. ASI helps the user avoid mistakes while working quickly and precisely to measure and align machines.



IntelliSweep™

With the intelligent IntelliSweep™ HD measuring mode, interference factors such as coupling play, angular misalignment, or external vibration sources can be easily identified by the user and eliminated from the system in order to avoid poor measurement data acquisition quality. As soon as the shaft rotates, a large amount of data is automatically and continuously recorded. The repeatability and the measuring precision are thus many times higher than with conventional measuring methods based on a three-point circular measurement calculation.



RotAlign™

The patented RotAlign™ sensor technology features a built-in inclinometer and vibration measurement. This is based on the use of a microelectromechanical system (MEMS) that measures over a total of seven axes. The XXL HD PSD sensor forms the basis for this. With this superior RotAlign™ technology, our intelligent IntelliSweep™, Simultaneous Live Move, and Quality Factor measuring modes, we achieve repeatable and precise measurement results in every area of misalignment.

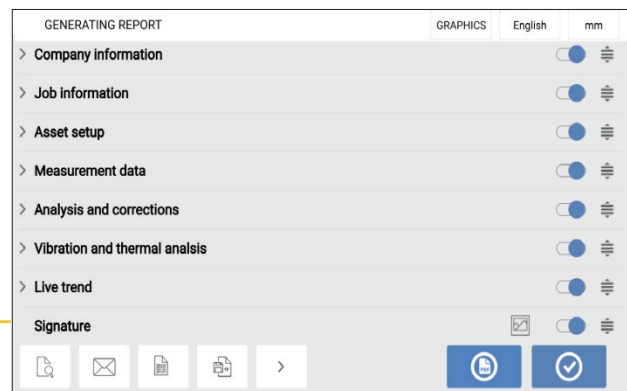


IntelliPass™

With the intelligent IntelliPass™ measuring mode, based on IntelliSweep™, decoupled shafts can be measured and aligned to each other. For this purpose, the two measuring heads - sensor and laser - are rotated past each other in different angular positions. The measurements are taken automatically as soon as the laser beam hits the center of the sensor.

Customizable Reports

Create tailored reports with ease using RotAlign™ 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™ app provides instant visibility into the financial benefits of precision alignment. By calculating savings from reduced power, 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.

ROI POWER SAVINGS RESULTS	
Reduced misalignment	0.98 mm / 1.34 degrees
Power loss / saving	6.35%
Cost of power per kWh	€ 0,36
Operating hours per day	24
Operating days per year	365
Annual power saving on Asset operating on 80% capacity	€ 5 604,75

Your Alignment Tool Your Way, Your Choice

Tablet

Choose from Open or Locked EX Tablet or simply download application to existing Android tablet of your choice

Fluke Alignment App

Locked



Unlocked



Laser & Sensor Heads

Gas and Dust ATEX Class 1 & NA Class1 Div1

RotAlign Elite EX



Feature Bundles

Add the right software solution with upgrade options to suit your needs.

Feature Bundle	
RotAlign Elite EX Starter	Horizontal Standard Machines (e.g. Motor – Pump), Anti-Friction Bearing / Ball Bearing, with Short-Flex couplings Larger and more critical Machines, Dynamic Machines (Temperature or load related movement), Wind Turbines, Propeller Shaft in Ships, Spacer Coupling, Single Plane Coupling, No Coupling, Vertically mounted Machines with Short-Flex Coupling Turbo Machinery (More critical and higher speed), 3 Machine Train, Sleeve Bearing / White Metal Bearing Gas Turbines, Cardan Shafts, 6 Machine Train, Uncoupled Shaft
RotAlign Elite EX Starter Plus	Every Machine Setup Any vertical machine type: Vertical Spacer Coupling, Vertical right angle gearbox
RotAlign Elite EX Advanced	Cardan Shafts (without removal of cardan shaft)
RotAlign Elite EX Expert	Large machines with multiple couplings, Cooling Towers, Steam Turbines, Pipe Strains, 14 Machine Train

Which alignment tool and bundle is for me?

Why Choose RotAlign Elite EX?

- You need to carry out alignment in dangerous or hazardous environments
- You need fully certified Gas and Dust ATEX Class 1 and North American Class 1 Div 1
- You have more than 3 machines to align (up to 14 train machines possible)
- You have cardan shaft connected machines to align
- You have advanced vertical machines to align
- You would like to monitor in real-time the dynamic machine movement to derive machine pre-sets
- You want the highest form of repeatability and advanced features that come with the Intelli modes

RotAlign Elite EX Bundles

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