Product overview: Fluke 830 Laser Shaft Alignment Tool

The Fluke 830 Laser Shaft Alignment Tool is the ideal test tool to precision-align rotating shafts in your facility.

It's a known fact - all rotating machinery is susceptible to misalignment. If you're still using rulers and dial indicators to ensure your rotating machinery is properly aligned, you could be losing thousands of dollars per year in replacement bearing costs, hours of unnecessary repair time, and crippling unplanned downtime, not to mention taking years off your machine's useful life.

The Fluke 830 Laser Shaft Alignment tool is easy-to-use, giving you fast, accurate and actionable answers that will keep your plant up and running. When it comes to laser shaft alignment, data is good but answers are better.

Unlike using the straightedge method or dial indicators the Fluke 830 performs the complicated alignment calculations for you, meaning you'll have the answers you need to quickly align your machine and get your plant up and running fast. An enhanced user interface provides easy to understand results that don't require extensive alignment knowledge and the unique "All-in-One" result screen that shows you both coupling results and feet corrections (vertical and horizontal) in real terms making it easy to take corrective action.

Since machine downtime is costly, test repeatability is critical. The Fluke 830 uses a patented single laser precision alignment system that provides accurate and repeatable measurement results so you can be assured you're addressing misalignment problems properly.

Other useful features:

- Includes a unique “All-in-One” result screen that shows both coupling results and vertical and horizontal feet corrections, making it easy to take corrective action
- Features a dynamic machine tolerance check that provides continuous evaluation of alignment adjustments so you know when your machine is in the acceptable range
- Offers unique extend mode to handle gross misalignment by virtually increasing laser detector size
- Provides auto save and resume capability to ensure your data is there when you need it

Specifications: Fluke 830 Laser Shaft Alignment Tool

Computer	
CPU	Intel XScale PXA270 running at 312 MHz
Memory	64 MB RAM, 64 MB flash
Display	Type: TFT, transmissive (sunlight-readable), 65,535 colors, backlit LED
	Integrated light sensor for automated adjustment of the brightness to the display according to the lighting conditions which extends battery life
	Resolution: 320 x 240 pixel; Dimensions: 89 mm (3.5 in) diagonal
	Keyboard elements: Setup, measure, diagnose, menu, clear, enter, back keys, navigation cursor cross, alphanumeric keyboard and on/off button
LED indicators	Multicolor LED for laser status and alignment condition
	Multicolor LED for battery status
Power supply	Integrated Lithium-ion polymer rechargeable battery: 7.4 V/ 2.6 Ah (for optional computer) with typical operating time of 17 hours (based upon an operating cycle of 33% measurement, 33% computation and 33% 'sleep' mode)
External interface	USB host and USB device (slave)
	Integrated wireless communication, Class 1, transmitting power 100 mW
	RS232 (serial) for sensor
	AC adapter/charger socket
Environmental protection	IP 65 (dustproof and water spray resistant), shockproof
	Relative humidity 10% to 90%

Operating temperature	-10°C to 50°C (14°F to 122°F)
Storage temperature	-20°C to 60°C (-4°F to 140°F)
Dimensions	220 mm x 165 mm x 45 mm (8.7 in x 6.5 in x 1.8 in)
Weight	742 g (1.64 lb)
Sensor	
Measurement principle	Coaxial, reflected laser beam
Environmental protection	IP 67 (submersible, dustproof)
Ambient light protection	Yes
Storage temperature	-20°C to 80°C (-4°F to 176°F)
Operating temperature	0°C to 55°C (32°F to 131°F)
Dimensions	107 mm x 70 mm x 49 mm (4 1/4 in x 2 3/4 in x 2 in)
Weight	177 g (6 1/2 oz)
Laser	Type: Ga-Al-As semiconductor laser
	Wavelength (typical) 675 nm (red, visible)
	Safety class: Class 2, FDA 21 CFR 1000 and 1040
	Beam power: < 1 mW
	Safety precautions: Do not look into laser beam
Detector	Measurement area: unlimited, dynamically extendible (U.S. Patent 6,040,903)
	Resolution: 1 µm; Accuracy (avg): > 98%
Inclinometer	Measurement range: 0° to 360°; Resolution: < 1°
Prism	
Type	90° roof prism; Accuracy (avg): > 99%
Environmental protection	IP 67 (submersible, dustproof)
Operating temperature	-20°C to 60°C (-4°F to 140°F)
Storage temperature	-20°C to 80°C (-4°F to 176°F)
Dimensions	100 mm x 41 mm x 35 mm (4 in x 1 5/8 in x 1 3/8 in)
Weight	65 g (2 1/2 oz.)
Carrying case	

Dimensions	565 mm x 343 mm x 127 mm (22 1/4 in x 13 1/2 in x 5 in)
Weight, including all standard parts	5.6 kg (12.3 lb)