

The FARO Laser Tracker Xi is a portable, contact measurement system that uses laser technology to accurately measure large parts and machinery across a wide range of industrial applications. It has a 230-ft. diameter range, achieves 0.001" 3-D single-point accuracy, and is rugged enough for the shop-floor environment. The system measures 3-D coordinates with its laser by following a mirrored spherical probe. The system can run in two modes: XtremeADM (Absolute Distance Measurement) and Interferometer; making it the most accurate and flexible Laser Tracker system.

- 230-foot range
- Up to .001" accuracy
- Automated compensation
- High-resolution interferometer
- XtremeADM instant beam acquisition

Most Common Applications

Aerospace:

Inspection & Certification, Automated Assembly Systems

Tool & Die:

Master Molds, Tool Setup, Composite Tooling

Automotive:

Tool Certification and Repeatability, Reverse Engineering

Heavy Equipment:

In-Process/Large Part Inspection, Installation and Alignment



A XtremeADM

B SelfComp

C Smart Warm-Up

D Integrated Weather Station

E Versatile Mounting Options

F Spherically Mounted Retroreflectors



A Acquires the beam instantly with fast, high-accuracy Absolute Distance Measurement

B Automatically compensates to quickly ensure high accuracy

C Newly expanded operating temperature, along with Active Thermal Compensation make it ready for all environments

D Integrated Weather Station is part of the full featured standard equipment

E Mounts vertically, horizontally or upside down, providing versatility in tight or congested shop areas

F Certified Precision Probes



System Specifications

Head size 11 x 21.8 in (280 x 554 mm)
Head weight 48 lbs (22 kg)
Controller size 6 x 7 x 11 in (160 x 180 x 280 mm)
Controller weight 12 lbs (5 kg)

Environmental

Altitude -700 to 2,450 meters
Humidity 0 to 95% non-condensing
Operating Temperature 5°F to 122°F (-15°C to 50°C)

Distance Measurement Performance*

XtremeADM

Resolution 0.5µm
Sample rate 10,000 samples/sec
Accuracy 10µm + 0.4µm/m
RO Parameter 10 µm

Interferometer

Resolution 0.158µm
Accuracy 2µm + 0.4µm/m
Maximum radial velocity 4m/sec
RO Parameter 10 µm

Range

Horizontal envelope +/- 270°
Vertical envelope +75 to -50
Minimum working range 0 m
Maximum working range 230-ft. (70 m) diameter

Angle Measurement Performance*

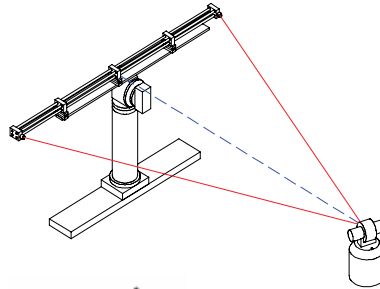
Angular accuracy 18µm + 3µm/m
Maximum angular velocity 180°/sec
Optional Precision Level Accuracy +/- 2 arcseconds

- *Typical Accuracy shown is half the Maximum Permissible Error (MPE) and variation in air temperature is not included. MPE and all accuracy specifications are calculated per ASME B89.4.19 Standard.
- Specifications, descriptions, and technical data may be subject to change.

Point-to-Point Typical Accuracy*

Horizontal Scale Bar Measurement

Range(m)	XADM(mm)	IFM(mm)
2	0.032	0.031
5	0.046	0.046
10	0.068	0.068
20	0.110	0.110
30	0.153	0.153
35	0.174	0.174



In-Line Distance Measurement

Length(m)	XADM(mm)	IFM(mm)
2 to 5 m	0.011	0.003
2 to 10 m	0.013	0.005
2 to 20 m	0.017	0.009
2 to 30 m	0.021	0.013
2 to 35 m	0.023	0.015



"The FARO Laser Tracker has already saved us hundreds of hours in the development process."
— Eclipse Aviation



www.faro.com
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ISO-17025 : 2005
ACCREDITED
Certificate # L1147