

FARO Laser Tracker Xi



[A] XtremeADM

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

[B] Wireless Targeting Camera (option)

Includes a 40 degree field-of-view; Integrated LED illuminator that lights up .5" targets from up to 24 m (80 ft.) away; Illuminator Blink which helps locate targets in view

[C] Wireless 802.11g Communication (option)

Easily connect to any wireless enabled PC

[D] SelfComp

Automatically compensates to quickly ensure high accuracy

[E] Integrated Weather Station

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

[F] Smart Warm-Up

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

[G] Versatile Mounting Options

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

[H] Spherically Mounted Retroreflectors

Certified Precision Probes

Xtreme Measurement Range!

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 70m (230-ft.) diameter range, achieves 0.025mm (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.

Most Common Applications

Aerospace: Inspection & Certification, Automated Assembly Systems

Automotive: Tool Certification and Repeatability, Reverse Engineering

Tool & Die: Master Molds, Tool Setup, Composite Tooling

Heavy Equipment: In-Process/Large Part Inspection, Installation and Alignment

Features

- ▶ 70m (230-foot) range
- ▶ Up to 0.025mm (0.001") accuracy
- ▶ Automated Compensation
- ▶ High-resolution interferometer
- ▶ XtremeADM instant beam acquisition

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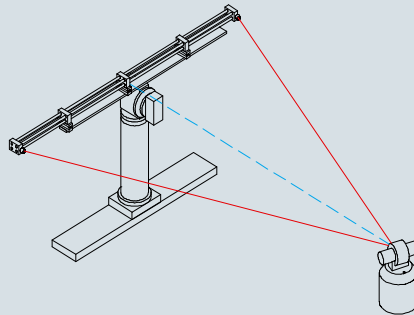
Applications



Point-to-Point Typical Accuracy*

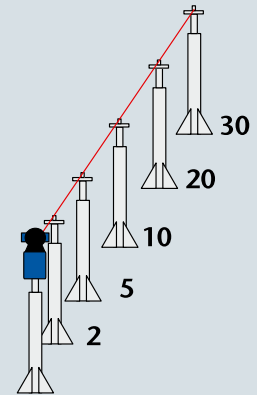
Horizontal Scale Bar Measurement

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 - 5	0.011	0.003
2 - 10	0.013	0.005
2 - 20	0.017	0.009
2 - 30	0.021	0.013
2 - 35	0.023	0.015



System Specifications

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

Range

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

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
 R0 Parameter: 10 µm

Interferometer

Resolution: 0.158µm
 Accuracy: 2µm + 0.4µm/m
 Maxim. radial velocity: 4m/sec
 R0 Parameter: 10 µm

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.



**ISO-17025 : 2005
 ACCREDITED
 Certificate # L1147**

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