

FARO Laser Tracker X



XtremeADM

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

SelfComp

Automatically compensates to quickly ensure high accuracy

Full Featured Standard Equipment

Integrated Precision Level and Weather Station is included

Smart Warm-Up

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

Versatile Mounting Options

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

Spherically Mounted Retroreflectors

Certified Precision Probes

Xtreme Measurement Range!

The FARO Laser Tracker X 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. (70m) diameter range, achieves point to point accuracy as high as 0.0004" (0.011mm), and is rugged enough for the shop-floor environment. The system measures 3-D coordinates with its laser by following a mirrored spherical probe. High-accuracy, angular encoders — along with XtremeADM — Absolute Distance Measurement, reports the 3-D position of the probe in real-time.

Common Applications

Aerospace: Inspection, Tool Building & 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

- ▶ 230-ft. (70m) range
- ▶ Up to 0.0004" (0.011mm) accuracy
- ▶ XtremeADM instant beam acquisition
- ▶ Instant-On Laser
- ▶ Automated Compensation

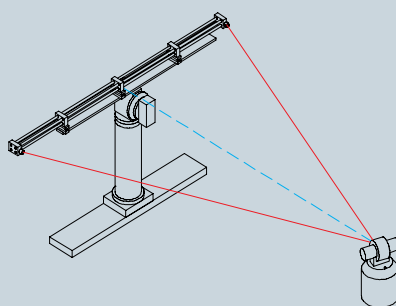
FARO Laser Tracker X

Applications

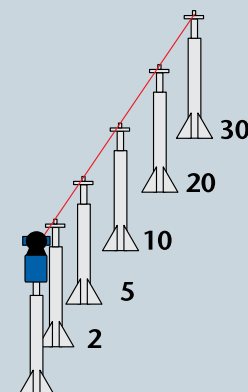


Point-to-Point Typical Accuracy**

Horizontal Scale Bar Measurement		
Range	XADM	
m	mm	in.
2	0.032	0.0013
5	0.046	0.0018
10	0.068	0.0027
20	0.110	0.0043
30	0.153	0.0060
35	0.174	0.0069



In-Line Distance Measurement		
Length	XADM	
m	mm	in.
2 - 5	0.011	0.0004
2 - 10	0.013	0.0005
2 - 20	0.017	0.0007
2 - 30	0.021	0.0008
2 - 35	0.023	0.0009



System Specifications

Head size: 280 x 554 mm (11 x 21.8 in)
 Head weight: 20 kg (44 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: -15°C to 50°C (5°F to 122°F)

Laser Emission*
 633-635 nm Laser, 1 milliwatt max/cw.
 Class II Laser Product

Distance Measurement Performance**
 Resolution: 0.5µm
 Sample rate: 10,000 samples/sec
 Accuracy: 10µm + 0.4µm/m
 R0 Parameter: 10µm

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

* • Product Complies with radiation performance standards under the food, drug and cosmetics act and internal standard IEC 60825-1 2001-08.

**• 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.

