

# FARO Laser Tracker



## **XtremeADM®**

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

## **SelfComp**

*Automatically tunes Laser Tracker parameters to ensure high accuracy*

## **Full-Featured Standard Equipment**

*Integrated Precision Level and Weather Station is included*

## **Smart Warm-Up**

*Accelerates the stabilization time in order to minimize the initial temperature changes' impact on measurements*

## **Versatile Mounting Options**

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

## **Spherically Mounted Retroreflectors**

*Certified Precision Probes*

## Measure more quickly, simply and accurately

The FARO Laser Tracker is an extremely accurate, portable coordinate measuring machine that enables you to build products, optimize processes, and deliver solutions by measuring more quickly, simply and precisely than previously possible. The FARO Laser Tracker X utilizes an advanced ADM-only system that enables dynamic measurements and scanning capabilities. The FARO Laser Tracker Xi incorporates a high-resolution interferometer for applications that require the highest accuracy results.

### Common Applications

**Alignment:** Real-time feedback of object positioning

**Installation:** Lay out / level machine foundation

**Part Inspection:** Digital record of actual vs nominal data

**Tool Building:** Set up and inspect tools with only one person

**Reverse Engineering:** Acquire high-accuracy digital scan data

## Features

- ▶ 70m (230-ft) diameter range
- ▶ Up to 0.003mm (0.00012") accuracy
- ▶ XtremeADM instant beam acquisition
- ▶ High-resolution interferometer
- ▶ Automatic compensation
- ▶ High performance, real-time dynamic measurements

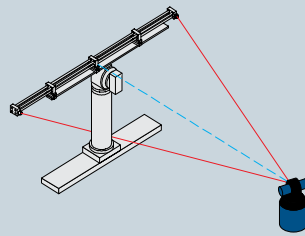
# FARO Laser Tracker



## Point-to-Point Typical Accuracy\*\*

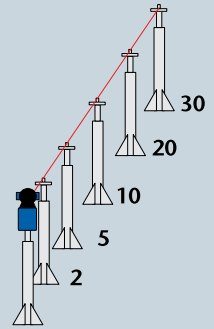
### Horizontal Scale Bar Measurement

Range	XADM		IFM (Xi Model Only)	
	mm	in.	mm	in.
2	0.032	0.0013	0.031	0.0012
5	0.046	0.0018	0.046	0.0018
10	0.068	0.0027	0.068	0.0027
20	0.110	0.0043	0.110	0.0043
30	0.153	0.0060	0.153	0.0060
35	0.174	0.0069	0.174	0.0069



### In-Line Distance Measurement

Length	XADM		IFM (Xi Model Only)	
	mm	in.	mm	in.
2 - 5	0.011	0.0004	0.003	0.00012
2 - 10	0.013	0.0005	0.005	0.0002
2 - 20	0.017	0.0007	0.009	0.0004
2 - 30	0.021	0.0008	0.013	0.0005
2 - 35	0.023	0.0009	0.015	0.0006



## System Specifications

### Dimensions

Head size: 280 x 554 mm (11 x 21.8 in)  
 Head weight: X - 20 kg (44 lbs), Xi - 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: -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\*\*

#### XADM

Resolution: 0.5µm  
 Sample rate: 10,000/sec  
 Accuracy: 10µm + 0.4µm/m  
 R0 Parameter: 10 µm

#### IFM

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

Protected by U.S. patents: 7327446, 7352446, 7466401

ISO 9001  
 BUREAU VERITAS  
 Certification



GSA Contract Holder