

FARO® Laser Tracker Vantage Features, Benefits & Technical Specifications



Water and Dust Resistant IP52 Rating

The Vantage can be used in demanding industrial conditions.

SmartFind

Quickly and efficiently locates and locks on to the correct target.

MultiView Cameras

This patent pending integrated two-camera system can automatically point to a specific target, and quickly and efficiently locate a target when the target is not in its normal position.

TruADM

Patented 5th generation ADM system provides the accuracy needed for everyday, real-world applications.

QuickComp

Optimizes measurements based on specific ranges to maintain high system accuracy.

TriMap Encoders

Three read head system that is self-mapping; Enables faster service time in more convenient locations.

Compact Size

The smallest and lightest FARO Laser Tracker ever built is incredibly easy to use and transport between job sites.

The FARO Vantage is the most complete laser tracking solution. It is an extremely accurate, portable coordinate measuring machine that enables you to build products, optimize processes, and deliver solutions by measuring quickly, simply and precisely. The Vantage is the smallest and lightest FARO Laser Tracker ever built, making it incredibly easy-to-use and transport between job sites. TruADM is FARO's 5th generation patented ADM system which uses predictive algorithms to compensate for the acceleration and velocity of a moving target.

Most Common Applications

Alignment: Real-time measurement confirms tolerances and validates design
Installation: Reduce wear and tear on mechanical parts
Part Inspection: Digital record of actual vs nominal data
Tool Building: Full volumetric accuracy tests
Reverse Engineering: Acquire high accuracy digital scan data
Robotic & Machine Guidance: Automation simplifies complex drilling and probing applications

Benefits

- ▶ Lightweight design and innovative packaging.
- ▶ Longer range for easy measurement of large objects
- ▶ Simply measure with WLAN anywhere within the wireless network's range with no need to plug into a laptop computer for enhanced portability and convenience.

FARO® Laser Tracker Vantage

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System Specifications

Dimensions

Head size: (w x h):	224mm x 416mm
Head weight:	12.6kg
Controller size (l x d x h):	290 x 158 x 214mm without filters
	316 x 158 x 214mm with filters
Controller weight:	4.8kg

Range

Horizontal envelope:	360° - Infinite rotation
Vertical envelope:	130° (+77.9° to -52.1°)
Minimum working range:	0m
Maximum working range:	80m* with selected targets & 10°C and 35°C temperature range
	60m with standard 1.5" & 7/8" SMRs
	30m with standard 1/2" SMR

MultiView Cameras

Field of view:	30°
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Single Point Repeatability

25 points at 1.6m:	8µm
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Environmental

Altitude:	-700m to 9,000m****
Humidity:	0 to 95% non-condensing
Operating temperature:	-15°C to 50°C

Laser Emission**

653-663nm Laser, 1 milliwatt max/cw.
Class II Laser Product

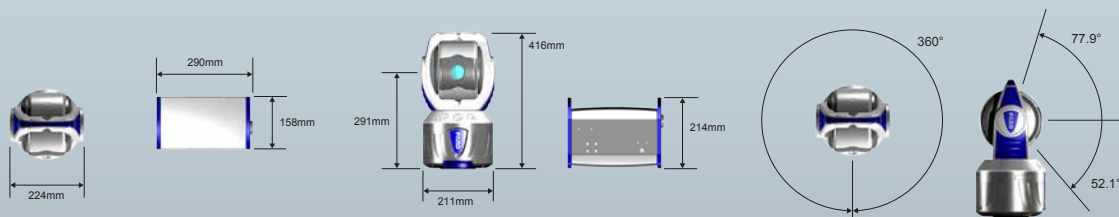
Distance Measurement Performance***

TruADM

Resolution:	0.5µm
Sample rate:	16,000 points/sec
Accuracy (MPE):	16µm + 0.8µm/m
R0 parameter (MPE):	16µm
Max radial acceleration:	30m/ sec ²
Max radial velocity:	>25m/sec

Angle Measurement Performance***

Angular accuracy (MPE):	20µm + 5µm/m
Maximum angular velocity:	180°/sec
Precision level accuracy:	±2 arcseconds
Max angular acceleration:	860°/sec ²



Point to Point Accuracy***

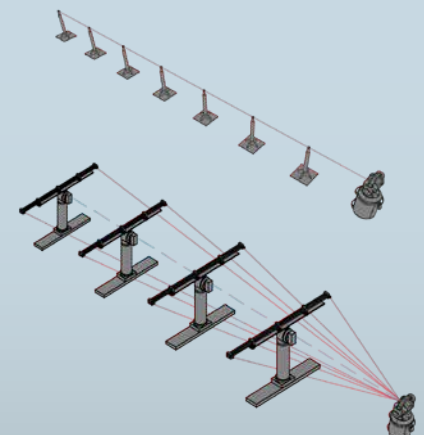


In-Line Distance Measurement

Length (m)	2-5	2-10	2-20	2-30	2-40	2-60	2-80*	
Distance (m)	3	8	18	28	38	58	78	
ADM	MPE (mm)	0.018	0.022	0.03	0.038	0.046	0.062	0.078
	Typical (mm)	0.009	0.011	0.015	0.019	0.023	0.031	0.039

Horizontal Scale Bar Measurement (2.3m)

Range (m)	2	5	10	20	30	40	60	80*	
ADM	MPE (mm)	0.044	0.064	0.099	0.17	0.24	0.312	0.452	0.594
	Typical (mm)	0.022	0.032	0.049	0.085	0.12	0.156	0.191	0.297



*With selected targets. **Product complies with radiation performance standards under the food, drug, and cosmetics act and international standard IEC 60825-1 2001-08. ***MPE and all accuracy specifications are calculated per ASME B89.4.19 - 2006. Variation in air temperature is not included. Specifications, descriptions, and technical data may be subject to change. ****With integrated weather station. Protected by U.S. patents: 7,327,446 7,352,446 7,466,401 7,701,559 8,040,525 8,120,780. 1mm = 0.0394 inches

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