

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°)
 0m
 Minimum working range: 80m* with selected targets & 10°C and 35°C temperature range
 Maximum working range: 60m with standard 1.5" & 7/8" SMRs
 30m with standard 1/2" SMR

Environmental

Altitude: -700m to 2,450m
 Humidity: 0 to 95% non-condensing
 Operating temperature: -15°C to 50°C

Distance Measurement Performance***

TruADM

Resolution: 0.5µm
 Sample rate: 10,000 points/sec
 Accuracy (MPE): 16µm + 0.8µm/m
 R0 Parameter (MPE): 16µm

Angle Measurement Performance***

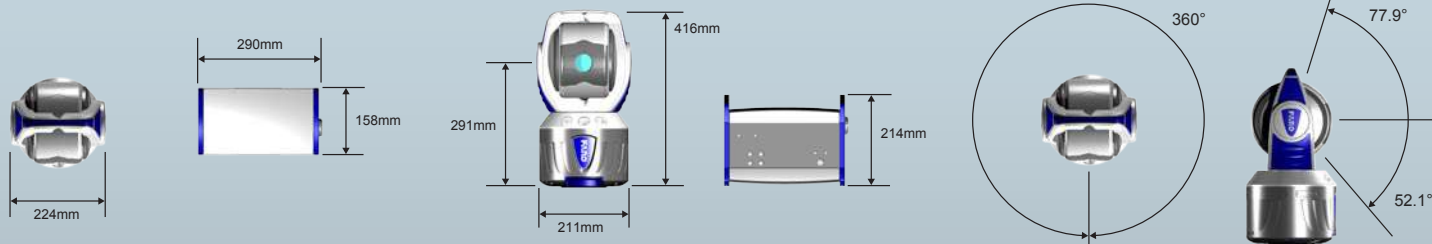
Angular accuracy (MPE): 20µm + 5µm/m
 Maximum angular velocity: 180°/sec
 Precision level accuracy: ±2 arcseconds

MultiView Cameras

Field of view: 30°

Laser Emission**

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

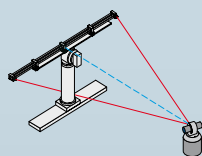


Point-to-Point MPE Accuracy***



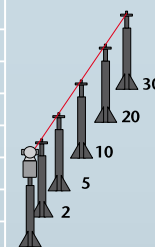
Horizontal Scale Bar Measurement

Range (m)	ADM (mm)
2	0.044
5	0.064
10	0.098
20	0.170
30	0.240
40	0.312
50	0.382
60	0.452
70	0.524
80*	0.594



In-Line Distance Measurement

Length (m)	Distance (m)	ADM (mm)
2-5	3	0.018
2-10	8	0.022
2-20	18	0.030
2-30	28	0.038
2-40	38	0.046
2-50	48	0.054
2-60	58	0.062
2-70	68	0.070
2-80*	78	0.078



*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.

Protected by U.S. patents: 7,327,446 7,352,446 7,466,401 7,701,559 8,040,525 8,120,780

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