Automated Precision Inc.
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Laser Tracker II$^{PLUS!\ ™}$

Designed with the user in mind, the Laser Tracker II$^{PLUS!\ ™}$ advanced optical design translates to precise accuracy and measurement reliability. The Laser Tracker II$^{PLUS!\ ™}$ is designed to operate where the most benefit is reaized ....on the shop floor. No other tracker can match the accuracy and reliability of the Laser Tracker II$^{PLUS!\ ™}$. It is the most versatile laser tracker available for dimensioning, tool building, alignment, and reverse engineering applications.

Superior Accuracy

API's advanced design adopts an on-the-shaft mounting of the laser head. As a result of this design approach, the laser beam exits the tracker head without going through a single bending mirror. The heart of this advanced tracker is the unique laser head design. The complete laser interferometer, ADM position sensing device, and optics are housed in one assembly. API's design minimizes thermally-induced measurement errors, resulting in superior instrument stability and accuracy.

Absolute Distance Measurement (ADM)

The Absolute Distance Measurement (ADM) option greatly expands the measurement capabilities of the Laser Tracker II$^{PLUS!\ ™}$. Use ADM to quickly measure inaccessible targets or to automate repetitive measurement tasks. With ADM you can quickly measure remote points in seconds. The ADM technology is based upon API's new innovative repetitive time-of-flight technique$^{(pat.\ pend.)}$ (RTOF) offering fast response, superior stability and accuracy, in an industrial environment.

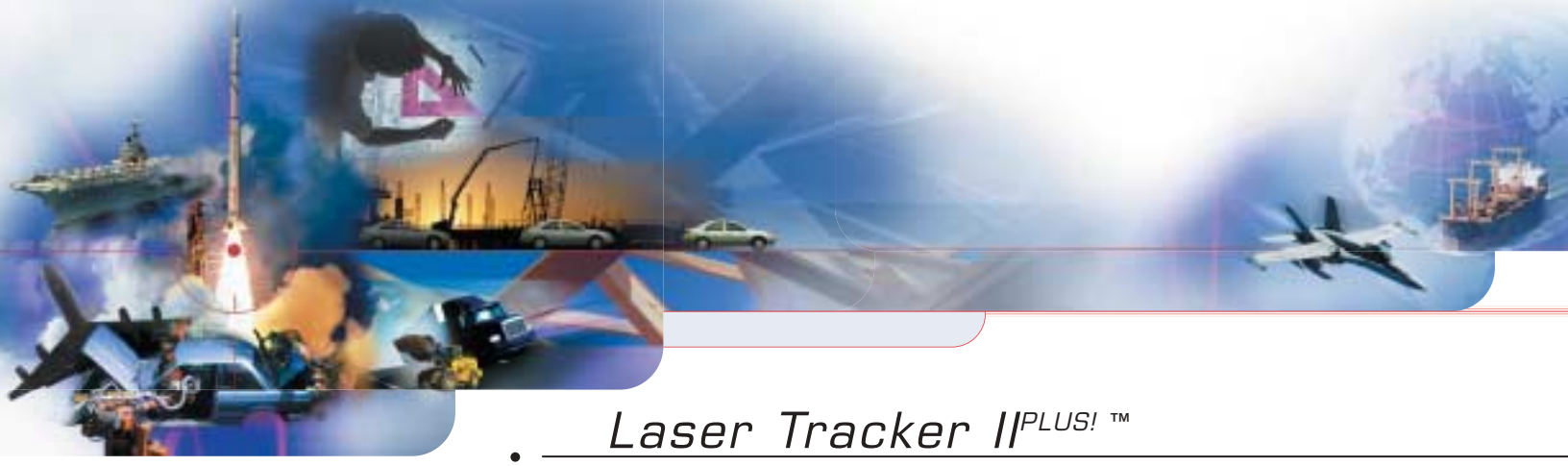
Applications

- Measure tooling, fixtures, and jigs
- Error map machine tools and robots
- Align machines, gear trains, rollers, and transfer lines
- Measure surface contours
- Reverse engineer parts

The Tracker II$^{PLUS!\ ™}$

API is the innovator in laser tracking technology. The Tracker II$^{PLUS!\ ™}$ offers a superior class of performance, portability, instrument ease-of-use, and reliability.

- High Precision
- Ease-of-use
- Rapid Set-up
- Compact Size
- Intuitive Software



Laser Tracker II$^{PLUS!}$ ™

Service Excellence

API's commitment to excellence extends beyond technology and underlies our dedication to quality in product, technical support, service, and customer satisfaction. This commitment, coupled with our expertise in metrology and laser technology, enables API to serve the world's leading manufacturing firms and research institutions.

Specifications

Laser Tracker II$^{PLUS!}$ ™

Maximum lateral target speed: > 3.0 meters/sec (120"/sec)
Maximum acceleration in all directions: > 2 g
Range of Measurements:

Horizontal:	± 300° (600° end-to-end)
Vertical:	+ 80°
	- 60°
Distance:	greater than 40 meters
Angle Resolution:	0.14 arc second

Interferometer Mode:

Distance Resolution:	± 1 µm
Repeatability:	± 2.5 ppm (2 sigma)

Absolute Accuracy in 3D Spatial Measurement:

Static:	± 5 ppm (2 sigma)
	0.001" (25 µm) at 16 feet (5 meters)
Dynamic:	± 10 ppm (2 sigma)
	0.002" (50 µm) at 16 feet (5 meters)

ADM Mode:

Distance Resolution:	± 1 µm
Repeatability:	± 25 µm
Accuracy:	± (25 µm to + 2.5ppm)
Weight of Tracker Head:	8.5kg (18.5lbs)
Weight of Controller:	3.2kg (7lbs)
Total Package Weight:	23kg (50lbs)*

*(includes carrying case, tracker, controller, tools, cable, accessories)

All above stated accuracy and repeatability are in compliance with ASME-B89 Dimensional Measuring Standards

Unmatched Portability

The Laser Tracker II$^{PLUS!}$ ™ sets the standard in tracker portability. Weighing only 8.2kg (18lbs), measuring 36cm (14in) in height, and 19cm (7.5in) in width, it is the most portable tracker available.

Large Measurement Volume

No other tracker offers the large measurement volume of the Laser Tracker II$^{PLUS!}$ ™ with a vertical range of +80° to -60°; enabling the equipment to handle large jobs such as error mapping machine tools and CMMs.

Rapid Warm-up

The Tracker II$^{PLUS!}$ ™ sealed optical head insures instrument warm-up in under 30 minutes even in cold environments.