FARO Products
Portable systems for measurement and imaging
About FARO FARO Gage

Pioneer for portable measurement

FARO develops portable devices for 3D measurement, inspection, imaging and surveying. Our focus is on simplifying our customers’ work with tools and empowering them to dramatically reduce on-site measuring time and eliminate costly errors.

As the pioneer in portable measurement, we have re-invented measuring: instead of carrying your parts to the measuring machine our systems can be deployed just where they are needed.

With FARO you have 3D measurement peace of mind.

The right product for every measurement task

No matter which accuracy and which measurement volume you want to measure - we’ve got the right portable measurement system for you!

FARO Gage

Accuracy: 0.018mm*

FaroArm

Accuracy: up to 0.009mm*

ScanArm

Accuracy: up to 0.061mm*

FARO Laser Tracker

Accuracy: up to 0.020mm*

FARO Laser Scanner

Distance accuracy: up to ±2mm*

FaroArm

Accuracy: up to 0.061mm*

FARO Gage

Accuracy: 0.018mm*

0m
0m
1m
2m
3m
4m
5m
6m
7m
8m
9m
10m
11m
12m
1m
2m
3m
4m
5m
6m
7m
8m
9m
10m
11m
12m

The FARO Gage enables measurements right on the machine producing your part. With its 1.2m (48") working volume, it is the "mount-it-to-where-you-make-it", truly portable, cost-effective, 3D, non-contact gages for machinists.

The FaroArm renders traditional CMMs, hand tools and other portable CMMs obsolete. It is available in different arm lengths from 1.8m (6 ft) to 3.7m (12 ft) and is ideal for inspection, reverse engineering and CAD-to-part-analysis of parts, fixtures and assemblies.

The first fully integrated laser scanner on FARO’s patented seven-axis arm. The FaroArm combined with the Laser Line Probe is perfect for reverse engineering and can inspect to CAD and records up to 45,000 points per second.

The FARO Laser Scanner is a portable, non-contact measurement system to accurately capture 3D data. The system rotates 360° and measures everything within its line of sight with a scan rate of up to 976,000 points per second.

FaroArm

Accuracy: up to 0.061mm* (30ft)

The FARO Laser Tracker is a portable 3D measurement system for large volumes which uses laser technology and agile Absolute Distance Meter (aADM) to effectively and accurately measure large parts, tooling and machinery.

The FARO Laser Scanner is a portable non-contact measurement system to accurately capture 3D data. The system rotates 360° and measures everything within its line of sight with a scan rate of up to 976,000 points per second.

FARO is certified according to ISO 9001:2000 and accredited according to ISO/IEC 17025:2005.

FARO Gage is high-precision, portable 3D coordinate measurement system with a working range of 1.2m and a measurement accuracy of 0.018mm. A variety of attachment options enable rapid deployment directly at the workplace or in a processing centre. The Gage is now equipped with the Bluetooth® wireless technology. Users can now inspect, then transmit data up to 10m (30 feet) away – even through walls – without having to use cables.

Small, flexible, deployable everywhere

User friendliness
Replaces traditional hand tools and thus eliminates individual operator variability

Mobility
Mount and measure parts in process

Productivity
Increases productivity with reduced measurement and inspection times

Quality
Meets quality standards with automatic, computer-generated reports

Wireless data transfer
Up to 10m (30ft) using Bluetooth®

Performance specifications

<table>
<thead>
<tr>
<th>Measurement volume</th>
<th>Repeatability</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200mm</td>
<td>0.018mm*</td>
<td>±0.025mm</td>
</tr>
</tbody>
</table>

1) Repeatability = Single point articulation performance test. 2) Accuracy = Volumetric maximum deviation.

*Depending on the measuring instrument different accuracy test methods have been used. For all technical details please consult the respective tech sheets.
The arm with boundless possibilities

The world’s best-selling measurement arm

The FaroArm product line, consisting of FARO Edge, Platinum and Fusion, are flexibly deployable, portable systems for 3D measurements. They meet the high accuracy requirements posed by development and production. The FaroArm products measure, digitize, or create a CAD component analysis right in production or during assembly. Different measuring volumes are available.

Cost effectiveness
Ends bottlenecks due to measurement directly at the part

Mobility
Mount and measure parts in process without the need for air-conditioned rooms

Productivity
Increases productivity with reduced measurement and inspection times

Quality
Meets quality standards with automatic, computer-generated reports

Simplicity at you fingertips
Enhanced by a built-in touch screen and an intuitive on-board measurement system which enable laptop-free measurements*

Performance specifications

<table>
<thead>
<tr>
<th>Measurement volume</th>
<th>Repeatability</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Axes</td>
<td></td>
</tr>
<tr>
<td>Edge</td>
<td>1.8m</td>
<td>0.024mm</td>
</tr>
<tr>
<td>Edge</td>
<td>2.7m</td>
<td>0.029mm</td>
</tr>
<tr>
<td>Edge</td>
<td>3.7m</td>
<td>0.064mm</td>
</tr>
<tr>
<td>Platinum</td>
<td>1.8m</td>
<td>0.020mm</td>
</tr>
<tr>
<td>Platinum</td>
<td>2.4m</td>
<td>0.025mm</td>
</tr>
<tr>
<td>Platinum</td>
<td>3.0m</td>
<td>0.043mm</td>
</tr>
<tr>
<td>Platinum</td>
<td>3.7m</td>
<td>0.064mm</td>
</tr>
<tr>
<td>Fusion</td>
<td>1.8m</td>
<td>0.036mm</td>
</tr>
<tr>
<td>Fusion</td>
<td>2.4m</td>
<td>0.043mm</td>
</tr>
<tr>
<td>Fusion</td>
<td>3.0m</td>
<td>0.074mm</td>
</tr>
<tr>
<td>Fusion</td>
<td>3.7m</td>
<td>0.104mm</td>
</tr>
</tbody>
</table>

1) Repeatability = Single point articulation performance test. 2) Accuracy = Random mean deviation.
FARO Laser Tracker ION

Measure flexibly and precisely

The FARO Laser Tracker ION is a portable measurement system which uses a laser beam to measure the 3D coordinates of large components, equipment, and machines with the help of a target. Using high-precision angle-of-rotation transmitters and Agile ADM (Absolute Distance Meter), it calculates the 3D position in real time with 0.002" (0.049mm) volumetric accuracy at 33 feet (10m) while offering a range of up to 110 metres.

Accuracy
High accuracy due to precise break-resistant targets

Productivity
Improved productivity due to the ability to perform measurements in less time

Efficiency
High cost savings due to reduced plant/machine downtime

Cost effectiveness
Amount of costly scrap is reduced due to preventable error

Performance specifications

Horizontal scale bar measurement (2.3m)

<table>
<thead>
<tr>
<th>Length (m)</th>
<th>Range (m)</th>
<th>ADM (mm)</th>
<th>IFM (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>0.009</td>
<td>0.003</td>
</tr>
<tr>
<td>2–5</td>
<td>3</td>
<td>0.009</td>
<td>0.003</td>
</tr>
<tr>
<td>2–10</td>
<td>8</td>
<td>0.011</td>
<td>0.005</td>
</tr>
<tr>
<td>2–20</td>
<td>18</td>
<td>0.015</td>
<td>0.009</td>
</tr>
<tr>
<td>2–30</td>
<td>28</td>
<td>0.019</td>
<td>0.013</td>
</tr>
<tr>
<td>2–40</td>
<td>38</td>
<td>0.023</td>
<td>0.017</td>
</tr>
<tr>
<td>2–50</td>
<td>48</td>
<td>0.027</td>
<td>0.021</td>
</tr>
<tr>
<td>2–55</td>
<td>53</td>
<td>0.029</td>
<td>0.023</td>
</tr>
</tbody>
</table>

In-line distance measurement

<table>
<thead>
<tr>
<th>Length (m)</th>
<th>Range (m)</th>
<th>ADM (mm)</th>
<th>IFM (mm)</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>0.009</td>
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FARO Laser Tracker ION

www.faro.com/lasertracker

FARO Edge ScanArm & Laser ScanArm

www.faro.com/arm

Non-contact measurement

Flexible due to integrated design

ScanArms facilitate contact and non-contact measurements in one operation. They are perfectly adapted to CAD comparisons, rapid prototyping, reverse engineering and 3D modeling. They combine the portable 7-axis FARO measurement arm with a laser sensor. FARO Laser Line Probe for Edge is the smallest, lightest and fastest handheld laser scanning probe. It is very user-friendly and offers maximum freedom of movement without cumbersome external cable connections.

Efficiency

Only one device for both tactile and non-contact measurements. Expanded scan coverage (up to 90mm wide laser stripe) and exceptional scan rate up to 45,000 3D points per second

User-friendliness

Its low weight (up to 76.6g) and ease-of-use enable fatigue-free work

Versatility

For a broad range of tasks like CAD-to-part comparisons and reverse engineering

Product Design

Design parts and products with precision and ease

Performance specifications

FARO Edge ScanArm – System accuracy

<table>
<thead>
<tr>
<th>Model</th>
<th>1.8m</th>
<th>2.7m</th>
<th>3.7m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edge</td>
<td>±0.069mm</td>
<td>±0.076mm</td>
<td>±0.126mm</td>
</tr>
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FARO ScanArm V3 – System accuracy

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<thead>
<tr>
<th>Model</th>
<th>1.8m</th>
<th>2.4m</th>
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<th>3.7m</th>
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<tbody>
<tr>
<td>Fusion</td>
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<td>±0.086mm</td>
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<td>±0.159mm</td>
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<td>Platinum</td>
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www.faro.com/arm

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**Go3D: 3D documentation made easy**

Small, lightweight, easy to use

The FARO Laser Scanner Focus3D is an incredibly easy-to-use mobile 3D camera. It enables the quick creation of accurate three-dimensional colour images – so-called point clouds – of large buildings, components or crime scenes, for example. The very small device offers exceptional ease of use, high scanning speed and excellent image quality – even in colour. It also has an intuitive touch screen display and an integrated quick-charge battery.

**SCENE software**

Use and process 3D point clouds easily

SCENE was specifically designed for the FARO Laser Scanner. SCENE processes and manages scanned data both easily and efficiently by using the automatic scan registration. The user just needs to check the results at the end. Once SCENE has prepared the scan data, viewing, evaluation and further processing can commence right away.

**Performance specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Range</th>
<th>Field of view</th>
<th>Measurement rate</th>
<th>Ranging error</th>
<th>Ranging noise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus 3D</td>
<td>0.6–20m</td>
<td>30° (vert) x 360° (hor)</td>
<td>976,000 points/sec</td>
<td>±2mm</td>
<td>±0.6mm at 10m, raw data; ±0.95mm at 90% refl.</td>
</tr>
<tr>
<td>Focus 3D</td>
<td>0.6–120m</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Model**

Focus 3D

- Standard scan
- B/W: 3min
- Colour: 5min

<table>
<thead>
<tr>
<th>Model</th>
<th>Scan time</th>
<th>Integrated colour camera</th>
<th>Weight</th>
<th>Inclination sensor</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus 3D</td>
<td>B/W: 3min</td>
<td>Up to 70 mio. pixel</td>
<td>5.0kg</td>
<td>✓</td>
<td>240 x 200 x 100mm</td>
</tr>
</tbody>
</table>

**SCENE WebShare**

So that everything stays in focus

FARO offers WebShare, a powerful tool for the easy and safe sharing of the scan data over the Internet. With a single click in the Focus3D’s SCENE software, the current scan data can be transferred to a safe WebShare server. Users such as the client or participating trades can easily view the scan data and evaluate them in detail using the free SCENE LT software. WebShare can be used without any additional costs.
Visualization of data made easy

Software for FaroArm and Laser Tracker

Software plays an integral part in the measurement process. Our hardware and the CAM2 Q software were jointly designed to offer an easy to use interface to facilitate your measurements. Depending on your application needs the FaroArm and the Laser Tracker work also with a wide range of third party software solutions.

FARO CAM2 Q is the fastest and most efficient software for 3D measurement. Simplified user interface and workflow allow users to start measuring in no time. With CAM2 Q, users can now simultaneously connect several devices to one computer automatically, allowing you to measure large parts without moving the measurement equipment.

CAM2 Q offers powerful customisation features: You can simply define how you want to measure and add or change features in any order you like – thus following your own manufacturing workflow. Quick measurement reports can be generated automatically.

Software options

Compatible with numerous software solutions

All FARO measurement systems can also be used in conjunction with a broad range of third party software.

Some of our software partners


You are in good hands

www.faro.com/cs

Accessories

Expand your possibilities

In addition to our hardware and software, we also offer a broad range of supplementary equipment and accessories: probes, targets (SMR), mounting options, tripods, measurement tables, computers, cables, adapters, tools, protective covers, transport cases and many more.

Training

Courses for your employees

A measurement system is only as good as its user. FARO offers training courses and workshops to show you how our products are employed most efficiently.

Depending on your knowledge level we offer basic or advanced training. Training is carried out in small groups at FARO or – if you wish – at your facilities.

If you have further questions for our product specialists you can ask them during our weekly Free Fridays.

Customer service

Always there for you

On the phone: Our customer service staff are available from 9am to 5pm from Monday to Friday. Free call number: 00 800 3276 7378
E-Mail: support@faroeurope.com
On-site: Our application engineers will help you on-site.

Service contract

The service contract includes maintenance, inspection and calibration by our experts. In addition, customers with a service contract will receive a 10% discount on all accessories and free re-certification, repair and advice.

FARO customers

References from all over the world

“We’ve cut our inspection time by 50% and saved roughly $75,000 to $100,000 by using FARO.”
Mike Hill, Debco Tool & Die