THE COMPLETE SOLUTION FOR DIMENSIONAL INSPECTION IN QUALITY CONTROL APPLICATIONS
ARE QUALITY CONTROL ISSUES IMPACTING YOUR BOTTOM LINE?

Creaform’s comprehensive range of portable and automated 3D optical measurement technologies is specifically dedicated to dimensional inspection for quality control in production environments. It combines the power of optical portable CMMs, 3D scanners, photogrammetry and fully integrated dimensional inspection software.

It is highly efficient at measuring parts of any type of material ranging from 0.1 to 10 m (0.3 to 33 ft) in size and with an accuracy of up to 0.020 mm (0.0008 in). It is the ideal solution to validate the dimensional conformity and/or quality of production tools, jigs, parts, assemblies, sub-assemblies or final products. Thanks to Creaform’s solutions, you can rely on the precision of your measurements regardless of production environment instabilities—all while avoiding bottlenecks at the CMM.

ADDRESS QUALITY CONTROL CHALLENGES HEAD ON

There’s a Creaform solution for any quality control application

- Part inspections
- Dynamic measurements
- Tool and jig verifications
- Maintenance, repair, and overhaul
THE PERFECT QUALITY CONTROL SOLUTION FOR EVERY PART SIZE

**HandySCAN 3D™**
The truly portable metrology-grade 3D scanner that delivers highly accurate measurements

**HandyPROBE™**
The only truly accurate portable CMM with greater, extendable measurement volume

**MetraSCAN 3D™**
The most accurate manual or automated 3D scanning solution, whether in a lab or on the shop floor

**MaxSHOT 3D™**
The easiest way to integrate photogrammetry’s accuracy within your inspection projects

<table>
<thead>
<tr>
<th>0.1 m (0.3 ft)</th>
<th>1 m (3 ft)</th>
<th>10 m (33 ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HandySCAN 3D™</td>
<td>MaxSHOT 3D™</td>
<td>MetraSCAN 3D™</td>
</tr>
<tr>
<td>Accuracy up to 0.030 mm (0.0012 in)</td>
<td>Accuracy of 0.015 mm/m (0.00018 in/ft)</td>
<td>Volumetric accuracy of 0.064 mm (0.0025 in)</td>
</tr>
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**VXinspect: Quality control software that takes it to the next level**

VXinspect™ is an intuitive and powerful 3D inspection software designed for manufacturing companies conducting first article inspection (FAI) or quality control. Directly integrated into VXelements™, Creaform’s 3D software platform and application suite, VXinspect provides the simplest integration of probing, 3D scanning and photogrammetry measurements.
**MetraSCAN 3D**

- **Accuracy**: Impressive metrology-grade accuracy regardless of the measurement environment (instability, vibrations, etc.) or operator skills.
- **Speed**: 7 laser crosses, high measurement rate and automatic mesh output for unmatched scanning speed.
- **Difficult Surfaces**: Scan any type of material, even black, multicolored, and shiny surfaces.

**C-Track**

- **Optical Tracker**: The system features dynamic referencing capabilities using optical reflectors placed on the part, allowing the system to move with the part and provide high-speed tracking without any loss of accuracy.

**Greater, Extensible Measurement Volume**: Can be easily and dynamically extended without any loss of accuracy or any conventional leapfrogging.

**Automatic Alignment**: The use of optical reflectors allows for the high-speed tracking of the part in the measurement volume, without the need for manual alignment.

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**HandySCAN 3D**

- **Portability**: Light stand-alone device for on-the-go scanning.
- **Accuracy**: Impressive accuracy regardless of the measurement environment (instability, vibrations, etc.) or operator skills.
- **Speed**: 7 laser crosses, high measurement rate and automatic mesh output for unmatched scanning speed.

**HandyPROBE Next**

- **Accuracy**: Impressive accuracy regardless of the measurement environment (instability, vibrations, etc.) or operator skills.
- **Multifunction Buttons**: Allow easier interaction with the software without having to go back to the computer.
- **Smart Probe Adapter**: Quick connect probe adapter for easy, automatic tip changes.

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**CUBE-R**

- **AF Scanning Arm**: High productivity industrial automation option for every floor.
- **Complete Turnkey Solution**: No modifications required, fully recognise shop-floor trust.

**CreAFORM Shop Floor Workstation**

- **Maximum Mobility**: Incorporates all the tools you need in one easy to move unit designed for real-life shop-floor conditions.
- **Simple User Interface**: Designed to minimize operator interaction and help perform automatic inspection.

**MaxSHOT 3D**

- **Photogrammetry Accuracy**: Delivers unmatched accuracy over large part measurements.
- **Go/No-Go Visual Feedback**: Laser-projected frame with instant feedback, letting users know if the image is good or bad.
- **Software Diagnostics**: Simple-to-understand image diagnostics to help users perform corrective actions before taking measurements.

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**Vxinspect Software Module**

- **Dimensional Inspection**: Intuitive and powerful autodetector software.
- **Multiple Measurement Modes**: Seamless integration of both single-point touch probe and non-contact measurements.

**NXInspect 2D**

- **Photo-Engagement Accuracy**: Images interpreted accurately even for large part measurements.
- **720 X 1080 Visual Resolution**: 1080 pixel maximum, fully rigid for crisp, high definition output.
- **Difficult Surfaces**: Scans any type of material, even black, multicolored, and shiny surfaces.

**C-Link Functionality**

- **Virtual Metrology Lab**: Create a virtual metrology lab by networking 2 to 4 C-Tracks for complete coverage of the measurement area.

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EXPERIENCE TRUE QUALITY CONTROL ON YOUR SHOP FLOOR

All of Creaform’s quality control solutions feature innovative and exclusive technologies

**TRUaccuracy™**
The technology ensures product performance and is insensitive to instabilities found in any shop floor environment

**TRUportability™**
The technology allows users to inspect parts with unequalled mobility and flexibility—no matter where (lab, factory, off-site, etc.)

**TRUsimplicity™**
The technology makes it possible for operators to take reliable measurements, regardless of their experience levels, thanks to the short learning curve and intuitive use of each system

Creaform technologies are backed by a world-class customer support to ensure seamless integration in your workflow so you can be up and running in no time.
THE ONLY TRULY ACCURATE PORTABLE CMM

The HandyPROBE Next™ arm-free probing system outperforms traditional portable CMMs on the shop floor. Because it is truly portable and insensitive to instabilities found in every production environment (e.g. part displacement, setup or CMM instability), it is highly efficient at measuring parts that can't be moved to a granite or cast iron table. It is also ideal for geometric and surface inspections. HandyPROBE Next can accurately measure parts ranging from 0.2 to 10 m (0.7 to 33 ft) in size and made of any type of materials.

HandyPROBE Next comes with a C-Track optical tracker providing dynamic referencing capabilities for the highest accuracy and greater, extendable measurement volume—ideal for dimensional inspection on the shop floor or assembly line. The probing system can also be paired with a MetraSCAN 3D scanner to offer high-performance scanning capabilities.

**TRUaccuracy**
- Metrology-grade accuracy, high repeatability and traceable certificate
- Dynamic referencing: accuracy remains insensitive to instabilities
- No accuracy drift over time with the easy field calibration
- Continuous monitoring of accuracy parameters

**TRUportability**
- Lightweight, wireless and arm-free probe for total freedom of movement
- Designed for use on the shop floor
- Handheld and ergonomic design
- Easy setup adjustments, flexible working volume

**TRUsimplicity**
- No rigid setup required: part can be moved freely
- Automatic alignment for repetitive inspections
- Short learning curve and intuitive operation
- Optional 3D scanning capabilities
- Intuitive software
THE COMPLETE METROLOGY-GRADE 3D SCANNER

The MetraSCAN 3D is the most complete 3D scanning solution for metrology-grade measurements and inspection. Truly portable and insensitive to changes found in shop-floor environments (e.g. vibrations, part displacement, setup or CMM instability), it significantly increases the reliability, speed and versatility of measurement processes. It also outperforms scanners that are mounted on traditional portable CMMs. The MetraSCAN 3D is the best solution for geometrical and freeform surface inspections on parts ranging from 0.2 to 10 m (0.7 to 33 ft) in size, regardless of the type of material, color, or reflectivity.

Paired with the C-Track optical tracker that enables dynamic referencing, automatic alignment and continuous monitoring of parameters, it provides the most accurate measurements in the lab and on the shop floor. Offering optional probing capabilities with the HandyPROBE Next, users can harness the power of both 3D scanning and portable optical CMMs for a streamlined inspection process.

**TRUaccuracy**
- Metrology-grade accuracy, high repeatability and traceable certificate
- Dynamic referencing: accuracy insensitive to instabilities
- No accuracy drift over time with the easy field calibration
- Continuous monitoring of accuracy parameters

**TRUportability**
- Lightweight and arm-free scanner for total freedom of movement
- Designed for use on the shop floor
- Handheld and ergonomic design
- Easy setup adjustments, flexible working volume

**TRUsimplicity**
- Large scanning area and high measurement rate
- No rigid setup required: part can be moved freely
- Automatic alignment for repetitive inspections
- Short learning curve and intuitive operation
- 3D scanning of any type of surface (black, multicolored, shiny, etc.)
- Real-time visualization
- Optional probing capabilities

**CUBE-R™**
CUBE-R™ is a truly accurate turnkey 3D scanning measuring machine for at-line inspection of parts up to 3 m. It leverages the power of MetraSCAN 3D metrology-grade scanner in a high-productivity industrial measuring cell designed for real-life shop-floor conditions.
THE TRULY PORTABLE METROLOGY-GRADE 3D SCANNER

HandySCAN 3D is a metrology-grade handheld portable 3D laser scanners. It is the fastest on the market with the highest measurement rate and accuracy available—all while remaining very simple to use. Its self-positioning capabilities and portability allow unmatched freedom of movement. It is the perfect solution when you need to reach confined areas or measure smaller parts ranging from 0.1 to 4 m (0.3 to 13 ft) in size, regardless of complexity, material, or color. HandySCAN 3D provides consistent and repeatable results across all work conditions or environments, enabling you to reduce turnaround times and increase profitability.

TRUaccuracy
- Metrology-grade measurements
- Accuracy in real-life conditions
- No rigid setup required
- Self-positioning

TRUportability
- Stand-alone device
- On-the-go scanning
- Lightweight and small
- Easy access to confined spaces

TRUsimplicity
- User-friendly
- Quick workflow integration and setup
- Automatic mesh output
- Real-time visualization
YOUR BEST SHOT
AT LARGE-SCALE PROJECTS

The MaxSHOT 3D portable optical coordinate measuring system is a complementary product that provides the high data accuracy and speed of photogrammetry to a wide range of applications already possible with Creaform technologies, especially when it comes to large-scale projects and parts from 2 to 10 m (7 to 33 ft). Based on a simple series of 2D photos, the MaxSHOT 3D makes it possible to quickly and easily generate a highly accurate positioning model of your parts, which significantly increases 3D measurement accuracy. Thanks to its laser-projected and software feedback, users of any level can use the MaxSHOT 3D!

**TRUaccuracy**
- Metrology-grade measurements: Accuracy of up to 0.015 mm (0.000059 in)
- Volumetric accuracy: 0.015 mm/m (0.00018 in/ft)
- Average deviation: 0.005 mm/m (0.000060 in/ft)

**TRUportability**
- Shop-floor compatible: Can be used in any production environment
- Bring it anywhere: Everything fits into one portable carrying case
- Highly ergonomic design: Developed specifically for photogrammetry

**TRUsimplicity**
- Live feedback on measurement quality: Laser projected frame with GO/NO-GO feedback
- Software diagnostics: VXelements guides users in troubleshooting measurement quality
- Intuitive controls and operation: Experience ultra-short learning curves
- Multifunction buttons: Easily interact with the software
**DIMENSIONAL INSPECTION SOFTWARE MODULE**

Directly integrated into VXelements, Creaform’s 3D software platform and application suite, VXinspect provides the simplest integration of probing, 3D scanning, and photogrammetry measurements. VXinspect is an intuitive and powerful 3D inspection software that is designed for manufacturing companies conducting first article inspection (FAI) or quality control in manufacturing process.

The software features all functionalities required by preproduction control or when setting up a high-efficiency measurement sequence to control multiple parts. With its intuitive interface, it is the best solution for all inspection workflows. You won’t have to compromise on measurement quality or GD&T requirements.

- CAD import
- Multiple-measurement mode
- Alignment
- Geometric dimensioning and tolerancing (GD&T)

**VXelements: CREAFORM’S 3D SOFTWARE PLATFORM AND APPLICATION SUITE**

VXelements powers our entire fleet of 3D scanning and measurement technologies. It gathers all the essential elements and tools into a user-friendly, simplified, and sleek working environment.

**VXmodel: Scan-to-CAD software module**

VXmodel™ is a post-treatment software that directly integrates into VXelements. It allows for the finalization of 3D scan data to use directly in any 3D printing or CAD software. VXmodel provides the simplest and fastest path from 3D scans to your computer-aided design or additive manufacturing workflow.

**VXtrack: Dynamic tracking software module**

Adds dynamic tracking provided by the VXtrack™ software module, a key component of the TRUaccuracy technology, which guarantees the highest level of accuracy there is.

**VXremote: Remote access software application**

VXremote™ improves your efficiency on the shop floor by providing fast and easy remote access to VXelements. It offers quick activation and setup and requires no hardware or server to install or maintain. You can have its data acquisition functionalities at your fingertips.
EXTEND THE POWER OF YOUR INSPECTION PROCESS

Creaform Shop-Floor Workstation
The Creaform Shop-Floor Workstation is designed to facilitate mobility across the shop floor and increase reliability by protecting your scanning and probing systems while still in operation or when stored (two C-Tracks and stands can fit in the workstation).

Creaform C-Track Shop-Floor Stand
The Creaform C-Track Shop-Floor Stand, available as stand-alone or bundled with the workstation, increases the stability of the C-Track while still in operation and facilitates mobility around the part without the risk of injury.

Virtual Metrology Lab
Take full advantage of the C-Link™ functionality by connecting up to 4 C-Tracks in a single network to create a virtual metrology lab. This dimensional inspection solution, designed for metrology lab applications, enables seamless probing and 3D scanning operations without having to move the C-Track optical tracker around.

Optical Probing Accessories
Use your MaxSHOT 3D or C-Track as an optical probing device and get direct 3D measurements for various types of features: hole location, edge location, surface points, etc.

CUSTOMER CARE PROGRAM
Creaform is committed to offering first-class customer service so that you can get the most out of your system.

Our multilingual team of product specialists will provide you with assistance to answer your immediate needs. Our fleet of leading-edge calibration tools in our service centers gives you local access to faster maintenance service and repair.

Be sure to subscribe to the Customer Care Program to take advantage of worry-free maintenance and global repair coverage for all of your Creaform hardware and software. Whether you need to access our latest software releases and knowledge base or require a loaner unit while your device is being serviced, we have a plan tailored to your needs. Gain peace of mind knowing your equipment will get even better with time.

METROLOGY AND ENGINEERING SERVICES
Convinced of the quality and possibilities of the Creaform technologies, but not quite yet ready to commit and buy? Know that Creaform offers a wide range of metrology and engineering services. Our experts have earned a worldwide reputation for effectiveness and professionalism. Whether you need their help to perform 3D scanning, quality control, reverse engineering, FEA/CFD simulations, product and tool development, or training services, you can count on their commitment to meet your requirements with responsiveness and adaptability.
### TECHNICAL SPECIFICATIONS

#### HandyPROBE™

| Model | HandyPROBE Next™ | HandyPROBE Next™|Elite |
|-------|------------------|------------------|
| **PART SIZE RANGE** | **Recommended:** | **Recommended:** |
| | Up to 0.025 mm (0.0010 in) | Up to 0.020 mm (0.0008 in) |
| | **ACURACY**<sup>(3)</sup> | **ACURACY**<sup>(3)</sup> |
| | Up to 0.04 mm (0.0016 in) | Up to 0.030 mm (0.0012 in) |
| | **SINGLE POINT REPEATABILITY**<sup>(3)</sup> (based on working volume) | **SINGLE POINT REPEATABILITY**<sup>(3)</sup> (based on working volume) |
| | 0.060 mm (0.0024 in) | 0.044 mm (0.0017 in) |
| | **VOLUMETRIC ACCURACY**<sup>(3)</sup> (based on working volume) | **VOLUMETRIC ACCURACY**<sup>(3)</sup> (based on working volume) |
| | 0.086 mm (0.0034 in) | 0.064 mm (0.0025 in) |
| | **VOLUMETRIC ACCURACY** (based on part size) | **VOLUMETRIC ACCURACY** (based on part size) |
| | N/A | N/A |
| **RESOLUTION** | 0.050 mm (0.0020 in) | 0.100 mm (0.0039 in) |
| **SCANNING AREA** | 225 x 250 mm (8.8 x 9.8 in) | 275 x 250 mm (10.8 x 9.8 in) |
| **STAND-OFF DISTANCE** | 30.0 mm (1.18 in) | 30.0 mm (1.18 in) |
| **DEPTH OF FIELD** | 200 mm (7.9 in) | 250 mm (9.8 in) |
| **LIGHT SOURCE** | 3 laser crosses | 7 laser crosses | 3 laser crosses |
| **LASER CLASS** | 2M (eye safe) | 2M (eye safe) | 2M (eye safe) |
| **MEASUREMENT RATE** | 205,000 measurements/s | 480,000 measurements/s | 205,000 measurements/s |
| **WEIGHT** | Probe: 0.5 kg (1.1 lb) | Scanner: 1.38 kg (3.0 lb) | C-Track: 0.85 kg (1.9 lb) |
| **DIMENSIONS** | Probe: 68 x 157 x 340 mm (2.7 x 6.2 x 13.4 in) | C-Track: 1031 x 181 x 148 mm (40.6 x 7.1 x 5.8 in) | 77 x 122 x 204 mm (3.0 x 4.8 x 8.0 in) |
| **OPERATING TEMPERATURE RANGE** | 5–40°C (41–104°F) | 5–40°C (41–104°F) | 5–40°C (41–104°F) |

**CERTIFICATIONS**

*EC Compliance (Electromagnetic Compatibility Directive, Low Voltage Directive, Radio Equipment and Telecommunications Equipment), compatible with rechargeable batteries (when applicable), IP50, WEEE*

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1. Based on the ASME B89.4.22 standard. The probe of the HandyPROBE Next is located within a conical socket. Individual points are measured from multiple approach directions. Each individual point measurement is analyzed as a range of deviations in X, Y, Z (value = range/2). Performance of the HandyPROBE Next is dependent on the working volume in which the measurement is made: 9.1 m<sup>3</sup> (320 ft<sup>3</sup>) or 16.6 m<sup>3</sup> (586 ft<sup>3</sup>).

2. Based on the ASME B89.4.22 standard. Performance is assessed with traceable length artefacts by measuring these at different locations and orientations within the working volume of the C-Track (value = maximum deviation). Performance of the HandyPROBE Next is dependent on the working volume in which the measurement is made: 9.1 m<sup>3</sup> (320 ft<sup>3</sup>) or 16.6 m<sup>3</sup> (586 ft<sup>3</sup>).

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4. Based on the ASME B89.4.22 standard. Performance is assessed with traceable length artefacts by measuring these at different locations and orientations within the working volume of the C-Track (value = maximum deviation). Performance of the HandyPROBE Next is dependent on the working volume in which the measurement is made: 9.1 m<sup>3</sup> (320 ft<sup>3</sup>) or 16.6 m<sup>3</sup> (586 ft<sup>3</sup>).

5. Based on the VDI/VDE 2634 part 1 standard.