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 1.0 meters (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 you have.
**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 and 3D scanning measurement capabilities.
FREE OF ANY RIGID MEASUREMENT SETUP: THE SYSTEM

HIGHLY ACCURATE MEASUREMENTS: IMPRESSIVE

DIMENSIONAL INSPECTION: INTELLIGENT AND

MULTIPLE-MEASUREMENT MODE: SEAMLESSLY

ON-THE-GO SCANNING: TAKE IT ENSM PLACE TO PLACE OR USE IT IN-PLACE OR ON-SITE.

VIRTUAL METROLOGY LAB: CREATE A VIRTUAL METROLOGY LAB ON THE-FLOOR AND SIMULATE THE ENVIRONMENT TO ACHIEVE COMPLETE COVERAGE OF THE MEASUREMENT AREA.

MAXIMUM FLEXIBILITY: EVERY C-TRACK™ COMES WITH A LIGHT TURNTABLE. THE SHOP-FLOOR STAND IS ALSO AVAILABLE AS AN OPTION.

FREE OF ANY RIGID MEASUREMENT SETUP: THE SYSTEM FEATURES DYNAMIC RE-SIZING CAPABILITIES USING OPTICAL REFLECTORS ALONG THE FUNCTIONALITY TO MOVE THE OBJECT AND THE SYSTEM ANY WAY THEY WANT DURING MEASUREMENT.

METRASCAN 3D COMPLETE AND POWERFUL INSPECTION SOLUTION: THE FUNCTIONALITY AND STRENGTH COMBINATION PROVIDE A COMPLETE SOLUTION ON-THE-GO.

MAXSHOT 3D SHORTER MEASURING TIME ON LARGER PARTS: EXTENDED MEASUREMENT RANGE OF DETECTION CAPABILITIES, THE SYSTEM MEASURES PARTS IN RAPID SUCCESSION WITHOUT THE NEED TO REALIGN.

CREAFORM SHOP-FLOOR WORKSTATION: UNCOMPLICATED, ALL THE TOOLS YOU NEED TO ONE-UNIT DESIGNED FOR REAL-LIFE SHOP-FLOOR CONDITIONS.

C-TRACK OPTICAL TRACKER: FITTED WITH HIGH-QUALITY OPTICAL AND ELECTRONIC TECHNOLOGY, IT ENABLES CONTINUOUS TRACKING OF TARGETS, WHICH PROVIDE INSTANT AND RELIABLE DETECTION AND TRACKING OF THE PART.
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 world-class customer support to ensure seamless integration in your workflow so that you are 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, set-up 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 meters (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, set-up or CMM instability), it is highly efficient at measuring parts that can’t be moved to a granite or cast iron table. By significantly increasing the reliability, speed and versatility of the measurement process, it outperforms scanners that are mounted on traditional portable CMMs on the shop floor. The MetraSCAN 3D is the best solution for geometrical and freeform surface inspections on parts ranging from 0.2 to 10 meters (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 addition of 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)
- Real-time visualization
- Optional probing capabilities
THE TRULY PORTABLE METROLOGY-GRADE 3D SCANNER

HandySCAN 3D is a new generation of 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 meters (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
THE EASIEST PATH TO PHOTOGRAMMETRY ACCURACY

The MaxSHOT 3D portable optical coordinate measuring system is a complementary product that provides data accuracy and speed of photogrammetry to the wide range of applications already possible with Creaform technologies, especially when it comes to larger parts. 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 part, which significantly increases 3D measurement accuracy. It’s your shot at photogrammetry!

The system combines the MaxSHOT 3D photogrammetric video camera and the VXshot™ processing software module which features an extremely simple data acquisition process that guides operators every step of the way.

**TRUaccuracy**
- Accurate positioning models
- Increased accuracy thanks to photogrammetry

**TRUportability**
- Light and portable
- Handheld and ergonomic design

**TRUsimplicity**
- Very simple
- Real-time visualization and validation of acquired data
- Step-by-step operation entirely guided by the VXshot module
DIMENSIONAL INSPECTION SOFTWARE MODULE

Directly integrated into VXelements, Creaform’s 3D software platform and application suite, VXinspect provides the simplest integration of probing and 3D scanning measurement capabilities. 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 pre-production control or when setting up a high-efficiency measurement sequence to control multiples 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™, Creaform’s 3D software platform, 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

Add 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 set-up 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 stands with C-Tracks 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.

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**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.

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**CREAFORM CUSTOMER CARE**

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.

**CREAFORM 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

<table>
<thead>
<tr>
<th></th>
<th>HandyPROBE™ Next™</th>
<th>HandyPROBE™ Next™ Elite</th>
<th>MetraSCAN 350™</th>
<th>MetraSCAN 350™ Elite</th>
<th>MetraSCAN 750™</th>
<th>MetraSCAN 750™ Elite</th>
<th>HandySCAN™ 300™</th>
<th>HandySCAN™ 700™</th>
<th>MaxSHOT 3D™</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PART SIZE RANGE</strong></td>
<td>0.2 - 6 m (0.7 - 20 ft)</td>
<td>Up to 0.02 mm (0.0001 in.)</td>
<td>0.2 - 6 m (0.7 - 20 ft)</td>
<td>Up to 0.04 mm (0.00016 in.)</td>
<td>Up to 0.03 mm (0.0012 in.)</td>
<td>Up to 0.04 mm (0.00016 in.)</td>
<td>Up to 0.03 mm (0.0012 in.)</td>
<td>Up to 0.025 mm (0.001 in.)</td>
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<tr>
<td><strong>ACCURACY</strong></td>
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<tr>
<td><strong>SINGLE POINT REPEATABILITY</strong></td>
<td>9.1 mm (320 ft)</td>
<td>0.060 mm (0.00024 in.)</td>
<td>0.044 mm (0.0017 in.)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>VOLUME ACCURACY</strong></td>
<td>9.1 mm (320 ft)</td>
<td>0.064 mm (0.0025 in.)</td>
<td>0.086 mm (0.0034 in.)</td>
<td>0.086 mm (0.0034 in.)</td>
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<td>0.064 mm (0.0025 in.)</td>
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<tr>
<td><strong>VOLUME ACCURACY WITH MAXSHOT 3D™</strong></td>
<td>0.060 mm + 0.025 mm/m</td>
<td>0.044 mm + 0.025 mm/m</td>
<td>0.060 mm + 0.025 mm/m</td>
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<td>0.044 mm + 0.025 mm/m</td>
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<tr>
<td><strong>RESOLUTION</strong></td>
<td>0.005 mm (0.00020 in.)</td>
<td></td>
<td>0.012 mm (0.00047 in.)</td>
<td></td>
<td>0.010 mm (0.00039 in.)</td>
<td></td>
<td>0.010 mm (0.00039 in.)</td>
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<tr>
<td><strong>SCANNING AREA</strong></td>
<td>225 x 250 mm (8.8 x 9.8 in.)</td>
<td></td>
<td>275 x 250 mm (10.8 x 9.8 in.)</td>
<td></td>
<td>225 x 250 mm (8.8 x 9.8 in.)</td>
<td></td>
<td>275 x 250 mm (10.8 x 9.8 in.)</td>
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<tr>
<td><strong>STAND-OFF DISTANCE</strong></td>
<td>300 mm (11.8 in.)</td>
<td></td>
<td>300 mm (11.8 in.)</td>
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<td>300 mm (11.8 in.)</td>
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<td>300 mm (11.8 in.)</td>
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<tr>
<td><strong>DEPTH OF FIELD</strong></td>
<td>200 mm (7.9 in.)</td>
<td></td>
<td>250 mm (9.8 in.)</td>
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<td>250 mm (9.8 in.)</td>
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<td>250 mm (9.8 in.)</td>
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<tr>
<td><strong>LIGHT SOURCE</strong></td>
<td>3 laser crosses</td>
<td></td>
<td>7 laser crosses (+ 1 extra line)</td>
<td></td>
<td>3 laser crosses</td>
<td></td>
<td>7 laser crosses (+ 1 extra line)</td>
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<tr>
<td><strong>LASER CLASS</strong></td>
<td>Class 2 (eye safe)</td>
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<td>Class 2 (eye safe)</td>
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<td>Class 2 (eye safe)</td>
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<td>Class 2 (eye safe)</td>
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<tr>
<td><strong>MEASUREMENT RATE</strong></td>
<td>80 measurements/s</td>
<td></td>
<td>205,000 measurements/s</td>
<td></td>
<td>480,000 measurements/s</td>
<td></td>
<td>205,000 measurements/s</td>
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<tr>
<td><strong>WEIGHT</strong></td>
<td>0.85 kg (1.9 lbs)</td>
<td></td>
<td>0.85 kg (1.9 lbs)</td>
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<tr>
<td><strong>DIMENSIONS</strong></td>
<td>68 x 157 x 340 mm (2.7 x 6.2 x 13.4 in.)</td>
<td></td>
<td>289 x 235 x 296 mm (11.4 x 9.3 x 11.7 in.)</td>
<td></td>
<td>77 x 122 x 294 mm (3.0 x 4.8 x 11.6 in.)</td>
<td></td>
<td>136 x 153 x 78 mm (5.4 x 6.0 x 3.0 in.)</td>
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</tr>
<tr>
<td><strong>OPERATING TEMPERATURE RANGE</strong></td>
<td>5°C - 40°C (41°F-104°F)</td>
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<tr>
<td><strong>OPERATING HUMIDITY RANGE</strong></td>
<td>10 - 90%</td>
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<tr>
<td><strong>CERTIFICATIONS</strong></td>
<td>EC Compliance (Electromagnetic Compatibility Directive, Low Voltage Directive, Radio Equipment and Telecommunications Equipment), compatible with rechargeable batteries (when applicable), IP54, WEEE</td>
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</table>

(1) Typical value for diameter measurement on a calibrated sphere artifact.
(2) 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 m³ (320 ft³) or 16.6 m³ (588 ft³).
(3) Based on the ASME B89.4.22 standard. Performance is assessed with traced length artifacts by measuring them at different locations and orientations within the working volume of the C-Track (value = maximum deviation). Performance of the HandyPROBE Next and MetraSCAN 3D is dependent on the working volume in which the measurement is made: 9.1 m³ (320 ft³) or 16.6 m³ (588 ft³).
(4) The volumetric accuracy of the system when using a MaxSHOT 3D cannot be superior to the default volumetric accuracy of the chosen system and model.
(5) Based on the VDI/VDE 2634 standard.

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**CERTIFICATIONS**

- EC Compliance (Electromagnetic Compatibility Directive, Low Voltage Directive, Radio Equipment and Telecommunications Equipment), compatible with rechargeable batteries (when applicable), IP54, WEEE

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**Authorized Distributor**