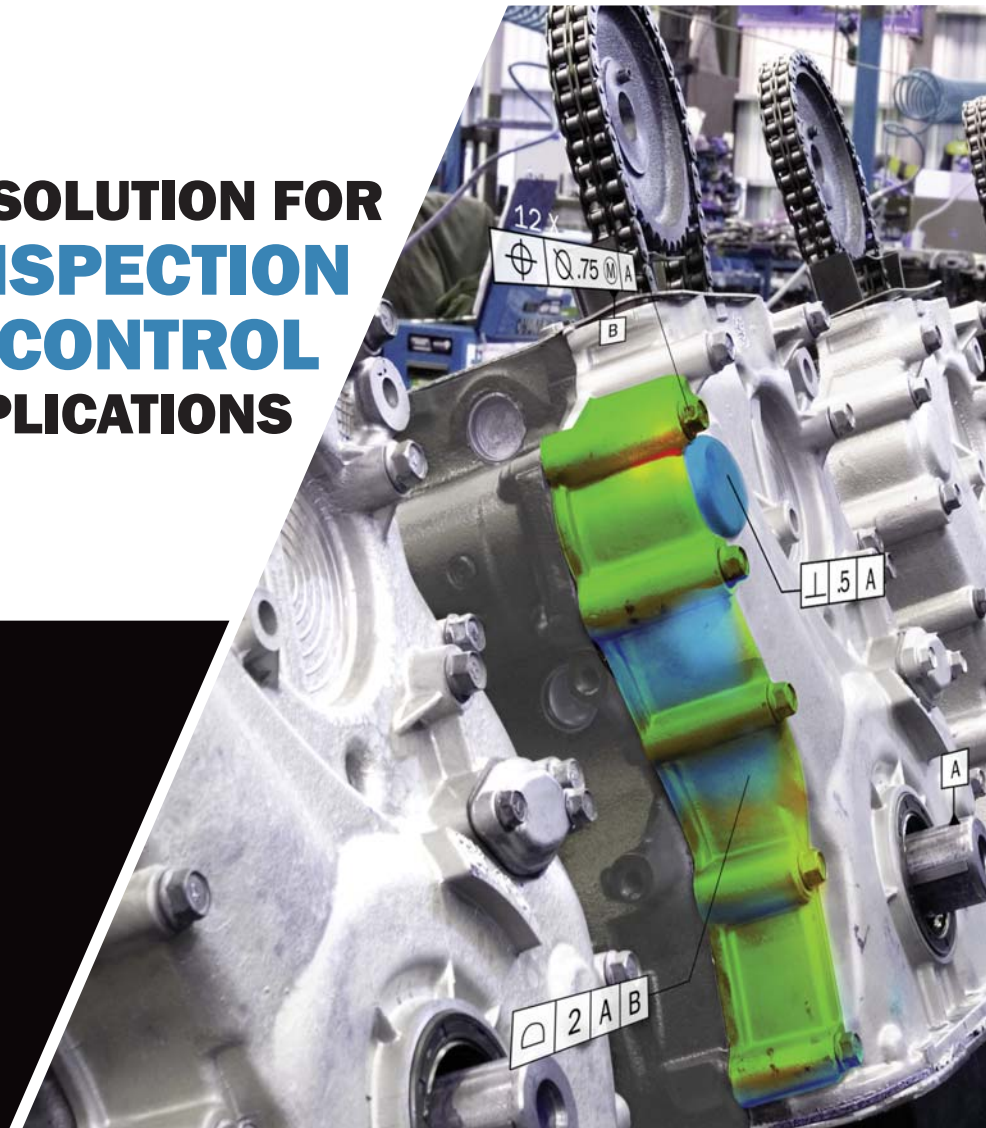
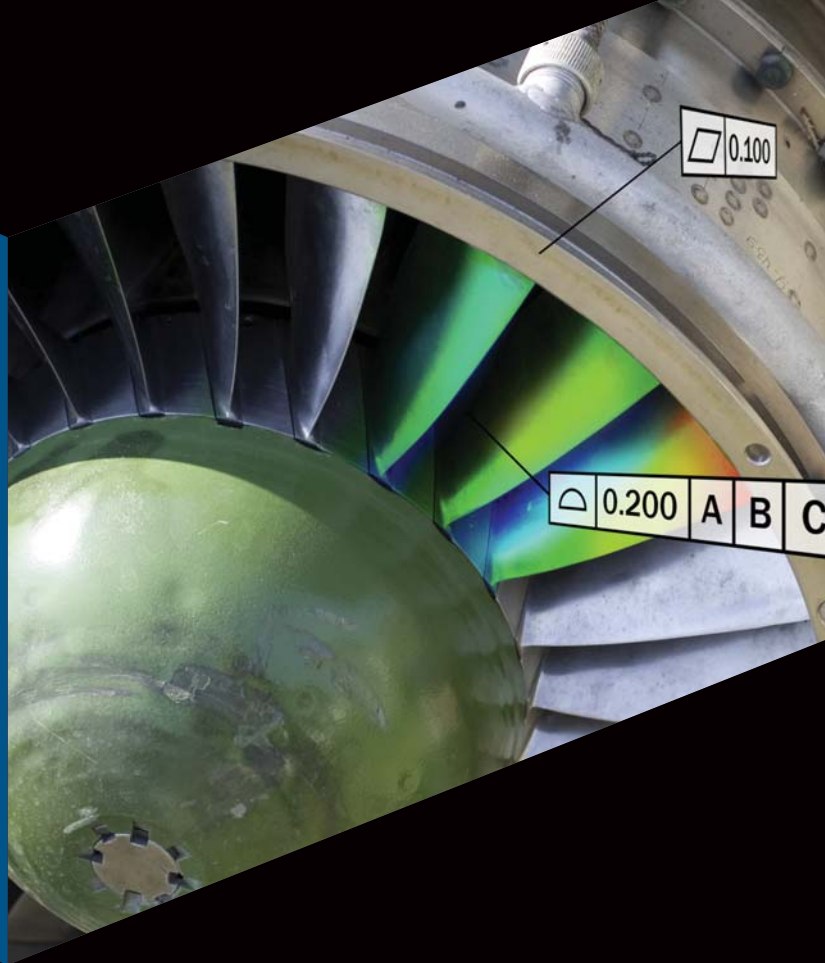




**THE COMPLETE SOLUTION FOR  
DIMENSIONAL INSPECTION  
IN QUALITY CONTROL  
APPLICATIONS**





## 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 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.

Part  
Inspections



Dynamic  
Measurements



Tool and Jig  
Verifications



Maintenance,  
Repair and  
Overhaul



# THE PERFECT QUALITY CONTROL SOLUTION FOR EVERY PART SIZE



**HANDY  
SCAN 3D**

3D SCANNING

The truly portable metrology-grade 3D scanner that delivers highly accurate measurements.



**HANDY  
PROBE**

PROBING

The only truly accurate portable CMM with greater, extendable measurement volume.



**METRA  
SCAN 3D**

3D SCANNING

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



**MAX  
SHOT 3D**

PHOTOGRAMMETRY

The easiest way to integrate the accuracy of photogrammetry within your inspection projects.

0.1 m (0.3 ft.)

1 m (3 ft.)

10 m (33 ft.)

HandySCAN 3D™  
Accuracy up to 0.030 mm  
(0.0012 in.)

HandyPROBE™  
Volumetric accuracy of 0.064 mm  
(0.0025 in.)

MetraSCAN 3D™  
Volumetric accuracy of 0.064 mm  
(0.0025 in.)

+

MaxSHOT 3D™  
Accuracy of  
0.025 mm/m  
(0.0003 in./ft.)

**VXinspect™**

**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.

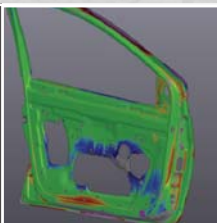


### MetraSCAN 3D R-Series

**THE ROBOT-MOUNTED 3D SCANNER:** AUTOMATED PART INSPECTION OF UP TO A FEW HUNDRED PARTS PER DAY, DIRECTLY ON YOUR PRODUCTION LINE.

**DIMENSIONAL INSPECTION:** INTUITIVE AND POWERFUL 3D INSPECTION SOFTWARE.

**MULTIPLE-MEASUREMENT MODE:** SEAMLESSLY INTEGRATE BOTH SINGLE-POINT TOUCH PROBE AND NON-CONTACT MEASUREMENTS.



### HandyPROBE Next

**GREATER, EXTENDABLE MEASUREMENT VOLUME:** CAN BE EASILY AND DYNAMICALLY EXTENDED WITHOUT ANY LOSS OF ACCURACY OR ANY CONVENTIONAL LEAPFROGGING.

**HIGHLY ACCURATE MEASUREMENTS:** IMPRESSIVE ACCURACY REGARDLESS OF THE MEASUREMENT ENVIRONMENT (INSTABILITY, VIBRATIONS, ETC.) OR OPERATOR SKILLS.



### HandySCAN 3D

**VERSATILE:** VIRTUALLY LIMITLESS 3D SCANNING—NO MATTER THE PART SIZE, COMPLEXITY, MATERIAL OR COLOR.

**ON-THE-GO SCANNING:** TAKE IT FROM PLACE TO PLACE OR USE IT IN-HOUSE OR ON-SITE.



**CREAFORM SHOP-FLOOR WORKSTATION:** INCORPORATES ALL THE TOOLS YOU NEED IN ONE UNIT DESIGNED FOR REAL-LIFE SHOP-FLOOR CONDITIONS.

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

**FREE OF ANY RIGID MEASUREMENT SETUP:** THE SYSTEM FEATURES DYNAMIC REFERENCING CAPABILITIES USING OPTICAL REFLECTORS PLACED ON THE PART ALLOWING USERS TO MOVE THE OBJECT AND THE SYSTEM ANY WAY THEY WANT DURING MEASUREMENT.

**AUTOMATIC ALIGNMENT:** THE USE OF OPTICAL REFLECTORS ALLOWS FOR THE PROBING OF MANY IDENTICAL PARTS IN RAPID SUCCESSION WITHOUT THE NEED TO REALIGN.

**VIRTUAL METROLOGY LAB:** CREATE A VIRTUAL METROLOGY LAB BY NETWORKING 2 TO 4 C-TRACKS (C-LINK™ FUNCTIONALITY) FOR COMPLETE COVERAGE OF THE MEASUREMENT AREA.

### MaxSHOT 3D

**SHORTER MEASURING TIME ON LARGER PARTS:** EXTENDED MEASUREMENT RANGE OF CREAFORM TECHNOLOGIES WITH ACCELERATED POSITIONING AROUND THE PART THANKS TO PHOTOGRAMMETRY.

### MetraSCAN 3D

**COMPLETE AND POWERFUL INSPECTION SOLUTION:** ALLOWS GEOMETRICAL AND FREEFORM INSPECTIONS, COMBINING PROBING AND 3D SCANNING ON THE SAME SYSTEM.

**C-TRACK OPTICAL TRACKER:** FITTED WITH HIGH-QUALITY OPTICS AND SPECIALIZED LIGHTING, 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 Creafom'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.

**Creafom 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.**



reddot award 2016  
best of the best

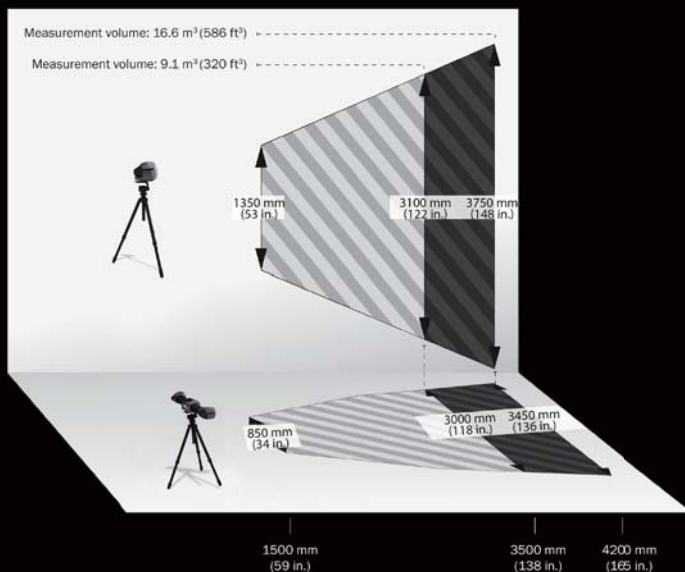
PROBING



# 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.



# HANDY PROBE™

## 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



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best of the best

3D SCANNING

# 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.



Part of the **MetraSCAN 3D R-Series**, the robot-mounted optical CMM 3D scanning system is a fast and accurate scanning solution designed for 3D automated inspection of parts on the production line and on the shop floor.

**METRA**  
**SCAN 3D**



## **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



reddot award 2015  
winner

3D SCANNING



# 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

**HANDY  
SCAN 3D**



# 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.

PHOTOGRAMMETRY



## **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

**MAX  
SHOT 3D**

# DIMENSIONAL INSPECTION SOFTWARE MODULE

Directly integrated into VXelements, Creafom'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)

**VXinspect™**

SOFTWARE



## **VXELEMENTS: CREAFORM'S 3D SOFTWARE PLATFORM AND APPLICATION SUITE**

VXelements™, Creafom'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.



### 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.



## 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

	HandyPROBE™		MetraSCAN 3D™				HandySCAN 3D™		MaxSHOT 3D™
	HandyPROBE Next™	HandyPROBE Next™   Elite	MetraSCAN 350™	MetraSCAN 350™   Elite	MetraSCAN 750™	MetraSCAN 750™   Elite	HandySCAN 300™	HandySCAN 700™	MaxSHOT 3D™
<b>PART SIZE RANGE</b> (recommended)	0.2–6 m (0.7–20 ft.)		0.2–6 m (0.7–20 ft.)				0.1–4 m (0.3–13 ft.)		3–10 m (10–33 ft.)
<b>ACCURACY</b> <sup>(1)</sup>	Up to 0.025 mm (0.0010 in.)	Up to 0.020 mm (0.0008 in.)	Up to 0.040 mm (0.0016 in.)		Up to 0.030 mm (0.0012 in.)		Up to 0.040 mm (0.0016 in.)	Up to 0.030 mm (0.0012 in.)	Up to 0.025 mm (0.0010 in.)
<b>SINGLE POINT REPEATABILITY</b> <sup>(2)</sup> (based on working volume)	9.1 m <sup>3</sup> (320 ft <sup>3</sup> )	0.060 mm (0.0024 in.)	0.044 mm (0.0017 in.)		N/A		N/A		N/A
	16.6 m <sup>3</sup> (586 ft <sup>3</sup> )	0.088 mm (0.0035 in.)	0.058 mm (0.0023 in.)		N/A		N/A		
<b>VOLUMETRIC ACCURACY</b> <sup>(3)</sup> (based on working volume)	9.1 m <sup>3</sup> (320 ft <sup>3</sup> )	0.086 mm (0.0034 in.)	0.064 mm (0.0025 in.)	0.086 mm (0.0034 in.)	0.064 mm (0.0025 in.)	0.086 mm (0.0034 in.)	0.064 mm (0.0025 in.)	N/A	
	16.6 m <sup>3</sup> (586 ft <sup>3</sup> )	0.122 mm (0.0048 in.)	0.078 mm (0.0031 in.)	0.122 mm (0.0048 in.)	0.078 mm (0.0031 in.)	0.122 mm (0.0048 in.)	0.078 mm (0.0031 in.)	N/A	
<b>VOLUMETRIC ACCURACY</b> (based on part size)	N/A		N/A				0.020 mm + 0.100 mm/m (0.0008 in. + 0.0012 in./ft.)	0.020 mm + 0.060 mm/m (0.0008 in. + 0.0007 in./ft.)	0.025 mm/m (0.0003 in./ft.) <sup>(5)</sup>
<b>VOLUMETRIC ACCURACY WITH MAXSHOT 3D</b> <sup>(4)</sup>	0.060 mm + 0.025 mm/m (0.0024 in. + 0.0003 in./ft.)	0.044 mm + 0.025 mm/m (0.0017 in. + 0.0003 in./ft.)	0.060 mm + 0.025 mm/m (0.0024 in. + 0.0003 in./ft.)	0.044 mm + 0.025 mm/m (0.0017 in. + 0.0003 in./ft.)	0.060 mm + 0.025 mm/m (0.0024 in. + 0.0003 in./ft.)	0.044 mm + 0.025 mm/m (0.0017 in. + 0.0003 in./ft.)	0.020 mm + 0.025 mm/m (0.0008 in. + 0.0003 in./ft.)		N/A
<b>RESOLUTION</b>	N/A		0.050 mm (0.0020 in.)				0.100 mm (0.0039 in.)	0.050 mm (0.0020 in.)	
<b>SCANNING AREA</b>	N/A		225 x 250 mm (8.8 x 9.8 in.)		275 x 250 mm (10.8 x 9.8 in.)		225 x 250 mm (8.8 x 9.8 in.)	275 x 250 mm (10.8 x 9.8 in.)	
<b>STAND-OFF DISTANCE</b>	N/A		300 mm (11.8 in.)				300 mm (11.8 in.)		
<b>DEPTH OF FIELD</b>	N/A		200 mm (7.9 in.)				250 mm (9.8 in.)		
<b>LIGHT SOURCE</b>	N/A		3 laser crosses		7 laser crosses (+ 1 extra line)		3 laser crosses	7 laser crosses (+ 1 extra line)	
<b>LASER CLASS</b>	N/A		Class 2 (eye safe)				Class 2 (eye safe)		
<b>MEASUREMENT RATE</b>	80 measurements/s		205,000 measurements/s		480,000 measurements/s		205,000 measurements/s	480,000 measurements/s	
<b>WEIGHT</b>	Probe: 0.5 kg (1.1 lbs.) C-Track: 5.7 kg (12.5 lbs.)		Scanner: 1.38 kg (3.0 lbs.) C-Track: 5.7 kg (12.5 lbs.)				0.85 kg (1.9 lbs.)		0.44 kg (1.0 lb.)
<b>DIMENSIONS</b> (LxWxH)	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.)		289 x 235 x 296 mm (11.4 x 9.3 x 11.7 in.)				77 x 122 x 294 mm (3.0 x 4.8 x 11.6 in.)		136 x 153 x 76 mm (5.4 x 6.0 x 3.0 in.)
<b>OPERATING TEMPERATURE RANGE</b>	5–40°C (41–104°F)								
<b>OPERATING HUMIDITY RANGE</b> (non-condensing)	10–90%								
<b>CERTIFICATIONS</b>	EC Compliance (Electromagnetic Compatibility Directive, Low Voltage Directive, Radio Equipment and Telecommunications Equipment), compatible with rechargeable batteries (when applicable), IP50, WEEE								

(1) Typical value for diameter measurement on a calibrated sphere artefact.

(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 m<sup>3</sup> (320 ft<sup>3</sup>) or 16.6 m<sup>3</sup> (586 ft<sup>3</sup>).

(3) 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 and

MetraSCAN 3D 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>).

(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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