

METROLOGY  
SOLUTIONS

NEW

# HandySCAN3D™

THE TRULY PORTABLE  
METROLOGY-GRADE  
3D SCANNERS



reddot award 2019  
winner

**CREAFORM**

**AMETEK®**  
ULTRA PRECISION TECHNOLOGIES

# HandySCAN3D™

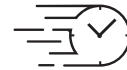
**WHEN ACCURACY  
MEETS VERSATILITY  
AND PORTABILITY**

The HandySCAN 3D™ line-up is a proven and trusted patented metrology-grade 3D scanner. Optimized to meet the needs of design, manufacturing and metrology professionals, it provides the most effective and reliable way to acquire accurate 3D measurements of physical objects anywhere.

Portable, accurate and simple to use, the HandySCAN 3D features unmatched speed that captures high-quality measurements. Since it performs regardless of environment changes or part movement, it represents the ideal tool for quality assurance and product development applications.



**ACCURACY OF  
0.025 mm (0.0009 in)**



**SCAN-TO-MESH  
IN SECONDS**



**CERTIFIED  
ISO 17025**



**WORLDWIDE  
SUPPORT**



**LARGE  
SCANNING AREA**



**PATENTED  
TECHNOLOGY**



- 1 High-performance optics**  
Optimal scan quality
- 2 Extra single line**  
Easy capture of hard-to-reach areas
- 3 Blue laser technology**  
High resolution capability
- 4 Stand-off distance  
color indicator**  
Maximizes scanning performance
- 5 Multifunction buttons**  
Quick access to frequently used  
software functionalities
- 6 Highly ergonomic  
and sleek design**  
Provides outstanding  
user experience





## ACCURACY & RESOLUTION

The HandySCAN 3D delivers accurate, high-resolution and repeatable results, regardless of the measurement setup quality and no matter the user experience. Featuring dynamic referencing, both the scanner and part can move during measurement and still provide an accurate and high-quality scan.

### Accuracy

0.025 mm (0.0009 in)

### Volumetric accuracy

0.020 + 0.040 mm/m (0.0008 in + 0.0005 in/ft)

### Reliable acceptance test

Based on VDI/VDE 2634 part 3 standard  
ISO 17025 accredited laboratory

### High resolution for fine details



## PORTABILITY

This handheld 3D scanner is a stand-alone device that does not require a tripod nor any external tracking device to operate. Fitting in a small suitcase, it can be brought anywhere and used in any environmental conditions without affecting its performance.

### Lightweight

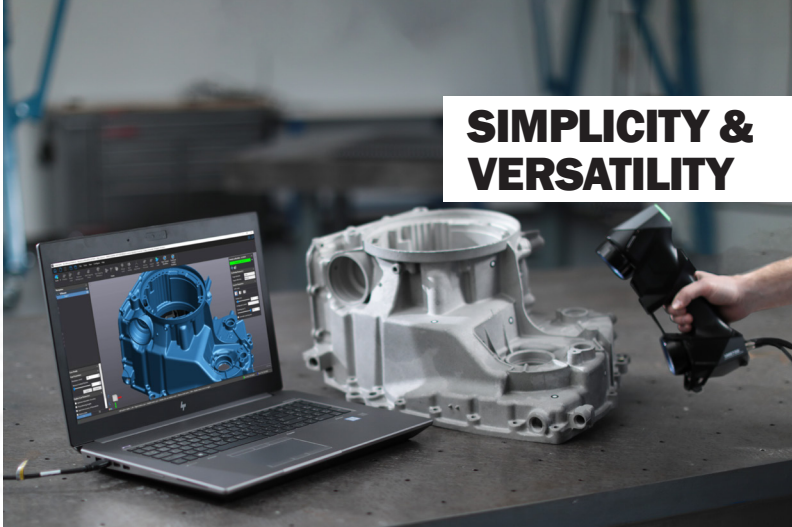
0.94 kg (2.1 lb)

### Dynamic referencing

Both the object and scanner can be moved freely while scanning

### Fits into a suitcase

### Take it anywhere you need



## SIMPLICITY & VERSATILITY

With its user-friendly interface and ergonomic design, the HandySCAN 3D measurement solution has a short learning curve. Highly versatile, it can be used to scan various object sizes and surface types in real time—all with the same device.

### Plug and play

### Simple user interface and real-time mesh visualization

### Single device fits all needs

### Masters complex and difficult surfaces



## SPEED

The HandySCAN 3D scanner features multiple laser crosses and an automatic mesh generation, enabling a faster workflow from the set-up to the scan and then to the file!

### Instant mesh

Ready-to-use files

### High measurement rate

Up to 1,300,000 measurements/s

### 11 laser crosses scanning area

### Quick set-up

Up and running in less than 2 minutes

# TECHNICAL SPECIFICATIONS

Innovating technology that provides *TRUaccuracy™*, *TRUsimplicity™*, *TRUportability™* as well as real speed to your metrology-grade applications.

	HandySCAN 307™	HandySCAN BLACK™	HandySCAN BLACK™Elite
<b>ACCURACY</b> <sup>(1)</sup>	Up to 0.040 mm (0.0016 in)	0.035 mm (0.0014 in)	0.025 mm (0.0009 in)
<b>VOLUMETRIC ACCURACY</b> <sup>(2)</sup> (based on part size)	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)	0.020 mm + 0.040 mm/m (0.0008 in + 0.0005 in/ft)
<b>VOLUMETRIC ACCURACY WITH MaxSHOT Next™Elite</b> <sup>(3)</sup>	0.020 mm + 0.015 mm/m (0.0008 in + 0.00018 in/ft)		
<b>MEASUREMENT RESOLUTION</b>	0.100 mm (0.0039 in)	0.025 mm (0.0009 in)	
<b>MESH RESOLUTION</b>	0.200 mm (0.0078 in)	0.100 mm (0.0039 in)	
<b>MEASUREMENT RATE</b>	480,000 measurements/s	800,000 measurements/s	1,300,000 measurements/s
<b>LIGHT SOURCE</b>	7 red laser crosses	7 blue laser crosses	11 blue laser crosses (+ 1 extra line)
<b>LASER CLASS</b>	2M (eye safe)		
<b>SCANNING AREA</b>	275 x 250 mm (10.8 x 9.8 in)	310 x 350 mm (12.2 x 13.8 in)	
<b>STAND-OFF DISTANCE</b>	300 mm (11.8 in)		
<b>DEPTH OF FIELD</b>	250 mm (9.8 in)		
<b>PART SIZE RANGE</b> (recommended)	0.1–4 m (0.3–13 ft)	0.05–4 m (0.15–13 ft)	
<b>SOFTWARE</b>	VXelements		
<b>OUTPUT FORMATS</b>	.dae, .fbx, .ma, .obj, .ply, .stl, .txt, .wrl, .x3d, .x3dz, .zpr, .3mf		
<b>COMPATIBLE SOFTWARE</b>	3D Systems (Geomagic® Solutions), InnovMetric Software (PolyWorks), Dassault (CATIA V5 and SOLIDWORKS), PTC (Creo), Siemens (NX and Solid Edge), Autodesk (Inventor, Alias, 3ds Max, Maya, Softimage)		
<b>WEIGHT</b>	0.85 kg (1.9 lb)	0.94 kg (2.1 lb)	
<b>DIMENSIONS</b> (LxWxH)	77 x 122 x 294 mm (3.0 x 4.8 x 11.6 in)	79 x 142 x 288 mm (3.1 x 5.6 x 11.3 in)	
<b>CONNECTION STANDARD</b>	1 X USB 3.0		
<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), compatible with rechargeable batteries (when applicable), IP50, WEEE		
<b>PATENTS</b>	CA 2,600,926, CN 200680014069.3, US 7,912,673, CA 2,656,163, EP (FR, UK, DE) 1,877,726, AU 2006222458, US 8,032,327, JP 4,871,352, US 8,140,295, EP (FR, UK, DE) 2,278,271, EP (FR, UK, DE) 2,230,482, IN 266,573, US 7,487,063, CA 2,529,044, EP (FR, UK, DE) 3,102,908, US 15/114,563, CN 201580007340X		

(1) HandySCAN BLACK and HandySCAN BLACKIElite (ISO 17025 accredited): Based on VDI/VDE 2634 part 3 standard. Probing error performance is assessed with diameter measurements on traceable sphere artefacts.  
HandySCAN 307: Typical value for diameter measurement on a calibrated sphere artefact.

(2) HandySCAN BLACK and HandySCAN BLACKIElite (ISO 17025 accredited): Based on VDI/VDE 2634 part 3 standard. Sphere-spacing error is assessed with traceable length artefacts by measuring these at different locations and orientations within the working volume.  
HandySCAN 307: Value for spheres spacing measurement on a calibrated length artefact.

(3) 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.



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