HandySCAN3D ›› ™

BLACK Series
**THE TRULY PORTABLE
METROLOGY-GRADE
3D SCANNERS**

▶ **WATCH PRODUCT VIDEO**

CREAFORM

AMETEK®

HandySCAN3D ›™

WHEN ACCURACY MEETS VERSATILITY AND PORTABILITY

The HandySCAN 3D™ line-up is the industry standard in portable metrology-grade 3D scanners and a proven and trusted patented technology. Optimized to meet the needs of design, manufacturing and metrology professionals, the BLACK Series 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|BLACK Series 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
0.025 mm
0.012 mm with Limited Edition

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|BLACK Series 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
0.012 mm with Limited Edition

Volumetric accuracy
0.020 + 0.040 mm/m
0.012 + 0.020 mm/m with Limited Edition

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

High resolution for fine details

High accuracy on large measurements
Integrated photogrammetry process and bundle adjustment optimisation

Integrated photogrammetry
High accuracy on large measurements with volumetric accuracy optimization

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

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, this 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|BLACK Series 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 accuracy, simplicity, portability as well as real speed to your metrology-grade applications.

	HandySCAN BLACK™	HandySCAN BLACK™|Elite
ACCURACY [1]	0.035 mm	0.025 mm *0.012 mm with Limited Edition* [5]
VOLUMETRIC ACCURACY [2] (based on part size)	0.020 mm + 0.060 mm/m	0.020 mm + 0.040 mm/m *0.012 mm + 0.020 mm/m with Limited Edition* [5]
VOLUMETRIC ACCURACY **WITH MaxSHOT Next™|Elite** [3]	0.020 mm + 0.015 mm/m	
MEASUREMENT RESOLUTION	0.025 mm	
MESH RESOLUTION	0.100 mm	
MEASUREMENT RATE	800,000 measurements/s	1,300,000 measurements/s
LIGHT SOURCE	7 blue laser crosses	11 blue laser crosses (+ 1 extra line)
LASER CLASS	2M (eye safe)	
SCANNING AREA	310 x 350 mm	
STAND-OFF DISTANCE	300 mm	
DEPTH OF FIELD	250 mm	
PART SIZE RANGE (recommended)	0.05–4 m	
SOFTWARE	VXelements	
OUTPUT FORMATS	.dae, .fbx, .ma, .obj, .ply, .stl, .txt, .wrl, .x3d, .x3dz, .zpr, .3mf	
COMPATIBLE SOFTWARE [4]	3D Systems (Geomagic® Solutions), InnovMetric Software (PolyWorks), Metrologic Group (Metrolog X4), New River Kinematics (Spatial Analyzer), Verisurf, Dassault Systèmes (CATIA V5, SOLIDWORKS), PTC (Creo), Siemens (NX, Solid Edge), Autodesk (Inventor, PowerINSPECT)	
WEIGHT	0.94 kg	
DIMENSIONS (LxWxH)	79 x 142 x 288 mm	
CONNECTION STANDARD	1 X USB 3.0	
OPERATING TEMPERATURE RANGE	5–40°C	
OPERATING HUMIDITY RANGE (non-condensing)	10–90%	
CERTIFICATIONS	EC Compliance (Electromagnetic Compatibility Directive, Low Voltage Directive), compatible with rechargeable batteries (when applicable), IP50, WEEE	
PATENTS	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 BLACK|Elite (ISO 17025 accredited): Based on VDI/VDE 2634 part 3 standard. Probing error performance is assessed with diameter measurements on traceable sphere artefacts.

(2) HandySCAN BLACK and HandySCAN BLACK|Elite (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. Results are obtained using integrated photogrammetry with volumetric accuracy optimization.

(3) The volumetric accuracy of the system when using a MaxSHOT 3D cannot be superior to the default accuracy for a given model.

(4) Also compatible with all major metrology, CAD, and computer graphic software through mesh and point cloud import.

(5) Limited Edition is able to deliver improved accuracy through optimized manufacturing and calibration processes.

Authorized Distributor