CREAFORM

HandySCAN 3D | BLACK Series

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** (0.0014 in)	**0.025 mm** (0.0009 in)
Volumetric accuracy[2] **(based on part size)**	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)**
Volumetric accuracy with MaxSHOT Next™ | Elite[3]	0.020 mm + 0.015 mm/m (0.0008 in + 0.00018 in/ft)	
Measurement resolution	**0.025 mm** **(0.0009 in)**	
Mesh resolution	**0.100 mm** **(0.0039 in)**	
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** **(12.2 x 13.8 in)**	
Stand-off distance	300 mm (11.8 in)	
Depth of field	250 mm (9.8 in)	
Part size range (recommended)	**0.05–4 m** **(0.15–13 ft)**	
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** **(2.1 lb)**	
Dimensions **(LxWxH)**	**79 x 142 x 288 mm** **(3.1 x 5.6 x 11.3 in)**	

	HandySCAN BLACK™	HandySCAN BLACK™ | Elite
Connection standard	1 X USB 3.0	
Operating temperature range	5-40 °C (41-104 °F)	
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 I Elite (ISO 17025 accredited): Based on VDI/VDE 2634 part 3 standard. Probing error performance is assessed with diameter measurements on traceable sphere artefacts (ISO 17025 accredited).

[2] HandySCAN BLACK and HandySCAN BLACK I 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 of the chosen system and model.

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