

HandySCAN 3D | BLACK Series

TECHNICAL SPECIFICATIONS

The HandySCAN 3D|BLACK Series technical specifications make it the reference in high-end, portable 3D measurement technology. Featuring *accuracy*, *simplicity*, *portability*, and unmatched measurement speed, they capture high-quality measuring data regardless of environmental changes or part movement. Thanks to this 3D scanner's specifications like accuracy, measurement rate, high resolution, and software compatibility, it is an ideal tool for production quality assurance and product development applications.

Technical Specifications

Innovating technology that provides accuracy, simplicity, portability as well as real speed to your metrology-grade applications.

	HandySCAN BLACK™ Elite	HandySCAN BLACK+™ Elite
Accuracy	0.025 mm (0.0009 in)	0.025 mm (0.0009 in) 0.012 mm (0.0005 in) ⁽¹⁾
Volumetric accuracy (based on part size)	0.020 mm + 0.040 mm/m (0.0008 in + 0.0005 in/ft)	0.020 mm + 0.040 mm/m (0.0008 0.0005 in/ft) 0.020 mm + 0.015 mm/m (0.0008 0.00018 in/ft) ⁽²⁾ 0.012 mm + 0.015 mm/m (0.0005 0.00018 in/ft) ⁽¹⁾⁽²⁾
Form error (Sphere)	N/A	0.030 mm (0.0012 in)
Form error (Flat)	N/A	0.050 mm (0.0020 in)
Acceptance test⁽³⁾	Based on VDI/VDE 2634 part 3	Based on VDI/VDE 2634 part & ISO 10360
Measurement capabilities (at a working distance of 0.3 m (1 ft))	Pin	0.750 mm (0.0295 in)
	Hole	1.250 mm (0.0492 in)
	Step	0.025 mm (0.0009 in)
	Wall	0.500 mm (0.0197 in)
Measurement resolution	0.025 mm (0.0009 in)	

Mesh resolution	0.100 mm (0.0039 in)	
Measurement rate	1,300,000 measurements/s	1,800,000 measurements/s
Light source⁽⁴⁾	22 blue laser lines (+ 1 extra line)	30 blue laser lines (+ 1 extra line)
Working distance	200 to 450 mm (7.9 x 17.7 in)	200 to 750 mm (7.9 x 29.5 in)
Depth of field	250 mm (9.8 in)	550 mm (21.7 in)
Part size range (recommended)	0.05-4 m (0.15-13.1 ft)	
Software	VXelements	
Output formats	.dae, .fbx, .ma, .obj, .ply, .stl, .txt, .wrl, .x3d, .x3dz, .zpr, .3mf	
Compatible software⁽⁵⁾	3D Systems (Geomagic® Solutions), InnovMetric Software (PolyWorks), Metrologic Group (Metrolog X4), New River Kinematics (Spatial Analyzer), Verisurf, Dassault Systèmes (CATIA, SOLIDWORKS), PTC (Creo), Siemens (NX, Solid Edge), Autodesk (Inventor, PowerINSPEC)	
Weight	0.94 kg (2.1 lb)	
Dimensions (LxWxH)	79 x 142 x 288 mm (3.1 x 5.6 x 11.3 in)	
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 2006222458, US 8,032,327, JP 4,871,352, US 8,140,295, EP (FR, UK, DE) 2,278,271, EP (FR, 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⁾ Performance obtained with Limited Edition. Limited Edition is able to deliver improved accuracy through optimized manufacturing and calibration processes.

⁽²⁾ Performance obtained with scale bars included in the Accu+ Kit.

⁽³⁾ Performance tests done in Creaform's ISO/IEC 17025 accredited calibration laboratories.

⁽⁴⁾ Laser class: 2M (eye safe).

⁽⁵⁾ Also compatible with all major metrology, CAD, and computer graphic software through mesh and point cloud import.