

MetraSCAN 3D

TECHNICAL SPECIFICATIONS

The MetraSCAN 3D optical CMM scanner is synonymous with speed, accuracy and versatility. As the perfect metrology solution for quality control, quality assurance, inspection and reverse engineering applications, the MetraSCAN 3D generates highly accurate dimensional data in any type of harsh production environment and with any type of component—regardless of part size, material, finish and complexity.

Technical Specifications

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

	MetraSCAN 357™	MetraSCAN BLACK+™	MetraSCAN BLACK+™ Elite
Accuracy	Up to 0.040 mm (0.0016 in)	0.035 mm (0.0014 in)	0.025 mm (0.0009 in)
Volumetric accuracy 9.1 m³ (320 ft³)	0.086 mm (0.0034 in)	0.086 mm (0.0034 in)	0.064 mm (0.0025 in)
Volumetric accuracy 16.6 m³ (586 ft³)	0.122 mm (0.0048 in)	0.122 mm (0.0048 in)	0.078 mm (0.0031 in)
Automatic Volume Extension accuracy⁽¹⁾	N/A	0.035 mm + 0.020 mm/m (0.0014 in + 0.00024 in/ft)	0.025 mm + 0.015 mm/m (0.0009 in + 0.00018 in/ft)
Form error (Sphere)	N/A	0.035 mm (0.0014 in)	0.025 mm (0.0009 in)
Form error (Flat)	N/A	0.060 mm (0.0024 in)	0.045 mm (0.0018 in)
Probing accuracy with HandyPROBE Next+	0.030 mm (0.0012 in)	0.030 mm (0.0012 in)	0.025 mm (0.0009 in)
Acceptance test⁽²⁾	N/A	Based on VDI/VDE 2634 part 3 and ISO 10360	

	MetraSCAN 357™	MetraSCAN BLACK+™	MetraSCAN BLACK+™ Elite
Measurement capabilities (at a working distance of 0.3 m (1 ft))	Pin	1.750 mm (0.0689 in)	0.750 mm (0.0295 in)
	Hole	1.750 mm (0.0689 in)	1.250 mm (0.0394 in)
	Step	0.035 mm (0.0014 in)	0.025 mm (0.0009 in)
	Wall	1.000 mm (0.0394 in)	0.500 mm (0.0197 in)
Measurement resolution	0.100 mm (0.0039 in)	0.025 mm (0.0009 in)	
Mesh resolution	0.200 mm (0.0078 in)	0.100 mm (0.0039 in)	
Measurement rate	480,000 measurements/s	1,800,000 measurements/s	
Light source⁽³⁾	14 red laser lines	30 blue laser lines (+ 1 extra line)	
Scanning area	275 x 250 mm (10.8 x 9.8 in)	310 x 350 mm (12.2 x 13.8 in)	
Stand-off distance		300 mm (11.8 in)	
Depth of field	200 mm (7.9 in)	250 mm (9.8 in)	
Part size range (recommended)		0.2–6 m (0.7–20 ft)	
Setup Assistance tools⁽⁴⁾		N/A	Included
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 V5, SOLIDWORKS), PTC (Creo), Siemens (NX, Solid Edge), Autodesk (Inventor, PowerINSPECT)		
Weight	Scanner: 1.38 kg (3.0 lb) Probe: 0.5 kg (1.1 lb) C-Track: 5.7 kg (12.5 lb)	Scanner: 1.49 kg (3.28 lb) Probe: 0.5 kg (1.1 lb) C-Track: 5.7 kg (12.5 lb)	
Dimensions (LxWxH)		Scanner: 289 x 235 x 296 mm (11.4 x 9.3 x 11.7 in) 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)	
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		