



ShapeGrabber® Ai820

Shapegrabber Ai820 is a floor model 3D scanner designed to serve a wide variety of parts in minutes with a high density of data points. The Ai820 offers:

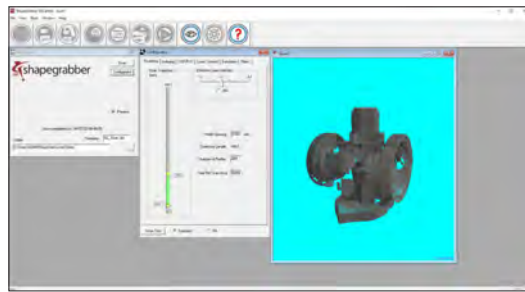
- **Metrology Grade 3D Scanning** – Ideal for measuring complex shapes in a variety of colors, and finishes. Excels in rapid prototyping, manufacturing, quality control, and reverse engineering applications.
- **Ease of Use** – Scans can be initiated with one click, delivering consistent measurement results by any operator. Scanning parameters are easily selected and saved – there is no need to write special code.
- **Accurate, High Density Point Data** – SG408 scanheads can be fitted to the standard vertical measurement axis and an optional horizontal axis, and can be used individually or in combination to collect data. Each scanhead can obtain more than 1,500,000 points per second.

Large Capacity Fully Automated 3D Laser Scanning



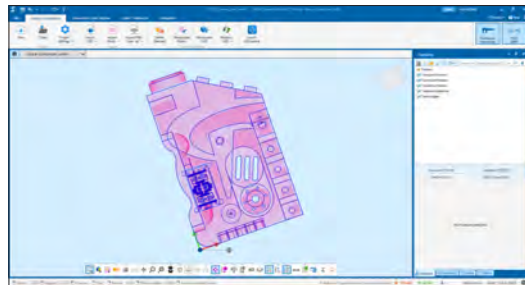
Shown with optional horizontal axis.



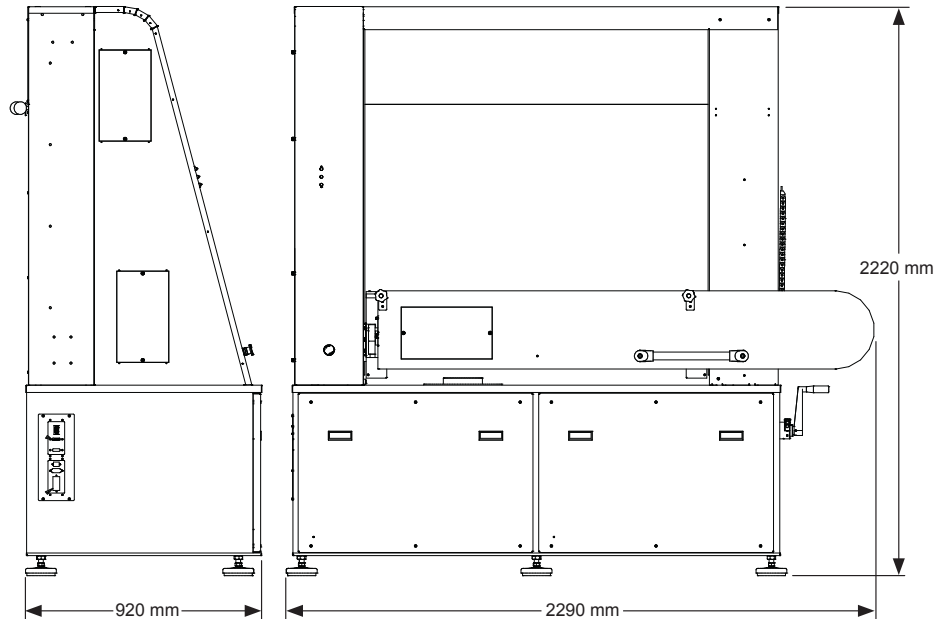


SGCentral is a user-friendly application that lets you configure scan settings, speed, and resolution for ShapeGrabber scanning systems. File formats supported are .gpd (Geomagic), .psl (Polyworks), .stl, xyz (ASCII generic), and others. SGCentral is included with every ShapeGrabber system.

SGCapture



SGCapture is a module for OGP® EVOLVE® SmartProfile®, the world's leading dimensional analysis software, that allows users to both acquire and evaluate scan data in a single software package. SmartProfile is the preferred solution for tolerance evaluation of 3D scanner data. The software's proprietary algorithms minimize the measurement uncertainty of the scanner data and produce CMM-like data sets.



System Weight: 725 kg
Shipping Weight: 1000 kg

Ai820	Specifications
Rotary Table Motion	360°
Vertical/Horizontal Scale Resolution	0.1 µm
Rotational Scale Resolution	0.001°
Maximum Worktable Load	90 kg
Software (standard)	SGCentral
Software (optional)	SGCapture, Polyworks, Geomagic
System Controller	Windows® based, with up-to-date processor and onboard networking/communication ports
Power Requirements	100-240 VAC, 50/60 HZ, 150 W, 1 phase 600 W
Rated Environment	Temperature 18-22 °C, stable to ± 1 °C, max rate of change 1 °C / hour, max vertical gradient of 1 °C / meter; 30-80% humidity; vibration <0.001g below 15 Hz
Safe Operating Environment	15-30 °C, non-condensing
Scanhead	SG408
Vertical Measuring Range	750 L x 415 Ø mm
Horizontal Measuring Range (optional)	1200 x 355 x 415 mm
Laser	IEC Class 2M
Standoff	290 mm
Near FOV	165 mm
Far FOV	355 mm
Depth of Field	415 mm
Data Rate Min	155,000 pts/s
Data Rate Max	>1,500,000 pts/s
Wavelength	405 nm (Blue)
System Accuracy	Specifications
Single Scan 3D Accuracy	(35 + L/100) µm
Multi-Scan Position Error (with rotary)	15 µm

Accuracy is evaluated with a QVI verification procedure where "L" is measured length in millimeters. Specifications apply within the rated environment.



Confidence. When Results Matter.™

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