HEXAGON

Absolute Scanner AS1
Key features

With the Absolute Scanner AS1, there are no compromises. There's no need to reduce scanning speed to achieve best-quality data, even when using a WiFi connection; no sacrificing usability and productivity in the search for better quality. Just premium engineering that guarantees reliable, high-accuracy results.

OLED touchscreen wrist display for instant access to settings and monitoring

Scan almost any surface with default exposure settings thanks to patented SHINE technology.

Complete arm and scanner system supported and serviced by a single manufacturer.

Removable pistol-grip for accessing tight spaces.

The first ever laser scanner that can be used with both a portable measuring arm and a laser tracker, with no realignment required when switching.

IP54-rated environmental protection with both arm and tracker.

Remountable in seconds with no time-wasting ralignment.

The most compact blue laser scanner on the market.

Horizontally oriented scan line for more comfortable measurement.

On-screen, LED and projected range finder guidance make correct scanner positioning simple.

Extra-wide scan line for faster part coverage.

Full system scanning certification defined according to ISO 10360-8 annex D.

High-volume data collection without reducing data quality.

Absolute Scanner AS1 specifications	
Accuracy (sensor)*	0.016 mm ($P_{Form.Sph.1\times25:ODS}$)
Point acquisition rate	up to 1.2 million points/s
Points per line	max. 4000
Line rate	max. 300 Hz
Line width (mid)	150 mm
Standoff	165 ± 50 mm
Minimum point spacing	0.027 mm
System scanning certification	yes
Laser class	2
Operating temperature	5–45°C
Weight	0.4 kg

*see the AS1 SSA column in the specifications table for the complete Scanning System Accuracy (arm + scanner)

Fully modular wrist (standard accessories)

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Absolute Arm 7-Axis
Key features

Absolute Encoders
Exclusive to Absolute Arm, no referencing needed: power on and measure.

Advanced construction
High-end carbon-fibre ensures thermal stability and uneven tube lengths typical in industrial robot design make the arm lighter to use.

Sensor recognition
Change touch probes or mount sensors on the fly without realignment.

Total protection
Full IP54 rating is standard on all Absolute Arm models for measurement in challenging environments.

Asset management
Compatibility with the Metrology Asset Management solution allows remote real-time status and performance monitoring in the field.

Handling grips
Ergonomic infinite-rotation grips minimise operator fatigue, ensure thermal stability and maximise accuracy.

Zero-G counterbalance
Effectively balances the arm while minimising torque in the arm's base, making movement effortless.

Built-in Bluetooth®
Connect to productivity-boosting accessories such as headphones or temperature sensors.

Control packs (WiFi and battery)
Boost functionality with full scanning performance over WiFi or single-cable connection (USB or Ethernet) and battery power (hot-swappable dual battery pack).

RDS SMART
Proprietary software featuring Self-Monitoring Analysis and Reporting Technology that manages the arm in the field by monitoring diagnostics including shocks and temperature changes.

RDS Quick Measure
Built-in utility program allows basic measurements without additional software.

24-month warranty
As standard on all Absolute Arm systems.

Worldwide service
Our network of Hexagon service centres around the world can provide local support and servicing for arms and all compatible sensors.

Absolute Arm 7-Axis accuracy and size specification

	Model	E_{UNI} [1]	P_{SIZE} [2]	L_{DIA} [3]	P_{FORM} [4]	AS1 SSA [5]	Weight [6]	Max. reach
83 series	8320-7	0.043 mm	0.016 mm	0.054 mm	0.033 mm	0.059 mm	8.8 kg	2.48 m
	8325-7	0.048 mm	0.023 mm	0.060 mm	0.043 mm	0.065 mm	9.1 kg	2.98 m
	8330-7	0.078 mm	0.034 mm	0.090 mm	0.058 mm	0.082 mm	9.4 kg	3.48 m
	8335-7	0.092 mm	0.042 mm	0.115 mm	0.067 mm	0.099 mm	9.7 kg	3.98 m
	8340-7	0.114 mm	0.051 mm	0.140 mm	0.084 mm	0.118 mm	10.0 kg	4.48 m
	8345-7	0.158 mm	0.078 mm	0.168 mm	0.106 mm	0.163 mm	10.3 kg	4.98 m
85 series	8520-7	0.029 mm	0.010 mm	0.038 mm	0.021 mm	0.041 mm	9.0 kg	2.48 m
	8525-7	0.031 mm	0.012 mm	0.048 mm	0.025 mm	0.047 mm	9.3 kg	2.98 m
	8530-7	0.057 mm	0.020 mm	0.083 mm	0.038 mm	0.064 mm	9.6 kg	3.48 m
	8535-7	0.069 mm	0.024 mm	0.099 mm	0.045 mm	0.078 mm	9.9 kg	3.98 m
	8540-7	0.084 mm	0.030 mm	0.120 mm	0.050 mm	0.089 mm	10.2 kg	4.48 m
	8545-7	0.113 mm	0.048 mm	0.140 mm	0.065 mm	0.141 mm	10.5 kg	4.98 m
87 series	8725-7	0.029 mm	0.011 mm	0.044 mm	0.023 mm	0.043 mm	9.3 kg	2.98 m
	8730-7	0.053 mm	0.018 mm	0.076 mm	0.035 mm	0.056 mm	9.6 kg	3.48 m
	8735-7	0.064 mm	0.022 mm	0.092 mm	0.041 mm	0.068 mm	9.9 kg	3.98 m
	8740-7	0.078 mm	0.028 mm	0.110 mm	0.046 mm	0.080 mm	10.2 kg	4.48 m
	8745-7	0.104 mm	0.044 mm	0.125 mm	0.060 mm	0.121 mm	10.5 kg	4.98 m

[1] E_{UNI} — Maximum permissible longitudinal error of measurement – according to ISO 10360-12:2016

[2] P_{SIZE} — Maximum permissible probe deviation, size – according to ISO 10360-12:2016

[3] P_{FORM} — Maximum permissible probe deviation, shape – according to ISO 10360-12:2016

[4] L_{DIA} — Maximum permissible probe deviation, position – according to ISO 10360-12:2016

[5] SSA — Scanning System Accuracy: L_{DIA} according to ISO 10360-8 annex D

[6] Weight — Weight without scanner

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Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter.

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