HEXAGON

Brochure

Absolute Arm

Usability | Versatility | Productivity | by design




ASTON MARTIN

The Absolute Arm

(Multi)functional, by design

With the Absolute Arm, it's all in the design. Design for high measurement productivity, so other manufacturing processes can stay on schedule. Design for practicality, so users can measure in almost any industrial environment. Design for flexibility, to meet the demands of any metrology challenge, anywhere.

And flexibility is at the core of the Absolute Arm product range. Flexibility in configuring the arm's wrist for the needs of the application and the comfort of the operator. Flexibility in swapping probes or scanners without having to stop work and calibrate. Flexibility in having measurement results displayed where they're needed. Flexibility in a product range of 36 different configurations across three types, seven sizes and three accuracy levels. Flexibility in finding the right solution for every measurement need.

With the Absolute Arm there's no need to compromise, no need to settle for second best. Whatever, wherever and however we want to measure, the right choice is right there, by design.

Absolute Arm

All in the design

Built on a platform of advanced technology, the Absolute Arm makes high-accuracy portable measurement effortless. Every part has been designed with practicality, usability and stability in mind. The product of over 35 years of experience in developing articulated measuring arms, it combines a clear picture of the future of portable metrology with the features that users have always wanted to see.

Encoders

Patented Absolute Encoders within every articulated joint are exclusive to Hexagon and make the Absolute Arm the only portable measuring arm that has completely eliminated warm-up times and encoder referencing before use.

Movement

The unique Zero-G Counter Balance system and low-friction rotating grips reduce user fatigue and maximise accuracy by minimising inertia.



Materials

High-tech carbon-fibre tube construction ensures strength and thermal stability under any environmental conditions.

Measurement

Multi-functional control buttons and a convenient OLED wrist display screen put measurement control directly in the user's hand, while a range of probes and 3D scanners deliver flexible measurement functionality.

Security

The HomeDock and SmartLock features allow the arm to be stowed and locked in place between measurements, for greater security during transport, set-up and station moves.

Feedback

Easy user interaction in even the harshest industrial environments through visual, acoustic and haptic feedback functions, now augmented with Bluetooth technology.

Portability

True wireless connectivity and hot-swappable batteries give greater flexibility when moving the arm around the shop floor, along with full WiFi scanning performance with our rapid laser and structured light scanners.



Usability, by design

The Absolute Arm was designed from the ground up with usability in mind. The goal is to deliver consistent, reliable and accurate results, whatever the experience level of the user.



Accuracy

The Absolute Arm range offers probing accuracy as fine as only 6 microns and scanning system accuracy to within 43 microns.



Speed

The RS-SQUARED is designed to obtain data sets of large simple objects in the shortest possible time, while the RS6 is designed for high-speed scanning of highly detailed parts.



Convenience

Even the largest Absolute Arm weighs less than 11 kilograms, making set-up and repositioning a quick and easy process.



Resilience

The robust and shock-resistant carry case keeps the arm properly protected and in perfect condition wherever and however it's transported.



Productivity

The SHINE technology of the RS6 Laser Scanner takes data quality to a new level without compromising on speed, while the ground-breaking RS-SQUARED Area Scanner brings ultra-fast structured light scanning to a portable measuring arm for the first time.



Connectivity

Industry 4.0 ready with full 300 Hertz scanning performance over WiFi and simple integration within Hexagon's Smart Factory concept



Repeatability

A patented kinematic probe joint minimises downtime by allowing all probes to be swapped on the fly with no need for recalibration.



Monitoring

The SMART – Self-Monitoring Analysis and Reporting Technology – system provides full diagnostic monitoring for comprehensive measurement reliability.



Certification

Probing accuracy certified according to ISO 10360-12 as standard, along with full scanning system accuracy according to ISO 10360-8 Annex D. Accuracy verification can be performed directly by the user with the supplied CMM-certified artefact.



Compatibility

An established and reliable software interface that is compatible with and supported by all major portable metrology software packages.

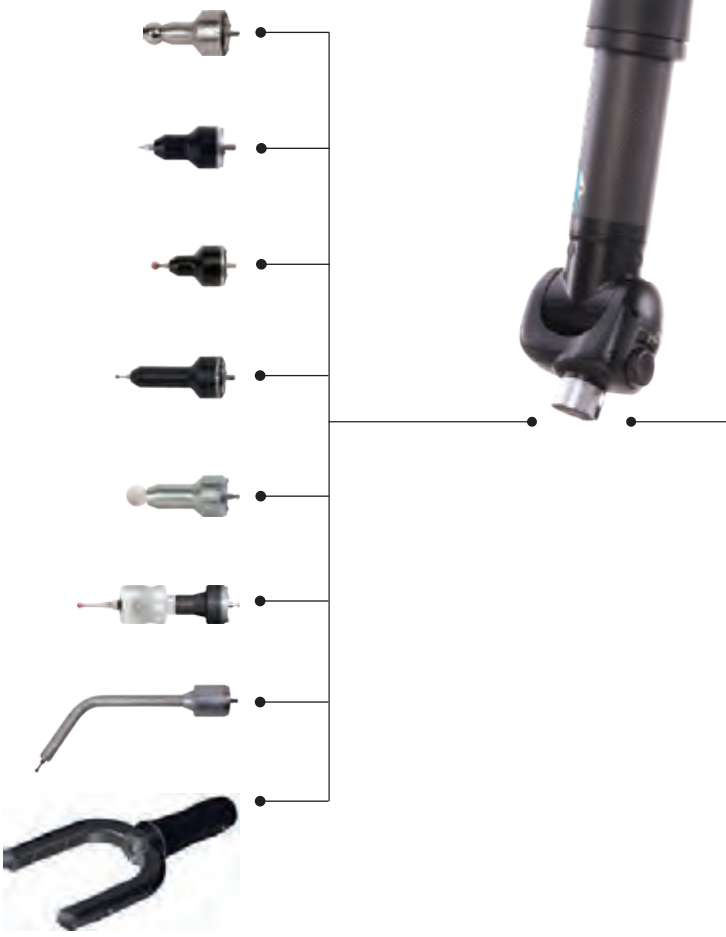
Versatility, by design

Every Absolute Arm is compatible with a wide range of probes, scanners and other accessories that make it without doubt the most versatile and multifunctional portable measuring arm in the world.

Capture scan with RS6, RS5, RS-SQUARED, HP-L-8.9 or APODIUS 3D. Probe with almost a hundred of different styli and tips, from angled to extended, from touch sensitive to infra-red. Add functionalities like battery operation and WiFi connectivity with a Control Pack. Choose between stands, tripods and trolleys, screws, clamps or a magnetic base. Combine with every major metrology software on the market.

Probing

From infrared non-contact probes for measuring tubes of different diameters, to angled probes for measuring difficult to access features, the Absolute Arm is compatible with almost 100 versatile probing options.





Scanning

Several sensors are available for the Absolute Arm, covering all possible contactless data collection requirement.



- **RS6 Laser Scanner**
  Flagship high-speed blue laser 3D scanning performance



- **RS5 Laser Scanner**
  Reliable general-purpose 3D scanning



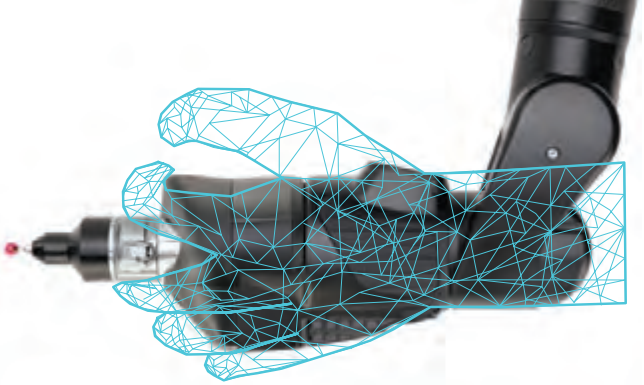
- **RS-SQUARED Area Scanner**
  Unique ultra-high-speed structured light 3D scanning technology

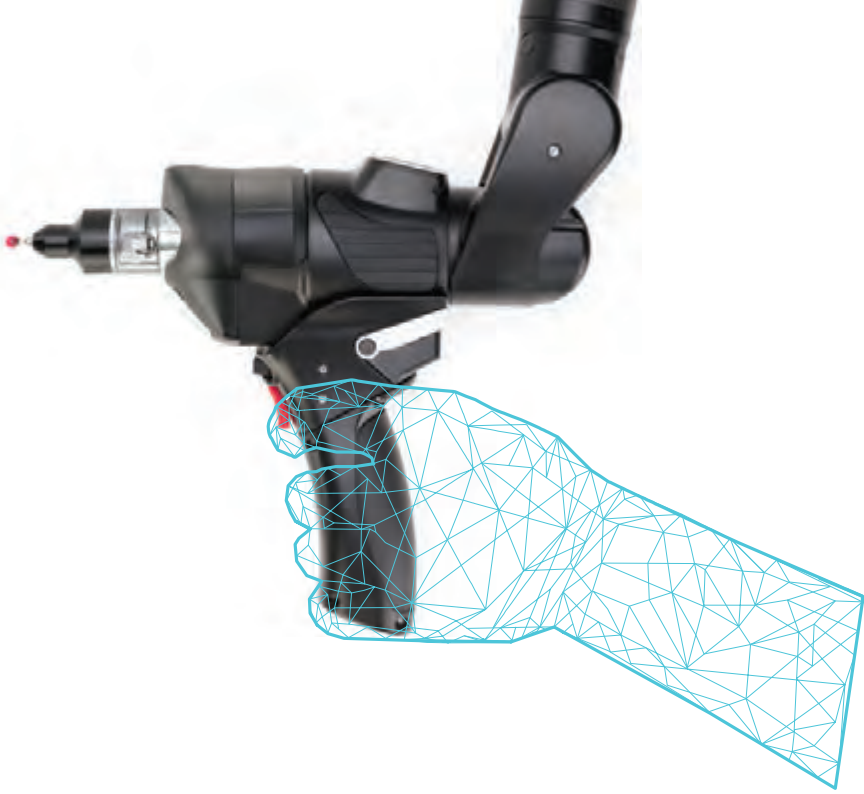


- **APODIUS Vision Sensor 3D**
  Specialised camera technology for composite material analysis



- **HP-L-8.9 Laser Scanner**
  Entry-level 3D scanning for 6-axis systems







Usability, by design

The unique modular wrist of the Absolute Arm is all about versatility. It makes it easier to get more done by adapting to the specific needs of each user.

- Pistol grips available in three different sizes – choose the most comfortable fit for the user.
- Remove the grip completely to measure hard-to-reach areas such as holes and cavities.
- Quickly switch between laser scanning, area scanning and touch probing without interrupting the measurement process.
- Even a mounted 3D scanner can be quickly and easily removed by the user for easier measurement in the tightest areas.
- All probes and scanners can be remounted without recalibration, allowing for immediate measurement.

Productivity, by design

Scanners for the Absolute Arm are more than just bolted-on accessories. They're designed to be integral parts of the arm system, guaranteeing increased measurement throughput and reliable accuracy without compromising on the simple usability at the core of the Absolute Arm design.



With the RS6 Laser Scanner, 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.

Built on unique SHINE technology, the RS6 always delivers full scanning performance, even on the most challenging part surfaces. Whether faced with glossy black plastic automotive body parts or moulded carbon-fibre components, this innovative exposure mode allows the RS6 to scan with no reduction in quality or productivity. Full frame rate and full laser line width, without spray and without the forced performance reductions that are a hallmark of other scanners.

RS6 Laser Scanner

- ✓ High-quality scan data collected at full speed, whatever the part.
- ✓ Scan 99 percent of surface types with default exposure settings thanks to SHINE technology.
- ✓ Extra-wide scan line for faster part coverage.
- ✓ High-quantity data collection without sacrificing data quality.
- ✓ Easily removed from the arm for better usability while probing.
- ✓ Remountable in seconds with no time-wasting recalibration.
- ✓ Horizontally oriented scan line for more comfortable measurement.
- ✓ Projected laser range finder makes correct scanner positioning simple.
- ✓ Full-speed scanning performance over WiFi or a single cable.
- ✓ Complete System Scanning Certification defined according to ISO 10360-8 Annex D.


Z
1000

The RS5 Laser Scanner is a general-purpose 3D scanner ideal for less-challenging applications like design modelling, tube or casting measurement, product benchmarking or virtual assembly.

Retaining the trademark flexibility of the Absolute Arm range, the RS5 can be removed for easier handling and measuring in tight spaces just like the flagship RS6 Laser Scanner, and likewise is also quickly remountable with no need for recalibration.

Built on reliable technology, the RS5 Laser Scanner is a more affordable alternative to a premium laser scanner.

RS5 Laser Scanner

- ✓ High-quality scan data without high-end investment.
- ✓ No reduction in data collection speed when using maximum laser width setting.
- ✓ Wide scan line covers parts quickly.
- ✓ Easily removed from the arm for better usability while probing.
- ✓ Remountable in seconds with no time-wasting recalibration.
- ✓ Horizontally oriented scan line for more comfortable measurement.
- ✓ Full-speed scanning performance over WiFi or a single cable.
- ✓ Complete System Scanning Certification defined according to ISO 10360-8 Annex D.


RS-SQUARED

Often, the time needed to scan a part is the most important factor when planning measurement tasks. The part might only be available for measurement for a limited time or restricted to an inconvenient location. That's why Hexagon has created the RS-SQUARED Area Scanner, the world's first structured light scanner mounted on a portable measuring arm.

RS-SQUARED is designed to ensure scanning is as fast as possible by combining the speed of a area scanner with the versatility of a measurement arm. Large 'tiles' of data are captured instead of the laser lines, but without the need for the reference markers that are typical of other area scanners. It's ideal for users who have large backlogs of parts or limited time in which to scan them.

RS-SQUARED Area Scanner

- ✓ Up to 4 scan 'tiles' are collected every second, ensuring that the part is scanned as quickly as possible.
- ✓ Each tile measures 300 x 300 millimetres and contains up to 1 million points.
- ✓ Reference markers are not required, reducing set-up time and eliminating the need to clean the part after scanning.
- ✓ Scan in 10 minutes an area that would require an hour of work with even a high-end laser scanner.
- ✓ Easily removed from the arm for better usability while probing.
- ✓ Remountable in seconds with no time-wasting recalibration.
- ✓ Full-speed scanning performance over WiFi or a single cable.
- ✓ Complete System Scanning Certification defined according to ISO 10360-8 Annex D.





Portable probing

The Absolute Arm is the absolute standard when it comes to reliable high-accuracy touch probe measurement, delivering market-leading probing accuracy.

Every arm is supplied with three pre-calibrated touch probes, so measurement can begin immediately. The established TESA kinematic joint for repeatable probe mounting means probes can be hot-swapped quickly and easily, with no need for recalibration between changes.

With some 100 probes available within the Absolute Arm accessory range, there's one that suits every measurement need. Straight probes, angled probes, trigger probes, tube probes – all are available at various lengths and tip diameters. Take a look at the comprehensive Absolute Arm Accessories Catalogue for more details.

A probing specialist, by design

The Absolute Arm is also available in a 6-axis model. These dedicated probing systems are built on well-established measurement technology and intended for applications where laser scanning is less important. The Absolute Arm 6-Axis offers the same probing functionality as the full 7-axis models while delivering improved probing accuracy to within just 8 microns. It's also fully upgradeable to entry-level laser scanning with the addition of the HP-L-8.9 Laser Scanner from the Absolute Arm accessories range.




ABSOLUTE ARM 85

The world's most accurate portable measuring arm

Combining ultra-high accuracy with small size, the Absolute Arm Compact is designed for optimum results in tight spaces.

Featuring an integrated base and a unique counter-weight balancing system for improved ease-of-use, the Absolute Arm Compact can be placed anywhere, even inside a machining centre for part alignment. This is high accuracy, guaranteed where it's needed most. The Compact is also fully compatible with WiFi and battery-operation Control Pack options, as well as the HP-L-8.9 Laser Scanner.

Put simply, the Absolute Arm Compact is still the world's most accurate portable measuring arm, with accuracy achievable to within just 6 microns. It's an incredible package of advanced portable technology that represents the perfect choice for measuring small-to-medium parts with absolute accuracy.

Complementary, by design

The ultra-high-accuracy measurement capabilities and extreme portability of the Absolute Arm Compact make it the perfect companion in CMM applications that require occasional measurements in hard-to-reach areas. That's why we offer the option to supply the Compact arm with full ISO 10360-2 certification, allowing users to maintain certification consistency while benefiting from its unique combination of portability and accuracy.

Absolute Arm

Applications

The Absolute Arm range is a single solution to measurement challenges across a wide range of industries and applications. From quality control to reverse engineering, from sheet metal production to engine components, there's an Absolute Arm for every measurement need.





Jig and fixture

Build and inspect

Tube and wire













Sheet metal

Mould and die

Shop floor











Additive manufacturing

Rectangle-section tubes





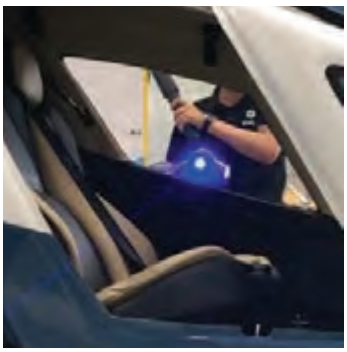
Composite inspection

In-process checks

Digitising













Maintenance and repair

Reverse engineering

Virtual assembly



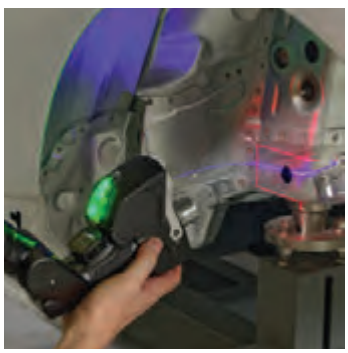












CAD-to-part

Gear measurement

On-machine verification

Special applications

The innovative technical features and accessories available with an Absolute Arm support a range of special applications, delivering key productivity improvements in sectors where a dedicated solution can deliver great improvements.



Tube and wire

The Absolute Arm offers two dedicated tube and wire application solutions, each based on a specialised tube measurement software platform.

The **Absolute Arm with TubeShaper** system uses non-contact infra-red tube probes to quickly create 3D CAD data that can define correctional data for a bending machine. It can perform in-bend measurements for greater accuracy and measure rectangle-section tubes.

The **Absolute Arm with BendingStudio** system works with a laser scanner to deliver incredibly fast and accurate 3D data for even complex and flexible tubes. This advanced software platform can manage every aspect of the tube and wire production process, all the way to directly defining and communicating bending machine correction data.

Each system is designed to significantly reduce the production-correction loop within the bent part manufacturing process and deliver incredible productivity benefits.



Composites

Featuring a dedicated surface scanner, the APODIUS Vision System 3D works with an Absolute Arm and laser scanner deliver accurate quality control for semi-finished carbon-fibre components.



Gears

Working with the QUINDOS software platform, the Gear Measurement System offers fast and simple 3D measurement for gear measurement applications that have previously required complex metrology devices.



Additive manufacturing

High-speed scanning with an Absolute Arm has a vital role to play in the emerging field of additive manufacturing, allowing users to quickly assess, revise and improve their component outputs.



Reverse engineering

Complete part data at sub-millimetre accuracy is key for high-quality reverse engineering – something that can be delivered quickly and reliably by an Absolute Arm scanner.

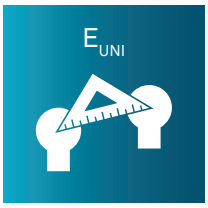
Certifying absolute accuracy

All Absolute Arm systems are produced and delivered in line with fully traceable and internationally recognised certifications, giving users complete confidence in the reliability of their measurements.

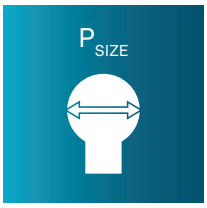
ISO 10360-12

As standard, probing accuracy certification is in line with the rigorous ISO 10360-12 test for defining the probing accuracy of portable measuring arms.

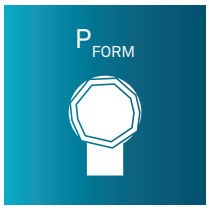
This is an extremely demanding and internationally recognised standard that requires certified length and sphere artefacts be measured multiple times in different positions within the arm measurement volume with a touch probe. The results of these measurements provide four accuracy results that together represent the arm's overall accuracy for contact measurement.



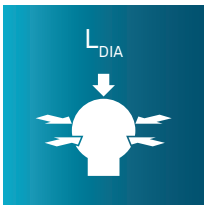
The E_{UNI} value is the maximum permissible error for unidirectional length measurements. It therefore most closely reflects most measurement needs.



The P_{SIZE} value is the maximum permissible error for measuring the diameter of a sphere. It therefore signifies the accuracy of feature measurements.



The P_{FORM} value is the maximum permissible error for the form of a sphere. This is a value that defines the dispersion accuracy of the arm.



The L_{DIA} value is the maximum permissible error for the articulation location. It therefore represents the repeatability of the arm.

ISO 10360-8

A full system scanning accuracy certification in line with the ISO 10360-8 Annex D standard is supplied with every Absolute Arm scanning system. This represents the global accuracy of the arm and scanner together. The test involves measuring a certified sphere artefact with five different arm articulations, in different locations throughout the arm measurement volume. A certified sphere artefact is supplied with every Absolute Arm scanning system.

ISO 10360-2

The Absolute Arm Compact is available with optional ISO 10360-2 certification. This is a CMM-type certification that quotes the arm accuracy according to a variable 'L', where 'L' is equal to the length of measurement that is being performed. A higher L-value denotes a larger measurement distance, such that ISO-certified accuracy increases with lower L-values. This is a useful option for users who plan to use their Absolute Arm Compact in conjunction with a bridge, gantry, vision or horizontal-arm CMM.

ISO 17025

Every Absolute Arm is manufactured in a production environment certified to ISO 17025.

Patent notice

Products described in this manual may be covered by one or more of the following U.S. patents 5,829,148; 6,598,306; 7,003,892; 7,568,293; 7,779,548; 7,908,757; D643,319; 8.174.682; 8,151,477; 8,407,907; 8,701,299 and other U.S. and foreign patents pending.

Absolute Arm

Series, sizes and set up

The three types of Absolute Arm are available in three different accuracy levels and seven model sizes, with measurement volume diameters from 1.2 to 4.5 metres, for a total of 36 individual arm configurations.

83 series

Entry-level measurement accuracy

85 series

Perfect balance between value for money and accurate measurement

87 series

Ultimate solution for portable high-accuracy measurement







	83	85	87
1.2 m	✓	✓	
2.0 m	✓	✓	
2.5 m	✓	✓	✓
3.0 m	✓	✓	✓
3.5 m	✓	✓	✓
4.0 m	✓	✓	✓
4.5 m	✓	✓	✓

Available measurement volumes for each Absolute Arm series

Volume vs reach

Some manufacturers quote their arm's maximum reach as its measurement volume. With the Absolute Arm, the quoted measurement volume represents the largest area within which reliable accurate measurement is feasible, rather than just the maximum possible horizontal extension of the arm.





Mounting the Absolute Arm

A selection of bases, tripods and stands is compatible with every Absolute Arm, including a convenient vacuum mount, all attachable through the specially designed Mounting Ring.



Large-volume measurement

Volume expansion accessories allow the Absolute Arm to measure parts and objects beyond its standard reach.

Leap Frog Kit

Extended measurement can be achieved with a Leap Frog Kit that allows the arm to measure from different stations.

GridLOK

For more demanding applications, the GridLOK system creates an expanded measurement arena within which the arm can be repositioned anywhere with no undue loss of accuracy.



World-class products to rely on

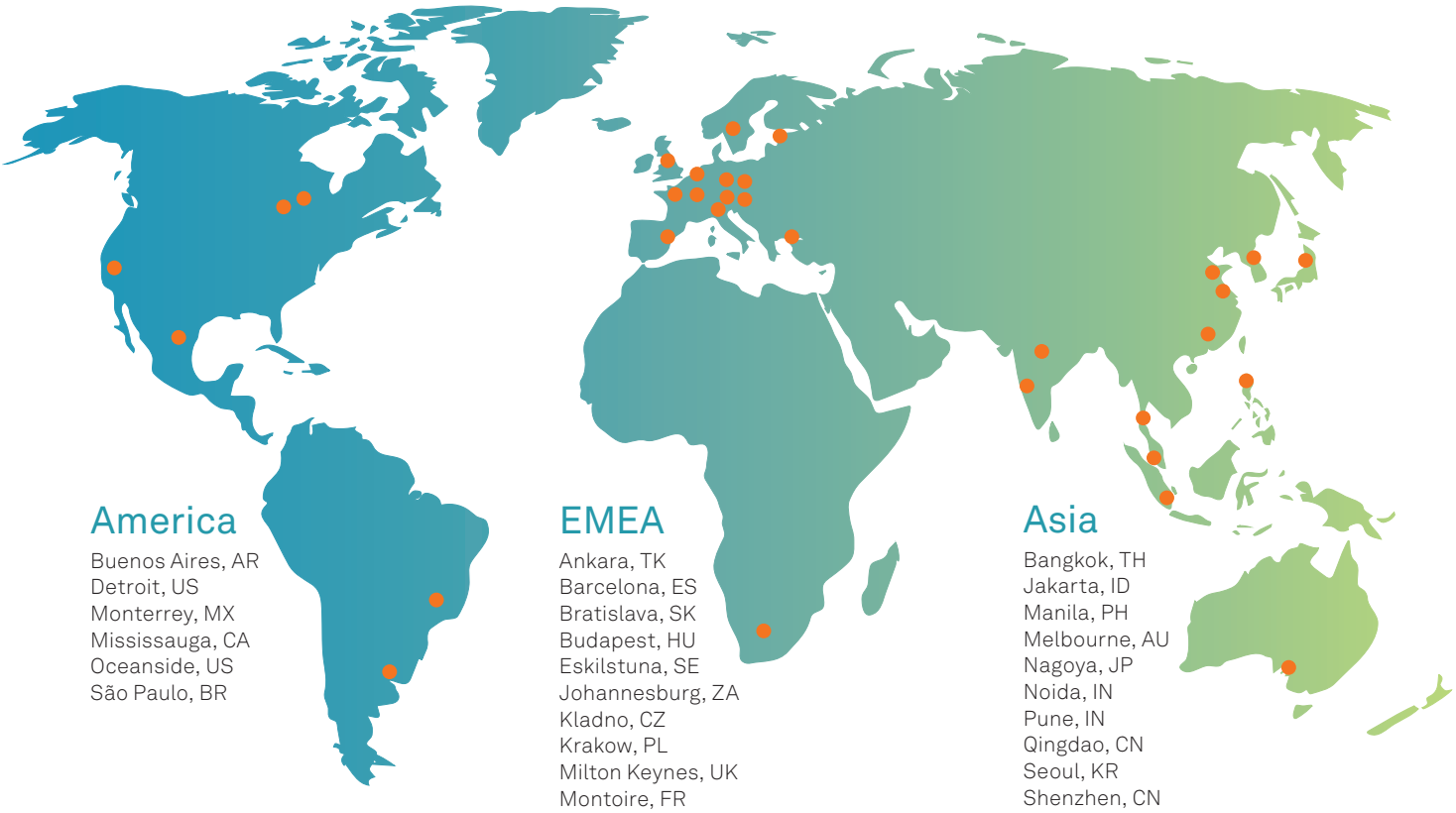
Drawing on decades of research and development experience, portable measuring arm technology from Hexagon's Manufacturing Intelligence division is built on a long history of outperforming technological innovation. Deriving quality from experience to drive productivity is what keeps Hexagon in front and able to deliver first-class solutions for industries around the world.

Along with the assurance of ten years of serviceability, owners of Hexagon portable measuring arm systems benefit from a 24-month factory warranty as standard – our guarantee that our technology will always meet the needs of our users.

World-class support delivered locally

The international presence of Hexagon guarantees comprehensive aftersales support and services across the globe. With the largest dedicated service team of any metrology equipment manufacturer and an emphasis on locally delivered solutions, Hexagon is unmatched from service, repair, certification and calibration through operator training and software maintenance and upgrades.

There are now 34 Absolute Arm service centres worldwide, all of which are able to offer full ISO certification facilities along with a complete array of other support and maintenance services.



America

Buenos Aires, AR
Detroit, US
Monterrey, MX
Mississauga, CA
Oceanside, US
São Paulo, BR

EMEA

Ankara, TK
Barcelona, ES
Bratislava, SK
Budapest, HU
Eskilstuna, SE
Johannesburg, ZA
Kladno, CZ
Krakow, PL
Milton Keynes, UK
Montoire, FR
Orbassano, IT
Prague, CZ
St. Petersburg, RU
Wetzlar, DE

Asia

Bangkok, TH
Jakarta, ID
Manila, PH
Melbourne, AU
Nagoya, JP
Noida, IN
Pune, IN
Qingdao, CN
Seoul, KR
Shenzhen, CN
Singapore, SIN
Suzhou, CN

World-class service made simple

Customer Care Packages

Absolute Arm owners have the opportunity to invest in a Customer Care Package - a standardised after-sale service package designed to ensure equipment remains in top condition and can be relied upon for accurate measurement results.

- Maintenance and warranty plans that ensure top equipment availability
- Trouble-free usage and minimal downtime.
- Preferred hotline access at no additional cost
- Access to professional advice whenever it's needed

Customer Care Packages include a selection of the following benefits, depending on the tier chosen.

- Planned annual service
- Hardware support
- Annual maintenance and recertification
- Remote assistance
- Repair parts and labour
- Customised local benefits
- Software maintenance

For complete details of the benefits of each level of Customer Care Package, please contact a local Hexagon representative.

Absolute Arm specifications

Absolute Arm 7-Axis accuracy and size specification

	Model	E_{UNI}[1]	P_{SIZE}[2]	L_{DIA}[3]	P_{FORM}[4]	RS6 SSA[5]	RS5 SSA[5]	RS-SQUARED SSA[5]	Weight	Max. reach
83 series	8320-7	0.043 mm	0.016 mm	0.054 mm	0.033 mm	0.059 mm	0.062 mm	NA	8.8 kg	2.48 m
	8325-7	0.048 mm	0.023 mm	0.060 mm	0.043 mm	0.065 mm	0.068 mm	0.164 mm	9.1 kg	2.98 m
	8330-7	0.078 mm	0.034 mm	0.090 mm	0.058 mm	0.082 mm	0.092 mm	0.204 mm	9.4 kg	3.48 m
	8335-7	0.092 mm	0.042 mm	0.115 mm	0.067 mm	0.099 mm	0.105 mm	0.242 mm	9.7 kg	3.98 m
	8340-7	0.114 mm	0.051 mm	0.140 mm	0.084 mm	0.118 mm	0.122 mm	0.283 mm	10.0 kg	4.48 m
	8345-7	0.158 mm	0.078 mm	0.168 mm	0.106 mm	0.163 mm	0.172 mm	0.338 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	0.045 mm	NA	9.0 kg	2.48 m
	8525-7	0.031 mm	0.012 mm	0.048 mm	0.025 mm	0.047 mm	0.048 mm	0.138 mm	9.3 kg	2.98 m
	8530-7	0.057 mm	0.020 mm	0.083 mm	0.038 mm	0.064 mm	0.066 mm	0.168 mm	9.6 kg	3.48 m
	8535-7	0.069 mm	0.024 mm	0.099 mm	0.045 mm	0.078 mm	0.080 mm	0.196 mm	9.9 kg	3.98 m
	8540-7	0.084 mm	0.030 mm	0.120 mm	0.050 mm	0.089 mm	0.091 mm	0.228 mm	10.2 kg	4.48 m
	8545-7	0.113 mm	0.048 mm	0.140 mm	0.065 mm	0.141 mm	0.148 mm	0.271 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	0.044 mm	0.123 mm	9.3 kg	2.98 m
	8730-7	0.053 mm	0.018 mm	0.076 mm	0.035 mm	0.056 mm	0.058 mm	0.148 mm	9.6 kg	3.48 m
	8735-7	0.064 mm	0.022 mm	0.092 mm	0.041 mm	0.068 mm	0.071 mm	0.173 mm	9.9 kg	3.98 m
	8740-7	0.078 mm	0.028 mm	0.110 mm	0.046 mm	0.080 mm	0.082 mm	0.198 mm	10.2 kg	4.48 m
	8745-7	0.104 mm	0.044 mm	0.125 mm	0.060 mm	0.121 mm	0.127 mm	0.222 mm	10.5 kg	4.98 m

3D scanner specifications

	RS6	RS5	RS-SQUARED	HP-L-8.9
Scanner type	Blue laser line scanner	Red laser line scanner	Structured light scanner	Red laser line scanner
Accuracy	0.026 mm (2σ)	0.028 mm (2σ)	0.06 mm (2σ)	0.04 mm (2σ)
Point acquisition rate	up to 1.2 million points/s	752 000 points/s	4 000 000 points/s (grid of raw points, no interpolation available)	45 000 points/s
Points per frame	max. 4000	max. 7520	1 million	750
Frame rate	max. 300 Hz	max. 100 Hz	max. 4 Hz	60 Hz
Line width (mid)	150 mm	115 mm	-	80 mm
Frame size (at mid-range)	-	-	300 mm x 300 mm	-
Standoff	165 ± 50 mm	165 ± 50 mm	300 ± 50 mm	135 ± 45 mm
Minimum point spacing	0.027 mm	0.011 mm	0.21 mm	0.08 mm
System scanning certification	yes	yes	yes	no
Laser class	2	2M	2	2
Operating temperature	5–40°C	5–40°C	5–40°C	5–40°C
Weight	0.4 kg	0.4 kg	1.4 kg	0.32 kg

Absolute Arm 6-Axis accuracy and size specification

	Model	E_{UNI} [1]	P_{SIZE} [2]	L_{DIA} [3]	P_{FORM} [4]	Weight	Max. reach
83 series	8312-6	0.024 mm	0.010 mm	0.021 mm	0.018 mm	12.1 kg	1.49 m
	8320-6	0.040 mm	0.013 mm	0.042 mm	0.026 mm	7.8 kg	2.23 m
	8325-6	0.046 mm	0.020 mm	0.053 mm	0.038 mm	8.1 kg	2.73 m
	8330-6	0.067 mm	0.029 mm	0.071 mm	0.054 mm	8.4 kg	3.23 m
	8335-6	0.085 mm	0.038 mm	0.090 mm	0.063 mm	8.7 kg	3.73 m
	8340-6	0.100 mm	0.046 mm	0.105 mm	0.077 mm	9.0 kg	4.23 m
	8345-6	0.120 mm	0.052 mm	0.110 mm	0.086 mm	9.3 kg	4.73 m
85 series	8512-6	0.019 mm	0.006 mm	0.016 mm	0.012 mm	12.2 kg	1.49 m
	8520-6	0.023 mm	0.008 mm	0.030 mm	0.017 mm	8.0 kg	2.23 m
	8525-6	0.028 mm	0.010 mm	0.035 mm	0.020 mm	8.3 kg	2.73 m
	8530-6	0.042 mm	0.015 mm	0.053 mm	0.030 mm	8.6 kg	3.23 m
	8535-6	0.055 mm	0.020 mm	0.069 mm	0.040 mm	8.9 kg	3.73 m
	8540-6	0.067 mm	0.024 mm	0.085 mm	0.045 mm	9.2 kg	4.23 m
	8545-6	0.080 mm	0.028 mm	0.102 mm	0.050 mm	9.5 kg	4.73 m
87 series	8725-6	0.026 mm	0.009 mm	0.032 mm	0.018 mm	8.3 kg	2.73 m
	8730-6	0.039 mm	0.014 mm	0.048 mm	0.028 mm	8.6 kg	3.23 m
	8735-6	0.052 mm	0.018 mm	0.064 mm	0.037 mm	8.9 kg	3.73 m
	8740-6	0.063 mm	0.022 mm	0.079 mm	0.041 mm	9.2 kg	4.23 m
	8745-6	0.074 mm	0.026 mm	0.094 mm	0.046 mm	9.5 kg	4.73 m

Absolute Arm Compact - 10360-2 accuracy specification

Model	E_{UNI} [1]	P_{SIZE} [2]
8312	0.008 mm	5+L/40 <0.018 mm
8512	0.006 mm	5+L/65 <0.015 mm

Absolute Arm technical specification

Operating Temperature	+5° to +40°C
Storage Temperature	-30° to +70°C
Operational Elevation	up to 2000 m
Relative Humidity	10–90% non-condensing
Marks of Conformity	CE – FCC – IC
Power Requirement	110–240 V

[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] L_{DIA} Maximum permissible probe deviation, position – according to ISO 10360-12:2016
[4] P_{FORM} Maximum permissible probe deviation, shape – 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
[7] MPE_p Maximum permissible error, probing – according to ISO 10360-2
[8] MPE_e Maximum permissible error, length measurement – according to ISO 10360-2



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

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

Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagonmi.com.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us @HexagonAB.

© 2020 Hexagon AB and/or its subsidiaries and affiliates. All rights reserved.