Absolute Arm systems and accessories

Version 2.3

Symbols

☑ : standard delivery

✓ : compatible with the item or accessory

– : incompatible with the item or accessory

O : mandatory accessory

opt : optional accessory

: not in standard delivery

This catalogue contains the complete range of products and accessories available for Absolute Arm systems from Hexagon. Whatever the industry or application, the Absolute Arm has a solution.

All systems and accessories offer the same high-end, straight-forward design and quality users expect from Hexagon products.

Visit our shop

| shop.hexagonmi.com

Hexagon Manufacturing Intelligence's online shop offers a streamlined search, order, and delivery service for a wide range of accessories and spare parts in many countries worldwide. Your benefits:

- Quickly find the right inspection solution with the shop's state-of-the-art search function: filter by price, radius, thread, and other criteria to pinpoint the exact product required

- Fast UPS dispatch

- Easy bulk purchase via CSV file uploads

- Convenient payment – on account or by credit card

Whether you're buying in bulk or single items, shop.hexagonmi.com takes the time and stress out of securing the measuring equipment you need.

Please direct any questions about Hexagon products or accessories to an authorised local sales representative to receive guidance and assistance in making an appropriate purchasing decision.

Important note

The information provided by Hexagon in this catalogue is for general information purposes only. All information and arm configurations subject to change without further notice.

The images in this document are for reference only and are subject to change without notice. The colour, shape and weight of the products represented here may be different from those delivered.
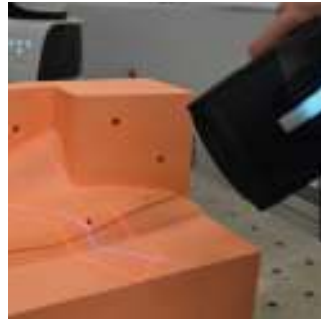
Contents

Jig and fixture

Build and inspect

Tube and wire
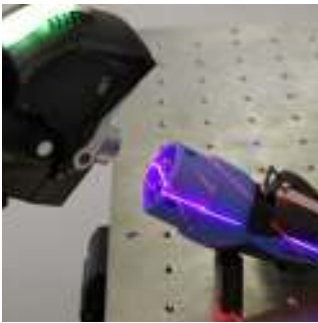
Sheet metal

Mould and die

Shop floor

ABSOLUTE ARM 85

Gear measurement

On-machine verification

Maintenance and repair

CAD-to-part

Reverse engineering

Virtual assembly

Composite inspection

In-process checks

Digitising

Absolute Arm systems

Accuracy

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

Convenience

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

Productivity

The SHINE technology of the Absolute Scanner AS1 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.

Repeatability

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

Compatibility

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

Speed

The RS-SQUARED is designed to obtain data sets of large simple objects in the shortest possible time, while the AS1 is designed for high-speed scanning of highly detailed parts.

Resilience

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

Connectivity

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

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. User accuracy verification supported by supplied CMM-certified artefact.

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.

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.

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

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

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.

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.

Accuracy Specifications

All probing specifications are achieved with an Absolute Arm mounted on a standard base plate or magnetic base (as available in this catalogue) under stable environmental conditions. This level of equipment accuracy is not guaranteed with other stands and volume extension products.

Nomenclature

RA8525-7

-7	7-Axis model
-6	6-Axis model
-T	Tube model
12	1.2 m measuring volume
20	2.0 m measuring volume
25	2.5 m measuring volume
30	3.0 m measuring volume
35	3.5 m measuring volume
40	4.0 m measuring volume
45	4.5 m measuring volume
87	series - Ultimate solution for portable high-accuracy measurement
85	series - Perfect balance between value and accurate measurement
83	series - Entry-level measurement accuracy

Absolute Arm 7-Axis wrist packages

	Removable pistol grip	Fixed pistol grip	3 sizes hand grips	Nose cone	AS1 Laser Scanner	RS5 Laser Scanner	RS-SQUARED Area Scanner	Fixed adaptor	Alignment sphere	Alignment plate
H00007281 - Probing kit	☑		☑	☑					☑*	
H000027249 - AS1 kit	☑		☑	☑	☑				☑	
H00007293 - RS5 kit	☑		☑	☑		☑			☑	
H000013115 - RS-SQUARED kit	☑		☑	☑			☑			☑
H00007294 - External scanning		☑	☑					☑	☑*	

*Certified chrome sphere for probing only.

Control packs

	Power AC	Battery		Ethernet-to-USB adaptor	WiFi		Ethernet cable		Scanners				
		Arm	Scanner		Arm	Scanner	Arm	Scanner	AS1	RS5	RS-SQUARED	HP-L-8.9	APODIUS 3D
H00015423-01 Connector Pack (CP-C)*	✓			✓			✓	✓	✓	✓	✓	✓	✓
H00012444-01 Wireless Pack (CP-W)*	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓**	✓**

**HP-L-8.9 and APODIUS 3D sensors do not support WiFi scanning.
***Includes a 3-metre ethernet cable and Gigabit ethernet adaptor.

Absolute Arm 7-Axis 83 series

7-axis portable measuring arm for all-purpose tactile measurement and scanning functionality, including:

- Zero-G Counterbalance
- SmartLock + HomeDock
- Base plate
- TKJ 3-mm / 6-mm / 15-mm ball probes
- RDS calibration and interface software
- Wrist display
- Travel case

- Certified alignment sphere for probing/scanning
- ISO 10360-12 certification (for articulated arms for tactile measurement)
- 24-month warranty

H00008000-03-8320	**Absolute Arm 8320-7**	
	2.0 m measurement volume	
H00008000-03-8325	**Absolute Arm 8325-7**	
	2.5 m measurement volume	
H00008000-03-8330	**Absolute Arm 8330-7**	
	3.0 m measurement volume	
H00008000-03-8335	**Absolute Arm 8335-7**	
	3.5 m measurement volume	
H00008000-03-8340	**Absolute Arm 8340-7**	
	4.0 m measurement volume	
H00008000-03-8345	**Absolute Arm 8345-7**	
	4.5 m measurement volume	

Encoder	Absolute Encoders	☑
Movement and security	Zero-G Counterbalance | SmartLock | HomeDock	☑
Display	OLED wrist display | LED pictograms	☑
Haptic feedback	Wrist vibration	☑
Cables	3-metre ethernet cable | Gigabit ethernet adaptor | Power supply	☑
Mounting base	Standard base plate with mounting ring	☑
Probes	TKJ L 50 – ø 15-mm stainless steel	☑
	TKJ L 50 – ø 6-mm ruby	☑
	TKJ L 50 – ø 3-mm ruby	☑
Packaging	Hard case	☑
	Accessories case	☑
Dust cover	Dust cover, Hexagon-branded	☑
Software	USB Standard Package:	
	RDS driver and interface	☑
	User manuals	☑

Control Pack	Connector pack (CP-C)	○
	Wireless pack (CP-W)	○
Artefacts*	Verification bar	opt
	Certified sphere for probing / scanning	☑
7-Axis kit	7-Axis probing kit, installed	○
	AS1 kit, installed	○
	RS5 kit, installed	○
	RS-SQUARED kit, installed	○
	7-Axis SE kit, installed	○
Warranty	2 years**	☑
Certification	ISO 10360-12 (certification for articulated arms for tactile measurement)	☑
	ISO 10360-8 Annex D (certificate of combination for arm, laser scanner and area scanner)	

* All artefacts are delivered with a certification.

** The warranty of two (2) years is valid only if an arm service check is performed during the first year.

Absolute Arm 7-Axis 85 series

7-axis portable measuring arm for all-purpose tactile measurement and scanning functionality, including:

- Zero-G Counterbalance
- SmartLock + HomeDock
- Base plate
- TKJ 3-mm / 6-mm / 15-mm ball probes
- RDS calibration and interface software
- Wrist display
- Travel case

- Certified alignment sphere for probing/scanning
- ISO 10360-12 certification (for articulated arms for tactile measurement)
- 24-month warranty

H00008000-03-8520	**Absolute Arm 8520-7** 2.0 m measurement volume
H00008000-03-8525	**Absolute Arm 8525-7** 2.5 m measurement volume
H00008000-03-8530	**Absolute Arm 8530-7** 3.0 m measurement volume
H00008000-03-8535	**Absolute Arm 8535-7** 3.5 m measurement volume
H00008000-03-8540	**Absolute Arm 8540-7** 4.0 m measurement volume
H00008000-03-8545	**Absolute Arm 8545-7** 4.5 m measurement volume

Encoder	Absolute Encoders	☑
Measurement and security	Zero-G Counterbalance | SmartLock | Home-Dock	☑
Display	OLED wrist display | LED pictograms	☑
Haptic feedback	Wrist vibration	☑
Handling grips	SpinGrip* | SpinKnob	☑
Cables	3-metre ethernet cable | Gigabit ethernet adaptor | Power supply	☑
Mounting base	Standard base plate with mounting ring	☑
Probes	TKJ L 50 – ø 15-mm stainless steel TKJ L 50 – ø 6-mm ruby TKJ L 50 – ø 3-mm ruby	☑ ☑ ☑
Packaging	Hard case Accessories case	☑ ☑
Dust cover	Dust cover, Hexagon-branded	☑

Software	USB Standard Package: RDS driver and interface User manuals	 ☑ ☑
Control Pack	Connector pack (CP-C) Wireless pack (CP-W)	○ ○
Artefact**	Verification bar Certified sphere for probing / scanning	☑ ☑
7-Axis kit	7-Axis probing kit, installed AS1 kit, installed RS5 kit, installed RS-SQUARED kit, installed 7-Axis SE kit, installed	○ ○ ○ ○ ○
Warranty	2 years***	☑
Certification	ISO 10360-12 (certification for articulated arms for tactile measurement) ISO 10360-8 Annex D (certificate of combination for arm, laser scanner and area scanner)	☑

* Not available for 8520 models.
** All artefacts are delivered with a certification.
*** The warranty of two (2) years is valid only if an arm service check is performed during the first year.

Absolute Arm 7-Axis 87 series

7-axis portable measuring arm for all-purpose tactile measurement and scanning functionality, including:

- Zero-G Counterbalance
- SmartLock + HomeDock
- Base plate
- TKJ 3-mm / 6-mm / 15-mm ball probes
- RDS calibration and interface software
- Wrist display
- Travel case

- Certified alignment sphere for probing/scanning
- ISO 10360-12 certification (for articulated arms for tactile measurement)
- 24-month warranty

H00008000-03-8725	**Absolute Arm 8725-7**	2.5 m measurement volume
H00008000-03-8730	**Absolute Arm 8730-7**	3.0 m measurement volume
H00008000-03-8735	**Absolute Arm 8735-7**	3.5 m measurement volume
H00008000-03-8740	**Absolute Arm 8740-7**	4.0 m measurement volume
H00008000-03-8745	**Absolute Arm 8745-7**	4.5 m measurement volume

Encoder	Absolute Encoders	☑
Movement and security	Zero-G Counterbalance | SmartLock | Home-Dock	☑
Display	OLED wrist display | LED pictograms	☑
Haptic feedback	Wrist vibration	☑
Handling grips	SpinGrip | SpinKnob	☑
Cables	3-metre ethernet cable | Gigabit ethernet adaptor | Power supply	☑
Mounting base	Standard base plate with mounting ring	☑
Probes	TKJ L 50 – ø 15-mm stainless steel TKJ L 50 – ø 6-mm ruby TKJ L 50 – ø 3-mm ruby	☑ ☑ ☑
Packaging	Hard case Accessories case	☑ ☑
Dust cover	Dust cover, Hexagon-branded	☑

Software	USB Standard Package: RDS driver and interface User manuals	 ☑ ☑
Control Pack	Connector pack (CP-C) Wireless pack (CP-W)	 ☑
Artefacts*	Verification bar Certified sphere for probing / scanning	☑ ☑
7-Axis kit	7-Axis probing kit, installed AS1 kit, installed RS5 kit, installed RS-SQUARED kit, installed 7-Axis SE kit, installed	○ ○ ○ ○ ○
Warranty	2 years**	☑
Certification	ISO 10360-12 (certification for articulated arms for tactile measurement) ISO 10360-8 Annex D (certificate of combination for arm, laser scanner and area scanner)	☑

* All artefacts are delivered with a certification.
** The warranty of two (2) years is valid only if an arm service check is performed during the first year.

Absolute Arm 6-Axis 83 series

6-axis portable measuring arm, designed for all-purpose tactile measurement or optional entry-level laser scanning, including:

- Zero-G Counterbalance
- SmartLock + HomeDock
- Base plate
- TKJ 3-mm / 6-mm / 15-mm ball probes
- RDS calibration and interface software
- Travel case

- Certified alignment sphere for probing
- ISO 10360-12 certification (for articulated arms for tactile measurement)
- 24-month warranty

H00008000-01-8320	**Absolute Arm 8320-6**	2.0 m measurement volume
H00008000-01-8325	**Absolute Arm 8325-6**	2.5 m measurement volume
H00008000-01-8330	**Absolute Arm 8330-6**	3.0 m measurement volume
H00008000-01-8335	**Absolute Arm 8335-6**	3.5 m measurement volume
H00008000-01-8340	**Absolute Arm 8340-6**	4.0 m measurement volume
H00008000-01-8345	**Absolute Arm 8345-6**	4.5 m measurement volume

Encoder	Absolute Encoders	☑
Movement and security	Zero-G Counterbalance | SmartLock | Home-Dock	☑
Display	LED pictograms	☑
Haptic feedback	Wrist vibration	☑
Cables	3-metre ethernet cable | Gigabit ethernet adaptor | Power supply	☑
Mounting base	Standard base plate with mounting ring	☑
Probes	TKJ L 50 – ø 15-mm stainless steel TKJ L 50 – ø 6-mm ruby TKJ L 50 – ø 3-mm ruby	☑ ☑ ☑
Packaging	Hard case Accessories case	☑ ☑

Dust cover	Dust cover, Hexagon-branded	☑
Software	USB Standard Package: RDS driver and interface User manuals	 ☑ ☑
Control Pack	Connector pack (CP-C) Wireless pack (CP-W)	○ ○
Artefact*	Verification bar Certified sphere for probing	opt ☑
Warranty	2 years**	☑
Certification	ISO 10360-12 (certification for articulated arms for tactile measurement)	☑

* All artefacts are delivered with a certification.
** The warranty of two (2) years is valid only if an arm service check is performed during the first year.

Absolute Arm 6-Axis 85 series

6-axis portable measuring arm, designed for all-purpose tactile measurement or optional entry-level laser scanning, including:

- Zero-G Counterbalance
- SmartLock + HomeDock
- Base plate
- TKJ 3-mm / 6-mm / 15-mm ball probes
- RDS calibration and interface software
- Travel case

- Certified alignment sphere for probing
- ISO 10360-12 certification (for articulated arms for tactile measurement)
- 24-month warranty

H00008000-01-8520 **Absolute Arm 8520-6**
2.0 m measurement volume

H00008000-01-8525 **Absolute Arm 8525-6**
2.5 m measurement volume

H00008000-01-8530 **Absolute Arm 8530-6**
3.0 m measurement volume

H00008000-01-8535 **Absolute Arm 8535-6**
3.5 m measurement volume

H00008000-01-8540 **Absolute Arm 8540-6**
4.0 m measurement volume

H00008000-01-8545 **Absolute Arm 8545-6**
4.5 m measurement volume

Encoder	Absolute Encoders	☑
Movement and security	Zero-G Counterbalance | SmartLock | Home-Dock	☑
Display	LED pictograms	☑
Haptic feedback	Wrist vibration	☑
Handling grips	SpinGrip* | SpinKnob	☑
Cables	3-metre ethernet cable | Gigabit ethernet adaptor | Power supply	☑
Mounting base	Standard base plate with mounting ring	☑
Probes	TKJ L 50 – ø 15-mm stainless steel TKJ L 50 – ø 6-mm ruby TKJ L 50 – ø 3-mm ruby	☑ ☑ ☑

Packaging	Hard case Accessories case	☑ ☑
Dust cover	Dust cover, Hexagon-branded	☑
Software	USB Standard Package: RDS driver and interface User manuals	 ☑ ☑
Control Pack	Connector pack (CP-C) Wireless pack (CP-W)	○ ○
Artefact**	Verification bar Certified sphere for probing	☑ ☑
Warranty	2 years***	☑
Certification	ISO 10360-12 (certification for articulated arms for tactile measurement)	☑

* Not available for 8520 models.
** All artefacts are delivered with a certification.
*** The warranty of two (2) years is valid only if an arm service check is performed during the first year.

Absolute Arm 6-Axis 87 series

6-axis portable measuring arm, designed for all-purpose tactile measurement or optional entry-level laser scanning, including:

- Zero-G Counterbalance
- SmartLock + HomeDock
- Base plate
- TKJ 3-mm / 6-mm / 15-mm ball probes
- RDS calibration and interface software
- Travel case

- Certified alignment sphere for probing
- ISO 10360-12 certification (for articulated arms for tactile measurement)
- 24-month warranty

H00008000-01-8725	**Absolute Arm 8725-6** 2.5 m measurement volume
H00008000-01-8730	**Absolute Arm 8730-6** 3.0 m measurement volume
H00008000-01-8735	**Absolute Arm 8735-6** 3.5 m measurement volume
H00008000-01-8740	**Absolute Arm 8740-6** 4.0 m measurement volume
H00008000-01-8745	**Absolute Arm 8745-6** 4.5 m measurement volume

Encoder	Absolute Encoders	☑
Movement and security	Zero-G Counterbalance | SmartLock | Home-Dock	☑
Display	LED pictograms	☑
Haptic feedback	Wrist vibration	☑
Handling grips	SpinGrip | SpinKnob	☑
Cables	3-metre ethernet cable | Gigabit ethernet adaptor | Power supply	☑
Mounting base	Standard base plate with mounting ring	☑
Probes	TKJ L 50 – ø 15-mm stainless steel TKJ L 50 – ø 6-mm ruby TKJ L 50 – ø 3-mm ruby	☑ ☑ ☑

Packaging	Hard case Accessories case	☑ ☑
Dust cover	Dust cover, Hexagon-branded	☑
Software	USB Standard Package: RDS driver and interface User manuals	 ☑ ☑
Control Pack	Connector pack (CP-C) Wireless pack (CP-W)	☑
Artefact*	Verification bar Certified sphere for probing	☑ ☑
Warranty	2 years**	☑
Certification	ISO 10360-12 (certification for articulated arms for tactile measurement)	☑

* All artefacts are delivered with a certification.
** The warranty of two (2) years is valid only if an arm service check is performed during the first year.

Absolute Arm Compact

Versatile 6-axis small-diameter ultra-high-accuracy portable measuring arm, including:

- Integrated base
- Counterweight balance system
- TKJ 3-mm / 6-mm / 15-mm ball probes
- RDS calibration and interface software
- Travel case
- 3 magnetic anchors
- Certified alignment sphere for probing

- ISO 10360-12**** alignment (for articulated arms for tactile measurement)
- 24-month warranty

H00008000-01-8312 **Absolute Arm 8312-6**
1.2 m measurement volume

H00008000-01-8512 **Absolute Arm 8512-6**
1.2 m measurement volume

Encoder	Absolute Encoders	☑
Haptic feedback	Wrist vibration	☑
Display	LED pictograms	☑
Handling grips	SpinKnob*	☑
Cables	3-metre ethernet cable | Gigabit ethernet adaptor | Power supply	☑
Mounting base	Standard base plate	☑
	Magnetic anchors	☑
Probes	TKJ L 50 – ø 15-mm stainless steel	☑
	TKJ L 50 – ø 6-mm ruby	☑
	TKJ L 50 – ø 3-mm ruby	☑
Packaging	Hard case	☑
	Accessories case	☑

Dust cover	Dust cover, Hexagon-branded	☑
Software	USB Standard Package:	
	RDS driver and interface	☑
	User manuals	☑
Control Pack	Connector pack (CP-C)	○
	Wireless pack (CP-W)	○
Artefact**	Verification bar (83 series)	opt
	Verification bar (85 series)	☑
	Certified sphere for probing	☑
Warranty	2 years***	☑
Certification	ISO 10360-12 (certification for articulated arms for tactile measurement)	☑
	ISO 10360-02 (certification for use in conjunction with a full-size CMM)****	opt

* 85 Series only.
** All artefacts are delivered with a certification.
*** The warranty of two (2) years is valid only if an arm service check is performed during the first year.
****Optional certification.

Absolute Arm Tube

6-axis portable measuring arm designed for tube measurement, with a special counterbalance, including:

- Zero-G Counterbalance, tube version
- SmartLock + HomeDock
- Base plate
- TKJ 3-mm / 6-mm / 15-mm ball probes
- RDS calibration and interface software
- Travel case

- Certified alignment sphere for probing
- ISO 10360-12 certification (for articulated arms for tactile measurement)
- 24-month warranty

H00008000-02-8325 **Absolute Arm 8325 T**
2.5 m measurement volume

H00008000-02-8330 **Absolute Arm 8330 T**
3.0 m measurement volume

Encoder	Absolute Encoders	☑
Movement and security	Zero-G Counterbalance | SmartLock | Home-Dock	☑
Haptic feedback	Wrist vibration	☑
Cables	3-metre ethernet cable | Gigabit ethernet adaptor | Power supply	☑
Mounting base	Standard base plate with mounting ring	☑
Probes	TKJ L 50 – ø 15-mm stainless steel TKJ L 50 – ø 6-mm ruby TKJ L 50 – ø 3-mm ruby	☑ ☑ ☑
Packaging	Hard case Accessories case	☑ ☑

Dust cover	Dust cover, Hexagon-branded	☑
Software	USB Standard Package: RDS driver and interface User manuals	 ☑ ☑
Control Pack	Connector pack (CP-C) Wireless pack (CP-W)	O O
Artefact*	Verification bar Certified sphere for probing	opt ☑
Warranty	2 years**	☑
Certification	ISO 10360-12 (certification for articulated arms for tactile measurement)	☑

* All artefacts are delivered with a certification.
** The warranty of two (2) years is valid only if an arm service check is performed during the first year.

Probes and scanners
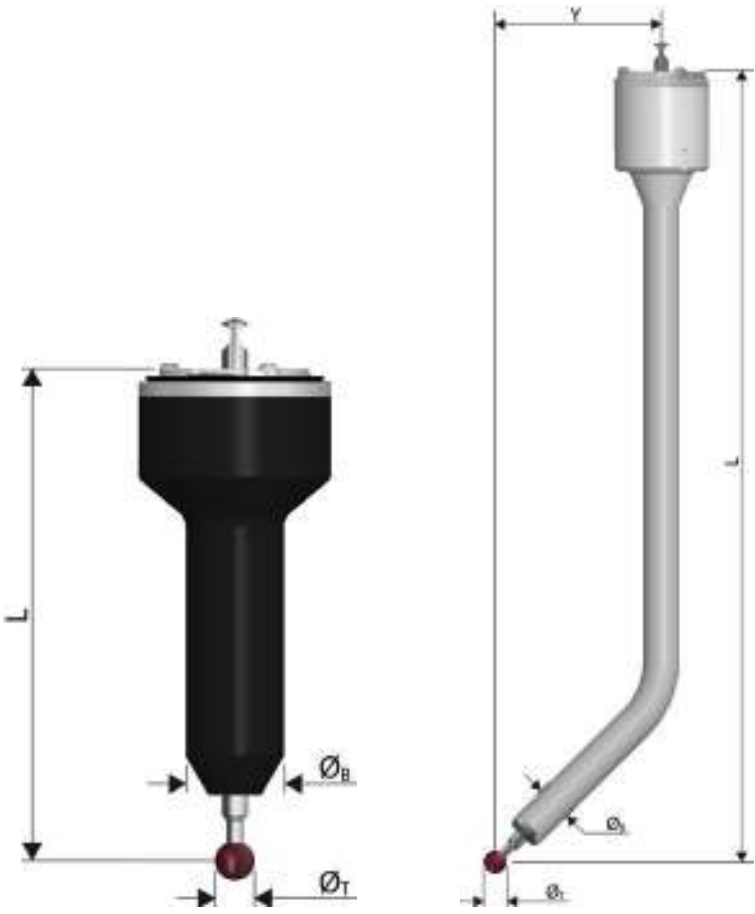
TKJ aluminium-body contact probes

Standard aluminium probes for the Absolute Arm are available from 50 to 100 millimetres in length.
An M3 connector allows the use of any M3 sphere tip.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

		L	Body	$Ø_B$	Tip type	Tip material	$Ø_T$	
H00007186*	**Probe with fixed ball (SS-15-SS-50)**	50 mm	Stainless steel	15 mm	Fixed ball	Stainless steel	15 mm	
H00007189-50*	**Probe with M3-stylus (R-3-A-50)**	50 mm	Aluminium	15 mm	M3	Synth. ruby	3 mm	
H00007187-50*	**Probe with M3-stylus (R-6-A-50)**	50 mm	Aluminium	15 mm	M3	Synth. ruby	6 mm	
H00007189-75	**Probe with M3-stylus (R-3-A-75)**	75 mm	Aluminium	15 mm	M3	Synth. ruby	3 mm	
H00007187-75	**Probe with M3-stylus (R-6-A-75)**	75 mm	Aluminium	15 mm	M3	Synth. ruby	6 mm	
H00007189-100	**Probe with M3-stylus (R-3-A-100)**	100 mm	Aluminium	15 mm	M3	Synth. ruby	3 mm	
H00007187-100	**Probe with M3-stylus (R-6-A-100)**	100 mm	Aluminium	15 mm	M3	Synth. ruby	6 mm	

* Already included as standard probes within all Absolute Arm packages.

TKJ aluminium-body contact probes

		L	Body	Ø$_B$	Tip type	Tip material	Ø$_T$	
54388-03	**Probe with M3-pointer stylus (A-50)**	50 mm	Aluminium	15 mm	M3	Tungsten carbide	Point	
54388-11	**Probe with M3-stylus (CE-12.7-A-50)**	50 mm	Aluminium	15 mm	Fixed ball	Ceramic	12.7 mm	
H00000906-01	**Probe with fixed ball (SS-9.5-SS-50)**	50 mm	Stainless steel	15 mm	Fixed ball	Stainless steel	9.5 mm	
54388-06	**Probe with M3-Pointer stylus (A-75)**	75 mm	Aluminium	15 mm	M3	Tungsten carbide	Point	
54388-09	**Probe with M3-Pointer stylus (A-100)**	100 mm	Aluminium	15 mm	M3	Tungsten carbide	Point	

TKJ carbon-body contact probes

Carbon-body probes for the Absolute Arm offer the largest range of probe sizes and types. Models available from 50 to 350 millimetres in length, and with standard M3 ball tips or fixed balls from 2 to 25 millimetres in diameter, for any kind of hard-contact probing task.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

		L	Body	$\emptyset_B$	Tip type	Tip material	$\emptyset_T$	
H00000383-01	**Probe with fixed ball (SS-9.5-C-50)**	50 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	9.5 mm	
H00000383-02	**Probe with fixed ball (SS-10-C-50)**	50 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	10 mm	
H00000383-03	**Probe with fixed ball (SS-15-C-50)**	50 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	15 mm	
H00000383-04	**Probe with fixed ball (SS-10-C-75)**	75 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	10 mm	
H00000383-05	**Probe with fixed ball (SS-15-C-75)**	75 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	15 mm	
H00000383-06	**Probe with fixed ball (SS-9.525-C-82)**	82 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	9.5 mm	
H00000383-07	**Probe with fixed ball (SS-12.7-C-85)**	85 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	12.7 mm	
H00000383-09	**Probe with fixed ball (SS-25-C-85)**	85 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	25 mm	
H00000576-01	**Probe with M3-stylus (R-2-C-85)**	85 mm	Carbon fibre	16 mm	M3	Synth. ruby	2 mm	
54397-01	**Probe with M3-stylus (R-3-C-85)**	85 mm	Carbon fibre	16 mm	M3	Synth. ruby	3 mm	
H00000576-02	**Probe with M3-stylus (R-4-C-85)**	85 mm	Carbon fibre	16 mm	M3	Synth. ruby	4 mm	
54397-02	**Probe with M3-stylus (R-6-C-85)**	85 mm	Carbon fibre	16 mm	M3	Synth. ruby	6 mm	
54397-03	**Probe with M3-pointer (C-85)**	85 mm	Carbon fibre	16 mm	M3	Tungsten carbide	Point	

TKJ carbon-body contact probes

		L	Body	$\varnothing_B$	Tip type	Tip material	$\varnothing_T$	
H00000576-04	**Probe with M3-stylus (R-10-C-100)**	100 mm	Carbon fibre	16 mm	M3	Synth. ruby	10 mm	
H00000576-03	**Probe with M3-stylus (R-2-C-100)**	100 mm	Carbon fibre	16 mm	M3	Synth. ruby	2 mm	
54397-04	**Probe with M3-stylus (R-3-C-100)**	100 mm	Carbon fibre	16 mm	M3	Synth. ruby	3 mm	
54397-05	**Probe with M3-stylus (R-6-C-100)**	100 mm	Carbon fibre	16 mm	M3	Synth. ruby	6 mm	
54397-06	**Probe with M3-pointer (C-100)**	100 mm	Carbon fibre	16 mm	M3	Tungsten carbide	Point	
H00000383-10	**Probe with fixed ball (SS-10-C-130)**	130 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	10 mm	
H00000383-11	**Probe with fixed ball (SS-15-C-130)**	130 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	15 mm	
54397-07	**Probe with M3-stylus (R-3-C-130)**	130 mm	Carbon fibre	16 mm	M3	Synth. ruby	3 mm	
H00000576-05	**Probe with M3-stylus (R-4-C-130)**	130 mm	Carbon fibre	16 mm	M3	Synth. ruby	4 mm	
54397-08	**Probe with M3-stylus (R-6-C-130)**	130 mm	Carbon fibre	16 mm	M3	Synth. ruby	6 mm	
54397-09	**Probe with M3-pointer (C-130)**	130 mm	Carbon fibre	16 mm	M3	Tungsten carbide	Point	
H00000383-12	**Probe with fixed ball (SS-10-C-150)**	150 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	10 mm	
H00000383-13	**Probe with fixed ball (SS-15-C-150)**	150 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	15 mm	

TKJ carbon-body contact probes

		L	Body	$\varnothing_B$	Tip type	Tip material	$\varnothing_T$
H00000576-06	**Probe with M3-stylus (R-2-C-150)**	150 mm	Carbon fibre	16 mm	M3	Synth. ruby	2 mm
54397-10	**Probe with M3-stylus (R-3-C-150)**	150 mm	Carbon fibre	16 mm	M3	Synth. ruby	3 mm
54397-11	**Probe with M3-stylus (R-6-C-150)**	150 mm	Carbon fibre	16 mm	M3	Synth. ruby	6 mm
54397-12	**Probe with M3-pointer (C-150)**	150 mm	Carbon fibre	16 mm	M3	Tungsten carbide	Point
H00000383-14	**Probe with fixed ball (SS-15-C-165)**	165 mm	Carbon fibre	16 mm	Fixed Ball	Stainless steel	15 mm
H00000383-15	**Probe with fixed ball (SS-10-C-180)**	180 mm	Carbon fibre	16 mm	Fixed Ball	Stainless steel	10 mm
H00000383-16	**Probe with fixed ball (SS-15-C-180)**	180 mm	Carbon fibre	16 mm	Fixed Ball	Stainless steel	15 mm
H00000383-17	**Probe with fixed ball (SS-20-C-180)**	180 mm	Carbon fibre	16 mm	Fixed Ball	Stainless steel	20 mm
54397-13	**Probe with M3-stylus (R-3-C-180)**	180 mm	Carbon fibre	16 mm	M3	Synth. ruby	3 mm
54397-14	**Probe with M3-stylus (R-6-C-180)**	180 mm	Carbon fibre	16 mm	M3	Synth. ruby	6 mm
54397-15	**Probe with M3-pointer (C-180)**	180 mm	Carbon fibre	16 mm	M3	Tungsten carbide	Point
54397-16	**Probe with M3-stylus (R-3-C-200)**	200 mm	Carbon fibre	16 mm	M3	Synth. ruby	3 mm
54397-18	**Probe with M3-pointer (C-200)**	200 mm	Carbon fibre	16 mm	M3	Tungsten carbide	Point

TKJ carbon-body contact probes

		L	Body	Ø$_B$	Tip type	Tip material	Ø$_T$
H00000383-18	**Probe with fixed ball (SS-15-C-293)**	293 mm	Carbon fibre	16 mm	Fixed ball	Stainless steel	15 mm
H00000576-10	**Probe with M3-stylus (R-3-C-300)**	300 mm	Carbon fibre	16 mm	M3	Synth. ruby	3 mm
H00000576-08	**Probe with M3-stylus (R-6-C-350)**	350 mm	Carbon fibre	16 mm	M3	Synth. ruby	6 mm

TKJ angled contact probes

For hard-to-reach areas of parts, the Absolute Arm can be equipped with special angled probes designed to allow for measuring around obstacles. Angles of 45, 60 and 90 degrees are available.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

		L	Y	Body	Tip type	Tip material	$\varnothing_T$	
54280-01	Angle Probe 45DEG with M3-Pointer Stylus (TC-10)	149 mm	38 mm	Aluminium	M3	Tungsten carbide	Point	
54280-02	Angle Probe 45DEG with M3-Stylus (R-3-SS-1.5-L10)	149 mm	38 mm	Aluminium	M3	Synth. ruby	3 mm	
54280-03	Angle Probe 45DEG with M3-Stylus (R-4-SS-2.5-L10)	149 mm	38 mm	Aluminium	M3	Synth. ruby	4 mm	
54280-04	Angle Probe 45DEG with M3-Stylus(R-6-SS-2.7-L10)	149 mm	38 mm	Aluminium	M3	Synth. ruby	6 mm	
54280-05	Angle Probe 60DEG with M3-Pointer Stylus (TC-L10)	149 mm	57 mm	Aluminium	M3	Tungsten carbide	Point	
54280-06	Angle Probe 60DEG with M3-Stylus (R-3-SS-1.5-L10)	149 mm	57 mm	Aluminium	M3	Synth. ruby	3 mm	
54280-07	Angle Probe 60DEG with M3-Stylus (R-4-SS-2.5-L10)	149 mm	57 mm	Aluminium	M3	Synth. ruby	4 mm	
54280-08	Angle Probe 60DEG with M3-Stylus (R-6-SS-2.7-L10)	149 mm	57 mm	Aluminium	M3	Synth. ruby	6 mm	
54280-09	Angle Probe 90DEG with M3-Pointer Stylus (TC-L10)	173 mm	43 mm	Aluminium	M3	Tungsten carbide	Point	
54280-10	Angle Probe 90DEG with M3-Stylus (R-3-SS-1.5-L10)	173 mm	43 mm	Aluminium	M3	Synth. ruby	3 mm	
54280-11	Angle Probe 90DEG with M3-Stylus (R-4-SS-2.5-L10)	173 mm	43 mm	Aluminium	M3	Synth. ruby	4 mm	
54280-12	Angle Probe 90DEG with M3-Stylus (R-6-SS-2.7-L10)	173 mm	43 mm	Aluminium	M3	Synth. ruby	6 mm	

TKJ contact probe kits

To enhance the possibilities of probing, customisable probe kits are available, each offering a different range of probe sizes.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

54388-50B

Probe Body (Aluminium / L=50 mm)
Individual solid aluminum probe shaft, length 50 millimetres.
For use with all Absolute Arm models with a TESA kinematic joint connector.

54388-100B

Probe Body (Aluminium / L=100 mm)
Individual solid aluminum probe shaft, length 50 millimetres.
For use with all Absolute Arm models with a TESA kinematic joint connector.

54135

Probe Kit – Short body (Aluminium)
Short-body probe set consisting of 5 aluminium probe shafts,
5 styli with ruby-ball tips, 2 adaptors and tools.
For use with all Absolute Arm models with a TESA kinematic joint connector.

Bodies (Aluminium)	Length	50 mm / 60 mm / 70 mm / 85 mm / 100 mm
Tips (Synth. ruby)	ø	2 mm / 3 mm / 4 mm / 5 mm / 6 mm
	Length	10 mm
Connectors		2 x TKJ
Tools		Body probe wrench + probe pin wrench

54136

Probe Kit – Long body (Aluminium)
Long-body probe set consisting of 4 carbon-fibre probe shafts,
5 styli with ruby-ball tips, 2 adaptors and tools.
For use with all Absolute Arm models with a TESA kinematic joint connector.

Bodies (Carbon fiber)	Length	130 mm / 150 mm / 180 mm / 200 mm
Tips (Synth. ruby)	ø	2 mm / 3 mm / 4 mm / 5 mm / 6 mm
	Length	10 mm
Connectors		2 x TKJ
Tools		Body probe wrench + tip wrench

TKJ special contact probes

Probes to designed to seat spherical retroreflectors or for customised purposes.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

H00000742-01

Probe-Alu-L75-12.7 for Tracker
Reflector not included.

ø	Tip type	L	Body
12.7 mm	Magnetic seat	75 mm	Aluminium

H00000742-02

Probe-Alu-L75-22.225 for Tracker
Reflector not included.

ø	Tip type	L	Body
22.225 mm	Magnetic seat	75 mm	Aluminium

H00000742-03

Probe-Alu-L75-38.1 for Tracker
Reflector not included.

ø	Tip type	L	Body
38.1 mm	Magnetic seat	75 mm	Aluminium

54431

Universal Probe Adaptor – TKJ male to M8
Probe body for adapting any M8 standard or customised probe adaptor.

TKJ touch-trigger probes

Touch-trigger probes allow for the measurement of sensitive parts. Available in fixed or adjustable versions, the touch-trigger probe is triggered immediately upon touching the surface. Suitable for any soft surface and for easily movable parts.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

34386

HP-T-EF Touch-Trigger Probe Kit
TKJ male probe with touch-trigger contact.

TKJ-M8-TTP		NCA7-5-19344 included
Tips (Synth. ruby)	ø	3 mm / 6 mm
	Length	20 mm / 10 mm
Trigger force		Extended force (0.10 N at 50mm)
Length		73 mm

NCA7-3-52596

HP-T-RP M8 Adjustable Touch-Trigger Probe Head
M8 head for TKJ adaptor touch-trigger probe.

TKJ-M8-TTP		NCA7-5-19344 included
Tips (Synth. ruby)	ø	3 mm / 6 mm
	Length	10 mm
Trigger force		Adjustable 0.11 N - 0.30 N
Length		85 mm

34385

TP20 Renishaw Touch-Trigger Probe Kit
TKJ male probe with touch-trigger contact.

TKJ-M8-TTP		NCA7-5-19344 included
Tips (Synth. ruby)	ø	3 mm / 6 mm
	Length	20 mm (ø 3 mm) / 10 mm (ø 6 mm)
Trigger Force		Extended force (0.1N at 50 mm) – 2 heads
Length		83 mm

NCA7-5-19344

TTP Adaptor – M8
TKJ-M base for all M8 touch-trigger probe heads.

M3 styli

A range of tips is available to allow for adapting the probe to the measurement object. All tips are fixed with a M3 thread and can be used on any hard-contact body probe or touch-trigger probe.

8x12	✓		
83-6 / 85-6 / 87-6	✓		
83-7 / 85-7 / 87-7	✓		

		ø	D	A	Tip material	L
74128	M3-Stylus (R-2-SS-1.5-L10)	2 mm	1.5 mm	M3	Synth. ruby	10 mm
74133	M3-Pointer Stylus (TC-L10)	Point	-	M3	Tungsten carbide	10 mm
03969327	M3-Stylus (R-3-SS-2-L10)	3 mm	2 mm	M3	Synth. ruby	10 mm
74130	M3-Stylus (R-4-SS-2.5-L10)	4 mm	2.5 mm	M3	Synth. ruby	10 mm
74131	M3-Stylus (R-5-SS-2.5-L10)	5 mm	2.5 mm	M3	Synth. ruby	10 mm
03969326	M3-Stylus (R-6-SS-2.5-L10)	6 mm	2.7 mm	M3	Synth. ruby	10 mm
NCA7-7-18998	M3-Stylus (R2-SS-1.5-L20)	2 mm	1.5 mm	M3	Synth. ruby	20 mm
NCA7-7-19997	M3-Stylus (R3-SS-2-L20)	3 mm	2 mm	M3	Synth. ruby	20 mm
NCA7-7-19998	M3-Stylus (R6-SS-2.5-L20)	6 mm	2.7 mm	M3	Synth. ruby	20 mm

Non-contact tube probes

Infrared non-contact probes for tube measurement are available in 6 sizes, allowing measurement of all kinds of tubes. A laser dot (class 2M) guides the user for precise placement.
Compatible with TubeShaper, GTube and Docs software.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

NCA7-2-21952-01   **NCP1 Non-Contact Tube Probe (12.5 mm)**

ø	4-13 mm
Recommended T-bar*	ø 6.4 mm (ref NCA7-2-21953-01)
Recommended Z Gage*	ø 8 mm (ref NCA7-2-21954-01)

NCA7-2-21952-02   **NCP2 Non-Contact Tube Probe (25 mm)**

ø	6-20 mm
Recommended T-bar*	ø 6.4 mm (ref. NCA7-2-21953-01)
Recommended Z Gage*	ø 8 mm (ref. NCA7-2-21954-01)

NCA7-2-21952-03   **NCP3 Non-Contact Tube Probe (50 mm)**

ø	10-40 mm
Recommended T-bar*	ø 12.7 mm (ref. NCA7-2-21953-02)
Recommended Z Gage*	ø 20 mm (ref. NCA7-2-21954-02)

NCA7-2-21952-04   **NCP4 Non-Contact Tube Probe (75 mm)**

ø	12-65 mm
Recommended T-bar*	ø 12.7 mm (ref. NCA7-2-21953-02)
Recommended Z Gage*	ø 20 mm (ref. NCA7-2-21954-02)

NCA7-2-21952-05   **NCP5 Non-Contact Tube Probe (100 mm)**

ø	20-85 mm
Recommended T-bar*	ø 25.4 mm (ref. NCA7-2-21953-03)
Recommended Z Gage*	ø 40 mm (ref. NCA7-2-21954-03)

NCA7-2-21952-06   **NCP6 Non-Contact Tube Probe (150 mm)**

ø	30-130 mm
Recommended T-bar*	ø 25.4 mm (ref. NCA7-2-21953-03)
Recommended Z Gage*	ø 40 mm (ref. NCA7-2-21954-03)

* Certified T-bar for alignment and certified Z Gage for verification not included.

Absolute Scanner AS1 and RS-SQUARED Area Scanner

H00027250

AS1 Kit, Accessory, for RA8 7-Axis
The Absolute Scanner AS1 is the flagship 3D scanning sensor for Absolute Tracker AT960 and Absolute Arm 7-Axis systems. Shipped individually in shipping box.

8x12	
83-6 / 85-6 / 87-6	
83-7 / 85-7 / 87-7	✓

Includes
- Absolute Scanner AS1
- RDS maintenance and interface software
- Certified scanning sphere, incl. certificate
- Scanner certificate
- 2-year warranty*

Warning
Arm must be equipped with at least CP1 or CP-C.
Scanner not delivered with "System Scanning Accuracy" ISO 10360-8 Annex-D report.
ODU-ethernet cable (3 m) not included.
Gigabit ethernet adaptor not included.
Wireless scanning available only with CP-W.

H00013263

RS-SQUARED kit, Accessory, for RA8 7-Axis
Ground-breaking white light scanner for RA8 Absolute Arm 7-Axis models. Shipped individually in shipping box.

Includes
- RS-SQUARED Area Scanner
- RDS maintenance and interface software
- Rest cradle
- Artefact plate for alignment and calibration, incl. certificate
- Certificates
- Travel case and strap
- 2-year warranty*

Warning
Arm must be equipped with at least CP1 or CP-C.
Scanner not delivered with "System Scanning Accuracy" ISO 10360-8 Annex-D report.
ODU-ethernet cable (3 m) not included.
Ethernet gigabit adaptor not included.
Wireless scanning available only with CP-W.
RS-SQUARED can not be used with any 2-metre arm models.

* The warranty of two (2) years is valid only if an arm service check is performed during the first year.

RS5 and HP-L-8.9 Laser Scanners

H00007975

RS5 Kit, Accessory, for RA8 7-Axis
General purpose laser scanner for the
RA8 Absolute Arm 7-Axis. Shipped
individually in shipping box.

8x12	
83-6 / 85-6 / 87-6	
83-7 / 85-7 / 87-7	✓

Includes
- RS5 Laser Scanner
- RDS maintenance and interface software
- Certified scanning sphere, incl. certificate
- Scanner certificate
- 2-year warranty

Warning
Arm must be equipped with at least CP1 or CP-C.
Scanner not delivered with the "System Scanning Accuracy" ISO 10360-8 Annex-D report.
ODU-ethernet cable (3 m) not included.
Ethernet gigabit adaptor not included.
Wireless scanning available only with CP-W.

H00007977

HP-L-8.9 Accessory Kit, for RA8 6-Axis
Cost-effective laser scanner for the Absolute Arm 6-Axis.
Shipped individually in shipping box.

Includes
- HP-L-8.9 Laser Scanner
- Certified sphere for probing and scanning
- ODU-ethernet cable (3 m)
- Scanner certification
- RDS maintenance and interface software
- Travel case
- 1-year warranty

Warning
Arm must be equipped with at least CP1 or CP-C.
Scanner not delivered with "System Scanning Accuracy" ISO 10360-8 Annex-D report.
Wireless scanning not available with HP-L-8.9.

Mounting solutions

Standard bases

All the standard bases for the Absolute Arm are designed for use with the Absolute Arm Mounting Ring.

NCA7-5-21497

Base Plate with Mounting Ring
Base mounting set that can be used to fix a base plate to the Absolute Arm so that it can stand freely on any flat and stable surface. Fully compatible with accuracy specifications and all Absolute Arm models.

Delivery contents
- Base plate (size: 170 x 235 x 15 mm)
- Mounting ring (ø 108 mm)
- 6 screws (SHCS, M8 x 1.25 x 25 SS)

8x12	✓*
83-6 / 85-6 / 87-6	☑
83-7 / 85-7 / 87-7	☑

NCA7-5-19866

Magnetic Base with Mounting Ring
Magnetic mounting adaptor for magnetically fixing any Absolute Arm system to magnetic surfaces. Works best on flat surfaces. Fully compatible with accuracy specifications and all Absolute Arm models.

Delivery contents
- Magnetic base plate (size: 238 x 271 x 112 mm)
- Set of three magnets (100 kg force / unit, size: 50 x 55 x 73 mm)
- Mounting ring (ø 108 mm)
- 3 screws (SHCS, M8 x 1.25 x 20 SS)
- 6 screws (SHCS, M8 x 1.25 x 25 SS)

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

H00008527

Witte Vacuum Mount Base
For mounting the arm on any flat surface without additional tools. For arms with up to 2.5 m measurement volume. Weight 6.3 kg.

Delivery contents
- Mounting ring
- Storage and transport case
- Rechargeable battery and charger
- User manual

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

NCA-7-7-19225

Circular Magnetic Base
Magnetic circular base only, please order the mounting ring H00004220

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

* For 8x12 models a Mounting Ring Adaptor (H00012888) is required.

Bases

H00004220

Mounting Ring
Ring attachment that allows the Absolute Arm to be mounted to any surface using just 6 screws, with no additional base plate required.
Fully compatible with accuracy specifications and with all Absolute Arm models.

Delivery contents
- Mounting ring (ø 108 mm)
- All necessary mounting screws

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

H00012888

Mounting Ring Adaptor Kit
Allows the use of any standard mounting base or tripod with RA8 Absolute Arm Compact models.

Delivery contents
- Mounting interface
- Nut
- All necessary mounting screws

8x12	✓**
83-6 / 85-6 / 87-6	
83-7 / 85-7 / 87-7	

H00000896

Magnetic Anchors
Magnetic anchors for the use with the integrated base of Absolute Arm Compact models.

Delivery contents
-3 magnetic anchors
Remarks
Magnetic anchors are delivered as standard for all Absolute Arm Compact models

H00001346**

Magnetic Blocks and Anchors Kit
Magnetic blocks and anchors for the use with the integrated base of Absolute Arm Compact models.

Includes
- 3 magnetic blocks (100 kg force/unit)
- 3 magnetic anchors
- All necessary mounting screws
- Short hexagon key

* For 8x12 models a Mounting Ring Adaptor (H00012888) is required.
** Option available only for 8x12 models.

Tripods

Instrument stands for functionality and portability. Collapsible, tripod-type stands are available in a number of standard configurations. Stands with graphite upper legs have a low weight and give an advantage with respect to thermal stability. The height of the stand is adjusted by releasing quick-action levers and setting each telescoping leg to the desired length.

| H00011491 | **Hexagon Stand, Graphite Portable Adjustable** *(MGS2000SA)*
 - Height adjustable 743-1403 mm
 - Net weight: 18 kg
 - Feet: 3 pad feet (32990) included |

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

| H00011492 | **Hexagon Stand, Graphite Portable Fixed** *(MGS2000SF)*
 - Height adjustable 619-972 mm
 - Net weight: 16 kg
 - Feet: 3 pad feet (32990) included |

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

| H00011493 | **Hexagon Stand, Tetralock Portable - 400S-D**
 - Materials: aluminium / stainless steel
 - Height: adjustable 750-1190 mm
 - Net weight: 11 kg
 - Transport case: duffel-style canvas bag |

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

| 32990 | **Brunson Pad Feet for Graphite Portable Stands**
 - For H00011492 (MxS2000SF), H00011491 (MxS2000SA) and H00011493 (400S-D)
 - 3 pieces |

| H00029348 | **Universal Power Supply Holder Kit**
 to be fixed on tripod leg |

| 576905 | **Travel Case for Graphite Portable Stands**
 Travel case for easy and safe transportation when shipping or packing requirements call for more protection, included carrying bag.
 - For H00011491 and H00011492 |

| 576906 | **Tripod Padded Bag**
 Durable carrying bag for easy transport to and from the jobsite.
 - For H00011491 and H00011492 |

* For 8x12 models a Mounting Ring Adaptor (H00012888) is required.

Stands

Rigid heavy-duty metrology stands are perfect for 3D measurement applications that require a great deal of stability along with mobility around the workplace.

H00011496	**Hexagon Stand, Model 230-F-24 Small** - Height: fixed 610 mm - Net weight: 77 kg
H00011497	**Hexagon Stand, Model 230-F-36 Medium** - Height: fixed 910 mm - Net weight: 86 kg
H00011498	**Hexagon Stand, Model 230-F-48 Large** - Height: fixed 1220 mm - Net weight: 104 kg

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

H00011494	**Hexagon Stand, Model 231 Small** - Height: adjustable 710-1070 mm - Net weight: 88 kg
H00011495	**Hexagon Stand, Model 230 Large** - Height: adjustable 1090-1700 mm - Net weight: 104 kg

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

32004-1	**Brunson Stand Extension 234-20** - Height: 508 mm - Includes spacer ring

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

H00011499	**Hexagon Laptop Support Arm and Tray 230-231** Black laptop support stand with adjustable laptop support tray, power cable management clips and 2 power supply mounting brackets. - Materials: aluminium (frame), plastic (tray) - Max. keyboard thickness/width: 44 mm / 394 mm - Net weight: 5 kg - Portable: yes - Transport case: no

8x12	✓*
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

* For 8x12 models a Mounting Ring Adaptor (H00012888) is required.

Tables

Hexagon portable base stations provide the ideal workplace for your portable measuring arm. Available in a number of sizes and configurations, they have a rigid design and are fully rust proofed. Stable, lockable wheels and a convenient handle allows for easy movement and secure stowing. Lockable doors and drawers are designed to store frequently used inspection tools, accessories and other components safely. The M8 threaded top plate is magnetic, allowing the arm to be mounted directly. The 50-millimetre hole pitch ensures maximum flexibility and freedom in setting up the right fixture for every part. Each base station is equipped with a Swift-Fix Basic kit (pictured) as standard, enabling operators to correctly fixture parts of different shapes, sizes and complexity.

Swift-Fix Basic Kit

Available in two sizes, each with two configurations: two doors and one drawer or two large drawers. Maximum workload capacity of all configurations is 250 kg. Two-draw versions available with foam insert for Absolute Arm Compact models. Skeleton versions available with option of stable feet or lockable wheels. Dimensional indications (W x D x H) in mm.

GB0005-2014	**Version two doors, one drawer**	910 x 610 x 935	115 kg net
GB0005-2015	**Version two doors, one drawer**	1220 x 910 x 935	196 kg net
GB0005-2016	**Version two drawers**	910 x 610 x 935	115 kg net
GB0005-2024	**Version two drawers** with foam insert for 8x12 arm	910 x 610 x 935	115 kg net
GB0005-2017	**Version two drawers**	1220 x 910 x 935	196 kg net
GB0005-2025	**Version two drawers** with foam insert for 8x20 arm	1220 x 910 x 935	196 kg net
GB0005-2050	**Version two drawers** with foam insert for 8x25 arm	1380 x 910 x 935	210 kg net
GB0005-2011	**Skeleton version on stable feet**	910 x 610 x 935	250 kg net
GB0005-2007	**Skeleton version on lockable wheels**	1820 x 610 x 935	250 kg net
GB0005-2008	**Skeleton version on lockable wheels**	1830 x 910 x 935	250 kg net
GB0005-0026	**Ratchet Jackable castors (set of 4)** when ordered with a base station		
GB0005-0050	**Ratchet Jackable castors (set of 4)** when ordered with an upgrade		

Version two doors, one drawer

Version two drawers

Skeleton example

GB0005-0024 **Laptop mount**
for laptop up to 15" option

GB0005-0020 **Laptop mount**
for laptop **up to 17"** option

H00002365 **Tube Inspection Table**
Table dedicated for tube inspection
applications.

1854 x 1230 x 917   100 kg net

Compatible with
- Mounting ring
- Stands (NCA7-5-52794 and NCA 7-5-52795)
- M6 holes grid

Raisers

Stable height extension for any arm. Particularly suitable for Absolute Arm tube inspection systems.

NCA7-5-52794 **Arm Raiser – 250 mm**
Multi-purpose stand, suitable for Absolute Arm
tube stations as well as other high-accuracy arm
applications.

- Compatible with accuracy specifications
- Compatible with all sizes of arm
- Mounting Ring included
- Height: 250 mm

NCA7-5-52795 **Arm Raiser – 500 mm**
Multi-purpose stand, suitable for Absolute Arm
tube stations as well as other high-accuracy arm
applications.

- Compatible with accuracy specifications
- Compatible with all sizes of arm
- Mounting Ring included
- Height: 500 mm

Artefacts and certifications

Verification bars

Certified length bars are mainly used to verfiy the accuracy of portable measuring arms and to perform length checkouts. They can also be used to evaluate arm performance against ISO 10360-12, ASME B89.4.22 or VDI/VDE standards.

32377* **Certified Length Bar (short)**
This length bar is recommended for 1.2 m Absolute Arm models.

Lengths
L1: 170 mm
L2: 310 mm

Delivery contents
Certified length bar
DIN ISO-17025 certificate

32378* **Certified Length Bar (medium)**
This length bar is recommended for 2.0-2.5 m Absolute Arm models.

Lengths
L1: 362 mm
L2: 712 mm

Delivery contents
Certified length bar
DIN ISO-17025 certificate

32379* **Certified Length Bar (long)**
This length bar is recommended for 3.0-4.5 m Absolute Arm models.

Lengths
L1: 514 mm
L2: 1016 mm

Delivery contents
Certified length bar
DIN ISO-17025 certificate
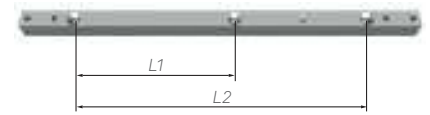
* One included with all 85/87 Series arm packages, according to arm size.

Certified spheres

Certified spheres are used to calibrate all contact probes and laser scanners or to verify their accuracy.

NCA7-5-20653-01 **Certified Sphere - Probing (25.4 mm)**
- Already included with 6-axis and SE arms
- Sphere: ø 25.4 mm / hardeness 58 Rc
- Material: high-chrome high-carbon stainless steel
- Certificate and base plate included

8x12	☑
83-6 / 85-6 / 87-6	☑
83-7 / 85-7 / 87-7	☑

H00000347 **Certified Sphere - Scanning and Probing (25.4 mm)**
- Recommended for scanning systems
- Already included with RS5 and AS1 kits
- Sphere: ø 25.4 mm
- Material: Tungsten carbide with matte finish
- Certificate and base plate included

8x12	
83-6 / 85-6 / 87-6	
83-7 / 85-7 / 87-7	☑

H00016402 **Certified Sphere for RS-SQUARED Area Scanner (75 mm)**
- Certified sphere for checking RS-SQUARED Area Scanner
- Sphere: ø 75 mm
- Material: Aluminium alloy with coating finish
- Certificate and based plate included

8x12	
83-6 / 85-6 / 87-6	
83-7 / 85-7 / 87-7	☑

Artefacts for tube probes

Calibrate tube probes and evaluate tube probe accuracy against certified tools.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

NCA7-2-21953-01 **Calibration Artefact for Tube Probe (ø 6.4 mm)**
Quarter-inch diameter T-bar for non-contact tube probe alignment.
- Recommended for NCP1 and NCP2
- Certificate included

NCA7-2-21953-02 **Calibration Artefact for Tube Probe (ø 12.7 mm)**
Half-inch diameter T-bar for non-contact tube probe alignment.
- Recommended for NCP3 and NCP4
- Certificate included

NCA7-2-21953-03 **Calibration Artefact for Tube Probe (ø 25.4 mm)**
One-inch diameter T-bar for non-contact tube probe alignment.
- Recommended for NCP5 and NCP6
- Certificate included

NCA7-2-21954-01 **Z Gage for Tube Probe (ø 8 mm)**
Gauge for non-contact tube probe verification and certification.
- Recommended for NCP1 and NCP2
- Certificate included

NCA7-2-21954-02 **Z Gage for Tube Probe (ø 20 mm)**
Gauge for non-contact tube probe verification and certification.
- Recommended for NCP3 and NCP4
- Certificate included

NCA7-2-21954-03 **Z Gage for Tube Probe (ø 40 mm)**
Gauge for non-contact tube probe verification and certification.
- Recommended for NCP5 and NCP6
- Certificate included

NCA7-2-21953-01

NCA7-2-21953-02

NCA7-2-21953-03

Optional certifications

H0000536 **Certification – ISO 10360-12**
Certification according to standard definition for tactile probing measurement with an articulated arm CMM.

8x12	☑
83-6 / 85-6 / 87-6	☑
83-7 / 85-7 / 87-7	☑

H00000621 **Certification – B89.4.22**
Available only for RA7 models. Includes certification only (without recalibration).

H00000658 **Certification – ISO 10360-2**
Optional probing certification.
Available only for 8x12 Absolute Arm Compact models.

8x12	opt
83-6 / 85-6 / 87-6	-
83-7 / 85-7 / 87-7	-

NCA7-4-52504 **Certification – VDI/VDE**
Available only for RA7 models. Probing certification according to standard definition.

Accessories for tube inspection

Non-contact tube probes

Infrared non-contact probes for tube measurement are available in 6 sizes, allowing measurement of all kinds of tubes. A laser dot (class 2M) guides the user for precise placement. Compatible with TubeShaper, GTube and Docs software.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

NCA7-2-21952-01 **NCP1 Non-Contact Tube Probe (12.5 mm)**

ø	4-13 mm
T-bar*	ø 6.4 mm (ref NCA7-2-21953-01)
Z Gage*	ø 8 mm (ref NCA7-2-21954-01)

NCA7-2-21952-02 **NCP2 Non-Contact Tube Probe (25 mm)**

ø	6-20 mm
T-bar*	ø 6.4 mm (ref. NCA7-2-21953-01)
Z Gage*	ø 8 mm (ref. NCA7-2-21954-01)

NCA7-2-21952-03 **NCP3 Non-Contact Tube Probe (50 mm)**

ø	10-40 mm
T-bar*	ø 12.7 mm (ref. NCA7-2-21953-02)
Z Gage*	ø 20 mm (ref. NCA7-2-21954-02)

NCA7-2-21952-04 **NCP4 Non-Contact Tube Probe (75 mm)**

ø	12-65 mm
T-bar*	ø 12.7 mm (ref. NCA7-2-21953-02)
Z Gage*	ø 20 mm (ref. NCA7-2-21954-02)

NCA7-2-21952-05 **NCP5 Non-Contact Tube Probe (100 mm)**

ø	20-85 mm
T-bar*	ø 25.4 mm (ref. NCA7-2-21953-03)
Z Gage*	ø 40 mm (ref. NCA7-2-21954-03)

NCA7-2-21952-06 **NCP6 Non-Contact Tube Probe (150 mm)**

ø	30-130 mm
Recommanded T-bar*	ø 25.4 mm (ref. NCA7-2-21953-03)
Recommanded Z Gage*	ø 40 mm (ref. NCA7-2-21954-03)

* Certified T-bar for alignment and certified Z Gage for verification not included.

Tools

EBD-12865   **Tube Holder (ø 0-20 mm)**
- Available in Europe, Middle East, Africa and South America
- Weight: 17 kg

EBD-12866   **Tube Holder (ø 20-70 mm)**
- Available in Europe, Middle East, Africa and South America
- Weight: 17 kg

EBD-20539-4   **Tube Holder (ø 0-50 mm)**
- Available in North America, China and Asia-Pacific
- Weight: 10 kg

Software and bender links

BendingStudio

The BendingStudio software platform links all data and processes around the production of bended parts – from design and process planning to manufacturing and quality control. BendingStudio is the only tool to meet and combine these requirements with an emphasis on metrological processes.

With clear actual-nominal value comparison allowing for fast evaluation, the implementation of multiple inspection plans with individual measurement criteria for each part, and the presentation of results remaining the same no matter the origin of the data, BendingStudio is the complete package for complex analysis and management of tube and wire production.

With the capacity to work with measurement input from both TubeInspect and Absolute Arm systems, BendingStudio is a key part of any tube and wire manufacturing toolkit.
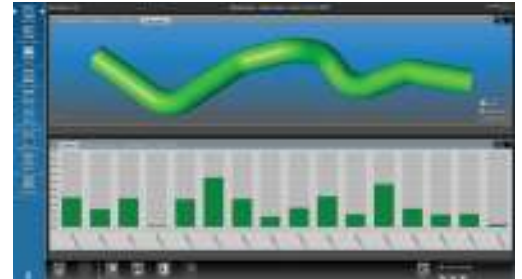
Software and bender links

TubeShaper

Created specifically for the Absolute Arm, TubeShaper brings user-friendly inspection to the tube manufacturing sector.

Designed to maximise production efficiency and reduce scrap, features such as offline licensing, direct import of CAD models and an intuitive modern graphical interface allow tubes to be designed, checked and corrected with speed and precision. Direct connection to a wide range of CNC tube bending machines from the market's leading manufacturers ensure that bending corrections are applied in real time on the shop floor.

Offering a state-of-the-art user interface, TubeShaper enables users to fully harness the measurement power and versatility of the Absolute Arm for all tube inspection applications. Non-contact infrared tube probes allow even soft rubber tubes to be measured, while tactile probes can also be used to reverse engineer or inspect complete tube fixtures. Uniquely, TubeShaper also allows for the measurement of rectangle-section tubes.

TubeShaper is the product of over three decades of experience in tube inspection and was developed in close collaboration with some of the world's leading tube manufacturers. Tube measurement software has never been so complete.

Monitor not included.

Volume extension systems

GridLOK

GridLOK is an expanded measurement solution that allows the accuracy and convenience of the Absolute Arm to be applied to larger parts and systems otherwise beyond its reach.

8x12	
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

51460-XX   **GridLOK Installation**
- Please specify the grid size when you order the kit
- Grid pattern available from 4 by 6 m up to 60 by 60 m*
- Please consult your local Hexagon representative for further information and recommendations

11615   **GridLOK stand-alone license**
Dongle-protection to activate the use of GridLOK function.

* Specific measuring area can be evaluated on request.

Leap Frog Kit

A set of magnets used to align an Absolute Arm across multiple measurement stations when measuring larger parts.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

54479-01 **Leap Frog kit**
Delivered in storage box.

- 4x Magnets with cones
- 1x Short rod

Other accessories

Cables and adaptors

H00017063   **Gigabit Ethernet Adaptor**
Ethernet to USB adaptor, for users who prefer a
USB connection to Ethernet.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

H00003263   **ODU-Ethernet cable (3 m)**
3-metre long Ethernet cable for arm-to-computer
data transfer and scanner data transfer. For use
with all RA8 Absolute Arm models.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

H00008521   **ODU-Ethernet cable (5 m)**
5-metre long Ethernet cable for arm-to-computer
data transfer and scanner data transfer. For use
with all RA8 Absolute Arm models.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

Control packs

Every advanced function an Absolute Arm performs is mediated through a control pack. From power, probing and scanning over a single cable connection to hot-swappable batteries and full-speed measurement-over-WiFi for unmatched portability, it all comes down to the control pack.

H00016653 **CP-C, Accessory**
Connector Pack (CP-C) shipped individually in shipping box.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

- Single cable connection for all touch probes, tube probes and scanners (HP-L-8.9, HP-C-V3D, AS1, RS5 and RS-SQUARED)
- Connection over ethernet or USB (with adaptor)

Includes
-Connector Pack CP-C
-RDS maintenance and interface software
-ODU-Ethernet cable-3m.
-Ethernet Gigabit adaptor.

Warning: Not compatible with HP-L-20.8 Laser Scanner

H00016654 **CP-W, Accessory**
Wireless Pack (CP-W) shipped individually in shipping box.

8x12	✓
83-6 / 85-6 / 87-6	✓
83-7 / 85-7 / 87-7	✓

- Single cable connection for all touch probes, tube probes and scanners (HP-L-8.9, HP-C-V3D, AS1, RS5 and RS-SQUARED)
- Wireless connections for all touch probes, tube probes, AS1, RS5 and RS-SQUARED. (HP-L-8.9 and HP-C-V3D do not support wireless connections)
- Connection over ethernet or USB (with adaptor)
- Battery operation (with hot-swappable batteries)

Includes
-Wireless Pack CP-W
-RDS maintenance and interface software
-Two rechargeable batteries
-ODU-Ethernet cable (3 m)
-Ethernet gigabit adaptor

Warning: Not compatible with HP-L-20.8 Laser Scanner

Batteries

NCA7-6-50108   **Li-ion Battery**
Internal Lithium-ion battery. A second battery can be hot-swapped with the battery installed in the control pack to allow constant powered wireless usage with no downtime. For all Absolute Arm Series 8 models equipped with a Wireless Pack CP-W, Control Pack 2 or Control Pack 3.

CH5000E   **Charger for Li-ion Battery (EU)**
External quick charger for Lithium-ion battery.

CH5000U   **Charger for Li-ion battery (UK)**
External quick charger for Lithium-ion battery.

CH5000A   **Charger for Li-ion battery (US)**
External quick charger for Lithium-ion battery.

H00007922   **RS-SQUARED Warming Plug**
Permits advanced warmup and/or maintenance of operational temperature of RS-SQUARED Area Scanner while using Absolute Arm with other sensors.

Includes
- Warming plug
- Power supply

Dust covers

Protection against dust is available for all Absolute Arm models and sizes. Designed to fit the arm when in the rest position.

H00006817	**Dust Cover – Hexagon branded (750 mm)** For Absolute Arm size 1.2 m

8x12	☑
83-6 / 85-6 / 87-6	
83-7 / 85-7 / 87-7	

H00006816-01	**Dust Cover – Hexagon branded (1080 mm)** For Absolute Arm size 1.5-2 m

8x12	
83-6 / 85-6 / 87-6	☑
83-7 / 85-7 / 87-7	☑

H00006816-02	**Dust Cover – Hexagon branded (1280 mm)** For Absolute Arm size 2.5-3 m

8x12	
83-6 / 85-6 / 87-6	☑
83-7 / 85-7 / 87-7	☑

H00006816-03	**Dust Cover – Hexagon branded (1640 mm)** For Absolute Arm size 3.5-4.5 m

8x12	
83-6 / 85-6 / 87-6	☑
83-7 / 85-7 / 87-7	☑

Installation USB package

H00007157	**USB Package Absolute Arm** Installation USB memory stick, including RDS installation files and all user manuals.

8x12	☑
83-6 / 85-6 / 87-6	☑
83-7 / 85-7 / 87-7	☑

Vision solutions

The first ever metrology solutions dedicated to carbon-fibre part applications, Hexagon's Vision System technology delivers camera-based analysis of composite fibre orientation .

HP-C-V2D-KIT **HP-C-V2D Vision System**
Standalone 2D carbon-fibre orientation analysis sensor. Shipped individually in shipping box.

Includes
HP-C-V2D Vision Sensor; interface box with USB cable (3 m); sensor cable (5 m); power cord with adaptor (1.5 m); power cord with strands (3 m); user manuals; storage box; 2 carbon fibre sample sheet demo parts; and 12-month warranty.

HP-C-V3D-KIT-RA8 **HP-C-V3D Vision System for RA8**
Carbon-fibre orientation analysis sensor that uses current generation Absolute Arm and laser scanner for 3D global coordinate referencing. Shipped individually in shipping box

Includes
HP-C-V3D Vision Sensor; adapter for RA8 Absolute Arm [H00012103]; calibration kit; user manuals; storage box; carbon fibre 3D double dome demo part; and 12-month warranty.

HP-C-V3D-KIT **HP-C-V3D Vision System for RA7**
Carbon-fibre orientation analysis sensor that uses previous generation Absolute Arm and laser scanner for 3D global coordinate referencing. Shipped individually in shipping box.

Includes
HP-C-V3D Vision Sensor; connecting cable for RA7 Absolute Arm (3 m); connecting kit for sensor; calibration kit; user manuals; storage box; carbon fibre 3D double dome demo part; and 12-month warranty.

Slot2 Callout

	Deviation
Center X	0.00307 ✓
Center Y	-0.00875 ✗
Center Z	0.00285 ✓
Length	0.08429 ✓
Width	0.04493 ✓

-0.11055

0.01038

0.04940   0.11538   0.01602

Circle3 Callout

	Deviation
Center X	0.00329 ✓
Center Y	0.02048 ✗
Center Z	-0.00007 ✓
Diameter	0.01401 ✓

Slot1 Callout

	Deviation
Center X	-0.00863 ✓
Center Y	-0.01908 ✗
Center Z	-0.00540 ✓
Length	0.09240 ✓
Width	0.08600 ✓

0.01599

0.05513

Circle1 Callout

	Deviation
Center X	0.00651 ✓
Center Y	0.02002 ✗
Center Z	0.00192 ✓
Diameter	0.01040 ✓

Circle2 Callout

|	Deviation
Center X	-0.00117 ✓
Center Y	-0.02142 ✗
Center Z	0.00355 ✓
Diameter	0.01120 ✓

Application software

PC-DMIS Portable

Portable measurement devices have changed the way operations are monitored, making it possible to take measurements and analyse the results directly where parts are made and assembled. PC-DMIS Portable provides the tools needed to more effectively monitor operations and identify minor issues before they turn into costly problems.

ROY-PROBE

PC-DMIS CAD++ Probing
Includes LMS license + all Portable interface (ROY-I-PORTABLE) +
XACT GD&T + IGES / DXF / DWG /STEP203 / STEP 214 / VDAFS /
XYZIJK / DES and DMISI/O translators and updates for 1 year

ROY-SCAN

PC-DMIS CAD++ Scanning
Includes LMS license + All Portable interfaces (ROY-I-PORTABLE) +
Hexagon Scanning Probe Interface + Scanning Auto Features +
Full COP support + XACT GD&T + IGES / DXF / DWG / STEP203 /
STEP 214 / VDAFS / XYZIJK / DES and DMISI/O translators
and updates for 1 year.

ROY-SCANMESH

PC-DMIS CAD++ Scanning/Mesh
Includes LMS license + all Portable interfaces (ROY-I-PORTABLE) +
Hexagon Scanning Probe Interface + Scanning Auto Features +
Full COP support + XACT GD&T, IGES / DXF / DWG / STEP203 /
STEP 214 / VDAFS / XYZIJK / DES and DMISI/O translators + STL Mesh
Creation and Inspection and updates for 1 year.

ROY-UP-300

**UPGRADE PC-DMIS CAD++ Probing to PC-DMIS CAD++ Scanning
for use with RSx and AS1 scanners**
Allows existing customers with a valid SMA to upgrade from PC-DMIS CAD++
Probing to PC-DMIS CAD++ Scanning.

ROY-UP-301

**UPGRADE PC-DMIS CAD++ Probing to PC-DMIS CAD++ Scanning for use
with HP-L-20.8**
Allows existing customers with a valid SMA to upgrade from PC-DMIS CAD++
Probing to PC-DMIS CAD++ Scanning.

PC-DMIS Portable
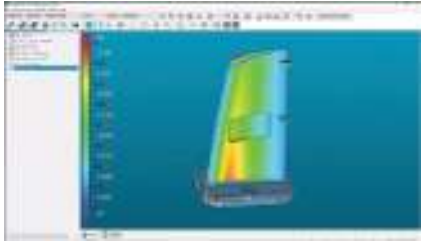
ROY-ADD-MESH

**UPGRADE PC-DMIS CAD++ Scanning
to PC-DMIS CAD++ Scanning/Mesh**
Allows existing customers with a valid SMA to upgrade from
PC-DMIS CAD++ Scanning to PC-DMIS CAD++ Scanning/Mesh.

ROY-SMA-PROBE-I-A

Annual SMA for CAD++ Scanning
Annual Software Maintenance Agreement (SMA) after year 1.

ROY-SMA-SCAN-I-A

Annual SMA for CAD++ Scanning
Annual Software Maintenance Agreement (SMA) after year 1.

ROY-SMA-MESH-I-A

Annual SMA for CAD++ Scanning/Mesh
Annual Software Maintenance Agreement (SMA) after year 1.

Inspire

User-friendly measurement software for portable probing and scanning

Inspire is the next generation inspection software for all portable probing and scanning devices. Inspire is a new software package that makes measurement simple and the complex possible. With one simple interface, Inspire works with laser tracker for probing and scanning applications. Intuitive and easy to use, Inspire software is a comprehensive solution that makes measurement simple, saves time, and ultimately improves productivity.

Inspire capabilities
- Measure
- Align
- Assemble/Build
- Analyse
- Report
- Scan and Probe
- Mesh
- Instrument networking
- Advanced Scripting
- CAD Import

Single Seat Licence includes all hardware interfaces and supports IGES, STEP, STL, CATIA, Solidworks, NX, ProEngineer, Inventor and Parametric CAD import. Training classes available at additional cost and updates for 1 year. Inspire provided with licence code.

576741	**Inspire - Single Seat Licence**

SpatialAnalyzer®

Powerful and traceable measurement and analysis software

SpatialAnalyzer® (SA) is a powerful, traceable and easy to use metrology and analysis software package, tailored for Hexagon`s Manufacturing Intelligence portable CMM family.

SA offers a vast number of benefits, including:
- Intuitive, state of the art graphical environment.
- Interfaces to all Hexagon Manufacturing Intelligence portable CMMs.
- All common CAD exchange and native formats.
- Advanced analysis and processing and unique alignment techniques.
- Easy multiple-instrument station bundling.
- True GD&T and feature checks.
- Numerous reporting options.
- Measurement uncertainty calculation.
- Unified Spatial Metrology Network to achieve the ideal instrument network.
- Integrated Modern Scripting Language to automate complete workflows.
- Multiple language support.
- Free SA Viewer to share SA job files easily.

SpatialAnalyzer® makes metrology easy.

Monitor not included.

SA PRO	**SA Professional**
SA UL	**SA Ultimate**
	Upgrades
576737	**Upgrade from SA PRO to SA UL**
	Maintenance
SA PRO EXT	**SMA for SA Professional**
SA UL EXT	**SMA for SA Ultimate**

QUINDOS

QDS

MTW-510-QPG-001   **Gear Software Package for Portable Products**
- Quindos 7 Basic (incl. CAD basic for scannable portable devices).
- Gear (measurement of straight or helical (cylindrical) gears.
- Unknown Gear (inspection of straight and helical, external and internal gears or gears segment with unknown parameters

Attention: When using the Absolute Arm for larger applications, an extension of the measuring volume may be required. Note that the required length must be adapted to the gear size.

APODIUS Explorer

**The uniquely specialised composite fibre orientation analysis platform**

An innovative and intuitive real-time software solution designed specifically for handling the unique challenges of composite scanning and fibre orientation analysis. Supports both manual and automated analysis processes.

HP-C-V2D-DONGLE-STD	**HP-C-V2D APODIUS Explorer 2D Software** Includes HP-C-V2D software dongle and single-user licence. First year SMA included.
HP-C-V3D-DONGLE-STD	**HP-C-V3D APODIUS Explorer 3D Software** Includes HP-C-V3D software dongle and single-user licence. First year SMA included.
HP-C-V2D-SW-1Y-SMA	**APODIUS Explorer 2D Software Maintenance Extension - 1 Year**
HP-C-V3D-SW-1Y-SMA	**APODIUS Explorer 3D Software Maintenance Extension - 1 Year**
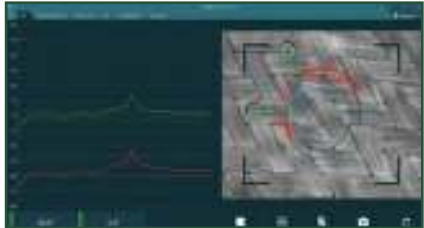
# VISI Reverse

VS-B10A	**Cloud to Mesh** Allows imported scan data (from file or directly from a Hexagon scanner) to be converted into a refined mesh (noise reduction, filtering, smoothing, topology detection, re-alignement). Mesh data can then be used as is or as a reference model for curves extraction. Direct interface to Absolute Arm included. Attention: Other prerequisite module(s) (VS-B03B / VS-S020) required. Please consult your local Hexagon representative for a complete overview and compatibility information.
VS-B10B	**Mesh to Surface** Allows mesh models to be converted automatically or semi-automatically to analytical surfaces. Attention: Other prerequisite module(s) (VS-B10A) required. Please consult your local Hexagon representative for a complete overview and compatibility information.
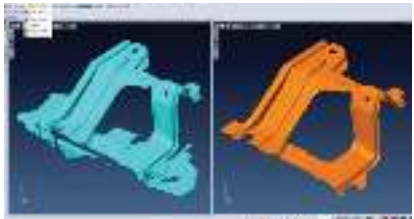
BendingStudio

The complete platform for bending data and processes

Bendingstudio links all data and processes involved in the manufacture of bended parts,
from production and process planning to manufacture and quality control.

110852	**BendingStudio EFFICIENT**

Compatible with TubeInspect and Absolute Arm with laser scanner (RDS) measurement systems.

Functionality includes:
- Database
- Optical gauge
- Bend data
- Bender interface standard
- Reverse engineering
- Statistics and reporting

110853	**BendingStudio TUBE**

Compatible with TubeInspect and Absolute Arm with laser scanner (RDS) measurement systems.

Functionality includes:
- Database
- Optical gauge
- Bend data
- Bender interface standard
- Reverse engineering
- Statistics and reporting
- Functional dimension
- Deflection dimension
- Formed ends diameter change adaptor

110854	**BendingStudio WIRE**

Compatible with TubeInspect and Absolute Arm with laser scanner (RDS) measurement systems.

Functionality includes:
- Database
- Optical gauge
- Bend data
- Bender interface standard
- Reverse engineering
- Statistics and reporting
- Functional dimension
- Deflection dimension
- Bender interface freeform

BendingStudio

| 110855 | **BendingStudio PROFESSIONAL** |
| | Compatible with TubeInspect and Absolute Arm with laser scanner (RDS) measurement systems. |

Functionality includes:
- Database
- Optical gauge
- Bend data
- Bender interface standard
- Reverse engineering
- Statistics and reporting
- Functional dimension
- Deflection dimension
- Formed ends diameter change adaptor
- Bender interface freeform
- Branched tubes
- Hoses

110856	**Upgrade EFFICIENT to TUBE**
110857	**Upgrade EFFICIENT to WIRE**
110858	**Upgrade TUBE to PROFESSIONAL**
110859	**Upgrade WIRE to PROFESSIONAL**
110860	**TubeInspect CONTROLLER**
106484	**BendingStudio CAD-WIZARD**
106488	**BendingStudio OFFLINE Licence**
	Same modules as main licence but without interface to measurement system. Applicable also for extension of network license (ART110874) with 1 additional user.
110874	**BendingStudio OFFLINE Network License**
	Same modules as main licence but without interface to measurement system, Network licence for 1 user only; licences for further users on request
106489	**BendingStudio Network Service**
109654	**1Y-SMA BendingStudio OFFLINE**
110826	**3Y-SMA BendingStudio OFFLINE**
110321	**1Y-SMA BendingStudio and Absolute Arm with Scanner**
110827	**3Y-SMA BendingStudio and Absolute Arm with Scanner**

TubeShaper

Specialist software for tube measurement, gauging and bending machine control

Created specifically for the Absolute Arm, TubeShaper brings a combination of user-friendly inspection and advanced functionality to the tube manufacturing sector.

The TubeShaper licensing concept allows TubeShaper to be configured by combining the three modules in several ways. There are effectively 4 possible configurations:

1. TubeShaper with no arm or bender interface
(H00017742)

2. TubeShaper with arm interface, but no bender interface
(H00017742 + H00017744)

3. TubeShaper with bender interface, but no arm interface
(H00017742 + H00017743)

4. TubeShaper with both arm and bender interfaces
(H00017742 + H00017743 + H00017744)

Monitor not included.

TubeShaper

H00017742	**TubeShaper, Core Licence**
	Includes all functionality, but no connection to any arm or bender. First year SMA included.

H00017743	**TubeShaper, Arm Measurement Module**
	Allows for connection to and collection of measurement data with any Absolute Arm or other RDS compatible arm. Supports all touch probes and tube probes. Must be added to a TubeShaper Core Licence.

H00017744*	**TubeShaper, Bender Link**
	Interface for connecting to 1 compatible bending machine. Warning: TubeShaper version must be at least v2.0. Bender compatibility must be checked in advance (see TubeShaper bender compatibility guide).

ROY-SMA-TUBE	**Annual SMA after Year 1**
	Software Maintenance Agreement (SMA) provides access to software updates and unlimited technical support.

H00017746	**Upgrade from G-Tube to TubeShaper without Bender Interface**
	G-Tube dongle will be required

H00017747*	**Upgrade from DOCS (without SMA) to TubeShaper with 1 Bender Interface.**
	DOCS dongle will be required.

H00017749	**Upgrade from SUPRAVISION to TubeShaper without Bender Interface.**
	Supravision dongle will be required.

Please consult your local Hexagon representaive for a complete and up-to-date list of available CNC tube bender interfaces.

Warranty and maintenance

Warranty plan renewals

H00011149-01*	**1 Year Arm Warranty Extension**	
	Renewal of standard manufacturer's warranty plan for Absolute Arm range for 1 year.	
H00011149-02*	**2 Years Arm Warranty Extension**	
	Renewal of standard manufacturer's warranty plan for Absolute Arm range for 2 years.	
H00011149-03*	**3 Years Arm Warranty Extension**	
	Renewal of standard manufacturer's warranty plan for Absolute Arm range for 3 years.	
H00011150-01*	**1 Year RS5 Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS5 Laser Scanner for 1 year.	
H00011150-02*	**2 Years RS5 Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS5 Laser Scanner for 2 years.	
H00011150-03*	**3 Years RS5 Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS5 Laser Scanner for 3 years.	
RS6-ASx-HW-1Y-WRTY*	**1 Year RS6-ASx-Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS6 and AS1 Laser Scanner for 1 year.	
RS6-ASx-HW-2Y-WRTY*	**2 Years RS6-ASx-Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS6 and AS1 Laser Scanner for 2 years.	
RS6-ASx-HW-3Y-WRTY*	**3 Years RS6-ASx-Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS6 and AS1 Laser Scanner for 3 years.	
H00018289-01*	**1 Year Area Scanner Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS-SQUARED Area Scanner for 1 year.	
H00018289-02*	**2 Years Area Scanner Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS-SQUARED Area Scanner for 2 years.	
H00018289-03*	**3 Years Area Scanner Warranty Extension**	
	Renewal of standard manufacturer warranty plan for RS-SQUARED Area Scanner for 3 years.	
HP-C-V2D-HW-1Y-WRTY**	**Vision Sensor 2D 1-Year Warranty Plan Renewal**	
	Including calibration and certification of the sensor. Must be ordered within eight (8) weeks of initial purchase. Can be purchased twice to extend the warranty from the first year (included) up to three (3) years.	
HP-C-V3D-HW-1Y-WRTY**	**Vision Sensor 3D 1-Year Warranty Plan Renewal**	
	Including calibration and certification of the sensor. Must be ordered within eight (8) weeks of initial purchase. Can be purchased twice to extend the warranty from the first year (included) up to three (3) years.	

* Can be added as an option before the first 24 months of standard warranty have expired.
** Renewal of standard manufacturer warranty plan for Vision Sensor 2D and 3D for 1 year. Includes calibration and certification of the sensor.

Warranty plan conditions

Standard manufacturer warranty plan

Hexagon's portable measuring arm factories provide a 2-year manufacturer warranty for Hexagon arms and scanners (excluding the HP-L-8.9 and HP-L-20.8 laser scanners). Warranty period begins at the customer delivery date or 3 months after the factory delivery to the local Hexagon representative. Standard factory warranty plan renewals have the following terms:

1. Repair of manufacturing defects on the following components: arm, encoders, encoder board, electronic boards, probe, scanner optics and light source (excluding HP-L-8.9 and HP-L-20.8) and all other arm parts.
2. The warranty of two (2) years is valid only if an arm service check is performed during the first year. This is a paid service that must be purchased by the customer at some time between the arm delivery and the due date, meaning maximum one (1) year after the instrument delivery.
3. Unlimited telephone and email technical support during the warranty period.
4. Under normal usage, the carbon-graphite tubes have a lifetime warranty.
5. Customer assumes all shipping costs.

Renewal of standard manufacturer warranty plan

Hexagon's portable measuring arm factories offer 1, 2, or 3-year renewals for the standard factory warranty plan. To be eligible for renewal, the warranty plan renewal must be ordered with the instrument or ordered before the existing warranty plan expires. Standard factory warranty plan renewals have the following terms:

1. Replacement or repair, at Hexagon portable measuring arm factory's discretion, free of charge, of any component or parts of the instrument which upon examination are found defective in workmanship or material.
2. Any required repairs not covered by the warranty plan renewal cost extra.
3. The instrument must be returned to the factory or an authorised and certified Hexagon service centre if a repair, calibration or certification needs to be performed.
4. For the renewals of the warranty, the instrument must be calibrated in a certified service centre, in the first instance no later than 15 months after delivery. The following calibrations are then required to take place every 12 months according to the warranty plan renewal.
5. Customer assumes all shipping costs.

World-class service made simple

Customer Care
Packages

Owners of Hexagon products featured in this catalogue 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 Customer Care Packages

	Platinum*	Gold*	Silver*	Bronze*
Planned annual service	☑	☑	☑	☑
Customer hardware support	☑	☑	☑	☑
Annual maintenance and recertification	☑	☑	☑	-
Remote connected assistance	☑	☑	-	-
Repair parts and labour	☑	-	-	-
Local customised benefits	☑	☑	☑	☑

All packages below can be added as an option before the first 12 months of standard warranty have expired.

H00029362	Bronze Customer Care Package
H00029363	Silver Customer Care Package
H00029364	Gold Customer Care Package
H00029365	Platinum Customer Care Package
H00028796	Upgrade Bronze to Platinum Customer Care Package
H00030198	Year 3 Platinum CCP
H00030199	Year 3 and 4 Platinum CCP
H00030200	Year 3, 4 and 5 Platinum CCP

* For further information about Bronze, Silver, Gold and Platinum service contracts, please contact a local Hexagon representative.

World-class products to rely on

Drawing on decades of research and development experience, metrology 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 and large-volume 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.

● Customer and demo centre   ○ Production facility
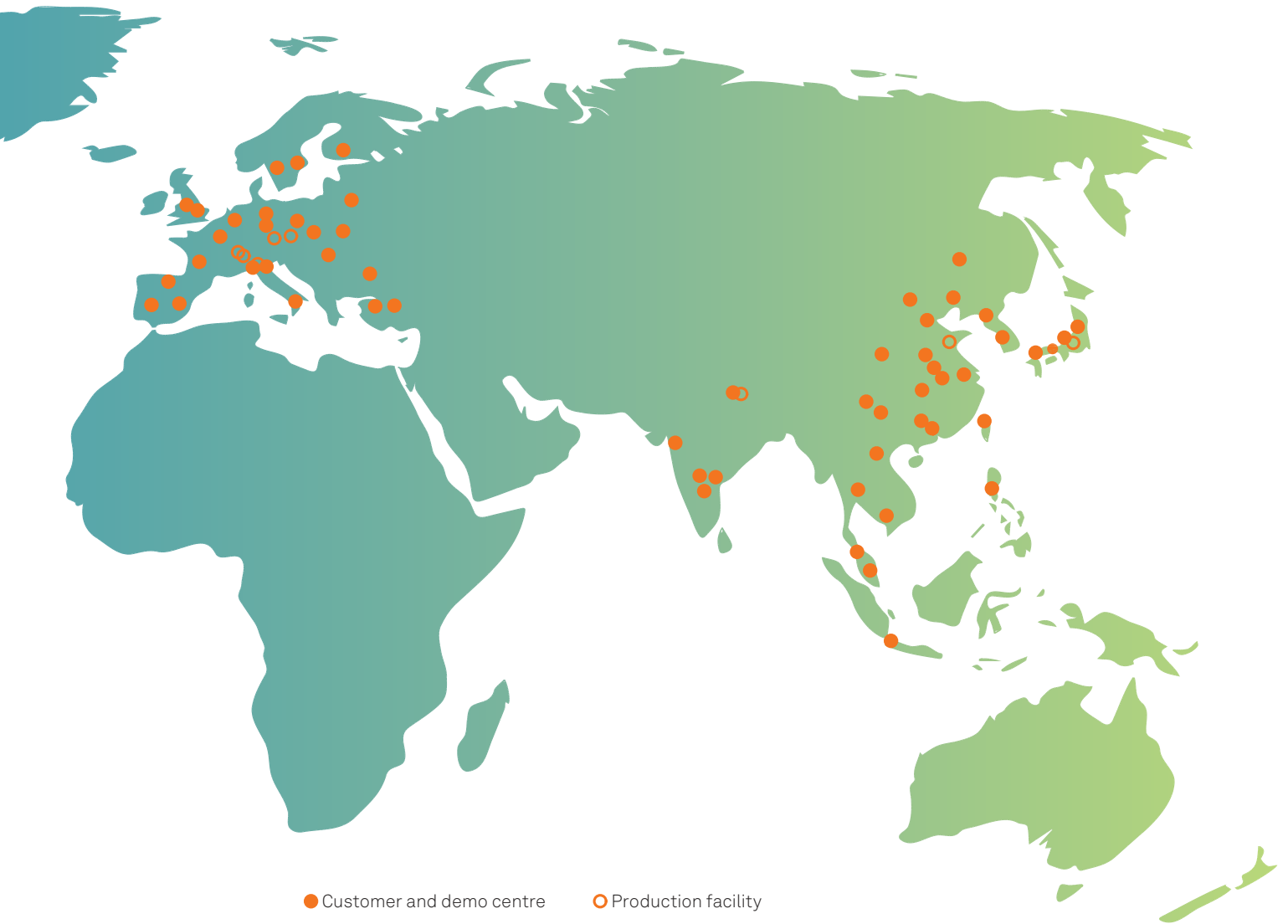
HEXAGON

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.