



**Phillip Lewis**  
**Marketing Manager**  
**Metrology Devices**  
**Hexagon**

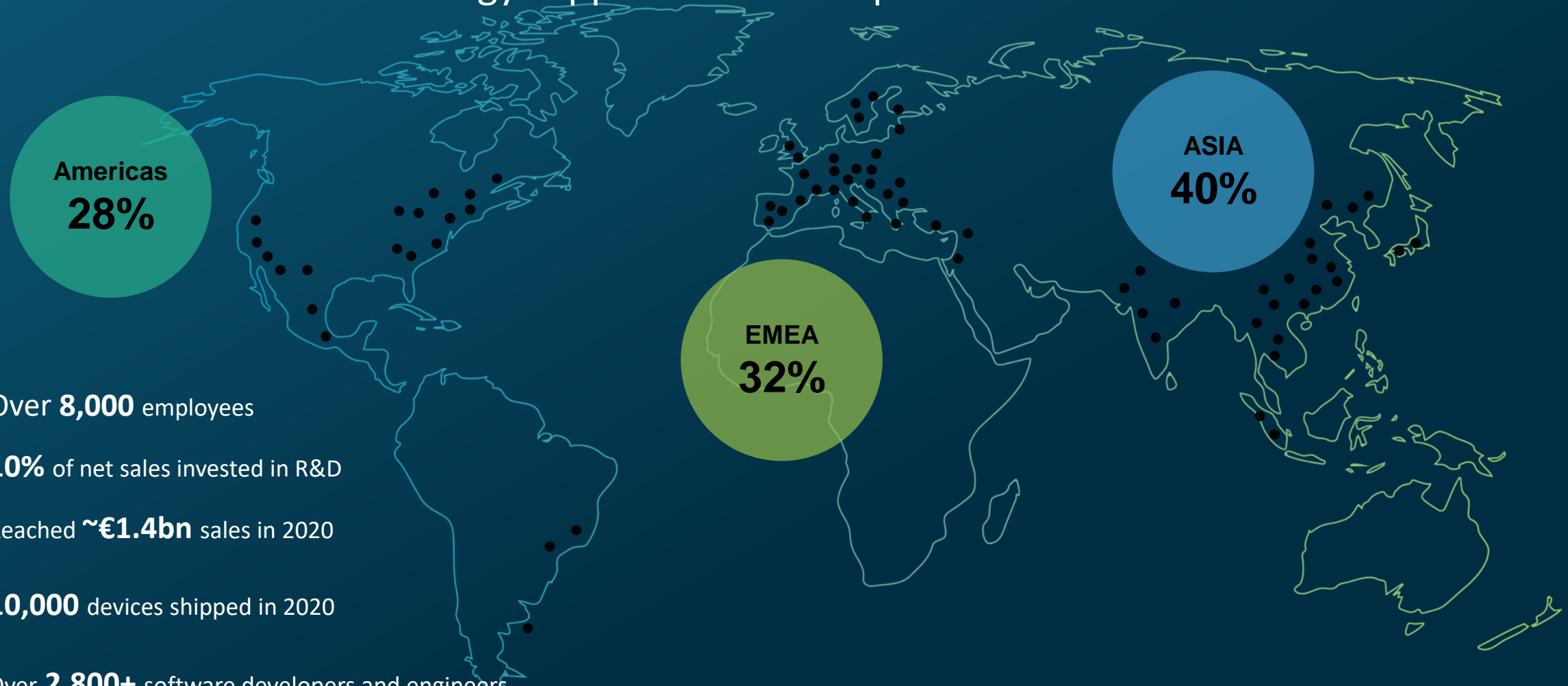


**Bryan Balch**  
**Sales Engineer**  
**Portable Arm & Automated Measurement Systems**  
**Hexagon**



# Hexagon's global reach in manufacturing

A vast and talented technology support and development network



Over **8,000** employees



**10%** of net sales invested in R&D



Reached **~€1.4bn** sales in 2020



**10,000** devices shipped in 2020



Over **2,800+** software developers and engineers

# Global manufacturing runs on Hexagon

Every year, Hexagon technology supports the development and production of...

**95%**  
of all cars produced



**90%** of all aircraft produced



We help our customers  
shape the future of products  
and services in all industries.



**75%** of all smartphones produced



**80%**  
of orthopedic implants produced

# A portfolio dedicated to optimising manufacturing workflows

From first concept to final product

## Design and engineering

- Optimise designs
- Ensure manufacturability
- Reduce prototypes
- Accelerate innovation



## Feedback and improvement

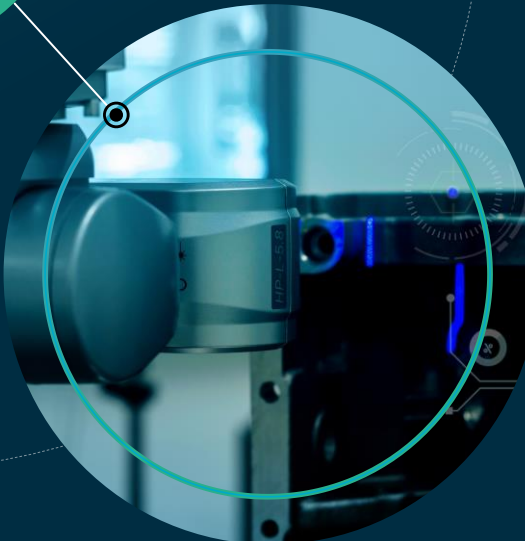
## Production

- Maintain design intent
- Improve process efficiency
- Reduce waste and rework
- Ensure reliable product delivery



## Metrology and inspection

- Capture real-world data
- Validate process capability
- Manage product quality
- Iterate and improve for the future





Hexagon helps toe the line while pushing the envelope at Hendrick Motorsports

# Hexagon Absolute Arm: Product range

The Absolute Arm configurations

83

Green

85

Blue

87

Chrome



Absolute Arm  
**Compact**

Very high accuracy | Small size  
Measurement of small parts or tight spaces  
Two accuracy levels: 83 and 85



Absolute Arm  
**6-axis**

Tactile probe measurement  
Three accuracy levels: 83, 85 and 87



Absolute Arm  
**7-axis**

Scanning and tactile probe measurement  
Three accuracy levels: 83, 85 and 87

# Hexagon Absolute Arm: Product range

- The Absolute Arm is available in 7 different lengths to suit your measurement needs (accuracy, portability, cost, time-to-measure and so on).
- The lengths correspond to the **spherical diameter** of the measurement volume of each arm.



## Low-Cost (83 SERIES / Green)

## Mid-Range (85 SERIES / Blue)

## Highest Accuracy (87 SERIES / Chrome)

### 83 6-axis

### 83 7-axis

### 85 6-axis

### 85 7-axis

### 87 6-axis

### 87 7-axis

1.2m (Compact)	-	1.2m (Compact)	-	-	-
2.0m	2.0m	2.0m	2.0m	-	-
2.5m	2.5m	2.5m	2.5m	2.5m	2.5m
3.0m	3.0m	3.0m	3.0m	3.0m	3.0m
3.5m	3.5m	3.5m	3.5m	3.5m	3.5m
4.0m	4.0m	4.0m	4.0m	4.0m	4.0m
4.5m	4.5m	4.5m	4.5m	4.5m	4.5m

# Hexagon Absolute Arm: **What are our customers' challenges?**

**Measure in different locations**



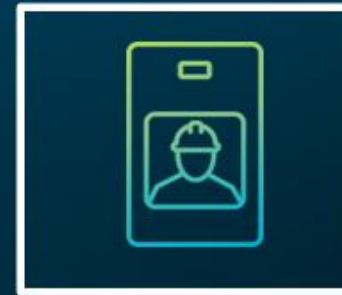
**Challenging environments**



**Varied applications**



**Service and support**



**Time to measure**



**Accuracy**



**Challenging parts**



**Easy to use**





Absolute Arm



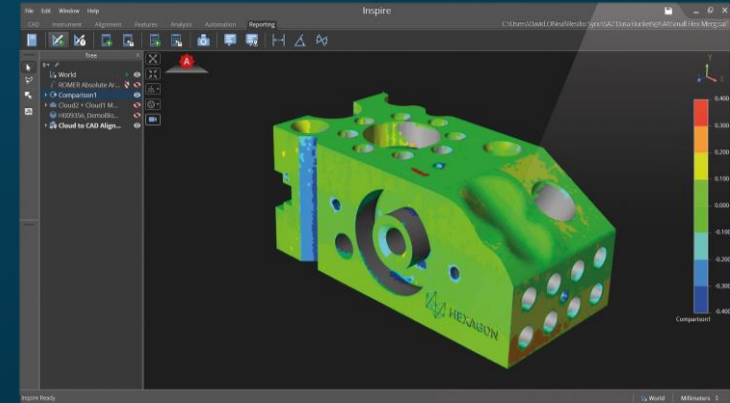
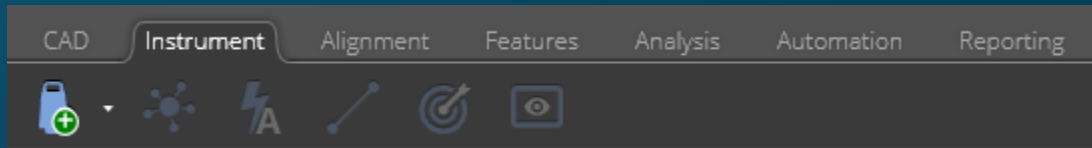
Inspire  
Inspection Software Suite



# Inspire

Built for users working on simple tasks to complex projects.

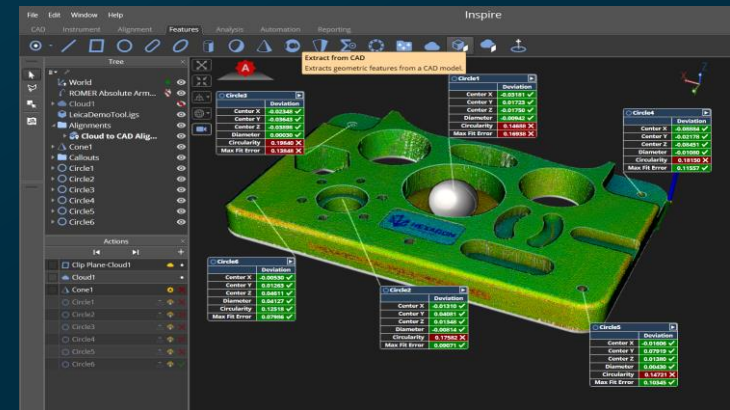
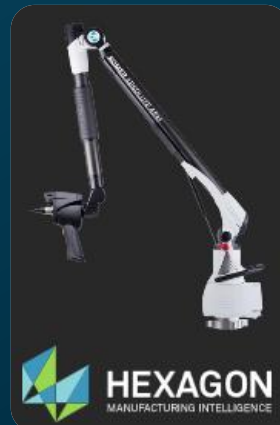
One simple interface for probing and scanning



**Default**

- Add ROMER Absolute Arm (7-Axis)
- Add Leica AT960 Laser Tracker
- Add Leica AT403 Laser Tracker
- Add Leica AT401 Laser Tracker

Automatically Connect To New Instruments  
 Automatically Connect When Opening Files  
 Clear Instrument History



**Instruments**

- Leica AT403 Laser...
- ROMER Absolute A...

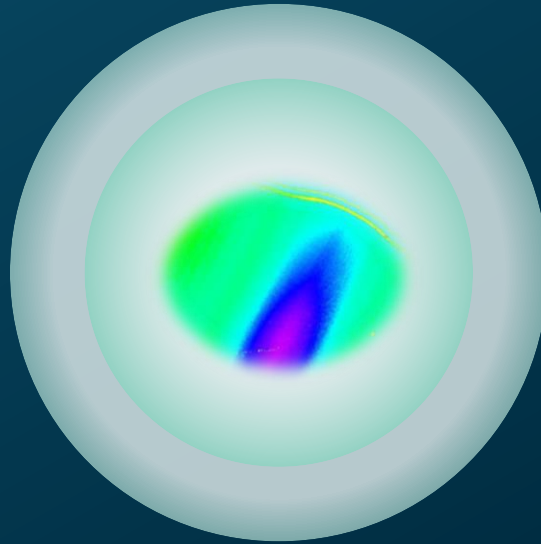
Click to connect.

Powerful CAD capabilities – supports PMI (product manufacturing information)

Absolute **S**canner **1** e**X**tra **L**arge is a non-contact laser scanner which enables the measurement of large surfaces and cavities at very high speed and quality.



Physical object



3D Model

Just like the AS1, AS1-XL can be used from laboratory room to manufacturing shopfloor and can be combined with multiple devices.

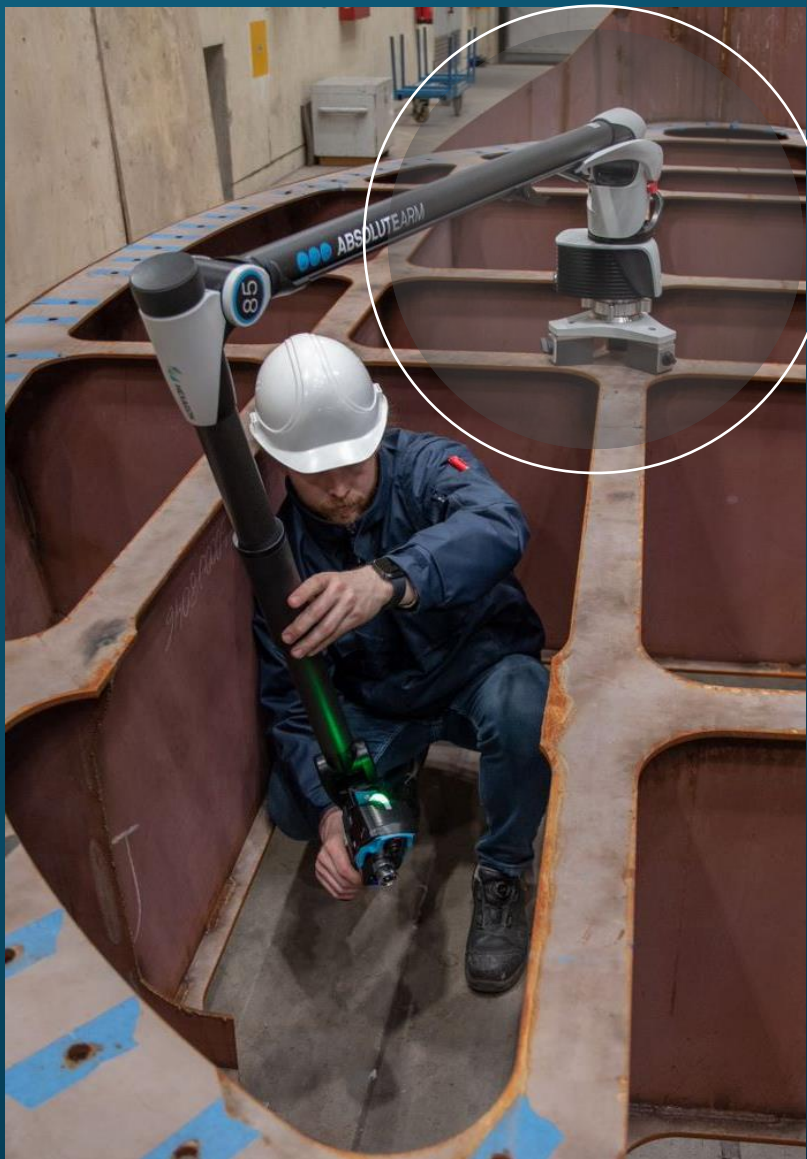


# EXTRA large



The innovative modularity of the **Absolute Scanner**, offer cross-platform compatibility with Portable Measuring Arm & Absolute Laser Tracker, for any scanning task.





## Handheld for Arms

For medium size objects



## Handheld for Laser Trackers

For large objects



## Automation for Laser Trackers

For multiple part inspection



The innovative modularity of the **Absolute Scanner**, offer cross-platform compatibility with Portable Measuring Arm & Absolute Laser Tracker, for any scanning task.



Absolute Trackers

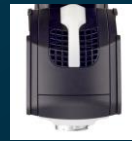


Absolute Arm



**AS1**  
1'200'000 pt/s

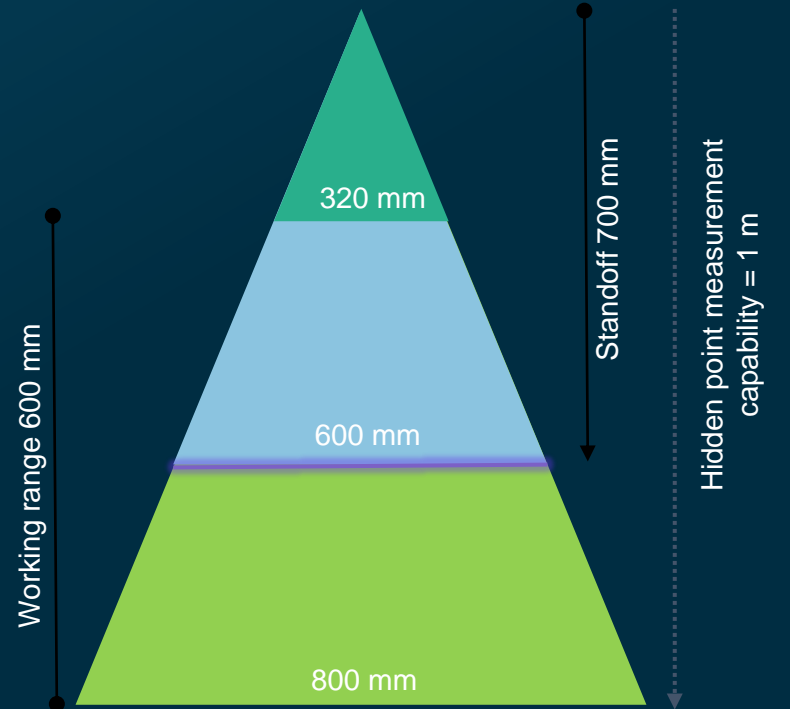
Working range 100 mm



150 mm

Standoff 165 mm

**AS1-XL**  
1'200'000 pt/s





HEXAGON

QUALITYDIGEST™

For More Information

**Absolute Arm:** [Hexagon Portable CMM](#)

**Absolute Laser Tracker:** [Hexagon Laser Trackers](#)

**AS1 Laser Scanner:** [Hexagon AS1 Absolute Scanner](#)

**AS1-XL Laser Scanner:** [Hexagon AS1-XL Absolute Scanner](#)

**Inspire Software:** [Hexagon Portable Metrology Inspection Software](#)