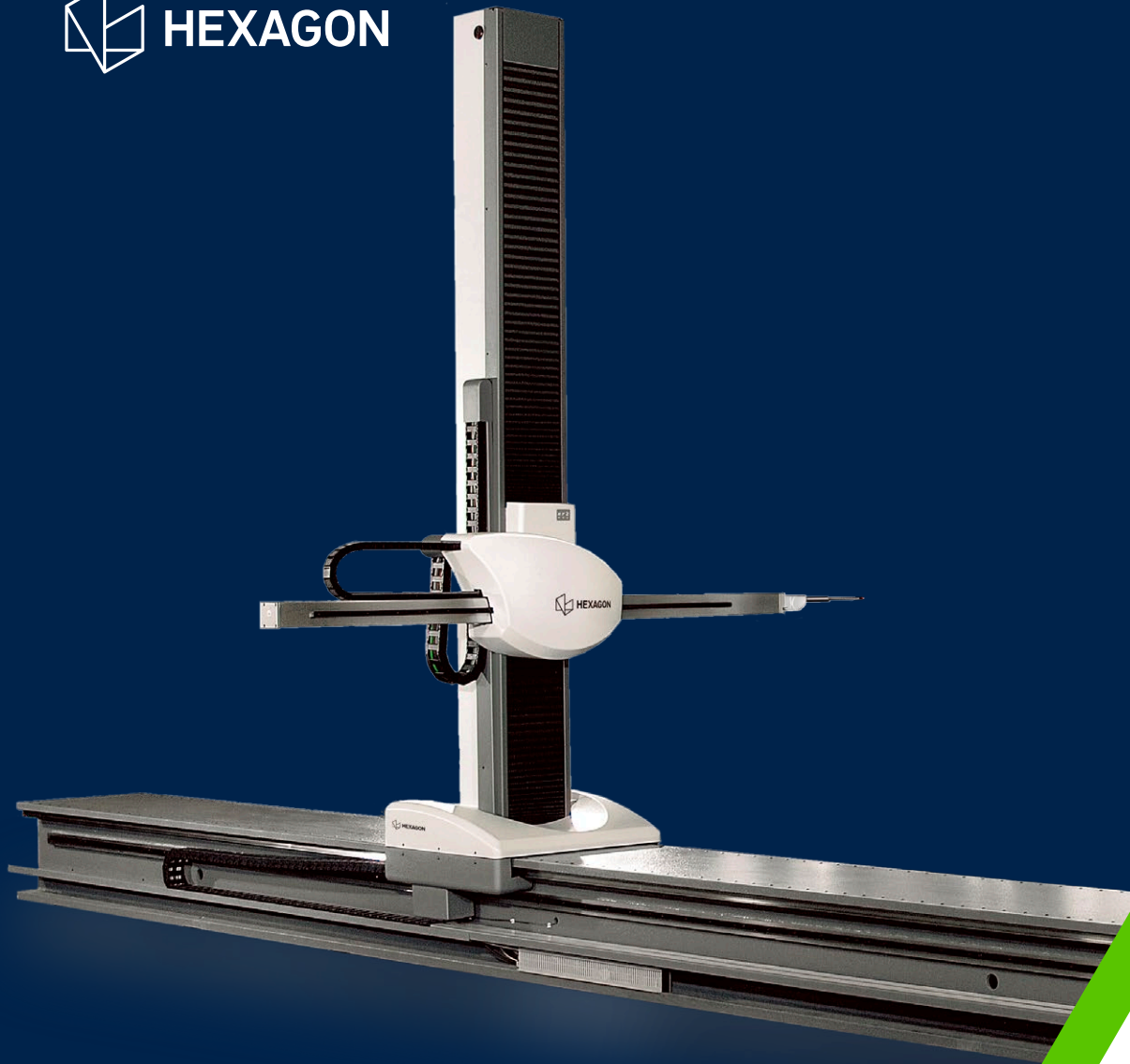




TORO HP

Horizontal Arm Coordinate
Measuring Machine





TORO HP

Precision for Sheet Metal. Performance for Production.

In today's fast-paced production environments, accuracy alone is not enough. Coordinate measuring machines (CMMs) must deliver speed, reliability and intuitive operation to keep quality aligned with demanding cycle times.

The TORO HP horizontal arm CMM has been specifically designed to meet the challenges of large-scale sheet metal inspection, delivering consistent, high-quality results across a wide range of applications — from body-in-white structures to subassemblies, doors and closures.

Backed by decades of metrology expertise, TORO HP combines proven technology with a robust, shop-floor-ready design. The result is a dependable solution that not only assures quality but actively drives production efficiency.

Advanced Technology Optimise System Performance

TORO HP is built on proven technology, with a robust mechanical structure designed to deliver accurate, reliable performance across a wide range of measuring applications.

- **Modular design** enables easy configuration, combining flexibility and programmability with speed and intuitive operation.
- **DC servo-driven axes** ensure stable, precise motion — with a rack-and-pinion X-axis and synchronous belt-driven Y/Z axes for smooth, slip-free positioning.
- **Open horizontal arm architecture** provides excellent accessibility, simplifying part loading and unloading.
- **Geometric error compensation and linear temperature correction** maintain consistent, high measurement accuracy directly on the shop floor.
- **Integrated Z-axis balancing system** includes an innovative fall-safety device, while protected guideways shield against environmental contamination.







Flexible Configurations on a Horizontal Arm Platform

TORO HP is a cost-effective, flexible horizontal arm CMM platform available in four standard configurations for single and dual-arm systems. The Touch, Speed, A+/T+ Touch, and A+/T+ Speed models each deliver targeted performance, enabling manufacturers to match measurement capability to their specific application needs.

The Touch and Speed configurations provide standard dynamics for reliable inspection, with Speed adding laser scanning for increased

throughput. The A+/T+ variants offer enhanced dynamics, higher accuracy and a wider operating temperature range, with the A+/T+ Speed model combining these benefits with advanced scanning for maximum productivity.

With its scalable configuration options, TORO HP provides an adaptable solution for everything from basic inspection to high-performance measurement in demanding production environments.

Feature	TORO HP Touch	TORO HP Speed	TORO HP A+/T+ Touch	TORO HP A+/T+ Speed
Machine dynamics	Standard	Standard	Enhanced	Enhanced
Accuracy	Standard	Standard	Increased	Increased
Operating temperature range	Standard	Standard	Extended	Extended
Touch-trigger probing	✓	✓	✓	✓
HP-L-10.10 LITE scanner	—	✓	—	—
HP-L-10.10 scanner	—	—	—	✓
Ideal for	Dimensional inspection	Faster inspection & scanning	High-accuracy inspection	High-performance scanning & inspection

Available in single- and dual-arm configurations.

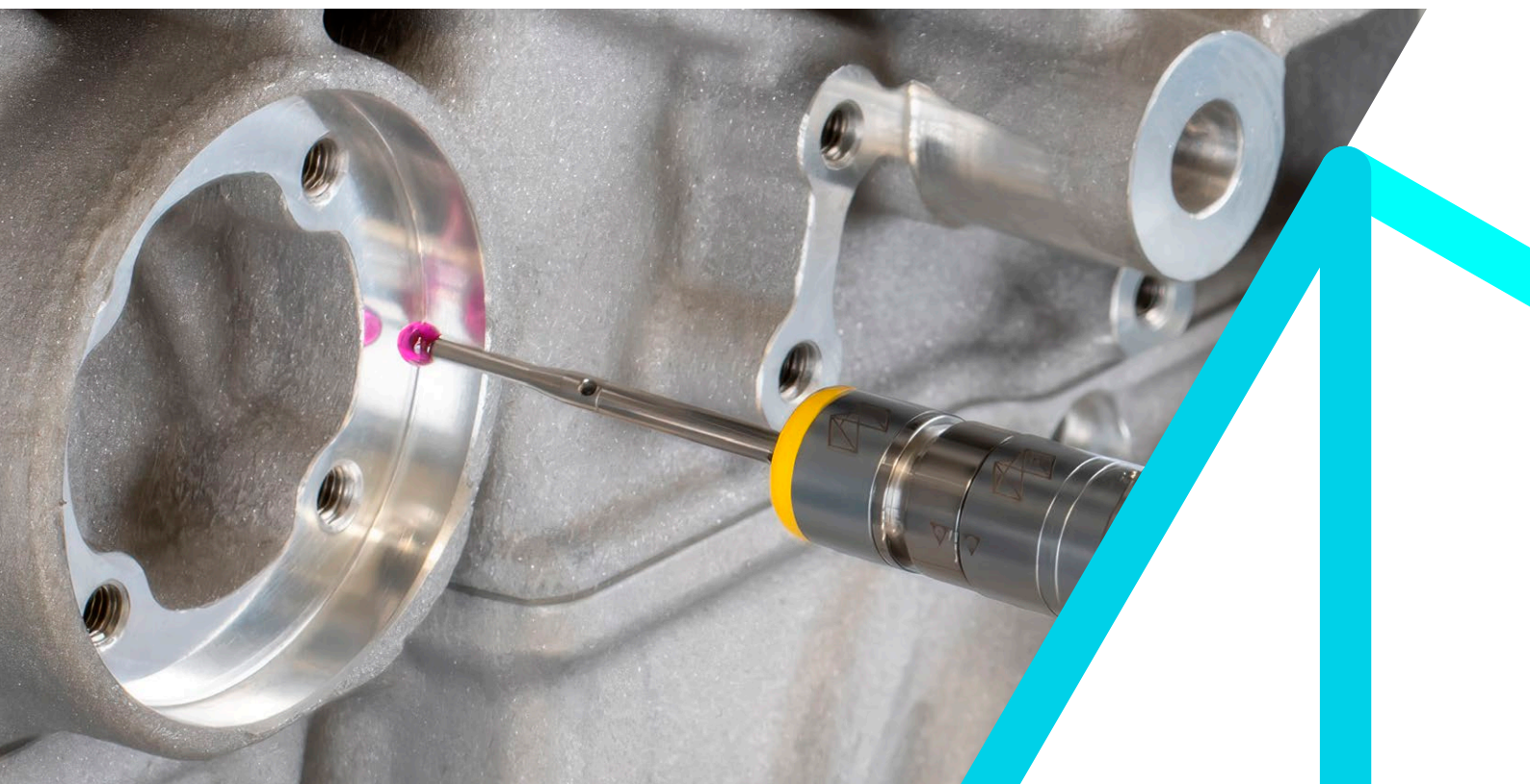
Flexible Measurement for Complex Applications

As manufacturing complexity continues to increase, measurement systems must offer both precision and adaptability. TORO HP is designed to meet this challenge, combining a flexible platform with a comprehensive portfolio of Hexagon sensors and probing technologies. This ensures optimal performance across a wide range of applications, from standard feature inspection to the capture of complex, freeform geometries.

Indexable Probe Heads

The HH-A-T5 indexable probe head combines speed and precision through programmable indexing in fine increments, enabling rapid and repeatable positioning across multiple measurement points. Compatible with a wide range of probe configurations, it provides a versatile solution for both routine inspection and complex measurement tasks. For larger components and hard-to-reach features, the HH-A-H2.5 automatic probe head with Heavy Duty Kinematic Joint (HDKJ) delivers the strength and stability required for extended-reach applications. Supporting probe extensions of up to 750 mm, it enables reliable measurement of deep features and large body structures, making it ideally suited to demanding automotive environments.

For maximum flexibility, the HH-ACW-43MW continuous wrist provides smooth, synchronised multi-axis movement that allows precise alignment with complex geometries while minimising the need for repositioning. Built on CW43 technology, it offers virtually infinite positioning with fine angular control in the A and B axes down to 0.1°, plus an optional continuous C axis for enhanced capability. Designed to support exceptionally long probe extensions, it provides reliable access to challenging measurement locations while maintaining outstanding accuracy, stability and measurement confidence.





Touch-Trigger Probes

The HP-TMe touch-trigger probe offers a compact and highly adaptable solution with multiple trigger force options, making it suitable for a wide range of applications. Complementing this, the HP-T-RP probe is designed for robust, shop-floor environments, delivering reliable performance even when used in automated or robotic applications. Together, these probes provide the durability and accuracy needed for consistent, high-quality inspection.

Laser Scanning - HP-L-10.10

Used in conjunction with the HH-ACW-43MW continuous wrist, Hexagon's HP-L-10.10 laser scanning sensors deliver exceptional flexibility and precision across complex geometries. For applications demanding the highest levels of accuracy, speed and advanced usability, the HP-L-10.10 provides industry-leading performance, capturing up to 600 000 points per second with a probing form error of just 8 μm — delivering accuracy that approaches tactile probing while enabling fast, reliable inspection of even highly reflective or shiny surfaces.

For manufacturers seeking a cost-effective balance between performance and throughput, the HP-L-10.10 LITE offers rapid point-cloud acquisition of up to 240 000 points per second with strong scanning accuracy and Hexagon's SHINE technology, making it ideal for efficiently digitising complete part surfaces and increasing measurement productivity.

Turning Measurement Data into Actionable Insight

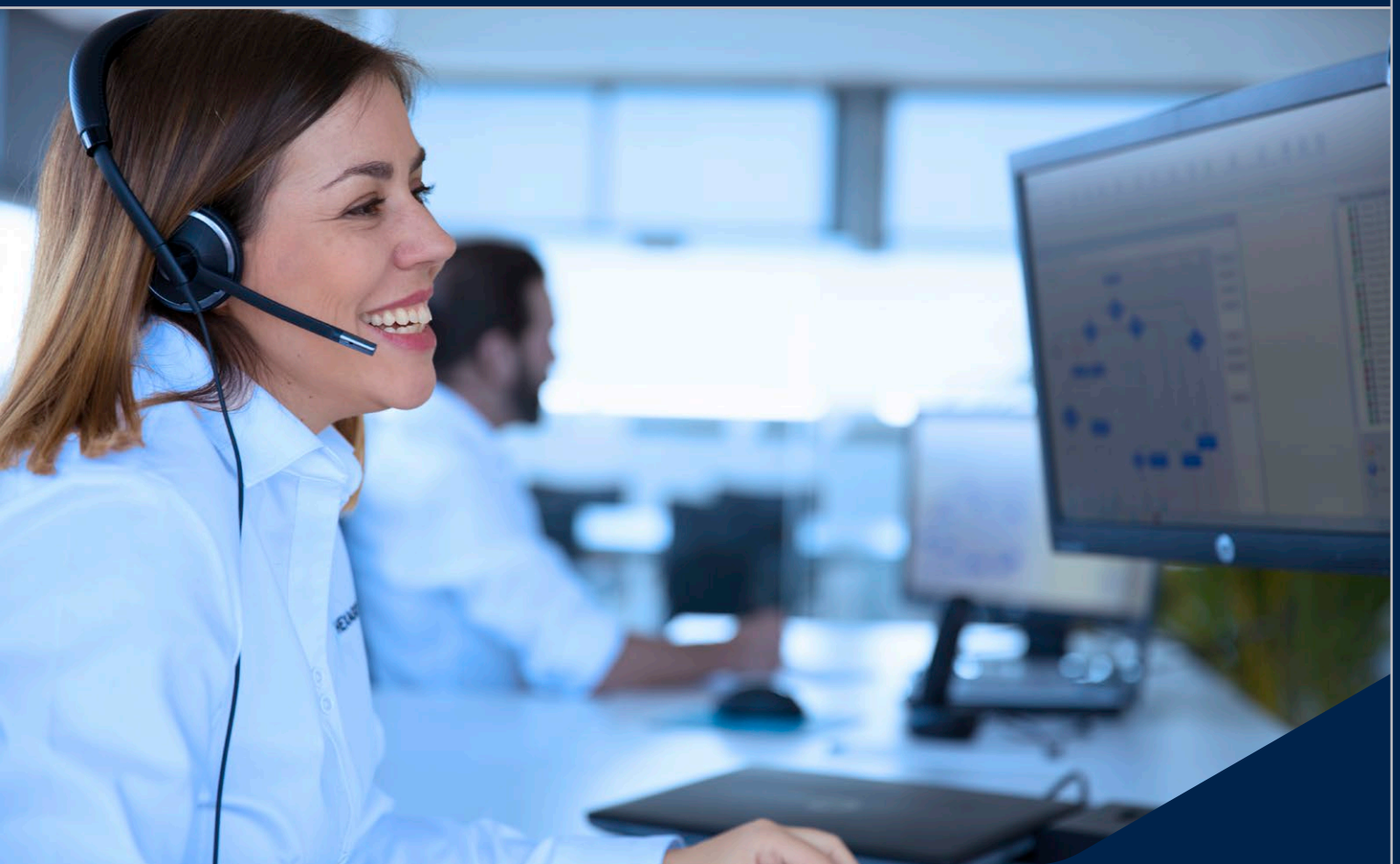
The true value of TORO HP is realised when measurement data becomes a connected, actionable part of the wider manufacturing process. By combining advanced metrology hardware with Hexagon's integrated software ecosystem, TORO HP enables a seamless flow of information — supporting smarter, data-driven quality decisions.

At the core is PC-DMIS, Hexagon's industry-leading metrology software for measurement programming and execution. With powerful CAD-based workflows and automated routine creation, it simplifies the inspection of everything from prismatic components to complex assemblies — increasing productivity, ensuring consistency and reducing the potential for error.

Extending these capabilities, PC-DMIS FUSION connects, visualises and contextualises measurement data through real-time dashboards and intuitive, interactive reporting. Fully integrated with PC-DMIS, it provides immediate visibility across operations, enabling users to identify trends, detect deviations early and take informed action with confidence.

By connecting data across systems, devices and workflows, TORO HP supports a continuous shift from inspection to insight-led process control. The result is enhanced process transparency, faster decision-making and sustained confidence in manufacturing quality.





MyCare Service Plans

Investing in a measurement system is only the beginning. Ensuring that it continues to perform at its best overtime is just as important. MyCare cuts the risk of unplanned downtime, raises productivity and reduces the total cost of ownership – helping you get the most from your investment over its lifetime. Choose from MyCare's three different service plans to find the mix of services that best meet your equipment and budget needs.

MyCare Basic

With this software-focused plan, you receive all metrology software updates and access to our technical support hotline.

MyCare Essential

Everything from the Basic plan, plus annual coverage for hardware preventive maintenance, calibration, recertification and computers.

MyCare Premium

The most comprehensive plan gives you all of MyCare Essential's benefits and adds repair labour, service parts and major machine component coverage.

There are even more benefits to discover for MyCare Essential and Premium. For complete details, please contact your local Hexagon customer relationship representative.

Hexagon is the global leader in measurement technologies. We provide the confidence that vital industries rely on to build, navigate, and innovate. From microns to Mars, our solutions ensure productivity, quality, safety, and sustainability in everything from manufacturing and construction to mining and autonomous systems.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,800 employees in 50 countries and net sales of approximately 5.4bn EUR.

Learn more at hexagon.com