



WHERE QUALITY
COMES TOGETHER





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Along with the manufacturing facilities highlighted, Hexagon Metrology has over 70 direct precision centres in more than 20 countries, plus a network of over 100 agents and distributors across the world. Wherever you are, Hexagon Metrology is never far away.

ALL FACETS OF METROLOGY

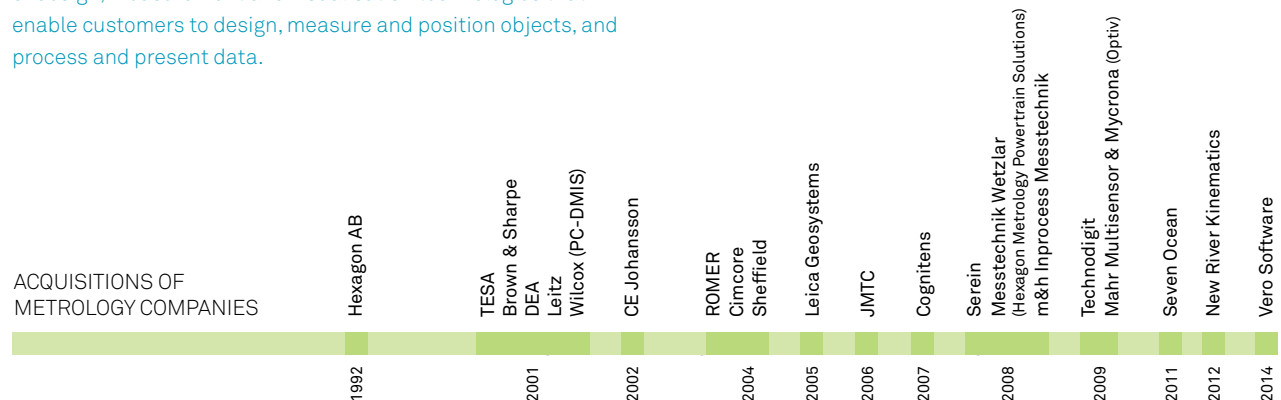
Hexagon Metrology offers a comprehensive range of products and services for all industrial metrology applications in sectors such as automotive, aerospace, energy and medical. We support our customers with actionable measurement information along the complete life cycle of a product – from development and design to production, assembly and final inspection.

With more than 20 production facilities and 70 Precision Centers for service and demonstrations, and a network of over 100 distribution partners on five continents, we empower our customers to fully control their manufacturing processes, enhancing the quality of products and increasing efficiency in manufacturing plants around the world.

Hexagon Metrology is part of Hexagon (Nordic exchange: HEXA B; www.hexagon.com). Hexagon is a leading global provider of design, measurement and visualisation technologies that enable customers to design, measure and position objects, and process and present data.

At Hexagon Metrology we strive to deliver solutions that enable you to become leaders in your own markets. This brochure is designed to give you a brief overview of the vast array of technology and services available and how working together we can help shape change in our ever developing world.

Norbert Hanke
CEO Hexagon Metrology





WORLD-CLASS MEASUREMENT TECHNOLOGIES AND SERVICE

Hexagon is a world-leading supplier of systems for measurement of objects in one, two or three dimensions. The systems measure with great precision and rapidly provide access to large amounts of measurement data. For the customer, this means greater efficiency and productivity, improved quality and significant material and cost savings in the production process.

Hexagon's vision

Hexagon aspires to play a leading role in the effort to solve the challenges our world is facing through its design, measurement and visualisation technologies.

Hexagon's mission

Hexagon is dedicated to delivering actionable information through design, measurement and visualisation technologies that enable customers to create and share manageable multidimensional data.

Hexagon's strategy is to be the most cost-efficient and innovative supplier, have the best management skills in the business and short and rapid decision processes.



Hexagon is split into 3 main business units

Geosystems

Hexagon Geosystems' technologies capture, reference, analyse, process and store valuable geographical information, allowing, in many instances, the data to be presented as 3D images. Geosystems' solutions are used by customers involved in industries such as surveying, public sector, construction, civil engineering, mining, energy, agriculture and defence.

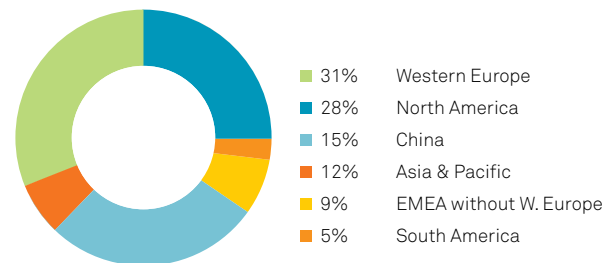
Metrology

Customers use Hexagon Metrology's systems for manufacturing evaluation, process qualification and final parts' inspection. Through the use of Metrology systems, customers in industries such as automotive, aerospace and energy can boost productivity and enhance efficiency by measuring every step in the manufacturing process to reduce or eliminate defects.

Technology

Hexagon Technology provides superior enterprise engineering software as well as geospatially powered solutions. It operates in industries such as oil and gas, nuclear and power generation, public safety and utilities and communications. It also offers the industry's most comprehensive line of Global Navigation Satellite System (GNSS) products.

Net sales in percent 2013

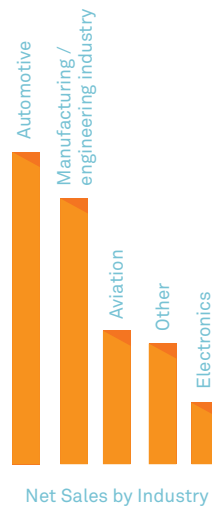


YOUR METROLOGY REQUIREMENTS SOLVED

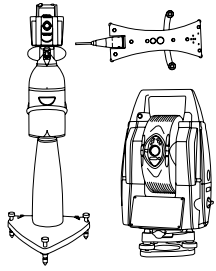
Hexagon Metrology's customers are active in the aerospace, security and defence-related industries, the automotive industry, government departments and authorities, the engineering industry, the construction industry, electronics, power generation, computing, design and medical industries.

Hexagon Metrology holds a primary market position through the expertise of some of the most important metrology manufacturers worldwide. From Hand Gauges to Portable Measurement Equipment, from Multisensor Coordinate Measuring Machines and Robots to Metrology Software, Hexagon Metrology offers a comprehensive range of products and services for all industrial metrology applications.

Whatever your industry – we've got it covered.



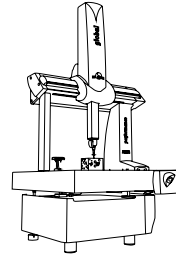




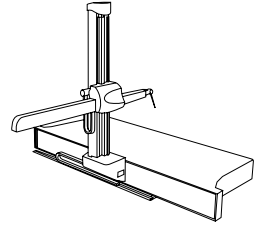
LASER TRACKERS
& STATIONS



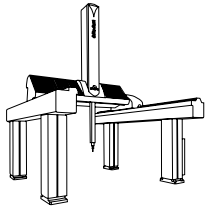
PORTABLE MEASURING ARMS



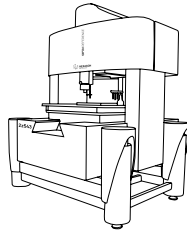
BRIDGE CMMS



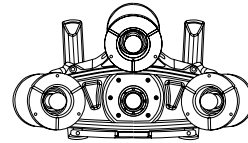
HORIZONTAL ARM CMMS



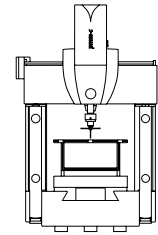
GANTRY CMMS



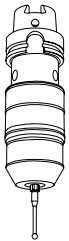
MULTISENSOR & OPTICAL SYSTEMS



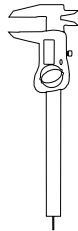
WHITE LIGHT SCANNERS



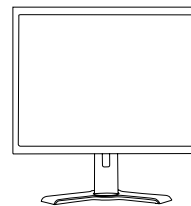
ULTRA HIGH ACCURACY CMMS



SENSORS

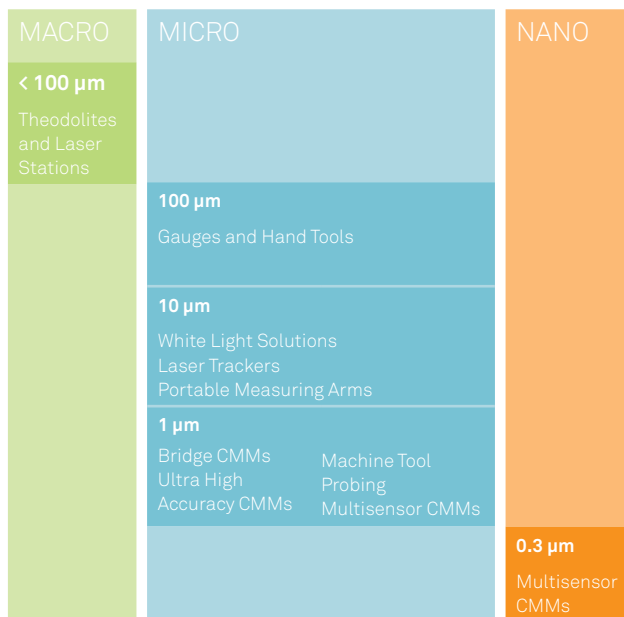


PRECISION MEASURING
INSTRUMENTS



SOFTWARE SOLUTIONS

MEASUREMENT ON ANY SCALE



Hexagon describes the measurement technologies market by three different segments: Macro, micro and nano. The boundaries between the three segments are the customers' requirements for measurement precision of the applications.

In the macro segment, large objects such as mountains, cities, roads, bridges, tunnels, dams, buildings, and other construction projects, are measured. These measurements require precision ranging from 10 metres to 100 micrometres.

In the micro segment, industrial components, from large aircraft to micro components in electronic and medical applications, are measured. Precisions from 100 to 0.3 micrometres are required for these applications. Customers in this segment are primarily the automotive, aerospace, engineering, medical and energy industries.

In the nano segment, objects such as microchips for the electronics industries, medical applications and materials with new characteristics are measured.



GAUGES AND HAND TOOLS

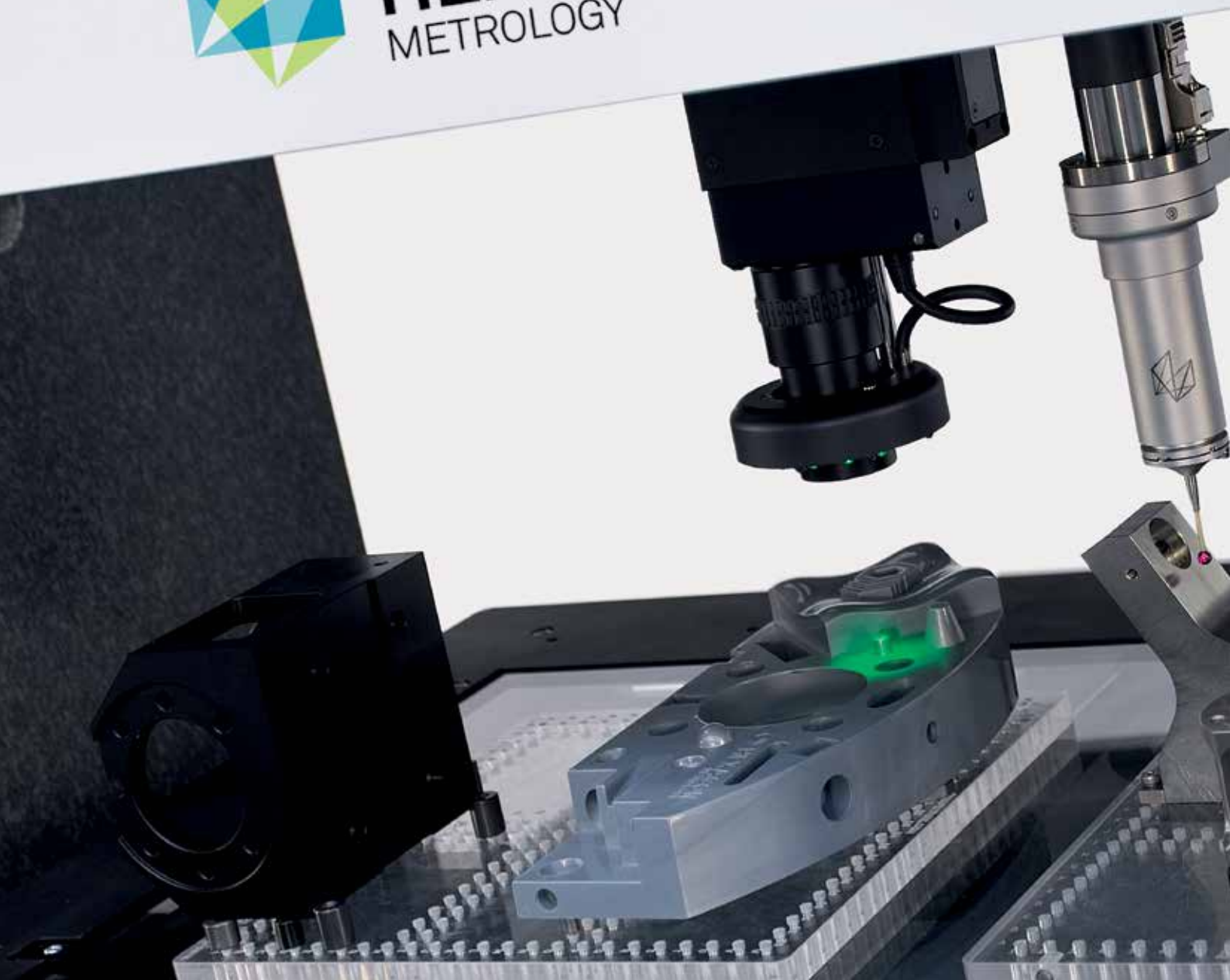


Outstanding price-performance ratio, flexibility and the highest quality – gauges and hand tools are the simplest and most widely used products in Hexagon Metrology's industrial metrology offering. Calipers, thread gages, bore and height measuring devices are suitable for countless applications in the metrology laboratory or on the production floor, often in combination with mechanical instruments or stationary machines. Length and angle standards are indispensable for the calibration of measuring equipment.

Traditional mechanical and electronic precision measuring gauges provide portability, extended service life and offer a large variety of measuring ranges. Hexagon Metrology hand tools are known round the world for quality, dependability and workmanship. We've been making hand measuring tools for well over 150 years.



HEXAGON
METROLOGY



VISION AND MULTISENSOR – FLEXIBILITY IN ONE MACHINE



Flexibility is the key issue for multisensor technology. Flexibility in the world of metrology means having the freedom of choice between contact and optical measurement – with only one measuring system. A single system is therefore sufficient for the contact and optical measurement of all inspection features on a workpiece.

For the measurement of materials sensitive to the touch, the solution is optical measuring systems. They measure non-destructively and accurately. Thanks to a versatile range of optical measuring systems, we have the right solution for every measuring task.

Typical applications include pressed/formed parts, injection molded parts, electronic components, rotationally symmetrical parts, precision mechanics, surface scanning, complex 3D parts, turned parts, prismatic parts and contours.

PORTABLE CMMS TAKING METROLOGY TO THE POINT OF MANUFACTURE



Why should work pieces be brought to a far-off measurement lab when you can inspect them at the point of manufacture? Portable measuring systems allow you to take measurements directly in the manufacturing environment, where process improvements are the most beneficial offering simplicity of operation and ever-reliable 3D measurements. The effect: rapid and highly accurate measurements fed directly into production leading to cost savings and quality improvements.

Portable Measuring Arms are available in several size and accuracy configurations, can be equipped with different types of probes and scanning heads to measure even difficult-to-access points either optically or by touch. The attractive price-performance of these portable coordinate measuring machines when compared with other techniques means they are finding use in a wide range of industries.

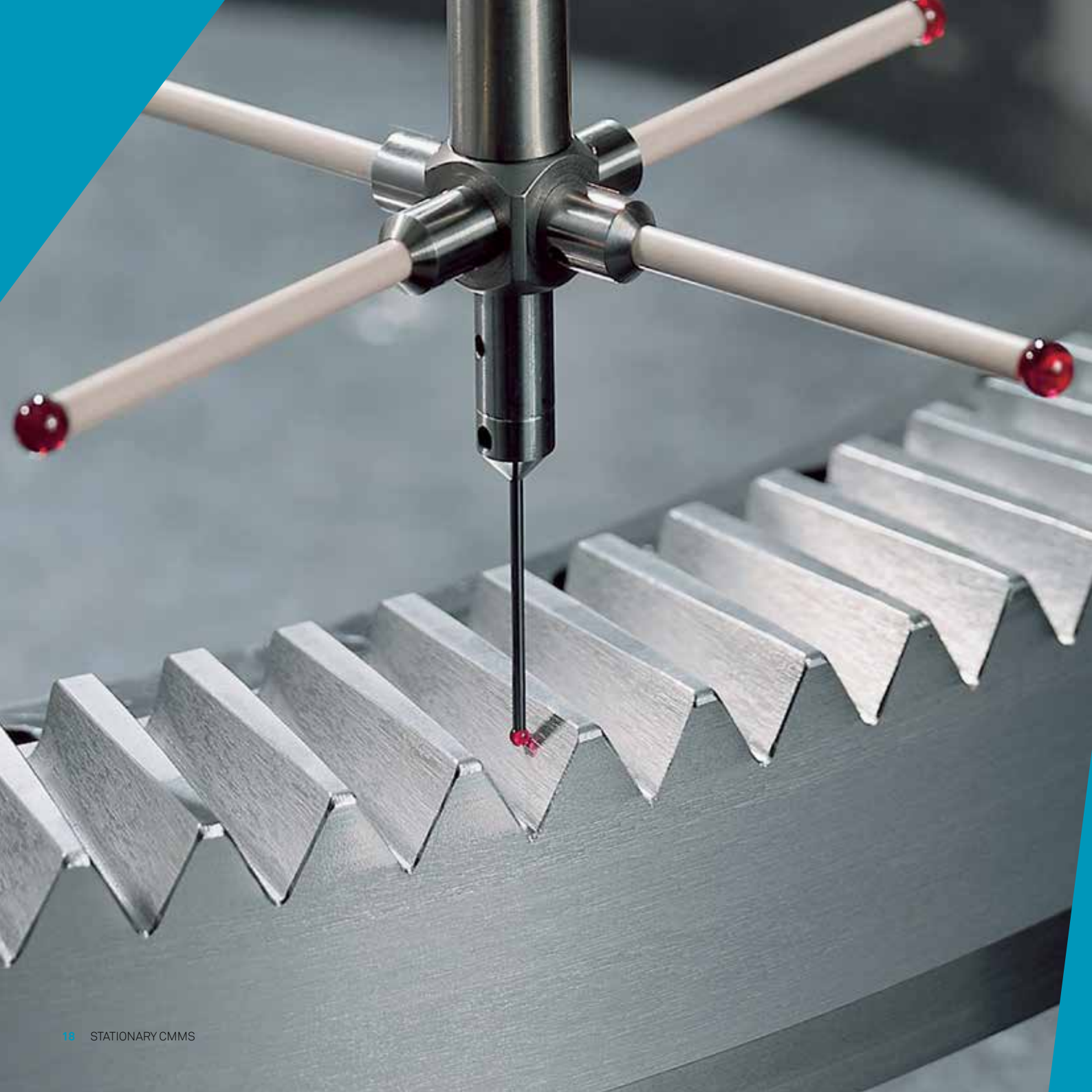
Laser Tracker Systems lead the field in terms of the accuracy, reliability and durability of portable coordinate measuring

machines. Expansion or automation of the system with hand-guided scanners, wireless probes or robot applications open up an enormous number of possible applications.

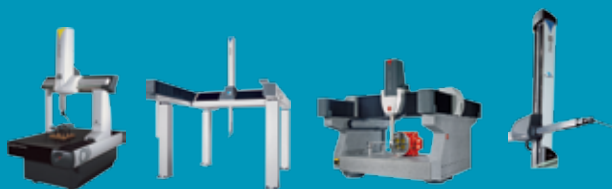
Industrial Theodolites and Laser Stations meet the highest standards even under tough conditions. The extreme measurement volume of up to 600 m makes a laser station the first choice for the inspection and assembly of very large components.

White Light Measurement Solutions are comprehensive 3D optical measurement solutions, focused on improving engineering and manufacturing processes in automotive and other manufacturing industries. 3 Dimensional Measurement is an increasingly significant strategy which allows manufacturing organizations to accelerate product introductions, reach higher product quality, reduce production costs and bring about higher profits for each product.





THE LARGEST RANGE OF STATIONARY CMMS IN THE WORLD



Stationary measuring systems from Hexagon Metrology are used across a whole range of industry applications. Whether for the high precision measurement of small parts for the watch making industry, or the large volume inspection of full size car bodies, Hexagon Metrology has a stationary measurement system to suit.

Bridge type CMMs

Measure small, medium and large parts three-dimensionally without having to sacrifice performance and accuracy. With sizes ranging from 4.5.4 (400mm x 500mm x 400mm) to 20.40.18 (2000mm x 4000mm x 1800mm) there is a model to suit almost any measurement requirement.

Gantry type CMMs

The largest stationary gantry coordinate measuring machines will give you gargantuan performance. It is not just the capacity of these giants of the world of coordinate measuring systems that leaves all others in the shade: they also impress with robust materials, a stable structure and high accuracy - on the production floor.

Horizontal Arm type CMMs

Designed for the inspection of sheet metal parts in the car industry, or other large-volume components in the aerospace, ship, defense, appliance, machinery and railway industries. Their open structure permits direct access to the workpiece and therefore significantly eases loading and unloading. Horizontal CMMs can also be integrated as a component of an automated production line such as automotive body-in-white.

Ultra High Accuracy and Gear Inspection Systems

These systems are built without compromise, ensuring the highest possible accuracy and repeatability.

Shop Floor Systems

Several machines are designed specifically for use on the Shop Floor where they are able to maintain high accuracy over large temperature ranges and other harsh environmental conditions in production, such as vibration and dirt.

SENSORS TO SUIT ALL APPLICATIONS



Whatever the application Hexagon Metrology has a sensor solution to match. With probing systems and styli for all portable and stationary measuring systems, including probing for on machine tool inspection.

Optical

For multisensor systems measurements are made using the high-resolution cameras, TTL (Through-The-Lens) lasers and the innovative Chromatic White Light Sensor (CWS).

Tactile

For coordinate measuring machines the range is a complete offering of touch probes, manual and motorized probe heads, analogue scanning probes, change racks, extensions and styli.

Portable

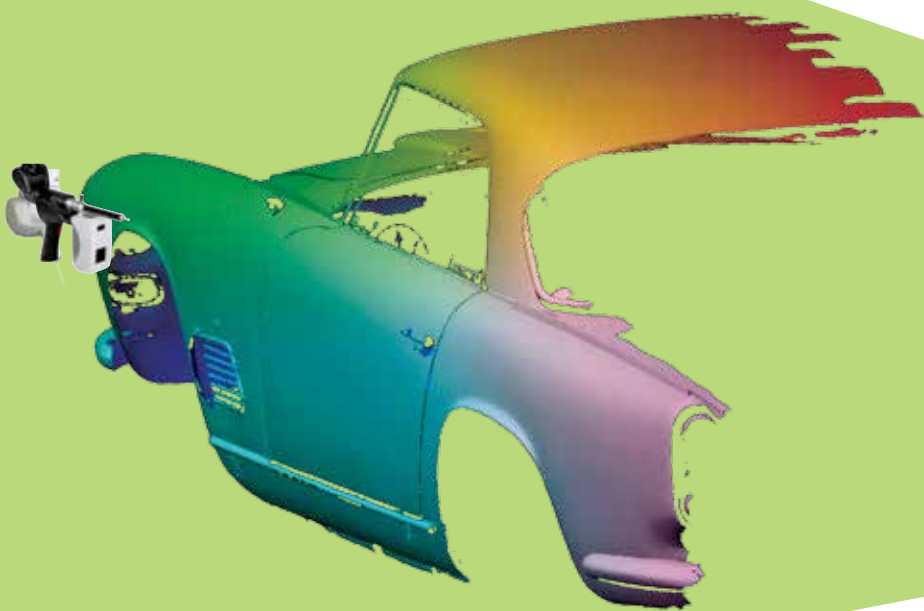
For portable systems Hexagon Metrology offers a wide range of interchangeable probes including hard probes, touch probes, infrared tube probes, laser line scanner systems and machine control sensors all designed to make the most difficult portable measuring tasks easier.

On Machine Tool

Machine tool probes measure workpieces directly on milling machines, machining centres, lathes, turning/milling machines, grinding machines, special machines and robots. Workpieces are not only aligned, but geometries are inspected while still on the machine. On machine tool probes facilitate daily work, reduce manufacturing time and costs and increase the possibilities of modern machines.

3D Laser Scanners

Laser scanners play a key role in quality assurance. 3D digital capture of shapes and surfaces using lasers is an effortless and precise process. The industry uses laser scanners primarily for the quality control of geometries and surface, but also for reverse engineering, fit and finish, and assembly applications.



SOFTWARE

THE HEART OF EVERY METROLOGY SYSTEM



Hexagon Metrology is the largest software developer in the metrology industry and offers a wide range of in-house developed, individually customizable software packages that deliver intelligent and effective acquisition, analysis, management and presentation of collected data.

Hexagon Metrology produces PC-DMIS, the world's most popular dimensional metrology software package, which offers many modules including CMM, vision, portable measuring arms, laser trackers, CNC machines, as well as options for devices that are "non-Hexagon Metrology" brands. For the measurement of gears, blades and other specialized geometry Hexagon Metrology's QUINDOS is the perfect solution.

SpatialAnalyzer® (SA) is a powerful, traceable and easy to use metrology and analysis software package, tailored for the Hexagon Metrology Portable CMM family.





WORLDWIDE SERVICE LOCAL TO YOU

A global service network to support customers from product enquiry to after sales needs.

Systems Consultation

Our specialists and engineers help select the solution that best suits specific manufacturing and inspection needs.

Training

Introductory to advanced metrology courses to optimize measurement productivity.

First Part Programming

Part programs developed by experts for proper start-up of inspection of new components.

Contract Inspection and Programming

A professional solution to production overload or unique measuring applications. Possibility of outsourcing dimensional inspection resources and activities to Hexagon Metrology.

Software Maintenance Agreements

Version updates and technical support for our market leading software packages.

Certification and Calibration

Regular certification and calibration to guarantee the highest levels of system accuracy and repeatability.

System Upgrades and Rebuilds

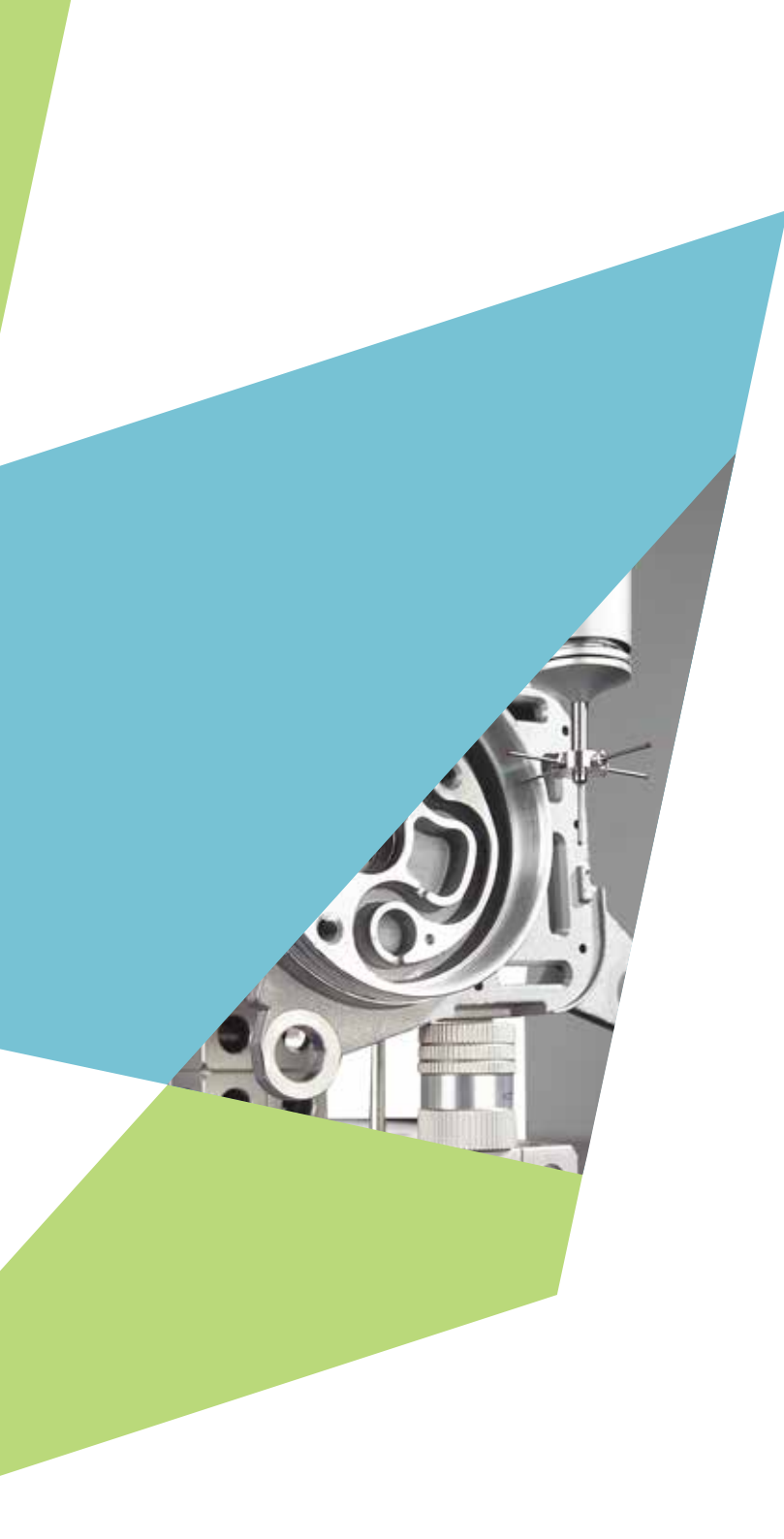
Old systems revitalized by combining advanced hardware and software with the existing equipment.

Service and Repair

Original Hexagon Metrology parts and certified factory service to keep systems running in peak condition.







WHY CHOOSE HEXAGON METROLOGY?

There are many kinds of measuring devices. But for a given measurement task there is usually only one true solution. The goal of Hexagon Metrology applications engineers is to develop this solution. Thanks to their extensive experience they know which system will best match your requirements.

The benefits are obvious: a tailor-made measuring system saves time and therefore costs. Naturally, the advice we provide does not end with the purchase of a system. Years after acquisition Hexagon Metrology customers profit from comprehensive service programs that are available with every installed device. And should the going really get tough, your Hexagon Metrology service engineer always has the right answer.

We have a network of Regional Precision Centers which are able to service a device at any time, upgrade a system to the latest version and train your measurement technicians. Measurement solutions from Hexagon Metrology – an investment that adds up.

For more information about how Hexagon Metrology can assist you, visit the website at www.hexagonmetrology.com

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Learn more at www.hexagon.com

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