



Micro-Hite
Handy and Cost-Effective CMM



Serving Metrology Worldwide

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METROLOGY



Micro-Hite

Micro-Hite, the line of small CMMs featuring excellent performance, is the result of the synergy among Hexagon Metrology companies in research, design and manufacturing. That's why Micro-Hite boasts the best price/performance ratio in the market.

Micro-Hite is suitable for use in small shops as well as in large operations, as a stand-alone, walk-up station for first part inspection, tool set-up or as a flexible gage. It is available in both the manual and CNC version.

The manual version, **Micro-Hite 3D**, is ergonomic and easy to use. It is therefore the ideal replacement of hand tools and gages.

The manual Micro-Hite 3D also features:

- Lock/unlock system for each individual axis.
- Z-Mouse, patented pointing device, that dramatically increases manual measurement throughput. Embedded in the machine Z column, it totally eliminates the need for the operator to move back and forth between the measuring machine and the computer.
- Hand control device: conveniently located on the machine table, it further speeds up measuring operations.
- Fine adjustment (option).

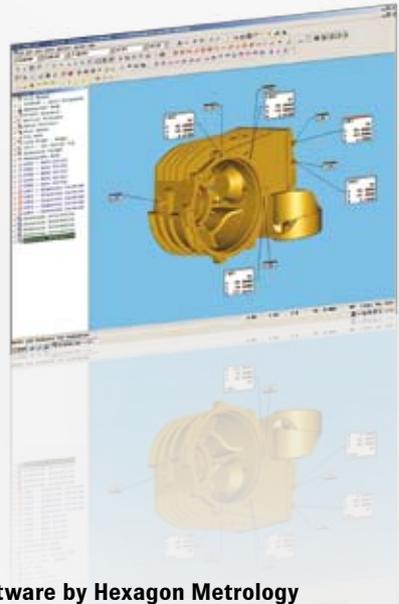
The automatic version, **Micro-Hite DCC**, features performance and flexibility typical of larger measuring volume CMMs.

Micro-Hite DCC is characterised by:

- High dynamics. Thanks to an advanced dual reduction belt drive system, the machine can reach high accelerations, typical of medium/large-sized CMMs. Positioning speed up to 350 mm/sec and acceleration up to 1730 mm/sec².
- Z axis pneumatic counterbalance system.

The powerful capabilities of **PC-DMIS™ software** allow to address any inspection application requirement. Measuring data is automatically collected and intuitive analysis reports are quickly generated.





PC-DMIS measuring software by Hexagon Metrology provides the most comprehensive solution to today's metrology applications.



is the perfect balance between power and ease of use.

It features:

- Intuitive graphic user interface (without CAD)
- Full programming environment, including high level programming functions
- Customisable menus
- Quick Starts™
- PTB certified algorithms
- Intuitive Probe and Go™ measurement
- Full suite of customisable reporting tools

Using Probe and Go measurement, just touch the feature of the part you want to inspect. PC-DMIS PRO automatically recognizes the feature type and creates an interactive graphical representation of the part on the screen.



Use the power of 3D CAD data to create part programs, both on line and off line, complete with graphical part models and probe path simulations. PC-DMIS CAD also allows to generate the geometry of unknown parts and computer models for reverse engineering applications.



It includes a complete suite of measurement routines that make the inspection of thin-walled parts (sheet metal, plastics, glass, etc.) faster and easier.



High Performance Swiss Made Probes

Micro-Hite is equipped with either of the Hexagon Metrology's high-tech touch trigger probing systems for CMMs that include both manual and motorized probe heads, automatic probe changers, probe extensions and styli.

- TESASTAR®, the best price/performance ratio manual swiveling probe with adjustable trigger force.
- TESASTAR-i®, repeatable manual index probe head with integrated sensor (adjustable trigger force). The indexing capability in 15° increments in both axes allows the probe to swivel through 168 positions without the need for recalibration.
- TESASTAR-m®, a state of the art motorized articulating probe head capable of indexing in 5° increments (roll: +180° to -180°; pitch: +90° to -115°). This translates to a total of 2,952 possible positions. The head also features high speed indexing, with faster index changes than similar products. It can be equipped with a comprehensive family of proprietary probes as well as other probe brands.

A modular (3, 5 or 9 modules), upgradeable, automatic tool changer allows probes and probing accessories to be exchanged automatically, without the need for recalibration.

A wide variety of styli is available to suit all application requirements.





Micro-Hite: Perfect in its Small Way

Advanced technologies, already successfully experimented on other Hexagon Metrology machine lines, allow Micro-Hite to achieve high performance and reliability.

- Computer design techniques, including Finite Element Analysis (FEA) and Modal Analysis, reduce structural deflections and the effects of vibrations and temperature variations on machine performance.
- TRICISION® technology improves the control of bridge axis roll for precise volumetric measuring accuracy.
- All aluminium construction improves thermal, dimensional/torsional and geometric stability of the machine.
- Thermally compatible materials and components minimize the influence of ambient temperature on measurement results, making the Micro-Hite suitable to operate both in the workshop and QC rooms.
- Off-centering of the masses for optimum geometric stability.
- 22 air bearings to ensure smooth and frictionless motion of the three axes.
- Patented glass scales along with non-contact, opto-electronic sensors.

Technical Specifications Micro-Hite 3D

Model	Measuring Strokes [mm]			Maximum Permissible Error (*) [μm]		Overall Dimensions [mm]			Max. Part Dimension [mm]			Max. Part Weight	Machine Weight
	X	Y	Z	MPE _E	MPE _P	Lx	Ly	Lz	Wx	Wy	Wz	[kg]	[kg]
454	460	510	420	3 + 4 L/1000	3.0	970	930	1620	600	750	480	227	210
474	460	710	420	3 + 4 L/1000	3.0	970	1130	1660	609	995	480	200	315

(*) according to VDI/VDE 2617 - L (mm)

Environment

Working temperature range	20 °C ± 1 °C
Max. temperature variation/day	1 °C
Operating temperature range	from 10 °C to 35 °C
Relative humidity	< 80 % non-condensing

Utility Requirements

Minimum air supply pressure	0.39 MPa
Air consumption	60 NI/min
Electrical supply	115 – 230 VAC; 50 – 60 Hz, 15 A
Maximum power consumption	600 VA



Machine stand available as option.

Technical Specifications Micro-Hite DCC

Models	Measuring Strokes [mm]			Maximum Permissible Error (*) [μm]		Max. 3D Speed	Max. 3D Acc.	Overall Dimensions [mm]			Max. Part Weight	Machine Weight
	X	Y	Z	MPE _E	MPE _P	[mm/s]	[mm/s ²]	Lx	Ly	Lz	[kg]	[kg]
454	460	490	390	2.5 + 3.9 L/1000	3.0	350	1730	1080	1160	2320	227	223
474	460	690	390	2.5 + 3.9 L/1000	3.0	350	1730	1080	1280	2320	200	325

(*) according to ISO 10360-2

Probe for performance test: TESASTAR-i, stylus ø 4 mm, L = 21 mm

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DEA

Since 1963, DEA has been one of the world's premier brands in Coordinate Measuring Machine technology. The main facilities are located in the Torino area (Italy), where highly skilled teams of mechanical, electronic and software engineers are committed to the continuous development of state-of-the-art solutions for dimensional quality inspection. DEA products are used by virtually every industry in every geographical market throughout the world.

Hexagon Metrology

Hexagon Metrology is part of the Hexagon group and brings leading brands from the field of industrial metrology under one roof.

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PC-DMIS® algorithms are PTB certified.

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