

*affordable SuperPrecision...*

## *When Size Does Matter!*



Small CMM for Ultra-High 3D Accuracy

Unheard of Value

Measure

Scan

Reverse Design

Small Footprint

Durable & Reliable

Ultimate Laboratory Instrument

**madeinusa**

**HELMEL**

Builders of Coordinate Measuring Machines since 1973

## Finally, the highest CMM accuracies are available to everyone.

Until Microgage, the cost of this level of 3D precision has been 3 to 10 times higher, and the choices have been limited to much larger machines. The need for the highest precision is often found in the smallest parts, yet there has been no choice but to buy a relatively huge CMM for these tasks, wasting money and valuable floor space.

### The right CMM at the right time.

Microgage is modeled on the World's most precise machine tools, having a rigid fixed bridge design made of steel. And like machine tools, the mechanical bearings and guide ways, along with motors and scales, are covered and protected for durability, stability, and life-long value. Bearings are classified within 120 nanometers in X and Y, and the entire structure is stress-relieved and thermally shielded inside and out, as well as vibration dampened. Accuracy is intrinsic: there is no software error correction, just pure physical precision. If high precision in small and medium sized parts is your game, Microgage is the answer made simple, whether in the lab or for production. In a world going micro, the Microgage has arrived!



### Geomet's software simplicity, yet full with analytical tools.

Hemel's Geomet CMM software has been praised for 30 years as efficient, practical, and easy to learn and use. At the same time it provides all the tools you need to make thorough, competent dimensional evaluations of features and relationships. It's great for starters, and easy to expand to a larger pallet of tools when needed.

#### A measure-ready high accuracy system includes:

- Tool steel part stage
- Steel 0.1  $\mu\text{m}$  encoder scales
- Sealed bearings and guideways
- Ergonomic Desk
- Renishaw PM1/TP20 electronic touch probe with styli\*
- Current PC with LCD monitor
- Latest Windows® operating system
- Delta Tau motion controller\*
- Powerful Geomet 101 3D software, upgradable\*
- Printed user guide and online help for Geomet
- Calibration sphere and iconic keyboard labels
- GeoWidget training artifact
- 1 Year warranty

\* The Model 128-801 is offered with an optional scanning package that includes the Renishaw UCC2 controller, SP25 probe, and 501 level Geomet.

Many options are available to tailor your Microgage system to your exacting requirements, and custom modifications for special requirements are also possible.

#### Specifications

Model Number	906-501	128-801
Measuring Range:	X 150mm (6")	200mm (8")
	Y 225mm (9")	300mm (12")
	Z 125mm (5")	200mm (8")
Overall Size:	X 400mm (16")	510mm (20")
	Y 600mm (24")	820mm (32.3")
	Z 700mm (28")	890mm (35")
Weight:	225 lbs (102kg)	260 lbs (118kg)
Resolution:	0.1 $\mu\text{m}$ (0.000004")	0.1 $\mu\text{m}$ (0.000004")
Performance:		
Per ISO 10360-2:		
	MPEp: 2.6 $\mu\text{m}$	TBD
	MPEe: 2.9 + L/1000 $\mu\text{m}$	TBD
Per ANSI B89.4.1a:		
	Repeatability: 0.7 $\mu\text{m}$ (0.00003")	TBD
	Linear: 1.8 $\mu\text{m}$ (0.00007")	TBD
	Volumetric: 5.8 $\mu\text{m}$ (0.00023")	TBD
Utility:	100-240 VAC, 50-60 Hz, 10A	

Based on a Renishaw PM1/TP20 with 10mm stylus length, at 20°C (68°F) and 50% humidity. Accuracy is mechanically intrinsic without volumetrically compensating software.

Contact Helmel for the full range of options, accessories and training



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Builders of CMMs Since 1973

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