1M - Series

iCROSTAR

Microstar 1M

Highly Accurate CMM
Reliable, Rugged, Fast

Intelligent Design

Broad Range of Sizes

Trigger Probes or Continuous Scanning

Inspect, Scan, Digitize

Reverse Engineer

Flexible Solutions for every Need



madeinusa

HELMEL

Builders of Coordinate Measuring Machines since 1973

Helmel Microstar 1M Series



Model Number	Travels X	Y	Z	Overall Dimensions W	L	H
640-402	40" 1015mm	60" 1525mm	40" 1015mm	70" 1780mm	104" 2640mm	142" 3610mm
840-402	40" 1015mm	80" 2030mm	40" 1015mm	70" 1780mm	124" 3150mm	142" 3610mm
1040-402	40" 1015mm	100" 2540mm	40" 1015mm	70" 1780mm	144" 3660mm	142" 3610mm
1240-402	40" 1015mm	120" 3050mm	40" 1015mm	70" 1780mm	164" 4165mm	142" 3610mm
650-402	50" 1270mm	60" 1525mm	40" 1015mm	80" 2030mm	104" 2640mm	142" 3610mm
850-402	50" 1270mm	80" 2030mm	40" 1015mm	80" 2030mm	124" 3150mm	142" 3610mm
1050-402	50" 1270mm	100" 2540mm	40" 1015mm	80" 2030mm	144" 3660mm	142" 3610mm
1250-402	50" 1270mm	120" 3050mm	40" 1015mm	80" 2030mm	164" 4165mm	142" 3610mm
660-402	60" 1525mm	60" 1525mm	40" 1015mm	90" 2285mm	104" 2640mm	142" 3610mm
860-402	60" 1525mm	80" 2030mm	40" 1015mm	90" 2285mm	124" 3150mm	142" 3610mm
1060-402	60" 1525mm	100" 2540mm	40" 1015mm	90" 2285mm	144" 3660mm	142" 3610mm
1260-402	60" 1525mm	120" 3050mm	40" 1015mm	90" 2285mm	164" 4165mm	142" 3610mm

[1]SPECIFICATIONS:

Resolution: 0.5 µm

Model:	**Y40-402**	**Y50-402**	**Y60-402**
MPE_p:	4.1 µm	4.8 µm	5.9 µm
MPE_e:	4.1+5L/1000	4.8+6L/1000	5.9+7L/1000

Performance: per ANSI B89.4.10360.2-2008. Performance is based on dynamic measurements with TP20 touch trigger probe and 20mm stylus length. Tests are at 68°F and 50% relative humidity.

Utility: 120-230V~, 50-60Hz, 20A grounded main power supply. Compressed Air Supply 85PSI @5CFM.

Helmel DNA:

Since 1973, a common genetic thread has run through all Helmel CMMs reflecting a philosophy and culture of sound mechanical designs, properly constructed, and coupled with leading probe systems and software that is powerful, efficient, and simple. Our objective is to provide customers with a durable and long lasting precision CMM that is affordable, economical to operate, easy to learn and use, and delivers decades of value and return on investment. It is an added bonus that Helmel is a stable company who will promptly provide knowledgeable service and support.

All Helmel Coordinate Measuring Machines have bearing systems characterized by strong bearing ratios, design emphasis on balance, attention to the center of moving mass, and optimized drive locations. Our CMMs are constructed with Intrinsic Mechanical Accuracy – **IMA**: they are physically straight, flat, square, and true, with precision derived from the structure. In most cases the introduction and expense of error mapping is not required. When applied, however, it is built on top of a sound and physically accurate structure[1].

Turn off error mapping on any competitive machine and you reveal a poor underlying product, for which you pay a dear price. Mapping is done to reduce production costs, but it will cost you more each time you need calibration because error correction files are hidden behind password protection only the OEM can access, binding you to their higher priced services for years. All calibration files on Helmel CMMs are open and accessible.

The design of our 1M Series incorporates a hybrid bearing system, with a combination of mechanical and air bearings, each utilized to take advantage of optimum performance characteristics.

We are a vertically integrated manufacturer with all key processes in-house: concepts, prototyping, mechanical and electrical design, machining, grinding, welding, painting, electronic and controller assembly, motion control and GEOMET metrology software development, system build, calibration and test, installation, training, and ongoing service and support. Helmel takes total responsibility for our products. We are still servicing Helmel products over 35 years old.

We recognize that our customers have a broad range of needs in the way they use our CMMs. Alongside our own Geomet software, Helmel offers alternative CMM software systems and options that are suited to the varying requirements of our end-users. Whether your needs are for "self-teach" programming, on-line or off-line CAD based programming, advanced probing or multi-sensor, scanning, reverse engineering, one-of-a-kind or high volume runs, automation and process control, or for laboratory or production floor, we can offer a machine-probe-software configuration ideally suited to your requirements.

The Standard MICROSTAR 1M System includes:

- Dual beam bridge design
- Bearings, ways, drives and scales are covered, shielded or guarded
- Precision bearings on hardened & ground or granite ways
- Non-contact optical steel scales mounted on steel structures
- Granite base
- 3/8-16 clamping inserts
- Machine cabinet with controller and PC on casters
- Rugged 3-axis joystick
- Latest computer hardware
- Flat panel LCD monitor
- Pull-out keyboard with GEOMET keyboard keylabels
- GEOMET 101 DCC software
- Training part and manual
- 1" calibration sphere
- 1 Year Warranty
- Installation, Calibration, Training

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Contact Helmel for the full range of options, accessories, and training.
1-800-BEST-CMM (1-800-237-8266)

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