

RB - Series

# PHOENIX

## Measureably the Best Coordinate Measuring Machine Value in America



*Fully Automatic Helmel  
Phoenix ready for your floor*

**UNDER \$20,000!**

*Measuring Range:  
12" x 12" x 10"*

*Intrinsically Accurate  
No Error Map*

*Easy-to-Learn GEOMET  
CMM Software*

*Helmel/Delta Tau  
Controller*

*Latest PC, LCD Monitor  
and Joystick*

*Renishaw Touch Trigger  
Probe System*

*High Reliability  
Shop Floor Protection*

*Self-Installable, Affordable  
and Economical to Own*

*Made in USA  
By America's CMM Builder*

*low energy  
compressorless*

# HELMEL

Builders of Coordinate Measuring Machines since 1973

# PHOENIX RB



## SPECIFICATIONS:

**Model Number** 112 RB

**Measuring Range**

X	12" (300mm)
Y	12" (300mm)
Z	10" (250mm)

**Weight** 440 lbs. (200 kg)

**Resolution** 0.00002" (0.5µm)

**Repeatability** 0.00012" (3 µm)

**Volumetric Accuracy** 0.00032" (8 µm)

**Linear Accuracy** 0.00018"+0.000006"/in. (4.5+L/150) µm, L=mm

**Performance per ANSI B89.4.1a-1998.** Performance is based on dynamic measurements with touch trigger probe and 300mm Ball Bar. Tests are at 68°F and 50% relative humidity.

**Utility:** 120-230V~, 50-60Hz, 10A grounded main power supply.

## The Standard PHOENIX RB System includes:

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

## 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 trustworthy, 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 mechanical bearing systems characterized by strong bearing ratios, design emphasis on balance, attention to the center of moving mass, and optimized drive locations on powered machines. Our CMMs are constructed with Intrinsic Mechanical Accuracy – **IMA**: they are physically straight, flat, square, and true, with precision derived from the structure, not from software error mapping. That is our *Credo*.

***Intrinsic Mechanical Accuracy is standard in every Phoenix. Performance is delivered without 3D error correction software.***

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. Error correction files are hidden behind password protection only the OEM can access, binding you to their higher priced services for years. A Helmel CMM employs scale correction factors only, and ours are open and accessible files.

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 30 years old.

Helmel's **GEOMET® CMM Software System** has been an industry leader since the early 1980's. Like our machines, there has been a continuity of concepts, and a fundamental goodness in ease and efficiency, that runs through the decades. A user of early HP Basic Geomet would have little difficulty to walk up and use the later DOS versions, or today's Windows versions, because the operating principles have not changed. The user interface, though vastly updated with graphical and Windows functionality, remains recognizable through our parallel iconic keyboard keylabel interface trademarked "Keystroke Magic™". Users inevitably gravitate to this ultimately efficient interaction with Geomet.

**HELMEL**  
*Builders of CMMs since 1973*

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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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