

DELTRONIC Known-Size Masters

\$2500
PER
GAGE
*

Cylindricals with actual size certified to within 2 1/2 millionths (.000,002,5")



The Deltronic Metrology Laboratory now offers low cost master cylindrical standards with "known-size" diameters as calibrated to the nearest five millionths (.000,005") and roundness charted to the nearest millionth (.000,001").

Any .0001" step size from Deltronic's gage stocks in the range .0070" to 1.0120" is available with calibration.

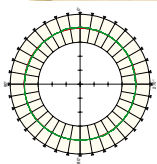
Each Known-Size Master is supplied with a Certificate of Calibration showing the exact size near each end of the gage, plus a roundness calibration (polar chart) shown to the millionth by our Taylor-Hobson Talyrond 265 (see below).

Known-Size gages can be used as setting masters to "zero" electronic comparators, supermikes, air gage rings, etc. Example of use: A half-inch Known-Size Master is selected for setting a comparative instrument. Its calibration

certificate shows the master's diameter to be .500,025". The electronic amplifier is set to zero plus 25 millionths, the actual size of the master, in order to read exactly zero when a part that is exactly a half-inch is measured on the comparator.

Diameter calibrations are accompanied by the NIST number assigned to our National Institute of Standards and Technology-calibrated master blocks.

*For the Known-Size Masters service add just Twenty-Five dollars (\$25.00) to gage prices listed on page 4. Shipment will be delayed one day. If you have priced setting masters or even Class "XXX" gages, you can fully appreciate the savings in this price for Known-Size Deltronics.



DELTRONIC Certified Tolerances

National Institute of Standards and Technology Calibrated Masters

Certificate of accuracy and traceability to the National Institute of Standards and Technology (NIST) is included with every Deltronic gaging product. This no-charge feature has its foundation in masters calibrated for us by the National Institute of Standards and Technology. In order to translate the Institute's measurements to the production of an accurate gaging product, there are three essential elements required. First, knowledgeable and experienced personnel; second, a suitable gage making/measuring environment; third, production and measuring equipment with inherent accuracy and resolution to satisfy the millionths requirements of our end products. Through many years of gage making experience Deltronic has evolved a "mix" of these essential elements to provide our customers with the maximum in consistent product quality at minimum cost.

ENVIRONMENT

The Metrology Laboratory maintains a "White Room" environment with limited access and a separate air temperature/filtration conditioning system, which maintains temperatures within two degrees Fahrenheit. This environment is provided for personnel and equipment required to calibrate working-master gages, which are cycled by comparison with NIST calibrated masters yearly or more often.

To maintain the integrity of this system of masters, both production inspection and finish lapping operations are performed at temperatures of 68 degrees plus or minus 2 degrees F, monitored with polar chart recordings.

GAGE MEASURING EQUIPMENT

To insure the conformance of production gages to NIST masters, the ultimate in inspection equipment is available and in constant use, not only in Deltronic's Metrology Laboratory, but in production and inspection departments as well.

Roundness — (TAYLOR-HOBSON TALYROND 265)

Permanent polar charts record roundness of Deltronic cylindrical gages and thread and gear wires to a resolution of one millionth. Similar machines are used by various government agencies, prime aerospace contractors and the finest metrology laboratories around the world.

Hardness — (ROCKWELL HARDNESS TEST-ED)

"Wearability" is assured through constant surveillance of hardened blanks and production samplings to maintain Deltronic's guaranteed Rc 62-64 hardness.

Surface Finish — (TAYLOR HOBSON INTRA SURFACE FINISH MEASURING SYSTEM)

Surface Finishes are continually monitored with this system. With its automatic motors and computer control, this system has the sub-microinch resolution allowing us to measure the approximately one microinch surface finish to which all Deltronic Gages are lapped.

Diameter — (FEDERAL MILLIONTH RESOLUTION GAGE BLOCK COMPARATOR)

The millionth measurement capability of this electronic equipment is used for white room measurements of inch and metric cylindrical grand masters. Similar millionth measurement equipment is utilized throughout the lapping process to provide consistent determinations of exact diameters.

