



ohmic instruments co.

508 August Street, Easton, Maryland 21601
(410) 820-5111 (800) 626-7713 Fax (410) 822-9633
www.ohmicinstruments.com
e-mail: ohmic@ohmicinstruments.com



INDUSTRIAL & ENVIRONMENTAL SENSORS, INSTRUMENTS & CONTROLS SINCE 1969

**CLIMATE CHAMBER MODEL S-904
HIGH ACCURACY HUMIDITY/TEMPERATURE CALIBRATION SYSTEM**

- **SELECT RH LEVELS FROM 5 TO 95 %RH**
- **ACCURACY TO $\pm 1\%$ RH, NIST TRACEABLE**
- **LED DISPLAY OF %RH AND TEMPERATURE**
- **TEMP SET FROM 10 TO 50 °C ± 0.1 °C**
- **RESPONSE: 2% RH / MINUTE CHANGE**
- **INTERNAL WET AND DRY RH SOURCE**
- **COMPUTER CONTROLLED INTERFACE**
- **LARGE TEST CHAMBER 4.0 x 4.0 x 6.25 IN**



**COST EFFECTIVE ALTERNATIVE TO A DUAL PRESSURE CALIBRATOR
A PRECISE SOURCE TO CALIBRATE RH AND TEMPERATURE INSTRUMENTS**

The S-904 Climate Chamber enables users of humidity sensors and transmitters to accurately generate reference humidity and temperature conditions. The unit performs over a wide RH and Temp. range with a high accuracy, traceable to NIST standards.

PRINCIPLE OF OPERATION: Model S-904 consists of a stable, highly accurate temperature and humidity control system. The self-contained unit utilizes accurate capacitance RH and Temp. sensors and controllers. In operation the system modulates the flow of air through a saturation and drying chamber. A ventilator continuously circulates air through the test chamber for maximum humidity and temperature uniformity. This results in a system that will stabilize to within 0.1% RH and 0.1°C of the setpoint in a short time.

TECHNICAL INFORMATION: For control applications the calibrator is equipped with the convenience of a built in DB-25 connector to interface with the system controller and the probes being tested. The unit has a 4.0 x 4.0 x 6.25 inch test space to hold multiple probes for evaluation. A 5-inch double o-ring disc seals the chamber. Front access to the water reservoir and desiccant tube enables easy maintenance and replacement .

The unit is powered by 85-264 VAC and includes a detailed manual . The only maintenance required is periodic replacement of readily available drying agent in the desiccant chamber and refilling of the saturator chamber with distilled water. The Model S-904 was designed for long term continuous operation. The system control may be turned on or off manually or through an external computer.

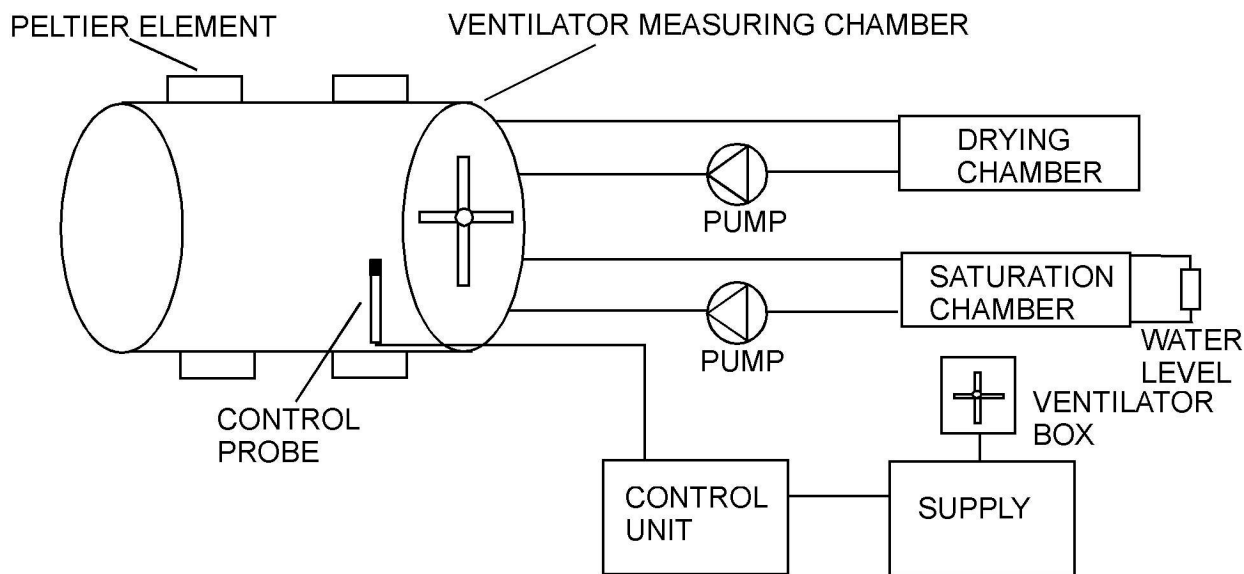
WARRANTY: All products manufactured by OHMIC Co. are warranted to be free of defects in material and workmanship for one year after delivery. Any equipment found to be defective within this period will be repaired or replaced free of charge.

SPECIFICATIONS - MODEL S-904

| | |
|--------------------------------|---|
| Power | 85 to 264 VAC, Power cord supplied |
| Humidity Range | 5-95 % RH |
| %RH Accuracy | ± 1% 10-70 %RH, ± 1.5 % 5-95 %RH |
| %RH Stability | Better than 0.2% RH |
| Stabilization Time to Setpoint | 2% RH per minute (20.....80 %RH) |
| Temperature Range | 10-50°C, (50-122°F) @ 20°C ambient temperature |
| Temperature Accuracy | ± 0.1°C, (±0.18°F) |
| Display | 3 Digit LED, 14 mm |
| Saturator Chamber | 10ml Capacity |
| Dimensions | 530 x 300 x 430mm (21 x 12x 17 Inches) |
| Probe Entry | 1 3/4 inch probe entry or 4.0 x 4.0 x 6.25 inch chamber |
| Weight | 20 Kg (44.0 Lbs) |

CHAMBER PRINCIPLE OF OPERATION

The measuring chamber has a dual wall system with airflow between the walls to guarantee a homogeneous temperature and humidity in the chamber. The outer wall is temperature controlled at 4 locations with matched high accuracy sensors. The temperature in the inner chamber is measured separately and this signal is used to correct the controllers. The humidity is maintained by saturation and drying chambers with separately controlled pumps.



ENGINEERING SUPPORT: OHMIC Instruments Co. designs and manufactures a full line of sensors, environmental and bio-medical instruments and controls. Many of our products are custom designed to meet specific requirements. Our engineers will be pleased to discuss your application.



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