



GC-1 Relative Humidity Generator

*For reliable and cost-efficient
calibration of large and
multiple RH instruments*

Features

- Built-in chilled-mirror hygrometer for continuous control of relative humidity
- NIST and CETIAT Traceable
- Large 4 cubic foot capacity chamber to accommodate multiple RH instruments
- Continuous digital control
- Prostep software automatically controls entire RH calibration cycle
- Fluid-jacketed chamber to ensure constant chamber temperature
- Fast, convenient, and cost effective method to calibrate RH equipment
- Clear Plexiglass chamber lid
- Casters for convenience and greater mobility
- Available in Standard and Variable-Temperature Models
- Variable-Temperature Model includes chiller

Options

- Glove box cover available to allow for on-line calibrations
- Built-in gas dryer

Applications

- Metrology Laboratories
- Calibration Laboratories
- Pharmaceutical Applications
- And Many More

The Model GC-1™ Relative Humidity Generator consists of a large 4 cubic foot capacity chamber designed to perform traceable calibrations of several large RH instruments or many small instruments. The GC-1 delivers highly accurate and repeatable calibrations in less time and at a lower cost than the competition.

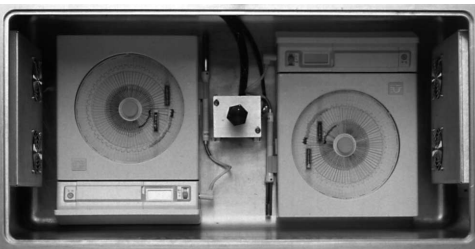
The GC-1 is based on the proven divided flow technology made popular in the Model C-1 RH generator, General Eastern's portable RH test chamber. Divided flow in the time domain excels as a reliable method for accurately controlling relative humidity at a fixed temperature.

The user supplies a source of dry gas to the generator and provides distilled water to fill the

saturation. The desired RH is selected on the front panel. Relative humidity is automatically controlled by time proportioning a fraction of a constant flow dry air stream through a saturator and into a mixing chamber. The saturated air rejoins the remaining dry air and mixes to the desired RH value before flowing into the test chamber. The large chamber will accommodate numerous RH probes or several humidity recorders for efficient, simultaneous calibration.

The GC-1's continuous digital control, and the built-in General Eastern chilled mirror dew point hygrometer make the GC-1 a traceable relative humidity transfer standard. Therefore, calibrations meeting the requirements of ANSI Z540-1-1994, 10CFR-50 and ISO 9001 can be performed.

Included with the GC-1 is the Prostep™ software package which allows the user to create and run user-defined RH values versus time test profiles in the GC-1. Custom test profiles can be created on a desktop computer and downloaded to the GC-1 via a standard RS-232 serial port.



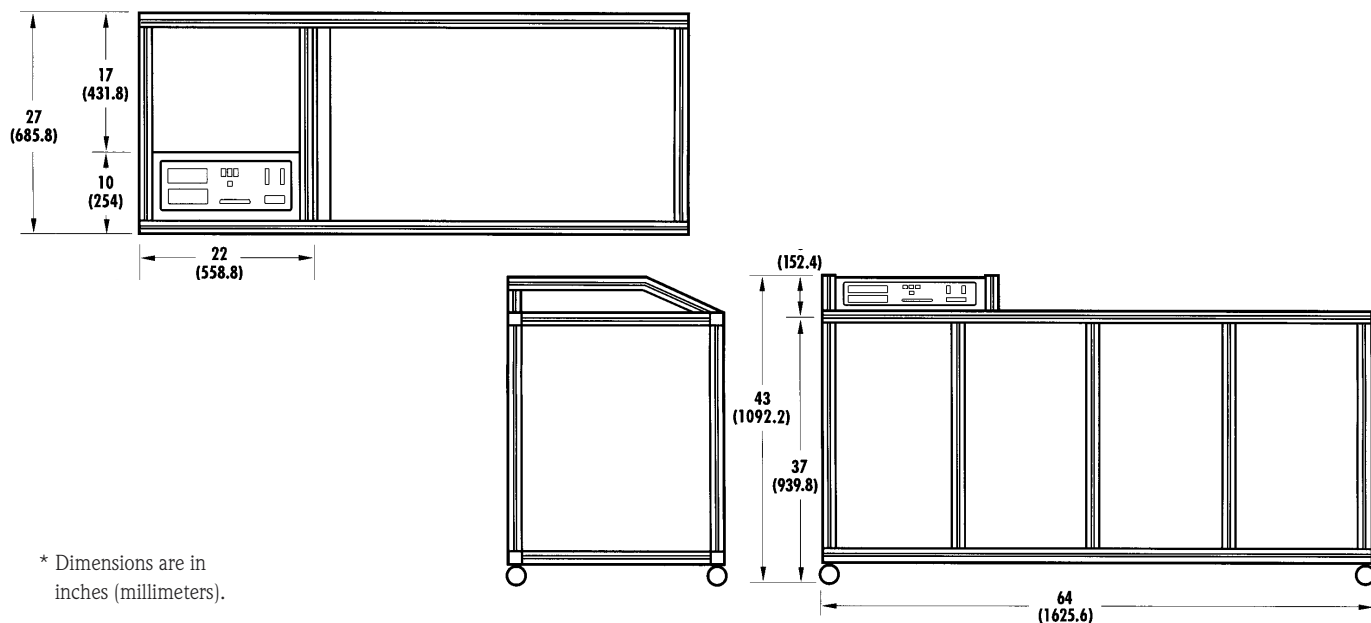
The GC-1's chamber is large enough to hold two humidity recorders or several smaller instruments.



GE Measurement & Sensing Technologies

General Eastern Instruments

SPECIFICATIONS / DIMENSIONS*



* Dimensions are in inches (millimeters).

Specifications Common to Both GC-1 Models

Operating Voltage	110/115VAC or 230VAC (Specify)
Vol. of Distilled Water Required:	Approximately 26 gal. (99 liters)
Dry Gas Requirement:	Frost point -40°F(-40°C) or lower Clean, oil-free gas regulated at 20 psig @ 50 SCFH (1.38 Bar @ 25 l/min)

Note: If you are using the optional DR-1 dryer, ordinary compressed air at 100 psi (7 Bar) with a dew point of +50°F(+10°C) or lower will suffice.

External Dimensions:	43 in. high x 64 in. wide x 27 in. deep (109.2 cm. high x 162.6 cm. wide x 68.6 cm. deep)
Test Chamber Dimensions:	14 in. high x 32.9 in wide x 16.9 in. deep (35.6 cm. high x 83.6 cm wide x 42.9 cm. deep)
Test Chamber Volume:	4 ft ³ (0.1132m ³)
Chamber Access:	Top loading, opening 29 in. wide x 14 in. deep (73.7 cm wide x 35.6 cm deep)
Cover Material:	Clear Plexiglass, can be drilled and/or slotted for cable access by user
Test Chamber Material:	Anodized Aluminum
Programmability:	Calibration profile may be programmed with GC-1 Prostep software
Range:	to 90% R.H.
Operating Environment:	Temperature stable within 2°F (1°C) between 68° and 86°F (20° to 30°C)
Time to Set-Point:	Approximately 60 minutes*

*With stabilized water temperature
Specifications are subject to change without notice.

Standard GC-1 Specifications

Accuracy:	1% R.H. between 10 and 80% R.H. 1.2% R.H. between 80 and 90% R.H. (at ambient temperature 68°F to 86°F) (20° to 30°C)
Stability:	0.2% R.H. at 20-80% R.H. 0.4% R.H. at 10-20 and 80-90% R.H.

Variable-Temperature GC-1 Specifications

R.H. Accuracy:	At chamber temperatures of 86° to 140°F (30° to 60°C) and 41° to 68°F (5° to 20°C): ± 1.5% R.H. between 20 and 80% R.H. ± 2.0 % R.H. between 10 and 20% and 80 to 90% R.H. At chamber temperatures of 68° to 86°F (20° to 30°C): ± 1% R.H. between 10 and 80% R.H. ± 1.2 % R.H. between 80 and 90% R.H.
R.H. Stability:	At chamber temperatures of 68° to 86°F (20° to 30°C): ± 0.2% R.H. between 20 and 80% R.H. ± 0.4 % R.H. between 10 and 20% and 80 to 90% R.H. At chamber temperatures of 41° to 68°F (5° to 20°C): ± 0.3% R.H. between 20 and 80% R.H. ± 0.5 % R.H. between 10 and 20% and 80 to 90% R.H. At chamber temperatures of 86° to 140°F (30° to 60°C): ± 0.3% R.H. between 20 and 80% R.H. ± 0.5 % R.H. between 10 and 20% and 80 to 90% R.H.
Temperature Stability:	At chamber temperatures of 41° to 68°F and 86° to 140°F (5° to 20 °C and 30° to 60°C): ±0.6°F (± 0.3°C) At chamber temperatures of 68° to 86°F (20° to 30°C): ± 0.2°F (0.1°C)



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