

QUANTACHROME

Hydrosorb™ 1000



Water Vapor Sorption Analyzer

Quantachrome's Hydrosorb 1000

Water sorption behavior plays an important role in the manufacture and design of many commonly encountered materials. Some examples include:

- Drying and storage of grains
- Shelf life of food products
- Stability of pharmaceutical substances
- Effectiveness of coatings for dental stain resistance

Water sorption measurement has traditionally been either slow and laborious, or costly and limited to small quantities of material. The **Hydrosorb 1000** is the latest innovation in water sorption characterization and overcomes these limitations. It offers fully automated, rapid measurement of adsorption and desorption water isotherms including BET surface area calculations and heats of adsorption. Sample temperature is thermostatted in the range 12-47 or 12-85°C; accurate water vapor dosing is made possible by using a unique, heated (100° C) manifold design. The fully integrated control system provides color real-time status, graphical data review and reporting functions via built-in color monitor and printer port. Data (ASCII format) can be uploaded to a PC via RS232 for importing into popular spreadsheet programs for further manipulation.

HYDROSORB™ 1000 SPECIFICATIONS

Physical

Depth::	58 cm (23 in.)
Width::	55 cm (22 in.)
Height:	73 cm (29 in.)
Weight:	150 kg (68 lbs.)

Electrical

Mains:	100-240V AC
	50/60Hz
Power:	1000 VA

Environmental Requirements

Temperature:	15 - 50°C
Maximum Ambient RH:	80%

Temperature Controller & Oven Specifications

Temperature Control:	+/- 0.3°C @ 100°C
Manifold Temperature Gradient	+/- 0.3°C @ 100°C

Analytical Capabilities

Po Range:	10 - 80 mm Hg (Standard), 10 - 440 mm Hg (HT model),
Bath Temperature range:	12.0 - 47°C (Standard), 12.0 - 85°C (HT model)

Required Utilities

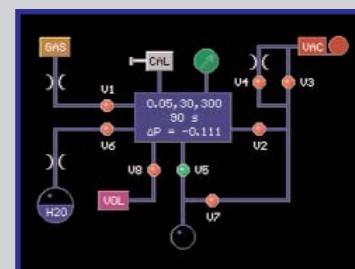
Vacuum pump (20µm or better)
Nitrogen or Helium Gas
Temperature Controlled Recirculator

Optional Accessories

Flow or FloVac Degasser
MasterPrep Degasser
Printer

Transducer Specifications

Pressure Resolution:	0.0015 mm Hg
Accuracy :	0.1% FS (includes non-linearity, hysteresis, and non-repeatability)
Sample RH% range:	0.25% to 99.5%, 0.25% increments
Equivalent mass resolution:	better than 0.05 micrograms (allows comparison with gravimetric methods)
Operating Temperature:	0 - 115°C (limited to 100°C by the Hydrosorb)
Overpressure Limit:	35 PSIA



Graphic Status Display



Built-in printer port for reporting options

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Serving Porous Materials
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