

# HumiPyc Model 1 Specifications:

<b>Analytical techniques:</b>	Volume (density) determination at precise RH and temperature conditions (No-Elutriation), Relative Humidity Analysis, Multiple Headspace Extraction, (optional) permeation of gases and vapors through membranes)
<b>Operational mode:</b>	Fully Automatic (Windows® based Software) and Manual Mode
<b>Sample chamber:</b>	Maximum volume about 125 cc, (5.3cm OD x 5.7cm H) (2.1"OD x 2.25"H), several adapters for reducing volume are supplied
<b>Sample containers:</b>	No special containers required, commonly available containers (with lids, caps) of standard sizes can be used, several different types are supplied.
<b>Sample treatment:</b>	Sample treatment to specified criteria; programmable and continuous pressurization/depressurization cycles or vacuum; introduction of vapors (manual mode only).
<b>Volume calibration:</b>	Using SS spheres (Set of Large spheres (0.5" -2"), Set of micro spheres (1 – 4mm), optional set of medium spheres (1mm – 25 mm or 1/8"-1"), Grade 25 or better)
<b>Detection limit (volume repeatability):</b>	<±0.010 mL
<b>Standard deviation of repeatability:</b>	< 0.005
<b>Resolution of data acquisition:</b>	24 bit
<b>Pressure mode:</b>	Continuous and rate programmable pressurization and depressurization of samples, programmable pressure steps
<b>Pressure range:</b>	(transducer dependent), typically 344.7 kPa (50 psia), absolute
<b>Transducer selection:</b>	Absolute, Gauge, Barometric, (common ranges)
<b>Transducer accuracy:</b>	(transducer dependent), typically ±0.11%FS, ±0.073%FS optional
<b>Temperature range:</b>	sub ambient to 50 °C, Peltier cell(s) based cooling (no bath needed)
<b>Temperature regulation:</b>	< ±0.1 °C
<b>Temperature probe (RTD) accuracy:</b>	±0.1 °C
<b>Thermal protection:</b>	Programmed limits and thermal cut-offs.
<b>RH probe range:</b>	0 to 100 %
<b>RH (digital) probe accuracy / resolution:</b>	±1 %RH / 16 bit
<b>Gas Type:</b>	Helium, N <sub>2</sub> , air, etc
<b>Gas Inlet Port:</b>	1/8" compression tubing (Swagelok® type bulkhead)
<b>Auxiliary supply ports:</b>	application specific connectivity

**Gas Inlet Pressure:**

Maximum: 150 psi (10.3 bar)  
Minimum: 20 psi (1.4 bar) above the maximum pressure  
to be set on the instrument panel

**Gas set point pressure:** Precision pressure regulator (non-relieving) and gauge are integral to the instrument, front panel

**Vacuum port:** 1/4"NPT Female (standard), other adapters available

**Communication link with a PC:** USB, Serial port (RS232)

**Dimensions:** (W x H x D) (22 x 29 x 43cm) (8.7" x 11.4" x 19")  
(Not including protrusions in front, back, and top)

**Instrument Weight (w/o accessories):** 14kg (30 lb)

**Typical power requirements: (Dependent on specific model):**

110/120 VAC, 300VA, 60 Hz nominal  
(Optional): 220/240 VAC, 300VA, 50 Hz nominal

These specifications are subject to change at any time and are dependent on specific models.

*Note: Performance of pycnometers varies with selected experimental conditions and hardware, (please review the posted application note)*



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