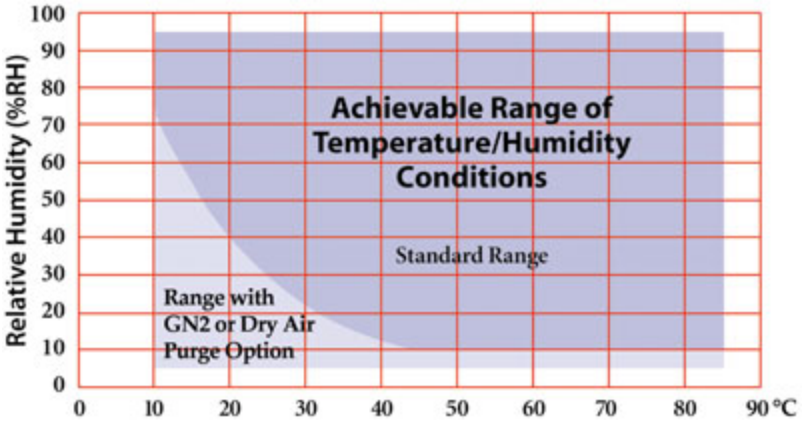
Model 101H Temperature/Humidity Chamber - Specifications

Effective for models shipped after December 10, 2018 with external water recirculation system.

Temperature Range (uncontrolled humidity)	-30°C to +130°C
Temperature Control Tolerance	±0.5°C (Short-term variations measured at the control sensor after stabilization)
Temperature Uniformity	±1.0°C (Variations throughout the chamber after stabilization, at least 2-inches from the walls, in the range of -25°C to +100°C)
Temperature Sensor	Platinum RTD sensor
Humidity Range	**Standard Range:** 10% to 95% RH Limited by a 6°C Dew Point within the range of +10°C to +85°C chamber temperature **With GN2 Purge or optional Dry Air Purge:** 5% to 95% RH Within the range of +10°C to +85°C chamber temperature  NOTE: Ability to reach RH extremes may be limited by the humidity sensor accuracy. Low Dew Point conditions can only be achieved when starting with a clean, dry chamber.
Humidity Control Tolerance	±3% RH (Short-term variations measured at the control sensor after stabilization)
Humidity Sensor	Dynamic capacitive type, Vaisala HMM100 with Stainless Steel Body (no wet wicks used)
Temperature/Humidity Controller	F4T Touch Screen Controller, Integrated Limit Control with independent sensor; Ethernet Modbus TCP and RS-232 Modbus RTU interfaces; USB host port for transfer via flash drive of data log files, profile configuration files, and controller configuration files.
Safety Limit Controller	Independent thermocouple sensor, integrated into the F4T controller, FM approved. User setable high and low temperature limits. Chamber turns off when limits are exceeded. A thermal fuse provides backup overtemperature protection.
Heat Up Transition Time (empty)*	4.8°C/minute from -25°C to +85°C

Cool Down Transition Time (empty)*	**End Temperature**					
Start Temperature	**+23°C**	**0°C**	**-10°C**	**-20°C**	**-25°C**	**-30°C**
+125°C	15 min	22 min	28 min	38 min	47 min	Ultimate
+85°C	9 min	15 min	21 min	29 min	38 min	Ultimate
+23°C	--	6 min	10 min	18 min	26 min	Ultimate

***Note:** Transition times are measured after a 30 minute soak at the respective start temperature with an empty chamber, as indicated on the temperature controller, 23°C ambient. Measured with set point beyond the start and end temperatures. Does not include the effect of proportional band when approaching set point. For 101H-EX: Transition times and live load capacity are reduced by 17% with 50 Hz input power.

Live Load Capacity (Uncontrolled Humidity)	**+23°C**	**0°C**	**-10°C**	**-15°C**	**-20°C**	**-25°C**
	440 W	290 W	190 W	150 W	100 W	80 W

Inside Dimensions	13.8"W x 11.8"H x 11.8"D, 1.1 cubic feet 350W x 300D x 300H mm, 31 liters
Outside Dimensions and Weight	**Benchtop Model 101H-B** 23.25"W x 36"H x 28.7"D (nominal) 590.6W x 914.4H x 730D mm Net weight: 200 pounds. Shipping weight (North America version): 280 pounds. **Floor-Standing Model 101H-F** 23.25"W x 62.3"H x 28.7"D (nominal) 590.6W x 1582H x 730D mm Net weight: 250 pounds. Shipping weight (North America version): 330 pounds.
Minimum Installed Clearance	12" (304mm) from the rear Full access to left side is required for maintenance when draining the internal water tank and changing the water filter.
Access Ports	3" (2.83" inside diameter) Port on left and right side (two total) Supplied with silicone foam plugs
Sound Level	66 dBA in cooling mode (A-weighted, measured 36" from the front surface, 63" from the floor, in a free-standing environment)
Air Flow	100 SCFM
Heater Power	250 Watts
Cooling System	1/4 HP Copeland hermetic compressor
Heat of Rejection (heat load in the room)	3000 BTUH (Maximum rated chamber load at maximum cooling rate from high temperature soak.)
Water Requirement	Supplied water recirculation system must be filled with clean tap water only.

	May be plumbed to a source of Single-Distilled or De-Ionized Water, maximum 50 psi (requires optional Inlet Solenoid Valve Assembly). Negligible water consumption.
Input Power	**North America Version (101H-B, 101H-F)** 120 V nominal (110 to 126 VAC), 60 Hz, 1 PH Max Current Draw 12 A, Recommended Minimum Service 15 A **Export Version (101H-EX-B, 101H-EX-F)** 230 V nominal (209 to 253 VAC), 50 Hz, 1 PH Max Current Draw 6 A, Recommended Minimum Service 8 A Temperature transition times and live load capacity are reduced by 17% with 50 Hz input power.

NOTE: Performance is typical and based on operation at 23°C (73°F) ambient and nominal input voltage. This product is designed for use in a normal conditioned laboratory. Operation at higher ambient temperatures will result in decreased cooling performance. Operation above 27°C (80°F) will have a significant impact on low-temperature operation.

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Due to continuous product improvement, specifications are subject to change without notice.