

VirTis BenchTop 2K

Benchtop Freeze Dryer



(BenchTop 2K with optional acrylic drum manifold and bulk drying shelves shown)

Key Features

- Direct chamber, flask and/or shelf drying capabilities.
- Includes microprocessor-based Sentry 2.0 controller.
- Choice of refrigeration system to meet a variety of process requirements.
- Wide variety of optional manifolds, shelves and accessories available.
- Optional shelf temperature control up to 50 °C with appropriate heated shelf assembly.

Performance Specifications

Item	ES	XL
Shelf Temperature Control Range (°C) [†]	-55	-75
Maximum Condenser Capacity (L)	3	3
Maximum Ice Condensing Capacity in 24 hours (L) [†]	2	2
Maximum Deposition Rate (L/hour) [†]	0.08	0.08
Number of Compressors	1	1
Compressor Horsepower	1/3	1/3
System Refrigerant	MO 89	R245fa/R508B
Average Vacuum Time to 100 Millitorr (minutes)	15	15
Lowest System Vacuum (mT)	≤ 10	≤ 10

Note: Performance specifications are based on SP Scientific test data from units operating at an ambient room temperature of approximately 20 °C. SP Scientific recommends an operating range of 15-25 °C (59-77 °F).

Electrical Requirements

Voltage (VAC)	100/115	200/240
Hertz	50, 60	50, 60
Phase	1	1
Breaker Amperage	15	10
NEMA Receptacle	5-15R	6-15R*

Utility Requirements

Item	ES	XL
With Vacuum Pump		
Approx. Peak Heat Generated (BTU/h)	3,000	3,000
Without Vacuum Pump		
Approx. Peak Heat Generated (BTU/h)	2,000	2,000

Optional Components



Acrylic Drum Manifold

8 Port Acrylic Drum Manifold;
9.5 Inch Diameter

12 Port Acrylic Drum Manifold;
12 Inch Diameter



Stainless Steel Drum Manifold

12 or 18 Port Stainless Steel
Drum Manifold



**Bulk Shelf Rack
(Heated or Unheated)**

3, 4 or 5 Shelves;
Heated or Unheated



**Stoppering
Assembly**

1, 2 or 3 Shelves;
Heated or
Unheated



Vertical Manifold

4, 8, 12 or 24 Port
Stainless Steel
Vertical Manifold

Note: Additional standard and custom accessories are available, along with flask adapters, glassware and other components. Contact SP Scientific for more information.

Dimensional Data

Width (in / cm) [‡]	12.5 / 31.7
Depth (in / cm)	19 / 48.3
Height (in / cm)	15.5 / 39.4
Approximate Weight (lb / kg)	60 / 27.3
Condenser Inside Diameter (in / cm)	9 / 22.9

Additional Information

Construction	316L Stainless Steel Condenser
Vacuum Pump (required, not included)	Two-Stage Rotary Vane
Stoppering (optional)	Manual
Defrost Type	Hot Gas
Refrigerant Type	CFC Free
Condenser Type	Bottom External Coil

^{*} Units configured for 200/240 VAC at 50 Hz are supplied with Continental European plug type CEE7/7. Receptacle configuration for 50 Hz units varies by country.

[†] The specified Maximum Ice Condensing Capacity in 24 Hours and Maximum Deposition Rate are based on the process of freeze-drying water as aggressively as possible. The freeze dryer's ability to collect ice at an hourly rate or over a specified period will always be application dependent.

[‡] Units equipped with the heat option shall have a width of 15.5 inches (39.4 centimeters).