

# VirTis BenchTop Pro with Omnitronics™ - 9L

## Benchtop Freeze Dryer



(BenchTop Pro 9L with optional tree-type manifold and condensate pan kit shown).

### Key Features

- Direct chamber, flask and/or rack drying capabilities.
- PLC-based Omnitronics™ controller.
- Choice of refrigeration system to meet various process requirements.
- Optional manifolds, racks and accessories available.

### Optional Components

- Stoppering-Tainer (SC-1 Stainless Steel).
- Stainless Steel Drum Manifold (18-Port).
- Tree-Type Stainless Steel Manifold (8- or 12-Port).
- Stainless Steel Vertical Manifold (12-Port).
- Bulk Shelf Rack.
- Vertical Acrylic Drum Manifold (8-or 12-Port).

**Note:** Additional accessories, as well as flask adapters, glassware and other components are available. Contact SP Scientific for more information.

### Performance Specifications

	SG	EG
Lowest Condenser Temperature (°C) (50 Hz / 60 Hz)	-52 / -55	-82 / -85
Maximum Condenser Capacity (L)	9	9
Maximum Ice Condensing Capacity in 24 hours (L)†	5	5
Maximum Deposition Rate (L/hour)†	0.21	0.21
Number of Compressors	1	2
Compressor Horsepower	1/3	1/3, 3/8
Average Vacuum Time to 100 Millitorr (minutes)**	18	18
Lowest System Vacuum (mT)**	≤ 30	≤ 20

**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).

### Utility Requirements

	SG	EG
<b>With Vacuum Pump</b>		
Approx. Peak Heat Generated (BTU/h)	3,500	4,500
<b>Without Vacuum Pump</b>		
Approx. Peak Heat Generated (BTU/h)	2,500	3,500

### Electrical Requirements

	SG			EG		
	100-120 (VAC)†	208-230 88-108	200-240	100-120 88-98	208-230	200-240
Hertz	60 50	60	50	60 50	60	50
Phase	1	1	1	1	1	1
Breaker Amperage	15	10	10	20	15	15

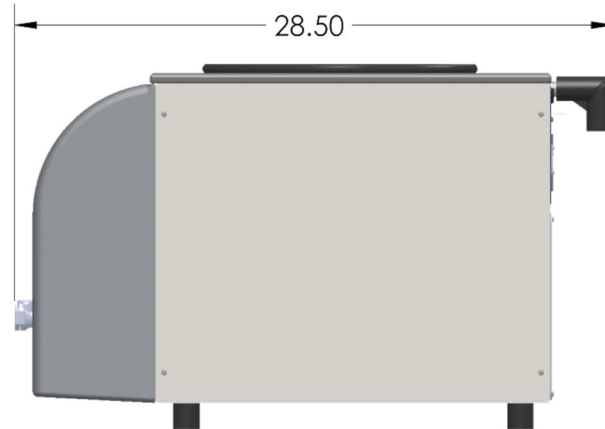
### Benchtop Pro 9L SG Refrigerant Information

	F gas	Charge (kg)	GWP		
Gas #1	R-1290	0.026	5	CO2e	
Gas #2	N/A	N/A	N/A		0.130
Gas #3	N/A	N/A	N/A		

### Benchtop Pro 9L EG Refrigerant Information

	F gas	Charge (kg)	GWP		
Gas #1	R-1270	0.0513	5	CO2e	
Gas #2	R170	0.020	6		0.377
Gas #3	N/A	N/A	N/A		

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## Dimensional Data

Width (in / cm)	15.5 / 39.4	
Depth (in / cm)	28.5 / 72.4	
Height (in / cm)	17 / 43.2	
Approximate Weight (lb / kg)	88 / 40 (SG)	131 / 59 (EG)
Condenser Inside Diameter (in / cm)	12 / 30.5	

## Additional Information

Construction	Stainless Steel Condenser
Vacuum Pump (required, not included)	Two-Stage Rotary Vane
Defrost Type	Hot Gas
Refrigerant Type	CFC Free
Condenser Type	Internal Coil

## Materials of Construction

Condenser Chamber	304
Internal Condenser Coil	316L Stainless Steel
Condenser Chamber Cover / Adapter Plate	Acrylic
Condenser Chamber Gasket	Neoprene Split-ring
Bulk Rack Shelves	304 Stainless Steel
Drum Manifold	Acrylic or 304 Stainless Steel
Vertical and Tree-Type Manifolds	316L Stainless Steel
Drum Manifold Gasket	Neoprene Split-ring
Quickseal Body	Neoprene
Quickseal Knob	Polypropylene



**Drum Manifold**

18-Port Stainless Steel



**Tree-Type Manifold**

8- or 12-Port Stainless Steel Manifold



**Horizontal Manifold**

Trays and Ports



**Bulk Shelf Rack**

3 Shelves



**Vertical Drum Manifold**

8- or 12-Port Acrylic

<sup>†</sup> 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.

<sup>\*\*</sup> Vacuum specifications are based on SP Scientific test data from similar units equipped with an Leybold D2,5E two-stage rotary vane vacuum pump. Units equipped with other vacuum pumps may yield different results.

<sup>‡</sup> NEMA plug type is selected at time of sale.

**Note:** The refrigerants and insulating foam contain fluorinated greenhouse gases.