# 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

| | ES | EL |
|---|---|---|
| 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 |

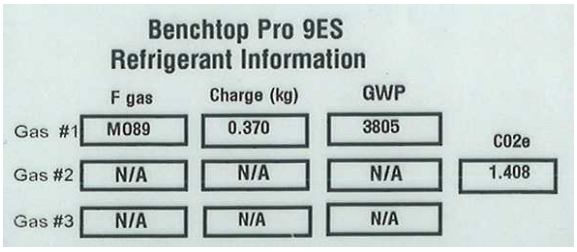
***Note****: Performance specifications are based on SP Scientific test data from units operating at an ambient room temperature of approximately 20 °C. SP Scientific recommends an operating range of 15-25 °C (59-77 °F).*

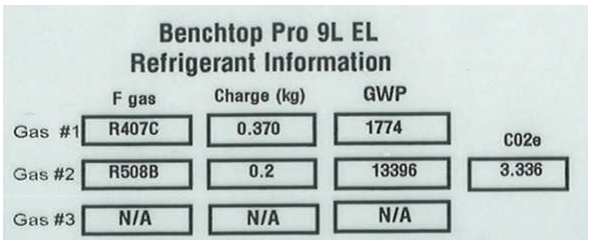
### Utility Requirements

| | ES | EL |
|---|---|---|
| **With Vacuum Pump** Approx. Peak Heat Generated (BTU/h) | 3,500 | 4,500 |
| **Without Vacuum Pump** Approx. Peak Heat Generated (BTU/h) | 2,500 | 3,500 |

### Electrical Requirements

| | ES | | | EL | | |
|---|---|---|---|---|---|---|
| Voltage (VAC)‡ | 100-120 | 208-230 | 200-240 | 100-120 | 208-230 | 200-240 |
| Hertz | 50, 60 | 60 | 50 | 50, 60 | 60 | 50 |
| Phase | 1 | 1 | 1 | 1 | 1 | 1 |
| Breaker Amperage | 15 | 10 | 10 | 20 | 15 | 15 |

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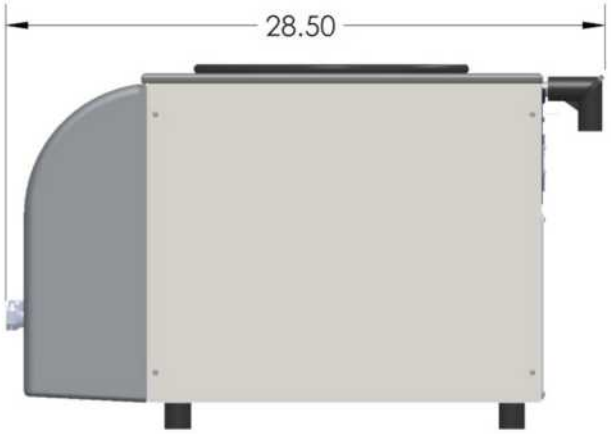
## Benchtop Freeze Dryer


### 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 (ES) | 131 / 59 (EL) |
| 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

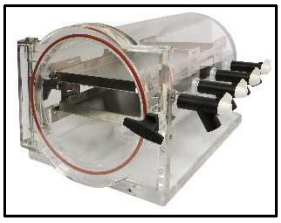
| | |
|---|---|
| Condenser Chamber | 304 |
| Internal Condenser Coil | 316L Stainless Steel |
| Condenser Chamber Cover / Adapter Plate | Acrylic |
| Condenser Chamber Gasket | Neoprene Split-ring |
| Bulk Rack Shelves | 304 Stainless Steel |
| Drum Manifold | Acrylic or 304 Stainless Steel |
| Vertical 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

*† 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.*

*** 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.*

*‡ NEMA plug type is selected at time of sale.*

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



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