VirTis Freezemobile 25L

Research Freeze Dryer

(Freezemobile 35L with optional stainless steel horizontal “T” manifold shown)

Key Features

- Compact, freestanding, mobile design.
- 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 filter traps available to protect the vacuum pump from corrosive solvents.

Performance Specifications

Item	ES	XL	EL
Lowest Condenser Temperature (50 Hz / 60 Hz, °C)	-50 / -53	-67 / -70	-82 / -85
Lowest Freezing Temperature with Optional Shell Bath (50 Hz / 60 Hz, °C)	-42 / -45	-52 / -55	-67 / -70
Maximum Condenser Capacity (L)	25	25	25
Condenser Surface Area (in^2 / cm^2)	506 / 3264	506 / 3264	506 / 3264
Maximum Ice Condensing Capacity in 24 hours (L)†	12	12	12
Maximum Deposition Rate (L/hour)†	0.5	0.5	0.5
Condenser Pull-Down from 20 °C to -45 °C (minutes)	≤ 25	≤ 25	≤ 25
Number of Compressors	1	1	2
Compressor Horsepower	1.0	1.0	1.0, 1.0
System Refrigerant	MO 89	R245fa / R508B	R508B, R407C
Vacuum Time to 100 Millitorr (minutes)	≤ 20	≤ 20	≤ 20
Lowest System Vacuum (mT)	≤ 15	≤ 15	≤ 15
Average Defrost Time (minutes)	≤ 60	≤ 60	≤ 60

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

Electrical Requirements

Item	ES	XL	EL
Voltage (VAC)	208/240	208/240	208/240
Hertz	50, 60	50, 60	50, 60
Phase	1	1	1
Breaker Amperage	15	15	20
NEMA Receptacle	6-15R*	6-15R*	6-20R*

Utility Requirements

Item	ES	XL	EL
Approx. Peak Heat Generated (BTU/h)	6,000	6,000	8,500

VirTis SP SCIENTIFIC Making Time for Science

815 Route 208, Gardiner, NY 12525 USA 845.255.5000 800.431.8232 Fax: 845.255.5338 www.SPScientific.com

Freezemobile 25L

Optional Components

Acrylic Drum Manifold

12 Port Acrylic Drum Manifold; 10 Inch Diameter

Stainless Steel Drum Manifold

12 or 18 Port Stainless Steel Drum Manifold

Bulk Shelf Rack

3, 4 or 5 Shelves; Heated or Unheated

Stoppering Assembly

1, 2 or 3 Shelves; Heated or Unheated

Vertical Manifold Assembly

4, 8, 12, 24 or 48 Port Stainless Steel Vertical Manifold

Horizontal "T" Manifold

1, 2 or 3 Tier Stainless Steel Horizontal "T" 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)	35 / 89
Depth (in / cm)	29 / 74
Height (in / cm)	37 / 94
Approximate Weight Range (lb / kg)	280-495 / 127-225

Additional Information

Construction	316L Stainless Steel Condenser Chamber
Vacuum Pump (required, not included)	Two-Stage Rotary Vane
Defrost Type	Hot Gas
Refrigerant	CFC-Free

** 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.

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VirTis Freezemobile 35L

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(Freezemobile 35L with optional stainless steel horizontal “T” manifold shown)

Performance Specifications

Item	ES	XL	EL
Lowest Condenser Temperature (50 Hz / 60 Hz, °C)	-50 / -53	-67 / -70	-82 / -85
Lowest Freezing Temperature with Optional Shell Bath (50 Hz / 60 Hz, °C)	-42 / -45	-52 / -55	-67 / -70
Maximum Condenser Capacity (L)	35	35	35
Condenser Surface Area (in2 / cm2)	750 / 4838	750 / 4838	750 / 4838
Maximum Ice Condensing Capacity in 24 hours (L)†	20	20	20
Maximum Deposition Rate (L/hour)†	0.83	0.83	0.83
Condenser Pull-Down from 20 °C to -45 °C (minutes)	≤ 25	≤ 25	≤ 25
Number of Compressors	1	1	2
Compressor Horsepower	1.5	1.5	1.5 1.0
System Refrigerant	MO 89	R245fa / R508B	R508B, R407C
Vacuum Time to 100 Millitorr (minutes)	≤ 20	≤ 20	≤ 20
Lowest System Vacuum (mT)	≤ 15	≤ 15	≤ 15
Average Defrost Time (minutes)	≤ 60	≤ 60	≤ 60

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

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- Includes microprocessor-based Sentry 2.0 controller.
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- Optional filter traps available to protect the vacuum pump from corrosive solvents.

Electrical Requirements

Item	ES	XL	EL
Voltage (VAC)	208/240	208/240	208/240
Hertz	50, 60	50, 60	50, 60
Phase	1	1	1
Breaker Amperage	20	20	30
NEMA Receptacle	6-20R*	6-20R*	L6-30R*

Utility Requirements

Item	ES	XL	EL
Approx. Peak Heat Generated (BTU/h)	7,200	7,200	9,800

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Optional Components

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3, 4 or 5 Shelves; Heated or Unheated

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Horizontal "T" Manifold

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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)	35 / 89
Depth (in / cm)	36 / 91
Height (in / cm)	37 / 94
Approximate Weight Range (lb / kg)	450-500 / 205-225

Additional Information	
Construction	316L Stainless Steel Condenser Chamber
Vacuum Pump (required, not included)	Two-Stage Rotary Vane
Defrost Type	Hot Gas
Refrigerant	CFC-Free

** Receptacle configuration for 50 Hz units varies by country.*

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