

VirTis GPDF 36DX66

General Purpose Freeze Dryer



Key Features

- Compact, freestanding, mobile design.
- Clear acrylic product and condenser chamber doors.
- Optional programmable heat allows for chamber temperature control to 60 °C.
- LyoTroll™ controller with manual and automatic drying capabilities.
- Smooth-wall condenser.
- Stainless steel trays.

Performance Specifications

Item	25L ES	35L ES	35L XL	35L EL
Chamber Temperature Control Range Without Heat (°C)	-29 to 0	-29 to 0	-29 to 0	-29 to 0
Chamber Temperature Control Range With Heat (°C)	-29 to 60	-29 to 60	-29 to 60	-29 to 60
Lowest Condenser Temperature (°C) (50 Hz / 60 Hz)	-50 / -53	-50 / -53	-67 / -70	-82 / -85
Maximum Condenser Capacity (L)	25	35	35	35
Condenser Surface Area (in ² / cm ²)	506 / 3264	750 / 4838	750 / 4838	750 / 4838
Maximum Ice Condensing Capacity in 24 hours (L) [†]	12	20	20	20
Maximum Deposition Rate (L/hour) [†]	0.50	0.83	0.83	0.83
Number of Compressors	2	2	2	3
Compressor HP Without Heat	1.0, 1.0	1.0, 1.5	1.0, 1.5	1.0, 1.0, 1.5
Compressor HP With Heat	1.0, 1.0	1.0, 1.5	1.0, 1.5	1.0, 1.0, 1.5
System Refrigerant (Product Chamber)	R-404A	R-404A	R-404A	R-404A
System Refrigerant (Condenser)	MO 89	MO 89	R245fa / R508B	R508B, R407C
Vacuum Time to 100 Millitorr (minutes)	≤ 45	≤ 45	≤ 45	≤ 45
Vacuum Rate of Rise (mT/hour)	≤ 30	≤ 30	≤ 30	≤ 30
Lowest System Vacuum (mT)	≤ 15	≤ 15	≤ 15	≤ 15

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).

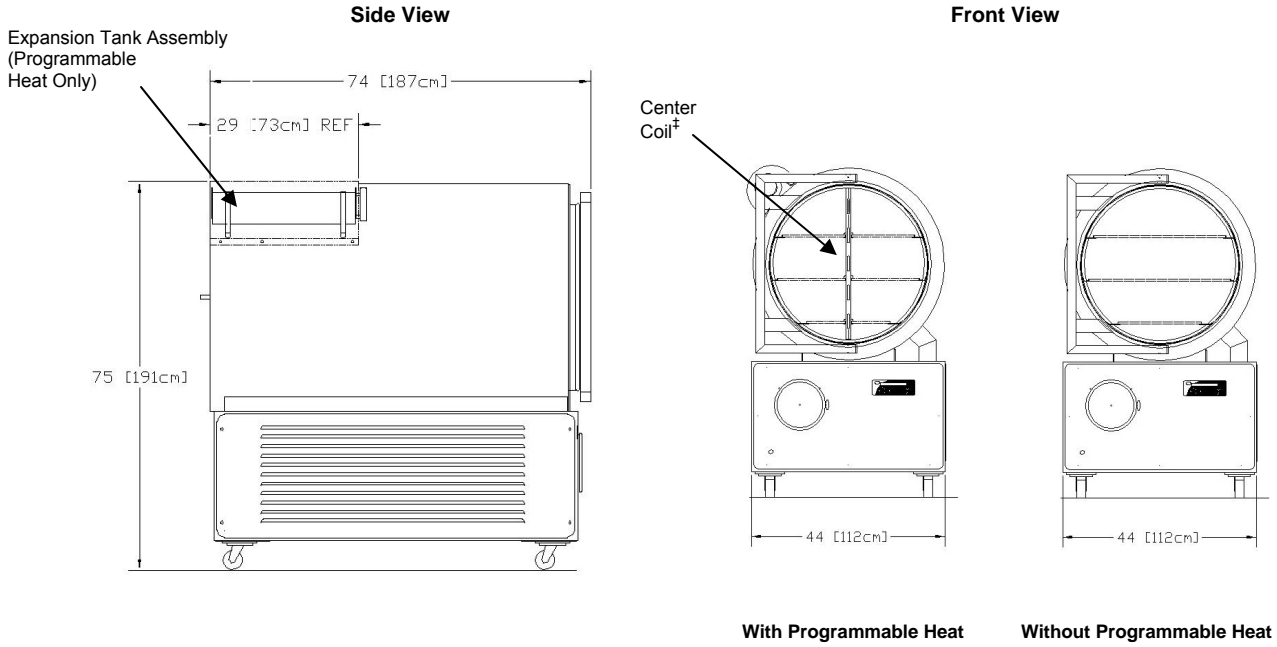
Electrical Requirements

Item	ES/XL	EL
Voltage (VAC) [*]	208/240	208/240
Hertz [*]	50, 60	50, 60
Phase [*]	1	1
Breaker Amperage [*]	30	40
Plug Type (60 Hz Systems)	NEMA L6-30-P	NEMA 6-50-P
Recommended Receptacle (60 Hz Systems)	NEMA L6-30-R	NEMA 6-50-R

Utility Requirements

Item	25L ES	35L ES	35L XL	35L EL
Ambient Room Temperature (°C)	20	20	20	20
Approx. Peak Heat Generated Without Heat (BTU/h)	8,900	10,200	10,200	16,200
Approx. Peak Heat Generated With Heat (BTU/h)	10,200	11,500	11,500	17,500

Layout Drawings



Dimensional Data

	Standard Configuration
Width (in / cm)	44 / 112
Depth (in / cm)	74 / 187
Height (in / cm)	75 / 191
Approximate Weight (lb / kg)	1800 / 818
Minimum Clearance on All Sides (in / cm)	10 / 25.4

Additional Information

Product Chamber Construction	Treated Mild Steel (Stainless Steel Optional)
Condenser Chamber Construction	316L Stainless Steel
Vacuum Pump	Two-Stage Rotary Vane
Defrost Type	Hot Gas
Refrigerant Type	CFC-Free
Vapor Port	Four (4) Inches

Tray Configuration Without Programmable Heat

Tray Levels	Area (ft ² / m ²)	Spacing** (in / mm)	Number of Trays
2	22.3 / 2.08	11.68 / 295	4
3	30.8 / 2.87	9.56 / 243	6
4	40.3 / 3.76	7.81 / 198	8
5	51.4 / 4.80	5.91 / 149	10
6	61.5 / 5.74	4.68 / 117	12
7	78.5 / 6.87	3.86 / 98	14
8	80.0 / 7.47	3.81 / 96	16
9	88.2 / 8.24	3.36 / 85	18

Tray Configuration With Programmable Heat

Tray Levels	Area (ft ² / m ²)	Spacing** (in / mm)	Number of Trays
2	21.2 / 1.98	11.68 / 295	8
3	29.1 / 2.71	9.56 / 243	12
4	37.8 / 3.53	7.81 / 198	16
5	48.5 / 4.53	5.91 / 149	20
6	59.5 / 5.56	4.68 / 117	24
7	70.0 / 6.54	3.86 / 98	28
8	74.8 / 6.99	3.81 / 96	32
9	83.1 / 7.77	3.36 / 85	36

* VirTis units are highly customizable and SP Scientific can configure any unit to conform to the service requirements of a wide range of international voltage and phase configurations. Contact SP Scientific for more information.

† 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 is application dependent.

‡ The center coil is provided in the chamber of those units equipped with the programmable heat option. This coil is used to provide uniform heating and cooling of the product chamber and trays. The chamber temperature of units without the heat option is cooled and controlled by refrigeration coils wrapped around the chamber exterior.

** Limited tray spacing available on the top tray.