

Genesis 30

Pilot Freeze Dryer

SP VirTis

Precision. Flexibility. Reliability.

Genesis 30 is designed to make freeze-drying simpler, faster, and more consistent. Built for research, diagnostics, tissue engineering, and small production, this system adapts to your workflow while delivering dependable, high-quality results..

Key Features & Benefits

- **Compact, Space-Saving Design**

Easy to install with a narrow footprint. Cleanroom configuration **available for labs with strict requirements or room classification**

- **Improved Software Interface**

Integrated LyoLogic® allows for a better customer experience and interface to aid in **improving cycle development and reducing cycle times**

- **Single Product Chamber**

Up to 6 shelves with stoppering ability for research development of your important freeze dried products

- **Greater Flexibility**

Single or multiple shelf latching **in seconds**, and for research in **multiple container sizes**

- **Expanded Accessory Compatibility**

Adaptable to a wide range of accessories for flexible integration into **diverse workflows**

- **Smooth-Walled Condenser**

Ease of cleaning and allows for **rapid turn around** from cycle to cycle

- **Intuitive Control Systems**

Available with Merlin or LyoLogic® HMI systems for **intuitive, precise operation and increased functionality**. LyoLogic® also available in 21 CFR capable version

- **Lower GWP Refrigerants**

Environmentally friendly CFC-free refrigerants optimize cooling efficiency and system reliability



Why Genesis 30?

- **Flexibility - easily adapt to accommodate various container formats**
- **Supports a wide range of lab workflows and applications**
- **Comprehensive training options**
- **Complete service solutions**
- **Fits in the space of a common laboratory refrigerator**
- **Offered in wide or narrow space saving configurations**
- **Fast turn around from one cycle to another**
- **Customizable - can be fitted with various options for your budget and needs**

Specifications

Lowest shelf temperature (50 Hz / 60 Hz)	≤ -67°C / -70°C
Shelf temperature control range*	-55 to 65°C
Shelf Temperature Control Range Tolerance	+/- 0.5 °C
Vacuum Level Control Range	0.067 – 0.67 mbar (50 – 500 mTorr)
Volume-based leak rate§	≤ 0.0042 mbar·L/sec (≤ 3.2 mTorr·L/sec)
Lowest system vacuum§	≤ 0.2 mbar (≤ 15 mTorr)

Refrigerant Information

	Gas 1	Gas 2
F Gas	R1270	R170
Charge (Kg)	0.4375 (WC) 0.380 (AC)	0.3
GWP	2	6
EPA SNAP	IPR	VLTR
Safety Class	A3	A3
Total CO ₂ E	0.003 (AC); TBD (WC)	

Electrical Requirements

Voltage	Phase	Frequency	Breaker Amperage	Recommended Outlet	Peak Current	Peak Power
208 VAC	1 Φ	60 Hz	30 A	NEMA 6-30R	TBD	TBD
230 VAC	1 Φ	50 Hz	30 A	NEMA 6-30R	27 A	6,500 VA
400 VAC	3 Φ	50 Hz	20 A	N/A	TBD	TBD

Shelf Configuration

Number of Shelves	Shelf Clearance	Recommended Vials [†]
3 Shelves	104.7 mm (4.12 in)	30R or Smaller
4 Shelves	76.7 mm (3.02 in)	20R or Smaller
5 Shelves	59.8 mm (2.35 in)	6R or Smaller
6 Shelves	48.5 mm (1.91 in)	2R or Smaller

Shelf size (W x D): 274.3 mm x 520.7 mm (10.8 in x 20.5 in)

Additional Information

Construction	316L stainless steel shelves, product chamber and condenser chamber
Defrost type	Hot gas
Vapor port	15.2 cm (6 in) Standard 20.3 cm (8 in) Narrow / Cleanroom
Temperature uniform	± 1.0°C
Noise Level	75 dBA

Specifications note:

Performance specifications are based on SP test data from units operating at an ambient room temperature of approximately 20°C. SP recommends an optimum operating range of 15-25°C (59-77°F). For full specifications please contact your regional product specialist.

Utility Requirements

	Air-Cooled	Water-Cooled
Compressed air (for units with isolation valve)		80 psig (5.5 bar)
Inert Gas for Backfilling		1 PSIG (70 mbar or 7 kpa)
Ambient Room Temperature		15 -25°C (59 -77°F)
Cooling Water	N/A	4-12 Lpm (1-3 gpm) 5-25°C, 2-4 bar (30-60 psi)
Heat Output Room, Peak	11,500 BTU/h (3.4 kW)	4,100 BTU/h (1.2 kW)

	Standard Configuration	Narrow Configuration	Cleanroom Configuration
Max. weight	363 kg (363 lb)	386 kg (850 lb)	
Max. weight crated (est.)	543 kg (1,200 lb)	566 kg (1,250 lb)	

* Shelf fluid inlet temperature controlled to within ± 0.5°C of the setpoint within the Shelf Temperature Control Range when at 100 mTorr.

† Vacuum specifications are based on Scientific Products test data from similar units equipped with a two-stage rotary vane vacuum pump.



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