

### *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<br>(50 – 500 mTorr) |
| Volume-based leak rate§                   | ≤ 0.0017 mbar•L/s (≤ 0.0012 Torr•L/s) |
| Lowest system vacuum§                     | ≤ 0.2 mbar (≤ 15 mTorr)               |

## Refrigerant Information

|                         | Gas 1                  | Gas 2 |
|-------------------------|------------------------|-------|
| F Gas                   | R1270                  | R170  |
| GWP                     | 2                      | 6     |
| EPA SNAP                | IPR                    | VLTR  |
| Safety Class            | A3                     | A3    |
| Total CO <sub>2</sub> E | 0.00168 (AC); TBD (WC) |       |

## Electrical Requirements

| Voltage | Phase | Frequency | Breaker Amperage | Recommended Outlet | Peak Current | Peak Power |
|---------|-------|-----------|------------------|--------------------|--------------|------------|
| 208 VAC | 1 Φ   | 60 Hz     | 40 A             | NEMA 6-30R         | 25 A         | 5,200 VA   |
| 230 VAC | 1 Φ   | 50 Hz     | 40 A             | NEMA 6-30R         | 25 A         | 5,750 VA   |
| 400 VAC | 3 Φ   | 50 Hz     | 32 A             | N/A                | 15 A         | 6,000 VA   |

## Shelf Configuration

| Number of Shelves | Shelf Clearance   | Recommended Vials† |
|-------------------|-------------------|--------------------|
| 3 Shelves         | 99.7 mm (3.92 in) | 30R or Smaller     |
| 4 Shelves         | 71.7 mm (2.82 in) | 20R or Smaller     |
| 5 Shelves         | 54.9 mm (2.16 in) | 6R or Smaller      |
| 6 Shelves         | 43.5 mm (1.71 in) | 2R or Smaller      |

Shelf size (W × D): 274.3 mm × 520.7 mm (10.8 in × 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<br>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                       | 3-5 psig (0.2 – 0.35 bar g) |                                                   |
| Ambient Room Temperature                        | 15 -25°C (59 -77°F)         |                                                   |
| Cooling Water                                   | N/A                         | 4-12 Lpm (1-3 gpm)<br>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               | 473 Kg (1,043 lb)      | 602 Kg (1,321 lb)    |                         |
| Max. weight crated (est.) | 719 Kg (1,586 lb)      | 874 Kg (1,927 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 and EPDM seals.



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