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Intelligent Cryogenic Storage Systems

# Pioneer of Ergonomic Freezers

The Crest series offers intelligent and efficient liquid nitrogen freezers specifically engineered for the prolonged storage of biological samples. These freezers utilize advanced vacuum and insulation technology to maintain a stable cryogenic environment within the tank, thereby reducing the consumption of liquid nitrogen. Emphasizing ergonomic design and user-friendliness, the Crest series integrates comprehensive software and reliable mechanisms to provide a dependable and efficient solution for all your cryogenic storage needs.





### Automated Rack Turning and Positioning \*

The system automatically rotates the target racks to the tank opening position before the lid is opened. This feature allows for easy access to the racks once the lid is open, which helps reduce air convection and minimize fogging.

#### Automated Lid Opening \*

Integrated with the software, the automated lid opening module not only reduces manual effort but also ensures that only authorized personnel can access the samples.

#### Adjustable Rack Hoist \*

The automatic lifting module enables the retrieval or placement of individual boxes while the rack is suspended within the tank opening. This eliminates the need to fully remove the rack from the tank, minimizing the exposure time of innocent samples.

### LN2-Free Defogging

The Crest series is equipped with a vacuum-based airflow system, which enables efficient defogging without the need for real-time liquid nitrogen supply when retrieving samples.

#### Racks Separator Design

Specially designed rack separators allow for a more organized arrangement of cryogenic racks, keeping the racks stable and facilitating quicker and easier storage.

### More Intelligent Management

### Crest

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### Hierarchical Management System

The platform supports
personalized parameter
settings and alarm
management, and features
a hierarchical authority
system for data management and sample
operations.



## Real-Time Information Management

The system features a
12-inch color touch screen
control panel that displays
real-time temperature,
liquid level, daily liquid
nitrogen consumption, and
alarm information.



#### **LIMS Integration**

The software is designed for seamless integration with LIMS systems, enabling functionalities such as sample access instructions, task status indicators, and more.

<sup>\*</sup> Applicable for the Premium series

### More Secure Storage



Uniform
Temperature Field

The small opening design minimizes the temperature gradient, keeping the top rack temperature as low as -190°C.



Real-Time Monitoring and Alerts

The system continuously monitors the sample environment and liquid nitrogen volume using a temperature probe and liquid level detector. It features various alarms for temperature, liquid level, time limits, and more.



Extended Static Holding Time A low evaporation rate ensures extended static holding time at cryogenic temperatures, even after the liquid nitrogen supply is removed



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Dimensions					
Differisions	Crest 400P	Crest 940P	Crest 200C	Crest 400C	Crest 940C
Model	CF400-LHC	CF940-LHC	CF200M	CF400M	CF940M
Overall Height	2,680 mm (8 ft, 9 in)	2,750 mm (9 ft)	1,890 mm (6 ft, 2 in)	1,950 mm (6 ft, 4 in)	2,020 mm (6 ft, 7 in)
Outside Diameter	1,160 mm (3 ft, 9 in)	1,530 mm (5 ft)	880 mm (2 ft, 10 in)	1,160 mm (3 ft, 9 in)	1,530 mm (5 ft)
Effective Internal Height	800 mm (2 ft, 7 in)	940 mm (3 ft, 1 in)	800 mm (2 ft, 7 in)	800 mm (2 ft, 7 in)	940 mm (3 ft, 1 in)
Neck Opening Diameter	460 mm (1 ft, 6 in)	619 mm (2 ft)	330 mm (1 ft)	460 mm (1 ft, 6 in)	619 mm (2 ft)
Neck Opening Height	1,520 mm (4 ft, 12 in)	1,587 mm (5 ft, 6 in)	1,425 mm (4 ft, 8 in)	1,520 mm (4 ft, 12 in)	1,587 mm (5 ft, 2 in)
LN <sub>2</sub> Capacity (L)	880	1,835	430	880	1,835
Empty Weight	1,389 lbs. (630 kg)	2,205 lbs. (1,000 kg)	904 lbs. (410 kg)	1,279 lbs. (580 kg)	2,028 lbs. (920 kg)
Installation Information					
Minimum Height of Installation	/	/	2,174 mm (7 ft, 2 in)	2,265 mm (7 ft, 5 in)	2,332 mm (7 ft, 8 in)
Minimum Height of Installation (incl. Lifting module)	2,780 mm (9 ft, 1 in)	2,850 mm (9 ft, 4 in)	2,690 mm (8 ft, 10 in)	2,780 mm (9 ft, 1 in)	2,850 mm (9 ft, 4 in)
LN <sub>2</sub> Capacity Under Platform (L)	140	320	60	140	320
Static Evaporation Rate of L№ (L/Day)	12	17	7	9	14
LN <sub>2</sub> Supply (psi)	≤22				
LN₂ Port	CGA295 external cone nut union				
Load of Lifting	33 lbs. (15 kg)				
Temperature Accuracy (°C)	±1				
Liquid Level Accuracy	±0.039" (1mm)				
Working Conditions	220 V, 50 Hz, 10 A, Temperature: 18 ~ 28°C, Humidity < 60 %				
Maximum Capacity					
Vial Capacity (Cryo Box, 2 mL)	41,600	99,200	19,500	41,600	99,200
Vial Capacity (SBS Box, 2 mL)	34,944	70,656	16,128	34,944	70,656
Blood Bag Capacity (25 mL, 7 Layers)	3,552	6,894	1,680	3,552	6,894
Blood Bag Capacity (50 mL, 7 Layers)	2,176	4,338	1,056	2,176	4,338
Blood Bag Capacity (250 mL, 5 Layers)	1,060	2,274	470	1,060	2,274
Blood Bag Capacity (500 mL, 5 Layers)	590	1,386	290	590	1,386

Accessories				
Model	Name	Applicable Models		
SBS-8D-940	SBS Rack Divider Components	CF940-LHC, CF940M		
SBS-4D-400	SBS Rack Divider Components	CF400-LHC, CF400M		
CB-6D-940	Square Rack Divider Components	CF940-LHC, CF940M		
CB-2D-400	Square Rack Divider Components	CF400-LHC, CF400M		
HFF-948	Lifting Module	CF400-LHC, CF400M		
HFF-1038	Lifting Module	CF940-LHC, CF940M		
HFF-200	Lifting Module	CF200M		