

# Thermo Scientific Cryogenic Chest Freezers

Ultra-low temperatures for ultra-reliable sample protection.



### More convenient than LN<sub>2</sub>

- Designed for long-term biological storage at uniform temperatures of -140°C and -150°C without LN<sub>2</sub> as a cooling medium
- Eliminates the need for maintaining a supply of LN<sub>2</sub>
- 100% of the interior space is usable, with stored samples maintained below critical temperatures
- Ample interior volume with capacity of up to 21,600 samples in 10.3 cu. ft. and up to 14,400 samples in 6.8 cu. ft. model (2mL vials in boxes)

### Specially designed refrigeration system

- Single compressor, orbital refrigeration system designed for cryogenic storage
- Specially mixed, CFC/HCFC-free refrigerants maximize cooling and minimize environmental impact

- Downfeed evaporator provides efficient refrigerant flow for a higher system efficiency and a better cabinet temperature uniformity
- Washable condenser filter keeps fins free of dust to maintain peak cooling efficiency; no tools required for removal
- Comes standard with RS232 output and access port on rear of unit

### Advanced control features

- Microprocessor control system with touchpad data entry and digital display allows for intuitive operation
- Set point security system for main power and alarm locks in temperature and alarm set points for increased sample protection
- Incident monitor provides visual and audible warnings of system abnormalities for increased sample protection



### Thermo Scientific Cryogenic Chest Freezers (Operating Temperature -140°C)

Cat. No.	Capacity cu. ft. (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions* H x D x W in. (cm)	Exterior Dimensions* H x D x W in. (cm)	Shipping Weight lbs. (kg)
13-990-21	10.3 (292)	208/230 V, 60 Hz 1Ø	20/30 (P6)	26.5 x 19 x 35.25	42.75 x 29 x 69	1065 (483)
13-990-10		220/240 V, 50 Hz 1Ø	20/30 (HW) <sup>1</sup>	(67.4 x 48.3 x 89.5)	(108.6 x 73.7 x 175.3)	

### Thermo Scientific Cryogenic Chest Freezers (Operating Temperature -150°C)

Cat. No.	Capacity cu. ft. (L)	Electrical	Amps/Breaker (Plug)	Interior Dimensions* H x D x W in. (cm)	Exterior Dimensions* H x D x W in. (cm)	Shipping Weight lbs. (kg)
13-986-61	6.8 (193)	208/230 V, 60 Hz 1Ø	20/30 (P6)	26.5 x 19 x 23.5	42.75 x 29 x 58	825 (374)
				(67.4 x 48.3 x 59.7)	(108.6 x 73.7 x 147.4)	

### Thermo Scientific Racking Systems

Cat. No.	Description	Dimensions in. (cm)	2" Boxes/Rack	Racks/Freezer 10.3 cu. ft. (292L)	Racks/Freezer 6.8 cu. ft. (193L)
39-818-6	2" cryo box rack	5.5 x 26.5 x 5.5 (14 x 67.3 x 14)	12	18	12
39-818-7	3" cryo box rack	5.5 x 26.5 x 5.5 (14 x 67.3 x 14)	8	18	12
39-818-8	27-position microplate rack	5.3 x 25.8 x 3.6 (13.5 x 65.5 x 9)	N/A	30	20

### Optional Back-Up Systems

Cat. No.	Description
<b>LN2 Back-Up System</b>	
13-990-112	Factory installed

### Optional Smart-View Wireless Monitoring Solution

Thermo Scientific™ Smart-View™ wireless monitoring solution safeguards sample integrity by continuously monitoring critical parameters and securely logging data to give you peace of mind. This wireless solution features audit trail traceability to assist with conformance to 21 CFR part 11, and other regulatory requirements.

- Intelligent plug and play simplicity
- Intuitive dashboard
- Flexible operation
- Precise monitoring
- Data traceability and security
- Numerous configuration capabilities
- Central monitoring system – scalable

### Optional Accessories

Cat. No.	Description
13-262-783	Cryo gloves, small
13-262-784	Cryo gloves, medium
13-262-785	Cryo gloves, large

CE CE mark available only on 220/240V models

\* All dimensions and specifications are subject to change without notice. External dimensions include allowances for cabinet door, hinges, latches, handles and control panel protrusions.

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