



**NEW! Thermo Scientific HERAfreeze
Ultra-Low Temperature Upright Freezers**

Maximizing Critical Sample Protection and Storage

Innovative Features and Rewarding Benefits

Features	Advantage	Benefit	Thermo Scientific HERAfreeze Model
Refrigeration System	Up to 20% greater heat removal capacity over ordinary freezers. Ensures faster temperature recovery after door openings.*	Quicker recovery after door openings, ensuring protection of critical samples.	Top, Basic
	Consumes up to 15% less power than leading competitor.*	Cost of ownership is lower and is also friendlier to the environment.	
	Emits up to 15% less heat into the environment than leading competitor.*	Less heat is emitted into the lab environment thus requiring less energy and HVAC equipment to keep the lab environment cool.	
	Noise levels are reduced by up to 40% over previous generation, decreasing interruption in the lab.	A quieter freezer allows the unit to be placed directly inside the lab, saving time.	
Microprocessor Control	Set point controls for the temperature and alarm system.	More precise settings and flexibility for temperature set points and alarm controls.	
PLUS Time Delay	Programmable feature delays restart of a bank of freezers after building power failure allows stabilized power and a uniform re-start.	<ul style="list-style-type: none"> Eliminates costs and down time associated with tripping a circuit breaker after a power failure. Reduces stress on the compressor and electrical components. 	
On Board Diagnostics	The system will report error codes, pointing the researcher or service technician to a probable cause.	Error indications will allow the researcher or service technician to diagnose problems faster, leading to lower down time inconvenience to the researcher and minimizing exposure to samples.	
Automatic Voltage Buck/Boost System	Buck will reduce incoming line voltage in the event the voltage is too high. Boost will provide additional voltage to incoming line voltage in the event voltage is too low.	This feature will add to the longevity of the freezer by stabilizing the voltage to the unit.	
Optional Integrated Back Up System	Integrated back up system is programmable at the user interface.	Provides user with assurance that samples will not be compromised in the event of a power outage.	
Recessed Power Switch	Power switch is recessed into the housing to keep the unit from inadvertently switching off.	Controls down time due to accidentally switching off the power supply.	
Reinforced Shelves	Stiffeners have been added to all stainless steel shelves for excessive loads and impacts.	Allows storage of high-load and non-standard samples, such as microplate hotels.	
Door Mounted Pressure Equalization Port (PEP)	The door mounted PEP does not take up valuable storage space and does not require maintenance (ice removal).	Periodic ice removal from PEP is not required, allowing the researcher to focus on his/her samples and not waste time maintaining the unit.	
Voltage Indicator (Power Monitor)	Voltage indicator button will provide incoming line voltage when pressed.	Provides fast and accurate information on incoming line voltage.	
New Communication Outputs (Standard on Certain Models)	4-20mA option for additional communication output devices.	Flexibility in options for connecting to remote alarm systems.	
Battery Readout	Readout is in actual voltage and not percentage of voltage in battery.	Provides user with assurance that alarms and displays will function in the event of a power outage.	

Environmentally Friendly*

15% lower power consumption reduces ownership cost and is environment friendly

15% lower heat rejection into the laboratory environment for a more comfortable work environment

20% more heat removal capacity for quick temperature recovery after door openings

40% quieter so they can reside in the lab; this speeds sample preparation and minimizes sample exposure to ambient air

* Based on internal performance data



Safeguarding Your Precious Samples with Advanced Technology and Exceptional Quality

Thermo Scientific HERAFreeze ultra-low temperature freezers combine the highest reliability and superior performance with cost-effective operation and innovative features.

Our HERAFreeze® freezers feature an advanced technology platform, refrigeration, microprocessor controls and high-quality construction, delivering:

› **Maximum Temperature Recovery**

Up to 20% more heat removal capacity over ordinary freezers, ensuring faster temperature recovery after door openings.*

› **Operational Efficiency**

Up to 15% less power to maintain cabinet temperature compared to other freezers.*

› **Comfortable Lab Environment**

Quiet, comfortable operation allows our ultra-low temperature freezers to reside directly in the lab, creating a more productive and efficient work environment.

› **Environmentally-Friendly**

Up to 15% less heat into the lab environment, minimizing air conditioning costs.*

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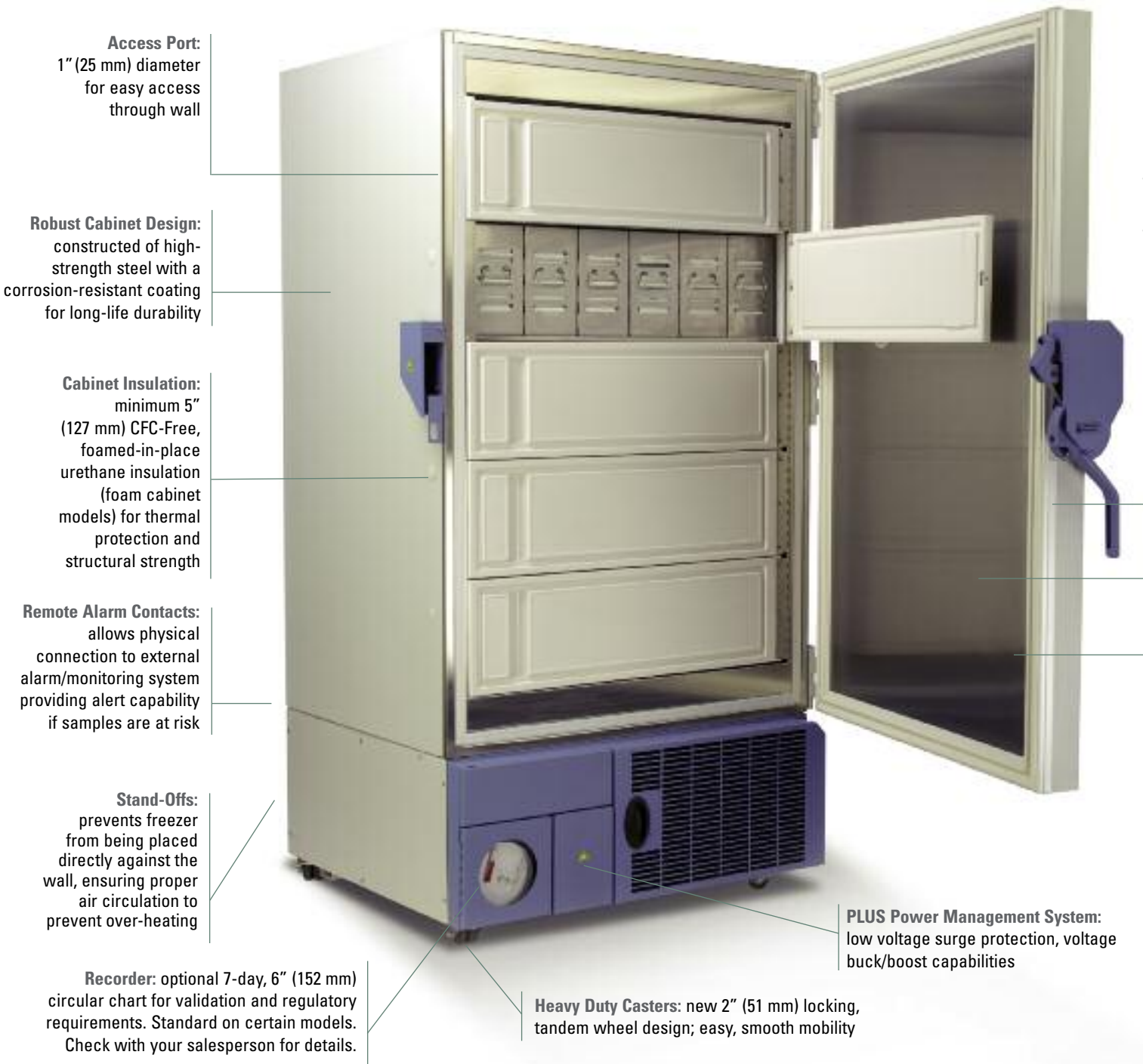
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NEW! Thermo Scientific HERAFreeze HD

Our new HERAFreeze® HD freezers feature a highly-efficient, innovative thin wall insulation technology. This allows for expanded interior storage capacity without increasing the exterior cabinet footprint.



Access Port:
1" (25 mm) diameter
for easy access
through wall

Robust Cabinet Design:
constructed of high-
strength steel with a
corrosion-resistant coating
for long-life durability

Cabinet Insulation:
minimum 5"
(127 mm) CFC-Free,
foamed-in-place
urethane insulation
(foam cabinet
models) for thermal
protection and
structural strength

Remote Alarm Contacts:
allows physical
connection to external
alarm/monitoring system
providing alert capability
if samples are at risk

Stand-Offs:
prevents freezer
from being placed
directly against the
wall, ensuring proper
air circulation to
prevent over-heating

Recorder: optional 7-day, 6" (152 mm)
circular chart for validation and regulatory
requirements. Standard on certain models.
Check with your salesperson for details.

Heavy Duty Casters: new 2" (51 mm) locking,
tandem wheel design; easy, smooth mobility

PLUS Power Management System:
low voltage surge protection, voltage
buck/boost capabilities



Cryolatch™: integrated door
handle and latch for one-hand
operation; built-in key lock and
padlock compatible



**Easy-to-Use Microprocessor
Controls:** programmable temperature/
alarm set points and on-board
diagnostics



Washable Filter: provides protection
from dust on the condenser, causing
reduced refrigeration performance
and increased risk to samples



**Door-Mounted Pressure Equalization
Port (PEP):** maintenance-free PEP
allows for quick re-entries after door
openings and eliminates the need for
ice removal (PEP is hidden from view)

Quality, Reliable Construction

Delivering the highest quality you expect, our HERAFreeze freezers feature robust, high-quality construction with your choice of foam or HD insulation, flexible storage and precision controls.

Secure Inner Doors:

high-impact ABS plastic with recessed handle

Outer Door Gasket:

unique door seal with five points of sealing contact protects against heat leaks and minimizes frost build-up

Insulated Outer Door:

minimum 3.5" (89 mm) high strength foamed-in-place urethane insulation

High Density Insulation (HERAFreeze HD freezers):

innovative composite thin wall design creates more storage without increasing cabinet footprint

Environmentally-Friendly, CFC-Free Refrigerants:

DuPont® Suva 95 in low-stage models

Stainless Steel Interior Shelves:

new reinforced shelves, developed for excessive loads and impacts



The world's largest ultra-low temperature freezer utilizes HD technology and saves valuable floor space

Our 889 liter HD model features 10 inner doors to reduce sample exposure to ambient air.

Our HERAFreeze racks are quality-built for ultimate sample protection. With proven reliability, our racks are completely interchangeable with all HERAFreeze Top and Basic freezers.



Inventory Racks: optional stainless steel with fiberboard boxes and dividers for complete sample protection





NEW! Thermo Scientific 889 L HERAfreeze HD

The Largest Capacity Ultra-Low Temperature Freezer Available

Our 889 L freezer delivers the industry's highest capacity and vial to footprint ratio – store up to 70,000 sample vials in 35 inventory racks.

More Capacity, Small Footprint

Uses HD technology and design to allow 31.4 cu ft (889 L) of capacity in a 24.8 cu ft (702 L) footprint. Features seven optional racks per shelf and five shelf positions hold up to 700 2" (50mm) boxes, 525 3" (76mm) boxes or 3,430 microplates.

Ultimate Sample Protection

Each inner door operates independently on a continuous hinge to protect entire sample contents from ambient thermal exposure.

Flexible Interior

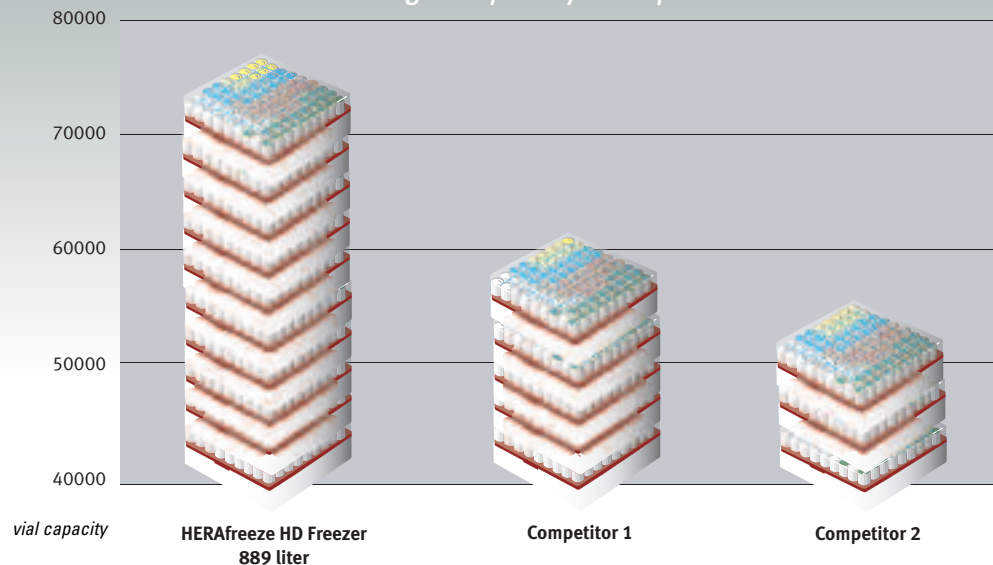
Five shelves, three adjustable in 1" (25 mm) increments, permit alternate inventory configuration.

Sophisticated Microprocessor Controls

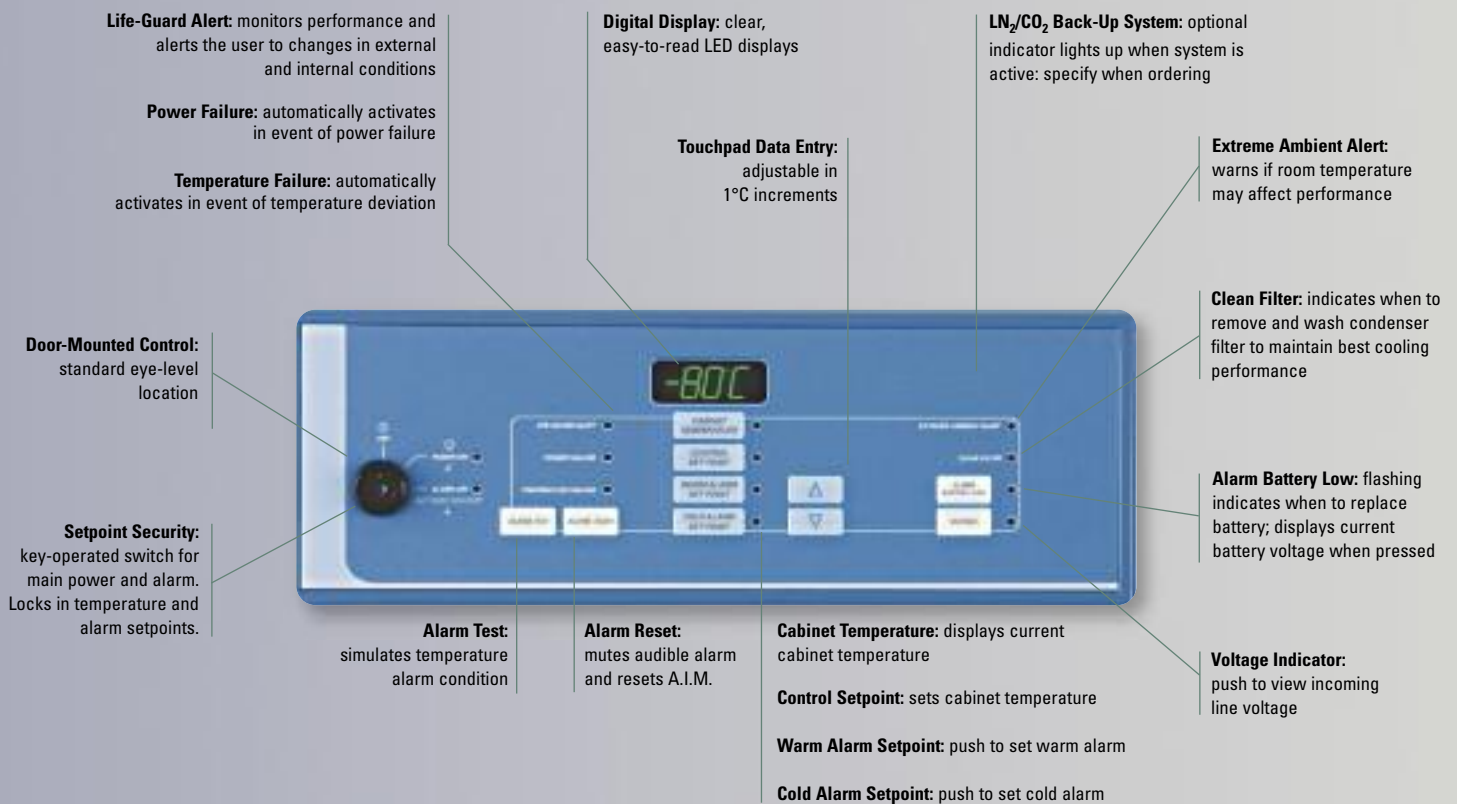
Our HERAfreeze HD line features sophisticated, easy-to-read microprocessor controls – delivering industry-leading performance to protect the integrity of your work.

Storage Capacity Comparison

Store up to
70,000 samples
– more than
any other freezer
on the market!



HERAfreeze HD Control Panel



Additional Features:

PLUS Power Management System:

- **Low Voltage Surge Protection:** minimizes voltage spikes; protects sensitive electronics
- **Voltage Buck/Boost:** protective device used to correct low or high voltage into the unit; protects and extends the life of electrical components

A.I.M. Automatic Incident Monitor: identifies temperature deviation (due to power failure or temperature failure) beyond alarm setpoint

Battery Backup: continuous charge provides full function to control panel in case of power failure

On-Board Diagnostics: continuously monitors sensors to ensure proper performance

NEW! Standard Features: Chart recorder, RS232 output and 4-20 milliamp output

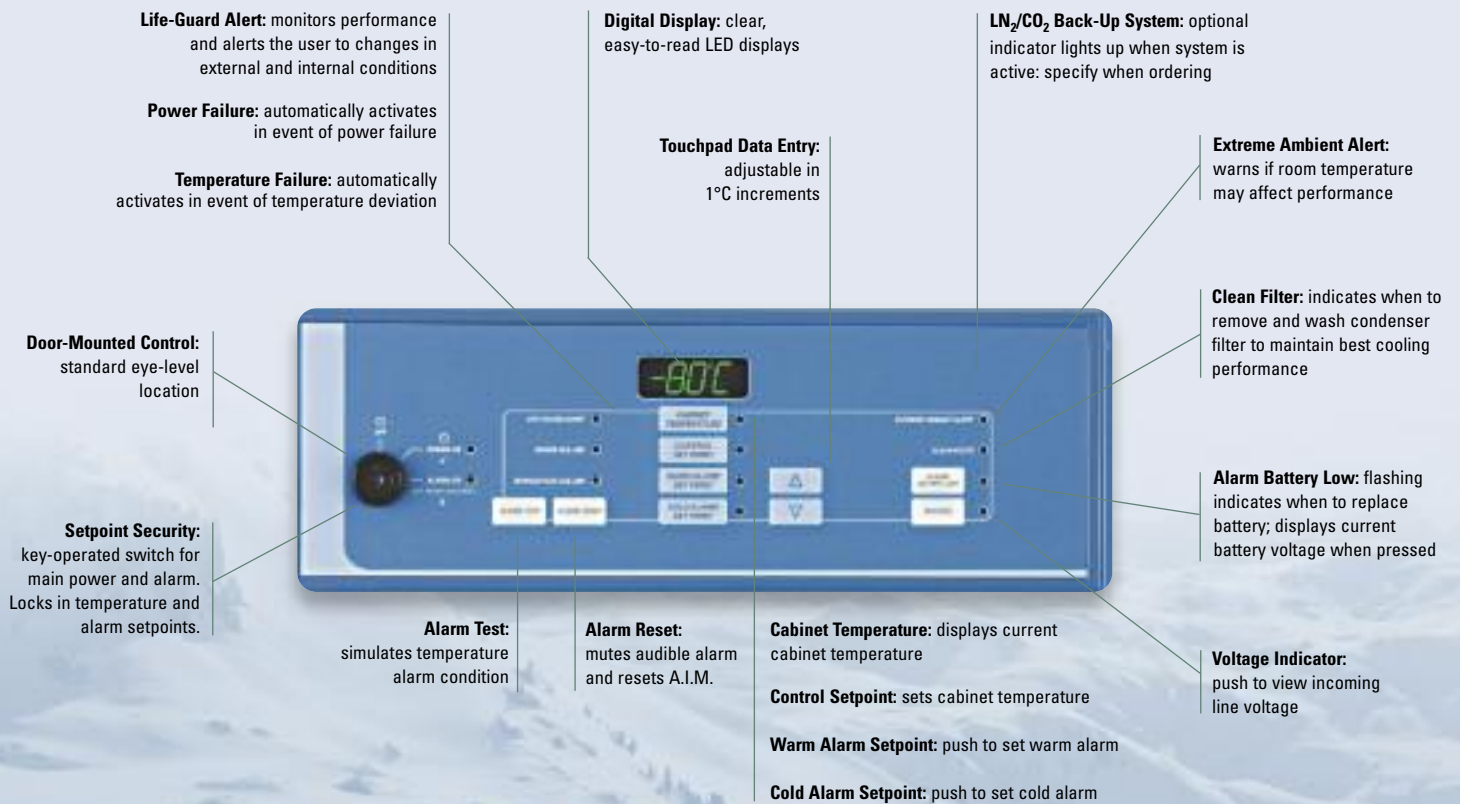
All Thermo Scientific HERAfreeze freezers feature programmable, easy-to-use microprocessor controls. Our control systems offer real-time visibility and precise setpoints on temperature, power and other critical measurements to continuously ensure the security of your work.



Thermo Scientific HERAfreeze Top

Our HERAfreeze Top freezers are suited for laboratories that require sophisticated electronic monitors and alarms for the highest level of sample protection.

Top Control Panel

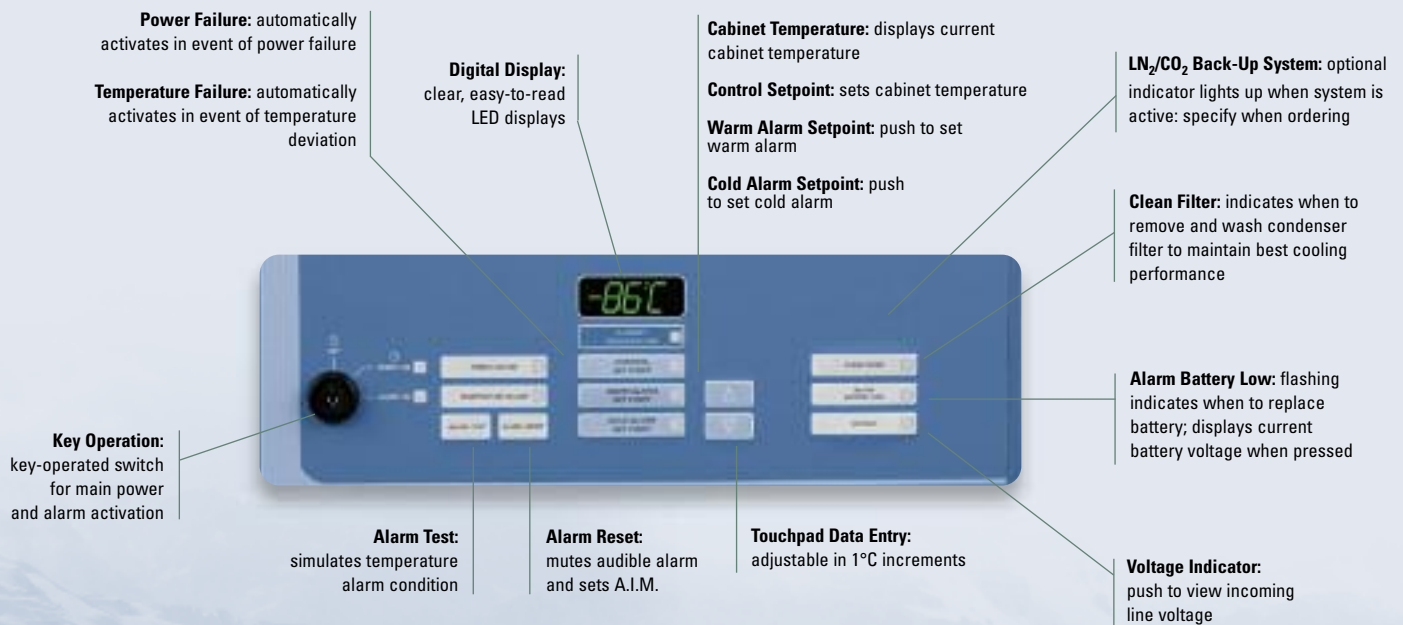




Thermo Scientific HERAfreeze Basic

Our HERAfreeze Basic freezers
 are suited for environments
 that require a moderate level
 of electronic monitors and
 alarms for sample protection.

Basic Control Panel



Rack Systems > Vials



H7C4-3/SA
Adjustable Side Access Rack
 9.4"H x 22.2"F-B x 5.4"W
 (240mm x 560mm x 137mm)

Description	Freezer Volume	Quantity of 2" Boxes	Quantity of 3" Boxes	Racks/ Shelf	Total Racks/ Freezer
	17 cu. ft./481 L	16	12	4	20
	21 cu. ft./594 L	16	12	5	25
	25 cu. ft./707 L	16	12	6	30



H8C4-3/SA
Adjustable Side Access Rack
 9.4"H x 26.75"F-B x 5.3"W
 (240mm x 680mm x 135mm)

	32 cu. ft./906 L	20	15	7	35
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H8C4/00
Sliding Drawer Rack
 9.4"H x 26.5"F-B x 5.5"W
 (240mm x 673mm x 140mm)

	32 cu. ft./906 L	20	15	7	35
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H7C4/00
Sliding Drawer Rack
 5.4"W x 21.85"F-B X 9.4"H
 (140mm X 555mm x 240mm)

	17 cu. ft./481 L	16	–	4	20
	21 cu. ft./594 L	16	–	5	25
	25 cu. ft./707 L	16	–	6	30



H7C4/SA
Fixed side access Rack for 2" Boxes
 9.4"H x 21.7"F-B x 5.4"W
 (240mm x 550mm x 137mm)

	17 cu. ft./481 L	16	–	4	20
	21 cu. ft./594 L	16	–	5	25
	25 cu. ft./707 L	16	–	6	30

Vial Storage



Racks do not include boxes or microplates.

Cat. No.	Fiberboard Box Description	Vials	Cat. No.	Fiberboard Box Description	Vials
820002/0	2" box, no dividers		820004/25	4" box, 24 mm sections	25
820002/16	2" box, 30 mm sections	16	820004/49	4" box, 16 mm sections	49
820002/25	2" box, 24 mm sections	25	820004/64	4" box, 14 mm sections	64
820002/49	2" box, 16 mm sections	49	820004/81	4" box, 13 mm sections	81
820002/64	2" box, 14 mm sections	64	820004/100	4" box, 12 mm sections	100
820002/81	2" box, 13 mm sections	81			
820002/100	2" box, 12 mm sections	100	Cat. No.	Aluminum Box Description	Vials
820003/0	3" box, no dividers		CRYO/2	2" box, no dividers	
820003/16	3" box, 30 mm sections	16	CRYO 16/2	2" box, 30 mm sections	16
820003/25	3" box, 24 mm sections	25	CRYO 25/2	2" box, 24 mm sections	25
820003/49	3" box, 16 mm sections	49	CRYO 36/2	2" box, 18 mm sections	36
820003/64	3" box, 14 mm sections	64	CRYO 49/2	2" box, 16 mm sections	49
820003/81	3" box, 13 mm sections	81	CRYO 64/2	2" box, 14 mm sections	64
820003/100	3" box, 12 mm sections	100	CRYO 81/2	2" box, 13 mm sections	81
820004/0	4" box, no dividers		CRYO 100/2	2" box, 12 mm sections	100
820004/16	4" box, 30 mm sections	16	CRYO 144/2	2" box, 10 mm sections	144

Rack Systems > Microplates



H7C4/MP/SA
Microplates Side-Access Rack
 9.4"H x 21.7"F-B x 5.4"W
 (240mm x 555mm x 137mm)

Description	Freezer Volume	Deepwell Plates	Shallow-well Plates	Microtube Boxes	Racks/ Shelf
	17 cu. ft./481 L	24	72		4
	21 cu. ft./594 L	24	72		5
	25 cu. ft./707 L	24	72		6



H7C4/MP
Microplates Front Access Rack
 9.4"H x 22"F-B" x 5.5"W
 (240mm x 555mm x 140mm)

	17 cu. ft./481 L	24	72		4
	21 cu. ft./594 L	24	72		5
	25 cu. ft./707 L	24	72		6



H8C4/MP/SA
Deep-well Plates with Individual Compartments
 9.4"H x 26.5"F-B x 5.4"W
 (240mm x 675mm x 137mm)

	32 cu. ft./906 L	28	84	–	7
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H8C4/MP
Front Drawer Microplate Rack
 9.5"H x 26.5"F-B x 5.5"W
 (240mm x 675mm x 140mm)

	32 cu. ft./906 L	28	84	31	7
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Other Accessories



Cat. No.	Description
	Temperature Recorder – 150mm (6") chart, 7-day chart drive
6183-6	Built-in, factory installed (<i>specify when ordering</i>)
6283-6	Built-in, field installed
6383-6	Free-standing, customer installed (<i>specify voltage when ordering</i>)
6185	Chart paper, temperature range +50°C to -115°C (<i>Package of 50</i>)
	Backup Systems
6594	CO ₂ backup system (<i>built-in factory installed, specify when ordering</i>)
6595	LN ₂ backup system (<i>built-in factory installed, specify when ordering</i>)
6593	CO ₂ backup system, free-standing (<i>customer installed; specify voltage when ordering</i>)
6214	LN ₂ backup system, free-standing (<i>customer installed, specify voltage when ordering</i>)
6405	RS-232 Data Port and Software
4706	420 Milliamp Outlet
6105	Cabinet Pass-Thru Port
SD3	SD3 Security Autodialer Kit (<i>consult your Thermo Scientific rep.</i>)
4425	Cryo Gloves (Medium)
4426	Cryo Gloves (Large)

Thermo Scientific HERAFreeze HD Ultra-Low Temperature Upright Freezers

Model No	Capacity L (cu. ft.)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D mm (inches)	Exterior Dimensions H x W x D (mm)	Shipping Weight kg (lbs)
HFU2585HDTOP-V	702 (24.8)	230V/50Hz 1Ø	12/16 (P7)	1283 x 876 x 616 (50.5 x 34.5 x 24.3)	1975 x 1092 x 935 (77.8 x 43.0 x 36.8)	358 (825)
HFU3280HDTOP-V	889 (31.4)	230V/50Hz 1Ø	12/16 (P7)	1283 x 993 x 693 (50.5 x 39.1 x 27.3)	1975 x 1219 x 935 (77.8 x 48.0 x 36.8)	478 (930)

Thermo Scientific HERAFreeze Top Ultra-Low Temperature Upright Freezers

Model No	Capacity L (cu. ft.)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D mm (inches)	Exterior Dimensions H x W x D (mm)	Shipping Weight kg (lbs)
HFU1785TOP-V	493 (17.4)	230V/50Hz 1Ø	12/16 (P7)	1283 x 597 x 635 (50.5 x 23.5 x 25)	1975 x 940 x 940 (77.8 x 37.0 x 37.0)	326 (720)
HFU2185TOP-V	578 (20.4)	230V/50Hz 1Ø	12/16 (P7)	1283 x 724 x 616 (50.5 x 28.5 x 24.3)	1975 x 1066 x 922 (77.8 x 42.0 x 36.3)	349 (770)
HFU2585TOP-V	702 (24.8)	230V/50Hz 1Ø	12/16 (P7)	1283 x 876 x 616 (50.5 x 34.5 x 24.3)	1975 x 1219 x 922 (77.8 x 48.0 x 36.3)	376 (830)

Thermo Scientific HERAFreeze Basic Ultra-Low Temperature Upright Freezers

Model No	Capacity L (cu. ft.)	Electrical	Amps/Breaker (Plug)	Interior Dimensions H x W x D mm (inches)	Exterior Dimensions H x W x D (mm)	Shipping Weight kg (lbs)
HFU1785BASIC-V	493 (17.4)	230V/50Hz 1Ø	12/16 (P7)	1283 x 597 x 635 (50.5 x 23.5 x 25)	1975 x 940 x 940 (77.8 x 37.0 x 37.0)	326 (720)
HFU2185BASIC-V	578 (20.4)	230V/50Hz 1Ø	12/16 (P7)	1283 x 724 x 616 (50.5 x 28.5 x 24.3)	1975 x 1066 x 922 (77.8 x 42.0 x 36.3)	349 (770)
HFU2585BASIC-V	702 (24.8)	230V/50Hz 1Ø	12/16 (P7)	1283 x 876 x 616 (50.5 x 34.5 x 24.3)	1975 x 1219 x 922 (77.8 x 48.0 x 36.3)	376 (830)



Thermo Scientific Nalgene and Nunc cryogenic storage vials give you everything you need to safely store precious specimens, organize freezer space and simplify sample retrieval. Nalgene® and Nunc™ combine to provide one-stop shopping for the widest variety and highest quality of externally and internally threaded cryovials, storage boxes, lab top coolers and controlled-rate freezing containers. New Nunc Cryobank and Bank-It™ cryovials are designed for automated cryogenic storage.

For further information regarding these products — visit www.nalgene.com or www.nuncbrand.com

NOT AVAILABLE IN NORTH AMERICA
WARRANTY INFORMATION:

Standard HERAFreeze models carry a 16-month full warranty for parts and a total 60-month warranty on compressor parts for the Top and Basic Series.

CERTIFICATION INFORMATION AND LINE CORD INFO:

- Meets NEMA, UL61010-1, UL471, CUL, CE, IEC60335-2-89/Climate Class T (Tropical) criteria
- Calibration Certification Available
- Validation Testing Program Available



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