

thermo scientific



Thermo Scientific HERAfreeze Ultra-Low Temperature Freezers

Your samples, our obsession

ThermoFisher
SCIENTIFIC

Freezers you can count on for daily dependability

To the rest of the world these are samples. To us they are a scientist's life's work. A lab's mission. A company's breakthrough. We are obsessed with sample integrity. Every one of our cold storage solutions is optimized for the best protection of critical samples. Our **Thermo Scientific™ HERAfreeze™ Ultra-Low Temperature Freezers** offer a complete range of upright and chest configurations designed for maximum sample protection.



Thermo Scientific HERAFreeze HFU-B Series Upright Freezers

Daily dependability you can count on

Thermo Scientific HERAFreeze HFU-B Series upright freezers are designed for daily sample protection and dependability. All models feature state-of-the-art refrigeration, sturdy construction and easy-to-use microprocessor control.

Rugged construction for everyday use

- Heavy gauge, cold-rolled steel cabinets with a powder coat paint finish for a uniform exterior that resists chipping and rust.
- 5" (12.7cm) foamed-in-place, polyurethane insulation reduces power consumption, maintains temperature setpoint and combined with triple-point door gasket, provides longer holding time in the event of a power loss.
- Advanced refrigeration system improves temperature control, increases reserve capacity, for more stable temperature sample.
- One 1" (2.5cm) access port enable use of independent probes.

- HFU-B -40°C Series comes standard with galvanized interior.
- Vacuum relief port permits easy access after door openings.

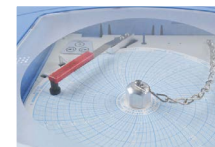
Secure inner doors

- Five inner doors reduce cold air loss and improve temperature recovery after door openings.



Microprocessor control

Centralized information center, including microprocessor control and monitoring system, ensures that all controls and displays are easy to reach and read. Eye level on our -86°C models and knee level on the -40°C models.



Optional chart recorder

Optional built-in chart recorder can be installed at waist level; knee level on our 3 cu. ft. (85L) models.



Easy-to-remove washable filter

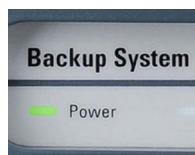
Provides protection from dust on condenser, reducing the risk of refrigeration malfunction or risk to samples.

Simplified installation

With our easy-roll 2" (5cm) locking castors.

Optional CO₂ or LN₂ back-up

Optional choice of CO₂ or LN₂ safety back-up systems for additional sample protection in the event of a power or mechanical failure.



Single-hand operation

Easy-to-use, ergonomic door handle with integrated key lock.



HERAfreeze HFU-B Series Upright Freezers

Specifications and ordering

Thermo Scientific HERAfreeze HFU-B Series -40°C Upright Freezers (Temperature Range: -10°C to -40°C)

Model No.	Capacity		Electrical		Max. Shelf Weight lbs. (kg)	Interior Dimensions H x W x D in. (cm)	Exterior Dimensions H x W x D in. (cm)	Shipping Weight lbs. (kg)
	cu. ft. (liters)	2 in. cryobox	Voltage/Frequency	Amps/Breaker (Plug)				
HFU40240BA	13.0 (368)	240	115V / 60 Hz	16/20 (NEMA 5-20)	125 (57)	51.5 x 23.0 x 19.3 (130.8 x 58.4 x 49.0)	77.9 x 33.3 x 32.9 (197.9 x 84.6 x 83.6)	711 (323)
HFU40240BD			208-230V / 60 Hz	12/16 (NEMA 6-15)				
HFU40240BV			230V / 50 Hz	12/16 (European)				
HFU40320BA	17.3 (490)	320	115V / 60 Hz	16/20 (NEMA 5-20)	125 (57)	51.5 x 23.0 x 25.3 (130.8 x 58.4 x 64.3)	77.9 x 33.3 x 38.9 (197.9 x 84.6 x 98.9)	830 (376)
HFU40320BD			208-230V / 60 Hz	12/16 (NEMA 6-15)				
HFU40320BV			230V / 50 Hz	12/16 (European)				
HFU40400BD	23.0 (651)	400	115V / 60 Hz	16/20 (NEMA 5-20)	125 (57)	51.5 x 30.6 x 25.3 (130.8 x 77.7 x 64.3)	77.9 x 40.8 x 38.9 (197.9 x 103.6 x 98.9)	879 (399)
HFU40400BD			208-230V / 60 Hz	12/16 (NEMA 6-15)				
HFU40400BV			230V / 50 Hz	12/16 (European)				

Monitoring and Remote Alarms

Model No.	Voltage	Description
5612-1A	120V / 60 Hz	Remote Alarm with Audible Signal Extend the freezers on-board alarms systems to remote locations in the facility.
5612-3V	230 V / 50 Hz	
400047	120V / 60 Hz	Sensaphone™ Telephone Dialing System Monitors up to four channels; Dials up to four numbers (not CE). Dedicated phone line is required
400182	220V / 50Hz	
400134	120V / 60 Hz	Sensaphone Telephone Dialing System Monitors up to eight channels; Dials up to eight numbers (not CE). Dedicated phone line is required
400183*	220V / 50Hz	
400048	120V / 60 Hz	Temperature / Power Monitor External Digital and audible / visual alarms monitor temperature and power supply of the freezer. Includes temperature probe
400049	220V / 50Hz	

*Not for sale in the EU.



**Sensaphone™
Telephone Dialing
System**

HERAfreeze HFU-B Series Upright Freezers

Options (Field-installed must be installed by a qualified professional)

Model No.	Installation	Description
1960535	Factory Installed	LN₂ Backup System
1960536	Field Installed	Maintains temperature down to -80°C with liquid nitrogen
1960533	Factory Installed	CO₂ Backup System
1960534	Field Installed	Maintains temperature down to -70°C with CO ₂
224195	Factory Installed	Ink Chart Recorder
224196	Field Installed	6" (150mm), seven day ink recorder, to -150°C. Includes one red felt tip pen and box of chart paper (qty. 50)
224197	Factory Installed	Inkless Chart Recorder
224198	Field Installed	6" (150mm), seven day inkless recorder, to -150°C. Includes box of chart paper (qty. 50)
195915	Factory Installed	Unique Key Lock
290199	Factory Installed	PT100 Sensor – Optional PT100 sensor for connection to building automation systems
290211	Field Installed	

Accessories

Model No.	Description
195890	Replacement Air Filter – Pack of five filters
400159	Replacement Back-Up Battery
991505	High-Pressure Liquid CO₂ Hose Kink-resistant, stainless steel lined, double-braided sheath. 316 stainless steel NPTF fitting. Max. working pressure 25,000 psig. 6' long
950316	Wall Clamp CO₂ cylinder holder for securing tank to the wall in accordance with OSHA guidelines
4000401	LN₂ Transfer Hose Flexible 6' metal hose. 0.5" diameter, 45° flare with swivel ends
17020	Ink Chart Paper (quantity: 50)
180000	Inkless Chart Paper (quantity: 50)
224134	Shelf Kit for 240 box capacity freezer (one shelf and clips)
224135	Shelf Kit for 320 box capacity freezer (one shelf and clips)
224158	Shelf Kit for 400 box capacity freezer (one shelf and clips)
224180	Shelf Kit for 600 box capacity freezer (one shelf and clips)
245231	Red Felt Tip Chart Pen
245232	Blue Felt Tip Chart Pen
4425	Cryo Gloves Medium
4426	Cryo Gloves Large
TF-ULT13	Seismic restraint kit for 13 cu. ft. (368L)
TF-ULT17	Seismic restraint kit for 17.3 cu. ft. (490L)
TF-ULT23	Seismic restraint kit for 23 cu. ft. (651L)
TF-ULT28	Seismic restraint kit for 28 cu. ft. (600L)


Alternate Cord and Plug Options

Model No.	Plug Description
430266	115V/20A Twist Lock Plug (NEMA L5-20P)
430267	230V/15A Twist Lock Plug (NEMA L6-15P)



Temperature / Power Monitor

Thermo Scientific HERAfreeze HFU-B Series Upright Freezer Racks

2" Box Racks	Model No. Description	Dimensions H x W x D in. (cm)	Freezer Vol. cu. ft. (liters)	Boxes/Rack	Racks/Shelf	Racks/Freezer	Boxes/Freezer
	398332 Sliding drawer rack	9.4 x 5.5 x 16.6 (23.9 x 14 x 42.2)	13 (368.1)	12	4	20	240
	398331 Sliding drawer rack	9.4 x 5.5 x 22 (23.9 x 14 x 55.9)	17.3 (490)	16	4	20	320
			23 (651.3)	16	5	25	400
	1950728 Sliding drawer rack	9.4 x 5.5 x 26.3 (23.9 x 14 x 66.5)	28.1 (793)	20	6	30	600
	398324 Adjustable side access rack	9.4 x 5.4 x 16.5 (23.9 x 13.7 x 41.9)	13 (368.1)	12	4	20	240
	398326 Adjustable side access rack	9.4 x 5.4 x 22 (23.9 x 13.7 x 55.9)	17.3 (490)	16	4	20	320
			23 (651.3)	16	5	25	400
3" Box Racks							
	920099 Sliding drawer rack	9.5 x 5.5 x 17.4 (24 x 14 x 44.2)	13 (368.1)	9	4	20	1800
	398330 Sliding drawer rack	9.5 x 5.5 x 22 (24 x 14 x 55.9)	17.3 (490)	16	4	20	320
			23 (651.3)	16	5	25	400
	1950729 Sliding drawer rack	9.5 x 5.5 x 26.3 (24 x 14 x 66.8)	28.1 (793)	15	6	30	450
	398325 Adjustable side access rack	9.4 x 5.4 x 16.1 (23.9 x 13.7 x 41.9)	13 (368.1)	9	4	16	144
	398327 Adjustable side access rack	9.4 x 5.4 x 22.1 (23.9 x 13.7 x 56.1)	17.3 (490)	12	4	20	240
			23 (651.3)	12	5	25	300
Microplate Racks							
	1950637 Sliding drawer rack	9.5 x 5.5 x 16.6 (24 x 14 x 44.2)	13 (368.1)	16	4	20	320
	1950638 Sliding drawer rack	9.5 x 5.5 x 22 (24 x 14 x 55.9)	17.3 (490)	24	4	20	480
			23 (651.3)	24	5	25	600
	1950730 Sliding drawer rack	9.4 x 5.5 x 26.3 (24 x 14 x 66.8)	28 (793)	28	6	30	840
	398334 Side access rack	9.4 x 5.3 x 14.7 (23.9 x 13.5 x 37.3)	13 (368.1)	44	4	20	880
	398333 Side access rack	9.4 x 5.3 x 22 (23.9 x 13.5 x 55.9)	17.3 (490)	66	4	20	1320
			23 (651.3)	66	5	25	1650
			28 (793)	66	6	30	1980
	398335 Side access rack	9.4 x 5.3 x 22 (23.9 x 13.5 x 55.9)	17.3 (490)	30	36	20	600
			23 (651.3)	30	5	25	750
			28 (793)	30	20/0	30	900

Racking Shelf Kits Includes Sliding Drawer Racks and 2" Boxes with 100 count cell dividers

Model Number	Freezer Volume cu. ft. (liters)	Racks Included	Boxes Included
RSK13SD5	13.0 (368)	4	48
RSK17SD5	17.3 (490)	4	64
RSK23SD5	23.0 (651)	5	80
RSK28CFSD5	28.0 (793)	6	120

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Sliding Drawer Inserts (Pack of 5)

Model Number	For	Freezer Volume	Slots
1950666P5	Microplates	13 cu. ft. (368L)	4
1950669P5	Microplates	17/23 cu. ft. (490/651L)	6
1950671P5	Microplates	28 cu. ft. (793L)	7

Model Number	For	Freezer Volume	Slots
1950668P5	Boxes	13 cu. ft. (368L)	3
1950670P5	Boxes	17/23 cu. ft. (490/651L)	4
1950672P5	Boxes	28 cu. ft. (793L)	5

HERAfreeze HFU-C Chest Freezers

Our Thermo Scientific™ HERAfreeze™ HFU-C Chest Freezers contain all the sample protection features of our HFU-B upright series. Choose a -86°C or -40°C cabinet in four convenient sizes as well as a full range of racking solutions.

Rugged construction for everyday use

- Heavy gauge, cold-rolled steel cabinets with a powder coat paint finish for a uniform exterior that resists chipping and rust.
- 5" (127mm) foamed-in-place, polyurethane insulation reduces power consumption, maintains temperature setpoint and combined with sub lids and door gasket, provides longer holding time in the event of a power failure.

- Advanced refrigeration system improves temperature control and increases reserve capacity, resulting in a more stable temperature sample.
- Stainless steel interior.
- 1" (2.5cm) access ports allow for the use of independent probes or instrumentation.



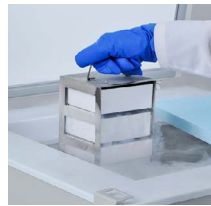
Optional CO2 or LN2 back-up

Optional choice of CO2 or LN2 safety back-up systems for additional sample protection in the event of a power or mechanical failure.



Microprocessor control

Centralized information center, including microprocessor control and monitoring system ensures that all controls and displays are easy to reach and read. Knee level on the 3 cu. ft. (85L) models.

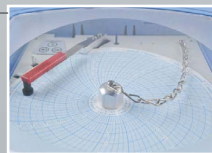


Polystyrene interior sub-lids

Reduce cold air loss and improve temperature recovery after door openings.

Single-hand operation

Easy-to-use, ergonomic, lockable door handle.



Optional chart recorder

Optional built-in chart recorder can be installed at waist level; knee level on our 3 cu. ft. (85L) models.



Easy-to-remove washable filter

Provides protection from dust on condenser, reducing the risk of refrigeration malfunction or risk to samples.

RS-485 and 4-20 milliamp analog outputs

For independent monitoring devices and recorders.

Simplified installation

With our new easy-roll 2" (5cm) locking casters.

HERAfreeze HFU-C Chest Freezers

Thermo Scientific HERAfreeze HFU-C Series -86°C Chest Freezers

Model No.	Capacity		Electrical		Interior Dimensions	Exterior Dimensions	Shipping Weight
	cu. ft. (liters)	2" cryobox	Voltage/Frequency	Amps/Breaker (Plug)	H x W x D in. (cm)	H x W x D in. (cm)	lbs. (kg)
HFC390TA	3.0 (84.9)	63	115V / 60 Hz	10.5/20 (NEMA 5-20)	16.5 x 18.5 x 18.5 (41.9 x 47.0 x 47.0)	43.8 x 28.5 x 29.9 (111.3 x 72.4 x 75.9)	432 (196)
HFC390TV			230V / 50 Hz	5.4/15 (European)			
HFC1390TA	12.7 (359.6)	252	115V / 60 Hz	16/20 (NEMA 5-20)	28.0 x 42.5 x 18.5 (71.1 x 108.0 x 47.0)	40.5 x 72.0 x 33.4 (102.9 x 182.9 x 84.8)	716 (325)
HFC1390TD			208-230V / 60 Hz	12/15 (NEMA 6-15)			
HFC1390TV			230V / 50 Hz	12/15 (European)			
HFC1790TA	17.0 (481.4)	348	115V / 60 Hz	16/20 (NEMA 5-20)	28.0 x 58.8 x 18.5 (71.1 x 149.4 x 47.0)	40.5 x 87.6 x 33.8 (102.9 x 222.5 x 85.9)	821 (372)
HFC1790TD			208-230V / 60 Hz	12/15 (NEMA 6-15)			
HFC1790TV			230V / 50 Hz	12/15 (European)			
HFC2090TA	20.0 (566.3)	396	115V / 60 Hz	16/20 (NEMA 5-20)	28.0 x 66.5 x 18.5 (71.1 x 168.9 x 47.0)	40.5 x 96.0 x 33.4 (102.9 x 243.8 x 84.8)	833 (378)
HFC2090TD			208-230V / 60 Hz	12/15 (NEMA 6-15)			
HFC2090TV			230V / 50 Hz	12/15 (European)			

Thermo Scientific HERAfreeze HFU-C Series -40°C Chest Freezers (-10°C to -40°C)

Model No.	Capacity		Electrical		Interior Dimensions	Exterior Dimensions	Shipping Weight
	cu. ft. (liters)	2" cryobox	Voltage/Frequency	Amps/Breaker (Plug)	H x W x D in. (cm)	H x W x D in. (cm)	lbs. (kg)
HFC350TA	3.0 (84.9)	63	115V / 60 Hz	5/15 (NEMA 5-20)	16.5 x 18.5 x 18.5 (41.9 x 47.0 x 47.0)	43.8 x 28.5 x 29.9 (111.3 x 72.4 x 75.9)	395 (179)
HFC350TV			230V / 50 Hz	3/15 (European)			
HFC1350TA	12.7 (359.6)	252	115V / 60 Hz	6.5/15 (NEMA 5-20)	28.0 x 42.5 x 18.5 (71.1 x 108.0 x 47.0)	40.5 x 72.0 x 33.4 (102.9 x 182.9 x 84.8)	659 (299)
HFC1350TD			208-230V / 60 Hz	6.5/15 (NEMA 6-15)			
HFC1350TV			230V / 50 Hz	6.5/15 (European)			
HFC1750TA	17.0 (481.4)	348	115V / 60 Hz	6.5/15 (NEMA 5-20)	28.0 x 58.8 x 18.5 (71.1 x 149.4 x 47.0)	40.5 x 87.6 x 33.8 (102.9 x 222.5 x 85.9)	764 (347)
HFC1750TD			208-230V / 60 Hz	6.5/15 (NEMA 6-15)			
HFC1750TV			230V / 50 Hz	6.5/15 (European)			
HFC2050TA	20.0 (566.3)	396	115V / 60 Hz	6.5/20 (NEMA 5-20)	28.0 x 66.5 x 18.5 (71.1 x 168.9 x 47.0)	40.5 x 96.0 x 33.4 (102.9 x 243.8 x 84.8)	776 (352)
HFC2050TD			208-230V / 60 Hz	6.5/15 (NEMA 6-15)			
HFC2050TV			230V / 50 Hz	6.5/15 (European)			

Monitoring and Remote Alarms

Model No.	Voltage	Description
5612-1A	120V / 60 Hz	Remote Alarm with Audible Signal Extend the freezer's on-board alarms systems to remote locations in the facility.
5612-3V	230 V / 50Hz	
400047	120V / 60 Hz	Sensaphone Telephone Dialing System Monitors up to four channels; Dials up to four numbers (not CE). Dedicated phone line is required
400182	220V / 50Hz	
400134	120V / 60 Hz	Sensaphone Telephone Dialing System Monitors up to eight channels; Dials up to eight numbers (not CE). Dedicated phone line is required
400183*	220V / 50Hz	
400048	120V / 60 Hz	Temperature / Power Monitor External digital and audible/visual alarms monitor temperature and power supply of the freezer. Includes temperature probe
400049	220V / 50Hz	

*Not for sale in the EU.

HERAfreeze HFU-C Chest Freezers

Accessories

Model No.	Description
195947	Replacement Air Filter (quantity of 5)
195948	Replacement Air Filter for Other Chest Freezers (quantity of 5)
17020	Ink Chart Paper (quantity of 50)
400159	Replacement Back-Up Battery
245231	Red Felt Tip Chart Pen
245232	Blue Felt Tip Chart Pen
4000401	LN ₂ Transfer Hose Flexible 6' metal hose. 0.5" diameter, 45° flare with swivel ends
950316	Wall Clamp CO ₂ cylinder holder for securing tank to the wall in accordance with OSHA guidelines
991505	High-Pressure Liquid CO ₂ Hose Kink-resistant, stainless steel lined, double-braided sheath. 316 stainless steel NPTF fitting. Max. working pressure 25,000 psig. 6' long
4425	Cryo Gloves Medium
4426	Cryo Gloves Large

The water-cooled condenser option is available on our -86°C freezers.

Your work environment stays cooler because 50% less heat is emitted to your surroundings (i.e. less BTU rejection). A water regulating valve automatically controls the water flow needed to maintain the compressor discharge pressure. Cooler compressor temperatures enhance compressor stability and reliability.

Like our standard freezers, those with the water-cooled condenser options are also UL listed to Canadian and United States requirements and bear the CE mark.

The following specifications apply to tower and city water sources:*

Water Pressure and Temperature

Maximum Pressure: 150 psig
Maximum Temperature: 29.4°C

Connections

Inlet: 0.5" compression
Outlet: 0.5" compression

Water Flow Rate Required (per minute)

Tower Water: 3.0 gal. (11.4L)
City Water: 1.0 gal. (3.8L)

Drain Required?

Tower Water: No (return line)
City Water: Yes

Installation requires a qualified technician and should include proper adjustment of the regulating valve which controls the discharge pressure.

*Actual requirements may vary due to specific water pressure conditions.

Options (Field-installed must be installed by a qualified professional)

Model No.	Installation	Description
1960535	Factory Installed	LN ₂ Backup System Maintains temperature down to -80°C with liquid nitrogen.
1960536	Field Installed	
1960533	Factory Installed	CO ₂ Backup System Maintains temperature down to -70°C with CO ₂
1960534	Field Installed	
201241	Factory Installed	Chart Recorder 6" (150mm), seven day ink recorder, to -150°C includes 50 chart papers
201240	Field Installed	
398213	RS-232, (0-1V)	Data Outputs (Factory Installed Only)
398214	RS-485, (0-1V)	
398215	RS-485, (0-5V)	
195967	Factory Installed	Water-Cooled Condenser Option

Thermo Scientific HERAfreeze Chest Freezer Racks

Model No. Description	Dimensions W x H x D in. (cm)	Freezer Vol. cu. ft. (liters)	Boxes Per Rack	Racks / Freezer	Boxes / Freezer
398184 2" Box Rack with locking rod	5.5 x 15.2 x 5.5 (14 x 38.6 x 14)	3 (85)	7	9	63
		12.7 (360)	12	21	252
		17.0 (481)	12	29	348
398186 2" Box Rack with locking rod	5.5 x 26.5 x 5.6 (14 x 67.2 x 14.2)	20.0 (566)	12	33	396
		12.7 (360)	8	21	168
		17.0 (481)	8	29	232
398185 3" Box Rack	5.5 x 16 x 5.5 (14 x 40.6 x 14)	20.0 (566)	8	33	264
		12.7 (360)	(27)	(33)	(891)
		17.0 (481)	(27)	(48)	(1,296)
398187 3" Box Rack	5.5 x 26.5 x 5.5 (14 x 67.3 x 14)	20.0 (566)	8	33	264
		12.7 (360)	(27)	(33)	(891)
		17.0 (481)	(27)	(48)	(1,296)
398188 27 Position Microplate Rack	5.3 x 25.8 x 3.5 (13.5 x 65.5 x 8.9)	20.0 (566)	(27)	(51)	(1,377)
		12.7 (360)	NA	5	NA
		20.0 (566)	NA	9	NA
114048* Wire Basket with Rollers	11.8 x 12.3 x 16.5 (30 x 31.2 x 42)	12.7 (360)	NA	NA	NA
189001 Wire Basket Rail Set	NA	12.7 (360)	NA	NA	NA
189000 Wire Basket Rail Set	NA	20.0 (566)	NA	NA	NA

* Basket rail set is required.



398184

398186

398185



398187

398188

114048

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Thermo Scientific™ Smart-Vue™ Wireless Monitoring Systems

With so much at stake, obsessive is smart

The Smart-Vue wireless monitoring system offers a complete and simplified solution to monitor critical samples stored inside your ultra-low temperature freezer.

This wireless solution features audit trail traceability to assist with conformance to 21 CFR part 11 and other regulatory requirements while safeguarding critical samples.

Visit thermofisher.com/smart-vue

Smart

Continuous, real-time monitoring of critical parameters – alerting you remotely when sample integrity is threatened

Scalable

Flexibility to grow with your expanding laboratory needs

Simple

Easy to install, use and maintain



**For more information, contact your sales representative.
Smart-Vue is not available in all Radio Frequency (RF) regions.**

Note: Smart-Vue wireless monitoring kits are designed for first time users monitoring critical temperature parameters in ultra-low temperature freezers. Smart-Vue modules and sensors are available for temperature, RH, CO₂ concentration, differential pressure, 4-20mA output, ambient conditions and alarm/relay dry contacts. Solutions vary by RF regions worldwide and are compatible with multiple types of laboratory equipment. Please ask your sales representative to evaluate a Smart-Vue wireless monitoring solution that best meets your specific needs.

Find out more at thermofisher.com/cold

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