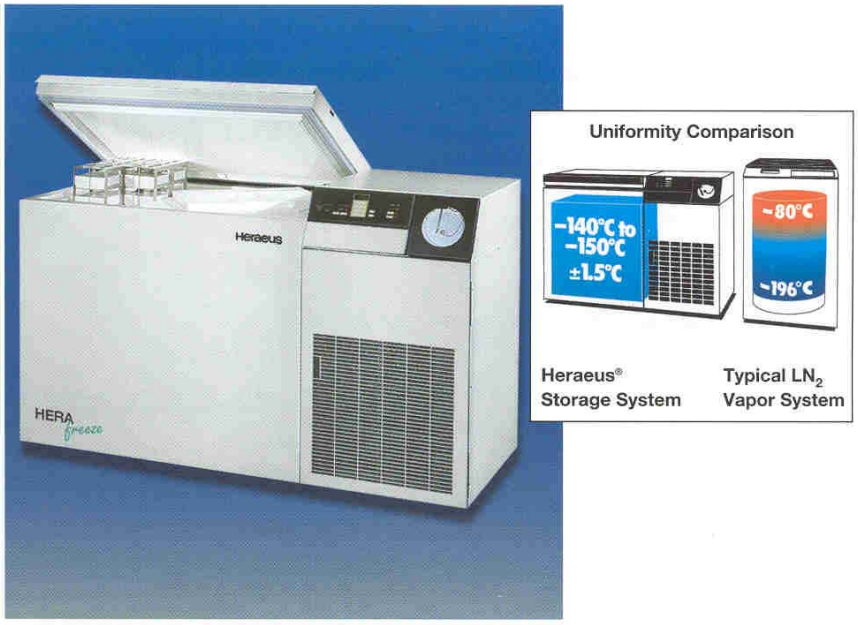
Heraeus

HERAEUS® HERAFREEZE® CRYOGENIC FREEZER

Storage Temperatures of –140 °C to –150 °C for Critical Applications and Long Term Storage

Heraeus® HERAfreeze® Cryogenic freezers offer a dependable, cost-effective and safe alternative to liquid nitrogen vapor for long-term storage of biologicals at cryogenic temperatures.
The HERAfreeze® Cryogenic freezers maintain a uniform –140 °C or –150 °C temperature throughout the inner chamber. All samples are maintained below the critical –130 °C glass transition temperature of water. By comparison, storage temperatures in liquid nitrogen vapor exhibit a severe temperature gradient related to elevation above the liquid source; cell viability may be affected by storage location.



Model HFC7150 TOP™ shown with optional temperature recorder.

General features

- Model HFC10140 TOP™
  Operating temperature: –140 °C
  Storage capacity: 292 Liters (10.3 cu.ft.)
- Model HFC7150 TOP™
  Operating temperature: –150 °C
  Storage capacity: 193 Liters (6.8 cu.ft.)

The HERAfreeze® Cryogenic freezers offer the savings and convenience of mechanical refrigeration with the advantage of cryogenic temperature performance at ranges typically associated with liquid nitrogen. The Cryogenic freezers utilize a patented unique single compressor refrigeration system to achieve and maintain uniform –140 °C and –150 °C temperatures .

Control System and Set-point Security

The microprocessor controller features intuitive data entry and display for easy operation. A keyed master switch for power, alarm and set-point includes a Setpoint Security function to disable operating temperature and alarm changes once deliberately established and placed in the "Secure" mode. To prevent accidents or tampering, set-points can be locked by a key.
Intelligent microprocessor controls provide the full complement of control and safety systems offered on Heraeus® ultra-low temperature freezers: Extreme Ambient Alert, Performance Deviation Alert, Set-point Security and more. A built-in voltage boost system protects refrigeration components by automatically maintaining proper power supply during brown-out conditions.

Low Profile Chest Design

HERAfreeze® Cryogenic freezers are available in two cabinet sizes. Both have low profile design for easier access to the stored product using conventional inventory racks and boxes. A counterbalanced lid seals safely against the cabinet with both a compression gasket and a magnetic seal to reduce frost. Other features include:

- Minimum 127 mm (5 in) high density foamed-in-place insulation, CFC-free.
- Insulated sub-lids minimize exposure during lid openings.
- Keyed lid lock for security.
- Heavy-duty swivel casters.
- Sound absorbing insulation.
- 25 mm (1 in) diameter access port

Microprocessor controls on HERAfreeze® Cryogenic freezers supervise all functions for total security and safety.

Control and Monitoring Systems

- The microprocessor control system is user-friendly with a digital display, keyed power and alarm switch, and touchpad data entry
- Three-position key switch offers setpoint security for operating temperature and alarm parameters
- Provides accurate status on temperature and voltage fluctuations
- Voltage boost notifies of insufficient incoming line voltage and automatically compensates to required voltage

Alarms

- Audible and visual alarms notify user of deviation beyond adjustable high and low parameters
- Performance Deviation Alert warns of current or recent self-corrected situations that may affect performance
- Low battery alarm indicator, clean filter light and alarm test are displayed on control panel
- Extreme ambient alarm warns if room temperature is affecting freezer performance
- Exterior alarm contacts allow connection to remote monitoring system

OPTIONS AND ACCESSORIES

Optional inventory components, including racks and boxes, may be ordered separately.

Backup Systems	Catalog No.
LN_2 Backup System (free-standing, customer installed)	AVL6214
LN_2 Backup System (built-in, factory installed)	AVL6595

Alarm Systems	Catalog No.
Alarm Delay Module	AVL6903

Temperature Recorders	Catalog No.
Temperature Recorder (built-in, factory installed)	AVL6283-5
Temperature Recorder (free-standing, customer installed)	AVL6383-5
Chart Paper (temperature range ±0 °C to –200 °C)	AVL7289

TECHNICAL DATA

Model	Voltage[1]	Amps/ Breaker[2] (A)	Set temperature	Volume (Liters/ Cu.ft.)	Interior Dimensions H x D x W (mm/inches)	Exterior Dimensions H x D* x W (mm/inches)	Ship Weight (kg/lb)	Catalog No.
HFC10140 TOP™	400V 50 Hz 3ϕ	11.0/15	–140°C	292/10.3	673 x 483 x 895/ 26.5 x 19.0 x 35.5	1086 x 808 x 1750/ 42.8 x 31.8 x 68.9	484/ 1065	HFC10140TOP-M
HFC10140 TOP™	200V, 50 Hz 3ϕ	16.0/20						HFC10140TOP-R
HFC7150 TOP™	400V 50 Hz 3ϕ	11.0/15	–150°C	193/6.8	673 x 483 x 597/ 26.5 x 19.0 x 23.5	1086 x 808 x 1451/ 42.8 x 31.8 x 57.1	375/ 825	HFC7150TOP-M
HFC7150 TOP™	200V, 50 Hz 3ϕ	16.0/20						HFC7150TOP-R

[1] Other voltages available upon request. Contact Kendro for ordering information.

[2] A dedicated circuit is recommended.

* plus compulsory wall distance

Exterior dimensions include allowances for cabinet, hinges, door latches, handles and control panel portrusions.

All dimensions and specifications are subject to change without notice.

For Ordering or Technical Information

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Printed in Germany 5C 10/02 4t Frotscher S00346

HFC 10140/HFC 7150 2e