Helmer
SCIENTIFIC

The First Professional Medical-grade Freezers

i.Series® and Horizon Series™ Freezers
Laboratory | Plasma

GX Solutions
powered by OptiCool™

What is a professional, medical-grade freezer?

Professional, medical-grade freezers are designed for the unique needs of critical healthcare applications, such as vaccine, plasma, reagent, and patient sample storage. Only professional, medical-grade freezers deliver optimized control in three important areas:

Temperature management
to safeguard stored products and maintain efficacy; maintaining acceptable temperature both during normal operation and auto-defrost cycles

Noise management
to provide a more comfortable environment for patients and a more productive workplace for staff.

Energy management
to reduce operating costs and support sustainability initiatives.

GX Solutions are the first cold-storage solution to offer optimized control in all three areas and offer the following benefits:
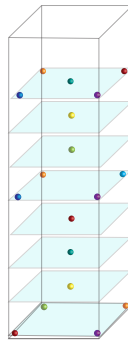
Temperature Management

Uniformity - Temperatures are maintained within +/-2°C throughout the unit. This provides confidence that contents are stored at the right temperature regardless of where they are placed within the unit.
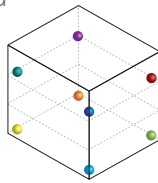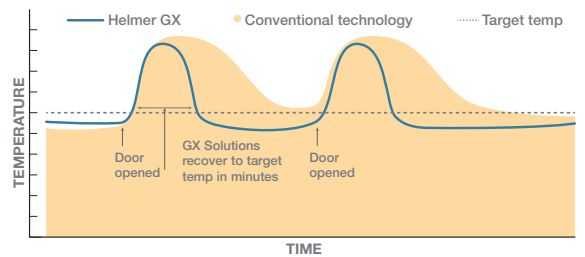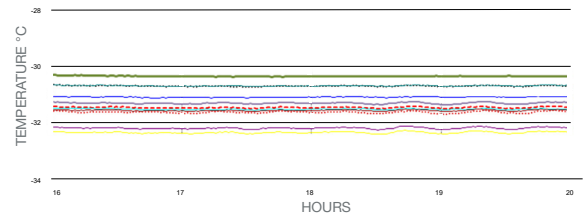
U/C uniformity testing probe locations

upright uniformity testing probe locations

Recovery - Faster recovery after prolonged door openings. Forced-air circulation keeps contents at the right temperature even when the unit is opened multiple times per hour for stocking, inventory counts and product retrieval.

Helmer GX   Conventional technology   Target temp

Door opened   GX Solutions recover to target temp in minutes   Door opened

TIME

Stability - Maintain superior temperature stability. This creates fewer deviations from the set point and avoids rapid, significant changes in temperature ensuring that patient samples, medications/vaccines or blood therapies are always in their optimal storage environment.
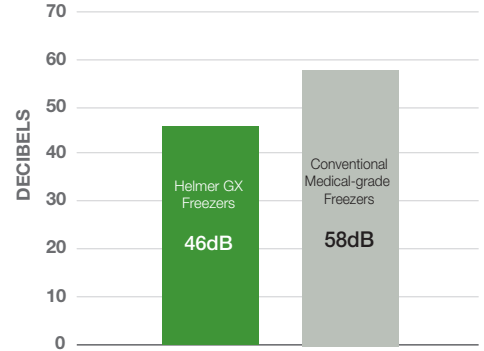
Helmer GX   Conventional technology   Target temp

TIME

2
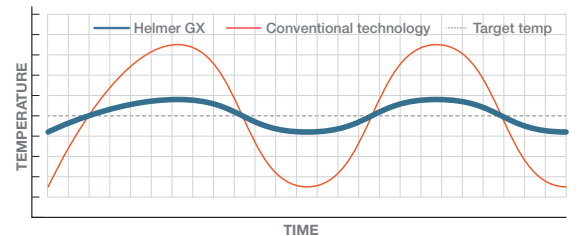
Noise Management

Designed for noise-sensitive areas such as medication rooms, pharmacies, labs, and patient rooms, GX professional medical-grade freezers are 3x quieter than traditional models leading to better rest for patients and fewer distractions for healthcare personnel.

Every increase of 10dB on the scale is equivalent to a 10-fold increase in sound intensity. U/C freezer example shown.

Energy Management

GX Solutions are ENERGY STAR® certified* and 35-45% more energy efficient than conventional medical-grade freezers. The use of natural hydrocarbons:

Reduces heat output - allows facilities to place freezers in small work areas while limiting impact on HVAC system.

Decreases carbon footprint - uses natural hydrocarbon (HC) refrigerants to dramatically decrease global warming potential.

**Meets ever-changing energy standards** - GX refrigerants are compliant with the Significant New Alternatives Policy (SNAP).

Conventional medical-grade freezer 6.64 kWh/day

40% more energy efficient

GX Solutions 3.99 kWh/day
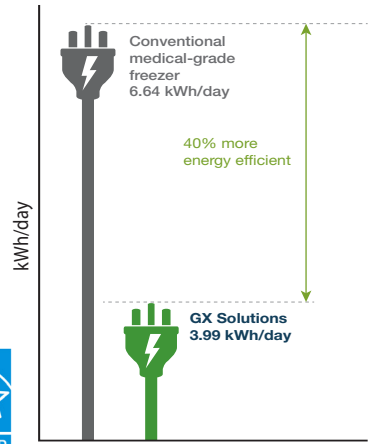
U/C freezer example shown

POWERED BY OptiCool™

Powering the 1st professional medical-grade freezers

The OptiCool™ cooling system pairs a variable capacity compressor (VCC) and natural hydrocarbon (HC) refrigerants.

How does a VCC system optimize temperature performance and energy efficiency?

COMPRESSOR RUN SPEED — VCC — Conventional

High Speed

Low Speed

Time
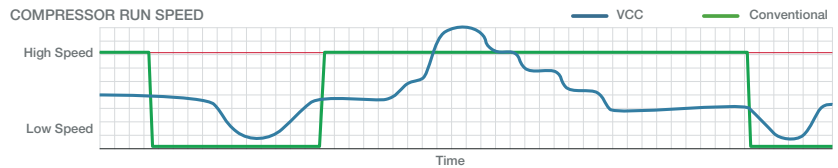
The OptiCool™ cooling system uses intelligent sensors to monitor operating conditions. When the door of the unit is opened, the VCC runs at a higher speed to deliver optimal temperature performance. When the temperature stabilizes, the VCC runs at a lower speed, resulting in lower energy consumption.

Natural Refrigerants Support Environmental Sustainability

The OptiCool™ cooling system uses R290, a naturally occurring refrigerant that is Environmental Protection Agency (EPA), Significant New Alternatives Policy (SNAP), and EU F-Gas compliant. This natural refrigerant is environmentally friendly, having no impact on ozone depletion and a very low Global Warming Potential (GWP) grade.

Global Warming Potential (GWP) of used refrigerant

3,922 HFC refrigerant

3 GX professional medical-grade refrigerant
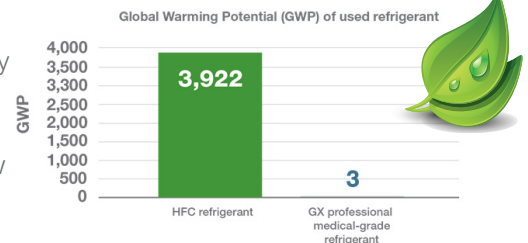
GX Solutions are available in i.Series® and Horizon Series™ Lines

i.Series®

7" (177mm) door-mounted touchscreen

-29.6 °C

Alarm Notification

Min/Max

i.C3 Apps

Protected Settings

Interactive Temperature Graph

Alarm Test

Digital Temp Display in °C or °F

Info Logs

Alarm Mute

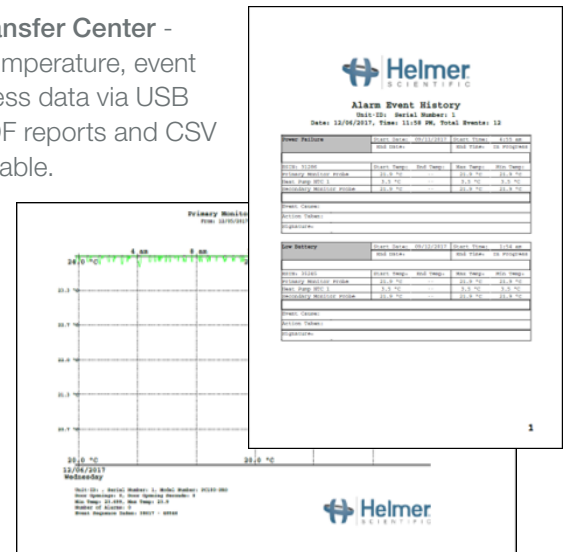Data Transfer Center
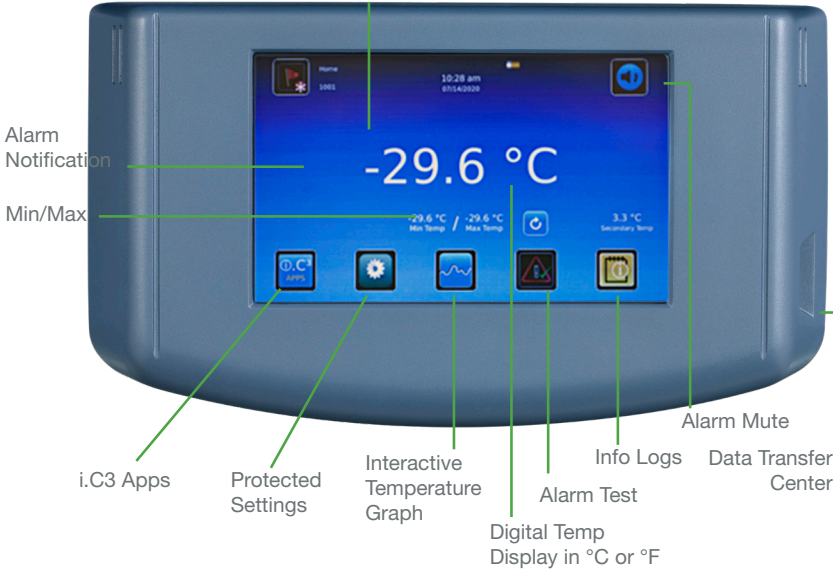
i.C3® Information Center

The i.Series i.C3 Information Center provides constant temperature monitoring and multiple information logs while offering security features to keep settings safe.

System Status Console - monitor status of the unit with one quick glance at the home screen.

Information and Event Center - records performance history of unit including event acknowledgement. Includes event status, min/max temps, and 7- and 1-day interactive graph views.

Guardian Plus™ Protection - offers protected settings and limited access plus optional integrated electromagnetic access control.

Data Transfer Center - export temperature, event and access data via USB port. PDF reports and CSV files available.

Horizon Series™

-29.7

High & Low Temp Alarms

Door Ajar Alarm

LED Display °C or °F

Touchpad Entry

Alarm Mute

Min/Max Display/Reset

Horizon Controls

A digital microprocessor temperature controller with a built-in alarm powers the Horizon Series models. Min/Max display and reset are included. Optional integrated electromagnetic access control offers secure access to the freezer via the Horizon Access Control Keypad.

GX Solutions: i.Series® / Horizon Series™ Comparison

	i.Series®	Horizon Series™
Temperature Display	°C or °F	°C or °F
Monitor/Logging	Event log records date, time and temperature data	N/A
Compliance Data	Download PDF Reports and CSV files via USB port	N/A
Security	Password protected settings / Key lock	Key lock
Temperature Graphing	Interactive temperature graph	N/A
Temperature Alarm Test	Automatic high/low alarm testing (Peltier-based)	Manual alarm test
Alarm Probe(s)	Stainless steel in product simulation bottle 2 - 20 and 25 cu ft, 1- 5 cu ft	1 - Stainless steel in product simulation bottle
Standard Alarms	High and low temperature, Door open, Power failure	High and low temperature, Door open, Power failure
Additional Alarms	Condenser temperature, Probe failure, Low battery	Probe failure
Min/Max Temperatures	Display and reset	Display and reset
Backup Power	Rechargeable battery backup - 20 hrs	Battery backup - 2 hrs
Connectivity	Ethernet/API, USB ports (2)	N/A
Dry contact alarm connections	Yes	Yes
Digital calibration	Yes	Yes
Warranty	5 yr compressor / 2 yr parts / 1 yr labor*	3 yr compressor / 2 yr parts / 1 yr labor*

* Warranties applicable in US and Canada. For international warranty information, contact your local distributor.

Services

Certificate of Calibration

Model and serial number certified to a NIST (National Institutes of Standards and Technology) traceable instrument. Conforms to ISO 17025 international standards for calibration testing and traceability. Must be requested at time of ordering.

Temperature Validation Service

Package certifies temperature performance of the freezer. A multiple point temperature recorder maps the temperature inside the freezer chamber and a document with data will be provided with a certificate of calibration for the test instrument. Must be ordered at time of purchase.

IQ/OQ Equipment Validation Guides

Provides documentation for Installation and Operational Qualifications (IQ/OQ), as well as an outline of suggested topics for performance qualification (PQ).

Full Level Service Agreements

Can be designed to include on-site parts, labor, preventative maintenance and/or calibration services.

Store Vaccines, Clinical Samples, Reagents and Controls

GX professional medical-grade laboratory freezers feature ventilated shelves and a solid door for secure storage of vaccines, medications, patient samples, reagents, laboratory media and other products requiring safe cold storage.

» Powered by OptiCool™ cooling technology which pairs a variable capacity compressor (VCC) and natural hydrocarbon (HC) refrigerants to create a freezer with optimized control in temperature, noise and energy management

» Factory pre-set to -30°C for laboratory applications

» Quiet operation for improved work environment (U/C 46dB, Upright 52dB)

» Reduced energy consumption (35-45% more efficient than traditional technology)

» Sustainable U.S. EPA and SNAP compliant natural refrigerants and foaming agents

» Meets NSF/ASNI 456 Vaccine Storage Standard requirements when configured with NSF/ANSI 456 certification option

» Compatible with ADA compliant counter tops (undercounter)

Construction

» Forced-air circulation maintains chamber temperature uniformity and provides quick recovery after door openings

» Programmable electrical defrost: Program up to 4 daily defrost events to run during low use periods for greater efficiency

» Solid, self-closing door maintains optimal storage conditions

» Ventilated shelves with side and rear guards are adjustable for storage flexibility

» Bacteria-resistant powder coated interior and exterior

» Swivel, locking casters (upright) / Leveling feet (U/C)

» Recessed floor contains spills for easy clean up and to maintain integrity of other stored products

» Key lock, settings security and optional access control

Top (L-R) iLF120-GX, HLF120-GX
Bottom (L-R) iLF105-GX, HLF105-GX

GX professional, medical-grade laboratory freezers

Model Number	Monitor	Temp Range Set point	Capacity cu ft | L	Electrical	Doors	Ventilated Shelves	Sound Level dB	Interior Dimensions w x h x d | in | mm	Exterior Dimensions* w x h x d | in | mm	Net Weight lb | kg
iLF105-GX*	i.C3® User Interface	-15°C to -30°C -30°C	5.3 150	115V 60Hz 220-240V 50/60Hz	1, Solid	2 ventilated shelves	46	19.5 x 19.9 x 22.8 496 x 505 x 580	24 x 31.5 x 26.7 610 x 798 x 678	179 | 82
HLF105-GX*	Horizon Controller	-15°C to -30°C -30°C	5.3 150	115V 60Hz 220-240V 50/60Hz	1, Solid	2 ventilated shelves	46	19.5 x 19.9 x 22.8 496 x 505 x 580	24 x 31.5 x 26.7 610 x 798 x 678	179 | 82
iLF120-GX	i.C3® User Interface	-15°C to -35°C -30°C	20.2 572	115V 60Hz 220-240V 50/60Hz	1, Solid	4 ventilated shelves	52	24.7 x 58.1 x 24 628 x 1476 x 609	29 x 80.3 x 28.6 737 x 2039 x 725	400 | 182
HLF120-GX	Horizon Controller	-15°C to -35°C -30°C	20.2 572	115V 60Hz 220-240V 50/60Hz	1, Solid	4 ventilated shelves	52	24.7 x 58.1 x 24 628 x 1476 x 609	29 x 80.3 x 28.4 737 x 2039 x 720	397 | 181
iLF125-GX	i.C3® User Interface	-15°C to -35°C -30°C	25.2 714	115V 60Hz 220-240V 50/60Hz	1, Solid	4 ventilated shelves	52	24.7 x 58.1 x 30 628 x 1476 x 762	29 x 80.3 x 34.4 737 x 2039 x 874	444 | 202
HLF125-GX	Horizon Controller	-15°C to -35°C -30°C	25.2 714	115V 60Hz 220-240V 50/60Hz	1, Solid	4 ventilated shelves	52	24.7 x 58.1 x 30 628 x 1476 x 762	29 x 80.3 x 34.4 737 x 2039 x 874	441 | 201

*Can be used undercounter, free-standing or stacked | *Exterior dimensions do not include handle, user interface

CE 2797   RoHS COMPLIANT

Top (L-R) iBF120-GX, HBF120-GX
Bottom (L-R) iBF105-GX, HBF105-GX

Blood Plasma Storage

GX professional medical-grade plasma freezers feature solid, stainless steel pull out drawers. They are designed to meet the strict requirements of AABB for secure storage of blood plasma.

» Powered by OptiCool™ cooling technology which pairs a variable capacity compressor (VCC) and natural hydrocarbon (HC) refrigerants to create a freezer with optimized control in temperature, noise and energy management

» Factory pre-set to -30°C to meet blood storage guidelines

» Quiet operation for improved work environment (U/C 46dB, Upright 52dB)

» Reduced energy consumption (35-45% more efficient than traditional technology)

» Sustainable U.S. EPA and SNAP compliant natural refrigerants and foaming agents

» Compatible with ADA compliant counter tops (undercounter)

Construction

» Forced-air circulation maintains chamber temperature uniformity and provides quick recovery after door openings

» Programmable electrical defrost: Program up to 4 daily defrost events to run during low use periods for greater efficiency

» Solid, self-closing door maintains optimal storage conditions and is field-reversible

» Solid, stainless steel pull out drawers with liquid-tight construction for containment of spills; fully extendable

» Chart recorder with 7-day circular charts (inkless)

» Bacteria-resistant powder coated interior and exterior

» Swivel, locking casters (upright) / Leveling feet (U/C)

» Recessed floor contains spills for easy clean up and maintain integrity of other stored products

» Key lock, settings security and optional access control

GX professional, medical-grade plasma freezers

Model Number	Monitor	Temp Range Set point	Capacity cu ft | L	Plasma Boxes	Electrical	Doors	Drawers	Sound dB	Interior Dimensions w x h x d | in | mm	Exterior Dimensions** w x h x d | in | mm	Net Weight lb | kg
iBF105-GX*	i.C3® User Interface	-15°C to -30°C -30°C	5.3 | 150	48	115V 60Hz 220-240V 50/60Hz	1, Solid	2 solid	46	19.5 x 19.9 x 22.8 496 x 505 x 580	24 x 31.5 x 26.7 in 610 x 798 x 678 mm	187 | 85
HBF105-GX*	Horizon Controller	-15°C to -30°C -30°C	5.3 | 150	48	115V 60Hz 220-240V 50/60Hz	1, Solid	2 solid	46	19.5 x 19.9 x 22.8 496 x 505 x 580	24 x 31.5 x 26.7 in 610 x 798 x 678 mm	187 | 85
iBF120-GX	i.C3® User Interface	-15°C to -35C -30°C	20.2 | 572	360	115V 60Hz 220-240V 50/60Hz	1, Solid	8 solid plus Cold-Shield™	52	24.7 x 58.1 x 24 628 x 1476 x 609	29 x 80.3 x 28.6 737 x 2039 x 725	469 | 213
HBF120-GX	Horizon Controller	-15°C to -35°C -30°C	20.2 | 572	360	115V 60Hz 220-240V 50/60Hz	1, Solid	8 solid plus Cold-Shield™	52	24.7 x 58.1 x 24 628 x 1476 x 609	29 x 80.3 x 28.4 737 x 2039 x 720	466 | 212
iBF125-GX	i.C3® User Interface	-15°C to -35°C -30°C	25.2 | 714	464	115V 60Hz 220-240V 50/60Hz	1, Solid	8 solid plus Cold-Shield™	52	24.7 x 58.1 x 30 628 x 1476 x 762	29 x 80.3 x 34.4 737 x 2039 x 874	524 | 238
HBF125-GX	Horizon Controller	-15°C to -35°C -30°C	25.2 | 714	464	115V 60Hz 220-240V 50/60Hz	1, Solid	8 solid plus Cold-Shield™	52	24.7 x 58.1 x 30 628 x 1476 x 762	29 x 80.3 x 34.4 737 x 2039 x 874	521 | 237

*Can be used undercounter, free-standing or stacked | **Exterior dimensions do not include handle, user interface

CE 2797   RoHS COMPLIANT

Options and accessories

Integrated Electromagnetic Access Control - Offers secure access to the refrigerator via the i.C3® Information Center (i.Series®) or Horizon Access Control Keypad (Horizon Series™). An electromagnetic lock is integrated into the unit and controlled by PIN or user code. Up to 100 unique user IDs. Key override included.

Seismic Floor Anchoring Bracket Kit - Seismic-rated solution includes brackets installed on floor in the back of the unit and under the door. Covered under an ICC-ES Evaluation Report (ICC-ESR-4233)

Floor and Wall Bracket Kit - Floor mounting brackets and cabinet anchor hardware to secure freezer to the building floor and/or wall (not seismic-rated).

Remote Lock Adapter Kit - Locks for automated dispensing cabinets provide additional access control. Special accessories allow proper installation on Helmer Scientific freezers. Compatible with most systems.

Temperature Chart Recorders - Standard on plasma freezers, optional on other models. Chart recorder is 4" (102mm), 7-day, with inkless pressure-sensitive chart paper. Backup battery and box of 52 charts included.

Pedestal - Base elevates undercounter freezer above the floor. Includes brackets to secure unit to pedestal.

Stacking Kit - Hardware to stack two undercounter units.

Remote Alarms - Free standing, extend existing alarms to remote locations with audible and visual signals. Operational up to 3000' (914m) from cabinet. Can be connected to a central alarm system.

Customized Storage - Select from Ventilated Shelves, Ventilated Drawers, and Stainless Steel Drawers.

Storage Trays - packages include tray, rails, and dividers for organized storage.

Drawer Dividers - Polycarbonate upright or angled dividers for use in solid, pull-out drawers. One set per drawer.

Stainless Steel Interior and/or Exterior - Must be ordered as factory-installed options.

Door Style - All freezers are standard right hinged, left-hinged doors may be ordered.

Swivel, Locking Casters - 2" (50mm)

Leveling Feet - Adjust and level unit.

GX Solutions

The first professional medical-grade freezers.

For medical professionals. Only from Helmer Scientific.

Contact our sales team to learn more about the first professional medical freezers on the market, and how they can benefit your medical setting. info.helmerinc.com/GXsolutions

Helmer
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