Helmer Scientific, Noblesville, Indiana
www.helmerinc.com

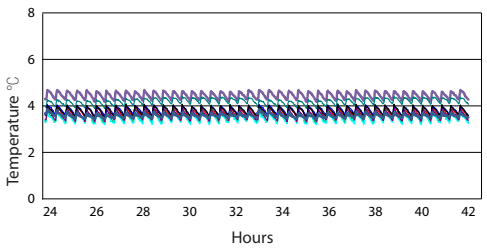
Technical Data Sheet
High-Performance, Medical-grade Refrigerator
Model: iBR105-GX, i.Series® Blood Bank / Undercounter

Application, Rating, & Electrical Data	
Application	High-performance storage of blood and other medical and scientific products
Storage Volume	5.3 cu ft (150 L) | 78 Blood bags
Temperature Range	+2°C to +10°C
Set Point	+4°C
Electrical Power	115V 60Hz | 220-240V 50/60Hz
Maximum Current	1.4A | 0.85A
Facility Supply Rating	Branch circuit with earth ground, meeting plug/cord ratings as well as local electrical safety codes and requirements 110-120V AC: 15 A (minimum) 220-240V AC: 10 A (minimum)
Power Plug/Power Cord Length	NEMA 5-15 hospital-grade | 115V 60Hz, 8 to 10 ft (2.4-3.0m) Inquire about additional plug/cord options
Certification/Agency Listing	QPS (Certified to UL and CSA Standards) IEC/UL61010-2-01: 2016 | IEC 61010-1:2010, AMD1:2016
Energy Star	Yes
ADA Compliant	Yes, fits under standard 34" high ADA compliant countertop
Indoor/Outdoor Use	Indoor use only, non-residential
Application Environment	Non-corrosive, non-flammable, non-explosive
Ambient Operating Temperature	+15°C to +32°C | +59°F to +90°F
Refrigeration	
Refrigeration System	VCC compressor-based, forced-air hydrocarbon
Compressor	Hermetic, variable speed (VCC). Rated speed range: 1300-4000 rpm
Condenser Type	Air-cooled fin and tube, sealed
Expansion Device	Cap tube
Evaporator Type	Direct expansion with forced-air fin and tube
Defrost Method	Automatic
Refrigerant	R600a, Isobutane, EPA SNAP compliant
Controller / Configuration Settings	
User Interface	i.C3® color touchscreen, door-mounted, 7in |177mm, °C or °F
Power Switch	On/Off
Controller Type	Microprocessor with touchscreen input & display
Security	Lockable door, password protected settings, PIN access via optional access control
Control Sensor	RTD, stainless steel
Communication Ports	USB, Remote alarm contacts, RJ45 (Ethernet), API available for Ethernet connectivity development
Power Failure Alarm	Yes
High/Low Alarms - Tests	Yes, fully adjustable, automatic (Peltier) testing
Door Ajar Alarm	Yes, fully adjustable
Condenser Temperature Alarm	Yes, fully adjustable
Min/Max Temperature	Yes, display and reset
Download	Yes, via USB. CSV and PDF
Event Log	Yes, all alarms, door openings, download via USB
Temperature Log	Yes, download via USB
Access Log	Yes, with optional access control, download via USB
Interactive Temperature Graph	Yes
Chart Recorder	Yes, standalone, 4" (102mm) diameter, inkless pressure-sensitive charts, backup battery
Temperature Monitoring Ballast	Yes, 4 oz bottle with screw cap, solid ballast optional
Battery Back-up	Yes, 20 hr display and alarm back-up for i.C3® touchscreen | Rechargeable 12V, lead acid

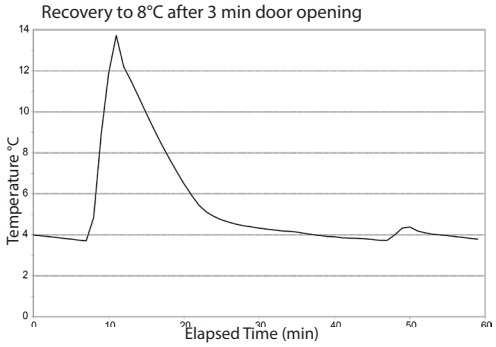
Performance Characteristics (normal operating conditions)	
Uniformity | °C	+/-1.0
Recovery to 8°C after 3 min door opening | min	7
Stability | °C	0.65
Energy Consumption | kWh/day	1.37
Noise emission | dB	42
Heat rejection/emission | BTU/hr	460
Pull-down time to 4°C | min	43

All performance data from 5 cu ft refrigerator, 24.8 ambient, 4.0°C

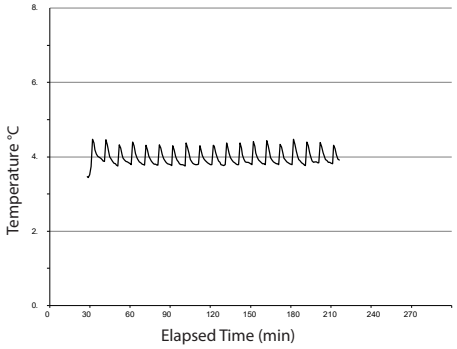
Uniformity



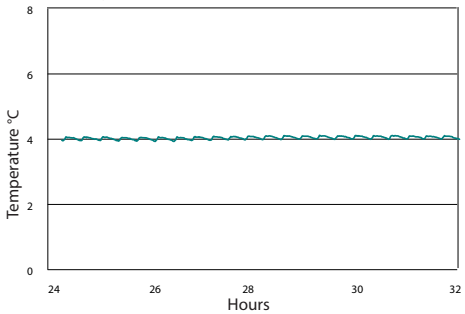
Recovery to 8°C after 3 min door opening

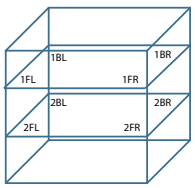


Recovery after consecutive 8 second door openings



Stability





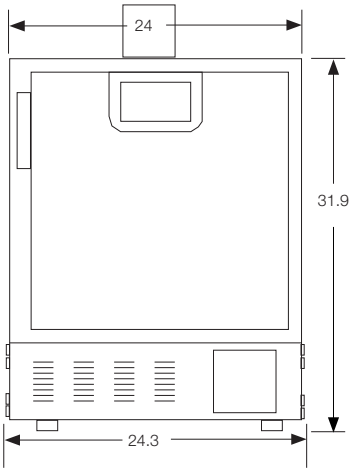
Location of test probes

Typical Temperature Map

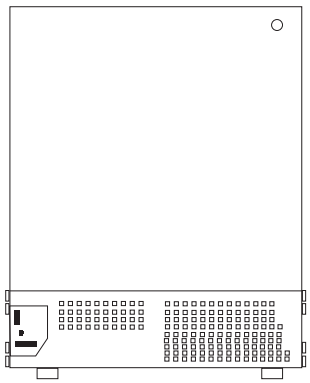
5 cu ft. Temperature Map (°C)

	1BL	1BR	1FL	1FR	2BL	2BR	2FL	2FR
Avg	3.7	3.6	3.3	3.5	4.7	3.7	4.2	3.9
Max	4.0	4.2	3.6	3.9	4.9	4.0	4.4	4.0
Min	3.4	3.1	2.9	3.1	4.4	3.3	4.0	3.7

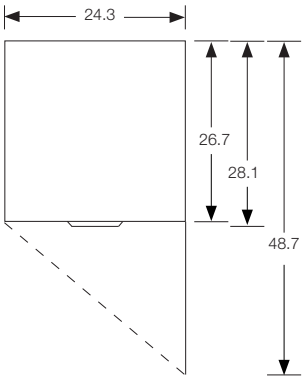
Dimensions and Construction	
Interior (w x h x d)	19.5 x 19.9 x 22.8 in | 496 x 505 x 580 mm
Exterior (w x h x d)	24 x 31.5 x 26.7 in | 610 x 798 x 678 mm *Add 2.5" to the height if choosing optional casters.
Overall Exterior (w x h x d)	24.3 x 31.9 x 28.1 in | 616 x 809 x 714 mm *Add 0.2" to width if choosing optional access control *Includes leveling feet, door handle, user interface, and access panels.
Insulation	Sustainable, US EPA, SNAP and GRAS approved foam
Exterior/Interior Finish	Bacteria-resistant powder-coating
Door	Solid, field-reversible
Access Port	Rear Access Port- for external monitoring probe(s) (0.75 in | 19 mm diameter)
Interior Storage (w x h x d)	2 drawers, liquid-tight, stainless steel, adjustable 16.7 x 3.8 x 19.2 in | 424 x 97 x 488 mm, 100 lb | 46kg max capacity/drawer
Leveling Feet	Yes, adjustable
Integrated Access Control	Optional- electromagnetic-lock with PIN entry via i.C3® user interface
Net Weight	186 lb | 85 kg
Shipping Weight	247 lb | 113 kg
Clearance Requirements	Minimum 3" (76 mm) behind unit for plug/cord and feature access Front ventilation eliminates the need for top or side clearance
Options | Accessories	Integrated access control, Stainless steel exterior/interior, Chart paper, Swivel/Locking casters, Solid ballast, Remote alarms, Remote lock adapter kit, Floor and Wall bracket kit, Stacking kit, Pedestal, Storage trays, Screen protector, LED light, Locking drawer, Drawer dividers, Left-hinge door, Glass door, Certificate of Calibration, Temperature Validation, Validation Guide (IQ/OQ), Extended Warranty
Warranty	Rel.i™ Plus Warranty- 7 years compressor, 2 years parts, 1 year labor Outside US and Canada- Contact your distributor for warranty information



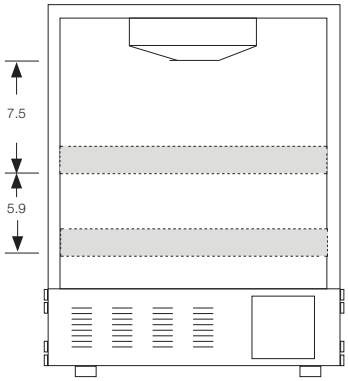
FRONT VIEW



BACK VIEW



TOP VIEW



INTERIOR
VERTICAL SPACING

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