

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		

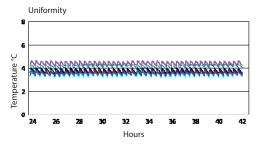
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Typical Temperature Map 5 cu ft. Temperature Map (°C)

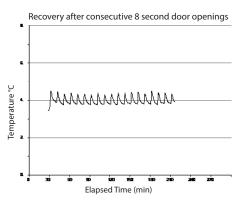
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		1BL	1BR	1FL	1FR	2BL	2BR	2FL	2FR
	Avg	3.7	3.6	3.3	3.5	4.7	3.7	4.2	3.9
	Max	4.0	4.2	3.6	3.9	4.9	4.0	4.4	4.0
ĺ	Min	3.4	3.1	2.9	3.1	4.4	3.3	4.0	3.7

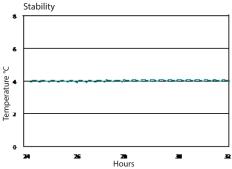
Performance Characteristics (normal operating conditions)			
Uniformity °C	+/-1.0		
Recovery to 8°C after 3 min door opening min	7		
Stability °C	0.65		
Energy Consumption kWh/day	1.37		
Noise emission dB	42		
Heat rejection/emission BTU/hr	460		
Pull-down time to 4°C min	43		

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





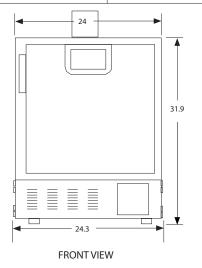


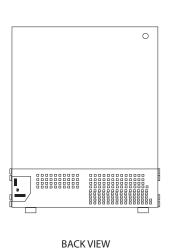


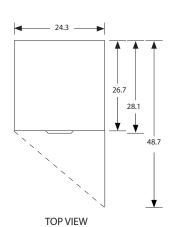


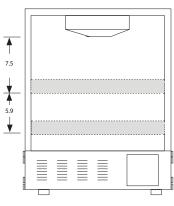
Dimensions and Construction				
Interior (w x h x d)	19.5 x 19.9 x 22.8 in 496 x 505 x 580 mm			
Exterior (w x h x d)	$24 \times 31.5 \times 26.7$ in $ 610 \times 798 \times 678$ mm *Add 2.5" to the height if choosing optional casters.			
Overall Exterior (w x h x d)	24.3 x 31.9 x 28.1 in 616 x 809 x 714 mm *Add 0.2" to width if choosing optional access control *Includes leveling feet at lowest level, door handle, user interface, and access panels *The maximum height added with leveling feet at highest level or casters installed is 2" (51 mm)			
Insulation	Sustainable, US EPA and SNAP 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 *leveling feet or casters are required for operation			
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			











INTERIOR VERTICAL SPACING





