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Helmer Scientific, Noblesville, Indiana
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Technical Data Sheet
High-Performance, Medical-grade Refrigerator
Model: iLR120-GX, i.Series® Laboratory / Upright

Application, Rating, & Electrical Data

Application	High performance storage of medical and scientific products
Storage Volume	20.2 cu ft	572 L
Temperature Range	+2°C to +10°C
Set Point	+4°C
Electrical Power	115V 60Hz	220-240V 50/60Hz
Maximum Current	2.8A	1.55A
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
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
Temperature Monitoring Ballast	Yes, two 4 oz bottles with screw caps, solid ballasts optional
Battery Back-up	Yes, 20 hr display & alarm back up for i.C3® touchscreen	Rechargeable 12V, lead acid

Performance Characteristics

Uniformity	°C	+/-1.0
Recovery to 8°C after 3 min door opening	min	9
Stability	°C	0.07
Energy Consumption	kWh/day	3.01
Noise emission	dB	49
Heat Rejection / Emission	BTU/hr	879
Pull-down time to 4°C	min	44

All performance data from 20 cu ft refrigerator, 24.8ºC ambient, 4.0ºC

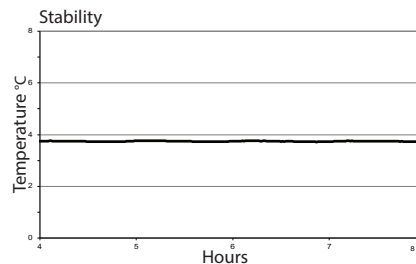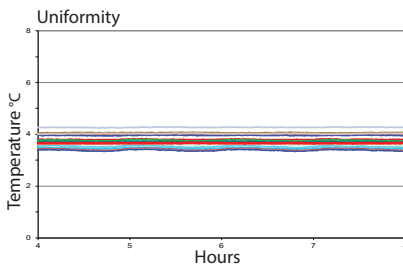Recovery after consecutive 8 second door openings
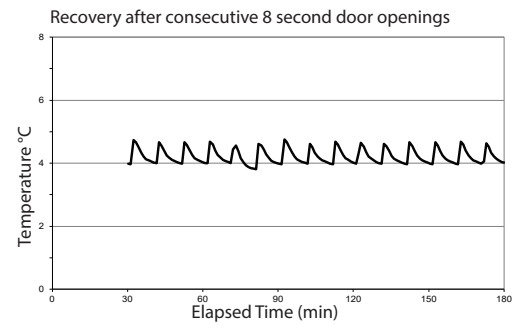
Typical Temperature Map
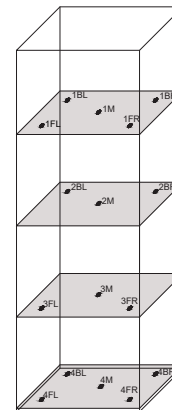
*Location of Test Probes*

20 cu ft. Temperature Map °C

	AVG	MAX	MIN
1BL	3.6	3.6	3.5
1BR	3.5	3.6	3.5
1FL	3.8	3.8	3.8
1FR	4.0	4.0	4.0
1M	3.8	3.8	3.7
2BL	3.4	3.4	3.3
2BR	3.5	3.5	3.4
2M	3.7	3.7	3.7
3FL	4.0	4.0	3.9
3FR	4.1	4.1	4.0
3M	3.7	3.7	3.6
4BL	3.4	3.5	3.4
4BR	3.6	3.6	3.5
4FL	4.3	4.3	4.2
4FR	4.0	4.1	4.0
4M	3.6	3.7	3.6

Uniformity

Stability

Dimensions and Construction

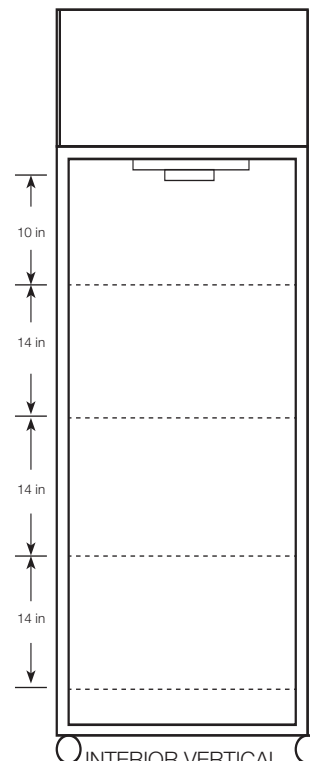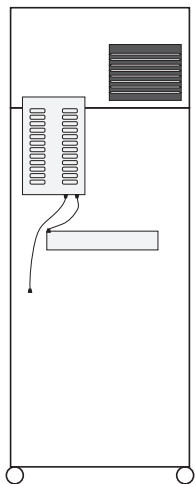|	
Interior (w x h x d)	24.7 x 58.1 x 24 in | 628 x 1476 x 609 mm
Exterior (w x h x d)	29 x 79.6 x 28.2 in | 737 x 2021 x 715 mm
Overall Exterior (w x h x d)	29 x 79.6 x 31.7 | 737 x 2021 x 803 mm *add 0.5" to width if choosing optional access control
Insulation	Sustainable, US EPA, SNAP and GRAS approved foam
Exterior/Interior Finish	Bacteria-resistant powder-coating
Door	1, dual-pane glass, right-hinge
Access Port	Top Access Port- for external monitoring probe(s) (0.75 in | 19 mm diameter) Left Sidewall Port - with interior and exterior plugs (1.75 in | 45 mm diameter)
Interior Storage (w x d)	4 ventilated, powder coated shelves, adjustable 22.5 x 21.9 in | 572 x 557 mm, 100 lb | 46 kg max capacity/shelf
Casters	Yes, swivel-locking
Integrated Access Control	Optional- electromagnetic-lock with PIN entry via i.C3® user interface
Net Weight	445 lb | 202 kg
Shipping Weight	535 lb | 243 kg
Clearance Requirements	Minimum of 8" (203mm) above and 3" (76mm) behind unit for clearance and feature access
Options | Accessories	Integrated access control, Stainless steel interior, Chart recorder, Chart paper, Leveling feet, Solid ballast, Remote alarms, Remote lock adapter kit, Floor and Wall bracket kit, Seismic anchoring Kit, Storage trays, Screen protector, Locking drawer, Left-hinge door, Solid or heated glass door, Top cover, Side-wall access ports, 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
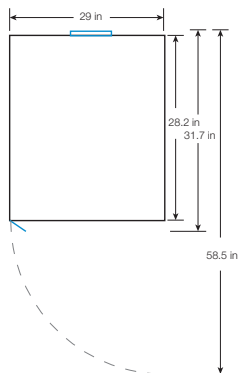
TOP VIEW
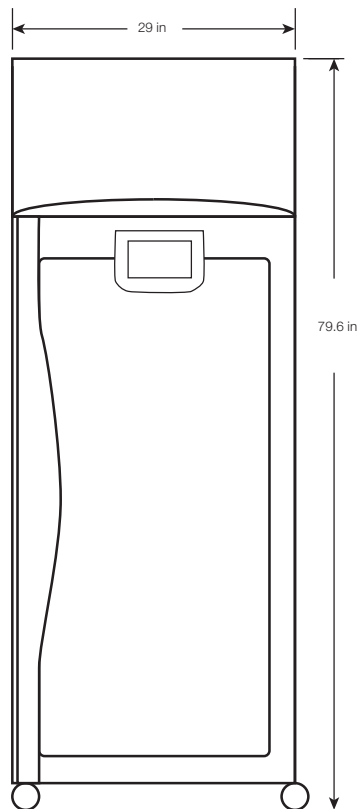
BACK VIEW

FRONT VIEW

INTERIOR VERTICAL SPACING