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Helmer Scientific, Noblesville, Indiana
www.helmerinc.com

Technical Data Sheet
High-Performance, Medical-grade Refrigerator
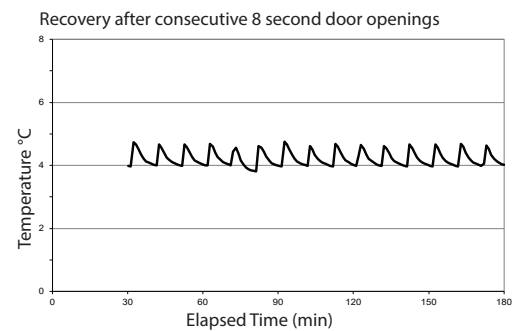Model: HLR120-GX, Horizon Series™ Laboratory / Upright

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/UL61010-2-011: 2016 | IEC 61010-1:2010, AMD1:2016 ETL certified to NSF/ANSI 456 Vaccine Storage Standard*
Energy Star	Yes, ENERGY STAR® Certified High Performance Refrigerator
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

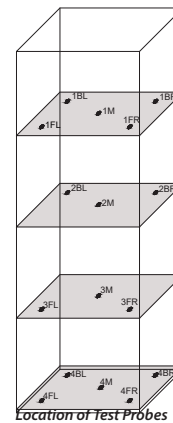|	
User Interface	LED digital display, °C or °F
Power Switch	On/Off
Controller Type	Microprocessor-based with alarm/monitor
Security	Lockable door, PIN access via optional access control
Control Sensor	RTD, stainless steel
Communication Port	Remote alarm contacts
Power Failure Alarm	Yes
High/Low Alarms	Yes, fully adjustable
Door Ajar Alarm	Yes
Min/Max Temperature	Yes, display and reset
Temperature Monitoring Ballast	Yes, 4 oz bottle with screw cap, solid ballast optional
Battery Back-up	Yes, 9V, non-rechargeable, lithium

*Must be configured with NSF/ANSI 456 Vaccine Storage Certification option (includes Certificate of Calibration)

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	3.04
Noise emission | dB	49
Heat Rejection / Emission | BTU/hr	879
Pull-down time to 4°C | min	44

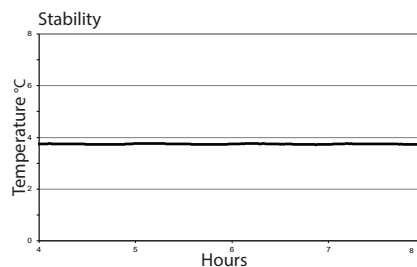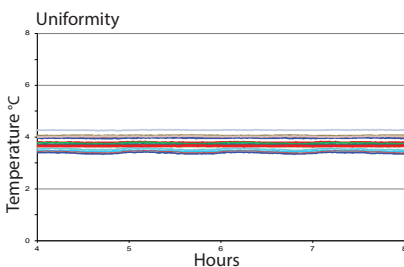All performance data from 20 cu ft refrigerator, 24.8ºC ambient, 4.0ºC

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

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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 78.9 x 28.1 in | 737 x 2003 x 712 mm
Overall Exterior (w x h x d)	29.1 x 78.9 x 33 in | 738 x 2003 x 837 mm *add 0.5" to width if choosing optional access control *subtract 0.2" from depth for units prior to serial number 2150000
Insulation	Sustainable, US EPA and SNAP 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 keypad
Net Weight	442 lb | 201 kg
Shipping Weight	535 lb | 243 kg
Clearance Requirements	Minimum of 8" (203mm) above and 3" (76mm) behind unit for proper ventilation, 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, Locking drawer, Left-hinge door, Solid or heated glass door, Top cover, Side-wall access ports, NSF/ANSI 456 Vaccine Storage Certification (includes Certificate of calibration), Temperature validation, Validation guide (IQ/OQ), Certificate of calibration, Extended warranty
Certificate of Calibration	Yes, available as an option, generated with an ISO 17025 certified, NIST traceable thermometer (Certificate of Calibration is included with the NSF/ANSI 456 Vaccine Storage Certification option)
Warranty	Rel.i™ Warranty- 5 years compressor, 2 years parts, 1 year labor Outside US and Canada- Contact your distributor for warranty information

TOP VIEW

FRONT VIEW

INTERIOR VERTICAL SPACING

BACK VIEW

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