

Helmer Scientific, Noblesville, Indiana www.helmerinc.com

Technical Data Sheet High-Performance, Medical-grade Refrigerator

Model: HLR105-GX, Horizon Series[™] Laboratory / Undercounter

Application, Rating, & Electrical Data						
Application	High-performance storage of medical and scientific products					
Storage Volume	5.3 cu ft (150 L)					
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	LED digital display, °C or °F					
Power Switch	On/Off					
Controller Type	Microprocessor 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, 9 volt, non-rechargeable, lithium					

	1BL	1BR	
1FL	1FR	\vee 1	
/	2BL	2BR	
2FL	2FR	$V \mid$	
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Location of test probes			

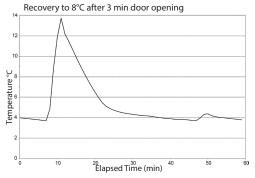
Typical Temperature Map 5 cu ft. Temperature Map (°C)

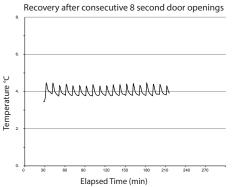
	1BL	1BR	1FL	1FR	2BL	2BR	2FL	2FR
Avg	3.6	3.5	4.1	3.9	4.5	3.8	4.4	3.9
Max	4.2	4.3	4.5	4.3	4.8	4.4	4.6	4.4
Min	3.2	3.1	3.7	3.6	4.2	3.4	4.1	3.6

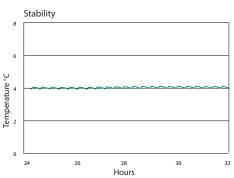
Performance Characteristics (normal operating conditions)						
Uniformity °C	+/-1.0					
Recovery to 8°C after 3 min door opening min	9					
Stability °C	0.82					
Energy Consumption kWh/day	1.2					
Noise emission dB	42					
Heat rejection/emission BTU/hr	460					
Pull-down time to 4°C min	36					

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

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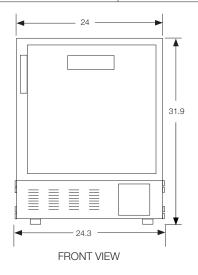


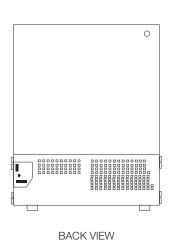


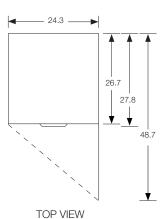


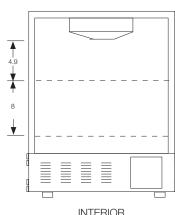
Dimensions and Construction				
Interior (w x h x d)	19.5 x 19.9 x 22.8 in 496 x 505 x 580 mm			
Exterior (w x h x d)	$24 \times 31.5 \times 26.7$ in \mid 610 \times 798 \times 678 mm *Add 2.5" to the height if choosing optional casters.			
Overall Exterior (w x h x d)	24.3 x 31.9 x 27.8 in 616 x 809 x 705 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 d)	2 ventilated, powder coated shelves, adjustable 17.9 x 21.3 in 454 x 541 mm, 100 lb 46kg max capacity/shelf			
Leveling Feet	Yes, adjustable			
Integrated Access Control	Optional- electromagnetic-lock with PIN entry via keypad			
Net Weight	174 lb 79 kg			
Shipping Weight	235 lb 107kg			
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 recorder, Chart paper, Swivel/Locking casters, Solid ballast, Remote alarms, Remote lock adapter kit, Floor and Wall bracket kit, Stacking kit, Pedestal, Storage trays, LED light, Locking drawer, Lefthinge door, Glass door, Certificate of calibration, Temperature validation, Validation guide (IQ/OQ), Extended warranty			
Warranty	Rel.i [™] Warranty- 5 years compressor, 2 years parts, 1 year labor Outside US and Canada- Contact your distributor for warranty information			











INTERIOR VERTICAL SPACING







