



MDF-MU339HL-PA

Biomedical ECO Freezer, -30°C

MDF-MU339HL-PA
13.0 cu.ft. | 369 L



The PHCbi brand -30°C Biomedical ECO Freezer provides a stable and reliable environment for storing of enzymes, vaccines, pharmaceutical products and other biomedical materials with uniform temperatures. The practical size saves space in the laboratory. An occasional manual defrost, if required, eliminates minor temperature fluctuations during operation. Configurable temperature ranges from -20°C to -30°C.

Natural Refrigerants and Inverter Technology

Naturally occurring hydrocarbon [HC] refrigerants have minimal effect on the environment and are compliant with environmental legislation for climate control. Combined with inverter technology, these refrigerants also provide more efficient cooling without compromising cooling performance, ambient tolerance and recovery speeds following door openings.

Safe Sample Storage

Protection and safety features include heavy duty, door-mount sealing gasket to eliminate cold air loss. High and low temperature deviation alarms warn of temperature setpoint violations and door ajar events. A standard door latch lock adds security, and an optional padlock can be installed to expand the envelope of protection.

ENERGY STAR® Qualified

Power consumption at rated storage temperatures confirms significant energy saving performance of the Biomedical ECO natural refrigerant platform. Power data published herein is based on internal results of production freezer testing prior to submittal for independent third-party evaluation similar to that now applied to other ENERGY STAR Certified PHCbi freezers in the same class.



Energy Efficient Performance

Natural refrigerant, a high performance inverter compressor and integrated electronics controls combine to manage overall performance, protect stored product and lower operating costs by up to 28% compared to conventional models. Performance is rated at 115V, AC, ambient temperature 30°C, with a wide tolerance for high ambient temperatures.



Microprocessor Controller and Alarms

The microprocessor-based temperature control system with LED display maintains accurate setpoint temperature to within 1°C over a range of -20°C to -30°C. Audible and flashing visual alarm lights supplement the setpoint deviation system to warn of parameter violations, or loss of power.



Smart Cabinet Design

Space-saving design allows more installation options in crowded laboratories or warm hallways. The cabinet includes 5 adjustable wire shelves. Optional open top bins can be added to hold common 2" or 3" freezer boxes, as well as miscellaneous goods. High density CFC-free and low GWP foamed-in-place insulation creates a temperature resistant wall structure. Painted steel interior surfaces simplify cleaning.



Model MDF-MU339HL-PA shown with optional storage bins.

Stored Product Protection

The single door Biomedical ECO freezer creates stable temperature storage in a space-saving cabinet.

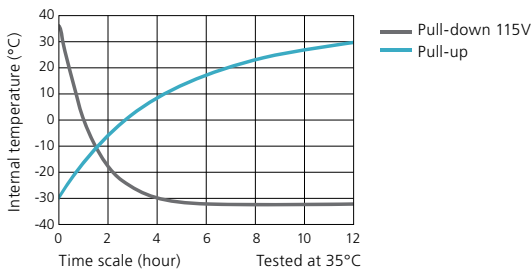
Manual Defrost Condensate Removal

Occasional manual defrosting maintains the most efficient freezer performance. An integrated condensate drain hose permits easy removal of water and stows out of the way when not in use.



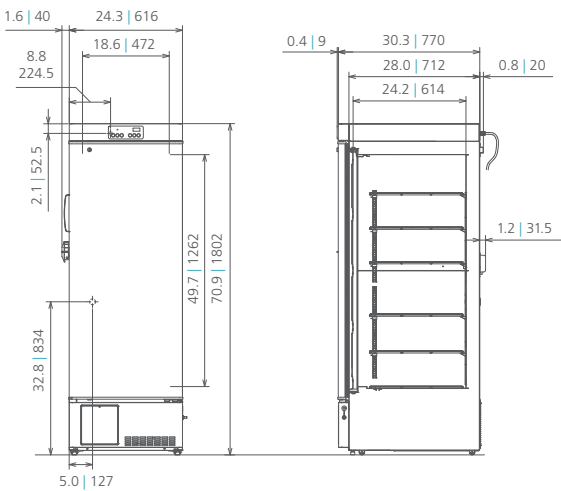
Temperature Uniformity

Stored product creates a thermal mass that enhances interior temperature uniformity. Multiple interior cold wall surfaces remove heat quickly and efficiently while maintaining uniformity.



Dimensions

Unit : inch | mm



Model Number		MDF-MU339HL-PA	
Exterior Dimensions (W x D x H) ¹⁾	inches mm	24.3 x 30.3 x 70.9	616 x 770 x 1802
Interior Dimensions (W x D x H)	inches mm	18.6 x 24.2 x 49.7	472 x 614 x 1262
Volume	cu. ft. liters	13.0	369
Net Weight	lbs kg	269	122
Capacity (2" boxes) Bin Freezer	qty	36	216
Capacity (3" boxes) Bin Freezer	qty	24	144
Bin Capacity	qty	6	
Performance			
Warranty ²⁾		2 years parts / labor, 3 years compressor parts	
Cooling Performance ³⁾	°C	-30	
Temperature Setting Range	°C	-18 to -35 in 1°C increments	
Temperature Control Range ³⁾	°C	-20 to -30 in 1°C increments	
Control			
Controller		Microprocessor, touchpad data entry, password protected	
Display		LED	
Temperature Sensor		Thermistor	
Refrigeration			
Refrigeration System		Cold wall	
Compressor	W	(1) 250 (inverter type)	
Refrigerant		CFC-free R-290	
Defrost		Manual	
Insulation Material		Rigid polyurethane, foamed-in-place, low GWP	
Insulation Thickness	inches mm	2.8	70
Construction			
Exterior and Interior Material		Painted steel	
Door	qty	1	
Outer Door - Key Lock	qty	1	
Additional Door Lock	qty	Door latch with hasp for padlock	
Wire Shelves, Vinyl Coated	qty	6 (5 adjustable)	
Shelf Dimension (W x D)	inches mm	17.6 x 20.1	447 x 510
Max. Load per Shelf	lbs kg	66.1	30
Max. Load - Total Freezer	lbs kg	396.6	180
Access Port	qty	(1) Standard	
Access Port Position		Back wall, left hand corner (facing unit)	
Access Port Diameter	inches mm	1.1	30
Casters	qty	4	
Leveling Feet		2 (on front of base)	
Alarms (V=Visual, B=Buzzer, R=Remote Alarm)			
Power Failure		V-B-R	
High Temperature		V-B-R	
Low Temperature		V-B-R	
Electrical and Noise Level			
Power Supply		115V, 60Hz, 1Ø, NEMA 5-15P, requires NEMA 5-15R receptacle	
Noise Level ⁴⁾	dB(A)	42	
Options			
Storage Bin ⁵⁾	Sold in sets of 2	MDF-035C-PW	
Temperature Recorders			
Circular Type	6", 7 Day Circular	MTRC954	
Chart Paper	52 charts per box	C740306REV	
Ink Pen	pack of 6	R252	
Optional Communication System			
Wireless, Cloud-Based, Automatic Data Management		LabAlert® Monitoring System	

¹⁾ External dimensions of main cabinet only. Excluding the door handle and other external projections
²⁾ Current warranty offered at time of printing and may be subject to change; US and Canada only
³⁾ Air temperature measured at freezer center, ambient temperature +30°C, no load
⁴⁾ Nominal value - Background noise 20 dB(A)
⁵⁾ Optional Bin, interior base dimensions 16.45" (418 mm) W x 21.65" (550 mm) F to B, height 6.2" (157.5 mm) H

Specifications are subject to change without notice. For latest specification information contact PHC Corporation of North America at info@us.phcd.com.



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