PHCbi

Life Science Innovator Since 1966

MDF-C8V1-PA

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VIP® Series

-80°C Ultra-Low Temperature Chest Freezer

3.0 cu.ft. | 84 L

VIP vacuum insulation

VIP Series ultra-low temperature freezers are designed for safe, reliable storage of biologicals. Energy efficiency in VIP Series freezers is achieved through balanced temperature performance and power management. The advanced combination of cabinet design, electronics, refrigeration and critical components are engineered for enhanced security, performance and reliability. VIP Series freezers have demonstrated >99% uptime through excellent performance history.

Reliability You Can Count On

The specially engineered compressor powers the auto-cascade single refrigeration system. The system provides dependable cooling by balancing temperature performance and energy management. Reserve refrigeration power assures exceptional temperature recovery following lid openings. VIP series freezers have demonstrated >99% reliability with excellent performance history.

Maximum Storage, Minimal Footprint

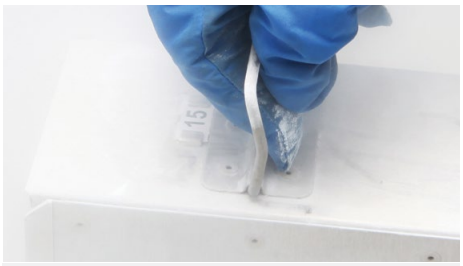
The chest freezer employs a patented VIP insulation composite that maximizes space efficiency and holds up to 42 2" boxes or 30 3" boxes within a 4.07 ft^2 (0.38 m^2) footprint.

Uniform Preservation

The combination of patented VIP vacuum insulation panels with compressors specifically designed for ultra-low temperature applications, assures superior uniformity (+/- 5°C) throughout the cabinet to maintain the integrity of the samples.

Microprocessor Controls/Alarms

The integrated microprocessor controller with LED display includes alarms, diagnostic and communication features with monitoring of system and compressor operating conditions.



Optimum Sample Storage

This space saving cabinet design offers a reduced wall thickness for maximum interior volume. Ideal for storage of DNA, RNA and other biological samples.

Extra Protection, Easy Access

Insulated locking lid with multilevel gasket seals firmly against the cabinet to minimize change in interior temperatures during routine openings. The sub lid provides additional protection. The lid handle features an ergonomic design that allows one-handed access.

VIP® Series -86°C ULT Chest Freezer

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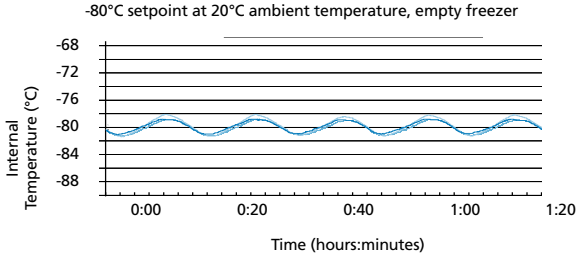
VIP Vacuum Insulated Panels

Inside-out engineering starts with a patented VIP insulation composite which results in an efficient, thin-wall cabinet. Insulated inner lid improves temperature uniformity. The chest freezer design minimizes cold air loss during lid openings and extends warm-up times during power outages.

Model MDF-C8V1-PA
is shown empty in the image.

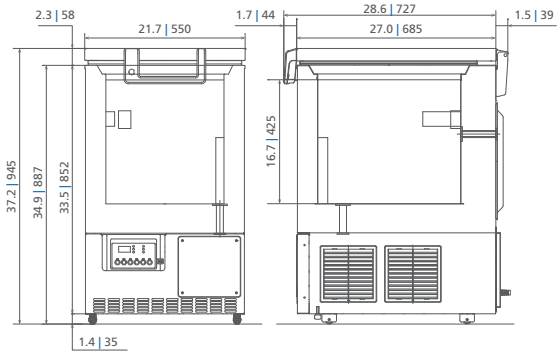
Temperature Uniformity Data



The graph represents nominal air temperature in an empty cabinet, which is indicative of worst case scenario for temperature uniformity. As product is added, the increase in thermal mass provides tighter temperature uniformity and stability

Dimensions

Unit : inch | mm



Model Number		MDF-C8V1-PA
External Dimensions (W × D × H) [1]	inches | mm	21.7 × 27.0 × 37.2 | 550 × 685 × 945
Internal Dimensions (W × D × H)	inches | mm	15.9 × 19.3 × 16.7 | 405 × 490 × 425
Volume	cu.ft. | liters	3.0 | 84
Net Weight	lbs. | kg	148 | 67
Capacity (2" boxes)	qty	42
Capacity (3" boxes)	qty	30
Inventory Racks (2" boxes)	qty	6
Inventory Racks (3" boxes)	qty	6
Performance		
Warranty		5 years parts and labor [2]
Cooling Performance [3]	°C	-80
Temperature Setting Range	°C	-55 to -85 in 1°C increments
Temperature Control Range [3]	°C	-60 to -80 in 1°C increments
Control		
Controller		Microprocessor, touchpad data entry with display lockout
Display		LED
Temperature Sensor		Pt-1000
Refrigeration		
Refrigeration System		Single compressor, auto-cascade
Compressors	W	(1) 400
Refrigerant		CFC-free mixed refrigerant
Insulation Material		Rigid polyurethane foam-in-place (PUF) + VIP
Construction		
Exterior & Interior Material		Painted steel
Lid	qty	1
Lid Lock	key	Standard
Sub Lid	qty	Insulated with formed-in grip
Access Ports	qty	2
Access Port Position		Middle left back wall and right front chamber floor
Access Port Diameter	inches | mm	0.6 | 17
Casters	qty	4 (2 leveling feet on front base)
Alarms	(V = Visual Alarm, B = Buzzer Alarm, 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, 1Ø, NEMA 5-15P, requires NEMA 5-15R receptacle
Frequency	Hz	60
Noise Level [4]	dB (A)	47
Options		
Liquid CO_2 Back-up System		CVK-UB4I
Temperature Recorder		
Circular Type	6", 7 day circular	MTRC954
Chart Paper	52 charts per box	C7100386REV
Ink Pen	pack of 6	R252
Optional Communication System		
Wireless, cloud-based, automatic data management		LabAlert® Monitoring System

[1] Exterior dimensions of main cabinet only, excluding 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 20dB[A]

Specifications are subject to change without notice. For latest specification information contact PHC Corporation of North America at info@us.phchd.com. Performance data herein is based on independent testing at time of publication.

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