

## VIP<sup>®</sup> ECO

-86°C to -40°C Ultra-Low Temperature Chest Freezer

MDF-DC102VH-PA, 115V  
MDF-DC202VH-PA, 115V

3.0 cu.ft. | 84 L  
6.4 cu.ft. | 180 L



MDF-DC102VH-PA

MDF-DC202VH-PA



This VIP ECO series of compact, ultra-low temperature (-86°C) freezers are ideal for personal or individual clinical usage. The series makes use of a natural refrigerant, reducing environmental impact and delivering optimal storage in a compact footprint.

### Natural Refrigerants

Naturally occurring hydrocarbon (HC) refrigerants have minimal effect on the environment and are compliant with environmental legislation for climate control. These refrigerants also provide efficient cooling without compromising performance, ambient tolerance, and recovery speeds following door openings.

### Organic EL Control Panel Includes USB Port

The control panel with organic EL display is positioned close to the top to help enhance ease of use. The enhanced visibility makes user operation simple and intuitive. A logging function is included, allowing users to save temperature/ alarm history data and transfer data using the USB port.



USB Port

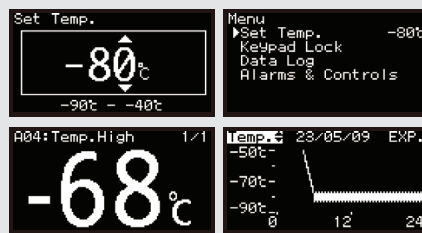
### Compact, Personal-Use Type Installs Anywhere

The external width of MDF-DC102VH-PA is 22" (558 mm), and MDF-DC202VH-PA width is 40.1" (1,018 mm). Compact configurations of each model offer installation flexibility whether placed in a room corner or right alongside a desk, making them ideal for dedicated use by individuals, small groups, and clinics.



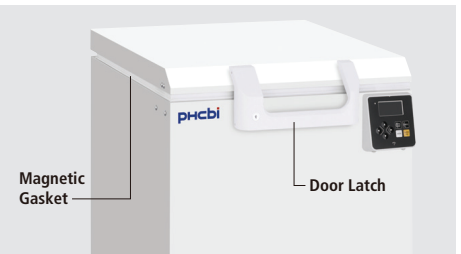
### Energy Efficient Performance

Natural refrigerants, compressors and integrated electronics combine to lower operating costs. Freezer operation is managed by effectively balancing temperature performance and energy management.



### Organic EL Offers Multiple Display Options

The control panel with organic EL display allows the user to conduct various operations, displaying control temperature, high / low temperature alarms as well as error messages.



Magnetic Gasket

Door Latch

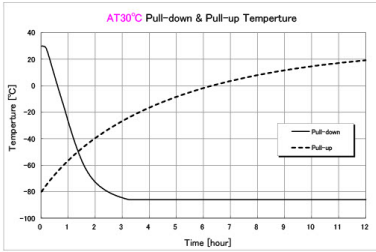
### Door Latch and Magnetic Gasket Combined

Door operation is through magnetic gasket. This feature in combination with the door latch, ensures the door is firmly closed and prevents cold air leakage.

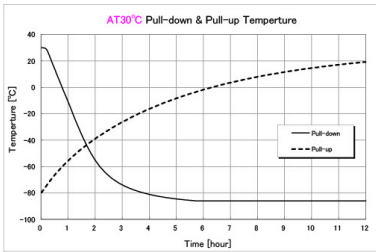
Performance Data

AT30°C Pull-down & Pull-up Temperature

MDF-DC102VH

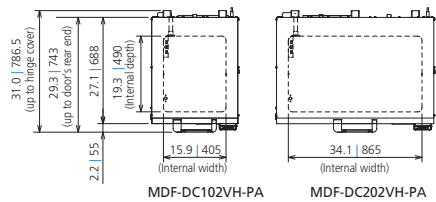


MDF-DC202VH

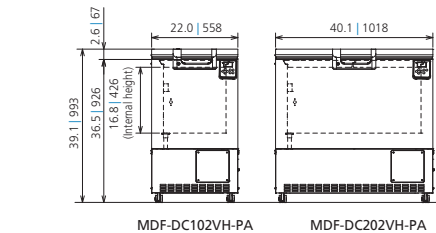


Dimensions

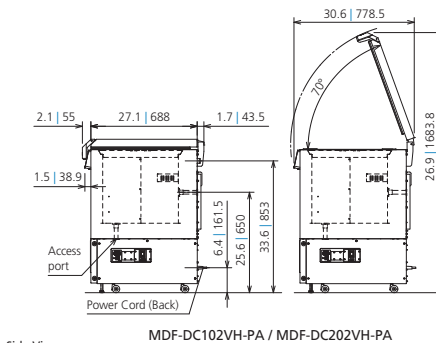
Unit: inch | mm



Top View



Front View



Side View

Model Number		MDF-DC102VH-PA	MDF-DC202VH-PA
External Dimensions (W x D x H) <sup>1)</sup>	inches   mm	22.0 x 27.1 x 39.1   558 x 688 x 993	40.1 x 27.1 x 39.1   1018 x 688 x 993
Internal Dimensions (W x D x H)	inches   mm	15.9 x 19.3 x 16.8   405 x 490 x 426	34.1 x 19.3 x 16.8   865 x 490 x 426
Volume	cu.ft.   liters	3.0   84	6.4   180
Net Weight	lbs   kg	187.4   85	253.5   115
2* Box and Racks - Capacity	Box   Rack	42   6	119   17
3* Box and Racks - Capacity	Box   Rack	30   6	85   17
<b>Performance</b>			
Cooling performance <sup>2)</sup>	°C		-86
Temperature Control Range <sup>2)</sup>	°C		-40 to -86 (settable in 1 degree increments)
Uniformity <sup>3)</sup>	°C		±5
Power Consumption <sup>3)</sup>	kWh/Day	5.36 (-80 Steady State)	6.32 (-80 Steady State)
BTU Nominal	Per Hour	1177	1467
<b>Control</b>			
Controller			Microcomputer control system
Display			Organic EL display
Controller Security			Lockable with keypad*
Temperature Sensor			Platinum resistance (Pt 1,000 Ω)
<b>Refrigeration</b>			
Cooling Method			Cold wall (single compressor auto cascade system)
Compressor	W		550
Refrigerant Type			Mixed HC refrigerant (R-600, R-170, R-50)
Insulation			Rigid polyurethane foam (PUF) + VIP Plus vacuum insulated panels
<b>Construction</b>			
Exterior Material			Painted Steel
Interior Material			Painted Steel
Outer Door	qty		1
Outer Door Lock			Y
Inner Lid	qty	1 (styrene foam)	2 (styrene foam)
Access Ports	qty		2
Access Port Positions	qty		Back (1), bottom (1)
Access Port Diameter	Ø inches   Ø mm		0.67   17
Casters	qty		4 (2 leveling feet)
<b>Alarms (V = Visual Alarm, B = Buzzer Alarm, M = Message, R = Remote Alarm)</b>			
Power Failure			V-B-M-R
High Temperature			V-B-M-R
Low Temperature			V-B-M-R
Remote Alarm Contacts			Allowable contact capacity: DC 30 V, 2 A <sup>4)</sup>
<b>Electrical</b>			
Power Supply			115V, NEMA 5-15P, 60HZ, 9.8 ft cord length
Running Amps   Max Amps		3.9   5.2	4.8   5.9
Noise Level <sup>5)</sup>	dB(A)		52
<b>Options</b>			
Back-Up Cooling Kit			MDF-UB8I-PW <sup>6)</sup>
Circular Type Chart Recorders			MTR-G85A-PA
Chart Paper / Ink Pen			RP-G85-PW / PG-R-PW
<b>Optional Communication System</b>			
Wireless, Cloud-Based, Automatic Data Management			LabAlert**   LabSVIFT™ <sup>7)</sup>   V-SafeRX**
4-20mA Output Module			MTR-420MA-PW   MTR420MAL - Loop Powered**   MTR420MAC - Equipment Powered**
<b>Certifications and Warranty</b>			
Certification			QPS Listed
Warranty <sup>8)</sup>			5 years parts and labor

<sup>1)</sup> Exterior dimensions of main cabinet only, excluding handle and other external projections.

<sup>2)</sup> Air temperature measured at freezer center, ambient temperature 30°C, no load.

<sup>3)</sup> Based on Energy Star version 1.1 test criteria conducted by 3rd party testing agency.

<sup>4)</sup> Standard signal and interface cables with a maximum length of 30 meters are recommended.

<sup>5)</sup> Nominal value - Background noise 20 dB(A).

<sup>6)</sup> Settable range of the injection start temperature is -70°C to -50°C.

<sup>7)</sup> Requires MTR-480 to operate as Gen 2 on LabSVIFT System.

<sup>8)</sup> Current warranty offered at time of printing and may be subject to change; US and Canada only.

\*Password protection lockable with keypad

\*\*Manufactured by others

Specifications are subject to change without notice.

For latest specification information contact PHC Corporation of North America at info@us.phcd.com. Performance data herein is based on independent testing at time of publication.



PHC Corporation of North America  
1300 Michael Drive, Suite A, Wood Dale, IL 60191  
Toll Free USA (800) 858-8442, Fax (630) 238-0074  
www.phcd.com/us/biomedical