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VIP® ECO

MDF-DC102VH-PA | FZRC3-ULT-115, 115V

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

3.0 cu.ft. | 84 L

OLED control panel | ECO natural refrigerants | VIP PLUS vacuum insulation

MDF-DC102VH-PA | **FZRC3-ULT-115**

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 | **FZRC3-ULT-115** is 22" (558 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.

PERFORMANCE $

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.
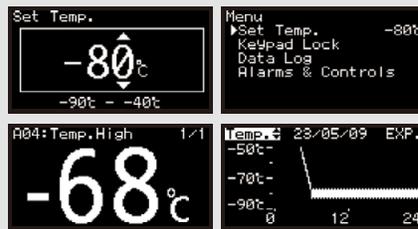
Organic EL Offers Multiple Display Options

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.
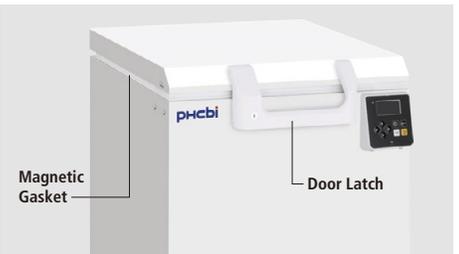
Magnetic Gasket

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.

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Performance Data

AT30°C Pull-down & Pull-up Temperature

MDF-DC102VH-PA | FZRC3-ULT-115
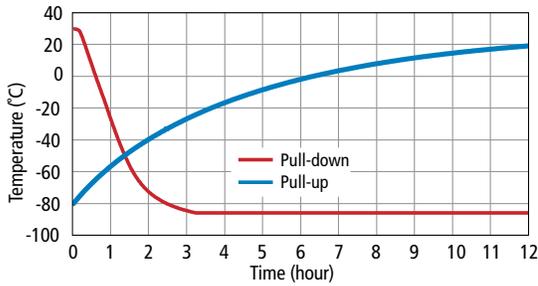
Dimensions

Unit: inch | mm

Front View

Top View

Side View
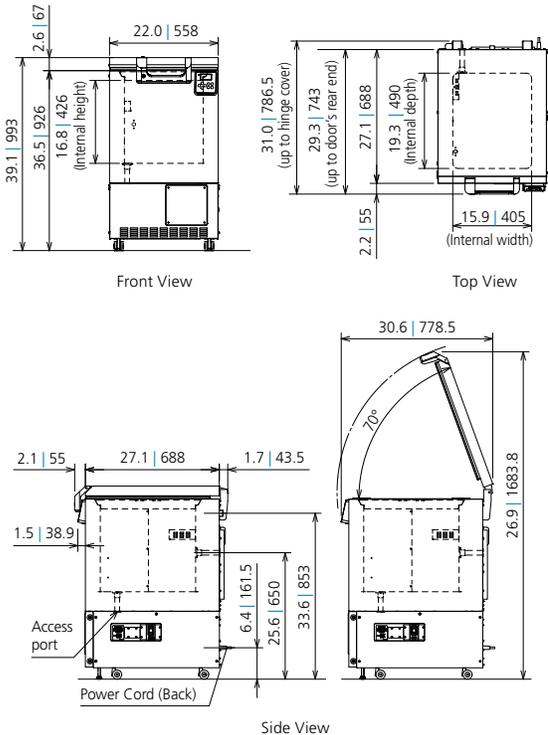
Model Number		MDF-DC102VH-PA | FZRC3-ULT-115
External Dimensions (W × D × H) [1]	inches | mm	22.0 x 27.1 x 39.1 | 558 x 688 x 993
Internal Dimensions (W × D × H)	inches | mm	15.9 x 19.3 x 16.8 | 405 x 490 x 426
Volume	cu.ft. | liters	3.0 | 84
Net Weight	lbs | kg	187.4 | 85
2" Box and Racks - Capacity	Box | Rack	42 | 6
3" Box and Racks - Capacity	Box | Rack	30 | 6
Performance		
Cooling performance [2]	°C	-86
Temperature Control Range [2]	°C	-40 to -86 (settable in 1 degree increments)
Uniformity [3]	°C	±5
Power Consumption [3]	kWh/Day	5.36 (-80°C Steady state)
BTU Nominal	Per Hour	1177
Control		
Controller		Microcomputer control system
Display		Organic EL display
Controller Security		Lockable with keypad [4]
Temperature Sensor		Platinum resistance (Pt 1,000 Ω)
Refrigeration		
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
Construction		
Exterior Material		Painted Steel
Interior Material		Painted Steel
Outer Door	qty	1
Outer Door Lock		Y
Inner Lid	qty	1 (styrene foam)
Access Ports	qty	2
Access Port Postions	qty	Back (1), bottom (1)
Access Port Diameter	Ø inches | Ø mm	0.67 | 17
Casters	qty	4 (2 leveling feet)
Alarms		(V = Visual Alarm, B = Buzzer Alarm, M = Message, R = Remote Alarm)
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 [5]
Electrical		
Power Supply		115V, NEMA 5-15P, 60HZ, 9.8 ft cord length
Running Amps | Max Amps		3.9 | 5.2
Noise Level [6]	dB(A)	52
Options		
Back-Up Cooling Kit		MDF-UB8I-PW [7]
Circular Type Chart Recorders		MTR-G85A-PA
Chart Paper / Ink Pen		RP-G85-PW / PG-R-PW
Optional Communication System		
Wireless, Cloud-Based, Automatic Data Management		LabAlert®* / LabSVIFT™ [8]
4-20mA Output Module		MTR420MAL - Loop Powered* | MTR420MAC- Equipment Powered*
Certifications and Warranty		
Certification		QPS Listed
Warranty [9]		5 years parts and labor

[1] Exterior dimensions of main cabinet only, excluding handle and other external projections.
[2] Air temperature measured at freezer center, ambient temperature 30°C, no load.
[3] Based on ENERGY STAR® version 1.1 test criteria conducted by 3rd party testing agency.
[4] Password protection settable keypad locks
[5] Standard signal and interface cables with a maximum length of 30 meters are recommended.
[6] Nominal value - Background noise 20 dB(A).
[7] Settable range of the injection start temperature is -70°C to -50°C.
[8] Requires MTR-480 to operate as Gen 2 on LabSVIFT System.
[9] Current warranty offered at time of printing and may be subject to change; US and Canada only.
*Manufactured by others

Specifications are subject to change without notice.
Performance data herein is based on independent testing at time of publication.

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