MDF-DC102VH-PE / MDF-DC202VH-PE

VIP ECO

-80°C Chest Freezers

84L / 180L

VIP PLUS vacuum insulation

ECO natural refrigerants

PHCbi's MDF-DC102VH-PE and MDF-DC202VH-PE VIP ECO Chest Freezers provide maximum sample storage capacity within an optimum footprint combined with industry leading cooling performance and reliability for an ideal long-term preservation solution.+

Optimum Sample Storage

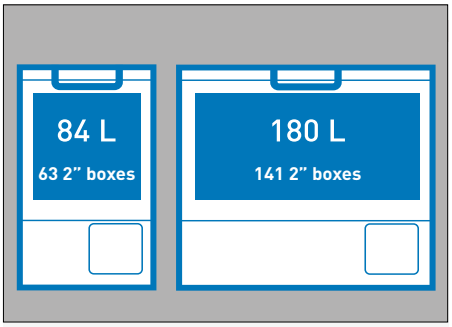
The use of patented VIP PLUS panels within the freezer cabinet provides a reduced wall thickness for maximum interior volume. This technology allows the MDF-DC102VH-PE and MDF-DC202VH-PE to require a small installation space with a great storage capacity.

Efficient Refrigeration

Naturally occurring hydrocarbon (HC) refrigerants provide more efficient cooling due to their high latent heat of evaporation. As well as improved performence this leads to lower GWP.

Ease of Use & Intelligent Security

The OLED panel has good visibility and intuitive operation. The USB port and data log functions simplifies temperature data and events management



Personal Storage

Ideal for reliable storage of small volume clinical trial samples and temperature control testing as well as for a wide variety of other biological applications.

Dependable Preservation

Quality of design and manufacture ensures trusted and reliable storage that maintains the integrity of precious samples.

Uniform Sample Storage

The uniform and stable temperatures provided are ideal for storage of DNA, RNA and other important biological samples.

VIP ECO -80°C Chest Freezers

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Specially developed single-compressor system

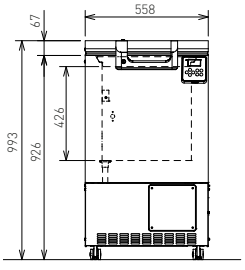
The unique auto-cascade system uses a single compressor for efficient cooling, enabling an extremely small footprint.
The highly efficient refrigeration system provides uniform and stable ultra-low temperatures down to -86°C.

Filterless Design

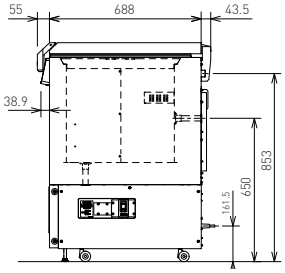
The unique cooling circuit makes the inconvenient customer maintenance procedure of filter cleaning unnecessary.

Minimal Footprint

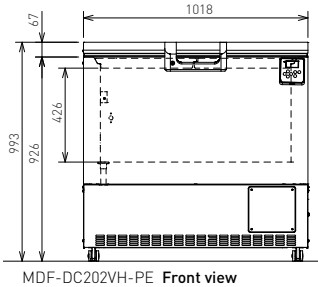
PHCbi VIP ECO ULT freezers provide up to 30% more storage capacity than a conventionally insulated freezer without increasing the footprint.[5]
The MDF-DC102VH-PE and MDF-DC202VH-PE feature VIP PLUS vacuum panels for increased energy efficiency and cooling performance.



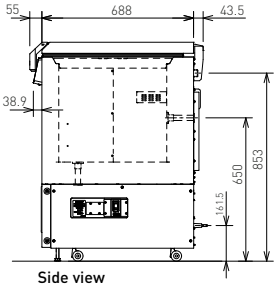
MDF-DC102VH-PE **Front view**



Side view



MDF-DC202VH-PE **Front view**



Side view

Model Number		MDF-DC102VH-PE	MDF-DC202VH-PE
Dimensions			
External dimensions (WxDxH) [1]	mm	558 x 688 x 993	1018 x 688 x 993
Internal dimensions (WxDxH)	mm	405 x 490 x 426	865 x 490 x 426
Volume	litres	84	180
Net weight	kg	85	115
Capacity Vertical rack: NIR-207C	2" boxes	42	119
Capacity Ladder racks: VC-660/3SC	2" boxes	63	141
Performance			
Cooling performance [2]	°C	-86	
Temperature setting range	°C	-40 to -90	
Temperature control range [2]	°C	-40 to -86	
Control			
Controller		Microcomputer control system	
Display		OLED	
Temperature sensor		Pt1000	
Refrigeration			
Compressor	W	550	
Refrigerant		HC mixed refrigerant	
Refrigerant weight	g	80	110
Refrigerant GWP		5	6
Total Refrigerant weight (CO_2 equivalent)	t	0.0004	0.0007
Insulation material		PUF / VIP Plus	
Insulation thickness	mm	76.5	
Construction			
Exterior material		Painted Steel	
Interior material		Painted Steel	
Outer Lid	qty	1	
Outer Lid Lock		Y	
Inner Lid	qty	1 (Styrofoam)	2 (Styrofoam)
Access Port	qty	2	
- position		Back/Bottom left front	
- diameter	Ø mm	17	
Casters	qty	4 (2 leveling feet)	
Data logging/USB		Y	
Alarms		(R = Remote Alarm, V = Visual Alarm, B = Buzzer Alarm)	
Power failure		V-B-R	
High temperature		V-B-R	
Low temperature		V-B-R	
Filter		Filterless design	
Electrical and Noise Level			
Power Supply	V	220/230/240	
Frequency	Hz	50	
Noise Level [3]	dB(A)	52	
Options			
Liquid CO_2 back-up		MDF-UB8-PW	
Temperature recorders			
- Circular type[4]		MTR-G85C-PE	
- Chart paper		RP-G85-PW	
- Ink pen		PG-R-PW	
- Continuous strip type		MTR-85H-PW	
- Chart paper		RP-85-PW	
- Ink pen		DF-38FP-PW	
- Recorder housing		MDF-S3085-PW	
MTR-MODB1-PW		MTR-MODB1-PW	

Appearance and specifications are subject to change without notice.

1) Exterior dimensions of main cabinet only, excluding handle and other external projections - See dimensions drawings on website for full details.
2) Air temperature measured at freezer centre, ambient temperature +30°C, no load.
3) Nominal value - Background noise 20dB(A).
4) Requires sensor cover MTR-C8-PW.
5) Compared with the MDF-193.

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Version: 151025