



MDF-U33V-PE

## VIP

-86°C Upright Freezer

333 L



PHCbi's MDF-U33V **VIP** -86°C Upright Freezer provides 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 space saving VIP panels within the freezer cabinet provides a reduced wall thickness for maximum interior volume. This results in a capacity of 216 2" boxes.

### Reliable PHCbi Technologies

Cool Safe® compressors that are specifically designed for ultra-low temperature applications are employed in the proven PHCbi cascade refrigeration system ensuring the highest levels of performance and reliability.

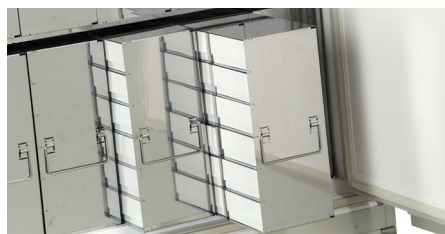
### Ease of Use & Intelligent Security

Comprehensive setpoint, alarm, monitoring and diagnostic functions supervised by PHCbi-built microprocessor controller with digital display of all functions.



### Uniform Sample Storage

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



### Dependable Preservation

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



### Self-Diagnostic Monitoring

Status Alert constantly monitors ambient and system conditions and notifies the user of any abnormalities, allowing preventative action.

# VIP -86°C Upright Freezer



## Application Specific Design

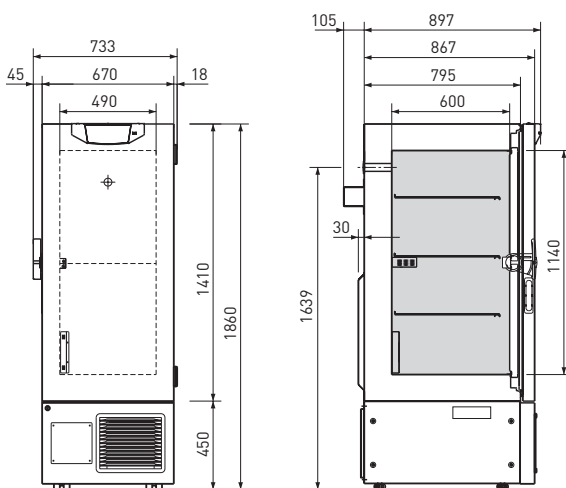
Refrigeration components are carefully selected and matched for optimum operation under demanding laboratory environments. This improves temperature recovery after door openings and sample placement, while ensuring lower internal temperatures for increased durability.

## High Storage Capacity

PHCbi VIP ULT freezers provide up to 30% more storage capacity than a conventionally insulated freezer without increasing the footprint.

## Microprocessor Control

Managed and monitored by an integrated microprocessor controller with a comprehensive alarm system and diagnostic functions.



Model Number		MDF-U33V-PE
External Dimensions (W x D x H) <sup>1)</sup>	mm	670 x 867 x 1860
Internal Dimensions (W x D x H)	mm	490 x 600 x 1140
Volume	litres	333
Net Weight	kg	255
Capacity	2" boxes	216
Performance		
Cooling performance <sup>2)</sup>	°C	-86
Temperature setting range	°C	-50 to -90
Temperature control range <sup>2)</sup>	°C	-50 to -86
Control		
Controller		Microprocessor, non-volatile memory
Display		LED
Temperature sensor		Pt-1000
Refrigeration		
Refrigeration system		Cascade
Compressors	W	450/750
Refrigerant		HFC
Insulation material		PUF / VIP PLUS
Insulation thickness	mm	70
Construction		
Exterior Material		Painted Steel
Interior Material		Painted Steel
Outer Door	qty	1
Outer Door Lock		Y
Inner Doors	qty	2 pieces (insulated)
Shelves	qty	3
Max. load - per shelf	kg	50
Max. load - total	kg	150
Vacuum release port		N
Access Port	qty	3
Access Port Position		Back, Bottom x 2
Access Port Diameter	∅ mm	17
Casters	qty	4 (2 leveling feet)
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		V-B
Door open		V-B
Electrical and Noise Level		
Power Supply	V	230
Frequency	Hz	50
Noise Level <sup>3)</sup>	dB [A]	49
Options		
Liquid CO <sub>2</sub> back-up		CVK-UB2-PW
Temperature recorders		
- Circular type		MTR-G85C-PE <sup>5)</sup>
- 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-PE
Optional communication systems		
Ethernet interface (LAN)		MTR-L03-PW

Appearance and specifications are subject to change without notice.

<sup>1)</sup> Exterior dimensions of main cabinet only, excluding handle and other external projections - See dimensions drawings on website for full details.

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

<sup>3)</sup> Nominal value - Background noise 20dB[A].

<sup>4)</sup> Installation of small inner door kit may affect usable storage capacity.

<sup>5)</sup> Requires sensor cover MTR-DU700SF-PW.

