PHCbi

Ultra-Low Temperature Freezer

MDF-U55V



MDF-U55V

Energy Saving

-86°C
519liters/18.3cu.ft.

V.I.P. PLUS
(Vacuum Insulation Panel)

Large capacity, space saving Ultra-Low Temperature Freezer with improved energy consumption

- V.I.P. PLUS technology maximises storage capacity
- New refrigeration system enables more energy efficient operation
- Safe operation with status alert continuous condition monitoring
- Inner doors removable for cleaning and defrosting
- Enhanced security with new rugged outer door latch
- Improved accessibility
- Quiet operation
- Can hold up to 352 pcs 2-inch boxes or 224 pcs 3-inch boxes
- Class IIa Medical Device (For EU countries only)

PHC Corporation, Biomedical Division

Life Science Innovator Since 1966

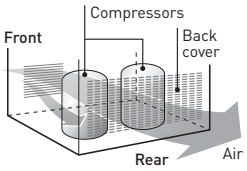
MDF-U55V

Features

DESIGN

- PHCbi V.I.P. PLUS -86˚C ultra-low temperature freezers use vacuum insulation cabinet construction that reduces the wall thickness from 14 cm to 7 cm (5.5" to 2.7") and achieves up to 30 % more storage capacity than conventionally insulated freezers, without increasing its footprint.
- The newly developed refrigeration circuit regulates high stage compressor ON-OFF cycles, resulting in a reduction in energy consumption of approx. 30 %* compared to the previous model.

  *The data is a measured example (AT 23˚C, 230 V 50 Hz, no load). Actual power consumption will vary depending on set and ambient conditions, loading and local voltage.
- The rear ventilation cover combines with the aerodynamically designed and positioned components in the refrigeration compartment to provide superior air flow, drastically reducing the load on the freezer and contributing to improved durability.



- Two independent and insulated inner doors with gaskets prevent cold air leakage.

RELIABILITY

- Status alert (condition monitor) monitors ambient and system conditions continuously and notifies of any abnormalities before a problem happens.

ACCESSIBILITY

- A beak style inner door latch tightly closes the inner door against the freezer frame. It also helps make opening and closing the door smoother.



- The condenser filter is situated at the bottom right side of the front panel to make filter removal and cleaning easier.

The MDF-U55V is certified as a Class IIa Medical Device (93/42/EEC and 2007/47/EC) (For EU countries only)

SAFETY

- Alarm lamp and buzzer offer secure warning of power failure or abnormal temperature increase.
- High and low temperature warning provides an audible and visual alarm when the temperature deviates more than ±5˚C to ±20˚C (adjustable) from the set point.
- Alarm ring-back function ensures the buzzer will resume operation, should alarm conditions continue after it is silenced.
- Microprocessor-controlled blocked filter alarm protects the refrigeration circuit.
- The rugged, one-handed outer door latch allows a padlock to be used to securely protect valuable samples.



- Control panel with digital display for easy operation.



Specifications

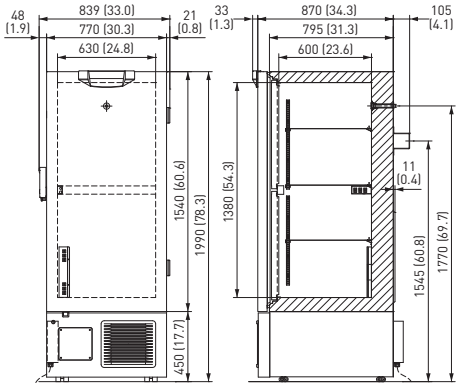
	Model No.
230 V/240 V, 50 Hz (CE)	MDF-U55V-PE
Temperature control range	–50˚C to –86˚C (in 1˚C increments)
Cooling performance	–86˚C (Ambient temperature 30˚C)
External dimensions (W x D x H)*1	770 x 870 x 1990 (mm) / 30.3 x 34.3 x 78.3 (inch)
Internal dimensions (W x D x H)	630 x 600 x 1380 (mm) / 24.8 x 23.6 x 54.3 (inch)
Net weight	Approx. 288 kg (635 lbs.)
Effective capacity	519 liters (18.3 cu.ft.)
Shelves	Stainless steel, 3 shelves
Access port	17mm diameter, 3 locations (back, bottom left/right corners)
Compressor	Hermetic type 450 W (high stage side), Hermetic type 750 W (low stage side)
Refrigerant	HFC
Alarms	High / low temperature, Power failure, Filter check, Self diagnostics, Door check, Part replacement notification
Remote alarm contact	Allowable contact capacity: DC 30 V, 2 A
Accessories	1 set of keys, 1 scraper

*Cooling performance is indicated by the temperature reached at the center of the freezer (at ambient temperature of 30˚C with no load). In order to use the freezer at a stable temperature for a long time, it is recommended that the temperature be set to at least 5˚C higher than the indicated lowest temperature.
In addition, depending on the usage conditions, it may not be possible to reach the indicated lowest temperature.

Caution: PHC Corporation guarantees the product under certain warranty conditions. PHC Corporation is in no way shall be responsible for any loss of content or damage to content. The battery for power failure alarm is an article for consumption. It is recommended that the battery will be replaced about every 3 years.
•Appearance and specifications are subject to change without notice.
*1 External dimensions of main cabinet only - see dimension drawings showing handles and other external projections.

Dimensions

Unit : mm (inch)



Options



Inventory rack
IR-220U-PW
IR-224U-PW



3 drawers
(for lower chamber)
MDF-50R-PW

Inner door (small)
MDF-5ID-PW



Circular recorder
MTR-G85C-PE

Strip chart recorder
MTR-85H-PW

Recorder mounting bracket
MDF-S3085-PW
(for MTR-85H-PW)



LCO_2 backup system
CVK-UB2-PW

LN_2 backup system
CVK-UBN2-PW

Interface board (For data acquisition system MTR-5000 users only)
MTR-L03-PW (Except for EU countries)
MTR-480-PW

Preservation (freezers, refrigerators) and Culturing (incubators) Equipment

The management of the design, development, production, sales support, and servicing of the above.

PHC Corporation, Biomedical Division
1-1-1 Sakada, Oizumi-machi, Ora-gun, Gunma 370-0596, Japan

PHC Corporation, Biomedical Division is certified for:
Environmental management system: ISO14001

DISTRIBUTED BY:

PHC Corporation

https://www.phchd.com/apac/biomedical/

Printed in Japan 1103-2018-04-BA