



MDF-MU539D

## -30°C Biomedical Freezer

479 L

**Can store samples at differing preservation temperatures with just this unit. A -30°C biomedical freezer with separate temperature controls for the 2 completely independent chambers.**

PHCbi medical freezers are equipped with various features that enable flexibility and maintain the quality of the samples during preservation such as height-adjustable shelf trays, separate top and bottom doors that suppress cold air leakage, and 2 completely independent chambers each with its own temperature control. Users can choose the model that meets their specific needs from the lineup.

### Height-adjustable shelf trays

By installing the refrigerant piping in the frame of the unit instead of in shelf trays as in conventional models, the unit enabled completely height-adjustable shelf trays.



### Maintains the quality of the samples during preservation

Equipped with separate doors that suppress the leakage of cold air during opening and closing of the doors, and manual defrosting that helps avoid temperature impact on the samples.

### 2 completely independent chambers with their own temperature controls

Top and bottom chambers are equipped with 2 independent refrigeration circuits. This enables separate temperature settings and defrosting for the two chambers.



### Adjusts the inside of the chambers according to the size of the samples

By changing the height of the shelf trays, the unit can accommodate chamber containers of various sizes including storage boxes of conventional models. The slim-type allows for the space between equipment to be used effectively.



Door latch

### Security functions that help protect valuable samples

With a temperature control capability that inhibits the change in temperature inside the chamber, and an alarm/security function that prevents errors, the unit maintains the quality of the preserved samples.



### Separate temperature controls for top and bottom chambers

Can store samples at differing preservation temperatures with just this unit. With the capability to defrost the top and bottom chambers separately, the unit makes it easy to transfer samples during defrosting.

## -30°C Biomedical Freezer

### Easy disposal of water used for defrosting

Even the cumbersome task of disposing water used for defrosting becomes easy with the drainage hose that is attached to the main unit. (Hose is usually stowed away when not in use)

### Easy to operate control panel

Button-type control panel is easy to operate. All inputs including temperature and alarm settings can be selected on the panel.



### Lockable door latch

To securely preserve/manage the valuable samples, In addition to a standard-feature door lock, a hole in the latch allows a padlock to be attached.

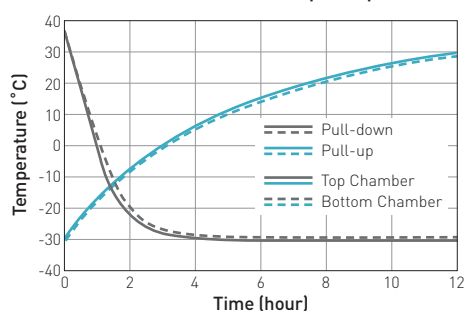
### Storage containers useful for organizing

The standard storage containers are useful for dividing small items and allow for efficient sample storage.



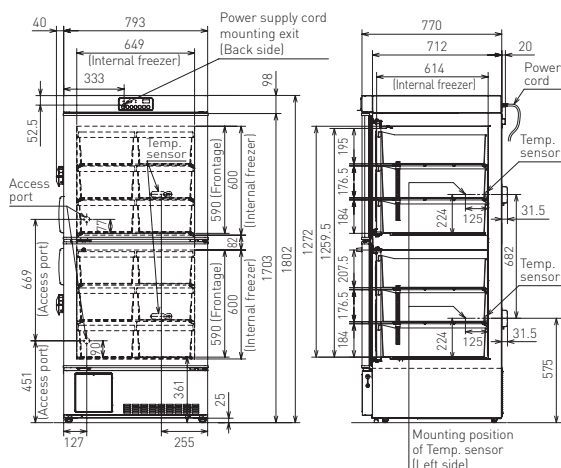
## Performance Data

AT35°C Pull-down & Pull-up Temperature<sup>2)</sup>



## Dimensions

Unit : mm



Preservation Equipment, Experimental Environment Equipment, Dispensary Equipment, Culturing Equipment and Drying & Sterilising Equipment for General Laboratory use  
The management of the design, development, production 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**

| Model Number  |                         | MDF-MU539D-PE  |
|---|-------------------------|--|
| External dimensions (W x D x H) <sup>1)</sup>                 | mm                      | 793 x 770 x 1802   |
| Internal dimensions (W x D x H)                               | mm                      | 649 x 614 x 600 (2 chambers)   |
| Volume  | litres                  | 479  |
| Net weight  | kg                      | 185  |
| Performance   |                         |  |
| Cooling performance <sup>2)</sup>                             | °C                      | -30  |
| Temperature setting range <sup>2)</sup>                       | °C                      | -35 to -18   |
| Temperature control range <sup>2)</sup>                       | °C                      | -30 to -20   |
| Control   |                         |  |
| Controller  |                         | Microprocessor, non-volatile memory  |
| Display   |                         | LED  |
| Temperature sensor  |                         | Thermistor   |
| Refrigeration   |                         |  |
| Cooling method  |                         | Direct   |
| Compressors   | W                       | 2 x 250 (Used in upper chamber and lower chamber respectively)   |
| Refrigerant   |                         | HFC  |
| Insulation material   |                         | PUF  |
| Insulation thickness  | mm                      | 70   |
| Construction  |                         |  |
| Exterior material   |                         | Painted Steel  |
| Interior material   |                         | Painted Steel  |
| Outer door  | qty                     | 2  |
| Outer door lock   |                         | Yes  |
| Shelves   | qty                     | 6  |
| Max. load - per shelf   | kg                      | 30   |
| Access port   | qty                     | 2  |
| Access port position  |                         | Back   |
| Access port diameter  | ∅ mm                    | 30   |
| Casters   | qty                     | 4 [2 levelling feet]   |
| Accessories   |                         |  |
| Storage containers  | qty                     | 12   |
| Inner dimension   | mm                      | W280 x D552 x H157   |
| Key   | set                     | 1  |
| Defrost spatula   | pc                      | 1  |
| Alarms [V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm] |                         |  |
| Power failure   |                         | V-B-R  |
| High temperature  |                         | V-B-R  |
| Low temperature   |                         | V-B-R  |
| Electrical and Noise Level                                    |                         |  |
| Power supply  | V                       | 220/230/240  |
| Frequency   | Hz                      | 50   |
| Noise level <sup>3)</sup>                                     | dB (A)                  | 42   |
| Options   |                         |  |
| Temperature recorders   | - Circular type         | MTR-G85C-PE<br>- Chart paper: RP-G85-PW<br>- Ink pen: PG-R-PW<br>- Recorder housing: MPR-S7-PW (for lower front)<br>MPR-S740T-PW (for top side)                |
|   | - Continuous strip type | MTR-4015LH-PE<br>- Chart paper: RP-40-PW<br>- Recorder housing: MPR-S30-PW (for unit lower front)<br>*Unit left top mounting hardware included in recorder kit |
| Optional Communication Systems                                |                         |  |
| Digital interface [RS232C/RS485] <sup>4)</sup>                |                         | MTR-480-PW   |
| Ethernet interface [LAN] <sup>4)</sup>                        |                         | MTR-L03-PW   |
| Quality Management System                                     |                         |  |
| Certification   |                         | ISO 9001   |

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

<sup>2)</sup> Air temperature measured at freezer centre, ambient temperature 35°C, no load.

<sup>3)</sup> Nominal value - Background noise 20 dB(A)

<sup>4)</sup> Only for MTR-5000 (data acquisition system) users.

• Appearance and specifications are subject to change without notice.

**Caution:** PHC Corporation guarantees this product under certain warranty conditions. However, please note that PHC Corporation shall not be responsible for any loss or damage to the contents of the product.

DISTRIBUTED BY:

**phcbi**  
PHC Corporation

<https://www.phchd.com/global/biomedical/>

Printed in Japan 1304-2018-04-CC