Pharmaceutical Refrigerators for reliable storage of pharmaceuticals, samples and reagents

- Precise temperature control
- Superior cooling performance
- Forced air circulation
- Double-glazing glass door
- Slim, and space saving design
- Useful alarm functions

Temperature range
+2°C to 14°C

Compact and large capacity

New cycle defrosting system

Pharmaceutical Refrigerators
MPR-S163/MPR-S313

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MPR-S163
MPR-S313

Preservation above-zero

PHC Corporation, Biomedical Division
Features

Improved Energy Saving
PHCbi’s new cycle defrosting system achieved 15%* energy saving compared to conventional models. This system observes the defrosting condition after every cycle, and prevents temperature rises that are caused by defrosting.

*The data is a measured example (set temp. 5°C, AT 23°C, 230 V 50 Hz, no load). Actual power consumption will vary depending on the set and ambient conditions, loading and local voltage.

User Friendly Design

1. New Control Panel
   - Newly designed for improved operability, visibility, and calibration
   - Digital setup for easy and secure operation
   - Temperature alarm settings made on the control panel

2. LED Interior Light
   The LED interior light automatically turns on/off in conjunction with the door opening/closing. It can also be controlled from the control panel.

3. Double-Paned Glass with Heat-Reflective Film
   The refrigerator doors constructed of double-paned glass with heat-reflective film, allow easy loading and unloading of samples while preventing ultraviolet rays, which may damage stored items, from entering the unit. PHCbi’s unique heatreflective film blocks the passage of radiant heat rays through the glass panels and keeps the inside temperature from being adversely affected by excessive amounts of heat.

Effective Temperature Control

1. Microprocessor Temperature Control
   A thermistor sensor monitors temperature inside the chamber, and microprocessor temperature control ensures that the set temperature is maintained. Even if the door is opened and closed frequently, the circulation fan ensures rapid temperature adjustment to provide a highly reliable, stable preservation environment that is not affected by ambient temperature.

2. Fan-Forced Air Circulation
   The temperature stays even throughout the inside of the refrigerator with the fan-forced air circulation system. No matter how the load is distributed, every corner of the unit is immediately cooled with no noticeable variation in temperature apparent inside the cabinet.

Enhanced Alarm and Safety Functions

1. Door Open Alarm
   When the door is opened, the Door Open indicator lamp lights automatically. After approx. 2 minutes, a buzzer alarm will sound if the door has not been closed (settable from 0 to 15 minutes). If the door remains open even after the buzzer is stopped, the buzzer rings again after 30 minutes (settable from 0 to 60 minutes in increments of 10 minutes).

2. Abnormal Temperature Alarm
   If the inside temperature changes ±2°C to ±14°C from the set temperature, the digital temperature display flashes, and a buzzer sounds an alarm after 15 minutes (settable from 0 to 15 minutes).

Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>220 V, 60 Hz</td>
<td>MPR-S163-PR</td>
</tr>
<tr>
<td></td>
<td>MPR-S163-PK</td>
</tr>
<tr>
<td>220 V, 50 Hz/60 Hz</td>
<td>MPR-S163-PT</td>
</tr>
<tr>
<td>220/230/240 V, 50 Hz (CE)</td>
<td>MPR-S313-PK</td>
</tr>
<tr>
<td>800 x 645 x 1090 (mm)</td>
<td>800 x 645 x 1800 (mm)</td>
</tr>
<tr>
<td>31.5 x 18.3 x 42.9 (inch)</td>
<td>31.5 x 18.3 x 70.9 (inch)</td>
</tr>
<tr>
<td>720 x 300 x 725 (mm)</td>
<td>720 x 350 x 1435 (mm)</td>
</tr>
<tr>
<td>28.3 x 11.8 x 28.5 (inch)</td>
<td>28.3 x 13.8 x 56.5 (inch)</td>
</tr>
<tr>
<td>198 liters (5.6 cu.ft.)</td>
<td>340 liters (12.0 cu.ft.)</td>
</tr>
<tr>
<td>71 kg (156 lbs.)</td>
<td>100 kg (220 lbs.)</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Polyurethane foam</td>
<td>Polyurethane foam</td>
</tr>
<tr>
<td>Sliding glass doors, double-glazing glass with heat-reflective film</td>
<td>Sliding glass doors, double-glazing glass with heat-reflective film</td>
</tr>
<tr>
<td>Hard steel wire</td>
<td>Hard steel wire</td>
</tr>
<tr>
<td>ø30 mm on back wall</td>
<td>ø30 mm on back wall</td>
</tr>
<tr>
<td>LED/Z casters</td>
<td>LED/Z casters</td>
</tr>
<tr>
<td>Hermatic type, 70 W</td>
<td>Hermatic type, 160 W</td>
</tr>
<tr>
<td>HFC</td>
<td>HFC</td>
</tr>
<tr>
<td>Pin &amp; Tube, Forced-air circulation</td>
<td>Pin &amp; Tube, Forced-air circulation</td>
</tr>
<tr>
<td>Wire &amp; Tube</td>
<td>Wire &amp; Tube</td>
</tr>
<tr>
<td>Cylindrical defrosting &amp; evaporator temp. detection system</td>
<td>Cylindrical defrosting &amp; evaporator temp. detection system</td>
</tr>
<tr>
<td>87 W</td>
<td>101 W</td>
</tr>
<tr>
<td>±2°C to ±14°C</td>
<td>±2°C to ±14°C</td>
</tr>
<tr>
<td>Digital (1°C increments)</td>
<td>Digital (1°C increments)</td>
</tr>
<tr>
<td>±2°C to ±14°C from temperature setting value</td>
<td>±2°C to ±14°C from temperature setting value</td>
</tr>
<tr>
<td>Buzzer / door ajar lamp</td>
<td>Buzzer / door ajar lamp</td>
</tr>
<tr>
<td>Battery mounting box: MPR-48B1-PW</td>
<td>Battery mounting box: MPR-48B1-PW</td>
</tr>
<tr>
<td>MTR-G04C-PE (recorder fixing: MPR-S30-PW)</td>
<td>MTR-G04C-PE (recorder fixing: MPR-S30-PW)</td>
</tr>
</tbody>
</table>

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.

*1 External dimensions of main cabinet only - see dimension drawings showing handles and other external projections.

Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Unit: mm (inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 x 311.5</td>
<td>31.5</td>
</tr>
<tr>
<td>720 x 358.3 (inside)</td>
<td>28.5</td>
</tr>
<tr>
<td>465 x 118.1</td>
<td>19.1</td>
</tr>
<tr>
<td>15</td>
<td>0.6</td>
</tr>
<tr>
<td>325 (12.8)</td>
<td>1.3</td>
</tr>
<tr>
<td>405 (15.9)</td>
<td>1.6</td>
</tr>
<tr>
<td>28.3 (1.1)</td>
<td>1.1</td>
</tr>
<tr>
<td>90 (3.5)</td>
<td>3.6</td>
</tr>
<tr>
<td>110 (4.3)</td>
<td>4.3</td>
</tr>
<tr>
<td>800 x 465 x 1090 (mm)</td>
<td>340 liters (12.0 cu.ft.)</td>
</tr>
<tr>
<td>31.5 x 18.3 x 70.9 (inch)</td>
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</tr>
</tbody>
</table>

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

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

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