## Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>MPR-1014-PA</th>
<th>—</th>
<th>MPR-514-PA</th>
<th>—</th>
</tr>
</thead>
<tbody>
<tr>
<td>115 V, 60 Hz</td>
<td>MPR-514-PK</td>
<td>—</td>
<td>MPR-1014-PK</td>
<td>—</td>
</tr>
<tr>
<td>220 V, 60 Hz</td>
<td>MPR-1014-PK</td>
<td>—</td>
<td>MPR-514-PK</td>
<td>—</td>
</tr>
<tr>
<td>220 V/380 V/415 V, 50 Hz (UK)</td>
<td>MPR-1014-PK</td>
<td>—</td>
<td>MPR-514-PK</td>
<td>—</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature range</th>
<th>2˚C to 14˚C (Ambient temperature -5˚C to 35˚C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>External dimensions (W x D x H)*</td>
<td>900 x 600 x 1790 (mm) / 35.4 x 23.6 x 70.5 (inch)</td>
</tr>
<tr>
<td>Internal dimensions (W x D x H)</td>
<td>800 x 465 x 1300 (mm) / 31.5 x 18.3 x 51.2 (inch)</td>
</tr>
<tr>
<td>Effective capacity</td>
<td>1029 liters (36.3 cu.ft.)</td>
</tr>
<tr>
<td>Net weight</td>
<td>244 kg (542 lbs.)</td>
</tr>
</tbody>
</table>

### Exterior cabinet
- Galvanised steel with baked on finish

### Interior cabinet
- Stainless steel

### Outer door
- 2 sliding doors, Double layer glass with heat reflection film

### Cabinet insulation
- Rigid polyurethane foamed-in-place (HCFC free)

### Cooling Method
- Forced cool air circulation
- Fan and tube

### Evaporator
- Fin and tube

### Condenser
- Wire and tube, Tube on sheet

### Compressor
- Hermetic type, output: 200 W
  - For cooling: output 3 W x 1
  - For condenser: output 73.8 W x 2

### Refrigerant
- HFC

### Defrosting
- Forced type, Fully automatic

### Defrost heater
- 141 W

### Upright refrigerator
- 1790 (70.5)
- 900 (35.4)
- 800 (31.5)

### Spacious capacity meets versatile requirements of pharmaceutical refrigeration, from small-variety packages to large-variety packages.

### Options
- Automatic Temperature Recorders
- External mounting Power Failure Alarm
- Data Acquisition System
- Interface board MFR-L03-PW for LAN
- Interface board MFR-480-PW for RS-232C/RS485

### Recording paper
- MTR-0621HL-PE/MTR-0621L-PA (Strip Chart Type)
- MTR-G04C-PE/MTR-G04A-PA (Circular Type)

### Recording Machine
- RP-06-PW
- MPR-S30-PW

### Recorder fixing
- MTR-G04C-PE/MTR-G04A-PA (Circular Type)

### Dimensions

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Width (mm)</th>
<th>Depth (mm)</th>
<th>Height (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPR-1014</td>
<td>900</td>
<td>600</td>
<td>1790</td>
</tr>
<tr>
<td>MPR-514</td>
<td>800</td>
<td>465</td>
<td>1300</td>
</tr>
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</table>

### Note
- Dimensions are subject to change without notice.
- 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.

### Options

<table>
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<tr>
<th>Automatic Temperature Recorders</th>
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<td>MTR-0621HL-PE/MTR-0621L-PA</td>
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<td>MTR-G04C-PE/MTR-G04A-PA</td>
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<table>
<thead>
<tr>
<th>External mounting Power Failure Alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFR-480-PW</td>
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<table>
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<tr>
<th>Data Acquisition System</th>
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<tr>
<td>Interface board MFR-L03-PW for LAN</td>
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<tr>
<td>Interface board MFR-480-PW for RS-232C/RS485</td>
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### Recording paper
- MTR-0621HL-PE/MTR-0621L-PA (Strip Chart Type)
- MTR-G04C-PE/MTR-G04A-PA (Circular Type)

### Recorder fixing
- MTR-G04C-PE/MTR-G04A-PA (Circular Type)
Stable and reliable environment control—the key to high-precision performance for exacting storage or research requirements

Several factors are important to assure the quality of pharmaceuticals, samples and reagents. These are storage temperature, expiry date, exposure to ultraviolet light and humidity. Of these the most important is storage temperature. If the temperature is too high, chemical changes can occur which affect the quality of the materials. If the temperature is too low, there is a risk of structural changes brought about by freezing. Narrow and uniform temperature control without regard to ambient conditions is very important. Don’t compromise your results!

**Uniform storage unaffected by ambient temperature**

**Microprocessor controlled**

An electronic sensor accurately monitors chamber temperature and feeds the information to the microprocessor for precise control at preset temperature. Fans ensure gentle air circulation to provide uniform top to bottom temperature control after frequent door openings. PHCbi’s easily calibrated, reliable and stable controls make validation easier.

**Remarkable cooling efficiency**

A highly efficient hermetic compressor, specially designed and developed by PHCbi, is utilized to provide powerful and rapid cooling to maintain proper temperature levels.

**Plenums**

PHCbi’s plenum design features uniform cold air flow distribution throughout the chamber to ensure temperature uniformity—essential for validated storage requirements.

**Ergonomic design**

The ergonomic design of the MPR series refrigerators provides a clear view of stored items through the large framed windows. The slim profile allows for easy-reach retrieval of your products. Users can choose from two types to suit their needs; one with all wire shelves or one with sliding racks on one side.

**Double-sensor temperature management**

The double-sensor control system with alarm-exclusive sensor added to the temperature control sensor always monitors the precise chamber temperature.

**Safety is a PHCbi standard**

Even the best designed refrigerator must be prepared for the unexpected.

- **Cabinet construction**
  - View Window design with protective film to prevent shattered glass from scattering onto the floor. Also features key locked doors.

- **Safety devices**
  - Audible and flashing LED visual alarms alert you to the unlikely event of either a high or low temperature condition.
  - An over-shooting prevention circuit automatically switches off the fan motor or heater, if the inside temperature rises abnormally.

- **Comprehensive alarms**
  - In addition to Low / High temperature alarms and door ajar alarm, power failure alarm can be installed as an option. Remote alarm terminal is also provided as standard.

**Worry-free cycle defrosting system**

With PHCbi’s cycle defrost system, defrosting is performed automatically during compressor “off” cycles, and by sensing frost levels. This way defrosting is performed only when required, further protecting the contents against unnecessary temperature rise. The defrosting heater also acts as an emergency heat source to prevent samples from freezing.

**HFC refrigerant & HCFC-free insulation**

PHCbi biomedical equipment is designed for low environmental impact. The MPR-514 and 1014 series use HFC refrigerant and the foamed-in-place insulation is HCFC free.