Temperature Distribution
Temperature uniformity is maintained at all storage levels even at full load conditions. This provides even, horizontal airflow across the solid adjustable glass shelves at all shelf levels to assure optimum temperature uniformity under full load conditions.

Superior Uniformity
The refrigerator provides superior uniformity throughout. Temperatures remain stable wherever products are stored, even in a fully loaded chamber. The refrigerator is engineered to prohibit inadvertent freezing of temperature sensitive vaccines.

Independent Refrigeration Systems
The single cabinet includes two independent temperature controlled chambers with separate refrigeration systems. The refrigerator section operates on a high efficiency inverter compressor running at variable speed upon demand to reduce energy consumption. New EPA SNAP refrigerants help meet facility sustainability goals and lower global environmental impact.

Natural Refrigerants
Hydrocarbon refrigerants help achieve facility sustainability objectives by minimizing any environmental impact without compromising cooling performance, ambient tolerance and recovery speeds following door openings.

Security Control and Monitoring
The microprocessor controller and softkey interface are door mounted at eye level. An OLED alphanumeric display provides convenient, secure user management. Refrigerator and freezer temperatures can be displayed simultaneously or individually. Minimum/maximum temperatures are automatically displayed every 24 hours. All alarm conditions are displayed and recorded. Data transfer is through a USB port.

Easy to Use
Adjustable audible and visual alarms are standard, along with integrated system diagnostics and predictive performance supervision. The password-protected control panel provides security and minimizes risk of accidental changes in setpoint.

The PHCbi brand Pharmaceutical Refrigerator with Freezer offers a complete storage solution in one cabinet. This multipurpose cabinet is designed for safe, reliable storage of vaccines and biological materials. Refrigerated and frozen products can be maintained within a single footprint.

PHC Corporation of North America
Pharmaceutical Refrigerator with Freezer

Slim Profile Cabinet Design
The space saving, ergonomic design has double doors for refrigerator and freezer chambers. The 15" door open allowance permits easy cabinet installation in narrow aisles and hallways for greater flexibility. Independent key locks on the refrigerator and freezer compartments increase security. The MPR-N450FH-PA has triple-pane viewing windows.

Maximized Storage
The refrigerator includes three adjustable, tempered glass shelves. The solid shelf construction eliminates tipping of bottles and vials. A rear wall LED light is included for product viewing.

Defrost Methods
Both models include manual defrost for the freezer compartment. The refrigerator compartment includes an automatic defrost, which activates electronically when needed. The refrigerator evaporator operates above freezing at all times. This prevents vaccines and lab supplies from freezing.

Dimensions

<table>
<thead>
<tr>
<th>Model Number</th>
<th>MPR-N450FH-PA</th>
<th>MPR-N450FSH-PA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model Number</strong></td>
<td>MPR-N450FH-PA</td>
<td>MPR-N450FSH-PA</td>
</tr>
<tr>
<td><strong>External Dimensions (W x D x H)</strong></td>
<td>inches</td>
<td>mm</td>
</tr>
<tr>
<td>31.9 x 26.5 x 72.4</td>
<td>810 x 673 x 1838</td>
<td></td>
</tr>
<tr>
<td>28.3 x 20.3 x 35.9</td>
<td>720 x 516 x 913</td>
<td></td>
</tr>
<tr>
<td>26.8 x 18.5 x 16.3</td>
<td>680 x 470 x 415</td>
<td></td>
</tr>
<tr>
<td><strong>Volume</strong></td>
<td>cu. ft.</td>
<td>liters</td>
</tr>
<tr>
<td><strong>Net Weight</strong></td>
<td>lbs.</td>
<td>kg</td>
</tr>
</tbody>
</table>

**Performance**
- **Warranty**
  - 3 years parts and labor
- **Cooling Performance**
  - °C: up to 14 (max +2) to -30 (max -30)
- **Temperature Setting Range**
  - °C: +2 to +14

**Control**
- **Controller**
  - Microprocessor, softkey data entry, password protected
- **Display**
  - White graphic OLED
- **Temperature Display**
  - Select refrigerator, freezer or concurrent
- **USB Logging Function**
  - Logs 3 months of data at 1 minutes intervals

**Refrigerator**
- **Compressor**
  - W: (1) 120, Inverter / (1) 170
- **Natural Refrigerant**
  - HC-600a / HC-650

**Construction**
- **Exterior and Interior Material**
  - Painted steel / ABS resin
- **Insulation Material, SNAP Compliant**
  - Polyurethane foam-in-place, CFC free
- **Key Lock**
  - (1) Standard / (1) Standard
- **Shelves**
  - (1) Standard
- **Shelf – Dimension (W x D)**
  - inches | mm
  - 28.2 x 17.7 | 715 x 449
  - 11.5 x 17.6 | 293 x 446
- **Max. Load per Shelf**
  - lbs. | kg
  - 55 | 25
  - 25 | 15
- **Max. Load – Total**
  - lbs. | kg
  - 165 | 75
  - 75 | 32
- **Access Port**
  - inches | mm
  - (1) Back wall, left 1.2 | 30
  - (1) Lower back middle 1.2 | 30
- **Casters**
  - qty
  - 4 (plus 2 leveling feet on front base)

**Alarms (V=Visual, B=Buzzer, M=Message, R=Remote Alarm)**
- **Power Failure**
  - R
- **High Temperature**
  - V=65R
- **Low Temperature**
  - V=65R
- **Sensor**
  - V=65R
- **Door Open**
  - V=5M

**Electrical and Noise Level**
- **Power Supply**
  - 115V, 60Hz, 1Ø, NEMA 5-15P
- **Noise Level**
  - dB(A) 41

**Temperature Recorders**
- **Circular Type, Dual Pen**
  - 6" , 7 Day Circular
  - MTRC955
- **Chart Paper**
  - 52 charts per box
  - C740306REV
- **Ink Pen, Red**
  - pack of 6
  - R252
- **Ink Pen, Blue**
  - pack of 6
  - R253

**Accessories**
- **Black-Out Panel for Photosensitive Product**
  - MPR-48BP-PW
- **Alarm Battery, Powers Alarm if Power Fails**
  - MPR-48BP-PW
- **Analog Temperature Transmitter**
  - MTR-480-PW

**Optional Communication System**
- **Wireless, Cloud-Based, Automatic Data Management**
  - LabAlert® Monitoring System

**Specifications are subject to change without notice.**
For latest specification information contact PHC Corporation of North America at info@us.phchd.com.