



## Pharmaceutical Refrigerator with freezer

415 L (Ref) / 176 L (Frz)

Providing a complete storage solution; refrigerator and freezer in one unit.

The MPR-715F combines high-performance refrigeration with a -30°C freezing environment within a small footprint for flexible, reliable and convenient sample storage.

### Optimum Temperature Distribution

Fan-forced air circulation system in the refrigerator offers better uniformity and fast recovery of temperature after routine door openings to minimise fluctuations.

### Excellent Stability

A unique defrost system in the refrigerator operates only short cycles as required to prevent unnecessary temperature spikes. The freezer compartment is manually defrosted for stable temperature performance.

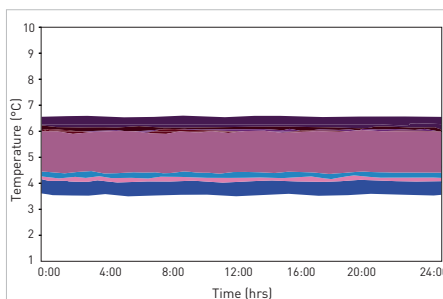
### Precise Control & Monitoring

Microprocessor controller, combined with accurate sensors, maintains precise temperatures within the refrigerator and freezer, while a comprehensive alarm system alerts of any temperature deviations.



### Two Temperatures, One Unit

Secure storage at both freezing and refrigerated temperatures within a minimal footprint is an ideal solution for installation in smaller spaces.



### Usability with Performance

PHCbi refrigerators are designed specifically for laboratory applications, with precise performance even under demanding conditions.



### Safe & Secure Storage

Multiple safety systems such as high / low temperature audible and visual alarms, remote alarm, door open alarm and keyed door locks.

## Pharmaceutical Refrigerator with freezer



### Optimized for Superior Usability

One unit with dual temperature zones requires minimal installation space. Four-door design reduces air loss during door opening and makes efficient use of space in front of the unit.

### PHCbi Design

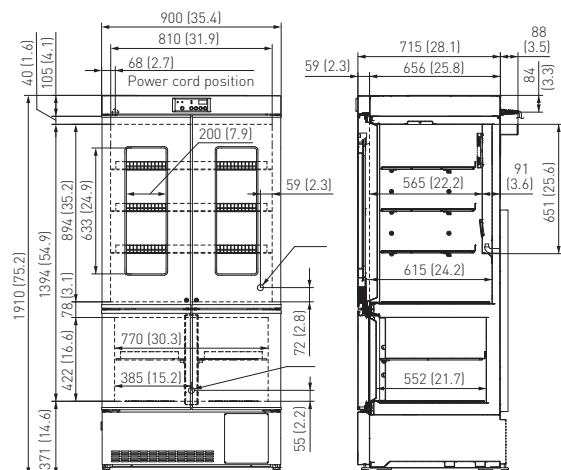
Refrigeration systems within both compartments are specially designed for demanding scientific and laboratory storage. Compressors are application specific, components are carefully matched and systems are laid out to ensure high-performance cooling with ultimate reliability.

### Quiet operation

Two specially designed compressors offer quiet operation for installation in busy working environments without disruption.

### Dimensions

Unit : mm (inch)



Model Number		MPR-715F-PA	MPR-715F-PE
External dimensions (W x D x H) <sup>1)</sup>	mm	900 x 715 x 1910	
Internal dimensions (W x D x H)	mm	810 x 615 x 894 (Ref) / 770 x 552 x 422 (Frz)	
Volume	litres	415 (Ref) / 176 (Frz)	
Net weight	kg	170	
<b>Performance</b>			
Cooling performance <sup>2)</sup>	°C	+2 / -30	
Temperature setting range	°C	+2 to +14 (Ref) / -35 to -15 (Frz)	
Temperature control range <sup>2)</sup>	°C	+2 to +14 (Ref) / -30 to -20 (Frz)	
<b>Control</b>			
Controller		Microprocessor, non-volatile memory	
Display		LED	
Temperature sensor		Thermistor	
<b>Refrigeration</b>			
Cooling method		Fan forced air circulation (Ref) / Direct (Frz)	
Defrost method		Cyclical defrost (Ref) / Manual (Frz)	
Refrigerant		HFC and HFO combined	
Insulation material		PUF	
Insulation thickness	mm	40 (Ref) / 60 (Frz)	
<b>Construction</b>			
Exterior material		Painted Steel	
Interior material		Painted steel (Ref) / Painted steel (Frz)	
Outer door	qty	4	
Outer door lock	qty	2	
Shelves	qty	3 (Ref) / 2 (Frz)	
Max. load - per shelf	kg	25 (Ref) / 15 (Frz)	
Access port	qty	2	
Access port position		Back	
Access port diameter	∅ mm	30	
Casters		4	
Interior light		LED (Ref)	
<b>Alarms</b> (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm)			
Power failure <sup>3)</sup>		V-B-R	
High temperature		V-B-R	
Low temperature		V-B-R	
Door open		V-B	
<b>Electrical and Noise Level</b>		MPR-715F-PA	MPR-715F-PE
Power supply	V	115	220 / 230 / 240
Frequency	Hz	60	50
Noise level <sup>4)</sup>	dB (A)	43	
<b>Options</b>			
Temperature recorders			
- Circular type		MTR-G3504A-PA	MTR-G3504C-PE
		- Chart paper: RP-G3504-PW - Ink pen: PG-RB-PW - Recorder housing: MPR-S7-PW	
- Continuous strip type		MTR-0621LH-PA (Ref) / MTR-4015LH-PA (Frz)	MTR-0621LH-PE (Ref) / MTR-4015LH-PE (Frz)
		- Chart paper: RP-06-PW (Ref) / RP-40-PW (Frz) - Recorder housing: MPR-S30-PW	
Battery mounting box		MPR-48B1-PW	
<b>Optional Communication Systems</b>			
Ethernet interface (LAN) <sup>5)</sup>		MTR-L03-PW	
Digital interface (RS232C/RS485) <sup>5)</sup>		MTR-480-PW	

- 1) Exterior dimensions of main cabinet only, excluding handle and other external projections.
- 2) Air temperature measured at refrigerator / freezer centre, ambient temperature 30°C, no load.
- 3) with MPR-48B1 installed.
- 4) Nominal value - Background noise 20 dB(A).
- 5) Only for MTR-5000 (data acquisition system) users.

**Caution:** PHC Corporation guarantees the product under certain warranty conditions. PHC Corporation in no way shall be responsible for any loss of content or damage to content.



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**Sheng Guan 聖川實業有限公司**

電話：02-2980-7936 傳真：02-8988-3071  
地址：新北市三重區五華街1巷26號1樓  
信箱：service@sagevision.com.tw  
網站：http://sagevision.com.tw/



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PHC Corporation

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