



MPR-N250FH

MPR-N250FSH

## MPR Natural Refrigerant Pharmaceutical Refrigerators with Freezer

+2°C to +14°C Refrigerators  
-30°C to -20°C Freezers



259 L (R: 179 L / F: 80 L)

Providing a complete storage solution — refrigerator and freezer in one unit. The MPR-N250FH/MPR-N250FSH combine high-performance refrigeration with a -30°C freezing environment within a small footprint for flexible, reliable and convenient sample storage. Natural refrigerants minimise environmental impact for a sustainable storage solution.

### Natural Refrigerants and Inverter Technology

Naturally occurring hydrocarbon [HC] refrigerants have minimal effect on the environment and are compliant with environmental legislation for climate control. Combined with inverter technology, these refrigerants also provide more efficient cooling without compromising performance and ambient tolerance and recovery speeds following door openings.

### 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 prevent inadvertent freezing of temperature sensitive vaccines.

### Security Control and Monitoring

The microprocessor controller and OLED display are door mounted at eye level. Control buttons allow convenient but secure user control. Refrigerator and freezer temperatures can be displayed in 0.1°C increments simultaneously or individually. Minimum/maximum temperatures are automatically displayed every 12/24 hours. All alarm conditions are displayed and recorded. Data transfer is through a USB port.

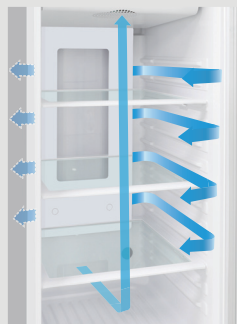
### Energy-efficient performance



Natural refrigerants, compressors and integrated electronics combine to achieve facility sustainability objectives by minimising any environmental impact without compromising cooling performance, ambient tolerance and recovery speeds following door openings.

### 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 each shelf level to assure optimum temperature uniformity under full load conditions.



### Safe & Secure storage



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

# Pharmaceutical Refrigerators with Freezer

With the new platform, the volume of the freezer (-30°C) has increased to 80 L, which is about 105%\* larger than the conventional model. By implementing a new platform with improved duct and mechanical layout, storage efficiency increased by 10% per area of storage.

\* comparison with MPR-215F.

## Ease of Use



Removable glass shelves inside the refrigerator compartment enable easy cleaning. The solid shelf construction allows bottles and vials to be securely positioned. Clear visibility inside the refrigerator compartment is provided by an LED light. Optional containers for the freezer compartment are available for flexible storage solutions.

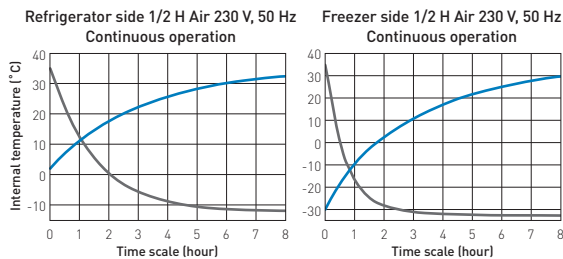
## Defrost Methods

The MPR-N250FH/MPR-N250FSH include manual defrost for the freezer compartment. The refrigerator compartment includes automatic defrost which activates electronically when needed. The refrigerator evaporator operates above freezing at all times. This prevents vaccines and lab supplies from freezing.

## Performance Data

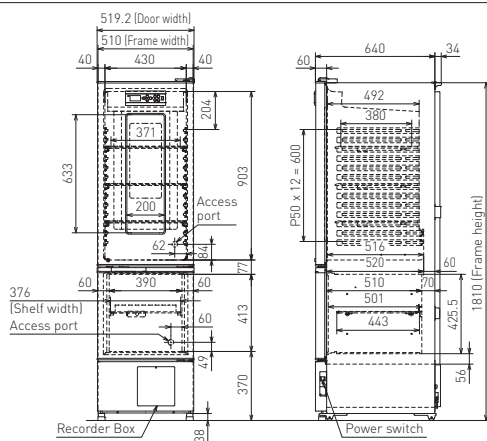
Pull-down & Pull-up Temperature (No load)  
AT35°C / AT30°C (Refrigerator/Freezer)

— Pull-down  
— Pull-up



## Dimensions

Unit: mm



Model Number		MPR-N250FH-PE / MPR-N250FSH-PE	
		MPR-N250FH-PA / MPR-N250FSH-PA	
Dimensions		Refrigerator	Freezer
External dimensions (W x D x H) <sup>1)</sup>	mm	510 x 640 x 1810	
Internal dimensions (W x D x H)	mm	430 x 516 x 903	390 x 501 x 413
Volume	litres	179	80
Net weight	kg	95 (FH) / 91 (FSH)	
Performance			
Temperature control range <sup>2)</sup>	°C	2 to 14	-30 to -20
Control			
Controller		Microprocessor with non-volatile memory	
Display		Digital (White graphic Organic LED), 1°C (increment of 0.1)	
Temperature sensor		Thermistor	
Refrigeration			
Cooling method		Fan forced air circulation	Direct cooling
Defrost method		Cyclical defrost	Manual
Refrigerant		HC refrigerant	
Insulation		Cyclopentane foamed polyurethane	
Construction			
Exterior material		Painted steel (PCM)	
Interior material		ABS Resin	Painted Steel
Outer doors	qty	2 (glass window (1 (FH) / 0 (FSH))	
Outer door lock		Cylinder lock x1	
Shelves		Tempered glass [3]	Coated steel wires [1]
Max. load - per shelf	kg	20	10
Access port	qty	1	1
Access port position		Back	
Access port diameter	∅ mm	30	
Casters	qty	4	
Interior light		LED	—
Alarms (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm, M = Message)			
Power failure <sup>3)</sup>		R (V-B optional)	
High temperature		V-B-M-R	
Low temperature		V-B-M-R	
Door open		V-B-M	
Electrical and Noise Level			
Power supply	V	PA: 115 V, 60 Hz / PE: 220/230/240 V, 50 Hz	
Noise level <sup>4)</sup>	dB (A)	40	
Options			
Temperature recorders	Continuous strip type	MTR-0621LH-PE/PA	—
	- Chart paper	RP-06-PW	—
	- Recorder housing	MPR-S30W-PW	—
	Circular type	MTR-G3504C-PE / MTR-G3504A-PA	—
	- Chart paper	RP-G3504-PW	—
	- Ink pen	PG-RB-PW	—
Temperature recorders	- Recorder housing	MPR-S7-PW <sup>5)</sup>	—
	Continuous strip type	—	MTR-4015LH-PE/PA
	- Chart paper	—	RP-40-PW
	- Recorder housing	—	MPR-S30W-PW
Battery kit for power failure alarm		MPR-48B2-PW <sup>6)</sup>	
Blackout panel		MPR-45BP-PW	
Optional Communication Systems			
Digital interface (RS232C/RS485) <sup>7)</sup>		MTR-480-PW	
Ethernet interface (LAN) <sup>7)</sup>		MTR-L03-PW	

<sup>1)</sup> Exterior dimensions of main cabinet only, excluding external projections - See dimensions drawings on website for full details.  
<sup>2)</sup> Air temperature measured at refrigeration compartment centre and freezer compartment centre, ambient temperature +30°C, no load.  
<sup>3)</sup> Remote alarm includes optional power failure alarm MPR-48B2-PW (B-R alarm).  
<sup>4)</sup> Nominal value - Background noise 20dB (A)  
<sup>5)</sup> When installing temperature recorder MTR-G3504A, optional mounting hardware is necessary.

<sup>6)</sup> Requires optional battery kit for power failure alarm MPR-48B2-PW  
<sup>7)</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 stored in the product.



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