



MPR-N650FSH



MPR-N650FH
With optional containers for freezer (MPR-715SC)

MPR Natural Refrigerant Pharmaceutical Refrigerators with Freezer

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



R: 466 L (FH) / 468 L (FSH) F: 189 L

Providing a complete storage solution; refrigerator and freezer in one unit. The MPR-N650FH/MPR-N650FSH combines 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 and lower running costs.

Stable, Uniform Temperatures

Inverter compressor (refrigerator compartment) can run at a range of speeds depending on the cooling requirement, ensuring a stable temperature. A duct system ensures uniform temperature distribution throughout the refrigerator and fast recovery of temperature after routine door openings to minimise fluctuation.

Precise Control & Intelligent Monitoring

A microprocessor controller and accurate sensors maintain precise refrigerator and freezer temperatures that are displayed simultaneously on an OLED panel. A USB port provides simple and convenient transfer of logged data to a PC including temperature, door opening times and alarm history.

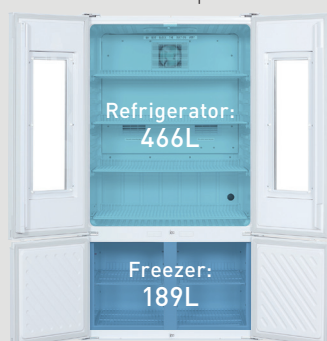
Energy-efficient performance

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.



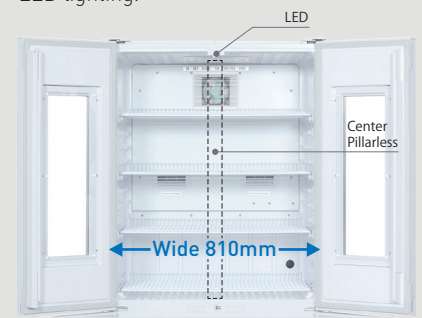
Two Temperatures, One Unit

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



Center Pillarless Doors Designed to Manage Large Containers

Wide 810mm refrigerator doors without center obstruction allow even large containers to be easily stored and removed. Interior visibility is excellent with LED lighting.



Pharmaceutical Refrigerators with Freezer

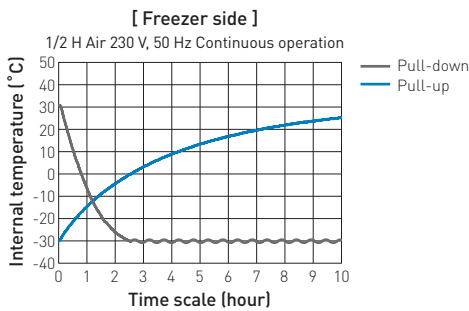
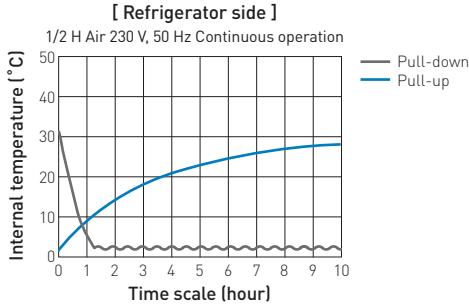
Temperature Controllability

The OLED panel has good visibility and intuitive operation. It displays detailed temperatures with increment of 0.1°C, minimal and maximal temperature for every 24 hours and can show refrigerator and freezer temperature simultaneously. The USB port and log functions simplifies temperature data management.



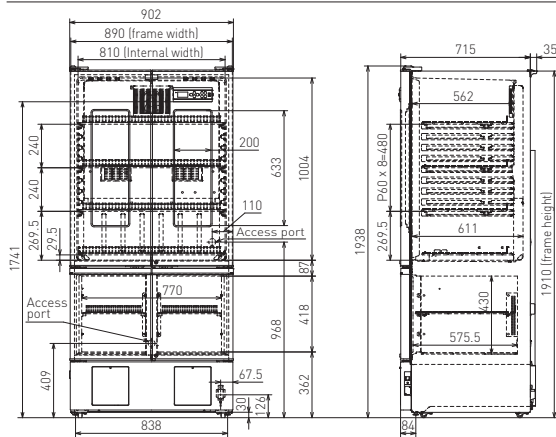
Performance Data

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



Dimensions

Unit: mm



Model Number	MPR-N650FH-PE / MPR-N650FSH-PE MPR-N650FH-PA / MPR-N650FSH-PA		
	Refrigerator	Freezer	
External dimensions (W x D x H) ¹⁾	mm 890 x 715 x 1910		
Internal dimensions (W x D x H)	mm 810 x 611 x 1004	770 x 575.5 x 418	
Volume	litres 466 (FH) / 468 (FSH)	189	
Net weight	kg 148 (FH) / 139 (FSH)		
Performance			
Temperature control range ²⁾	°C 2 to 14	-30 to -20	
Control			
Controller	Microprocessor with non-volatile memory		
Display	Digital (White graphic OLED), 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	PUF		
Construction			
Exterior material	Coloured Steel		
Interior material	ABS Resin	Painted Steel	
Outer doors	qty 4 (glass window [2(FH)/0(FSH)])		
Outer door lock	Y	Y	
Shelves	qty Coated steel wires (3)	Coated steel wires (2)	
Max. load - per shelf	kg 25	15	
Access port	qty R (1) / F (1)		
Access port position	Back		
Access port diameter	Ø mm 30		
Casters	qty 4		
Interior light	LED	-	
Alarms (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm, M = Message)			
Power failure ³⁾	R ³⁾		
High temperature	V-B-M-R		
Low temperature	V-B-M-R		
Door open	V-B-M		
Electrical and Noise Level			
Power supply	V	PE: 220/230/240 PA: 115	
Frequency	Hz	PE: 50 PA: 60	
Noise level ⁴⁾	dB [A] 40		
Options			
Temperature recorders	Continuous strip type - Chart paper - Recorder housing	MTR-0621LH-PE/PA RP-06-PW	MTR-4015LH-PE/PA RP-40-PW
	Circular type - Chart paper - Ink pen - Recorder housing	MTR-G3504C-PE/MTR-G3504A-PA RP-G3504-PW PG-RB-PW MPR-S7-PW ⁵⁾	
Battery kit for power failure alarm	MPR-48B2-PW		
Containers inside freezer	-	MPR-715SC-PW	
Blackout panel	MPR-45BP-PW	-	
Additional shelf kit for freezer	-	MPR-650ST-PW	
Optional Communication Systems			
Digital interface [RS232C/RS485]	MTR-480-PW ⁶⁾		
Analog Interface board	MTR-420MA-PW ⁶⁾		
Ethernet interface [LAN]	MTR-L03-PW		
Quality Management System			
Certification	ISO9001		

PUF = Rigid polyurethane foamed insulation

¹⁾ Exterior dimensions of main cabinet only, excluding external projections - See dimensions drawings on website for full details.

²⁾ Air temperature measured at refrigeration compartment centre and freezer compartment centre, ambient temperature +30°C(F) / +35°C(R), no load.

³⁾ V-B-M-R when the optional battery kit for power failure alarm MPR-48B2-PW is installed

⁴⁾ Nominal value - Background noise 20dB [A]

⁵⁾ When installing temperature recorder, optional mounting hardware is necessary.

⁶⁾ Standard signal and interface cables with a maximum length of 30 meters are recommended.

• 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.



Preservation Equipment, Experimental Environment Equipment, Dispensary Equipment, Culturing Equipment and Drying & Sterilising Equipment for General Laboratory use

The management of the design, development, production and servicing of the above.

PHC Corporation, Biomedical Division

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PHC Corporation Biomedical Division is certified for:

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