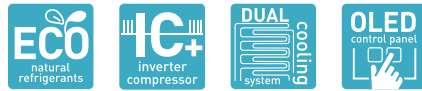




TwinGuard ECO Pharmaceutical Refrigerator

2°C to 14°C

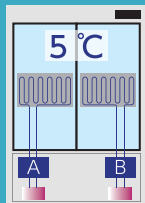


1165 L / 1155 L

The two MPR Series PHCbi Pharmaceutical Refrigeration Showcase models with large storage capacity perfectly preserve samples, reagents, and pharmaceuticals through high-reliability temperature control. Along with employing natural hydrocarbon (HC) refrigerants and inverter-controlled compressors, power consumption has also been reduced by more than 78% compared to conventional models. The “TwinGuard ECO” models featuring independent dual cooling circuits are a perfect solution to an ideal model that can effectively respond, should any problem occur.

Twin Guard (dual cooling) ensures stable in-chamber temperature*

A single unit incorporates independent dual cooling circuits. Should one circuit experience a problem, the other circuit will continue to maintain in-chamber temperature at SV 5°C±3°C. The double-safe circuits ensure preserving the crucial stored items with greater safety.



*At AT 23°C
Temperature transition with one-compressor operation

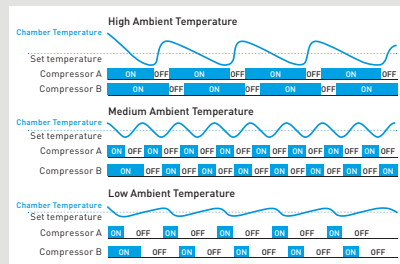
Natural Refrigerants and Inverter Technology

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 cooling performance, ambient tolerance and recovery time following door openings.

OLED Control Panel

The microprocessor controller and OLED display have good visibility and intuitive operation. Control buttons allow convenient but secure user control. Refrigerator temperature can be displayed in 0.1°C increments. Minimum/maximum temperatures are automatically displayed every 12/24 hours. All alarm conditions are displayed and recorded.

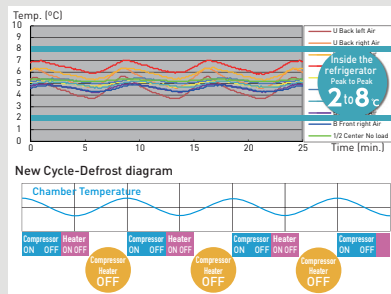
In-chamber temperature control adapts to ambient temperature



*Varies with installation environment and operating conditions

Compressor A and B operate under independent control. Power consumption is automatically minimized through monitoring installation location ambient temperature and refrigerator load status. Operation is automatically controlled by selecting the optimum of the three patterns shown above.

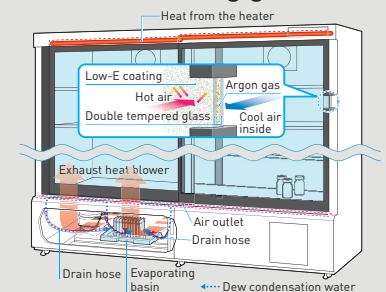
Temperature Stability and Uniformity



* May differ from actual operation graph.

Natural CFC-free refrigerants, inverter-controlled compressors, and a new Cycle Defrost system combine to improve in-chamber temperature control. Peak-to-peak measurements at 9 positions inside the chamber indicate temperature distribution within 2°C to 8°C.

Enhanced sliding glass door

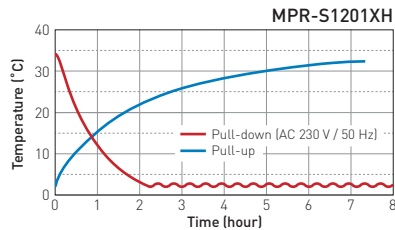


The sliding glass door is meticulously designed to increase energy efficiency and safeguards stored items against heat transfer through the window. The thermal glass door has a Low-E coating and features a double glass pane separated by argon gas. Together with heat coming from the heated top and warm air emitted from the air vents near the sliding glass door rail, it prevents the formation of moisture on the glass surface.

TwinGuard ECO Pharmaceutical Refrigerator

Performance Data

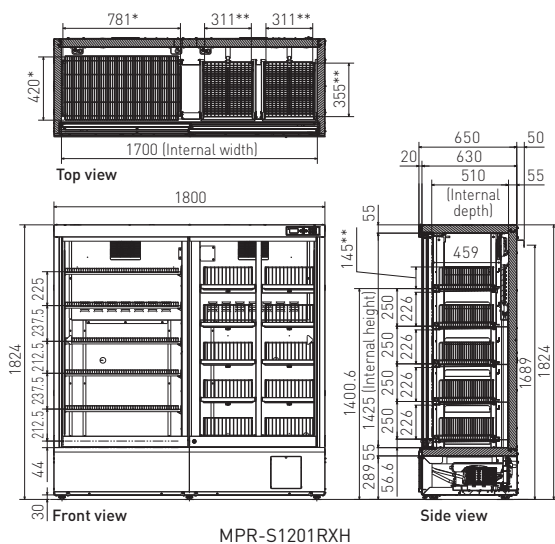
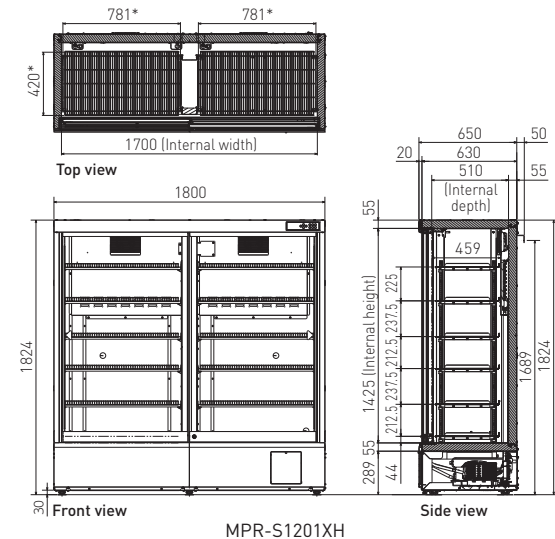
AT35°C Pull-down & Pull-up Temperature



Dimensions

Unit : mm

*Shelf dimensions
**Drawer dimensions



Model Number	MPR-S1201XH-PE	MPR-S1201XH-PA	MPR-S1201RXH-PE	MPR-S1201RXH-PA
External dimensions (W x D x H) ¹⁾	mm 1800 x 650 x 1824			
Internal dimensions (W x D x H)	mm 1700 x 510 x 1425			
Volume	liters 1165		1155	
Net weight	kg 267	265	279	277
Performance				
Temperature control range ²⁾	°C 2 to 14			
Control				
Controller	Microcomputer control system			
Display	Organic EL display			
Temperature sensor	Thermistor sensor			
Refrigeration				
Refrigerant	HC refrigerant			
Insulation	Rigid polyurethane foamed-in place			
Construction				
Exterior material	Painted Steel			
Interior material	Painted Steel			
Outer door	qty 2			
Outer door lock	Y			
Shelves	qty 12 (Hard steel wire with polyethylene coating)	6 (Hard steel wire with polyethylene coating)		
Dimensions	mm W781 x D420 x H23			
Max. load - per shelf	50 kg/shelf			
Drawers	qty —	10 (Hard steel wire powder baking finish)		
Dimensions	mm — W311 x D355 x H145			
Max. load - per drawer	— 20 kg/drawer			
Compressor	Inverter type, Output: 130 W x 2			
Evaporator	Fin and tube type			
Condenser	Wire and tube			
Access port	qty 3			
Access port position	Back			
Access port diameter	∅ mm 30			
Casters	qty 6			
Interior lights	qty 24 (LED)			
Alarms (V = Visual Alarm, B = Buzzer Alarm, M = Message, R = Remote Alarm)				
Power failure	R ³⁾			
High temperature	V-B-M-R			
Low temperature	V-B-M-R			
Door open	V-B-M			
Remote alarm contact	Allowable contact capacity: DC 30 V, 2 A ⁴⁾			
Electrical and Noise Level				
Power supply	V 220 / 230 / 240	115	220 / 230 / 240	115
Frequency	Hz 50	60	50	60
Noise level ⁵⁾	dB (A) 42			
Options				
Name card holder	MPR-50CH-PW			
Battery kit for power failure alarm	MPR-48B2-PW			
Temperature recorders	- Circular type PE: MTR-G04C-PE - Chart paper: RP-G04-PW PA: MTR-G04A-PA - Ink pen: PG-R-PW - Recorder mounting bracket MPR-S7-PW - Continuous strip type PE: MTR-0621LH-PE - Chart paper: RP-06-PW PA: MTR-0621LH-PA - Recorder mounting bracket MPR-S30-PW			
Optional Communication Systems				
Digital interface (RS232C/RS485)	MTR-480-PW ⁴⁾			
Interface board	MTR-420MA-PW ⁴⁾			
Ethernet interface (LAN)	MTR-L03-PW ⁴⁾			
Quality Management System				
Certification	ISO9001			

- Exterior dimensions of main cabinet only, excluding handle and other external projections.
- Ambient temperature; -5°C to 35°C, no load.
- Remote alarm includes optional power failure alarm MPR-48B2-PW [V-B-M-R alarm].
- Standard signal and interface cables with a maximum length of 30 meters are recommended.
- Nominal value - Background noise 20 dB(A).

• 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.

Based on independent third-party testing at time of publication. ENERGY STAR test results for submitted products can be compared for performance across the competitive market. For results see the ENERGY STAR website:



www.energystar.gov/productfinder/product/certified-lab-grade-refrigeration/details/3478051 [MPR-S1201XH-PA]

www.energystar.gov/productfinder/product/certified-lab-grade-refrigeration/details/3543492 [MPR-S1201RXH-PA]



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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