

Preservation

above-zero

Pharmaceutical Refrigerators

**Stable and reliable refrigerated environment for
exacting laboratory requirements**



MPR-1411

Stable temperature environment for clinical, research, pharmaceutical and industrial use.

Large Capacity ENVIRO-CENTERS

Environmental Laboratory
Wide temperature range

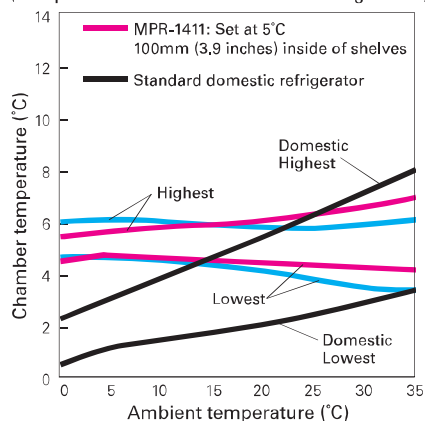
2°C to 23°C (ambient temperature 0°C to 35°C)

Temperature stability

Panasonic's temperature control system with thermistor monitor and microprocessor control reliably maintains cabinet temperature at the set level and is unaffected by ambient temperature. Forced air circulation ensures that the cabinet temperature returns to the set point immediately after door openings and remains uniform throughout the cabinet.

Relationship between chamber temperature and ambient temperature

(Comparison with standard domestic refrigerators)



Adjustable shelves and wide range setpoint for varying laboratory applications including chromatography and pharmaceutical storage.

MPR-1411



Speedy & powerful refrigeration

To cope with frequent door openings, Enviro-Centers are equipped with powerful, hermetically sealed compressors. These purpose-built compressors ensure superior pull-down characteristics and precise temperature control.

Easy-to-manage layout

The interior layout flexibility of Enviro-Centers makes them ideal for running experiments that require stable, cool conditions, as well as storage.

Standard alarm & safety features

Enviro-Centers are fitted with buzzers and flashing lights to warn of high and low temperature problems. In the event of an irregular rise in cabinet temperature, the heater automatically shuts off and forced air circulation brings the temperature down. Door locks are fitted to safeguard valuable contents.

Wide temperature range

With a temperature range of 2°C to 23°C, Enviro-Centers are ideally suited for tests that require a stable, cool temperature.

HFC refrigerant & HCFC-free insulation

Panasonic biomedical equipment is designed for low environmental impact. The MPR-1411 series use HFC refrigerant and the foamed-in-place insulation is HCFC free.

Cycle defrost

In the 5°C range, frost buildup on the evaporator is inevitable. This can affect the performance of the heat exchanger. Panasonic has solved this problem with a cycle defrost and evaporator temperature sensor system. This system runs automatically, so there is no need to turn off the power for defrosting. Temperature rise during defrost is minimal. The evaporation heater also doubles as protection against drops in cabinet temperature caused by a low ambient temperature.

Protective glass doors

All glass doors include a protective film to prevent shattering in the event of accidental collisions.

Large capacity

With a modular width of 1440mm (56.7 inches)-wide MPR-1411 offers capacity of 1364 liters (48.2 cu.ft.)

The interior is spacious enough to accommodate column chromatography apparatus or large volumes of reagents, test samples and biologicals.

Large fans

The 120mm-diameter fan ensures an even temperature throughout the cabinet (MPR-1411 models have a double flow system with two fans). Heat spots from powered test apparatus are minimized and pull-up characteristics after door openings are outstanding.



User-friendly design and double function door

Easy to read and operate control panel featuring a full array of alarm and safety functions. Thru wall access ports are standard to allow access for power cords. Aesthetically attractive exterior color blends well in most lab color schemes. The "catch-free" rounded corners are safe attractive. Doors open smoothly and close automatically. Some laboratory refrigerators have solid doors for temperature stability, while others have glass doors for easy viewing. Panasonic Enviro-Centers give you the best of both versions. The broad, solid frames with effective gaskets ensure excellent temperature stability, and the double-pane glass windows offer an excellent view of the interior without compromising temperature stability.

Adjustable shelves

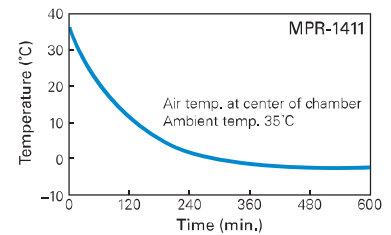
The shelves can be arranged to accommodate tall apparatus such as fraction collectors. These shelves are deep enough [620mm (24.4 inches) front to back] and strong enough (40kg for the MPR-1411) to hold most apparatus.

Specifications

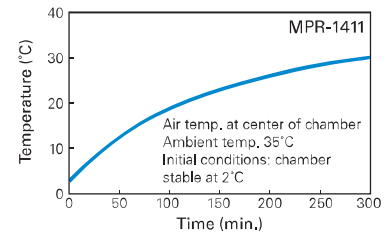
Large Capacity ENVIRO-CENTER Environmental Laboratory Refrigerator	
MPR-1411	
Exterior dimensions (W x D x H)	1440 x 830 x 1950 (mm) / 56.7 x 32.7 x 76.8 (inch)
Interior dimensions (W x D x H)	1320 x 710 x 1500 (mm) / 52.0 x 28.0 x 59.1 (inch)
Effective capacity	1364 liters (48.2 cu.ft.)
Exterior	Galvanised steel with baked-on finish
Interior	Galvanised steel with baked-on finish
Doors	2 x double pane glass doors, self closing
Insulation	HCFC-free rigid foamed-in-place polyurethane
Shelves	8 x polyethylene-coated wire shelves. Max. load: 50kg/shelf
Access ports	3 locations, 30mm diameter (both sides, cabinet top)
Lock	2 x cylinder lock
Casters	4 pcs
Cooling method	Forced air circulation with double fan
Compressor	250 W, hermetic reciprocating type
Evaporator	Fin tube type
Condenser	Fin tube type
Refrigerant	R-404A (HFC)
Defrost method	Forced type (cycle defrost system), fully automatic hot pipe for automatical evaporation for drain water
Defrost heater	257 W
Temperature control	Microprocessor controlled on/off type. Thermistor sensor Temp. control range: 2°C to 14°C (ambient temp. -5°C to 0°C no-load) 2°C to 23°C (ambient temp. 0°C to 35°C no-load) (1°C step)
Safety features	High/low temp. protection circuit, remote alarm contact, temperature lock, part replacement notification, self diagnostics, memory backup (nonvolatile memory).
High temp. alarm	Flashing LED & buzzer after 0 to 15 minutes delay
Low temp. alarm	Flashing LED & buzzer after 0 to 15 minutes delay
Door ajar alarm	Flashing lamp, buzzer after 0 to 15 minutes delay
Interior lamp	40W x 1, fluorescent lamp
Net weight	248kg (546.7 lbs)

Performance data (Reference Data)

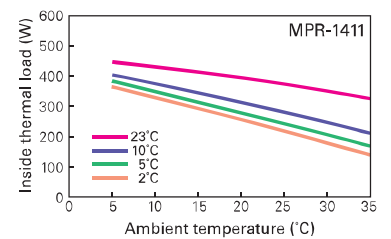
Pull-down characteristics (no-load)



Pull-up characteristics (no-load)



Test of permissible inside thermal load



Alarm and safety features

Features	Trigger	Type of alarm/response
High temperature alarm	2°C to 14°C (selectable) above setpoint	Flashing LED & buzzer
Low temperature alarm	2°C to 14°C (selectable) below setpoint; 0°C or lower	Flashing LED & buzzer
Over heating protection	Interior temperature rises to 40°C	Fan motor & heater OFF
Over cooling protection	Interior temperature lowers to 1°C	Compressor OFF
Tamper proof	Tamper proof key lock ON	Set temperature cannot be altered
Memory backup	Power failure	Memory of settings
Door ajar	Door not closed	Door ajar lamp ON & buzzer
Self diagnostics	Sensor open or short	Error code shown (E01, E02)
Remote terminal	Operation can be checked from office or control room away from the lab	
Temperature recorder	Optional	

Voltage specification

by destination		Model No.
Representative destination	Europe 230V, 50Hz (CE)	MPR-1411-PE
	Korea 220V, 60Hz	MPR-1411-PK
	Thailand 220V, 50Hz	MPR-1411-PB

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

• Appearance and specifications are subject to change without notice.

Options

Automatic Temperature Recorder MTR-G04

Recording range: -10°C to +40°C

Recording paper: RP-G04-PW

Recording pen: PG-R-PW

Recorder mounting kit: MPR-S7-PW

Automatic Temperature Recorder MTR-0621LH-PE

Recording range: -6°C to +20°C

Recording paper: RP-06-PW

Recorder mounting kit: MPR-S30-PW

Battery Installation Box for Power Failure Alarm

MPR-48B-PW

Data acquisition system MTR-5000-PW

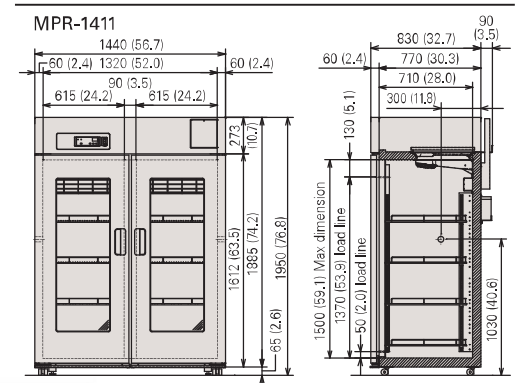
Ethernet (LAN) Interface board: MTR-L03-PW

RS232C/RS485 Interface board: MTR-480-PW

Mounting bracket: MPR-48B-PW

Dimensions

Unit: mm (inch)



Panasonic Healthcare Co., Ltd., Biomedical Business Unit is certified for:
Quality management system: ISO9001
Medical devices quality management system: ISO13485



Panasonic Healthcare Co., Ltd., Biomedical Business Unit is certified for:
Environmental management system: ISO14001

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Indonesia Sole Distributor

Jl. Agung Utara Raya Blok A 36D/42 Sunter Agung Jakarta Utara 14350 Indonesia

Telp. (62-21) 64716568, 70240088, 70240099, 87960123, 87960456

Fax. (62-21) 64716566, 87961123, 87961456

Email : sigmabimed@indo.net.id, sales@sigmabimed.com

Website : www.sigmabimed.com

Kemenkes RI AKL 20209913872

phc bi

PHC Corporation

1-1-1 Sakata Oizumi-Machi, Ora-Gun,
Gunma 370-0596, Japan

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