

# Preservation

above-zero

## Pharmaceutical Refrigerators

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



MPR-721

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

Large Capacity  
ENVIRO-CENTERS

Environmental Laboratory  
Wide temperature range

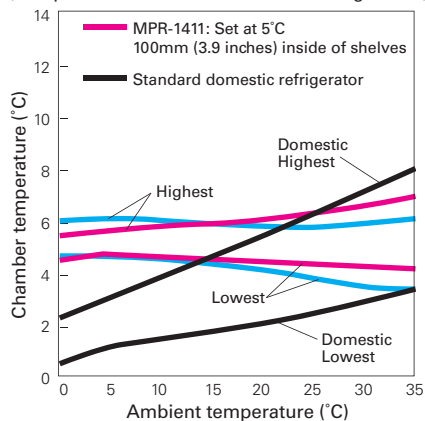
**2°C to 23°C** (ambient temperature 0°C to 35°C)

## 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-721



## 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-721R 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.

## Filterless design (MPR-721/721R)

The filterless condenser cuts down on cleaning maintenance.

## Drawer type (MPR-721R)

The "R" models are fitted with pull-out drawers. With a profile of 100mm (3.9 inches) and 530mm (20.8 inches) front to back, these drawers are deep enough to hold large bottles or reagent kits. They also allow convenient, space-efficient storage and management of patient medications and other items.

The MPR-721R is shipped with five drawers, while the MPR-1411R is shipped with ten drawers, five in each half of the cabinet.

## 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 (50kg for the MPR-721R) to hold most apparatus.

## Specifications

Environmental Laboratory Refrigerator	
MPR-721	
Exterior dimensions (W x D x H)	770 x 830 x 1955 (mm) / 30.3 x 32.7 x 77.0 (inch)
Interior dimensions (W x D x H)	650 x 710 x 1500 (mm) / 25.6 x 28.0 x 59.1 (inch)
Effective capacity	684 liters (24.2 cu.ft.)
Exterior	Galvanised steel with baked-on finish
Interior	Galvanised steel with baked-on finish
Doors	1 x double pane glass doors, self closing
Insulation	HCFC-free rigid foamed-in-place polyurethane
Shelves	4 x polyethylene-coated wire shelves. Max. load: 50kg/shelf
Access ports	3 locations, 30mm diameter (both sides, cabinet top)
Lock	1 x cylinder lock
Casters	4 pcs
Cooling method	Forced air circulation with single fan
Compressor	200 W, hermetic reciprocating type
Evaporator	Fin tube type
Condenser	Wire tube type
Refrigerant	R-134a (HFC)
Defrost method	Forced type (cycle defrost system), fully automatic hot pipe for automatical evaporation for drain water
Defrost heater	153 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	20W x 1, fluorescent lamp
Net weight	174kg (383.6 lbs)

## 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	

## 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-LO3-PW  
RS232C/RS485 Interface board: MTR-480-PW  
Mounting bracket: MPR-48B-PW



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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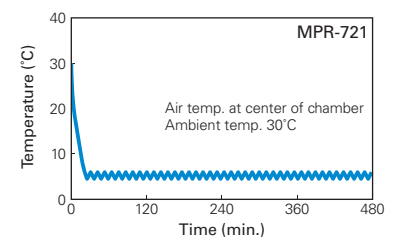
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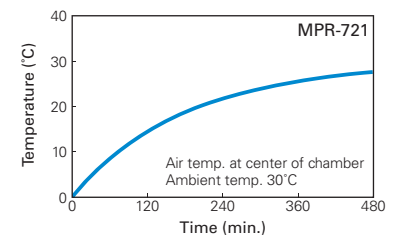
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## Performance data (Reference Data)

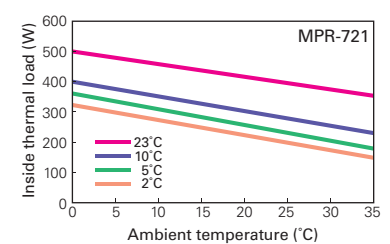
### Pull-down characteristics (no-load)



### Pull-up characteristics (no-load)



### Test of permissible inside thermal load



## Voltage specification

by destination	Model No.
Europe 230V, 50Hz (CE)	MPR-721R-PE
Korea 220V, 60Hz	MPR-721R-PK
Thailand 220V, 50Hz	MPR-721R-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.

## Dimensions

Unit: mm (inch)

