

Biomedical Refrigerator with Freezer



MPR-414F-PA

Uniformity with Forced Air Circulation

Forced air circulation in the refrigerator allows for precise temperature uniformity. Efficient temperature recovery properties allow for minimal fluctuations around set points.

Sample Security Design

Refrigerator evaporator operates above freezing temperatures, therefore reducing the need for a defrost system. It also avoids exposing products to freezing temperatures making them ideal for reagents, vaccine storage, and other samples.

Temperature Controls and Sensors

Accurate temperature sensors and controllers inside the refrigerator maintain a set temperature between the 2°C to 8°C. Alarms and temperature monitoring allow for quick notification of adverse operating conditions.

Dedicated Refrigeration



Uniformity



Optimum Footprint

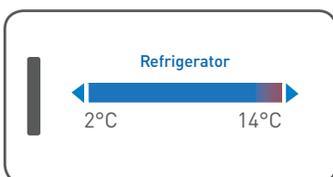


12.0 cu.ft. (340 liters) Ref | 2.9 cu.ft (82 liters) Frzr



Refrigeration Systems

Separate refrigeration systems and compressors allow differential control of individual refrigerator and freezer compartments. The freezer system maintains temperatures as low as -30°C, while the refrigerator system allows for a temperature between 2°C to 8°C.



Microprocessor Controls

Comprehensive **setpoint, alarm, monitoring and diagnostic functions** are maintained by Panasonic-built microprocessor controller with digital display of all critical functions.



Validated Storage

MPR refrigeration systems are designed to **meet regulatory guidelines** for vaccine and other samples storage. Therefore, it assures product safety during storage.

MPR Series

CDC RECOMMENDATIONS	✓
AABB GUIDELINES	✓
ICH GUIDELINES	✓
USDA GUIDELINES	✓



Biomedical Refrigerator with Freezer

The MPR Series biomedical refrigerators with freezer combine high performance refrigeration with advanced control and alarm monitoring systems as well as energy efficient and improved cabinet design.

- Microprocessor controller and interior forced air circulation in the refrigerator.
- Safe and secure storage behind a lockable door.
- Integrated alarm functions.
- One unit with dual temperature zone needs only minimal installation space.
- Double-pane windows with heat reflection film reduces condensation.
- Calibration adjustment through the control panel.
- The MPR series combo units have two separate specially designed compressors for the refrigerator and the freezer sections and offers quiet operation.
- Optional wireless Cloud/App based monitoring through LabAlert.

SAFETY FUNCTIONS

MPR Series

TEMPERATURE ALARM	✓
OVERHEATING PROTECTION	✓
MEMORY BACK-UP FUNCTION	✓
SELF-DIAGNOSTIC FUNCTION	✓
KEY LOCK SWITCH	✓

Cycle Defrost

Unique cycle defrost (refrigerator only) initiates only as required and maintains internal temperature uniformity without fluctuations.

Key Advantages of MPR Series for Vaccine Storage

- Accurate temperature sensors maintain a set temperature within 2°C to 8°C (refrigerator) and -20°C to -30°C (freezer).
- Refrigerator evaporator operates above freezing temperatures, thereby reducing the need for defrost.
- Alarms and temperature monitoring for quick notification of adverse operating conditions.
- Fan-forced air circulation for precise temperature uniformity in the refrigerator.
- Minimal fluctuations and efficient temperature recovery properties.

General Applications - Freezer

Restriction enzyme and reagent preservation

-20°C



Biological sample preservation

-30°C



Vaccine preservation

-30°C



MODEL	MPR-414F-PA
AIR TEMPERATURE UNIFORMITY	+/- 3°C (for 2°C to 14°C in the Refrigerator) +/- 5°C (for -35°C to -15°C in the Freezer)
EXTERIOR DIMENSIONS (W X D X H)	31.5" x 23.6" x 71.1" (800 x 600 x 1805 mm)
EFFECTIVE CAPACITY	Refrigerator: 12.0 cu.ft. (340 liters) Freezer: 2.9 cu. ft. (82 liters)
EXTERIOR FINISH	Polyester resin finish baked on zinc galvanized steel
INTERIOR DIMENSIONS (W X D X H)	Ref-28.3" x 19.5" x 56.1" (720 x 495 x 1425 mm) Frzr-12.5" x 17.3" x 22.7" (317 x 440 x 576 mm)
INTERIOR FINISH	Refrigerator: Styrene Resin Freezer: Colored Aluminum Plate
INSULATION	CFC-Free rigid polyurethane foamed in place
NET WEIGHT	277 lbs. (126 kg.)
TEMPERATURE CONTROL	Microprocessor L.E.D. Display
COOLING METHOD	Refrigerator: Fan-Forced Air Circulation Freezer: Direct Cooling (manual defrost)
POWER CONSUMPTION	160W
REFRIGERANT	R-134a (HFC) / R407D
SHELVES	Refrigerator: 2 (55 lbs. per shelf), 3 (33 lbs. per shelf) Freezer: 1 (22 lbs. per shelf)
ALARMS AND SAFETY	High/low temperature alarm, Door ajar alarm, Memory back-up during power failure, Self-diagnostics, Remote alarm contacts (N.O./N.C., DC30V, 2A), Door lock with key
CASTERS	4 Casters with 2 adjustable leveling feet
ACCESS PORT	30 mm (rear), for both refrigerator and freezer sections