

# Biomedical Refrigerator with Freezer



MPR-215F-PA

### Uniformity with Forced Air Circulation

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

### Sample Security Design

Refrigerator evaporator operates above freezing temperatures, therefore reducing the need for defrost and avoiding exposing products to freezing temperatures. Ideal for biological, reagents, and vaccine storage.

### Temperature Controls and Sensors

Accurate temperature sensors inside the refrigerator and controllers built specifically to maintain a set temperature within the 2°C to 8°C temperature range. Alarms and temp monitoring for quick notification of adverse operating conditions.

Dedicated Refrigeration



Uniformity



Optimum Footprint

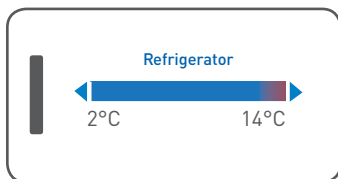


6.2 cu.ft. Ref | 1.4 cu.ft. Frzr



## Refrigeration Systems

Separate refrigeration systems and compressors allow differential control of individual refrigerator and freezer compartments, allowing freezer section to maintain temperatures as low as -30°C



## Microprocessor Controls

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



## Validated Storage

MPR refrigeration systems are designed to assure stored product safety to **meet regulatory guidelines** for vaccine and biologicals.

### MPR Series

|                     |   |
|---------------------|---|
| CDC RECOMMENDATIONS | ✓ |
| FDA STANDARDS       | ✓ |
| AABB GUIDELINES     | ✓ |
| ICH GUIDELINES      | ✓ |
| USDA GUIDELINES     | ✓ |



# Biomedical Refrigerator with Freezer

The MPR Series biomedical refrigerators with freezer combine high performance refrigeration, control and alarm/monitoring systems with energy efficient, cost-effective cabinet design.

- Microprocessor controller and interior forced air circulation in the refrigerator.
- Safe and secured storage behind a keyed locking door.
- Integrated alarm functions.
- One unit with dual temperature zone needs only minimal installation space.
- Double-pane windows with heat reflection film reduces the 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 the 2°C to 8°C (refrigerator) and -20°C to -30°C (freezer) temperature range
- Refrigerator evaporator operates at above freezing temperatures, therefore 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-215F-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 F-B X H) | 21.3" x 21.9" x 70.6" [540 x 557 x 1794 mm]  |
| EFFECTIVE CAPACITY                | Refrigerator: 6.2 cu. ft. (176 liters)   Freezer: 1.4 cu. ft. (39 liters)  |
| EXTERIOR FINISH                   | Polyester resin finish baked on zinc galvanized steel  |
| INTERIOR FINISH                   | Refrigerator: Styrene Resin   Freezer: Colored Aluminum Plate  |
| INSULATION                        | CFC-Free rigid polyurethane foamed in place  |
| NET WEIGHT                        | 190 lbs. (86 kg.)  |
| TEMPERATURE CONTROL               | Microprocessor L.E.D. Display  |
| COOLING METHOD                    | Refrigerator: Fan-Forced Air Circulation   Freezer: Direct Cooling (manual defrost)  |
| ENERGY CONSUMPTION                | 2.86 kWh/Day (At 5°C in the refrigerator and -20°C in the freezer)   |
| REFRIGERANT                       | R-134a (HFC)   |
| SHELVES                           | Refrigerator: 3 (44 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 (left) for both refrigerator and freezer sections  |