



# Biomedical Refrigerator with Freezer

## 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



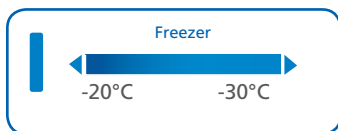
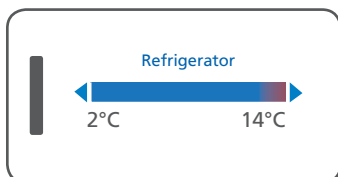
Optimum Footprint



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

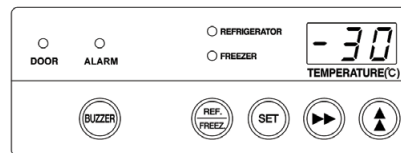
## Refrigeration Systems

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 a 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 refrigerator with freezer combines high performance refrigeration with advanced control and alarm monitoring systems, energy efficiency 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.
- MPR series combo units have two separate specially designed compressors for the refrigerator and the freezer sections and offers quiet operation.
- Optional wireless cloud-based monitoring through LabAlert™.

### SAFETY FUNCTIONS

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 Number	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



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