

SANYO



MPR Series™ Pharmaceutical Refrigerator with Freezer

MPR-215F
MPR-414F



Features:

- Energy-saving storage solutions for uniformity, reliability and environmentally safe operation.
- SANYO Designed refrigeration systems designed for precise and stable vaccine and biologics storage.

www.sanyobiomedical.com

My Life. My Work. My Choice.

MPR Series Pharmaceutical Refrigerator with Freezer



SANYO MPR Series pharmaceutical refrigerators with freezer combine high performance refrigeration, control and alarm/monitoring systems with energy efficient, cost-effective cabinet design. One unit with dual temperature zone needs only minimal space. The two door design reduces air loss during door openings.

Biomedical Refrigerator with Freezer Combination

Model Number	Refrigerator Volume (cu.ft.)	Freezer Volume (cu.ft.)	Exterior Dimensions (w x f-b x h)	Temperature Range (forced air)	Temperature Range (cold air)	Voltage, Power Connection
MPR-215F	6.2	1.4	21.3" x 21.9" x 70.5"	2°C to 14°C	-20°C to -30°C	115V NEMA 5-15
MPR-414F	12.0	2.9	31.5" x 23.6" x 71.0"	2°C to 14°C	-20°C to -30°C	115V NEMA 5-15

Application Specific Performance

Superior uniformity for precise and stable temperature control and monitoring of your vaccines, reagents and other biologicals.

SANYO Cycle Defrost

Unique cycle defrost (refrigerator only) initiates only as required; maintains internal temperature uniformity without fluctuation due to a defrost cycle.

SANYO-Designed Refrigeration

SANYO-designed compressors allow differential control of individual refrigerator and freezer compartments.

Validatable Storage

Laboratory-grade integrated systems are designed to assure stored product safety.

Microprocessor Controls

Comprehensive setpoint, alarm, monitoring and diagnostic functions based on SANYO-built microprocessor controller with digital display of all input/output functions.

MPR-414F

Validated Storage of Reagents, Pharmaceuticals and Biological Samples:

- Ideal biologic storage environment for precise control and superior temperature, control and uniformity.
- Microprocessor controller and interior forced air circulation.
- Safe and secured storage behind a keyed locking door.
- Integrated alarm functions.
- One unit with dual temperature zone needs only minimal installation space.
- Four-door design reduces air loss during door openings. (MPR-414F)
- Easier validation services calibration adjustment through the control panel is available.
- The MPR series combo units have two separate specially designed compressors and offers quiet operation.

Alarm & Safety Functions

	MPR-215F	MPR-414F
Temperature Alarm	Yes	Yes
Overheating Protection	Yes	Yes
Memory Back-up Function	Yes	Yes
Door Ajar	Yes	Yes
Self-diagnostic function	Yes	Yes
Key Lock Switch	Yes	Yes



Application Specific Preservation

SANYO offers a selection of Pharmaceutical Refrigerators and Freezers that include significant design and performance properties which differentiate them from conventional household refrigerators that are not suitable for pharmacy use.

Vaccine Storage

Variations in temperature and failure to follow storage and monitoring requirements can drastically affect the effectiveness of vaccines through non-compliance of regulatory standards of governing agencies. SANYO designs equipment for specific applications while meeting the standards of the Food and Drug Administration (FDA), American Association of Blood Banks (AABB), Joint Commission on Accreditation of Healthcare Organizations (JCAHO), International Committee for Harmonization (ICH), and United States Department of Agriculture (USDA).

Key Advantages of SANYO Application Specific Refrigeration

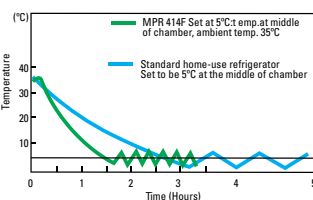
- Digital temperature sensors inside the refrigerator and controllers built specifically to maintain a set temperature within the 2°C to 8°C temperature range
- Evaporator operates at 2°C, therefore preventing vaccines from freezing
- Alarms and temperature monitoring for quick notification of adverse operating conditions
- Fan-forced air circulation for precise temperature uniformity
- Efficient temperature recovery properties. Minimal temperature fluctuations around set point

SANYO MPR Series vs Domestic Refrigerator

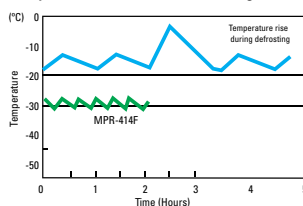
Model Number	MPR Series	Domestic Refrigerator
CFC-Free, reliable temperature control not affected by ambient temperature	Yes	No
Digital Display of chamber temperature	Yes	No
Precise temperature setting of chamber with microprocessor control	Yes	No
Variable temperature control of Refrigerator (2°C – 4°C)	Yes	No
Variable temperature control of Freezer (-20°C – -30°C)	Yes	Max/Mid/Min
Uniform temperature at all shelf levels	Yes	No
Separate operation of Refrigerator and Freezer	Yes	18°C
Window for viewing	Yes	No
Racks (SUS-304, MPR-41R)	Yes	No
Monitoring hole/port	Yes	Some Models Yes
Temperature recorder (option)	Yes	No
Door ajar option with indicator light and audible alarm	Yes	Some Models Yes
High/low alarm and under cooling overheating protection	Yes	No
Remote alarm terminal	Yes	No
Set temperature deviation	Yes	No
Self diagnostic function	Yes	No
Unique cycle defrost automatic defrost system	Yes	No
Condensate evaporator	Yes	Yes

Performance Data of MPR Series

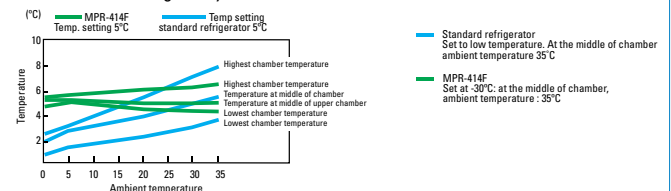
Refrigerator pull-down data



Freezer chamber temperature cycle of MPR-414F compared to standard home-use refrigerators



Relationship between chamber temperature and ambient temperature change (compared to standard home-use refrigerators)

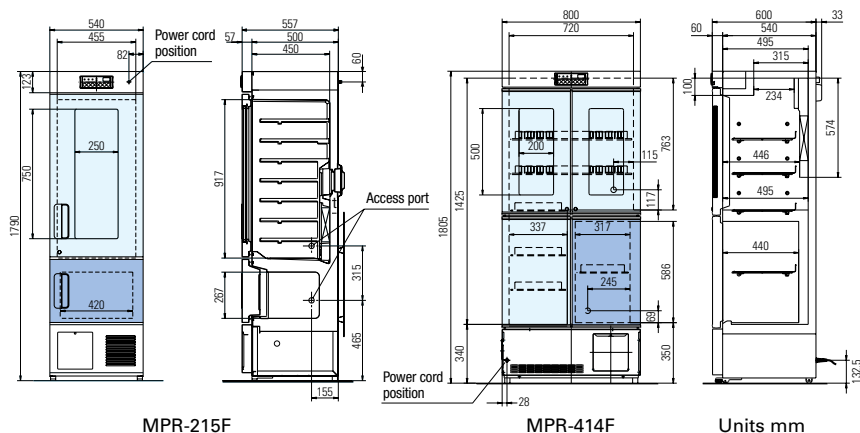


MPR Series Specifications

Biomedical Refrigerator with Freezer Combination

Name	MPR-215F		MPR-414F	
Model	Refrigerator	Freezer	Refrigerator	Freezer
Effective Capacity	6.2 cu. ft. 176 L	1.4 cu. ft. 39 L	12.0 cu. ft. 340 L	2.9 cu. ft. 82 L
External Dimensions (w x f-b x h)	21.3" x 21.9" x 70.5" 540 x 557 x 1790 mm		31.5" x 23.6" x 71.0" 800 x 600 x 1805 mm	
Weight	176 lbs. 80 kg		277 lbs. 126 kg	
Exterior	Polyester resin finish baked on zinc galvanized steel			
Interior	Styrol resin	Colored aluminum plate	Stainless steel	Colored aluminum plate
Insulation	CFC-Free rigid polyurethane foamed in place			
Temperature Range	2°C to 14°C Ambient temperature: 30°C	-20°C to -30°C Ambient temperature: 30°C	2°C to 14°C Ambient temperature: 30°C	-20°C to -30°C Ambient temperature: 30°C
Temperature Control	Microprocessor LED Display			
Cooling Method	Fan-Forced air circulation	Direct Cooling (manual defrost)	Fan-Forced air circulation	Direct Cooling (manual defrost)
Compressor	60W	60W	160W	160W
Refrigerant	R-134A (HFC)			
Shelves	3 (44 lbs./shelf)	1 (22 lbs./shelf)	Large: 2 (55 lbs./shelf) Small: 3 (33 lbs./shelf)	1 (22 lbs./shelf)
Access Port	Ø 30 mm (left)	Ø 30 mm (left)	Ø 30 mm (rear)	Ø 30 mm (rear)
Casters	4 casters with 2 adjustable leveling feet			
Alarm 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 key lock.			
Options	2-pen type circular temperature recorder (MTR-C955) Drawers for the bottom left compartment (MPR-41R): MPR-414F only			

These models are not explosion-proof/safe. DO NOT preserve chemicals that are highly volatile or corrosive.



SANYO

SANYO North America Corporation
Biomedical Solutions Division
1300 Michael Drive, Suite A, Wood Dale, IL 60191
Toll free USA (800) 858-8442, Fax (630) 238-0074
www.sanyobiomedical.com

SANYO100810V1

Product conforms to RoHS
(European Restriction of Hazardous
Substance directives)



SANYO Electric Co.,Ltd., Biomedical Division, Gumma is certified for quality management system:ISO9001/medical devices quality management system:ISO13485/environmental management system:ISO14001

