

Blood Bank Refrigerators

MBR-1404GR
MBR-704GR
MBR-304GR
MBR-107D(H)



The ideal +4°C environment for safe and reliable storage of whole blood. SANYO blood bank refrigerators are designed to conform to AABB criteria with a highly efficient compressor that provides superior temperature recovery, rapid cooling and quiet performance for each model.

Model: MBR-1404GR, 45.4 cu.ft., 720 bags

Blood Bank Refrigerators, Ideal +4°C Environment

Stable Temperature Control

- Two thermistor sensors constantly monitor the temperature in both the upper and lower part of the chamber. The sensors are located in the liquid-loaded monitor bottles, which are in the shape of a blood bag.
- Microprocessor control ensures the most accurate temperature control available.
- Multi air-flow plenum system ensures excellent temperature uniformity in larger capacity models. (MBR-704GR, MBR-1404GR)
- Temperature-maintained defrost designed with thermal sensors and heaters on the evaporator, all under precise microprocessor control.

Temperature Variations Prevented

SANYO MBR series are designed to minimize cold air loss even with frequent door openings.

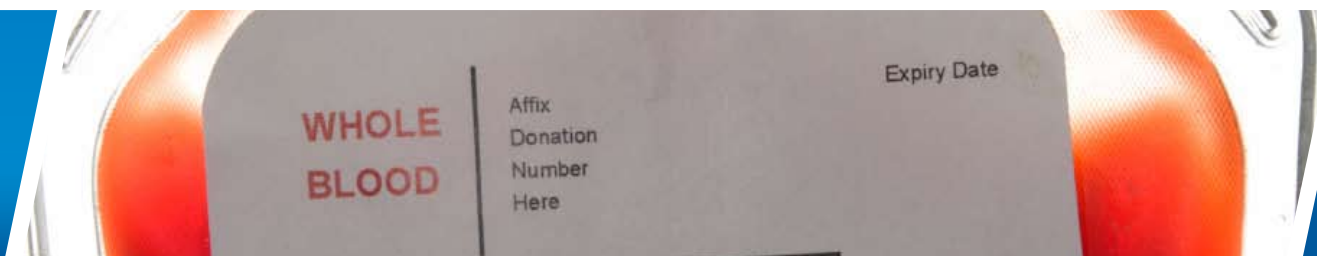
- Separated transparent inner doors minimize the chamber air leakage during door openings.
- Foamed-in-place insulation in the walls and the magnetic sealed

outer doors with double-paned glass window prevents chamber air leakage and promotes complete door closings.

- Large air circulation fan enables rapid temperature recovery after door openings. (Double fan for MBR-1404GR)

User Friendly Design

- Fluorescent interior lamp with ON/OFF switch and a large view window in the outer door provide a clear view of stored items.
- Digital display is easy to see and is calibrated through the control panel.



Cooling Performance: $4^{\circ}\text{C} \pm 1.5^{\circ}\text{C}$
(Ambient temp. 35°C)



MBR-1404GR

45.4 cu.ft. (1,287 liters)
720 bags/450ml blood bags

Cooling Performance: $4^{\circ}\text{C} \pm 1^{\circ}\text{C}$
(Ambient temp. 35°C)



MBR-704GR

21.8 cu.ft. (617 liters)
360 bags/450ml blood bags

Alarm and Safety Functions

To ensure the safety of the precious blood supply, SANYO MBR series provide the following safety functions:

- Audible and flashing LED visual alarms with remote alarm contacts, in case of power failure, high or low temperature condition, or during any thermal sensor abnormality.
- Door alarm and key lock are standard features.
- Re-activating buzzer, lamp and remote alarm contacts. (30 min. after buzzer stops)
- Built-in temperature recorder.

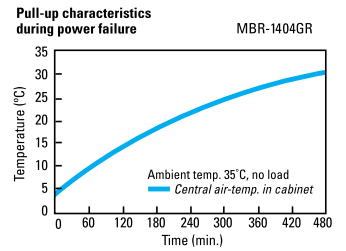
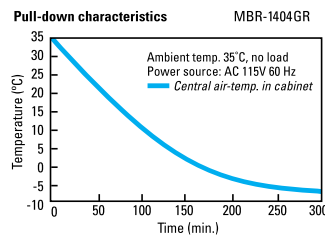
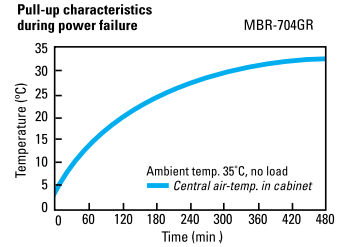
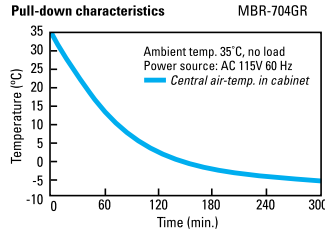
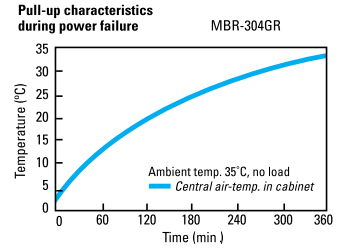
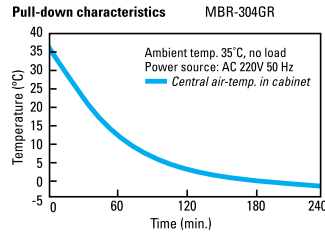
Environmentally Friendly

SANYO refrigerators feature commercially available CFC-free, HFC refrigerants and CFC-free insulation.

SANYO is RoHS Compliant

On July 1, 2006, the RoHS legislation (EU Directive 2002/95/EU) came into effect. RoHS is the restriction of hazardous substances to reduce the amount of pollution in the environment. Toxic substances in electrical equipment such as Lead, Cadmium, Mercury, Chromium 6+, PBB & PBDE, which can do serious harm to the environment, have been banned. The SANYO MBR series refrigerators are compliant with these regulations.

Performance Data Reference



Safe and Reliable Whole Blood Storage

Cooling Performance: $4^{\circ}\text{C} \pm 1^{\circ}\text{C}$
(Ambient temp. 35°C)



MBR-304GR

10.6 cu.ft. (302 liters)
120 bags/450ml blood bags

Cooling Performance: $4^{\circ}\text{C} \pm 1^{\circ}\text{C}$
(Ambient temp. 35°C)



MBR-107D(H)

2.8 cu.ft. (79 liters)
32 bags/450ml blood bags

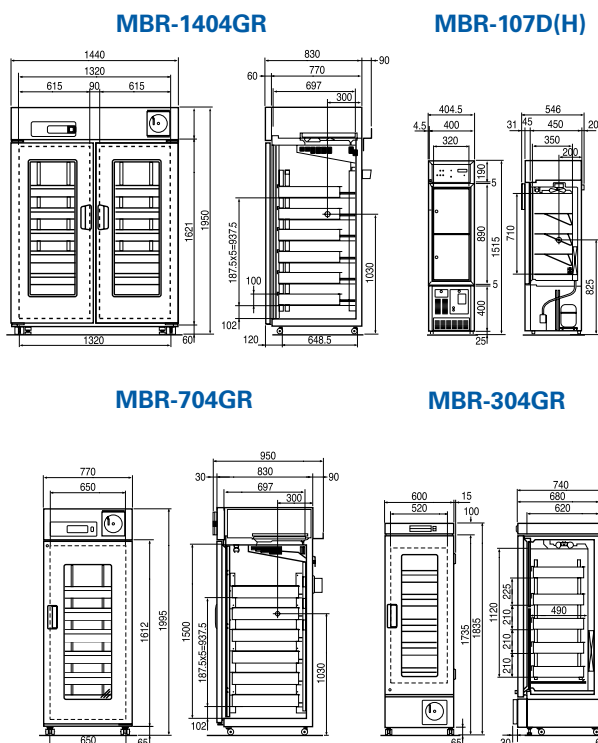
Specifications



| Model No. | MBR-304GR | MBR-704GR | MBR-1404GR |
|---------------------------------|---|--|--|
| Exterior Dimensions (W x D x H) | 23.6" x 26.8" x 72.2" (600 x 680 x 1,835 mm) | 30.3" x 32.7" x 77.0" (770 x 830 x 1,955 mm) | 56.7" x 32.7" x 76.8" (1,440 x 830 x 1,950 mm) |
| Interior Dimensions (W x D x H) | 20.5" x 19.3" x 45.3" (520 x 490 x 1,150 mm) | 25.6" x 27.4" x 59.1" (650 x 697 x 1,500 mm) | 52.0" x 27.4" x 59.1" (1,320 x 697 x 1,500 mm) |
| Net weight | 308 lbs., 140 kg | 462 lbs., 210 kg | 638 lbs., 290 kg |
| Effective capacity | 10.6 cu. ft. (302 liters) | 21.8 cu. ft. (617 liters) | 45.4 cu. ft. (1,287 liters) |
| Storage capacity | 120 bags (450ml) | 360 bags (450ml) | 720 bags (450ml) |
| Exterior cabinet | Painted Steel | | |
| Interior cabinet | Painted Steel | | |
| Cabinet insulation | Rigid polyurethane, foamed-in-place | | |
| Outer door | Insulated steel frame with double layer glass windows | | |
| Door lock | 1 | 1 | 2 |
| Inner door (Acrylic) | 2 | 3 | 6 |
| Drawers | 5 stainless steel roll-out drawers | 6 stainless steel roll-out drawers | 12 stainless steel roll-out drawers |
| Casters | 4 | | |
| Compressor | 175W Hermetically sealed | 220W Hermetically sealed | 300W Hermetically sealed |
| Refrigerant | R-134a (HFC) | | |
| Cooling performance | 4°C±1°C (Ambient temperature 35°C) | 4°C±1°C (Ambient temperature 35°C) | 4°C±1.5°C (Ambient temperature 35°C) |
| Air circulation | Forced air circulation | | |
| Defrost | Fully automatic | | |
| Temperature control | Microprocessor control | | |
| Temperature alarm | High (6°C), Low (2°C), Audible and visual alarm | | |
| Power failure alarm | Audible and visual alarm (24 hours), Automatic rechargeable battery (Ni-MH) | | |
| Door alarm | Audible and visual alarm | | |
| Remote alarm contact | DC30V, 2A, Normal open, Temperature alarm or power failure alarm | | |
| Temperature monitor bottle | 250ml x 2 with thermistor sensor | | |
| Lightning | 15W Fluorescent lamp | 20W Fluorescent lamp | |
| Access hole | 1 | | 2 |
| Recorder | 1/7/30 days circular recorder | | |
| Options | Recording paper (RP-06) | Recording paper (RP-G04), Recording pen (PG-R) | Recording paper (RP-G04), Recording pen (PG-R) |

| Model No. | MBR-107D(H) |
|---------------------------------|--|
| Exterior Dimensions (W x D x H) | 15.7" x 19.5" x 59.6" (400 x 495 x 1,515 mm) |
| Interior Dimensions (W x D x H) | 12.6" x 13.8" x 28" (320 x 350 x 710 mm) |
| Net weight | 154 lbs. (70kg) |
| Effective capacity | 2.8 cu. ft. (79liters) |
| Storage capacity | 32 bags (450ml) |
| Exterior cabinet | Painted Steel |
| Interior cabinet | Stainless steel |
| Cabinet insulation | CFC-free rigid polyurethane, foamed-in place |
| Outer door | Triple layer glass windows |
| Door lock | 1 |
| Inner door (Acrylic) | 2 |
| Shelves | 3 zinc-plated steel wire and 1 stainless steel |
| Compressor | 110W Hermetically sealed |
| Refrigerant | R-134a |
| Cooling performance | 4°C ±1°C (Ambient temperature 35°C) |
| Air circulation | Forced air circulation |
| Defrost | Fully automatic |
| Temperature control | Microprocessor |
| Temperature alarm | High (6°C), Low (2°C), Audible and visual alarm |
| Power failure alarm | Audible and visual alarm (9 hours), Automatic rechargeable battery (Ni-Cd) |
| Door alarm | Visual alarm |
| Remote alarm contact | DC30V, 1A, Normal open Temperature alarm or power failure alarm |
| Lightning | 6W Fluorescent lamp |
| Access hole | 1 |
| Recorder | 30 days strip chart recorder, |

*Appearance and specifications are subject to change without notice.



SANYO Electric Co.,Ltd., Biomedical Division, Gumma is certified for Quality management system:ISO9001/Medical devices Quality management system:ISO13485/Environmental management system:ISO14001



SANYO is committed to developing green technologies that provide energy efficiency resulting in lower operational costs with less impact on the environment.



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



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LR-MBR Series-11.09