Panasonic

Preservation
above-zero

Blood Bank Refrigerators

Specially designed to provide precise and reliable temperature control that meets various criteria for whole blood and blood derivatives.

MBR-305GR   MBR-705GR   MBR-1405GR   MBR-107DH   MBR-506DH

Designed to conform to AABB criteria, the Panasonic MBR series GR type (stainless steel roll-out drawers with card holder) ensures stable and reliable temperature control utilizing Panasonic original technology. A special highly efficient compressor designed and developed by Panasonic provides rapid cooling and quiet performance for each model.

Stable Temperature Control

- Temperature is controlled by two sensors located in the liquid-loaded **monitor bottles**, which are in the shape of a blood bag.

- **Two thermistor sensors** constantly monitor the temperature in both the upper and the lower part of chamber.

- **Microprocessor control** ensures the most accurate temperature control available.

- **Multi air-flow plenum system** ensures excellent temperature uniformity in larger capacity models. (MBR-705GR, MBR-1405GR)

- **Temperature-maintained defrost** designed with thermal sensors and heaters on the evaporator, all under precise microprocessor control.

Temperature Variations Prevented

The Panasonic MBR Series is 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 **magnetic sealed outer doors with double-pane glass window** prevent chamber air leakage and promote complete door closings.

- **Large air circulation fan** enables rapid temperature recovery after door openings. (Double fan for MBR-1405GR.)

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 calibratable through the control panel.

Easy-access front control panel (MBR-305GR, MBR-705GR, MBR-1405GR)

- Filterless construction eliminates bothersome filter cleaning. (MBR-305GR)

* Appearance and specifications are subject to change without notice.

MBR-305GR

MBR-705GR

MBR-305GR

Temperature:
4℃ ±1.5℃
(Ambient temp. 35℃)

Effective capacity
302 liters
(10.7 cu.ft.)

120 bags/
450mℓ blood bag
(without baskets)
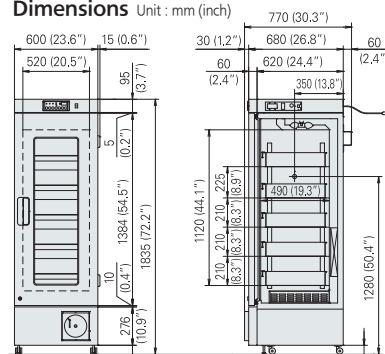
MBR-705GR

Temperature:
4℃ ±1.5℃
(Ambient temp. 35℃)
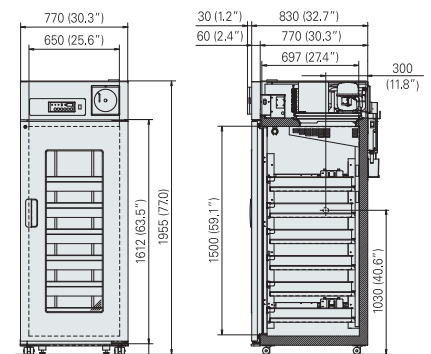
Effective capacity
622 liters
(22.0 cu.ft.)

360 bags/
450mℓ blood bag
(without baskets)

Dimensions Unit : mm (inch)

MBR-305GR

MBR-705GR

Alarm and Safety Functions

To ensure the safety of precious blood supply, the Panasonic MBR Series provides 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 any thermal sensor abnormality.
- Door alarm and key lock are standard features.
- Re-activating buzzer, lamp and remote alarm contact. (30 min. after buzzer stops)
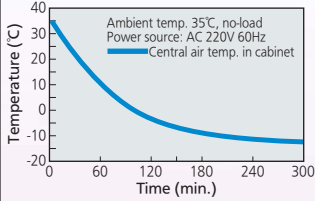- Built-in temperature recorder.

Environmentally Friendly

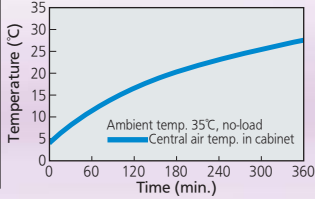Panasonic refrigerators feature commercially-available HCFC-free, HFC refrigerants and HCFC-free insulation.

Performance Data (Reference Data)
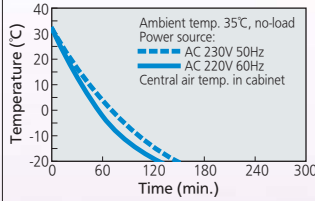
MBR-305GR
Pull-down characteristics

Ambient temp. 35℃, no-load
Power source: AC 220V 60Hz
— Central air temp. in cabinet

MBR-705GR
Pull-down characteristics

Ambient temp. 35℃, no-load
Power source:
--- AC 230V 50Hz
— AC 220V 60Hz
Central air temp. in cabinet

MBR-1405GR
Pull-down characteristics

Ambient temp. 35℃, no-load
Power source: AC 115V 60Hz
— Central air temp. in cabinet

Pull-up characteristics during power failure

Ambient temp. 35℃, no-load
— Central air temp. in cabinet

Pull-up characteristics during power failure

Ambient temp. 35℃, no-load
— Central air temp. in cabinet
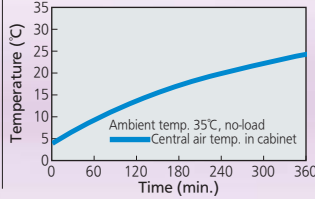
Pull-up characteristics during power failure
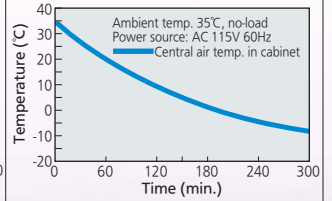
Ambient temp. 35℃, no-load
— Central air temp. in cabinet
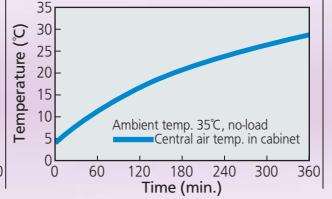
*A continuously operating compressor was used to obtain data for the upper three graphs.

MBR-1405GR

MBR-107DH   MBR-506DH

MBR-1405GR

Temperature:
4℃ ±1.5℃
(Ambient temp. 35℃)

Effective capacity
1301 liters
(45.9 cu.ft.)

720 bags/ 450mℓ blood bag (without baskets)

MBR-107DH
MBR-506DH

Temperature:
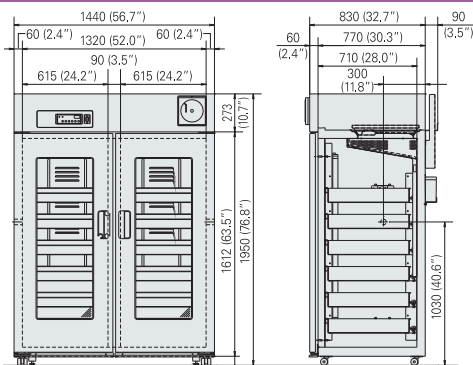**4℃ ±1℃**
(Ambient temp. 35℃)

Effective capacity
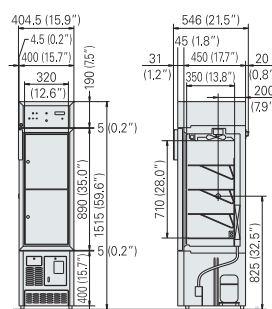**79 liters**
(2.8 cu.ft.) MBR-107DH

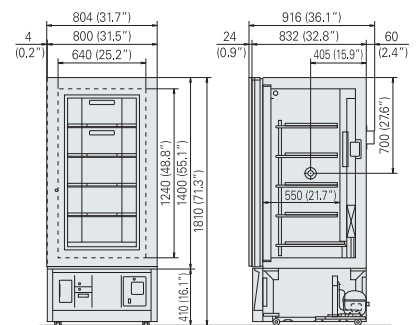**32** bags/ 450mℓ blood bag (without baskets)

425 liters
(15.0 cu.ft.) MBR-506DH

120 bags/ 450mℓ blood bag (without baskets)

MBR-1405GR

MBR-107DH

MBR-506DH

Specifications

	MBR-305GR	MBR-705GR	MBR-1405GR
External dimensions (W x D x H)*1	600 x 680 x 1835 (mm) / 23.6 x 26.8 x 72.2 (inch)	770 x 830 x 1955 (mm) / 30.3 x 32.7 x 77.0 (inch)	1440 x 830 x 1950 (mm) / 56.7 x 32.7 x 76.8 (inch)
Internal dimensions (W x D x H)	520 x 490 x 1150 (mm) / 20.5 x 19.3 x 45.3 (inch)	650 x 697 x 1500 (mm) / 25.6 x 27.4 x 59.1 (inch)	1320 x 710 x 1500 (mm) / 52.0 x 28.0 x 59.1 (inch)
Net weight	147 kg (324 lbs.)	213 kg (470 lbs.)	315 kg (694 lbs.)
Effective capacity	302 liters (10.7 cu.ft.)	622 liters (22.0 cu.ft.)	1301 liters (45.9 cu.ft.)
Storage capacity	120 bags (450mℓ), without baskets	360 bags (450mℓ), without baskets	720 bags (450mℓ), without baskets
Exterior cabinet	Galvanised steel with baked-on finish		
Interior cabinet	Galvanised steel with baked-on finish		
Cabinet insulation	Foamed-in-place rigid polyurethane		
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	150 W hermetically sealed	200 W hermetically sealed	250 W hermetically sealed
Refrigerant	HFC		
Temperature	4℃ ±1.5℃ (Ambient temperature 35℃)		
Air circulation	Forced air circulation		
Defrost	Fully automatic		
Temprature control	Microprocessor control		
Temperature alarm	High (6℃), Low (2℃), Audible and visual alarm		
Power failure alarm	Audible and visual alarm (24 hours), Automatic rechargable battery (Ni-MH)		
Door alarm	Audible and visual alarm		
Part replacement notification	Fan morter, Battery		
Remote alarm contact	DC30V, 2A, Temperature alarm or power failure alarm		
Temperature monitor	2 bottles with thermistor sensor		
Lighting	15W fluorescent lamp	20W fluorescent lamp	40W fluorescent lamp
Access port	1	2	
Accessories	1/7/30-day circular recorder, Door lock key		
Options	Recording paper (RP-G04-PW), Recording pen (PG-R-PW)		
	Data acquisition system (MTR-5000-PW/MTR-L03-PW or MTR-480-PW), Baskets (MBR-55B-PW, MBR-56B-PW)	Data acquisition system (MTR-5000-PW/MTR-L03-PW or MTR-480-PW)	

	MBR-107DH	MBR-506DH
External dimensions (W x D x H)*1	400 x 495 x 1515 (mm) / 15.7 x 19.5 x 59.6 (inch)	800 x 832 x 1810 (mm) / 31.5 x 32.8 x 71.3 (inch)
Internal dimensions (W x D x H)	320 x 350 x 710 (mm) / 12.6 x 13.8 x 28.0 (inch)	640 x 550 x 1240 (mm) / 25.2 x 21.7 x 48.8 (inch)
Net weight	70 kg (154 lbs.)	185 kg (408 lbs.)
Effective capacity	79 liters (2.8 cu.ft.)	425 liters (15.0 cu.ft.)
Storage capacity	32 bags (450mℓ), with MBR-16B	120 bags (450mℓ), with MBR-56B
Exterior cabinet	Galvanised steel with baked-on finish	
Interior cabinet	Stainless steel	
Cabinet insulation	Foamed-in-place rigid polyurethane	
Outer door	Triple layer glass windows	
Door lock	1	
Inner door (acrylic)	2	5
Shelves	3 zinc-plated steel wire and 1 stainless steel	5 coated hard steel wire shelves
Casters	—	4
Compressor	110 W hermetically sealed	160 W hermetically sealed
Refrigerant	HFC	
Temperature	4℃ ±1℃ (Ambient temperature 35℃)	
Air circulation	Forced air circulation	
Defrost	Fully automatic	
Temprature control	Microprocessor	
Temperature alarm	High (6℃), Low (2℃), Audible and visual alarm	
Power failure alarm	Audible and visual alarm (9 hours), Automatic rechargable battely (Ni-Cd)	
Door alarm	Visual alarm	
Remote alarm contact	DC30V, 1A	DC24V, 1A
	Temperature alarm or power failure alarm	
Lighting	6 W fluorescent lamp	15 W fluorescent lamp
Access port	1	
Accessories	30-day recorder, Door lock key 1 set	
Options	Recording paper (RP-06-PW)	
	Basket (MBR-15B-PW) Max.8pcs/unit 220ml bags x 7pcs/basket	Basket (MBR-55B-PW) Max.20pcs/unit 220ml bags x 10pcs/basket
	Basket (MBR-16B-PW) Max.8pcs/unit 450ml bags x 4pcs/basket	Basket (MBR-56B-PW) Max.20pcs/unit 450ml bags x 6pcs/basket

Power Voltage, Rated Frequency

	Model No.		
115V, 60Hz	MBR-305GR-PA	MBR-705GR-PA	MBR-1405GR-PA
220V, 60Hz	MBR-305GR-PK MBR-305GR-PR	MBR-705GR-PK MBR-705GR-PR	—
230V/240V, 50Hz (CE)	—	MBR-705GR-PE	MBR-1405GR-PE
220V/230V/240V, 50Hz (CE)	MBR-305GR-PE	—	—

	Model No.	
115V, 60Hz	MBR-107DH-PA	—
220V, 50Hz/60Hz	MBR-107DH-PK	—
230V/240V, 50Hz (CE)	—	MBR-506DH-PE
220V/230V/240V, 50Hz (CE)	MBR-107DH-PE	—

Panasonic Healthcare Co., Ltd., Biomedical Business Unit is certified for:
Quality management system: ISO9001
Medical devices quality management system: ISO13485

ISO 14001 JACO UKAS MANAGEMENT SYSTEMS 051 JAB CM021 EC97J1224

Panasonic Healthcare Co., Ltd., Biomedical Business Unit is certified for:
Environmental management system: ISO14001

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