

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 (450 ml), without baskets	360 bags (450 ml), without baskets	720 bags (450 ml), 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°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		
Part replacement notification	Fan motor, Battery		
Remote alarm contact	DC 30 V, 2 A, Temperature alarm or power failure alarm		
Temperature monitor	2 bottles with thermistor sensor		
Lighting	15 W fluorescent lamp	20 W fluorescent lamp	40 W fluorescent lamp
Access port	1	2	
Accessories	1/7/30-day circular recorder, Door lock key		
Quality Management System	ISO13485		
Options	Recording paper (RP-G04-PW), Recording pen (PG-R-PW)		
	Interface board for the data acquisition system MTR-5000 user (MTR-L03-PW or MTR-480-PW), Baskets (MBR-55B-PW, MBR-56B-PW)		Interface board for the data acquisition system MTR-5000 user (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 (450 ml), with MBR-16B	120 bags (450 ml), 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°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	DC 30 V, 1 A	DC 24 V, 1 A
	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	
Quality Management System	ISO13485	
Options	Recording paper (RP-06-PW)	
	Basket (MBR-15B-PW) Max.8 pcs/unit 220 ml bags x 7 pcs/basket	Basket (MBR-55B-PW) Max.20 pcs/unit 220 ml bags x 10 pcs/basket
	Basket (MBR-16B-PW) Max.8 pcs/unit 450 ml bags x 4 pcs/basket	Basket (MBR-56B-PW) Max.20 pcs/unit 450 ml bags x 6 pcs/basket

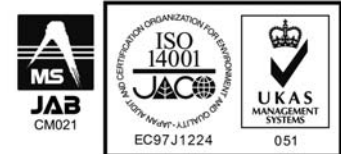
Power Voltage, Rated Frequency

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

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

Caution: PHC Corporation guarantees this product under certain warranty conditions. However, please note that PHC Corporation shall not be responsible for any loss or damage to the contents of the product.
 *Appearance and specifications are subject to change without notice.
 *1 External dimensions of main cabinet only - see dimension drawings showing handles and other external projections.

TUV SUD
 Preservation (freezers, refrigerators) and Culturing (incubators) Equipment
 The management of the design, development, production, sales support, and servicing of the above.
 PHC Corporation, Biomedical Division
 1-1-1 Sakada, Oizumi-machi, Ora-gun, Gunma 370-0596, Japan



PHC Corporation, Biomedical Division is certified for:
Environmental management system: ISO14001

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PHCbi

Blood Bank Refrigerators



Blood Bank Refrigerators

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



PHC Corporation, Biomedical Division

**Life Science
 Innovator
 Since 1966**

The DH-type (coated steel wire shelf) and GR-type (stainless steel roll-out drawer with card holder) is designed to provide stable and reliable temperature control utilizing PHCbi original technology. A special highly efficient compressor designed and developed by PHCbi, to provide 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 PHCbi 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)

Alarm and Safety Functions

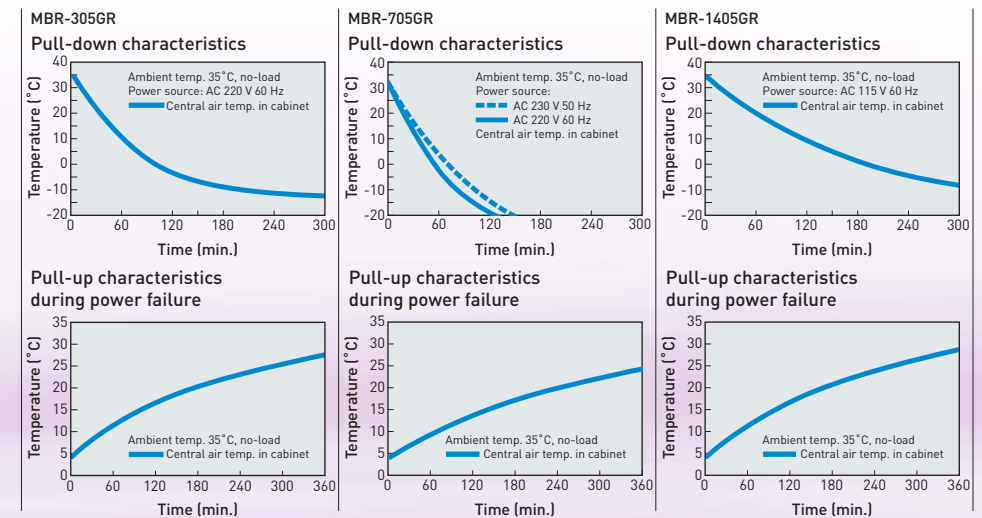
To ensure the safety of precious blood supply, the PHCbi MBR Series provides the following safety functions:

- **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

PHCbi MBR Series feature commercially-available HCFC-free, HFC refrigerants and HCFC-free insulation.

Performance Data (Reference Data)



*A continuously operating compressor was used to obtain data for the upper three graphs.



MBR-305GR

Temperature: **4°C ± 1.5°C**
(Ambient temp. 35°C)

Effective capacity
302 liters
(10.7 cu.ft.)

120 bags/
450 ml blood bag
(without baskets)

MBR-705GR

Temperature: **4°C ± 1.5°C**
(Ambient temp. 35°C)

Effective capacity
622 liters
(22.0 cu.ft.)

360 bags/
450 ml blood bag
(without baskets)

MBR-1405GR

Temperature: **4°C ± 1.5°C**
(Ambient temp. 35°C)

Effective capacity
1301 liters
(45.9 cu.ft.)

720 bags/
450 ml blood bag
(without baskets)

MBR-107DH
MBR-506DH

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

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

32 bags/
450 ml blood bag (without baskets)

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

120 bags/
450 ml blood bag (without baskets)

* Appearance and specifications are subject to change without notice.

