

| 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 | 5 |
| 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

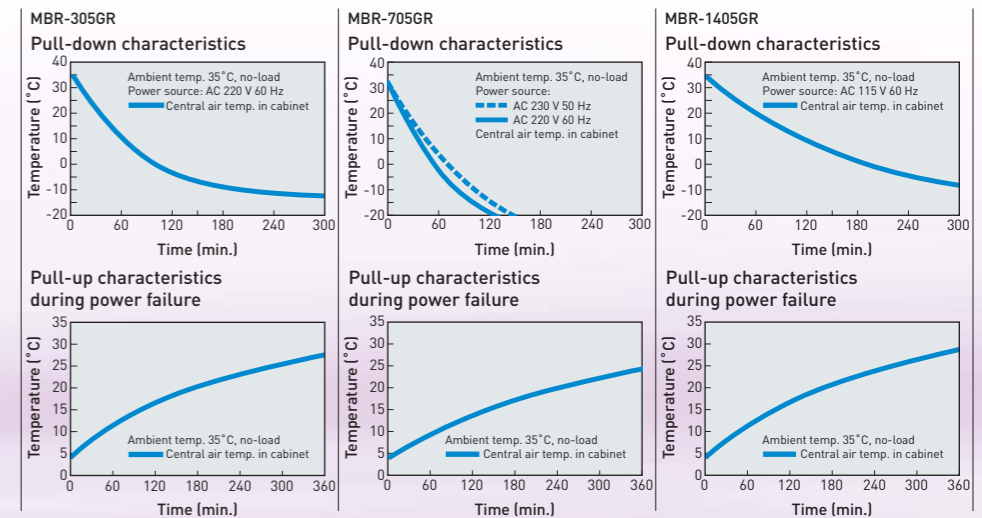
To ensure the safety of precious blood supply, the PHCbi MBR Series provides the following safety functions:

- **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

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

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

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

MBR-107DH
MBR-506DH

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

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

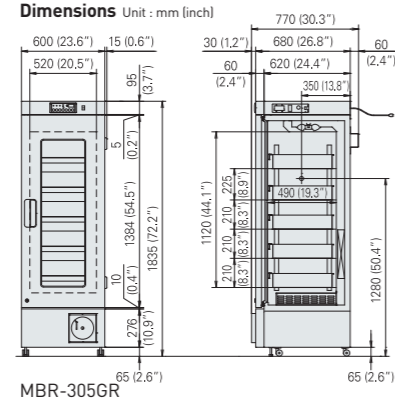
32 bags/
450 ml blood bag (without baskets)

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

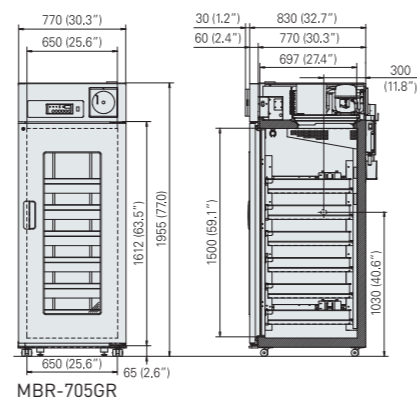
120 bags/
450 ml blood bag (without baskets)

* Appearance and specifications are subject to change without notice.

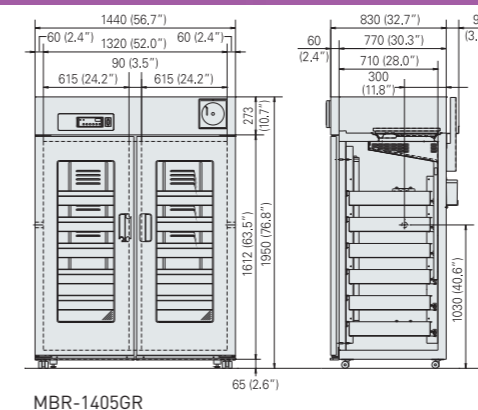
Dimensions Unit : mm (inch)



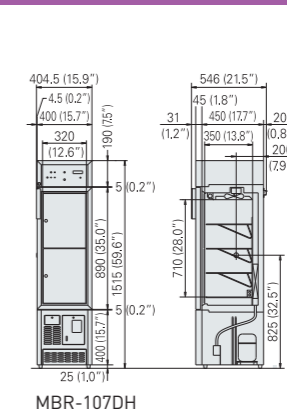
MBR-305GR



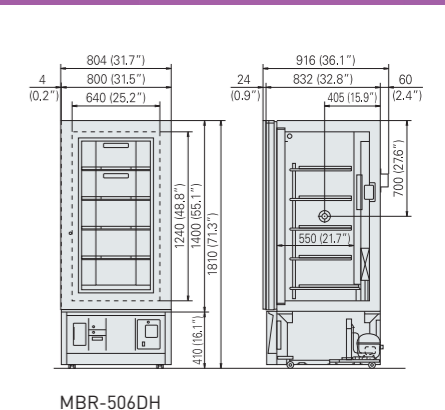
MBR-705GR



MBR-1405GR



MBR-107DH



MBR-506DH