

Preservation
sub-zero



MDF-U5412

Temperature

(Ambient temperature 30°C)

-40°C

Effective capacity

482 liters/17.0 cu.ft.

280 pcs

300ml frozen plasma bag

Biomedical Freezer for reliable preservation of plasma and other biologics

- High freezing power
- Stable & Uniform temperature design
- Ideal freezing environment for biologics
- Alarm and safety devices

MDF-U5412

Features

PHCbi MDF-U5412 provides an ideal freezing environment for preservation of plasma, vaccines, test samples, and other biological specimens.

Stable & Uniform Temperature Design

- Double outer doors
- Full-height storage containers on each shelf
- Cooling tubes under every shelf
- Direct cooling system for stable temperature control
- Fine-controllable refrigeration circuit with valve

Large Storage Capacity

- 300ml FFP* bag x 280 pieces.

*Fresh Frozen Plasma

User Friendly Design

- Built-in door latch for each door
- Easy calibration through the control panel

Visual and Audible Alarm System

- High & Low temperature alarm
- Power failure alarm with non-volatile memory back up
- Self-diagnostic system

Safety Function

- Remote alarm contact
- Re-activating buzzer, lamp and remote alarm contact (30min. after buzzer stops)
- Standard door lock and independent padlock hasp door latches for extra security
- Remote monitoring by Data acquisition system (Option)
- 1/7/30 days circular recorder (Option)

Environment friendly

- HCFC-Free refrigerant and insulation

Specifications

	Model No.
220 V, 50 Hz	MDF-U5412-PB
220 V, 60 Hz	MDF-U5412-PK MDF-U5412-PR
230 V/240 V, 50 Hz (CE)	MDF-U5412-PE
External Dimensions (W x D x H)* ¹	804 x 772 x 1802 (mm) / 31.7 x 30.4 x 71.0 (inch)
Internal Dimensions (W x D x H)	658 x 607 x 1272 (mm) / 25.9 x 23.9 x 50.1 (inch)
Net weight	134 kg (295.4 lbs.)
Effective capacity	482 liters (17.0 cu.ft.)
Exterior cabinet	Galvanised steel with baked-on finish
Cabinet insulation	Rigid polyurethane foamed-in place
Outer door	2, Insulated and magnetic sealed
Door lock	1 door lock, 2 lockable door latches for each door
Storage container	6 pcs. (Upper room), 4 pcs. (Lower room)
Casters	4
Adjustable leveling feet	2
Compressor	Hermetic, 400 W (PB & PE models), 450 W (PK & PR models)
Refrigerant	HFC refrigerant
Temperature control range	-20°C to -40°C (Ambient temperature 5°C to 30°C)
Settable range	-18°C to -45°C
Cooling method	Direct cooling
Temperature control	Microprocessor control
Temperature alarm	High / Low (±5°C to ±15°C, adjustable)
Power failure alarm	Buzzer and lamp (Automatic rechargeable battery), Memory back up
Remote alarm contact	Allowable contact capacity: DC 30 V, 2 A, Temperature alarm or power failure alarm
Access hole	ø30, Rear side
Accessories	Door lock key, Defrost spatula, Storage containers
Options	Interface board* ² (MTR-L03-PW, MTR-480-PW), Strip chart recorder (MTR-4015LH-PE), Recorder fixing (MPR-S30-PW), Recording paper (RP-40-PW), Circular chart recorder (MTR-G85C-PE), Recorder mounting kit (MPR-S7-PW), Recording paper (RP-G85-PW), Recording pen (PG-R-PW)

*Cooling performance is indicated by the temperature reached at the center of the freezer (at ambient temperature of 30°C with no load). In order to use the freezer at a stable temperature for a long time, it is recommended that the temperature be set to at least 5°C higher than the indicated lowest temperature.

In addition, depending on the usage conditions, it may not be possible to reach the indicated lowest temperature.

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.

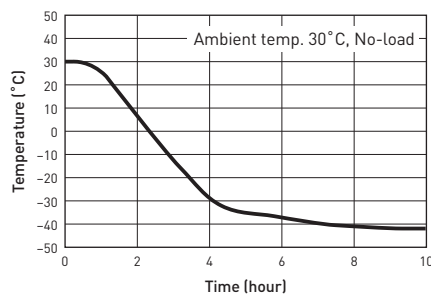
• Appearance and specifications are subject to change without notice.

*¹ External dimensions of main cabinet only - see dimension drawings showing handles and other external projections.

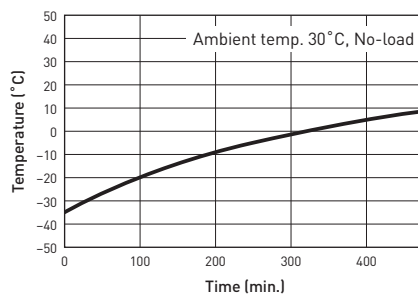
*² Interface board is for the data acquisition system MTR-5000 user only.

Performance Data

Pull-down characteristics

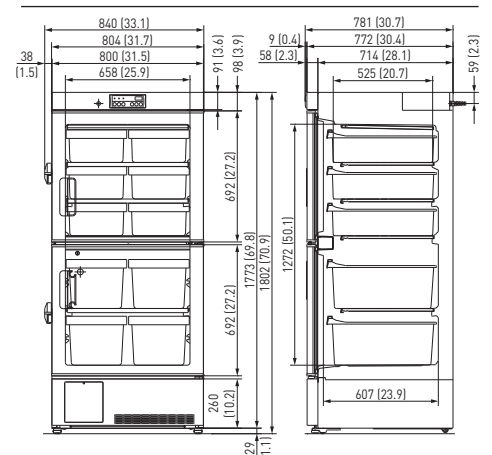


Pull-up characteristics during power failure



Dimensions

Unit: mm (inch)



(220/230/240 V, 50 Hz)



Preservation (freezers, refrigerators) and Culturing (incubators) Equipment

The management of the design, development, production, sales support, and servicing of the above.

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PHC Corporation Biomedical Division is certified for:
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