

Preservation

sub-zero

Biomedical Freezers

Panasonic Biomedical Freezers offer the outstanding reliability and performance required in a wide variety of storage and research applications.



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Panasonic's MDF Series Biomedical Freezers offer the outstanding reliability and performance required in a wide variety of storage and research applications. In the medical field, they provide effective storage of life-saving fresh and frozen blood supplies and vaccines, as well as samples for diagnosis. In the biotechnology field, they provide effective storage of enzymes for genetic research, as well as culture media, reagents and samples for testing. In the industrial field, they are ideal for aging and temperature tests on electronic components, precision devices, and compound resins. As a storage environment, with excellent safety features, easy operability, and a host of other features, these freezers offer unsurpassed reliability and functionality. If you are looking for precision temperature controlled storage equipment, look to Panasonic.

Chest type

Power to cope with frequent door openings



Small size suitable for personal use

- Digital temperature display as standard feature
- Compact, personal size

MDF-137
Effective capacity:
138 liters
(4.9 cu.ft.)

Versatile mid-size model

- Digital temperature display as standard feature
- Easy-to-use 200-liter mid-size model



MDF-237
Effective capacity:
221 liters
(7.8 cu.ft.)

Large size 400-liter class

- Digital temperature display as standard feature
- Large-capacity, economical size

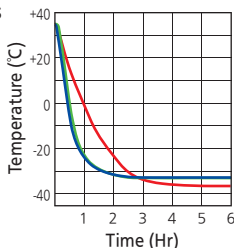


MDF-437
Effective capacity:
425 liters
(15.0 cu.ft.)

Performance Data

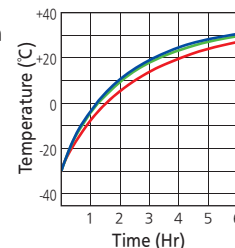
Pull-down characteristics under no-load condition

- MDF-137
- MDF-237
- MDF-437



Pull-up characteristics under no-load condition

- MDF-137
- MDF-237
- MDF-437



Features

Enhanced Operation

- Front-mounted display/control panel (with microprocessor) located at convenient waist height



Photo is MDF-U537D

- Memory backup
- Temperature display
- Front access calibration for temperature recorder
- The control panel, alarm system and non-volatile memory are the same for all models in the series.

- Single electrical box makes servicing simpler.
- The chamber temperature is displayed for five seconds if BUZZER key is depressed during power failure alarm.
- After a power outage, operation resumes at pre-outage settings (non-volatile memory for temperature and alarm temperature settings)
- Control panel can be reset to zero for validation.
- Two access ports (right-hand side and bottom left) (chest type)
- Four casters and two adjustable feet

Recording Features (Optional)

Recorder can be fitted in convenient position that will not interfere with installation. Choice of optional recorders

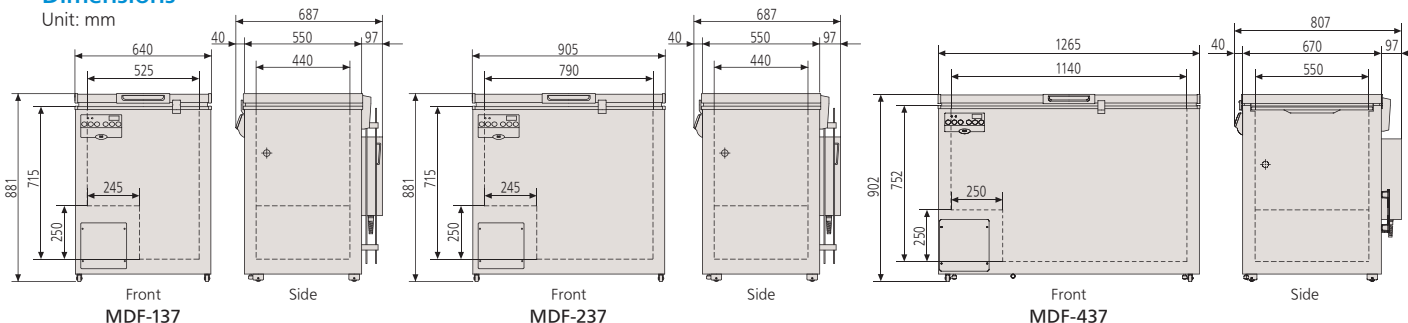
- 7-day circular recorder (MTR-G85C-PE) and 32-day strip recorder (MTR-4015LH-PE) are available. (except MDF-U443)
- Temperature recorder with auto recharging battery
- Front access calibration for temperature recorder

Environment-Friendly

- HFC refrigerant (non-CFC, non-HCFC refrigerant) is environment-friendly but offers superb performance.
- Pre-coated metal body causes less environmental damage than conventional paint coating.

Dimensions

Unit: mm



Upright type

Maximum capacity in minimum installation space

Large-capacity, economical, space-saving model

- Top/bottom twin door design prevents cold air escaping
- Convenient storage drawers



Effective capacity:
MDF-U5312 482 liters
(17.0 cu.ft.)

Independent top/bottom control meets differing freezer needs simultaneously

- Two independent freezer cabinets in one body, with separate defrost and operation
- Individual freezer circuits for each compartment



Effective capacity:
MDF-U537D 452 liters
(16.0 cu.ft.)

Easy-to-use, slim & compact design

- Microprocessor digital temperature display
- Convenient storage drawers



Effective capacity:
MDF-U334 274 liters
(9.7 cu.ft.)

Powerful fan ensures temperature uniformity throughout the freezer cabinet.

Forced air circulation & auto defrost

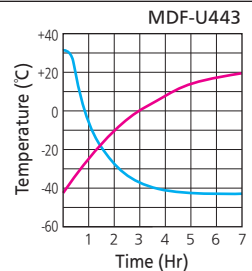
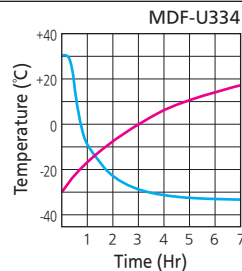
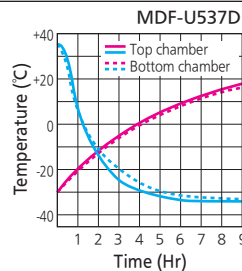
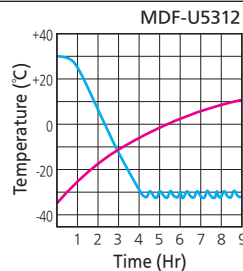
- High freezing power increases temperature uniformity
- Auto defrost for easy maintenance



Effective capacity:
MDF-U443 426 liters
(15.0 cu.ft.)

— Pull-down characteristics
— Pull-up characteristics during power failure

Central air temp. in cabinet
Ambient temp. 35°C, No-load



Safety Features

- Alarm & Recording System
- High/low temperature alarm
- Power failure alarm
- Remote alarm contact
- Self diagnostics function. Should an abnormality be picked up, an error code will be displayed in red figures.
- Breaker switch turns power off in event of over current abnormality.
- Balance hinges keep the lid open in any position to make this chest freezer easier to use. This means you have both hands free to work. (chest type)



- Secure lock safeguards the contents of the freezer and keeps hazardous items out of harm's way.



Newly designed lid lock (chest type).



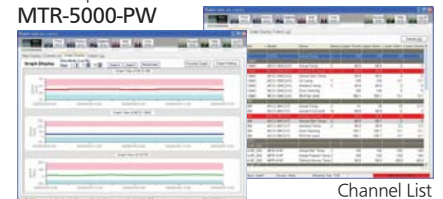
- Door latch can accommodate a pad lock for added protection of valuable samples. (upright type)

- Part replacement notification (MDF-U5312)

Temperature Monitoring Features (optional)

Data Acquisition System enables remote monitoring of Panasonic biomedical freezers.

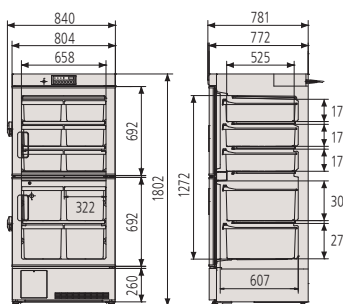
Data Acquisition Software
MTR-5000-PW



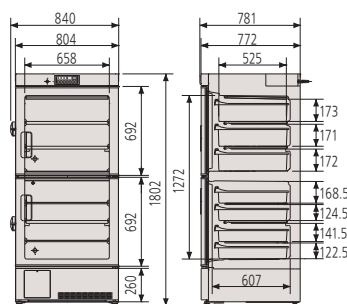
Graph Display

Channel List

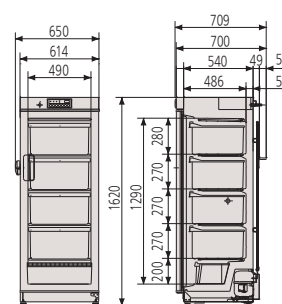
Interface board
MTR-L03-PW



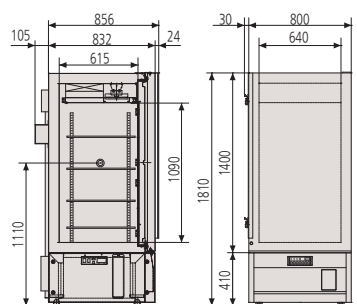
MDF-U5312



MDF-U537D



MDF-U334



MDF-U443

Specifications

	Model No.			
110V, 60Hz	—	—	—	MDF-U537D-PT
115V, 60Hz	—	—	—	MDF-U537D-PA
220V, 60Hz	—	—	—	MDF-U537D-PK
240V, 50Hz (CE)	—	—	—	MDF-U537D-PS
220V/230V/240V, 50Hz (CE)	MDF-137-PE	MDF-237-PE	MDF-437-PE	MDF-U537D-PE
External dimensions (W x D x H)*1	640 x 687 x 881 (mm) 25.2 x 27.0 x 34.7 (inch)	905 x 687 x 881 (mm) 35.6 x 27.0 x 34.7 (inch)	1265 x 807 x 902 (mm) 49.8 x 31.8 x 35.5 (inch)	804 x 772 x 1802 (mm) 31.7 x 30.4 x 70.9 (inch)
Internal dimensions (W x D x H)	525 x 440 x 715 (mm) 20.7 x 17.3 x 28.1 (inch)	790 x 440 x 715 (mm) 31.1 x 17.3 x 28.1 (inch)	1140 x 550 x 733 (mm) 44.9 x 21.7 x 28.9 (inch)	658 x 607 x 589/Top (mm) 658 x 607 x 603/Bottom (mm) 25.9 x 23.9 x 23.2 (inch) 25.9 x 23.9 x 23.7 (inch)
Capacity	138 liters (4.9 cu. ft.)	221 liters (7.8 cu. ft.)	425 liters (15.0 cu. ft.)	452 liters (16.0 cu. ft.)
Net Weight (Approx.)	52 kg (115 lbs.)	60 kg (132 lbs.)	81 kg (179 lbs.)	136 kg (300 lbs.)
Cooling performance	-30°C (AT: 35°C, no load)			
Control range	-20°C to -30°C			
Baskets	2	3	4	Top: 6 large, Bottom: 8 small
Access ports	17mm diameter, right-hand side and bottom left			Two 30mm diameter, rear
Compressor	Hermetic, 150 W	Hermetic, 200 W	Hermetic, 250 W	Hermetic, 350 W
Refrigerant	R-134a		R-404A	R-407D
Alarm system	• High/low temperature alarm (SV ±5°C to ±15°C adjustable) • Power failure • Remote alarm contact			
Calibration	Zero adjustment via control panel			
Options	Temperature recorder (MTR-G85C-PE, MTR-4015LH-PE), Data acquisition system (MTR-5000-PW)			
Baskets	MDF-13B2-PW/13B3-PW		MDF-43B2-PW/43B3-PW	—

	Model No.		
110V, 60Hz	MDF-U5312-PT	MDF-U334-PT	—
115V, 60Hz	MDF-U5312-PA	MDF-U334-PA	—
220V, 50Hz	MDF-U5312-PB	MDF-U334-PB	MDF-U443-PB
220V, 60Hz	MDF-U5312-PK	MDF-U334-PK / MDF-U334-PR	MDF-U443-PK / MDF-U443-PR
230V/240V, 50Hz (CE)	MDF-U5312-PE	—	MDF-U443-PE
220V/230V/240V, 50Hz (CE)	—	MDF-U334-PE	—
External dimensions (W x D x H)*1	804 x 772 x 1802 (mm) 31.7 x 30.4 x 70.9 (inch)	614 x 709 x 1620 (mm) 24.2 x 27.9 x 63.8 (inch)	800 x 832 x 1810 (mm) 31.5 x 32.8 x 71.3 (inch)
Internal dimensions (W x D x H)	658 x 607 x 1272 (mm) 25.9 x 23.9 x 50.1 (inch)	490 x 486 x 1290 (mm) 19.3 x 19.1 x 50.8 (inch)	640 x 615 x 1090 (mm) 25.2 x 24.2 x 42.9 (inch)
Capacity	482 liters (17.0 cu. ft.)	274 liters (9.7 cu. ft.)	426 liters (15.0 cu. ft.)
Net Weight (Approx.)	134 kg (295 lbs.)	81 kg (179 lbs.)	213 kg (470 lbs.)
Cooling performance	-30°C (AT: 35°C, no load)		-40°C (AT: 35°C, no load)
Control range	-20°C to -30°C		-15°C to -40°C
Baskets	Top: 6 small, Bottom: 4 large	4 large, 1 small	—
Access ports	30mm diameter, rear	30mm diameter, left-hand side	40mm diameter, left-hand side
Compressor	Hermetic, 400 W	Hermetic, 200 W	Hermetic, 400 W/750 W
Refrigerant	R-404A	R-134a	High stage: R-134a, Low stage: R-404A
Alarm system	• High/low temperature alarm (SV ±5°C to ±15°C adjustable) • Power failure • Remote alarm contact • Part replacement notification	• High/low temperature alarm (SV ±5°C to ±15°C adjustable) • Power failure • Part replacement notification • Remote alarm contact • Self diagnostics • Remote alarm contact	• High/low temperature alarm (SV ±5°C to ±20°C adjustable) • Power failure • Filter clogging • Remote alarm contact • Battery/fan motor replacement notification
Calibration	Zero adjustment via control panel		
Options	Temperature recorder (MTR-G85C-PE, MTR-4015LH-PE), Data acquisition system (MTR-5000-PW)		Temperature recorder (MTR-85H-PW, MTR-4015LH-PE), Data acquisition system (MTR-5000-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: Panasonic guarantees the product under certain warranty conditions. Panasonic in no way shall be responsible for any loss of content or damage to content. • 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.

Options

Storage Baskets



For MDF-137/237
MDF-13B2-PW (set of two)
MDF-13B3-PW (set of three)
 Outer dimensions:
 255(W) x 420(D) x 205(H)mm
 Inner dimensions: 210(W) x 370(D) x 200(H)mm



For MDF-437
MDF-43B2-PW (set of two)
MDF-43B3-PW (set of three)
 Outer dimensions:
 275(W) x 530(D) x 205(H)mm
 Inner dimensions: 230(W) x 480(D) x 200(H)mm

Temperature Recorders



MTR-G85

MTR-G85A-PA (110V–120V) -100°C to +40°C
MTR-G85C-PE (200V–240V) -100°C to +40°C
 • Recorder fixing for MDF-137/237/437: MDF-S740T-PW
 • Recorder fixing for MDF-U5312/U537D upper room: MDF-S740T-PW
 • Recorder fixing for MDF-U5312/U537D lower room: MPR-S7-PW
 • Recording paper: RP-G85-V
 • Ink pen: PG-R-PW



MTR-4015LH-PE

MTR-4015LH-PE -40°C to +14°C
 • Recorder fixing for MDF-137/237/437: MDF-S3040-PW
 • Recorder fixing for MDF-U5312/U537D lower room (no kit required for MDF-U334/U443/U537D upper room): MPR-S30-PW
 • Recording paper: RP-40-PW



MTR-85H-PW

MTR-85H-PW
 (for MDF-U443 only)
 -100°C to +50°C
 • Recording paper: RP-85-PW
 • Ink pen: DF-38FP-PW

Data acquisition system
MTR-5000-PW
 Interface board
MTR-L03-PW or **MTR-480-PW**



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



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

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