

**Specifications**

230V, 50Hz (CE)	MDF-137-PE	MDF-237-PE	MDF-436-PE	MDF-U537D-PE
<b>Model No.</b> 220V, 60Hz 110V, 60Hz	—	—	MDF-436-PK	MDF-U537D-PK MDF-U537D-PT
<b>Exterior dimensions (W x D x H)<sup>1)</sup></b>	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 905 (mm) 49.8 x 31.8 x 35.6 (inch)	804 x 772 x 1802 (mm) 31.7 x 30.4 x 70.9 (inch)
<b>Interior dimensions (W x D x H)</b>	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 735 (mm) 44.9 x 21.7 x 28.9 (inch)	658 x 607 x 589 (top) (mm) 25.9 x 23.9 x 23.2 (inch)
<b>Capacity</b>	138 liters (4.9 cu. ft.)	221 liters (7.8 cu. ft.)	426 liters (15.0 cu. ft.)	452 liters (16.0 cu. ft.)
<b>Cooling performance</b>	-30°C (AT: 35°C, no load)	-35°C (AT: 35°C, no load)	-35°C (AT: 35°C, no load)	-30°C (AT: 35°C, no load)
<b>Control range</b>	-20°C to -30°C	-20°C to -30°C	-20°C to -35°C	-20°C to -30°C
<b>Baskets</b>	2	3	4	Top: 6 medium, Bottom: 8 small
<b>Access ports</b>	17mm diameter, right-hand side and bottom left			Two 30mm diameter, rear
<b>Compressor</b>	Hermetic, 150 W	Hermetic, 200 W	Hermetic, 350 W	Hermetic, 350 W
<b>Refrigerant</b>	HFC			
<b>Alarm system</b>	• High/low temperature alarm (SV ±5°C to ±15°C adjustable) • Power failure • Remote alarm contact			
<b>Calibration</b>	Zero adjustment via control panel			
<b>Options</b>	Temperature recorder (MTR-G85C-PE, MTR-4015LH-PE), Data acquisition system		Temperature recorder (MTR-G85C-PT, MTR-4015LH-PT), Data acquisition system	
<b>Baskets</b>	MDF-13B2-PW/13B3-PW	MDF-23B2-PW/23B3-PW	MDF-43B2-PW/43B3-PW	MDF-43B2-PW/43B3-PW

230V, 50Hz (CE)	MDF-U5312-PE	MDF-U334-PE	MDF-U443-PE
<b>Model No.</b> 220V, 60Hz 230V, 50Hz 110V, 60Hz	MDF-U5312-PK MDF-U5312-PB MDF-U5312-PT	MDF-U334-PK MDF-U334-PT	MDF-U443-PK MDF-U443-PB
<b>Exterior dimensions (W x D x H)<sup>1)</sup></b>	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)
<b>Interior dimensions (W x D x H)</b>	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)
<b>Capacity</b>	482 liters (17.0 cu. ft.)	274 liters (9.7 cu. ft.)	426 liters (15.0 cu. ft.)
<b>Cooling performance</b>	-30°C (AT: 35°C, no load)	-30°C (AT: 35°C, no load)	-40°C (AT: 35°C, no load)
<b>Control range</b>	-20°C to -30°C	-20°C to -30°C	-15°C to -40°C
<b>Baskets</b>	Top: 6 medium, Bottom: 4 large	4 large, 1 small	—
<b>Access ports</b>	30mm diameter, rear	30mm diameter, left-hand side	40mm diameter, left-hand side
<b>Compressor</b>	Hermetic, 400 W	Hermetic, 200 W	Hermetic, 400 W/750 W
<b>Refrigerant</b>	HFC		
<b>Alarm system</b>	• 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/fanmotor replacement notification
<b>Calibration</b>	Zero adjustment via control panel		
<b>Options</b>	Temperature recorder (MTR-G85C-PE, MTR-4015LH-PE), Data acquisition system	Temperature recorder (MTR-G85C-PE, MTR-4015LH-PE), Data acquisition system	Temperature recorder (MTR-85H-PW, MTR-4015LH-PE), Data acquisition system

\*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 is not responsible for any loss of content or damage to content. • Appearance and specifications are subject to change without notice. • <sup>1)</sup> Interior 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 425(D) x 205(H)mm  
 Inner dimensions: 210(W) x 370(D) x 200(H)mm

For MDF-436  
**MDF-43B2-PW** (set of two)  
**MDF-43B3-PW** (set of three)  
 Outer dimensions: 775(W) x 530(D) x 205(H)mm  
 Inner dimensions: 730(W) x 480(D) x 200(H)mm

**Temperature Recorders**

**MTR-G85C-PE** (excluding MTR-U443) -30°C to +40°C  
 • Recorder housing for MDF-137/237/37/38: MTR-S740T-PW  
 • Recorder housing for MDF-U5312/U537D upper room: MDF-S740T-PW  
 • Recorder housing for MDF-U5312/U537D lower room: MTR-S740T-PW  
 • Recording paper: RP-G85-W  
 • Ink paper: PS-H-PW

**MTR-85H-PW** (for MTR-U443 only) -100°C to +50°C  
 • Recording paper: RP-85-PW  
 • Ink paper: UI-38P-PW

**MTR-4015LH-PE** -40°C to +14°C  
 • Recorder housing for MTR-137/237/436: MTR-S304B-PW  
 • Recorder housing for MDF-U5312/U537D lower room (no kit required for MTR-U5312/U443/U537D upper room): MTR-S304-PW  
 • Recording paper: RP-40-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

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**Panasonic**

**Biomedical Freezers**



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



Panasonic the new name for SANYO

# Biomedical Freezers

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



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



Effective capacity: **221 liters** (7.8 cu.ft.)

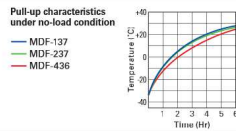
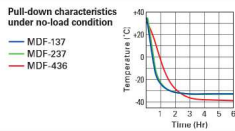
**Large size 400-liter class**

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



Effective capacity: **426 liters** (15.0 cu.ft.)

## Performance Data



## Features

### Enhanced Operation

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



- 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-G95C-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.

## Upright type

Maximum capacity in minimum installation space

### Large-capacity, economical, space-saving model

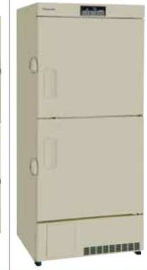
- Top/bottom twin door design prevents cold air escaping
- Convenient storage drawers



Effective capacity: **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: **452 liters** (16.0 cu.ft.)

### Easy-to-use, slim & compact design

- Microprocessor digital temperature display
- Convenient storage drawers



Effective capacity: **274 liters** (9.7 cu.ft.)

Powerful fan ensures temperature uniformity throughout the freezer cabinet.

### Forced air circulation & auto defrost

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

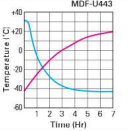
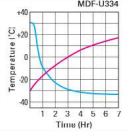
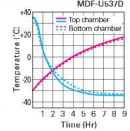
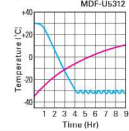


Effective capacity: **426 liters** (15.0 cu.ft.)

### 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.



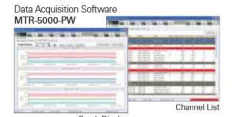
- Door latch can accommodate a pad lock for added protection of valuable samples. (upright type)



- Part replacement notification (MDF-U5372)

## Temperature Monitoring Features (optional)

Data Acquisition System enables remote monitoring of Panasonic biomedical freezers.



Interface board MTR-L03-PW

## Dimensions

