

Specifications	MDF-137-PE	MDF-237-PE	MDF-437-PE	MDF-U537D-PE
Model No.	MDF-137-PE	MDF-237-PE	MDF-437-PE	MDF-U537D-PE
220V, 50Hz (C)	—	—	—	MDF-U537D-PK
220V, 60Hz	—	—	—	MDF-U537D-PT
110V, 60Hz	—	—	—	—
Exterior dimensions (W x D x H)*	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)
Interior 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)	656 x 607 x 569 (mm) 656 x 607 x 809 (mm) 25.8 x 23.9 x 22.3 (inch) 25.8 x 23.9 x 31.8 (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.)
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			
Compressor	Hermetic, 150 W	Hermetic, 200 W	Hermetic, 250 W	Hermetic, 350 W
Refrigerant	R-134a	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-1382-PW/1383-PW	MDF-4382-PW/4383-PW	—	

Specifications	MDF-U512-PE (230/240V, 50Hz)	MDF-U534-PE	MDF-U443-PE (230/240V, 50Hz)
Model No.	MDF-U512-PE	MDF-U534-PE	MDF-U443-PE
220V, 50Hz	MDF-U512-PK	MDF-U534-PK	MDF-U443-PK
220V, 60Hz	MDF-U512-PT	MDF-U534-PT	MDF-U443-PT
110V, 60Hz	—	—	—
Exterior dimensions (W x D x H)*	804 x 772 x 1802 (mm) 31.7 x 30.4 x 70.9 (inch)	514 x 709 x 1670 (mm) 20.2 x 27.9 x 65.8 (inch)	800 x 832 x 1810 (mm) 31.5 x 32.8 x 71.3 (inch)
Interior dimensions (W x D x H)	656 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.)
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		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 diagnosis • Remote alarm contact	• High/low temperature alarm (SV ±5°C to ±20°C adjustable) • Power failure • Filter clogging • Remote alarm contact • Battery/fluorescent replacement notification
Calibration	Zero adjustment via control panel		
Options	Temperature recorder (MTR-G85C-PE, 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 at least 5°C higher than the indicated frozen temperature. In addition, depending on the usage conditions, it may not be possible to reach the indicated lowest temperature.
 Caution: Reverse parameters the product under certain operating conditions. Panasonic is not responsible for any loss of content or damage to content. * Appearance and specifications are subject to change without notice.
 * Exterior dimensions of main cabinet only - see dimension drawings showing handles and other external projections.

Options

Storage Baskets

For MDF-137/237
MDF-1382-PW (set of two)
MDF-1383-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-4382-PW (set of two)
MDF-4383-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-G85C-PE (excluding MDF-U443) -100°C to +40°C
 • Recorder fixing for MDF-137/237/437, MDF-S140-PW
 • Recorder fixing for MDF-U534/U537D upper room, MDF-S140-PW
 • Recorder fixing for MDF-U534/U537D lower room, MPR-S14-PW
 • Recording paper: RP-G85-W
 • Ink type: P-ink-PW

MTR-4015LH-PE -40°C to +14°C
 • Recorder fixing for MDF-137/237/437, MDF-S3040-PW
 • Recorder fixing for MDF-U534/U537D upper room (ink kit required for MDF-U534/U443/U537D upper room), MPR-S30-PW
 • Recording paper: RP-4015-PW

MTR-85H-PW (for MDF-U443 only)
 -100°C to +50°C
 • Recording paper: RP-85-PW
 • Ink type: DF-387-PW

Data acquisition system
MTR-5000-PW
Interface board
MTR-L63-PW or **MTR-480-PW**

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

MS JAB CME2
 ISO 14001
 U.K.A.S. ISO 13485
 BCFP J1224 051

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

DISTRIBUTED BY:

Panasonic

<http://panasonic.net/healthcare/biomedical/>

Printed in Japan 168-2013-11

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

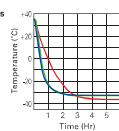


Effective capacity: **425 liters** (15.0 cu.ft.)

Performance Data

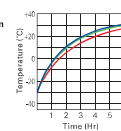
Pull-down characteristics under no-load condition

- 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
- 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.

Upright type

Maximum capacity in minimum installation space

Large-capacity, economical, space-saving model

- Right-hands 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

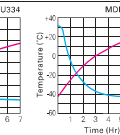
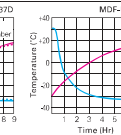
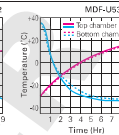
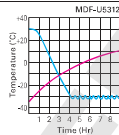
- High freezing power increases temperature uniformity
- Auto defrost for easy maintenance



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

Pull-down characteristics

- Pull-up characteristics during power failure
- Central 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.

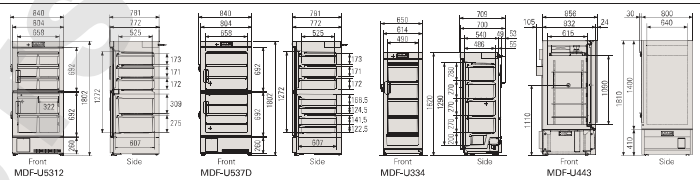
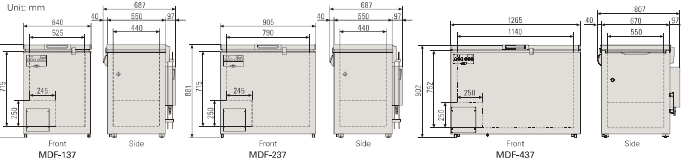
Data Acquisition Software MTR-5000-PW



Graph Display Channel List

Interface board MTR-L03-PW

Dimensions



DOMINIQUE DUT