



## Biomedical Freezers

### -30°C Upright Freezers

#### Optimum Storage Capabilities

Panasonic biomedical freezers offer auto and manual defrost storage solutions for uniformity, reliability and environmentally safe operation.

#### Ergonomic Design with Multiple Applications

Constructed with high-performance laboratory and clinical-grade refrigeration systems, these freezers are used in clinical, biotechnology, and industrial labs. These are ideal for storage of biologics, enzymes, culture media, reagents, and specimens.

High Performance



Security



Optimum Footprint



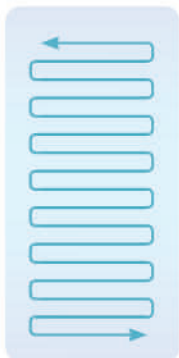
22.0 cu.ft. | 24.4 cu.ft.



#### Uniformity

Using the microprocessor technology the MDF series provides **precise and uniform storage temperatures** regardless of ambient conditions.

(Adjustable temperature setpoints to -15°C or -30°C on MDF-U731-PA and -18°C or -30°C on MDF-U731M-PA, by increments of 1°C.)



Temperature Range  
-15°C to -30°C  
(MDF-U731-PA)

-18°C to -30°C  
(MDF-U731M-PA)



#### Microprocessor Controls

Comprehensive **setpoint, alarm, monitoring, and diagnostic functions** are maintained by Panasonic-built microprocessor controller with digital display of all input/output function.



• Defrost Key

• Digital display of temperature



#### Sample Protection Functions

Digitally adjustable temperature setpoint, high/low temperature alarm, door ajar alarm, remote alarm contacts, and non-volatile memory backup functions.

Both visual and audible alarms are standard.



Standard keyed door lock and integrated padlock hasp are standard features.



# Biomedical Freezers

## -30°C Upright Freezers

Auto and manual defrost storage solutions for uniformity, reliability and environmentally safe operation.

Designed with the features to give superior uniformity, microprocessor control, and large storage capacity. Ideal for biomedical research and biotechnology applications. Additionally, two access ports, casters, remote alarm contacts, and security features are included as standard features.

### General Purpose Storage Maintenance-free

(MDF-U731-PA Only)  
Storage at -30°C with electronically controlled auto-defrost, which occurs only on demand. It leads to minimized temperature spikes and maintenance-free storage. No need for end user intervention to defrost unit and clean up condensate.

### Enzyme Storage Bins

(MDF-U731M-PA Only)  
The optional full storage system creates a flexible and convenient inventory system for enzymes and many other types of samples. The total system includes 14 storage bins and additional wire shelving.

### General Applications - Freezer

Restriction enzyme and reagent preservation



Biological sample preservation

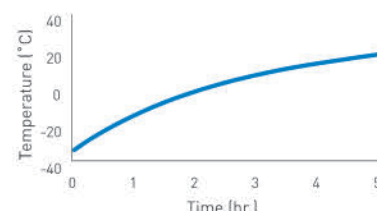
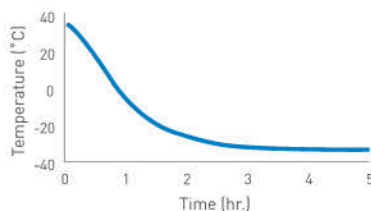


Vaccine preservation



## High Performance Operation

Unlike many other cold wall freezers, the MDF Series has cooling coils strategically spaced in the walls, not only along both sides and the back of the chamber, but also on the top and the bottom of the chamber to ensure maximum cooling performance.



At 35°C, no load, measured at center of chamber

MODEL	MDF-U731-PA	MODEL	MDF-U731M-PA
DEFROSTING SYSTEM	Electronically activated automatic defrost	DEFROSTING SYSTEM	Manual Defrost
TEMPERATURE RANGE	-15°C to -30°C	TEMPERATURE RANGE	-15°C to -30°C
VOLUME	22.0 cu.ft. [623 liters]	VOLUME	24.4 cu.ft. [690 liters]
EXTERIOR DIMENSIONS	30.3" x 32.7" x 77.0" 770 x 830 x 1955 mm	EXTERIOR DIMENSIONS	30.3" x 32.7" x 77.0" 770 x 830 x 1955 mm
INTERIOR DIMENSIONS	25.6" x 27.5" x 53.9" 650 x 700 x 1370 mm	INTERIOR DIMENSIONS	25.6" x 27.5" x 59.8" 650 x 700 x 1520 mm
ELECTRICAL REQUIREMENTS	115V, 60 Hz, 15 Amp breaker, NEMA 5-15P Plug	ELECTRICAL REQUIREMENTS	115V, 60 Hz, 15 Amp breaker, NEMA 5-15P Plug
NET WEIGHT	374.7 lbs. [170 kg.]	NET WEIGHT	335 lbs. [152 kg.]
SHELVES (MAX. LOAD)	4 Adjustable wire shelves, 110 lbs. (50 kg.) capacity each	SHELVES (MAX. LOAD)	4 adjustable wire shelves, 110 lbs. (50 kg.) capacity each
ENERGY CONSUMPTION	3.94 kWh/Day [At -30°C with 20°C ambient temperature]	ENERGY CONSUMPTION	3.32 kWh/Day [At -30°C with 20°C ambient temperature]
INSULATION	CFC-free polyurethane foamed-in place	INSULATION	CFC-free polyurethane foamed-in place
ACCESS PORT	Diameter 30 mm (left) / Diameter 20 mm (top)	ACCESS PORT	Diameter 30 mm (left)
TEMPERATURE CONTROL	Microprocessor control, LED display,	TEMPERATURE CONTROL	Microprocessor control, LED display,
ALARMS AND SAFETY	High/Low temperature alarm, door ajar alarm, power failure, remote alarm contacts, memory backup of set temp	ALARMS AND SAFETY	High/Low temperature alarm, door ajar alarm, power failure, remote alarm contacts, memory backup of set temp