



MDF-U731M-PA | FZRMD24

Biomedical Freezer

-30°C Upright Freezer

24.4 cu.ft. | 690 L

The MDF-U731M-PA is a -30°C manual defrost freezer engineered for stable, reliable cold storage. Its cold wall design promotes uniform temperature distribution without the fluctuations associated with automatic defrost cycles, making it ideal for sensitive materials. Designed for laboratory, clinical, and biotechnology environments, this unit delivers consistent performance for critical storage applications.

Refrigeration Design

This biomedical freezer utilizes unique high performance laboratory and clinical grade refrigeration systems to provide dependable cooling by balancing temperature performance and energy management. The reserve refrigeration power, initiated automatically on demand, assures fast temperature recovery following door openings.

Uniform Storage Environment

Uniform temperatures are maintained throughout the storage chamber through unique electrical control of the refrigeration system. This assures product safety regardless of storage location. This freezer is ideal for storage of biologics, enzymes, culture media, vaccines, lab specimens and other temperature sensitive materials.

Manual Defrost Systems

Model MDF-U731M-PA includes a cold wall evaporator with a manual defrost system. Coils are placed strategically within the chamber for maximum cooling performance. The chamber storage area is maintained at a constant temperature until a manual defrost is initiated. This stability is ideal for temperature sensitive biological materials, such as enzymes.



Stable Temperature Performance

Uniform temperatures are maintained throughout the storage chamber for assured product safety regardless of storage location. This is ideal for storage of biologics, enzymes, culture media, vaccines, lab specimens and other temperature sensitive materials.



Microprocessor Control and Alarm System

Our biomedical freezers include factory preset audible and visual alarms for power failure and door ajar, battery backup and a self-diagnostic messaging system. The softkey six button menu allows for easy management of all freezer functions.



Storage Solutions

The MDF-U731M-PA is equipped with standard wire shelving and offers flexible storage configurations. It supports an optional bin system with additional shelving and accessories, and can be customized with fixed side-access racks or sliding drawer racks to accommodate vial storage boxes.

Image above shows optional storage bins.

-30°C Upright Freezer



Cam latch provides positive door closure.
The key lock and integrated hasp, padlock optional, increase security.

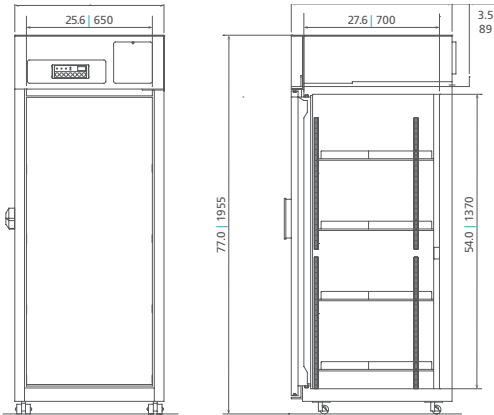
Model MDF-U731M-PA shown with optional storage bins.

Maximize Floor Space

The upright cabinet design offers maximum storage with minimal floor space required.

Dimensions

Unit : inch | mm



MDF-U731M-PA | FZRMD24

Model Number		MDF-U731M-PA FZRMD24
External Dimensions (W x D x H) ¹⁾	inches mm	30.3 x 32.7 x 77.0 770 x 830 x 1955 mm
Internal Dimensions (W x D x H)	inches mm	25.6 x 27.6 x 59.8 650 x 700 x 1520 mm
Volume	cu.ft. liters	24.40 690
Net Weight	lbs kg	335 152
Performance ^{2) 3) 4)}		
Temperature Control Range	°C	-20 to -30 in 1°C increments
Uniformity	±	3
Power Consumption	kWh/day	2.89
BTU Nominal	Per hour	801
Noise Level ⁵⁾	dB(A)	40
Control		
Controller		Microprocessor, softkey data entry, password protected, memory
Display		LED
Temperature Sensor		Thermistor
Refrigeration		
Refrigeration System		Single, hermetic, reciprocal compressor
Compressors	W	(1) 400
Refrigerant		SNAP and CARB Approved HFO R-449A - 260 grams
Evaporator Type		Cold Wall
Defrost		Manual
Insulation Material		Rigid polyurethane foamed-in-place
Construction		
Exterior Material		Powder coated steel
Interior Material		Painted steel
Outer Door		1; Solid
Key Lock		Standard
Additional Door Lock		Provision for pad lock
Shelves		4; Adjustable, wire
Shelf Dimension (W x D)	inches mm	24.6 x 24.4 626 x 620
Max. Load - Total	lbs kg	110 50
Access Port / Position	qty	2; 1 left side 1 top
Bins	qty	Optional
Access Port Diameter	inches mm	1.1 30
Casters	qty	2; Swivel 2; fixed
Leveling Feet	qty	2; Front of base for securing unit in place
Alarms (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm)		
Power Failure		V-B-R
High Temperature		V-B-R
Low Temperature		V-B-R
Door Ajar		V-B
Remote Alarm Contacts / Outputs		Normal open, normal closed, common DC 30V, 2A
Electrical		
Power Supply		115V, 1Ø, NEMA 5-15P; requires NEMA 5-15R receptacle 8 ft power cord
Max Amps		2.4 2.2
Options		
Bin	part number	MDF-T075C-PW (pack of 2)
Bin Capacity	pack	7 packs of 2, total 14 bins
Extra Shelf	part number	MDF730SLF
Circular Type	6" / 7"	MTR-G85A-PA w/ fixing plate MPR-S7-PW
Chart Paper	55 Sheet	RP-G85-PW
Ink Pen	pack of 2	PG-R-PW
Optional Communication System		
Wireless, Cloud-Based, Automatic Data Management		LabSVIFT Gen 1 LabAlert Monitoring System * V-SafeRX *
4-20mA output module		MTR-420MA-PW - Equipment Powered MTR420MAL- Loop Powered * MTR420MAC - Equipment Powered*
Certifications and Warranty		
Certification		QPS listed and ENERGY STAR.
Warranty ⁶⁾		3 years and parts and labor

¹⁾ Exterior dimensions of main cabinet only, excluding handle and other external projections

²⁾ The data reflects performance metrics rather than official product specifications. Results from technical data sheet tests should not be used to establish regulatory parameters for specific customer applications

³⁾ The performance of the freezer will depend on factors such as the volume of customer products, storage configuration, selected options, operating conditions, test methods, and adherence to recommended maintenance practices.

⁴⁾ Ongoing product improvements may lead to changes or omissions in this technical data sheet without prior notice. PHC Corporation of North America disclaims responsibility for any damage, injury, loss, or expenses arising from the misuse of the information provided.

⁵⁾ Nominal value- Background noise 20 dB(A)

⁶⁾ Current warranty offered at time of printing and may be subject to change; US and Canada only

* Manufactured by others



PHC Corporation of North America

