

MDF-DU900VC-PA

## VIP® Series

-86°C Ultra-Low Temperature Upright Freezer

29.8 cu.ft. | 845 L



MDF-DU900VC-PA



The MDF-DU900VC-PA is a high performance ultra-low temperature freezer designed for safe, reliable storage of biologicals in biorepositories or other facilities where bulk consolidation of valuable samples is preferred. This freezer has an efficient volume- to-footprint ratio that makes maximum use of available floor space while still passing through a standard 36" wide (91 cm) doorway.

### Reliability You Can Count On

The robust refrigeration system is powered by engineered compressors. This system provides dependable cooling by balancing temperature performance and energy management. Reserve refrigeration power assures exceptional temperature recovery following door openings. VIP freezers have demonstrated superior reliability with excellent performance history.

### High Capacity Storage, Minimal Footprint

The upright cabinet design employs a patented VIP Plus insulation composite that offers space efficiency. This allows the large freezer cabinet to maximize storage space, holding up to 672 2" boxes or 448 3" boxes within a 10.79 ft<sup>2</sup> (1 m<sup>2</sup>) footprint.

### Ergonomic Design

The computer designed EZlatch (patent pending) is central to an overall freezer access system. This is comprised of the outer door and inner doors, door gaskets, positive inner and outer door latches and a vacuum relief port. These individual components all function in unison to assure comfortable operation, sample security, temperature integrity and control of frost build-up.



### Microprocessor Controller

Freezer operation is managed by a microprocessor-based controller that combines security, monitoring, predictive performance and data logging functions into a single, eye level display.



### Large Volume Efficiency

As sample volumes in biorepositories and biobanks increase exponentially, the high capacity storage chamber offers space for expansion and overflow from crowded smaller freezers.



### EZlatch Design

The EZlatch is engineered to tolerate frequent door openings, simplify one-handed access and control frost associated with extreme temperature differentials.

# VIP Series -86°C ULT Upright Freezer

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## VIP Plus Insulated Panels

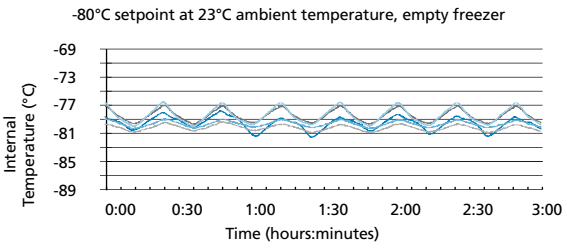
Inside-out engineering starts with a patented VIP Plus insulation composite which results in an efficient, thin-wall cabinet. Insulated inner doors improve temperature uniformity and cold air loss during door openings and extend warm-up times during power outages.

Model MDF-DU900VC-PA is shown empty in the image.

## Touchscreen Display

The high contrast color LCD touchscreen is easy to view from a distance. A USB port is standard and can enhance the gathering, storage and transfer of the freezer operating data. Ideal for quality processes and GxP regulated facilities.

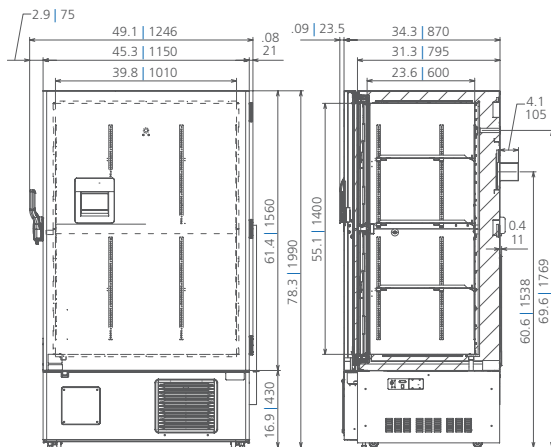
## Temperature Uniformity Data



As interior air temperature stabilizes at the desired setpoint, large mass storage volume sustains tight temperature uniformity of the load inside the insulated cabinet.

## Dimensions

Unit : inch | mm



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Model Number		MDF-DU900VC-PA
External Dimensions (W x D x H) <sup>1)</sup>	inches   mm	45.3 x 34.3 x 78.3   1150 x 870 x 1990
Internal Dimensions (W x D x H)	inches   mm	39.8 x 23.6 x 55.1   1010 x 600 x 1400
Volume	cu.ft.   liters	29.8   845
Net Weight	lbs.   kg	842   382
Capacity (2" boxes)	qty	672
Capacity (3" boxes)	qty	448
Inventory Racks (2" boxes)	qty	28
Inventory Racks (3" boxes)	qty	28
<b>Performance</b>		
Warranty		5 years parts and labor <sup>2)</sup>
Cooling Performance <sup>3)</sup>	°C	-86
Temperature Setting Range	°C	-50 to -90 in 1°C increments
Temperature Control Range <sup>3)</sup>	°C	-50 to -86 in 1°C increments
<b>Control</b>		
Controller		Microprocessor, touchscreen data entry, password protected
Display		LCD color touchscreen
Temperature Sensor		Pt-1000
<b>Refrigeration</b>		
Refrigeration System		Cascade
Compressors	W	(1) 1000 High-Stage and (1) 1100 Low-Stage
Refrigerant		CFC-free R-404A and R-508A
Insulation Material		Rigid polyurethane foam (PUF) + VIP Plus
<b>Construction</b>		
Exterior & Interior Material		Painted steel
Outer Door	qty	1
Outer Door Lock		Standard
Inner Doors	qty	2 insulated, ABS, with stainless steel frame and positive latches
Shelves	qty	3
Shelf Dimensions (W x D)	inches   mm	38.9 x 20.9   988 x 533
Max. Load - per Shelf	lbs   kg	110   50
Max. Load - Total Freezer	lbs   kg	440   200
Vacuum Release Port		Standard
Access Ports	qty	2
Access Port Position		Back wall and chamber floor
Access Port Diameter	inches   mm	0.6   17
Casters	qty	4 (2 leveling feet)
<b>Alarms (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm)</b>		
Power Failure		V-B-R
High Temperature		V-B-R
Low Temperature		V-B-R
Filter		V-B
Door Open		V-B
<b>Electrical and Noise Level</b>		
Power Supply		208-220V, 1Ø, NEMA 6-15P requires NEMA 6-15R receptacle
Frequency	Hz	60
Noise Level <sup>4)</sup>	dB (A)	52
<b>Options</b>		
Small Inner Door Kit	set of 2 (total of 4 inner doors)	MDF-9ID-PW (max 2) <sup>5)</sup>
Liquid CO <sub>2</sub> Back-up System		MDF-UB6B-PW
<b>Temperature Recorders</b>		
Circular Type	6", 7 day circular	MTR-C954
Chart Paper	52 charts per box	C7100386REV
Ink Pen	pack of 6	R252
<b>Optional Communication System</b>		
Wireless, cloud-based, automatic data management		LabAlert® Monitoring System

<sup>1)</sup> Exterior dimensions of main cabinet only, excluding handle and other external projections

<sup>2)</sup> Current warranty offered at time of printing and may be subject to change; US and Canada only

<sup>3)</sup> Air temperature measured at freezer center, ambient temperature +30°C, no load

<sup>4)</sup> Nominal value - Background noise 20dB[A]

<sup>5)</sup> Installation of small inner door kit may affect usable storage capacity

Specifications are subject to change without notice.

For latest specification information contact PHC Corporation of North America at info@us.phchd.com.