PHCBI

MDF-DC700VXC-PA | **75788-512**

Twin*Guard*®

-86°C Ultra-Low Temperature Chest Freezer

25.3 cu.ft. | 715 L

DUAL cooling system

VIP PLUS vacuum insulation

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The patented TwinGuard -86°C chest freezer is powered by a unique concept of two independent auto-cascade cooling circuits that work together, both independently and concurrently, to provide continuity in stored product protection over a range of real world conditions.
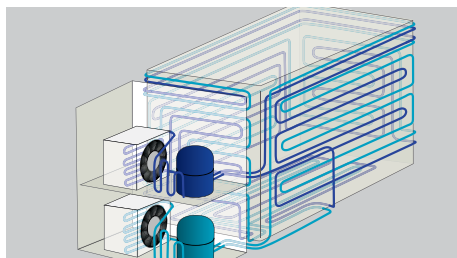
Ultimate Sample Protection

The dual cooling system offers the highest level of sample protection through the use of two independent refrigeration systems that maintain -86°C temperature. The two circuits work together for fast temperature recovery, while the secondary system keeps the temperature at -70°C if a service event occurs.

Efficient Sample Storage

The use of VIP® Plus cabinet and lid insulation, combined with a newly designed refrigeration system layout ensures a capacity of 520, 2" storage boxes, utilizing less floor space than competitive units.

Security Control and Monitoring

A color LCD touchscreen allows full user control while the USB port makes transferring logged data to a PC convenient. All performance attributes are displayed and an internal time/temperature log is expressed in graphic form.

Valuable Sample Storage

With two independent systems, each sustaining ultra-low temperatures, your samples remain safe. Optional CO_2 backup provides an extra layer of protection.

Predictive Maintenance

Performance monitoring ensures the freezer is operating within specification. This protects the compressors and condenser fans. External stress on the compressors or fans, due to ambient temperature abnormality or excess load, is displayed for immediate notification.

Ease of Use

The display panel includes a comprehensive alarm system with audible and visual warnings, unit diagnostics and running temperature log.

PHC Corporation of North America

avantor delivered by **VWr** | **VWR.COM**
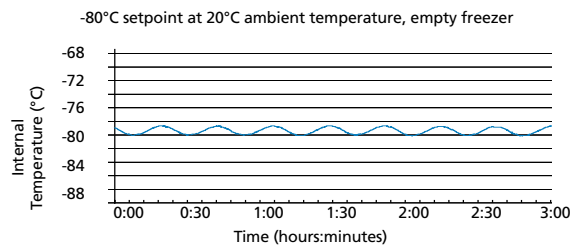
Twin*Guard*® -86°C ULT Chest Freezer

Model MDF-DC700VXC-PA | **75788-512**

Improved Temperature Performance

The TwinGuard -86°C chest freezer design provides optimal temperature stability and uniformity during routine lid openings, minimizing the loss of cold air even when the freezer lid is open.
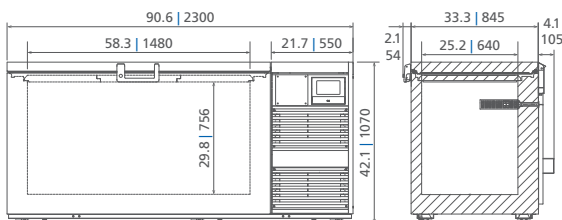
Temperature Uniformity Data:

-80°C setpoint at 20°C ambient temperature, empty freezer

Typical uniformity profile. For detailed information on actual data points contact PHC Corporation of North America.

Dimensions

Unit : inch | mm

Model Number		MDF-DC700VXC-PA	**75788-512**
External Dimensions (W × D × H) [1]	inches	mm	90.6 × 37.6 × 42.1 I 2300 × 955 × 1070
Internal Dimensions (W × D × H)	inches	mm	58.3 × 25.2 × 29.8 I 1480 × 640 × 756
Volume	cu.ft.	liters	25.3 I 715
Net Weight	lbs	kg	807 I 366
Capacity (2" boxes)	qty	520
Capacity (3" boxes)	qty	360
Inventory Racks (2" boxes)	qty	40
Inventory Racks (3" boxes)	qty	40
Performance		
Warranty [2]		5 years parts and labor
Cooling Performance [3]	°C	-86
Temperature Setting Range [3]	°C	-50 to -90 in 1° increments
Temperature Control Range [3]	°C	-50 to -86 in 1° increments
Cooling Performance [3] Service Event (System A or B)	°C	-70
Control		
Controller		Microprocessor, touchscreen data entry, password protected
Display		LCD color touchscreen
Temperature Sensor		Pt-1000
Refrigeration		
Refrigeration System	qty	2 (auto-cascade)
Compressors	W	(2) 1100
Refrigerant		Mixed HC/HFC blended
Insulation Thickness, Material	inches I mm	2.8 I 70, foamed-in-place + VIP Plus vacuum insulated panels
Construction		
Exterior Material		Painted steel
Interior Material		Stainless steel
Lid	qty	1 (key lock)
Sub Lids	qty	3 (insulated, foamed styrene)
Access Ports	qty	1: back wall
Access Port Diameter	inches	mm	0.6	17
Casters	qty	6 (3 leveling feet)
Alarms		(V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm)
Power Failure		V-B-R
Temperature (High and Low)		V-B-R
Sensor Failure		V-B-R
Door Open		V-B
Battery Check		V
Fan Motor Check		V
Cooling Circuit Abnormality		V-B-R
Remote Alarm Contacts		DC 30V 2A (normally open, normally closed, common)
Electrical and Noise Level		
Power Supply		208V-230V, 1Ø, 60Hz, NEMA 6-15P, requires NEMA 6-15R receptacle
Voltage Booster		Standard, automatic, built-in
Noise Level [4]	dB(A)	52
Options		
Liquid CO_2 Back-Up System		MDF-UB5-PW	**76490-332**
Liquid Nitrogen Back-Up System		MDF-UB5-PW-LN2
Temperature Recorder		
Chart Recorder [5]	6", 7 day circular	MTRC954	**97014-882**
Chart Paper	52 charts per box	C7100386REV	**76490-366**
Ink Pen	pack of 6	R252	**76452-714**
Optional Communication System		
Wireless, Cloud-Based, Automatic Data Management		LabAlert® Monitoring System

[1] Exterior dimensions of cabinet excluding handle, rear stand-off brackets and other external projections. Consult sales rep for doorway entry instructions, less than 37.6".
[2] Current warranty offered at time of printing and may be subject to change; US and Canada only
[3] Air temperature measured at freezer center, ambient temperature +30°C, no load
[4] Nominal value, background noise 20 dB(A)
[5] Requires sensor cover MTR-DU700SF-PW

Specifications are subject to change without notice.

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