MDF-DC700VX-PE

TwinGuard

-86˚C Chest Freezers

575 | 715 L

TWIN GUARD dual cooling system

VIP PLUS vacuum insulation

MDD medical device directive

PHCbi's **TwinGuard** -86˚C chest freezers deliver the unsurpassed level of safety and sample security that is critical for valuable biological samples alongside exceptional ease of use and data monitoring.

Ultimate Sample Protection

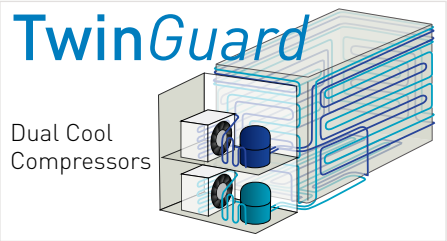
The Dual Cooling System offers the highest level of protection through the use of two independent refrigeration systems. If one system unexpectedly fails the other can maintain the freezer in the -70˚C range.

Improved Temperature Performance

TwinGuard chest freezers maintain better temperature stability and uniformity during routine door openings than equivalent upright models as less cold air leaves the freezer while the door is open.

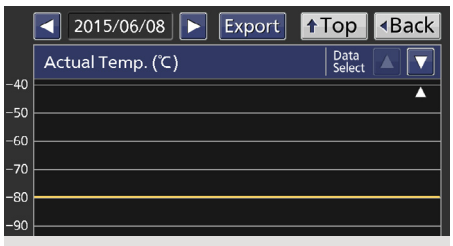
Enhanced Use & Intelligent Security

A colour LCD touch panel allows full user control, even with gloved hands, while the USB port makes transferring logged data to a PC convenient. The filterless design of the freezers reduces routine maintenance.



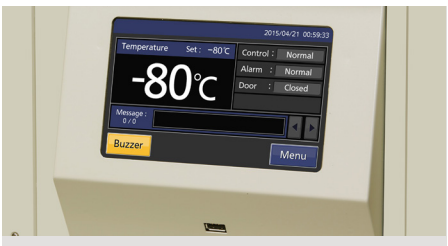
Valuable Sample Storage

Securely store valuable and irreplaceable samples with the upmost confidence that they won't be lost in the case of compressor failure.



Temperature Sensitivity

Enhanced uniformity and greatly reduced risk of sample degradation as a result of temperature fluctuation during freezer failure.



Restricted Access Laboratories

Significantly extended critical time to react to any sudden mechanical failure. Ideal for high security applications.

TwinGuard -86°C Chest Freezers

Dual Cooling System

Two independent refrigeration systems, with CoolSafe compressors, provide a reliable and exceptionally stable -86°C ultra-low temperature environment.

In the case of an unexpected failure of one cooling circuit, the other circuit will maintain the freezer in the -70°C range, protecting samples until service can be arranged.

Microprocessor Control with Touch Screen Display

An LCD touch screen displays freezer temperature and important status information while a USB port allows logged data to be easily transferred to a PC.

When set to ECO mode, the microprocessor controller will establish an overlapping cycle of the two refrigeration systems based on the load status of the freezer, significantly reducing energy consumption.

Efficient Sample Storage

The use of highly efficient VIP Plus insulation combined with a newly designed refrigeration system layout ensures the most efficient use of space for up to 30%* more 2" box storage capacity.

*MDF-DC500VX compared with previous equivalent PHCbi models.

Filterless Design

The filterless construction of the freezers reduces routine maintenance time by eliminating the need for regular cleaning of filters.

EEA, Switzerland and Turkey only

CE 0123 **For medical use**
The MDF-DC500&700VX freezers are certified as a Class IIa Medical Device (93/42/EEC and 2007/47/EC). Applicable countries: Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Ireland, Italy, Liechtenstein, Luxembourg, Malta, the Netherlands, Spain, Switzerland and the United Kingdom only

CE **For laboratory use**
Applicable countries: EEA countries, Switzerland and Turkey

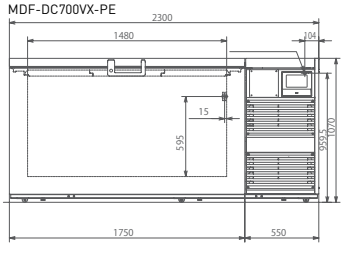
Model Number		MDF-DC500VX-PE	MDF-DC700VX-PE
External dimensions (W x D x H)[1]	mm	2010 x 845 x 1070	2300 x 845 x 1070
Internal dimensions (W x D x H)	mm	1190 x 640 x 756	1480 x 640 x 756
Volume	litres	575	715
Net Weight	kg	328	358
Capacity	2" boxes	416	520
Performance			
Cooling performance [2]	°C	-86	
Temperature setting range	°C	-50 to -90	
Temperature control range [2]	°C	-50 to -86	
Control			
Controller		Microprocessor, non-volatile memory	
Display		LCD Touch Screen	
Temperature sensor		Pt-1000	
Refrigeration			
Refrigeration system*		Independent Dual-Cooling	
Compressors	W	2 x 1100	
Refrigerant		MU-NC500	MU-NC700
Refrigerant weight	g	515	550
GWP of refrigerant for each cooling circuit		5139	5370
Total Refrigerant weight (CO_2 equivalent)	t	5.293	5.907
Insulation material		PUF / VIP Plus	
Insulation thickness	mm	70/135	
Construction			
Exterior material		Painted Steel	
Interior material		Stainless Steel	
Outer lid	qty	1	
Outer lid lock		Y	
Inner lid		3 pieces (Styrofoam)	
Access Port	qty	1	
- position		Back	
- diameter	Ø mm	17	
Alarms		(R = Remote Alarm, V = Visual Alarm, B = Buzzer Alarm)	
Power failure		V-B-R	
High temperature		V-B-R	
Low temperature		V-B-R	
Filter		Filterless design	
Lid open		V-B	
Electrical and Noise Level			
Power supply	V	230	
Frequency	Hz	50	
Noise level[3]	dB [A]	52	
Options			
Liquid CO_2 back-up		MDF-UB5-PW	
Temperature recorders			
- Circular type		MTR-G85C-PE	
- Chart paper		RP-G85-PW	
- Ink pen		PG-R-PW	
- Continuous strip type		MTR-85H-PW	
- Chart paper		RP-85-PW	
- Ink pen		DF-38FP-PW	
- Recorder housing		MDF-S3085-PE	

Appearance and specifications are subject to change without notice.

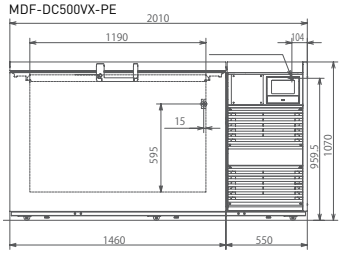
[1] Exterior dimensions of main cabinet only, excluding handle and other external projections - See dimensions drawings on website for full details.
[2] Air temperature measured at freezer centre, ambient temperature +30°C, no load
[3] Nominal value - Background noise 20dB[A]

* Complies with Art. 11, Annex III of F-Gas Regulation (EU) No 517/2014. Contains fluorinated greenhouse gases in hermetically sealed equipment.

MDF-DC700VX-PE



MDF-DC500VX-PE



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