MDF-DU302VX

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TwinGuard

-86˚C Ultra-Low Temperature Freezer

DUAL cooling system | VIP PLUS vacuum insulation | EZlatch door handle

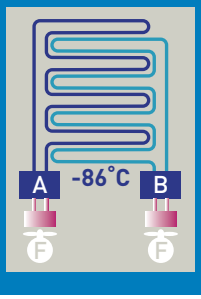
360 L

Ultra-low temperature storage solution for valuable samples. Twin*Guard* equipped with new Dual Cooling System.

New Twin*Guard* adopts optimised Dual Cooling System and new cabinet design with enhanced insulation performance and storage capacity.
Superior cooling performance focused on reliability and safety suitable even for mass sample storage such as biobank use.

Ultimate Sample Protection

New optimised Dual Cooling System "Twin*Guard*" comprised of independent dual cooling circuits realises -86˚C and one side of the cooling circuits maintains chamber temperature at -70˚C.
The freezer can minimise risk of compromising valuable samples.



Efficient Sample Storage

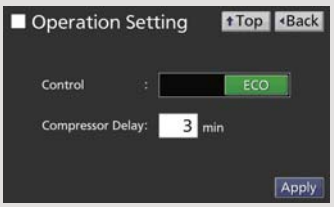
New cabinet design combines an insulated outer door with superior storage efficiency and an inner door designed for uniform temperature distribution. This improves storage efficiency approximately 10 % [240 pcs of 2-inch Cryo boxes can be stored] while maintaining the same footprint as conventional models.

Intelligent Interface

The newly developed ergonomic "EZlatch" door handle makes access to stored samples even easier. Intuitive and intelligible large colour LCD touchpanel is provided.

ECO operation and energy saving

Improved insulating performance cuts power consumption approximately 10 %* compared to conventional models when the ECO mode is selected, thanks to the effective combination of VIP Plus insulation and the next-generation cabinet.



* Compared to conventional models. Power consumption per 2 inch box. Power source: 230 V 50 Hz, AT 23°C

Flexible shelf layout

Multiple shelf configurations allow a variety of storage options. Organise your samples by transferring your current inventory racks.

Reliable controllability and data log function

Large colour LCD touchpanel is accurately controlled even with a gloved hand, while the USB port makes transferring logged data of product's operational status to a PC convenient.

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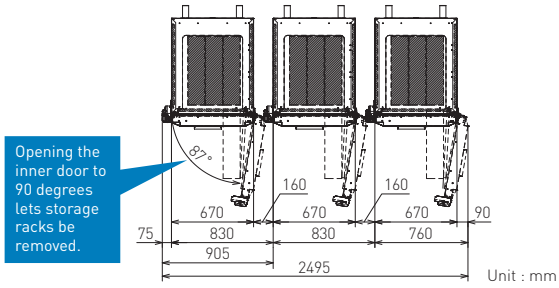
New Cabinet Design

The "Chamfer-design" body front features a chamfered edge for reduced installation space in a multiple unit installation. The design is especially suitable for a biobank or similar application.



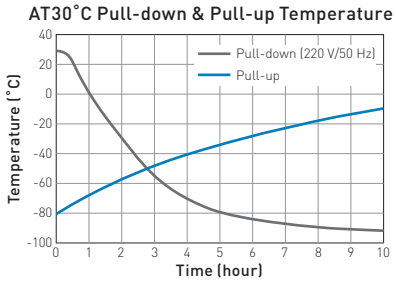
Filterless Design

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

User friendly for daily operation with newly developed vacuum release port and fivefold gasket

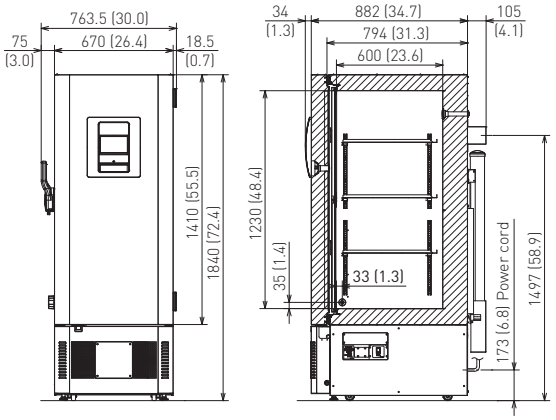
Newly developed automatic vacuum release port and fivefold gasket are adopted. Automatic release of negative pressure and reduced frost realise user friendliness even for frequent door opening.

Performance Data



Dimensions

Unit : mm (inch)



Model Number		MDF-DU302VX-PE	MDF-DU302VX-PA
External dimensions (W x D x H) [1]	mm	670 x 882 x 1840	
Internal dimensions (W x D x H)	mm	490 x 600 x 1230	
Volume	litres	360	
Net weight	kg	225	
Capacity [2]	2" boxes	240	
Performance			
Cooling performance [3]	°C	-86	
Temperature setting range	°C	-90 to -50	
Temperature control range [3]	°C	-86 to -50	
Control			
Controller		Microprocessor, non-volatile memory	
Display		LCD Touchpanel	
Temperature sensor		Pt-1000	
Refrigeration			
Refrigeration system		Independent Dual-Cooling	
Compressors	W	2 x 450	
Refrigerant		HFC mixed	
Insulation material		PUF / VIP PLUS	
Insulation thickness	mm	80	
Construction			
Exterior material		Painted Steel	
Interior material		Painted Steel	
Outer door	qty	1	
Outer door lock		Yes	
Inner doors	qty	2 pieces	
Shelves	qty	3 (stainless steel)	
Max. load - per shelf	kg	50	
Max. load - total [4]	kg	365	
Vacuum release port		2 (1 automatic, 1 manual)	
Access port	qty	3	
Access port position		3 locations (rear x 1, bottom x 2)	
Access port diameter	Ø mm	17	
Casters	qty	4 (2 leveling feet)	
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	
Filter		Filterless design	
Door open		V-B	
Electrical and Noise Level		MDF-DU302VX-PE	MDF-DU302VX-PA
Power supply	V	220 / 230 / 240	220
Frequency	Hz	50	60
Noise level [5]	dB (A)	52	
Options			
Liquid CO_2 back-up		MDF-UB7-PW	
Inventory rack		IR-220U-PW	
Temperature recorders - Circular type		MTR-G85C-PE [6]	- Chart paper: RP-G85-PW - Ink pen: PG-R-PW
Temperature recorders - Continuous strip type		MTR-85H-PW [6]	- Chart paper: RP-85-PW - Ink pen: DF-38FP-PW - Recorder housing: MDF-S3085-PW
Optional Communication Systems			
Digital interface (RS232C/RS485) [7]		MTR-480-PW	
Ethernet interface (LAN) [7]		MTR-L03-PW	
Quality Management System			
Certification		ISO 9001	

1] External dimensions of main cabinet only, excluding handle and other external projections.
2] Usable storage capacity of 2" boxes when the original 3 trays installed.
3] Air temperature measured at freezer centre, ambient temperature 30°C, no load.
4] Max. load allowed for chamber interior — total shelves (3) and chamber bottom, excluding load on casters mounted on product.
5] Nominal value - Background noise 20 dB[A].
6] Requires sensor cover MTR-DU700SF-PW.
7] Only for MTR-5000 (data acquisition system) users.

- Appearance and specifications are subject to change without notice.

Caution: PHC Corporation guarantees this product under certain warranty conditions. However, please note that PHC Corporation shall not be responsible for any loss or damage to the contents of the product.

Preservation Equipment, Experimental Environment Equipment, Dispensary Equipment, Culturing Equipment and Drying & Sterilising Equipment for General Laboratory use

The management of the design, development, production and servicing of the above.

PHC Corporation, Biomedical Division
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PHC Corporation, Biomedical Division is certified for:
Environmental management system: ISO14001

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