PHCbi

-86°C Ultra-low Temperature Freezer

VIP PLUS vacuum insulation

EZlatch door handle

845 L

PHCbi's MDF-DU900V -86°C Upright Freezer provides maximum sample storage capacity within an optimum footprint combined with industry leading cooling performance and reliability for an ideal long-term preservation solution.

MDF-DU900V

Maximum Sample Storage

The use of space saving VIP PLUS panels within the freezer cabinet allows a capacity of up to 616 2" boxes inside a footprint of just 1m^2 for maximum storage. The freezer's conventional depth allows for easy installation.

Reliable PHCbi Technologies

The compressors that are specifically designed for ultra-low temperature applications are employed in the proven PHCbi cascade refrigeration system ensuring high levels of performance and reliability.
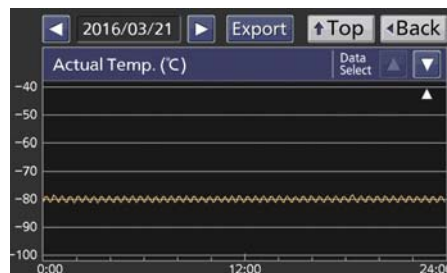
Enhanced Use & Intelligent Security

The new EZlatch makes access to stored samples even easier.
A colour LCD touch panel allows full user control, even with gloved hands, while the USB port makes transferring logged data to a PC simple and convenient.

High Capacity Sample Storage
Ideal for high volume and long term sample storage in biobanks and biorepositories.

Dependable Preservation
Quality of design and manufacture ensures trusted and reliable storage that maintains the integrity of precious samples.

Easy Data Monitoring
Important information such as freezer temperature, door opening times and alarm history is logged for monitoring in GLP applications.

PHC Corporation, Biomedical Division

Life Science Innovator Since 1966
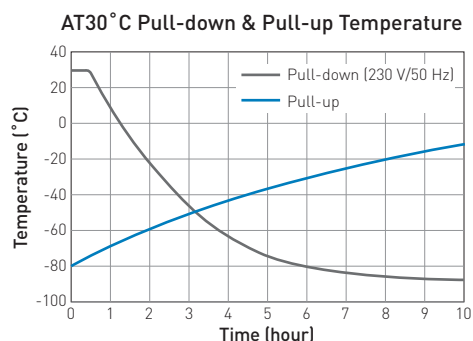
-86°C Ultra-Low Temperature Freezer

Application Specific Design

Refrigeration components are carefully selected and matched for optimum and efficient operation under demanding laboratory environments. This improves temperature recovery after door openings and sample placement, while ensuring lower internal temperatures for increased durability.
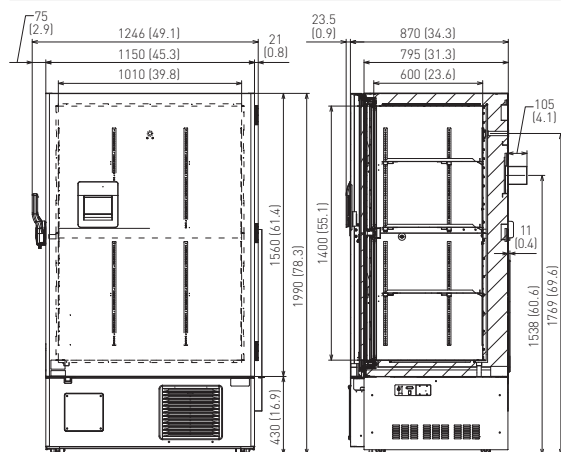
Microprocessor Control with Touch Screen Display

Managed and monitored by an integrated microprocessor controller with a comprehensive alarm system and self-diagnostic functions. Freezer temperature and important status information are clearly displayed and logged, with the possibility to export the data to USB.

Performance Data

AT30°C Pull-down & Pull-up Temperature

- Pull-down (230 V/50 Hz)
- Pull-up

Dimensions

Unit : mm (inch)

Model Number		MDF-DU900V-PB	MDF-DU900V-PE	MDF-DU900VC-PA	MDF-DU900V-PK
External dimensions (W x D x H) [1]	mm	1150 x 870 x 1990			
Internal dimensions (W x D x H)	mm	1010 x 600 x 1400			
Volume	litres	845			
Net weight	kg	376		382	
Capacity	2" boxes	616			
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		Cascade			
Compressors	W	2 x 1100			
Refrigerant		HFC			
Insulation material		PUF / VIP PLUS			
Insulation thickness	mm	70			
Construction					
Exterior material		Painted Steel			
Interior material		Painted Steel			
Outer door	qty	1			
Outer door lock		Y			
Inner doors	qty	2 pieces (insulated)			
Shelves	qty	3 (stainless steel)			
Max. load – per shelf	kg	50			
Max. load – total	kg	574.2			
Vacuum release port		Y			
Access port	qty	2			
Access port position		Back, Bottom			
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		V-B			
Door open		V-B			
Electrical and Noise Level		MDF-DU900V-PB	MDF-DU900V-PE	MDF-DU900VC-PA	MDF-DU900V-PK
Power supply	V	220	230 / 240	220	220
Frequency	Hz	50	50	60	60
Noise level [3]	dB (A)	52			
Options					
Small inner door kit	set of 2	MDF-9ID-PW (max 2) [4]			
Liquid CO2 back-up		MDF-UB6B-PW			
Inventory rack		IR-224U-PW, IR-220U-PW			
Temperature recorders – Circular type		MTR-G85C-PE [5] – Chart paper: RP-G85-PW			
		– Ink pen: PG-R-PW			
Temperature recorders – Continuous strip type		MTR-85H-PW [5] – Chart paper: RP-85-PW			
		– Ink pen: DF-38FP-PW			
		– Recorder housing: MDF-S3085-PW			
Optional Communication Systems					
Digital interface (RS232C/RS485) [6]		MTR-480-PW			
Ethernet interface (LAN) [6]		MTR-L03-PW			

[1] Exterior dimensions of main cabinet only, excluding handle and other external projections.
[2] Air temperature measured at freezer centre, ambient temperature 30 °C, no load.
[3] Nominal value - Background noise 20 dB[A].
[4] Installation of small inner door kit may effect usable storage capacity.
[5] Requires sensor cover MTR-DU700SF-PW.
[6] Only for MTR-5000 (data acquisition system) users.
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.

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