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雙獨立壓縮機

人臉辨識 (選配)

NEW

TwinGuard eco

Natural refrigerants

Ultra-low Temperature Freezer

-86°C to -40°C

528 L / 729 L



MDF-DU703VXH(A)

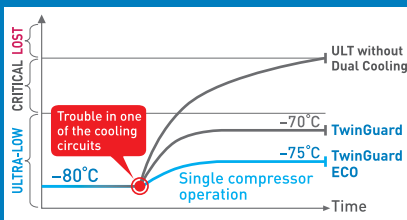
MDF-DU503VXH(A)

Ultra-low Temperature Freezer with Dual Compressors and Natural Refrigerants

The next generation **Twin Guard ECO** Ultra Low Temperature freezers enhance access control via an electronic lock with facial recognition (optional), NFC protection (optional) and PIN code, offering a significantly high protection for valuable samples. The use of natural refrigerants minimizes energy consumption which in turn reduces environmental impact.

Ultimate Sample Protection

The Dual Cooling System offers high levels of protection through the use of two independent refrigeration systems. If one system unexpectedly fails, the other can maintain the freezer in the -75°C range.



*Any unexpected failure on either of the single compressor will be alerted

Performance and Reliability

Naturally occurring hydrocarbon (HC) refrigerants have minimal effect on the environment and are compliant with environmental legislation for climate control. Combined with inverter technology, these refrigerants also provide more efficiency without compromising cooling performance, ambient tolerance, and recovery speeds following door openings.

Security Control and Monitoring

An eye level, door-mounted, 10.1 inches high resolution LCD touchscreen allows full user control. The USB port makes transferring logged data to a PC convenient. All performance attributes are displayed and an internal temperature log can be expressed in graphic form over time.



Valuable Sample Storage

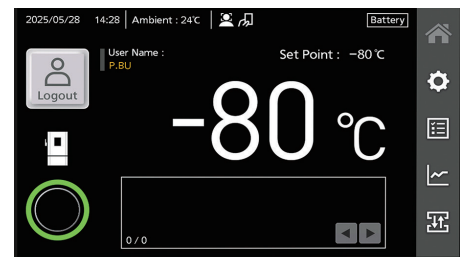
Securely stores valuable and irreplaceable samples to prevent loss even with compressor failure.



Natural Refrigerants

Natural refrigerants, compressors and integrated electronics combine to lower operating costs by up to 57%*. Freezer operation is managed by effectively balancing temperature performance and energy management.

*Model MDF-DU703VXH-PE compared to model MDF-DU702VX-PE 230V 50Hz Normal mode (AT23°C SV-80°C, no load)



Electronic Door Lock

Know who uses the freezer and when. Door openings/closings are tracked.

3 Ways to lock the door:

- PIN code
- Facial recognition (optional)
- IC card (optional)



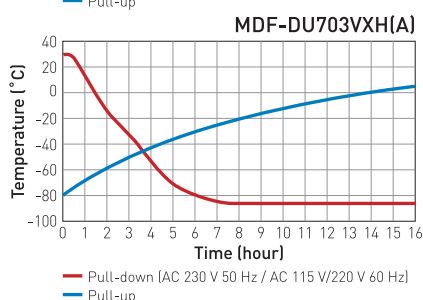
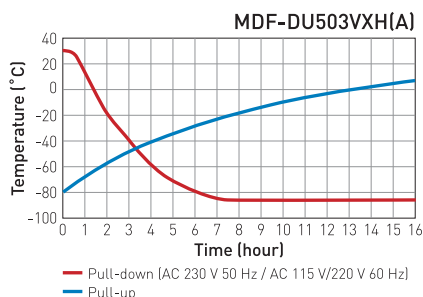
TwinGuard eco

Natural refrigerants
Ultra-low Temperature Freezer

With optional inner door set
MDF-7ID4-PW

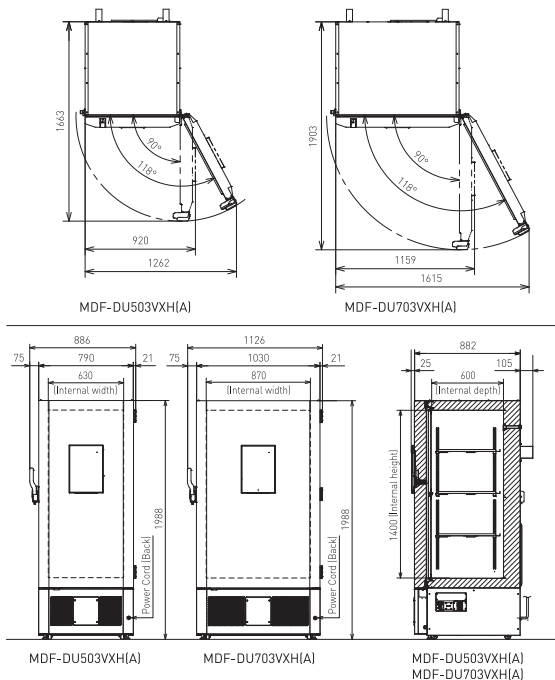
Performance Data

AT30 °C Pull-down & Pull-up Temperature



Dimensions

Unit : mm



Model Number	MDF-DU503VXH-PE MDF-DU503VXH-PA	MDF-DU703VXH-PE MDF-DU703VXH-PA
External dimensions (W x D x H) ¹⁾	mm 790 x 882 x 1988	1030 x 882 x 1988
Internal dimensions (W x D x H)	mm 630 x 600 x 1400	870 x 600 x 1400
Volume	liters 528	729
Net weight	kg PE: 262 / PA: 263	PE: 296 / PA: 297
Capacity ²⁾	2" boxes 384	576
Performance		
Cooling performance ³⁾	°C	-86
Temperature settable range	°C	-90 to -40
Temperature control range ³⁾	°C	-86 to -40
Control		
Controller		Microprocessor with non-volatile memory
Display		LCD Touchscreen
Temperature sensor		Pt-1000
Refrigeration		
Refrigeration system		Independent Dual-Cooling
Compressors	W	2 x 920
Refrigerant		HC
Insulation material		PUF / VIP Plus
Insulation thickness		80 mm
Construction		
Exterior material		Painted Steel
Interior material		Painted Steel
Outer door	qty	1
Outer door lock		Y
Inner doors	qty	2
Shelves	qty	3 (stainless steel)
Max. load - per shelf	kg	50
Vacuum release port	qty	1 (automatic)
Access port	qty	3
Access port position		back x1, bottom x2
Access port diameter	∅ mm	17
Casters	qty	4 (2 leveling feet)
Alarms (V = Visual Alarm, B = Buzzer Alarm, M = Message, R = Remote Alarm)		
Power failure		V-B-M-R
High temperature		V-B-M-R
Low temperature		V-B-M-R
Filter		Filterless design
Door open		V-B-M
Electrical and Noise Level		
Power supply	V	PE: 220/230/240 / PA: 115/220
Frequency	Hz	PE: 50/60 (220 V/230 V), 50 (240 V) / PA: 60
Noise level ⁴⁾	dB (A)	52
Options		
Inventory rack		IR-224U-PW, IR-316U-PW
Drawer		MDF-50R-PW
Small inner door kit	set of 5	MDF-5ID5-PW
Small inner door kit	set of 4	MDF-5ID4-PW
Face recognition kit		MTR-FRC-PW
NFC System ⁷⁾	set of 5	NFC reader: MTR-NFC-PW IC Cards: MTR-IC-PW
Liquid CO ₂ back-up		MDF-UB9-PW
Temperature recorders	- Circular type	MTR-G85C-PE/MTR-G85A-PA ⁶⁾ - Chart paper: RP-G85-PW - Ink pen: PG-R-PW
	- Continuous strip type	MTR-85H-PW ⁶⁾ - Chart paper: RP-85-PW - Ink pen: DF-38FP-PW - Recorder housing: MDF-S3085-PW
Recorder sensor cover		MTR-DU7005F-PW
Optional Communication Systems		
Digital interface (RS232C/RS485)		MTR-480-PW ⁸⁾
Ethernet interface (LAN)		MTR-MOBB1-PW ⁹⁾
Analog converter		MTR-420MA-PW
Quality Management System		
Certification		ISO9001

- Exterior dimensions of main cabinet only, excluding handle and other external projections.
- Usable storage capacity of 2" boxes when the original 3 trays installed.
- Air temperature measured at freezer center, ambient temperature 30 °C, no load.
- Nominal value - Background noise 20 dB(A).
- Usable storage capacity will be 480 x 2" boxes with installation of MDF-7ID5-PW and additional shelf.
- Requires sensor cover MTR-DU7005F-PW.

- The NFC System is only available in limited countries.
 - Only for MDF-DU503VXH-PA and MDF-DU703VXH-PA.
 - Standard signal and interface cables with a maximum length of 30 meters are recommended.
 - 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 is certified for:
Environmental management system: ISO14001



MDF-DU503VXH-PA
MDF-DU703VXH-PA
models only

ENERGY STAR® Certified

For details see
www.energystar.gov/productfinder/product/certified-lab-grade-refrigeration/details/4528780
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PHC Corporation, Biomedical Division 1-1-1 Sakada, Oizumi-machi, Ora-gun, Gunma 370-0596, Japan

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