

Cryogenic

-150°C Chest Freezer

128 L



MDF-1156-PE



The most uniform storage temperatures for cryopreservation solutions

The MDF-1156 **Cryogenic** Freezer offers unparalleled safety, reliability and uniform temperatures well below -135°C for ideal long-term cryopreservation solutions.

Optimum Sample Storage

The use of patented space saving VIP PLUS panels within the freezer cabinet provides a reduced wall thickness for maximum interior volume. This results in a capacity of up to 150 2" boxes.

Reliable Technologies

Compressors that are specifically designed for ultra-low temperature applications are employed in the proven cascade refrigeration system ensuring the highest levels of performance and reliability.

Ease of Use & Intelligent Security

All alarm functions, self-diagnostic notifications and a graphical display of temperature performance over time are available in the specially designed LCD control panel.



Uniform Sample Storage

The uniform and stable temperatures provided are ideal for storage of cells, tissues and other important biological samples.



Dry Storage

The highest levels of protection for valuable samples, without the risks of cross contamination and vertical temperature gradients.



Easy Monitoring

The blue display provides a clear view of the temperature and gives a notification in the case of abnormalities.

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Application Specific Design

Due to the extended operation of compressors within ultra-low temperature freezers, lubricant oil is essential to reduce wear, prevent abrasions and seizure and therefore maintain the highest levels of freezer performance. However, when lubricant oil circulates within the refrigeration circuit, it can cause piping to become clogged, resulting in compressor damage. Incorporating a high-efficiency oil separator, **Cryogenic -150°C** freezers effectively separate lubricant oil from refrigerant, increasing the durability of the compressors and offering a reliable ultra-low temperature environment.

High Storage Capacity

Cryogenic freezers with VIP PLUS insulation provide up to 30% more storage capacity than a conventionally insulated freezer without increasing the footprint.

Microprocessor Control

Managed and monitored by an integrated microprocessor controller with a comprehensive alarm system and diagnostic functions.

Model Number		MDF-1156-PE
Dimensions		
External Dimensions (W x D x H) ¹⁾	mm	1400 x 800 x 945
Internal Dimensions (W x D x H)	mm	500 x 450 x 572
Volume	litres	128
Capacity	2" boxes	81
Net weight (approx)	kg	265
Performance		
Cooling performance ²⁾	°C	-152
Temperature setting range	°C	-125 - -155
Temperature control range ²⁾	°C	-130 - -152
Control		
Controller		Microprocessor, non-volatile memory
Display		LCD
Temperature sensor		Pt-1000
Refrigeration		
Refrigeration system		Cascade
High-stage compressor	W	1100
High-stage refrigerant		HFC
Low-stage compressor	W	1100
Low-stage refrigerant		HFC mixed
Insulation material		PUF
Insulation thickness	mm	175
Construction		
Exterior Material		Painted Steel
Interior Material		Aluminium
Outer door lock		Y
Inner door/lid	qty	1
Max. load - total	kg	300
Access port	qty	1
- position		Left
- diameter	∅ mm	40
Casters	qty	6 (2 levelling feet)
Alarms (R = Remote Alarm, V = Visual Alarm, B = Buzzer Alarm)		
Power Failure		V-B-R
High Temperature		V-B-R
Low Temperature		-
Filter		V-B
Door open		-
Electrical and Noise Level		
Power Supply	V	230V 50Hz single phase
Noise Level ³⁾	dB [A]	61
Options		
Liquid CO ₂ back-up		CVK-AT2-PW ^{4,5)}
Liquid N ₂ back-up		CVK-ATN2-PW ⁴⁾
Temperature recorders		
- Continuous strip type		MTR-155H-PW
- Chart paper		RP-155-PW
- Ink pen		DF-38FP-PW
- Recorder housing		-

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
- 4) Temperature recorder MTR-155H-PW provided with back-up system
- 5) CVK-A-PW may also be used



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