



MDF-MU549DH-PE

# Biomedical ECO

-40°C Plasma Freezer

479 L



**Cost-saving and environmentally friendly fresh frozen plasma storage** Biomedical ECO -40°C Plasma Freezer, with two independent chambers for sample storage at selectable temperatures, and natural refrigerants minimise energy consumption, reduce environmental impact and save money. The MDF-MU549DH-PE provides secure storage of valuable research and clinical samples.

## Natural Refrigerants and Inverter Technology

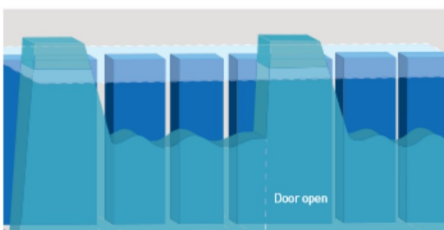
Naturally occurring hydro-carbon [HC] refrigerants have minimal effect on the environment and are compliant with environmental legislation for climate control. Combined with inverter technology, these refrigerants also provide more efficient cooling without compromising cooling performance and ambient tolerance and recovery speeds following door openings.

## Safe & Secure Sample Storage

The MDF-MU549DH-PE has high and low abnormal temperature alarms, and manual defrosting to prevent samples from being affected by temperature variations. The freezer features two separate outer doors to reduce cold air leakage when taking samples in and out of the freezer.

## Height-adjustable shelf trays

The MDF-MU549DH-PE features completely height-adjustable shelf trays. The freezer can optional be equipped with storage containers. Optional drawer and racking systems are available upon request.



## Stable Temperatures

Inverter compressors provide optimum stability, while quality of design ensures reliability. Ideal for samples that are sensitive to temperature fluctuations.



## Two independently controlled temperature chambers

Top and bottom chambers are equipped with two independent refrigeration circuits. This enables separate temperature settings and defrosting for the two chambers.



## Lockable door latch

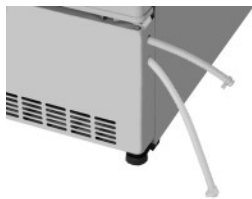
To securely preserve/manage the valuable samples, in addition to a standard-feature door lock, a hole in the latch allows a padlock to be attached.

## BIOMEDICAL ECO -40°C Plasma Freezer



MDF-MU549DH-PE with optional pull-out storage containers

### Easy defrosting

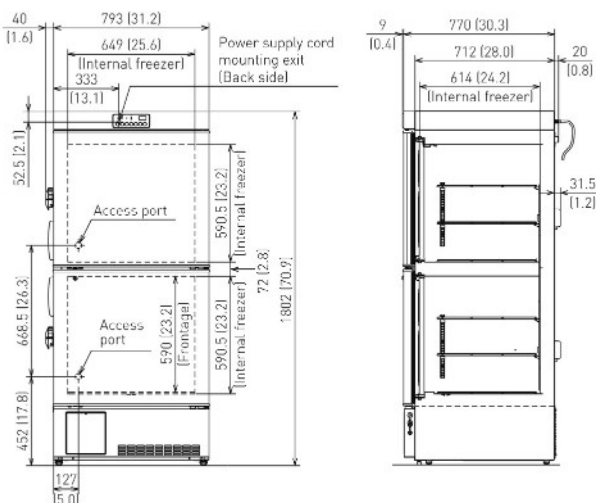


Both freezer compartments can individually be defrosted. Defrosting can become an easy task with the drain hose.

### Reliable Sample Security

A comprehensive self-diagnostic system and visual and audible alarm system with remote alarm contacts ensures users are aware of any abnormalities and can take appropriate actions to ensure the safety of previous samples. The double doors come with a key lock as standard and provision for an additional padlock to be added (padlock not provided) for extra security. An access port allows external temperature monitoring with the use of a probe, or an optional temperature chart recorder can be added.

### Dimensions



Model Number		MDF-MU549DH-PE
External dimensions (W x D x H) <sup>1)</sup>	mm	793 x 770 x 1802
Internal dimensions (W x D x H)	mm	649 x 614 x 600 (2 chambers)
Volume	litres	479
Net weight	kg	165
Performance		
Cooling performance <sup>2)</sup>	°C	-40
Temperature setting range	°C	-18 to -45
Temperature control range <sup>2)</sup>	°C	-20 to -40
Control		
Controller		Microprocessor, non-volatile memory
Display		LED
Temperature sensor		Thermistor
Refrigeration		
Refrigeration system		Direct
Compressors	W	2 x 400 (Used in upper chamber and lower chamber respectively)
Refrigerant		HC
Insulation material		PUF
Insulation thickness	mm	70
Construction		
Exterior material		Painted Steel
Interior material		Painted Steel
Outer door	qty	2
Outer door lock		Yes
Shelves	qty	6
Max. load - per shelf	kg	30
Access port	qty	2 (1 each chamber)
- position		Back
- diameter	∅ mm	30
Casters	qty	4 (2 leveling feet)
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
Electrical and noise level		
Power supply	V	220/230/240
Frequency	Hz	50
Noise level <sup>3)</sup>	dB [A]	42
Accessories		
Key	set	1
Defrost spatula	pc	1
Options		
Temperature recorders		
• Circular type		MTR-G85C-PE
		- Chart paper: RP-G85-PW - Ink pen: PG-R-PW - Recorder housing: MDF-S740T-PW (for top side) MPR-S7-PW (for lower front)
• Continuous strip type		MTR-4015LH-PE
		- Chart paper: RP-40-PW - Recorder housing: MPR-S30-PW (for lower front)
Storage container		MDF-05SC-PW (2 pcs/set), 6 sets/Freezer
(Inner dimension)	mm	W280 x D552 x H157

Appearance and specifications are subject to change without notice.

<sup>1)</sup> External dimensions of main cabinet only, excluding handle and other external projections.

<sup>2)</sup> Air temperature measured at freezer centre, ambient temperature 35°C, no load.

<sup>3)</sup> Nominal value - Background noise 20 dB(A)



PHC Europe B.V.  
Nijverheidsweg 120 | 4879 AZ Etten-Leur | Netherlands  
T: +31 (0) 76 543 3839 | F: +31 (0) 76 541 3732  
[www.phc.com/eu/biomedical](http://www.phc.com/eu/biomedical)

#### EEA, Switzerland and Turkey only



#### For medical use

The MDF-MU549DH-PE is 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



#### For laboratory use

Applicable countries: EEA countries, Switzerland and Turkey