



MDF-MU339HL-PE | MDF-MU539HL-PE

# Biomedical ECO

-30°C freezers

369 L | 504 L



Same level of reliability with even better performance and efficiency.

**Biomedical ECO -30°C Freezers** have natural refrigerants and Inverter Compressors and, therefore, minimise energy consumption, reduce environmental impact and save money on running costs.

## Natural Refrigerants and Inverter Technology

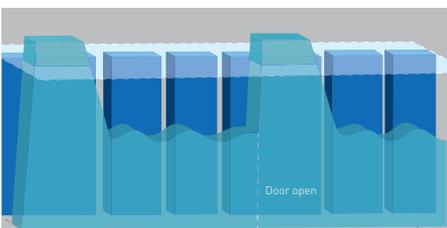
Naturally occurring hydro-carbon [HC] refrigerants have minimal effect on the environment and are compliant with environmental legislation for climate control. Combined with inverter technology, these refrigerants also provide more efficient cooling without compromising cooling performance, ambient tolerance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

## Safe & Secure Sample Storage

The Biomedical ECO freezers have high and low abnormal temperature alarms, and manual defrosting to prevent samples from being affected by temperature variations. The MDF-MU539HL-PE features two separate outer doors to reduce cold air leakage when taking samples in and out of the freezer. In addition to a standard-feature door lock, a latch that allows a padlock to be attached is also provided.

## Height-adjustable shelf trays

Both units feature completely height-adjustable shelf trays. The freezer can be equipped with optimal storage containers. Optional drawer and racking systems are available upon request. (the slim model, MDF-MU339HL-PE, features a width of just 616 mm)



## Stable Temperatures

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



## Versatile Alarm Functions

Alarms for high/low temperatures and an error code display with self diagnostic functions inform users of any abnormalities such as power failures or plug drop-outs, allowing prompt actions to be taken to avoid damaging valuable samples.



## Easy Defrosting

Defrosting can become an easy task with the drain hose which is attached to the main unit.

## BIOMEDICAL ECO -30°C Freezer



MDF-MU339HL-PE

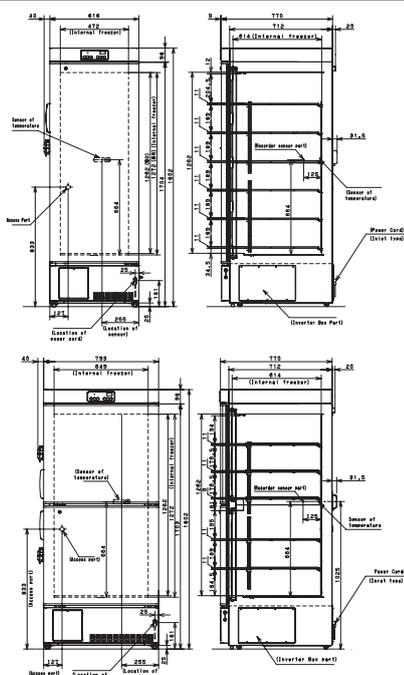
MDF-MU539HL-PE

### Inverter Compressors

While conventional freezers use single speed compressors which cycle on and off, **Biomedical ECO** Freezers contain inverter compressors that can run at different speeds to maximise cooling performance under different conditions. As the compressor is not cycling on and off as frequently the temperature uniformity of the freezer is significantly improved. Inverter compressors have the added advantage of reducing the energy consumption of the freezer which is not only better for the environment but also helps to reduce running costs.

### Integrated Control Centre

The microprocessor control system is secure, easy to use and comprehensive and can be accessed through a front mounted control panel. The microprocessor has a memory back-up so after a power failure, operation resumes at pre-outage settings. The self diagnostics function will display an error code in the case of an abnormality.



Model Number		MDF-MU339HL-PE	MDF-MU539HL-PE
External dimensions (W x D x H) <sup>1)</sup>	mm	616 x 770 x 1802	793 x 770 x 1802
Internal dimensions (W x D x H)	mm	472 x 614 x 1262	649 x 614 x 1262
Volume	litres	369	504
Net weight	kg	122	144
Performance			
Cooling performance <sup>2)</sup>	°C	-30	
Temperature setting range	°C	-18 to -35	
Temperature control range <sup>2)</sup>	°C	-20 to -30	
Control			
Controller	Microprocessor, non-volatile memory		
Display	LED		
Temperature sensor	Thermistor		
Refrigeration			
Refrigeration system	Direct		
Compressors	W	400 (inverter control)	
Refrigerant	HC		
Insulation material	PUF		
Insulation thickness	mm	70	
Construction			
Exterior material	Painted Steel		
Interior material	Painted Steel		
Outer door	qty	1	2
Outer door lock	Yes		
Shelves	qty	6	
Max. load - per shelf	kg	30	
Access port	qty	1	
- position	Back		
- diameter	∅ mm	30	
Castors	qty	4 [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	V-B-R		
Electrical and noise level			
Power supply	V	220/230/240	
Frequency	Hz	50	
Noise level <sup>3)</sup>	dB [A]	42	
Options			
Temperature recorders			
• Circular type	MTR-G85C-PE		
	- Chart paper: RP-G85-PW		
	- Ink pen: PG-R-PW		
	- Recorder housing: MPR-S7-PW		
• Continuous strip type	MTR-4015LH-PE		
	- Chart paper: RP-40-PW		
	- Recorder housing: MPR-S30-PW		
Storage container	MDF-03SC-PW [2 pcs/set, 3 sets/freezer]		MDF-05SC-PW [2 pcs/set, 6 sets/freezer]
[Inner dimension]	mm	W420 x D552 x H157	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]