

Classic Eco Series

-86°C Ultra-Low Freezers

MDF-DU300H-PE

Classic **ECO**



Save money and energy

- Up to 45% reduction in energy use¹⁾
- Up to € 3.100 savings on energy costs over 10 years¹⁾
- Less heat generation means saving on air conditioning

Less environmental impact

- Reduced carbon footprint
- No high GWP refrigerants

1) Model MDF-DU300H (333 litres) compared to MDF-U3386S at set value -80°C, 23°C ambient, no load, 230V 50Hz, € 0.18/kWh. Actual energy use and savings will depend on operating conditions and price of electricity paid.

-86°C Ultra-Low Freezers MDF-DU300H-PE

Classic **ECO**

Panasonic Classic Eco series ultra-low freezers with natural refrigerants minimise energy consumption, reduce environmental impact and save money. Innovative technology and Class IIa medical device certification provide secure storage of valuable research and clinical samples.

Natural refrigerants

Natural hydrocarbon refrigerants provide more efficient cooling due to their high latent heat of evaporation. As a result, smaller compressors can be used leading to greater energy efficiency. With exceptionally low global warming potential natural refrigerants are also better for the environment.

Heat exchanger design

A new patent-pending heat exchanger provides greater surface area contact at critical points in the refrigeration system. This improves overall efficiency and reduces compressor running time for lower energy consumption.

Panasonic designed refrigeration

From high performance, reliable compressors to strategically designed evaporator coils that provide optimum temperature uniformity, Panasonic refrigeration systems are specifically designed for ultra-low applications. This leads to highly durable and efficient cooling for the reliable storage of valuable samples and research material.

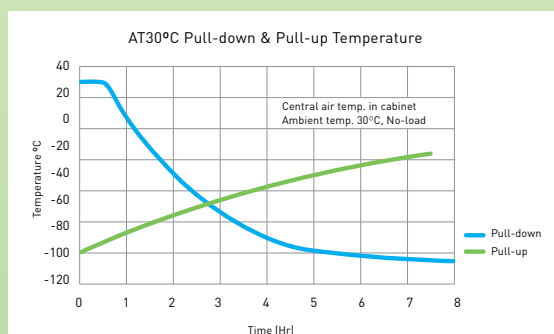
Automatic compressor cycling

Compressor ON - OFF cycles are regulated automatically in response to cooling demand to minimise compressor running time and to save energy.

Microprocessor control

Comprehensive control, alarm and monitoring functions are combined in an easy to use Panasonic-built microprocessor controller with digital display of all functions.

Fast temperature pull-down



MDF-DU300H-PE is certified as a Class IIa Medical Device [93/42/EEC and 2007/47/EC] for medical purposes of storing cells, DNA and/or frozen plasma (For EU countries only)

Panasonic

Classic Eco -86°C Upright Freezers

Characteristics

PUF = Rigid polyurethane foamed insulation
V = Visual alarm
B = Buzzer alarm
R = Remote alarm



MODEL

MDF-DU300H-PE

Dimensions

External dimensions (W x D x H) ¹⁾	mm	750 x 870 x 1830
Internal dimensions (W x D x H)	mm	490 x 600 x 1140
Volume	litres	333
Capacity	2" boxes	216
Net weight (approx)	kg	241

Performance

Cooling performance ²⁾	°C	-86
Temperature setting range	°C	-50 ~ -90
Temperature control range ²⁾	°C	-50 ~ -86
Energy consumption ³⁾	kWh/24h	5,9

Control

Controller	Microprocessor non-volatile memory	
Display	LED	
Temperature sensor	Pt-1000	

Refrigeration

Refrigeration system	Cascade	
High-stage compressor	W	450
High-stage refrigerant	HC	
Low-stage compressor	W	450
Low-stage refrigerant	HC	
Insulation material	PUF	
Insulation thickness	mm	130

Construction

Exterior material	Painted steel	
Interior material	Painted steel	
Outer door lock	Y	
Inner door	qty	2 (insulated)
Shelves	qty	3
Max. load - per shelf	kg	50
Max. load - total	kg	150
Access port	qty	3
- position	Back / bottom x 2	
- diameter	Ø mm	17
Casters	qty	4 (2 levelling feet)

Alarms

Power failure	V-B-R	
High temperature	V-B-R	
Low temperature	V-B-R	
Filter	V-B	

Electrical and noise level

Power supply	230V 50Hz single phase	
Noise level ⁴⁾	dB	52

Options

Liquid CO ₂ back-up	CVK-UB2-PW	
Liquid N ₂ back-up	CVK-UBN2-PW	
Temperature recorders		
- Circular type	MTR-G85C-PE	
- Chart paper	RP-G85-PW	
- Ink pen	PG-R-PW	
- Continuous strip type	MTR-85H-PW	
- Chart paper	RP-85-PW	
- Ink pen	DF-38FP-PW	
- Recorder housing	MDF-S3085-PW	
RS485 interface module	MTR-480-PW	
Drawers	qty	MDF-30R-PW (max 2)

Notes:

- 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) Typical data - Individual units may vary and power consumption will depend on loading and operating conditions.
Freezer set point -150°C/-80°C, (delete as appropriate) ambient temperature 20~23°C, unloaded, 230V 50Hz power supply
- 4) Nominal value - Background noise 20dB

Appearance and specification are subject to change without notice.

for more information:

www.biomedical.panasonic.eu