Panasonic

Classic Eco Series

-86°C Ultra-Low Freezers

MDF-DU300H-PE

Classic ECO

Save money and energy

- Up to 45% reduction in energy use[1)]
- Up to € 3.100 savings on energy costs over 10 years[1)]
- 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.

Discovery powered by precision

-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.

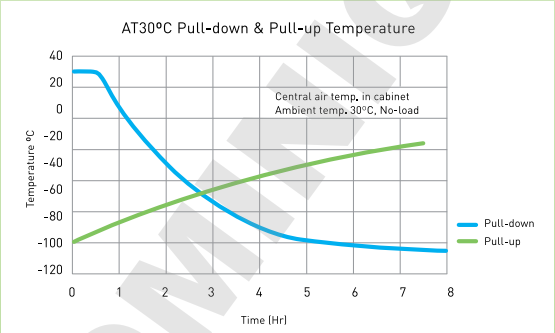
Heat exchanger design
A new patent-pending heat exchanger provides greater surface area contact at critical points in the refrigeration system. This improves overall efficiency and reduces compressor running time for lower energy consumption.

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



CE 0123

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)

Classic Eco Series

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
Net weight (approx)	kg	241
Performance		
Cooling performance [2]	°C	-86
Temperature setting range	°C	-50 ~ -90
Temperature control range [2]	°C	-50 ~ -86
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
Alarms		
Power failure		V-B-R
High temperature		V-B-R
Low temperature		V-B-R
Filter		V-B
Construction		
Exterior material		Painted steel
Interior material		Painted steel
Outer door/lid lock		Yes
Shelves adjustable	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)
Electrical and noise level		
Energy consumption [3]	kWh/24h	5,9
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 (-100°C to +40°C) - Chart paper - Ink pen		MTR-G85C-PE RP-G85-PW PG-R-PW
- Continuous strip type (-100°C to +50°C) - Chart paper - Ink pen		MTR-85H-PW RP-85-PW DF-38FP-PW
- Recorder housing		MDF-S3085-PW
RS485 interface module		MTR-480-PW
		MTR-L03-PW
Drawers	qty	MDF-30R-PW (Max 2)

Notes:
1) Exterior dimensions of main cabinet only, excluding handles and other external projections
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 -80°C, ambient temperature 23°C, unloaded, 230V 50Hz power supply
4) Typical data (background noise: 20dB)

Appearance and specification are subject to change without notice.

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for more information:

www.biomedical.panasonic.eu