VIP ECO

Natural Refrigerants -86°C Upright Freezer

Cost-saving and environmentally friendly sample storage within an optimal footprint

The MDF-DU702VH VIP ECO -86°C Upright Freezer provides maximum sample storage capacity within an optimum footprint combined with natural refrigerants to minimise energy consumption, reduce environmental impact and save money.

Efficient Refrigeration

Naturally occurring hydrocarbon (HC) refrigerants provide more efficient cooling due to their high latent heat of evaporation. As well as improved performance this leads to reduced power consumption and energy costs.

Inverter Technology

The MDF-DU702VH VIP ECO ULT Freezer contains Inverter Compressors that maximise cooling performance under different conditions, and contribute to reducing the energy consumption of the freezer.

Intelligent Interface

The EZlatch makes access to stored samples even easier. A colour LCD touch panel allows full user control, even with gloved hands, while the USB port makes transferring logged data to a PC simple and convenient.

Environmentally Friendly

Ideal for laboratories looking to reduce their carbon footprint and environmental impact to comply with sustainability policies.

Uniform Sample Storage

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

Easy Data Monitoring

Important information such as freezer temperature, door opening times and alarm history is logged for monitoring in GLP applications.
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Inverter Compressors

While conventional freezers use single speed compressors which cycle on and off, the MDF-DU702VH VIP ECO ULT Freezer contains inverter compressors that can run at different speeds to maximise cooling performance under different conditions. Combined with hydrocarbon refrigerants, these compressors ensure the most efficient energy use and reduced heat output.

Efficient & Flexible Sample Storage

The combination of VIP PLUS vacuum insulation and an enhanced cabinet design with insulated outer door, ensures optimum temperature uniformity, while the reduced wall thickness maximizes storage capacity. Multiple shelf configurations allow a variety of storage options. Organize your samples by transferring your current inventory racks.

Innovative Cabinet Design

The enhanced cabinet design with chamfered edges reduces footprint for use in multi freezer laboratories.

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**Model Number**

<table>
<thead>
<tr>
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<th>MDF-DU702VH-PE</th>
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<td><strong>External Dimensions (W x D x H)</strong></td>
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**Performance**

- **Cooling performance**^1^ °C -86
- **Temperature setting range** °C -50 to -90
- **Temperature control range**^2^ °C -50 to -86

**Control**

- **Controller** Microprocessor, non-volatile memory
- **Display** LCD Touch Screen
- **Temperature sensor** Pt-1000

**Refrigeration**

- **Refrigeration system** Cascade
- **Compressors** W 2 x 750
- **Refrigerant** HC
- **Insulation material** PUF / VIP Plus
- **Insulation thickness** mm 80

**Construction**

- **Exterior Material** Painted Steel
- **Interior Material** Painted Steel
- **Outer Door qty** 1
- **Outer Door Lock** Y
- **Inner Doors qty** 2
- **Shelves qty** 3
- **Max. load - per shelf** kg 50
- **Max. load - total**^3^ kg 515
- **Vacuum release port** 2 (1 automatic, 1 manual)
- **Access Port qty** 3
- **Access Port Position** back x 1, bottom x 2
- **Access Port Diameter** Ø mm 17
- **Casters qty** 4 (2 leveling feet)

**Alarms** (V = Visual Alarm, B = Buzzer Alarm, R= Remote Alarm)

- **Power Failure** V-B-R
- **High Temperature** V-B-R
- **Low Temperature** V-B-R
- **Filter** V-B
- **Door open** V-B

**Electrical and Noise Level**

- **Power Supply** V 230
- **Power Consumption**^4^ kWh/24h 7.7
- **Frequency** Hz 50
- **Noise Level**^5^ dB [A] < 52

**Options**

- **Small Inner Door Kit** set of 5 MDF-7ID5-PW
- **Small Inner Door Kit** set of 4 MDF-7ID4-PW
- **Liquid CO2 back-up** MDF-UB7-PW
- **Temperature recorders**
  - **Circular type** MTR-G85C-PE^7^
  - **Chart paper** RP-G85-PW
  - **Ink pen** PG-R-PW
  - **Continuous strip type** MTR-85H-PW^7^
  - **Chart paper** RP-85-PW
  - **Ink pen** DF-38FP-PW
  - **Recorder housing** MDF-S3085-PW

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^1^ Exterior dimensions of main cabinet only, excluding handle and other external projections – See dimensions drawings for full details.

^2^ Air temperature measured at freezer centre, ambient temperature ±3°C, no load.

^3^ Max load is the total of the load distributed over all shelves (3) and chamber bottom surface. The weight is the maximum load for chamber inside and does not account for maximum load on casters equipped with product.

^4^ 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.

^5^ Nominal value - Background noise 20dB[A].

^6^ Usable storage capacity will be 480 x 2" boxes with installation of MDF-7ID5-PW and additional shelf.

^7^ Requires sensor cover MTR-DU700SF-PW.

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The MDF-DU702VH-PE is certified as a Class IIa Medical Device (93/42/EEC and 2007/47/EEC) for medical purposes of storing human cells, organs, plasma and DNA.

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