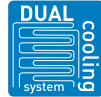


MDF-DU502VX-PE

TwinGuard

-86°C Upright Freezer

528 L



Our most secure ultra-low temperature freezer for the storage of your valuable samples.

TwinGuard Ultra Low Temperature Freezers with Dual Cooling Technology offer the highest level of security for high-value samples. Alongside exceptional ease-of-use and data monitoring, the Dual Cooling System provides the highest level of protection.

Ultimate Sample Protection

The Dual Cooling System offers high levels of protection through the use of two independent refrigeration systems. If one system unexpectedly fails the other can maintain the freezer in the -70°C range.

Efficient 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 up to 384 2" boxes.

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 convenient.



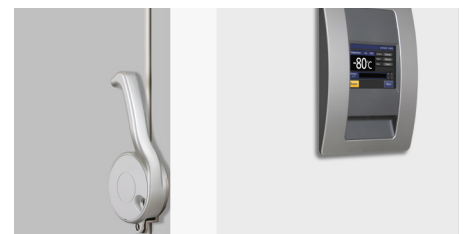
Valuable Sample Storage

Securely store valuable and irreplaceable samples with the upmost confidence that they won't be lost in the case of compressor failure.



Flexible Shelf Layout

Multiple shelf configurations allow a variety of storage options. Organize your samples by transferring your current inventory racks.



Restricted Access Laboratories

Significantly extended time to react to any sudden mechanical failures and data logging are ideal for high security applications such as pathogenic research.

TwinGuard -86°C Upright Freezer



Dual Cooling System

The Dual Cooling System offers ultimate sample protection. The two independent refrigeration systems provide a reliable and exceptionally stable -86°C ultra low temperature environment. If one system unexpectedly fails, the other can maintain the freezer in the -70°C range until service can be arranged.

Intelligent Eco Mode Operation

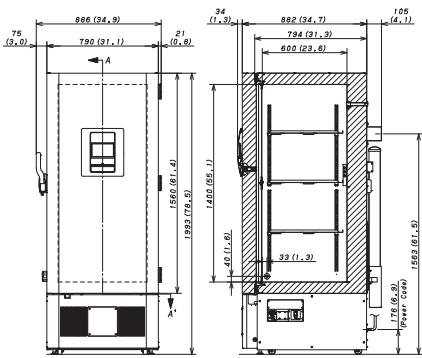
When set to ECO mode, the microprocessor controller will establish an overlapping cycle of the two refrigeration systems based on the load status of the freezer, significantly reducing energy consumption.

Filterless Design

The filterless construction of the freezers reduces routine maintenance time by eliminating the need for regular cleaning of filters.

Innovative Cabinet Design

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



MDF-DU502VX-PE

EEA, Switzerland and Turkey only



For medical use

The MDF-DU502VX-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

| Model Number | | MDF-DU502VX-PE |
|---|----------|-------------------------------------|
| External dimensions (W x D x H) ¹⁾ | mm | 790 x 882 x 1993 |
| Internal dimensions (W x D x H) | mm | 630 x 600 x 1400 |
| Volume | litres | 528 |
| Net weight | kg | 285 |
| Capacity | 2" boxes | 384 |
| Performance | | |
| Cooling performance ²⁾ | °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* | | Independent Dual-Cooling |
| Compressors | W | 2 x 1100 |
| Refrigerant | | MU-N502 |
| Refrigerant weight in each cooling circuit | g | 510 |
| GWP of refrigerant for each cooling circuit | | 5313 |
| Total Refrigerant weight (CO ₂ equivalent) | t | 5.419 |
| Insulation material | | PUF / VIP Plus |
| Insulation thickness | mm | 80 |
| Construction | | |
| Exterior material | | Painted Steel |
| Interior material | | Painted steel |
| Outer doors | qty | 1 |
| Outer door lock | | Y |
| Inner doors | | 2 |
| Shelves | qty | 3 |
| Max. load - per shelf | kg | 50 |
| Max. load - total ³⁾ | kg | 415 |
| Vacuum release port | | 2 (1 automatic, 1 manual) |
| Access port | qty | 3 |
| - position | | back x 1, bottom x 2 |
| - diameter | ∅ mm | 17 |
| 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 |
| Filter | | Filterless design |
| Door open | | V-B |
| Electrical and Noise Level | | |
| Power supply | V | 230 |
| Frequency | Hz | 50 |
| Noise level ⁴⁾ | dB [A] | 52 |
| Options | | |
| Small inner door kit | set of 5 | MDF-5ID5-PW ⁵⁾ |
| Small inner door kit | set of 4 | MDF-5ID4-PW |
| Liquid CO ₂ back-up | | MDF-UB7-PW |
| Temperature recorders | | |
| - Circular type | | MTR-G85C-PE ⁶⁾ |
| - Chart paper | | RP-G85-PW |
| - Ink pen | | PG-R-PW |
| - Continuous strip type | | MTR-85H-PW ⁶⁾ |
| - Chart paper | | RP-85-PW |
| - Ink pen | | DF-38FP-PW |
| - Recorder housing | | MDF-S3085-PW |

Appearance and specifications are subject to change without notice.

¹⁾ Exterior dimensions of main cabinet only, excluding handle and other external projections.

²⁾ Air temperature measured at freezer centre, ambient temperature +30°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⁾ Nominal value - Background noise 20dB[A]

⁵⁾ Usable storage capacity will be 320 x 2" boxes with installation of MDF-5ID5-PW and additional shelf.

⁶⁾ Requires sensor cover MTR-DU700SF-PW

* Complies with Art. 11, Annex III of F-Gas Regulation (EU) No 517/2014. Contains fluorinated greenhouse gases in hermetically sealed equipment.



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