TwinGuard
-86˚C Ultra-Low Temperature Freezer

Ultra-low temperature storage solution for valuable samples.
TwinGuard equipped with new Dual Cooling System.
New TwinGuard adopts optimised Dual Cooling System and new cabinet design with enhanced insulation performance and storage capacity.
Superior cooling performance focused on reliability and safety suitable even for mass sample storage like biobank use.

Ultimate Sample Protection
New optimised Dual Cooling System “TwinGuard” comprised of independent dual cooling circuits realises -86˚C and one side of the cooling circuits maintains chamber temperature at -70˚C. The freezer can minimise risk of compromising valuable samples.

Efficient Sample Storage
New cabinet design combines an insulated outer door with superior storage efficiency and an inner door designed for uniform temperature distribution. This improves storage efficiency approximately 10% (576 pcs of 2-inch Cryo boxes can be stored in the MDF-DU702VX while maintaining the same footprint as conventional models).

Intelligent Interface
The newly developed ergonomic “EZlatch” door handle makes access to stored samples even easier. Intuitive and intelligible large colour LCD touchpanel is provided.

ECO operation and energy saving

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Operation mode</th>
<th>Energy-saving Rate*1</th>
<th>Conventional Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MDF-DU502VX</td>
<td>Normal</td>
<td>18%</td>
<td>MDF-U500VX</td>
</tr>
<tr>
<td>MDF-DU702VX</td>
<td>Normal</td>
<td>19%</td>
<td>MDF-U700VX</td>
</tr>
<tr>
<td></td>
<td>ECO</td>
<td>22%</td>
<td></td>
</tr>
</tbody>
</table>

Improved insulating performance cuts power consumption approximately 22%*2 compared to conventional models when the ECO mode is selected, thanks to the effective combination of VIP Plus insulation and the next-generation cabinet.

Flexible shelf layout
The inner space offers flexible storage, allowing either three or four shelves*3 and chamber bottom to be used. Also, an inner door with four or five small doors (optional) is available.

Reliable controllability and data log function
Large colour LCD touchpanel is accurately controlled even with a gloved hand, while the USB port makes transferring logged data of product’s operational status to a PC convenient.

*1 Power consumption per 2 inch box.
*2 Power source: 230V 50Hz, AT 23˚C
*3 Three shelves equipped as standard.
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Approximately 110mm* installation width can be reduced when installing 3 units in line compared to conventional units.

The “Chamfer-design” body front features a chamfered edge for reduced installation space when compared to conventional models in a multiple unit installation. The design is especially suitable for a biobank or similar application.

User friendly for daily operation with newly developed vacuum release port and fivefold gasket newly developed automatic vacuum release port and fivefold gasket are adopted. Automatic release of negative pressure and reduced frost realise user friendliness even for frequent door opening.

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**Performance Data**

*1 Comparison of MDF-DU702VX and the conventional MDF-U700VX product.

**Control**

- Controller: Microprocessor, non-volatile memory
- Display: LCD Touchpanel
- Temperature sensor: Pt-1000

**Refrigeration**

- Refrigeration system: Independent Dual-Cooling
- Compressors: W
- Refrigerant: HFC mixed
- Temperature sensor: Pt-1000

**Electrical and Noise Level**

- Power supply: V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm
- Noise level: dB (A)

**Options**

- Small inner door kit
- Liquid CO2 back-up
- Inventory rack
- Digital interface
- Ethernet interface (LAN)

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**Preservation (freezers, refrigerators) and Culturing (incubators) Equipment**

The management of the design, development, production, sales support, and servicing of the above. Panasonic Healthcare Co., Ltd. Biomedical Division is certified for:

- Environmental management system: ISO14001

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