



MDF-DU502VXC-PA

TwinGuard®

-86°C Ultra-Low Temperature Upright Freezer 18.6 cu.ft. | 528 L



The Panasonic Healthcare patented TwinGuard -86°C upright freezer is powered by a unique concept of two independent auto-cascade cooling circuits that work together, both independently and concurrently, to provide continuity in stored product protection over a range of real world conditions.

Ultimate Sample Protection

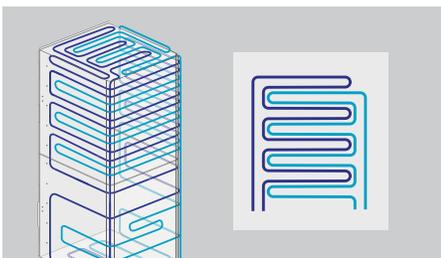
The dual cooling system offers the highest level of sample protection through the use of two independent refrigeration systems that maintain -86°C temperature. The two circuits work together for fast temperature recovery, while the secondary system keeps the temperature at -70°C if a service event occurs.

Efficient Sample Storage

The use of VIP® Plus cabinet and door insulation, combined with a newly designed refrigeration system layout ensures a capacity of 384 2" storage boxes, requiring only 7.49 sq.ft. (0.70 m²) of floor space.

Security Control and Monitoring

An eye level, door mounted color LCD touchscreen allows full user control while the USB port makes transferring logged data to a PC convenient. All performance attributes are displayed and an internal time/temperature log is expressed in graphic form.



Valuable Sample Storage

With two independent systems, each sustaining ultra-low temperatures, your samples remain safe. Optional CO₂ backup provides an extra layer of protection.



EZlatch

EZlatch is the centerpiece of a holistic inventory access and frost mitigation system. The simplified, one-handed, comfortable operation keeps TwinGuard upright freezers operating at maximum energy efficiency.



Ease of Use

The display panel includes a comprehensive alarm system with audible and visual warnings, unit diagnostics, running temperature log and predictive analytics.

TwinGuard® -86°C ULT Upright Freezer

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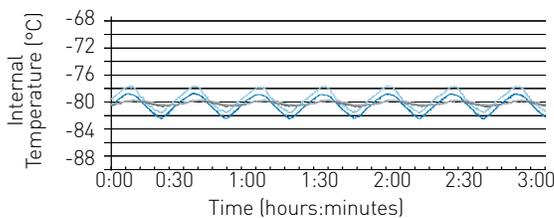
Model MDF-DU502VXC-PA

Improved Temperature Performance

The TwinGuard -86°C upright freezer design provides optimal temperature stability and uniformity. During routine door openings, the insulated inner doors minimize the loss of cold air even when the outer door is open.

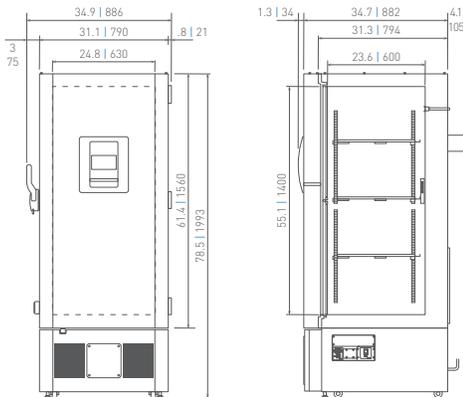
Temperature Uniformity Data:

-80°C setpoint at 23°C ambient temperature, empty freezer



Dimensions

Unit : inch | mm



| Model Number | | MDF-DU502VXC-PA |
|---|--------------------|---|
| External Dimensions (W × D × H) ¹⁾ | inches mm | 31.1 × 34.7 × 78.5 790 × 882 × 1993 |
| Internal Dimensions (W × D × H) | inches mm | 24.8 × 23.6 × 55.1 630 × 600 × 1400 |
| Volume | cu.ft. liters | 18.6 528 |
| Net Weight | lbs kg | 648 294 |
| Capacity (2" boxes) | qty | 384 |
| Capacity (3" boxes) | qty | 256 |
| Inventory Racks (2" boxes) | qty | 16 |
| Inventory Racks (3" boxes) | qty | 16 |
| Performance | | |
| Warranty ²⁾ | | 5 years parts and labor |
| Cooling Performance ³⁾ | °C | -86 |
| Temperature Setting Range ³⁾ | °C | -50 to -90 in 1° increments |
| Temperature Control Range ³⁾ | °C | -50 to -86 in 1° increments |
| Cooling Performance ³⁾ Service Event (System A or B) | °C | -70 |
| Control | | |
| Controller | | Microprocessor, touchscreen data entry, password protected |
| Display | | LCD color touchscreen |
| Temperature Sensor | | Pt-1000 |
| Refrigeration | | |
| Refrigeration System | qty | 2 (auto-cascade) |
| Compressors | W | [2] 1100 |
| Refrigerant | | Mixed HC/HFC blended |
| Insulation Thickness, Material | inches mm | 3.1 80, foamed-in-place + VIP Plus vacuum insulated panels |
| Construction | | |
| Exterior Material | | Painted steel |
| Interior Material | | Painted steel |
| Outer Door | qty | 1 (key lock with provision for optional pad lock) |
| Inner Doors | qty | 2 (insulated ABS, stainless steel frames, positive latches) |
| Shelves | qty | 3 (adjustable) |
| Shelf Dimensions (W × D) | inches mm | 24.2 × 21.0 615 × 534 |
| Max. Load per Shelf | lbs kg | 110 50 |
| Vacuum Release Port | qty | 2: in door (automatic release) and side wall, lower left (manual release) |
| Access Ports | qty | 3: upper back wall (back-up system), bottom left (recorder sensor), bottom right (access) |
| Access Port Diameter | inches mm | 0.6 17 |
| Casters | qty | 4 (2 leveling feet on front base) |
| Alarms [V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm] | | |
| Power Failure | | V-B-R |
| Temperature (High and Low) | | V-B-R |
| Sensor Failure | | V-B-R |
| Door Open | | V-B |
| Battery Check | | V |
| Fan Motor Check | | V-B |
| Cooling Circuit Abnormality | | V |
| Remote Alarm Contacts | | DC 30V 2A (normally open, normally closed, common) |
| Electrical and Noise Level | | |
| Power Supply | | 208V-230V, 1Ø, 60Hz, NEMA 6-15P, requires NEMA 6-15R receptacle |
| Voltage Booster | | Standard, automatic, built-in |
| Noise Level ⁴⁾ | dB(A) | 52 |
| Options | | |
| Inner Door Kit with 5 Smaller Doors | | MDF-5ID5-PW |
| Inner Door Kit with 4 Smaller Doors | | MDF-5ID4-PW |
| Liquid CO ₂ Back-Up System | | MDF-UB7-PW |
| Temperature Recorder | | |
| Circular Type | 6", 7 day circular | MTRC954 ⁵⁾ |
| Chart Paper | 52 charts per box | C7100386REV |
| Ink Pen | pack of 6 | R252 |
| Optional Communication System | | |
| Wireless, Cloud-Based, Automatic Data Management | | LabAlert® Monitoring System |



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¹⁾ Exterior dimensions of main cabinet only, excluding handle and other external projections
²⁾ Current warranty offered at time of printing and may be subject to change; US and Canada only
³⁾ Air temperature measured at freezer center, ambient temperature +30°C, no load
⁴⁾ Nominal value, background noise 20 dB(A)
⁵⁾ Requires sensor cover MTR-DU700SF-PW

Specifications are subject to change without notice.

For latest specification information contact Panasonic Healthcare at info@us.panasonic-healthcare.com.