



# Ultra-Low Temperature V.I.P.™ Freezer

# MDF-U53V

- V.I.P.™ technology maximises storage capacity.
- Safe operation with Status Alert continuous condition monitoring
- Enhanced security
- Improved accessibility



**519L** (18.3 cu.ft.)  
**352** 2" inventory boxes  
**224** 3" inventory boxes

Conventional Insulation → SANYO MDF-U53V with VIP Insulation

Insulation Type	Capacity	Volume	Inventory
Conventional	100%	399L / 14.1 cu.ft.	240Ca. 2" boxes
SANYO MDF-U53V with VIP	130%	519L / 18.3 cu.ft.	352Ca. 2" boxes

↑ Insulation → ↓ 2" box Inventory

# V.I.P. Evolution series -86°C

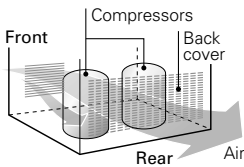


# MDF-U53V

## Features

### EVOLUTIONARY DESIGN

- SANYO V.I.P.™ Evolution Series -86°C ultra-low temperature freezers use patented revolutionary vacuum insulation cabinet construction that reduces the wall thickness from 14cm to 7cm (5.5" to 2.7") and achieves up to 30% more storage capacity than a conventionally insulated freezer without increasing the footprint.
- The newly developed refrigeration system and the freezer structure offer a quiet experimental environment.
- Achieves 10% higher energy conservation than previous model. (For model rated 220V, 50Hz)
- The newly developed back cover combined with new aerodynamically designed and placed components in the refrigeration compartment provide superior air flow, making it possible to drastically reduce the stress on the freezer and contributing to excellent durability.



- Two independent and insulated inner doors with gaskets prevent cold air leakage.

### RELIABILITY

- Status Alert (Condition monitor) Monitors ambient and system conditions continuously and notifies of any abnormalities before a problem happens.

### ACCESSIBILITY

- A beak style inner door latch tightly closes the inner door against the freezer frame. It also helps make opening and closing the door smoother.
- The condenser filter is situated at the bottom right side of the front panel to make filter removal and cleaning easier.

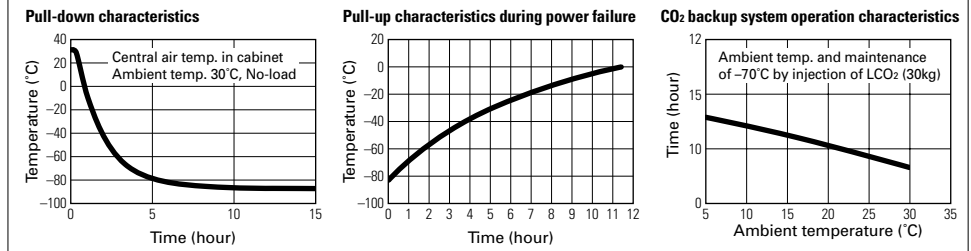


### SAFETY

- Alarm lamp and buzzer offer secure warning of power failure or abnormal temperature increase.
- High and low temperature warning provides an audible and visual alarm when the temperature deviates more than  $\pm 5^{\circ}\text{C}$  to  $\pm 20^{\circ}\text{C}$  (adjustable) from the set point.
- Alarm ring-back function ensures that buzzer will resume operation, should alarm conditions continue after it is silenced.
- Microprocessor-controlled filter-clog check function protects the refrigeration circuit.
- The rugged, one-handed outer door latch has a hole to allow a padlock to securely protect valuable samples.
- Control panel with digital display for easy operation.

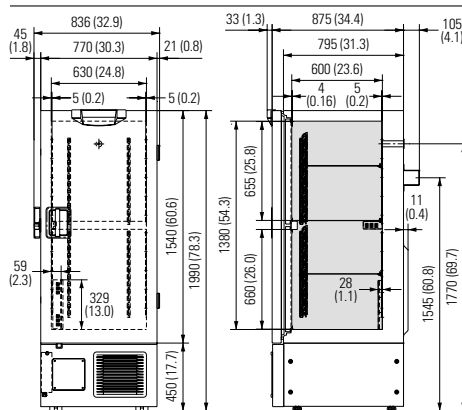


### Performance Data



### Dimensions

[Unit: mm (inch)]










## Specifications

Model	MDF-U53V
Temperature range	-50°C to -86°C (1°C increments)
Maximum cooling performance	-86°C (Ambient temp. 30°C)
Exterior dimensions (W x D x H)	770 x 875 x 1990mm (30.3" x 34.4" x 78.3")
Interior dimensions (W x D x H)	630 x 600 x 1380mm (24.8" x 23.6" x 54.3")
Net weight	Approx. 299kg (659 lbs.)
Effective capacity	519 L (18.3 cu.ft.)
Shelves	Stainless steel, 3 shelves
Access port	17mm diameter, 3 locations (back, bottom left/right corner)
Compressor	Hermetic type, Output: 1100 W (high stage side), 1100 W (low stage side)
Refrigerant	HFC
Alarm	High/low temperature, Power failure, Filter check, Self diagnostics, Door check, Part replacement notification
Remote alarm contact	Allowable contact capacity: DC 30V, 2A
Accessories	1 set of keys, 1 scraper

\*Appearance and specifications are subject to change without notice.

\*Cooling performance is indicated by the temperature reached at the center of the freezer (at ambient temperature of 30°C with no load). In order to use the freezer at a stable temperature for a long time, it is recommended that the temperature be set to at least 5°C higher than the indicated lowest temperature. In addition, depending on the usage conditions, it may not be possible to reach the indicated lowest temperature.

### Options

 Inventory rack <b>IR-220U</b> <b>IR-224U</b>	 3 drawers (for lower chamber) <b>MDF-50R</b>	 Circular recorder <b>MTR-G85</b>	 Slip chart recorder <b>MTR-85H</b>	 Recorder mounting bracket <b>MDF-S3085</b> (for MTR-85H)	 LCO <sub>2</sub> backup system <b>CVK-UB2</b> LN <sub>2</sub> backup system <b>CVK-UBN2</b>
		 SANYO DAQ (Data Acquisition) system <b>MTR-480/MTR-2000</b>			

We design and manufacture products in accordance with ISO9001 & 14001 requirements.

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