

# Panasonic



-86°C ULTRA-LOW  
TEMPERATURE  
FREEZERS

## TwinGuard<sup>®</sup>

### Added Protection

Redundant cooling systems based on patented auto-cascade refrigeration technology provide a wider circle of valuable specimen protection.

-50°C to -86°C



25.3 cu.ft.  
(715 L)



12.7 cu.ft.  
(360 L)



18.6 cu.ft.  
(528 L)



25.7 cu.ft.  
(729 L)

Life Science  
E116 2CIGUC6



*Model MDF-DU702VXC-PA shown with one additional shelf to create five levels. Additional configurations of four or five inner doors are available.*

## Cabinet Design Features

- 1 VIP Plus composite wall insulation increases interior storage volume
- 2 An automatic vacuum breaker permits immediate re-entry into the upright freezer following door openings
- 3 Two insulated inner doors create additional protection. Optional inner door configurations include four and five inner doors
- 4 Upright freezer cabinets include three high-capacity stainless steel shelves to create four interior compartments



MDF-DU702VXC-PA

MDF-DU502VXC-PA


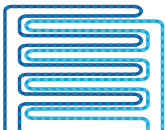
MDF-DU302VX-PA

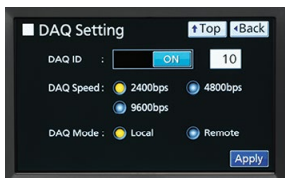
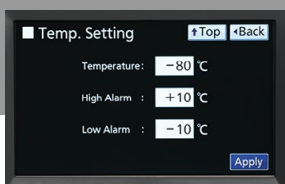
## Refrigeration System Features and Benefits

Each of the two TwinGuard auto-cascade systems is powered by a single compressor designed and engineered specifically to achieve and maintain ultra-low temperatures.

- TwinGuard internal heat exchangers provide ample surface area to move energy from one stage to another
- Components are engineered to tolerate broader voltage deviations typical of real-world installations
- TwinGuard condensers are dust resistant and require no filter or regular cleaning
- Environmentally friendly, non-CFC refrigerants are used exclusively

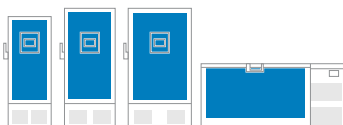
## TwinGuard Operating Mode

Status	A and B ON, Full	A and B ON, Cycling, ECO
Function	Pull-down and Recovery	Energy over Performance
Performance	Maximum cooling power to -86°C or setpoint, maximum power for recovery following door opening	Useful when low-ambient temperature opportunity permits
		





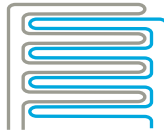
*TwinGuard ultra-low temperature freezers are managed by a microprocessor-based digital controller designed for touchscreen interface. Menus are password protected for setpoint security, temperature display, system status, alarm functions and predictive performance advisories.*

## TwinGuard Series, -50°C to -86°C



TwinGuard models are available in three, space-saving upright cabinets and one, low-profile chest cabinet, each designed for both new laboratories, renovation and replacement installations.

MODEL NUMBER	CONFIGURATION	VOLUME cu.ft.   L
MDF-DU302VX-PA	Upright	12.7   360
MDF-DU502VXC-PA	Upright	18.6   528
MDF-DU702VXC-PA	Upright	25.7   729
MDF-DC700VXC-PA	Chest	25.3   715

A and B ON, Cycling, Normal	A ON, B Standby	B ON, A Standby
Performance over Energy	Backup for B	Backup for A
Standard operation, stability at -86°C or at setpoint	Maintains minimum -70°C temperature with B offline	Maintains minimum -70°C temperature with A offline
		

## Engineered for Performance and Reliability

The Panasonic Healthcare TwinGuard is specifically designed to assure high performance ultra-low temperature cooling to achieve uniform temperatures, quick recovery following door openings and continuity of operation through platform redundancy and electronic oversight.

*TwinGuard ultra-low temperature freezers are designed for long-term storage of high value biologicals including mammalian and plant cell cultures, stem cells, cell lines and subcellular components.*

*Applications include pharmaceutical and biotech laboratories, biorepositories, medical research and academic institutions, government installations, blood and tissue banks, hospitals, clinics and industrial research facilities.*



Model MDF-DC700VXC-PA



Multi-point door gasket is field replaceable without tools.

## Advanced Frost Control System, Upright Cabinets

- Insulated inner doors with gaskets minimize cold air loss during door openings and include positive latches to hold firmly against the two main compartments
- The multi-point peripheral gasket mounted on the face of the cabinet is designed for *in situ* field replacement if required



Ergonomically designed for minimal effort and one-handed operation, the EZlatch door handle spans a compact arc of only 45 degrees. It gently pushes the door away from the face of the cabinet and evenly draws the door to the multi-point gasket when closing. EZlatch is standard on upright TwinGuard cabinets.

## For More Information

[www.panasonic-healthcare.com/us/biomedical/twinguard-freezers](http://www.panasonic-healthcare.com/us/biomedical/twinguard-freezers)

# Panasonic®

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