

# Alphavita

BIO SCIENTIFIC

In order to provide stable and safe low-temperature preservation environment for samples

Dual-cooling  
system

Double  
-cooling

+

VIP  
PLUS

Warm-keeping  
design

MDF-U692VX/U792VX



MDF-C590VX

Chest model feature:  
Compared with upright model: pull-down speed 26% ↑, temperature uniformity 57% ↑.  
In case of sample stock-in/stock-out, the middle and lower chamber can remain stable operation at set temperature, and temperature fluctuation only occurs in the upper chamber. (Time for recovery to -75°C<10min)



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Technical parameters and specifications are for reference not order basis.  
Information mentioned is subject to change(s) without prior notice.  
Please in kind prevail.

To protect life with bio-science

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Smart storage within your reach  
super-large touch panel



Double protection & safe preservation -  
-90°C dual cooling system



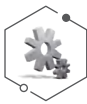
## SAMPLE

- Convenient sample operation: editable sample property, management of sample stock-in/stock-out, sample transfer, sample management, etc.; Function of intelligent sample statistics, information such as sample stock-in-/stock-out, sample qty and type can be summarized and processed.



## RECORD

- Chamber temperature and ambient temperature can be viewed in Data Graph and Data List;
- Functions of data export and core components' work status monitoring;
- Viewable history alarms and operation records.



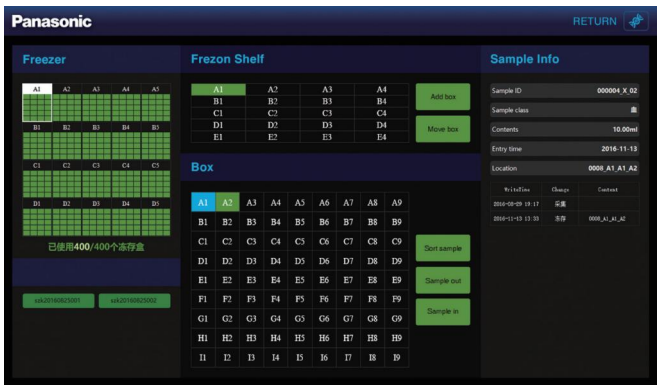
## SETTING

- Users can modify running parameters by inputting password after ID verification;
- One-key to restore factory setting with password.



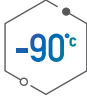
## SMART GUARD

- Available role presetting in the system gives equipment administrator and sample operator different access, effectively ensuring the sample safety.



## DIAGNOSE

- Visualized data and work status information replace traditional alarm information code to display the running status of core components more visually; Component alert indicators facilitate maintenance, effectively improve operation safety and prolong equipment service life.



## Double-cooling

- ULT freezers equipped with brand new dual-cooling system are specially designed for sample preservation. In case of dual-cooling system operation, chamber can even reach -90°C; while in case of single cooling system operation, chamber can still reach -80°C;
- Original import compressor plus auto-cascade cooling system with mixed refrigerants provides stable -90°C temperature cycle and improves pull-down by 35%;
- Significantly improved bioactivity and safety in case of long-term preservation.



## Sealed chamber design

- Quadruple-pane door gaskets are distributed on different planes to form a vacuum protection area to prevent cold air loss; wholly foamed inner door with thickness≥30mm to reduce frost growth.



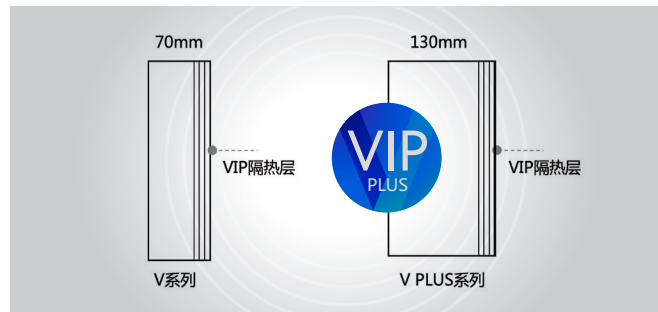
## Safety design

- Dual cooling system design enables stable -80°C(MDF-U590VX: -75°C) to ensure sample safety, despite one cooling system suffers an unexpected failure; Standard expansion tank to absorb system pressure in case of excessive pressure caused by extremely high ambient temperature or any other reasons, to maintain normal compressor operation and ensure sample safety;
- Core parameters protection with password to avoid losses caused by mis-operation.



## V.I.P plus

- Optimized vacuum insulation material (U-Vacua) plus PU foamed warm-keeping wall provides unprecedented insulation performance, significantly improves warm-keeping performance by 20%.



## User-friendly design

- Ergonomic latch plus optional padlock provides more user-friendliness. Standard electronic code lock is applicable for both card-swiping and fingerprint unlock;
- Finless condenser frees users from condenser filter cleaning;
- Controller with delay start function enables off-peak start for 0~30min, significantly reduces the load on electric circuit from simultaneous start-up.

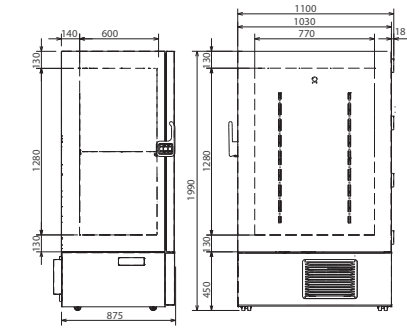


## Consumables layout

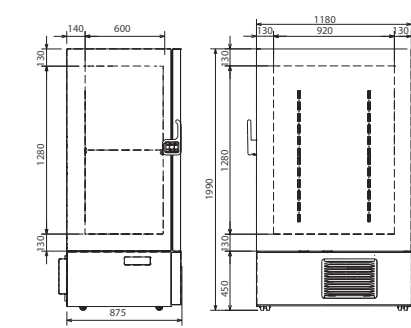
ULT Freezer	2ml cryo-tube			0.5ml cryo-tube			Area
	Rack	Box capacity	Max. sample capacity	Rack	Box capacity	Max. sample capacity	
MDF-C590VX	32(1×12)	384	38400	32(1×18)	576	57600	1.9m²
MDF-U692VX	20(5×4)	400	40000	20(7×4)	560	56000	0.9m²
MDF-U792VX	24(5×4)	480	48000	24(7×4)	672	67200	0.95m²

### External dimensions(mm)

#### MDF-U692VX

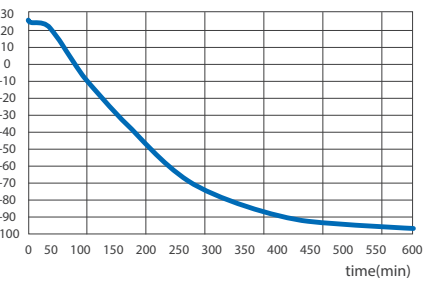


#### MDF-U792VX



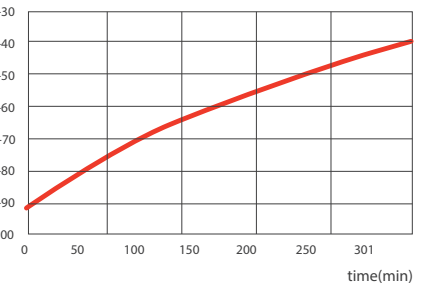
### Pull-down curve(center)

#### MDF-U792VX

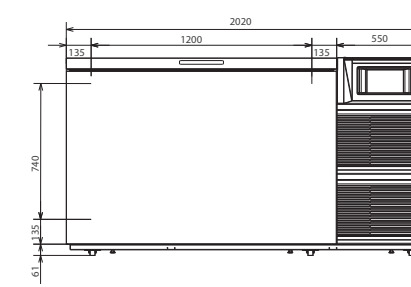
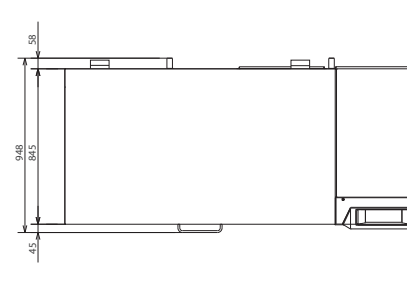


### Pull-up curve(center)

#### MDF-U792VX



#### MDF-C590VX



### Technical Parameters

Model	MDF-U692VX	MDF-U792VX	MDF-C590VX
Temperature range	-50~-90℃ (division value: 0.1℃, AT: 10~30℃)		
External dimensions	W1030xD875xH1990mm	W1180xD875xH1990mm	W2020xD948xH1076mm
Internal dimensions	W770xD600xH1280mm	W920xD600xH1280mm	W1200xD640xH740mm
Total effective capacity	603L	706L	580L
Power	1374W	1477W	1338W
Net weight	310kg	345kg	335kg
Interior/Exterior	Painted steel		
Outer door	Painted steel		
Inner door	ABS resin plate with stainless steel frame (x2)		
Shelf	Height-adjustable stainless steel shelf (x3)		
Access port	Diameter: 17mm (rear-left bottom)		
Insulation	Rigid foamed polyurethane+vacuum insulation panel (VIP)		
Compressor	Full-closed		
Evaporator	Coil tube		
Refrigerant	Mixed refrigerant		
Condenser	Finless copper tube		
Temperature control	Microprocessor		
Temperature sensor	Platinum thermistor (Pt1 000)		
Alarm	High/low temperature alarm, sensor abnormality alarm, power failure alarm, condenser sensor high temperature alarm, remote alarm, etc.		
Accessory	Key (1 set), defrost shovel (1)		
Power supply	Single phase: 230V~50Hz		
Electric shock protection type	I		
Optional	Rack, CO2 back-up		