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# METHHER

## SERIES

### -86 °C Dual System



This product is specially designed and manufactured for long term storage of various biological product, including viruses, germs, erythrocytes, leucocyte and cutis. Applications can be found in blood banks, hospitals, epidemic prevention services, and research institutes, laboratories in electronic and chemical plants, bio-logical engineering institutes and marine fishery companies.



2 individual inner doors can be opened independently to minimize frost buildup inside the chamber  
 Unique door seal design for the minimum loss of cold temperature during a door opening  
 Stainless Steel handle to ensure the door open conveniently even in the case of frost



Excellent Doors Seals  
 5 gasket seal, 4 seals for out door



7 Inches touch Screen  
 All data display on the screen, easy to observe

Write Board for short records which would pass to next user

Green Handle, easy to use with 2 locks

Special V.I.P (Vacuum Insulation Panel) design with extra insulation factor cuts down heat loss to cabinet by 25%



Big condenser for better heat dissipation



Changeable sensor box or you could put another sensor from here to monitor or record temperature

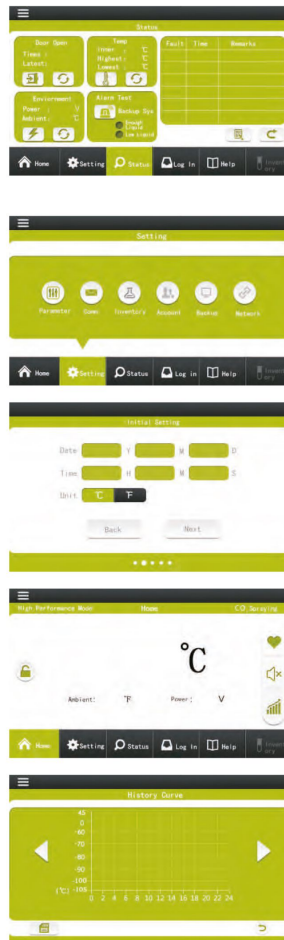


## -86 °C Methers Dual System

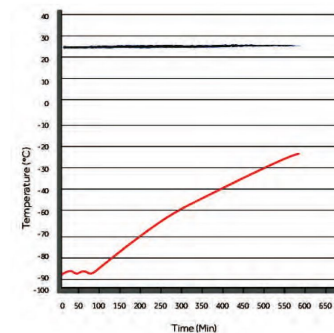
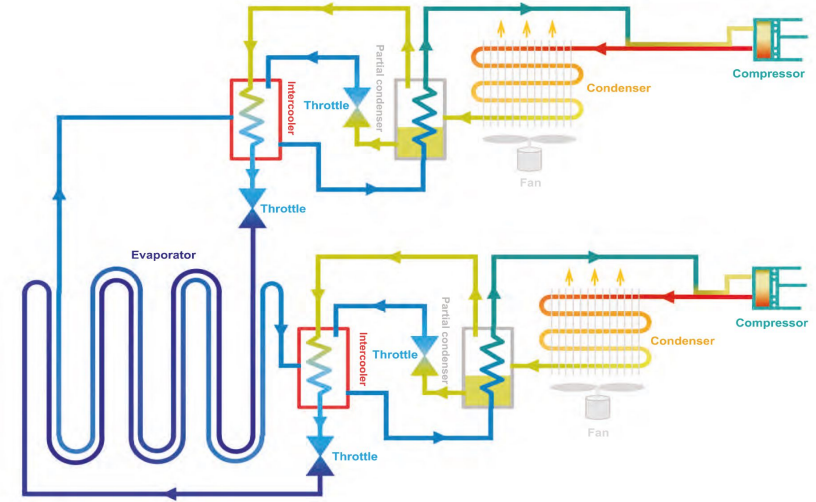
--7 Inches Touch Screen & Functions



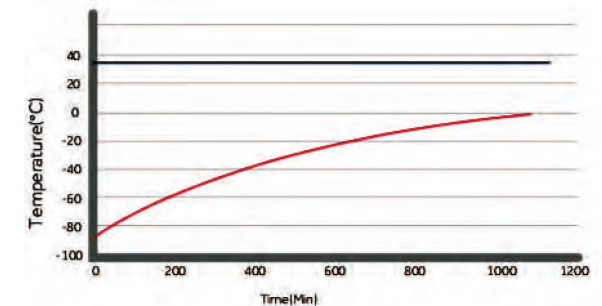
Alarm	Alarm Triggering Condition
High Temperature	Temperature reaches the warm alarm limit
Low Temperature	Temperature reaches the low alarm limit
Power Failure	Equipment loses power
Door Ajar	Door open period exceeds 5 mins
Probe Failure	<ol style="list-style-type: none"> <li>Main cabinet temperature control sensor fails</li> <li>Condenser sensor fails</li> <li>Ambient sensor fails</li> <li>Heat exchanger sensor fails</li> <li>Heat exchanger temperature fails</li> </ol>
Low Battery	Battery capacity runs low or battery switch is not turned on
Hot Condenser	<ol style="list-style-type: none"> <li>Condensers filter element is clogged</li> <li>Ambient temperature is too high</li> </ol>
High Ambient Temperature	Ambient temperature exceeds 32°C
Other alarms	<ol style="list-style-type: none"> <li>Thermostat failure</li> <li>Abnormal voltage alarm</li> </ol>



## Dual System Circulation System



Pull-up test at 25°C ambient  
MDF-86V588D



Pull-up test at 32°C ambient  
MDF-86V588D

## -86 °C Metherr Dual System

# METHERR SERIES

## -86°C Cascade System

### FILED PROVEN RELIABILITY

- Unique insulated inner door design for four separate storage compartments to minimize frost buildup inside the chamber.
- Specialized control system design for a well-balanced operation of dual refrigeration system.
- Positive filed proven reliability record.

### SAFETY

- Malfunction alarms including high and low temperature, power failure, sensor error, clean-filter, and extremely high ambient, abnormal voltage, thermostat failure, low battery, condenser clean, door ajar.
- Capable of producing two types of alarm outputs, audible buzzer and visible flashing light.
- Door open feature standard and USB port for temperature data downloading standard on upright models.
- Remote alarm contacts.



### ENERGY SAVING

- Unique door seal design for the minimum loss of cold temperature during a door opening.
- High performance VIP insulation panels to minimize cabinet heat gain and to improve temperature stability.

### INSTALLATION AND APPLICATION

- Wide range operating voltage system from 187V to 242V designed to allow units installed in areas with poor voltage condition
- Suitable for 10°C to 32°C ambient temperature

### KEY DESIGN FEATURES

- Microprocessor-controlled system designed for controlled range of -40°C to -86°C for cabinet space with 1°C increment
- Settable high temperature and low temperature alarms.
- Automatic clean-filter alarm and sensor error alert.
- Adjustable storage shelf height
- Optional temperature recorder, storage racks and storage box
- Double security with two independent cooling system, when one system breakdown, the other system could maintain the inner temperature at -70°C.



METHERR -86°C Cascade System



## -86 °C Methers Cascade System

### FILED PROVEN RELIABILITY

- Unique insulated inner door design for four separate storage compartments to minimize frost buildup inside the chamber.
- Specialized control system design for a well-balanced operation of cascade refrigeration system.
- Positive filed proven reliability record.

### ENERGY SAVING

- Unique door seal design for the minimum loss of cold temperature during a door opening.
- High performance VIP insulation panels to minimize cabinet heat gain and to improve temperature stability.
- HC Refrigerant with better efficiency & less energy cost, good for environment.

### SAFETY

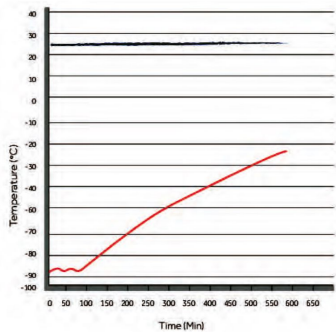
- Malfunction alarms including high and low temperature, power failure, sensor error, clean-filter, and extremely high ambient, abnormal voltage, thermostat failure, low battery, condenser clean, door ajar.
- Capable of producing two types of alarm outputs, audible buzzer and visible flashing light.
- Door open feature standard and USB port for temperature data downloading standard on upright models.
- Remote alarm contacts.

### KEY DESIGN FEATURES

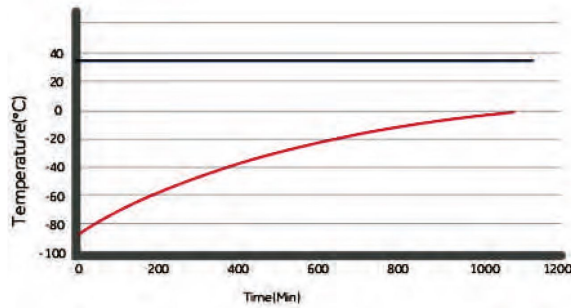
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- Automatic clean-filter alarm and sensor error alert.
- Adjustable storage shelf height
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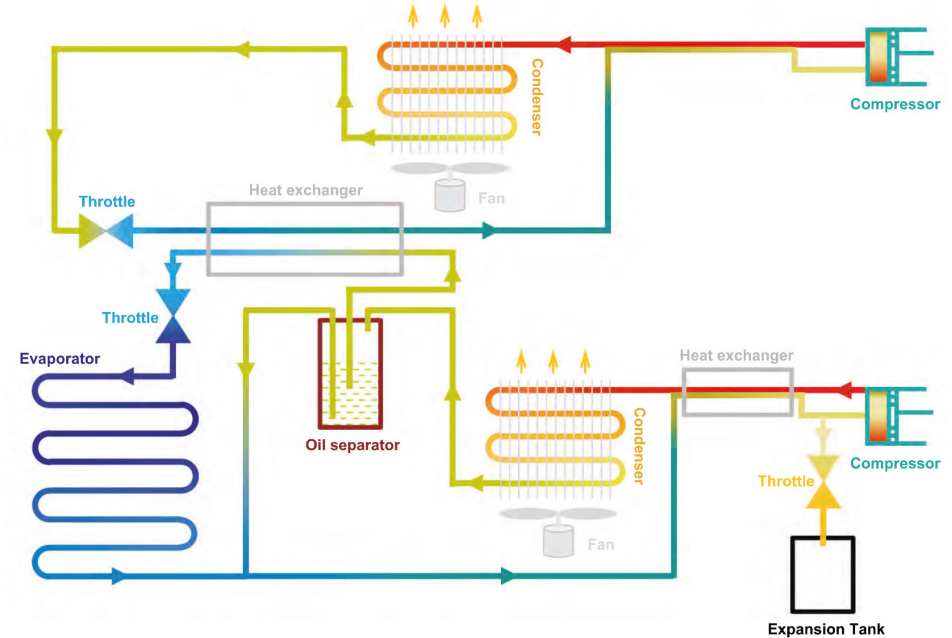


Pull-up test at 25°C ambient



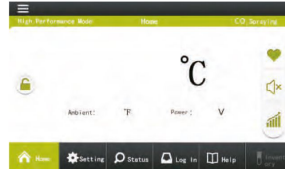
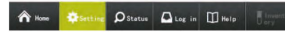
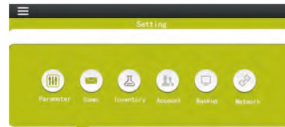
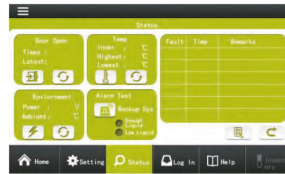
Pull-up test at 32°C ambient

## Cascade System Heat Exchange Circulation



METHER -86°C Cascade System

## -86 °C Methers Cascade System --7 Inches Touch Screen & Functions



Alarm	Alarm Triggering Condition
High Temperature	Temperature reaches the warm alarm limit
Low Temperature	Temperature reaches the low alarm limit
Power Failure	Equipment loses power
Door Ajar	Door open period exceeds 5 mins
Probe Failure	<ol style="list-style-type: none"> <li>1. Main cabinet temperature control sensor fails</li> <li>2. Condenser sensor fails</li> <li>3. Ambient sensor fails</li> <li>4. Heat exchanger sensor fails</li> <li>5. Heat exchanger temperature fails</li> </ol>
Low Battery	Battery capacity runs low or battery switch is not turned on
Hot Condenser	<ol style="list-style-type: none"> <li>1. Condensers filter element is clogged</li> <li>2. Ambient temperature is too high</li> </ol>
High Ambient Temperature	Ambient temperature exceeds 32°C
Other alarms	<ol style="list-style-type: none"> <li>1. Thermostat failure</li> <li>2. Abnorml voltage alarm</li> </ol>



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Changeable sensor box or you could put another sensor from here to monitor or record temperature



# PROMED SERIES

-86 °C Self- Cascade System



This product is specially designed and manufactured for long term storage of various biological product, including viruses, germs, erythrocytes, leucocytes and cutis. Applications can be found in blood banks, hospitals, epidemic prevention services, and research institutes, laboratories in electronic and chemical plants, bio-logical engineering institutes and marine fishery companies.



### SAFETY

- Malfunction alarms including high and low temperature, power failure, sensor error, clean-filter, and extremely high ambient, abnormal voltage, thermostat failure, low battery, condenser clean, door ajar.
- Capable of producing two types of alarm outputs, audible buzzer and visible flashing light.
- Door open feature standard and USB port for temperature data downloading standard on upright models.
- Remote alarm contacts.



### INSTALLATION AND APPLICATION

- Wide range operating voltage system from 187V to 242V designed to allow units installed in areas with poor voltage condition
- Suitable for 10°C to 32°C ambient temperature



### FILED PROVEN RELIABILITY

- Unique insulated inner door design for four separate storage compartments to minimize frost buildup inside the chamber.
- Specialized control system design for a well-balanced operation of cascade refrigeration system.
- Positive filed proven reliability record.



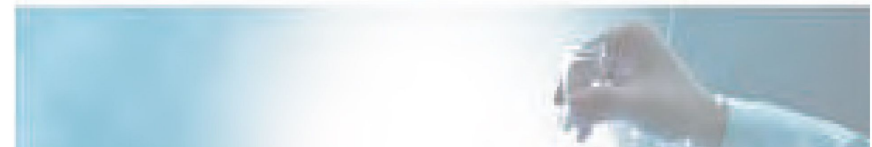
### KEY DESIGN FEATURES

- Microprocessor-controlled system designed for controlled range of -40°C to -86°C for cabinet space with 1°C increment
- Settable high temperature and low temperature alarms.
- Automatic clean-filter alarm and sensor error alert.
- Adjustable storage shelf height
- Optional temperature recorder, storage racks and storage box

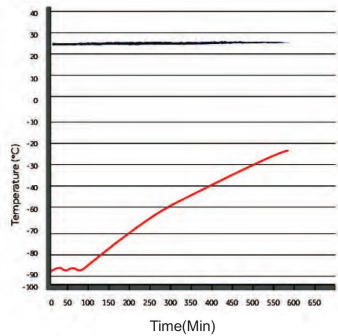
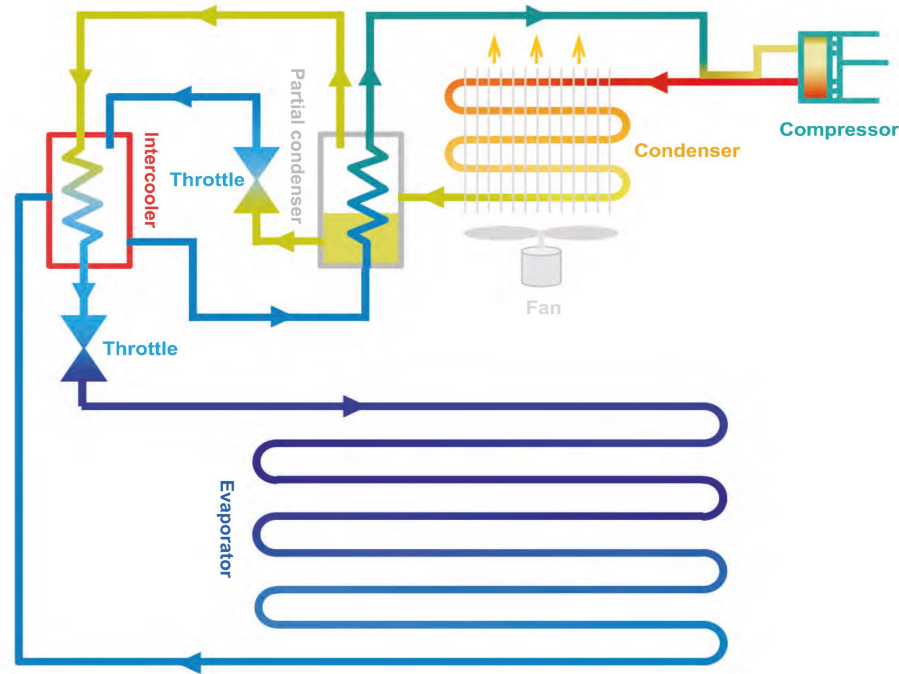


### ENERGY SAVING

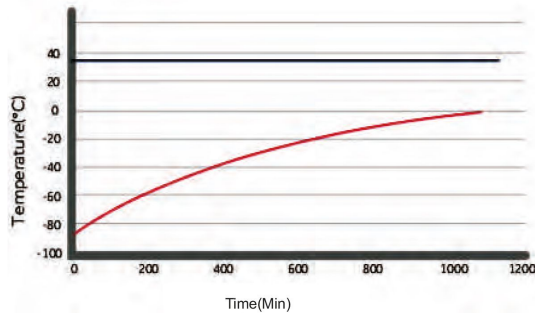
- Unique door seal design for the minimum loss of cold temperature during a door opening.
- High performance VIP insulation panels to minimize cabinet heat gain and to improve temperature stability.



## -86 °C Self- Cascade System



Pull-up test at 25°C ambient



Pull-up test at 32°C ambient

## -86 °C Self- Cascade System



3 individual inner doors can be opened independently to minimize frost buildup inside the chamber. Unique door seal design for the minimum loss of cold temperature during a door opening. Stainless Steel inner handle to ensure the door open conveniently even in the case of frost.



Excellent Doors Seals 5 gasket seal, 4 seals for out door, 1 seal for inner door which provides maximum protection against thermal intrusion

Big Door handle, easy to open

Sample port on back for temperature monitoring conveniently

Big condenser for better heat dissipation, Ambient Temperature sensor

Controller Panel with press button Alarm status shows on it, easy for attention

PROMED -86°C Self-Cascade System



## -86 °C Self- Cascade System

Eye-level controls for quick and easy programming and viewing

Display for working temperature, setting temperature, high-alarming temperature, low-alarming temperature, password setting, and codes error



Operating status display

Audio alarm

Silencing sound alarm

Malfunction detection Visual alarm

Selecting function

Adjusting key

Alarm	Alarm Triggering Condition
High Temperature	Temperature reaches the warm alarm limit
Low Temperature	Temperature reaches the low alarm limit
Power Failure	Equipment loses power
Door Ajar	Door open period exceeds 5 mins
Probe Failure	<ol style="list-style-type: none"> <li>Main cabinet temperature control sensor fails</li> <li>Condenser sensor fails</li> <li>Ambient sensor fails</li> <li>Heat exchanger sensor fails</li> <li>Heat exchanger temperature fails</li> </ol>
Low Battery	Battery capacity runs low or battery switch is not turned on
Hot Condenser	<ol style="list-style-type: none"> <li>Condensers filter element is clogged</li> <li>Ambient temperature is too high</li> </ol>
High Ambient Temperature	Ambient temperature exceeds 32°C
Other alarms	<ol style="list-style-type: none"> <li>Thermostat failure</li> <li>Abnorml voltage alarm</li> </ol>

## -86 °C Self- Cascade System



### CHARACTERISTIC FUNCTION

- Safety door lock design to prevent abnormal door open
- Wide voltage for AC187V-AC242V
- Mute design for salient needed environment
- Digital display with big screen, easy to check
- Excellent thermal insulation peformance with silicone door seal design (second door seal optional)
- Mobile and fixable wheel for move



### BOX

- The box is made of high quality cold rolled steel plate, and the surface is treated with advance anti-corrosion phosphatic spraying process with elegant orange powder coating. High-class 304 SUS inner box, durable and reliable.



### SAFETY GUARANTEE

- Temperature high/low alarm, sensor malfunction alarm, thermostat failure alarm
- Audible and visible alarm
- Keyboard lockable, password protection o pe change running parameter randomly
- Display running parameter with real-time monitoring to guarantee the stability of freezer



### TEMPERATURE CONTROL MODE

- With the international famous brand computer temperature control system to keep the inner temperature accurate and stable. Temperature adjusted from -40°C~ -86°C
- High light digital display
- High/low temperature alarm, the alarm temperature can be set as needed
- Platinum esiance temperature sensor, sensing temperature accurately

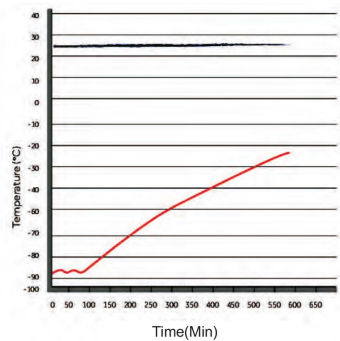
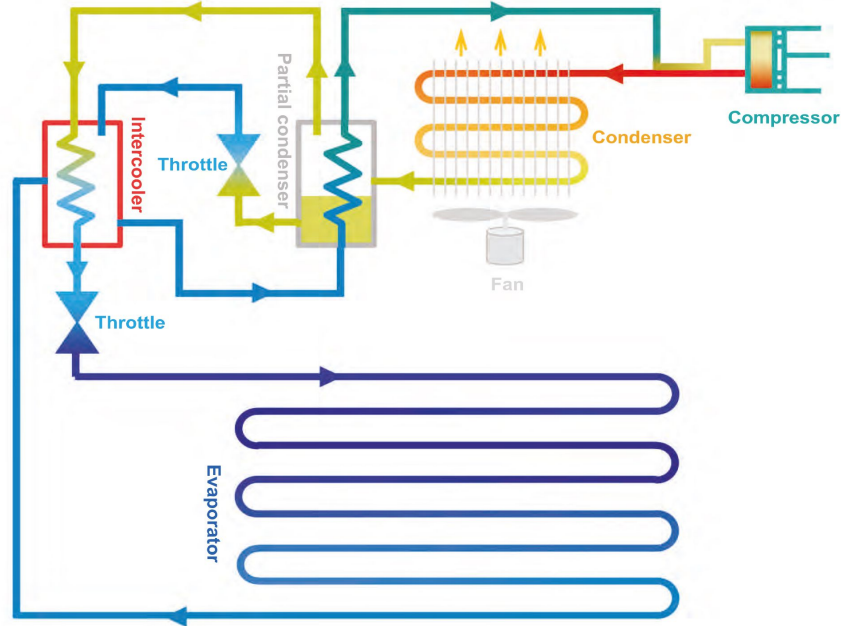


### REFRIGERATION SYSTEM

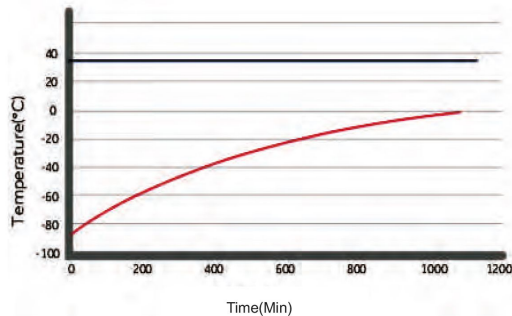
- Imported brand compressor work with CFC-Free environmental refrigerant
- High density insulation foam layer with better heat preservation effect
- Optimized self-cascade refrigeration system to provide faster cooling speed with lower power consumption



## -86 °C Self- Cascade System



Pull-up test at 25°C ambient



Pull-up test at 32°C ambient

# PROMED SERIES

## -86 °C Cascade System



PROMED -86°C Cascade System

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## -86 °C Cascade System



### ENERGY SAVING

- Unique door seal design for the minimum loss of cold temperature during a door opening.
- High performance VIP insulation panels to minimize cabinet heat gain and to improve temperature stability.



### CHARACTERISTIC FUNCTION

- Removable condenser covers for easy-maintain and clean
- Reserved position and port for chart recorder
- Protection cover for switch and external alarm port
- Door lock design to avoid abnormal door open
- Easy-removable inner door
- Adjustable SUS shelves
- Professional double testing hole
- Adjustable wheel, easy for installation, move and fix
- Frozen store rack optional



### FILED PROVEN RELIABILITY

- Unique insulated inner door design for four separate storage compartments to minimize frost buildup inside the chamber.
- Specialized control system design for a well-balanced operation of cascade refrigeration system.
- Positive filed proven reliability record.



### SAFETY

- Malfunction alarms including high and low temperature, power failure, sensor error, clean-filter, and extremely high ambient, abnormal voltage, thermostat failure, low battery, condenser clean, door ajar.
- Capable of producing two types of alarm outputs, audible buzzer and visible flashing light.
- Door open feature standard and USB port for temperature data downloading standard on upright models.
- Remote alarm contacts.



### INSTALLATION AND APPLICATION

- Wide range operating voltage system from 187V to 242V designed to allow units installed in areas with poor voltage condition
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## -86 °C Cascade System



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Sample port on back for temperature monitoring conveniently



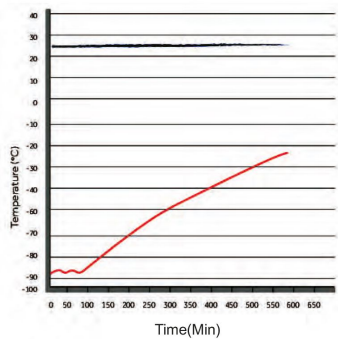
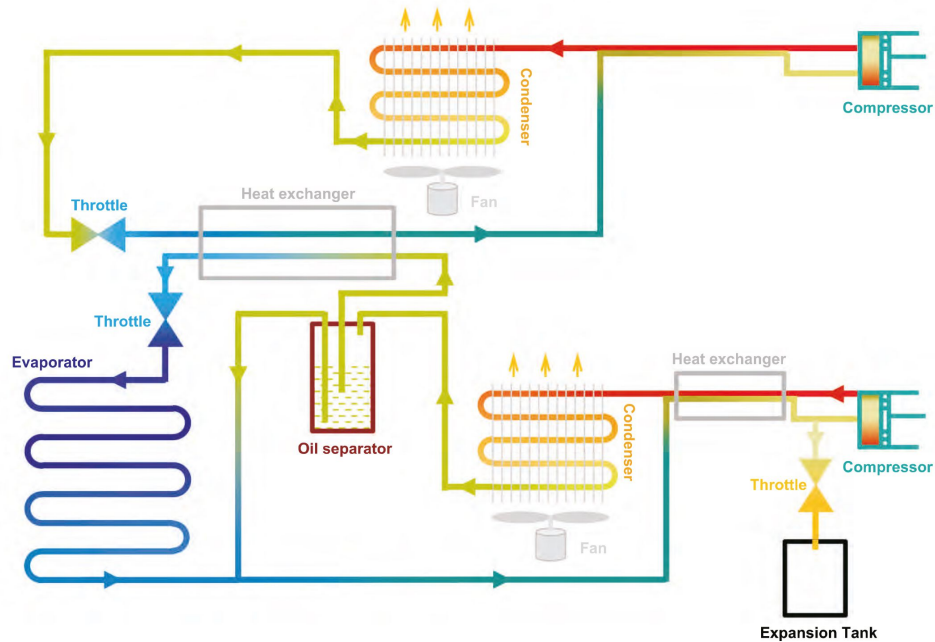
Big condenser for better heat dissipation, Ambient Temperature sensor



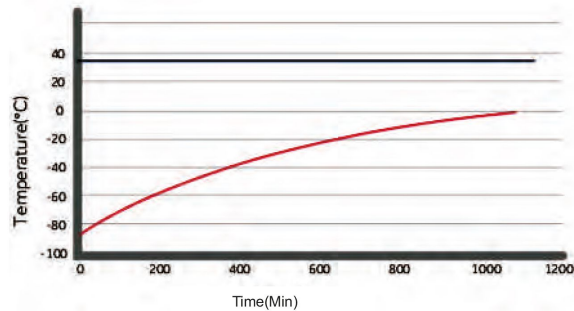
Controller Panel with press button Alarm status shows on it, easy for attention



## -86 °C Cascade System Cascade System Heat Exchange Circulation



Pull-up test at 25°C ambient

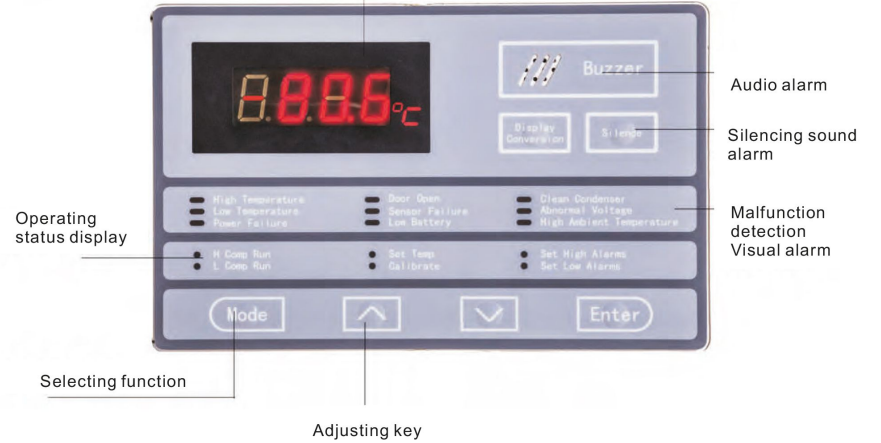


Pull-up test at 32°C ambient

## -86 °C Cascade System

Eye-level controls for quick and easy programming and viewing

Display for working temperature, setting temperature, high-alarming temperature, low-alarming temperature, password setting, and codes error



Audio alarm

Silencing sound alarm

Malfunction detection Visual alarm

Operating status display

Selecting function

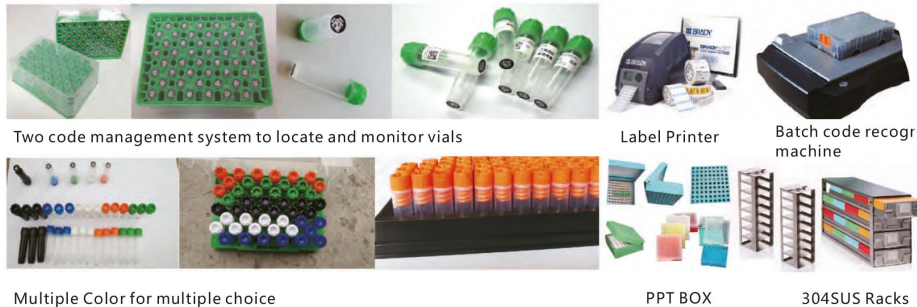
Adjusting key

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Power Failure	Equipment loses power
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Probe Failure	<ol style="list-style-type: none"> <li>1. Main cabinet temperature control sensor fails</li> <li>2. Condenser sensor fails</li> <li>3. Ambient sensor fails</li> <li>4. Heat exchanger sensor fails</li> <li>5. Heat exchanger temperature fails</li> </ol>
Low Battery	Battery capacity runs low or battery switch is not turned on
Hot Condenser	<ol style="list-style-type: none"> <li>1. Condensers filter element is clogged</li> <li>2. Ambient temperature is too high</li> </ol>
High Ambient Temperature	Ambient temperature exceeds 32°C
Other alarms	<ol style="list-style-type: none"> <li>1. Thermostat failure</li> <li>2. Abnorml voltage alarm</li> </ol>

# 1. Medical ULT Freezer



# 2. CONSUMABLES FOR ULT FREEZER



Two code management system to locate and monitor vials

Label Printer

Batch code recog machine

Multiple Color for multiple choice

PPT BOX

304SUS Racks

# BIOLOGICAL SAMPLE BANKS REQUIRE CONSUMABLES

Freezer Model	Capacity(L)	Shelves	Compartments	Size of Racks(H* D)	Racks per Shelf	Racks per Freezer	Boxes Per Rack	Boxes per Freezer	Box Size(mm )	Vials per Freezer						
VRIE408	408	3	4	5*4	4	16	20	288	2*50	28800						
				4*4	4		16									
VRIE588	588	3	4	5*5	4	16	25	400		2*50	40000					
				5*5	4		16									
VRIE728	728	3	4	5*4+6*4	6	24	20+24	504			2*50	50400				
VRIE838	838	3	4	5*5	6	24	25	600				2*50	60000			
				5*5	6		24									
VRIESE188	188	3	4	4*3	3	12	12	108					2*50	10800		
VRIESE340	340	3	4	4*4	3	12	16	192						2*50	19200	
VRIESVE408	408	3	4	5*4	4	16	20	288							2*50	28000
				4*4	4		16									
VRIESE588	588	3	4	5*5	4	16	25	400	2*50							40000
VRIESE838	838	3	4	5*5	6	24	25	600		2*50						60000