



-86°C ULT Freezer

QuickCool Series

Model: MDF-86V408E

(Version: 2024-5)



Applications

The -86°C ultra-low temperature freezers are designed for the long-term preservation of viruses, germs, vaccines, biological tissues and organs, special food, medicines, reagents, etc.

Features

- Accurate temperature controller, setting temperature range of -40 to -86°C
- 7-inch touch screen display, accuracy of 0.1 °C.
- Suggested ambient temperature: +10 to 32°C.
- 304 SS inner chamber for friendly use and easy cleaning.
- Brand compressor to ensure excellent stability of the cooling system.
- Patented refrigeration technology, high-efficiency mixed gas for the cooling system.

Security

- Safety door lock to prevent unauthorized access.
- 72h built-in backup battery to power the controller and save temp. data when power failure or system error.
- Visual and audible alarm system: High/low temperature, sensor failure, controller error, etc.
- Power failure protection: turn-on delay of the cooling system after power failure.
- Controller error protection: the cooling system will remember the normal working cycle and keep working depending on this memory when the controller or two sensors failed.

Humanized design

- Adjustable shelves for easy storage.
- Casters with stoppers for easy moving and fixation.
- Special-designed service-free drainage system.



Specifications

Model NO.	MDF-86V408E
Main Specifications	
Temperature Range	-40 ~ -86 °C
Ambient Temperature	10~32°C
Capacity (L/Cu. Ft.)	408 / 14.41
Interior Dimensions (W×D×H) mm	606×575×1180
Exterior Dimensions (W×D×H) mm	872×1028×1945.5
Weight	268 kgs
Noise	50 dB
Storage	
Cold Rack (pcs)	5×4 / 8, 4×4 / 8
2' Cold Box (pcs)	288
0.5~2ml Cryo Vials (pcs)	28,800
Control and Power	
Controller	Microprocessor
Display	7" Touch Screen
Sensor	PTC
Voltage and Frequency	187~242V, 50/60Hz
Power	1200 W
Electric Current	5.455A
Power Consumption (kWh/24h)	12.65 (-81°C) 10.33 (-75°C)
Audible and Visual Alarms	
High / Low Temp. Alarm	Yes
Power Failure Alarm	Yes, 72h
Sensor Error Alarm	Yes
Controller Error Alarm	Yes
Door Ajar Alarm	Yes
Abnormal Voltage Alarm	Yes
Abnormal Ambient Temp. Alarm	Yes
Battery Error Alarm	Yes
Filter Net Clean Alarm	Yes
Condenser Error Alarm	Yes
Refrigeration	
Refrigeration Type	Direct Cooling
Defrost	Manual
Compressor (Brand/pcs)	SECOP / 1
Refrigerant / Weight (kgs)	R4001 / 350g
Cabinet	
Door (pcs)	Foamed Solid Door / 1
Inner Door (pcs)	304SS Foamed Solid Door / 2
Fixed / Adjustable Shelf (pcs)	0 / 3
Interior Cabinet Material	304 Stainless steel
Exterior Cabinet Material	Coated Steel
Insulation Material	PURF (δ100mm), VIP
Door Lock	Yes
Test Hole (pcs)	Φ25mm / 1
Fixed / Levelling Castors (pcs)	0 / 4
Accessories	
Voltage Stabilizer	Optional
USB Data Download Port	Yes

Remote Alarm Port	Yes
RS232 / RS485 Port	Optional
Temperature Datalogger	Optional
Temperature Printer	Optional
Protective Gloves	Optional
LN2/CO2 Backup System	Optional
LN2 Filling Tank for Backup System	Optional
Shipping	
Package	Plywood box with pallet
Shipping Weight	318 kgs
Shipping Size (W×D×H)	954×955×2094
Shipping Volume	1.91 CBM