

EcoTouch ULT freezer

SUS304 Interior
durable use and easy clean



Ergonomic door padlock-compatible, integrated key lock

Built-in whiteboard
transfer message easily

Washable filter
provides protection against dust on the condenser

Castor with breaker
for easy installation



7" LCD Eco touch screen
Friendly interface freezer information
On-board data storage Store up to 15 years of temperature and event data

Pressure release port
for quick re-entries after door opening

USB port
download freezer temperature and event data



Remote alarm contact
output compatible with external alarm and monitoring systems

Optional seven day chart recorder

The -86°C ULT freezer is specially designed for a stable ultra low temperature storage condition, to store germs, erythrocytes, leucocytes, viruses and many other biological materials. Installations can be found in research institutes, pharmacy industry, clinical labs, blood banks and laboratories in electronic & chemical plants.



A SMART freezer

- 7" touch screen, easy observation & convenient operation
- Checking history temperature curve and alarm record on screen
- Self-diagnostic, automatic check & alarm for key components
- Optional USB port, download data conveniently

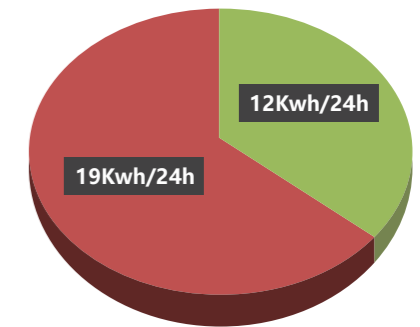
A GREEN freezer

- Non greenhouse gas is used, an environmental friendly freezer.
- Hydrocarbon two compressor cascade cooling system for super low power consumption.



Power consumption of traditional freezer & energy-saving freezer

- energy saving freezer
- traditional freezer



Electricity charge for a 600 liter ULT freezer

Product	Power consumption (Kwh/24h)	Ambient Temperature	1-year charge	5-year charge
Traditional freezer	19.00	25°C	€ 1,733.75	€ 8,668.75
Antech energy-saving freezer	12.00	25°C	€ 1,095.00	€ 5,475.00
Value saved			€ 638.75	€ 3,193.75
				€ 17,337.50
				€ 10,950.00
				€ 6,387.50

A USER-FRIENDLY freezer

- SUS304 interior for easy cleaning & rust free
- White board to record a message conveniently
- Document groove to put paper, create a stylish lab
- Optional electric lock for safety and convenient administration
- Maximum sample storage capacity with an optimum footprint
- Special noise reduction design, a real quite lab partner



▲ Outer door latch with padlock panel



▲ SS304 inner door latch



▲ SS304 inner cabinet, figure marked strip and sensor



▲ Protection against Wall



▲ Washable filter



▲ Heavy-duty caster with lock



▲ Testing port



▲ 7-day circular chart recorder is Optional

Accessories



Specification

Model	MF-86V458T	MF-86V588T	MF-86V728T	MF-86V838T
Technical Data				
Type	Upright	Upright	Upright	Upright
Capacity (L/cu ft)	408/14.41	588/20.76	728/25.70	838/29.59
Inner doors	2 pcs, forming door, SUS304	2 pcs, forming door, SUS304	2 pcs, forming door, SUS304	2 pcs, forming door, SUS304
Shelves	3 pcs, SUS304	3 pcs, SUS304	3 pcs, SUS304	3, made in SUS304
Inner chamber material	SUS304	SUS304	SUS304	SUS304
Cooling type	Direct cooling	Direct cooling	Direct cooling	Direct cooling
Refrigerant	Hydrocarbon, CFC Free, Non greenhouse	Hydrocarbon, CFC Free, Non greenhouse gas	Hydrocarbon, CFC Free, Non greenhouse gas	Hydrocarbon, CFC Free, Non greenhouse gas
Noise level (dB)	50	51	52	53
Temperature				
Ambient temperature (°C)	10~32°C	10~32°C	10~32°C	10~32°C
Temperature range (°C)	-40~-86°C	-40~-86°C	-40~-86°C	-40~-86°C
Cooling & Controller				
Cooling System	Two compressor cascade system	Two compressor cascade system	Two compressor cascade system	Two compressor cascade system
Compressor Brand	SECOP	SECOP	SECOP	SECOP
Sensor	PT100	PT100	PT100	PT100
Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor
Display & Control	7" Touch Screen	7" Touch Screen	7" Touch Screen	7" Touch Screen
Electronic parameter				
Voltage/Frequency	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz
Power (W)	845	815	935	890
Power Consumption (kWh/24h)	11.6	12	13.28	13.86
Vials load				
2ml Vials (pcs)	19200	40000	50000	60000
Size & Weight				
Internal (W*D*H) mm	606×575×1180	606×738×1310	963×558×1350	894×718×1310
External (W*D*H) mm	891×992×1945	891×1155×1995	1248×970×1994	1160×1172×1995
Packing (W*D*H) mm	954×955×2094	954×955×2094	1320×975×2185	1212×1098×2185
Net/Gross weight (kg)	215/245	249/275	320/350	275/305
Alarm System				
High/low temperature	✓	✓	✓	✓
Power off	✓	✓	✓	✓
Abnormal voltage	✓	✓	✓	✓
Sensor malfunction	✓	✓	✓	✓
Filter screen check	✓	✓	✓	✓
Temperature controller malfunction	✓	✓	✓	✓
Backup battery malfunction	✓	✓	✓	✓
Condenser malfunction	✓	✓	✓	✓
Ambient temperature	✓	✓	✓	✓
Accessories				
Door ajar	✓	✓	✓	✓
Caster	4	4	4	4
Test hole/Diameter	1/25mm	1/25mm	1/25mm	1/25mm
Remote alarm contact	✓	✓	✓	✓
RS232/485 port	✓	✓	✓	✓
USB Port	Optional	Optional	Optional	Optional
Temperature recorder	Optional	Optional	Optional	Optional
Freezer racks	Optional	Optional	Optional	Optional
CO2 backup system	Optional	Optional	Optional	Optional
LN2 backup system	Optional	Optional	Optional	Optional

EcoLogic ULT freezer

Microprocessor controller of temperature, alarm, monitoring and diagnostic functions.

panel

Various stainless steel rack for option

Formed inner door with door seal

Double layer outer door seal

Outer door latch with padlock panel

SS304 inner cabinet and inner door rust free & easy cleaning

Formed outer door with VIP

Access port for power switch and remote alarm contact

Heavy-duty caster with lock

Padlock panel to prevent unauthorized access

EBM brand fan & Secop/Embraco brand compressor are used

Precise Temperature Control

Microprocessor temperature controller, digital temperature display, ensure precise & stable running at -86°C

LED digital display, easy to read temperature and alarm conditions.



Advanced Cooling System

- Two-compressor cascade refrigeration system with Hydrocarbon refrigerant
- World-class famous SECOP brand compressor
- High-tech integrated sensors to display and control temperature
- Wide range operating voltage system from 185V to 260 V designed
- Suitable for 10°C to 32°C ambient temperature

Ultra Low Power Consumption

- World leading energy efficient ULT freezer
- VIP panel for excellent insulations
- Insulated inner door to keep cold air inside of cabinet
- High efficiency cooling system

Ergonomic Design

- Removable condenser cover, easy maintenance
- Stainless steel 304 interior material, easy cleaning
- Lockable casters for easy movement and fix
- Top quality stainless steel racks and cryogenic boxes are available



Specification

	Model	MF-86V340E
Technical Data	Cabinet Type	Upright
	Gross Capacity (L)	340
	2ml Vials (pcs)	19200
	Climate Class	N
	Cooling Type	Direct Cooling
	Cooling System	Two Compressor Cascade System
	Defrost Mode	Manual
	Refrigerant	CFC-Free
	Door	Single Solid Door
Performance	Noise (dB)	50
	Temperature Range (°C)	-60 ~ -86
Control	Cooling Performance (°C)	-86
	Temperature Control	Microprocessor
Material	Display	LED
	Interior	SUS304
	Exterior	Powder Coated Steel
	Shelf	SUS304
Electrical Data	Insulation	PU Forming
	Voltage/Frequency	220V~240V, 50Hz
Dimensions	Power (W)	800
	Net/Gross Weight (kg)	190/240
	Internal Dimension (W/D/H, mm)	488×607×1140
	External Dimension (W/D/H, mm)	854×1072×1907
	Packing Dimension (W/D/H, mm)	935×1070×2128
	Container Load (20'/40'/40'H)	12/24/24
	High/Low Temperature Alarm	Y
Functions	High Ambient Temp Alarm	Y
	Remote Alarm Contact	Y
	Hot Condenser Alarm	Y
	Power Failure Alarm	Y
	High/Low Voltage Alarm	Y
	Sensor Error Alarm	Y
	Low Battery Alarm	Y
Accessories	Door Lock	Y
	Caster	4
	Shelf/Chamber	3/4
	Inner Door	2
	Remote Alarm Contact	Standard
	Test Hole	Standard
	Chart Recorder	Optional
	USB Interface	Y
	CO2 Backup System	Optional
	LN2 Backup System	Optional
Others	Certificate	CE, ISO9001

Dual Guard ULT Freezer



Dual Cooling System

The Dual Cooling System Ultra-low Freezer avoids conventional cascade refrigeration technology by using two completely independent one-compressor, auto-cascade cooling systems, each capable of maintaining ultra-low temperatures.

Each refrigeration circuit includes a closed-loop cold-wall evaporator configured in parallel to the other. Conventional ULT freezers with single or cascade refrigeration circuits cannot work when one compressor fails.

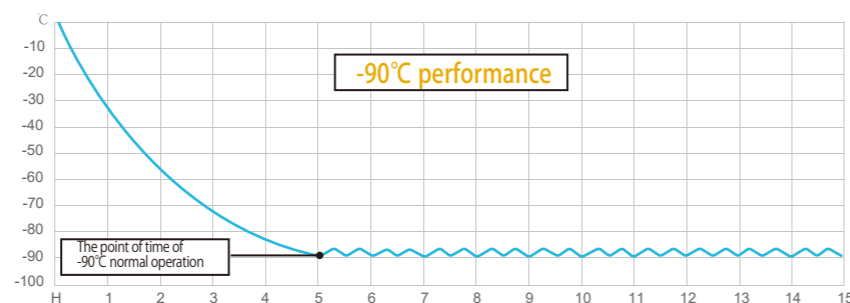
NEW DUAL COMPRESSOR FREEZING SYSTEM

Independent refrigeration system sustain freezing temperature at least -70 °C in the event of a compressor failure.

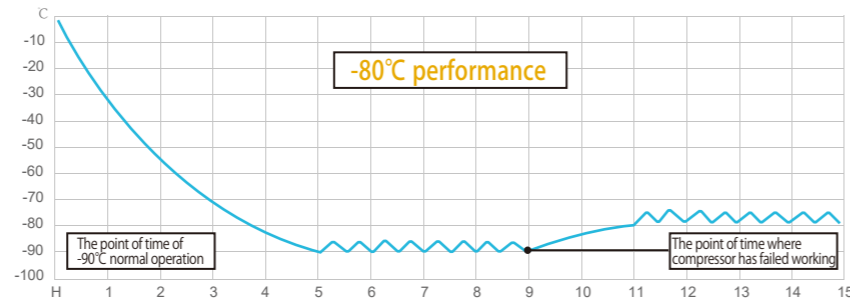
Dual Compressor System

- Simplified structure provides high efficiency, lowered noise and no failures.
- A freezer is enough for ultra cold storage at -90°C

The temperature curve of -90°C normal setting



The temperature curve of one compressor failure



Features

- Two independent refrigeration systems in one ULT freezer
- Exceptionally uniform and reliable temperature
- User-friendly design and low running costs.
- A remote alarm terminal mounted to connect to an external alarm system.
- Chart recorder is optional
- LN2 backup system or CO2 backup system is optional

Specification

Model	MF-86V360D	MF-86V480D	MF-86V590D	MF-86V840D
Basic				
Type	Upright	Upright	Upright	Upright
Capacity (L/cu ft)	390/13.77	490/17.30	590/20.84	840/29.66
Temperature range (°C)	-40~-86°C	-40~-86°C	-40~-86°C	-40~-86°C
Ambient temperature (°C)	10~32°C	10~32°C	10~32°C	10~32°C
Inner doors	2 pcs, forming door	2 pcs, forming door	2 pcs, forming door	2 pcs, forming door
Shelves	3 pcs, SUS304	3 pcs, SUS304	3 pcs, SUS304	3, made in SUS304
Cooling type	Direct cooling	Direct cooling	Direct cooling	Direct cooling
Refrigerant	CFC Free	CFC Free	CFC Free	CFC Free
Noise level (dB)	50	51	52	53
Cooling & Controller				
Cooling System	Two independent cooling system	Two independent cooling system	Two independent cooling system	Two independent cooling system
Compressor Qty	2	2	2	2
Compressor Brand	SECOP	SECOP	SECOP	SECOP
Sensor	PT100	PT100	PT100	PT100
Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor
Display	7" Touch Screen/LED	7" Touch Screen/LED	7" Touch Screen/LED	7" Touch Screen/LED
Electronic parameter				
Voltage/Frequency	220V~240V, 50Hz/60Hz	220V~240V, 50Hz/60Hz	220V~240V, 50Hz/60Hz	220V~240V, 50Hz/60Hz
Power (W)	800	1100	1100	1100
Vials load				
2ml Vails (pcs)	24000	32000	40000	60000
Size & Weight				
Internal (W*D*H) mm	460×600×1310	600×600×1310	740×600×1310	880×730×1310
External (W*D*H) mm	730×845×1970	870×845×1970	1010×845×1970	1150×970×1970
Net/Gross weight (kg)	215	250	280	305
Alarm System				
High/low temperature	✓	✓	✓	✓
Power failure alarm	✓	✓	✓	✓
Sensor malfunction	✓	✓	✓	✓
Backup battery malfunction	✓	✓	✓	✓
Condenser dirty alarm	✓	✓	✓	✓
High ambient temperature	✓	✓	✓	✓
Door open	✓	✓	✓	✓
Accessories				
Caster	4	4	4	4
Test hole/Diameter	1/25mm	1/25mm	1/25mm	1/25mm
Remote alarm contact	✓	✓	✓	✓
USB Port	Optional	Optional	Optional	Optional
Temperature recorder	Optional	Optional	Optional	Optional
Freezer racks	Optional	Optional	Optional	Optional
CO2 backup system	Optional	Optional	Optional	Optional
LN2 backup system	Optional	Optional	Optional	Optional

Classic ULT freezer

Performance

- Temperature reaches -86 °C , adjustable -40 °C ~ -86 °C ,
- Microprocessor controller with LED display increment 0.1
- Wide range operating voltage system from 185V to 260 V

Reliability

- Single compressor and auto-cascade refrigerant system
- World famous compressor (SECOP) and FAN (EBM)
- Lower the noise and low power consumption

Safety

- Audible and visual alarm:
- High/Low temperature alarm
 - Sensor error alarm
 - Power failure alarm
 - Remote alarm contact

Ergonomic Design

- Safety lock to prevent unauthorized
- Universal lockable caster design for ease of maneuvering
- Adjustable storage shelf height
- Unique CFC-free mixed refrigerant

Upright type



MF-86V58

MF-86V158

Chest type



MDF-86C258

Specification

Model	MF-86V58	MF-86V158	MF-86H118	MF-86H258	MF-86H458
Technical Data					
Cabinet Type	Upright	Upright	Chest	Chest	Chest
Gross Capacity (L)	58	158	118	258	458
Climate Class	N	N	N	N	N
Cooling Type	Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling
Cooling System	Single Compressor Auto-cascade System	Single Compressor Auto-cascade System	Single Compressor Auto-cascade System	Single Compressor Auto-cascade System	Single Compressor Auto-cascade System
Defrost Mode	Manual	Manual	Manual	Manual	Manual
Refrigerant	CFC-Free	CFC-Free	CFC-Free	CFC-Free	CFC-Free
Door	Single Solid Door	Single Solid Door	Single Solid Door	Single Solid Door	Single Solid Door
Noise (dB)	50	50	50	50	50
Performance					
Temperature Range (°C)	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86	-40 ~ -86
Cooling Performance (°C)	-86	-86	-86	-86	-86
Control					
Temperature Control	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor
Display	LED	LED	LED	LED	LED
Material					
Interior	SUS304	SUS304	SUS304	SUS304	SUS304
Exterior	Powder Coated Steel	Powder Coated Steel	Powder Coated Steel	Powder Coated Steel	Powder Coated Steel
Shelf	SUS304	SUS304	N/A	N/A	N/A
Insulation	PU Forming	PU Forming	PU Forming	PU Forming	PU Forming
Electrical Data					
Voltage/Frequency	220V~240V, 50Hz/60Hz 115V/60Hz	220V~240V, 50Hz/60Hz 115V/60Hz	220V~240V, 50Hz/60Hz 115V/60Hz	220V~240V, 50Hz/60Hz 115V/60Hz	220V~240V, 50Hz/60Hz 115V/60Hz
Power (W)	400	450	450	500	550
Dimensions					
Net/Gross Weight (kg)	75/95	130/160	90/135	220/240	240/270
Internal Dimension (W/D/H, mm)	364x405x409	460x455x800	700x470x360	780x500x660	1330x500x600
External Dimension (W/D/H, mm)	540x620x1115	700x700x1580	900x750x920	1510x885x1095	2110x885x1095
Packing Dimension (W/D/H, mm)	610x700x1240	780x800x1710	1330x850x1140	1570x945x1230	2170x945x1230
Container Load (20'/40'/40'H)	27/57/104	21/45/45	16/36/36	7/15/30	5/11/22
Functions					
High/Low Temperature Alarm	Y	Y	Y	Y	Y
Remote Alarm Contact	Y	Y	Y	Y	Y
Power Failure Alarm	Y	Y	Y	Y	Y
Sensor Error Alarm	Y	Y	Y	Y	Y
Accessories					
Door Lock	Y	Y	Y	Y	Y
Caster	4	4	6	6	8
Shelf/Chamber	1/2	2/3	N/A	N/A	N/A
Inner Door	1	3	1	1	1
Remote Alarm Contact	Standard	Standard	Standard	Standard	Standard
Test Hole	Standard	Standard	Standard	Standard	Standard
Chart Recorder	Optional	Optional	Optional	Optional	Optional
CO2 Backup System	Optional	Optional	Optional	Optional	Optional
LN2 Backup System	Optional	Optional	Optional	Optional	Optional
Others					
Certificate	CE, ISO9001	CE, ISO9001	CE, ISO9001	CE, ISO9001	CE, ISO9001