ANTECH

BIOMEDICAL REFRIGERATION
SOLUTIONS

2~8°C/ 4°C/ -25°C/ -40°C/ -86°C/ -150°C

TABLE OF CONTENTS

ANTECH

EXPLANATION OF ICONS

Low CO2 emissions
Optimized refrigeration system for lower power consumption and reduced CO2 emissions

Password protection
Protected engineer mode, avoids unauthorized change of key parameters

Natural refrigerant
Natural gas is used to reduce GHG (greenhouse gas) emissions and protect climate.

Door ajar alarm
Alarm activated if door open up for a certain time.

CFC /HCFC free
Environment friendly refrigerant, harmless to ozonosphere.

High/low temperature alarm
Sound / flash alarm to remind user when chamber temperature is out of desired range

Force air cooling
for excellent temperature uniformity & fast cool-down after door opennings

Power failure alarm
Sound alarm after power failure, avoid potential loss caused by temperature rise

Direct cooling
Optimized direct cooling system with high efficiency

Reversible doors
Left or right side open reversible door for flexibable installations

USB port
Temperature data storage & USB port for download

Stackable design
The refrigerator or freezer is stackable (using ANTECH stacking kits) to save space

Safety door lock
Preventing unauthorized access

CE certification
CE certified model, safety guaranteed

CryoMonitor 2000TF
Temperature Monitoring System

The CryoMonitor 2000TF provides both on-site and cloud based remote temperature monitoring for pharmacy refrigerator, bio-medical freezer, ultra-low temperature freezer, incubator, liquid nitrogen container, etc.

CryoMonitor 2000TF records temperature data for traceability. It alarms users with sound & light when temperature is out of normal range, to avoid irreparable loss of precious samples or products.

Furthermore, taking advantages of optional cloud service, data is transferred to and stored on cloud server, which can be visited from a PC, pad or smart phone anywhere & anytime.

Features

- Both on-site & cloud based remote monitoring
- -200 ~ +200°C wide temperature range
- Quick installation kit for easy installation
- Data storage & USB port for download
- Remote alarm contact

- RS485 port
- Wi-Fi connection & BioExpress cloud platform
- 3-year cloud service free of charge
- Worldwide data access & alarm
- Backup battery for monitoring during power failure or movement

Connection (Optional)

— Wi-Fi connection to transfer data to cloud server.
— Global access on a PC, tablet or smartphone.

Wi-Fi Enabled   Cloud Server   Various Devices   Global Access   Email Alarm   SMS Alarm

Interface

1. Wi-Fi connection status   2. USB connection status   3. Date & time   4. Sound alarm
5. Power connection status   6. Unit of temperature   7. Temperature display

Specification

MODEL	CryoMonitor 2000TF
Temperature monitoring	-200~+200°C
Temperature sensor	PT-100
On-site alarm	Sound & light
Dimension (Width x Height x Thickness)	138 x 91 x 42mm
Net weight	330g
Power supply	100~240V, 50/60Hz, AC
Backup battery	Built-in lithium battery, replaceable
Data storage	●
USB port for data download	●
Romote alarm contact	●
RS485 port	●
Internet connection	Wi-Fi
Cloud service	3-year could service free of charge
Cloud alarm	Email, SMS

2~8°C Pharmacy Refrigerator

The professional PharmaSafe series medical refrigerator, specifically developed to be used by laboratories, hospitals, and pharmacies, ensure optimal storage conditions for temperature sensitive medical products and biological material, meeting the highest requirement for accurate controlled cold storage. Available with a wide range of capacities and applications, from 60 liters for minor needs to 1400 liters for pharmaceutical warehouses. Both glass door and solid door (forming door) are available. Space saving sliding door refrigerators are available for large capacity models. PharmaSafe refrigerators are compliant with main international requirements, including CE, UL, etc.

TC-100 Controller

Microprocessor electronic controller for PharmaSafe series medical refrigerators, fitted with dual LED screen to display inner chamber temperature and key working conditions. Advanced dual sensor control system for accurate temperature control.

PERFORMANCE

- Forced air cooling for excellent temperature uniformity
- Variable (cycle) defrost
- Intelligent microprocessor controller with LED digital display resolution 0.1
- Magnetically sealed door with rapid cool-down mode after door opening
- Dual sensor design: Independent control sensor and display sensor

ALARMS

- High temperature
- Low temperature
- Door ajar
- Power failure
- Sensor error
- Low battery

ERGONOMIC DESIGN

- Door-activated and exterior switch-activated interior LED lighting
- Self-close door for convenient operation
- Left/right side open revisable door (capacity less than 600 liters) to suit various space
- Ultra-quite design reduces noise level

SAFETY

- Build-in data storage and USB port for download
- Quick check of max/min temperature in 24 hours
- Password protection avoids key parameters unauthorized change
- Safety door lock, preventing unauthorized access
- Access port for additional temperature probe
- Remote alarm contacts

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
- CFC-Free polyurethane foaming insulation
- High efficiency cooling system for lower energy consumption and carbon emission

Safety door lock
Preventing unauthorized access

USB port
Temperature data storage and download

Forced air cooling
Excellent temperature uniformity
and fast recovery after door open

Adjustable shelves
Convenient storage of different
size products

Dual sensor system
Product sensor in aluminum block
to simulate real product temperature;
Control sensor in air for accurate control.

Access port
For easy access of additional
temperature probe

Remote alarm contact
Sending signal to a remote alarm system

ANTECH

PharmaSafe
2-8°C/ Desktop/ MPR-68

ANTECH's 60 liter desktop medical refrigerator is ideal for small medical practices, pharmacies, and labs. It is a great choice when you need small medical fridge for specialized medicines, vaccines or lab materials. It is perfectly suited for additional storage where space is a consideration. The MPR-68 is designed for the most rigorous life science, research, healthcare, clinical, and commercial applications.

This unit uses environmentally friendly, natural refrigerants that are fully compliant with new EPA/SNAP/UL regulations.
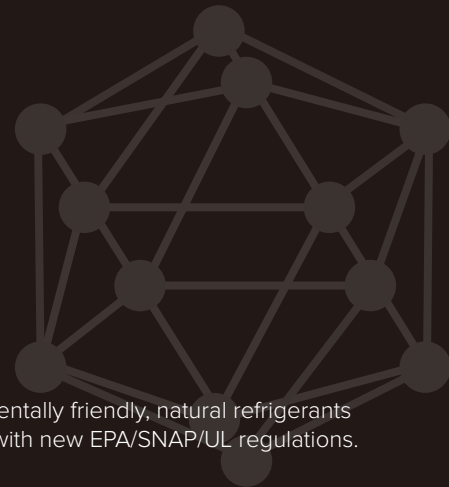
▼ MPR-68 glass door

▼ MPR-68 solid door
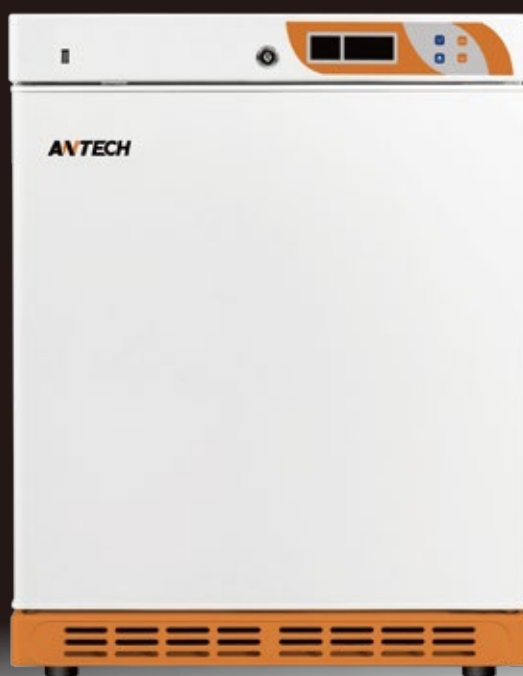
NATURAL REFRIGERANT

FORCE AIR COOLING

USB PORT

REVERSIBLE DOORS

STACKABLE DESIGN

DOOR AJAR ALARM

MODEL	MPR-68
Door type	1 glass door as standard, solid door optional
Temperature range (°C)	2～8
Capacity (L)	65
External dimensions W×D×H (mm)	510×590×660
Shelves (pcs)	2
Power supply	220V/50Hz; 220V/60Hz; 120V/60Hz
Data storage & USB port	●

PharmaSafe
2-8°C/ Under-counter/ MPR-136

ANTECH's glass door 136 liter undercounter medical refrigerator MPR-136 is ideal for small medical practices, pharmacies, and labs. Its height is designed to match laboratory table and optimized usage of limited space. Despite a small capacity refrigerator, the functions are complete for medical and laboratory applications, including data storage and USB port for download, high/low temperature alarm, door open alarm, power failure alarm, remote alarm contact, etc. Therefore, MPR-136 meets the most rigorous requirements of healthcare and scientific research.

This unit uses environmentally friendly, natural refrigerants that are fully compliant with new EPA/SNAP/UL regulations.

MPR-136S is a solid door (forming door) refrigerator with same functions and features.
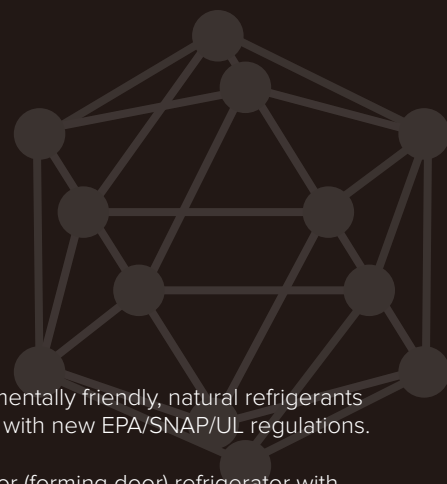
▼ With Stacking Kits

ANTECH PharmaSafe series under counter and benchtop units are stackable using ANTECH stacking kit. You can order with various combinations with flexibility for your specific demand

NATURAL REFRIGERANT	FORCE AIR COOLING	USB PORT	REVERSIBLE DOORS	STACKABLE DESIGN	DOOR AJAR ALARM

MODEL	MPR-136
Door type	1 glass door as standard, solid door optional
Temperature range (°C)	2～8
Capacity (L)	136
Externmal dimensions W×D×H (mm)	600×680×812
Shelves (pcs)	3
Power supply	220V/50Hz; 220V/60Hz; 120V/60Hz
Data storage & USB port	●

PharmaSafe
2-8°C/ MPR-260/360/525

PharmaSafe series upright glass door medical refrigerators are used to store medicines, vaccines or lab materials in pharmacies, hospitals, clinics and labs. Forced air cooling enables excellent temperature uniformity. The dual-pane, insulated LOW-E glass door provides superior thermal performance and lower condensation. Product temperature sensor is put into aluminum block to simulate product temperature. Access port is available for additional temperature probe.

Solid door (forming door) models are available for these medical refrigerators.

These units use environmentally friendly, natural refrigerants that are fully compliant with new EPA/SNAP/UL regulations.

Temperature data storage and USB port are supplied as standard. A pdf format file including temperature curve and temperature data can be downloaded. A quick check of maximum and minimum temperature record in previous 24 hours is also available, making the job much easier for operators.

▼ MPR-260

▼ MPR-360

▼ MPR-525

| LOW CO2 EMISSIONS | FORCE AIR COOLING | USB PORT | REVERSIBLE DOORS | POWER FAILURE ALARM | DOOR AJAR ALARM |

MODEL	MPR-260	MPR-360	MPR-525
Door type	1 glass door as standard, solid door optional		
Temperature range (°C)	2～8	2～8	2～8
Capacity (L)	270	375	520
External dimensions W×D×H (mm)	600×590×1585	600×680×1840	775×700×1945
Shelves (pcs)	5	6	5
Power supply	220V/50Hz 220V/60Hz 120V/60Hz	220V/50Hz 220V/60Hz 120V/60Hz	220V/50Hz 220V/60Hz 120V/60Hz
Data storage & USB port	●	●	●

PharmaSafe
2-8°C/ MPR-656/1006/1410

PharmaSafe series large capacity medical refrigerators are used to store medicines, vaccines or lab materials with large volume. The capacity is up to 1410 liters. Forced air cooling for high-temperature stability and quick temperature recovery after door open. The dual-pane, insulated glass door provides superior thermal performance and lower energy consumption.

Temperature data storage and USB port are supplied as standard. A quick check of maximum and minimum temperature record in previous 24 hours is also available.

Solid door (forming door) models are available for light sensitive materials.

These units use environmentally friendly, natural refrigerants that are fully compliant with new EPA/SNAP/UL regulations.

▼ MPR-656

▼ MPR-1006

| LOW CO2 EMISSIONS | FORCE AIR COOLING | USB PORT | POWER FAILURE ALARM | DOOR AJAR ALARM |

MODEL	MPR-656	MPR-1006	MPR-1410
Door type	1 glass door as standard, solid door optional	2 glass door as standard, solid door optional	
Temperature range (°C)	2～8	2～8	2～8
Capacity (L)	638	1140	1410
External dimensions W×D×H (mm)	780×840×1965	1300×840×1965	1580×840×1965
Shelves (pcs)	5	5	5
Power supply	220V/50Hz 220V/60Hz 120V/60Hz	220V/50Hz 220V/60Hz 120V/60Hz	220V/50Hz 220V/60Hz 120V/60Hz
Data storage & USB port	Yes	Yes	Yes

2~8℃
PharmaSafe series
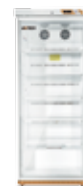
	Model	MPR-68	MPR-136	MPR-260	MPR-360	MPR-525
Main specifications	Type	Desktop	Under-counter	Upright	Upright	Upright
	Temperature range (℃)	2〜8	2〜8	2〜8	2〜8	2〜8
	Climate type	N	N	N	N	N
	Capacity (L)	65	136	270	375	520
	Internal W×D×H (mm)	410×391×420	500×510×570	500×420×1290	500×510×1550	645×510×1640
	External W×D×H (mm)	510×590×660	600×680×812	600×590×1585	600×680×1840	775×700×1945
	Weight（KGs）	34	53	71	83	121
	Insulation (mm)	50	50	50	50	60
	Cooling type	Forced air	Forced air	Forced air	Forced air	Forced air
	Defrost	Auto defrost	Auto defrost	Auto defrost	Auto defrost	Auto defrost
	Refrigerant	R600a	R600a	R600a(220/60:R290)	R600a(220/60:R290)	R600a(220/60:R290)
Control system	Controller	TC-100	TC-100	TC-100	TC-100	TC-100
	Display	LED digital	LED digital	LED digital	LED digital	LED digital
	Display accuracy	0.1	0.1	0.1	0.1	0.1
Power	Power supply (V/Hz)	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60
	Rated power (W)	118 118 100	135 135 105	175 210 180	237 230 210	210 210 210
	Rated Current (A)	1.0 1.0 1.2	1.0 1.0 1.2	1.3 1.5 1.8	1.6 1.6 2.2	1.5 1.5 2.2
Data memory	High/low temp check	●	●	●	●	●
	USB port	●	●	●	●	●
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○CryoMonitor 2000TF	○ CryoMonitor 2000TF
Alarm functions	Visible/audible alarm	●	●	●	●	●
	High/low temp alarm	●	●	●	●	●
	Remote alarm contact	●	●	●	●	●
	Sensor failure	●	●	●	●	●
	Door open	●	●	●	●	●
	Low battery	●	●	●	●	●
	Power failure	●	●	●	●	●
Other feature	Door lock with key	●	●	●	●	●
	Inner LED light	●	●	●	●	●
	Adjustbale foot	●	●	-	-	-
	Caster	-	-	●	●	●
	Test access port	Φ19mm x 1	Φ19mm x 1	Φ19mm x 1	Φ19mm x 1	Φ19mm x 1
	Shelves adjustable	1	2	5	5	5
	Shelf at buttom	1	1	1	1	1
	Door QTY	1	1	1	1	1
Material	Exterior	Pre-coated steel	Pre-coated steel	Pre-coated steel	Pre-coated steel	Pre-coated steel
	Interior	Pre-coated aluminum	Pre-coated aluminum	Pre-coated aluminum	Pre-coated aluminum	Pre-coated aluminum
	Door	2-layer glass door, optional solid door	2-layer glass door, optional solid door	2-layer glass door, optional solid door	2-layer glass door, optional solid door	2-layer glass door, optional solid door
	Insulation	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Shipping	Gross weight (KGs)	42	60	82	101.5	138.5
	Packing W×D×H (mm)	570×620×720	650×700×860	660×620×1650	660×700×1900	830×750×2000
	Volume (m³)	0.25	0.39	0.68	0.88	1.25

2~8°C
PharmaSafe series

Model		MPR-656			MPR-1006			MPR-1410		
Main specifications	Type	Upright			Upright			Upright		
	Temperature range (°C)	2～8			2～8			2～8		
	Climate type	N			N			N		
	Capacity (L)	638			1140			1410		
	Internal W×D×H (mm)	660×650×1400			1299×650×1400			1460×650×1400		
	External W×D×H (mm)	780×840×1965			1300×840×1965			1580×840×1965		
	Weight（KGs）	144			223			238		
	Insulation (mm)	60			60			60		
	Cooling type	Forced air			Forced air			Forced air		
	Defrost	Auto defrost			Auto defrost			Auto defrost		
	Refrigerant	R290			R290			R290		
Control system	Controller	TC-100			TC-100			TC-100		
	Display	LED digital			LED digital			LED digital		
	Display accuracy	0.1			0.1			0.1		
Power	Power supply (V/Hz)	220/50	220/60	120/60	220/50	220/60	120/60	220/50	220/60	120/60
	Rated power (W)	260	260	250	400	400	420	400	400	420
	Rated Current (A)	1.5	1.5	2.6	2.35	2.35	4.8	2.35	2.35	4.8
Data memory	High/low temp check	●			●			●		
	USB port	●			●			●		
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF			○ CryoMonitor 2000TF			○ CryoMonitor 2000TF		
Alarm functions	Visible/audible alarm	●			●			●		
	High/low temp alarm	●			●			●		
	Remote alarm contact	●			●			●		
	Sensor failure	●			●			●		
	Door open	●			●			●		
	Low battery	●			●			●		
	Power failure	●			●			●		
Other feature	Door lock with key	●			●			●		
	Inner LED light	●			●			●		
	Adjustbale foot	-			-			-		
	Caster	●			●			●		
	Test access port	Φ19mm x 1			Φ19mm x 1			Φ19mm x 1		
	Adjustable shelves QTY	5			5			5		
	Door QTY	1			2			2		
Material	Exterior	Coated steel			Coated steel			Coated steel		
	Interior	Coated steel			Coated steel			Coated steel		
	Door	3-layer glass door, optional solid door			3-layer glass door, optional solid door			3-layer glass door, optional solid door		
	Insulation	Polyurethane			Polyurethane			Polyurethane		
Shipping	Gross weight (KGs)	201			258			278		
	Packing W×D×H (mm)	840×870×2150			1340×870×2150			1640×870×2150		
	Volume (m³)	1.57			2.51			3.07		

PharmaStore series pharmacy refrigerators

Antech PharmaStore series pharmacy refrigerators are designed to store drugs, vaccine and reagents in drug stores, clinics, hospitals and laboratories.

Advanced forced air cooling & dual sensor control systems are adopted for excellent temperature uniformity and accurate temperature control.

PharmaStore series are equipped with complete professional functions to guarantee safety of products, such as high/low temperature alarm, door ajar alarm, sensor error alarm, power failure alarm, remote alarm contact, etc.

PharmaStore series refrigerators are compliant with main international requirements, including CE, UL, etc.

This units uses environmentally friendly, natural refrigerant fully compliant with new EPA/SNAP/UL regulations.

TC-110 Controller

Microprocessor electronic controller for PharmaStore series pharmacy refrigerators, advanced dual sensor control system for accurate temperature control.

| LOW CO2 EMISSIONS | NATURAL REFRIGERANT | CFC /HCFC FREE | HIGH/LOW TEMPERATURE ALARM | POWER FAILURE ALARM | DOOR AJAR ALARM | SAFETY DOOR LOCK | FORCE AIR COOLING | CE CERTIFICATION |

PERFORMANCE

• Forced air cooling for excellent temperature uniformity
• Variable (cycle) defrost
• Microprocessor controller with LED digital display
• Dual sensor design: Independent control sensor and display sensor

ERGONOMIC DESIGN

• Interior LED lighting for convenient operation
• Ultra-quite design reduces noise level
• Adjustable feet for leveling

SAFETY

• High/low temperature alarm, door ajar alarm, sensor error alarm, power failure alarm with backup battery
• Safety door lock, preventing unauthorized access
• Access port for additional temperature probe
• Remote alarm contact

ENVIRONMENT FRIENDLY

• Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
• High efficiency cooling system for lower energy consumption and carbon emission

MPR-60   MPR-120   MPR-280   MPR-362   MPR-440

▶ **Safety door lock**
Preventing unauthorized access

▶ **Forced air cooling**
Excellent temperature uniformity and fast recovery after door open
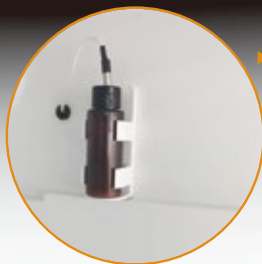
▶ **Dual sensor system**
Product sensor in Emery sand bottle to simulate real product temperature; Control sensor in air for accurate temperature control.
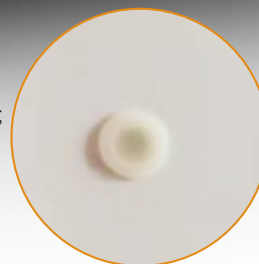
▶ **Access port**
For easy access of additional temperature probe

▶ **Remote alarm contact**

▶ **Backup battery**
For alarm in case of power failure

Specification

Model		MPR-60		MPR-120		MPR-280		MPR-362		MPR-440	
Main Specifications	Temperature Range (℃)	2～8		2～8		2～8		2～8		2～8	
	Climate Class	N		N		N		N		N	
	Capacity (L)	60		120		280		362		440	
	Cooling Type	Forced-Air		Forced-Air		Forced-Air		Forced-Air		Forced-Air	
	Defrost	Auto		Auto		Auto		Auto		Auto	
	Refrigerant	R600a		R600a		R600a		R600a		R600a	
	Noise (dB)	45		45		45		45		45	
Control System	Controller	TC-110		TC-110		TC-110		TC-110		TC-110	
	Display	LED digital		LED digital		LED digital		LED digital		LED digital	
	Display Accuracy	0.1 ℃		0.1 ℃		0.1 ℃		0.1 ℃		0.1 ℃	
	Sensor	Display sensor & control sensor									
Power	Power Supply (V/Hz)	220 50/60	120/60	220 50/60	120/60	220 50/60	120/60	220 50/60	120/60	220 50/60	120/60
	Power (W)	70	85	111	97	174	165	184	175	194	185
	Rated Current (A)	0.6	1.0	0.7	1.2	1.1	2.0	1.2	2.0	1.3	2.0
Dimensions	Inner (W*D*H, mm)	394*376*418		477*424*632		473*550*1160		473*550*1460		473*550*1760	
	External (W*D*H, mm)	480*535*585		597*540*885		595*710*1345		595*710*1645		595*710*1945	
	Packing (W*D*H, mm)	520*565*620		635*585*955		640*760*1370		640*760*1670		640*760*1970	
	Net Weight（KG）	29		44		67		80		92	
	Gross Weight（KG）	32		48		75		90		102	
Alarm Functions	Visible/audible Alarm	●		●		●		●		●	
	High/Low Temperature	●		●		●		●		●	
	Sensor Error	●		●		●		●		●	
	Door Ajar	●		●		●		●		●	
	Power Failure	●		●		●		●		●	
	Low Battery	●		●		●		●		●	
	Remote Alarm Contact	●		●		●		●		●	
Monitoring	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF		○ CryoMonitor 2000TF		○ CryoMonitor 2000TF		○ CryoMonitor 2000TF		○ CryoMonitor 2000TF	
Materials	Exterior	Painted steel		Painted steel		Painted steel		Painted steel		Painted steel	
	Interior	Polystyrene		Polystyrene		Polystyrene		Polystyrene		Polystyrene	
	Insulation	Polyurethane		Polyurethane		Polyurethane		Polyurethane		Polyurethane	
	Door	Glass door x 1		Glass door x 1		Glass door x 1		Glass door x 1		Glass door x 1	
	Inner light	LED		LED		LED		LED		LED	
	Shelf	Coated Steel Wire		Coated Steel Wire		Coated Steel Wire		Coated Steel Wire		Coated Steel Wire	
	Shelf Qty	1 large & 1 small		3 large & 1 small		5 large & 1 small		7 large & 1 small		9 large & 1 small	
Others	Door Lock	●		●		●		●		●	
	Test Access Port	●		●		●		●		●	
	Adjustable Feet	●		●		●		●		●	
	Backup battery	●		●		●		●		●	

4°C Blood Bank Refrigerator

ANTECH BloodSafe series blood bank refrigerators are designed to meet highest requirements for the secure storage of blood and blood components. It provides excellent temperature performance, low noise and decreased energy consumption. High quality SECOP compressor and natural hydrocarbon refrigerant are used for optimized temperature performance and energy efficiency.

TC-100 Controller

Microprocessor electronic controller for BloodSafe series blood bank refrigerators, fitted with dual LED screen to display inner chamber temperature and key working conditions. Advanced dual sensor control system for accurate temperature control.

PERFORMANCE

- Forced air cooling for excellent temperature uniformity
- Variable (cycle) defrost
- Intelligent microprocessor controller with LED digital display resolution 0.1
- Magnetically sealed door with rapid cool-down mode after door opening
- Dual sensor design: Independent control sensor and display sensor

ALARMS

- High temperature
- Low temperature
- Door ajar
- Power failure
- Sensor error
- Low battery

ERGONOMIC DESIGN

- Stainless steel interior for easy cleaning
- Stainless steel sliding drawers for convenient use
- Door-activated and exterior switch-activated interior LED lighting
- Self-close door for convenient operation
- Ultra-quite design reduces noise level
- 3-layer glass door preventing frost

SAFETY

- Build-in data storage and USB port for download
- Quick check of high/low temperature in 24 hours
- Password protection avoids key parameters unauthorized change
- Safety door lock, preventing unauthorized access
- Access port for additional temperature probe
- Remote alarm contacts

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
- No impact on ozone depletion, and very low Global Warming Potential (GWP)
- High efficiency cooling system for lower energy consumption and carbon emission

Door lock
Door lock preventing unauthorized access

USB port
Temperature data storage and download

Forced air cooling
Excellent temperature uniformity
and fast recovery after door open

Sliding drawer
Stainless steel sliding drawers for
convenient storage of blood bags

Access port
For easy access of additional
temperature probe

Remote alarm contact
Sending signal to a remote alarm system

ANTECH

4°C
BloodSafe series

	Model	MBR-658			MBR-1008			MBR-1408		
Main specifications	Type	Upright			Upright			Upright		
	Temperature range (℃)	4			4			4		
	Climate type	N			N			N		
	Capacity (L)	638			1140			1410		
	Blood bag storage qty(450ml)	390			624			780		
	Internal W×D×H (mm)	660×650×1400			1299×650×1400			1460×650×1400		
	External W×D×H (mm)	780×840×1965			1300×840×1965			1580×840×1965		
	Weight（KGs）	174			277			298		
	Insulation (mm)	60			60			60		
	Cooling type	Forced air			Forced air			Forced air		
	Defrost	Auto defrost			Auto defrost			Auto defrost		
Control system	Refrigerant	R290			R290			R290		
	Controller	TC-100			TC-100			TC-100		
	Display	LED digital			LED digital			LED digital		
	Display accuracy	0.1			0.1			0.1		
Power	Power supply(V/Hz)	220/50	220/60	120/60	220/50	220/60	120/60	220/50	220/60	120/60
	Rated power (W)	260	260	250	400	400	420	400	400	420
	Rated Current (A)	1.5	1.5	2.6	2.4	2.4	4.8	2.4	2.4	4.8
Data memory	High/low temp check	●			●			●		
	USB port	●			●			●		
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF			○ CryoMonitor 2000TF			○ CryoMonitor 2000TF		
Alarm functions	Chart recorder	○			○			○		
	Visible/audible alarm	●			●			●		
	High/low temp alarm	●			●			●		
	Remote alarm contact	●			●			●		
	Sensor failure	●			●			●		
	Door open	●			●			●		
	Low battery	●			●			●		
Other feature	Power failure	●			●			●		
	Door lock with key	●			●			●		
	Inner LED light	●			●			●		
	Adjustbale foot	●			●			●		
	Caster	●			●			●		
	Test access port	Φ19mm x 1			Φ19mm x 1			Φ19mm x 1		
	Sliding drawers QTY	6			12			12		
	Door Qty	1			2			2		
Material	Exterior	Coated steel			Coated steel			Coated steel		
	Interior	Stainless steel			Stainless steel			Stainless steel		
	Door	3-layer glass			3-layer glass			3-layer glass		
	Insulation	Polyurethane			Polyurethane			Polyurethane		
Shipping	Gross weight (KGs)	203			312			338		
	Packing W×D×H (mm)	840×870×2150			1340×870×2150			1640×870×2150		
	Volume (m3)	1.57			2.51			3.07		

2~8°C & -25°C Combined Refrigerator and Freezer

Antech medical-class combined refrigerator & freezer provides a compact storage solution for temperature sensitive medical products and biological material at refrigerator temperature (2~8°C) or freezing temperature (-10~-25°C).

LOW CO2 EMISSIONS	NATURAL REFRIGERANT	CFC /HCFC FREE	HIGH/LOW TEMPERATURE ALARM	SAFETY DOOR LOCK

PERFORMANCE

- Independent cooling system for refrigerator and freezer. If one part fails, the other part still works normally
- High-precision microprocessor temperature control system with 0.1℃ display accuracy

ALARMS

- High temperature
- Low temperature
- Open door
- Power failure
- Sensor error
- Low battery

ERGONOMIC DESIGN

- Glass window for refrigerator part for convenient observation
- Adjustable shelves for refrigerator part, freezer part
- Self-close door for convenient operation
- Ultra-quite design reduces noise level

SAFETY

- Safety door lock, preventing unauthorized access
- Access port for additional temperature probe
- Remote alarm contacts

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
- High efficiency cooling system for lower energy consumption and carbon emission
- CFC-Free polyurethane foaming insulation

2~8°C & -25°C
Combined Refrigerator and Freezer

	Model	MRF-300		
Main specifications	Type	Upright		
	Temperature setting range (°C)	Ref: 2~8; freezer: -25～-10		
	Climate type	N		
	Capacity (L)	Ref: 170; freezer: 100		
	Net weight (kg)	78		
	Internal W×D×H (mm)	Ref: 500×460×730; freezer: 500×460×445		
	External W×D×H (mm)	600×606×1776		
	Cooling type	Ref: forced-air; freezer: direct		
	Defrost	Ref: auto; freezer: manual		
	Refrigerant	R600a(220/60:R290)		
	Number of Compressor	2		
Control & display system	Controller	Microprocessor x 2		
	Display	LED Digital		
	Temperature display accuracy	0.1		
Power	Power supply (V/Hz)	220/50	220/60	120/60
	Rated power (W)	230	270	280
	Rated current (A)	1.8	2.1	3.5
Alarm functions	Visible/audible alarm	●		
	High/low temperature	●		
	Power failure	●		
	Sensor failure	●		
	Door open	●		
	Low battery	●		
	Remote alarm contact	●		
Accessories	Door type	Ref: glass door; freezer: forming door		
	Shelves	Ref: 3 adjustable shelves ; freezer: 2 adjustable shelves		
	Safety door lock	●		
	Test access port	Φ20mm x 2		
	Casters	4 (2 with brake)		
Monitoring	Cloud monitoring (Wi-Fi)	CryoMonitor 2000TF, optional		
Material	Exterior	Coated steel		
	Interior	Coated steel		
	Insulation	Polyurethane		
Shipping	Gross weight (KGs)	100		
	Packing W×D×H (mm)	660x660x1840		
	Volume (m³)	0.8		

2~8°C & -40°C Combined Refrigerator and Freezer

Antech medical-class combined refrigerator & freezer provides a compact storage solution for temperature sensitive medical products and biological material at refrigerator temperature (2~8°C) or freezing temperature (-20~-40°C).

LOW CO2 EMISSIONS	NATURAL REFRIGERANT	CFC /HCFC FREE	HIGH/LOW TEMPERATURE ALARM	USB PORT	SAFETY DOOR LOCK

PERFORMANCE

- Independent cooling system for refrigerator and freezer. If one part fails, the other part still works normally
- High-precision microprocessor temperature control system with 0.1℃ display accuracy
- Digital display show freezer working condition and alarm code
- 3-Channel sensor for control, display and ambient temperature

ERGONOMIC DESIGN

- Glass window for refrigerator part for convenient observation
- Adjustable shelves for refrigerator part, drawers for freezer part
- Self-close door for convenient operation
- Ultra-quite design reduces noise level

ALARMS

- High temperature
- Low temperature
- Hot condenser
- Open door
- Power failure
- Sensor error
- Low battery

SAFETY

- Build-in data storage and USB port for download
- Safety door lock, preventing unauthorized access
- Access port for additional temperature probe
- Remote alarm contacts

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
- High efficiency cooling system for lower energy consumption and carbon emission
- CFC-Free polyurethane foaming insulation

2~8°C & -40°C
Combined Refrigerator and Freezer

	Model	MRF-288A			MRF-450A		
Main specifications	Type	Upright			Upright		
	Temperature setting range (°C)	Ref: 2~8; freezer: -10～-40			Ref: 2~8; freezer: -10～-40		
	Climate type	N			N		
	Capacity (L)	Ref: 188; freezer: 100			Ref: 315; freezer: 204		
	Net weight (kg)	143			186		
	Internal W×D×H (mm)	Ref: 600×510×710; freezer: 500×460×505			Ref: 750×610×740; freezer: 650×560×565		
	External W×D×H (mm)	700×640×1845			910×740×1972		
	Cooling type	Ref: forced-air; freezer: direct			Ref: forced-air; freezer: direct		
	Defrost	Ref: auto; freezer: manual			Ref: auto; freezer: manual		
	Refrigerant	Hydrocarbon gas			Hydrocarbon gas		
	Number of Compressor	2			2		
Control & display system	Controller	Microprocessor			Microprocessor		
	Display	LED Digital			LED Digital		
	Temperature display accuracy	0.1			0.1		
Power	Power supply (V/Hz)	220/50	220/60	120/60	220/50	220/60	120/60
	Rated power (W)	330	320	375	398	425	365
	Rated Current (A)	2.5	3.0	5.5	3.6	3.6	6.5
Data	USB port	●			●		
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF			○ CryoMonitor 2000TF		
	RS485 port	●			●		
Alarm functions	Visible/audible alarm	●			●		
	High/Low temperature	●			●		
	Hot condensor	●			●		
	Power failure	●			●		
	Sensor failure	●			●		
	High ambient temperature	●			●		
	Door open	●			●		
	Low battery	●			●		
	Remote alarm contact	●			●		
Accessories	Door type	Ref: forming door with glass window; freezer: solid forming door			Ref: forming door with glass window; freezer: solid forming door		
	Shelves & drawers	Ref: 3 shelves + 1 drawer; freezer: 3 drawers			Ref: 3 shelves + 1 drawer; freezer: 6 drawers		
	Safety door lock	●			●		
	Test access port	Φ25mm x 2			Φ25mm x 2		
	Casters	4 (2 with brake)			4 (2 with brake)		
Material	Exterior	Coated steel			Coated steel		
	Interior	Stainless steel			Stainless steel		
	Insulation	Polyurethane			Polyurethane		
Shipping	Gross weight (KGs)	165			215		
	Packing W×D×H (mm)	830×756×2004			1030×890×2158		
	Volume (m³)	1.25			1.98		

-25°C Laboratory Freezer

The professional LabSafe series lab freezer, specifically developed to be used by laboratories, hospitals, and pharmacies, ensure optimal storage conditions for temperature sensitive medical products and biological material, meeting the highest requirement for accurate controlled cold storage. High density solid door (forming door) is used for excellent insulation. LabSafe freezers are compliant with main international requirements, including CE, UL, etc.

TC-200 Controller

Microprocessor electronic controller for LabSafe series laboratory freezers, fitted with dual LED screen to display inner chamber temperature and key working conditions. Advanced dual sensor control system for accurate temperature control.

PERFORMANCE

- Intelligent microprocessor controller TC-200
- Dual sensor system: display sensor in aluminum block to simulate real product temperature. Control sensor in air for accurate control.
- Optimized direct cooling system & manual defrost
- Rapid temperature recovery after door opening

ERGONOMIC DESIGN

- Self-close door for convenient operation
- Left/right side open revisable door to suit various space
- Ultra-quite design reduces noise level
- LED light for convenient operation

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
- CFC-Free polyurethane foaming insulation
- High efficiency cooling system for lower energy consumption and carbon emission

ALARMS

- High temperature
- Low temperature
- Door ajar
- Power failure
- Sensor error
- Low battery

SAFETY

- Build-in data storage and USB port for download
- Quick check of max/min temperature in 24 hours
- Password protection avoids key parameters unauthorized change
- Safety door lock, preventing unauthorized access
- Access port for additional temperature probe
- Remote alarm contacts

Safety door lock
Preventing unauthorized access

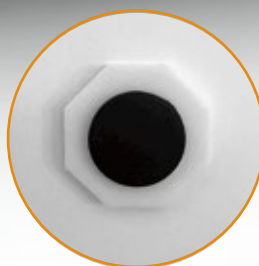**USB port**
Temperature data storage and download

Adjustable shelves
Convenient storage of different
size products
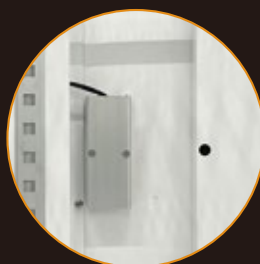
Dual sensor system
Product sensor in aluminum block
to simulate real product temperature;
Control sensor in air for accurate control.

Access port
For easy access of additional
temperature probe

Remote alarm contact
Sending signal to a remote alarm system

ANTECH

LabSafe Series
-25°C/ Desktop/ MDF-25U60

ANTECH desktop lab freezer MDF-25U60 is ideal for small medical practices, pharmacies, and labs. It is a great choice when you need a small lab freezer for specialized medicines, vaccines or lab materials. It is perfectly suited for additional storage where space is a consideration. The MDF-25U60 is designed for the most rigorous life science, research, healthcare and clinical applications.

This unit uses environmentally friendly, natural refrigerants that are fully compliant with new EPA/SNAP/UL regulations.

▼ MDF-25U60

▼ With Stacking Kits

CFC /HCFC FREE	USB PORT	POWER FAILURE ALARM	DOOR AJAR ALARM	REVERSIBLE DOORS	STACKABLE DESIGN

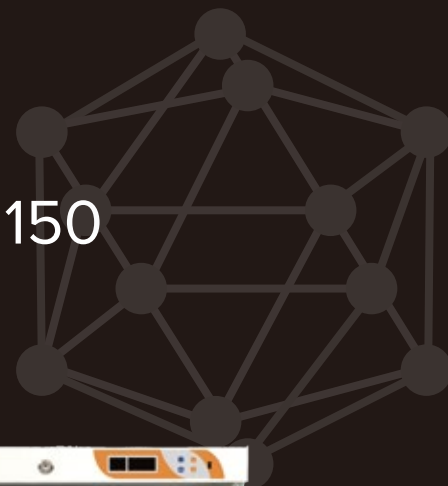| MODEL	MDF-25U60
Temperature range (°C)	-10～-25
Capacity (L)	65
External dimensions W×D×H (mm)	510×590×660
Shelves (pcs)	2
Data storage & USB port	●
Power supply	220V/50Hz; 220V/60Hz; 120V/60Hz

LabSafe Series
## -25°C/Under-counter/ MDF-25U150

ANTECH undercounter lab freezer MDF-25U150 is ideal for small medical practices, pharmacies, and labs. Its height is designed to match laboratory table and optimized usage of limited space. Despite a compact freezer, the functions are complete for medical and laboratory applications, including data storage and USB port for download, high/low temperature alarm, door open alarm, power failure alarm, remote alarm contact, LED light etc. Therefore, MDF-25U150 meets the most rigorous requirements of healthcare and scientific research.

This unit uses environmentally friendly, natural refrigerants that are fully compliant with new EPA/SNAP/UL regulations.

MDF-25U150 is a stackable freezer (using Antech stacking kits) to install in a limited space. You can order with various combinations with flexibility for your specific demand.

▼ MDF-25U150
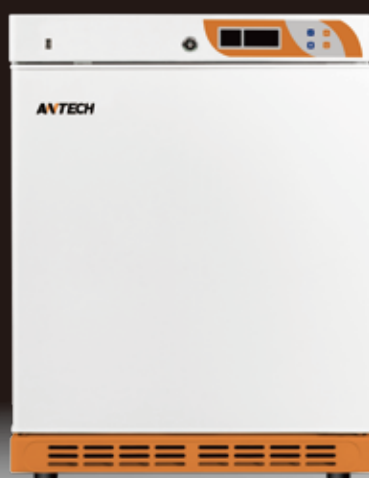
▼ With Stacking Kits

| NATURAL REFRIGERANT | USB PORT | HIGH/LOW TEMPERATURE ALARM | DOOR AJAR ALARM | REVERSIBLE DOORS | STACKABLE DESIGN |

MODEL	MDF-25U150
Temperature range (°C)	-10～-25
Capacity (L)	120
External dimensions W×D×H (mm)	600×680×812
Shelves (pcs)	3
Data storage & USB port	●
Power supply	220V/50Hz; 220V/60Hz; 120V/60Hz

LabSafe Series
-25°/MDF-25U270/400/600

LabSafe series upright lab freezers are used to store medicines, vaccines or lab materials in pharmacies, hospitals, clinics and labs. Product temperature sensor is put into aluminum block to simulate real product temperature. Access port is available for additional temperature probe.

These units use environmentally friendly, natural refrigerants that are fully compliant with new EPA/SNAP/UL regulations.

Temperature data storage and USB port are supplied as standard. A pdf format file including temperature curve and temperature data can be downloaded. A quick check of maximum and minimum temperature record in previous 24 hours is available, making the job much easier for operators. LED light for convenient operation.

▼ MDF-25U270

▼ MDF-25U600

| NATURAL REFRIGERANT | USB PORT | HIGH/LOW TEMPERATURE ALARM | POWER FAILURE ALARM | DOOR AJAR ALARM | REVERSIBLE DOORS |

MODEL	MDF-25U270	MDF-25U400	MDF-25U600
Temperature range (°C)	-10～-25	-10～-25	-10～-25
Capacity (L)	280	380	550
External dimensions W×D×H (mm)	600×560×1585	600×680×1840	775×700×1945
Shelves (pcs)	5	6	6
Data storage & USB port	●	●	●
Power supply	220V/50Hz 220V/60Hz 120V/60Hz	220V/50Hz 220V/60Hz 120V/60Hz	220V/50Hz 220V/60Hz 120V/60Hz

LabSafe series

	Model	MDF-25U60	MDF-25U150	MDF-25U270	MDF-25U400	MDF-25U600
Main specifications	Type	Desktop	Under-counter	Upright	Upright	Upright
	Temperature range (℃)	-10～-25	-10～-25	-10～-25	-10～-25	-10～-25
	Climate type	N	N	N	N	N
	Capacity (L)	65	120	280	380	550
	Internal W×D×H (mm)	410×450×420	500×540×570	500×450×1290	500×520×1550	645×530×1645
	External W×D×H (mm)	510×590×660	600×680×812	600×560×1585	600×680×1840	775×700×1945
	Weight（KGs）	31	41	61	74	95
	Insulation (mm)	50	50	50	50	60
	Cooling type	Direct cooling	Direct cooling	Direct cooling	Direct cooling	Direct cooling
	Defrost	Manual	Manual	Manual	Manual	Manual
	Refrigerant	R600a	R600a(220/60:R290)	R600a	R290	R290
Control system	Controller	TC-200	TC-200	TC-200	TC-200	TC-200
	Display	LED digital	LED digital	LED digital	LED digital	LED digital
	Display accuracy	0.1	0.1	0.1	0.1	0.1

		MDF-25U60			MDF-25U150			MDF-25U270			MDF-25U400			MDF-25U600		
Power	Power supply (V/Hz)	220/50	220/60	120/60	220/50	220/60	120/60	220/50	220/60	120/60	220/50	220/60	120/60	220/50	220/60	120/60
	Rated power (W)	95	95	115	120	140	170	220	220	200	220	220	230	250	250	230
	Rated Current (A)	0.7	0.7	0.9	1.1	1.3	1.7	1.7	1.7	1.8	1.7	1.7	2.0	1.7	1.7	2

		MDF-25U60	MDF-25U150	MDF-25U270	MDF-25U400	MDF-25U600
Data memory	High/low temp check	●	●	●	●	●
	USB port	●	●	●	●	●
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF				
Alarm functions	Visible/audible alarm	●	●	●	●	●
	High/low temp	●	●	●	●	●
	Sensor failure	●	●	●	●	●
	Door open	●	●	●	●	●
	Low battery	●	●	●	●	●
	Power failure	●	●	●	●	●
	Remote alarm contact	●	●	●	●	●
Other feature	Door lock with key	●	●	●	●	●
	Inner LED light	●	●	●	●	●
	Adjustbale foot	●	●	●	N/A	N/A
	Caster	N/A	N/A	N/A	●	●
	Test access port	Φ19mm x 1	Φ19mm x 1	Φ19mm x 1	Φ19mm x 1	Φ19mm x 1
	Shelves adjustable	1	2	5	5	5
	Shelf at buttom	1	1	1	1	1
	Door QTY	1	1	1	1	1
Material	Exterior	Pre-coated steel	Pre-coated steel	Pre-coated Steel	Pre-coated steel	Pre-coated steel
	Interior	Pre-coated aluminum	Pre-coated aluminum	Pre-coated aluminum	Pre-coated aluminum	Pre-coated aluminum
	Door	Solid door	Solid door	Solid door	Solid door	Solid door
	Insulation	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane
Shipping	Gross weight (KGs)	39.5	50.5	73.5	92	112.5
	Packing W×D×H (mm)	570×620×760	660×620×910	660×620×1630	660×700×1900	830×750×2000
	Volume (m³)	0.27	0.37	0.67	0.88	1.25

-40°C Deep Freezer

TC-200 Controller

Microprocessor electronic controller TC-200, fitted with dual LED screen to display inner chamber real time temperature and key working status including controller lock status, cooling status, power supply indicator, etc.. It is installed at the eye level, convenient for reading all data and operating on controller.

LOW CO2 EMISSIONS	NATURAL REFRIGERANT	CFC /HCFC FREE	USB PORT	POWER FAILURE ALARM	DIRECT COOLING	SAFETY DOOR LOCK

PERFORMANCE

- Optimized cooling system & high efficiency hydrocarbon refrigerant.
- SECOP brand compressor & EBM brand blower.
- High density polyurethane forming for insulation.
- Forming inner doors with door seal for better insulation and less frost.

ERGONOMIC DESIGN

- Adjustable stainless steel shelves to load different size products
- Ultra-quite design reduces noise level

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
- CFC-Free polyurethane foaming insulation
- High efficiency cooling system for lower energy consumption and less carbon emission

ALARMS

- High temperature
- Low temperature
- Door open
- Power failure
- Sensor error

SAFETY

- Build-in data storage and USB port for download
- Password protection avoids key parameters unauthorized change
- Safety lockable door, preventing unauthorized access
- Access port for additional temperature probe
- Remote alarm contacts
- Optional online monitoring system

USB port
Temperature data storage and download

Lockable door handle
For easy operation and prevent unauthorized access

ANTECH

Adjustable shelves
Convenient storage of different size products made in stainless steel

Pressure release port
Manual pressure release port for easy re-opening of outer door in a shorter time

Access port
One access ports at side and back of freezer, for easy access of additional temperature probe

Remote alarm contact
Sending signal to a remote alarm system

-40°C
LabSafe series

Model		MDF-40U280	MDF-40U360	MDF-40U620	MDF-40U700
Main specifications	Type	Upright	Upright	Upright	Upright
	Temperature range (℃)	-20～-40	-20～-40	-20～-40	-20～-40
	Cooling type	Direct cooling	Direct cooling	Direct cooling	Direct cooling
	Defrost	Manual	Manual	Manual	Manual
	Climate type	N	N	N	N
	Capacity (L)	283	361	620	707
	Internal W*D*H (mm)	460×470×1310	460×600x1310	740x640x1310	740x730x1310
	External W*D*H (mm)	715×725×1910	715×855×1910	995×895×1910	995×985×1910
	Weight（KGs）	115	140	181	205
	Refrigerant	R290	R290	R290	R290
	Number of compressor	1	1	1	1
Control system Data memory	Controller	TC-200	TC-200	TC-200	TC-200
	Display	LED digital	LED digital	LED digital	LED digital
	Display accuracy	0.1	0.1	0.1	0.1
	High/low temp check	●	●	●	●
	USB port	●	●	●	●
Power	Power supply (V/Hz)	220/50; 220/60; 120/60	220/50; 220/60; 120/60	220/50; 220/60; 120/60	220/50; 220/60; 120/60
	Rated power (W)	350	400	550	550
Alarm	Visible/audible alarm	●	●	●	●
	High/low temp	●	●	●	●
	Sensor failure	●	●	●	●
	Door open	●	●	●	●
	Low battery	●	●	●	●
	Power failure	●	●	●	●
	Remote alarm contact	●	●	●	●
Accessories	External door	1	1	1	1
	Inner door	4	4	4	4
	Safety door lock	Yes	Yes	Yes	Yes
	Adjustbale shelf	3	3	3	3
	Test access port	Φ19mm x 2	Φ19mm x 2	Φ19mm x 2	Φ19mm x 2
	Caster	4	4	4	4
Material	Exterior	Pre-coated steel	Pre-coated Steel	Pre-coated steel	Pre-coated steel
	Interior	Pre-coated steel	Pre-coated steel	Pre-coated steel	Pre-coated steel
	Outer door	Forming door	Forming door	Forming door	Forming door
	Inner door	Forming door	Forming door	Forming door	Forming door
	Cabinet insulation thickness (mm)	90	90	90	90
	Outer door insulation thickness (mm)	80	80	80	80
	Insulation	Polyurethane	Polyurethane	Polyurethane	Polyurethane
	Compressor brand	SECOP	SECOP	SECOP	SECOP
	Blower brand	EBM	EBM	EBM	EBM
Shipping	Gross weight (KGs)	138	172	220	265
	Packing WxDxH (mm)	735×760×2120	735×890×2120	1015×930×2120	1015×1020×2120
	Volume (m³)	1.18	1.39	2.27	2.49

-40°C Deep Freezer

Antech -40°C deep freezer is designed to store temperature sensitive medical products and biological materials at accurate controlled temperature. Available with 3 capacities: 90 liter under-counter freezer, 270 liter single-door freezer and 450 liter two-door freezer. It is an ideal product to store plasma, reagent and other biomedical products which require to be stored at -20~-40°C temperature.

| LOW CO2 EMISSIONS | NATURAL REFRIGERANT | CFC /HCFC FREE | HIGH/LOW TEMPERATURE ALARM | USB PORT | SAFETY DOOR LOCK |

PERFORMANCE

- High-precision microprocessor temperature control system with 0.1℃ display accuracy
- Digital display show freezer working condition and alarm code
- 3-Channel sensor for control, display and ambient temperature

ALARMS

- High temperature
- Low temperature
- Open door
- Power failure
- Sensor error
- Low battery

ERGONOMIC DESIGN

- ABS drawers for convenient storage
- Self-close door for easy operation
- Ultra-quite design reduces noise level

SAFETY

- Build-in data storage and USB port for download
- Safety door lock, preventing unauthorized access
- Access port for additional temperature probe
- RS485 port and remote alarm contacts

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
- High efficiency cooling system for lower energy consumption and carbon emission
- CFC-Free polyurethane foaming insulation

-40°C
Deep Freezer

| Model	MDF-40U90			MDF-40U270			MDF-40U450		
Main specifications									
Type	Under-counter			Upright			Upright		
Temperature range (℃)	-20～-40			-20～-40			-20～-40		
Cooling type	Direct cooling			Direct cooling			Direct cooling		
Defrost	Manual			Manual			Manual		
Climate type	N			N			N		
Capacity (L)	90			270			450		
Internal W*D*H (mm)	500*485*532			500*460*1235			650*570*627x2		
External W*D*H (mm)	660*645*815			746*700*1792			856*789*1960		
Weight（KGs)	54			98			144		
Refrigerant	R290			R290			R290		
Number of compressor	1			1			2		
Control system									
Controller	Microprocessor			Microprocessor			Microprocessor		
Display	LED digital			LED digital			LED digital		
Display accuracy	1			1			0.1		
Power									
Power supply (V/Hz)	220/50	220/60	120/60	220/50	220/60	120/60	220/50	220/60	120/60
Rated power (W)	131	170	170	255	210	179	346	375	305
Rated Current (A)	1.3	1.8	4.2	2.8	2.2	4.2	4.5	3.7	5.3
Data									
USB port	●			●			●		
Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF			○ CryoMonitor 2000TF			○ CryoMonitor 2000TF		
RS485 port	●			●			●		
Alarm functions									
Visible/audible alarm	●			●			●		
High/low temp	●			●			●		
Sensor failure	●			●			●		
Door open	●			●			●		
Low battery	●			●			●		
Power failure	●			●			●		
Remote alarm contact	●			●			●		
Other feature									
Door lock with key	●			●			●		
Adjustbale foot	2			2			N/A		
Caster	2			2			4		
Test access port	Φ25mm x 1			Φ25mm x 1			Φ25mm x 2		
Drawers	3			7			12		
Door Qty	1			1			2		
Material									
Exterior cabinet material	Pre-coated steel			Pre-coated Steel			Pre-coated steel		
Interior cabinet material	Pre-coated aluminum			Pre-coated aluminum			Pre-coated aluminum		
Door type	Solid door			Solid door			Solid door		
Insulation material	Polyurethane			Polyurethane			Polyurethane		
Shipping									
Gross weight (KGs)	67			115			172		
Packing W*D*H (mm)	722*697*890			835*775*1910			960*870*2175		
Volume (m³)	0.45			1.24			1.82		

-86°C Ultra-low Temperature Freezer

ANTECH offers advanced BioSafe ULT freezers with optimized cooling system and ergonomic design. Both upright freezers and chest freezers are available, from 88 liter compact freezer to 838 liter large volume biobanking freezer. Various of high efficiency cooling systems to meet different requirements of users. Dual compressor cooling technology (BioSafe-DUAL) are adopted on ANTECH ULT freezers, providing lowest energy consumption & highest level protection.
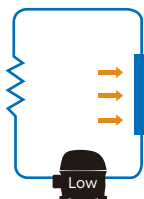
BioSafe-ECO series
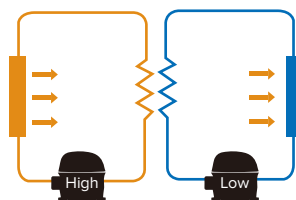
2-compressor cascade system, SECOP brand;
Hydrocarbon refrigerant for lower power consumption;
Capacity: 338L, 408L, 588L, 728L, 838L.

BioSafe-DUAL series
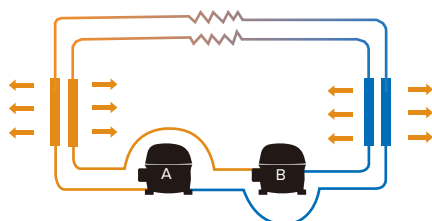
Independent dual compressor system:
inner temperature maintain -75°C when one compressor fails;
Capacity: 408L, 588L, 728L, 838L.

BioSafe-MINI series
BioSafe-AIR series

Single compressor cooling system:
compact construction with high efficiency,
reach -86°C with 1 compressor;
Capacity: 58L, 88L, 100L

Upright freezers

Capacity	58L	88L	100L	338L	408L	588L	728L	838L
BioSafe-MINI	-	MDF-86U108	-	-	-	-	-	-
BioSafe-ECO	-	-	-	MDF-86U340T	MDF-86U458T	MDF-86U588T	MDF-86U728T	MDF-86U838T
BioSafe-DUAL	-	-	-	-	MDF-86U458D	MDF-86U588D	MDF-86U728D	MDF-86U838D
BioSafe-AIR	MDF-86U50	-	MDF-86U100	-	-	-	-	-

Chest freezers

Capacity	130L	495L	746L
BioSafe-MINI	MDF-86C118	-	-
BioSafe-ECO	-	MDF-86C458	MDF-86C728

BioSafe-AIR ULT Freezer
Single compressor

BioSafe-AIR series compact ULT freezers allow users to store biological products with more flexibility. MDF-86U50 is a desk-top model, while MDF-86U100 is an under-counter freezer. Both 2 models are stackable.

TC-300A Controller

Microprocessor electronic controller TC-300A, fitted with dual LED screen to display inner chamber temperature and key working conditions. Advanced dual sensor control system for accurate temperature control.

| LOW CO2 EMISSIONS | DOOR AJAR ALARM | STACKABLE DESIGN | USB PORT | POWER FAILURE ALARM | SAFETY DOOR LOCK |

PERFORMANCE

- High efficiency single compressor refrigeration system
- V.I.P. (vacuum insulation panel) for excellent insulation
- Honeywell Solstice® liquid blowing agent (LBA) for better insulation
- Forming inner door(s) with door seal for better insulation

ALARMS

- High temperature
- Low temperature
- High ambient temperature
- Door open
- Power failure
- Sensor error
- High condenser alarm
- Low battery

ERGONOMIC DESIGN

- Compact design for desk-top or under-counter usage
- Silent running creating a user-friendly environment
- Stackable design to save space
- Stainless steel interior for easy cleaning
- Pressure release port to allow door open with shorter interval

SAFETY

- Password protection avoids key parameters unauthorized change
- Safety door lock, preventing unauthorized access
- Test access port for additional temperature probe
- Remote alarm contacts
- Optional build-in data storage and USB port for download
- Optional online monitoring system(CryoMonitor 2000TF)
- Optional CO2/LN2 backup system

ENVIRONMENT FRIENDLY

- CFC-Free polyurethane foaming insulation
- Honeywell Solstice® liquid blowing agent (LBA) makes environment green
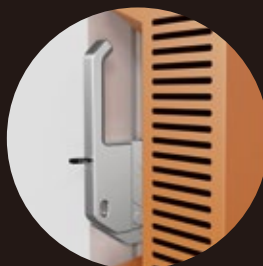- High efficiency cooling system for lower energy consumption and less carbon emission

High class interior
Stainless steel interior
Forming inner door
Rust-free & easy cleaning

Ergonomic door handle
Light operation, friendly to ladies
Safety lock to prevent unauthorized access
Mid-positioned design, handle operation not
influenced by wall or table side

Stainless steel shelf
Adjustable position in the chamber
Removeable to store large size product
Stainless steel for easy cleaning

Test access port
For easy access of additional
temperature probe
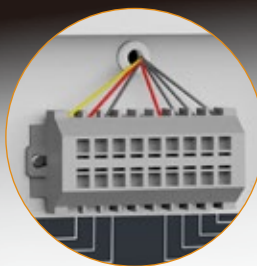
Remote alarm contact
NO (normally open)
NC (normally close)

Stackable design:
Upper: MDF-86U50
Lower: MDF-86U100

CryoMonitor 2000TF (optional)
Cloud based temperature monitoring system
Email & SMS alarms
USB port for data storage and download

-86°C
BioSafe-AIR

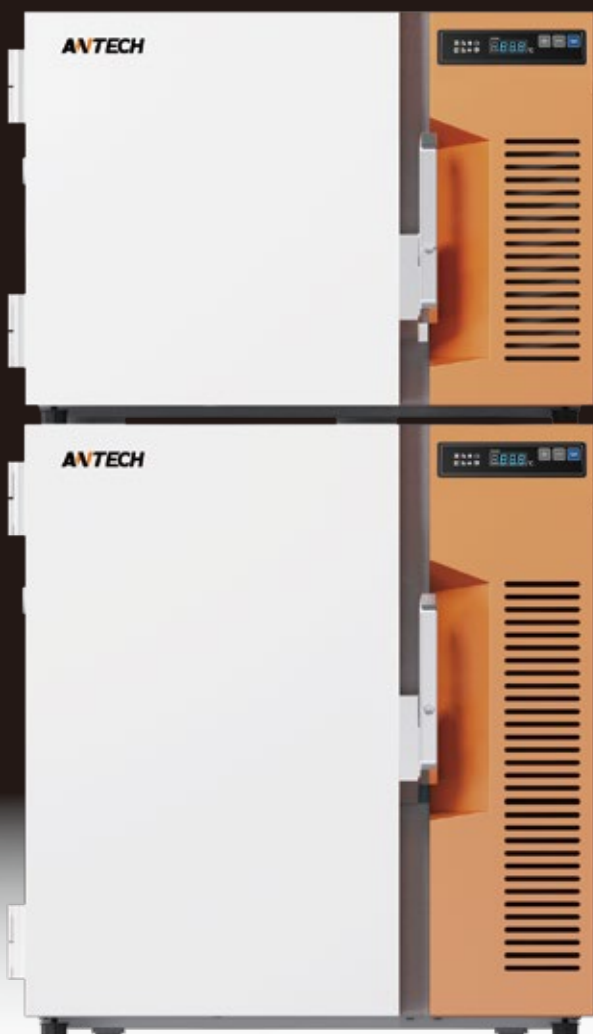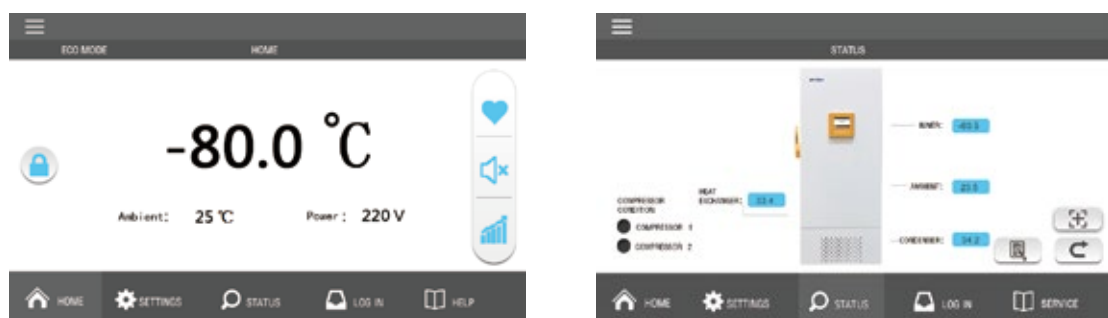|	Model	MDF-86U50	MDF-86U100
Main specifications	Type	Upright, desk-top	Upright, under-counter
	Stackable	●	●
	Cooling technology	Single compressor	Single compressor
	Temperature setting range (°C)	-40~-86	-40~-86
	Climate type	N	N
	Capacity (L)	58L	100L
	2" box storage Qty (Pcs)	30	60
	Net weight (KGs)	84	108
	Intermal W×D×H (mm)	340x460x364	340x460x630
	Extermal W×D×H (mm)	760x680x550	760x680x818
	Door entrance limit (≥mm)	680	680
	Cooling type	Direct	Direct
	Defrost	Manual	Manual
	Refrigerant	Mixed gas	Mixed gas
	Number of compressor	1	1
Control & display system	Controller	TC-300A	TC-300A
	Display	LED	LED
	Temperature display accuracy	0.1	0.1
	Password protection	●	●
Power	Power supply (V/Hz)	110V,50/60Hz；220V,50/60Hz	110V,50/60Hz；220V,50/60Hz
	Rated power (W)	260	450
	Rated current (A)	2.9	2.9
Data memory & monitoring	USB port	○	○
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF
	Visible/audible alarm	●	●
Alarm functions	High/Low temperature	●	●
	Hot condenser	●	●
	Power failure	●	●
	Sensor failure	●	●
	High ambient temperature	●	●
	Door open	●	●
	Remote alarm contact	●	●
Accessories	Inner forming door	1	2
	Adjustable foot	4	4
	Scroll wheel	N/A	2
	Stackable kit	○	○
	Test access port	1	1
	Adjustable shelves	1	1
	Safety door lock	●	●
	Pressure equalization port	●	●
	Freezer rack	○	○
	Rack type (DxH)	5x3	5x3
	Rack Qty	2	4
	CO2/LN2 backup system	○	○
Material	Exterior	Powder coated galvanized steel sheet	Powder coated galvanized steel sheet
	Interior	Stainless steel	Stainless steel
	Insulation	Polyurethane+LBA	Polyurethane+LBA
	Vacuum insulation panel (VIP)	●	●
	Cabinet insulation thickness (mm)	80	80
	Outer door thinkness (mm)	80	80

● Basic equipment   ○ Optional

BioSafe ECO/DUAL/MINI ULT Freezer
TC-310 touch screen controller

TC-310 smart control system is adopted for easy observation and convenient operation.
· 7" LCD touch screen: sensitive touch, user-friendly HIM;
· Large display of chamber temperature, easy observation at distance;
· Status icon to show freezer situation at first sight: normal or abnormal;
· Password administration to prevent unauthorized change of settings;
· Show temperature curve on touch screen;
· Temperature and event data storage and USB port for download.

| LOW CO2 EMISSIONS | CFC /HCFC FREE | USB PORT | POWER FAILURE ALARM | DIRECT COOLING | SAFETY DOOR LOCK |

PERFORMANCE

- Optimized cooling system & high efficiency hydrocarbon refrigerant. (Biosafe-ECO system)
- SECOP brand compressor & EBM brand blower.
- VIP (vacuum insulation panel) + high density polyurethane forming for insulation.
- Forming inner doors for better insulation

ERGONOMIC DESIGN

· 7-inch touch screen for easy operation
· Forming inner doors with door seal for better insulation and less frost
· Adjustable stainless steel shelves to load different size products
· Pressure release port for easy opening of outer door
· Ultra-quite design reduces noise level
· Optional sliding drawer rack & side access rack for 2ml vials, 5ml vials or SBS boxes

ENVIRONMENT FRIENDLY

· Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates （only for Biosafe-ECO series）
· CFC-Free polyurethane foaming insulation
· High efficiency cooling system for lower energy consumption and less carbon emission

ALARMS

• High/low temperature
• High ambient temperature
• Door ajar
• Power failure
• Sensor error
• Abnormal voltage
• Controller failure
• Low battery
• Condenser malfunction

SAFETY

· Build-in data storage and USB port for download
· Temperature quick check via temperature curve
· Password protection avoids key parameters unauthorized change
· Safety door lock, preventing unauthorized access
· Access port for additional temperature probe
· Remote alarm contacts
· Optional online monitoring system
· Optional CO2/LN2 backup system

USB port
Temperature data storage and download

Door handle with safety lock
For easy operation and prevent unauthorized access

Stainless steel inner cabinet
Adjustable shelves

RS485 interface
Enables freezer to communicate with the computer

Access port
One access ports at side and back of freezer, for easy access of additional temperature probe

Remote alarm contact
Sending signal to a remote alarm system

ANTECH

BioSafe-ECO

-80.0 ℃

TC-300 touch screen controller

TC-300 smart control system is adopted for easy observation and convenient operation.
· 7" LCD touch screen: sensitive touch, user-friendly HIM;
· Large display of chamber temperature, easy observation at distance;
· Status icon to show freezer situation at first sight: normal or abnormal;
· Password administration to prevent unauthorized change of settings;
· Show temperature curve on touch screen;
· Temperature and event data storage and USB port for download.

| LOW CO2 EMISSIONS | CFC /HCFC FREE | USB PORT | POWER FAILURE ALARM | DIRECT COOLING | SAFETY DOOR LOCK |

PERFORMANCE

- Optimized cooling system & high efficiency hydrocarbon refrigerant.
- SECOP brand compressor & EBM brand blower.
- VIP (vacuum insulation panel) + high density polyurethane forming for insulation.
- Forming inner doors for better insulation

ERGONOMIC DESIGN

· 7-inch touch screen for easy operation
· Forming inner doors with door seal for better insulation and less frost
· Adjustable stainless steel shelves to load different size products
· Auto heating & manual pressure release port for easy opening of outer door
· Ultra-quite design reduces noise level
· Optional sliding drawer rack & side access rack for 2ml vials, 5ml vials or SBS boxes

ENVIRONMENT FRIENDLY

· Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
· CFC-Free polyurethane foaming insulation
· High efficiency cooling system for lower energy consumption and less carbon emission

ALARMS

• High temperature
• Low temperature
• High ambient temperature
• Door ajar
• Power failure
• Sensor error

SAFETY

· Build-in data storage and USB port for download
· Temperature quick check via temperature curve
· Password protection avoids key parameters unauthorized change
· Safety door lock, preventing unauthorized access
· Access port for additional temperature probe
· Remote alarm contacts
· Optional online monitoring system
· Optional CO2/LN2 backup system

BioSafe-MINI
Under-counter ULT Freezer

ANTECH's compact under-counter ULT freezer MDF-86U108 is an ideal solution to store biological materials in a limited space. The freezer size is designed to match laboratory table height, so that it can be put under counter.

BioSafe-MINI adopts high efficiency single compressor cooling system, with reduced energy consumption and lower noise.

TC-300 touch screen smart controller is used. Despite a compact freezer, the functions are complete for medical and laboratory applications, including data storage and USB port for download, high/low temperature alarm, door open alarm, power failure alarm, remote alarm contact, etc. Therefore, MDF-86U108 meets the most rigorous requirements of healthcare and scientific research.

▶ **Remote alarm contact**

▶ **Touch screen controller**

▶ **Door handle**

▶ **Switch for backup battery**

▶ **Door lock**

LOW CO2 EMISSIONS	DOOR AJAR ALARM	CFC /HCFC FREE	USB PORT	POWER FAILURE ALARM	DIRECT COOLING	SAFETY DOOR LOCK

-86°C
BioSafe-ECO series

Model		MDF-86U340T	MDF-86U458T	MDF-86U588T	MDF-86U728T	MDF-86U838T
Main specifications	Type	Upright	Upright	Upright	Upright	Upright
	Cooling technology	Cascade cooling	Cascade cooling	Cascade cooling	Cascade cooling	Cascade cooling
	Temperature setting range (°C)	-40～-86	-40～-86	-40～-86	-40～-86	-40～-86
	Climate type	N	N	N	N	N
	Capacity (L)	338	408	588	728	838
	2" box storage Qty (Pcs)	192	288	400	504	600
	Net weight (KGs)	296	292	335	380	397
	Intermal W×D×H (mm)	488*607*1140	606*575*1180	606*738*1310	963×571×1350	894×718×1310
	Extermal W×D×H (mm)	854×1072×1907	891×992×1945.5	891×1155×1994.5	1248×975×1994.5	1179×1135×1994.5
	Cooling type	Direct	Direct	Direct	Direct	Direct
	Defrost	Manual	Manual	Manual	Manual	Manual
	Refrigerant	Hydrocarbon gas	Hydrocarbon gas	Hydrocarbon gas	Hydrocarbon gas	Hydrocarbon gas
	Number of compressor	2	2	2	2	2
Control & display system	Controller	TC-310	TC-310	TC-310	TC-310	TC-310
	Display	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen
	Temperature display accuracy	0.1	0.1	0.1	0.1	0.1
	Password protection	●	●	●	●	●
	Temperature graph	●	●	●	●	●
Power	Power supply (V/Hz)	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60
	Rated power (W)	620	650	690	710	720
Data memory & monitoring	USB port	●	●	●	●	●
	RS 485 port	●	●	●	●	●
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF
	Chart recorder	○	○	○	○	○
Alarm functions	Visible/audible alarm	●	●	●	●	●
	High/Low temp	●	●	●	●	●
	Hot condenser	●	●	●	●	●
	Power failure	●	●	●	●	●
	Sensor failure	●	●	●	●	●
	High ambient temp	●	●	●	●	●
	Door open	●	●	●	●	●
	Power failure backup system	72h	72h	72h	72h	72h
	Remote alarm contact	●	●	●	●	●
Accessories	Inner door	2	2	2	2	2
	Casters	●	●	●	●	●
	Test access port	Φ25mm	Φ25mm	Φ25mm	Φ25mm	Φ25mm
	Adjustable shelves	3	3	3	3	3
	Safety door lock	●	●	●	●	●
	Pressure equalization port	●	●	●	●	●
	Freezer rack	○	○	○	○	○
	Rack type (LxH)	4x4	4x5&4x4	5x5	4x5&4x6	5x5
	Rack Qty	12	8+8	16	18+6	24
	CO2/LN2 backup system	○	○	○	○	○
Material	Exterior	Powder coated steel	Powder coated steel	Powder coated steel	Powder coated steel	Powder coated steel
	Interior	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
	Insulation	Polyurethane	Polyurethane	Polyurethane	Polyurethane	Polyurethane
	Vacuum insulation panel (VIP)	●	●	●	●	●
	Cabinet insulation thickness (mm)	150	100	100	100	100
	Outer door thinkness (mm)	105	105	105	105	105
	Compressor brand	SECOP	SECOP	SECOP	SECOP	SECOP
Shipping	Gross weight (KGs)	306	317	364	400	430
	Packing W×D×H (mm)	950*1090*2070	960*1035*2120	970*1190*2210	1333*1010*2210	1275*1165*2210
	Volume (m³)	2.14	2.75	2.55	2.97	3.03

-86°C
BioSafe-DUAL series

	Model	MDF-86U458D	MDF-86U588D	MDF-86U728D	MDF-86U838D
Main specifications	Type	Upright	Upright	Upright	Upright
	Cooling technology	Independent dual cooling	Independent dual cooling	Independent dual cooling	Independent dual cooling
	Temperature setting range (°C)	-40～-86	-40～-86	-40～-86	-40～-86
	Climate type	N	N	N	N
	Capacity (L)	408	588	728	838
	2" box storage Qty (Pcs)	288	400	504	600
	Net weight (KGs)	236	283	316	310
	Intermal W×D×H (mm)	606*575*1180	606*738*1310	963×571×1350	894*718*1310
	Extermal W×D×H (mm)	891×992×1946	891×1155×1995	1248×975×1995	1179×1135×1995
	Cooling type	Direct	Direct	Direct	Direct
	Defrost	Manual	Manual	Manual	Manual
	Refrigerant	Mixed gas	Mixed gas	Mixed gas	Mixed gas
	Number of compressor	2	2	2	2
Control & display system	Controller	TC-310	TC-310	TC-310	TC-310
	Display	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen	7" LCD touch screen
	Temperature display accuracy	0.1	0.1	0.1	0.1
	Password protection	●	●	●	●
	Temperature graph	●	●	●	●
Power	Power supply (V/Hz)	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60	220/50 220/60 120/60
	Rated power (W)	1350	1500	1400	1700
Data memory & monitoring	USB port	●	●	●	●
	RS 485 port	●	●	●	●
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF	○ CryoMonitor 2000TF
	Chart recorder	/	/	/	/
Alarm functions	Visible/audible alarm	●	●	●	●
	High/Low temp	●	●	●	●
	Hot condenser	●	●	●	●
	Power failure	●	●	●	●
	Sensor failure	●	●	●	●
	High ambient temp	●	●	●	●
	Door open	●	●	●	●
	Power failure backup system	72h	72h	72h	72h
	Remote alarm contact	●	●	●	●
Accessories	Inner door	2	2	2	2
	Casters	●	●	●	●
	Test access port	Φ25mm	Φ25mm	Φ25mm	Φ25mm
	Adjustable shelves	3	3	3	3
	Safety door lock	●	●	●	●
	Pressure equalization port	●	●	●	●
	Freezer rack	○	○	○	○
	Rack type (LxH)	4x5&4x4	5x5	4x5&4x6	5x5
	Rack Qty	8+8	16	18+6	24
	CO2/LN2 backup system	○	○	○	○
Material	Exterior	Powder coated steel	Powder coated steel	Powder coated steel	Powder coated steel
	Interior	Stainless steel	Stainless steel	Stainless steel	Stainless steel
	Insulation	Polyurethane	Polyurethane	Polyurethane	Polyurethane
	Vacuum insulation panel (VIP)	●	●	●	●
	Cabinet insulation thickness (mm)	100	100	100	100
	Outer door thinkness (mm)	105	105	105	105
	Compressor brand	SECOP	SECOP	SECOP	SECOP
Shipping	Gross weight (KGs)	278	346	392	384
	Packing W×D×H (mm)	963*1035*2120	970*1190*2190	1333*1010*2210	1271*1165*2190
	Volume (m³)	2.11	2.53	2.97	3.24

-86°C
BioSafe-MINI

	Model	MDF-86U108			MDF-86U58			MDF-86U158		
Main specifications	Type	Under-counter, upright			Upright			Upright		
	Cooling technology	Single compressor			Single compressor			Single compressor		
	Temperature setting range (°C)	-40～-86			-40～-86			-40～-86		
	Climate type	N			N			N		
	Capacity (L)	88			58			158		
	2" box storage Qty (Pcs)	60			36			108		
	Net weight (KGs)	85			75			130		
	Internal W×D×H (mm)	320×450×610			364x405x409			460x455x800		
	External W×D×H (mm)	800×700×870			540X620X1115			700x700x1580		
	Door entrance limit (≥mm)	676			620			700		
	Cooling type	Direct			Direct			Direct		
	Defrost	Manual			Manual			Manual		
	Refrigerant	Mixed gas			Mixed gas			Mixed gas		
	Number of compressor	1			1			1		
Control & display system	Controller	TC-300			TC-300E			TC-300E		
	Display	7" LCD touch screen			LED			Electronic		
	Password protection	●			●			●		
	Temperature display accuracy	0.1			0.1			0.1		
Power	Power supply (V/Hz)	220/50	220/60	120/60	220/50	220/60	120/60	220/50	220/60	120/60
	Rated power (W)	410	460	520	500	500	500	500	500	500
	Rated Current (A)	2.3	2.6	6.6	3.2	3.2	6.0	3.2	3.2	6.0
Data memory & monitoring	USB port	●			N/A			N/A		
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF			○ CryoMonitor 2000TF			○ CryoMonitor 2000TF		
	Chart recorder/ data logger	○			○			○		
Alarm functions	Visible/audible alarm	●			●			●		
	High/Low temperature	●			●			●		
	Hot condensor	●			N/A			N/A		
	Power failure	●			●			●		
	Sensor failure	●			●			●		
	High ambient temperature	●			N/A			N/A		
	Door open	●			●			●		
	Remote alarm contact	●			●			●		
Accessories	Inner door	2			2			3		
	Casters	●			●			●		
	Test access port	Φ19mm x 1			Φ20mm x 1			Φ20mm x 1		
	Adjustable shelves	1			1			2		
	Safety door lock	●			●			N/A		
	Pressure equalization port	Manual			N/A			N/A		
	Freezer rack	○			N/A			N/A		
	Rack type (LxH)	3x5			N/A			N/A		
	Rack Qty	4			N/A			N/A		
	CO2/LN2 backup system	○			○			○		
Material	Exterior	Powder coated steel			Powder coated steel			Powder coated steel		
	Interior	Pre-coated steel			SUS			SUS		
	Insulation	Polyurethane			Polyurethane			Polyurethane		
	Vacuum insulation panel (VIP)	●			N/A			N/A		
	Cabinet insulation thickness (mm)	90			90			120		
	Outer door thickness (mm)	90			90			120		
Shipping	Gross weight (KGs)	105			95			160		
	Packing W×D×H (mm)	850×730×953			610x700x1240			780x800x1710		
	Volume (m³)	0.59			0.53			1.07		

-86°C
Chest type

Model		MDF-86C118			MDF-86C458			MDF-86C728		
Main specifications	Type	Chest			Chest			Chest		
	Cooling technology	Single compressor			Cascade cooling			Cascade cooling		
	Temperature setting range (°C)	-40～-86			-40～-86			-40～-86		
	Climate type	N			N			N		
	Capacity (L)	130			495			746		
	2" box storage Qty (Pcs)	96			360			585		
	Net weight (KGs)	98			225			275		
	Internal W×D×H (mm)	630×440×470			1310×600×630			1310×740×770		
	External W×D×H (mm)	850×740×1023			1965×860×910			1965×1000×1040		
	Door entrance limit (≥mm)	740			780			997		
	Cooling type	Direct			Direct			Direct		
	Defrost	Manual			Manual			Manual		
	Refrigerant	Hydrocarbon gas			Hydrocarbon gas			Hydrocarbon gas		
	Number of compressor	1			2			2		
Control & display system	Controller	TC-300			TC-300			TC-300		
	Display	7" LCD touch screen			7" LCD touch screen			7" LCD touch screen		
	Password protection	●			●			●		
	Temperature display accuracy	0.1			0.1			0.1		
Power	Power supply (V/Hz)	220/50	220/60	120/60	220/50	220/60	120/60	220/50	220/60	120/60
	Rated power (W)	480	480	540	900	850	780	980	900	820
	Rated Current (A)	2.8	2.8	6.7	7.0	5.0	8.8	7.2	5.8	9.0
Data memory & monitoring	USB port	●			●			●		
	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF			○ CryoMonitor 2000TF			○ CryoMonitor 2000TF		
	Chart recorder/ data logger	○			○			○		
Alarm functions	Visible/audible alarm	●			●			●		
	High/Low temperature	●			●			●		
	Hot condensor	●			●			●		
	Power failure	●			●			●		
	Sensor failure	●			●			●		
	High ambient temperature	●			●			●		
	Door open	NO			●			●		
	Remote alarm contact	●			●			●		
Accessories	Inner door	N/A			2			2		
	Casters	●			●			●		
	Test access port	Φ19mm x 1			Φ19mm x 2			Φ19mm x 2		
	Adjustable shelves	N/A			N/A			N/A		
	Safety door lock	●			●			●		
	Pressure equalization port	Manual			Auto x 1 & manual x 1			Auto x 1 & manual x 1		
	Freezer rack	○			○			○		
	Rack type (LxH)	1x8			1x10			1x13		
	Rack Qty	12			36			45		
	CO2/LN2 backup system	○			○			○		
Material	Exterior	Powder coated steel			Powder coated steel			Powder coated steel		
	Interior	Stainless steel			Stainless steel			Stainless steel		
	Insulation	Polyurethane			Polyurethane			Polyurethane		
	Vacuum insulation panel (VIP)	●			●			●		
	Cabinet insulation thickness (mm)	90			90			90		
	Outer door thickness (mm)	90			90			90		
Shipping	Gross weight (KGs)	116			278			318		
	Packing W×D×H (mm)	930×780×1160			2010×880×1030			2010×1095×1165		
	Volume (m³)	0.84			1.82			2.56		

CO₂ Back-up System

BS-1 is to ensure optimal security for critical samples stored in Ultra-Low Temperature Freezers. It controls injection of CO_2 into freezer when freezer temperature rises above the preset temperature value. It also reminds users to fill or replace their CO_2 cylinders when pressure is low.

ADVANTAGE

• Compact design, small footprint, can be placed on freezer top
• Temperature display, setting temperature adjustable by user
• Unique low CO_2 alarm, reminding user to change CO_2 cylinder in time
• USA-made ASCO brand ultra-low temperature electromagnetic valve

RELIABILITY

• Stainless steel construction, rust-free, easy cleaning
• Hose & injection tube with sponge cover for insulation
• Rechargeable battery for 48 hours working time

SAFETY

• Valve test button to check whether electromagnetic valve works normally
• High/Low temperature alarm, low battery alarm, low CO_2 alarm
• Stop injection of CO_2 when door opens, protecting user from being injured by liquid CO_2 (need to be connected with ULT freezer door switch).

CO₂ Back-up System

Model		BS-1
Basic	Climate Class	N
	Cooling Type	Direct Cooling
	Refrigerant	Liquid CO_2
Performance	Cooling Performance (°C)	-70
	Temperature Range (°C)	-40~-70
Control	Controller	Thermostat
	Display	LED
	Temperature Increment (°C)	1
Electrical	Power Supply	AC 100~240V, 50/60Hz
	Power (W)	20
	Electrical Current (A)	0.25
Weight & Dimension	Net/Gross Weight	11.2/13.6kg
		24.7/30lbs
	Exterior Dimension (W*D*H)	200×400×160 (mm)
		7.8×15.7×6.3 (in)
	Packing Dimension (W*D*H)	370×530×330 (mm)
		14.6×20.9×13 (in)
Functions	High/Low Temperature Alarm	●
	Low Liquid CO_2 Alarm	●
	Low Battery Alarm	●
	Sensor Failure Alarm	●
	Main Power Failure Alarm	●
	Valve Open Indicator Light	●
	Main Power On Indicator Light	●
	Valve Test Button	●
Accessories	*Hose (connecting backup system & CO_2 cylinder)	3 meter
	Injection Tube (connecting backup system & freezer)	2 meter

*The specification of the joint connected to the CO_2 cylinder is G 5/8 ″

LN$_2$ Back-up System

BS-II is to ensure optimal security for critical samples stored in ultra low temperature freezers. It controls injection of LN$_2$ into freezer when freezer temperature rises above the preset temperature value.

ADVANTAGE

• Compact design, small footprint, can be placed on freezer top
• Temperature display, setting temperature adjustable by user
• USA-made ASCO brand ultra-low temperature electromagnetic valve

RELIABILITY

• Stainless steel construction, rust-free, easy cleaning
• Hose & injection tube with sponge cover for insulation
• Rechargeable battery for 48 hours working time

SAFETY

• Valve test button to check whether electromagnetic valve works normally
• High/Low temperature alarm, low battery alarm
• Stop injection of LN$_2$ when door opens, protecting user from being injured by liquid LN$_2$ (need to be connected with ULT freezer door switch).

LN$_2$ Back-up System

Model		BS-II
Basic	Climate Class	N
	Cooling Type	Direct Cooling
	Refrigerant	LN$_2$
Performance	Cooling Performance (°C)	-150
	Temperature Range (°C)	-60~-150
Control	Controller	Thermostat
	Display	LED
	Temperature Increment (°C)	1
Electrical	Power Supply	AC 100~240V, 50/60Hz
	Power (W)	20
	Electrical Current (A)	0.25
Weight & Dimension	Net/Gross Weight	11.2/13.6kg
		24.7/30lbs
	Exterior Dimension (W*D*H)	200×400×160 (mm)
		7.8×15.7×6.3 (in)
	Packing Dimension (W*D*H)	370×530×330 (mm)
		14.6×20.9×13 (in)
Functions	High/Low Temperature Alarm	●
	Low Liquid LN$_2$ Alarm	N/A
	Low Battery Alarm	●
	Sensor Failure Alarm	●
	Main Power Failure Alarm	●
	Valve Open Indicator Light	●
	Main Power On Indicator Light	●
	Valve Test Button	●
Accessories	*Hose (connecting backup system & LN$_2$ cylinder)	3 meter
	Injection Tube (connecting backup system & freezer)	2 meter

*The specification of the joint connected to the LN$_2$ cylinder is CGA-295

-150°C Cryogenic Freezer

The -150 °C cryo freezer provides a safe, convenient and economical alternative for long term storage for a variety of biological specimens at cryogenic temperature (below -135°C).

Compared with liquid nitrogen containers, there is no need to supply liquid nitrogen for mechanical freezers. It is easier to use and contamination risk caused by liquid nitrogen is avoided.

ANTECH adopted innovative 2-compressor cascade cooling system for its cryogenic freezers, realizing lower power consumption, faster cooling rate and lower noise level.

LOW CO2 EMISSIONS	NATURAL REFRIGERANT	CFC /HCFC FREE	HIGH/LOW TEMPERATURE ALARM	POWER FAILURE ALARM	DIRECT COOLING	SAFETY DOOR LOCK

PERFORMANCE

- Optimized cooling system & high efficiency hydrocarbon refrigerant.
- SECOP brand compressor & EBM brand blower.
- High density polyurethane forming for insulation.

ALARMS

- High temperature
- Low temperature
- Power failure
- Sensor error

ERGONOMIC DESIGN

- Forming inner doors for better insulation and less frost
- Stainless steel interior for easy cleaning
- Ultra-quite design reduces noise level
- Optional slim rack for convenient operation

SAFETY

- Safety door lock, preventing unauthorized access
- Access port for additional temperature probe
- Optional online monitoring system
- Optional CO2/LN2 backup system

ENVIRONMENT FRIENDLY

- Natural refrigerant compliant with EPA and SNAP non-ozone depleting mandates
- CFC-Free polyurethane foaming insulation
- High efficiency cooling system for lower energy consumption and less carbon emission

-150°C
Cryo Freezer

Model	MDF-150C118				MDF-150C208
Main specifications	Type	Chest			Chest
	Cooling technology	2-compressor casade system			2-compressor casade system
	Temperature setting range (°C)	-125～-150			-125～-150
	Climate type	N			N
	Capacity (L)	118			258
	2" box storage Qty (Pcs)	54			165
	Net weight (KGs)	165			280
	Internal W×D×H (mm)	540×400×560			780x500x660
	External W×D×H (mm)	1275×795×990			1510x885x1095
	Door entrance limit (≥mm)	780			885
	Cooling type	Direct			Direct
	Defrost	Manual			Manual
	Number of compressor	2			2
Control & display system	Controller	Microprocessor			Microprocessor
	Display	LED			LED
	Temperature display accuracy	0.1			0.1
Power	Power supply (V/Hz)	220/50	220/60	120/60	220/50
	Rated power (W)	1800	1800	1800	2450
	Rated current (A)	10.0	10.0	19.8	15.0
Alarm functions	Visible/audible alarm	●			●
	High/Low temperature	●			●
	Power failure	●			●
	Sensor failure	●			●
Monitoring	Cloud monitoring (Wi-Fi)	○ CryoMonitor 2000TF			○ CryoMonitor 2000TF
Accessories	Inner door	1			2
	Casters	6			6
	Test access port	Φ20mm x 1			Φ20mm x 1
	Safety door lock	●			●
	Freezer rack	○			○
	Rack model	CFC-9-2, 1×9			CFC-11-2, 1×11
	Rack Qty	6			15
	LN2 backup system	○			○
Material	Exterior	Pre-coated steel			Pre-coated steel
	Interior	Stainless steel			Stainless steel
	Insulation	Polyurethane			Polyurethane
	Cabinet insulation thickness (mm)	150mm			150mm
	Outer door thickness (mm)	105mm			105mm
	Compressor brand	SECOP			SECOP
Shipping	Gross weight (KGs)	208			292
	Packing W×D×H (mm)	1340×860×1140			1570×960×1230
	Volume (m³)	1.31			1.85

Racks for Antech Freezers

Model	Rack type (boxes each layer x layers)	Rack model Sliding drawer	Side access	Racks per freezer	2" box storage capacity	Maximum 2ml vail capacity
MDF-86U108	3x5	VFD-352	VFF-352	4	60	6,000
MDF-86U158	3x4	VFD-342	VFF-342	9	108	10,800
MDF-86U340T	4x4	VFD-442	VFF-442	12	192	19,200
MDF-86U458T/458D	4x5 & 4x4	VFD-452&VFD-442	VFF-452&VFF-442	8+8	288	28,800
MDF-86U588T/588D	5x5	VFD-552	VFF-552	16	400	40,000
MDF-86U728T/728D	4x5 & 4x6	VFD-452&VFD-462	VFF-452&VFF-462	18+6	504	50,400
MDF-86U838T/838D	5x5	VFD-552	VFF-552	24	600	60,000
MDF-86C118	1x8	N/A	CFC-8-2	12	96	9,600
MDF-86C458	1x10	N/A	CFC-10-2	36	360	36,000
MDF-86C728	1x13	N/A	CFC-13-2	45	585	58,500
MDF-150C118	1x9	N/A	CFC-9-2	6	54	5,400
MDF-150C208	1x11	N/A	CFC-11-2	15	165	16,500

Vertical Racks with Spring Clip for 2" Boxes
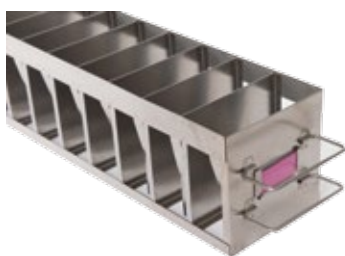
▶ Spring clips for easy operation and prevent box drop.
▶ Dual large handles at top for easy handling.
▶ Label holders for easy identification.
▶ Constructed of high-grade corrosion resistant stainless steel.
▶ Precision craftsmanship & no sharp edges.

Vertical Racks for 2" Boxes		
Item#	Description / Capacity	H x W x D, mm
CFC-7-2	7 Boxes	432 x 140 x 140
CFC-8-2	8 Boxes	488 x 140 x 140
CFC-9-2	9 Boxes	544 x 140 x 140
CFC-10-2	10 Boxes	600 x 140 x 140
CFC-11-2	11 Boxes	656 x 140 x 140
CFC-12-2	12 Boxes	712 x 140 x 140
CFC-13-2	13 Boxes	768 x 140 x 140
CFC-14-2	14 Boxes	824 x 140 x 140
CFC-15-2	15 Boxes	880 x 140 x 140
CFC-16-2	16 Boxes	936 x 140 x 140

Note: including handle height 40mm.

Sliding Drawer Freezer Racks for 2" & 3" Boxes

▶ Handle at each drawer for easy handling.
▶ Label holder at each drawer for easy identification.
▶ Constructed of high-grade corrosion resistant stainless steel.
▶ Precision craftsmanship & no sharp edges.

For 2" Freezer Boxes		
Item#	Boxes per layer x Layers	L x H x W, mm
VFD-332	3 x 3 Rack/ for 9 boxes	424 x 177 x 140
VFD-342	3 x 4 Rack/ for 12 boxes	424 x 236 x 140
VFD-352	3 x 5 Rack/ for 15 boxes	424 x 295 x 140
VFD-432	4 x 3 Rack/ for 12 boxes	557 x 177 x 140
VFD-442	4 x 4 Rack/ for 16 boxes	557 x 236 x 140
VFD-452	4 x 5 Rack/ for 20 boxes	557 x 295 x 140
VFD-462	4 x 6 Rack/ for 24 boxes	557 x 354 x 140
VFD-542	5 x 4 Rack/ for 20 boxes	690 x 236 x 140
VFD-552	5 x 5 Rack/ for 25 boxes	690 x 295 x 140
VFD-652	6 x 5 Rack/ for 30 boxes	823 x 295 x 140

For 3.75" Freezer Boxes		
Item#	Boxes per layer x Layers	L x H x W, mm
VFD-323	3 x 2 Rack/ for 6 boxes	424 x 202 x 140
VFD-333	3 x 3 Rack/ for 9 boxes	424 x 303 x 140
VFD-423	4 x 2 Rack/ for 8 boxes	557 x 202 x 140
VFD-433	4 x 3 Rack/ for 12 boxes	557 x 303 x 140
VFD-443	4 x 4 Rack/ for 16 boxes	557 x 404 x 140
VFD-453	4 x 5 Rack/ for 20 boxes	557 x 505 x 140
VFD-523	5 x 2 Rack/ for 10 boxes	690 x 202 x 140
VFD-533	5 x 3 Rack/ for 15 boxes	690 x 303 x 140

Side Access Freezer (Frame Type) Racks for 2" & 3" Boxes

- ▶ Large handles for easy handling.
- ▶ Label holders for easy identification.
- ▶ Constructed of high-grade corrosion resistant stainless steel.
- ▶ Precision craftsmanship & no sharp edges.

For 2" Freezer Boxes		
Item#	Boxes per layer x Layers	L x H x W, mm
VFF-332	3 x 3 Rack/ for 9 boxes	424 x 177 x 140
VFF-342	3 x 4 Rack/ for 12 boxes	424 x 236 x 140
VFF-352	3 x 5 Rack/ for 15 boxes	424 x 295 x 140
VFF-432	4 x 3 Rack/ for 12 boxes	557 x 177 x 140
VFF-442	4 x 4 Rack/ for 16 boxes	557 x 236 x 140
VFF-452	4 x 5 Rack/ for 20 boxes	557 x 295 x 140
VFF-462	4 x 6 Rack/ for 24 boxes	557 x 354 x 140
VFF-472	4 x 7 Rack/ for 28 boxes	557 x 413 x 140
VFF-542	5 x 4 Rack/ for 20 boxes	690 x 236 x 140
VFF-552	5 x 5 Rack/ for 25 boxes	690 x 295 x 140
VFF-652	6 x 5 Rack/ for 30 boxes	823 x 295 x 140

For 3.75" Freezer Boxes		
Item#	Boxes per layer x Layers	L x H x W, mm
VFF-323	3 x 2 Rack/ for 6 boxes	424 x 202 x 140
VFF-333	3 x 3 Rack/ for 9 boxes	424 x 303 x 140
VFF-423	4 x 2 Rack/ for 8 boxes	557 x 202 x 140
VFF-433	4 x 3 Rack/ for 12 boxes	557 x 303 x 140
VFF-443	4 x 4 Rack/ for 16 boxes	557 x 404 x 140
VFF-453	4 x 5 Rack/ for 20 boxes	557 x 505 x 140
VFF-523	5 x 2 Rack/ for 10 boxes	690 x 202 x 140
VFF-533	5 x 3 Rack/ for 15 boxes	690 x 303 x 140

-86°C Portable ULT Freezer 1 liter
CryoExpress ONE

Antech CryoExpress series ultra low temperature portable freezer is compact in size, light in weight, and powerful in cooling.

Taking advantages of advanced Stirling cooling technology, CryoExpress series offer wide range accurate temperature control, from ambient temperature to -86°C ultra low temperature, which can be used for transportation of biological sample, vaccine, pharmacy, etc.

The portable freezer can be powered with 12~24V DC on a moving vehicle or vessel. Since a built-in lithium battery is supplied, it even works for certain time without any external power supply, so that the positive cooling continues from vehicle to freezer at destination.

By using adapter, CryoExpress series freezer can be powered and charged with 100~240V AC power supply.
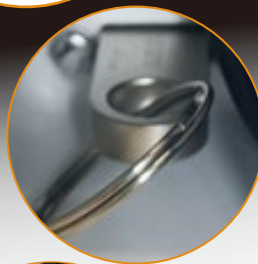
▶ **Electric door lock (NFC card)**

▶ **Space for 100-place cryogenic box**
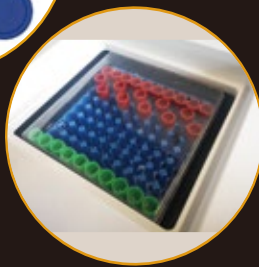
▶ **Advanced Stirling cooling technology**

▶ **USB port for data download**

▶ **Built-in lithium battery**

▶ **Large handle for convenient movement**

Touch screen controller

- Set temperature
- Inner cabin temperature
- Ambient temperature
- Temperature graph
- Running time
- Battery status
- Door lock status
- Settings
- Network status
- Power button

Specification

	Model	CryoExpress ONE
Performance	Temperature range	-86°C to 8°C @ 25°C ambient
	Climate type	SN/N
	Cooling system	Free-piston Stirling engine cooler
	Controller	Touch screen
	Door lock	NFC electric lock & manual lock
	Data memory	Temperature record & USB port
	Insulation	Vacuum insulation panel & polyurethane foam
Capacity & size	Capacity	1 Liter
	2ml vials capacity	100 pcs (81/100-place cryogenic box)
	External dimensions, W x D x H	290 x 311 x 450mm
	Internal dimensions, W x D x H	147 x 130 x 58mm
	Net weight	13.5kg
Power	Power supply	DC 12~30V; AC 100~240V, 50/60Hz
	Rated power	80W
	Power cord	AC adapter & power cord, DC power cord
	Backup battery (standard)	Built-in lithium battery, 1-hour working time
	Backup battery (optional)	External lithium battery, 4-hour working time

-86°C Portable ULT Freezer 25 liter

Antech CryoExpress series ultra low temperature portable freezer is compact in size, light in weight, and powerful in cooling. Taking advantages of advanced Stirling cooling technology, CryoExpress series offer wide range accurate temperature control from ambient temperature to -86℃ ultra low temperature, which can be used for transportation of biological sample, cells, vaccine, pharmacy, etc.

The portable freezer can be powered with 12~24v DC on a moving vehicle or vessel, or by a power bank. By using adapter, CryoExpress series freezer can be powered and charged with 100~240V AC power supply.

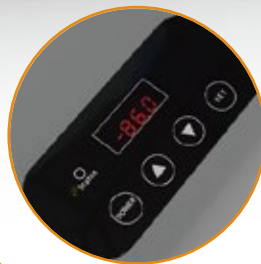▶ **Ergonomic designed handle**
Easy to hold and remove

▶ **AC power connection**
With small lid can protect from liquid, dust and others pollutant

▶ **Liner**
Food grade 304 stainless steel liner

▶ **DC power connection**
Male-female cord adapter design, make the line link more tightly

▶ **Microprocessor controller**
Easy to use and set

▶ **Hinge**
Secure and reliable quality insures the lid open and close freely

Features

- **Precise temperature control**
  Fast cooling speed and uniform internal temperature

- **High energy efficiency**
  Designed for space and energy efficiency, the ultra-low temperature freezer uses
  less than 2.8 kWh/day at -80°C

- **Compatible with multiple power sources**
  The portable ULT freezer plugs into any 110V–240V outlet, worldwide, and can even
  run on 12V DC power with an automotive adapter

- **Compact and lightweight design**
  Weighing only 17.5kg, the portable ULT freezer can easily and inexpensively be
  shipped anywhere in the world

- **User-friendly operation and maintenance**
  The operation touch panel is easy to operate and set up

- **Utilizes 100% natural refrigerant, supporting -sustainable and eco-friendly operation**
  Use natural refrigerants, which are more environmentally sustainable and eliminate the need for special export shipping classifications

-86°C Cooling Curve
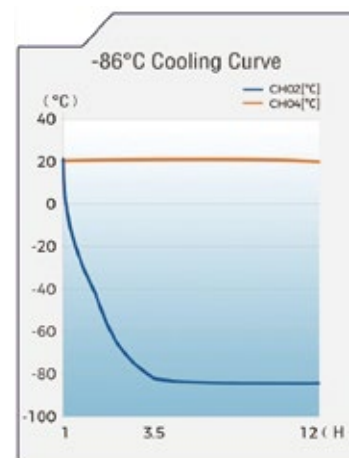
WHY CHOOSE STIRLING COOLING TECHNOLOGY?

The revolutionary ultra-low temperature freezer was equipped with Stirling compressor. The Stirling refrigeration compressor is a mechanical chiller driven by electricity.
With its compact and field-proven, free-piston Stirling engine technology, it brings portable, precisely controlled ULT freezer storage anywhere there is a need for patient care, testing or specimen collection.

Advantages:
- Simplified structure
- Rapid freezing capability

- Operates without tilt angle restrictions
- High efficiency with low energy consumption
- Long lifespan and maintenance-free

-86°C Portable ULT Freezer

Model		MMF-2
Performance	Temperature range	-86℃ to 18℃
	Climate type	SN/N
	Cooling motor	Free-piston Stirling engine
	Controller	Microprocessor controller
	Door lock	Yes
	Defrost	Manual
	Over temperature alarm	Yes
	Liner material	SUS304
Capacity & size	Capacity	25L
	Number of 81/100-place 2'' boxes	18
	Internal dimensions, W x D x H	250*300*300mm
	External dimensions, W x D x H	392*455*616mm
	Net weight	17.5kg
Power	Power supply	100V~240V AC, 50/60 Hz；12~24V DC
	Rated power	100W
	Power cord	AC adapter & power cord, DC power cord
Shipping	Packing W x D x H	480*530*710mm
	Gross weight	21kg

ANTECH