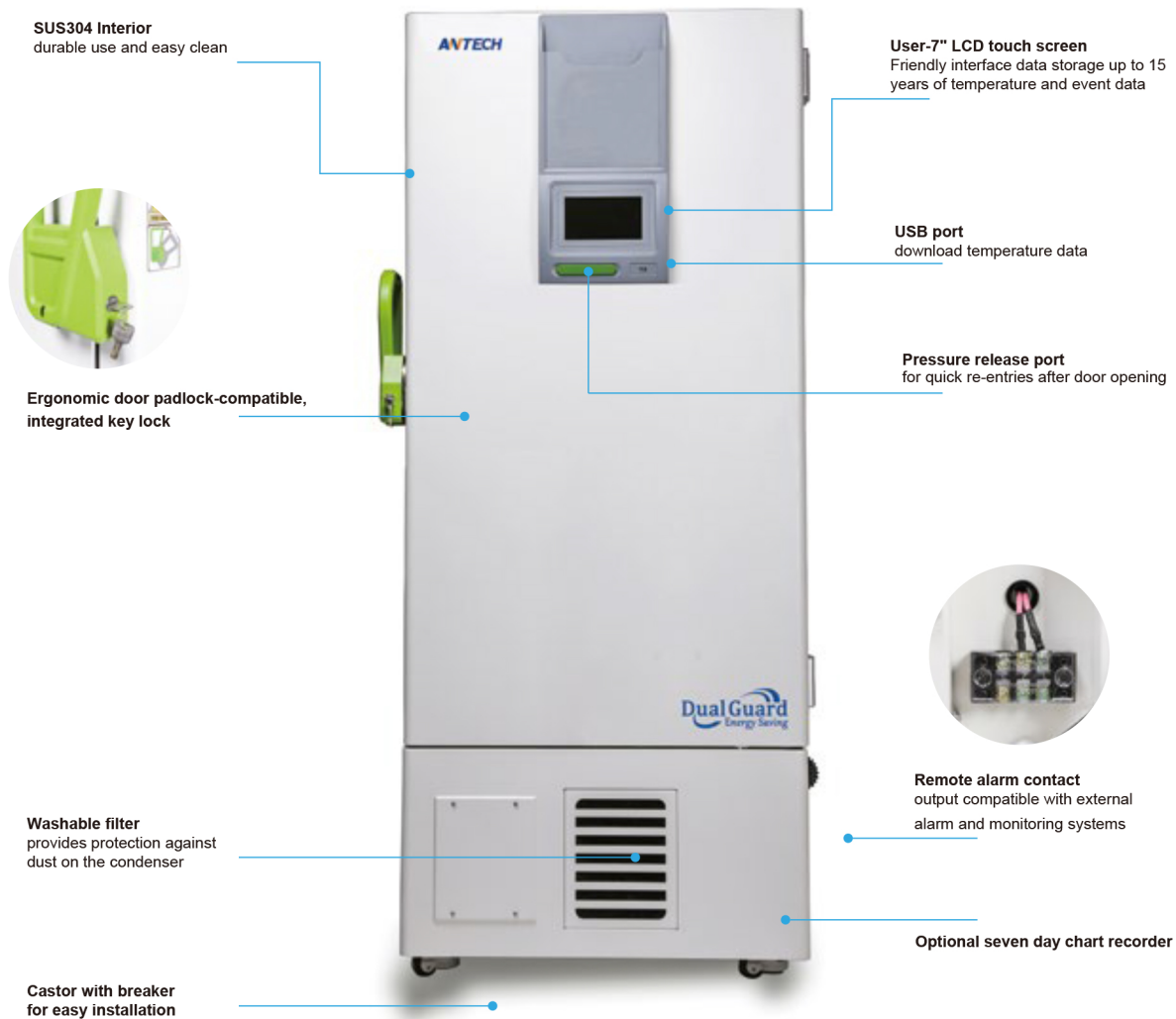


EcoTouch Series ULT freezer



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

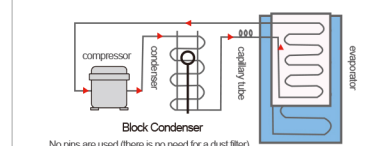
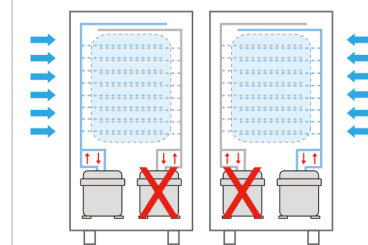


Dual Cooling System

- Two independent refrigeration systems in one ULT freezer
- Exceptionally uniform and reliable temperature
- User-friendly design and low running costs.

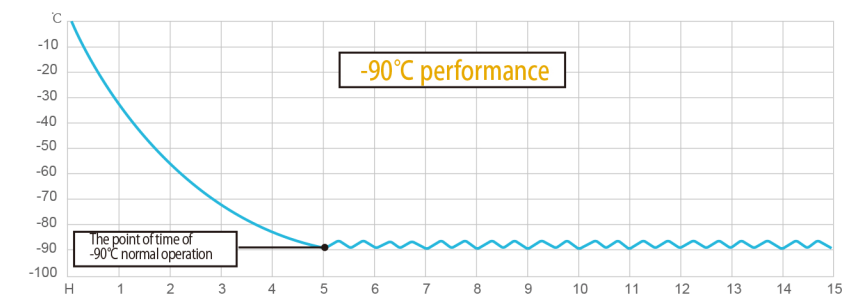
NEW DUAL COMPRESSOR FREEZING SYSTEM

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

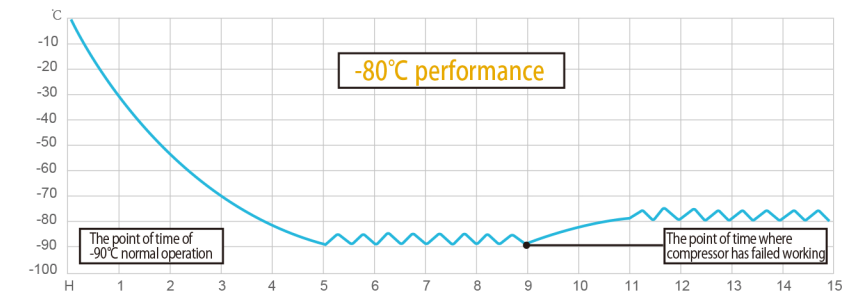


- Dual Compressor System**
- Simplified structure provides high efficiency, lowered noise and no failures.
 - A freezer is enough for ultra cold storage at -90°C

The temperature curve of -90°C normal setting



The temperature curve of one compressor failure



(MDF-86U458D)

DualGuard Series ULT freezer

A USER-FRIENDLY Freezer

- SUS304 interior for easy cleaning & rust free
- 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



Optimal Capacity

Model	Capacity(L)	2ml Vial	2" box *	Rack Type	Rack Qty	Total Rack Qty
MDF-86U458D	408	28800	288	5x4 4x4	8 8	16
MDF-86U588D	588	40000	400	5x5	16	16
MDF-86U838D	838	60000	600	5x5	24	24

* Notes: calculated based on 100-well box.

Model	MDF-86U458D	MDF-86U588D	MDF-86U838D
Type	Upright	Upright	Upright
Capacity (L/cu ft)	408/14.41	588/20.76	838/29.59
Inner doors	2 pcs, forming door, SUS304	2 pcs, forming door, SUS304	2 pcs, forming door, SUS304
Shelves	3 pcs, SUS304	3 pcs, SUS304	3, made in SUS304
Inner chamber material	SUS304	SUS304	SUS304
Technical Data			
Cooling type	Direct cooling	Direct cooling	Direct cooling
Refrigerant	Hydrocarbon, CFC Free, Non greenhouse gas	Hydrocarbon, CFC Free, Non greenhouse gas	Hydrocarbon, CFC Free, Non greenhouse gas
Noise level (dB)	50	51	53
Temperature			
Ambient temperature (°C)	10~32°C	10~32°C	10~32°C
Temperature range (°C)	-40~-86°C	-40~-86°C	-40~-86°C
Cooling & Controller			
Cooling System	Two independent cooling system	Two independent cooling system	Two independent cooling system
Compressor Brand	SECOP	SECOP	SECOP
Sensor	PT100	PT100	PT100
Controller	Microprocessor	Microprocessor	Microprocessor
Display & Control	7" Touch Screen	7" Touch Screen	7" Touch Screen
Electronic parameter			
Voltage/Frequency	220V, 50/60Hz	220V, 50/60Hz	220V, 50/60Hz
Power (W)	845	815	900
Power Consumption (kWh/24h)	11.6	12	13.86
Vials load			
2ml Vials (pcs)	28,800	40,000	60,000
Size & Weight			
Internal (W*D*H) mm	606×575×1180	606×738×1310	894×718×1310
External (W*D*H) mm	891×992×1945	891×1155×1995	1179×1135×1995
Packing (W*D*H) mm	954×955×2094	970×1138×2185	1212×1098×2185
Net/Gross weight (kg)	292/317	335/363.5	397/430
Alarm System			
High/low temperature	√	√	√
Power off failure	√	√	√
Abnormal voltage	√	√	√
Sensor error	√	√	√
Filter screen check	√	√	√
Controller failure	√	√	√
Low battery	√	√	√
Condenser malfunction	√	√	√
High ambient temperature	√	√	√
Door ajar	√	√	√
Accessories			
Caster	4	4	4
Test hole/Diameter	1/25mm	1/25mm	1/25mm
Remote alarm contact	√	√	√
USB Port	Y	Y	Y
Temperature recorder	Optional	Optional	Optional
Freezer racks	Optional	Optional	Optional
CO2 backup system	Optional	Optional	Optional
LN2 backup system	Optional	Optional	Optional