

-86 °C ULT Freezer

DualSafe Series ULT freezer

Microprocessor controller with LED digital display is installed in eye level, all controls and displays are easy to operate and read.

Exterior cold-rolled steel cabinets with a powder coat paint finish for a uniform exterior that anti-corrosion and anti-rust.

#304 Stainless steel shelves with adjustable height is easy for various samples storage.

Vacuum Insulation panel (VIP) in foaming insulation improves temperature control, increases storage capacity and samples storage efficiency.



2 foaming inner doors with ergonomic latch and double seals, reducing cold air leakage and ensure quick temperature recovery after door open.

Single-hand operation handle; Pad lock can be added to avoid unauthorized entry

Pressure release port permits easy access after door closing.

Outer door with double gaskets, better for insulation

4 casters with brake and the level feet are easy to move and install freezer.

Optional 7-days chart recorder

> Application

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.



> **Two Independent Refrigeration System** to ensure double security for samples cold storage. If one system is failure, the other one can maintain the temperature below -75°C.

> **Stable Refrigeration System and Reliable Performance, Fast Temperature Pull Down Time and Good Temperature uniformity**

Double hydrocarbon cascade refrigeration system achieves very fast temperature cooling down to -80°C

> **Intelligent Microprocessor controller and LED Digital display**

Highly visible display, intelligent controller and simplified programming , easy to set up, program, check, and monitor parameters. Password lock provides unauthorized access to the freezer.

> **A green freezer with HC refrigerant, more energy saving**

Non greenhouse gas is used, more environmental friendly. Hydrocarbon refrigeration, super low power consumption.

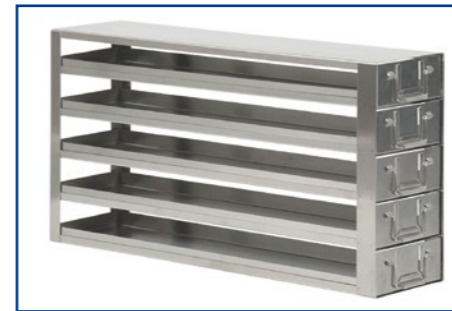
> **Optional Co2 backup system and LN2 backup system can be supplied to guarantee extra safety for samples.**

> **Temperature Control and display**

Intelligent microprocessor controller cabinet temperature is adjustable at the range of -40°C~-86°C with an increment of 0.1°C; LED Digital display control and display inner temperature accuracy at 0.1. The controller is with password protection to avoid unauthorized changes on the key parameters.

> Accessories & consumables

1, Freezer rack Drawer type
Material: #304 stainless steel



2, Co2/LN2 backup system
Inject the Liquid nitrogen into ULT freezer to Keep the freezer temperature



3, 2" box (10*10 or 9*9)
Material: PC, paper with film
Size:W133*L133*H52mm



4, 7-day chart recorder



> Features

- Two refrigeration system run independently and alternately, If one system failed, the other one can maintain the temperature at -75 C.
- LED digital highly visible display, intelligent controls and simplified programming make it easy to set up, program, check, and monitor parameters and conditions.
- Password protection secure the freezer parameter setting authorization.
- Audible and visual alarms for power failure, high/low temp, door ajar, condenser hot, probe failure, etc.
- Single-hand operation with an easy-to-use handle, padlock-compatible.
- 4 casters with brake and the level feet is easy to move and install freezer.
- 2 inner doors reduce cold air leakage and ensure temperature recovers quickly after opening door.
- User friendly interactive microprocessor control and monitoring system is installed in eye level, all controls and displays are easy to operate and read.
- Exterior and interior cold-rolled steel cabinets with a powder coat paint finish for a uniform exterior that anti-corrosion and anti-rust.
- Vacuum Insulation panel (VIP) in foaming insulation improves temperature control, increases reserve capacity and samples storage efficient.
- 2 access ports enable external probes.
- #304 Stainless steel shelves with adjustable height is easy for various samples storage.
- Pressure release port permits easy access after door closing.
- Easy-to-remove washable filter provides protection from dust on the condenser, increasing refrigeration performance.



> 2" Box Storage Capacity

Model	Capacity(L)	2ml Vial	2" box	Rack Type	Rack Qty
MDF-86U360D	360	24000	240	5x4	12
MDF-86U480D	480	32000	320	5x4	16
MDF-86U590D	590	40000	400	5x4	20
MDF-86U730D	730	50000	500	5x5	20

* Notes: calculated based on 100-well box.

> Specification

Model		MDF-86U360D	MDF-86U480D	MDF-86U590D	MDF-86U730D
Feature	Cabinet Type	Upright	Upright	Upright	Upright
	Capacity	360L	480L	590L	730L
	Cooling Performance	-86°C	-86°C	-86°C	-86°C
	Temperature Setting Range	-40°C ~ -86°C	-40°C ~ -86°C	-40°C ~ -86°C	-40°C ~ -86°C
Technical Data	Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor
	Display	LED digital display	LED digital display	LED digital display	LED digital display
	Ambinet temperature	10°C~32°C	10°C~32°C	10°C~32°C	10°C~32°C
	Cooling type	Direct cooling	Direct cooling	Direct cooling	Direct cooling
	Defrost	Manual	Manual	Manual	Manual
	Refrigerant system	Two independ cooling systems			
	Refrigerant gas	Mixed refrigerant gas, HC type			
	Sound level	50	52	52	53
	Dimension	Interior size (W*D*H)	460x600x1310mm	600x600x1310mm	740x600x1310mm
Exterior Size(W*D*H)		640x822x1970mm	780x822x1970mm	920x822x1970mm	920x952x1970mm
Package Size (W*D*H)		840x970x2080mm	990x970x2080mm	1130x970x2080mm	1130x1110x2080mm
Net/Gross Weight		220/270KGS	250/300KGS	280/335KGS	310/370KGS
20ft/40ft/40HQ container Load		18/36/36	12/24/24	12/24/24	10/20/20
Electrical Data	Power Supply(V/Hz)	220/50/60	115/60	220/50/60	115/60
	Power	900W	1000W	1100W	1100W
	Current(A)	4.8	9.6	5.3	10.6
Alarm Function	High/Low temperature alarm	Y	Y	Y	Y
	Hot condenser alarm	Y	Y	Y	Y
	Power failure alarm	Y	Y	Y	Y
	Sensor malfunction alarm	Y	Y	Y	Y
	High ambinet temperature	Y	Y	Y	Y
	Door open alarm	Y	Y	Y	Y
	Remote alarm	Y	Y	Y	Y
Material	Interior Material	Powder coated steel			
	Exterior Material	Powder coated steel			
	Insulation Material	PUF+VIP Panel			
Accessories	Shelf Quantity	3	3	3	3
	Inner door Quantity	2	2	2	2
	Castors	Y	Y	Y	Y
	Test port	Y/2	Y/2	Y/2	Y/2
	Pad lock kit	Y	Y	Y	Y
	Door handle	Y	Y	Y	Y
	Pressure realease port	Y	Y	Y	Y
	Co2 backup system	Optional	Optional	Optional	Optional
	7 days chart recorder	Optional	Optional	Optional	Optional