



10+year experience in manufacturing biomedical refrigeration equipments (4°C blood bank refrigerator, 2-8°C refrigerator, -40°C freezer, -86°C freezer, -105°C freezer, -164°C freezer).

-80°C Portable Ultra-low Temperature Freezer

DF80-PH18





Temperature control

High definition digital display with the display accuracy reaching 0.1°C



Human-oriented

The case is equipped with external padlock to ensure the safety of samples.



Sample Storage

The internal design of the box can perfectly store the frozen layer box, which is convenient for better storage of samples.



Smart Control

High definition digital display brightly display temperature. Temperature accuracy is 0.1°C . Temperature setting range is -10°C ~ -80°C .

Structure

High quality structure steel plate.
Cozy handle

Refrigeration

CFC-free refrigerant
Can be used on vehicles with 12V power supply, can also be used in house with 220V power supply.
High density insulation, perfect preservation performance.

Safety

Well-designed alarm system, high/low temperature alarm, sensor fault alarm, power outage alarm.
Power-on delay and power-off interval protection.
Keyboard with keyword protection

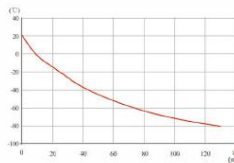
Scope of Application



It can apply to physical evidence for public security, blood station, hygiene epidemic-protection system, academic institutions, electron industry, chemical industry, bioengineering, laboratories in colleges and universities, military enterprises, pelagic fishery companies, etc.

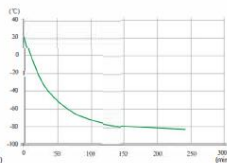
Performance Data/ Cooling Curve

Environment temperature: 25°C
Container: 1.5ml mini-type needle tubing*48
Cooling time: 25°C→-80°C 120min



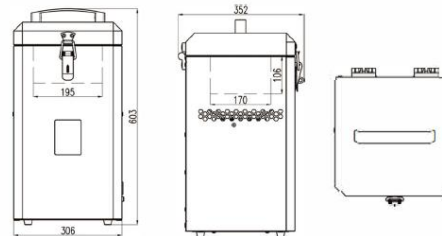
Put in a 1.5ml minitype test tube (water injected) when powering on

Environment temperature: 25°C
Container: 1.5ml mini-type needle tubing*48
Cooling time: 25°C→-80°C 3min



Put in a 1.5ml minitype test tube (water injected) when running at -80°C

External Dimension



Model	DF80-PH18
Capacity	1.8Liter
Temperature Range	-10°C ~ -80°C
Ambient Temperature	16-32°C
Cooling	Direct Cooling
Display	Digital Display
Climate Class	N
Alarm System	High/Low Temperature, Sensor Fault, Power outage
Power Supply	DC12V, AC100-240V
Input Power	80Watt
Rated Current	0.46A
Internal Material	EVA
Lock	YES
NW/GW	12/14KG
Internal Size	152*133*87mm
External Size	245*282*496mm
Package Size	315*385*530mm

-86°C Ultra-low Temperature Freezer **Upright Series**



DF86-U398



DF86-U528



DF86-U678



DF86-U858



DF86-U1010



DF86-U50



DF86-U100



7" LED Screen Control System

- The 7" LED touch screen has clear display, user-friendly interface and more accurate temperature control, which can indicate operating status clearly;
- The high-precision microcomputer control system and platinum resistor sensors enable users to set temperature inside the cabinet within a range from -40 to -86°C.



Security System

- The perfect audible & visual alarm system: high and low temperature, sensor error, power failure, low battery, door ajar, main board communication error, high ambient temperature, samples out of date notification etc;
- The compressor start delay and stopping interval protection can ensure reliable operation;
- Both the touch screen controller and keyboard controller have password protection which can prevent any adjustment of operation without permission;



Refrigeration System

- The imported high-efficiency compressor and EBM fan are energy-saving and highly efficient;
- The large finned condenser with a space between fins $\leq 2\text{mm}$, providing effective heat dissipation.



Supplies for Cryopreservation

Inventory racks/boxes for cryopreservation are optional.



Alarm Upgrading

USB data storage function: can store relevant operating data, which can be downloaded and checked, ensuring improved security and reliability of sample storage.



Human-oriented

- 2-layer heat insulating foamed door with inner and outer door seal and the insulation design of the outer door system with multiple patents can prevent loss of refrigerating capacity in an effective way;
- The 6 sides of the cabinet are made from high-performance VIP: Vacuum Insulation Panel material, improving thermal insulation performance to a large extent.



Human-oriented

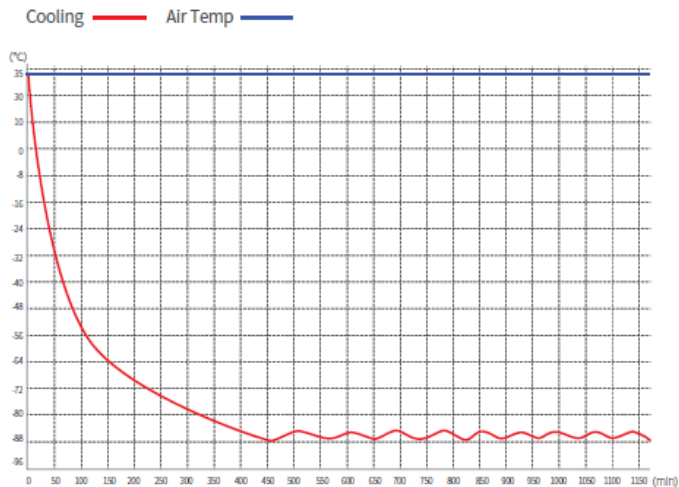
- The new designed assisting handle and vacuum release port let the freezer be operated single-handedly to open and close the outer door.
- The newly added file box makes recording easier and more convenient.
- The liner made from High quality galvanized steel sheet for medical use is low-temperature tolerant and corrosion-resistant, which has a long service life and is easy to clean;
- The universal casters and leveling feet design are more convenient for movement and fixation.



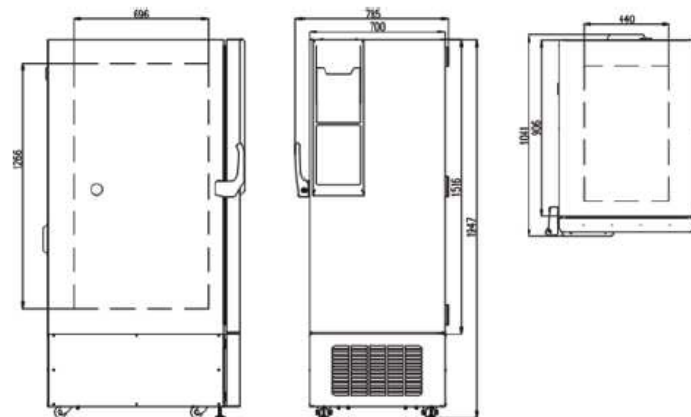
✓ Scope of Application

Suitable for use in blood banks, hospitals, health and disease prevention systems, research institutions, colleges & universities, the electronic industry, biological engineering, laboratories in colleges & universities, military enterprises, deep-sea fishing companies, etc.

🔗 Performance Data / Cooling Curve



📏 External Dimension



-86℃ Ultra Low Temperature Freezer (Upright Series)

Model	DF86-U50	DF86-U100	DF86-U398	DF86-U528	DF86-U678	DF86-U858	DF86-U1010
Capacity	50	100	398	528	678	858	1010
Cabinet Type	Upright	Upright	Upright	Upright	Upright	Upright	Upright
Internal Size(W*D*H)mm	430*305*425	450*439*514	440*696*1266	585*696*1266	750*696*1286	877*696*1378	1022*696*1378
External Size(W*D*H)mm	953*700*757	1066*742*820	785*1041*1947	930*1041*1947	1090*1025*1955	1217*1025*2005	1362*1025*2002
Package Size(W*D*H)mm	1110*834*931	1200*863*991	890*1165*2145	1035*1165*2145	1203*1155*2171	1330*1155*2176	1473*1155*2176
NW./GW.	104/122 KG	145/176 KG	237/272 KG	286/319 KG	330/382 KG	390/431 KG	430/500 KG
Performance							
Temperature Range	-40℃ ~ -86℃	-40℃ ~ -86℃	-40℃ ~ -86℃	-40℃ ~ -86℃	-40℃ ~ -86℃	-40℃ ~ -86℃	-40℃ ~ -86℃
Ambient Temperature	16 ~ 32℃	16 ~ 32℃	16 ~ 32℃	16 ~ 32℃	16 ~ 32℃	16 ~ 32℃	16 ~ 32℃
Cooling Performance	-86℃	-86℃	-86℃	-86℃	-86℃	-86℃	-86℃
Climate Class	N	N	N	N	N	N	N
Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor
Display	Digital Display	Digital Display	Digital Display	Digital Display	Digital Display	Digital Display	Digital Display
Refrigeration							
Compressor	1pc	1pc	1pc	1pc	2pcs	2pcs	2pcs
Cooling Method	Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling
Defrost Mode	Manual	Manual	Manual	Manual	Manual	Manual	Manual
Refrigerant	Mixture Gas	Mixture Gas	Mixture Gas	Mixture Gas	Mixture Gas	Mixture Gas	Mixture Gas
Insulation Thickness(mm)	110	115	130	130	130	130	130
Construction							
External Material	Steel Plates with spraying	Steel Plates with spraying	Steel Plates with spraying	Steel Plates with spraying	Steel Plates with spraying	Steel Plates with spraying	Steel Plates with spraying
Inner Material	Steel sheet	Steel sheet	Steel sheet	Steel sheet	Steel sheet	Steel sheet	Steel sheet
Shelves	1 stainless steel	1stainless steel	3stainless steel	3stainless steel	3stainless steel	3stainless steel	3stainless steel
Door Lock with Key	YES	YES	YES	YES	YES	YES	YES
External Lock	YES	YES	YES	YES	YES	YES	YES
Access Port	1pc, 25mm Φ	1pc, 40mm Φ	2pcs, 25mm Φ	2pcs, 25mm Φ	3pcs, 25mm Φ	3pcs, 25mm Φ	3pcs, 25mm Φ
Data Logging	USB record per10mins	USB record per20mins	USB record per1min	USB record per1min	USB record per1min	USB record per1min	USB record per1min
Backup Battery	YES	YES	YES	YES	YES	YES	YES
Electrical							
Power Supply	230V± 10% / 50Hz	230V± 10% / 50Hz	230V± 10% / 50Hz	230V± 10% / 50Hz	230V± 10% / 50Hz	230V± 10% / 50Hz	230V± 10% / 50Hz
Rated Power	750	750	750	750	750	750	750
Input Power	1050	1050	1050	1050	1050	1050	1050
Rated Current	4.89A	5A	5A	6.57A	9.1A	10.86A	11.8A
Power Consumption	8.75KWh/24h	9.2KWh/24h	11KWh/24h	12.82KWh/24h	15KWh/24h	16.5KWh/24h	19.15KWh/24h
Optional Accessory							
	Chart Recorder,CO2 backup system, RS485,Remote Alarm System	Chart Recorder,CO2 backup system	Chart Recorder,CO2 backup system, Remote Alarm System	Chart Recorder,CO2 backup system, Remote Alarm System	Chart Recorder,CO2 backup system, Remote Alarm System	Chart Recorder,CO2 backup system, Remote Alarm System	Chart Recorder,CO2 backup system, Remote Alarm System

-86°C Ultra-low Temperature Freezer **Chest Series**



DF86-H50



DF86-H138



DF86-H328



DF86-H668



High-precision Temperature Control

- Digital temperature display; display inner temperature, power and voltage, ambient temperature and more at the same time.
- 2 inches high-brightness digital temperature display, microprocessor-based temperature controller, -40°C~-86°C can be set freely.



Refrigeration System

Applied with Secop (Danfoss) compressor, single compressor system with target mixture refrigerant to reduce noise and improve the cooling temperature come to -86°C stably and effectively.



Insulation System

- The thickness of outer door insulation layer is equal to or greater than 90mm,
- The thickness of insulation layer in refrigerator body is equal to or greater than 110mm.
- Perfectly lock air conditioning, effectively prevent the loss of cooling capacity.



Alarm system

- The perfect audible & visual alarm system: High/low temperature, sensor error, power failure, low battery, door ajar, high ambient temperature, communication failure etc.
- Startup delay and stop interval protection function to ensure reliable operation;
- Keyboard lock and password protection function to prevent arbitrary adjustment of operating parameters;
- Safety door lock design, ensure safety sample storage.



Human-oriented

- The inner liner is made of stainless steel, resistant to corrosion and easy to clean.
- 4 units Casters for easy handling.
- Front opening lockable door with full height handle, with vacuum release port for easy open during cooling operation.
- Two-times foaming technology. 130mm foaming insulation with VIP board for better temperature performance.

DF86-H50



High-precision Temperature Control

- Digital temperature display, simultaneously display the chamber temperature, power supply voltage, ambient temperature and other parameters etc. The running status is clearly displayed;
- The high-precision microcomputer temperature control system and platinum resistor temperature sensors enable users to set temperature inside the cabinet within a range from -40°C to -86°C.



Refrigeration System

The imported high-efficiency compressor and EBM fan are energy-saving and highly efficient.



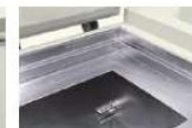
Thermal Insulation System

- The two-layer heat insulating foamed door with inner and outer door seal and the insulation design of the outer door system with multiple patents can prevent loss of refrigerating capacity in an effective way;
- No CFC polyurethane foaming technology, super thick VIP insulation which greatly improves the insulation effect.



Security System

- The well-developed security system with multiple audible & visual alarm functions: high/ low temperature alarm, door opening alarm, power outage alarm, abnormal voltage alarm, sensor failure alarm, low battery alarm, condenser poor heat dissipation alarm, system failure alarm;
- The turn-on delay and stopping interval protection function can ensure reliable operation;
- The keyboard lock function and password protection function can prevent any adjustment of operating parameters without permission;



Human-oriented

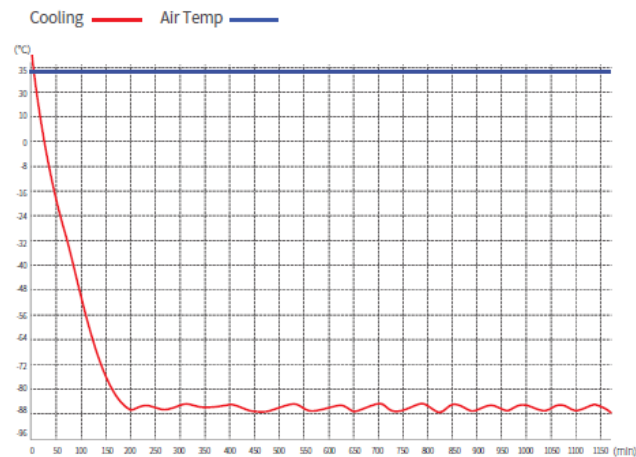
- The door with new-type assisting door handle to be opened easily;
- Door handle with lock for safety operation..
- SUS304 interior, low temperature resistance anti-corrosion for long service life and easy cleaning;
- Universal wheels easy for movement and fixation.



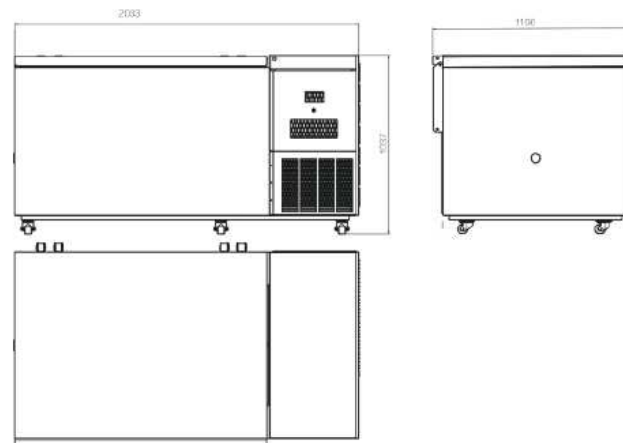
✓ Scope of Application

Suitable for use in blood banks, hospitals, health and disease prevention systems, research institutions, colleges & universities, the electronic industry, biological engineering, laboratories in colleges & universities, military enterprises, deep-sea fishing companies, etc.

🔗 Performance Data / Cooling Curve (DW-HW138)



📏 External Dimensions



-86℃ Ultra Low Temperature Freezer (Chest Series)				
Model	DF86-H50	DF86-H138	DF86-H328	DF86-H668
Capacity	50	138	328	668
Cabinet Type	Chest	Chest	Chest	Chest
Internal Size(W*D*H)mm	430*305*425	490*470*580	1200*470*570	1200*815*610
External Size(W*D*H)mm	650*606*1080	1320*890*1030	2005*890*1009	2033*1190*1037
Package Size(W*D*H)mm	788*720*1283	1470*990*1241	2150*960*1242	2145*1305*1234
NW./GW.	74/101 KG	200/231	280/344	352/438
Performance				
Temperature Range	-40℃ ~ -86℃	-40℃ ~ -86℃	-40℃ ~ -86℃	-40℃ ~ -86℃
Ambient Temperature	16 ~ 32℃	16 ~ 32℃	16 ~ 32℃	16 ~ 32℃
Cooling Performance	-86℃	-86℃	-86℃	-86℃
Climate Class	N	N	N	N
Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor
Display	Digital Display	Digital Display	Digital Display	Digital Display
Refrigeration				
Compressor	1pc	1pc	1pc	2pcs
Cooling Method	Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling
Defrost Mode	Manual	Manual	Manual	Manual
Refrigerant	Mixture Gas	Mixture Gas	Mixture Gas	Mixture Gas
Insulation Thickness(mm)	110	155	130	135
Construction				
External Material	Steel Plates with spraying	Steel Plates with spraying	Steel Plates with spraying	Steel Plates with spraying
Inner Material	304Steel sheet	304Steel sheet	304Steel sheet	304Steel sheet
Shelves	1 stainless steel	1stainless steel	3stainless steel	3stainless steel
Door Lock with Key	YES	YES	YES	YES
External Lock	YES	YES	YES	YES
Access Port	1pc, 40mm Φ	1pc, 40mm Φ	1pc, 40mm Φ	1pc, 40mm Φ
Data Logging	Printer/USB record per10mins	Printer/USB record per20mins	Printer/USB record per20mins	Printer/USB record per20mins
Backup Battery	YES	YES	YES	YES
Electrical				
Power Supply	230V± 10% / 50Hz	230V± 10% / 50Hz	230V± 10% / 50Hz	230V± 10% / 50Hz
Rated Power	720	1100	987	1950
Input Power	970	1270	1050	1950
Rated Current	4.49A	5.78A	5.6A	9.5A
Power Consumption	9KWh/24h	5.6KWh/24h	8.7KWh/24h	13.4KWh/24h
Optional Accessory				
	Chart Recorder,CO2 backup system, RS485,Remote Alarm System	Chart Recorder,CO2 backup system	Chart Recorder,CO2 backup system, Remote Alarm System	Chart Recorder,CO2 backup system, Remote Alarm System

About MEI

- ✦ Mussi Ecology Innovation(MEI) is an innovative integrated solutions provider, discovers, develops and optimizes creative methods of supporting medical and Lab works. In the past 10years, MEI served hundreds of hospitals、Labs、CDC、research institutes、pharmacy companies etc over the world, the good reputation earned is benefited from 3 characters: Integrity, Persistence, Reliability.
- ✦ MEI respect nature more than anything, MEI's producing and living activities must comply with the laws and rules of nature.
- ✦ MEI values ecological balance and ecological protection, seeking harmonious and sustainable development by creative technology and renewable resources. MEI attach importance to every detail from material research to complete machine operating, from single device appliance to IOT, to stop pollution and damage to ecology is the most effective way to benefit human beings on earth, we are ON THE WAY.

