



Laboratory Equipment Manufacturer  
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# Operation Manual for Low Temperature Freezers **DW-25YW Series** **DW-40FW Series**



**PLEASE READ THIS MANUAL CAREFULLY BEFORE OPERATION**

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Thank you for buying a ULT freezer!

For your personal safety and better performance of this unit, please read this Operation Manual thoroughly and save it properly for future reference.

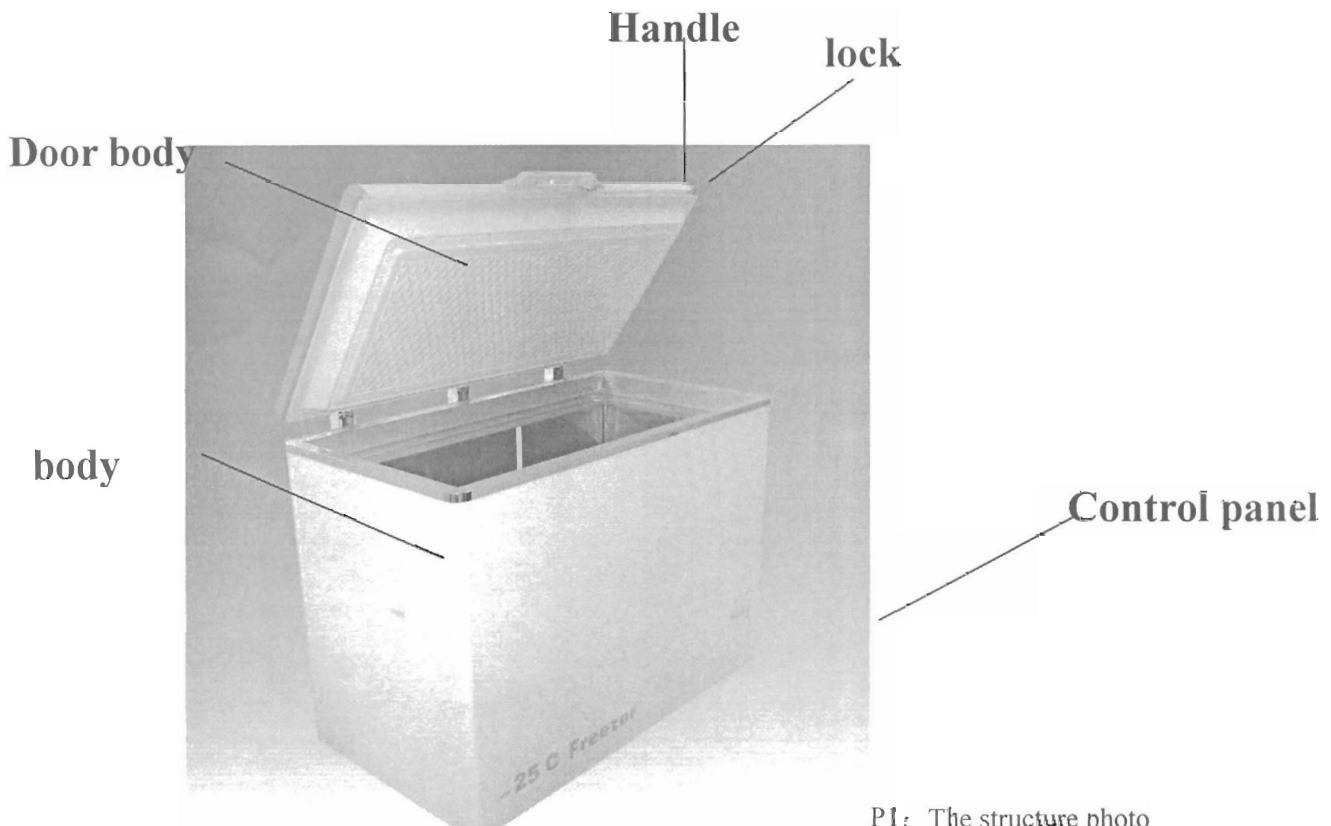
If the customers damaged the machine not obey the manual, Mrc will not be responsibility.

 **Safe Notice:**

- ⑥ Please read this manual carefully when use our machine at the first time.
  - ⑥ The one who operate Low temperature Freezer should be trained and authorized
  - ⑥ The maintenance of equipment should be made by Mrc or their's agent
  - ⑥ If happen the questions which not mentioned in the manual,please contact Mrc or agent ,and ask the right way to solve.
  - ⑥ The better to use the Mrc fittings,If the customers use other's spare parts, Mrc will be not responsible for the bad effect.But the customers can apply for Mrc
  - ⑥ Should be check-up and maintenance to Ultra low temperature freezer at the stated time.
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- Right to use the protective equip
  - Adopt the good sanitation habit
  - Everyone have the obligation to take care of himself.

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## 1.Schematic Picture and Description



PI: The structure photo


Series of Ultra-low temperature freezer is designed to store materials under very low temperature condition for hospital, epidemic station, blood bank, research institute, university, biological pharmaceutical industry and gene engineering, etc. The internal temperature in cabinet can be easily adjusted through the keys in control panel. All operations are convenient and reliable.

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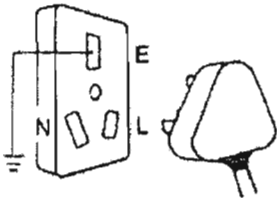
## 2.Pre-Installation


### 2.1 Convey



- Pick up the unit from the bottom of tank and a slant plane within  $45^\circ$  is acceptable. All transportation should be carefully.
- Don't catch the door body or ostium
- Don't allow to convert, flatwise, extrusion the freezer.
- In flat floor,Can push the freezer directly to move in stone's throw
-  **Notice: When move the freezer,Please notice the feet not hit the power lines.**

### 2.2 Power



- Don't use the prolong power line;
- Don't rejigger the pin and jack;
- The power line can't pack , pressed by furniture,and near the compressor
- Don't connect the Nport to the E port,It may cause the freezer crust electriferous,happen to get an electric shock.
- Once the powel line damage,Need to change as the special line,which provided by the factory or the appointed maintain servic.
- The freezer powei is 220V 、 50Hz alternating current,If the voltage range from 187V to 242V,The freeze run normally.if beyond please install the AC manostatt
-  **Notice : The freezer should use the special power jack,and earth credibility**

### 2.3 Emplace

The freezer should emplace the dry shady,good ventilation,far from fot power,and avoid the sunshine.

The freezer should leave the gap around,Benefit for drop away heat.

The place should place flat,Or ealse the freezer may not steady,cause the shake and noise.

If the freezer place on the carpet,you'd better fill up the wood under the freezer,Or else the freezer compressor heat may cause the carpet change color.

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## 3 Operation Direction

### 3.1 First operation

Advise to use the warm water and little scour to clean the freezer, and use the water to clean, then dry it.

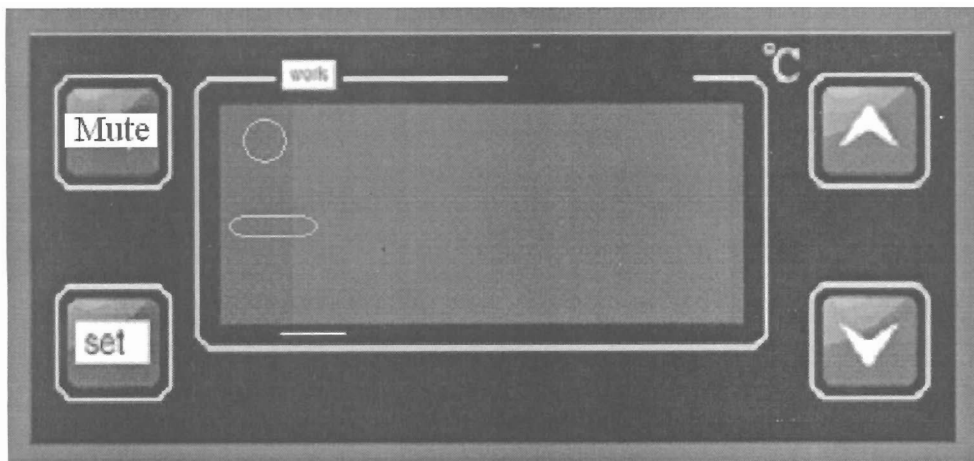
Set the freezer temperature as  $-26^{\circ}\text{C}$ , after 30 minutes, the freezer temperature descends obviously, it means the refrigeration system is normal, test is ok. (first use please set as  $-20^{\circ}\text{C}$ , waiting the freezer closed, then set as  $-26^{\circ}\text{C}$ )

To put the goods in the freezer after the temperature drop.

### 3.2 Temperature set

The freezer has a display temperature controller, the original temperature set as  $-26^{\circ}\text{C}$  by factory

→ How to set the temperature



⑥ Examine parameter, Not in the setting status:

Press "▲" show the setting temperature, After seconds will show current temperature; Press "▼" show the return difference temperature, After seconds will show current temperature.

⑥ How to Set the temperature

◇ Turn into the setting status:

At the un-setting status, Press "set" one time, Will turn into the setting status. Now the set indicator light, Show the current temperature.

◇ Set the temperature:

At the setting status, Press "▲" "▼" to adjust the temperature. Press 1 times to  $1^{\circ}\text{C}$ .

Press "SET" more than 2 seconds will come to quick set, Confirm by press "SET". Then show "L", Press "SET" again will show low alarm set, same method as High alarm set. Then confirmed by press "SET". And back to current temperature

◇ Quit the setting status:

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At the setting status, Press "set" more than 5seconds or no operation within 30 seconds, The system will save the setting temperature ,and back to normal work status.

- ⑥ When compressor delayed time beyond the setting delayed time, Or sensor temperature higher than setting temperature + return difference temperature, The replay will start refrigeration
- ⑥ Sensor failure alarm:
  - When sensor plough, LED glittering and show "E1", Alarm with buzzer.;
  - When sensor short curcuit, LED glittering and show "E2", Alarm with buzzer.
- ⑥ Exceed temperature range alarm:
  - When sensor temperature more than +99°C or less than -50°C , Will show "HH" or "LL".
- ⑥ Press "Mute" more than 2seconds, Temperature control system close.

## 4 Defrost ● Unused ● Maintenance

### 4.1 Defrost

1. There will be some frost on the surfaces of chamber for a long time running which may decrease the performance of freezer. If the thickness of frost is more than 10mm, some defrost operations are recommended.

2. Cut off the power, Open the door, and move the goods to shade.

3. Use shovel to clean the surface frost.

4. To quicken the process of defrost, You can put the 50°C water container in the freezer.

5. Note: Any electric heater, metal tool or edge tool CAN NOT be used during defrost operation.

6. Then to clean the water with dry cloth, Block the drain lid.

7. Connect the power supply after defrost is completed to run your freezer.

8. To put the goods in the freezer after finish all steps.

### 4.2 Maintenance


1 Can not put the heavy goods in the freezer, prevent to press the body.

2 Should clean the freezer at regular times. (for safe, please draw the power pin at first)

3. Use the soft and warm cloth to clean the freezer surface and inner.

4 If dirty serious, Please use the scour to wipe, then clean with soft cloth.

5.. Once the freezer running, The best continuous to use.

- ①  **DO NOT sprinkle water on the faces of cabinets, which may decrease insulating property of electric parts and rust metal parts.**

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**DO NOT use hot water, corrosive cleanser and organic solvent!**



Note: **Prohibit the children to playing games around the freezer.**

### 4.3 The failure service

Some unexpected failures may arise during running. Please pay attention to the running status of your ULT freezer. If any exceptional case arises, please check and solve it according to the following introductions. If the problem is not solved well, please contact our service center for details.

Problem	Possible Cause
ULT freezer does not operate	<ul style="list-style-type: none"><li>● Power outage has occurred.</li><li>● The plug is bad or not securely plugged-in.</li><li>● Fuse is blown.</li><li>● Voltage is too low or too high.</li></ul>
Compressor does not work	<ul style="list-style-type: none"><li>● Power in control panel is off.</li><li>● Temperature setting is wrong.</li></ul>
Temperature is higher than setting	<ul style="list-style-type: none"><li>● Frost in inner wall is too thick</li><li>● The door is not closed properly or is opened too frequently.</li><li>● Overfull materials are put into chamber.</li><li>● Ambient temperature is too high.</li></ul>
Too great noise	<ul style="list-style-type: none"><li>● Freezer is not leveled well.</li><li>● Freezer leans upon the wall.</li></ul>

● Below are normal operation:

- ① There are some light clashes when the compressor starts up and stops.
- ② During rainy and watery season some frost may accumulate on the surfaces of cabinets.  
Please clean it with dry rag.
- ③ The freezer running, The compressor heat and felt hot.
- ④ The compressor start or close, the parts may cause the light clash sound.

DO NOT open the door twice within 5 minutes. This may lead the hot air into the interior of freezer and the door may be difficult to open because of a negative pressure due to a sharp decrease of temperature of this part air.

**Before call the service engineer, Please clean and disinfect the freezer.**

**Condition:Can not shake heavily, strike,prevent drench.**

**Environment Temperature: -40℃~+55℃, Relative humidity: 10%**

## 5. The mainly function

### 5.1 The mainly technical parameter

Model	DW-25YW110A	DW-25YW166A	DW-25YW226A	DW-25YW508A	DW-40FW110	DW-40FW251	DW-40FW351
Climatic type	N	N	N	N	N	N	N
The facility safe types	I Kind B Type	I Kind B Type	I Kind B Type	I Kind B Type	I Kind B Type	I Kind B Type	I Kind B Type
Storing temperature	-10~-25℃	-10~-25℃	-10~-25℃	-10~-25℃	-10~-40℃	-10~-40℃	-10~-40℃
Valid capacity(L)	110	166	226	508	110	251	351
Rating vlotage (V~)	220	220	220	220	220	220	220
Rating frequency (HZ)	50	50	50	50	50	50	50
Input power (W)	145	160	207	330	200	265	240
Refrigerant	R134a	R134a	R134a	R134a	R134a	R507	R507
Size (depth×width×height) (mm)	549*549*845	906*556*945	1206*556*937	1204*654*857	583x619x870	730x1204x968	730x1554x968

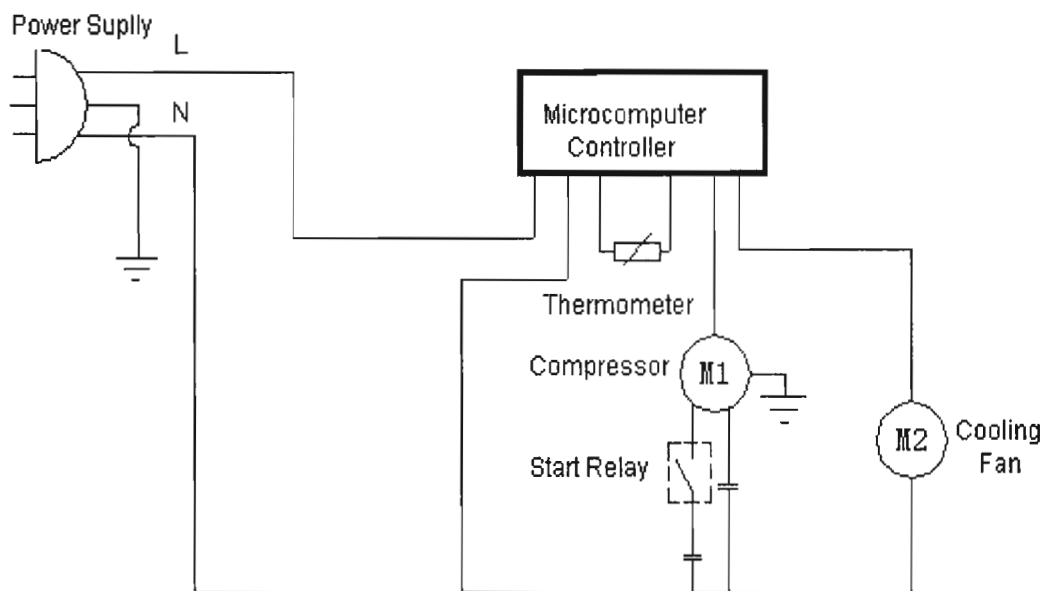
### The encasement list

Item	Operation Manual	Key	Defrost shovel
DW-25YW110A	1	2×2	1
DW-25YW166A	1	2×2	1
DW-25YW226A	1	2×2	1
DW-25YW508A	1	2×2	1
DW-40FW110	1	2×2	1
DW-40FW251	1	2×2	1
DW-40FW351	1	2×2	1



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### The circuit diagram



All technical parameters and circuit diagram in nameplate are final ones for your units.