



OPERATION MANUAL FOR

DW-40FL90/270

Ultra Low Temperature Freezer



M.R.C LTD.

OFFICES: HAGAVISH 3, HOLON 58817
P.O.B. 111, HOLON 58100, ISRAEL
TEL: 972-3-5595252 FAX: 972-3-5594529

MRC.Ver.01-02.10

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.

Failure to read, understand and follow the instructions in this manual may result in damage to the unit, injury to operating personnel and poor equipment performance.

The material in this manual is for information purposes only. The contents and the product it describes are subject to change without notice.

Always use the proper protective equipment (clothing, gloves, goggles etc.).

Always dissipate extreme cold or heat and wear protective clothing.

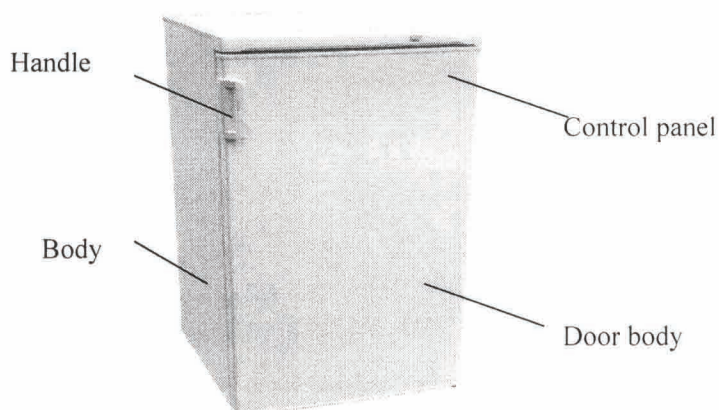
Always follow good hygiene practices.


Each individual is responsible for his or her own safety.

 **Safe Notice:**

- Please read this manual carefully when use our machine at the first time.
- The one who operate Ultra Low temperature Freezer should be trained and authorized
- The maintenance of equipment should be made by Mrc or their's agent
- If happen the questions which not mentioned in the manual, please contact us or agent , and ask the right way to solve.
- The better to use the our 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
- Should be check-up and maintenance to Ultra low temperature freezer at the stated time.
- Ultra Low temperature Freezer prohibit to storing alive life, flowers and others which not be fit for the low temperature.
- Ultra Low temperature Freezer through condenser to reach refrigerating. To ensure the freezer run regularly and ventilation, The body back and both sides away from the wall at least 30cm., and not be blocked by barrier.
- When Ultra Low temperature Freezer working, The inner temperature is very low. So if not wear glove, Please don't touch the cover board.
- If the power shut off, Please wait 5minutes.Can to connect again, to prevent the compressor damage.

1.Schematic Picture and Description



 Because the freezer amelioration and the model different, the actual product may not the same as the photo, Please follow the actual freezer.

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.

2. Pre-Installation

- How to transport: Pick up the unit from the bottom of tank and a slant plane within 45° is acceptable. All transportation should be carefully.
- Remove all wrappers.
- Check accessories and documents according to package list.
- Clean the unit thoroughly before any operation.
- Installing location: Do not position the unit in direct sunlight or near heating diffusers, radiators, or other sources of heat. The ambient temperature should not exceed 32°C. A minimum 20cm space on the sides, rear and top should be provided for better air circulation and heat discharge. Location where is too cold and place with high humidity or can be easily splashed by water are forbidden.



On the flat floor, Can directly impulse the freezer moving at stone's throw.



Notice: When moving the freezer, Please notice the wheel not to damage the line.



Notice: Should take away the packing base before run the freezer.



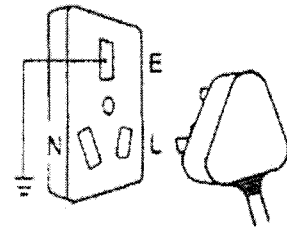
Notice: When connect the power supply, Don't put the goods in the freezer immediately. Please waiting for 12 hours

The freezer working condition:

- A. **The environment temperature:** 10℃ ~ 30℃
- B. **The relative humidity:** ≤ 80%
- C. **No strong shake and causticity gas around.**
- D. **No sunshine and other cold/hot power effect.**



Ultra Low temperature Freezer working rule: **Running intermission**



P3: N and E port can't connect

● **Safety Introduction**

- ① **Power supply:** This ULT freezer is designed operating under 220V/50HZ AC power supply. The unit can normally start under the voltage varying from 198V to 242V.
- ② Must provide one single exclusive plug receptacle with credible grounding to unit.
- ③ Inflammable and explosive materials, as well as high corrosive acid and alkali must be strictly prohibited in cabinet.
- ④ Keep the key properly avoiding the children take it to open the back door which may result in unexpected injury.
- ⑤ To avoid cold injury, please place and remove goods with protective gloves.

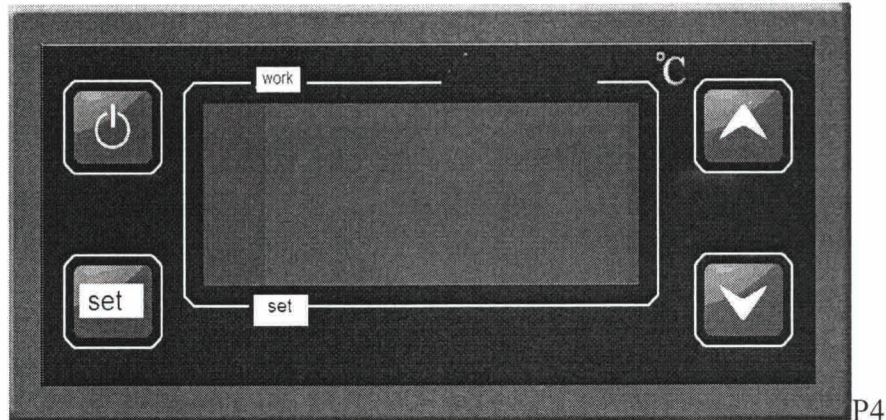
3 Operation Direction

3.1 Use at the first time

- Advise to use the warm water and little scour to clean the freezer, and use the water to clean, then dry it.
- To adjust the freezer at -40°C , To connect the power, The compressor startup after 3 minutes. 30 minutes later, The freezer temperature drop obviously, it means the refrigeration system is normal. We advise to adjust the temperature at -35°C at first, After stop the machine, Then set as -40°C
- To put the goods in the freezer after the temperature drop.
- To save the power, Please don't often open and close the door

3.2 Adjust the temperature

Display the temperature



- 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. .
- How to Set the temperature
.◇ Turn into the setting status:
At the un-setting status, Press “set” 5 seconds, 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°C .
◇ Quit the setting status:
At the setting status, Press “set” more than 5 seconds or no operation within 30 seconds, The system will save the setting temperature, and back to normal work status.
- When compressor delayed time beyond the setting delayed time, Or sensor

temperature higher than setting temperature + return difference temperature, The replay will start refrigeration


➤ **Sensor failure alarm:**

When sensor plough, LED glittering and show “E1”, Alarm with buzzer.;

When sensor short circuit, LED glittering and show “E2”, Alarm with buzzer.

➤ **Exceed temperature range alarm:**

When sensor temperature more than +99°C or less than -50°C , Will show “HH” or “LL”.

➤ Press  more than 2 seconds, 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. After the freezer running 192 hours, The system automatic defrost.

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.**

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

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

5. Service after sale

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

● 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.

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°C ~+55°C, Relative humidity: 10%~90%.

6 The mainly function

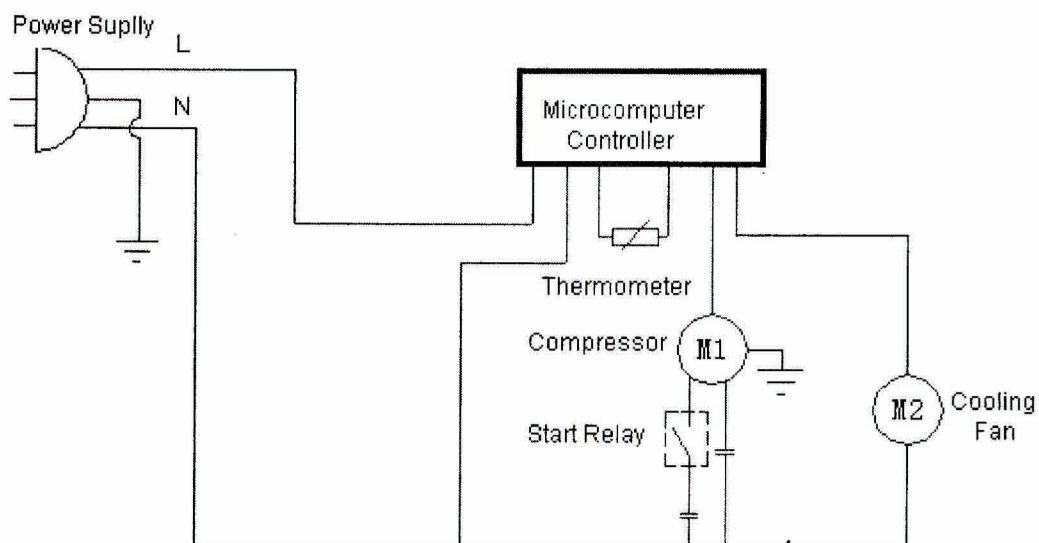
6.1 The mainly technical parameter

Model	DW-40FL90/270	The facility safe types	I Kind B Type
Climatic type	N	Input power (W)	280
Storing temperature	-10~-40°C	Refrigeration	R507/100g
Valid capacity (L)	90/270	Size (depth × width × height) (mm)	623x544x842/570x595x176 0
Rating vlotage (V~)	220	Rating frequency (HZ)	50

6.2 The encasement list

Item	Operation Manual	Key	Defrost shovel
Qty	1	2	1

6.3 The circuit diagram



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