



-86°C Portable Deep Freezer

Operating Instructions



- Please read these instructions carefully before use.
- This freezer reaches extremely cold temperatures. Danger of frostbite and other injuries. Wear gloves and protective clothing.
- Please contact IVYX Scientific at support@ivyxscientific.com for any issues or concerns. We aim to answer within 24 hours.

SAFETY INSTRUCTIONS

Please read this manual carefully and keep it in a safe place.

- This freezer should only be operated by trained and authorized personnel.
- **FROSTBITE RISK:** Wear gloves, other protective clothing, and PPE before operating this freezer.
- **BURN RISK:** The surface of the compressor can reach temperatures of 90°C (194°F). Do not touch the compressor while in use.
- **ELECTRIC SHOCK RISK:** High electrical voltage and current present a risk of electric shock. Make sure the power cord is not damaged before using this freezer.
- Keep at least a 12-inch (30 cm) gap around the sides and back to ensure proper ventilation and heat dissipation. Do not block the air inlets and outlets.
- If the power is cut off while in use, wait 5 minutes before reconnecting to avoid damaging the compressor.
- Do not store flammable, explosive, or corrosive products inside.
- Keep away from water.
- In case of machine failure or power failure, the temperature in the freezer will rise. If it cannot be restarted within a short period of time, transfer the items inside to another freezer meeting the temperature requirements.

1. Features

- **ULTRA LOW TEMPERATURE:** Temperature control from -40.0°C to -86.0°C (-40 to -123°F) in increments of 0.1°C.
- **PORTABLE:** Can be carried by one person, with external dimensions of 30x15.5x20 (76x40x50 cm)
- **25L VOLUME:** Interior chamber dimensions of 13.1x8.7x13.4 in (332x221x341 mm).
- **THICK INSULATION:** Dual door gaskets and thick foam insulation prevent loss of cooling.
- Microcomputer temperature controller enables precise and accurate temperature control.
- Proprietary mix of environmentally friendly low-temperature refrigerants. No CFC refrigerants used.

Model	Capacity	Temp.	Voltage	Power	Power Consumption	Size W×L×H	Net Weight
DW-86W25	25L	-40.0 to -86.0°C	220V/50HZ	280 W	4 kWh / 24h	780*410*515mm 30.7x16.1x20.3 in	21 kgs 46.3 lbs

2. Packing List

Model	Operating Instructions	Pair of gloves	Ice Scraper	110V/220V Adapter
DW-86W25	1	1	1	1

3. Operating Environment Requirements

- For indoor use only
- Mounting surface must be level, non-combustible, and capable of supporting the weight of the freezer (46 lbs / 21 kgs)
- Place away from direct sunlight and heat source
- Ambient temperature must be kept between 0°C and 32°C (32°F-90°F)
- Keep a gap of at least 12 inches (30cm) to facilitate ventilation and heat dissipation
- Keep it dry (away from high humidity and water).
- Keep away from electromagnetic interference (it can affect the normal operation and directly damage the control system)

4. Starting the freezer

- As liquids may have shifted during shipping, the freezer should be set for 12 hours on a level surface before the first power on to allow the liquids and refrigerants to settle.
- The freezer operates on 220V AC. If using 110V AC voltage, plug in the 110V/220V adapter to an electrical wall outlet, then connect the freezer plug to the adapter. Turn on the adapter by pressing the power button.
- The temperature control display will turn on. Follow the Temperature Control Instructions below to set the temperature.
- Do not place samples inside as soon as the power is switched on. Wait for the set temperature to be reached before placing samples inside. To prevent large temperature fluctuations, do not fill more than ¼ of the capacity at a time. Fill to ¼ capacity, wait a few minutes for the temperature to stabilize before adding more samples.

5. Temperature Control Instructions



- Press the **SET** key. SP (Set Point) appears on the screen.
- Press the **SET** key again. The SP value (temperature in °C) is displayed.
- Adjust the SP temperature (the set temperature desired) with the ↑ and ↓ keys. The temperature can be set in 0.1°C increments from -40.0°C to -86.0°C.
- Press **SET** key to confirm the setting temperature. The compressor will then turn on and the temperature will drop until the set temperature is reached. The red dot under the "out" on the LCD screen indicates that the compressor is running.
- Press **SET** key and ↓ key at the same time to exit (or wait for one minute). The temperature inside will then be displayed on the LCD screen.

6. Maintenance

- Clean the inner and outer surfaces of the freezer with a non-corrosive, neutral cleaning agent. After cleaning, wipe with a dry cloth.
- Do not clean with boiling water, detergent, acid, alkali, gasoline, alcohol, benzene, or bristle brush.
- Remove dust from the condenser frequently with a soft brush or vacuum cleaner to ensure appropriate cooling.
- If the freezer is operating for an extended time, frost is likely to accumulate inside and around the freezer box. Excessively thick frost layer will affect the sealing and refrigeration performance. Please defrost regularly with an ice scraper and wipe clean with a dry cloth.
- Condensation may appear on the door seal or the sides of the freezer. This is normal if the air humidity is high. Just wipe it dry.
- When not in use, unplug the power plug from the freezer. Cover with a plastic bag and place in a clean and ventilated place.

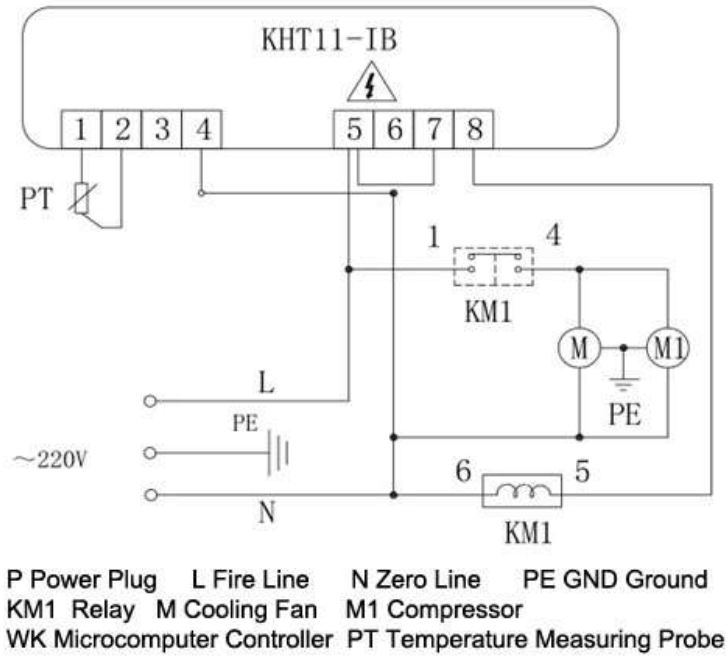
7. General troubleshooting

Below are common issues, error codes and possible solutions. If you need additional assistance, please contact support@ivyxscientific.com.

Error Code	Code Description	Reason
000	Temperature probe rod failure	Communication failure or temperature sensor failure
---	Short circuit fault	The thermostat short-circuited

Issue	Possible Solution
Freezer not working	Make sure the power cord is plugged in correctly.
Compressor not working	Make sure the temperature is set correctly. Check the controller, controller line and compressor for damage.
Temperature continues to drop after reaching the set point	Make sure the temperature is set correctly.
Temperature does not reach the set value	Make sure the door is properly closed. Do not open the door repeatedly in a short period of time. Do not put too many items in at one time.
Sound of liquid flowing	This is the normal sound of the refrigerant flowing in the pipes.
Too much noise	Make sure the freezer body does not touch walls or other objects.

Electrical Diagram



Warranty Information

This product and all products sold by IVYX Scientific are covered by a one-year warranty against defects in materials and workmanship. If you encounter issues with our product, please contact us at support@ivyxscientific.com. We aim to answer within 24 hours and will do our best to help you out. If we are unable to fix your problem, we will send you a replacement unit free of charge or a full refund.