

## HNZXIB DW86L58

# HNZXIB -86° Ultra Low Temp Freezer (58L) Instruction Manual

Model: DW86L58

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your HNZXIB -86° Ultra Low Temp Freezer (Model DW86L58). Please read this manual thoroughly before operating the unit and keep it for future reference.

## 2. SAFETY INFORMATION

### Important Safety Instructions:

- Ensure the freezer is connected to a power source that matches the specifications in this manual.
- Do not place the freezer in areas with excessive moisture or direct sunlight.
- Always wear appropriate personal protective equipment (PPE), such as cryogenic gloves, when handling samples or working inside the freezer, especially at ultra-low temperatures.
- Do not attempt to repair or modify the unit yourself. Contact qualified service personnel for assistance.
- Keep the area around the freezer clear to ensure proper ventilation.
- In case of an alarm, refer to the troubleshooting section immediately.

## 3. PRODUCT OVERVIEW

The HNZXIB -86° Ultra Low Temp Freezer (Model DW86L58) is designed for precise and reliable cryogenic storage of research specimens and samples. Key features include:

- Intelligent microcomputer digital control for precise temperature management (accuracy  $\pm 0.1^{\circ}\text{C}$ ).
- User-friendly front-mounted controls and temperature display.
- Comprehensive alarm system for over-temperature conditions and system failures.
- Ultra-thick, environmentally-friendly insulation for reduced heat loss and energy efficiency.

- Durable 304 stainless steel inner cavity for easy cleaning and corrosion resistance.
- Tubular copper tube evaporator for efficient heat dissipation.



Figure 1: HNZXIB -86° Ultra Low Temp Freezer (Model DW86L58) with its main features visible.

## DOUBLE DOOR DESIGN



**Two layers of silicone rubber door seals**  
Prevent air leakage and provide more stable temperature control.

Figure 2: Detailed view of the control panel and mechanical door lock for secure operation.

### 4. SETUP

1. **Unpacking:** Carefully remove the freezer from its packaging. Inspect for any shipping damage.
2. **Placement:** Position the freezer on a level, stable surface in a well-ventilated area. Ensure adequate clearance around the unit for air circulation.
3. **Power Connection:** Connect the freezer to a dedicated 110V power outlet. Verify that the power supply matches the unit's requirements.
4. **Initial Power-On:** Turn on the main power switch. The digital display will illuminate, showing the current internal temperature.
5. **Temperature Setting:** Use the control panel to set the desired operating temperature. Refer to the "Operating Instructions" section for detailed steps.
6. **Stabilization:** Allow the freezer to operate for at least 24 hours to reach and stabilize at the set temperature before loading any samples.

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Video 1: This video demonstrates the physical setup and initial power-on of a 58L -86 Vertical Ultra-Low Temperature Laboratory Freezer, showing the exterior and interior features.

## 5. OPERATING INSTRUCTIONS

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The freezer features an intelligent microcomputer digital control system for precise temperature management.

1. **Power On/Off:** Use the main power switch located on the control panel to turn the unit on or off.
2. **Temperature Adjustment:**
  - Press the "SET" button to enter temperature setting mode.
  - Use the Up (▲) and Down (▼) arrow buttons to adjust the desired temperature. The adjustment accuracy is 0.1°C.
  - Press "SET" again to confirm the new temperature.
3. **Alarm System:** The freezer is equipped with a high and low-temperature alarm system.
  - If the internal temperature deviates beyond the set thresholds, an audible buzzer will sound, and a flashing alarm will appear on the display.
  - To silence the alarm, press the appropriate button on the control panel (refer to the specific button labels on your unit). Investigate the cause of the alarm immediately.
4. **Door Operation:** The freezer features a double door design with two layers of silicone rubber door seals to prevent air leakage. Ensure both doors are securely closed after each use to maintain optimal temperature and energy efficiency.

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Video 2: This video demonstrates the temperature setting process on an Ultra Low Temperature Freezer, showing the digital display and control buttons.

## 6. MAINTENANCE

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Regular maintenance ensures optimal performance and extends the lifespan of your freezer.

- **Cleaning:** Clean the interior of the freezer regularly using a mild, non-abrasive cleaner. The 304 stainless steel inner cavity is designed for easy cleaning.
- **Defrosting:** Frost buildup can reduce efficiency. Defrost the freezer when frost accumulation becomes noticeable. Turn off the unit, remove all samples, and allow the frost to melt naturally. Do not use sharp objects to remove ice.
- **Door Seals:** Inspect the silicone rubber door seals periodically for any signs of wear or damage. Clean them with a damp cloth to ensure a tight seal.
- **Condenser Coils:** Keep the condenser coils (located at the back/bottom of the unit) clean and free of dust and debris to ensure efficient cooling. Use a soft brush or vacuum cleaner.
- **Power Cord:** Regularly check the power cord for any damage. Do not operate the unit with a damaged cord.

# WIDE RANGE OF APPLICATIONS



Food  
Freezing



Research  
Institutes



Industries  
and mines



Biological  
Research



Electronic  
Chemicals



Figure 3: The ultra-thick insulation layer helps maintain stable temperatures and reduces energy consumption.

# PRODUCT PARAMETERS



Capacity: 58L

Temperature: -86°C

Net Weight: 78kg

Power: 450W

External Dimensions:

600\*665\*1150mm

Internal Dimensions:

361\*405\*410mm

**Note:**

- If placing dry ice, please use a foam box.
- The temperature is too low, it is recommended to wear gloves when handling reagents.

Figure 4: The double door design with two layers of silicone rubber door seals ensures minimal air leakage and stable temperature control.

## 7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Freezer not cooling	Power supply issue, compressor malfunction, excessive frost.	Check power connection. Ensure proper ventilation. Defrost if necessary. Contact service if problem persists.
Temperature alarm sounds	Door not closed properly, power outage, ambient temperature too high, system malfunction.	Ensure door is sealed. Check power. Reduce ambient temperature. Contact service for system issues.
Excessive noise	Unit not level, fan obstruction, compressor issue.	Ensure unit is level. Check for obstructions around fans. Contact service for compressor noise.

## 8. SPECIFICATIONS

<b>Feature</b>	<b>Detail</b>
Brand	HNZXIB
Model Info	DW86L58
Capacity	58 Liters
Temperature Range	-40°C to -86°C
Temperature Precision	±0.1°C
Item Weight	238 pounds
Product Dimensions	60 x 60 x 85 inches (D x W x H)
Installation Type	Freestanding
Voltage	110 Volts
Wattage	300 watts
Door Hinges	Top
Door Material Type	Stainless Steel
Shelves	1
Certification	CSA, NSF

# STABLE COMPRESSOR PERFORMANCE



## Brand Compressor

Efficient operation, strong power,  
fast cooling.



## Internal Evaporation Tube

Made of refined copper tube, effi-  
cient and durable.



Figure 5: Illustration of the freezer's stable compressor and efficient internal evaporation tube.

## PRODUCT DETAILS



▶ Control Panel



▶ Mechanical door lock



▶ Fixed Fuma Wheel

Figure 6: Key product details: control panel, mechanical door lock, and fixed Fuma wheel for mobility.

# 304 STAINLESS STEEL LINER



304 Stainless steel



Preservative  
Does not rust



Easy to clean



**Hierarchical Storage  
Adjustable Height**



Figure 7: The 304 stainless steel liner is preservative, does not rust, and is easy to clean. Features adjustable height for hierarchical storage.

## 9. WARRANTY AND SUPPORT

The HNZXIB -86° Ultra Low Temp Freezer (Model DW86L58) comes with a standard warranty. For specific warranty terms and conditions, please refer to the documentation included with your product or contact HNZXIB customer support.

### Customer Support:

- For technical assistance, troubleshooting, or spare parts, please contact Henan Zhuoxian Import & Export Trading Co., Ltd.
- Refer to the contact information provided in your product packaging or on the official HNZXIB website.
- 30-day easy returns are available.

