

# -150°C Cryo Freezer



**DW-150W209A**

## Scope of Application :

A mechanical cryogenic freezer is used for the long-term cryopreservation of samples such as cell cultures, tissue samples, bacteria, viruses and non-biological products such as electronics. Applications include cord blood preservation, biobanks, reproductive procedures, blood banks, life science research, biomedical engineering and fisheries. Mechanical cryopreservation is a safe alternative to LN<sub>2</sub> and can reduce or eliminate the reliance on LN<sub>2</sub>, reducing safety concerns.

## Innovative Design

- 100% Hydrocarbon refrigeration technology
- Energy-efficient and Environmentally-friendly
- Quiet, low noise operation
- Safe and reliable
- Intelligent control

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## Product Advantages

-  **Hydrocarbon energy-saving refrigeration technologies**
  - Includes specialist industrial compressor, hydrocarbon refrigerant, dual-compressors 4-stage cascade refrigeration system, which delivers excellent energy-efficiencies
  - Energy-efficient fan design with intelligent start/stop
-  **Environmentally friendly**
  - HC refrigerant, truly environmentally-friendly refrigeration system with zero global warming potential (GWP)
  - LBA polyurethane foam has low GWP and is significantly lower than most HFCs commonly used, offering better environmental protection
-  **Superior Uniformity**

The temperature uniformity is  $\pm 5^{\circ}\text{C}$  with the setting temperature of  $-150^{\circ}\text{C}$
-  **Safe, Secure and Reliable**

The pressure state of the system can be automatically adjusted by the pressure controller to prevent the pressure from being too high to effect the freezer operation. Multiple alarms, including high and low temperature, power failure, door ajar, hot condenser, low battery, sensor error, and high ambient temperature.
-  **Low noise**

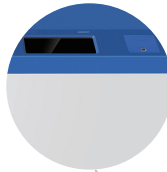
Noise-reduction features and system ensure a low noise output of just 55dB

## Functional Details

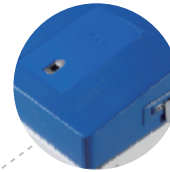
**Integrated stainless steel hinge**  
Lid opening with stopping mechanism, angle  $>45^{\circ}$



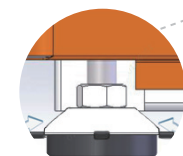
**Intelligent touchscreen controller and multiple interfaces**  
Angled LCD screen allows users to view data clearly



**Electric control module**  
Standard USB, Optional fingerprint lock, NFC card lock

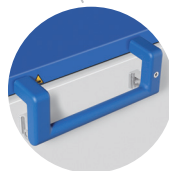


**Access Port**  
One 25mm test hole



**Adjustable foot**  
Large adjustable feet, easy to level

**Integrated lid and handle**  
Easy to grasp, comfortable to use and durable



**Magnetic front cover**  
Screwless design making it easy to remove and clean the filter



## Product Details

### • Microprocessor controller

Equipped with a microprocessor controller and a 10.1 inch LCD screen with display accuracy at 0.1°C to show the cabinet and ambient temperature, voltage and other data clearly. The temperature inside the cabinet is adjustable from -140°C to -150°C.

### • Safe and secure

Integrated handle, equipped with key lock and padlock as standard with optional electromagnetic lock and finger-print lock, providing multiple safeguards for sample safety.

### • Large capacity USB

Enables users to download historical temperature data (up to 10 years) for compliance and auditing purposes.

### • Backup power, extended standby

Equipped as standard with two lithium batteries which allows extended information/data availability, even after power cutoff.

### • Multiple alarms

Including high and low temperature alarm, sensor error, hot condenser, power failure, low battery, door ajar, high ambient temperature and other alarm functions.

### • Superior insulation performance

The VIP and polyurethane foam (140mm) cabinet design, multiple door seals, two inner lids to prevent cold loss, delivers excellent thermal efficiencies.

### • Compatible with freezer racks design

The internal height of the compartment means that various racks can be used for storage for flexibility.

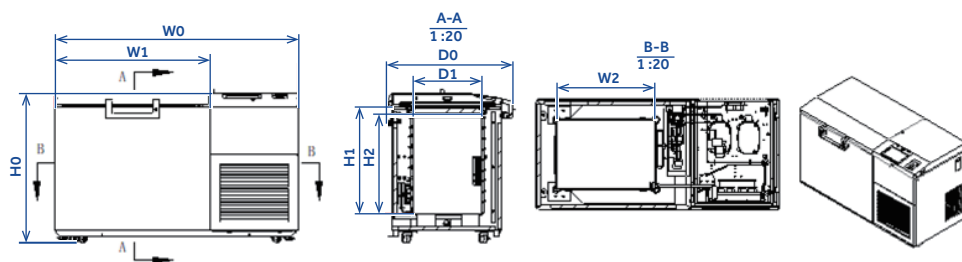
### • Networking functions

A standard RS485 port is configured to be connected to the monitoring software.

### • Anti-defrost design

Built-in halo heater reduces frost build-up.

## Product Dimension Drawings



Remark:  
W0-Total Width  
W1-Cabinet Width  
W2-Inner Cabinet Effective Width  
D0-Total Depth  
D1-Inner Cabinet Effective Depth  
H0-Total Height  
H1-Inner Cabinet Height  
H2-Inner Cabinet Effective Height

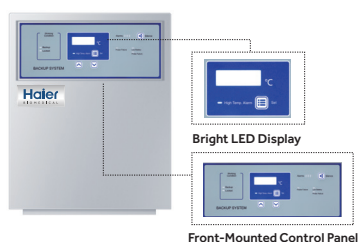
Model	Code	W0	W1	W2	H0	H1	H2	D0	D1
DW-150W209A		1650mm	1050mm	667mm	1010mm	727mm	677mm	860mm	462mm

## Product Accessories (Optional)



### Temperature Recorder


- Front-mounted
- For independent temperature monitoring



### LN<sub>2</sub> Backup System

#### Features

- Interlocked design to turn off the LN<sub>2</sub> injection when the door is opened
- Protection circuit to prevent over-charging battery
- Light weight and portable design, suitable for installation on top of a freezer
- Alarm functions to include low battery and sensor error

Rack Type	ULT Freezer	Freezer Rack						Freezer Rack Quantity	Total Boxes
		CAT.No.	Model	Material	Layout (Rows* Columns)	Box Type	Dimensions (D*W*H) (mm)		
 Chest-type freezer rack	DW-150W209A	433026	DCJ-10-A (SUS304)	SUS304	10*1	2 inch	141*141*552	12	120
		433028	DCJ-12-A (SUS304)	SUS304	12*1	2 inch	141*141*662	12	144

## Specifications



Model			DW-150W209A
Technical Data	Cabinet Type		Chest
	Climate Class (°C)		10~28
	Cooling Type		Direct Cooling
	Defrost Mode		Manual
	Refrigerant		HC
	Sound Level (dB(A))		55
Performance	Cooling Performance (°C)		-150
	Temperature Range (°C)		-140 ~ -150
Control	Controller		Microprocessor
	Display		LCD Touchscreen
Electrical Data	Power Supply (V/Hz)		208~230/60
	Max Power (W)		2000
Dimensions	Capacity (L/Cu.Ft)		209/7.4
	Net/Gross Weight	kg	260/295
		lbs	573.2/650.4
	Interior Dimension (W*D*H)	mm	667*462*677
		in	26.3*18.2*26.7
	Exterior Dimension (W*D*H)	mm	1650*860*1010
		in	65.0*33.9*39.8
	Packing Dimension (W*D*H)	mm	1810*960*1170
		in	71.3*37.8*46.1
	Cabinet Width (without handle and hinge)	mm	667
Functions	Container Load (20'/40'/40'H)		12/24/24
	High/Low Temperature Alarm		Y
	Hot Condenser Alarm		Y
	Power Failure Alarm		Y
	High/Low Voltage Alarm		Y
	Sensor Error Alarm		Y
	Low Battery Alarm		Y
	High Ambient Temperature Alarm		Y
	Door Ajar Alarm		Y
	Start-Up Delay		Y
Accessories	Caster		Y(4)
	Leveling Feet		Y(2)
	Porthole		1*Rear, (25mm)Diameter
	Inner Doors		2
	Freezer Racks Qty (2" boxes)		12
	Capacity (2" boxes)		144
	USB Interface		Y
	Remote Alarm		Y
	5V Power Supply Port		Y
	Temperature Chart Recorder		Optional
	RS232/485 Port		NA/Standard
	CO <sub>2</sub> Backup System		N/A
	LN <sub>2</sub> Backup System		Optional
Other	Certification		UL

\*Haier Biomedical reserves the right to change products and specifications without prior notice.