

**Haier Biomedical**  
Intelligent Protection of Life Science

# -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
- Quiet, low noise operation
- Energy-efficient and Environmentally-friendly
- Safe and reliable
- Intelligent control

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**-150°C Cryo Freezer DW-150W209A****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

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## -150°C Cryo Freezer DW-150W209A

### 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 fingerprint 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.

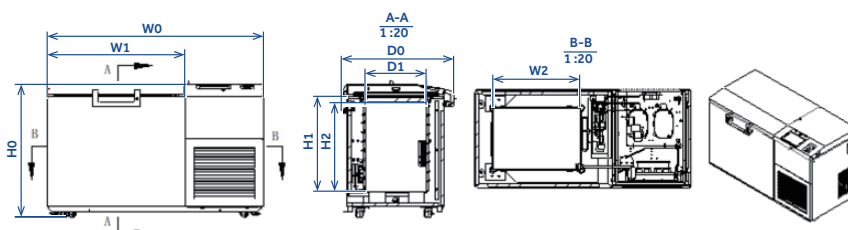
#### • Networking functions

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 |

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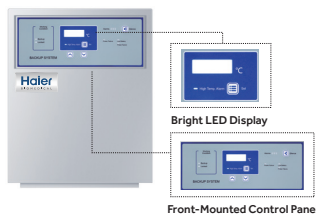
## -150°C Cryo Freezer DW-150W209A

### 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) |                       |             |
| <br>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         |

## -150°C Cryo Freezer DW-150W209A

### 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         |
| Functions       | Cabinet Width (without handle and hinge) |     | mm 667                 |
|                 | 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                      |
| Accessories     | Door Ajar Alarm                          |     | Y                      |
|                 | Start-Up Delay                           |     | Y                      |
|                 | 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                    |
| Other           | LN <sub>2</sub> Backup System            |     | Optional               |
|                 | Certification                            |     | UL                     |

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

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