

Haier Biomedical

**JoJo**  
Life Science



# -86°C ULT Freezer (Twin Cool)



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## Scope of Application >

It can be used for low-temperature tests and other tests which require strict storage condition for the viruses, pathogens, red blood cells, white blood cells, skin, bones, bacteria, semen, biological products, ocean products, electronic devices and special materials. Application could be found at blood stations, hospitals, disease control and prevention centers, scientific research institutions, enterprises in electronics and chemical industry, biomedical engineering institutes and pelagic fishery companies and etc.

## Advanced hardware system



### Smart full-size touch screen

10 inch capacitive touch screen, state-of-art UI design coupled with sample management system, optimal user experience, better man-machine interaction



### New robust and durable handle, optional fringer print lock and NFC electromagnetic lock

New robust and durable handle and built-in lock with 4 keys  
More flexible configuration: optional finger print lock and NFC card access

## IoT software system



### Simplified sample management experience

Smart storage: scanning gun& barcode for precise identification, simple and effortless  
Precise delivery: retrieve your samples with higher precision and efficiency



### Interconnected multi terminals for monitoring safety

Check the real-time operating status via mobile phones or palmtop, simple and reliable

### A Dual independent refrigeration systems, making the samples safer

The dual refrigeration systems run independently and alternately, and both of them can reach up to -80°C through independent refrigeration. In case that failure occurs to one system, the sample storage safety can still be guaranteed.

### B High speed refrigeration and frequently opening of the door needing not to be worried

It uses auto-cascade hydrocarbon refrigeration technology and can realize quick cooling; it only needs 180 minutes to reduce the temperature from 25°C to -80°C. Normally, the temperature in the refrigerator can quickly recover to -75°C in 1 minutes after the door being opened and closed so that the sample safety can be guaranteed.

### C Energy saving and environment protection

It adopts auto-cascade hydrocarbon refrigeration technology, three-layer energy saving and superinsulation design, which can increase the insulation efficiency by 30%, and realize the energy saving by 50%. Its daily power consumption is only 11 degrees, which leads the world. It has obtained the energy saving and environmental protection certification issued by the national quality certification center.

## Friendly design



### Equipped with a variety of safety locks, providing more safety guarantee

Standard equipped with key lock, padlock and optional electromagnetic lock with fingerprint lock, providing multiple safeguards for sample safety



### Massive sample information storage available in the cloud

Hundreds of millions of scientific research and sample information being able to be stored into the cloud server



### Multiple noise reduction measures, reducing the noise down to 53dB

Special noise-reduction design matching with super silent compressor and energy-saving fan, lower noise level



### Double foaming for both inner and outer doors and five-layer sealing design

Optimized super-thick V•P thermal insulation technology, extending temperature holdover time during power failure and increasing insulation efficiency by 20%.

# Specification

|                              | Model                      | DW-86L578ST    | DW-86L578ST(120/60) | DW-86L728ST    |
|------------------------------|----------------------------|----------------|---------------------|----------------|
| Technical Data               | Cabinet Type               | Upright        | Upright             | Upright        |
|                              | Climate Class              | N              | N                   | N              |
|                              | Cooling Type               | Direct cooling | Direct cooling      | Direct cooling |
|                              | Defrost Mode               | Manual         | Manual              | Manual         |
|                              | Refrigerant                | HC             | HC                  | HC             |
|                              | Sound Level (dB(A))        | 53             | 52                  | 50             |
| Performance                  | Cooling Performance(°C)    | -86            | -86                 | -86            |
|                              | Temp Range(°C)             | -40~-86        | -40~-86             | -40~-86        |
| Control                      | Controller                 | Microprocessor | Microprocessor      | Microprocessor |
|                              | Display                    | LCD            | LCD                 | LCD            |
| Electrical Data              | Power Supply(V/Hz)         | 208~230/50     | 120/60              | 208~230/50     |
|                              | Power(W)                   | 1400           | 1400                | 1400           |
|                              | Electrical Current(A)      | 10             | 14                  | 10             |
| Dimensions                   | Capacity(L/Cu.Ft)          | 578/20.4       | 578/20.4            | 728/25.7       |
|                              | Net/Gross Weight(approx)   | 325/355        | 325/355             | 350/385        |
|                              |                            | 716.5/782.6    | 716.5/782.6         | 771.6/848.8    |
|                              | Interior Dimensions(W*D*H) | 620*716*1310   | 620*716*1310        | 766*716*1310   |
|                              |                            | 24.4*28.2*51.6 | 24.4*28.2*51.6      | 30.2*28.2*51.6 |
|                              | Exterior Dimensions(W*D*H) | 895*998*1980   | 895*998*1980        | 1046*998*1980  |
|                              |                            | 35.4*39.3*78.0 | 35.4*39.3*78.0      | 41.2*39.3*78.0 |
|                              | Packing Dimension(W*D*H)   | 950*1055*2150  | 950*1055*2150       | 1100*1105*2150 |
| 37.4*41.5*84.6               |                            | 37.4*41.5*84.6 | 43.3*43.5*84.6      |                |
| Container Load(20'/40'/40'H) | 12/24/24                   | 12/24/24       | 10/20/20            |                |
| Functions                    | Remote Alarm               | Y              | Y                   | Y              |
|                              | High/Low Temp              | Y              | Y                   | Y              |
|                              | Hot Condenser              | Y              | Y                   | Y              |
|                              | Power Failure              | Y              | Y                   | Y              |
|                              | Sensor Error               | Y              | Y                   | Y              |
|                              | Low Battery                | Y              | Y                   | Y              |
|                              | High Ambient Temp          | Y              | Y                   | Y              |
|                              | Door Ajar                  | Y              | Y                   | Y              |
| Accessories                  | Caster                     | Y              | Y                   | Y              |
|                              | Foot                       | Y              | Y                   | Y              |
|                              | Porthole                   | Y/2            | Y/2                 | Y/2            |
|                              | Shelves/ Inner Doors       | 3/4            | 3/4                 | 3/4            |
|                              | USB Interface              | Y              | Y                   | Y              |
|                              | 5V Power Supply Port       | Y              | Y                   | Y              |
|                              | Temp Recorder              | Optional       | Optional            | Optional       |
|                              | RS232/485 Port             | Standard       | Standard            | Standard       |
|                              | CO2 Backup System          | Optional       | Optional            | Optional       |
|                              | LN2 Backup System          | Optional       | Optional            | Optional       |
| Other                        | Certification              | CE             | UL                  | CE             |

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# Variable Frequency Drive -86°C ULT Freezer

IoT technology for more intelligent management  
HC & Inverter technology for better energy saving



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## Scope of Application

It can be used for low-temperature tests and other tests which require strict storage condition for the viruses, pathogens, red blood cells, white blood cells, skin, bones, bacteria, semen, biological products, ocean products, electronic devices and special materials. Application could be found at blood stations, hospitals, disease control and prevention centers, scientific research institutions, enterprises in electronics and chemical industry, biomedical engineering institutes and pelagic fishery companies and etc.

## Advanced hardware system



### Smart full-size touch screen

10 inch capacitive touch screen, state-of-art UI design coupled with sample management system, optimal user experience



### HC & variable frequency drive refrigeration system for additional energy saving

More advanced innovative design and excellent energy saving performance. Energy consumption is down to a single digit



### New robust and durable handle, optional fringer print lock and NFC electromagnetic lock

New robust and durable handle and built-in lock with 4 keys  
More flexible configuration: optional finger print lock and NFC card access

## IoT software system



### Simplified sample management experience

Smart storage: scanning gun& barcode for precise identification, simple and effortless  
Precise delivery: retrieve your samples with higher precision and efficiency



### Interconnected multi terminals for monitoring safety

Check the real-time operating status via mobile phones or palmtop, simple and reliable

### A Shortening the access time from 1 minute to 1 second

Changing ransacking boxes and chests and manually recording to one-gun, one-code and one-key operation, realizing double screen synchronization and one-second access

### B Changing safety control from unknown to 24-hour controlled

Changing scattered equipment to all-time, all-weather, all-direction and multi-screen status monitoring and equipment self-diagnosis by IoT, protecting the sample safety

### C Three-times energy saving and environmental protection

Ultra-low power consumption, down to less than 10KWh/day, world leading energy saving performance

## Friendly design



### Equipped with a variety of safety locks, providing more safety guarantee

Standard equipped with key lock, padlock and optional electromagnetic lock with fingerprint lock, providing multiple safeguards for sample safety



### Multiple noise reduction measures, lower noise level of 44dB

Special noise-reduction design, ultra silent inverter compressor and variable speed fan, enabling the surroundings to be as silent as possible



### Massive sample information storage available in the cloud

Hundreds of millions of scientific research and sample information being able to be stored into the cloud server



### Double foaming for both inner and outer doors and five-layer sealing design

Optimized super-thick V+P thermal insulation technology, extending temperature holdover time during power failure and increasing insulation efficiency by 20%

# Specification

|                              | Model                   | DW-86L579BPT   | DW-86L729BPT   | DW-86L829BPT   | DW-86L959BPT   |
|------------------------------|-------------------------|----------------|----------------|----------------|----------------|
| <b>Technical Data</b>        | Cabinet Type            | Upright        | Upright        | Upright        | Upright        |
|                              | Climate Class           | N              | N              | N              | N              |
|                              | Cooling Type            | Direct cooling | Direct cooling | Direct cooling | Direct cooling |
|                              | Defrost Mode            | Manual         | Manual         | Manual         | Manual         |
|                              | Refrigerant             | HC             | HC             | HC             | HC             |
|                              | Noise((dB(A))           | 43.5           | 43.5           | 43.5           | 47             |
| <b>Performance</b>           | Cooling Performance(°C) | -86            | -86            | -86            | -86            |
|                              | Temp Range(°C)          | -40~-86        | -40~-86        | -40~-86        | -40~-86        |
| <b>Control</b>               | Controller              | Microprocessor | Microprocessor | Microprocessor | Microprocessor |
|                              | Display                 | LCD            | LCD            | LCD            | LCD            |
| <b>Electrical Data</b>       | Power Supply(V/HZ)      | 100~230/50/60  | 100~230/50/60  | 208~230/50/60  | 208~230/50/60  |
|                              | Power(W)                | 1100           | 1100           | 1100           | 1300           |
|                              | Electrical Current(A)   | 6              | 6              | 6              | 7              |
| <b>Dimensions</b>            | Capacity(L/Cu.Ft)       | 579/20.4       | 729/25.7       | 829/29.2       | 959/33.9       |
|                              | Net/Gross Weight        | 325/355        | 350/385        | 380/415        | 450/485        |
|                              | (approx)                | 716.5/782.6    | 771.6/848.8    | 837.7/914.8    | 992.1/1069.2   |
|                              | Interior Dimension      | 620*716*1310   | 766*716*1310   | 870*716*1310   | 1016*716*1310  |
|                              | (W*D*H)                 | 24.4*28.2*51.6 | 30.2*28.2*51.6 | 34.3*28.2*51.6 | 40.0*28.2*51.6 |
|                              | Exterior Dimension      | 895*998*1980   | 1046*998*1980  | 1145*998*1980  | 1296*998*1980  |
|                              | (W*D*H)                 | 35.4*39.3*78.0 | 41.2*39.3*78.0 | 45.1*39.3*78.0 | 51.0*39.3*78.0 |
|                              | Packing Dimension       | 950*1055*2150  | 1100*1105*2150 | 1190*1045*2150 | 1365*1105*2150 |
| (W*D*H)                      | 37.4*41.5*84.6          | 43.3*43.5*84.6 | 46.9*41.1*84.6 | 53.7*43.5*84.6 |                |
| Container Load(20'/40'/40'H) | 12/24/24                | 10/20/20       | 8/20/20        | 8/16/16        |                |
| <b>Functions</b>             | Remote Alarm            | Y              | Y              | Y              | Y              |
|                              | High/Low Temp           | Y              | Y              | Y              | Y              |
|                              | Hot Condenser           | Y              | Y              | Y              | Y              |
|                              | Power Failure           | Y              | Y              | Y              | Y              |
|                              | Sensor Error            | Y              | Y              | Y              | Y              |
|                              | Low Battery             | Y              | Y              | Y              | Y              |
|                              | High Ambient Temp       | Y              | Y              | Y              | Y              |
|                              | Door Ajar               | Y              | Y              | Y              | Y              |
| <b>Accessories</b>           | Caster                  | Y              | Y              | Y              | Y              |
|                              | Foot                    | Y              | Y              | Y              | Y              |
|                              | Test Hole               | Y/2            | Y/2            | Y/2            | Y/2            |
|                              | Shelves/ Inner Doors    | 3/4            | 3/4            | 3/4            | 3/4            |
|                              | USB Interface           | Y              | Y              | Y              | Y              |
|                              | 5V Power Supply Port    | Y              | Y              | Y              | Y              |
|                              | Temp Recorder           | Optional       | Optional       | Optional       | Optional       |
|                              | 485 Port                | Standard       | Standard       | Standard       | Standard       |
|                              | CO2 Backup System       | Optional       | Optional       | Optional       | Optional       |
| LN2 Backup System            | Optional                | Optional       | Optional       | Optional       |                |
| <b>Others</b>                | Certificate             | CE、UL          | CE、UL          | CE、UL          | CE、UL          |

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