



**TwinCool
ULT Freezer**

Scope of Application

The TwinCool ULT freezer can be used for the storage and protection of valuable samples which require strict and continuous storage conditions such as viruses, pathogens, red blood cells, white blood cells, skin, bones, bacteria, semens and other biological products and special materials. Designed to operate even in the event of a compressor failure. Applicable to many storage requirements found within blood storage facilities, hospitals, disease control and prevention centres, scientific research institutions, biomedical engineering institutes and electronics and chemical industry.

Advanced Hardware System



Smart Full-size Touch Screen

10-inch touch screen with state-of-art user interface design, coupled with sample management system provides optimal user experience and better interaction

A Dual independent refrigeration systems for maximum sample safety

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 system for faster pull down and temperature recovery after door opening

It uses auto-cascade hydrocarbon refrigeration technology for faster pulldown; it takes just 180 minutes to reduce the temperature from ambient 25°C to -80°C. Typically, the temperature in the freezer can quickly recover to -75°C in 1 minute after the door being opened and closed so that the sample safety can be guaranteed.

C World-leading energy saving refrigeration technology

It adopts auto-cascade hydrocarbon refrigeration technology, three-layer energy saving and superinsulation design, which can increase the insulation efficiency by 30%, and reduce the energy by 50%. Power consumption is only 11kWh/day and the unit is certified by The National Quality Certification Center for energy saving and environmental protection.

IoT Software System



Simplified Sample Management Experience

Barcode scanner for simple, effortless and precise identification. Input and retrieve your samples with higher precision and efficiency



Wireless Monitoring Connectivity

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

Friendly Design



Safe and secure

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



Low noise design, reducing the noise down to 53dB

Special noise-reduction design plus super silent compressor technology and energy-saving fan, considerably lowers noise level



Cloud data storage available

Store hundreds of millions of scientific research and sample information in the cloud server



Optimized insulation

Double foaming for both inner and outer doors and five-layer sealing design and optimized super-thick VIP thermal insulation technology, extends temperature holdover time during power failure and increases insulation efficiency by 20%

Specifications

| Model | DW-86L578ST | | DW-86L728ST | | |
|------------------------------|-------------------------------|------------------|----------------|----------------|----------------|
| Technical Data | Cabinet Type | Upright | | | |
| | Climate Class | N | | | |
| | Cooling Type | Direct Cooling | | | |
| | Defrost Mode | Manual | | | |
| | Refrigerant | HC | | | |
| | Sound Level(dB(A)) | 53 | 52 | 50 | |
| Performance | Cooling Performance(°C) | -86 | | | |
| | Temperature Range(°C) | -40--86 | | | |
| Control | Controller | Microprocessor | | | |
| | LCD Touch Screen | LCD Touch Screen | | | |
| Electrical Data | Power Supply(V/Hz) | 208~230/50 | 120/60 | 208~230/50 | |
| | Power(W) | 1400 | | | |
| | Electrical Current(A) | 10 | 14 | 10 | |
| Dimensions | Capacity(L/Cu.Ft) | 578/20.4 | | 728/25.7 | |
| | Net/Gross Weight(approx) | kg | 325/355 | | 350/385 |
| | | lbs | 716.5/782.6 | | 771.6/848.8 |
| | Interior Dimension(W*D*H) | mm | 620*716*1310 | | 766*716*1310 |
| | | in | 24.4*28.2*51.6 | | 30.2*28.2*51.6 |
| | Exterior Dimension(W*D*H) | mm | 895*998*1980 | | 1046*998*1980 |
| | | in | 35.2*39.3*78.0 | | 41.2*39.3*78.0 |
| | Packing Dimension(W*D*H) | mm | 950*1055*2150 | | 1100*1105*2150 |
| in | | 37.4*41.5*84.6 | | 43.3*43.5*84.6 | |
| Container Load(20'/40'/40'H) | 12/24/24 | | 10/20/20 | | |
| Alarms | High/Low Temperature | Y | | Y | |
| | Hot Condenser | Y | | Y | |
| | Power Failure | Y | | Y | |
| | High/Low Voltage | Y | | Y | |
| | Sensor Error | Y | | Y | |
| | Low Battery | Y | | Y | |
| | High Ambient Temperature | Y | | Y | |
| | Door Ajar | Y | | Y | |
| | Caster | Y | | Y | |
| | Foot | Y | | Y | |
| Accessories | Porthole | Y/2 | | Y/2 | |
| | Shelves/Inner Doors | 3/4 | | 3/4 | |
| | USB Interface | Y | | Y | |
| | Remote Alarm | Y | | Y | |
| | 5V Power Supply Port | Y | | Y | |
| | Temperature Recorder | Optional | | Optional | |
| | Rs232/485 Port | Optional | | Optional | |
| | CO ₂ Backup System | Optional | | Optional | |
| | LN ₂ Backup System | Optional | | Optional | |
| | Others | Certification | CE | ULENERGYSTAR | CE |

Product appearance and specifications are subject to change without notice

The TwinCool ultra-low temperature freezer by Haier Biomedical provides the highest level of protection for your valuable samples.



DW-86L578S

Safer by Design

Haier Biomedical's ultra low temperature freezers with intelligent TwinCool technology are designed to provide optimal cabinet reliability, longevity, efficiency and sample protection. This super efficient technology also improves the energy efficiency of our third generation ULT freezers and leads the way in terms of product innovation.

Intelligent TwinCool Refrigeration System

Two independent refrigeration systems are designed to ensure optimal reliability, longevity and efficiency. Depending on the load demands and ambient conditions, one or both refrigeration systems will operate on demand, ensuring the samples are fully protected under the worst possible condition.



Maximum Sample Security

TwinCool system means extra insurance for temperature. Each independent refrigeration system can maintain -80°C separately.



Fast Cabinet Pull Down

Fast and efficient cabinet pull down, it usually takes an average of three hours to reach -80°C in a 25°C ambient. This means the temperature recovery after door opening is excellent ensuring the stored samples are not exposed to undesirable temperatures.



Maximum Energy Efficiency

The TwinCool ultra-low temperature system operates with 12 kWh/day.



World-leading Energy Saving Refrigeration Technology

The Haier hydrocarbon refrigeration technology uses less than 50% energy compared to traditional CFC refrigerants to reduce the operating cost. The refrigerants do not contain fluorine or chlorine giving it a GWP value of just three, which is better for the environment.



Reduced running costs

VIP thermal insulation system is designed to significantly reduce heat gain and operating cost.



Energy Saving Refrigeration
High efficiency cooling fans and compressors, combined with hydrocarbon refrigerants, ensure energy savings and long-term sample security



Pressure Equalisation Port
Heated Pressure Equalization Port allows users to re-open the main door quickly after entering



USB Interface
Enables users to download historical temperature data for compliance/auditing purposes



DW-86L578S



Multi-layer Sealing Structure
Triple gaskets provide a tight seal between the inner doors and outer door, reducing heat gain and retaining the temperature better in the event of a power failure

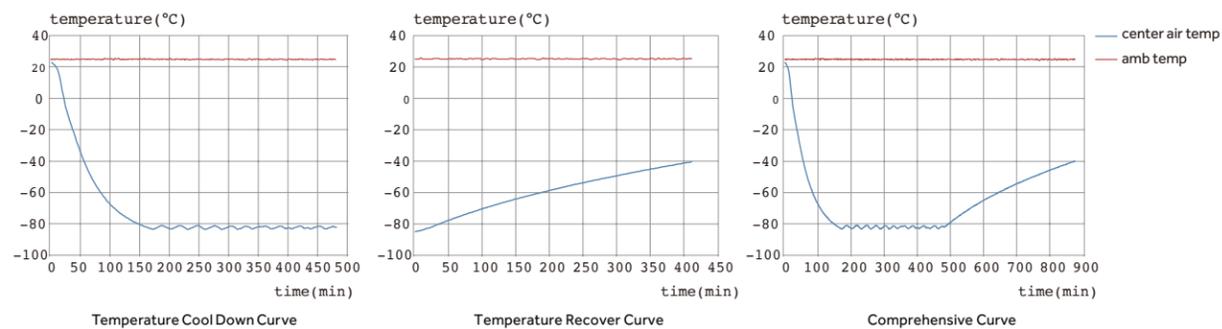


Improved Handle Design
Lockable handle safeguards your precious samples. A padlock can also be added for extra sample safety



Multi-level Alarms
Alarm functions include high, low temperature, sensor error, power failure, high ambient, clean filter and door ajar

DW-86L578S | TYPICAL PERFORMANCE CHARACTERISTICS IN 25°C AMBIENT



Specifications

| Model | | DW-86L578S | DW-86L728S | |
|-------------------------------|------------------------------|----------------|----------------|----------------|
| Technical Data | Cabinet Type | Upright | Upright | |
| | Climate Class | N | N | |
| | Cooling Type | Direct Cooling | Direct Cooling | |
| | Defrost Mode | Manual | Manual | |
| | Refrigerant | HC | HC | |
| Performance | Sound Level(dB(A)) | 53 | 50 | |
| | Cooling Performance(°C) | -86 | -86 | |
| Control | Temperature Range(°C) | -40--86 | -40--86 | |
| | Controller | Microprocessor | Microprocessor | |
| Electrical Data | Display | LED | LED | |
| | Power Supply(V/HZ) | 208~230/50 | 208~230/50 | |
| | Power(W) | 1400 | 1400 | |
| Dimensions | Electrical Current(A) | 10 | 10 | |
| | Capacity(L/Cu.Ft) | 578/20.4 | 728/25.7 | |
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| | Hot Condenser | Y | Y | |
| | Power Failure | Y | Y | |
| | High/Low Voltage | N/A | N/A | |
| | Sensor Error | Y | Y | |
| | Low Battery | Y | Y | |
| | High Ambient Temperature | Y | Y | |
| | Door Ajar | Y | Y | |
| | Accessories | Caster | Y | Y |
| Foot | | Y | Y | |
| Porthole | | Y/2 | Y/2 | |
| Shelves/Inner doors | | 3/4 | 3/4 | |
| USB Interface | | Y | Y | |
| Remote Alarm | | Y | Y | |
| 5V Power Supply Port | | Y | Y | |
| Temperature Recorder | | Optional | Optional | |
| Rs232/485 Port | | Optional | Optional | |
| CO ₂ Backup System | | Optional | Optional | |
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| Others | Certification | CE | CE | |

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct. If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

www.wolflabs.co.uk

Tel : 01759 301142

Fax : 01759 301143

sales@wolflabs.co.uk

Please contact us if this literature doesn't answer all your questions.