

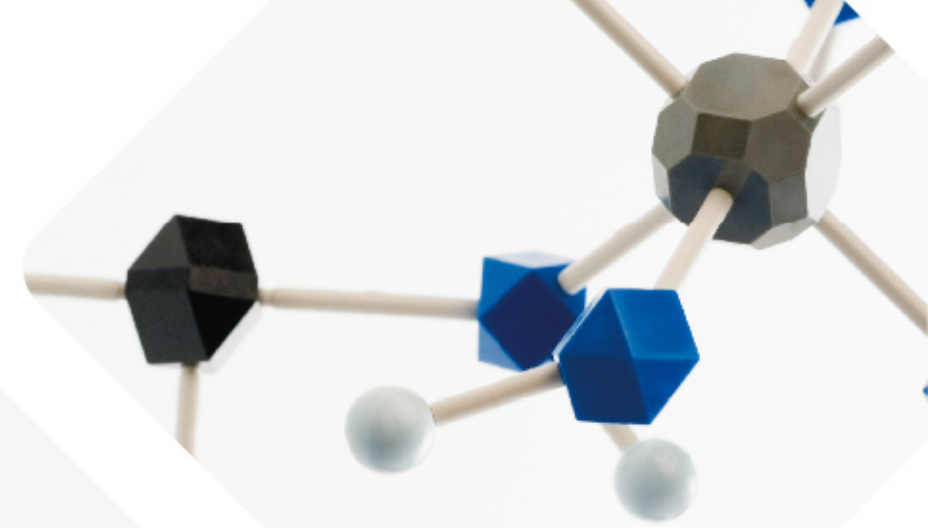
# Haier

Available in Aotearoa from CCAT Scientific

[ccat.co.nz](http://ccat.co.nz)

[info@ccat.co.nz](mailto:info@ccat.co.nz)

0800 222 812



## Haier Medical and Laboratory Products Co. Ltd

Room 403D, Brand Building, Haier industrial park, No. 1  
Haier Road, Qingdao, 266101, P.R.China  
Tel: +86-0532-88936011 / 5955  
Website: [www.haiermedical.com](http://www.haiermedical.com)



Note: If slight difference occurs between pictures and actual products, please refer to actual products. Our company reserves the right of final interpretation to this brochure and please contact with us for future information you might need.



2014-02

## Ultra-low Temperature Freezer

The Best Choice For Your Samples

## Features and Performance

- ▼ Safety
- ▼ Reliability
- ▼ Energy saving

This product is specially designed and manufactured for long time storage of various biological products, including viruses, germs, erythrocytes, leucocytes and cutis.

Applications can be found in blood banks, hospitals, epidemic prevention services, and research institutes, laboratories in electronic and chemical plants, biological engineering institutes and marine fishery industry.

### Field proven reliability

- ▼ Unique insulated inner door design for four separate storage compartments to minimize frost buildup inside the chamber
- ▼ Specialized control system design for a well-balanced operation of cascade refrigeration system
- ▼ Positive field proven reliability record

### Safety

- ▼ Malfunction alarms including high and low temperature, power outage, sensor errors, high voltage and low voltage, clean-filter, and extremely high ambient
- ▼ Capable of producing two types of alarm outputs: audible buzzer and visible flashing light Multiple built-in system protection features including user-settable protection code for controls, user settable delay to start, voltage compensation system and protection against extreme high voltages
- ▼ Door ajar feature standard on all single door upright models
- ▼ USB port for temperature data downloading on all single door upright models

### Installation & Application

- ▼ Wide range operating voltage system from 185V to 260V designed to allow units installed in areas with poor voltage condition
- ▼ Suitable for 10°C to 32°C ambient temperature
- ▼ Input voltage and ambient temperature shown simultaneously for ease of monitoring environmental conditions
- ▼ Robust door latch designed for secure door closing
- ▼ Compact casters for ease of maneuvering

### Low noise level

- ▼ Specialized refrigeration system design using whisper quiet fan and compressors
- ▼ Freezer chassis designed to absorb vibration and sound

### Energy saving

- ▼ Unique door seal design for the minimum loss of cold temperature during a door opening
- ▼ VIP insulation panels to minimize cabinet heat gain and to improve temperature stability
- ▼ Patented cabinet insulation system designed for optimal performance of cold storage temperature and minimal frost build up
- ▼ Unique design of independent insulated inner door systems for independent access of storage space to provide the maximum protection of stored samples

### Key design features

- ▼ Microprocessor-controlled system designed for controllable range of -40°C to -86°C settable in 1°C increment
- ▼ Large LED display for cabinet temperature, set temperature, ambient temperature, and input voltage
- ▼ Settable high temperature and low temperature alarms
- ▼ Automatic clean-filter alarm and sensor error alert
- ▼ Adjustable storage shelf height
- ▼ Optional temperature recorder, storage racks and storage boxes

**4 Individual Removable Foam Inner Doors**

- 4 individual inner doors can be opened independently to minimize frost buildup inside the chamber.
- Unique door seal design for the minimum loss of cold temperature during a door opening.
- Compatibility with existing racking system from competitors.
- Stainless Steel handle to ensure the door open conveniently even in the case of frost.

**Excellent Doors Seals**

- 5 gasket seal, 4 seals for out door, 1 seal for inner door which provides maximum protection against thermal intrusion.

**Microprocessor control panel and digital display**

**Circular-chart Recorder(Optional)**

- Front-mounted.
- For independent temperature monitoring.

**Pressure Equalization Port**

- Heated port with spring-assisted mechanism to prevent icing on the vent.
- Allows the freezer door to be opened shortly after adding samples.

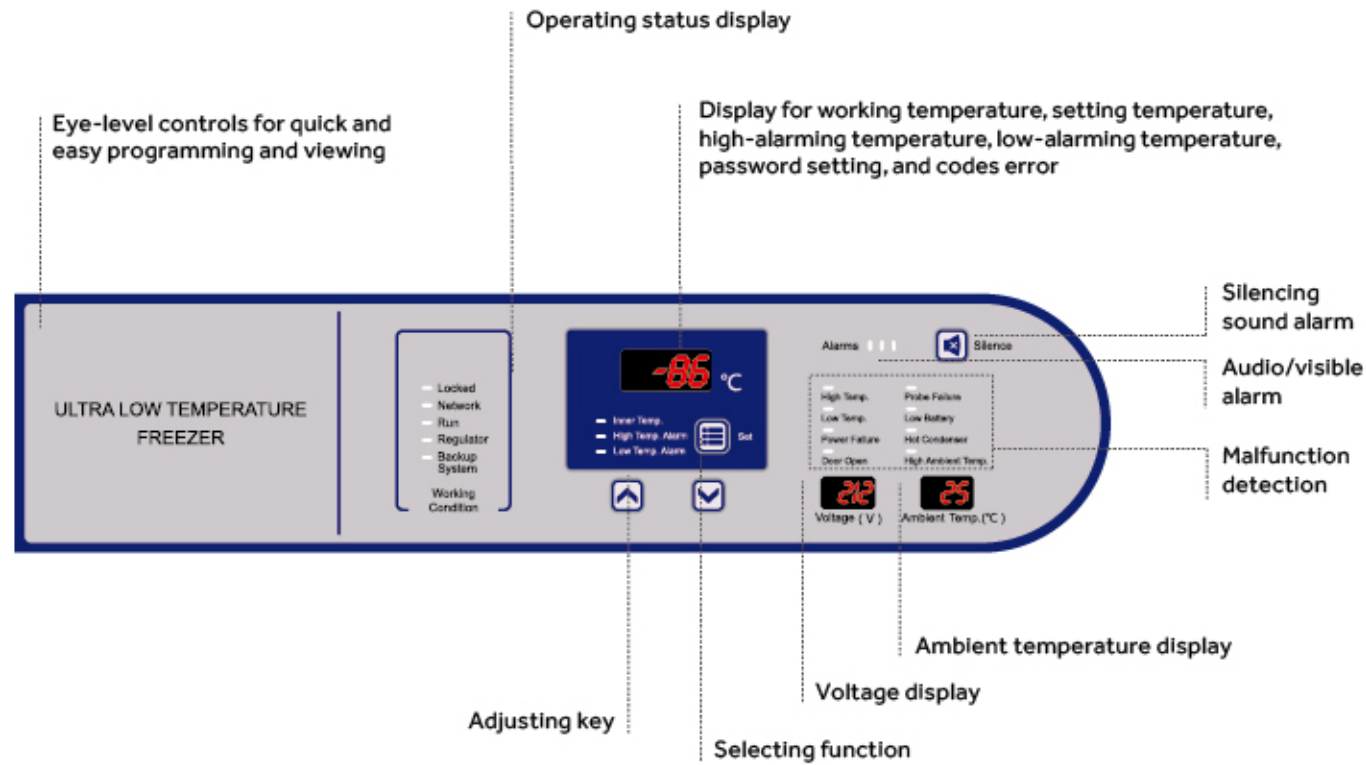
**Two sample ports on back for temperature monitoring conveniently.**

**High Efficiency Refrigeration Components**

- Industrial grade hermetically sealed compressors, ultra low noise under cascade cooling system.
- High efficiency coalescent oil separator ensures no oil entering.
- Energy efficient fan design, with 5 years life to ensure the cooling effect.
- Unique CH refrigeration system is optimized to provide maximum efficiency in even the most extreme ambient conditions.

**DW-86L728J**

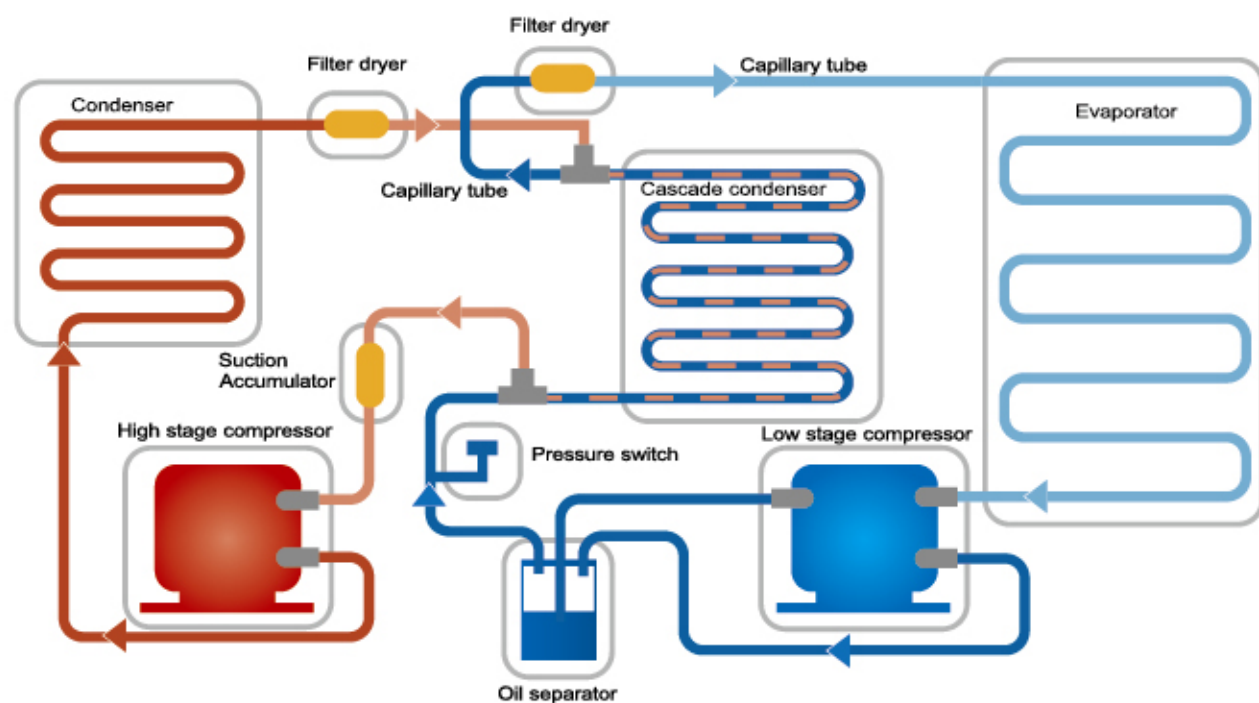
# Features and Benefits











| Alarm                    | Alarm Triggering Condition   |
|--------------------------|--|
| High Temperature         | Temperature reaches the warm alarm limit   |
| Low Temperature          | Temperature reaches the low alarm limit  |
| Power Failure            | Equipment loses power  |
| Door Ajar                | Door open period exceeds 5 mins  |
| Probe Failure            | <ul style="list-style-type: none"> <li>Main cabinet temperature control sensor fails</li> <li>Condenser sensor fails</li> <li>Ambient sensor fails</li> <li>Heat exchanger sensor fails</li> <li>Heat exchanger temperature fails</li> </ul> |
| Low Battery              | Battery capacity runs low or battery switch is not turned on   |
| Hot Condenser            | <ul style="list-style-type: none"> <li>Condensers filter element is clogged</li> <li>Ambient temperature is too high</li> </ul>  |
| High Ambient Temperature | Ambient temperature exceeds 32°C   |

| Features  | Advantages   | Benefits  |
|---|--|---|
| Refrigeration system                                      | Balanced, optimized refrigeration system for faster pull-down speed and tighter temperature uniformity. Approximately 15% lower discharge temperature. | Safeguard stored samples. Increased reliability. Reduced heat output to environment, less demand on AC system.  |
| Microprocessor control                                    | Keyboard style data entry. Digital display. Automatic lockout feature on control to prevent unintended operation.                                      | Ease of operation, safer, and more accurate.  |
| Self-diagnostics  | Control system can automatically determine areas that might suggest a system malfunction. Provides a quick and convenient method for maintenance.      | Speedy resolution of issues related to freezer system for a better protection of samples.   |
| Real-time display of ambient temperature and line voltage | Instant environmental information and power information for users.   | Direct information for users to perform and schedule preventive maintenance (PM) activities.  |
| Programmable delay in restart of units after power outage | Avoid power surge or line sagging when units are attempting to restart after a power outage or generator switchover.                                   | System can bypass harmful transient period to decrease the probability of component damage due to unstable power supply.  |
| On-demand operation of cooling fans                       | Automatic adjust run time of fans based on ambient demand. Extends fan motor life. Stabilize operating pressures.                                      | Consumes less power and emits lower noise.  |
| Extremely low sound system                                | Specialized design with sound reduction features and system.   | Approximately 10 dB quieter than typical competitor units. Better suited for applications in laboratory.  |
| Automatic voltage compensation system                     | Automatically detects changes in line voltage and adjusts to provide an optimal range of operation for system.   | Additional reliability of compressor with intelligent voltage handling system while typical competitor systems only buck or boost voltages.                     |
| Protection shield for power switch                        | Ease of access with proper protection. Improved aesthetics.  | Alarm connections easily accessible.  |
| Overcurrent protection                                    | Provide alarm signals when there is a severe voltage condition or electrical malfunctions.   | Provide safety to operators and samples.  |
| Enforced shelves  | Double re-enforcement channels to support a heavier load.  | Stores large mass and oddly shaped products.  |
| Double silicone-sealed inner doors                        | Individual inner doors with foamed insulation and double-sealed gaskets.   | Lessens temperature impact to other compartments. Provides additional safety for samples. Reduces energy consumption by about 30% compared to similar freezers. |
| Extended display with backup battery                      | High capacity battery can sustain display and alarm function for about 72 hours when there is a power outage.  | Continuously monitor the freezer temperature even when there is a loss of AC power. Provides temperature information of stored samples.                         |
| Network   | NC/NO contact points for remote alarm system, RS232 and RS485 systems.   | Can be connected with PC for remote monitoring.   |
| Can be supported with backup cooling systems              | Independent backup cooling system.   | Auto activation of backup system when there is a loss of main cooling system. Provides a better and timely protection of samples.                               |
| Temperature recorder                                      | Equipped with temperature recorder as a standard feature.  | Reliably tracks temperature.  |
| Lock for external door                                    | Padlock compatible.  | Product safety.   |

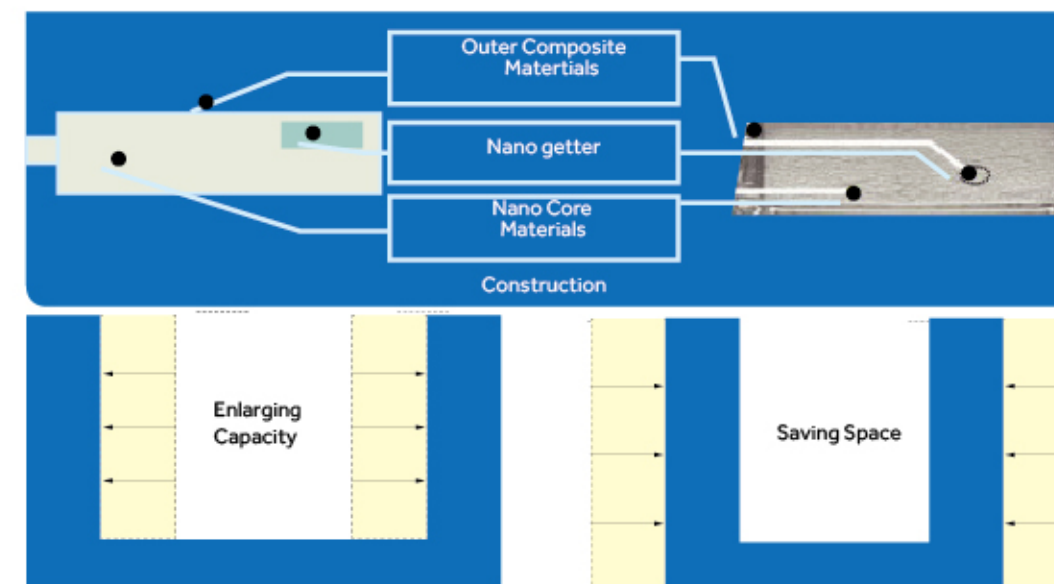
▼ Heat exchange circulation system of ultra low temperature freezer



|   |   |
|---|---|
|  | <p>▼ Filter</p> <p>Filter for refrigerant to protect system from the water and other entering</p>   |
|  | <p>▼ Capillary tube for high stage</p> <p>High temperature refrigerants flow into the evaporator from the Capillary tube</p>  |
|  | <p>▼ Capillary tube for low stage</p> <p>Low temperature refrigerants flow into the evaporator from the Capillary tube</p>  |
|  | <p>▼ High stage condenser</p> <p>Extra-large air cooled condenser dissipates product heat content efficiently.</p>  |
|  | <p>▼ Low stage Evaporator</p> <p>The close contact design between the evaporating tube and the inner cabinet increases the heat conducting efficiency</p>   |
|  | <p>▼ Ultra low noise compressor</p> <p>Compressor provides reliable performance with ultra low noise<br/>Specially designed low stage evaporator yields excellent temperature uniformity and recovery after loading and door opening.<br/>Both high and low stage compressors are industrial grade hermetically sealed compressor designed for low temperature application.<br/>Sound level is extremely low.</p> |
|  | <p>▼ Heat exchanger system</p> <p>Heat exchanger between the high and low temperature stage in the system</p>   |
|  | <p>▼ Temprite oil separator</p> <p>Temprite oil separator can effectively separate oil and water so as to improve the refrigeration performance</p>   |

▼ Vacuum Insulation Panel technology

- ▼ VIP panels minimize heat load into the cabinet for a more stable storage temperature and more energy efficient
- ▼ VIP panel's micro pores provide the key blockage to convective heat transfer
- ▼ VIP panel's thin wall saves valuable floor space



# Salvum ULT Freezer

Energy Saving



Energy Saving Models



### Advantages

- World leading energy-efficient, 10.5\* kwh/day
- Hydrocarbon refrigeration system
- Slim cabinet design
- Reliable sample protection
- Malfunction alarms
- Excellent insulation performance

\* (Details validated by National Center Of Safety Quality Supervision And Testing For Electronic & Electrical Products)

Haier's next generation ULT freezer DW-86L728J is particularly designed for energy savings. It consumes the least amount of energy for the class of large ULT freezers. This new model uses environmentally safe hydrocarbon refrigerants and high efficiency fan motors to maximize the cooling ability of the system and reduce energy consumption. While providing sample safety, the new freezer design makes energy savings possible for laboratories.

### Safety

- Excellent temperature uniformity for an exacting sample storage requirement
- High efficiency and reliability cooling fans ensure energy savings and long term storage safety



### Superior

- Special V.I.P (Vacuum Insulation Panel) design with extra insulation factor cuts down heat loss to cabinet by 25%
- High efficiency hydrocarbon refrigerant based refrigeration system increases the efficiency by 45% than previous model
- Four individual insulated inner door to keep the cold air inside
- Pressure equalization port provides superior air flow making it possible to drastically reduce the stress on the freezer
- Low noise: DW-86L728J: 50dB(A) (reference data)

### Alarms (visual and audible)

- Adjustable High/Low temperature alarm
- Sensor error
- Low battery
- Door ajar
- Power failure
- Probe failure
- Hot condenser
- High ambient
- Remote alarm contact

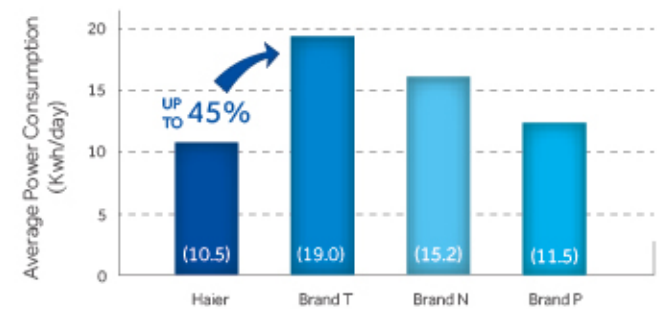
### Global Most Energy Efficiency

Electricity charge of a 700-liter ULT Freezer

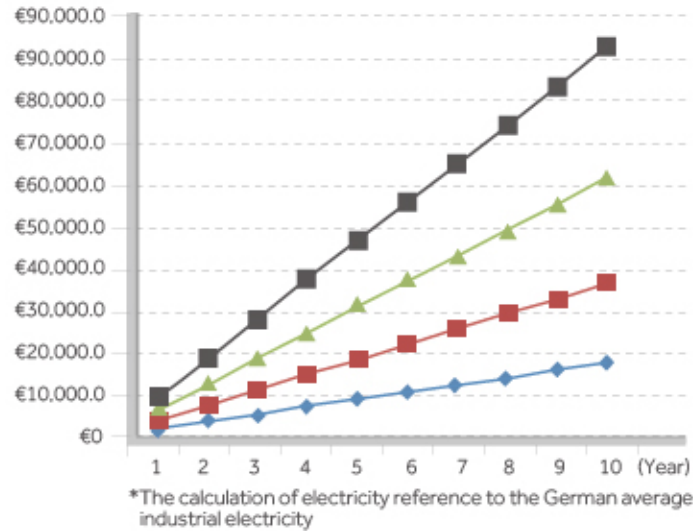
| Model      | Power Consumption (kwh/h) | Ambient Temperature | Electricity Charge (1year) | Electricity Charge (5year) | Electricity Charge (10year) |
|------------|---------------------------|---------------------|----------------------------|----------------------------|-----------------------------|
| DW-86L728J | 10.5*                     | 25°C                | € 1,724.6                  | € 8,623.1                  | € 17,246.3                  |
| Brand P    | 11.5                      | 22-26°C             | € 1,888.9                  | € 9,444.4                  | € 18,888.8                  |
| Brand N    | 15.2                      | 23°C                | € 2,496.6                  | € 12,483.0                 | € 24,966.0                  |
| Brand T    | 19.0                      | 25°C                | € 3,120.8                  | € 15,603.8                 | € 31,207.5                  |

Notes: \*Typical data - individual units may vary and power consumption will depend on loading and operating conditions. Freezer set-point -80°C, ambient temperature 25°C, unloaded, 220-240V 50Hz power supply

- The new Eco-friendly Haier ULT freezer is the most energy-efficient one in the world which is designed to help you save energy.



Haier DW-86L728L Electricity Charge for ten years compared with other brands with similar capacity



€ Less Cost

- Compared with Brand P, Haier DW-86L728J will help you to save €1,642.5 electricity charge in 10 years
- Compared with Brand N, Haier DW-86L728J will help you to save €7,719.7 electricity charge 10 years
- Compared with Brand T, Haier DW-86L728J will help you to save €13,961.2 electricity charge 10 years

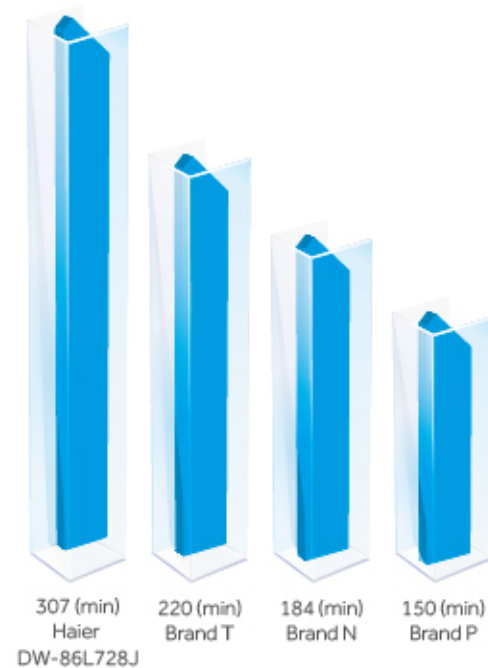
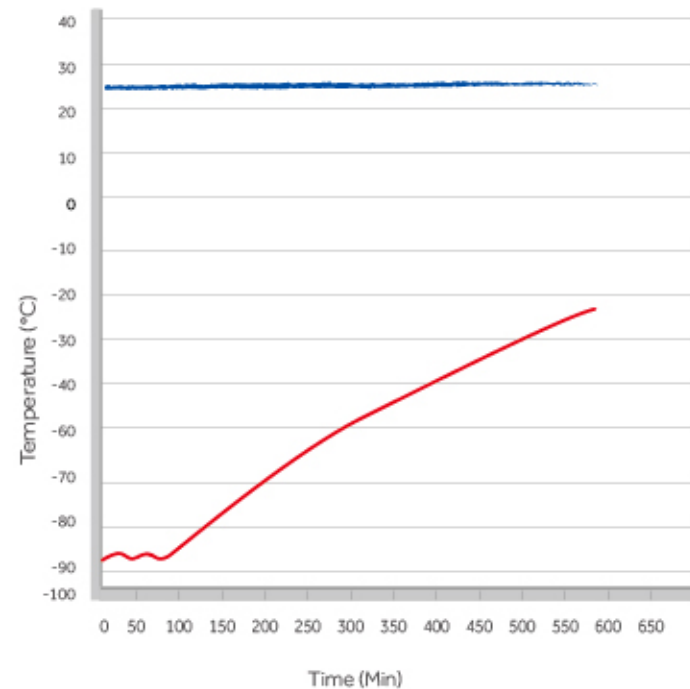
Brand T Brand P  
Brand N Haier DW-86L728J

Extended Pull-up Time During A Power Failure

- Pull-up time measures the time taken for temperature to rise up (from -80°C to -50°C) at 25°C ambient when the power is interrupted

- Haier has the best pull-up time among the ULT freezers compared with competitors' largest volume product

DW-86L728J Pull-up test at 25°C ambient

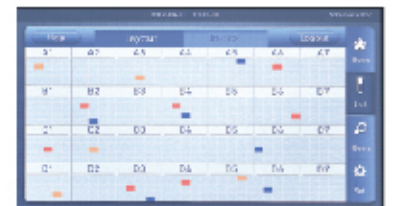


Patronus ULT Freezer  
Touch Screen Series



Haier to release the largest ultra-low temperature storage freezer with touch screen control in the global market.

UNIQUE INVENTORY MANAGEMENT SYSTEM (IMS)



Layered display for sample storage, clear at a glance, easier to manage

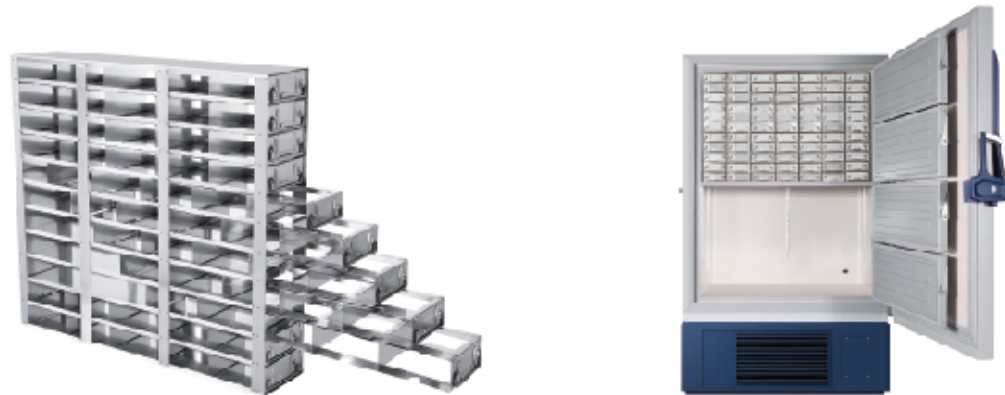


Message and notepad function to transmit the information conveniently

## World Largest Sample Storage Capacity

Deadline of Survey Data: October, 2013

Haier new generation touch screen ULT Freezer DW-86L959, makes use of support racks in size 11\*5, which can offer the largest storage volume in the global market with the capacity of storing **77,000** samples.



### Advantages

- ▼ The new freezer design is equipped with a uniquely designed sample management system of touch screen feature
- ▼ The feature makes it possible for fast archiving and retrieving of biological samples for a broader application range. This special feature, developed by Haier, allows a user to record any event and to set up safe and reliable authorizations for access and message checking
- ▼ The feature is designed to allow the equipment to perform self - diagnostics for potential problems and to alert the user to perform maintenance to extend life of the freezer
- ▼ Unlimited battery life which saves cost of replacement battery

### Features

- ▼ Alarm functions include conditions of such as loss of power, door ajar, voltage buck boost alerts, out of specified voltage alarm, sensor failure alarms, low battery capacity alarm, start delay protection and dirty filter alarm
- ▼ LCD display flashing on touch screen, display and buzzer alarm
- ▼ Adjustable alarm delay for sound and time
- ▼ Safe mode and licensing mode
- ▼ Energy saving mode and high performance mode

### Easy to use

- ▼ Current events, storage record, alarm records and other parameters can be downloaded for processing
- ▼ The door handle is designed with consideration for ergonomic factors. It is easy for customers to use
- ▼ Improved security is achieved by programming multiple user authorizations of access. Stored samples of different ownership can be displayed with different colors. Sample positions and status can be displayed clearly and directly
- ▼ The control feature record send permanently stores sample information, alarm record, archiving and retrieving records and environmental condition. Cabinet temperature can be displayed on the front panel. Automatic alarm is triggered when temperature exceeds allowable limits and temperature recording line will change its color

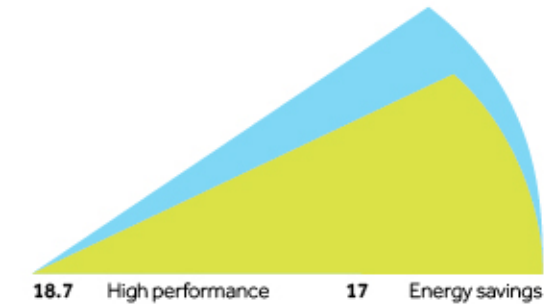
### Leading Position

- ▼ The new freezer offers the largest storage volume in the global market with the capacity of storing 77,000 samples
- ▼ The average cost to store one sample is 15% less than that of the common international level
- ▼ Super quiet sound of only 49 decibels, the new ULT can be installed in work spaces
- ▼ Special energy saving feature optimizes the operation for the least energy consumed in the industry
- ▼ This ergonomically designed paper holder provides a convenient platform to organize paperwork

### Two Modes Selection

For customers who require the strictest tolerances, our **high performance** mode provides the tightest temperature uniformity. For most applications, our **energy savings** mode offers excellent temperature control, plus up to 10% savings on energy usage.

- **High-Performance Mode**  
Designed with GMP applications in mind. Outstanding temperature uniformity and peak variation from setpoint
- **Energy-Savings Mode**  
Excellent temperature uniformity Up to 10% energy savings over high-performance mode



### Energy Efficient

Haier energy consumption is the lowest of all manufactures' largest capacity ULT Freezers

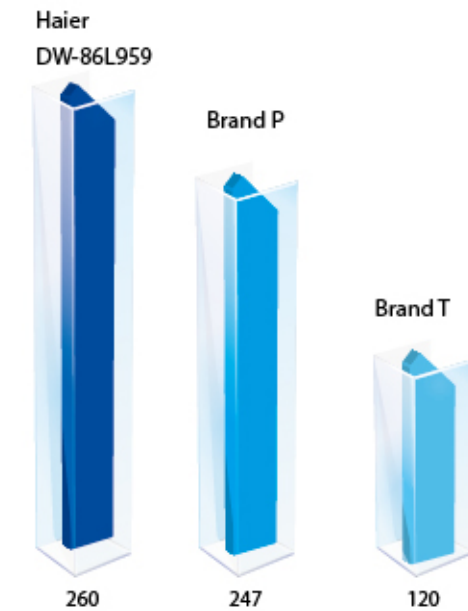
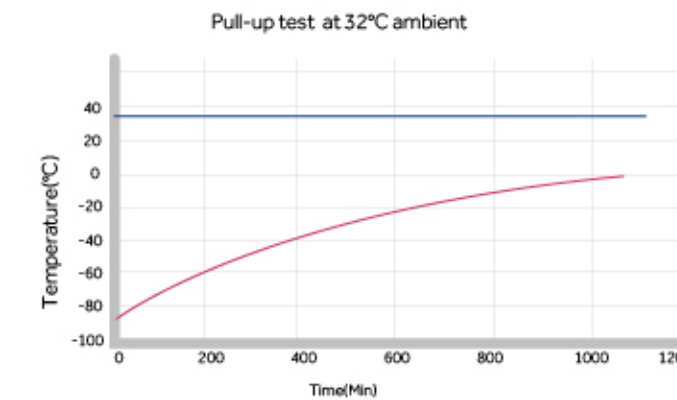
Haier DW-86L959 Brand T Brand P



Average Power Consumption (KWh/day)

### Extended Pull-up Time During A Power Failure

- Pull-up time measures the time taken for temperature to rise up (from -80°C to -50°C) at 32°C ambient when the power is interrupted
- Haier has the best pull-up time among the ULT freezers compared with competitors' largest volume product



## Slim Style ULT Freezer



This product is specially designed and manufactured for long time storage of various biological products, including viruses, germs, erythrocytes, leucocytes and cutis. Applications can be found in blood banks, hospitals, epidemic prevention services, and research institutes, laboratories in electronic and chemical plants, biological engineering institutes and marine fishery industry.

DW-86L338 DW-86L388A

### Ergonomic design

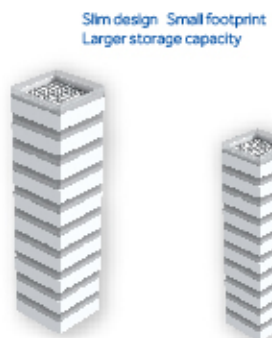
- ▼ Slim design to fit narrow space
- ▼ Lockable casters for ease of maneuvering
- ▼ Cam latch for ease of door closing and locking

### Advantages

- ▼ Low noise for more installations
- ▼ Safety: malfunction alarms, multiple protection function, broad voltage range designed for broad applications
- ▼ Fast temperature pulldown, superior temperature uniformity and reliability



812mm  
915mm  
DW-86L338



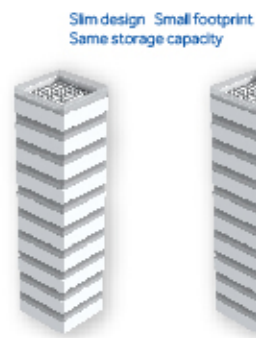
Slim design Small footprint  
Larger storage capacity  
New ULT Freezer  
DW-86L338(338L)  
Holds 21,600 vials



Previous Haier ULT Freezer  
DW-86L288(288L)  
Holds 18,000 vials



812mm  
915mm  
DW-86L388A



Slim design Small footprint  
Same storage capacity  
New ULT Freezer  
DW-86L388A(388L)  
Holds 24,000 vials



Previous Haier  
ULT Freezer  
DW-86L388(388L)  
Holds 24,000 vials

## Personal-sized Chest Freezer



DW-86W100

This product is designed for small medical institutions, research institutions and biological companies to store reagent, restriction enzyme, DNA modification enzyme, gene, organs and others.

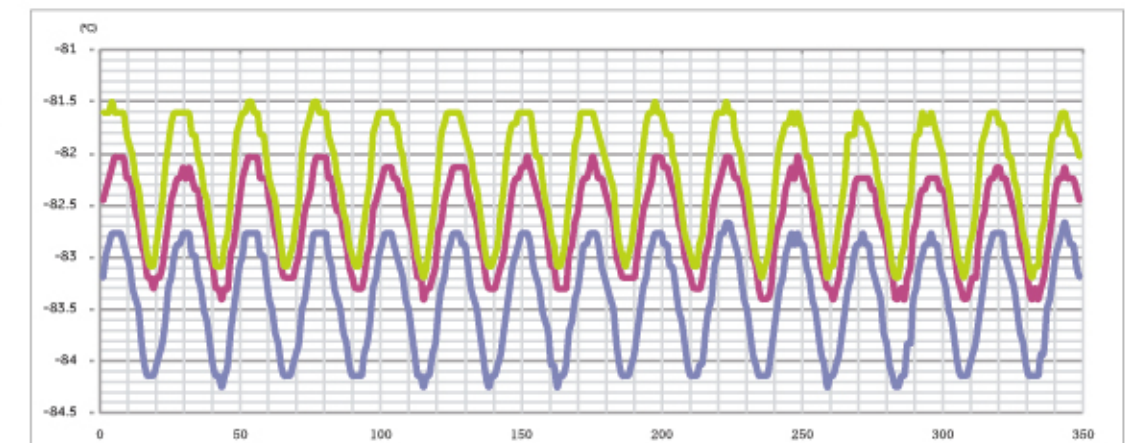
### Features

- ▼ **Temperature Control**  
Microprocessor control, digital display with an increment of 1°C, cabinet temperature is adjustable in a range of -40°C-86°C
- ▼ **Malfunctions alarms**  
High/low temperature, power outage, sensor error, high and low voltage, clean-filter, and extremely high ambient
- ▼ **Low Noise**  
Noise level less than 49dB leading in the industry
- ▼ **Refrigeration System**  
High density thermal insulation layers to get better heat insulation. Unique sealing structure together with heat retardant system design keeps the cabinet frosting effectively

### Advantages

- ▼ **Small Footprint**  
Compact Chest Design, space saving, easy for installation
- ▼ **Large Capacity**  
Optimized space to hold more freezer boxes(72ea 2\* boxes)
- ▼ **Good Temperature Uniformity**  
Cabinet temperature can reach -86°C with temp uniformity within 4±2°C

— Upper Chamber  
— Central Chamber  
— Lower Chamber





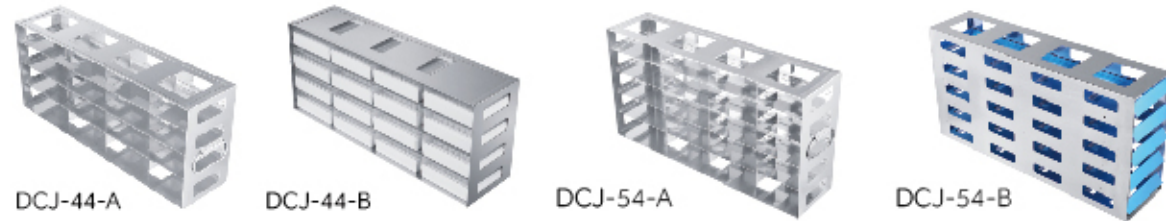
# Specification



| Model                  | DW-86L338                               | DW-86L388A                     | DW-86L486                      | DW-86L490                      | DW-86L628                      | DW-86L728                       | DW-86L828                       | DW-86L728J                       | DW-86L729                        | DW-86L959                        | DW-86W100                        | DW-86W420                      |                                 |            |        |            |        |            |      |     |    |     |
|------------------------|---|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|--------------------------------|---------------------------------|------------|--------|------------|--------|------------|------|-----|----|-----|
| <b>Technical Data</b>  | Cabinet Type                            | Upright                        | Upright                        | Upright                        | Upright, double door           | Upright                         | Upright                         | Upright                          | Upright                          | Upright                          | Upright                          | Chest                          | Chest                           |            |        |            |        |            |      |     |    |     |
|                        | Climate Class                           | N                              | N                              | N                              | N                              | N                               | N                               | N                                | N                                | N                                | N                                | N                              | N                               |            |        |            |        |            |      |     |    |     |
|                        | Cooling Type                            | Direct cooling                 | Direct cooling                 | Direct cooling                 | Direct cooling                 | Direct cooling                  | Direct cooling                  | Direct cooling                   | Direct cooling                   | Direct cooling                   | Direct cooling                   | Direct cooling                 | Direct cooling                  |            |        |            |        |            |      |     |    |     |
|                        | Defrost Mode                            | Manual                         | Manual                         | Manual                         | Manual                         | Manual                          | Manual                          | Manual                           | Manual                           | Manual                           | Manual                           | Manual                         | Manual                          |            |        |            |        |            |      |     |    |     |
|                        | Refrigerant                             | CFC-Free                       | CFC-Free                       | CFC-Free                       | CFC-Free                       | CFC-Free                        | CFC-Free                        | CFC-Free                         | CFC-Free                         | CFC-Free                         | CFC-Free                         | CFC-Free                       | CFC-Free                        |            |        |            |        |            |      |     |    |     |
|                        | Noise Level(dB)                         | 50                             | 50                             | 49                             | 49                             | 49                              | 50                              | 50                               | 50                               | 49                               | 49                               | 49                             | 50                              |            |        |            |        |            |      |     |    |     |
| <b>Performance</b>     | Cooling performance(°C)                 | -86                            |                                |                                |                                |                                 |                                 |                                  |                                  |                                  |                                  |                                |                                 |            |        |            |        |            |      |     |    |     |
|                        | Temp Range(°C)                          | -40--86                        |                                |                                |                                |                                 |                                 |                                  |                                  |                                  |                                  |                                |                                 |            |        |            |        |            |      |     |    |     |
| <b>Control</b>         | Controller                              | Microprocessor                 |                                |                                |                                |                                 | Microprocessor                  |                                  |                                  |                                  |                                  |                                |                                 |            |        |            |        |            |      |     |    |     |
|                        | Display                                 | LED                            |                                | LED                            | LED                            |                                 |                                 | LED                              |                                  | LED                              |                                  | LED                            | LED                             | LED        | LED    | LED        | LED    |            |      |     |    |     |
| <b>Electrical Data</b> | Power Supply(V/Hz)                      | 220-240/50                     | 220/60                         | 220-240/50                     | 220/60                         | 115/60                          | 220-240/50                      | 220/60                           | 115/60                           | 220-240/50                       | 220/60                           | 220-240/50                     | 220/60                          | 220-240/50 | 220/60 | 220-240/50 | 115/60 | 220-240/50 |      |     |    |     |
|                        | Power(W)                                | 900                            | 1000                           | 1000                           | 1000                           | 1000                            | 1200                            | 1200                             | 1200                             | 1200                             | 1200                             | 1200                           | 1200                            | 1000       | 1200   | 1300       | 650    | 650        | 1000 |     |    |     |
|                        | Electrical Current(A)                   | 8                              | 8                              | 8                              | 9                              | 5.5                             | 18                              | 6.5                              | 6.5                              | 7                                | 9                                | 18                             | 9                               | 9          | 9      | 9          | 7      | 7          | 9    | 7.5 | 12 | 7.5 |
| <b>Dimensions</b>      | Capacity(L/Cu.Ft)                       | 338/11.9                       | 388/13.7                       | 486/17.1                       | 490/17.3                       | 628/22.2                        | 728/25.7                        | 828/29.2                         | 728/25.7                         | 729/25.7                         | 959/33.9                         | 100/3.5                        | 420/14.8                        |            |        |            |        |            |      |     |    |     |
|                        | Net/Gross Weight(kg)<br>(approx) (lbs)  | 238/278<br>524.7/612.9         | 255/286<br>562.2/630.5         | 290/310<br>639.3/683.4         | 295/335<br>650.4/738.5         | 301/323<br>663.6/712.1          | 350/380<br>771.6/837.8          | 380/410<br>837.8/903.9           | 311/333<br>685.6/734.1           | 310/332<br>683.4/731.9           | 450/485<br>992.1/1069.2          | 138/160<br>304.2/352.7         | 310/357<br>683.4/787.1          |            |        |            |        |            |      |     |    |     |
|                        | Interior Dimension (mm)<br>(W*D*H) (in) | 465*630*1165<br>18.3*24.8*45.9 | 465*630*1310<br>18.3*24.8*51.6 | 590*630*1310<br>23.2*24.8*51.6 | 590*630*1310<br>23.2*24.8*51.6 | 760*630*1310<br>29.9*24.8*51.6  | 870*630*1310<br>34.3*24.8*51.6  | 870*716*1310<br>34.3*28.2*51.6   | 766*716*1310<br>27.0*28.2*51.6   | 766*716*1310<br>27.0*28.2*51.6   | 1016*716*1310<br>40.0*28.2*51.6  | 470*450*480<br>18.5*17.7*18.9  | 1367*462*652<br>53.8*18.2*25.7  |            |        |            |        |            |      |     |    |     |
|                        | Exterior Dimension (mm)<br>(W*D*H) (in) | 812*893*1846<br>32.0*35.2*72.7 | 812*893*1980<br>32.0*35.2*78.0 | 945*900*1980<br>37.2*35.4*78.0 | 860*900*1980<br>33.9*35.4*78.0 | 1035*900*1980<br>40.7*35.4*78.0 | 1145*900*1980<br>45.1*35.4*78.0 | 1145*980*1980<br>45.1*38.6*78.0  | 1041*980*1980<br>36.7*38.6*78.0  | 1046*998*1980<br>41.2*39.3*78.0  | 1296*998*1980<br>51.0*39.3*78.0  | 769*825*1120<br>30.3*32.5*44.1 | 2130*870*1020<br>83.9*34.3*40.2 |            |        |            |        |            |      |     |    |     |
|                        | Packing Dimension (mm)<br>(W*D*H) (in)  | 970*880*1990<br>38.2*34.6*78.3 | 970*880*2125<br>38.2*34.6*83.7 | 990*880*2125<br>38.9*34.6*83.7 | 920*990*2165<br>36.2*38.9*85.2 | 1090*960*2130<br>42.9*37.8*83.9 | 1190*955*2145<br>46.9*37.6*84.4 | 1190*1035*2145<br>46.9*40.7*84.4 | 1078*1034*2130<br>42.4*40.7*83.9 | 1078*1034*2130<br>42.4*40.7*83.9 | 1328*1034*2130<br>52.3*40.7*83.8 | 835*860*1235<br>32.9*33.9*48.6 | 2300*970*1164<br>90.6*38.2*45.8 |            |        |            |        |            |      |     |    |     |
|                        | Container load (20/40/40H)              | 12/24/24                       | 12/24/24                       | 12/24/24                       | 12/24/24                       | 12/24/24                        | 10/20/20                        | 8/20/20                          | 10/22/22                         | 10/22/22                         | 8/18 /18                         | 12/24/48                       | 6/12/24                         |            |        |            |        |            |      |     |    |     |
| <b>Functions</b>       | High/Low Temp                           | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Hot Condenser                           | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Power Failure                           | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | High/Low Voltage                        | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Sensor Error                            | Y                              | Y                              | N/A                            | Y                              | N/A                             | Y                               | N/A                              | N/A                              | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Low Battery                             | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | High Ambient Temp                       | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Door Ajar                               | Y                              | Y                              | Y                              | N/A                            | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | N/A                            | N/A                             |            |        |            |        |            |      |     |    |     |
| <b>Accessories</b>     | Caster                                  | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Foot                                    | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Test Hole                               | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y,2                              | Y,2                              | Y,2                              | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Shelves/Inner doors                     | 3/2                            | 3/2                            | 3/4                            | 3/4                            | 3/4                             | 3/4                             | 3/4                              | 3/4                              | 3/4                              | 3/4                              | -/1                            | -/3                             |            |        |            |        |            |      |     |    |     |
|                        | USB Interface                           | N/A                            | N/A                            | Y                              | N/A                            | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | N/A                            | N/A                             |            |        |            |        |            |      |     |    |     |
|                        | Remote Alarm                            | Y                              | Y                              | Y                              | Y                              | Y                               | Y                               | Y                                | Y                                | Y                                | Y                                | Y                              | Y                               |            |        |            |        |            |      |     |    |     |
|                        | Temp Recorder                           | Optional                       | Optional                       | Optional                       | Optional                       | Optional                        | Optional                        | Optional                         | Optional                         | Optional                         | Optional                         | Optional                       | Optional                        |            |        |            |        |            |      |     |    |     |
|                        | Rs232/485 Interface                     | Optional                       | Optional                       | Optional                       | Optional                       | Optional                        | Optional                        | Optional                         | Optional                         | Optional                         | Optional                         | Optional                       | Optional                        |            |        |            |        |            |      |     |    |     |
|                        | CO2Backup System                        | Optional                       | Optional                       | Optional                       | Optional                       | Optional                        | Optional                        | Optional                         | Optional                         | Optional                         | Optional                         | Optional                       | Optional                        |            |        |            |        |            |      |     |    |     |
|                        | LN2Backup System                        | Optional                       | Optional                       | Optional                       | Optional                       | Optional                        | Optional                        | Optional                         | Optional                         | Optional                         | Optional                         | Optional                       | Optional                        |            |        |            |        |            |      |     |    |     |
| <b>Others</b>          | Certificate                             | CE                             | CE                             | CE,UL                          | CE                             | CE,UL                           | CE,UL                           | CE,UL                            | CE                               | CE                               | CE                               | CE,UL                          | CE                              |            |        |            |        |            |      |     |    |     |

※Note:Water Cooled ULT Freezers Available On Request

## Racks & Boxes(Optional)



| ULT Model  | Rack Model | Rack Description | Rack Dimensions(W*D*H) |                   | Q'ty of Racks | Q'ty of Boxes | Q'ty of Samples |           |
|------------|------------|------------------|------------------------|-------------------|---------------|---------------|-----------------|-----------|
|            |            |                  |                        |                   |               |               | 9*9 box         | 10*10 box |
| DW-86L338  | DCJ-54-A   | 2'(5*4)          | 138*544*287(mm)        | 5.4*21.4*11.3(in) | 6             | 120           | 9720            | 12000     |
|            | DCJ-54-B   | 2'(5*4)          | 140*554*289(mm)        | 5.5*21.8*11.4(in) | 6             | 120           | 9720            | 12000     |
|            | DCJ-44-A   | 2'(4*4)          | 138*544*234(mm)        | 5.4*21.4*9.2(in)  | 6             | 96            | 7776            | 9600      |
|            | DCJ-44-B   | 2'(4*4)          | 140*554*236(mm)        | 5.5*21.8*9.3(in)  | 6             | 96            | 7776            | 9600      |
| DW-86L388A | DCJ-54-A   | 2'(5*4)          | 138*544*287(mm)        | 5.4*21.4*11.3(in) | 12            | 240           | 19440           | 24000     |
|            | DCJ-54-B   | 2'(5*4)          | 140*554*289(mm)        | 5.5*21.8*11.4(in) | 12            | 240           | 19440           | 24000     |
| DW-86L486  | DCJ-54-A   | 2'(5*4)          | 138*544*287(mm)        | 5.4*21.4*11.3(in) | 16            | 320           | 25920           | 32000     |
|            | DCJ-54-B   | 2'(5*4)          | 140*554*289(mm)        | 5.5*21.8*11.4(in) | 16            | 320           | 25920           | 32000     |
| DW-86L490  | DCJ-54-A   | 2'(5*4)          | 138*544*287(mm)        | 5.4*21.4*11.3(in) | 8             | 160           | 12960           | 16000     |
|            | DCJ-54-B   | 2'(5*4)          | 140*554*289(mm)        | 5.5*21.8*11.4(in) | 8             | 160           | 12960           | 16000     |
|            | DCJ-44-A   | 2'(4*4)          | 138*544*234(mm)        | 5.4*21.4*9.2(in)  | 8             | 128           | 10368           | 12800     |
|            | DCJ-44-B   | 2'(4*4)          | 140*554*236(mm)        | 5.5*21.8*9.3(in)  | 8             | 128           | 10368           | 12800     |
| DW-86L528  | DCJ-54-A   | 2'(5*4)          | 138*544*287(mm)        | 5.4*21.4*11.3(in) | 20            | 400           | 32400           | 40000     |
|            | DCJ-54-B   | 2'(5*4)          | 140*554*289(mm)        | 5.5*21.8*11.4(in) | 20            | 400           | 32400           | 40000     |
| DW-86L728  | DCJ-54-A   | 2'(5*4)          | 138*544*287(mm)        | 5.4*21.4*11.3(in) | 24            | 480           | 38880           | 48000     |
|            | DCJ-54-B   | 2'(5*4)          | 140*554*289(mm)        | 5.5*21.8*11.4(in) | 24            | 480           | 38880           | 48000     |
| DW-86L828  | DCJ-55-A   | 2'(5*5)          | 138*680*287(mm)        | 5.4*26.8*11.3(in) | 24            | 600           | 48600           | 60000     |
|            | DCJ-55-B   | 2'(5*5)          | 140*688*289(mm)        | 5.5*27.1*11.4(in) | 24            | 600           | 48600           | 60000     |
| DW-86L728J | DCJ-55-A   | 2'(5*5)          | 138*680*287(mm)        | 5.4*26.8*11.3(in) | 20            | 500           | 40500           | 50000     |
|            | DCJ-55-B   | 2'(5*5)          | 140*688*289(mm)        | 5.5*27.1*11.4(in) | 20            | 500           | 40500           | 50000     |
| DW-86L729  | DCJ-55-A   | 2'(5*5)          | 138*680*287(mm)        | 5.4*26.8*11.3(in) | 20            | 500           | 40500           | 50000     |
|            | DCJ-55-B   | 2'(5*5)          | 140*688*289(mm)        | 5.5*27.1*11.4(in) | 20            | 500           | 40500           | 50000     |
| DW-86L959  | DCJ-115-A  | 2'(11*5)         | 141*694*636(mm)        | 5.6*27.3*25.0(in) | 14            | 770           | 62370           | 77000     |
|            | DCJ-55-A   | 2'(5*5)          | 138*680*287(mm)        | 5.4*26.8*11.3(in) | 28            | 700           | 56700           | 70000     |
|            | DCJ-55-B   | 2'(5*5)          | 140*688*289(mm)        | 5.5*27.1*11.4(in) | 28            | 700           | 56700           | 70000     |
| DW-86W100  | DCJ-08-A   | 2'(8*5)          | 138*142*461(mm)        | 5.4*5.6*18.1(in)  | 9             | 72            | 5832            | 7200      |
| DW-86W420  | DCJ-11-A   | 2'(11*1)         | 138*142*633(mm)        | 5.4*5.6*24.9(in)  | 27            | 297           | 24057           | 29700     |

## "A proven solutions partner " Marrow Donor Progra(NMDP)

Hundreds of -86 °C ultra low temperature freezer and the cold chain equipment monitoring and control system solution for NMDP.



### NMDP Solution Supplier

Hundreds of ULT Freezers Included

## The China National Gene Bank

There are over 10 units of Haier ULT Freezers, storing about 300,000 blood samples of children with birth defects. And provide necessary supports for monogenic disease research, such as Down's Syndrome and Thalassemia.

