

# -86°C Ultra-low Temperature Freezer

*Targeted Refrigeration • Fast Refrigeration  
Energy-saving & Environmentally Friendly  
Awarded with the Second Prize under State  
Technological Invention Award*



## DW-HW50HC



### Precise Temperature Control and Safe Storage

Microprocessor-based temperature controller, -40°C~-86°C can be set freely with display accuracy at 0.1°C.



### Visual & Audio Alarm system

High/low temperature alarm, power failure alarm, low battery alarm, high ambient temperature alarm, communication failure alarm etc.



### Refrigeration System

Applied Secop (Danfoss) compressor, 1 unit to reduce noise and improve the cooling temperature come to -86°C stably.

Fan electromotor with internationally famous of Germany EBM, energy saving, high efficiency, and quiet.



### Energy Saving

Equipped with DC/DC power management module, optimized energy saving;  
High-precision voltage control, stabilizing the voltage and freezer performance;  
Reduce the redundancy heat, completely eradicate overheating risk.





### High-precision Temperature Control

- Digital temperature display; display inner temperature, power and voltage, ambient temperature and more at the same time;
- 2 inches high-brightness digital temperature display, microprocessor-based temperature controller, -40°C~-86°C can be set freely.



### Refrigeration System

Applied with Secop (Danfoss) compressor, single compressor system with target mixture refrigerant to reduce noise and improve the cooling temperature come to -86°C stably and effectively.



### Insulation System

- The thickness of outer door insulation layer is equal to or greater than 90mm;
- The thickness of insulation layer in refrigerator body is equal to or greater than 110mm;
- Perfectly lock air conditioning, effectively prevent the loss of cooling capacity.



### Alarm system

- The perfect audible & visual alarm system: High/low temperature, sensor failure, power failure, low battery, high ambient temperature, communication failure etc;
- Startup delay and stop interval protection function to ensure reliable operation;
- Keyboard lock and password protection function to prevent arbitrary adjustment of operating parameters;
- Safety door lock design, ensure safety sample storage.



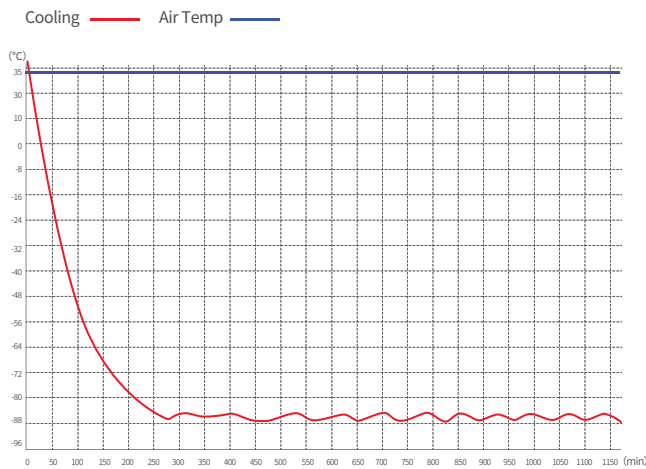
### Human-oriented

- The inner liner is made of stainless steel, resistant to corrosion and easy to clean;
- 4 Universal casters for easy handling;
- Front opening lockable door with full height handle, with vacuum release port for easy open during cooling operation;
- Two-times foaming technology, 110mm foaming insulation with VIP board for better temperature performance.

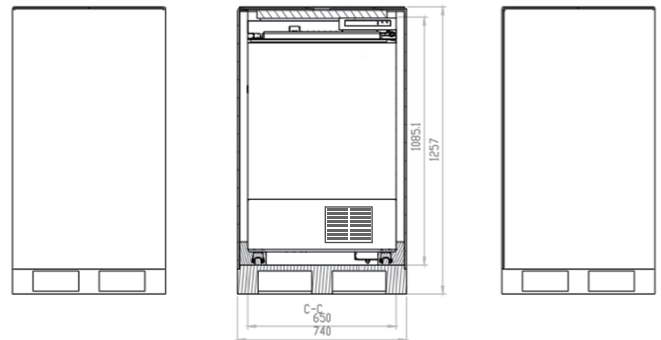
## Scope of Application

Suitable for use in blood banks, hospitals, health and disease prevention systems, research institutions, colleges & universities, the electronic industry, biological engineering, laboratories in colleges & universities, military enterprises, deep-sea fishing companies, etc.

## Performance Data / Cooling Curve



## External Dimension



## Specification Chart

| <b>-86°C Ultra-low Temperature Freezer</b>  |  |
|---|--|
| <b>Model</b>                                | DW-HW50HC  |
| <b>Cabinet Type</b>                         | Chest  |
| <b>Capacity(L)</b>                          | 50   |
| <b>Internal Size(W*D*H)mm</b>               | 430*305*425  |
| <b>External Size(W*D*H)mm</b>               | 650*606*1080   |
| <b>Package Size(W*D*H)mm</b>                | 788*720*1283   |
| <b>NW/GW(Kgs)</b>                           | 74/120   |
| <b>Performance</b>                          |  |
| <b>Temperature Range</b>                    | -40~-86°C  |
| <b>Ambient Temperature</b>                  | 16-32°C  |
| <b>Cooling Performance</b>                  | -86 °C   |
| <b>Climate Class</b>                        | N  |
| <b>Controller</b>                           | Microprocessor   |
| <b>Display</b>                              | Digital display  |
| <b>Refrigeration</b>                        |  |
| <b>Compressor</b>                           | 1pc  |
| <b>Cooling Method</b>                       | Direct cooling   |
| <b>Defrost Mode</b>                         | Manual   |
| <b>Refrigerant</b>                          | HC   |
| <b>Insulation Thickness(mm)</b>             | 110  |
| <b>Construction</b>                         |  |
| <b>External Material</b>                    | High quality steel plates with spraying  |
| <b>Inner Material</b>                       | Stainless steel  |
| <b>Door Lock with Key</b>                   | Yes  |
| <b>Padlock</b>                              | Optional   |
| <b>Access Port</b>                          | 1pc. Ø 25 mm   |
| <b>Casters</b>                              | 4  |
| <b>Data Logging/Interval/Recording Time</b> | USB/Record every 10 minutes / 2 years  |
| <b>Backup Battery</b>                       | Yes  |
| <b>Alarm</b>                                |  |
| <b>Temperature</b>                          | High/Low temperature,High ambient temperature  |
| <b>Electrical</b>                           | Power failure,Low battery  |
| <b>System</b>                               | Sensor failure, Condenser overheating alarm,Built-in USB datalogger failure, Communication error |
| <b>Electrical</b>                           |  |
| <b>Power Supply(V/HZ)</b>                   | 220-240~/50  |
| <b>Rated Current(A)</b>                     | 5.48   |
| <b>Power(W)</b>                             | 682  |
| <b>Power Consumption(KWh/24h)</b>           | 8.33   |
| <b>Accessories</b>                          |  |
| <b>Standard</b>                             | RS485,Remote alarm contact   |
| <b>Options</b>                              | Chart recorder, CO <sub>2</sub> backup system,Printer  |

\*The model, parameters and performance specified in this brochure may be changed without prior notice because of product upgrading.

\*There may be differences between the product images shown in this brochure and the actual products. When you are buying any product, please check the actual product.