

# -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-HW50 (Smart Freezer)



### 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.



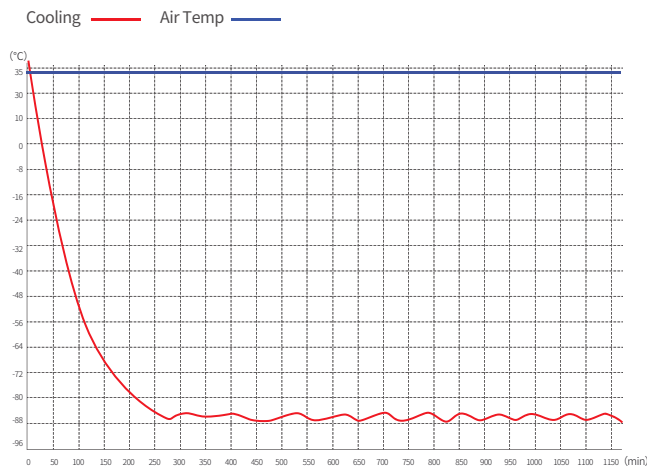
### Human-oriented

- 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.

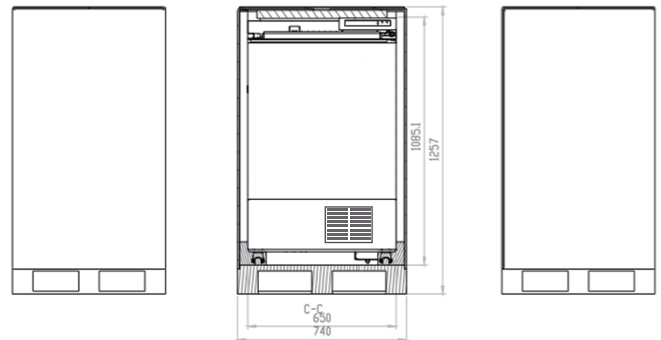
## ✓ Scope of Application

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-HW50
<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>	677*606*1081
<b>Package Size(W*D*H)mm</b>	788*720*1283
<b>NW/GW(Kgs)</b>	82/N
<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>	Mixture gas
<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>External Lock</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 minute / 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 datalogger USB failure, Communication error
<b>Electrical</b>	
<b>Power Supply(V/HZ)</b>	220-240~/50
<b>Rated Current(A)</b>	5.3
<b>Accessories</b>	
<b>Options</b>	Chart recorder, CO <sub>2</sub> backup system

\*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.