

-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, -10°C~-86°C can be set freely with precision at 1°C.



Visual & Audio Alarm system

High/low temperature alarm, power failure alarm, low battery alarm, door ajar alarm, high air temperature alarm, communication failure alarm.



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 refrigerator 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, $-10^{\circ}\text{C} \sim -86^{\circ}\text{C}$ 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.



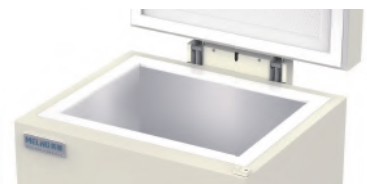
Insulation System

- 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 error, power failure, low battery, door ajar, 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.
- 72 hours back-up battery for display and alarms system during power failure for supportive safety notification.



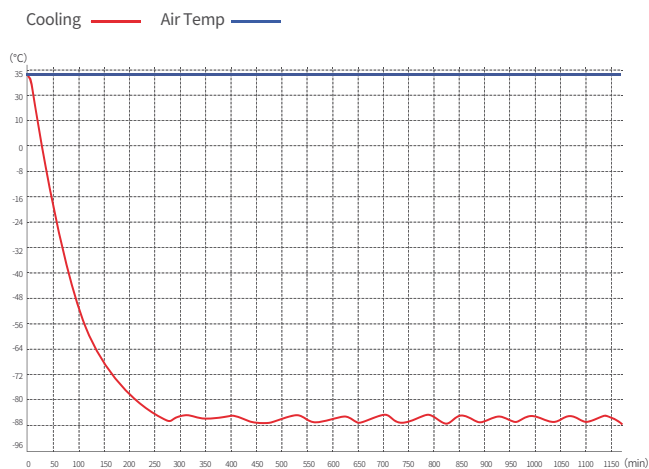
Human-oriented

- Stainless steel interior, Outer is painted steel panel, 4units 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. 130mm foaming insulation with VIP board for better temperature performance.

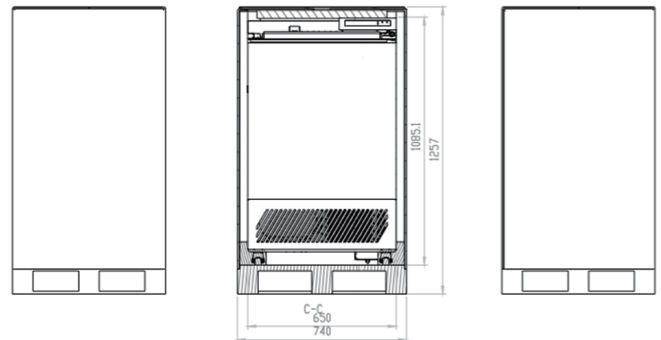
Scope of Application

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



Eternal Dimension



| -86°C Ultra-low Temperature Freezer | |
|-------------------------------------|---|
| Model | DW-HW50 |
| Cabinet Type | Chest |
| Capacity(L) | 50 |
| Internal Size(W*D*H)mm | 430*305*425 |
| External Size(W*D*H)mm | 650*606*1080 |
| Package Size(W*D*H)mm | 740*670*1257 |
| NW/GW(Kgs) | 82/102 |
| Performance | |
| Temperature Range | -10~-86°C |
| Ambient Temperature | 16-32°C |
| Cooling Performance | -86°C |
| Climate Class | N |
| Controller | Microprocessor |
| Display | LED |
| Refrigeration | |
| Compressor | 1pc |
| Cooling method | Direct cooling |
| Defrost Mode | Manual |
| Refrigerant | Mixture gas |
| Insulation Thickness(mm)mm | 130 |
| Construction | |
| External Material | Steel plates with spraying |
| Inner Material | Stainless steel |
| Door Lock with key | Yes |
| External lock | Yes |
| Access test port | 1pc. Ø 24.5 mm |
| Casters | 4 |
| Data Logging/Time/Quantity | USB/Record every 1 minute / 365 days |
| Battery | 48hours back-up battery |
| Door with heater | Hot gas heating |
| Alarm | |
| Temperature | High/Low temperature,High ambient temperature |
| Electrical | Power failure,Low battery |
| System | Sensor error, Condenser cooling failure,Door ajar Recorder error |
| Electrical | |
| Power Supply(V/HZ) | 220/50, 220/60, 110/60 |
| Rated Power(W) | 650 |
| Input Power(W) | 970 |
| Current Consumption(KWh/24h) | 7.97 |
| Rated Current(A) | 4.49 |
| Options | |
| System | Chart recorder, CO2 backup system, Printe,RS485 |

*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.