



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

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.



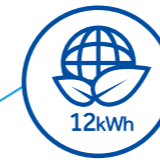
Maximum Sample Security

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



Fast Cabinet Pull Down

Fast and efficient cabinet pulldown, 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

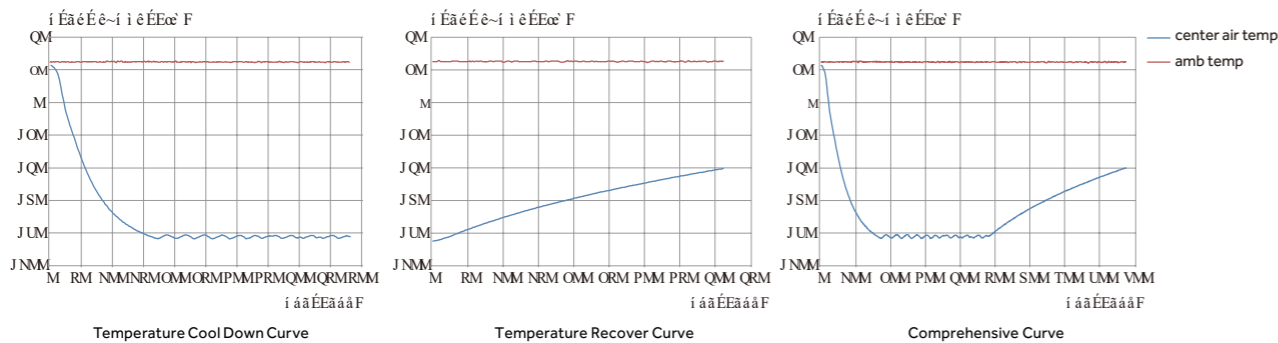


Improved Handle Design
Lockable handle safeguards your precious samples. A padlock can also be added for extra sample safety



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	
	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
Alarms	Container load(20'/40'/40'H)	12/24/24	10/20/20	
	High/Low Temperature	Y	Y	
	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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