

## TwinCool ULT Freezer

Safer by Design



### Maximum Sample Security

TwinCool means Stay Cool. In the event of one compressor failure the second compressor ensures the cabinet continues to maintain  $-80^{\circ}\text{C}$ , therefore not jeopardising sample integrity.



### Maximum Energy Efficiency

Due to cabinet design and the use of hydrocarbon refrigerants, the TwinCool 578S has an outstanding energy consumption figure of 12kWhr/day.



### Fast Cabinet Pull Down

Takes only 3 hours to cool from  $+25^{\circ}\text{C}$  ambient to  $-80^{\circ}\text{C}$  and provides excellent recovery times after door openings.

Haier Biomedical's ultra low temperature freezers with intelligent TwinCool technology

offer users the highest level of protection for valuable samples; if one compressor fails, the second compressor is designed to maintain the cabinet temperature at  $-80^{\circ}\text{C}$ , ensuring sample integrity.

## Safer by Design

Haier Biomedical's ultra low temperature freezers with intelligent TwinCool technology are designed to provide optimal cabinet performance 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.



### Reduced running costs

VIP thermal insulation designed to significantly reduce heat loss and reduce cabinet running costs.

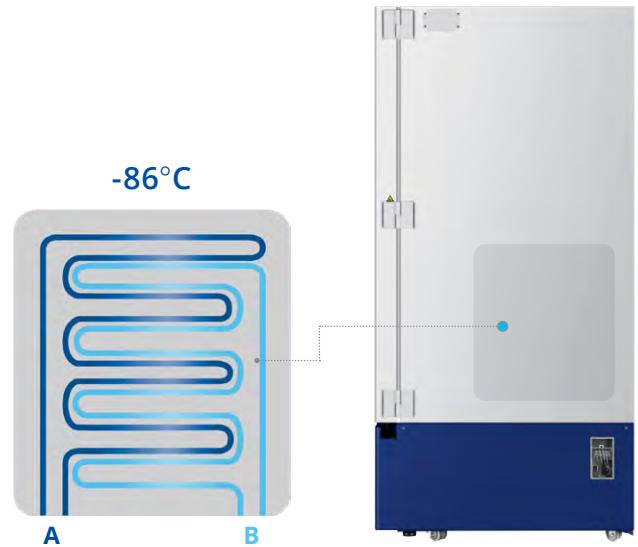


### World-leading Energy Saving Refrigeration Technology

The hydrocarbon refrigeration technology saves energy by up to 50%, significantly reducing the running costs of the freezer. Hydrocarbon refrigerant contains no fluorine or chlorine and has a global warming potential (GWP) value of just 6, meaning this refrigerant is a more environmentally friendly option compared to HFC refrigerants.

## Intelligent TwinCool Refrigeration System

Two independent refrigeration systems 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.



## PRODUCT ADVANTAGES



### Energy Saving Refrigeration

High efficiency cooling fans and compressors, combined with hydrocarbon refrigerants, ensure energy savings and long-term sample security



### Multilayered Sealing Structure

Triple layer of gaskets split between main and inner doors decreases heat loss and guarantees excellent warm up times in the event of a power failure



### Pressure Equalisation Port

Heated port with spring assisted mechanism to prevent icing on the vent allows users to reopen the main door soon after entering



### Improved Handle Design

Lockable handle with unique key prevents other Haier freezer owners access to your precious samples, also comes with space for a padlock for that extra security



### USB Interface

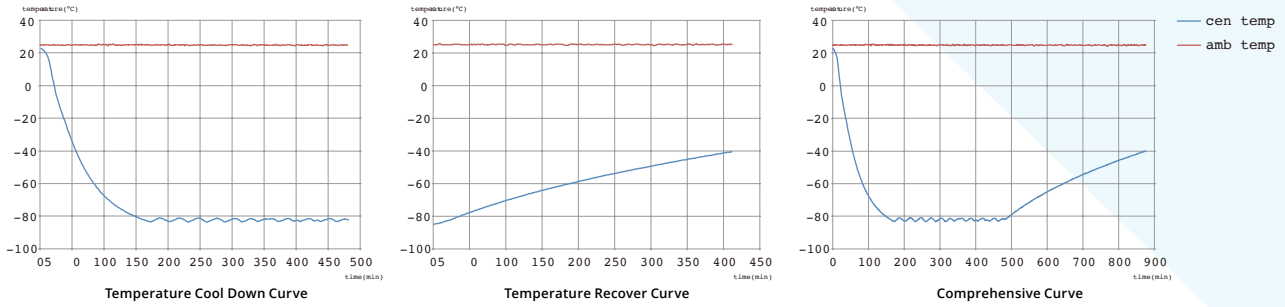
Enables users to download historical temperature data for compliance/auditing purposes



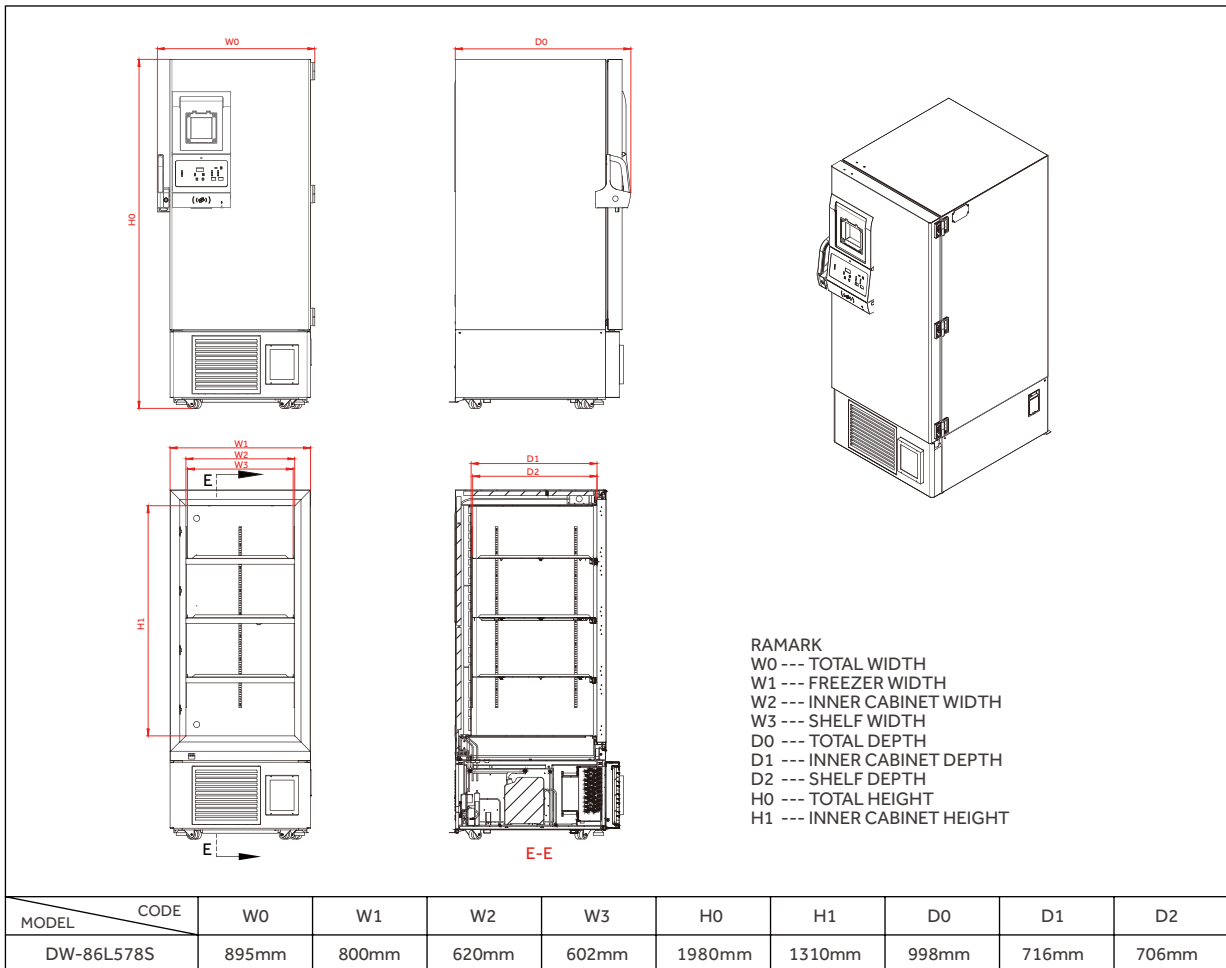
### Multilevel Alarms

Alarming functions that include hi and low temperature, sensor error, power failure, high ambient, clean filter and door ajar

## TYPICAL PERFORMANCE CHARACTERISTICS IN 25°C AMBIENT



## PRODUCT DIMENSION DRAWING



Model	Voltage (V/Hz)	Rated Power (W)	Inner Cabinet Temperature (°C)	External Dimension (W * D * H mm)	Internal Dimension (W * D * H mm)	Effective Volume (L)	Net Weight / Gross Weight (Kg)	Shelf
DW-86L578S	220~230/50	1400	-86	895*998*1980	620*716*1310	578	325/355	3

## PRODUCT SPECIFICATIONS

Product	DW-86L578S
Cabinet Type	Upright
Climate Class	N
Storage Capacity	578/20.4(L/Cu.Ft)
Temperature Range(°C)	-40~-86
Noise Level (db)	53
Net/Gross Weight	325/355
Exterior Dimensions(W*D*H)	895*998*1980(mm) 35.2*39.3*78.0(in)
Interior Dimensions(W*D*H)	620*716*1310(mm) 24.4*28.2*51.6(in)
Refrigerant	HC
Cooling Performance(°C)	-86
Display	LED
Power Supply(V/Hz)	220~230/50
Power(W)	1400
Power Consumption	12Kw/h
Electrical Current(A)	10
Building Supply Rating (A)	16
Power Lead Length(m)	2.5
Heat Rejection (BTU/day)	1706
Ambient Temperature(°C)	10~32°C
Cooling Type	Direct cooling
Compressor Type/Brand/Number	Hermetic Reciprocating Type / SECOP / 2
Compressor Capacity(W)	1300+1300
Evaporator Type	Copper Tube Evaporator
Defrost Mode	Manual
Refrigerant Charge/Flammable	R600a+R1150+R14 Mix in 1st Stage / the same in 2nd Stage/Flammable
Controller Level	Top
Power Switch	16A
Controller	Microprocessor
Setpoint Security	Yes
Controller Sensor	PT100
Remote Alarm Terminals	Remote Alarm Port, RS232/RS485 (Optional)
Adjustable High/Low Temp Alarms	Y
Insulation	VIP+CFC Free Foaming Agent
Exterior Door Seal	Four Seal On The Outside Door Seal Strip
Interior Door Seal	One Seal On The Interior Door Seal Strip
Shelves/Capacity/Dims/Material	3 stainless steel adjustable shelves with dimension 596*657 mm(W*D), -max capacity per shelf:40kg / 88.2lbs
Caster	Y/4
Exterior Material	Colour Coating Steel Plate
Interior Material	Colour Coating Steel Plate
Door Thickness (mm)	90
Cabinet Thickness	90
Inner Door	Four Solid Door
Condenser Type	Fin Condenser
Fan Brand	EBM
Back Up Battery For Alarm Functions	Support high/low temperature, power failure, door open, sensor failure, high ambient temperature, hot condenser and low battery alarms
Temperature Uniformity(°C)	±5
Temperature Accuracy(°C)	0.1
Cool Down Time (25°C ambient to -80°C) mins	180
Warm Up Time (25°C ambient -80°C to -50°C) mins	280
1 Min Door Open Recovery Time (ambient 25°C running temp -80°C)mins	30
Certificate	CE

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