

Typical Installation and Application

Haier Biomedical -30°C biomedical freezer: safe and reliable dual-system, intelligent hot gas defrosting, hydrocarbon energy saving



DW-30L1280F

Key Features



Hydrocarbon energy saving: green and environmental protection

Using green and eco-friendly hydrocarbon refrigeration system, based on the principle of zero damage to ozone sphere and zero boost to greenhouse effect, we effectively reduce the energy consumption to 8kW/24H.



Intelligent defrosting: prolong the defrosting cycle, safeguard the stability of storage temperature

The intelligent defrosting is two times less than the traditional defrosting, effectively draws down the temperature fluctuation caused by defrosting during sample storage cycle via intelligently identifying the amount of frost on evaporator.



Dual independent refrigeration systems: higher safety

Auto defrosting system plus constant refrigeration system, successfully solve the industry problem that inside temperature rise sharply when fan cooling refrigerator defrosts; Once one system failed, the other one would reach to -25 °C soon; which double the safety of the sample. With air cooling technology, the inside uniformity can reach ±3°C (±5°C during defrosting period).



Hot gas defrosting technology: eradicate the hidden danger of electric leakage

We apply full-automatic hot gas defrosting technology on the whole machine. Compared with heater wire defrosting technology, it gets rid of the risk of electric leakage due to wire aging, offers you higher efficiency and safety.



Low noise

Optimize system and engine room noise reduction design, noise: 45.4db (220V/50Hz test data)

Product Advantages

Microcomputer control
LED digital temperature display with inside temperature accuracy of 0.1 C, while at the same time displaying the voltage and ambient temperature, alarm, AB operating system and defrost level settings.

Heat preservation design of refrigeration unit
Subtle temperature rise during defrosting.

Intelligent hot gas defrosting
Prolongs the defrosting cycle, eradicates the hidden danger of electric leakage.

Supersized double outer doors
70mm insulation layer.

Standard USB port
Capable of storing more than 15 years of data.

Shelves
Equipped with 12 stainless steel shelves of 6 layers, which are adjustable to meet different requirements of users.

Safe lock
Electronic mortise lock design, with NFC clocking-in function (fingerprint optional).

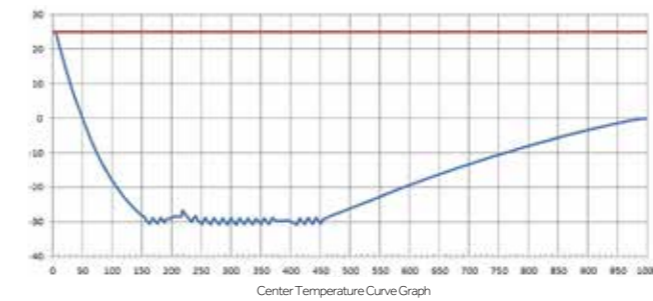
Castors and feet
4 omnidirectional casters and 2 level legs, easy to move, lock and level.

Low noise
Optimal system and engine noise reduction design, the temperature can cool down to -30 C within 3 hours.

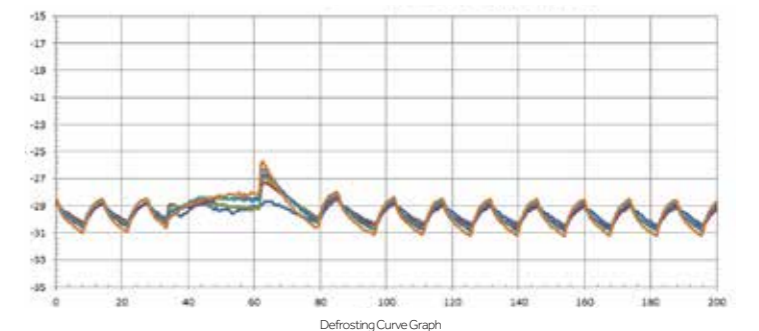
Foam beam design
Better insulation effect.

Bottom strainer drawable design
Easy to clean.

Optional: Blood baskets (48 units), and the capacity is 900 x 200ml blood bags.



— center of the four-storey inside cabinet
— ambient temperature



— 1th storey center
— 2th storey center
— 3th storey center
— 4th storey center
— 5th storey center
— 6th storey center

Specifications

Model		DW-30L1280F	
Technical Data	Cabinet Type	Upright	
	Climate Class	N	
	Cooling Type	Forced air cooling	
	Defrost Mode	Automatic defrost	
	Refrigerant	HC	
	Sound Level (dB(A))	46	
Performance	Cooling Performance (°C)	-30	
	Temp Range (°C)	-10~-30	
Control	Controller	Microprocessor	
	Display	LCD	
Electrical Data	Power Supply (V/Hz)	220~240/50	
	Power (W)	800	
	Electrical Current (A)	4.5	
Dimensions	Capacity (L/Cu.Ft)	1280/45.2	
	Net/Gross Weight(approx)	kg	420/480
		lbs	925/1057
	Interior Dimension(W*D*H)	mm	1320*752*1260
		in	52/29.6/49.6
	Exterior Dimension(W*D*H)	mm	1520*1065*1980
		in	59.8/41.9/77.9
Packing Dimension(W*D*H)	mm	1570*1080*2130	
	in	61.8/42.5/83.8	
Container Load (20'/40'/40'H)	6/14/14		
Alarms	High/Low Temperature	Y	
	Remote Alarm	Y	
	Power Failure	Y	
	Sensor Error	Y	
	Low Battery	Y	
	High Ambient Temperature	Y	
	Door Ajar	Y	
Accessories	Castor	Y	
	Sensor Error	Y	
	Porthole	Y	
	Drawers/Inner Doors	12/-	
	Temperature Recorder	/	
	USB Interface	Y	
Other	RS485	Y	
	Certification	CE	

F suffix - Forced air cooling

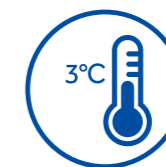
Product appearance and specifications are subject to change without notice

Typical Installation and Application

Suitable for sample storage within blood banks, hospitals, disease control centres, research institutes, electronic, chemical and other industries, cryopreservation of plasma, biologics and other products, also suitable for cold tests for components and materials.

**DW-30L818BP****Key Features****Energy saving with variable frequency inverter technology**

Optimized refrigeration system with a high efficiency inverter compressor to reduce energy consumption.

**Excellent temperature uniformity in a large storage space**

Features built-in evaporator, large storage space and adjustable shelf, providing faster temperature pulldown and a better temperature uniformity of set point $\pm 3^{\circ}\text{C}$.

**Low noise**

Sound reduction design lowers the sound level to 37dB(A) at 220V/50Hz.

**Environment Friendly**

1)HC refrigeration system contains zero chlorine and fluorine, which is better for the environment.
2)Urethane foam insulation complies with European ROHS regulation.

Product Advantages

Ergonomic Design: document holding compartment for storing size A4 paper and pens.

Optional USB port allows users to download temperature data saved up to 10 years for compliance and auditing purposes.



Double door seals for better insulation performance.

Microprocessor temperature control: LED displays cabinet temperature with 0.1°C resolution, ambient temperature, and input voltage.



Pressure equalization port for easy door opening.

Ergonomic handle design: easy access to storage space, built in lock and padlock features.



DW-30L818BP

Casters and leveling legs for ease of maneuvering and positioning.

Inner door design reduces loss of cold air to improve energy efficiency and stable temperature.



Powder coating galvanized interior with large round corner design, corrosion resistance and easy to clean.

Adjustable shelves made with stainless steel or coated steel.

Microprocessor Control System

- Microprocessor-based temperature control.
- Large LED displays cabinet temperature with 0.1 °C resolution with adjustable temperature setting from -10 °C to -30 °C.
- Cabinet temperature, ambient temperature and voltage are shown on the panel.
- Alarm conditions include high and low temperature, sensor error, power failure, low battery, door ajar and high ambient.
- Alarm modes are audible and flashing lights. Remote alarm terminals are available.
- Battery supports display and alarm system for forty eight hours after power outage.
- Optional features are IoT module, USB port, temperature recorder and NFC swipe card functions.

Insulation

- 70 mm thick insulation.
- Inner doors for better thermal efficiency.

Porthole

- Two standard portholes allow ease of temperature testing.

Security Lock

- Lock is standard. Magnetic lock is optional for added protection and security

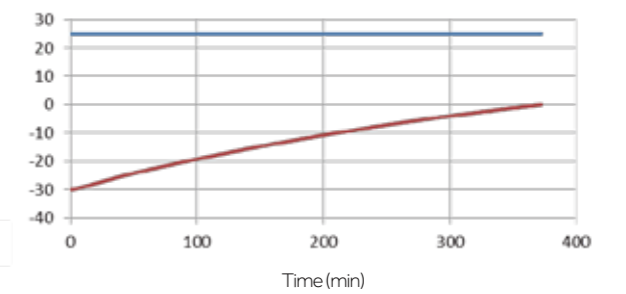
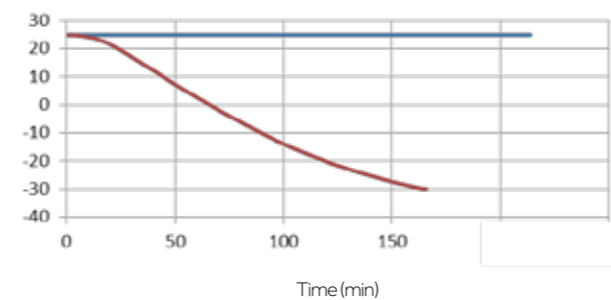
Temperature Recorder

- Optional temperature recorder for temperature recording and compliance.



Typical Performance Characteristics at 25°C ambient

— Ambient Temp.
— Center Temp.



Product Advantages**Easy to clean and corrosion resistant**

Electric zinc plate powder sprayed internal liner and large round corner design and coated steel plate exterior design ensure reliable corrosion prevention which is easy to clean.

Ergonomic handle design: easy access to storage space, built in lock and padlock features.

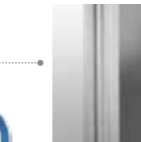
4 multi-directional casters and 2 lockable feet make it easy to move, level and lock in place.

**DW-30L818**

Microcomputer electronic thermostat, LCD digital display of inside temperature, with 0.1 °C display accuracy.



Double seal design provides better insulation and saves energy.



Inner doors prevent rapid loss of cold air, saving energy and reducing temperature fluctuations.

**Flexible internal storage**

Equipped with 5 plastic coated steel wire shelves with optional stainless steel shelves, which are adjustable to meet the different requirements of users.

Specifications

	Model	DW-30L818	DW-30L818BP	
Technical Data	Cabinet Type	Upright	Upright	
	Climate Class	SN N	SN N	
	Cooling Type	Direct Cooling	Direct Cooling	
	Defrost Mode	Manual	Manual	
	Refrigerant	HC	HC	
	Sound Level (dB(A))	44	37 (220V/50Hz)	
Performance	Cooling Performance (°C)	-30	-30	
	Temp Range (°C)	-10--30	-10--30	
Control	Controller	Microprocessor	Microprocessor	
	Display	LCD	LED	
Electrical Data	Power Supply (V/Hz)	220-240/50	100-230/50/60	
	Power (W)	380	680	
	Electrical Current (A)	2.8	7.7	
Dimensions	Capacity (L/Cu.Ft)	818/28.8	818/28.8	
	Net/Gross Weight (approx)	kg	205/235	210/240
		lbs	451.9/518.1	463.0/529.1
	Interior Dimension (W*D*H)	mm	750*755*1460	750*755*1460
		in	29.5*29.7*57.5	29.5/29.7/57.5
	Exterior Dimension (W*D*H)	mm	988*951*1980	988*951*1980
		in	38.9/37.4/78.0	38.9/37.4/78.0
	Packing Dimension (W*D*H)	mm	1040*1060*2150	1040*1060*2150
		in	40.9/41.7/84.6	40.9/41.7/84.6
Container Load (20'/40'/40'H)		10/22/22	10/22/22	
Alarms	High/Low Temperature	Y	Y	
	Remote Alarm	Y	Y	
	Power Failure	Y	Y	
	Sensor Error	Y	Y	
	Low Battery	N	Y	
	High Ambient Temperature	Y	Y	
	Door Ajar	Y	Y	
	Castor	Y	Y	
Accessories	Sensor Error	Y	Y	
	Porthole	Y	Y	
	Drawers/Inner Doors	-/3	-/3	
	Temperature Recorder	Optional	Optional	
	USB Interface	Optional	Optional	
	RS485 Port	Optional	Y	
Other	Certification	CE	CE	

BP suffix - Variable frequency inverter compressor

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-30°C Biomedical Freezer (Upright)

This freezer is designed for storage of critical and temperature sensitive biological samples, laboratory products and medical products in institutions such as blood banks, hospitals and research laboratories.



Key Features

- Forced air and auto defrost design: -30°C storage temperature with automatic defrost cycles guided by time and temperature, ensure maximum temperature stability and minimize energy use
- High-performance refrigeration system: achieves excellent temperature uniformity with intelligent operation control at -30°C
- Microprocessor control with digital display: 0.1°C control increments, adjustable range of -10°C to -30°C



Door lock and padlock



Backup battery protection



USB



Malfunction Alarms

DW-30L420F



Drawer (Optional)



Microprocessor control panel



Air distribution

-30°C Biomedical Freezer (Upright)



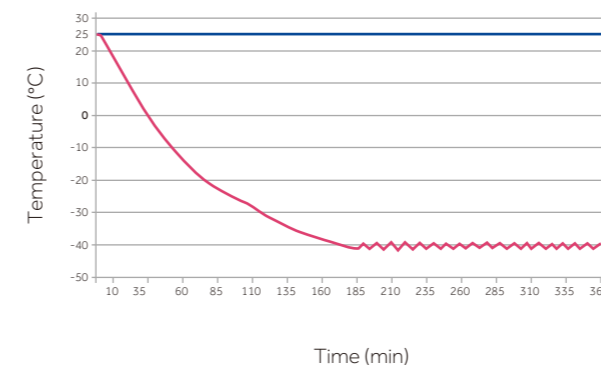
Safety

- Alarm system includes audible and visual alerts. Alarms include high and low temperature, sensor error, power failure, door ajar, low battery and high ambient temperature. Remote contacts are standard
- Backup battery provides continuous monitoring and displays the interior temperature for up to 48hrs in the event of a mains power failure
- Standard USB port on DW-30L420F allows users to download temperature data
- Lockable door with padlock for added sample security

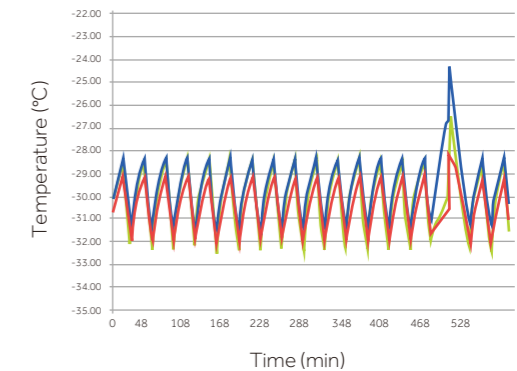
Ergonomic Design

- Self-closing door with 90° stay-open feature conserves energy and helps maintain temperature uniformity to protect your valuable samples
- Corrosion-free interior brushed stainless steel liner and exterior coated steel plate
- 5 adjustable stainless steel shelves and optional drawer
- Casters and levelling legs, easy to move and lock

Pull down test at 25°C ambient



Temperature Uniformity



*Freezer set-point -30 °C, ambient temperature 25 °C

Haier Biomedical -30°C biomedical freezer with smart control and energy-saving hydrocarbon refrigeration system for safe and reliable product storage.

**DW-30L278****DW-30L508**

Application

Biomedical and life science laboratories within blood banks, hospitals, disease control centres and research institutes as well as electronics and chemical industries. Used for cryopreservation of plasma, biological samples and other products and cold tests for components and materials.

Advantages

- **High-efficiency and energy-saving compressor and refrigeration system**

Industrial grade energy-saving compressor and optimized cooling system reduces power consumption by more than 55% compared with older models.

- **Green and environmentally friendly**

Hydrocarbon refrigerant compressor system and use of hydrocarbon refrigerants makes the refrigeration system completely green and environmental friendly. Built with isopentane foam polyurethane insulation, which complies with European RoHS Directive.

- **Superior temperature uniformity**

Evaporator-shelf design speeds up the cooling process and provides a more uniform temperature distribution. The temperature uniformity at specific points throughout the unit is $\pm 4^{\circ}\text{C}$.

- **Low sound level**

Sound-reducing design with optimized system reduces the sound level, smoother operation eliminates high-pitched noise.

Key Features



- **Microprocessor control system:**

- Microprocessor temperature controller, LCD temperature display, display accuracy at 0.1°C .
- Adjustable temperature setting from -10°C to -30°C
- Multiple alarm functions including high temperature alarm, low temperature alarm, sensor failure alarm and power failure alarm
- Sound and flash alarm
- Alarm lasts for more than 24 hours after power failure



- **Excellent temperature-retaining ability**

High efficient insulation and double-sealing design improves temperature performance, energy efficiency and system reliability



- **Lock**

Lock latch and key lock double-lock design provides an extra level of security



- **Porthole**

Porthole design is standard



- **Recorder**

Optional chart temperature recorder available

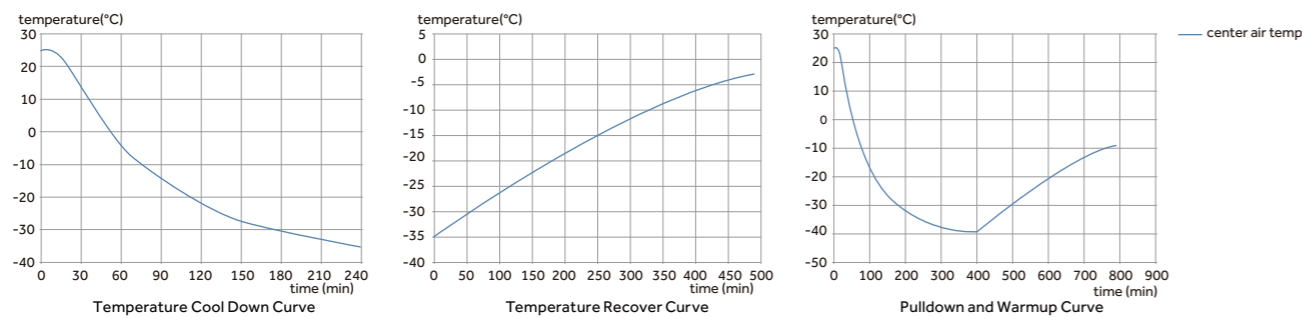


-30°C Biomedical Freezer



DW-30L508

DW-30L508 | TYPICAL PERFORMANCE CHARACTERISTICS AT 25°C AMBIENT



-30°C Biomedical Freezer

Specifications

Model	DW-30L420F	DW-30L278	DW-30L508			
Technical Data	Cabinet Type	Upright	Upright	Upright, Double Door		
	Climate Class	SN N	SN N	SN N		
	Cooling Type	Forced air Cooling	Direct Cooling	Direct Cooling		
	Defrost Mode	Automatic Defrost	Manual	Manual		
	Refrigerant	HC	HC	HC		
	Sound Level (dB(A))	46	40	41	43	
Performance	Cooling Performance (°C)	-30	-30	-30		
	Temperature Range (°C)	-10--30	-10--30	-10--30		
Control	Controller	Microprocessor	Microprocessor	Microprocessor		
	Display	LED	LCD	LCD	LED	
Electrical Data	Power Supply (V/Hz)	220-240/50 208-230/60	220-240/50	220-240/50	115/60	
	Power (W)	460/1000(Defrost)	330	530	600	
	Electrical Current (A)	4.0/5.8(Defrost)	2	3	5.4	
Dimensions	Capacity (L/Cu.Ft)	420/14.8	278/9.8	490/17.3		
	Net/Gross Weight (approx)	kg	195/225	115/135	164/200	
		lbs	429.9/496.0	253.7/297.7	361.6/440.9	
	Interior Dimension (W*D*H)	mm	685*610*1028	520*435*1230	685*610*1228	
		in	27.0*24.0*40.5	20.5*17.1*48.4	27.0*24.0*48.3	
	Exterior Dimension (W*D*H)	mm	950*920*1900	745*675*1810	915*810*1860	
		in	37.4*36.2*74.8	29.3*26.6*71.3	36.0*31.9*73.2	
Packing Dimension (W*D*H)	mm	980*935*2040	805*725*1970	980*905*2040		
	in	38.6*36.8*80.3	31.7*28.5*77.6	38.6*35.6*80.3		
Container Load (20'/40'/40'H)	12/24/24	14/28/28	12/24/24			
Alarms	High/Low Temperature	Y	Y	Y	Y	
	Remote Alarm	Y	/	/	Y	
	Power Failure	Y	Y	Y	/	
	Sensor Error	Y	Y	Y	Y	
	Low Battery	Y	/	/	/	
	High Ambient Temperature	Y	/	/	/	
	Door Ajar	Y	/	/	/	
	Caster	Y	Y	Y		
Accessories	Foot	Y	Y	Y		
	Porthole	Y	Y	Y		
	Drawers/Inner Doors	-/3 6/-	6/-	10/-		
	Temperature Recorder	Optional	Optional	Optional		
	USB Interface	Y	/	/		
Others	Certification	CE /	CE	CE	UL	

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