Haier Biomedical
Intelligent Protection of Life Science

ULT Freezer Solutions

North America
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UK
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Middle East
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Russia
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South East Asia
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JAN 2021

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Haier Biomedical Salvum brand of ULT freezers has been designed to deliver energy savings and reduced carbon footprint. This range uses environmentally safe hydrocarbon refrigerants and high efficiency fan motors to maximize the cooling ability of the system and reduce energy consumption. While providing sample safety, the freezer design makes energy savings possible for laboratories.
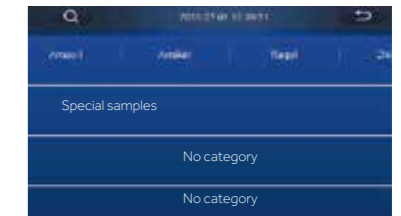
DW-86L829

DW-86L579

Large Intelligent LCD Screen Visual Management

10-inch high-performance LCD capacitive screen, sensitive touch operation; intuitive display of inside temperature, ambient temperature, input voltage and other data and temperature curves.

Inventory Management System

The single version of the inventory management allows users who do not have a racking system within the freezer to easily record item locations, entry and exit records.

Single version (standard)

Professional version(optional)

In instances where customers use racking systems, the optional professional version of the inventory management is available. Freezer racks, boxes, and vials can easily record item locations and entry and exit records, facilitate item inventory and statistics, realize multi-screen interaction and reduce errors through secondary verification.
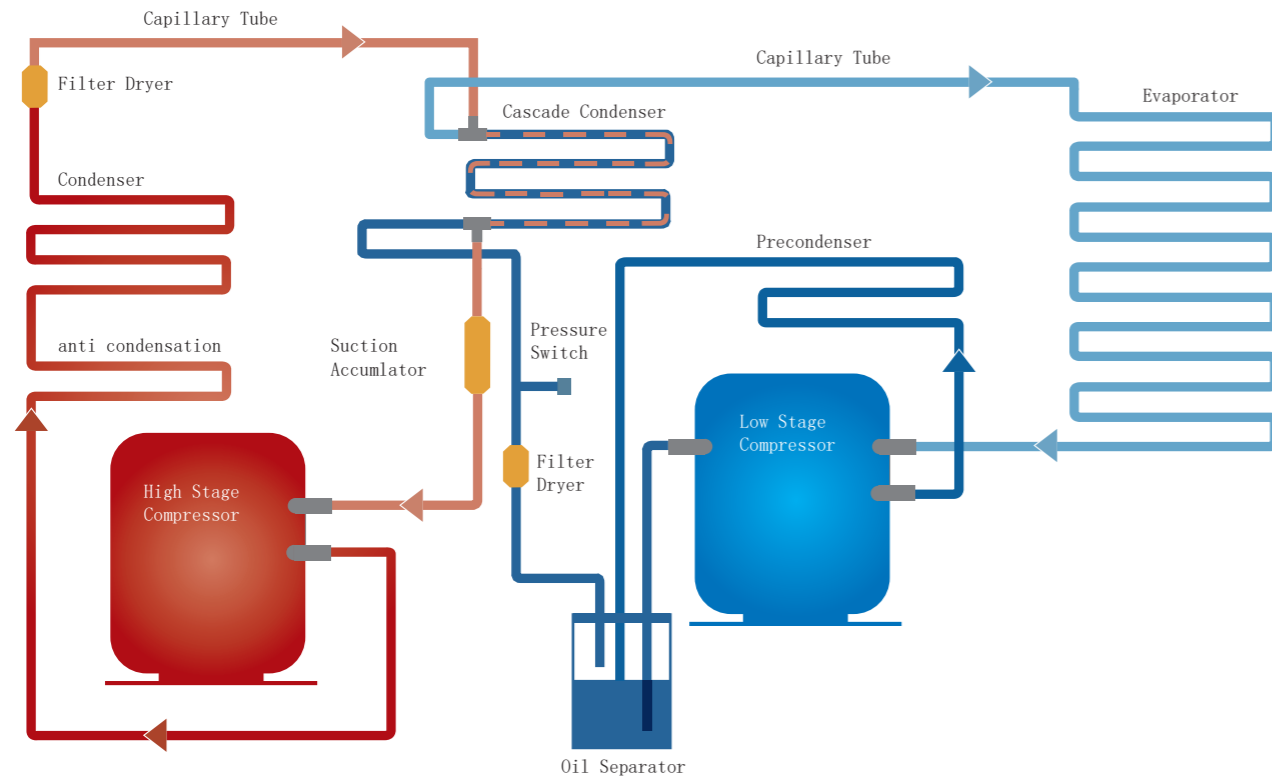
The freezer comes with the single version as standard.

Equipped with Multiple Interfaces

·Standard USB interface, capable of storing data for 10 years
·Standard remote alarm terminal RS485 port

Multiple Options for Safe Management and Control Systems

Standard password lock, optional fingerprint module, punch card module, face recognition, realizing safe and secure multi-user management.

Heat Exchange Circulation System

Capillary Tube

Filter Dryer

Condenser

anti condensation

Capillary Tube

Cascade Condenser

Suction Accumlator

Pressure Switch

High Stage Compressor

Filter Dryer

Oil Separator

Precondenser

Low Stage Compressor

Capillary Tube

Evaporator

Filter dryer
• Filtration and drying device for water and debris

Capillary tube for high stage
• Expansion device for high stage liquid refrigerant

Capillary tube for low stage
• Expansion device for low stage refrigerant

High stage condenser
• Extra-large air cooled condenser dissipates product heat content efficiently.

Low stage evaporator
• Heat exchanger for expanded low stage refrigerant

Ultra low noise compressor
• Compressor provides reliable performance with ultra low noise
• Specially designed low stage evaporator yields excellent temperature uniformity and recovery after loading and door opening.
• Both high and low stage compressors are industrial grade hermetically sealed compressor designed for low temperature application. Sound level is extremely low.

Cascade condenser
• Heat exchanger between the high and low temperature stage in the system

Temprite oil separator
• Temprite oil separator can effectively separate oil and water so as to improve the refrigeration performance

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(Salvum Ultimate) Under Counter ULT freezer

Suitable for clinical, medical, scientific research, quarantine and other departments to store items under low temperature conditions. Applicable for universities, hospitals, disease prevention and control centres, blood stations, scientific research institutes, electronics and chemical enterprise laboratories and biomedical engineering research institutes. For storage of biological products and biological samples such as red and white blood cells, viruses, bone and bacteria. Also used for electronic devices and other materials used for cryogenic tests.

DW-86L100J

Energy Efficient, Safe and Reliable
High efficiency HC refrigeration system, optimised for energy efficiency delivering a power consumption figure of just 5.5kW/24hrs.

Personal ULT Storage
810mm cabinet height makes it easy to place on or under counter, saving storage space. Stackable design.

Ergonomic design
Ergonomic handle design ensures easy one-hand door opening.

Low noise
Optimized noise reduction cabinet and system design, emits sound level of only 46.8dB.

VIP insulation and multilayered sealing design

70mm insulating layer with 25mm VIP and 4 layers of gasket improves energy efficiency and reduces heat loss to deliver excellent warm up times in event of power failure.

Optional IoT Module

Real time monitoring of cabinet temperature, temperature setting, high and low temperature alarm value, temperature curve, alarm log and event log.

· User-settable parameters such as set point and alarms.
· Real-time cabinet temperature display, alarm information, power supply and compressor start/stop state.
· Standard USB port capable of storing >15 years of operating data for compliance.

Filter is easy to remove and clean without the need for tools.

Ergonomic design for easy door opening and closing. Lockable and equipped with 4 keys as standard with the ability to add a padlock for extra security when required.

Double stainless-steel inner doors to prevent cooling loss when opening the outer door, easy to clean.

4 casters + 2-foot locks, easy to move, lock and level.

Microprocessor control system

· Microcomputer electronic thermostat, LED temperature display, display precision 1°C, adjustable cabinet temperature set point -40°C~-86°C.
· Cabinet temperature/voltage/ambient temperature checking are available.
· Multiple alarm functions: high temperature alarm, low temperature alarm, sensor fault alarm, power failure alarm, low battery power alarm, open door alarm and high ambient temperature alert.
· Sound and light alarm mode, attachable to remote alarm interface.
· Battery backup alarm function operates continuously for >24hrs in the event of a power outage.
· Standard configuration: RS485 port and USB interface.
· Standard 5V power supply available for test equipment.
· Optional IoT module.

Superior thermal insulation performance

70mm super thick insulation layer design, aviation vacuum insulation material VIP, thickness of 25 mm or more, 4 layers of silicone seal, superior thermal insulation and energy saving effect.

Porthole

Portholes as standard, allows for independent testing of cabinet temperature.

Security lock

Standard door lock and padlock to ensure sample security and prevent unauthorised access.

USB data storage

Capable of storing more than 15 years of data.

-86°C ULT Freezer

-86°C ULT Freezer

Specifications

	Model	DW-86L338J	DW-86L338JA	DW-86L388J	DW-86L486E	DW-86L490J	DW-86L490JA	DW-86L578J	DW-86L578JA	DW-86L628E
Technical Data	Cabinet Type	Upright	Upright	Upright	Upright	Upright	Upright	Upright	Upright	Upright
	Climate Class	N	N	N	N	N	N	N	N	N
	Cooling Type	Direct cooling	Direct cooling	Direct cooling	Direct cooling	Direct cooling	Direct cooling	Direct cooling	Direct cooling	Direct cooling
	Defrost Mode	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual	Manual
	Refrigerant	HC	HC	HC	HC	HC	HC	HC	HC	HC
	Sound level (dB(A))	50	50	50	49	50	50	50	50	49
Performance	Cooling Performance (°C)	-86	-86	-86	-86	-86	-86	-86	-86	-86
	Temperature Range (°C)	-40~-86	-40~-86	-40~-86	-40~-86	-40~-86	-40~-86	-40~-86	-40~-86	-40~-86
Control	Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor	Microprocessor
	Display	LED	LED	LED	LED	LED	LED	LED	LED	LED
Electrical Data	Power Supply (V/Hz)	220~240/50	115/60 | 208~230/60	220~240/50	220~240/50	220~240/50	208~230/60	220~240/50 | 120/60	208~230/60	220~240/50
	Power (W)	650	700 | 1000	650	1000	900	1000	750 | 1000	1000	1200
	Electrical Current (A)	7.5	12 | 7.5	5	10	8	8	7.5 | 12	9	11
Dimensions	Capacity (L/Cu.Ft)	338/11.9		388/13.7	486/17.1	490/17.3		578/20.4		626/22.1
	Net/Gross Weight (approx) kg	238/278		255/286	290/310	295/335		300/330		301/323
	Net/Gross Weight (approx) lbs	524.7/612.9		562.2/630.5	639.3/683.4	650.4/738.5		661.4/727.5		664.0/712.0
	Interior Dimension (W*D*H) mm	465*630*1165		465*716*1310	590*630*1310	590*630*1310		620*716*1310		760*630*1310
	Interior Dimension (W*D*H) in	18.3*24.8*45.9		18.3*28.2*51.6	23.3*24.8*51.6	23.2*24.8*51.6		24.4*28.2*51.6		29.9*24.8*51.6
	Exterior Dimension (W*D*H) mm	830*893*1846		812*980*1980	945*900*1980	860*900*1980		903*980*1960		1035*900*1980
	Exterior Dimension (W*D*H) in	32.7*35.2*72.7		31.2*38.6*78.0	37.2*35.4*78.0	33.9*35.4*78.0		35.6*38.6*77.2		40.7*35.4*78.0
	Packing Dimension (W*D*H) mm	875*970*2010		893*1078*2135	995*995*2150	925*985*2150		950*1055*2125		1080*965*2150
	Packing Dimension (W*D*H) in	34.4*38.2*79.1		35.2*42.4*84.1	39.2*39.2*84.6	36.4*38.8*84.6		37.4*41.5*83.7		42.5*38.0*84.6
	Container load (20'/40'/40'H)	12/24/24		12/24/24	12/24/24	12/24/24		12/24/24		12/24/24
Alarms	High/Low Temperature	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Hot Condenser	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Power Failure	Y	Y	Y	Y	Y	Y	Y	Y	Y
	High/Low Voltage	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Sensor Error	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Low Battery	Y	Y	Y	Y	Y	Y	Y	Y	Y
	High Ambient Temperature	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Door Ajar	Y	Y	Y	Y	Y	Y	Y	Y	Y
Accessories	Caster	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Foot	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Porthole	Y/2	Y/2	Y/2	Y/2	Y/2	Y/2	Y/2	Y/2	Y/2
	Shelves/Inner doors	3/2	3/2	3/2	3/4	3/4	3/4	3/4	3/4	3/4
	USB Interface	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Remote Alarm (Dry contacts)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	5V Power Supply Port	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Temperature Recorder	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	RS232/485 Port	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	CO_2 Backup System	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
	LN2 Backup System	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional
Others	Certification	CE	UL	CE	CE	CE	UL	CE,ENERGY STAR | UL,ENERGY STAR	UL	CE

· Product appearance and specifications are subject to change without notice
· DW-86L338J/490J/578/628/959 stainless steel interior optional