-86°C Vertical ULT Freezer

Dual cascading system • efficient heat exchange • low-pressure operation

Widely used in scientific research institutions, disease control centers, universities, biotechnology companies, hospitals, blood banks, deep-sea fisheries, electronics manufacturers, and chemical industries.

Ideal for long-term storage of red and white blood cells, skin, bone, bacteria, viruses, biological products, marine specimens, as well as for low-temperature testing of electronic components and special materials.



Product Advantages

Efficient Heat Exchange

Shell-and-tube heat exchanger with Temprite oil separator delivers a stable and efficient refrigeration system

Precise Temperature Control

Microcomputer controlled system allows temperature control accuracy up to ±0.1° C, adjustable internal temperature ranging from -40°C to -86°C with uniform temperature distribution

Low Noise Operation

Silent compressor and optimized noise reduction design of compressor chamber achieves operating noise levels below 60 dB

Thermal Insulation

130mm ultra-thick insulation, double-layered door and 6-layer door seal ensures exceptional temperature retention

Advanced Refrigeration System

Optimized dual-stage cascade referigeration system with compressor that offers powerful, energy-saving and efficient operation

Safe & Secure

Start-up delay protection, power-cut protection, password protection, high/low temperature alarm, power failure alarm, dirty condenser alarm, high ambient temperature alarm, sensor fault alarm, low battery level alarm, open door alarm etc.

Interface and Monitoring

7" LCD display with intuitive operation and real-time running status

Long-Term Data Storage

Operating temperature and alarm data can be stored over 10 years

Product Parameters

Model			DW-86L102
Approved Regions			Asia-Pacific, Southeast Asia, Europe, CIS, Middle East, India, South America, Africa
Technical Data	Cabinet Type		Upright
	Climate Class		SN
	Cooling Type		Direct cooling
	Defrost Mode		Manual
	Refrigerant		HFC
	Sound Level (dBA)		48
Performance	Temperature Range (°C)		-40 ~-86
Control	Controller		Microprocessor
	Display		7-inch touch screen LCD
Electrical Data	Power Supply (V/Hz)		220/50-220/60-115/60
	Power (W)		558
	Electrical Current (A)		5
Dimensions	Capacity (L/Cu.Ft)		102/4.28
	Net/Gross Weight (approx)	(kg)	160/194
		(lbs)	352/427
	Interior Dimension (W×D×H)	(mm)	450×530×430
		(in)	17.7×20.9×16.9
	Exterior Dimension (W×D×H)	(mm)	1130×875×770
		(in)	44.5×34.3×30.3
	Packing Dimension (W×D×H)	(mm)	1210×972×840
		(in)	47.6×38.3×33.1
	20GP/40GP/40HQ		9/20/20
	High/Low Temperature		Y
	Hot Condenser		Y
Alarms	Power Failure		Y
	High/Low Voltage		Y
	Sensor Error		Y
	Low Battery		Y
	High Ambient Temperature		Y
	Door Ajar		Y
	Filter Dirty Alarm		Y
	Voltage Exceed Alarm		Y
Accessories	Caster Wheels		Y
	Foot		Y
	Service Port/Quantity		Y/2
	Shelves/ Inner Doors		1/1
	USB Interface		Y
	Remote Alarm		Y
	5V Power Supply Port		Optional
	Temperature Chart Recorder		Optional
	RS485 Port		Y
Other	Certification		/

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Product Parameters

Model		DW-86L102
Operational Performance	Temperature Setting Mode	Digital (Control Accuracy 1°C)
	Temperature Sensor	PT100
	Power Consumption (kWh/24h)	8.9
Material & Build	Exterior Material	Color coated cold rolled steel
	Interior Material	Color coated steel plate
	Insulation	CFC-free foam
	Outer Door	Single solid door
	Door Thickness (mm)	85
	Cabinet Thickness (mm)	130
	Inner Door	Single solid door
	External Door Sealing Structure	Double seal on external door seal strip
	Inside Door Sealing Structure	Single seal on interior door seal strip
	Padlock Latch/Quantity	Y/1
	Built-in Key Door Lock/Quantity	N
	Electroning Magnetic Lock	N
Product Accessories	Shelves Material	Stainless steel
	Adjustable Shelves	Y
	Shelves Dimension (mm)	457×500
	Static Feet	Y
	Compressor Type	Hermetic reciprocating
	Compressor Brand	SECOP
	Compressor Quantity	2
	Refrigerant Model	R404A/R290/R508B

Model		DW-86L102
Product Accessories	Maximum Capacity (2 Inch Racks)	3
	Maximum Capacity (2 Inch Boxes)	63
	Maximum Capacity (Samples in 10×10 Cryo Boxes)	6300
Function Parameters	Ambient Temperature Display	Y
	Boot Delay Protection	Y
	Boot Delay Design	Y
	Password Protection	Y
	Power Failure Interval Protection	Y
	Compressor Start Delay Protection	Y
Evaporator	Type	Copper tube
	Material	TP2M
Condenser	Type (Forced Cooling)	Fin condenser
	Material (Forced Cooling)	TP2M
	External Fan	EBM
	Internal Temperature Uniformity (°C)	±4
	Internal Temperature Accuracy (°C)	0.1
	Cooling Speed (Mins)	240
	Holdover time at 25°C ambient (From -80°C to -50°C)(mins)	120
	Backup battery / battery life (hrs)	Y/48
	Temperature recorder battery life (hrs)	36