

# Smart Frequency Conversion ULT Freezer



DW-86L579/729/829/959BPT

## Scope of Application

Suitable for long term storage applications and compliant with typical storage requirements found in hospitals, disease control and prevention centres, scientific research institutions, biomedical engineering institutes, the agriculture/fishery sector as well as the electronics and chemical industries.

## Friendly Design

- Intelligent frequency conversion technology
- Low noise design
- Safe and secure
- Precise temperature control to ensure the cabinet temperature stability

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## Product Parts



### Smart Full-size Touch Screen

10 inch capacitive touch screen, state-of-art UI design coupled with sample management system to provide the optimal user experience



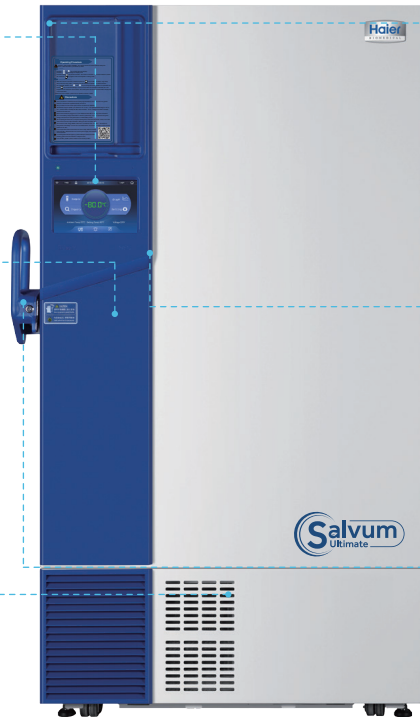
### Pressure Equalisation Port

Heated port with spring assisted mechanism to prevent icing on the vent allows users to reopen the main door soon after entering. Adopts chromium plating, rust-proof



### Energy Saving Refrigeration

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



DW-86L829BPT



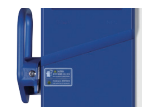
### Multilayered Sealing Structure

Multilayered gaskets decrease heat loss and guarantee excellent warm up times in the event of a power failure



### USB Interface

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



### Improved Handle Design

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

## Advanced Hardware System



### Smart Full-size Touch Screen

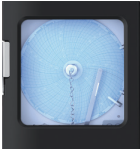
10 inch capacitive touch screen, state-of-art UI design coupled with sample management system to provide the optimal user experience.



### HC & Variable Frequency Drive Refrigeration System for Additional Energy Saving

Advanced innovative design delivers superior energy savings. The energy consumption is down to a single digit.

## Product Accessories (Optional)



### Temperature Recorder (Optional)

- Front-mounted.
- For independent temperature monitoring.

### CO<sub>2</sub> Backup System

#### Advantage

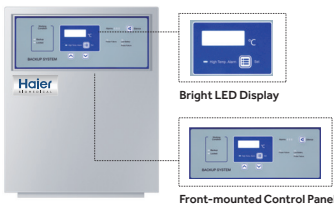
- Small footprint, light and easy for installation
- User adjustable temperature setting
- Simple to program and operate
- Flexible – Can be installed on any ULT freezer, which has a port hole
- The CO<sub>2</sub> injection pipe is designed in combination of filter, to prevent the blockage of CO<sub>2</sub> back-up system

#### Safety

- Liquid CO<sub>2</sub> test button to ensure the backup system is working
- Low CO<sub>2</sub> alarm system alerts the user when liquid CO<sub>2</sub> bottle is low in liquid level
- Ultra-low sound level compressors

#### Reliability


- Stainless steel covering, more elegant
- Stainless steel input pipe design, allows for flexibility and ease of cylinder positioning
- Durable battery lasts up to 48 hours




### LN<sub>2</sub> Backup System

#### Features

- Interlocked design to turn off the LN<sub>2</sub> injection when the door is opened
- Protection circuit to prevent over-charging battery
- Light weight and portable design, suitable for installation on top of a freezer
- Alarm functions to include low battery and sensor error

Rack Type	ULT Freezer	Freezer Rack						Freezer Rack Quantity	Box Capacity
		CAT.NO.	Model	Material	Layout (Rows*Columns)	Box Type	Dimensions (D*W*H)(mm)		
 Sliding-drawer freezer rack	DW-86L579BPT	433001	(EXP) DCJ-55-B (SUS201)	SUS201	5*5	2 inch	686*141*291	16	400
	DW-86L729BPT							20	500
	DW-86L829BPT							24	600
	DW-86L959BPT							28	700
	DW-86L579BPT	433002	(EXP) DCJ-55-B (SUS304)	SUS304	5*5	2 inch	686*141*291	16	400
	DW-86L729BPT							20	500
	DW-86L829BPT							24	600
	DW-86L959BPT							28	700

Rack Type	ULT Freezer	Freezer Rack						Freezer Rack Quantity	Box Capacity
		CAT.NO.	Model	Material	Layout (Rows*Columns)	Box Type	Dimensions (D*W*H)(mm)		
 Side-access freezer rack	DW-86L579BPT	4330012	(EXP) DCJ-55-A (SUS304)	SUS304	5*5	2 inch	686*141*291	16	400
	DW-86L729BPT							20	500
	DW-86L829BPT							24	600
	DW-86L959BPT							28	700

# Smart Frequency Conversion ULT Freezer

## Optional IoT Software System



### Simplified Sample Management Experience

Optional 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 portable tablet, simple and reliable.

#### A Quicker product access, identification and retrieval

Instead of a manual system, the one-gun, one-code and one-key operation plus touch screen synchronization means you can access and retrieve your samples within seconds.

#### B 24-hour sample protection

Using Haier Biomedical's app and IoT technology the unit can be monitored and can self-diagnose faults, ensuring you are always aware of your unit's status and able to make real-time and informed choices to protect your samples.

#### C Cloud data storage available

Store hundreds of millions of scientific research and sample information in the cloud server.

## Friendly Design



### Safe and Secure

Standard equipped with key lock, padlock and optional electromagnetic lock, fingerprint lock, providing multiple safeguards for sample safety.



### Super Energy Efficient with Three Environmentally Friendly Innovations

Ultra-low power consumption, down to less than 10kWh/day, ensuring a world leading energy saving performance.



### Low Noise

Special noise-reduction design plus super silent compressor technology and energy-saving fan, considerably lowers noise level.



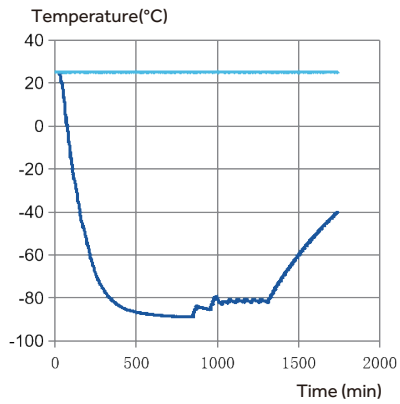
### Optimized Insulation

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%.

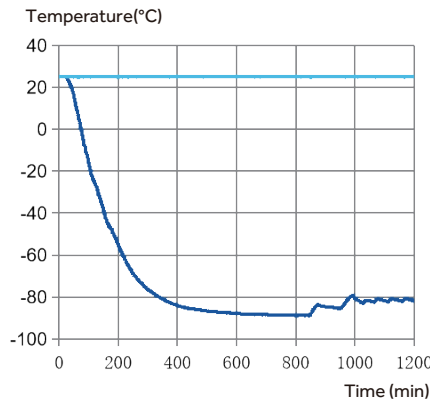
# Smart Frequency Conversion ULT Freezer

## Temperature Curve

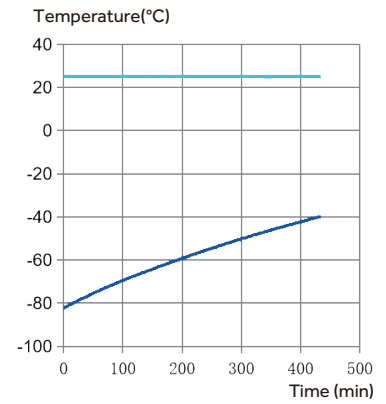
DW-86L959BPT Typical Performance Characteristics



Comprehensive Curve



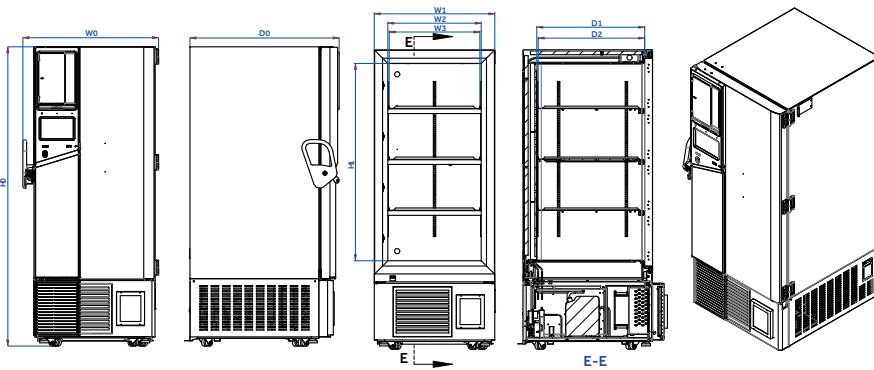
Temperature Cool Down Curve



Temperature Recover Curve

— Amb temp  
— Cen temp

## Product Dimensions



### Parameter Description:

- W0--Overall width of the machine
- W1--Outer width of the cabinet
- W2--Inner liner width
- W3--Width of inner shelf  
(Width of shelf for effective placement of freezing rack)
- D0--Overall depth of the machine
- D1-- Inner liner depth
- D2-- Inner depth of shelf  
(Depth of shelf for effective placement of freezing rack)
- H0--Overall height of the machine
- H1--Inner liner height

Parameter	W0	W1	W2	W3	H0	H1	D0	D1	D2
DW-86L579BPT	895mm	800mm	620mm	602mm	1980mm	1310mm	998mm	716mm	706mm
DW-86L729BPT	1046mm	946mm	766mm	750mm	1980mm	1310mm	998mm	716mm	706mm
DW-86L828BPT	1145mm	1050mm	870mm	854mm	1980mm	1310mm	998mm	716mm	706mm
DW-86L959BPT	1296mm	1196mm	1016mm	1000mm	1980mm	1310mm	998mm	716mm	706mm

# Smart Frequency Conversion ULT Freezer

## Specifications



Model		DW-86L579BPT	DW-86L729BPT	DW-86L829BPT	DW-86L959BPT	
Technical Data	Cabinet Type	Upright	Upright	Upright	Upright	
	Climate Class	N	N	N	N	
	Cooling Type	Direct Cooling	Direct Cooling	Direct Cooling	Direct Cooling	
	Defrost Mode	Manual	Manual	Manual	Manual	
	Refrigerant	HC	HC	HC	HC	
Performance	Sound Level (dB(A))	43.5	43.5	43.5	47	
	Cooling Performance (°C)	-86	-86	-86	-86	
Control	Temperature Range (°C)	-40~-86	-40~-86	-40~-86	-40~-86	
	Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	
Electrical Data	Display	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	
	Power Supply (V/Hz)	100-230/50/60	100-230/50/60	208-230/50/60   100-230/50/60	208-230/50/60   100-230/50/60	
Dimensions	Max Power (W)	1100	1100	1400	1750	
	Capacity (L/Cu.Ft)	579/20.4	729/25.7	829/29.2	959/33.9	
	Net/Gross Weight	kg	325/355	350/385	380/415	450/485
		lbs	716.5/782.6	771.6/848.8	837.7/914.9	992.1/1069.2
	Interior Dimension (W*D*H)	mm	620*716*1310	766*716*1310	870*716*1310	1016*716*1310
		in	24.4*28.2*51.6	30.2*28.2*51.6	34.3*28.2*51.6	40.0*28.2*51.6
	Exterior Dimension (W*D*H)	mm	895*998*1980	1046*998*1980	1145*998*1980	1296*998*1980
		in	35.2*39.3*78.0	41.2*39.3*78.0	45.1*39.3*78.0	51.0*39.3*78.0
	Packing Dimension (W*D*H)	mm	953*1071*2127	1105*1066*2117	1204*1072*2125	1365*1102*2164
		in	37.6*42.2*83.8	43.6*42*83.4	47.5*42.3*83.7	53.8*43.4*85.2
Alarms	Container Load (20'/40'/40'H)	12/24/24	10/20/20	8/20/20	8/16/16	
	High/Low Temperature	Y	Y	Y	Y	
	Hot Condenser	Y	Y	Y	Y	
	Power Failure	Y	Y	Y	Y	
	High/Low Voltage	Y	N	Y	Y	
	Sensor Error	Y	Y	Y	Y	
	Low Battery	Y	Y	Y	Y	
	High Ambient Temperature	Y	Y	Y	Y	
	Door Ajar	Y	Y	Y	Y	
Start-up Delay	Y	Y	Y	Y		
Accessories	Caster	Y (4)	Y (4)	Y (4)	Y (4)	
	Leveling Feet	Y (2)	Y (2)	Y (2)	Y (2)	
	Porthole	2 rears, (25mm) diameter	2 rears, (25mm) diameter	2 rears, (25mm) diameter	2 rears, (25mm) diameter	
	Inner Doors	4	4	4	4	
	Shelves	3- stainless steel adjustable shelves	3- stainless steel adjustable shelves	3- stainless steel adjustable shelves	3- stainless steel adjustable shelves	
	Shelf Dimensions (W*D) (mm)	606*650	752*650	856*650	1002*650	
	Max. Load per Shelf (kg)	72	90	108	126	
	Freezer Racks Quantity (2" boxes)	16	20	24	28	
	Capacity (2" boxes)	400	500	600	700	
	USB Interface	Y	Y	Y	Y	
	Remote Alarm	Y	Y	Y	Y	
	5V Power Supply Port	Y	Y	Y	Y	
	Temperature Chart Recorder	Optional	Optional	Optional	Optional	
	RS232/485 Port	NA/Standard	NA/Standard	NA/Standard	NA/Standard	
Certifications	CO <sub>2</sub> Backup System	Optional	Optional	Optional	Optional	
	LN <sub>2</sub> Backup System	Optional	Optional	Optional	Optional	
	Certification	CE, UL, ENERGY STAR	CE, UL, ENERGY STAR	CE, ENERGY STAR   UL, ENERGY STAR	CE, ENERGY STAR   UL, ENERGY STAR	

Haier Biomedical reserves the right to change products and specifications without prior notice.