

# 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

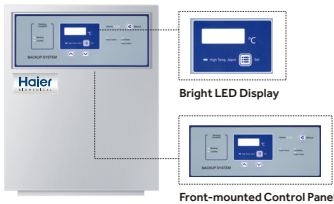
- Stainless steel covering, more elegant
- Stainless steel input pipe design, allows for flexibility and ease of cylinder positioning
- Durable battery lasts up to 48 hours





### 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	CAT.NO.	Material	Rack Layout (Rows* Columns)	Box Type	Maximum Box Dimensions (mm)	Rack Dimensions (D*W*H)(mm)	Packing Dimensions (D*W*H)(mm)	Freezer Rack Quantity	Freezer Box Quantity	Cryo Tube Quantity (2ml)	
 Sliding-drawer freezer rack	DW-86L579BPT	433001	SUS201	5*5	2 inch	133*133*53	686*141*291	730*160*310	16	400	40000
	DW-86L729BPT								20	500	50000
	DW-86L829BPT								24	600	60000
	DW-86L959BPT								28	700	70000
	DW-86L579BPT	433002	SUS304	5*5	2 inch	133*133*53	686*141*291	730*160*310	16	400	40000
	DW-86L729BPT								20	500	50000
	DW-86L829BPT								24	600	60000
	DW-86L959BPT								28	700	70000

Rack Type	CAT.NO.	Material	Rack Layout (Rows* Columns)	Box Type	Maximum Box Dimensions (mm)	Rack Dimensions (D*W*H)(mm)	Packing Dimensions (D*W*H)(mm)	Freezer Rack Quantity	Freezer Box Quantity	Cryo Tube Quantity (2ml)	
 Side-access freezer rack	DW-86L579BPT	433012	SUS304	5*5	2 inch	133*133*53	686*141*291	730*160*310	16	400	40000
	DW-86L729BPT								20	500	50000
	DW-86L829BPT								24	600	60000
	DW-86L959BPT								28	700	70000

# 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

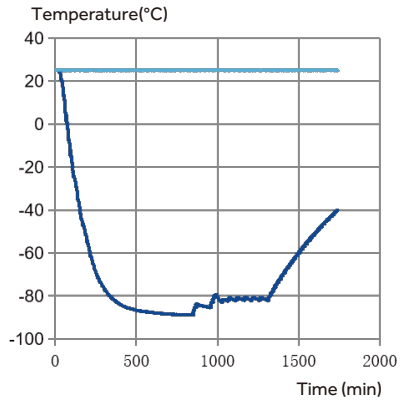
Double foaming for both inner and outer doors and five-layer sealing design and optimized super-thick VIP thermal insulation technology, extends temperature holdover time during power failure and increases insulation efficiency by 20%.

# Smart Frequency Conversion ULT Freezer

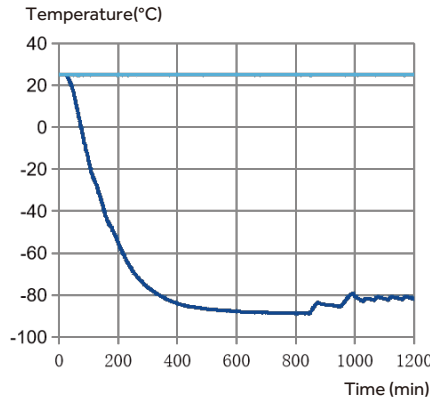
## Temperature Curve



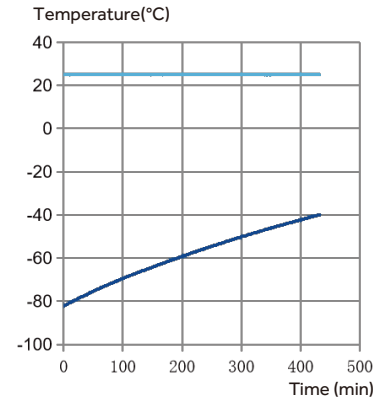
DW-86L959BPT Typical Performance Characteristics



Comprehensive Curve



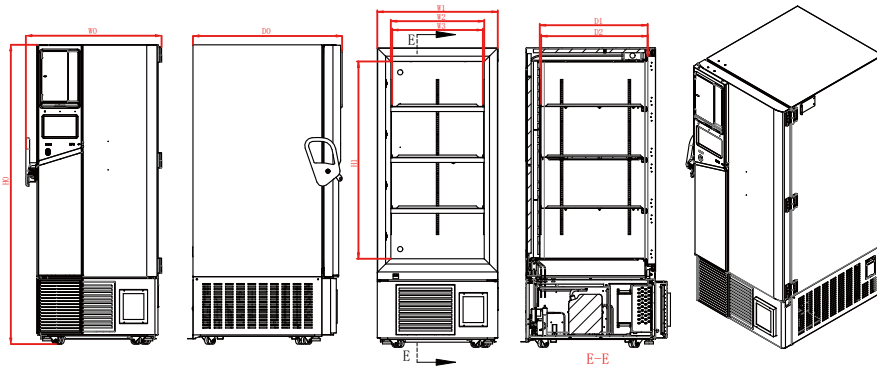
Temperature Cool Down Curve



Temperature Recover Curve

— Cen temp  
— Amb 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	
	Sound Level (dB(A))	43.5	43.5	43.5		47	
Performance	Cooling Performance (°C)	-86	-86	-86		-86	
	Temperature Range (°C)	-40~-86	-40~-86	-40~-86		-40~-86	
Control	Controller	Microprocessor	Microprocessor	Microprocessor		Microprocessor	
	Display	Touch Screen LCD	Touch Screen LCD	Touch Screen LCD		Touch Screen LCD	
Electrical Data	Power Supply (V/Hz)	100-230/50/60	100-230/50/60	100-230/50/60	208-230/50/60	100-230/50/60	208-230/50/60
	Electrical Current (A)	14	14	15	6	20	7
Dimensions	Capacity (L/Cu.Ft)		579/20.4	729/25.7	829/29.2		959/33.9
	Net/Gross Weight (approx)	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	975*1095*2130	1120*1090*2130	1240*1080*2130		1410*1160*2185
		in	38.4*43.1*83.9	44.1*42.9*83.9	48.8*42.5*83.9		55.5*45.7*86.0
Container load (20'/40'/40'H)		12/24/24	10/22/22	5/11/11		5/10/10	
Alarms	High/Low Temperature	Y	Y	Y		Y	
	Hot Condenser	Y	Y	Y		Y	
	Power Failure	Y	Y	Y		Y	
	High/Low Voltage	Y	Y	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	Y	Y		Y	
	Foot	Y	Y	Y		Y	
	Porthole	Y/2	Y/2	Y/2		Y/2	
	Shelves/Inner Doors	3/4	3/4	3/4		3/4	
	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	
	RS485 Port	Y	Y	Y		Y	
	CO <sub>2</sub> Backup System	Optional	Optional	Optional		Optional	
	LN <sub>2</sub> Backup System	Optional	Optional	Optional		Optional	
Certifications	CE	Y	Y	/	Y	/	Y
	UL	Y	Y	Y	/	Y	/
	ENERGY STAR	Y	Y	Y	Y	Y	Y

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