

# UltraEco ULT Freezer

## Redefining Cold Storage Excellence

Discover the UltraEco ULT freezer, the most energy efficient ULT freezer in the world. Our UltraEco ULT freezer uses energy-saving technology to deliver precise temperature control for long-term storage of biological samples and reagents, ensuring the integrity and stability of these precious materials. But that's just one consideration. It is equally important that today's storage solutions are energy efficient and environmentally friendly.



World's No.1  
Energy Efficiency



Ultra-Low  
Carbon Footprint



Superior  
Performance



Uncompromising  
Safeguards



User-Centric  
Convenience

\*Based on ENERGY STAR certified ULT freezer energy data (as of Feb. 2026)



DW-86L580BPT/730BPT/  
830BPT/960BPT

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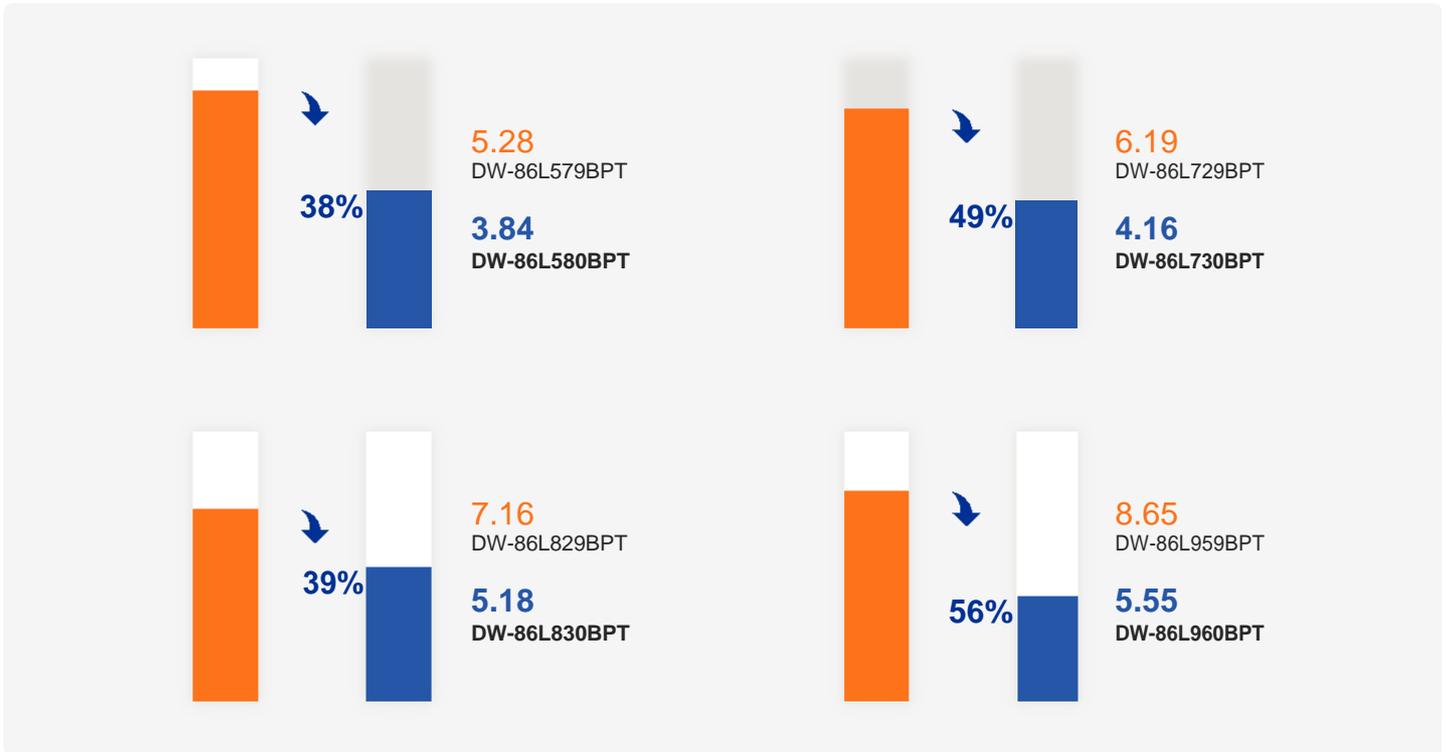


Haier Biomedical  
International

**Optimal Energy Efficient Performance**

The UltraEco ULT freezer – an ultra-low impact, greener alternative for cold storage  
The UltraEco ULT freezer combines a hydrocarbon refrigerant, inverter compressor technology and new sustainable material science to significantly reduce electricity consumption:

**Power Consumption (kWh/day/2”cryobox)**



**Enhanced Performance**

An upgraded compressor, enhanced refrigeration system and new sustainable insulation material deliver a range of benefits compared to the previous generation of ULT freezers.

**49%**

Decrease in Energy Consumption

**15 min**

1 Min Door Opening Recovery Time

**80%**

Faster Re-Entry Time

**1 hour**

Improvement in warm-up time from -80 to -50°C

**42dB(A)**

Lower Sound Level

**±2°C**

Outstanding Temperature Uniformity

\*Above data based on DW-86L730BPT

**Green and Environmental Friendly**



Naturally occurring hydrocarbon refrigerants and insulation materials are a feature of the UltraEco ULT freezer – the first of its kind in this sector. These non-toxic, eco-friendly materials are more sustainable, non-ozone depleting and reduce the carbon footprint, providing a greener, more environmentally- friendly insulation solution than other current generation freezers.

**Safety and Reliability**

- Dual sensors deliver precise temperature change detection, doubling sample storage security.
- The compressor’s self-diagnostic function triggers instant alarms upon malfunctions, enabling prompt maintenance to prevent sample damage.
- VIP insulation ensures 6-hour thermal retention, protecting samples during brief power outages.
- Optional built-in independent backup system guarantees sample safety even during extended power failures.

**Ergonomic Design**

**10 Inch Capacitive Touch Screen**  
State-of-art UI design coupled with sample management system to provide the optimal user experience

**Innovative Light Bar Design**  
Clearly indicate the operating status of the freezer and offer strengthened visual alarm indications for effortless at-a-glance monitoring



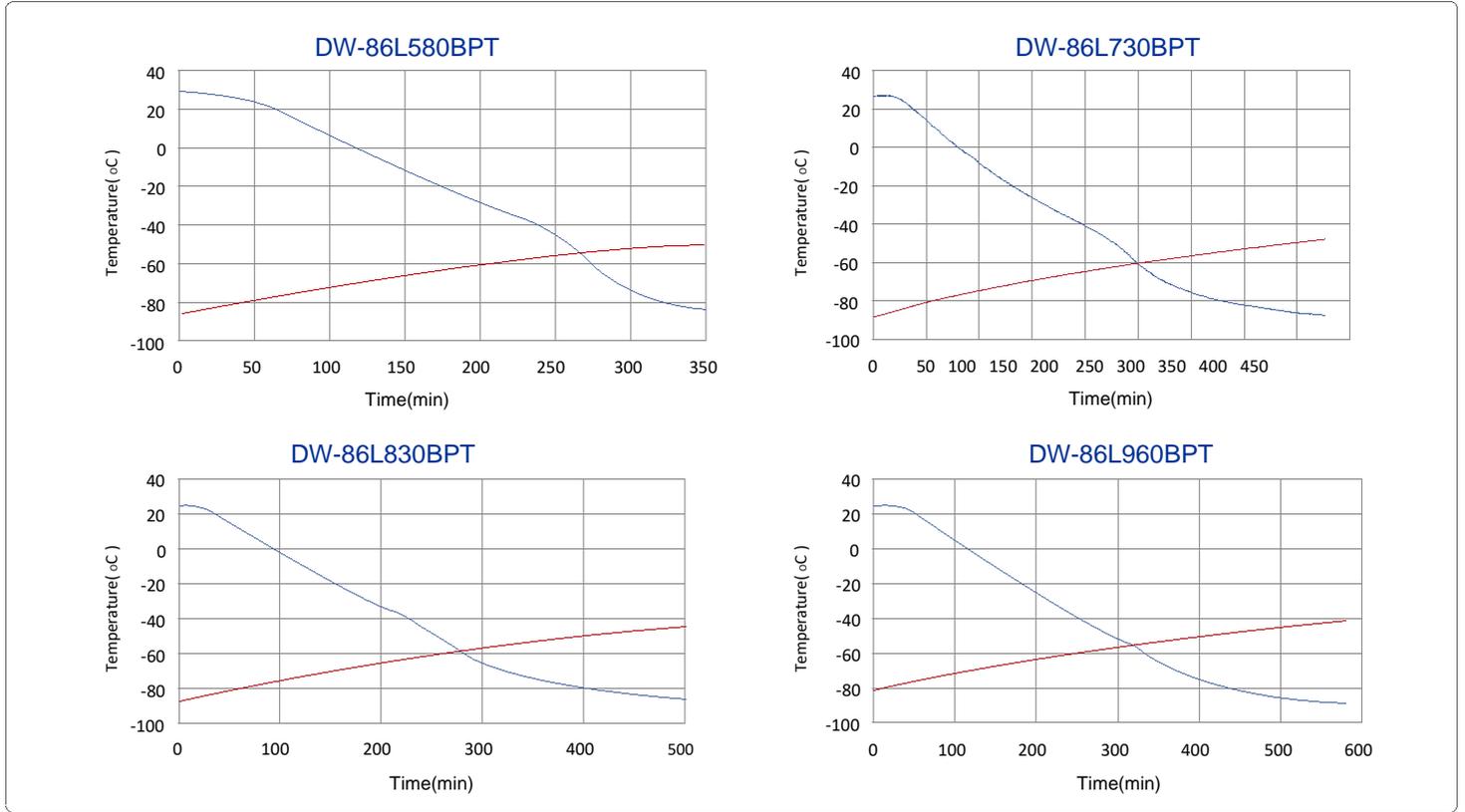
**Improved Pressure Relief Port**  
Re-entry time shortened to just 60 seconds

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

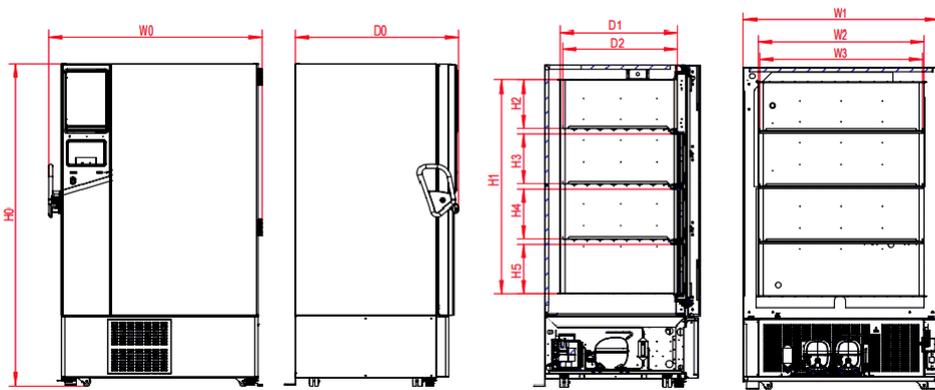
**Performance Curve**

**Temperature Pull-down & Pull-up Curves at 25°C Ambient**

— Pull-down  
— Pull-up



**Product Dimensions**



**Remark**

Parameter	Description
W0	Overall Unit Width
W1	Cabinet Exterior Width
W2	Inner Liner Width
W3	Shelf Clear Width (for freezer racks)
D0	Overall Unit Depth
D1	Inner Liner Depth
D2	Maximum Item Storage Depth
H0	Overall Unit Height
H1	Inner Liner Height
H2	1st Layer Height
H3	2nd Layer Height
H4	3rd Layer Height
H5	4th Layer Height
H6	5th Layer Height

Code Model	W0/mm	W1/mm	W2/mm	W3/mm	H0/mm	H1/mm	H2/mm	H3/mm	H4/mm	H5/mm	D0/mm	D1/mm	D2/mm
DW-86L580BPT	890	795	620	604	1960	1310	298	303	303	301	980	716	700
DW-86L730BPT	1046	946	766	750	1960	1310	298	303	303	301	980	716	700
DW-86L830BPT	1145	1050	870	854	1960	1310	298	303	303	301	980	716	700
DW-86L960BPT	1296	1196	1016	999	1960	1310	298	303	303	301	980	716	700

**Specifications**

Model		DW-86L580BPT	DW-86L730BPT	DW-86L830BPT	DW-86L960BPT	
Technical Data	Cabinet Type	Upright	Upright	Upright	Upright	
	Ambient Temperature (°C)	10-32	10-32	10-32	10-32	
	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))	≤42	≤42	≤42	≤40	
Performance	Cooling Performance (°C)	-86	-86	-86	-86	
	Temperature Range (°C)	-40~-90	-40~-90	-40~-90	-40~-90	
Control	Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	
	Display	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	LCD Touchscreen	
Electrical Data	Power Supply (V/Hz)	100~230/50/60	100~230/50/60	100~230/50/60	100~230/50/60	
	Max Power (W)	800	900	1050	900	
Dimensions	Capacity (L/Cu.Ft)	580/20.5	730/25.8	830/29.3	960/33.9	
	Net/Gross Weight	kg	277/320	295/346	325/377	350/406
		lbs	632.7/718.7	694.5/811.3	740.8/859.8	826.7/939.2
	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	890*980*1960	1046*980*1960	1145*980*1960	1296*980*1960
		in	35.2*38.6*77.2	41.2*38.6*77.2	45.1*38.6*77.2	51.0*38.6*77.2
	Packing Dimension (W*D*H)	mm	960*1150*2160	1110*1150*2160	1220*1150*2160	1400*1150*2160
		in	37.8*42.3*85	43.3*45.3*85	48*45.3*85	55.1*45.3*85
	Cabinet Width (without handle and hinge)	mm	795	946	1050	1196
Container Load (20/40/40H)		12/24/24	10/20/20	8/20/20	8/16/16	
Functions	High/Low Temperature Alarm	Y	Y	Y	Y	
	Hot Condenser Alarm	Y	Y	Y	Y	
	Power Failure Alarm	Y	Y	Y	Y	
	High/Low Voltage Alarm	Y	Y	Y	Y	
	Sensor Error Alarm	Y	Y	Y	Y	
	Low Battery Alarm	Y	Y	Y	Y	
	High Ambient Temperature Alarm	Y	Y	Y	Y	
	Door Ajar Alarm	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	3*rear, (15mm)diameter	3*rear, (15mm)diameter	3*rear, (15mm)diameter	3*rear, (15mm)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)	80	95	108	126	
	Freezer Racks Qty (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	N/A/Standard	N/A/Standard	NA/Standard		
CO <sub>2</sub> Backup System	Optional	Optional	Optional	Optional		
LN <sub>2</sub> Backup System	Optional	Optional	Optional	Optional		
Other	Certifications	CE, UL, ENERGY STAR	CE, UL, ENERGY STAR, DIN	CE, UL, ENERGY STAR, DIN	CE, UL, ENERGY STAR	

\*CE and UL certifications for models DW-86L580BPT and DW-86L960BPT are expected to be obtained in March 2026.

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