

# 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

**Qingdao Haier Biomedical Co., Ltd.**

No.280 Feng Yuan Road, High-tech Zone,  
Qingdao, 266111, P.R. China

E-mail: [inquiry@haierbiomedical.com](mailto:inquiry@haierbiomedical.com)

Website: [www.haiermedical.com](http://www.haiermedical.com)

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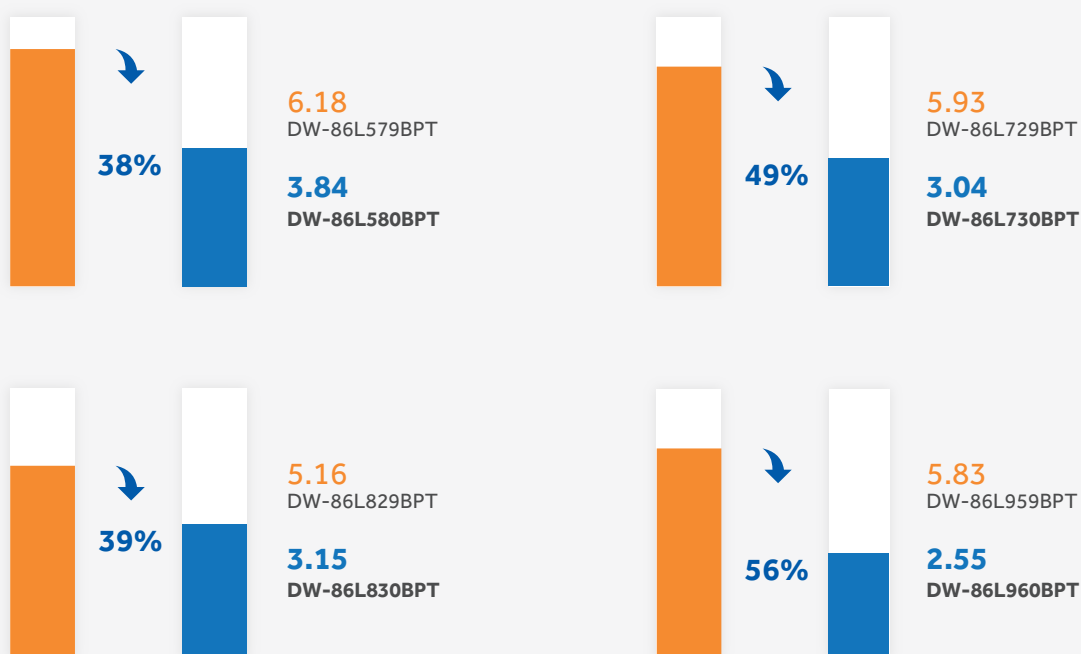
## Optimal Energy Efficient Performance



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/year/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



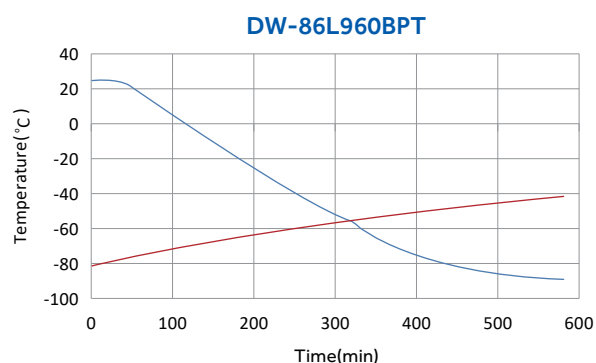
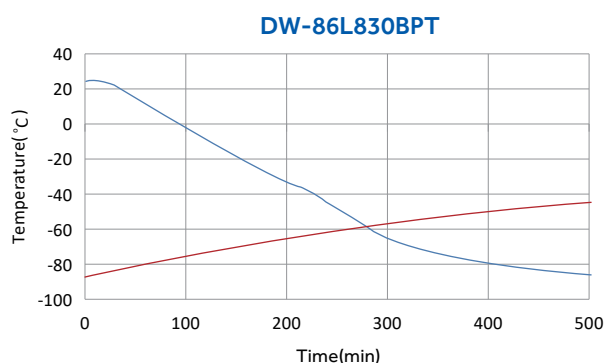
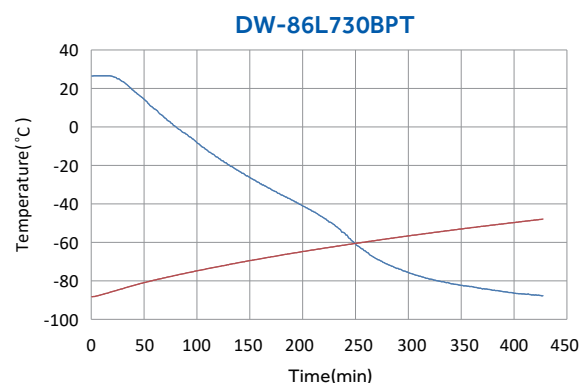
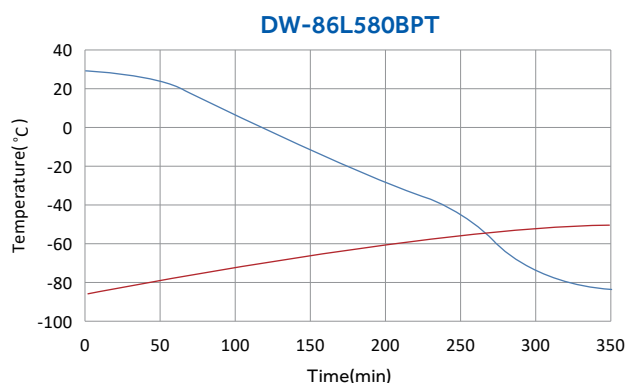
### USB Interface

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

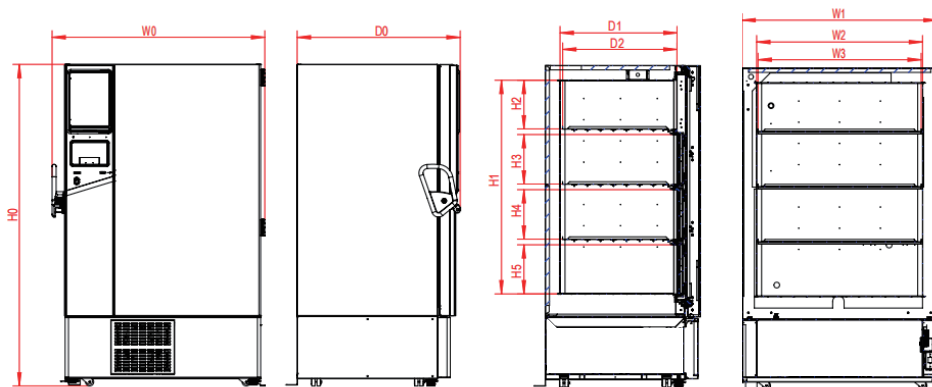
## Performance Curve

### 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<br>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  | 895   | 800   | 620   | 604   | 1970  | 1310  | 298   | 303   | 303   | 301   | 998   | 716   | 700   |
| DW-86L730BPT  | 1046  | 946   | 766   | 750   | 1970  | 1310  | 298   | 303   | 303   | 301   | 998   | 716   | 700   |
| DW-86L830BPT  | 1145  | 1050  | 870   | 854   | 1970  | 1310  | 298   | 303   | 303   | 301   | 998   | 716   | 700   |
| DW-86L960BPT  | 1296  | 1196  | 1016  | 999   | 1970  | 1310  | 298   | 303   | 303   | 301   | 998   | 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                                   | ≤46                                   | ≤40                                   |
| 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                                  |     | 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  | 287/326                               | 315/368                               | 336/390                               | 375/426                               |
|                 |                                          | 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  | 895*998*1970                          | 1046*998*1970                         | 1145*998*1970                         | 1296*998*1970                         |
|                 |                                          | in  | 35.2*39.3*77.6                        | 41.2*39.3*77.6                        | 45.1*39.3*77.6                        | 51.0*39.3*77.6                        |
|                 | 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 800                                | 946                                   | 1050                                  | 1196                                  |
| Functions       | Container Load (20'/40'/40'H)            |     | 12/24/24                              | 10/20/20                              | 8/20/20                               | 8/16/16                               |
|                 | 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                                     |
| Accessories     | Start-up Delay                           |     | Y                                     | Y                                     | Y                                     | Y                                     |
|                 | Caster                                   |     | Y(4)                                  | Y(4)                                  | Y(4)                                  | Y(4)                                  |
|                 | Leveling Feet                            |     | Y(2)                                  | Y(2)                                  | Y(2)                                  | Y(2)                                  |
|                 | Porthole                                 |     | 2*rear, (15mm)diameter                | 2*rear, (15mm)diameter                | 2*rear, (15mm)diameter                | 2*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)                 |     | 72                                    | 90                                    | 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.