Haier Biomedical
Intelligent Protection of Life Science

Stirling Compact ULT Freezer

Delivering cutting-edge ultra-low temperature storage solutions, featuring energy-efficient design and uncompromising temperature stability across a range of -20°C to -86°C. Boasting a compact footprint and advanced functionalities, it is the ideal choice for laboratories that prioritize both superior performance and cost efficiency in sample preservation.



Innovative Design

- Wide Temperature Range
- 100% Natural Refrigerants
- Ultra-Low Energy Consumption
- Compact & Flexible Design
- Superior Performance
- Minimized Maintenance

DW-86L100STL

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Product Features

Featuring a space-saving design, it offers full-performance ULT storage for benchtop setups, stacked arrangements, or undercounter installations.

Ideal for precisely regulated temperature changes across an expansive set point range of - 86°C to - 20°C, maintaining a temperature uniformity of ±2°C.

The advanced refrigeration system utilizes 100% natural refrigerants to reduce the impact on climate.

Optimized for energy efficiency delivering a power consumption of just 3 kWh/day at -80°C.

Improved pressure relief port, re-entry shortened to just 60 seconds.

The sound level is ≤ 42dB (A), creating a quiet environment.

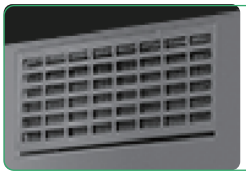
Adopting the PID temperature control technology enables precise temperature control and keeps the temperature fluctuation within ±0.5°C from -20°C to -86°C.

Innovative refrigeration technology without compressor and oil ensures safety, reliability and a long service life.

Ergonomic Design



7-inch LCD touchscreen for intuitive display and one-touch operation



Tool-free removable filter for easy cleaning



Ergonomic door handle for effortless operation and long durability





Standard USB port for easy data export



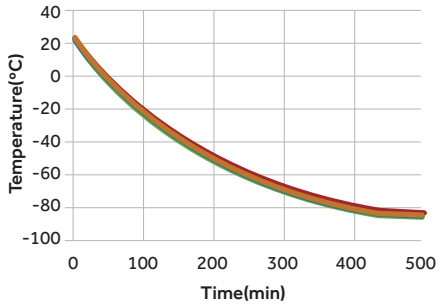
Test porthole for independent testing and simplified calibration



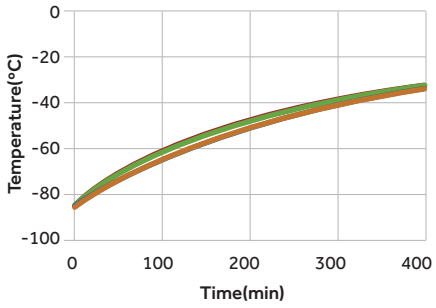
Dual inner door design minimizes cold air loss during door openings

Performance Curve

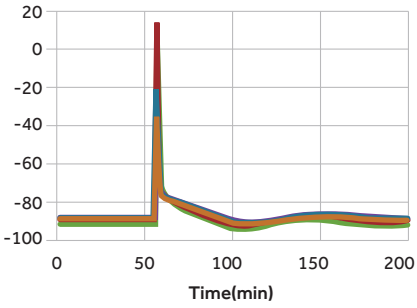
Pull-down to -80 °C: 6 hours



Pull-up from-80 °C to -50 °C: 3.7 hours



Temperature recovery to -75 °C after 1-min door opening*: 21 minutes

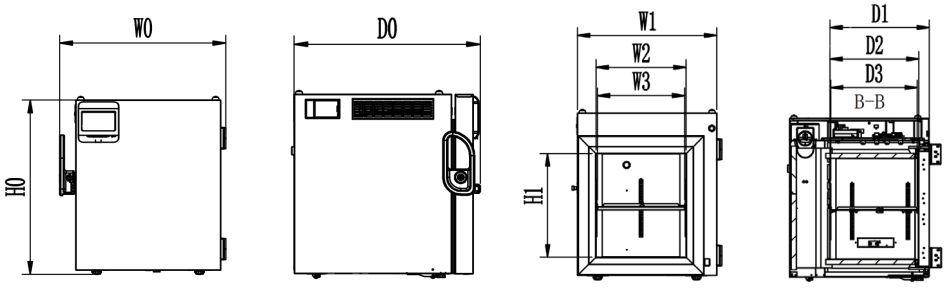


Ambient temp: 25°C | Set point: -80°C | Empty freezer test

Above data represents typical performance, not published specifications, and should not be used to set application parameters. Actual performance varies with load, storage format, operating conditions, test methods, and maintenance.

*Test condition: Empty cabinet, exterior door and all inner doors opened simultaneously.

Product Dimension Drawings



Remark
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
D3--Shelf Clear Depth (for freezer racks)
H0--Overall Unit Height
H1--Inner Liner Height

Model \ Code	W0	W1	W2	W3	D0	D1	D2	D3	H0	H1
DW-86L100STL	779mm	705mm	440mm	426mm	820mm	496mm	444mm	432mm	816mm	505mm

Specifications

	Model		DW-86L100STL	
Technical Data	Cabinet Type		Upright	
	Ambient Temperature (°C)		10~32	
	Cooling Type		Direct cooling	
	Defrost Mode		Manual	
	Refrigerant		HC	
	Sound Level (dB(A))		≤42	
Performance	Cooling Performance (°C)		-86	
	Temperature Range (°C)		-20~-86	
Control	Controller		Microprocessor	
	Display		LCD touchscreen	
Electrical Data	Power Supply (V/Hz)		220~240/50/60	110~120/50/60
	Max Power (W)		300	
Dimensions	Capacity (L/Cu.Ft)		100/3.5	
	Net/Gross Weight	kg	110/145	
		lbs	260.2/326.3	
	Interior Dimension (W*D*H)	mm	440*444*505	
		in	17.3*17.5*19.9	
	Exterior Dimension (W*D*H)	mm	779*820*816	
		in	30.7*32.3*32.1	
	Packing Dimension (W*D*H)	mm	850*920*1000	
		in	33.5*36.2*39.4	
	Cabinet Width (without handle and hinge)	mm	705	
	Container Load (20'/40'/40'H)		24/52/52	
Functions	High/Low Temperature Alarm		Y	
	Hot Condenser Alarm		N/A	
	Power Failure Alarm		Y	
	High/Low Voltage Alarm		N/A	
	Sensor Error Alarm		Y	
	Low Battery Alarm		Y	
	High Ambient Temperature Alarm		Y	
	Door Ajar Alarm		Y	
	Start-up delay		Y	
Accessories	Caster		Y	
	Leveling Feet		Y	
	Porthole		Y/1	
	Inner Doors		2	
	Shelves		1- stainless steel adjustable shelves	
	Shelf Dimensions (W*D) (mm)		425*430	
	Max. Load per Shelf (kg)		90	
	Freezer Racks Quantity (2" boxes)		6	
	Capacity (2" boxes)		72	
	USB Interface		Y	
	Remote Alarm		Y	
	5V Power Supply Port		Y	
	Temperature Chart Recorder		N/A	
	RS232/485 Port		N/A /Standard	
	CO_2 Backup System		Optional	
	LN_2 Backup System		Optional	
Others	Certifications		CE	/