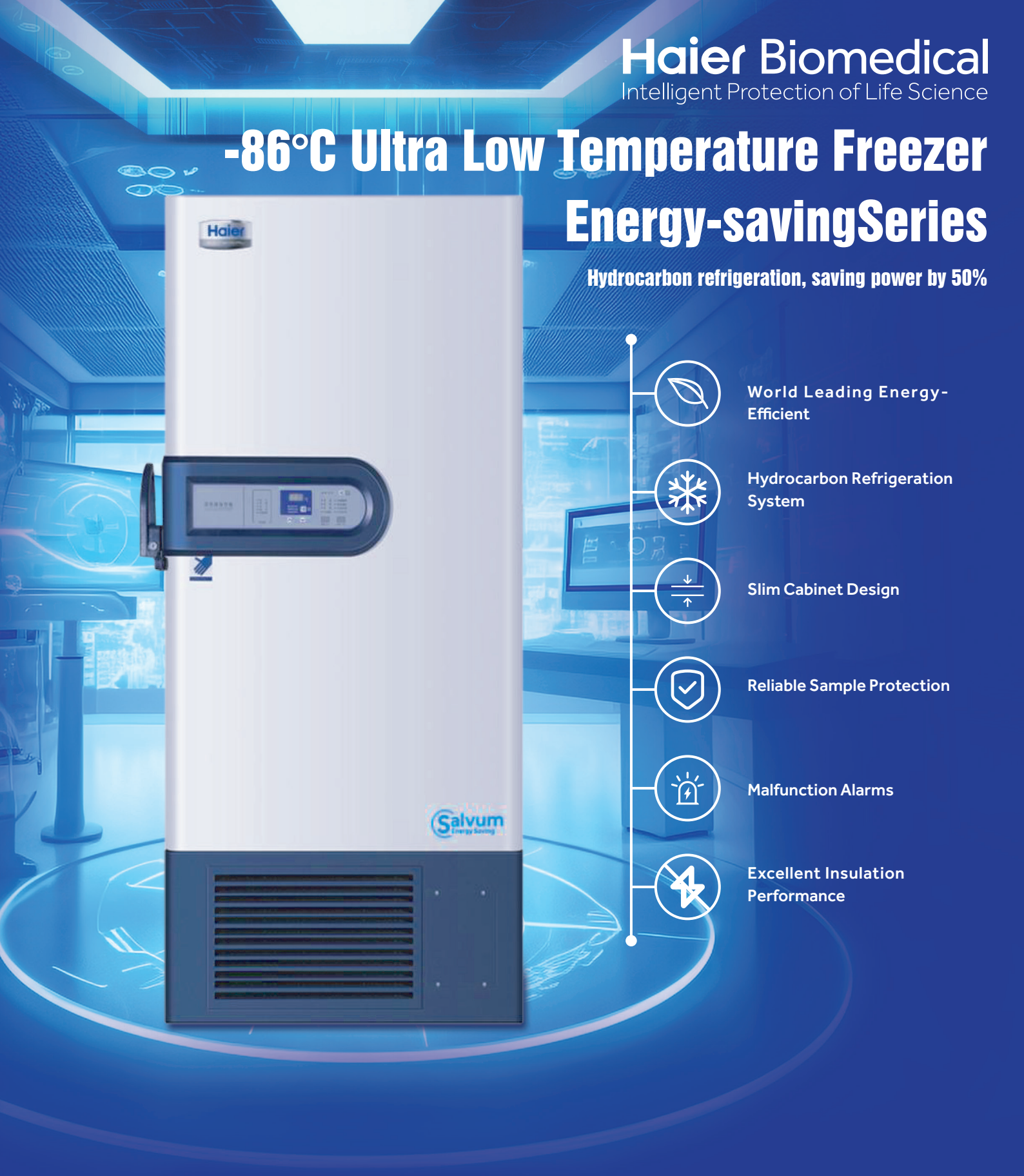
Haier Biomedical
Intelligent Protection of Life Science

-86°C Ultra Low Temperature Freezer
Energy-savingSeries

Hydrocarbon refrigeration, saving power by 50%



- World Leading Energy-Efficient
- Hydrocarbon Refrigeration System
- Slim Cabinet Design
- Reliable Sample Protection
- Malfunction Alarms
- Excellent Insulation Performance

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Oct, 2026

Haier Biomedical | Haier Biomedical International | Haier Biomedical International | Haier Biomedical International | Haier Biomedical International

Product Features

Field Proven Reliablity

- Unique insulated inner door design for four separate storage compartments to minimize frost buildup inside the chamber
- Specialized control system design for a well-balanced operation of cascade refrigeration system
- Positive field proven reliability record

Safety

- Malfunction alarms including high and low temperature, power failure, sensor error, clean-filter, and extremely high ambient
- Capable of producing two types of alarm outputs: audible buzzer and visible flashing light
- Multiple built-in system protection features including user-settable protection code for controls, user settable delay to start, voltage compensation system, and protection against extreme high voltages
- Door open feature standard and USB port for temperature data downloading standard on upright models
- Remote alarm contacts

Energy Saving

- Unique door seal design for the minimum loss of cold temperature during a door opening
- High performance VIP insulation panels to minimize cabinet heat gain and to improve temperature stability
- Patented cabinet insulation system designed for optimal performance of cold storage temperature and minimal frost buildup
- Unique design of independent insulated inner door systems for independent access of storage space to provide the maximum protection of stored samples

Installation & Application

- Wide range operating voltage system from 185V to 260V designed to allow units installed in areas with poor voltage condition
- Suitable for 10°C to 32°C ambient temperature
- Input voltage and ambient temperature shown simultaneously for ease of monitoring environmental conditions
- Robust door latch designed for secure door closing
- Compact casters for ease of maneuvering

Key Design Features

- Microprocessor-controlled system designed for controllable range of -40°C to -86°C for cabinet space with 1°C increment
- Large LED display for cabinet temperature, set temperature, ambient temperature, and input voltage
- Settable high temperature and low temperature alarms
- Automatic clean-filter alarm and sensor error alert
- Adjustable storage shelf height
- Optional temperature recorder, storage racks and storage boxes

Low Sound Level

- Specialized refrigeration system design using whisper quiet fan and compressors
- Freezer chassis designed to absorb vibration and sound

Product Parts



4 Individual Removable Foam Inner Doors

- 4 individual inner doors can be opened independently to minimize frost buildup inside the chamber
- Unique door seal design for the minimum loss of cold temperature during a door opening
- Compatibility with existing racking system from competitors
- Stainless steel handle to ensure proper strength for door latching
- Some interior door handles have been upgraded to stainless steel for more comfortable door opening experience



Excellent Doors Seals

- Total of five gaskets to safeguard the freezer temperature, including four seals for the exterior door, one for each inner door



- Optimized slideway design, easier to open and close the door



Pressure Equalization Port

- Heated port with spring-assisted mechanism to prevent icing on the vent
- Allows re-accessing the freezer after initial door opening
- Adopts chromium plating, rust-proof



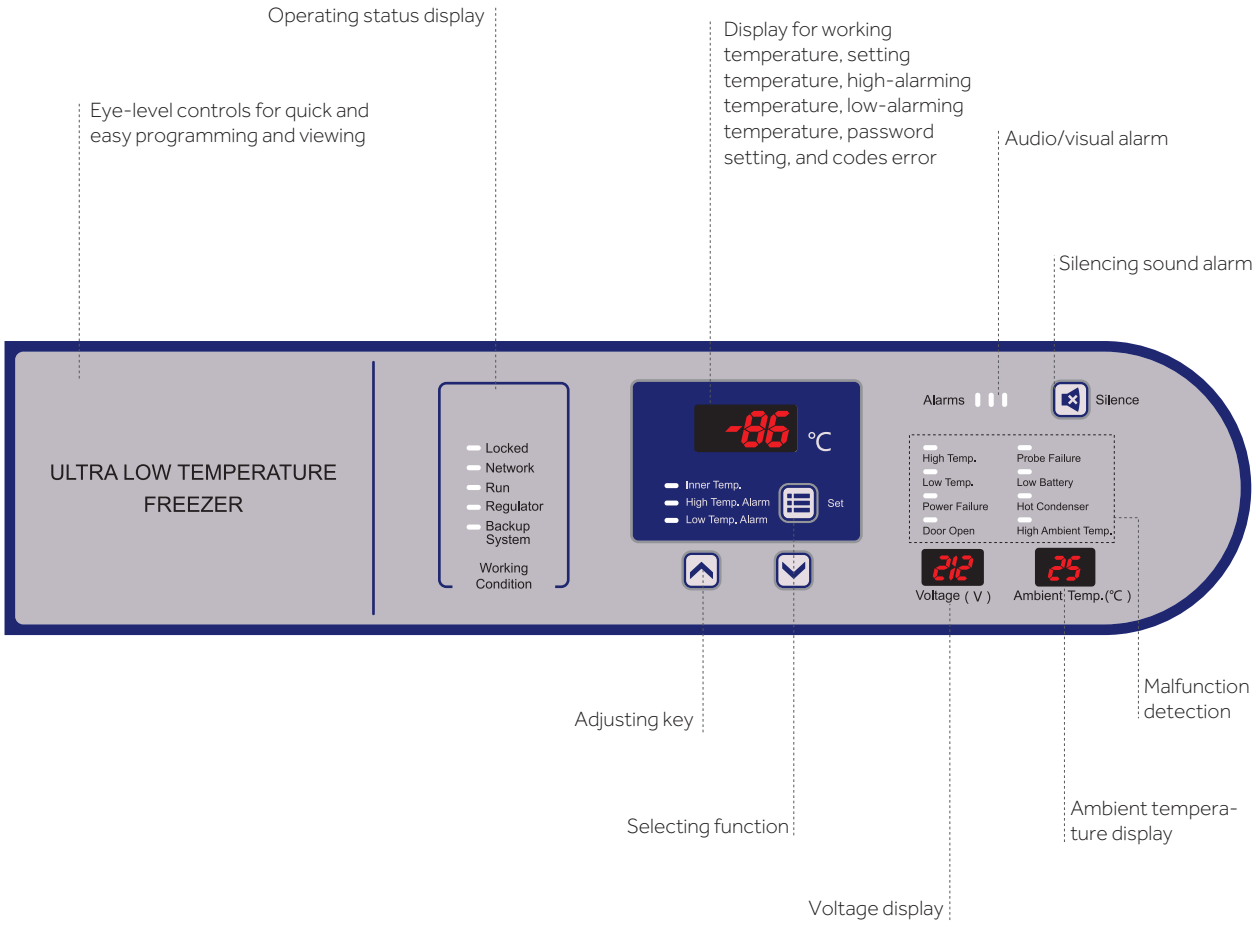
Circular-chart Recorder (Optional)

- Front-mounted
- For independent temperature monitoring

High Efficiency Refrigeration Components

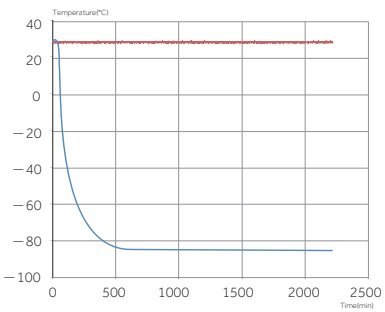


Two port holes for ease of temperature monitoring

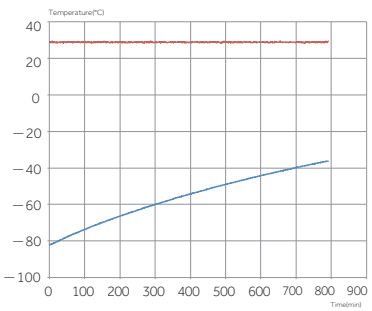


Product Performance

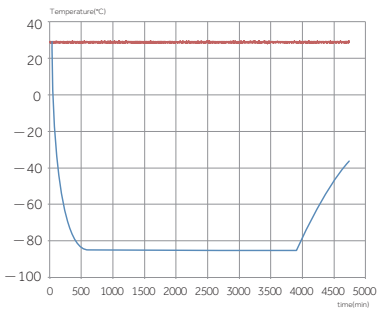
TYPICAL PERFORMANCE CHARACTERISTICS AT 25 °C AMBIENT



Temperature Cool Down Curve



Temperature Recover Curve



Comprehensive Curve

Specifications






	Model		DW-86L338J	DW-86L338JA		DW-86L388J	DW-86L486E	DW-86L490J	DW-86L490JA
Data Technical	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))		50			50	49	50	
Performance	Cooling Performance (°C)		-86			-86	-86	-86	
	Temperature Range (°C)		-40~-86			-40~-86	-40~-86	-40~-86	
Control Data	Controller		Microprocessor			Microprocessor	Microprocessor	Microprocessor	
	Display		LED			LED	LED	LED	
Electrical	Power Supply (V/Hz)		220~240/50	120/60	208~230/60	220~240/50	220~240/50	220~240/50	208~230/60
	Electrical Current(A)		7.5	12	7.5	7.5	10	8	6
Dimensions	Capacity (L/Cu.Ft)		338/11.9			388/13.7	486/17.1	490/17.3	
	Net/Gross Weight (approx)	kg	238/278			255/286	290/310	295/335	
		lbs	524.7/612.9			562.2/630.5	639.3/683.4	650.4/738.5	
	Interior Dimension (W*D*H)	mm	465*630*1165			465*716*1310	590*630*1310	590*630*1310	
		in	18.3*24.8*45.9			18.3*28.2*51.6	23.3*24.8*51.6	23.2*24.8*51.6	
	Exterior Dimension (W*D*H)	mm	830*893*1846			830*980*1980	953*900*1980	873*900*1980	
		in	32.7*35.2*72.7			32.7*38.6*78.0	37.5*35.4*78.0	34.4*35.4*78.0	
	Packing Dimension (W*D*H)	mm	879*974*2013			877*1070*2114	1020*1020*2130	934*980*2116	
		in	34.6*38.3*79.3			34.5*42.1*83.2	40.2*40.2*83.9	36.8*38.6*83.3	
	Container Load (20'/40'/40'H)		12/26/26			12/26/26	10/22/22	12/26/26	
Functions	High/Low Temperature		Y			Y	Y	Y	
	Hot Condenser		Y			Y	Y	Y	
	Power Failure		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	
Accessories	Caster		Y			Y	Y	Y	
	Foot		Y			Y	Y	Y	
	Porthole		Y/2			Y/2	Y/2	Y/2	
	Shelves/ Inner Doors		3/2			3/2	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	
	RS232/485 Port		Optional			Optional	Optional	Optional	
	CO_2 Backup System		Optional			Optional	Optional	Optional	
	LN_2 Backup System		Optional			Optional	Optional	Optional	
Certification	CE		Y	/	/	/	Y	Y	/
	UL		/	Y	Y	Y	/	/	Y
	ENERGY STAR		/	/	/	/	/	/	/

-86°C Ultra Low Temperature Freezer






	Model		DW-86L578J	DW-86L578JA		DW-86L628E	DW-86L728J	DW-86L728JA		DW-86L828J	DW-86L828JA
Data Technical	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))		50			49	50			50	51.5
Performance	Cooling Performance (°C)		-86			-86	-86			-86	
	Temperature Range (°C)		-40~-86			-40~-86	-40~-86			-40~-86	
Control Data	Controller		Microprocessor			Microprocessor	Microprocessor			Microprocessor	
	Display		LED			LED	LED			LED	
Electrical	Power Supply (V/Hz)		220~240/50	120/60	208~230/60	220~240/50	220~240/50	120/60	208~230/60	120/60	208~230/60
	Electrical Current(A)		7.5	12	9	11	10	18	10	10	10
Dimensions	Capacity (L/Cu.Ft)		578/20.4			626/22.1	728/25.7			828/29.2	
	Net/Gross Weight (approx)	kg	300/330			301/323	345/385			380/410	
		lbs	661.4/727.5			664.0/712.0	760.6/848.8			837.7/903.9	
	Interior Dimension (W*D*H)	mm	620*716*1310			760*630*1310	766*716*1310			870*716*1310	
		in	24.4*28.2*51.6			29.9*24.8*51.6	30.2*28.2*51.6			34.3*28.2*51.6	
	Exterior Dimension (W*D*H)	mm	903*980*1960			1043*900*1980	1049*980*1980			1145*980*1980	
		in	35.6*38.6*77.2			41.1*35.4*78.0	41.3*38.6*78.0			45.1*38.6*78.0	
	Packing Dimension (W*D*H)	mm	952*1063*2089			1110*1005*2130	1100*1069*2130			1197*1050*2117	
		in	37.5*41.9*82.2			43.7*39.6*83.9	43.3*42.1*83.9			47.1*41.3*83.3	
	Container Load (20'/40'/40'H)		12/24/24			12/24/24	10/22/22			5/11/11	
Functions	High/Low Temperature		Y			Y	Y			Y	
	Hot Condenser		Y			Y	Y			Y	
	Power Failure		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	
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	
	RS232/485 Port		Optional			Optional	Optional			Optional	
	CO_2 Backup System		Optional			Optional	Optional			Optional	
	LN_2 Backup System		Optional			Optional	Optional			Optional	
Certification	CE		Y	/	/	Y	Y	/	/	Y	/
	UL		/	Y	Y	/	/	Y	Y	/	Y
	ENERGY STAR		Y	Y	/	/	/	Y	/	/	Y

-86°C Ultra Low Temperature Freezer





	Model		DW-86L100J		DW-86W100J	DW-86W420J	DW-86W420JA
Data Technical	Cabinet Type		Upright		Chest	Chest	
	Climate Class		N		N	N	
	Cooling Type		Direct Cooling		Direct Cooling	Direct Cooling	
	Defrost Mode		Manual		Manual	Manual	
	Refrigerant		HC		HC	HC	
	Sound Level (dB(A))		46.8		49	50	
Performance	Cooling Performance (°C)		-86		-86	-86	
	Temperature Range (°C)		-40~-86		-40~-86	-40~-86	
Control Data	Controller		Microprocessor		Microprocessor	Microprocessor	
	Display		LED		LED	LED	
Electrical	Power Supply (V/Hz)		220~240/50	120/60	220~240/50	220~240/50	208~230/60
	Electrical Current(A)		3	6.5	4	7.5	
Dimensions	Capacity (L/Cu.Ft)		100/3.5		100/3.5	420/14.8	
	Net/Gross Weight (approx)	kg	108/132		138/160	310/357	
		lbs	238/291		304.2/352.7	683.4/787.0	
	Interior Dimension (W*D*H)	mm	330*481*630		470*450*480	1367*462*652	
		in	13*19*25		18.5*17.7*18.9	53.8*18.2*25.7	
	Exterior Dimension (W*D*H)	mm	770*660*810		769*825*1120	2130*870*1020	
		in	30*26*32		30.3*32.5*44.1	83.9*34.3*40.2	
	Packing Dimension (W*D*H)	mm	830*730*1000		835*860*1280	2210*910*1160	
		in	32.7*28.7*39.4		32.9*33.9*50.4	87*35.8*45.7	
	Container Load (20'/40'/40'H)		32/64/64		14/28/56	12/26/26	
Functions	High/Low Temperature		Y		Y	Y	
	Hot Condenser		Y		Y	Y	
	Power Failure		Y		Y	Y	
	Sensor Error		Y		Y	Y	
	Low Battery		Y		Y	Y	
	High Ambient Temperature		Y		Y	Y	
	Door Ajar		Y		Y	Y	
Accessories	Caster		Y		Y	Y	
	Foot		Y		Y	Y	
	Porthole		Y/1		Y/1	Y/1	
	Shelves/ Inner Doors		1/2		-/1	-/3	
	USB Interface		Y		Y	Y	
	Remote Alarm		Y		Y	Y	
	5V Power Supply Port		Y		N/A	N/A	
	Temperature Chart Recorder		/		Optional	Optional	
	RS232/485 Port		NA/Y		Optional	Optional	
	CO_2 Backup System		Optional		Optional	Optional	
	LN_2 Backup System		Optional		Optional	Optional	
Certification	CE		Y	/	Y	Y	/
	UL		/	Y	/	/	Y
	ENERGY STAR		/	/	/	/	/

· Product appearance and specifications are subject to change without notice.
· DW-86L338J/490J/578/628/959 stainless steel interior optional.