

bitstrong Biomedical



SmartFrequency
Conversion
ULT Freezer

Haier Biomedical's SmartFrequency technology manages the compressor speeds on demand. The ultra-low temperature freezers can thus achieve the world-leading energy efficiency in ultra-low temperature.



DW-86L829BP

Smarter by Design

The SmartFrequency Conversion range of ultra low temperature freezers have been designed and developed at the Haier Biomedical R&D Institute. They are certified by one of the world's leading energy conservation and environmental protection organisations.



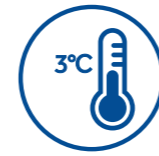
Intelligent frequency Conversion technology

Two variable speed compressors are controlled for optimal freezer performance. Low energy consumption is achieved.



Maximum energy efficiency

Our SmartFrequency Technology, coupled with our environmentally safe and friendly hydrocarbon refrigeration system, allows the Haier freezers to operate at a low level of energy of 8.2 kWh/day.



Precise temperature control

The innovative control algorithm balances the effects of temperature loss with the unique frequency conversion refrigeration system, ensuring the cabinet temperature stability of $\pm 3^{\circ}\text{C}$.



Frequency conversion Adaptive technology

Variable speed compressors in Haier Biomedical freezers are operated to produce the capacity that matches the demand of the load. The control system automatically tunes the speed of the compressors to optimize the operation.



World-leading energy saving Refrigeration technology

Our hydrocarbon refrigeration technology can save energy by 50%, significantly reducing operator's cost. The refrigerants do not contain fluoride and chloride. The global warming potential is extremely low at 3. Thus they are very friendly to the environment.



Minimal sound level output

Adaptive control technology controls the fans and compressors to reduce the sound level to 43.5 dB(A).

Energy Saving Refrigeration
High efficiency cooling fans and compressors, combined with hydrocarbon refrigerants, ensure energy savings and long-term sample security

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

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



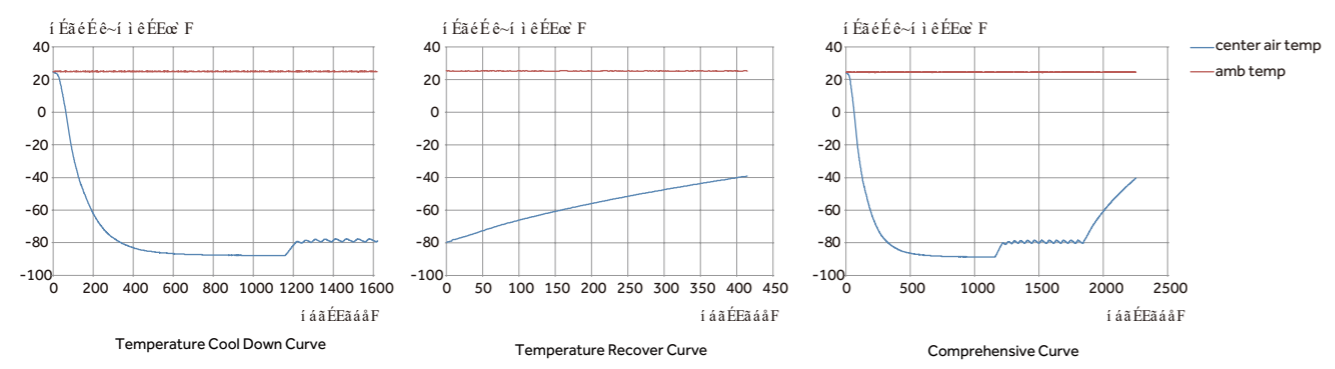
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Multilayered Sealing Structure
Triple layer of gaskets split between main and inner doors decreases heat loss and guarantee excellent warm up times in the event of a power failure

Improved Handle Design
Lockable handle with unique key prevents other Haier freezer owner's access to your precious samples, also comes with space for a padlock for that extra security

Multilevel Alarms
Alarming functions that include high and low temperature, sensor error, power failure, high ambient, clean filter and door ajar

DW-86L829BP | TYPICAL PERFORMANCE CHARACTERISTICS IN 25°C AMBIENT



Specifications

Model	DW-86L579BP	DW-86L729BP	DW-86L829BP	DW-86L959BP		
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	
Performance	Sound Level (dB(A))	43.5	43.5	43.5	47	
	Cooling Performance(°C)	-86	-86	-86	-86	
Control	Temp Range(°C)	-40~-86	-40~-86	-40~-86	-40~-86	
	Controller	Microprocessor	Microprocessor	Microprocessor	Microprocessor	
Electrical Data	Display	LED	LED	LED	LED	
	Power Supply(V/Hz)	100~230/50/60	100~230/50/60	208~230/50/60	208~230/50/60	
	Power(W)	1100	1100	1100	1300	
Dimensions	Electrical Current(A)	6	6	6	7	
	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 Dimensions(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 Dimensions(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	950*1055*2150	1100*1105*2150	1190*1045*2150	1365*1105*2150
		in	37.4*41.5*84.6	43.3*43.5*84.6	46.9*41.1*84.6	53.7*43.5*84.6
Container Load(20'/40'/40'H)	12/24/24	10/20/20	8/20/20	8/16/16		
Alarms	Remote Alarm	Y	Y	Y	Y	
	High/Low Temp	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 Temp	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	
	5V Power Supply Port	Y	Y	Y	Y	
	Temp 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	
Other	Certification	CE,UL,ENERGY STAR	CE,UL,ENERGY STAR	CE,UL,ENERGY STAR	CE,UL,ENERGY STAR	

Product appearance and specifications are subject to change without notice