

Dual X Series ULT Freezer



MD-86L720BS



Dual Cooling&Dual Guard

Two independent systems ensure uninterrupted operation, even if one fails; Dual systems reduce individual load, extending overall lifespan

Super & Even Cooling

180Mins Rapid Cooling(25°C→-81°C)&±3 Uniformity.

FLEX-VOLT®(100-240~V)

Stable operation at 100-240~V, 50/60Hz.

Energy-Saving & Low Noise

6.5KW/24h Power Consumption & 46dB Low Noise.

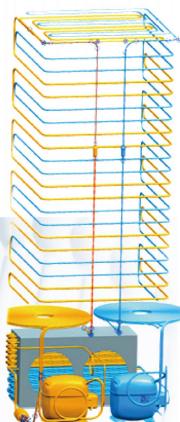
Voltage Flex Tech



10.1 inch LCD Touch Display



Dual Cooling Technology



304 SS **VS** PCM



220V 10A Plug
10A **VS** 15A



Ingenious Handle Design



Li-ion VS Lead-Acid
Maintenance-free



5-Layer Silicone Seal



Anti-Condensation
80% humidity

Application, Rating, & Electrical Data		Dimensions and Construction	
Application	ULT freezer	Interior (w*d*h)	740*720*1310 mm
Storage Volume (L/cuft)	720/25.43	Exterior (w*d*h)	1030*995*1980 mm
Temperature Range	-40°C to -86°C	Access Port	2 Access Port- for external monitoring probe(s) (25 mm diameter)
Default Set Point	-81°C	shelf	3 87 kg max capacity
Power	100V-240~V /50Hz/60Hz	Wheels	4 Swivel Casters + 2 Leveling Feet
Current	14A (at 100V) ,6.5A(at 240V)	Net Weight	320 kg
Power Cord Length	1.7m	Gross Weight	370 kg
Certification	CE	All performance data from 720L ULT freezer, 25 ambient, -81°C	
Door type	Solid door	Uniformity	
Application Environment	Non-corrosive, non-flammable, non-explosive	Temperature	80
Ambient Operating Temperature	10°C~32°C	Elapsed Time (min)	0
Refrigeration		Cooling Speed	
Refrigeration System	Dual Inverter cooling	Temperature	20
Compressor	Hermetic, variable speed	Elapsed Time (h)	0
Condenser Type	Air cooling	Temperature	0
Expansion Device	Capillary tube	Elapsed Time (h)	1
Evaporator Type	Built-in	Temperature	-20
Defrost Method	Manual defrosting	Elapsed Time (h)	2
Refrigerant	Mix refrigerant	Temperature	-40
Controller / Configuration Settings		DOR 1 minute	
Display screen	10.1"LCD Touch screen	Temperature	-80
Controller Type	Microprocessor	Elapsed Time (min)	0
Security	Lockable door, password protected settings	Temperature	-20
Control Sensor	PT1000, stainless steel	Elapsed Time (min)	1
Communication Ports	USB, Remote alarm contacts	Temperature	-40
Power Failure Alarm	Yes	Elapsed Time (min)	2
High/Low Alarms	Yes, fully adjustable	Temperature	-60
Door Ajar Alarm	Yes	Elapsed Time (min)	3
Download	Yes, via USB, PDF	Temperature	-80
Temperature Log	Yes, download via USB	Elapsed Time (min)	4
Battery Back-up	Yes, 17 hr display and alarm back-up Rechargeable 12V, li-ion battery	Temperature	-100
Performance Characteristics (normal operating conditions)		Temperature Rise Profile	
Uniformity (°C)	±3	Temperature	10
Recovery to -75°C after 1 min door opening (min)	20	Elapsed Time (min)	0
Temperature fluctuation (°C)	≤3	Temperature	-80
Energy consumption (kWh/day)	6.5	Elapsed Time (min)	1
Noise emission (dB)	46	Temperature	-60
Heat rejection (BTU/hr)	1638	Elapsed Time (min)	2
Pull-down time to -81°C (min)	180	Temperature	-40
Backup Time(h)	17	Elapsed Time (min)	3
Optional Accessories	Cryo Rack,Cryo Box,Cryovial,Chart Recorder, Cold Chain Monitor,LN2 Backup,CO2 Backup ,Printer	Temperature	-20

Typical Temperature Map

	test 1	test 2	test 3	test 4	test 5	test 6	test 7	test 8	test 9
Avg	-81.50	-81.60	-82.76	-82.28	-82.77	-82.42	-81.39	-81.98	-82.24
Max	-80.10	-80.40	-80.80	-80.00	-80.60	-80.30	-80.00	-80.80	-81.00
Min	-82.40	-83.40	-84.60	-84.20	-84.50	-84.20	-82.80	-83.20	-83.50

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