Dual Guard ULT Freezer

Midea Biomedical



MD-86L818BS

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

210Mins Rapid Cooling(25°C→-81°C)&±5 Uniformity.

Smart Inverter

Smart Inverter auto-adjusts compressor speed to load changes.

Energy-Saving & Low Noise

14.3KW.h/24h Power Consumption & 51dB Low Noise.

Structure Features



1 Multi-layer Sealing Structure

Multi-layers gaskets provide a tight seal between the inner doors and outer door, reducing heat exchange and retaining the inner temperature better when there is power failure.

2 VIP PLUS Design

Provides up to 30% more storage capacity than a conventionally insulated freezer, without increasing the footprint. A glass fibre core provides advanced thermal properties.

3 USB Port

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

4 10.1 inch LCD Touch Screen

Visual management, real time display inner temperature, alarms, temperature curves and other data.



5 Lever Handle Design

Ingenious handle design helps you to open and close door easier. Lockable handle safeguards your precious samples. Padlock can also be added for extra sample safety.

6 Relief Ports

It allows users to re-open the main door quickly when entering ,rust-proof, freeze-free.

7 Narrow Door Design

The freezer can pass through an 750mm wide door when the door is open.

Midea Biomedical

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Technical Data Sheet
High-Performance, Lab ULT Freezer
Model: MD-86L818BS,Dual Guard ULT Freezer

Application, Rating, & Electrical Data

Application	ULT freezer
Storage Volume (L/Cu.ft)	838//29.59
Temperature Range	-40°C to -86°C
Default Set Point	-81°C
Power	220-240~V /50Hz/60Hz
Current	9.5A
Power Cord Length	1.7m
Certification	CE
Door type	Solid door
Application Environment	Non-corrosive, non-flammable, non-explosive
Ambient Operating Temperature	10°C~32°C

Refrigeration

Refrigeration System	Dual Inverter Cooling
Compressor	Hermetic, variable speed
Condenser Type	Air cooling
Expansion Device	Capillary tube
Evaporator Type	Built-in
Defrost Method	Manual defrosting
Refrigerant	Mix refrigerant

Controller / Configuration Settings

Display screen	10.1"LCD Touch screen
Controller Type	Microprocessor
Security	Lockable door, password protected settings
Control Sensor	PT1000, stainless steel
Communication Ports	USB, Remote alarm contacts
Power Failure Alarm	Yes
High/Low Alarms	Yes, fully adjustable
Door Ajar Alarm	Yes
Download	Yes, via USB, PDF
Temperature Log	Yes, download via USB
Battery Back-up	Yes, 10 hr display and alarm back-up | Rechargeable 12V, lead acid

Performance Characteristics (normal operating conditions)

Uniformity | (℃)	±5.0
Recovery to -75°C after 1 min door opening | (min)	49
Temperature fluctuation | (℃)	⩽3.5
Energy consumption | (kWh/day)	14.3
Noise emission | (dB)	51
Heat rejection | (BTU/hr)	3314
Pull-down time to -81°C | (min)	210

Typical Temperature Map

	test 1	test 2	test 3	test 4	test 5	test 6	test 7	test 8	test 9
Avg	-81.39	-81.35	-82.76	-82.28	-82.77	-82.42	-81.39	-81.98	-82.24
Max	-78.60	-78.70	-80.80	-80.00	-80.60	-80.30	-80.00	-80.80	-81.00
Min	-83.50	-83.50	-84.60	-84.20	-84.50	-84.20	-82.80	-83.20	-83.50

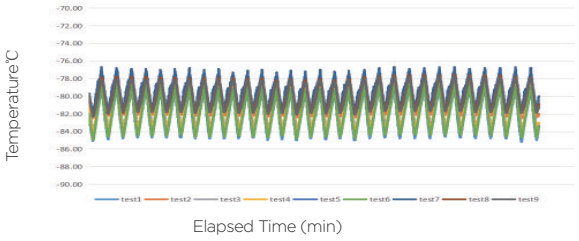
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Dimensions and Construction

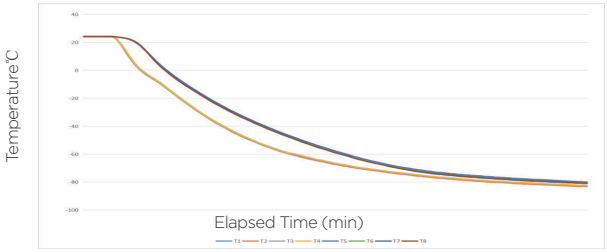
Interior (w*d*h)	885*720*1310 mm
Exterior (w*d*h)	1175*995*1980 mm
Access Port	2 Access Port- for external monitoring probe(s) (25 mm diameter)
shelf	3 | 87 kg max capacity
Wheels	4 Swivel Casters + 2 Leveling Feet
Net Weight	332 kg
Gross Weight	401 kg

All performance data from 838L ULT freezer, 25 ambient, -81°C

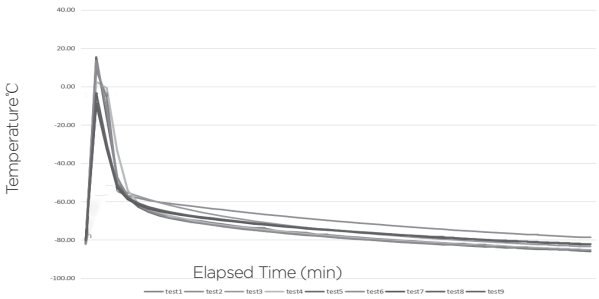
Uniformity



Cooling Speed



DOR 1 minute



Temperature recover curve

