Under Counter ULT Freezer

Midea Biomedical



MD-86L108

Reliable Sample Storage

High temperature uniformity;
Imported world-famous components.

Multi-level Alarms

High,low temperature,sensor error,power failure, high ambient alarm,door open alarm.

Fast Cabinet Pull Down

Faster cool down time compare with average.

Smart Design

9.000 vials(2ml) storage, biggest in industry.

Structure Features

VIP PLUS

VIP PLUS vacuum insulation provides up to 30% more storage capacity than a conventionally insulated freezer.

Steel Cabinet

Abrasive and corrosion resistance,easy clean.

USB Interface

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



Ingenious Handle Design

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

LED Display

LED screen to provide optimal user experience. The built in USB port allows logged data to be easily transferred to PC.

Alarm functions

include high, low temperature, sensor error, power failure, high ambient alarm, door open alarm etc.

2 casters + 2-foot locks, easy to move, lock and level.

Multi-layer Silicone Sealing Structure

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

Double inner doors

Can reduce cooling loss when opening the outer door, easy to clean.

Tool-free removable filter design

Easy and quick to clean the filter.

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Technical Data Sheet
High-Performance, Lab Guard ULT Freezer
Model: MD-86L108,Under Counter ULT Freezer

Application, Rating, & Electrical Data

Application	ULT freezer
Storage Volume (L/Cu.Ft)	108/3.81
Temperature Range	-40°C to -86°C
Default Set Point	-81°C
Power Supply	115/60Hz | 220-240-V /50Hz | 220-240-V //60Hz
Current	8A | 4.9A | 3.3A
Power Cord Length	1.7m
Certification	CE&UL
Door type	Solid door
Application Environment	Non-corrosive, non-flammable, non-explosive
Ambient Operating Temperature	10°C~32°C

Refrigeration

Refrigeration System	Self-cascade
Compressor	Hermetic, fixed 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	LED
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, 44 hr display and alarm back-up | Rechargeable 12V, lead acid

Performance Characteristics (normal operating conditions)

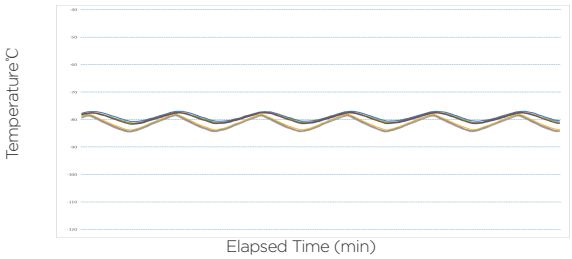
Uniformity | (℃)	±3.0
Recovery to -75°C after 1 min door opening | (min)	17.5
Energy consumption | (kWh/day)	5.2 | 4.6 | 3.9
Noise emission | (dB)	46 | 45 | 45
Heat rejection | (BTU/hr)	1400
Pull-down time to -81°C | (min)	210 | 180 | 180

Dimensions and Construction

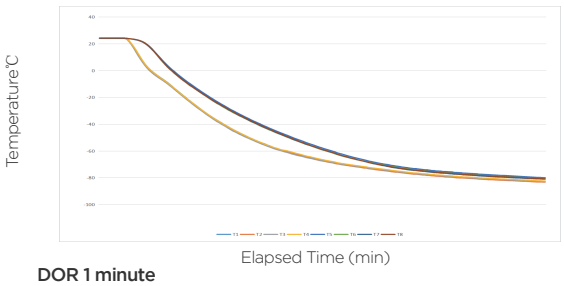
Interior (w*d*h)	440*435*590 mm
Exterior (w*d*h)	955*675*815 mm
Access Port	2 Access Port- for external monitoring probe(s) (25 mm diameter)
shelf	1 | 49 kg max capacity
Wheels	N
Net Weight	113 kg
Gross Weight	141 kg

All performance data from 108L ULT freezer, 25 ambient, -81°C

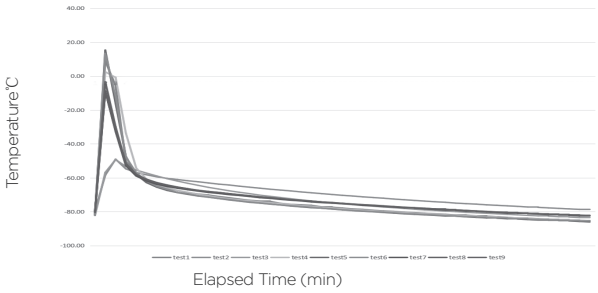
Uniformity



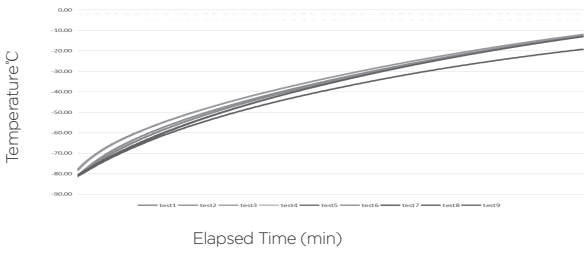
Cooling Speed



DOR 1 minute

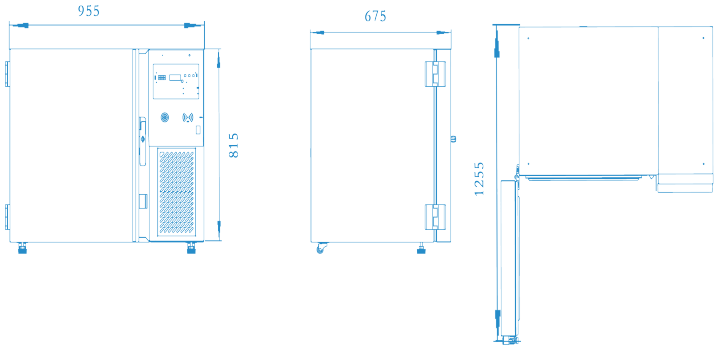


Temperature recover curve



Typical Temperature Map

	test 1	test 2	test 3	test 4	test 5	test 6	test 7	test 8	test 9
Avg	-81.18	-81.49	-81.56	-80.89	-78.71	-79.15	-79.47	-79.27	-79.52
Max	-78.30	-78.60	-78.70	-78.10	-77.00	-77.40	-77.60	-77.40	-77.80
Min	-84.10	-84.30	-84.40	-83.70	-80.61	-81.10	-81.50	-81.30	-81.70



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