

-30°C Biomedical ECO Freezer | MDF-MU339HL

Natural Refrigerants and Inverter Technology

Hydrocarbon [HC] refrigerants have minimal effect on the environment and are compliant with environmental legislation for climate control. Combined with inverter technology, these refrigerants also provide more efficient cooling without compromising cooling performance, ambient tolerance and recovery speeds following door openings.

Energy-efficient Performance

Natural refrigerants, compressors and integrated electronics combine to lower operating costs by up to 28%*. Freezer operation is managed by effectively balancing temperature performance and energy management.

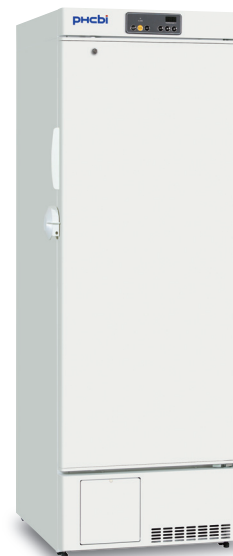
* Compared to conventional models.
Power source: 220V/230V/240V 50Hz, Ambient temperature: 30°C

Height-adjustable Shelf Trays

This unit features fully height adjustable shelf trays accommodating chamber containers of various sizes.



Model Number		MDF-MU339HL-PE	MDF-MU339HL-PA
External dimensions (W x D x H) ¹⁾	mm	616 x 770 x 1802	
Internal dimensions (W x D x H)	mm	472 x 614 x 1262	
Volume	litres	369	
Net weight	kg	122	
Performance			
Cooling performance ²⁾	°C	-30	
Temperature setting range	°C	-35 to -18	
Temperature control range	°C	-30 to -20	
Control			
Controller		Microprocessor, non-volatile memory	
Display		LED	
Temperature sensor		Thermistor	
Refrigeration			
Compressor	W	400	
Refrigerant		HC	
Insulation material		PUF	
Insulation thickness	mm	70	
Construction			
Exterior material		Painted Steel	
Interior material		Painted Steel	
Outer door	qty	1	
Outer door lock		Yes	
Shelves	qty	6	
	Dimensions	W447 x D510	
Max. load - per shelf	kg	30	
Access port	qty	1	
Access port position		Back	
Access port diameter	∅ mm	30	
Casters	qty	4 [2 levelling feet]	
Accessories			
Accessories	qty	1 Key set / 1 Defrost spatula	
Alarms (V = Visual Alarm, B = Buzzer Alarm, R = Remote Alarm)			
Power failure		V-B-R	
High temperature		V-B-R	
Low temperature		V-B-R	
Electrical and Noise Level			
Power supply	V	220/230/240	115
Frequency	Hz	50	60
Power Consumption (100-240V / 50/60Hz) SV-30°C	kWh/day	AT30°C: 2.33 AT20°C: 1.58	
Noise level ³⁾	dB (A)	42	
Options			
Temperature recorders	- Circular type	MTR-G85C-PE/MTR-G85A-PA — Chart paper: RP-G85-PW — Ink pen: PG-R-PW — Recorder housing: MPR-S7-PW	
	- Continuous strip type	MTR-4015LH-PE/MTR-4015LH-PA — Chart paper: RP-40-PW — Recorder housing: MPR-S30-PW	
Storage Container	Inner dimensions	mm MDF-035C-PW [2 pcs/set] W420 x D552 x H157	
Optional Communication Systems			
Digital interface (RS232C/RS485) ⁴⁾		MTR-480-PW	
Ethernet interface (LAN) ⁴⁾		MTR-L03-PW	
Quality Management System			
Certification		ISO 9001	



¹⁾ External dimensions of main cabinet only, excluding handles and other external projections.

²⁾ Air temperature measured at freezer centre, ambient temperature 35°C, no load.

³⁾ Nominal value - Background noise 20 dB(A)

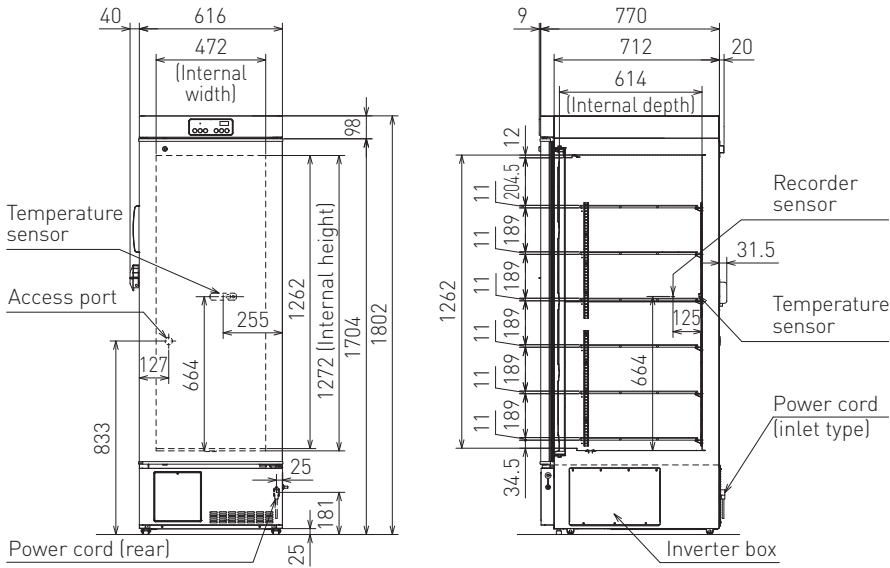
⁴⁾ Only for MTR-5000 [data acquisition system] users.

• Appearance and specifications are subject to change without notice.

Caution: PHC Corporation guarantees this product under certain warranty conditions. However, please note that PHC Corporation shall not be responsible for any loss or damage to the contents stored in the product.



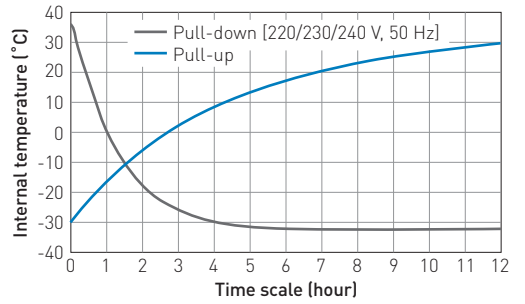
Dimensions



Unit : mm

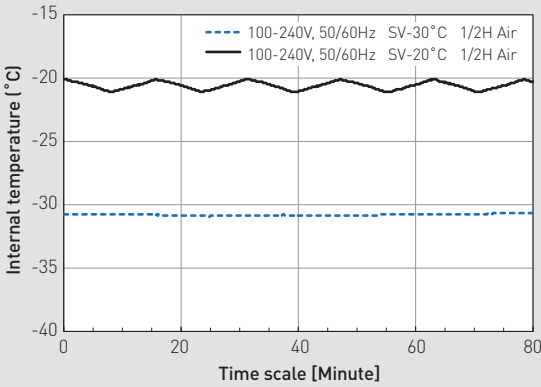
Performance Data

AT35°C Pull-down & Pull-up Temperature (No load)

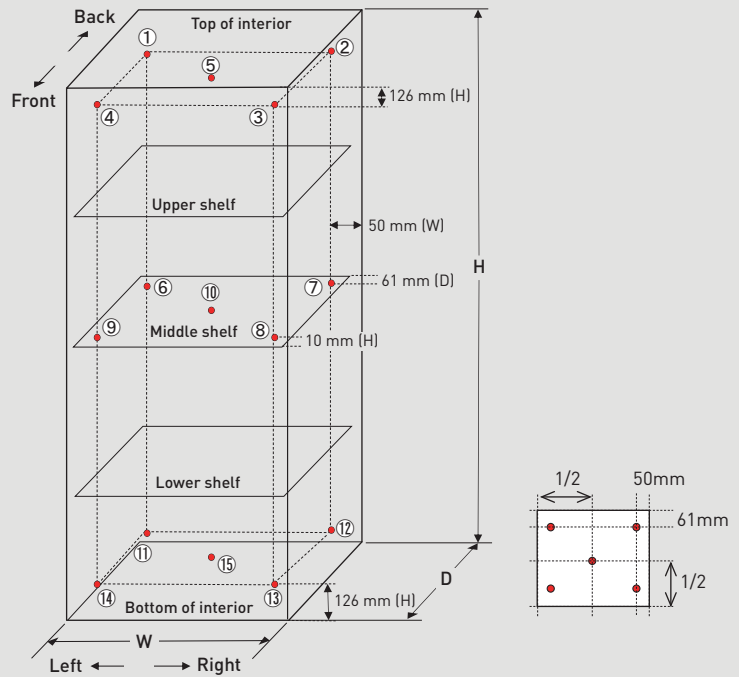


Cycle running

Condition: SV-30°C & -20°C, AT30°C, no load



Temperature uniformity -15 points measuring



Internal Temperature Uniformity (Reference Data)

Distribution data

Temperature of the cycle in each area (SV-30°C, air temperature)

Ambient temperature 30°C 100-240V, 50/60Hz No Load

Unit: °C

	①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮	Average
Maximum	-28.3	-28.1	-28.2	-28.4	-28.7	-30.6	-30.7	-30.3	-30.3	-30.7	-31.7	-31.8	-31.3	-31.3	-31.8	—
Minimum	-28.8	-28.7	-28.7	-28.9	-29.0	-30.9	-30.9	-30.6	-30.6	-31.0	-32.0	-32.0	-31.6	-31.6	-32.1	—
Middle of cycle	-28.6	-28.4	-28.5	-28.7	-28.9	-30.8	-30.8	-30.5	-30.5	-30.9	-31.9	-31.9	-31.5	-31.5	-32.0	-30.3

(Note) Disclaimer

- Specification may change without notice.
- The performance data was measured by inhouse test data of PHC.
- The Performance data is a reference data and not guaranteed.
- Not all the products available in all countries.