

-150°C Cryogenic Freezer

MDF-C2156VANC-PA | 10046-900

8.2 cu. ft. | 232.2 L

The PHCbi brand -150°C cryogenic freezer offers air-phase cryogenic storage without the need for liquid nitrogen as the primary cooling medium. **SNAP compliant refrigerants meet EPA requirements.**



Model Number		MDF-C2156VANC-PA 10046-900
External Dimensions (W x D x H)	inches mm	68.1 x 30.1 x 39.8 1730 x 765 x 1010
Internal Dimensions (W x D x H)	inches mm	29.9 x 19.5 x 24.2 760 x 495 x 615
Capacity (2" cardboard boxes), Vertical Racks	qty	165
Capacity (2" plastic boxes), Vertical Racks	qty	150
Capacity (3" plastic boxes), Vertical Racks	qty	105
Net Weight, Empty	lbs. kg	716 325
Control		
Controller		Microprocessor, touchscreen data entry, password protected
Display		LCD color touchscreen
Refrigeration		
Temperature Range		-125°C to -152°C
Refrigeration System		CFC free refrigerants
Construction		
Access Port		1.5"
Electrical		208/230V, AC, 60 Hz, 1 phase, standard NEMA 6-15 plug

Benefits of Mechanical Cryopreservation

- Tight uniformity at -150°C, ±5°C
- Minimizes consumption of LN₂ where greater than 3% loss per day is typical
- Reduces the LN₂ handling safety hazard
- Lowers total costs of ownership, reduces global energy costs of LN₂ production to help meet facility sustainability objectives
- Eliminates cross contamination potential of liquid phase storage

High Performance ECO Pharmaceutical Refrigerator

MPR-S300H-PA | 76383-298

12.2 cu.ft. | 345 L

The pharmacy refrigerator offers a complete storage solution for high value pharmaceutical and vaccine materials within a compact footprint.

Model Number		MPR-S300H-PA 76383-298
External Dimensions (W x D x H) ¹⁾	inches mm	31.5 x 19.7 x 71.7 800 x 500 x 1820
Internal Dimensions (W x D x H)	inches mm	28.3 x 14.2 x 56.1 720 x 360 x 1425
Volume	cu.ft. liters	12.2 345
Net Weight	lbs kg	229 104
Control		
Controller		Microprocessor with non-volatile memory
Display		Digital (white graphic OLED)
Refrigeration		
Temperature Range		+2°C to +14°C
Refrigeration System		CFC/HFC free refrigerants
Construction		
Access Port	qty	1.2"
Electrical		115V / 60Hz, NEMA 6-15 plug

Natural Refrigerants and Inverter Technology

Hydrocarbon [HC] refrigerants have minimal effect on the environment and are compliant with US EPA SNAP legislation for environmental sustainability. Combined with inverter compressor technology, these refrigerants provide more efficient cooling without compromising cooling capacity, ambient tolerance and recovery time following door openings.



Scale-Up Culture-Based Therapeutics

MCO-80ICL-PA | 10046-928

30.1 cu.ft. | 851 L

The PHCbi MCO-80ICL-PA | 10046-928 Cell Production Incubator is engineered with redundant active and passive contamination mitigation systems that incorporates precision environmental control technologies for advancing mammalian cell culture based biological therapeutics.

Large Capacity

Cells require a uniform, stable and stress-free environment for healthy proliferation. The large capacity cell production incubator is designed to maintain accurate temperature, humidity and CO₂ throughout the chamber. High throughput cell production Holds roller bottle apparatuses, cell stacks and shakers Uniform conditions at all shelf levels.

CO₂ Control

IR sensor coupled with the PID microprocessor controller is used to provide superior CO₂ control and exceptionally fast recovery after door openings. Gas system design minimizes CO₂ consumption. The incubator functions are managed by a fully integrated microprocessor controller with a range of setpoints and alarms for temperature and CO₂.



Cell culture apparatus shown, optional.

cellIQ™ CO₂ Incubators

MCO-230AICUVL-PA | 10830-874

8.1 cu.ft. | 230 L

MCO-170AICUVL-PA | 10119-820

5.8 cu.ft. | 165 L

PHCbi brand CO₂ incubators include models with both active and passive decontamination features. These include **SafeCell™ UV light** to scrub pathogens from interior airflow, and **H₂O₂ vapor generation** sequences to decontaminate interior surfaces in three hours, minimizing downtime. Copper enriched stainless steel interior surfaces create a germicidal barrier without discoloration or corrosion.



Ideal for Clinical and Research Applications

Cell-IQ™ cell culture incubators create precise *in vitro* environments essential to cell growth. Incubators are available in traditional CO₂ configurations for standard processes. Controlled CO₂ for pH management, stable temperature ~37°C, and elevated humidity to eliminate media desiccation.

Typical Applications	Requirements	Advantages
Stem Cell Culture	<ul style="list-style-type: none"> Highly stable temperature and CO₂ control with elevated relative humidity to minimize small sample media desiccation. 	<ul style="list-style-type: none"> Precise temperature control at all shelf levels established through microprocessor controlled Direct Heat and Air Jacket heating system (Direct Heat and Air Jacket U.S. Patent 5519188).
IVF	<ul style="list-style-type: none"> Complete decontamination between batch processes. 	<ul style="list-style-type: none"> Precise CO₂ control impervious to short-term humidity shifts following door openings.
Regenerative Tissue Culture	<ul style="list-style-type: none"> Continuous mitigation of airborne contaminants following door openings. Elimination of cross contamination. 	<ul style="list-style-type: none"> Safe, hydrogen peroxide vapor 3 hour decontamination <i>in situ</i> without heat. Constant scrubbing of chamber air to reduce potential for mycoplasma and other contaminants.
Conventional Cell Culture	<ul style="list-style-type: none"> Flexibility for a broad range of cell culture applications. 	<ul style="list-style-type: none"> Scalable for use in routine research or for cell cultures highly sensitive to environmental stability and contamination.

Incubator Selection			
PHCbi Model Number		MCO-170AICUVL-PA	MCO-230AICUVL-PA
VWR Catalog Number		10119-820	10830-874
Interior Volume		5.8 cu.ft.	8.1 cu.ft.
Passive Contamination Control	InCu-saFe® Copper Enriched Stainless Steel	Standard	Standard
	SafeCell™ UV, Background	Standard	Standard
	Condensation Management	Standard	Standard
Active Decontamination Method	SafeCell™ UV, On Demand	Standard	Standard
	Vaporized H ₂ O ₂ On Demand	Standard	Optional
CO ₂ Control	Infrared Sensor, Fast Recovery, 0.1% Accuracy	0 to 20%	0 to 20%



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