

# Controlled Rate Freezer

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### Scope of Application

Widely used in research and medical fields for cryopreserving cells, tissues, and biological samples. Equipped with an integrated cryobox system and advanced liquid nitrogen dispersion technology, it ensures uniform, stable cooling effect suitable for GLP laboratories and IQ/OQ validation.

### Key Features



#### Temperature Performance & Control

This system operates across an extensive temperature range from +50°C to -190°C and delivers precise ramp rates of 0.1-99.9°C/min (cooling) and 0.1-12°C/min (heating). It maintains high uniformity with less than 2°C deviation between chamber points during cooling and features dual-probe control for independent sample and chamber temperature management.



#### Intelligent Control System

Equipped with an Android-based microprocessor and 10-inch touchscreen interface displaying real-time sample/chamber temperatures, the unit offers six pre-set programs and over twenty user-defined protocols. Its "Freezing Curve" function records and displays critical parameters including sample temperature, chamber temperature, and latent heat for process documentation.



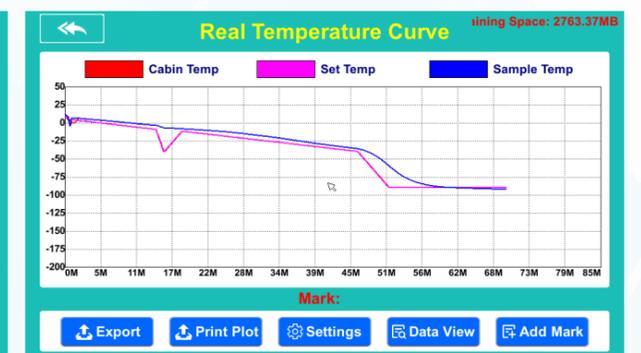
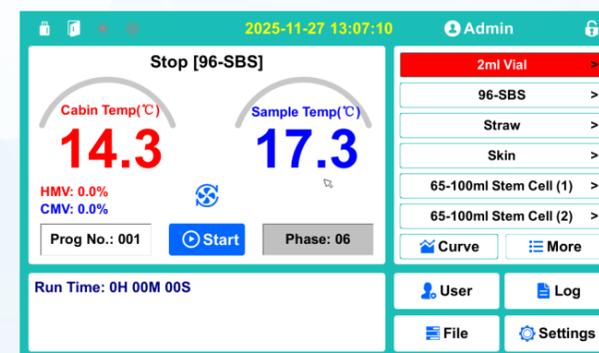
#### Robust Hardware Design

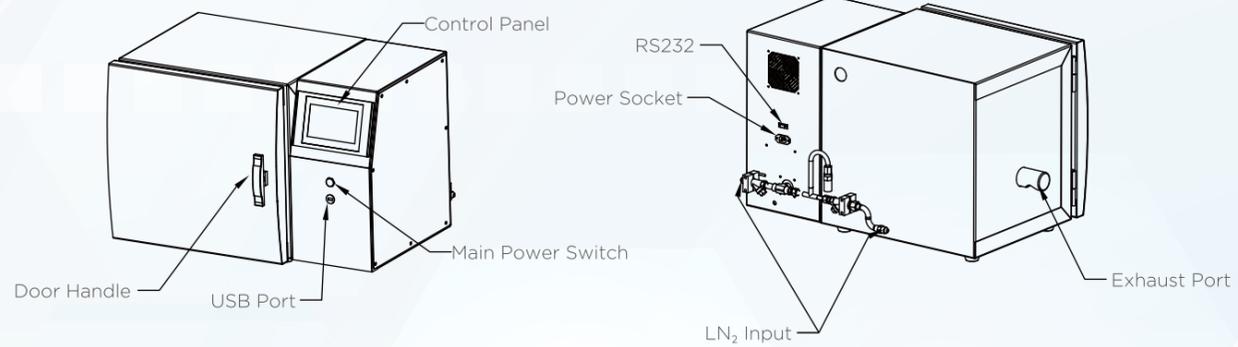
Featuring a powder-coated chamber body with stainless-steel interior and in-situ foamed insulation, the system ensures thermal retention and uniformity. The dual inlet valve design enhances operational stability, while an internal fan with protective mesh generates horizontal laminar airflow for consistent coolant dispersion and temperature distribution. The front-opening door enables convenient access.



#### Operational Efficiency

Engineered for silent laboratory operation, the system prioritizes user-friendly performance in demanding environments.





### Specifications



Model	MCX-17	MCX-34	MCX-37	MCX-51
<b>Capacity</b>				
2ml Vials	380	810	930	1190
5ml Vials	228	486	533	714
25/50ml Blood Bags	30	60	60	90
250ml Blood Bags	10	20	20	30
<b>Performance</b>				
Temp. Range	50°C - -190°C			
Exterior Dia. (mm)	860*540*550	1006*540*550	1046*540*550	1190*540*550
Interior Dia (mm)	180*305*330	330*305*330	370*305*330	502*305*330
Capacity(L)	17	34	37	51
Net Weight(kg)	82	92	97	103
Cooling Rate	0.1°C-99.9°C/min			
Heating Rate	0.1°C-12°C/min			
Temp. Uniformity	<2°C			
Control Mode	Microcomputer Control			
Program Control	Sample Temperature/Chamber Temperature			
Display	10-Inch LCD Touch Screen			
Available Program	6 Preset Programs, 20 User-Set Programs			

### Accessories List

Description	Dimension(W*D*H)mm	Vials/Bags Per Rack	Compatible Models
5ml Freezing Rack	158*312*264	228(5ml vial)	CX17/CX51
2ml Freezing Rack	158*312*264	380(2ml vial)	CX17/CX51
5ml Freezing Rack	312*312*264	486(5ml vial)	CX34/CX51
2ml Freezing Rack	312*312*264	810(2ml vial)	CX34/CX51
2ml Freezing Rack	158*312*280	456(2ml vial)	CX17/CX51
2ml Freezing Rack	312*312*180	972(2ml vial)	CX34/CX51
25ml Blood Bag Freezing Rack	98*105*215	10(25ml blood bag)	CX17/CX34/CX51
50ml Blood Bag Freezing Rack	98*161*265	10(50ml blood bag)	CX17/CX34/CX51
250ml Blood Bag Freezing Rack	157*205*210	10(250ml blood bag)	CX17/CX34/CX51
500ml Blood Bag Freezing Rack	163*306*199	10(500ml blood bag)	CX17/CX34/CX51
700ml Blood Bag Freezing Rack	163*306*199	10(700ml blood bag)	CX17/CX34/CX51