

## Pharmacy refrigerator

*Applications Temp 2- 8°C*

## Cooling Incubator

*Applications Temp 10- 40°C*

*Controlled air temperature systems for storage, incubation, testing and stability applications.*

## Precision Thermal Solutions

Laboratory / Medical / Industrial Applications



Quality Management System : ISO 13485

**Water Bath & Oil Bath** Operating Range RT+5 -200 °C  
*Liquid-based temperature control systems for heating, cooling, and circulation applications.*

**Hotplate & Heating Systems** Operating Range RT+5 -650 °C  
*Surface heating systems for laboratory, testing, and industrial heating applications.*

## **Refrigeration & Incubator Series**

Temperature-Controlled Chambers and Refrigeration Systems are designed to provide stable and uniform air temperature control for storage, incubation, testing, conditioning, and research applications. These systems are widely used in laboratories, hospitals, pharmaceutical manufacturing, quality control departments, research facilities, and industrial environments where accurate and reliable temperature control is required.

Applications can generally be categorized by operating temperature range and process requirements:

- **Cold Storage Applications (Approx. 2 – 8 °C)**  
Suitable for vaccines, pharmaceuticals, biological reagents, diagnostic kits, and other temperature-sensitive materials requiring controlled refrigerated storage.
- **General Refrigerated Storage Applications (Approx. 2 – 15 °C)**  
Used for sample preservation, reagent storage, quality control materials, and laboratory products requiring stable low-temperature conditions.
- **Low Temperature Incubation Applications (Approx. 10 – 30 °C)**  
Suitable for BOD testing, environmental studies, water quality analysis, sample conditioning, and other applications requiring controlled temperatures below ambient conditions.
- **Biological Incubation Applications (Approx. 20 – 45 °C)**  
Used for microbiology, cell culture, enzyme studies, biochemical testing, and other biological processes requiring stable long-term temperature control.
- **Stability Testing Applications (Approx. 25 – 40 °C)**  
Designed for product stability studies, shelf-life evaluation, packaging validation, and quality assurance programs requiring controlled environmental conditions.
- **Elevated Temperature Testing Applications (Approx. 40 – 80 °C)**  
Suitable for material conditioning, product evaluation, accelerated testing, and industrial processes requiring stable temperatures above ambient conditions.

Temperature-controlled systems are available in a variety of configurations including Medical Refrigerators, Vaccine Refrigerators, Laboratory Refrigerators, BOD Incubators, Laboratory Incubators, Stability Chambers, and Custom Temperature-Controlled Chambers to support applications ranging from routine storage to precision research and industrial testing.

## Height Precision Temperature Controller

Engineered for versatile applications, our products deliver high precision and reliable temperature control. The system offers dual-temperature operation, supporting:

- Pharmacy Refrigerator 2°C to 8°C
- Cooling Incubator 10°C to 40°C

They offer the flexibility and accuracy demanded by professional applications

Feature	2°C - 8°C	10°C - 40°C
Equipment	Pharmacy-Medical refrigerator Laboratory refrigerator	Cooling Incubator / Stability Chamber / BOD chamber / Shelf Life Testing chamber
Key Purpose	Cold storage Preserve temperature-sensitive products	Maintain stable temperature conditions
Suitable For	Vaccines, medicines, biological reagents, lab samples	Culture growth, stability testing, incubation, sample conditioning
Temperature Accuracy	Standard Accuracy High Accuracy	High Accuracy
Typical Industries	Hospitals, pharmacies, labs	Labs, R&D, QA/QC, pharmaceutical production



CID-07



CID-04



CID-03



CID-02

### Refrigeration System

Highly efficient Compressor  
Forced-Air Circulation and fan  
Defrost system  
Non CFC

### Safety control

Over temperature alarm system  
Protection function: power-on delay  
Lamp indicator Alarm  
Buzzer and flash alarm (option)

### Temperature Controller

Microprocessor PID or On-Off  
LED Display

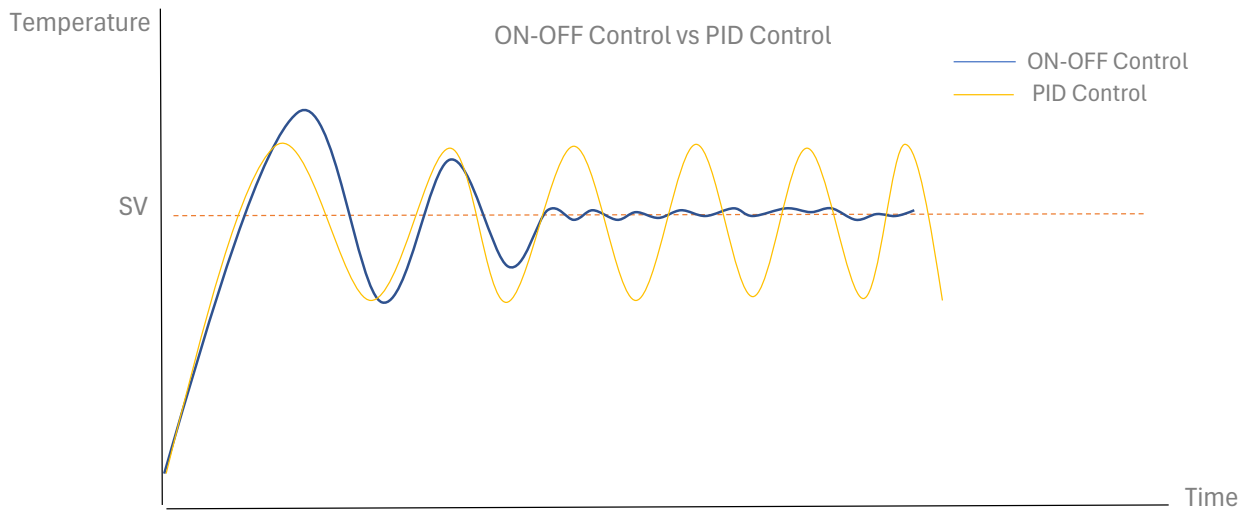
## Temperature Control Systems

### ON-OFF Control

A standard control method that maintains temperature within the specified range by automatically switching the refrigeration system on and off.

### PID Control

A high-precision control system that continuously adjusts cooling output to maintain superior temperature stability, minimize temperature fluctuations, and improve control accuracy.



---

## Temperature Stability and Uniformity

The performance of a temperature-controlled chamber is determined not only by the refrigeration system but also by the control strategy, sensor placement, air circulation, and chamber design.

A well-designed control system helps minimize temperature fluctuations and improves temperature uniformity throughout the chamber, providing more reliable storage, incubation, and testing conditions.

Key factors affecting chamber performance include:

- Temperature controller type (ON-OFF or PID)
- Sensor location
- Air circulation pattern
- Sample loading condition
- Ambient temperature

## Air Circulation System

Temperature-controlled chambers utilize forced-air circulation to improve temperature distribution throughout the chamber. Proper air circulation helps reduce temperature gradients, improves temperature recovery after door opening, and enhances overall temperature uniformity.

The effectiveness of air circulation can be influenced by chamber size, shelf arrangement, sample loading, and airflow design.

## Custom Temperature Control Solutions

Standard commercial refrigeration cabinets can be integrated with customized control systems, heating systems, sensors, alarms, data logging, and specialized chamber configurations to meet specific laboratory and industrial requirements.

Available options may include:

- PID temperature control
- Heating and cooling operation
- Alarm systems
- Data logging
- RS485 / Ethernet communication
- Custom shelves and internal fixtures
- Application-specific chamber modifications

## Medical Refrigerator for Pharmaceuticals, Vaccines, Samples, and Chemical Storage

Designed for the safe and stable storage of pharmaceuticals, vaccines, biological samples, chemicals, and other temperature-sensitive materials. Suitable for hospitals, pharmaceutical manufacturing facilities, and laboratories requiring precise and reliable temperature control for storage applications.

### Temperature Control System :ON-OFF Control System

Conventional temperature control method that maintains the chamber temperature within the specified range by automatically cycling the refrigeration system on and off.

2-8 °C On-Off Control		Model	CID-03BGA	CID-07BGA
Technical data	Cooling		Forced-Air Circulation and fan	
Controller	Accuracy		2-8 °C	
	Controller		On-Off	
	Display		LED	
	Set Acc		1 °C	
Material	Internal		Aluminium powder coating	
	External		Electro-Galvanized Coated Steel	
Size	Internal		520x450 x1120 mm	1150 x 400 x 1550 mm
	External		600x580x1580 mm	1235 x 510 x 2040 mm
Volume (L)			256 L	700 L
Weight (kg)			60 kg	140 kg
Shelf (Standard)			3	5x2



## Medical Refrigerator for Pharmaceuticals, Vaccines, Samples, and Chemical Storage

Designed for the safe and stable storage of pharmaceuticals, vaccines, biological samples, chemicals, and other temperature-sensitive materials. Suitable for hospitals, pharmaceutical manufacturing facilities, and laboratories requiring precise and reliable temperature control for storage applications.

### Temperature Control System : PID Control System

Advanced temperature control method that provides higher temperature accuracy and stability by continuously regulating the refrigeration system output, minimizing temperature fluctuations within the specified range.

2-8 °C PID Control	Model	CID-02B	CID-03B	CID-04B	CID-07B
Technical data	Cooling	Forced-Air Circulation and fan			
	Heating	100W	300W		
	Defrost	Yes			
Controller	Accuracy	+/-1 °C			+/- 2 °C
	Controller	PID			
	Display	LED			
	Set Acc	0.1°C			
Material	Internal	Polymer	Aluminium powder coating		
	External	Polymer	Electro-Galvanized Coated Steel		
Size	Internal	380x320x1150 mm	520x450 x1120 mm	545x450x1470 mm	1150 x 400 x 1550 mm
	External	480x580x1290 mm	600x580x1580 mm	615x510x1850 mm	1235 x 510 x 2040 mm
Volume (Lite)		144 L	256 L	330 L	700 L
Weight (kg)		40 kg	60 kg	70 kg	140 kg
Power (Watt)		200 w	480w	500w	600w
Shelf (Standard)		4	3	4	5x2

*Desired accuracy can be selected by order (ISO17025)*



Microprocessor  
PID control



Standard Shelf



Circulation Fan

High-Precision Temperature-Controlled Chambers provide accurate and stable temperature control from 10–40°C for BOD testing, product stability studies, shelf-life evaluation, microbial incubation, and controlled sample storage.

Designed for biological and chemical laboratories, quality control departments, and industrial testing applications where temperature uniformity, stability, and reliable performance are essential.

Incubator 10-40 °C	Model	CID-02C	CID-03C	CID-04C	CID-07C
Technical data	Cooling	Forced-Air Circulation and fan			
	Heating	100W	300W	300W	300W
	Defrost	Yes	Yes	Yes	Yes
Controller	Accuracy	+/-1 °C	+/- 1 °C	+/- 1 °C	+/- 2 °C
	Controller	PID	PID	PID	PID
	Display	LED			
	Set Acc	0.1°C			
Material	Internal	Polymer	Aluminium powder coating		
	External	Polymer	Electro-Galvanized Coated Steel		
Size	Internal (mm)	380x320x1150	520x450 x1120	545x450x1470	1150 x 400 x 1550
	External (mm)	480x580x1290	600x580x1580	615x510x1850	1235 x 510 x 2040
Volume (Lite)		144 L	256 L	330 L	700 L
Weight (kg)		40 kg	60 kg	70 kg	140 kg
Power (Watt)		200 w	480w	500w	600w
Shelf (Standard)		4	3	4	5*2
Sub model CGP		Door : Glass 2 layer			
Sub model CAP		Door : Glass 2 layer with Opaque 2 layer			
Special Order		<i>Material : SUS 304</i> <i>Accuracy : &lt; 1°C</i> <i>Alarm</i> <i>Recorder</i>			

*Desired accuracy can be selected by order (ISO17025)*



Circulation Fan



SUS304 Shelf  
Model CID-02



Model CID-03