

Precision Thermal Solutions

Laboratory / Medical / Industrial Applications

Refrigeration & Incubation

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

Applications Temp 2-40 °C

Water Bath & Oil Bath

Liquid-based temperature control systems for heating, cooling, and circulation applications.

Operating Range RT+5 -200 °C

Hotplate & Heating Systems

Surface heating systems for laboratory, testing, and industrial heating applications.

Operating Range RT+5 -650 °C



Quality Management System : ISO 13485

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
- **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

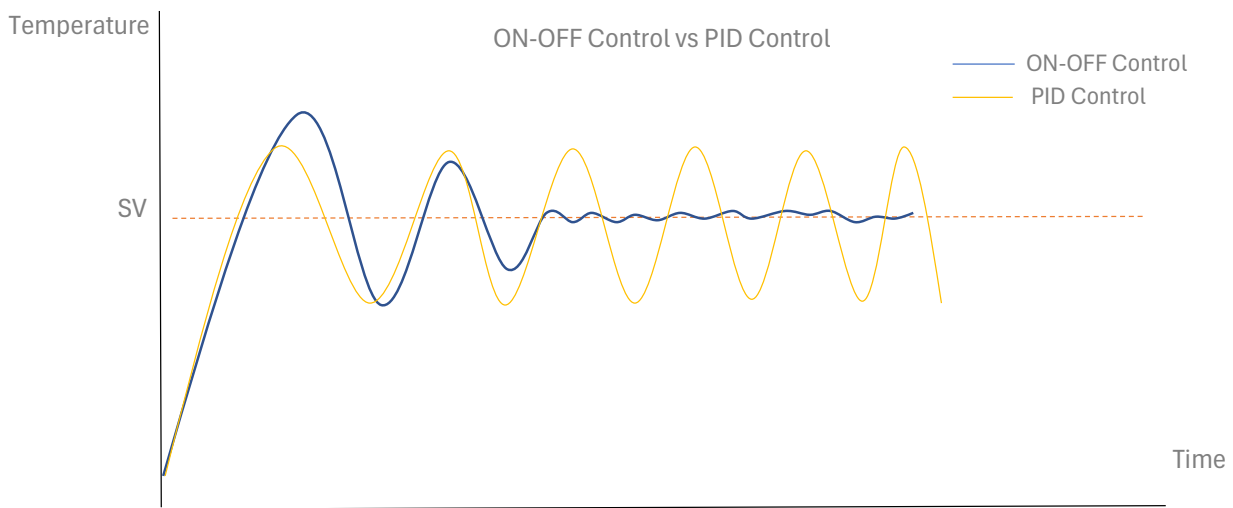
Temperature Control Systems

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 : < 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

Laboratory Water bath Series

Water Bath is a laboratory temperature control system designed for heating, cooling, and maintaining samples at stable and uniform temperatures using water as the thermal transfer medium. Compared with direct heating methods, Water Bath systems help minimize localized overheating or overcooling, making them suitable for applications requiring gentle and consistent temperature control.

Water Bath systems are widely used in educational laboratories, research facilities, hospitals, quality control (QC) processes, pharmaceutical production, food processing, chemical industries, and general industrial applications where stable thermal conditions are required.

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

- Low Temperature / Cooling Applications (Approx. 5 – 25 °C)
Suitable for biological analysis, sample preservation, stability testing, and laboratory processes requiring temperatures below ambient conditions.
- General Warming Applications (Approx. 25 – 60 °C)
Commonly used for reagent warming, sample preparation, chemical dissolution, and routine laboratory heating applications.
- Incubation & Biological Applications (Approx. 30 – 45 °C)
Ideal for microbiology, enzyme reactions, biochemical testing, and medical or biological incubation processes requiring stable long-term temperature control.
- High Temperature Testing Applications (Approx. 40 – 100 °C)
Used for quality control, material testing, evaporation, chemical reactions, and laboratory procedures requiring elevated and consistent temperatures.
- High Temperature Oil Bath Applications (>100 °C)
For processes requiring temperatures above the boiling point of water, Oil Bath systems are used for chemical synthesis, distillation, and high-temperature laboratory operations.

Water Bath systems are available in various configurations including General Water Bath, Circulating Water Bath, Refrigerated Water Bath, and Shaking Water Bath to support applications ranging from routine laboratory use to precision research and industrial temperature control processes.

Temperature Controller

Match Precision to Your Purpose

Choose from our comprehensive Water Bath line-up, featuring three distinct control architectures designed to support different applications and budget requirements.

Select the Analog Model for basic heating and extraction applications, the Digital Model for routine laboratory and general-purpose operation, or the high-performance PID Model for Medical, Analytical, and R&D applications requiring superior temperature stability and precision.

Find the ideal balance of performance, accuracy, and operational efficiency for your laboratory today.

Temperature Control Methods

ON-OFF Analog Control

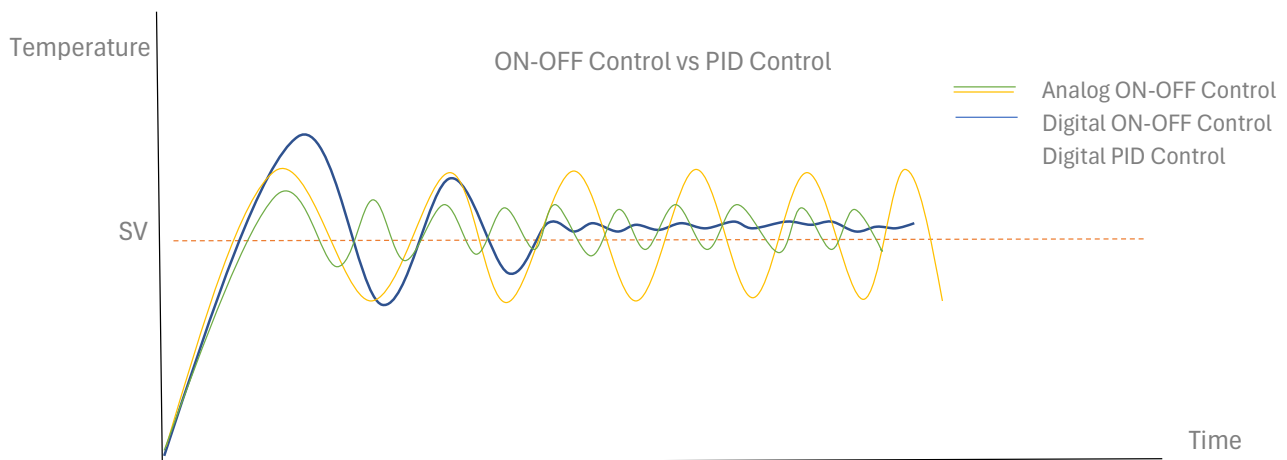
A simple and reliable mechanical temperature control system using thermostat-based ON-OFF operation. Suitable for general heating, routine laboratory work, and industrial applications where ease of operation and cost efficiency are preferred.

ON-OFF Digital Control

A digital temperature control system with electronic sensing and display for improved temperature monitoring and adjustment accuracy. Ideal for routine laboratory applications requiring better usability and more stable temperature control than conventional analog systems.

PID Control

A high-precision temperature control system that continuously adjusts heating output to maintain highly stable and accurate temperature conditions. Recommended for Medical, Analytical, Research, and critical laboratory applications where temperature stability is essential.



Thermal Source System

Heating System

The heating system utilizes SUS Coil Heaters with heating power, size, and coil configuration carefully selected to match the bath dimensions and operating volume for improved heating uniformity and thermal efficiency.

SUS304 Heater

Suitable for general laboratory applications, offering reliable corrosion resistance for water and standard laboratory solutions.

SUS316 Heater

Provides enhanced chemical and corrosion resistance for demanding chemical, pharmaceutical, and high-corrosion laboratory applications.



Compressor Cooling System

The cooling system utilizes a compressor in combination with a cooling coil to remove heat from the water and reduce the operating temperature below ambient conditions.

Refrigerant continuously circulates through compression, condensation, expansion, and evaporation stages to create continuous heat transfer within the system.

The cooling coil absorbs thermal energy from the water and transfers the heat back into the refrigeration cycle.

The system is designed for continuous operation, providing stable temperature control and consistent cooling performance.



Safety Control System

Over-Temperature Protection Thermostat

Equipped with an independent over-temperature protection thermostat to help prevent overheating during operation. Automatically disconnects the heating circuit when the temperature exceeds the preset safety limit, helping protect both the equipment and the user.

Fuse Protection

Integrated electrical fuse protection helps reduce the risk of damage caused by abnormal current or electrical faults during operation.

Heat-Resistant Wiring System

Internal wiring utilizes heat-resistant silicone cables designed to withstand elevated operating temperatures and improve long-term reliability in laboratory and industrial environments.

Circulation System

The circulation system utilizes a water pump to maintain uniform temperature distribution throughout the bath and reduce temperature variation between different areas.

Pump flow rate and performance are carefully selected to match bath volume, application requirements, and temperature stability conditions.

Pump materials and construction are designed to withstand the intended operating temperature range for reliable long-term operation.

Factors for Precise Temperature Control

Accurate and stable temperature control depends on several factors including the control system, heating and cooling capacity, circulation performance, and operating environment.

Temperature Control System

The temperature controller is a critical component for maintaining stable operating conditions. PID Control systems continuously adjust heating or cooling output to minimize temperature overshoot and improve stability compared with conventional ON-OFF control systems.

Heating and Cooling Capacity Selection

Temperature control performance depends on selecting appropriate heating and cooling capacity based on bath volume, sample load, application requirements, and ambient conditions. Improper capacity selection may result in temperature fluctuation or slower stabilization performance.

Circulation System

The use of a circulation pump helps maintain uniform water flow throughout the bath, reducing temperature variation between different areas and improving overall temperature uniformity.

Combined Heating and Cooling Control

For operating temperatures close to ambient conditions, typically around 25 – 35 °C, temperature stability may be affected by room temperature and environmental changes. Coordinated control between both heating and cooling systems can significantly improve temperature accuracy and reduce fluctuation.

Environmental and Load Conditions

Ambient temperature, ventilation, sample volume, frequent lid opening, and the introduction of samples at different temperatures can all affect temperature stability. These factors should be considered when selecting and designing a temperature control system for laboratory or industrial applications.

Temperature-Controlled Water Baths provide precise and stable temperature control for laboratory research, analytical testing, quality control, and industrial applications.

Designed for excellent temperature uniformity and dependable long-term operation, they are available in various capacities with Analog, Digital, and PID control options to meet diverse application requirements and accuracy demands.

Water bath RT+5 -100°C Model		WTT-D10	WA-D16	WTT-D16	WD-D16	WA-D32	WTT-D32	WD-D30P
Technical data								
Heating	Power	1500 W)		2000W		2500W		2200W
	Material	SUS 304	SUS 304	SUS 304	SUS 316	SUS 304	SUS 304	SUS 304
Controller	Accuracy °C	+/-1	+/-2	+/-0.5	+/-0.1	+/-2	+/-0.5	+/-1
	Controller	Digital on/off	Analog	Digital on/off	PID	Analog	Digital on/off	PID
	Display	LED	-	LED	LED	-	LED	LED
	Set Acc °C	0.1	-	0.1	0.1	-	0.1	0.1
Material	Internal	SUS 304						Polycarbonate
	External	Epoxy Powder Coated Steel						SUS304
Size	Internal (cm)	25x30x15	30x35x16	30x35x16	30x35x16	30x70x16	30x70x16	25x32x40
Cover / Drain		Flat / No Drain	Flat / Slope Cove and Drain				Flat / No Drain	Flat /Drain
Volume (Lite)		10	16		32		30	
Special Order	Material	Inside-Out side SUS304 Polycarbonate bath / Clear bath						
	Circulating	Water pump SUS 316 (resistant high temperature)						
	Basket	Rack / Basket Made to order						

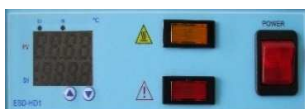
Desired accuracy can be selected by order (ISO17025)



M shape Heater : SUS304



Model : WA-D10



Microprocessor PID control



Model : WD-D16



Digital on/off control with Timer

Temperature-Controlled Oil Baths provide precise and stable heating for applications requiring temperatures above 100°C. They are ideal for laboratory research, chemical processing, material testing, and industrial heating applications where uniform and reliable temperature control is essential.

Common applications include temperature control of samples and chemicals, chemical reactions, distillation, material compatibility testing, and heat transfer processes. Designed for excellent temperature uniformity and dependable long-term operation, these oil baths deliver consistent performance across a wide range of high-temperature applications.

Oil bath RT+5 -220°C Model		WO-3L with lift	WO-5L with lift
Technical data			
	Power	1000 W	1500W
	Material	SUS 304	
Controller	Accuracy °C	+/-1	
	Controller	PID	
	Display	LED	
	Set Acc °C	0.1	
Material	Internal	SUS 304	
	External	Epoxy Powder Coated Steel	
Size	Internal	Dia 26 x15 cm	Dia 28 x17 cm
	External		
Volume (Lite)		3	5
Weight (kg)		7	8



Control lift



Heater : SUS304



Model : WO-3L

Cooling Baths provide precise and reliable temperature control for laboratory, research, and industrial applications requiring cooling and temperature stabilization.

Suitable for exothermic reaction cooling, external fluid circulation, incubation and testing processes, and temperature control of samples, chemicals, and laboratory equipment. Designed for excellent temperature uniformity and dependable long-term operation, they deliver consistent performance across a wide range of cooling applications.

Cooling Bath 4 -80°C Model		WC-D15	WC-D20	WCH-D20
Technical data				
	Cooling	Compress 1/3Hp	Compress 1/3Hp	Compress 1/3Hp
	Heater	-	-	2000W
Controller	Accuracy °C	+/-2	+/-2	+/-1
	Controller	Digital on-off Control	Digital on- off Control	Digital PID Control
	Display	LED	LED	LED
	Set Acc °C	0.1	0.1	0.1
	Circulating	Closed-Loop system	-	-
	Flow rate	20 L /min	-	-
Material	Internal	SUS 304		
	External	Epoxy Powder Coated Steel		
Size	Internal	Dia. 30 x 26 cm	Dia. 30 x 30 cm	Dia. 30 x 30 cm
	External	41x45x85 cm	41x45x85 cm	41x45x85 cm
Volume (Lite)		15	20	20

Ex. Rack for Bottom



Circulation Heaters are designed for precise temperature control and continuous fluid circulation in laboratory, research, and industrial applications.

Featuring a compact control unit and a separate heating reservoir, they provide flexible installation and efficient temperature management for a variety of liquid heating processes. System capacity and reservoir size can be customized to meet specific application requirements.

Designed for excellent temperature stability, dependable long-term operation, and consistent performance, circulation heaters deliver reliable thermal control across a wide range of applications.

Circulation Heater +5 -60°C Model		RH-D60
Technical data		
	Heater Power	1500 W
	Material	SUS 304
Controller	Accuracy °C	+/-1
	Controller	PID
	Display	LED
	Set Acc °C	0.1
Material	Internal	Tube SUS 304
	External	Epoxy Powder Coated Steel
Size	External	30x40x22 cm
Circulation	Flow Rate	20 L/ min



Example usage illustration.

Polycarbonate Test Baths feature a transparent tank design that allows clear observation of samples and testing processes during operation. They are ideal for quality control, research, laboratory testing, and industrial inspection applications requiring visual monitoring under controlled temperature conditions.

Suitable for leak testing, product evaluation, and other applications where direct observation of the test specimen is essential. The transparent construction enables operators to monitor changes, detect defects, and verify test results without interrupting the testing process.

Designed for excellent temperature stability and reliable operation, Polycarbonate Test Baths provide an effective solution for both routine quality control and specialized testing applications.

Aerosol Can Leak Testing

Polycarbonate Test Baths are widely used for leak testing of filled and sealed aerosol cans. During testing, aerosol cans are immersed in heated water, allowing leaks to be easily detected by observing escaping gas bubbles through the transparent bath walls.

An optional aerosol can basket is available to securely hold and organize multiple cans during testing, improving inspection efficiency and operator convenience.

<i>Test bath +5 -60°C</i>	<i>Model</i>	<i>WDD-30P</i>
Technical data		
	Heater Power	1800 W
Controller	Accuracy °C	+/-1
	Controller	PID
	Display	LED
	Set Acc °C	0.1
Material	Internal	Polycarbonate 10 mm
	External	SUS 304
Size	Internal	25x32x40
	External	28x48x40
Volume (Lite)		30



Multi-Purpose Heating Baths provide a flexible heating platform for laboratory, research, and industrial applications. Designed to support a variety of heat transfer media, they can be adapted to meet the specific requirements of different heating and temperature control processes.

Common applications include wax melting, sand baths, dry heating, and temperature-controlled processing of samples, materials, and specialized products. Optional internal and external temperature sensors are available to support different monitoring and control requirements.

Engineered for dependable operation, temperature stability, and application flexibility, these systems offer a practical solution for both standard and custom thermal processing applications.

Test bath +5 -120°C	Model	HBD-30
Technical data	Heater Power	2200 W
	Controller	PID
	Display	LED
	Set Acc °C	0.1
Material	Internal	SUS304
	External	Epoxy Powder Coated Steel
Size	Internal	30x50x20cm
	External	48x58x45cm
Volume (Lite)		30 L
Weight (kg)		16 kg



Laboratory Hotplate Series

The Laboratory Hotplate Series is designed for laboratory heating, research, sample preparation, and industrial applications requiring stable and uniform temperature distribution. Suitable for a wide range of heating processes including sample warming, evaporation, chemical processing, and high-temperature testing applications.

Available with Aluminum, Cast Iron, and Glass Ceramic top plates to support different operational requirements and working environments. Multiple heating technologies are available, including Coil Heater, Mica Heater, Direct Coil Heater, and Infrared Heater systems for various heating characteristics and performance needs.

Both Analog and Digital PID control versions are available. Analog models provide simple, durable, and reliable operation for general-purpose heating applications, while Digital PID models offer improved temperature stability and precise control for laboratory testing and research applications.

The hotplate series is built for continuous operation with durable construction, efficient heat distribution, and integrated over-temperature safety protection. Suitable for chemical laboratories, QC processes, research facilities, educational laboratories, and general industrial heating applications.

Temperature Control

ON-OFF Control: Standard temperature control system designed for general heating applications with simple and reliable operation. Suitable for routine laboratory work, production support, and industrial heating processes where ultra-precise control is not required.



PID Control: High-precision temperature control system with continuous output adjustment for improved temperature stability and reduced over shoot. Suitable for laboratory testing, research applications, and processes requiring accurate and repeatable temperature control.



Heating Element

Coil Heater with Heat-Conductive Plate

Uses heating coils installed beneath or integrated with a heat-conductive plate such as Aluminum or Cast Iron to provide uniform surface temperature distribution. Suitable for general-purpose hotplates and continuous industrial heating applications requiring stable and durable operation.

Direct Coil Heater

Uses exposed heating coils to transfer heat directly to the vessel or heating surface, similar to the operating principle of a Heating Mantle. Provides rapid thermal response and localized heating performance for specialized laboratory applications.

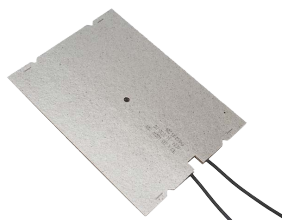
Mica Heater

Uses resistance wire embedded within mica insulation layers, allowing compact construction and fast thermal response. Suitable for compact heating systems requiring efficient heat transfer and stable temperature control.

Infrared Heater

Uses infrared radiation to transfer thermal energy directly to the vessel and heating surface. Provides rapid heat-up performance and high surface temperature capability for fast heating applications.

Property	Coil Heater with Conductive Plate	Direct Coil Heater	Mica Heater	Infrared Heater
Heating Method	Through conductive plate	Direct heating	Mica insulated heating	Infrared radiation
Heating Response	Medium	Fast	Fast	Very Fast
Temperature Uniformity	Very Good	Medium	Very Good	Good
Heat Retention	Good	Low	Medium	Low
Durability	High	High	Medium-High	Medium
Suitable Applications	General / Industrial Use	Heating Mantles / Local Heating	Precision Control	Rapid Heating Applications



Safety control

Over-Temperature Protection Thermostat

Equipped with an independent over-temperature protection thermostat to prevent overheating during operation. Automatically disconnects the heating circuit when the temperature exceeds the preset safety limit, helping protect both the equipment and the user.

Material : Top Plate

Aluminum Plate

High thermal conductivity plate providing fast heat transfer and uniform surface temperature distribution.
Suitable for general laboratory heating and testing applications.

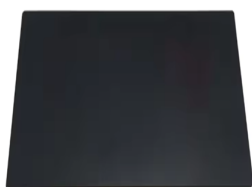
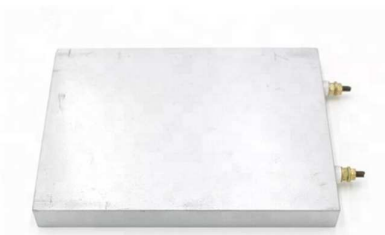
Glass Ceramic Plate

Excellent chemical and high-temperature resistance with a smooth and easy-to-clean surface. Suitable for chemical laboratory applications and high-temperature heating processes.

Cast Iron Plate

Heavy-duty heating surface with excellent heat retention and high mechanical strength. Suitable for continuous operation and industrial heating applications using large or heavy vessels

Property	Aluminum	Glass Ceramic	Cast Iron
Heat Conductivity	High	Medium	Medium
Heat-Up Response	Fast	Medium	Medium-slow
Chemical Resistance	Medium	High	Low-Medium
Mechanical Strength	Medium	Fragile to Impact	High
Weight	Light	Medium	Heavy
Suitable Applications	General Use	Chemical / Laboratory	Heavy Duty / Industrial



Magnetic Stirrer

The Magnetic Stirrer is designed for solution mixing, sample preparation, and laboratory or chemical processing applications. Using a magnetic stir bar, it provides continuous and uniform stirring for mixing, dissolution, and solution preparation.

Suitable for general laboratory procedures, research applications, and analytical operations. Available in both Motor Type and Non-Motor Magnetic Drive configurations for different operational requirements

Motor Type (Shaded Pole Motor)

- Uses a Shaded Pole Motor to drive the magnetic stirring system inside the vessel
- Provides stable stirring performance with reliable torque for general laboratory and continuous mixing applications
- Suitable for sample preparation, chemical mixing, and medium-viscosity solutions
- Good torque and stable stirring performance
- Suitable for wider solution volumes and viscosities
- Durable, simple, and cost-effective design
- Higher vibration and noise compared with non-motor systems
- Mechanical components may wear during long-term operation



Non-Motor Type (Magnetic Drive)

- Uses rotating magnetic field technology without conventional motor-driven transmission components
- Provides quiet and stable stirring with reduced vibration and mechanical wear
- Suitable for analytical, pharmaceutical, microbiology, and precision laboratory applications
- Low vibration and quiet operation
- Stable low-speed stirring performance
- Reduced maintenance requirements
- Lower stirring torque compared with motor-driven systems
- Less suitable for highly viscous solutions



Magnetic Stir Bar

- Designed for use with magnetic stirrers to provide stable and uniform liquid mixing in laboratory applications
- Uses permanent magnetic cores with high magnetic stability for reliable continuous stirring performance
- Available in various shapes including cylindrical, octagonal, pivot ring, and cross types for different vessel and mixing requirements
- PTFE-coated surface provides excellent chemical resistance against acids, alkalis, and solvents while reducing friction and contamination
- Smooth PTFE surface is easy to clean and suitable for chemical, pharmaceutical, microbiology, and research applications



Large Heating Plates provide precise and uniform heating for laboratory, research, quality control, and industrial applications requiring extended heating areas.

Designed to deliver consistent temperature distribution across a large surface, they are ideal for sample preparation, material testing, process heating, and specialized thermal applications. The large platform supports a variety of containers, fixtures, and workpieces while maintaining stable heating performance.

Available with Analog or Digital PID control options, these systems offer dependable operation, temperature stability, and reliable long-term performance for demanding laboratory and industrial environments.



Large working area
Digital / Analog Control
High thermal conductivity

Model		HD1-D	HD1-A
Heater	Power	2200 W	2200 W
	Material	Mica heater	Mica heater
Controller	Controller	PID	Analog On/off
	Display	Digital	Lamp indicator
	Set Acc °C	0.1 C	scale 1-8
Material	External	Epoxy Powder Coated Steel	Epoxy Powder Coated Steel
	Plate	Aluminium	Aluminium
Size	plate	30x50x10 cm	30x50x10 cm

Glass ceramic
Digital Control and timer
Acid Resistant



Infrared Hot Plates are designed to deliver rapid and efficient heating for laboratory, research, quality control, and industrial applications.

Equipped with a glass-ceramic heating surface, they provide excellent thermal durability, chemical resistance, and ease of maintenance. The infrared heating technology enables fast temperature rise and high surface temperatures, making them ideal for evaporation, sample preparation, thermal testing, and process heating applications.

Engineered for dependable operation, temperature stability, and consistent heating performance, Infrared Hot Plates offer an effective solution for applications requiring fast and concentrated heat transfer.

Model		HF-20D
Technical data		
	Heater Power	1800 W
Controller	Controller	PID
	Display	LED
	Set Acc °C	1
Material	Top plate	Glass ceramic
	External	Epoxy Powder Coated Steel
Size	Work space	20 cm

Heating Mantles are designed for safe and uniform heating of round-bottom flasks and spherical glass vessels used in laboratory, research, and chemical applications.

The heating element surrounds the vessel to provide even heat distribution while minimizing localized hot spots, making it ideal for temperature-sensitive processes and prolonged heating applications. Featuring a direct-coil heating system, Heating Mantles deliver rapid thermal response, support continuous operation, and can achieve temperatures up to 600°C.

Suitable for distillation, evaporation, chemical synthesis, sample preparation, and research applications, Heating Mantles provide excellent temperature uniformity, dependable operation, and consistent thermal performance for demanding laboratory environments.



Model		HM-D1	HM-D3	HM-D6	HM-D1F
Technical data					
	Heater Power	500 W	1500 W	3000 W	500 W
	Material	SUS coil			
	Controller	Analog			
	Set Acc °C	scale 1-8			
Material	Top plate	Tube SUS 304			
	External	Epoxy Powder Coated Steel			
Size	Dia.	125 mm			
	Volume	250-750 ml			
	External	230x 180 x 175	230x 450 x 175	230x 900 x 175	230x 180 x 175

Multi Position Hot plate : Cast Iron

400 °C

Multi-Position Hot Plates are designed for efficient and simultaneous heating of multiple samples in laboratory, research, and quality control environments.

Equipped with a robust cast iron heating surface, they offer excellent heat retention, durability, and stable heating performance for continuous operation. The multi-position configuration allows several vessels to be processed at the same time, improving workflow efficiency and productivity.

Suitable for distillation, extraction, sample preparation, chemical reactions, and other thermal processing applications, Multi-Position Hot Plates provide dependable operation, consistent heating performance, and reliable long-term use in demanding laboratory environments.



Model		HD-3420
Technical data	Heater Power	500 W
	Controller	Analog
	Display	LED
	Set Acc °C	Scale 1-8
Material	Internal	SUS304
	External	Epoxy Powder Coated Steel
Size	plate	Cast Iron
	plate	900 mm
	External	450 x210 x 130 mm

Magnetic Stirrer

Non motor

Multi-Position Magnetic Stirrers are designed for simultaneous stirring of multiple samples, improving efficiency and productivity in laboratory applications.

The non-motor magnetic drive system reduces vibration and minimizes mechanical wear compared with conventional motor-driven designs. This simple and robust construction provides reliable operation and is well suited for continuous laboratory use.

Suitable for research, microbiology, chemistry, pharmaceutical applications, and general laboratory mixing processes, Multi-Position Magnetic Stirrers deliver consistent stirring performance across multiple positions while helping optimize laboratory workflow.



Model		MS-D6
Technical data		
	Stirrer position	Magnetic -Non motor 6
Controller	Controller	Analog / 1 set : 2 position
	Set Acc °C	scale 1-8
Material	plate	Acrylic
	External size	550x370x50 mm
Volume		1000 ml / position

Analog Hotplate Stirrers provide simultaneous heating and stirring for routine laboratory applications.

Equipped with a high-conductivity aluminum heating plate, they offer rapid heating and uniform temperature distribution. The analog control system ensures simple operation, while the motor-driven stirring mechanism provides reliable sample mixing.

Suitable for sample preparation, chemical dissolution, mixing processes, and general laboratory heating applications.



Model		HD-300	H-SD300
Technical data	Heater Power	600 W	600 W
	Controller	Analog	Analog
	Display	LED	LED
	Set Acc °C	Scale 1-8	Scale 1-8
Material	Internal	SUS304	SUS304
	External	Epoxy Powder Coated Steel	Epoxy Powder Coated Steel
	Motor	-	Shaded pole motor 1200 rpm
Size	plate	Aluminium	Aluminium
	plate	140 mm	140 mm
	External	150 x230 x 160 mm	150 x230 x 160 mm