

## Hot plate

Temperature 300- 650°C

## Heating Mantle

Temperature 600°C

## Magnetic Stirrer

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

**Refrigeration & Incubation** Applications Temp 2-40 °C  
Liquid-based temperature control systems for heating, cooling, and circulation applications.

## 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.

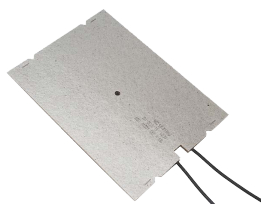
### **Mica Heater**

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.

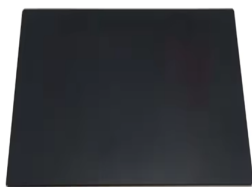
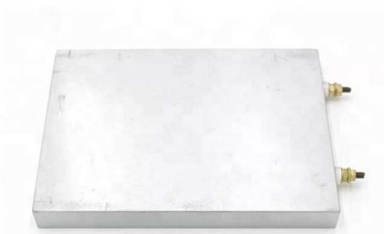
### *Glass Ceramic Plate*

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.



<b>Model</b>		<b>MS-D6</b>
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