

water-jacketed heating incubator with double door structure

Water jacket heating incubator is a high-precision temperature control equipment designed for medical and health care, pharmaceutical industry, biochemistry, agricultural science and other scientific research and industrial production departments.

Water Jacket Heating Incubator

Water jacket heating incubator is widely used in bacterial culture, fermentation, seed cultivation and other constant temperature tests, providing a stable temperature-controlled environment for various experiments.

Main Features of the Water Jacket Heating Incubator

- **Double door structure:** The outer door can keep the isolation of the external environment, the inner door is made of high-quality heat preservation tempered glass, which is convenient for observing the situation inside the working chamber, and will not affect the stability of the internal temperature to ensure the accuracy of the experimental process.
- **Water jacket structure:** The water jacket of the incubator is made of high-quality stainless steel material argon arc welding, with very good heat conduction properties. The water jacket can effectively maintain the uniformity of the internal temperature, and even after the power failure, the high heat capacity of the water can maintain a constant temperature for a longer period of time, to avoid the impact of temperature fluctuations on the experiment.



- **Double temperature insurance device:** Built-in automatic tracking temperature control system and over-temperature alarm function, if the temperature exceeds the set range, the system will immediately cut off the heating device and issue an alarm. At the same time, the built-in temperature insurance device to ensure the safety of the experimental process.
- **Intelligent temperature control system:** The use of microcomputer intelligent temperature control instrumentation, combined with PID control algorithms, can achieve precise temperature control. After setting the temperature, the system will automatically determine the heating power, real-time display of the heating state, to ensure that the temperature is not overshoot phenomenon. It also has a power failure recovery memory function, which automatically returns to the previously set temperature after power failure.
- **High-quality liner design:** The liner is made of high-quality mirror stainless steel, with corrosion-resistant, acid-resistant, easy-to-clean and other characteristics, and is designed with rounded corners, easy to clean and maintain, to ensure that the experimental environment is hygienic.
- **Adjustable shelves:** The height of the shelves in the working chamber can be freely adjusted according to user needs, to meet the needs of different experiments.
- **Timing function:** Can be set to work continuously or 1 to 9999 minutes of timing function, convenient for periodic experimental operations.
- **Temperature range:** Room temperature +5 °C to 65 °C, suitable for routine microbiological and chemical experiments temperature requirements.
- **Convection type:** With fan forced air convection.

Advantages of Water Jacket Heating Incubator

- **High precision of temperature control:** Using advanced PID control technology, it can realize precise and stable temperature control to ensure the accuracy of experimental data.
- **High efficiency and energy saving:** The use of water jacket structure, can maintain a constant temperature for a longer period of time, reduce energy consumption, improve energy efficiency.
- **Easy to operate:** Microcomputer intelligent control interface is simple, with power failure recovery and automatic adjustment function, the operation is very convenient.
- **Strong safety:** Double temperature control and multiple safety protection devices to effectively ensure the safety of the experimental process, to avoid abnormal temperature damage to the experimental samples.
- **Easy maintenance:** The liner material is corrosion-resistant and easy to clean, and can maintain a good working condition after long-term use.

Working Principle

The core principle of the water jacket heating incubator is to use the water jacket system to evenly distribute heat. The water circulation system in the inner liner heats the water layer through the heating element, and the high heat capacity of the water jacket ensures that the temperature is evenly transferred to the studio. The microcomputer intelligent temperature controller monitors the temperature in real time through PID control algorithm and automatically adjusts the heating power according to the experimental requirements to ensure the temperature inside the chamber is stable. In this way, the incubator can provide a constant and uniform temperature-controlled environment to support the cultivation and experimentation of various cells, microorganisms and chemical reactions.

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Model	HW10-50	HW10-80	HW10-160	HW10-270
Volume	50L	80L	160L	270L
Convection type	with fan forced air convection			
Heating Method	Stainless steel electric heater, water-jacketed type			
Temperature control method	PID			
Temperature Control Range	ambient+5°C to 65°C			

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Model	HW10-50	HW10-80	HW10-160	HW10-270
Temperature Resolution	0.1°C			
Temperature Accuracy	±0.2°C			
Temperature Uniformity	±0.5°C			
Number of Shelves	2			
Operating Time	1 to 9999 minutes or continuous			
Internal Dimensions	350x350x410mm	400x400x500mm	500x500x650mm	600x600x750mm
External Dimensions	515x515x700mm	550x580x790mm	650x680x936mm	765x750x1036mm
Power	500W	800W	1200W	1500W
Power supply	220Vac, 50Hz			