Hot Air Sterilizer (Class100 type)

Principle of the Dry Heat Sterilizer:

Under the action of the circulating fan, heating tube, and dehumidifying fan, the dry heat sterilizer rapidly heats up. At the same time, clean and dry air enters the sterilization chamber through a high-efficiency filter, absorbing moisture from the surface of the materials. The absorbed moisture evaporates and is discharged through the circulating channel. The dry air circulates in a directed manner under the action of the fan. As the water vapor gradually decreases, fresh filtered air is intermittently replenished. The chamber is maintained at a slightly negative pressure, and the temperature in the sterilization chamber reaches the set value. It is kept at the set temperature for insulation circulation, achieving sterilization of the sterilized items.

Dry Heat Sterilizer Applications:

Dry heat sterilizer finds wide-ranging applications across industries, including:

1. Pharmaceutical Manufacturing: Ideal for the dry heat sterilization of pharmaceutical equipment, containers, and raw materials, ensuring compliance with rigorous industry standards.
2. Biotechnology: Suitable for sterilizing laboratory instruments, glassware, and media, maintaining a sterile environment crucial for biotechnological processes.
3. Healthcare Institutions: Used for the dry heat sterilization of medical instruments, surgical equipment, and other healthcare materials, contributing to infection control measures.
4. Research Laboratories: Applicable in research settings for the sterilization of tools and equipment critical to experiments and studies.
5. Food and Beverage Industry: Employed for sterilizing packaging materials, utensils, and equipment in the production and processing of food and beverages.
6. In summary, dry heat sterilizer combines cutting-edge technology with versatile features, making it an indispensable tool in various sectors where reliable and effective sterilization is paramount.

Dry Heat Sterilizer Features:

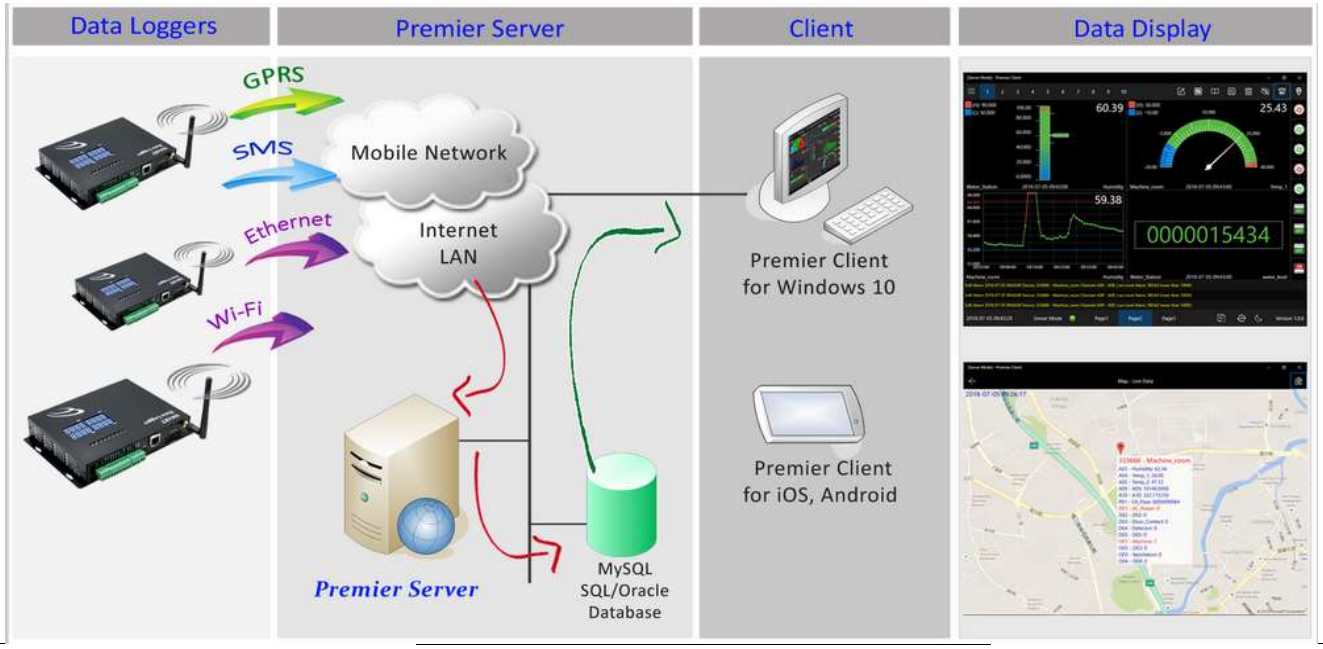
1. Premium Chamber Material: Crafted from high-quality 304 stainless steel, the chamber ensures durability, resistance to corrosion, and facilitates easy cleaning, meeting the stringent requirements of sterilization standards.
2. Variable Capacities: Dry heat sterilizer offers a range of capacities (200-2000L), providing flexibility to cater to diverse industry needs, from smaller laboratories to large-scale pharmaceutical production.
3. Powerful Sterilization Capability: With a power supply of 18kVA, the dry heat sterilizer delivers robust and efficient sterilization performance, ensuring the complete elimination of microorganisms and spores.
4. Wide Temperature Range: Operating in a temperature range from RT+10℃ to 300℃, dry heat sterilizer accommodates various sterilization requirements, making it suitable for a broad spectrum of applications.
5. Low Noise Level: The dry heat sterilization process is conducted with minimal disruption, as the noise level is maintained at ≤85dB, ensuring a quiet and conducive working environment.
6. High Cleanliness Grade: Achieving a cleanliness grade of Class 100, the dry heat sterilizer provides a sterile environment, preventing the introduction of contaminants during the dry heat sterilization process.
7. Versatile Cooling Options: The dry heat sterilizer offers flexibility with cooling methods, allowing users to choose between Air Cooling and Water Cooling based on their specific requirements and available resources.

Dry Heat Sterilizer Specifications:

Model	ST-DH360	ST-DH450	ST-DH650	ST-DH800	ST-DH1000	ST-DH1200	ST-DH2000
Chamber Material	304/316L						
Capacity(L)	360	450	650	800	1000	1200	2000
Power Supply	18kVA	20kVA	21kVA	24kVA	27kVA	27kVA	36kVA
Sterilizer Temperature	RT+10~300℃						
Noise	≤85dB						
Cleanliness Grade	CLass 100						
Cooling Method	Air Cooling						

4.3/5/7 inch Touch screen

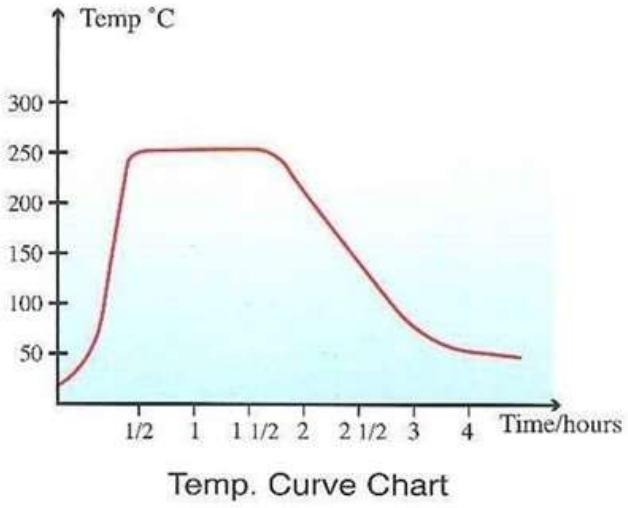
- Three-level password protected permission management and operation log function to improve the safety and traceability of the experiment (For FDA);
- It has the function of appointment running, timing and power-off memory;
- The controller has screen locking function to avoid migration;
- It has functions of real-time curve view, historical data storage and export, and can be extended to remote communication, USB flash disk port, printer port and other functions.



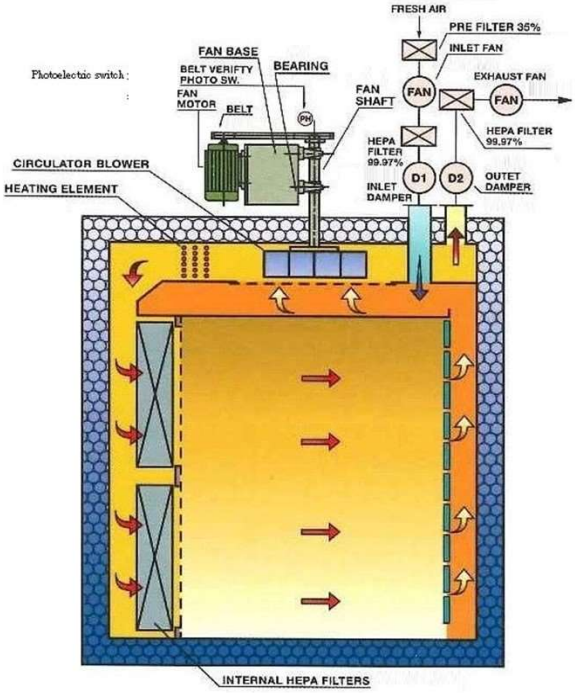
Control System

- ❖ Using human machine interface touch screen (LCD with color) and PID sequence controller for Hot Air Sterilizer System, easy to operate and maintain.
- ❖ Operation panel can set up multiple type of displayed information; you can operate, adjust and install the equipment in accordance with the screen.
- ❖ Using Silicone Control Rectifier (SCR) module for control system, it had a very smooth and stable temperature curve with auto tuning temperature controller (P.I.D) during sterilization.
- ❖ Recording continuous curve of the chamber sterilization process by temperature recorder, you can choose 6 points or 12 points.
- ❖ Automatic sterilizer cycle including five stages: heating → drying → sterilizing → cooling → finishing.
- ❖ Preventing hot temperature happened and bottles' broken when cooling cycle is not finished yet and the door can't be opened.
- ❖ Providing optional equipment purchasement to check chamber pressure is in regular condition or not during turning. The recorder will display pressure value.

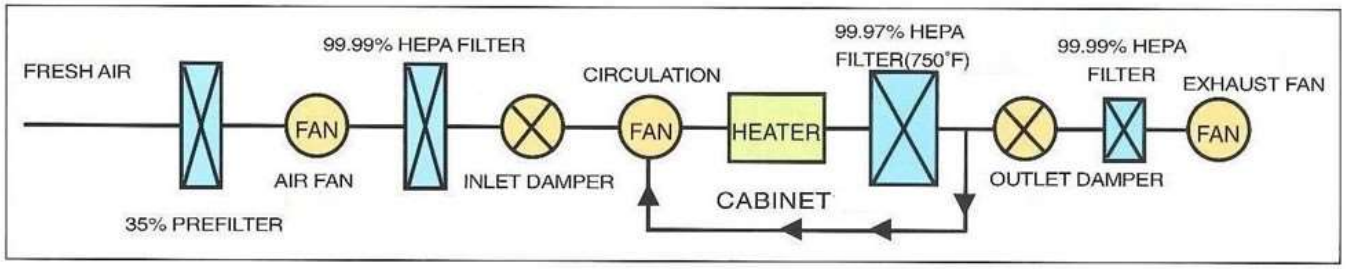
Temperature Curve Chart



Processing Map: Map 1



Processing Map: Map 2



- The equipment will be fully tested before delivering to customer's end, providing original calibration documents, IQ & OQ documents, and all calibration reports of various instruments including temperature sensor that also comply with cGMP regulations.