



MQS SERIES PULSE VACUUM AUTOCLAVE (STERILIZER)

Zhangjiagang Huanyu Pharmaceutical Equipment Co., Ltd.

Profession and Innovation Lead to Future Accomplishment



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○ Structure features

Nice chamber structure and finish

Nice chamber finish, and the equipment is with firm structure, which could stamped by proficient 3 bars, and each autoclave is detected by X ray, and certified by the government, which could fully meet the standard of pressure vessel. Good quality silicon insulation layer is surrounded outside of the chamber to reduce the heat radiation on the surface of the machine.

Full automatic door

The equipment is equipped with full automatic door, and it can also be made to double door structure, which could achieve the isolation of the operation area to the sterile area.

Stainless steel piping

Stainless steel pipelines are used to avoid corrosion that may lead to secondary contamination of the sterilized loads.

○ All round flexible custom made service

The equipment structure and program could be custom made, including:

- Equipment internal measurement and pipeline location could be custom made according to the measurement and quantity of the loads for sterilization.
- Equipment external measurement could be narrow designed according to the sterilization room measurement.
- Door structure choice: motor door or sliding door.
- Door open direction.
- Steam generator could be accessorized according to user's requirement.
- Sterilization program could be custom made according to user's sterilization craft requirement.
- Equipment configuration and etc.

○ Precise control system

Intelligent temperature sensor, pressure transmitter and pneumatic valve ensure steam pressure temperature detecting and control both inside the chamber and jacket.

○ Load traceability

All data reports and curves could be recorded on SD card in non modifiable format, and could be traced conveniently.

○ Safety

- The doors are designed with independent mechanical and digital safety features:
 - 1.The door is not allowed to be opened when the chamber is pressurized.
 - 2.The cycle is not allowed to start when the door is not sealed.
 - 3.Door process will automatically stop if obstruction is detected.
 - 4.The door cannot be unsealed until the chamber pressure reach room pressure.
 - 5.Under double door structure, double door interlock to prevent both doors open in the same time.
- Safety valves are installed to prevent pressure exceeds the allowed limit.
- Liquid levels are installed inside built-in steam generator to ensure the safety operation of the heating element.
- Emergency stop button is installed for immediate cycle shut off under emergency.

○ Sterilization features

- Three times of pre pulse vacuum for fully eliminate the chamber air to ensure the temperature evenness during sterilization.
- Vacuum emission + jacket drying to ensure the dry effect of the sterilization loads.
- The air is filtered through 0.22µm filter before inlet into the chamber to avoid secondary contamination to the sterilization loads.

○ Application

- ◇Textile;
- ◇Instruments;
- ◇Containers;
- ◇Culture medium;
- ◇Small amount of liquid in unsealed bottles;
- ◇Rubber stopper and aluminum cap;
- ◇others.



○ Control System

Loading side

PLC and HMI color display touch screen control

- ◇Automatic & Manual Operation Mode;
- ◇Stable performance & precise control;
- ◇Multiple sterilize cycles;
- ◇Sterilizing parameters can be set on HMI;
- ◇Print of time, temperature, pressure and etc.

Operation programs

| Program Name | Cycle phase | Set-able parameters |
|------------------|--|---|
| Textile | Three times pulse Vacuum---Heat---Sterilize---Dry---End | Sterilize Pressure: 0.07-0.22Mpa; Sterilize Temperature: 115-134 °C, |
| Instrument | | |
| B-D Test | | |
| Liquid | Heat---Sterilize---Cool---End | |
| Vacuum Leak test | Vacuum to set pressure – Hold for a set period – Return to normal pressure – Check the leakage rate | Vacuum pressure Holding period Acceptable leakage rate |

Parameter table

| Model | Volume | Chamber measurement | External measurement | Steam | Water | Power | Weight |
|---------|--------------------|---------------------|----------------------|-------|-------|-------|--------|
| MQS0.25 | 0.25m ³ | 800×600×600mm | 1100×1320×1700mm | 15kg | 100kg | 3kw | 900kg |
| MQS0.36 | 0.36m ³ | 1000×600×600mm | 1300×1320×1700mm | 20kg | 100kg | 3kw | 1000kg |
| MQS0.6 | 0.6m ³ | 1200×610×910mm | 1500×1320×1950mm | 30kg | 200kg | 3kw | 1350kg |
| MQS0.8 | 0.8m ³ | 1500×610×910mm | 1800×1320×1950mm | 40kg | 200kg | 4kw | 1650kg |
| MQS1.2 | 1.2m ³ | 1500×680×1180mm | 1820×1420×2000mm | 40kg | 300kg | 4.5kw | 2000kg |
| MQS1.5 | 1.5m ³ | 1900×680×1180mm | 2200×1420×2000mm | 50kg | 300kg | 4.5kw | 2200kg |
| MQS2.0 | 2.0m ³ | 2500×680×1180mm | 2800×1420×2000mm | 65kg | 400kg | 5.5kw | 2600kg |
| MQS2.5 | 2.5m ³ | 2100×1000×1200mm | 2400×1880×2000mm | 80kg | 400kg | 5.5kw | 3200kg |