

Steam Sterilizer

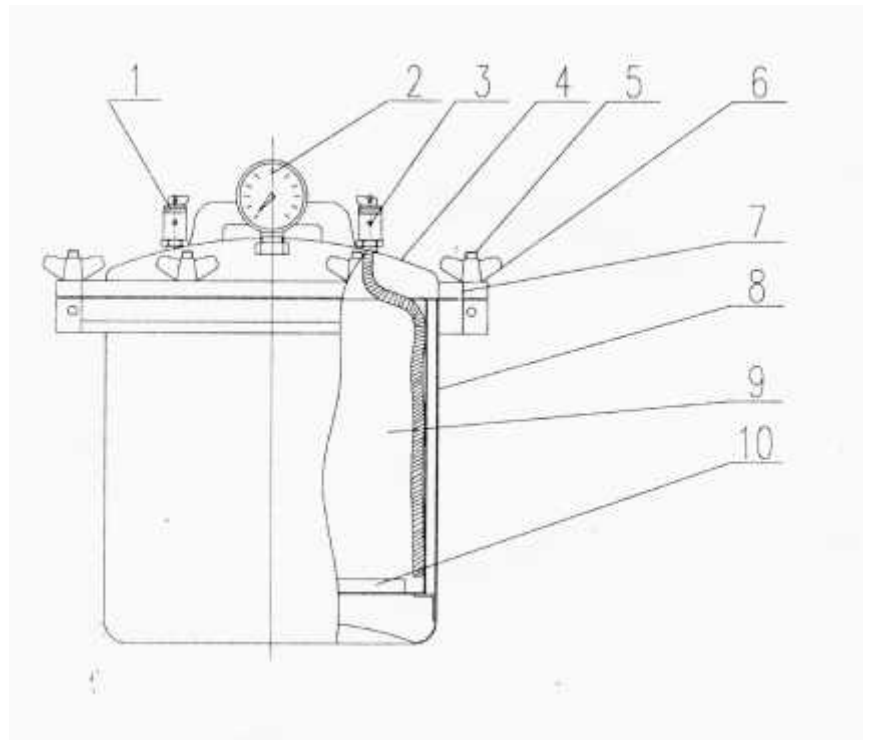
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Introduction

The sterilizer uses saturated steam to rapidly and efficiently sterilize a wide range of items in the school laboratory environment such as glassware, agars and compounds, media and instruments

Details

1. Safety Valve
2. Pressure gauge
3. Air Release Valve
4. Lid Assembly
5. Lid Locking Bolts
6. Wingnuts
7. Silicon Gasket
8. Sterilizing Chamber
9. Sterilizing Drum
10. Internal Plate to Cover Element



The sterilizer is heated by an immersed electro-thermal element which gives rapid temperature rise and low power consumption.

The sterilizer is fabricated from high grade stainless steel which is acid and alkali proof and is much stronger and more robust than aluminium sterilizers.

The lid is fitted with an air release valve, safety valve and dual scale gauge calibrated in bar (1 bar equals 1 atmosphere) and degrees centigrade to permit convenient monitoring.

Technical Parameters

Internal working volume	.18 Cubic Meter
Rated working pressure	.14 - .165 MPa
Maximum Safe Pressure	.165MPa (safety valve preset value)
Operating Voltage	240V AC 50Hz
Electrothermal Element rating	2kW
Average sterilization time	15 - 20 min - Refer manufacturer's instructions.

Operating Instructions

Preparation

Pour 3.5 liters of water into the container ensuring the element is well covered....it is essential that each time the unit is cycled the water level is checked because if the element is exposed it is likely it will be seriously

damaged or become inoperable. Sterilizing cycles consume water as steam hence the requirement to monitor the water level at each sterilization cycle.

Loading

Place articles to be sterilized on the sieve plate or in the test tube/beaker rack ensuring space is left between the items to let the steam penetrate correctly.

Closing

Place the sterilizing stainless steel drum containing the items, or the loaded rack into the drum and place into the sterilizer, insert the hose attached to the fitting on the underside of the lid into the half round slot in the

drum ensuring alignment of the lid and the bolt slot on the container and then evenly tighten the wing nuts to make the container and lid tightly sealed together.

Heating

Connect the sterilizer to the standard AC wall outlet (240VAC50Hz) and turn on the power.

Now, the air release valve should be opened to emit any cold air inside. When the steam begins to emit from the air release valve close it using a pencil or similar tool.

When the pressure/temperature reaches the pre-set value, you can check on the gauge that the correct temperature/pressure is indeed present inside.

Sterilizing

When the steam pressure reaches the pre-set value .15 - .16MPa commence timing your cycle according to the individual instructions in the case of agars or other compounds.....the safety valve will open automatically and then cycle itself to maintain a constant pressure.

Cooling

When the cycle time has elapsed turn off the power and wait until the pressure gauge returns to zero then open the air release valve and ONLY then can you safely release the wing nuts and remove the lid.

Note: NEVER RELEASE STEAM OR OPEN THE LID IMMEDIATELY AFTER THE CYCLE HAS FINISHED AS SERIOUS INJURY FROM ESCAPING STEAM WILL RESULT

A good rule of thumb is to wait twenty minutes for the sterilizer to cool and the pressure return to atmosphere.

Safety and Maintenance

Power Converter

Supplied with your sterilizer is a power converter (*replacement code: 1221010*) which plugs normally into your laboratory wall socket and into which you plug the sterilizer cord.

This has been supplied for safety reasons due to the high-power draw of the sterilizer. The sterilizer has an overly large earth for increased safety. Please note the switch on the side to reset the converter.

General Safety

This sterilizer is a steam pressure vessel so do not interfere or damage the safety valves.

If the pressure gauge indicates .165MPa and the safety valve does not exhaust IMMEDIATELY turn off the power and investigate.

The pressure gauge needle should always point to zero before using the sterilizer otherwise the unit may read more than the pre-set range.... contact your supplier for advice.

The pressure gauge should be regularly checked at least twice per year for correct calibration.

After use drain all water from inside the unit and dry all components

Note: ONLY AFTER DISCONNECTING THE MAINS POWER.

Take care of the silicon gasket by keeping it clean and free from abrasive materials as this component must be in perfect order to ensure the required pressure is maintained.

Operate on an insulated surface such as a bench mat to protect laboratory surfaces from heat damage. **Note: NEVER OPEN THE STERILIZER UNTIL ALL PRESSURES HAVE BEEN RELEASED AND THE UNIT IS COOL TO TOUCH.**