

IS 3829 (Part 1) : 1999
Specification for Steam Sterilizers
Part 1 Horizontal Cylindrical and Horizontal Rectangular Steam Sterilizers,
Pressure type (For Hospital And Pharmaceutical Use)

Comprehensive guide about Sterilizer used in Hospital

Sterilizer or autoclave is a device that **destroys or deactivates all forms of microbial activity**. Steam sterilizer uses **pressurized steam** to increase the pressure and temperature required for the sterilization time (*similar to pressure cooker*).

It is used in healthcare facilities, for **sterilizing surgical instruments and lab equipment**, to prevent infections, ensure the patient's safety, and maintain sterile conditions.

It is important that the sterilizers are able to **reach and maintain the required temperature** for the **required amount of time**. The Construction of the sterilizer comprising of chamber, shell, steam jacket, door and valve, shall be such as to maintain the required temperature **within the tolerance limit** and for the desired time period.

The **thermometer** and the **pressure gauge** used to measure the temperature and pressure are verified for their **accuracy** of measurement.

It is crucial for the sterilizers to be **safe and durable** for use. **Hydrostatic pressure test** are used for assessing the **strength and integrity** of sterilizer, by filling it with water, and pressurizing to a level higher than its **Maximum Allowable Working Pressure (MAWP)**. The Sterilizer is then monitored for leaks over a set period of time. This ensures that the sterilizer is safe for use.

The **Marking** requirements provide the operator with **vital information**, such as the **source of steam, working pressure, hydrostatic test pressure, wattage and power consumption** (*for electrically operated sterilizer*), for proper functioning.

In order to reach the desired **Sterility Assurance Level (SAL)**, it is important that the sterilizers are operated according to the **recommended operating time and steam penetration time** for sterilization. **Routine maintenance** for sterilizers is also important for keeping them operating properly and safely. The **Operating manual** provides all these details.

IS 3829 (Part 1) ensures that the steam sterilizer is **safe for use** and provides the desired **Sterility Assurance Level (SAL)**.