



Summary of IS 3829 (Part 2) : 1978 — Specification for steam sterilizers: Part 2 horizontal cylindrical high speed steam sterilizers, pressure type

Sterilization is the process of eliminating all forms of microbial life, including bacteria, viruses, fungi, and spores, from an object or surface. Sterilization ensures that these products and surfaces are free from bacteria, viruses, fungi, and spores, making them safe for use in surgeries and other medical procedures, and prevents infections.

There are different mechanisms used to achieve sterilization; for example, **Steam Sterilization**, Dry Heat Sterilization, Chemical Sterilization, Radiation Sterilization etc. Steam sterilizers, *also known as autoclaves*, uses high-pressure saturated steam at temperatures of **121 – 134 °C** to achieve sterilization.

In Hospitals, the steam sterilizers are used for **sterilization of surgical instruments, medical devices and equipment, dressings, bandages, linens** etc.

While looking for a sterilizer for their use in Hospitals, one should check for qualities like effective sterilizer capability i.e. it should be capable of sterilizing surgical instruments swiftly, it should be equipped with features like robust locking systems, pressure safety valves, and low-water protection etc. for enhanced user safety, it should be built from high-grade material, and shall have standardized designs ensuring interoperability.

The Indian Standard, IS 3829 (Part 2), ensures quality by specifying stringent design, material, and operational requirements. It mandates the use of reliable materials like stainless steel, sets clear guidelines for operational safety through pressure testing and lock mechanisms, and addresses the need for efficient sterilization by defining **quick operational cycles**. The ability of the pressure-type horizontal cylindrical high-speed steam sterilizers to complete a sterilization cycle within six minutes makes it suitable for use in the **emergency sterilization** situations e.g. for sterilization of unwrapped surgical instruments.

Optional accessories such as thermographs and trolleys are also standardized, allowing customization based on consumer needs. This Indian Standard thus assures that the Horizontal Steam Sterilizers are safe, high-quality, and efficient.

The Indian Standard is one of the series of Indian Standard published for Steam Sterilizers, other parts are, IS 3829 (Part 1) - Specification for steam sterilizers: Part 1 horizontal cylindrical and horizontal rectangular steam sterilizers, pressure type (for Hospital and Pharmaceutical Use), and IS 3829 (Part 3) - Specification for steam sterilizers: Part 3 pressure sterilizers, vertical cylindrical type