

Mevex Equipment for Medical Device Sterilization



Background

Linear accelerators (linacs) are used to process medical devices due to their efficiency and ability to deliver precise doses of ionizing radiation. The sterilization process involves exposing the medical devices to high-energy X-rays or electron beams (E-beams) generated by the linac, which effectively disrupts the DNA of microorganisms, rendering them unable to reproduce and causing their death.

Several factors drive the use of linacs for processing medical devices. First, they provide a controlled and reproducible method for achieving the required sterilization dose, ensuring consistency across batches. Second, the X-ray and electron beams generated by linacs can penetrate packaging materials, allowing for the processing of devices without compromising their integrity or functionality. This is particularly important for complex medical instruments that must remain sterile until use. Moreover, linacs offer the advantage of reduced chemical residues and minimal impact on heat-sensitive materials.

Examples of medical devices treated with linear accelerators:

- Implants: Devices such as orthopedic implants (e.g., screws, plates) and dental implants
- Catheters: Various types of catheters, including urinary and intravenous catheters, that are used in different medical procedures
- Sutures: Sterile sutures are used to close wounds or incisions in surgical procedures
- Diagnostic devices: Instruments such as endoscopes and biopsy needles that are crucial for minimally invasive procedures
- Single-use healthcare products: Syringes and surgical gloves
- Wound care products: Dressings, tissue, and bandages



What types of linac configurations are available for processing medical devices?

	X-ray Linacs	E-beam Linacs
Energy Range	7.5 MeV	10-11 MeV
Power Range	Up to 75 kW (10mA)	Up to 70 kW (6.4 mA)

FOR MORE INFORMATION

STERIS Applied Sterilization Technologies

Web: steris-ast.com
Email: ast_info@steris.com
(EMEA-APAC) +44 330 236 8344
(Americas) 877.783.7479

