Washer/decontaminators

Health problem addressed

Use of washer/decontaminators help reduce staff exposure to risky manual cleaning of soiled instruments (e.g., organic debris) and ensure that cleaning is done in a consistent manner.

Product description

Washer/decontaminators clean instruments and utensils by removing blood, fat, and other organic debris that can adhere to surfaces and crevices, which provide a substrate for growth of microorganisms. They consist of one or more corrosion-resistant, shelved chambers that are freestanding, recessed in a wall, or installed between walls. The latter configuration, also called pass-through, keeps contaminated material away from clean areas where instruments are packed before final sterilization by loading on one side of a wall and unloading on the other. Inside the unit, manifold inlets are utilized to spray water and water/detergent mix. Most manufacturers can provide units designed for either steam or electric water heating. Some units have automatic loading/unloading features to minimize the need for operator attention and help reduce staff injuries. Most units have electromechanical or microprocessor controls to provide the user with a record of wash/rinse cycle parameters.

Principles of operation

The washing action typically consists of high-pressure jet-spraying water or a water/detergent mixture through several manifold inlets above, below, and at the sides of the racks or from inlets in rotary spray arms. The rinse cycle can use either distilled or deionized water and is followed by heated forced-air drying. The devices to be cleaned are commonly rinsed in cool water to prevent proteinaceous material from baking on before the water temperature is increased.

Operating steps

- Wire mesh stainless steel baskets containing soiled materials are manually or automatically loaded onto racks in the wash chamber.
- When the chamber has been properly closed, the wash process is started. Most units have pre-wash, detergent wash, rinse, DW rinse, and dry cycles. Some units also have ultrasonic cleaning and lubricating rinse cycles.
- After the final cycle has completed, the decontaminated items are removed. Pass-through units release the items on the decontaminated side of the unit.

Reported problems

It was reported that the central processing unit of some models malfunctioned during processing, thus preventing the unit from completing the cycle. Units should have audible or visual alarms to alert technicians when a component fails, the device door is unlocked, the cycle fails to complete, or temperature is below the set point. Units should have emergency stop buttons or cables, and a safety interlock switch to stop all machine action if the door is opened during operation. Motors have overheated during the drying cycle in specific models.

Use and maintenance

User(s): Sterile processing (supply) technicians
Maintenance: Biomedical engineering staff and/or service contract with the manufacturer or third-party organization
Training: Initial training by manufacturer, operator’s manuals, user’s guide

Environment of use

Settings of use: Hospital central sterile processing (supply) department
Requirements: Line power, water source, drain, optional pit, optional steam generator

Product specifications

Approx. dimensions (mm): 1800 x 800 x 750
Approx. weight (kg): 200-400
Consumables: Enzyme detergent
Price range (USD): 20,000-80,000 (40,000 typical); price covers all types and variations
Typical product life time: 12 years
Shelf life (consumables): 2 years

Types and variations

- Freestanding
- Pass-through

Other common names:
Decontaminating washers