Porous loads

A variety of fabrics and textiles can be sterilized in an autoclave, for example many hospitals will use an autoclave to sterilize gowns, instrument packs etc. Veterinary practices will sterilise animal bedding materials, instruments and so on.

Central Sterile Service Departments (CSSD’s) often use a combination of pouches and wrapping depending on the type of surgical instrument they are protecting from contamination. Pouches of any type are generally used for smaller surgical instruments, whilst wrapping is used for larger items such as surgical trays and pans.

Surgical packs, wraps and plain closure bags are usually sealed with Autoclave Tape for security. This tape is designed to change colour beyond a certain temperature to help identify successful sterilisation. It is important to use the correct tape as substitutes (such as masking tape) are not designed to withstand the conditions inside an autoclave.

Challenges of wrapped instrument and fabric loads

As these types of items are true ‘porous loads’ they will require both pre and post vacuum systems, negative and positive steam pulsing and a fully heated jacket.

Steam quality is also important when operating porous load autoclaves. In order to achieve a touch-dry load, conditions inside the autoclave need to be just right. With the Advanced Vacuum, negative and positive steam pulses from a dry saturated steam source (i.e. a Steam Generator) provide the perfect air removal, sterilization and drying conditions.

Recommended options

- **Heated Jacket** – adds a secondary layer to the autoclave allowing steam to circulate outside the sterilization chamber whilst insulating the main vessel. The heated jacket eliminates cold spots within the chamber and thus prevents excessive condensation.

- **Advanced Vacuum (AVC001)** – is suitable for all units with an integral steam generator (or external steam supply), this option is Astell’s most advanced method of air removal. It’s ideal for sterilizing porous loads and other materials typically found in dental and medical applications where air pockets could easily form.

- **Vacuum Steam Pulsing** – achieved with our Advanced Vacuum AVC001, provides effective air-removal (essential for porous loads), ensuring good steam penetration, whilst post vacuum drying in conjunction with a steam-heated jacket results in touch-dry loads at the end of the cycle.

- **Integral Steam Generator** – removes the heating elements from the chamber and replaces them with an integral generator for improved control over steam production.

FAQs

The Advanced Vacuum option and Heated Jacket option provide drying for wrapped instruments. Can they be turned on/off depending on the load?

Both these options are used according to the load/program chosen by the user. Cycle data is managed via the colour touchscreen controller.
When asking for a quotation...
Remember to answer these four questions when asking for a quotation.

- What size of autoclave do you need?
- What items will you (or your customer) be sterilizing?
- Does the load need to be dry at the end of the cycle?
- How many cycles do you wish to run per day?