



WHAT IS YOUR LOAD TYPE?

Porous loads

A variety of fabrics and textiles can be sterilized in an autoclave, for example many hospitals will use an autoclave to sterilise 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.

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.

THE CHALLENGES

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.



CHOOSING AN AUTOCLAVE BY LOAD TYPE

POROUS LOADS

Wrapped instruments and fabrics



ASTELL RECOMMENDED PRODUCTS*



Top Loading Range

95 – 135 litres

- Vertical chamber with gas strut assisted door and fast-action locking mechanism
- Size optimised baskets and discard containers ensuring maximum chamber usage. Optional integral hoist for heavy loads
- Compact design with castors for easy movement
- Full range of options comparable with much larger machines



Front Loading Range

120 – 344 litres

- Horizontal chamber provides easy loading access
- 5 standard chamber sizes up to 344 litres in capacity
- All units feature Astell's 'Swiftlock' secure door closure system
- Optional shelves and discard containers provide chamber loading flexibility



SQUARE Range

125 – 735+ litres

- A choice of 7 standard chamber sizes and either a manual or automatic door
- Integral Steam Generator fitted as standard
- Fully customizable design built to customer requirements
- Ideal for high throughput laboratories

*Please note these are suggested model ranges. Other products and options are available. Please contact us for a personal recommendation, providing a description of the load type(s).

Product highlights

All Astell autoclaves have the following features:

'Heaters in chamber' models have 'media holdwarm', a feature that uses the heaters to hold sterilized media at a set temperature until it is to be used.

Autoclaves are manufactured in accordance with Pressure Equipment Directive (PED 2014/68/EU) and ISO 9001:2015 quality standards.

5.7" colour touchscreen controller with USB connectivity; allows users to edit cycle parameters, store and recover historic cycle data, add security levels with user passwords and more.

316L-grade stainless steel pressure vessels with electro-polished finish.

LSPT probe features 316L stainless steel conduit to protect the probe whilst inside the autoclave, and during unloading/unloading.

Industry-standard safety features to ensure the well-being of both the sterilizer and its operators; including external pressure gauge, over pressure and over temperature protection, a safety-linked door mechanism and thermally insulated doors.

Optional stainless steel pipework and panel work if required.

Optional controller software that meets the guidelines of FDA 21 CFR Part 11 Electronic Records; Electronic Signature final rule legislation.

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?



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