

10 things you should know before purchasing an autoclave...

Promed autoclave guidelines

WHY USE A VACUUM (TYPE B) AUTOCLAVE RATHER THAN A NON-VACUUM (TYPE N) AUTOCLAVE?

The preferred method for sterilisation of medical instruments is by using saturated steam, under pressure at the highest temperature compatible with the instrument. Ideally instruments should be sterilised at 134 degrees for three minutes. Steam sterilisation requires direct contact between the saturated steam and every surface of the instrument. As this direct contact can be prevented by the presence of air in the chamber a vacuum must be present to remove the air and enable steam penetration. All pouched instruments, instruments with lumens or cavities (whether pouched or un-pouched) and porous loads (e.g. swabs or dressings) must be sterilised in a vacuum autoclave. An advantage of pouching all instruments is that they remain sterile for up to 6 months until you use them. Un-pouched instruments must be used straight away.



10 THINGS YOU SHOULD KNOW BEFORE PURCHASING AN AUTOCLAVE....

Because micro-organisms will not be destroyed unless they come into direct contact with steam, any air that remains trapped within the instrument or load will act as a barrier to the steam and prevent parts of the load from being sterilized. The triple pulse, pre-vacuum phase of a 'Type B' vacuum autoclave utilises a powerful vacuum pump to forcibly remove all the residual air from within the chamber and load, enabling steam to circulate freely and rapidly, and allowing good penetration of the steam into the load, thus ensuring fully effective sterilization.

Vacuum autoclaves feature vacuum assisted drying at the end of the sterilization phase. The rapid removal of steam and the creation of a vacuum within the chamber and load helps to ensure all contents are thoroughly dry when removed from the autoclave. This offers the user significant advantages that bring a practical benefit, as equipment such as single solid or hollow instruments, sets for surgical procedures and porous items can be wrapped in approved packing materials which will then maintain the contents in a sterile condition ready for use at a later time. So what should you know before purchase....

1. Purchase a Vacuum B Autoclave

Vacuum B Autoclaves are suitable for sterilising:

- Wrapped solids instruments and utensils.
- Porous loads
- Hollow instruments and utensils

All dental autoclaves should be regularly serviced and maintained to ensure they are achieving appropriate sterilization conditions. This would include:

- A validated process at commissioning
- Regular performance monitoring by periodic testing (daily, weekly user test)
- Documentation of in-use operational reading.

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2. Case Size

Before you buy establish where you intend to keep your autoclave. If you have a space restriction determine if the autoclave has a smaller case that will fit confined spaces, If space is severely restricted, it maybe worth considering the purchase of a smaller autoclave that is specifically designed for sterilising small instruments or hand pieces.

3. Chamber Size

Choose an autoclave with the appropriate chamber diameter for your needs - the bigger the chamber the greater the capacity for instruments, although a smaller chamber will usually mean faster overall cycle times and may be more appropriate for your needs.

4. Cycle time

The quicker the cycle, the quicker the turnaround of instruments. Ensure the autoclave has the appropriate choice of cycles to meet your sterilising requirements

5. Heater Design

Choose one that heats the water outside the chamber. This ensures that the load will be completely dry and minimises the amount of distilled water lost between cycles-which costs you money.

6. Single Use Water

Autoclaves that use fresh water for each cycle offer superior performance as there are no contaminates from previous cycles being used in the sterilising process.

7. Printer Facility

Printers make permanent recording easy but do cost extra. If you do not invest in a printer initially, ensure that you can refit one at a later date.

8. Guarantees/Warranties

Check the period of warranty offered with the autoclave. Those with two year warranties offer increased peace-of-mind and will save you money

9. Aesthetic Design

Make your life easier: Choose an autoclave that looks good and one that can be easily maintained with minimum effort. Consider a plastic-bodied autoclave rather than metal. Plastic removes the risk of rust and upholds maximum good looks with minimum of effort. A good looking, modern autoclave will be in keeping with today's modern practices and, will present a good image to patients, reassuring them that they're in safe, caring hands.

10. Quality Assurances

Quality standards are there for a reason. Check with the manufacturer whether their sterilisers conform with the Medical Devices Directive (93/42 EEC) and are CE marked.

