



Prestige Medical

## vacuum assisted steam sterilization - the facts

A non-vacuum autoclave, often referred to as 'Type N', is only suitable for processing solid unwrapped instruments. They are not suitable for sterilizing instruments that have lumens (hollow cavities), items wrapped or enclosed in pouches, and porous (absorbent or linen) loads.

'Type N' non vacuum autoclaves are not very efficient at removing trapped pockets of air and, because microorganisms 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.

For the sterilization of hollow, wrapped, pouched and porous loads as well as solid unwrapped instruments a 'Type B' vacuum autoclave should be used. The triple pulse, pre-vacuum phase of a 'Type B' autoclave utilises a vacuum pump to 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.

All 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 help to ensure all contents are thoroughly dry when removed from the autoclave, a critical requirement when wrapped or pouched instruments are being sterilized.

Drying also offers the user significant advantages that bring a practical benefit, as equipment such as single wrapped solid or hollow instruments, sets for surgical procedures and porous items can be wrapped in approved packing materials that will then maintain the contents in a sterile condition ready for use at a later time. Equipment required to be sterile at the time of use can now be available on demand.

Where specific loads or items are to be sterilised, a 'Type S' autoclave that utilises only a single pulsed pre-vacuum phase may be sufficient to remove air from within the chamber and load. The manufacturer must advise what loads are suitable for processing in their autoclave and be able to demonstrate that the autoclave is capable of successfully sterilizing those specific loads. The autoclave should not be used to process loads that have not been validated for that autoclave

EN13060 Clearly states: It is essential that a sterilizer is only used for the sterilization of products for which it is designed, and the choice of sterilizer or sterilization cycle can be inappropriate for a particular load.

**ALWAYS ENSURE YOU USE THE RIGHT CYCLE FOR THE LOAD**

infection control fact sheet 1