HOSPITALEQUIP T/A MOUKOKO & BROS TRAD
Private Bag X201, Suite 073, Hatfield 0028
204 Festival Street
Hatfield 0083, Pretoria
Gauteng,
South Africa

Registration# 2006/143989/23
www.hospitalequip.co.za
sales@hospitalequip.co.za
guy@hospitalequip.co.za
WhatsApp:+27 (0) 83 551 5231
Telephone:+27 (0) 65 831 0268

FAQ's AUTOCLAVES (WHAT YOU NEED TO KNOW)

Ask -1.What is an steam sterilizer (autoclave)??

Answer-

An steam sterilizer (autoclave) is a device that uses steam to sterilize equipment and other objects. This means that all bacteria, viruses, fungi, and spores are destroyed. Autoclaves work by allowing steam to enter and maintaining extremely high pressure for at least 15 minutes. Because damp heat is used, heat-labile products (such as some plastics) cannot be sterilized or they will melt.

Ask -2.What is the difference between disinfection and sterilization?

Answer-

Disinfection destroys all the micro-organisms present in a given environment apart from spores: an object that has been disinfected properly may still transmit a pathogenic micro-organism. Sterilization, on the other hand, is the complete elimination of all micro-organisms including spores.

Ask -3.What are the main features of steam sterilization?

Answer-

Heat is the best and most used sterilization agent and pressurized, saturated water vapor is the most efficient method of heat transmission. That is why steam sterilization reduces the time and the temperature needed for the treatment: at 134℃ an exposure of only 4 minutes is sufficient, at 121℃ a time of 15 minutes is enough. In addition, steam sterilization creates no toxic or dangerous residues on objects and does not damage instruments (provided that they can withstand the temperatures reached).

Ask -4.What autoclave should I use (class B, class S or Class N)?

Answer-

What autoclave you should use is determined by the type of instruments that you sterilise.

If you sterilise Hollow Load Type A & B instruments, you will need an autoclave capable of running a Type B Cycle. These autoclave are usually called Class B sterilizers.

Typical users of Class B autoclaves include:

Dentists

Plastic surgeons

Day surgeries

Medical Surgeries

Podiatrist Tattooist

Body Pierces

Veterinary application

Cosmetic application (Including hair or nail salons etc…)

If you only sterilize unwrapped Non Hollow instruments, you only need an autoclave capable of running Class N Cycles. These autoclaves are usually called Class N Sterilisers. Not many new sterilizes are Class N, although many older sterilisers are. When purchasing a new autoclave to run Class N, it is best to purchase a Class S sterilisers as these can easily process such instruments.

Can a single sterilizer be used for multiple load types?

Generally all autoclaves are capable of sterilizing all types of loads, but in order to get the most from your considerable investment it is worth investigating what options might be available to more efficiently process the different types of materials. A waste load can be processed far more effectively by using options such as vacuum and free steaming, but using these on a media load could lead to disaster. Some laboratories use a different autoclave for each load type to avoid cross contamination, but for smaller laboratories this can easily be overcome by having pre-set selectable programs for each load type. Once programmed and 'locked off' these cycles can also be qualified.

Ask -5.What are the type A & B hollow instruments?

Answer-

Hollow Load Type A

An object whose ratio of length of cavity to diameter is greater than 5.

Hollow Load Type B

An object whose ratio of length of cavity to diameter is greater than 1 and less than 5.

Non Hollow Instruments (Solid Instruments)

An object whose ratio of length of cavity to diameter is less than 1.

Due acknowledgement is given to EN 13060:2004.

Ask -6.Top-loading autoclaves or front-loading autolcaves? Horizontal or vertical type autoclaves?

Answer-

Many sizes of lab sterilizers are available as either top- or front-loading; which suits you best? Top loaders conserve space, but can be cumbersome if you process heavy loads. Front loaders can't process as large a load at comparable volume, but pose less of a risk of strain or repetitive injury to technicians who handle many loads each day.

Ask -7.What is a Type-B (class B) autoclave?

Answer-

Class B autoclave used for sterilizing all objects (solid instruments, porous objects and A and B hollow objects, both packaged and un-packaged);

Class N autoclave used for sterilizing only un-packaged solid instruments;

Class S autoclave used for sterilizing un-packaged solid instruments plus one other of the types indicated for cycle B (to be specified by the maker).

Class B autoclaves are the autoclaves that can carry out cycle B and thus can sterilize any kind of object.

Ask -8.What is EN 13060 standard?

Answer-

This is the applicable European standard, relating to small steam sterilizers.

In most cases (Dental, Medical, Tattoo, Piercing, Podiatry, Veterinary, laboratory) this standard applies at reprocessing of reusable medical and surgical instruments and equipment, and maintenance of the associated environment.

Ask -9.What records do I need to keep?

Answer-

All documents relating to sterilisation should be retained and kept in the steri room. Records to be kept include: Tests performed, cycle records (print outs), training records, maintenance records, validation certificate

Ask -10.How often should I use biological indicators?

Answer-

Annual validation negates the need for any further bio tests to be carried out. If your autoclave is not being validated, we suggest monthly bio tests should be carried out.

Ask -11.When should instruments be in packs for sterilising?

Answer-

European standard states that packing items is done to provide an effective barrier against potential contamination and maintain sterility. Unpacked items should be used immediately, or cleaned and sterilised again before use. Packed items can be stored in a clean, dry place and will remain sterile until they are used.

Ask -12.How should I place packs in the autoclave?

Answer-

When using standard self - sealing pouches, they can be placed paper side up on the tray (when there are only a few - no overlapping) or up on their side with paper to paper, plastic to plastic. A "pack rack" is the best way to stack bags in the autoclave.

Ask -13.What are my cycle needs?

Answer-

Different loads call for different cycles in order to assure sterilization or destruction. What roles will your lab autoclave need to fulfill? If you primarily process growth media, then you'll want a rapid cooling system to prevent the media from becoming "overcooked." Those processing glassware, instruments, or porous loads benefit from vacuum and pulsed freesteaming cycles, which assure good steam penetration and dry finished loads. An autoclave primarily used for discard loads and laboratory waste greatly benefits from an exhaust filtration system and thermal probes for quality assurance. And if you plan to use your lab sterilizer for many tasks, expanded memory modules make it easy to design custom cycles for each task and run them with "one-touch" convenience.

Ask -14.What ICANCLAVE autoclaves provide in laboratory use?

Answer-

ICANCLAVE autoclave for the modern laboratory, the pharmaceutical and food industry as well as for special application. Innovations for safe, accurate, reproducible and validatable sterilization in research and industry.

Glassware, instruments & apparatus sterilization

Standard use of autoclave with option of vacuum drying which allows loads to be removed 'dry' without operator intervention

Media preparation

The following options are recommended for effective media preparation with reduced cycle times: freesteaming (improved temperature distribution); accelerated cooling (extra loads per day); media warming (when cycle finishes media is kept at 40oC, handy for overnight cycles); performance testing

Fluid and diluent sterilisation

ICANCLAVE autoclaves recommend the following options for effective fluid sterilization: load sensed process timing (guaranteed sterilizing times as cycle does not start until probe placed in centre of load reaches cycle temperature); accelerated cooling (extra loads per day)

Waste sterilization

The greatest difficulty with some waste loads is achieving adequate load steam penetration especially where there are large volumes of air (petri dishes, porous loads, etc.) and/or large quantities of insulating plastic materials. The following options are recommended: freesteaming (improved temperature distribution); pulsed freesteaming (improved steam penetration); accelerated cooling (more loads per day); pre-cycle vacuum (excellent air removal in conjunction with pulsed freesteaming); vacuum cooling cycle (even faster cycles); performance testing

Porous loads (e.g. textiles) sterilization

The key requirements are good steam penetration and effective drying. The following options are strongly recommended: pulsed freesteaming (improved steam penetration) in conjunction with pre-cycle vacuum for effective air removal; vacuum drying (essential for load to be removed 'dry' at the end of the cycle)

Ask -15.What is the Vacuum or Air Leakage Test for?

Answer-

This is used to test the efficacy of the air removal system and that the hydraulic system is perfectly air-tight. The test is defined according to EN 13060, which lies down that there must be a cycle that carries out this test automatically on all autoclaves that have a vacuum phase for removing air. For this test at least the vacuum phase is carried out as in the highest performing cycle offered by the machine, then the chamber is kept in isolation for a certain length of time and the increase in pressure due to any re-entry of air is checked to make sure it is lower than a pre-defined value.

Ask -16.What is the Helix Test for?

Answer-

Its purpose is to check the degree of steam penetration in the case of hollow objects and the efficacy of the air removal system. The test uses a Teflon tube open at one end only (length 1.5 m, internal diameter 2 mm), ending with a Teflon capsule, containing a chemical process indicator. EN 13060 requires for purposes of approval the employment of this apparatus to test cycles for sterilizing hollow load A (for example B cycles). The test is positive if the chemical indicator changes colour in line with the information given by the producer