GLOBO SSS Kronos 23 Lt - Technical Description

CISA reserves the right to change the characteristics of the equipment without forewarning. We would also like to remind the users of this document that the photos and illustrations contained herein are provided by way of example.

INTENDED USE

This CISA machine has been designed for sterilization of surgical instruments, rubber load and gloves, fluids in open containers, empty glassware, flasks, bottles, test-tubes, pipets and Petri dishes.

These CISA table top sterilizers are built in accordance with Standards: ISO 13445, 97/23/EEC (PED), UNI EN 13060, CEI EN 61010-1, EN 61010-2-040, EN 60204-1. The CE marking with the identification number issued by the Notified Body in accordance with Directives 93/42/EEC and 73/23/CEE.

The autoclave works with saturated steam as a sterilising agent with a wide temperature range up to 143 °C and pressure range up to 3.5 bar.
There are 2 test programs: the VACUUM TEST to verify the tightness of the chamber and the piping system, and the BOWIE&DICK test that verifies the efficiency of the steam penetration and the sterilisation process.

TECHNICAL DETAILS

Sterilisation chamber
The equipment consists of a sterilization chamber made of pickled AISI 304 stainless steel, of adequate thickness for the steam pressure and operating temperatures, resistant to corrosion.
The rounded shape of the chamber allows the condensate to drain perfectly. The appliance is compliant with the European Pressure Equipment Directive (PED) 2014/68/EU and bears the relative marking (CE).

The door
The internal surface of the door is made of **Stainless steel**. The porthole is mounted on a casted aluminum plate, designed with reinforcement ribs and insulated with pad that guarantees an external temperature below 45°C. The tightness is guaranteed by the compression of the gasket, which always takes place automatically and is controlled by the software. Throughout the process, this ensures it adheres perfectly to the surface of the door. Automatic door locking device, simply closing the door with a slight push forward with the palm of your hand. Without complicated mechanism, it utilizes the natural pull of the vacuum and the motorized system to securing the door closure.

Maintenance
Even though the overall dimensions of the machine are contained, it is spacious inside thanks to the designed position of the components, which also facilitate maintenance.
The technician is provided with a special USB key in order to be able to upgrade software automatically if required.

Hydraulic system
Flexible Pipes are made of PTFE and Silicon.
Fittings and other hydraulic components (valves, check valves, etc.) are made of stainless, copper, brass, aluminum and PTFE.

Powerful vacuum system
The device has a powerful vacuum system consisting of a **double-stage pump** that ensures excellent removal of the air during the pre-vacuum stage and excellent drying during the post-vacuum stage. The pump is installed on special anti-vibration mounts that **reduce noise** whilst ensuring high levels of protection. By using steam/vacuum pulses during the pre-vacuum stages, all the air is removed to ensure excellent penetrability of the steam inside the load. The type and amount of pulses may vary depending on the load and packaging material.

Electric system
The electric system of the autoclave complies with the following European regulations:
EN 61010-1 (93) -A2 (95), IEC 204.1, EN 61010-2-041 (96), EN 60204-1.
Equipment classification: class I type B

Water tanks
Inside the protective casing there are no.2 tanks, where one is for clean water loading and one for wastewater collection. The design of the clean water tank facilitate its cleaning, inspection and filling.

MANAGEMENT SYSTEM AND CONTROL PANEL

Graphic display
Wide graphic display which allows to get all cycle parameters: date and time, running cycle, cycle phase, temperature, relative pressure, cycle duration for sterilization and drying phases and time remaining. The display shows also all the messages with the relating icon: door locked, wait door unlock, maintenance schedule, preheating, cooling pause, minimum water level, maximum water level, check water quality, water drain, class of cycle and cycle completed. In case of alarm, the display shows the description of the alarm and the procedure to reset the autoclave: the cycle and the phase in which the alarm has occurred is

printed on the printout. The alarm is showed with an intermittent Danger Symbol and by a long beep. The safety code for the reset is clearly indicated on the display.

Interface and software
A very **user-friendly** software controls the many functions of CISA TABLE TOP. With only 4 key buttons you can get through the menus of CISA TABLE TOP. For example, in every moment of the cycle, you can see relative pressure, temperature of the chamber, cycle information, time to end.

From the Main Settings Menu, you can modify all the options of CISA TABLE TOP:

- Language: you can chose between more than 12 languages
- Date and time,
- Self-filling, filling by pump or by osmosis system
- Auto shut off after 1 hour if no key is pressed, the sterilizer will turn off automatically
- Button sound: ON/OFF
- Printer: thermal
- Data logging: USB as optional (with this option you save space and paper)

CISA table top has a **MTS diary on board** which can re-print the last 10 cycles. Kronos autoclaves show the message “Service xxx” on the display when the self-controlled system understand the need.

Start delay function
With this tool you can program the delayed start of a Test cycle (Vacuum test and helix/B&Dick test). You choose the cycle, press 3 times START and set the delay you want.

PC connection
There is a serial port on the back of the sterilizer for a direct connections of an External USB system.

Printer
The printer, integrated in the control panel, allows to record and keep a paper report of every sterilization cycle.

Special USB datalogger
The technician is provided with a special USB key in order to be able to upgrade software automatically if required.
The same tool is available to the end user, even if CISA doesn’t supply software upgrades to end users. End users may save the electronic data and keep them instead of paper.

STERILISATION CYCLES

These are obtained via the system that controls the autoclave. The following cycles can be obtained:

pre-set cycles to sterilize every kind of material (solid, porous, hollow A or hollow B):

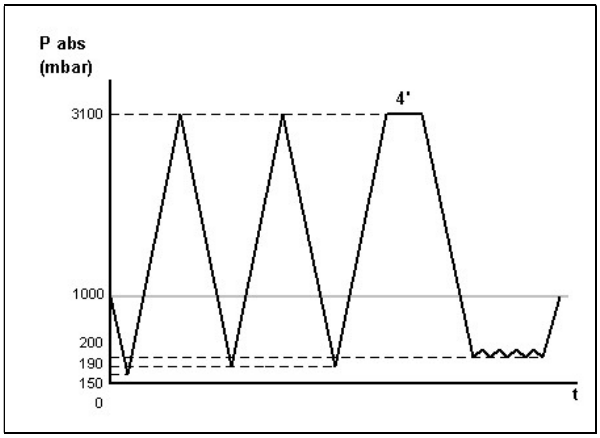
1. **121°C HOLLOW WRAPPED**
2. **134°C HOLLOW WRAPPED**
3. **121°C WRAPPED SOLIDS**
4. **134°C WRAPPED SOLIDS**

5. **134°C PRIONS**
6. **121°C POROUS**
7. **134°C POROUS**
8. **121°C RAPID**
9. **134° C RAPID**
10. **134° C OPEN HOLLOW**

- 1 SPECIAL cycle, user-programmable. The programming and the start of this cycle are protected by an access code.

- 2 test cycles:
VACUUM TEST (air leakage test)
BOWIE&DICK TEST (porous load test)

Cycles profile
The pressure of the pre-vacuum phase of the cycles reaches 120 mbar and the pressure of the drying phase reaches 200 mbar. The drying phase combines the action of the vacuum pump to the introduction of air filtered through a specific bacteriological filter. The system guaranties a perfect drying with a residual humidity lower than 0,2% for solid load and lower than 1,0% for porous load (as stated in EN13060).



OPTIONAL

Internal water softner
The compact osmosis system treat the water supplied to the sterilizer. The built-in water conductivity meter controls the quality of the water and permits the filling and use of a good water, protecting the sterilizer components.

Perfect water distiller 0,6lt/hr. tank capacity 4lt.

Datalogger to save data digitally

TECHNICAL SUMMARY

Chamber capacity	**l**	**23**
Water consumption per cycle (min. – max.)	cm^3	420 – 1190
Eletric voltage and frequency	V – HZ	230 – 50/60 (single – phase AC)
Absorbed maximum power	W	2000
Detected noise level	dB	56 - 63
Overall dimensions WxHxD	mm	505 x 400 x 690
Number of trays	Q.	5
Weight (mass.)	Kg	55