Poleax Series

HIGH DURABILITY SEMI-AUTOMATIC AUTOCLAVES

PRESENTATION :

SA-232X autoclaves is constructed microprocessor.
Offer advantages such as power conservation, water conservation and reduced maintenance due to less parts. Control panels are designed with simple controls for basic sterilization tasks. It is not only easy to operate, durable, low maintenance cost, but also equipped with an air pump dryer with a HEPA filter, which can greatly improve the sterilization efficiency and effect, and achieve the minimum cost and the maximum profit.

FEATURES :

- Microprocessor Controlled
- Simple Control Panel
- Pressure Auto Door Lock
- 0.03 ㎛ HEPA Air Filter
- Pressure Overload Protection
- Overheat Protection
- Closed Door Drying

STANDARDS & DIRECTIVES :

* 2014/68/EU (PED; Pressure Equipment Directive)
* EN/IEC 61010-1 (Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use)
* EN/IEC 61010-2-040 (Safety requirements for sterilizers used to treat medical materials)
* EN/IEC 61326-1 (EMC; Electrical equipment for measurement, control and laboratory use)
* ISO 13485 (Quality Management/Certification)
* RoHs (Restriction of Hazardous Substances Directive)

CHAMBER :

Made of 304 stainless steel, the overall design is pressure-resistant, high-temperature resistant, and has the ability to remove a large amount of water, air and condensed steam. It has an exhaust hole that allow most of the air in the chamber to be exhausted, so that the steam can flow better and be distributed to every corner to achieve maximum sterilization effect. The chamber has a thermal insulation effect to reduce heat loss and the effect of external ambient temperature.

Designed in accordance with ASME codes & standards and complies with the PED (Pressure Equipment Directive), with a service life of up to 7 years.

SUS 316 can be selected for chamber material.

Chamber Volume -

☐ 16 Liter (SA-232X)

Chamber Material -

☐ SUS 304 / 304 Stainless Steel (Standard)

☐ SUS 316 / 316 Stainless Steel (Optional)

CHAMBER LOAD CAPACITY :

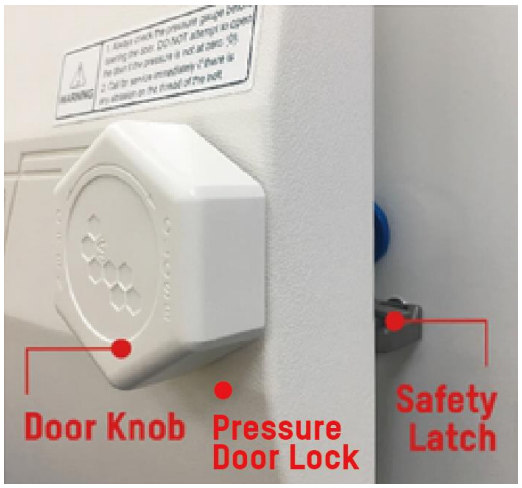
	SA-232X
Chamber Volume (L)	16
Chamber Size (mm)	230 x 410
Maximum Instrument Length (mm)	340
Maximum Load (unwrapped) (g)	3,000
Maximum Load (wrapped) (g)	800

DOOR LOCK SYSTEM :

SA-232X adopts multiple security door lock system.

Lift the safety latch and close the door, and hold the hexagonal door handle, then turn it clockwise to tighten it until the door is completely closed. Door is sealed using a flexible silicone gasket.

It has a pressure auto door lock system. When the chamber pressure is greater than 0.2 bar, the stainless steel lock core structure inside the automatic lock device will protrude to fix the door lock and prevent it from turning to prevent the door from being opened. A Safety Latch is to confirm the safety of the second time to maintain the safety
of users.



(SA-232X)

HEATING SYSTEM :

The heating system is divided into two parts

Sterilization heating: The sterilization water is heated by the electric heating tube heater (M Heater) to generate saturated steam for sterilization.

Dry heating: The temperature of the chamber is increased by the bend heater (B-Heater) to completely dry the chamber and the sterilized loads.

M-Heater

Located at the bottom of the chamber. It is made of SUS 316 stainless steel. The steam is generated by heating the water through the heater. It is equipped with an over temperature controller to avoid overheating of the chamber and prolong the service life of the equipment.

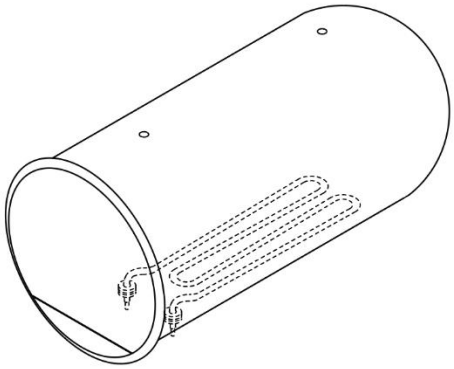
Powers –

SA-232X (16 Liter) : 1,200W / 110V

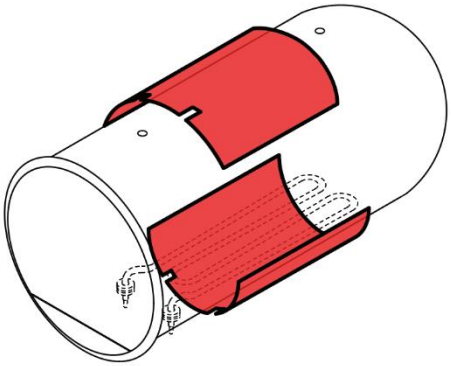
SA-232X (16 Liter) : 1,400W / 230V

B-Heater

It is composed of silicone rubber and nichrome wire of winding elements, and is activated during the drying process to heat and keep the chamber warm, through the cooperation with the air pump and HEPA air filter, the clean air is introduced into the chamber and heated to dry the chamber and the sterilized loads. This method improves the drying efficiency by 60% compared with the airflow drying with the door open and can ensure that the sterilized load is not polluted by external air.



(SA-232X No Drying)



(SA-232X Closed-Door Drying)

Powers -

SA-232X (16 Liter) : 150W x 2 / 110V

SA-232X (16 Liter) : 150W x 2 / 230V

Drying Methods -

- ☐ No Drying (Standard)
- ☐ Closed-Door Drying with Air Pump (Optional)

AIR PUMP :

Using a high-flow air pump, it is activated during the drying process and interacts with the Band Heater and Air Filter, which can introduce the filtered clean air into the Chamber for heating, speed up the drying speed and maintain the sterilization effect.

HEPA AIR FILTER：

Using high efficiency HEPA air filter, the filtering effect of air particles below 0.03μm is over 99.99% to ensure that the sterilized items are not affected by the external environment and remain sterilized during the drying process.
The air filter not only meets the requirements of EN 13060 for air filters, but also meets the BFE and VFE filtration efficiency as high as 99.999%.

FILLING WATER SYSTEM：

Poleax series uses manual water filling method and has a water tank. Water can be pre-installed into the water tank without worrying about local pipe position, which greatly reduces the requirement for placement. Turn the water filling knob 90 degrees counterclockwise to open the gate to allow water to flow into the chamber, and turn the knob 90 degrees clockwise to stop filling when the water is over the M-Heater.

Water Tank Volume -

SA-232X (16 Liter) : 4,200 (cc)

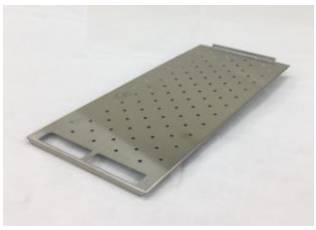
COMMAND AND CONTROL SYSTEM：

It is composed of a command panel fixed on the front of the device and controlled by a microcomputer. The operation panel is very simple, with only three buttons, namely open, select and start. The operation is simple and convenient. You only need to filling water, set the sterilization temperature and "SELECT" the sterilization time, and then press the "START" button. The sterilization cycle will automatically start to the end without any additional operations.

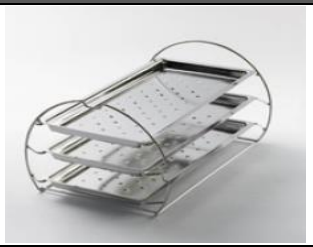
The adjustment range of the sterilization temperature is 108°C~134°C, and there are three options for sterilization time (4 mins / 10 mins / 30mins), and it will automatically perform 18 mins of drying after the sterilization is over.

SA-232X is not only equipped with a sterilization process indicator, it can easily understand the current sterilization progress, but also has an over-temperature and over-pressure protection device. When the pressure and temperature exceed the allowable safety value, the sterilizer will shut down automatically to protect the safety of users and prolong the service life of the equipment.

STANDARD ACCESSORIES :

	Name	Image	Description
☐	Tray Base		Support the sterilizer accessories likes Basket, Tray Set, Box or sterilization loads. (1 pcs of standard)
☐	HEPA Air Filter		Filtering effect of air particles under 0.03μm is over 99.99%. Replace the filter according to the ambient air quality. (1 pcs of closed-door drying standard)
☐	Basket with Wire-Mesh Plate		Sterilization basket with two wire mesh plate, made of 304 stainless steel. Dimensions (W x H x D) : 16 Liter : 180 x 120 x 340 mm (1 set of standard)
☐	Cham Mate		Autoclave chamber & piping cleaner 10 bags/ paper box. (2 bags of standard)

OPTIONAL ACCESSORIES :

	Name	Image	Description
☐	Tray Set (Plate)		Round tray holder, with a capacity of three stainless steel trays, made of 304 stainless steel. Trays dimensions (W x H x D) : 16 Liter : 178 x 20 x 323 mm
☐	Basket		Sterilization basket, made of 304 stainless steel. Dimensions (W x H x D) : 16 Liter : 180 x 120 x 340 mm
☐	Box		Sterilization box, made of 304 stainless steel wire. Dimensions (W x H x D) : 16 Liter : 161 x 132 x 340 mm

☐	Spring Holder		Made of 304 stainless steel, which is easy to load and unload the bagged instruments, and carry out proper sterilization and drying. Dimensions (W x H x D) : 97 x 122 x 148 mm
☐	Sterilization Pouch		Sterilization pouches are practical and easy to use, providing a fast and effective containment for equipment.
☐	RO Water Filter		Filter out dirt odor, chlorine and salt; extending life usage of the sterilizer and quality. Quicker production & supply RO water
☐	Water Distiller		Water distiller turns water into steam to remove fluoride, arsenic, lead, viruses and other contaminants, protecting your sterilizer and instruments at a fraction of cost.

VOLTAGE :

☐ AC 110V, 50/60Hz

☐ AC 230V, 50/60Hz

WATER AND ENERGY CONSUMPTION :

		SA-232X
Total Power (W)	No Drying (Standard)	1,200W (110V) 1,400W (230V)
	Closed-Door Drying with Air Pump (Optional)	1,600W (110V) 1,800W (230V)
Max. Water (cc)		300 ~ 450

OVERALL DIMENSIONS :

SA-232X (16 Liter) : 501mm × 406mm × 537mm (W x H x D)

NET WEIGHT :

SA-232X (16 Liter) : 28kg

ENVIRONMENTAL CONDITIONS IN THE STERILE AREA :

* Indoor use;
* Under 1,000m (altitude);
* Temperature 5°C to 40°C;
* Relative Humidity 80%RH@31°C to Relative Humidity 50%RH@40°C;
* Voltage fluctuation ±10 %;
* Transient overvoltages category II;
* Pollution degree 2

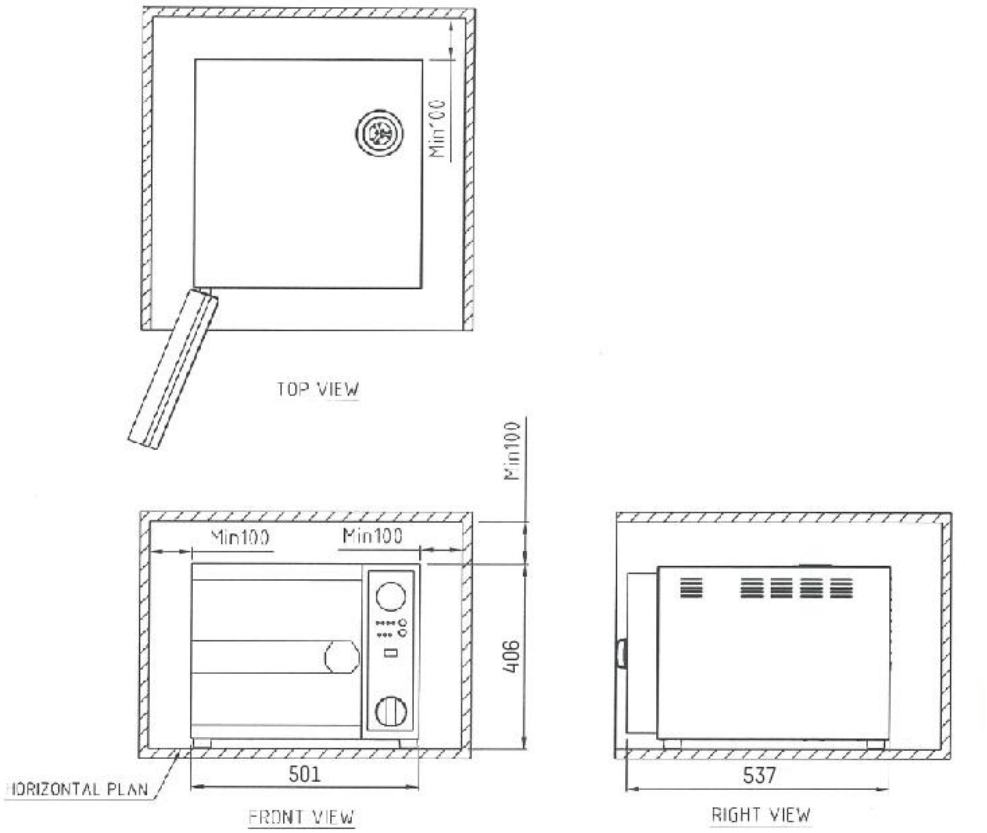
INSTALLATION INSTRUCTION :

This equipment has been designed for use in accordance with the International EMC (Electromagnetic Compatibility) Standards.

Please note the following points when installing this equipment :

1. Please install it in a stable and firm place. When installing, be sure to keep the machine body with a ventilation distance of more than 10 cm on the top, back panel, and left and right sides. Make sure that the door can be opened freely after installation.
2. While installation, please make sure that the bearing capacity of installation table is enough to carry the sterilizer.
3. Do not install or operate the sterilizer in areas where flammable items or volatile substances are used or stored. An explosion could occur, causing personal injury. An installation site with good air circulation is required.
4. Be sure to install the sterilizer on a flat surface, otherwise it may not defect the water level correctly.

- SA-232X installation drawing



RECOMMENDED SUPPLY WATER QUALITY :

Suggested maximum limits of contaminants in and specification for water for steam sterilization.

	Feed water
Evaporate residue	≤ 10 mg/l
Silicium oxide, SiO_2	≤ 1 mg/l
Iron	≤ 0.2 mg/l
Cadmium	≤ 0.005 mg/l
Lead	≤ 0.05 mg/l
Rest of heavy metals, excluding iron, cadmium, lead	≤ 0.1mg/l
Chloride	≤ 2mg/l
Phosphate	≤ 0.5 mg/l
Conductivity (at 20°C)	≤ 15 µs/cm
pH value	5 to 7.5
Appearance	colourless, clean without sediment
Hardness	≤ 0.02 mmol/l
NOTE - The use of water for steam generation with contaminants at levels exceeding those given in this table can greatly shorten the working life of a sterilizer and can invalidate the manufacturer's warranty guarantee.	

Compliance should be tested in accordance with acknowledged analytical methods.

For more information, contact

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