



“Sturdy” Autoclave Sterilizer

SA-232X Instruction Manual

Please read manual carefully before using and keep it well.

CE₂₄₆₀

OPERATION MANUAL

SA-232X

AUTOMATIC AUTOCLAVE STERILIZER

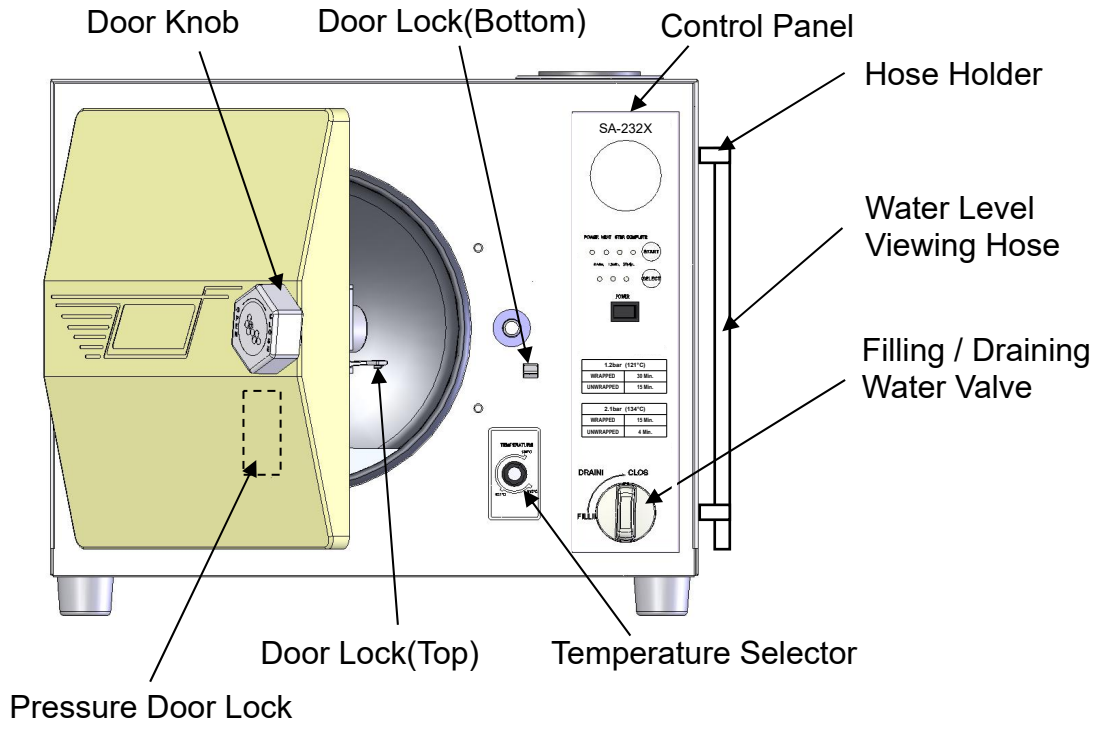
Please read this manual carefully prior to using your new Autoclave. Following the simple instructions contained in this manual will help to ensure ease of use, trouble-free operation, and a longer working life for your Autoclave.

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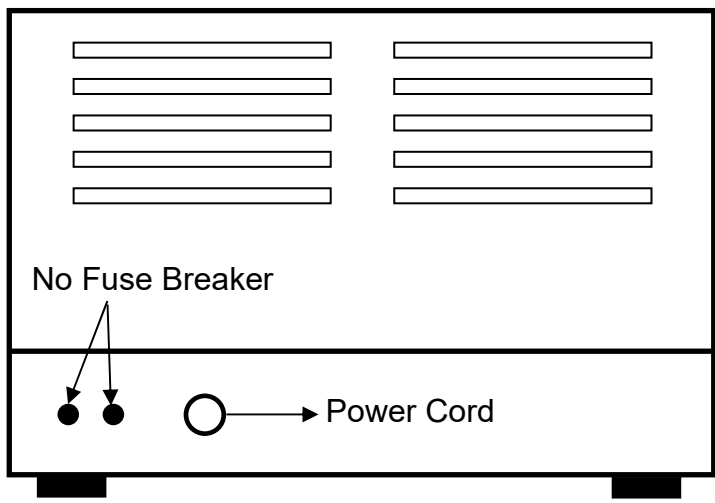
ISO 13485 Certificated firm

CHAPTER 1 LOCATION

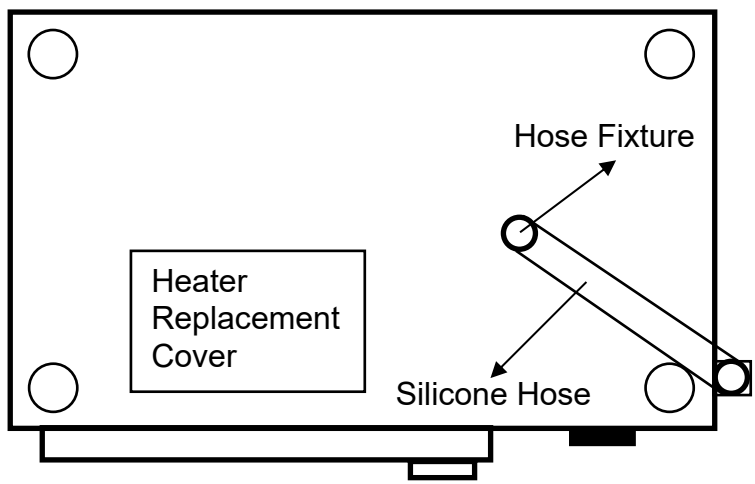
Front View:



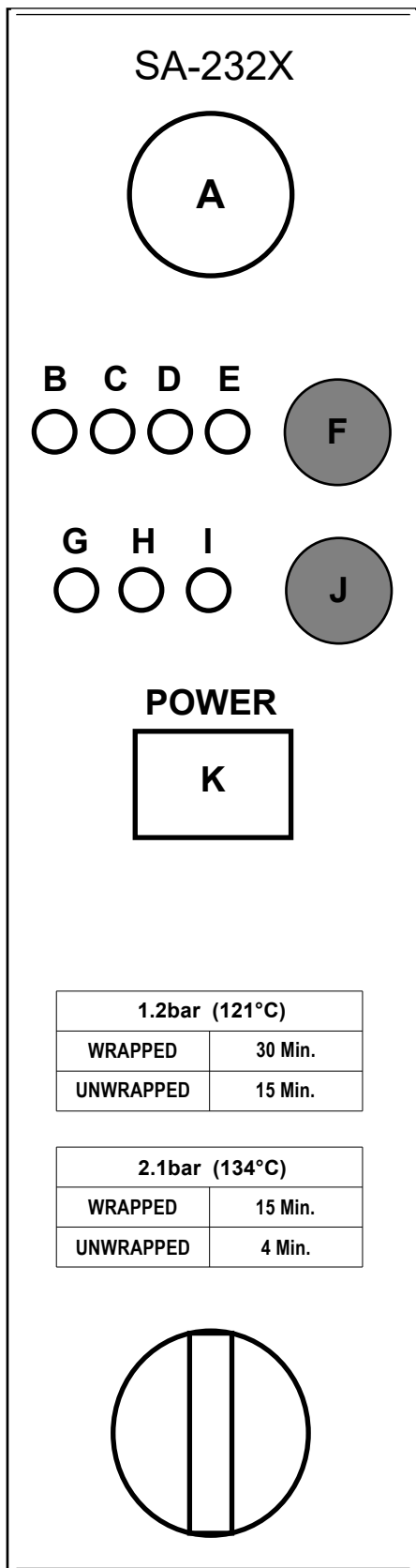
Backside View:



Underside View:



CHAPTER 1 CONTROL PANEL DESCRIPTION



- A. PRESSURE GAUGE
- B. **POWER** INDICATOR
- C. **HEATING** INDICATOR
- D. **STERILIZATION** INDICATOR
- E. **COMPLETE** INDICATOR
- F. **START** BUTTON
- G. **4 Min.** STERI. TIME INDICATOR
- H. **15 Min.** STERI. TIME INDICATOR
- I. **30 Min.** STERI. TIME INDICATOR
- J. **SELECT** BUTTON (STERI. TIME)
- K. **POWER** SWITCH WITH LAMP

CHAPTER 2 SPECIFICATION

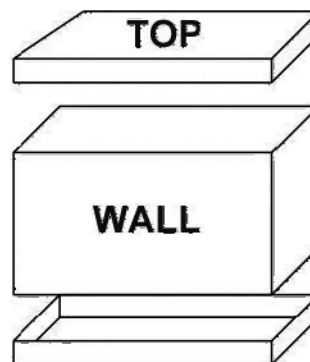
Chamber Size	230mm \varnothing × 410mm (Depth) (Made of ST. ST. #304)
Overall Size	501mm (W) × 406mm (H) × 537mm (D)
Power Consumption	110V / 1.5 KW (MAX.) / 13.7A 230V / 1.7KW (MAX.) / 7.4A
Safety Device	① Safety Valve ② Low Water (Overheated) Power Cut ③ Temperature Protection Switch ④ Pressure Control Switch
Lifetime	7 years
Standard Accessories	Basket x 1, Mesh Tray x 2 (ST. ST. #304)
Optional Accessories	* Sterilization Box × 1 (ST. ST. #304) * Tray Set (Tray × 3, Frame × 1 Pulling Holder × 1) (Made of ST. ST. #304) * Spring Holder (Pouch Rack) (Made of ST. ST. #304)

CHAPTER 3 PREPARATIONS & INSTALLATION

CHECKLIST FOR UNPACKING INSTRUCTIONS

TO UNPACK AUTOCLAVE FROM CARTON

1. Cut off the bale wire binder.
2. Remove top cover of the carton.
3. Remove wall piece of the carton.
4. Remove foam-packing pieces.
5. Move out the autoclave from the base foam.



CHECKLIST BEFORE USE THIS AUTOCLAVE

NOTE: Please check the enclosed accessories at first.

1. Put the autoclave on the table, and keep the distance more than 5cm between wall and the case.

2. Keep the autoclave in level condition.

3. Check the Power source is 110V or 230V.

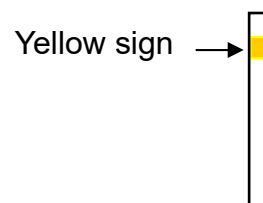


Figure 1

4. Pouring water (**DISTILLED WATER ONLY**) into water reservoir until water level near the **FULL** level sign in the water reservoir. You can also check the water level via water level viewing hose which is located outside the cover. (See Figure 1)

CAUTION: Please **DO NOT** pour water over both signs.

5. Please take power cord out, and plug the male end into a standard single and grounded AC outlet.

POWER SOCKET: 110V / 15A, 230V / 15A

CAUTION: Before plug the power cord, please switch off the power.

6. Press the **Power** switch. If the lamp is lightened, that means the autoclave is electro-powered and is standby right now.

CHAPTER 4 OPERATION

PLEASE CHECK **CHAPTER 3** AT FIRST.

Caution: Mind the chamber wall for hot surface.

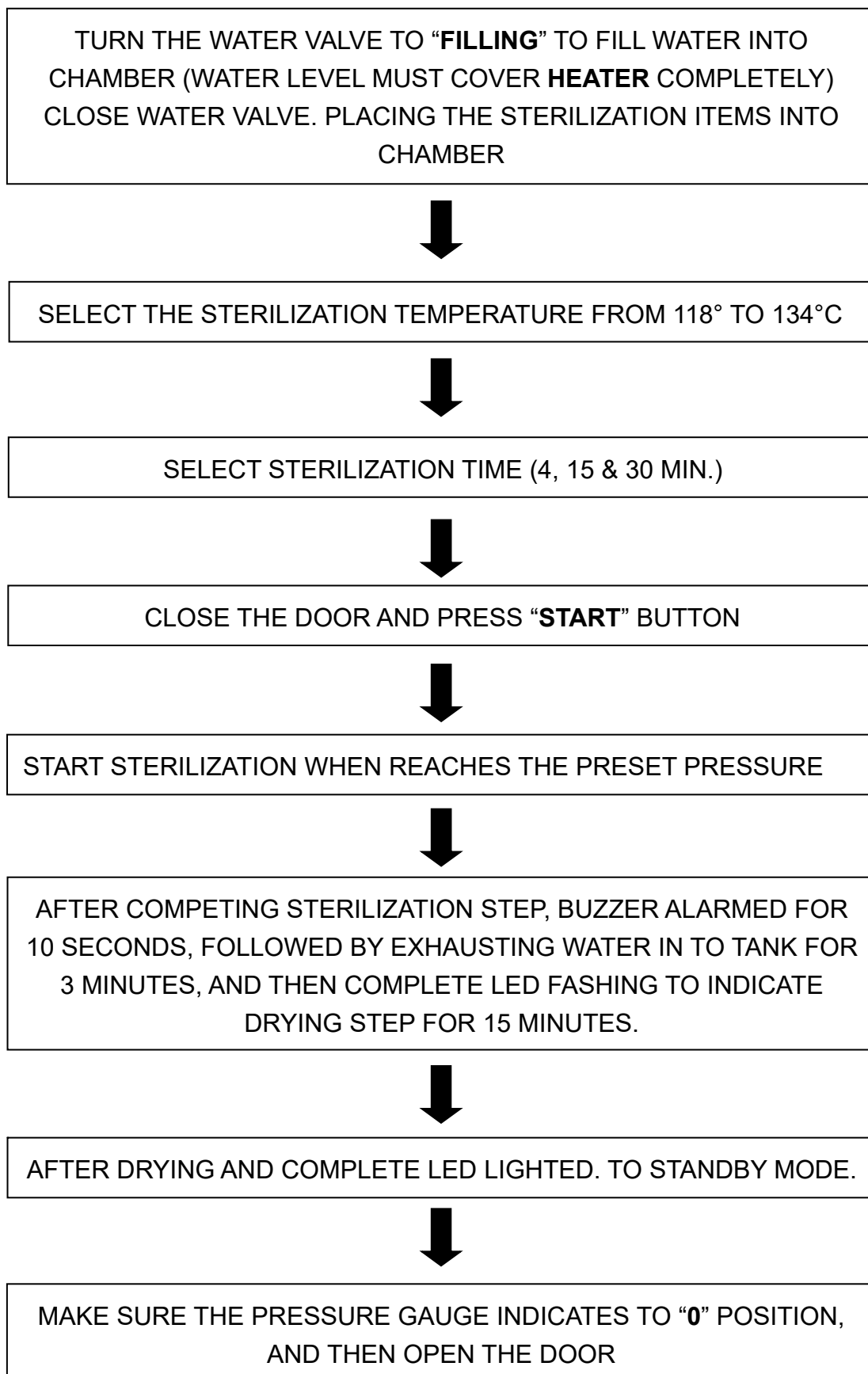
1. Open the door.
2. Open the door and remove the heater cover.
3. Turn the water valve to “**FILLING**” to fill water into chamber. (Water level must cover Heater completely.) Then turn the valve to “**CLOSE**” to stop filling.
4. Put heater cover back to chamber. Then arrange sterilization items (put in the sterilization box or on the tray first) into chamber.
NOTE: Put the steam indicator strip in the meantime if necessary.
5. Select **Sterilization Temperature**. (118°C to 134°C by Temperature Selector)
6. Press the **POWER** switch. (Power switch lamp should be lightened.)
7. Select **Sterilization Time**. (4, 15, or 30 Min. by “**SELECT**” button)
8. Close the door. Then press “**START**” button.
9. Start **Heating** by heater. The “**HEAT**” indicator should be lightened right now. In the meantime, the cold air will be exhausting by steam trap.
10. Pressure rises to the preset value. Steam penetrates through the whole chamber. Start **Sterilization** process for the preset time. (ex.: 4 Min.)
11. Complete sterilization. The buzzer sounds for 10 seconds before exhaust and drying.
12. The completion indicator lights up and you can remove the disinfection items.
13. Turn off the “**POWER**” switch while not in operation.



ANY TIME YOU WANT TO OPEN THE DOOR, PLEASE MAKE SURE THE PRESSURE GAUGE INDICATES TO “**0**” POSITION.

CHAPTER 4-1 BASIC STEPS OF STERILIZATION

PLEASE CHECK **CHAPTER 4** AT FIRST.



CHAPTER 4-2 CONCERNING THE STERILIZATION ITEMS

Figure 1



Items to be sterilized

All items need to be put into the sterilization box. Do not let the sterilization items inside the box over the rim of the box. Or the sterilization box cannot be covered properly.

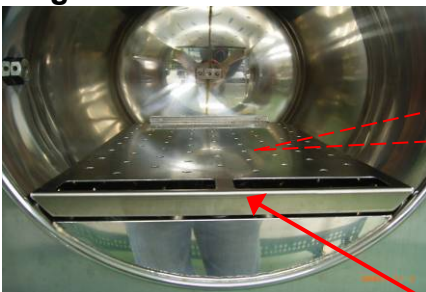
Figure 2



Put on the cover when sterilization item was put into box.

By the way, don't forget to open both side windows before putting sterilization box into chamber.

Figure 3



Please check the level of the heater cover when the heater cover was put into chamber.

Heater cover

Figure 4



Please check heater cover and sterilization box are not in oblique position when the sterilization box was put into chamber.

CHAPTER 5 WARNING

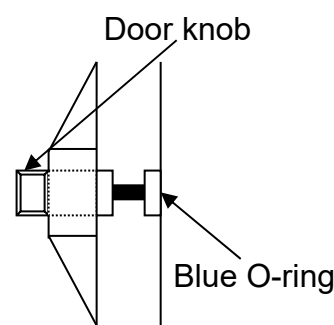
PLEASE CHECK THE FOLLOWING ARTICLES CAREFULLY.

1. Anytime before opening the door, please double check the pressure gauge. **DO NOT** opens the door when the pressure inside the chamber is over “0” bar(kg/cm²).

Caution: Mind the chamber wall for hot surface.

2. Use only DISTILLED WATER or RO (Reverse Osmosis) WATER is necessary for Poleax series. Or we may not be able to offer the quality guarantee.
3. Remember to fill water into the chamber before every cycle.

4. Don't forget to turn the water valve to “CLOSE” after filling water. Or the pressure inside the chamber cannot rise.
5. The door knob must be turned tightly.
Make sure that it touches the blue O-ring can help the door closed completely.



6. Don't overfill water into the water reservoir.
7. The filter inside the chamber and piping system should be cleaned per season at least.
8. We recommend use of chemical indicator strips as a check for sterilization. These strips may also be kept as a record of sterilization.
9. Please pay attention to the high temperature on the top of the housing when it's working.
10. In the event of an emergency, or maintenance, please switch off the **POWER** and unplug the power cord immediately.

11. Signs of CAUTION and INDICATION:



Caution! Hot surface.



Grounding terminal.



This label is meaning that indicator for power off.



This label is meaning that indicator for power on.



Consult instructions for use



Disposal of Electrical & Electronic Equipment (WEEE):
This product should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. For more detailed information about the recycling of this product, please contact your local city office, household waste disposal service or the retail store where you purchased this product.



2008-01 Date of Manufacture. EX: 2008-01 is mean January / 2008.



Authorized Representative at europe.



Manufacturer.

- 12. Storage environment: temperature: $-10^{\circ}\text{C} \sim + 50^{\circ}\text{C}$ / humidity $\leq 80\%$
- 13. Working environment: temperature: $1^{\circ}\text{C} \sim + 40^{\circ}\text{C}$ / humidity $\leq 80\%$
- 14. Transportation environment: temperature: $-10^{\circ}\text{C} \sim + 50^{\circ}\text{C}$ / humidity $\leq 80\%$

CHAPTER 6 APPENDIX

6-1 PROGRAM DETAILS AS FOLLOWS:

**Temperature at 134°C / 273°F Approx. 2.1 bar(kgf/cm²)

UNWRAPPED	Select 4 Min. sterilization time
WRAPPED	Select 15 Min. sterilization time

**Temperature at 121°C / 250°F Approx. 1.2 bar(kgf/cm²)

UNWRAPPED	Select 15 Min. sterilization time
WRAPPED	Select 30 Min. sterilization time

FOR REFERENCE: 1 kgf / cm² = 0.98bar = 14.2psi

The sterilization items must be marked as AUTOCLAVEABLE or STEAM STERILIZABLE.

6-2 PACKING INSTRUCTIONS:

RE-PACKING INSTRUCTIONS: TO PACK AUTOCLAVE INTO CARTON (PLEASE REFER TO CHAPTER 1 LOCATION OF CONTROLS)

1. Draining off all water from the autoclave, including chamber, water reservoir and hose.
2. Turn off the **POWER** and unplug the power cord.
3. Place all accessories into the chamber. Close the door firmly.
4. Cover the autoclave with the plastic bag.
5. Put the base carton containing the packing bottom-foam onto the floor.
6. Place the autoclave into the base carton and fixed it in the bottom-foam set.
7. Place the wall piece of carton into the base carton.
8. Put 4 pieces of angle paper fixing in each corner of the carton.
9. Put the top carton piece on.
10. Put top foam (4 pcs) on around the top of the autoclave.
11. Close the top of the carton and seal with tape.
12. Binding with binder to concrete the top carton and base carton.
13. The carton was already designed with 2 holes on each side. It's convenience for carriers.

IMPORTANT: We strongly recommend that all packing materials including the carton should to be kept properly. It's for reuse in case the unit needs to be transported again anytime.

CHAPTER 7 SIMPLE TROUBLESHOOTING

A. POWER INDICATOR ISN'T LIGHTENED

- 1. Cause: Power supply isn't connected properly.**
Solution: Re-connect power cord until power indicator light illuminates.
- 2. Cause: No Fuse Breaker flicked off.**
Solution: Please contact your distributor for help.
- 3. Cause: Over-heating protection is activated.**
Solution: Wait for 10 minutes and the autoclave will restart automatically.

B. AUTOCLAVE ISN'T OPERATING PROPERLY

- 1. Cause: Unable to press buttons**
Solution: Please contact your distributor for help.
- 2. Cause: Unable to heat up**
Solution: Please contact your distributor for help.
- 3. Cause: Unable to enter sterilization step**
Solution: Please contact your distributor for help.
- 4. Cause: Unable to complete cycle**
 - 4-1. Cause: Forget to fill water or water isn't enough.**
Solution: Please refill water and try again.
 - 4-2. Cause: Water valve isn't closed.**
Solution: Please turn the water valve to "CLOSE" position and try again.

C. COLOR OF STEAM INDICATOR STRIP DOESN'T CHANGE

- 1. Cause: Select wrong sterilization time.**
Solution: Please re-select proper sterilization time for the sterilization items and try again.

Any other problems, please contact your distributor for help.

CHAPTER 8 MAINTENANCE INSTRUCTIONS

DAILY:

- Wipe the inside of the chamber, door and the gasket with a damp, lint-free cloth.
- Check the water level. Top up with distilled water only.
- Drain off the remaining water inside the chamber every time after running a cycle.

WEEKLY:

- Drain off the remaining water of water reservoir and refill with distilled water. (*Please use the water level viewing hose to drain off water of water reservoir.)
- Remove the cap of water reservoir and find the safety valve. Pull the ringlet of the safety valve to check its working status.

MONTHLY:

- Clean the chamber and piping system with “**CHAM-MATE**”.
- Check if the air filter is too dirty, replace with a new one if required to guarantee the sterilization quality.
- Use clean water to scrub the water reservoir thoroughly. (It's to clean away the mineral residues of water.)

ANNUALLY: (Please contact your distributor for maintenance.)

- Check the working status of silicone door gasket, steam trap, safety valve, and heater. (Recommendation: Replace the silicone door gasket every year.)
- Test the functions of PCB (Printed Circuit Board).
- Check the temperature during sterilization.
- Use biological indicators to test the validity of sterilization.

WARRANTY

Your “**STURDY**” product has a one (1) year guarantee of defective in materials and workmanship under normal use from the date of purchase.

This warranty does not apply to any product damaged by accident, misuse, abuse, neglect, improper line voltage, drop, fire, flood. Or the products were altered or repaired by anyone other than qualified service personnel.

The liability of Sturdy Industrial Co., Ltd. is limited to repair or replacement and under no circumstances shall “**STURDY**” be liable for any collateral consequential damages or loss. This guarantee specifically excludes the expendables and consumable.

All warranty claims must be directed to the distributors or agents authorized by Sturdy Industrial Co.,Ltd. whom are responsible for the sales of this equipment. The customers are responsible for shipping expense.

User's Name: _____

Address: _____


Country: _____ Tel: _____ Fax: _____

Date of Purchase: _____ Model No.: _____

Series No.: _____

Distributor: _____

Manufacturer: Sturdy Industrial Co.,Ltd. (ISO 13485 Certificated Firms)

Name	Sturdy Autoclave Sterilizer		
Model	SA-232X		
Manufacturer 	Sturdy Industrial Co. Ltd.		
Address	168, Sec. 1, Zhongxing Rd., Wugu District, New Taipei City, 24872, Taiwan		
EC Representative <table border="1" data-bbox="295 1713 391 1758"> <tr> <td>EC</td> <td>REP</td> </tr> </table>	EC	REP	APEX MEDICAL S.L. Elcano 9, 6 ^a planta 48008 Bilbao. Vizcaya SPAIN
EC	REP		

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