

OPERATION MANUAL

SA-202 & SA-232

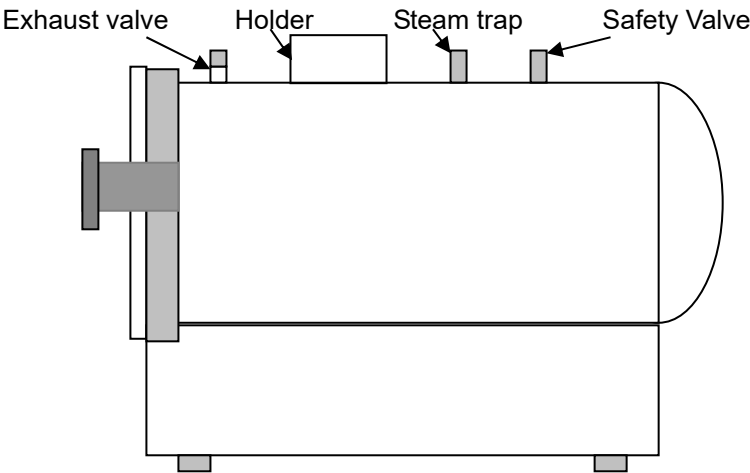
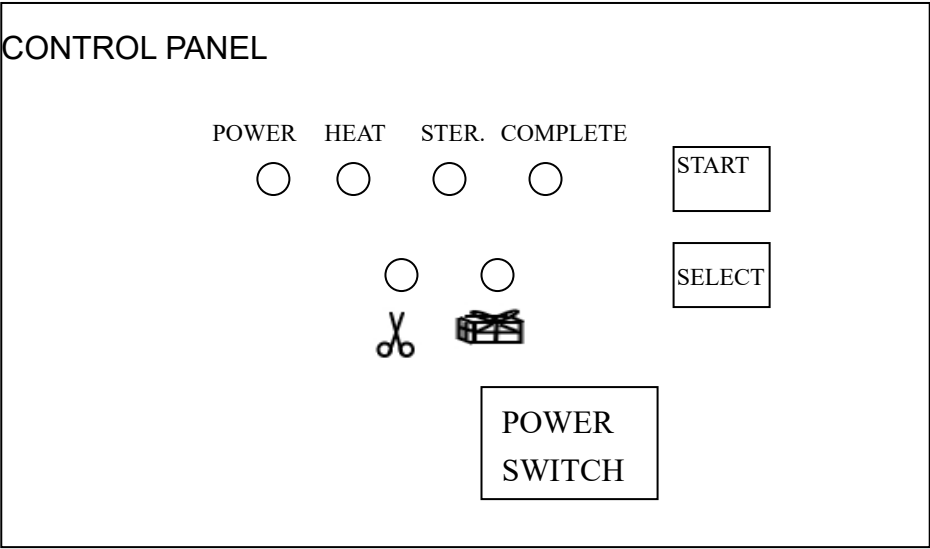
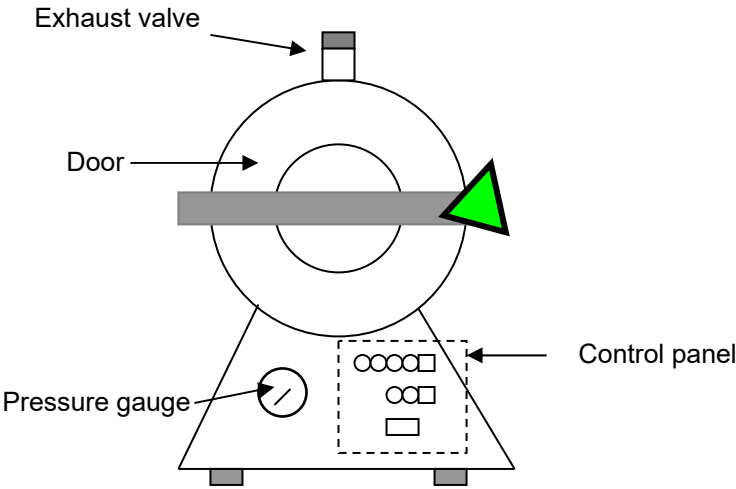
AUTOMATIC AUTOCLAVE STERILIZER

CONTENTS



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

CHAPTER 1.	LOCATION	1
CHAPTER 2.	SPECIFICATION	3
CHAPTER 3.	PREPARATION	4
CHAPTER 4.	OPERATION	5
CHAPTER 5.	WARNING	7
CHAPTER 6.	APPENDIX	8
CHAPTER 7.	TROUBLE SHOOTING	10
CHAPTER 8.	MAINTENANCE REQUIREMENTS	11

CHAPTER 1. LOCATION



CONTROL PANEL :

1. POWER : POWER ON LAMP
2. HEAT : HEATING LAMP
3. STER. : STERILIZATION LAMP
4. COMPLETE : COMPLETE LAMP
5. “  “ : 18 MINUTES STERILIZATION TIME
6. “  “ : 33 MINUTES STERILIZATION TIME
7. POWER SWITCH : POWER ON SWITCH
8. START BUTTON : PRESS TO START PROGRM
9. SELECT BUTTON : TO SELECT STERILIZATION TIME 18 OR 33 MINUTES.

CHAPTER 2. SPECIFICATION

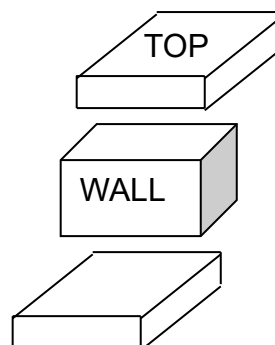
SPECIFICATION OF

MODEL NO.	SA-232	SA-202
CHAMBER SIZE	Ø 230 × 410 mm	Ø 200 × 310 mm
CHAMBER CAPACITY	APPROX. 16 LITTER	APPROX. 10 LITTER
OVERALL	335(W) × 430(H) × 510(D)	315(W) × 360(H) × 450(D)
POWER CONSUMPTION	230V / 0.8KW(MAX) / 3.5A 110V / 0.8KW(MAX.) / 7.3A	230V / 0.8KW(MAX) / 3.5A 110V / 0.8KW(MAX.) / 7.3A
USING PRESSURE AND TEMPERATURE	UNWRAPPED / WRAPPED / LIQUID: 126°C/APPROX. 1.4 bar(kgf/cm ²)	
DESIGN TEMPERATURE	140°C	
SAFETY DEVICE	1. LOW WATER CUT –OFF SWITCH 2. SAFETY VALVE AND RELEASE VALVE 3. EMERGENCY EXHAUST VALVE 4. DOOR SAFETY CATCHER 5. PRESSURE CONTROL SWITCH	
SAFETY APPROVAL	CHAMBER DESIGN BY ASME / USA STANDARD	
LIFE TIME	7 YEARS	
STANDARD ACCESSORIES	1. STAINLESS STEEL#304 STERILIZATION BOXES. / 1 PCS 2. STAINLESS STEEL #304 TRAY / 1 PCS	
OPTIONAL ACCESSORIES	1. STAINLESS STEEL #304 TRAY FRAME × 1 + TRAY × 3 + TRAY PULLING HOLDER × 1 2. STAINLESS STEEL #304 STERILIZATION SPRING × 2 PCS	

CHAPTER 3. PREPARATION

CHECKLIST FOR UNPACKING INSTRUCTIONS: TO UNPACK AUTOCLAVE FROM CARTON

1. Remove Straps.
2. Remove top of carton.
3. Remove wall-piece of the carton.
4. Remove foam-packing pieces.



CHECKLIST BEFORE USE THIS AUTOCLAVE

PS: PLEASE CHECK THE ACCESSORIES ENCLOSED, AT FIRST.

1. Place the autoclave on plane table. Keep a distance of more than 5cm from the wall and keep this autoclave in horizontal.



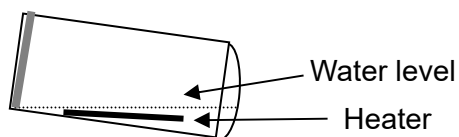
CAUTION: Do not install the autoclave subject to splashing of liquid.

2. Check the elec. power source must be 110V, 220V or 240V

110V power cord type : 14 AWG x 3C	CSA or U/L.
220V power cord type : 1.5mm ² x 3C	TUV
240V power cord type : 1.5mm ² x 3C	SAA

3. Pouring the water (DISTILLED WATER ONLY) into the chamber, until the water level near the door sight.

CAUTION: THE WATER LEVEL MUST COVER THE HEATER.



4. You are now, ready to take the power cord, and plug into a standard grounded AC outlet.

PS: POWER SOCKET	240VAC / 15A	220VAC / 15A	110VAC / 15A
------------------	--------------	--------------	--------------

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

5. Check the power lamp, if it is light on, that means the power is already stand-by now.

CHAPTER 4. OPERATION

PLEASE CHECK CHAPTER 3. AT FIRST.

1. Open the door; pouring water until the water level fully covers the heater. Then tune close the exhaust valve ◦
2. Put the sterilized instruments into the trays or sterilization box. Or spring holder as you need.
3. Then put the box (or tray, or spring holder) into the chamber ◦

PLEASE DON'T FORGET TO PUT THE STERILIZATION INDICATOR IN CHAMBER.

4. Close the door, turning the handle to tight ◦ Then turn power on ◦
5. Press the “ select” button to set up sterilization time.
Please note : the sterilization time was set up in the program : 18 minute / 30 minutes. So the user can select the sterilization time by selection button ◦ And then push the “ **START** ” button to working, the heating lamp will light on ◦

AS TO THE TIME SET, PLEASE REFER THE ENCLOSED APPENDIX.

6. After the chamber pressure up to the pressure you set up, the sterilization lamp light on. Meanwhile the sterilization timer starts work. When the sterilization lamp light off (and the “COMPLETE” lamp light on) that mean the sterilization cycle is completed.
7. Buzzer ringing will report you, “ MY DEAR MASTER ! YOUR COMMAND HAVE BEEN COMPLETED.”

PS: Please don't open the door immediately. After buzzer is ringing.

8. Turn-open the exhaust valve, to release the chamber pressure, until the pressure return to “0”. Then, open the door.

PS: If the door can't be opened, it is the chamber in vacuum condition.

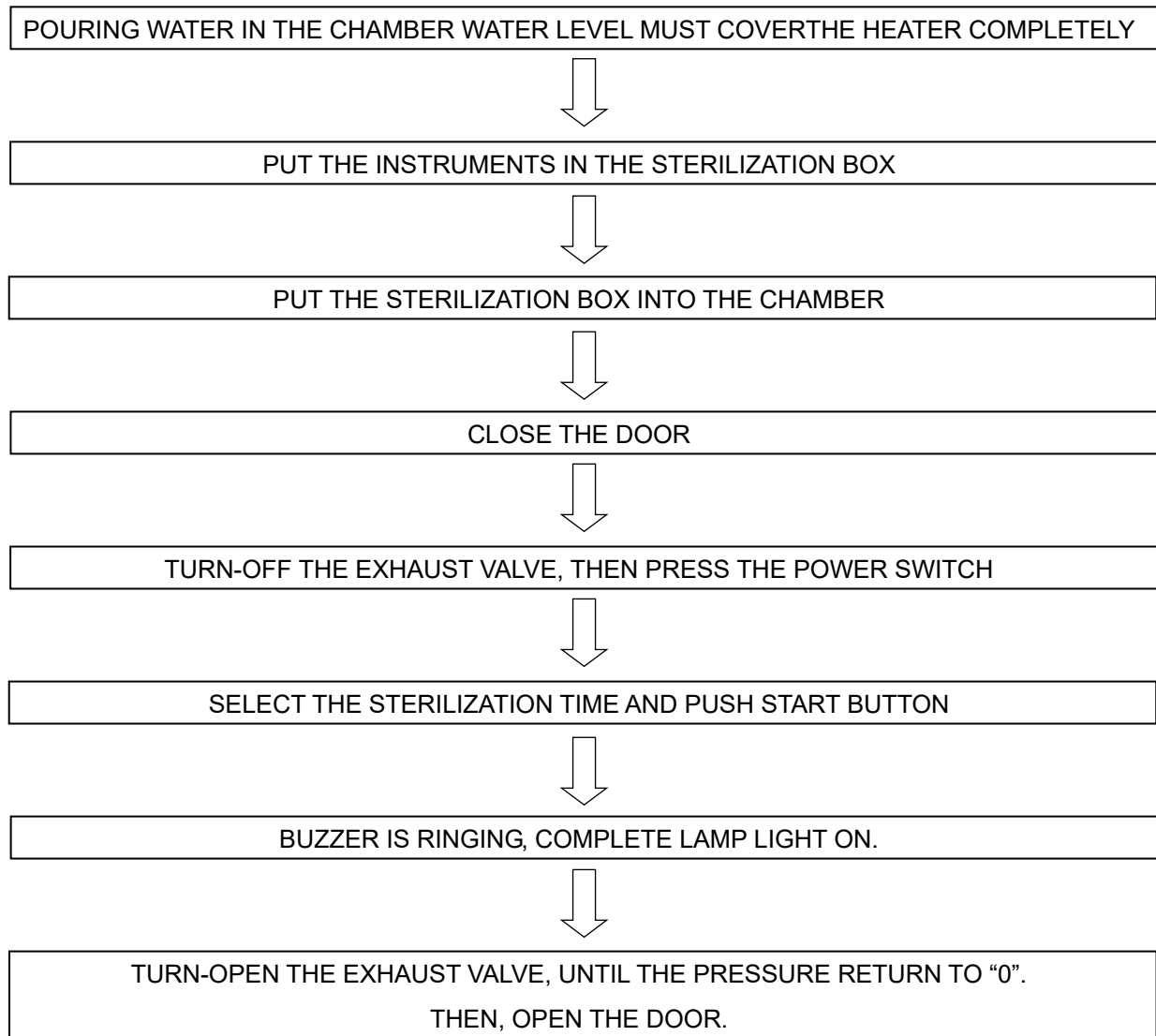
Please exhaust valve to release the vacuum in chamber ◦

CAUTION : BEFORE OPENING THE DOOR ENSURE THE PRESSURE GAUGE IS AT “ ZERO” POSITION.

CAUTION : PLEASE DON'T FORGET THE CHECK THE STERILIZATION INDICATOR, AFTER STERILIZATION CYCLE.

CHAPTER 4. BASIC STEP OF STERILIZING

PLEASE CHECK CHAPTER 4. OPERATION, AT FIRST.



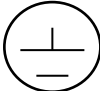




CHAPTER 5. WARNING

1. Please check the pressure gauge, if the pressure over than 0 kgf/cm². Please don't open door.
2. **"USE ONLY DISTILLED WATER"** for this autoclave. Or not, we can't offer the quality guarantee service.
3. Please pour the water into the chamber, before sterilization. Or not, the low water protector will cut-off the elec. power.

PS: Please SWITCH OFF the power switch, and pour water in the chamber.
Then, close the door and SWITCH ON the power switch again.

4. Please attend the high temperature around the chamber. When she is working.
5. The door handle must be touching the stop metal, which on the screw of the handle, when you close the door.
6. Ensure the heater inside the chamber is covered with water prior to commencement of the sterilization cycle.
7. Use only a dedicated power supply.
8. The silicon rubber gasket on the inner door and the front of the chamber should be kept clean to maintain maximum gasket.
9. We recommend use of chemical indicator strips as a check for sterility. These strips may also be kept as a record of sterilization.
10. In the event of an emergency immediately turn the autoclave power-off at the mains power point. Then, turn open the exhaust valve.
11. THE SIGN OF CAUTION AND INDICATION:

				
CAUTION:	CAUTION:	INDICATION:	INDICATION:	INDICATION:
Please check our operation manual.	Hot, Please don't touch it.	Electricity earth protection.	POWER-OFF	POWER-ON

12. Storage environment: temperature: -10°C ~+ 50°C / humidity ≤ 80%
13. Working environment: temperature: 1 °C ~ + 40°C/ humidity ≤ 80%
14. Transportation environment: temperature: -10°C ~ + 50°C / humidity ≤ 80%

CHAPTER 6. APPENDIX

APPENDIX – A

※ SELECT THE STERILIZATION TIME:

PRESSURE ON 1.4 bar(kgf/cm²) (APPROX. 126°C / 258°F)

UNWRAPPED Select 18 minutes sterilization time.

WRAPPED Select 33 minutes sterilization time.

LIQUIDS Select 33 minutes sterilization time.

FOR REFERENCE : $1 \text{ kgf/cm}^2 = 0.98 \text{ bar} = 14.2 \text{ psi}$.

Sterilization instruments must be made by metal without plate, or autoclaveable plastic or rubber material.

Liquid sterilization is available, but it must adjust the exhaust valve limited and arrange the pressure down to 0 in 5 minutes.

APPENDIX – B

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

1. Drain all water from the autoclave.
2. Remove power cord and place all items into the chamber. Close door secure firmly.
3. Cover the autoclave with the plastic bag.
4. Place the bottom of the carton containing the packing bottom foam on the floor.
5. Place the autoclave into the packing bottom foam ensuring that the door of the autoclave is in the position.
6. Place the wall piece of carton into the bottom of the carton.
7. Place the packing fix foam into the back and front of door.
8. Place the packing foam on the top of the autoclave.
9. Check all pieces foam are fixing the autoclave well.
10. Place top of carton to cover the wall piece of carton.
11. Tie carton together with heavy twine or a similar strong material.

IMPORTANT: We strongly recommend that all packing material including the carton be kept for re-use in the event that the unit needs to be transported at any time.

CHAPTER 7. TROUBLE SHOOTING

* POWER INDICATOR LAMP IS NOT LIGHT ON:

1. Cause: Power supply is not properly connected.
Solution: Try to connect power supply until power indicator goes on.
2. Cause: PCB broken.
Solution: Replace PCB.
3. Cause: Transformer wire connection is not tight.
Solution: Tighten it.
4. Cause: Transformer broken.
Solution: Replace the transformer

* TEMPERATURE SWITCH CUT-OFF

1. Cause: Water is not enough.
Solution: Pour water in the chamber to the full level.
2. Cause: Forget pouring water in the chamber
Solution: Pouring water in the chamber, & try again.
3. Cause: Forget turn-closed the exhaust valve.
Solution: Turn-off the valve, and try again.

* THE PRESSURE CAN'T UP TO 1.2kgf/cm² IN 20 MINUTES.

1. Cause: The steam trap over flowing
Solution: Adjust the steam trap exhaust slowly. (Must be adjusted by engineer)
2. Cause: Forget turn-closed the exhaust valve.
Solution: Turn-off the valve, and try again.
3. Cause: Water is not enough.
Solution: Pour the water in the chamber to the full level.
4. Cause: Forget pouring water in the chamber
Solution: Pouring water in the chamber, & try again

* "COMPLETE" Light is not light on, after cycle finished:

1. Cause: Have some electricity power source problem.
Solution: Re-cycle again.
2. Cause: After re-cycle, still the same happened.
Solution: Call to engineer.

PS: ANY PROBLEMS PLEASE CHECK THE WIRE CONNECTION AT FIRST.

CHAPTER 8. MAINTENANCE REQUIREMENTS

DAILY:

- WIPE THE INSIDE OF THE CHAMBER AND THE INSIDE OF THE DOOR WITH NON-LINT CLOTHE SUCH AS A WETTEX.
- CHECK AND KEEP THE DOWN SIDE (IN THE CHAMBER SIDE) OF THE SAFETY VALVE AND STEAM TRAP TO BE CLEAN.

WEEKLY:

- EMPTY THE BALANCE WATER IN THE CHAMBER AND CLEAN THE RACK AND TRAYS.
- TRY TO PULL THE SAFETY VALVE WITH THE RINGLET. TO CHECK AND KEEP THE SAFETY VALVE IN WORKING CONDITION.

MONTHLY:

- EMPTY THE BALANCE WATER IN THE CHAMBER, AND CLEAN THE SURFACE OF THE CHAMBER AND THE SURFACE OF THE HEATER, WITH A LITTER SOUP. THEN, WATER CLEANS AGAIN.
- **CLEAN** THE CHAMBER AND PIPING SYSTEM WITH "CHAM-MATE".
- **PULL THREE TIMES FOR SAFETY VALVE.**

YEARLY: (CHECK BY ENGINEER)

- REMOVE, CLEAN AND EXHAUSE VALVE, AND REPLACE THE SAFETY VALVE & STEAM TRAP.
- CHECK THE ELECTRIC WIRE SYSTEM, FUSE, AND CONNECTORS.
- CHECK THE PRESSURE GAUGE, IN WORKING CYCLE.
- CHECK THE SPRING TIMER, IN WORKING CYCLE.
- CHECK THE INDICATION LAMPS, AND ALL CYCLE FUNCTION.
- CHECK THE DOOR GASKET. (SUGGESTION: REPLACE IT PER YEAR.)

WARRANTY

Your “**Autoclave Sterilizer**” 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 Manufacturer is limited to repair or replacement and under no circumstances shall “**Autoclave Sterilize**” 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 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:

