OPERATION MANUAL

SAT - series

AUTOMATIC AUTOCLAVE STERILIZER

422-04022 v.08 10 December 2019

OPERATION INSTRUCTION

SAT- series

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.

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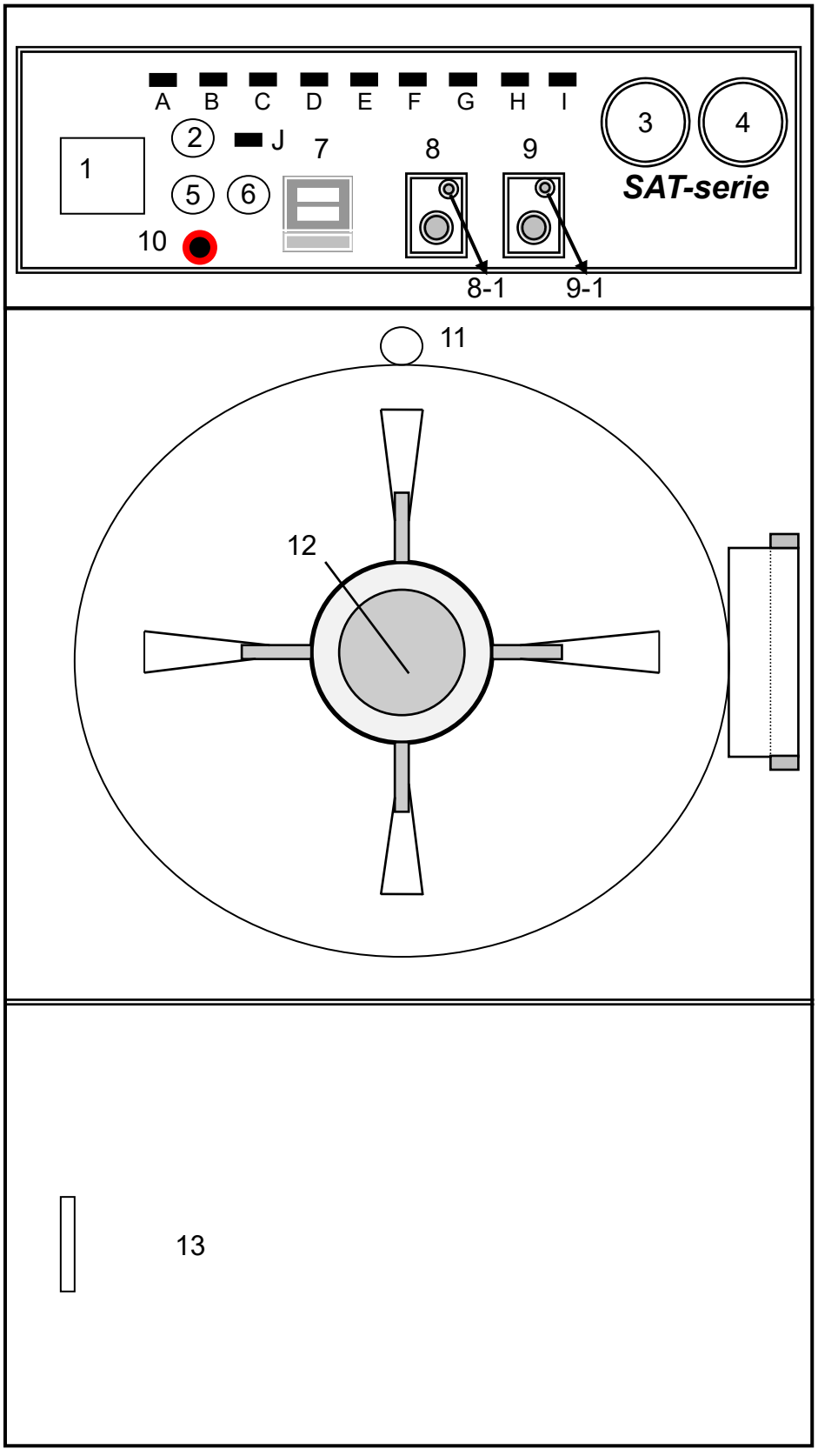
CHAPTER 1 LOCATION:

SAT series (STANDARD CHAMBER):



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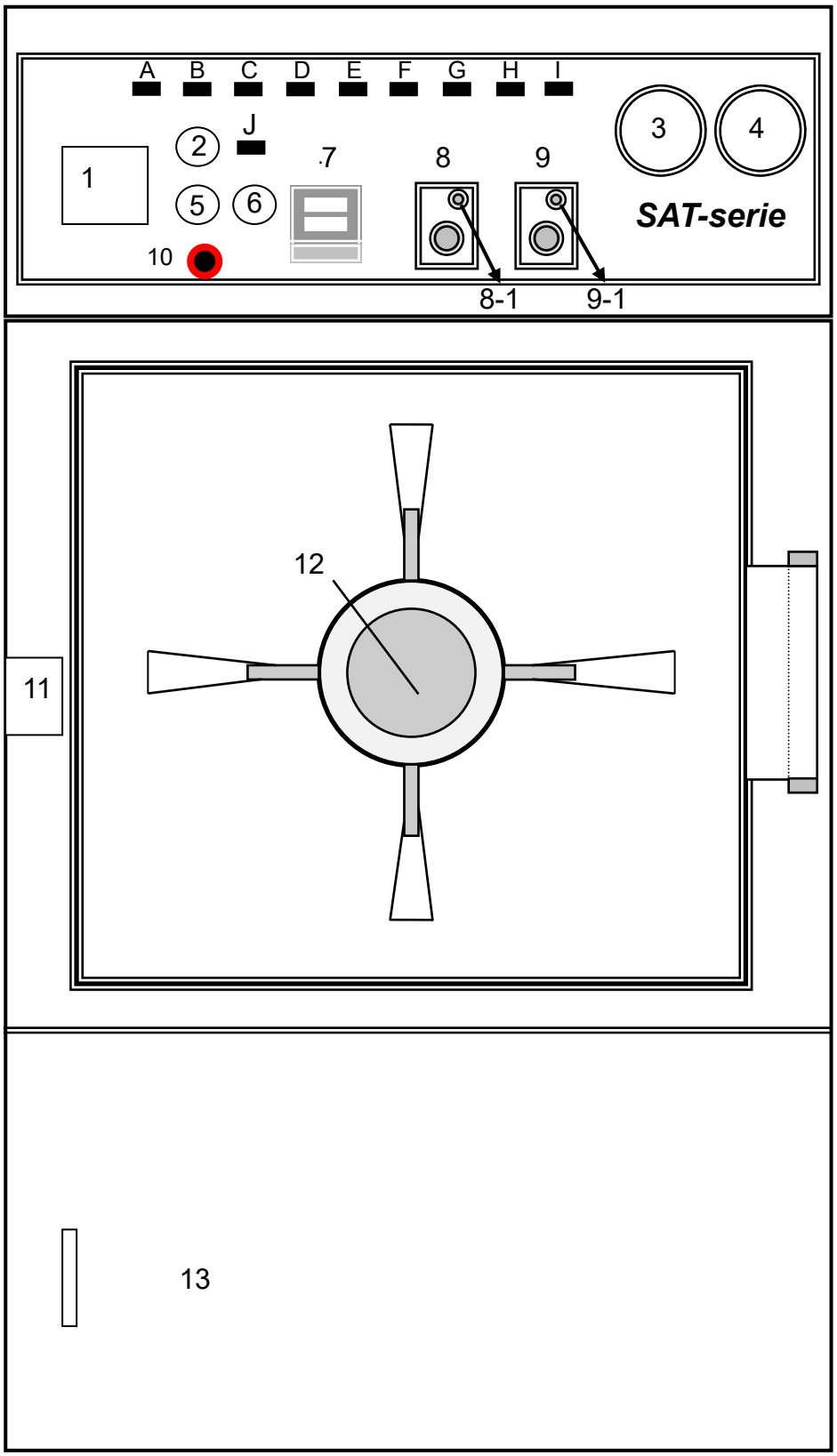
SAT series (SQUARE CHAMBER):



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CHAPTER 1 SAT series LOCATION:

1. Print recorder (optional device)
2. Sterilization program selection switch
3. Chamber pressure gauge/ vacuum gauge
4. Jacket pressure gauge
5. Stand by switch
6. Start switch
7. Temperature controller
8. Sterilization timer

8-1 Sterilization timer indicator

9. Dry timer

9-1 Dry timer indicator

10. Emergency exhaust bottom
11. Door open/close micro switch
12. Door handle
13. Maintains door

INDICATION LAMPS:

a. Power indicator lamp
b. Add water indicator lamp
c. Heating-up indicator lamp
d. Pre-vacuum indicator lamp
e. Sterilization indicator lamp
f. Exhaust indicator lamp
g. Dry / vacuum indicator lamp
h. Vacuum release indicator lamp
i. Complete indicator lamp
j. Over temperature indicator lamp

CHAPTER 1 LOCATION OF CONTROLLER

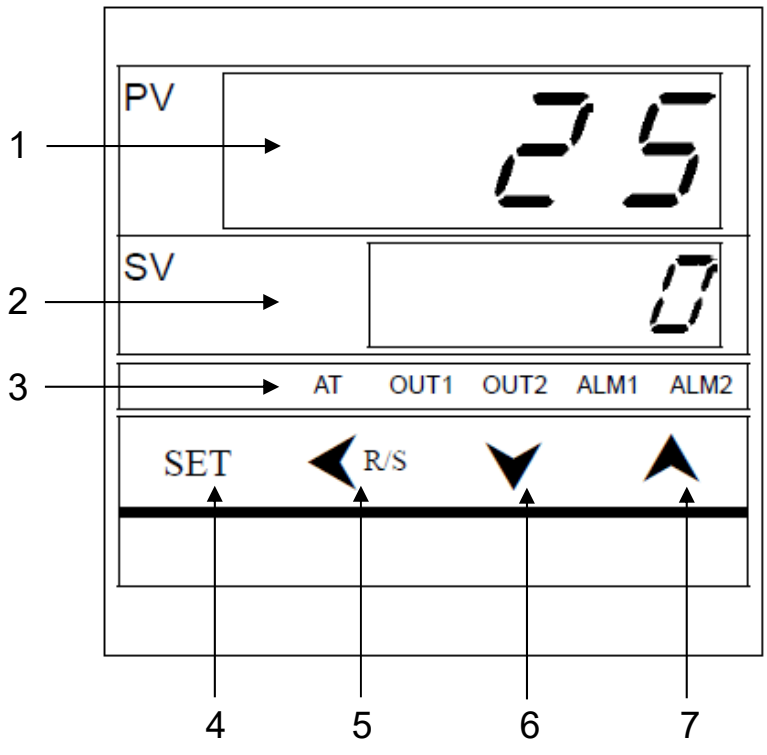
Operation for CB-100 Temperature control

※Use CB-100 temperature controller position description：

1. PV: Actual chamber temperature display (green color)
2. SP Set value (set sterilization temperature) display (Orange color)
3. Indication Lamps:
   - “AT”: Auto-tuning Lamp: Flashes during auto-tuning execution. (green color)
   - “ OUT1”： Control Output Lamp (org): Lights when control output is turned on (green color)
   - “ALM 1”: Control Output Lamp: Lights when alarm 1 output is turned on. (red color)
4. **SET** key: Used for parameter calling up and set sterilization temperature registration.
5. R/S KEY: 1). Shift digits, when settings are changed.

   2). Modify the internal data of the temperature controller with the SET button.
6. Down-key: Decrease numerals.。
7. Up-key: increase numerals.

==========



How to operation the CB-100 temperature control.

Power on the machine, and wait 5 second for machine self-test.

⇩

※Set the sterilization temperature.

1. Press ***SET*** key
2. Please press ▼ or ▲ to set sterilization temperature 121 or 134C
3. Press ***SET*** key again
4. Temperature set is complete.

⇩

PS：***Please do not change following data. Because the data Is for you reference. If you change the data will damage The machine. The difference machine has difference data. Please do not write them to same data.***

1. Press ***SET*** key about 3 second. The display is PV … AL1

SP… 0

⇩

2. Press ***SET*** key. The display is PV … ATU

SP … 0

⇩

3. Press ***SET*** key. The display is PV … STU

SP … 0

⇩

4. Press ***SET*** key. The display is PV … P

SP …1.2

⇩

5. Press ***SET*** key. The display is PV … I

SP … 25

⇩

6. Press ***SET*** key. The display is PV … D

SP … 6

⇩

7. Press ***SET*** key. The display is PV … Ar

SP …100

⇩

8. Press ***SET*** key. The display is PV … T

SP … 20

⇩

9. Press ***SET*** key. The display is PV … PT

SP… 0

⇩

10. Press ***SET*** key. The display is PV …LCK

SP …1000

0011 To lock the data

Press ***SET*** key.about 3 second. The machine come back operation model.

==========

Simultaneously Press ”***SET***” Key and ”***<R/S***” Key about 3 second, then go to next level

11. Press ***SET*** key. The display is PV … Cod

SP … 0000

⇩

12. Press ***SET*** key. The display is PV … SL 1

SP … 1100

⇩

13. Press ***SET*** key. The display is PV … SL 2

SP … 0000

⇩

14. Press ***SET*** key. The display is PV … SL 3

SP … 0000

⇩

15. Press ***SET*** key. The display is PV … SL 4

SP … 0001

⇩

16. Press ***SET*** key. The display is PV … SL 5

SP … 0000

⇩

17. Press ***SET*** key. The display is PV … SL 6

SP … 0001

⇩

18. Press ***SET*** key. The display is PV … SL 7

SP … 0000

⇩

19. Press ***SET*** key. The display is PV … SL 8

SP … 0000

⇩

20. Press ***SET*** key. The display is PV … SL 9

SP … 0000

⇩

21. Press ***SET*** key. The display is PV … SL10

SP … 1000

⇩

22. Press ***SET*** key. The display is PV … SL11

SP … 0000

⇩

23. Press ***SET*** key. The display is PV … Cod

SP … 0001

⇩

24. Press ***SET*** key. The display is PV … SLH

SP … 136

⇩

25. Press ***SET*** key. The display is PV … SLL

SP … 0

⇩

26. Press ***SET*** key. The display is PV … oH

SP … 2.0

⇩

27. Press ***SET*** key. The display is PV … AH1

SP … 2.0

⇩

28. Press ***SET*** key. The display is PV … dF

SP … 1

⇩

29. Press ***SET*** key. The display is PV … STTn

SP … 100

⇩

30. Press ***SET*** key. The display is PV … STPK

SP … 67

⇩

31. Press ***SET*** key. The display is PV … STIK

SP … 16

⇩

32. Simultaneously Press ***SET*** key and ***<R/S*** key about 3 second. The machine come back operation model.… Complete setting.

CAUTION:

1. Anytime when you push-on the power switch, please wait about 5 seconds. And then you can set-up the sterilization temperature and sterilization time. Because the temperature control switch need 5 seconds for auto-research all the function and programs.

2. If you push the “SET” bottom over than 3 seconds, the display will be jumped to other functions. Please push this button 3 seconds again. And the display will come back to normal condition.

CHAPTER 2 SPECIFICATION:

MODEL series	SAT series
Control System	PLC Control System with Digital Temperature Display Temperature Control System
Construction	St. St. #304 Housing, frame, door, chamber and jacket
Design Temperature	140ºC
Chamber Design	ASME Standard
Chamber Material Stainless Steel #304	Standard
Chamber Material Stainless Steel #316	Optional
Automatic Add-Water	Yes
Using Temperature	105ºC - 136ºC ≒ (0.2 - 2.3kgf/cm^2) 221ºF - 277ºF adjustable
Dry Function	Yes
Electric Voltage	230V 1or 3 Phases, 380V or 415V or 440V 3 Phases
Optional Accessories	St. St. Basket × 2 pcs. & Transportation Cart
Pressure Control Switch	Yes/1 pc.
Water Level Control Switch	Yes
Temperature Control Switch	Yes
Pre-Vacuum Function	Yes
Dry-Vacuum Function	Yes
Liquid sterilization function	Yes
Temperature Recorder	Yes
6 Points Temperature Recorder	Can be optioned
Double Door	Can be optioned
Door Pressure Auto-Lock	Yes
Sliding Door Construction	Can be optioned
Safety Device	Pressure Protection Switch. Temperature Control Switch. Low water Detection, Safety Valve. Pressure Door Auto-lock. Door indication light on.(For Double Door)
Estimate Life Time	7 Years

SAT - SERIES (STANDARD CHAMBER)

MODEL NO.	SAT-400	SAT-450	SAT-500
CHAMBER SIZE	ϕ 400mmX800mm(D)	ϕ 450mmX900mm(D)	500mmX1000mm(D)
OVERALL	830(W) X1800 (H) X1150(D) mm	850(W) X1800 (H) X1350(D) mm	850(W)X1800(H)X1450(D) mm
CHAMBER CAPACITY	100 LITER	143 LITER	196 LITER
HEATING POWER	7.0KW 50/60Hz	7.0KW 50/60Hz	9.0KW 50/60Hz
STANDARD ACCESSORIES	ST.ST.#304 TRAY * 1 PC. VIEWER TUBE X 2PCS	ST.ST.#304 TRAY * 1 PC. VIEWER TUBE X 2PCS	ST.ST.#304 TRAY * 1 PC. VIEWER TUBE X 2PCS
MODEL NO.	SAT-600		
CHAMBER SIZE	ϕ 610mmX1200mm(D)		
OVERALL	930(W)X1900(H)X1680(D) mm		
CHAMBER CAPACITY	350 LITER		
HEATING POWER	12.0KW 50/60Hz		
STANDARD ACCESSORIES	ST.ST.#304 TRAY * 1 PC. VIEWER TUBE X 2PCS		

SAT - SERIES (SQUARE CHABMER)

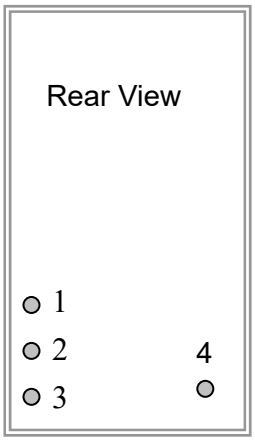
MODEL NO.	SAT-S0110	SAT-S0260	SAT-S0454
CHAMBER SIZE	410mmX410mmX660mm (D)	510mmX510mmX1000mm (D)	610mmX610mmX1220mm (D)
OVERALL	850(W) X1750 (H) X1350 (D) mm	980(W) X1850 (H) X1600 (D) mm	1160(W) X1900 (H) X1830 (D) mm
CHAMBER CAPACITY	110 LITER	260 LITER	454 LITER
HEATING POWER	9.0KW 50/60Hz	12.0KW 50/60Hz	15.0KW *2 50/60Hz
STANDARD ACCESSORIES	ST.ST.#304 TRAY X 2PC./RAIL VIEWER TUBE X 2PC	ST.ST.#304 TRAY X 2PC./RAIL VIEWER TUBE X 2PC	ST.ST.#304 TRAY X 2PC./RAIL VIEWER TUBE X 2PC
MODEL NO.	SAT-S0680	SAT-S0848	
CHAMBER SIZE	610mmX915mmX1220 mm(D)	610mmX915mmX1520 mm(D)	
OVERALL	1740(W) X2100 (H) X2020 (D) mm	1740(W) X2100 (H) X2320 (D) mm	
CHAMBER CAPACITY	680 LITER	848 LITER	
HEATING POWER	15.0KW *2 50/60Hz	12.0KW *4 50/60Hz	
STANDARD ACCESSORIES	ST.ST.#304 TRAY X 2PC./RAIL VIEWER TUBE X 2PC	ST.ST.#304 TRAY X 2PC./RAIL VIEWER TUBE X 2PC	

CHAPTER 3 PREPARATION

CHECKLIST FOR UNPACKING INSTRUCTIONS:

TO UNPACK AUTOCLAVE FROM WOOD

1. Remove top pieces wood.
2. Remove the holder wood (4 pieces).
3. Remove each sidewall pieces (4 pieces) of the case.
4. Remove the fixing holder on each down side.
5. Move the autoclave out from the plank.

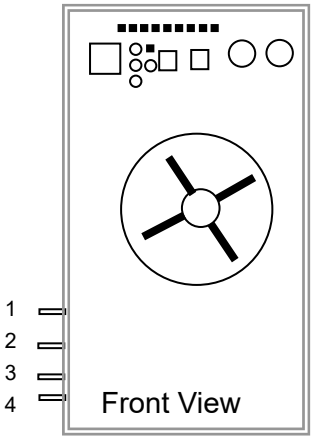


INSTALLATION – 1 FOR SINGLE DOOR:

1. Fixing Ø½" the **distilled water** inlet hose.
2. Fixing Ø½" the tap-water inlet hose for vacuum pump.
3. Fixing Ø½" the high pressure of chamber & jacket exhaust outlet hose
4...Fixing Ø1" the pump exhaust & steam generator outlet hose.

INSTALLATION – 2 FOR DOUBLE DOOR:

1. Fixing Ø½" the **distilled water** inlet hose.
2. Fixing Ø½" the tap-water inlet hose for vacuum pump.
3. Fixing Ø1" the pump exhaust & steam generator outlet hose.
4. Fixing Ø½" the high pressure of chamber & jacket exhaust outlet hose



Waste water should be brought into the public net in accordance with the local rules or requirements i.e.

PS: PLEASE CHECK THE ACCESSORIES ENCLOSED, AT FIRST.

4. Put this autoclave on the ground with level, and keep the distance more than 10cm
   between the wall and the case. And **keep this autoclave in level condition.**

5. Check the elec. power source must be **380VAC or 230 VAC. The no fuse breaker is necessary, please don't forget to install for electric power source**

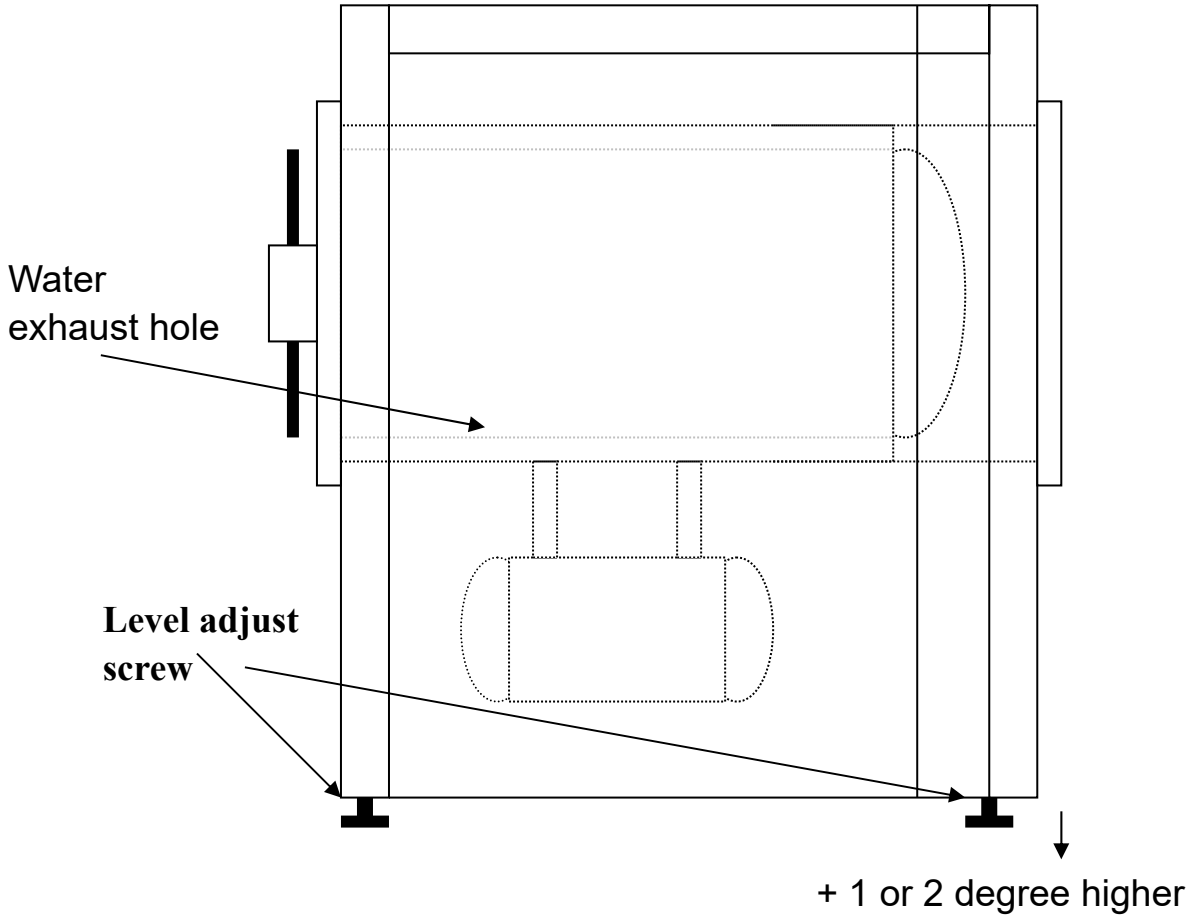
6. The water source must be distilled water. Basically the hard water is not allowed to use in SAT series. If you use hard water, please option one filter before the machine. And must clean the chamber and boil per each month. This autoclave have auto-add-water device. Until the flow water touch the full level sensor on the steam generator, the solenoid valve will cut-off the water flow in automatically.

7. Press the power switch, if power lamp is light on, that means the power is already stand-by now.

CHAPTER 3-1 PREPARATION

INSTALLATION - 3：

As to the good dry function, please check the level installation.



If the dry is not so well, please check the ground level and adjust the level adjusts screws as our suggestion;

Adjust the backside leg's screw to make back side higher or adjust the front side leg's screw to make front side lower.

Normally the back will higher than front side about 1 to 2 degree.

⚠**CAUTION:** The autoclave MUST BE earthed!

⚠**CAUTION:** The circuit-breaker is also serves as a disconnect device for disconnecting the power, it should be so located that the circuit-breakers are not blocked by any other devices.

CHAPTER 4. PLACEMENT OF ITEMS TO BE STERILIZED

NOTE: Refer to infection control, such as sterilization and sterility assurance in health care facilities of your local authority, for load placement guidelines.

NOTE: Please place items to be sterilized on the tray properly in order to have the best sterilization and/or drying result.

WARNING: Be careful when removing the sterilized items as the metal surfaces might still be hot. Always wear suitable hand protection to remove the box or use the appropriate aids (tray holder) to lift the trays.

NOTE: It is recommended not to exceed 70% of pooch if pooch are used for sterilization.

WARNING: To sterilize absorbent cotton or woolen, please wrap it with sterilizing pouch to avoid piping clog. Place a chemical indicator for

WARNING: If implements are packed with sterilizing pouches, please make sure not to pile them up.

Figure 1

1. Before loading, ensure instruments are cleaned and rinsed.
2. Be sure there will be enough space between each wrap for better air flow as shown in Figure 2.

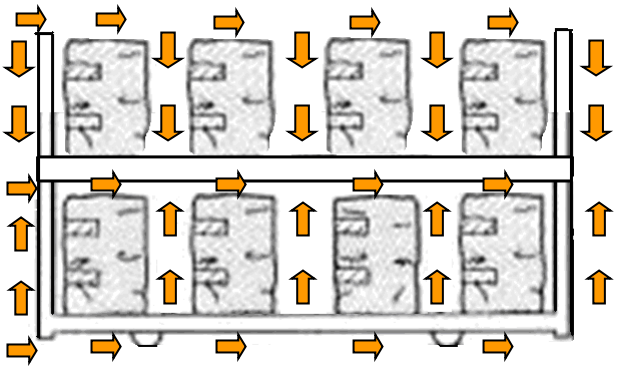


Figure 2

3. If implements are packed with sterilizing pouches and placed inside a sterilization box, make sure to display items as shown in Figure 3.

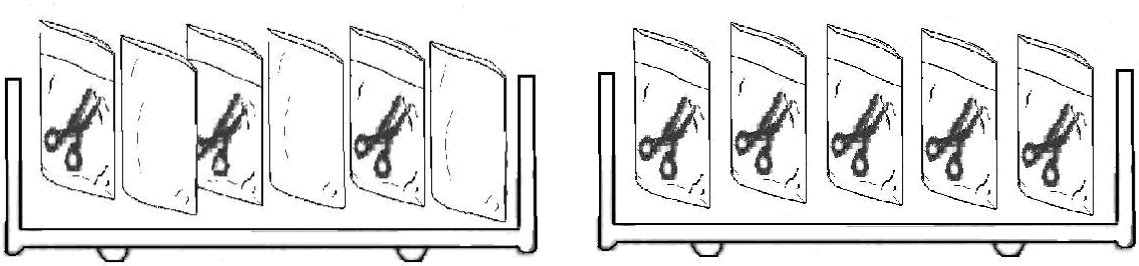


Figure 3

4. If implements are treatment plate, make sure to arrange items as shown in Figure 4.

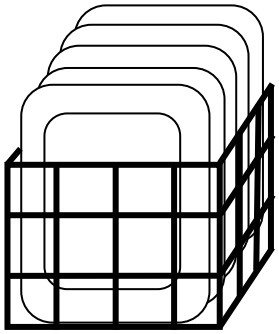


Figure 4

5. If compound items, such as solid loads and porous loads, are packed at the same wrapped, be placed them at the lowest side of the chamber to prevent condensation drops.

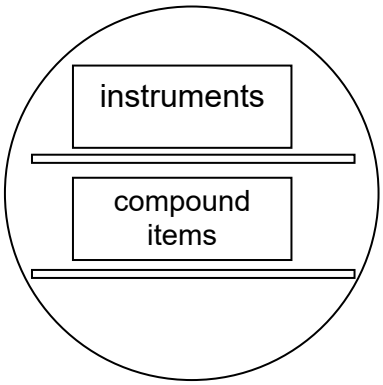


Figure 5

6. Do not exceed to its maximum limit and/or touch the walls of the chamber; and make sure there are enough space for free circulations of steam penetration.

7. Uniform placing of objects that do not overlap.
8. Place tubes or hollows loads horizontal to tray without overlapping. When place sterilizing pouch on the sterilization box or tray, make sure the medical grade paper is facing upward.
9. Round pans, trays, pots pan, etc., should be opening upside down as shown in Figure 6.

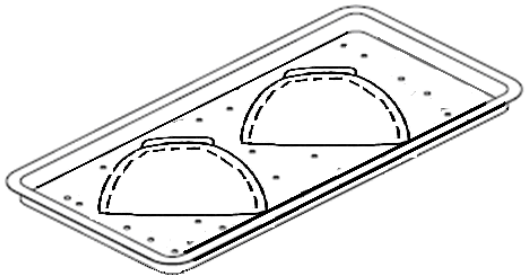


Figure 6

10. Detach caps from can-like items and separated them for sterilization work.
11. If implements are packed with sterilizing pouches, please make sure not to pile them up.

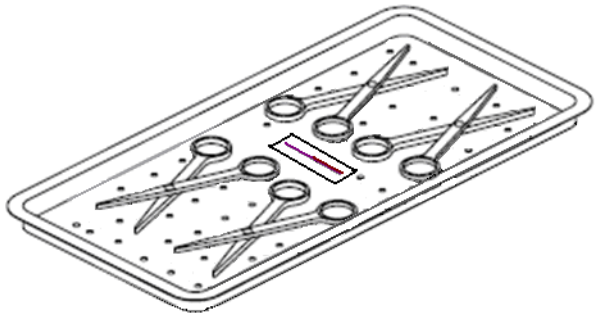


Figure 7

12. Follow the instruction of the instrument to clean and wash the hollow instruments prior sterilizing work, and wipe excess detergents or water. Keep the double ended hollow instrument as straight as possible while keeping two ends opened.
13. An additional temperature sensor and recorder are required for liquid sterilization program as shown in Figure 8.

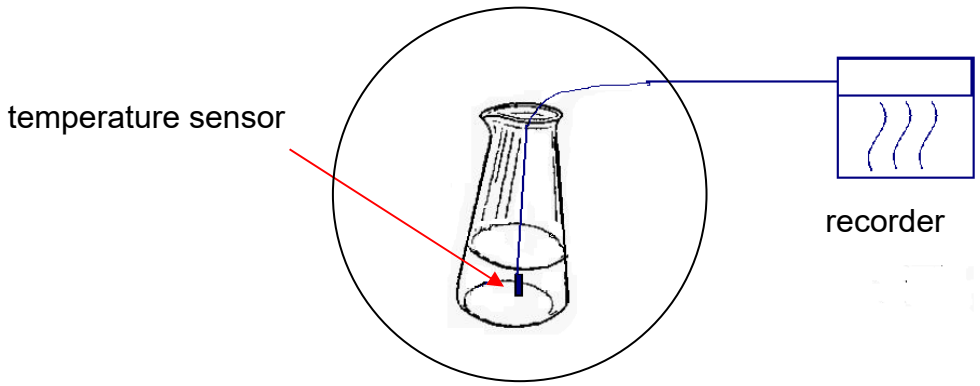


Figure 8

14. Make sure that the items to be sterilized are placed in proper position and then closed the door for sterilization works.

CHAPTER 5 OPERATION

PLEASE CHECK CHAPTER 3. AT FIRST.

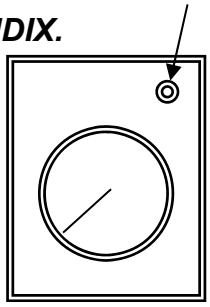
1. Open the door and put the sterilized instruments into the chamber. Than closed the door.
   PLEASE DON'T FORGET TO PUT THE STERILIZATION INDICATOR INTO CHAMBER.

2. Set-up the sterilization temperature 121ºC or 134ºC.

3. Sep-up the sterilization time.
   AS TO THE TIME SET, PLEASE REFER THE ENCLOSED APPENDIX.

4. Sep-up the dry time.
   AS TO THE TIME SET, PLEASE REFER THE ENCLOSED APPENDIX.

5. After the chamber temperature up-to the you set-up,
   The LED of sterilization timer turn to "flash" that means the sterilization timer starts work. Then the LED turns light on. This means the sterilization timer finished working then the the dry-timer starts working.



Timer

6. The LED of dry timer turn to "flash" that means the dry timer start work and the and the "DRY" Indication lamp will be light on. **Meanwhile the jack steam pressure will be exhausted to make the chamber vacuum**. The LED turns light on. This means the dry cycle is finished. Then, the dry-timer stop working, and the "complete" indicator lamp light on.

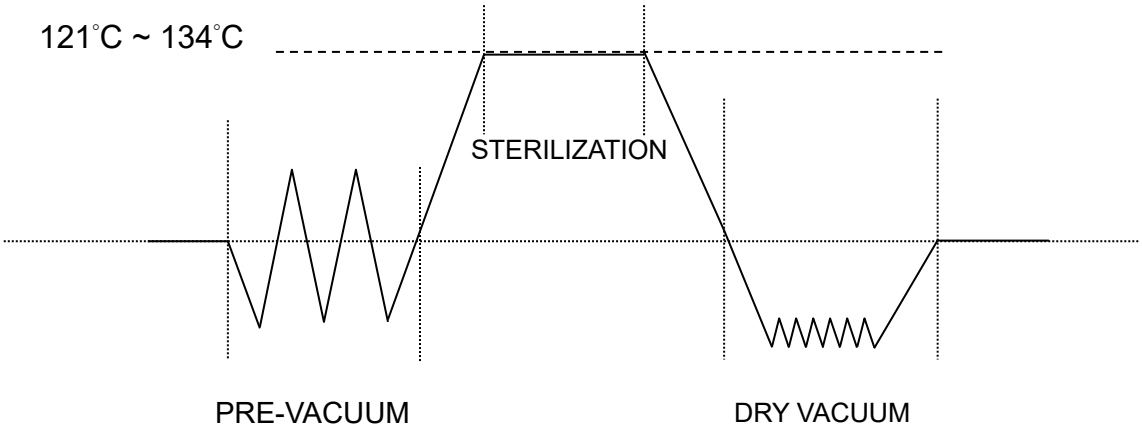
7. About 40 seconds buzzer will report you, "MY DEAR MASTER! YOUR COMMAND HAVE BEEN COMPLETED." Please check the COMPLETE indicator. It must be light on. If not that means this cycle is fail. Please re-sterilize again.

8. SAT series is control by micro processor (PLC). SO she can help you to check the working steps automatically.

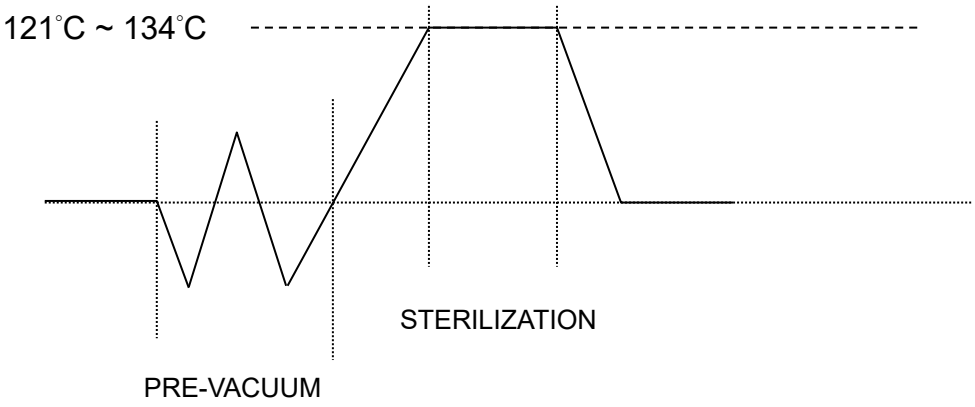
CAUTION: BEFORE OPENING THE DOOR ENSURE THE PRESSURE GAUGE IS AT "ZERO" POSITION.
CAUTION: PLEASE DON'T FORGET THE CHECK THE STERILIZATION IDICATOR, AFTER STERILIZATION CYCLE.

THE STERILIZATION MODE:

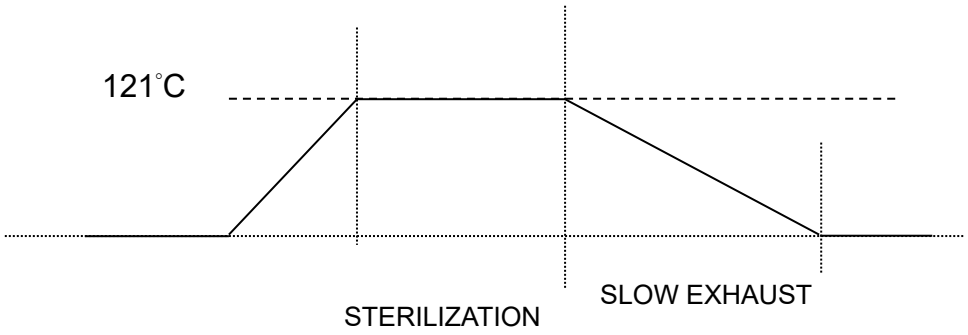
WRAPPED STERILIZATION MODE:



UNWRAPPED STERILIZATION MODE:



LIQUID STERILIZATION MODE:



CHAPTER 5-1 BASIC STEP OF STERILIZING

PLEASE CHECK CHAPTER 4. OPERATION, AT FIRST.

PUT INSTRUMENTS INTO CHAMBER, CLOSE THE DOOR THEN PUSH ON THE STAND BY SWITCH

⇩

SELECT THE STERILIZATION TEMPERATUER

⇩

SELECT WAPPED /UNWRAPPED/ LIQUID STERILIZATION MODE

⇩

SET STERILIZATION TIME

⇩

SELECT DRY TIMER OR NON-DRY

⇩

PUSH START SWITCH ON (START WORKING)

⇩

THE VACUUM PUMP STARTS WORKING THREE (3) TIMES FOR WRAPPED WHEN THE PRESSURE OF JACKET ARRIVED SET

⇩

STERILIZATION TIMER START WORKING,
WHEN TEMPERATURE OF CHAMBER ARRIVED SET

⇩

THE CHAMBER PRESSURE EXHAUST, WHEN STERILIZATION

⇩

THE DRY TIMER & VACUUM PUMP START WORKING, WHEN THE CHAMBER PRESSURE EXHAUST COMPLETED

⇩

AFTER 40 SECONDS BUZZER ON, THEN IT CUT OFF THE ELE. POWER AUTOMATICLLY.

⇩

THE COMPLETE INDICATOR LAMP TURNS LIGHT ON.
IF NOT LIGHT ON PLEASE RE-CYCLE AGAIN

⇩

IF THE COMPLETE INDICTION LAMP NOT LIGH ON PLEASE RE-CYCLE AGAGIN.

CAUTION

1. HECK THE PRESSURE GAUGE RETURN TO "**ZERO**" POSITION BEFORE THE DOOR OPENED.

2. OPEN THE DOOR, IN 10 MINUTES, AFTER ALARM TO MAKE THE DRY FUNCTION IN GOOD CONDITION

3. IF YOU NEED DO THE NEXT RUN? FIRST TURN THE "START" SWITCH TO "OFF" POSITION THEN TURN OFF THE POWER SWITCH AGAIN TURN ON THE POWER SWITCH TO RESET MACHIN.

CHAPTER 6 WARNING

1. Anytime check the pressure gauge, if the pressure over than 0 kgf/cm^2. Please don‘t open door.
2. **“USE ONLY DISTILLED or SOFT & FILTERED WATER”** Or not, we can’t offer the quality guarantee service.
3. Please keep open the water source into the chamber, Or not, the low-water protector wills cut-off the elec. power.
4. Please attend the high temperature on the door of the chamber. When she is working.
5. The door handle must be closed well, when the unit is in sterilization.
6. Please install the No Fuse breaker, between the elec. Power source and autoclave.
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.
9. The filter valve inside the chamber, should be cleaned at least every season.
10. We recommend use of chemical indicator strips as a check for sterility. These strips may also be kept as a record of sterilization.
11. In the event of an emergency immediately turn the autoclave off at the mains power point.
12. Please keep the chamber clean, anytime.
13. Movement: This machine over than 350KG to 750KG. Anytime, move this machine must by 6 people at least.
14. If the recording will not be used often. Avoid ink stained paper, Please reference the recorder manual to take out printer felt pen or chart paper guide.
15 If the ALARM indicator lamp  illuminates, the machine is overpressure or overheat. Please contact local distributor for service.
16 The sign of caution and indication:

	Caution! Hot surface.
	Grounding terminal.
	This label means indicator for power on
	This label means indicator for power off
	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.
	Date of Manufacture: EX: 2008-01 is mean January / 2008.
	Authorized Representative at europe.
	Manufacturer.
	Caution, risk of electric shock.

17 ORAGE ENVIRONMENT: TEMPERATURE:-10℃~+50℃ /
HUMIDITY: ≤ 80%

18 WORKING ENVIRONMENT: TEMPERATURE: 5℃~+40℃ /
HUMIDITY: ≤ 80%

19 TRANSPORTATION ENVIRONMENT: TEMPERATURE: -10℃~+60℃ /
HUMIDITY: ≤ 80%

CHAPTER 7 APPENDIX

SETTING UP THE STERILIZATION TIME:

* Temperature 134ºC / 273ºF (Approx. pressure 2.1 kgf/cm^2) UNWRAPPED Set-up 4 minutes sterilization time. WRAPPED Set-up 15 minutes sterilization time.

* Temperature 121ºC / 250ºF (Approx. pressure 1.1 kgf/cm^2) UNWRAPPED Set-up 22 minutes sterilization time. WRAPPED Set-up 30 minutes sterilization time. LIQUIDS Set-up 40 minutes sterilization time.

* DRY TIME: 30 minutes

* **SPECIAL SELECTION RANGE**: TEMPERATURE SELECTION RANGE 105ºC~136ºC STERILIZATION TIME SELECTION RANGE 0 ~ 60 minutes DRY TIME SELECTION RANGE 0 ~ 60 minutes

 # FOR REFERENCE: ***1 kgf/cm^2 = 0.98 bar = 14.2 psi.***

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

CHAPTER 8 TROUBLE SHOOTING

***POWER 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: Breaker broken.
   Solution: Replace the breaker with 50A type.
3. Cause :Bulb broken.
   Solution: Replace the bulb.
4. Cause: Power switch fuse broken.
   Solution: Replace the fuse.

*** HEATING-UP LAMP IS NOT LIGHT ON:**

1. Cause: Lamp Broken.
   Solution: Replace the bulb.
2. Cause Heater broken.
   Solution: Replace the heater

*** DRY LAMP IS NOT LIGHT ON:**

1. Cause: Lamp broken.
   Solution: Replace bulb.
2. Cause: Dry timer broken
   Solution: Replace the dry timer.

*** LOW WATER (OVER HEAT) INDICATION AND ALARM:**

1. Cause: Water is not enough.
   Solution: Check water source.
2. Cause: Water level sensor surface dirty and non-conductive
   Solution: Call service.
3. Cause: Check the water pipe leakage or other problem.

PS: THE FILTER MUST BE CLEAN PER EACH SEASON.

*** PRESSURE IN THE CHAMBER CAN'T EXHAUSE AUTOMATICALLY AFTER STERILIZATION:**

1. Cause: Filter is not clean.
   Solution: Clean it.
2. Cause: Check solenoid valve for chamber exhaust
   Solution: The valve broken, replace it.
3. Cause: Check the power for solenoid
   Solution: Call service

*** PRESSURE CAN'T UP:**

1. Cause: Steam solenoid unclean.
   Solution: Clean the filter.
   Solution: Clean the solenoid, or replace it.

***.DRY FUNCTION NOT PERFECT:**

Please open the door in 15 minutes, after alarm. If still have same problem, please call engineer.

Due to the "PRESSURE DOOR LOCK DEVICE", so if you can't open the door after work finished, please do following step:

a. Please turn the handle " ↷ " to tight the door 。
b. Then, turn the handle "↶ " back to open it.。

*. The maintenance on the trap it must be isolated from both the supply line and return line and any pressure allowed to safely normalize to atmosphere. The trap should then be allowed to cool. When reassembling, ensure that all joint faces are clean. Please see figure 1.

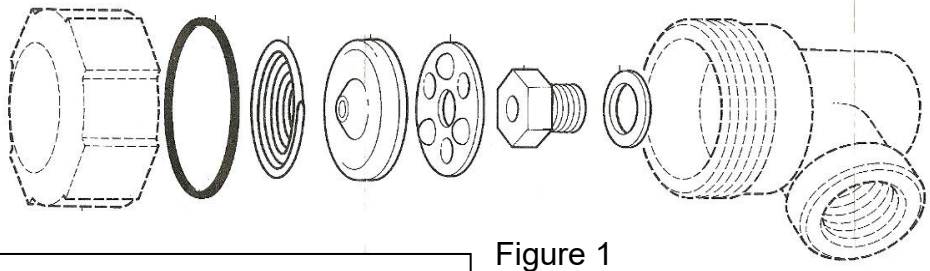


Figure 1

Note 1: Early spacer plates were uni-directional (see Fig. 2) and must be fitted with the high points uppermost. This does not apply to later models.

Fig. 2

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

CHAPTER 9 MAINTENANCE REQUIREMENTS

DAILY:

☺ WIPE THE INSIDE OF THE CHAMBER AND THE INSIDE OF THE DOOR WITH A NON LINT CLOTH SUCH AS A WETTEX.

☺ CHECK WATER SOURCE.

WEEKLY:

☺ CLEAN THE RACK AND TRAYS.

☺ CLEAN THE FILTER IN THE CHAMBER. (ON THE EXHAUST HOLE)

MONTHLY:

☺ AFTER STERILIZATION, WHEN THE CHAMBER PRESSURE STILL OVER THAN 0 kgf/cm², PLEASE TURN-OPEN THE JACKET EXHAUST VALVE KNOB. THEN, THE PRESSURE WILL EXHAUST THE BALANCE WATER AND STEAM FROM THE JACKET AND THE BOIL. THIS WAY WILL KEEP THE JACKET AND BOILER CLEAN. AND PUSH-ON THE POWER SWITCH TO REFILL THE WATER. TO THE BOIL AGAIN. AFTER 10 MINUTES, PLEASE PUCH-OFF THE POWER SWITCH, AND TURN-OPEN THE EXHAUST VALVE (KNOB) AGAIN. AFTER 2-3 TIMES, THE BOIL AND JACKET WILL BE CLEAN WELL.

☺ *EXHAUST ALL WATER FROM STERILIZATION GENERATOR. AND TAKE OUT SENSOR OF WATER LEVEL FROM THE TOP OF STERILIZATION GENERATOR (Before you take out the sensor, Please make the maker at the side) THAN CLEAR THE SENSOR OF WATER LEVEL. AFTER THE CLEAN, REINSTALL THE SENSOR OF WATER LEVE BACK TO STERILIZATION GENERATOR.*

YEARLY: (CHECK BY ENGINEER)

☺ REMOVE, CLEAN AND REPLACE THE WIRE MESH FILTER AT INSIDE OF THE HOUSING. THEN, FIX RETURNS THE FILTER.

☺ CHECK THE ELECTRIC WIRE SYSTEM, FUSE, AND CONNECTORS.

☺ CHECK THE TUBING SYSTEM.

☺ CLEAN THE SOLENOID VALVE.

☺ CHECK THE INDICATION LAMPS, AND ALL CYCLE FUNCTION.

☺ CHECK THE DOOR GASKET. (SUGGESTION: REPLACE IT PER YEAR.)

☺ CHECK THE FUNCTION OF THE SAFETY VALVE.

☺ CLEAN THE SURFACE OF THE WATER LEVEL CENSOR.

Cleaning Steps to the Water Sensors of the Steam Generator - Model SAT Series

⚠ **Warning**: Danger of Electric Shock! Disconnect the power prior to the maintenance works.

1 Mark and record the wiring number for subsequent reinstallation works. Do not mix the High-Level-Sensor, Low-Level-Sensor and Ground sensors.

2 Disconnect the three wirings counter-clockwise by using a No. 10 wrench (or an adjustable wrench), as shown in Fig- 1

3 Loosen the two sensors nuts (High-Level-Sensor and Low-Level-Sensor) counter-clockwise by using a No. 27 wrench (or an adjustable wrench), and then loosen the Ground screw nut counter-clockwise by using a No. 17 wrench (or an adjustable wrench).

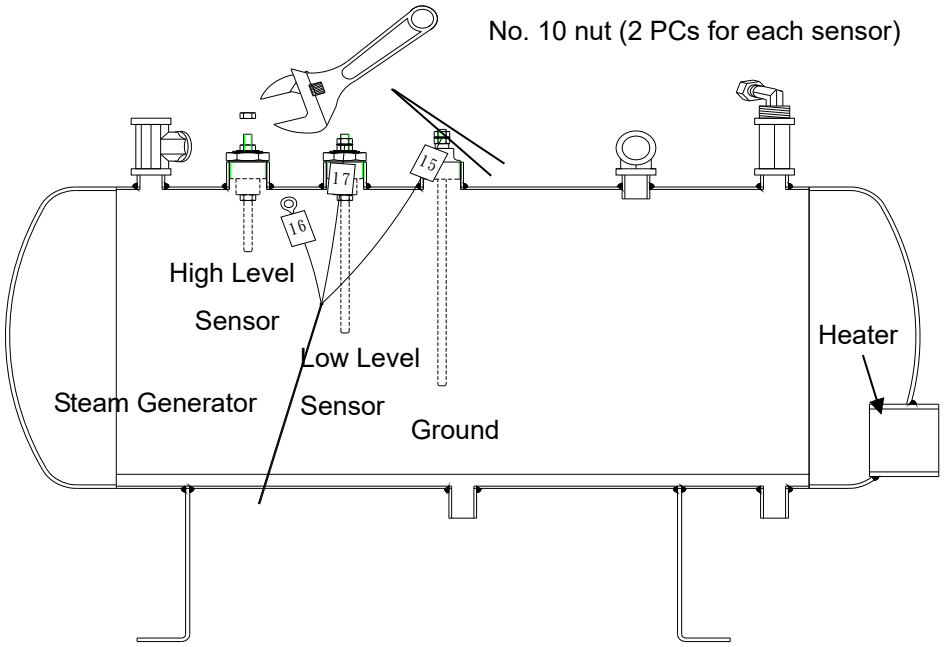


Fig- 1 Layout

4 Disassemble the High-Level-Sensor and Low-Level-Sensor as shown in Fig- 2 and Fig- 3.

5 Clean each part very careful to remove the scale and deposit with clean water, a small brush or scrub sponge may help to the cleaning works. Also clean the Ground Sensor Rod as described above.

Note: Each part must be clean completely; there should be no dirt on the surface of the Teflon Insulator.

6 Dry all of the components after the cleaning work. Wrap the screw thread of the High-Level-Sensor and Low-Level-Sensor rods (Fig- 3) with sealing tape so that they can be tighten with Teflon Insulators.

7 Assemble the components as shown in Fig- 2 and Fig- 3

8 Wrap the screw thread of the nut with sealing tape for assembly purpose.

9 Install the three sensors and their associated wiring with the tools used in step 1. Visual inspect that the position and wiring identification are match to Fig- 1.

10 Restore the power.

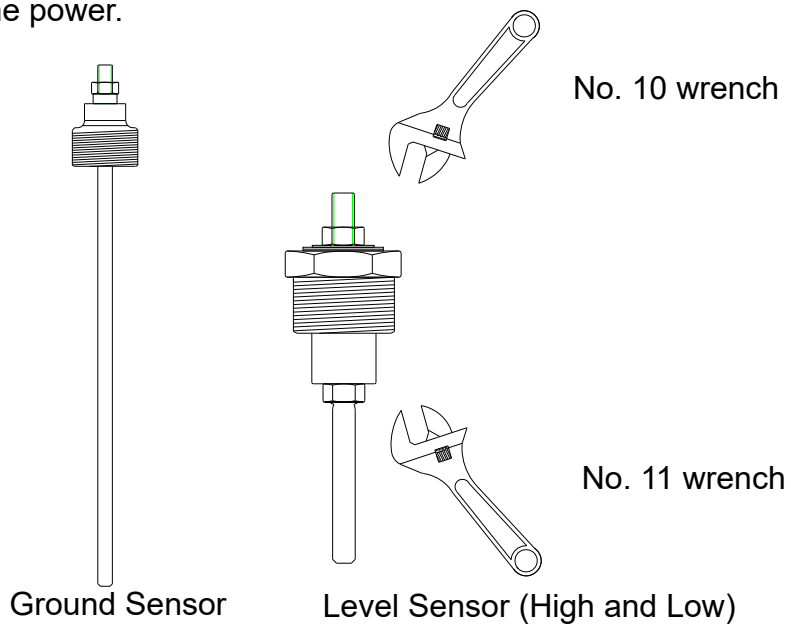


Fig- 2 Sensors

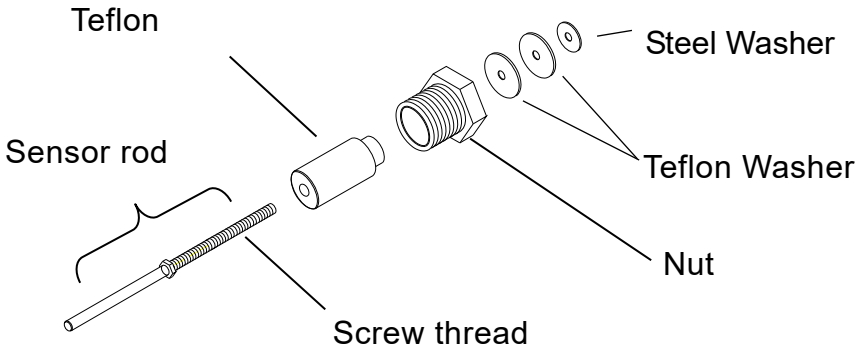


Fig- 3 Sensor Assembly

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