AG neovo
HEALTHCARE

Instruction Manual

AG Neovo Autoclave LouieP Séries

Model: P-M10T / P-M10TR

Please read this manual carefully before use.

422-02071 Rev.1 (07/30/2020)

Contents

1. Important Safety Instructions

⚠ **WARNING:** DO NOT place high temperature objects on top of the equipment to prevent objects dropping and causing fire or smoke.

⚠ **WARNING:** Please install, operate and maintain the sterilizer in accordance with this Instruction Manual. Failure to do so could result in serious injury or damage to the unit.

⚠ **WARNING:** Use only FDA-cleared chemical & biological indicators designed for steam sterilization that are compatible with the particular sterilization cycle temperature and exposure time being monitored.

Use sterility monitors with each sterilization load. If a sterilizing cycle is terminated prematurely, reprocess instruments (loads) to ensure sterility of the load. Follow manufacturer's instructions for proper disposal of used indicators.

⚠ **WARNING:** Use only FDA-cleared accessories are intended to be used with this autoclave model P-M10T and P-M10TR. Using other trays could restrict air / steam flow to items resulting in inadequate sterilization and drying.

⚠ **WARNING:** When pouching or wrapping items, use only sterilization pouches and wraps that have been cleared by the FDA and labeled for use with the steam sterilization cycle being used. Follow the manufacturer's instructions for use.

⚠ **WARNING:** DO NOT overload the chamber! Adequate space is required around items in trays for steam circulation and drying. Failure to allow adequate space will compromise sterilization and drying. Items and packaging should be completely dry when removed from the sterilizer to minimize the potential for recontamination.

⚠ **NOTE:** Loads must be placed on trays at all times.

⚠ **WARNING:** DO NOT place alcohol or other flammable items in the sterilizer. An explosion could occur, causing personal injury.

Gasoline
Alcohol
Gas
Chemical

Figure 1

⚠ **WARNING:** A separate (dedicated) circuit is recommended for the sterilizer. The sterilizer should not be connected to an electrical circuit with other appliances or equipment.

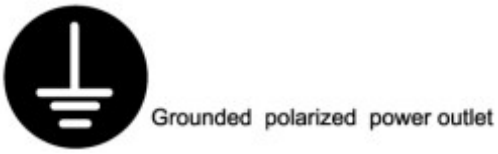


Figure 2

⚠ **WARNING:** Always check the status of the electric wire; unplug the power cord if breakage occurs. If needed, contact your supplier for service support.

⚠ **WARNING:** DO NOT allow children use or play with this sterilizer.

⚠ **WARNING:** DO NOT insert fingers into the gap on the hinge side of the door.

⚠ **WARNING:** The pressure gauge must be checked before opening the door. If the pressure is not zero (0), DO NOT try to open the door.

⚠ **WARNING:** In an event of emergency, or before carrying out any maintenance, always disconnect the power cord from the socket-outlet.

Figure 3

⚠ **WARNING:** Use sterilization indicator test strips to check if sterilization has been successful.

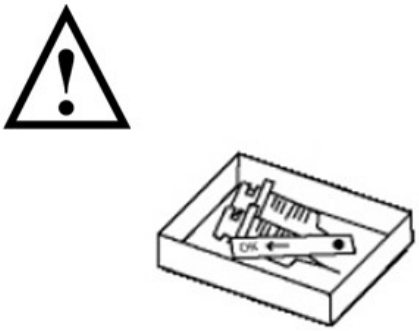


Figure 4

⚠ **WARNING:** If the ALARM LED indicator light ⚠ illuminates, the machine is over-pressured or overheated. The sterilizer will shut down automatically. Contact your supplier for service support.

⚠ **WARNING:** Use only distilled water. Normal tap water contains minerals, especially chlorides, which have corrosive effects on stainless steel. Failure to use distilled water will invalidate the warranty.

.

Pure water
City water
Groundwater…

Figure 5

⚠ **CAUTION:** DO NOT place any objects on the power plug or power cord.

⚠ **CAUTION:** The case and metal surface of the sterilizer become very hot during the operation process. Please DO NOT touch it.

⚠ **CAUTION:** DO NOT place any objects on water reservoir cap.

⚠ **CAUTION:** Always check the water level in the reservoir before running a sterilization cycle. If the LOW WATER LED indicator light illuminates, add distilled water. If the water is sufficient, but the LOW WATER LED indicator light is still illuminating, refer to the Troubleshooting guidelines.

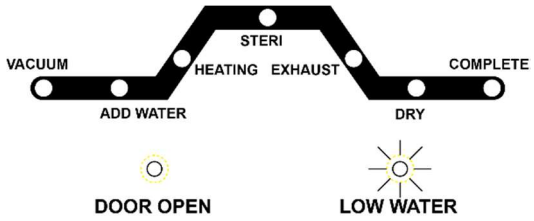


Figure 6

⚠ **CAUTION:** The water level must remain between the green " FULL LEVEL " and " MINIMUM LEVEL " labels on the right side of the sterilizer.

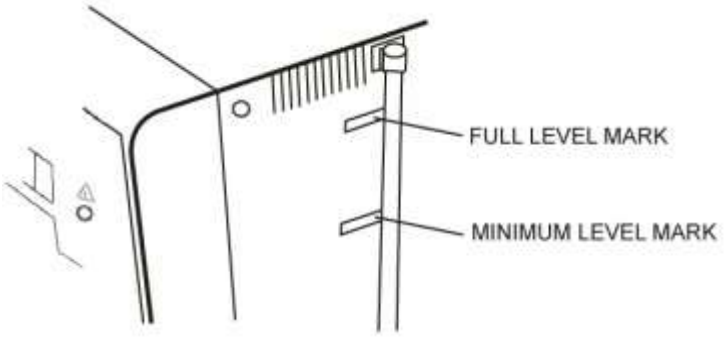


Figure 7

⚠ **CAUTION:** The ADD WATER LED indicator will illuminates during the sterilization process. This is a part of the normal operation and does not require users to take any steps.

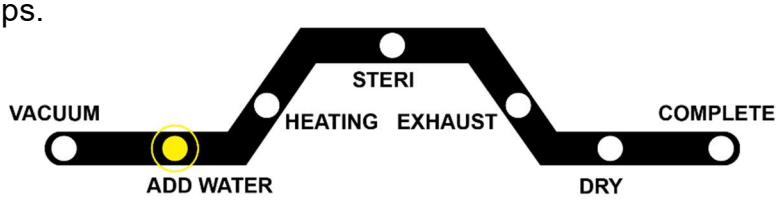


Figure 8

⚠ **CAUTION:** After the sterilization cycle completed, when opening the door, there will be steam and hot water present avoid contact.

⚠ **CAUTION:** DO NOT place any objects on top of the sterilizer.

⚠ **CAUTION:** DO NOT turn the sterilizer up-side-down or let it to drop on the power plug.

⚠ **CAUTION:** It takes at least two (2) or more people to carry the sterilizer in order to prevent it from dropping.

⚠ **CAUTION:** Always wait at least 20 minutes between each sterilization cycle.

⚠ **CAUTION:** Please unplug the power cord and drain off water from the water reservoir if the sterilizer will not be used regularly.

⚠ **CAUTION:** Always keep the sterilizer clean.

2. Explanation of Safety Symbols and Notes

	Caution, consult instruction manual for use
	Protective earth (ground)
	Alternating Current
	ATTENTION, Hot surface
	CAUTION, risk of electric shock.
	Disposal of Electrical & Electronic Equipment (WEEE): This equipment should be handed over to an applicable collection point for the recycling of electrical and electronic components or parts. For more detailed information about the recycling of this equipment, please contact your local city office, household waste disposal service or the retail store where you purchased this equipment. (European community only)
	Authorized representative in the European Community
	Manufacturer
	Date of manufacture It is a 6-digit number. The first 4 digits represent the year and the last 2 digits represent the month.
	Consult instructions for use
	ON (Power), connection to the mains
	OFF (Power), disconnection from the mains
Power	Power switch
NOTE	Indicates information that user should pay special attention to

3. Unboxing

⚠ **WARNING:** It takes at least two (2) or more people to carry the sterilizer in order to prevent it from dropping.

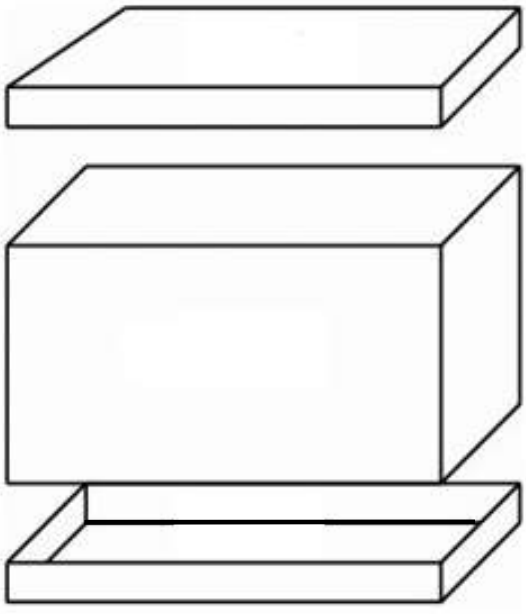


Figure 9

A Cut the drawstrings.

B Lift the top cover of the cardboard box.

C Remove the body circumference of the cardboard box and the packaging materials inside.

D Lift the sterilizer from the base of the package carefully.

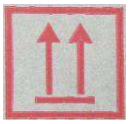
E Check whether all accessories are as follows (the accessories are packed inside the sterilizer):

- Instruction manual x 1
- Heater Cover x 1
- Tray Rack x 1 (standard)*
- Tray x 3 (standard)*
- Tray Holder x 1 (standard)*
- USB flash drive (optional for P-M10TR only)*
- Cleanser for chamber x 2 (standard)*
- Pouch Holder (optional)*

* Accessories will vary according to the order requirements.

⚠ **CAUTION:** We recommend keeping all packaged materials for future use.

3.1 Shipping Symbols

Symbol	Description	Symbol	Description
	Face up		Stacking limited to four layers
	Fragile, handle with care		Keep away from rain
	DO NOT use hooks		

4. Installation

4.1 Environment

The design of this sterilizer complies with international EMC (Electromagnetic Compatibility) standards. Perform operations according to the explanations below if necessary for different environments to eliminate interference.

- Move the equipment or turn its direction.
- Expand the space between the equipment and other machines.
- Insert the plug into other socket-outlets.
- Consult your local dealer or a qualified electrician.
- Refer to the “ 12 Specifications ” for the ambient temperature of the installation.

4.2 Water Quality

Distilled water or mineral-free water supplied to the sterilizer should have the physical characteristics and maximum acceptable contaminant level listed in the table below:

Physical characteristics and maximum acceptable contaminant Ingredient content of the sterilizer.

(ANSI / AAMI ST46 ref.).

Element	Condensate – allowable content
Evaporate residue	≤15 miligrams/liter (mg/l)
Silica	≤2 mg/l
Iron	≤0.2 mg/l
Cadmium	≤0.005 mg/l
Lead	≤ 0.05 mg/l
Rest of heavy metals	≤0.1 mg/l
Chloride	≤3 mg/l
Phosphate	≤0.5 mg/l
Conductivity	≤50 μs/cm
pH value	6.5 to 8
Appearance	Colorless, clean, without sediment
Hardness	≤0.1 mmol/l

Authorized laboratories should test for compliance with the data described above using recognized analytical methods.

⚠ **NOTE:** It is recommended to perform water quality test once per month. Using water that does not comply with the table above will have a severe impact to the lifespan of the sterilizer, and may invalidate the warranty from the manufacturer.

⚠ **CAUTION:** Failure to change water may result in sterilizer malfunction. DO NOT use bleaching agents or any abrasive materials / substances in chamber (i.e. bleach, steel wool, wire brush, scouring powder, etc.). Failure to comply may result in damage to the chamber and / or other components.

4.3 Sterilizer Installation

Following the installation steps from A to G below

⚠ **CAUTION:** Read and follow " 5.2 Sterilizer Overview " to understand the overview of the sterilizer.

⚠ **CAUTION:** Please make sure that the carrying capacity of the mounting table is enough to support the size and weight of the sterilizer during installation. Refer to " 12 Specifications " for information of the weight of the sterilizer.

⚠ **CAUTION:** Place the sterilizer on a stable workbench or work surface, and make sure that there is at least a 4 inches (10 cm) gap between the wall or other equipment components and the side of the equipment, so that air can flow freely.

⚠ **CAUTION:** Make sure that the door can be opened freely after installation.

⚠ **WARNING:** DO NOT install or operate the sterilizer in areas where flammable objects or volatile substances are used or stored. It may result in explosions and cause physical injuries. A well-ventilated installation location is required.

A. Open the water reservoir cap. Pour the distilled water into the water reservoir as shown in Figure 10.

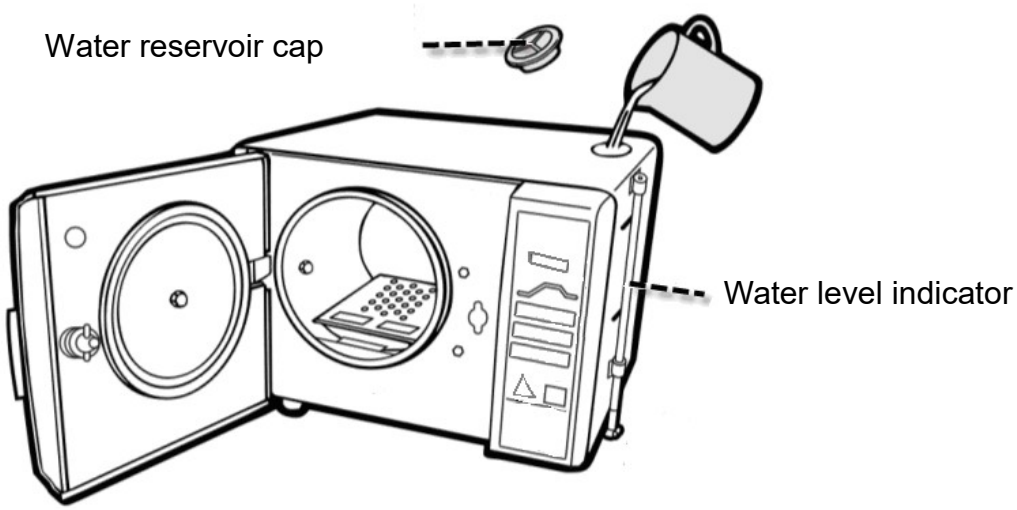


Figure 10

⚠ **CAUTION:** Only fill the distilled water into the sterilizer. DO NOT fill the water over the yellow water level mark, as shown in Figure 11.

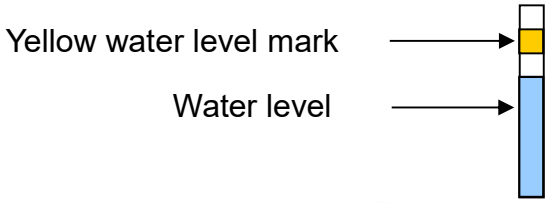


Figure 11

⚠ **WARNING:** DO NOT add the distilled water into the water reservoir during the sterilization process to prevent overflow. After each sterilization cycle has been completed, all remaining water in the sterilizer will return to the water reservoir automatically.

B. As shown in Figure 12 (standard accessories), install the Heater Cover onto the chamber and make sure the round edge faces the back, and that the vertical front edge of the chamber is firmly positioned in the corresponding slot in the lower part of the chamber.

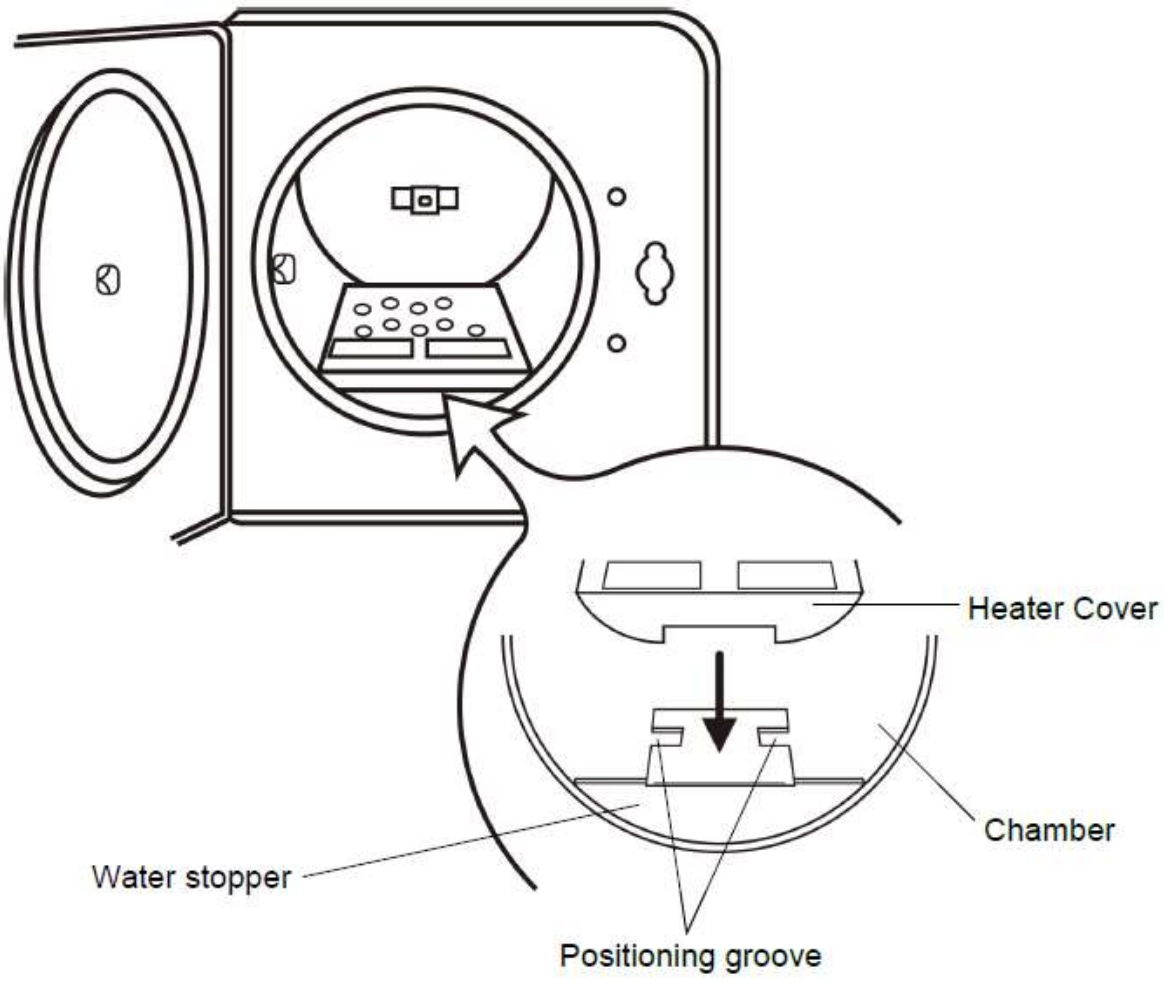


Figure 12

C. Install the tray rack (standard accessory). as shown in Figure 13.

CAUTION: The tray rack should be installed as shown in Figure 13 below. The groove of the tray rack will pass through the bushing in the chamber.

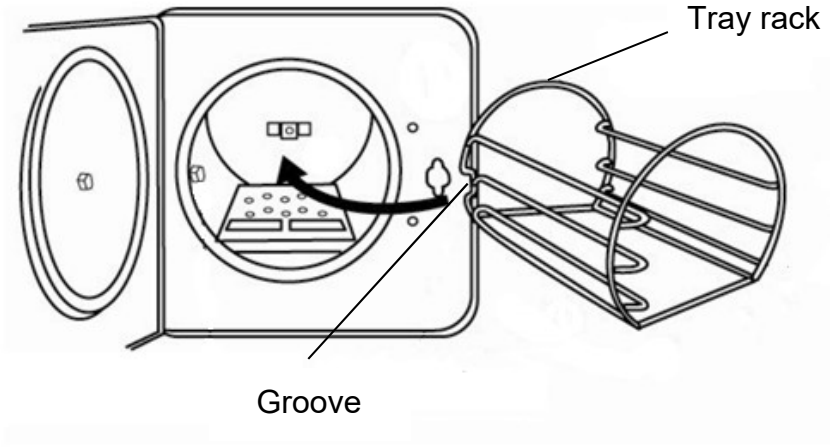


Figure 13

D. Install the trays as shown in Figure 14 (standard accessory).

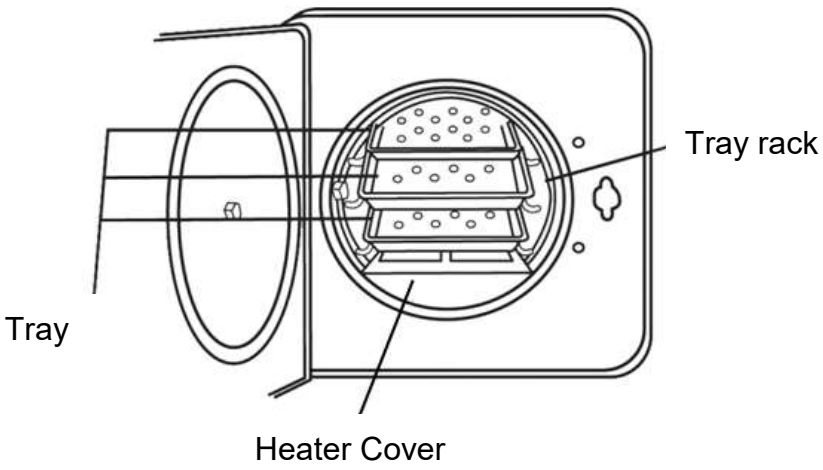


Figure 14

E. Close the door and rotate the “ Door handle ” 90° clockwise to lock it.

F. Make sure the “ POWER switch ” is set in the OFF “ O ” position, and then insert the power cord into an independent (dedicated) power outlet.

⚠ **WARNING:** The sterilizer requires an independent (dedicated) socket-outlet. Make sure the socket-outlet is grounded and can provide 15 A / 120VAC capacity.

⚠ **WARNING:** The power plug is one of the emergency disconnection measures. Make sure that the power plug can be accessed easily after installation.

G. Turn the “ POWER switch ” to the ON “ I ” position, and the power LED indicator should turn on. The “ DOOR OPEN ” LED indicator should go off. If the above requirements cannot be achieved, turn the power off and unplug the power, and then repeat steps from A to F of “ 4.3 Sterilizer Installation “. If problems still persists, switch off the power and unplug the power plug of the sterilizer. Contact your local dealer for help.

5. Introduction

5.1 Indication for Use

The AG Neovo Autoclave LouieP Series (models P-M10T and P-M10TR) is intended to be used in medical and dental offices, hospitals, clinics, nursing homes, laboratories, and other facilities to sterilize heat and moisture stable reusable equipment. Dental handpieces can be sterilized in the models P-M10T and P-M10TR. The AG Neovo Autoclave LouieP Series (models P-M10T and P-M10TR) is not recommended for sterilization of liquid intended for direct patient contact.

5.2 Sterilizer Overview

5.2.1 External

※ **P-M10TR**

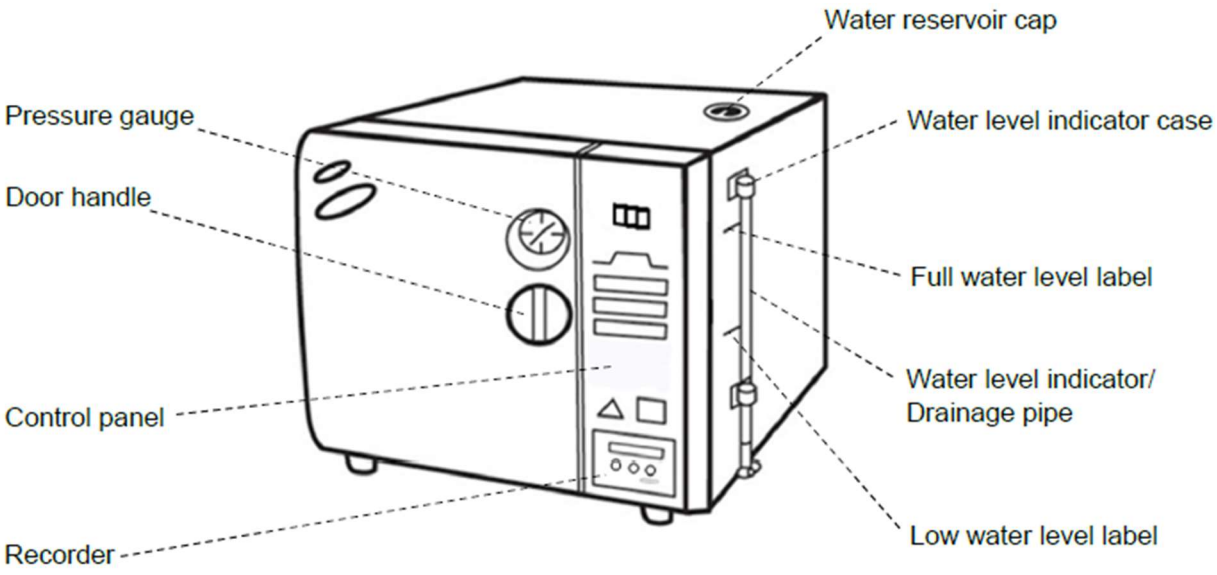


Figure 15

※ **P-M10T**

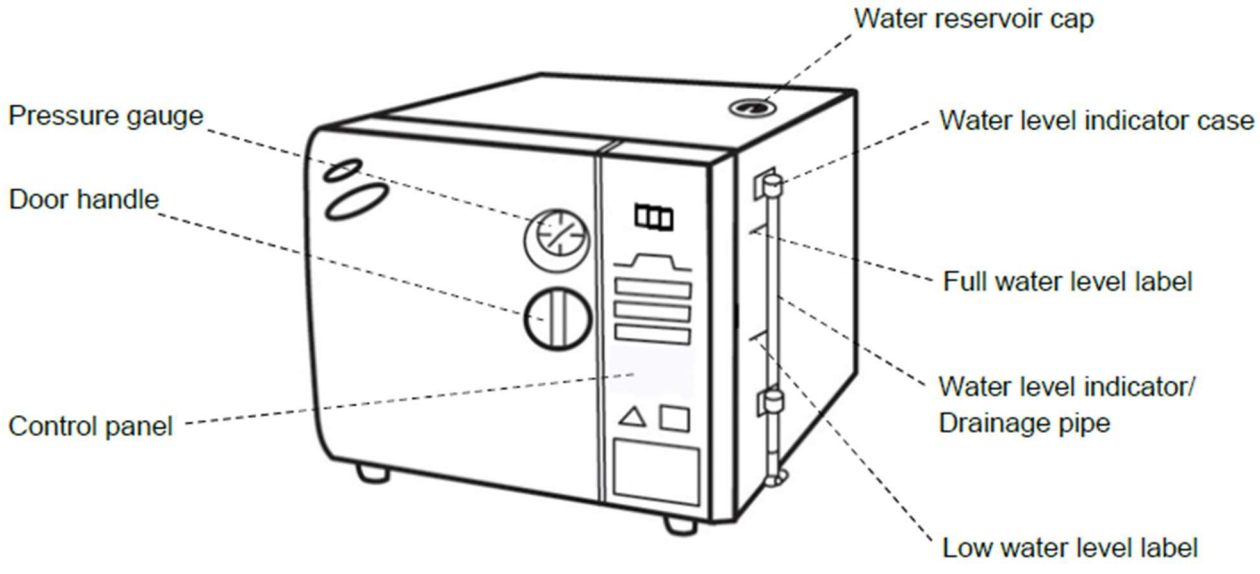


Figure 16

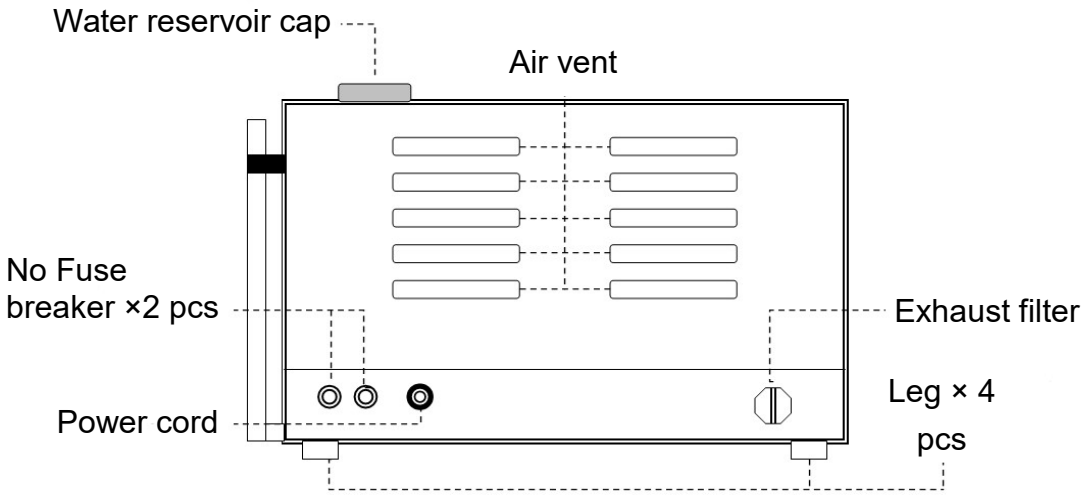


Figure 17

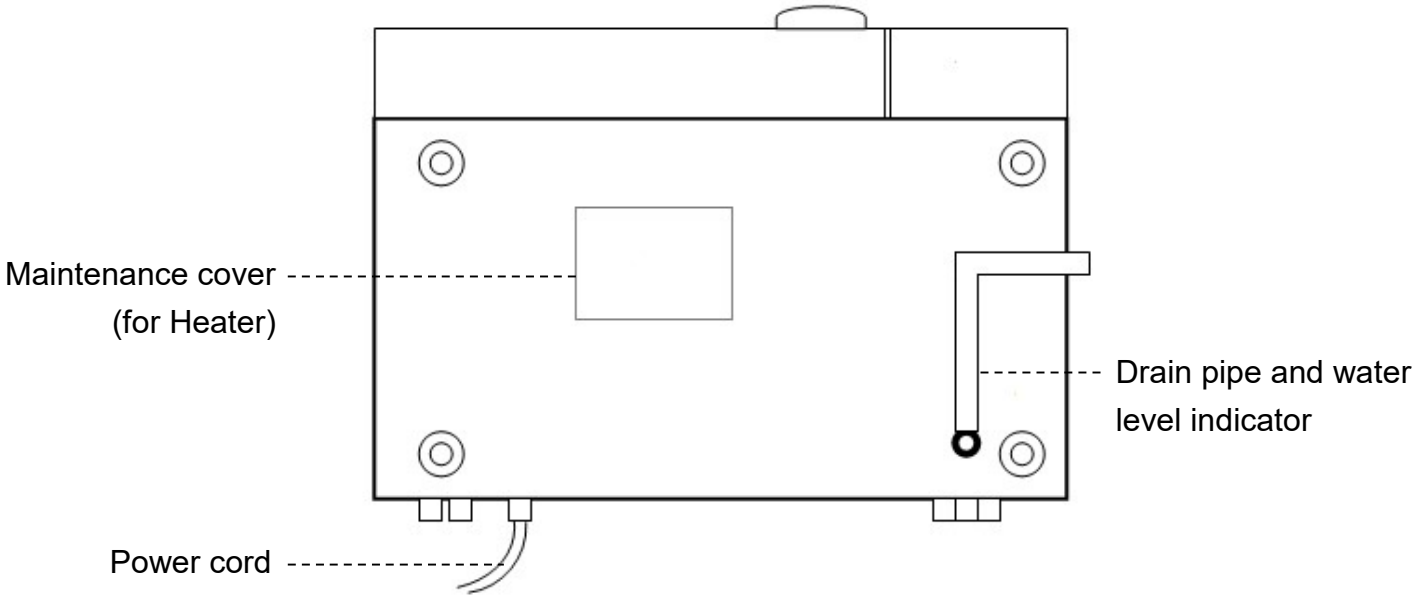


Figure 18

5.2.2 Inside of the chamber

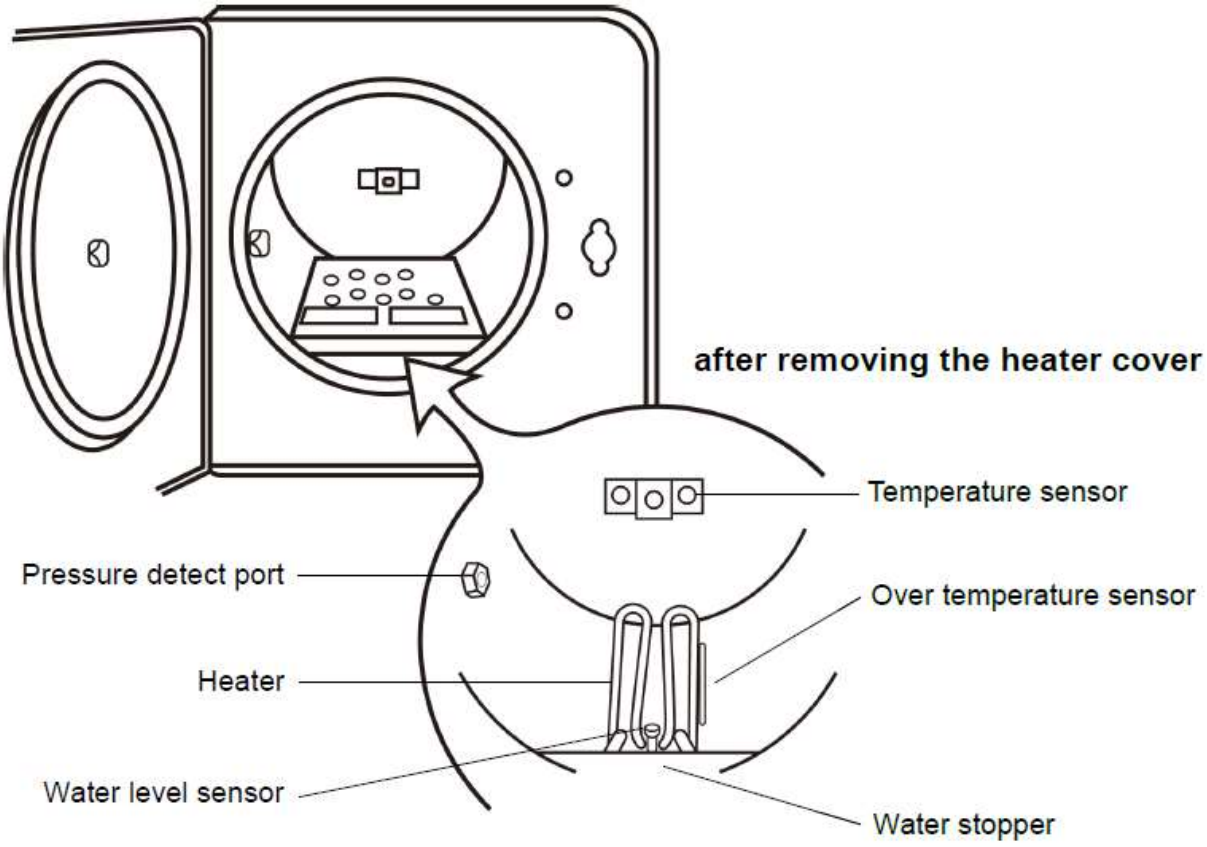


Figure 19

5.2.3 Control Panel

TEMP display panel
Displays the temperature inside the sterilizer. **“ REC ”** will be displayed if there is a recorder.

Program status indicator
Independent LED indicator that displays the execution of current program status.
- VACUUM
- ADD (Filling) WATER
- HEATING
- STERI (Sterilization)
- EXHAUST
- DRY
- COMPLETE

DOOR OPEN indicator
Indicates that the sterilizer door is opened or not closed completely.

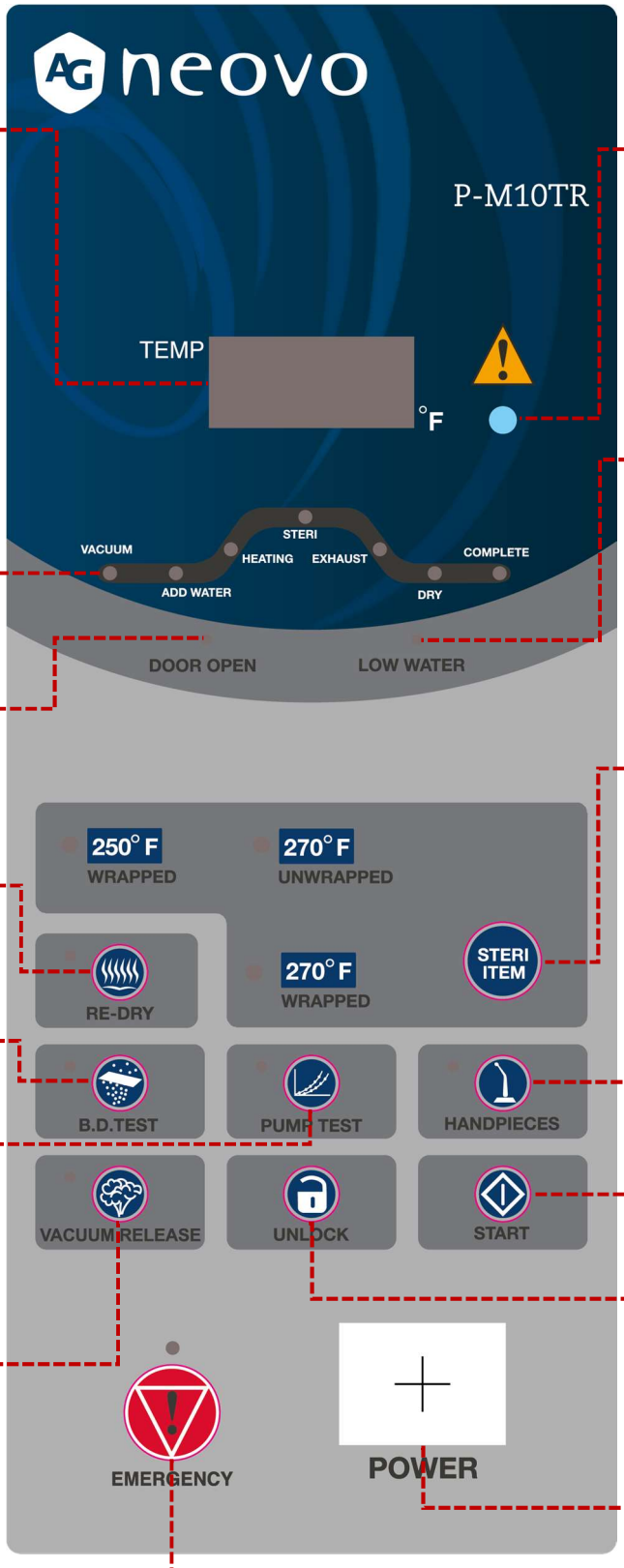
RE-DRY button
Select the RE-DRY process for 10 minutes. After selecting, the LED indicator will turn on.

B. D.TEST button
Executes the B.D. test program.

PUMP TEST button
Executes the pumping steps to verify the pump functions properly.

VACUUM RELEASE button
Releases the pressure in the chamber before opening the door.

EMERGENCY stop button
Stops all programs and releases the pressure / vacuum inside the sterilizer. (Press for more than 3 seconds.)



Alarm indicator
Indicates that the temperature or pressure is too high.

LOW WATER level indicator
This means that the water level is lower than the minimum water level or that the program did not add enough water after 5 minutes of ADD WATER operation.

STERILIZATION ITEM button
different process of programs. The program names are as follows:
1. Wrapped 250℉ (Packs)
2. Unwrapped 270℉ (Instrument)
3. Wrapped 270℉ (Pouches)

HANDPIECES button
Start the HANDPIECES program

START button
Start the selected program

UNLOCK button:
Press this button to unlock the door after the sterilization cycle has been completed or being necessary.

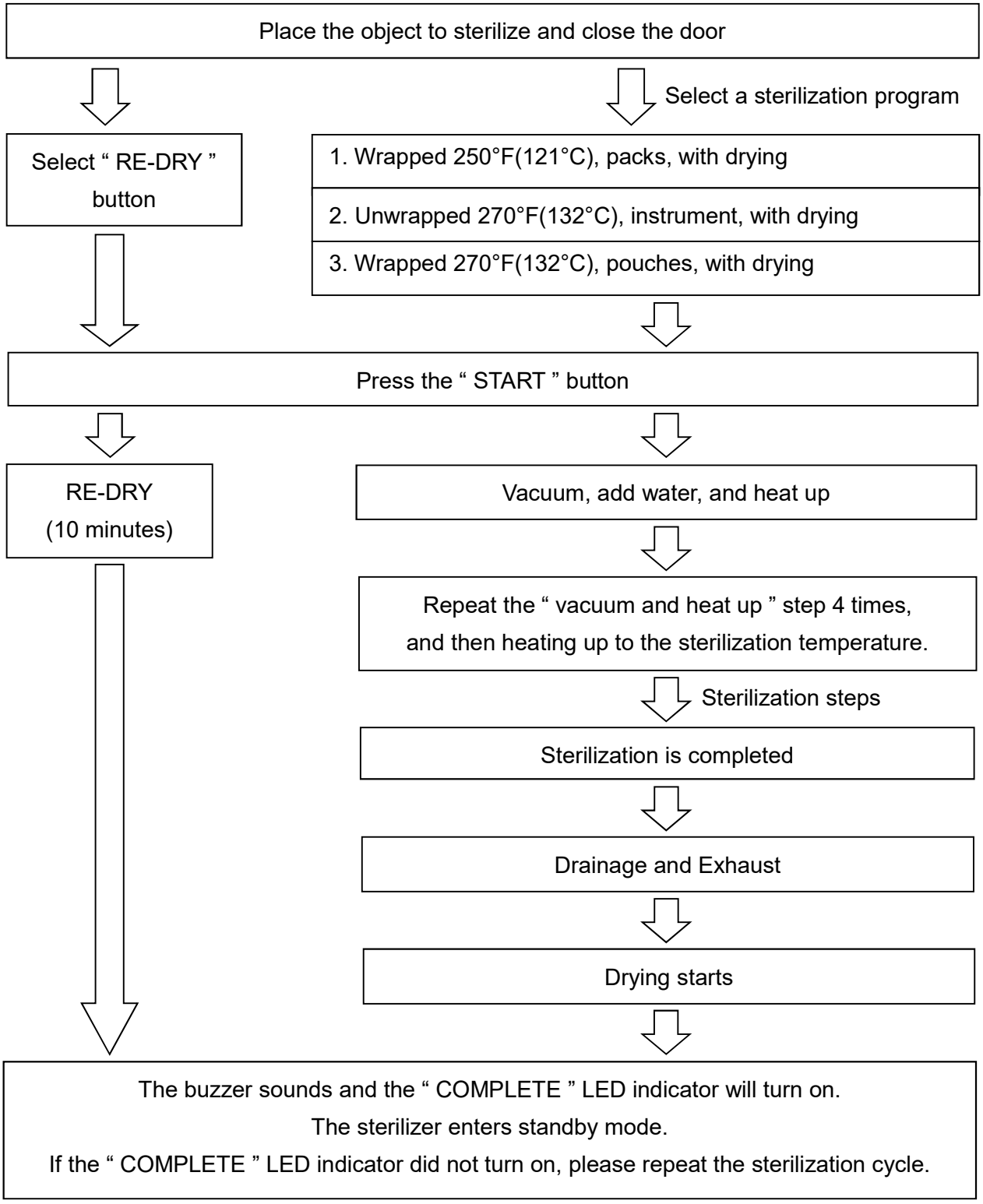
POWER switch
ON / OFF switch and power LED indicator (lights when it switches ON).

Figure 20

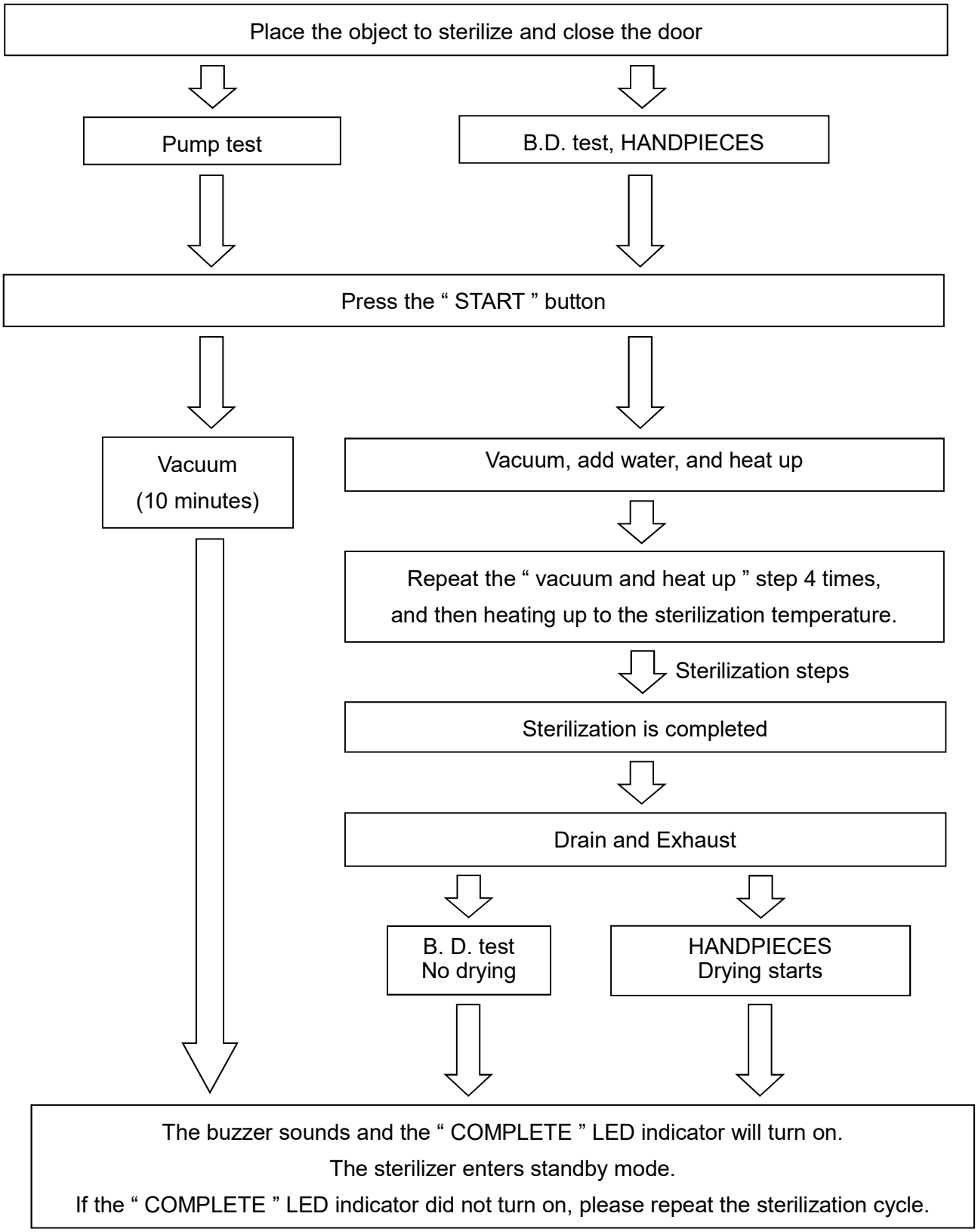
6. Operation

6.1 Operation Overview

6.1.1 Sterilization and RE-DRY Program



6.1.2 Vacuum Test / B. D. Test / Hanpieces



6.1.3 Maximum Load

		Program			
		Unwrapped	Wrapped	Wrapped	Handpieces
Temperature		270 °F (132 °C)	250 °F (121 °C)	270 °F (132 °C)	270 °F (132 °C)
Pressure		27.2 psi (186 kPa)	15 psi (104 kPa)	27.2 psi (186 kPa)	27.2 psi (186 kPa)
Sterilization time (minutes)		3	30	4	4
Dry time (minutes)		30	30	30	30
Max. load	Solid Instrument	9.0 lbs (4080 grams)	-	-	-
	Textile Packs	-	2.9 lbs (1300 grams)	-	-
	Pouches		-	2.9 lbs (1300 grams)	
	Handpieces	-	-	-	9 handpieces with other instruments 4.5 lbs (2040 grams)

Test program:

		Program			
		Bowie-Dick test	Pump test		Re-dry
			P-M10T	P-M10TR	
Temperature		273 °F (134 °C)	-	-	320 °F (160 °C)*
Pressure		29.5 psi (203.4 kPa)	60 cmHg (80 kPa)	60 cmHg (80 kPa)	-
Sterilization time (minutes)		3.5	-	-	-
Dry time (minutes)		-	-	-	10
Vacuum Time (minutes)		-	10	10	-
Max. load	Solid Items	Bowie-Dick-type test pack	N/A	N/A	9.0 lbs (4080 grams)
	Packs (Pouched)				2.9 lbs (1300 grams)

“ * ” denotes the temperature is measured on the outside chamber wall, not in the sterilization chamber.

6.1.4 Cycle Parameters

Cycle	Ster. Temp.	Ster. Pressure	Ster. Time (minutes)	Dry Time (minutes)	Items to be Sterilized (always consult the item manufacturer's recommendation for sterilization)
Un-wrapped	270 °F (132 °C)	27.2 psi (186 kPa)	3	30	● Instruments loose on a tray. ● Loose items manufacturers recommend for exposures at 270 °F (132 °C) for 3 minutes. *Note: The sterility of unwrapped items is compromised on exposure to a non-sterile environment.*
Wrapped (Pouches)	270 °F (132 °C)	27.2 psi (186 kPa)	4	30	● Pouched or loosely wrapped instruments. ● Wrapped trays of loose instrument. ● Wrapped items manufacturers recommend for exposures at 270 °F (132 °C) for 4 minutes.
Wrapped (Textile Packs)	250 °F (121 °C)	15 psi (104 kPa)	30	30	● Textiles and surgical packs wrapped for sterilization. ● Items except liquids, manufacturers recommend for exposures at 250 °F (121 °C) for 30 minutes.
Handpieces	270 °F (132 °C)	27.2 psi (186 kPa)	4	30	Dental handpieces (wrapped) *Note: Verify acceptability of sterilization parameters with handpiece manufacturer.*
Bowie-Dick test	273 °F (134 °C)	29.5 psi (203 kPa)	3.5	N/A	N/A
Re-Dry	N/A	N/A	N/A	10	N/A
Pump test	N/A	N/A	N/A	10	N/A

6.2 Preparation for Sterilization

A. Follow “ 4 Installation ” and complete the installation first.

B. Follow “ 4.3 Sterilizer Installation ” and make sure that there is sufficient water in the water reservoir.

C. Check that the reading of the pressure gauge returns to zero (0), and then rotate the “ Door handle ” 90° counter-clockwise to open the door.

D. Place objects for sterilization and the chemical indicator (or biological indicator) onto the tray according to your needs. As shown in Figure 21.

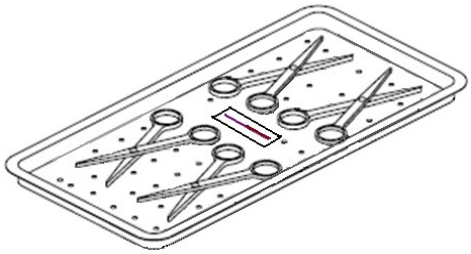


Figure 21

⚠ **CAUTION:** Make sure to clean and rinse the objects for sterilization before loading.

⚠ **WARNING:** Please refer to the maximum allowed load in “ 6.1.3 Maximum Load ”. Not following these instructions may cause the sterilizer to malfunction and cause the sterilization cycle to fail.

⚠ **WARNING**: Use only FDA-cleared chemical & biological indicators designed for steam sterilization that are compatible with the particular sterilization cycle temperature and exposure time being monitored.

Use sterility monitors with each sterilization load. If a sterilizing cycle is terminated prematurely, reprocess instruments (loads) to ensure sterility of the load. Follow manufacturer’s instructions for proper disposal of used indicators.

E. Close the door and then rotate the “ Door handle ” 90° clockwise to lock it.

F. Turn on the “ POWER ” switch to the “ I ” (ON) position, and the power indicator should turn on. The “ DOOR OPEN ” indicator should go off.

⚠ **WARNING:** The door must be closed completely while the equipment is operating. If the " DOOR OPEN " LED indicator turns on as shown in Figure 22, it means that the door is not properly closed.

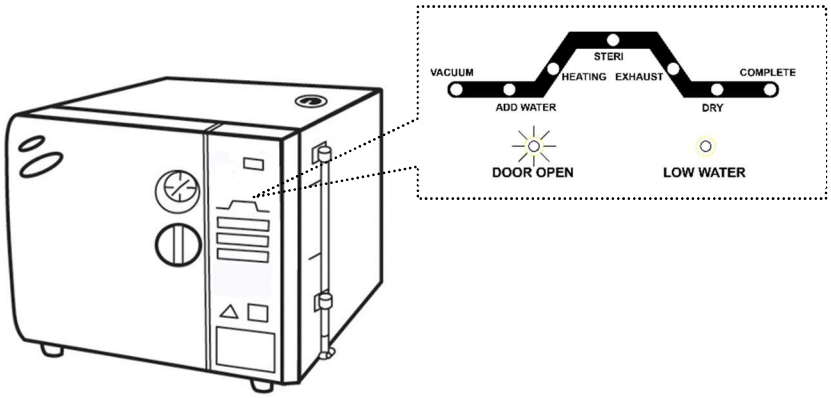


Figure 22

6.3 Select a Sterilization Program

⚠ **WARNING:** When pouching or wrapping items, use only sterilization pouches and wraps that have been cleared by the FDA and labeled for use with the steam sterilization cycle being used. Follow the manufacturer's instructions for use.

⚠ **WARNING:** DO NOT overload the sterilizer! There must be sufficient space between objects on the tray to perform optimal steam sterilization cycle and drying. Sterilization and drying is affected when there is insufficient space between sterilizing materials Objects and packages removed from the sterilizer should be completely dry to minimize the possibility of re-contamination.

A. Refer to " 6.2 Preparation for sterilization " before starting the sterilization program.

B. Timing diagram for the sterilization program as shown in Figure 23.

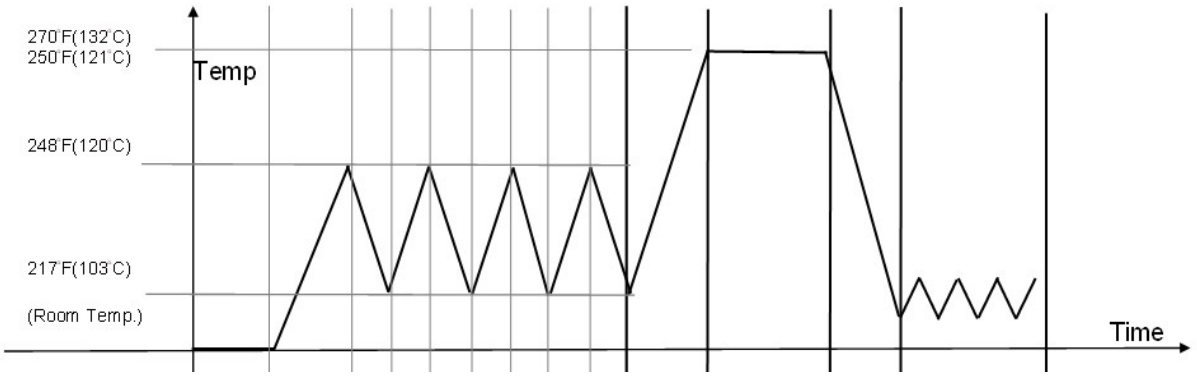


Figure 23

C. Press " STERI ITEM "  and select 3 different programs. Related parameters are as follows:

No	Sterilization program	Sterilization temperature	Sterilization time	Drying time
1	Wrapped 250 °F (Pouches, packs)	250 °F (121 °C)	30 minutes	30 minutes
2	Unwrapped 270 °F (Instrument)	270 °F (132 °C)	3 minutes	30 minutes
3	Wrapped 270 °F (Pouches)	270 °F (132 °C)	4 minutes	30 minutes

D. Press the “ START ”  button. The sterilization temperature, sterilization time, and drying time will be displayed two times consecutively, and then the sterilizer will run the selected programs automatically. The program execution status will be displayed on the status indicator, as shown in Figure 24.

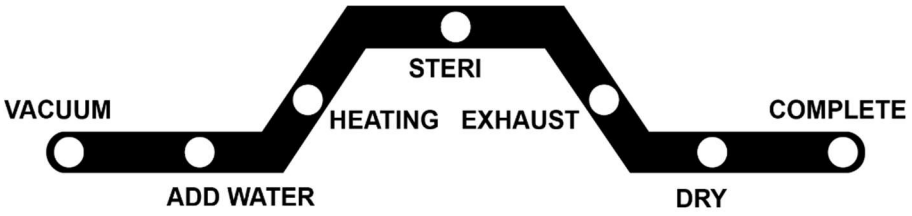


Figure 24

The buzzer will sound while the display flashes when completed. When the buzzer stops and the “ COMPLETE ” LED indicator on the progress status indicator turns on, the execution of the programs has been completed.

WARNING: If the “ COMPLETE ” LED indicator did not turn on, it means that the cycle failed and should be run again.

E. Open the sterilizer door and remove the sterilization object. Check the status indicator. Repeat the cycle if it failed. Contact the qualified technical personnel to perform calibration if necessary. Please refer to “ 11. Troubleshooting ”.

WARNING: Check that the pressure gauge reading is zero (0) before opening the door.

WARNING: Beware of the steam when opening the door after sterilization has been completed.

WARNING: Be careful when removing the sterilization object because the metal surface may still be very hot. Always wear appropriate hand guards when removing trays or use suitable aiding tools (tray holder) to lift the tray.

WARNING: If the sterilizer is used continuously, let the sterilizer cool down for 20 minutes between each sterilization cycle.

6.4 RE-DRY Program

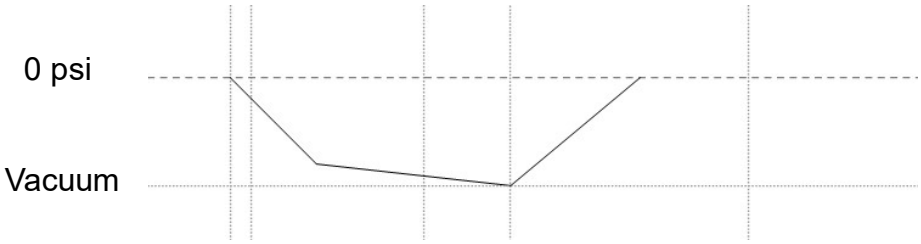


Figure 25

Press the " RE-DRY " button  and the LED indicator will turn on.

Then press the " START " button  and the " RE-DRY " program will run for 10 minutes. During the execution process, the " DRY " LED indicator on the " progress status indicator " will flash.

The buzzer will sound while the display flashes when completed. When the buzzer stops and the " COMPLETE " LED indicator on the progress status indicator turns on, the process has been completed.

6.5 HANDPIECES Program

⚠ **WARNING:** DO NOT overload the sterilizer! There must be sufficient space between the objects on the tray to perform the optimal steam sterilization cycle and drying. Sterilization and drying will be affected if there is insufficient space between objects. Objects removed from the sterilizer should be completely dry to minimize the possibility of re-contamination.

A. Refer to " 6.2 Preparation for sterilization " before starting the sterilization program.

B. Timing diagram for the Handpieces sterilization program.

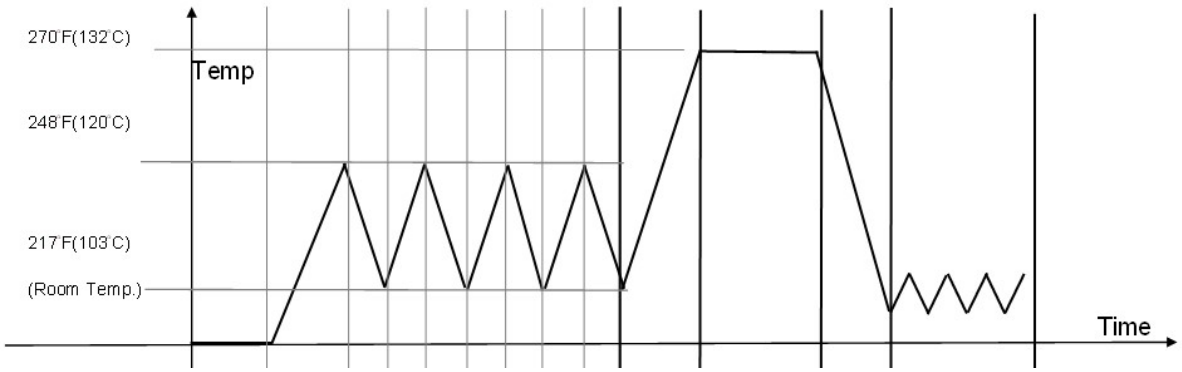


Figure 26

C. Press the “ HANDPIECES ” button  and select “ Handpieces Program ”. Related sterilization durations are as shown in the table below:

Sterilization temperature	270 °F (132 °C)
Sterilization duration	4 minutes.
Drying duration	30 minutes

D. Press the “ START ” button  . The sterilization temperature, sterilization time, and drying time will be displayed two times consecutively, and then the sterilizer will run the selected program automatically. The program execution status will be displayed on the status indicator, as shown in Figure 27.

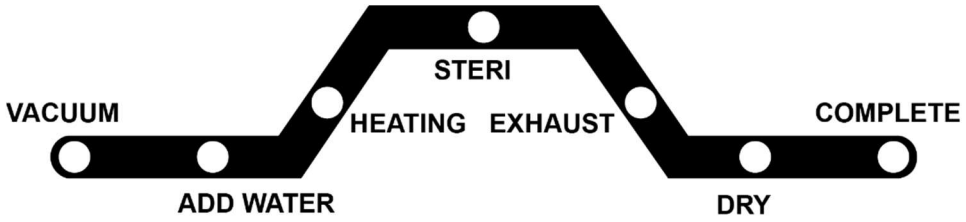


Figure 27

The buzzer will sound while the display flashes when completed. When the buzzer stops and the “ COMPLETE ” LED indicator on the progress status indicator turns on, the execution of the programs has been completed.

⚠ **WARNING:** If the “ COMPLETE ” LED indicator did not turn on, it means that the cycle failed and should be run again.

E. Open the sterilizer door and remove the sterilization object. Check the status indicator. Repeat the cycle if it failed. Contact the qualified technical personnel to perform calibration if necessary. Please refer to “ 11. Troubleshooting ”.

 **WARNING:** Check that the pressure gauge reading is zero (0) before opening the door.

 **WARNING:** Beware of the steam when opening the door after sterilization has been completed.

 **WARNING:** Be careful when removing the sterilization object because the metal surface may still be very hot. Always wear appropriate hand guards when removing trays or use suitable aiding tools (tray holder) to lift the tray.

 **WARNING:** If the sterilizer is used continuously, let the sterilizer cool down for 20 minutes between each sterilization cycle.

6.6 B.D. TEST Program

A. Refer to “ 6.2 Preparation for sterilization ” before starting the sterilization program.

B. Timing diagram for the B.D. test program as shown in Figure 28.

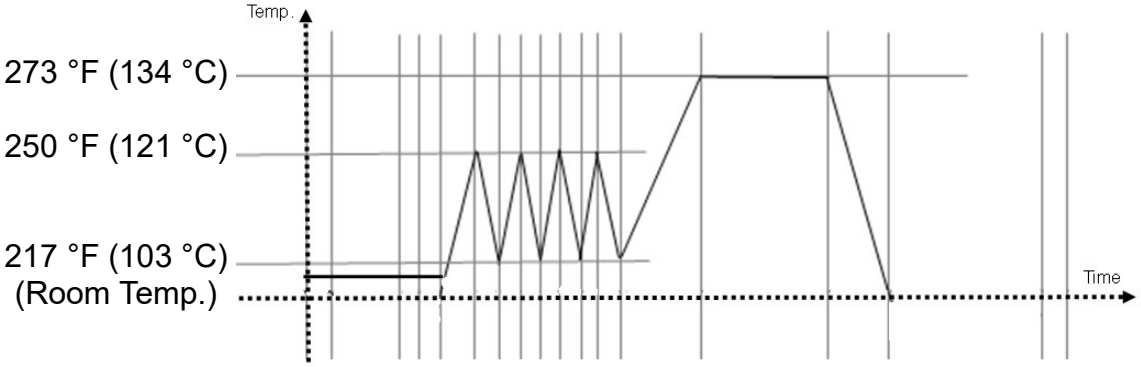


Figure 28

C. Press “ B.D. TEST ” button  to select “ B. D. TEST ” program. Related sterilization durations are as shown in the table below:

Sterilization temperature	273 °F (134 °C)
Sterilization duration	3.5 minutes
Drying duration	N/A

D. Press the “ START ” button  . The sterilization temperature, sterilization time, and drying time will be displayed two times consecutively, and then the sterilizer will run the selected program automatically. The program execution status will be displayed on the status indicator, as shown in Figure 29.

NOTE: The DRY step will not be executed.

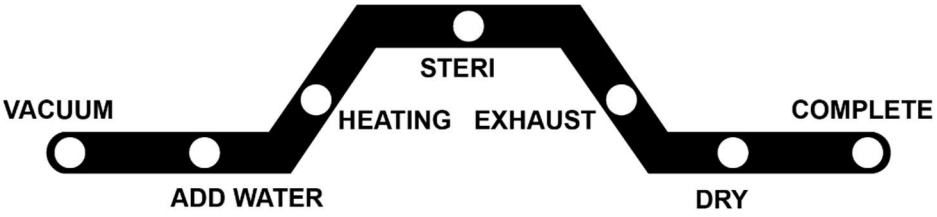


Figure 29

The buzzer will sound while the display flashes when completed. When the buzzer stops and the “ COMPLETE ” LED indicator on the progress status indicator turns on, the execution of the programs has been completed.

⚠ **WARNING:** If the “ COMPLETE ” LED indicator did not turn on, it means that the cycle failed and should be run again.

F. Open the sterilizer door to remove the B. D. test pack and check the indicator. Repeat the cycle if it failed. Contact the qualified technical personnel to perform calibration if necessary. Please refer to “ 11. Troubleshooting ”.

⚠ **WARNING:** Check that the pressure gauge reading is zero (0) before opening the door.

⚠ **WARNING:** Beware of the steam when opening the door after sterilization has been completed.

⚠ **WARNING:** Be careful when removing the sterilization object because the metal surface may still be very hot. Always wear appropriate hand guards when removing trays or use suitable aiding tools (tray holder) to lift the tray.

⚠ **WARNING:** If the sterilizer is used continuously, let the sterilizer cool down for 20 minutes between each sterilization cycle.

6.7 PUMP TEST Program

A. Refer to “ 6.2 Preparation for sterilization ” before starting the sterilization program.

B. Timing diagram for the pump test program.

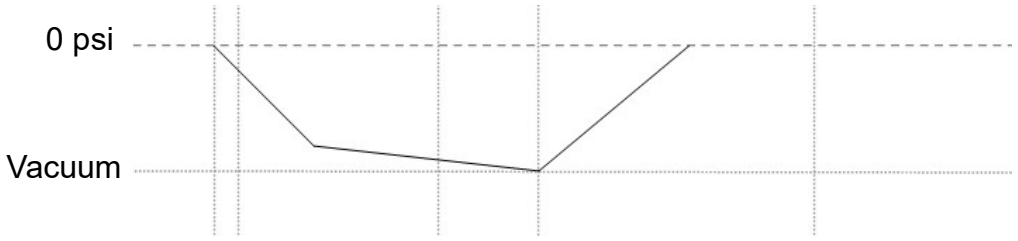


Figure 30

C. Press “ PUMP TEST ” button  to select “ PUMP TEST ” program. Related sterilization durations are as shown in the table below:

Sterilization temperature	N/A
Sterilization duration	N/A
Drying duration	N/A
Vacuum suction duration	10 minutes.

D. Press the “ START ” button  . The sterilization temperature, sterilization time, and drying time will be displayed two times consecutively, and then the sterilizer will run the selected programs automatically. The program execution status will be displayed on the status indicator, as shown in Figure 31.

CAUTION: The DRY procedure will not be executed.

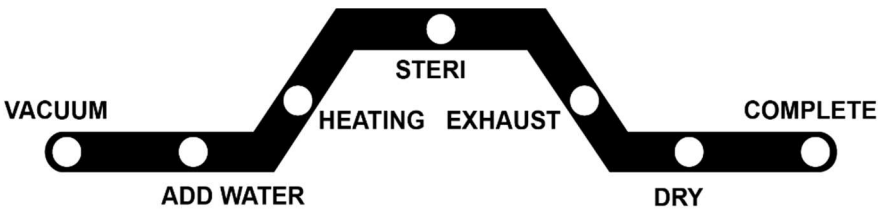


Figure 31

The buzzer will sound while the display flashes when completed. When the buzzer stops and the “ COMPLETE ” LED indicator on the progress status indicator turns on, the execution of the programs has been completed.

WARNING: If the " COMPLETE " LED indicator did not turn on, it means that the cycle failed. Please execute it again.

6.8 VACUUM RELEASE

Press the " VACUUM RELEASE " button  to release the pressure inside the sterilizer. "  " will be displayed to indicate operation in progress. Check that the pressure gauge reading is zero (0) before opening the door.

WARNING: Check that the pressure gauge reading is zero (0) before opening the door.

6.9 UNLOCK

After the sterilization cycle has been completed or execution of the process was canceled, press the " UNLOCK " button  to release the lock status. When users press the " UNLOCK " button, there are two condition descriptions, as shown below:

1. High temperature inside the sterilizer: The temperature panel displays "  ", which means that the door is locked. Now we have to wait until the temperature panel displays "  " before the door can be opened.
2. Safety temperature inside the sterilizer: The temperature panel displays "  ", this means that the door can now be opened.

WARNING: Check that the pressure gauge reading is zero (0) before opening the door.

6.10 EMERGENCY Stop

Press and hold down the " EMERGENCY " button  for 3 seconds to stop the process and release the pressure / vacuum. The sterilizer will sound an alarm and display E07 indicating emergency operations. Wait the pressure gauge reading returns to zero (0) to reset the process.

WARNING: Press the " EMERGENCY " button  only when there is an abnormal incident or emergency situation. The sterility of the sterilized object should be verified again.

WARNING: The disposal of objects that have not completed sterilization cycle should comply with local regulations. DO NOT treat them as ordinary waste.

CAUTION: If the " EMERGENCY " button  had being pressed without the need to open the door, this emergency operation might need to be repeated to release the pressure.

6.11 To Open Door When Power Outage

CAUTION: Unplug the power cord from the socket before starting the following operations, and make sure that the pressure gauge reading is zero (0) before opening the door. If the pressure gauge reading is not zero (0), follow the next procedures carefully to release the chamber pressure and to open the door.

CAUTION: Mind the steam while checking and pulling the ring of the safety valve.

6.11.1 Releasing Chamber Pressure

If the pressure gauge reading is not zero (0), open the " Water reservoir cap " and pull the ring of safety valve by using a screwdriver as shown in Figure 32 to release the steam until the pressure gauge reading reaches zero (0).

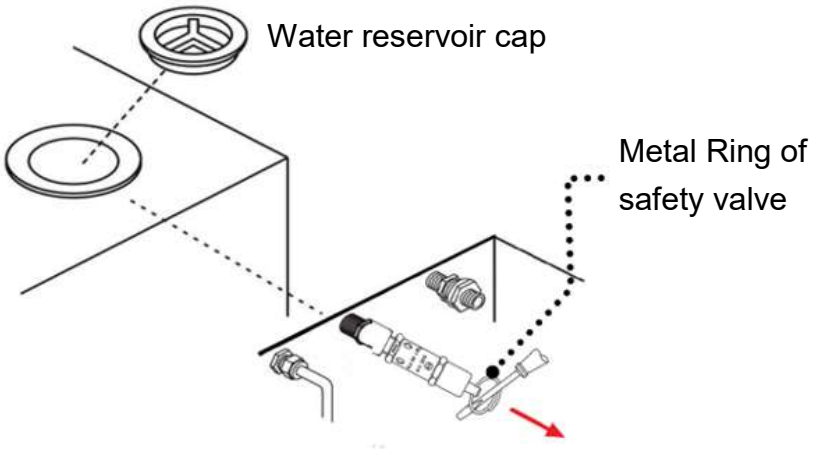


Figure 32

6.11.2 Opening Door

WARNING: You may only perform the following procedures when sterilizer experiences power outage during operation and when door is locked.

WARNING: Always check the pressure before opening the door. Do not attempt to open the door if the pressure is not at zero (0).

The door releasing mechanism is located beneath the front door as shown in ① of Figure 33. Use left hand to pull the metal ring towards ② (front position), at the same time use right hand to grab " Door handle " ③ of Figure 33, turn " Door handle " ③ counter-clockwise to 90 degree (④), then the door can be opened.

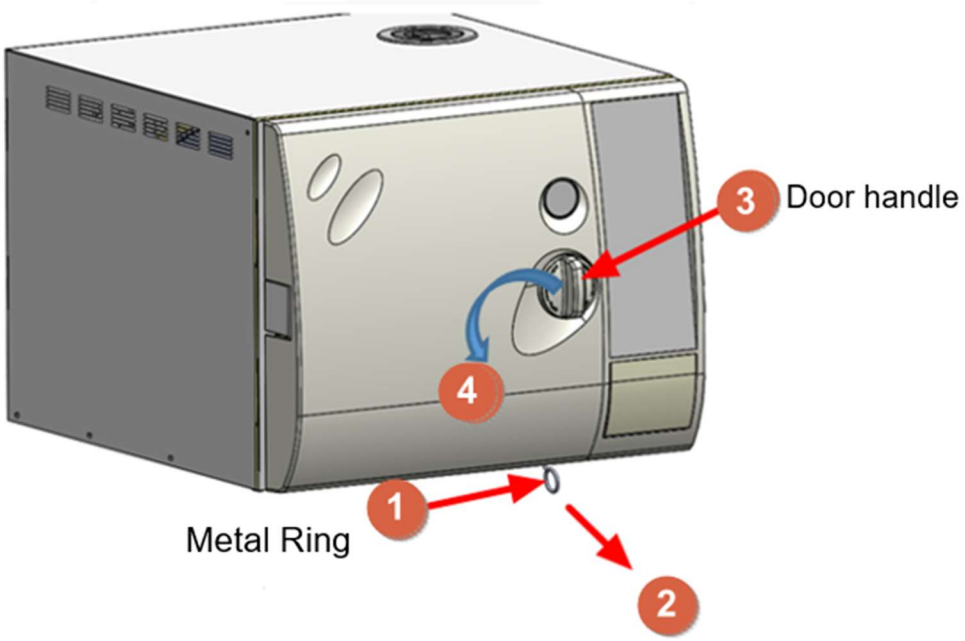


Figure 33

6.12 How to place Objects to Sterilization

Place the sterilization objects correctly to achieve optimal drying results.

⚠ **WARNING:** When pouching or wrapping items, use only sterilization pouches and wraps that have been cleared by the FDA and labeled for use with the steam sterilization cycle being used. Follow the manufacturer's instructions for use.

⚠ **WARNING:** Placement of sterilization objects must not exceed the maximum load in the sterilizer! There must be sufficient space around the objects on the tray to perform the steam cycle and drying. Sterilization and drying will be affected if there is insufficient space. Objects removed from the sterilizer should be completely dry to minimize the possibility of re-contamination.

⚠ **WARNING:** To sterilization absorbent cotton or wool, please pack it in sterilization bags to prevent the piping being blocked.

⚠ **WARNING:** Use only FDA-cleared chemical & biological indicators designed for steam sterilization that are compatible with the particular sterilization cycle temperature and exposure time being monitored.

Use sterility monitors with each sterilization load. If a sterilizing cycle is terminated prematurely, reprocess instruments (loads) to ensure sterility of the load. Follow manufacturer's instructions for proper disposal of used indicators.

⚠ **WARNING:** When pouching or wrapping items, use only sterilization pouches and wraps that have been cleared by the FDA and labeled for use with the steam sterilization cycle being used. Follow the manufacturer's instructions for use.

⚠ **WARNING**: DO NOT overload the chamber! Adequate space is required around items in trays for steam circulation and drying. Failure to allow adequate space will compromise sterilization and drying. Items and packaging should be completely dry when removed from the sterilizer to minimize the potential for recontamination.

⚠ **NOTE:** Loads must be placed on trays at all times.

⚠ **WARNING:** Use only FDA cleared accessories are intended to be used with this autoclave model P-M10T and P-M10TR. Using other trays could restrict air / steam flow to items resulting in inadequate sterilization and drying.

6.12.1 Instrument Sterilization

Place instruments evenly on the tray according to Figure 34. DO NOT stack or overlap the instruments.

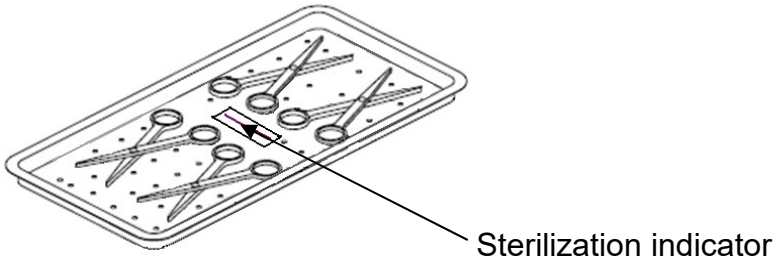


Figure 34

⚠ **WARNING:** If instruments contain sterilization bags, make sure not to stack them. Place them correctly as shown in Figure 35, and DO NOT overlap the small bags as shown in Figure 36 in order to ensure the quality for sterilization.

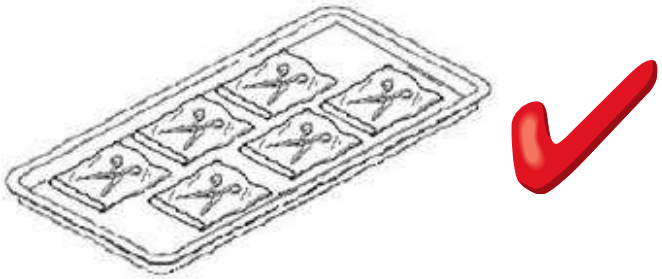


Figure 35

Figure 36

⚠ **WARNING:** Recommend the use of pouch holder for objects placed in sterilization bags in order to ensure sterilization results. Place each bag individually according to Figure 37 or Figure 38. The pouch holder can be provided as an optional accessory.

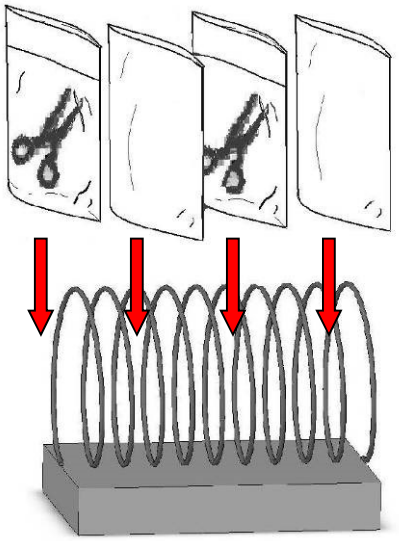


Figure 37

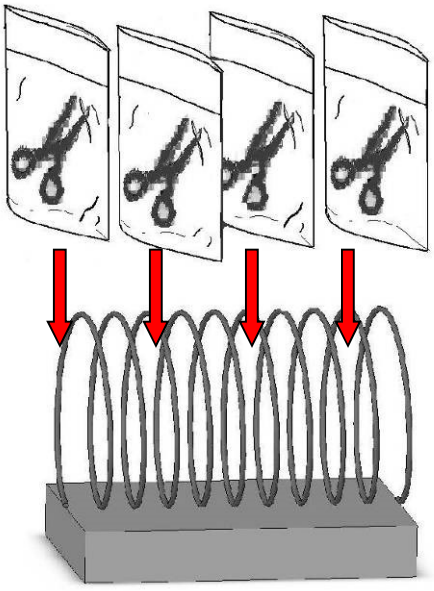


Figure 38

6.12.2 Sterilization for Wrap

WARNING: To perform sterilization for absorbent cotton or wool, please wrap it with a thin towel, covering cloth, linen, or sterilization bag in order to prevent the piping from being blocked as shown in Figure 39.

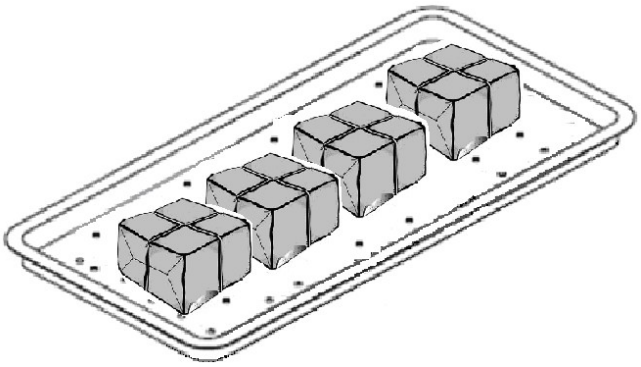


Figure 39

- Place the packaging paper on the tray vertically.
- Beware not to let the wrapped object come in contact the chamber's wall.
- Make sure that the opening of the packaging paper is vertical to the tray in order to improve sterilization performance and dryness.
- Align the openings of the packaging paper in the same direction.
- Make sure the medical paper faces up when placing the sterilization bag on the sterilization tray.

6.12.3 Sterilization for Pouched Handpiece

WARNING: To perform sterilization for pouched handpiece(s) loaded on the tray as shown in Figure 40.

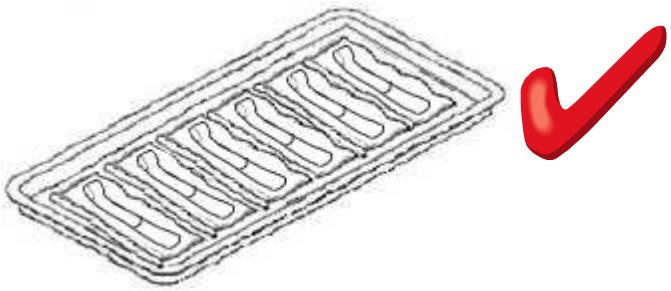


Figure 40

- Place the pouched handpiece(s) on the tray with the paper side down.
- Beware not be let the pouched object come in contact with the chamber's wall.
- Never stack pouches because over lapping surfaces and areas cannot be exposed to the steam and will not be sterilized. See Figure 41.

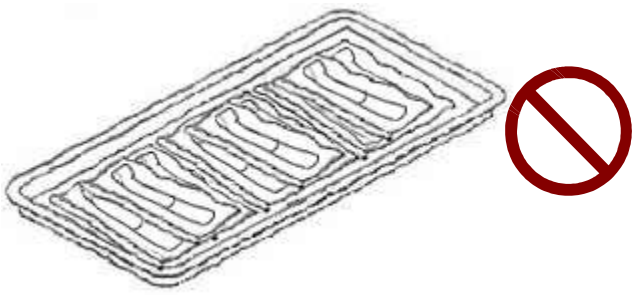


Figure 41

- Pouched handpiece(s) should not touch the chamber wall to allow sufficient space for air circulation.
- Pouched instrument(s) and handpiece(s) should only be loosely packed with single height loaded (not piled or stacked). Insufficient exposure to the steam may result in inadequate sterilization.
- Pouches that are labelled should only use nontoxic ink marking pen and should only marked on the plastic side of the pouch.

7. Recorder (for P-M10TR)

7.1 General description for the recorder

This type of paperless recorder can store the information such as the sterilization temperature, pressure, and time for each cycle. The printer can be purchased optionally. It also records specified information onto a USB flash drive. For reading data, a specific software (PC record reader) must deploy to open data record. Please visit the website (https://healthcare.agneovo.com/us/downloadcenter/download-center/autoclave/louiep-series) and download the latest software by clicking “ P-M10TR / P-M10-PC Record Reader ” software, or contact your dealer for help.

⚠ **CAUTION:** Before starting the sterilization cycle, please insert a USB flash drive.

⚠ **CAUTION:** It is recommended to have an interval of at least 20 minutes between each sterilization cycle, and make sure that the “ Data Download Complete ” to USB operation is completed before starting a new sterilization cycle.

7.2 Recorded Contents

Description of the recorded contents:

Two types of record documents will be created for each sterilization cycle. One is detailed contents with the “ YYYYMMDD_HHMMSS.std ” format, and the other is summary contents with the “ SYYYYMMDD_HHMMSS.std ” format.

7.2.1 Description of the recorded contents

Printed output	Description
MODEL: P-M10TR	Model
Version: V0.99	The software version installed on this sterilizer
SN: 161005204-001	Serial number
Program: 270 Unwrapped	Sterilization program
Ster. Temp: 270 ºF	Sterilization temperature
Ster. Time: 4 m	Sterilization holding time
Dry Time: 30 m	Drying duration
Date: 2019 / 06 / 13 Time: 10:45:57 AM	Sterilization date and time
Cycle No.: 24	Number of times used:

Step	Time mmm:ss	Temp. ºF	Pres. Psi
START	000:00	78.7	0.0
	000:01	78.5	0.0
	000:02	78.5	0.1
	~		
PZ1	000:44	78.6	0.1
	000:45	78.6	-0.2
	000:46	78.6	-0.4
	~		
H1	010:54	119.3	-11.8
	010:55	119.5	-11.8
	~		
PZ2	036:42	246.9	12.6
	036:43	246.7	12.4
	~		
S00	076:34	270.8	27.3
	076:35	271.0	27.4
	~		
S01	077:34	271.5	27.5
	077:35	271.5	27.5
	~		
S02	078:34	272.1	27.7
	078:35	272.1	27.7
	078:36	272.1	27.7
	~		
EXH	080:40	271.7	2.14
	080:41	271.6	2.14
	~		
D0	083:42	206.6	1.1
	083:43	206.6	1.1
	~		
D1	113:51	234.8	1.1
END	114:52	235.1	1.1

Step	Action description
Time mmm:ss	mmm: minute ss: second
Temp (ºF)	Temperature of chamber (ºF)
Pres (psi)	Pressure of chamber (psi)
START	Activation
PZ1	1st pre-vacuum suction
H1	1st heating
PZ2	2nd pulse
H2	2nd heating
PZ3	3rd pulse
H3	3rd heating
PZ4	4th pulse
H4	4th heating
PZ5	5th pulse
H5	5th heating
S00	Start sterilization
S02	Record the sterilization time once per minute after “ S00 ”, and the final sterilization time
EXH	Exhaust of water and steam
D0	Drying starts
D1	Drying duration completed
END	Record ended

Steri. Temp: 272.2 ~ 270.8 ºF	Maximum and minimum temperatures detected during the sterilization period
Steri. Pres: 27.4 ~ 28.2 psi	Maximum and minimum pressures detected during the sterilization period

Printed output	Description
Steri. Time: 04:04	Sterilization holding time
Total time: 114:52	Time passed from the beginning to the completion of the process
Program complete	Completion of program execution
Signature: _____	Signature

7.2.2 Summary Content Description

<table>
<tr><th>Printed output</th><th>Description</th></tr>
<tr><td>MODEL: P-M10TR</td><td>Model</td></tr>
<tr><td>Version: V0.99</td><td>The software version installed on this sterilizer</td></tr>
<tr><td>SN:161005204-001</td><td>Serial number</td></tr>
<tr><td>Program: 270 Unwrapped</td><td>Sterilization program</td></tr>
<tr><td>Ster. Temp.: 270 ºF</td><td>Sterilization temperature</td></tr>
<tr><td>Ster. Time: 4 m</td><td>Sterilization holding time</td></tr>
<tr><td>Dry Time: 30 m</td><td>Drying duration</td></tr>
<tr><td>Date: 2019 / 06 / 13
Time: 10:45:57 AM</td><td>Sterilization date and time</td></tr>
<tr><td>Cycle No.: 24</td><td>Number of times used:</td></tr>
<tr><td>
<table>
<tr><th>Step</th><th>Time
mmm:ss</th><th>Temp.
ºC</th><th>Pres.
bar</th></tr>
<tr><td>START</td><td>000:00</td><td>78.7</td><td>0.0</td></tr>
<tr><td>PZ1</td><td>000:44</td><td>78.6</td><td>0.1</td></tr>
<tr><td>H1</td><td>010:54</td><td>119.3</td><td>-11.8</td></tr>
<tr><td>PZ2</td><td>036:42</td><td>246.9</td><td>12.6</td></tr>
<tr><td>H2</td><td>038:13</td><td>217.4</td><td>1.7</td></tr>
<tr><td>PZ3</td><td>046:52</td><td>248.0</td><td>13.3</td></tr>
<tr><td>H3</td><td>048:16</td><td>218.4</td><td>1.8</td></tr>
<tr><td>PZ4</td><td>056:13</td><td>248.1</td><td>13.4</td></tr>
<tr><td>H4</td><td>057.34</td><td>218.1</td><td>1.7</td></tr>
<tr><td>PZ5</td><td>064.27</td><td>249.0</td><td>14.5</td></tr>
<tr><td>H5</td><td>065:42</td><td>219.3</td><td>2.1</td></tr>
<tr><td>S00</td><td>076:34</td><td>270.0</td><td>27.4</td></tr>
<tr><td>S01</td><td>077:34</td><td>271.5</td><td>27.8</td></tr>
<tr><td>S02</td><td>078:34</td><td>272.3</td><td>27.8</td></tr>
<tr><td>S03</td><td>079:34</td><td>271.7</td><td>27.2</td></tr>
<tr><td>S04</td><td>080:34</td><td>271.4</td><td>27.8</td></tr>
<tr><td>S05</td><td>080:37</td><td>271.7</td><td>27.8</td></tr>
<tr><td>EXH</td><td>080:40</td><td>271.7</td><td>27.7</td></tr>
<tr><td>D0</td><td>083:42</td><td>206.6</td><td>1.1</td></tr>
<tr><td>D1</td><td>113:51</td><td>234.8</td><td>1.1</td></tr>
<tr><td>END</td><td>114:52</td><td>235.1</td><td>1.1</td></tr>
</table>
</td><td>
<table>
<tr><td>Step</td><td>Action description</td></tr>
<tr><td>Time
mmm:ss</td><td>mmm: minute
ss: second</td></tr>
<tr><td>Temp
(ºF)</td><td>Temperature of chamber
(ºF)</td></tr>
<tr><td>Pres (psi)</td><td>Pressure of chamber (psi)</td></tr>
<tr><td>START</td><td>Activation</td></tr>
<tr><td>PZ1</td><td>1st pre-vacuum suction</td></tr>
<tr><td>H1</td><td>1st heating</td></tr>
<tr><td>PZ2</td><td>2nd pulse</td></tr>
<tr><td>H2</td><td>2nd heating</td></tr>
<tr><td>PZ3</td><td>3rd pulse</td></tr>
<tr><td>H3</td><td>3rd heating</td></tr>
<tr><td>PZ4</td><td>4th pulse</td></tr>
<tr><td>H4</td><td>4th heating</td></tr>
<tr><td>PZ5</td><td>5th pulse</td></tr>
<tr><td>H5</td><td>5th heating</td></tr>
<tr><td>S00</td><td>Start sterilization</td></tr>
<tr><td>S02</td><td>Record the sterilization time once per minute after “ S00 ”, and the final sterilization time</td></tr>
<tr><td>EXH</td><td>Exhaust of water and steam</td></tr>
<tr><td>D0</td><td>Drying starts</td></tr>
<tr><td>D1</td><td>Drying duration completed</td></tr>
<tr><td>END</td><td>Record ended</td></tr>
</table>
</td></tr>
<tr><td>Steri. Temp.: 272.2 ~ 270.8 ºF</td><td>Maximum and minimum temperatures detected during the sterilization period</td></tr>
<tr><td>Steri. Pres.: 27.4 ~ 28.2 psi</td><td>Maximum and minimum pressures detected during the sterilization period</td></tr>
<tr><td>Ster. Time: 04:04</td><td>Sterilization duration</td></tr>
<tr><td>Total time: 114:52</td><td>Time passed from the beginning to the completion of the process</td></tr>
<tr><td>Program complete</td><td>Completion of program execution</td></tr>
</table>

Printed output	Description
Signature:_____	Signature

7.3 Storage Medium

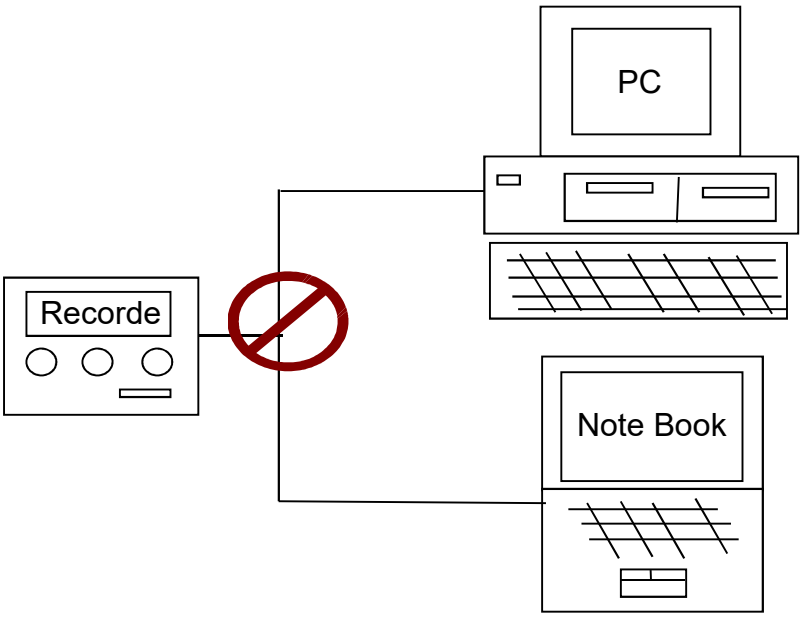
Only use a USB flash drive recommended by the manufacturer for the storage medium, such as a USB 2.0 flash drive.

The USB flash drive should be formatted before inserting it into the recorder for the first time. The data will only be saved in the root directory.

⚠ **CAUTION:** You should back up the USB flash drive to another safe medium regularly.

⚠ **CAUTION:** Connecting an external hard drive to the recorder is not allowed.

⚠ **CAUTION:** DO NOT connect the recorder to a PC, notebook computer, or other mobile equipment.



7.4 Recorder Panel Description

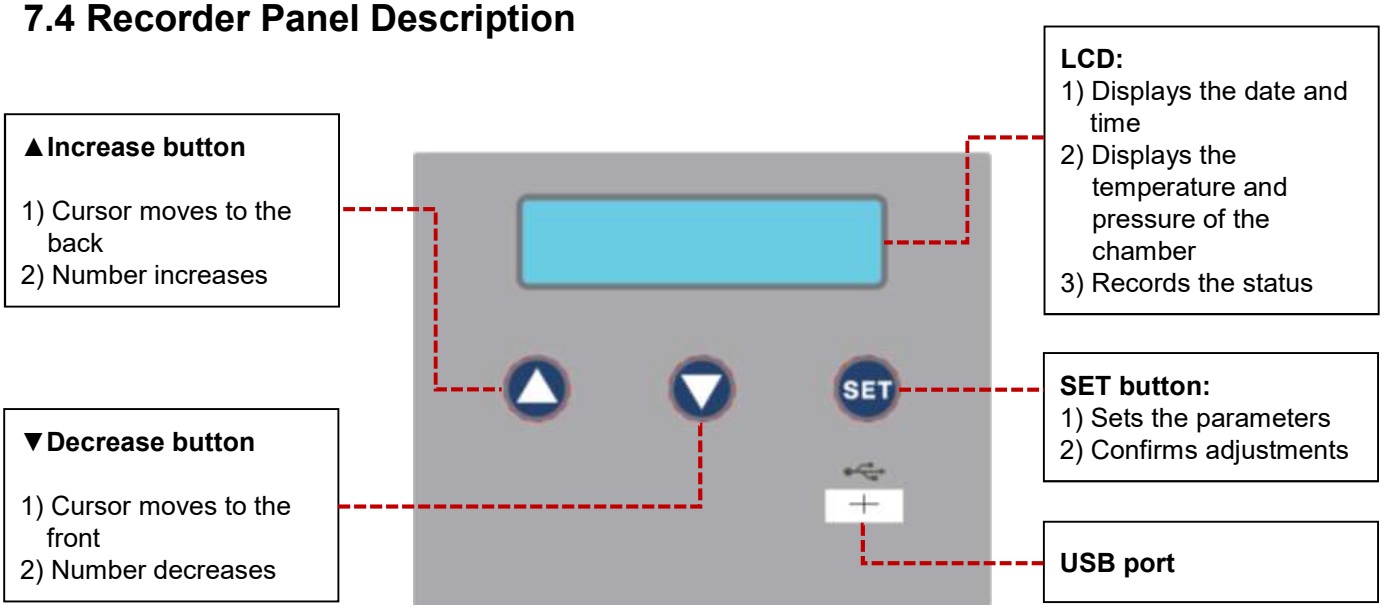


Figure 42

7.5 Recorder Function Description

Please refer to Figure 43 for the flowchart of the recorder

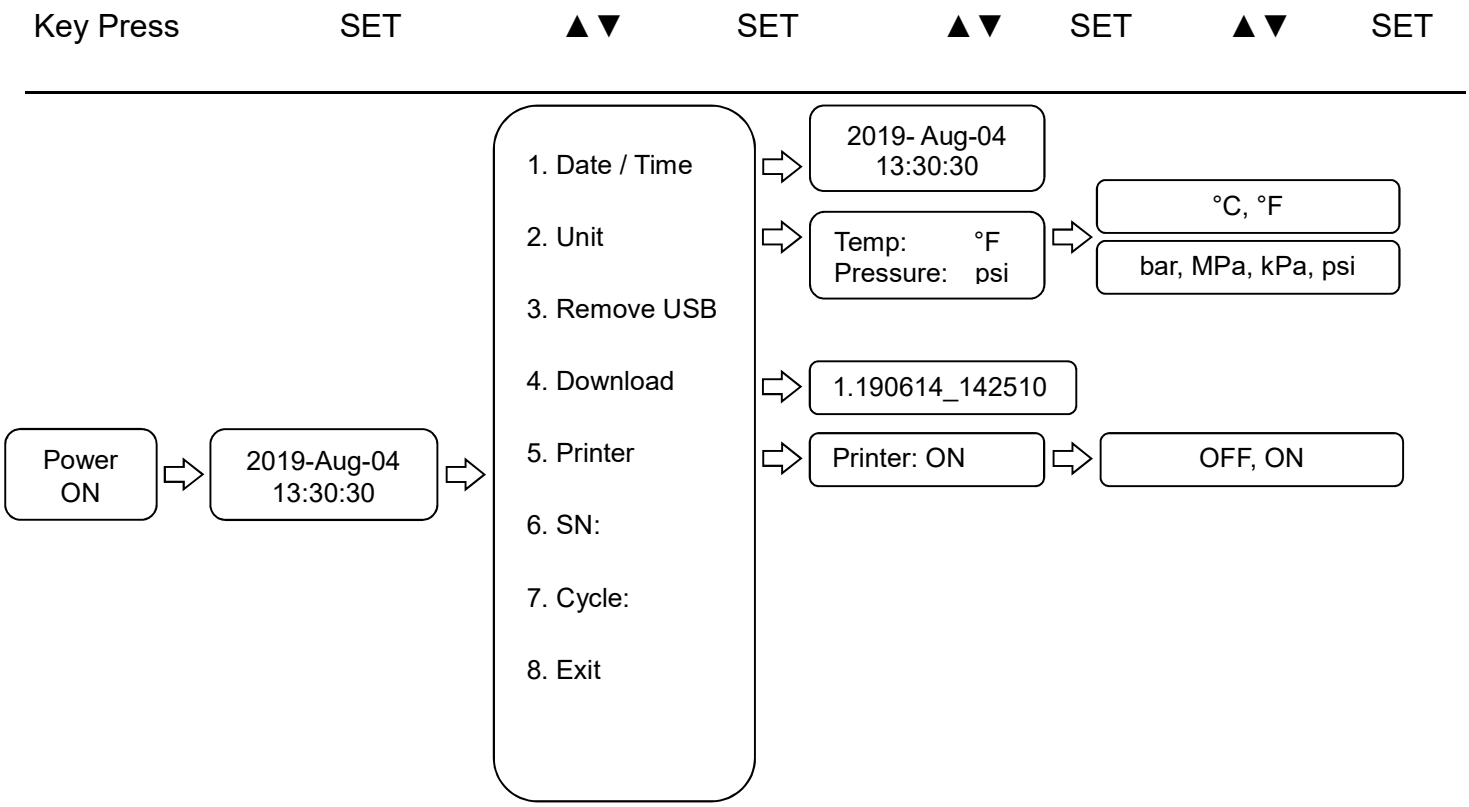


Figure 43

7.5.1 General

The recorder has 3 operation modes, which are standby mode, record mode, and adjustment mode respectively.

7.5.1.1 Standby mode

After the main power is turn on, the standby mode of the recorder will display date and time as shown in Figure 44.

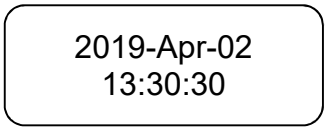


Figure 44

If the low power symbol flashes, please replace the new batteries as shown in Figure 45.

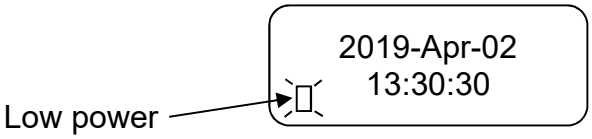


Figure 45

⚠ **CAUTION:** If the low power battery symbol " □ " appears on the recorder display, please contact with local dealer for replacing a new battery with the same type (CR2032). After replacing with new batteries, you must reset the date, time, and unit.

7.5.1.2 Record mode

a) The recorder will be activated automatically and record the temperature and pressure of the chamber after pressing the " START " button on the sterilizer, as well as the execution time. The temperature and pressure of the chamber and a flashing message " R " will be shown on the display.

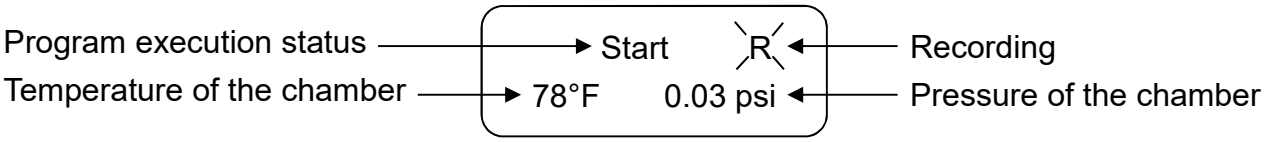


Figure 46

⚠ **CAUTION:** Before starting the sterilization cycle, please insert a formatted USB flash drive**.**

⚠ **CAUTION:** If USB flash drive was not detected before the sterilization cycle starts, the warning message " E105: No USB Memory " will be displayed, and the buzzer will sound the alarm. This message will not affect the sterilization task because the data will be saved to the internal memory for a period. Please refer to " 7.5.2.4 Download " for more explanations on how to download the data to the USB flash drive.

b) After the sterilization cycle has been completed, the data will be saved to the USB flash drive and the recorder will return to standby mode. The saving steps are as shown in Figure 47.

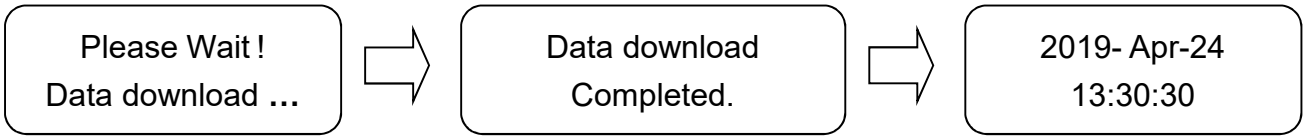


Figure 47

⚠ **CAUTION:** The manufacturer strongly recommends the use of a USB flash drive as the storage medium and always back up the USB flash drive to another safe medium**.**

7.5.1.3 Adjustment mode

At the standby mode, press the " SET " button and the recorder will enter the adjustment mode, as shown in Figure 48.

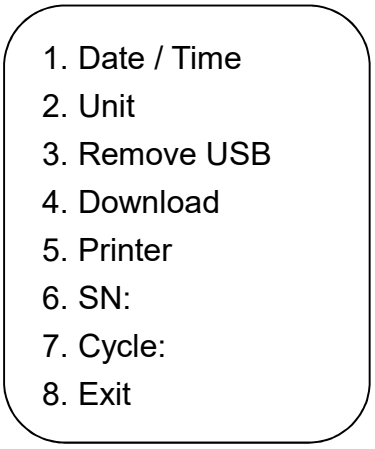


Figure 48

⚠ **CAUTION:** After 15 seconds, if no keys are pressed in the " adjustment mode " the recorder will return to the standby mode.

7.5.2 Setting

7.5.2.1 Set the date and time

Press up (▲) or down (▼) select " 1. Date / Time " and press the " SET " button to adjust the parameters of the recorder as shown in Figure 49.

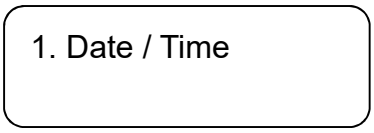


Figure 49

Press the " SET " button to enter the edited content as shown in Figure 50, and press the increase (▲) or decrease (▼) buttons until the current date and time are displayed. The " SET " button should be pressed to enter the parameters you changed, and then switch to the next parameter.

Every time you press the " SET " button, the order will be year-month-day-hour-minute-second.

After entering the current date and time, press the " SET " button to return to " adjustment mode ", and then select " 8. Exit ", and then press the " SET " button again to return to standby mode, as shown in Figure 50.

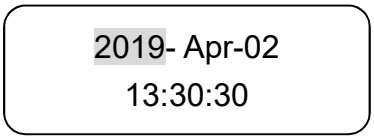


Figure 50

7.5.2.2 Setting unit (temperature and pressure)

Press up (▲) or down (▼) select " 2. Unit " and press the " SET " button to adjust the parameters of the recorder is displayed, as shown in Figure 51.

Figure 51

Press the " SET " button to edit the temperature unit or pressure unit, and then press the increase (▲) or decrease (▼) buttons until the temperature unit or pressure unit needed appears, as shown in Figure 52.

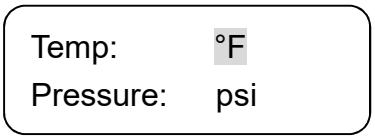


Figure 52

Every time the “ SET ” button is pressed, the order will be temperature-pressure. After entering the equipment, press the “ SET ” button to return to “ adjustment mode ”, and then select “ 8. Exit ”, and then press the “ SET ” button again to return to standby mode, as shown in Figure 44.

7.5.2.3 Remove USB

⚠ **CAUTION:** If this operation is not followed to remove the USB flash drive, the record data might get damaged.

Press up (▲) or down (▼) select “ 3. Remove USB ” and press the “ SET ” button to adjust the parameters of the recorder. As shown in Figure 53.

Figure 53

Press the “ SET ” button and it will prompt you to “ Please remove the USB flash drive ”, then you can safely remove the USB memory. This message will remain until you remove the USB memory.

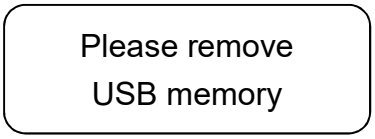


Figure 54

Press the “ SET ” button to return to “ adjustment mode ”, and then select “ 8. Exit ”, and then press the “ SET ” button again to return to standby mode, as shown in Figure 44.

7.5.2.4 Download

⚠ **WARNING:** The recorder can operate without a USB flash drive, if the built-in memory of the recorder is full, then the data recorded will be overwritten by the next data. The manufacturer strongly recommends to use a USB flash drive as the storage medium and always back up the USB flash drive to another safe media. If sterilization must be executed without using a USB flash drive, the following steps must be followed to download the data in the recorder memory before executing next sterilization program.

Insert a formatted USB flash drive into the appropriate port. Press the " SET " button and then press up (▲) or down (▼) select " 4. Download ", as shown in Figure 55 to Figure 57.

Figure 55

Press the " SET " button and then press up (▲) or down (▼) to select the document to download, as shown in Figure 56.

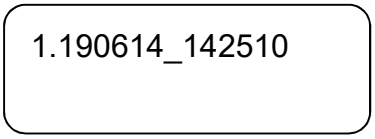


Figure 56

Press the " SET " button and a prompt " Please wait! Data download... " will appear, and then execute " Data download Completed " as shown in Figure 57.

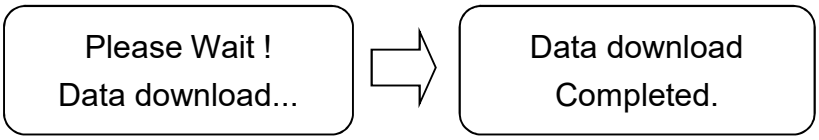


Figure 57

⚠ **CAUTION:** If no storage medium was detected, the message " E105: No USB Memory " will be displayed and the buzzer will sound the alarm, and the recorder will return to the previous screen in 15 seconds.

7.5.2.5 Printer (optional purchase)

Press the “ SET ” button and then press up (▲) or down (▼) select “ 5. Printer ”, as shown in Figure 58.

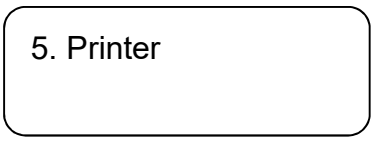


Figure 58

Press the “ SET ” button and select Printer content, and then press the (▲) or (▼) buttons to select, as shown in Figure 59.

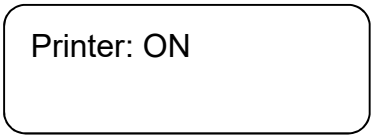


Figure 59

Press the “ SET ” button to return to “ adjustment mode ”, and then select “ 8. Exit ”, and then press the “ SET ” button again to return to standby mode, as shown in Figure 44.

7.5.2.6 SN (serial number of the machine)

Press the “ SET ” button and then press up (▲) or down (▼) select “ 6. SN: ”, as shown in Figure 60.

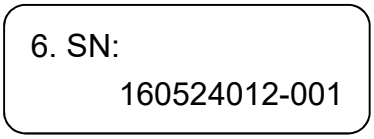


Figure 60

7.5.2.7 Cycle

Press the “ SET ” button and then press up (▲) or down (▼) select “ 7. Cycle: ” for the reading of the number of sterilization cycle that have been performed, as shown in Figure 61.

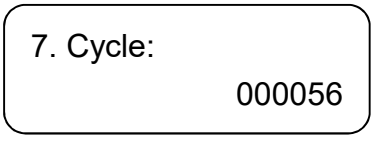


Figure 61

7.5.2.8 Exit

Press the “ SET ” button and then press up (▲) or down (▼) select “ 8. Exit ”, as shown in Figure 62.

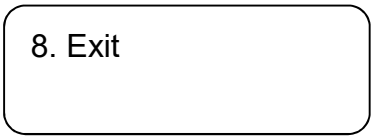


Figure 62

Press the “ SET ” button to return to standby mode, as shown in Figure 44.

7.6 Messages and Troubleshooting (for Recorder)

Problem	Troubleshooting
No display	- Turn on the main switch. - Reinsert the power cable. - Check whether there is poor connection. - Contact your local dealer for service.
E101: Temperature sensor fault	- Contact your local dealer for service.
E103: Pressure sensor fault	- Contact your local dealer for service.
E105: No USB Memory	- Insert a USB flash drive. - Reinsert the USB flash drive and try again.
E107: USB is full	Data stored on the USB flash drive is full. Please back up the contents of the USB flash drive to a safe area immediately, and then follow the process in “ Download ” to download the latest recorded data.
E108: USB Format Error	- Reformat the USB flash drive. - Replace with another USB flash drive. - Contact your local dealer for service.
E109: EEPROM fault	- Replace with another main board. - Contact your local dealer for service.
E125: Keyboard fault	Contact your local dealer for service.
E135: Abnormal of the cycle	- Check the power of the sterilizer. - Contact your local dealer for service.
E155: Password fail	Authorized person only. This function is reserved for the manufacturer for diagnostic purposes. The user is protected by a password. Please contact your local dealer or manufacturer for information.

⚠ **CAUTION:** Please contact your local dealer if you encountered any other problems. DO NOT try to dismantle the sterilizer or recorder by yourself. Otherwise it may result in severe physical injuries or damage to equipment.

8. PC Record Reader (for P-M10TR)

8.1 Record Reader Instructions

The text is subject to change without further notice.

Please visit the website (https://healthcare.agneovo.com/us/downloadcenter/download-center/autoclave/louiep-series) and download the latest software by clicking “ P-M10TR / P-M10-PC Record Reader ” software, or contact your dealer for help.

⚠ **CAUTION:** This software can only be operated by trained personnel.

⚠ **CAUTION:** This software can only be used with the AG Neovo autoclave / sterilizer series.

8.2 Features

This software is used with the P-M10TR series autoclave / sterilizer.

1. Read the recorded files in the USB flash drive.
2. ID and password of administrators and users.
3. Administrator permissions: Open software, read, print, and back up recorded documents, modify and set the ID and password of administrators and operators.
4. Operator permissions: Open software, read, and print recorded documents.

8.3 Computer System Requirements

- CPU Over 1GHz
- 256MB RAM or above
- USB 2.0 port or above
- Windows© 7 service pack 2 or above (Windows© is a trademark of Microsoft Co.)

8.4 Installation and Setup

Insert the USB flash drive or download the installation file from the AG Neovo Healthcare website (https://healthcare.agneovo.com/us/downloadcenter/download-center/autoclave/louiep-series) by clicking “ P-M10TR / P-M10-PC Record Reader ” to download the software.

Follow the steps below when using for the first time.

1. Decompress the file (“ recordsetup-Vx.x ”) on the computer.

2. Double-click the “ setup ” file and the installation process is as shown in Figure 63.

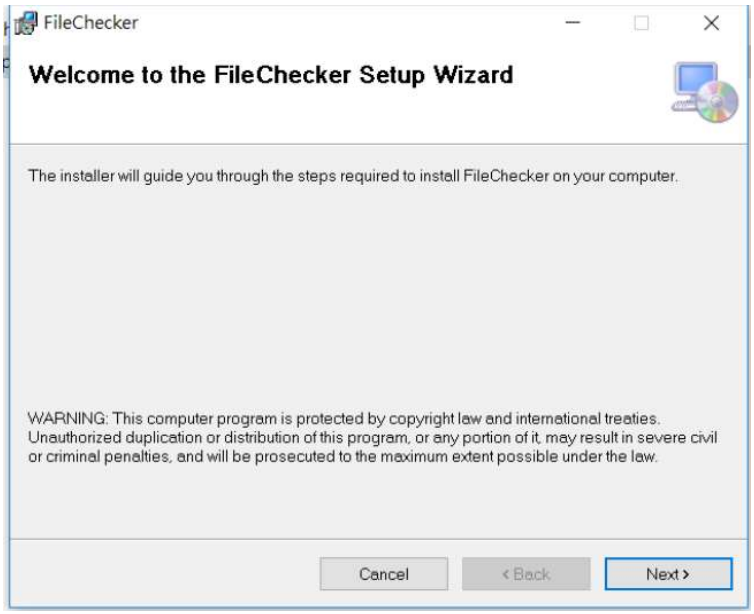


Figure 63

3. Select installation folder, Please Click “ Next ” to “ FileChecker Setup Wizard ” and follow the steps below to install the program as shown in Figure 64.

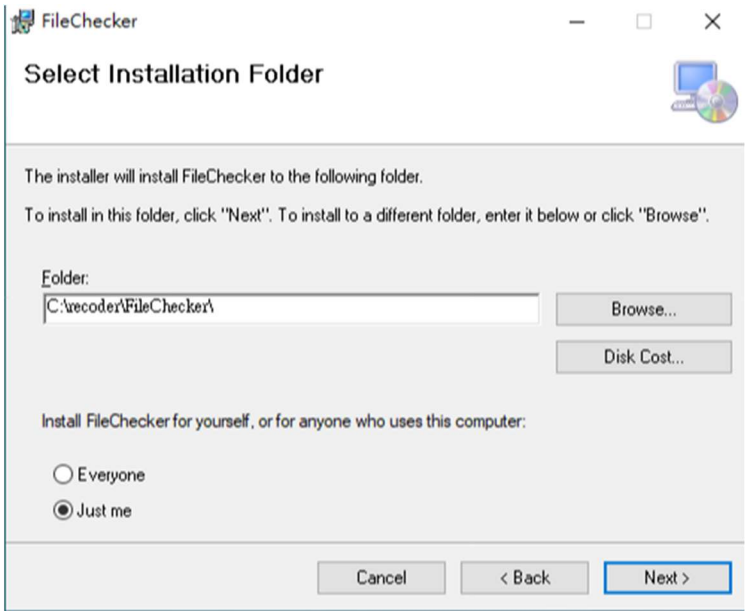


Figure 64

4. Confirm installation, Please Click “ Next ”, as shown in Figure 65.

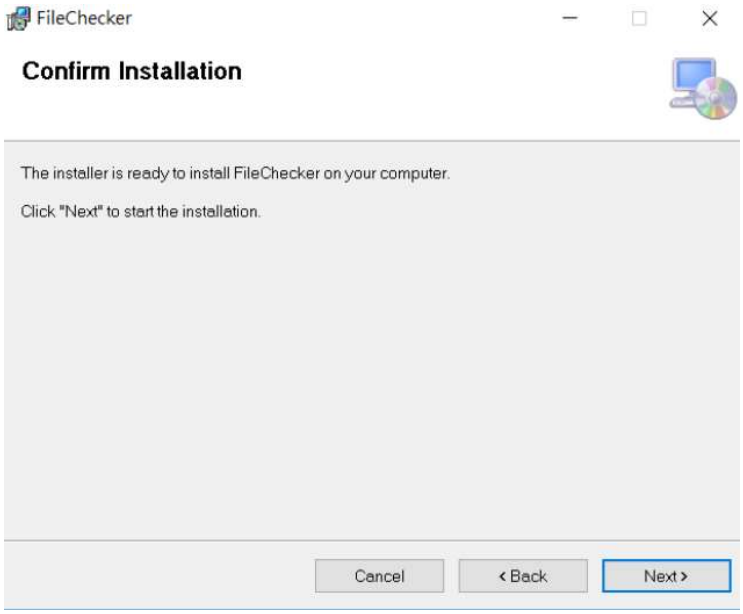


Figure 65

5. Installation complete, Please Click “ Close ”, as shown in Figure 66.

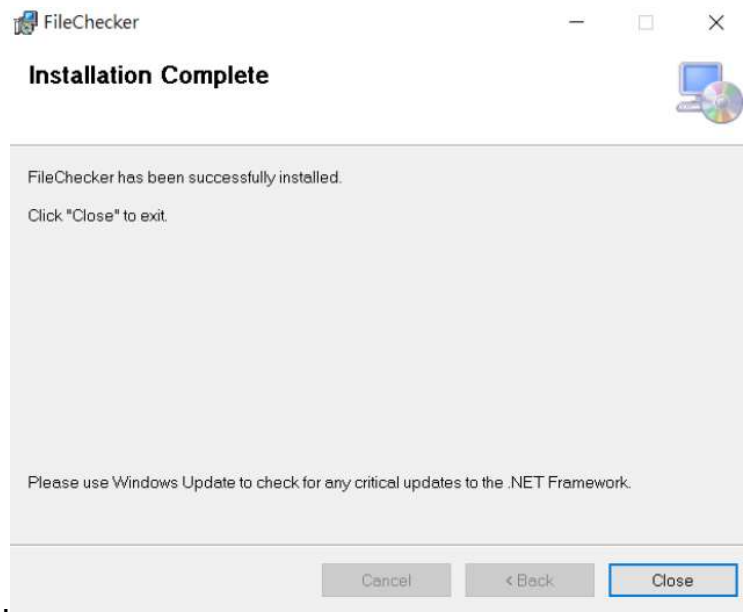


Figure 66

6. Complete the program installation. You will see the icon (Shortcut to FileChecker) on the desktop of your computer as shown in Figure 67.

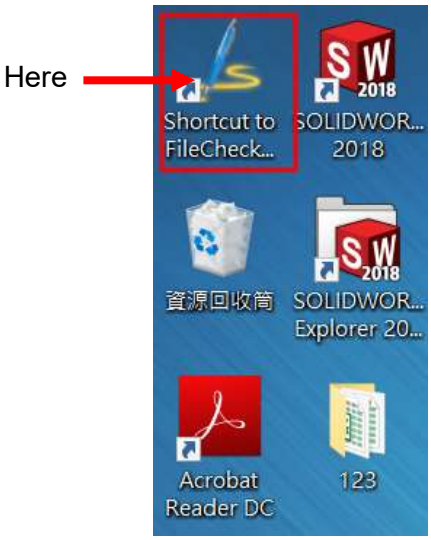


Figure 67

8.5 Operating the " PC Record Reader " Software

Insert the USB (with the recorded data) into the computer before opening the software.

1 Double-click the " Shortcut to FileChecker " icon (as shown in Figure 67).
A window will pop up as shown in Figure 68.

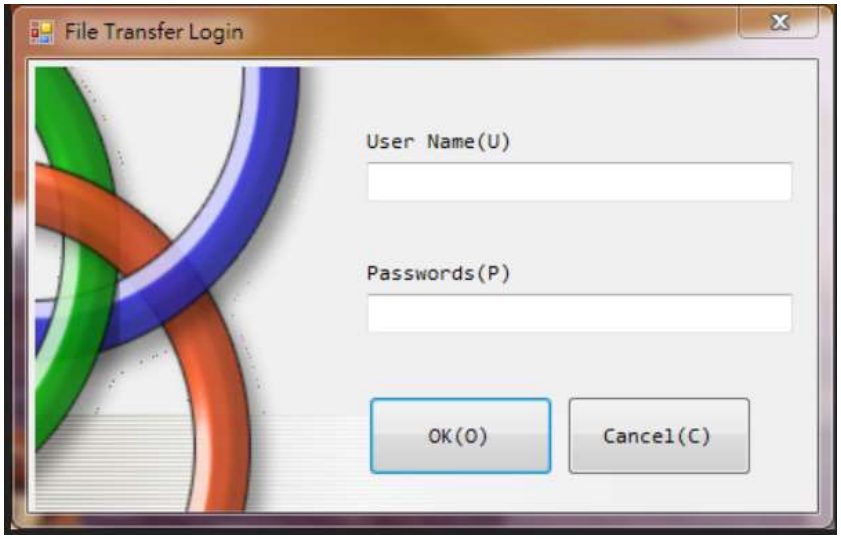


Figure 68

CAUTION: Please change the password when you enter the software for the first time.

Default ID and password table

User name	Password
admin	admin
user	user

2 Enter the default “ User name and password ” when operating the software for the first time, as shown in Figure 69.

Figure 69

3 Click “ OK ” to get Figure 70. There are 3 main areas: Menu, USB data, and Data area.

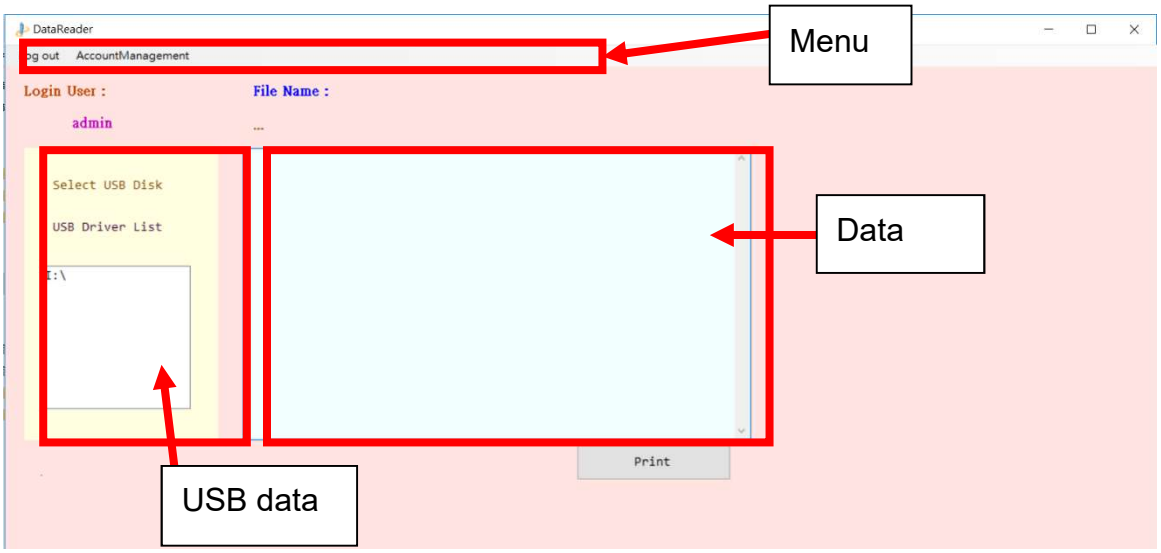


Figure 70

8.5.1 Menu Area

8.5.1.1 Log out

Click “ Log out ” once to exit the software.

8.5.1.2 Account management

Click once to enter this function. This function is divided into 2 areas. (1) User Accounts and (2) Admin Accounts, as shown in Figure 71.

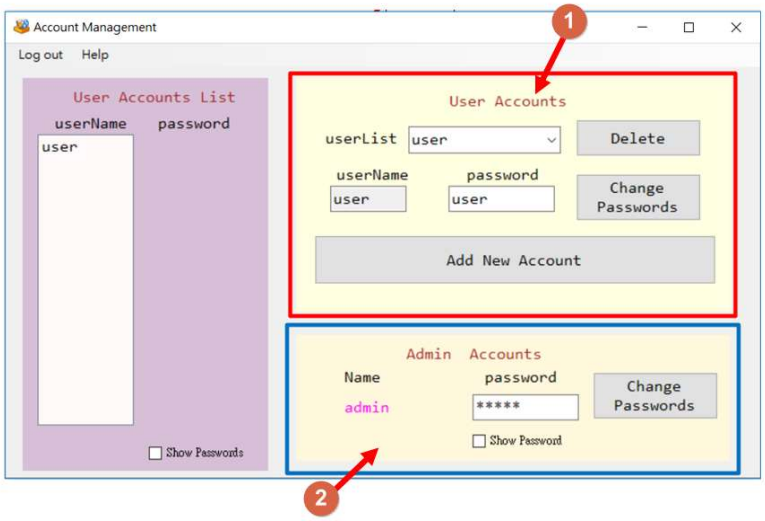


Figure 71

8.5.1.2.1 Operator account (User accounts):

8.5.1.2.1.1 Add a User Account

To create new user accounts, please refer to the following steps:

1. Click the “ Add New Account ” button.
2. Enter the new “ user name ” or your desired name, as shown in ① of Figure 72, and enter the password as shown in ② of Figure 72.
3. Click “ OK ” as shown in ③ of Figure 72, and then click “ Add New Account ” as shown in ④ of Figure 73, and then return to the submenu.

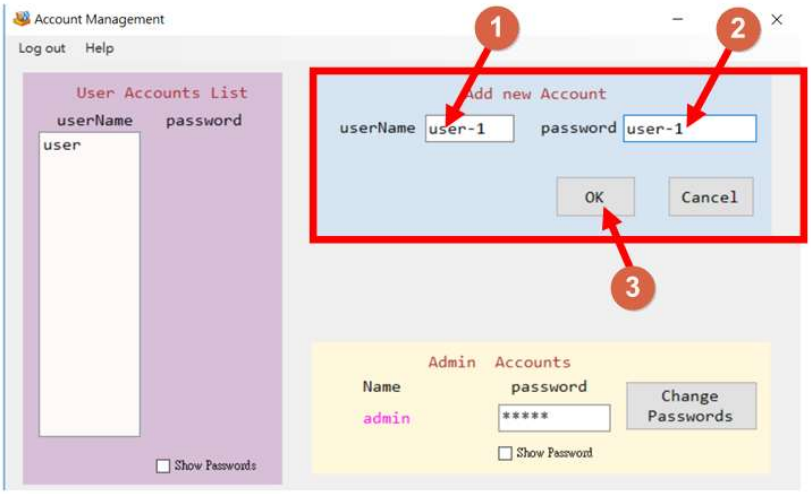


Figure 72

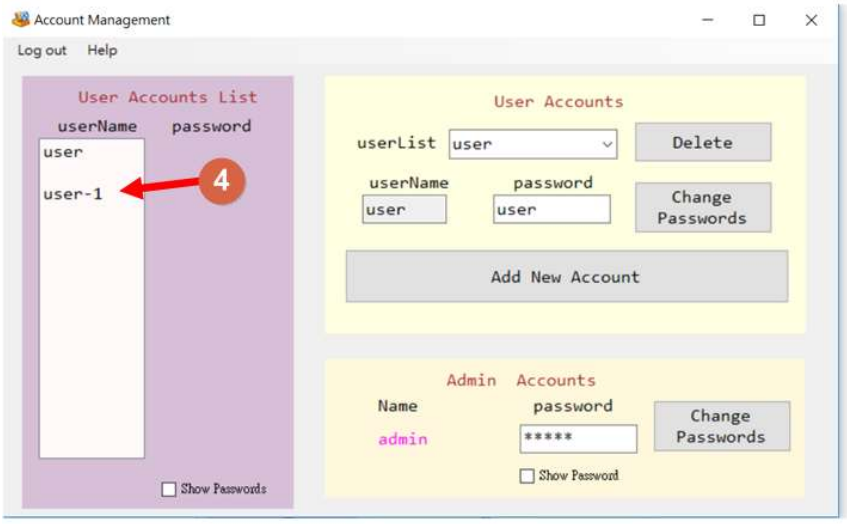


Figure 73

8.5.1.2.1.2 Delete User Account

To delete user accounts, please refer to the following steps:

1. Select the user to delete as shown in① (for example user-1) of Figure 74, and then click ② of Figure 74.
2. Click ③ of Figure 74 to delete user-1.
3. After deleting user-1, please refer to ④ as shown in Figure 75, and then return to the submenu.

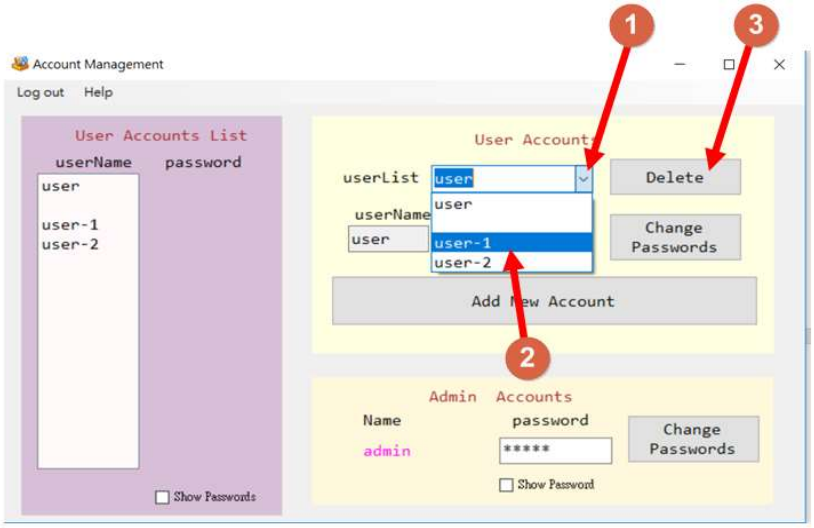


Figure 74

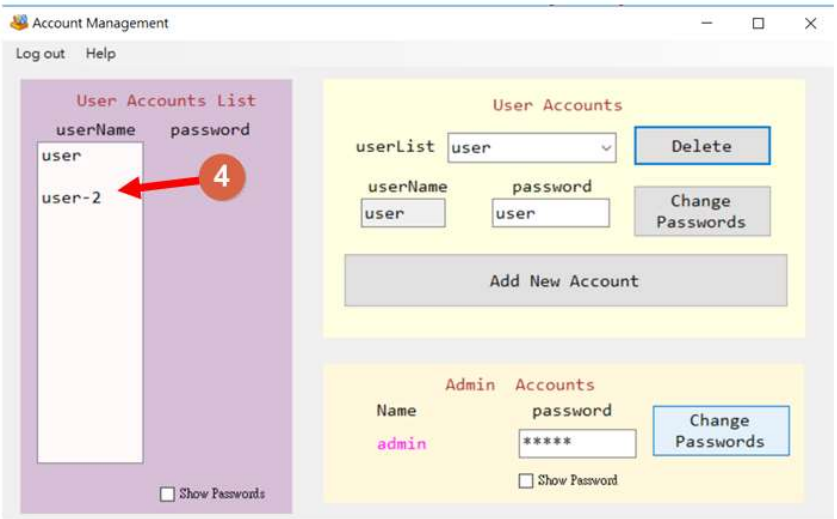


Figure 75

8.5.1.2.1.3 Change password

To change password, please refer to the following steps:

1. Click ① on “ userList ” and select “ user-2 ” such as ②, as shown in Figure 76.

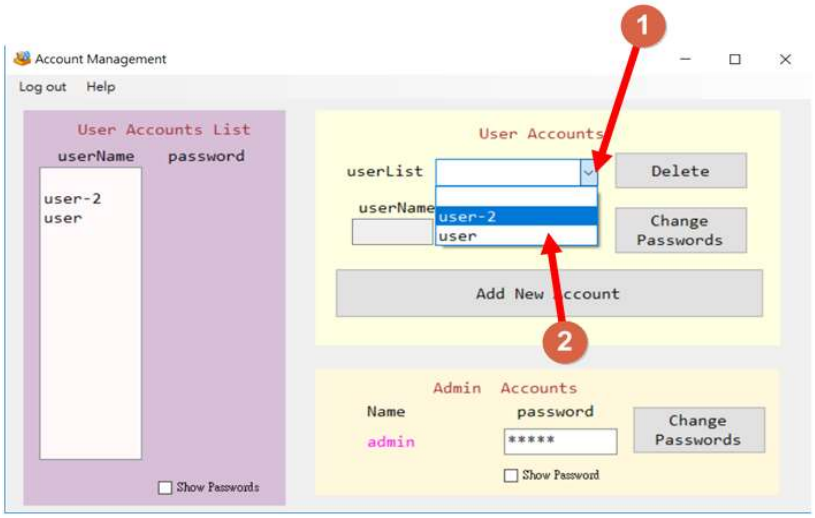


Figure 76

2. Enter the password such as ③, and then click the “ Change Passwords ” button such as ④, as shown in Figure 77.

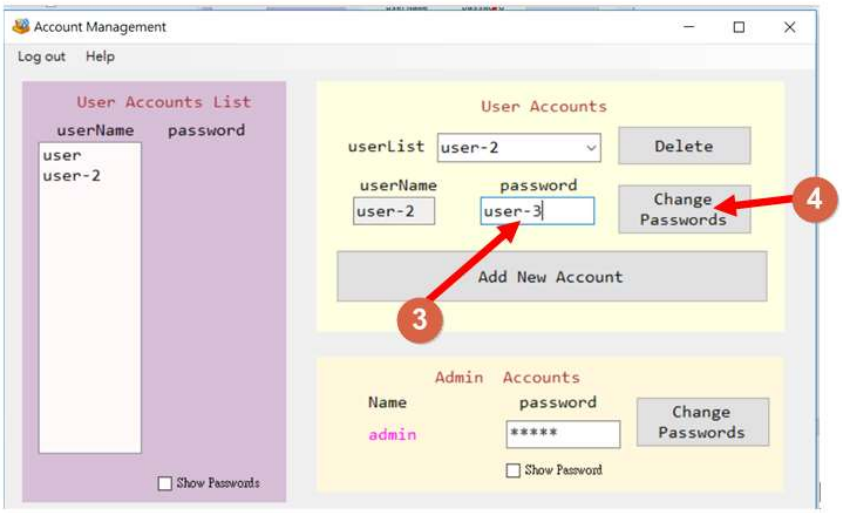


Figure 77

3. A pop-up window like the one shown in Figure 78 will be displayed, and then click OK such as ⑤.

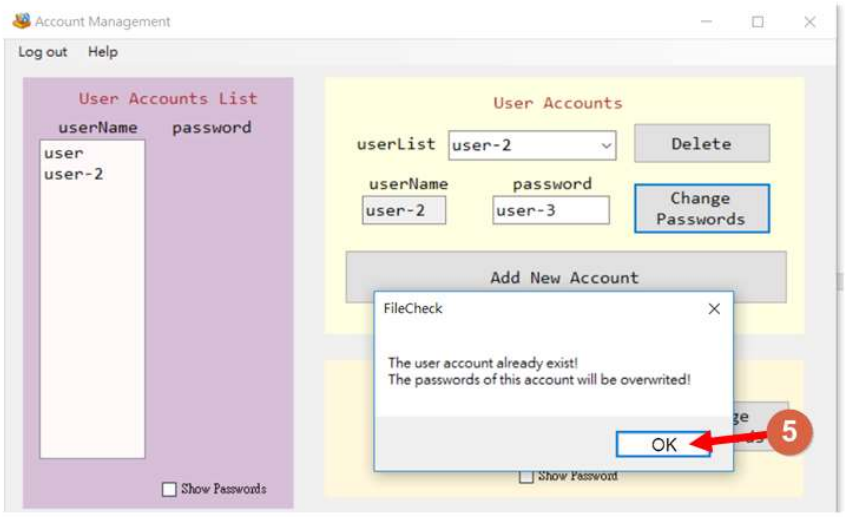


Figure 78

4. Select “ user-2 ” to ensure that the password has already been changed like ⑥ as shown in Figure 79.

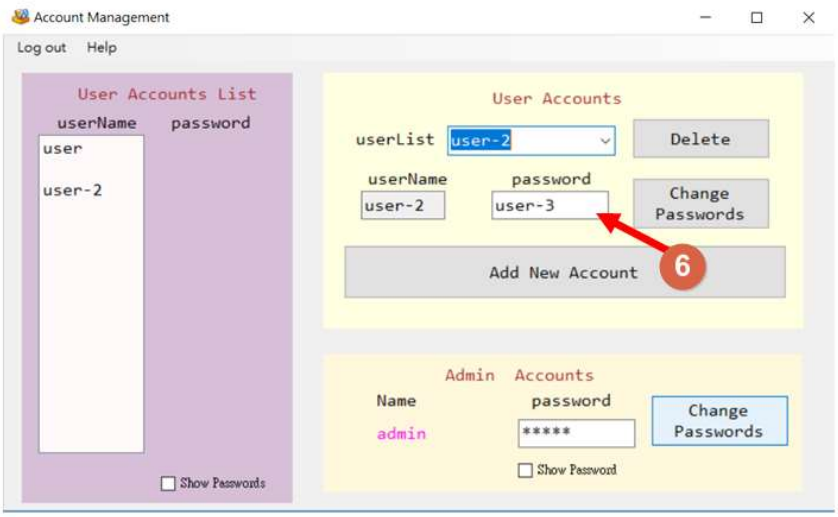


Figure 79

8.5.1.2.2 Administrator account (Admin account)

To change administrator's password, please refer to the following steps:

1. Click the frame ① once and the password will be displayed as shown in Figure 80.
2. Enter the new password ② as shown in Figure 80.
3. Press the " change password " button ③ as shown in Figure 80.

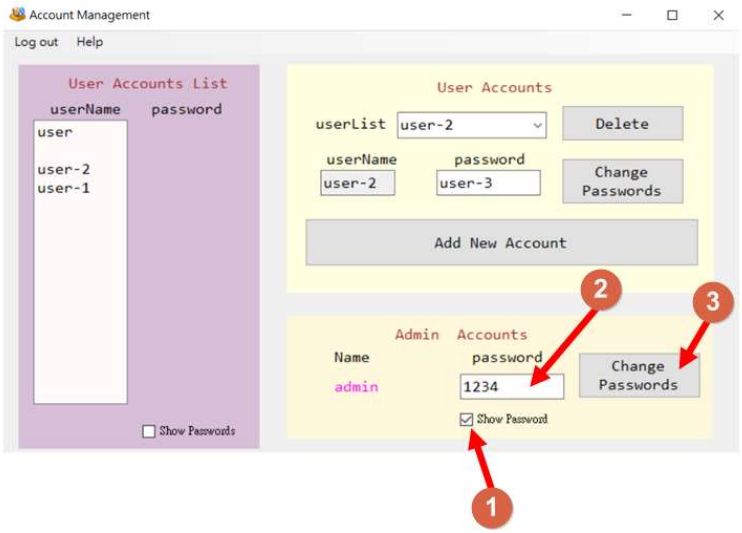


Figure 80

4. Click the frame ④ once and the password will be displayed as shown in Figure 81.
5. Enter the same password again ⑤ as shown in Figure 81.
6. Click the " confirm " button ⑥ as shown in Figure 81.

Figure 81

7. A pop up window will be displayed, and then click OK ⑦ as shown in Figure 82.

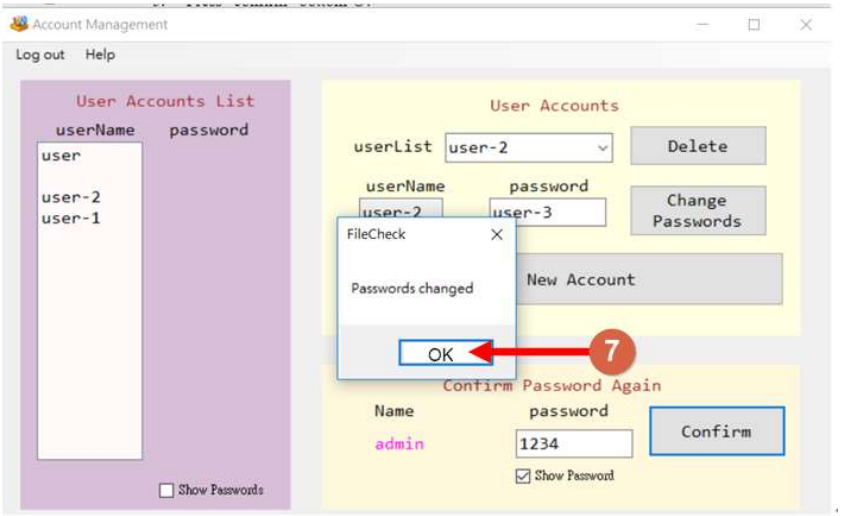


Figure 82

8. Check the password change ⑧ as shown in Figure 83.

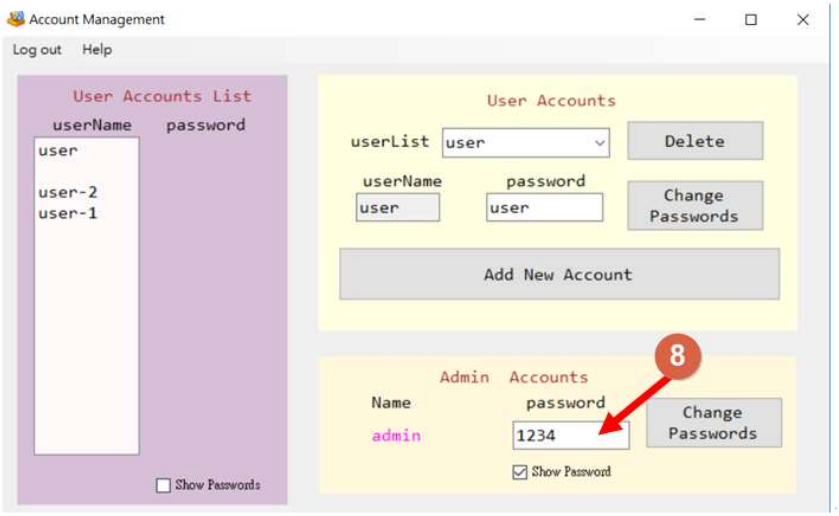


Figure 83

8.5.2 USB Area

Once the USB flash drive is detected, it will be displayed the file name as shown in Figure 84.

1. Click the icon 

once to open the software such as shown in Figure 84.
2. The warning sign dialog window will pop up, telling you that the USB content is incorrect. The USB flash drive might have contained certain viruses or incorrect data. Please check your USB flash drive and then click OK to continue as shown in ① of Figure 84.
3. Click on the " I:\ " disk once as shown in ② of Figure 84, and then the files content of USB flash disk as shown in ③ of Figure 84 can be displayed in the file browsing area.

Figure 84

4. Select “ folder ” ① as shown in Figure 85 to view the log files (such as I: \ 20190916_190902 \ S20190916_190902.std) ② as shown in Figure 85.
5. The log file content will be displayed in the data area ③ as shown in Figure 85.

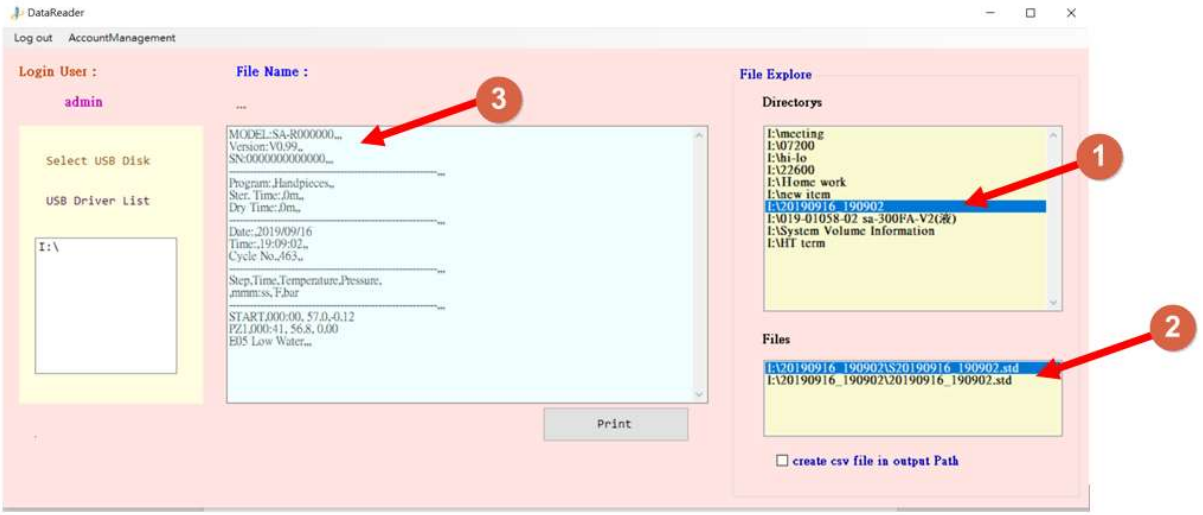


Figure 85

8.5.2.1 Print

Click “ Print ” ④ to show the total pages, and click “ Yes ” ⑤ of Figure 86 to print the recorded data, or click “ No ” ⑤ return to Figure 85.

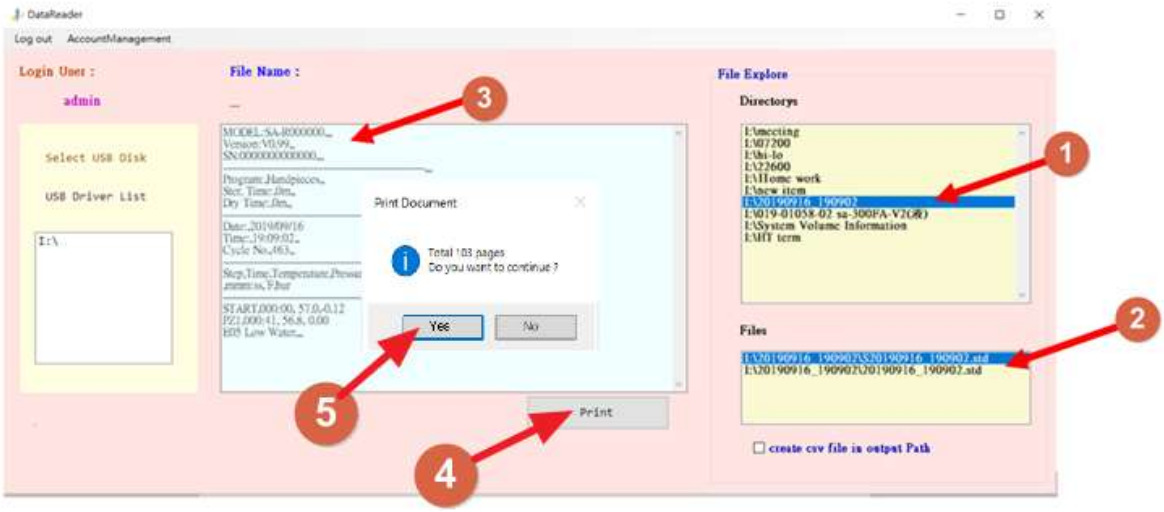


Figure 86

8.5.2.2 Create CSV file in output Path

Click this “ create csv file in oputput Path ” once to start creating file function and export the detailed data using csv format. As shown in ④ of Figure 87.

Figure 87

9. Test Description

9.1 Biological Indictor

It is often used for sterilization verification and regular checking of sterilization cycles. The biological indictor changes in color and / or turbidity represent the results of the sterilization process. If there are no changes, it has reached the proper sterilization condition. Otherwise the growth of the spores shows that the sterilization process has not been reached. Please refer to the data from the manufacturer of the biological indictor.

For example of biological indicator (EZ Test) is shown below:

1. Execute a sterilization program at a location where sterilization is most difficult (top of the drainpipe). Place one or multiple EZ Test biological indicator balances inside the sterilizer.

⚠ **WARNING:** Please handle carefully the biological indicator after sterilization.

⚠ **WARNING:** EZ Test is a trademark of Mesa Laboratories, Inc. biological indicator products.

⚠ **WARNING:** Use only FDA-cleared chemical & biological indicators designed for steam sterilization that are compatible with the particular sterilization cycle temperature and exposure time being monitored.
Use sterility monitors with each sterilization load. If a sterilizing cycle is terminated prematurely, reprocess instruments (loads) to ensure sterility of the load. Follow manufacturer’s instructions for proper disposal of used indicators.

1. Wait for the biological indicator to cool and then pass it through the side of the extruded plastic tube, or use the tool provided to crush the ampoules for the culture medium.
2. Place the treated unit(s) and an untreated (control) unit vertically in an incubator with a temperature of 58-62 degrees for 24 hours (Geobacillus stearothermophilus).
3. Start monitoring and record the cultivated units after 12-18 hours.
4. The untreated (control) unit should appear turbid and / or its color changed to yellow or close to yellow.
5. A failed sterilization cycle is turbid and / or the color changed to yellow or close to yellow. A test device retaining the original color indicates that the sterilization parameters have been reached.
6. For more detail information, please consult your biological indicator dealer.

9.2 Bowie-Dick Test Pack

The size of commercially available Bowie-Dick type Test Pack must be suitable for the sterilizer to test. The indicator is a type of thermal paper. It is placed in the middle of a box made of multiple layers of paper and foam rubber.

Bowie-Dick Test Pack must be inserted manually. It would be the best if it is inserted on the lowest tray with the label facing up. Verify the test immediately after the cycle execution has been completed. Be careful when treating the data pack (it is still very hot). Remove the indicator paper and evaluate the test results according to the explanations given in the package.

Bowie-Dick Test Pack monitor the temperature of the sterilizer at 132 °C-134 °C (270 °F-273 °F) every day to confirm the performance of the sterilizer.

For example Description of the Bowie-Dick Test Pack (which is the 3M™Comply™ Bowie-Dick Test Pack #1233LF) is as follows:

1. Place the “ 3M™Comply™ Bowie-Dick Test Pack #1233LF ” on top of the drainpipe at the bottom of the sterilizer tray frame. (the coolest point of the chamber)
2. Execute a Bowie-Dick test program.
3. Wear heat-resistant gloves after treatment and remove the Bowie-Dick Test Pack from the sterilizer.
4. Open the Bowie-Dick Test Pack and check the indicator.
5. The indicator should display even color changed. If the color change is incomplete, it means that the sterilizer might have fault and should be reported to the supervisor immediately.
6. Keep it as a permanent record.
7. For more detail information, please consult your Bowie-Dick Test Pack dealer.

⚠ **WARNING:** 3M™Comply™Bowie-Dick Test Pack #1233LF is a trademark of 3M Medical Corporation.

⚠ **WARNING:** Use only FDA-cleared chemical & biological indicators designed for steam sterilization that are compatible with the particular sterilization cycle temperature and exposure time being monitored.
Use sterility monitors with each sterilization load. If a sterilizing cycle is terminated prematurely, reprocess instruments (loads) to ensure sterility of the load. Follow manufacturer’s instructions for proper disposal of used indicators.

10. Maintenance Instructions

⚠ **WARNING:** Not following the maintenance instructions will cause negative effects to the performance and lifespan of the sterilizer, and may void the warranty.

⚠ **WARNING:** Turn off the sterilizer and disconnect the power before performing maintenance. Make sure the sterilizer has cooled down to room temperature.

⚠ **WARNING:** Make sure the pressure gauge reading is zero (0) before opening the door.

⚠ **CAUTION:** Confirm that the sterilizer is empty before performing maintenance. Correct and regular maintenance is required to optimize the performance of the sterilizer.
Not following the maintenance instructions will have severe impacts to the performance and lifespan of the sterilizer.

⚠ **CAUTION:** Failure to change water may result in sterilizer malfunction. DO NOT use bleaching agents or any abrasive materials / substances in chamber (i.e. bleach, steel wool, wire brush, scouring powder, etc.). Failure to comply may result in damage to the chamber and / or other components.

⚠ **CAUTION:** Before conducting maintenance, confirm that the chamber is empty without loads.

10.1 Daily

- Clean the external surface with a soft cloth.

⚠ **NOTE:** Use of alcohol cleaner containing substantial of alcohol in the formula may damage the faceplate.

- Wipe the chamber, door, and the inside of the gasket with a damp lint-free cloth.
- Check the water level of the water reservoir.
- Filling distilled water only.
- Make sure that the vents on the cover of the water reservoir (Figure 15 and Figure 16) are not blocked / clogged.
- Check the status of the power cable. Please call for service staff if there are ruptures.

10.2 Weekly

- Use a cloth or sponge with a non-corrosive stainless steel cleaner and water to clean the tray rack and trays.
- Change the distilled water in the water reservoir:
  Drain water from the water level / drain hose (Figure 15, Figure 16 and Figure 18) located on the right side of the sterilizer and fill in clean distilled water.

  Exhaust filter cleaning:
  Unlock the filter nut with a wrench in a counter-clockwise direction, as shown in Figure 88 and Figure 89.

⚠ **CAUTION:** Place a towel at the bottom of the filter faucet to prevent leaking.

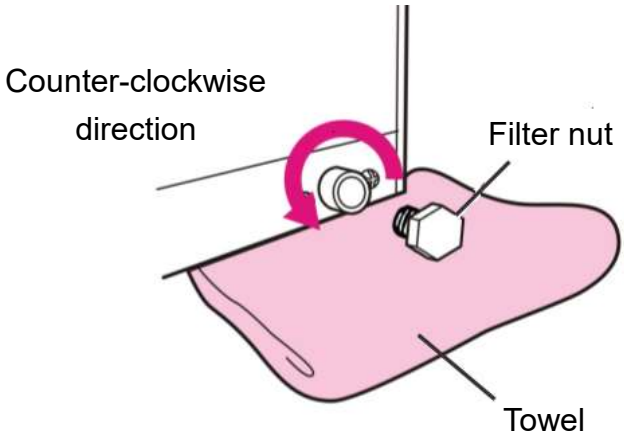


Figure 88

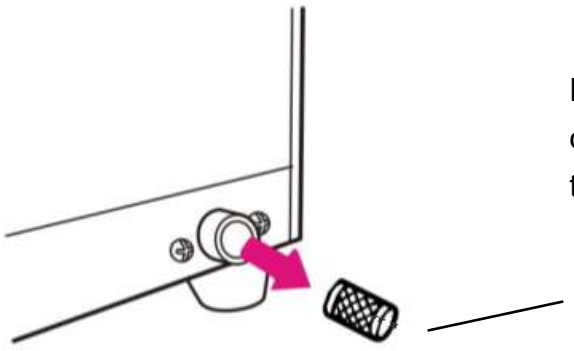
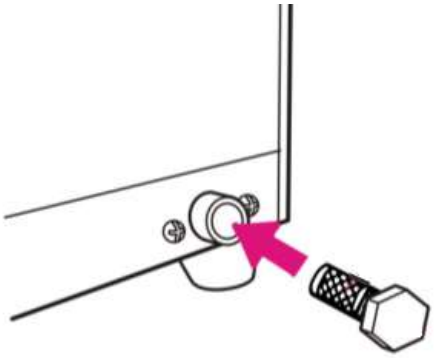


Figure 89

Remove the filter carefully and rinse it with water to clean it. Assemble it again as shown in Figure 90.



Install the filter in the direction indicated by the arrows. Fasten the filter nut in a clockwise direction.

Figure 90

10.3 Monthly

- Use non-corrosive cleaner and a hard brush or sponge to clean the water level sensor in front of the chamber to prevent it from being unable to detect water levels, as shown in Figure 91.

⚠ **NOTE:** Cleaning the dirt on the side of the sensor is more important than tip of the sensor. Finally, Use a damp cloth to wipe the surface after cleaning.

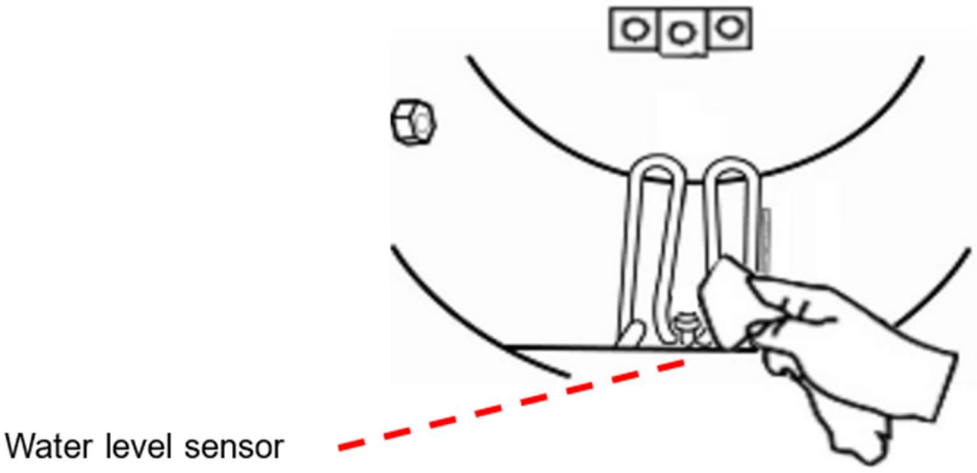


Figure 91

- Follow the instructions on the “ CHAM-MATE ” pouch and to clean the chamber and the piping system.

- **To check the safety valve:**

  Turn off the power and unplug the power plug of the sterilizer. As shown in Figure 92, remove the cover of the water reservoir. Use a screwdriver to pull the metal ring of the safety valve out for at least 3 times. Put the water reservoir cap back in place.

⚠ **WARNING:** If excess force is required to pull the safety valve, the safety valve needs to be replaced. Call for service staff.

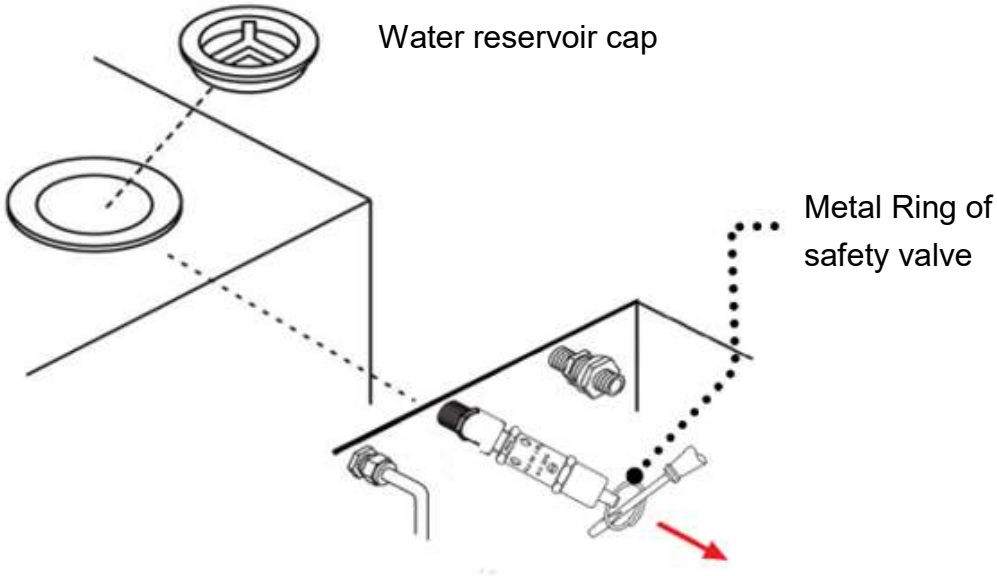


Figure 92

10.4 Annually

⚠ **CAUTION:** Annual maintenance service must be performed by trained and experienced engineers. Contact your distributor for detailed information. The following maintenance instructions are for reference only.

- Check whether the piping is any leaking.
- Check whether the progress indicator is operating normally.
- Check the operating status of the drain valve, safety valve, and heater.
- Check whether the door gasket is ruptured or worn. The door gasket is a consumable. It is suggest to change the door gasket once a year.

10.4.1 Changing Door Gasket

How to change the door gasket:

1. Remove the old door gasket from the door, and then remove the O-shaped washer from the door gasket. Install the O-shaped washer into the new door gasket, as shown in Figure 93.

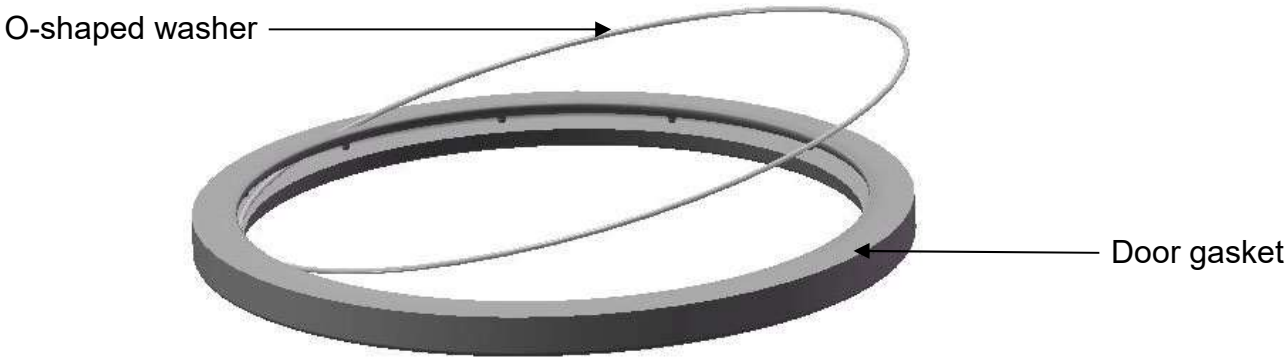


Figure 93

2. Check the O-shaped washer is fully installed into the door gasket, as shown in Figure 94.

Figure 94

3. Install the door gasket into the groove of the door. As Figure 95 shown, press the door gasket into the groove of the door evenly. When pressing the door gasket into the trapezoidal door grove, please beware of the installation direction and refer to Figure 96 for the correct direction.

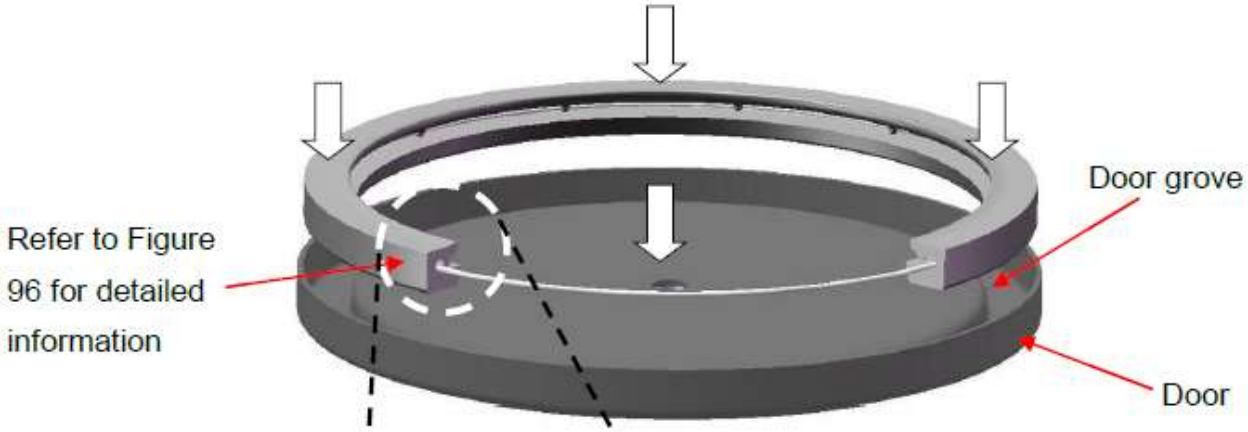


Figure 95

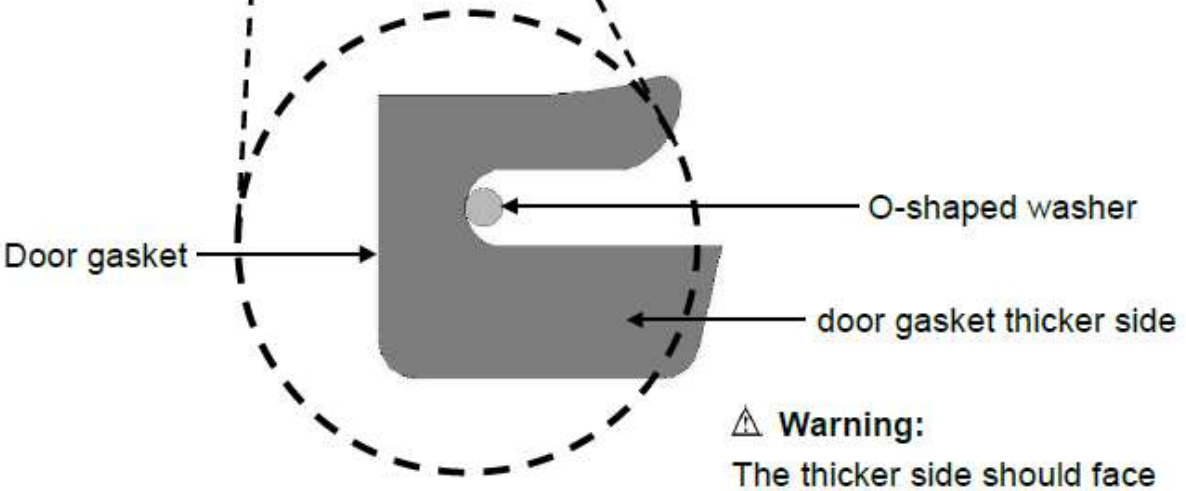


Figure 96

⚠ **Warning:**
The thicker side should face the door center for the installation of the door gasket.

⚠ **CAUTION:** The disposal of the old door gasket should comply with local regulations.

Follow the order in Figure 97, Figure 98, and Figure 99 to install the door gasket into the groove of the door.

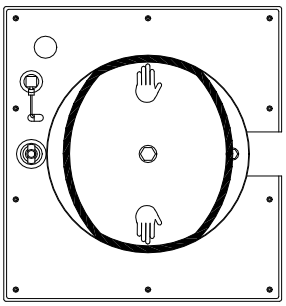


Figure 97

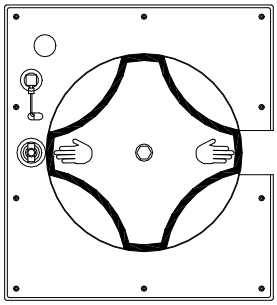


Figure 98

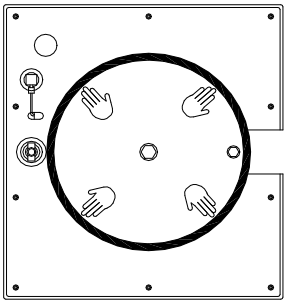


Figure 99

⚠ **CAUTION:** The disposal of the old door gasket should comply with local regulations.

10.4.2 Changing Air Filter

⚠ **CAUTION:** Make sure that the power is turn off and no pressure in the autoclave / sterilizer before changing the air filter.

Open the door. The air filter is located at the front of the autoclave / sterilizer.

1. Rotate the air filter in a counter-clockwise direction until the air filter is loosened as shown in Figure 100.
2. Install a new air filter and tighten the air filter in a clockwise direction.

Figure 100

11. Troubleshooting

11.1 Symptoms

Problem	Possible Cause	Troubleshooting
Power indicator isn't illuminated	Main cable is unplugged or the POWER switch is off	Plug in the power cord and turn on the POWER switch.
	Forget to turn on the switch	Press the Power switch to " I (ON) " position.
	No Fuse Breaker tripped	Wait until sterilizer cools down to room temperature. Reset all the circuit breakers located at the rear lower right hand-side of the equipment.
Low water LED indicator lights ON and buzzer sounds	Insufficient water inside the water reservoir	Follow " 4.3 Sterilizer Installation " to fill distilled water.
	Water level sensor inside chamber	Follow the maintenance in " 10.3 Monthly " to clean the sensor.
	Water filter blocked	Follow the maintenance in " 10.2 Weekly " to clean the water filter.
	Water level sensor inside water reservoir	Contact local distributor for service.
Steam leaks from the door	Door gasket is dirty or wear out	Clean the door gasket. If the door gasket has been used for over one (1) year, please replace it according to the maintenance requirements in " 10.4 Annually ".
Door cannot be opened	Pressure still exists in the chamber	Follow the steps in " 6.8 " and press the " VACUUM RELEASE " button to release the pressure. If problems still exist, contact your local dealer for service.
Water inside chamber doesn't automatically return to the reservoir	1. Exhaust filter in the pipeline system is clotted	1. Contact local distributor for service.
	2. Exhaust solenoid valve is faulty	2. Contact local distributor for service.
Excessive force is required to pull the safety valve	1. DO NOT use any tool	1. Please use the tool (e.g. screw driver or pliers) to pull the ring.
	2. Faulty safety valve	2. Contact local distributor for service.
No Vacuum	1. Pipeline leakage	Contact local distributor for service.
	2.Vacuum pump fail	

⚠ **CAUTION:** If any other problems were encountered, contact your local dealer at any time for service. DO NOT try to dismantle the sterilizer by yourself, otherwise it may result in severe personal injuries or damage to the equipment.

11.2 Error Code List (for Sterilizer)

ERROR CODE	Description
E01	K-type sensor in chamber is out of connection (EMERGENCY LED indicator is ON)
E02	Door is not closed completely (“ DOOR OPEN ” LED indicator is ON)
E03	Sterilization temperature is over 279 °F (137 °C) (EMERGENCY LED indicator is ON)
E04	Water reservoir is in LOW WATER level condition (LOW WATER LED indicator is ON)
E05	Water in chamber is not enough in first 5 min. during add-water stage.
E06	Sterilization temperature is under than 2 °C exceeding 5 min. during sterilization step (EMERGENCY LED indicator is ON)
E07	EMERGENCY water / pressure exhaust (EMERGENCY LED indicator is ON)
E08	No vacuum has been detected within 10 min of operation.

12. Specifications

Model	**P-M10T**	**P-M10TR**
Capacity of chamber	6.3 Gallons (24 liters)	
Maximum instrument length	13.8 in. (35 cm)	
Maximum load (Solid item)	9.0 lbs (4082 grams)	
Maximum load (Packs)	2.9 lbs (1300 grams)	
External dimensions (D x W x H)	25.8 in. (65.5 cm) x 21 in. (53.3 cm) x 17.4 in. (44.2 cm)	
Chamber dimensions	10.2 in. (26 cm) Diameter x 17.7 in. (45 cm) Depth	
Net weight	127.9 lbs (58 kg)	
Gross weight	134.5 lbs (61 kg)	
Voltage / power (heater) / current	120 V ~ 60 Hz / 1400 W / 12A	
Fuse	15 A x 2	
Water reservoir capacity	1.1 Gallons (4.2 liters)	
Water consumption	0.074 Gallons (0.28 liters) - 0.0925 Gallons (0.35 liters)	
Sterilization temperature	250 °F / 270 °F (121 °C / 132 °C) Bowie Dick test: 273 °F (134 °C)	
Working environment	● Indoor use. ● Under 3,280.84ft (1,000m) (altitude). ● Temperature 41 °F (5 °C) to 104 °F (40 °C). ● Relative humidity 80% RH @ 88 °F (31 °C) to relative humidity 50% RH @ 104 °F (40 °C). ● Voltage fluctuation ±10%. ● Transient overvoltage category II ● Pollution degree 2, in accordance with IEC 60664	
Transportation environment	-50 °F (10 °C) to 158 °F (70 °C), 10% RH to 90% RH	
Storage condition	-50 °F (10 °C) to 122 °F (50 °C), 10% RH - 70% RH	
Atmospheric pressure	7.2 psia to 15.4 psia (49.6 kPa to 106.4 kPa)	
Overpressure protection	Safety valve 40 psi to 41 psi (275.8 kPa-282.7 kPa)	
Overpressure indication	warning LED	
Overheat indication	warning LED	
Water level indication	1. Low water level of the Chamber warning LED 2. Low water level of the water reservoir warning LED	
Door lock indication	Door switch with warning LED	
Pressure indication	Analog pressure gauge	
Function display	LED	
Recorder	—	Yes

Model	**P-M10T**	**P-M10TR**
Cycle Program	1. Wrapped (Textile Packs) 250 °F (121 °C) 2. Wrapped (Pouches) 270 °F (132 °C) 3. Unwrapped 270 °F (132 °C) 4. Handpieces 270 °F (132 °C) 5. Bowie Dick test 273 °F (134 °C) 6. Pump test 7. Re-Dry	
Other controls	1. Vacuum Release 2. Unlock 3. Emergency	
Certifications	ASME Boiler & Pressure Vessel Code, Section VIII, Division 1.	
	IEC 61010-1 IEC 61010-2-040 IEC 61326-1	

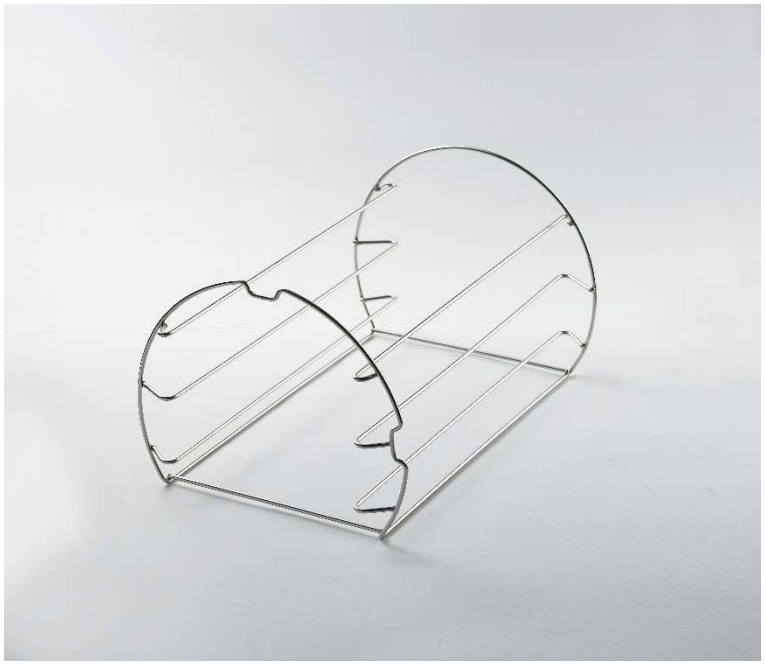
13. Accessories and Spare Parts

Item 1. 424-01001 Cleanser for chamber (CHAM-MATE)

Item 2. 910-04001 Pouch holder

Item 3. 211-02002 Tray Holder

Item 4. 203-02004 Tray Rack



Item 5. 600-22151 Tray

Item 6. 411-01003 Air filter

Item 7. 409-02022 Door Gasket

Accessories and Spare parts list

Item number	Material number	Product name
1	424-01001	Cleanser for chamber (CHAM-MATE)
2	910-04001	Pouch holder
3	211-02002	Tray Holder
4	203-02004	Tray Rack
5	600-22151	Tray
6	411-01003	Air filter
7	409-02022	Door Gasket

14. Warranty

Limited Warranty

For a period of two (2) years or 2,500 cycles, whichever occurs first, AG Neovo guarantees that the LouieP series steam sterilizer, when shipped out by AG Neovo is in new and unused condition.

Two (2) years or 2,500 cycles warranty (according to the invoice date) will cover the performance of all components of the unit except consumable parts such as the door gasket, air filter, and Cham-Mate (chamber and pipe cleaner), provided that the unit is being used and maintained according to the instruction manual. This limited warranty is not transferable or assignable and applied to the first retail purchaser.

In the event of failure due to defects during this warranty or cycle period, the exclusive remedies shall be repaired or replaced only, at AG Neovo's option and without charge, of any defective non-consumable part(s), provided AG Neovo is notified and confirmed such defects by receiving RMA request through https://healthcare.agneovo.com with complete and accurate information, and further provided that the defective part(s) or unit(s) as a whole are returned to AG Neovo designating service center packed in good well-protected or original packing material. It is retail purchaser's obligation to arrange for repair delivery of the unit to AG Neovo Service Center or any authorized dealers for warranty service at retail purchaser's expense. AG Neovo may be contacted for service inquiries by email (service.usdental@agneovo.com); by calling toll-free 1-866-333-3686; or by writing to AG Neovo Technology Corporation Service Center, 2362 Qume Dr. Suite A, San Jose, California 95131.

This warranty shall be considered to be validated if the product is accompanied by the original purchase invoice from the authorized AG Neovo dealer, which included a clear serial number and date of purchased. All retail purchasers must complete Product Registration form at https://healthcare.agneovo.com to keep this warranty validated within **60 days** of purchase (date on invoice). AG Neovo will not accept any other forms of validation. AG Neovo reserves the right to reject or refuse any warranty service with incomplete or inaccurate product registration.

Upon two (2) years or 2,500 cycles and after, all AG Neovo's warranties and other duties with respect to the quality of the product shall be conclusively presumed to have been satisfied. AG Neovo shall not be held liable after such termination and no action or breach of any such warranty or duty may thereafter be commenced against AG Neovo. Warranty period may differ with product and region; please check with your local branch office or sales representative for more detail. AG Neovo reserves the right to refuse any warranty for anyone tempered with the original warranty product(s) and part(s).

Warranty Exclusion

Warranty would not be honored or AG Neovo would not be held liable for damage, deterioration or malfunction resulting from:

a. Accident, abuse, misuse, neglect, fire, water / liquids, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the products.
b. Repair or attempt to repair by anyone included use NON-Genuine parts for repairing not certified by AG Neovo.
c. Any physical damage of the products due to shipping or packing.
d. Disassembly or improper installation and improper cleaning or maintain of the unit not according to the operating guideline in instruction manual.
e. Normal wearing out and tearing.
f. Other causes, which does not relate to product defect or any quality of the product.

Warranty made by authorized personnel or dealers and anything not follow those terms and conditions stated above would considered to be part of Warranty Exclusion.

Name	**AG Neovo Autoclave LouieP Series**
Model	P-M10T / P-M10TR
Telephone	1-408-321-8210
Address	2362 Qume Dr. Suite A, San Jose, CA 95131
Website	healthcare.agneovo.com
Authorized service company	