



Enclave N - Class[®]

Front Loading Autoclave

Steam Sterilizer

Operation Manual

Dear doctor,

We thank you for your confidence demonstrated by the purchase of our Front Loading Autoclave- Enclave.

As an owner-run and operated family concern founded in 1997, we have a long history of successful specialization in hygiene products for practice- based use. Our focus on innovation, quality and continuous improvement in operational reliability has established GDP as the most trusted manufacturers of Autoclave in India.

You, our customer are justified in your demand for the best products, quality and reliability. Providing "**Competence in Hygiene**" and "**Quality – Made in India**", we guarantee that these demands will be met.

Regulatory Requirement

This product complies with regulatory requirements of the following European Directive 93/42/EEC concerning medical devices.

Certification

Manufactory is certified with EN ISO 9001 and EN ISO 13485.

Revision History

REV	ISSUE DATE	REASON FOR CHANGE
Rev-A	24.01.2023	First Issue

Please verify that you are using the latest revision of this document. Information pertaining to this document is maintained on manufactory. If you need to know the latest revision, please contact your distributor, sales representative, or our service department.



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Chapter 1 Introduction

1.1 Attention

This manual contains necessary and sufficient information to operate equipment safely, such as optimal usage, secure and reliable operation, regular and correct servicing requirements.

Read and understand all instructions in this manual before attempting to operate equipment.

Keep this manual with the equipment at all times. Periodically review the procedures for operation and safety precautions.

1.2 Usage Indication

Application to all wrapped or non-wrapped, solid, hollow load products type A and porous products or related articles.

This sterilizer can be used for dental clinic, laboratory, surgical room, emergency room, ophthalmology, gynecology and steam, cosmetic hospital and so on, by dentists and professionals.

Chapter 2 Safety

2.1 General Safety Recommendation

- † The user is responsible for operation and servicing the sterilizer in accordance with the instructions listed in this manual.
- † The sterilizer could not be used for liquid.
- † The sterilizer has not been designed to operate in the presence of gas or explosive vapors.
- † The trays and the load will still be hot at the end of each cycle. Use the tray holder provided to remove each tray from the chamber.
- † Do not open the door of the chamber during the sterilization programs. Do not open the door until the pressure inside chamber is getting to 0bar (0 PSI).
- † Do not put your hands or face on the cover of the sterilizer during the sterilization programs.
- † Do not remove the instruction plate or any label from the sterilizer.
- † Do not pour water or any other liquid over the sterilizer.
- † Do not fill the caustic matter in the chamber.
- † Use only high quality distilled Water & RO Water (TDS Below 50) .
- † Unplug the main lead before inspecting or servicing the machine.
- † Only an approved technician using original spare parts can carry out repairs and maintenance.
- † During the transportation, the sterilizer should be carried by two people in case of turning over.
- † Do not use the equipment for cooking.

2.2 Operation Risk

Please take attention on avoid operation risk during operation.

Scald risk (Burning)

- † Every time open the door after finish one cycle, please keep an appropriate distance, because the chamber still has rudimental steam with high temperature, avoid to be scalded.
- † Every time open the door after finish one cycle, please not touch the main door and chamber, because of high temperature, avoid to be scalded.

Pollution risk

Please clean the chamber after every time, avoid rudimental contamination left inside chamber.

2.3 Protection Device

Device Name	Function
Plastic or fabric glove	Useful during load and remove articles, avoid to be scalded.

Chapter 3 Receiving and Installation

3.1 Check the Package

Please check package carefully when you receive the equipment.

Item	18 L
Packing Size	600x460x455mm
N./G. Weight	25/28 KGs

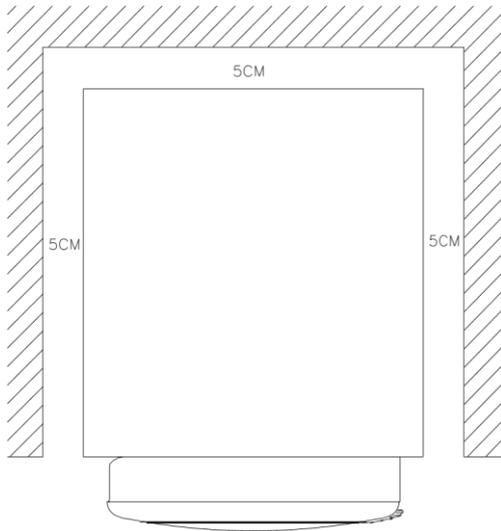
3.2 Unpacking the Accessory

Open the door and take out all the accessories, item listed below:

No.	Part Name	Qty
1	Tray rack	1 piece
2	Tray	3 pcs
3	Removal tool	1 piece
4	Draining tube	1 piece
5	Measuring Mug	1 piece
6	Operation manual	1 piece

3.3 Installation Environment

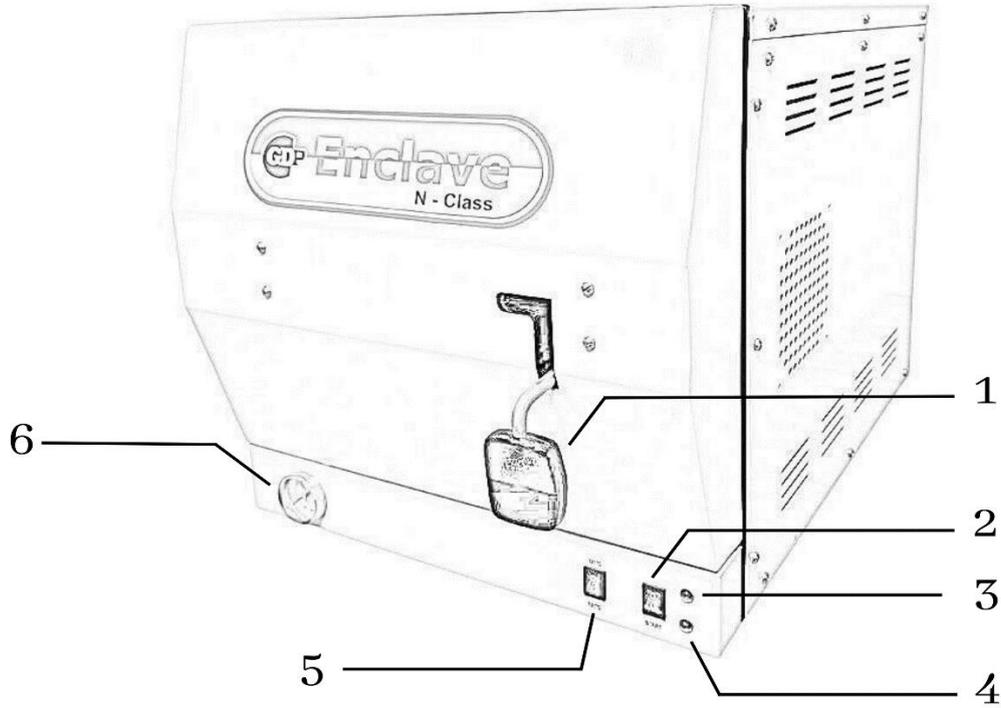
After remove the package, the sterilizer should be set in a level place which at least has 5 cm distance with each side (20cm of the top) as followed:



- The sterilizer should be set in a place with good ventilation;
 - The temperature of environment: 5-40°C ;
 - The humidity of environment: ≤85%; ●
- Atmosphere pressure: 860Hpa~1060Hpa;
- An earth connection is essential (Electrical)

Chapter 4 Description and Specification

4.1 Overview



NO.	Item	Description
1	Door Handle	Push to close the door
2	Cycle Switch	Turn on and off for cycle
3	Power Lamp	Turn Red to Indicate Cycle start
4	Sterilization Lamp	Green lamp on during sterilization cycle
5	Temperature selector	Select Sterilization under 121°C/ 15mins or 134°C/ 6mins
6	Pressure Gauge	Show Chamber Pressure

4.2 Technical Specification

Basic specification

Rated Voltage: AC 220V/ 50~60Hz/ 4A

Rated Power: 1500 WATTS

Fuse: T10A AC220V

Temperature: 5~40°C

Noise :< 50db

The Max. duration of using loading test: 90mins.

Sterilizer Chamber

Material: Aluminum Alloy (for medical)

Work Pressure: -0.9 bar~2.5 bar

Max. Temperature: 145 °C

Chamber Volume: 18L

Loading Size: 18L

Max. Loading Weight: 18L (3.07kg/cm²)

Working Pressure/Temperature: 1.1~1.3bar/ 121~122°C ; 2.1~2.3bar/ 134~135°C

Water Volume for One Cycle: 400ml

Sterilizer Steam Safety Valve

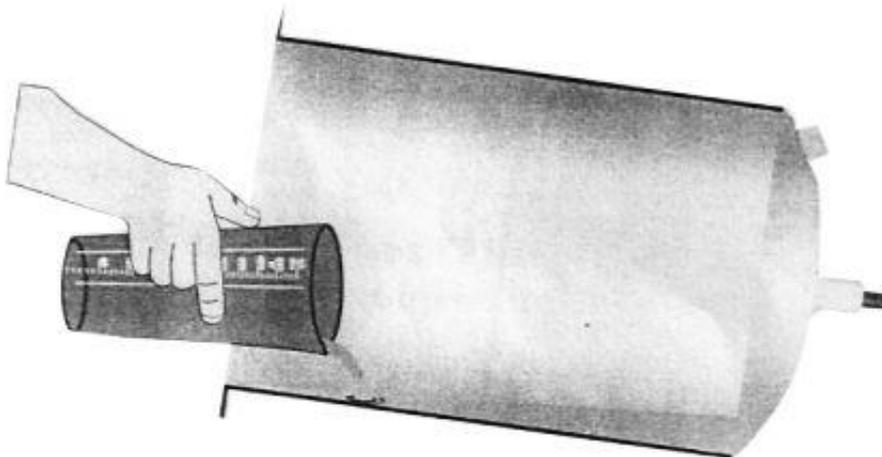
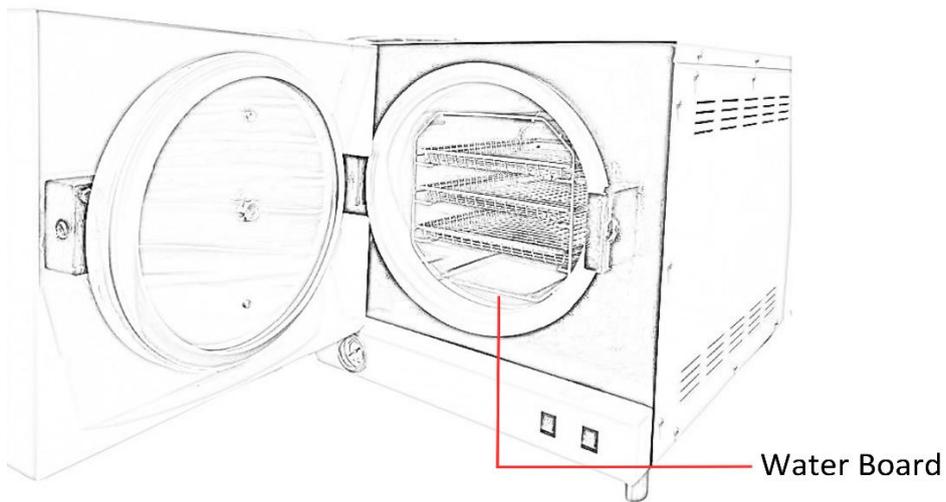
Safety Release Pressure: 2.45 bar

Max. Working Temperature: 160 °C

Chapter 5 Panel and Function

5.1. Open the door and make sure that there is no dust or impurity left inside chamber, fill 400ml distilled /drinking water into the chamber.

MAKE SURE THAT THE WATER SURFACE IS COMING UPTO THE FRONT OF THE CHAMBER. IT IS NOT ALLOWED TO START THE CYCLE WITHOUT WATER.



5.2. Connect one end of the draining tube to the equipment's drain plug at the backside and put the other end into the waste water tank,

5.3. Load the trays into the chamber with tray removal tool, and put the instruments which need to be sterilized on the trays.

5.4. Close the door.

5.5. Turn on the power switch, then set the sterilization temperature, temperature select switch ON: 134°C/ 6mins, temperature selection OFF:121°C/ 16mins. It will start sterilization cycle automatically.

5.7. When the cycle is finished, the green lamp will be off. Then please turn off the cycle on switch to release the pressure inside the chamber to 0 bar,. Then you can open the door.

CAUTION



PLEASE DO NOT OPEN THE DOOR UNTIL THE PRESSURE INSIDE CHAMBER FALLS TO 0 BAR

5.8. Please turn off the power switch and take the instruments out.

5.9 Opening the door in an emergency following a power outage

WARNING

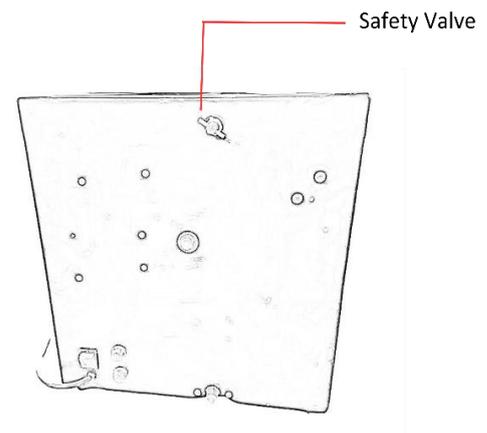


The steam sterilizer must be completely pressure free. Failure to observe this provision can result in scalding/injury.

- No steam may be permitted to leave from between the sterile filter and the rear panel of the steam sterilizer.
- The slide seal grip must be easy to actuate.
- It must be possible to push the door c. 2 mm to the rear with light pressure.
- It is imperative that you allow the steam sterilizer to cool. Metal parts such as the door and chamber can be hot.

Should it not be possible to open the door e.g. following a power outage, taking into account the safety information specified above, proceed as follows:

1. Switch off the steam sterilizer at the mains and remove the plug from the socket.



2. To effect emergency release of the door, rotate the steam release valve knob at the backside anti clockwise to manually Depressurize the chamber. (Please Note to retighten the knob after opening the door.)

3. Open the door.

Chapter 6 Working Phase and Troubleshooting

Phase Description	LED Description	Buzzer	Solution
NO Water	Green light blinks 3 times and off	Continuous buzzer	Check Chamber for Water
Self-test turns off unexpected power outage last time	Red light blinks every 0.5s	Stops 1s between every 0.2s ring	Turn off the power, then restart the equipment
Self-test turns off that air exhausting valve is open	Red light blinks	Stops 1s between every 2 rings	Turn off the air exhausting valve switch, and restart the equipment
Over temperature inside chamber	Red light blinks	Stops 1s between every 3 rings	Stop heating and turn off the power
Sterilization temperature is too low	Red and Green lights blink in turn	Stops 1s between every 4 rings	Loaded too many instruments
Temperature sensor fails	Red light always on	Stops 1s between every 5 rings	Turn off the power and restart the equipment after cooling
Fail to get sterilization temperature in 30mins	Yellow light blinks	Stops 1s between every 6 rings	Turn off power to check if the following situations exist: leakage, low voltage, water inside chamber is not enough

Chapter 7 Maintenance

7.1 Servicing intervals

Interval	Measure	Device components
Weekly	Check for soiling, deposits or damage	Chamber inc. door seal and chamber sealing face, mount for the load
After 24 months or 1000 cycles	Maintenance	By the authorized customer services working in accordance with the maintenance instructions.
As required	Cleaning the surfaces	Housing parts

7.2 Cleaning



NOTICE

Inappropriately performed cleaning can lead to the scratching of and damage to surfaces and the development of leaks in sealing surfaces.

This also favors the development of soiling deposits and corrosion in the sterilization chamber.

- Comply with all information regarding cleaning of the part affected.

Door seal, chamber, chamber sealing face, mount, trays

Check the chamber, door seal, chamber sealing face and the load mount **once a week** for soiling, deposits or damage.

If you find any impurities, remove the trays or cassettes from the chamber from the front. Clean the soiled components.

When cleaning the chamber, load mount and chamber seal face, please comply with the following:

- u Switch off the steam sterilizer before cleaning and remove the power plug from the socket.
- u Ensure that the chamber is not hot.
- u Use a soft, non-fuzzing cloth.
- u First soak the cloth with the cleaning alcohol or spirit and attempt to wipe away impurities.
- u Use a chlorine and vinegar-free cleaning fluid.
- u Use a neutral liquid cleaning agent to clean the door seal.
- u You should not allow cleaning fluid to enter the piping coming from the chamber.
- u Do not use any hard objects such as a metal saucepan cleaner or a steel brush.

7.3 Replacing the Door Gasket

The door seal may not be greased or oiled. It should be kept clean and dry. If the door seal becomes worn or loses form, it must be replaced. Otherwise, this could result in leaks and the egress of steam. The door seal is only inserted in the groove of the round blank and can be changed as follows:

1. Open the steam sterilizer door and remove the old door seal.



2. Insert the door seal in the groove of the round blank.

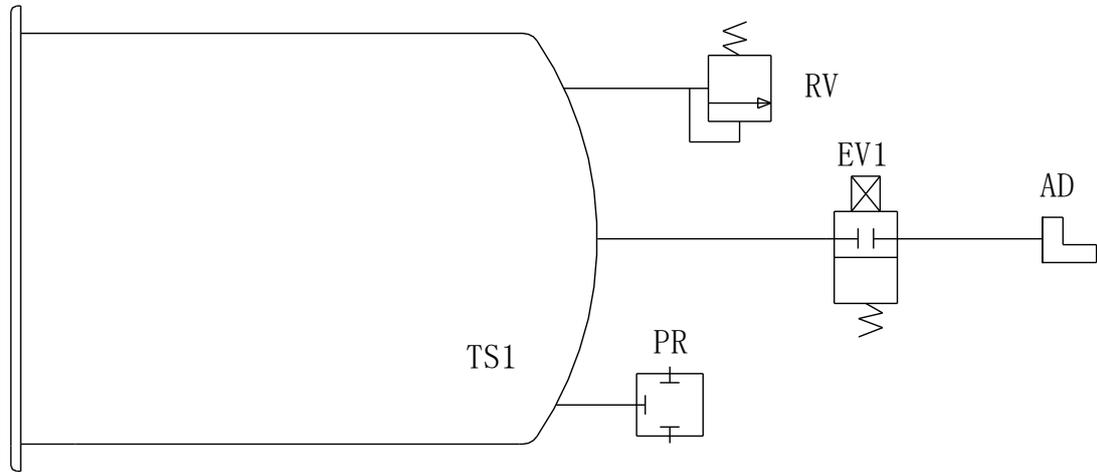


PLEASE NOTE

Make sure that the broad seal face faces the chamber when inserting. The door can only be shut correctly and the chamber sealed, if the door seal sits correctly in the groove.

Appendix Piping Diagram

Piping Diagram



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Code	Name	Code	Name
RV	Relief Valve	PR	Manometer
AD	Air Exhausting Port	TS1	Temperature Sensor
EV1	Solenoid Valve (Normal-Close)		

WARRANTY CERTIFICATE - APPLICATION

NAME _____

ADDRESS _____

CITY _____ **STATE** _____ **COUNTRY** _____

PHONE _____ **PIN** _____

INVOICE _____ **ISSUE DATE** _____

DEALER _____

MODEL- _____ **SERIAL NO.** _____

BATCH _____ **MANUFACTURING DATE** _____



DENTAL PRODUCTS

Manufactured By
Dibya Industries (India)