

T-Classic User Manual

Portable Steam Sterilizer




Tuttnauer
Innovation · Legacy · Partnership



Instructions for use

Please read these instructions before using the autoclave.

Keep these "Instructions for use" in a safe place close by the unit for future reference.

Service Helpline: Telephone: 1-800-624-5836 Ext. 433

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For additional information visit
www.tuttnauer.com/us

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Model No.

Date of purchase.

Serial No.

Section 1: Introduction

Thank you for choosing the Tuttnauer T-Classic Autoclave.

After removing the device from the box, please check for any transit damage, if damage to the devices found, please contact your supplier immediately.

Together with this unit and operating manual, you will find the following:

- Instrument furniture
- Electrical mains cord
- Performance test certificate

Section 2: Operating Symbols, Displays & Controls

The following descriptions refer to the pictures of the controls, display lights and operating symbols opposite.

Controls:

- A Depressurization Valve
- B Start Cycle Button
- C Pressure Rise Indicator
- D Display Panel
- E Top Handle

Do not touch the top handle during or immediately after the cycle has completed as it may be hot.

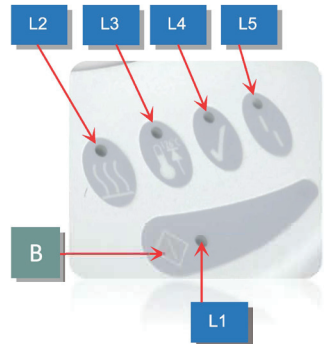
F Steam Duct - **WARNING HOT PART!**

Display lights:

- L1 Power "On" light illuminates **GREEN**
- L2 Heating light illuminates **ORANGE**
- L3 Sterilizing light illuminates **YELLOW**
- L4 Sterilizing complete light illuminates **GREEN**
- L5 Fault light illuminates **RED**

Warning symbols:

- W1 Caution, electric shock hazard
- W2 Warning, read manual before using the autoclave
- W3 Warning, unit must be earthed/grounded
- W4 Warning, heat hazard



WARNING!
Do not touch the body or lid when the autoclave is in operation, as these parts become hot

WARNING!
The main outlet **MUST BE GROUNDED**.
The main plug should always be easily accessible as it is to be relied upon as "the means of disconnection".



Section 3: Getting Started

Before using the autoclave for the first time please take time to read the following pages to familiarize yourself with the operation of the unit.

We strongly recommend that all users of the autoclave are trained in its operation.

The autoclave is very easy to use. By following this simple operating sequence in conjunction with the pictures of the autoclave, its controls, display panel and operating symbols (page 3), you will be able to ensure your instruments are correctly sterilized every time.

3.1 Water

Fill the unit to the water level line on the inside of the chamber with 0.75 Litres of distilled or de-ionised water.

DO NOT USE TAP WATER OR OVERFILL
CHECK WATER LEVEL AFTER EVERY CYCLE

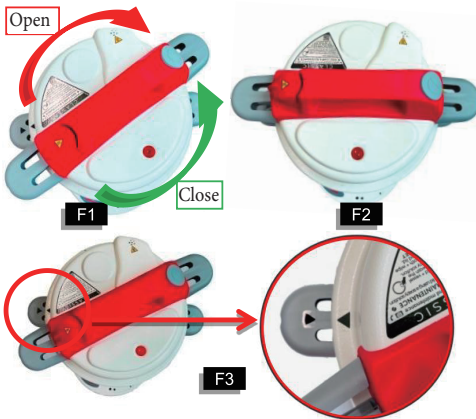
3.2 Loading

Place the instruments into the instrument basket or cassettes, and place in the unit.

Please see section 7 – Technical specification for loading capacities

3.3 Closing

Always place the lid on the autoclave with the Depressurization Valve (A) open. Align the two black triangles on the cover and body as shown in (F3) and turn in a clockwise direction (F1) ensuring the lid is completely closed (F2). Close the Depressurization Valve (A) so it is aligned with the top handle on the lid. Never leave the autoclave in the position as shown in (F1).



3.4 Power connection

Attach the cable supplied to the rear of the unit and plug into a GROUNDED main electrical socket of the CORRECT voltage. Lights: (L1) illuminates GREEN. If this flashes continuously, then there is an error, and you should contact Tuttinauer for further assistance.

3.5 Starting

Start the sterilizing cycle by pressing button (B).

Lights: L1 illuminates GREEN
 L2 illuminates ORANGE

As the temperature rises, air will be displaced by steam through the Air Bleed Device located in the lid, until it closes with an audible "click", sealing the unit.

The Pressure Rise Indicator (C) will rise indicating the unit is now pressurised.

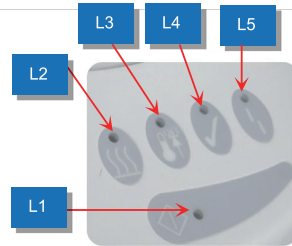
Sterilizing Temperature is reached when:

Lights: L1 illuminates GREEN
 L2 flashes ORANGE
 L3 illuminates YELLOW

Sterilizing Cycle is completed when:

L1 illuminates GREEN
 L4 illuminates GREEN

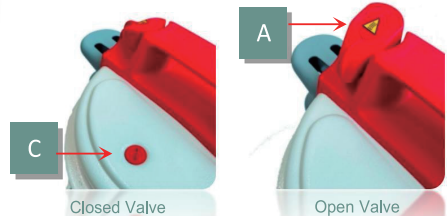
Note: L4 remains GREEN until a new cycle is started or the unit is disconnected from the mains power.



3.6 Depressurizing

Once the sterilizing cycle has been completed, the unit needs to be depressurized and allowed to cool down before the lid is opened and sterilized instruments can be removed.

The time taken to reach the point at which this is safe to do so can be shortened by manually depressurizing the unit. Open the Depressurization Valve (A) by turning slowly in an anti-clockwise direction. The Pressure Rise Indicator (C) will drop once the steam has been released.



WARNING!

There will be a visual and audible release of steam from the rear of the Steam Duct.

3.7 Unlocking

Once the pressure has been released - the lid may be unlocked. Ensure the Depressurization Valve (A) is open. Remove the lid by turning in an anti-clockwise direction (F1).

3.8 Unloading

Lift off the lid, gently place upside down on a solid work surface and leave to cool. Ensure the Depressurization Valve (A) is in the closed position to avoid damaging it.

The basket or cassettes containing the sterilized instruments can now be lifted out of the unit. To avoid damage, replace the lid as described in step "3.3".

3.9 Cycle verification

We recommend the use of a chemical indicator loaded to verify the sterilization cycle. Simply place the indicator strip in with the load. Tuttnauer dealers can supply chemical and biological indicators.

Please note if any of the above indicator tests fail – contact an authorized technician.

STERILIZATION CYCLE HAS NOT BEEN ACHIEVED

WARNING!

Always consult with your instrument manufacturer IFUs for their suitability for autoclaving and the maximum temperature which the instruments can withstand.

Section 4: Continued Operation

To ensure your autoclave gives you the years of service for which it was designed, it is important to remember a few "Do's" and "Don'ts" with regards to the operation of the unit and follow simple care and maintenance procedures:

Do ensure that...

- 1.... You read these instructions and always follow the operating sequence.
- 2.... The work surface on which you will place the autoclave is flat, solid and heat resistant.
- 3.... The instruments are designed to withstand the sterilizing temperature, are thoroughly cleaned and rinsed before sterilizing, and are not any longer than the maximum length, or exceed the load weight, specified – see "Technical Specification" section.
- 4.... The water level is maintained regularly with clean distilled or deionised water only.
- 5.... The unit is in a "draft free" environment and is positioned not less than 10 inches from adjacent walls.

- 6.... You only use the Tuttnauer green high pressure sealing gasket and ensure that it is changed if visibly damaged, or when shrinkage has occurred, see "Fault mode - 5".
- 7.... The lid is securely closed when the unit is not in use, to avoid the risk of accidental damage. Never leave in position as shown in F1. (Page 4)
- 8.... You have the model details, serial number and date of purchase when contacting Tuttnauer or your supplier.
- 9.... Change your water daily

DO NOT...!

- 1.... Touch the unit while it's in operation - it gets HOT!
- 2.... Attempt to remove the lid during operation.
- 3.... Lose this operating manual
- 4.... Add any chemicals whatsoever to the water.
- 5.... Attempt to sterilize volatile substances, toxic materials, or inappropriate loads.
- 6.... Place the unit on heat sensitive surfaces polished wood or glass.
- 7.... Open the Depressurization Valve (A) during the sterilization cycle.
- 8.... Leave the Depressurization Valve (A) in the "open" position when placing the lid upside down on a work surface.
- 9.... Immerse the unit or electrical cord in water when cleaning.
- 10.... Use abrasive materials or lubricants when cleaning.
- 11.... Drop or abuse the unit.
- 12.... Use in areas of risk associated with flammable materials or gases.
- 13.... Attempt to change fuses until the unit has been unplugged from the mains. Only qualified persons should change fuses.
- 14.... Reach over the unit when removing the cover, doing so may cause burns from rising heat and steam.
- 15.... Press the start button once the cycle has been started as this will re-set the cycle timer to zero.

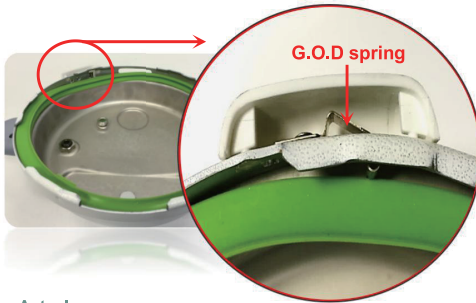
Section 5: Daily Care & Maintenance

WARNING!

Disconnect the autoclave from the mains power supply before cleaning.

Green sealing gasket

- Remove the gasket from inside the lid and clean with warm, soapy water.
- Rinse thoroughly, shake dry, do not wipe.
- Replace the gasket, carefully placing it under the location lugs. Please ensure that gasket sits **against** the Gasket Offset Device as shown in the image below. Please note that the gasket may appear slightly wrinkled until the unit has been used.
- Replace gasket when it begins to show visible signs of degradation and leakage.



Autoclave

- If a new gasket leaks, or if a persistent leak develops, gently clean the sealing surface of both the lid and body of the unit with a light nylon pan scorer, making sure you do not remove any metal. Rinse both surfaces, but do not dry.
- Clean both interior and exterior with warm, soapy water ensuring the electrical parts are kept dry.
- Monitor the first cycle of the day to check the Air Bleed Device, which is located inside the lid, audibly “clicks” shut.
- Lubricate underside of body lugs with “Vaseline” if the lid becomes stiff.

DO NOT LUBRICATE THE GASKET

IMPORTANT!

Tuttnauer recommends that your unit is annually serviced & calibrated by a qualified service technician

Section 6: Troubleshooting

In the event of an error occurring during any stage of the unit's operation, identify the error by referring to the descriptions below. The error can be resolved by following the Troubleshooting Guide applicable to the problem incurred.

Error indication/Description & Troubleshooting

Error 1: No Power to unit

Light: L1 fails to illuminate.

Blown fuse / Defective Socket / Mains not connected

Troubleshoot: Ensure mains lead is connected.

Check / replace fuse: Check power to socket.

Error 2: Boil Dry Error.

Light: L5 flashes RED

Troubleshoot:

i) Check water level – allow unit to cool before refilling to correct water level.

ii) Check & ensure de-pressurization valve is closed.

iii) Clean gasket & vessel rim.

Please contact a Tuttnauer technician if the error repeats after checking and carrying out the above troubleshooting.

Error 3: Sterilization failed to be achieved.

Light: L4 fails to illuminate GREEN.

Troubleshoot: Disconnect from mains then reconnect and repeat

cycle. If the error repeats - contact a Tuttnauer technician

Error 4: Incomplete sterilization cycle

Chemical & Biological Indicators fail.

Disconnect from mains then reconnect and repeat cycle. If the error repeats - contact a Tuttnauer technician.

Error 5: Steam or water leaks from under the lid.

i) Worn or dirty gasket.

Troubleshoot: Wash gasket and sealing surfaces on the body and

lid as described under “Daily Care and Maintenance”. If the error persists, replace with a new gasket.

ii) Incorrectly closed lid.

Troubleshoot: Ensure the unit is fully depressurized by opening

Depressurization Valve (A). Remove lid and re-fit carefully. Disconnect from mains, reconnect and repeat cycle.

Error 6: Excessive steam or water leaking from depressurization valve (A).

Depressurization valve (A) in “OPEN” position, close depressurization valve (A).

Error 7: Settings Issue.

Light L1 flashes continuously, arrange an engineer

Section 7: Technical Specification

In the unlikely event that something should go wrong, we have incorporated a number of safety features to ensure that your autoclave remains safe at all times. Safety features

1. Located in the rear of the lid, beneath the cover, is a spring called the Gasket Offset Device (GOD Spring). This has been designed to prevent pressure building up if the lid has been incorrectly fitted.

DO NOT TAMPER WITH THIS SAFETY DEVICE

2. If for any reason, the temperature falls below the minimum required sterilizing temperature, the Error Light (L5) will be illuminated. Switch the unit off and leave to cool down. Then switch back on. Check gasket, water level and refill if necessary. Run another cycle and if the issue persists contact a Tuttnauer technician.

3. If there is an electrical or electronic failure resulting in a build-up of pressure - in excess of normal operating pressure - one or all of the following safety features will be activated.

i) A pressure relief valve installed within the lid handle (E) will loudly and rapidly "Vent" steam allowing its exit via the Steam Duct (F)

ii) The gasket will "extrude" through the slot in the rear of the lid rapidly releasing excess pressure and steam.

iii) A non-resettable thermal fuse is located in the base of the unit. This will activate automatically if an error was to occur with the unit.

Note: Should any of errors listed occur, please follow these steps:

- a) **Do not touch the unit.**
- b) **Switch off at the wall socket and un-plug**
- c) **Allow temperature and pressure to drop before touching the unit or removing your instruments**
- d) **Do not attempt to re-start the cycle**
- e) **Arrange for an immediate service.**

Technical Specifications		9 Liter
Height		13 Inch
Width		13.4 inch
Net Weight		12.3lbs
Capacity		9 Liters /2.4 Gallons
Internal Chamber Dimensions (d/h)		8/9 inch
Max' Instrument length		8.9 inch
Max' Load Weight		6.6 lbs

Rating - Models are rated continuously for intermittent use.

Body - Deep drawn aluminium.

Lid – Stainless Steel

Heater - Externally surface mounted mechanically fixed electric element.

Temperature cut out - Thermal fuse.

Pressure - Calibrated pressure release valve.

Max. Single Fault Temperature – 271F

Over Voltage Category - Group II

Environment conditions - indoor use - temperature 41F to 104F - altitude up to 2000m - maximum relative humidity 80% for temperatures up to 87F decreasing linearly to 50% relative humidity at 104F -mains supply voltage fluctuations not to exceed +10% of the nominal voltage input Connections - Mains inlet socket 'hot' format conforming to IEC 302.

Safety shut down - See 'Temperature Cut Out'.

Packaging - All packaging materials are recyclable

Section 8: Additional Information

Spares

Only those spare parts supplied or specified by Tuttnauer should be used with the operation and maintenance of the autoclave. Use of unauthorised parts will invalidate any warranty given and may adversely affect the performance and safety of the unit.

Accessories

A range of accessories are available for your autoclave as described below.

Please contact your supplier for further details.

1. 219294 - Lifting device
2. 219708 – 9 Liter Basket
3. 219291 – Cassette Box / 219706 – Cassette Rack
4. 219706 – 3 Cassettes & Cassette Carrier
5. 219500 – Green Silicone Sealing Gasket

Warranty*

This device is covered under Tuttnauer warranty for 1 year - parts and labor

Tuttnauer is not liable if the device has been misused or in the event operator did not adhere to the instructions enclosed or if the autoclave has been mishandled, interfered with, altered, repaired or serviced by any unauthorized party. This may also jeopardize the safety features of the unit.

*This warranty **excludes** the gasket, all internal furniture and consumables.

Approvals

Note: Please ask for details of approvals specific to your model.

- BS EN 61010-1 Safety standard for electrical equipment
- BS EN 50081-1 Electromagnetic compatibility
- ASME VIII Division 1 – Pressure Vessel
- FDA 510(K) – Number K962903 (120v Model)
- CSA / UL – (120v Model)
- TSSA Canadian Design Registration – 120v Model

Cleaning materials

- Mild washing up liquid
- Non-abrasive cream cleaner
- Disinfectant diluted in water - non chlorine base

Packaging

All packaging materials used are recyclable, please dispose of accordingly.