

Vertical Autoclave Sterilizer, Triple Wall SS 304

Operating Manual

Sterilization Equipment

Intended use

Top-loading steam sterilizer for heat- and moisture-tolerant instruments, glassware, culture media, fluids and biohazard waste in hospital, laboratory, veterinary, academic and production settings.

Intended users

Trained sterilization, laboratory or clinical staff. Follow your facility's protocols and applicable regulations.

Read this manual completely before first use and keep it with the product. This document provides general operating, care and safety guidance. Where the product is supplied with manufacturer labeling or instructions, those take precedence. For questions, a replacement copy, or a digital copy of this manual, email sales@scimedstore.com.

1. Safety

Safety warnings and cautions

- This is a pressure vessel. Only trained personnel should operate it. Never open the lid while the chamber is under pressure or the gauge reads above zero.
- Connect only to a correctly rated, grounded supply matching the voltage marked on the unit. Installation should be done by a qualified electrician.
- Never operate without water at the required level. Do not bypass or disable the low-water cutoff, safety valve, vacuum breaker or pressure switch.
- Wear heat-resistant gloves, eye protection and a lab coat or gown when unloading. Hot steam and surfaces can cause severe burns.
- Do not autoclave flammable, volatile, corrosive or toxic chemicals, sealed containers, or materials that are not heat- and moisture-tolerant.
- Loosen caps on bottles and use the slow exhaust approach for liquid loads to avoid boil-over.
- Use distilled or RO/DI water to reduce mineral build-up on the heating element and chamber.
- Switch off and isolate power before cleaning, draining or servicing.

2. Package contents

- Vertical autoclave (selected chamber size) with radial-locking lid and pedal lift
- Water level indicator
- Vacuum breaker
- Automatic low-water cutoff
- Automatic pressure control switch
- Spring-loaded safety valve
- Steam release and water outlet valves
- Power cable (220V)
- User manual and installation guide

Check contents on receipt. Report missing or damaged items to sales@scimedstore.com within 48 hours of delivery.

3. Specifications

Chamber size	Varies by variant: 10 x 18 in (approx. 23 L), 12 x 20 in (approx. 37 L), 14 x 22 in (approx. 55 L), 16 x 24 in (approx. 79 L), 18 x 24 in (approx. 100 L), 22 x 30 in (approx. 180 L), 22 x 30 A Advanced (approx. 180 L)
Construction	Triple wall SS 304; Advanced variant fully SS
Sterilizing condition	121°C at 15 psi (1.2 kgf/cm ²)
Operating pressure range	15-22 psi adjustable
High-temperature range	Up to 134°C (22 x 30 A Advanced variant only)
Hydraulic test pressure	40 psi
Controller	Auto set at 15 psi / 121°C; Advanced variant: PID temperature controller with timer and alarm buzzer
Pressure display	Analog dial gauge; digital PID readout on Advanced variant
Lid	Radial locking, jointless molded silicone rubber gasket, foot-pedal lift
Safety systems	Low-water indicator, automatic pressure switch, steam release valve, water outlet valve, spring-loaded safety valve, vacuum breaker, miniature circuit breaker
Power	220V, 50 Hz (other voltage as specified at order)

4. Unpacking and setup

- 1 Have the unit installed on a level, solid floor that can support its full weight with water and load, with clearance around it for ventilation and service access.
- 2 Have a qualified electrician connect it to a correctly rated, grounded 220V supply (or the voltage specified at order).
- 3 Close the water outlet valve.
- 4 Fill the chamber with distilled or RO/DI water to the level shown on the water level indicator.
- 5 Check that the lid gasket is clean, seated and undamaged.
- 6 Run an empty test cycle and confirm the gauge, controller, safety valve and low-water cutoff work correctly before first use.

5. Operation

Loading and starting a cycle

- 1 Check the water level and top up with distilled or RO/DI water if needed.
- 2 Prepare the load according to your facility's sterilization protocol (clean, dry, wrapped or packed as required, caps loosened on bottles).
- 3 Place the load in the chamber or basket without overpacking so steam can circulate.
- 4 Lower the lid with the pedal lift and tighten the radial locks evenly until sealed.
- 5 Open the steam release valve if your procedure requires air removal at the start, and close it once steam flows steadily.
- 6 Switch on. The unit heats until it reaches the set pressure and temperature (121°C at 15 psi standard).

- 7 Hold for the exposure time required by your facility's protocol for the load type. On the Advanced variant, set the timer and alarm accordingly.

Ending the cycle and unloading

- 1 Switch off the heater at the end of the exposure time.
- 2 Allow the pressure to fall naturally. For liquid loads, let it cool slowly; do not vent rapidly.
- 3 When the gauge reads zero, open the steam release valve slowly to release any remaining steam.
- 4 Wearing heat-resistant gloves and eye protection, loosen the radial locks and lift the lid away from your face using the pedal.
- 5 Let the load stand briefly before removal; handle liquid containers carefully as they may still be very hot.
- 6 Record the cycle and use sterilization indicators per your facility's protocol.

6. Cleaning and disinfection

- Switch off, isolate power and allow the unit to cool fully before cleaning.
- Drain the water through the water outlet valve at the end of each day or as required by your facility, and refill with fresh distilled or RO/DI water before the next use.
- Wipe the inner chamber with a soft cloth and mild detergent, rinse with clean water and dry. Do not use abrasive pads, bleach or chloride-containing cleaners on stainless steel.
- Clean the lid gasket with a damp cloth and check it for cracks.
- Wipe the exterior with a damp cloth.

7. Maintenance and storage

- Check the water level before every cycle.
- Inspect the lid gasket regularly and replace it if worn, hardened or cracked.
- Test the safety valve operation periodically as described in your facility's maintenance procedure.
- Descale the chamber and heating element if mineral deposits form.
- Have pressure gauge accuracy, safety devices and electrical connections checked periodically by qualified service personnel.
- Monitor sterilization performance with chemical and biological indicators per facility protocol.

8. Troubleshooting

Problem	Likely cause	What to do
Unit does not heat	No power, circuit breaker tripped or low-water cutoff active	Check the supply and circuit breaker; check and correct the water level.
Pressure does not rise	Lid not sealed, steam release valve open or gasket damaged	Close the steam release valve, re-tighten the lid locks evenly, and inspect or replace the gasket.
Steam leaking from the lid	Gasket worn or locks tightened unevenly	Switch off and depressurize; re-seat or replace the gasket and tighten locks evenly.
Safety valve releasing steam	Pressure above set limit or pressure switch fault	Switch off and allow to cool; contact service before further use.
Liquids boil over	Pressure released too quickly	Allow liquid loads to cool slowly before venting.
Wet packs after cycle	Overloading or insufficient drying	Load less densely and allow loads to dry per your facility's procedure.

9. Disposal

- Decontaminate the chamber before disposal if it was used for biohazard waste.
- Drain all water.
- Recycle stainless steel and dispose of electrical components as electronic waste in accordance with local regulations.

10. Warranty and support

Products are covered by SciMed's standard warranty (12 months from purchase unless a different period is stated on your invoice). Warranty terms: scimedstore.com/pages/warranty.

Support, spare parts and additional copies of this manual: sales@scimedstore.com. Please include your order number and a photo of the product or issue.

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