

## Steelco VS L range

Bulk Laboratory Steam Sterilizers





# Driven by customer needs

Steelco is a leading infection control solution provider, supplying the healthcare, laboratory research and pharma sectors. Active in over 100 countries, Steelco has equipped numerous world renown hospitals and counts among its customers household names in the laboratory, pharmaceutical and industrial sectors.

Driven by customer feedback, Steelco develops, manufactures and supplies solutions that maximize infection control safety and contamination prevention, optimize processes and minimize costs.

Our focus on innovation has led us to become leaders in areas such as automation, improving the efficiency and working environment of those that use Steelco products.

Whether you are just wishing to replace a single small machine or **requiring assistance in designing and equipping your scientific or research laboratory**, Steelco and it's factory trained dealers are here to help you make the best decision possible that works for you and then support you every step of the way.



Steelco's catalogues of the **washing systems for life sciences and laboratory applications:**

Washer disinfectors for **life science applications**



**Laboratory glassware** washer disinfectors



# Steam sterilizing autoclaves

## for pharma and research laboratories

Steelco is the ideal partner for the sterilization of glassware and other items used in laboratory activities or life sciences applications. Customers appreciate the **versatility, intuitive functionality, high performance** and **reliability** of the VS L Series. With an extensive range, models are available for any size facility.

Our experienced layout design team can help you plan your new or refurbished department and our process engineering team can develop cycles specifically to best meet your needs.



*R&D Department*

*Scientific Laboratories*

*Pharmaceutical Laboratories*

## Supporting you every step of the way

Steelco provides technical service and user training courses at the Steelco Academy. Our optional remote diagnostics capabilities and worldwide team of factory trained engineers ensure that you receive the service support you need to cost effectively maximize the uptime of your sterilizers. Spare parts are readily available from Steelco logistic and technical support center.



Steelco's catalogues for the **pharmaceutical applications:**

Pharmaceutical **washing and sterilization** systems





# Steelco VS L bulk range

## bulk steam sterilizers for your life science laboratory

Steelco steam sterilizers VS L series are designed for laboratory applications including research laboratories, bio-containment and animal care facilities.

VS L bulk sterilizers are engineered to offer best in class solutions for the reduction of energy and water consumption to give users lowest operating costs per load, ECO water saving packages reduce water consumption to nearly zero depending on chosen model and options

**Up to 10 standard chamber sizes with a volume from 905 to 9.070 litres** are available with pressure vessel and relief valves that are PED and/or ASME marked or according to the directives of the country of destination.



### **VS L Bulk Range**

*Automatic horizontal sliding door  
or manual hinged door*

Chamber volume

**from 905 litres (32 ft<sup>3</sup>)  
to 9.070 litres (320 1/3 ft<sup>3</sup>)**

## Standard compliant

Steelco manufactures according the ISO 9001 quality system. Steam sterilizers VS L series meet the following standards requirements:

- 2006/42/CE (Machinery Directive)
- 2014/30/EU (EMC Directive)
- 2014/68/UE (PED)

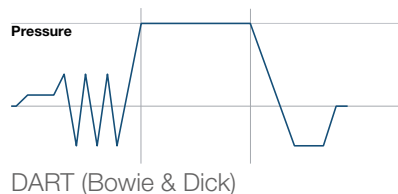
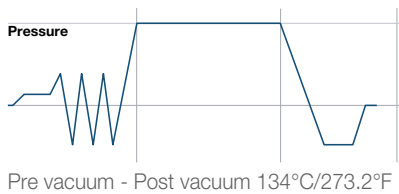
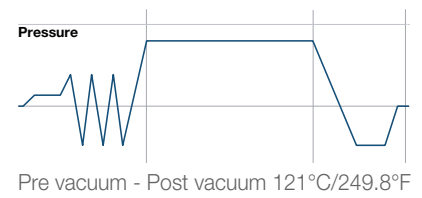
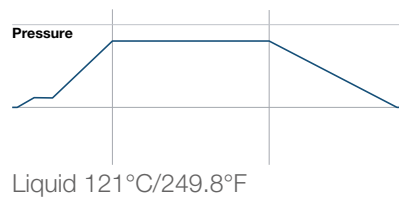
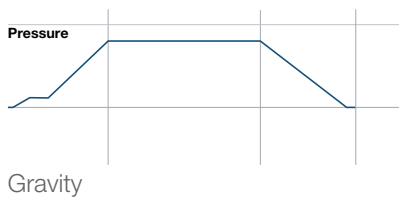
Additional technical norms and standards (according to country of destination and customer requirements):

- IEC 61010-2-040
- EN ISO 12100
- EN 61326
- EN 13445
- EN ISO 9712
- EN ISO 9606-1
- EN ISO 15614-1
- ASME code Sec.VIII div. 1 & div. 2
- UL compliant
- EN 285 (available upon request)

- **ECO water saving options**, unrivalled levels of efficiency.
- Single and double door pass through options.
- Manual hinged or automatic sliding door
- Technical service access either on the left or right loading side.

## Cycle configuration to match your process needs

The following cycles are factory programmed and included as standard.



Jacket cooling, air over pressure with jacket cooling, effluent decontamination, low temperature cycle and  $F_0$  function are available **as option**.

Steelco can develop and provide specific cycles to meet individual customers needs.

## Steelco VS L Small & Medium Range



Chamber volume  
**from 110 litres (3 <sup>8</sup>/<sub>9</sub> ft<sup>3</sup>)**  
**to 920 litres (32 <sup>1</sup>/<sub>2</sub> ft<sup>3</sup>)**

Steelco has developed a wide range of small and medium sized autoclaves. **Up to 8 standard chamber sizes** with a volume from 110 to 920 litres.





# Steelco VS L range

Bulk laboratory steam sterilizers



## Key features

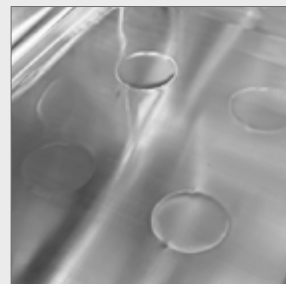
- AISI 316L stainless steel chamber with high efficiency heat transfer **full jacket system** for even heat distribution
- Doors internally made of **stainless steel AISI 316L** with no welding
- **Heat insulation** with durable reusable **cover** for fast service maintenance at a lower cost
- **Load control probe** included as standard
- Colour touch screen HMI with multi level user access system
- Built-in printer for process recording
- Non proprietary widely available durable spare parts
- **ECO cool down water saving system** included as standard



User friendly colour touch screen.



Integrated printer and ethernet port.



Full high efficiency heat transfer jacket system.



Piping made of AISI 316L stainless steel, available as option.

## Flexible configuration



horizontal sliding  
left or right



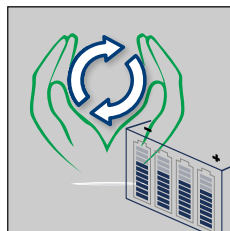
hinged door  
left or right

- *Single or double doors for pass through installation\**
- *Sliding or hinged, automatic or manual doors\**
- *Technical area either on the left or right side\**

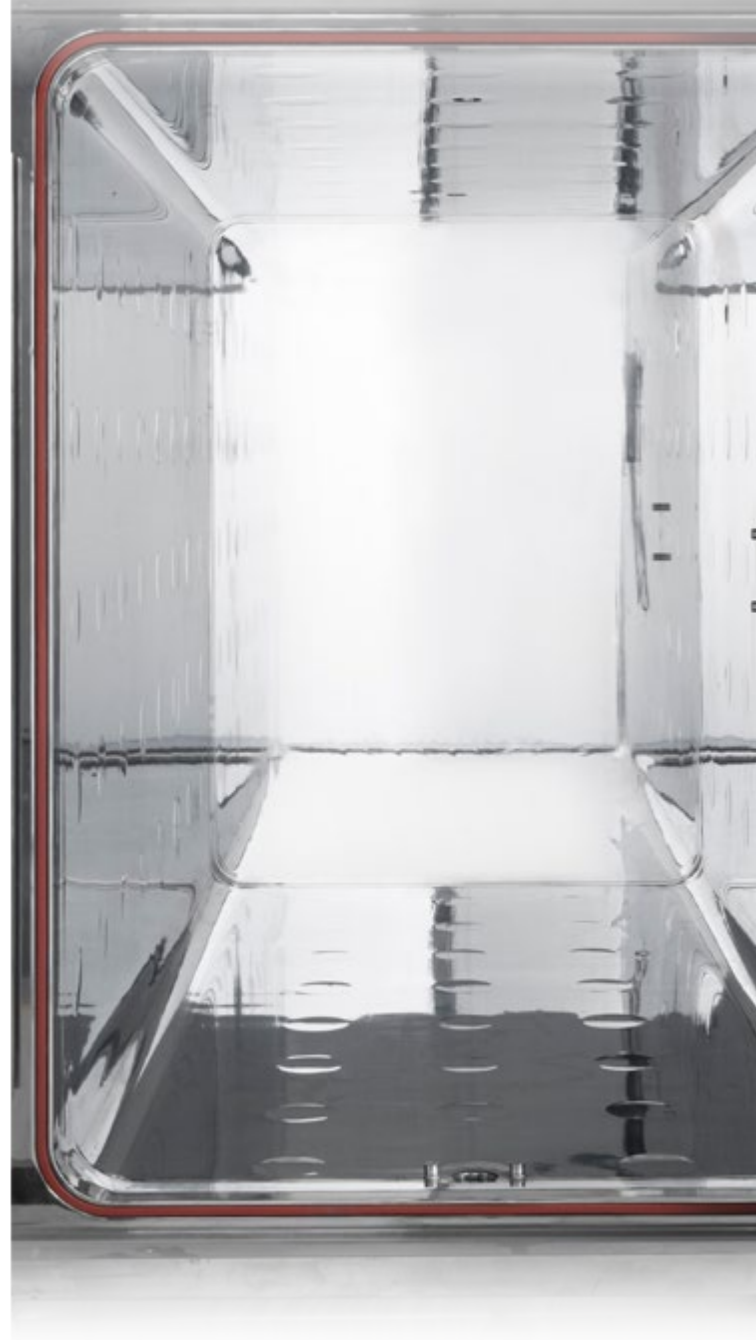
\* *Limitation may apply based on country destination and sterilizer model/configuration*



Air-differential seals  
available as options



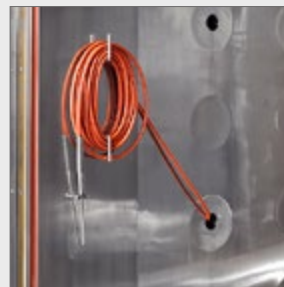
UPS option for up to 5  
minutes of continuous  
operation in the event of a  
power failure.



Door internally made of stainless steel AISI 316L with no welding. Safe, hermetically sealing for durability and reliability.



Heat insulation with durable fabric covering for improved service maintenance.



RTD (Resistance Temperature Detectors) temperature probes.



High efficiency water ring vacuum pump.



# ECO water saving options

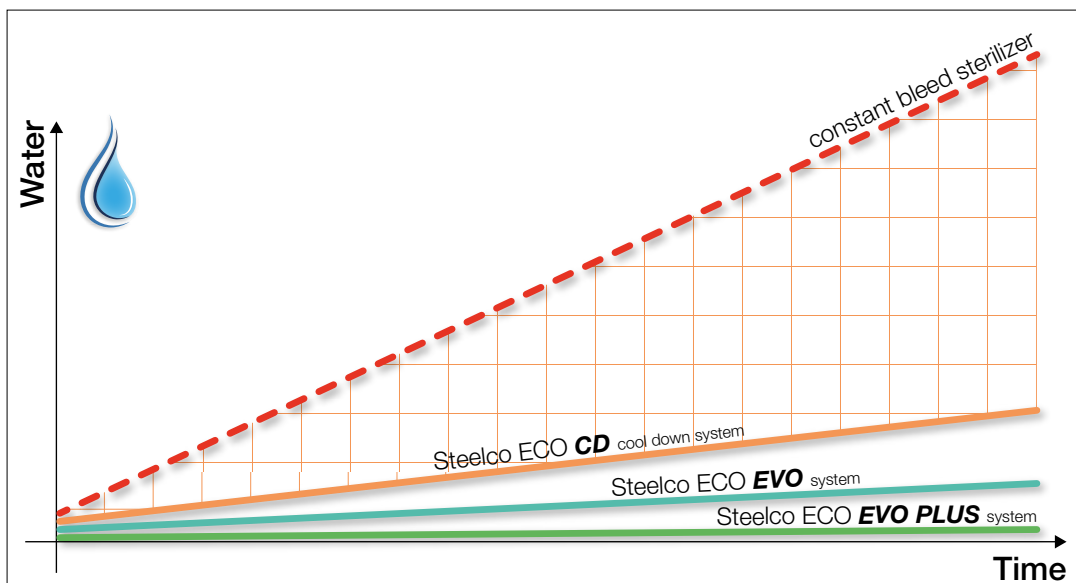
Unrivalled levels of efficiency

Steelco's sterilisers set new standards in utilities reduction.

Water saving options can reduce water consumption to nearly zero depending on chosen model and water saving configuration.

As part of its environmental water saving policy, Steelco equips **all sterilizers as standard** with its **ECO CD cool down system** water saving package.

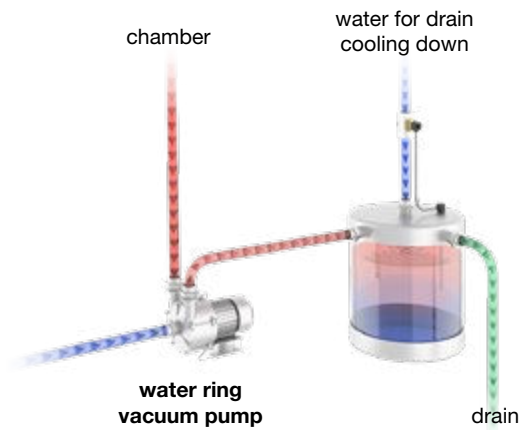
## Every drop counts!





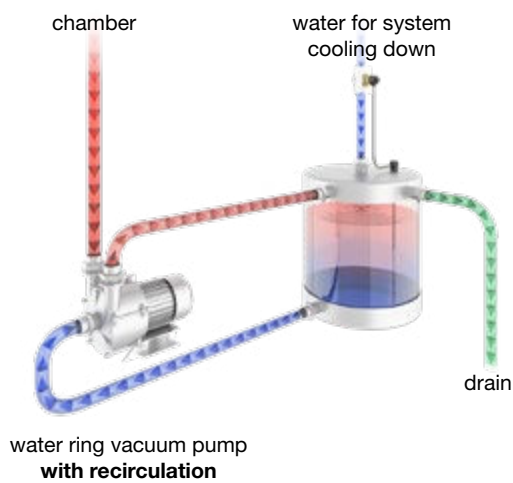
## ECO configurations

### **CD** cool down system



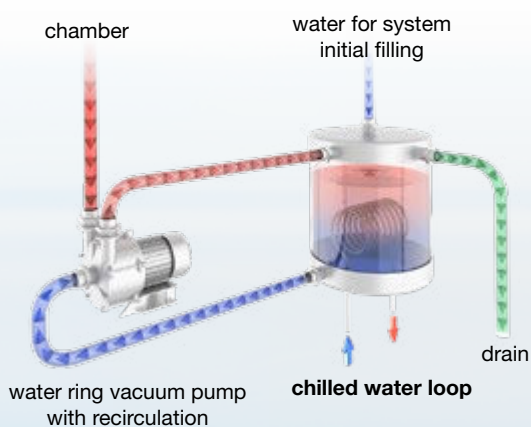
The system consists of a tank that collects both chamber and condensate drains.

### **EVO** system



The system consists of a tank that collects both chamber and condensate drains. Collected water is re-circulated to feed vacuum systems.

### **EVO PLUS** system



The system consists of a water tank that collects both chamber and condensate drains. Collected water is re-circulated to feed vacuum systems. The system exchanges heat with a chilled water loop from building.

# Machine configuration

## Standard features

- Chamber made of AISI 316L stainless steel
- Piping and valves in copper-brass
- Single door
- HMI - HAKKO 7" touch screen display operating panel with PLC Saia, positioned on side of the chamber.
- On board thermal printer
- Vacuum Pump
- CD Cool Down
- Steam from building
- Pneumatic valves
- Load Control Probe
- Gravity Cycle
- Liquid Cycle
- Pre-Post Vacuum cycles
- Leak Test
- DART (Daily Air Removal Test) cycle
- Hinged front cabinet panel
- Chamber rails or chamber tracks located on the floor of the sterilizer chamber
- EN 285 (applicable requirements).
- ASME vessel and safety valves
- Loading accessories (not included)

## Options

### Structural machine configuration

- Second Door
- Chamber and doors polish finishing
- Chamber in 316TI stainless steel
- Air differential seal
- Side and top panels
- Floating switch for vessel
- Seismic Tie-Down Kit
- Seismic Calculations

### Hydraulic configuration

- 316L Stainless steel process-steam wetted piping
- 316L Stainless steel valves and components
- Steam Filter for direct steam feeding
- On board 316L stainless steel Electric boiler
- On board 316L Stainless steel Steam to Steam boiler for clean steam application
- Combined functioning: building Steam/Electrical boiler made of 316L Stainless steel or Carbon steel
- EVO cool down
- EVO PLUS cool down
- On board Air Compressor for valves and gasket only

### Process cycle

- Jacket cooling with cold water
- Jacket cooling with water recirculation system
- Air Over Pressure with Jacket cooling
- Thermocouple fitting
- Pipework for testing clean steam quality - in compliance with EN 285
- Automatic air detector system - allowing also manual operation - in compliance with EN 285

- Manual air detector system - manual operation with check valves - in compliance with EN 285.
- Degassing system for feeding boiler water
- Effluent Decontamination feature
- Additional filter for effluent decontamination feature
- Incinerator for effluent decontamination feature
- F0 function
- Low Temperature Cycle
- Water shower + counter pressure
- H2O2 port

### Control options

- HMI full capability on unload side
- Control panel on loading side SIEMENS IPC377E Family 15" TOUCH with PLC and developed with WinCC Advanced according 21 CFR 11
- SteelcoData View - cycle traceability software
- Connection for remote monitoring (tele-service)
- UPS - Uninterruptible power supply
- Volt free contact
- USB port

### Further options

- Knocked down delivery

### Accessories

- Fixed height loading carriage + loading car with 3 perforated shelves
- Load cart for floor loading
- Additional loading car with perforated shelves
- Additional fixed height loading carriage for unload side

### Documentation & Validation

- FAT Steelco standard Laboratory protocol and execution
- IQ-OQ protocols
- SAT Steelco standard Laboratory protocol
- Calibration certificates at factory's site
- 100% test I/O PLC at factory's site
- Temperature mapping test at factory's site

## Car and carriage

Fixed height loading carriage and loading car with 3 height adjustment shelves. Shelves can hold 100 Kg (220 lbs) evenly distributed on the shelf. Load cart for floor loading: Upon request is possible to order a load cart for floor loading installation made of 316 stainless steel.



# Capacity and dimensions

## VS L - Bulk capacity range

All models are available in **single or double** door version.

Overall dimension depends on sterilizer model/configuration. Custom sizes also available.

Model	Door opening	Door	Capacity (Liters/ft <sup>3</sup> )	Chamber dimensions (mm/inch)			Overall dimensions (mm/inch)		
				Width	Height	Depth	Width	Height	Depth
VS 264151 L	Sliding Horizontal	Single	<b>905</b> 32	<b>670</b> 26 1/2	<b>1050</b> 41 1/4	<b>1286</b> 50 3/4	<b>1860</b> 73 1/4	<b>1900</b> 74 3/4	<b>1592</b> 62 3/4
		Double	<b>922</b> 32 1/2	<b>670</b> 26 1/2	<b>1050</b> 41 1/4	<b>1310</b> 52 1/2	<b>1860</b> 73 1/4	<b>1900</b> 74 3/4	<b>1592</b> 62 3/4
VS 264175 L	Sliding Horizontal	Single	<b>1330</b> 47	<b>670</b> 26 1/2	<b>1050</b> 41 1/4	<b>1886</b> 74 1/4	<b>1860</b> 73 1/4	<b>1900</b> 74 3/4	<b>2192</b> 86 1/4
		Double	<b>1344</b> 47 1/2	<b>670</b> 26 1/2	<b>1050</b> 41 1/4	<b>1910</b> 75 1/4	<b>1860</b> 73 1/4	<b>1900</b> 74 3/4	<b>2192</b> 86 1/4
VS 364872 L	Sliding Horizontal /Hinged	Single or Double	<b>2040</b> 72	<b>914</b> 36	<b>1219</b> 48	<b>1829</b> 72	<b>1795</b> 70 3/4	<b>2012</b> 79 1/4	<b>2192</b> 86 1/4
VS 355764 L	Sliding Horizontal	Single or Double	<b>2130</b> 75 1/4	<b>900</b> 35 1/2	<b>1450</b> 57	<b>1630</b> 64 1/4	<b>2585</b> 101 3/4	<b>1946</b> 76 1/2	<b>2088</b> 86 1/4
VS 415798 L	Sliding Horizontal	Single or Double	<b>3800</b> 134 1/4	<b>1050</b> 41 1/4	<b>1450</b> 57	<b>2500</b> 98 1/2	<b>2910</b> 114 1/2	<b>1950</b> 76 3/4	<b>2964</b> 116 3/4
VS 398787 L	Sliding Horizontal	Single or Double	<b>4840</b> 171	<b>1000</b> 39 1/4	<b>2200</b> 86 1/2	<b>2200</b> 86 1/2	<b>2693</b> 106	<b>2712</b> 106 3/4	<b>2664</b> 105
VS 3583106 L	Sliding Horizontal	Single or Double	<b>5100</b> 180	<b>900</b> 35 1/2	<b>2100</b> 82 3/4	<b>2700</b> 106 1/4	<b>2543</b> 100	<b>2600</b> 102 1/4	<b>3164</b> 124 1/2
VS 498686 L	Sliding Horizontal	Single or Double	<b>5940</b> 209 3/4	<b>1245</b> 49	<b>2184</b> 86	<b>2184</b> 86	<b>3213</b> 126 1/2	<b>2768</b> 109	<b>2664</b> 105
VS 4987103 L	Sliding Horizontal	Single or Double	<b>7170</b> 253 1/4	<b>1250</b> 49 1/4	<b>2200</b> 86 1/2	<b>2607</b> 102 3/4	<b>3243</b> 127 3/4	<b>2700</b> 106 1/4	<b>3073</b> 121
VS 4383130 L	Sliding Horizontal	Single or Double	<b>7625</b> 269 1/5	<b>1100</b> 43 1/4	<b>2100</b> 82 3/4	<b>3300</b> 130	<b>2943</b> 115 3/4	<b>2600</b> 102 1/4	<b>3764</b> 148 1/4
VS 5186126 L	Sliding Horizontal	Single or Double	<b>9070</b> 320 1/4	<b>1300</b> 51 1/4	<b>2180</b> 85 3/4	<b>3200</b> 126	<b>3363</b> 132 1/2	<b>2930</b> 115 1/4	<b>3700</b> 145 3/4





**Miele** Group Member



Products offered for sale may differ from those described or illustrated in this brochure due to later production changes or/and optional configurations. The products and technical specifications are subjected to change without prior notice. Please consult your Steelco dealer for the latest information.

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