

## Washer disinfectors

Small - Medium range





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## Small - Medium range

Steelco continues to grow and enhance its international reputation in **healthcare** through its strategy of investment in product development.

This **small-medium range of washer disinfectors** is at the forefront of the latest research and technology, resulting in consistently tested and efficient washing performance. Our approved products are designed to satisfy all customer expectations thus ensuring a strong platform to promote further business opportunities.



- > DS 50
- > DS 50 DRS hot air drying
- > DS 50 HDRS hot air drying
- > DS 50/2 DRS hot air drying pass-through

- > DS 500 SC
- > DS 500 CL hot air drying
- > DS 500 DRS hot air drying

8 DIN 1/1 trays  
washer disinfectors

- > DS 600/1
- > DS 600/2

8 DIN 1/1 trays  
washer disinfectors

## Standard compliant

Steelco Washer-Disinfectors are designed and constructed to comply with the latest European and UK guidelines on decontamination. EN ISO 15883-1/2, CEN ISO/TS 15883-5 and HTM 2030. Steelco Washer-Disinfectors are classified CE Medical Device (Community rule 93/42/CEE) code nr. 0051.





Constant improvements and innovations lead **Steelco** products to run economically and reach a higher level of environment compatibility.

### Machines baskets, inserts and accessories

*“the range offers to customers a large choice of machines, baskets and inserts all specifically designed to meet different end user needs”*



- > DS 610/1
- > DS 610/2

Fast Cycle version



10 DIN 1/1 trays  
washer disinfectors

- > DS 610/1 SL sliding door
- > DS 610/2 SL sliding door

Fast Cycle version



10 DIN 1/1 trays  
washer disinfectors

- > ID 300  
Instrument drying cabinet

- > AD 400  
Instrument, anaesthesia bags and hanging hoses mixed drying cabinet

- > BD 500  
Warming cabinet for blankets

Other medical range  
Steelco products:

ARES  
Endoscope Reprocessing System



Washer disinfectors  
CSSD range, systems and automations





## Cleaning effectiveness

The **Mechanical** action is one of the main element for the cleaning effectiveness of the washing process, Steelco has studied different washing pumps, following each model washing circuit that ensure high flow rate combined with effective spray pressure.

According to internal procedures, an ultrasonic cleaning unit can be used as an alternative support to the manual cleaning to remove biological debris in the most intricate shapes and cavities before the washing disinfection process.



Ultrasonic cleaning system washing tanks are made of stainless steel AISI 316L, the external body in AISI 304.

Pneumatic lift of the baskets with security device.

Basket support provided with 6 luer lock connections.



Inner cabinet, washing arms and tank filters made of high quality AISI 316 L stainless steel (DIN 1.4404).

External cabinet made of AISI 304 stainless steel (DIN 1.4301).

Construction system with total removal of angles.

Self cleaning tank with rounded edges.

Water filtering system in three levels.



## Ultrasonic cleaning

Ultrasonic cleaning acts on immersed surfaces thousands times a second to insure perfect cleanliness even on the most intricate shapes. Ultrasonic cleaning is safe for the most delicate and highly finished objects since there are no abrasives or harsh chemicals used and does not create scratches which would create cleaning problems later.

Steelco ultrasonic cleaners are available in several versions, all featuring automatic tank filling and water control level with water recirculation through luer lock connections for hollow instruments during the cycle.

## Thermodisinfection and drying capabilities

Thermodisinfection is the recommended and most efficient method for the disinfection of reusable medical devices. European guidelines strongly recommend thermodisinfection to be applied whenever it is possible. To grant the best results, Steelco washer disinfectors are also equipped with efficient hot air drying systems that facilitates the total elimination of remaining water both inside and outside the instruments.



Thermodisinfection is achieved by gaining a temperature up to 93°C and its holding for a programmable period, for each single cycle, in order to comply with any legal provisions regarding thermodisinfection among different countries.

Temperature check by means of 2 PT1000 independent probes.

Every detail of washing and drying circuits has been optimised for the best performances. Process valves, piping and blowers are designed for the least possible resistance in the system and to increase the water and the air flow into the chamber and through the carts.

## Washers key features

- Up to four liquid dispensing systems for detergent dosing.
- Three water connections are available: cold, warm and DI water. Between each washing and disinfection phase water is drained and clean water is introduced for the next phase. Boiler or tanks for pre-heating of DI water option are available. Triple water filtering system grants to capture all the residue so that it is not recirculated and thus saving the pump life.
- Double wall construction and high quality insulation reduce electricity consumption and heat loss.
- High flow capacity built-in water softening systems for a continuous supply of softened water.
- Water purification systems for DI water supply are available.



## Control system

Steelcotronic Control System, with its auto-diagnostic checking, constantly monitors and displays current cycle status and alarms. It allows the user to optimise the washing process and to personalize the programmes on the machine.



The ease in using the touch control system, thanks also to the graphic colour LCD display, simplifies the end user job when operating the machine. The glass panel guarantees the operator a better protection against any contamination when selecting the cycle type.



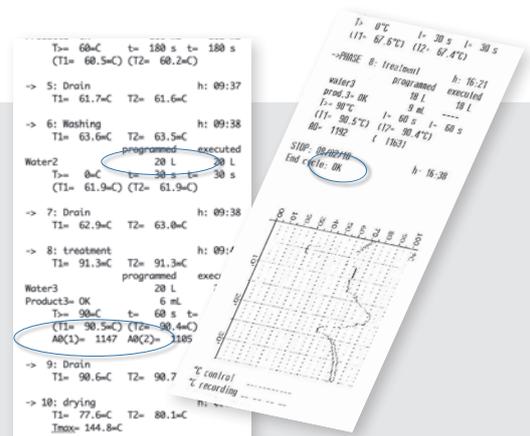
A USB port is available for the download of historical cycle data and for easy software upgrades. USB port allows an easy paperless document flow. Documents can be opened directly by common office applications.

## Print reports and historical cycle data

During every washing cycle, the machine software generates a report that can be printed or stored on a USB memory key, or transferred to a PC connected via Ethernet or RS232 port.

All critical parameters are registered, in particular:

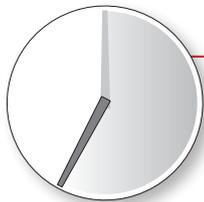
- machine model and number, operator identity,
- cycle starting/ending date and time, status at the end of the washing cycle,
- executed A<sub>0</sub> values,
- programmed and executed water and chemical consumption,
- temperatures measured by nr. 2 independent monitoring probes during each cycle phase.



## The Fast Cycle concept

Steelco follows the more and more growing Customer demand for washer disinfectors which can combine high standard cleaning and drying results with working efficiency and very short cycle time.

### Save time and save energy



**35 Min. Cycle Time**

#### Fast Cycle concept

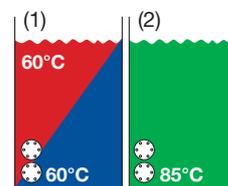
*“combines the energy saving concept with a high standard of cleaning and drying performance in a very short cycle time”*

Thanks to the experience we Steelco has with the manufacturing of our DS 1000 3S and DS 800 2S CSSD models for which a standard cleaning, disinfecting and drying cycle time has been reduced up to 30 minutes, Steelco has now developed new fast cycle machines for the middle size washer disinfectors range.

DS 610 SL (sliding down door) and DS 610 (hinged door) machines have been developed in Fast Cycle configuration to achieve effective washing and drying results in a 35 minutes cycle time.

Focused on the environmentally consciousness theme Steelco has greatly improved working efficiency with the reduction of energy consumption due to cycle time reduction and thermal insulation.

### 2S standard fast cycle



Pre heated tanks

■ washing water

■ rinsing water

■ demineralized water

The pre heated 60 °C hot water washing tank (1) allows to reduce washing process time and consequently the total cycle time. Saving heating time in the washing chamber, avoids washing chamber to cool down thus reducing energy loss. While the machine is performing the washing phase, the washing tank (1) is filled with rinsing water and pre heated to 60 °C.

The pre heated 85 °C demineralized water tank (2) allows to radically reduce thermodisinfection process time and consequently the total cycle time.

A further step in energy and time saving can be achieved by an optional highly efficient heat exchanger that recovers washing and rinsing drain hot water energy to pre heat DI water.

Steelco offers a complete accessories range: transport trolleys, wash carts, inserts, trays, complements





## DS 610/1 SL - DS 610/2 SL

### Sliding down door washer disinfectors

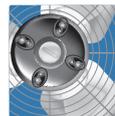
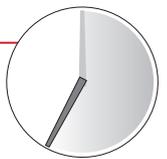


A fully automatic washer disinfectator with **motorized vertical sliding down door** available in **single or double door pass-through** version, **standard or fast cycle concept version**.

The large capacity of this model assures consistently tested and efficient washing-disinfecting performances and can meet at the same time high reprocessing needs of a TSSU/CSSD solution.

**Fast Cycle concept - 35 min. cycle time**

*"combines the energy saving concept with a high standard of cleaning and drying performance in a very short cycle time"*



Filtered forced hot air drying system ensures perfect drying of all instruments and tubes after disinfection thanks to an efficient distribution of air on all chamber parts and wash cart levels.



All loading and unloading operations can be done by using manual transfer trolleys or automatic single loading/unloading conveyors.

Washing chamber



Chamber volume ~250 lt / 66.04 Gal US  
Basket volume ~220 lt / 58.12 Gal US



Sliding down door

Sliding down door allows a reduced machine encumbrance and is ideal in every reprocessing area also when the space is very limited.

The full HST glass motorized door provides the end user with a complete visual inspection during washing cycle.

## DS 610/1 SL - DS 610/2 SL - Key features

- High safety and easy to use soft touch control system on glass panel with LCD colour display to visualize cycle status.
- 20 standard pre-programmed cycles available and 20 additional cycles available for customization.
- RS 232 port for printer connection to monitor/validate the washing phases.
- Motorized sliding down glass door made of double HST tempered glass.
- Ergonomic design of the door level height allows convenient loading and unloading operations.
- An efficient filtered forced air drying system with adjustable time and temperature setting, helps to ensure the complete inside and outside drying of all the surgical instruments and tubes.
- Washing and DI disinfection temperature are fully adjustable up to 93°C. Temperature is monitored by two independent sensors.
- Machine can be equipped with a steam condenser to prevent vapours from entering into the washing area.
- Heavy washing pump ensure high water flow rate combined with effective spray pressure.
- Washing/drying injection system on the same circuit.
- Inner cabinet, washing arms and tank filters entirely made of high quality AISI 316L stainless steel. Frame and body of machine made of AISI 304 stainless steel.
- Triple water filtering system ensures to capture residue, preventing re-circulation of contaminated material.
- Two standard automatic liquid dispensers provided with level control.
- Large storage on the basement to allocate up to four 5 lt (1.32 Gal US) chemical containers.

### Optional

- 3<sup>rd</sup> and 4<sup>th</sup> Chemical dosing pump
- HEPA H14 air filter
- Conductivity sensor
- Integrated printer ST2
- Light inside chamber
- Sump steam heating
- Basket recognition system
- USB port
- Analogic sensor on washing circuit for pressure check (registered data)
- 1S or 2S Fast Cycle versions
- Ethernet connection
- Steam condenser (total machine height 2390mm/94.09")
- Drain water heat exchanger (Fast Cycle version only)
- Additional chemical dosing monitoring (flow meters)

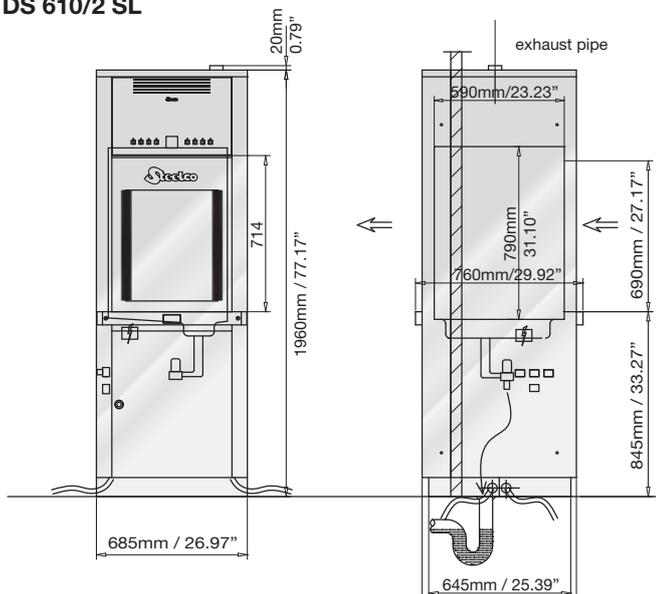
### Dimensions and connections

	DS 610 SL	DS 610 SL2S (Fast Cycle)
Standard electrical connection (International)	400V/3~+N/50Hz	400V/3~+N/50Hz
Optional electrical connection (North America)*	208V/3~+N/60Hz or 480V/3~+N/60Hz	208V/3~+N/60Hz or 480V/3~+N/60Hz
Power**	12750 W	17000 W
Pump power	750 W	750 W
Noise	61.6 dB(A)	61.6 dB(A)
Permitted room temperature	+5°C/41°F - +40°C/104°F	+5°C/41°F - +40°C/104°F
Dryer blower	up to 250 m <sup>3</sup> /h - 8828 ft <sup>3</sup> /h	up to 250 m <sup>3</sup> /h - 8828 ft <sup>3</sup> /h
Dryer heating	4000 W	4000 W

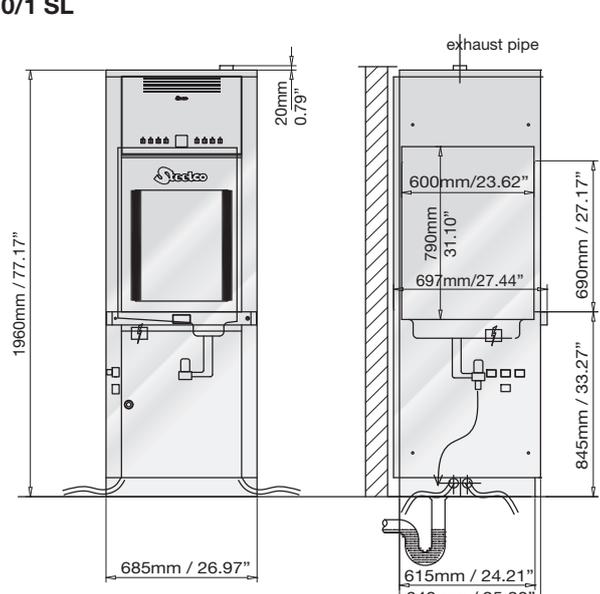
\* other electrical connections also available as optional

\*\* with electrical heating elements - washing chamber steam heating configuration available as option

### DS 610/2 SL



### DS 610/1 SL





## DS 610/1 - DS 610/2

### Washer disinfectors

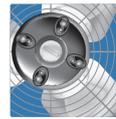
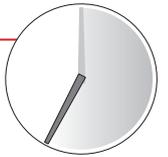


DS 610 is a high capacity model, **frontal loading or pass-through washer disinfectant** available in **standard or fast cycle concept version**.

All loading-unloading operations can be carried out by using manual transfer trolleys.

#### Fast Cycle concept - 35 min. cycle time

*"combines the energy saving concept with a high standard of cleaning and drying performance in a very short cycle time"*



Filtered forced hot air drying system ensures perfect drying of all instruments and tubes after disinfection thanks to an efficient distribution of air on all chamber parts and wash cart levels.



Sliding drawer provided with lock for protected and easy access to chemical tank storage.

#### Washing chamber



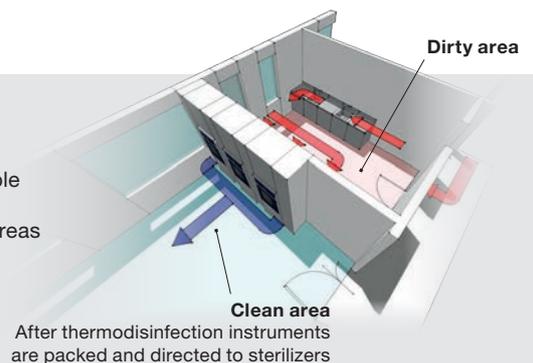
**DIN 1/1**  
**net basket capacity**

Chamber volume ~250 lt / 66.04 Gal US  
Basket volume ~220 lt / 58.12 Gal US

#### Pass-through application

Steelco DS 610 SL, DS 610 and DS 600 in double door version are suitable for reducing cross contamination through the separation of dirty areas from the clean ones.

With DS 610 machines a higher productivity can be achieved with the optional Fast Cycle configuration.



## DS 610/1 - DS 610/2 - Key features

- High safety and easy to use soft touch control system on full glass panel with LCD colour display to visualize cycle status.
- 20 standard pre-programmed cycles available and 20 additional cycles available for customization.
- RS 232 port for printer connection to monitor and validate washing phases.
- Ergonomic design of the door level height allows the user a convenient loading/unloading job with the support of a manual loading/unloading trolley.
- High visibility full glass door.
- Filtered forced air drying system with adjustable time and temperature settings, helps to ensure the complete inside and outside drying of all the surgical instruments and tubes.
- Washing and DI disinfection temperature are fully adjustable up to 93°C. Temperature is monitored by two independent sensors.
- Standard steam condenser prevents vapours from entering into the washing area. Optional on Fast Cycle configuration.
- Heavy washing pump ensures high water flow rate combined with effective spray pressure.
- Washing/drying injection system on the same circuit.
- Inner cabinet, washing arms and tank filters entirely made of high quality AISI 316L stainless steel. Frame and body of machine made of AISI 304 stainless steel.
- Triple water filtering system ensure to capture residue, preventing re-circulation of contaminated material.
- Two standard automatic liquid dispensers provided with level control.
- Large storage on the basement to allocate up to three 5 lt (1.32 Gal US) chemical containers.

### Optional

- 3<sup>rd</sup> and 4<sup>th</sup> Chemical dosing pump
- HEPA H14 air filter
- Water softener (not for Fast Cycle version)
- Integrated printer ST2
- Light inside chamber
- Sump steam heating
- Basket recognition system
- USB port
- Analogic sensor on washing circuit for pressure check (registered data)
- Additional chemical dosing monitoring
- Ethernet connection
- Boiler to pre-heat DI water (4,5 Kw power)
- Conductivity sensor
- Drain water heat exchanger (Fast Cycle version only)
- 1S or 2S Fast Cycle versions (tot machine height 1960 mm / 77.16")
- Steam condenser (Fast Cycle versions only, total machine height 2390mm/94.09")

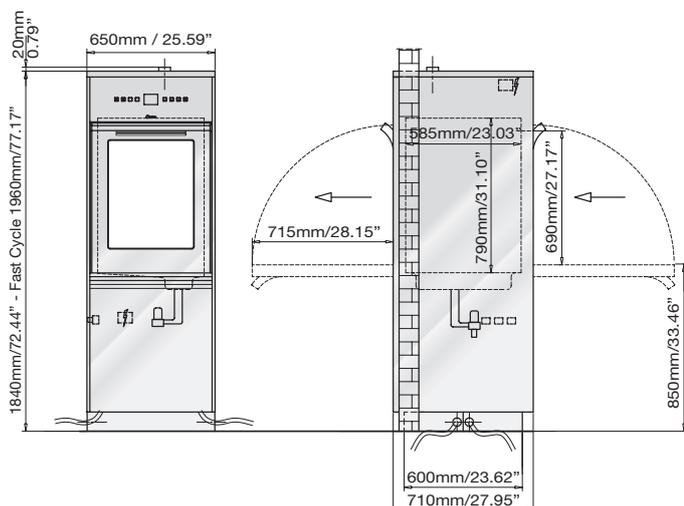
### Dimensions and connections

	DS 610	DS 610 2S (Fast Cycle)
Standard electrical connection (International)	400V/3~+N/50Hz	400V/3~+N/50Hz
Optional electrical connection (North America)*	208V/3~+N/60Hz or 480V/3~+N/60Hz	208V/3~+N/60Hz or 480V/3~+N/60Hz
Power**	8250 W	17000 W
Pump power	750 W	750 W
Noise	61.6 dB(A)	61.6 dB(A)
Permitted room temperature	+5°C/41°F - +40°C/104°F	+5°C/41°F - +40°C/104°F
Dryer blower	up to 250 m <sup>3</sup> /h - 8828 ft <sup>3</sup> /h	up to 250 m <sup>3</sup> /h - 8828 ft <sup>3</sup> /h
Dryer heating	4000 W	4000 W

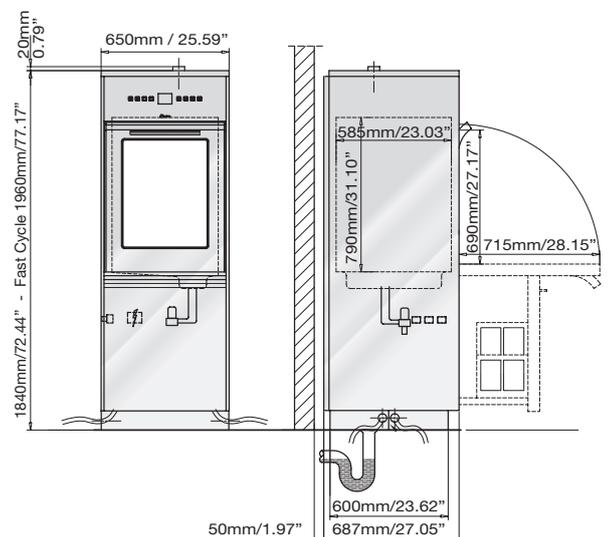
\* other electrical connections also available as optional

\*\* with electrical heating elements - washing chamber steam heating configuration available as option

### DS 610/2



### DS 610/1





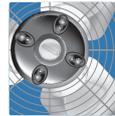
## DS 600/1 - DS 600/2

### Washer disinfectors



DS 600 **frontal loading or pass-through washer disinfectant** is the evolution of a flexible integrated system for the washing, disinfection, air drying and validation of instruments used in surgeries and sterilization centres.

All loading-unloading operations can be carried out by using manual transfer trolleys.



Filtered forced hot air drying system ensures perfect drying of all instruments and tubes after disinfection thanks to an efficient distribution of air on all chamber parts and wash cart levels.



Sliding drawer provided with lock for protected and easy access to chemical tank storage.

### Washing chamber



Chamber volume ~200 lt / 58.12 Gal US  
Basket volume ~170 lt / 44.90 Gal US

### Carts availability

The following applications are performed using dedicated wash carts and accessories:

Surgical instruments, MIS instruments, Anaesthesia instruments, Ophthalmology instruments, OP rubber shoes, Containers, Baby bottles.



Washing cart for robotic surgery instruments

## DS 600/1 - DS 600/2 - Key features

- High safety and easy to use soft touch control system on glass panel with LCD colour display to visualize cycle status.
- 20 standard pre-programmed cycles available and 20 additional cycles available for customization.
- RS 232 port for printer connection to monitor and validate washing phases.
- Ergonomic design of the door level height allows to the user a convenient loading/unloading job with the support of a manual loading/unloading trolley.
- High visibility full glass door.
- Filtered forced air drying system with adjustable time and temperature settings, helps to ensure the complete inside and outside drying of all the surgical instruments and tubes.
- The built-in water softener provides optimal cleaning effectiveness.
- Washing and DI disinfection temperature are fully adjustable up to 93°C. Temperature is monitored by two independent sensors.
- Standard steam condenser eliminates vapours from entering into the washing area.
- Heavy washing pump ensures high water flow rate combined with effective spray pressure.
- Washing/drying injection system.
- Inner cabinet, washing arms and tank filters entirely made of high quality AISI 316L stainless steel. Frame and body of machine made of AISI 304 stainless steel.
- Triple water filtering system ensure to capture residue, preventing re-circulation of contaminated material.
- Two standard automatic liquid dispensers provided with level control.
- Large storage on the basement to allocate up to three 5 lt (1.32 Gal US) chemical containers.

### Optional

- 3<sup>rd</sup> and 4<sup>th</sup> Chemical dosing pump
- HEPA H14 air filter
- Conductivity sensor
- Integrated printer ST2
- Light inside chamber
- Sump steam heating
- Additional chemical dosing monitoring
- Ethernet connection
- Analogic sensor on washing circuit for pressure check (registered data)
- USB port
- Boiler to pre-heat DI water (into fully dedicated bottom basement)

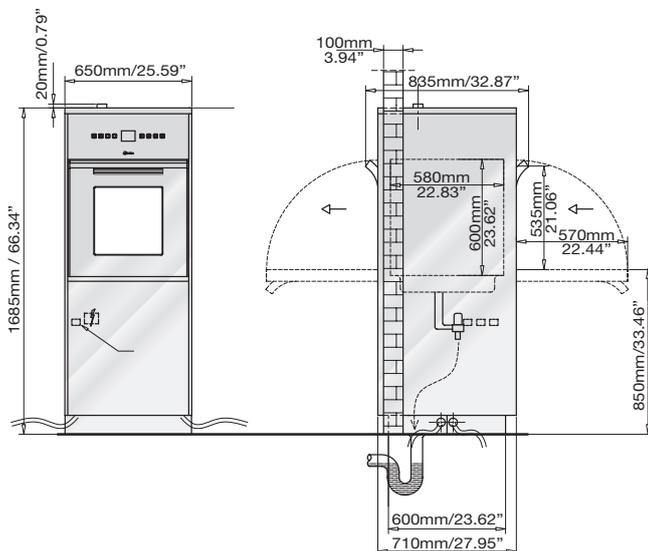
### Dimensions and connections

Standard electrical connection (International)	400V/3~+N/50Hz
Optional electrical connection (North America)*	208V/3~+N/60Hz or 480V/3~+N/60Hz
Power**	8250 W
Pump power	750 W
Noise	56 dB(A)
Permitted room temperature	+5°C/41°F - +40°C/104°F
Dryer blower	up to 150 m³/h - 5298 ft³/h
Dryer heating	4000 W

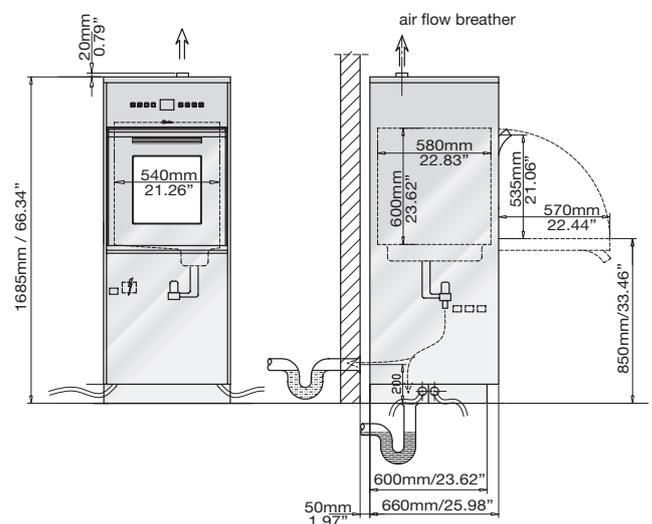
\*other electrical connections also available as optional

\*\* with electrical heating elements - washing chamber steam heating configuration available as option

### DS 600/2



### DS 600/1





## DS 500 CL

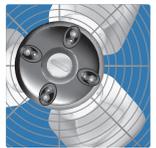
### Underbench washer disinfector with forced hot air drying

Specially designed for installations with limited space, this model features **washing and air drying on two levels**, normally seen on large machines.

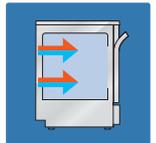
This new generation of compact washer disinfectors share the same technology of our high capacity CSSD equipment with significant improvements in terms of cleaning quality, thermodisinfection and drying performances.



Filtered forced air drying system with adjustable time and temperature setting, helps to ensure a complete drying, inside and outside, of all the surgical instruments and tubes.



Washing injection system and hot air drying on two levels.



#### Washing chamber



Chamber volume ~171 lt / 45.17 Gal US  
Basket volume ~151 lt / 39.89 Gal US

#### Stainless steel door version



#### Control panel

- LCD display control panel with 40 washing and thermodisinfection programs for surgical instruments: 20 standard pre-programmed cycles and 20 additional available for customization.

#### Connections

- RS 232 port dedicated for printer or PC connection to monitor and validate washing cycles and/or data storage.

#### Full glass door version



#### Control panel

- Soft touch full glass control panel with graphic colour LCD display.
- 40 washing and thermodisinfection programs for surgical instruments: 20 standard pre-programmed cycles and 20 additional available for customization.

#### Connections

- USB port on the front panel for washing cycles data storage and/or software upgrades.
- RS 232 port dedicated for printer or PC connection to monitor and validate washing cycles and/or data storage.



## DS 500 CL - Key features

- Heavy washing pump to ensure high water flow rate combined with effective spray pressure.
- Filtered forced air drying system with adjustable time and temperature setting, helps to ensure a complete drying, inside and outside, of all the surgical instruments and tubes.
- Washing and DI disinfection temperature are fully adjustable up to 93°C. Temperature is monitored by two independent sensors.
- Standard steam condenser prevents vapours from entering into the washing area.
- Inner cabinet, washing arms and tank filters made of high quality AISI 316 L stainless steel.
- Two automatic liquid dispensers.
- Triple water filtering system captures residue, preventing re-circulation and extending the pump life.

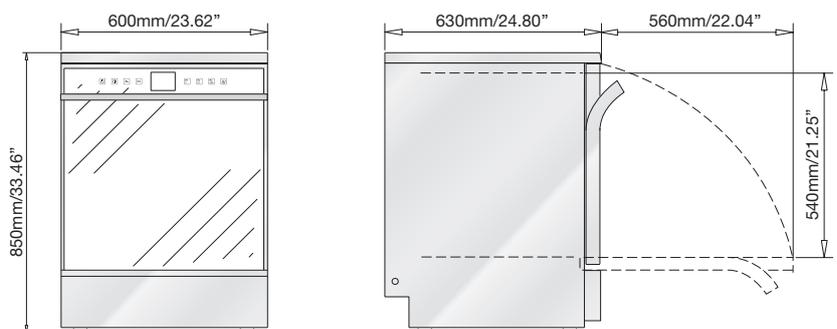
### Optional

- **Full glass door version**
- 3<sup>rd</sup> Chemical dosing pump
- Extra power 8 KW to reduce cycle time
- HEPA H14 air filter
- External printer ST1
- Ethernet connection
- Boiler to pre-heat DI water (stand required)
- Built in water softener
- Light inside chamber

### Dimensions and connections

Standard electrical connection (International)	400V/3~+N/50Hz
Optional electrical connection (North America)*	208V/3~+N/60Hz - 220V/~ /60Hz
Power	5600 W
Pump power	550 W
Noise	56 dB(A)
Permitted room temperature	+5°C/41°F - +40°C/104°F
Dryer blower	up to 150 m³/h - 5298 ft³/h
Dryer heating	1400 W

\*other electrical connections also available as optional



## Stands and side cabinets

- Different models of 300mm/11.81" wide side cabinets allow to hold:
- Boiler for DI water pre-heating (cabinet and washer disinfectant are manufactured as a single 900 mm wide unit).
  - Purification system for DI water supply.
  - Up to four 5 lt. 1.32 Gal US chemical containers.

Stands improve ergonomics when machine is not installed under counter. The 600mm/23.62" height stands are equipped with doors for easy storage access to chemicals and accessories.

Stand is recommended when the machine is equipped with the option of boiler to pre heat DI water and the needed booster pump.



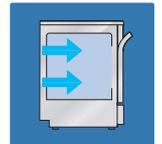
## DS 500 SC - Underbench washer disinfectant

Specially designed for installations with limited space, this model features **washing injection system on two levels.**

This new generation of compact washer disinfectors share the same technology of our high capacity CSSD equipment for significant improvements in terms of cleaning quality and thermodisinfection performances.



Washing injection system on two levels.



### Washing chamber



Chamber volume ~171 lt / 45.17 Gal US  
Basket volume ~151 lt / 39.89 Gal US

#### Stainless steel door version DS 500 SC



##### Control panel

- LED display control panel with 10 washing and thermodisinfection programs for surgical instruments: 5 standard pre-programmed cycles and 5 additional available for customization.

##### Connections

- RS 232 port dedicated for printer or PC connection to monitor and validate washing cycles and/or data storage.

#### Stainless steel door version DS 500 SCL



##### Control panel

- LCD display control panel with 40 washing and thermodisinfection programs for surgical instruments: 20 standard pre-programmed cycles and 20 additional available for customization.

##### Connections

- RS 232 port dedicated for printer or PC connection to monitor and validate washing cycles and/or data storage.

#### Full glass door version DS 500 SCL soft touch



##### Control panel

- Soft touch full glass control panel with graphic colour LCD display.
- 40 washing and thermodisinfection programs for surgical instruments: 20 standard pre-programmed cycles and 20 additional available for customization.

##### Connections

- USB port on the front panel for washing cycles data storage and/or software upgrades.
- RS 232 port dedicated for printer or PC connection to monitor and validate washing cycles and/or data storage.



## DS 500 SC - Key features

- Heavy washing pump to ensure high flow rate combined with effective spray pressure.
- Washing and DI disinfection temperature are fully adjustable up to 93°C. Temperature is monitored by two independent sensors.
- Standard steam condenser prevents vapours from entering into the washing area.
- Inner cabinet, washing arms and tank filters made of high quality AISI 316 L stainless steel.
- Two automatic liquid dispensers.
- Triple water filtering system captures residue, preventing re-circulation and extending the pump life.

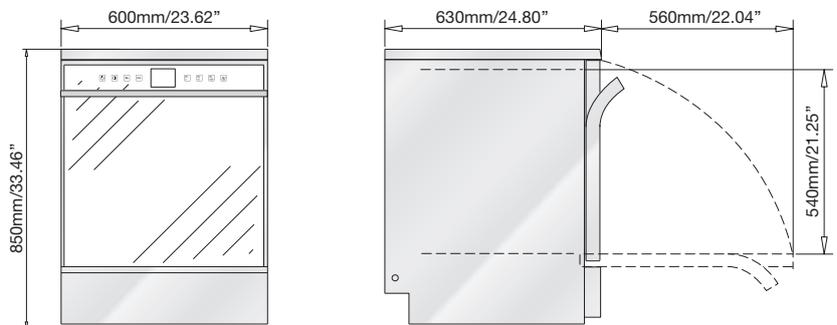
### Optional

- **Full glass door version DS 500 SCL soft touch** - 3<sup>rd</sup> Chemical dosing pump
- Extra power 8 KW to reduce cycle time
- Ethernet connection (full glass door version only)
- External printer ST1
- Light inside chamber
- Boiler to pre-heat DI water (stand required)
- Built in water softener

### Dimensions and connections

	DS 500 SC	DS 500 SCL - DS 500 SCL s.t.
Standard electrical connection (International)	230V/~ /50Hz	400V/3~+N/50Hz
Optional electrical connection (North America)*	208V/3~+N/60Hz - 220V/~ /60Hz	208V/3~+N/60Hz - 220V/~ /60Hz
Power	3050 W	3050 W
Pump power	550 W	550 W
Noise	56 dB(A)	56 dB(A)
Permitted room temperature	+5°C/41°F - +40°C/104°F	+5°C/41°F - +40°C/104°F

\* other electrical connections also available as optional



### how to combine optionals choosing the right configuration



• = allowed function	stand		cabinet left or right sided		900mm machine right side only cabinet			stand + 900mm machine right side only cabinet	
	comb. 1	comb. 2	comb. 3	comb. 4	comb. 5	comb. 6	comb. 7	comb. 8	comb. 9
<b>pre-heating boiler</b>	•	-	-	-	•	-	-	• <sup>A</sup>	• <sup>B</sup>
<b>chemical storage</b>	•	•	•	-	-	•	-	• <sup>B</sup>	• <sup>B</sup>
<b>purification system</b>	-	-	-	•	-	-	•	-	• <sup>A</sup>
<b>4<sup>th</sup> dosing pump</b>	-	-	-	-	-	•	-	-	• <sup>B</sup>
<b>integrated printer</b>	-	-	-	-	•	•	•	• <sup>A</sup>	• <sup>A</sup>



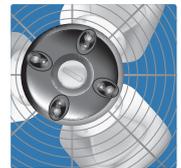
## DS 500 DRS

Underbench washer disinfector with forced hot air drying



**An under counter washer disinfector with powerful built-in HEPA filtered forced air drying.** Washing injection system, hot air drying and liquid detergent container built into the machine are the main features of this model.

Filtered forced air drying system with adjustable time and temperature setting, helps to ensure completely dry, inside and outside, of all the surgical instruments and tubes.



Separate washing injection system and hot air drying



### Washing chamber



Chamber volume ~171 lt / 45.17 Gal Us  
Basket volume ~151 lt / 39.89 Gal US

### HEPA Filter

The lateral compartment allows easy operator and maintenance access to the HEPA filtered drying system and to the chemical dosing system.

It can also store up to four 5 lt / 1.32 Gal US chemical containers.



machine configured with stand and glass window door

### Complements

Stands improve ergonomics when machine is not installed under counter. The 600mm/23.62" height stands are equipped with doors for easy storage access to chemicals and accessories. Stand is recommended in case the machine is equipped with the option of boiler to pre heat DI water and the needed booster pump. The 300mm/11.81" height stand is just a support and can't be used as a container.

#### Stand for DS 500 DRS

**9991015** mm. 900x560x600h/35.43"x22.05"x23.62"h

**9991146** mm. 900x560x300h/35.43"x22.05"x11.81"h

## DS 500 DRS - Key features

- Filtered forced air drying system with adjustable time and temperature setting, helps to ensure completely dry, inside and outside, of all the surgical instruments and tubes.
- RS 232 port is provided with printer connection for monitoring and validating washing phases.
- LCD display with 40 programs for surgical instruments.
- The built-in water softener, optional, provides optimal cleaning effectiveness.
- Washing and DI disinfection temperature are fully adjustable up to 93°C. Temperature is monitored by two independent sensors
- Standard steam condenser prevents vapours from entering into the washing area.
- Heavy washing pump ensures high flow rate combined with effective spray pressure.
- Inner cabinet, washing arms and tank filters made of high quality AISI 316L stainless steel.
- Two standard automatic liquid dispensers.
- Triple water filtering system captures residue preventing re-circulation and extending the pump life.

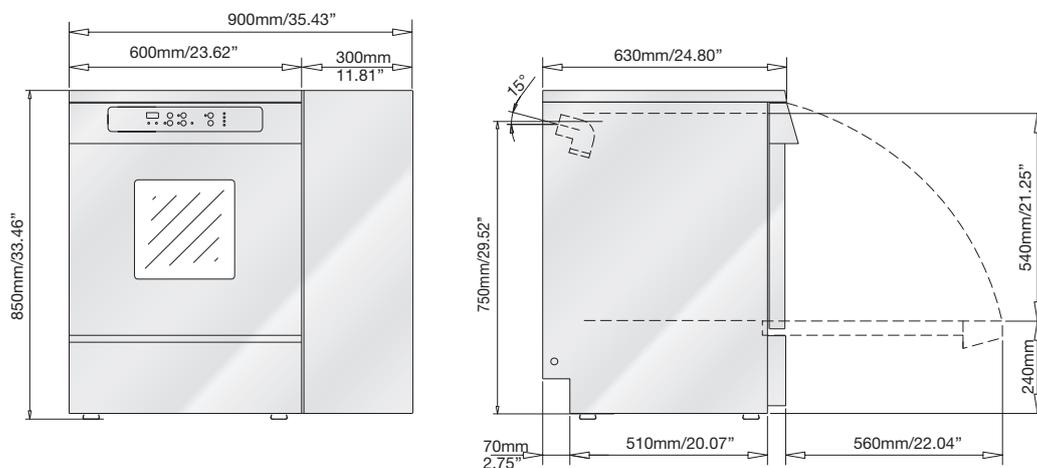
### Optional

- 3<sup>rd</sup> and 4<sup>th</sup> Chemical dosing pumps
- HEPA H14 air filter
- Stand
- Boiler to pre-heat DI water (stand required)
- Extra power 8 KW to reduce cycle time
- Front panel integrated printer ST2
- Glass window door
- Built in water softner

### Dimensions and connections

Standard electrical connection (International)	400V/3~+N/50Hz
Optional electrical connection (North America)*	208V/3~+N/60Hz - 220V/~ /60Hz
Power	5600 W
Pump power	550 W
Noise	56 dB(A)
Permitted room temperature	+5°C/41°F - +40°C/104°F
Dryer blower	up to 150 m <sup>3</sup> /h - 5298 ft <sup>3</sup> /h
Dryer heating	2000 W

\*other electrical connections also available as optional





## Compact washer disinfectors with forced hot air drying

Steelco DS 50 DRS range is an efficient aid for the cleaning, thermal disinfection and **forced hot air drying** of all types of dental and surgical instruments. Manufactured to allow an easy installation onto a bench top, it grants a fast and effective treatment of surgical instruments and utensils excluding the professional risk due to handling infected instruments.

The DS 50 HDRS model is dedicated to stand alone installation and can be easily built as under bench into existing furniture. All the models provide a practical and safe solution for chemical storage.

### DS 50 HDRS

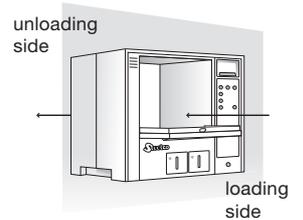


### DS 50 DRS



### DS 50/2 DRS

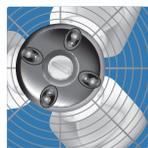
The DS 50/2 DRS double door model is suitable for barrier installation reducing cross contamination by separating dirty and clean areas.



### Washing chamber

Chamber volume ~60 lt / 15.85 Gal US  
Basket volume ~50 lt / 13.20 Gal US

### Forced hot air drying



Filtered forced air drying system with adjustable time and temperature setting, helps to ensure completely dry, inside and outside, of all the surgical instruments and tubes.

### Standard compliant

Steelco DS 50 DRS range washer disinfectors are designed to comply with the European EN ISO 15883 and UK HTM 2030 guidelines on decontamination and are classified CE medical device (Community Rule 93/42/CEE).

### Chemical storage

On DS 50 DRS and DS 50/2 DRS models, chemical tanks are integrated in the front panel and provided with quantity inspection window.

On DS 50 HDRS model, the large storage on bottom basement allows to allocate up to two 5 lt (1.32 Gal US) chemical containers.



## DS 50 DRS range - Key features

- High safety and easy to use soft touch control system on glass panel with LCD colour display to visualize cycle status.
- 20 standard pre-programmed cycles available and 20 additional cycles available for customization.
- USB port for historical cycle data download and software upgrades.
- RS 232 port for printer connection to monitor and validate washing phases.
- High visibility full glass door.
- Filtered forced air drying system with adjustable time and temperature settings, helps to ensure the complete inside and outside drying of all the surgical instruments and tubes.
- The built-in water softener, optional, provides optimal cleaning effectiveness
- Washing and Disinfection temperatures are fully adjustable up to 93°C. Temperature is monitored by two independent sensors.
- Standard steam condenser eliminates vapours from entering the washing area.
- Heavy washing pump ensures high flow rate combined with effective spray pressure. Triple water filtering system captures residue preventing re-circulation and extending the pump life.
- Inner cabinet, washing arms and tank filters made of high quality AISI 316L stainless steel.
- A built-in automatic liquid dispenser is standard. A second automatic liquid dispenser normally used for rinse aid chemical is available as option.
- Liquid chemical levels are controlled by a pressure switch.

### DS 50 HDRS model

- Ergonomic design of the door level height allows to the user a convenient loading/unloading job.
- Storage on bottom basement to allocate up to two 5 lt (1.32 Gal US) chemical containers.

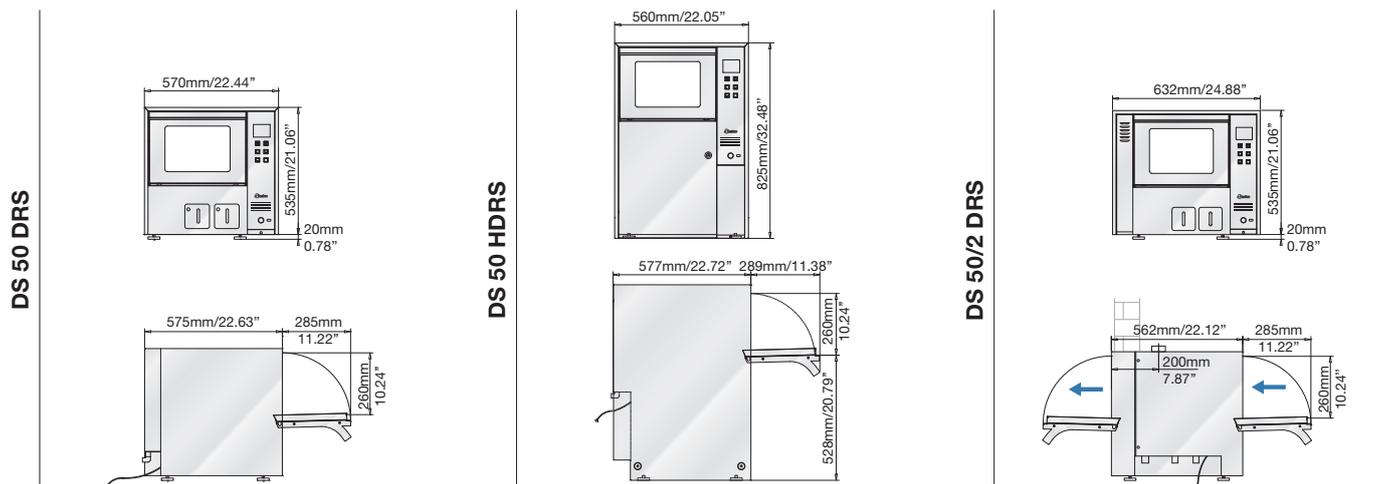
### Optional

- DI water connection
- 2<sup>nd</sup> Chemical dosing pump (with integrated liquid container on front panel for DS 50 DRS and DS 50/2 DRS models)
- HEPA H14 air filter
- External printer ST1
- Water softener
- Ethernet connection

### Dimensions and connections

Standard electrical connection (International)	230V/~50Hz
Optional electrical connection (North America)*	220V/~60Hz
Power	2750 W
Pump power	150 W
Noise	52 dB(A)
Permitted room temperature	+5°C/41°F - +40°C/104°F
Dryer blower	up to 100 m <sup>3</sup> /h - 3531 ft <sup>3</sup> /h
Dryer heating	750 W

\*other electrical connections also available as optional



## Integrated USB port

A USB port integrated on the front panel is a standard feature on this model allowing the operator easy historical cycle data transfer from the machine to PC.

Ethernet connection is available as option.



A complete range of wash baskets is available for dental, MIS, ophthalmology and other applications





## DS 50 - Tabletop washer disinfecter

Steelco DS 50 is an efficient aid for the cleaning and thermal disinfection of all types of dental and surgical instruments.

Designed for easy installation onto a bench top, allows the operator easy loading of the material and the selection of the cycle.

Everything else - pre-wash, wash and thermal disinfection - is provided by the machine.



A complete accessories range: baskets, inserts, trays



### Washing chamber

Chamber volume ~60 lt / 15.85 Gal US  
Basket volume ~50 lt / 13.20 Gal US

Steelco DS 50 washer disinfecter is designed and constructed to comply with the European EN ISO 15883 guidelines on contamination. It is a classified CE medical device (Community Rule 93/42/CEE).

### Integrated automatic liquid dispenser



The machine is configured with a built-in automatic liquid dispenser for detergent.

A second automatic liquid dispenser normally used for rinse aid chemical is available as option.

Liquid chemical levels are controlled by a pressure switch.

## DS 50 - Key features

- Steelcotronic control system with LED display, 3 pre-setted washing programs for dental and surgical instruments.
- RS 232 port for printer connection to monitor and validate washing phases.
- The built-in water softener, optional, provides optimal cleaning effectiveness
- Washing and Disinfection temperatures are fully adjustable up to 93°C. Temperature is monitored by two independent sensors.
- Standard steam condenser eliminates vapours from entering the washing area.
- Heavy washing pump ensures high flow rate combined with effective spray pressure.
- Inner cabinet, washing arms and tank filters made of high quality AISI 316L stainless steel.
- Triple water filtering system captures residue preventing re-circulation and extending the pump life.
- A built-in automatic liquid dispenser is standard. One more built-in dispenser is available as option.

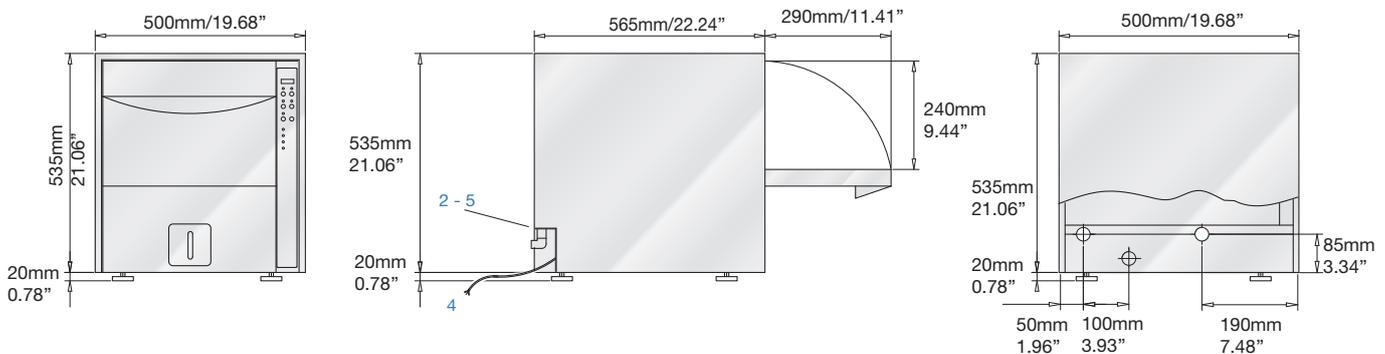
### Optional

- DI water connection
- External printer ST1
- Water softner
- 2<sup>nd</sup> Chemical dosing pump

### Dimensions and connections

Standard electrical connection (International)	230V/~50Hz
Optional electrical connection (North America)*	220V/~60Hz
Power	2750 W
Pump power	150 W
Noise	52 dB(A)
Permitted room temperature	+5°C/41°F - +40°C/104°F

\*other electrical connections also available as optional



## W 100 - Reverse osmosis water purification system

The W100 is a very compact reverse osmosis device which is perfect to combine with small medium range washer disinfectors. The system is supplied by drinking tap water and, with its filtration system, pressure pump and osmosis membrane, it feeds a 35lt. (9.25 Gal US) gal tank with osmotic water.

Osmotic water tank is equipped with a level control system and automatically refilled.

### Dimensions:

WxDxH 200+200 x 600 x 615mm (7.87"+7.87" x 23.62" x 24.21")

**Osmotic water flow:** 100 lt/h (26.41 Gal US/h) at 20°C (68°F) with 500 ppm salinity NaCl ca. (lower temperature and higher salinity cause a reduction of the osmotic water production)



## Drying cabinets

Steelco drying cabinets are **available in several configurations** from full width shelves dedicated to instruments, equipment and general items to mixed solutions for anaesthesia items and instruments.

Blanket warming version available as well.

Cabinets are available in single door or double door pass through versions with glass doors for a rapid visual inspection of the stored items.

**Separate drying** of anesthetic and instrument accessories increases the throughput capacity of a washer disinfector of a third. Drying cabinets can accept a load volume of more than 2 units of washer disinfectors.



### ID 300

Instrument drying cabinet



- capacity up to nr. 18 DIN 1/1 trays on 9 removable shelves, supplied with nr. 8 shelves.



### AD 400

Instrument, anaesthesia bags and hanging hoses mixed drying cabinet

Composition

- up to nr. 3 AN cassettes for a total capacity of 36 anaesthesia hoses
- up to nr. 9 DIN 1/1 trays capacity on 9 removable shelves  
or
- up to nr. 18 anaesthesia bags capacity
- up to nr. 9 DIN 1/1 trays capacity on 9 removable shelves

Supplied with nr. 8 shelves and nr. 3 AN cassettes.



### BD 500

Blankets warming cabinet

- 4 removable shelves for blankets (standard). Shelves can be added and adjusted for different sizes of load.



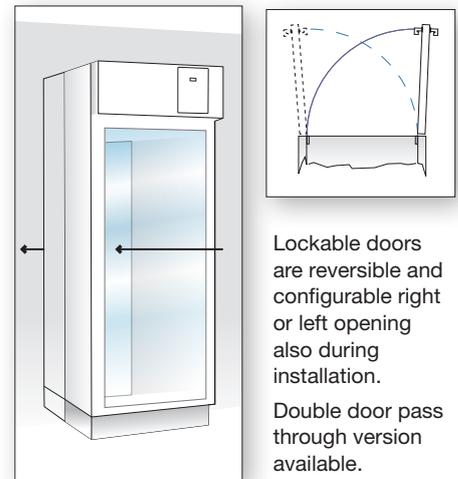
standard



option

## General key features

- Insulated double walled AISI 304 stainless steel construction that grants the exterior surface temperature does not exceed 49°C (120°F). Temperature of tempered glass door does not exceed 49°C (120°F).
- Visual “open door” indicator. Lockable door.
- LED display, programmable for °C and °F, provides control and heater-on information for easy serviceability, temperature and time settings are control password protected to prevent unauthorized changes.
- Drying temperature settable from ambient to 80°C (176°F). Temperature alarms is disabled when door is open and for the time required to re-equilibrate temperatures in cabinet after door is closed. Temperature setting from 1 up to 999 min or continuous. Once the selected temperature is attained, it will be controlled throughout within 5.5°C (10°F) of the selected temperature. Overheat protection will shut the heater off with audible alarm for operator
- Indirect UV air treatment during the whole cycle. Optional.
- Drying circuit with double fan combined with fast connectors (optional).
- Flashing air flow visual alarm indicators if either drying circuit fails.
- Air flow alarm with re-settable audible alarm, (flashing alarm indication remains until the air flow is restored).
- HEPA filtration on drying circuit. Monitoring for HEPA filter and indicator on panel advising when replacement is required.
- Control components positioned in top front position for convenient service access. Easy removal of fans, heater elements and control boards.



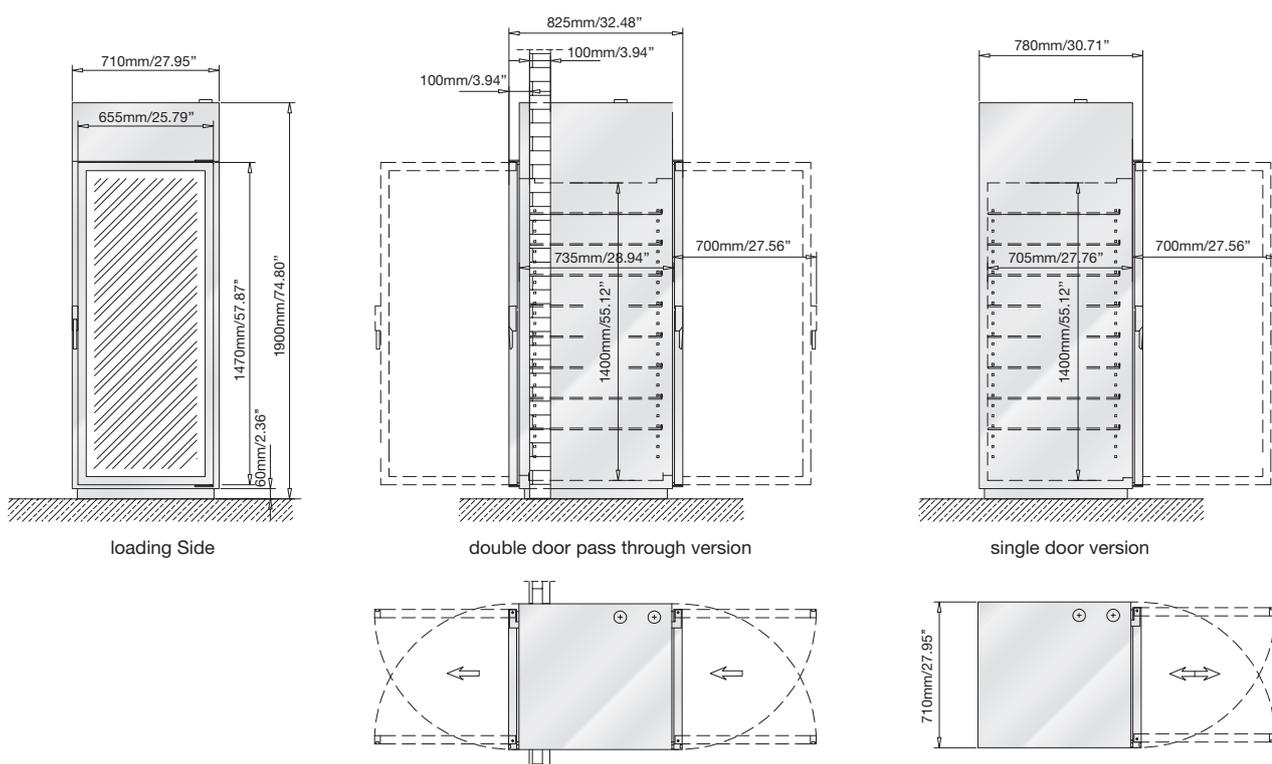
### Optional

- nr. 8 or 9 air fast connections
- extra shelves with rails
- UV air treatment
- Humidity sensor
- ST2 printer

### Dimensions and connections

Standard electrical connection (International)	230V/~50Hz
Optional electrical connection (North America)*	220V/~60Hz
Power ID 300 - BD 500	1700 W
Power AD 400	1750 W

\*other electrical connections also available as optional





## US 100 - US 200 - Ultrasonic cleaning system

This Ultrasonic Cleaning System is focused on the treatment of reusable medical devices and rigid endoscopes.

It combines a stainless steel cleaning tank with industrial style transducers and a powerful ultrasonic generator to provide the strongest tabletop cleaning available. **It gives the speed and effectiveness of ultrasonic cleaning power with the convenience of plug-in-anywhere operation.**

A DIN tray basket support and cover are included in the base unit. It meets CSA and UL requirements.

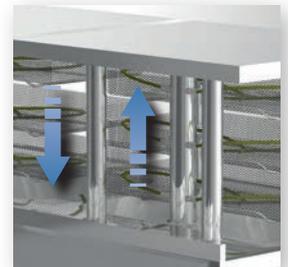
Critical process parameters such as temperature, ultrasonic power and time are monitored granting the compliance to the international standards and can be recorded.



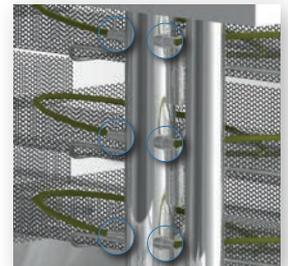
**US 200/2**  
automatic module with  
2 ultrasonic tanks

**US 200/3**  
automatic module with 1  
ultrasonic and 1 rinsing tank

Pneumatic lift of the baskets provided with security device. The baskets automatically sink by pressing cycle start and are automatically lifted at the end of the cycle (no physical operation is required). A manual operating version is also available.



Water recirculation through luer lock connections during the cycle - nr. 2 luer lock connections for each level



Under bench storage for chemical canisters



Tank dimensions  
600x350x345h mm  
23.62"x13.78"x13.58"

Basket capacity  
nr. 3 DIN 1/1 net baskets

Luer lock connections  
nr. 6 each tank



**US 100**  
automatic module  
with 1 ultrasonic tank

**US 200/1**  
automatic module  
with 1 ultrasonic tank



## US 100 - US 200 - Key features

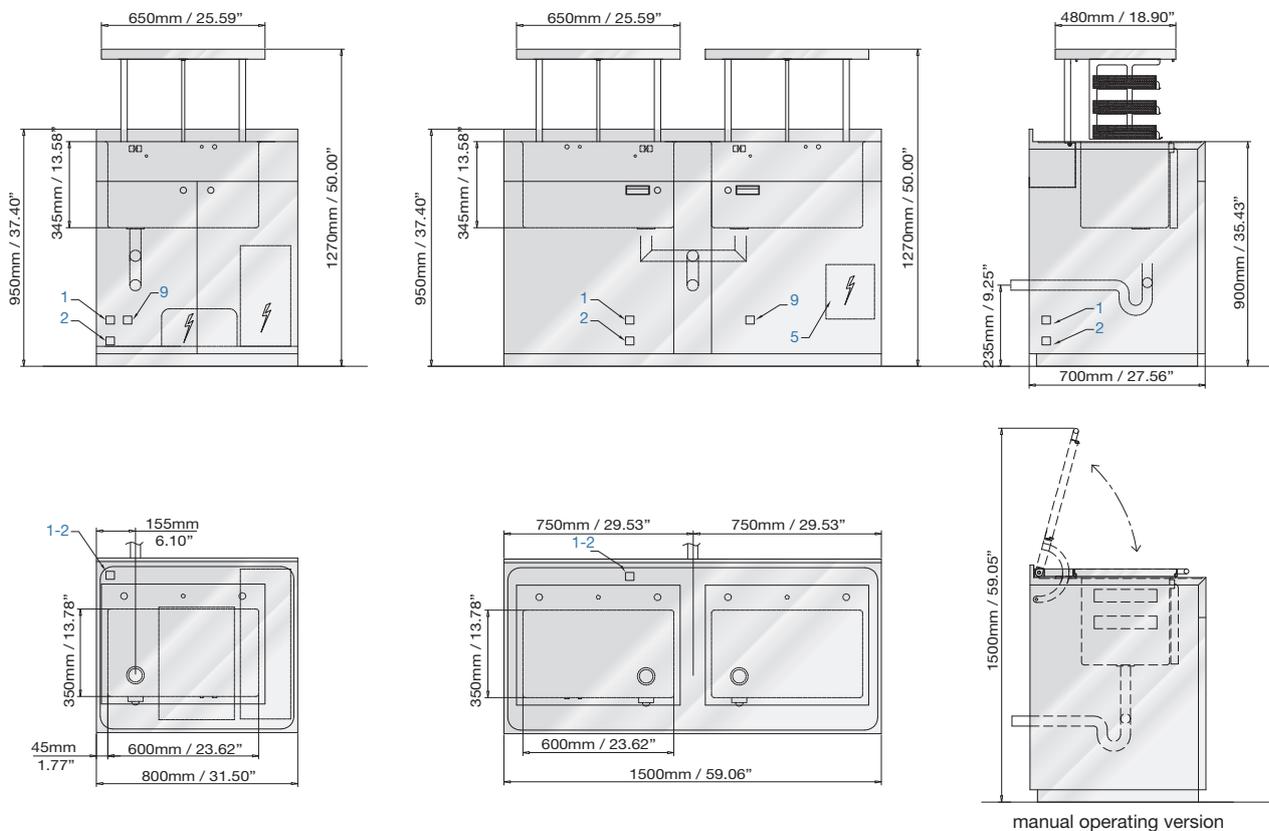
- Washing tank made of stainless steel AISI 316L.
- External body made of stainless steel AISI 304.
- LED display and timer for cycle control
- Automatic tank filling and water control level.
- Pump for automatic chemical dosing.
- Automatic minimum level of chemical control with alarm.
- Ultrasonic power 3000W with filter for radio frequency interference and power control from 0 to 100% included.
- Operation frequency modulation
- to avoid neutralization areas of the ultrasound effect.
- Standard Ultrasonic frequency 38 kHz, other frequencies on request.
- US 200/3 rinsing tank is provided with water spray nozzles and Luer Lock connections for water circulation.

Dimensions and connections	US 100 - US 200/1 - US 200/3	US 200/2
Standard electrical connection (International)	230V/~ /50Hz	230V/~ /50Hz
Optional electrical connection (North America)*	208V/3~+N/60Hz - 220V/~ /60Hz	208V/3~+N/60Hz - 220V/~ /60Hz
Total power	3250 W	6350 W
Ultrasonic power	3000 W	6000 W
Tank power	600 W	1200 W
Permitted room temperature	+5°C/41°F - +40°C/104°F	+5°C/41°F - +40°C/104°F

\*other electrical connections also available as optional

### Optional

- Hinged covers for manual operating version
- Integrated printer



1 Warm water connection	¾" male	DN 20 mm
2 Cold water connection	¾" male	DN 20 mm
5 Electrical connection		

9 Compressed air	¼" male
10 Machine drain	Ø 40 mm/1.57"



**Miele** Group Member

ARES - flexible endoscope automated reprocessing system



Dental washer disinfectors

Flusher disinfectors

Steam sterilizing autoclaves



Washer disinfectors for central of sterilization departments

Laboratory glassware washer disinfectors



Washing and sterilizing systems for life science and pharmaceutical applications

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