

Ultrasonic

From delicate microsurgery instruments
to heavy duty sets





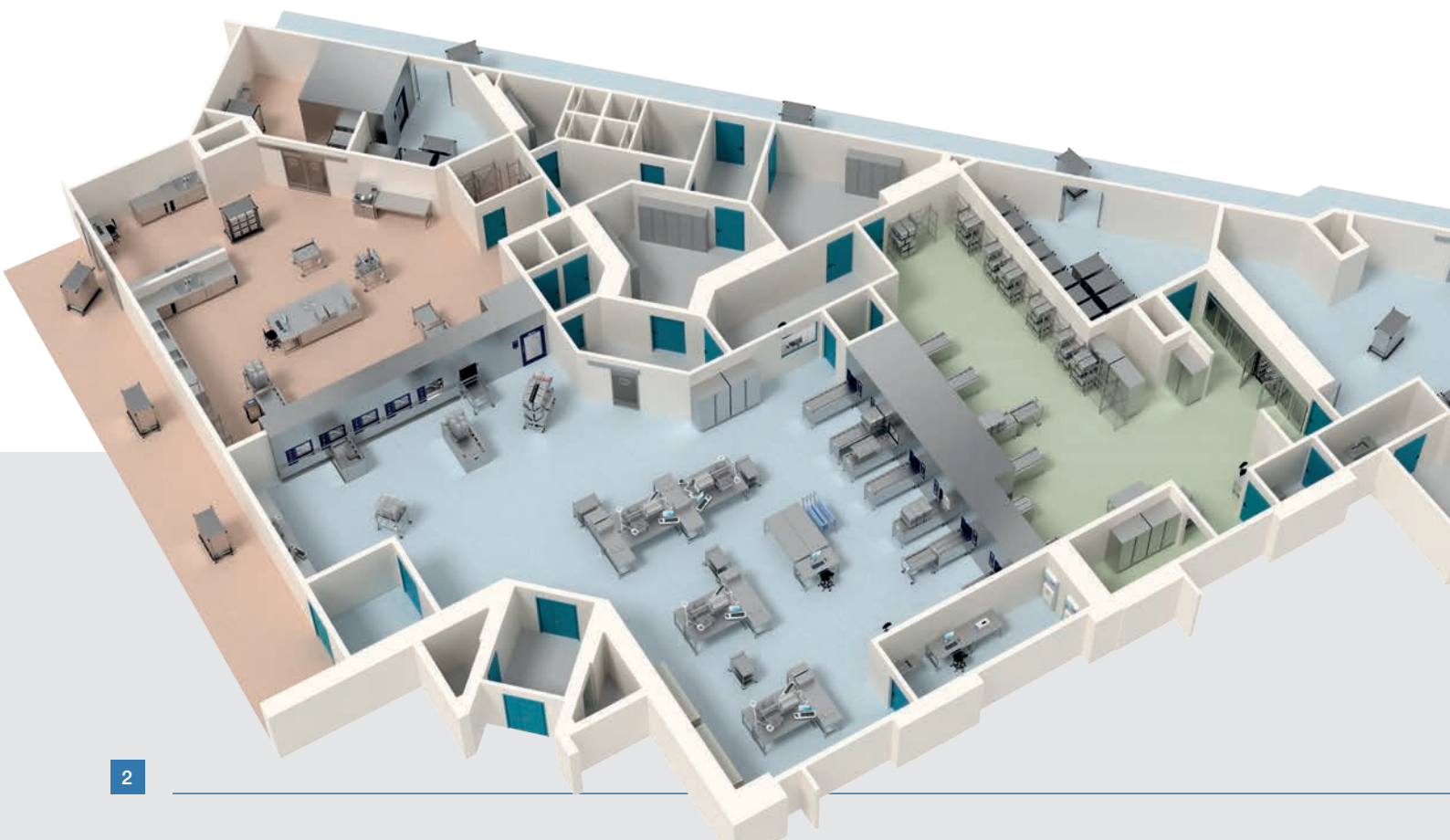
Driven by customer needs

Steelco is a leading infection control solution provider, supplying the healthcare, laboratory research and pharma sectors. Active in over 90 countries, Steelco has equipped numerous world renowned 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, 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.

With headquarters that overlook the Alps, a core value of Steelco is to minimize our carbon footprint by manufacturing in modern premises in as efficient a manner as possible. We are dedicated to reducing the energy and water consumption of our equipment whilst improving performance.

Whether you are just wishing to replace a single small machine or assistance in designing and equipping a large central CSSD, 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.



Ultrasonic overview

Under ISO 17664 it is the instrument manufacturer's responsibility to provide instructions on how after use, instruments should be prepared, cleaned, disinfected, dried, inspected, maintained, tested, packaged, sterilized and stored.

Steelco has developed an innovative range of different ultrasonic units to meet different applications and capacities so that CSSD staff can reprocess instruments including complex microsurgery tools according to a manufacturer's instructions when these stipulate the use of an ultrasonic unit.

- +** *Intuitive and automatic functions*
- +** *Heavy to handle*
- +** *Cannulated instrument connection*
- +** *High capacity*
- +** *Flexible configuration*

Standard compliant

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



Medical range Steelco products Washer disinfectors and Sterilizer



CSSD range
Systems and Automations



Washer disinfectors
for transfer trolleys, sterile
containers and bulky items



Steam Sterilizer
hospitals, CSSD and
medical center



Steelco Ultrasonic range



Dedicated complex instruments

US 80 and 300 ultrasonic units have been developed for complex cannulated instruments combining ultrasonic power with Steelco's active flushing technology.

From 12 up to 40 cannulated instruments



Dedicated general purposes

US 100 and US 200 meets the needs of busy CSSD departments that need large capacity ultrasonic cleaning units for the treatment of medical devices and rigid endoscopes.

3 x Din basket capacity per cycle.

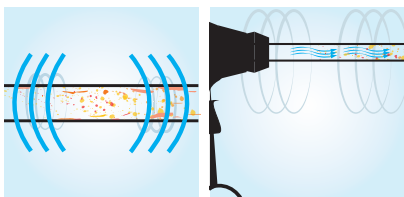


US 1000 High Capacity Ultrasonic Cleaner

Steelco US 1000 has been designed to be integrated into high capacity automated washer systems, between a prewashing unit and automatically loaded washers to reduce total cycle time.

18 x Din basket capacity per cycle

Read more from Steelco CSSD range catalog



Steelco Active Flushing Technology

US 80 and US 300 feature Steelco Active Flushing Technology, sequentially pulsed and ultrasonic action to provide a powerful combined decontamination to clean even the most intricate of shapes and connections.

Safe and validated process

A soft touch glass control panel with graphic colour LCD display is intuitive to use and enables the selection of 20 preset programs or an additional 20 user defined programs.

The SteelcoTronic control system constantly monitors that all critical parameters such as temperature, detergent dosing, water level and equipment function are correct. Cycle information can be stored or printed. To protect users and avoid cross contamination risks, units will only operate with their lids closed.



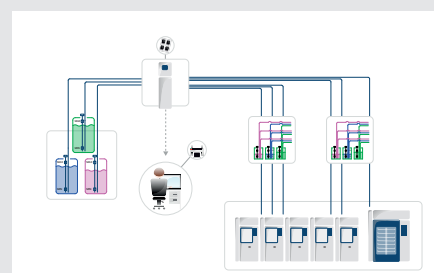
Chemistries to complement ultrasonic cleaning

For best results use Steelco chemistries that have been validated on ultrasonic units. Detergents are internally stored and together with water are automatically dosed to the correct level with a lowlevel detergent alarm fitted.

SteelcoChem

Centralized Chemical Dispensing System

- Cost reduction through the purchase of large volumes of detergents.
- No more need to replace small containers.
- Reduces the risk of incorrect product selection and operator exposure to spillages.
- The constant monitoring of consumption and of remaining volume of chemical minimizes the risk of downtime.



Installation example



US 80 and US 300

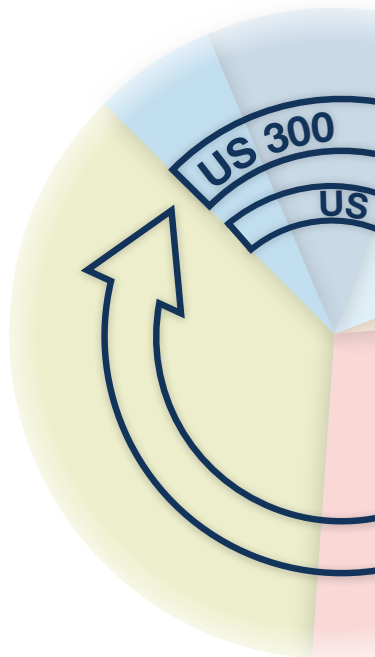
Ultrasonic system for cannulated instruments



US 300
ultrasonic unit



US 80
ultrasonic unit



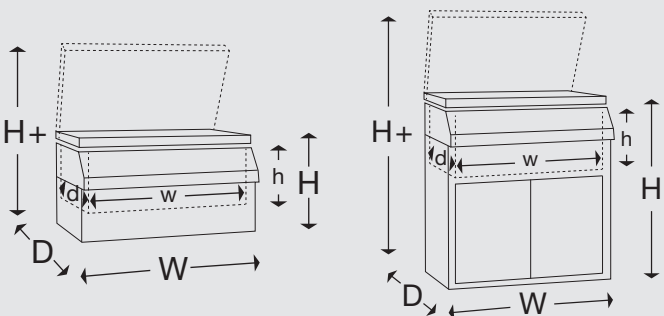
The increase in minimal invasive surgery and use of robots has driven the need for increasingly sophisticated instruments.

The smaller interior structures and connections within complex hollow lumen and microsurgical instruments pose added challenges for their reprocessing.

Responding to these challenges, Steelco has developed the US 80 and US 300 Ultrasonic units specifically for cannulated instruments.



Washer dimensions



		W	D	H	H+	w	d	h
US 80	mm	760	560	398	795	650	300	220
	inches	29 ⁷ / ₈	22 ¹ / ₁₆	15 ¹¹ / ₁₆	31 ⁵ / ₁₆	25 ⁹ / ₁₆	11 ¹³ / ₁₆	8 ¹¹ / ₁₆
US 300	mm	890	675	1045	1530	750	400	260
	inches	35	26 ⁹ / ₁₆	41 ¹ / ₈	60 ¹ / ₄	29 ¹ / ₂	15 ³ / ₄	10 ¹ / ₄

US 80 - Process cycle

Example of a standard cycle. Including automated drain phases. Custom cycles can be programmed.

1. Cold prewash
 2. Water and detergent dosed with control of parameters
 3. Steelco Active Flushing
- ➔ Instruments ready for further processing

Capacity

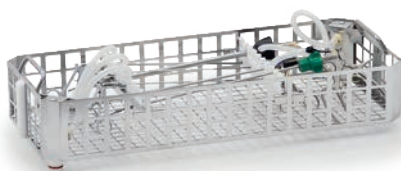
up to 12 hollow instruments in a single cycle

Features

US 80 is a small footprint benchtop size unit for the pretreatment of hollow instruments. Excellent cleaning results are obtained for **up to 12 hollow instruments** by the combined effects of Ultrasonic cleaning and Steelco's Active Flush technology.

All steps of the decontamination process are fully automated.

The injection-washing basket can be easily removed from the ultrasonic unit, allowing loading and connection of instruments on a separate workbench.



US 80 basket dimensions WxDxH
600x250x100mm / 23 5/8"x9 13/16"x3 15/16"

US 300 - Process cycle

Example of a standard cycle. Including automated drain phases. Custom cycles can be programmed.

1. Cold prewash
 2. Water and detergent dosed with control of parameters
 3. Steelco Active Flushing
 4. Rinse with DI or RO water
 5. Thermal disinfection
 6. Forced hot air drying system
- ➔ Instruments ready for sterilization

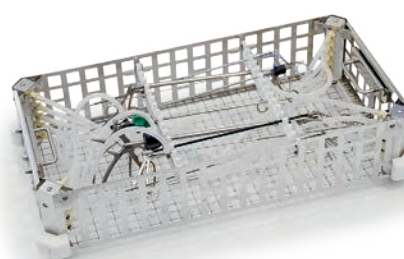
Capacity

Up to 40 hollow instruments in a single cycle

Features

The US 300 is a free standing unit that following the Steelco Active Flush cycle, will rinse instruments with DI or RO water prior to thermal disinfection, making instruments safe to handle and ready for sterilization.

In addition to its high capacity of reprocessing **up to 40 hollow instruments in a single cycle**, US 300 also has a number of additional features such as on board chemical storage of up to 2 chemistries and automatic lid opening option via IR sensor.



US 300 basket dimensions WxDxH
700x350x150mm / 27 9/16"x13 3/4"x5 15/16"

Connection kit for the validated reprocessing (washing and thermal disinfection) of "da Vinci®" robotic surgery instruments for US 300 model.

The connection kits allow the set up the standard loading basket with housings for the robotic surgical instruments and are available for the IS 3000 (Si) and IS 4000 (Xi) series.





US 100 and US 200

Ultrasonic cleaning systems



US 200
automatic module

US 100
automatic module

Steelco’s ultrasonic cleaning systems are ideally suited to the needs of busy departments and can be easily installed in and pre-treatment areas.

Both the US100 or US 200 model feature AISI 316L grade stainless steel wash tanks fitted with industrial style transducers and a powerful ultrasonic generator to provide high performance cleaning in a low maintenance durable unit.

Meeting international standards, critical process parameters such as temperature, ultrasonic power and time are monitored with user alarm systems fitted.

Powerful Cleaning Action

Outstanding cleaning results are achieved due to ultrasonic power of 3000W per tank with filter for radio frequency control and 0% to 100% power control. Frequency modulation technology ensures an even cavitation effect distribution.

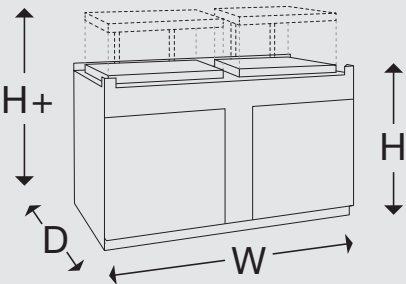
Supplied as standard with 38KHz ultrasonic frequency with other frequencies available on request. 4 Luer lock connections per tray level.



Washing chamber

Chamber dimension WxDxH
600 x 350 x 345mm
 23 5/8" x 13 3/4" x 13 9/16"

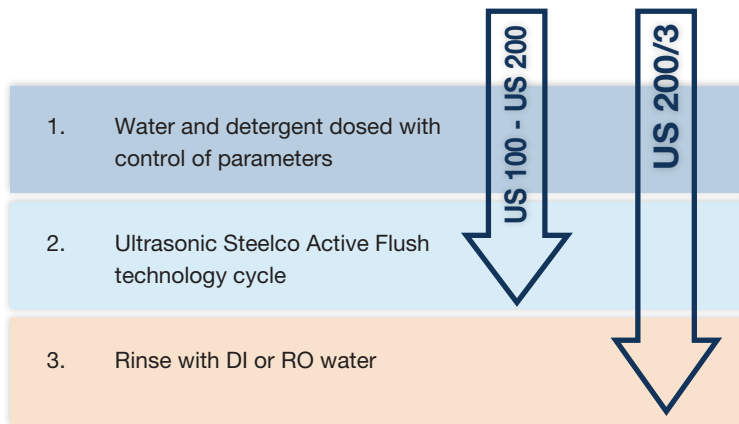
Wash cart dimension WxDxH
485 x 250 x 50mm
 19 1/16" x 19 13/16" x 2"



Washer dimensions

		W	D	H	H+
US 100	mm	800	700	950	1270
	inches	31 1/2	27 9/16	37 3/8	50
US 200	mm	1500	700	950	1270
	inches	59 1/8	27 9/16	37 3/8	50

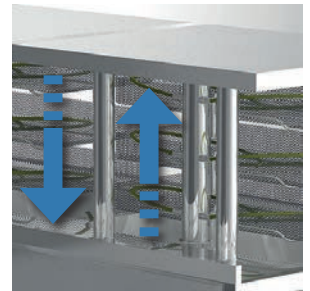
Steps



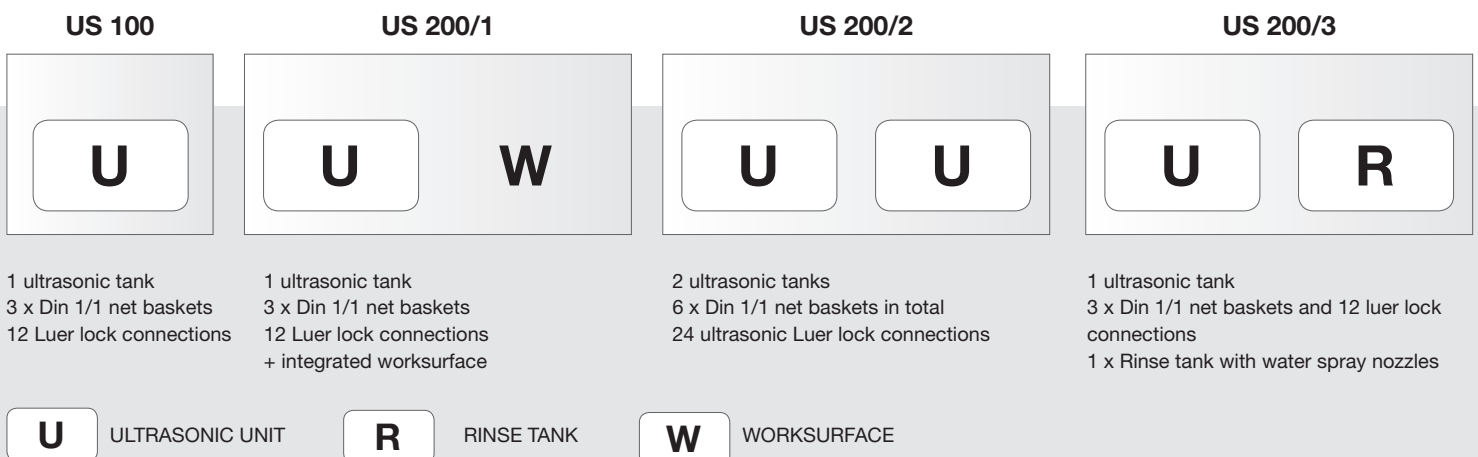
Frequency of automatic renewal of washing solution selected according to user requirements.

Features

- Automatic tank filling with water level control
- Automatic minimum level control of chemical with alarm
- Automatic degassing procedure (time selectable)
- Pump for automatic chemical dosing
- Intermittent functioning water recirculation pump
- Cold/warm water mixing system
- Baskets are automatically lowered and raised at the start and end of each cycle thereby reducing the risk of work related injuries manual lifting
- Pneumatic lift of the cover and baskets provided with security device



Tank configuration










Technical data





ultrasonic washers	US 80	US 300	US 100 US 200/1	US 200/2	US 200/3
<i>CAPACITY</i>					
number of ultrasonic tanks	1	1	1	2	1
total capacity of ultrasonic tanks - lt	43	78	72,5	2x72,5	72,5
water capacity at full fill level - lt	24	49	58	2x58	58
maximum number of cannulated instruments	12	40	12	2x12	12
number of connections	6	20	12	2x12	12
<i>PROCESS</i>					
"Active Flushing" technology	•	•	•	•	•
pressure control of washing circuits	◦	◦	-	-	-
drain water cooling system	-	◦	-	-	-
forced hot air drying system	-	◦	-	-	-
<i>CONSTRUCTION</i>					
external surfaces AISI 304	•	•	•	•	•
washing chamber AISI 316L	•	•	•	•	•
<i>DOOR OPERATION</i>					
manual	•	-	◦	◦	◦
automatic - pneumatically actuated	-	-	•	•	•
automatic - electrically actuated	-	-	◦	◦	◦
automatic - foot pedal operated	-	-	◦	◦	◦
automatic - infrared sensor operated	-	•	◦	◦	◦
automatic door locking	-	•	•	•	•
<i>CONTROL PANEL</i>					
soft touch, 4,3" graphic LCD display	•	•	◦	◦	◦
touch button, LED display	-	-	•	•	•
standard programs	20	20	2	2	2
custom programs	20	20	1	1	1
USB port	•	•	-	-	-
RS232 serial port	•	•	◦	◦	◦
integrated printer	◦	◦	◦	◦	◦
ethernet port for paperless traceability	•	•	◦	◦	◦
<i>UTILITIES</i>					
standard electrical connection	230V 50Hz	400V 3~+N 50Hz	230V 50Hz	230V 50Hz	230V 50Hz
others available on request					
total power W	1100	10000	3250	6350	3250
ultrasonic power W	1000	2000	3000	3000x2	3000
cold and warm water connections	•	•	•	•	•
<i>DETERGENT DOSING SYSTEM</i>					
standard dosing pump	1	1	1	2x1	1
additional dosing pump	◦	◦	◦	◦	◦
internal detergent storage (5 l containers)	-	2	2	2	2
compatibility with central dosing system	•	•	•	•	•

• = Standard ◦ = Optional - = Not available

Standard instrument connection accessories

		US 100 - US 200/1	US 200/2	US 200/3
	US100501 Silicone tube with luer lock connection to machine, open end for instrument connection	12	2x12	12
			US 80	US 300
			3	14
				
			3	6
	US300513 Silicone tube with easy connection to machine, sleeve with silicone seal for connection to unported instruments max instrument ø 10mm			

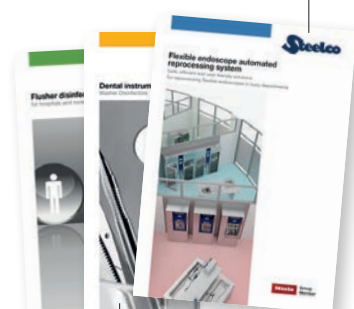
Optional instrument connections and accessories

	US300518 Connection kit for robotic instruments "da Vinci®" series IS 3000 (Si) - compatible only with US 300		US300530 Connection kit for robotic instruments "da Vinci®" series IS 4000 (Xi) - compatible only with US 300
	US300512 Silicone tube with easy connection to machine, sleeve with silicone seal for connection to unported instruments - max ø 22mm		020651 Y adaptor for doubling flushing connections
			9991362 Female luer lock connectors (2pcs.)
			C095008 Cap for closing unused luer lock connections
			C71 150Wx230Dx50H mm 5 ¹⁵ / ₁₆ W x 9 ¹ / ₁₆ D x 2 H inches mesh basket for small ware. C87 Lid for C71 mesh basket.
			C1190 110Wx150Dx50H mm 4 ⁵ / ₁₆ W x 5 ¹⁵ / ₁₆ D x 2 H inches mesh basket for small ware. C1191 Lid for C1190 mesh basket.



Miele Group Member

ARES - flexible endoscope automated reprocessing system



Dental washer disinfectors

Flusher disinfectors

Steam sterilizing autoclaves



Washer disinfectors for central sterile supply departments

Laboratory glassware washer disinfectors



Washing and sterilizing systems for life science and pharmaceutical applications

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*Only for products listed into the 909/MDD certificate

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