

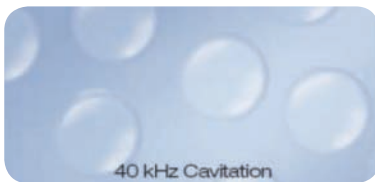
More Cleaning Power & Protection

Caviwave™ Ultrasonic Cleaning Family

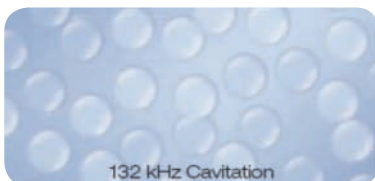
Caviwave
Cleaning System



NEW!
Caviwave Pro
Cleaning System



40 kHz Cavitation



132 kHz Cavitation

Caviwave Ultrasonic Cleaning Systems provide more cleaning power, more protection and more flexibility for your unique instrument processing needs. The Caviwave line offers cleaning options for everything from delicate ophthalmic instruments to heavy orthopedic sets to valuable *da Vinci*® 8mm and 5mm *EndoWrist*® Instruments.

The powerful **132 kHz transducers** deliver three times the frequency of the industry standard 40 kHz transducer. This micromechanical scrubbing action efficiently cleans both hard-to-reach internal passages and heavily soiled external surfaces, providing reassurance that your instruments were thoroughly cleaned and protected.

Caviwave™ Ultrasonic Cleaning Systems

Efficient Cleaning

The Caviwave Ultrasonic Cleaner (single bay) and Ultrasonic Console (dual bay) were designed to handle many types of surgical instruments:

- lumened (canulated) instruments
- heat-sensitive instruments
- delicate ophthalmic instruments to heavy orthopedic sets



Automated lift elevator



Toe touch cycle start



Lumened device flush



Preprogrammed cycles



Automated Processing

Preprogrammed cycles are easy to use and provide consistency of cleaning even for the hard to see or hard to reach areas.

- automated load/unload elevator provides ergonomic tray loading
- toe touch control provides hands-free cycle start
- automatic fill maintains water level and quality
- automatic drain helps increase productivity
- lumen flushing is more effective than only manual brushing
 - port flushing: canulated instruments with ports
 - reverse port flushing: instruments without ports



Original Caviwave Cleaner



Original Caviwave Console

NEW!

Caviwave™ Pro Ultrasonic Cleaning System

With CaviClean technology

More Peace of Mind

With Caviwave Pro, you get all of the benefits of the original Caviwave model, plus the added capability of cleaning valuable *da Vinci* 8mm and 5mm *EndoWrist* instruments and accessories:

- Caviwave Pro systems include a validated cycle for automated processing of both *da Vinci EndoWrist* Instruments and accessories
- automated cycle provides reliable, repeatable cleaning performance
- minimizes labor-intensive manual cleaning of *da Vinci EndoWrist* Instruments and Accessories
- automatically flushes*, cleans, lubricates and dries** *da Vinci EndoWrist* Instruments and Accessories

Our process has been independently tested and validated in partnership with Intuitive Surgical to meet the benchmarks established by AAMI TIR 30:2003 and AAMI TIR12:2004.



Easy-to-use control panel



Up to 35 lb. of regular instruments



Lumened instruments



da Vinci EndoWrist instruments

CaviClean Technology

The patented **CaviClean Technology** found in Caviwave Pro Ultrasonic systems, developed after extensive research, is a simultaneous multi-frequency design that creates optimal ultrasonic action and noise reduction.

CaviClean Technology:

- Combines:
 - Large bubbles with soil-removing power
 - Small bubbles with good penetration capability
- Includes automated cycles that wash, rinse, dry and lubricate
- Provides complete coverage of all surfaces (internal and external)
- Removes film and small particles



New Caviwave Pro Cleaner



New Caviwave Pro Console

*Flushing not required for *EndoWrist* accessories. **Caviwave Pro console only.

More Cleaning Power

From the powerful 132 kHz transducers in the Caviwave Cleaner and Console to the patented CaviClean Technology of the Caviwave Pro Cleaner and Console, STERIS provides the optimal ultrasonic performance you need.



Caviwave Cleaner



More Protection

Prolystica cleaning chemistries are formulated to be tough on soil but gentle on instruments. This detergent removes bioburden and protects the passivation layer of your stainless steel instruments.

After the instruments have been cleaned and dried, we go even further by adding lubricant during the rinse phase to help protect your surgical instruments.



Caviwave Console



More Environmentally Friendly

Each Caviwave Ultrasonic cleaning system uses an efficient water recovery system that allows rinse water to be reused for up to 12 cycles, drastically reducing the amount of water used by the system.

Caviwave systems also use an environmentally friendly chemistry. From the small recyclable packaging to the biodegradable ingredients, Prolystica Enzymatic chemistry is gentle on the environment.



New Caviwave Pro Cleaner

Visit www.steris.com to see a video of the Caviwave Pro Ultrasonic Cleaner in action.



New Caviwave Pro Console

da Vinci and *EndoWrist* are registered trademarks of Intuitive Surgical, Inc.



APPLICATION

The Caviwave Pro Ultrasonic Cleaning System Cleaner is designed to thoroughly clean (remove tissue, blood and other contaminants) surgical instruments and Intuitive Surgical®¹ *da Vinci*® Endowrist® instruments and *da Vinci*® accessories prior to final disinfection and sterilization. The Caviwave Pro System effectively cleans 5mm and 8mm *da Vinci*® Endowrist® instruments and *da Vinci*® accessories, laparoscopic devices and surgical instruments.

DESCRIPTION

The Caviwave Pro Ultrasonic Cleaning System Cleaner is a freestanding instrument washer housed in a compact stainless-steel cabinet. The Cleaner Model contains all needed components to effectively clean (utilizing ultrasonic cavitation passing through a detergent-balanced solution) up to 10 Intuitive Surgical *da Vinci*® Endowrist®, 10 laproscopic surgical devices or collection of regular surgical instruments prior to disinfection and sterilization.

The Cleaner Model is equipped with a powered opening lid, load/unload tray elevator and touch screen control.

STANDARDS

The Caviwave Pro Ultrasonic Cleaning System meets the applicable requirements of the following standards:

- **Underwriters Laboratories (UL)** Standard 61010-1: 2nd Edition 2005 Electrical Safety.
- **IEC-61010-1:** 2001 Electrical Safety.
- **Canadian Standards Association (CSA)** Standard C22.2 No. 61010-1: 2nd Edition 2004 Electrical Safety.

¹ *da Vinci, Endowrist and Xi* are trademarks of Intuitive Surgical.



(Typical only - some details may vary.)

- **CalOSHPD California Seismic "R" Listing.**
- **IEC 61010-1 Safety Requirements.**

SIZE (W X H X L)

Overall dimensions of a fully equipped Cleaner:

- 43-1/2 x 42-1/4 ± 1 x 36" (1105 x 1073 ± 25 x 914 mm)

Service Access Clearance:

- Minimum 24" (610 mm) all sides

FEATURES

The Caviwave Pro Ultrasonic Cleaning System Cleaner Model is wired for operation on either 208 V (50/60 Hz, three phase [5 wire]/ single phase [4 wire]) or 240 V (50/60 Hz, single phase [3 wire]) voltage and shipped with power cord. STERIS supplies a complete

The Selections Checked Below Apply To This Equipment

VOLTAGES

- 208 V, 50/60 Hz, 3ph (5 Wires Including Protective Earth and Neutral)
- 208 V, 50/60 Hz, 1ph (4 Wires Including Protective Earth and Neutral)
- 240 V, 50/60 Hz, 1ph (3 Wires Including Protective Earth)

ACCESSORIES

- Seismic Tie-Down (CR1212)
- Standard Instrument Tray for 17/20 Gal Ultrasonic Cleaners (CR1221)
- Standard 10-Port Flush Kit with Brackets (CR1219)
- Extension Hose Kit, 2.5 Gal Detergent (CRP1006)
- Caviwave Pro Instrument Tray with Port Flush Kit - for *da Vinci*® Single Site® and *da Vinci*® Endowrist® Instruments (CRP1717)
- Caviwave Pro 10 Single Port Flush Replacement Hoses - for *da Vinci*® Single Site® and *da Vinci*® Endowrist® Instruments (CRP1719)

ACCESSORIES (CONT'D)

- Caviwave Pro 1 Lid-to-Manifold Replacement Hose (CRP1721)
- Caviwave Pro 17-Gal Instrument Tray with Flush Kit - for *da Vinci*Xi® Instruments (CRP1723)
- Caviwave Pro 17-Gal Instrument Replacement with 4 Flush Hoses - for *da Vinci*Xi® Instruments (CRP1724)

Item _____

Location(s) _____

working unit ready for installation and connection to facility service lines. The Cleaner Model includes the following features:

Optimum Ultrasonic Cleaning Power is ensured by simultaneous multi-frequency design. Sonic generators deliver dual (58/132 kHz) frequencies creating optimal cleaning action and noise reduction. The generators are mounted with individual slide out modules for ease of service. Also, patented ceramic transducer modules are bonded to the process tank providing efficient energy transmission for instrument cleaning.

Touch Screen Control enables operator to open lid, select cycle, start or pause cycle and monitor cycle progress from the touch screen controller.

Locking Caster Wheels are supplied for ease of Caviwave Pro Ultrasonic Cleaning System movement.

Safety Interlocks and Controls help to ensure operator safety.

Large Capacity Process Tank (17 gal [64 L]) accepts a large variety of instrument trays. Each unit contains a standard instrument tray and an Intuitive Surgical *da Vinci*[®] Endowrist[®] instrument tray. Tank is constructed of type 316 stainless steel with a BA finish.

Illuminated Controls include MAIN POWER ON/OFF, ALERT: READ SCREEN and Touch Screen Display.

Two Chemical Probes are provided for 1 gal (3.8 L) containers of detergent and lubricant.

Front and Side Service Access Panels are supplied on the unit for ease of any maintenance procedures. Access doors are scratch and dent resistant. Lift-Out access panels are constructed of type 304 stainless steel. Front doors have automatic power cut-off feature to protect components and operator when doors are opened.

Base Plate, Frame and Removable Countertop are constructed of type 304 stainless steel.

Recommended Chemicals for use in this machine:

- Hinge-Free[®] Instrument Lubricant.
- Polystica[®] 2X Concentrate Enzymatic Presoak and Cleaner.
- Polystica[®] 2X Concentrate Alkaline Detergent.
- Polystica[®] 2X Concentrate Neutral Detergent.

PREVENTIVE MAINTENANCE

Customers are encouraged to contact STERIS concerning our annual maintenance program. Under the terms of the program, preventive maintenance, adjustments and replacement of worn parts are provided on a scheduled basis to help ensure optimal equipment performance and help minimize untimely or costly schedule interruptions. STERIS maintains a worldwide staff of well-equipped, factory-trained technicians to provide these services, as well as on-site installation, training and expert repair services. Contact STERIS for details.

NOTES

1. Pipe sizes shown indicate terminal outlets only. Building service lines (not provided by STERIS) must supply the specified pressures and flow rates.
2. STERIS recommends that a dedicated, grounded electrical circuit be provided for each unit. Do not use extension cord and plug.
3. Approximate operating weight: 891 lb (404 kg).
4. Caviwave Pro Cleaner must be mounted on a hard, non-combustible level surface.
5. STERIS requires as a minimum for floor sink: 6" diameter x 6" deep with a 2" minimum outlet pipe from the bottom.
6. STERIS requires minimum clear openings from loading dock to installation point of 44" (1118 mm) for Cleaners. Doors with openings narrower than this 44" (1118 mm) requirement may need door and/or frame removal.

UTILITY REQUIREMENTS

Refer to equipment drawing (764335-355) for installation details and specifications.

Electrical

208 V, 50/60 Hz, 3-Phase (5 Wire); 208V, 50/60 Hz, 1-Phase (4 Wire); 240V, 50/60 Hz, 1-Phase (3 Wire)

Drain (Gravity)

1" FPT CPVC (trap and waste lines are not provided by STERIS). Maximum flow: 10 gpm. Maximum water temperature: 120°F (49°C). See **Note 5**.

Drain (Pump)

3/4" FPT CPVC (trap and waste lines are not provided by STERIS). Maximum flow: 20 gpm. Maximum water temperature: 120°F (49°C). See **Note 5**.

Hot Tap Water (SS)

1/2" FPT (38 psi Maximum); 110-120°F (43-49°C).

Cold Tap Water (SS)

1/2" FPT (38 psi Maximum); 40-60°F (4-16°C).

Deionized Water (SS)

1/2" FPT (38 psi Maximum); 65-120°F (18-49°C).

NOTE: Electrical and plumbing connection must be flexible or contain a disconnect to allow unit to be moved from the wall for servicing.

The base language of this document is ENGLISH. Any translations must be made from the base language document.

CUSTOMER IS RESPONSIBLE FOR COMPLIANCE WITH APPLICABLE LOCAL AND NATIONAL CODES AND REGULATIONS.

TECHNICAL DATA

MODEL	POWER REQUIREMENTS (Amps)†			SONIC POWER (Watts)	SHIP WEIGHT lb (kg)	TANK FLUID CAPACITY gal (L)	HEAT LOSS (BTU)	TRAY SIZE L x W x D* in (mm)
	208 V		240 V					
	1 PH**	3 PH‡	1 PH+					
CRP117		26		2000	841 (382)	17 (64)	300	24 x 14 x 3 (610 x 356 x 76)
CRP1172081	33			2000	841 (382)	17 (64)	300	24 x 14 x 3 (610 x 356 x 76)
CRP1172401			30	2000	841 (382)	17 (64)	300	24 x 14 x 3 (610 x 356 x 76)

*Maximum tray size

†Amperage value shown is actual current drain. Disconnect should be at least 25% more.

**4 Wires including Neutral and Protective Earth.

‡5 Wires including Neutral and Protective Earth.

+3 Wires including Protective Earth.

For Further Information, contact:



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