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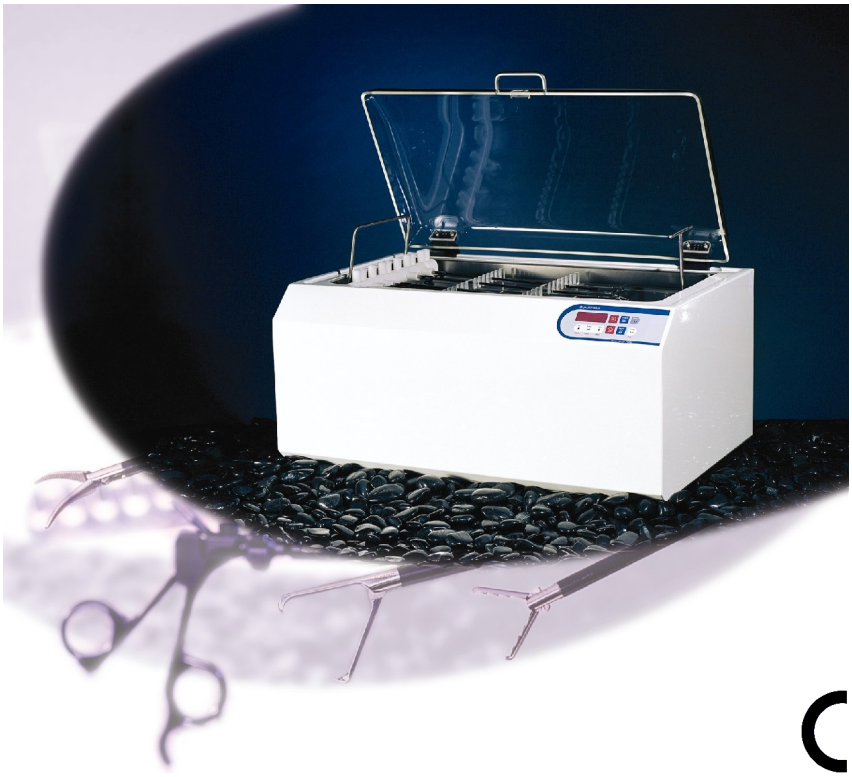
So Easy So Fast So Clean Soniclean

Ultrasonic Irrigator S2800



CE

Version 17

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Contents

1. Overview

The Irrigated Ultrasonic Cleaner or “Irrigator” is designed to improve the quality and consistency of cleaning of laparoscopic instruments using a combination of ultrasonics and irrigation. The Irrigator flushes clean solution through the cannulae of hollow instruments, whilst delivering ultrasonics to precision clean. The Irrigator is designed for cleaning hollow instruments and is equally effective for cleaning non-cannulated instruments. It is intended that the instruments shall be gross cleaned prior to loading into the Irrigator, and be sterilised in the usual manner after ultrasonic cleaning.

2. Installation Procedure

2.1. Plumbing:

Inlet Mains Supply

i) Screw supplied braided hose on to the machine and inlet mains water supply.
ii) Hand tightened only.

Outlet Waste Supply

i) Screw and hand tighten supplied grey sink hose onto the machine and insert into drain.
ii) Ensure that the grey sink hose falls evenly away from the machine to the drain

2.2. Electrical:

i) Plug machine into mains supply.
ii) Switch on when ready to operate.

2.3. Machine Reporting System: (MRS only)

i) LAN connection; take the LAN provided cable and push the black plug into the MRS socket provided on the Irrigator. Plug the other end (RJ45) into the LAN wall outlet.
ii) Contact your IT department and hand them the Machine Reporting Manual. The appropriate information for connecting the machine to the Local Area Network is found on page 10 “Network Hardware and Configuration” of the Machine Reporting System Manual.
iii) PC Connection: take the PC cable provided and push the black plug into the MRS socket provided on the Irrigator. Plug the other end (RJ45) into the appropriate outlet on the PC.
iv) Temperature Sensor: Push the ambient temperature sensor probe into the temperature sensor socket found on the right side of the machine.

2.4 Printer

i) Plug the machine into mains supply and turn on at the switch.
ii) Plug the printer cable into the machine and the printer.

iii) Press the feed button to progress the paper.

2.5. Detergent Bottle:

i) Connect detergent hose to left hand side socket of machine.
ii) Place filtered end of detergent hose into container.
iii) Ensure there is sufficient detergent in bottle at all times.
iv) Check level of detergent regularly.

2.6. Machine Location:

i) Place machine on flat and horizontal surface (maximum 2º tilt).
ii) Position at operator's convenience.

Caution:

Only use designated cables for accessing data from the Irrigator. The cable marked 'PC' should be used with a laptop computer. The cable marked 'LAN' should be used for connection to a LAN wall outlet.

3. Installation Requirements

IMPORTANT NOTE:

The customer shall ensure the following requirements are met prior to installation. This is essential for the machine to perform at optimum level and to fulfil Australian Standards.
If the customer fails to provide this information, Soniclean will provide the information for a fee.

3.1. Environmental:

i) Use cold water only.
ii) A tap or inlet must be dedicated to the irrigator.
iii) Water Quality for cleaning as per AS/NZS 4187:2003 shall be used. +Water Hardness will
determine the type of detergent to be used. It will also determine the amount of detergent to be used in the cleaner.

3.2. Plumbing:

i) Maximum water pressure 150 psi, minimum water pressure 50 psi.
ii) Flow rate 10 litres/minute (minimum) to 20 litres/minute (maximum).
iii) This is a **High Hazard** application and the inlet mains supply shall be fitted with an approved Reduced Pressure Zone Device and a line filter. *(Please check with your local Water Authority for the correct installation information for your area.)*
iv) Mains inlet connection with ½" male BSP fitting within 600mm from the machine.
v) Do not use any aeration devices in the mains water supply.
vi) Outlet pipe of 25mm diameter for waste water within 600mm from the machine.

3.3. Electrical:

i) Wall power socket 240 VAC 50-60 Hz rated at 10 amps.
ii) Wall power socket located within 600mm from the machine.

iii) Power supply circuit shall not be shared with life threatening or life support electrical systems.
iv) Power supply circuit shall not be shared with computer electrical system or other excessively large power devices, e.g. steriliser/washer disinfectors.
v) Earth leakage protection shall be provided by user.

3.4. Machine Reporting System: (MRS models only):
i) Local Area Network (LAN) outlet 1000mm from the machine.

3.5. Printer
i) Allow room on the left hand side of the machine for the printer unit.

3.6. Detergent Bottle:
i) The detergent bottle is supplied with your machine.
ii) The detergent bottle shall be positioned on the right hand side of the machine.
iii) When bottle is empty replace with the same brand of detergent. It is important the identical detergent is used, as this is critical to the total cleaning process. If other detergent is used the machine shall require re-programming.

3.7. Machine Location:
i) Place the machine on a flat and horizontal surface. (Maximum 2º tilt)
ii) Position at operator's convenient height. (The top of the lid at elbow height)
iii) The bench top shall be strong enough to support the fully loaded machine. (approximately 60 kilograms)
iv) The unit requires 590mmx 880mm of bench space.
v) Allow minimum 100mm clearance at the rear to enable plumbing access. This may be reduced by fitting elbows to both the inlet and the outlet.
vi) Allow 1000mm clearance above unit to allow the lid to open fully.

4. Operating Instructions

4.1. Prior to Operating:
Position machine on bench top or table (ideally, so the lid of the machine is at elbow height) and ensure machine is horizontal.

4.2. How to Operate:

4.2.1. Start Process:
i) Turn on at power point.
ii) The machine will display 8.8.8.8, then SCX.X
iii) The machine will automatically drain, flush, drain the flush, fill with water and detergent and perform a de-gassing cycle.
iv) When the degassing cycle is complete, the machine is ready for use.
v) During the above cycle, the machine with display the following;

Display	Function
8.8.8.8	Internal program
SCX.X	Internal program process
Drn	Draining the water.
Drnf	Tank is flushing. (drain is open)

Drn	Tank is draining the flush
FILL	Tank is filling with water and detergent is automatically added at the programmed quantity. (0.5%)
De-gas	The solution is degassing. This takes approximately 10 minutes.
----	The machine is ready to be loaded with instruments.

vii) It is recommended that you perform a foil test daily to check the performance of your Irrigator (Refer Section 5, Foil Test)

4.2.2. Confirm Parameters:

To check or change the settings or parameters of your Irrigator:

i) Press the “SHIFT” key and “PROG” key together and hold for 3 seconds.
ii) A beep will sound when command has been recognized.
iii) The machine will display the “Clean Time” or “ct”
iv) Scroll through the parameters using the “Enter” keys
v) The parameters may be changed as required. (Refer Section 6, Program Mode Section)

4.2.3. Load the Machine:

N.B. Refer to Appendix – Cleaning Cannulated Instruments for suggestions about care of your laparoscopic instruments.

i) Instruments may be loaded into tray with the tray located on a bench top, inside the machine, or resting above the bath. (Use the “T” handle on the tray to position tray above bath)
ii) Dismantle the instruments and insert the nozzle end of the cannulated instrument (standard sizes 2, 5 and 10mm) into the connector provided.
iii) With the ports vertical, place the connector, with instrument loaded, into the port.
iv) Gently lay the instruments down and rest them on the moveable plastic rack. (Adjust the rack to support the instruments). The other parts of the instruments may be placed on the bottom of the tray or in the instrument holders provided.
v) The unused ports should be left in vertical position (when the irrigator function is turned off to that port).
vi) Lower the tray into the cleaning bath. (Ensure the “T” handle is on the right hand side).
vii) Ensure that the spigot in the bath docks onto the instrument tray.

4.2.4. Start Cleaning:

i) Close the lid and press “CLEAN”
ii) The machine will perform a cleaning cycle according to its program.
iii) The machine will perform a short de-gas, and then commence cleaning.

Short De-gas Cycle Activity	Display	Parameters set by manufacturer (Settings)	Explanation
Clean No.	C-01	10	Current Cleaning cycle number
De-gassing	degas	2	De-gassing time period
Time Remaining	01.48	2 mins	Time remaining to complete current de-gassing cycle shown in minutes and seconds.

iv) The following table explains the various parameters of the clean function, which are displayed during cleaning and are programmable to suit your requirements.

Cleaning Activity	Display	Parameters set by manufacturer (Settings)	Explanation
Clean No.	C-01	10	Current Cleaning cycle number
Ultrasonics	P-03	3	Displays power level
Time Remaining	09.48	10 mins	Time remaining to complete current clean cycle shown in minutes and seconds.
Irrigator	Red Light On Keypad	5 (one rest period = 5 secs)	Light indicates if function is on or off (irrigate for 5 secs, rest for 25 secs, and repeat)

4.2.5 To Pause Cleaning:

i) Lift the lid to pause the cleaning cycle.

ii) This feature allows for any adjustments the instruments may require.

4.2.6 To Stop Clean Cycle:

i) Press “CLEAN” again during cycle. This will stop cycle and clear current clean.

ii)

To start new cycle press “CLEAN” again.

4.2.7 Completion of Single Clean Cycle:

i) The machine, will emit 5 beeps and display '**- - - -**'.
ii) Lift the lid.
iii) Raise the instrument tray and rest it above the bath using the 'T' handle.

4.2.8 Automatic Drain and/or Shutdown:

The Irrigator can be programmed to automatically drain after a selected number of cleaning cycles.

i) Manufacturer's programmed number of cleans between draining is ten.
ii) When the tenth clean cycle is completed the machine will display "END".
iii) The tank will automatically drain.

4.3 Irrigator Function:

i) To turn on, press the "IRRIGATE" key. The red light indicator will light, indicating the irrigation function is "on". The machine will irrigate as programmed.
ii) To stop irrigating, press the IRRIGATE key again, the red indicator light will extinguish, indicating the function is "off".

4.4 De-gas Function:

i) The machine will automatically de-gas as programmed when started.
ii) If further de-gassing is required, press the "DEGAS" key.
iii) The red indicator light will light, indicating the machine is de-gassing.
iv) To stop de-gassing, press the "DEGAS" key again, the red indicator light will extinguish, indicating the machine has stopped de-gassing.

4.5 Drain the Tank:

i) Press the "SHIFT" key and "DRAIN" key together and hold for 3 seconds.
ii) The machine will emit a beep.
iii) Release the keys and the machine will drain.
iv) When drain complete display will show "off".

4.6. Drain and Refill the Tank:

i) Press the "SHIFT" key and "REFILL" key together and hold for 3 seconds.
ii) The machine will emit a beep.
iii) Release the keys and the machine will drain and then refill with water and detergent and perform de-gas cycle.

4.7. Manual Shut Down Procedure:

This enables the machine to be shut down at any time. It is recommended that this procedure be done at the end of each day.

i) Press "SHIFT" and "DRAIN" together, and hold for 3 seconds.
ii) The machine will display "OFF".
iii) The machine will drain.
iv) Turn off the power at the power point.

v) Wipe down surfaces of machine with detergent or disinfectant.

5. Foil Test

Tip: Remove tray to ensure foil test is accurate

5.1 How to perform foil test:

i) Complete the usual start process
ii) Use a strip of 'home' brand aluminium foil about 150mm long x width of roll.
iii) Make sure Lid is closed
iv) Press TEST Key to switch on ultrasonic and unit will run for 30 sec as programmed
v) Open the Lid and insert the foil vertically into the bath.
vi) Keep foil in the bath until LID is displayed
vii) Remove the foil and compare the number and distribution of perforations with the sample foil test provided with your machine.
viii) Refer Australian Standard AS/NZ 2773.1-1998, page 16 for more details.

5.2 Foil Test Problem Solving:

If you are having difficulty getting a foil test to perform to standard, work through the following items, then try foil test again.

5.2.1 Machine may require further degassing.

5.2.2 Detergent Type and Dilution.

i) Always use a pH neutral or slightly alkaline detergent (pH 8 to 10.8) that is made specifically for ultrasonic machines.

ii) Extra detergent may be added to overcome water quality issues.

Tip: Check detergent bottle is full, check that same brand is being used, and check bottle and hose are connected and that there are no kinks in the line.

5.2.3 Contact your service agent if you cannot achieve a satisfactory foil test.

N.B. As per AS/NZ 2773.1-1998, it is acceptable to use alternative methods of testing the performance of your ultrasonic machine. Examples such as aluminium disc and pencil test, UPM probe must be used as per manufacturer's instructions.

6. Programmable Features

When you receive your Soniclean Irrigator it will be set to function automatically. The parameters are set in the factory. The features described below may be altered as you require. The list includes the display you will see on the machine when you are programming.

Ct - length of cleaning times

PO - ultrasonic power levels

Cn - clean time. This determines the number of cleaning cycles your machine will perform before automatically draining. To refill, press SHIFT and hold down REFILL for three seconds.

SP - detergent concentration

G1 - start up degassing time

G2 - degassing time prior to each clean, pre-clean degas

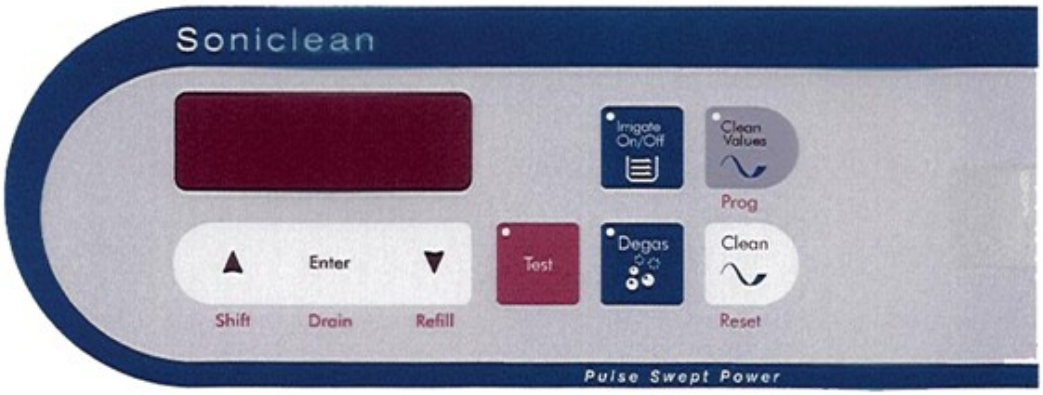
tt - test time. Set time for foil test

Id - irrigate default. Re-programs the machine to suspend the irrigator function.

Ir - irrigate rest periods. Determines the On/Off cycles of the irrigator function.

To alter these parameters see 6, Program Mode.

7. Keypad Description



Name of key	Function
▲	Increases values in program mode.
Enter	Confirms the parameters in program mode, and, Initialises the machine in operate mode.
▼	Decreases values in program mode.
Shift	Second function key. Hold down, then press required key, i.e. drain, refill, reset, program.
Drain	Drains the machine (takes approximately 2 mins). Hold down SHIFT key then press DRAIN key and hold for 3 seconds. Can be activated at any time.
Refill	Drains the machine, then refills with fresh water. Hold down SHIFT key then press REFILL key and hold for 3 seconds. Can be activated at any time except during clean or de-gas cycles.
Reset	Immediately aborts any current process that is operating. Hold down SHIFT and RESET keys together.
Irrigate On/ Off	Flushes inner lumen of instruments. Red light indicates irrigation feature is operating.
Clean	Ultrasonic cleaning and irrigation as programmed. Red light indicates clean cycle is operating. Press CLEAN during the clean cycle to cancel the current operation.
De-gas	De-gassing removes air bubbles from the water prior to ultrasonic cleaning. Red light indicates de-gas is operating.

	Press DE-GAS during the degas cycle to cancel the current operation.
Prog	Places the machine in program mode to allow alterations to the programmed settings. Hold down SHIFT key then press PROG key and hold for 3 seconds.
Test	Operates the ultrasonic cleaning mode for 30 seconds for the foil test.
Clean Values	Cleaning times and power levels may be changed without performing the complete programming procedure.

8. Program Mode

The parameters can be altered by entering the program mode. There are 3 ways of entry to this mode.

8.1 Program Entry Points:

8.1.1 Alternative 1 – Program at Start Up

i) Press the "PROG" key then turn on the machine.
ii) Hold the "PROG" down until the machine displays "CT 10".
iii) Release the "PROG" key.

8.1.2 Alternative 2 - Program during Operation:

i) When the machine will display "**- - - -**"
ii) Hold down the "SHIFT" key and then press the "PROG" key and hold for 3 seconds.

8.2 Program Parameters:

To program the parameters, enter program mode as desired in 6.1, then:

i) The machine will display a variety of parameters that may reconfigure.
ii) Press the arrow "UP" key to increase the parameter and the arrow "DOWN" key to decrease the parameter.
iv) To accept a value press "ENTER". The display will scroll through the parameters.
v) Refer the tables below for parameters and values.

KEY TO PROGRAMMING DISPLAY					
PARAMETER	**DISPLAY**	**UNIT**	**MIN**	**MAX**	**FACTORY SETTINGS**
Clean time	Ct	mins	1	99	10
Ultrasonics power level	PO		1	3	3
Clean number	Cn		0	99	10
Detergent concentration	SP	percentage	0.0	5.0	0.5
Start up de-gassing time	G1	mins	0	99	10
De-gassing time	G2	mins	0	99	2
Test time	tt	sec	0	99	30

Irrigate default	Id		0=Off	1=On	1
Irrigate rest periods N.B. Irrigator on time is 5 secs	Ir	1 rest period = 5 secs	5 period (5x5= 25secs)	50	5

9. Display Messages

These messages are displayed on the keyboard at various times. This table explains their meanings.

Display	Explanation
- - - -	Together with 5 beeps indicates that a process has been completed. (The operator does not need to wait for the beeps to complete before starting another process.)
04.58*	Shows the time remaining of the function that is currently operating, i.e. clean or de-gas.
C-01*	Indicates the current cleaning cycle number.
P-03*	Indicates power level selected, e.g. P-02, P-03, etc.
dGAS	Indicates the machine is de-gassing.
drn	Machine is draining.
drnf	Bottom of the wash tank is flushed with clean water, and then drained.
FILL	The machine is filling the wash tank.
OFF	The machine has completed a drain or other operation and needs to be turned off at power point.
END	End of final clean.
Lid	When the lid is in the open position, a flashing “Lid” message is displayed, and all operations are paused. When the lid is lowered again the paused operations will recommence from the point of the pause.
tESt	When the lid is open to maintain ultrasonic (foil/UPM) performance test
Error messages	
Drnb	This indicates sensors detect liquid when wash tank supposed to be empty.
FAIL	Indicates that the operator programmed values have been lost and will need to be re-programmed.
HOT	Indicates an excessive heat condition.
LO	Indicates a low level in the wash tank.
OFLO	Indicates that liquid has been detected in an area of the machine that should always be dry.
rtc	Indicates the Real Time Clock (RTC) date/time in the system is considered invalid
P-UP	Indicates a clean process was interrupted and did not complete the full cycle
H2OL	Indicates a water leak in the system or circuit/wiring failure
IP-?	Indicates the configuration of the machine is not known. **MRS function only**

N.B. * *Displayed when cleaning*

10. Error Diagnosis

10.1. Program Values Lost: (FAIL)
This message indicates the operator programmed values have been lost and will need to be re-entered. This error occurs when the machine loads the programmed values stored in memory and an error is detected in the data. This error may be caused by:
i) The memory device has not been programmed or programming has been erased.
ii) An error in the memory device.
iii) Electrical “noise” causing corruption of data.

Corrective Action
i) Press the “PROG” key to re-program the machine.
ii) If the “FAIL” message is displayed again it may a faulty memory device.
iii) Contact service agent.

When the following messages are detected, they are flashed on the display together with rapid intermittent beeps.
Power to the machine must be removed when this occurs.

10.2. Low Level in Tank: (LO)
i) This message may occur after a *Fill Wash Tank Operation* has completed and a low level is detected in the wash tank (below minimum level).
ii) This fault may be caused by a leaky drain valve or faulty minimum level sensor.
iii) This error will not be detected while the wash lid is up as the operator may cause wave action in the wash tank causing a false indication.

Corrective Action
ix) Turn off at power point.
x) Contact service agent.

10.3. Drain Blocked: (drnb)
i) This message occurs if the top, minimum, or empty level sensors detect liquid.
ii) This may be caused by a blocked drain, or a faulty level sensor.
iii) This may be caused by an incorrectly installed drain hose

Corrective Action
i) Turn off at power point.
ii) Check for blocked drain.
iii) Remove blockage if found.
iv) Re-start machine.
v) Check drain hose installation
vi) If no blockage present contact service agent.

10.4. Overflow Detection: (OFLO)

i) This message occurs when liquid is in danger of overflowing tank.
ii) When this condition occur all power to the machine shall be shut down.

Corrective Action

i) Drain valve not working
ii) Contact a service agent.

10.5. Ultrasonics Overheating: (HOT)

i) This message occurs when the ultrasonics board indicates an excessive heat condition.

Corrective Action

i) Turn off the machine at power point.
ii) Allow to cool for at least one hour.
iii) Re-start machine.
iv) If “HOT” display persists, contact a service agent.

10.6. Real Time Clock: (rtc)

This message occurs if the Real Time Clock (rtc) date/time in the system is considered invalid.

1) This may be caused by the machine not being used for a long period of time.

Corrective Action

i) Replace the backup battery for the clock if discharged
ii) Reset the date/time through the Web interface. (Read the Machine Reporting Manual, Page 7)
ii) Contact a service agent.

10.7. Power up warning. (P-UP)

This message occurs at boot up time if a clean process was interrupted and did not complete its cycle. This alerts the operator that instruments being cleaned in the machine may not be completely clean.

i) Power Failure

Corrective Action

i) Press enter and continue with the clean cycle

10.8. Water Leak. (H2OL)

Water may have entered the red control box or blue ultrasonic box or there may be a circuit/wiring failure

Corrective Action

i) Contact a service agent.

10.9. Setting default IP values. (IP-?)

Only for MRS models and IT staff use.

Corrective Action

i) Contact the facilities IT department
ii) Refer to the Machine Reporting Manual, Page 11
iii) Contact a service agent

APPENDICES

SPECIFICATIONS

Soniclean S-2800 Irrigated Ultrasonic Cleaner “The Irrigator”

Model	S2800
Tank Size	650mm x 336mm x 180mm
Tank Capacity	39 litres
Ultrasonic Power	350W (typical)
Overall Size	742mm x 483mm x 420mm
Weight	35kg (approx)
Benchtop Footprint Clearance	590mm deep x 880mm wide x 790mm Overhead

IRRIGATOR WARRANTY

The warranty applies to Soniclean Irrigated Ultrasonic Cleaner (Irrigator) model S-2800.

Your Irrigator is guaranteed for 12 months from date of purchase. We undertake to repair free of charge or exchange (at our discretion) any part found to be defective due to a manufacturing fault.

This warranty is not transferable and does not cover damage caused by the following:

- misuse, neglect, failure to observe operating instructions, failure to keep the machine clean, accident, use of incorrect power supply, use of incorrect water supply and use of incorrect or non-approved cleaning chemicals.

This warranty does not cover the ultrasonic tank against:

- chemical and/or cavitations/ultrasonic erosion, damage to transducers caused by excess thermal or mechanical shock.

The purchaser agrees to undertake the cost and responsibility of transportation of the machine to and from the premises of the distributor, authorised service agent or manufacturer.

For the warranty conditions to apply, the Irrigator must be installed and commissioned by personnel approved by the manufacturer. Any faults or possible doubts arising concerning the effective operation of the machine must be reported to your supplier or manufacturer in writing within 3 working days.

This form, photocopy or facsimile must be returned within 1 month from date of commissioning the machine.

Purchased from_____

Model:_____ Serial No: _____

Date of Purchase _____ Date of Commissioning _____

Commissioned by _____
(Signature)

Details: (plumbing licence, etc.)

_____

Hospital staff in attendance _____
(Signature)

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CLEANING CANNULATED INSTRUMENTS

Cannulated instruments are difficult and time consuming to clean. This information is designed to assist you in the cleaning of your instruments. It provides suggestions only and needs to be used in conjunction with your hospital procedures and protocols, the instrument manufacturers' instructions and the Australian Standards (AS/NZ). In particular, AS/NZ 4187 and AS/NZ 2773.2.

> *"The aim of cleaning is to remove microbial, organic and inorganic soil. The way in which this is done varies with the material composition of the instrument as well as its design."* (AS/NZ 4187 p.22)

There are hundreds of different types of rigid cannulated instruments. These instruments are made by many different manufacturers from a variety of materials. By checking the manufacturer's instructions for each instrument you are cleaning, you will ensure the best result.

Water used for cleaning and rinsing needs to be of good quality (as per AS4187). Some practitioners choose to use demineralised, distilled or sterile water for rinsing of instruments.

Cleaning process

Before you use your Soniclean S-2800 Ultrasonic Irrigator, it is suggested that you …

1. Process your instruments as soon after use as possible. (Once soil has dried on an instrument it is more difficult to decontaminate and the bioburden will increase).
2. It is recommended that initial treatment of used instruments is done as close to place of use as possible, i.e. near the operating table.
3. Disassemble instruments as recommended by the manufacturer.
4. Remove visible soil by rinsing under running water and flush the internal lumens of instruments with a syringe (or pressure gun) via flushing ports.

Some practitioners may choose to add the following steps:

5. *If not cleaning immediately, soak instruments in enzymatic detergent. Ensure you flush channels of instrument again with enzymatic detergent.*
6. *After soaking, rinse enzymatic detergent off instrument including flushing the internal lumens of the instrument with a syringe via flushing port.*

Using your Soniclean S-2800 Ultrasonic Irrigator ...

1. Prepare Irrigator for use as per summarised operating instructions on front panel of irrigator (refer to operating instructions if required).
2. Place instruments into the Soniclean Ultrasonic Irrigator ports. Instruments may be loaded outside, above or inside machine. (This is done with the ports in the upright position. Then, position ports so instruments are lying down in the irrigator bath).
3. Clean for desired time, ensuring irrigator function on. (Recommended time is 5-15 minutes depending on size, type, and numbers of instruments to be cleaned).
4. Remove instruments from Irrigator.
5. Visually check for any contamination. If this occurs, start cleaning process again.

After using your Soniclean S-2800 Ultrasonic Irrigator ...

1. Rinse instruments outside and inside, flushing internal lumens with water using syringe. (This will remove detergent used in ultrasonic Irrigator).
2. Check for any signs of contamination while rinsing: if present, repeat cleaning process.
3. Dry instrument using compressed air (air gun) if available. If any soil seen, repeat cleaning process.
4. Pre-pack and sterilise as per usual procedure.

Performance Testing

Foil Test

As per AS/NZ 2773.2 it is recommended that you undertake a performance test on your Irrigator regularly. Your machine has been supplied with a sample foil test to assist you with this testing.

Other Options

Some practitioners may choose to use additional tests for checking the performance of the Soniclean Ultrasonic Irrigator.

This document provides suggestions only and needs to be used in conjunction with your hospital procedures and protocols, the instrument manufacturers' instructions and the Australian Standards.

SUMMARY OPERATING INSTRUCTIONS

- **Remove tray. Turn on** at power point. Machine will display 8.8.8.8, then SC4.1. Machine will automatically drain, flush, drain the flush, fill, & degas (approx. 2+3+20=25 minutes)
- **Machine will display - - - -**
- **Check program settings.**
- **The machine is now ready for use.**
- **Load the machine and Close the lid.**
- **Press CLEAN.** Display shows C-01 (number of cleans), degas, 01.52 (time remaining), then C-01 (number of cleans), P-03 (power level), 09.48 (time remaining)
- **To stop** cleaning at any time, just lift lid or press clean again.
- **When cleaning cycle is complete, machine will display - - - -**
- **Lift lid and remove tray.**
- When programmed number of cleans completed machine will drain and display END.

Automatic Shut Down

- When the programmed number of cleaning cycles are completed the machine will automatically drain, and display END.
- Press and hold SHIFT & REFILL to continue cleaning or
- Turn off at power point.

Manual Shut Down

- Press SHIFT and DRAIN.
- When machine has drained display will show OFF.
- Turn off at power point.

RECOMMENDED DISINFECTION PROTOCOL SONICLEAN S-2800 IRRIGATED ULTRASONIC CLEANER

It is Soniclean's protocol to disinfect every irrigator supplied for trial at the end of every trial and immediately prior to commencing the next trial. Soniclean or their distributors/agents will ensure this is undertaken unless the trial organisation prefers to conduct the disinfection themselves.

The protocol to be followed:

1. Drain irrigator and turn off at power point.

2. Apply protective gloves (disposable non sterile latex gloves are suitable).
3. Remove tray; thoroughly wipe down all visible surfaces of the irrigator including the lid, tank, all outside surfaces, hoses and attachments with disinfectant solution[1].
4. Remove detergent hose and replace with disinfectant hose connected to bottle with slightly more than required amount of disinfectant[1.2]. Insert tray.
5. Turn irrigator on at power point whilst holding down the program key (this will allow you to re-program the parameters).
6. Change soap % parameter to required amount of disinfectant. Ensure irrigate function on.
7. Press “clean”. The irrigator will now add appropriate amount of disinfectant to tank and in doing so will disinfect the internal plumbing fittings as well as irrigator ports.

KEY TO PROGRAMMING DISPLAY					
PARAMETER	**DISPLAY**	**MACHINE**	**MIN**	**MAX**	**FACTORY SETTINGS**
Clean time	**Ct**	**mins**	**1**	**99**	**10**
Ultrasonic power level	**PO**		**1**	**3**	**3**
No. of cleans between drains	**Cn**		**0**	**99**	**10**
Detergent concentration	**SP**	**percentage**	**0.0**	**5.0**	**0.5**
Start up degassing time	**G1**	**mins**	**0=Off**	**99**	**10**
Degassing time prior to each clean	**G2**	**mins**	**0=Off**	**99**	**2**
Test time	**Tt**	**sec**	**0=Off**	**99**	**30**
Irrigate default	**Id**		**0=Off**	**1=On**	**1**
Irrigate rest periods	**Ir**	**1 rest period = 5 secs**	**5 period (5 x 5 = 25 secs)**	**50**	**5**

8. Once clean is complete, disconnect disinfectant bottle and replace with bottle filled with clean water.
9. Press “shift” and “refill” keys, hold for three seconds. This will cause irrigator to empty of water and disinfectant and then to fill with water. This will rinse disinfectant out of the unit.
10. Repeat steps 5 and reprogram soap parameter to factory setting (i.e. 1.2)
11. Dry all external surfaces and pack unit ready for transport.

Notes:

1. **<u>Disinfectant solutions</u>**: The recommendation is to use a medical grade disinfectant, TGA approved, that is recommended for use in hospital settings for disinfecting horizontal and vertical working surfaces.

Soniclean currently uses a product called LCC, CSSD (supplied by Dominant Chemicals). For disinfecting the irrigator it is recommended that you dilute LCC, 1:35. That is:

1.1 To disinfect surfaces you will need to add 6mls of disinfectant to 200mls of water and then use this solution to wipe the surfaces with.

1.2 To disinfect internal plumbing fittings, set the soap % parameter to 5. (This will ensure 800mls of LCC is added to the 30litre tank).

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S-2800 ULTRASONIC IRRIGATOR ACCESSORIES

1. MANUAL

- 1 x Operator's Manual.
- 1 x Laminated Instruction Sheet.
- 1 x Sample Foil Test and Instructions in Clear Plastic Wallet.
- 1x Training DVD

2. FITTINGS

- 1 x Inlet (Fill) Hose.
- 1 x Outlet (Drain) Hose.
- 1 x Detergent Connector Hose including ceramic weight and filter.

3. STANDARD ACCESSORIES

- 1 x Tray with Manifold.
- 14 x Instrument Connectors.
- 1 x Aluminum Foil.

4. DETERGENT

- 1 x 5 liters Sonic 1.
- 1 x MSDS for Detergent.
- 1 x Detergent Information Sheet.

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