Statim 7000

Field Training Manual

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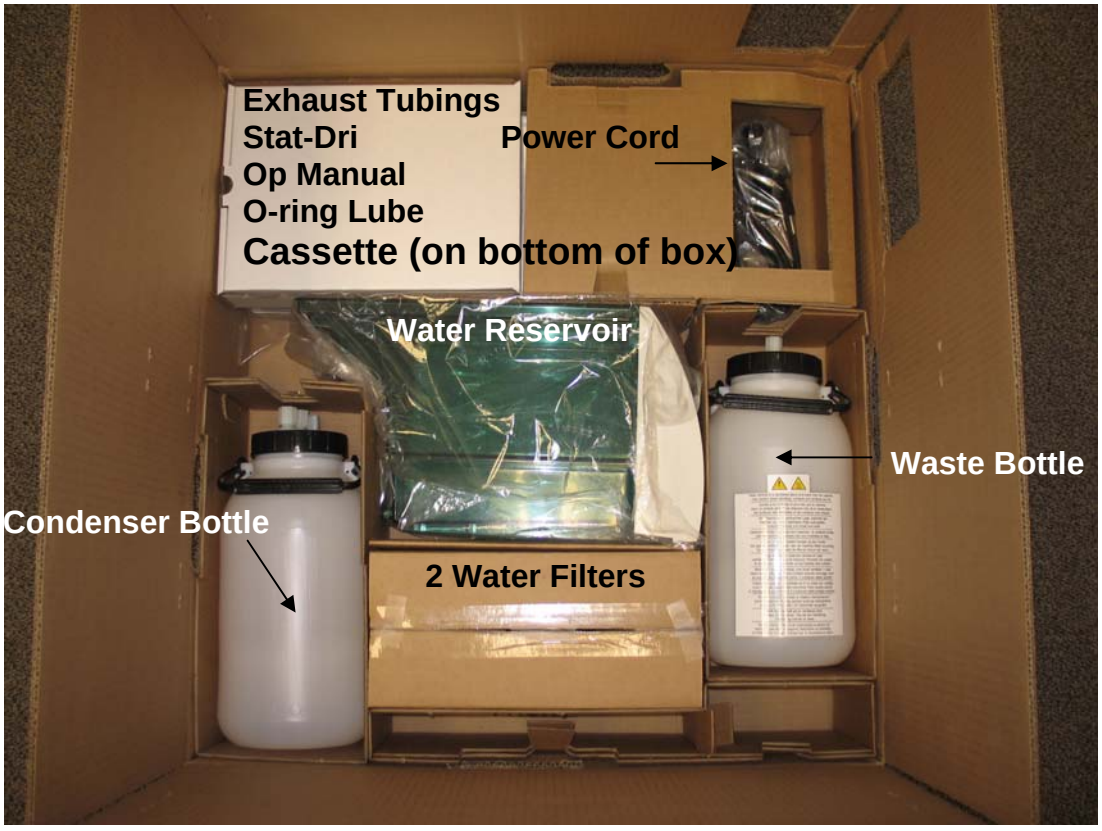
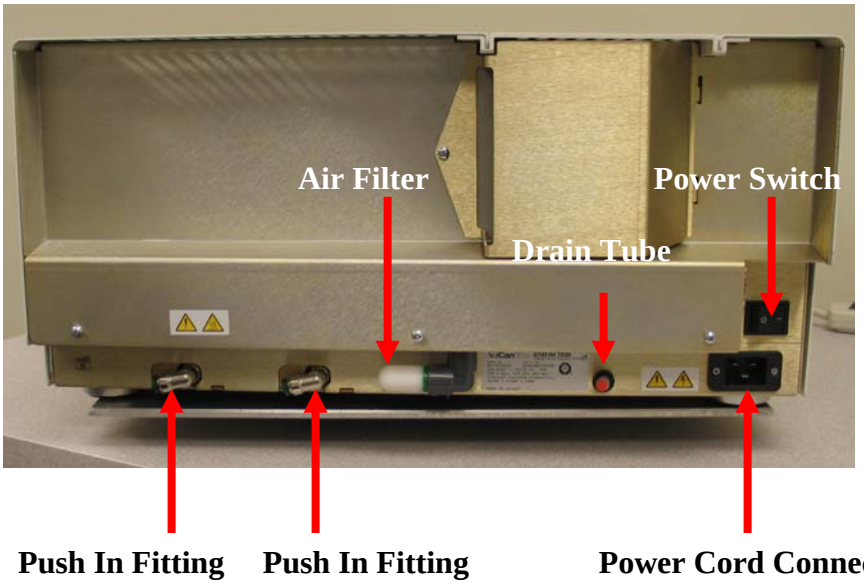
Statim 7000
Packaging & Accessories



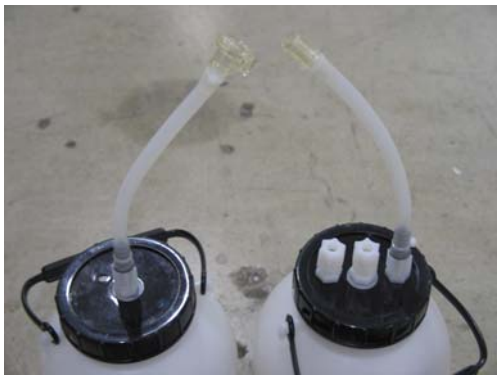
Statim 7000 Installation

1. Connect the Power Cord and the Exhaust Tubings to the rear of the Statim.



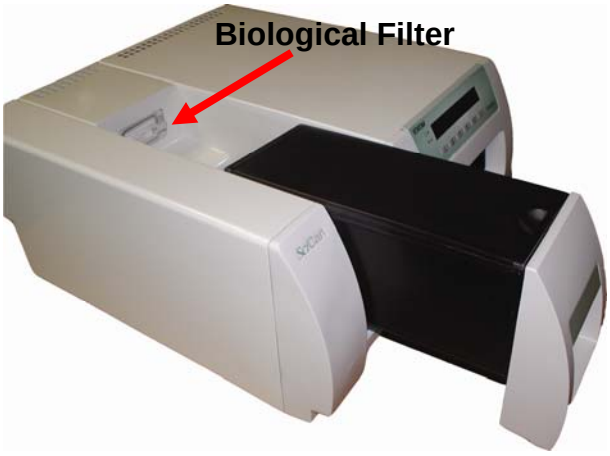
Connect the Exhaust Tubings to the large fittings on the Condenser Bottle & the small tubings to the small fitting on the Condenser & Waste Bottles.

Connect bottle together using Quick Disconnect Coupling.



Insert Water Filter or Bypass Cartridge.

Insert Water Reservoir



Note: The Biological Filter is accessible behind the Water Reservoir.

Statim 7000 User Setup

User setup mode – To initially setup your Statim
Hold down the Stop button and turn the unit ON.

If unit is already ON.
Hold down the Stop Button and the Air Dry Only Button simultaneously.

Initial Display

>Time/Date Setup
Language Setup

Unit ID Setup *
Drying – Unwrapped
Drying – Wrapped
Drying – R&P
Drying - Extra
Water Quality
Last Printout *
RS232 *
End of Line CR/LF *
Serial Port Bit rate *
Printer user º char *
Steri. End buzzer
Air Filter Warning
Water Filter
Replace Filter
Save and Exit
Exit

*** Only used when Statim is connected to a Printer or Data Logger**

Keypad:

Unwrapped	Select next item in the menu
Wrapped	Select previous item in the menu
Rubber and Plastics	Enter the indicated sub menu selection
Stop	Exit menu to normal mode of operation

Time/Date Setup Mode – Set the proper time and date

18:00	04/10/2008
HH:MM	MM/DD/YYYY

Keypad:

Unwrapped	Increase current field (the flashing value on the display)
Wrapped	Decrease current field (the flashing value on the display)
Rubber and Plastics	Select next field
Stop	Save & exit menu to normal mode of operation

Language Setup – Display information in your desired language

N. A. ENGLISH

Available Languages
N. A. English (North American English)
U. K. English (United Kingdom English)
Francais (French)
Deutsch (German)
Espanol (Spanish)
Italiano (Italian)
Dansk (Danish)
Portugues
Nederlands
Japanese
Svenska (Swedish)
Polski (Polish)
Magyar (Hungarian)
Cesky (Czech)
Norsk (Norwegian)
Islenska (Iceland)
Slovencina (Slovak)
Eesti (Estonian)
Lietuviu K. (Lithuanian)
Slovenian (Slovenia)
Romana (Romanian)

Keypad:

Unwrapped	Select next language
Wrapped	Select previous language
Stop	Save & exit menu to normal mode of operation

Unit ID Setup – Associate unit with an ID number **(Used with Printer)**

Unit # : 000

Keypad:

Unwrapped	Decrease current field (the flashing value on the display)
Wrapped	Increase current field (the flashing value on the display)
Rubber and Plastics	Select next digit
Stop	Save & exit menu to normal mode of operation

Drying – Unwrapped – Set Unwrapped Cycle drying time between 0 & 30 minutes

>Drying - Unwrapped Time: 12 minutes

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – Wrapped – Set Wrapped Cycle drying time between 10 & 30 minutes

>Drying - Wrapped Time: 12 minutes

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – R&P – Set Rubber & Plastics Cycle drying time between 0 & 30 minutes

>Drying – R&P Time: 12 minutes

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – Extra – Sets drying time between 1 & 30 minutes for Air Dryer Only Cycle

>Drying – Extra Time: 12 minutes

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Water Quality – Display detected water quality

```
>Water quality
CD= x.xuS/NNN/y.yppm
```

Screen Representation

x.x	Water conductivity in uS (micro-Siemens)
NNN	Water conductivity in ADC (Analog to Digital converter) counts (0…255)
y.y	Water quality in ppm (parts per million)

Keypad:

Rubber and Plastics	Return to main menu
Stop	Exit menu to normal mode of operation

Last Printout – Printer reprints last cycle and unit returns to normal mode of operation **(Used with Printer)**

RS232 – To select which serial device to attach **(Used with Printer)**

```
>RS232
 N/A
```

Serial Printer
USB FLASH/MSD

Keypad:

Unwrapped	Move to next option, second line shows the new value
Wrapped	Move to previous option, second line shows the new value
Rubber and Plastics	Save and return to main menu
Stop	Exit menu to normal mode of operation without saving

End of Line CR/LF – Configure the printout layout **(Used with Printer)**

```
>End Of Line CR/LF
CR/LF
```

-
CR
This only needs to be set if a serial printer is attached to the serial port.

Available options:

-	No line terminator is sent after each line. To be used with printer that accepts only 20 characters per line and automatically advances to next line. **Should be used with the STATprinter.**
CR	A <CR> is sent at the end of the line. To be used with printers that advance to beginning of next line when a CR is received.
CR/LF	A <CR><LF> is sent at the end of the line. To be used with printers that translate advance to beginning of next line only when LF is received.

Keypad:

Unwrapped	Select next option. Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Save & exit to main menu
Stop	Exit and return to normal mode of operation

SciCan Suggested External Printers	End Of Line CR/LF	Serial Port Bit Rate	Printer user ° char
Epson TM-U220D (C31C515603)	CR/LF	9600	248 [0xF8]
Citizen IDP-3110-40 RF 120B	CR	9600	N/A
Star Micro SP212FD42-120	CR	9600	210 [0xd2]
Star Micro SP216FD41-120	CR/LF	9600	210 [0xd2]
Star Micro SP512MD42-R	CR/LF	9600	210 [0xd2]

Serial Port Bit Rate – Choose bit rate for device connected to the serial port **(Used with Printer)**

Serial Port Bit Rate
9600

19200
57600
115200
1200
2400
4800

If USB FLASH/MSD is selected as the RS232 device, a Serial Port Bit Rate selection of 9600 will be required for the Data Logger to be operational.

Keypad:

Unwrapped	Select next value
Wrapped	Select previous value
Rubber and Plastics	Save & Return to main menu
Stop	Exit without saving and return to normal mode of operation

Printer user ° char – Setting to print a °C sign **(Used with Printer)**

Printer user ° char
32 [0x20]

32 decimal value for selected char-default 32
20 hex value for the selected char-default 20

Keypad:

Unwrapped	Increase value by one
Wrapped	Increase value by ten
Rubber and Plastics	Select and return to main menu
Stop	Exit without saving and return to normal mode of operation

Steri. End buzzer – Set length of time buzzer will sound a end of sterilization

>Steri. End buzzer 0s

15s
30s
Max

Keypad:

Unwrapped	Select next value
Wrapped	Select previous value
Rubber and Plastics	Save & Return to main menu
Stop	Save & exit menu to normal mode of operation

Air Filter Warning – Reset warning indicator when Air Filter is replaced.

>Air Filter Warning Do not Reset

Yes, Reset

Water Filter – Set Statim for Water Filter or Water Bypass Cartridge

>Water Filter Installed

Not Installed

Replace Filter – Reset Statim when Water Filter is replaced.

>Replace Filter Do not replace

Yes, replace

Save and Exit – Saving settings and return to normal mode of operation
Upon selection, current settings are saved and unit restarts in normal mode of operation

Exit – Exit menu without saving settings
Upon selection, current settings are discarded, not saved and unit restarts in normal mode of operation

Statim 7000 Service Setup

Service setup mode – To enter the **Service Setup Mode**, turn power switch ON while holding down Unwrapped and Wrapped buttons.
The **Service Setup Mode** is password protected; a password must be entered to continue. The default password is Unwrapped, Wrapped, Rubber and Plastics, Stop buttons pressed in this order. If the password has been changed the backdoor password is, Unwrapped, Wrapped, Unwrapped, Wrapped buttons pressed in this order.

>Calibration
Time/Date Setup

Language Setup
Unit ID Setup *
Set cycle counter
Conductivity Setup
Water.Cnd Tmp. Comp
Last Printout *
Stored CF Printouts *
Clear CF Printouts *
Display last CF#
Devices Test On/Off
Temperature Offset
Validation Offset
Repeater mode
RS232 *
End of Line CR/LF *
Serial Port Bitrate *
Printer user º char *
Factory default
Drying – Unwrapped
Drying – Wrapped
Drying – R&P
Drying - Extra
Air Filter Warning
Water Filter
Replace Filter
Steri. End buzzer
Upgrade Firmware
Change Password
Backup NVRAM
Restore NVRAM
Save and Exit
Exit
Production Cycle

*** Only used when Statim is connected to a Printer or Data Logger**

Keypad:

Unwrapped	Select next item in the menu
Wrapped	Select previous item in the menu
Rubber and Plastics	Enter the indicated sub menu selection
Stop	Exit menu to normal mode of operation

Calibration *– Select calibration to run chamber and validation thermocouple calibration cycles only.*

Note: See page 38 for validation thermocouple calibration procedure.

Time/Date Setup Mode – Set the proper time and date

18:00	07/09/2008
HH:MM	MM/DD/YYYY

Keypad:

Unwrapped	Increase current field (the flashing value on the display)
Wrapped	Decrease current field (the flashing value on the display)
Rubber and Plastics	Select next field
Stop	Save & exit menu to normal mode of operation

Language Setup – Display information in your desired language

N. A. ENGLISH

Available Languages

N. A. English (North American English)
U. K. English (United Kingdom English)
Francais (French)
Deutsch (German)
Espanol (Spanish)
Italiano (Italian)
Dansk (Danish)
Portugues
Nederlands
Japanese
Svenska (Swedish)
Polski (Polish)
Magyar (Hungarian)
Cesky (Czech)
Norsk (Norwegian)
Islenska (Iceland)
Slovencina (Slovak)
Eesti (Estonian)
Lietuviu K. (Lativan)
Slovenian (Slovenia)
Romana (Romanian)

Keypad:

Unwrapped	Select next language
Wrapped	Select previous language
Rubber and Plastics	If Repeater mode is ON, this key will scroll through all the available display messages of the chosen language.
Stop	Save & exit menu to normal mode of operation

Unit ID Setup – Associate unit with an ID number **(Used with Printer)**

Keypad:

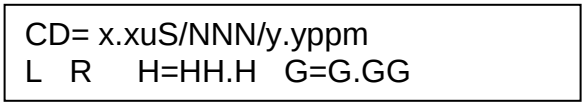
Unwrapped	Decrease current field (the flashing value on the display)
Wrapped	Increase current field (the flashing value on the display)
Rubber and Plastics	Select next digit
Stop	Save & exit menu to normal mode of operation

Set cycle counter – Adjust the recorded number of cycles ran

Keypad:

Unwrapped	Decrease current digit
Wrapped	Increase current digit
Rubber and Plastics	Select next digit
Stop	Save & exit menu to normal mode of operation

Conductivity Setup – To display detected water quality and adjust low and high thresholds.



Screen Representation

x.x	Water conductivity in uS (micro-Siemens)
NNN	Water conductivity in ADC (Analog to Digital converter) counts (0…255)
y.y	Water quality in ppm (parts per million)
L	"L" is displayed when water level switch is activated, "-" when the switch is not active
R	"R" is displayed when water reservoir reed switch is activated, "-" when the water reservoir reed switch is not activated.
HH.H	High value threshold (Bad water threshold) default 10uS Values larger than this trigger "Bad water quality" error
G.GG	Water conductivity circuit gain default 1.00

Note: Statim 7000 does not use the conductivity reading to trigger the "No Water, Refill Reservoir" message. There is a float sensor for that.

Keypad:

Unwrapped	Increase current field
Wrapped	Decrease current field
Rubber and Plastics	Move to next field
Stop	Exit menu to normal mode of operation

Note: To perform Water Conductivity Circuit Calibration see page 37.

Water Cnd Tmp Comp - To enable or disable water conductivity temperature compensation

```
>Water Cnd Tmp Comp
On
```

Off

Keypad:

Unwrapped	Select next option Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

Last Printout – Printer reprints last cycle and unit returns to normal mode of operation **(Used with Printer)**

Stored CF Printouts – Printer prints saved cycle fault printouts and unit returns to normal mode of operation. **(Used with Printer)**

The saved CF printouts are sent to the printer or data logger only when either one is attached and configured. The following types of errors are saved:

CF's
Water quality or Water level low errors
Cycle interrupted due to errors (##)

Clear CF Printouts – Reset Cycle Fault printout list **(Used with Printer)**

```
>Clear CF Printouts
No
```

Yes

Keypad:

Unwrapped	Select next option Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

Display last CF# - Show the last Cycle Fault that occurred

```
>Display last CF#
 ##    (#######)
```

Screen Representation

##	Last recorded CF number
(#######)	Cycle counter number for last CF

Keypad:

Rubber and Plastics	Return to main menu
Stop	Exit to normal mode of operation

Devices Test On/Off – Toggle the unit's devices on or off

```
>Devices Test On/Off
 Pump Off
```

Valve Off
Compressor Off
Yellow LED Off
Extra 1L Off
Extra 2L Off
Valve 2 Off
Fan Off

Keypad:

Unwrapped	Select next option. Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Toggle On/Off selected device
Stop	Return to main menu

Chamber Temperature Offset – View the offset of the chamber thermocouple

```
>Temperature Offset
 ##
```

Screen Representation

##	Offset value

Keypad:

Rubber and Plastics	Return to main menu
Stop	Exit to normal mode of operation

Validation Offset – View the offset of the validation thermocouple

```
>Validation Offset
 ##
```

Screen Representation

##	Offset value

Keypad:

Rubber and Plastics	Return to main menu
Stop	Exit to normal mode of operation

Repeater mode – Enable or disable unit to run cycles continuously

```
>Repeater mode
Off
```

On

Keypad:

Unwrapped	Select next option. Second line shows new value
Wrapped	Select previous option. Second line shows new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

RS232 – To select which serial device to attach **(Used with Printer)**

```
>RS232
  N/A
```

Serial Printer
USB FLASH/MSD

Keypad:

Unwrapped	Move to next option, second line shows the new value
Wrapped	Move to previous option, second line shows the new value
Rubber and Plastics	Save and return to main menu
Stop	Exit menu to normal mode of operation without saving

End of Line CR/LF – Configure the printout layout **(Used with Printer)**

```
>End Of Line CR/LF
CR/LF
```

-
CR
This only needs to be set if a serial printer is attached to the serial port.

Available options:

-	No line terminator is sent after each line. To be used with printer that accepts only 20 characters per line and automatically advances to next line. **Should be used with the STATprinter.**
CR	A <CR> is sent at the end of the line. To be used with printers that advance to beginning of next line when a CR is received.
CR/LF	A <CR><LF> is sent at the end of the line. To be used with printers that translate advance to beginning of next line only when LF is received.

Keypad:

Unwrapped	Select next option. Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Save & exit to main menu
Stop	Exit and return to normal mode of operation

SciCan Suggested External Printers	End Of Line CR/LF	Serial Port Bit Rate	Printer user ° char
Epson TM-U220D (C31C515603)	CR/LF	9600	248 [0xF8]
Citizen IDP-3110-40 RF 120B	CR	9600	N/A
Star Micro SP212FD42-120	CR	9600	210 [0xd2]
Star Micro SP216FD41-120	CR/LF	9600	210 [0xd2]
Star Micro SP512MD42-R	CR/LF	9600	210 [0xd2]

Serial Port Bit Rate – Choose bit rate for device connected to the serial port
(Used with Printer)

Serial Port Bit Rate
9600

19200
57600
115200
1200
2400
4800

If USB FLASH/MSD is selected as the RS232 device, a Serial Port Bit Rate selection of 9600 will be required for the Data Logger to be operational.

Keypad:

Unwrapped	Select next value
Wrapped	Select previous value
Rubber and Plastics	Save & return to main menu
Stop	Exit, without saving, and return to normal mode of operation

Printer user ° char – Setting to print a °C sign **(Used with Printer)**

Printer user ° char
dd [0xhh]

dd decimal value for selected char-default 32
hh hex value for the selected char-default 20

Keypad:

Unwrapped	Increase value by one
Wrapped	Increase value by ten
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, and return to normal mode of operation

Factory default – Reset to factory default settings

>Factory default
No

Yes, Reset NVRAM!

This function resets the NVRAM to factory default settings. The chamber and voltage calibration offsets and conductivity settings will be reset. The cycle counter will not be reset.

Keypad:

Unwrapped	Select next option. Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Save and return to main menu
Stop	Exit, without saving, and return to normal mode of operation

Drying – Unwrapped – Set Unwrapped Cycle drying time between 0 & 30 minutes

>Drying - Unwrapped Time: 12 minutes

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – Wrapped – Set Wrapped Cycle drying time between 10 & 30 minutes

>Drying - Wrapped Time: 12 minutes

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – R&P – Set Rubber & Plastics Cycle drying time between 0 & 30 minutes

>Drying – R&P Time: 12 minutes

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Drying – Extra – Sets drying time between 1 & 30 minutes for Air Dryer Only Cycle

>Drying – Extra Time: 12 minutes

Keypad:

Unwrapped	Increase time by one minute
Wrapped	Decrease time by one minute
Rubber and Plastics	Save and return to main menu
Stop	Save & exit menu to normal mode of operation

Air Filter Warning – Reset warning indicator when Air Filter is replaced.

>Air Filter Warning Do not Reset

Yes, Reset

Water Filter – Set Statim for Water Filter or Water Bypass Cartridge

>Water Filter Installed

Not Installed

Replace Filter – Reset Statim when Water Filter is replaced.

>Replace Filter Do not replace

Yes, replace

Steri. End buzzer – Set length of time buzzer will sound a end of sterilization

>Steri. End buzzer 0s

15s
30s
Max

Upgrade Firmware – Not used at this time.

Change Password – Change the password required to access the service menu

The unit will query for a 4 key password

Type New Password ****

The unit will require that the user re-enter the same 4 key password

Type New Password ****

The unit will confirm that the password has been changed or if changing the password failed, the unit will again query for a new 4 key password

Password Changed

In case the changed password is lost a backdoor password can be used: Unwrapped, Wrapped, Unwrapped, Wrapped in this order.

Backup NVRAM – Saves a copy of the unit's current settings

>Backup NVRAM No

Yes

Keypad:

Unwrapped	Select next option Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

Restore NVRAM – Restores the previously saved unit settings into the NVRAM

>Restore NVRAM No

Yes

Keypad:

Unwrapped	Select next option Second line shows the new value
Wrapped	Select previous option. Second line shows the new value
Rubber and Plastics	Select and return to main menu
Stop	Exit, without saving, to normal mode of operation

Save and Exit – Saving settings and return to normal mode of operation
Upon selection, current settings are saved and unit restarts in normal mode of operation

Exit – Exit menu without saving settings
Upon selection, current settings are discarded, not saved and unit restarts in normal mode of operation

Production Cycle – For manufacturing use only

Statim 7000 Cover Removal

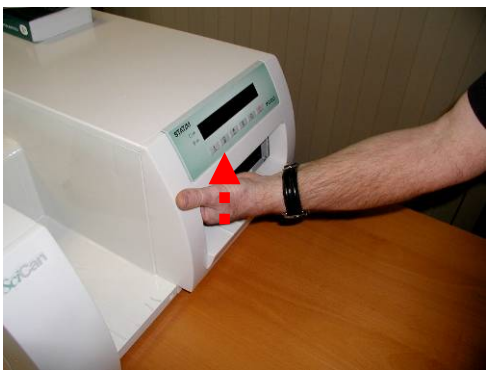
1. With the unit off, unplug the power cord from the wall outlet and remove the cassette and reservoir from the unit.

2. Remove the water filter or water bypass cartridge (if the unit is using distilled water) from the reservoir area.

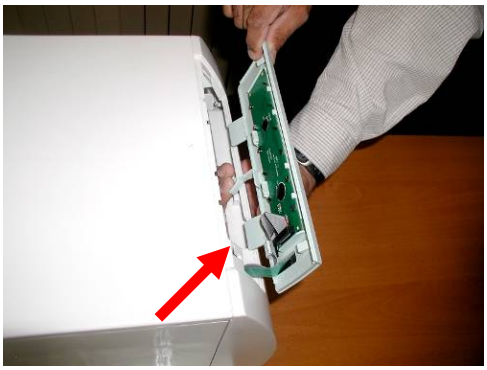
3. Remove the eight screws across the bottom front of the unit using a Philips screw driver.

4. Push the cover forward from the back a little to loosen it, until it stops.

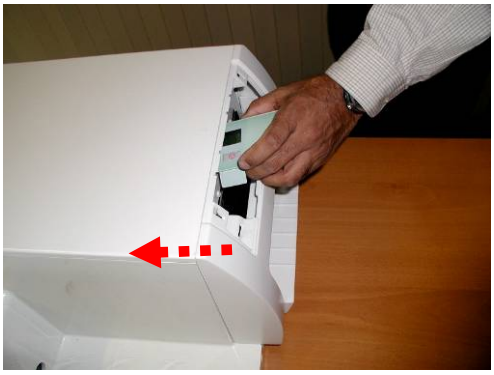
5. Detach the LCD/keypad by reaching up inside the cover through the armature opening to feel for a plastic tab located directly behind the Rubber and Plastics key.



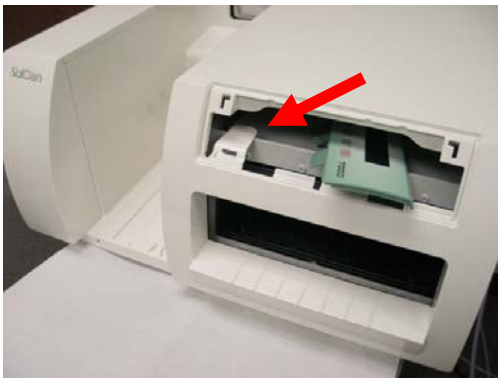
6. Push this tab to the left to unlock the LCD/keypad from the cover.



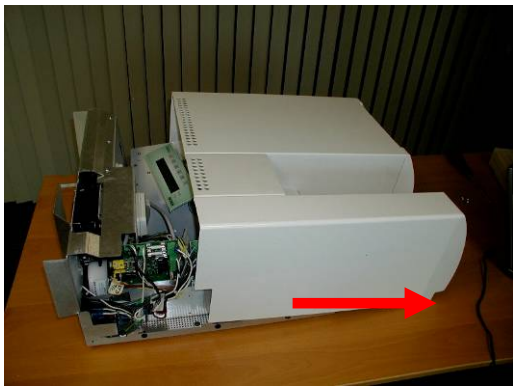
7. Place the LCD/keypad on top of the armature so that it is out of the way as you remove the cover.



8. Release the cover retention clip by reaching inside the cover though the LCD opening and lift up on the tap located on the left most side of the opening. Slide cover forward.



9. Push the cover all the way forward to slide it off from the front.



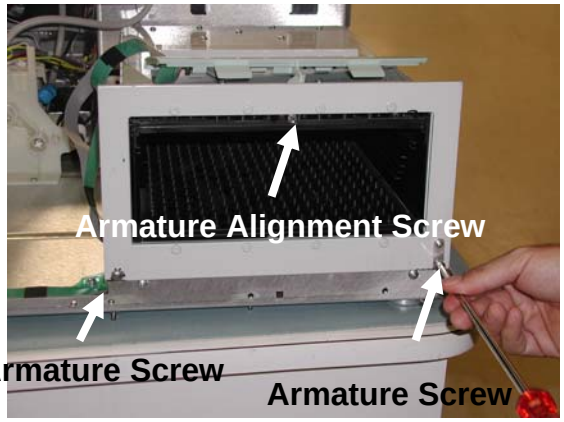
10. To replace the cover. Place the cover back on to the unit about 1 inch away from the back. Once the chassis hooks engage with the cover, push the cover towards the back until the back of the cover is in line with the back of the chassis

11. Replace the LCD panel

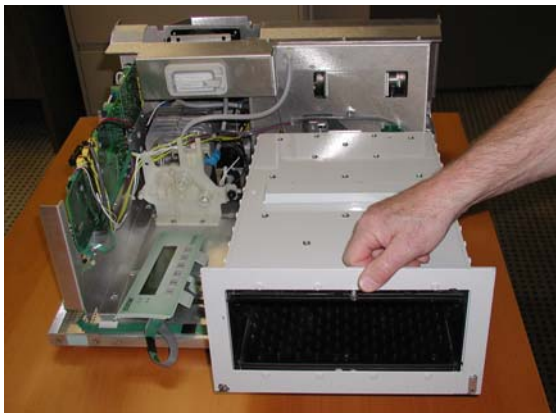
12. Insert the 8 screws that were originally removed.

Armature Removal

Removed 2 screws in lower left and right corners of Armature and loosen alignment screw in top center of Armature.

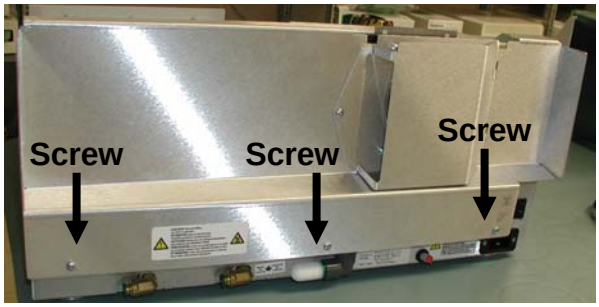


Armature is mounted on 2 rails which will allow the Armature to slide easily. Slide Armature forward and remove using two hands. There are no connections to the Armature.

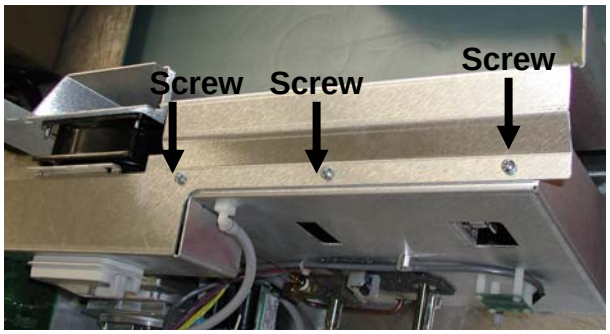


Rear Cover Removal

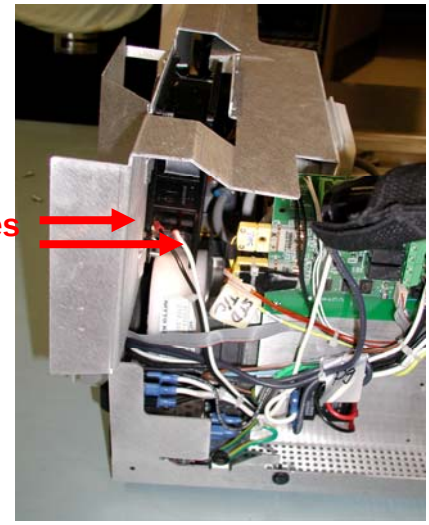
Remove 3 screws from bottom of rear cover.



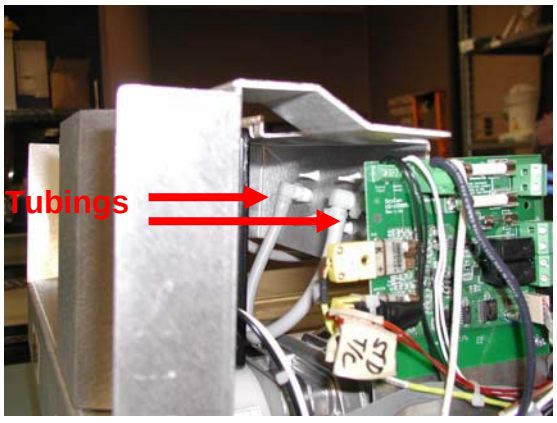
Remove 3 screws from top of rear cover.



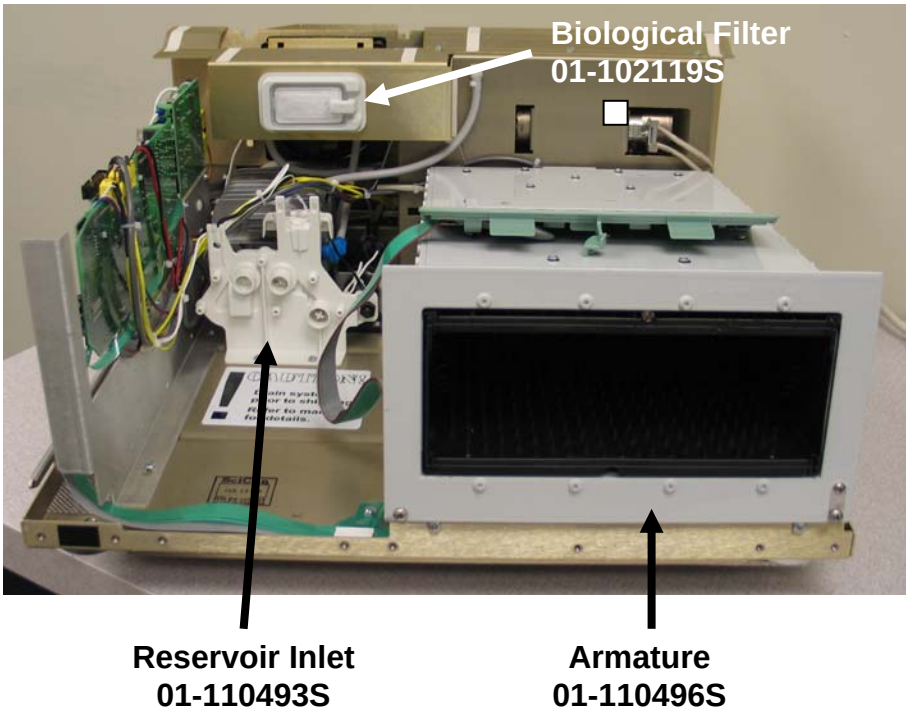
Disconnect black and white wires from Fan

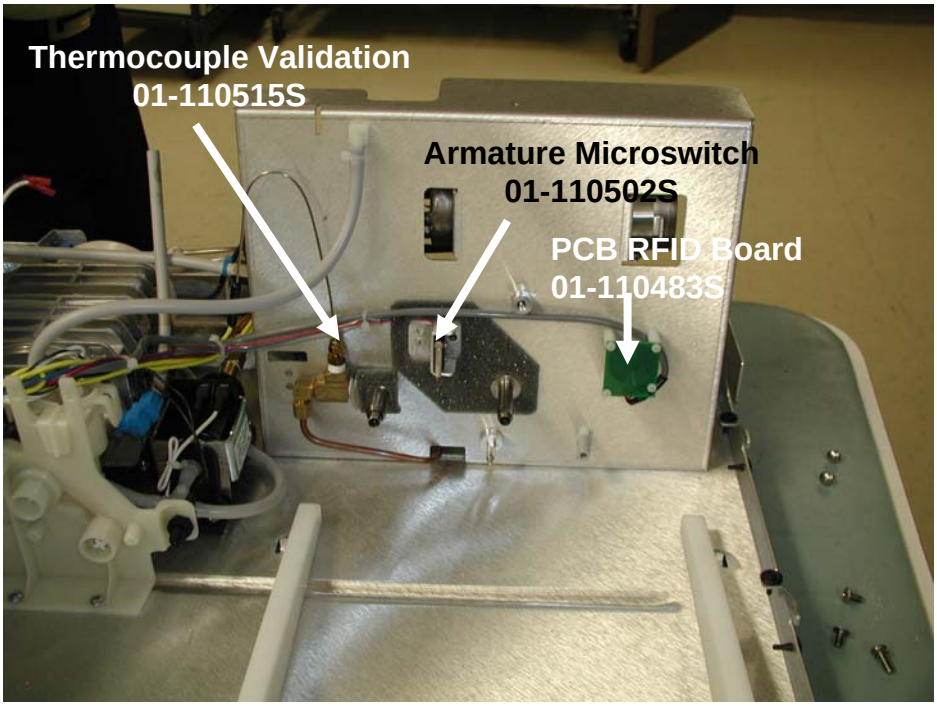


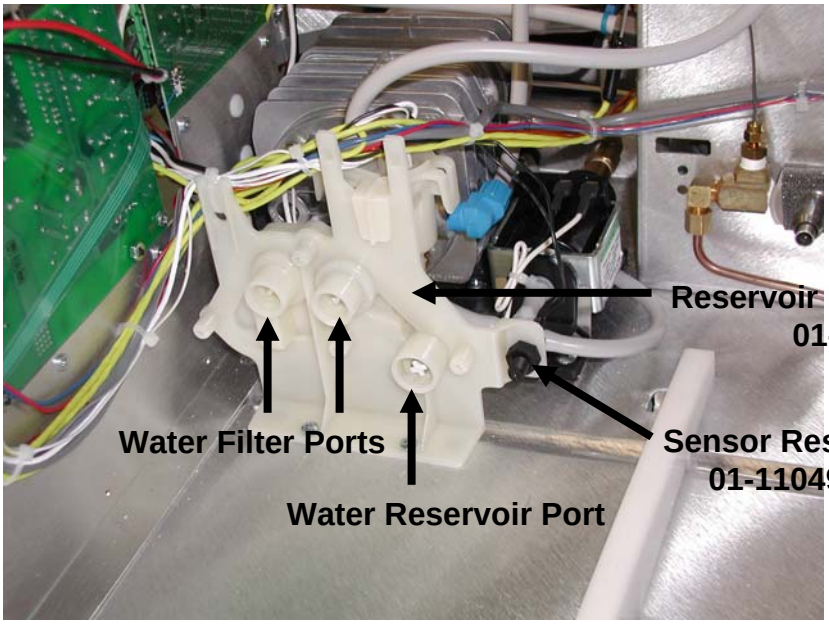
Disconnect Biological Filter Tubings

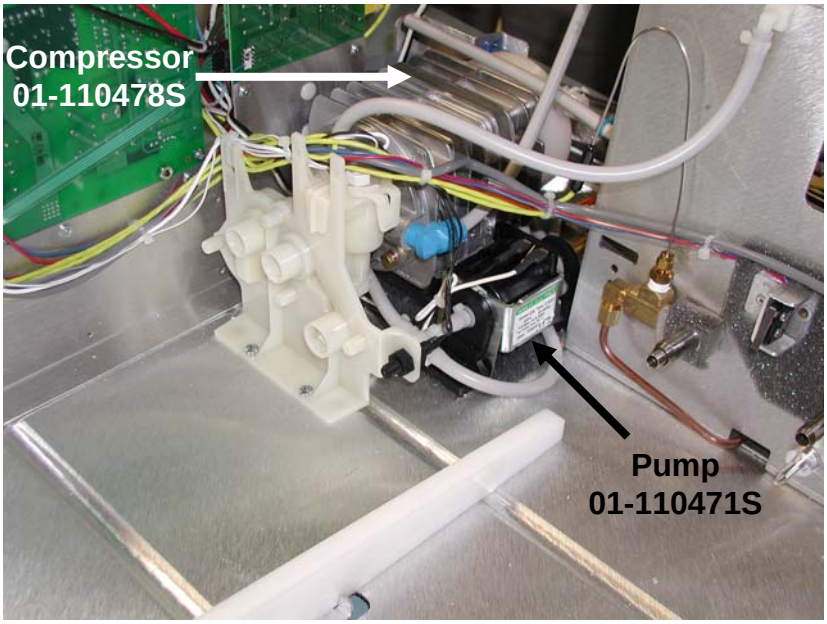


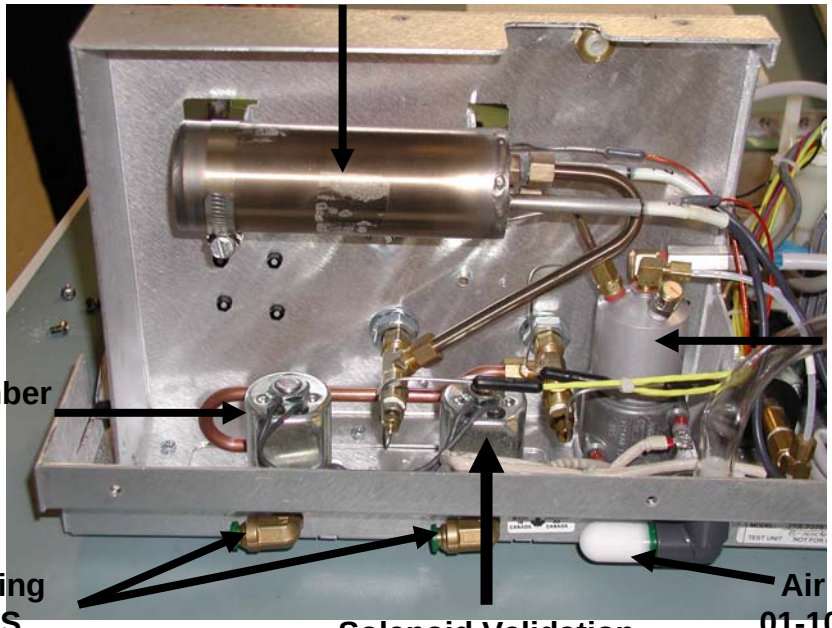
Statim 7000 Chassis Parts

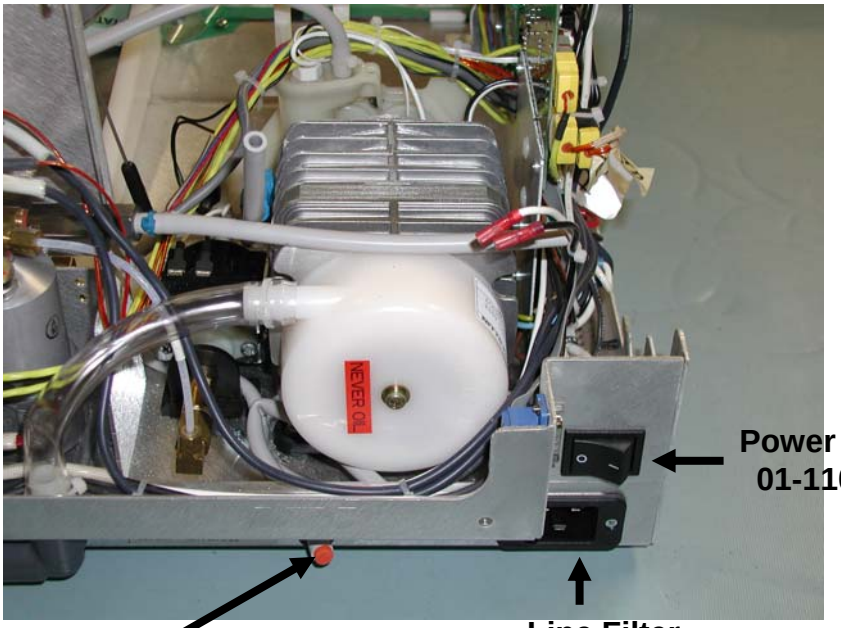




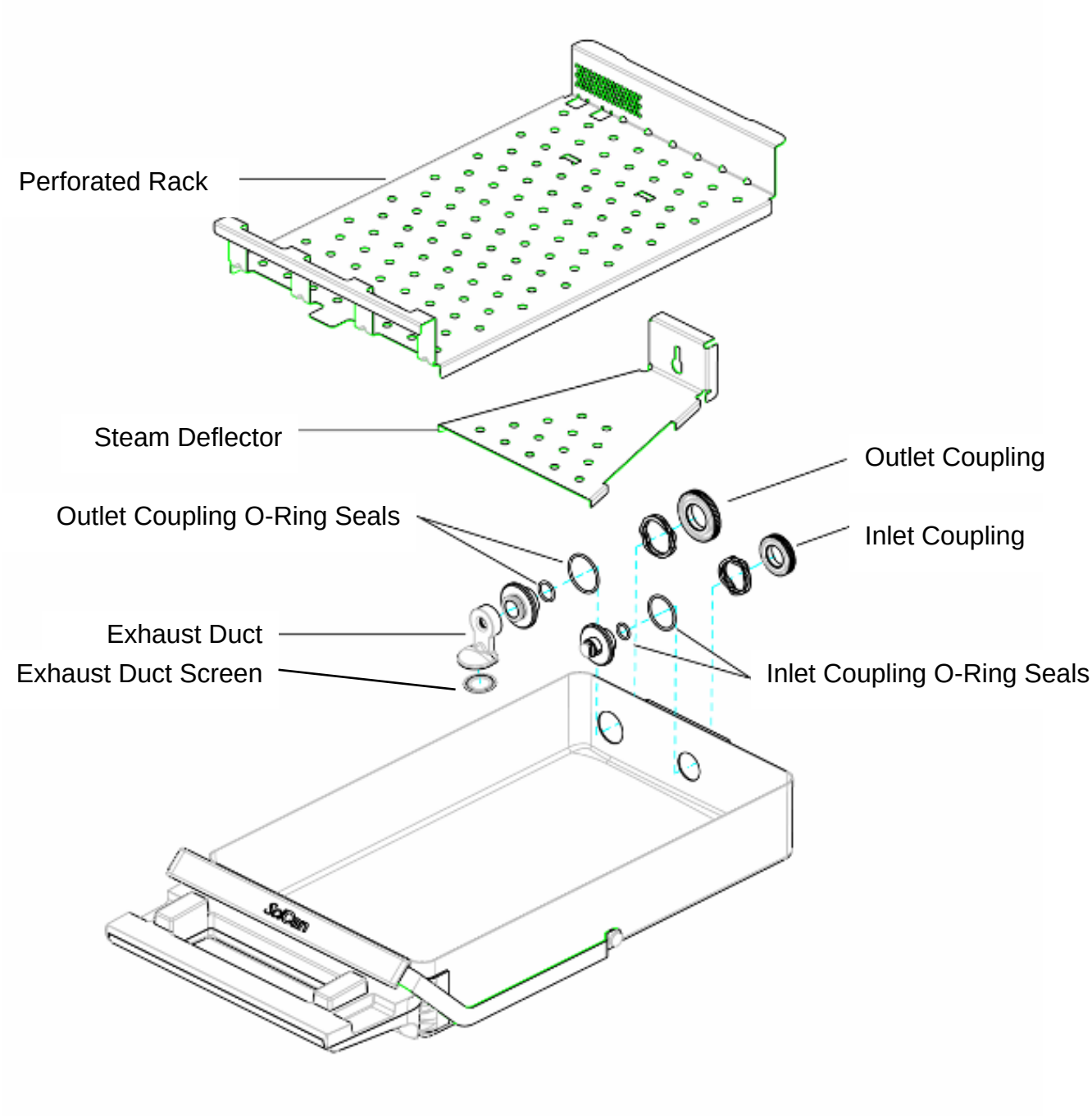

Reservoir Inlet Assembly
01-110493S
Water Filter Ports
Sensor Reservoir
01-110492S
Water Reservoir Port


Compressor
01-110478S
Pump
01-110471S


Auxiliary Heater
01-110474S
Boiler
01-110472S
Solenoid Chamber
01-110527S
Push In Fitting
01-110503S
Solenoid Validation
01-110528S
Air Filter
01-101652S


NEVER OIL
Power Switch
01-110504S
Line Filter
01-110505S
Plug Drain Tubing
01-104343S

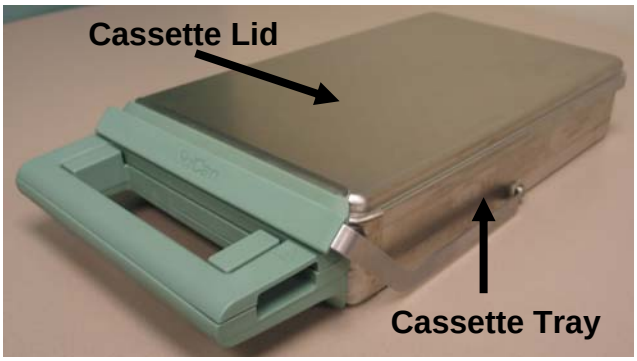
Statim 7000 Cassette



Cassette Complete 7000 Internal Dimensions:
Part #01-110288S 13.7" x 8.6" x 2.5"

Cassette Lid 7000
Part #01-110290S

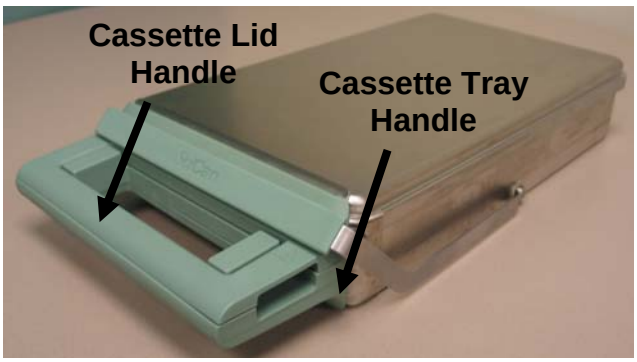
Cassette Tray 7000
Part #01-110289S



Cassette Lid Handle
Part #01-110329S

Cassette Tray Handle
Part #01-110330S

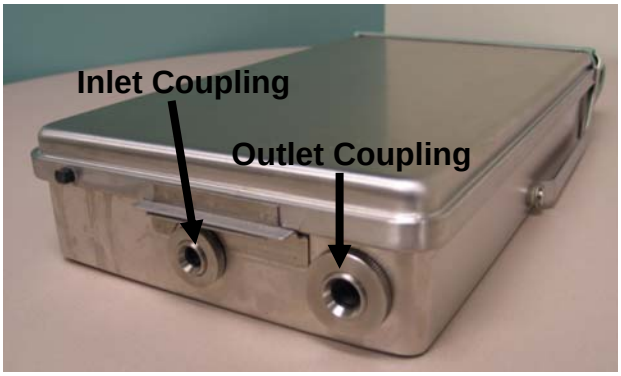
Cassette Seal Kit (not shown)
Part #01-110327S



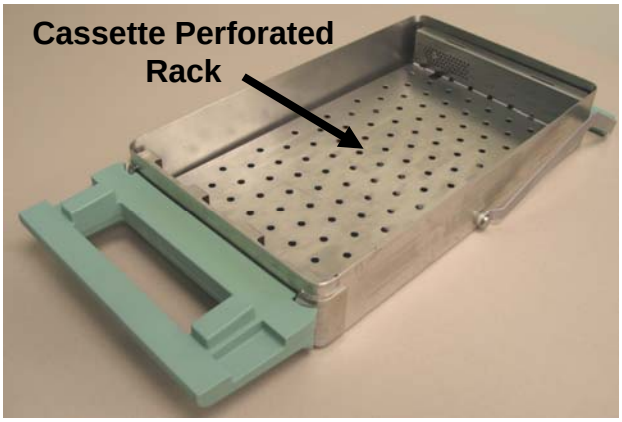
Cassette Inlet Coupling
Part #01-110291S

Cassette Outlet Coupling
Part #01-110292S

Cassette Coupling Seal Kit
Part #01-110296S
(Includes o-rings & gaskets for both couplings)

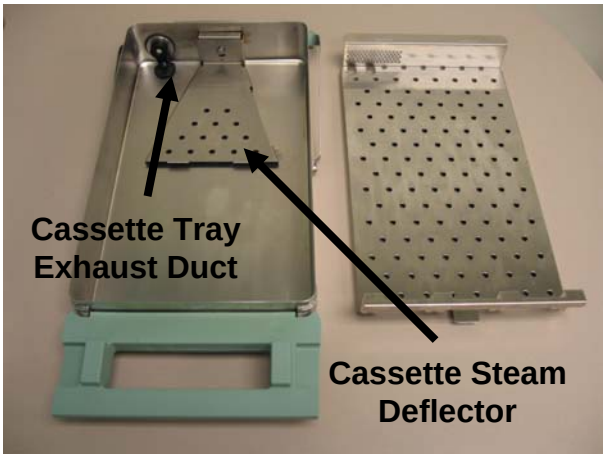


Cassette Perforated Rack
Part #01-110294S



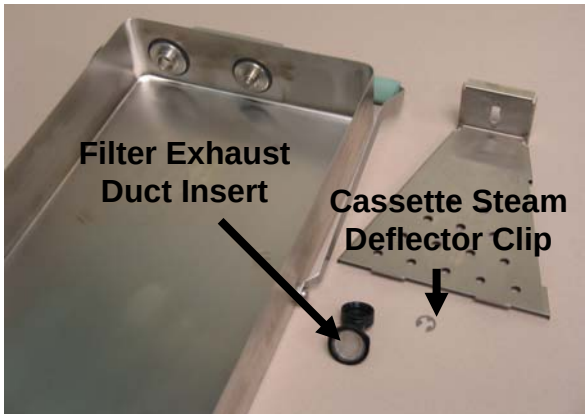
Cassette Tray Exhaust Duct
Part #01-110297S

Cassette Steam Deflector
Part #01-110825S



Filter Exhaust Duct Insert
Part #01-106848S

Cassette Steam Deflector Clip
Part #01-110824S



Statim 7000 Error Codes

Cycle Fault Number	Description of Fault	Suggested steps for Correction of Fault
Cycle Fault #1	The Cassette temperature failed to reach 95°C within a time-out period.	May be caused by a large cassette leak in conjunction with an extremely large load or a blown Thermal Fuse caused by weak water pump delivery.
Cycle Fault #3	The Cassette has failed to pressurize and achieve a temperature of 110°C within a time-out period.	May be caused by a faulty Cassette Seal, a damaged Cassette, or a faulty Solenoid Valve (failed to close).
Cycle Fault #4	The Cassette has failed to achieve sterilization conditions within a timeout period of the chamber first reaching 110°C.	May be caused by a faulty Cassette Seal, a damaged Cassette, or a faulty Solenoid Valve (failed to close).
Cycle Fault #6	The software has detected a Validation Thermocouple temperature 5°C greater than the chamber during the sterilizing phase of a cycle.	Check for kinked or pinched exhaust tubing and for visible steam leaks from the Cassette Seal, Lid or Tray. Check the exhaust Solenoid Valves and make sure the plunger is not sticking. Recalibrate Validation Thermocouple.
Cycle Fault #7	If chamber temperature drops below the sterilization temperature (134°/121°C) by more than 3°C, CF 7 is posted.	May be caused by a faulty Cassette Seal, a damaged Cassette, a faulty Solenoid Valve (failed to close), a leaky Pressure Relief Valve or a leaky Check Valve.
Cycle Fault #8	The software has detected a Validation Thermocouple temperature 5° less than the chamber during the sterilizing phase of the cycle.	Check for a clogged Filter Screen in the Exhaust Duct in the Cassette Tray. Check the Solenoid Valves for debris and make sure the plunger is not sticking. Recalibrate the Validation Thermocouple.
Cycle Fault #10	The cassette temperature has failed to drop to 115°C during the Unwrapped or Wrapped Cycle or 110°C during the Rubber and Plastics Cycle in the purge conditioning stage.	Check for a clogged Filter Screen in the Exhaust Duct in the Cassette Tray, a kinked or pinched Exhaust Tubing from center elbow fitting or a faulty Solenoid Valve (failed to open).
Cycle Fault #11	The cassette temperature has failed to drop to 102°C within a timeout period during the venting cycle.	Check for a clogged Filter Screen in the Exhaust Duct in the Cassette Tray, a kinked or pinched Exhaust Tubing from center elbow fitting or a faulty Solenoid Valve (failed to open).
Cycle Fault #12	This indicates a problem with the temperature measuring system.	Check for a disconnected, broken or faulty thermocouple lead or a defective PCB.

Cycle Fault #14	The steam temperature raised above the high threshold.	Check for faulty PCB or defective Solid State Relay.
Cycle Fault #15	The cassette temperature raised above the high threshold during the sterilization phase of the cycle or above 138.6°C during conditioning or pressurizing phase of the cycle.	Check for a clogged Filter Screen in the Exhaust Duct in the Cassette Tray, a kinked or pinched Exhaust Tubing from center elbow fitting or a faulty Solenoid Valve (failed to open).
Cycle Fault #16	The Boiler temperature went above a threshold value.	Replace Water Filter Check for a weak Water Pump or a faulty PCB causing constant power to the Boiler.
Cycle Fault #17	Auxiliary Heater overheated.	Check for a faulty Auxiliary Heater, a defective Solid State Relay or PCB.
Cycle Fault #18	Ambient temperature to high.	Ambient temperature (as sensed by the PCB cold junction temperature sensor) increased over a preset threshold. This may be caused by a failed cool down fan, a failed Auxiliary Heater PCB or a defective main PCB.
Cycle Fault #19	The Validation Thermocouple calibration is invalid.	This occurs when a new PCB or Microprocessor is installed. This may also happen when the unit has been subjected to a strong static discharge corrupting the memory. Calibrate the Validation Thermocouple.
Cycle Fault #20	The cassette temperature raised above 138.6°C during the Drying phase of a cycle.	Check for a clogged Filter Screen in the Exhaust Duct in the Cassette Tray, a kinked or pinched Exhaust Tubing leading to the Condenser Bottle or a faulty Solenoid Valve (failed to open). A faulty Auxiliary Heater, Auxiliary Heater PCB or Solid State Relay.
Cycle Fault #25	The software has failed to detect a need to pump water within 90 seconds of the state of a cycle.	Check for a blown Thermal Fuse caused by a weak Water Pump, constant power to the Water Pump caused by a defective PCB or a faulty Boiler.

Cycle Fault #26	The sterilization phase has failed to start within 3 minutes of the cassette reaching sterilization temperature. CF26 is displayed when it occurred in 3 consecutive cycles (Cycle Interrupted is displayed for the first two cycles). CF26 counter is reset whenever a successful cycle is completed.	May be caused by improper Validation Thermocouple calibration, weak Water Pump or faulty Solenoid Valve.
Cycle Fault #27	The temperature of the Boiler failed to drop below a set-point temperature (150°C) in a timeout period.	May be caused by a weak Water Pump, a defective float switch (does not detect insufficient water in the water reservoir) or a faulty Boiler.
Cycle Fault #32	No water pumped to the boiler while executing the Water Filter priming.	May be leaking Water Filter, leaking Water Reservoir connection or faulty Water Pump.
Cycle Fault #79	Error in communication with the RFID adapter or Cassette Seal RFID tag.	Make sure cassette is completely inserted and try another cycle. May be defective Cassette Seal or RFID adapter.
Cycle Fault #80	Auxiliary Heater heating element did not reach a target temperature in a specified period of time.	Check fuses on Auxiliary Heater PCB May be a defective Auxiliary Heater, Auxiliary Heater PCB, Solid State Relay or main PCB.
Cycle Fault #81	Auxiliary Heater superheated steam did not reach a target temperature in a specified period of time.	Check to see that Biological Filter is installed correctly. Check fuses on Auxiliary Heater PCB May be a defective Auxiliary Heater, Auxiliary Heater PCB, Solid State Relay or main PCB.
Cycle Fault #82	Unit failed to cool down in a specified period of time.	May be a defective Auxiliary Heater, Auxiliary Heater PCB, Solid State Relay, main PCB or Compressor.
Cycle Fault #90	Corrupted or not initialized chamber calibration value.	This occurs when a new PCB or Microprocessor is installed. This may also happen when the unit has been subjected to a strong static discharge corrupting the memory. Unit requires chamber calibration.
Cycle Fault #98	Main PCB not communicating with Auxiliary Heater PCB.	May be Microprocessor not installed properly, defective main PCB or Auxiliary Heater PCB.

“No Configuration EEPROM”	No communication between EEPROM and Microprocessor.	May be Microprocessor or EEPROM not installed properly. Replace Microprocessor kit.
Message: Printer Fault (if optional printer is installed)	Printer is not printing.	Check for paper jam or defective Printer.
“Cycle Aborted”	This error message is displayed on the printout only, followed by the message “Not Sterile”, as a result of the operator pressing the STOP button to stop the cycle or as a result of any other abnormal cycle termination, including Cycle Fault errors.	
“Stop Button Pressed”	The operator pressed the STOP button to stop the cycle. The LCD shows the message “Not Sterile”.	
“ Cycle Interrupted”	This message is displayed when the sterilization phase has failed to start within 3 minutes of the cassette reaching the sterilization temperature. If it occurs in 3 consecutive cycles CF26 is displayed. Also this message is generated if a bad water conductivity or no water condition was detected for a while before water conductivity level turns back to normal. Also this message is displayed if the unit lost power before the cycle ended.	Check for loose Power Cord connection at the back of the Statim and at the wall outlet. Check for low water level in the Water Reservoir. Go to User Menu and check the water quality. If CF 26 appears run a Validation Thermocouple calibration.

“Press Stop To Reset”	This message is displayed for all error faults. The user must press the Stop button on the keypad to reset the unit: otherwise the user will be unable to initiate another cycle.	
“Order Water Filter Expiring Soon”	This message is displayed when the water quality reaches 8uS or the filter is within 6 days of the average usage time for this unit.	Order Water Filter Cartridge part #SCWF1 (single cartridge) or part #SCWF6 (package of 6 cartridges). Replace Water Filter Cartridge when Water Filter Expired message appears.
“Water Filter Expired Replace Water Filter”	This message appears when the Water Filter has been in use for 60 days or water quality is above 10uS. The Water Filter must be replaced otherwise the user will be unable to initiate another cycle.	Replace Water Filter Cartridge part# SCWF1 (single cartridge) or SCWF6 (package of 6 cartridges)
“Refill Reservoir/Empty Waste Bottle”	This message appears when the Water Reservoir is low on water or the Water Filter is clogged.	Check to see that the Water Reservoir is full. Go to Device Test and run the Water Pump for 5 to 10 seconds. Replace the Water Filter. Check Float Switch.
“LUBRICATE CASSETTE COUPLING O-RINGS”	This message appears every 250 cycles.	Used Q-Tips & Lubricant provided with Statim and replacement seals to lubricate o-rings.

Statim 7000
Water Conductivity Circuit Calibration

1. Disconnect conductivity sensor wires (J4-3 & J4-4).
2. Using a wire, short together the float pins (J4-5 & J4-6).
3. Turn power switch ON while holding down Unwrapped and Wrapped buttons to enter **Service Mode.**
4. The **Service Mode** is password protected, enter password to continue, default password is: Unwrapped, Wrapped, Rubber and Plastics and Stop buttons pressed in this order.

Keypad function at this time:

Unwrapped Key:	Select next item in the menu
Wrapped Key:	Select previous item in the menu
Rubber and Plastics Key:	Enter current selection

5. Toggle through the menu selections using the keypad to reach **Conductivity Setup** and press the Rubber and Plastics key.
6. Display should be similar to the example below.

CD=xx.xuS/NNN/y.yppm
L R H=HH.H G=G.GG

Screen Representation

x.x	Water conductivity in uS (micro-Siemens)
NNN	Water conductivity in ADC (Analog to Digital converter) counts (0…255)
y.y	Water quality in ppm (parts per million)
L	“L” is displayed when float switch is activated, "-" when the float switch is not active
R	“R” is displayed when the Water Quality Sensor is active, "-" when the Water Quality Sensor is not active.
HH.H	High value threshold (Bad water threshold) default 10uS Values larger than this trigger “Bad water quality” error
G.GG	Water conductivity circuit gain default 1.00

Note: Statim 7000 does not use the conductivity reading to trigger the “No Water, Refill Reservoir” message. There is a float sensor for that.

7. By pressing the Rubber and Plastics Key the selection moves between H and G.
8. Select “G” Water conductivity circuit gain (flashing value on the display), by pressing the Rubber and Plastics Key.
9. Adjust G.GG value so the conductivity in ADC counts (NNN) shows 186±1 count.

Note: When the NNN value is 186±1 the G.GG value will be approximately 1.00.

10. Press Stop Key to exit the Water Conductivity Mode and save displayed setting and enter normal mode of operation, “Select a Cycle” screen.

Keypad functions in Conductivity Setup screen:

Unwrapped Key:	Increase current field (flashing value on the display)
Wrapped Key:	Decrease current field (flashing value on the display)
Rubber and Plastics Key:	Move to next field
Stop Key:	Exit

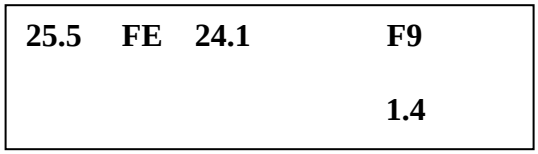
Statim 7000
Validation Thermocouple Calibration

1. Turn power switch ON while holding down Unwrapped and Wrapped keys to enter **Service Mode.**
2. The **Service Mode** is password protected, enter password to continue, default password is: Unwrapped, Wrapped, Rubber and Plastics and Stop keys pressed in this order. If the password has been changed the backdoor password is, Unwrapped, Wrapped, Unwrapped, Wrapped buttons pressed in this order.

Keypad function at this time:

Unwrapped Key:	Select next item in the menu
Wrapped Key:	Select previous item in the menu
Rubber and Plastics Key:	Enter current selection

3. Toggle through the menu selections using the keypad to reach **Calibration** and press the Rubber and Plastics key.
4. Display should be similar to the example below.



Screen Representation

25.5	Validation thermocouple reading
FE	Validation thermocouple hexadecimal offset compared with chamber reading
24.1	Chamber temperature in °C
F9	Chamber thermocouple hexadecimal offset
1.4	Difference between validation thermocouple and chamber thermocouple in °C

5. Start a Validation thermocouple self-calibration cycle. Press and **hold** the Unwrapped key and at the same time press the Start key.

6. The Validation thermocouple self-calibration will start by entering the heating up phase and the screen will change for the **Voltage Reading calibration.**

Voltage Calibration
V=VVV VCAL=CCC

Screen Representation

VVV = Voltage measured by unit
CCC = Voltage calibration offset

Keypad function at this time:

Unwrapped Key:	Increase current field
Wrapped Key:	Decrease current field
Rubber and Plastics Key:	Select and return to main menu
Stop:	Exit, without saving, to normal mode of operation

7. VCAL value should be adjusted so that the VVV value is the same as the line voltage measured by the reference voltmeter connected to the power line (same power outlet where the Statim power cord is plugged in). Calibration should be done within ±2%.

8. This calibration phase lasts at least 30 seconds and it ends either by pressing the Rubber and Plastics button or automatically when the unit moves to the Conditioning phase. When the Voltage Reading calibration phase ends the screen moves to the main calibration screen.
   Note: The Validation thermocouple hexadecimal offset will change to 00 and the character "*" will appear after the 00. The display should be similar to the example below. The 00* on the display indicates the Validation thermocouple calibration cycle is running. This calibration will take approximately 6 minutes. **Note: If there is no cassette in the unit, the water quality is unacceptable or the water level is low the Validation thermocouple calibration cycle will not run.**

25.5	**00***	**24.1**	**F9**
			1.4

9. Allow the Validation thermocouple self-calibration to complete. The temperature within the chamber will rise to sterilization temperature. Wait until the sterilization phase of the calibration cycle ends automatically. The **00*** value will change to a new offset value. The unit will vent automatically. After the unit has vented press the Stop key to end the calibration cycle.

25.5	**FF***	**24.1**	**F9**
			1.4

10. Press the Stop button to end the Validation thermocouple self-calibration cycle.

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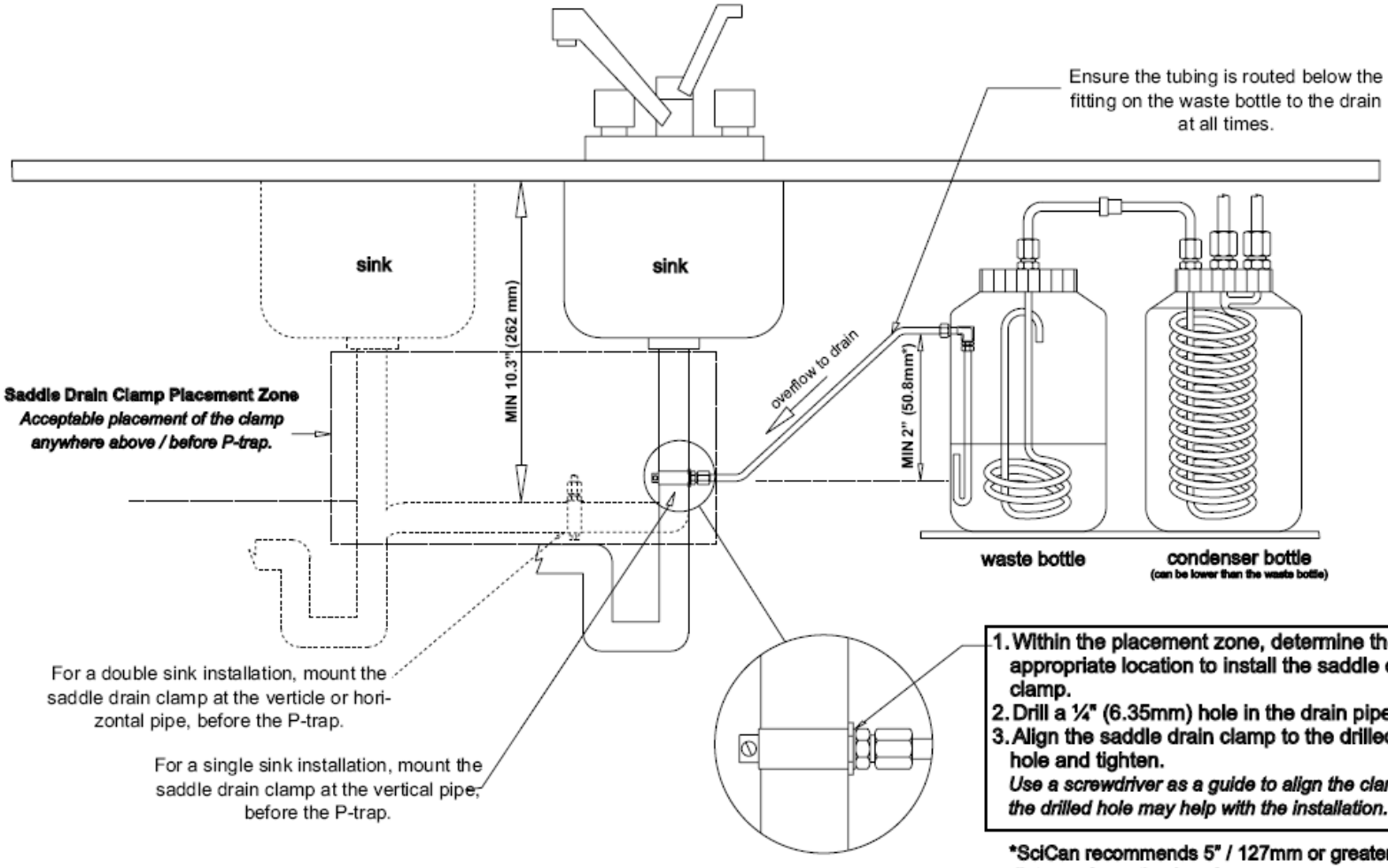
www.scican.com

Installation Instructions

Bottle - Overflow-to-drain, 7000
01-110300S

Recommendation: kit to be installed by a service professional.



1. **Within the placement zone, determine the appropriate location to install the saddle drain clamp.**
2. **Drill a ¼" (6.35mm) hole in the drain pipe.**
3. **Align the saddle drain clamp to the drilled hole and tighten.**
   Use a screwdriver as a guide to align the clamp to the drilled hole may help with the installation.

***SciCan recommends 5" / 127mm or greater distance for optimal performance.**

95-110771-1