



Safe, Simple, Sterisil


Sterisil® System G4


—
INSTALLATION
MANUAL



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 **IMPORTANT**
Sections marked with the red triangle icon contain information that must be taken into consideration before installation.

 **BOTTLE FILL AND DIRECT FEED COMPARISON**
The Sterisil® System G4 can be configured for independent bottle reservoirs or municipal direct feed depending on the office configuration. Throughout this manual, designated sections specific to the direct feed configuration will be highlighted in blue with the blue “DF” circle icon. Pay specific attention to the plumbing of dental water with direct feed systems as they are significantly different from their bottle fill counterparts.

 **OPTIONAL ADD-ONS**
Sections marked with the orange circle icon designate optional add-ons.

NEED HELP OR HAVE QUESTIONS?

Our technical support staff is available and ready to help. Please call, email, or visit us online for additional support.



719 622 7200



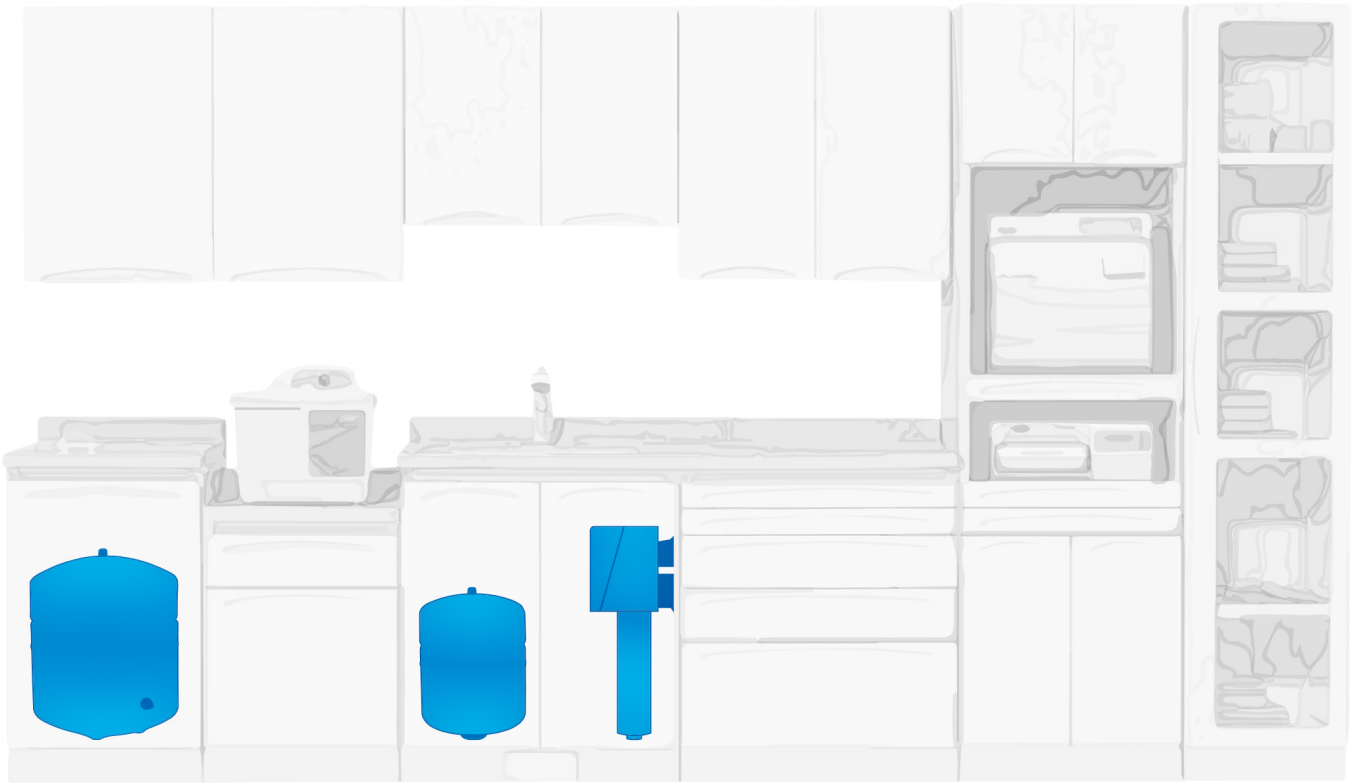
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BEFORE YOU BEGIN

IMPORTANT TO THE INSTALLER

Please read the entire manual before proceeding with the installation and initial operation. Always follow local plumbing codes and municipal regulations.

The G4 can be installed anywhere in a dental, medical, lab, or hospital setting. The system and tanks are designed to fit under a counter-top where the cold water supply and drain connection are in close proximity.

The initial set up can take 3–5 hours depending on customer specifications. Ensure the lengths of tubing provided will meet the needs of your specific configuration. All tubing cuts should be made at a right angle to the tubing itself. Be sure to inspect the ends for burrs before establishing a connection. If the cut is jagged, the connection will not be secure and may leak.


WARRANTY REGISTRATION



Please locate the system's serial number on the left panel of the unit. Record the installation date on the warranty card. Please ensure you or a staff member send in the warranty card or register online. Please return the warranty registration form via mail or register online at sterisil.com/warranty immediately upon installation.

INITIAL INSTALLATION CONSIDERATIONS

OPTIONAL ADD-ONS

 Sterisil offers optional add-ons to the G4 to ensure proper performance. Installation of these items can be found at www.sterisil.com/sterisil-system#DOCUMENTS. Optional add-ons are identified in each relevant section by the color orange. Specific requirements for add-ons must be understood before starting the installation.

IMPORTANT




For the system to fit functionally in its mounting, it will require at least:

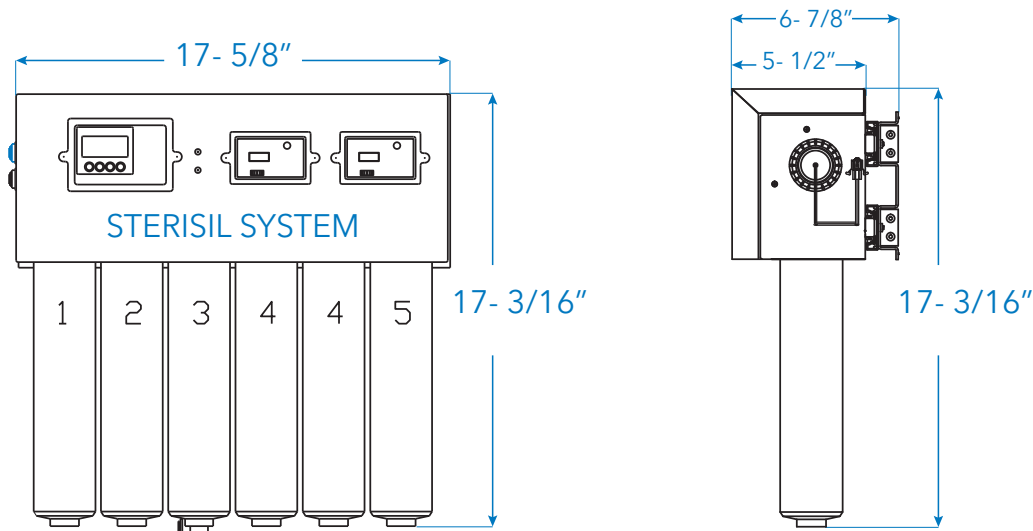
- 20" in length
- 9" in width
- 20" in height

These dimensions allow for 2" of space on all sides of the system.

DIRECT FEED SPECIFIC REQUIREMENTS (CUSTOMER SUPPLIED)

- 
- Centrally installed within the dental office, the furthest chair should not exceed 50' from the system.
 - No brass or copper plumbing components may be used downstream of the system.
 - Recommended use of PVC APEX A FIRE Rated tubing for delivery of dental water.

SPECIFICATIONS



STERISIL® SYSTEM G4 SPECIFICATIONS

Minimum Pressure	65 PSI	
Maximum Pressure	85 PSI	
Minimum Temperature	45°F	
Maximum Temperature	100°F	
Faucets (2)	Sink with space for two faucets	
Plumbing Drain	Standard sink or floor drain	
Electrical Outlets	(1) Quad outlet 110V AC, 3 amp, GFCI, within 3' from system	
Mounting Space	System: 20"L x 9"W x 20"H	
Bladder Tank Space	Tank 2G: 12"H x 9"Dia Tank 4G: 15"H x 12"Dia	Tank 10G: 21"H x 13"Dia Tank 14G: 23"H x 15.25"Dia

PHASE 1: UNPACKING AND INVENTORY

Carefully unpack the contents of the boxes. The standard Sterisil® System G4 configuration is shipped in three boxes.



IMPORTANT

Verify there was no damage during shipment. If damage is evident, contact the shipping company immediately.

TOOLS

Tools required for installation:

- Phillips head screwdriver
- Standard wrench set ranging from 1/2" to 3/4"
- Small to medium size adjustable wrench
- Standard hex key set
- Box knife
- Hand drill
- Phillips driver bits
- Universal drill bits: sizes 1/8" to 1/2" standard
- Level

BOX 1:

- Sterisil® System G4
- System mount (slide or hinged)
- Bag: (Manual, packing list, faucet stickers, tank stickers and warranty card)
- 10 ft 3/8" tubing
- 40 ft 1/4" tubing
- Autoclave Faucet (white) and Dental Faucet (chrome) w/ 1/4" to 7/16" faucet connectors
- Cartridges (Stage 1, 2, 3, 4 [x2], 5)
- Permeate Pump
- Blank Cartridge, clip and mounting screws
- UV Light transformer
- Large bag: Drain Saddle Valve, thread tape, Permeate Pump clip, 1/4" pressure gauge x2, 3/8" pressure gauge, Flow Sensor, Flow Restrictor, modular couplers, stem elbow x3, Dental/Autoclave Discs, cables and RJ-12 connectors.
- Small bag: #10x1" mounting screws x8, sheet rock plastic anchors x8, supply tee, 1/4" union tee, 1/4" Tank Ball Valve, 3/8" Tank Ball Valve, Inline Ball Valve and Single Check Valve.

BOX 2:

Dental Water Storage Tank

BOX 3:

Reserve Water Storage Tank

BOX 4:

Prefilter Kit

INVENTORY ITEMS MAY VARY DEPENDING ON SYSTEM SELECTION AND SPECIFIC PARAMETERS.

PHASE 2: MOUNTING

IMPORTANT

The location of your Sterisil® System G4 needs the following considerations prior to mounting:

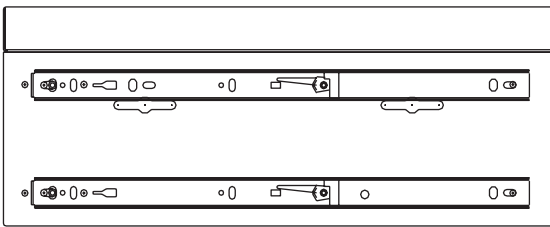
- Distance to the water supply
- Leave enough slack in tubing to account for mounting configurations
- Accessibility to digital monitors
- UV Light replacement, allow 12" for clearance
- Cartridge clearance
- Distance to the electrical outlets
- Drain location for the brine line
- Placement location for the storage tanks
- Type of system mounting device: Slide or Hinged mount

MOUNTING THE SYSTEM (SLIDE MOUNT OR HINGED MOUNT)

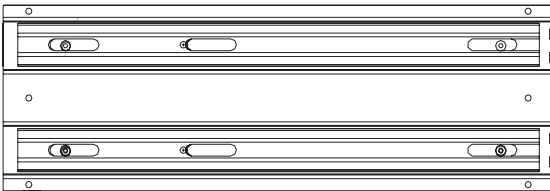
Affixing the Mounting Plate to the Wall

- Take your mounting plate, mark and drill your holes.
- Screw the mounting plate to the wall and ensure it is level.
- Secure the unit to the mounting plate.

Slide Mount

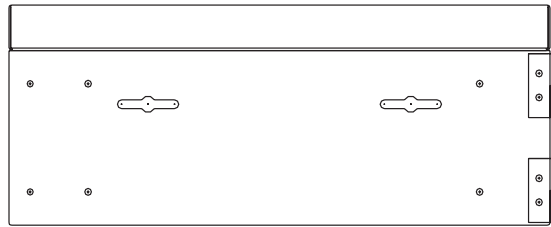


Back of system with slide rails installed

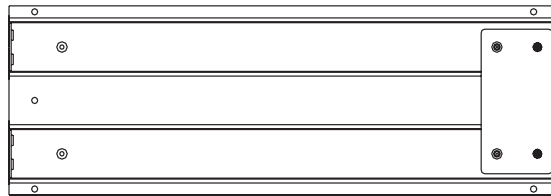


Front of Sliding Mount Plate

Hinged Mount

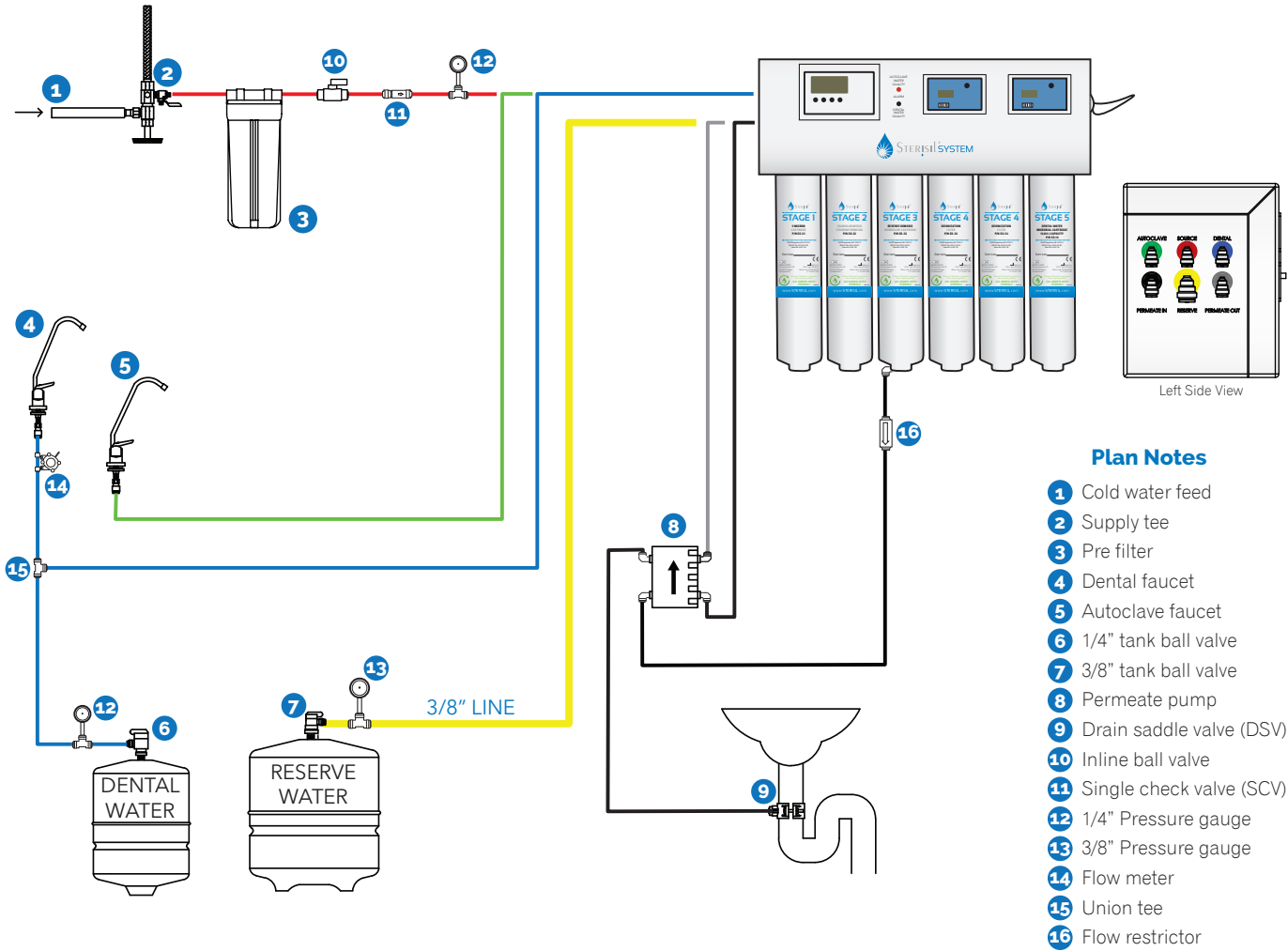


Back of System with Hinge Plates installed



Front of Hinged Mounting Plate

STANDARD PLUMBING DIAGRAM



Plan Notes

- 1 Cold water feed
- 2 Supply tee
- 3 Pre filter
- 4 Dental faucet
- 5 Autoclave faucet
- 6 1/4" tank ball valve
- 7 3/8" tank ball valve
- 8 Permeal pump
- 9 Drain saddle valve (DSV)
- 10 Inline ball valve
- 11 Single check valve (SCV)
- 12 1/4" Pressure gauge
- 13 3/8" Pressure gauge
- 14 Flow meter
- 15 Union tee
- 16 Flow restrictor

Line colors correspond with actual system port colors.

PERIPHERAL COMPONENTS



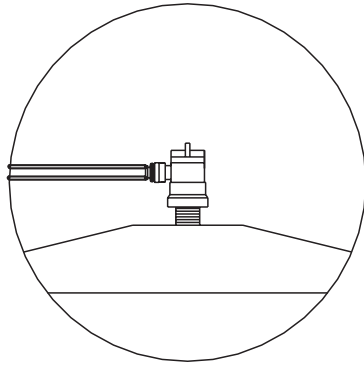
IMPORTANT

Peripheral components should not be more than 50 feet from the system.

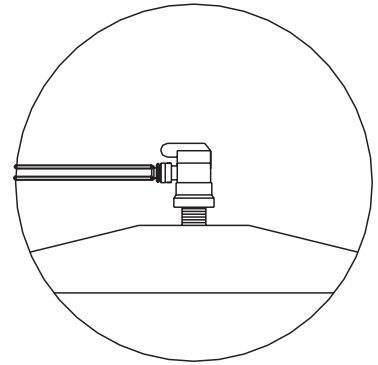
WATER STORAGE TANKS

- Take each tank and wrap the threads on top of the tanks with thread tape (included). Install the 3/8" valve and hand tighten it to the larger Reserve Tank. Do not over tighten this valve.
- Repeat this process with the 1/4" valve for the Dental Water Tank.

Tank Ball Valve in
"closed" position:



Tank Ball Valve in
"open" position:



PRE-FILTER KIT



IMPORTANT

- Account for a minimum of 2" clearance at the bottom for future filter replacements.
- The Pre-filter will be connected to the source line.
- If you have a Sterisil® Booster Pump, the Pre-filter Kit will go before the Booster Pump on the source water line.

Mounting the Pre-Filter

- Take your mounting bracket, mark, and drill your holes and affix the bracket to the wall.
- Ensure the two threaded quick connect fittings are sealed with thread tape.
- Twist the two quick connect fitting adapters into the two holes on the lid of the filter housing.
- Attach the filter housing to the mounting bracket using the screws provided.

PERMEATE PUMP

Tack the clip to the wall and place the pump in the clip.



IMPORTANT

The Permeate Pump must be mounted with the long arrow pointing up.

FAUCET(S) INSTALLATION

The bottle fill configuration includes a white Autoclave Faucet and a chrome Dental Faucet. Dental water is always plumbed to the chrome faucet.

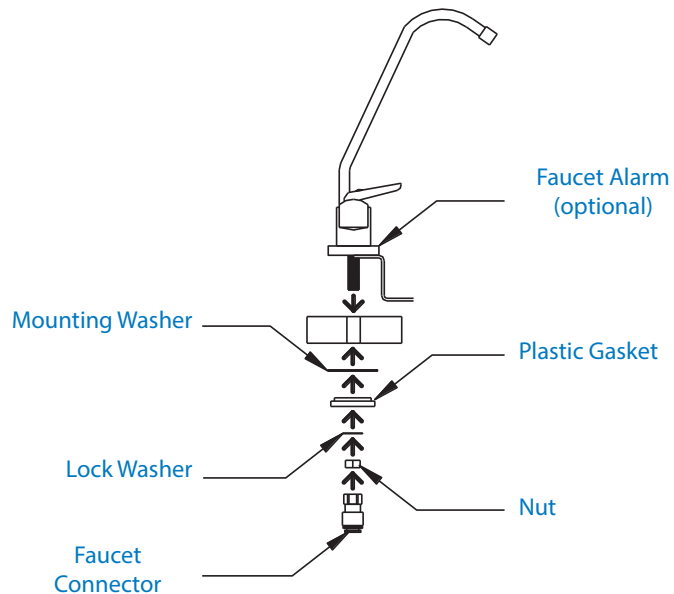
OPTIONAL ADD-ONS
Remote faucet mounting bracket

DF Direct feed systems only use the white Autoclave Faucet. Dental water is fed directly to the dental unit hand pieces.

COUNTER-TOP MOUNT

Faucet assembly instructions are located on the back of the faucet box.

- Do not use the compression fittings provided. Instead, use the provided push-fit 1/4" to 7/16" faucet connectors.
- Drill a 5/8" hole at the desired location.
- Place the faucet through the hole and mount using the hardware (included).
- Place the under-sink mounting washer, plastic gasket, lock washer, and install the nut (included in box) and hand tighten.
- Wrap the threads with thread tape, and install faucet connectors.



PHASE 3: CARTRIDGES

- Remove the yellow cap from the top of the cartridges, and write the install date with a permanent marker.
- Install cartridges. Please note, there are two Stage 4 Cartridges. They will both be positioned interchangeably in ports 4 and 5.
- Once all cartridges are installed, remove the brine plug from the bottom of the Stage 3 Cartridge and install the stem elbow.
- Mount the Blank Cartridge clip on the wall near the system and place the Blank Cartridge in the clip.

PHASE 4: SOURCE WATER AND TUBING

SOURCE WATER CONNECTION

Supply Tee

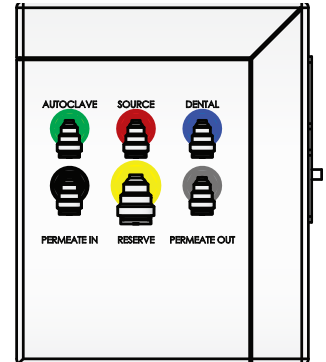
- Turn off the water on the municipal supply line.
- Remove the existing hose, wrap the supply tee threads with thread tape, and install the supply tee on the cold water supply. Tighten the tee with a wrench. Hot water should not be used to feed the Sterisil® System G4.

TUBING CONNECTIONS

To make a connection with quick connect fittings, simply push the tubing into the fitting until it stops. When making cuts, be sure to cut at a right angle to the tubing itself, and inspect the ends for burrs. Be sure to factor any movement in the system into the tubing length so as to not put tension on ports or components.

Source Water: (Supply Tee to Source Port) (Red fitting indicator)

- Insert the white 1/4" tubing into the supply tee. The other end of this tubing will run to the "IN" port on the Pre-Filter housing.
- Run a line from the "OUT" port on the Pre-Filter housing to the red "SOURCE" port on the side of the system
 - Cut and install a 1/4" Inline Ball Valve and a Single Check Valve (SCV) on this line.



OPTIONAL ADD-ONS

Booster pump

Dental Connection: (Blue fitting indicator)

- Run a line from dental tank to the dental faucet.
- Make a cut on this line and install a 1/4" union tee.
- Run 1/4" tubing from the "DENTAL" port on the system to the 1/4" union tee.
- Cut and insert 1/4" pressure gauge along tubing between connections as close to the tank as possible.
- Take the remaining 2 stem elbows and place them in the two ports on the Flow Sensor.
- Cut the tubing and install the Flow Sensor between the faucet and 1/4" union tee junction. Ensure two stem elbows are installed on the Flow Sensor.
- Cut the tubing and insert the Single Check Valve between flow meter and the dental water supply line. Ensure arrow is pointed towards the dental water supply line.

- **DF Direct Feed System:** Run a 1/4" line from the Dental Tank to the customer provided dental water supply line that connects to the dental chairs.

Autoclave Port: (Green fitting indicator)

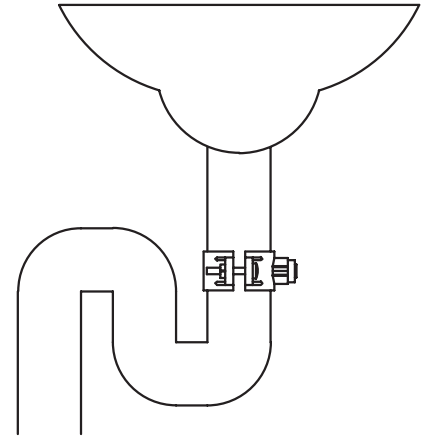
Run 1/4" tubing from the green "AUTOCLAVE" port on the system to the white Autoclave Faucet.

OPTIONAL ADD-ONS

Sterisil wand

Drain Saddle Valve (DSV):

- Start by marking the drain pipe where you intend to drill your 1/4" hole. The DSV will need to be before or after the peatrap.
- Attach the gasket and mount the saddle valve with the provided nuts and bolts to the drain pipe.
- Once the DSV is properly mounted remove the gray collet from the hole.
- Drill through the hole into the drain pipe.
- When you drill the hole, be sure not to drill through the other side of the drain pipe.
- Clear any metal shavings from the hole, then reinsert the collet.
- Run 1/4" line from "BRINE OUT" on the Permeate Pump to the DSV.



Permeate Pump:

- Run 1/4" tubing from bottom of Stage 3 to "BRINE IN" on the Permeate Pump.
- Cut the tubing and insert the Flow Restrictor with the arrow pointing towards the Permeate Pump.
- Run 1/4" tubing from "BRINE OUT" on the Permeate Pump to Drain Saddle Valve (DSV).

Note: If you have a floor drain that is accessible, you can always run tubing straight from the "BRINE OUT" port on the pump to the floor drain. If not, you will need to install the DSV on an existing drain pipe. Ensure tubing is secured into the drain.

- Run 1/4" tubing from "PERMEATE IN" on the Permeate Pump to black "PERMEATE IN" port on the system.
- Run 1/4" tubing from "PERMEATE OUT" on the Permeate Pump to gray "PERMEATE OUT" port on the system.

Reserve Port: (Yellow fitting indicator)

- Run a 3/8" line from the yellow "RESERVE" port on the system to the 3/8" Tank Ball Valve on the Reserve Water Storage Tank.
- Cut and insert the 3/8" pressure gauge, as close to the tank as possible.

OPTIONAL ADD-ONS

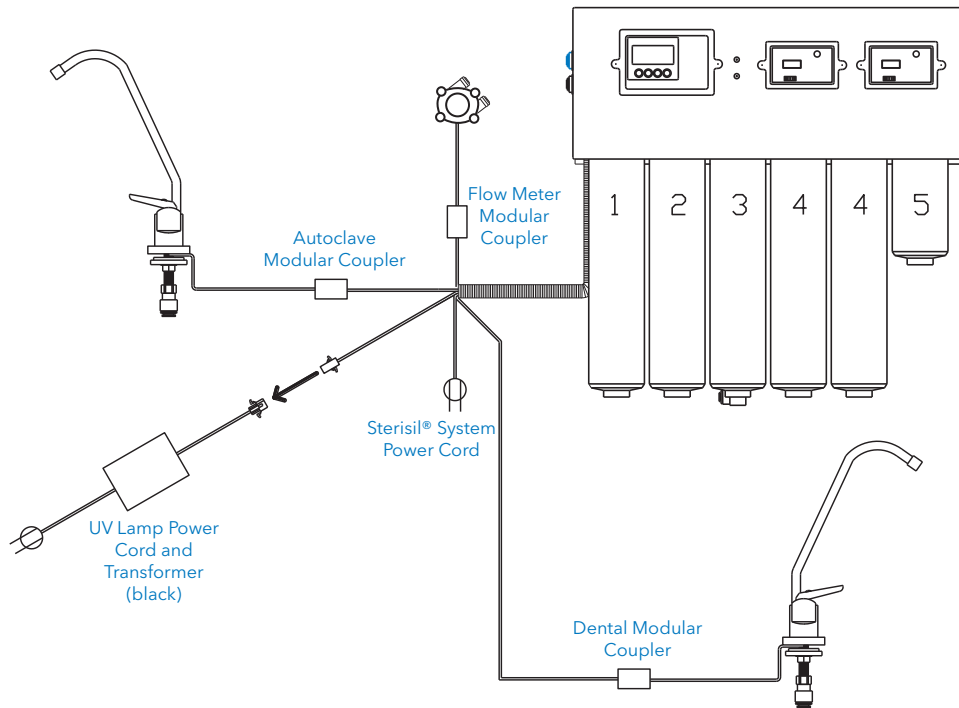
Pressure switch from booster pump

PHASE 5: ELECTRICAL AND OPERATIONAL TEST

ELECTRICAL

Connect all flat, 4-wire data standard power cords using color code and labels attached to the wires.

DF Direct Feed System will not include a chrome Dental Faucet, Dental Modular Coupler or Data Cable.



OPERATIONAL TEST

At this point, both Storage Tank Valves should be closed; meaning the ball valve knob is turned perpendicular with the tubing going in.

- Plug in the UV Light Transformer and verify the light is functional. There will be a slight blue/purple glow.
- Open the Source Water Valve at your municipal supply.
- Confirm source water pressure is above 65 PSI and below 85 PSI.
- Leave both tanks closed.
- Turn on the Autoclave Faucet, and wait for water. Check for leaks, then turn off the faucet.
- Turn on the Dental Faucet, and look for a thin stream of water. Check for leaks, then turn off the faucet.
- Open the Reserve and Dental Storage Tanks by turning the tank ball valve knob in line with the tubing. Tanks will slowly begin to fill. Allow at least four hours for pressurization.
- After four hours, open the valve at the white Autoclave Faucet, and start running water. At this point, you should be looking for leaks anywhere in the system and connecting tubing. Once you have water at the faucet and confirmed there are no leaks, run for 2–3 minutes, then close the faucet.
- Repeat this process for the chrome Dental Water Faucet.
- Allow at least 8–12 hours for the tanks to completely fill.

DF Direct Feed System: Run handpiece water at the furthest chair from the system. Check for leaks. Note: Consider waiting 24hrs as you will not have adequate water pressure until the Dental Tank has filled.

- Check RO Quality Monitor and DI Quality Monitor readings.
- Ensure the Filter Monitor is set properly. Refer to the Maintenance Manual, pg. 13, and the Ideal Readings and Operation document at www.sterisil.com/sterisil-system.
- Sterisil® recommends all waterlines be shocked by a plumber or technician before daily use.


LIMITED WARRANTY

Sterisil® warrants the Sterisil® System G4 to be free from defects in parts, materials, manufacturing, or labor for a period of one year after the device is placed in service by the end user (the "Warranty Period"), and on select electrical components from the date of Sterisil's Purchase. This Limited Warranty does not include user replaceable parts required for routine maintenance of the product, or damage resulting from abuse or neglect of the product, and covers only use of the product for its intended purpose, and not for any other use. End users should contact Sterisil or an authorized distributor for claims arising during the Warranty Period. Sterisil reserves the right to repair or replace, in its discretion, any product that may exhibit a defect during the Warranty Period. Please note that the bladder tanks need to be replaced approximately every 2 years.

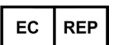
EXCEPT FOR THE FOREGOING LIMITED WARRANTY, ALL Sterisil® PRODUCTS ARE SOLD "AS IS." THE FOREGOING LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Sterisil® shall not be liable to any user of any product, or any other person, for any indirect, special, incidental, exemplary or consequential damages (including, without limitation, lost profits) resulting from use or inability to use any Sterisil product, arising from any cause of action whatsoever, including contract, warranty, strict liability, or negligence, even if Sterisil has been notified of the possibility of such damages. Under no circumstances shall the liability of Sterisil to the user or any other party exceed the purchase price of the product. No action under the foregoing limited warranty may be brought more than one (1) year after the expiration of the Warranty Period. Exclusive subject matter and personal jurisdiction for all disputes arising under this Limited Warranty shall be in the El Paso County District Court in Colorado Springs, Colorado.

⚠ WARNING: This product can expose you to mercury, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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EPA Est. No. 83315-CO-001
EPA Reg. No. 83315-2 (Stage 5: Dental Water Microbiological Cartridge)
Patent No. 6,991,736
GP8002.D



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