STERISIL® SYSTEM G5
HANDBOOK

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INTRODUCTION

The Sterisil® System G5 takes the existing 6 stages of water treatment found in our G4 Systems and merges them with an on-board Class A ultraviolet disinfectant and integrated smart technology. The result is the most advanced dental water treatment system in the world.

The G5 employs Sterisil's potent silver based residual disinfectant delivering a class leading EPA claim of ≤10CFU per ml HPC purity; that's 50 times lower than the acceptable standard set forth by CDC and ADA. In addition, the G5 is the only dental water system in the world to feature Class A ultraviolet (UV) irradiation capable of killing 99.99% of bacteria and viruses.* That's class leading disinfection without tablets or daily additives and only 10 minutes of annual maintenance.

Integrated smart technology allows for live, 24/7 monitoring and alerts accessed anytime via the PC app or touchscreen. The system enables the user to see real time data from a network of on-board sensors for convenient system health monitoring. In the event of a maintenance alert, users can access built-in troubleshooting guides pertaining to their specific error for quick and easy resolution.

In this handbook, you will learn about all aspects of the system functions needed for daily use and routine maintenance. If you need information not found in this handbook, visit sterisil.com/sterisil-system-G5 for the complete installation manual, or contact Sterisil customer support at 719.622.7200. Welcome to the next level of dental water compliance, peace of mind, and confidence.

* Chevrefils, G., B.Ing, Caron, E., B.Sc., Wright, H., Sakamoto, G., Payment, P., Barbeau, B., & Cairns, B. (2006). UV Dose Required to Achieve Incremental Log Inactivation of Bacteria, Protozoa and Viruses. IUVA News,8, 1st ser., 38-45.

MAIN FEATURES

SIMPLE
• Streamlined installation for bottle fill and direct feed applications
• Touch screen and PC remote monitoring
• No tablets or daily additives
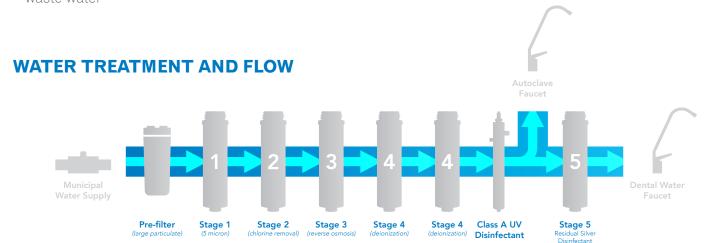• Annual maintenance of only 10 minutes

POWERFUL
• The only dental water system equipped with class A UV light capable of killing 99.99% of bacteria and viruses*
• Produces on-demand Dental, Autoclave and RO water
• ≤ 10 CFU/ml EPA claim exceeds EPA, CDC, and ADA guideline by 50x the standard

RELIABLE
• 24/7 monitoring with automatic alerts
• Two-year data storage and system memory
• Built-in troubleshooting guides
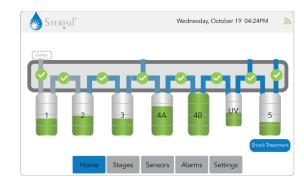• Internal sensors and valves prevent water waste

SAFE
• Non-toxic and non-corrosive
• Meets Best Management Practices (BMP) for dental water waste
• Does not contain oxidizers, such as iodine and chlorine, which have shown to release mercury into dental waste water

WATER TREATMENT AND FLOW

TOUCHSCREEN

Thanks to an integrated network of sensors and smart technology, the Sterisil® System G5 is easier than ever to maintain. Every aspect of system functionality that is monitored has an alert and alarm point with a corresponding visual notification displayed prominently on the touchscreen and the PC app. The "next step alert guidance," prompts the user through the resolution.

HOME SCREEN
The home screen provides an overview and access point for all system functions including cartridge life, operating pressures, and water quality.

ALERTS - ATTENTION REQUIRED (YELLOW)

A yellow bar will appear in the top of the touchscreen or on the PC app when a system function nears the threshold of normal operating parameters. Simply touch the yellow bar to reveal the details and follow the "next step alert guidance" system to resolve the issue.
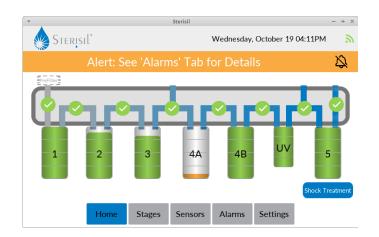
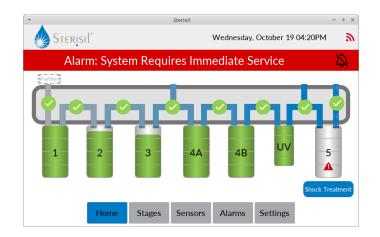## ALARMS - REQUIRES IMMEDIATE SERVICE (RED)

A red bar indicates an issue demanding immediate attention. The notification: "Alarm: System Requires Immediate Service." Simply touch the red bar or click on the PC app to reveal the details and follow the "next step alert guidance" system to resolve the issue.

You may also bring up the details view by touching either the desired Stage number from the "Home" screen or select the "Stages" tab from the bottom row.

REPROGRAMING THE TOUCHSCREEN

(All programing steps below are represented in the installation video at sterisil.com/sterisil-system-g5.) Bring up the details view by touching either the desired Stage number from the "Home" screen or select the "Stages" tab from the bottom row. Select the "Replace Component" button and choose the appropriate component and hit "Replace."

ROUTINE MAINTENANCE

Cartridges	Lifespan
Stage 1	1 year
Stage 2	9,463L
Stage 3	1 year or the TDS water quality
Stage 4A	Dependent on water quality and usage
Stage 4B	Dependent on water quality and usage
Class A UV Light	Dependent on water quality and usage
Stage 5 - 1,000L	1,000 liters of dental water
Stage 5 - 3,000L	3,000 liters of dental water
Stage 5 - 7,000L	7,000 liters of dental water
Stage 5 - 10,000L	10,000 liters of dental water

REPLACING CARTRIDGES

Thanks to internal valving, cartridge change outs are simple and easy. It is not necessary to shut off the source water from the supply tee. Water flow is automatically shut off when a cartridge is removed. Please have a towel nearby for excess water in cartridges.

1. Before removing a cartridge, place a large "X" on the one to be replaced to avoid any confusion when the new cartridge is introduced.
2. If you are changing the Stage 3 Cartridge, it will be necessary to remove the brine tube from the bottom of the cartridge prior to removal. Simply push in on the collet and pull out on the tubing to remove. You will reinstall this tube by pressing the tubing into the collet once the new cartridge is in place.
3. To remove a cartridge, rotate counter clockwise until the cartridge is free of the valve head. A small amount of water may escape during this process. Don't panic, this is normal.
4. Before placing a new cartridge in the system, write the date in the space provided on the label. Remove the yellow cap from the top of the new cartridge, and rotate the cartridge clockwise into the valve head to secure it. Ensure cartridge is fully screwed in.
5. Reprogram the capacity monitoring from the touchscreen as referenced in Phase 5 of the installation procedure.
6. The final step when changing cartridges is to run some water for 60 seconds. For change outs on Stages 1-4, close the RO tank and run the autoclave water. For Stage 5 change outs, close the Dental Storage Tank and run the dental water (Stage 5).
7. Open all tanks to finish.
8. Depleted cartridges can be discarded in the trash or returned to Sterisil for recycling. For more information on our recycling program visit sterisil.com/recycle.

CHANGING THE PRE-FILTER

You will need to set the reminder for the appropriate interval. Please consult your Sterisil Water Compliance Specialist to confirm your replacement interval. Select the pre-filter icon, select "Replace component," and select the appropriate interval.

1. Close the inline ball valves before and after the housing.
2. Purge the pressure from the filter housing by depressing the red button on the top of lid.
3. Unscrew the water reservoir lid to access and replace the micron filter inside.
4. Reassemble and open inline and source water valves to restore flow to the system.
5. You can visually confirm water is flowing freely.

CHANGING THE CLASS A UV LIGHT

The Class A UV light on the Sterisil® System G5 is a powerful tool in bacteria reduction. Do not remove the UV bulb with the system plugged in. Never look directly at the bulb when it is powered up and emitting light. Removal and replacement of an expired bulb takes less than 5 minutes and requires no special tools. Replacement may be easier with the cartridges removed from ports 5 and 6. Always wear clean gloves when handling a new UV bulb.

1. Start by unplugging the system from the power outlet.
2. Locate the UV housing behind the cartridges. Pull down on the UV power cable to feed slack for removing the bulb.
3. Press in on UV lamp harness (not the ribbed housing sleeve) on the right side of the housing and twist counterclockwise until the bulb releases.

4. Pull the bulb completely out of the housing.
5. Separate the bulb from the cable.
6. Remove the protective wrapping from the new bulb (grab bulb by green ceramic sections only or wear clean rubber gloves as a precaution).
7. Connect the bulb to the cable.
8. Slide bulb all the way in and carefully rotate clockwise until harness seats itself.
9. Push the excess length of cable back into the system.
10. Plug in the system and wait for full power up.
11. Follow the procedure from Phase 5 in the installation manual to reset the monitor.

SAVING AND EXPORTING SYSTEM LOG FILES

Thanks to an integrated network of sensors and smart technology, your G5 has the capability to collect, archive, and export water treatment data to any personal computer with the PC app installed.

SAVING LOG FILES
1. Open the PC app.
2. In the upper left corner of the home screen you will find the button labeled "Save Log Files."
3. Select your folder and click "ok."

EXPORTING LOG FILES TO EMAIL
1. Open the PC app.
2. In the upper left corner of the home screen you will find the button labeled "Email Log Files."
3. Your default email platform will automatically open a new email with the log files attached.

WATERLINE SHOCK PROTOCOL USING CITRISIL™ SHOCK TABLETS

For older dental units, units that consistently show excessive CFU levels, or units which have sustained a breach in protocol, it may be necessary to perform a shocking protocol with Citrisil Shock to clear previous accumulations in the existing waterlines.

Shock should be performed in the following manner:
1. Empty water from bottle.
2. Drop orange Citrisil Shock tablet into bottle.
3. Add 177 ml. (6 fl.oz.) of warm distilled water.
4. Wait 60 seconds for tablet to fully dissolve.
5. Swirl orange shock solution to clean and disinfect inside of bottle.
6. Connect bottle to dental unit, and run lines until orange color appears.
7. Leave in lines overnight.
8. The following day empty orange shock solution from bottle and refill with treated maintenance water from the chrome faucet.
9. Purge waterlines until the orange shock treatment dissipates.

FAQS

WILL THE STERISIL® SYSTEM G5 TREAT MY ENTIRE BUILDING/OFFICE?
The G5 is not designed as a full building/office water treatment system. It provides treated water for independent bottle reservoirs, directly plumbed dedicated lines for each operatory unit, and autoclaves. In addition, it can be plumbed to provide treated water to a drinking water dispenser.

WHAT IS THE LIFESPAN OF THE CARTRIDGES?
The lifespan of G5 cartridges is determined by the incoming source water quality and the volume of water used. Most locations can expect Stages 1, 2, and 3 to last approximately one year. The Stage 4 cartridges may last between 4 to 12 months depending on water quality and usage.

WHY DOES THE WATER FROM MY G5 HAVE A STRANGE ODOR?
This issue will occur once the Stage 4 cartridges have been depleted. Ensure the cartridges are promptly replaced when the alarm indicates they are due for replacement.

DO I NEED TO CLOSE THE MAIN WATER VALVE FEEDING THE G5 WHEN CHANGING THE FILTERS?
The main water valve does not need to be closed when changing filters. Each filter connects to a valve head with an automatic shut-off valve that cuts off water flow once the cartridge has been removed.

DOES THE INCOMING WATER PRESSURE MATTER?
The G5 requires a minimum incoming source pressure of 65 PSI for optimal function. Inadequate source pressure can result in low water pressure from hand pieces and faucets directly plumbed to it. A booster pump is recommended when incoming water pressure is below 65 PSI.

WHY IS THE WATER PRESSURE FROM MY FAUCET/HAND PIECE SO LOW?
Insufficient handpiece/faucet pressure can be caused by several issues. Most commonly it is the following:
• Insufficient tank size
• Expired tank
• Insufficient incoming source pressure
• Improper system configuration

WHY IS THE DRAIN LINE CONSTANTLY DRAINING?
The stream of brine water will reduce from a constant stream to a "pulse" of water as the tanks fill. You should also check the orientation of the permeate pump as this can affect the brine flow. The long arrow should always point toward the ceiling. If your tanks are full and this issue persists, contact Sterisil customer support.

WILL THE STERISIL® SYSTEM G5 STOP WORKING IF IT IS UNPLUGGED?
The G5 requires power to generate water. The standard AC plug supplies power for UV light, touchscreen, and solenoids. In the event of a power outage, water will continue to be dispensed from the dental and autoclave faucets so long as there is water in the tanks. However, the tanks will not be refilled until power has been restored.

WHAT ARE THE TANKS FOR?
The Reverse Osmosis (RO) Cartridge is rated to produce 50 gallons of purified water per day. To have water ready for on demand use, water must be stored in tanks. The larger tank stores reverse osmosis water, and the smaller tank stores treated dental water. The system will continually fill these tanks as water is used from the system.

DO I NEED TO PURCHASE A BOOSTER PUMP FOR MY G5?
A booster pump is recommended when the incoming water pressure is less than 65 PSI, or when there is an elevation change between the G5 and the dental operatories/dispensing faucets. For direct feed applications, if the chair furthest from the system is more than 50 feet, a booster pump may be needed to maintain adequate water pressure at the handpiece.

WHAT IS THE PRE-FILTER FOR? DO I NEED TO PURCHASE A PRE-FILTER KIT?
The Pre-Filter reduces the incoming source water's particulates to improve the water quality entering the G5. A Pre-Filter is not required for it to function, but it is highly recommended with water sources of 250 total dissolved solids parts per million or higher.

IS WATER FROM THE AUTOCLAVE OR DENTAL FAUCET SAFE TO DRINK?

Though the water from the Autoclave and Dental lines is not directly harmful, Sterisil does not recommend consumption of water from these faucets.

SHOULD I SHOCK MY OPERATORIES PRIOR TO INSTALLING A G5?

A shock treatment for units that will be directly plumbed to the system is beneficial prior to installation but not required. Independent bottle reservoir units can be shocked as needed with Citrisil™ Shock.

G5 PARTS

Sterisil® System G5 Replacement Individual Cartridges	
G5-C1	Stage 1- 5 micron Cartridge
G5-C2	Stage 2- 10 micron Carbon Block Cartridge
G5-C3	Stage 3- Reverse Osmosis Membrane
G5-C4	Stage 4- Deionization Cartridge
G5-C4XL	Stage 4 - Extended Life Deionization Cartridge
G5-C5-1	Stage 5- 1,000L Capacity Residual Disinfectant Cartridge
G5-C5-3	Stage 5- 3,000L Capacity, Residual Disinfectant Cartridge
G5-C5-7	Stage 5- 7,000L Capacity, Residual Disinfectant Cartridge
G5-C5-10	Stage 5- 10,000L Capacity, Residual Disinfectant Cartridge
G5-UV	Replacement UV Bulb- Class A
Sterisil® System G5 Replacement Cartridge Kits	
G5-AK	Stages 1, 2 & 3 + UV Bulb (Class A)
G5-DI	(2) Stage 4, Two Deionization Cartridges
G5-DIXL	(2) Stage 4 - Extended Life Deionization Cartridges
Bladder Tanks	
SS-BT2	2 Gallon Bladder Tank (9" dia x 12" h)
SS-BT4	4 Gallon Bladder Tank (12" dia x 15" h)
SS-BT10	10 Gallon bladder tank (21"h 13" dia)
SS-BT14	14 Gallon Bladder Tank (15.25 dia x 23" h)
All system Accessories	
SS-DS	In-Wall Dispensing Station
SS-DS-2	In-Wall Dispensing Station w/ 2 faucets
SS-PreKit	Pre-filter Kit (50 filters+holder)
SS-PreKitRF-10	Pack of 10 Pre-filter Kit Replacement Filters
SS-PreKitRF-50	Pre-filter Kit 50 filters ONLY
SS-Wand	Autoclave Filler Wand for all Systems
SS-BP	Booster Pump for all Systems

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.

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