

# DISINFECTION PROCEDURE:

UV disinfection is a physical disinfection process and adds nothing to the water. As there is no residual, it is imperative that the entire distribution system located after the UV be chemically disinfected to ensure that the water is free from any bacteriological contaminants. The disinfection process must be performed immediately after the UV unit is installed and repeated thereafter whenever the UV is shut down for service, without power, or inoperative for any reason. The procedure for sanitizing the plumbing system is readily accomplished as follows:

1. Remove the pre-filter cartridge and fill the sump with 1-2 cups of household (5.25%) bleach (chlorine) – Do **NOT** use hydrogen peroxide. At all times during this process, make sure the UV unit (and lamp) is turned on and operational!
2. Open every faucet and allow cold water to run until the chlorine is detected. When you smell chlorine, shut the faucet off and then repeat the process on the hot water side. You must ensure that all taps, including outside faucets, dishwashers, showerheads, washing machines, connections to refrigerators, toilets, etc., pass chlorinated water.
3. Once all the locations have passed the chlorine disinfection solution, you will need to leave the solution sit for a period of 20 – 30 minutes. Reinstall the pre-filter cartridge into the filter and then flush the chlorine solution from the system. Make sure that each fixture that was disinfected in step two is completely flushed of the chlorine solution as the consumption of this water is not advised due to the extremely high concentrations of chlorine. It is important to remember that in the event that a UV is briefly shut down for routine cleaning or during power interruptions where water could have passed through the system, the aforementioned procedure must also be followed.
4. The addition of chlorine (bleach) to a hot water tank that has in the past been fed with untreated raw water with high levels of other contaminants (iron, manganese, hydrogen sulphide, organics, etc.) will result in oxidation of these contaminants and may require repeated flushing of the hot water tank. This contingency must be dealt with independently under the start-up procedure for any other conditioners that may form a part of the pre-treatment for the UV unit.
5. The above procedure (Steps 1 to 3) will result in a massive chlorine residual far in excess of the 0.5 to 1.0 mg /L typically present in municipally chlorinated water and of a magnitude consistent with the minimum 50 mg/L chlorine solution recommended for the disinfection of distribution systems known to be contaminated.

**PLEASE NOTE:** As the Platinum systems include a 254nm UV intensity monitor, it should be noted that the introduction of the bleach solution required for disinfection **WILL** trigger a temporary low UV condition. This is due to the fact that the bleach physically “clouds” the raw water. Once the bleach runs through the system, the alarm condition will return to normal. To avoid the closing of the dry contacts in a solenoid installation, simply power up the system and once the sensor has been detected and indicates PASS on the smart switch the sensor should then be disconnected from the controller. The controller will complete its diagnostic setup, opening the dry contacts, allowing the flow of water. Once the bleach is out of the system, reconnect the sensor cable. The temporary alarm, “SENSOR FAILURE”, will sound until the sensor cable is reconnected.

## OPERATION

- Always disconnect power before performing any work on the disinfection system.
- Regularly inspect your disinfection system to ensure that the system is operational.
- Replace the UV lamp annually (or biennially if seasonal home use) to ensure maximum disinfection.
- Always drain the reactor chamber when closing a seasonal home or leaving the unit in an area subject to freezing temperatures.