

CLEANING, SANITIZING, AND CARTRIDGE REPLACEMENT PROCEDURE

1. Mix mild cleaning solution of dish soap and clean potable water in plastic bowl.
2. Empty storage tank and relieve system pressure. Verify tank valve is open. Close feed water supply valve and open product water faucet.

Ice maker: Transfer ice cubes from bin/tray to clean freezer container for storage until procedure is done.
3. **CAUTION:** Use air hand pump to avoid damaging tank. Verify product water valve is open before proceeding.

Check product water storage tank air pre-charge using low-pressure gauge (P/N 34002024). Air valve is located on tank base. Pre-charge should be 55 kPa (8 psig) with tank empty and tank valve open.
4. **CAUTION:** Do not attempt to remove filter housings until water flow stops. This reduces pressure inside the system so housings may safely be removed.

CAUTION: Additional point-of-use devices (i.e., icemakers) may use filters along their supply line. Remove any filter or treatment device installed between module and delivery device before proceeding.

Remove each filter/membrane housing by turning it counter-clockwise. Remove each filter cartridge as its housing is removed. Discard filters.

IF MEMBRANE IS PERFORMING SATISFACTORILY:
Go to Step 5.

IF MEMBRANE IS DEPLETED OR FOULED:
Discard it and go to Step 7.

5. **CAUTION:** Use sanitary rubber gloves for this procedure to avoid contaminating sanitizing solution, filters, or membrane. Wear gloves whenever cleaning/ sanitizing system components or handling new filter/membrane cartridges.

Clean membrane outer wrap with washcloth and cleaning solution. Do not immerse membrane in solution. Do not scrub membrane wrap with abrasive cleaners. Rinse membrane well with clean potable water.
6. Place membrane into clean plastic bag, close bag.
7. Remove filter/membrane housing "O" rings and wash them with cleaning solution. Rinse them well with clean potable water. Inspect them for damage (i.e., nicks, scratches). Replace damaged "O" rings.

8. **CAUTION:** Do not get Smartap[®] Water Quality Monitor electronics, wiring, or connectors wet.

Clean filter housings and manifold ports, inside and outside, with washcloth and cleaning solution. Do not use abrasive materials.
9. Rinse manifold/housings with clean potable water.
10. Inspect manifold and filter housing "O" ring groove area for damage (i.e., nicks or scratches). Replace damaged components.
11. Place a small amount of "O" ring lubricant over surface of filter/membrane housing "O" ring. Install "O" ring into filter housing groove.

TO SANITIZE THE SYSTEM: Complete Steps 12-34.

TO INSTALL FILTERS: Complete Steps 19-34.

WARNING: WEAR SAFETY GLASSES WHILE PERFORMING THIS PROCEDURE.

WARNING: READ "WARNINGS" INFORMATION ON BLEACH CONTAINER BEFORE USING CONTENTS. HANDLE SANITIZING SOLUTION CAREFULLY. AVOID CONTACT WITH UNPROTECTED AREAS.

12. **CAUTION:** Excessive concentrations of bleach will damage plastic and rubber components. Rinse all parts that contact bleach thoroughly with clean potable water.

Mix sanitizing solution of 1.5 ml (1/3 teaspoon) of household bleach and 3.8 L (1 gallon) of clean, potable water in the bucket. Mix solution well.

13. **CAUTION:** Tighten filter housings by hand only. Do not use tools as they will over-tighten and damage housings. Take care not to cut or pinch "O" rings.

Add 236 ml (one cup or 8 oz.) of sanitizing solution to each filter housing and install them onto the manifold (do not install filters or membrane at this time). Tighten each filter housing by hand only.
14. Slowly open source water supply valve.
15. Open product water faucet. Close faucet as soon as water begins to flow from spout.
16. Wait 5 minutes, then close source water supply valve.
17. Wait 25 minutes, then open product water faucet and let water flow to drain.

CLEANING, SANITIZING, AND CARTRIDGE REPLACEMENT PROCEDURE

18. **CAUTION:** Do not attempt to remove filter housings until water flow stops. This reduces pressure inside the system so housings may safely be removed.

Remove filter housings and dispose of water. Rinse filter housings and manifold ports thoroughly with clean potable water.

19. **CAUTION:** Do not remove protective plastic bag from replacement filter/membrane cartridges until so instructed.

Install "O" rings into filter housings. Open top of filter bag enough to expose filter cap and "O" ring grooves. Place a small amount of "O" ring lubricant on surface of each "O" ring.

20. **CAUTION:** Tighten filter housings by hand only. Do not use tools as they will over-tighten and damage housings. Take care not to cut or pinch "O" rings.

CAUTION: Refer to Page 8, Figure 9 for location of each cartridge.

Install filter and membrane cartridges. Hold cartridge by its protective plastic bag and insert cartridge into manifold turning it 1/4 turn as it enters the port. Slide bag from cartridge and discard. Replace each filter housing as each cartridge is installed.

21. Turn feed water valve slowly to open position.

22. Confirm system is producing water. Unit will be sending rinse water to drain.

TO REPLACE BATTERY: Perform Steps 23 – 29.

NOTE: Replace battery with a new alkaline 9-volt battery (P/N 31300001).

23. **CAUTION:** Wiring within module cover connects monitor components. If wires, circuit board, or connections are damaged and/or wetted, monitor will not function.

Remove module cover (Page 10, Step 4).

24. Disconnect battery. The battery connection is a snap type connector (Figure 11).

25. Remove battery by sliding it out of its holder.

26. **CAUTION:** Replace battery after system has been in production mode for at least 5 minutes. This ensures sensing switch is in proper position to record data.

Carefully slide battery into its holder.

27. **CAUTION:** Verify battery connector alignment before making connection (Figure 11).

Connect battery by pressing clip onto battery terminals.

28. Test battery connection by activating monitor. Open product water faucet. If an indicator light illuminates, connection is good.

NOTE: Close faucet after light illuminates. Test confirms connection, not water quality.

29. Replace module cover and tighten screws.

30. Open product water faucet. Let water flow until all air has been expelled from the system.

31. Close product water faucet. Wait 30 minutes, check connections for leaks, and correct if necessary.

Icemaker/Extra point of use: Check lines for leaks.

32. Allow storage tank to fill overnight.

33. **WARNING: DO NOT USE THE FIRST FULL STORAGE TANK OF WATER**

Discard (to drain) first full tank of water by opening product water faucet until water flow stops, then close faucet. This flushes sanitizing solution from system.

Icemaker: Let tray/bin fill with ice cubes. Discard all ice cubes to drain. This flushes sanitizing solution from lines to icemaker. Replace delivery device filter (if applicable).

34. System is ready to use. Should there be any aftertaste or odor, drain storage tank and repeat Steps 32 and 33.

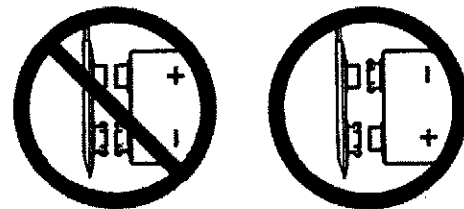


Figure 11 Smartap® Battery Connections

DO NOT USE THE FIRST FULL STORAGE TANK OF WATER

Allow reservoir to fill overnight. Dispense this water to drain.

This process removes sanitizing solution from system, sanitizes fittings and tubing, and sends solution to drain.

ACTIVATING THE SYSTEM

AUTION: Make sure all water supply lines, drain lines, and fittings are secure and free from leakage.

Open saddle-tapping valve. Close product water faucet. Check for leakage.

Turn tank valve one-quarter turn counter-clockwise to open valve (handle should be in line with tubing as it enters connection).

Confirm system is producing water. Module will be sending rinse water to drain.

OTE: Item Callouts refer to Page 8, Figure 9 unless noted otherwise.

CAUTION: Wiring within module cover connects monitor components. If wires, circuit board, or connections are damaged and/or wetted, monitor will not function.

Loosen mounting bracket screws (Item 7). Gently pull module cover (Item 1) up and away from the manifold body.

CAUTION: Connect battery located inside module cover or on manifold to monitor after system has been in production mode for at least 5 minutes. This ensures sensing switch is in proper position to record data.

Connect battery (Item 2) by pressing clip onto battery terminals (Page 13, Figure 11).

Replace module cover and tighten screws.

7. Test battery connection by activating monitor. Open product water faucet or press pushbutton, whichever is applicable. If indicator light illuminates, connection is good.

NOTE: Close faucet immediately after light illuminates. Test is to confirm battery connection, not water quality.

8. Open product water faucet and let water flow until all air has been expelled from system. Lock faucet open by rotating handle 90° or by lifting handle, whichever is applicable.
9. Close product water faucet. In 30 minutes, check connections for leaks and correct if necessary.

Icemaker/Extra point of use: Check connections on these supply lines for leaks.

- 10 Allow storage tank to fill overnight.

11. **WARNING: DO NOT USE THE FIRST FULL STORAGE TANK OF WATER**

Discard (to drain) first full tank of water by opening product water (and extra point-of-use) faucet until water flow stops, then close faucet. This will flush sanitizing solution from system.

Icemaker: Let tray/bin fill with ice cubes. Discard all ice cubes. This flushes sanitizing solution from lines to icemaker.

12. System is ready to use. Should there be any aftertaste or odor to water or ice cubes, repeat Steps 10 and 11.

DO NOT USE THE FIRST STORAGE TANK OF WATER

Allow storage tank to fill overnight. Dispense this water to drain.

This process removes factory-installed sanitizing solution from the entire system and sends it to drain.

This process also sanitizes fittings and tubing used during installation.

KEY COMPONENTS

PRODUCT WATER FAUCETS/TANK MEMBRANES AND FILTERS

Air Gap Faucet	Part No.	Membrane - Thin Film Composite	Part No.	Filter	Part No.
Polymer, Plain Front	1140020*	Models 10105 - Black Tape 25 GPD	41400005	Sediment Filter - Black Cap	41400008
Polymer, Light Bar	1140043*	Models 10107 - Orange Tape 45 GPD	41400007	Carbon Filter - Blue Cap	41400009
Storage Tank	Part No.	*Color Suffix Codes: EPChrome/Black = 0, White = 1, EPChrome/White = 2, Almond = 3, Black = 4, Satin/Black = 6, Satin/White = 8			
7.6L (2.0 gal) Polymer White	92313				

PARTS AND SERVICE AVAILABLE THROUGH YOUR HYDROTECH® DEALER

ROUTINE MAINTENANCE

RECOMMENDATIONS	
<p>HAVE ALL COMPONENTS ON HAND AND READY BEFORE BEGINNING PROCEDURE. A CLEAN WORK AREA AND EQUIPMENT ARE ESSENTIAL TO PROPERLY CLEAN AND/OR SANITIZE THE SYSTEM. (i.e., CLEAN HANDS, TOOLS, WORK SURFACE, AND CONTAINERS)</p>	
Service Requirements	Recommended Service Intervals
<p>To insure the system operates at its optimum level, certain routine maintenance must be performed. Frequency of maintenance performance will depend on feed water quality and level of system usage.</p> <p>CLEAN: Each time filters are replaced SANITIZE: At least once a year and each time membrane is replaced</p>	<p>Replace filters as required or every 6 to 12 months depending on feed water quality.</p> <p>Replace membrane as required based on Smartap® Water Quality Monitor indication or periodic TDS rejection tests.</p> <p>Maximum recommended service life for membrane is 60 months.</p>

EQUIPMENT NEEDED		
Safety glasses Rubber gloves, sanitary Wash Cloth, Clean and Lint-free Liquid dish soap	Household bleach - Unscented Only (5 1/4% sodium hypo chlorite) Plastic storage bag Manual Air Pump	Plastic bucket Plastic bowl "O" ring Lube FDA Approved (P/N 30300026)

REPLACEMENT FILTER SETS	REPLACEMENT MEMBRANES
P/N 41400008 Sediment Filter (1 each) P/N 41400075 Activated Carbon Filter (2 each)	P/N 41400005, Model 10105, Black Tape 25 GPD P/N 41400007, Model 10107, Orange Tape 45 GPD
"O" RINGS	
P/N 34201010 Sediment or Carbon Cartridge to Port P/N 34201026 Filter Housing	P/N 34201010 Membrane to Flow Tower, Lower P/N 34201006 Membrane Flow Tower, Upper