Installation, Service and Operation Manual

RS-W Systems

RS-W Type I
RS-W Type II

www.aquacera.com

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About the Product:

FSC conditioner systems by AquaCera® are designed to provide years of protection from scale build up and reduce or remove existing scale from hard water supplies. The systems are meant for installation at the entry point of water coming into the home whereby it can treat your entire home for both hot and cold water.

FSC conditioners prevent and reduce existing scale by creating nano sized crystal structures that calcium and magnesium ions attach to and subsequently will not adhere to pipe-work, plumbing fixtures or water using appliances.

Unlike water softeners which require salt to periodically "regenerate" or clean the filtration media, FSC conditioners by AquaCera® require no additives or chemicals to keep the unit functioning.

This unit is not a water softener. It will not remove calcium or magnesium minerals from your water. The water in your home will still contain these beneficial and essential minerals and is safe to drink.

We recommend using phosphate free cleaning products to achieve maximum benefit from this system when doing laundry and washing dishes. Many new products are now available at local grocery chain food stores in your area.

About this System

The system you have purchased is an RSW-Type I or II which incorporates the FSC conditioner and a backwashing iron/manganese/sulfur removal system. This combination system provides all the conditioning benefits as listed above with the added benefit of clear water iron removal up to 12 p.p.m., hydrogen sulfide of up to 5 p.p.m., and manganese levels to 5 p.p.m.

This system is normally used on well water supplies containing hard water and a detectable levels of iron. Some municipally treated waters also have a residual iron and this system will remove these trace levels from your water.

This system is recommended to be installed with the backwash filter unit first, followed by the conditioner. Consult with your AquaCera dealer prior to installation to ensure that the correct installation procedure is being followed.

Benefits of an AquaCera RS-W Iron and Conditioner Systems:

- ✓ **No Salt**
- ✓ **No Chemicals ***
- ✓ **No Maintenance**
- ✓ **Retains Essential Minerals**
- ✓ **Protects Water Using Appliances**
- ✓ **Simple Installation**
- ✓ **Takes very limited space**
- ✓ **Compatible with all on-site/community waste water treatment systems**
- ✓ **Recommended for use in areas with water softener restrictions and areas where water softeners have become "banned"**
- ✓ **High levels of clear water iron removal**
- ✓ **Hydrogen Sulfide removal**
- ✓ **Manganese removal**

Installation Notes:

FSC Conditioner:

- Due to the amount of area inside the tank required for fluidization, this tank contains the required amount of media based on water hardness and flow requirements. It is partially filled with media and contains approximately 0.5 gallons of water inside the unit to protect the media from drying out during the shipment and storage of the system prior to use. This also alleviates pre-soaking the media prior to placing the system into service, eliminating the need for a lengthy installation process.
- This unit can be laid on its side for transportation purposes as there is no under-bedding.
- These units are installed in an "UPFLOW" configuration. This is the opposite of most water softener installations. Please follow the labels on the top of the tank for correct installation.

Iron Filter:

- Depending on the level of iron to be treated, it is recommended that the backwash filter unit is programmed to "back-wash" every 3 days.
- A minimum of 7 gallons per minute is required to backwash this unit effectively (based on RS-W Type I or II). This level of water is required due to the weight of the media inside the unit to adequately lift the media "bed" and remove the filtered iron particulate.

Warning:

Do Not let the system freeze. Damage to the tanks or valve may result!

System Parts Overview:

RSW

Bypass Valve Assemblies

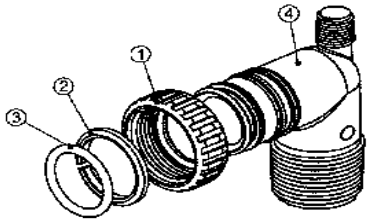
1” Male Threaded Fittings for RSW Backwash Valve

The Following Page describes the fitting kits available for the FSC conditioner unit. One set is included with the system.

Installation Fitting Assemblies

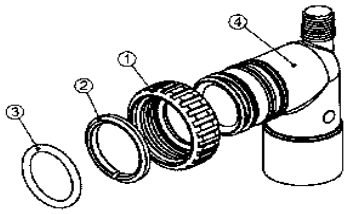
Order No: V3007
Description: WS1 Fitting 1" PVC Male NPT Elbow Assembly

Drawing No.	Order No.	Description	Quantity
1	CLK V3151	WS1 Nut 1" Quick Connect	2
2	CLK V3150	WS1 Split Ring	2
3	CLK V3105	O-Ring 215	2
4	CLK V3149	WS1 Fitting 1 PVC Mule NPT Elbow	2



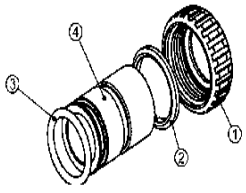
Order No: V3007-01
Description: WS1 Fitting ¼ " & 1" PVC Solvent 90 ASY

Drawing No.	Order No.	Description	Quantity
1	CLK V3151	WS1 Nut 1" Quick Connect	2
2	CLK V3150	WS1 Split Ring	2
3	CLK V3105	O-Ring 215	2
4	CLK V3189	WS1 Fitting ¼ & 1 PVC Solvent 90	2



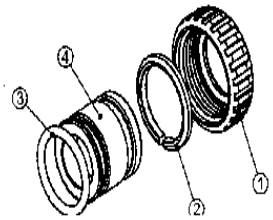
Order No: V3007-02
Description:WS1 Fitting 1" Brass Sweat Assembly

Drawing No.	Order No.	Description	Quantity
1	CLK V3151	WS1 Nut 1" Quick Connect	2
2	CLK V3150	WS1 Split Ring	2
3	CLK V3105	O-Ring 215	2
4	CLK V3188	WS1 Fitting 1 Brass Sweat	2



Order No: V3007-03
Description: WS1 Fitting ¾ " Brass Sweat Assembly

Drawing No.	Order No.	Description	Quantity
1	CLK V3151	WS1 Nut 1" Quick Connect	2
2	CLK V3150	WS1 Split Ring	2
3	CLK V3105	O-Ring 215	2
4	CLK V318801	WS1 Fitting ¾ Brass Sweat	2



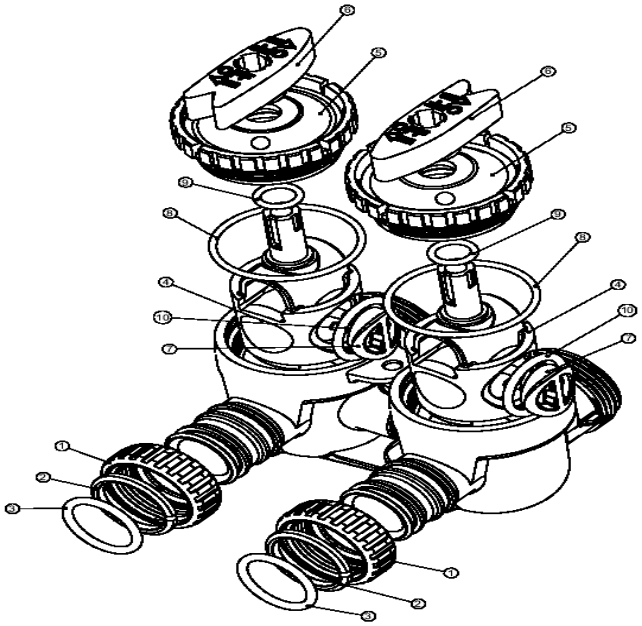
Bypass Valve replacement parts

Bypass Valve

Drawing No.	Order No.	Description	Quantity
1	CLK V3151	WS1 Nut 1"" Quick Connect	2
2	CLK V3150	WS1 Split Ring	2
3	CLK V3105	O-Ring 215	2
4	CLK V3145	WS1 Bypass 1" Rotor	2
5	CLK V3146	WS1 Bypass Cap	2
6	CLK V3147	WS1 Bypass Handle	2
7	CLK V3148	WS1 Bypass Rotor Seal Retainer	2
8	CLK V3152	O-Ring 135	2
9	CLK V3155	O-Ring 112	2
10	CLK V3156	O-Ring 214	2

(Not Shown) Order No. V3191-01, Description: WS1 Bypass Vertical Adapter Assembly

Order No.	Description	Quantity
CLK V3151	WS1 Nut 1" Quick Connect	2
CLK V3150	WS1 Split Ring	2
CLK V3105	O-Ring 215	2
CLK V319101	WS1 Bypass Vertical Adapter Assembly	2



Bypass Valve

The bypass valve is typically used to isolate the control valve from the plumbing system's water pressure in order to perform control valve repairs or maintenance. The WS1 bypass valve is particularly unique in the water treatment industry due to its versatility and state of the art design features. The 1" full flow bypass valve incorporates four positions including a diagnostic position that allows service personnel to work on a pressurized system while still providing untreated bypass water to the facility or residence. Its completely non-metallic, all plastic design allows for easy access and serviceability without the need for tools.

The bypass body and rotors are glass filled Noryl and the nuts and caps are glass filled polypropylene. All seals are self-lubricating EPDM to help prevent seizing after long periods of non-use. Internal o-rings can easily be replaced if service is required.

The bypass consists of two interchangeable plug valves that are operated independently by red arrow shaped handles. The handles identify the flow direction of the water. The plug valves enable the bypass valve to operate in four positions.

1. **Normal Operation Position:** The inlet and outlet handles point in the direction of flow indicated by the engraved arrows on the control valve. Water flows through the control valve during normal operation and this position also allows the control valve to isolate the media bed during the regeneration cycle. (see Figure 1)
2. **Bypass Position:** The inlet and outlet handles point to the centre of the bypass, the control valve is isolated from the water pressure contained in the plumbing system. Untreated water is supplied to the plumbing system. (see Figure 2)
3. **Diagnostic Position:** The inlet handle points in the direction of flow and the outlet handle points to the centre of bypass valve, system water pressure is allowed to the control valve and the plumbing system while not allowing water to exit from the control valve to the plumbing. (see Figure 3)
4. **Shut Off Position:** The inlet handle points to the centre of the bypass valve and the outlet points to the direction of flow, the water is shut off to the plumbing system. If water is available on the outlet side of the softener it is an indication of water bypass around the system (i.e. a plumbing connection somewhere in the building bypasses the system). (see Figure 4)

NOTE TO INSTALLER:

Installation Sequence:

Tank 1: Backwashing Filter Unit
Tank 2: Conditioner

Tank one is a down-flow configured unit. Follow the arrows on the back of the control valve to plumb in the inlet and outlet correctly.

Tank two is an up-flow configured unit; use the up-flow inlet (clearly labeled "inlet") for incoming water and the down-flow inlet (clearly labeled "outlet") for treated water.

Bypass Valve will only connect to the system in one direction. The "Red" bypass handles may need to rotated 180 degrees to correspond with the labels marked "INLET" and "OUTLET" on the Tank Head. It is most important for proper installation that the inlet feed water supply is connected to the "INLET" labeled side on the unit and the outlet supply to the home is connected to the "OUTLET" labeled side on the unit.

INSTALLATION INSTRUCTIONS:

1. **Place the system in desired location**
2. **Connect bypass valves to the units and if necessary lift and rotate 180º the "red" bypass valve handles (Conditioner Tank only) so they correspond with the inlet and outlet labels on the unit.**
3. **Make plumbing connections to the system as per local and state plumbing regulations.**
4. **Open inlet side of conditioner unit allowing the system to fill with water. When full, close the inlet side valve and allow the media to soak for 30 minutes.**
5. **Check for leaks. Repair as necessary.**
6. **Whilst tank two is soaking, open the inlet supply on the backwash filter allowing the tank to fill with water. When the tank appears to be almost full of water, initiate a backwash sequence to allow the dust from the media bed to be rinsed away. See the "User Displays/Settings page to find out how this manual backwash is initiated.**
7. **This backwashing procedure takes approximately 20 minutes. Once this is completed, you may open the outlet valve on the unit to service position.**
8. **Once all steps are completed, you may now open all valves to the system as it is ready for service.**

HOME OWNER:

We would like to take a moment to thank you for your purchase of this new innovative technology for scale prevention.

You should expect over the next few weeks some periodic white talc like film or deposits. This occurs due to existing scale deposits built up over time in your pipes and fixtures. This whiteness will easily clean off with water and will eventually stop occurring.

Your aerators on faucets may need to be periodically removed and cleaned for the next few months to remove clogged scale that is too large to pass through the screens.

Sinks and Fixtures:

Water that is allowed to evaporate may cause small spots. These spots will remove immediately upon wiping with wet cloth or sponge. No chemicals or scouring agents will be necessary.

Dishwashers:

Phosphate based detergents may cause a white film on glassware. If this occurs, switching to a non-phosphate based detergent such as LemiShine™ or Seventh Generation® will eliminate this problem. Use the highest heat selection for the water temperature and turn off the heat drying operation.

*Phosphate based detergents are potentially hazardous to the environment and consequently are becoming less used by detergent manufacturers.

Bathing:

Soaps and shampoos will lather well in conditioned water and as a result, less soap may be needed. Modern liquid based soaps offer the best results over traditional “bar” based soaps.

Consumers who have switched from a salt based system to an AquaCera® based system will see similar results in laundry benefits and soap lathering effects. You will not get the “slimy” film-like texture on your skin as you can get with a traditional water softener.

General Maintenance Tips:

Drain your water heater after initial installation of your system has been completed.
Within 30-60 days of operation, drain the water heater again to remove any scale deposits that may be resting in the base of the tank. Annual draining of the water heater is suggested depending on the age of the tank upon initial installation of the conditioner and the age of the plumbing in your home.

Model 7000AIO

Service Manual

IMPORTANT: Fill in Pertinent Information on Page 3 for Future Reference

Table of Contents

IMPORTANT PLEASE READ:

- The information, specifications and illustrations in this manual are based on the latest information available at the time of printing. The manufacturer reserves the right to make changes at any time without notice.
- This manual is intended as a guide for service of the valve only. System installation requires information from a number of suppliers not known at the time of manufacture. This product should be installed by a plumbing professional.
- This unit is designed to be installed on potable water systems only.
- This product must be installed in compliance with all state and municipal plumbing and electrical codes. Permits may be required at the time of installation.
- If daytime operating pressure exceeds 80 psi, nighttime pressures may exceed pressure limits. A pressure reducing valve must be installed.
- Do not install the unit where temperatures may drop below 32°F (0°C) or above 110°F (43°C).
- Do not place the unit in direct sunlight. Black units will absorb radiant heat increasing internal temperatures.
- Do not strike the valve or any of the components.
- Warranty of this product extends to manufacturing defects. Misapplication of this product may result in failure to properly condition water, or damage to product.
- A prefilter should be used on installations in which free solids are present.
- In some applications local municipalities treat water with Chloramines. High Chloramine levels may damage valve components.
- Correct and constant voltage must be supplied to the control valve to maintain proper function.
- It is recommended that the AIO valve be serviced annually because of the harsh conditions in which it may be used. At a minimum, service the valve part numbers 61438 Seals and Spacers Assembly and 61648 7000AIO Piston Assembly. These should be replaced annually to maintain optimal performance. A service professional should be contacted for this annual maintenance.

Job Specification Sheet

Job Number: _____

Model/Serial Number: _____

Iron ppm: _____

Display Format: _____

Valve Type: _____

Control Type: _____

Day Override: _____

Regen Time: _____

Regen Cycle Step Times: Backwash: _____ Brine Draw/Air Draw:_____

Rapid Rinse: _____

Mineral Tank Size: _____

Installation Instructions

WATER PRESSURE: A minimum of 20 psi of water pressure (1.4 bar) is required for regeneration valve to operate effectively.

ELECTRICAL FACILITIES: An uninterrupted alternating current (A/C) supply is required. Note: Other voltages are available. Please make sure your voltage supply is compatible with your unit before installation.

EXISTING PLUMBING: Condition of existing plumbing should be free from lime and iron buildup. Piping that is built up heavily with lime and/or iron should be replaced.

LOCATION OF OXIDIZER AND DRAIN: The oxidizer should be located close to a drain to prevent air breaks and back flow. The oxidizer should be installed ahead of any water softeners.

BY-PASS VALVES: Always provide for the installation of a by-pass valve if unit is not equipped with one.

CAUTION: Water pressure is not to exceed 125 psi (8.6 bar), water temperature is not to exceed 110°F (43°C), and the unit cannot be subjected to freezing conditions.

Installation Instructions

1. Place the oxidizer tank where you want to install the unit making sure the unit is level and on a firm base.
2. During cold weather, the installer should warm the valve to room temperature before operating.
3. All plumbing should be done in accordance with local plumbing codes. The pipe size for residential drain line should be a minimum of 1/2” (13 mm). Backwash flow rates in excess of 7 gpm (26.4 Lpm) or length in excess of 20’ (6 m) require 3/4” (19 mm) drain line. Commercial drain lines should be the same size as the drain line flow control.
4. A properly sized check valve must be installed at the valve inlet to prevent the pressurized air head in the oxidizer tank from venting backwards up the feed water plumbing.
5. Refer to the dimensional drawing for cutting height of the distributor tube. If there is no dimensional drawing, cut the distributor tube flush with the top of the tank.
6. Assemble the deflector to the distributor tube.
7. Lubricate the distributor O-ring seal and tank O-ring seal. Place the main control valve on tank. Note: Only use silicone lubricant.
8. Solder joints near the drain must be done prior to connecting the Drain Line Flow Control fitting (DLFC). Leave at least 6” (15 cm) between the DLFC and solder joints when soldering pipes that are connected on the DLFC. Failure to do this could cause interior damage to the DLFC.
9. Teflon® tape is the only sealant to be used on the drain fitting.
10. On units with a by-pass, place in by-pass position. Turn on the main water supply. Open a cold filtered water tap nearby and let run a few minutes or until the system is free from foreign material (usually solder) that may have resulted from the installation. Once clean, close the water tap.
11. Place unit in cycle 4 rapid rinse and slowly open the bypass. Let run to drain until all air is purged. Return unit to service then proceed to open water taps starting at the highest elevation working down to the lowest point until air is purged from the lines.
12. Plug unit into an electrical outlet. Note: All electrical connections must be connected according to local codes. (Be certain the outlet is uninterrupted).

CAUTION
- **Do not exceed 125 psi water pressure**
- **Do not exceed 110°F (43°C) water temperature**
- **Do not subject unit to freezing conditions**

WARNING

The system MUST be depressurized before removing any connections for servicing.

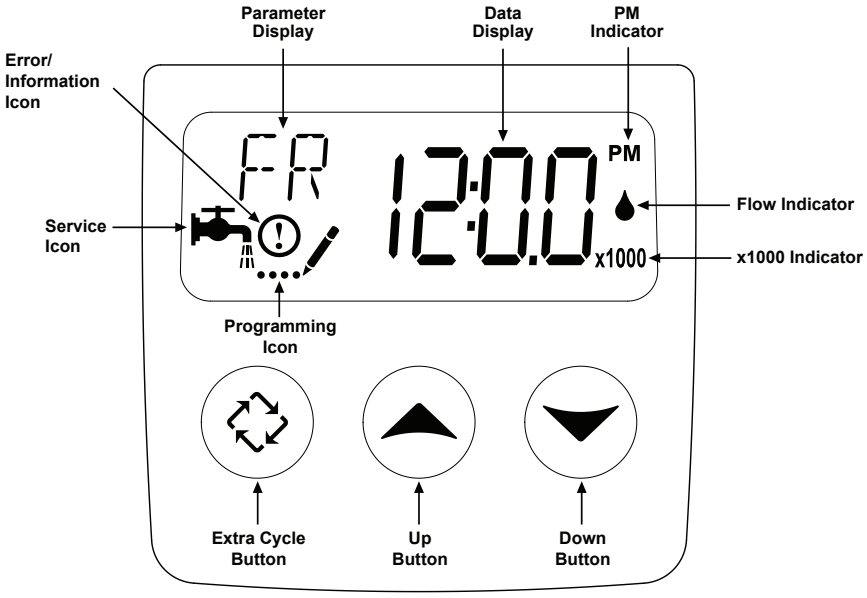
It is recommended that the AIO valve be serviced annually because of the harsh conditions in which it may be used. At a minimum, service the valve part numbers 61438 Seals and Spacers Assembly and 61648 7000AIO Piston Assembly. These should be replaced annually to maintain optimal performance. A service professional should be contacted for this annual maintenance.

The Air Injected Oxidizer should be installed with the inlet, outlet, and drain connections made in accordance with the manufacturer's recommendations, and to meet applicable plumbing codes.

NOTE: The valve control may need to reset to the home position when it is powered up. If it does, the motor will run until it reaches service and time of day will return.

1. Press the extra cycle button and hold it for five seconds to trigger a manual regeneration and advance the valve to the first regeneration position. Pressing the extra cycle button while the unit is in a regeneration cycle will cause the valve to advance to the next position.
2. Position the valve to backwash. Ensure the drain line flow remains steady for 10 minutes or until the water runs clear (see above).
3. Position the valve to the draw position. Ensure the unit is drawing air through the air inlet check valve. Allow the unit to run until the oxidizer tank has been fully flushed with fresh air, as indicated by the presence of large air bubbles in the drain discharge.
4. Position the valve to the rapid rinse position. Check the drain line flow, and run for 5 minutes or until the water runs clear.
5. Replace control box cover.

Timer Features



Features of the SXT:

- Power backup that continues to keep time and the passage of days for a minimum of 48 hours in the event of power failure. During a power outage, the control goes into a power-saving mode. It does not monitor water usage during a power failure, but it does store the volume remaining at the time of power failure.
- Settings for both valve (basic system) and control type (method used to trigger a regeneration).
- Day-of-the-Week controls.
- While in service, the display alternates between time of day, volume remaining or days to regeneration, and tank in service (twin tank systems only).
- The Flow Indicator flashes when outlet flow is detected.
- The Service Icon flashes if a regeneration cycle has been queued.
- A regeneration can be triggered immediately by pressing the Extra Cycle button for five seconds. During regeneration, the user can force the control to advance to the next cycle step immediately by pressing the Extra Cycle button.
- The Parameter display shows the **current** Cycle Step (BW, AD, RR, etc) during regeneration, and the Data display counts down the time remaining for that cycle step. While the valve is transferring to a new cycle step, the display will flash.
- The Parameter display will identify the **destination** cycle step (BW, AD, RR, etc) and the Data display will read "----". Once the valve reaches the cycle step, the display will stop flashing and the Data display will change to the time remaining.

Setting the Time of Day

1. Press and hold either the Up or Down buttons until the programming icon replaces the service icon and the parameter display reads TD.
2. Adjust the displayed time with the Up and Down buttons.
3. When the desired time is set, press the Extra Cycle button to resume normal operation. The unit will also return to normal operation after 5 seconds if no buttons are pressed.

Queueing a Regeneration

1. Press the Extra Cycle button. The service icon will flash to indicate that a regeneration is queued.
2. To cancel a queued regeneration, press the Extra Cycle button.

Regenerating Immediately

Press and hold the Extra Cycle button for five seconds.

Timer Operation

Time Clock Delayed Control

A Time Clock Delayed Control regenerates the system on a timed interval. The control will initiate a regeneration cycle at the programmed regeneration time when the number of days since the last regeneration equals the regeneration day override value.

Day of the Week Control

This control regenerates the system on a weekly schedule. The schedule is defined in Master Programming by setting each day to either “off” or “on.” The control will initiate a regeneration cycle on days that have been set to “on” at the specified regeneration time.

Control Operation During Regeneration

During regeneration, the control displays a special regeneration display. In this display, the control shows the current regeneration step number the valve is advancing to, or has reached, and the time remaining in that step. The step number that displays flashes until the valve completes driving to this regeneration step position. Once all regeneration steps are complete the valve returns to service and resumes normal operation.

Pressing the Extra Cycle button during a regeneration cycle immediately advances the valve to the next cycle step position and resumes normal step timing.

Control Operation During Programming

The control only enters the Program Mode with the valve in service. While in the Program Mode, the control continues to operate normally monitoring water usage and keeping all displays up to date. Control programming is stored in memory permanently, eliminating the need for battery backup power.

Manually Initiating a Regeneration

1. When timer is in service, press the Extra Cycle button for 5 seconds on the main screen.
2. The timer advances to Regeneration Cycle Step #1 (backwash), and begins programmed time count down.
3. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #2 (air draw).
4. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #3 (not used).
5. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #4 (rapid rinse).
6. Press the Extra Cycle button once to advance valve to Regeneration Cycle Step #5 (not used).
7. Press the Extra Cycle button once more to advance the valve back to in service.
   NOTE: A queued regeneration can be initiated by pressing the Extra Cycle button. To clear a queued regeneration, press the Extra Cycle button again to cancel. If regeneration occurs for any reason prior to the delayed regeneration time, the manual regeneration request will be cleared.

Control Operation During A Power Failure

The SXT includes integral power backup. In the event of power failure, the control shifts into a power-saving mode. The control stops monitoring water usage, and the display and motor shut down, but it continues to keep track of the time and day for a minimum of 48 hours.

The system configuration settings are stored in a non-volatile memory and are stored indefinitely with or without line power. The Time of Day flashes when there has been a power failure. Press any button to stop the Time of Day from flashing.

If power fails while the unit is in regeneration, the control will save the current valve position before it shuts down. When power is restored, the control will resume the regeneration cycle from the point where power failed. Note that if power fails during a regeneration cycle, the valve will remain in it's current position until power is restored. The valve system should include all required safety components to prevent overflows resulting from a power failure during regeneration.

The control will not start a new regeneration cycle without line power. If the valve misses a scheduled regeneration due to a power failure, it will queue a regeneration. Once power is restored, the control will initiate a regeneration cycle the next time that the Time of Day equals the programmed regeneration time. Typically, this means that the valve will regenerate one day after it was originally scheduled. If the treated water output is important and power interruptions are expected, the system should be setup with a sufficient reserve capacity to compensate for regeneration delays.

Master Programming Mode Chart

Master Programming Options			
Abbreviation	**Parameter**	**Option Abbreviation**	**Options**
DF	Display Format	GAL	Gallons **(Default)**
		Ltr	Liters
		Cu	Cubic Meters
VT	Valve Type	St1b	Standard Downflow/Upflow Single Backwash
		St2b	Standard Downflow/Upflow Double Backwash
		Fltr	Filter
		UFbF	Upflow Brine First
		8500	TwinFlo100SXT
		IF	**(Default)**
		Othr	Other
CT	Control Type	Fd	Meter (Flow) Delayed
		FI	Meter (Flow) Immediate
		tc	Time Clock **(Default)**
		dAY	Day of Week
NT	Number of Tanks	1	Single Tank System **(Default)**
		2	Two Tank System
TS **(Not Shown)**	Tank in Service	U1	Tank 1 in Service **(Not Shown)**
		U2	Tank 2 in Service
C **(Not Shown)**	Unit Capacity		Unit Capacity (Grains) **(Not Shown)**
H **(Not Shown)**	Feedwater Hardness		Hardness of Inlet Water **(Not Shown)**
RS **(Not Shown)**	Reserve Selection	SF	Percentage Safety Factor **(Not Shown)**
		rc	Fixed Reserve Capacity **(Not Shown)**
SF **(Not Shown)**	Safety Factor		Percentage of the system capacity to be used as a reserve **(Not Shown)**
RC **(Not Shown)**	Fixed Reserve Capacity		Fixed volume to be used as a reserve **(Not Shown)**
DO	Day Override		The system's day override setting **(DO-3 Default)**
RT	Regen Time		The time of day the system will regenerate **(12:00 AM Default)**
BW, AD, RR	Regen Cycle Step Times		The time duration for each regeneration step. Adjustable from OFF and 0-199 minutes. **NOTE: If "Othr" is chosen under "Valve Type", then R1, R2, R3, etc, will be displayed instead**
D1, D2, D3, D4, D5, D6, & D7	Day of Week Settings		Regeneration setting (On or OFF) for each day of the week on day-of-week systems **(Not Shown)**

CAUTION: Before entering Master Programming, please contact your local professional water dealer.

Master Programming Mode Chart

Master Programming Options			
CD	Current Day		The Current day of the week
FM **(Not Shown)**	Flow Meter Type	t0.7	3/4” Turbine Meter **(Not Shown)**
		P0.7	3/4” Paddle Wheel Meter **(Not Shown)**
		t1.0	1” Turbine Meter **(Not Shown)**
		P1.0	1” Paddle Wheel Meter **(Not Shown)**
		t1.5	1.5” Turbine Meter **(7000 Default) (Not Shown)**
		P1.5	1.5” Paddle Wheel Meter **(Not Shown)**
		Gen	Generic or Other Meter **(Not Shown)**
K **(Not Shown)**	Meter Pulse Setting		Meter pulses per gallon for generic/other flow meter **(Not Shown)**

NOTES:
Some items may not be shown depending on timer configuration.
The timer will discard any changes and exit Master Programming Mode if any button is not pressed for sixty seconds.

CAUTION: Before entering Master Programming, please contact your local professional water dealer.

Master Programming Mode

When the Master Programming Mode is entered, all available option setting displays may be viewed and set as needed. Depending on current option settings, some parameters cannot be viewed or set.

Setting the Time of Day

1. Press and hold either the Up or Down buttons until the programming icon replaces the service icon and the parameter display reads TD.
2. Adjust the displayed time with the Up and Down buttons.
3. When the desired time is set, press the Extra Cycle button to resume normal operation. The unit will also return to normal operation after 5 seconds if no buttons are pressed.

Entering Master Programming Mode

Set the Time Of Day display to **12:01 P.M.** Press the Extra Cycle button (to exit Setting Time of Day mode). Then press and hold the Up and Down buttons together until the programming icon replaces the service icon and the Display Format screen appears.

Exiting Master Programming Mode

Press the Extra Cycle button to accept the displayed settings and cycle to the next parameter. Press the Extra Cycle button at the last parameter to save all settings and return to normal operation. The control will automatically disregard any programming changes and return to normal operation if it is left in Master Programming mode for 5 minutes without any keypad input.

Resets:

Soft Reset: Press and hold the Extra Cycle and Down buttons for 25 seconds while in normal Service mode. This resets all parameters to the system default values, except the volume remaining in meter immediate or meter delayed systems and days since regeneration in the time clock system.

Master Reset: Hold the Extra Cycle button while powering up the unit. This resets all of the parameters in the unit. Check and verify the choices selected in Master Programming Mode.

1. Display Format (Display Code DF)

This is the first screen that appears when entering Master Programming Mode. The Display Format setting specifies the unit of measure that will be used for volume and how the control will display the Time of Day. This option setting is identified by “DF” in the upper left hand corner of the screen. There are three possible settings:

Display Format Setting	Unit of Volume	Time Display
GAL	U.S. Gallons	12-Hour AM/PM
Ltr	Liters	24-Hour
Cu	Cubic Meters	24-Hour

(7000 AIO Default)

CAUTION: Before entering Master Programming, please contact your local professional water dealer.

2. Valve Type (Display Code VT)
Press the Extra Cycle button. Use this display to set the Valve Type. The Valve Type setting specifies the type of cycle that the valve follows during regeneration. Note that some valve types require that the valve be built with specific subcomponents. Ensure the valve is configured properly before changing the Valve Type setting. This option setting is identified by “VT” in the upper left hand corner of the screen. There are 5 possible settings:

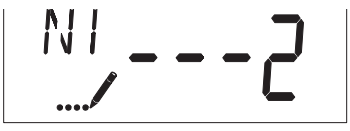
Abbreviation	Parameter
St1b	Standard Downflow/Upflow, Single Backwash
St2b	Standard Downflow/Upflow, Double Backwash
Fltr	Filter
UFbF	Upflow Brine First
8500	TwinFlo 100
IF	7000 AIO Default
Othr	Other

3. Control Type (Display Code CT)
Press the Extra Cycle button. Use this display to set the Control Type. This specifies how the control determines when to trigger a regeneration. For details on how the various options function, refer to the “Timer Operation” section of this service manual. This option setting is identified by “CT” in the upper left hand corner of the screen. There are four possible settings:

Meter Delayed: Fd
Meter Immediate: FI
Time Clock: tc (7000 AIO Default)
Day of Week: dAY

4. Number of Tanks (Display Code NT)
Press the Extra Cycle button. Use this display to set the Number of Tanks in your system. This option setting is identified by “NT” in the upper left hand corner of the screen. There are two possible settings:

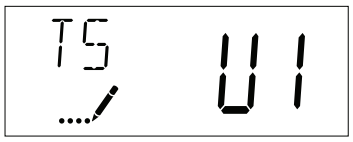
Single Tank System: 1 (7000 AIO Default)
Two-Tank System: 2



CAUTION: Before entering Master Programming, please contact your local professional water dealer.

5. Tank in Service (Display Code TS)
Press the Extra Cycle button. Use this display to set whether tank one or tank two is in service. This option setting is identified by “TS” in the upper left hand corner of the screen. This parameter is only available if the number of tanks has been set to 2. There are two possible settings:

Tank One in Service: U1
Tank Two in Service: U2



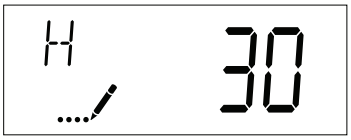
(Not Shown)

6. Unit Capacity (Display Code C)
Press the Extra Cycle button. Use this display to set the Unit Capacity. This setting specifies the treatment capacity of the system media. Enter the capacity of the media bed in grains of hardness when configuring a softener system, and in the desired volume capacity when configuring an oxidizer system. This option setting is identified by “C” in the upper left hand corner of the screen. The Unit Capacity parameter is only available if the control type has been set to one of the metered options. Use the Up and Down buttons to adjust the value as needed.

(Not Shown)

Range: 1-999,900 grain capacity

7. Feedwater Hardness (Display Code H)
Press the Extra Cycle button. Use this display to set the Feedwater Hardness. Enter the feedwater hardness in grains per unit volume for softener systems, or 1 for oxidizer systems. This option setting is identified by “H” in the upper left hand corner of the screen. The feedwater hardness parameter is only available if the control type has been set to one of the metered options. Use the Up and Down buttons to adjust the value as needed.



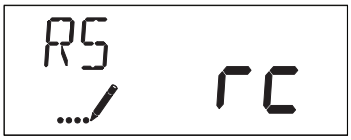
(Not Shown)

Range: 4-199 hardness

CAUTION: Before entering Master Programming, please contact your local professional water dealer.

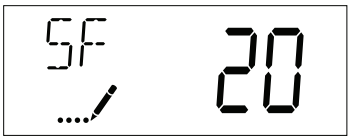
8. Reserve Selection (Display Code RS)
Press the Extra Cycle button. Use this display to set the Safety Factor. Use this display to select the type of reserve to be used in your system. This setting is identified by “RS” in the upper left-hand corner of the screen. The reserve selection parameter is only available if the control type has been set to one of the metered options. There are two possible settings.

SF	Safety Factor
rc	Fixed Reserve Capacity



(Not Shown)

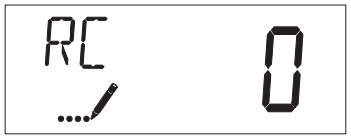
9. Safety Factor (Display Code SF)
Press the Extra Cycle button. Use this display to set the Safety Factor. This setting specifies what percentage of the system capacity will be held as a reserve. Since this value is expressed as a percentage, any change to the unit capacity or feedwater hardness that changes the calculated system capacity will result in a corresponding change to the reserve volume.This option setting is identified by “SF” in the upper left hand corner of the screen. Use the Up and Down buttons to adjust the value from 0 to 50% as needed.



(Not Shown)

Range: 0-50%

10. Fixed Reserve Capacity (Display Code RC)
Press the Extra Cycle button. Use this display to set the Reserve Capacity. This setting specifies a fixed volume that will be held as a reserve. The reserve capacity cannot be set to a value greater than one-half of the calculated system capacity. The reserve capacity is a fixed volume and does not change if the unit capacity or feedwater hardness are changed. This option setting is identified by “RC” in the upper left-hand corner of the screen. Use the Up and Down buttons to adjust the value as needed.

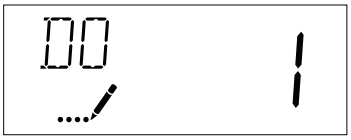


(Not Shown)

Range: 0-half the calculated capacity

CAUTION: Before entering Master Programming, please contact your local professional water dealer.

11. Day Override (Display Code DO)
Press the Extra Cycle button. Use this display to set the Day Override. This setting specifies the maximum number of days between regeneration cycles. If the system is set to a timer-type control, the day override setting determines how often the system will regenerate. A metered system will regenerate regardless of usage if the days since last regeneration cycle equal the day override setting. Setting the day override value to “OFF” disables this function. This option setting is identified by “DO” in the upper left hand corner of the screen. Use the Up and Down buttons to adjust the value as needed.



(DO-3 7000 AIO Default)

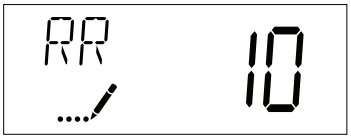
Range: Off-99 days

12. Regeneration Time
Press the Extra Cycle button. Use this display to set the Regeneration Time. This setting specifies the time of day the control will initiate a delayed, manually queued, or day override triggered regeneration. This option setting is identified by “RT” in the upper left hand corner of the screen. Use the Up and Down buttons to adjust the value as needed.

(RT 12:00 AM 7000 AIO Default)

13. Regeneration Cycle Step Times
Press the Extra Cycle button. Use this display to set the Regeneration Cycle Step Times. The different regeneration cycles are listed in sequence based on the valve type selected for the system, and are identified by an abbreviation in the upper left-hand corner of the screen. The abbreviations used are listed below. If the system has been configured with the “OTHER” valve type, the regeneration cycles will be identified as R1, R2, R3, R4, R5, and R6. Each cycle step time can be set from 0 to 199 minutes, or “OFF.” Setting a cycle step to “OFF” will disable all of the following steps. Setting a cycle step time to 0 will cause the control to skip that step during regeneration, but keeps the following steps available. Use the Up and Down buttons to adjust the value as needed. Press the Extra Cycle button to accept the current setting and move to the next parameter.

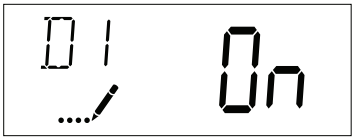
Cycle Step	Abbreviation
AD	Air Draw (40 min 7000 AIO Default)
BF	Brine Fill (Not Used)
BW	Backwash (10 Min 7000 AIO Default, 2nd Backwash Not Used)
RR	Rapid Rinse (5 Min 7000 AIO Default)
SV	Service



Range: 0-199 minutes

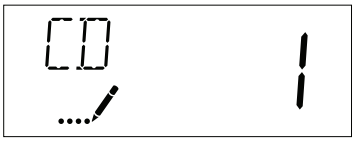
CAUTION: Before entering Master Programming, please contact your local professional water dealer.

14. Day of Week Settings
Press the Extra Cycle button. Use this display to set the regeneration schedule for a system configured as a Day of Week control. The different days of the week are identified as D1, D2, D3, D4, D5, D6, and D7 in the upper left-hand corner of the display. Set the value to “ON” to schedule a regeneration or “OFF” to skip regeneration for each day. Use the Up and Down buttons to adjust the setting as needed. Press the Extra Cycle button to accept the setting and move to the next day. Note that the control requires at least one day to be set to “ON.” If all 7 days are set to “OFF”, the unit will return to Day One until one or more days are set to “ON.”



(Not Shown)

15. Current Day (Display Code CD)
Press the Extra Cycle button. Use this display to set the current day on systems that have been configured as Day of Week controls. This setting is identified by “CD” in the upper left-hand corner of the screen. Use the Up and Down buttons to select from Day 1 through Day 7.



(Not Shown)

16. Flow Meter Type (Display Code FM)
Press the Extra Cycle button. Use this display to set the type of flow meter connected to the control. This option setting is identified by “FM” in the upper left-hand corner of the screen. Use the Up and Down buttons to select one of the 7 available settings.

t0.7	Fleck 3/4” Turbine Meter (Not Shown)
P0.7	Fleck 3/4” Paddle Wheel Meter (Not Shown)
t1.0	Fleck 1” Turbine Meter (Not Shown)
P1.0	Fleck 1” Paddle Wheel Meter (Not Shown)
t1.5	Fleck 1 1/2” Turbine Meter (Not Shown)
P1.5	Fleck 1 1/2” Paddle Wheel Meter (Not Shown)
GEn	Generic/Other Meter (Not Shown)

CAUTION: Before entering Master Programming, please contact your local professional water dealer.

17. Meter Pulse Setting (Display Code K)
Press the Extra Cycle button. Use this display to specify the meter pulse setting for a non-standard flow meter. This option setting is identified by “K” in the upper left-hand corner of the screen. Use the Up and Down buttons to enter the meter constant in pulses per unit volume.

(Not Shown)

18. Press the Extra Cycle button to save all settings and exit Master Programming Mode.

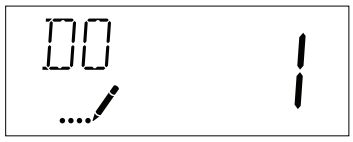
User Programming Mode

User Programming Mode Options		
Abbreviation	**Parameter**	**Description**
DO	Day Override	The timer's day override setting
RT	Regeneration Time	The time of day that the system will regenerate (meter delayed, timeclock, and day-of-week systems)
H	Feed Water Hardness	The hardness of the inlet water - used to calculate system capacity for metered systems
RC	Reserve Capacity	The fixed reserve capacity
CD	Current Day	The current day of week

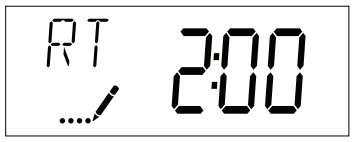
NOTES:
Some items may not be shown depending on timer configuration.
The timer will discard any changes and exit User Mode if any button is not pressed for sixty seconds.

User Programming Mode Steps

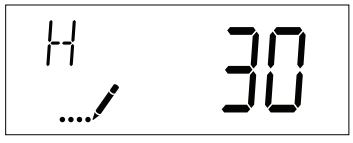
1. Press the Up and Down buttons for five seconds while in service, and the time of day is NOT set to 12:01 PM.
2. Use this display to adjust the Day Override. This option setting is identified by "DO" in the upper left hand corner of the screen.



3. Press the Extra Cycle button. Use this display to adjust the Regeneration Time. This option setting is identified by "RT" in the upper left hand corner of the screen.

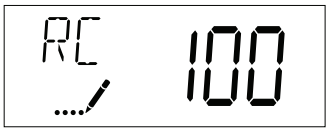


4. Press the Extra Cycle button. Use this display to adjust the Feed Water Hardness. This option setting is identified by "H" in the upper left hand corner of the screen.



Range: 4-199 hardness

5. Press the Extra Cycle button. Use this display to adjust the Fixed Reserve Capacity. This option setting is identified by “RC” in the upper left-hand Corner of the screen.



(Not Shown)

6. Press the Extra Cycle button. Use this display to set the Current Day of the Week. This option setting is identified by “CD” in the upper left hand corner of the screen.

(Not Shown)

7. Press the Extra Cycle button to end User Programming Mode.

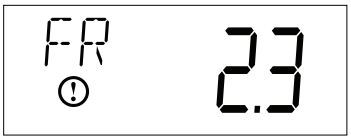
Diagnostic Programming Mode

Diagnostic Programming Mode Options		
Abbreviation	**Parameter**	**Description**
FR	Flow Rate	Displays the current outlet flow rate
PF	Peak Flow Rate	Displays the highest flow rate measured since the last regeneration
HR	Hours in Service	Displays the total hours that the unit has been in service
VU	Volume Used	Displays the total volume of water treated by the unit
RC	Reserve Capacity	Displays the system's reserve capacity calculated from the system capacity, feedwater hardness, and safety factor
SV	Software Version	Displays the software version installed on the controller

NOTES:
Some items may not be shown depending on timer configuration.
The timer will exit Diagnostic Mode after 60 seconds if no buttons are pressed.
Press the Extra Cycle button to exit Diagnostic Mode at any time.

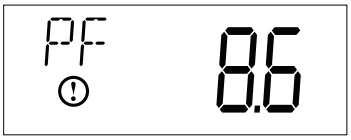
Diagnostic Programming Mode Steps

1. Press the Up and Extra Cycle buttons for five seconds while in service.
2. Use this display to view the current Flow Rate. This option setting is identified by "FR" in the upper left hand corner of the screen.



(Not Shown)

3. Press the Up button. Use this display to view the Peak Flow Rate since the last regeneration cycle. This option setting is identified by "PF" in the upper left hand corner of the screen.



(Not Shown)

4. Press the Up button. Use this display to view the Hours in Service since the last regeneration cycle. This option setting is identified by "HR" in the upper left hand corner of the screen.

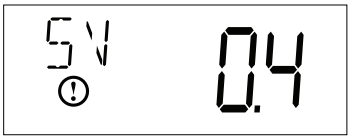
Press the Up button. Use this display to view the Volume Used since the last regeneration cycle. This option setting is identified by "VU" in the upper left hand corner of the screen.

(Not Shown)

1. Press the Up button. Use this display to view the Reserve Capacity. This option setting is identified by “RC” in the upper left hand corner of the screen.

(Not Shown)

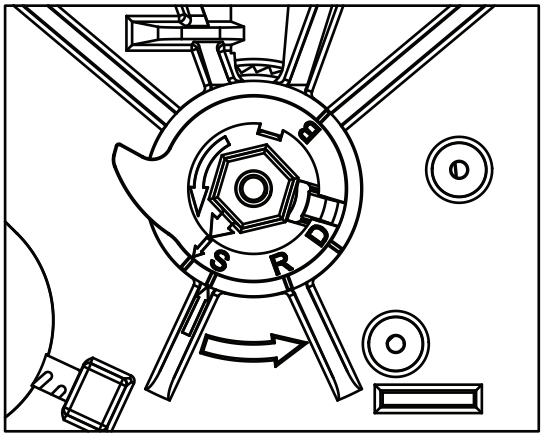
2. Press the Up button. Use this display to view the Software Version. This option setting is identified by “SV” in the upper left hand corner of the screen.



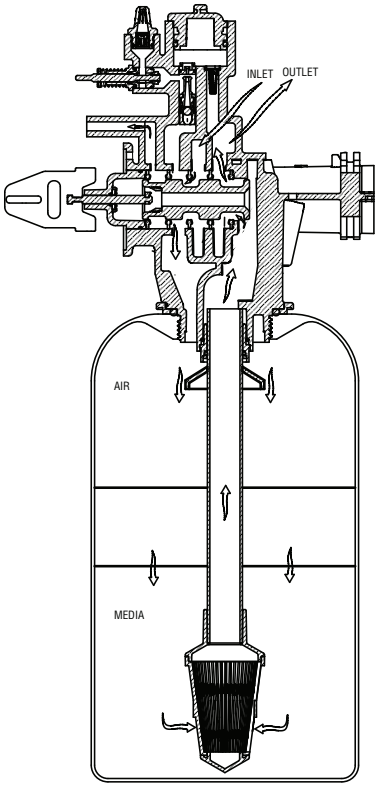
3. Press the Extra Cycle button to end Diagnostic Programming Mode.

Water Conditioner Flow Diagrams

In Service Position

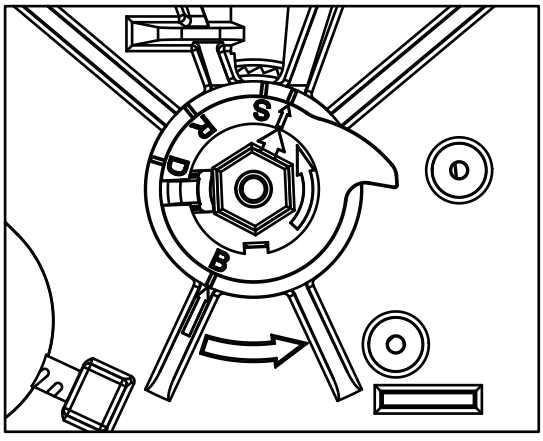


42544_REVA

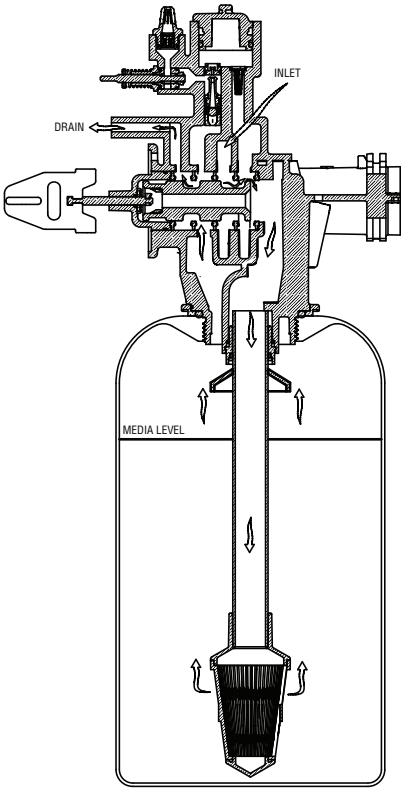


42515-10

Backwash Position

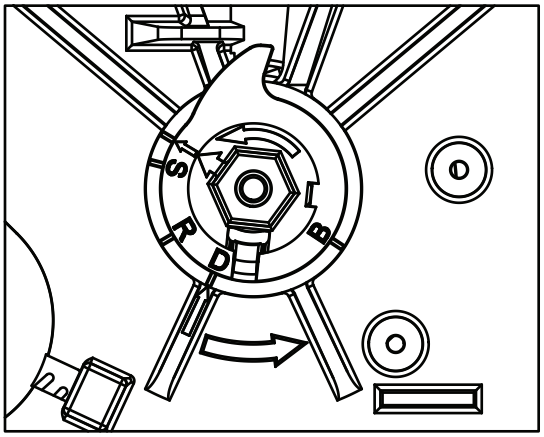


42544_REVA

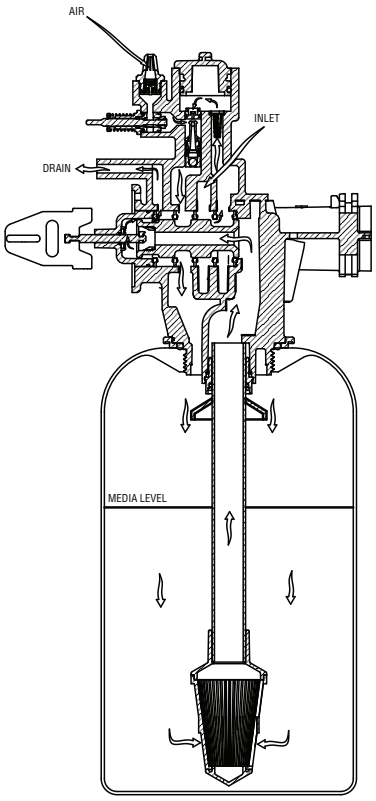


42515-20

Draw Position

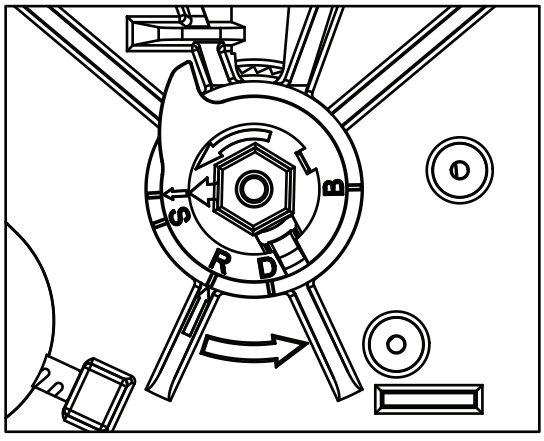


42544_REVA

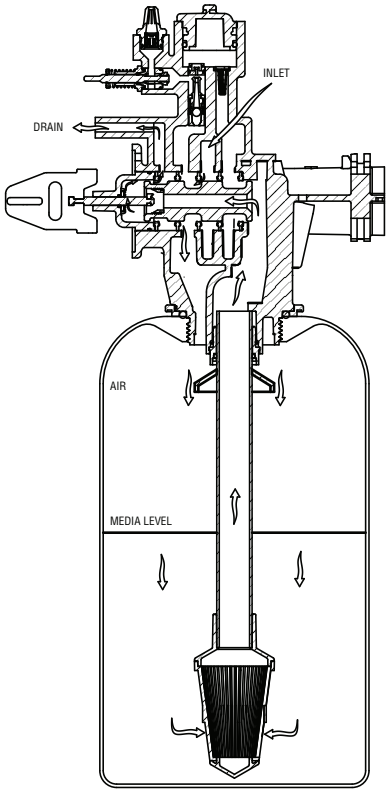


42515-30

Rinse Position

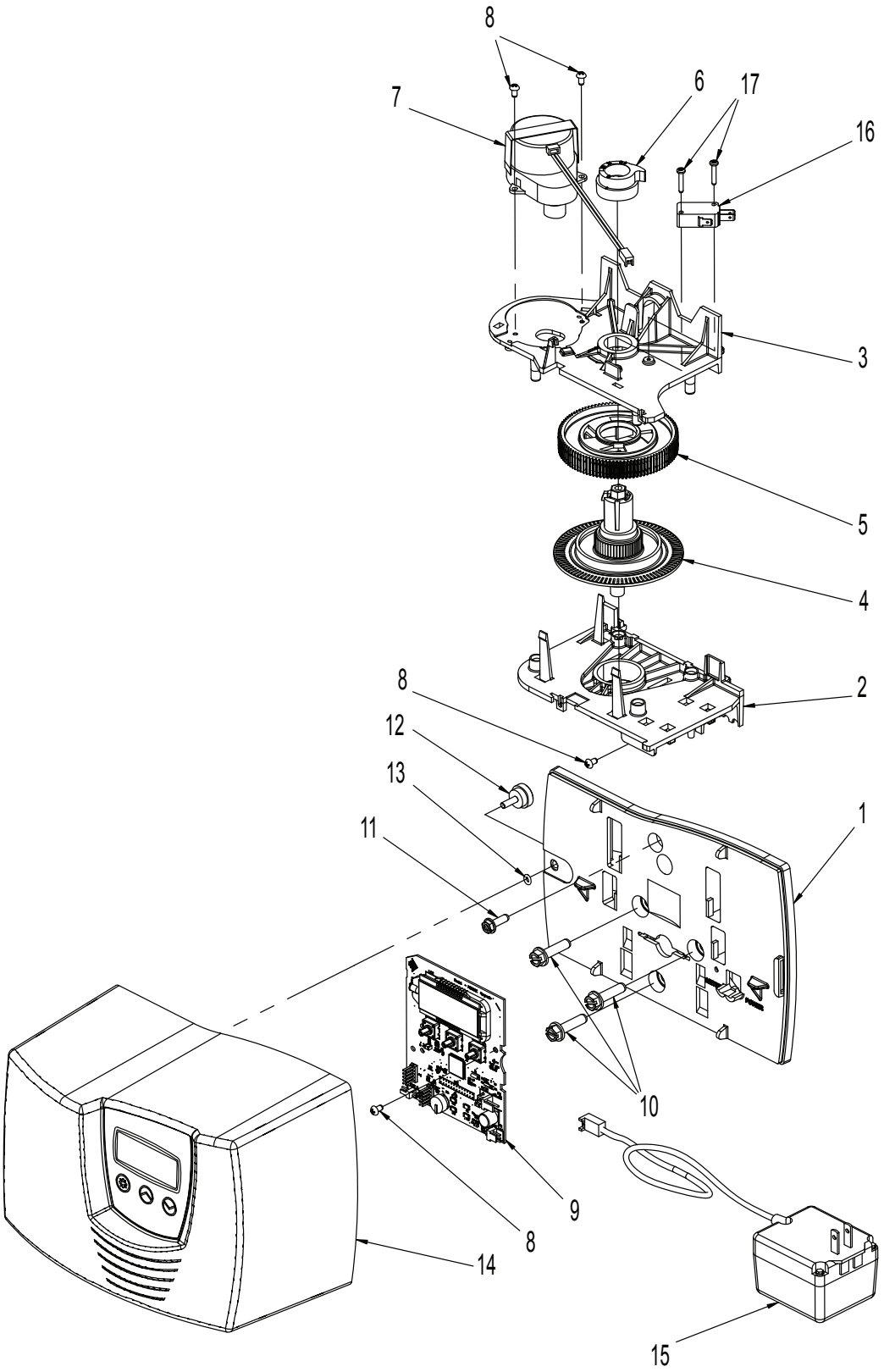


42544_REVA



42515-40

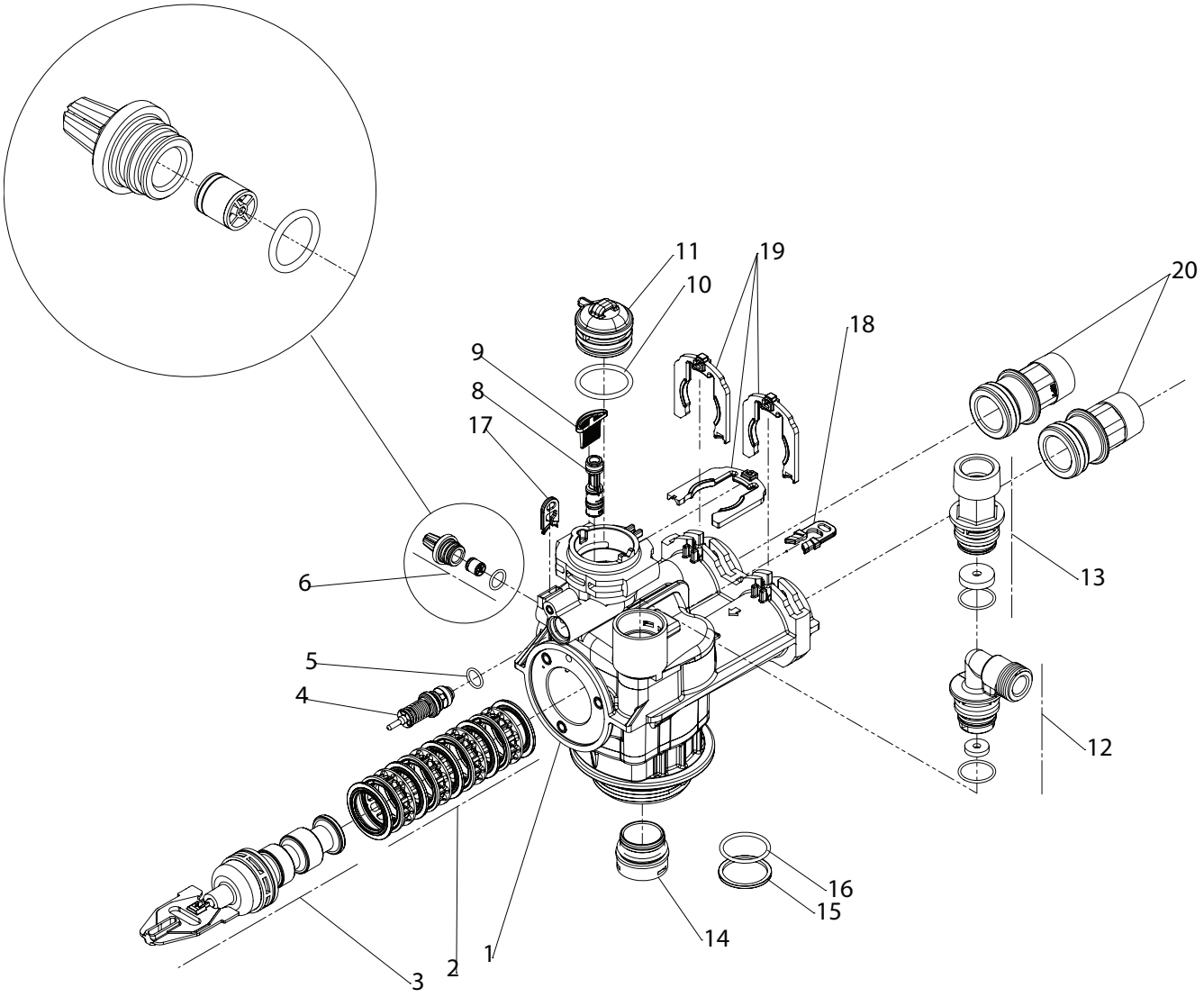
Powerhead Assembly



61501-7000SXT-IF

Item No.	Quantity	Part No.	Description
1	1	40980	Backplate, 7000
2	1	40979	Plate, Lower Support
3	1	40978	Plate, Upper Support
4	1	40702	Shaft, Encoder, 7000
5	1	40703	Gear, Main
6	1	42470	Cam, 7000 AIO
7	1	42349	Motor, 24V, 2RPM, 7000
8	4	13602	Screw, Phil RD HD, 6-32 x 5/16
9	1	61696	Circuit Board, 7000, SXT
10	3	40967	Screw, Hex Washer, Slotted
11	1	12473	Screw, Hex Washer HD, 10-24 x 5/8
12	1	19367	Screw, Designer Cover, Thumb
13	1	41122	O-ring, -007
14	1	61693-01	Cover Assembly, 7000, SXT, Gray
		61693-02	Cover Assembly, 7000, SXT, Black
15	1	40981	Transformer, US 24V, 9.6 VA, 7000
		41086	Transformer Assembly, 230/24V
16	1	10218	Switch, Micro
17	1	11805	Screw, RD HD, 4-40 x 5/8 Type 1

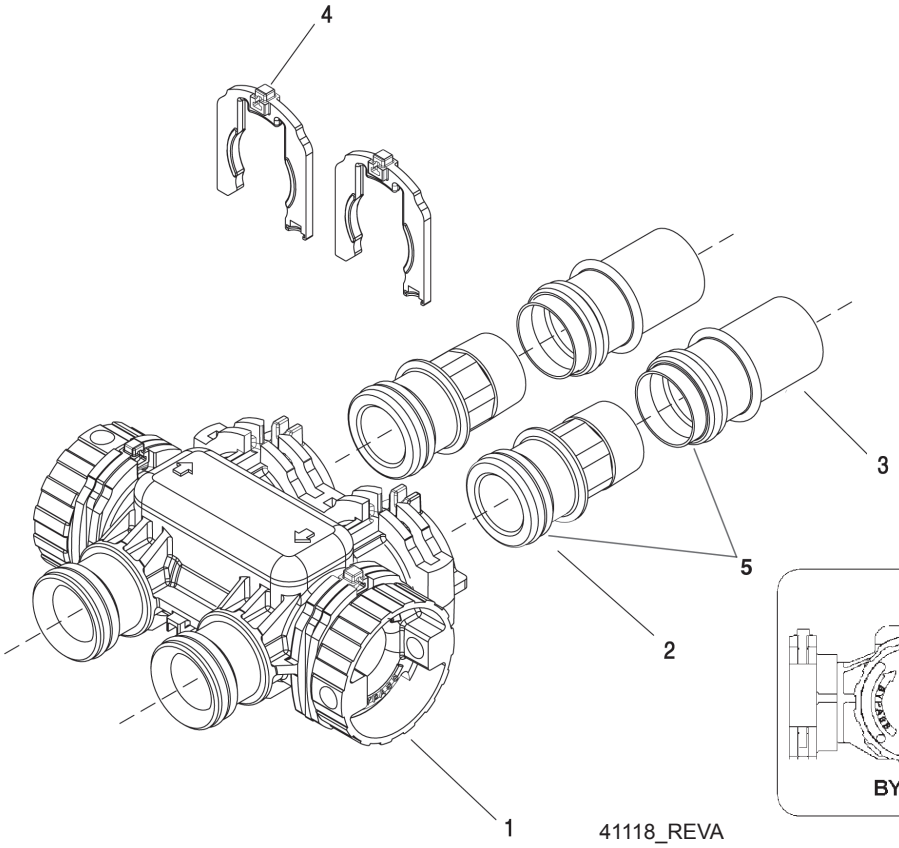
Valve Assembly



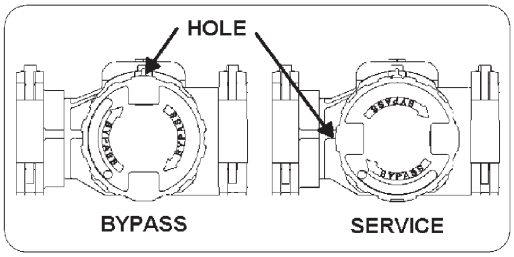
61500-7000-IF

Item No.	Quantity	Part No.	Description
1	1	61050	Valve Body Assembly, 7000, 32 mm DIST
	1	61051	Valve Body Assembly, 7000, 1.05” DIST
2	1	61438	Seal and Spacer Kit, 7000, D/F
3	1	61648	Piston Assembly, 7000 AIO
4	1	60016-01	Brine Valve Assembly, 7000, 560CD
5	1	13302-01	O-ring, -014
6	1	61647	Check Valve Assembly, 7000, Air Draw
8	1	61649	Injector Assembly, 7000 AIO
9	1	40950	Screen, Injector, 7000
10	1	40951	O-ring, -220
11	1	40556	Cap, Injector
12	1	61455-xx	DLFC Assembly, 3/4”
		61455-00	DLFC Size 3/4”, Blank gpm
		61455-17	DLFC Size 3/4”, 1.7 gpm
		61455-20	DLFC Size 3/4”, 2.0 gpm
		61455-24	DLFC Size 3/4”, 2.4 gpm
		61455-30	DLFC Size 3/4”, 3.0 gpm
		61455-35	DLFC Size 3/4”, 3.5 gpm
		61455-40	DLFC Size 3/4”, 4.0 gpm
		61455-45	DLFC Size 3/4”, 4.5 gpm
		61455-50	DLFC Size 3/4”, 5.0 gpm
		61455-60	DLFC Size 3/4”, 6.0 gpm
		61455-70	DLFC Size 3/4”, 7.0 gpm
13	1	61456-xx	DLFC Assembly, 1”
		61456-00	DLFC Size 1”, Blank gpm
		61456-8.0	DLFC Size 1”, 8.0 gpm
		61456-9.0	DLFC Size 1”, 9.0 gpm
		61456-10	DLFC Size 1”, 10.0 gpm
		61456-12	DLFC Size 1”, 12.0 gpm
		61456-15	DLFC Size 1”, 15.0 gpm
		61456-20	DLFC Size 1”, 20.0 gpm
		61456-25	DLFC Size 1”, 25.0 gpm
		61456-30	DLFC Size 1”, 30.0 gpm
14	1	61419	Distributor Adapter, 1.05”
15	1	40538	Retainer, 32 mm
16	1	19054	O-ring, -124
17	1	40946	Clip, Brine Retaining
18	1	40945	Clip, Drain Retaining
19	1	40576	Clip, H, Plastic, 7000
20	1	40563-01	Connector Assembly, 1” NPT, w/O-ring

Bypass Assembly



41118_REVA



41147_REVA

IMPORTANT

To bypass the valve, turn bypass knob on both sides of the valve to bypass position.

When returning to service, put the inlet into service before the outlet.

Item No.	Quantity	Part No.	Description
1	1	40569	Bypass Assembly, 7000, Less Clip
2	2	42414-01	Connector Assembly, 3/4” NPT, 7000, Plastic
	2	42414-11	Connector Assembly, 3/4” BSP, 7000, Plastic
	2	61561	Connector Assembly, 1” NPT, 7000, Brass
	2	61561-10	Connector Assembly, 1” BSP, 7000, Brass
	2	40563-01	Connector Assembly, 1” NPT, 7000, Plastic
	2	40563-11	Connector Assembly, 1” BSP, 7000, Plastic
	2	40565-01	Connector Assembly, 1-1/4”, NPT, 7000, Plastic
	2	40565-11	Connector Assembly, 1-1/4” BSP. 7000, Plastic
	2	61562	Connector Assembly, 1-1/2” NPT, 7000, Brass
	2	61562-10	Connector Assembly, 1-1/2” BSP, 7000, Brass
	2	42241-01	Connector Assembly, 1-1/2” NPT, 7000, Plastic
	2	42241-11	Connector Assembly, 1-1/2” BSP, 7000, Plastic
3	2	61626	Connector Assembly, 3/4” and 1” Sweat, 7000
	2	41242-01	Connector Assembly, 1” and 1-1/4”, Sweat, 7000
	2	41243-01	Connector Assembly, 1-1/4” and 1-1/2”, Sweat, 7000
4	2	40576	Clip, H, Plastic, 7000
5	1	40951	O-ring, -220
Not Shown	1	61462	By-Pass Service Kit, 7000 (Includes all internal parts for 7000 bypass assembly - bypass body not included)

Error Codes

Note: Error codes appear on the In Service display.

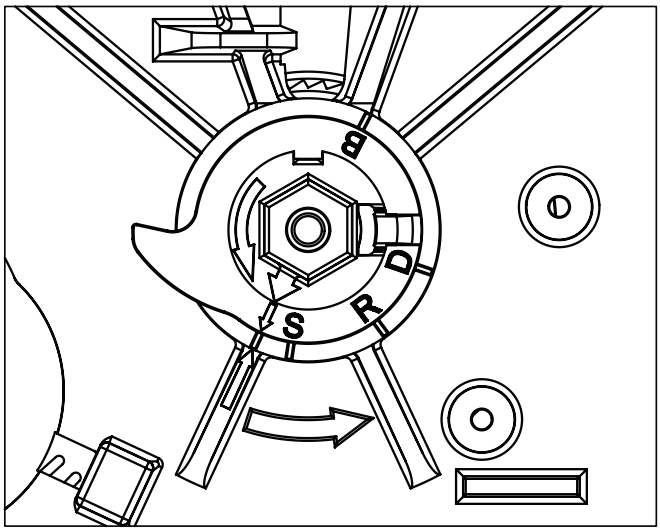
Error Code	Error Type	Cause	Reset and Recovery
0	Cam Sense Error	The valve drive took longer than 6 minutes to advance to the next regeneration position.	Unplug the unit and examine the powerhead. Verify that all cam switches are connected to the circuit board and functioning properly. Verify that the motor and drive train components are in good condition and assembled properly. Check the valve and verify that the piston travels freely. Replace/reassemble the various components as necessary. Plug the unit back in and observe its behavior. The unit should cycle to the next valve position and stop. If the error re-occurs, unplug the unit and contact technical support.
1	Cycle Step Error	The control experienced an unexpected cycle input	Unplug the unit and examine the powerhead. Verify that all cam switches are connected to the circuit board and functioning properly. Enter Master Programming mode and verify that the valve type and system type are set correctly with regard to the unit itself. Step the unit through a manual regeneration and verify that it functions correctly. If the error re-occurs unplug the unit and contact technical support.
2	Regen Failure	The system has not regenerated for more than 99 days (or 7 days if the Control Type has been set to Day-of-Week).	Perform a Manual Regeneration to reset the error code. If the system is metered, verify that it is measuring flow by running service water and watching for the flow indicator on the display. If the unit does not measure flow, verify that the meter cable is connected properly and that the meter is functioning properly. Enter Master Programming mode and verify that the unit is configured properly. As appropriate for the valve configuration, check that the corrct system capacity has been selected, that the day override is set properly, and that the meter is identified correctly. If the unit is configured as a Day-of-Week system, verify that at least one days is set ON. Correct the settings as necessary.
3	Memory Error	Control board memory failure.	Perform a Master Reset and reconfigure the system via Master Programming mode. After reconfiguring the system, set the valve through a manual regeneration. If the error re-occurs, unplug the unit and contact technical support.

WARNING

The controller MUST be depressurized before removing any quick connection clips for servicing. The connector should be pushed toward the control while removing clips.

Troubleshooting

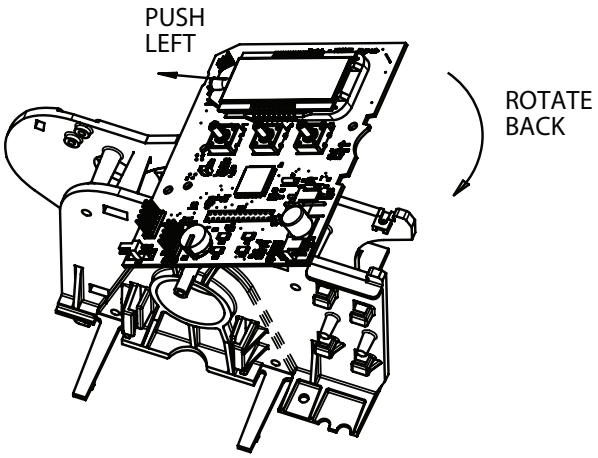
Problem	Cause	Correction
1. AIO valve fails to regenerate.	A. Electrical service to unit has been interrupted. B. Timer is defective.	A. Assure permanent electrical service (check fuse, plug, pull chain or switch). B. Replace timer.
2. Loss of water pressure.	A. Iron buildup in line to water conditioner. B. Iron buildup in water conditioner. C. Inlet of control plugged due to foreign material broken loose from pipe by recent work done on plumbing system.	A. Clean line to water conditioner. B. Clean control and add mineral cleaner to mineral bed. Increase frequency of regeneration and/or backwash time. C. Remove pistons and clean control.
3. Loss of mineral through drain line.	A. Drain line flow control too large.	A. Check to ensure drain line flow control is sized properly for your mineral tank.
4. Iron in treated water.	A. Bypass valve is open. B. Unit does not draw air during regen. C. Injector screen plugged. D. Tank does not fully flush with air during regeneration. E. Water usage depletes oxidizer capacity before regeneration. F. Leak at distributor tube. G. Internal valve leak	A. Close bypass valve. B. Check the air inlet check valve. Clean or replace as needed. C. Clean injector screen. D. Verify the draw time setting and adjust as needed. E. Adjust regeneration frequency to meet demand. F. Make sure distributor tube is not cracked. Check O-ring and tube pilot. G. Replace seals and spacers and/or piston



42544_REVC

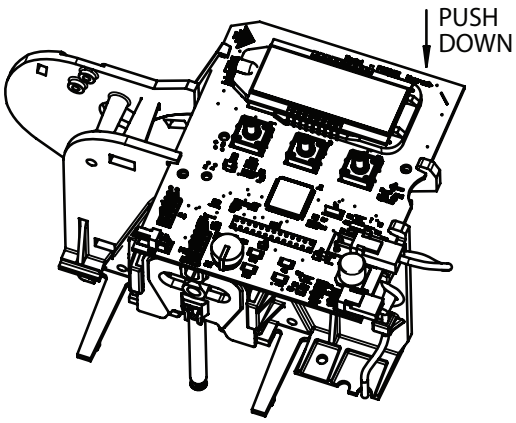
1. Unplug the power source.
2. With 3/8” nut driver, turn the cycle cam counter-clockwise to the position shown in illustration above.
3. Slightly pull the two tabs outward and push the gearbox slightly upward to remove.
4. When returning valve to service after powerhead disassembly, manually step valve through regeneration using the extra cycle button until valve is in service.

Inserting Circuit Board



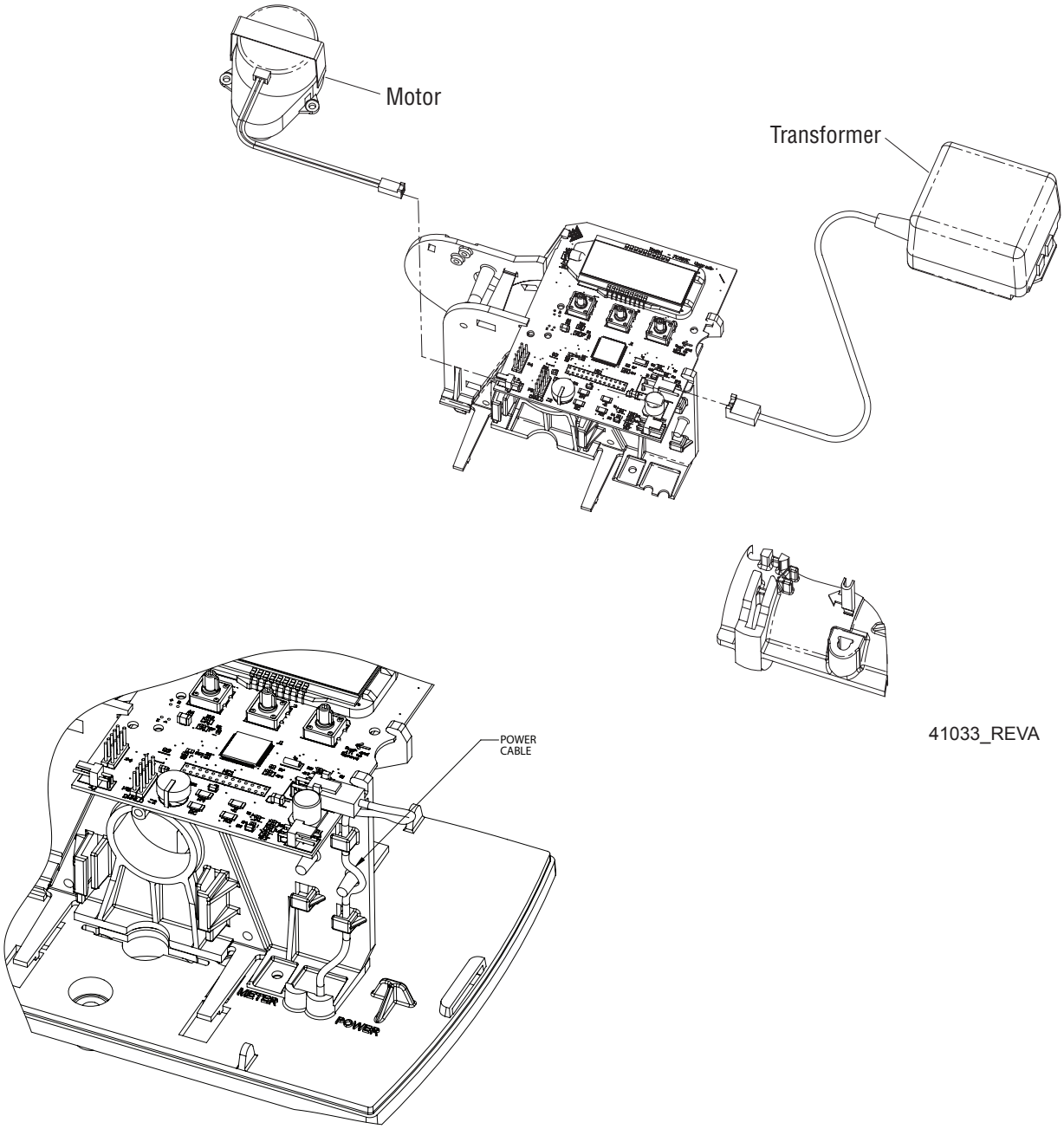
41033_REVA

1. To insert the circuit board, align the notches on the left side of the board with the flexible finger on the power head. Apply pressure to the left while rotating the board back.



41033_REVA

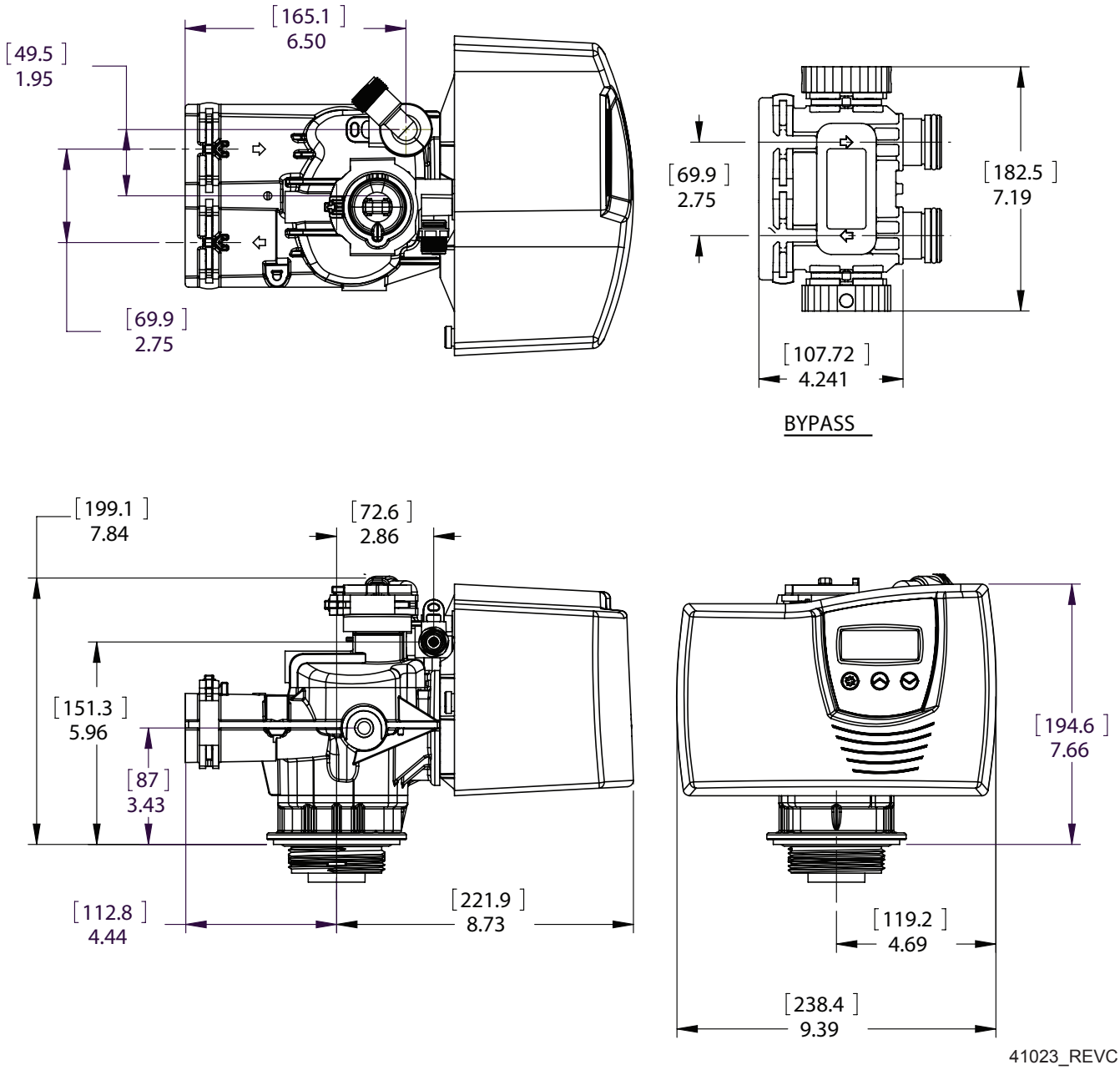
2. When all the way down, snap the circuit board into place under the notches on the right.

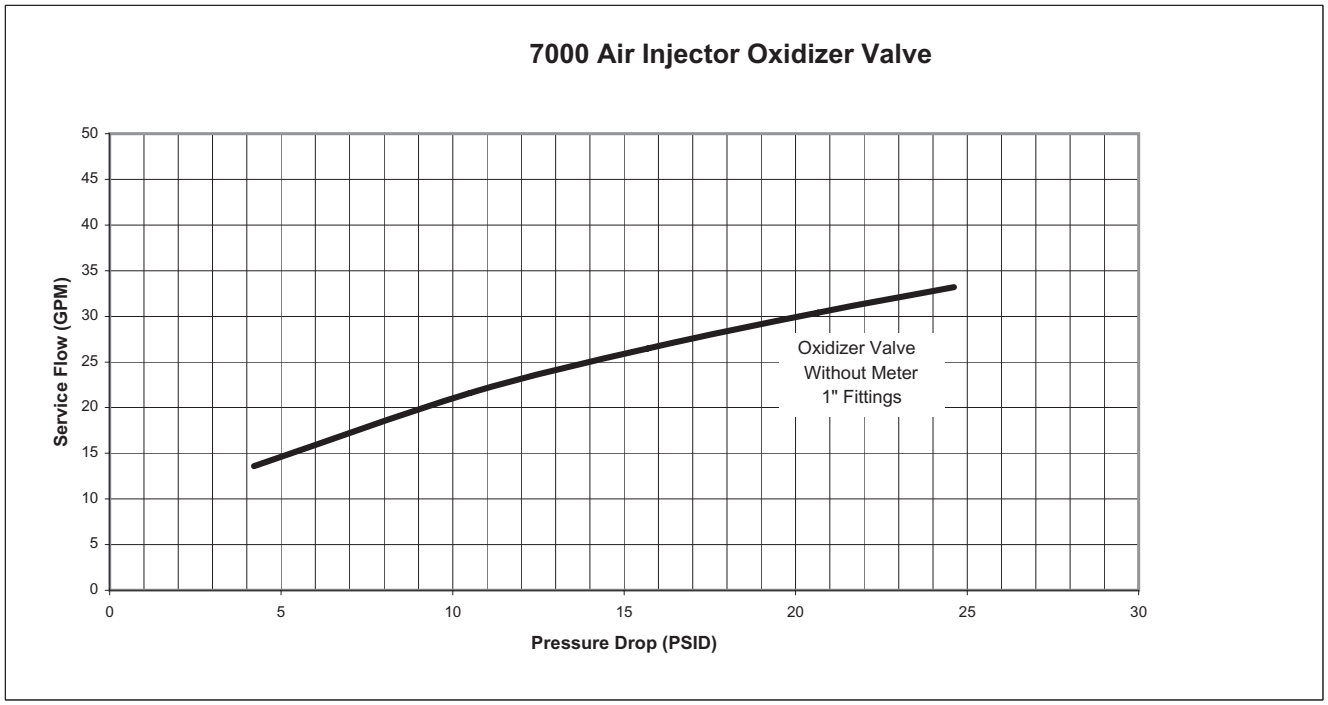


After the circuit board is installed:

1. Connect the motor wires to the motor connector on board.
2. Connect the transformer cable to the transformer connector on board.
3. Thread power wire along path shown in above illustration.

Dimensions


[165.1]
6.50
[49.5]
1.95
[69.9]
2.75
[69.9]
2.75
[182.5]
7.19
[107.72]
4.241
BYPASS
[199.1]
7.84
[72.6]
2.86
[151.3]
5.96
[87]
3.43
[112.8]
4.44
[221.9]
8.73
[194.6]
7.66
[119.2]
4.69
[238.4]
9.39
41023_REVC


7000 Air Injector Oxidizer Valve
Service Flow (GPM)
50
45
40
35
30
25
20
15
10
5
0
0
5
10
15
20
25
30
Pressure Drop (PSID)
Oxidizer Valve
Without Meter
1" Fittings

TR22625

Notes

Warranty

CFCI, through its dealers and distributors warrants the following units:

RS-CITY Carbon/Conditioner Systems
RS-W Well Water Iron/H2S/Manganese Removal and Conditioning Systems
FSC Conditioner Systems

The medias for each of the above systems is warranted against defects for a period of 5 years from date of purchase to the home owner. Proof of purchase is required for warranty service.

The tank(s) and controls for AquaCera branded products are covered by a 10 year manufacturer warranty to cover defects in materials and workmanship for the time period.

Dated proof of purchase is required for any warranty related service.

Conditions

CFCI, of course does not cover neglect or abuse of their products. The warranty refers to defects in material or workmanship only. Excessive heat (110F) or cold is not covered (33F). The warranty does not include acts of God such as floods or lightning. The warranty does not apply to plumbing supplies or soldering joints. Problems such as leaks or floods are to be covered by the purchaser's home insurance. Warranty is the decision of CFCI not that of any other party or representative. CFCI customers are to maintain their product. Failure to do so may cause media failure without defect rather by way of neglect. Water by its nature is changeable by way of quality and quantity and CFCI, is not responsible for excessive dirty water conditions that may affect the performance or life of its products. Warranty refers to defects on material and workmanship not general wear or use.
Please keep in mind the importance of your bill of sale. Your bill of sale is required for all warranty validation. Warranty applies to original purchaser and is not transferable.

Please complete the following and return to your dealer for validation.

Name:_____

Address:_____
_____
_____

Telephone:_____

Date of Installation:_____

Date of Purchase:_____

Installed By:_____

Your Dealer:_____