Installation, Service and Operation Manual

RS-C Systems

RS-C8
RS-C10
RS-C105
RS-C12

www.aquacera.com

About the Product:

RS-C systems by AquaCera® are designed to provide years of protection from scale build up and reduce or remove existing scale from hard water supplies. They are also designed to remove trace chemicals such as chlorine or chloramines introduced into the water by municipal treatment plants as a means of disinfection. These chemicals create taste and odor issues and carcinogenic compounds that are not beneficial for consumption or absorption into the body. Waters containing chemicals from agricultural cultivation may also enter into the water supply and the RS-C systems are designed to reduce these contaminants. 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.

Benefits of an AquaCera RS-C Treatment System:

- ✓ **No Salt**
- ✓ **No Chemicals**
- ✓ **No Maintenance**
- ✓ **Retains Essential Minerals**
- ✓ **Protects Water Using Appliances**
- ✓ **No Electricity**
- ✓ **No Periodic Backwashing – NO DRAIN LINE TO CONNECT TO**
- ✓ **Simple Installation**
- ✓ **Takes very limited space**
- ✓ **Compatible with all on-site/community waste water treatment systems**
- ✓ **Water quality is enhanced**
- ✓ **Removes trace chemical contaminants**
- ✓ **Removes bad tastes and odors**
- ✓ **Recommended for use in areas with water softener restrictions and areas where water softeners have become "banned"**

Installation Notes:

Unlike a water softener, there are no drain line, brine line or electricity requirements for this system.

Conditioner Unit:

- 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.

Carbon Filter Unit:

- This unit comes fully loaded with media, ready for installation.
- This unit may be laid on its side as it is a fully packed media bed with upper and lower distribution baskets.

Warning:

Do Not let the system freeze. Damage to the tank(s) may result!

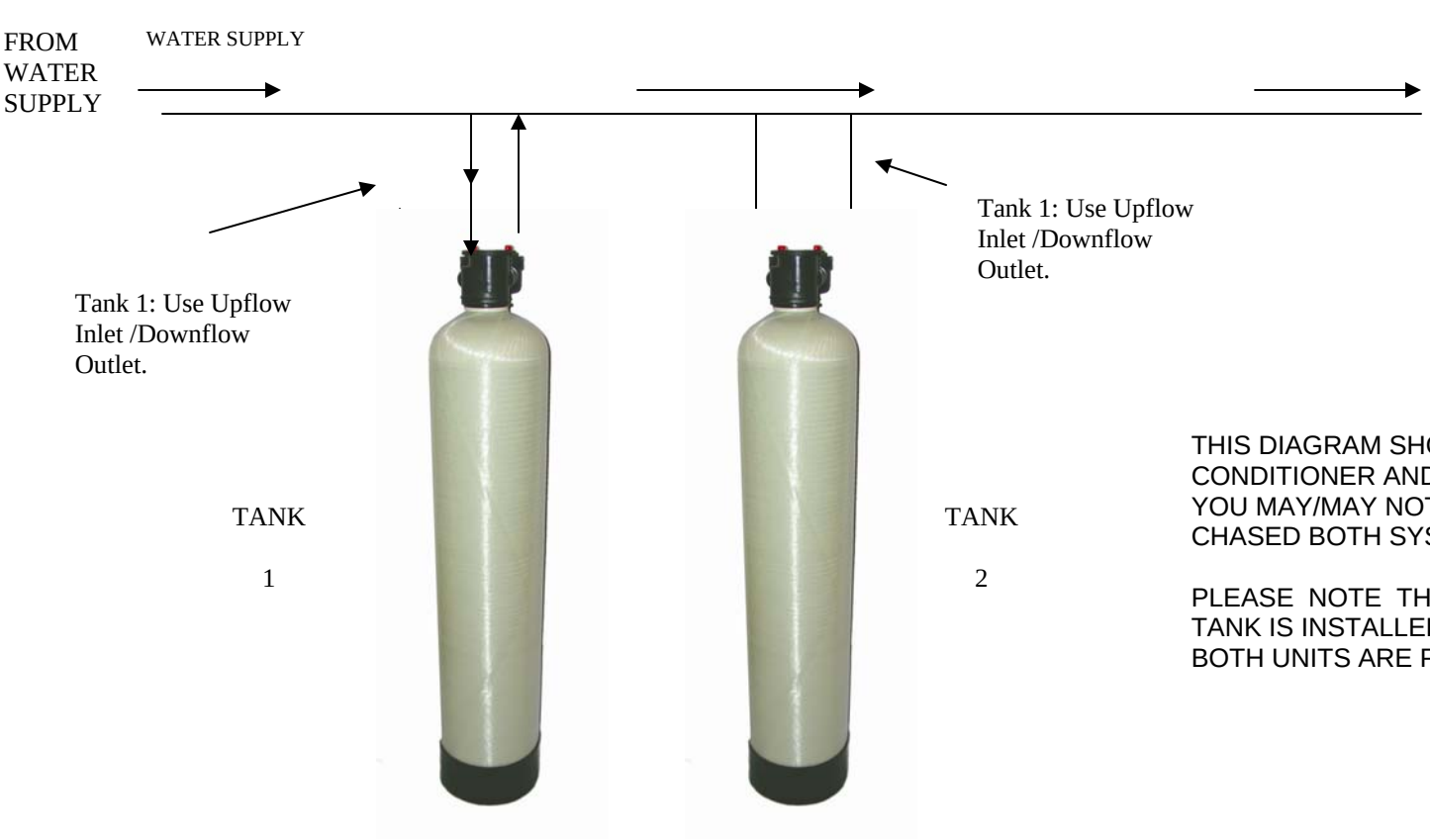
System Parts Overview:

FSC Conditioner Tank

Carbon Filter Tank

Bypass Valve Assembly

FSC Conditioner diagram (Shown as RS-C System with Carbon unit)



THIS DIAGRAM SHOWS BOTH A CONDITIONER AND CARBON FILTER. YOU MAY/MAY NOT HAVE PURCHASED BOTH SYSTEMS.

PLEASE NOTE THAT THE CARBON TANK IS INSTALLED FIRST WHEN BOTH UNITS ARE PURCHASED.

THIS SYSTEM IS DESIGNED TO ELIMINATE CALCIUM AND MAGNESIUM SCALE TO 25 GRAINS OF HARDNESS. PLEASE CONSULT THE OEM WHERE SITUATIONS OUTSIDE OF THESE PARAMETERS EXIST.

CARBON SYSTEM DESIGNED TO REMOVE MOST TASTE/ODOR/CHEMICALS THAT MAY OR MAY NOT BE PRESENT IN YOUR WATER.

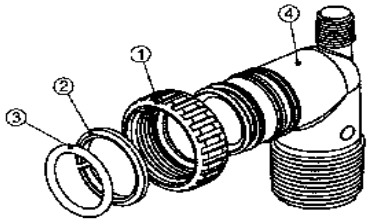
PLEASE NOTE THAT THE SUPPLY INLET TO THE FIRST TANK IS MADE ON THE UPFLOW INLET SIDE. CONDITIONED WATER LEAVES THE TANK ON THE DOWNFLOW SIDE!

THIS APPLIES TO THE CARBON FILTER. UPFLOW INLET-DOWNFLOW OUTLET. CHEMICAL FREE WATER LEAVES THE DOWNFLOW SIDE OF THE SYSTEM.

Installation Fitting Assemblies

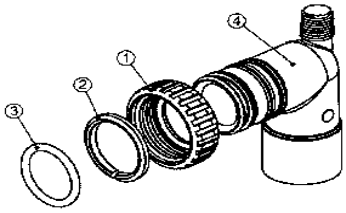
Order No: V3007
Description: WS1 Fitting 1" PVC Male NPT Elbow Assembly

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



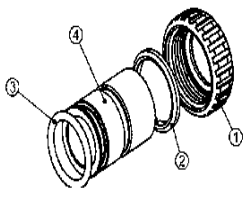
Order No: V3007-01
Description: WS1 Fitting ¼ " & 1" PVC Solvent 90 ASY

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



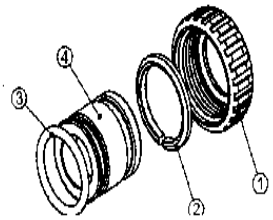
Order No: V3007-02
Description:WS1 Fitting 1" Brass Sweat Assembly

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

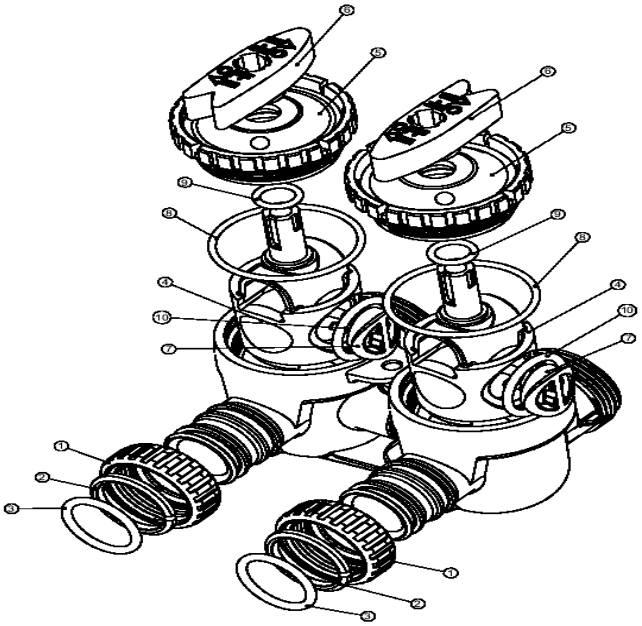


Bypass Valve

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:

Bypass Valves 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 Heads. 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:

Carbon Tank Flushing Procedure

Carbon unit is shipped dry. Before placing this unit into service, it must be flushed to a drain or outlet where the dust and grey water that occurs when water first comes into contact with this system can be discarded. Failure to do so will result in dust fines and grey water to appear in the supply lines for several hours.

1. **Place the system in desired location**
2. **Connect bypass valve to the units and if necessary lift and rotate 180º the “red” bypass valve handles so they correspond with the inlet and outlet labels on the unit.**

Please note that this system is designed to operate in an “UPFLOW” configuration

3. **Make plumbing connections to the system as per local and state plumbing regulations.**
4. **Open inlet side of carbon unit allowing the system to fill with water.**
5. **Close the inlet side when tank is full.**
6. **Open the inlet side of the conditioner unit allowing it to fill with water.**
7. **Close the inlet.**
8. **Open the inlet and outlet of the carbon tank, and open a laundry tub fixture when available or closest cold water fixture to bleed out any air or remaining grey water from the carbon tank**
9. **When the water runs clear, open the inlet and then the outlet on the conditioner tank.**
10. **Check for leaks. Repair as necessary.**
11. **Once all steps are completed, system 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 an immediate improvement in water quality. Water will taste better and there should be no remaining chlorine based taste or smell in your water.

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.

Warranty

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

RS-CITY Carbon/Conditioner Systems
RS-I Well Water Iron Removal and Conditioning Systems
RS-H Well Water Hydrogen Sulfide Removal 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:_____