

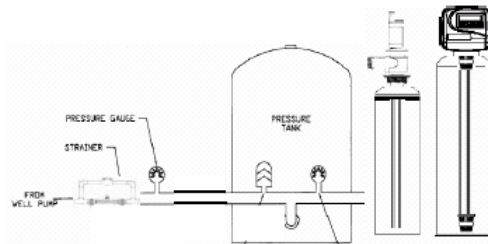
Premium Chemical Free Iron/Sulphur Filter Installation Manual



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EXCALIBUR PREMIUM CHEMICAL FREE IRON/SULPHUR FILTER INSTALLATION MANUAL



INSTALLATION PROCEDURES:

The Premium Chemical Free Iron/Sulphur Filter control valve, fittings and chemical free bypass are designed to accommodate minor plumbing misalignments.

Do not use Vaseline, oils, hydrocarbon lubricants or spray silicone on the Premium Chemical Free Iron/Sulphur Filter. A silicon lubricant may be used on back o rings of the Premium Chemical Free Iron/Sulphur Filter but not necessary. Avoid any type of lubricants, including silicone on the Premium Chemical Free Iron/Sulphur Filter red or clear lip seals.

The Premium Chemical Free Iron/Sulphur Filter nuts and caps are designed to be unscrewed or tightened by hand or with the special Premium Chemical Free Iron/Sulphur Filter wrench if necessary. Pliers can be used on the Premium Chemical Free Iron/Sulphur Filter control valve to unscrew the nut or cap. Do not use a pipe wrench to tighten or loosen Premium Chemical Free Iron/Sulphur Filter control valve nuts or caps. Do not place screwdriver in slots on caps and/or tap with a hammer on the Premium Chemical Free Iron/Sulphur Filter control valve.

Do not use pipe dope or other sealants on Premium Chemical Free Iron/Sulphur Filter threads. Teflon tape must be used on the Premium Chemical Free Iron/Sulphur Filter control valve threads of the 1" NPT elbow or 1/4" NPT connection and on the threads for the drain line connection. Teflon tape is not necessary on the Premium

Chemical Free Iron/Sulphur Filter nut connection or caps because of o ring seals.

All plumbing should be done in accordance with local plumbing codes. The pipe size for Premium Chemical Free Iron/Sulphur Filter drain line should be a minimum of ½ inch. When the backwash flow rates for the Premium Chemical Free Iron/Sulphur Filters in excess of 7GPM or length in excess of 20 feet require ¾ inch drain line.

Solder joints near the Premium Chemical Free Iron/Sulphur Filter drain must be done prior to connecting the drain line flow control fitting. Leave at least 6 inches between the Premium Chemical Free Iron/Sulphur Filter drain line control fittings and solder joints when soldering pipes that are connected on the drain line control fitting. Failure to do this could cause interior damage to the Premium Chemical Free Iron/Sulphur Filter control valve drain line flow control fitting.

When assembling the installation/fitting package for the Premium Chemical Free Iron/Sulphur Filter (inlet and outlet) connect the fitting to the plumbing system first and then attach the nut, split ring or o ring from the Premium Chemical Free Iron/Sulphur Filter control valve. Heat from soldering or solvent cements may damage the Premium Chemical Free Iron/Sulphur Filter nut, split ring or o ring. The solder joints should be cool and solvent cements should be set before installing the Premium Chemical Free Iron/Sulphur Filter control valve nut, split ring and o ring. Avoid getting primer and solvent cement on the Premium Chemical Free Iron/Sulphur Filter control valve on any part of the o rings, split rings, bypass valve or control valve.

Premium Chemical Free Iron/Sulphur Filter to be plugged into an electrical outlet. All electrical connections must be connected in accordance with local electrical codes.

Install grounding strap on metal pipes, one end on inlet and the end to outlet (copper).

Note: The air injection valve must be installed between the existing pump and pressure tank following the black arrow indicating flow

direction. After the pressure tank install the contact air release tank and then the backwashable Iron / Sulphur Filter supplying treated water to your household.

INSTALLING FITTING ASSEMBLIES:

Premium Chemical Free Iron/Sulphur Filter control valve installation fittings connect to the control valve or the bypass valve using nuts that only require hand tightening. Hand tighten Premium Chemical Free Iron/Sulphur Filter nut connections between Premium Chemical Free Iron/Sulphur Filter control valve and installation fittings, control valve and bypass valve and bypass valve and installation fittings allows for easy serviceability. Do not use a pipe wrench to tighten Premium Chemical Free Iron/Sulphur Filter nuts on installation fittings. Hand tighten only.

Premium Chemical Free Iron/Sulphur Filter split ring retainer holds the nut on and allows load to be spread over the entire nut surface area reducing the chance for leakage with the Premium Chemical Free Iron/Sulphur Filter. The split ring design, incorporated into the installation fittings allows approximately 2 degrees off axis alignment to the plumbing system. The Premium Chemical Free Iron/Sulphur Filter installation fittings are designed to accommodate minor plumbing misalignments.

Premium Chemical Free Iron/Sulphur Filter control valve slip the nut onto the fitting first, then the split ring second and the o ring last. Hand tighten the nut. If the fitting is leaking, tightening the nut will not stop the leak. Remove the Premium Chemical Free Iron/Sulphur Filter nut, fitting and check for damage or misalignment of the o ring.

Do not use pipe dope or other sealants on the Premium Chemical Free Iron/Sulphur Filter threads. Teflon tape must be used on the Premium Chemical Free Iron/Sulphur Filter threads of the 1" NPT elbow and 1/4" NPT connections and on the threads for the drain line connection. Teflon tape is not necessary on the connection or caps because of the o ring seals.

BYPASS VALVE:

The Premium Chemical Free Iron/Sulphur Filter bypass valve easily

connects to the Premium Chemical Free Iron/Sulphur Filter control valve body using nuts that only require hand tightening. Hand tighten nut connections between Premium Chemical Free Iron/Sulphur Filter control valve and fittings, Premium Chemical Free Iron/Sulphur Filter control valve and bypass valve and bypass valve and installation fittings allow for easy serviceability. On Premium Chemical Free Iron/Sulphur Filter do not use Vaseline, oils or other unacceptable lubricants on o- rings. A silicon lubricant may be used on black o rings. All seals are self lubricating EPDM for long life lubricating qualities.

NOTE: Quick connect 1" NPT nut will fit around a 3/4" copper elbow.

Excalibur Chemical Free Iron/Sulphur Filter System Setup:

Chemical Free Iron/Sulphur filter system setup choose the time for the chemical Free Iron/Sulphur Filter on the cycles selected in cycle sequence and specifies the Chemical Free Iron/Sulphur Filter other operating parameters for the Chemical Free Iron/Sulphur Filter System. The upper and lower limits for the Chemical Free Iron/Sulphur filter of the allowable Premiums for the cycles are as follows:

Chemical Free Iron/Sulphur Filter	Options	Units	Lower/Upper Limit
Chemical Free Iron/Sulphur Filter	Backwash	Minutes	14
Chemical Free Iron/Sulphur Filter	Rinse (fast)	Minutes	8

Step 1:

On the Chemical Free Iron/Sulphur Filter press set hour and up buttons simultaneously for 3 seconds and release on the Chemical Free Iron/Sulphur Filter. Then press again on the Chemical Free Iron/Sulphur Filter the set hour and up buttons simultaneously for 3 seconds then release.

Step 2:

On the Chemical Free Iron/Sulphur Filter select P9 using the up or down arrows. On the Chemical Free Iron/Sulphur Filter press the set hour button to go to step 3.

Step 3:

On the Chemical Free Iron/Sulphur Filter P9 is selected dashes will appear for minutes of fill. Then on the Chemical Free Iron/Sulphur Filter press set hour button to go to step 4.

Step 4:

On the Chemical Free Iron/Sulphur Filter use the up or down buttons to select 99 days between regen. On the Chemical Free Iron/Sulphur Filter press the set hour button to go to step 5.

Step 5:

On the Chemical Free Iron/Sulphur Filter use the up or down buttons to switch between 60 hZ or 50hZ option. The Chemical Free Iron/Sulphur Filter must be set for 60 hZ. Then on the Chemical Free Iron/Sulphur Filter press the set hour button to go to step 6.

Step 6:

On the Chemical Free Iron/Sulphur Filter if a differential pressure switch is installed and actuated on the Chemical Free Iron/Sulphur Filter a regeneration will occur immediately. If no arrow points at regeneration hour, or a regeneration will occur at the delayed regeneration hour or a regeneration will occur at the delayed hour if an arrow points at regen hour. On the Chemical Free Iron/Sulphur Filter use up or down buttons to switch between the two choices. If a differential switch is not installed, the settings in this display are ignored. ON the Chemical Free Iron/Sulphur Filter press the set hour to exit system setup.

Excalibur Water Systems Chemical Free Iron/Sulphur Filter
Programming Procedures:

General Operation:

When the Chemical Free Iron/Sulphur Filter is filtering on two displays of the Chemical Free Iron/Sulphur Filter two displays will be shown, time of day or days until the next regeneration of the Chemical Free Iron/Sulphur Filter. When pressing up or down on the Chemical Free Iron/Sulphur Filter will toggle between the two choices.

To set time of day:

When the Chemical Free Iron/Sulphur Filter has a power outage time of day needs to be reset. All other information for the Chemical Free Iron/Sulphur Filter will be stored in memory no matter how long the Chemical Free Iron/Sulphur Filter has a power outage. Please complete the steps shown below to access this mode of the Chemical Free Iron/Sulphur Filter press set hour.

Step I:

Chemical Free Iron/Sulphur Filter accessed by pressing set hour.

Step II:

Chemical Free Iron/Sulphur Filter adjust to the nearest hour using up or down on the Chemical Free Iron/Sulphur Filter an arrow points to PM during PM hours.

Step III:

Press set hour on the Chemical Free Iron/Sulphur Filter to complete and return to normal operation for the Chemical Free Iron/Sulphur Filter.

To set time of regeneration:

Chemical Free Iron/Sulphur Filter for initial setup or to make adjustments to the Chemical Free Iron/Sulphur Filter, please complete the steps shown below for the Chemical Free Iron/Sulphur Filter. To access this mode of the Chemical Free Iron/Sulphur Filter by pressing set hour and up simultaneously for 3 seconds on the Chemical Free Iron/Sulphur Filter.

Step I:

Chemical Free Iron/Sulphur Filter accessed by pressing set hour and up simultaneously for 3 seconds on the Chemical Free Iron/Sulphur Filter.

Step II:

On the Chemical Free Iron/Sulphur Filter adjust time of regeneration hour by using the up or down buttons on the Chemical Free Iron/Sulphur Filter. An arrow points to PM during PM hours on the Chemical Free Iron/Sulphur Filter. Simultaneously press the hour and down button to return to normal for the Chemical Free Iron/Sulphur Filter.

The user can initiate manual regeneration of the Chemical Free Iron/Sulphur Filter. The user has the option to request Chemical Free Iron/Sulphur Filter to have manual at the delayed regeneration time for the Chemical Free Iron/Sulphur Filter or have the regeneration occur immediately for the Chemical Free Iron/Sulphur Filter. On the Chemical Free Iron/Sulphur Filter simultaneously press the up and down buttons on the Chemical Free Iron/Sulphur Filter to start regeneration at the next delayed regeneration time. If the Chemical Free Iron/Sulphur Filter regeneration is to occur today, an arrow will point to regeneration on the Chemical Free Iron/Sulphur Filter. For immediate regeneration simultaneously press and hold up and down buttons for 3 seconds on the Chemical Free Iron/Sulphur Filter.

When Chemical Free Iron/Sulphur Filter is in regeneration, step through the different regeneration cycles by pressing either up or down buttons on the Chemical Free Iron/Sulphur Filter until complete and back to present time of day.

User please note:

Do not attempt to go further into Chemical Free Iron/Sulphur Filter programming other than time of day or regeneration on the Chemical free Iron/Sulphur Filter unless you have a full and comprehensive understanding of the Chemical Free Iron/Sulphur Filter programming and all features. Incorrect settings on the Chemical Free Iron/Sulphur Filter may result in a labour service charge.

EXCALIBUR WATER SYSTEMS

Chemical Free Iron/Sulphur Filter

Troubleshooting Guide

Problem	Possible Cause	Solution
1. Timer does not display time of day	a. Transformer unplugged	a. Connect power
	b. No electric power at outlet	b. Repair outlet or use working outlet
	c. Defective transformer	c. Replace transformer
	d. Defective PC board	d. Replace PC board
2. Timer does not display correct time of day	a. Switched outlet	a. Use uninterrupted outlet
	b. Power outage	b. Reset time of day
	c. Defective PC Board	c. Replace PC board
3. Control valve regenerates at wrong time of day	a. Power outages	a. Reset control valve to correct time of day
	b. Time of day not set correctly	b. Reset to correct time of day
	c. Time of regeneration incorrect	c. Reset regeneration time
4. E1, E2 or E3 E1-Unable to recognize start of regeneration E2-Unexpected stall E3-Motor ran to long, timed out trying to reach the next cycle position or trying to reach home position	a. Control valve has just been serviced	a. Press SET HOUR and DOWN for 3 seconds or unplug power source jack (black wire) from the circuit board and plug back in to reset control valve
	b. Foreign matter is lodged in control valve	b. Check piston and spacer stack assembly for foreign matter
	c. High drive forces on piston	c. Replace piston(s) and spacer stack assembly
	d. Control valve piston not in home position	d. Press SET HOUR and DOWN for 3 seconds or unplug power source jack (black wire) from the circuit board and plug back into reset control valve
	e. Motor not inserted fully to engage pinion, motor wires broken or disconnected, motor failure	e. Check motor and wiring. Replace motor if necessary
	f. Drive gear label dirty or damaged, missing or broken gear	f. Replace or clean drive gear
	g. Drive bracket incorrectly aligned to back plate	g. Reset drive bracket properly
	h. PC board is damaged or defective	h. Replace PC board
	i. PC board incorrectly aligned to drive bracket	i. Ensure PC board is correctly snapped on to drive bracket
5. Control Valve stalled in regeneration	a. Motor not operating	a. Replace motor
	b. No electric power at outlet	b. Repair outlet or use working outlet
	c. Defective transformer	c. Replace transformer
	d. Defective PC board	d. Replace PC board
	e. Broken drive gear or drive cap assembly	e. Replace drive gear or drive cap assembly
	f. Broken piston retainer	f. Replace drive cap assembly
	g. Broken main or regenerant piston	g. Replace main or regenerant piston

6. Control valve does not regenerate	a. Transformer unplugged	a. Connect transformer
	b. No electric power at outlet	b. Repair outlet or use working outlet
automatically when UP and DOWN buttons are depressed and held	c. Broken drive gear or drive cap assembly	c. Replace drive gear or drive cap assembly
	d. Defective PC board	d. Replace PC board
7. Control valve does not regenerate automatically but does when UP and DOWN buttons are depressed	a. Defective PC board	a. Replace PC board
	b. Set-up error	b. Check control valve set-up procedure
8. Too much air in water (cloudy small air bubbles)		a. Check air – off tank. Risers in place
		b. Braukman valve on.
		c. check braukman valve internals – clean debris etc. out
		d. too much draw on intake (micronizer) adjust to 30% draw of pump cycle.
9. Smell and/or Iron bleeding thru		a. Check programming
		b. Air injection set properly
		c. Size of equipment correct
10. Smell Hot side only		a. Chlorinate hot tank
		b. Optional to remove anode rod.
		c. If condition persists check for sulphur reducing bacteria
11. Black or Grey water (cold side)		a. Unit backwashed thoroughly at install. (backwash now)
		b. Check backwash control
		c. Plugged backwash control
		d. Kinked drain line
12. Excessive noise during backwash		a. Fasten all lines
13. No air getting drawn into water		a. Check micronizer adjustments
		b. Not enough flow (check pump flow rate)
		c. Plugged air intake
		d. Pressure settings should be at 30-50 no higher.
		e. (lower the pressure – increase flow)
14. Particles in water (Media-Black)		a. Broken distributor or riser tube.