

Iron Guard & Iron Guard Plus Water Softeners

Meter Initiated & Calendar Clock Models

Important Note: Page 8 of this manual contains important maintenance procedures for the continued proper operation of your softener. These procedures MUST BE performed regularly for your guarantee to remain valid.

REMINDER: HAVE YOU ALSO PURCHASED WITH YOUR IRON GUARD OR IRON GUARD PLUS SOFTENER THE FOLLOWING ITEMS?

- | | |
|-----------------|--------------------------------|
| 1. ITEM # 33010 | RES-UP FEEDER |
| 2. ITEM # 45148 | PRO-RESCARE SOLUTION, 1 QUART |
| OR | |
| ITEM # 45147 | PRO-RESCARE SOLUTION, 1 GALLON |

THESE ITEMS ARE CRITICAL TO THE PERFORMANCE OF THE SOFTENER FOR ITS INTENDED APPLICATION.



Performance & Specifications

Item #	Model	Capacity @ 15lbs/cu.ft. setting (grains)	Salt Dosage (LB)	Maximum Hardness (gpg)	Maximum Iron (ppm)	Flow Rate (USGPM)	Resin Tank Size (inches)	Brine Tank Size (inches)	Resin Volume (CF)	Salt Capacity (LB)	Shipping Weight (LB)
2060	FE30MI	32,000	15	75	7.5	8	10 x 47	23 x 38	1.0	400	135
2059	FE45MI	48,000	23	75	7.5	10	12 x 52	23 x 38	1.5	400	187
2058	FE60MI	64,000	30	75	7.5	12	14 x 50	23 x 38	2.0	400	234
2061	STFE30MI	32,000	15	75	7.5	8	10 x 54	23 x 38	1.0	400	175
2063	STFE30CC	32,000	15	75	7.5	8	10 x 54	23 x 38	1.0	400	175

Note: (gpg) refers to Grains per USGallon measurement of Total Hardness

The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions stated herein, without obligation to change previously manufactured products or to note the change.

How Your Iron Guard or Iron Guard Plus Water Softener Works

Hard water contains dissolved calcium and magnesium which build up inside your water heater, plumbing fixtures and appliances. The minerals also react with soap to form a scum which appears as bathtub ring, greys your laundry and leaves your hair dull and your skin itchy. Iron water leaves yellow, orange or brown stains on your laundry, sinks, tubs and toilets.

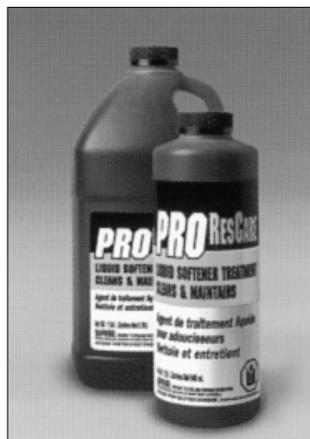
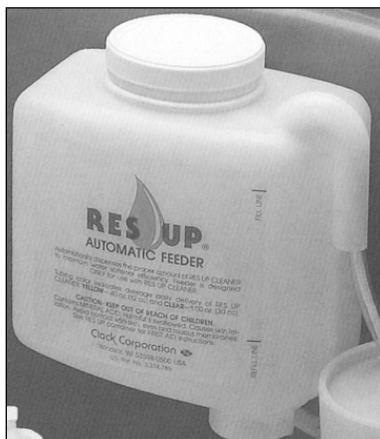
Iron Guard contains a bed of fine mesh ion exchange resin beads. As water passes through the bed, calcium and magnesium, the hardness minerals, and any clear or red water iron are removed and held by the resin. The Iron Guard Plus bed contains calcium carbonate in addition to the fine mesh ion exchange resin. This media combines to raise low pH water to enable the resin to remove hardness and red water iron.

Eventually, the resin beads become saturated and must be regenerated. A brine solution is drawn into the bed to drive out the accumulated minerals. This process is called ion exchange. After the minerals and brine are rinsed out with fresh water, the regenerated resin is ready to soften your water again.

Important Reminder

For the proper operation of your Iron Guard or Iron Guard Plus Water Softener, a Res-Up Feeder and a supply of PRO-ResCare solution is essential to extend the life of the resin media bed. If you have not purchased the following items along with your softener, please contact your supplier or installer to obtain them. The PRO-ResCare in combination with the Res-Up Automatic Feeder delivers the appropriate amount of the solution to the brine tank. The PRO-ResCare solution added is used in the regeneration cycle to chemically clean the resin bed of iron and other contaminants. Without the PRO-ResCare solution, iron will foul the media overtime causing loss of performance, increased pressure drops and leakage of hardness and iron.

PLEASE TAKE THE TIME READ THE LABEL AND WARNINGS BEFORE USING THIS PRODUCT WITH YOUR WATER SOFTENER. USE ALL SUGGESTED CAUTIONS WHEN USING AND STORING THE "PRO-ResCare" PRODUCT.



Application of Iron Guard & Iron Guard Plus Water Softeners

The **Iron Guard** or **Iron Guard Plus** Water softener is designed to soften water through an ion exchange process as described previously. In addition, the ion exchange resin used in the mineral tank is a special fine mesh resin, which is less likely to be prone to iron fouling than standard softener resin. A resin cleaner solution should still be added to the brine tank with the use of an automatic feeder. Our recommended automatic feeder and resin cleaner solution is available through your distributor or installer.

The unit has been factory preset to regenerate the resin with a higher salt setting than regular water softeners. We recommend that you **DO NOT ADJUST** this salt setting of 15lb-salt/cf-resin. The higher dosage is another important factor in the softeners' ability to regenerate the resin that removed iron during the last service cycle.

Iron Guard Plus Softeners will require topping up of the calcium carbonate media occasionally. The frequency of adding media is highly dependant on the chemistry of the water being treated and is difficult to predict, however, it is unlikely it will need to be topped up more than once per year.

Some additional guidelines about the application of Iron Guard and Iron Guard Plus water softeners are as follows:

- The **Iron Guard & Iron Guard Plus** water softeners are not recommended for removal of iron that is organically bound.
- The **Iron Guard & Iron Guard Plus** water softeners are not recommended for removal of iron with iron bacteria combinations.
- The **Iron Guard & Iron Guard Plus** water softeners are not recommended as the primary method of water treatment for iron when found in combination with significant amounts of manganese. An Iron and Sulfur filter (Greensand) is recommended as pretreatment. The **Iron Guard** softeners can still be used as a polisher or backup treatment for iron.
- Regular use of a resin cleaner with an automatic feeder is essential to the proper functioning of the **Iron Guard & Iron Guard Plus** water softeners when applied on water supplies containing iron.
- **Iron Guard Plus** water softeners only should not be applied unless the pH of the water is 6.8 or lower. The calcium carbonate in the mineral tank raises the pH of the water allowing iron in the ferrous state (i.e. in solution) to be more easily removed.
- When calculating the capacity of the **Iron Guard** or **Iron Guard Plus** water softener in gallons, remember to add the converted Iron to the Total Hardness tested in the water. See Page 5.
- Only use this product on water that is potable. **DO NOT** apply this product on water that is unsafe to drink without proper disinfection.

Installation and Start-up Procedure

CAUTION:

If the ground from the electrical panel or breaker box to the water meter or underground copper pipe is tied to the copper water lines and these lines are cut during installation of the Noryl bypass valve and/or poly pipe, an approved grounding strap must be used between the two lines that have been cut in order to maintain continuity. The length of the grounding strap will depend upon the number of units being installed and/or the amount of copper pipe being replaced with poly. See Figure 1.

In all cases where metal pipe was originally used and is later interrupted by poly pipe or the Noryl bypass valve as in Figure 2 or by physical separation as in Figure 3, to maintain proper metallic pipe bonding, an approved ground clamp c/w not less than # 6 copper conductor must be used for continuity.

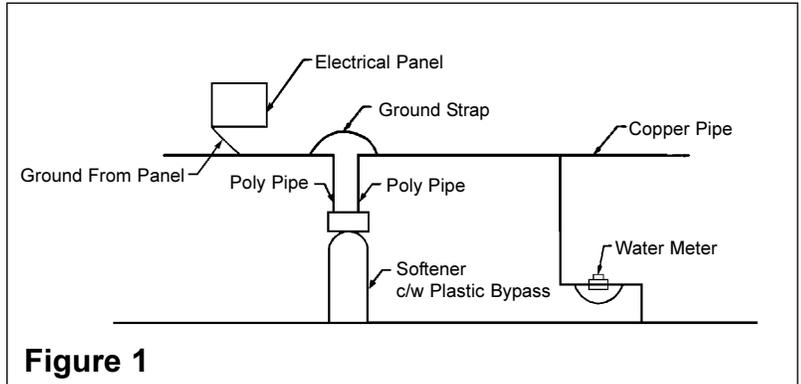


Figure 1

Check your local electrical code for the correct clamp and cable size.

1. Determine the best location for your water softener, bearing in mind the location of your water supply lines, drain line and 120 volt AC electrical outlet. Subjecting the softener to freezing or temperatures above 49°C (120°F) will void the warranty.
2. Familiarize yourself with the location of the inlet, outlet and drain on the control valve. Be very careful not to get the controls wet.
3. The inlet and outlet of the valve are marked with arrows. Attach the bypass valve, supplied with the softener, to the control valve. When sweat fittings are used, solder the adapters for the inlet and outlet to a short length of copper pipe first. This procedure is necessary because the controls **MUST NOT** be subjected to temperatures above 160°F. Then, using teflon tape, screw the adapters for the inlet and outlet into the valve.

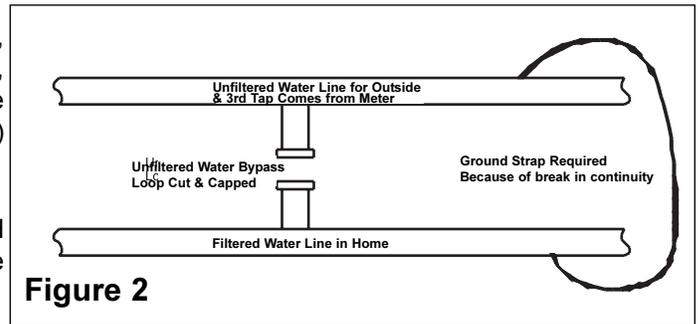


Figure 2

CAUTION - do not use pipe thread compound as it may attack the material in the valve body.

On the drain, using Teflon tape attach the 1/2" hose barb supplied (Do Not overtighten) and a full 1/2" hose for the drain line. A restriction at the drain can cause any automatic water conditioner to malfunction. Place the conditioner in position and complete the plumbing necessary for the installation. Generally, water to outdoor faucets and sprinklers should not be softened.

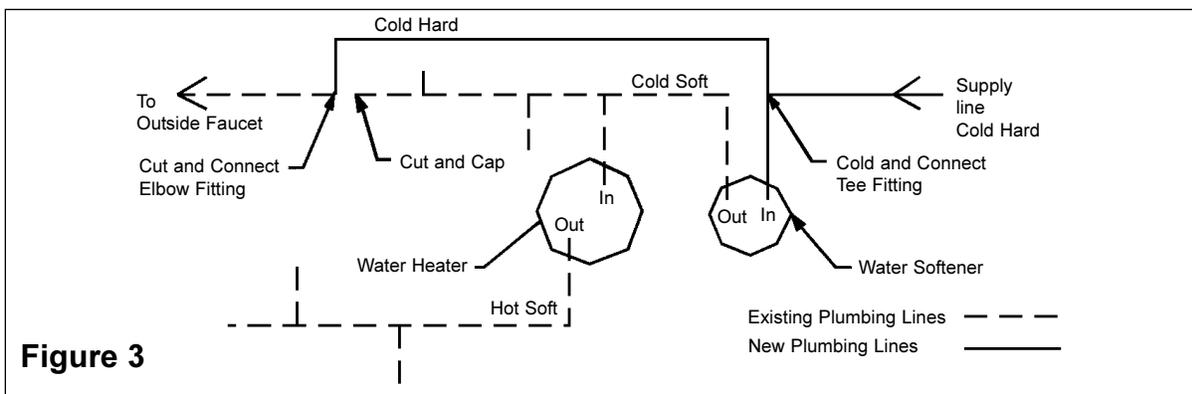


Figure 3

Installation and Start-up Procedure cont...

4. Water to supply outside faucets used to water lawns and gardens should not be softened. A new water line is often required to be connected to supply hard water to the inlet of the water softener and to the outside faucets. Cut the water line between where it enters the house; before any lines that branch off to feed water heater or other fixtures in the house; and as near the desired location of the water softener as possible. Install a tee fitting on the feed end of the cut pipe and an elbow on the other end. Install piping from the tee to the water softener inlet and from the elbow to the outlet of the softener. To sever the water lines which branch off to feed outside faucets, cut the branch lines approximately two inches from the fitting on the main water line. Install an elbow on the end of the pipe nearest the outside faucet and a cap on the end connected to the existing water line. Install piping from the tee on the inlet line to the water softener to the elbow on the pipe to the outside faucet. Following this procedure will result in all lines in the house, with the exception of the outside faucets but including the water heater and therefore the hot water lines, being supplied with soft water.
5. Plug the softener in. Manually turn the manual regeneration knob (see figure 5, page 5) to the backwash position. Slowly turn on the water supply to the valve until all the air clears. Allow the water to run to the drain for 2 to 3 minutes or until the water is clear.
6. Optional (Skip to step 8 if disinfection is not desired) - We recommend that all new water softeners be disinfected prior to start up. Disinfection can be achieved by the application of chlorine (household bleach). Manually turn the knob to the start of the BRINE REFILL position. The correct amount of water will be automatically metered through the air check tube in the brine well into the brine tank. Add one (1) teaspoon of chlorine (household bleach) to the brine tank and mix the chlorine and water solution. Turn the knob, advancing the valve to the BRINE/RINSE position. Plug the softener in and the valve will automatically return to the SERVICE position.
7. **2510 Valve Only (FE30MI & STFE30MI)** - Manually turn the Manual Regeneration Knob on the timer slowly through backwash, brine draw, fast rinse to the Brine Tank Refill cycle (see Fig.5, page 5). Once in the Brine Tank Refill cycle, allow valve to fill tank automatically. The correct amount of water is automatically metered into the air check tube in the brine well into the brine tank. The Brine Tank Refill cycle can be located by observing the drain line and watching the movement of the piston gear on the valve (see figure 4). These cycles are as follows:

- 1st cycle is BACKWASH : Valve should cycle to position and water should begin flowing to drain rapidly.
- 2nd cycle is BRINE DRAW: Valve should cycle to next position, water will continue to flow to drain slowly.
- 3rd cycle is FAST RINSE: Valve should cycle to next position, water will continue to flow to drain rapidly.
- 4th cycle is BRINE TANK REFILL: Valve should cycle to next position, water will STOP flowing to drain and water will begin flowing into the brine tank.

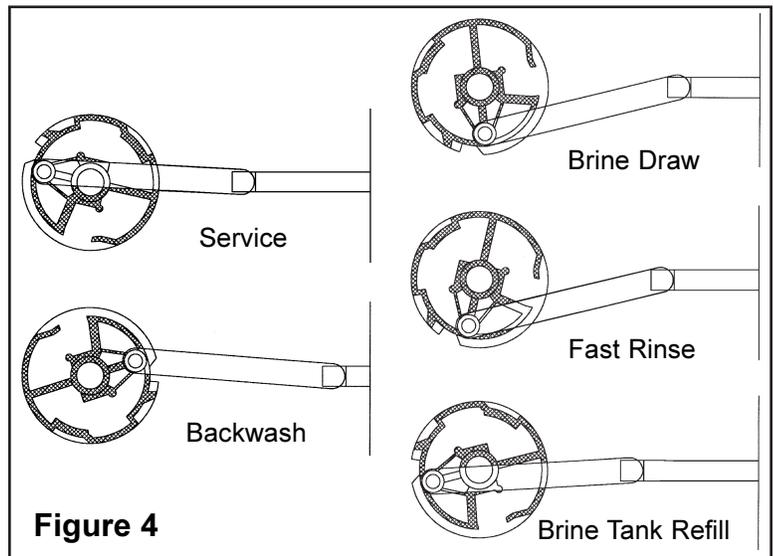


Figure 4

5600 Valve Only (STFE30CC) - Manually turn the regeneration knob to the start of the BRINE REFILL position. The correct amount of water is automatically metered into the air check tube in the brine well into the brine tank. The 5600 control valve will automatically return to SERVICE position as indicated by the words SOFT WATER on the central dial.

8. Set the 24 hour timer and frequency of regeneration following instructions on page 5 and/or 6.
9. Replace timer cover.
10. Fill the brine tank with approved water softener salt.
11. Make sure that bypass valve is left in the normal service position.
(See Page 7, Fig. 7)

ALL GOVERNMENT CODES GOVERNING INSTALLATIONS OF THESE DEVICES MUST BE OBSERVED.

Operating Instructions: Iron Guard & Iron Guard Plus Meter Initiated (MI) Models

1. How To Set Time Of Day:

Press and hold the red button in to disengage the drive gear.
Turn the 24 hour gear until the actual time of day is at the time of day pointer.
Release the red button to again engage the drive gear.

2. Time Of Regeneration:

The time of regeneration is factory set at 2:00 am

3. How To Manually Regenerate Your Water Conditioner At Any Time:

Turn the manual regeneration knob clockwise.

This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.

Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set only one half of this time.

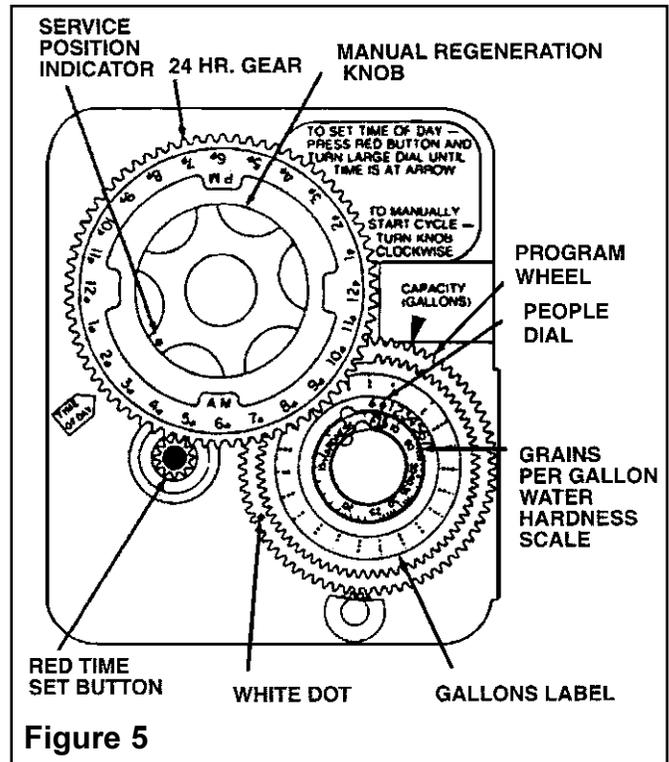


Figure 5

In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

4. Calculating Compensated Hardness

Before Setting Regeneration Frequency:

It is assumed that the Iron Guard or Iron Guard Plus water softener is being applied to a water supply that not only requires the removal of hardness, but also of some iron as well. Before the regeneration frequency can be set, the compensated total hardness must be calculated to factor in the iron that will be removed as well. To do this, you must have the results of water analysis that provides the Total Hardness in GPG (grains/USGallon) and Iron which is usually recorded as ppm (parts per million) or mg/L (milligrams per litre).

$$\text{Compensated Hardness} = \text{Total Hardness (GPG)} + 4 \times \text{Iron (ppm or mg/L)}$$

eg. Total Hardness = 25 GPG & Iron = 2 mg/L
therefore;
Compensated Hardness = 25 GPG + 4 x 2 mg/L = 33 GPG

Note: If Total Hardness has been recorded as ppm (or mg/L) in testing, divide the number by 17.1 to obtain the Total Hardness expressed in GPG.

5. Setting The Frequency Of Automatic Regeneration:

There are two methods for setting the program wheel - use only one of the following methods:

Method 1

Set the program wheel by lifting the "people" dial and rotating it so that the number of people in the household is aligned with the grains per gallon water hardness scale. Release the dial and check for firm engagement at setting. (This method will provide reserve capacity based on 75 gallons per person per day.)

Method 2

The frequency of automatic regeneration can alternatively be set by using the Gallon Label and the small white dot on the Program Wheel. To set the Program Wheel, grasp it, and while pulling it towards you, turn it until the desired number of gallons is aligned with the white dot on the circumference. The number of gallons is read by multiplying the

number on the label by 100. To determine the number of gallons of softened water that can be produced between regenerations, use the following formula:

Capacity of your conditioner (See Specifications Page 1)

÷ Grains of compensated* hardness in water sample

= No. of Gals. between regeneration

- Reserve (No. of people x 75 gals.)

= No. of Gals. at which to set the program wheel

* For each part per million of iron in the sample include 4 gpg in hardness calculation

Operating Instructions: Iron Guard & Iron Guard Plus Calendar Clock (CC) Models

1. Setting the 24 Hour Timer (Figure 6)

The 24-hour timer must correspond with the correct time of day to ensure proper cycle of your conditioner. Disengage the drive gear by pressing and holding in the RED BUTTON on the left side of the control. Now turn the large dial until the actual time of day is at the time of day arrow, at the bottom of the panel. Release the red button and check for firm engagement at setting. The correct time of day on the 24-hour clock has now been set.

2. Setting the Regeneration Frequency (Figure 6)

The unit's control features a skipper wheel with twelve numbered tabs and trip fingers. Each represents one day of a twelve day schedule. By adjusting the skipper wheel tabs the control can be programmed to regenerate every second, third, fourth, sixth or every twelfth day, according to your requirements.

The control is shipped with all the skipper wheel tabs pushed outwards. You must push the tabs in toward the center of the wheel (retracting the trip fingers) for each day that regeneration is **not** required.

The following tables can be used to help determine the frequency of regeneration for water softeners or backwashing for filters, i.e. the number of tabs that should be pushed outwards on the skipper wheel. Use this table as a guide. Individual circumstances will require more or less frequent regenerations. NOTE: Add one person to your household if you have a dishwasher.

Rotate the skipper wheel until number "1" is at the pointer, leave this tab out. Moving clockwise round the skipper wheel push in tabs for those days regeneration is **not** required. The tabs left out trigger regeneration, these should be evenly spaced around the wheel.

Example: 18,000 (capacity of unit) divided by 5,000 grains of compensated hardness to be removed daily equals 3.6. Rounds 3.6 up to 4, which is the number of tabs that have to be left in out position. Remembering that the 4 "out" tabs must be evenly spaced, rotate the skipper wheel until number "1" is at the pointer, leave this tab out. Moving clockwise round the skipper wheel, push in tabs 2, 3, 5, 6, 8, 9, 11 and 12. The water conditioner is now set to automatically regenerate every three days.

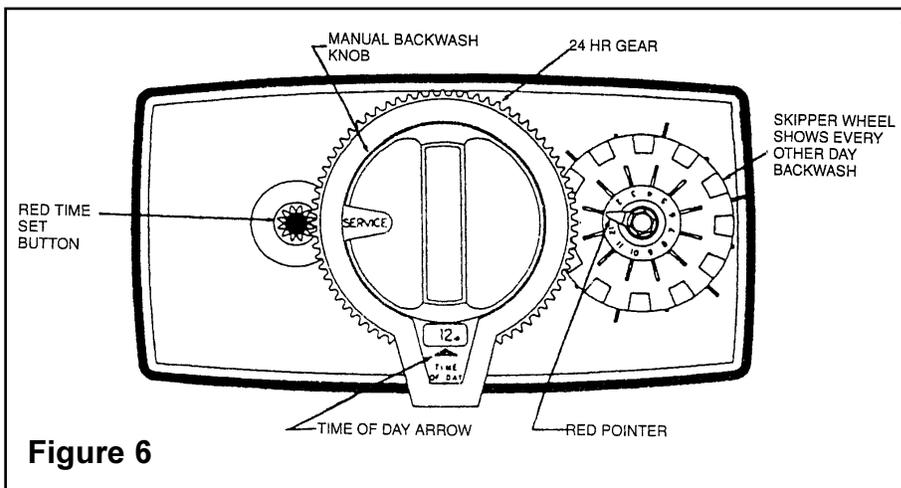


Figure 6

Grains of Compensated Hardness	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75	76-80
No. Of Persons	Regeneration Frequency - No. of Tabs Pushed Outwards															
2	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3
3	1	1	2	2	3	3	3	3	3	3	4	4	4	4	4	4
4	1	2	2	3	3	3	3	3	4	4	6	6	6	6	6	6
5	2	2	3	3	4	4	4	4	6	6	6	6	12	12	12	12
6	2	2	3	3	4	4	6	6	6	6	12	12	12	12	12	12
7	2	3	3	4	4	6	6	6	12	12	12	12	12	12	12	12
8	2	3	3	4	6	6	6	12	12	12	12	12	12	12	12	12
9	3	3	4	4	6	6	12	12	12	12	12	12	12	12	12	12
10	3	4	4	6	6	12	12	12	12	12	12	12	12	12	12	12

Note: Refer to Operating Instructions for Meter Initiated Models on how to calculate compensated hardness.

3. Manual Regeneration (Clock Controls)

Should you run out of soft water due to inadequate frequency of regeneration or inadequate reserve capacity, power failures, lack of salt or excessive usage because of unexpected demands, you can initiate a manual regeneration simply by turning the large knob on the front of the control clockwise to the "REGEN." position. The unit will now automatically complete a regeneration cycle and return to service. If possible, avoid water use during the regeneration cycle.

Operating Instructions: General

Water Pressure

Your conditioner is designed to operate under normal water pressures from 20 psi to 120 psi.

Regeneration and Automatic Bypass

Water conditioners are factory set to regenerate at 2:00 a.m. during a period of little or no water use. The regeneration cycle lasts approximately three hours, after which soft water service is restored. While regeneration is taking place, hard water automatically bypasses the water conditioner if required. Use of water, particularly hot water, should be avoided at this time to prevent hard water from filling the water heater.

Manual Bypass (Figure 7)

In case of an emergency such as an overflowing brine tank, you can isolate your water softener from the water supply using the bypass valve located at the back of the control.

In normal operation the bypass is open with the ON/OFF knobs in line with the INLET and OUTLET pipes. To isolate the softener, simply rotate the knobs clockwise (as indicated by the word BYPASS and arrow) until they lock.

You can use your water related fixtures and appliances as the water supply is bypassing the softener. However, the water you use will be hard.

To resume soft water service, open the bypass valve by rotating the knobs counter-clockwise.

New Sounds

You will notice new sounds, such as the hum of the timer, as your water conditioner operates. During regeneration, it will not be uncommon to hear the sounds of water running to the drain.

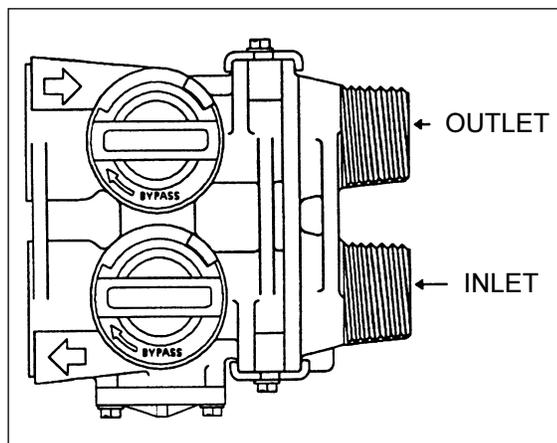


Figure 7

Maintenance Instructions

Maintenance of your new water conditioner requires very little time or effort, however, it is essential. Regular maintenance will ensure many years of trouble free and efficient operation.

Adding Salt

Use only crystal softener salt. Check the salt level monthly. It is important to maintain the salt level above the water level. To add salt, simply lift the salt lid and add the salt directly into the brine tank. Be sure the brine well cover is on and fill only to the height of the brine well.

Caution

Liquid brine will irritate eyes, skin and open wounds. Gently wash exposed area with fresh water. Keep children away from your water conditioner.

Resin Cleaner

An approved resin cleaner **must** be used on a regular basis if your water supply contains iron. The amount of resin cleaner and frequency of use is determined by the quantity of iron in your water (consult your local representative or follow the directions on the resin cleaner package).

Care of Your Water Softener

To retain the attractive appearance of your new water conditioner, clean occasionally with a mild soap solution. Do not use abrasive cleaners, ammonia or solvents. Never subject your conditioner to freezing or to temperatures above 120°F.

Bridging (Figure 8)

Humidity or the wrong type of salt may create a cavity between the water and the salt. This action, known as “bridging”, prevents the brine solution from being made, leading to your water supply being hard.

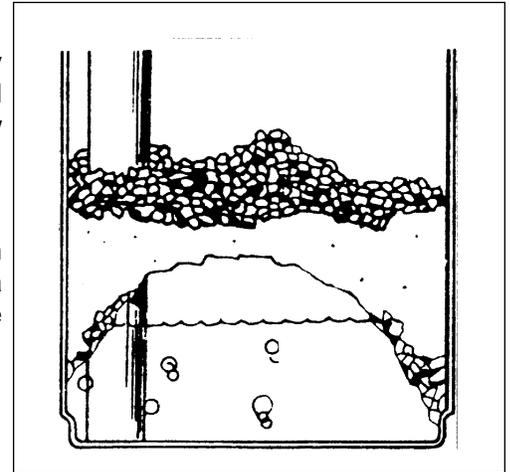


Figure 8

If you suspect salt bridging, carefully pound on the outside of the plastic brine tank or pour some warm water over the salt to break up the bridge. This should always be followed up by allowing the unit to use up any remaining salt and then thoroughly cleaning out the brine tank. Allow four hours to produce a brine solution, then manually regenerate the softener.

Cleaning the Injector Assembly (Figure 9)

Sediment, salt and silt will restrict or clog the injector. A clean water supply and pure salt will prevent this from happening.

The injector assembly is located on the left side of the control valve. This assembly is easy to clean.

Shut off the water supply to your softener and reduce the pressure by opening a cold soft water faucet. Using a screwdriver, remove the two screws holding the injector assembly to the control valve body. Carefully remove the assembly and disassemble as shown in Figure 9. The injector orifice is removed from the injector body by carefully turning it out with a large screwdriver. Remove the injector throat the same way. Carefully flush all parts with water. Use a mild acid such as vinegar or **Pro-Rust Out** to clean the small holes in the orifice and throat.

Reassemble using the reverse procedure.

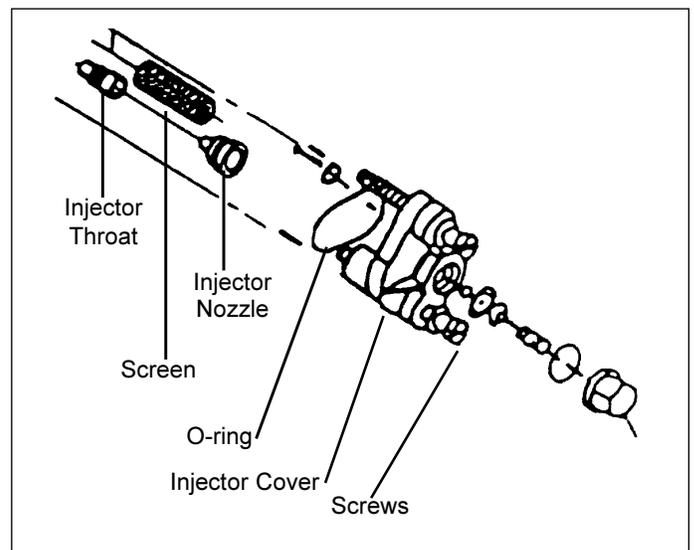


Figure 9

Trouble Shooting Guide

<p>1. SOFTENER DELIVERS HARD WATER</p> <p>Bypass valve is open.</p> <p>No salt in brine tank.</p> <p>Injector or screen plugged.</p> <p>Insufficient water flowing into brine tank.</p> <p>Electrical service to unit has been interrupted.</p> <p>Salt bridged.</p> <p>Loose brine line.</p> <p>Plugged injector assembly.</p> <p>Reserve capacity has been exceeded - demand regeneration models only</p> <p>Program wheel is not rotating with meter output - demand regeneration models only</p> <p>Meter is not measuring flow - demand regeneration models only.</p>	<p>Close bypass valve</p> <p>Add salt to brine tank and maintain salt level above water level.</p> <p>Replace injectors and screen.</p> <p>Check brine tank fill time and clean brine line flow control if plugged.</p> <p>Assure permanent electrical service (check fuse, plug, or switch).</p> <p>Break salt bridging following instructions on page 8.</p> <p>Tighten connections at control valve and at brine valve.</p> <p>Clean assembly following instructions on page 8.</p> <p>Check salt dosage requirements and reset program wheel to provide additional reserve.</p> <p>Pull cable out of meter cover and rotate manually. Program wheel must move without binding and clutch must give positive "clicks" when program wheel strikes regeneration stop. If it does not, replace timer.</p> <p>Check output by observing rotation of small gear on front of timer program wheel must not be against regeneration stop for this check. Each tooth to tooth is approximately 30 gallons. If not performing properly, replace meter.</p>
<p>2. INTERMITTENT SOFT WATER</p> <p>Control will not draw brine properly</p> <p>Using hot water during regeneration cycle</p> <p>Loose wiring or connections</p> <p>Leaky faucet</p> <p>Water hardness increased</p> <p>Softener capacity too small</p>	<p>Maintain water pressure at 20 psi minimum. Check for restrictions in drain line. Clean or replace injector assembly. Check for air leaks between control valve and air check valve and tighten connections.</p> <p>Avoid using hot water at this time as water heater will fill with hard water.</p> <p>Unplug softener and check that all wires are securely connected.</p> <p>Check and repair plumbing leaks that can cause you to run out of soft water.</p> <p>Have samples of your water analyzed to determine any change in hardness.</p> <p>Increase capacity by replacing with larger unit.</p>
<p>3. SOFTENER FAILS TO REGENERATE OR REGENERATES AT WRONG TIME</p> <p>Electrical service to unit has been interrupted</p>	<p>Assure permanent electrical service (check fuse, plug, pull chain or switch). Reset time of day.</p>
<p>4. UNIT USES TOO MUCH SALT</p> <p>Timer is defective</p> <p>Power failure</p>	<p>Replace timer.</p> <p>Reset time of day.</p>
<p>5. LOSS OF WATER PRESSURE</p> <p>Improper salt setting</p> <p>Excessive water in brine tank</p> <p>Inlet to control blocked with iron buildup or foreign matter</p>	<p>Check salt usage and salt setting.</p> <p>See problem No. 8</p> <p>Clean line to water conditioner. Remove piston and clean control.</p>
<p>6. LOSS OF RESIN THROUGH DRAIN LINE</p> <p>Iron buildup in water conditioner</p>	<p>Clean control and add resin cleaner to resin bed.</p>
<p>7. IRON IN CONDITIONED WATER</p> <p>Air in water system</p> <p>Fouled resin bed</p>	<p>Assure that well system has proper air eliminated control. Check for dry well condition.</p> <p>Check backwash, brine draw and brine tank fill. Increase frequency of regeneration.</p> <p>Clean control and add resin cleaner to resin bed.</p> <p>Iron Guard Plus only: if symptom occurs after a year or so of service, the calcium carbonate may be depleted. Replace with calcium carbonate media.</p>

<p>8. EXCESSIVE WATER IN BRINE TANK</p> <p>Plugged drain line flow control Plugged injector system Foreign material in brine valve Foreign material in brine line flow control</p>	<p>Clean flow control. Clean injector and replace screen. Clean or replace brine valve. Clean brine flow control.</p>
<p>9. SOFTENER FAILS TO DRAW BRINE</p> <p>Drain line flow control is plugged Injector is plugged Injector screen is plugged Line pressure is too low Internal control leak</p>	<p>Clean drain line flow control. Clean or replace injectors. Replace screen. Increase line pressure. Line pressure must be at least 20 psi (139.9 KPa) at all times. Change seals and spacers and/or piston assembly.</p>
<p>10. CONTROL CYCLES CONTINUOUSLY</p> <p>Faulty timer mechanism</p>	<p>Replace timer</p>
<p>11. DRAIN FLOWS CONTINUOUSLY</p> <p>Foreign material in control Internal control leak Control valve jammed in brine or backwash position. Timer motor stopped or jammed</p>	<p>Remove piston assembly and inspect bore, remove foreign material. Check control in various regeneration positions. Replace seals and/or piston assembly. Replace piston and seals and spacers. Replace timer motor.</p>

Guarantee

USF WaterGroup Inc. guarantees that your new water conditioner is built of quality material and workmanship. When properly installed and maintained, it will give years of trouble-free service.

Five Year Complete Parts Guarantee:

USF Watergroup Inc. will replace any part which fails within 60 months from date of manufacture as indicated by the serial number, provided the failure is due to defect in material or workmanship. The only exception shall be when proof of purchase or installation is provided and then warranty period shall be from the date thereof.

Lifetime Guarantee on Mineral Tanks and Brine Tanks:

USF WaterGroup Inc. will provide a replacement mineral tank or brine tank to any original equipment purchaser in possession of a tank that fails within his/her lifetime, provided that the water conditioner is, at all times operated in accordance with specifications and not subject to freezing.

General Provisions:

USF WaterGroup Inc. assumes no responsibility for consequential damage, labor or expense incurred as a result of a defect or for failure to meet the terms of these guarantees because of circumstances beyond its control.



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