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# Water Softening system



**Owner's Manual & Installation Instructions**

GXOF18G

NSF®

System tested and certified by NSF International against NSF/ANSI Standard 44 for softener performance and the reduction of barium and radium 226/228.

***Write the model and serial numbers here:***

***Model #*** _____

***Serial #*** _____

To find these numbers, lift the cover and look on the rim below the control panel.


***#30500 General GXOF18G Euro Version 10-04***

# *IMPORTANT SAFETY INFORMATION. READ ALL INSTRUCTIONS BEFORE USING.*

## ⚠ *WARNING!*

*For your safety, the information in this manual must be followed to minimize the risk of electric shock, property damage or personal injury.*

## *SAFETY PRECAUTIONS*

- Check and comply with your state and local codes. You must follow these guidelines.
- Use care when handling the water softening system. Do not turn upside down, drop, drag or set on sharp protrusions.
- Water softening systems using sodium chloride (salt) for recharge add sodium to the water. *Persons on sodium restricted diets should consider the added sodium as part of their overall intake. Potassium chloride can be used as an alternative to sodium chloride in your softener.*
- The water softening system works on 24 volt-50 Hz electrical power only. *Be sure to use only the included transformer.*
- Transformer must be plugged into an indoor 220 - 240 volt, grounded outlet only.
- Use clean water softening salts only, at least 99.5% pure. NUGGET, PELLET or coarse SOLAR salts are recommended. Do not use rock, block, granulated or ice cream making salts. They contain dirt and sediments, or mush and cake, and will create maintenance problems.
- Keep the salt hole cover in place on the softener unless servicing the unit or refilling with salt.

⚠ ***WARNING:*** ***Do not*** use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

## *PROPER INSTALLATION*

*This water softening system must be properly installed and located in accordance with the Installation Instructions before it is used.*

- Install or store where it will not be exposed to temperatures below freezing or exposed to any type of weather. Water freezing in the system will break it. Do not attempt to treat water over 37°C.
- ***Do not*** install in direct sunlight. Excessive sun or heat may cause distortion or other damage to non-metallic parts.
- Properly ground to conform with all governing codes and ordinances.
- Use only *lead-free solder and flux* for all sweat-solder connections, as required by state and federal codes.
- The water softening system requires a minimum water flow of 11 litres per minute at the inlet. Maximum allowable inlet water pressure is 8.6 Bar. If daytime pressure is over 5.5 Bar, nighttime pressure may exceed the maximum. Use a pressure reducing valve to reduce the flow if necessary.
- Softener resins may degrade in the presence of chlorine above 1 ppm. If you have chlorine in excess of this amount, you may experience reduced life of the resin. In these conditions, you may wish to consider purchasing a GE point-of-entry household filtration system with a chlorine reducing filter.

⚠ ***WARNING:*** Discard all unused parts and packaging material after installation. Small parts remaining after the installation could be a choke hazard.

## *READ AND FOLLOW THIS SAFETY INFORMATION CAREFULLY.*

## ***SAVE THESE INSTRUCTIONS***

# Installation instructions.

**⚠CAUTION:** *Certain plumbing skills are needed for installation. If you are unsure about any part of the installation of this product, consult a professional plumber.*

## Unpacking and Inspection

Be sure to check the entire softener for any shipping damage or parts loss. Also note damage to the shipping cartons. Contact the transportation company for all damage and loss claims. The manufacturer is not responsible for damages in transit.

Small parts needed to install the softener are packaged either in a bag or on a cardboard sheet. To avoid loss of the small parts, keep them packaged until you are ready to use them. Be sure not to discard components hidden in packaging.

## Important Installation Recommendations

*Read entire manual. Failure to follow all guidelines and rules could cause personal injury or property damage.*

- Before you begin installation, read these Installation Instructions completely. Then, obtain all the materials and tools you will need to make the installation. Failure to properly install the softener voids the warranty.
- Check local codes. The installation must conform to them.
- ***Consult with your licend local plumber, if you have questions on the Plumbing Code***
- Use only lead-free solder and flux for all sweat-solder connections, as required by state and federal codes.
- Connect the softener to the main water supply pipe ***before*** or ***ahead of the*** water heater. ***DO NOT RUN HOT WATER THROUGH THE SOFTENER.*** Temperature of water passing through the softener must be less than 49°C.
- Use care when handling the softener. Do not turn upside down, drop, drag or set on sharp protrusions.
- Maximum allowable inlet water pressure is 8.6 Bar. If daytime pressure is over 5.5 Bar, nighttime pressure may exceed the maximum. Use a pressure reducing valve if necessary. (Adding a pressure reducing valve may reduce the flow.)
- The softener works on 24 volt-50 Hz electrical power only. Be sure to use the included transformer. Be sure the electric outlet and transformer are in an inside location to protect from moisture.
- See *Where to Install the Softener* section for more details.

**⚠WARNING:** Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. The water should be tested periodically to verify that the system is performing satisfactorily.

- Small parts remaining after the installation could be a choke hazard. Discard safely.

# Installation instructions.

### Plan How You Will Install the Softener

You must first decide how to run in and out pipes to the softener. Look at the house main water pipe at the point where you will connect the softener. Is the pipe soldered copper, glued plastic, or threaded galvanized? What is the pipe size?

**⚠WARNING:** Use only lead-free solder and flux to prevent lead poisoning.

See *Typical Installation Illustration,* Fig. 1. Use this as a guide when planning your particular installation. ***Be sure to direct the incoming hard water supply to the softener valve inlet fitting.*** The valve is marked ***IN*** and ***OUT.*** See illustration on page 5 to help you prepare.

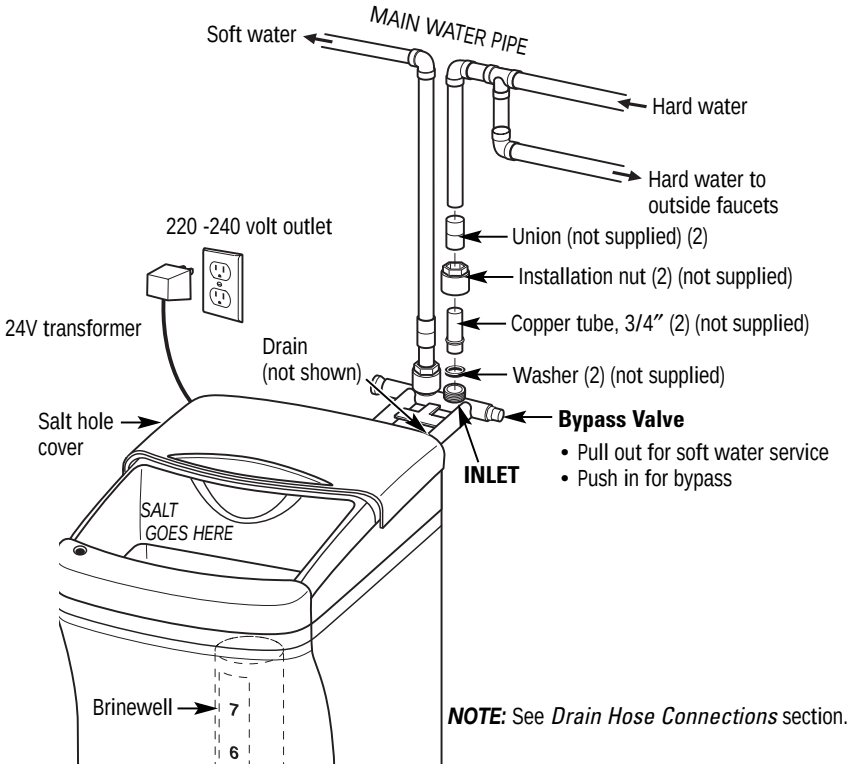
### Where to Install the Softener

- Place the softener as close as possible to a sewer drain, or other acceptable drain point or standpipe.
- It is recommended to keep outside faucets on hard water to save soft water and salt.
- Do not install the softener in a place where it could freeze. ***Freeze damage is not covered by the warranty.***
- Do not install the softener where it would block access to the water heater or access to the main water shutoff.
- Put the softener in a place where water damage is least likely to occur if a leak develops. The manufacturer will not repair or pay for water damage.
- A 220 - 240-volt electric outlet is needed to plug in the included transformer. The softener has a 2 m power cable. If the outlet is remote (up to 30 meters), use 0.8 mm2 wire to connect. ***Be sure the electric outlet and transformer are in an inside location, to protect from wet weather.*** Be sure the outlet is unswitched to prevent accidental shutoff.
- If installing in an outside location, you must take the steps necessary to assure the softener, installation plumbing, wiring, etc., are as well protected from the elements (sunlight, rain, wind, heat, cold), contamination, vandalism, etc., as when installed indoors. ***Outdoor installation is not recommended, and voids the warranty.***
- ***Keep the softener out of direct sunlight.*** The sun's heat may distort non-metallic parts and may damage the electronics.

### Tools and Materials Required for Installation

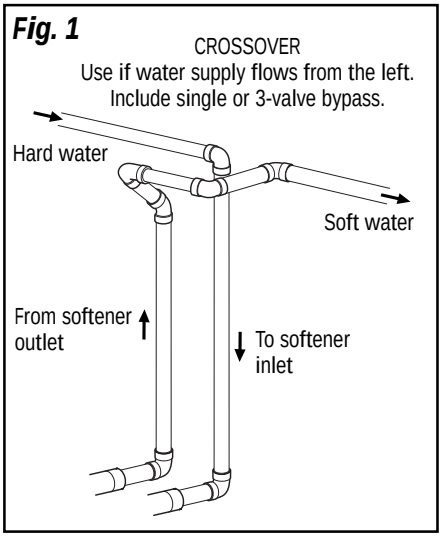
- In and out fittings included with the softener are 1″ .
  You should maintain the same, or larger, pipe size as the water supply pipe, up to the softener inlet and outlet.
- Use the included bypass valve to install the softener. The bypass valve allows you to turn off water to the softener for servicing, but still have water in the house pipes.
- Use copper, brass or galvanized pipe and fittings. Some codes may also allow CPVC plastic pipes.
- If additional drain hose is needed for valve and salt tank drains, it can be ordered from GE Parts.
- If a rigid valve drain is needed to comply with plumbing codes, you can buy the parts needed to connect a 1/2″ copper tubing or plastic pipe drain.
- Clean nugget or pellet water softener salt is needed to fill the brine tank, see *Step 8* in the *Step-by-Step Installation Instructions.*

## *Typical Installation Illustration*




***NOTE:*** See *Drain Hose Connections* section.

***Fig. 1***




## *Optional 3-Valve Bypass Installation Illustration*

**Adapters for this installation are not supplied with the softener.**

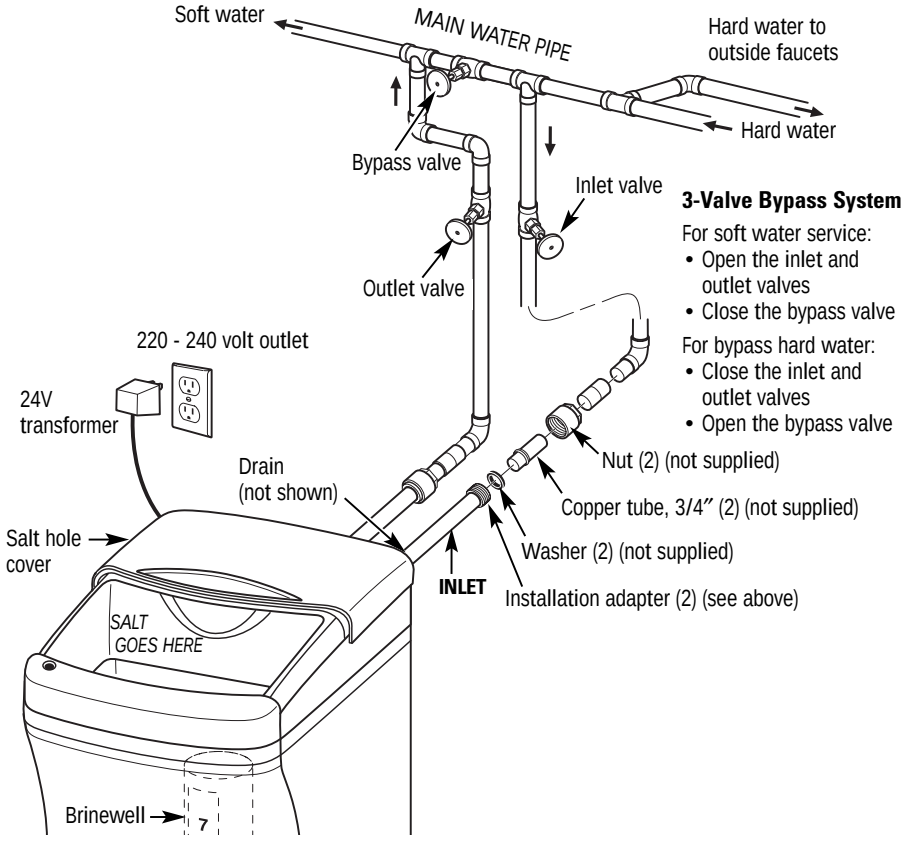
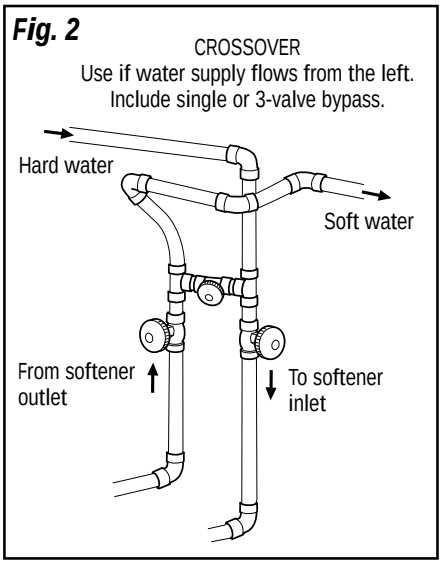



***Fig. 2***



# Step-by-step installation instructions.

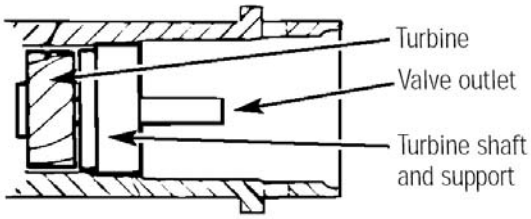
- Turn off the gas or electric supply to the water heater, in the possibility that the water heater may be drained while draining pipes.
- Turn off the water supply to pipes to be cut and drain the house water pipes.
- Open both hot and cold faucets at the lowest location possible.

***NOTE:*** For easier installation, remove the top cover (Figure 3).
cover forward and lift up.

### *1. INSTALL BYPASS VALVE ( Actual bypass may differ from drawing)*

- Remove top cover (figure 3) and remove plastic shipping plug and wire from valve outlet .

***NOTE:*** Be sure the turbine and support are firmly in place in the valve outlet. Blow into the valve port and observe the turbine for free rotation.




- Push the bypass valve (lubricate o-ring seals with silicone grease) into both ports of the valve as shown in Fig. 3A.
- Snap the 2 large plastic clips in place, from the top, down as shown in Figures 3A and 3B.

**Be sure they snap into place. Pull on the bypass valve to make sure it is held securely in place.**
**Make sure to read the the hardness bleed screw settings on page 91 of this manual**

### *2. MOVE THE SOFTENER ASSEMBLY INTO INSTALLATION POSITION*

Be sure the installation surface is level and smooth. Sharp objects under the tank may puncture it. If needed, place the tank on a section of 2 cm thick (minimum) plywood. Then, place shims under the plywood as needed to level the softener.

### *3. PLUMB "IN" AND "OUT" PIPES TO AND FROM SOFTENER*

***CAUTION:*** Observe all of the following cautions as you connect inlet and outlet plumbing. See illustrations on page 5.

- BE SURE INCOMING **HARD WATER** SUPPLY IS DIRECTED TO THE SOFTENER VALVE **INLET** PORT. If house water flow is from the left, use a plumbing **crossover** as shown in Fig. 1, page 5. If house water flows up from the floor level, turn the bypass valve upside down as shown in Fig. 3C.
- If making a soldered copper installation, **do all sweat soldering before connecting pipes to the bypass valve.** Torch heat will damage plastic parts.
- When turning threaded pipe fittings onto plastic fittings, use care not to **cross-thread**.
- Use pipe joint compound on all external pipe threads.
- Support inlet and outlet plumbing in some manner (use pipe hangers) **to keep the weight off of the valve fittings**.

### *4. CONNECT AND RUN THE VALVE DRAIN HOSE*

***IMPORTANT:*** If you want to attach the drain fitting to a rigid tube, see Step 4A .

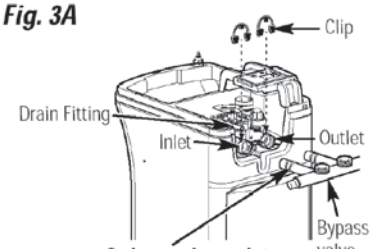
- Assemble drain fitting as shown in Fig. 4.
- Use the provided drain hose to attach to the valve drain fitting. To keep water pressure from blowing the hose off, use a hose clamp to secure in place. Cut the necessary length and use the remainder in Step 5.
- Locate the other end of the hose at a suitable drain point (floor drain, sump, laundry tub, etc.) that terminates at the sewer. **Check and comply with local codes.**

***IMPORTANT:*** If more drain hose is needed, it should be ordered from GE Parts.
**The water softener will not work if water cannot exit this hose during recharge.**

- Tie or wire the hose in place at the drain point. High water pressure will cause it to whip during the back-wash and fast rinse cycles of recharge. **Also provide an air gap of at least 4cm between the end of the hose and the drain point**. An air gap prevents possible siphoning of sewer water into the softener, if the sewer should "back-up."
- If raising the drain hose overhead is required to get to the drain point, **do not raise higher than 2 m above the floor**. Elevating the hose may cause a back-pressure that could reduce brine draw during recharge.

***Fig. 3***


***Fig. 3A***




**O-ring seal goes into the outer groove only.**
The clip snaps into the inner groove (see below).

***Fig. 3B***

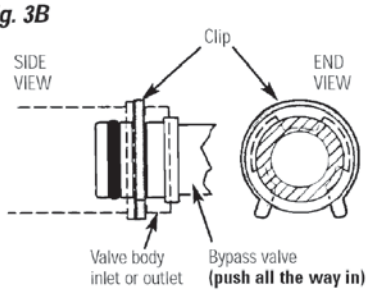



***Fig. 3C***

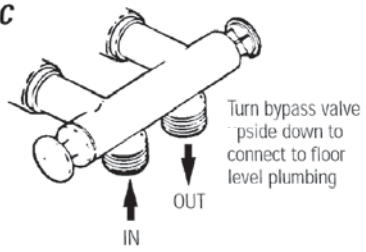
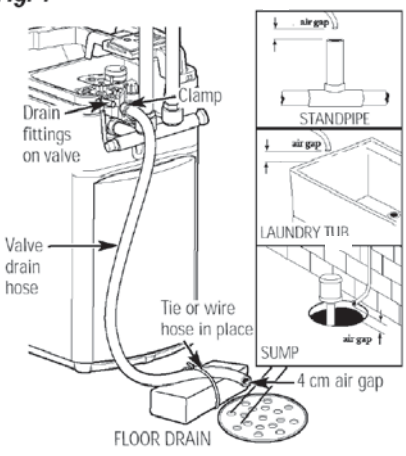



***Fig. 4***



### *4A. CONNECTING A RIGID VALVE DRAIN TUBE*

To adapt a copper drain tube to the softener, buy a compression fitting (garden hose thread x 1/2" O.D. tube) and needed tubing from your local hardware store.

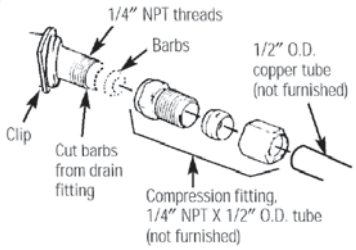
### *5. INSTALL THE BRINE TANK OVERFLOW FITTINGS AND HOSE*

- Insert the rubber grommet into the 2 cm diameter hole in the brine tank sidewall as shown in Fig. 5.
- Push the end of the hose adapter elbow into the grommet as shown in Fig. 5.
- Attach a length of hose (use remaining hose from Step 4) to the hose adapter elbow. Use a hose clamp to hold it in place.
- Locate the other end of the hose at the drain point. **DO NOT ELEVATE** this hose higher than the elbow on the brine tank.

***IMPORTANT: DO NOT TEE OVERFLOW HOSE TO VALVE DRAIN HOSE.***

***NOTE:*** This drain is for safety only. If the cabinet (brine tank) should over-fill with water, the excess is carried to the drain.

*Fig. 4A*




### *6. INSTALL GROUNDING CLAMP (not included)*

***DANGER:*** Failure to properly attach ground clamp could result in electrical shock.

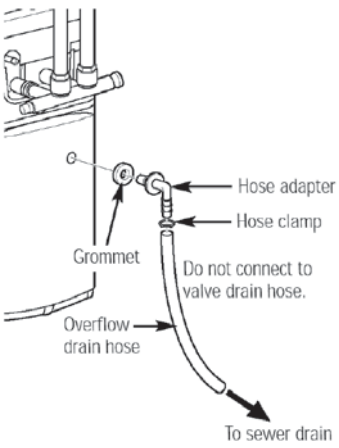
If plumbing is metal, to maintain electrical ground continuity in the house cold water piping, install the ground clamp (not included) as shown in Fig. 6.

- Clean pipe with emery paper in the area where the clamp is to be installed.
- Install grounding clamps as shown, making sure clamps fit freely around pipe.
- Make sure lock washer is in place.
- Handtighten screw, then one more full turn with screwdriver.

***NOTE:*** When replacing an existing softener, also replace grounding clamps.

If removing softener completely, hard-plumb the water line with same type of pipes as the original to assure plumbing integrity and ground continuity over the life of the home.

*Fig. 5*

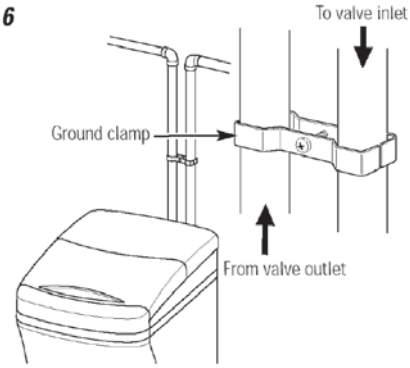



### *7. FLUSH PIPES, EXPEL AIR FROM SOFTENER, AND TEST YOUR INSTALLATION FOR WATER LEAKS*

***CAUTION:*** **To avoid water or air pressure damage to softener inner parts, be sure to do the following steps in exact order.**

- **Fully open 2 cold soft water faucets nearby the softener.**
- **Place bypass valve in "bypass" position by pushing the stem inward.**
- **Fully open the house main water pipe shutoff valve. Observe a steady flow from both faucets opened in step A, above.**
- **Place bypass valve in the "service" position EXACTLY as follows. KEEP SOFT WATER FAUCETS OPEN.**
  **SLOWLY pull or slide the valve stem (out) toward the service position, pausing several times to allow the softener to pressurize slowly.**
- **After about 3 minutes, open a HOT water faucet for 1 minute, or until all air is expelled, then close. NOTE:** If water appears cloudy or has salty taste, allow to run for several more minutes, or until clear.
- **Close all water faucets.**
- **Check your plumbing work for leaks and fix right away if any are found. Be sure to observe previous caution notes.**
- **Turn on the gas or electric supply to the water heater. Light the pilot, if applicable.**

*Fig. 6*




### *8. ADD WATER AND SALT TO THE BRINE TANK*

- Lift the salt hole cover. Add about 11 litres of water into the tank. Do not add into the brinewell.
- Fill tank with NUGGET, PELLET or coarse SOLAR water softener salt with a purity of 99.5% or higher. **Do not use** rock, block, granulated and ice cream-making salts, or **salt with iron-removing additives**
  Maximum salt storage capacity is approxilately 45Kg.
  Keep the salt hole cover closed unless servicing the unit or refilling with salt.

***NOTE:*** If the softener is installed in a humid basement or other damp area, it is better to **fill the tank with less salt, more frequently**. 25 Kg. of salt will last for several months, depending on water hardness, family size and water softening system model.

### *9. CONNECT TO ELECTRICAL POWER*

To gain access to the transformer/power cord assembly, remove the salt hole cover from the softener. Unclip the tabs on the rear of the top cover and rotate the cover upwards to remove. DO NOT PULL OR DISCONNECT WIRING.

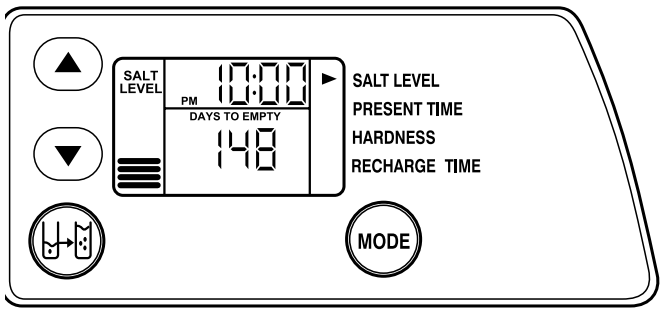
- The softener works on 24 volt-50Hz electric power. The included transformer changes standard 220 - 240 -volt AC house power to 24 volts.

**Plug the transformer into a 220 - 240-volt outlet only**. Be sure the outlet is always live so it can not be switched off by mistake.

- Replace the top cover.
- Replace the salt hole cover.

# Step-by-step installation instructions.

### Programming the Control




**CONTROL SETTINGS REQUIRED** upon installation and after an extended power outage.

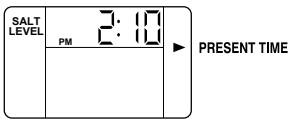
***NOTES:***

- WHEN THE TRANSFORMER IS PLUGGED INTO THE ELECTRICAL OUTLET, 12:00 PM (flashing), and an arrow ► is displayed next to ***PRESENT TIME*** on the faceplate decal. The blue indicator light will also flash. Program the control as instructed below.

  **If [ od --- is flashing,** use the UP ▲ button to set the correct code F18 for GXOF18G

  If you pass by the correct number, use the DOWN▼ button. Then press the ***MODE*** button to accept the correct model.
- A "beep" sounds while pressing buttons for control programming. One beep signals a change in the control display. Repeated beeps mean the control will not accept a change from the button you have pressed, and you should select another button.
- To program the control, you will use the UP ▲, DOWN ▼ and ***MODE*** buttons.
- Use the ***MODE*** button to scroll arrow ► to desired control function.

### SET PRESENT TIME OF DAY




***1.*** Press the ***MODE*** button until arrow ► points to ***PRESENT TIME.***

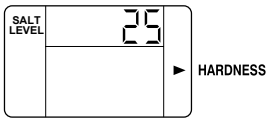
***2.*** Press UP ▲ or DOWN ▼ button to set. The UP button advances the time; the DOWN button moves the time in reverse.

If the present time is between noon and midnight, be sure PM shows in the display. If the present time is between midnight and noon, be sure AM shows in the display.

***NOTE:*** Each press of an UP ▲ or DOWN ▼ button changes the time by one minute. Holding the button changes the time at a rapid rate.

***3.*** When the present time is correct, press ***MODE*** to accept.

### SET WATER HARDNESS NUMBER




***1.*** Press the ***MODE*** button until arrow ► points to ***HARDNESS***.

***2.*** Press UP ▲ or DOWN ▼ button to set your water hardness number in the display. DOWN decreases the hardness value. UP increases the hardness value.

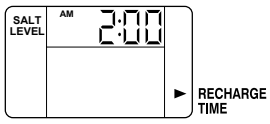
***NOTE:*** Each press of a button changes the display by 1, between 1 and 25. Above 25, the display changes 5 at a time (25, 30, 35, etc.). Holding a button in changes the numbers at a rapid rate.

***3.*** When the display shows your water hardness (in grains per gallon), press ***MODE*** to accept.

***NOTE:*** **If there is clear water iron in your water supply, you will need to increase the hardness setting by 5 for each 1 ppm of clear water iron in your water supply.**

**You can get the grains per gallon (gpg) hardness of your water supply from a water analysis laboratory. If you are on a municipal supply, call your local water department. To calculate the gpg hardness from German degrees divide by 0.953, to calculate gpg hardness from French degrees divide by 1.71. If your report shows hardness in parts per million (ppm) or milligrams per liter (mg/l), simply divide by 17.1 to get the equivalent number of grains per gallon.**

### SET RECHARGE (STARTING) TIME




***1.*** Press the ***MODE*** button until arrow ► points to ***RECHARGE TIME.***

***NOTE:*** A flashing 2:00 AM (factory default) should show in the display. This is a good time for recharge to start (takes about 2 hours) in most households because water is not in use. HARD WATER is bypassed to house faucets during recharge.

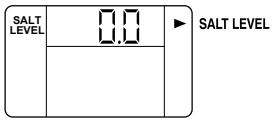
**If no change is needed, go to step 3.** To change the recharge starting time, follow step 2.

***2.*** Press UP ▲ or DOWN ▼ button to set the desired recharge start time. Be sure to observe the AM or PM as you did when setting the time of day.

***NOTE:*** Each press of a button changes the time by 1 hour. Holding the buttons in changes the time at a rapid rate.

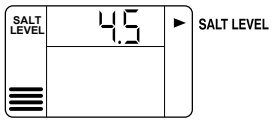
***3.*** Press the ***MODE*** button to accept.

### SET SALT LEVEL



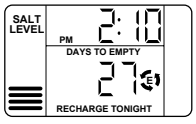

***1.*** Press the ***MODE*** button until arrow ► points to ***SALT LEVEL.***

***2.*** Determine level of salt in brine tank using yellow indicator on side of brine well, inside brine tank (see illustration on page 5).




***3.*** Press UP ▲ or DOWN ▼ button to set the ***SALT LEVEL*** to correspond to level on yellow indicator in brine tank.

***NOTE:*** Each press of a button changes the level by increments of 0.5 up to 8.0. As the number increases, the salt level bars increase on each whole number. Lowering the salt level below zero turns the ***SALT LEVEL*** indicator OFF.




***4.*** Press the ***MODE*** button to accept. The display shows the present time of day and ***DAYS TO EMPTY***. ***RECHARGE TONIGHT*** may appear if unit is new.

### *Programming the Control (cont.)*
### *DAYS TO EMPTY*


The words ***DAYS TO EMPTY*** and a number are shown in the lower half of the display. This information is shown in the normal run display. This is to inform the user of the number of days before the salt level in the brine tank reaches Level 0. There will be salt left in the salt tank, but it may not be sufficient to fully recharge the system. Salt should be added at this time to avoid hard water. The value is updated daily and whenever the ***SALT LEVEL*** value is changed.

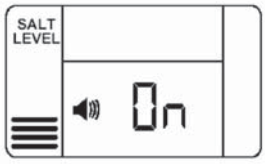
***NOTE:*** For the first several weeks of operation the ***DAYS TO EMPTY*** may provide erratic operation. For example, the blue indicator light may flash, showing that more salt is required when the actual salt level in the tank is well above the Level 0. In some cases, the ***DAYS TO EMPTY*** may even increase over a several week period.

It takes a couple of months for the water softener to learn ***your*** water usage pattern. Once it does this, it will accurately determine actual salt usage pattern. During this first period, check salt level when blue indicator light flashes. If the salt level in the tank is at Level 1 or above, allow system to run. Be sure to reset your salt level indicator each time you add salt to the system.

### *Optional Control Settings*

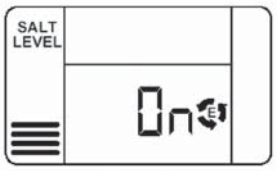
The controller display has several options and features.

### *LOW SALT ALARM*




The ***LOW SALT ALARM***, when enabled, will sound the beeper when the ***DAYS TO EMPTY*** value is 15 days or less. To change this setting, press and hold the ***MODE*** button for 3 seconds. ON (factory default) or OFF will flash in the display. Press the UP ▲ or DOWN ▼ buttons to toggle this feature ON or OFF. Press the ***MODE*** button to accept, and the display will move to ***SALT EFFICIENCY***.

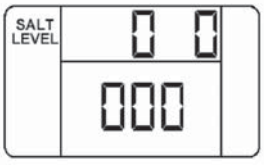
### *SALT EFFICIENCY*




When the ***SALT EFFICIENCY*** feature is ON, the unit will operate at a salt efficiency of 4000 grains of hardness removed per pound of salt (59fm3/kg salt). This mode of operation is the most efficient setting for salt usage, because the system will tend to recharge more often, with less salt usage. Turning the feature OFF will tend to lengthen the time between recharge cycles, which will provide the most efficient usage of water, but may use more salt. The degree of difference between these two cycles is highly dependent on the water usage and hardness at a particular installation.

To change the setting, press the UP ▲ or DOWN ▼ buttons to toggle the feature ON or OFF. Press the ***MODE*** button to accept. The display will move to ***SYSTEM/ELECTRONIC DIAGNOSTICS.***

### *SYSTEM/ELECTRONIC DIAGNOSTICS*




This display contains system diagnostics information to assist in troubleshooting problems with the system.

See page 15 for details. Press the ***MODE*** button to return to the normal run display.

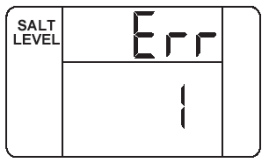
### *LOST TIME SIGNAL*

If time is lost on the display due to power interruption, the blue indicator light will flash 4 times every second, until the present time of day is entered.

### *LOW SALT SIGNAL*

When the ***DAYS TO EMPTY*** drops to 15, the blue indicator light and ***DAYS TO EMPTY*** in the display will flash every second and the alarm will beep every 30 seconds (from 8:00 AM to 8:00 PM), to notify the user that the unit is running low on salt. As soon as any button is pressed, the alarm will stop beeping. The blue indicator light and ***DAYS TO EMPTY*** will continue to flash. Once salt is added to the brine tank and the ***SALT LEVEL*** is reset, the ***DAYS TO EMPTY*** wil l be reset.

### *ERROR SIGNALS*




If there is an error code detected, the blue indicator light will flash 4 times every second, the display will flash ***Err***, and the alarm will beep every 30 seconds (from 8:00 AM to 8:00 PM), to signal that the softener requires service. The alarm can be turned off by pressing any button, but the blue indicator light and display will continue to flash.

See page 14 for information to assist in troubleshooting error codes. Once the problem is corrected, disconnect the transformer from the wall outlet momentarily, and plug it back in. The normal display will appear. The motor may run for several minutes, as the unit resets. If the problem is not corrected, the error code will reappear in 6 minutes.

### *BLUE INDICATOR LIGHT*

Steady blue light indicates that the unit is working correctly. The light flashes
when the unit needs attention from the user.

- Light flashes and ***DAYS TO EMPTY*** flashes—check salt level and add salt as required.
- Light flashes and ***Err*** is in the display˜electrical problem with system˜see page 16.
- Light will also flash when power to the unit has been interrupted. Check the ***PRESENT TIME*** setting.

# Step-by-step installation instructions.

### Sanitizing Procedures

*To complete the installation, do the following sanitizing procedures.*

Care is taken at the factory to keep your water softener clean and sanitary. Materials used to make the softener will not infect or contaminate your water supply and will not cause bacteria to form or grow. However, during shipping, storage, installing and operating, bacteria could get into the softener. For this reason, sanitizing as follows is suggested when installing.

***NOTE:*** **Sanitizing is recommended by the Water Quality Association for disinfecting.**

***1.*** Be sure to complete all installation steps, including programming the control.

***2.*** Pour about 22.ml (1½ tablespoons) of common 5.25% unscented household bleach (Clorox, Linco, Bo Peep, White Sail, Eagle, etc.) into the ***brinewell***. Refer to illustration on page 5.

***3. IMPORTANT:*** Press and hold for 3 seconds the faceplate ***RECHARGE*** button to start an immediate recharge. ***RECHARGE*** begins to flash in the display. The bleach will be drawn through the water softener and out the drain. This process takes approximately 2 hours.

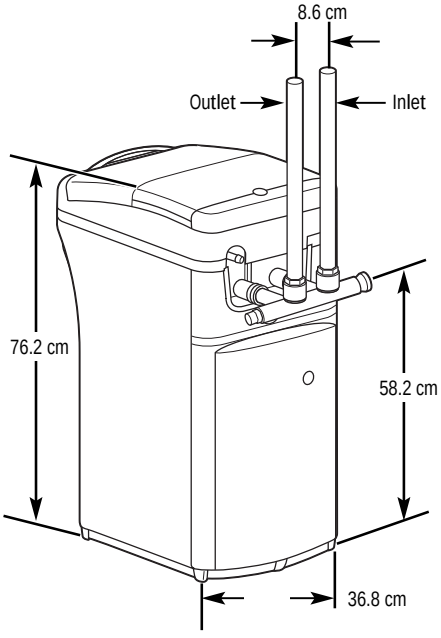
***4.*** If, after sanitization, water from the house faucet tastes salty or has a slight color, this is a preservative from the resin tank. Turn on the cold soft water faucets and drain for a few minutes or until clear.

***NOTE:*** When the above sanitizing regeneration is over, all remaining bleach is flushed from the conditioner and your house ***COLD*** water supply is fully soft immediately. However, your water heater is filled with hard water and as hot water is used, all remaining bleach is flushed from the system and it will refill with soft water. When all the hard water is replaced in the water heater, hot only and mixed hot and cold water will be fully soft. If you want totally soft water immediately, after the above recharge, drain the water heater until the water runs cold.

⚠***WARNING:*** If you do drain the water heater, use extreme care as the hot water could cause burns. Turn the water heater off prior to draining.

### Specifications/Dimensions

| | GXSF18G |
|---|---|
| Rated Capacity* | 5.2 mols with 0.80 kg of salt<br>8.6 mols with 1.7 kg of salt<br>12.2 mols with 4.6 kg of salt |
| Rated Efficiency** | 6.2 mols/kg @ 0.8 kg salt dose |
| Amount of High Capacity Resin (kg/liters) | 15.1/18 |
| Resin Tank Nominal Size (in., dia. x height) | 10 x 21 |
| Service Flow Rate (l/min) | 26.5 |
| Water Supply Maximum Hardness (gpg) | 95 |
| Water Supply Maximum Clear Water Iron (ppm)*** | 5 |
| Water Pressure Limits (min.–max. bar) | 1.4 - 8.6 |
| Pressure Drop at Rated Service Flow (bar) | 0.55 |
| Water Temperature Limits (min.–max. °C) | 4 - 49 |
| Maximum Flow Rate to Drain (l/min) | 8.3 |




This system conforms to NSF/ANSI 44 for the specific capacity claims as verified and substantiated by test data.

* Testing was performed using pellet grade sodium chloride as the regenerant salt.

** Efficiency rating is valid only at the lowest stated salt dosage and service flow rate. This softener was efficiency rated according to NSF/ANSI 44.

*** Extent of iron removal may vary with conditions. The capacity to reduce clear water iron is substantiated by independent laboratory test data.
Refer to *Cleaning Iron Out of the Water Softening System* section.

### Service

When the water softening system is providing soft water, it is called “Service.” During service, hard water flows from the house main water pipe into the water softening system. Inside the water softening system resin tank is a bed made up of thousands of tiny, plastic resin beads. As hard water passes through the bed, each bead attracts and holds the hard minerals. This is called ion-exchanging. It is much like a magnet attracting and holding metals. Water without hard minerals (soft water) flows from the water softening system and to the house pipes.

After a period of time, the resin beads become coated with hard minerals and they have to be cleaned. This cleaning is called recharge. Recharge is started at 2:00 AM (factory setting) by the water softening system control, and consists of five stages or cycles. These are ***FILL, BRINING, BRINE RINSE, BACKWASH*** and ***FAST RINSE***.

### Automatic Hard Water Bypass During Recharge

For emergency needs, hard water is available to the home during the recharge cycles.

***However, you should avoid using HOT water because the water heater will fill with the hard water.***

### Fill

Salt dissolved in water is called brine. Brine is needed to clean the hard minerals from resin beads. To make the brine, water flows into the salt storage area during the fill stage.

### Brining

During brining, brine travels from the salt storage area into the resin tank. Brine is the cleaning agent needed to remove hard minerals from the resin beads. The hard minerals and brine are discharged to the drain.

The nozzle and venturi create a suction to move the brine, maintaining a very slow rate to get the best resin cleaning with the least salt.

### Brine Rinse

After a pre-measured amount of brine is used, the brine valve closes. Water continues to flow in the same path as during brining, except for the discontinued brine flow. Hard minerals and brine flush from the resin tank to the drain.

### Backwash

During backwash, water travels ***up*** through the resin tank at a fast flow rate, flushing accumulated iron, dirt and sediments from the resin bed and to the drain.

### Fast Rinse

Backwash is followed by a fast flow of water ***down*** through the resin tank. The fast flow flushes brine from the bottom of tank, and packs the resin bed.

After fast rinse, the water softening system returns to soft water service.

# About the water softener system.

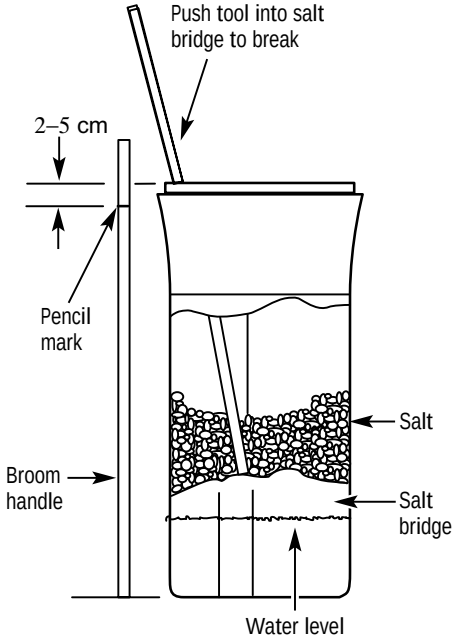
### Breaking a Salt Bridge

Sometimes, a hard crust or salt bridge forms in the salt storage area. It is usually caused by high humidity or the wrong kind of salt. When the salt bridges, an empty space forms between the water and salt. Then salt will not dissolve in the water to make brine.

If the brine tank is full of salt, it is hard to tell if you have a salt bridge. Salt is loose on top, but the bridge is under it. The following is the best way to check for a salt bridge.

Salt should be loose all the way to the bottom of the tank. Take a broom handle or like tool, and carefully push it down into the salt, working it up and down. If the tool strikes a hard object (be sure it's not the bottom or sides of the tank), it's most likely a salt bridge. Carefully break the bridge with the tool. ***Do not*** pound on the walls of the tank.

If the wrong kind of salt made the bridge, take it out. Then fill the tank with nugget or pellet salt only. In humid areas, it is best to fill with less salt, more often to prevent a salt bridge from forming.



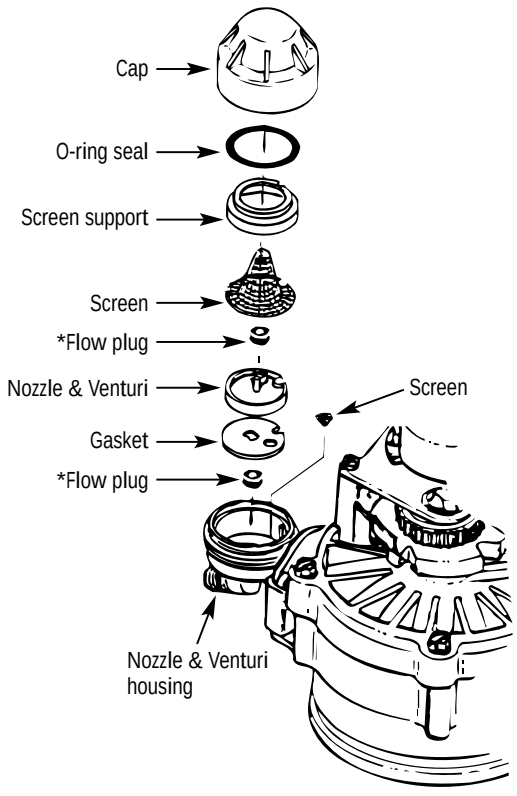

### Cleaning the Nozzle and Venturi Assembly

***A clean nozzle and venturi is needed for the water softening system to work properly.*** This small unit makes the suction to move brine from the salt storage area to the resin tank during recharge. If it becomes plugged with sand, dirt, etc., the water softening system will not work and you will get hard water.

To get to the nozzle and venturi, remove the water softening system top cover. Be sure the water softening system is in service cycle (no water pressure at nozzle and venturi). Then, while holding the nozzle and venturi housing with one hand, remove the cap. Lift out the screen support and screen, then the nozzle and venturi. Wash and rinse the parts in warm water until clean. If needed, use a small brush to remove iron or dirt. Also check and clean the gasket.

***NOTE:*** Some models have a small flow plug located in the nozzle and venturi, and/or a small cone shaped screen in the housing. Be sure to check and clean these parts, if your model is so equipped.

Carefully replace all parts in the correct order. Lightly lubricate the o-ring seal with clean silicone grease or petroleum jelly and place in position. ***Install and tighten the cap, by hand only. Do not overtighten the cap.***




***IMPORTANT:*** Be sure small holes in the gasket are centered directly over the small holes in the nozzle and venturi housing.

*Install with numbered side up, concave side down.

### Normal Operation, Control Displays

During normal operation, the present time of day and AM or PM and ***DAYS TO EMPTY*** show in the control display area. When the demand computer determines a recharge is needed, ***RECHARGE TONIGHT*** begins to flash in the display along with the present time. ***RECHARGE TONIGHT*** flashes until the next recharge start time, then changes to ***RECHARGE,*** which flashes until the recharge is over.

### Feature: Optional Recharge Controls

Sometimes, a manually started recharge may be desired or needed. *Two examples:*

- You have used more water than usual (house guests, extra washing, etc.) and you may run out of soft water before the next recharge.
- The system ran out of salt.

Use one of the following features to start a recharge immediately, or at the next preset recharge start time.

#### RECHARGE TONIGHT

Touch (do not hold) the ***RECHARGE*** button. ***RECHARGE TONIGHT*** flashes in the control display area. A recharge will occur at the next preset recharge start time. If you decide to cancel this recharge, touch the same button once more.

#### RECHARGE

Press and hold the ***RECHARGE*** button until ***RECHARGE*** starts to flash in the control display area. The water softening system begins an immediate recharge and, when over in about two hours, you will have a new supply of soft water. Once started, you cannot cancel this recharge.

### Feature: Memory

If electrical power to the water softening system is interrupted, the control display is blank, and the blue indicator light is off, but the control keeps correct time for about 6 hours. When power is restored, you have to reset the present time only if the display and blue indicator light are flashing. All other settings are maintained and never require resetting unless a change is desired.

If the time is flashing after a long power outage, the water softening system continues to work as it should to provide you with soft water. However, recharge may occur at the wrong time of day until you reset the control to the correct time of day.

### Feature/Service: Automatic Electronic Diagnostics

The control computer has a self-diagnostic function for the electrical system (except input power and water meter). The computer monitors the electronic components and circuits for correct operation. If a malfunction occurs, an error code appears in the control display.

The chart on *Error Codes* shows the error codes that could appear and possible reasons for each code. See *Manually Initiated Electronic Diagnostics* to further isolate the defect.

# About the water softener system.

### Service: Electronic Demand Time Features and Service

| ERROR CODE DISPLAYED | ERR 01 | ERR 02 | ERR 03 | ERR 04 | ERR 05 |
|---|---|---|---|---|---|
| POSSIBLE DEFECT | • Motor inoperative<br>• Wiring harness or connection to switch<br>• Position switch<br>• Control | • Position switch<br>• Control | • Motor inoperative or wiring harness<br>• Control | • Position switch or wiring harness<br>• Control | • Control |

***To remove an error code:*** ***1.*** *Unplug transformer.*
***2.*** *Correct defect.*
***3.*** *Plug transformer in.*
***4.*** *Wait for at least 6 minutes. The error code will return if the reason for the error code was not corrected.*

### Service: Timer/Softener, Service Checkout Procedure

If you are not getting soft water, and an error code is not displayed, use the procedures below to find the problem. First make the following visual checks.

***VISUAL CHECKS:***

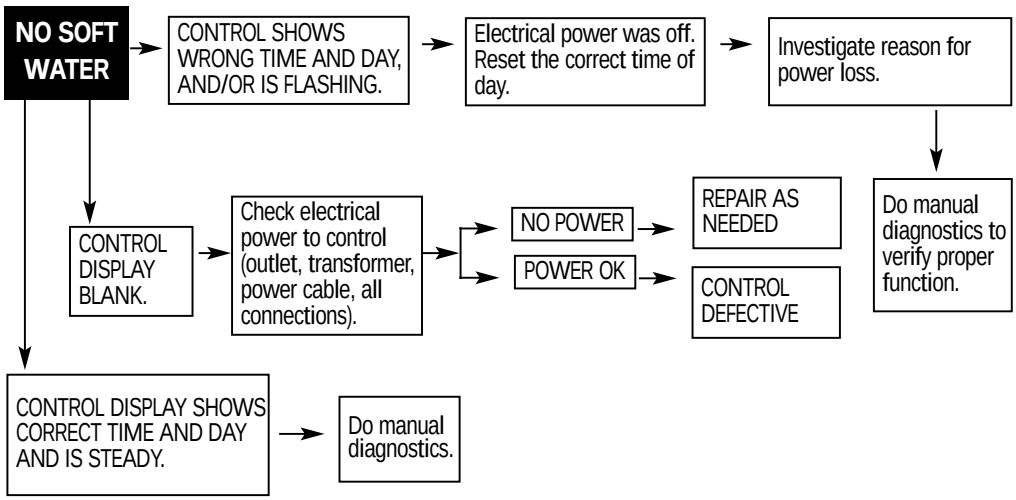
***1.*** Is there electrical power to the outlet the water softening system transformer is plugged into?

***2.*** Is there sufficient salt in the storage tank?

***3.*** Is the softener bypass valve directing water for soft water service?

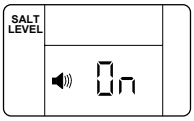
***4.*** Is the valve drain hose open to the drain, not more than 2m above the softener, and unobstructed?

*If you do not find a problem with the visual checks, continue below.*

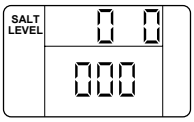


## Service: Manually Initiated Electronics Diagnostics

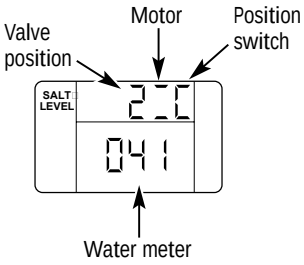
**1.** To enter diagnostics, press and hold the ***MODE*** button for 3 seconds until the Low Salt Alarm screen shows.




**2.** Press the ***MODE*** button 2 times to advance through Low Salt Alarm and Salt Efficiency options. See *Programming the Control* for details on these two options.




***3. OPERATION OF DIAGNOSTICS***




- **Valve Position –** Press the ***RECHARGE*** button to initiate a recharge cycle. Press again to manually index valve to next position. See *Service: Manually Advance Recharge Check* for details.

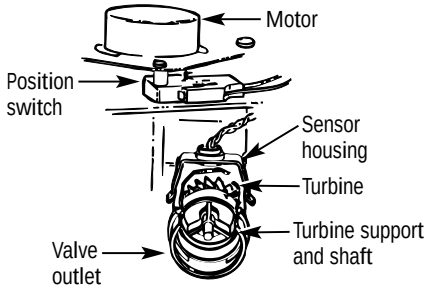
  0 – Service
  1 – Fill
  2 – Brine
  3 – Backwash
  4 – Fast Rinse

- **Motor Operation –** Two dashes will circulate around when motor should be running.
- **Position Switch Operation –**

  – Closed – valve rotating to next position

  – Open – valve in position, service, fill, brine, etc.

- **Water Meter –** Indicates whether water is flowing through valve.




– 000 indicates no water is flowing through the valve

– Open nearby soft water faucet

– 000 to 199(continual) shows water is flowing.
Display repeats for each gallon of water passing through the meter. Control will beep at every gallon. (1 gallon= 3.78 litres)

– If there is no reading in the display, with faucet open, check the sensor. Pull the sensor from the valve outlet port, and pass a small magnet in front of the sensor. Counter should index in the display. If counter does not index, check to make sure harness is connected to board properly. If there is a reading in the display, there may be a problem associated with the turbine. Turn off water supply, close the by-pass valve, and disconnect by-pass valve from valve body. Check turbine for binding or restriction due to debris. If this does not correct the problem, the Timer, Sensor, or Turbine may require replacement.

**4.** Historical data about the softener is available.

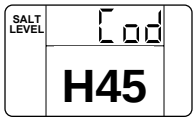
- Press and hold the UP ▲ button to display the number of days this control has had electrical power applied.
- Press and hold the DOWN ▼ button to display the number of recharges initiated by this control since the model code number was entered.

**5.** Press the ***MODE*** button to return to normal operation and display.

## Service: Set Model (F) Code

**1.** To change or check model code, first press and hold the ***MODE*** button for 3 seconds until the Low Salt Alarm screen shows.

**2.** Press and hold the ***MODE*** button again for 3 seconds. A display with cod at the top will appear.




**3.** Press the UP ▲ or DOWN ▼ buttons to select the correct model code.

F18 = GXOF18G

**4.** Press the ***MODE*** button one time to return to normal operation and display. If the model code was changed:

- the display will go blank momentarily, then display the model code entered.
- the display will then return to the set present time display, and the blue indicator light will flash. The control will have to be reprogrammed. See *Programming the Control*.

***NOTE:*** If the control is left in any of the above diagnostic displays, or a flashing display when setting time, hardness, etc., it will revert back to the normal display in 4 minutes.

### Service: Manually Advance Recharge Check

***NOTE:*** The control display must show a steady time (not flashing).

***1.*** Press the ***RECHARGE*** button and hold in for three seconds. ***RECHARGE*** begins to flash as the water softening system enters the fill cycle of recharge. Remove the brinewell cover and, using a flashlight, observe fill water entering the brine tank. If water does not enter the tank, look for an obstructed nozzle, venturi, fill flow plug or brine tubing. See *Care and Cleaning of the Water Softener System* section.

***2.*** After observing fill, press the ***RECHARGE*** button to move the water softening system into brining. A slow flow of water to the drain will begin. Verify brine draw from the brine tank by shining a flashlight into the brinewell and observing a noticeable drop in the liquid level over an extended period of time.

***NOTE:*** Be sure a salt bridge is not preventing water from contacting salt. See *Care and cleaning of the water softening system* section.

*If the water softening system does not draw brine, check:*

- nozzle and / or venturi dirty or defective.
- defective nozzle and venturi seal.
- nozzle and venturi not seated properly on gasket.
- other inner valve defect (rotor seal, rotor and disc, wave washer, etc.).
- restricted drain (check drain fitting and hose).

***NOTE:*** If water system pressure is low, an elevated drain hose may cause back pressure, stopping brine draw.

***3.*** Again, press the ***RECHARGE*** button to move the water softening system into backwash. Look for a fast flow of water from the drain hose. A slow flow indicates a plugged top distributor, backwash flow plug or drain hose.

***4.*** Press the ***RECHARGE*** button to move the water softening system into fast rinse. Again look for a fast drain flow. Allow the water softening system to rinse for a few minutes to flush out any brine that may remain in the resin tank from the brining cycle test.

***5.*** To return the water softening system to service, press the ***RECHARGE*** button.

### Checking the Salt Storage Level and Refilling

Brine (salt dissolved in water) is needed for each and every recharge. The water for making brine is metered into the salt storage area by the water softening system valve and control. ***However, you must keep the tank supplied with salt.***

***When to refill with salt:*** If the blue indicator light and ***DAYS TO EMPTY*** are flashing, there is less than 15 days supply of salt. Refill with salt. In humid areas it is best to refill with less salt and more often, to avoid the forming of a salt bridge, see page 12. After adding salt, remember to reset the ***SALT LEVEL*** in the control, see page 8. Never allow the salt level to drop below zero on the yellow indicator before you refill it. Without enough salt, you will soon have hard water.

Use clean water softening salts only, at least 99.5% pure. NUGGET, PELLET or coarse SOLAR salts are recommended. ***Do not use rock, block, granulated or ice cream making salts.*** They contain dirt and sediments, or mush and cake, and will create maintenance problems.

**⚠CAUTION:** ***Water softening salt with iron removing additives:*** Some salts may have an additive to help the water softening system handle iron in the water supply. Although this additive may help to keep the water softening system resin clean, it may also release corrosive fumes that weaken and shorten the life of some water softening system parts.

### Cleaning Iron Out of the Water Softening System

Your water softening system takes hardness minerals (calcium and magnesium) out of the water. Also, it can control some (see the *Specification Guidelines* section) “clear water” iron. With clear water iron, water from a faucet is clear when first put into a glass. After 15 to 30 minutes, the water begins to cloud or turn rust colored. A water softening system ***will not*** remove any iron that makes the water cloudy or rusty as it comes from the faucet (called red water iron). To take red water iron out of water, or over the maximum of clear water iron, an iron filter or other equipment is needed.

If your water supply has clear water iron, periodic resin bed cleaning is needed.

Clean the bed at least every six months, or more often if iron appears in the soft water between cleanings.

***IMPORTANT:*** It is important to mix the resin bed cleaner with water (following the manufacturer’s instructions), pour it into the ***brinewell tube*** (see page 5) and recharge the softener immediately. Do not pour the resin bed cleaner in with the salt, as it will not be as effective in cleaning the resin, and can cause damage to the softener if it is left in the brine tank for an extended period due to the corrosive gases that are formed.

# *Before you call for service…*

*Troubleshooting Tips*
*Save time and money! Review the chart on this page first and you may not need to call for service.*

## NO SOFT WATER – Most Common Problems:

*Check the following before calling for service:*

- Not enough salt—should be at least 1/3 full.
- Bypass valve in "Bypass" position—knob should be in the "OUT" (service) position.
- Hardness setting too low. Check hardness setting and adjust. Verify hardness of supply water—from local water company, water test or call the GE Answer Center.
- Salt Bridge—salt solidifies above water level so that brine water is not in contact with salt. See the *Breaking a Salt Bridge* section.

| *Problem* | *Possible Causes* | *What To Do* |
|---|---|---|
| *No soft water* | **Faucet or fixture where sample was taken not plumbed to soft water.** ***NOTE:*** *Be sure sample is from a faucet that does not mix soft and hard water. For example, a single lever kitchen faucet, if the cold side is plumbed to hard water*. | • To conserve salt, the installer may have isolated some fixtures (outside faucets, toilets, etc.) from soft water. From the outlet of the water softening system, trace the water flow path, in house plumbing. If soft water is not directed to a faucet or fixture where wanted, consult a plumber. |
| | **No salt in the brine tank or salt bridged** | • Check for a salt bridge or, if the tank is empty, refill with recommended salt. Press (for 3 seconds) the ***RECHARGE*** button to start an immediate recharge and restore soft water supply. |
| | **Transformer unplugged at wall outlet or power cable to softener not connected. Fuse blown or circuit breaker popped on circuit to electrical outlet. Electrical outlet on a circuit that can be switched off** | • Check for a loss of electrical power to the water softening system, due to any of these conditions and correct as needed. With the power supply restored, observe the faceplate time display and read *Programming the Control* section. ***NOTE:*** *The electrical outlet for the softener should be continuously live so it cannot be accidentally switched off.* |
| | **Manual bypass valve in bypass position** | • Be sure the bypass valve stem is positioned properly, with the knob in the OUT position. Observe instructions on the decal at the end of the stem. Check the position of bleed screw. |
| | **Valve drain hose pinched, plugged, elevated too high or otherwise restricted** | • Any restriction in this drain hose may prevent proper operation of the nozzle and venturi and reduce or prevent brine draw during recharge. |
| | **Nozzle and venturi dirty, incorrectly assembled or damaged** | • Refer to *Cleaning the Nozzle and Venturi Assembly* instructions. With water pressure to the water softening system off, take the nozzle assembly apart. Inspect, clean and replace as needed. Any foreign particle(s), scratches, nicks, etc., in the passages can prevent operation. Be sure holes in the gasket are centered over holes in the housing. |

| Problem | Possible Causes | What To Do |
|---|---|---|
| *Water hard sometimes* | **Using hot water while the water softening system is regenerating** | • Avoid using hot water during water softening system recharge because the water heater will refill with hard water. See *Automatic Hard Water Bypass During Recharge* section, page 11. |
| | **Control *HARDNESS* number setting too low** | • Press the ***MODE*** button until arrow points to ***HARDNESS***. Be sure the number shown is the same as the actual grains per gallon **hardness of your water supply**. See the *Programming the Control* section if a change in the setting is needed. |
| | **Grains of hardness in your water supply have increased** | • Water hardness can change over time, especially in well water. To check, have the water tested by a water analysis laboratory or call your local water department. Adjust the ***HARDNESS*** number setting as needed. |
| *Water feels slippery after installation of water softening system* | **Absence of hardness minerals** | • This is normal. Hardness in water gives it the abrasive feel you may have been accustomed to. The slippery feel is the clean feel of soft water. |
| *Water softening system not using any salt* | **Water softening system is a "demand" unit** | • Does not use much salt to regenerate—very efficient. |
| | **Possible salt bridge** | • See the *About the Water Softener System* section, page 12. |
| | **Possible plugged nozzle and venturi** | • See the *About the Water Softener System* section, page 12. |
| *Water is blue color after water softening system was installed* | **Acidic water in copper plumbing** | • Have the water tested at once. |
| *Water softening system not regenerating* | **Meter turbine stuck** | • See the *Service: Manually Initiated Electronics Diagnostics* section for troubleshooting procedures, page 15.<br>• Call for service. |
| | **Sensor wire not plugged into the control** | • See the *Service: Manually Initiated Electronics Diagnostics* section for troubleshooting procedures, page 15.<br>• Call for service. |
| | **No power to unit** | • Check the circuit breaker or fuses. |
| | **Mechanical defect** | • Call for service. |
| *Cloudiness on glassware (automatic dishwashers)* | **Combination of soft water and too much detergent** | • This is called *etching* and is permanent. To prevent this from happening, use less detergent if you have soft water. Wash glassware in the shortest cycle that will get them clean. |
| *Excessive/high level of water in brine tank* | **Valve drain hose pinched, plugged, elevated too high or otherwise restricted** | • Any restriction in this drain hose may prevent proper operation of the nozzle and venturi and reduce or prevent brine draw during recharge. |
| | **Nozzle and venturi dirty, incorrectly assembled or damaged** | • See the *Cleaning the Nozzle and Venturi Assembly* section, page 12. With water pressure to the water softening system off, take the nozzle assembly apart. Inspect, clean and replace as needed. Any foreign particle(s), scratches, nicks, etc., in the passages can prevent operation. Be sure holes in the gasket are centered over holes in the housing. |

# Before you call for service…

*Troubleshooting Tips*

| *Problem* | *Possible Causes* | *What To Do* |
|---|---|---|
| ***Salty tasting or brown/yellow colored water after installation*** | **Unit not sanitized** | • Complete the *Sanitization Procedures* on page 10.<br>• At completion of recharge cycle (approx. 2 hrs), run water from faucets to purge the salty water. |
| | **Low water pressure** | • Check pressure; should be minimum1.4 Bar. |
| | **Restricted drain hose** | • Clean and reconnect hose.<br>• Check for kinks in drain line. |
| ***Brown/yellow colored water*** | **Unit was idle for a period of time** | • Complete the *Sanitization Procedures* on page 10. |
| ***Resin beads showing up in drinking water and sink*** | **Cracked distributor** | • Call for service. |
| ***Sounds you might hear*** | **Running water from the unit into a drain during recharge** | • This is normal. |
| ***Water has air bubbles and is cloudy*** | **Air in system after installation** | • Will go away after it runs for a while. |
| ***Error Code on control*** | **Wiring may have worked loose in the control** | • See page 14 for details.<br>• Unplug transformer.<br>• Remove control cover, release clips on side.<br>• Check for loose/incorrect wiring connections to electronic board or switch. Reconnect as required.<br>• Reassemble control cover.<br>• Plug in Transformer.<br>• Wait six minutes for Error Code to reappear.<br>• If Error Code reappears, call for service. |
| ***Blue light flashing*** | | |
| ***When power applied to the system*** | **Control needs to be programmed (a power outage may have occurred)** | • See the *Programming the Control* section, page 8. |
| ***If "DAYS TO EMPTY" is flashing*** | **Low salt level, less than 15 days** | • Fill with salt.<br>•Reset salt level. |
| ***If "Err" in display*** | **Electrical problem with system** | • See page 14 for details.<br>•See procedure above, Error code on control. |

# *SmartWater*™ Water Softening Systems
# Model GXOF18G

## PERFORMANCE DATA SHEET

This softener conforms to NSF/ANSI 44 for the specific performance claims as verified and substantiated by test data. This model is efficiency rated. The efficiency rating is valid only at the minimum stated salt dose. It has a demand initiated regeneration (D.I.R.) feature that complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. The softener has a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on sodium chloride) and shall not deliver more salt than their listed rating. The rated salt efficiency is measured by laboratory tests described in NSF/ANSI Standard 44. These tests represent the maximum possible efficiency that the system can achieve. Operational efficiency is the actual efficiency after the system has been installed. It is typically less than the efficiency due to individual application factors including water hardness, water usage, and other contaminants that reduce the softener's capacity. Use clean water softening salts only, at least 99.5% pure. For best results use nugget, pellet or coarse solar salts. This system is not intended for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Refer to Use and Care Manual for further details on installation and maintenance, user's responsibilities, parts and service, and further restrictions, or limitations to the use of the product. GE complies with applicable local warranty laws via its authorized distributors and re-sellers.

## SPECIFICATIONS

| | |
|---|---|
| Rated Service Flow Rate | 26.5 L/min |
| Pressure Drop at Rated Service Flow Rate | 0.55 Bar |
| Rated Capacity for Softening | 5.2 mols with 0.8 Kg of salt<br>8.6 mols with 1.7 Kg of salt<br>12.2 mols with 4.6 Kg. of salt |
| Rated Efficiency | 6.2 mols/Kg @ 0.8 Kg of salt |
| Iron Reduction[1] | 5 ppm |
| Min.-Max. Working Pressure | 1.4-8.6 Bar |
| Min.-Max. Operating Temperature | 4-49 °C |
| Max. Flow Rate to Drain During Regeneration Cycle | 8.3 L/min |

[1]Tested by a qualified independent laboratory against accepted industry protocol.

## PERFORMANCE CLAIMS

| Contaminant | Influent Challenge Level | Maximum Allowable Product Water level |
|---|---|---|
| Barium | 10±10% mg/L | 2.0mg/L |
| Radium 226/228 | 25 pCi/L | 5 pCi/L |

**General Electric Company**
**Appliance Park, Louisville, KY 40225**
**www.geappliances.com**

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