TFM Series Water Softener

Installation & Operation Manual

(Please save for future reference)

Thank you for purchasing one of our ENVIROGARD / Rainfresh Water Softeners. We are committed to ensuring that you are **totally satisfied**.

If you have any problems, don't go back to the store – **please contact us !**
Most issues can be resolved over the phone.
Help Line : 1-800-667-8072 (Monday to Friday 8:30 AM to 5:00 PM EST)
www.rainfresh.ca

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Certified by IAPMO R&T against CSA B483.1 and NSF/ ANSI 44.

A. SYSTEM SPECIFICATIONS & DIMENSIONS

Model	System Capacity (Grains)○	Flow Rate		Pressure Drop at Rated Service Flow (psi)	Media Tank Size	Resin Type	Resin Volume (cu ft)	Unit Weight Lbs (Kg)
		Service (US GPM)	Max Flow to Drain (US GPM)					
30TFM	30,000	11.0	2.0	15.0	9" x 48"	Fine mesh cation softening resin	1.0	87 (39.5)
45TFM	45,000	11.2	2.4	15.0	10" x 54"		1.5	115 (52.2)
60TFM	60,000	12.4	3.5	15.0	12" x 52"		2.0	150 (68.2)

○ – @ 15 lbs salt/ft³. Values not supported by test data. Only tested at one salt setting (Rated Capacity)

- Feed Water Temperature = 4°C - 38°C (39 - 100°F)
- Operating Pressure = 25 (172 kPa) - 100 PSIG (689 kPa)*
- Voltage = 110 V AC

* **Note:** Install pressure regulator and water hammer arrestor if pressure exceeds rated pressure at any time.

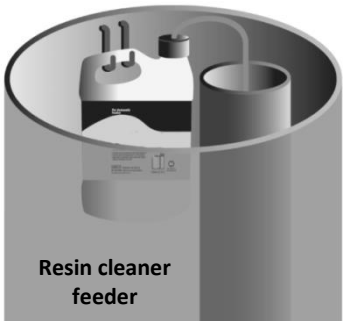
- At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.
- The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions stated herein, without obligation to change previously manufactured products or to note the change.

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These softeners conform to NSF/ANSI 44 for the specific performance claims as verified and substantiated by test data. These models are efficiency rated. The efficiency rating is valid only at the stated salt dose and maximum service flow rate. They have a demand initiated regeneration (D.I.R.) feature that complies with specific performance specifications in-tended to minimize the amount of regenerant brine and water used in their operation. These softeners have a rated softener 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 ratings. The rated salt efficiency is measured by laboratory tests described in NSF/ANSI Standard 44. These tests represent the maximum possible efficiency that the systems 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.

Feed Water Quality:

Iron < 5.0 PPM; Manganese < 0.05 PPM ; Turbidity < 1 NTU ; Free Chlorine < 0.5 PPM ; H_2S – Nil ; Organics – Nil.
If feed water quality exceeds above limits, please call Rainfresh for advice on additional treatment that may be necessary.

B. HOW YOUR WATER SOFTENER WORKS



Your Rainfresh TFM-softener removes hardness & iron using a process called Ion Exchange. In this process, when water flows through the unit, hardness-causing minerals such as Calcium & Magnesium and ferrous iron, are trapped by the media (called *Resin*) and an equivalent amount of sodium ions are released into the water. When the capacity of the resin to trap hardness & iron is exhausted, the unit is re-charged by softener salt in a process called *Regeneration*. During regeneration, the unit first backwashes to remove any sediment, rust or other particulates, that may have accumulated in the unit. This is followed by introduction of a saturated salt solution (*brine*) that bumps off the trapped hardness & iron to drain and recharges the resin with sodium. As iron is hard to detach from the resin, the unit includes an automatic resin-cleaner feeder that installs on the salt tank and slowly releases resin-cleaner into the brine, which then helps remove the trapped iron during regeneration.

Once you program the unit at the time of installation, the regeneration process happens automatically. All you need to do is to ensure that there is always enough salt in the salt tank and resin cleaner in the feeder.

C. SAFETY PRECAUTIONS ⚠

- Follow all applicable province/state and local regulations.
- Handle your water softener carefully. Do not lie on side, turn upside down, drop or drag.
- This softener uses salt (sodium chloride) to regenerate. Persons on sodium restricted diets should consider the added sodium as part of their overall intake. Potassium chloride can be used as an alternate in such situations. Please consult Rainfresh technical support.

Cautions before installation

1. Install a pressure regulator and water hammer arrestor if pressure exceeds maximum rating at any time. **Note:** If daytime pressure is over 80 psi, night time pressure may exceed maximum pressure rating.
2. Do not install on water that is microbiologically unsafe without adequate disinfection before or after the unit. For effective disinfection install a Rainfresh Drinking Water System or Rainfresh UV disinfection system.
3. For use on cold water only.
4. **Only use thread seal tape** (Teflon® tape) for fitting connections into unit. **DO NOT USE pipe dope or chemical sealants.**
5. If water pipes are used to ground electrical system, install jumper wire (#4 gauge solid copper wire) across the unit to maintain proper grounding of your electrical system
6. **Protect your unit from freezing** - drain the unit if freezing temperatures exist.
7. **NOTE: IF SOLDER TYPE FITTINGS ARE USED DO NOT USE torch near inlet/outlet connections.** All solder joints should be made before joining pipe to filter head. Use only lead-free solder and flux.
8. **DO NOT over-tighten** metal fittings on to unit connections.
9. You will need softener salt with this unit (not included). Softener salt is sold at most retailers.
10. Place the unit on a flat level surface. Do not place shims under the unit to level it. The weight of the unit full of water and salt can cause the softener tank to crack at the shim.
11. The unit should only be moved by 2 or more people due to heavy weight. Failure to do so can result in back or other injury.
12. The unit must be installed in an area where there is reasonable access to the salt tank for regular salt filling.

D. INSTALLATION

Electrical Requirements:

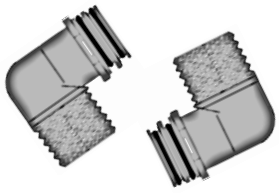
- The automatic control valve requires a constant power supply - 110V AC. We recommend a GFI (ground fault interrupter) outlet within 5 feet of the softener. Extension cords are not recommended.
- If water pipes are used to ground electrical system, you will need to install a jumper wire across the filter unit.

Unpacking the unit

The unit includes:

Softener tank with control valve and bypass valve & brine (salt) tank





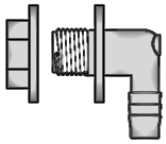
Inlet/outlet elbow fittings (2) – ¾" Male NPT



Allen key (for ease of opening & closing bypass valve)



Drain hose (15 ft) with hose clamp



Brine overflow fitting



AC power adapter



Resin cleaner & feeder

Unpack the unit and place it at the location where you intend to install it.

- Stand back and look at the softener to make sure it is standing straight up and not tilted to one side. Make sure your chosen location will be fairly level, dry, and protected from possible freezing conditions. The softener can sit directly on the floor and will not corrode. DO NOT set the softener onto make shift platforms as this can damage the salt tank, or may cause it to topple.

- The system has 3 connections - an inlet, an outlet, and a drain line connection. If you are looking at the back of the unit (**fig 1**), the inlet is on the left side. **Warning:** Make sure that you have correctly identified the inlet of the system. REVERSING THE CONNECTIONS WILL RESULT IN RESIN BEADS BEING THROWN INTO YOUR HOME'S PLUMBING SYSTEM CAUSING DAMAGE TO IT AS WELL AS THE SOFTENER.

- The following pipe can be used for installing your new system - Copper, CPVC, and PEX are the most popular.

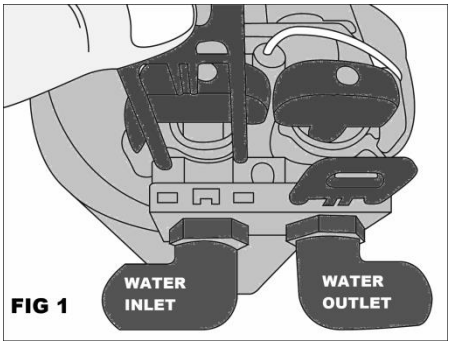
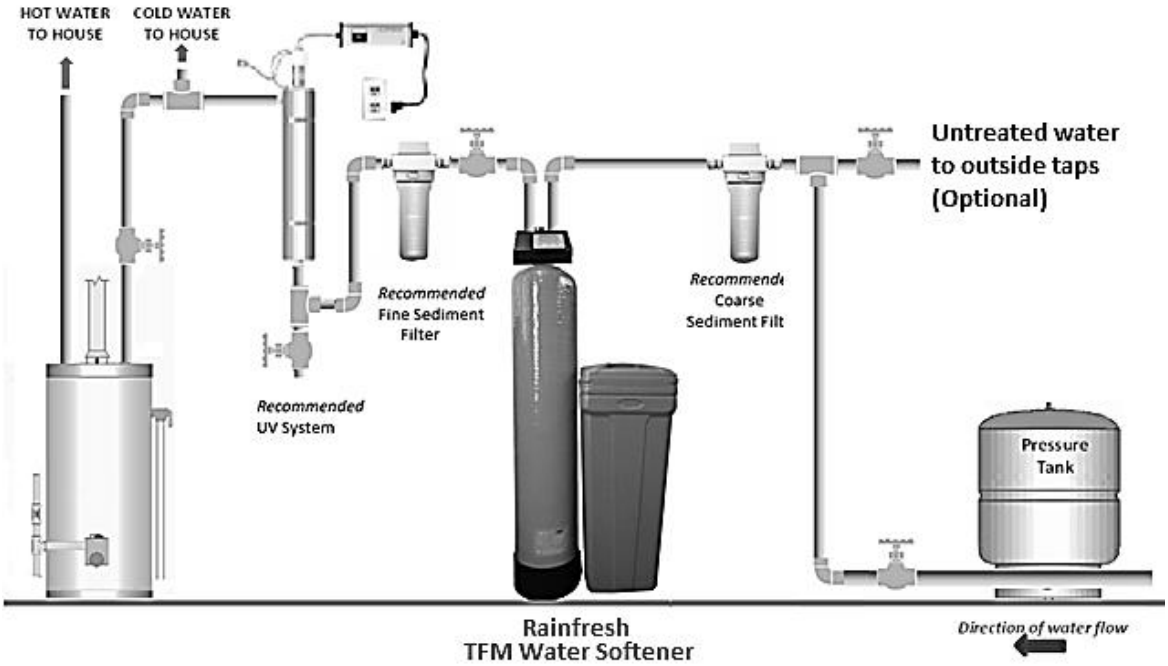


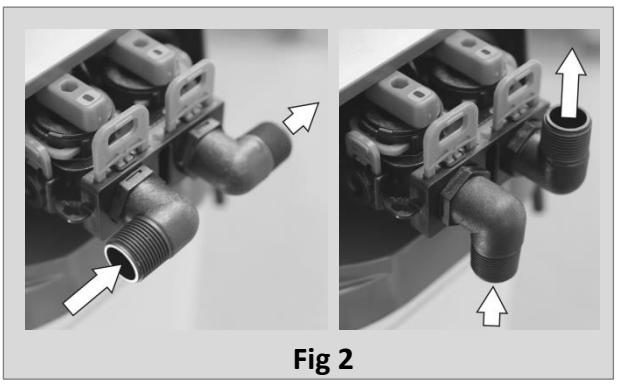
FIG 1

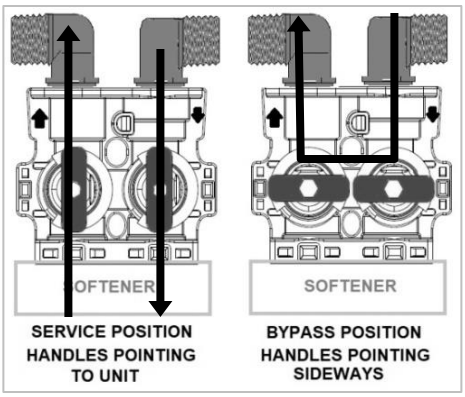
Installation Location



- You may choose not to treat the water spigots that go outside used for irrigation or sprinkler systems. You will have to plan the job so that you cut in to feed the softener AFTER these spigots.

BEFORE YOU BEGIN INSTALLATION, CONFIRM THE INLET AND OUTLET OF THE UNIT AND IDENTIFY THE SERVICE AND BYPASS POSITIONS OF THE VALVE. The bypass valve is used to isolate the unit from the plumbing system in order to perform maintenance or repairs on the unit. During normal use the bypass valve should be in "SERVICE" position and to isolate it, the valve should be turned to "BYPASS" position**. Make sure that the bypass valve is in bypass mode as shown.**


Fig 2



Plumbing in your softener

- If your hot water tank is electric, turn off the power to it to avoid damage to the element in the tank.
- If you have a private well, turn the power off to the pump then shut off the main water shut off valve. If you have municipal water, simply shut off the main valve. Go to a faucet, (preferably on the lowest floor of the house) turn on the cold water until all pressure is relieved and the flow of water stops.
- Position the softener in the desired location. The unit comes with two 90° ¾" male NPT elbow connections (see fig 2). You can turn them at any angle to suit your installation.
- **Note:** To change the connection fitting, simply remove the locking clips by hand and pull the fitting out. Insert new fitting and reinstall locking clip (fig 3).
- Plumb in the softener using appropriate fittings.
- Attach the drain hose (15 ft included) to the drain fitting and secure it with a hose clamp (fig 4) (included).
- Run the drain line to a nearby laundry tub, standing pipe or floor drain (fig 5) and cut off excess tubing.
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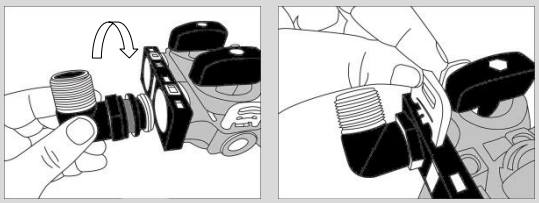


Fig 3

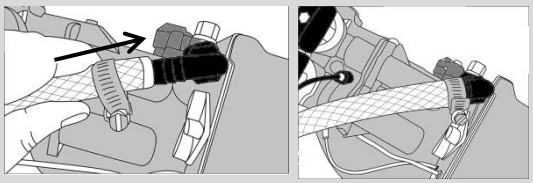


Fig 4

NOTE ABOUT DRAIN LINE : You can run the drain hose from the unit to the ceiling joists (max 8 ft ceiling) and run it to the nearest laundry tub or drain pipe. This can be run up overhead or down along the floor. Use band clamps to hold the drain tubing in place. If running drain line more than 15 feet from the softener (max 25 ft), increasing the line size to 3/4" will be required. Please follow your local plumbing & other applicable codes for where to run softener discharge water. NEVER MAKE A DIRECT CONNECTION INTO A WASTE WATER DRAIN. A PHYSICAL AIR GAP OF AT LEAST 1.5" SHOULD BE USED TO AVOID BACTERIA AND WASTEWATER TRAVELING BACK THROUGH THE DRAIN LINE INTO THE SOFTENER (see fig 5). If you have other water conditioners, such as carbon filter, tannin filter etc., RUN THE DRAIN TUBING FOR EACH UNIT SEPARATELY. DO NOT TEE (COMBINE) DRAIN TUBING FROM OTHER UNITS.

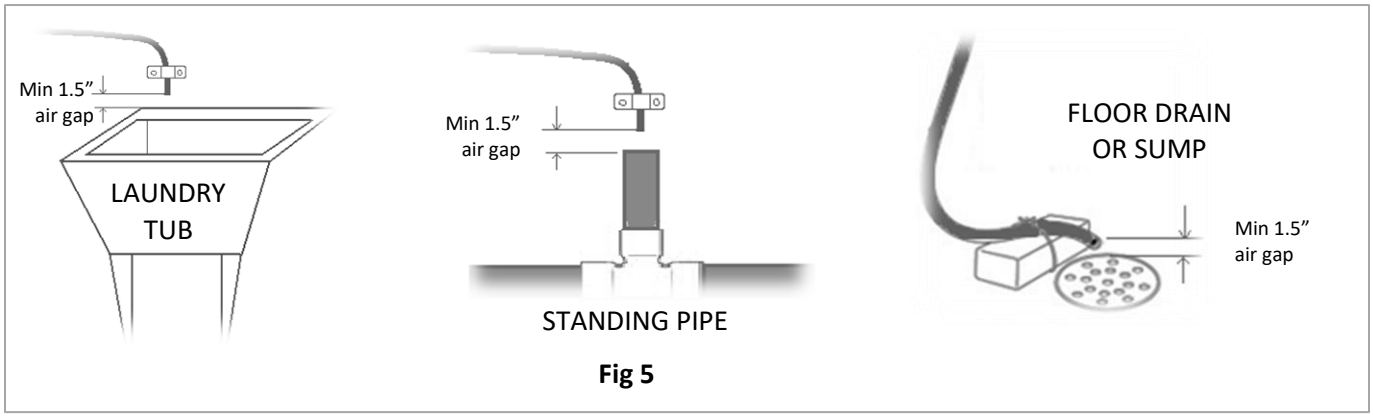


Fig 5

You can also use code-approved air-gap attachments available at most plumbing stores.

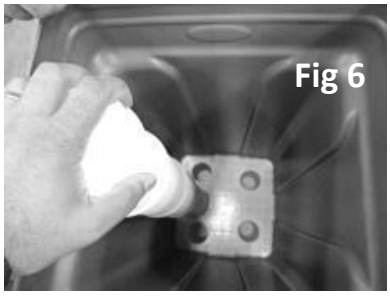


Fig 6

- Remove the lid on the salt tank. Insert the brine well into the appropriate slot at the bottom of the salt tank (**fig 6)**. Slide the 3/8" tube through the hole on the side of the salt tank and connect it to the brine float as shown in **fig 7**.

- Remove locking clip on the brine outlet **(fig 8)** and insert other end of the 3/8" tube until it goes no further**.** Replace locking clip. The salt tank is flexible and can be moved around the softener as long as it is connected to it through the 3/8" brine tube.
- **Attaching the overflow tubing :** If the safety overflow is not already attached to the brine (salt) tank, drill a ¾" hole on the side of the brine tank about ¾ of the way from the bottom (**fig 9**). Insert the over flow fitting from the outside and tighten the nut from the inside to lock it in place. **WARNING : DO NOT TEE THE OVERFLOW TUBING TO THE DRAIN TUBING**
- Attach the rest of the drain tubing to the overflow fitting and run to the floor drain with an appropriate air gap, as shown in fig 5. If you do not have any more drain tubing left, you will need to purchase extra tubing at your local plumbing retailer. A hose clamp is also recommended to hold the tubing on the fitting.

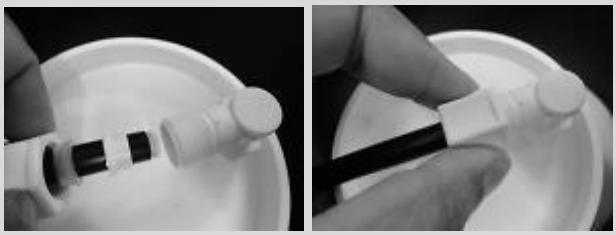


Fig 7

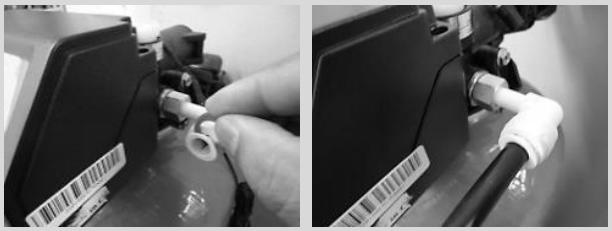
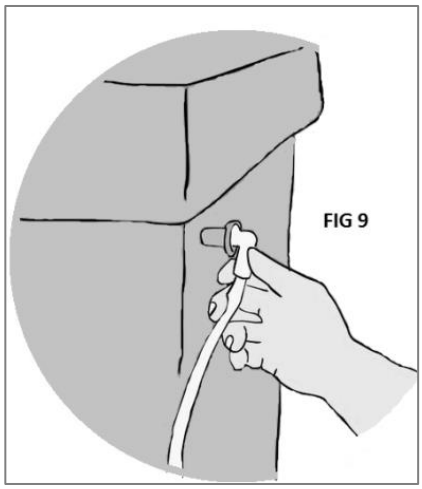


Fig 8

- Add about 5 gallons of water in the salt tank. This is not a critical level but just helps with the process for the first regeneration. Then add 2 bags (20 Kg bags) of salt to start with.
- Turn the main house shut-off valve on slightly and watch for leaks. Make sure a faucet is on somewhere and that any aerator is removed to avoid clogging from loosened scale in the pipes. If you have no leaks, proceed to the next steps.



Turn on the water supply

- Using the Allen key (included), **turn the bypass inlet slightly** to allow water to run into the unit. The water should initially fill the tank slowly. Once the tank is full of water, you can open valve fully. This prevents resin from being pushed up into the control head by the initial surge of water going in.
- Make sure there are no leaks in your plumbing before proceeding.
- At the nearest cold treated water tap remove the faucet screen and open the faucet. Using the Allen key (included), open the outlet side of the bypass valve and let water run a few minutes or until the system is free of any air or foreign material resulting from the plumbing work. Close the water tap when water runs clean, and then proceed to start up instructions.
- Connect the control valve to the power adapter (**fig 10**) & connect the adapter to the power supply.

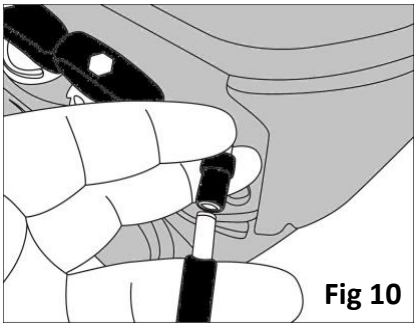


Fig 10

NOTE: Your unit is not yet ready for service until you complete manual regeneration. See next page

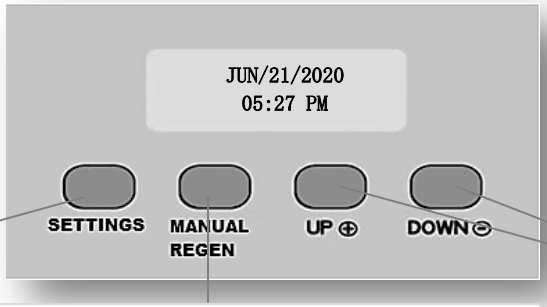
E. START UP & PROGRAMMING

The control valve is controlled with simple, user-friendly electronics displayed on an LCD screen.

When power is first supplied, the valve electronics may take up to a minute to initialize. During this time the screen may show "INTIALIZING WAIT PLEASE". Do not touch any buttons at this time. When the valve reaches the service position, it will display the following information in sequence. **THIS IS NORMAL**

1. Date & Time
2. Total & Remaining Gallons
3. No. of people in the house & Reserve Capacity
4. Estimated days left for next regeneration
5. Last Regeneration date
6. Total # of regenerations
7. Total Treated Gallons of water
8. Overrun Total
9. Current and Peak water flow rate
10. Day override
11. Rinse override
12. Delayed Regeneration
13. Regeneration Time
14. Refill Time
15. Valve Model
16. Valve ID

The control valve has a display screen and 4 buttons



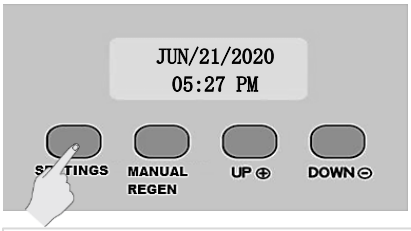
SETTINGS
The function of this key is to enter the level one programming mode where the valve settings can be adjusted.

MANUAL REGEN
This button has two functions. The first is to initiate a manual regeneration by holding the button for 3 or more seconds. The second function is while in programming mode, pressing this key allows the user to change the value of each setting.

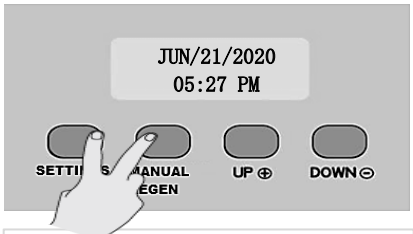
UP / DOWN
These buttons are used to increase or decrease the value of the settings while in the programming mode.

PROGRAMMING

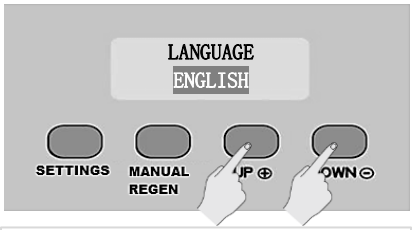
(I) LANGUAGE SELECTION



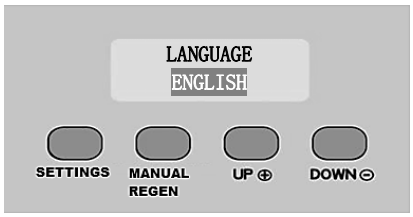
Press **SETTINGS** for 3 sec.
After 3 seconds the display will beep confirming unlock



Press **SETTINGS** and **REGEN** button together for 3 seconds.
The display will beep & change to LANGUAGE

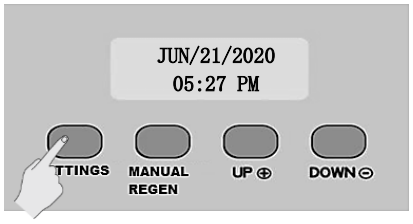


Press **UP** or **DOWN** key to select your preferred language

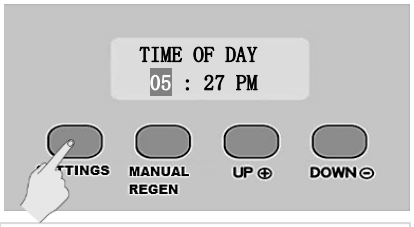


Press **SETTINGS** again to exit Language selection.

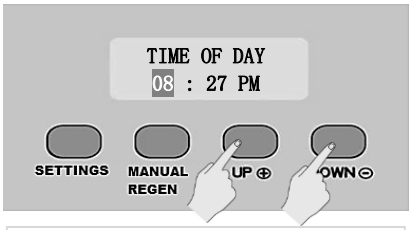
(II) BASIC PROGRAMMING



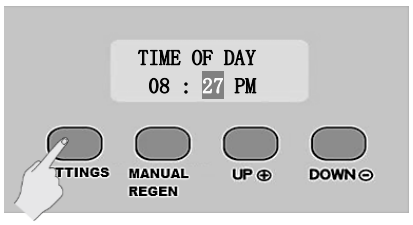
1. Press **SETTINGS** for 3 sec.
2. After 3 seconds the display will beep confirming unlock



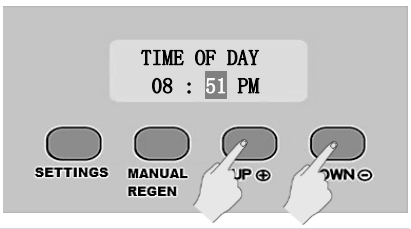
3. Press **SETTINGS** again and the hour value becomes highlighted



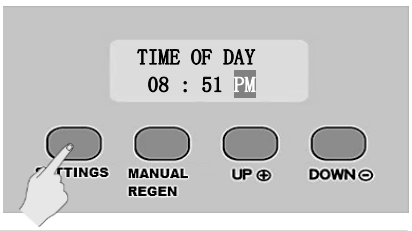
4. Press **UP** or **DOWN** key to change the hour value to current time



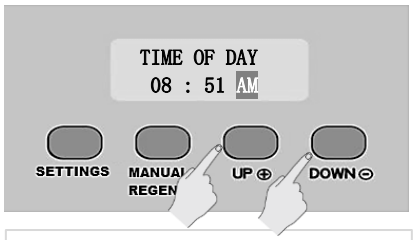
5. Press **SETTINGS** again. Hour value will be accepted and minute value will be highlighted



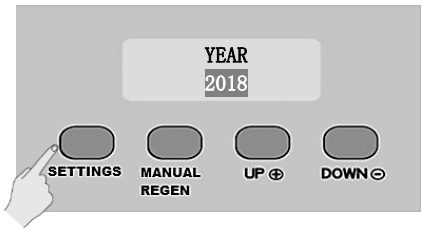
6. Press **UP** or **DOWN** key to change minute value to current minutes



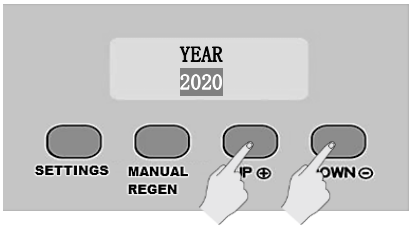
7. Press **SETTINGS** key again and AM/PM will be highlighted.



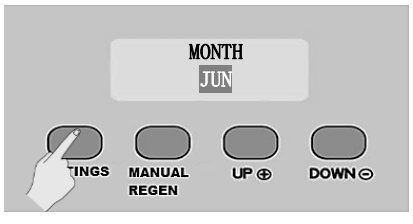
8. Now press **UP** or **DOWN** key to change AM/PM value to current time



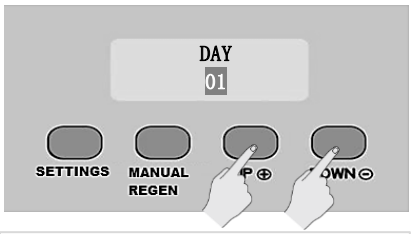
9. Press **SETTINGS** button again and YEAR will be highlighted



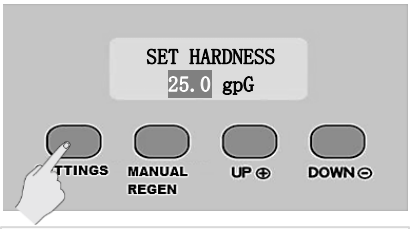
10. Now press **UP** or **DOWN** key to change YEAR to current year



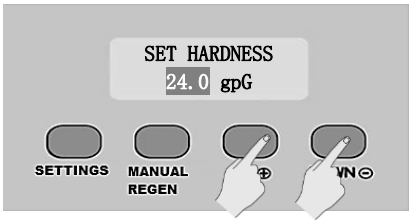
10. Press **SETTINGS** again to highlight and use UP or DOWN keys to select current month. Then press SETTINGS again to advance to DATE



12. Press **UP** or **DOWN** to enter CURRENT DATE.



13. Press **SETTINGS** again to advance to "SET HARDNESS"



14. Press **UP** or **DOWN** key to enter your water hardness in grains per gallon. See note

NOTE : Setting Water Hardness

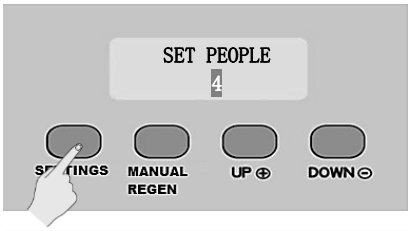
This value is the hardness value of your water in grains per gallon (GPG). If you have the reading in PPM or mg/L, simply divide that by 17.1 to get the reading in GPG. You must also add (5 x iron level in PPM) to the hardness value.

HARDNESS VALUE = YOUR WATER HARDNESS + (5 x Iron concentration in PPM)

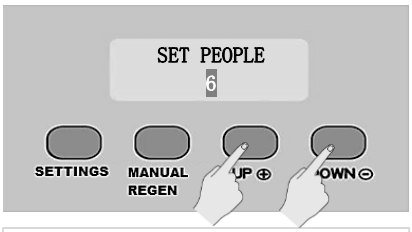
For example, if your water hardness is 20 GPG and the iron level is 0.3 PPM, the hardness value you enter must be

$$20 + 5 \times (0.3) = 20 + 1.5 = 21.5 \text{ GPG}$$

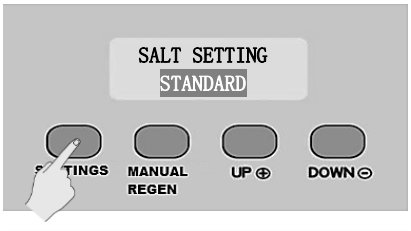
Note: If you do not know your water hardness, we highly recommend that you get a water test to confirm this. Until then you can leave the setting at default.



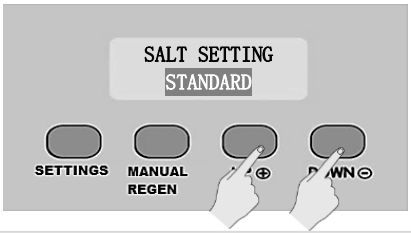
15. Press **SETTINGS** again to advance to "SET PEOPLE"



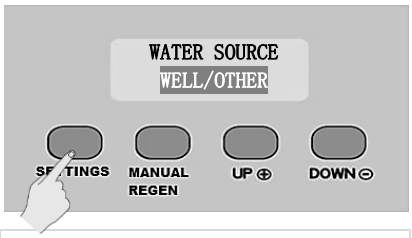
16. Now press **UP** or **DOWN** key to enter number of people in your household.



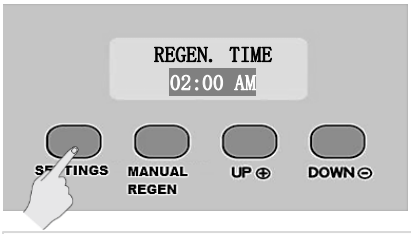
17. Press **SETTINGS** again to advance to SALT SETTINGS.



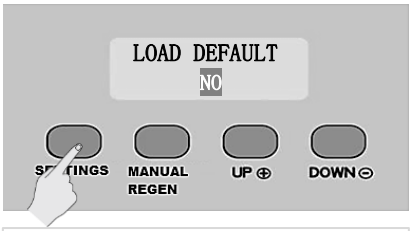
18. Leave at STANDARD (factory setting). If your water is clean and municipally treated, press **UP** or **DOWN** key to change the value to HIGH EFFICIENCY



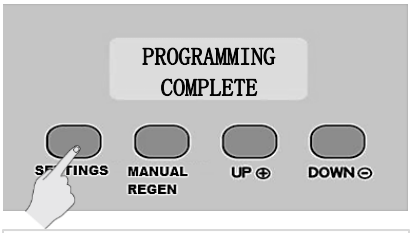
19. Press **SETTINGS** to advance to "Water Source". Do not change this setting.



20. Press **SETTINGS** to advance to "REGEN TIME". This is the time when the unit will complete regeneration. Leave at default setting or use **UP** or **DOWN** keys to change per your choice



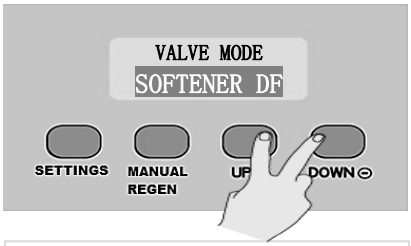
21. Press **SETTINGS** again to advance to "LOAD DEFAULT". Do not change this setting unless you want to change all your settings to factory settings



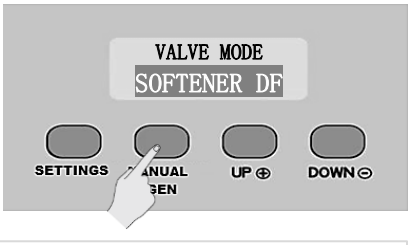
22. Press **SETTINGS** again and this completes the programming

(III) ADVANCED PROGRAMMING

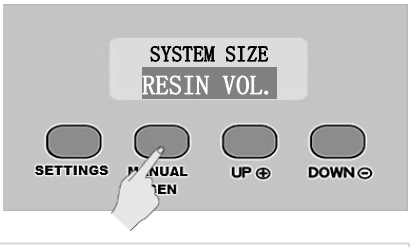
In the advanced programming, you can change individual regeneration cycle times. DO NOT change these without confirming with Rainfresh technical support. By changing these values your unit can malfunction.



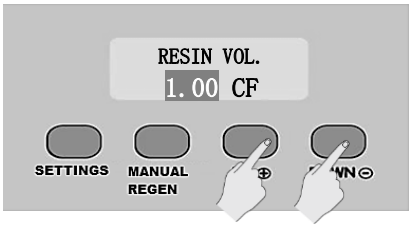
Unlock display by pressing SETTINGS for 3 sec. Press **UP** & **DOWN** keys together for 3 seconds until unit beeps and display changes to VALVE MODE.



Leave VALVE MODE at default setting. Press **REGEN** button to advance to "SYSTEM SIZE".

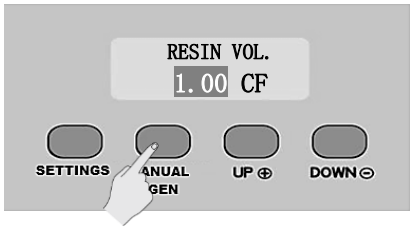


Leave SYSTEM SIZE at default setting (RESIN VOL). Press **REGEN** button to advance to "RESIN VOL".

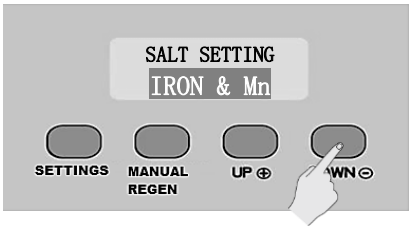


Set RESIN VOL as follows:

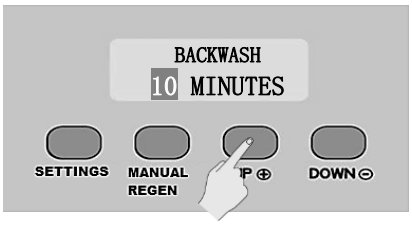
Model 30TFM – 1.00 CF
Model 45TFM – 1.50 CF
Model 60TFM – 2.00 CF
Model 90TFM – 3.00 CF



Press **REGEN** button to advance to "SALT SETTING"



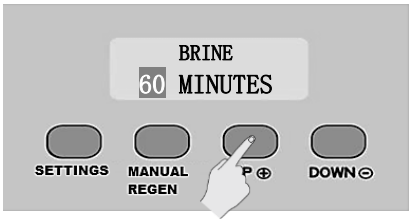
Leave at IRON & MN" (factory setting). If your water does not have high iron, press **DOWN** key to change the value to "STANDARD"
Press **REGEN** button to advance to "BACKWASH"



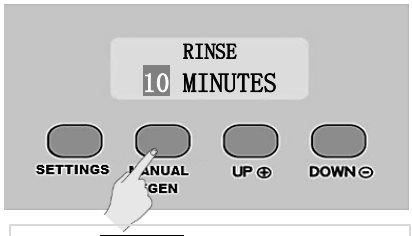
Default BACKWASH is set for 10 min. Press **UP** to increase this setting if your water has high turbidity or iron



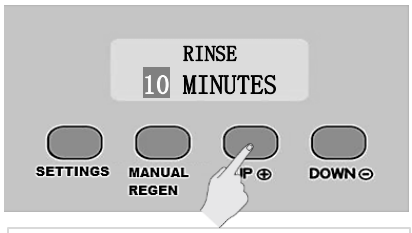
Press **REGEN** button to advance to "BRINE"



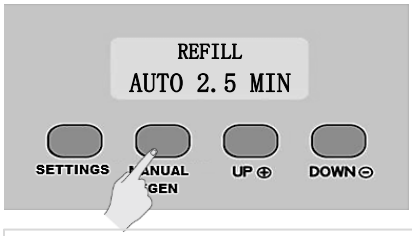
Default brine is set for 60 min. You can use **UP** arrow key to increase this setting to max 70 min if your water has high iron



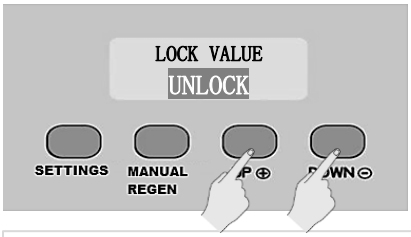
Press **REGEN** button to advance to “RINSE”



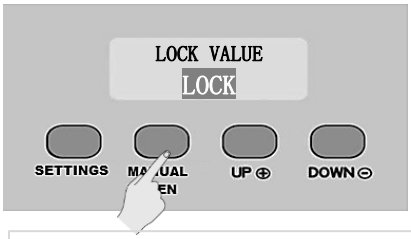
Default RINSE is set for 10 min. You can use **UP** arrow key to increase this setting if you prefer a more thorough



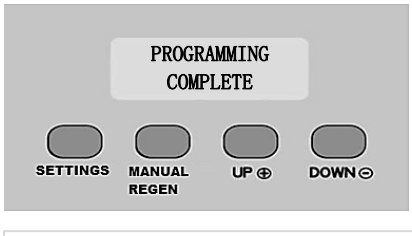
Press **REGEN** button to advance to “REFILL”. This is set to AUTO. Press **REGEN** to advance to LOCK VALVE



Press **UP** or **DOWN** key to either LOCK your settings or leave them unlocked



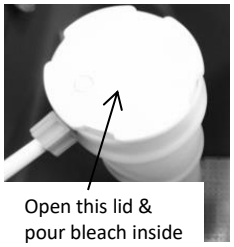
Press **REGEN** button to advance to complete programming



Display will briefly show PROGRAMMING COMPLETE & go to home screen. It will now display various settings in sequence.

Disinfecting the Softener

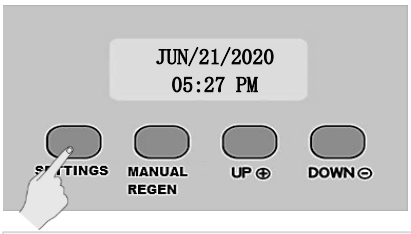
It is possible that during shipping, storage & installing, bacteria can go into the unit. Therefore, as a good installation practice, it is recommended that the softener be disinfected prior to use. To disinfect, open the lid of the brine well in the salt tank and add approx. 3 tablespoons of fresh common household bleach. Replace lid & proceed to manual regeneration.



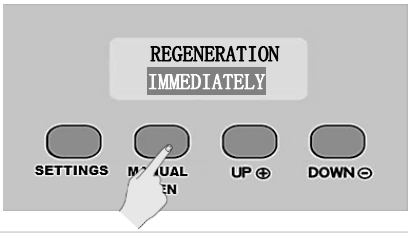
Open this lid & pour bleach inside

Manual Regeneration

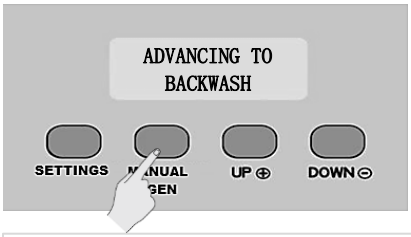
To perform a manual regeneration, follow the following steps.



Press **SETTINGS** for 3 sec. After 3 seconds the display will beep confirming unlock



Press and hold **REGEN** button and display changes to REGENERATION.

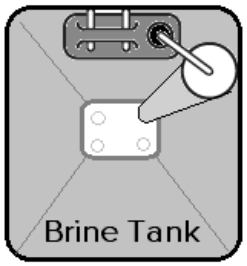


Press **REGEN** button again and the unit will start the regeneration process. This will last for over an hour.

YOUR UNIT IS NOW READY FOR SERVICE

Attaching Resin cleaner feeder

Drill 2 holes (for the resin cleaner bracket) at the top of the brine tank near the brine well. Hang the resin cleaner jug from the bracket from the inside of the brine tank. Remove the cap on the cleaner and replace with the cap that has the wick attached. Drill a hole near the top of the brine well and drop the other end of the wick into the brine well through this hole. Automatic feeding will begin in a few hours.



Top View

F. OTHER FEATURES

Control operation during a power failure

In the event of a power failure, the valve will keep track of the time and day for 48 hours. The programmed settings are stored in a non-volatile memory and will not be lost during a power failure. If power fails while the unit is in regeneration, the valve will finish regeneration after power is restored. If the valve misses a scheduled regeneration due to a power failure, it will queue regeneration at the next regeneration time once power is restored.

Safety float

The brine tank is equipped with a safety float which prevents your brine tank from overfilling as a result of a malfunction such as a power failure.

New sounds

You may notice new sounds as your water softener operates. The regeneration cycle lasts approximately 2 hours. During this time, you may hear water running intermittently to the drain.

Manual bypass

In the case of 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. To resume soft water service, open bypass valve by rotating the knobs counterclockwise (see page 4).

G. MAINTENANCE

Adding Salt

To add salt, simply slide open the salt tank lid and add the salt directly into the brine tank. Use only pellet salt that is specifically for water softeners only. **DO NOT USE rock salt, road salt or other types of impure salts.** You can use Potassium Chloride but you will need to increase salt settings. Check the salt level monthly. It is important to **ALWAYS maintain the salt level above the water level**. The salt tank should never be empty.

WARNING : DO NOT OVERFILL THE SALT TANK TO THE TOP. Once you can see the water level in the tank, do not fill more than 2-3 bags of salt.

YOU WILL NOT BE ABLE TO SEE THE WATER ONCE YOU ADD A COUPLE OF BAGS OF SALT. IF YOU WANT TO CHECK THE WATER LEVEL, OPEN THE LID ON THE BRINE WELL.

Preventing and breaking a Salt Bridge

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



If you are unable to break the bridge this way, take a strong rod and carefully push down the salt, working it up and down. **Do not** pound on the walls of the tank. If the wrong kind of salt has been used, take it out and fill with nugget or pellet salt.

Adding the resin cleaner

Regularly check the resin cleaner feeder level and replace when empty. The cleaner is available from the same retailer where you purchased the unit or call Rainfresh.

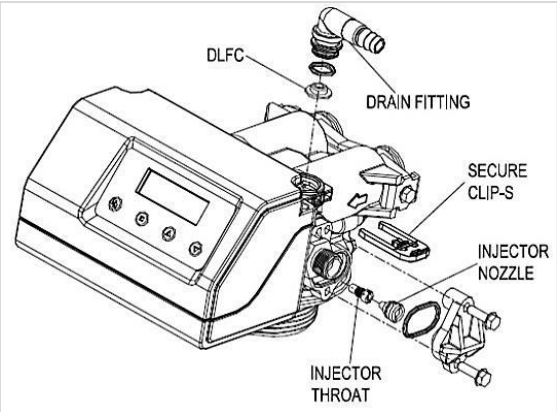
Care of Your Softener

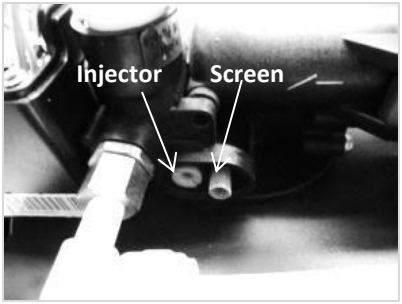
To retain the attractive appearance of your new water softener, clean occasionally with mild soap solution. Do not use abrasive cleaners, ammonia or solvents.

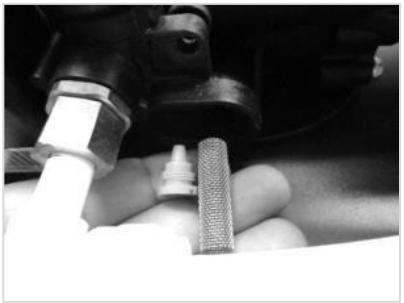
Cleaning the Injector Assembly

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 right side of the control valve. 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 cover to the control valve body. Carefully remove the assembly and disassemble as shown in Figure 6. The injector orifice is removed from the valve body by carefully turning it out with a large screwdriver. Remove the injector throat the same way. Carefully flush all parts including the screen. Use a mild acid such as vinegar to clean the small holes in the orifice and throat.

Reassemble using the reverse procedure.







H. TROUBLESHOOTING

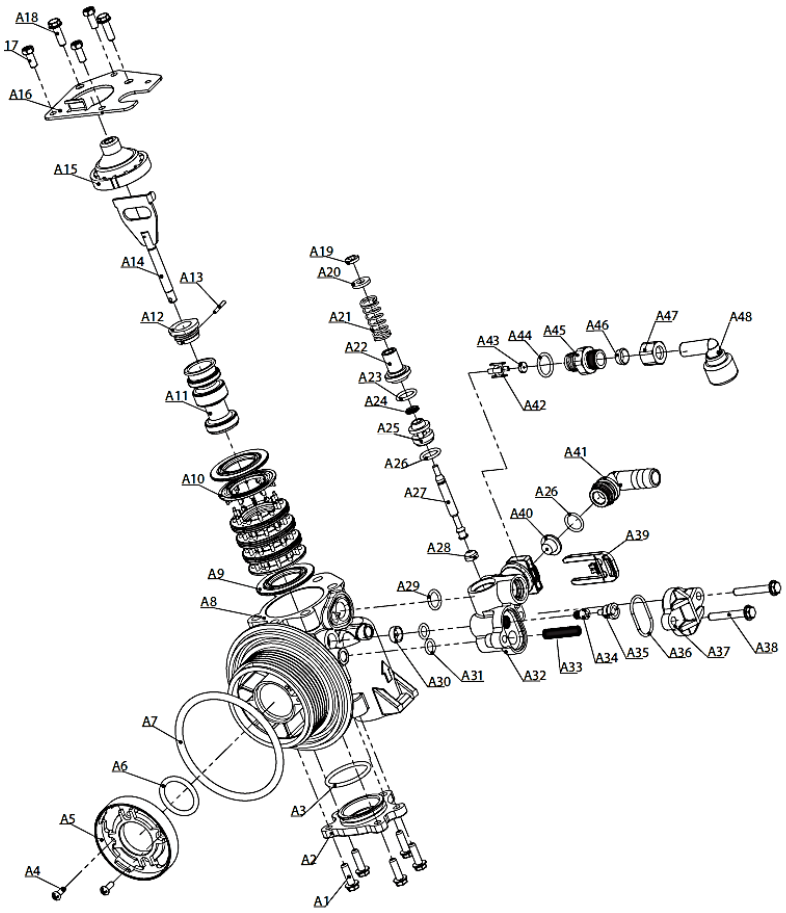
Please review the following troubleshooting guide before calling customer service.

- If you are unable to resolve the problem using the guide below, please call customer service at 1800 667 8072 (Mon to Fri 8:30 AM to 5 PM EST)
- **Please have your receipt & model number ready before you call. Customer service may request digital pictures of your installation in order to help troubleshoot the unit.**

ISSUE	POSSIBLE CAUSE	POSSIBLE SOLUTION
A. Unit fails to start a regeneration cycle	1. No power supply 2. Defective circuit board 3. Defective motor 4. Defective meter	1. Check electrical service & re-set time of day 2. Replace faulty parts 3. Replace motor 4. Replace meter
B. Water is hard	1. Bypass valve is closed 2. No salt in salt tank 3. Plugged injector/screen 4. Leak between valve and riser tube 5. Internal valve leak	1. Open bypass valve 2. Add salt to salt tank 3. Clean parts (see page 11) 4. Check if riser is cracked or O-ring is damaged. Replace faulty parts 5. Replace valve seals, spacer and piston assembly
C. Salt use is high	1. Salt setting high	1. Under ADVANCED PROGRAMMING change salt setting to high efficiency (not recommended for water with iron)
D. Low water pressure	1. Iron or scale buildup in line feeding softener 2. Iron buildup inside valve or tank 3. Inlet of control valve plugged due to dirt	1. Clean/replace supply line 2. Clean control valve & add resin cleaner to clean bed. Increase regeneration frequency 3. Clean control valve inlet
E. Resin in drain line	1. Air in water system 2. Incorrect or missing drain line flow control (DLFC) 3. Unit sucking air during brine draw	1. Check well system for proper air elimination 2. Check and replace DLFC 3. Check and secure all connections from valve to brine safety float
F. Too much water in brine tank	1. Plugged injector or screen 2. Plugged brine valve 3. DLFC plugged	1. Clean parts (page 9) 2. Clean parts 3. Clean DLFC
G. Unit fails to draw brine	1. DLFC plugged 2. Injector or screen is plugged 3. Inlet pressure too low 4. Internal valve leak	1. Clean DLFC 2. Clean parts 3. Increase min pressure to at least 25 psi 4. Replace seals, spacer & piston assembly
H. Unit cycles continuously	1. Defective circuit board	1. Replace faulty parts
I. Water flows to drain continuously	1. Valve settings incorrect 2. Internal leak	1. Check valve settings 2. Replace seals, spacer & piston assembly
J. Softener is leaking between the bypass valve and control valve	1. Possible O-ring leak	Check the metal adapter clips holding the 2 components together and tighten if necessary. Replace O-rings as required
K. Softener is always flashing through different pieces of information	This is normal	No action required
M. My display screen is blank	1. Power cord may be unplugged from either adapter or receptacle 2. Defective circuit board	1. Re-connect power cord 2. Call Rainfresh to receive new circuit board with replacement instructions

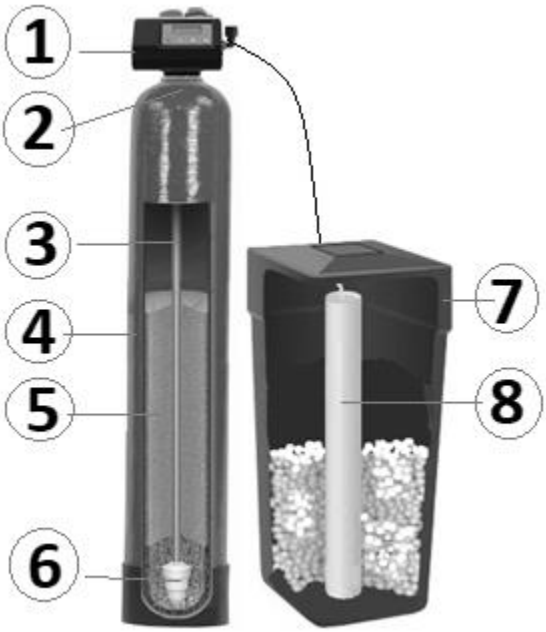
Need help troubleshooting? Call Toll Free 1-800-667-8072 Monday to Friday 8:30 AM to 5 PM EST.

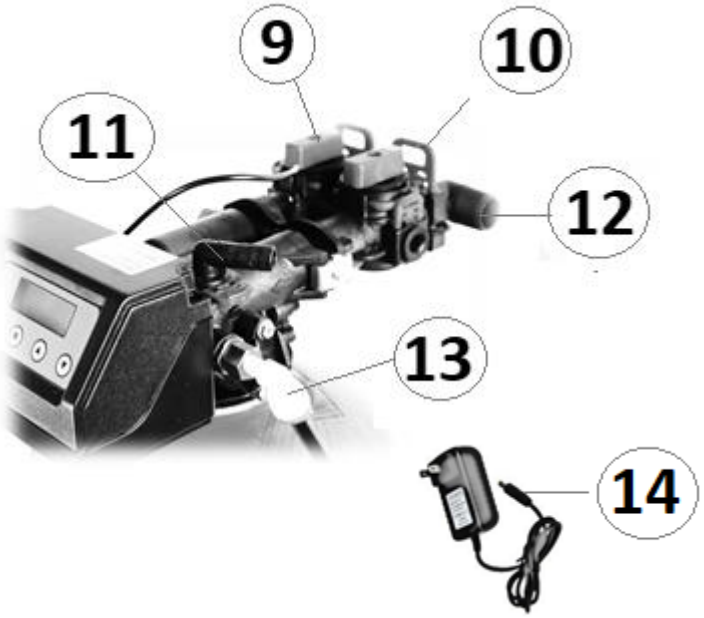
I. PARTS LIST



No.	Part # (WaterGroup)	Part # (Canature	Description	Qty
A48	60010656	21499033	QC BRINE ELBOW	1
A47	60010088	05056108	BLFC Fitting Nut	1
A46	60010087	05056033	BLFC Ferrule	1
A45	13244	05056100B	BLFC Copper Fitting	1
A44	60010083	05056138	O-Ring-φ14×1.8	1
A42	60010081	05056035	BLFC Button Retainer	1
A41	60010229	05010082	Drain Fitting-B	1
A39	60010069	05056172	Secure Clip-S	1
A38	60010089	05056086	Screw-M5×30(Hexagon with Washer)	2
A37	60010090	05056029	Injector Cover	1
A36	60010091	05056205	O-RING(23.9×1.8)	1
A33	10227	05056103	Injector Screen	1
A32	60010093	05056177	Injector Body	1
A31	60010094	05056067	O-Ring-φ7.8×1.9	2
A30	60010095	05056037	Air Disperser	1
A29	12638	05056066	O-Ring-φ11×2	1
A28	60032	05056180M	Injector Seat	1
A27			Injector Stem	1
A26			O-Ring-φ12×2	2
A25			Injector Spacer	1
A24			Quad Ring	1
A23			O-Ring-φ12.5×1.8	1
A22			Injector Cap	1
A21			Injector Screen	1
A20			Special Washer	1
A19			Retaining Ring	1
A18	60010076	05056088	Screw-M5×16(Hexagon with Washer)	2
A17	60010075	05056087	Screw-M5×12(Hexagon)	3
A10	14241	05056204	Spacer	8
A9	13242-02	05056073	Seal	5
A8	60095083	05030001	Bnt85 Valve Body	1
A7	60010077	05056063	O-ring-φ78.74×5.33	1
A6	60010080	26010103	O-ring-φ25×3.55	1
A5	60010599	07060007	Valve Bottom Connector	1
A4	60010099	13000426	Screw-ST2.9×13(Large Wafer)	2
A3	60095614	05030013	O-ring-φ30×2.65	1
A2	60095063	05030004	Bnt85 End Cover	1
A1	60010596	05056508	Screw-M5×12(Hexagon with Washer)	5

Part #	Part Description
60010609	INJECTOR SET #1 WHITE THROAT
60010610	NOZZLE #1 WHITE THROAT





J. WARRANTY

This "TFM" Series Softener System is warranted to the original Consumer purchaser for a period of one (1) year, from the date of purchase, against defects in materials or workmanship. The electronic controls and mineral tank are warranted for 5 and 10 years respectively against defects in materials or workmanship. The company's obligation under this warranty shall consist of repair or replacement, at its option, of any part found by company inspection to be defective, provided that the product has not been misused, abuse, altered or damaged by Consumer with respect to the original installation, as determined by the company. This warranty will not apply if water passing through the System has a) Turbidity / Suspended Solids > 5 ppm (mg/l). b) Hydrogen Sulphide concentrations greater than 0.05 ppm (0.05 mg/l). c) Iron concentration greater than 5.0 ppm (5.0 mg/l), d) Manganese greater than 0.05 ppm (0.05 mg/l), e) Tannins or colour or other feed water conditions that exceed the water quality requirements of the softener. This limited Warranty applies only to a unit when returned to the Warrantor at the owner's expense and in accordance with shipping instructions received from the Warrantor. This warranty does NOT cover, and is intended to exclude, any liability on the part of Envirogard for any incidental damages, consequential damages, labour charges or any other costs incurred in connection with the purchase, installation, use, maintenance or repair of the system whether under this warranty or any other warranty implied by law. Some provinces/states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from province/state to province/state. This warranty applies only to water filter/systems purchased in Canada or the U.S.A.

	DESCRIPTION
1	Control Valve
2	Top distributor (inside tank not shown)
3	Riser
4	Media Tank
5	Resin
6	Bottom distributor
7	Brine tank
8	Brine well with safety float inside
9	Bypass valve
10	Bypass clips
11	Drain fitting
12	Inlet outlet fittings. ¾" MNPT
13	Brine fitting 3/8" stem x 3/8" QC
14	Power adapter (110V)

To order replacement parts, call
1800 667 8072 Monday to Friday
8:30 AM to 5 PM EST.

Envirogard Products Limited
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Tel : (905) 884 9388 **Helpline:** 1800 667 8072
Web: www.rainfresh.ca