

## SHOWER SOFTENER

RL-R50/M3A1

RL-R50/M3A3

RL-R50/M2A5

**(Double tanks in series)**



Designed for High Hardness Water

The appearance is just for reference. It is subject to the real product.

### Service and Maintenance Manual

Please read this manual in details before using the product and keep it properly in order to consult in the future.

0WRX.466.647

**Application:** The product is mainly used for making soft water for shower, can also be used in applications, such as floor heating, beauty salon, hairdressing salon, washing machines etc..

**The treated water by the softener can not be drunk directly.**

#### Warm Note

1. With upgrading of the product, there may be some of words or figure in the manual is different with the real product, please be subject to the real product.
2. All the contents are carefully checked. If there is any printing errors or mistakes in the manual, we reserve the rights of interpretation.

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## Notice

1. As the specific place of shower softener used, all its components are of restricted service life, essential parts of which are listed in detail in the manual. Please replace the spare parts strictly in accordance with the manual.
2. This manual is a guiding document for the correct use of the product, please do the usual operation, check and maintenance strictly in accordance with the manual.
3. It is recommended to select professional personnel appointed by authorized dealer to install the product. When installation, ender user should inform the detail information of installation wall, such as the material of wall, distribution of water pipeline and wire, etc.. If the product is installed by ender user himself, if there is any problem happened during the installation, we will not take any responsibility.
4. The product is suit for municipal tap water, water pressure is 0.1~0.6 MPa, water temperature is 5°C-70°C. It is forbidden to use it out of the range.
5. The product is only suitable for indoor installation and use. It should be put in a cool and dry place, avoid direct sunlight. The pipeline connected to the product should be kept away from light source, heat source, corrosive environment and crash with sharp objects.
6. There is a sewer within 1 meter around the product which is used for drainage.
7. In any case, do not spray water to the product.
8. When the product is in failure, please cut off the water and contact the local dealer in time.
9. In order to prevent the regeneration can't achieve the desired effect, please use the grain salt provided by our company as possible.
10. When the transformer or cable damaged, the replaced one must be from our company.
11. Due to the product need electricity in use, please put the transformer in a place where no water can spray.
12. If the consequences happened due to not operating according to the above notes, our company will not take any responsibility.

## SHOWER SOFTENER

### 1. Product Overview

#### 1.1. Characteristics

- Applicable to the treatment of high hardness water.
- Dynamic regeneration mode, bigger water treatment capacity, save salt and water.
- Extensive applicability: could be installed before or after the water heater. Installed before water heater could prevent it damaged because of scaling.
- Automatically controlling the regeneration time, one button to realize regeneration. No need people stand by, LED display each status.
- Reminders of a new regeneration cycle, by time or by meter optional. (Time clock type with only time-reminding option)
- It has an automatic backwash function to reduce the phenomenon of resin harden and strainer blockage, and improve the service lifetime of resin.
- Data saved after power off.

#### 1.2. Technical Parameters

Item	Requirement
Working Pressure	0.1~0.6MPa
Inlet Water Temperature	5℃~70℃
Environment Temperature	5℃~50℃
Rated Flow Rate	600L/h
Electrical Facility	AC100~240V/50~60Hz
Water Treatment Capacity	1500L
Resin Volume	5.5L(in total for two tanks)
Inlet/Outlet	G1/2
Salt Consumption of Regeneration	800g
Applicable Water	Municipal Tap Water

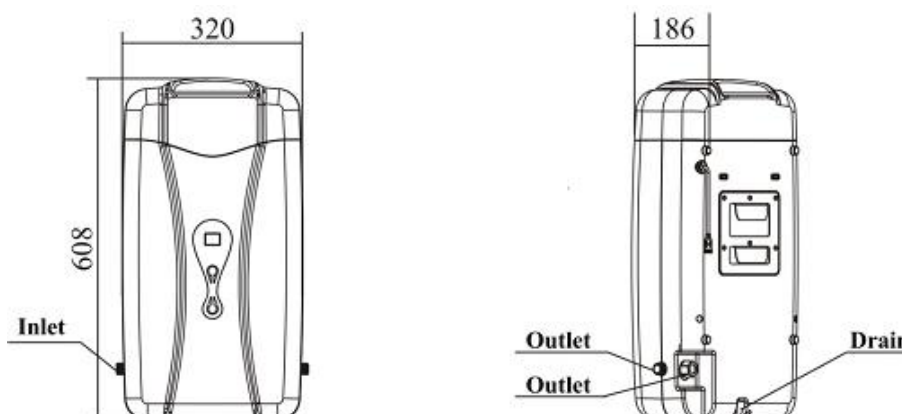
Outlet water quality: Meet the requirement of Sanitary Safety and Function Evaluation Regulation of Water Treatment Device for Drink Water-General Water Treatment Device (2001).

All the parameters of the product is tested under the standard test condition (Tested water hardness is CaCO<sub>3</sub>, 200 mg/ L). The parameters will be different if the actual usage condition changed.

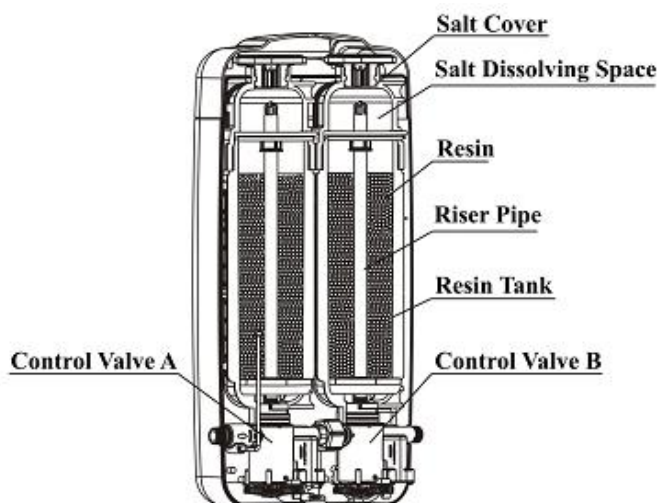
#### 1.3. Water Technological Process

Municipal tap water → Sodium cation resin → Soft water

#### 1.4. Appearance Dimensions



1.5. Structure



**2.Regeneration Operation**

2.1. Water Treatment Capacity

Water treatment capacity relates to water hardness. For a family with 3 persons, if everyone uses 40L water for shower, calculate the service time.

Water Hardness	Water Capacity	Service Time
200mg/L	1500L	About 12 days
400 mg/L	750L	About 6 days

The ways of the residential softener to remind are time clock type and meter type. The users who choose time clock type should estimate the time according to the practical situation of water using. The users who choose meter type should set local water hardness only, and then the system will calculate the water treatment capacity automatically. It will remind to regenerate when the resin becomes ineffective.

Reminding way of time clock type:

When the product is in service, there will show the using days, such as 01 (it stands for that has been used for one day after regeneration), 02 (it stands for that has been used for 2 days after regeneration)..., which is convenient to check the using days.

Users can set to remind according to the practical using situation so that control the time of regeneration better. For the details of setting steps, please see parameter setting.

Remind way of meter type:

In meter type mode, system will show "1111" when in service. "1" stands for 25% of water treatment capacity. When the water treatment capacity reaches a certain point, the screen will be flashy and remind users.

Users must set the local water hardness when use the meter type. The unit is mg/L, and local water hardness =the value you set×10. Such as value "10" means 100mg/L, value "15" means 150mg/L, and so on.

Attention: Battery-driven type has no clock/meter regeneration reminding function.

## 2.2. Regeneration Salt Consumption

Regeneration salt is made according to the characteristics of shower softener. One time of regeneration consumes 800g of salt (2 bags). **There is a special shovel which is used for adding salt with a certain quantity in spare parts kit. Customer could buy regeneration salt from other company. Salt adding quantity is based on shovel.**

Note: Use other brand of salt may cause bad effect of regeneration.

## 2.3. Regeneration Process Operation


When the water treatment capacity reaches a certain value, the resin invalid, it needs to regenerate with salt.





It is no need to regenerate for the new product installing first time until the resin becomes ineffective.

Operation methods:

A.The shower softener needs water supplied for regeneration. For the shower softener installed after water heater, the ender user needs to open the water mixing valve to let cold water enter to shower softener to regenerate, or else the regeneration is invalid.

B.During regeneration, press and hold the button  for 3 seconds, and hear a sound “Di”, enter into

regeneration status. The display board shows  when motor is rotating. When it reaches at


backwash status, it shows , water flows out from drain. After 30 seconds at  status, it will switch to  status automatically.  figure flashes and sounds buzzer.


C.Open upper cover of shell as shown in Figure 1, unscrew in turn the salt covers of resin tank 1 and resin tank 2, as is shown in Figure 2, and add 400 grams of special regeneration salt through each salt adding port as in Figure 3. Stir the grain salt to be flat and distributed equally. Tighten two salt covers, put the upper cover. It is better to control the salt adding operation within in 3 minutes.

Note: the Salt Cover can be opened only in  status. Do not open the Salt Cover in other statuses.

D.The shower softener will regenerate automatically, no need people to check. The regeneration process is about 1 hour. After regeneration, if it is the mode of installed before water heater, the shower

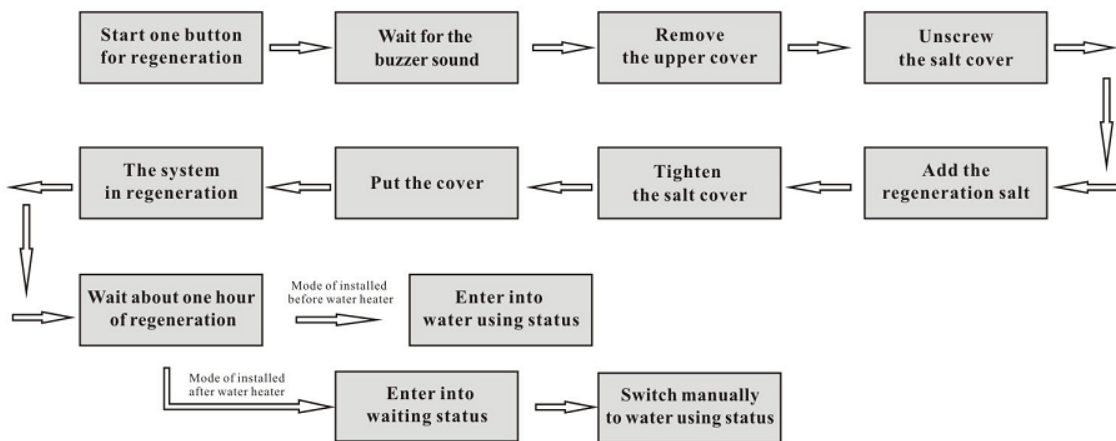
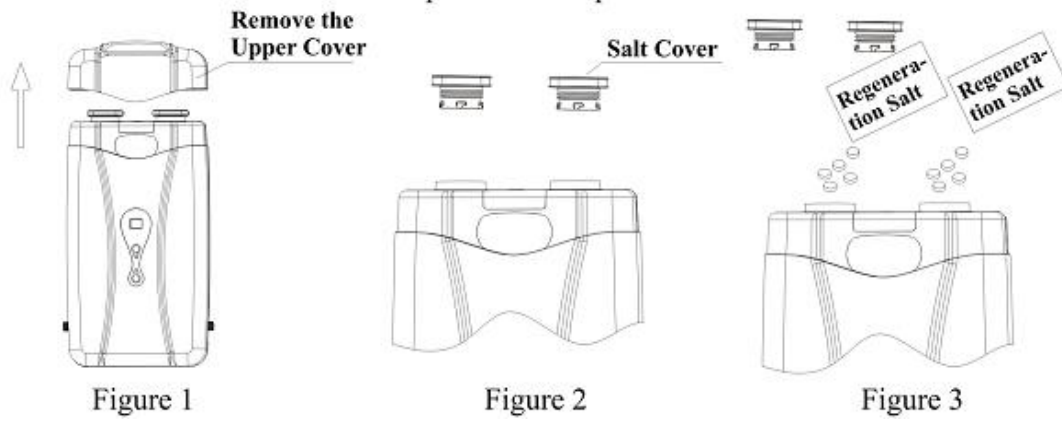
softener will enter into water using statuses , if it is the mode of installed after water heater, the

shower softener will enter into waiting status . If it needs to use water, ender user presses and holds

regeneration button  to switch it to water using status.

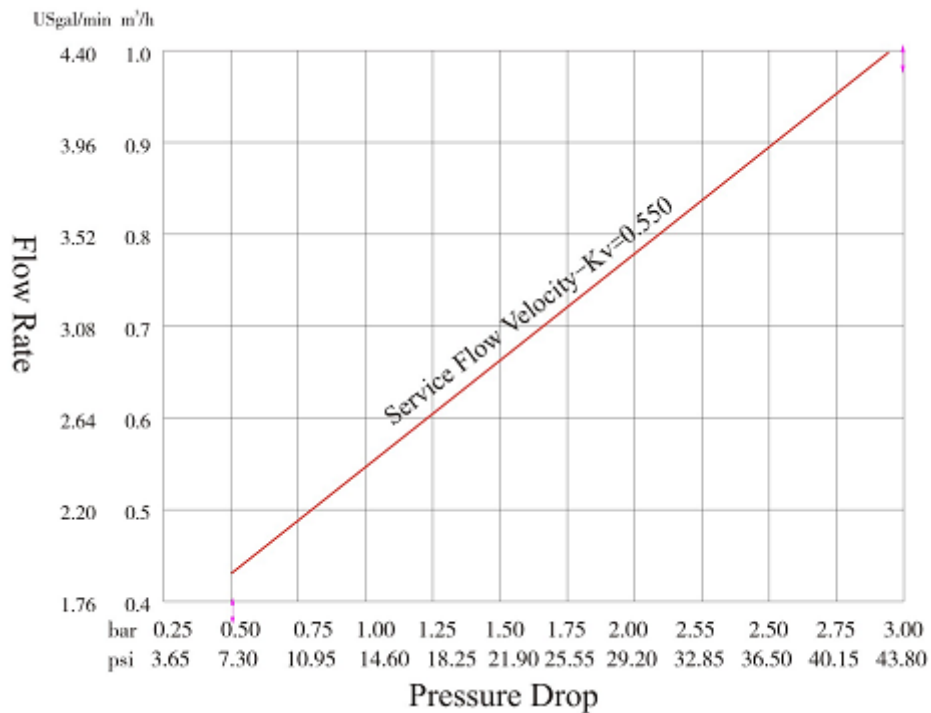
Note: During the switching of regeneration process, there will be some water flowing out from outlet. Make sure not to put outlet of sprinkler towards shower softener.

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**Flow Chart of Regeneration Process**

### 2.4. Pressure / Flow Rate Chart



### 3. Battery Change of Battery-Driven Type

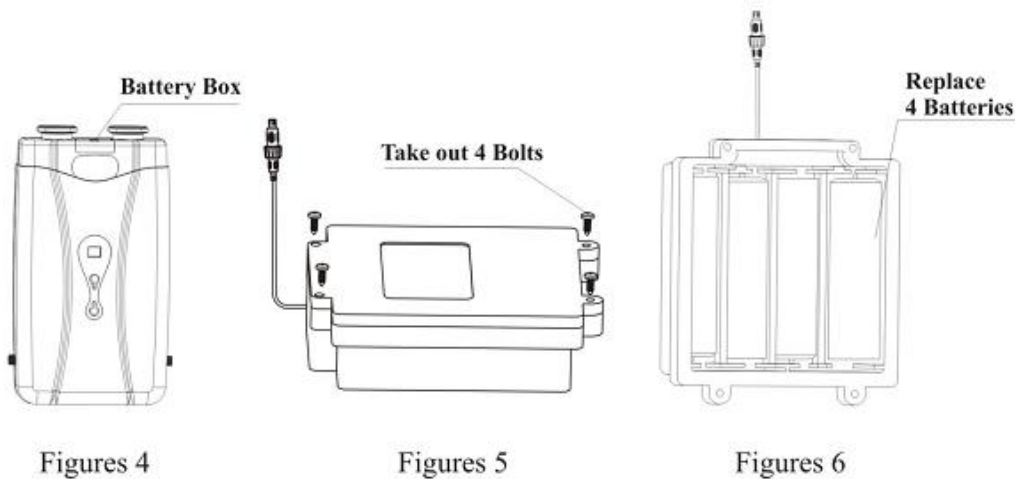
Shower softener of this model can be powered by AC adapter or battery-driven. For saving energy consumption, there is no regeneration reminding for battery-driven type shower softener. Timing of regeneration should be seized by users, but no more need for operations after it comes into the regeneration process.

Battery-driven type shower softener is powered by four pieces of AA batteries, which ensure a working time of six months. The actual service cycle and total regeneration times relate to quality of batteries.

When it's time for battery replacement, button being pressed and held, the screen will display **8:8** and flash to remind.

Follow steps as below to replace batteries:

Remove the battery cover on shower softener and take out the battery. Disassemble the sealing cover of the battery box with a screwdriver, replace batteries, and install the battery box back to shower softener following above instructions, as shown in Figures 4, 5 and 6.



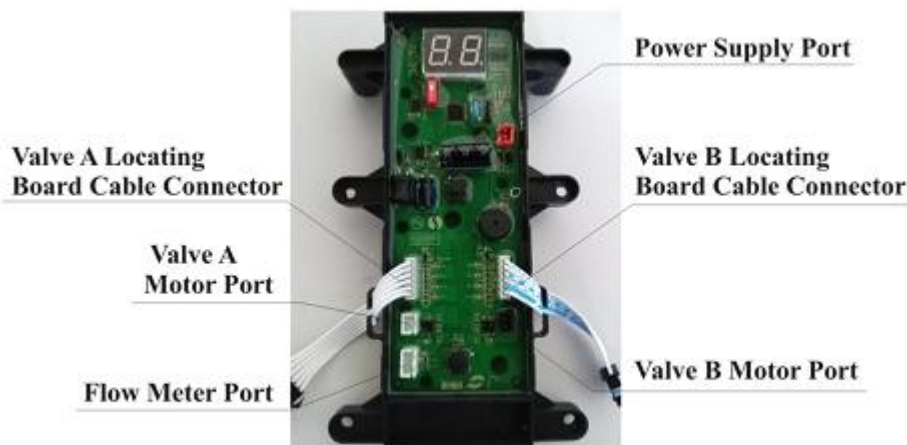
### 4. Parameter Setting

#### 4.1. Product Control Panel Instruction





## 4.2. Display Board Ports Instruction







Figures 8

The ports on the display board have a one-to-one correspondence with connectors. Connect them according to the colors and the numbers of pin cores.

## 4.3. Product Installation Type Setting

There are two types of installation, which are installed before and after water heater. It has difference processes accordingly. Resin invalid warning has time clock type and meter type.




The meanings of each code are as following:

Code	Meaning	Setting
SH	Installed after water heater, time clock type	Power on, press and hold both  and  buttons for three seconds to enter into installation type selection, press  to select the type, then press  to save the setting and quit.
S9	Installed before water heater, time clock type	
LH	Installed after water heater, meter type	
L9	Installed before water heater, meter type	

Enquiry mode: Power on, interface will display installation type.

## 4.4. Regeneration Days Reminding Settings




The shower softener can be set up alarm of regeneration days according to the practical circumstance.

The screen flashes to remind the ender user to add salt. Under the time clock mode, press and hold  button to enter into the interface of setting regeneration days reminding. Press  to set the days, then press  to save the setting and quit. For example, if it is set 07, 7 days after regeneration, the screen flashes to remind the ender user to add salt. The default setting is 00 which means no reminding. The parameter setting range is 00-60.











## 4.5. Setting the Local Water Hardness

When users choose meter type, they should set the local water hardness only, and then the system will calculate the water treatment capacity automatically. When the water treatment capacity reaches a

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certain point, the screen will be flashy and remind users to add salt to regenerate. Setting way is as following: press and hold  in meter mode to enter the menu of setting the local water hardness, and then press  to set the value of hardness. Press  to turn back and save when finish the setting. The unit is mg/L, and local water hardness =the value you set×10. Such as value “10” means 100mg/L, value “15” means 150mg/L, and so on.

### 4.6. Meaning of Process Code

Code	Meaning	Explanation	Code	Meaning	Explanation
	Service/ Service Days	In time clock type mode		Salt Disslution	
	Service/Remaining Water Volume	In meter type mode, one bar stands for 25% of water treatment capacity.		Fast Rinse	Water flows out from drain
	Backwash	Water flows out from drain		Salt Disslution	
	Salt Disslution			Fast Rinse	Water flows out from drain
	Fast Rinse	Water flows out from drain		Closing and Waiting	

## 5. Resin Replacement

It needs to replace the resin after the shower softener being used for 3 to 5 years. It is recommended to do it by professional personal. If you replace the resin by yourself, please follow these steps:

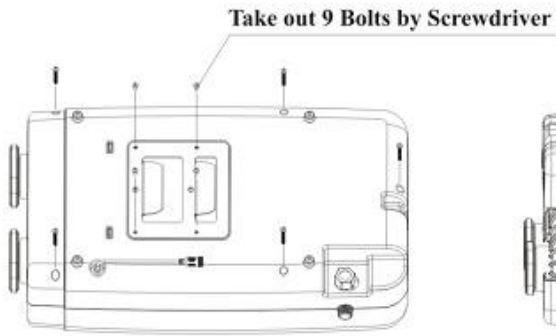
- a. Unscrew 5 bolts on back cover and 4 diagonal bolts on clevis by cross screwdriver.
- b. Take out the front cover of shower softener. Be sure not scratch the surface.
- c. Unscrew 4 bolts at the main control board by screwdriver and take out the board
- d. Unscrew 8 bolts which are used to fix resin tank to back cover by cross screwdriver.
- e. Unscrew the animated nut at the joint of two control valves.
- f. Take out the valve-tank assembly and unscrew the resin tank cover with a special tool.
- g. Take out the strainer carefully and prevent the riser pipe falling out.
- h. Press the riser pipe to prevent it falling out. Pour out of resin, and put 2.5 liters of new resin in to resin tank.
- i. After replacing resin, assemble the shower softener according to the above instruction.

Install the shower softener according to above steps, please note:

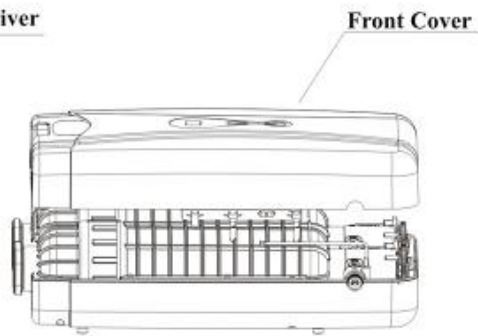
- 1.Thread on resin tank and O-ring should be cleaned.
2. If the riser pipe falls out, it needs to be cleaned and inserted into resin tank.
- 3.Be sure the drain line flow control is undamaged when installing the drain pipeline.

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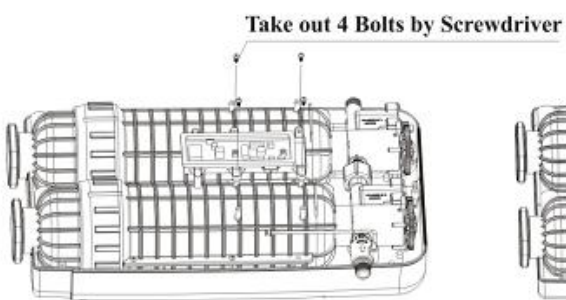
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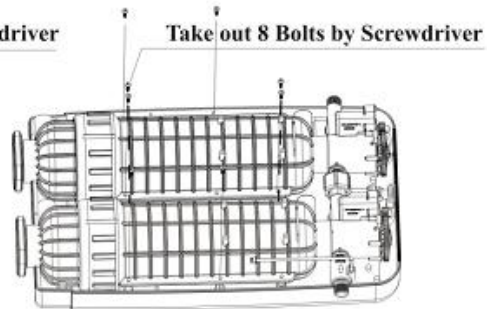
a. Take out Bolts at Back Cover



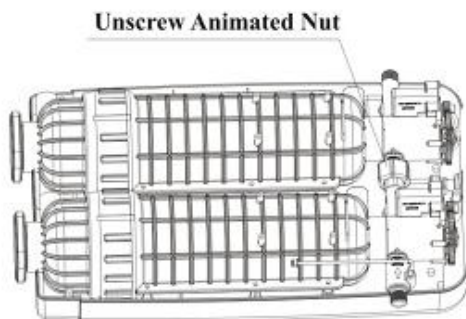
b. Dissemble Front Cover



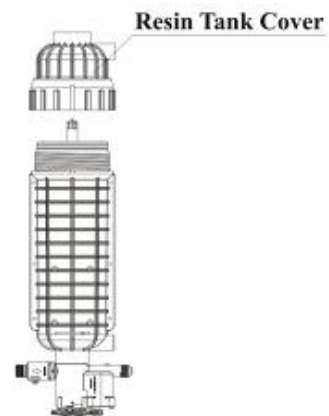
c. Unscrew Bolts at Main Control Board



d. Unscrew Bolts at Resin Tank



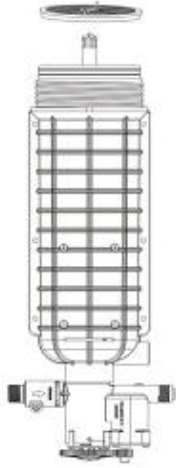
e. Unscrew Animated Nut



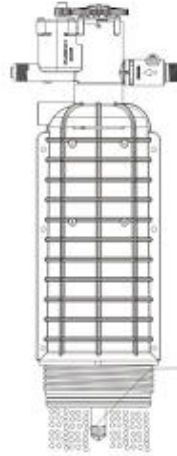
f. Unscrew Resin Tank Cover

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g. Remove Top Strainer



**Press the Riser Pipe  
and Dump Resin**

h. Dump Resin

## 6. Trouble Shooting

Problem	Cause	Correction
Leakage	No o-ring installed or assembly not tight.	Install o-ring and tighten the connection.
Water flow rate decreased	Strainer blocked.	Clean strainer and install front filter screen.
Outlet water unqualified	1.Resin invalid. 2.Resin lifetime expired. 3.Regeneration effect not good.	1.Regenerate resin. 2.Replace resin. 3.Check if the drain pipeline blocked or use the special regeneration salt.
Regeneration effect not good	1.Do not use the special regeneration salt. 2.The drain is blocked. 3.Source water is not opened during regeneration.	1.Use the special regeneration salt. 2.Clean the drain line flow control. 3.Open the source water and regenerate again.
E1 flash (Damaged Parts of Tank A)	1.Motor failure. 2.Display board failure. 3.Locating board failure. 4.Moving disk stuck. 5.Battery no electricity.	1.Replace motor. 2.Replace display board. 3.Replace locating board. 4.Clean the substance between moving disk and fixed disk. 5.Replace battery.
E2 flash (Damaged Parts of Tank A)	1.Wiring of locating board is bad. 2. Display board failure.	1.Replace the locating board wiring. 2.Replace display board.
F1 flash (Damaged Parts of Tank B)	1.Motor failure. 2.Display board failure. 3.Locating board failure. 4.Moving disk stuck. 5.Battery no electricity.	1.Replace motor. 2.Replace display board. 3.Replace locating board. 4.Clean the substance between moving disk and fixed disk. 5.Replace battery.
F2 flash (Damaged Parts of Tank B)	1.Wiring of locating board is bad. 2.Display board failure.	1.Replace the locating board wiring. 2.Replace display board.
E3 flash	Display board failure.	Replace display board.

## 7. Warranty Card

Dear client:

This warranty card is the guarantee proof of our Shower Softener. It is kept by client self. You could get the after-sales services from the supplier which is appointed by manufacturer. Please keep it properly. It couldn't be retrieved if lost. It couldn't be repaired free of charge under the below conditions:

- 1.Guarantee period expired.(One year);
- 2.Damage resulting from using, maintenance, and keeping that are not in accordance with

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the instruction;

3. Damage resulting from repairing not by the appointed maintenance personnel;

4. Content in guarantee proof is unconfirmed with the label on the real good or be altered;

5. Damage resulting from force majeure.

Product Name	SHOWER SOFTENER			
Model		Code of Valve Body		
Purchase Company Name		Tel/Cel.		
Problem				
Solution				
Date of Repairing		Date of Accomplishment		Maintenance Man Signature