Rayne®
Water Conditioning

Owner's Manual
R4039

RXD Water Softener

This manual contains information on setting the controller and normal operating maintenance required by the owner.

UNPACKING INFORMATION
Unit is shipped with the necessary softening media already loaded in the mineral tank. Items packed separately are located in the brine tank:

A. Transformer 24 Volt
B. By-pass
C. 9V Ni- Cad Battery
D. Owner's Manual
E. Warranty

WARRANTY RECORD: INSTALLER RESPONSIBLE FOR ENTRIES
CUSTOMER TO RETAIN

This water treatment equipment is warranted against defects in materials and workmanship according to the specific terms of the warranty provided. To substantiate any warranty claims, retain the bill of sale, or purchase contract, and the water analysis report if available.

MODEL NO._____ **WARRANTY SERIAL #**_____

DATE INSTALLED_____/_____/_____

COMPENSATED WATER HARDNESS_____ **GPG**

TYPE OF SALT IN BRINE TANK †_____

DEALER NAME: _____

ADDRESS: _____

SPECEFICATIONS	**RXD 1000 RXD 1000 S**	**RXD 1500 RXD 1500 D**	**RXD 2000**
Pressure range	30º psi to 125º psi		
Operating Temperature	40º F to 120º F		
Electrical	24 V, 60Hz		
Max. Hardness range (gpg)	60	70	100
Service Flow Rate	13.5	13	14
Softening Capacity (grains) Minimum - Efficiency Setting	20,000	30,000	40,000
Softening Capacity (grains) Maximum	30,000	45,000	60,000
Salt Dosage (lbs.) Minimum - Efficiency Setting	6	9	12
Salt Dosage (lbs.) Maximum	15	22 1/2	30
Clear water of Iron Removal Capacity (ppm) *	5	5	6
Brine Valve System	Noryl Safety Float		

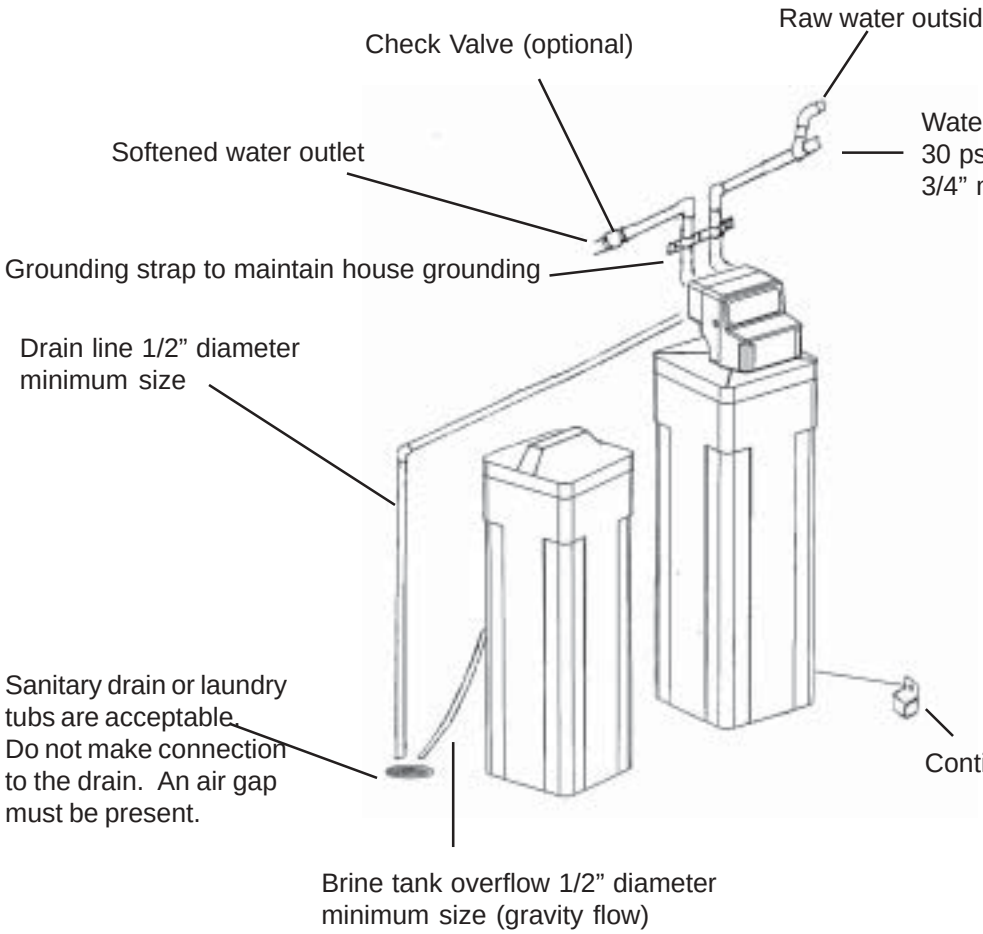
*NOTE: MUST BE SET AT MAXIMUM SALT FOR IRON REMOVAL

† **SALT**-Use evaporated salt such as solar, pellet, nugget, button, crystal, or tabs. Rock salt is not recommended because it commonly contains silt and sand which can hamper the operation of the equipment. DO NOT use granulated types. Block types labeled for water softener use are acceptable, however, DO NOT drop into brine tank or stack more than two high.

INTRODUCTION

Your new Rayne automatic water softener will contribute to better and longer service from all the water using appliances in your home. You'll soon appreciate the many savings and personal benefits that soft water brings.

PIPING DETAILS



Softener Tank Installation

OWNER'S RESPONSIBILITY

A. Maintain a supply of proper type salt in the brine tank. (See SPECIFICATIONS)
B. Occasionally inspect drain lines for possible restriction, clogging, or kinking.
C. Occasionally cleaning of the softening resin is recommended. Specialty chemicals are available to clean and maintain water softener efficiency. When purchasing, look for the active ingredient SODIUM HYDROSULFITE on the label of the cleaning agent .
D. Clean brine tank periodically. (once a year is recommended)
E. Protect the system from freezing - If system is used in a summer home, system should be drained down and protected against freezing.

Installation and Start-Up Procedures

1. The water softener should be installed with the inlet, outlet and drain connections made in accordance with the manufacturers recommendations and to meet applicable plumbing codes.

2. Plug the valve transformer into an approved power source. Once the valve is powered, it may cycle itself to return to Service.

3. In normal operation the Time of Day, Volume Remaining Displays will alternate being viewed. Set the Time of Day Display by depressing the Up or Down Set Button, to the correct time. (See Fig. 1) Note: Time of Day must be set correctly to either A.M. or P.M. (See Fig. 1).

4. The value displayed in the Volume Remaining Display will be the volume of water (In gallons) remaining prior to regeneration, including any reserve capacity. Open a soft water tap. As water flows through the softener, the number displayed will decrease. Close the tap after 3 - 5 gallons of water flow.

5. Cycle the valve to the backwash position by depressing the Extra Cycle Button for 5 seconds, and allow water to run to drain for 3 to 4 minutes. Using the extra cycle button continue to step the valve through the other regeneration cycles checking for Brine Draw, Rapid Rinse, and Brine tank fill. Allow the valve to return to service automatically from brine tank refill.

6. Make sure the salt dosage is set as recommended by the manufacturer.

7. Fill the brine tank with salt.

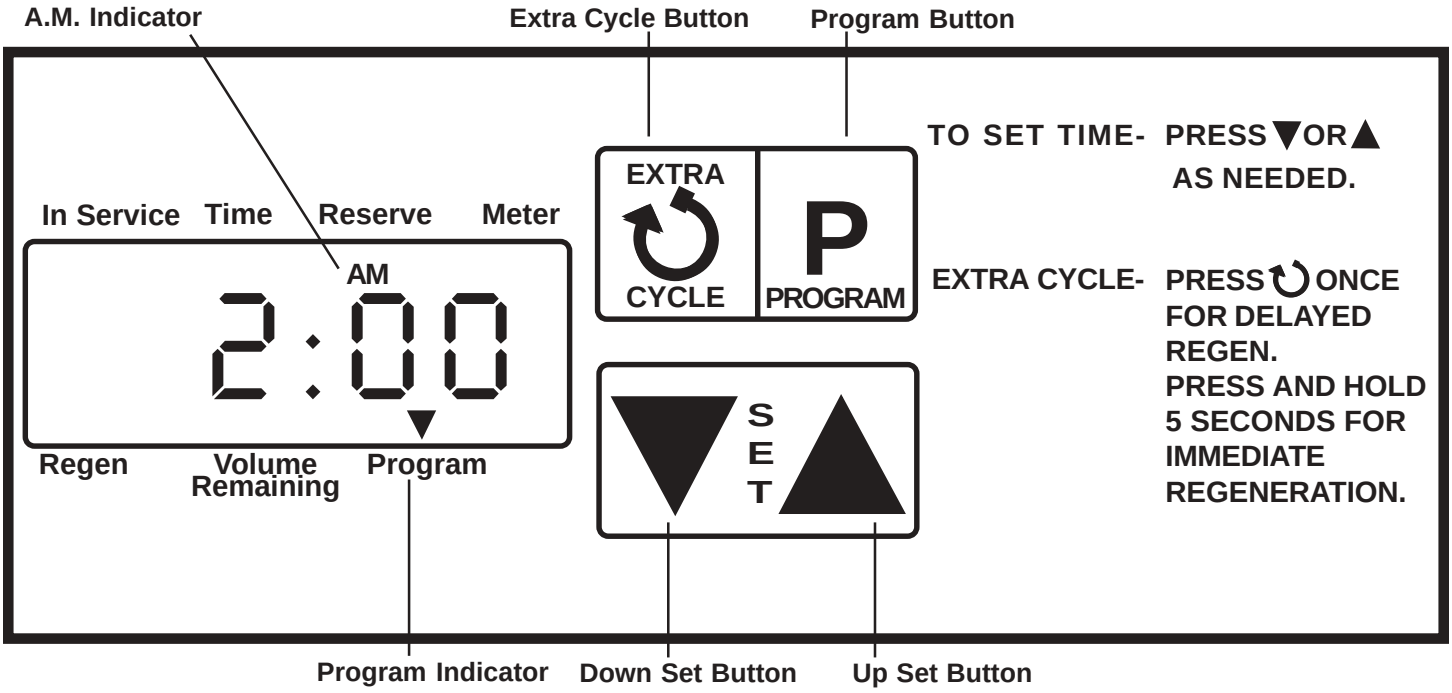
8. The RXD Valve is equipped with a 9Volt Alkaline Battery. It is recommended this battery be changed once a year. Daylight Savings Time is a good time to do so. The battery is located below the electronics, inside the front cover. In the event of a power outage, the battery will maintain current system information (Time of Day, Volume Remaining, etc.) for approximately 24 hours at maximum battery capacity. This backup time will vary, depending on flow meter usage during the power outage. If the power interruption exceeds the capacity of the battery backup, the normal operating display(s) information will be lost.

9. For the valve to resume normal operation, it will be necessary to reset only the Time of Day Display. This can be done by depressing either the Up or Down Arrow Buttons. The valve will automatically initiate a regeneration cycle 5 minutes after power re-application. All valve programming however, is stored in special non-volatile memory that can be retained for years without power.

10. During cold weather it is recommended that the installer warm the valve up to room temperature before operating.

Option Setting Level #1 - Installer Programming

Fig.1



Use UP and Down Arrows to Set Time of Day

Setting up the valve during installation requires access to the first level of option programming.

Entering Option Level #1
Depress for the Program Button for 5 seconds. The Program Arrow will turn on and the first display viewed is used to set the Inlet Water Hardness.

1. **Water Hardness (H)**
   The unit of measure used for this setting is grains. This option setting is identified by the letter H in the first digit.

   Example: 25 grains [H - - - - 25]

   The **UP** and **DOWN Set Buttons** will adjust this value.

2. **Regeneration Time**
   Depress the Program Button. The next display viewed is the option for Regeneration Time. It is identified by a non-flashing colon between two sets of numbers.

   Example: 2 o'clock A.M. regeneration time [2:00] **(A.M. Indicator On)**

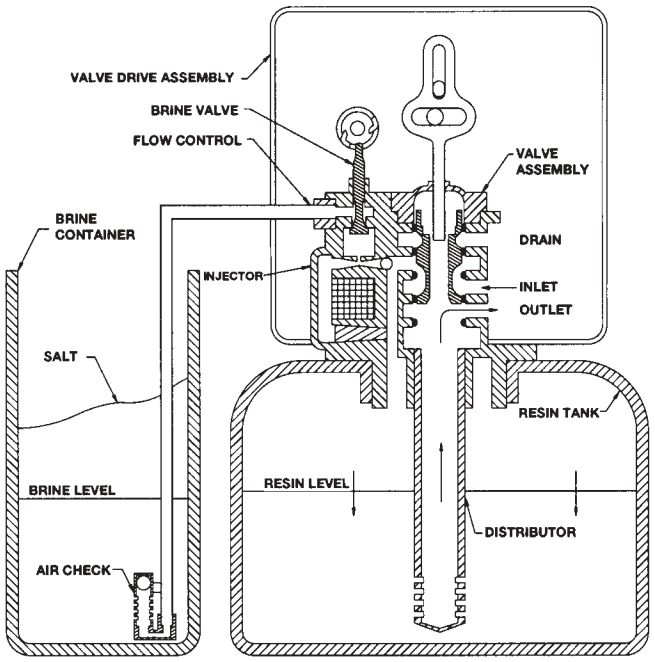
   The **UP** and **DOWN Set Buttons** will adjust this value.

Exiting This Option Setting Level
Push the Program Button to return to Time to Day / Gallons Remaining.

Installer Notes
1. Control Calculations - With Delayed Regeneration Valves, the control is designed to automatically calculate the number of gallons between regenerations and set the reserve capacity based on daily water usage. There is no need to program either of these settings. The System capacity Option Setting should be set to the resin bed manufacturers capacity recommendations for a given amount of salt to be used during regeneration.

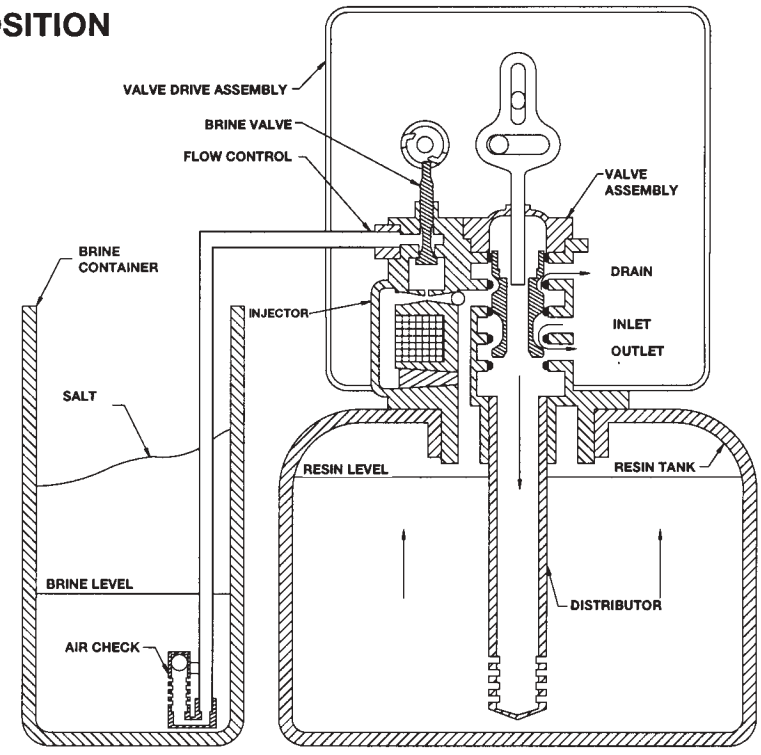
Water Flow Diagrams

1 SERVICE POSITION



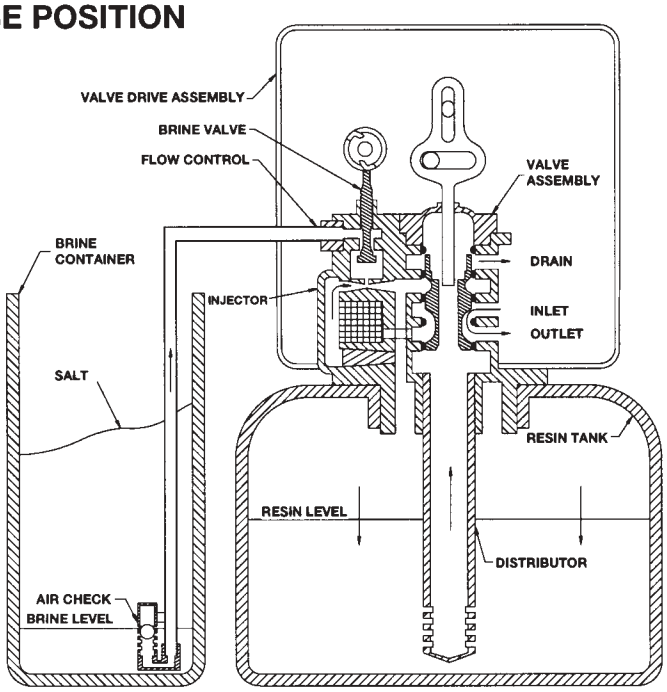
Hard water enters unit at valve inlet and flows around the piston down thru the mineral in the mineral tank. Conditioned water enters center tube thru the bottom distributor – then flows up thru the center tube and to the outlet of the valve.

2 BACKWASH POSITION



Hard water enters unit at valve inlet - flows around piston - down center tube - thru bottom distributor and up thru the mineral - around the piston and out the drain line.

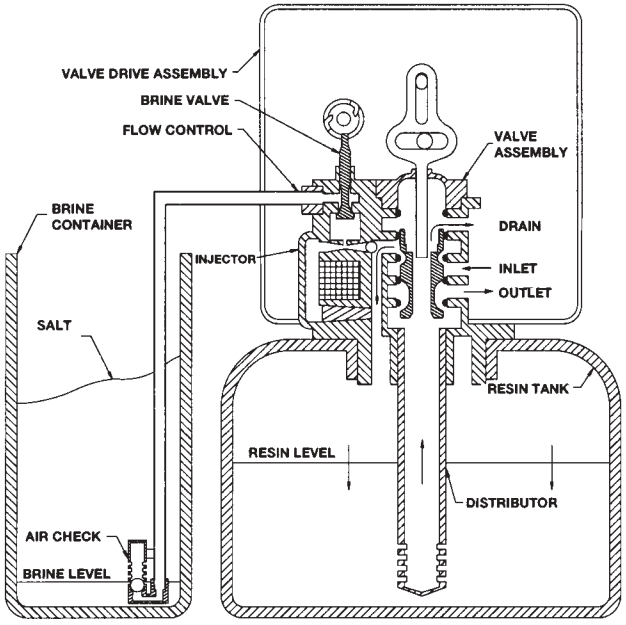
3 BRINE/SLOW RINSE POSITION



Brine. Hard water enters unit at valve inlet - flows into injector housing and thru nozzle and throat to draw brine from the brine tank - brine flows down thru mineral and enters the center tube thru bottom distributor and out thru the drain line.

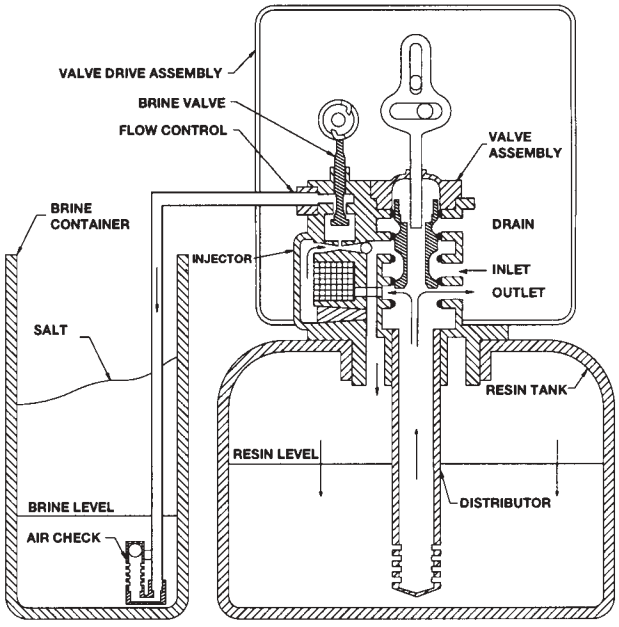
Slow Rinse. Hard water enters unit at valve inlet - flows into injector housing and thru nozzle and throat down thru mineral and enters the center tube thru bottom distributor and out thru the drain line.

4 RAPID RINSE POSITION



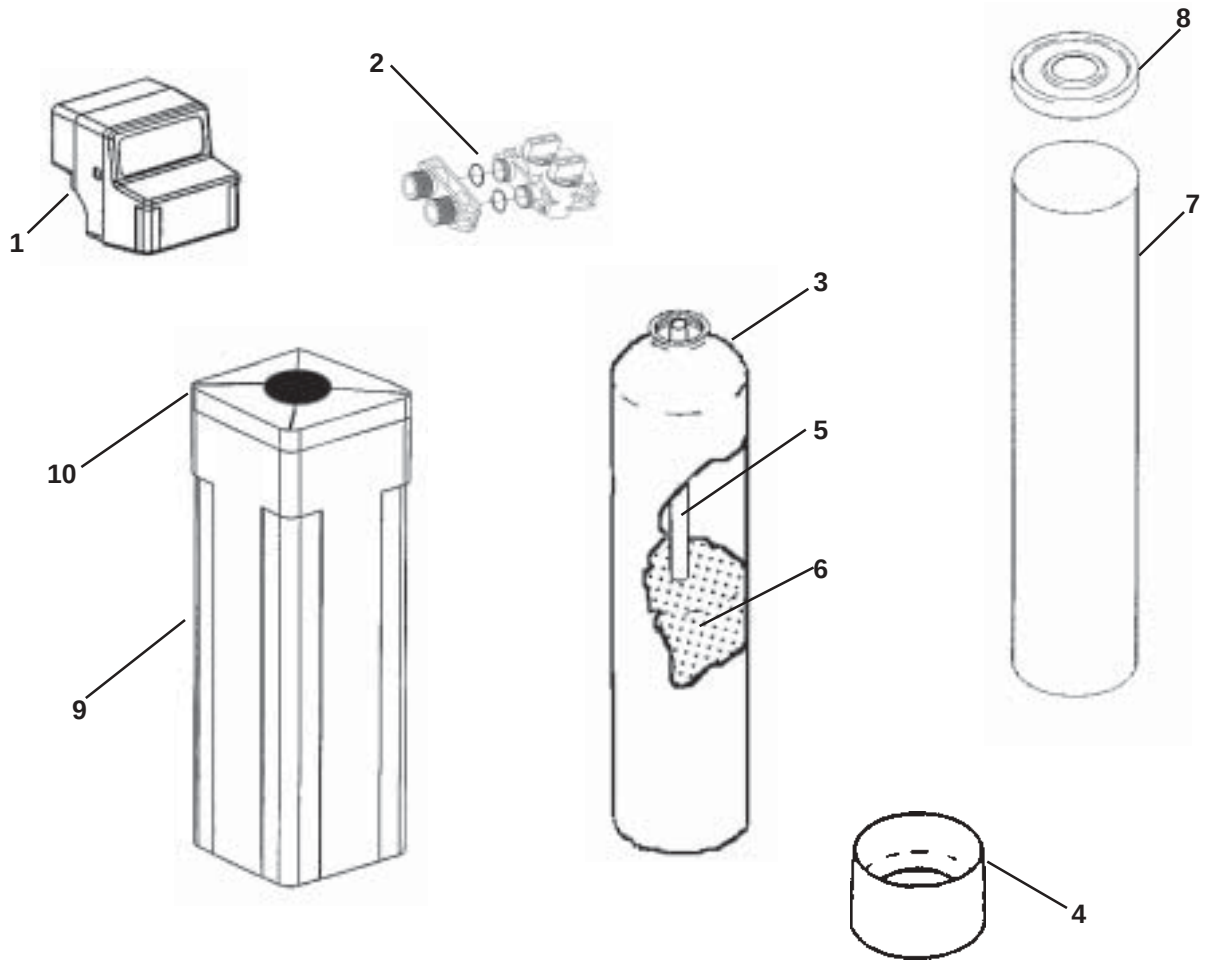
Hard water flows from inlet around the piston down thru the mineral into bottom distributor and up thru center tube - thru piston and out thru the drain line.

5 BRINE TANK FILL POSITION



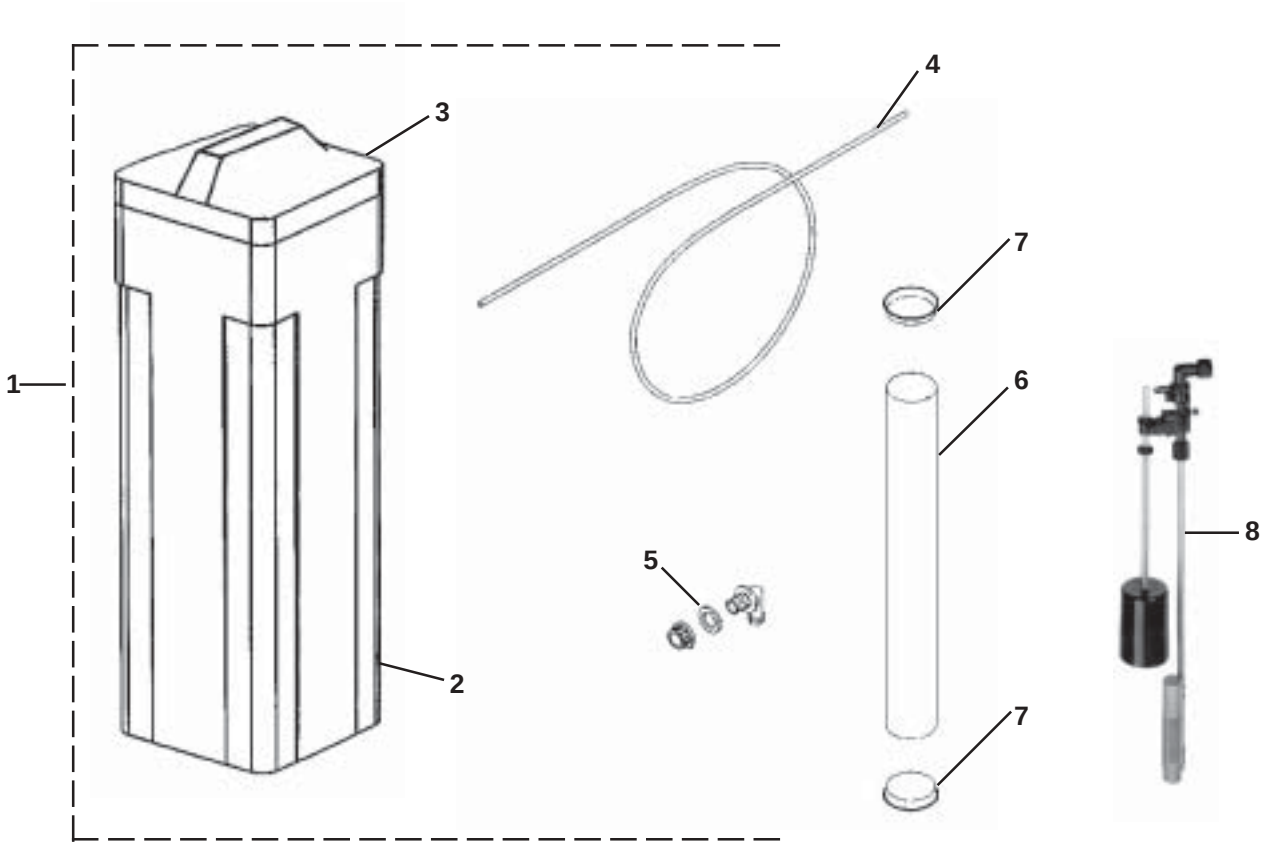
Hard water enters unit at valve inlet and flows around the piston down thru the mineral. Conditioned water flows up thru the center tube - flows thru the injector housing - thru the brine valve to fill the brine tank.

Water Softener Assembly



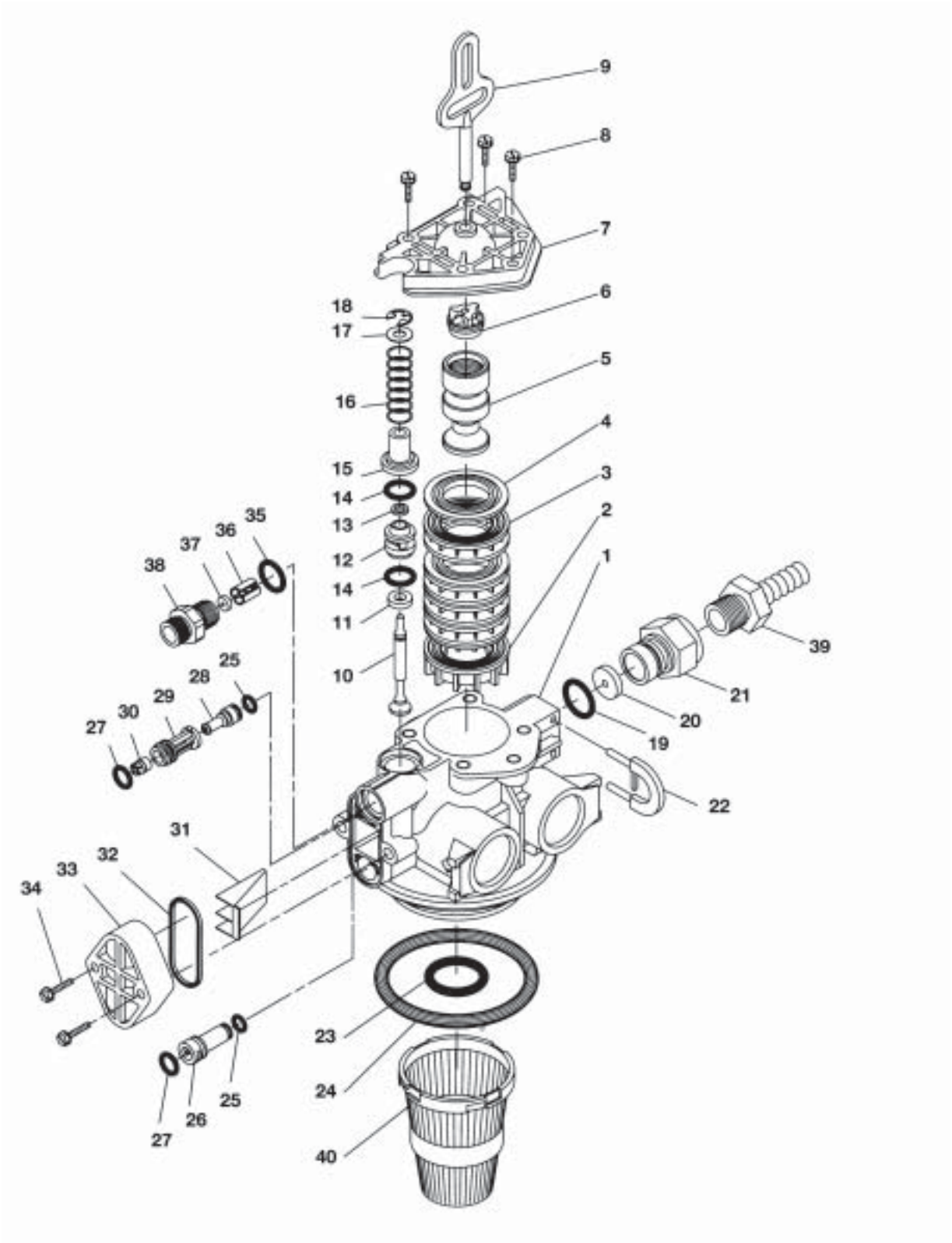
Item #	RXD1000	RXD1500	RXD1500-D	RXD2000	RXD1000-S	Description
1	5066103					RXD Controller - Specify Model
2	60049					Bypass , plastic 1"
3	ST1040 10 x 40	ST1047 10 x 47		ST1252 12 x 52	ST1035 10 x 35	Mineral Tank
4	RF00011			RF01010	n/a	Tank Base
5	RF0030					High Flow 1" Distributor - Specify Model
6	A1020-5					High Capacity Resin, C-249
	1 cf	1.5 cf	1.5 cf	2 cf	1 cf.	
7	CK1040 Almond 10 x 40	CK1047 Almond 10 x 47	SS1047 Stainless Steel 10 x 47	CK1252 Almond 12 x 52	n/a	Jacket - Almond
8	RF00015		SS0010	RF01212	n/a	Collar - Black
9	n/a	n/a	n/a	n/a	CK1111	Cabinet
10	n/a	n/a	n/a	n/a	CK0011	Cabinet Deck

Brine Tank Assembly



Item #	RXD1000	RXD1500	RXD1500-D	RXD2000	RXD1000-S	Description
1	C10771BR		C10772BR	C10771BR	CK1000S	Complete Brine Tank Assembly
2	B08801BR 15 x 17, Almond		B08802BR 15 x 17, Black	B08801BR 15 X 17, Almond	CK1111 11 x11, Almond	Brine Tank
3	A10171BR 15 x 17 Black				CK0001 11 x11, Black	Brine Tank Lid
4	A11510BR					Brine Line
5	A13940BR					Overflow fitting
6	A14120BR					Brine Well
7	A05300BR					Brine Well Lid
8	2310					Brine Valve Assembly

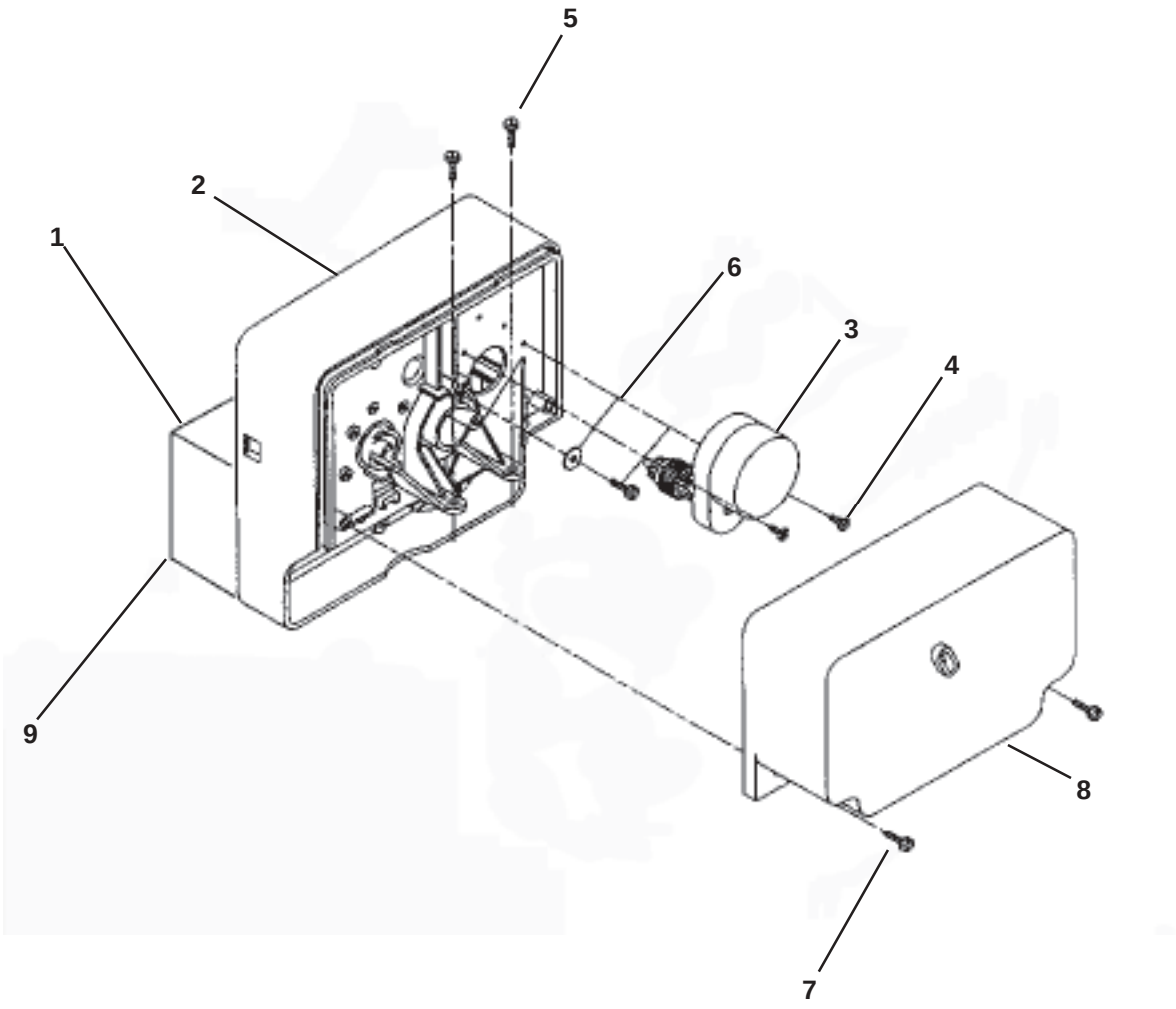
Control Valve Assembly



Downflow Control Valve

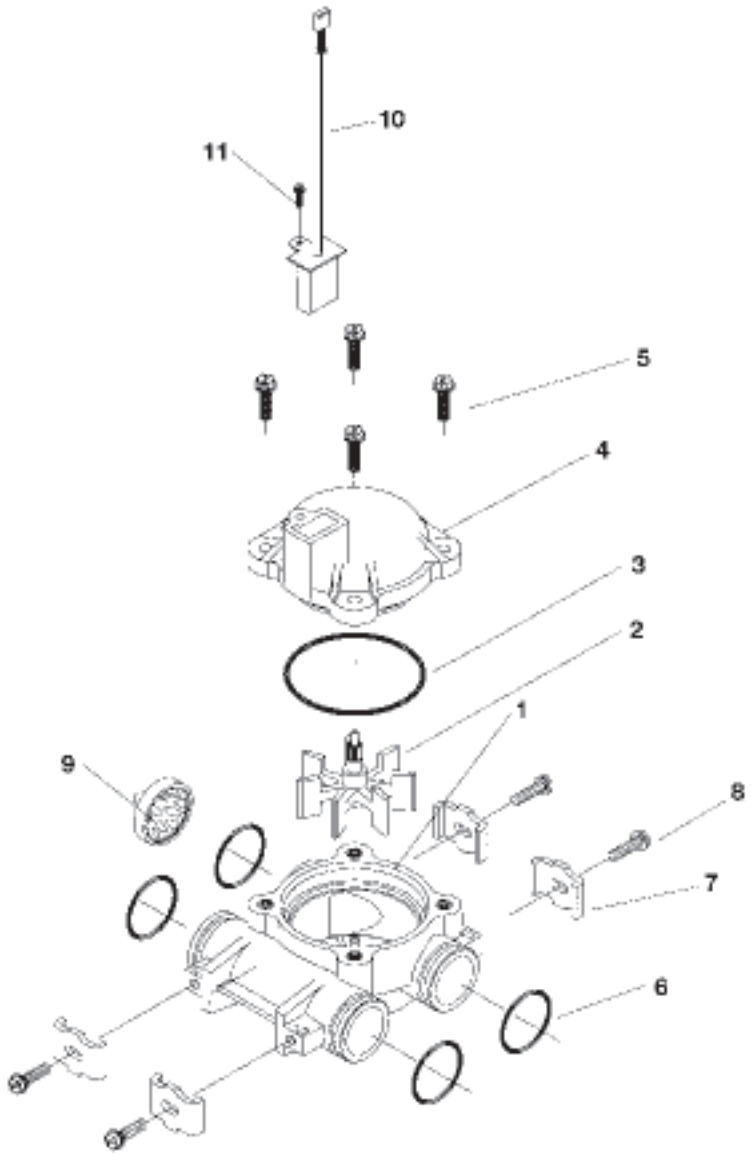
Item No.	Quantity	Part No.	Description
1	1	18815	Valve Body, 5000, 1 " Dist.
2	1	18264	Spacer, End
3	4	14241	Spacer
4	5	13242	Seal
5	1	18265	Piston, Downflow
6	1	14309	Retainer, Piston Rod
7	1	18268	End Plug Assembly
8	3	18261	Screw, Hex Washer Head, 10-24 x 13/16
9	1	18267	Piston Rod
10	1	17978	Brine Valve Stem
11	1	18755	Seat, Brine Valve
12	1	13167	Spacer, Brine Valve
13	1	12550	Quad Ring, -009
14	2	13302	0 Ring, -014
15	1	13165	Cap, Brine Valve
16	1	11973	Spring, Brine Valve
17	1	16098	Washer, Plain, Nylon
18	1	11981-01	Retaining Ring
19	1	11183	0 Ring, -017
20	1		Flow Washer (specify size)
21	1	11385-01	Flow Control Housing, Plastic
22	1	18312	Retainer, Drain
23	1	13304	0 Ring, -121
24	1	18303	0 Ring, -336
25	2	10141	0 Ring, -010
26	1	18276	Plug, Injector
27	2	13771	0 Ring, -012
28	1	18275-X	Injector Throat (specify size) 000, 00, 0, 1, 2, 3
29	1	18274-X	Injector Nozzle (specify size) 000, 00, 0, 1, 2, 3
30	1	18273	Vortex Generator
31	1	18271	Screen Injector
32	1	18301	Seal, Injector
33	1	18277	Cap, Injector, Softener
34	2	18262	Screw, Hex Washer Head, 10-24 x 1
35	1	12977	0 Ring, -015
36	1	13245	Retainer, BLFC Button
37	1		Flow Washer (specify size)
38	1	13244	Adapter, BLFC
39	1	13308	Hose Barb, Black, 1/2 x 112 Straight
	1	12338	Hose Barb, Black, 1/2 x 1/2 900 Elbow
40	1	18280	Top Collector, 1 X .011, Gray

Control Drive Assembly



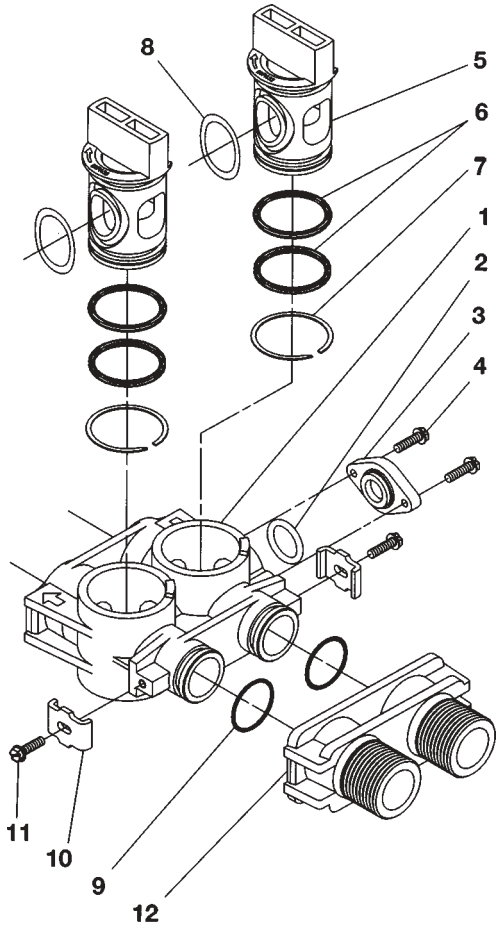
Item No.	Quantity	Part No.	Description
1	1	EB5066	Electronic Board
2	1	60200-00	Control Drive Assembly, Downflow
3	1	18217-10	Motor Assembly 24V / 60 Hz
4	2	13602	Screw, Rd Head, 6-32 x 5/16
5	2	18261	Screw, Hex Head, 10-24 x 13/16
6	1	13363	Washer, Plain .145 ID
7	4	13296	Screw, Hex Washer 6-20 x 1/2
9	1	18259-02	Cover, Back, Black
10	2	19935-01	Cover, Front, Smoke

Meter Assembly



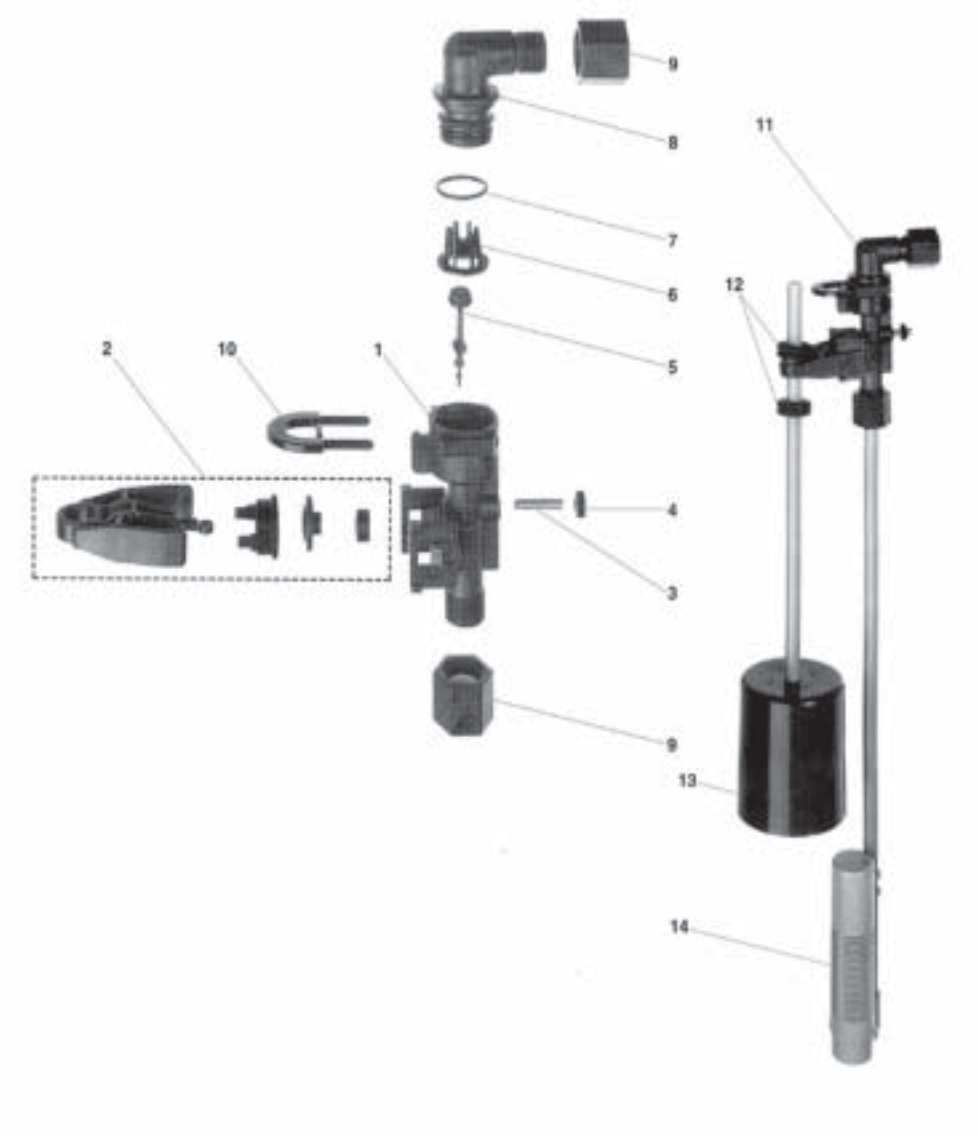
Item No.	Quantity	Part No.	Description
1	1	13821	Meter Body
2	1	13509	Impeller
3	1	13847	0 Ring, -137
4	1	14716	Meter Cap Assembly
5	4	12473	Screw, Hex Washer, 10-24 x 5/8
6	4	13305	0 Ring, -119
7	4	13255	Clip, Mounting
8	4	13314	Screw, Hex Washer Head, 8-18 x 5/8
9	1	14613	Flow Straightener
10	1	19121-01	Harness Assembly, Flow Meter
11	1	17798	Screw

By-Pass Assembly



Item No.	Quantity	Part No.	Description
1	1	19723	By-Pass Valve Body, Plastic
2	1	11183	0 Ring, -015
3	1	19724	Cap, By-Pass
4	2	17512	Screw, Hex Washer Head, #6-24 x 3
5	2	17820	Plug, By-Pass
6	4	18661	0 Ring, -218
7	2	18662	Retaining Ring
8	2	18660	0 Ring
9	2	13305	0 Ring, -119
10	2	13255	Clip, Mounting
11	2	13314	Screw, Hex Washer Head, 8-18 x 5/8
12	1	18706	Yoke, Plastic, 1 " NPT
	1	8706-02	Yoke, Plastic 3/4" (not pictured)
	1	19620-01	90º Adapter Coupling - Optional (not pictured)

2310 Safety Brine Valve Assembly



Item No.	Quantity	Part No.	Description
1	1	19645	Safety Brine Valve Body
2	1	19803	Safety Brine Valve Arm Assembly
3	1	19804	Stud, 10-24
4	1	19805	Nut, 10-24
5	1	19652-01	Poppet & Seal
6	1	19649	Flow Dispenser
7	1	11183	O-Ring, -017
8	1	19647	Elbow, Safety Brine Valve
9	2	19625	Nut Assembly, 3/8
10	1	18312	Retaining Clip
11	1	60014	Safety Brine Valve, 2310 (includes items 1 -10)
12	2	10150	Grommet (included with item 13)
13	1	60068	Float Assembly, 2310
14	1	60002	500 Air Check Assembly

Service Instructions

A. To Remove and Replace Powerhead

1. Turn off water supply to conditioner:
   a. If the conditioner installation has a "three valve" by-pass system, first open the valve in the bypass line, then close the valves at the conditioner inlet and outlet.
   b. If the conditioner has an integral by-pass valve, put it in the by-pass position.
   c. If there is only a shut-off valve near the conditioner inlet, close it.
2. Relieve water pressure in the conditioner by putting the control in the backwash position momentarily. Return the control to the service position.
3. Unplug electrical cord from outlet.
4. Disconnect the cable from the meter cover. Remove the control valve back cover.
5. Remove screw and washer at drive yoke. Remove powerhead mounting screws. The entire powerhead assembly will now slide forward.
6. Put new powerhead on top of valve. Place lugs atop end plug and slide rearward. Be sure drive pin on main gear engages slot in drive yoke (rotate control knob if necessary).
7. Replace powerhead mounting screws. Replace screw and washer at drive yoke.
8. Return by-pass or inlet valving to normal service position. Water pressure should now be applied to the conditioner, and any by-pass line shut off.
9. Plug electrical cord into outlet.
10. Set time of day, program wheel, and salt usage. Cycle the control valve manually to assure proper function. Make sure the control valve is returned to the service position.
11. Replace the control valve back cover. Set top leading edge of cover over the 2 legs and rotate down (See illustration page 19.)
12. Make sure there is enough brine in the brine tank.
13. Plug cable into meter cover.
14. Press the Extra Cycle button to allow the unit to regenerate that evening.

B. To Remove and Replace Motor

1. Follow steps A1 through A4.
2. Remove the clear Motor Bearing on the front face of the powerhead by turning clockwise.
3. Disconnect wire nuts on motor leads and powercord.
4. Remove the two screws holding motor in place and pull motor out of powerhead. Note: You may have to rock motor slightly to the side.
5. Place new motor in position. Motor should set flush with powerhead and install the two screws.
6. Reconnect motor leads and powercord and install wire nuts. Note: Motor leads should be wrapped clockwise around the motor coil to keep clear of the mechanical operation of the Control Valve.
7. Install the clear Motor Bearing on the front face of the powerhead.

C. To Replace or Clean Injectors and Screen

1. Follow steps A1 through A3.
2. Remove the two screws in the injector cap. Remove injector cap and discard seal. With screwdriver, pry injector nozzle and throat assembly from valve body.
3. Push in cleaned or new injector nozzle and throat assembly. Be sure they are all the way in. Clean or install a new screen.
4. Install new Injector cap seal in Valve Body.
5. Insert screws through injector cap into mating
6. holes in the valve body and tighten screws.
7. Return by-pass or inlet valving to normal service position. Water pressure should now be applied to the conditioner and any by-pass line shut off. Check for leaks at seal around injector cap.

D. To Replace Piston and/or Seals and Spacers and/or Brine Valve

1. Follow steps A1 through A.5.
2. Remove the three screws and pull upward on end plug and piston assembly to remove it from Valve Body.
3. To Replace Brine Valve
   a. Pull brine valve from valve body, also remove and discard o ring at bottom of brine valve hole
   b. Apply silicone lubricant to new o ring and reinstall at bottom of brine valve hole.
   c. Apply silicone lubricant to o ring on new brine valve assembly and press into place, shoulder on bushing should be flush with valve body.
4. To Replace Seals and Spacers:
   a. Remove seals and spacers using your fingers from valve body.
   b. Inspect the inside bore of the valve for foreign matter that could interfere with valve operation.
   c. Replace new seals and spacers using your fingers to set in place.
5. To Replace Piston:
   a. Inspect the inside of the valve to make sure that all seals and spacers are in place, and that there is no foreign matter that could interfere with valve operation.
   b. Take new piston and end plug assembly as furnished and push piston into valve by means of the end plug.
6. Install and tighten the three screws in the end plug.
7. Return by-pass or inlet valve to normal service position. Water pressure should now be applied to the conditioner and any by-pass line shut off.

Service Instructions

7. Check for leaks at all seal areas.
8. Follow steps A6 through A14.

E. **To Replace Meter**

1. Turn off water supply to conditioner:
   a. If the conditioner installation has a "three valve" by-pass system, first open the valve in the bypass line, then close the valves at the conditioner inlet and outlet.
   b. If the conditioner has an integral by-pass valve, put it in the by-pass position.
   c. If there is only a shut-off valve near the conditioner inlet, close it.
2. Relieve water pressure in the conditioner by putting the control in the backwash position momentarily. Return the control to the service position.
3. Unplug electrical cord from outlet.
4. Disconnect the cable from meter cover.
5. Remove two screws and clips at by-pass valve or yoke. Pull resin tank away from plumbing connections.
6. Remove two screws and clips at control valve. Pull meter module out of control valve.
7. Apply silicone lubricant to four new o rings and assemble to the four ports on new meter module.
8. Assemble meter to control valve. Note, meter portion of module must be assembled to valve outlet.
9. Attach two clips and screws at control valve. Be sure clip legs are firmly engaged over lugs.
10. Push resin tank back to the plumbing connections and engage meter ports with by-pass valve or yoke.
11. Attach two clips and screws at by-pass valve or yoke. Be sure clip legs are firmly engaged over lugs.
12. Return by-pass or inlet valving to normal service position. Water pressure should now be applied to the conditioner, and any by-pass line shut off.
13. Check for leaks at all seal areas.
14. Plug electrical cord into outlet.
15. Set time of day. Make sure the control valve is in the service position.
16. Plug cable into meter cover.

F. To Replace Meter Cover and/or Impeller

1. Follow Steps E1 through E4.
2. Remove four screws on cover.
3. Lift cover off of meter module, discard o ring.
4. Remove and inspect impeller for gear or spindle damage, replace if necessary.
5. Apply silicone lubricant to new o ring and assemble to the smallest diameter on meter cover.
6. Assemble new cover to meter module. Be sure impeller spindle enters freely into cover. Press firmly on cover and rotate if necessary to assist in assembly.
7. Replace four screws and tighten.
8. Follow steps E12 through E16.

Trouble Shooting Guide

	SYMPTOM		PROBABLE CAUSE		CORRECTION
1.	Softener fails to regenerate automatically.	A.	Cord plugged into intermittent or dead power source.	A.	Connect to constant power source.
		B.	Disconnected meter cable.	B.	Reconnect cable
		C.	Defective power cord.	C.	Replace cord.
		D.	Defective controller or meter.	D.	Replace or repair.
2.	Regeneration at wrong time.	A.	Controller improperly set, due to Power failure.	A.	Reset timer.
				B.	Check battery.
3.	Loss of capacity.	A.	Increased raw water hardness.	A.	Reset the unit to the new hardness.
		B.	Brine concentration and /or quantity.	B.	Keep brine tank full of salt at all times. Clean it yearly. Salt may be bridged.
		C.	Resin Fouling.	C.	Call dealer, find out how to confirm it, clean the resin and prevent future fouling.
		D.	Poor distribution, Channeling (uneven bed surface).	D.	Call dealer. Check distributors and backwash flow.
		E.	Internal valve leak.	E.	Call dealer. Replace spacers, seals and/or piston.
		F.	Resin age.	F.	Call dealer. Check for resin oxidation caused by Chlorine. Mushy resin.
		G.	Resin loss.	G.	Call dealer. Check for correct bed depth. Broken distributors. Air or gas in bed: Well gas eliminator Loose brine line.
4.	Poor water quality.	A.	Check items listed in #3.	A.	Check items listed in #3.
		B.	Bypass valve open.	B.	Close bypass valve.
		C.	Channeling.	C.	Check for too slow or high service flow. Check for media fouling.
5.	High salt usage.	A.	High Salt setting.	A.	Adjust salt setting.
		B.	Excessive water in brine tank.	B.	See symptom No. 7.

Trouble Shooting Guide

	SYMPTOM		PROBABLE CAUSE		CORRECTION
6.	Loss of water pressure.	A.	Scaling/Fouling of inlet pipe.	A.	Clean or replace pipeline. Pre-treat to prevent.
		B.	Fouled resin.	B.	Clean the resin. Pre-treat to prevent.
		C.	Improper backwash.	C.	Too many resin fines and/or sediment. Call dealer, reset backwash flow rate, and/or adjust time.
7.	Excessive water in brine tank and/or salty water to service.	A.	Plugged Drain Line.	A.	Check flow to drain, clean flow control.
		B.	Dirty or damaged brine valve.	B.	Clean or replace brine valve.
		C.	Plugged injector	C.	Clean injector and replace screen.
		D.	Low inlet pressure.	D.	Increase pressure to allow injector to perform properly (20 psig minimum).
		E.	Timer not cycling.	E.	Replace timer.
8.	Softener fails to use salt.	A.	Plugged/restricted drain line.	A.	Clean drain line and/or flow control.
		B.	Injector is plugged.	B.	Clean or replace injector and screen.
		C.	No water in brine tank.	C.	Check for restriction in BLFC. Ensure safety float is not stuck.
		D.	Water pressure is to low.	D.	Line pressure must be at least 20 psi.
		E.	Brine line injects air during brine draw.	E.	Check brine line for air leaks.
		F.	Internal control leak.	F.	Call dealer, check piston, seals, and spacers for scratches and dents.
9.	Control cycles continuously.	A.	Faulty timer.	A.	Replace timer.
10.	Continuous flow to drain.	A.	Faulty timer.	A.	Call dealer. Clean valve, rebuild unit.
		B.	Internal control leak.	B.	Same as above.
		C.	Valve jammed in brine or backwash position.	C.	Same as above.
		D.	Valve motor stopped or jammed.	D.	Replace valve motor.

Service Assemblies

60015 ..... 1610 Brine Valve
For Illustration, see page 10
1.....11973 ..... Spring, Brine Valve
1 .....11981-01 ..... Retaining Ring
1 .....12550 ..... Quad Ring, -009
1 .....13165 ..... Cap, Brine Valve
1 .....13167 ..... Spacer, Brine Valve
2 .....13302 ..... 0 Ring, -014
1 .....16098 ..... Washer, Plain, Nylon
1 .....17978 ..... Brine Valve Stem
1 .....18755 ..... 0 Ring, -201

60022-12..... BLFC.125 GPM
60022-25 ..... BLFC.25 GPM
60022-50 ..... BLFC.50 GPM - Standard
60022-100 ..... BLFC 1.0 GPM
For Illustration, see page 10
1.....17307 ..... Flow Washer. 125 GPM
12094..... Flow Washer.25 GPM
12095..... Flow Washer.50 GPM
12097..... Flow Washer 1.0 GPM
1.....12977 ..... 0 Ring, -015
1 .....13244 ..... Adapter, BLFC
1 .....13245 ..... Retainer, BLFC

60115-00 ..... Piston Assembly, Downflow
For Illustration, see page 10
1 .....14309 ..... Retainer, Piston Rod
1 .....18265 ..... Piston, Downflow
1 .....18267 ..... Piston Rod
1 .....18268 ..... End Plug Assembly

.....60120 ..... Seal and Spacer Kit
For Illustration, see page 10
5 .....13242 ..... Seal
4 .....14241 ..... Spacer
1 .....18264 ..... End Spacer

18272-000..... 1610 Injector Assy., 000, Brow
18272-00 ..... 1610 Injector Assy., 00, Violet
18272-0 ..... 1610 Injector Assy., 0, Red
18272-1 ..... 1610 Injector Assy., 1, White
18272-2 ..... 1610 Injector Assy., 2, Blue
18272-3 ..... 1610 Injector Assy., 3, Yellow
For Illustration, see page 10
1 .....10141 ..... 0 Ring, -010
1 .....13771 ..... 0 Ring, -012
1 .....18273 ..... Vortex Generator
1 .....18274-XX ..... Injector Nozzle
1 .....18275-XX ..... Injector Throat

60280-000 ..... 1610 Injector Kit, 000, Brown
60280-00 ..... 1610 Injector Kit, 00, Violet
60280-0 ..... 1610 Injector Kit, 0, Red
60280-1 ..... 1610 Injector Kit, 1, White
Model 1000 & 1500
60280-2 ..... 1610 Injector Kit, 2, Blue -
Model 2000
60280-3 ..... 1610 Injector Kit, 3, Yellow
For Illustration, see page 10

1.....18271..... Screen, Injector
1 .....18272-XX .....1610 Injector Assembly
1 .....18277 .....Cap, Injector
1 .....18301 .....Seal, Injector
2 .....18262 .....Screw, Hex Washer Head,
10-24 x 12

CD5066 Control Drive Assembly
For Illustration and parts list, see page 12
60086-50.....3/4" Meter
For Illustration, see page 13

60049.....Bypass, Plastic
For Illustration and parts list, see page

60705-00 ....DLFC BLANK
60705-06 ....DLFC .60 GPM
60705-08 ....DLFC .80 GPM
60705-10 ....DLFC 1.0 GPM
60705-12 ....DLFC 1.2 GPM
60705-13 ....DLFC 1.3 GPM
60705-15 ....DLFC 1.5 GPM
60705-17 ....DLFC 1.7 GPM
60705-20 ....DLFC 2.0 GPM
60705-24 ....DLFC 2.4 GPM
Model 1000 & 1500
60705-30 ....DLFC 3.0 GPM
60705-35 ....DLFC 3.5 GPM
Model 2000
60705-40 ....DLFC 4.0 GPM
60705-45 ....DLFC 4.5 GPM
60705-50 ....DLFC 5.0 GPM
60705-60 ....DLFC 6.0 GPM
60705-70 ....DLFC 7.0 GPM
For Illustration, see page 10
1..... 11183 .....0 Ring, -017
1..... 11385-01 ....DLFC Housing Plastic
Flow Washer (specify size)