

SUPERSOFT®



INSTALLATION GUIDE & OWNER'S MANUAL



Change your water. Change your life.



AVAILABLE APPLICATION OPTIONS

Super Soft Combo



Super Soft Water Saver Combo



H2 ZERO ULT



Smart Faucet
Blue light turns red when it's time to change the filters!

Super Soft Combo Purified & Alkaline Water



Smart Faucet
Blue light turns red when it's time to change the filters!

Super Soft Water Saver Combo Value Option



Change your water. Change your life.

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INSPECTION & PREPARATION

Understanding How The Water Softener Works

The principle behind water softening is simple chemistry. A water softener contains resin beads which hold electrically charged ions. When hard water passes through the softener, calcium and magnesium ions are attracted to the charged resin beads. The result is removal of calcium and magnesium ions which produces soft water.

I. Be Familiar with the System Before Installation

- ❗ IMPORTANT!** Please read the entire manual and become familiar with instructions and parts needed before proceeding with the installation.

Inspect the System

Please take the system and all the components out of the box. Inspect the system and all the connection fittings carefully, make sure nothing is damaged during shipping. If any part is cracked or broken, please do not proceed with the installation and contact your distributor.

System Components Breakdown (See Dia. A)

- Halo Valve Meter
- 5' of 3/8" Brine Line
- Brine Tank
- Bypass Valve
- Drain Line Fitting
- 14' of 1/2" Drain Line
- Top Distributor
- Resin Media
- Resin Tank
- Riser Tube & Bottom Distributor
- Control Valve
- Upper Distributor Basket

Required Tool List for System Installation

- Channel Locks
- Screwdriver
- Teflon Tape
- Razor Knife
- Two Adjustable Wrenches
- Plastic inlet and outlet fittings are included with the softener. To maintain full valve flow, 1" pipe to and from the softener fittings are recommended.
- Use copper, brass, or PEX pipe and fittings. Some codes may also allow PVC plastic pipe.
- Additional tools may be required if modification to home plumbing is required.

Required Components not Included with the System

- Extra Course Grade or Crystal water softener salt is needed to fill the brine tank

II. System Operation Parameter and Installation checklist

i IMPORTANT! The following condition for feed water supply must be met or warranty will be void and manufacturer assumes no responsibility for damage to system or property.

1. Water Temperature Parameter

System must not be installed at an area where it is exposed to direct sunlight and must be protected against freezing and extreme heat.

- Maximum: 100° F (37.8° C)
- Minimum: 33° F (0° C)

2. Water Pressure Parameter

The maximum allowable inlet water pressure is 80 psi. Use a pressure reducing valve (PRV) to reduce the pressure if needed.

- Maximum: 80 PSI
- Minimum: 25 PSI

3. Chlorine & Chloramine Tolerance

Softener resin may degrade in the presence of chlorine or chloramines. If the feed water contains chlorine or chloramines, reduced life of the resin could occur. In these conditions, a whole house Halo filtration system with chlorine, chloramine reducing media is recommended.

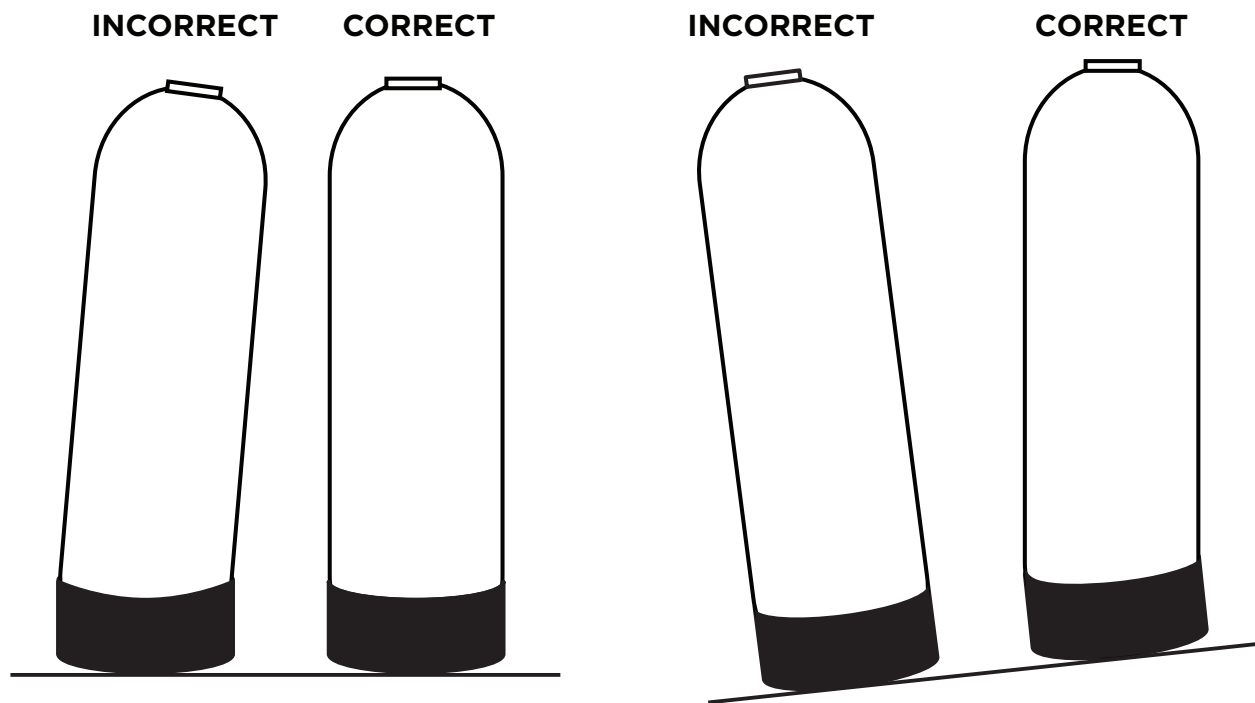
- Maximum: 1 ppm

4. Pre-install environment checklist

- Do not use with water that is micro-biologically unsafe or of unknown quality without adequate disinfection.
- Properly ground to conform with all governing code and ordinances. Use only lead-free solder and flux for all sweat-solder connections as required by state and federal codes.
- Place the softener as close as possible to the pressure tank (well system) or water meter (city water).
- Place the softener as close as possible to a floor drain, or other acceptable drain point (laundry tub, sump, standpipe, etc.).
- Connect the softener to the main water supply pipe before the water heater. Do not run hot water through the softener. Temperature of water passing through the softener must be less than 100° F.
- Outside faucets and irrigation system should not be supplied with softened water. If this is not possible, be sure to bypass the softener when watering grass or plants.
- Place softener in a place where water damage is least likely to occur if a leak develops.
- A 120 volt electric outlet is needed within 6 feet of the softener. The softener has an attached 8 foot power cable.
- If installing in an outside location, necessary steps must be taken to assure the softener, installation plumbing, wiring, etc. are protected from the elements and contamination sources.
- The brine tank should be located no more than 15' from the resin tank.

III. Installation Safety Guide

- Handle with care when moving the water softening system. Do not turn upside down, drop, drag, or set on areas with sharp protrusions.
- The system works on standard 110v power plug only.
- Use clean water softening salt only with at least 99.5% pure. Extra course grade or crystal salt is recommended. Do not use rock, block, granulated or ice cream making salts. They contain contaminants that could cause problems during maintenance
- Always keep salt lid in place on the softener unless servicing or refilling the unit.
- All of our resin tanks have level adjusting tank bases. These tanks are designed to work with a “floating” base. This allows the tank to be leveled on any surface. Some applications may not have level surface to place the tank. The floating base allows the tank to be leveled within the base and ensure proper operation. Sometimes the base can shift during shipping. It can be adjusted back by lifting the tank up no higher than 5” - 10”, and letting it drop to help level the base.



INSTALLING THE SYSTEM

❗ IMPORTANT! Locate and test the main water supply valve to the home before installing the system. If the main water supply valve fails to shut off the water completely during the test, we recommend fixing the valve before begin installing the system.

⚠ WARNING! If the system is installed on a metal (Conductive) plumbing system, i.e., copper or galvanized metal, the plastic components of the system will interrupt the continuity of the plumbing system. As a result, any errant electricity from improperly grounded appliances downstream or potential galvanic activity in the plumbing system can no longer ground through contiguous metal plumbing. Some homes may have been built in accordance with building codes, which actually encouraged the grounding of electrical appliances through plumbing. A grounded “jumper wire” bridging the equipment and reestablishing the contiguous conductive nature of the plumbing system must be installed prior to your system use.

STEP 1. Shutting off the Main Water Supply Valve

⚠ WARNING! If the hot water tank is electric, turn off the power to the hot water tank first to avoid damage to the element in the tank. If the source water is coming from a private well. Power off the well water pump and then shut off the main water supply valve.

1. Locate the main water supply valve of the house and turn off completely.
2. Test to see if the water is completely shut off by turning on the closest faucet in the cold water position. If the cold water cannot be shut off, replace the shutoff valve before beginning installing the system.

STEP 2. Inspect Equipment for damage



1. When received inspect equipment for damage. Unbox Super Soft and ensure all parts and pieces are in good condition and accounted for.





2. Parts required for installation. Brine tank, mineral tank with control valve, brine tank grid, over flow fitting, brine well, grid feet, bypass, flow straightener, 1" yoke, drain tubing, and brine tank tubing.



STEP 2. Brine Tank Assembly



1. Install feet into grid assembly.





2. Place grid in brine tank with hole for brine well acing towards the holes in the brine tank. Insert brine well into hole in grid plate in the brine tank.





3. Insert 3/8" tubing through brine tank and connect to the 3/8" brine valve in the brine well. Place brine well cap on top of brine well and push down inserting into well.



4. Place lid on brine tank.
Brine tank assemble complete.



STEP 3. Mineral Tank Valve Assembly



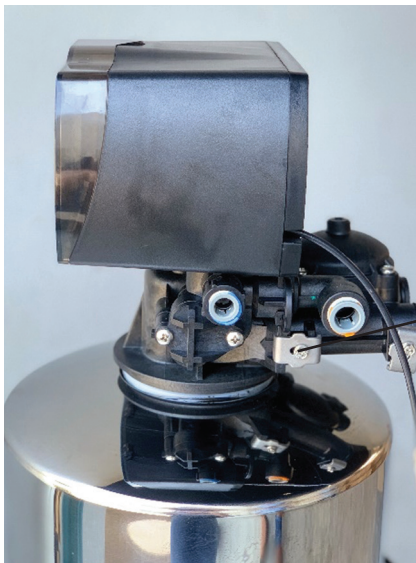
1. Remove blue protective wrap from Super Soft mineral tank.



2. Insert flow straightener into back of control valve on the right hand side.



3. Attach meter to control valve aligning impeller inside of meter with flow straightener.

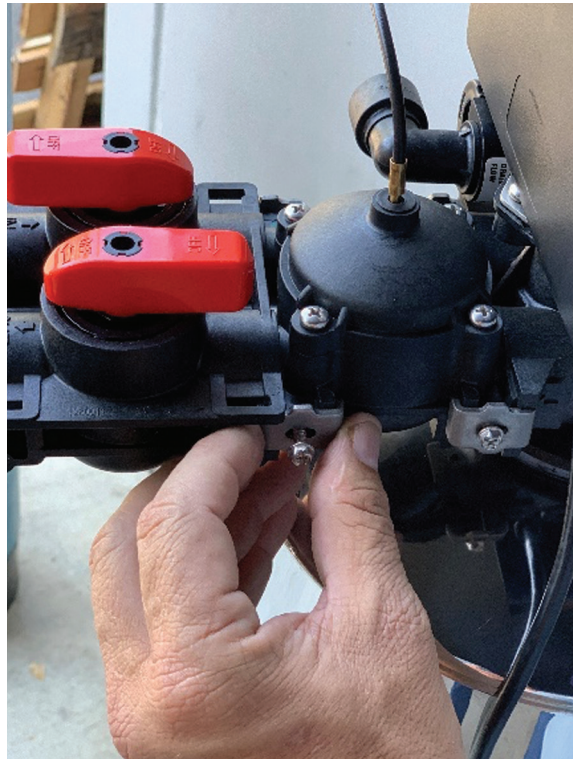


4. Place metal fastening tab between control valve and meter. Use a 1/4" nut driver or Phillips head screwdriver to tighten screws on mounting tabs. Ensure mounting tab is secured flush to the valve and meter. Do not over tighten.

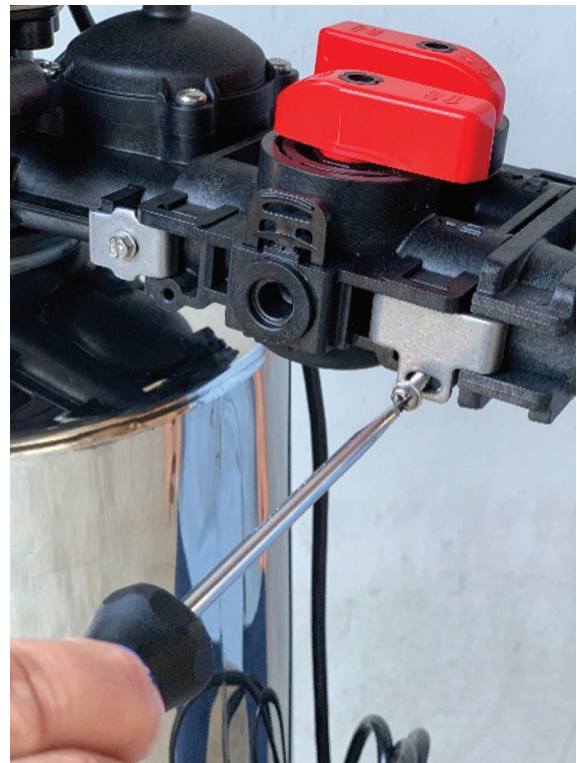
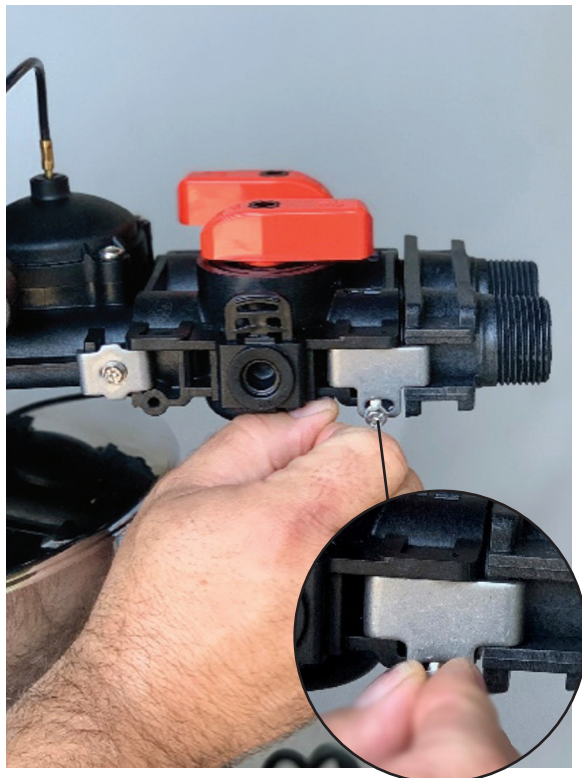


5. Attach meter cable inside top hole of meter. Press in for snug fit.

5. Attach bypass assembly to meter. Place mounting clips between bypass and meter. Use 1/4" nut driver or Phillips screwdriver to attach mounting clips. Ensure the mounting clip is flush with meter and bypass. Do not over tighten.

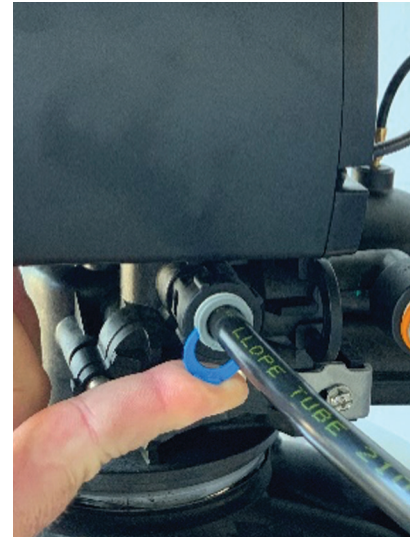
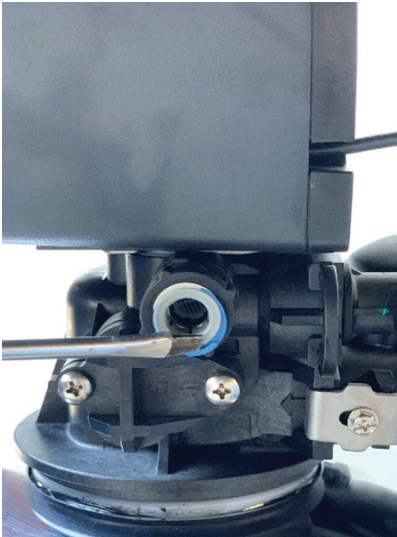


6. Attach yoke assembly to bypass. Place mounting clips between bypass and meter. Use 1/4" nut driver or Phillips screwdriver to attach mounting clips. Ensure the mounting clip is flush with meter and bypass. Do not over tighten.

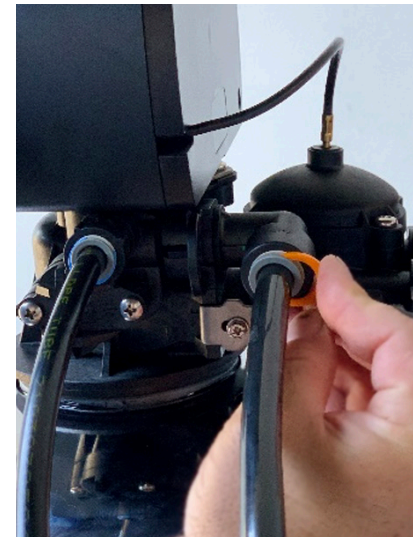
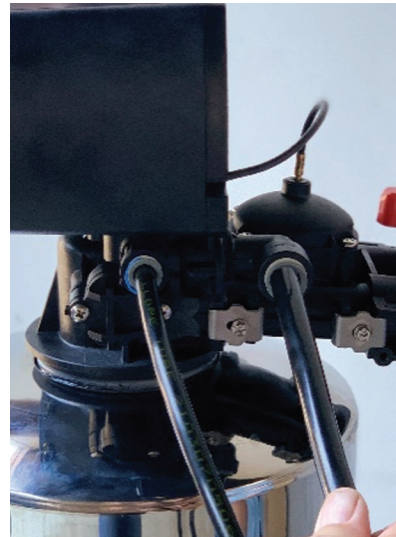
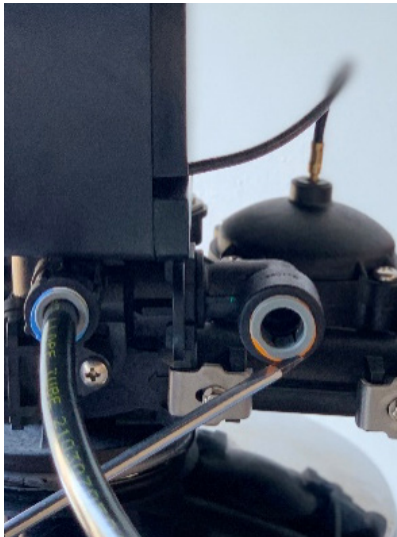


STEP 3. Brine Tank Tubing Assembly

1. Remove blue locking clip from 3/8" quick connect fitting on control valve. Insert 3/8" tubing from brine tank into quick connect fitting. Replace blue locking clip once tubing is installed.



2. Remove orange locking clip from 1/2" quick connect fitting on control valve. Insert 1/2" tubing from drain into quick connect fitting. Replace orange locking clip once tubing is installed.



ASSEMBLY COMPLETED



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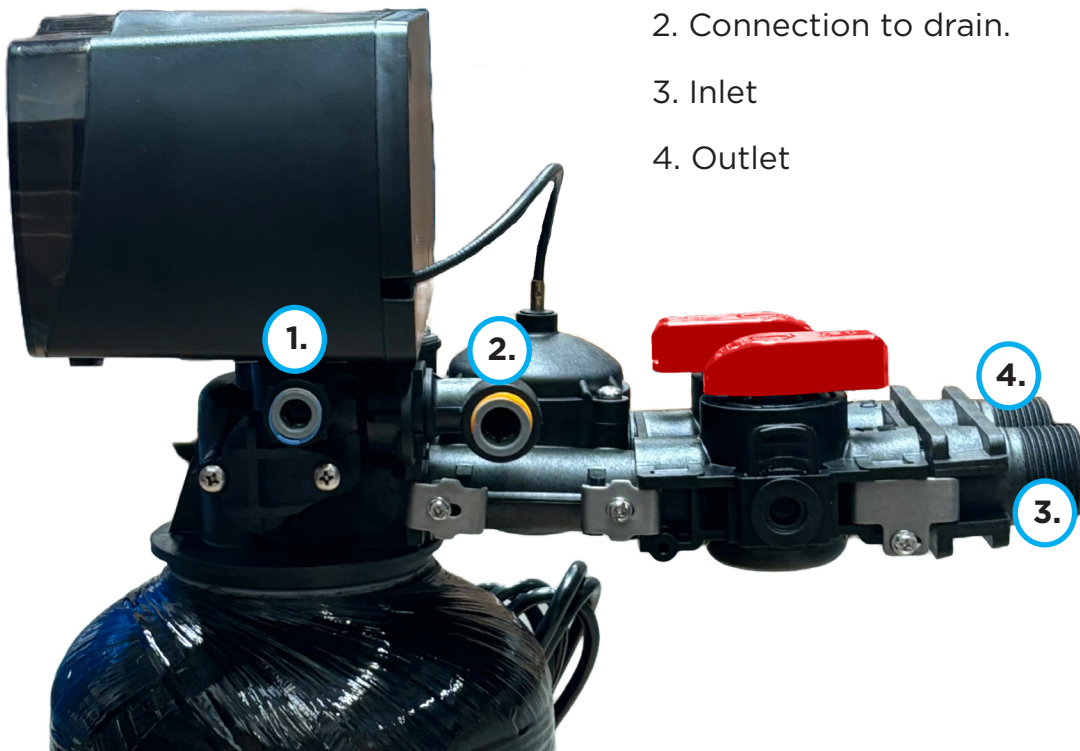
Identifying Connections

1. Connection to brine tank.

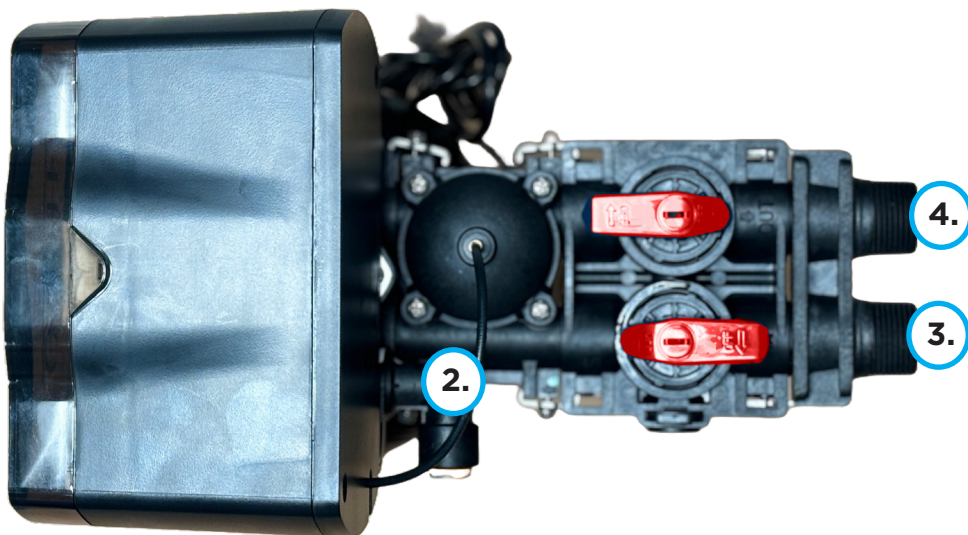
2. Connection to drain.

3. Inlet

4. Outlet



Left side view

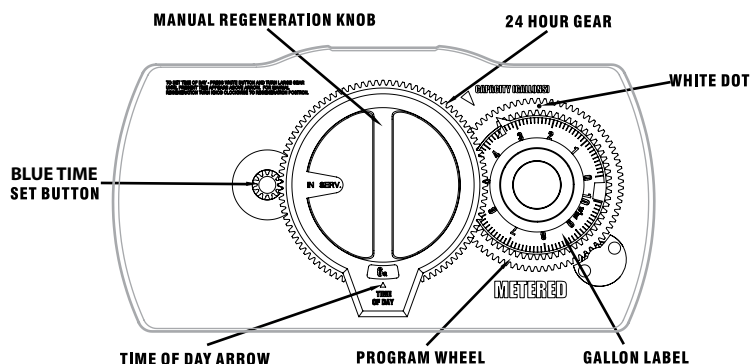


Top view

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Meter Control Valve Start-up Procedure

1. Manually index the softener control to the In Service position and let water flow into the resin tank. When the water flow stops, open a softened water tap until all air is released from the lines. Then close tap. Note: The various regeneration positions may be dialed manually by turning the knob on the front of the control until the indicator shows that the softener is in the desired position.
2. Set water usage program wheel :Calculate the gallon capacity of the system by dividing the system capacity by the raw water hardness. Next subtract the necessary reserve requirement by multiplying the number of people in the house by 75 gallons (1 US gallon=3.785 L) per day. Set the gallons available at the small white dot on program wheel gear by pulling out on the clear program wheel and turning to desired setting. The table below is also a quick reference to determine the gallons used before each regeneration.
3. Rotate program wheel counterclockwise until it stops at regeneration position.
4. Manually index the control to the backwash position and allow water to flow at the drain for 5 to 7 minutes or until drain water runs clear.
5. Manually index the control to the service position.
6. Plug in the electrical cord to 110 volt power.
7. Manually advance the control to the beginning of the brine fill position and allow the control to return to the In service position automatically.
8. Fill the brine tank with salt and add 5 gallons of water.
9. Make sure that any bypass valving is left in the normal service position.
10. Push blue set button and spin time of day to correct time.

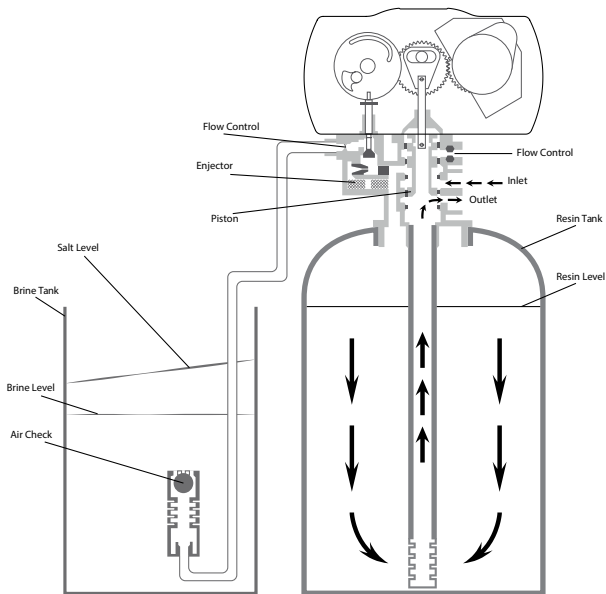


Meter Gallon Settings

1 CF @ MIN. SALT	HARDNESS 5gpg	HARDNESS 10gpg	HARDNESS 15gpg	HARDNESS 20gpg	HARDNESS 30gpg	HARDNESS 40gpg	HARDNESS 50gpg
1 PERSON	3925	1925	1260	925	590	425	325
2 PEOPLE	3850	1850	1185	850	515	350	250
3 PEOPLE	3850	1775	1110	775	440	275	175
4 PEOPLE	3700	1700	1035	700	365	200	100
5 PEOPLE	3625	1625	960	625	290	125	25
6 PEOPLE	3550	1550	885	550	215	50	
1.5 CF @ MIN. SALT	HARDNESS 5gpg	HARDNESS 10gpg	HARDNESS 15gpg	HARDNESS 20gpg	HARDNESS 30gpg	HARDNESS 40gpg	HARDNESS 50gpg
1 PERSON	5925	2925	1925	1425	925	675	525
2 PEOPLE	5850	2850	1850	1350	850	600	450
3 PEOPLE	5775	2775	1775	1275	775	525	375
4 PEOPLE	5700	2700	1700	1200	700	450	300
5 PEOPLE	5625	2625	1625	1125	625	375	225
6 PEOPLE	5550	2550	1550	1050	550	300	150
2 CF @ MIN. SALT	HARDNESS 5gpg	HARDNESS 10gpg	HARDNESS 15gpg	HARDNESS 20gpg	HARDNESS 30gpg	HARDNESS 40gpg	HARDNESS 50gpg
1 PERSON	7925	3925	2590	1925	1260	925	725
2 PEOPLE	7850	3850	2515	1850	1185	850	650
3 PEOPLE	7775	3775	2440	1775	1110	775	575
4 PEOPLE	7700	3700	2365	1700	1035	700	500
5 PEOPLE	7625	3625	2290	1625	960	625	425
6 PEOPLE	7550	3550	2215	1550	885	550	375

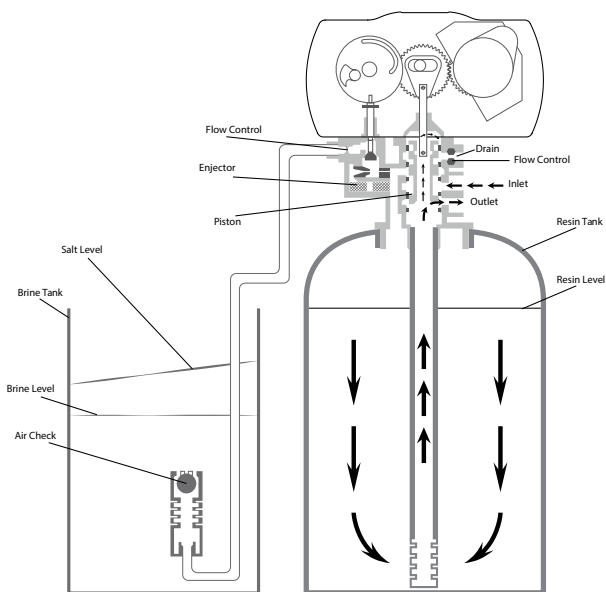
For hardness exceeding 50 grains please contact HALO Water Systems 800-591-0538.

Flow Diagrams



1) Service Position

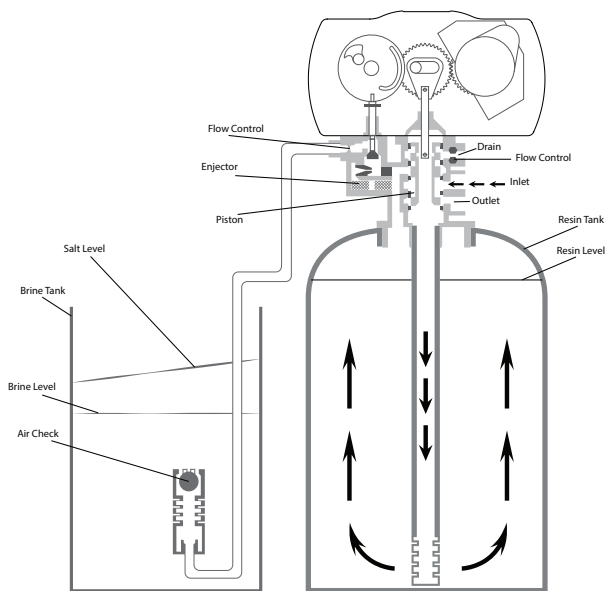
Hard water enters unit at valve inlet and flows down through the mineral in the mineral tank. Conditioned water enters center tube through the bottom distributor, then flows up through the center tube, around the piston, and out the outlet of the valve.



2) Preliminary Rinse Position

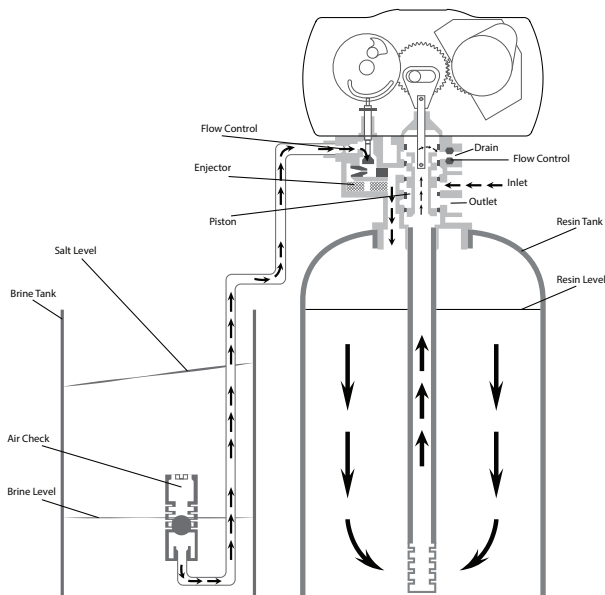
Slow rinse of the resin bed. Water flows down through the resin bed, up the bottom distributor and out the drain.

Flow Diagrams



3) Backwash Position

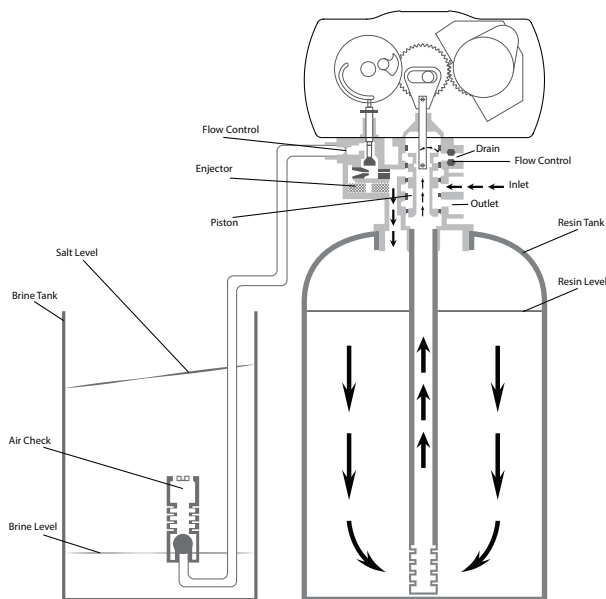
Hard water enters unit at valve inlet, flows through piston, down center tube, through bottom distributor, up the through the mineral, around the piston and out the drain line. Water is passed through the resin bed in the opposite direction of normal flow, which flushes suspended matter out of the resin tank. Backwashing also loosens the resin bed which becomes compacted during the softening (in service) cycle.



4) Brine Position (Softeners Only)

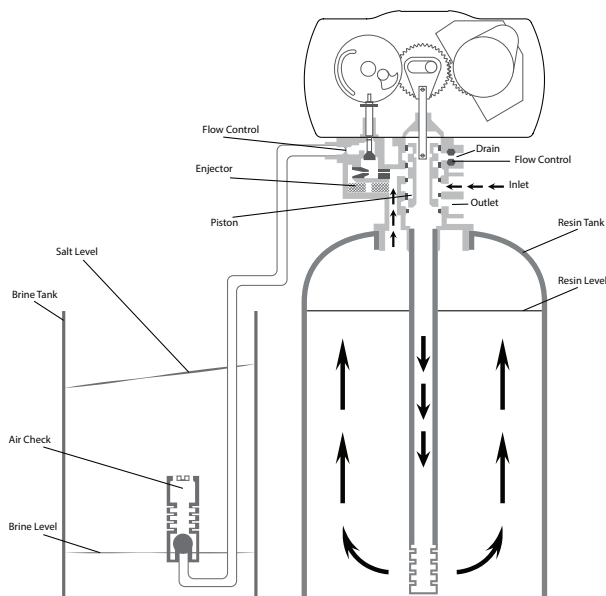
Hard water enters unit at valve inlet, flows up into injector housing and down through nozzle and throat to draw brine from the brine tank, brine flows down through mineral and enters the center tube through the bottom distributor and out through the drain line. The resin beads are washed with the strong solution of salt water which is called the brine solution. Since the resin beads prefer calcium and magnesium ions.

Flow Diagrams



5) Slow Rinse Position (Softeners Only)

After all the brine has been drawn from the brine tank, hard water continues to enter through the valve inlet, flows around the lower piston groove and through the nozzle and throat, down through the resin and into the distributor, then up through the center tube, at last through the center hole in the piston and out the drain.



6) Rapid Rinse Position

The resin bed rinsed to remove excess brine solution from the tank and the resin beads are the ready to produce soft water again. Hard water enters unit at valve inlet, flows through piston, down center tube, through bottom distributor, and up through the mineral, around the piston and out the drain line.

TOTAL GALLONS CALCULATION

The HALO Water Systems, LLC valve uses a meter to count the gallons of water being treated through the system. Once the gallons programmed in the unit has been exhausted, the system will regenerate. The total gallons of treatable water the system can produce is based on the system size, family size, and the hardness level of the feed water. A simple calculation is done to determine the amount of gallons to input during the programming portion of the installation.

NOTE: This calculation must be completed to program the unit:

Total Gallons = System Capacity in Grains (see chart above) / Hardness in (GPG) Grains Per Gallon
(determined by water test) - Number of People X 75 Gallons

Parameter	SuperSoft		
	H-SS100	H-SS150	H-SS200
Minimum Salt Curve Capacity Setting	20,000	30,000	40,000
Brine Fill Settings in Minutes	6	8	10

Example:

System Capacity: H-SS100 System/20,000 Grains (reference chart)

Feed Water Hardness: 10 GPG (must be tested on-site by the end user or installer)

Number of People: 3

$(20,000 \text{ Grains} / 10 \text{ GPG}) - (3 \text{ People} \times 75 \text{ Gallons}) = \text{Total Gallons}$

$2,000 \text{ Gallons} - 225 \text{ Gallons} = 1,775 \text{ Total Gallons}$

1,775 Gallons would be inputted for Total Gallons during programming.

If the hardness level is given in ppm or mg/L, it can be converted to Grains Per Gallon by dividing the value by 17.1.

Input the site values in the equation below to figure out your total gallons value:

$(\text{_____ Grains} / \text{_____ GPG}) - (\text{_____ People} \times 75 \text{ Gallons})$
 $\text{_____ Gallons} - \text{_____ Gallons} = \text{_____ Total Gallons}$

PRODUCT DIMENSIONS

SuperSoft				
MODEL	TANK SIZE	A	B	C
H-SS100	9" X 48"	54"	48"	9"
H-SS150	10" X 54"	64"	54"	10"
H-SS200	12" X 52"	62"	52"	12"



SYSTEM TROUBLESHOOT

MODEL	CAUSE	CORRECTION
(1) The control fails to regenerate automatically.	A) Disconnected meter cable	A) Reconnect the meter cable
	B) Motor damaged	B) Replace the Motor
	C) Electronic controller or sensor damaged	C) Replace or repair
2) Regeneration at wrong time	A) Timer improperly set, due to power failure	A) Reset timer
3) loss of capacity	A) Increase raw water hardness	A) reset unit to the new capacity
	B) Brine concentration or quantity	B) Keep brine tank full of salt at all times. Clean it yearly. Salt may be bridged. If using a salt grid Plate insure refill water is over it
	C) Poor distribution, channeling (Uneven bed service)	C) Check distributors and backwash flow
	D) Internal control leak	D) Replace the spacer, seal or piston
	E) Aging of rinse	E) Check for resin oxidation caused by Chlorine. Mushy resin
	F) Loss of rinse	F) Check for correct bed depth. Broken distributors. Air or gas in bed.
4) Excessive salt use	A) High salt setting	A) adjust salt setting
5) Loss of water pressure	A) Fouling of inlet pipe	A) Clean or replace the pipeline
	B) Fouled resin	B) Clean the resin. Pre-treat to prevent
6) Excessive water in brine tank	A) Plugged drain line	A) Check drain line and clean flow control
	B) Brine valve plugged or damaged	B) Clean or replace the brine valve
	C) Injector plugged	C) Clean injector, replace injector screen
	D) Low inlet water pressure	D) Increase water pressure to allow Injector to perform properly
7) Softener fails to brine draw	A) Plugged drain line	A) Clean drain line and flow control
	B) Plugged injector	B) Clean or replace the injector and screen
	C) No water in the brine tank	C) Check for restriction in B.L.F.C. Ensure Safety float is not stuck
	D) Low water pressure	D) Increase water pressure
	E) Brine line injects air during brine draw	E) Check brine line for air leaks
	F) Internal control leak	F) Check seal, spacer and piston for scratches and dents
8) Control cycles continuously	A) Faulty timer	A) Replace timer
9) Continuous flow to drain	A) Foreign material in the control	A) Call contractor. Clean valve, rebuild unit
	B) Internal control leak	B) Same as above
	C) Piston jammed in brine or back wash position	C) Same as above



Softening System

LIMITED PRODUCT WARRANTY

HALO Water Systems, LLC warrants that your new acid neutralizer is built of quality material and workmanship. When properly installed and maintained, it will give years of trouble free service.

Five Year Valve, Electronics Guarantee

HALO Water Systems, LLC will replace any part on the valve which fails within (5) five years from date of manufacture, as indicated by the serial number, provided the failure is due to a defect in material or workmanship. The only exception shall be when proof of purchase or installation is provided and then the warranty period shall be from the date thereof. Media and internal control valve parts will not be covered for systems at or above 1 ppm chlorine concentrated feed waters. Valve shall be covered for 10 years if CK10 is pretreated with a HALO 5, H2 Zero or Mini system. Temperature range must be maintained at 33 degrees to 120 degrees and water pressure maintained between 40 psi and 80 psi. Do not allow to freeze.

Ten Year Tank Guarantee

HALO Water Systems, LLC will provide one (1) replacement tank to any original equipment purchaser in possession of the HALO Water Systems, LLC SuperSoft that fails for (10) ten years after the date of purchase, provided that it is at all times operated in accordance with specifications and not subject to freezing. Resin has a warranty of 1 year unless Halo 5, H2 Zero or Mini system is used as pretreatment, If so the warranty is extended to 10 years.

General Provisions

HALO Water Systems, LLC assumes no responsibility for consequential damage, labor or expense incurred as a result of a defect or for failure to meet the terms of these guarantees because of circumstances beyond our control. Installation workmanship failure is not covered under warranty. Damage caused by environmental conditions such as,

lightening strikes, humidity or heat will not be covered under warranty.

These warranties are in lieu of all other warranties expressed or implied, and we do not authorize any person to assume for us any other obligation on the sale of this SuperSoft. No responsibility is assumed for delays or failure to meet these warranties caused by strike, government regulations or other circumstances beyond the control of HALO Water Systems, LLC.

Obtaining Warranty Coverage or General Inquiries

If coverage is available, you may obtain coverage under this Limited Product Warranty by providing HALO Water Systems, LLC with proof of original purchase, and that you are the original purchaser. In making the claim, please provide your name, address, phone number, a description of the product involved, and an explanation of the defect.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. THIS WARRANTY MAY NOT BE TRANSFERRED TO A SUBSEQUENT OWNER.

SERVICE LOG

[illegible]

Activate your Warranty



**SCAN TO
ACTIVATE**

SUPERSOFT®



**SCAN TO
LEARN
MORE**

SUPERSOFT®



Family of Products



HALO Water Systems, LLC

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