Culligan.

Culligan® High Efficiency Twin Automatic Water Softeners Owners Guide

Thank You

And Welcome To Your New World Of Better Living With Culligan Water.

The Culligan HE Twin Water Softeners with Soft-Minder® Meter and Aqua-Sensor® sensing device are tested and certfied by WQA against ORD0902, CSA B483.1, NSF/ANSI Standard 44 for the effective reduction of hardness (calcium and magnesium), as verified and substantiated by test data.

For installations in Massachusetts, Massachusetts Plumbing Code 248 CMR shall be adhered to. Consult your licensed plumber for installation of this system. This system and its installation must comply with state and local regulations. The use of saddle valves is not permitted.

If this is your first experience having soft, conditioned water in your home, you'll be amazed at the marvelous difference it makes. We promise that you'll never want to be without it again.

Congratulations, too, on selecting one of the "first family" of water conditioners in the prestigious Culligan High Efficiency Softeners. With Culligan's many years of knowledge and experience in water treatment, you can be confident that the model you selected has been designed and engineered to provide years of service with a minimum of care and attention.

Some localities have corrosive water. A water softener cannot correct this problem and so its printed warranty disclaims liability for corrosion of plumbing lines, fixtures or appliances. If you suspect corrosion, your Culligan Dealer has equipment to control the problem.

Sodium Information: *Water softeners using sodium chloride for regeneration add sodium to the water. Persons who are on sodium restricted diets should consider the added sodium as part of their overall sodium intake.*

Attention Culligan Customer:

The installation, service and maintenance of this equipment should be rendered by a qualified and trained service technician. Your local independently operated Culligan dealer employs trained service and maintenance personnel who are experienced in the installation, function and repair of Culligan equipment. This publication is written specifically for these individuals and is intended for their use.

We encourage Culligan users to learn about Culligan products, but we believe that product knowledge is best obtained by consulting with your Culligan dealer. Untrained individuals who use this manual assume the risk of any resulting property damage or personal injury.

Performance Data Sheets are included in this manual for various Culligan HE Twin Softener models. Refer to the Performance Data Sheet for your specific softener, as there are slight differences between the models. The softener warranty is located on page 72 of this Owner's Guide.

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Specifications

Culligan High Efficiency Twin Water Conditioners with Aqua-Sensor® Device or Soft-Minder® Meter—Downflow Regeneration

Model	9" Model	10" Model	12" Model	14" Model
Control Valve	1" Reinforced Thermoplastic w/ HE Circuit Boards			
Overall Conditioner Ht	56 in	62 in	60 in	73 in
Media Tank Design	Quadra-Hull™			
Media Tank Dimensions (Dia x Ht)	9 x 48 in	10 x 54 in	12 x 52 in	14 x 65 in
Salt Storage Tank Dimensions (Dia x Ht)	18 x 43 in	18 x 43 in	18 x 43 in	24 x 42 in
Exchange Media, Type and Quantity	Cullex® Media, 1.0 ft³	Cullex Media, 1.5 ft³	Cullex Media, 2.0 ft³	Cullex Media, 3.0 ft³
Underbedding, Type and Quantity	Cullsan® Underbedding, 12 lb	Cullsan Underbedding, 15 lb	Cullsan Underbedding, 20 lb	Cullsan Underbedding, 25 lb
Exchange Capacity @ Salt Dosage Per Recharge	17,854 gr @ 4.0 lb	26,781 gr @ 6.0 lb	31,352 gr @ 7.0 lb	51,726 gr @ 12 lb
	27,108 gr @ 8.0 lb	40,662 gr @ 12.0 lb	48,458 gr @ 16.0 lb	75,582 gr @ 24 lb
	31,736 gr @ 12.0 lb	47,604 gr @ 18.0 lb	59,267 gr @ 18.0 lb	88,549 gr @ 36 lb
Efficiency rated dosage[1]	4,463 gr/lb @ 4 lb salt dosage	4,463 gr/lb @ 6 lb salt dosage	4,479 gr/lb @ 7 lb salt dosage	4,310 gr/lb @ 12 lb salt dosage
Freeboard to Media[2]	14.5 in	14.5 in	16 in	25 in
Freeboard to Underbedding[3]	44.5 in	47.5 in	46 in	59 in
Salt Storage Capacity	375 lb	375 lb	375 lb	600 lb
Rated Service Flow @ Pressure Drop	9.0 gpm @ 11 psi	9.4 gpm @ 12 psi	10.0 gpm @ 10 psi	10.6 gpm @ 11 psi
Auxiliary Flow Rate[4]	10.8 gpm @ 15 psi	11.0 gpm @ 15 psi	12.6 gpm @ 15 psi	12.8 gpm @ 15 psi
Total Hardness, Maximum	75 gpg	99 gpg	99 gpg	99 gpg
Total Iron, Maximum	5 ppm			
Hardness to Iron Ratio, Minimum	8 gpg to 1 ppm			
Operating Pressure	20-125 psi [138–862 kPa]			
Operating Pressure (Canada)	20-90 psi [138–621 kPa]			
Operating Temperature	33-120°F [0–49°C]			
Electrical Requirements	24V/60 Hz			
Electrical Power Consumption, Min/Max	8.4 watts/21.6 watts			
Drain Flow, Maximum[5]	2.5 gpm	2.5 gpm	3.0 gpm	5.3 gpm
Recharge Time, Average[6] Recharge Water	78 minutes	67 minutes	62 minutes	76 minutes
Consumption, Average[6]	47 gallons	45 gallons	67 gallons	155 gallons

1 The efficiency rated dosage is only valid at the stated salt dosage and is efficiency rated according to NSF/ANSI Standard 44.

2 Measured from top of media to top surface of tank threads (backwashed and drained).

3 Measured from top of underbedding to top surface of tank threads.

4 Auxiliary flow rates do not represent the maximum service flow rate used for determining the softener's rated capacity and efficiency and that continuous operation at these flow rates greater than the maximum service flow rate may affect capacity and efficiency performances.

5 Backwash at 120 psi.

6 10 minute backwash, 4 lb. 9" model, 6 lb. 10" model, 7 lb. 12" model, or 12 lb. 14" model salt dosage.

Culligan High Efficiency Twin Softener—Upflow Regeneration

Model	9" Model	10" Model
Control Valve	1" Reinforced Thermoplastic with HE Circuit Board	
Overall Conditioner Height	56 in	62 in
Media Tank Design	Quadra-Hull™	
Media Tank Dimensions (Dia x Ht)	9 x 48 in	10 x 54 in
Salt Storage Tank Dimensions (Dia x Ht)	18 x 43 in	
Exchange Media, Type and Quantity	Cullex® Media, 1.0 ft^3	Cullex Media, 1.5 ft^3
Underbedding, Type and Quantity	Cullsan® Underbedding, 12 lb	Cullsan Underbedding, 15 lb
Exchange Capacity @ Salt Dosage Per Recharge	17,854 gr @ 4.0 lb	26,781 gr @ 6.0 lb
	27,108 gr @ 8.0 lb	40,662 gr @ 12.0 lb
	31,736 gr @ 12.0 lb	47,604 gr @ 18.0 lb
Efficiency rated dosage[1]	4,463 gr/lb @ 4 lb salt dosage	4,463 gr/lb @ 6 lb salt dosage
Proportional Brining Efficiency Rating[2]	5,250 gr/lb @ 4 lb salt dosage	5,247 gr/lb @ 6 lb salt dosage
Freeboard to Media[3]	14.5 in	14.5 in
Freeboard to Underbedding[4]	44.5 in	47.5 in
Salt Storage Capacity	375 lb	
Rated Service Flow @ Pressure Drop	9.0 gpm @ 11 psi	9.4 gpm @ 12 psi
Auxiliary Flow Rate[5]	10.8 gpm @ 15 psi	11.3 gpm @ 15 psi
Total Hardness, Maximum	30 gpg	
Total Iron, Maximum	2 ppm	
Hardness to Iron Ratio, minimum	8 gpg to 1 ppm	
Operating Pressure	20-125 psi [138–862 kPa]	
Operating Pressure (Canada)	20-90 psi [138–621 kPa]	
Operating Temperature	33-120°F [0–49°C]	
Electrical Requirements	24V/60 Hz	
Electrical Power Consumption, Min/Max	8.4 watts/21.6 watts	
Drain Flow, Maximum[6]	2.5 gpm	
Recharge Time, Average[7] Recharge Water	78 minutes	67 minutes
Consumption, Average[7]	47 gallons	45 gallons

1   The efficiency rated dosage is only valid at the stated salt dosage and is efficiency rated according to NSF/ANSI 44.
2   The Proportional Brining Efficiency Rating assumes a 20 percent reserve capacity at the time of regeneration that is typical of what the manufacturer expects under real-world operation. Proportional brining is not measured by NSF/ANSI 44, and so this cliam is not, and can not, be rated to NSF/ANSI 44.
3   Measured from top of media to top surface of tank threads. (backwashed and drained).
4   Measured from top of underbedding to top surface of tank threads.
5   Auxiliary flow rates do not represent the maximum service flow rate used for determining the softener's rated capacity and efficiency and that continuous operation at these flow rates greater than the maximum service flow rate may affect capacity and efficiency performances.
6   Backwash at 120 psi (830 kPa).
7   10 minute backwash, 4 lb. 9" model, 6 lb. 10" model, 7 lb. 12" model, or 12 lb. 14" model salt dosage

Introduction

Read this Manual First

Before you operate the High Efficiency Twin Water Softening System, read this manual to become familiar with the device and its capabilities.

For replacement parts and service, contact your local Culligan dealer.

Watch for Special Paragraphs

Please read the special paragraphs in this manual. Examples are shown below.

Safe Practices

Throughout this manual there are paragraphs set off by special headings.

> *Note:* *Check and comply with your state and local codes. You must follow these guidelines.* **For installations in Massachusetts, Massachusetts Plumbing Code 248 CMR shall be adhered to. Consult your licensed plumber for installation of this system. This system and its installation must comply with state and local regulations. The use of saddle valves is not permitted.**

Note: Note is used to emphasize installation, operation or maintenance information which is important, but does not present any hazard. Example:

> *Note:* *The nipple must extend no more than 1 inch above the cover plate.*

Caution! Caution is used when failure to follow directions could result in damage to equipment or property. Example:

> ⚠ **Caution!** Disassembly while under water pressure can result in flooding.

Warning! Warning is used to indicate a hazard which could cause injury or death if ignored. Example:

> ⚠ **WARNING! Electrical shock hazard! Unplug the unit before removing the cover or accessing any internal control parts.**

Serial Numbers

The control valve serial number is located on the back of the timer case.

The media tank serial number is located on the top surface of the tank.

> *Note:* *DO NOT remove or destroy the serial number. It must be referenced on request for warranty repair or replacement.*

This publication is based on information available when approved for printing. Continuing design refinement could cause changes that may not be included in this publication.

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It's All So Easy, So Economical, So Efficient, So Enjoyable!

Kind To Skin And Complexion

Soft water will help prevent red, itchy or dry skin because there are no hardness impurities to cause soreness, no soap curd to coat the skin. Shaving is easier, smoother—either with blade or electric shaver.

Bathing And Showering

You'll use far less soap with conditioned water. Use your soap very sparingly—not as you did before soft water. Just a quick rinse removes all lather, leaving your skin pleasantly smooth and silky—because now it's free of sticky soap curd and film.

Saves Washing Costs. Helps Control Environmental Pollution

Soft water washes whiter and cleaner with less soap or detergent. Because the hardness impurities are removed, your soap can concentrate solely on washing. People usually find that they can reduce the amount of soap they use substantially. If you normally used a cup per wash load with hard water, try using only 1/3 cup depending on the size of your wash load and the degree of soil. Different amounts are required, but you can use less with softened water. An added bonus is the fact that your washable fabrics will last longer.

Super Hair Conditioning

Soft water is great for scalp and hair care. No insoluble deposits are formed. Hair is shinier, softer, more manageable. Reduce the amount of shampoo you have normally used.

Dishes Are A Delight

Washed by hand or in a dishwasher, glassware, dishes and silver wash cleaner, easier. Follow your dishwasher manufacturer's instructions. Soft water promotes sanitation because no greasy hard water film can form to collect or harbor bacteria.

Easier Housekeeping, Gleaming Fixtures

You'll be amazed at the marvelous difference. Just a swish of the cloth, and the bathtub or shower and fixtures are clean and sparkling. Imagine, no scouring! No hard water scum to cause rings, streaks, spots and stains. To keep their gleaming luster, simply wipe fixtures with a towel after use. Formica, tile, walls, floors, woodwork surfaces clean easier, stay clean longer. You'll save on cleaning aids and save on time.

Saves Water-Heating Energy, Helps Water-Using Appliances

Soft water reduces the formation of rock-like hard water scale which encrusts water heaters, hot water pipes, shower heads, and water-using appliances. This scale can cause premature maintenance and failure.

Elimination of hard water also provides substantial energy savings because scale acts as an insulator, wasting electricity or gas used to heat water.

Savings Galore

A water conditioner is frequently referred to as "the appliance that pays for itself". You'll find that your savings on soaps, detergents, cleaning aids, and personal care products will help your family's household budget. And if you place a price on your time, you'll be most happy with the time saved by your new family servant.

Water For Lawns And Household Plants

If possible, lawn sprinkling faucets should be supplied with hard water primarily because it is uneconomical to soften so much water.

Household plants are much more sensitive than lawns with respect to the kind of water which is best. First, because they receive no rainfall and, second, there is little or no drainage of the soil. Preferably they should be watered with rainwater or water which is low in mineral content such as distilled or demineralized water. Softened water is not recommended for house plants because a build-up of sodium in the soil may interfere with efficient absorption of water by the plant root system. Additional information may be obtained from your independently operated Culligan dealer.

Culligan Municipal Softener

With the Culligan Municipal softener you will experience the above benifits in addition to the reduction of chlorine taste and odor for a fresh, clean taste and smell.

Why Water Gets Hard And How It Is Softened

All of the fresh water in the world originally falls as rain, snow, or sleet. Surface water is drawn upward by the sun, forming clouds. Then, nearly pure and soft as it starts to fall, it begins to collect impurities as it passes through smog and dust-laden atmosphere. And as it seeps through soil and rocks it gathers hardness, rust, acid, unpleasant tastes and odors.

Water hardness is caused primarily by limestone dissolved from the earth by rainwater. Because of this, in earlier times people who wanted soft water collected rainwater from roofs in rain barrels and cisterns before it picked up hardness from the earth.

Some localities have corrosive water. A softener cannot correct this problem and so its printed warranty disclaims liability for corrosion of plumbing lines, fixtures or appliances. If you suspect corrosion, your Culligan Man has equipment to control the problem.

Iron is a common water problem. The chemical/physical nature of iron found in natural water supplies is exhibited in four general types:

1. **Dissolved Iron**—Also called ferrous or "clear water" iron. This type of iron can be removed from the water by the same ion exchange principle that removes the hardness elements, calcium and magnesium. Dissolved iron is soluble in water and is detected by taking a sample of the water to be treated in a clear glass. The water in the glass is initially clear, but on standing exposed to the air, it may gradually turn cloudy or colored as it oxidizes.

2. **Particulate Iron**—Also called ferric or colloidal iron. This type of iron is an undissolved particle of iron. A softener will remove larger particles, but they may not be washed out in regeneration effectively and will eventually foul the ion exchange resin. A filtering treatment will be required to remove this type of iron.

3. **Organic Bound Iron**—This type of iron is strongly attached to an organic compound in the water. The ion exchange process alone cannot break this attachment and the softener will not remove this type of iron.

4. **Bacterial Iron**—This type of iron is protected inside a bacteria cell. Like the organic bound iron, it is not removed by a water softener.

When using a softener to remove both hardness and dissolved iron it is important that it regenerates more frequently than ordinarily would be calculated for hardness removal alone. Although many factors and formulas have been used to determine this frequency, it is recommended that the softener be regenerated when it has reached 50–75% of the calculated hardness alone capacity. This will minimize the potential for bed fouling. (Iron removal claims have not been verified by the Water Quality Association.)

If you are operating a water softener on clear water iron, regular resin bed cleaning is needed to keep the bed from coating with iron. Even when operating a softener on water with less than the maximum of dissolved iron, regular cleanings should be performed. Clean every six months or more often if iron appears in your conditioned water supply. Use resin bed cleaning compounds carefully following the directions on the container.

> ⚠ **Caution!** Do not use where the water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit.

The Culligan Process

Your Culligan water conditioner consists of three basic components, (A) the Control Valve, (B) the Mineral Tank, and (C) the Brine System.

A. The exclusive Culligan control valve automatically performs a variety of tasks that are necessary for the proper operation of your water conditioner. These tasks, commonly referred to as cycles or operating positions, are **Service, Regeneration,** and **Brine Refill**.

   1. **Service:** While the control valve is in the "Service cycle", hard water is directed down through the column of Cullex® resin where hardness minerals are removed from the water. The softened water is then directed into your household plumbing lines. The ability of the Cullex resin to remove hardness minerals needs to be periodically replenished; this is referred to as . . .

   2. **Regeneration:** While the control valve is in the "Regeneration cycle", water is first directed up through the column of Cullex resin to flush accumulated sediment out of the resin and down the drain. Then, the regenerant brine solution is slowly drawn from the bottom of the salt storage tank of the Brine System and is directed down through the column of Cullex resin, restoring the ability of the resin to remove hardness minerals from your water supply. Once completed, the regeneration cycle is followed by . . .

   3. **Brine Refill:** While the control valve is in the "Brine Refill cycle", a predetermined amount of water is directed to the salt storage tank of the Brine System so that additional salt can be dissolved to provide the brine solution that will be needed for the next regeneration cycle.

B. The Mineral Tank contains the Cullex resin column, Cullsan® underbedding, and an outlet manifold (the Culligan Municipal also includes carbon media for chlorine taste & odor reduction). The number of gallons of hard water that can be softened by the Cullex resin column before it needs regeneration is called the "capacity" of the resin column, and depends upon the amount of hardness minerals in each gallon of water (expressed as grains per gallon) and upon the amount of regenerant brine solution (expressed as pounds of salt) passed through the resin column during regeneration.

   Your Culligan service person, taking into account the hardness of your water and the amount of softened water your household may reasonably expect to use each day, has carefully established how often the softener will regenerate and how much salt will be used for each regeneration. This will ensure that all of your soft water needs will be fulfilled without using an excessive amount of salt.

C. The Brine System consists of a salt storage container and hydraulic Dubl-Safe™ valve. The salt storage container holds the salt that is used to make the regenerant brine solution. The hydraulic Dubl-Safe valve limits the amount of water that is returned to the salt storage tank during the brine refill cycle.

   Since a predetermined amount of salt is dissolved with each brine refill cycle, the salt must be periodically replenished in order to maintain efficient operation. Your Culligan service person will be able to tell you about how often salt must be added to the salt storage container.
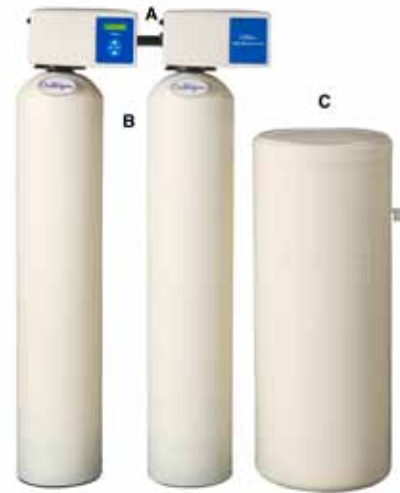
Water Meter Mode

In water meter mode, the controller keeps track of the quantity of water that has flowed through the resin bed. Based on the influent water hardness and the hardness capacity of the resin bed, a service life expectancy in the quantity of softened water is calculated and programmed into the control. When the set point is reached, regeneration is triggered. If the predict mode is not selected the regeneration will start at time of regeneration. In immediate mode the regeneration starts as soon as the regeneration signal is provided. If time clock backup is set and the capacity has not been exhausted but the days since last regen is greater than time clock backup, setting the softener will immediately regenerate.

Aqua-Sensor® Mode

The Aqua-Sensor is a conductivity probe that senses when the hardness front passes through the resin bed. It functions independently of the influent water hardness so therefore, is useful in conditions when the influent water hardness varies throughout the year. It provides for the most efficient mode of operation. In addition to sensing when a resin bed is exhausted, it can also be used to determine when the brine solution is rinsed from the resin bed during the Brine Draw/Slow Rinse cycle triggering the control to move to fast rinse. This patented feature provides water savings by optimizing the amount of rinse water required to completely rinse out the resin bed.

Smart Brine Tank Probe

The smart brine tank probe monitors conditions inside the brine tank. It predicts when salt needs to be added to the brine tank, detects the presence of salt-bridging, eductor line plugging and brine tank overfilling.

Wireless Remote Control

The wireless remote control displays the current status of the water softener or filters and allows for remote control. It can be located up to 200 feet away from the softener (depending upon building construction materials). The wireless remote displays information about softener performance, problems, days of salt remaining and allows remote control for regeneration.

The wireless remote control is designed to communicate at 915 MHz and to work without interference with other 915 MHz devices such as cordless telephones and baby monitors.

Modem

The modem allows for the system to be remotely monitored detecting problems before they occur, to schedule salt delivery when it is needed and to keep the system software up to date with the latest advances.

Manual Regeneration

Manual regeneration can be initiated via the softener control valve or wireless remote display. Manual regeneration can be initiated to begin regeneration immediately or that night. To immediately initiate regeneration, press and hold the CHECK MARK button for at least ten (10) seconds. To cancel a delayed regeneration, press and hold the CHECK MARK button for at least five (5) seconds.

Predict Mode

The Predict Mode is used with the flow meter to determine the optimum regeneration point. Before the regeneration starts, the control will compare the remaining capacity value with the average daily water use. If the average daily water usage is less than the reserve capacity, the controller will wait 24 more hours before regeneration. If the reserve capacity is less than the average daily water usage, the control will initiate regeneration. This works in delay mode only. At any time, if the total capacity value is reached, the control will initiate an immediate regeneration.

Pre-Rinse Mode

The Pre-rinse mode is used to pre-rinse the softener resin bed or filter media. The pre-rinse in flow meter mode will occur after the control has sensed that no water has flowed through the control for a period of X hours (can be set through the programming menu). When the control is in this mode, once the X amount of hours have elapsed the control will cycle to the fast rinse position for the pre-set length of minutes and then return to the home or service position.

> ***Note:*** *Be sure to set the brine safety level float to the proper position when using this mode since the refill step also occurs in the fast rinse position. Failure to do so will result in a higher salt dosage than anticipated.*

Down Flow Regeneration
Water and regenerate flow downward through the media tank.

Up Flow Regeneration
Water flow is downward and regenerate flow is upward through the media tank. The significance of this is that regeneration will be most effective in those parts of the resin bed which are treated with the freshest regenerate solution. There will tend to be less hardness leakage with up-flow regeneration.

Proportional Brining
The control monitors your softened water usage making only enough brine to regenerate that part of the resin bed that has been exhausted. In this way the amount of salt used relates directly to the amount of softened water used, making it more efficient and cost effective. Proportional brining can only be used with upflow regeneration. The Aqua-Sensor or meter can be used to initiate a regeneration.

Dial-a-Softness®
Dial-a-Softness is a manual adjustment built into the control valve that allows for variable hardness bypass into the softened water. The hard water bypass can be adjusted from 0% to 30%. The Dial-a-Softness also increases the softener capacity in proportion to the percent hard water bypass (less salt used).

Component Description

The water conditioner is shipped from the factory in a minimum of three cartons. Remove all components from their cartons and inspect them before starting installation.

Control Valve Assembly—Includes the control valve, bypass valve, and meter. Small parts packages will contain additional installation hardware, and the conditioner Owner's Guide.

Media Tank—Includes Quadra-Hull™ media tank complete with Cullex® ion exchange resin, underbedding and outlet manifold (12″ and 14″ tanks are shipped without media).

Salt Storage Tank Assembly—Includes salt storage container with support plate and Dubl-Safe™ brine refill valve and chamber.

Tools and Materials

The following tools and supplies will be needed, depending on installation method.

> *Note:* Check and comply with your state and local codes. You must follow these guidelines.
>
> **For installations in Massachusetts, Massachusetts Plumbing Code 248 CMR shall be adhered to. Consult your licensed plumber for installation of this system. This system and its installation must comply with state and local regulations. The use of saddle valves is not permitted.**

All Installations

- Safety glasses
- Phillips screwdrivers, small and medium tip.
- Gauge assembly (PN 00304450 or equivalent)
- Silicone lubricant (PN 00471507 or equivalent)—Do Not Use Petroleum-Based Lubricants
- A bucket, preferably light-colored
- Towels

Special Tools

- Torch, solder and flux for sweat copper connections
- Use only lead-free solder and flux for all sweat-solder connections, as required by state and federal codes.
- Threading tools, pipe wrenches and thread sealer for threaded connections.
- Saw, solvent and cement for plastic pipe connections.

Materials

- Brine line, 3/8″ (PN 01009819 or equivalent)
- Drain line, 1/2″ (PN 00303082, gray, semi-flexible; or PN 00331946, black, semi-rigid; or equivalent)
- Thread sealing tape
- Pressure reducing valve (if pressure exceeds 125 psi [860 kPa], PN 00490900 or equivalent)
- Pipe and fittings suited to the type of installation
- Water softener salt (rock, solar or pellet salt formulated specifically for water softeners)

Application

Water quality—verify that raw water hardness and iron are within limits. Note the hardness for setting the salt dosage and recharge frequency.

Iron is a common water problem. The chemical/physical nature of iron found in natural water supplies is exhibited in four general types: Dissolved Iron, Particulate Iron, Organic Bound Iron and Bacterial Iron. Hardness sample kits are available through your local Culligan dealer.

Pressure - If pressure exceeds 125 psi (860 kPa), install a pressure reducing valve (see materials checklist). On private water systems, make sure the minimum pressure (the pressure at which the pump starts) is greater than 20 psi (140 kPa). Adjust the pressure switch if necessary.

> ⚠ **Caution!** Do not use where the water is microbiologically unsafe or with water of unknown quality adequate disinfection before or after the unit.
>
> **Caution!** The use of a pressure reducing valve may limit the flow of water in the household.

Temperature—Do not install the unit where it might freeze, or next to a water heater or furnace or in direct sunlight. Outdoor installation is not recommended, and voids the warranty. Use the Culligan Outdoor Gold or Medallist Series Softeners for outdoor installations. The Culligan Outdoor Gold or Medallist Series Softeners have been certified by Underwriter's Laboratories for outdoor installation. If installing in an outside location, you must take the steps necessary to assure the softener installation plumbing, wiring, etc. Areas well protected from the elements (sunlight, rain, wind, heat, cold), contamination, vandalism, etc. as when installed indoors.

Location

Space requirements—Allow 6–12 inches (15–30 cm) behind the unit for plumbing and drain lines and 4 feet (1.3 meters) above for service access and filling the salt container.

Floor surface—Choose an area with solid, level floor free of bumps or irregularities. Bumps, cracks, stones and other irregularities can cause the salt storage tank bottom to crack when filled with salt and water.

Drain facilities—Choose a nearby drain that can handle the rated drain flow (floor drain, sink or stand pipe). Refer to the Drain Line Chart, Table 3 (page 24), for maximum drain line length.

> *Note:* *Most codes require an anti-siphon device or air gap. Observe all local plumbing codes and drain restrictions. The system and installation must comply with all state and local laws and regulations.*

Electrical facilities—A 10-foot cord and wall mount plug-in transformer are provided. The customer should provide a receptacle, preferably one not controlled by a switch that can be turned off accidentally. Observe local electrical codes.

> *Note:* *The softener works on 24 volt/60 Hz electrical power only. Be sure to use the included transformer. Be sure the electrical outlet and transformer are in an inside location to protect from moisture. Properly ground to conform with all governing codes and ordinances.*
>
> *Note:* *PN 01020620 and PN 01018133 plug-in transformers are rated for indoor installations only.*

Note: Read this section entirely before starting the installation. Follow all applicable plumbing and electrical codes.

For installations in Massachusetts, the Commonwealth of Massachusetts Plumbing Code 248 CMR shall be adhered to. Consult your licensed plumber for installation of the system. This system and its installation must comply with state and local regulations. The use of saddle valves is not permitted.

With the exception of media containers, open the remaining containers, remove all the components, and inspect them before starting installation.

Placement

Refer to Figure 1 for system placement.

- Set the media tank on a solid, level surface near water, drain and electrical facilities.
- Set the brine system on a flat, smooth, solid surface as near the media tank as possible.
- Waste connections or drain outlets shall be designed and constructed to provide for connection to the sanitary waste system through an air gap of two pipe diameters or 1 inch, whichever is larger. See Figure 1.

Tank Assembly

- 9" and 10" tanks are filled with media at the factory.
- Before the unit can be connected to the plumbing, you must insert the manifold and load the media into the tank for 12" and 14" units.

Position the Mineral Tank(s)

⚠ Caution! Do not lay the tank down unless a suitable lifting device is available. Personal injury and damage to the unit can result if dropped.

Note: For Municipal units allow the media to soak for 24 hours.

Determine the location for the mineral tanks(s) prior to loading, because they will be difficult to move after the underbedding and gravel are loaded.
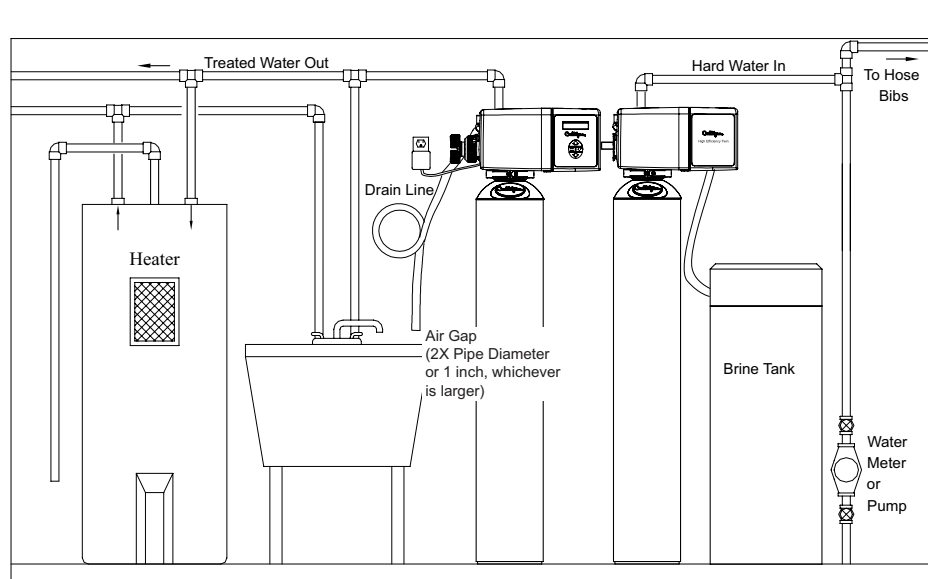
Figure 1. HE Twin system placement.

Load the Tank (12" and 14" Tanks)

1. Position the tank so that the Culligan® logo is in the front.
2. Remove the inlet strainer.
3. Install the outlet manifold into the tank (Figure 2).
4. Cover the tops of the manifolds with a clean rag.
5. Using a large-mouth funnel, load the Culligan underbedding through the top of the tank.

> ⚠️ **CAUTION! DO NOT allow the outlet manifold to move when loading the media. The manifold must remain vertical to ensure a good seal at the gasket. Rap the tank near the bottom with a rubber mallet to level the sand.**

6. Load the tank with the Cullex® ion exchange resin. Leveling is not required.
7. Remove the funnel.
8. Install the inlet strainer making sure to thread the strainer until it bottoms out on the tank thread. Failure to install the strainer correctly can cause the cotrol to leak.

Aqua-Sensor® Installation

1. Measure the sensor cable length: refer to Figure 2 and Table 1 (the Aqua-Sensor cord is set at the factory for a 9" tank).

Tank Model	Dimension X	Y
9" Quadra-Hull™ Tank	34 1/2"	40"
10" Quadra-Hull Tank	30 1/2"	44"
12" Quadra-Hull Tank	32 1/2"	42"
14" Quadra-Hull Tank	22 1/2"	52"

Dimension X is the exposed length the Aqua-Sensor cord (cord length from the Aqua-Sensor plug to the circuit board connector). You can then verify the Aqua-Sensor probe is inserted to the proper depth by confirming that Dimension X is at the correct length.

Table 1. HE Twin cable lengths.

> **NOTE   Only one Aqua-Sensor probe is used for HE Twin applications.**

2. Loosen the small Aqua-Sensor Plug; a needle-nose pliers works best. See Figure 3.
3. Moisten the cable sheath and slide the cable grip up or down to the proper cable length.
4. Tighten the small Aqua-Sensor plug so that the fitting cannot slide along the cable.

> **NOTE   There must be no kinks or bends in the cable.**

5. Insert the probe and cable through the Aqua-Sensor port.
6. Tighten the Aqua-Sensor plug into the Aqua-Sensor port.

Figure 2. HE Softener tank.

Small Aqua-Sensor® Plug
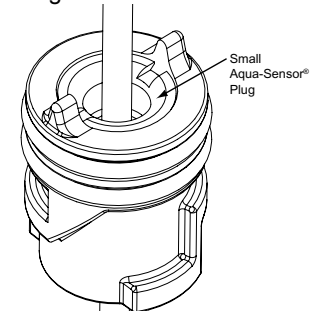
Figure 3. Aqua-Sensor plug.

> **NOTE   Follow Aqua-Sensor programming procedures—see page 44.**

> **NOTE** The media tank must be backwashed so that the Aqua-Sensor probe can fall into the proper position. See "Recommended Aqua-Sensor® Start-Up Procedure" on page 44.

Mount the Control Valve

See Figure 4 for an illustration on mounting the control valve to the tank.

1. Assemble the O-rings, located in the parts pack, to the tank adapter.

2. The valve adapter O-ring sits on the first step on the adapter. See Figure 5.

> **NOTE** Do not push the top O-ring down to the flange surface on the adapter.

> **NOTE** The larger of the two O-rings in the parts should be positioned between the adapter and the valve. Do not stretch the smaller O-ring onto the top of the tank adapter.

3. Lubricate only the top o-ring on the tank adapter and the outlet manifold o-ring with silicone lubricant.

4. Screw the adapter into the tank until the adapter bottoms out on the tank flange.

> **NOTE** The adapter only needs to be tightened hand-tight to the tank flange.

5. Align the manifold with the center opening in the valve, and firmly press the valve onto the adapter.

> **NOTE** Make sure to push the valve straight down onto the manifold. If the valve is cocked, it may cause the O-ring to slip off the manifold.

6. Assemble the tank clamp to the control, and tighten the clamp screw.

> **NOTE** The clamp and valve will be able to rotate on the tank until pressure is applied.

Add O-Rings
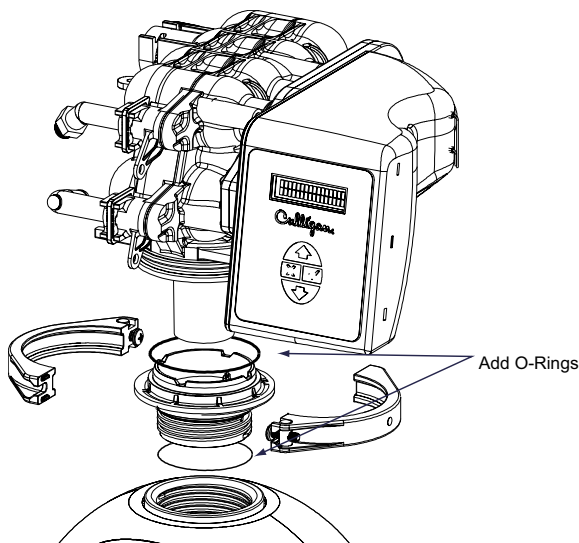
Figure 4. Mounting the control valve.

O-Ring

Figure 5. Valve adapter O-ring.

Backwash Flow Control, Eductor Nozzle—Throat

Listed below is the recommended backwash flow control, eductor nozzle, and eductor throat to be used for various size tanks.

Refer to Figure 6 through Figure 8 and instructions below for changing the backwash flow control, eductor nozzle, and eductor throat.

Unit	Backwash Flow	Nozzle	Throat	Brine Refill Flow
9"	2.5 gpm (#2 Brown)	Blue*	Light Brown*	0.45 gpm*
10"	2.5 gpm (#2 Brown)	Beige	Light Brown	0.45 gpm
12"	3.0 gpm (#3 Green)	Beige	Light Brown	0.8 gpm
14"	5.3 gpm (Black)	Green	Blue	0.8 gpm
* Shipped assembled inside the control standard from factory				

Table 2. Flow Restrictors

Eductor Nozzle and Throat Replacement

Refer to Figure 6 and the instructions below when changing the eductor nozzle and throat.

1. Remove the eductor cap clip.
2. Remove the eductor cap.
3. Remove the eductor assembly.
4. Remove the eductor screen from the assembly
5. Remove the blue nozzle and replace it with the correct nozzle. See Table 2.
6. Make sure to put the O-ring on the nozzle.
7. Replace the eductor throat if required.
8. Reverse the procedure to reassemble.

NOTE	Observe the orientation of the arrow on the eductor cap. The arrow faces down for downflow regeneration applications; the arrow faces up for upflow/proportional brining regeneration applications.

NOTE	When installing a 10", 12" or 14" tank, the Eductor Factor A, Eductor Factor B, and Brine Fill Flow needs to be updated in the circuit board; see "Advanced System Setup" for the procedure.
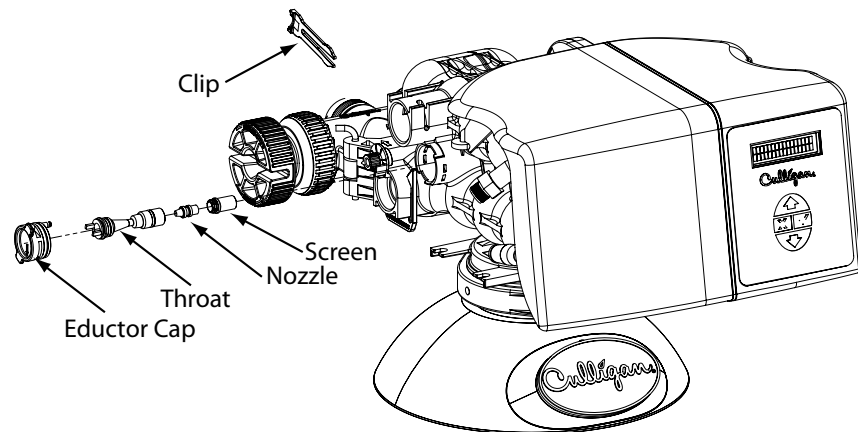
Figure 6. Removing the eductor nozzle and throat.

Backwash Flow Control Replacement

Refer to Figure 7 through Figure 9, Table 2, and instructions below to replace the backwash flow control.

1. Remove the cover by releasing the cover fastener from the control valve. See Figure 7 and Figure 8.

2. Remove the drain clip and pull the drain elbow straight off. See Figure 9.

3. Remove the backwash flow control located behind the elbow.

4. Install the correct backwash flow control. See Table 2.

5. Reverse the procedure to reassemble.

NOTE	The number on the flow control should face into the valve body.

NOTE	Do not re-install the cover until the drain line tubing is connected.
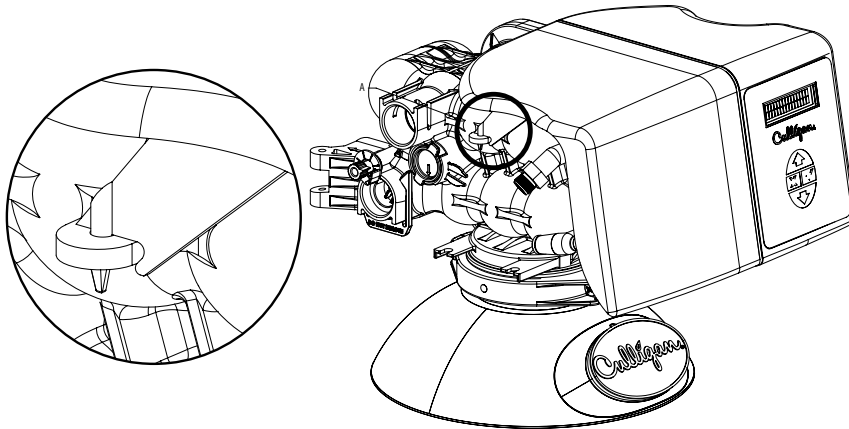
Figure 7. HE Twin softener cover fastener clip.
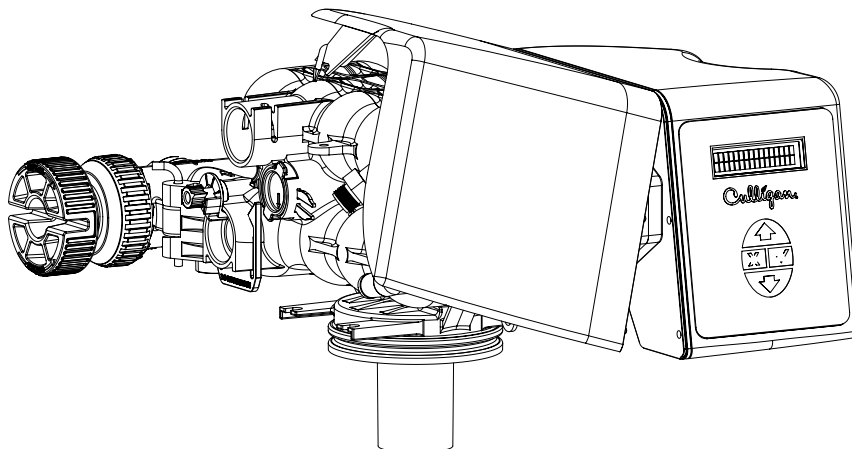
Figure 8. Removing the HE Twin softener cover.
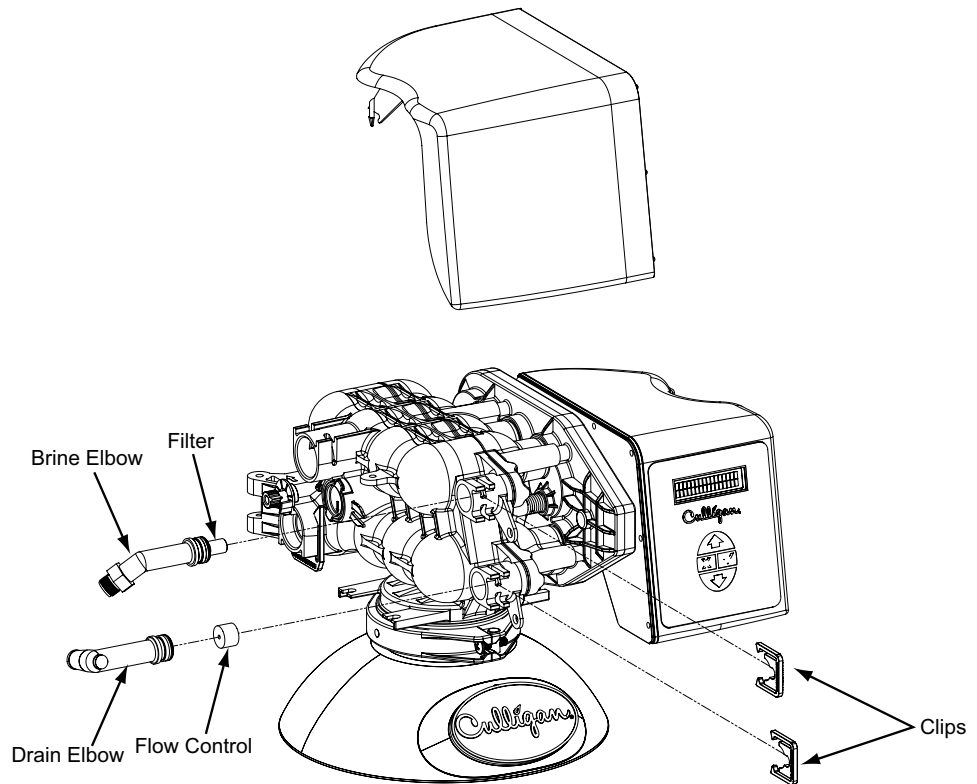
Figure 9. Removing the drain elbow and brine elbow.

Brine Elbow Filter

Drain Elbow Flow Control

Clips

Attaching the Cover

Once the drain and brine line is connected re-attach the cover. Refer to the below instructions and Figure 10 through Figure 12.

1. Insert the two pins on the top of the cover into the two holes on top of the frame; the cover should be slightly angled. See Figure 10.

2. Rotate the cover downward inserting the two pins on the side of the cover into the two holes on side of the frame. See Figure 11.

3. Attach the cover fastener onto the control valve. See Figure 12.
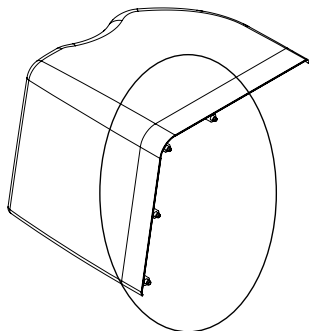
Figure 10.   Cover fastener clip.
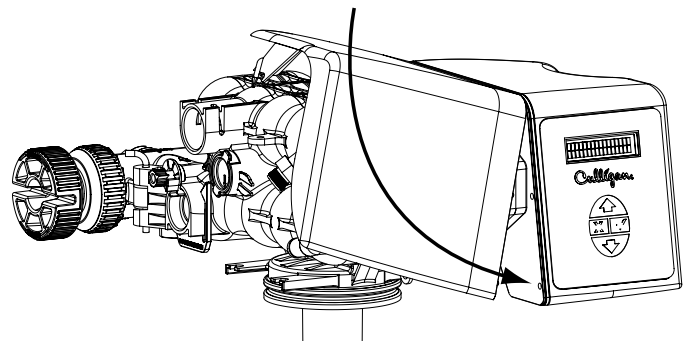
Figure 11.   Reattaching the HE Twin softener cover.

Push down
into place
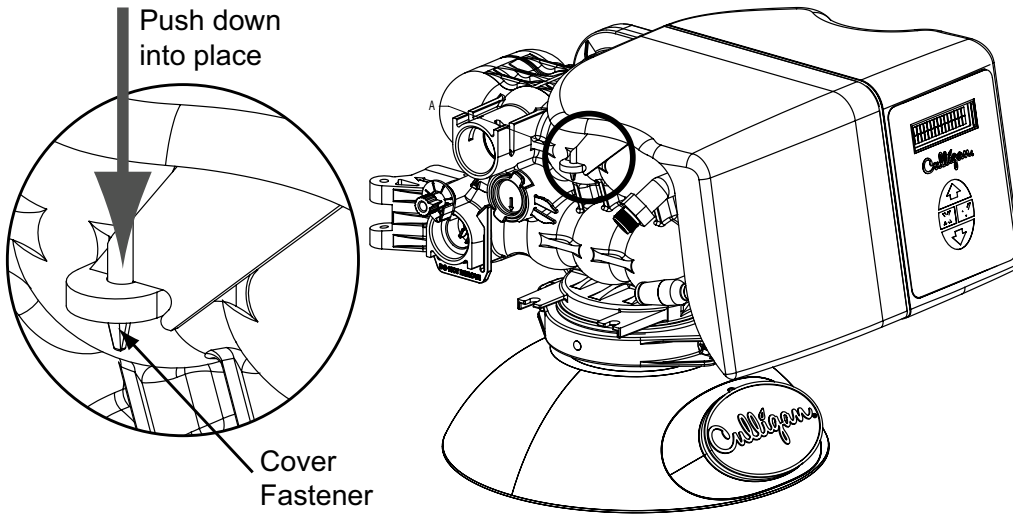
Cover
Fastener

Figure 12. Reattaching the cover fastener.

Dial-a-Softness

Dial-a-Softness is a manual adjustment built into the control valve that allows for variable hardness bypass into the softened water. The hard water bypass can be adjusted to produce 1–3 gpg hardness bleed. Shipped from the factory the Dial-a-Softness knob is set to the "SOFTEST" position (no hard water bypass). See Figure 13.

To set the Dial-a-Softness:

1. Locate the Dial-a-Softness knob on the control valve.
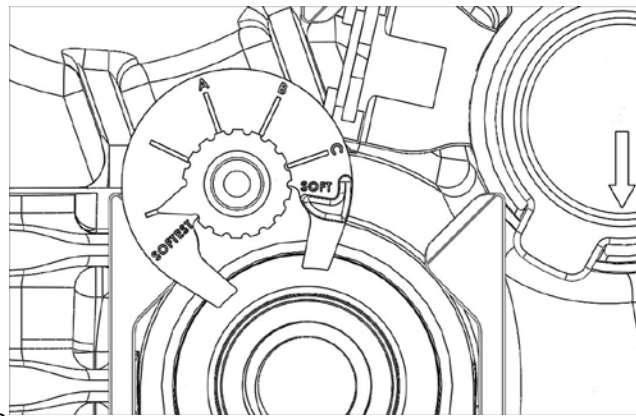
Figure 13. Dial-a-Softness knob.

2. Set the Dial-a-Softness knob to position A, B, or C as outlined in the table below, based on raw water hardness; this should produce a 1–3 gpg hardness bleed.

Letter on Dial-a-Softness Knob	1–3 gpg Hardness Bleed
SOFTEST	0
A	Greater than 20 gpg
B	Between 10–20 gpg
C	Less than 10 gpg

NOTE **The HE must take into account the adjusted capacity if the Dial-a-Softness was changed.**

Plumbing Connections

Shipped with each softener is a Culligan® bypass valve, which is used to connect the softener to the plumbing system. The bypass allows the softener to be isolated from the water service line if service is necessary while still providing water to the home. The bypass valve can be directly plumbed into the system, or can be connected with the following optional sweat connection kits.

- P/N 01010783   1" Sweat Copper Adapter Kit
- P/N 01016564   3/4" Sweat Copper Adapter Kit
- P/N 01016565   3/4" Elbow Sweat Copper Adapter Kit
- P/N P1018757   1" NPT Plastic Elbow Adapter Kit
- P/N P1018758   1" NPT Plastic Installation Kit

⚠	**CAUTION!**	**Close the inlet supply line and relieve the system pressure before cutting into the plumbing! Flooding could result if not done!**

⚠	**CAUTION!**	**When making sweat connections, use care to keep heat away from the plastic nuts used to connect the plumbing to the bypass. Damage to these componenets may result otherwise.**

Bypass Valve Installation

Refer to Figure 14 and the instructions below to connect the meter, bypass valve, and interconnecting pipe.

1. All HE units are equipped with a Soft-Minder® meter. The meter is installed on the outlet side of the control valve. The meter body fits in the same space as the coupling between the control valve and the bypass. Make sure the arrow on the flow meter is pointing in the direction of the flow.

2. The bypass valve connects directly to the control valve with the meter and coupling and two assembly pins. Lubricate all O-rings on the couplings/meter with silicone lubricant.

3. Connect the interconnecting pipe. The interconnecting pipe is connected to the outlet of Control #1 and the inlet of Control #2.
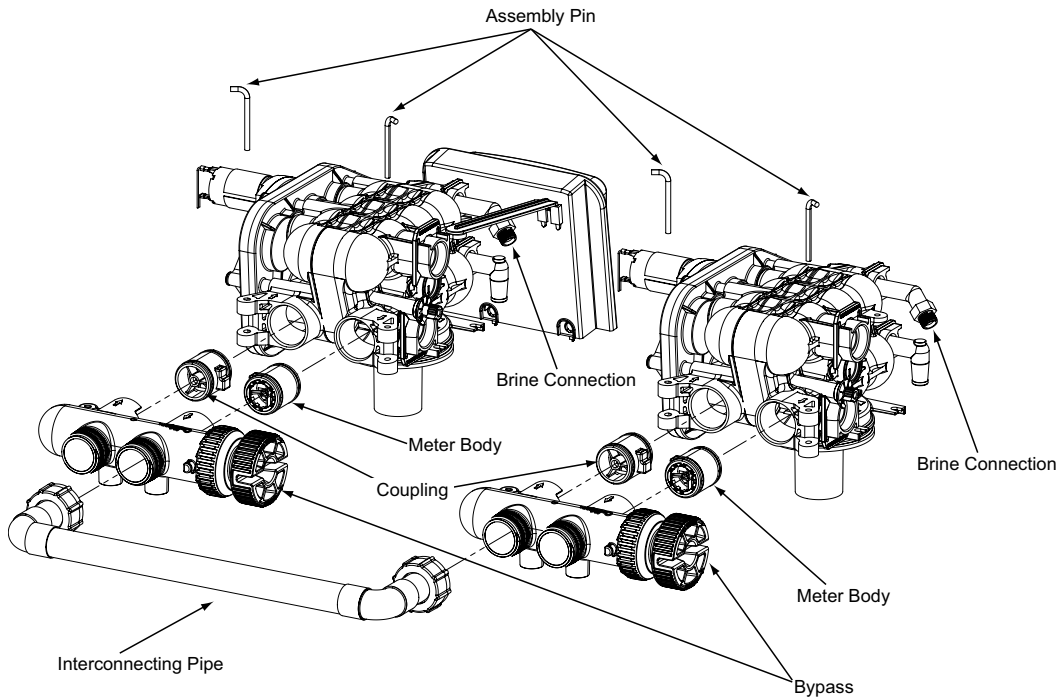
Figure 14.   Bypass valve assembly.

Assembly Pin

Brine Connection

Meter Body

Coupling

Brine Connection

Interconnecting Pipe

Meter Body

Bypass

NOTE	**If the ground from the electrical panel or breaker box to the water meter or underground copper pipe is tied to the copper water lines and these lines are cut during installation of the bypass valve, an approved grounding strap must be used between the two lines that have been cut in order to maintain continuity. The length of the grounding strap will depend upon the number of units being installed. In all cases where metal pipe was originally used and is later interrupted by the bypass valve to maintain proper metallic pipe bonding, an approved ground clamp c/w not less than #6 copper conductor must be used for continuity. Check your local electrical code for the correct clamp and cable size.**

To bypass, turn the blue knob clockwise (see directional arrow on end of knob) until the knob stops as shown. DO NOT OVERTIGHTEN! (Figure 15). To return to service, turn the blue knob counter-clockwise (see directional arrow on the end of knob) until the knob stops as shown. DO NOT OVERTIGHTEN! (Figure 16)
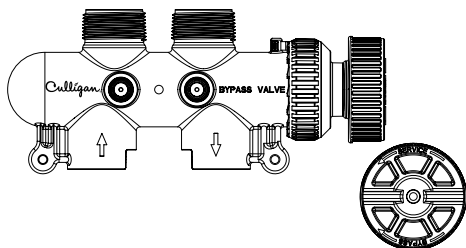
Figure 15.   Turn blue bypass knob clockwise.

About 1-1/4"

A screwdriver shank may be used in the slot as a lever for extra turning force if needed.
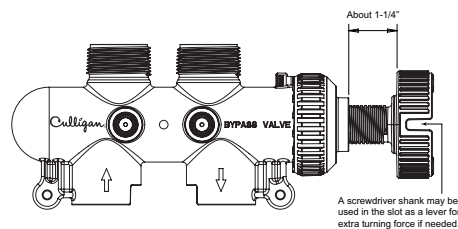
Figure 16.   Turn knob counter-clockwise.

Drain Line Connection

Refer to Table 3 for drain line length and height limitations under the applicable tank size.

1. Remove 1/2" pipe clamp from the small parts pack included with the control.

2. Route a length of 1/2" drain line from the drain elbow to the drain.

3. Fasten the drain line to the elbow with the clamp.

4. Secure the drain line to prevent its movement during regeneration. When discharging into a sink, or open floor drain, a loop in the end of the tube will keep it filled with water and will reduce splashing at the beginning of each regeneration.

NOTE	Waste connections or drain outlets shall be designed and constructed to provide for connection to the sanitary waste system through an air gap of two pipe diameters or 1 inch, whichever is larger.

NOTE	Note: Observe all plumbing codes. Most codes require an anti-siphon device or air gap at the discharge point. The system and installation must comply with state and local laws and regulations.

Operating Pressure	0 ft (0 m)	2 ft (0.6 m)	4 ft (1.2 m)	6 ft (1.8 m)	8 ft (2.4 m)	10 ft (3 m)
30 psi (210 kPa)	60 ft (18 m)	50 ft (15 m)	30 ft (9 m)	15 ft (5 m)	Not allowable	Not allowable
40 psi (279 kPa)	100 ft (30 m)	90 ft (27 m)	70 ft (21 m)	50 ft (15 m)	30 ft (9 m)	12 ft (4 m)
50 psi (349 kPa)	145 ft (41 m)	115 ft (35 m)	80 ft (24 m)	80 ft (24 m)	60 ft (18 m)	40 ft (12 m)
60 psi (419 kPa)				100 ft (30 m)	100 ft (30 m)	85 ft (26 m)	60 ft (18 m)
80 psi (559 kPa)	Normal installation should not require				140 ft (43 m)	120 ft (37 m)
100 psi (699 kPa)	more than 100 ft (30 m) of drain line					150 ft (46 m)

Table 3. Height of Discharge Above Floor Level Operating

Brine System Assembly—Duplex Models

Models using a common brine tank should be assembled as follows:

1. Cut off approximately two inches of brine tubing, then attach the tubing to the brine safety valve. See Figure 17.

2. Connect the center leg of the duplex tee (provided in the small parts pack) to the other end of the tubing.

3. Connect the brine line tubing from each softener to the two remaining ends of the duplex tee. The nut and insert are provided in the small parts pack.
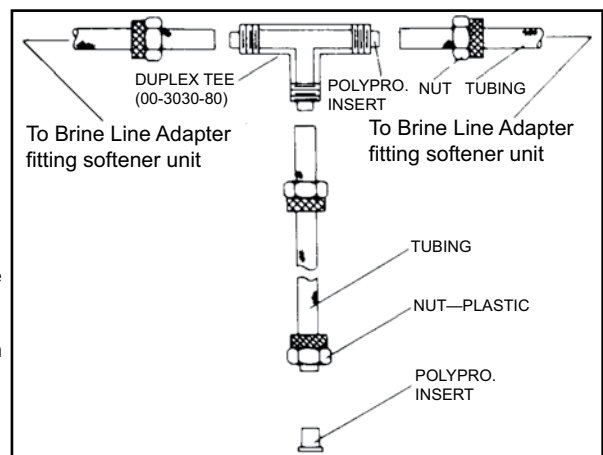
Figure 17.   Brine system assembly.

Fill The Salt Storage Container

Fill the salt storage container with water until the level reaches about one (1) inch above the salt support plate. Pour salt into the container. Fill with salt to within a few inches of the top.

Brine Valve "A" Dimension

The brine valve contains a brine float which can serve as a backup refill shutoff in the event of a failure, such as a power outage when in the refill position. The float level should be set based on the salt dosage setting. Refer to Figure 18.

1. Remove nut retaining brine valve to brine chamber.

2. Lift the brine valve from the brine chamber.

3. Find the correct A dimension from 01023053 "Appendix A, Softener Capacities" Table 5.

4. Set the distance from the top of the filter screen to the base of the float accordingly. The slight difference in height when the float is pulled up or down is negligible.

5. Re-install into brine chamber and replace nut.
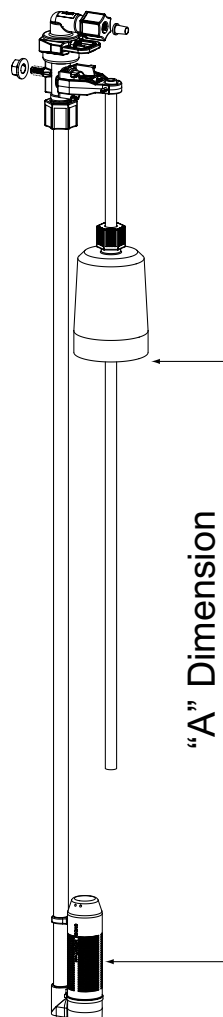
Figure 18.   Brine valve "A" dimension.

Circuit Board Connections

To connect the Aqua-Sensor® probe and meter to the HE Twin Control #1 and motor cable, gear box position cable, and the meter cable from HE Twin Control #2, proceed as follows:

> ⚠ **WARNING! Disconnect all electrical power to the unit before connecting.**

> ⚠ **CAUTION! Grip all connections to the circuit board by the connecting terminals for assembly and disassembly. Failure to do so could result in damage to the wire leads or connecting terminals.**

> ⚠ **CAUTION! Do not touch any surfaces of the circuit board. Electrical static discharges might cause damage to the board. Handle the circuit board by holding only the edges of the circuit board. Mishandling of the circuit board will void the warranty.**

> **NOTE** Observe all state and local electrical codes.

1. Remove the electrical enclosure from both control valves. First remove the electrical enclosure screw and then gently remove the enclosure from the control. Refer to Figure 19 and below instructions.

Electrical Enclosure Screw

24 Volt Power Cord

DOWN-FLOW GEARBOX

Flow Meter Wire Harness

Aqua-Sensor Wire Harness and 2.5 Volt Power Cord

Flow Meter Harness Motor Cable and Gearbox Position Cable from Control #2
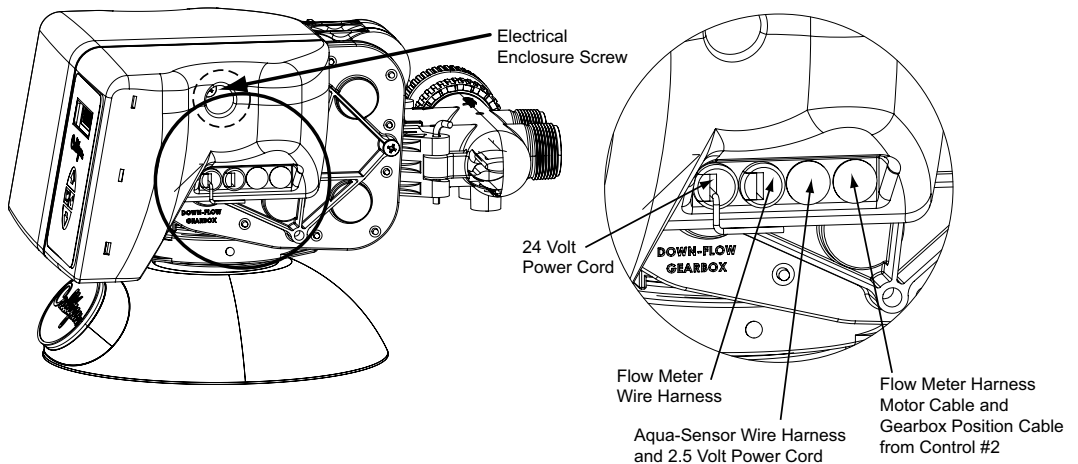
Figure 19. Circuit board connections.

2. Remove the 24 Volt power supply wire harness from the circuit board. See Figure 21.

3. Grip the circuit board from the edges and gently rotate it to the back of the enclosure (you are disengaging the circuit board from the two support pins on the bottom of the enclosure).

4. Remove the circuit board from the enclosure.

5. Remove the plastic plugs from the enclosure.

> **NOTE** **If additional accessories are to be connected to the circuit board (such as the Smart Brine Tank Probe or a phone line for modem) insert both the Aqua-Sensor 2.5 Volt power supply wire harness and the Aqua-Sensor sensor probe wire harness through the third hole on the enclosure.**

> **NOTE** **The wire connectors must be connected to the circuit board properly. The wires must exit the plug-in connector opposite of the raised white base of the circuit board connector. Failure to properly connect any of the connectors will result in a malfunction of the circuit board operation.**
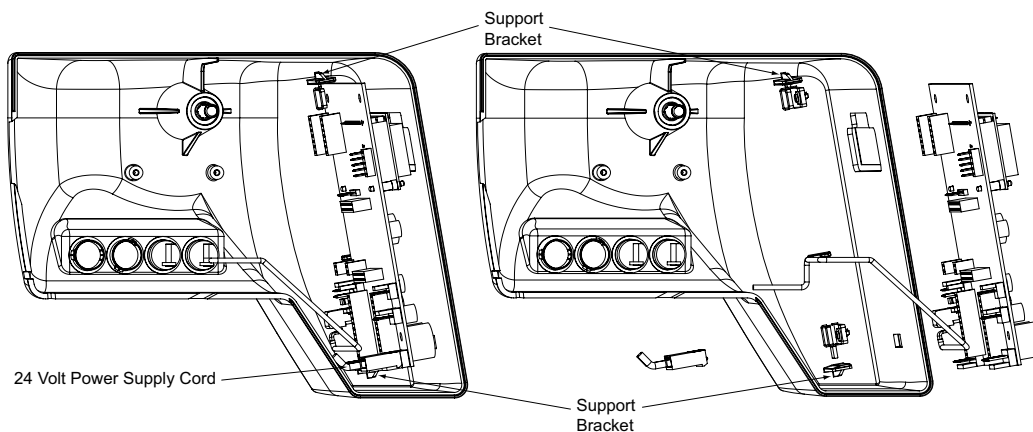
Figure 20.   Circuit board power supply.   Figure 21.   Circuit board removal.

6. Connect the auxiliary board to the main circuit board (Figure 22).

7. Insert the circuit board back into the enclosure.

   a. Angle the circuit board opposite the front enclosure and into the support bracket on the side of the enclosure.

   b. Gently push down and rotate forward until you hear a click (the pins on the bottom of the enclosure being inserted into the circuit board).

   c. Check to make sure the circuit board is rigidly fastened.
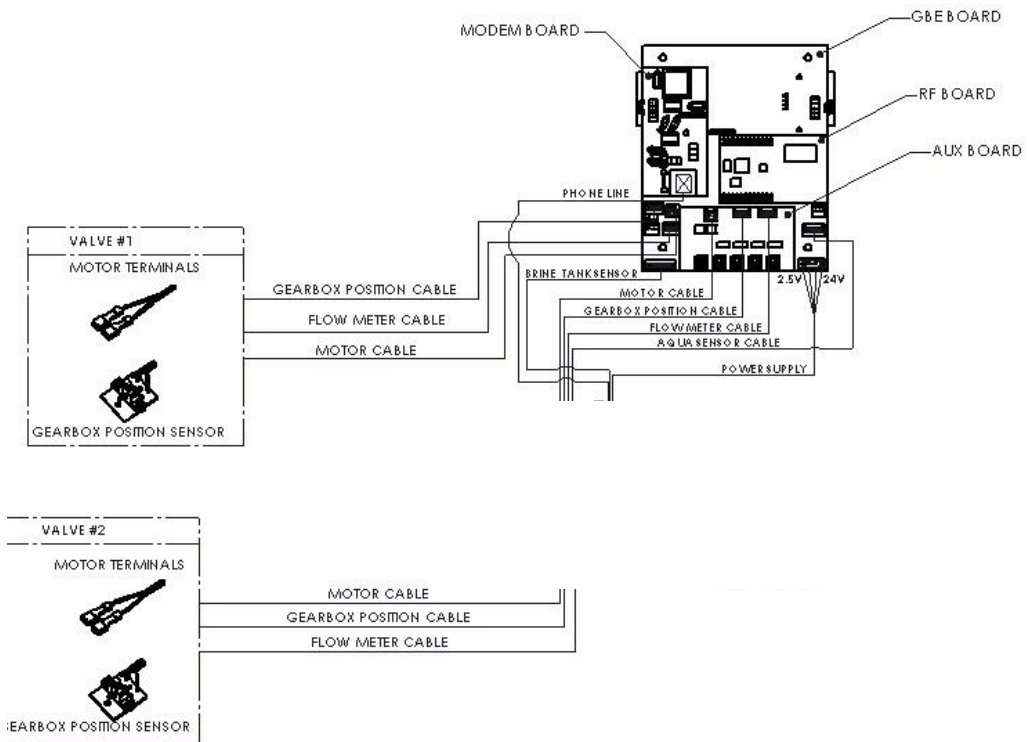
Figure 22.   Circuit board connections.

8. Connect the motor cable, gear box position cable and meter cable from HE Twin Control #2 to the auxiliary board to the main circuit board (Figure 22).

9. Connect the Aqua-Sensor probe and meter from HE Twin Control #1 to the circuit board. The Aqua-Sensor probe terminal is labeled "Aqua-Sensor" while the Soft-Minder® meter terminal is labeled "Flow Meter."

10. If installing an Aqua-Sensor, set up the 2.5 VAC power now.

   a. Locate the Aqua-Sensor power cord packed in the small parts pack. It has two spade terminals on one end of the cable and two metal slip-in tabs on the other end.

   b. The metal tabs should be INSIDE the controller. The spade terminals should be connected to the transformer.

   c. Press the two metal tabs on the end of the power cord into the open slots on the connector. These will be connected to the pins labeled "2.5 V" on the circuit board.

   d. Connect the other end of the power cord, with the spade terminals, to the two 2.5 VAC terminals on the transformer (Figure 22).

11. Pull any excess cable wire out of the enclosure and route the wiring inside the enclosure to avoid any interference.

XMFR

2.5VAC   24VAC

Power to circuit board 24V

Power to circuit board 2.5VAC only required for Aqua-Sensor installations

2.5V **POWER CORD**

24VAC on TRANSFORMER

METAL TABS Connect to white connector on main power cord

Blue
Black
Red
White
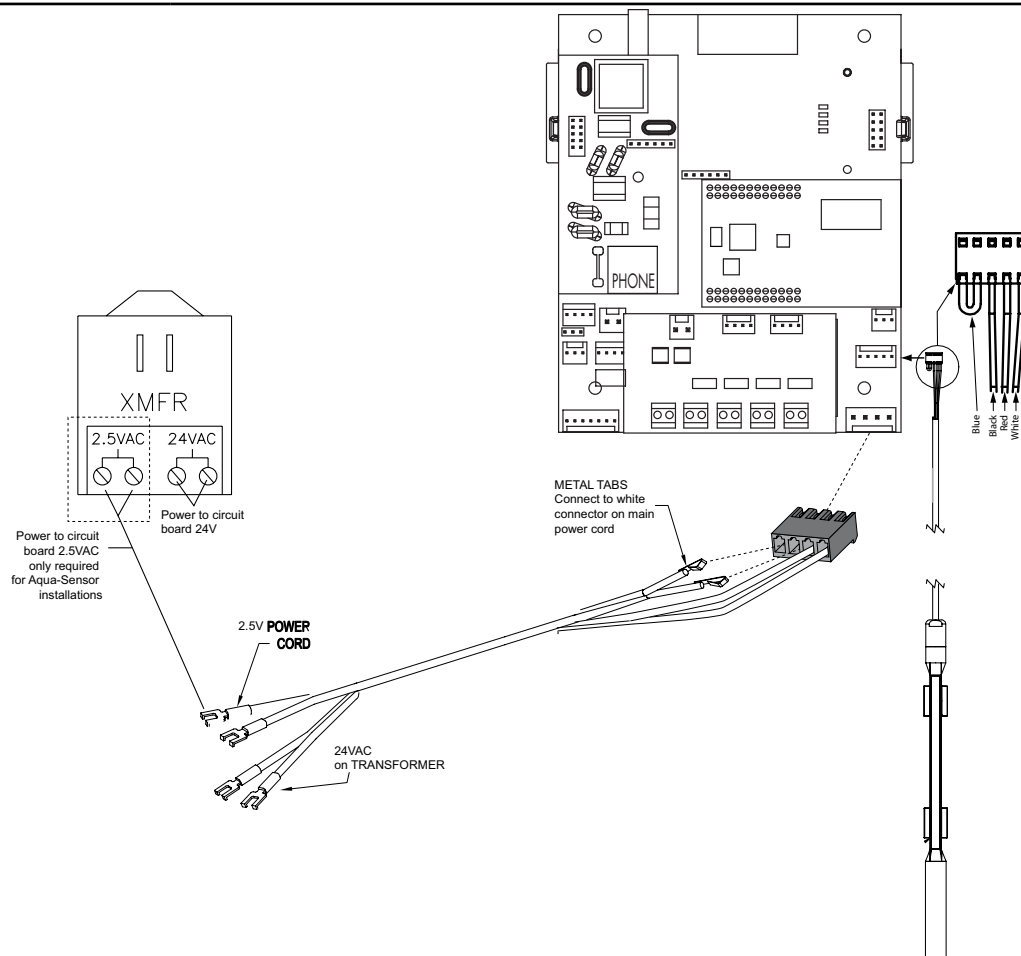
Figure 22. 2.5 VAC Aqua-Sensor® power connection.

12. Reattach the electrical enclosure cover to the control valve.

   a. Align the circuit board in the enclosure with the three support brackets on the control valve frame. See Figure 23.

   b. Push the enclosure onto the control valve, inserting the circuit board edge in the slots on the control valve frame and the screw on the enclosure with the hole on the cover.
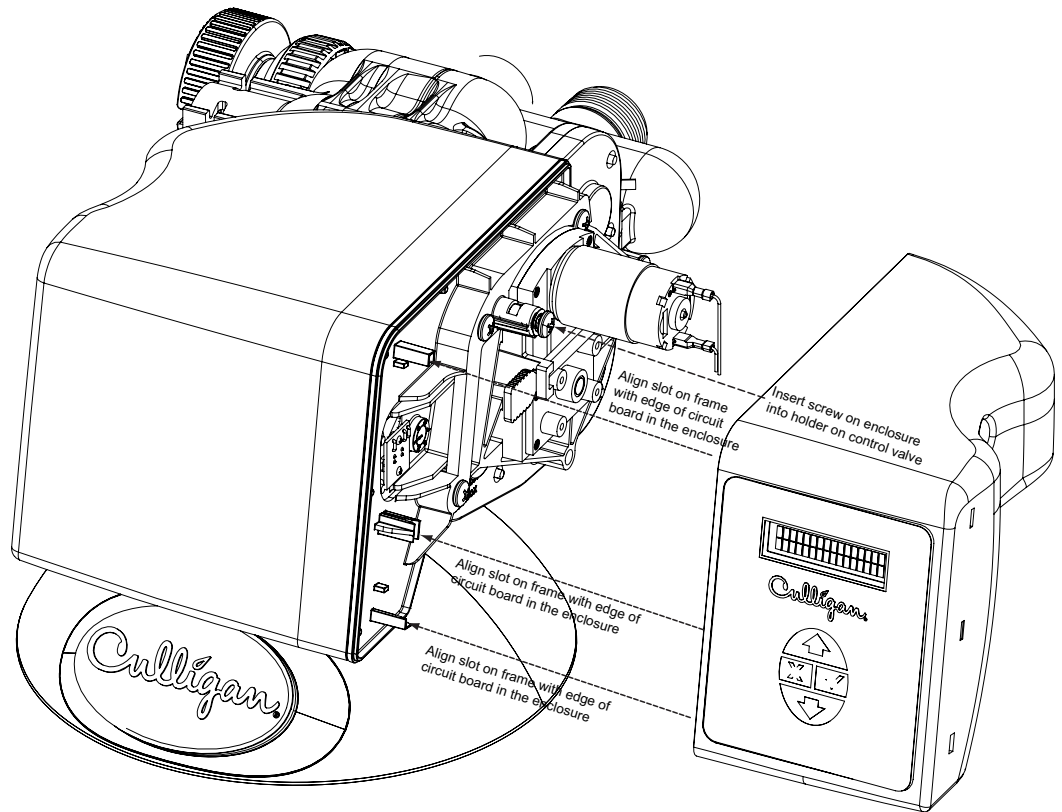
Figure 23.   Attaching enclosure cover to control valve.

c. Screw the enclosure on the control.

d. Attach the strain relief fittings to the Aqua-Sensor probe and 2.5 VAC power cord and insert into the enclosure.

e. Connect the 24 Volt power cord to the two 24 VAC terminals on the transformer.

Navigating the Menus and Keypad

UP button

CHECK MARK or **OK** button

CANCEL (X) button

DOWN button
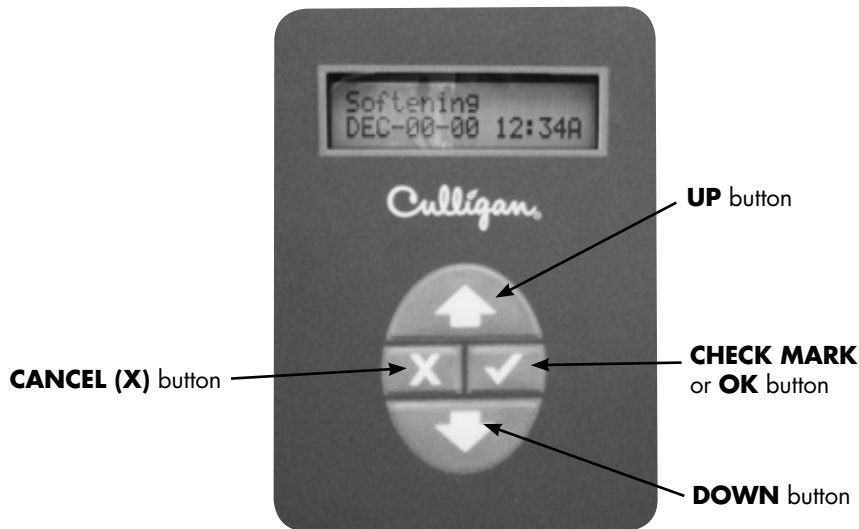
UP ARROW button: scrolls up the menu

DOWN ARROW button: scrolls down the menu

CHECK MARK button: selects the highlighted option, opens a new screen, or accepts a changed setting

CANCEL or **X** button: returns to the previous screen or cancels a changed setting
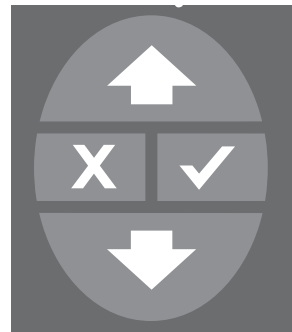
Controller

Remote

NOTE	Hold down the UP ARROW or DOWN ARROW button to quickly scroll through the setting without repeatedly pressing the button.

SOFTENING

DEC-00-00 12:34A

This is the **HOME SCREEN**. Press any button except the **CANCEL (X)** button to advance to the **MAIN MENU SCREEN**.

1) INFORMATION

2) MANUAL MODE

This is the **MAIN MENU SCREEN**. The ">" symbol indicates the menu selection. Press the **UP ARROW** or **DOWN ARROW** button to scroll through the menu.

	1) INFORMATION)2) MANUAL MODE	To select a setting, press the **CHECK MARK** button.
	MANUAL MODE REGEN NOW	The screen displays the setting (Manual Mode) and the current value (Regen Now). Press the **CHECK MARK** button to change the value.
	MANUAL MODE)REGEN NOW	The screen displays the ">" symbol next to the value, indicating that the value may be changed.
	MANUAL MODE)REGEN TONITE	Press the **UP ARROW** or **DOWN ARROW** button to change the value. The screen displays the new value. For example, press the **DOWN ARROW** button to change the value to Regen Tonite. Press the **DOWN ARROW** button again to select the next available value, Bypass.
X	MANUAL MODE REGEN NOW	To cancel the changed setting and revert to the default setting, press the **CANCEL (X)** button. The screen displays the default setting.
	MANUAL MODE BYPASS	Press the **CHECK MARK** button to accept the changed value. If the setting values are displayed, the ">" symbol no longer appears next to the value.
X	1) INFORMATION)2) MANUAL MODE	The screen returns to the Main Menu. Press the **CANCEL (X)** button to return to the **HOME** screen.
X	SOFTENING DEC-00-00 12:34A	The screen displays the **HOME** screen.
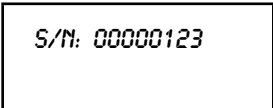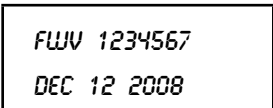
NOTE **Unplugging the Culligan HE water softener will not affect any of the control settings (the control must be plugged in for at least 10 minutes). Once programmed, the settings will be stored indefinitely.**
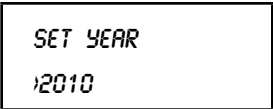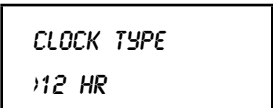
First Time Setup Procedure
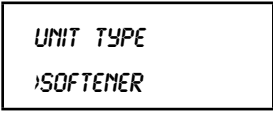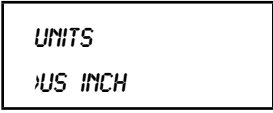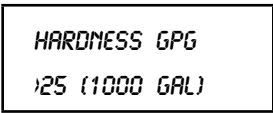
When a new controller is first powered on, the screen will display the first time setup message. The Smart Controller is designed to simplify the setup and installation process by making some default recommendations during the initial setup. These default settings are designed to be appropriate for most common installations.

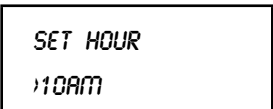| Function Button	Screen Display	Range	Procedure
⬇	FIRST TIME SETUP PRESS DOWN ARROW	N/A	When a new controller is first turned on, the screen displays **FIRST TIME SETUP**. Press the **DOWN ARROW** button.
⬇	S/N: 00000123	N/A	**Serial Number** The screen displays the serial number for this Smart Controller. Press the **DOWN ARROW** button. | NOTE	**If this unit will be installed with a modem, it is required that this electronic ID number be reported to Culligan on the IQR form.**	
⬇	FWV 1234567 DEC 12 2008	N/A	**Firmware Version** The screen displays the firmware version and date installed for this GBE Controller. Press the **DOWN ARROW** button.
⬇	SET MONTH JAN	Jan–Dec	**Set Month** The screen displays the month setting. Press the **DOWN ARROW** button to accept this information and view the day setting.
✔	SET MONTH ›JAN	Jan–Dec	To change the month setting, press the **CHECK MARK** button. The screen displays a cursor (>) symbol next to the displayed value.
⬆	SET MONTH ›FEB	Jan–Dec	Press the **UP ARROW** button. The screen displays the next value (here, changing January to February).
✔	SET MONTH FEB	Jan–Dec	Press the **CHECK MARK** button. The controller accepts the value and displays the Day setting.

Function Button	Screen Display	Range	Procedure
	SET DAY ·2		**Set Day** Whenever the displayed value is correct, press the **DOWN ARROW** button. The screen displays the next setting.
	SET DAY ·2	1–30	If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** button to change the day. The screen displays the new day (in this example, from 1 to 2). Press the **CHECK MARK** button to accept the value and advance to the next setting, **SET YEAR**.
	SET YEAR ·2010	2009–30	**Set Year** If the displayed value is not correct, press the **CHECK MARK** button. Press the the **UP ARROW** button to change the year. The screen displays the new day (in this example, leave at the default, 2010). Press the **CHECK MARK** button to accept the value and advance to the next setting, **CLOCK TYPE**.
	CLOCK TYPE ·12 HR	12 or 24	**Set Clock Type** If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** or **DOWN ARROW** button to change the clock type. The screen displays the changed setting (in this example, leave at 12 hour). Press the **CHECK MARK** button to accept the value and advance to the next setting, **SET HOUR**.
	SET HOUR ·10AM	12PM–11AM	**Set Hour** If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** or **DOWN ARROW** button to change the hour. The screen displays the changed setting (in this example, from 12PM to 10AM). Press the **CHECK MARK** button to accept the value and advance to the next setting, **SET MINUTE**.
	SET MINUTES ·20	0–60	**Set Minutes** If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** button to change the minutes. The screen displays the changed setting (in this example, from 0 to 20). Press the **CHECK MARK** button to accept the value and advance to the next setting, **UNIT TYPE**.

Function Button	Screen Display	Range	Procedure
	UNIT TYPE ›SOFTENER	Filter or Softener	**Set Unit Type** If the displayed value is not correct, press the **CHECK MARK** button. Press the **DOWN ARROW** button to change the unit type. The screen displays the changed setting (in this example, leave at the default, softener). Press the **CHECK MARK** button to accept the value and advance to the next setting, **VALVE TYPE**.
	VALVE TYPE ›GLOBAL	4-cycle, 5-cycle, Plat Plus, Global	**Set Valve Type** If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** or **DOWN ARROW** button to change the valve type. The screen displays the new valve type (leave the HE setting at the default, **GLOBAL**). Press the **CHECK MARK** button to accept the value and advance to the next setting, **UNITS**.
	UNITS ›US INCH	US Inch or METRIC	**Set Units** If the displayed value is not correct, press the **CHECK MARK** button. Press the **DOWN ARROW** button to change the measurement units. The screen displays the changed setting (in this example, leave at US Inch). Press the **CHECK MARK** button to accept the value and advance to the next setting.
	RESIN IN TANK ›1.00	0.10–4.00 4.10–200.00	**Set Softener Resin Value** If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** or **DOWN ARROW** button to change the new softener resin volume. This setting increments by tenths until 4.00 cubic feet, and then increments by whole numbers. The screen displays the changed setting (leave the HE setting at the default, 1.00). Press the **CHECK MARK** button to accept the value and advance to the next setting.
	HARDNESS GPG ›25 (1000 GAL)	1–170	**Set Water Hardness** If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** or **DOWN ARROW** button to change the water hardness setting. The screen displays the changed setting (leave the HE setting at the default, 25 (1000 gallons)). Press the **CHECK MARK** button.

Completed First Time Setup

```
INITIALIZING

FEB-02-10 12:18P
```

When the setup is complete, the circuit board microprocessor automatically calculates softener capacity. The screen displays the initializing status and the current date and time, and then transitions to the home screen.

```
SOFTENING

FEB-02-10 12:18P
```

The screen displays the current state (the display alternates between Softenening the next programmed regeneration) and the date/time set for the unit. This is the default home screen.

The controller is designed to simplify the setup and installation process by making some default recommendations during the Initial Setup. The default settings are designed to be appropriate for most common installations.
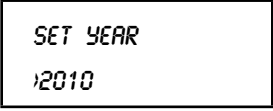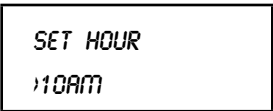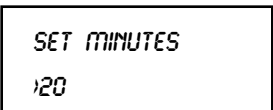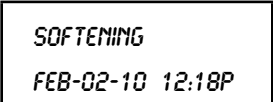
Follow this procedure to update the date or time.

Function Button	Screen Display	Range	Procedure
⬇	SOFTENING FEB-02-10 12:18P	N/A	Start at the home screen. Press the **DOWN ARROW** button.
⬇	2)MANUAL MODE ›3)SET DATE/TIME	N/A	Press the **DOWN ARROW** button to scroll to **3) SET DATE/TIME**. Press the **CHECK MARK** button to change the settings.

Set Month

Function Button	Screen Display	Range	Procedure
⬇	SET MONTH JAN	Jan–Dec	The screen displays the month setting. Press the **DOWN ARROW** button to accept this information and view the day setting.
✓	SET MONTH ›JAN	Jan–Dec	To change the month setting, press the **CHECK MARK** button. The screen displays a cursor (>) symbol next to the displayed value.
⬆	SET MONTH ›FEB	Jan–Dec	Press the **UP ARROW** button. The screen displays the next value (here, changing January to February).
✓	SET MONTH FEB	Jan–Dec	Press the **CHECK MARK** button. The controller accepts the value and displays the Day setting.

Set Day

Function Button	Screen Display	Range	Procedure
⬇	SET DAY ›2		Whenever the displayed value is correct, press the **DOWN ARROW** button. The screen displays the next setting.
✓	SET DAY ›2	1–30	If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** button to change the day. The screen displays the new day (in this example, from 1 to 2). Press the **CHECK MARK** button to accept the value and advance to the next setting, **SET YEAR**.

Set Year

Function Button	Screen Display	Range	Procedure
✔	SET YEAR ›2010	2009–30	If the displayed value is not correct, press the **CHECK MARK** button. Press the the **UP ARROW** button to change the year. The screen displays the new day (in this example, leave at the default, 2010). Press the **CHECK MARK** button to accept the value and advance to the next setting, **CLOCK TYPE**.

Set Clock Type

Function Button	Screen Display	Range	Procedure
✔	CLOCK TYPE ›12 HR	12 or 24	If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** or **DOWN ARROW** button to change the clock type. The screen displays the changed setting (in this example, leave at 12 hour). Press the **CHECK MARK** button to accept the value and advance to the next setting, **SET HOUR**.

Set Hour

Function Button	Screen Display	Range	Procedure
✔	SET HOUR ›10AM	12PM–11AM	If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** or **DOWN ARROW** button to change the hour. The screen displays the changed setting (in this example, from 12PM to 10AM). Press the **CHECK MARK** button to accept the value and advance to the next setting, **SET MINUTE**.

Set Minutes

Function Button	Screen Display	Range	Procedure
✔	SET MINUTES ›20	0–60	If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** button to change the minutes. The screen displays the changed setting (in this example, from 0 to 20). Press the **CHECK MARK** button to accept the value and advance to the next setting, **UNIT TYPE**.

Set Daylight Savings Time

Function Button	Screen Display	Range	Procedure
✔	DAYLIGHT SAVINGS ›YES	Yes No	If the displayed value is not correct, press the **CHECK MARK** button. Press the **UP ARROW** button to select Daylight Savings Time. Press the **CHECK MARK** button to accept the value.
✗	SOFTENING FEB-02-10 12:18P		Press the **X** button to return to the home screen.
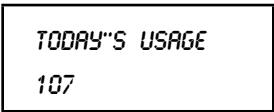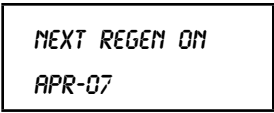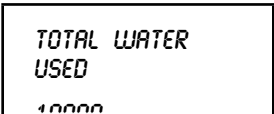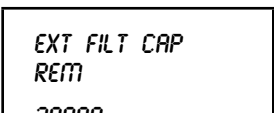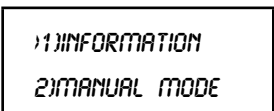
The following information can be displayed at the control valve or remote display. These settings are read-only. Press the **DOWN ARROW** or **CHECK MARK** button to scroll through the settings. Press the **UP ARROW** button to view the previous setting.

Function Button	Screen Display	Range	Setting Description
▼	SOFTENING APR-05-10 12:34A	N/A	This is the **HOME SCREEN**. Press any button except the **CANCEL (X)** button to advance to the **MAIN MENU SCREEN**.
▼ ✓	›1)INFORMATION 2)MANUAL MODE	1–6	Press the **DOWN ARROW** button once to **1) INFORMATION**. Press the **CHECK MARK** button to display the Information screens.
▼	SALT TANK LEVEL OK	1–12	If a Salt Brine Tank is installed, this screen displays the salt level. The screen displays OK unless the SBT probe detects an over-filled brine tank or low salt level. This screen is displayed only if a Smart Brine Tank is installed. If the screen displays **LOW**, the subsequent screen will display **APPROX DAYS OF SALT REMAINING**.
▼	REMAIN CAPACITY 80%	0–100	The softening capacity remaining, displayed as a percentage of the total capacity. During manually initiated regeneration, assume 0 percent remaining capacity. Press the **DOWN ARROW** button to display the next screen.
▼	REMAIN CAPACITY 708	0–no limit	The softening capacity remaining, measured in gallons (liters). Press the **DOWN ARROW** button to display the next screen.
▼	CURRENT FLOWRATE 10.8	0–no limit	The current flow rate, measured in gallons (liters) per minute. Press the **DOWN ARROW** button to display the next screen.

Function Button	Screen Display	Range	Setting Description
↓	TODAY''S USAGE 107	0–no limit	Today's water usage, measured in gallons (liters). Press the **DOWN ARROW** button to display the next screen.
↓	AVERAGE DAILY 310	0–no limit	Average water usage for this configuration. Press the **DOWN ARROW** button to display the next screen.
↓	NEXT REGEN ON APR-07	N/A	Displays the date of the next regeneration, based on average daily water usage. Press the **DOWN ARROW** button to display the next screen.
↓	TOTAL WATER USED 10000	0–no limit	Displays the total water used for this configuration. Whole numbers are displayed above 100 gallons. Press the **DOWN ARROW** button to display the next screen.
↓	EXT FILT CAP REM 20000	0–no limit	Displays the remaining capacity of the external filter. When the remaining capacity reaches zero, the system triggers the External Filter Alarm. Press the **DOWN ARROW** button to display the main menu.
X	1)INFORMATION 2)MANUAL MODE		Press the **CANCEL/X** button until the screen displays the **HOME SCREEN** and saves the settings.

Several conditions will cause the controller to initiate a regeneration. The screen displays **REGEN TONITE** when the controller has a regeneration scheduled. The screen displays **REGENERATING** during regeneration. Regeneration occurs:

- When the Soft-Minder® meter records the passage of a predetermined number of gallons.

- When the Aqua-Sensor® probe senses the hardness in the Cullex Media.

- When the number of days without a regeneration is equal to the regeneration interval (time clock backup) setting.

- At the next preset time (such as 2:00 a.m. the following morning) when the **CHECK MARK** button is pressed for five (5) seconds (the screen displays **REGEN TONITE**).

- Immediately, when the **CHECK MARK** button is pressed for ten (10) seconds (the screen displays **REGEN NOW**).

- Immediately, if power to the unit has been off for more than three (3) hours and time of day has been restored.

- At the next preset time, based on the DAY OF WEEK regeneration setting.

Delayed Regeneration
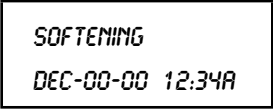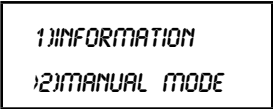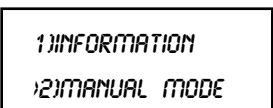
Function Button	Screen Display	Range	Changing the Setting
✔	SOFTENING DEC-00-00 12:34A	N/A	At the **HOME SCREEN**, press the **CHECK MARK** button and hold for at least five seconds.
✔	REGEN TONITE JAN-09-10 4:58P	Regen Tonite	The first line of the display will toggle between **SOFTENING** and **REGEN TONITE**.
✔	REGEN OFF JAN-09-10 4:58P	Regen Off	To cancel a delayed regeneration, press and hold the **CHECK MARK** button for five (5) seconds. The screen displays **REGEN OFF**.

Immediate Regeneration

Function Button	Screen Display	Range	Changing the Setting
✔	SOFTENING DEC-00-00 12:34A	N/A	At the **HOME SCREEN**, press the **CHECK MARK** button and hold for at least ten (10) seconds.
✔	REGEN NOW JAN-09-10 4:58P	Regen Now	The first line of the screen displays **REGEN NOW**. The softener will initiate an immediate regeneration.
✔	REGENERATING JAN-09-10 4:58P	N/A	The first line of the screen displays **REGENERATING**.

Standard Manual Regeneration

Function Button	Screen Display	Range	Changing the Setting
⬇	SOFTENING DEC-00-00 12:34A	N/A	This is the **HOME SCREEN**. Press any button except the **CANCEL (X)** button to advance to the **MAIN MENU SCREEN**.
⬇	1)INFORMATION ›2)MANUAL MODE	1–6	Press the **DOWN ARROW** button to **2) MANUAL MODE**. The screen displays the Manual Mode settings.
✓	MANUAL MODE ›REGEN NOW	Regen Off Regen Now Regen Tonite Bypass	Press the **CHECK MARK** button and the **UP ARROW** or **DOWN ARROW** button to change the setting. **REGEN NOW** is the default. Press the **CHECK MARK** button to select this option to begin regeneration immediately. **REGEN OFF** specifies that the softener will not regenerate. **REGEN TONITE** specifies that the softener will regenerate that night at 2:00 a.m. (or at the preset regeneration time). The screen displays two status messages: **SOFTENING** and **REGEN TONITE.** **BYPASS** specifies a preset time when the softener will be bypassed. Press the **CHECK MARK** button to select the total time the softener is to be in the bypass state.
✓	MANUAL BYPASS ›OFF	Off 30 (min) 60 90 120 180 Manual Bypass	Press the **CHECK MARK** button and the **UP ARROW** or **DOWN ARROW** button to select the total time the softener is to be in the bypass state. Press the **CHECK MARK** button to accept this setting. The screen displays the Manual Mode menu.
X	1)INFORMATION ›2)MANUAL MODE		Press the **CANCEL/X** button until the screen displays the **HOME SCREEN** and saves the settings.

Recommended Meter Start-Up Procedure

1. Close the main water supply valve.

2. Set the Cul-Flo-Valv® to the bypass position.

3. Ensure that all faucets at the installation site are closed.

4. Direct the drain line discharge into a bucket where flow can be observed.

5. Plug the transformer into a 120 Volt, 60 Hz, single-phase receptacle. The screen displays **FIRST TIME SETUP**.

6. Complete the First Time Setup.

7. Open the main supply valve.

8. Initiate an immediate regeneration to move the control into the **BACKWASH** position.

9. Refer to the section on manual cycling for information on cycling the control through its positions.

10. When in the **BACKWASH** position, slowly rotate the bypass to the soft water position until water flows.

11. Allow the tank to fill slowly until water flows from the drain line.

12. When flow to drain is established, open the bypass fully. Watch the drain line discharge for signs of resin. If signs of resin particles appear, reduce the flow. Increase the flow again when resin no longer appears in the discharge.

13. After the **BACKWASH** runs clear, step the control to the **REFILL** position to fill the brine tank and purge air from the brine line.

14. Complete the installation and cleanup.

15. Sanitize the unit as you leave the installation site. See "Sanitizing Procedure" on page 48.

16. Initiate an immediate regeneration, or set to regenerate at the preset time.

Recommended Aqua-Sensor® Start-Up Procedure

NOTE	You might find it useful to pre-test the sensor probe in your shop. The same test setup can be used in the field.

1. Close the main water supply valve.

2. Install the sensor probe into the tank but do not connect the sensor to the control at this time.

3. Set the Cul-Flo-Valv® to the BYPASS position.

4. Ensure that all faucets at the installation site are closed.

5. Direct the drain line discharge into a bucket where flow can be observed.

6. Plug the transformer into a 120 Volt, 60 Hz, single-phase receptacle (make sure to connect both 24V and 2.5V properly).

7. Complete the FIrst Time Set-up.

8. Open the main supply valve.

9. Initiate an immediate regeneration to move the control into the **BACKWASH** position.

10. Refer to the section on manual cycling for information on cycling the control through its positions.

11. When in the **BACKWASH** position, slowly rotate the bypass to the soft water position until water flows.

12. Continue **BACKWASH** until the drain effluent is clear and the Aqua-Sensor probe is placed in the resin bed—at least 10 minutes (use a white foam coffee cup to occasionally collect a sample of backwash water; the stark white of the cup will show the presence of color throw and resin fines).

13. Continue or repeat the **BACKWASH** cycle if needed.

14. After the backwash water runs clear, step the control to the **REFILL** position to fill the brine tank and purge air from the brine line.

15. Unplug the control and connect the sensor to the circuit board.

16. Reconnect the power and **INSTALL** the Aqua-Sensor Probe (Main Menu/ Accessories/ AquaSensor)

17. Check the condition of the Aqua-Sensor (Main Menu/Diagnostics/Checksensors)

18. Press the Program key and program the control to the desired settings.

19. Complete installation and cleanup.

20. Sanitize the unit as you leave the installation (see "Sanitizing Procedure" on page 48).

21. Initiate an immediate regeneration.

The thorough backwashing process should have cleared the fines and color-throw from the tank. The probe should settle into the resin bed during the first couple of minutes of backwashing.

Salt is the mineral used to "recharge" your water conditioner. A brine solution is automatically made up in the bottom of the salt storage container, the Cullex® resin beads in the mineral tank are flushed with the brine solution as a step in the recharging process.

Your Culligan Water Conditioner has been carefully designed to get the greatest amount of softening capacity from the salt it uses. Here is some pertinent information about salt usage, types and service.

Salt Economizer

This control is set at the time of installation, and determines salt usage according to the water hardness, number of persons in the household, and water usage.

What Kind of Salt is Best

All Culligan Water Conditioners are designed to use any water conditioner salt of good quality, including "rock" "pellet," "solar," or "evaporated" types.

All rock salt, regardless of source, contains insoluble material which collects at the bottom of the salt storage tank and requires periodic clean-out.

If purified salt products are used, the salt storage compartment will require less frequent clean-out, but you must check more frequently for "bridging."

Regardless of what type of salt is used, we recommend Culligan Brand Salt as suggested by your Culligan Dealer. He or she is the expert and can provide you with the best product for your Culligan Water Conditioner.

Automatic Salt Delivery Service

Ask your Culligan Dealer for details about salt delivery service. You can have your salt supply replenished on a regular basis. Whether you have automatic delivery service or pick up salt from your Culligan Dealer, you will be getting quality salt packaged according to rigid Culligan specifications. Using Culligan Brand Salt will help assure continued efficiency and trouble-free operation of your water conditioner.

Modem allows for the system to be remotely monitored detecting problems before they occur, to schedule salt delivery when it is needed and to keep the system software up to date with the latest advances.

NOTE	Sodium Information: Water softeners using sodium chloride for regeneration add sodium to the water. Persons who are on sodium restricted diets should consider the added sodium as part of their overall sodium intake.

Care and Cleaning of Your Water Conditioner

Following these simple precautions will help assure continued trouble-free service and keep your Culligan Water Conditioner looking like new for years.

1. Do not place heavy objects on top of the salt storage tank or timer cover.

2. Use only mild soap and warm water when cleaning the exterior of the conditioner. Never use harsh, abrasive cleaning compounds or those which contain acid, such as vinegar, bleach and similar products.

3. **Important: Protect your water conditioner and the entire drainline from freezing temperatures. DANGER: If your unit should freeze, do not attempt to disassemble it. Call your Culligan Dealer.**

4. **Important: Culligan water softeners are sold for use on potable water, only. If at any time the water becomes contaminated, such as during a "boil water" situation, the operation of the water softener should be discontinued until it is verified that the water is again potable. To do this, turn the blue knob in a clockwise position. Then, call your Culligan dealer to have your system sanitized before it is placed back into service.**

5. Should service, adjustment or trouble-shooting information be needed which is not covered in the Use and Care Guide, call your Culligan Dealer.

For parts and service availability please call your local independently operated Culligan dealer. For your nearest Culligan dealer, call (800) 285-5442.

Recommended Preventative Maintenance Inspection Schedule

The Culligan High Efficiency Twin household water softener has been designed to provide a good, consistent service life. Routinely inspecting the system may help avoid potentially costly breakdowns related to circumstances outside of the control of the dealer and/or user.

Component	Suggested Inspection Frequency	Reason for Maintenance
Entire System	At Start-up, after infrequent use (idle for one week or more) or every 3 - 6 months.	On private supplies, the appearance of off-tastes and odors, particularly if musty or "rotten egg" (caused by harmless sulfate-reducing bacteria) may indicate a need for the system to be sanitized. See page 48.
Backwash Flow Controller	Every 12 months or every time service is performed on the system.	Build up of sediment, iron and/or other foreign materials (found in some water supplies but not necessarily all) could negatively affect system performance. Monitor item for normal or unexpected wear.
Brine eductor nozzle and throat	Every 12 months or every time service is performed on the system.	Build up of sediment, iron and/or other foreign materials (found in some water supplies but not necessarily all) could negatively affect system performance. Monitor item for normal or unexpected wear.
Softening Media (Cullex)	Every 2 -3 years	Chlorinated water supplies can breakdown and destroy resin material. Resin material may also perform poorly if subjected to other materials (sediment, iron, alum, etc.) found in some water supplies (but not necessarily all).

A periodic clean-out of the Salt Storage Tank is necessary to keep your Culligan Water Conditioner at peak operating efficiency. Do it at least every two years when the salt supply is low. Follow these step-by-step procedures:

Tools needed:

- Scoop
- Clean, bucket-size container
- Garden hose
- Household scrub brush or sponge

1. Remove the salt storage tank cover and the cap from the brine valve chamber.
2. Lift the brine valve out of the brine valve chamber and set aside in an upright position.
3. If you'd like to save any clean, dry salt remaining in the tank, remove it and place it in a clean container.
4. Using the scoop, dig out and discard as much remaining salt, water and debris as possible.
5. Remove the brine valve chamber by removing the screws on either side of the salt tank.
6. Remove the salt plate at the bottom of the brine tank.
7. Lay the salt tank on its side and direct a brisk stream of water from your garden hose to its inside to rinse out all residue.
8. Using a household scrub brush and a mild soapy solution, clean the salt plate. This will complete the tank cleaning.
9. Insert the brine valve into the chamber and replace brine valve chamber cap.
10. Fill the salt storage tank with four to six inches of water.
11. Fill the tank with salt to within a few inches of the top.
12. Replace salt storage tank cover.

Sanitizing Procedure

A water softener in daily use on a potable water supply generally requires no special attention other than keeping the salt tank filled. Occasionally, however, a unit may require sanitization under one of the following conditions:

- At start-up time.
- After standing idle for a week or more.
- On private supplies, the appearance of off-tastes and odors, particularly if musty or "rotten egg" (caused by harmless sulfate-reducing bacteria).

NOTE   If the water supply contains iron, regenerate the softener before sanitizing to remove iron from the resin.

Caution! Hazard from toxic fumes! Chlorine bleach and common iron control chemicals may generate toxic fumes when mixed.

- If the unit uses Culligan Sofner-gard® or other compounds containing sodium hydrosulfite, sodium bisulfite, or any other reducing agent, disconnect the device feeding the chemical(s) and manually regenerate the unit before sanitizing.
- Do not use this procedure if the softener salt contains iron control additives.

1. Remove the brine tank cover.
2. Pour directly into the brine chamber 1/3 to 1/2 cup of common household bleach (5.25% sodium hypochlorite) for each cubic foot of resin in the tank.
3. Manually start recharge. Allow the unit to complete the recharge cycle automatically.

If tastes and odors return frequently, even after sanitization, a continuous chlorination system may be needed. Send a water sample to a qualified laboratory for bacterial analysis.

If you unexpectedly experience hard water, make these simple checks before calling your Culligan dealer. One of the following conditions may be the reason for your interruption of service.

Important

If any of the following conditions is found, the water conditioner should be manually recharged according to instructions on page 42 after you have corrected the problem.

Power Supply

Check your power supply cord. Is it plugged fully into the electric outlet? Be certain that the outlet is not controlled by a wall switch which has been turned off. Reset conditioner to proper time of day and then plug in.

Blown Fuse

Check the house fuse or circuit breaker panel. Replace a blown-out fuse or reset an open circuit breaker.

Power Failure

Any interruption in your power supply or time changes - such as daylight savings - will disrupt your conditioner's recharge schedule by causing the timer to run off-schedule. Reset timer to proper time of day.

Bypass Valves

Check to see if they are in the proper position. Cul-Flo-Valv® Bypass, if used, should be in the "Push for Service" position. If hand valves are used, see that inlet and outlet valve are opened and that the bypass valve is closed.

No Water

If you aren't getting any water flow at all, make sure your water supply is working. Open a tap ahead of the conditioner (outside tap) to see if you have any water pressure. If you have water pressure, check the bypass valve. If it is in the Service position, put it into the bypass and call your Culligan dealer for service.

Increased Usage

Guests, family additions, new water-using appliances, etc., all will result in more water usage and will require more capacity from your conditioner. You can reprogram your recharging schedule by following the directions on pages 41-42. Call your Culligan dealer for advice and save a service call.

Salt Supply

Check it. Refill if necessary and wait approximately 4 hours for salt to dissolve before initiating a recharge cycle.

Salt Bridging

Salt bridging occurs when a space is formed between the salt and the water underneath, preventing the salt from dissolving to make brine. No brine, no soft conditioned water!

High humidity and/or use of some brands of purified salt products may cause a salt bridge to form.

The best way to check and eliminate a salt bridging problem is to take a broom handle or similar instrument and make a mark 34 inches from the end. Then carefully begin to probe down through the salt with the instrument. Should an obstruction be found before the mark on your instrument reaches the rim of the salt storage tank, a salt bridge is likely to have formed. Continue to probe and break the salt bridge completely.

Error Codes

The following error messages may display on both the HE controller and Remote Display (if connected).


```
PROBLEM FOUND
APR-01-10 10:01A
```

When the controller identifies an error, it will attempt to correct the error without user input. If the problem persists, the **HOME SCREEN** displays **PROBLEM FOUND**. Press the **CHECK MARK** button. The screen displays the first error.

```
LOW SALT
```

Press the **DOWN ARROW** button to display any additional errors.

```
-) CLEAR ERRORS
```

```
-) GO TO MENU
```

Press the **CHECK MARK** and the **DOWN ARROW** button to view **CLEAR ERRORS**, **GO TO MENU**, or **EXIT**. If you select **CLEAR ERRORS**, the controller checks error status and attempts to clear the error. If the error still exists, the screen displays **PROBLEM FOUND**. If the error no longer exists the screen displays **SYSTEM OK**.

Error	Reason for Error	Comment/Clearing Error Message
Salt Bridging	Brine tank has low concentration of brine but still appears to have solid salt.	Use a tool to break up any salt bridge inside the brine tank
No Remote RF Signal	Main board is not receiving a signal from the remote.	Remote is off, out of range or on a different channel from the main board. If interference is suspected, try moving the remote closer or switching to a different channel on both the main and remote units
Motor Home Error	Motor did not move when it should. The control home position could not be found.	Use manual motor control to see if motor is actually working and not jammed. Use Diagnostics/ Sensor menu to verify that the optical or sensor is working. Verify the valve type for the control (HE = **GLOBAL**).
Brine Blocked	The flow rate of brine or water to or from the brine tank is fully or partially blocked.	Check brine line for blockages or air leaks. Check eductor and eductor screen for blockages
Replace Filter Media	Total gallons thru the unit has exceeded the specified capacity of the media.	Replace the media. Reset the media filter life at Main Menu/ Advanced Setup/Regen Settings/ Media Life
Replace Aux Filter Media	Total gallons through the secondary filter (i.e. "Big Blue" filter) has exceeded the specified capacity.	Replace optional filter cartridge. Reset the aux. Filter media life at Main Menu/ Accessories/ Aux Filter menu
Aqua-Sensor Salt Error	Aqua-Sensor did not detect brine during the regeneration cycle.	Check brine tank; add salt if necessary. Check Z ratio of the Aqua-Sensor at Main Menu/Advanced/Diagnostics/ Sensors
Call Culligan at xxx-xxx-xxxx	This message is displayed if an error has been detected that requires servicing and no modem installed in the system.	Call the number shown. If possible, use a phone that will allow you to see and enter changes to the main controller if required by the service technician during the call
Position Sensor Error	The motor is directed to run but no change in position is detected.	Check the motor using manual motor control and the position sensors using Main Menu/ Advanced/ Diagnostics Sensors
xx days salt remaining	This is a prediction of the number of days until it will be necessary to add salt to the brine tank.	Add salt to the brine tank at any time. It is recommended that the brine tank be filled to approximately 2/3 full.
Low Salt Level	Salt level is low; less than 15 days of salt remaining.	Contact Culligan dealer for salt delivery or fill brine tank with salt.
Low Battery	Battery needs replacement.	Replace with Panasonic Model# CR 2032 3V battery.
Brine Overfill	Too much water in brine tank.	
	Plugged drain line flow control (Unit will not draw brine).	Check eductor; check for brine draw.
	Plugged eductor system (Unit will not draw brine).	Clean drain line flow control.
	Slow leak to brine line.	Clean eductor screen and nozzle
	Faulty eductor piston.	Replace eductor piston
	Power outage while control was in refill position.	
No Refill	Failure to refill brine tank. Refill restrictor plugged. Air in brine line causes float to slam shut.	Clean or replace refill restrictor. Verify all tubing connections are properly assembled.
Aqua-Sensor Probe	An Aqua-Sensor was "Installed" but main board detects the Aqua-Sensor is not connected. The board might not be detecting the 2.5V power supply	Check connection of Aqua-Sensor to the main board.

Normally, all water except outside lines passes through the water conditioner. There are times when the water conditioner should be bypassed, using the Cul-Flo-Valv® Bypass, or a three-way bypass valve. You should bypass:

1. If lines to outside faucets do not bypass the water conditioner, and you do not want to waste soft water on lawn sprinkling or other outside uses.

2. If you are going away on vacation and want to save salt by not having the unit recharge while you're away.

Bypass Valve

In the back of Culligan water conditioners is a Cul-Flo-Valv® Bypass. To bypass unit, simply turn the blue knob clockwise. To return to soft water service, reverse the procedure—turn the blue knob counter-clockwise.
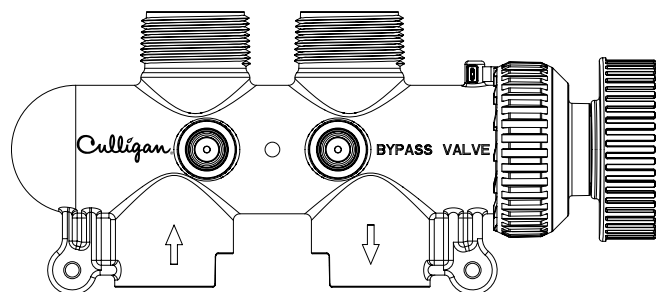
To BYPASS, turn the blue knob clockwise (see directional arrow on end of knob) until the knob stops as shown.
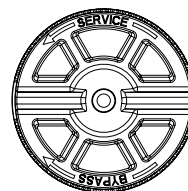
DO NOT OVERTIGHTEN!

Figure 24. Bypass valve.
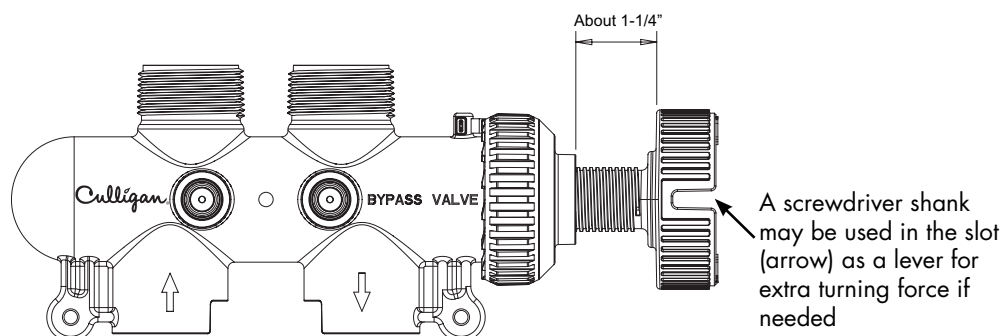
To return to SERVICE, turn the blue knob counter-clockwise (see directional arrow on end of knob) until the knob stops as shown.

DO NOT OVERTIGHTEN!

A screwdriver shank may be used in the slot (arrow) as a lever for extra turning force if needed

Figure 25. Soft water.

Performance Data Sheet

Culligan High Efficiency Twin 9" Water Softener with Soft-Minder® Meter

Culligan knows the more informed you are about your water treatment systems, the more confident you will be about its performance. It's because of this and more than seventy years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

Important Notice: Read this Performance Data Sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

Manufacturer:	Culligan International Company
	9399 W. Higgins Rd., Suite 1100, Rosemont, IL 60018 USA
	(847) 430-2800
Product:	Culligan High Efficiency Twin 9" Water Softener with Soft-Minder® Meter

Testing Conditions & Results:

Flow Rate:	9.0 gpm @ 11 psi	Capacity:	17,854 grains @ 4.0 lb. salt
Pressure:	30 - 40 psi (2.1–2.8 kg/cm^2)		27,108 grains @ 8.0 lb. salt
Acidity:	Non-Corrosive		31,736 grains @ 12.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,463 gr/lb		

Softener Specifications:

Service Flow Rate: 9.0 gpm	Pressure Drop at Max. Flow Rate: 11 psi
Operating Temp. Range: 33-125°F (0.6–51.7°C)	Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–120 psi (1.4–8.5 kg/cm^2)	Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm^2)

The Culligan High Efficiency Twin 9" Water Softeners with Soft-Minder® Meter are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium and magnesium) as verified and substantiated by test data.

An efficiency rated water softener is a DIR softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchange per kilogram of salt), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved 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.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

Notice: *This softener is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.*

† The efficiency rated dosage is only valid at the 4lb. salt dosage and maxmum service flow rate for 9" models.

Buyer Signature _____ Date _____

Seller Signature _____ Date _____

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Manufacturer: Culligan International Company
9399 W. Higgins Rd., Suite 1100, Rosemont, IL 60018 USA

(847) 430-2800

Product: Culligan High Efficiency Twin 9" Water Softener
with Aqua-Sensor® Sensing Device

Testing Conditions & Results:

Flow Rate:	9.0 gpm @ 11 psi	Capacity:	17,854 grains @ 4.0 lb. salt
Pressure:	30 - 40 psi (2.1–2.8 kg/cm²)		27,108 grains @ 8.0 lb. salt
Acidity:	Non-Corrosive		31,736 grains @ 12.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,463 gr/lb		

Softener Specifications:

Service Flow Rate: 9.0 gpm   Pressure Drop at Max. Flow Rate: 11 psi
Operating Temp. Range: 33-125°F (0.6–51.7°C)   Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–120 psi (1.4–8.5 kg/cm²)   Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm²)

The Culligan High Efficiency Twin 9" Water Softeners with Aqua-Sensor® Sensing Device are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium and magnesium) as verified and substantiated by test data.

An efficiency rated water softener is a DIR softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchange per kilogram of salt), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved 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.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

Notice: *This softener is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.*

† The efficiency rated dosage is only valid at the 4lb. salt dosage and maxmum service flow rate for 9" models.

Buyer Signature _____ Date _____

Seller Signature _____ Date _____

Performance Data Sheet

Culligan High Efficiency Twin 10" Water Softener with Soft-Minder® Meter

Culligan knows the more informed you are about your water treatment systems, the more confident you will be about its performance. It's because of this and more than seventy years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

Important Notice: Read this Performance Data Sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

Manufacturer: Culligan International Company
                      9399 W. Higgins Rd., Suite 1100, Rosemont, IL 60018 USA
                      (847) 430-2800

Product: Culligan High Efficiency Twin 10" Water Softener
                      with Soft-Minder® Meter

Testing Conditions & Results:

Flow Rate:	9.4 gpm @ 12 psi	Capacity:	26,781 grains @ 6.0 lb. salt
Pressure:	30 - 40 psi (2.1–2.8 kg/cm^2)		40,666 grains @ 12.0 lb. salt
Acidity:	Non-Corrosive		47,604 grains @ 18.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,460 gr/lb		

Softener Specifications:

Max. Flow Rate: 9.4 gpm	Pressure Drop at Max. Flow Rate: 12 psi
Operating Temp. Range: 33-125°F (0.6–51.7°C)	Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–120 psi (1.4–8.5 kg/cm^2)	Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm^2)

The Culligan High Efficiency Twin 10" Water Softeners with Soft-Minder® Meter are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium and magnesium) as verified and substantiated by test data.

An efficiency rated water softener is a DIR softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchange per kilogram of salt), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved 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.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

Notice: *This softener is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.*

† The efficiency rated dosage is only valid at the 6lb. salt dosage and maxmum service flow rate for 10" models.

Buyer Signature _____ Date_____

Seller Signature _____ Date_____

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Manufacturer: Culligan International Company
9399 W. Higgins Rd., Suite 1100, Rosemont, IL 60018 USA
(847) 430-2800

Product: Culligan High Efficiency Twin 10" Water Softener
with Aqua-Sensor® Sensing Device

Testing Conditions & Results:

Flow Rate:	9.4 gpm @ 12 psi	Capacity:	26,781 grains @ 6.0 lb. salt
Pressure:	30 - 40 psi (2.1–2.8 kg/cm^2)		40,666 grains @ 12.0 lb. salt
Acidity:	Non-Corrosive		47,604 grains @ 18.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,460 gr/lb		

Softener Specifications:

Service Flow Rate: 9.4 gpm   Pressure Drop at Max. Flow Rate: 15 psi
Operating Temp. Range: 33-125°F (0.6–51.7°C)   Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–120 psi (1.4–8.5 kg/cm^2) Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm^2)

The Culligan High Efficiency Twin 10" Water Softeners with Aqua-Sensor® Sensing Device are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium as verified and substantiated by test data.

An efficiency rated water softener is a DIR softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchange per kilogram of salt), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved 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.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

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† The efficiency rated dosage is only valid at the 6lb. salt dosage and maxmum service flow rate for 10" models.

Buyer Signature _____ Date_____
Seller Signature _____ Date_____

Performance Data Sheet

Culligan High Efficiency Twin 10" Water Softener with Aqua-Sensor® Sensing Device

Performance Data Sheet

Culligan High Efficiency Twin 12" Water Softener with Soft-Minder® Meter

Culligan knows the more informed you are about your water treatment systems, the more confident you will be about its performance. It's because of this and more than seventy years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

Important Notice: Read this Performance Data Sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

Manufacturer:	Culligan International Company 9399 W. Higgins Rd., Suite 1100, Rosemont, IL 60018 USA (847) 430-2800
Product:	Culligan High Efficiency Twin 12" Water Softener with Soft-Minder® Meter

Testing Conditions & Results:

Flow Rate:	10.0 gpm @10 psi	Capacity:	31,352 grains @ 7.0 lb. salt
Pressure:	30 - 40 psi (2.1–2.8 kg/cm²)		48,458 grains @ 16.0 lb. salt
Acidity:	Non-Corrosive		59,267 grains @ 24.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,479 gr/lb		

Softener Specifications:

Service Flow Rate: 10.0 gpm	Pressure Drop at Max. Flow Rate: 10 psi
Operating Temp. Range: 33-125°F (0.6–51.7°C)	Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–120 psi (1.4–8.5 kg/cm²)	Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm²)

The Culligan High Efficiency Twin 12" Water Softeners with Soft-Minder® Meter are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium and magnesium) as verified and substantiated by test data.

An efficiency rated water softener is a DIR softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchange per kilogram of salt), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved 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.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

Notice: *This softener is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.*

† The efficiency rated dosage is only valid at the 8lb. salt dosage and maxmum service flow rate for 12" models.

Buyer Signature _____ Date_____

Seller Signature _____ Date_____

Culligan knows the more informed you are about your water treatment systems, the more confident you will be about its performance. It's because of this and more than seventy years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

Important Notice: Read this Performance Data Sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

Manufacturer: Culligan International Company
9399 W. Higgins Rd., Suite 1100, Rosemont, IL 60018 USA
(847) 430-2800

Product: Culligan High Efficiency Twin 12" Water Softener with Aqua-Sensor® Sensing Device

Testing Conditions & Results:

Flow Rate:	10.0 gpm @10 psi	Capacity:	31,352 grains @ 7.0 lb. salt
Pressure:	30 - 40 psi (2.1–2.8 kg/cm^2)		48,458 grains @ 16.0 lb. salt
Acidity:	Non-Corrosive		59,267 grains @ 24.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,479 gr/lb		

Softener Specifications:

Service Flow Rate: 10.0 gpm　　　　　　　　Pressure Drop at Max. Flow Rate: 10 psi
Operating Temp. Range: 33-125°F (0.6–51.7°C)　　Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–120 psi (1.4–8.5 kg/cm^2)　Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm^2)

The Culligan High Efficiency Twin 12" Water Softeners with Aqua-Sensor® Sensing Device are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium as verified and substantiated by test data.

An efficiency rated water softener is a DIR softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchange per kilogram of salt), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved 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.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

Notice: *This softener is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.*

† The efficiency rated dosage is only valid at the 8lb. salt dosage and maximum service flow rate for 12" models.

Buyer Signature _____ Date_____

Seller Signature _____ Date_____

Performance Data Sheet

Culligan High Efficiency Twin 14" Water Softener with Soft-Minder® Meter

Culligan knows the more informed you are about your water treatment systems, the more confident you will be about its performance. It's because of this and more than seventy years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

Important Notice: Read this Performance Data Sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

Manufacturer:	Culligan International Company
	9399 W. Higgins Rd., Suite 1100, Rosemont, IL 60018 USA
	(847) 430-2800
Product:	Culligan High Efficiency Twin 14" Water Softener
	with Soft-Minder® Meter

Testing Conditions & Results:

Flow Rate:	10.6 gpm @ 11 psi	Capacity:	51,726 grains @ 12.0 lb. salt
Pressure:	30 - 40 psi (2.1–2.8 kg/cm²)		75,580 grains @ 24.0 lb. salt
Acidity:	Non-Corrosive		88,539 grains @ 36.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,310 gr/lb		

Softener Specifications:

Service Flow Rate: 10.6 gpm	Pressure Drop at Max. Flow Rate: 11 psi
Operating Temp. Range: 33-125°F (0.6–51.7°C)	Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–120 psi (1.4–8.5 kg/cm²)	Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm²)

The Culligan High Efficiency Twin 14" Water Softeners with Soft-Minder® Meter are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium and magnesium) as verified and substantiated by test data.

An efficiency rated water softener is a DIR softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchange per kilogram of salt), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved 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.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

Culligan water softeners are designed to work with any salt of good quality, although it is recommended that you ask your local Culligan Man for his suggestion on the best type and grade of salt to use in this softener.

Notice: *This softener is not intended to be used for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.*

† The efficiency rated dosage is only valid at the 12lb. salt dosage and maximum service flow rate for 14" models.

Buyer Signature _____ Date_____

Seller Signature _____ Date_____

Culligan knows the more informed you are about your water treatment systems, the more confident you will be about its performance. It's because of this and more than seventy years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

Important Notice: Read this Performance Data Sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

Manufacturer: Culligan International Company
9399 W. Higgins Rd., Suite 1100, Rosemont, IL 60018 USA
(847) 430-2800

Product: Culligan High Efficiency Twin 14" Water Softener
with Aqua-Sensor® Sensing Device

Testing Conditions & Results:

Flow Rate:	10.6 gpm @ 11 psi	Capacity:	51,726 grains @ 12.0 lb. salt
Pressure:	30 - 40 psi (2.1–2.8 kg/cm^2)		75,580 grains @ 24.0 lb. salt
Acidity:	Non-Corrosive		88,539 grains @ 36.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,310 gr/lb		

Softener Specifications:

Service Flow Rate: 10.6 gpm   Pressure Drop at Max. Flow Rate: 11 psi
Operating Temp. Range: 33-125°F (0.6–51.7°C)   Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–120 psi (1.4–8.5 kg/cm^2)   Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm^2)

The Culligan High Efficiency Twin 14" Water Softeners with Aqua-Sensor® Sensing Device are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium and magnesium) as verified and substantiated by test data.

An efficiency rated water softener is a DIR softener which also complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in its operation. Efficiency rated water softeners shall have a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt (based on NaCl equivalency) (477 grams of total hardness exchange per kilogram of salt), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency the system can achieve. Operational efficiency is the actual efficiency achieved 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.

Refer to the Specifications, Familiarization and Warranty section of this Owner's Guide for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan Man. Performance will vary based on local water conditions. The substances reduced by this system are not necessarily in your water.

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Buyer Signature _____ Date_____

Seller Signature _____ Date_____

Electrical Schematic

BACK

FRONT

BASE BOARD

RF BOARD

AUXILIARY BOARD

MODEM BOARD

POWER CONNECTOR

White
Red
Black
Blue

POWER CABLE SHOULD BE PLUGGED TO 24V CONNECTORS-RIGHT SIDE (AS SHOWN ABOVE)

PLUGS

FLOW METER CABLE

POWER CABLE

MOTOR CONNECTOR

POSITION SENSOR CONNECTOR

FLOW METER CONNECTOR

RED WIRE
BLACK WIRE

RED WIRE

GREEN WIRE

GREEN WIRE
BLACK WIRE
RED WIRE

RED WIRE
BLACK WIRE

MOTOR
FLOW METER
POSITION

BLACK WIRE

DETAIL A
SCALE 2 : 1

RED WIRE
EMPTY
GREEN WIRE
BLACK WIRE

RED WIRE

RED WIRE

BLACK WIRE

CONNECTOR (RED WIRE) - PLUS
CONNECTOR (BLACK WIRE) - MINUS
(AS SHOWN ABOVE)
BEND THE PINS DOWN AFTER
ASSEMBLING THE CONNECTORS

SENSOR BOARD SHOULD BE ATTACHED
WITH WIRES POINTING UP
(AS SHOWN ABOVE)

METAL TABS
Connect to white
connector on main
power cord

BLACK WIRE
GREEN WIRE
EMPTY
RED WIRE

DISPLAY

BATTERY CR2032
(POS. SIDE UP)

KEYPAD CONNECTOR

24VAC
on TRANSFORMER

2.5V POWER CORD

XMFR

24VAC

2.5VAC

Power to circuit
board 24V

Power to circuit
board 2.5VAC
only required
for Aqua-Sensor
installations

CONTROLLER #1

GBE BOARD

RF BOARD

AUX BOARD

AQUA SENSOR CABLE — to TANK

24V

2.5V

POWER SUPPLY

MODEM BOARD

PHONE LINE

BRINE TANK SENSOR

MOTOR CABLE

GEARBOX POSITION CABLE

FLOW METER CABLE

GEARBOX POSITION CABLE

FLOW METER CABLE

MOTOR CABLE

MOTOR CABLE

GEARBOX POSITION CABLE

FLOW METER CABLE

CONTROLLER #2

VALVE #1

MOTOR TERMINALS

GEARBOX POSITION SENSOR

VALVE #2

MOTOR TERMINALS

GEARBOX POSITION SENSOR

Parts List

High Efficiency™
Indoor Assembly

O-RING GROOVES
QUAD-RING GROOVE
BRINE PISTON DETAIL

O-RING GROOVES
QUAD-RING GROOVE
PISTON DETAIL

EDUCTOR DETAIL

ELECTRONICS HOUSING

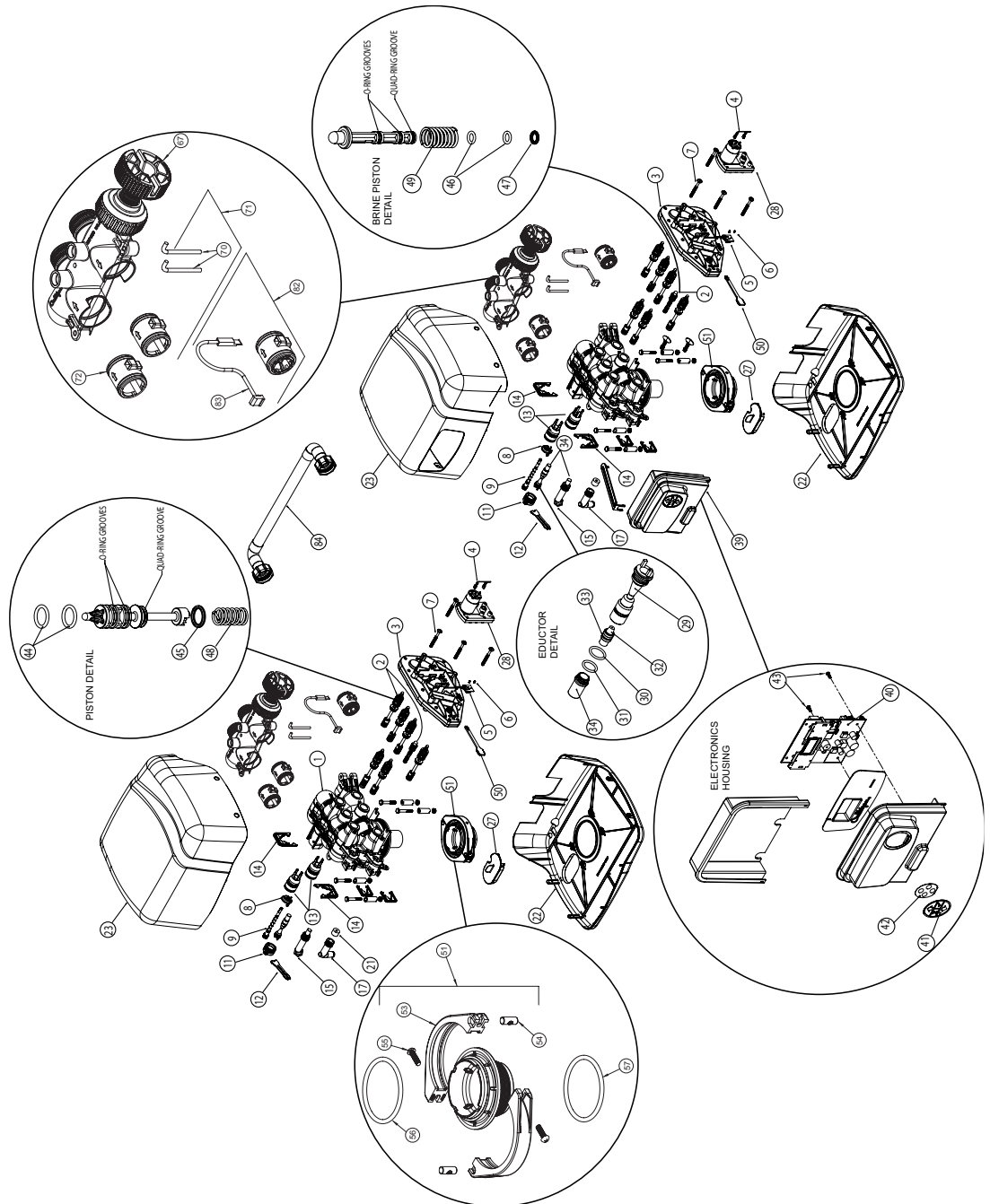| Item	Part Number	Description
	01020442	High Efficiency, Downflow Regeneration—Complete
	01022508	High Efficiency, Upflow Regeneration—Complete
	01022776	Outdoor High Efficiency, Downflow Regeneration—Complete
	01022781	Outdoor High Efficiency, Upflow Regeneration—Complete
	01022746	HE Twin Control #2, Downflow Regeneration—Complete
	01023279	HE Twin Control #2, Upflow Regeneration—Complete
	01023280	Outdoor HE Twin Control#2, Downflow Regen—Complete
	01023283	Outdoor HE Twin Control #2, Upflow Regen—Complete
1	01020251	Valve Body
2	01022791	Piston Rebuild Kit, Includes 6ea Piston Assemblies and 1ea Brine Piston Assembly
3	01020440	Gear Box Assembly less Motor—Downflow Regeneration
	01022234	Gear Box Assembly less Motor—Upflow Regeneration
4	01022735 / 01022752	Wire Harness for Motor / Wire Harness, Motor, Control #2
5	01020420 / 01022751	Wire Harness with Optical Sensor / Wire Harness with Optical Sensor, Control #2
*	01017134	Power Cord
6	P1020433	Sensor Assembly Screw, 10ea/Kit
7	P1020517	Gearbox Assembly Screw, 10ea/Kit
8	P1020289	Dial-a-Softness Knob, 10-pack
9	P1020427	Dial-a-Softness Rebuild Kit, 10-pack
10	P1021162	Eductor Plug O-ring, 10ea/Kit
11	P1020487	Eductor Plug Assembly with O-rings, 10ea/Kit
12	P1020290	Eductor Plug Clip, 10ea/Kit
13	01020489	Bypass Plug Assembly with O-rings, 10ea/Kit
14	P1020291	Bypass Clip, 10ea/Kit
15	01020581	Brine Elbow Assembly with O-rings, 10ea/Kit
	P1018871	Insert, Brine Line Connector, 3/8"
	P1002205	Nut, Brine Line Connector, 3/8"
16	P1020432	Brine/Drain Clip, 10ea/Kit
17	P1017758	Drain Elbow Assembly, 10ea/Kit
18	P0440268	O-ring, Drain and Brine Elbow, 10ea/Kit
19	P1020556	Wing Screw, 10ea/Kit
20	01020495	Electronic Enclosure Arm
21	P0331635	Backwash Flow Control, #2 (Brown), 9" & 10" Tanks, 10ea/Kit
	P0331636	Backwash Flow Control, #3 (Green), 12" Tanks, 10ea/Kit
	P0401031	Backwash Flow Control, (Black), 14" Tanks, 10ea/Kit
22	01020670	Enclosure Tray—Indoor
	01021040	Enclosure Tray—Outdoor
23	01020671	Enclosure
	01021041	Enclosure—Outdoor
*	P1022777	Screw for Outdoor Enclosure, 10ea/Kit
24	01020590	Enclosure Plug
25	P1020615	Enclosure Tray Screw, 10ea/Kit
26	P1020617	Enclosure Tray Nut, 10ea/Kit
27	P1020672	Enclosure Tray Spacer, 10ea/Kit
28	01020240	Motor
29	01022796	Eductor Throat with O-rings, Tan (9, 10 & 12" Tanks), 10ea/Kit

Item	Part Number	Description
	01022723	Eductor Throat with O-rings, Blue (14" Tanks), 10ea/Kit
30	P1020603	Eductor Throat O-ring, Large, 10ea/Kit
31	P1020428	Eductor Throat O-ring, Small, 10ea/Kit
32	P1013894	Eductor Nozzle w/ O-ring, Blue (9" & 10" tanks), 10ea/Kit
	P1013895	Eductor Nozzle w/ O-ring, Beige (10" & 12" tanks), 10ea/Kit
	00447752	Eductor Nozzle w/ O-ring, Green (14" tanks)
33	P0308438	O-ring, Eductor Nozzle, 10ea/Kit
34	P1020256	Filter Screen, 10ea/Kit
35	P1020424	O-ring, Eductor Plug Assembly, Small, 10ea/Kit
39	01022800 / 01023589	Electronics Enclosure Kit less Circuit Board / Electronics Enclosure Kit less Circuit Board, Control #2
40	01020745	Replacement Circuit Board Kit
41	P1023112 / P1023276	Circuit Board Label, 10ea/Kit / Circuit Board Label, Control #2, 10ea/Kit
42	P1020497	Keypad with Connector, 10ea/Kit
43	P1020508	PCB Screw, 10ea/Kit
44	P1020431	Main Piston O-ring, 25ea/Kit
45	P1020430	Main Piston Quad Ring, 25ea/Kit
46	P1020426	Brine Piston O-ring 25ea/Kit
47	P1021881	Brine Pston Quad Ring 25ea/Kit
48	P1020252	Main Piston Spring, 10ea/Kit
49	P1020286	Brine Piston Spring 10ea/Kit
50	P1020415	Gear Motor Retainer 10ea/Kit
51	01014153	Adapter Assy, 1" valve to tank w/o O-ring
52	01013958	Tank Adapter, 1" Valve
53	P1013959	Tank Clamp, 1" Valve
54	P1013669	Tank Clamp Pin, 1" Valve
55	P0318383	Tank Clamp Screw, 1" Valve
56	P1014848	O-ring, Large, Valve to Tank Adapter
57	P0440052	O-ring, Valve Adapter to ACME Tank
67	01018760	Bypass Valve - 1"/1-1/4" Rotary
70	P1009075	Retaining Clip, 1" Bypass valve
71	01014033	Coupling Kit - 1" Bypass
72	P1009099	O-ring, Couplings/Meters
82	01011188	Meter Kit - 1"
83	01008070 / 01014739	Wire Harness, 3/4"/1" Meters / Wire Harness, Meter, Control #2, 48" long
84a	01021077	Interconnecting pipe, copper
84b	01023290	Interconnecting pipe, plastic
*	P0451701	Hose Clamp, Drain
*	01018249	1 1/4" Straight Through Adapter
*	01018755	Rebuild Kit - 1"/1-1/4" Rotary Bypass
*	01010783	1" Copper Adapter Kit, (1" Bypass)
*	01016564	3/4" Copper Adapter Kit (1" Bypass)
*	01016565	3/4" Elbow Copper Adapter Kit (1" Bypass)
*	01018757	1" NPT Female Elbow Kit (1" Rotary Bypass)
*	P1009856	Gasket, Copper Plumbing Adapters
*	01018133	Transformer, Dual Output
*	01020620	Transformer, Dual Output w/ 6' Power Cord

* Not shown

Parts List

High Efficiency™
Outdoor Assembly

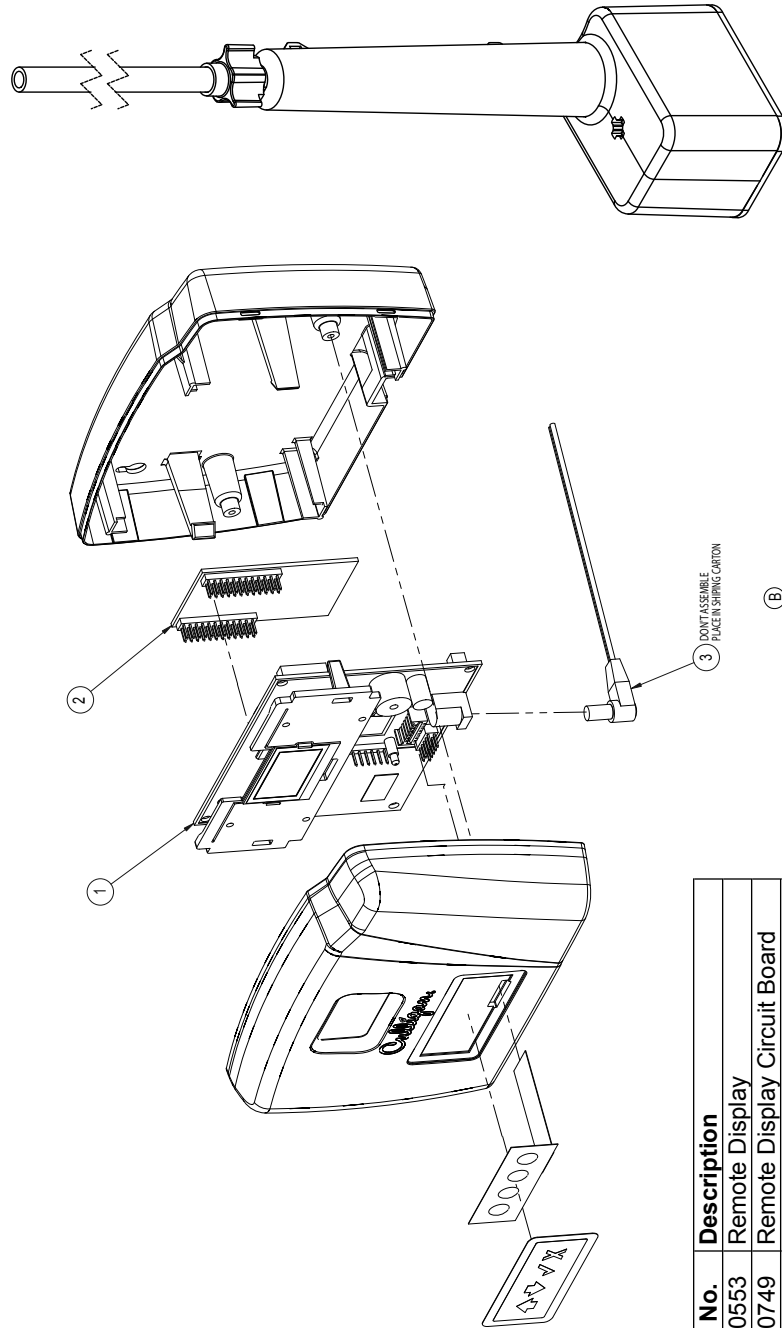| Item	Part Number	Description
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	01022234	Gear Box Assembly less Motor—Upflow Regeneration
4	01022735 01022752	Wire Harness for Motor Wire Harness, Motor, Control #2
5	01020420 01022751	Wire Harness with Optical Sensor Wire Harness with Optical Sensor, Control #2
*	01017134	Power Cord
6	P1020433	Sensor Assembly Screw, 10ea/Kit
7	P1020517	Gearbox Assembly Screw, 10ea/Kit
8	P1020289	Dial-a-Softness Knob, 10-pack
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	P1002205	Nut, Brine Line Connector, 3/8"
16	P1020432	Brine/Drain Clip, 10ea/Kit
17	P1017758	Drain Elbow Assembly, 10ea/Kit
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19	P1020556	Wing Screw, 10ea/Kit
20	01020495	Electronic Enclosure Arm
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24	01020590	Enclosure Plug
25	P1020615	Enclosure Tray Screw, 10ea/Kit
26	P1020617	Enclosure Tray Nut, 10ea/Kit
27	P1020672	Enclosure Tray Spacer, 10ea/Kit
28	01020240	Motor
29	01022796	Eductor Throat with O-rings, Tan (9, 10 & 12" Tanks), 10ea/Kit
	01022723	Eductor Throat with O-rings, Blue (14" Tanks), 10ea/Kit

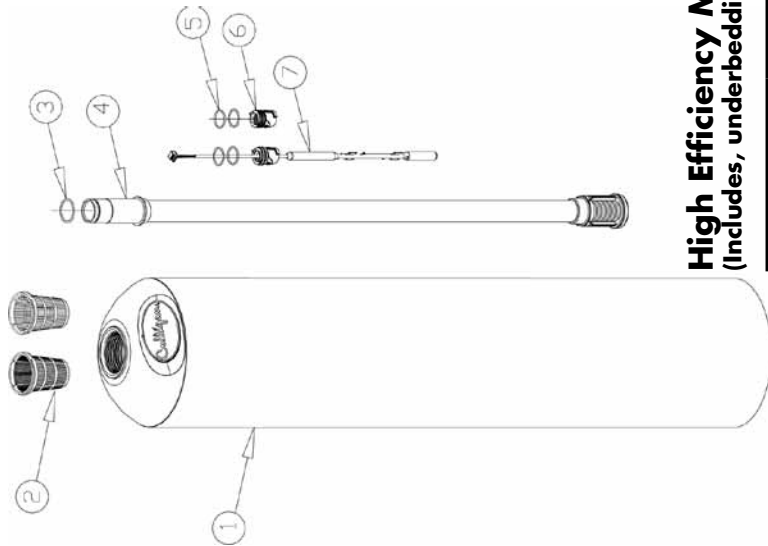| Item	Part Number	Description
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32	P1013894	Eductor Nozzle w/ O-ring, Blue (9" & 10" tanks), 10ea/Kit
	P1013895	Eductor Nozzle w/ O-ring, Beige (10" & 12" tanks), 10ea/Kit
	00447752	Eductor Nozzle w/ O-ring, Green (14" tanks)
33	P0308438	O-ring, Eductor Nozzle, 10ea/Kit
34	P1020256	Filter Screen, 10ea/Kit
35	P1020424	O-ring, Eductor Plug Assembly, Small, 10ea/Kit
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46	P1020426	Brine Piston O-ring 25ea/Kit
47	P1021881	Brine Pston Quad Ring 25ea/Kit
48	P1020252	Main Piston Spring, 10ea/Kit
49	P1020286	Brine Piston Spring 10ea/Kit
50	P1020415	Gear Motor Retainer 10ea/Kit
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52	01013958	Tank Adapter, 1" Valve
53	P1013959	Tank Clamp, 1" Valve
54	P1013669	Tank Clamp Pin, 1" Valve
55	P0318383	Tank Clamp Screw, 1" Valve
56	P1014848	O-ring, Large, Valve to Tank Adapter
57	P0440052	O-ring, Valve Adapter to ACME Tank
67	01018760	Bypass Valve - 1"/1-1/4" Rotary
70	P1009075	Retaining Clip, 1" Bypass valve
71	01014033	Coupling Kit - 1" Bypass
72	P1009099	O-ring, Couplings/Meters
82	01011188	Meter Kit - 1"
83	01008070 01014739	Wire Harness, 3/4"/1" Meters Wire Harness, Meter, Control #2, 48" long
84a	01021077	Interconnecting pipe, copper
84b	01023290	Interconnecting pipe, plastic
*	P0451701	Hose Clamp, Drain
*	01018249	1 1/4" Straight Through Adapter
*	01018755	Rebuild Kit - 1"/1-1/4" Rotary Bypass
*	01010783	1" Copper Adapter Kit, (1" Bypass)
*	01016564	3/4" Copper Adapter Kit (1" Bypass)
*	01016565	3/4" Elbow Copper Adapter Kit (1" Bypass)
*	01018757	1" NPT Female Elbow Kit (1" Rotary Bypass)
*	P1009856	Gasket, Copper Plumbing Adapters
*	01018133	Transformer, Dual Output
*	01020620	Transformer, Dual Output w/ 6' Power Cord

* Not shown

Parts List

Remote Display and
Smart Brine Tank
Sensor

Item	Part No.	Description
1	01020553	Remote Display
	01020749	Remote Display Circuit Board
2	01020750	RF Board
3	01020611	Transformer
4	01020447	Smart Brine Sensor
	01020747	Modem

3) DON'T ASSEMBLE
PLACE IN SHIPING CARTON

B

Tank Assembly

Item	Part No.	Description	Qty.
1	01-0166-17	Tank Assembly, 9" w/ Fillport, Complete	
	01-0166-18	Tank Assembly, 10" w/ Fillport, Complete	
	01-0171-92	Tank Assembly, 12" w/ Fillport, Complete, Less Media	
	01-0171-94	Tank Assembly, 14" w/ Fillport, Complete, Less Media	
	01-0163-51	Tank Assembly, 9" w/o Fillport, Complete	
	01-0163-52	Tank Assembly, 10" w/o Fillport, Complete	
	01-0163-49	Tank Replacement, 9", w/ Fillport, Empty	
	01-0163-50	Tank Replacement, 10", w/ Fillport, Empty	
	01-0165-20	Tank Replacement, 12", w/ Fillport, Empty	
	01-0165-22	Tank Replacement, 14", w/ Fillport, Empty	

Item	Part No.	Description	Qty.
	01-0163-47	Tank Replacement, 9", w/o Fillport, Empty	
	01-0163-48	Tank Replacement, 10", w/o Fillport, Empty	
2	01-0098-47	Top Strainer - Fine Slot	1
	01-0111-95	Top Strainer - Wide Slot	1
3	01-0090-99	O-Ring, Manifold	1
4	01-0161-76	Outlet Manifold - 9"	1
4	01-0145-39	Outlet Manifold - 10"	1
4	01-0145-40	Outlet Manifold - 12"	1
4	01-0164-29	Outlet Manifold - 14"	1
5	P1017434	O-Ring, Plug and Sensor	2
6	01-0151-22	Plug	1
7	01-0187-63	Aqua-Sensor® Probe	1

High Efficiency Municipal Replacement Media Packs
(Includes, underbedding, Cullex, and Carbon)

| Part Number	Description	Media Quantity		
		Cullex	Carbon	Cullsan
01019848	Culligan Total Home Advanced Media Replacement Kit for 9" Tanks (2 boxes)	0.8 ft³	6 lbs	12 lbs
01019849	Culligan Total Home Advanced Media Replacement Kit for 10" Tanks (2 boxes)	1.0 ft³	8 lbs	15 lbs
01019850	Culligan Total Home Advanced Media Replacement Kit for 12" Tanks (2 boxes)	1.5 ft³	12 lbs	20 lbs
01019851	Culligan Total Home Advanced Media Replacement Kit for 14" Tanks (2 boxes)	2.3 ft³	18 lbs	25 lbs

Parts List

16" and 18" Brine Systems
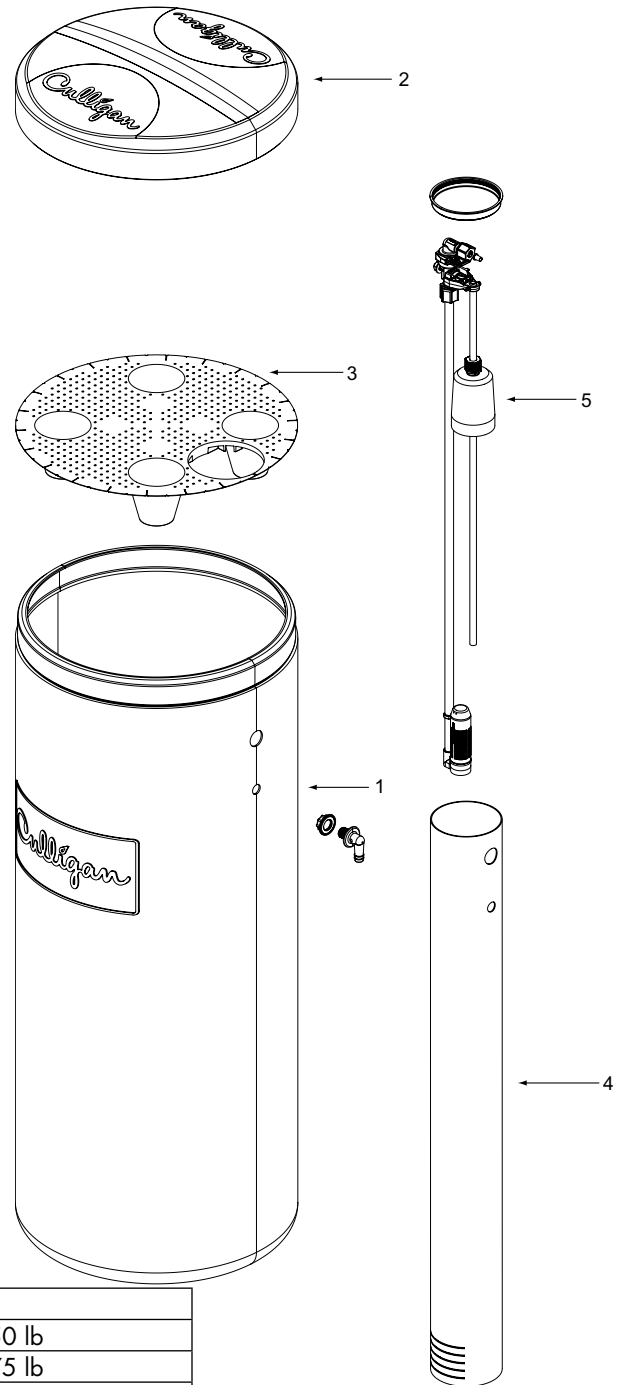
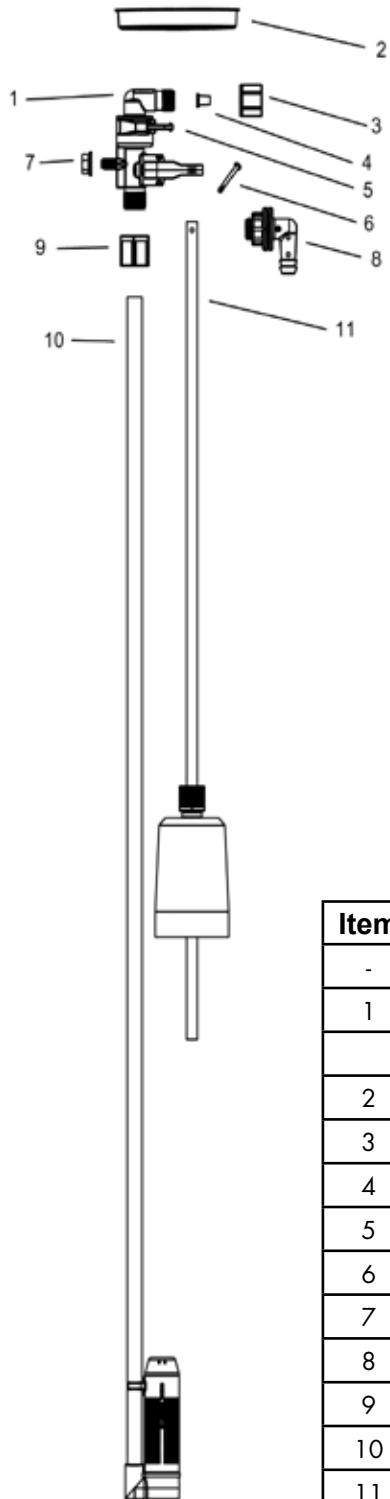| Item	Part No.	Description
-	01-0187-05	Brine System, 250 lb
-	01-0187-15	Brine System, 375 lb
1	01-0187-09	Replacement Tank, 250 lb
	01-0187-16	Replacement Tank, 375 lb
2	01-0187-04	Cover, 250 lb
	01–0187-17	Cover, 375 lb
3	01-0187-07	Salt Plate, 250 lb
	01-0187-13	Salt Plate, 375 lb
4	01-0187-07	Brine Chamber, 250 lb & 375 lb
5	01-0187-06	Brine Valve

Brine Valve

Item	Part No.	Description
-	01018706	Brine Valve
1	01018710	BLFC Elbow - 0.45 gpm
	01018711	BLFC Elbow - 0.8 gpm
2	P1020194	Brine Well Cap - 24 Pack
3	P1020196	3/8" Compression Nut - 24 Pack
4	P1018871	3/8" Insert - 25 Pack
5	P1012091	Retaining Clip - 24 Pack
6	P1020192	Pin - 24 Pack
7	P1020193	5/16" Nut - 24 Pack
8	P1020190	Overflow Fitting w/ Nut - 24 Pack
9	P1020195	3/8" Nut - 24 Pack
10	P1020198	Air check Assembly - 24 Pack
11	P1020197	Float - 24 Pack

Parts List

24" Brine System

Item	Part No.	Description
-	01018720	Brine System, 650 lb
1	01-0187-18	Replacement Tank, 650 lb
2	01-0187-19	Cover, 650 lb
3	01-0189-09	Salt Plate, 650 lb
4	01-0187-08	Brine Chamber
5	01-0187-06	Brine Valve
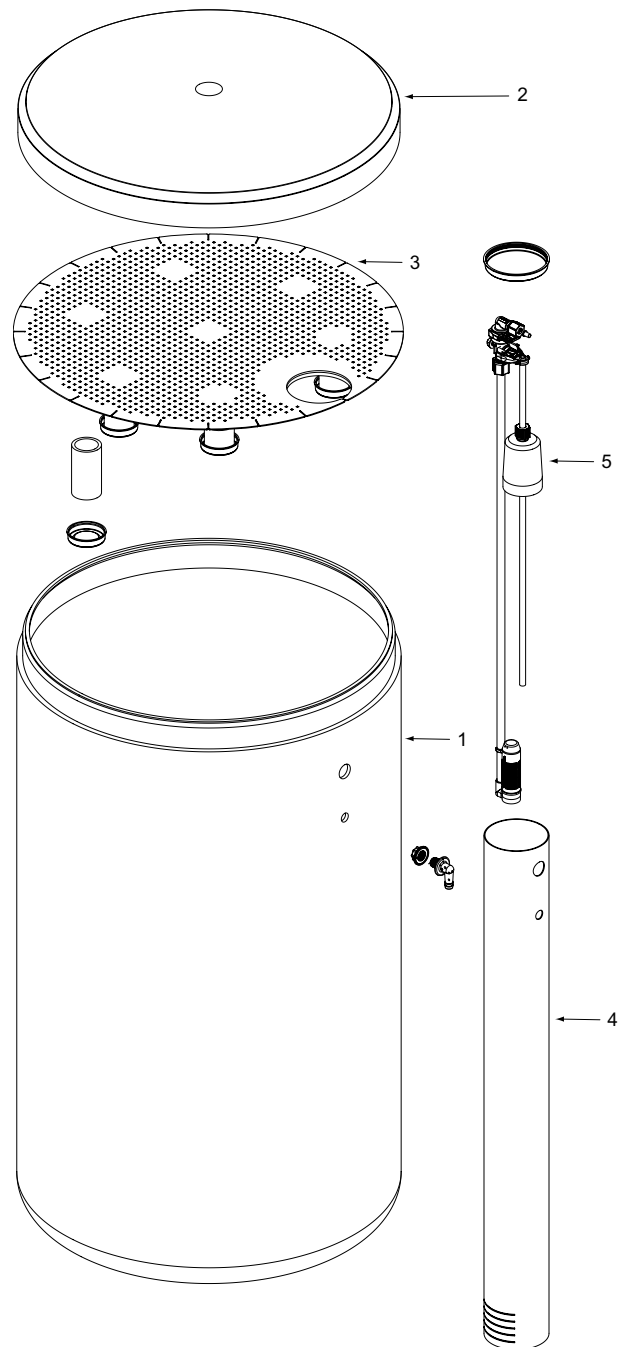
Important Data on Your Water Conditioner

It is advisable to have the salesperson or installer fill in the information below for your future reference. If this has not been done, please ask for it, as it is necessary if you contact your dealer.

Identification

Model Name _____   Catalog No. _____

Control Model No. _____   Control Serial No. _____

Date of Installation _____   Tank Serial No. _____

Settings

Salt Setting _____ lbs.

Time of Recharge: _____ a.m.   _____ p.m.

Upon Demand
(Aqua-Sensor® Models)

Gallons to signal _____ gallons (Soft-Minder® Models)

Total Capacity _____ gallons (Soft-Minder® Models)

Number of people in household _____

Tank Size _____ inches

Water Analysis

Total Hardness _____ (gpg)   Total Iron _____ (ppm)   pH (acidity) _____

Other _____

_____

_____

Culligan Limited Warranty

Culligan High Efficiency Automatic Water Conditioners

You have just purchased one of the finest water conditioners made. As an expression of our confidence in Culligan International Company products, your water conditioner is warranted to the original end-user, when installed in accordance with Culligan specifications, against defects in material and workmanship from the date of original installation, as follows:

For a period of ONE YEAR	The entire conditioner and Culligan HE Municipal Media
For a period of FIVE YEARS	Remote display, modem, Soft-Minder® meter, Smart Brine probe, or Aqua-Sensor® probe, if so equipped.
For a period of TEN YEARS	High Efficiency circuit board, control valve body, excluding internal parts.
	The salt storage container, brine valve and all its component parts
For the LIFETIME of the original consumer purchaser	The Quadra-Hull™ conditioner tank and the Cullex® resin

If a part described above is found defective within the specified period, you should notify your independently operated Culligan dealer and arrange a time during normal business hours for the dealer to inspect the water conditioner on your premises. Any part found defective within the terms of this warranty will be repaired or replaced by the dealer. You pay only freight from our factory and local dealer charges.

We are not responsible for damage caused by accident, fire, flood, freezing, Act of God, misuse, misapplication, neglect, oxidizing agents (such as chlorine, ozone, chloramines and other related components), alteration, installation or operation contrary to our printed instructions, or by the use of accessories or components which do not meet Culligan specifications, is not covered by this warranty. Refer to the specifications section in the Installation and Operating manual for application parameters.

Our product performance specifications are furnished with each water conditioning unit. TO THE EXTENT PERMITTED BY LAW, CULLIGAN DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE; TO THE EXTENT REQUIRED BY LAW, ANY SUCH IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE ONE-YEAR PERIOD SPECIFIED ABOVE FOR THE ENTIRE CONDITIONER. As a manufacturer, we do not know the characteristics of your water supply or the purpose for which you are purchasing a water conditioner. The quality of water supplies may vary seasonally or over a period of time, and your water usage rate may vary as well. Water characteristics can also differ considerably if your water conditioner is moved to a new location. For these reasons, we assume no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligations for us. Further, we assume no liability and extend no warranties, express or implied, for the use of this product with a non-potable water source. OUR OBLIGATIONS UNDER THIS WARRANTY ARE LIMITED TO THE REPAIR OR REPLACEMENT OF THE FAILED PARTS OF THE WATER CONDITIONER, AND WE ASSUME NO LIABILITY WHATSOEVER FOR DIRECT, INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, GENERAL, OR OTHER DAMAGES.

Some states do not allow the exclusion of implied warranties or limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Similarly, some 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 state to state. Consult your telephone directory for your local independently operated Culligan dealer, or write Culligan International Company for warranty and service information.

Culligan International Company

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Rosemont, Illinois 60018
www.culligan.com

You Get Your Water Expert, The Culligan Man

We're here to provide you with fast, dependable service, making sure any problems you have are taken care of. The Culligan Man has been around for over seventy years, delivery dependable service all along. That's why people say "Hey, Culligan Man!®" Because we're the water experts. And that's who you want taking care of your water.

The Culligan Promise

At Culligan, we understand that a water quality improvement system is an investment in your family's well-being. That's why our 1,350 independently operated dealers worldwide don't just sell products; they sell water quality you can count on. We stand behind our products with written limited warranties and our unequaled Culligan service. No matter where you live, you can depend on Culligan expertise to work for you—today and tomorrow.

With Culligan You Get More Than a Quality Product

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