

Culligan®

High
Efficiency
Progressive
Flow
Automatic
Water
Softeners
Owners
Guide





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.



WARNING! Electrical shock hazard! Prior to servicing equipment, disconnect power supply to prevent electrical shock.

NOTICE

This system is not intended for use where water is microbiologically unsafe or with water of unknown quality.



WARNING! If incorrectly installed, operated or maintained, this product can cause severe injury. Those who install, operate, or maintain this product should be trained in its proper use, warned of its dangers, and should read the entire manual before attempting to install, operate, or maintain this product.



WARNING! This device complies with part 15 of the FCC rules subject to the two following conditions: 1) This device may not cause harmful interference, and 2) This device must accept all interference received including interference that may cause undesired operation.

This equipment complies with Part 15 of the FCC rules. Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



CAUTION! To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.



CAUTION! This product is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they have been given supervision or instruction.



CAUTION! Children should be instructed not to play with this appliance.



CAUTION! If the power cord from the transformer to the unit looks or becomes damaged, the cord and transformer should be replaced by a Culligan Service Agent or similarly qualified person in order to avoid a hazard.

Products manufactured and marketed by Culligan International Company (Culligan) and its affiliates are protected by patents issued or pending in the United States and other countries. Culligan reserves the right to change the specifications referred to in this literature at any time, without prior notice. Culligan, AquaSensor, Tripl-Hull, and SoftMinder are trademarks of Culligan International Company or its affiliates.

Culligan International Company
9399 West Higgins Road, Suite 1100
Rosemont, Illinois 60018
1-847-430-2800
www.culligan.com



Contents

About this Manual.....	<u>4</u>
Thank You.....	<u>5</u>
Specifications	<u>6</u>
Introduction.....	<u>7</u>
How Your Water Conditioner Works	<u>8</u>
The Culligan Process	<u>9</u>
Modes of Operation	<u>10</u>
Salt Supply, Usage and Service	<u>12</u>
Care and Cleaning of Your Water Conditioner	<u>13</u>
Cleaning Out the Salt Storage Tank	<u>14</u>
Sanitizing Procedure	<u>15</u>
Navigating the Menus and Keypad.....	<u>16</u>
Set Date and Time.....	<u>17</u>
Information.....	<u>19</u>
Regeneration	<u>21</u>
Error Codes	<u>23</u>
When and How to Bypass Your Water Softener	<u>24</u>
Things to Check Before You Call for Service.....	<u>25</u>
Performance Data Sheet.....	<u>26</u>
Important Data on Your Water Softener	<u>30</u>
Parts List.....	<u>31</u>
Culligan Limited Warranty	<u>38</u>



About this Manual

This manual:

- Familiarizes the operator with the equipment
- Explains installation and setup procedures
- Provides basic programming information
- Explains the various modes of operation
- Gives specifications and troubleshooting information

Read this Manual First

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

Installation or maintenance done on this system by an untrained service person can cause major damage to equipment or property damage. Not adhering to the recommended service/maintenance can cause damage to equipment or property damage.

Safe Practices

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

Notice (or Note) is used to emphasize installation, operation or maintenance information which is important, but does not present any hazard. For example,

NOTICE The nipple must extend no more than 1 inch above the cover plate.

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



CAUTION! Disassembly while under water pressure can result in flooding.

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



WARNING! Electrical shock hazard! Unplug the unit before removing the timer mechanism or cover plates!

The CAUTION and WARNING paragraphs are not meant to cover all possible conditions and situations that may occur. Understand that common sense, caution, and careful attention are conditions which cannot be built into the equipment. These MUST be supplied by the personnel installing, operating, or maintaining the system.

Be sure to check and follow the applicable plumbing codes and ordinances when installing this equipment. Local codes may prohibit the discharge of sanitizing or descaling solutions to drain.

Use protective clothing and proper face or eye protection equipment when handling chemicals or tools.

NOTE: The Culligan High Efficiency Progressive Flow Softener is not intended for use with water that is microbiologically unsafe or of unknown quality without adequate disinfection either before or after the system.

NOTE: Check with your public works department for applicable local plumbing and sanitation codes. Follow local codes if they differ from the standards used in this manual. To ensure proper and efficient operation of the Culligan High Efficiency Twin Softener to your full satisfaction, carefully follow the instructions in this manual.



Thank You

Welcome To Your New World of Better Living with Culligan Water.

The HE Progressive Flow Water Softeners with Soft-Minder® meter and Aqua-Sensor® sensing device are tested and certified by WQA against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data.

The HE Progressive Flow Water Softeners with Soft-Minder® meter and Aqua-Sensor® sensing device are certified by IAPMO R&T against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data.

The HE Progressive Flow Water Softeners with Soft-Minder® meter and Aqua-Sensor® sensing device are registered for sale with the State of Iowa.

For installations in Massachusetts, the 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 Water 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 written warranty disclaims liability for corrosion of plumbing lines, fixtures or appliances. If you suspect corrosion, your Culligan Dealer has equipment to control the problem.

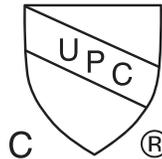
Licensed plumbers know that standard industry procedures include only to hand tighten or use strap wrenches on plastic parts. Plastic piping systems must be installed, operated and maintained in accordance with accepted standards and procedures. Not adhering to the recommended service/maintenance can cause damage to equipment or property damage.

NOTICE **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.**

Serial Numbers

The control valve serial number is located on the back of the electrical enclosure.
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.**





Specifications

Culligan High Efficiency Softener—Progressive Flow

	9" Model	10" Model
Control Valve	1" Reinforced Thermoplastic w/ HE Circuit Boards	
Overall Conditioner Ht	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)	16 x 43 in or 18 x 43 in	16 x 43 in or 18 x 43 in
Exchange Media, Type and Quantity ¹	Cullex® Media, 1.0 ft ³	Cullex® Media, 1.5 ft ³
Underbedding, Type and Quantity ¹	Cullsan® Underbedding, 12 lb	Cullsan® Underbedding, 15 lb
Exchange Capacity @ Salt Dosage Per Recharge ¹	17,563 gr @ 4.0 lb	26,781 gr @ 6.0 lb
	26,667 gr @ 8.0 lb	40,662 gr @ 12.0 lb
	31,219 gr @ 12.0 lb	47,604 gr @ 18.0 lb
Efficiency rated dosage ^{1,2}	4,390 gr/lb @ 4 lb salt dosage	4,463 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	250 lb or 375 lb	250 lb or 375 lb
Rated Service Flow @ Pressure Drop ¹ (per tank)	10.0 gpm @ 13 psi	10.0 gpm @ 14 psi
Auxiliary Flow Rate ⁵	10.8 gpm @ 15 psi	11.0 gpm @ 15 psi
Suggested Progressive Flow Trip Point	9.0 gpm	9.0 gpm
Total Hardness, Maximum	75 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	28VDC	
Electrical Power Consumption, Min/Max	8.4 watts/21.6 watts	
Drain Flow, Maximum ⁶	2.5 gpm	2.5 gpm
Recharge Time, Average ⁷ Recharge Water	78 minutes	67 minutes
Consumption, Average ⁷	47 gallons	82.2 gallons

¹The media amounts, underbedding, capacities/salt settings, efficiency ratings, and service flow numbers are for single tank systems. All amounts should be double for twin tank systems.

²The efficiency rated dosage is only valid at stated salt dosage and max. flow rate and is efficiency rated according to NSF/ANSI 44. Water consumption determined in accordance with 7.1.1 of NSF/ANSI 44.

³Measured from top of media to top surface of tank threads. (backwashed and drained).

⁴Measured from top of underbedding to top surface of tank threads.

⁵Auxiliary flow rates do not represent the maximum service flow rate used for determining the softener rated capacity and efficiency. Continuous operation at these flow rates greater than the maximum service flow rate might affect capacity and efficiency performances.

⁶Backwash at 120 psi (830 kPa).

⁷10 minute backwash, 4 lb. 9" model, 6 lb. 10" model.



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 a 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 reduced, your soap can concentrate solely on washing. People usually find that they can reduce the amount of soap they use substantially. If you normally use a cup per wash load with hard water, try using 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 and 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, and woodwork surfaces clean easier and 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 that 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.

Water For Lawns And Household Plants

If possible, lawn sprinkling faucets should be supplied with hard water primarily because it is not economical 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.

Introduction



How Your Water Conditioner Works

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 written warranty disclaims liability for corrosion of plumbing lines, fixtures or appliances. If you suspect corrosion, your Culligan dealer 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 percent 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 and IAPMO R&T.)

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.

NOTICE Do not use where the water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit.



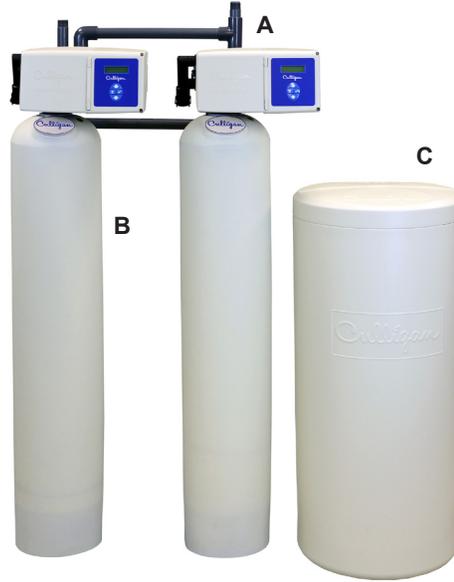
The Culligan Process

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

A. Control Valve

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 Regeneration.
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 Brine Refill.
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

The Mineral Tank contains the Cullex resin column, Cullsian® 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

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.

Because 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.



Modes of Operation

Water Meter Mode

In water meter mode, the Smart 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 the programmed time of regeneration. If Regeneration Days Interval (time clock backup) is set and the capacity has not been exhausted, the HE softener will regenerate when days since last regeneration equal time clock back up. In immediate mode the regeneration starts as soon as the regeneration signal is provided.

Aqua-Sensor® Mode

The Aqua-Sensor is a conductivity probe that senses when a 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.

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.

Regeneration Interval (Time Clock Backup Mode)

This setting provides regeneration when a set period of time has elapsed. If the meter or Aqua-Sensor does not trigger regeneration prior to the time clock backup value, the time clock backup will trigger the regeneration.

Culligan Connect™

The Culligan Connect™ interface is an intuitive mobile app and is available on both iOS and Android.

Users will see their daily and weekly usage patterns graphically represented and instantly updated each time they open the app. In addition, low salt alerts and the ability to put the unit in bypass mode or regeneration from anywhere offer an all new level of control and convenience.

Manual Regeneration

Pressing and holding for five (5) seconds will initiate a delayed regeneration. Pressing and holding again for five (5) seconds will cancel the delayed regeneration. Pressing and holding for ten (10) seconds will initiate an immediate regeneration. The regeneration statistics will not be updated if the last cycle of regeneration does not automatically complete. See [page 21](#) for further details about the Manual Regeneration feature.

Bypass Mode

The HE softener can be bypassed for a preset time duration. See [page 24](#) for further details about the Bypass feature.



Day-of-Week Regeneration

A regeneration can be programmed to occur on any day (or any combination of days) of the week. If for example the “Tuesday Regeneration Trigger” and the “Friday Regeneration Triggers” are turned “ON”, then a regeneration will occur every Tuesday and Friday (in addition to any other regeneration triggers which may occur).

Predict Mode

The Predict Mode is used in the flow meter mode 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 remaining capacity, the controller will wait 24 more hours before regeneration. If the remaining capacity is less than the average daily water usage, the control will initiate regeneration. This works in delay mode only.

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.

Progressive Flow

Used with up to six, and as few as two, mineral tanks in a system, the progressive flow mode allows more than one tank in a system to be either online or offline depending on the downstream flow demand. If flow demand is greater than the flow capability of the tank online, another tank can be brought online to help satisfy the excess demand. Once the demand has decreased, the second tank is returned to standby mode, and the system reverts to just one tank online providing treated water.

The progressive flow mode of operation relies on a user-programmable set point, or Trip Point. The Trip Point is a unit of flow (gallons or liters per minute). Reaching the trip point causes the second unit in a multiple resin tank system to come online. Each additional resin tank in the system will subsequently be brought online as multiples of the Trip Point are reached. For example, a three-tank system with a Trip Point = 9 gpm will bring two tanks online once the facility flow demand is equal or greater than the 9 gpm trip point. Should the flow demand reach 18 gpm or higher, the system will bring the third tank online.

The additional tanks return to standby mode when, for at least 30 seconds, the facility flow demand is lower than 95 percent of the Trip Point for two-tank systems, lower than 95 percent of twice (2X) the Trip Point for three-tank systems, or lower than 95 percent of three times (3X) the Trip Point.

Utilizing the progressive flow feature may allow the owner to use smaller water softening models, resulting in the potential for reduced capital and operation costs.



Salt Supply, Usage and Service

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 Culllex® 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.

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.

NOTICE 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.



WARNING! 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” advisory, 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 troubleshooting 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 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).



Cleaning Out the Salt Storage Tank

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

Procedure

1. Remove the salt storage tank cover and the cap from the brine valve chamber.
2. Disconnect the brine line from the brine valve by holding the outer ring of the push fitting; push the tubing in slightly before pulling it out.
3. Lift the brine valve out of the brine valve chamber and set aside in an upright position.
4. If you'd like to save any clean, dry salt remaining in the tank, remove it and place it in a clean container.
5. Using the scoop, dig out and discard as much remaining salt, water and debris as possible.
6. Remove the brine valve chamber by removing the screws on either side of the salt tank.
7. Remove the salt plate at the bottom of the brine tank.
8. 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.
9. Using a household scrub brush and a mild soapy solution, clean the salt plate. This will complete the tank cleaning.
10. Insert the brine valve into the chamber and replace brine valve chamber cap. (Re-insert the brine valve into the chamber, re-insert the brine line fully, and replace brine valve chamber cap.)
11. Fill the salt storage tank with 4 to 6 inches of water.
12. Fill the tank with salt to within a few inches of the top.
13. 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! Caution! Hazard from toxic fumes! Chlorine bleach and common iron control chemicals may generate toxic fumes when mixed.

If the unit uses any 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.

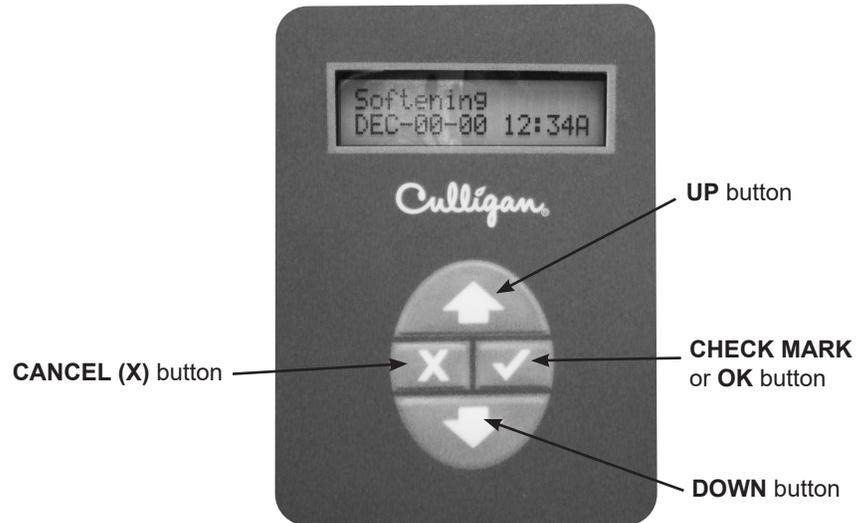
Do not use this procedure if the softener salt contains iron control additives.

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.



Navigating the Menus and Keypad



UP ARROW button: scrolls up the menu



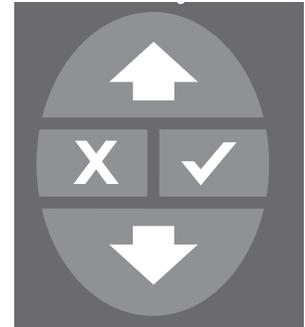
DOWN ARROW button: scrolls down the menu



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  or  to quickly scroll through the setting without repeatedly pressing the button.



Set Date and Time

Follow this procedure to update the date or time.

NOTE: The HE Controller must initialize and return to the HOME screen if settings are changed.

Screen Display	Range	Setting Description
SOFTENING JAN-01-18 12:01P	N/A	1. From the HOME screen, press to view the main menu.
>1) INFORMATION 2) MANUAL MODE	1-6	2. The screen displays the main menu. Press to select 3) SET DATE/TIME .
Set Month		
SET MONTH >JAN	Jan- Dec	3. The screen displays the month setting. Press or and then to change the setting.
Set Day		
SET DAY >1	1-31	4. The screen displays the day setting. Press or and then to change the setting.
Set Year		
SET YEAR >2018	2009- 2030	5. The screen displays the year setting. Press or and then to change the setting.
Set Clock Type		
CLOCK TYPE > 12 HR	12 HR, 24 HR	6. The screen displays the clock type setting. Press or and then to change the setting.
Set Hour		
SET HOUR > 1PM	12PM- 11AM, 0-23	7. The screen displays the hour setting. Press or and then to change the setting.
Set Minutes		
SET MINUTES >41	0-59	8. The screen displays the minutes setting. Press or and then to change the setting.



Screen Display	Range	Setting Description
Set Daylight Savings Time		
<div style="border: 1px solid black; padding: 5px;"> DAYLIGHT SAVING YES </div>	Yes, No	9. The screen displays the Daylight Savings Time setting. Press   or  and then  to change the setting.
<div style="border: 1px solid black; padding: 5px;"> 2) MANUAL MODE >3) SET DATE/ TIME </div>		10. The screen displays the main menu. Press  to save the changes and initialize the system.
<div style="border: 1px solid black; padding: 5px;"> SOFTENING JAN-01-18 1:41P </div>		11. The screen displays the home screen.



Information

The following information can be displayed at the control valve or remote display. These settings are read-only. Press or to scroll through the settings. Press to view the previous setting.

Screen Display	Range	Setting Description
SOFTENING JAN-01-18 12:01P	N/A	1. From the HOME screen, press to view the main menu.
>1) INFORMATION 2) MANUAL MODE	1-6	2. The screen displays the main menu. Press to select 1) INFORMATION .
SALT TANK LEVEL OK	OK, Low	3. If a Smart Brine Tank Probe is installed, this screen displays the salt level. The status is OK unless the SBT probe detects and overfilled brine tank or low salt level. If the screen displays LOW a subsequent screen displays APPROX DAYS OF SALT REMAINING . Press to select the next information screen.
REMAIN CAPACITY 100%	0-100	4. The screen displays the softening capacity remaining, displayed as a percentage of the total capacity. During manually initiated regeneration, assume 0 percent remaining capacity. Press to select the next information screen.
REMAIN CAPACITY 740 GAL	0-no limit	5. The screen displays the softening capacity remaining, measured in gallons (liters). Press to see the next information screen.
CURRENT FLOWRATE 0.0 GPM	0-no limit	6. The screen displays the current flow rate, measured in gallons (liters) per minute. Press to see the next information screen.
TODAY'S USAGE 0 GAL	0-no limit	7. The screen displays today's water usage, measured in gallons (liters). Press to see the next information screen.
AVERAGE DAILY 300 GAL	0-no limit	8. The screen displays average water usage for this configuration. Press to see the next information screen.



Screen Display	Range	Setting Description
NEXT REGEN ON JAN-03	N/A	9. The screen displays the date of the next regeneration, based on average daily water usage. Press  to see the next information screen.
DEALER ID	N/A	10. This is the local dealer's eight-digit identification number as entered during the First Time Setup.
TOTAL WATER USED 1000 GAL	0-no limit	11. The screen displays the total water used for this configuration. Whole numbers are displayed above 100 gallons. Press  to see the next information screen.
EXT FILT CAP REM 20000 GAL	0-no limit	12. If an external filter is used, the screen displays the remaining capacity of the filter. When the remaining capacity reaches zero, the system triggers the External Filter Alarm. Press  to return to the main menu.
>1) INFORMATION 2)MANUAL MODE		13. The screen displays the main menu. Press  to exit to the home screen.
SOFTENING JAN-01-18 12:01P		14. The screen displays the home screen.



Regeneration

There are several conditions that will cause the HE Controller to trip a regeneration. The screen displays REGEN Tonite when the control has signaled for a regeneration. Regenerating is displayed while the control is in regeneration. The following are conditions that will call for regeneration:

1. When the Soft-Minder® meter has recorded the passage of a predetermined number of gallons.
2. When the Aqua-Sensor® Probe senses the hardness in the Culler Media.
3. At the preset time, when the number of days without a regeneration is equal to the regeneration interval (timeclock backup) setting.
4. At the preset time, when Regen Tonite is selected. The screen displays Regen Tonite.
5. Immediately, when the Regen Now is selected. The screen displays Regenerating.
6. Immediately, if power to the unit has been off for more than three hours and the time of day has been restored.
7. At the preset time based on "Day-of-Week" Regeneration setting.

Follow either procedure to initiate a manual regeneration.

Delayed Regeneration

Screen Display	Range	Setting Description
SOFTENING JAN-01-18 12:01P	N/A	1. From the HOME screen, press <input checked="" type="checkbox"/> and hold for three (3)seconds, then release the button.
REGEN TONITE JAN-01-18 12:01P	Regen Tonite	2. The screen displays the regeneration status on the first line of the display. The system will regenerate at a scheduled time.
REGEN OFF JAN-01-18 12:01P	Regen Off	3. To cancel a delayed regeneration, press <input checked="" type="checkbox"/> and hold for at least three (3)) seconds, then release the button. The screen displays the new status.

Immediate Regeneration

Screen Display	Range	Setting Description
SOFTENING JAN-01-18 12:01P	N/A	1. From the HOME screen, press <input checked="" type="checkbox"/> and hold for at least ten (10) seconds, then release the button.
REGEN NOW JAN-01-18 12:01P	Regen Now	2. The screen displays the regeneration status on the first line of the display. The softener will initiate an immediate regeneration.
REGENERATING JAN-01-18 12:01P	N/A	3. The first line of the screen displays REGENERATING .



Standard Manual Regeneration

Screen Display	Range	Setting Description
SOFTENING JAN-01-18 12:01P	N/A	1. From the HOME screen, press to view the main menu.
1) INFORMATION >2) MANUAL MODE	1-6	2. The screen displays the main menu. Press to select 2) MANUAL MODE .
MANUAL MODE >REGEN NOW	Regen Off Regen Now Regen Tonite Bypass	3. The screen displays the manual regeneration menu. Press or and then to change the setting. REGEN NOW is the default. REGEN OFF specifies 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 softener bypass time. Press to select the total time the softener is in the bypass state.
MANUAL BYPASS OFF	Off, 30, 60, 90, 120, 180, Manual Bypass	4. The screen displays the manual bypass duration, in minutes. This specifies the total time the softener is to be in the bypass state. Press or and then to change the setting.
SOFTENING JAN-01-18 12:01P	N/A	5. Press to display the home screen.



Error Codes

The HE Controller, as well as the Remote Display (if connected), may display the following errors.

PROBLEM FOUND
APR-01-18 10:01A

1. When the HE Controller identifies an error, it is programmed to attempt to correct the error without user input. If the problem persists, the **HOME SCREEN** displays **PROBLEM FOUND**. Press  to display the first error present.

Pos Sensor Err

2. Press  to display any additional errors present.

-->CLEAR ERRORS

3. Press  and  to view action: **CLEAR ERRORS, GO TO MENU,** or **EXIT**. If you select **CLEAR ERRORS**, the controller checks the error status and attempts to clear the error. If the error still exists, the home screen displays **PROBLEM FOUND**. If the error no longer exists the screen displays **SYSTEM OK**.

-->GO TO MENU

4. Contact your local Culligan dealer.



When and How to Bypass Your Water Softener

Normally, all water except outside lines passes through the water softener. There are times when the water softener 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 softener, and you do not want to waste softened water on lawn sprinkling or other outside uses.
2. If you are going away on vacation and do not want the unit to recharge.

Bypass Valve

In the back of Culligan water softener is a Cul-Flo-Valv® Bypass valve. To bypass the unit, turn the blue knob clockwise. To return to softened water service, turn the blue knob counter-clockwise.

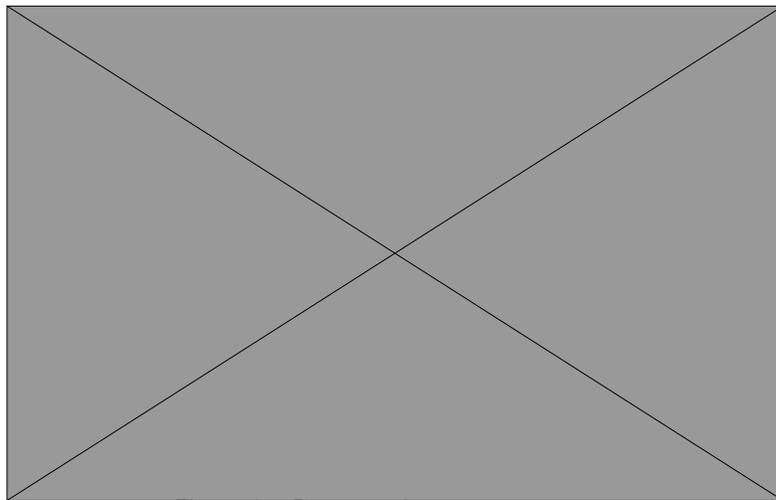


Figure 1. Bypass valve.

Bypassed

To BYPASS, turn the blue knob clockwise (see directional arrow on end of knob) until the knob stops as shown in [Figure 1](#). DO NOT OVERTIGHTEN!

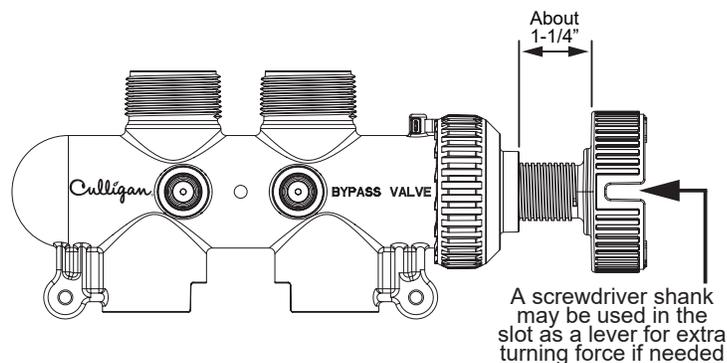


Figure 2. Service valve.

Softened Water

To return to SERVICE, turn the blue knob counter-clockwise (see directional arrow on end of knob) until the knob stops as shown in [Figure 2](#). DO NOT OVERTIGHTEN!



Things to Check Before You Call for Service

If you unexpectedly experience changes in your 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 are found, the water softener should be manually regenerated according to instructions on [page 10](#) 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. Plug in the transformer then reset conditioner to the correct time of day.

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 change—such as daylight savings—will disrupt your softener's regeneration schedule by causing the timer to run off-schedule. Reset the timer to the correct 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 "Service" position (see [page 24](#)). 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., will result in more water usage and may require additional programming by your local Culligan dealer. Please contact your local Culligan dealer.



Performance Data Sheet

Culligan High Efficiency Progressive Flow 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.

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
www.culligan.com

Product: Culligan High Efficiency Progressive Flow 9" Water Softener with Soft-Minder® Meter

Testing Conditions & Results:

Flow Rate:	10.0 gpm@13 psi (per tank)	Capacity:	17,563 grains @ 4.0 lb. salt
Pressure:	30–40 psi (2.1–2.8 kg/cm ²)		26,667 grains @ 8.0 lb. salt
Acidity:	Non-Corrosive		31,219 grains @ 12.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage†:	4,390 grains @ 4.0 lb salt		

Softener Specifications:

Service Flow Rate: 10.0 gpm per tank	Pressure Drop at Max. Flow Rate: 13 psi (90 kPa)
Operating Temp. Range: 33–120°F (0.6–51.7°C)	Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–125 psi (1.4–8.6 kg/cm ²)	Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm ²)

Name of Substance	USEPA Max. Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	10.0 gpm (per tank)	13 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	10.0 gpm (per tank)	13 (psig)

This system is certified for barium and radium 226/228 reduction based on hardness reduction. It is recommended you test your water every six months to ensure the system is performing properly and that hardness, and therefore barium and radium 226/228, are being reduced.

The HE Progressive Flow 9" Water Softeners with Soft-Minder® meter are tested and certified by WQA against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data. To maintain product certification and ensure uniform performance, the product is retested on a consistent basis.

The HE Progressive Flow 9" Water Softeners with Soft-Minder® meter are certified by IAPMO R&T against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data. To maintain product certification and ensure uniform performance, the product is retested on a consistent basis.

The HE Progressive Flow 9" Water Softeners with Soft-Minder® meter are registered under Iowa Water Treatment Device Registration Number 20666.

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 (P/N 01025288) for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan dealer. 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 dealer 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 4 lb. salt dosage and maximum service flow rate for 9" models.



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.

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
www.culligan.com

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

Testing Conditions & Results:

Flow Rate:	10.0 gpm@13 psi (per tank)	Capacity:	17,563 grains @ 4.0 lb. salt
Pressure:	30–40 psi (2.1–2.8 kg/cm ²)		26,667 grains @ 8.0 lb. salt
Acidity:	Non-Corrosive		31,219 grains @ 12.0 lb. salt
Temperature:	68°F (20°C)	pH:	7.6
Efficiency Rated Dosage [†] :	4,390 grains @ 4.0 lb salt		

Softener Specifications:

Service Flow Rate: 10.0 gpm per tank	Pressure Drop at Max. Flow Rate: 13 psi (90 kPa)
Operating Temp. Range: 33-120°F (0.6–51.7°C)	Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–125 psi (1.4–8.6 kg/cm ²)	Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm ²)

Name of Substance	USEPA Max. Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	10.0 gpm per tank	13 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	10.0 gpm per tank	13 (psig)

This system is certified for barium and radium 226/228 reduction based on hardness reduction. It is recommended you test your water every six months to ensure the system is performing properly and that hardness, and therefore barium and radium 226/228, are being reduced.

The HE Progressive Flow 9" Water Softeners with Aqua-Sensor® sensing device are tested and certified by WQA against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data. To maintain product certification and ensure uniform performance, the product is retested on a consistent basis.

The HE Progressive Flow 9" Water Softeners with Aqua-Sensor® sensing device are certified by IAPMO R&T against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data. To maintain product certification and ensure uniform performance, the product is retested on a consistent basis.

The HE Progressive Flow 9" Water Softeners with Aqua-Sensor® sensing device are registered under Iowa Water Treatment Device Registration Number 20666.

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 (P/N 01025288) for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan dealer. 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 dealer 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 4 lb. salt dosage and maximum service flow rate for 9" models.

Performance Data Sheet

Culligan High Efficiency Progressive Flow 9" Water Softener with Aqua-Sensor® Sensing Device



C US



C



Performance Data Sheet

Culligan High Efficiency Progressive Flow 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.

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
www.culligan.com

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

Testing Conditions & Results:

Flow Rate:	10.0 gpm@14 psi (per tank)	Capacity:	26,781 grains @ 6.0 lb. salt
Pressure:	30–40 psi (2.1–2.8 kg/cm ²)		40,662 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 [†] :	4,463 grains @ 6.0 lb salt		

Softener Specifications:

Service Flow Rate: 10.0 gpm per tank	Pressure Drop at Max. Flow Rate: 14 psi (90 kPa)
Operating Temp. Range: 33–120°F (0.6–51.7°C)	Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–125 psi (1.4–8.6 kg/cm ²)	Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm ²)

Name of Substance	USEPA Max. Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	10.0 gpm per tank	14 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	10.0 gpm per tank	14 (psig)

This system is certified for barium and radium 226/228 reduction based on hardness reduction. It is recommended you test your water every 6 months to ensure the system is performing properly and that hardness, and therefore barium and radium 226/228, are being reduced.

The HE Progressive Flow 10" Water Softeners with Soft-Minder® meter are tested and certified by WQA against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data. To maintain product certification and ensure uniform performance, the product is retested on a consistent basis.

The HE Progressive Flow 10" Water Softeners with Soft-Minder® meter are certified by IAPMO R&T against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data. To maintain product certification and ensure uniform performance, the product is retested on a consistent basis.

The HE Progressive Flow 10" Water Softeners with Soft-Minder® meter are registered under Iowa Water Treatment Device Registration Number 20667.

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 (P/N 01025288) for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan dealer. 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 dealer 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 6 lb. salt dosage and maximum service flow rate for 10" models.



Performance Data Sheet

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

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.

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
www.culligan.com

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

Testing Conditions & Results:

Flow Rate:	10.0 gpm@14 psi (per tank)	Capacity:	26,781 grains @ 6.0 lb. salt
Pressure:	30–40 psi (2.1–2.8 kg/cm ²)		40,662 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 [†] :	4,463 gr/lb @ 6 lb salt		

Softener Specifications:

Service Flow Rate: 10.0 gpm per tank	Pressure Drop at Max. Flow Rate: 14 psi (90 kPa)
Operating Temp. Range: 33-120°F (0.6–51.7°C)	Max. Drain Flow Rate: 2.5 gpm
Working Press. Range: 20–125 psi (1.4–8.6 kg/cm ²)	Oper. Press. Range (Canada): 20–90 psi (1.4–6.3 kg/cm ²)

Name of Substance	USEPA Max. Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	10.0 gpm per tank	14 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	10.0 gpm per tank	14 (psig)

This system is certified for barium and radium 226/228 reduction based on hardness reduction. It is recommended you test your water every six months to ensure the system is performing properly and that hardness, and therefore barium and radium 226/228, are being reduced.

The HE Progressive Flow 10" Water Softeners with Aqua-Sensor® sensing device are tested and certified by WQA against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data. To maintain product certification and ensure uniform performance, the product is retested on a consistent basis.

The HE Progressive Flow 10" Water Softeners with Aqua-Sensor® sensing device are certified by IAPMO R&T against NSF/ANSI 372, CSA B483.1, and NSF/ANSI Standard 44 for the effective reduction of Calcium and Magnesium (hardness), barium, and radium 226/228, as verified and substantiated by test data. To maintain product certification and ensure uniform performance, the product is retested on a consistent basis.

The HE Progressive Flow 10" Water Softeners with Aqua-Sensor® sensing device are registered under Iowa Water Treatment Device Registration Number 20667.

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 (P/N 01025288) for more specific product information. To avoid contamination from improper handling and installation, your system should only be installed and serviced by your Culligan dealer. 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 dealer 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 6 lb. salt dosage and maximum service flow rate for 10" models.





Important Data on Your Water Softener

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: _____ lb.

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 Ion _____ (ppm)

pH (acidity) _____

Other _____



Item	Part No.	Description
	01020622	HE Control Valve, Progressive Flow, Complete
1	01020251	Valve Body, Progressive Flow
2	01025267	Piston Rebuild Kit, Includes 6ea Standard Piston assemblies and 1ea Brine Piston Assembly
3	P1022786	Brine Piston w/80 Duro Quad Seal, HE 1", 5ea
4	01020589	Gear Box Assembly, Progressive Flow
5	01020240	Gearmotor
6	P1020415	Retainer, Gearmotor, 10ea
7	01020420	Wire Harness w/ Position Sensor
8	01022735	Wire Harness, Motor
9	P1020433	Position Sensor Screw, 10ea
10	P1020517	Gear Box Assembly Screw, 10ea
12	P1020624	Dial-a-Softness Assembly w/ O-Rings, 10ea
13	P0440268	O-Ring, Brine & Drain Elbow, 10ea/Kit
14	P1020487	Eductor Plug Assembly w/ O-Rings, 10ea
15	P1020290	Eductor Plug Retainer, 10ea
17	P1020291	Backwash Bypass Retainer, 10ea
18	P1034563	Brine Elbow Assembly, 10ea
19	P1030127	Retainer, Brine & Drain Elbow, 10ea
20	P1023021	Drain Elbow Assembly, 10ea
23	01033171	Enclosure Frame
24	P0331635	Backwash Flow Control, #2 Brown (9" & 10" Tanks), 10ea
25	01033172	Control Valve Cover
26	—	Hood, Compact, HE Control (not available for sale), Kit
28	P1031866	Enclosure Screw, 10ea/Kit
29	P1031873	Enclosure Door Screw, 10ea/Kit
30	P1031872	Enclosure Hinge, 10ea/Kit
31	P1000372	Strain Relief Fitting, 10ea/Kit
32	01033071	Enclosure Door Kit, Indoor
34	P1021162	O-ring, Eductor Plug Assembly, Large, 10ea/Kit
35	P1020424	O-ring, Eductor Plug Assembly, Small, 10ea/Kit
39	01033070	Electronics Enclosure Kit less Circuit Board
40	01023447	Replacement Circuit Board
41	P1031871	Circuit Board Label, 10ea/Kit
42	P1020497	Keypad with Connector, 10ea/Kit
45	P1022796	Eductor Throat with O-rings, Downflow, Tan (9" and 10" Tanks), 10ea
46	P1020603	Eductor Throat O-ring, Large, 10ea/Kit
47	P1020428	Eductor Throat O-ring, Small, 10ea/Kit
48	P1013894	Eductor Nozzle w/ O-ring, Blue (9" and 10" tanks), 10ea

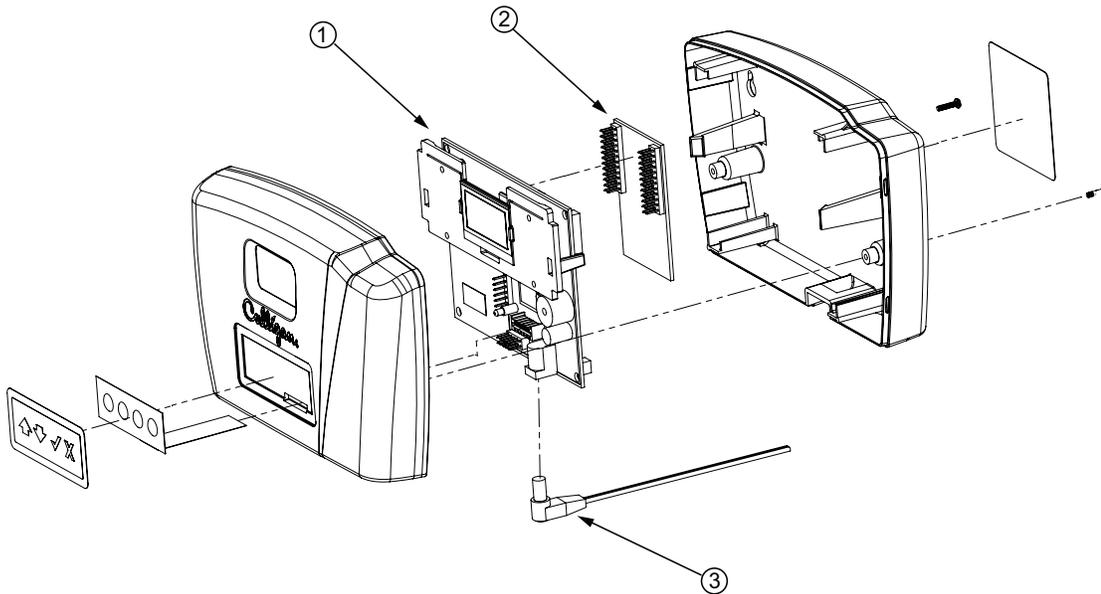
Item	Part No.	Description
	P1013895	Eductor Nozzle w/ O-ring, Beige (10" tanks), 10ea/Kit
49	P0308438	O-ring, Eductor Nozzle, 10ea
50	P1029422	Screen, 10ea/Kit
51	01014153	Tank Adapter Assy, 1" valve to tank less O-Rings
52	01013958	Tank Adapter, 1" Valve, Kit
53	P1013959	Tank Clamp, 1" Valve, 10ea/Kit
54	P1013669	Tank Clamp Pin, 1" Valve, 10ea/Kit
55	P0318383	Tank Clamp Screw, 1" Valve/3/4" bkt, 10ea/Kit
56	P1014848	O-ring, Large, Valve to Tank Adapter, 25ea
57	P0440052	O-ring, Valve Adapter to ACME Tank, 25ea
60	P1020431	Main Piston O-ring, 25ea/Kit
61	P1025199	Main Piston Quad Ring, 25ea/Kit
62	P1020426	Brine Piston O-ring 25ea/Kit
63	—	Brine Piston Quad Ring (not available for sale), Kit
64	P1020252	Main Piston Spring, 10ea
65	P1020286	Brine Piston Spring 10ea
69	01018760	Bypass Valve, Rotary
70	P1009075	Retaining Clip, 1" Bypass valve, 10ea/Kit
71	01014033	Coupling Kit - 1" Bypass, Kit
72	P1009099	O-ring, Couplings/Meters, 50ea/Kit
82	01026849	Meter Kit Assembly, HE 1", LF
83	01023117	Wire Harness, Meter, 28" Long
86	01020486	Progressive Flow Assembly w/ O-rings
87	P1020489	Progressive Flow Plug w/ O-rings, 10ea
*	P1034568	Tee, 3/8" Tube, 10pk
*	P0451701	Hose Clamp, Drain, 25ea
*	01018249	1/4" Straight Through Adapter
*	01018755	Rebuild Kit—1"/1/4" Rotary Bypass
*	P1016467	Replacement O-Ring for Bypass Valve Stem, 50ea/Kit
*	01010783	1" Copper Adapter Kit, (1" Bypass)
*	01016564	3/4" Copper Adapter Kit (1" Bypass)
*	01016565	3/4" Elbow Copper Adapter Kit (1" Bypass)
*	P1018757	1" NPT Female Elbow Kit (1" Rotary Bypass), 10ea
*	P1009856	Gasket, Copper Plumbing Adapters, 25ea
*	01031826	Transformer, Single Output, 20'
*	01031921	Transformer, Single Output, 40' (optional)
*	01016327	Communications Cable
*	01024797	Interconnecting Tank Assembly, Outlet
*	01024804	Interconnecting Tank Assembly, Inlet
*	P1006498	Plug, 10ea/Kit

* Not shown



Parts List

Remote Display and Accessories

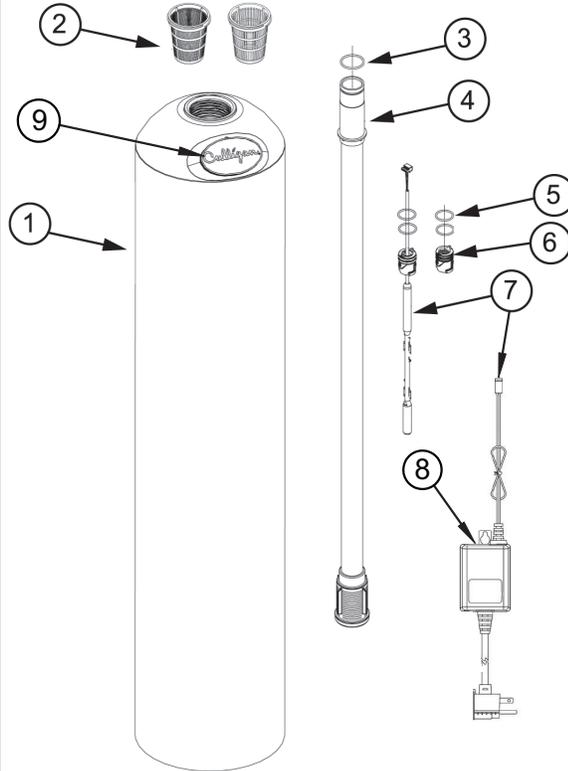


Item	Part No.	Description
	01020553	Remote Display Assembly, Softener/Filter - 915 MHz, North American English Version
	D1025235	Remote Display Assembly, Softener/Filter - 869 MHz, European English Version
	D1020608	Remote Display Assembly, Softener/Filter - 869 MHz, European French Version
	D1025110	Remote Display Assembly, Softener/Filter - 869 MHz, European Italian Version
	D1025111	Remote Display Assembly, Softener/Filter - 869 MHz, European Spanish Version
1	01020749	Circuit Board, Remote Soft/Filt, English Replacement
1	01024866	Circuit Board, Remote Soft/Filt, French Replacement
1	01025114	Circuit Board, Remote Soft/Filt, Spanish Replacement
2	01020751	Circuit Board, RF, GBE, 869 MHz, European Version
3	01029455	Transformer, North American Version
Accessories		
	01031244	WiFi Accessory Board
	01020747	Modem Circuit Board
	01022238	Alarm Relay Board
	01026885	SBT Sensor w/Chamber, HE Indoor
	01031925	Kit, Aqua-Sensor, Hanging, HH, Indoor, 20' cable
	01031926	Kit, Aqua-Sensor, Hanging, HH, Indoor, 40' cable

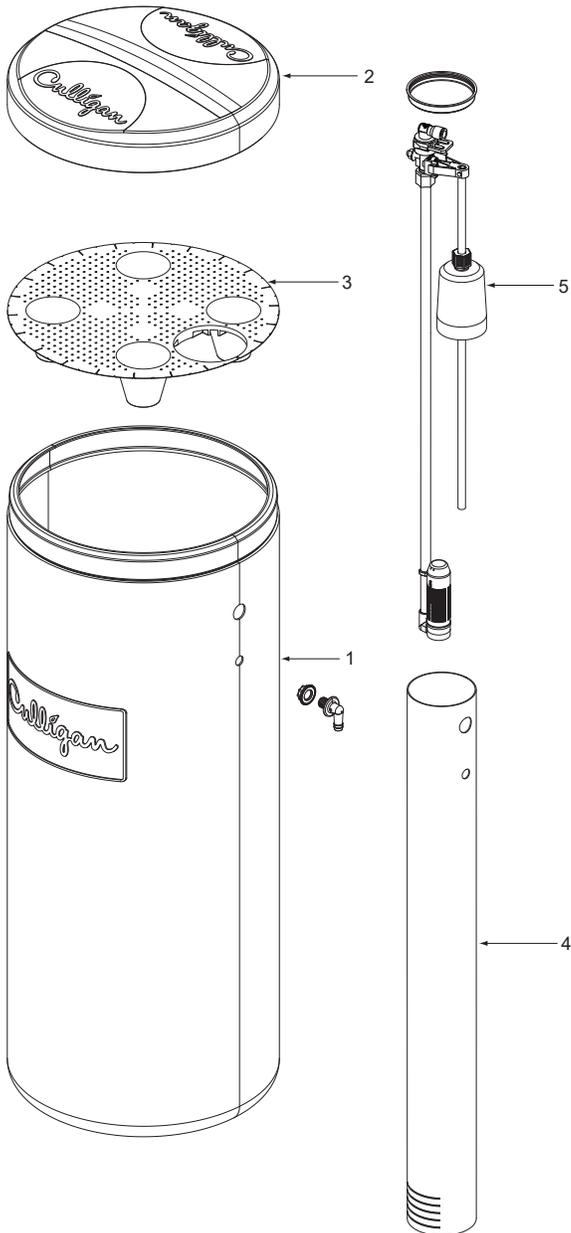


Parts List

Tank Assembly



Item	Part No.	Description	Qty
1	01016617	Tank Assembly, 9" w/ Fillport, Complete	
	01016618	Tank Assembly, 10" w/ Fillport, Complete	
	01016351	Tank Assembly, 9" w/o Fillport, Complete	
	01016352	Tank Assembly, 10" w/o Fillport, Complete	
	01016349	Tank Replacement, 9", w/ Fillport, Empty	
	01016350	Tank Replacement, 10", w/ Fillport, Empty	
	01016347	Tank Replacement, 9", w/o Fillport, Empty	
	01016348	Tank Replacement, 10", w/o Fillport, Empty	
2	P1009847	Top Strainer - Fine Slot, 10 Pack	
	P1011195	Top Strainer - Wide Slot, 10 Pack	1
3	P1009099	O-Ring, Manifold, 50 Pack	1
4	01016176	Outlet Manifold - 9"	1
4	01014539	Outlet Manifold - 10"	1
5	P1017434	O-Ring, Plug and Sensor, 10 Pack	2/10
6	01015122	Plug	1
7	01031925	Kit, Aqua-Sensor, Hanging, HH, Indoor, 20' cable	1
	01031926	Kit, Aqua-Sensor, Hanging, HH, Indoor, 40' cable	
8	01031829	Transformer, Aqua-Sensor, Indoor, 20' cable	1
	01031922	Transformer, Aqua-Sensor, Indoor, 40' cable	
9	01016174	Culligan Emblem	1



Item	Part No.	Description
—	01018705	Brine System, 250 lb
—	01018715	Brine System, 375 lb
1	01018709	Replacement Tank, 250 lb
	01018716	Replacement Tank, 375 lb
2	—	Cover, 250 lb (not available for sale)
	01018717	Cover, 375 lb
3	01018707	Salt Plate, 250 lb
	01018713	Salt Plate, 375 lb
4	01018708	Brine Chamber, 250 lb & 375 lb
5	01035282	Brine Valve

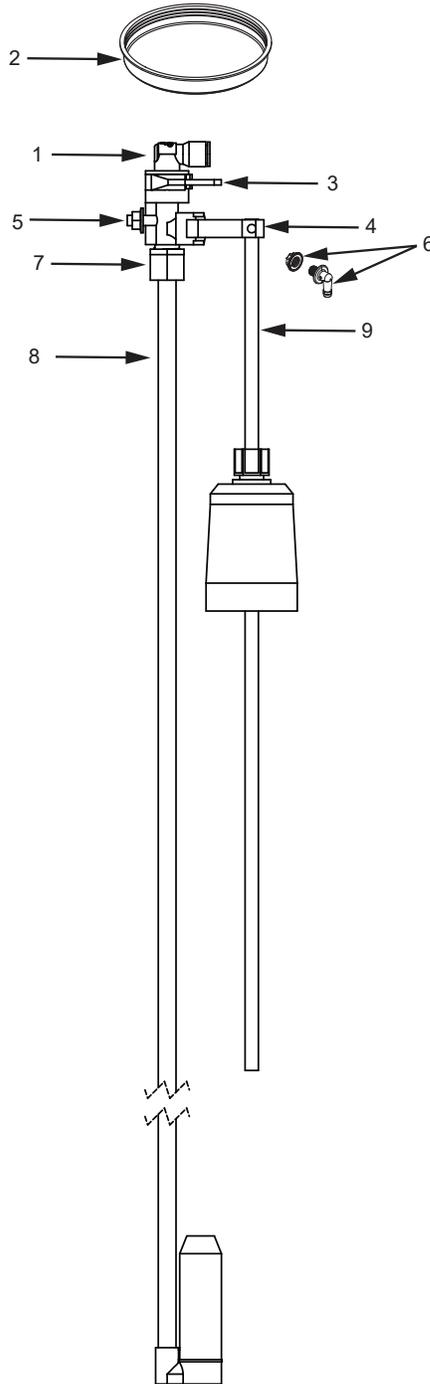
Parts List

16" and 18" Brine System



Parts List

Brine Valve Assembly

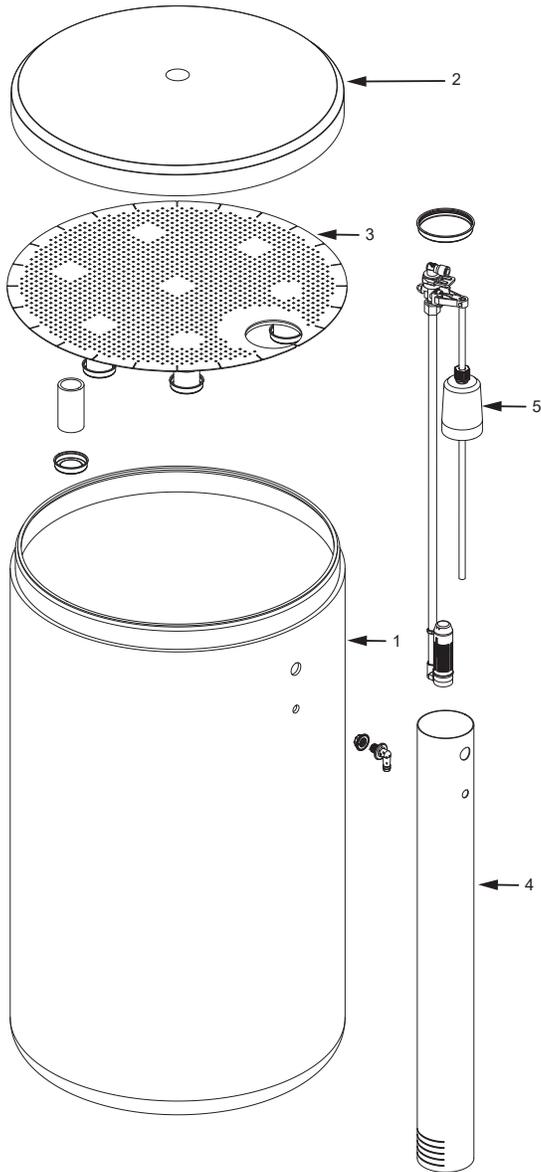


Item	Part No.	Description
—	01035282	Brine Valve
1	01035204	BLFC Elbow - 0.45 gpm
	01018711	BLFC Elbow - 0.8 gpm
2	P1020194	Brine Well Cap - 24 Pack
3	P1020191	Retaining Clip - 24 Pack
4	P1020192	Pin - 24 Pack
5	P1020193	5/16" Nut - 24 Pack
6	P1020190	Overflow Fitting w/ Nut - 24 Pack
7	P1020195	3/8" Nut - 24 Pack
8	P1020198	Air check Assembly - 24 Pack
9	P1020197	Float - 24 Pack



Parts List

24" Brine System



Item	Part No.	Description
—	01018720	Brine System, 650 lb
1	01018718	Replacement Tank, 650 lb
2	01018719	Cover, 650 lb
3	01018714	Salt Plate, 650 lb
4	01018708	Brine Chamber
5	01035282	Brine Valve



**Culligan
Limited
Warranty**

Culligan High Efficiency Progressive Flow 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
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 written 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

9399 W. Higgins Road, Suite 1100
Rosemont, Illinois 60018
www.culligan.com



Notes