



# Culligan®

***Culligan  
Gold Series™  
Automatic  
Water Conditioner  
Owners Guide***





## Thank You

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

The Culligan Gold Series™ Water Softeners with Soft-Minder® Meter and Aqua-Sensor® sensing device are tested and certified by WQA against NSF/ANSI Standard 44 for the effective reduction of hardness (calcium and magnesium), barium and radium 226/228 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.**

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 Gold Series*. 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.



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Performance Data Sheets are included in this manual for various Culligan Gold Series™ 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 57 of this Owner's Guide.

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## Specifications

### Culligan Gold Series™ Water Conditioners with Aqua-Sensor® Device or Soft-Minder® Meter

	9" Model	10" Model	12" Model	14" Model
Control Valve	1" 5-cycle Reinforced Thermoplastic	1" 5-cycle Reinforced Thermoplastic	1" 5-cycle Reinforced Thermoplastic	1" 5-cycle Reinforced Thermoplastic
Overall Conditioner Height	54 in	60 in	58 in	71 in
Media Tank Design	Quadra-Hull	Quadra-Hull	Quadra-Hull	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)	16 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, 16 lb	Cullsan® Underbedding, 25 lb
Exchange Capacity @ Salt Dosage Per Recharge	19,500 gr @ 4.0 lb	28,900 gr @ 6.0 lb	32,600 gr @ 7.0 lb	52,200 gr @ 12.0 lb
	28,600 gr @ 8.0 lb	38,900 gr @ 12.0 lb	61,600 gr @ 18.0 lb	76,500 gr @ 24.0 lb
	33,200 gr @ 12.0 lb	46,800 gr @ 18.0 lb	71,700 gr @ 30.0 lb	92,600 gr @ 36.0 lb
Efficiency at rated salt dosage <sup>1,6</sup>	4,890 gr/lb @ 4 lb salt dosage	4,800 gr/lb @ 6 lb salt dosage	4,660 gr/lb @ 7 lb salt dosage	4,350 gr/lb @ 12 lb salt dosage
Freeboard to Media <sup>2</sup>	14.5 in	14.5 in	20 in	25 in
Freeboard to Underbedding <sup>3</sup>	44.5 in	47.5 in	46 in	59 in
Salt Storage Capacity	250 lb or 375 lb	375 lb	375 lb	600 lb
Rated Service Flow @ Pressure Drop	9.0 gpm @ 13 psi	9.6 gpm @ 15 psi	10.0 gpm @ 14 psi	10.8 gpm @ 15 psi
Total Hardness, Maximum	75 gpg	99 gpg	99 gpg	99 gpg
Total Iron, Maximum	5 ppm	5 ppm	5 ppm	5 ppm
Hardness to Iron Ratio, Minimum	8 gpg to 1 ppm	8 gpg to 1 ppm	8 gpg to 1 ppm	8 gpg to 1 ppm
Operating Pressure	20-125 psi	20-125 psi	20-125 psi	20-125 psi
Operating Pressure (Canada)	20-90 psi	20-90 psi	20-90 psi	20-90 psi
Operating Temperature	33-120°F	33-120°F	33-120°F	33-120°F
Electrical Requirements	24V/60 Hz	24V/60 Hz	24V/60 Hz	24V/60 Hz
Electrical Power Consumption, Min/Max	3 Watts/ 35 Watts	3 Watts/ 35 Watts	3 Watts/ 35 Watts	3 Watts/ 35 Watts
Drain Flow, Maximum <sup>4</sup>	1.6 gpm	1.6 gpm	2.6 gpm	6.6 gpm
Recharge Time, Average <sup>5</sup>	68 min	57 min	52 min	66 min
Recharge Water Consumption, Average <sup>5</sup>	35 gal	46 gal	51 gal	176 gal

1 The efficiency rated dosage is only valid at the 4 lb. salt dosage for the 9" model, 6 lb. salt dosage for the 10" model, 7 lb. salt dosage for 12" model and 12 lb. salt dosage for 14" model 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 of inlet fitting.

4 Backwash at 120 psi (830 kPa).

5 10 minute backwash, 4 lb. (1.8 kg) 9" model, 6 lb. (2.7 kg) 10" model, 7 lb. 12" model or 12 lb. 14" model salt dosage at 30 psi (204 kPa).



## Introduction

### Read this Manual First

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

### 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.

NOTE: Notice 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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## **Introduction (cont.)**

### **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.



## Introduction (cont.)

### **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. Inside Text



## How Your Water Conditioner Works

### Why Water Gets Hard And How It's 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.



## How Your Water Conditioner Works

### 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.

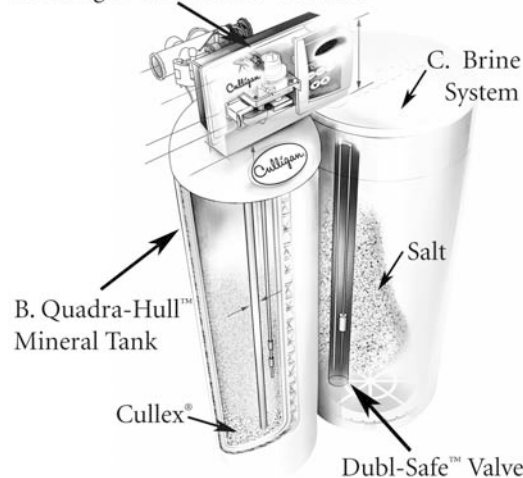
- A. The exclusive Culligan control valve automatically performs a variety of tasks that are necessary for the proper operation of your water conditioner. These tasks, commonly referred to as cycles or operating positions, are **Service, Regeneration, and Brine Refill**.
1. **Service:** While the control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

A. Culligan Gold Series™ Control





## Modes of Operation

### 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. In delay regeneration mode, if the predict mode is turned on, the average daily water usage will be compared to the remaining capacity at the regeneration delay time to predict if another day's water usage can occur before requiring regeneration. If enough capacity is not present then the regeneration will occur at that time. If the predict mode is not selected the regeneration will start at time of regeneration. In immediate mode the regeneration starts when the capacity is exhausted. 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 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.

### Manual Regeneration

Pressing and holding the regen button for 5 seconds will initiate an immediate regeneration. The beeper will give one beep at the start of manual regeneration (when the motor starts to turn). In delay mode, pressing and releasing the regen button will light the regen icon for regeneration to occur at the set delay time. Pressing and releasing the regen button again will turn off the regen icon.

### 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.

### Efficiency Mode

Water softeners historically use an optimum time range to control the Regeneration cycle steps, with a minimum and maximum time required to perform each step dependent on the salt being used, the hardness total and iron level. Culligan typically uses the maximum time range to insure effective Regeneration. However, if the iron content of the water to be softened is zero, and the hardness level is less than 20 gpg, Culligan has developed a new set of regeneration times geared to reducing salt and water usage. These times are defined under a new operating mode coined "Efficiency Mode". Compared to the present time values used, these new regeneration times and salt dosages are considerably less.



## Preparation

### 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 5-cycle regeneration control valve and the Accusoft® Plus Microprocessor. 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.

**Bypass Valve** - Includes the molded bypass valve, the interconnecting couplings, and the assembly pins.

### 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.

#### 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, 5/16" (PN 00303128 or equivalent)
- Drain line, 1/2" (PN 00303082, gray, semi-flexible; or PN 00-3319-46, 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)



## Preparation (cont.)

### 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 17), for maximum drain line length.

**NOTICE:** 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.

**NOTICE:** 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.

**NOTICE:** P.N. 01012956 and P.N. 01014897 plug-in transformer are rated for indoor installations only. P.N. 01015972 plug-in transformer is rated for indoor/outdoor installations. (Non-Aqua-Sensor)



## Installation

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

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

### Placement

Refer to figure 9 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.

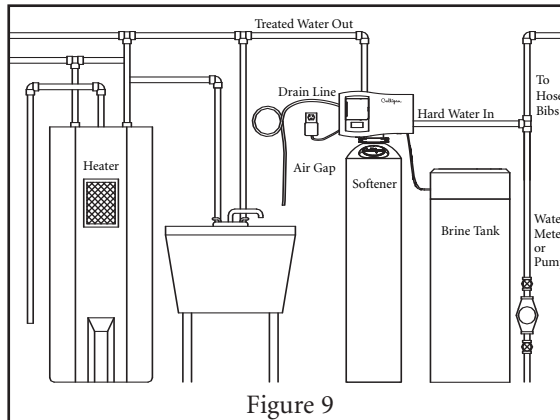


Figure 9

### Tank Assembly

Before the unit can be connected to the plumbing the manifold distributors must be assembled and the underbedding and resin must be loaded into the tank for 12" and 14" tanks.



**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.

### Position the Mineral Tank(s)

Determine the location for the mineral tank(s) prior to loading, since they will be difficult to move after the underbedding and gravel are loaded.

### Loading 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 10).
4. Cover the top of the manifold 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.

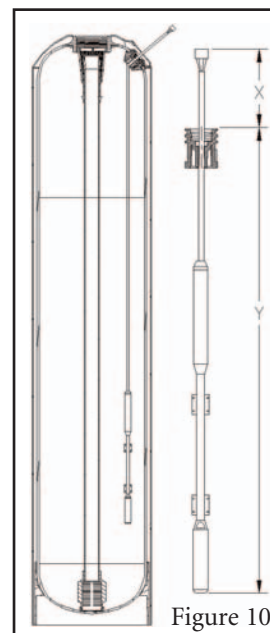


Figure 10



## Installation (cont.)

6. Aqua-Sensor Installation (optional device)
  - A. Measure the sensor cable length as shown in Figure 10 and Table 1.
  - B. Loosen the small Aqua-Sensor Plug
  - C. Moisten the cable sheath and slide the cable grip up or down to the proper cable length.
  - D. Tighten the small Aqua-Sensor plug so that the fitting cannot slide along the cable.
  - E. Insert the probe and cable through the Aqua-Sensor port.
 

**Note:** *There must be no kinks or bends in the cable.*
7. Load the tank with the Cullex® ion exchange resin. Leveling is not required. Remove the funnel.
8. Install the inlet strainer making sure to thread the strainer in until it bottoms out on the thread. Failure to install the strainer correctly can cause the control to leak.

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 dimension "X" is at the corrected length.

	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"

Table 1

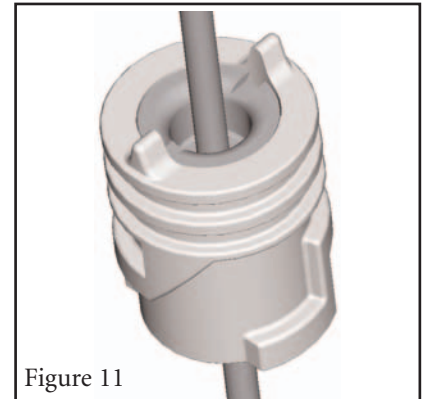


Figure 11

### Mount the Control Valve

See Figure 12 for a visual on mounting the control valve to the tank.

- Assemble the o-rings, located in the parts pack, to the tank adapter.
- The valve adapter o-ring sits on the first step on the adapter. See Figure 13.

**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 part goes between the adapter and the valve, do not stretch the smaller o-ring onto the top of the tank adapter.*

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

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

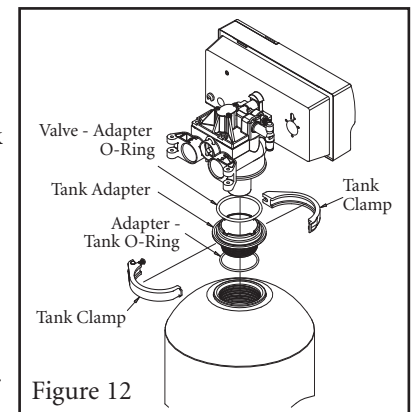


Figure 12



Figure 13



## Installation (cont.)

**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.

- 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.

### Flow Control Eductor Nozzle

Listed below is the recommended eductor nozzle to be used at various salt dosages.

Table 2 - Flow Restrictors

Unit	Backwash Flow	Nozzle	Throat	Brine Refill Flow
9"	2.0 gpm (#2 Brown)	Blue*	Light Brown*	0.45 gpm
10"	2.0 gpm (#2 Brown)	Beige	Light Brown	0.45 gpm
12"	3.5 gpm (#3 Green)	Beige	Light Brown	0.8 gpm
14"	5.5 gpm (Black)	Green	Blue	0.8 gpm

\* Standard from factory

Refer to Figure 14 for a visual on changing the eductor nozzle and the backwash flow control.

#### Eductor Nozzle Replacement:

- Remove the three screws on the eductor cap and remove the cap.
- Remove the eductor assembly.
- Remove the eductor screen from the assembly.
- Remove the blue nozzle and replace it with the beige nozzle. Make sure to put the o-ring on the correct nozzle.
- Reverse the procedure to reassemble. To prevent leaks, ensure that the gasket is in the proper position.

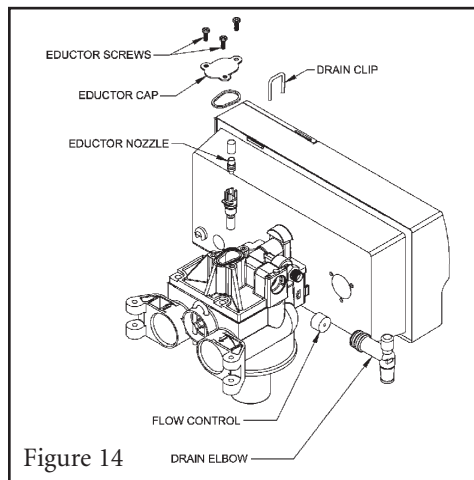


Figure 14

#### Backwash Flow Control Replacement:

- Remove the drain clip and pull the drain elbow straight off.
- Remove the backwash flow control located behind the elbow.
- Install the correct backwash flow control.

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

- Reverse the procedure to reassemble.

**NOTE:** Dip switch #5 is to be in the "off" position for 9" and 10" Tanks (0.45 gpm refill flow control). Dip switch 5 is to be in the "on" position for 12" and 14" tanks (0.80 gpm brine refill flow control).

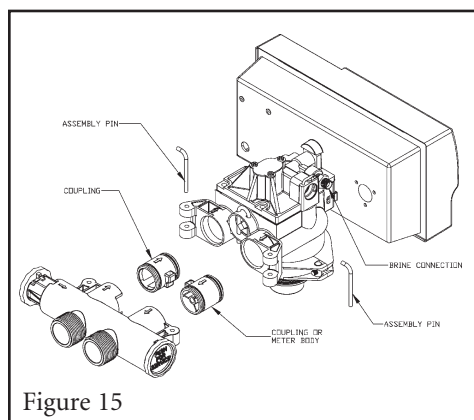


Figure 15



## Installation (cont.)

### 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



**CAUTION!** Close the inlet supply line and relieve 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 components may result otherwise.

### Bypass Valve Installation

The bypass valve connects directly to the control valve with a pair of couplings and two assembly pins (Figure 15). Lubricate all o-rings on the couplings with silicone lubricant.

On Soft-Minder® meter controls, the meter replaces the coupling on the outlet side of the control. The meter body fits in the same space as the coupling between the control valve and the bypass. Make sure that the arrow on the flow meter is pointing in the direction of flow (Figure 15).

**NOTE:** The bypass stem can only be removed from valve on the bypass side (red knob). The bypass valve is designed so that it can be flipped over, with the bypass (red) knob on the left side of the valve. This will need to be taken into consideration if the control is plumbed in close to a wall which may prevent the stem from being easily removed.

The bypass valve has knobs that easily snap on and off of the stem. A screwdriver can be used to depress the snap lever on the stem for knob removal. The knobs have alignment tabs that mate into the notches in the bypass body to ensure that the stem is properly aligned in the bypass body. The service knob (blue) has a locking feature, which must be depressed in order to shift the stem out of the bypass position (Figure 16).

**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.

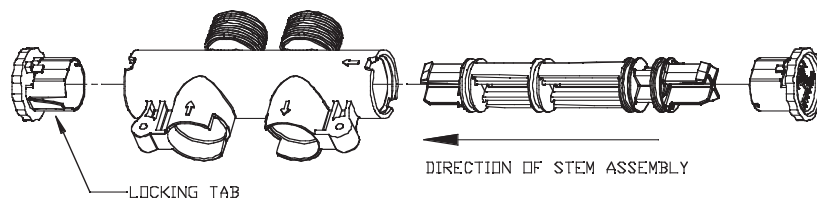


Figure 16



## Installation (cont.)

### Drain Line Connection

Refer to Table 3 for drain line length and height limitations.

- Remove 1/2" pipe clamp from the small parts pack included with the control.
- Route a length of 1/2" drain line from the drain elbow to the drain.
- Fasten the drain line to the elbow with the clamp.
- 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 2 pipe diameters or 1 inch, whichever is larger.

**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.

Height of Discharge Above Floor Level Operating						
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)					140 ft (43 m)	120 ft (37 m)
100 psi (699 kPa)	Normal installation should not require more than 100 ft (30 m) of drain line					150 ft (46 m)

Table 3

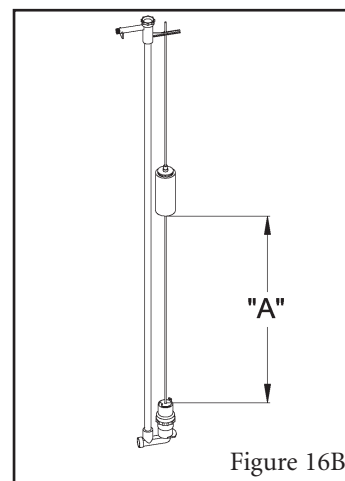
### Fill the Salt Storage Container

Fill the salt storage container with water until the level reaches about 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 Culligan Gold Series™ unit 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 16B.

- Lift the brine valve from the brine chamber.
- Find the correct "A" dimension.
- 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.





## Installation (cont.)

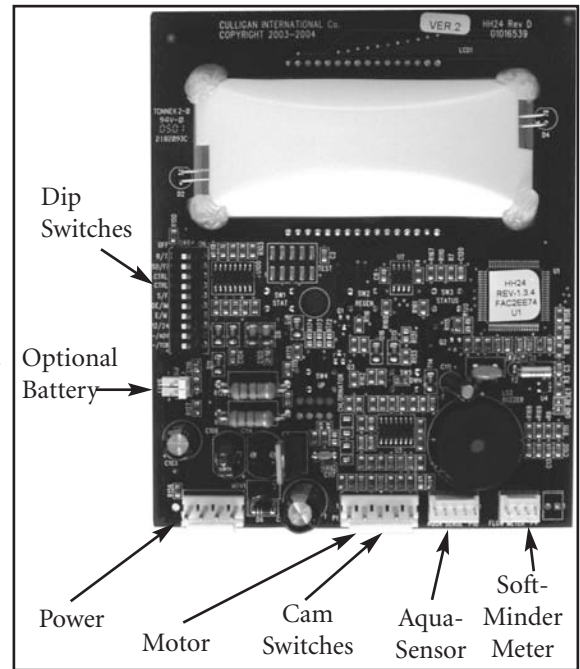
### Aqua-Sensor® Probe and Soft-Minder® Meter Connection

To connect the probe or meter leads refer to Figure 21 and proceed as follows:

- Remove the timer case from the back plate.
- Snap the circuit board holding plate off the back plate to provide access to the back of the circuit board.
- Remove the plastic plug from the backplate.
- Slip the sensor probe lead or meter cable through the hole and toward the circuit board.

**NOTE:** The strain relief located on the back of the wire connection for the Aqua-Sensor® probe may have to be removed in order to fit it through the backplate. Replace the strain relief if you need to remove it for assembly.

- Connect the lead to the circuit board. The Aqua-Sensor probe terminal is labeled "Aqua-Sensor" while the Soft-Minder meter terminal is labeled "Flow Meter".



- Pull any excess cable wire back out of the enclosure, and route the wiring inside the enclosure to avoid any interference with moving parts.
- Locate the strain relief bushing in the parts pack. Place it on the cable at the point of entry to the rear of the timer plate and push it into the hole.

**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.



## Installation (cont.)

### Connect the Brine Line

- Measure a length of brine line sufficient to reach from the brine tank to the brine fitting, with no sharp bends. For easier access to the float it is recommended to add an extra four feet (1.3 meters) of length to the brine line. Cut both ends of the brine line squarely and cleanly.
- Remove the brine valve from the brine tank and then remove the white nut and insert from the float rod. Return float rod to its original position.
- Slip the white nut over one end of the tubing and press the plastic insert into the end of the tubing (Figure 18). Connect to the brine valve and tighten nut.
- Remove white nut and plastic insert from the small parts pack.
- Slip the white nut over one end of the tubing and press the plastic insert into the end of the tubing (Figure 18). Connect to the brine connection on the valve and tighten nut.

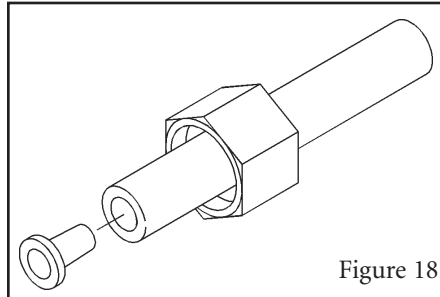


Figure 18

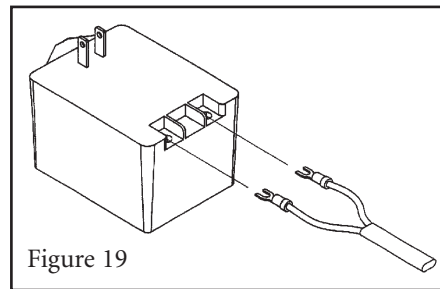


Figure 19

### Electrical Connection

The power cord needs to be connected to the plug-in transformer. Figure 19 shows the cord attachment to the transformer for non Aqua-Sensor models.

**Note:** Observe all state and local electrical codes.

The Aqua-Sensor probe (Figure 20) requires a 2.5 VAC power source. This source is provided via two of the posts on the 24V/2.5V transformer. Two leads from the transformer must be wired to the 2.5 VAC terminal on the circuit board. The wire connector from the Aqua-Sensor probe is simply plugged in the circuit board (Figure 21).



**CAUTION!** Failure to connect power to the correct terminals will damage the circuit board!

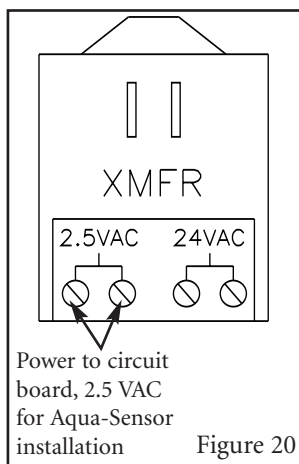


Figure 20

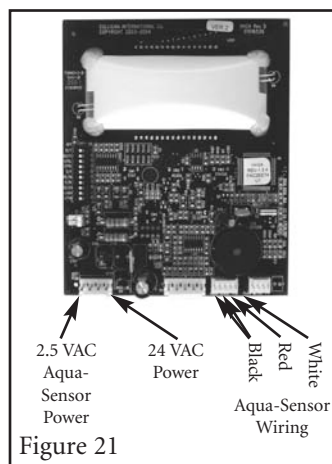


Figure 21



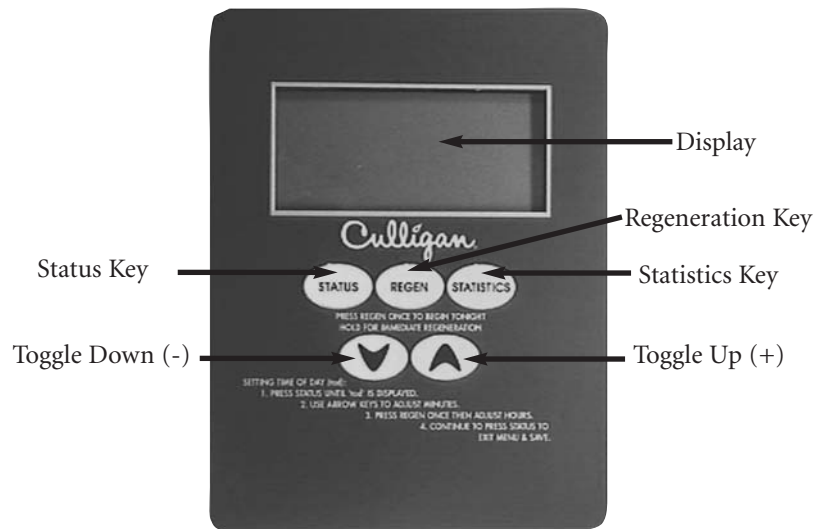
## Programming

### Power Loss

The AccuSoft® circuit board is equipped with a Hi-Cap Capacitor and EEPROM memory chip. The capacitor is capable of maintaining the time, for at least one day, in the event of a power outage. The EEPROM ensures that the individual programming parameters of your softener are not lost.

If the power outage lasts long enough to drain the Hi-Cap Capacitor, the control will flash “12:00 PM” when power is returned to the control. The unit will continue to keep time from the moment power is restored, and will initiate a full regeneration at the preset regeneration time. The time of day will need to be reset in order to return the regeneration to its preset time.

If you live in an area where power outages occur with a regular frequency, a battery backup option is available for ensuring that the time of day is properly maintained. Contact your Culligan Dealer for more information.

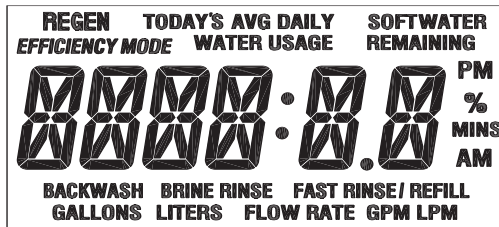


Display	Back lit LCD display.
Status Key	Depress to enter and move through the programming steps.
Regeneration Key	Press and hold the key for five (5) seconds to initiate an immediate regeneration. When pressed during programming the time of day or time of regeneration, this key will allow the user to toggle between the hours and minutes setting of timing program segments.
Statistics Key	Each time depressed, the Statistics key will display statistical information such as flow rate or time of day.
Toggle Down Key (-)	In the programming mode this key will move the user through the programming function in a descending mode. If depressed for greater than three seconds, the rate at which the display scrolls through data will increase.
Toggle Up Key (+)	In the programming mode this key will move the user through the programming function in an ascending mode. If depressed for greater than five seconds, the rate at which the display scrolls through the data will increase. This key will also allow the user to manually step through the cycles of regeneration.



## Programming (cont.)

The Culligan® AccuSoft® Plus circuit board controls all of the softener functions. These settings are programmed at the time of installation. The following is a list of all the microprocessor functions, in the event that any of the settings need to be adjusted.



1. **Beeper Setting** - This setting is used to turn the beeper on or off for each key press actuation. The display will show "bEEP X" where X is either "Y" or "N". The "Y" or "N" will be toggled with the "+" and "-" keys. Setting the Beep option to "N" will only disable the beeper for key press actuation. The beeper will still be active for error and alarm codes.



Pressing the "Status" key will save the setting and move to the next programming step.

2. **Time of Day** - This setting is used to program the current time of day. When in this step the display will first show "tod" for two seconds. After "tod" is displayed, "12:00 PM" will display (or the current set time if already programmed) and the minutes will flash. The minutes are adjusted with the "+" or "-" key until the correct value is displayed.



Press the "Regen" key to flash the hours. Adjust with the "+" or "-" key until the correct time is displayed.



Pressing the "Status" key will move to the next programming step. Pressing "Regen" will move back to the minutes adjust.

3. **Time of Regeneration** - This setting is used to program the time at which a regeneration is to occur in the delay mode, or in immediate mode with time clock backup on. The display will first show "tor" for two seconds.



After "tor" is shown the display will then show the default of 2:00 AM (or the current programmed time of regeneration if already set). The time can be adjusted in 30 minute increments by pressing the "+" or "-" keys.



Pressing the "Status" key will save the setting and move to the next programming step.



## Programming (cont.)

4. **Regeneration Interval** - This setting is used to set the days between regeneration. If the time clock backup Dip switch # 10 is set to on. The display will show "REGEN" icon and "dAYS" as well as the numbers to change. Adjust the value with the "+" or "-" keys.

Pressing the "Status" key will save the setting and move to the next programming step.



5. **Hardness Setting (flow meter only)** - This setting is used to set the hardness (grains) of the influent water supply. The display will only appear if a flow meter is connected to the circuit board and the control is set to Gold or Gold (softener mode only). For English Units the display will first show "Hard" for two seconds and then display the Hardness default (or the previously programmed value). Adjust the value with the "+" or "-" keys.



6. **Iron Setting (flow meter only)** - This setting is used to set the iron level (PPM) of the influent water supply. The display will show "Iron" in the left most digits and the iron default setting (or the previously programmed value) in the far right digit. The display will only appear if a flow meter is connected to the circuit board and the control is set to Gold, Gold or Europe (softener only). Adjust the value with the "+" or "-" keys.

Pressing the "Status" key will temporarily store the setting and move to the next programming step.



7. **Salt Type (flow meter only)** - This setting is used to select the regeneration salt type (Sodium Chloride or Potassium Chloride). The display will show "SALT" for 2 seconds. Then display the default 'NACL'. Pushing the "+" or "-" keys will change to 'KCL'.



Pressing the "Status" key will temporarily store the setting and move to the next programming step.

8. **Efficiency Mode (flow meter only)** - Efficiency mode will only be active if iron is set to 0 and hardness is less than 20 grains (Not available if DIP switch #6 or DIP switch #9 are on). The "EFFICIENCY MODE" Icon will be displayed with a default of "YES". Toggle between "YES" and "NO" with the "+" or "-" key.

Pressing the "Status" key will temporarily store the setting and move to the next programming step.





## Programming (cont.)

9. **Tank Sizes (flow meter only)** - This setting is used to determine what size tank the control is connected to. The display will first show "GOLd" for two seconds and then display the tank size default. Adjust the tank size with the "+" or "-" keys.

Pressing the "Status" key will temporarily store the setting and move to the next programming step.

GOLd

10. **Defaults (flow meter only)** - This setting allows the control to automatically determine what the values shall be for salt dosage, cycle times, batch capacity, and total capacity based on the "temporarily stored" values above. The display will first show "dEFLtS" for two seconds and then display "YES" or "NO", with "YES" being the default. "YES" and "NO" are toggled with the "+" or "-" keys.

If 'YES' is chosen, then pressing the "STATUS" key will let the control automatically lookup, calculate, and save the values for salt dosage, cycle times, batch capacity, and total capacity, and proceed to the next item in the programming menu.

If 'NO' is chosen, then the programmer will have the ability to set each value as desired for salt dosage, cycle times, batch capacity, and total capacity. (Choosing "NO" will cancel Efficiency Mode if it was active prior to this step)

10 X 54

dEFLtS

YES

11. **View** - This setting is used to allow the programmer to view the calculated and looked up values for salt dosage, cycle times, batch capacity, and total capacity. These values may only be viewed and can't be changed at this time. This 'View' programming item is only available in the menu if 'dEFLtS' was set to 'YES'. The display will show "VIEW N". The "Y" or "N" will be toggled with the "+" and "-" keys. The default for this item shall always be "N" and does not get saved in EEPROM. The programmer must always toggle to "Y" in order to view these items.

If "Y" is chosen, then pressing the "STATUS" key will display the value for salt dosage; repeated presses of the status key will display cycle times, batch capacity, and total capacity.

Pressing the "STATUS" key after viewing "Maxcap" will exit the programming menu.

If "N" is chosen, then pressing the "STATUS" key will exit the programming menu.

VIEW N



## Programming (cont.)

- 12. Salt Dosage** - This setting is used to set the salt dosage. The display will first show "dOSAGE" for two seconds and then display the default (or previously programmed value). Adjust the salt dosage with the "+" or "-" keys.

*Note: This setting appears during Aqua-Sensor Programming.*

Pressing the "STATUS" key will save the setting and move to the next programming step.

dOSAGE

LbS 7

- 13. Backwash Time** - This setting is used to program the backwash. The time of the cycle is kept in minutes. The display will show the "BACKWASH" and "MINS" icons and the cycle time in the right most digits. Adjust the value with the "+" or "-" keys.

*Note: This setting appears during Aqua-Sensor Programming.*

Pressing the "Status" key will save the setting and move to the next programming step.

BACKWASH 10 MINS

- 14. Brine Drain/Slow Rinse** - This setting is used to set the time in minutes for brine drain/slow rinse cycle. The display will show the "BRINE RINSE" and "MINS" icons and the cycle time in the right most digits. Adjust the value with the "+" or "-" keys.

*Note: This setting appears during Aqua-Sensor Programming.*

Pressing the "Status" key will save the setting and move to the next programming step.

BRINE RINSE 60 MINS

- 15. Batch Set Point** - This setting is used to set the trip point for regeneration when in flow meter operation. It will only appear if a flow meter is connected, and 'dEFLtS' set to 'NO'. The programmed setting displays the actual set point to trigger regeneration. The display will show the "REGEN" icon and "BAtch" for two seconds and then display the "REGEN" and "GALLONS" icons and the setting numbers to adjust. Adjust the value with the "+" or "-" keys.

Pressing the "Status" key will save the setting and move to the next programming step.

REGEN BAtch

REGEN 000870 GALLONS



## Programming (cont.)

- 16. Total Capacity Set Point (Max Capacity)** - This setting is used to program a value that corresponds to the maximum capacity that can be expected from a unit before it is completely exhausted. If the unit reaches this set point an immediate regeneration will occur even if the control is set to delay mode. This setting will only appear if a flow meter is connected to the circuit board. Adjust the value with the "+" or "-" keys. The display will show the "REGEN" icon and "MAXCAP" for two seconds and then display the "REGEN" and "GALLONS" icons and the setting numbers to adjust.

REGEN  
MAXCAP

REGEN  
999999  
GALLONS

Pressing the "Status" key will save the setting and move to the next programming step.

- 17. Additional Features** - The Culligan Gold Series Softener electronics are packed with features that expand the water softening experience. The statistics button allows you to view four separate gages: Capacity Remaining, Water Used Today, Average Water Usage, and Current Flow Rate. To view each item, press the statistics button, to step to the next item, press the button again. These screens will time-out after 5 seconds if no button is pushed.

### Programming Mode Timeout

If no key activity occurs for a period of 180 seconds (3 minutes) while in programming mode, the mode will time out, exit the programming mode and return to time of day display. Any setting that wasn't saved by pressing the 'status' key prior to the control timing out will revert back to the original value.



## Statistic Functions

### Statistic Functions

The statistical functions are reached by pressing the "Statistics" key. Repetitive presses of the "Statistics" key will cycle through the standard statistics mode until cycled back to time of day display.

Once either of the statistics menus is entered the information shown for each display is outlined below:

- **Aqua Sensor** - This display will only show when in aqua sensor mode (no meter attached). The display will alternate between 'aqua' and 'sensor' every second until the 'statistics' key is pressed or until the function times out.
- **Flow Rate** - This display will only show if the flow meter is attached to the control. The display shall show the current flow rate of the water passing through the control. The display will show the "FLOW RATE" and "GPM" icons and the current flow rate passing through the flow meter for as long as the "-" key or "Statistics" key is not pressed.

This display shall never time out, as opposed to the rest of standard statistics (10 minutes).

- **Capacity Remaining (%) (standard statistics)** - This display will only show if the flow meter is attached to the control. The display shows the percent capacity remaining before regeneration will be triggered. The display will show the "SOFTWATER", "REMAINING" and "%" icons. This display shall never time out, as opposed to the rest of standard statistics (10 minutes).

- **Today's Water Usage** - This display will only show if the flow meter is attached to the control. The display will show the accumulated flow of water for the current day. The value is to start totalizing at 12:00 AM and reset to 0 at 11:59:59 PM. The display will show the "TODAY'S", "WATER USAGE" and "GALLONS" icons and the total days flow.

- **Average Daily Water Usage** - This display will only show if the flow meter is attached to the control. The display will show a running 7-day average of daily water usage. The display will show the "AVG DAILY", "WATER USAGE" and "GALLONS" icons and the averaged flow value.

AQUA

SENSOR

005.6  
FLOW RATE GPM

SOFTWATER  
REMAINING  
047%  
GALLONS

TODAY'S  
WATER USAGE  
187  
GALLONS

AVG DAILY  
WATER USAGE  
02 13  
GALLONS



## Final Start-Up

### Regeneration

There are several conditions that will cause the control to trip a regeneration. The “REGEN” enunciator will light when the control has signaled for a regeneration. The “REGEN” enunciator will flash 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 Culllex Media.
- 3 At the preset time, when the number of days without a regeneration is equal to the Timeclock Backup setting.
- 4 At the preset time, when the “REGEN” button is depressed once. “REGEN” will light.
- 5 Immediately, when the “REGEN” button is depressed for three seconds. “REGEN” will light and blink.
- 6 Immediately, if power to the unit has been off for more than 3 hours and time of day has been restored.

An override function is to exist to allow for the control to initiate a delayed regeneration if DIP switch # 6 is set to 'delay'. To initiate the override function simultaneously press and hold the "+", "-", and "Statistics" keys for 3 seconds while in the service mode. The display will show the status of power up as "DELAY" or IMMEd" with "IMMEd" being the default.



Toggle the setting with the "+" or "-" key and save the setting and exit by pressing the "Status" key. If set to delayed, then after a >3hr power outage the "regen" icon will light and the regeneration will begin when the timer reaches the next programmed time of regeneration. If set to immediate, the regeneration will begin as soon as the control completes the homing cycle.



If dipswitch 6 is set to “ON”, the unit will begin a regeneration immediately for instances 1 and 2. With dipswitch 6 set to “OFF”, the regeneration will not begin until the preset regeneration time.

**Note:** *If set to immediate mode as timeclock or timeclock backup, the unit will initiate regeneration at 12:00 AM. In the delay mode, “REG” indicator will light at 12:00 AM and regeneration will occur at delayed time.*



## Final Start-Up

### Start-Up

- Close the main water supply valve.
- Set the Cul-Flo-Valv® to the bypass position.
- Ensure that all faucets at the installation site are closed.
- Direct the drain line discharge into a bucket where flow can be observed.
- Plug the transformer into a 120 Volt, 60 Hz, single-phase receptacle.
- Wait for the control to energize the motor and home itself.
- Set the timer to the correct time of day.
- Open the main supply valve.
- Initiate an immediate regeneration to move the control into the backwash position.
- Refer to the section on manual cycling for information on cycling the control through its positions.
- When in the backwash position, slowly shift the bypass to the soft water position until water flows.
- Allow the tank to fill slowly until water flows from the drain line.
- 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.
- When the unit is filled with water, return the timer to the service position and proceed with setting the microprocessor. Refer to the programming section.  
***Note:** Unplugging the Culligan® Gold Series water softener will not affect any of the control settings. Once programmed in, the settings will be stored indefinitely. In the event of a power failure the time-of-day setting will be stored for up to 12 hours. If longer time storage is necessary, a battery backup is available.*
- Sanitize the water softener (see sanitizing procedure on page 32).



## 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 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.

**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, push the red knob on the back of the water softener against the barrel of the bypass valve. 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.

*Note: Following the manufacturer's instructions regarding operation, maintenance and replacement requirements, including replacement of filters if applicable, is essential for Culligan's products to perform as advertised.*

If you have further questions, please call your local independently operated Culligan dealer. He or she will be glad to be of assistance to you. For your nearest Culligan dealer, call (800) 285-5442.

### Recommended Preventative Maintenance Inspection Schedule

The *Culligan Gold Series* 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 40.
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).



## Care and Cleaning of Your Water Conditioner (cont.)

### To Clean 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 2 years when the salt supply is low. Follow these step-by-step procedures:

#### Tools needed:

- Scoop
- Clean, bucket-size container
- Phillips-head screwdriver
- 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. Stand salt tank upright. Replace the salt plate. Place brine valve chamber in position and affix with screws.
10. Insert the brine valve into the chamber 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.



## Care and Cleaning of Your Water Conditioner (cont.)

### 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 softner-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.



## Things to Check Before Calling for Service

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 28 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 22-26. 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 3/4 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 Accusoft Plus microprocessor is equipped with an advanced error detection system. During all operating modes the softener's electronics are performing self-diagnostics to ensure that the unit is operating correctly. There may be times, however, when something may occur that could cause the unit to improperly operate. In those instances the microprocessor will identify the exact problem and alert the user with an error code. Shown below is a description of the error codes.

Display	Error Description	Mode of Detection	Clearing Error/Alarm
<b>ERR 1</b>	Motor Failure to Start	If the valve fails to reach the desired state within 70 seconds of driving the motor. The control will attempt to start the motor 3 times for 70 seconds each time with a 60 second off period between each attempt.	Press and hold 'STATUS' key for 10 seconds.
<b>ERR 2</b>	Motor Failure to Stop	If the control detects changes in the Cam inputs when the motor is not supposed to be turning.	Press and hold 'STATUS' key for 10 seconds.
<b>ERR 3</b>	Incorrect Cycle Position	The control expects to be in a different position than that indicated by the Cam switch closures.	Press and hold 'STATUS' key for 10 seconds.
<b>ERR 4</b>	Dips # 3 & 4 (Control Selection) Do Not Match the Valve Detected	-If dips#3&4 are set for 'Gold' and 4-cycle valve is detected. -If dips#3&4 are set for 'Gold' or 'Europe' and 5-cycle valve is detected.	Press and hold 'STATUS' key for 10 seconds.
<b>MISSED</b>	Auto Rinse Out Failure	If brine rinse time was not cut short by Auto Rinse Out and lasted 99 minutes. Alarm occurs after regen is complete.	Press and hold the 'REGEN' key for 10 seconds while in Service Statistics Mode at the 'Last Slow Rinse Time' display OR the alarm clears automatically if the next brine rinse cycle is successfully cut short by Auto Rinse Out.
<b>RINSE</b>			

To reset an error, press and hold for 10 seconds the status button. The unit will beep and check to see if indeed the error has been fixed. If the error was not fixed, the board will re-display the error code. If the error code does not reset please contact your local Culligan Dealer. For additional troubleshooting or service needs, please contact your local Culligan Dealer.



## Error Codes (cont.)

### When and How to Bypass Your Water Conditioner

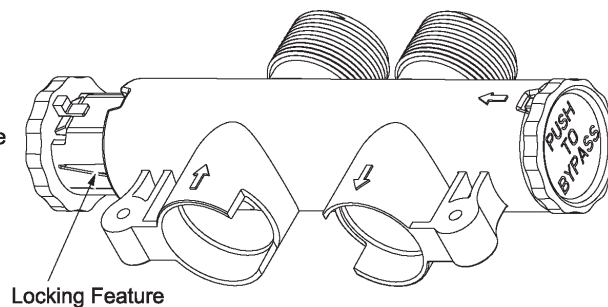
Normally, all water except outside lines passes through the water conditioner. There are times when the water conditioner should be bypassed, using the push-button Cul-Flo-Valv<sup>®</sup> Bypass, or a 3-way bypass valve. You should bypass:

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.

### Push-Button Bypass

In the back of Culligan water conditioners is a push-button Cul-Flo-Valv Bypass. To bypass unit, simply push the red knob (marked "Push to Bypass") against the bypass valve body. To return to soft water service, reverse the procedure - push the blue knob (marked "Push for Service") against the bypass valve body.

The service knob (blue) has a locking feature, which must be depressed in order to shift.





## Performance Data Sheet

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**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  
One Culligan Parkway, Northbrook, IL 60062-6209 USA  
(847) 205-6000

**PRODUCT:** Culligan Gold Series™ 9" Water Softener with Soft-Minder® Meter

### TESTING CONDITIONS & RESULTS:

<b>Flow Rate:</b> 9.0 gpm	<b>Capacity:</b> 19,500 grains @ 4.0 lb. salt
<b>Pressure:</b> 30 - 40 psi	28,600 grains @ 8.0 lb. salt
<b>Acidity:</b> Non-Corrosive	33,200 grains @ 12.0 lb. salt
<b>Temperature:</b> 68° (20°C)	<b>pH:</b> 7.6
<b>Efficiency Rated Dosage†:</b> 4,890 gr/lb	



### SOFTENER SPECIFICATIONS:

<b>Max. Flow Rate:</b> 9.0 gpm (34 Lpm)	<b>Pressure Drop at Max. Flow Rate:</b> 13 psi (90 kPa)
<b>Operating Temp. Range:</b> 33-125°F (1-50°C)	<b>Max. Drain Flow Rate:</b> 1.6 gpm (6.1 Lpm)
<b>Working Pressure Range:</b> 20-120 psi (140-860 kPa)	<b>Operating Pressure Range (Canada):</b> 20 - 90 psi (140 - 620 kPa)

Name of Substance	USEPA Maximum Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	14.29 gpm	35 + 5 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	14.29 gpm	35 + 5 (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. Hardness test strips have been included. Additional strips are available from your local Culligan dealer.

The Culligan Gold Series 9" Water Softeners 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 for 9" models.

Buyer Signature \_\_\_\_\_ Date \_\_\_\_\_

Seller Signature \_\_\_\_\_ Date \_\_\_\_\_



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One Culligan Parkway, Northbrook, IL 60062-6209 USA  
(847) 205-6000

**PRODUCT:** Culligan Gold Series™ 9" Water Softener with Aqua-Sensor® Sensing Device

### TESTING CONDITIONS & RESULTS:

**Flow Rate:** 9.0 gpm  
**Capacity:** 19,500 grains @ 4.0 lb. salt  
**Pressure:** 30 - 40 psi 28,600 grains @ 8.0 lb. salt  
**Acidity:** Non-Corrosive 33,200 grains @ 12.0 lb. salt  
**Temperature:** 68° (20°C) **pH:** 7.6  
**Efficiency Rated Dosage†:** 4,890 gr/lb



### SOFTENER SPECIFICATIONS:

**Max. Flow Rate:** 9.0 gpm (34 Lpm) **Pressure Drop at Max. Flow Rate:** 13 psi (90 kPa)  
**Operating Temp. Range:** 33-125°F (1-50°C) **Max. Drain Flow Rate:** 1.6 gpm (6.1 Lpm)  
**Working Pressure Range:** 20-120 psi (140-860 kPa) **Operating Pressure Range (Canada):** 20 - 90 psi (140 - 620 kPa)

Name of Substance	USEPA Maximum Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	14.29 gpm	35 + 5 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	14.29 gpm	35 + 5 (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. Hardness test strips have been included. Additional strips are available from your local Culligan dealer.

The Culligan Gold Series 9" Water Softeners 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.

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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 for 9" models.

Buyer Signature \_\_\_\_\_ Date \_\_\_\_\_

Seller Signature \_\_\_\_\_ Date \_\_\_\_\_



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**MANUFACTURER:** Culligan International Company  
One Culligan Parkway, Northbrook, IL 60062-6209 USA  
(847) 205-6000

**PRODUCT:** Culligan Gold Series™ 10" Water Softener with Soft-Minder® Meter

### TESTING CONDITIONS & RESULTS:

**Flow Rate:** 9.6 gpm  
**Pressure:** 30 - 40 psi  
**Acidity:** Non-Corrosive  
**Temperature:** 68° (20°C)  
**Efficiency Rated Dosage†:** 4,810 gr/lb

**Capacity:** 28,900 grains @ 6.0 lb. salt  
38,900 grains @ 12.0 lb. salt  
46,800 grains @ 18.0 lb. salt

**pH:** 7.6



### SOFTENER SPECIFICATIONS:

**Max. Flow Rate:** 9.6 gpm (36 Lpm)      **Pressure Drop at Max. Flow Rate:** 15 psi (104 kPa)  
**Operating Temp. Range:** 33-125°F (1-50°C)      **Max. Drain Flow Rate:** 1.6 gpm (6.1 Lpm)  
**Working Pressure Range:** 20-120 psi (140-860 kPa)      **Operating Pressure Range (Canada):** 20 - 90 psi (140 - 620 kPa)

Name of Substance	USEPA Maximum Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	14.41 gpm	35 + 5 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	14.41 gpm	35 + 5 (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. Hardness test strips have been included. Additional strips are available from your local Culligan dealer.

The Culligan Gold Series 10" Water Softeners 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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**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 for 10" models.

Buyer Signature \_\_\_\_\_ Date \_\_\_\_\_

Seller Signature \_\_\_\_\_ Date \_\_\_\_\_



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**MANUFACTURER:** Culligan International Company  
One Culligan Parkway, Northbrook, IL 60062-6209 USA  
(847) 205-6000

**PRODUCT:** Culligan Gold Series™ 10" Water Softener with Aqua-Sensor® Sensing Device

### TESTING CONDITIONS & RESULTS:

**Flow Rate:** 9.6 gpm  
**Capacity:** 28,900 grains @ 6.0 lb. salt  
38,900 grains @ 12.0 lb. salt  
46,800 grains @ 18.0 lb. salt  
**Pressure:** 30 - 40 psi  
**Acidity:** Non-Corrosive  
**Temperature:** 68° (20°C)  
**pH:** 7.6  
**Efficiency Rated Dosage†:** 4,810 gr/lb



### SOFTENER SPECIFICATIONS:

**Max. Flow Rate:** 9.6 gpm (36 Lpm)      **Pressure Drop at Max. Flow Rate:** 15 psi (104 kPa)  
**Operating Temp. Range:** 33-125°F (1-50°C)      **Max. Drain Flow Rate:** 1.6 gpm (6.1 Lpm)  
**Working Pressure Range:** 20-120 psi (140-860 kPa)      **Operating Pressure Range (Canada):** 20 - 90 psi (140 - 620 kPa)

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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. Hardness test strips have been included. Additional strips are available from your local Culligan dealer.

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Buyer Signature \_\_\_\_\_ Date \_\_\_\_\_

Seller Signature \_\_\_\_\_ Date \_\_\_\_\_



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**MANUFACTURER:** Culligan International Company  
One Culligan Parkway, Northbrook, IL 60062-6209 USA  
(847) 205-6000

**PRODUCT:** Culligan Gold Series™ 12" Water Softener with Soft-Minder® Meter

### TESTING CONDITIONS & RESULTS:

**Flow Rate:** 10.0 gpm  
**Pressure:** 30 - 40 psi  
**Acidity:** Non-Corrosive  
**Temperature:** 68° (20°C)  
**Efficiency Rated Dosage†:** 4,810 gr/lb

**Capacity:** 32,600 grains @ 7.0 lb. salt  
61,600 grains @ 18.0 lb. salt  
71,700 grains @ 30.0 lb. salt

**pH:** 7.6



### SOFTENER SPECIFICATIONS:

**Max. Flow Rate:** 10.0 gpm (38 Lpm)      **Pressure Drop at Max. Flow Rate:** 14 psi (104 kPa)  
**Operating Temp. Range:** 33-125°F (1-50°C)      **Max. Drain Flow Rate:** 2.6 gpm (9.8 Lpm)  
**Working Pressure Range:** 20-120 psi (140-860 kPa)      **Operating Pressure Range (Canada):** 20 - 90 psi (140 - 620 kPa)

Name of Substance	USEPA Maximum Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	15.18 gpm	35 + 5 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	15.18 gpm	35 + 5 (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. Hardness test strips have been included. Additional strips are available from your local Culligan dealer.

The Culligan Gold Series 12" Water Softeners 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 7lb. salt dosage for 12" models.

Buyer Signature \_\_\_\_\_ Date \_\_\_\_\_

Seller Signature \_\_\_\_\_ Date \_\_\_\_\_



## Performance Data Sheet

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 sixty-five 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  
One Culligan Parkway, Northbrook, IL 60062-6209 USA  
(847) 205-6000

**PRODUCT:** Culligan Gold Series™ 12" Water Softener with Aqua-Sensor® Sensing Device

### TESTING CONDITIONS & RESULTS:

**Flow Rate:** 10.0 gpm  
**Capacity:** 32,600 grains @ 7.0 lb. salt  
61,600 grains @ 18.0 lb. salt  
71,700 grains @ 30.0 lb. salt  
**Pressure:** 30 - 40 psi  
**Acidity:** Non-Corrosive  
**Temperature:** 68° (20°C)  
**pH:** 7.6  
**Efficiency Rated Dosage†:** 4,810 gr/lb



### SOFTENER SPECIFICATIONS:

**Max. Flow Rate:** 10.0 gpm (38 Lpm)      **Pressure Drop at Max. Flow Rate:** 14 psi (104 kPa)  
**Operating Temp. Range:** 33-125°F (1-50°C)      **Max. Drain Flow Rate:** 2.6 gpm (9.8 Lpm)  
**Working Pressure Range:** 20-120 psi (140-860 kPa)      **Operating Pressure Range (Canada):** 20 - 90 psi (140 - 620 kPa)

Name of Substance	USEPA Maximum Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	15.18 gpm	35 + 5 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	15.18 gpm	35 + 5 (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. Hardness test strips have been included. Additional strips are available from your local Culligan dealer.

The Culligan Gold Series 12" Water Softeners 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 7lb. salt dosage for 12" models.

Buyer Signature \_\_\_\_\_ Date \_\_\_\_\_

Seller Signature \_\_\_\_\_ Date \_\_\_\_\_



## Performance Data Sheet

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**MANUFACTURER:** Culligan International Company  
One Culligan Parkway, Northbrook, IL 60062-6209 USA  
(847) 205-6000

**PRODUCT:** Culligan Gold Series™ 14" Water Softener with Soft-Minder® Meter

### TESTING CONDITIONS & RESULTS:

**Flow Rate:** 10.8 gpm  
**Capacity:** 52,200 grains @ 12.0 lb. salt  
76,500 grains @ 24.0 lb. salt  
92,600 grains @ 36.0 lb. salt  
**Pressure:** 30 - 40 psi  
**Acidity:** Non-Corrosive  
**Temperature:** 68° (20°C) **pH:** 7.6  
**Efficiency Rated Dosage†:** 4,810 gr/lb



### SOFTENER SPECIFICATIONS:

**Max. Flow Rate:** 10.8 gpm (40 Lpm) **Pressure Drop at Max. Flow Rate:** 15 psi (104 kPa)  
**Operating Temp. Range:** 33-125°F (1-50°C) **Max. Drain Flow Rate:** 6.6 gpm (1251 Lpm)  
**Working Pressure Range:** 20-120 psi (140-860 kPa) **Operating Pressure Range (Canada):** 20 - 90 psi (140 - 620 kPa)

Name of Substance	USEPA Maximum Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	15.49 gpm	35 + 5 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	15.49 gpm	35 + 5 (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. Hardness test strips have been included. Additional strips are available from your local Culligan dealer.

The Culligan Gold Series 14" Water Softeners 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 for 14" models.

Buyer Signature \_\_\_\_\_ Date \_\_\_\_\_

Seller Signature \_\_\_\_\_ Date \_\_\_\_\_



## Performance Data Sheet

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 sixty-five years of commitment to customer satisfaction that Culligan is providing this Performance Data Sheet to its customers.

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**MANUFACTURER:** Culligan International Company  
One Culligan Parkway, Northbrook, IL 60062-6209 USA  
(847) 205-6000

**PRODUCT:** Culligan Gold Series™ 14" Water Softener with Aqua-Sensor® Sensing Device

### TESTING CONDITIONS & RESULTS:

**Flow Rate:** 10.8 gpm  
**Pressure:** 30 - 40 psi  
**Acidity:** Non-Corrosive  
**Temperature:** 68° (20°C)  
**Efficiency Rated Dosage†:** 4,810 gr/lb

**Capacity:** 52,200 grains @ 12.0 lb. salt  
76,500 grains @ 24.0 lb. salt  
92,600 grains @ 36.0 lb. salt

**pH:** 7.6



### SOFTENER SPECIFICATIONS:

**Max. Flow Rate:** 10.8 gpm (40 Lpm)      **Pressure Drop at Max. Flow Rate:** 15 psi (104 kPa)  
**Operating Temp. Range:** 33-125°F (1-50°C)      **Max. Drain Flow Rate:** 6.6 gpm (1251 Lpm)  
**Working Pressure Range:** 20-120 psi (140-860 kPa)      **Operating Pressure Range (Canada):** 20 - 90 psi (140 - 620 kPa)

Name of Substance	USEPA Maximum Contaminant Level	pH	Flow Rate	Pressure
Barium	2.0 mg/L	7.5 + 0.5	15.49 gpm	35 + 5 (psig)
Radium 226/228	5 pCi/L	7.5 + 0.5	15.49 gpm	35 + 5 (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. Hardness test strips have been included. Additional strips are available from your local Culligan dealer.

The Culligan Gold Series 14" Water Softeners 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.

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**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 for 14" models.

Buyer Signature \_\_\_\_\_ Date \_\_\_\_\_

Seller Signature \_\_\_\_\_ Date \_\_\_\_\_



**California  
Certification**

State of California  
Department of Health Services

**Water Treatment Device  
Certificate Number**

**04 - 1620**

*Date Issued:* July 21, 2004

<u>Trademark/Model Designation</u>	<u>Replacement Elements</u>
Culligan Gold 9" Soft Minder	None
Culligan Gold 9" Aqua-Sensor	None
<u>Manufacturer</u> Culligan International	

The water treatment device(s) listed on this certificate have met the testing req 116830 of the Health and Safety Code for the following health related contaminant

<u>Microbiological Contaminants and Turbidity</u>	<u>Inorganic/Radiological Contaminants</u>
None	Barium Radium 226/228
<u>Organic Contaminants</u>	
None	

<u>Rated Service Capacity:</u>	<u>Rated Service Flow:</u> 10 gpm
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Conditions of Certification:

Do not use with water that is microbiologically unsafe or of unknown quality, without adequate disinfection before or after the system.



## California Certification

State of California  
Department of Health Services  
Water Treatment Device  
Certificate Number

04 - 1574

*Date Issued:* July 21, 2004

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<u>Trademark/Model Designation</u>	<u>Replacement Elements</u>
Gold 10" Aqua Sensor	None
Gold 10" Soft Minder	None
<u>Manufacturer</u> Culligan International	

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The water treatment device(s) listed on this certificate have met the testing requirements 116830 of the Health and Safety Code for the following health related contaminants:

<u>Microbiological Contaminants and Turbidity</u>	<u>Inorganic/Radiological Contaminants</u>
None	Barium Radium 226/228
<u>Organic Contaminants</u>	
None	

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Rated Service Capacity:                      Rated Service Flow: 1.6 gpm

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Conditions of Certification:

Do not use with water that is microbiologically unsafe or of unknown quality, without adequate disinfection before or after the system.



**California  
Certification**

State of California  
Department of Health Services  
**Water Treatment Device  
Certificate Number**

**02 - 1488**

Date Issued: April 19, 2002

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**Trademark/Model Designation**

Gold 12" Time Clock

Gold 12" Softminder

Gold 12" Aqua Sensor

**Replacement Elements**

None

None

None

**Manufacturer:** Culligan International

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The water treatment device(s) listed on this certificate have met the testing requirements pursuant to Section 116830 of the Health and Safety Code for the following health related contaminants:

**Microbiological Contaminants and Turbidity**

None

**Inorganic/Radiological Contaminants**

Barium

Radium 226/228

**Organic Contaminants**

None

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**Rated Service Capacity:** Not Applicable

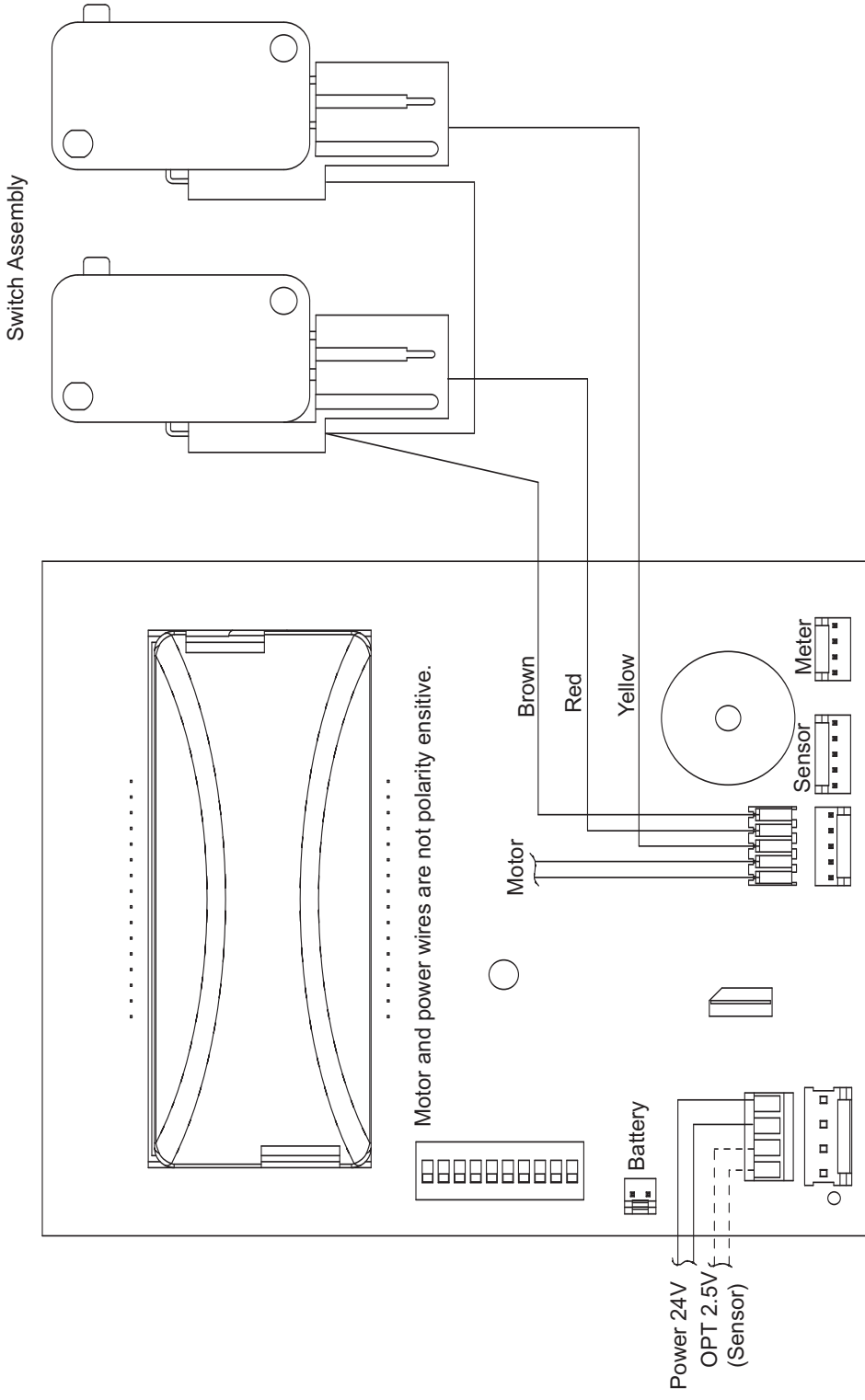
**Rated Service Flow:** 10.5 gpm

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Do not use with water that is microbiologically unsafe or of unknown quality, without adequate disinfection before or after the system.



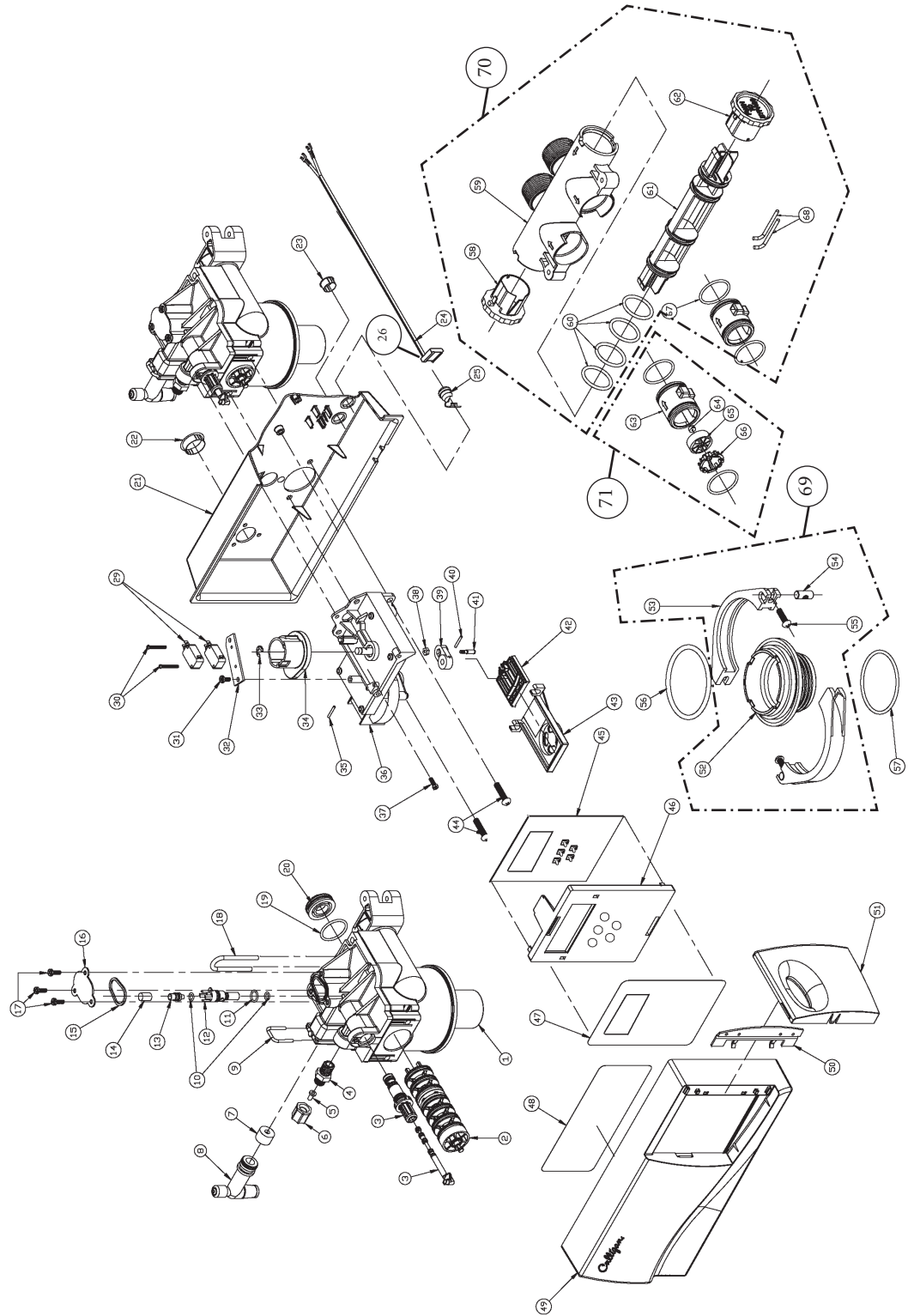
## Wiring Schematic



Rear View Circuit Board



# Control Parts List



Item	Part No.	Description	Item	Part No.	Description
	01-0171-31	Control Valve Assembly - Gold Series	36	01-0141-79	Drive Motor & Bracket Assembly 24V/60Hz
‡	01-0139-76	Control Valve	37	01-0017-84	Screw
‡	01-0130-83	Seal Pack Assembly	38	00-3183-54	Nut
‡	01-0136-06	Eductor Sleeve and Eductor Piston Assembly	39	00-4452-21	Bellcrank
‡	P0-4479-86	O-Ring, Eductor Sleeve, Small O-Ring (25/Kit)	40	00-4435-59	Roll Pin
‡	P0-3084-07	O-Ring, Eductor Sleeve, Large O-Ring (25/Kit)	41	01-0126-49	Follower
‡	P0-4487-50	Screen, Eductor Sleeve (10/Kit)	42	01-0126-48	Yoke
‡	00-4479-87	O-Ring, Eductor Piston (10/Kit)	43	01-0126-47	Bracket
4	00-4432-91	Connector Brine Line	44	00-3184-52	Screw
5	P0-3031-92	Insert, PP, 0.312" (25/Kit)	45	01-0170-32	Circuit Board
6	P0-3031-93	Nut, PP, 0.312" (25/Kit)	46	01-0164-76	Circuit Board Mounting Plate
7	P0-3316-35	Backwash Restrictor, #2 (brown), 9" & 10" Tanks (10/Kit)	47	01-0164-78	Timer Label
	P0-3316-36	Backwash Restrictor, #3 (green), 12" Tanks	49	01-0140-26	Cover
	00-4010-31	Backwash Restrictor (black), 14" Tanks	50	01-0140-30	Hinge
8	00-4468-35	Drain Elbow Assembly w/O-Ring	51	01-0164-75	Door
9	00-4473-87	Retainer, Drain Elbow	52	01-0139-58	Tank Adapter
‡	P0-3084-38	O-Ring, Eductor Nozzle and Throat (10/Kit)	53	01-0139-59	Tank Clamp
‡	00-3084-37	O-Ring, Eductor Throat	54	01-0136-69	Clamp Pin
‡	00-4012-48	Eductor Throat w/O-Rings (light brown), 9", 10" & 12" Tanks	55	00-318-383	Screw
	01-0141-42	Eductor Throat w/O-Ring, 14" Tank	56	01-0148-48	O-Ring
‡	00-4460-38	Eductor Nozzle - Blue, 9" & 10" Tanks	57	00-4400-52	O-Ring
*	00-4460-39	Eductor Nozzle Beige, 10" & 12" Tanks	58	01-0139-63	Knob, Bypass - Service
	00-4477-52	Eductor Nozzle (green), 14" Tank	59	01-0164-65	Bypass Body, 1-1/4" NPT
‡	P0-4452-69	Eductor Screen (10/Kit)	60	01-0164-67	O-Ring
14	00-4457-97	Eductor Port Cover	61	01-0164-66	Bypass Stem
15	00-4010-22	Screw	62	01-0139-64	Knob, Bypass - Bypass
16	00-4486-87	Retainer, Rear Body Plug	63	01-0080-66	Coupling
17	00-4481-28	O-Ring, Rear Seal (10/Kit)	64	01-0080-69	Meter Bearing
18	00-4481-26	Rear Body Plug	65	01-0080-67	Impeller
‡	01-0140-27	Control Back Plate	66	01-0080-65	Snap-In Retainer
21	01-0139-66	Plug, 1.000" Snap-in	67	01-0090-99	O-Ring
22	01-0064-98	Plug, .562" Snap-in	68	01-0090-75	Assembly Pins
23	01-0171-34	Power Cord	69	01-0141-53	Adapter Assembly (Includes Items 52 - 55)
24	01-0003-72	Strain Relief	*	01-0171-35	Wall Mount Transformer
25	01-0172-64	Wire Connector	70	01-0164-64	Wire, Motor Wire Harness
26	01-0032-44	Switch	71	01-0111-88	1-1/4" Bypass Assembly
29	00-4486-86	Screw	*	01-0129-58	Flow Meter Assembly w/ Harness
30	00-3184-55	Switch Bracket	*	P0-4517-01	Wire Harness, Cam
31	00-4010-40	Retaining E-Ring (10/Kit)	*	01-0128-44	Hose Clamp, Drain
32	P1-0130-43	Cam	*	01-0138-39	Flow Meter Harness
33	01-0130-31	Roll Pin	*	01-0148-97	Back-up Battery
34	00-4452-46		*	01-0172-64	Wall Mount, Transformer - Aqua-Sensor
35			*		Power Cord Connector

\* Not Illustrated

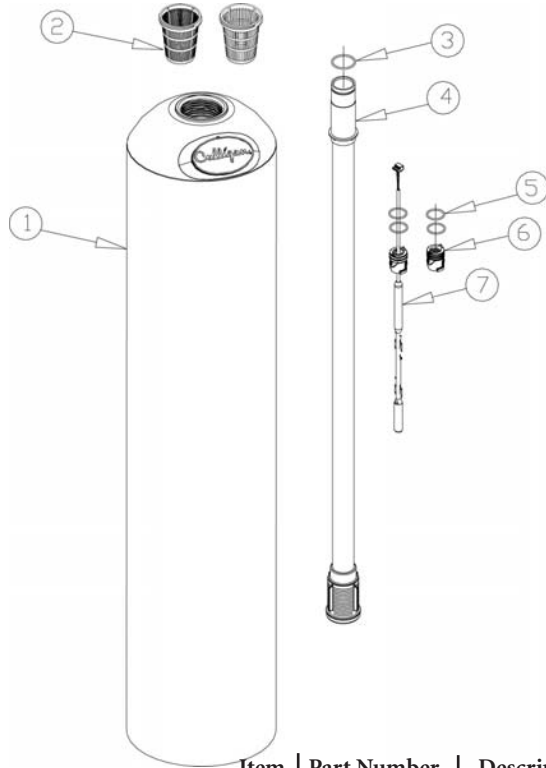
‡ Recommended Spare Parts



## Control Parts List (cont.)



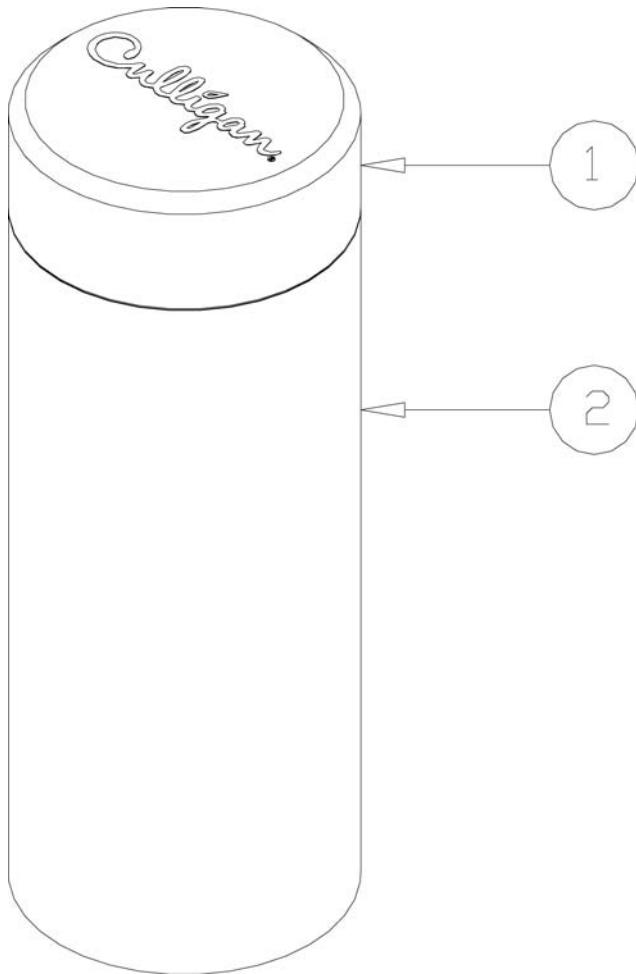
## Tank Assembly Parts List



Item	Part Number	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		
	01-0171-91	Tank Assembly, 12" w/o Fillport, Complete, Less Media		
	01-0171-93	Tank Assembly, 14" w/o Fillport, Complete, Less Media		
	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		
	01-0163-47	Tank Replacement, 9", w/o Fillport, Empty		
	01-0163-48	Tank Replacement, 10", w/o Fillport, Empty		
	01-0165-19	Tank Replacement, 12", w/o Fillport, Empty		
	01-0165-21	Tank Replacement, 14", w/o Fillport, Empty		
	2	01-0098-47	Top Strainer - Fine Slot	
		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	EV3038-11	O-Ring, Plug and Sensor	2	
6	01-0151-22	Plug	1	
7	01-0165-68	Aqua-Sensor® Probe	1	



## Brine Tank Parts List



Item	Part Number	Description
—	00-4413-90	Brine System, 160 lb. Replacement
—	00-4418-86	Brine System, 250 lb. Replacement
—	00-4418-87	Brine System, 375 lb. Replacement
1	00-3039-93	Cover, 250 lb. (114 kg)
	00-4010-42	Cover with Gold Band (No Culligan Logo), 160 lb. (73 kg)
	00-3039-80	Cover, 375 lb. (170 kg)
2	00-3040-10	Tank Only, 250 lb. (114 kg)
	00-4413-91	Tank Only, 160 lb. (73 kg)
	00-3039-75	Tank Only, 375 lb. (170 kg)
*	00-3044-30	Salt Plate, Plastic, 250 lb. (114 kg)
*	00-3044-39	Salt Plate, Plastic, 375 lb. (170 kg)

\* Not Illustrated



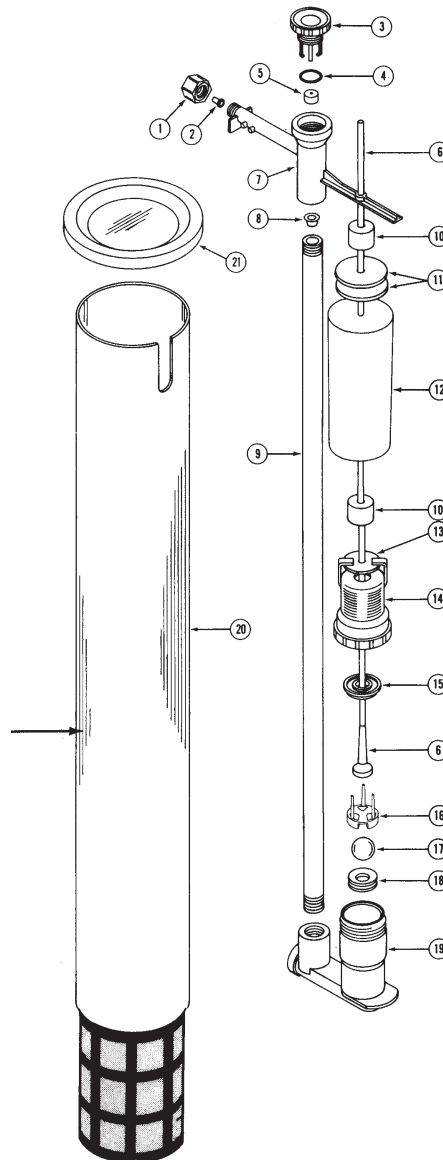
## Service Parts Kits

Item	Part No.	Description
	01-0162-67	Power Valve Seal Rebuild Kit
2		Seal Pack
3		Eductor Sleeve w/ O-Rings
3		Brine Piston w/ O-Rings
	01-0162-66	PV Eductor Rebuild Kit
12		Light Brown Eductor w/ O-Ring
13		Blue Restrictor w/ O-Ring
13		Beige Restrictor w/ O-Ring
14		Eductor Screen
15		Eductor Port Gasket
7		Black Flow Control (1.2 gpm)
7		Brown Flow Control (2.0 gpm)
7		Green Flow Control (3.5 gpm)
8		Drain Elbow Assembly w/ O-Ring
	01-0162-69	Power Valve Drive & Seal Rebuild Kit
2		Seal Pack
3		Eductor Sleeve w/ O-Rings
3		Brine Piston w/ O-Rings
43		Scotch Yoke Bracket
42		Scotch Yoke
38,39,40,41		Bell Crank & Follower Assembly
44		Screw (2 each)
33		E-Ring
34		Cam
	01-0141-79	Drive Motor Kit
36		Motor
39		Bell Crank
38		Nut
41		Follower
40		Roll Pin
35		Roll Pin
32		Switch Bracket
31		Screw (2 each)



## Brine Valve 9" & 10" Tanks Parts List

Item	Part Number	Description
—	00-4418-88	Brine Valve Assembly
—	00-4011-41	Brine Valve Assy., Brine Tank, 160 lb.
1	00-3031-93	Plastic Nut, 5/16-inch
2	00-3031-92	Plastic Insert
3	00-4407-96	Refill Cap
‡4	00-3084-07	O-ring
‡5	00-4016-22	Flow Restrictor, No. 5, 0.45 gpm (170 lpm)
6	00-3400-14	Stem Seat Assy., 250 lb. (114 kg) & 375 lb. (170 kg)
7	00-4407-95	Refill Body
‡8	00-3325-28	Hat Screen
9	00-2234-35	Plastic Pipe, 1/4-in. NPT x 35 in. long, 250 lb. (114 kg) & 375 lb. (170 kg)
10	00-3047-03	Float Retainer (2 required)
11	00-3047-18	Float Weight, Stainless Steel (2)
12	00-4448-73	Float
13	00-3320-72	Screen Top Seal
14	00-4446-64	Filter Screen Cap
‡15	00-4444-96	Stem Seat
16	00-4473-92	Insert
17	00-4477-81	Air Eliminator Ball
‡18	00-3048-04	Ball Seat
19	00-5418-21	Float Valve Body with Ball Seat
	00-5418-34	Float Valve Body with Ball Seat, 150 lb. Brine Tank
20	00-3045-37	Brine Valve Chamber, 250 lb. (114 kg) & 375 lb. (170 kg) Salt Storage Tank
	00-4413-92	Brine Valve Chamber, 160 lb. (Shown)
21	00-3046-06	Cap, Brine Valve Chamber
*	00-4463-88	Screw, St. Steel, Brine Valve Chamber
*	00-4463-89	Nut, St. Steel, Brine Valve Chamber



\* Not Illustrated

‡ Recommended Spare Parts

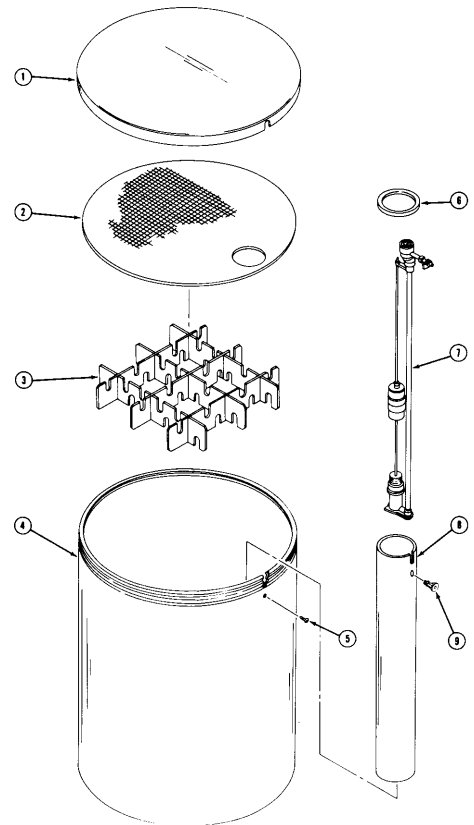


## Brine System - Safety Valve Parts List

Item	Part No.	Description
<b>40-GALLON TANK (375 lbs. capacity)</b>		
	01-0019-09	Tank System Complete 40 gallon
1	00-3039-80	Cover, PP
2/3	00-3044-39	Plate, Salt, PE, w/Supports
4	00-4471-08	Tank, PE
5	00-4463-88	Screw, SS, #10-32 x 0.625"
6	00-3046-06	Cap
7	00-3042-93	Brine Safety Valve
8	00-3045-37	Brine Valve Chamber
*	00-9018-00	Tubing, Brine Line 1/2" O.D. x 3/8" I.D. Black, Plastic
*	00-4463-89	Nut, SS, #10-32
<b>75-GALLON TANK (600 lbs. capacity)</b>		
	01-0019-01	Tank System Complete 75 gallon
1	01-0019-29	Cover, PE
2	00-3044-74	Salt Plate Assembly
3	00-3317-69	Support Leg (6 Required)
4	00-3040-34	Tank, PE
5	00-3184-92	Screw, SS, #10-16 x 0.5"
6	00-3046-06	Cap
7	00-3042-93	Brine Safety Valve
8	00-3045-27	Brine Valve Chamber
9	00-3306-29	Spacer
*	00-9018-00	Tubing, Brine Line 1/2" O.D. x 3/8" I.D. Black, Plastic

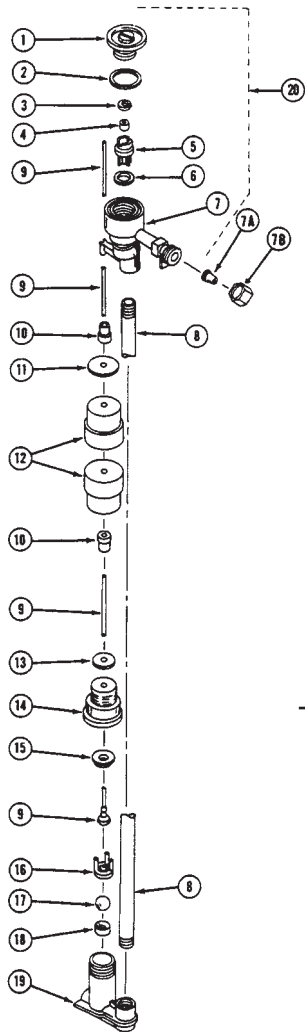
\* Not Illustrated

† Specify number of feet





## Brine Valve - 12" and 14" Tanks Parts List



Item	Part Number	Description
	00-3042-93	Brine Valve Complete
1	00-3321-25	Cap, Refill
2	00-4415-93	Quad-Ring, Buna-N, 1.25" x 1.375"
5	00-3321-74	Restrictor, Refill, 0.8 gpm (12" & 14" Tanks)
6	00-3048-05	Gasket, Buna-N, 0.682" x 0.940"
7	00-5418-22	Body, Refill
7a	00-4405-16	Insert, PP, 0.5"
7b	00-4404-02	Nut, PP, 0.5"
8	00-2234-35	Pipe, Kral, 0.25" NPTE x 35"
9	00-3400-14	Steam Seat Assembly
10	P0-3047-03	Retainer, Float / MP 25
11	00-3323-49	Weight, Float
12	00-4448-73	Float
13	00-3320-72	Seal, Top
14	00-4446-64	Screen Cap
15	P0-4444-96	Stem Seat, EPT / MP 10
16	P0-4473-92	Insert, Black / MP 10
17	P0-4477-81	Ball Air Eliminator / MP 10
18	00-4035-66	Ball Seat, Buna-N
19	00-5418-21	Float Valve Body w/Seat
20	00-3321-74	Brine Refill Assembly
*	00-9018-00	Tubing, Brine Line 1/2" O.D. x 3/8" I.D., Black, Plastic

\* Not Illustrated. Specify number of feet



## Records and Data

### 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 \_\_\_\_\_

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## Culligan Limited Warranty

### Culligan Gold Series™ 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:

<b>For a period of ONE YEAR</b>	<b>The entire conditioner</b>
<b>For a period of FIVE YEARS</b>	<b>Soft-Minder® meter, or Aqua-Sensor® probe if so equipped.</b>
<b>For a period of TEN YEARS</b>	<b>The AccuSoft® Plus circuit board, The control valve body, excluding internal parts. The salt storage container, brine valve and all its component parts</b>
<b>For the LIFETIME of the</b>	<b>The Quadra-Hull™ conditioner tank original consumer purchaser and the Cullex® resin</b>

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**  
**One Culligan Parkway**  
**Northbrook, Illinois 60062**



**With Culligan  
You Get More  
Than a Quality  
Product**

### **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 sixty 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.

**This page contains materials and DCO information.  
IT DOES NOT PRINT AS PART OF THE DOCUMENT!**

**Materials & Description:** Gold Series Owners Guide      PN 01017062

**Size:**                    11” x 17” Booklet, folded down to 8 1/2” x 11”

**Color:**                 Black Ink; 2 Sided

**Stock:**                 20# White

**Coating:**

**Other:**                 Bookletmaker, Saddle Stitch (2 Staples)  
                                 3 Hole Drill

LET	CHANGE	BY	APRVD	DCO	DATE
A	NEW ART CREATED	LR	JS	7015	01/06/04
B	UPDATE CALF CERT	LR	JS	7648	08/06/04
C	UPDATE ART	PH	JS	8160	01/25/05
D <sup>4</sup>	Add Install & Parts Lists	LR	JS	8470	09/27/05