

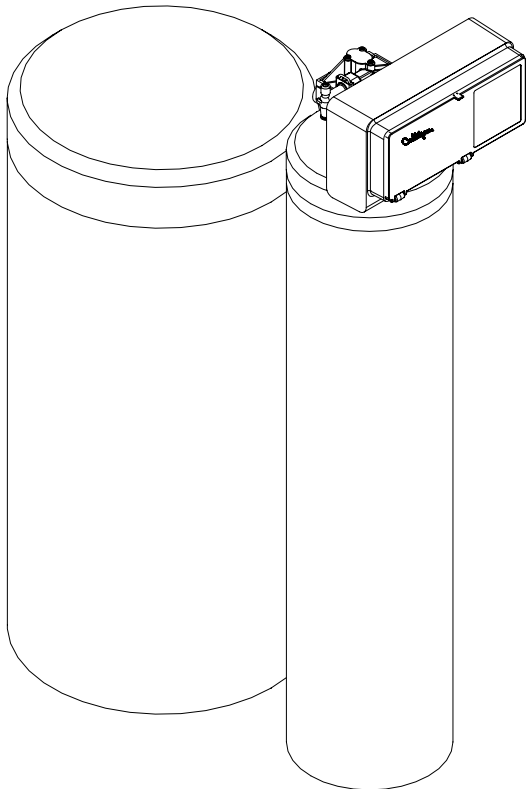
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DCO #

# Owner's Guide

# CULLIGAN<sup>®</sup> MARK 100 AUTOMATIC WATER CONDITIONER



*Culligan*<sup>®</sup>

# Thank You

## AND WELCOME TO YOUR NEW WORLD OF BETTER LIVING WITH CULLIGAN WATER.

The Culligan® Mark 100 water softeners are tested and validated by WQA against ANSI/NSF Standard 44 for the effective reduction of the calcium and magnesium, along with Barium and Radium 226/228\*.



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 Mark 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 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.*

\* Verified utilizing hardness surrogate per ANSI/NSF Standard 44.

Performance Data Sheets are included in this manual for the various Mark 100 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 16 of this Owner's Guide.



**MARK 100** 9" Water Softener  
Performance Data Sheet - Page 10



**MARK 100** 9" Water Softener with Soft-Minder<sup>®</sup> Meter  
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**MARK 100** 9" Water Softener with Aqua-Sensor<sup>®</sup> Sensing Device  
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**MARK 100** 12" Water Softener  
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**MARK 100** 12" Water Softener with Soft-Minder<sup>®</sup> Meter  
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**MARK 100** 12" Water Softener with Aqua-Sensor<sup>®</sup> Sensing Device  
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# Specifications

## Culligan® Mark 100 Water Conditioners with Time Clock, Aqua-Sensor® Device or Soft-Minder® Meter

	9" Model	12" Model
Control Valve	5-cycle, Reinforced Thermoplastic	5-cycle, Reinforced Thermoplastic
Overall Conditioner Height	51 in	51 in
	1 295 mm	1 295 mm
Media Tank Dimensions (Dia x Ht)	9 x 45 in	12 x 45 in
	229 x 1 143 mm	305 x 1 143 mm
Salt Storage Tank Dimensions (Dia x Ht)	16 x 43 in	18 x 43 in
	406 x 1 092 mm	457 x 1 092 mm
	18 x 43 in	
	457 x 1092 mm	
Exchange Media, Type and Quantity	Cullex® Media, 0.86 ft <sup>3</sup>	Cullex® Media, 1.4 ft <sup>3</sup>
	Cullex® Media, 24.5 L	Cullex® Media, 40 L
Underbedding, Type and Quantity	Cullsan® Underbedding, 12 lb	Cullsan® Underbedding, 30 lb
	Cullsan® Underbedding, 5.4 kg	Cullsan® Underbedding, 14 kg
Exchange Capacity	17,500 gr @ 4.0 lb	24,100 gr @ 6.0 lb
@ Salt Dosage Per Recharge <sup>1</sup>	1 133 g @ 1.8 kg	1 560 g @ 2.7 kg
	23,900 gr @ 8.0 lb	34,500 gr @ 12.0 lb
	1 547 g @ 3.6 kg	2 234 g @ 5.4 kg
	26,600 gr @ 12.0 lb	41,900 gr @ 18.0 lb
	1 722 g @ 5.4 kg	2 713 g @ 8.1 kg
Freeboard to Media <sup>2</sup>	16.6-17.6 in	17.5-18.5 in
	420-447 mm	444-470 mm
Freeboard to Underbedding <sup>3</sup>	39.2 in	38.5 in
	996 mm	978 mm
Salt Storage Capacity	250 lb or 375 lb	375 lb
	114 kg or 170 kg	170 kg
Rated Service Flow @ Pressure Drop	7.5 gpm @ 15 psi	7.5 gpm @ 15 psi
	30 Lpm @ 102 kPa	31 Lpm @ 102 kPa
Total Hardness, Maximum	75 gpg	99 gpg
	1 283 mg/L	1 692 mg/L
Total Iron, Maximum	5 ppm	5 ppm
	5 mg/L	5 mg/L
Hardness to Iron Ratio, Minimum	8 gpg to 1 ppm	8 gpg to 1 ppm
	140 mg/L to 1 mg/L	140 mg/L to 1 mg/L
Operating Pressure	20-125 psi	20-125 psi
	140-860 kPa	140-860 kPa
Operating Temperature	33-120°F	33-120°F
	1-50°C	1-50°C
Electrical Requirements	120V/60 Hz	120V/60 Hz
Electrical Power Consumption, Min/Max	3 Watts/35 Watts	3 Watts/35 Watts
Drain Flow, Maximum <sup>4</sup>	2.0 gpm	3.5 gpm
	8 Lpm	14 Lpm
Recharge Time, Average <sup>5</sup>	80 min	85 min
Recharge Water Consumption, Average	45 gal	86 gal
	170 L	325 L

1 Capacities and corresponding salt dosages pertain to low hardness waters. Capacities given are per recharge

2 Measured from top of media to top of inlet fitting (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, 7 lb (3.2 kg) 9" model or 13 lb (5.9 kg) 12" model salt dosage at 30 psi (204 kPa).

## **IT'S ALL SO EASY, SO ECONOMICAL, SO EFFICIENT, SO ENJOYABLE!**

### **KIND TO SKIN AND COMPLEXION**

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

### **BATHING AND SHOWERING**

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

### **SAVES WASHING COSTS. HELPS CONTROL ENVIRONMENTAL POLLUTION**

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

### **SUPER HAIR CONDITIONING**

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

### **DISHES ARE A DELIGHT**

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

### **EASIER HOUSEKEEPING, GLEAMING FIXTURES**

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

### **SAVES WATER-HEATING ENERGY HELPS WATER-USING APPLIANCES**

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

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

### **SAVINGS GALORE**

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

### **WATER FOR LAWNS AND HOUSEHOLD PLANTS**

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

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

# 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.

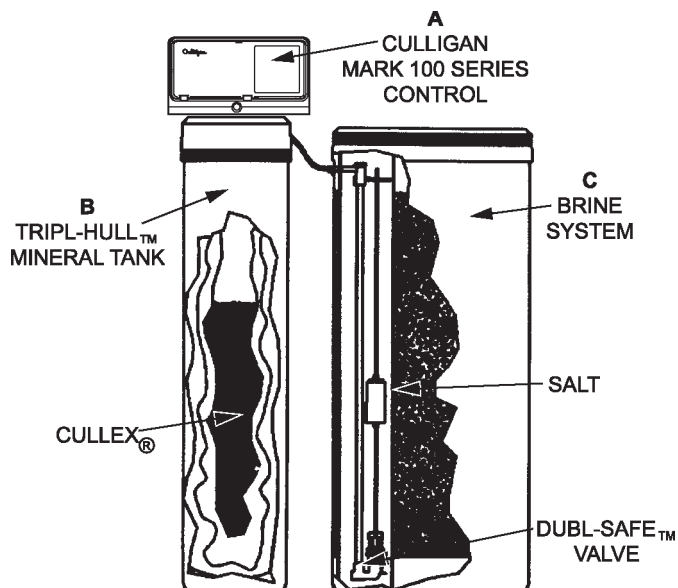
When using a softener to remove both hardness and dissolved iron it is important that it regenerates more frequently than ordinarily would be calculated for hardness removal alone. Although many factors and formulas have been used to determine this frequency, it is recommended that the softener be regenerated when it has reached 50 - 75% of the calculated hardness alone capacity. This will minimize the potential for bed fouling.

If you are operating a water softener on clear water iron, regular resin bed cleaning is needed to keep the be 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.

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

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# 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<sup>®</sup> 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 exclusive Bonded Tripl-Hull<sup>™</sup> Mineral Tank contains the Cullex resin column, Cullsant<sup>®</sup> underbedding, and an outlet manifold. Note: The Mineral Tank of Aqua-Sensor<sup>®</sup> models also contains a mineral sensor device that determines when the Cullex resin needs regeneration. 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 serviceperson, 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<sup>™</sup> 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 serviceperson will be able to tell you about how often salt must be added to the salt storage container.

# Familiarization

## Display

As shipped from the factory, the display of the board will turn off if there has been no keyboard activity for a 1 minute period. To have a the display constantly lit, press the STATUS button until the number 10 icon is lit. Next, press the UP arrow. A “d” for disable will appear in the display. To have the display blank again, press the UP arrow. An “E” will appear in the display.

## Power Loss

The AccuSoft<sup>®</sup> 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.

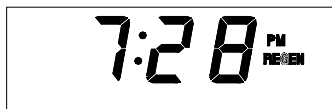
## Meter Operation

For units equipped as a Soft-Minder<sup>®</sup> meter, the gallons remaining can be viewed by pressing the STATUS button until the screen is blank. Press the DOWN arrow until the number 15 icon is illuminated. The display must be multiplied by 10 to determine the actual gallons remaining before the unit calls for a regeneration.

## Regeneration

To initiate an immediate regeneration, press the “REGEN” button twice. An immediate regeneration will also occur if a power outage has lasted for more than four hours and the Immediate Regeneration option is chosen. Ask your Culligan Dealer about this feature.

A regeneration at the Time of Regeneration will occur if so signaled by the Aqua-Sensor<sup>®</sup> sensing device or the Soft-Minder meter. If the blanking option is engaged, the display will light indicating a regeneration signal has been received. It will then blank itself after 1 minute. The “REGEN” enunciator on the display will also be lit.



## Service

The Culligan<sup>®</sup> Mark 100 water softener is equipped with a service icon to insure optimal operation of your water softener. Should service become necessary, a phone icon will be displayed when a service condition occurs, call your local Culligan dealer for assistance. The phone icon will be the only item displayed when service is required on the control.



The Culligan<sup>®</sup> AccuSoft<sup>®</sup> 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. If a small padlock icon appears in the lower right corner of the display, the microprocessor settings are locked and only the Time-of-Day setting can be adjusted, call your Culligan Dealer if setting changes are required.

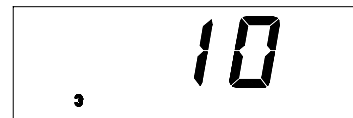
1. With a flashing or blank display, pressing the status button twice will move to the **Time-of-Day** adjustment. A number “1” will appear at the bottom of the display while in this mode.



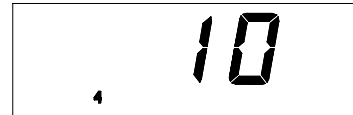
2. Press status again, this displays the **Time-of-Regeneration**. A number “2” will appear at the bottom of the display while in this mode.



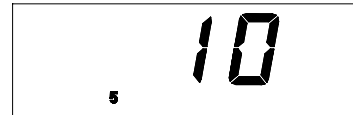
3. Press status again, the number “3” will appear at the bottom of the display. **This setting is not used.**



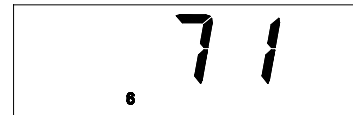
4. Pressing status again will show the **Salt Dosage**. This can be adjusted from 3-15 lbs. for the 9” and 5-24 lbs. on 12” models. A number “4” will appear at the bottom of the display while in this mode.



5. Press status again, this displays the **Backwash Time**. The setting can be adjusted between 5 and 40 minutes. A number “5” will appear at the bottom of the display while in this mode.



6. Press status again to display the **Brine/Rinse Time**. The settings can be adjusted from 37-85 min for 9”, and 35-89 min for 12”. A number “6” will appear at the bottom of the display while in this mode.



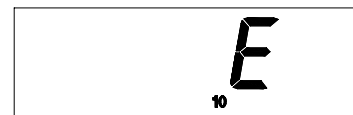
7. Press status again to display the **Hardness Level**. The setting can be adjusted from 2-99 gpg. **Meter Models Only**. A number “7” will appear at the bottom of the display while in this mode.



8. Press status again, for time clock models the display will show the **Regeneration Interval**. Controls with a Soft-Minder<sup>®</sup> meter will display the **Gallons to Signal** (multiply the displayed value by 10). A number “8” will appear at the bottom of the display while in this mode.



9. Press status again, the number “9” will appear at the bottom of the display. **This setting is not used.**



10. Pressing status again brings up the ability to **Enable/Disable** the screen blanking. To have the display constantly lit, press the up arrow, a “d” for disable will appear in the display. Pressing the up arrow again displays an “E”, signifying that display blanking is enabled. A number “10” will appear at the bottom of the display while in this mode.

# 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<sup>®</sup> resin beads in the tall, thin tank are flushed with 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.

Regardless of what type of salt is used, we recommend Culligan Brand Salt as suggested by your Culligan Dealer. He 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.

# CARE AND CLEANING OF YOUR CULLIGAN 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** Should service, adjustment or trouble-shooting information be needed which is not covered in this Owner's Guide, a complete Service Manual covering the conditioner that you own may be obtained from your Culligan Dealer.

# 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 chamber retaining screw and nut.
6. Remove the salt plate at the bottom of the 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. Make sure to place the tank on a flat, smooth, solid surface.
10. Replace the salt plate. Place brine valve chamber in position and affix with screw and nut.
11. Insert the brine valve into the chamber and replace brine valve chamber cap.
12. Fill the salt storage tank with 4 to 6 inches of water.
13. Fill the tank with salt to within a few inches of the top.
14. Replace salt storage tank cover.

# Performance Data Sheet

Culligan knows the more informed you are about your water treatment system, the more confident you will be about its performance. It's because of this and more than sixty 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® Mark 100, 9" Water Softener

## TESTING CONDITIONS & RESULTS

<b>Flow Rate:</b> 7.5 gpm	<b>Capacity:</b>
<b>Pressure:</b> 30-40 psi	17,500 grains @ 4.0 lb. salt
<b>Acidity:</b> Non-Corrosive	23,900 grains @ 8.0 lb. salt
<b>Temperature:</b> 68° (20°C)	26,600 grains @ 12.0 lb. salt
<b>pH:</b> 7.6	

## SOFTENER SPECIFICATIONS

<b>Maximum Flow Rate:</b> 7.5 gpm (30 Lpm)
<b>Pressure Drop at Maximum Flow Rate:</b> 15 psi (102 kPa)
<b>Operating Temperature Range:</b> 33-120°F (1-50°C)
<b>Maximum Drain Flow Rate:</b> 2.0 gpm (8 Lpm)
<b>Working Pressure Range:</b> 20-125 psi (140-860 kPa)



The Culligan Mark 100 water softeners are tested and validated by WQA against ANSI/NSF Standard 44 for the effective reduction of calcium and magnesium (hardness) along with Barium and Radium 226/228\*.

Refer to the Specifications, Familiarization, and Warranty sections 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.

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## PRODUCT

Culligan® Mark 100, 9" Water Softener with Soft-Minder® Meter

## TESTING CONDITIONS

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<b>Pressure:</b> 30-40 psi	17,500 grains @ 4.0 lb. salt
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### Pressure Drop at Maximum Flow Rate:

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### Operating Temperature Range:

33-120°F (1-50°C)

### Maximum Drain Flow Rate:

2.0 gpm (8 Lpm)

### Working Pressure Range:

20-125 psi (140-860 kPa)



This Culligan Mark 100 water softener is tested and validated by WQA to ANSI/NSF Standard 44 for the effective reduction of calcium and magnesium (hardness) along with Barium and Radium 226/228\*.

This softener is efficiency rated, it has a Demand Initiated Regeneration (D.I.R.) feature which complies with specific performance specifications intended to minimize the amount of regenerant brine and water used in their operation. The softener has a rated salt efficiency of not less than 3350 grains of total hardness exchange per pound of salt used (based on NaCl equivalency), and shall not deliver more salt than its listed rating. The efficiency is measured by a laboratory test described in ANSI/NSF Standard 44. This test represents the maximum possible efficiency that the system can achieve. Operational efficiency is the actual efficiency achieved after the system has been installed. Operational efficiency 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 sections 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.*

\* Verified utilizing hardness surrogate per ANSI/NSF Standard 44.

# Performance Data Sheet

Culligan knows the more informed you are about your water treatment system, the more confident you will be about its performance. It's because of this and more than sixty 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<sup>®</sup> Mark 100, 9" Water Softener with Aqua-Sensor<sup>®</sup> Sensing Device

## TESTING CONDITIONS

<b>Flow Rate:</b> 7.5 gpm	<b>Capacity:</b>
<b>Pressure:</b> 30-40 psi	17,500 grains @ 4.0 lb. salt
<b>Acidity:</b> Non-Corrosive	23,900 grains @ 8.0 lb. salt
<b>Temperature:</b> 68° (20°C)	26,600 grains @ 12.0 lb. salt
<b>pH:</b> 7.6	

## SOFTENER SPECIFICATIONS

### Maximum Flow Rate:

7.5 gpm (30 Lpm)

### Pressure Drop at Maximum Flow Rate:

15 psi (102 kPa)

### Operating Temperature Range:

33-120°F (1-50°C)

### Maximum Drain Flow Rate:

2.0 gpm (8 Lpm)

### Working Pressure Range:

20-125 psi (140-860 kPa)



This Culligan Mark 100 water softener is tested and validated by WQA to ANSI/NSF Standard 44 for the effective reduction of calcium and magnesium (hardness) along with Barium and Radium 226/228\*.

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## MANUFACTURER

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

## PRODUCT

Culligan® Mark 100, 12" Water Softener

## TESTING CONDITIONS & RESULTS

<b>Flow Rate:</b> 7.5 gpm	<b>Capacity:</b>
<b>Pressure:</b> 30-40 psi	24,100 grains @ 6.0 lb. salt
<b>Acidity:</b> Non-Corrosive	34,500 grains @ 12.0 lb. salt
<b>Temperature:</b> 68° (20°C)	41,900 grains @ 18.0 lb. salt
<b>pH:</b> 7.6	

## SOFTENER SPECIFICATIONS

<b>Maximum Flow Rate:</b> 7.5 gpm (30 Lpm)
<b>Pressure Drop at Maximum Flow Rate:</b> 15 psi (102 kPa)
<b>Operating Temperature Range:</b> 33-120°F (1-50°C)
<b>Maximum Drain Flow Rate:</b> 2.0 gpm (8 Lpm)
<b>Working Pressure Range:</b> 20-125 psi (140-860 kPa)



The Culligan Mark 100 water softeners are tested and validated by WQA against ANSI/NSF Standard 44 for the effective reduction of calcium and magnesium (hardness) along with Barium and Radium 226/228\*.

Refer to the Specifications, Familiarization, and Warranty sections 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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# Performance Data Sheet

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## MANUFACTURER

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

## PRODUCT

Culligan<sup>®</sup> Mark 100, 12" Water Softener with Soft-Minder<sup>®</sup> Meter

## TESTING CONDITIONS

<b>Flow Rate:</b> 7.5 gpm	<b>Capacity:</b>
<b>Pressure:</b> 30-40 psi	24,100 grains @ 6.0 lb. salt
<b>Acidity:</b> Non-Corrosive	34,500 grains @ 12.0 lb. salt
<b>Temperature:</b> 68° (20°C)	41,900 grains @ 18.0 lb. salt
<b>pH:</b> 7.6	

## SOFTENER SPECIFICATIONS

<b>Maximum Flow Rate:</b>
7.5 gpm (30 Lpm)
<b>Pressure Drop at Maximum Flow Rate:</b>
15 psi (102 kPa)
<b>Operating Temperature Range:</b>
33-120°F (1-50°C)
<b>Maximum Drain Flow Rate:</b>
2.0 gpm (8 Lpm)
<b>Working Pressure Range:</b>
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## PRODUCT

Culligan® Mark 100, 12" Water Softener with Aqua-Sensor® Sensing Device

## TESTING CONDITIONS

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# LIMITED WARRANTY

## CULLIGAN<sup>®</sup> MARK SERIES AUTOMATIC WATER CONDITIONERS

You have just purchased one of the finest water conditioners made. As an expression of our confidence in Culligan products, your water conditioner is warranted to the original end-user, when installed in accordance with Culligan International Company 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>The control valve timer The AccuSoft<sup>®</sup> circuit board, or Soft-Minder<sup>®</sup> meter, if so equipped</b>
<b>For a period of TEN YEARS</b>	<b>The control valve body The salt storage container, brine valve and all its component parts</b>
<b>For the LIFETIME of the original consumer purchaser</b>	<b>The Tripl-Hull<sup>™</sup> conditioner tank including all internal components and the Cullex<sup>®</sup> 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, INCIDENTAL, CONSEQUENTIAL, SPECIAL, GENERAL, OR OTHER DAMAGES.

### CONSUMERS:

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

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## *YOU GET YOUR WATER EXPERT, THE CULLIGAN MAN.*

We're here to provide you with fast, local, 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!"<sup>®</sup> Because we're the water experts. And that's who you want taking care of your water.

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## *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.

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Simply call and say . . .

**"HEY CULLIGAN MAN!"<sup>®</sup>**

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