

Culligan®

**Culligan
Medallist
Plus®
Sulfur-OX3
Automatic
Water Filter
Owners
Guide**



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DCO 190573 09/19



Attention Culligan Customer

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



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

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



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



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



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



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



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

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

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The filter warranty is located on [page 17](#) of this Owner's Guide.

Contents

About this Manual.....	4
Thank You.....	5
Application.....	6
Operation.....	7
Programming.....	8
Error Codes.....	10
When & How to Bypass Your Water Filter.....	11
Care and Cleaning of Your Water Filter.....	12
Things to Check Before You Call For Service.....	13
Performance Data Sheet.....	14
Records and Data.....	15
Culligan Limited Warranty.....	16



About this Manual

This manual:

- familiarizes the operator with the equipment
- explains installation and setup procedures
- provides basic programming information
- explains the various modes of operation
- gives specifications and troubleshooting information

Read this Manual First

Before you operate the Culligan Medallist Plus Sulfur-OX3™ water filter system, read this manual to become familiar with the device and its capabilities.

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

Safe Practices

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

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

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

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



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

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



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

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

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

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

CAUTION! The Culligan Medallist Plus Sulfur-OX3™ water filter system is not intended for use with water that is microbiologically unsafe or of unknown quality without adequate disinfection either before or after the system.

NOTE: Check with your public works department for applicable local plumbing and sanitation codes. Follow local codes if they differ from the standards used in this manual. To ensure proper and efficient operation of the Culligan Medallist Plus Sulfur-OX3™ water filter system to your full satisfaction, carefully follow the instructions in this manual.



Thank You

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

The Culligan™ Medallist Plus Sulfur-OX3™ water filter system has been tested and certified by WQA against NSF/ANSI Standard 372, CSA B483.1, and NSF/ANSI Standard 42 for the effective reduction of hydrogen sulfide up to 500 gallons as verified and substantiated by test data.

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



CAUTION!

This system is to be supplied with cold water only.

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

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

If this is your first experience having filtered, 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 filters in the prestigious Culligan Medallist 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.

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Specifications

Culligan Medallist Sulfur-OX3 Filter

	10" Sulfur-OX3
Control Valve	1" reinforced thermoplastic
Overall Conditioner Height	67"
Media Tank Dimensions (D x H)	10" x 54" tank
Filter Media Type	1.0 cu. ft. Cullar S
Underbedding	
Cullsan	20 lbs.
Capacity ¹	500 gallons
Freeboard ²	29"
Rated Hydrogen Sulfide	1 ppm
Max. Hydrogen Sulfide ⁵	3 ppm
Minimum Alkalinity	100 ppm
pH for Iron Removal ³	7.0 - 8.5
Service Flow @ Pressure Drop (Clean Bed)	
Normal	4 gpm @ 2.9 psi
Maximum ⁴	6 gpm @ 9 psi
Operating Pressure	20-60 psi
Operating Temperature	33-120° F (1-48° C)
Electrical Requirements	28 Volts/50-60 Hz
Power Consumption, Continuous/Maximum	3 Watts/21.6 Watts
Drain Flow	5.5 gpm
Reconditioning Time	
Backwash	15 minutes
Air Draw	40 minutes
Fast Rinse	5 minutes

¹ Capacity based on 4 gpm and 5 mg/L of dissolved iron.

² Measure from top of media bed to top of inlet fitting.

³ Not recommended for Hydrogen Sulfide removal.

⁴ Max flow rates and pressure drop characteristics have not been validated by the Water Quality Association. The maximum specified flow rate at which the system will deliver treated water, as validated by the Water Quality Association, is defined as service flow.

⁵ Not validated by Water Quality Association.



Water Quality

Verify that the raw water hydrogen sulfide, pH, and alkalinity levels are within recommended limits.



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

Application

Hydrogen Sulfide

Hydrogen Sulfide usually occurs naturally in well water as a dissolved gas. It is typically the result of organic decomposition. It has a characteristic “rotten egg” odor and can usually be noticed at a concentration above .50 ppm. In some cases hydrogen sulfide can be caused by Sulfate Reducing Bacteria (SRB). This system is not designed to treat hydrogen sulfide caused by SRB. The Culligan Analytical Laboratory can test for both of these contaminants.

Principles of Operation - Sulfur-OX3 Aeration System

The Culligan Sulfur-OX3 system utilizes the principle of oxidation to convert hydrogen sulfide to sulfate or a filterable particle, resulting in the reduction of hydrogen sulfide odor. The process is accomplished by water entering the filter tank being immediately exposed to an “airhead” at the top of the filter tank to begin the oxidation process. The filter media acts a catalyst to help complete the oxidation reaction and retain precipitated particles. Periodic backwashing purges the accumulated particles from the filter tank and reclassifies the media bed. After the backwash cycle the Sulfur-OX3 control valve replenishes the airhead in the filter tank during the “Air Draw” cycle. During this cycle Air is educted into the filter tank in sufficient volume for the required airhead. During the “Rinse” cycle the air charge is compressed and stored within the filter tank and the filter media is rinsed prior to the system returning to the service cycle.

Pressure

Although the system components are rated for higher pressures this system should not be operated at pressures above 60 psi for proper operation. Culligan recommends following the IAPMO Uniform Plumbing code section 806.2 by installing a Pressure Regulating Valve if the water pressure is greater than 60 psi. Operating on pressures above the UPC for extended periods of time can increase the service frequency and failure of replacement parts. On a private water system, make sure the minimum pressure (when the pump starts) is greater than 20 psi (140 kPa).



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 and UL certification.



Operation

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 two days, in the event of a power outage. The EEPROM ensures that the individual programming parameters of your filter 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 conditioning cycle at the preset conditioning time. The time of day will need to be reset in order to return the conditioning cycle 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.

Reconditioning

To initiate a reconditioning cycle at the preset time, press the “REGEN” button. The “REG” light will light. To initiate an immediate reconditioning cycle, press and hold the “REGEN” button for at least five seconds. The “REG” will light and blink. An immediate reconditioning cycle will also occur if a power outage has lasted for more than three hours and the Reconditioning Cycle option is chosen. Ask your Culligan Dealer about this feature.

A reconditioning cycle at the Time of Reconditioning will occur if so signaled by the Soft-Minder meter. The “REG” enunciator on the display will also be lit.

Service

The Culligan Medallist Plus Series® water filter is equipped with a self diagnostic program to insure optimal operation of your water filter. Should service become necessary, a phone icon will appear in the display. If this condition occurs, call your local Culligan Dealer for assistance. The phone icon and error code will be the only items displayed when service is required on the control.



Programming

The timer uses four buttons:

Button	Description
Set-up / Enter Key (Status)	Advance timer through display options
Regeneration Key (REGEN)	Initiate a reconditioning cycle
Toggle Down Key ("-")	Decrease the setting
Toggle Up Key ("+")	Increase the setting

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.



Flashing Minutes



Flashing Hours



Flashing Time



Time of Reconditioning

This setting is used to program the time at which a reconditioning cycle 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 reconditioning 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.

Reconditioning Cycle Interval

This setting is used to set the days between reconditioning in time clock mode.

The display will show "REG" icon and "dAY" for two seconds and then display 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. The reconditioning cycle interval is 3 days for the Iron-OX5 filter system.





Backwash Time

This setting is used to program the cycle 1 time that is the backwash cycle. The time of the cycle is kept in minutes. The display will show "buu" in the display for two seconds and then the cycle time in the right most digits. Adjust the value with the "+" or "-" keys.

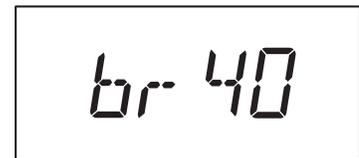


Pressing the "Status" key will save the setting and move to the next programming step.



Pause Time

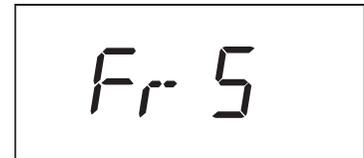
This setting is used to set the time in minutes for cycle 2. This cycle settling is for the Air Draw Cycle to that replenishes the air charge in the Sulfur-OX3 filter. The display will show "br" in the left most digits and the cycle time in the right most digits. Adjust the value with the "+" or "-" keys.



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

Fast Rinse Time

This setting is used to set the time in minutes for cycle 3. The display will show "Fr" in the left most digits and then the cycle time in the right most digits. Adjust the value with the "+" or "-" keys. Pressing the "Status" key will save the setting and move to the next programming step.



Blank Display

After the last programming menu is displayed (menu will vary depending on mode of operation), pressing status will move to a blank display screen.

From the 'blank display', pressing the "+" key from the blank display will enter the diagnostics menu.

From the 'blank display', pressing the "-" key will enter the statistics menu.

From the 'blank display', pressing the "Status" key will exit programming mode and return to the service mode time display.

The "regen" key is ignored while in the 'blank display'.



Error Codes

The Culligan Medallist Plus Series Filter is equipped with an advanced error detection system. During all operating modes the filter'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 a telephone handset symbol in the upper left corner of the display and the error code will be shown. Shown below is codes that would appear if an error is detected.

Display	Error Description	Response
E1	Motor will not stop turning	Call Culligan service technician
E2	Motor stuck	Call Culligan service technician
E3	Wrong position	Call Culligan service technician

If an error code appears that requires an authorized service technician please contact your local Culligan Dealer.

For any additional troubleshooting or service needs please contact your local Culligan Dealer.



When & How to Bypass Your Water Filter

Normally, all water except the outside faucet lines and irrigation system water passes through the water filter. There are times when the water filter should be bypassed, Cul-Flo-Valv® Bypass, or a 3-way bypass valve. You should bypass:

- If lines to outside faucets do not bypass the water filter, and you do not want to waste filtered water on lawn sprinkling or other outside uses.
- If you are going away on vacation and want to save water by not having the unit recharge while you're away.

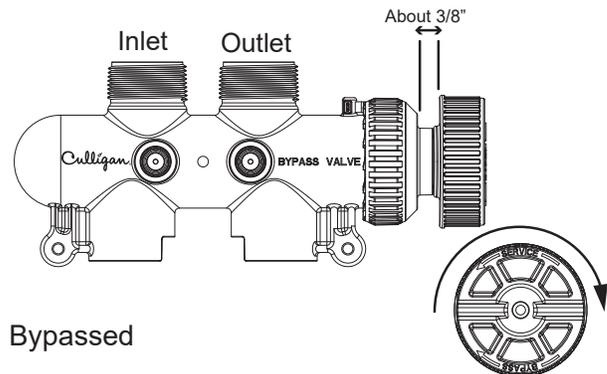
Medallist Plus Series Bypass Valve

Culligan Bypass Valve

In the back of Culligan water filters is a Cul-Flo-Valv® Bypass. To bypass unit, simply turn the blue knob clockwise. To return to filtered water service, reverse the procedure—turn the blue knob counter-clockwise.

To BYPASS, turn the blue knob clockwise (see directional arrow on end of knob) until the knob stops as shown.

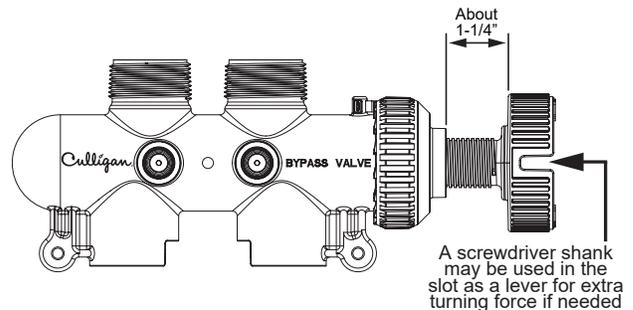
DO NOT OVERTIGHTEN!



Bypassed

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

DO NOT OVERTIGHTEN!



Filtered Water



Care and Cleaning of Your Water Filter

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

- 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.
- **Important:** Protect your water filter and the entire drainline from freezing temperatures. **DANGER! If your unit should freeze, do not attempt to disassemble it. Call your Culligan Dealer.**
- **Important:** Culligan water filters 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 filter should be discontinued until it is verified that the water is again potable. To do this, turn the knob on the bypass valve to the bypass position. Then, call your Culligan dealer to have your system sanitized before it is placed back into service.
- Should service, adjustment or trouble-shooting information be needed which is not covered in the Use and Care Guide, call your Culligan Dealer.

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.



Things to Check Before You Call For Service

If you unexpectedly experience hydrogen sulfide or “rotten egg” odor in your water, make these simple checks before calling your Culligan dealer. One of the following conditions may be the reason for your change in water quality.

Important

If any of the following conditions is found, the water filter should be manually reconditioned 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.

Tripped Circuit Breaker

Check the house circuit breaker panel or fuse box. Reset an open circuit breaker or replace a blown fuse if that circuit provides power to the filter system.

Power Failure

Any interruption in your power supply or time changes - such as daylight savings - will disrupt your filter's reconditioning 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 “Service” (handle stem screwed out) position. If individual shut-off 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 filter (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 filter. You can manually recondition the system by following the directions on [page 9](#) and [page 10](#). If the problem still persists after a reconditioning cycle, call your local Culligan dealer for advice or service.



Performance Data Sheet

Culligan Medallist Plus® Sulfur-OX3 Filter

Important Notice — Read this data sheet and compare the capabilities of the unit to your actual water treatment needs. Culligan recommends that you have your water supply tested to determine these needs before purchasing a water treatment unit.

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 seventy years of commitment to our customers that Culligan is providing this Performance Data Sheet to its customers.

Manufacturer Culligan International Company
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Substance Reduction

This system has been tested according to NSF/ANSI Standard 42 for the reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI Standard 42.

While testing was performed under standard laboratory conditions, actual performance may vary.

Substance	Influent Challenge Concentration	Reduction Requirement	Average Reduction Percentage
Hydrogen Sulfide	1.0 mg/L ± 10%	0.05 mg/L	96.2%

Capacity: 500 gallons
Flow Rate: 4 gpm
Rated Pressure Drop: 4 gpm @ 2.9 psi

Operating Conditions

Water Pressure Limits: 20 - 60 psi (140)
Canada: 20 - 90 psi (140 - 620 kpa)
Temperature Limits: 33 - 120° F (1 - 50° C)
Electrical Characteristics: 120V/ 60 Hz, 35 Watts

The Culligan™ Medallist Plus Sulfur-OX3™ water filter system has been tested and certified by WQA against NSF/ANSI Standard 372, CSA B483.1, and NSF/ANSI Standard 42 for the effective reduction of hydrogen sulfide as verified and substantiated by test data.

Performance Indicator: If water flow decreases or a noticeable taste change occurs, the filter should be reconditioned. If conditions do not improve, contact your local Culligan Man. He can determine if your filter requires servicing. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Reconditioning cycle Frequency:
Replacement frequency is recommended every three days but can vary with local water conditions.

Refer to the Installation and Operation Instructions, Parts List and Printed Warranties 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 product are not necessarily in your water.



Buyer Signature _____ Date _____

Seller Signature _____ Date _____



Records and Data

Important Data on Your Water Filter

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

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

Reconditioning cycle Interval _____ days (Time Clock Back-Up (tcb))

Gallons to signal _____ gallons capacity (CAPG)

Number of people in household _____

Water Analysis

Total Hardness _____ (gpg)

Total Iron _____ (ppm)

Hydrogen Sulfide level _____

pH (acidity) _____

Other _____



Culligan Limited Warranty

Culligan Medallist and Medallist Plus® Automatic Water Filters

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

For a period of ONE YEAR	The entire filter
For a period of FIVE YEARS	The AccuSoft® circuit board, or Soft-Minder® meter, if so equipped.
For a period of TEN YEARS	The control valve body, excluding internal parts.
	The filter tank

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 filter on your premises. Any part found defective within the terms of this warranty will be repaired or replaced by the dealer. You pay only freight from our factory and local dealer charges.

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

Our product performance specifications are furnished with each water filter 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 filter. 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 filter 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 filter, 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.

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Notes



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