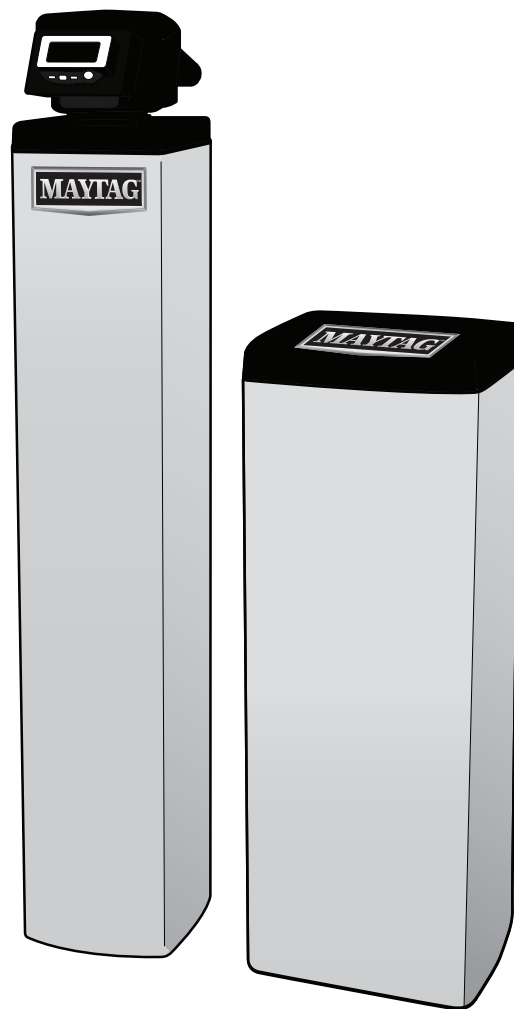


**MAYTAG®**  
**AP SERIES**

# WATER TREATMENT SYSTEM OPERATION MANUAL



Certified by  
International Association of Plumbing and Mechanical Officials (IAPMO) R&T  
NSF/ANSI 42, 44, 61 & 372 · IPC · IRC

Reference Performance Data Sheet

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# WATER TREATMENT SYSTEM SAFETY

**Your safety and the safety of others are very important.**

We have provided many important safety messages in this manual and on your appliance.  
Always read and obey all safety messages.



This is the safety alert symbol.

This symbol alerts you to potential hazards that can kill or hurt you and others.

All safety messages will follow the safety alert symbol and either the word

“DANGER” or “WARNING.” These words mean:

**! DANGER**

You can be killed or seriously injured if you don't immediately follow instructions.

**! WARNING**

You can be killed or seriously injured if you don't follow instructions.

All safety messages will tell you what the potential hazard is, tell you how to reduce the chance of injury, and tell you what can happen if the instructions are not followed.

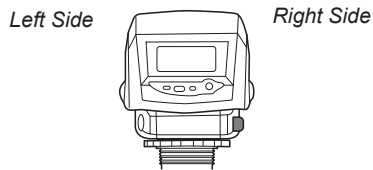
# INTRODUCTION

**IMPORTANT:** Failure to follow this instruction can result in personal injury or damage to the equipment.

The purpose of this installation manual is to guide the installer through the installation and operation process of MAYTAG® series water treatment system.

This manual is a reference and not included in every system installation situation. The technician installing this equipment must have:

- Training in the MAYTAG® series controllers.
- Knowledge of water treatment and how to determine proper control settings.
- Basic plumbing skills.
- The directional instructions “left” and “right” are determined by looking at the front of unit.



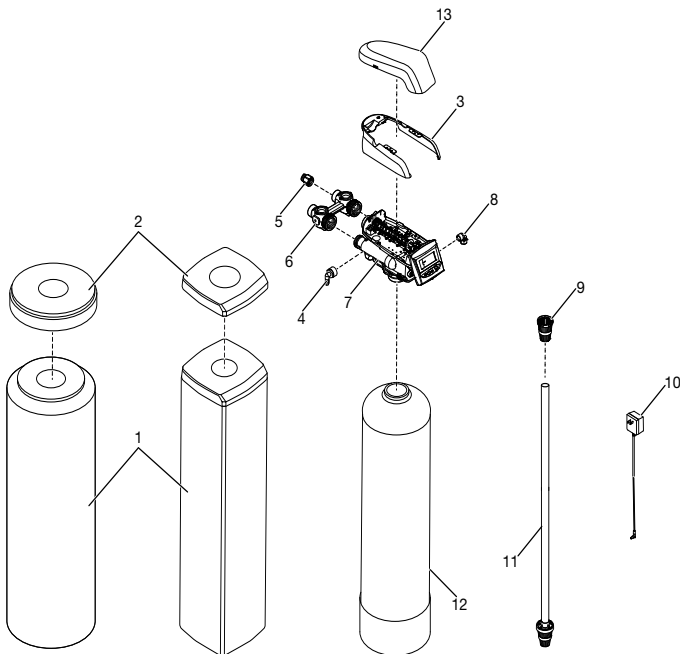
Inspect the unit for damage or missing parts.  
Contact your supplier if any discrepancies exist.

## Main Parts

- Mineral Tank with Valve
- Brine Tank with Cover
- Power Transformer
- Water Bypass
- Hose Adapter and Flow Control
- Brine Well Assembly

## PARTS AND FEATURES

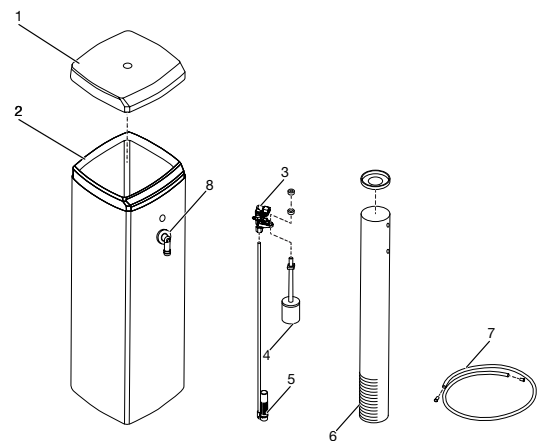
### Mineral Tank



- 1. Mineral Tank Shroud
- 2. Shroud Cover
- 3. Shield
- 4. Hose Adapter
- 5. Flow Control
- 6. Bypass
- 7. Valve
- 8. Brine fitting
- 9. Upper Basket
- 10. Power Transformer
- 11. Distributor Tube Assembly
- 12. Mineral Tank
- 13. Cover

Figure 1: Media Tank

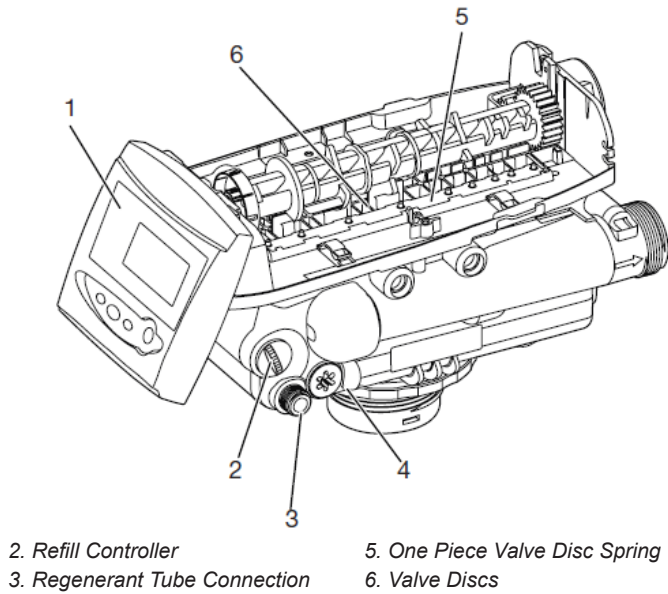
### Brine Tank



- 1. Cover
- 2. Brine Tank
- 3. Brine Valve
- 4. Float
- 5. Air Check
- 6. Brine Well
- 7. Tubing
- 8. Overflow Fitting

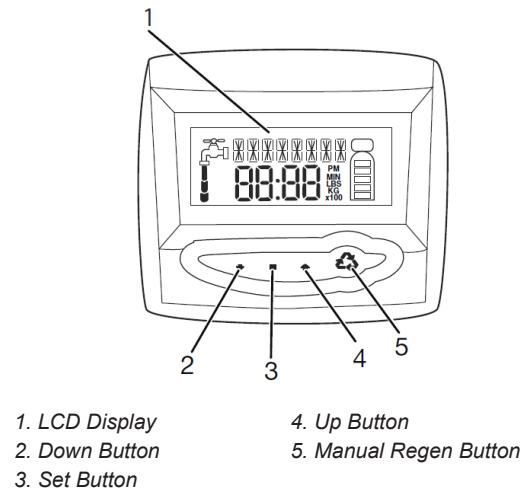
Figure 2: Brine Tank

## Valve Layout

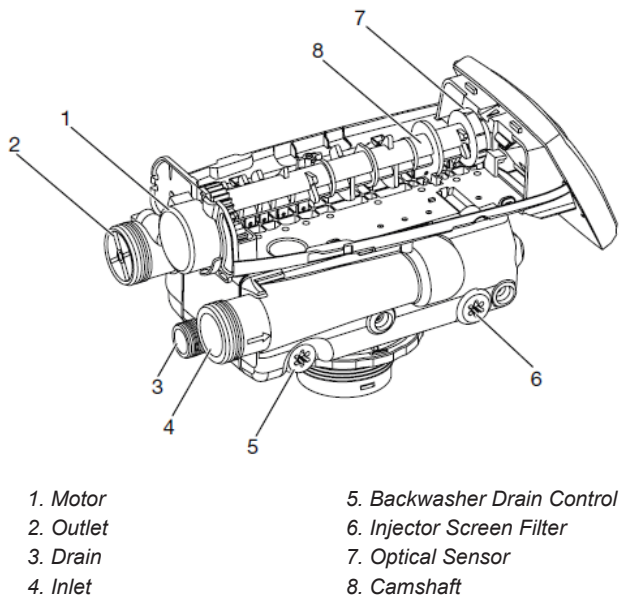


**Figure 3A: Valve Layout**

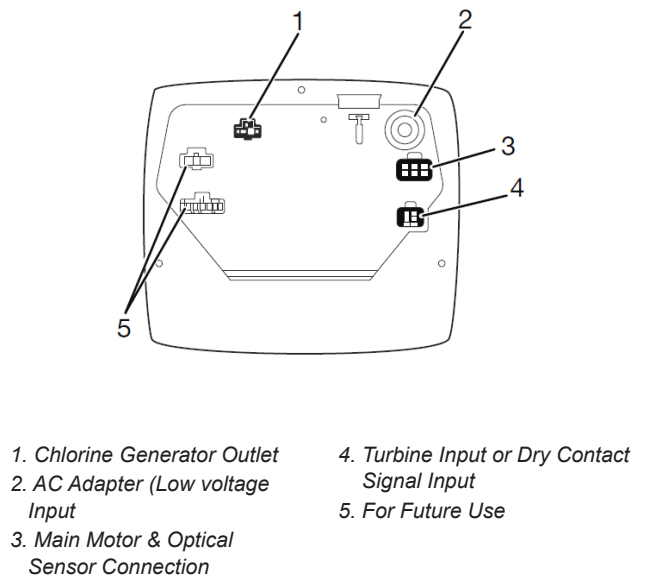
## Control Layout



**Figure 4A: Control Layout**



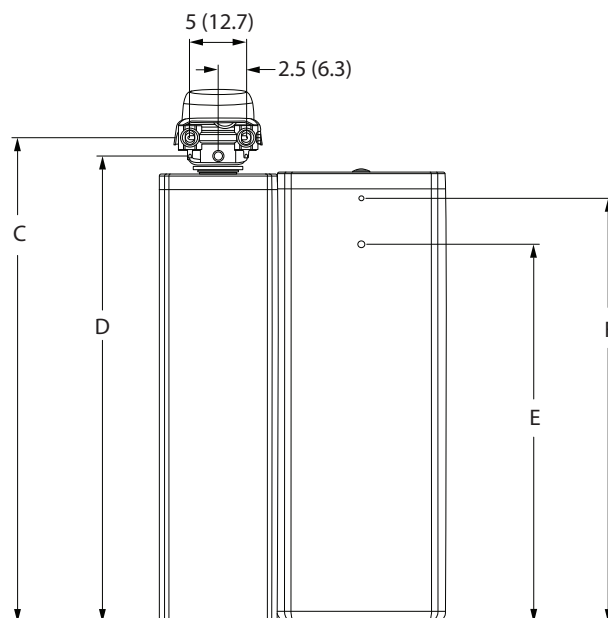
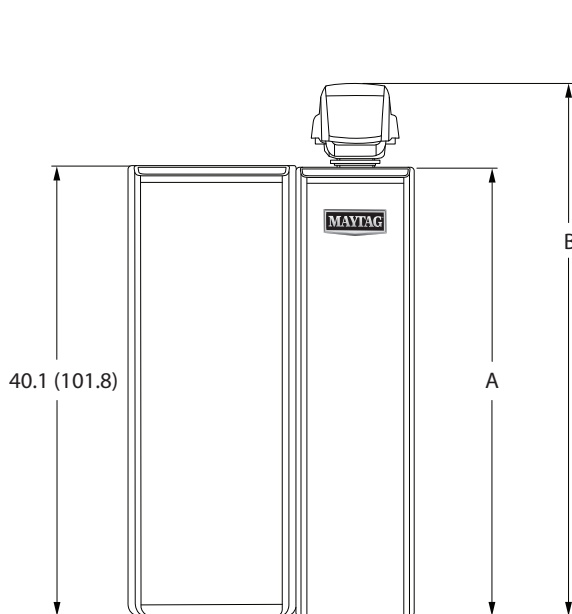
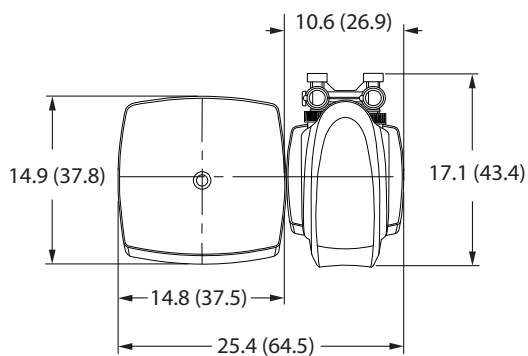
**Figure 3B: Valve Layout**



**Figure 4B: Control Layout**

# EQUIPMENT DIMENSIONS

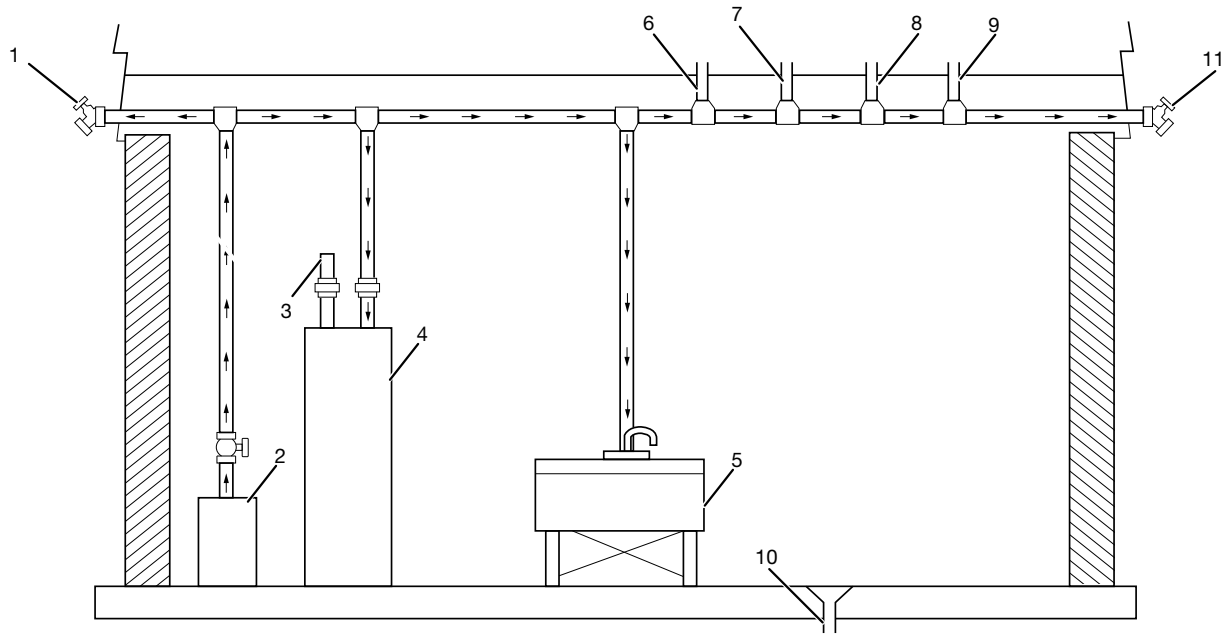
Dimensions	10 x 44" Tank (25 x 112 cm)	10 x 54" Tank (25 x 137 cm)
A	43.9" (111 cm)	53.9" (137 cm)
B	51.4" (130 cm)	61.4" (156 cm)
C	47.2" (120 cm)	57.2" (145 cm)
D	45.6" (116 cm)	55.6" (141 cm)
E	33.7" (85.6 cm)	33.7" (85.6 cm)
F	37.8" (96 cm)	37.8" (96 cm)



Dimensions are given in: In (cm)

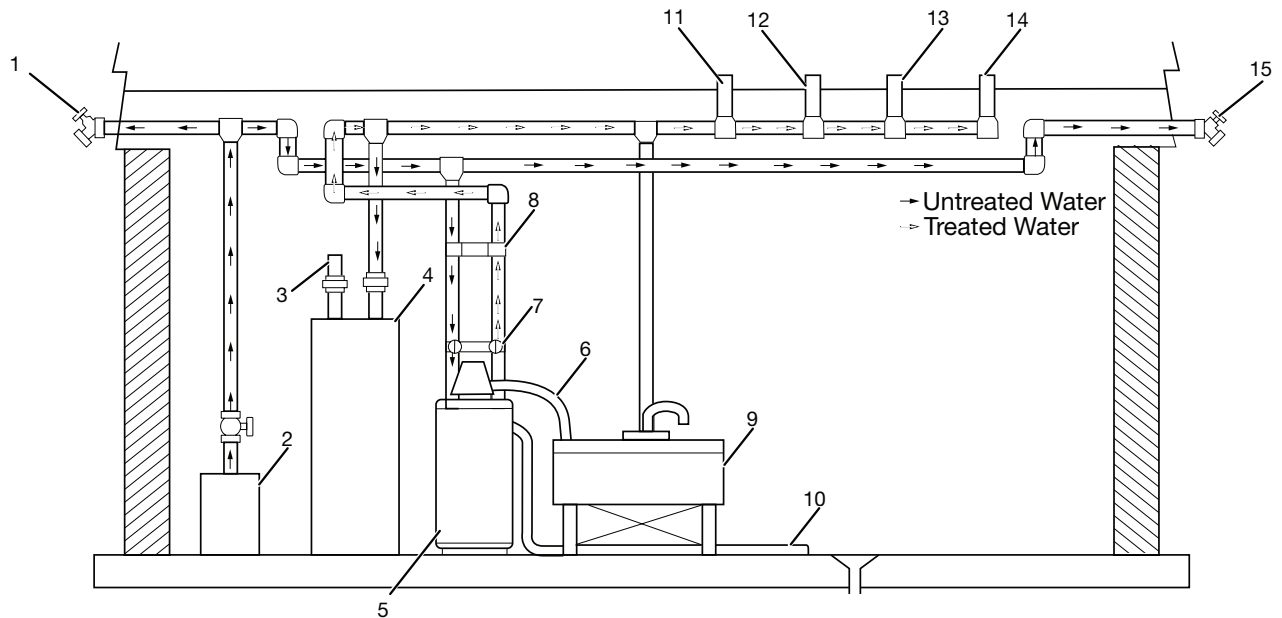
**Figure 5: Equipment Dimensions**

# SYSTEMS LAYOUT



- |                     |                    |
|---------------------|--------------------|
| 1. Outside Faucet   | 7. Lavatory        |
| 2. Pump or Meter    | 8. Toilet          |
| 3. Hot Water Outlet | 9. Kitchen         |
| 4. Water Heater     | 10. Floor Drain    |
| 5. Laundry Tubs     | 11. Outside Faucet |
| 6. Bath Tub         |                    |

**Figure 6: Standard Basement Before Installation (Cold water lines shown)**



- |                           |                               |                    |
|---------------------------|-------------------------------|--------------------|
| 1. Outside Faucet         | 6. Drain Line                 | 11. Bath Tub       |
| 2. Pump or Meter          | 7. Bypass                     | 12. Lavatory       |
| 3. Hot Water Outlet       | 8. Grounding Strap            | 13. Toilet         |
| 4. Water Heater           | 9. Laundry Tubs               | 14. Kitchen        |
| 5. Water Treatment System | 10. Brine Tank Overflow Drain | 15. Outside Faucet |

**Figure 7: Treated Water Flow Diagram**

## SYSTEM SPECIFICATIONS

Model number	3M-APR32-XXX 3M-APR32-CG-XXX	3M-APR32XC-XXX 3M-APR32XC-CG-XXX	3M-APR40-XXX 3M-APR40-CG-XXX	3M-AP32-XXX 3M-AP32-CG-XXX	3M-AP48-XXX 3M-AP48-CG-XXX
Recharge Style	Upflow	Upflow	Upflow	Upflow	Upflow
Mineral Tank Size	10" x 44"	10" x 54"	10" x 54"	10" x 44"	10" x 54"
Resin Volume	1.00 ft³	1.00 ft³	1.25 ft³	1.00 ft³	1.50 ft³
Recharge (Salt) Tank Size	15" x 40"	15" x 40"	15" x 40"	15" x 40"	15" x 40"
Salt Storage	240 lbs	240 lbs	240 lbs	240 lbs	240 lbs
Drain Water Rate	2.7 gpm	2.7 gpm	2.7 gpm	2.7 gpm	2.7 gpm
Service Connection Size	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Drain Connection Size	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT	3/4" NPT
Recharge (Brine) Connection Size	3/8" NPT	3/8" NPT	3/8" NPT	3/8" NPT	3/8" NPT
Typical Installation Space Requirements	26"W X 20"D X 50"H	26"W X 20"D X 60"H	26"W X 20"D X 60"H	26"W X 20"D X 50"H	26"W X 20"D X 60"H
Shipping Weight	142 lbs	153 lbs	159 lbs	130 lbs	158 lbs



# INSTALLATION INSTRUCTIONS

## Location Requirements

### Indoor Location Requirements

#### IMPORTANT:

For indoor location of the Water Treatment System, make sure to follow these requirements:

- Install the appliance on flat and level surface.
- Make sure to maintain the space to access the equipment for maintenance and adding regenerant (salt) to tank.
- Ambient temperatures is more than 35°F (1°C) and below 120°F (49°C).
- Water pressure is less than 125psi (8.6 bar) and more than 20psi (1.38 bar).
- Maintain constant electrical supply to operate the control.
- Total minimum pipe run to water heater of 10 ft. (3 m) to avoid the backup of hot water into system.
- Local drain for discharge as close as possible to the appliance.
- Water line connections with shutoff or bypass valves.
- Must meet any local and state codes for site of installation.
- Valve is designed for minor plumbing misalignments. Do not support weight of system on the plumbing.
- Make sure that all the soldered pipes are fully cooled before attaching plastic valve to the plumbing.

### Outdoor Location Requirements:

#### IMPORTANT:

- Place the unit at the dry location only, unless listed as Class 2 Power Supply which is suitable for outdoor use.
- A protected environment is recommended when the water system is installed outdoors. Ensure that important safety measures are taken for outdoor location as mentioned below:
- **Moisture** - The valve and control are rated for NEMA 3 locations. Water falling must not affect the performance. The system is not designed to withstand extreme humidity or water spray from below. Examples are:
  - Constant heavy mist,
  - Near corrosive environment or
  - Upward spray from sprinkler.
- **Direct Sunlight** - In direct sunlight the material will fade or discolor over time. The integrity of the material will not degrade to cause system failures.
- **Temperature** – Extreme hot or cold temperature will cause damage to the valve or control. Freezing temperatures will freeze the water in the valve. This will cause physical damage to the internal parts as well as the plumbing and mineral. High temperatures will affect the control. The display may become unreadable but the control must continue to function. When the temperature returns to normal operating limits, the display will re-appear. A protective cover must assist with high temperature applications.
- **Insects** – The control and valve have been designed to keep all but the smallest insects out of the critical areas. Use duct tape to cover the holes in the top plate. The top cover must be installed securely in place.

†TEFLON is a registered trademark of Chemours

## Electrical Requirements

### ⚠ WARNING



#### Electrical Shock Hazard

Plug into a grounded 3 prong outlet.

Do not remove ground prong.

Do not use an adapter.

Do not use an extension cord.

Failure to follow these instructions can result in death, fire, or electrical shock.

There are no user serviceable parts in the AC adapter, motor, or controller, in the event of a failure, these parts must be replaced.

- All electrical connections must be completed according to the local codes.
- Only use the AC power adapter which is supplied with the appliance.
- The power outlet must be grounded.
- To disconnect power, unplug the AC adapter from power supply.

## Mechanical Requirements

#### IMPORTANT:

- Plumbing must be installed in accordance with the International Plumbing Code and any local codes and ordinances.
- Do not use petroleum based lubricants such as Vaseline, oils, or hydrocarbon based lubricants. Use only 100% silicone lubricants.
- All plastic connections should be hand tightened. Teflon® tape may be used on connections where O-ring seal is not used.  
**NOTE:** Do not use pliers or pipe wrenches to tighten the plastic connections.
- Soldering near the drain line must be done before connecting the drain line to the valve. Excessive heat will cause interior damage to the valve.
- Refer to the drain line requirements.
- Do not use lead based solder for sweat solder connections.
- The drain line must be a minimum of 1/2" (1.3 cm) diameter. Use 3/4" (2 cm) pipe if the backwash flow rate is greater than 7 GPM (26.5 LPM) or the pipe length is greater than 20 feet (6 M).
- Do not support the weight of the system on the control valve fittings, plumbing, or the bypass.
- It is not recommended to use sealants on the threads. Use Teflon® tape on the threads of the 1" (2.54 cm) NPT elbow, drain line connections, and other NPT threads.
- Install appropriate grounding strap across the inlet and outlet metal piping of the water treatment system to ensure that a proper ground is maintained.

## General Requirements

### **⚠ WARNING**

#### **Excessive Weight Hazard**

**Use two or more people to move and install water treatment system.**

**Failure to do so can result in back or other injury.**

**IMPORTANT:** Make sure that the valve and tank components of this unit have been assembled and tightened to the proper factory torque specifications. Over tightening can cause improper valve, probe and tank alignment and can damage the tank O-ring (P/N 1010154).

- Keep the mineral tank in the upright position. Do not turn upside down or drop. Turning the tank upside down will cause media to enter the valve.
- Operating ambient temperature: 35 °F - 120 °F (1 °C - 49 °C).
- Operating water temperature: 35 °F - 100 °F (1 °C - 38 °C).
- Working water pressure range: 20 psi - 125 psi (1.38 bar - 8.62 bar).
- Use only regenerant designed for water softening. Do not use ice melting salt, block salt or rock salt.
- When filling mineral tank, do not open water valve completely. Fill tank slowly to avoid media from exiting the tank.
- When installing the water connection (bypass or manifold) connect to the plumbing system first. Allow heated parts to cool and cemented parts to set before installing any plastic parts. Do not get primer or solvent on O-rings, nuts, or the valve.

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

## EQUIPMENT INSTALLATION

**NOTE:** Before turning on the water, rotate the two handles on the bypass valve two to three times. This will help to install the O-rings and avoid leaking.

- If the plumbing to the water treatment system is metal, a ground strap must be installed.
- The plumbing must be self-supporting and secure to avoid movement. A piece of metal or a ground strap is secured to both the inlet and outlet pipes, see the below Figure 8:

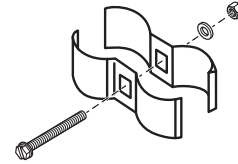


Figure 8

**IMPORTANT:** The inlet water must be connected to the inlet port of the valve. While replacing non-autotrol valves, it is possible that the inlet and outlet get exchanged or plumbing to be installed in an opposite order. Do not solder pipes with lead-based solder.

**IMPORTANT:** Do not use tools to tighten plastic fittings. Over time, stress can cause break of the connections. When the bypass is used, only hand tighten the nuts.

**IMPORTANT:** Do not use petroleum grease on gaskets when connecting bypass plumbing. Use only 100% silicone grease products when installing any MAYTAG® brand valve. Non-silicone grease can cause plastic components to fail over time.

**NOTE:** Several tube adapters are available to connect the valve to the water plumbing. See Parts List in section "Valve Part List".

**NOTE:** The MAYTAG® system should be installed by someone familiar with plumbing practices.

- The system is located after the pressure tank (or incoming water supply) and any filtration equipment. Water that leaves the system will feed the hot water heater and the rest of the building.
- Place the mineral tank and brine tank in position.
- Use the plumbing adapters or the bypass and connect the valve to the building plumbing. Make sure that the water inlet and outlet on the valve matches the inlet and outlet of the plumbing.
- Connect the drain line, see the section "Drain Line Connection".
- Connect the regenerant line, see the section "Regenerant Line Connection".
- Connect the brine tank overflow, see the section "Overflow Line Connection".
- Plug in AC adapter to the control. Before loading regenerant or applying power, refer to the sections "Controller", "Programming Overview", "Levels I Programming", "Levels II Programming", "Level III Diagnostic Programming", and "Placing System into Operation".
- Plug the AC adapter into an electrical outlet that is not switched ON/OFF. The controller display will cycle to "Levels I Programming". Refer to "Levels I Programming" for further startup instructions.

## Drain Line Connection

**NOTE:** Standard commercial practices are expressed here. Local codes may require changes to the below suggestions. Check with local authorities before installing a system.

1. The unit must be above and not more than 20 ft (6.1 m) from the drain. Use an appropriate adapter fitting to connect 1/2" (1.3 cm) plastic tubing to the drain line connection of the control valve.
2. If the backwash flow rate exceeds 5 GPM (22.7 LPM) or if the unit is located 20 - 40 Ft. (6.1 – 12.2 m) from drain, use 3/4" (1.9 cm) tubing. Use appropriate fittings to connect the 3/4" (1.9 cm) tubing to the 3/4" (1.9 cm) NPT drain connection on valve.
3. The drain line may be elevated up to 6 feet (1.8 m) considering the run does not exceed 15 feet (4.6 m) and water pressure at the system is not less than 40 psi (2.76 bar). Elevation can increase by 2 feet (61 cm) for each additional 10 psi (0.69 bar) of water pressure at the drain connector.
4. Where the drain line is elevated but empties into a drain below the level of the control valve, form a 7" (18 cm) loop at the far end of the line so that the bottom of the loop is level with the drain line connection. This will provide an adequate siphon trap. Tie or wire the hose in place at the drain point. Also provide an air gap of at least 1½" (3.05 cm) between the end of the hose and the drain point.
5. Where the drain empties into an overhead sewer line, a sink-type trap must be used.
6. Secure the end of the drain line to keep it from moving.

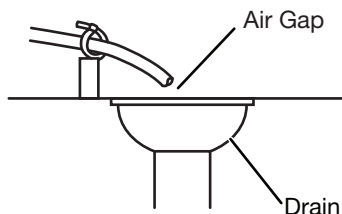


Figure 9: Drain Line Connection

## Regenerant Line Connection

The regenerant line from the tank connects to the valve. Make the connections and hand tighten. Make sure that the regenerant line is secure and free from air leaks. Even a small leak can cause the regenerant line to drain out, and the system will not draw regenerant from the tank. This may also introduce air into the valve and cause problems with valve operation.

Make sure that pipe sealant (Teflon® tape) is applied to the 3/8" (1 cm) NPT regenerant line connection.

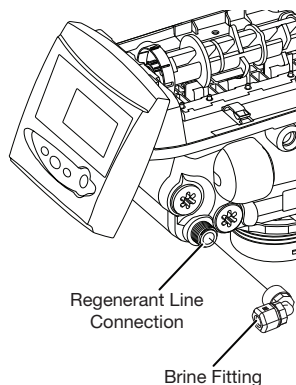


Figure 10: Regenerant Line Connection

## To install the brine line:

1. Insert one end of the tubing into the elbow on the valve.
2. Hand tighten the nut until tight.
3. Inside the salt tank, remove the cap from the large cylinder to gain access to the connection.
4. Be sure the brass insert is in the end of the brine tubing. Insert the tubing through the opening in the tank.
5. Push the tubing into the plastic nut. Slowly unscrew the nut until the tubing moves into the connection. The tubing will hit bottom.

**NOTE:** Once the tubing has been pushed into the nut it cannot be pulled out. The nut will need to be removed. See the below Figure 12 for correct assembly.

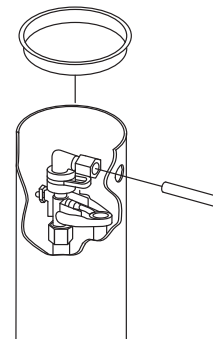


Figure 11

6. Hand tighten the plastic nut to create a pressure tight connection and double wrench tighten the nut 1½ to 2 turns.

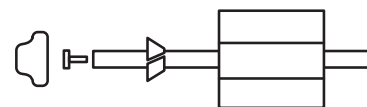


Figure 12

## Overflow Connection

In the event of a malfunction, the salt TANK OVERFLOW will direct "overflow" to the drain instead of spilling on the floor. This fitting should be on the side of the cabinet. Most tank manufacturers include a post for the tank overflow connector.

To connect the overflow line, locate the tubing connector on side of tank. Attach length of 1/2" (1.3 cm) internal diameter tubing to fitting and run to drain. Do not elevate overflow line higher than overflow fitting (see Figure 13).

Tubing sold separately in 100 ft. (30.5 m) rolls (LE Part No. 3PET58100B). Do not tie into drain line of control unit. Overflow line must be a direct, separate line from overflow fitting to drain, sewer or tub. Allow an air gap as per drain line instructions.

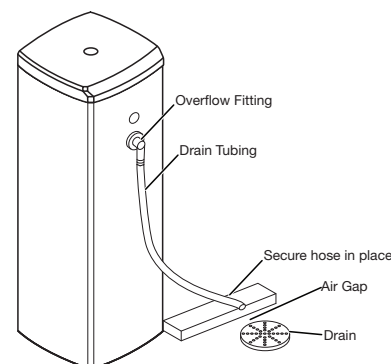



Figure 13

# ELECTRICAL CONNECTION

**⚠ WARNING**



**Electrical Shock Hazard**

Plug into a grounded 3 prong outlet.

Do not remove ground prong.

Do not use an adapter.

Do not use an extension cord.

Failure to follow these instructions can result in death, fire, or electrical shock.

**IMPORTANT:** This valve and control are for dry location , unless used with a Listed Class 2 Power Supply suitable for outdoor use.

**NOTE:** There are no user serviceable parts in the AC adapter, motor or the control board.

All controllers operate on a 12 V alternating current power supply. This requires use of the AC adapter supplied with the system. A variety of AC adapters are available for different applications. These AC adapters below are available from supplier:

AC Adapter	Input Voltage	Application	MFG Part No.
Standard wall mount	120 V 60 Hz	Standard indoor application	1000811
Outdoor rated	120 V 60 Hz	UL listed for outdoor installations	1235448

## 120 V AC Adapters:

Make sure that the power source matches the rating printed on the AC adapter.

**NOTE:** The power source must be constant. Make sure that the AC adapter is not on a switched outlet. Power interruptions longer than 8 hours may cause the controller to lose the day and time settings. When power is restored, the day and time settings must be re-entered.

# SYSTEM OPERATION

## Service (Down-flow)

Untreated water is directed down through the resin bed and up through the riser tube. The water is treated as it passes through the resin bed.

## Brine Refill

Water is directed down through the resin bed to the regenerant tank at a controlled rate, to create brine for the next regeneration.

## Brine Preparation

The refill water is allowed to dissolve the salt and prepare brine.

## Brine/Slow Rinse (Up-flow)

The control directs water through the brine injector and brine is drawn from the regenerant tank. The brine is then directed down the riser tube up through the resin bed and up to the drain. The hardness ions are exchanged by sodium ions and are sent to the drain. The resin is regenerated during the brine cycle. Brine draw is completed when the air check closes.

## Re-pressurized Cycle (Hard Water Bypass Flapper Open)

This cycle allows the air and water to hydraulically balance in the valve before continuing the regeneration.

## Backwash (Up-flow)

The flow of water is reversed by the control valve and directed down the riser tube and up through the resin bed. During the backwash cycle, the bed is expanded and debris is flushed to the drain.

## Fast Rinse (Down-flow)

The control directs water down through the resin bed and up through the riser tube to the drain. Any remaining brine residue is rinsed from the resin bed.

## Cycle Water Flows

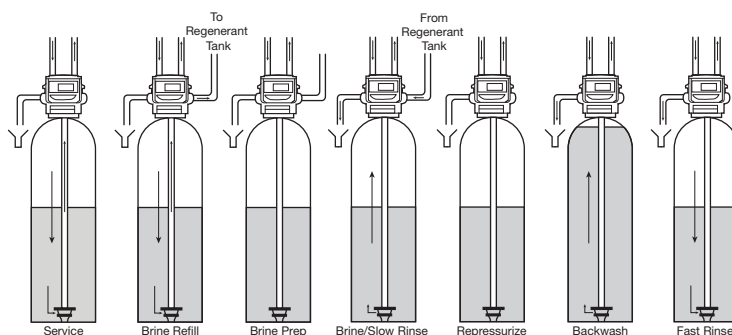


Figure 14

Valve Camshaft

The front end of the camshaft has an indicator cup. The cup has slots in the outer periphery and numbers on the inside face, as shown in below Figure 15.

The numbers can be seen with the cover off, from the front over the top of the controller. The number at the top indicates which regeneration cycle (Refer to below table) is currently in progress.

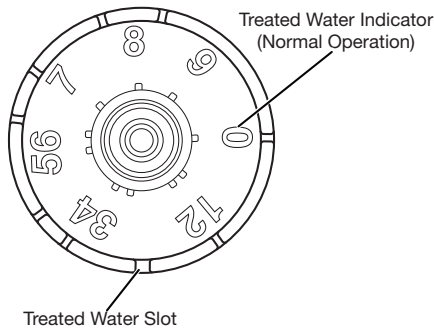


Figure 15

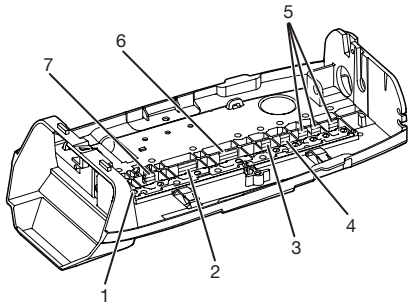
The corresponding slot for the number is positioned at the optical sensor which is approximately 90 degrees out of phase.

0	Treated Water - normal operation mode
1	Brine Refill
2	Brine Prep
3	Brine Draw / Slow Rinse Cycle
*4	Holiday
*5	Brine Empty / Slow Rinse
6, 7	Re pressurization
8	Backwash Cycle
9	Fast Rinse Cycle
<i>*Cycles are skipped unless "Holiday Mode" is enabled.</i>	

Table: Regeneration Cycle Indicators

**Note:** If electrical power is not available, the camshaft can be rotated counter clockwise by hand if the motor is removed.

Valve Operation





1. Regenerant Valve
2. Inlet Valve
3. Refill Valve
4. Rinse Drain
5. Backwash Drain Valves
6. Outlet Valve
7. Bypass Valve

Figure 16

Injector Instructions

The injectors are coded according to size, by the number of “bumps” molded onto the end of the injector. The valve injector size is based on water pressure of 20 to 60 psi and uses an injector with 5 bumps. If water pressure exceeds 60 psi, see the table below for recommended injector:

Tank Diameter Used	Water Pressure	Injector Used
10" (25.4 cm)	20 to 60 psi	 5
10" (25.4 cm)	61 to 120 psi	 4

Disinfection of Water Treatment Systems

The materials of construction of the modern water system will not support bacterial growth, nor will these materials contaminate a water supply. During normal use, a water treatment system may become fouled with organic matter, or in some cases with bacteria from the water supply. This may result in an off-taste or odor in the water. Some systems may need to be disinfected after installation and some systems will require periodic disinfection during their normal life.

For Detailed instructions refer to the section “To Sanitize and Disinfect the Water Treatment System”.



# MAYTAG® SERIES SYSTEM CONTROLLERS

## Getting Started

- When the controller is initially plugged in first, it may display a flashing Err 3 and scrolling “Call Dealer for Service” message. This means that the controller is rotating to the home position. The Err 3 will clear when the control reaches the home position.
- The preset default time of regeneration is 2:00 AM. If you want to change it, see the section “Level II Programming”.
- The controller can be programmed to regenerate on specific days of the week. See the section “Level II Programming”.
- If electrical power is not available, the camshaft can be rotated counterclockwise by hand if the motor is removed.
- The controller sends commands to the motor for camshaft movement. However, water pressure/flow are required during the regeneration cycle for backwash, purge and refill, and brine draw to actually take place.
- Make sure control power source is plugged in. The transformer should be connected to a non-switched power source.

## Controller Location

The controllers are designed to be mounted on the valve or attached to a flat surface. Installations that do not provide easy access to the valve can have the controller mounted for remote operation.

## Power Loss Memory Retention

The controller features battery-free time and date retention during the loss of power. This is designed to last a minimum of 8 hours depending on the installation. The controller will continue to keep time and day in dynamic memory while there is no AC power. The controller will not track water usage on volumetric demand controls in the event of a power failure. All programmed parameters are stored in the static memory and will not be lost in the event of a power failure. These settings are maintained separately from the time and day settings.

## Motor

The controller uses a standard 12 V AC motor that works with either 50 or 60 Hz. The same motor is used worldwide and does not need to be changed for different power conditions.

## Controller Memory

Information entered or calculated by the controller is stored in two different ways.

A static memory will store:

- Model number
- Regenerant setting
- Time of regeneration
- Days between regeneration
- Filter mode

A dynamic memory with eight-hour retention will store:

- Current day of week
- Running clock

**NOTE:** Water flow to the valve can be turned on or bypassed when the controller is powered up for the first time.

## Variable Reserve Function

The metered-demand volumetric controllers are designed with a variable reserve feature. This feature automatically adjusts the reserve to the user's water usage schedule.

A variable reserve saves salt and water by only regenerating when absolutely necessary, and makes sure that enough soft water is available for typical high-water usage days.

For each day of regeneration, the controller reviews the last four weeks of water usage for the same day of the week to determine if the remaining capacity is adequate for the next day of the week.

If not, it will initiate an automatic regeneration.

## Display Icons

**NOTE:** In normal operation and during programming, only a few of the icons will be displayed.

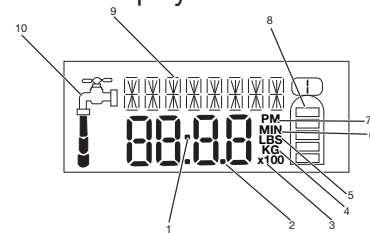
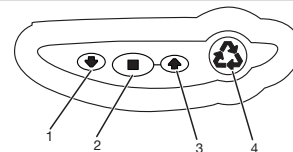


Figure 17

- Colon flashes as part of the time display. Indicates normal operation.
- Four digits used to display the time or program value. Also used for error codes.
- X100 multiplier for large values.
- When “KG” is displayed, the value entered is in kilogram or kilograms.
- When “LBS” is displayed, the value entered is in pounds.
- When “MIN” is displayed, the value entered is in minute increments.
- “PM” indicates that the time displayed is between 12:00 noon and 12:00 midnight (there is no AM indicator). PM indicator is not used if clock mode is set to 24 hour.
- Displays amount of treated capacity remaining.
- Shows when water is flowing through the valve.
- Banner display.

## Keypad - Button



Call out	Button	Function
1		Scroll down through a list
2		Press to accept a setting
3		Scroll up through a list
4		Start a regeneration

Figure 18

## Identifying and Changing Model Number

**IMPORTANT:** Only the model numbers shown in below Table are to be used. Using a model number that is not in below Table will cause undesirable performance. If the programmed model number needs to be changed follow the steps below to select a valid model.

**NOTE:** This below table is for reference only. Your model number should be set by a Maytag Water Treatment Professional based on your specific application requirements.

Model Number	Tank Diameter Media (Cu. Ft.)	Total Salt dosage (lbs)	Total Capacity (Kilo grains)	Injector Type
47	10 x 44 & 10 x 54 1.00 Ft³	2.5	10,000	5 Bump
48	10 x 44 & 10 x 54 1.00 Ft³	3.5	12,000	5 Bump
49	10 x 44 & 10 x 54 1.00 Ft³	8.5	20,000	5 Bump
50*	10 x 44 & 10 x 54 1.00 Ft³	13.0	22,000	5 Bump
51	10 x 54 1.25 Ft³	3.0	13,000	5 Bump
52	10 x 54 1.25 Ft³	11.0	25,000	5 Bump
53*	10 x 54 1.25 Ft³	16.0	28,000	5 Bump
54	10 x 54 1.50 Ft³	4.0	16,000	5 Bump
55	10 x 54 1.50 Ft³	5.0	18,000	5 Bump
56	10 x 54 1.50 Ft³	12.5	30,000	5 Bump
57*	10 x 54 1.50 Ft³	19.0	33,000	5 Bump
58	13 x 54 2.00 Ft³	5.0	21,000	7 Bump
59	13 x 54 2.00 Ft³	7.5	25,000	7 Bump
60	13 x 54 2.00 Ft³	17.0	40,000	7 Bump
61	13 x 54 2.50 Ft³	6.5	26,000	7 Bump
62	13 x 54 2.50 Ft³	8.5	30,000	7 Bump
63	13 x 54 2.50 Ft³	20.0	49,000	7 Bump
99	For special applications - Contact the System manufacturer			

\*The salt amount on models 50, 53, and 57, can be changed if required.

Table: Model Numbers Details

## Identifying the model number

1. Press and hold the SET and DOWN buttons simultaneously until the display blanks out. Release buttons.
2. The Model Number will be displayed. Proceed to the next step to change the Model Number.

**NOTE:** The control will revert back to the service display if no buttons are pushed within 30 seconds.


## Changing the model number

1. Press and hold the SET button until 0 is displayed.
2. Release button.
3. A flashing 11 will now be displayed on the screen, which is a default model number.
4. Press the UP or DOWN button until the desired model number is displayed (See Table on this page).
5. Press and release the SET button to save the desired model numbers.
6. Time of day will scroll and time will be flashing.

Scrolling Display	Button to Press	Description	Range
SELECT MODEL NUMBER	↓ or ↑	Default is 11 Must Select model from table	The range is 1-99 however. Only the model selections in the table above are valid selection
TIME OF DAY	Press then ↓ or ↑ Press	Time of Day Set the time of day. Includes PM monitor. The time will flash. Default is a 12hr clock	12 or 24
DAY XX	Press then ↓ or ↑ Press	Day of Week Set to actual day of the week	SU, MO, TU, WE, TH, FR, SA
REGENERATION TIME	Press then ↓ or ↑ Press	Time of Regeneration Set to desired time of regeneration. The time will flash	Full 24 hours Increment of one Minute

MAYTAG

12:00



**Service Display**

Scrolling name and valve model. Time with flashing colon.  
Capacity remaining shown as 1 to 5 bars.

After resetting the model number, reset:

- Level I parameters (Time of day, Day of week and Regeneration time)
- Also need to reset some of the Level II parameters

The Model Number setting is very important. The controller software includes additional model numbers that operate other valve types. If the model number is set incorrectly an ERROR 3 could be displayed when advancing the valve through the regeneration cycles. The valve will not function properly. The control model number must be selected from "Table: Model Numbers Details."

## Controller Programming

The controller is designed to function by setting the Time of Day, Day of the Week, and the Hardness. The remaining settings are set at the factory using a Model Number. The buttons on the keypad are used to adjust the settings of the controller.

The controller menu has three levels:

- **Level I Basic** — This level is easily accessed by the user. Only the Time of Day, Day of Week and Time of Regeneration can be changed in Level I.
- **Level II Professional** — This level allows the installer to change settings such as hardness, capacity, and cycle times.
- **Level III Diagnostic** — This operation history and the program are viewable. This information is used to troubleshoot and maintain the system.

**NOTE:** If a button is not pushed for thirty seconds, the controller returns to normal operation mode.

### Level I Programming

The control can be quickly programmed by following the sequential procedure. Level I program parameters are those that can be accessed by pressing and releasing the SET button.

- **Model Number:** Select a model from the "Table: Model Numbers Details" in section "Identifying and Changing Model Number" based on the application and determine your model number before you start.
- **Time of Day:** Includes PM indicator. Can be set to display as a 24 hour clock. See section "Level II programming".
- **Day of Week:** Set to actual day of the week.
- **Time of Regeneration:** Fully adjustable. Default is 2:00 AM.

**NOTE:** At start up if a model number appears, follow these instructions to set the appropriate model number.

- **Model Number:** Before you start, review the "Table: Model Numbers Details" on Page 15 to determine the model number needed based on the application. Select the model number. To change the model number, see instructions in section "Identifying and Changing Model Number".
- **Setting Time of Day:** Upon initial startup of the controller, you will need to set the time of day. The words "TIME OF DAY" will scroll across the banner display and a programmed time of day will be flashing below. If time is not flashing, press and release the SET button. To change the time of day, press and hold the UP or DOWN buttons until the correct time of day is displayed. Press and release the SET button to accept the selection.
- **Setting Day of Week:** After setting the Time of Day the banner display will show the word "DAY" followed by an abbreviated day of the week. If the abbreviated day of the week is not flashing press and release the SET button.  
SU = Sunday  
MO = Monday  
TU = Tuesday  
WE = Wednesday  
TH = Thursday  
FR = Friday  
SA = Saturday

Press and hold the UP or DOWN buttons to change the flashing day of week until the current day is displayed. Press and release the SET button to accept the selection.

- **Setting Regeneration Time:** The regeneration time is a setting which allows the programmer to select the time of day when regeneration should occur. The words "REGENERATION TIME" will scroll across the banner display. If the time is not flashing press and release the SET button. To change the regeneration time press and hold the UP or DOWN buttons until the desired regeneration time is displayed. Press and release the SET button to accept the selection.

### Level II Programming (after start up)

Level II program parameters are those parameters which are used to fine-tune systems operation. To access the Level II program parameters press and hold the UP and DOWN buttons simultaneously until the display goes blank, then release the buttons. Override is the first level II parameter displayed. Level II program parameters include:

- **Operation Type**  
CALENDAR OVERRIDE  
SALT AMOUNT  
CAPACITY K GRAIN  
HARNESS GPG  
SELECT LANGUAGE  
CLOCK MODE  
UNITS OF MEASURE  
INJECTOR SELECTION\*  
SLOW RINSE  
BACKWASH  
FAST RINSE  
OPERATION TYPE 269\*  
SERVICE INTERVAL  
CHLORINE GENERATOR

\*View only

Level II parameters will, in almost all cases, be preset to meet your configuration needs. The predefined system number will pre-program all of the Level II parameters to the selected default values.

- **Setting the Calendar Override**

Calendar Override allows the programmer to set the maximum days between regenerations. A setting of 0 (zero) means the calendar override is disabled. To change the calendar override, press and release the SET button while the words "CALENDAR OVERRIDE" appear on the banner display. The blinking digit can be changed to the desired numbers of days. To lock in the parameter, press and release the SET button. The calendar override days between regeneration must be set to zero to enable regeneration on specific days.

**NOTE:** Regeneration on specific day is used to provide regeneration when water demands are not steady. Example: If the weekdays have low usage and the weekend is high, then regeneration every three days will not meet the requirements..

- **Viewing the Salt Amount**

The salt amount is selected by the water treatment professional.



## ■ Setting Capacity

### System Default Capacity Setting

The default capacity setting is accurately calculated when the model number is entered by the factory. The capacity can be changed. Contact your Maytag water treatment professional before adjusting the capacity setting. Default capacities are shown in "Table: Model Numbers Details" on Page 15.

**Note:** (Conditioners only) A different model number must be selected to change the default capacity and salt dosage.

## ■ Setting the Hardness (conditioners only)

Hardness is set in Grains per Gallon (GPG) or Parts per Million (ppm) and should be programmed to the total hardness level of the incoming water supply. Press and release the SET button to make the display flash. Use the UP or DOWN buttons to adjust the hardness setting until the desired hardness is displayed.

Press and release the SET button to accept the selection.

## ■ Setting the Language

The controller is capable of displaying 6 different languages as follows:

- 1 = English
- 2 = Spanish
- 3 = French
- 4 = Italian
- 5 = Flemish
- 6 = German

Press and release the SET button then use the UP or DOWN buttons to select the desired language. Press and release the SET button to accept the selection.

## ■ Setting Clock Mode

The controller can be programmed to operate with a 12-hour or 24-hour clock. Program the clock mode to "12" for a 12-hour clock or "24" for a 24-hour clock. When the controller is programmed as a 12-hour clock the PM indicator will illuminate during the PM hours. There is no AM indicator.

## ■ Setting Units of Measure

The controller can be programmed to operate in U.S. or metric units. Program the units of measurement to 0 (zero) for U.S. units or 1 for Metric units.

## ■ Viewing the Injector Type

The injector is selected by system model number at the factory. See "Table: Model Numbers Details" on Page 15 for further injector information.

## ■ Adjusting the Cycle Times

The following cycle times are adjustable.

Cycle	Range
Slow Rinse	1 to 125 minutes
Backwash	1 to 50 minutes
Fast Rinse	1 to 30 minutes

Refill time does not appear as this cycle time is determined by the salt setting.

The controller calculates the Slow Rinse default time based on injector type, system size and salt dosage.

The cycle times can be adjusted for custom applications. Please contact your Maytag water treatment professional before attempting to adjust the Slow Rinse time.

## ■ Setting the Service Interval

The service interval feature is an option that will allow the installer to program the controller to ask for maintenance after a programmed duration. The feature is programmed from 0 (zero) to 99 months. When the programmed length of time has been reached the words "CALL DEALER FOR SERVICE" will appear in the banner display to signal the end user that regular maintenance may be required. If it is set to 0 (zero) the function is disabled. If you wish to enable this function program the desired service interval duration.

## ■ Setting the Chlorine Generator/Check Salt (conditioners only) \*OPTIONAL\*






















The controller has the capability to produce a low level of chlorine during the brine draw stage of regeneration. It can also sense if there is any salt present during the time when brine draw is occurring. This parameter can be adjusted to the following:





















0 =	Chlorine Generator with Check Salt disabled
1 =	Check Salt only - NACL will be displayed after MAYTAG next to (269)
2 =	Chlorine Generator with Check Salt enabled - CL will be displayed after MAYTAG next to (269)

Select the desired parameter then press and release the SET button to accept the selection. If equipped, see Chlorine Generator (Check Salt) installation instructions in section optional items and features on page 30.

**IMPORTANT:** Setting days between regeneration to zero will cause the system to not regenerate. This setting is used for selecting regeneration on specific days or to use with a remote regeneration input. Regeneration on specific days is used to provide regeneration when water demands are not steady.

**Example:** If the weekdays have low usage and the weekend is high, then regeneration every three days will not meet the requirements.

Scrolling Display	Button to Press	Description	Range
ENTER CALENDAR OVERRIDE	Press then  or  Press 	1. Calendar Override* Set the maximum days between regenerations	0 to 99 days
SALT AMOUNT	Press then  or  Press 	2. Salt Amount Default = 10 lbs	0.5 to 125 lbs.
CAPACITY K GRAIN	Press then  or  Press 	3. System capacity in Kilo Grains Refer to "Table: Model Numbers Details"	1 to 140
HARDNESS GPG	Press then  or  Press 	4. Hardness Grains per Gallon Set based on measured hardness	3 to 200
SELECT LANGUAGE	Press then  or  Press 	5. Display Language Scroll and Select Banner Language	1 to 8
CLOCK MODE	Press then  or  Press 	6. Clock Select 12 Hr or 24 Hr	12 or 24
UNITS OF MEASURE	Press then  or  Press 	7. Units of measure Select English or Metric	0 to 1

Scrolling Display	Button to Press	Description	Range
INJECTOR SELECTION	LOCKED	8. View Only	
SLOW RINSE	Press then  or  Press  or 	9. Slow Rinse DO NOT CHANGE	Use factory settings
BACKWASH	Press then  or  Press  or 	10. Backwash DO NOT CHANGE	Use factory settings
FAST RINSE	Press then  or  Press  or 	11. Fast Rinse DO NOT CHANGE	Use factory settings
OPERATION TYPE	LOCKED	14. Valve Type Displays valve type selected at start up. View Only	
SERVICE INTERVAL	Press then  or  Press  or 	15. Time between service reminder Select number of months between each service reminder	1 to 99 Months
CHLORINE GENERATOR	Press then  or  Press  or 	14. Chlorine Generator Style Select ON or OFF	0 or 1 or 2

### Level III Diagnostic Programming

Historical information can be retrieved from the controller when the controller is in the home position by pressing the SET and DOWN buttons simultaneously. Release both buttons when the controller blanks out and displays MODEL NUMBER. Press the UP or DOWN buttons to navigate to each setting. The banner display will scroll across the top of the display and the value will be displayed below the display. Upon completing the initial programming procedure the average daily usages will display the same value. These values will change as the unit logs water usage.

Scrolling Display Readout	Range/Values	Valve Type
		269
<b>MODEL NUMBER*</b>	See Salt/Capacity Table	X
Days since regeneration	0 to 255 days	X
Peak flow rate - Day and Time	Language/Clock Mode Dependant	X
<b>PEAK FLOW RATE GPM*</b>	0 to 47 GPM	X
Water treated today Gal	0 to 65536 gallons	X
Water since regeneration Gal	0 to 65536 gallons	X
Sunday average usual Gal	0 to 65536 gallons	X
Monday average usual Gal	0 to 65536 gallons	X
Tuesday average usual Gal	0 to 65536 gallons	X
Wednesday average usual Gal	0 to 65536 gallons	X
Thursday average usual Gal	0 to 65536 gallons	X
Friday average usual Gal	0 to 65536 gallons	X
Saturday average usual Gal	0 to 65536 gallons	X
<b>Total water used Gal X 100*</b>	<b>0 to 999900 gallons*</b>	X
<b>Total water used Gal X 1000000*</b>	<b>0 to 42,940,000 gallons*</b>	X
<b>Months since service*</b>	<b>0 to 2184 months*</b>	X

\*Bold text indicates that specific values can be reset. Press and hold the SET button for 5 seconds to reset the value.

## Placing Water System into Operation

**IMPORTANT:** Do not open bypass valve or allow water into mineral tank before proceeding to next step.

Refer to section "Water Line Connections" and Figure 23 to install inlet/outlet piping and valves required for proper startup and servicing. Once Plumbing connections are complete, before turning on the water supply to the house;

- Open the inlet ball valve
- Close the outlet ball valve
- Turn the bypass valve to the "in bypass" position (Refer to Figure 22).
- Slowly turn on the water supply to the house.
- Open the outlet boiler drain on the outlet side of the system.
- Flush the lines into a bucket or a garden hose to purge color, cement, sealants or solder residue.
- Once the lines are clear close the outlet boiler drain.

Please review the quick cycling the control instructions No. 1 and No. 2 below before proceeding to system start-up. It is required that the control be quick cycled to specific regeneration cycles when placing the water system into operation.

### Quick Cycling the Controller

1. With the control valve in the treated water position (Refer to Figure 19):
  - Press and release the REGEN button, "IMMEDIATE REGENERATION" starts to scroll.
  - Press and release the SET button, the controller will scroll "\ / \ / \ / \ /" (See Figure 20), indicating that the motor and camshaft are turning.
  - Once the motor and camshaft stop turning, the controller will scroll "REGENERATION TIME REMAINING" and displays the remaining regeneration time.
2. To display the current cycle and the time remaining of the current cycle, press and hold the SET button.
2. To advance the control to the next cycle. Press and release the UP and SET buttons simultaneously.

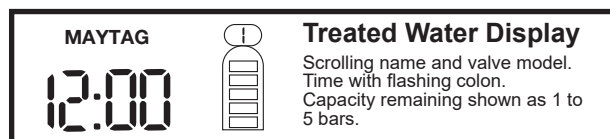


Figure 19



Figure 20

**NOTE:** The control can be sent directly back to the treated water position from any regeneration cycle. Press and hold the UP and SET buttons (about 5 seconds) until "REGENERATION CANCELED" scrolls on the screen. The control will skip all remaining regeneration cycles and return to the treated water position.

**NOTE:** The control valve can be started-up even if power is not available to the controller. The valve must be connected to the water supply. The motor can be removed from the valve, and the camshaft can be indexed manually counterclockwise by hand. This will allow the tank to be filled and allows regenerant draw to be tested.

## System Start-Up

Once the lines are flushed, perform the previous initial programming steps and review the Quick Cycling Controller instructions, you will need to place the system into operation. Ensure to follow below steps, as the instructions are different from other models.

1. Remove the cover from the valve. Removing the cover will allow you to see that the camshaft is turning, and in which cycle the camshaft is currently positioned.
2. Water supply to the house still turned on and the bypass valve "in bypass" position.
3. Press and release the REGEN button, "IMMEDIATE REGENERATION" starts to scroll. Press and release the SET button, the controller will scroll \\\\/\\\/\\\/ indicating that the motor and camshaft are turning. Once the motor and camshaft stop turning and the controller scrolls "REGENERATION TIME REMAINING".
4. Press and release the SET and UP buttons simultaneously in advance for each cycle until you reach the Backwash Cycle (C8), see the cycle sequence in table below.

C#	Cycle Sequence
0	Treated Water – Normal Operation Mode
1	Brine Refill
2	Brine Prep
3	Brine Draw/Slow Rinse Cycle
6,7	Re pressurization
8	Backwash Cycle
9	Fast Rinse Cycle

**NOTE:** C6 and C7 re pressurization does not have flow to drain.

**Table: Regeneration Cycle Indicators**

5. Fill the mineral tank with water.  
**NOTE:** If mineral tank opened too rapidly or too far, mineral can be lost out of the mineral tank into the valve or plumbing. In the 1/2 open position, you must hear air slowly escaping from the valve drain line.
- While the controller is in the Backwash Cycle (C8) and the bypass valve on "in bypass" position, start to fill the unit slowly by slightly opening the bypass valve. Inlet knob allowing air to purge, then turn the knob to 1/2 service flow rate.
- Once the air has finished purging from the tank, and water begins to flow steadily from the drain line. Verify all air is out, then open the bypass valve inlet knob all the way to maximum flow.
- Unplug the AC power adapter, allowing extended backwashing of media. This may take 15 to 30 minutes until water to the drain runs clear of color and media fines.
- Continue letting the water run to drain until the water runs clear from the drain line. This flushes color, and media fines from the media bed. To aid in rinsing the media, turn the water on and off quickly to spur water hammer, releasing more color. Once the water to the drain continuously runs clear, plug the AC power adapter back in and proceed to next step as mentioned below.
- Press and release the SET and UP buttons simultaneously in advance to start the Fast Rinse Cycle (C9), see the above cycle sequence table. Allow water to run through the drain until water runs clear. These backwashing and rinsing steps are mandatory to properly start up the system. Failure to complete these steps will lead to service issues. The backwash and rinse steps may need to be repeated to ensure that the drain water is completely clear.

- Press and hold the SET and UP buttons simultaneously for 5 seconds to cancel regeneration, and cycle the controller back to the treated water position.

**NOTE:** It is recommended that you do not put salt (regenerant) into the brine tank until after the control valve has been put into operation. With no regenerant in the tank, it is much easier to view water flow and motion in the tank.

6. Add water to the brine (Regenerant) tank (proceed only when color of the water in drain is completely clear).
  - Start another regeneration cycle. Press and release the "REGEN" button, "IMMEDIATE REGENERATION" starts to scroll. Press and release the SET button, the controller will scroll \\\\/\\\/\\\/ indicating that the motor and camshaft are turning. The controller scrolls "REGENERATION TIME REMAINING" and displays the total regeneration time remaining. Press and release the SET and UP buttons simultaneously to advance the Brine Refill Cycle (C1) to prime the brine line tube between the brine tank and the control valve and add treated water to the brine tank.

**NOTE:** As you advance through each cycle, there will be a slight delay before you can advance to the next cycle. There will be a pause after the brine draw and slow rinse cycles (system pause). This cycle allows the water/air pressure to equalize on each side of the valve discs.

- When Brine Refill Cycle (C1) arrives, the controller will direct the water down through the brine line tube and into the brine tank. Watch the bottom of the brine tank, once all air bubbles have been purged from the brine line tube and the water level is rising. Allow about [4" to 5" (10.2 cm to 12.7 cm)] of water to fill the bottom of the brine tank. Do Not overfill.
  - Press and release the SET and UP buttons simultaneously to advance to the Brine Prep Cycle (C2). Once the brine prep cycle is reached, press the SET and UP buttons simultaneously to advance to the Brine Draw/Slow Rinse cycle (C3).
7. Draw water from the brine (Regenerant) tank.
    - With the controller in the Brine Draw/Slow rinse cycle, check to see that the water in the brine tank is being drawn out of the brine tank. The water level in the brine tank should recede very slowly.
    - If the water in the brine tank does not recede, or goes up, refer to the troubleshooting section.
  8. If the water level is receding from the brine tank, wait for the air check assembly to check and stop the flow of water from the brine tank. Press and hold the SET and UP buttons simultaneously for 5 seconds to cancel regeneration, and cycle the controller back to the treated water position.
  9. Slowly turn the bypass outlet knob to the "Normal Operation" position and open the outlet ball valve.
  10. Finally, turn on a faucet plumbed after the water system. Run the faucet until the water runs clear, once the water runs clear turn off the faucet.
  11. Place salt (Regenerant) in the brine tank.
  12. Disinfect the water treatment system (see below).

The construction materials of this water system will not support bacterial growth, nor will these materials contaminate the water supply. During normal use, a water treatment system may become fouled with organic matter, or in some cases with non-pathogenic bio-growth from the water supply. This may result in an off-taste or odor in the water.

The system must be disinfected after installation and proper routine maintenance requires annual disinfection.

## To Sanitize and Disinfect the System (last step after lacing the system into operation):

Depending upon the conditions of use, the style of conditioner, the type of ion exchanger, and the disinfectant available, a choice can be made among the following methods.

### Sodium or Calcium Hypochlorite

These materials are satisfactory for use with polystyrene resins, synthetic gel zeolite, greensand and bentonites.

#### 5.25% Sodium Hypochlorite

These solutions are available under trade names such as Clorox\*. If stronger solutions are used, such as those sold for commercial laundries, adjust the dosage accordingly.

##### 1. Dosage

- Polystyrene resin; 1.2 fluid ounce (35.5 ml) per cubic foot.
- Non-resinous exchangers; 0.8 fluid ounce (23.7 ml) per cubic foot.

##### 2. Regenerant tank conditioners

- Backwash the conditioner and add the required amount of hypochlorite solution to the well of the regenerant tank. The regenerant tank should have water in it to permit the solution to be carried into the conditioner.
- Proceed with the normal regeneration.

\*Clorox is a trademark of the Clorox Company.

### Calcium Hypochlorite

Calcium hypochlorite, 70% available chlorine, is available in several forms including tablets and granules. These solid materials may be used directly without dissolving before use.

##### 1. Dosage

- Two grains (approximately 0.1 ounce [3 ml]) per cubic foot.

##### 2. Regenerant tank conditioners

- Backwash the conditioner and add the required amount of hypochlorite to the well of the regenerant tank. The regenerant tank should have water in it to permit the chlorine solution to be carried into the conditioner.
- Proceed with the normal regeneration.

The MAYTAG® Water Treatment System is now fully operational.

## Inspection

The system is shipped with several parts unassembled. When parts are removed from the packing, they must be inspected for damage. If any parts are damaged or missing, contact your supplier.

**IMPORTANT:** When handling the mineral tank do not turn it upside down or drop on its side.

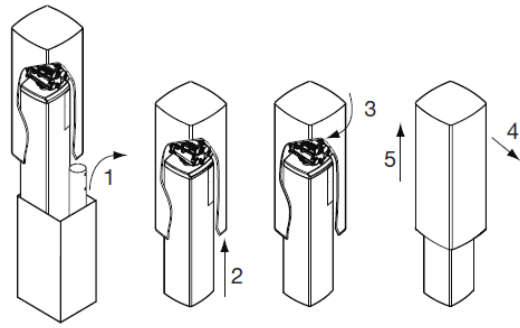


Figure 21

When the carton is first opened, the softener will be standing upright.

#### REMOVE BRINE TANK SLOWLY

**IMPORTANT:** The brine tank fits tightly over the valve. When removing the brine tank, tip it forward and rotate slightly to pull off. Do not damage valve cover or control.

To assemble the system, remove the salt tank components (cover, tank and brine tube assembly) from the shipping container.

1. Remove the brine well and parts bags.
2. Lift the brine tank up 2 feet.
3. Turn the brine tank 1/4 turn to the right.
4. Tilt the brine tank toward the label and slowly lift free. The mineral tank can now be removed.

#### To assemble the Salt Tank:

1. Stand the salt tank up and in position. Level as needed. The tank has two ports that will be connected. One to a drain and one to the valve.
2. Remove the overflow fitting from the brine tube. Place the brine tube in position. Align the large hole in the brine well with the hole in the brine tank. Install the overflow fitting in this hole to secure well to tank. Lay cover aside for now.

#### To assemble the Mineral Tank:

**IMPORTANT:** The mineral tank contains loose particles that will shift. If the tank is turned upside down or laid back quickly, the particles may enter the valve. If this happens, the valve may need to be disassembled and cleaned.

1. Stand the tank up and in position.
2. If the floor under the mineral tank is uneven, level as needed.



## Water Line Connections

A bypass valve system should be installed on all water treatment systems. A bypass is included with this system. Bypass valves isolate the water system from the water supply and allow untreated water to be used. Service or routine maintenance procedures may also require that the system is bypassed during routine maintenance and servicing procedures. The illustrations below show the two common bypass methods.

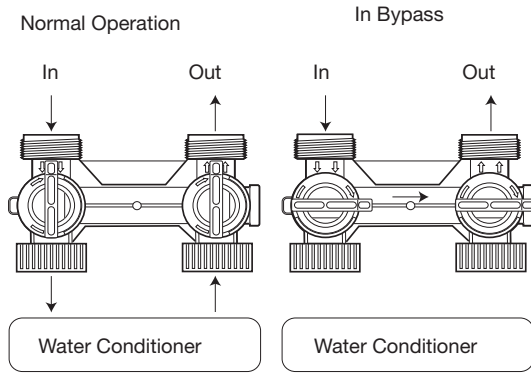


Figure 22: Hi Flow Bypass (Included)

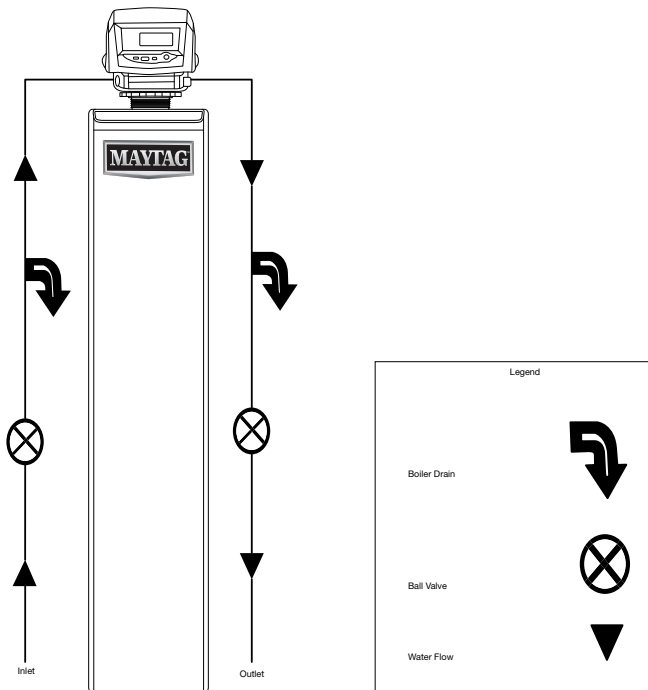


Figure 23: Typical inlet/outlet piping and placement of valves for proper start up and servicing

**MAYTAG®**  
**WATER TREATMENT SYSTEM**  
(Drawings, Part Numbers and Optional Items)

# OPTIONAL ITEMS AND FEATURES

## Chlorine Generator ("Check Salt" feature) Installation Instructions:

The chlorine generator feature is constantly checking for salt and will produce chlorine throughout the regeneration process. This automatic monitoring system will only produce chlorine when a salt/regenerant is available in the brine line. The system will produce up to a maximum of 4 PPM of chlorine. This system is not designed for a whole-system disinfection that requires chlorine for proper application. This system provides chlorine for aesthetic chlorination of media beds. "Check Salt" will scroll and illuminate whenever the brine concentration falls below 5 to 7% saturation.

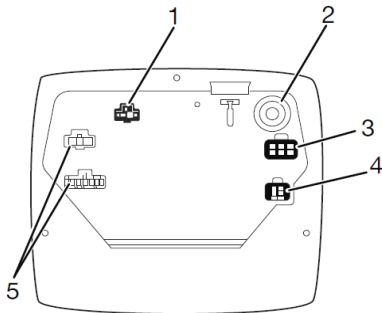
The MAYTAG® series controls have the capability to produce a low level of chlorine to chlorinate during regeneration. "Check Salt" will scroll when the end user needs to add salt to the regenerant tank. Potassium chloride or sodium chloride can be used. Installing the chlorine generator is simple.

### STEP 1:

Remove the controller by pushing the release tab down and rocking the controller out and up (see Figure 24). Disconnect the power.

### STEP 2:

Insert the small chlorine generator wire connector into the back of the controller, (see Figure 24).

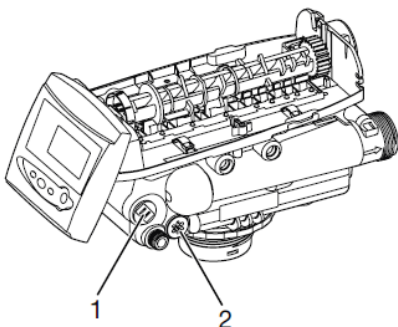


1. Chlorine Generator Outlet
2. AC Adapter (Low voltage Input)
3. Main Motor & Optical Sensor Connection
4. Turbine Input or Dry Contact Signal Input
5. For Future Use

Figure 24

### STEP 3:

Remove the existing refill controller and ball from the valve and replace it with the chlorine generator refill flow control (see Figure 25 for the location of the refill controller).



1. Refill Controller
2. Injector and Cap

Figure 25

### STEP 4:

Insert the large connector of the chlorine generator cord to the end of the refill flow control. The connector is keyed to be installed in only one direction. Press it in firmly to make sure there is good contact.

### STEP 5:

Reconnect power to the controller and reinstall the controller to the valve.

### STEP 6:

The controller must be programmed to enable the chlorine generator.

1. Power up the controller.
2. Press the UP and DOWN buttons simultaneously for 5 seconds to enter Level II programming.
3. Press the UP button to navigate to the chlorine generator option.
4. Set to one of the following settings as desired:

0 =	Chlorine Generator with Check Salt disabled
1 =	Check Salt only - NACL will be displayed after MAYTAG next to (269)
2 =	Chlorine Generator with Check Salt enabled - CL will be displayed after MAYTAG next to (269)

5. Once the correct setting above is selected, press SET to enter your setting. After 30 seconds the controller will return to normal operation mode.

## Blending Valve Kit:

### Purpose:

Blends in a controlled amount of hard water to achieve a desired hardness.

<b>KIT</b>	LE Part No: 3ATBLENDERKIT1239760
<b>Nut</b>	18-8 and 10-32
<b>Adjusting Screw</b>	10-32 x 1.5"

### Installation:

1. Insert the nut into the blending valve orifice located near the bypass flapper shown below. Insert the screw through the top plate and then through the nut (Figure 26).

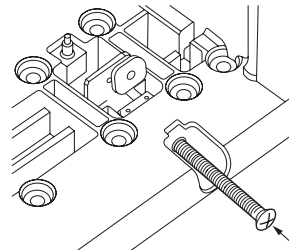


Figure 26

2. Tighten the screw until it touches the bypass flapper (Figure 27).

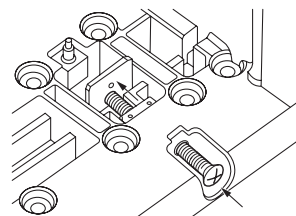


Figure 27

**Operation:**

1. Tightening the adjusting screw will force the bypass flapper to open. The open flapper will allow untreated (hard) water to blend with the treated water supply. As the adjusting screw is tightened, the hardness of the outlet water increases (Figure 28).

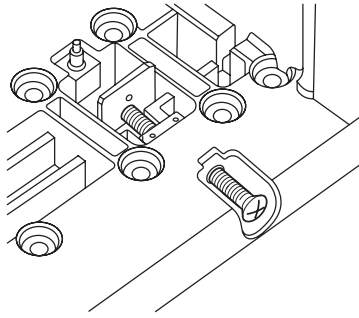


Figure 28

Loosening the adjusting screw will allow the bypass flapper to close. The closing action will blend less untreated water into the outlet flow.

2. To blend a specific amount of hardness into the outflow, adjust the screw and test the water. Repeat the procedure as needed until the desired hardness level is reached (Figure 29).

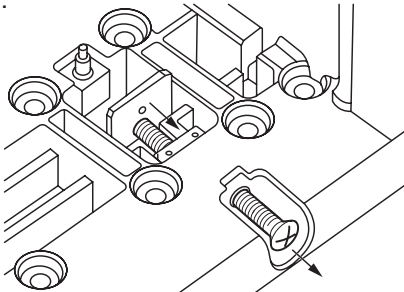


Figure 29



## Valve Exploded View

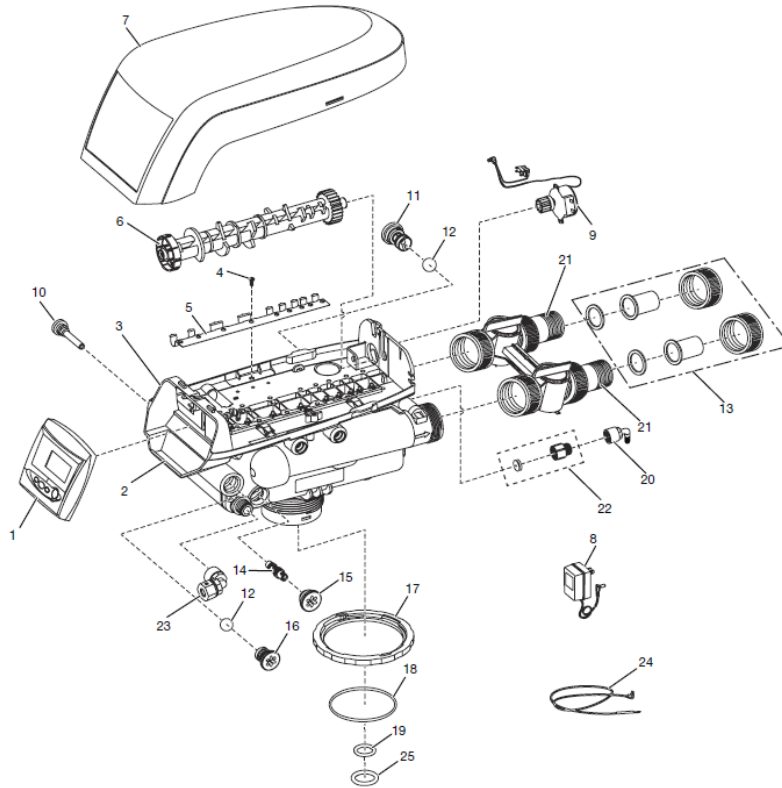


Figure 30: Exploded View

## Valve Part List

Drawing No.	Part No.	Manufacture Part No.	Description	Quantity
1	3ATTIMMT	4005409	Controller	1
2	3ATC26989	1244651	Valve Assembly w/o Flow Controls	1
3	3ATTOPPLATE26X	1235338	Top Plate, Valve	1
4		1234170	Screw, Top Plate	18
*	3ATFLP1041174	1041174	Valve Disc Kit, Flapper, 263/268/269	1
5	3ATSPRING1235339	1235339	Valve Disc Spring, Valve	1
6	3ATCAM1237402	1237402	Cam Valve, Green, 269	1
7	3ATCVR4005345	4005345	Cover, Black, Out Door	1
**	3ATCVR3002884	3002884	Cover, Black, In Door	1
8	3ATRANSFORMER12V	1000811	Transformer, 120 V AC, 60 Hz, NA Plug	1
Optional	3ATRANSOUTDOOR	1235448	Transformer, 120 V AC, 60 Hz Outdoor Rated	1
9	3ATMOTOR3019221	3019221	Motor/Optical Cable/Sensor	1
10	3ATINJSCREEN1000226	1000226	Screen/Cap Assembly w/ O-Ring	1
<b>Drain Control Assembly:</b>				
11	3ATBW10002-XX		#8 - #14 Backwash Assembly (1.7-5.3 GPM)	1
12	3ATBWBALL1030502	1030502	Ball, Flow Restrictor	2
13			Adapter Kit, Multiple Options, pg 25	1
14	3ATINJ1035734	1035734	"J" Injector, Lt Blue 10" (25.4 cm) tank	1
Additional	3ATINJ1035736	1035736	"L" Injector, Orange 13" (33.02 cm) tank	1
15	3ATCAPW/ORING1000269	1000269	Injector Cap with O-Ring	1

Drawing No.	Part No.	Manufacture Part No.	Description	Quantity
16	3ATREFILLCONT1243510	1243510	Refill Ball & Cone Type Flow Control	1
17	3ATTANKRING1035622	1035622	Tank Ring	1
18	3ATTANKORING1010154	1010154	O-Ring, Tank	1
19		1010428	O-Ring, 1.05 Riser Tube	1
20	3FLDFT12338	12338	Valve Drain Connection Fitting, Elbow, 1/2"(1.27 cm) MPT x 1/2" (1.27 cm) BARB 90 drain fitting	1
*	3ATFLP1041174	1041174	Valve Disc Kit	1
21***	3ATBP1040930	1040930	Bypass, Valve	1
22	3FC60365-XX	60365-XX	1.5 - 7.0 gpm Drain Line Flow Control (includes Button)	1
23	3PEPKP6FE6	456FE6	Brine Fitting - Regenerant Line Elbow	1
*	3PEBI38	535375	Tube Brine Insert for Brine Fitting	1
24	3ATTURBINECBL1235446	1235446	Flow Sensor Cable	1
*	3ATTURBINEASSEMBLY	1033444	Turbine Assembly	1
*	3ATCHLORINEGENERATOR	1244336	Optional Chlorine Generator Kit	1
25	3ATORING1.32DIST	1010129	O-Ring, 1.32 Riser Tube	1
<b>Plumbing Connectors and Parts:</b>				
*	3ATAL1030540	1030540	3/4" (1.9 cm) Copper Tube Adapter	2
*	3ATAL1030545	1030545	1" (2.54 cm) Copper Tube Adapter	2
*	3ATAL1030368	1030368	1 1/4" (3.2 cm) Copper Tube Adapter	2
*	3ATAL1030578	1030578	3/4" (1.9 cm) CPVC Tube Adapter	2
*	3ATAL1030579	1030579	1" (2.54 cm) CPVC Tube Adapter	2
*	3ATAL1034385	1034385	Nut 1.25" (3.2 cm) for all Tube Adapters	2
*	3ATAL1030541	1030541	Black Gasket for Tube Adapters	2
<b>Additional Parts</b>				
*	3FLP16174	16174	Silicone Dow #7 Lube	1
*	15TT05520	55008pq	Teflon® Tape	1
*	3RESUPQT	T6001-04	RESUP Quart	1
*	3PEIMPCUTPO	4002	Snip Pocket Poly Tube Cutter	1
*	3PET58100B	H1025-02	5/8" (1.6 cm) PE Drain Tubing Black 100'	1
*	3ATTOOLBW&INJ1013600	1013600	Torx® 50 Wrench	1
*	3FLBYPASSWRENCH	41891	ByPass T-wrench	1

\* Not shown in drawing

\*\* Order Separately

\*\*\* Bypass does not include plumbing connectors, see Plumbing Connectors and Parts above for options. There are no serviceable parts on the bypass.

†®TEFLON is a registered trademark of Chemours

TORX is a registered trademark of Acument Intellectual Properties, LLC

## Mineral Tank Assembly and Parts List

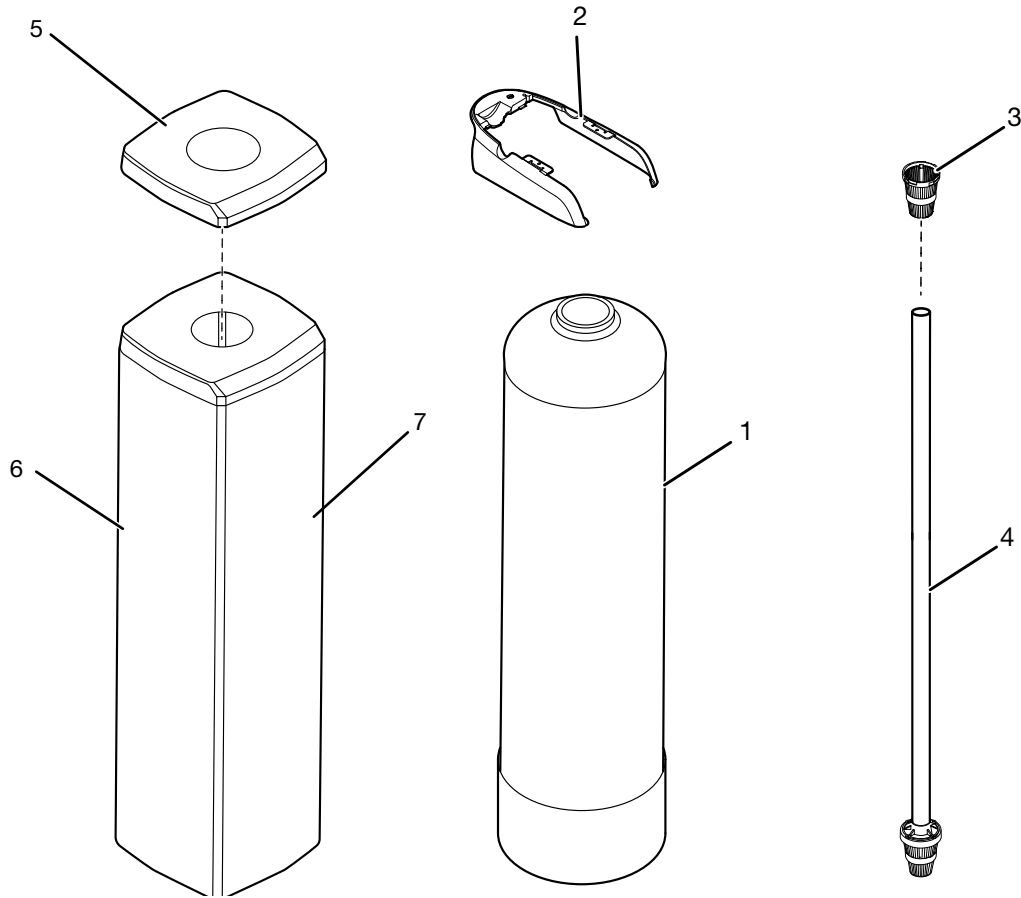


Figure 31

Drawing No.	Part No.	Manufacture Part No.	Description	Quantity
1		CH30523-01010103-30	Tank 10 x 44, Universal Inlet , Natural Color, Composite Base	1
1**		CH34387	Tank 10 x 54, Universal Inlet , Natural Color, Composite Base	1
2		3002885	Shield, Decorative Black	1
3	3TDD1203	D1203	1.05 Distributor, Basket , Upper 269	1
4	3DIST10554ST	D780C2A55	1.05 Distributor Tube Assy	1
5		4005346	Cover, Shroud, Mineral Tank Black	1
6		4005335	Shroud, Mineral Tank, 44", Blue Assy*	1
6**		4005336	Shroud, Mineral Tank, 54", Blue Assy*	1
7	3LLB-M-TJ_4.5 X 1.6331		Label, Jacket , MAYTAG®	1
*	3LLB-M-COMBO-APXX		Combo Label - Models (AP32 - AP48)	1
*	3LLB-M-COMBO-APRXX		Combo Label - Models (APR32 - APR40)	1

\* Not shown in drawing

\*\* Additional sizes

\*\*\* New standard replacement distributor assembly

Some images are enlarged for viewing purposes

## Brine Tank Assembly and Parts List

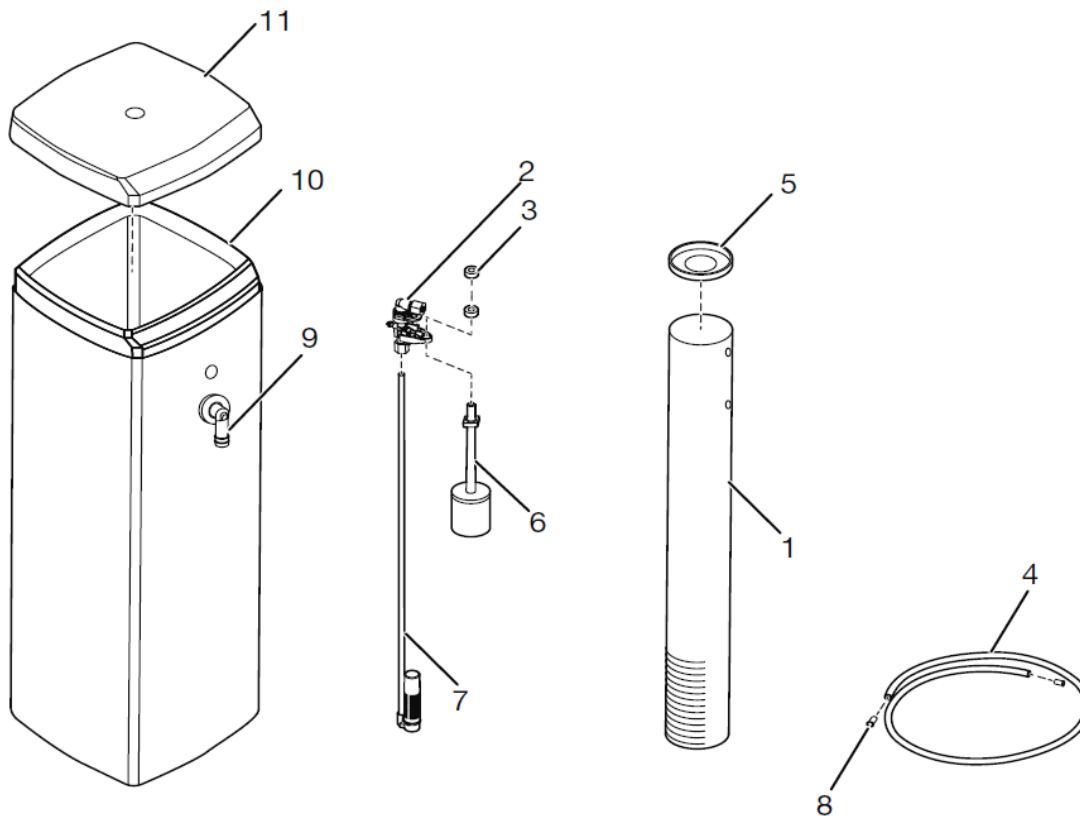


Figure 32

Drawing No.	Part No.	Manufacture Part No.	Description	Quantity
1		CH15013-2	Brine Well w/Slots	1
2	3FLBRINEVALVE60014	60014	Safety Brine Valve	1
3	3FLBRINEGROMMET10150	10150	Grommet	2
4**		CH16371-60	Tubing, 3/8" x 60" Long	1
5		CH15024	Cap, Brine Well 4" Dia. (Caplug STP-4)	1
6		60068-8.06	Brine Float w/One Grommet (As Purchased)	1
7		60002-27	Air Check Assembly	1
8		BR10332	Tubing Insert , Brass	2
9		CH20774	Overflow Fitting Assembly	1
*		CH15031-1	Overflow Elbow	1
*		CH15031-2	Overflow Nut	1
*		CH16331	Gasket	1
*		CH20731-1	Polypro Washer	1
10		4005332	Brine Tank (Only) Blue	1
11		4005343	Cover, Square Black	1
*	3LLB-M-BT_7X2.5		Label, MAYTAG®, Brine Tank Cover	1

\* Not shown in drawing

\*\* Includes 5 ft of tubing supplied with system, to reorder, tubing is sold in 100 ft roll

Some images are enlarged for viewing purposes

# TROUBLESHOOTING

## ⚠ WARNING



### Electrical Shock Hazard

**Plug into a grounded 3 prong outlet.**

**Do not remove ground prong.**

**Do not use an adapter.**

**Do not use an extension cord.**

**Failure to follow these instructions can result in death, fire, or electrical shock.**

Problem	Possible Cause	Solution
Brine tank overflow.	<ol style="list-style-type: none"> <li>1. Uncontrolled brine refill flow rate.</li> <li>2. Air leak in brine line to air check.</li> <li>3. Drain control clogged with resin or other debris.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove brine control to clean ball and seat.</li> <li>2. Check all connections in brine line for leaks. Refer to instructions.</li> <li>3. Clean drain control.</li> </ol>
Flowing or dripping water at drain or brine line after regeneration.	<ol style="list-style-type: none"> <li>1. Valve stem return spring weak.</li> <li>2. Debris is keeping valve disc from closing</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace spring (contact dealer).</li> <li>2. Remove debris.</li> </ol>
Hard water leakage after regeneration.	<ol style="list-style-type: none"> <li>1. Improper regeneration.</li> <li>2. Leaking of external bypass valve.</li> <li>3. O-ring around riser pipe damaged.</li> <li>4. Incorrect capacity</li> </ol>	<ol style="list-style-type: none"> <li>1. Repeat regeneration after making certain correct regenerant dosage was set.</li> <li>2. Replace bypass valve (contact dealer).</li> <li>3. Replace O-ring (contact dealer).</li> <li>4. Verify appropriate regenerant amount and treated capacity (contact dealer).</li> </ol>
Control will not draw brine.	<ol style="list-style-type: none"> <li>1. Low water pressure.</li> <li>2. Restricted drain line.</li> <li>3. Injector plugged.</li> <li>4. Injector defective.</li> <li>5. Valve disc 2 and/or 3 not closed.</li> <li>6. Air check valve prematurely closed.</li> <li>7. Check water pressure.</li> </ol>	<ol style="list-style-type: none"> <li>1. Make correct setting according to instructions.</li> <li>2. Remove restriction.</li> <li>3. Clean injector and screen.</li> <li>4. Replace injector and cap (contact dealer).</li> <li>5. Remove foreign matter from disc and check disc for closing by pushing in on stem. Replace if needed (contact dealer).</li> <li>6. Put control momentarily into brine refill. Replace or repair air check if needed (contact dealer).</li> <li>7. Maximum 80 psi - install pressure reducing valve. Set pump to maintain 20 psi at conditioner. Change drain to remove restriction.</li> </ol>
Control will not regenerate automatically.	<ol style="list-style-type: none"> <li>1. AC adapter or motor not connected.</li> <li>2. Defective motor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect power.</li> <li>2. Replace motor (contact dealer).</li> </ol>
Control regenerates at wrong time of day.	Controller set incorrectly.	Correct time setting according to instructions.

Problem	Possible Cause	Solution
Valve will not draw brine.	<ol style="list-style-type: none"> <li>1. Low water pressure.</li> <li>2. Restricted drain line.</li> <li>3. Injector plugged.</li> <li>4. Injector defective.</li> <li>5. Air check valve closes prematurely on brine pickup tube.</li> </ol>	<ol style="list-style-type: none"> <li>1. Set pump to maintain 20 psi at softener.</li> <li>2. Change drain to remove restriction.</li> <li>3. Clean injector and screen.</li> <li>4. Replace injector (contact dealer).</li> <li>5. Put control momentarily into brine/slow rinse.</li> <li>6. Replace or repair air check if needed (contact dealer).</li> </ol>
System using more or less salt than regenerant setting.	Foreign matter in valve causing incorrect flow rates.	Remove brine control and flush out foreign matter. Advance control to brine/slow rinse, to clean valve (after so doing position control to "fast rinse" to remove regenerant from tank).
Intermittent or irregular regenerant draw.	<ol style="list-style-type: none"> <li>1. Low water pressure.</li> <li>2. Defective injector.</li> </ol>	<ol style="list-style-type: none"> <li>1. Set pump to maintain 20 psi at water system.</li> <li>2. Replace injector (contact dealer).</li> </ol>
No treated water after regeneration.	<ol style="list-style-type: none"> <li>1. No regenerant in regenerant tank.</li> <li>2. Injector plugged.</li> <li>3. Air check valve closes prematurely.</li> </ol>	<ol style="list-style-type: none"> <li>1. Add regenerant to regenerant tank.</li> <li>2. Clean injector and screen.</li> <li>3. Put control momentarily into brine/slow rinse. Replace or repair air check if needed (contact dealer).</li> </ol>
Backwashes or purges at excessively low or high rate.	<ol style="list-style-type: none"> <li>1. Incorrect drain control used.</li> <li>2. Foreign matter affecting valve operation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace with correct size control (contact dealer).</li> <li>2. Remove drain controller and clean ball and seat</li> </ol>
No water flow display when water is flowing.	<ol style="list-style-type: none"> <li>1. Bypass valve in bypass.</li> <li>2. Meter probe disconnected or not fully connected to meter housing.</li> <li>3. Restricted meter turbine rotation due to foreign material in meter..</li> </ol>	<ol style="list-style-type: none"> <li>1. Shift bypass valve to not-in-bypass position.</li> <li>2. Fully insert probe into meter housing.</li> <li>3. Remove meter housing, free up turbine and flush with clean water. Turbine should spin freely. If not, replace meter (contact dealer)ter (contact dealer).</li> </ol>
Run out of treated water between regenerations.	<ol style="list-style-type: none"> <li>1. Improper regeneration.</li> <li>2. Incorrect regenerant setting.</li> <li>3. Incorrect hardness or capacity settings.</li> <li>4. Water hardness has increased.</li> <li>5. Restricted meter turbine rotation due to foreign material in meter.</li> </ol>	<ol style="list-style-type: none"> <li>1. Repeat regeneration, making certain that correct regenerant dosage is used.</li> <li>2. Set to correct regeneration time. See level I programming.</li> <li>3. Set to correct values. See Programming section.</li> <li>4. Set hardness to new value. See Programming section.</li> <li>5. Remove meter housing, free up turbine and flush with clean water. Turbine should spin freely; if not , replace meter (contact dealer)</li> </ol>
Regenerant tank overflow.	<ol style="list-style-type: none"> <li>1. Regenerant valve disc 1 being held open by foreign matter.</li> <li>2. Valve disc 2 not closed during regenerant draw causing brine refill.</li> <li>3. Air leak in regenerant line to air check.</li> <li>4. Improper drain control for injector.</li> <li>5. Drain control clogged with resin or other debris.</li> </ol>	<ol style="list-style-type: none"> <li>1. Manually operate valve stem to flush away obstruction.</li> <li>2. Flush out foreign matter holding disc open by manually operating valve stem.</li> <li>3. Check all connections in regenerant line for leaks. Refer to instructions.</li> <li>4. Too small of a drain control with a larger injector will reduce draw rates.</li> <li>5. Clean drain control.</li> </ol>
<p>If equipped "Check Salt" scrolling on display.</p> <p>"Check Salt" stays on after adding salt.</p> <p>"Check Salt" on, plenty of salt in brine tank.</p> <p>"Check Salt" on, plenty of salt in brine tank and drawing brine.</p>	<ol style="list-style-type: none"> <li>1. Verify brine tank has salt.</li> <li>2. "Check Salt" stays on until unit is regenerated with sufficient salt in brine tank.</li> <li>3. Verify unit is drawing brine from brine tank.</li> <li>4. Check leads connected to chlorine generator.</li> <li>5. Check programming of chlorine generator.</li> </ol>	<ol style="list-style-type: none"> <li>1. Add salt, place in regeneration.</li> <li>2. Regenerate after salt is added to brine tank.</li> <li>3. If not drawing tighten connections, recheck if drawing brine, If not, see pertaining section above.</li> <li>4. Re-attach leads.</li> <li>5. Reset program (see section on chlorine generator programming).</li> </ol>

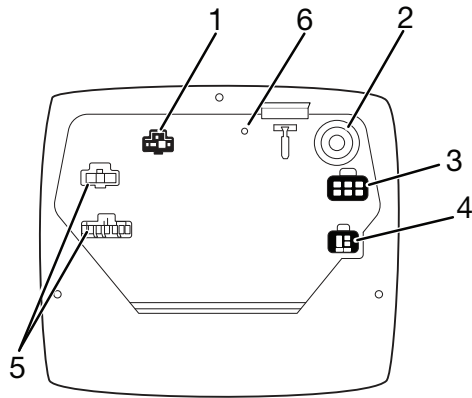
Problem	Possible Cause	Solution
"Call Dealer for Service" scrolling on display.	Signals end user regular maintenance may be required based on programmed Service Interval length of time has been reached.	<ol style="list-style-type: none"> <li>Reset "MONTHS SINCE SERVICE" in Level III Diagnostics: <ul style="list-style-type: none"> <li>Press SET &amp; DOWN buttons simultaneously with controller in home position.</li> <li>Press UP or Down till "MONTHS SINCE SERVICE" is reached.</li> <li>Press and hold the SET button for 5 seconds to reset the value. (Resets to zero).</li> </ul> </li> </ol>
Unit will not refill brine tank	<ol style="list-style-type: none"> <li>No water flowing from valve to brine tank in refill cycle.</li> <li>#5 valve disc is not open in refill cycle.</li> </ol>	<ol style="list-style-type: none"> <li>Check Regenerant Refill Controller <ul style="list-style-type: none"> <li>Check Refill Flow Control (12) Ball is in place.</li> <li>Check Refill Flow Control (16) flow button is properly seated with .33 mark is visible from end).</li> </ul> </li> <li>Check if #5 valve disc is stuck closed.</li> </ol>
Time of day incorrect	Power failure occurrence.	Press SET to reset the time display.
ERR 1 is displayed.	Program settings have been corrupted.	Press any key and reset model number.
ERR 3 is displayed.	1. Controller does not the position of the camshaft. Camshaft should be rotating to find home position.	Wait for two minutes for the controller to return to Home position. The hourglass should be flashing on the display indicating the motor is running.
	1. Camshaft is not turning during ERR 3 display.	<ol style="list-style-type: none"> <li>Check that motor is connected.</li> <li>Verify that motor wire harness is connected to motor and controller module.</li> <li>Verify that optical sensor is connected and in place.</li> <li>Verify that motor gear has engaged cam gear.</li> <li>If everything is connected, try replacing in this order: <ul style="list-style-type: none"> <li>Wire harness</li> <li>Motor</li> <li>Optical sensor</li> </ul> </li> <li>Check power supply voltage - use circuit analyzer to check voltage polarity.</li> </ol>
	1. If camshaft is turning for more than five minutes to find Home position:	<ol style="list-style-type: none"> <li>Verify that optical sensor is in place and connected to wire.</li> <li>Verify that camshaft is connected appropriately.</li> <li>Verify that no dirt or rubbish is clogging any of the cam slots.</li> <li>If motor continues to rotate indefinitely, replace the following components in this order: <ul style="list-style-type: none"> <li>Wire harness</li> <li>Motor</li> <li>Optical sensor</li> </ul> </li> </ol>
	1. Check if control banner display is scrolling "MAYTAG (269)"	<ol style="list-style-type: none"> <li>Possible wrong model number.</li> <li>Check data plate on system.</li> <li>Verify and change model number if applicable (see identifying and changing model number section).</li> </ol>



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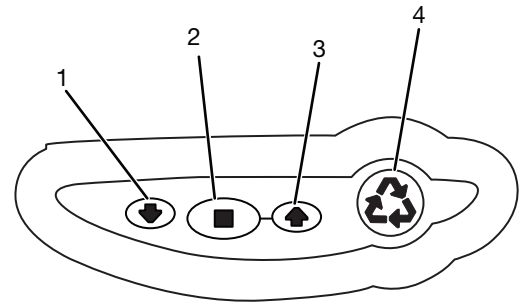
# MASTER RESET PROCEDURE

Please read each procedure entirely before starting



- |                                      |  |
|--------------------------------------|--|
| 1. Chlorine generator outlet         | 4. Turbine input or dry contact signal input |
| 2. AC Adapter (12 V Input)           | 5. For future use                            |
| 3. Motor & optical sensor connection | 6. Reset button                              |

Figure 34



- |                      |                       |
|----------------------|-----------------------|
| 1. Scroll down arrow | 3. Scroll UP arrow    |
| 2. SET               | 4. Start regeneration |

Figure 35

---

## Super Capacitor Reset

This step will discharge the super capacitor, the equivalent of powering down and removing the battery.

1. Unplug the power supply from the controller.
2. Using a paper clip, insert the paper clip into the hole next to the controller latch, (see figures above).
3. Depress the reset button until a click can be heard, hold for 5 seconds.
4. Reconnect the power supply to the controller.
5. Set the time of day (if time is not flashing, press and release the SET button):
  - Press the UP or DOWN button to set the current time of day.
  - Press SET to save setting.
6. Set the day of the week (if day is not flashing, press and release the SET button):
  - Press the UP or DOWN button to set the current day of week.
  - Press SET to save setting.
7. If applicable, set the regeneration time (if the time is not flashing, press and release the SET button):
  - Press the UP or DOWN button to set the desired time of regeneration
  - Press and release the SET button to save setting.

---

## Display and Key Pad Test Procedure

This step will confirm that all the icons are displaying properly and that all the buttons are operating correctly.

1. Unplug the power supply from the controller.
2. Press and hold the SET button while re-connecting the power supply.
3. Continue holding the SET button, observe the display, all the icons should be displayed; once the version number appears i.e 3.04, then release the SET button.
4. Press and release each key pad button individually as displayed:
  - Display shows: PUSH SW1, Press button 1 (DOWN)
  - Display shows: PUSH SW3, Press button 3 (UP)
  - Display shows: PUSH SW4, Press button 4 (REGEN)
  - Display shows: FAULT AT 2 PUSH SET TO RESET, Press button 2 (SET)



---

## Advanced Programming Reset (Level III Diagnostics)

This step will reset the model number and erase all historical data.

1. Press the SET and DOWN button simultaneously until the display goes blank and the current model number is displayed, then release
2. Press and hold the SET button until 0 (zero) is displayed, the version number will flash and the number 11 will begin to flash.
3. Use the UP or DOWN button to select the correct model number, see level III diagnostics - viewing and changing the model number in the operations manual or contact your refiner manufacturer.
4. Press the SET button to save.
5. Set the time of day (if time is not flashing, press and release the SET button):
  - Press the UP or DOWN button to set the current time of day.
  - Press SET to save setting.
6. Set the day of the week (if DAY is not flashing, press and release the SET button):
  - Press the UP or DOWN button to set the current day of week.
  - Press SET to save setting.
7. If applicable, set the regeneration time (if the time is not flashing, press and release the SET button):
  - Press the UP or DOWN button to set the desired time of regeneration
  - Press and release the SET button to save setting.

**IMPORTANT:** The model number setting is very important. The controller software includes additional model numbers that operate other valve types. If the model number is set incorrectly an ERROR 3 could be displayed when advancing the valve through the regeneration cycles. The valve will not function properly. The control board model number must be selected from the table Model Numbers Details.

# CAMSHAFT, OPTICAL SENSOR, AND MOTOR REMOVAL/ RE-INSTALLATION

## Parts List

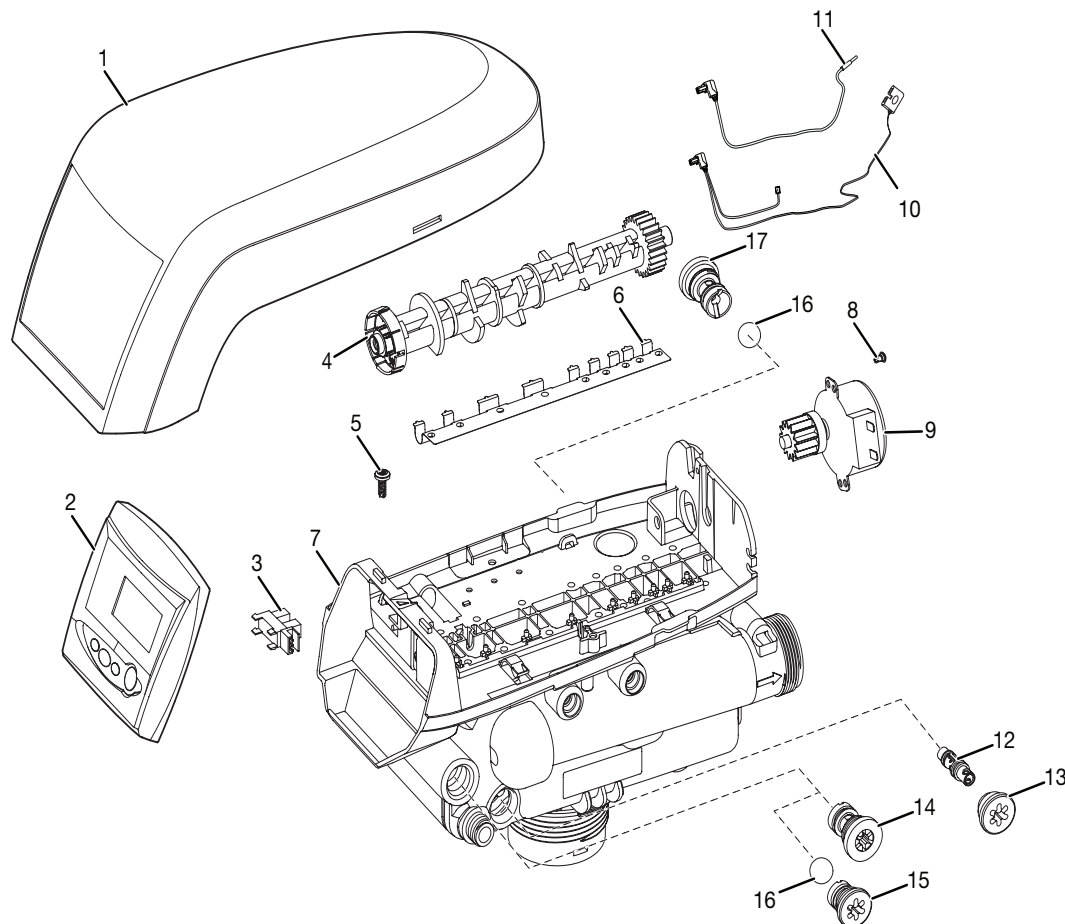


Figure 36

Item	Description
1	Cover
2	Controller
3	Optic Sensor
4	Camshaft
5	Screw, Top Plate
6	Spring
7	Top Plate
8	Rivet, Plastic Motor Assembly
9	Motor Assembly
10*	Cable, Optic Sensor/Motor
11*	Meter Cable, (760/762 only)
12*	Injector
13*	Cap, Injector
14*	Refill Control, Flow Button Style
15*	Refill Control, Ball/Cone Style
16*	Ball
17*	Backwash Control
*Vary according to the control valve model	

---

## Camshaft , Optical Sensor, and Motor Removal

1. Place system into bypass (if needed, de-pressurize the system by forcing the back flapper open). See Figure 36.
2. Disconnect power by releasing clip on left back of controller, remove, (Item 2) then unplug power cord. See Figure 35.
3. Remove (Item 8) Plastic Rivet holding (Item 9) Motor Assembly to (Item 7) top plate. See Figure 35.
4. Rotate Motor Assembly counter clockwise (viewed from back) until motor bracket is disengaged from slot.
5. Slide Motor Assembly straight back, until motor pinion (gear teeth) is freed from camshaft gear.
6. Slide (Item 4) Camshaft back until gear contacts back of top plate, then allow tension to disengage and free cam. See Figure 38.
7. Unplug (Item 3) optical sensor, then pull plug side backward to release from front of top plate. See Figure 37.

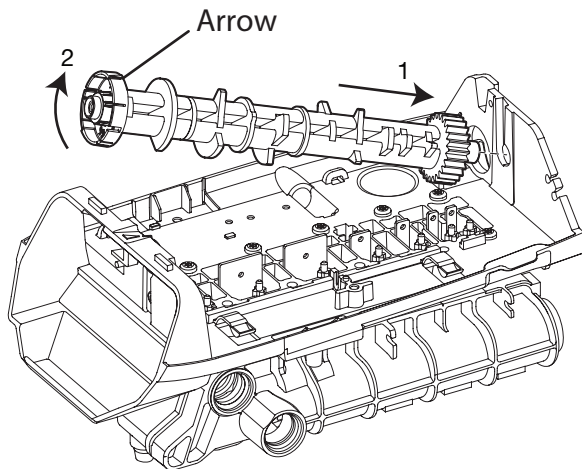


Figure 37

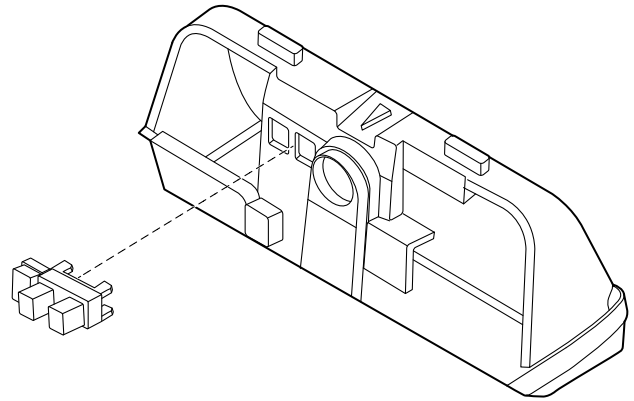


Figure 38

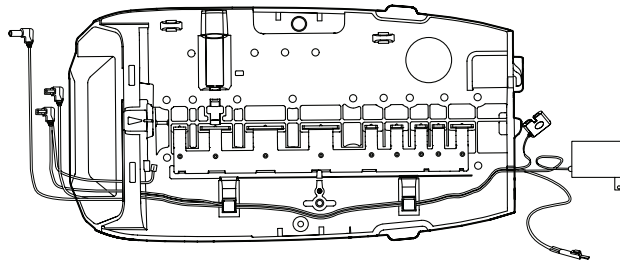


Figure 39

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## Camshaft , Optical Sensor, and Motor Re-installation

1. Insert the optical sensor by pushing the hooked side into top plate first, then plug side of sensor until both snaps. See Figure 37.
2. Grasp the camshaft (Item 4) with the arrow molded on top front of the camshaft cup facing up.
3. Slide Camshaft back till gear contacts top plate, push down on valve disc, and slide forward into front of top plate.
4. Slide Motor Assembly forward through back of top plate, till motor pinion (gear teeth) meshes with camshaft gear.
5. Rotate Motor Assembly clockwise (viewed from back) until motor bracket is engaged into slot.
6. Push Plastic Rivet (Item 8) through hole in top plate (Item 7) and through Motor Assembly (Item 9) bracket.
7. Connect the cable to optical sensor and to back of the controller, then connect the wiring to the drive motor.
8. Insert meter cable probe to valve body and connect the meter cable to the back of the controller.
9. Route all cabling through both clips on the top plate (Figure 38).
10. Connect the AC adapter cable to the back of the control board.
11. Install the controller onto the top plate.
12. Plug in AC adapter to power source. Controller displays ERR 3 as it automatically cycles to home position.
13. The ERR 3 message clears when the control reaches the home position. Check / program controller.

# PERFORMANCE DATA SHEET

## MAYTAG® WATER TREATMENT SYSTEM

Model Numbers	* ** 3M-APR32-XXX *** 3M-APR32-CG-XXX	* ** 3M-APR32XC-XXX *** 3M-APR32XC-CG-XXX	* ** 3M-APR40-XXX *** 3M-APR40-CG-XXX	* ** 3M-AP32-XXX *** 3M-AP32-CG-XXX	* ** 3M-AP48-XXX *** 3M-AP48-CG-XXX
Rated flow rate	10.0 gpm	10.0 gpm	10.0 gpm	10.0 gpm	14.0 gpm
Pressure drop @ rated flow rate	8 psi	8 psi	9 psi	8 psi	15 psi
Peak flow rate and pressure drop	16.5 gpm @ 15 psi 19.8 gpm @ 20 psi 22.8 gpm @ 25 psi	25.9 gpm @ 15 psi 18.2 gpm @ 20 psi 22.4 gpm @ 25 psi	15.5 gpm @ 15 psi 18.7 gpm @ 20 psi 21.7 gpm @ 25 psi	16.5 gpm @ 15 psi 19.8 gpm @ 20 psi 22.8 gpm @ 25 psi	15.0 gpm @ 15 psi 15.9 gpm @ 20 psi 18.2 gpm @ 25 psi
Electrical Requirements	120 V 60 hz input 12 V 60 hz output	120 V 60 hz input 12 V 60 hz output	120 V 60 hz input 20 V 60 hz output	120 V 60 hz input 12 V 60 hz output	120 V 60 hz input 12 V 60 hz output
Capacities at rated service flow	10,500 @ Low (2.4 lbs) 22,800 @ Std (8.8 lbs) 27,700 @ High (12.8 lbs)	10,500 @ Low (4.5 lbs) 33,800 @ Std (9.0 lbs) 27,700 @ High (15.0 lbs)	14,900 @ Low (3.0 lbs) 32,500 @ Std (11.0 lbs) 39,400 @ High (16.0 lbs)	10,500 @ Low (2.4 lbs) 22,800 @ Std (8.8 lbs) 27,700 @ High (12.8 lbs)	17,900 @ Low (3.6 lbs) 39,000 @ Std (13.2 lbs) 47,300 @ High (19.2 lbs)
Type and amount of Ion Exchange resin	1.0 cu ft	1.0 cu ft	1.25 cu ft	1.0 cu ft	1.5 cu ft
Working Water Pressure	20 to 125 psi (1.4 to 8.8 kg/cm <sup>2</sup> )	20 to 125 psi (1.4 to 8.8 kg/cm <sup>2</sup> )	20 to 125 psi (1.4 to 8.8 kg/cm <sup>2</sup> )	20 to 125 psi (1.4 to 8.8 kg/cm <sup>2</sup> )	20 to 125 psi (1.4 to 8.8 kg/cm <sup>2</sup> )
Operating Temperature (min/max)	35 to 100°F (1.6 to 38° C)	35 to 100°F (1.6 to 38° C)	35 to 100°F (1.6 to 38° C)	35 to 100°F (1.6 to 38° C)	35 to 100°F (1.6 to 38° C)
Maximum flow rate in gpm or L/min to drain during regeneration	2.7 gal/min (10.22 L/min)	2.7 gal/min (10.22 L/min)	2.7 gal/min (10.22 L/min)	2.7 gal/min (10.22 L/min)	2.7 gal/min (10.22 L/min)
Efficiency rating Efficiency rated salt setting	4369 grains/pound Low (2.4 lbs)	4369 grains/pound Low (2.4 lbs)	4974 grains/pound Low (3.0 lbs)	4974 grains/pound Low (2.4 lbs)	4974 grains/pound Low (3.6 lbs)
Efficiency rated capacity	10,500 grains	10,500 grains	14,900 grains	10,500 grains	17,900 grains
Accepted type or grade, pellet or solar salt for water softeners.	Sodium Chloride	Sodium Chloride	Sodium Chloride	Sodium Chloride	Sodium Chloride

\* These systems conform to NSF/ANSI 44 for the specific performance claims as verified and substantiated by test data.

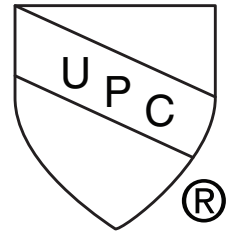
NSF/ANSI 44 Performance Claims: – Hardness, Radium 226, 228 and Barium claims;

NSF/ANSI 61: Drinking Water System Components – Health Effects;

NSF/ANSI 372 Lead Free Compliance; Uniform Plumbing Code (UPC),

International Plumbing Code (IPC) and International Residential Code (IRC).

\*\* These systems conform to NSF/ANSI Standard 42: Reduction claim: Aesthetic Chlorine/Taste and Odor up to 197,389 gallons as verified and substantiated by test data The concentration of the indicated substances in water entering the conditioner was reduced to a concentration less than or equal to the permissible limit.



Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

Certified by  
IAPMO R&T  
NSF/ANSI 42, 44, 61 & 372 · IPC · IRC

Substance	Influent Challenge Concentration	Reduction Requirement
Chlorine	2.0 mg/L ± 10%	>50% reduction
Barium	2.0 mg/L	<2.0 mg/L
Radium 226/228	5 pCi/L	<5.0 pCi/L

- Efficiency rated water softener is a demand initiated regeneration (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 exchanged per kilogram of salt), and shall not deliver more salt than its listed rating. The Efficiency of the water softener, the salt dosage at that efficiency, the capacity at that salt dosage and that of the efficiency is only valid at the stated salt dosage.
- Efficiency is measured by a laboratory test described in NSF/ANSI 44. The test represents the maximum possible efficiency that 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 softeners capacity. While the testing was performed under standard laboratory conditions, actual performance can vary.
- Refer to the system installation and operations manual for set-up and programming instructions.
- System testing utilized sodium chloride regenerant specifically formulated for water conditioning units. Please see operations manual for user responsibility, parts and service availability, any further restrictions or limitations to the use of this product.

# MAYTAG® WATER TREATMENT SYSTEMS



WHAT'S INSIDE MATTERS™

## LIFETIME LIMITED WARRANTY

The LeverEdge (hereinafter LE) warrants any Maytag brand water treatment system manufactured by LE and installed by a duly authorized Maytag dealer, to be free from defects in materials and workmanship to the original residential purchaser (hereinafter CONSUMER) from the date of purchase. All aspects of this warranty are subject to the following limitations, terms and conditions.

### 1. DURATION OF WARRANTY

If LE equipment consisting of the Mineral and Storage Tanks, Controls and Valves, Pumps and Switches, Ion Exchange Resin and Treatment Media, Drinking Water Systems (excluding replacement exchange modules or inline filters), and Ultraviolet Lights (excluding bulbs and sleeves) is determined to have failed as a result of a manufacturing defect, LE will, at its sole discretion, repair or replace the defective part at NO CHARGE to the CONSUMER (excluding labor, and applicable shipping and handling costs) for the duration of the CONSUMER's ownership of the original equipment (hereinafter "LIFETIME").

### 2. LIMITATIONS OF COVERAGE

This warranty extends only to the CONSUMER for damage resulting from defects in materials and workmanship, and does not include renewable components. It does not extend to damage caused by the CONSUMER'S neglect or abuse, or by accident, to damage caused by wind, hail, or abnormal weather conditions, or to damage caused by acts of God, civil insurrection, or extraordinary circumstances beyond the control of LE.

LE shall not be liable for any direct or indirect damage resulting from the use of the equipment, and in no event shall the extent of this warranty coverage exceed the purchase price of the equipment.

LE cannot know the characteristics of a CONSUMER'S water supply or the purpose for which one is purchasing LE equipment. Also, water qualities vary seasonally and over time. Therefore, LE assumes no liability for the determination of the proper equipment necessary to meet a CONSUMER'S requirements, nor does it authorize others to assume such obligations on its behalf.

This warranty excludes any equipment which was not manufactured by LE and installed by an authorized Maytag dealer or on which the date code has been removed or altered. Any tampering or attempted repair performed by anyone other than an authorized dealer, including the CONSUMER, voids this warranty.

### 3. MISCELLANEOUS

In order to be considered for validation, all claims for warranty coverage must be accompanied by a copy of the purchase agreement indicating the date of initial installation, and proof of the CONSUMER's residency, such as a current real estate annual tax bill, utility bill, or credit card statement. LE reserves the right to inspect the LE equipment prior to honoring any warranty claim.

This warranty is only issued by LE, an authorized licensee of Maytag. The CONSUMER is hereby advised that Maytag is not the manufacturer of the equipment, and provides no additional or separate warranty whatsoever in connection with the equipment.

This warranty gives you specific legal rights, and you may have other rights which may vary from state to state. Any and all inquiries or claims under this warranty must be submitted in writing to The LeverEdge, Attn: Warranty Department, 1423 Gunn Highway, Odessa, FL 33556.

THE LEVEREDGE  
1423 Gunn Highway  
Odessa, FL 33556  
Phone: (866) 910-8351  
[www.theleveredge.com](http://www.theleveredge.com)

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Limited warranty provided by the manufacturer.

1423 Gunn Highway Odessa, FL 33556

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