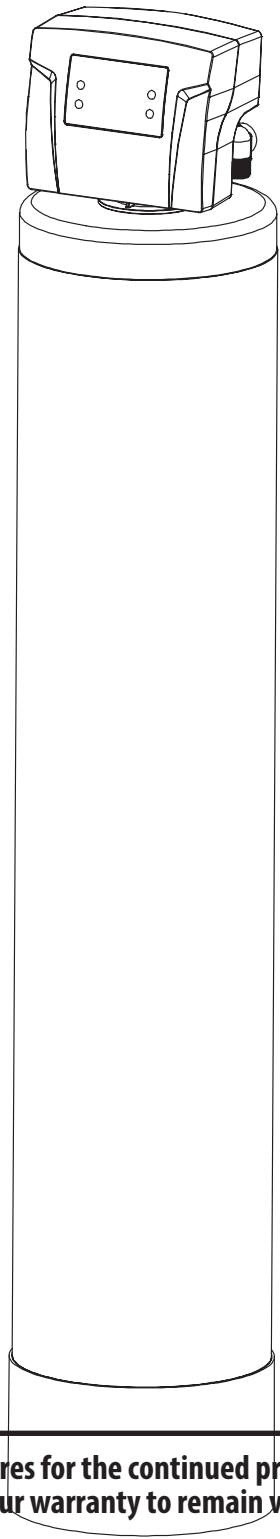


Owners Manual

89 Filter

- Taste and Odor (TO)
- Multimedia (MM)
- Nexsand
- Neutralizer (NU)
- Birm (BM)



1. Page 18 of this manual contains important maintenance procedures for the continued proper operation of your unit. These **MUST** be performed regularly for your warranty to remain valid.
2. Read all instructions carefully before operation.
3. Avoid pinched o-rings during installation by applying NSF certified lubricant to all seals (provided with install kit).
4. This system is not intended for treating water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Canada West
855 Park St., Unit 1
Regina, SK S4N 6M1

Canada East
490 Pinebush Rd., Unit 1
Cambridge, ON N1T 0A5

U.S.A.
56 Lightcap Rd.
Pottstown, PA 19464

9760 Mayflower Park Drive,
Suite 110
Carmel, IN 46032

4655 McDowell Rd. W
Phoenix, AZ 85035

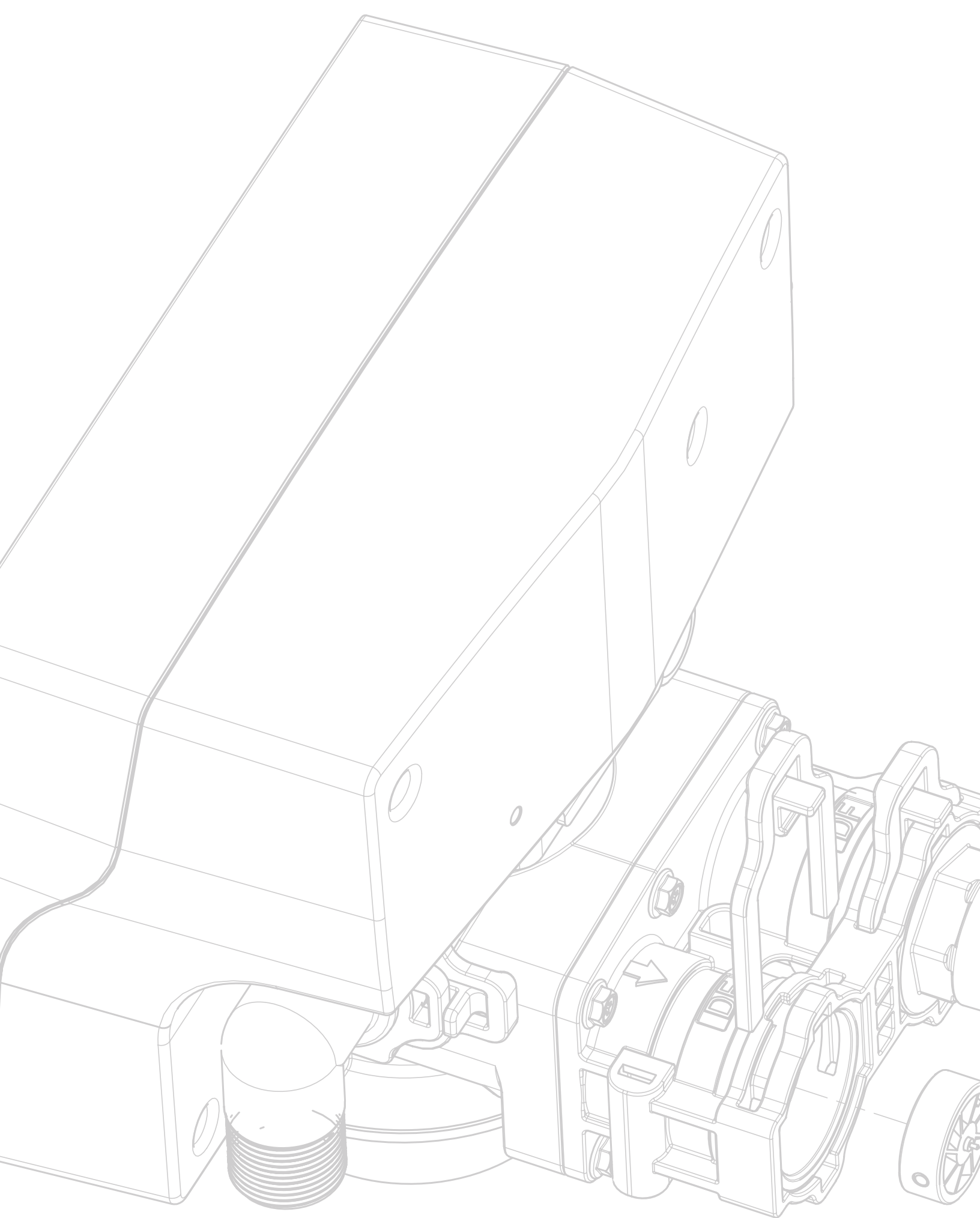


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READ THIS PAGE FIRST

BEFORE STARTING INSTALLATION

- ▶ Read this manual thoroughly to become familiar with the appliance and its capabilities before installing or operating the new appliance. Failure to follow instructions in this manual could result in personal injury or property damage. This manual will also help you to get the most out of your new appliance.
- ▶ Installation must comply with all State, provincial or local regulations. Check with your local public works department for plumbing and sanitation codes. In the event the codes conflict with any content in this manual the local codes should be followed. Consult your licensed plumber for installation of this system.
- ▶ **WARNING!:** Do not use water that is microbiologically unsafe without adequate disinfection before or after this system.
- ▶ Do not install this appliance where it may be exposed to wet weather, direct sunlight, or temperatures outside of the range specified above.
- ▶ This appliance is designed to operate on pressures of 30 psi to 125 psi. If the water pressure is higher than the maximum use a pressure reducing valve in the water supply line to the device.
- ▶ This appliance is capable of operating at temperatures between 40°F and 110°F (4°C - 43°C). Do not use this appliance on hot water supplies.
- ▶ Avoid pinched o-rings during installation by applying (provided with install kit) NSF certified lubricant to all seals.
- ▶ It is not uncommon for sediment, precipitated iron or hardness to be present in water supplies. Precipitated minerals or sediments can cause damage to the seals and piston. This is considered a harsh environment and the seals and piston would not be covered by warranty stated or otherwise.
- ▶ It is recommended to regularly inspect and service the control valve on an annual basis. Cleaning and or replacement of piston, seals, and or spacers may be necessary depending on how harsh the conditions are. An Annual Maintenance kit is available for this purpose
- ▶ This publication is based on information available when approved for printing. Continuing design refinement could cause changes that may not be included in this publication. The manufacturer reserves the right to change the specifications referred to in this literature at any time, without prior notice.

INSTALL NOTES & SAFETY MESSAGES

Watch for the following messages in this manual:

NOTE

Do not remove or destroy the serial number. It must be referenced on request for warranty repair or replacement

NOTE: used to emphasize installation, operation or maintenance information which is important but does not present a hazard.



CAUTION!

Disassembly while under pressure can result in flooding.

CAUTION: used when failure to follow directions could result in damage to equipment or property.



WARNING!

ELECTRICAL SHOCK HAZARD! UNPLUG THE UNIT BEFORE REMOVING THE COVER OR ACCESSING ANY INTERNAL CONTROL PARTS

WARNING: used to indicate a hazard which could cause injury or death if ignored.

SPECIFICATION

Model	Media Cu Ft	Flow Rate USGPM			Micron Rating	Mineral Tank Size	Pipe Size Inches	Ship Weight Lbs
		Service	Peak	Backwash				
Iron Filters - Birm								
89BM-75	0.75	3.0	4.0	3.5	-	8 x 44	3/4" - 1"	67
89BM-100	1.00	3.0	5.0	4.0	-	9 x 48	3/4" - 1"	79
89BM-150	1.50	4.0	8.0	5.0	-	10 x 54	3/4" - 1"	101
89BM-200	2.00	5.0	10.0	7.0	-	12 x 52	3/4" - 1"	121
89BM-300	3.00	6.0	12.0	10.0	-	14 x 65	3/4" - 1"	184
Taste & Odor Filters								
89TO-75	0.75	4.0	5.0	3.5	-	8 x 44	3/4" - 1"	50
89TO-100	1.00	5.0	7.0	4.0	-	9 x 48	3/4" - 1"	60
89TO-150	1.50	7.0	10.0	5.0	-	10 x 54	3/4" - 1"	78
89TO-200	2.00	10.0	12.0	7.0	-	12 x 52	3/4" - 1"	95
89TO-300	3.00	12.0	15.0	10.0	-	14 x 65	3/4" - 1"	138
Neutralizing Filters								
89NU-75	0.75	2.0	3.5	3.5	-	8 x 44	3/4" - 1"	93
89NU-100	1.00	3.0	5.0	4.0	-	9 x 48	3/4" - 1"	120
89NU-150	1.50	5.0	8.0	5.0	-	10 x 54	3/4" - 1"	164
89NU-200	2.00	6.0	10.0	7.0	-	12 x 52	3/4" - 1"	207
89NU-300	3.00	7.0	12.0	10.0	-	14 x 65	3/4" - 1"	330
Sediment Turbidity Multi-Media Filters								
89MM-75	0.75	4.0	5.0	4.0	15 - 20 μ	8 x 44	3/4" - 1"	79
89MM-100	1.00	5.0	7.0	5.0	15 - 20 μ	9 x 48	3/4" - 1"	118
89MM-150	1.50	7.0	10.0	7.0	15 - 20 μ	10 x 54	3/4" - 1"	144
89MM-200	2.00	10.0	12.0	10.0	15 - 20 μ	12 x 52	3/4" - 1"	198
89MM-300	3.00	12.0	15.0	14.0	15 - 20 μ	14 x 65	3/4" - 1"	342
Nexsand Turbidity Filters								
89NEX-75	0.75	4.0	6.0	5.0	3 - 5 μ	8 x 44	3/4" - 1"	90
89NEX-100	1.00	5.0	8.0	7.0	3 - 5 μ	9 x 48	3/4" - 1"	135
89NEX-150	1.50	8.0	10.0	10.0	3 - 5 μ	10 x 54	3/4" - 1"	205
89NEX-200	2.00	10.0	12.0	14.0	3 - 5 μ	12 x 52	3/4" - 1"	255

Working Temperature = 34-110°F (1-43°C)
 (Do not subject the unit to freezing temperatures)
 Working Pressure = 30-125 PSIG (137-861 kPa)
 Voltage = 120V / 60 Hz
 Pipe Size = 3/4" and 1"

- At the stated service flow rates, the pressure drop through these devices will not exceed 15 psig.
- The manufacturer reserves the right to make product improvements which may deviate from the specifications and descriptions stated herein, without obligation to change previously manufactured products or to note the change.

* Do not use water that is microbiologically unsafe without adequate disinfection before or after the system.

Peak flow rates intended for intermittent use only (10 minutes or less) and are for residential applications only. Do not use peak flow rate for commercial applications or for a continuous rate when treated water supplies are geothermal heat pump, swimming pool, etc.

For satisfactory operation, the pumping rate of the well system must equal or exceed indicated backwash flow rate.

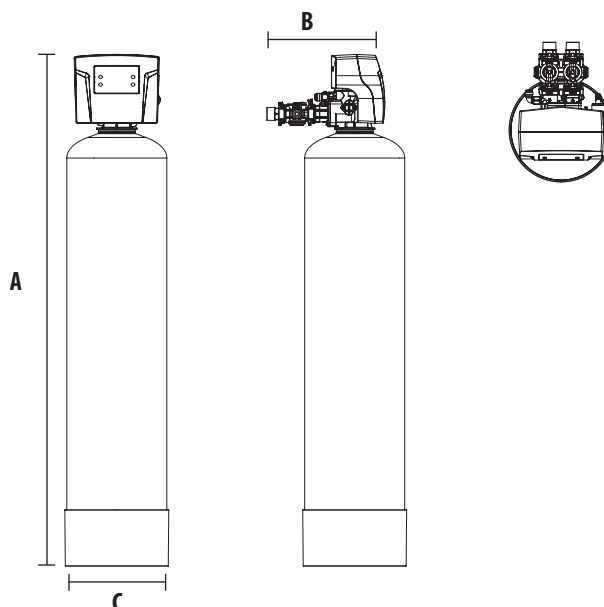
All units come with plastic bypass

Water and Time Consumed During Regeneration

	Backwash Minutes	Rapid Rinse Minutes	Total Time of Regeneration	Total Water Consumed during Regeneration (GAL) (Birm, TO, Neu)	Total Water Consumed during Regeneration (GAL) (MM)	Total Water Consumed during Regeneration (GAL) (Nexsand)
75	10	10	20	70	80	100
100	10	10	20	80	100	140
150	10	10	20	100	140	200
200	10	10	20	140	200	280
300	10	10	20	200	280	340

SYSTEM DIMENSIONS

Models	A (Inches)	B (Inches)	C (Inches)
75	51.5	13"	8"
100	55.5	15"	9"
150	61.5	16"	10"
200	59.5	17"	12"
300	72.5	18"	14"



BASIC PRINCIPLES

The success of the installation will depend, to a great extent, on advanced planning and preparation. Careful attention to the location of the unit, accessibility to electrical and drain facilities, and the availability of the proper tools will ensure a professional-looking installation.

Of utmost importance is the assurance that the filter has been properly applied and meets all specifications.

Application:

Correct application is directly associated with the performance and life expectancy of any water filter. It is important, therefore, to understand how your WaterGroup Water Filter functions and to know its capabilities and limitations so that a correct application can be made.

By following the guidelines and recommendations set forth in this manual, you can be certain your filter is applied correctly.

MM / Nexsand Filter

The Automatic Water Filter is capable of removing particulate matter particle size as small as 30 microns. It will not remove color, organics, colloidal turbidity or dissolved solids. Some applications include:

- Removal of suspended matter in any water system
- Removal of particulate matter, such as clay, mud, etc.
- Prefiltration of oxidized iron prior to an automatic or manual softener
- Removal of light sand

The quality and number of gallons of filtered water between backwashes will depend upon the amount, type, and size of the particulate matter being filtered. If a water sample is sent to a laboratory, where application of a MMF Type unit is contemplated. The laboratory will test for Nephelometric Turbidity Units (NTU) and suspended solids (mg/L). The sample will also be filtered through 10 micron filter paper and NTU run on a filtered sample. If the NTU of the raw water exceeds 150, suspended solids exceed 150 mg/L, or the filter water through the 10 micron filter paper has unacceptable quality, a MMF filter might not be applicable. As a guide, the U.S. Public Health Drinking Water standards states the turbidity should not exceed 1 NTU. The exact number of gallons filtered between backwashes can not be given because of many variables.

TO Filter

Automatic Water Filter with Activated Media will control chlorine taste and odor, and it will also remove most objectional organic colors. It will not remove hydrogen sulfide. It is important to note that whenever the cause of an objectional taste or odor has not been established, Health Authorities should determine if the water is safe to drink. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

NU Filter*

Automatic Water Filter with Neutralizing Media will neutralize slightly acid water (pH 5.2 to >6.8) and thus help to prevent unsightly brown or green stains due to corrosion of household plumbing. If the pH is between 5 and 6, one part of Magnesium Oxide Media should be mixed with five parts of Calcite Media to provide additional neutralizing capability. If the water to be treated has a pH less than 5, a high hardness, or a high carbon dioxide level, NF might not be applicable; a solution feeder should be used. Because NF adds hardness, it should be used prior to a softener.

NOTE

Under dynamic conditions it might be necessary to mix five parts Calcite with one part Magnesium Oxide to effectively raise the pH. In order to size and apply the equipment correctly, a complete analysis of the water supply should be obtained.

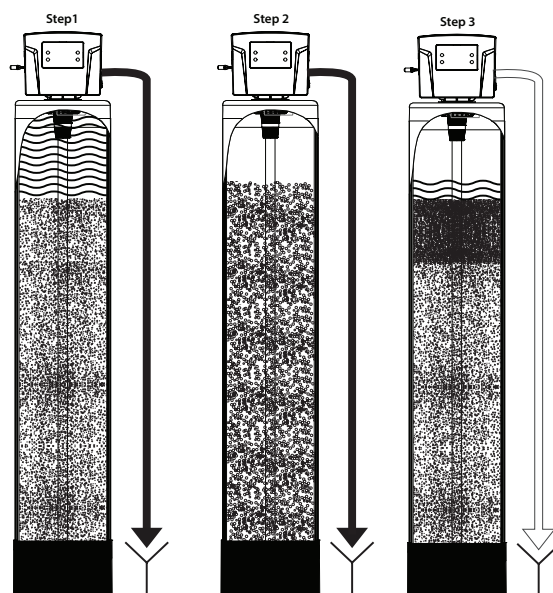
BM Filter

This media acts as a catalyst for the removal of iron and manganese from the water but require pre-oxidation. This media removes the iron and manganese from the water. This is not recommended to remove hydrogen sulfide from the water and requires high pH water. The media is not sacrificial hence no replenishment is required.

Control Valve Regeneration Sequence

The regeneration cycle goes through 3 steps.

1. **Backwash (minimum 30 psi inlet pressure required):** During the backwash cycle, water flows upwards through the bed, expanding the media and carrying any contaminants trapped within it to the drain.
2. **Rapid Rinse:** During the rapid rinse cycle, water flows downwards through the bed, settling the media and carrying any precipitated contaminants trapped within it to the drain.
3. **In-Service Position:** The unit then returns to the In-Service position. While this happens water continues to enter the tank.



CAUTION!

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

UNPACKING / INSPECTION

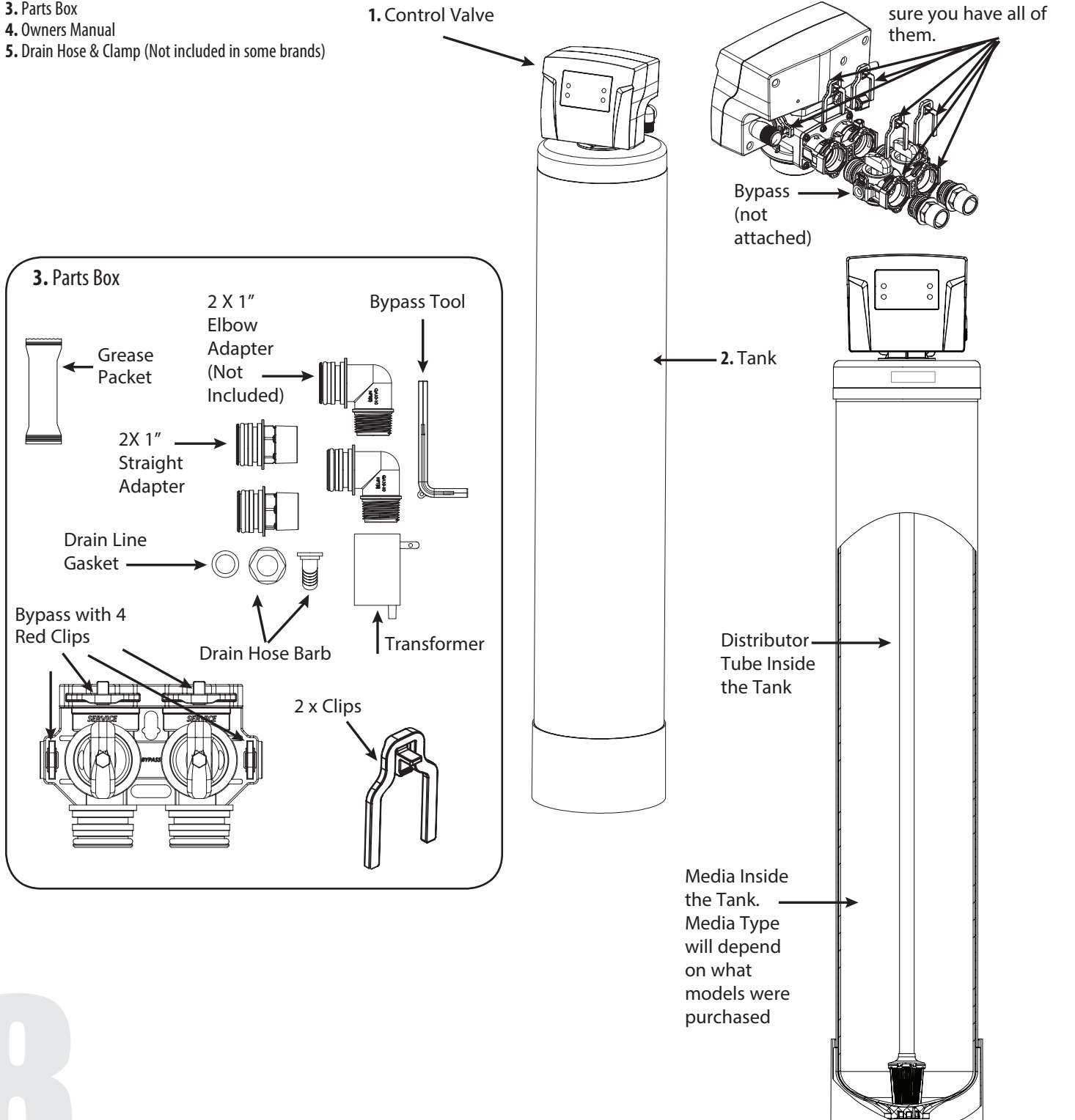
Be sure to check the entire unit for any shipping damage or parts loss. Also note damage to the shipping cartons. Contact the transportation company for all damage and loss claims. The manufacturer is not responsible for damages in transit.

Small parts, needed to install the filter, are in a parts box. To avoid loss of the small parts, keep them in the parts bag until you are ready to use them.

What is included in the box?

For Models 75,100,150, TO-200, Birm-200, you will expect the following. Shipping Carton Quantity – 1

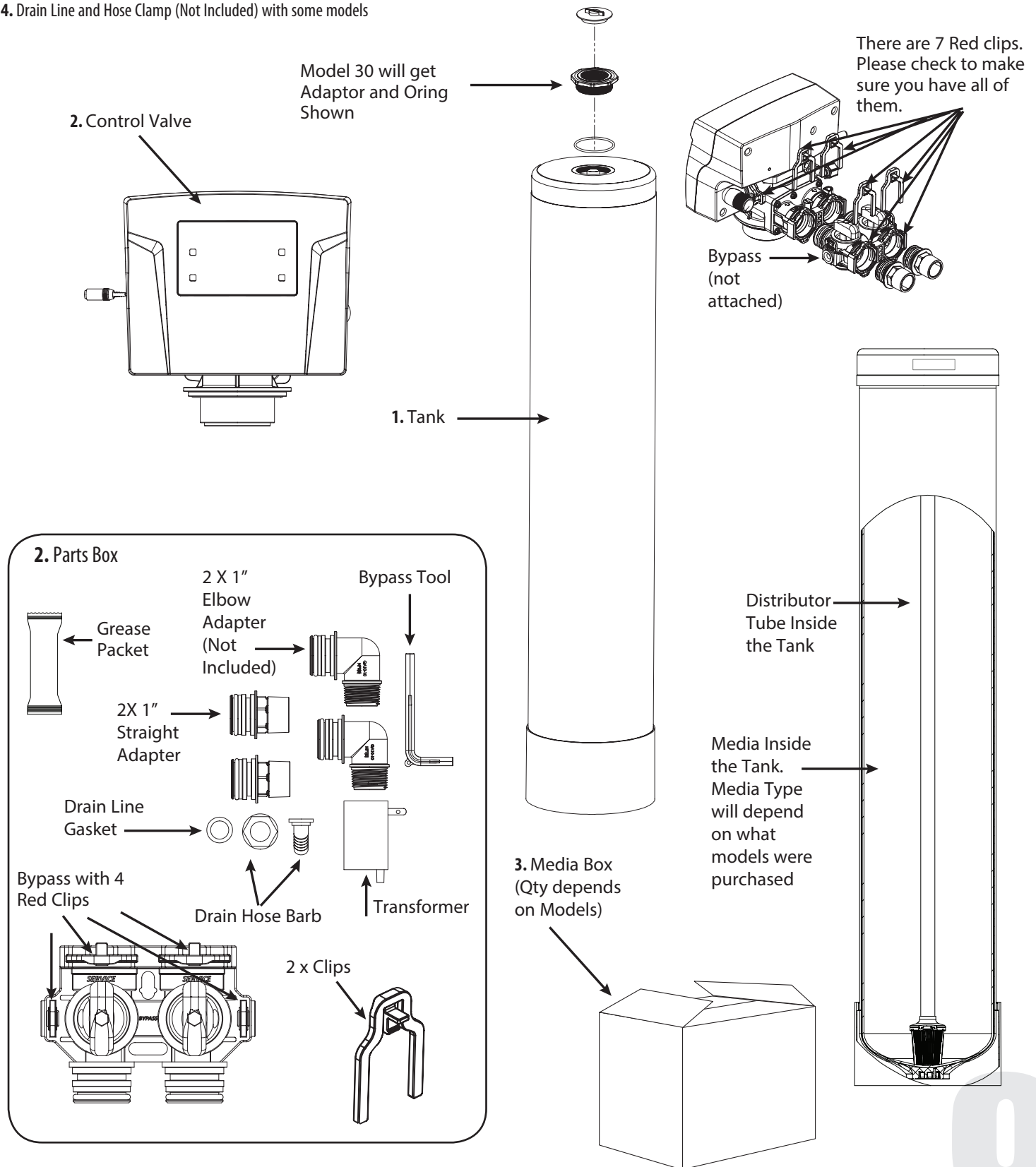
1. Control Valve
2. Tank
3. Parts Box
4. Owners Manual
5. Drain Hose & Clamp (Not included in some brands)



For Models 20,30, the media and Control Valve is packaged separately in carton and bags

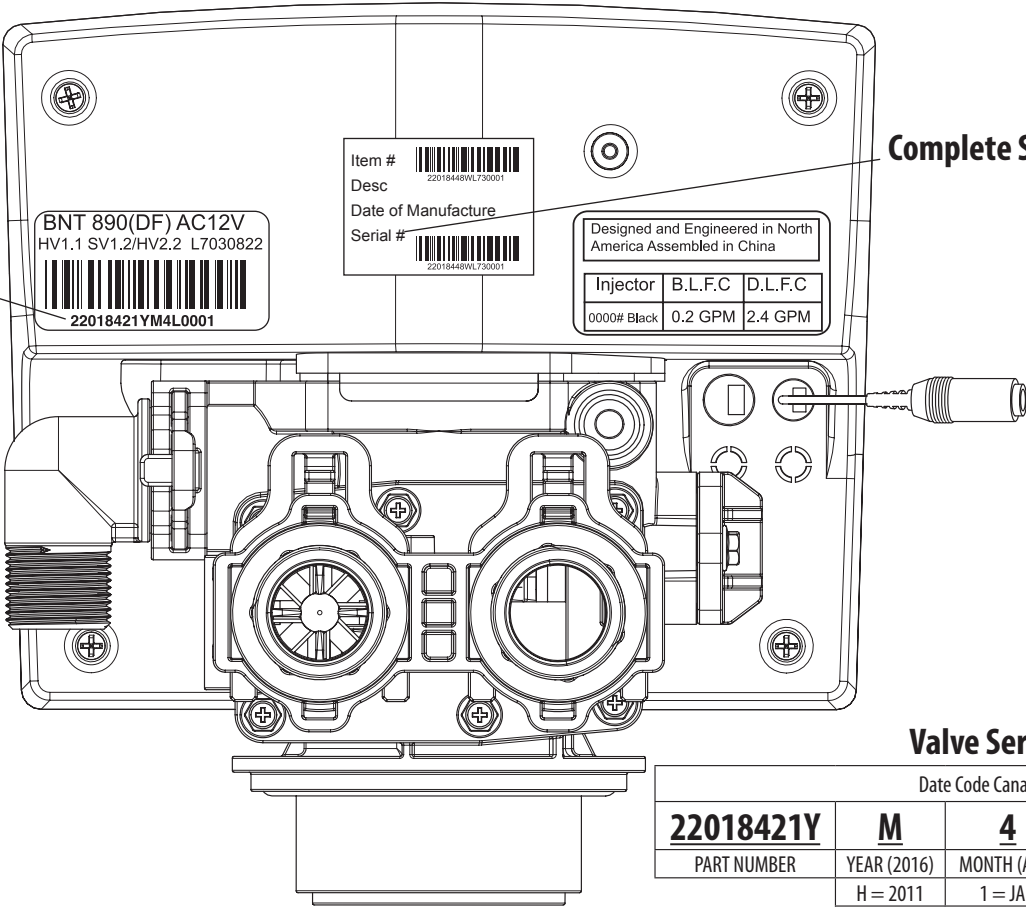
What is included with 20,30 models?

1. Tank (Model 30 will get an Adapter and Oring attached to the tank)
2. Control Valve with Parts Box
3. Media Boxes (Qty 2 for 20, Qty 3 for 30)
4. Drain Line and Hose Clamp (Not Included) with some models



Check Valve Type and Valve Serial #

Check to make sure Valve Type if Downflow (DF) (left Sticker shown below). The right Sticker shows the serial # of the control valve. The middle Sticker is dataplate which provides information of Serial # and Date of Manufacture of complete system. Both Serial # labels are important for troubleshooting.



Valve Serial #:

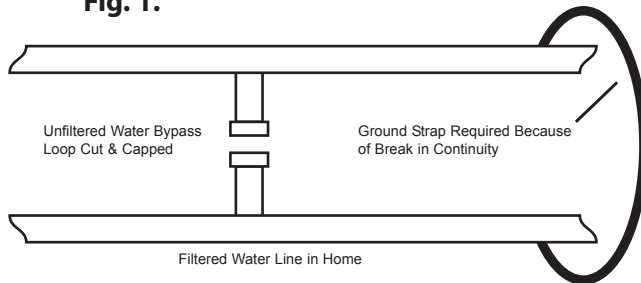
Date Code Canature Valve				
22018421Y	M	4	L	0001
PART NUMBER	YEAR (2016)	MONTH (APR)	DAY of MONTH (21)	BATCH NUMBER
	H = 2011	1 = JAN	1	
	I = 2012	2 = FEB	2	
	J = 2013	3 = MAR	3	
	K = 2014	4 = APR	4	
	L = 2015	5 = MAY	5	
	M = 2016	6 = JUN	6	
	N = 2017	7 = JUL	7	
	O = 2018	8 = AUG	8	
	P = 2019	9 = SEP	9	
	Q = 2020	A = OCT	A = 10	
		B = NOV	B = 11	
		C = DEC	C = 12	
			D = 13	
			E = 14	
			F = 15	
			G = 16	
			H = 17	
			I = 18	
			J = 19	
			K = 20	
			L = 21	
			M = 22	
			N = 23	
			O = 24	
			P = 25	
			Q = 26	
			R = 27	
			S = 28	
			T = 29	
			U = 30	
			V = 31	

BEFORE INSTALLATION

Make sure you have a copy of your most recent water test results. If your water has not been tested previously you can contact your supplier of this product to obtain a water sample bottle to be sent to one of our facilities for a free analysis. **It is important that this product not be installed until you have this information.**

In all cases where metal pipe was originally used and is later interrupted by poly pipe or the Noryl bypass valve or by physical separation, an approved ground clamp with no less than #6 copper conductor must be used for continuity, to maintain proper metallic pipe bonding.

Fig. 1.



Inspecting and Handling Your Filter*

Inspect the equipment for any shipping damage. If damaged, notify the transportation company and request a damage inspection. Damage to cartons should also be noted.

Handle the filter unit with care. Damage can result if it is dropped or set on sharp, uneven projections on the floor.

Do not turn the filter unit upside down.

To Insure this Product Functions Properly:

Your feed water line size to the unit must be a minimum of 3/4 inch with an operating pressure of no less than 30 psi and no more than 125 psi.

MECHANICAL:

Do not use petroleum based lubricants such as petroleum jelly, oils or hydrocarbon based lubricants. Use only 100% silicone lubricants (grease packet provided in parts kit). All plastic connections should be hand tightened only. Teflon tape may be used on connections that do not use an O-ring seal. Do not use pliers or pipe wrenches except where indicated by Nut shape (eg. pipe adapters) All plumbing must be completed according to local codes. Soldering connections should be done before connecting any pieces to the pipe as excessive heat can damage them.

Tools Required for Installation:

NOTE: We recommend installation only be completed by a competent installer or plumbing professional to insure this product is installed in accordance with local plumbing codes.

- ▶ Two adjustable wrenches
- ▶ Additional tools may be required if modification to home plumbing is required.
- ▶ Plastic inlet and outlet fittings are included with the filter. To maintain full valve flow, 3/4" or 1" pipes to and from the filter fittings are recommended. You should maintain the same, or larger, pipe size as the water supply pipe, up to the filter inlet and outlet.
- ▶ Use copper, brass, or PEX pipe and fittings.
- ▶ Some codes may also allow PVC plastic pipe.
- ▶ ALWAYS install the included bypass valve, or 3 shut-off valves. Bypass valves let you turn off water to the filter for repairs if needed, but still have water in the house pipes.
- ▶ 5/8" OD drain line is needed for the valve drain. A 10' length of hose is not included with some brands.

NOTE

All government codes and regulations governing the installation of these devices must be observed.



CAUTION!

If the ground from the electrical panel or breaker box to the water meter or underground copper pipe is tied to the copper water lines and these lines are cut during installation of the Noryl bypass valve and/or poly pipe, an approved grounding strap must be used between the two lines that have been cut in order to maintain continuity. The length of the grounding strap will depend upon the number of units being installed and/or the amount of copper pipe being replaced with plastic pipe.

See Fig. 1.

NOTE

Check your local electrical code for the correct clamp and cable size.

NOTE

If a severe loss in water pressure is observed when the filter unit is initially placed in service, the filter tank may have been laid on its side during transit. If this occurs, backwash the filter to "reclassify" the media.

*NOTE

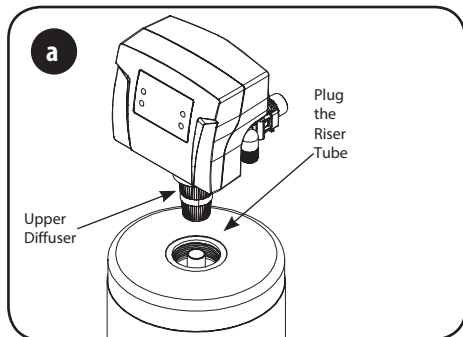
Due to transportation and climatic conditions all connections including the valve to the tank need to be checked at time of installation and tightened if necessary.

PREPARATIONS

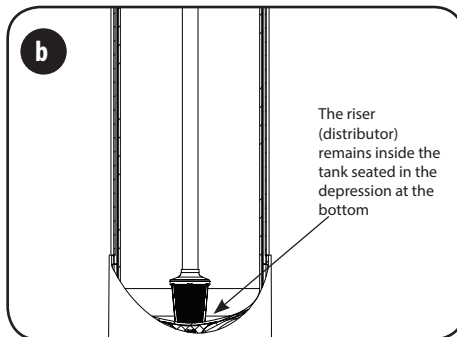
Media Installation (When Necessary). Models including and higher than (Models 20,30,) of media are shipped with separate media in pails or boxes. Models lower than 1.5 CF of media come loaded with media and this step can be skipped for new installation.

CAUTION!

The unit should be depressurized before installing or replacing media

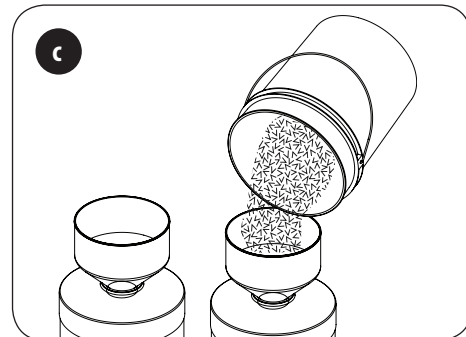


a) Remove the valve from the mineral tank. Add bottom cone only in TO Models

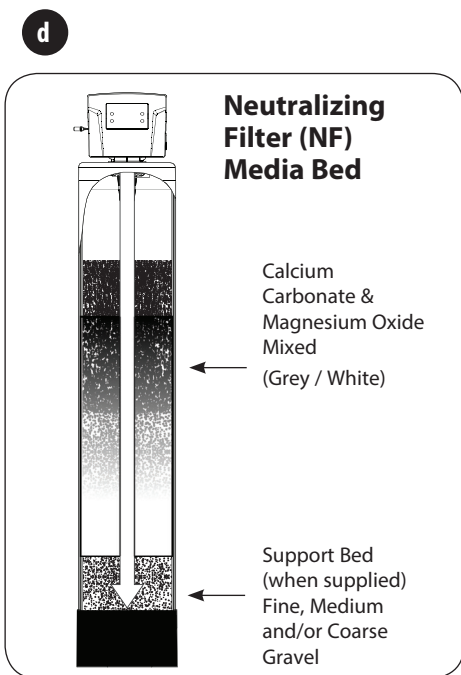


b) Temporarily plug the open end of the riser tube to ensure that no resin or gravel falls down into the distribution. The riser (distributor) remains inside the tank seated in the depression at the bottom.

Plug tube with a tape. Remove after media is loaded.

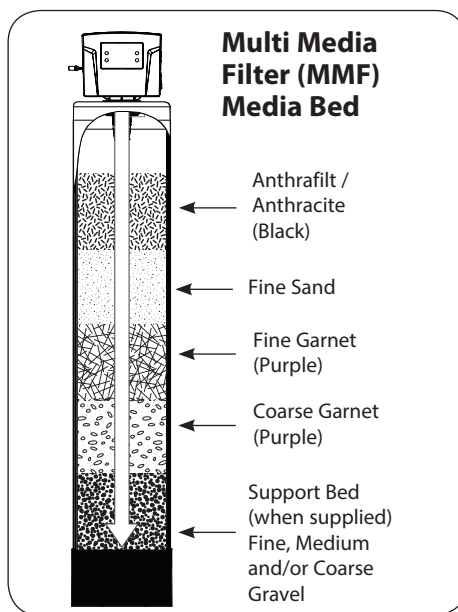


c) Fill support bed first. The media will not always spill down inside the tank and may need to be swept inside. The large funnel (sold separately makes filling the tank easier and neater. (Or an empty 1 gallon or 4 liter container with the bottom cut out makes a good funnel.)

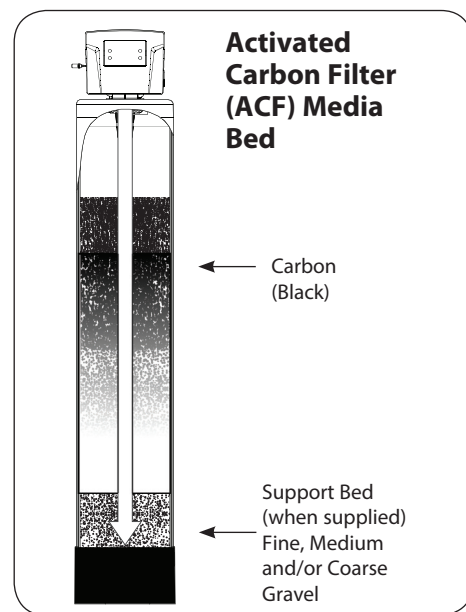


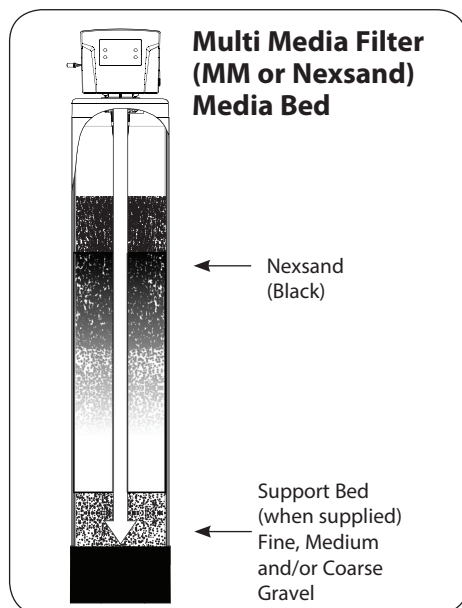
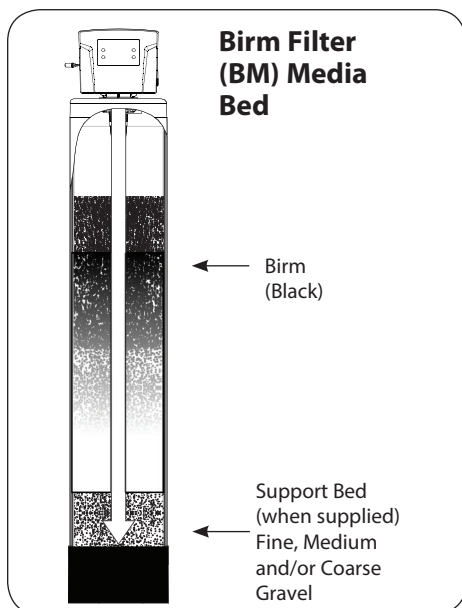
Fill tank one quarter full of water to protect distribution during gravel installation.

Place the media into the tank in the order indicated above. Slowly and carefully add the gravel support bed and the filtration media leveling each layer as it is placed into the tank.



Fill support bed (if supplied) first. During the filling process, ensure the distributor tube stays on the bottom of the tank, reasonably centered. Remove the tape from the distributor once media is loaded. Whenever possible, fill the tank outdoors to avoid problems with dust. If filling indoors, a dust mask should be worn.





CAUTION!

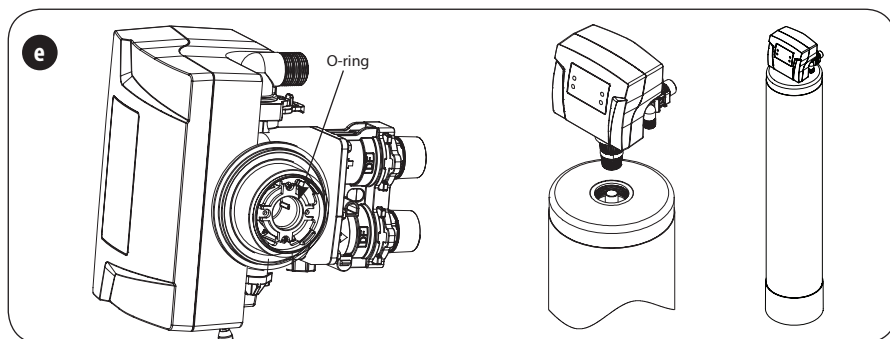
DO NOT use petroleum based lubricants as they will cause swelling of O-ring seals.

CAUTION!

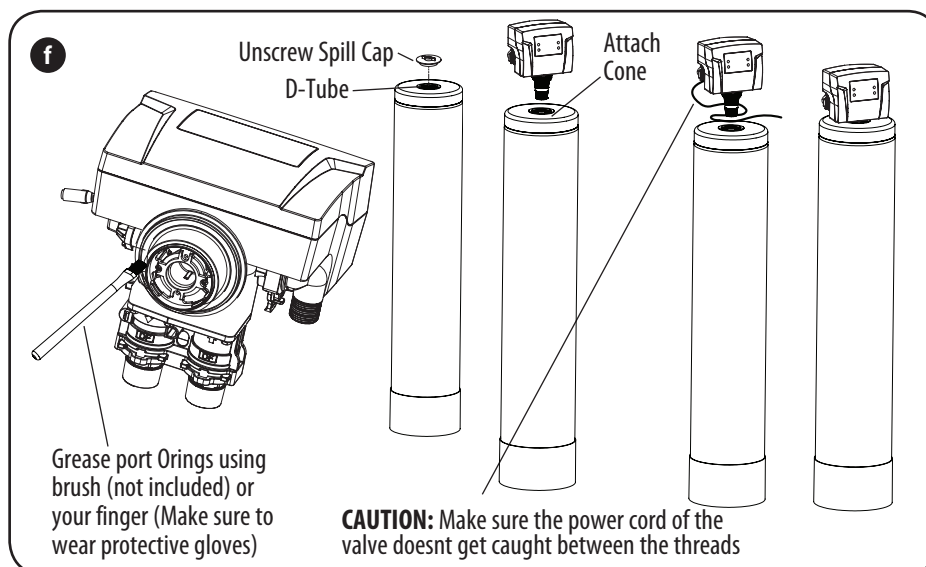
Make sure that the unit is de-pressurized before conducting this task.

NOTE

Some medias like those used in NU Models are sacrificial and deplete faster depending on inlet water conditions and usage. The media replenishment is more frequent in high water usage and more acidic water cases. The dome hole models are available and supplied in which the dome hole is available for a quick addition or replenishment of media in the tank.

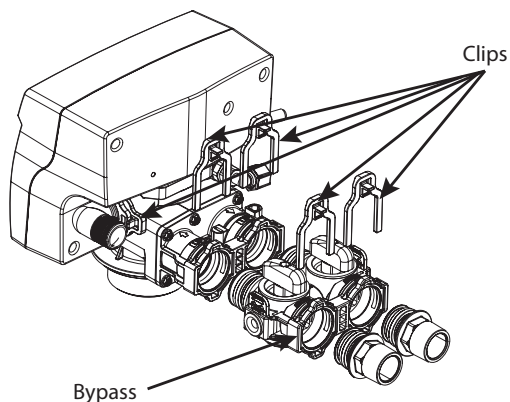


f. Unplug the riser tube, carefully position the valve over it and turn the valve into the threads in the fiberglass tank, tightening securely into tank. **Note:** Ensure that the internal O-ring in the valve fits securely over the riser tube. Silicone grease (part # 92360) or other food grade lubricant may be applied to the O-ring to ease installation of the riser tube.



d) Lube the bottom Valve Orings with the grease supplied, Attach the Upper Cone. Unscrew the spill cap. Carefully Slide the D-Tube inside the Valve and Screw the Valve inside the Tank such that the power cord doesn't get caught between the valve and the tank.

PREPARATIONS



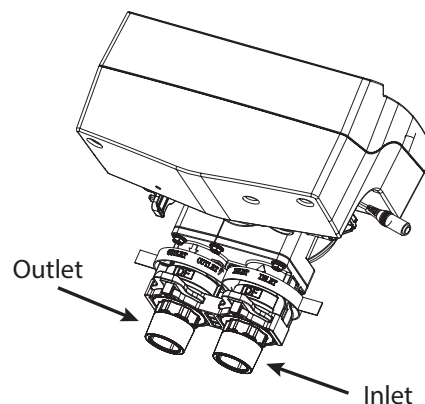
Attaching Bypass to Valve (If required in case of replacing the control valve. The new control valve comes with bypass attached)

Make sure the bypass is attached well to the control valve. Connect the straight or elbow connectors to the bypass with red clips. Connect the inlet and outlet of the water Softener to the plumbing of the house. The control valve must not be submitted to temperatures above 43°C (110°F). When sweat fittings are used, to avoid damaging the control valve, solder the threaded copper adapters to the copper pipe and then, using Teflon tape, screw the assembly into the bypass valve. Do not use pipe thread compound as it may attack the material in the valve body.

INSTALLATION STEPS

Determine the best location for your water Softener, bearing in mind the location of your water supply lines, drain line and 120 volt AC electrical outlet. Subjecting the Softener to freezing or temperatures above 43°C (110°F) will void the warranty.

Please notice the inlet and outlet labels on the valve as shown here to determine the position of the equipment:



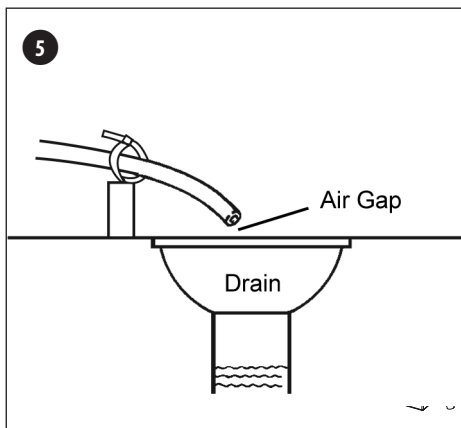
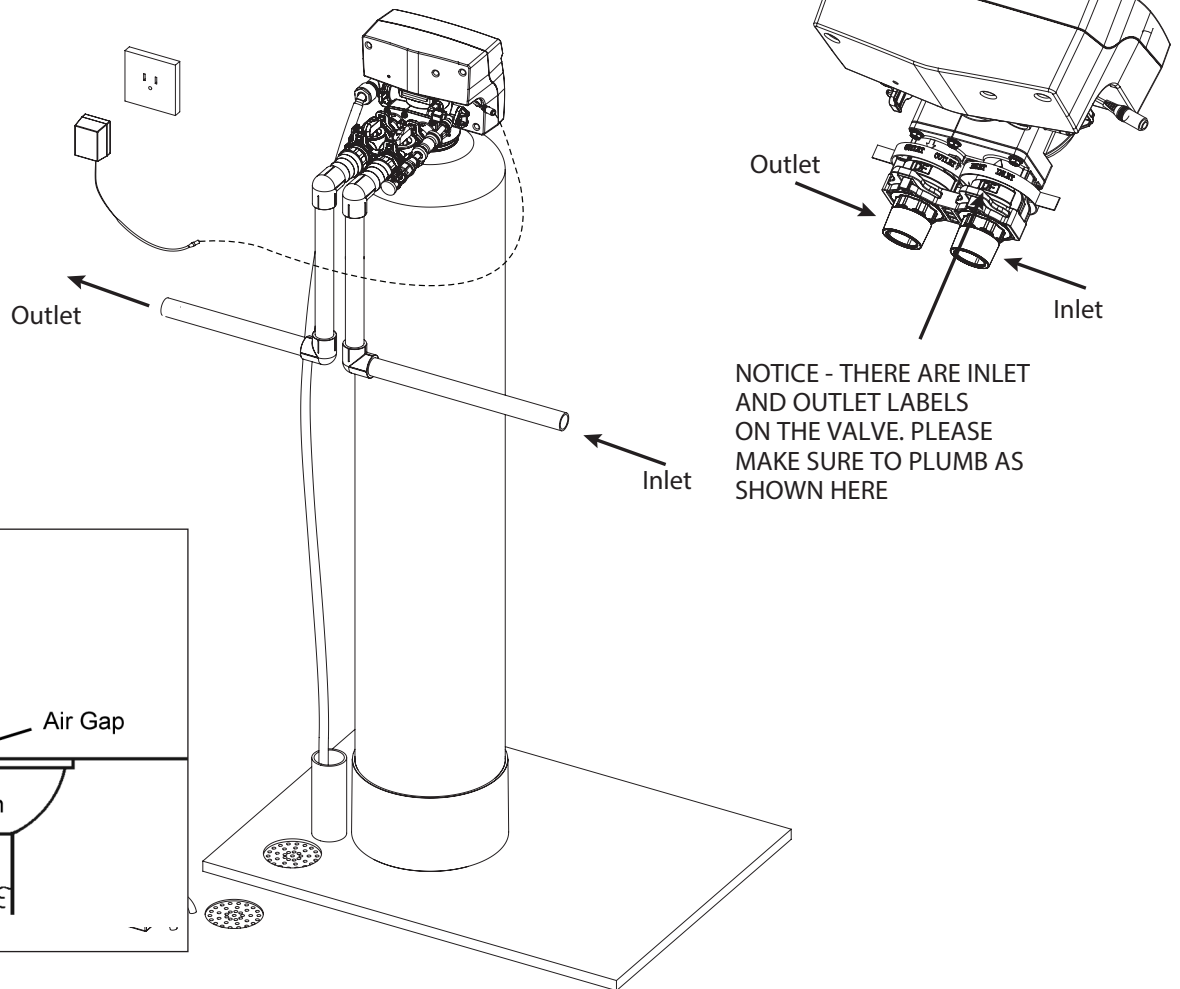
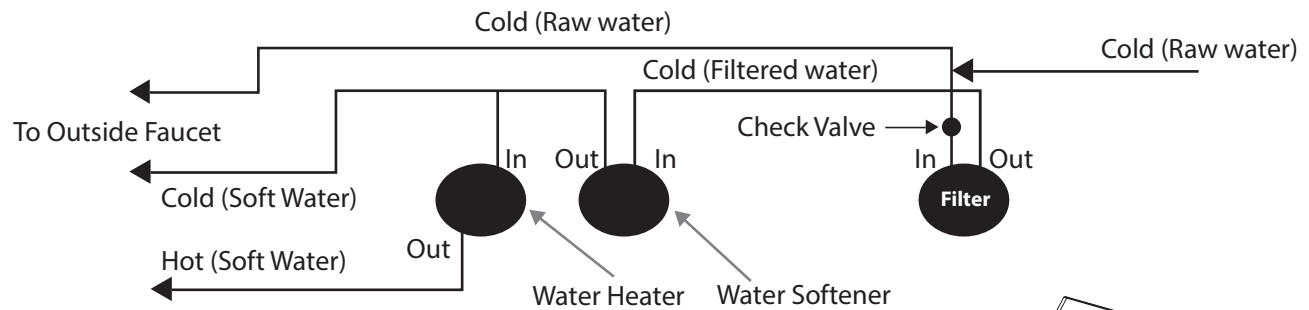
Facts to Remember When Planning Your Installation

1. All installation procedures must conform to local and state or provincial plumbing codes.
2. Outside faucets used to water lawns and gardens should not supply untreated water, replace untreated water with feed water to the unit. If necessary to do this please install check valve, see page 14. A new water line is often required to be connected to supply untreated water to the inlet of the water filter and to the outside faucets.
3. Make sure the bypass is attached well to the control valve. Connect the straight or elbow connectors to the bypass with red clips. Connect the inlet and outlet of the water filter to the plumbing of the house. The control valve must not be submitted to temperatures above 43°C (110°F). When sweat fittings are used, to avoid damaging the control valve, solder the threaded copper adapters to the copper pipe and then, using Teflon tape, screw the assembly into the bypass valve.
Do not use pipe thread compound as it may attack the material in the valve body.
4. Apply Teflon Tape and Orings to the fittings
5. Connect Filter to the house plumbing. Any solder joints near the valve must be done before connecting any piping to the valve. Always leave at least 6" (152 mm) between the valve and joints when soldering pipes that are connected to the valve. Failure to do this could cause damage to the valve.
6. **Drain Line connection:** Using Teflon tape, screw the 1/2" hose barb and attach oring into the drain port in the valve. Attach 1/2" drain hose (Supplied with some models and brands) to the hose barb and tighten securely with a hose clamp (Supplied with some models and brands). Run the drain line to a floor drain or a laundry drain. Complete any necessary plumbing.
7. Using the Allen Key (included), place the unit in the bypass position. Slowly turn on the main water supply. At the nearest cold treated water tap nearby remove the faucet screen, open the faucet and let water run a few minutes or until the system is free of any air or foreign material resulting from the plumbing work.
8. Make sure there are no leaks in the plumbing system before proceeding. Close the water tap when water runs clean.
9. Open the brine tank / cabinet salt lid and add water until there is approximately 3" (75 mm) of water in the tank. Do not add salt to the brine tank at this time.

INSTALLATION

Connect Filter to the house plumbing. Any solder joints near the valve must be done before connecting any piping to the valve. Always leave at least 6" (152 mm) between the valve and joints when soldering pipes that are connected to the valve. Failure to do this could cause damage to the valve.

Correct Installation of the Check Valve: Install 1" check valve on inlet of bypass valve. The check valve needs to be installed at the highest possible level of the plumbing line to avoid air trap. Please see an example below:



NOTE

Waste connections or drain outlet shall be designed and constructed to provide for connection to the sanitary waste system through an air-gap of 2 pipe diameters or 1 inch (22 mm) whichever is larger.



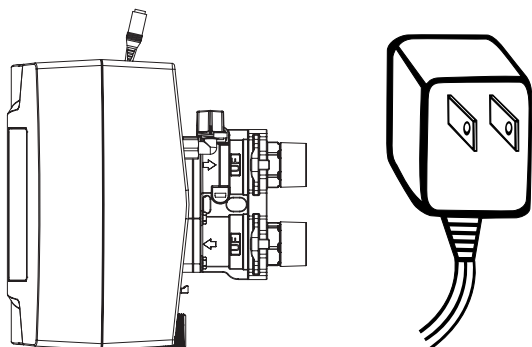
CAUTION!

Never insert drain line directly into a drain, sewer line, or trap. Always allow an air gap between the drain line and the wastewater to prevent the possibility of sewage being back-siphoned into the conditioner.

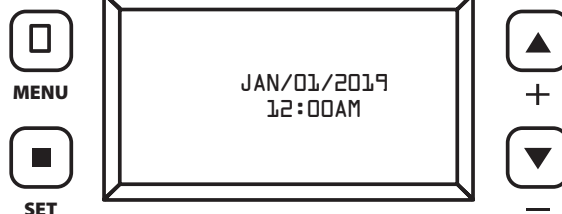
STARTUP INSTRUCTIONS

1. Connect the Transformer to the Valve

Plug the 12-volt transformer into a 120 VAC 60 Hz outlet.



Screen Display Button Configuration:



Key Pad Settings:



MENU

This function is to enter the basic set up information required at the time of installation.



SET

This function is to accept the values if changed and advance to the next page in the menu.



+

-

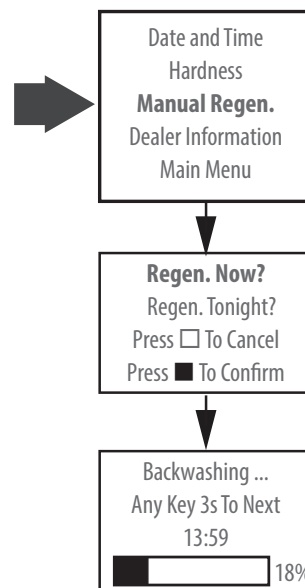
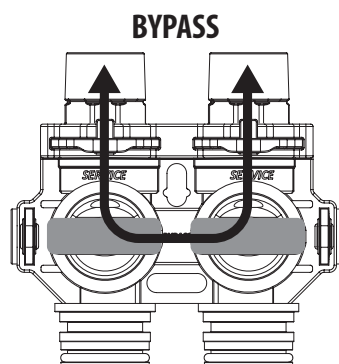
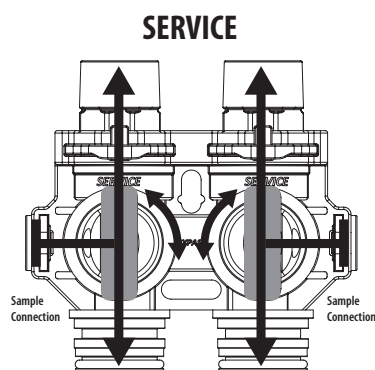
These buttons are used to increase or decrease the value of the settings while in the programming mode.

2. Manually Regenerate the Valve

Manually Regenerate the Valve and move it to backwash position.

Press Menu Key  and Scroll down  using Up and Down Arrow

buttons to "Manual Regen". Press "SET"  Select "Regen Now"



4a. **(CARBON UNITS – Model T0)** Open the inlet on the bypass valve slightly and very slowly allow water to enter the unit. (If the water enters too quickly it will push the media or carbon up into the control valve and get plugged).

Once the unit has filled sufficiently that water is at least equal to the height of the top of the media shut down the water for 15 – 20 minutes for the carbon to soak. Unplug the power cable. After the carbon has soaked for the recommended time continue by plugging the power cable back in.

4b. **(Other Models)** Open the inlet on the bypass valve slowly and allow water to enter the unit. (The outlet of the bypass should remain closed to prevent any fines or debris from entering the plumbing system. Allow all air to escape from the unit before turning the water on fully then allow water to run to drain for 3-4 minutes.

5. Unplug the power cord from the power supply, open inlet. Check the drain line flow. Allow the water to run for 30 minutes.

6. Plug in the valve and the valve will automatically advance to the SERVICE position. Open the outlet valve on the bypass, then slowly open the nearest treated water faucet and allow the water to run until clear, close the tap and replace the faucet screen.

7. The Valve is already programmed from factory for AIO Models. Please set up date and time of day as shown on next page.

Set Up Current Time of Day and Regeneration Time When Filter Should Regenerate When No one uses Water in House.

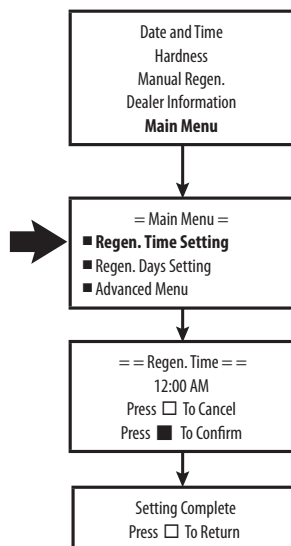
Press Menu Key ☐ and Select "Date and Time" using "Set" ☐ button and set

For setting the regeneration time, Press Menu Key ☐ and Select Main Menu

till you hear a beep and select Regen time

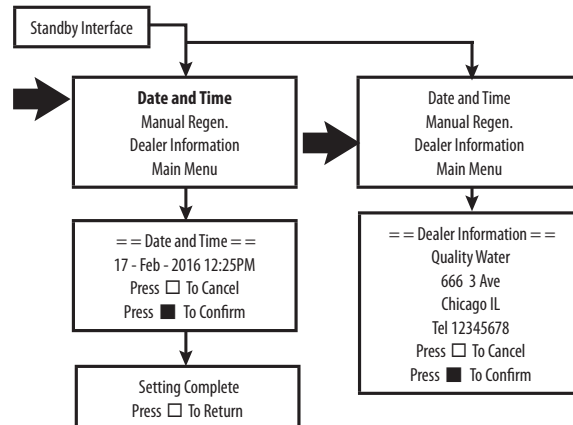
Setting the Regeneration Time

Press **Menu** key. Press **—** to advance to Advanced Menu
Press **SET** or until you hear a beep
Press **+** or **—** to choose menu option. Press **SET** to enter
Press **+** or **—** to change option. Press **SET** to accept



Setting Time of Day and Dealer Information

Press **Menu** key
Press **SET** or until you hear a beep
Press **+** or **—** to choose menu option. Press **SET** to enter
Press **+** or **—** to change value. Press **SET** to accept



MAINTENANCE INSTRUCTIONS

Care of Your Filter

To retain the attractive appearance of your new water filter, clean occasionally with a mild soap solution. Do not use abrasive cleaners, ammonia or solvents. Never subject your filter to freezing or to temperatures above 43°C (110°F).

Replacing Media Bed

The media bed in a neutralizing filter is slowly dissolved and has to be replaced. The frequency of replacement varies, depending on water quality - consult your dealer to determine the expected life of your media bed.

IMPORTANT WARRANTY AND MAINTENANCE INFORMATION

Please have the information below filled out and available when calling in for parts or warranty:

Model number:
Serial number:
Valve Serial number:
Date installed:

Additional notes:

SERVICING 89 VALVE

Before Servicing

1. Turn off water supply to conditioner :

a. If the conditioner installation has a 3 valve bypass system first open the valve in the bypass line, then close the valves at the conditioner inlet & outlet.

b. If the conditioner has an integral bypass valve, put it in the bypass position.

c. If there is only a shut-off valve near the conditioner inlet, close it.
2. Relieve water pressure in the conditioner by stepping the control into the backwash position momentarily. Return the control to the In Service position.
3. Unplug Electrical Cord from outlet.
4. Disconnect drain line connection.

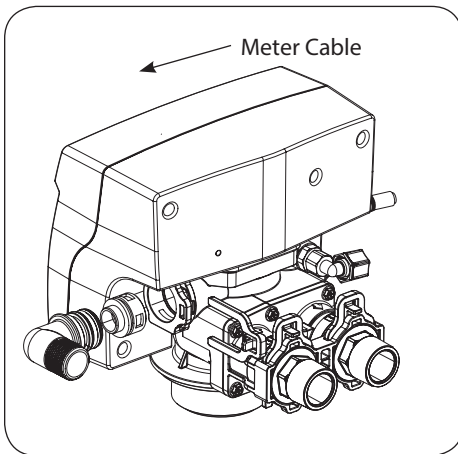
**CAUTION!**

Disassembly while under pressure can result in flooding. Always follow these steps prior to servicing the valve.

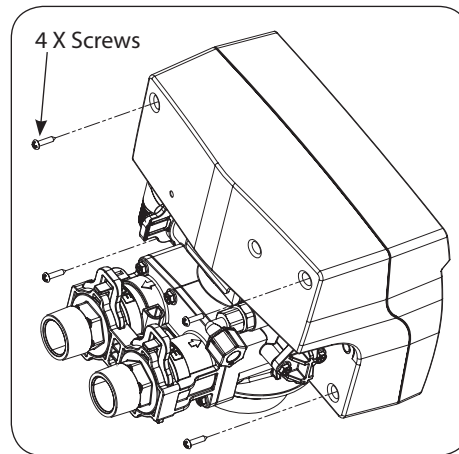
**WARNING!**

ELECTRICAL SHOCK
HAZARD! UNPLUG THE UNIT
BEFORE REMOVING THE COVER OR ACCESSING ANY INTERNAL CONTROL PARTS

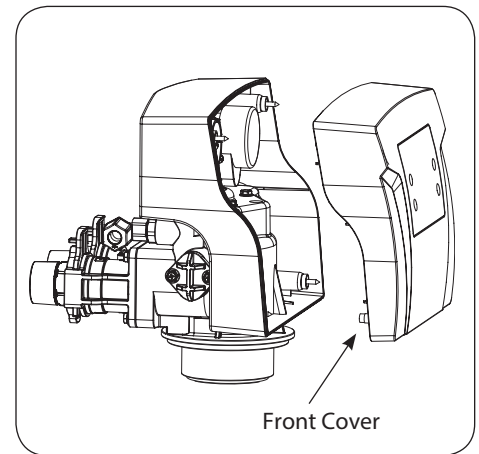
TIMER REPLACEMENT



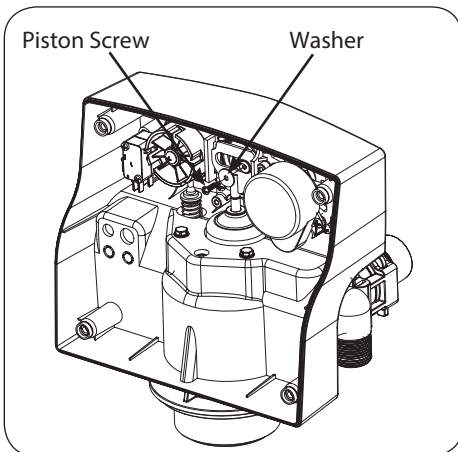
1. Disconnect the meter cable from the meter. (If flow meter is attached)



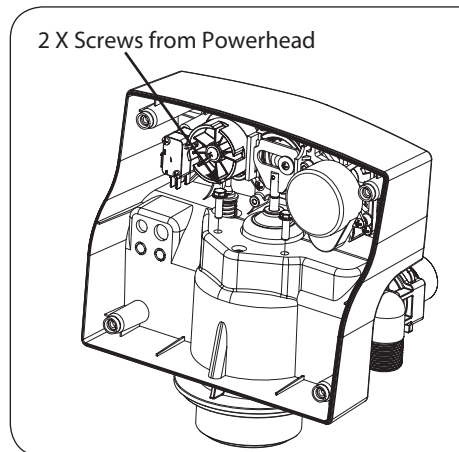
2. Remove four screws from the back of the valve cover



3. Remove the front cover of the valve.



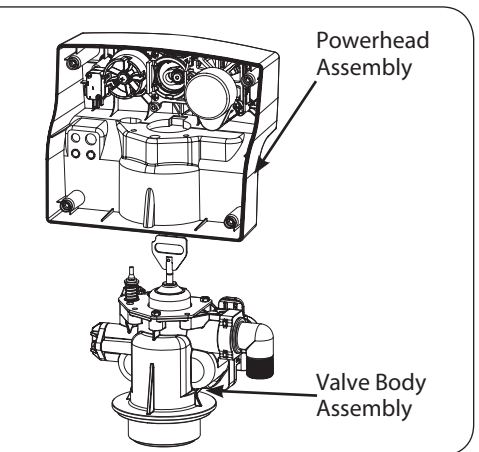
4. Remove the piston screw and washer from the piston rod.



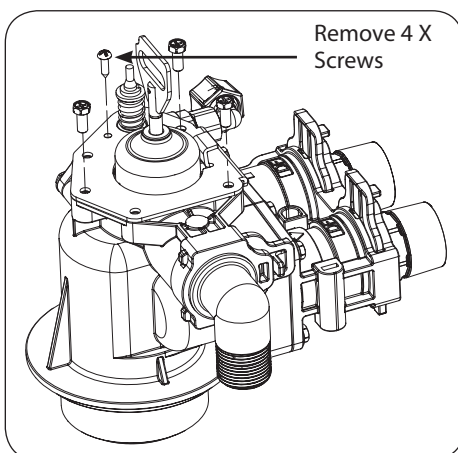
5. Remove the two screws from the powerhead as shown

6. Lift the powerhead from the valve body assembly

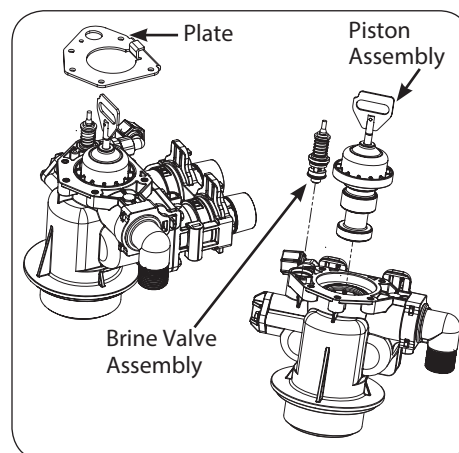
7. Replace the powerhead by reverse following the steps in this section



PISTON ASSEMBLY REPLACEMENT

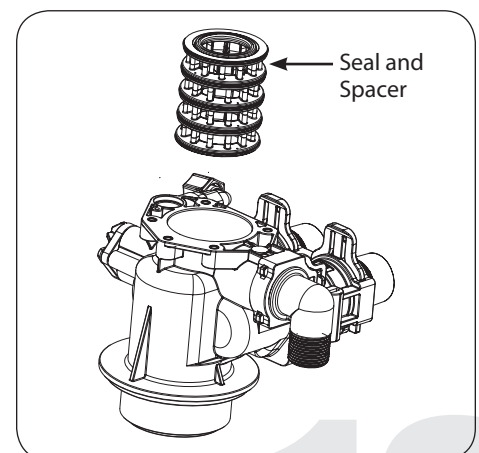


1. Follow steps 1 to 6 of timer /Powerhead replacement.
2. Remove four screws from the plate on the valve body.



3. Remove the plate from the valve body and pull the Piston Assembly from the valve. The brine valve assembly can also be removed in this stage.

4. Remove the seal spacer assembly, grease it with silicone lubricant and put back in.



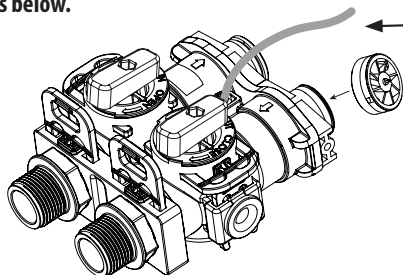
5. Replace piston assembly followed by timer assembly.
6. Replace the piston assembly and reverse following steps in this section

REPLACING THE BYPASS AND METER CABLE

If valve is manufactured before March 20th, 2018, and customer wishes to replace or service impeller on bypass. Customer can order 60010238. If customer wishes to replace to new design, then follow the steps below.

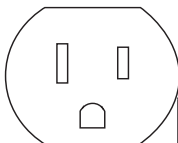
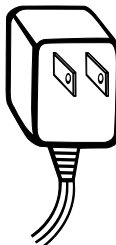
60095101

Bypass comes with Meter and Grey Meter Cable



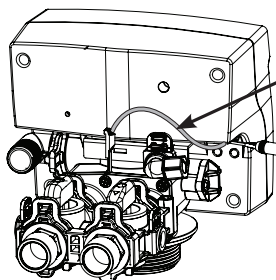
Step 1

Unplug the power from the wall socket.



Step 2*

Remove 2 screws and clips from bypass.

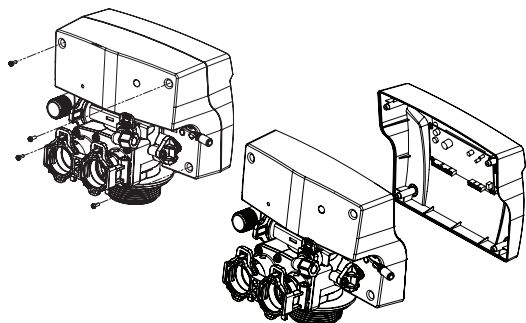


Disconnect the meter cable from the bypass.

*NOTE

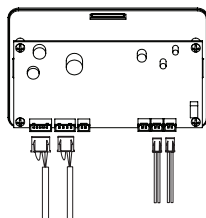
Water to the household needs to be turned off and pressure relieved before Step 2

Step 3 Remove Cover.



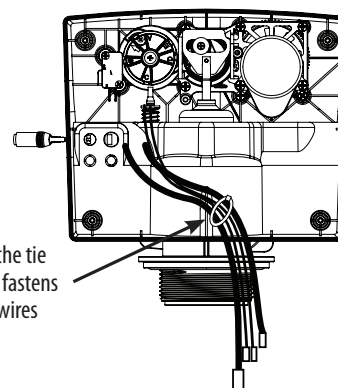
Step 4

Disconnect the cables from the front PCB display.



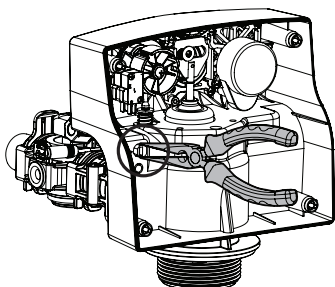
Step 5

Disconnect the cables from the rear PCB display.



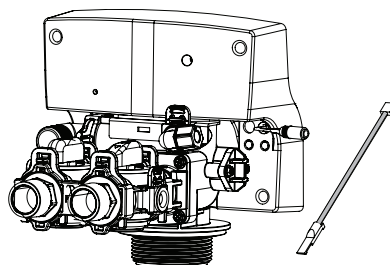
Step 6

Remove strain relief with pliers.



Step 7

Replace the old cable with the new Cable.



Step 8

Assemble the valve. Plug the power supply back into the wall socket and follow the programming shown on right:

Affects valves manufactured after March 20, 2018.

If replacing old impeller assembly to new version on Valves manufactured before March 20th 2018, programming should be adjusted on the control valve. Please see steps below:

To enter the programming press and hold the MENU button for 5 seconds to unlock the screen.

Press and hold the Up and Down Arrows.

Press the down arrow to get to METER RATIO then press SET.

Press UP or Down Arrow to choose Turbine-H and press SET.

Set as per charts on right.**

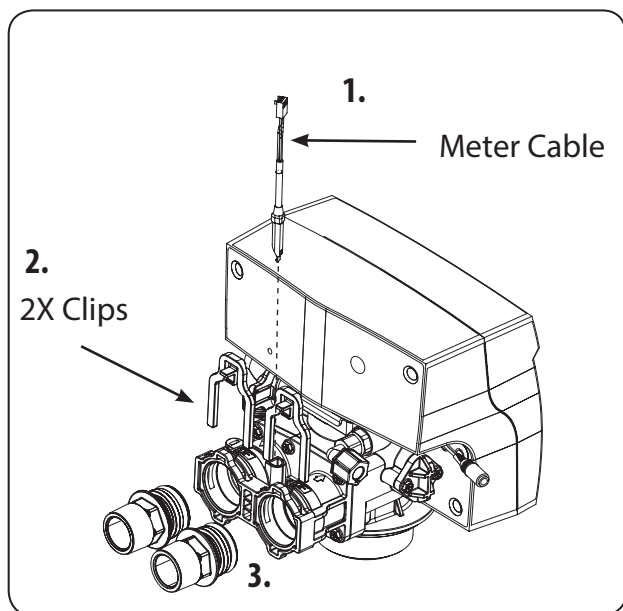
NEW

Valve Type	Unit Measure	Turbine-H	
		A	K
89 UF sSoftener	US Gallon	1.20	0.731
89 DF Softener	US Gallon	1.6	0.621
89 DF Filter	US Gallon	1.7	0.597

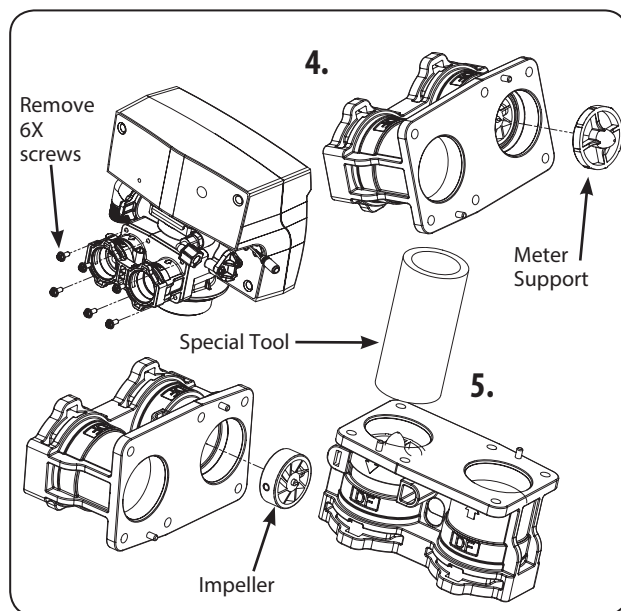
OLD

Valve Type	Unit Measure	Turbine-H	
		A	K
89 UF Softener	US Gallon	1.06	0.636
89 DF Softener	US Gallon	1.6	0.575
89 DF Filter	US Gallon	1.1	0.558

METER ASSEMBLY REPLACEMENT (For Models Manufactured before Valve Serial # Date of November 2015)

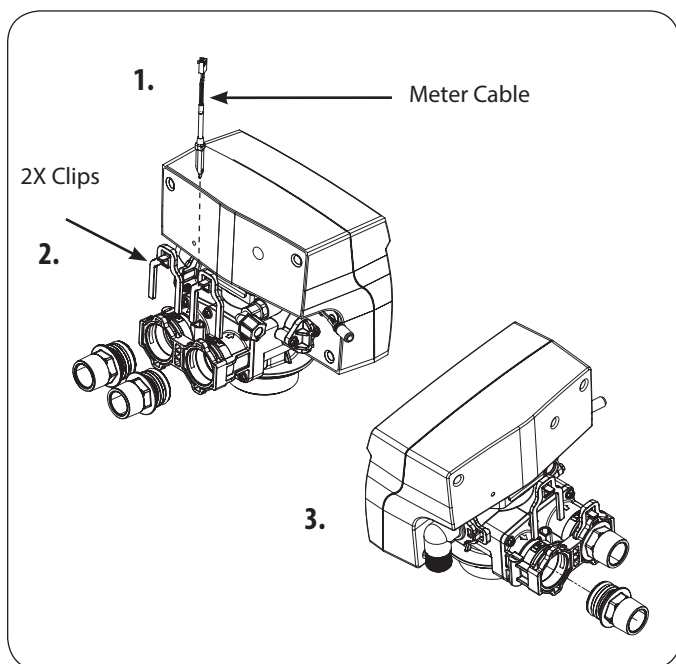


1. Disconnect the meter cable from the meter.
2. Disconnect the valve from bypass by removing clips
3. Remove the coupling adapter from the valve

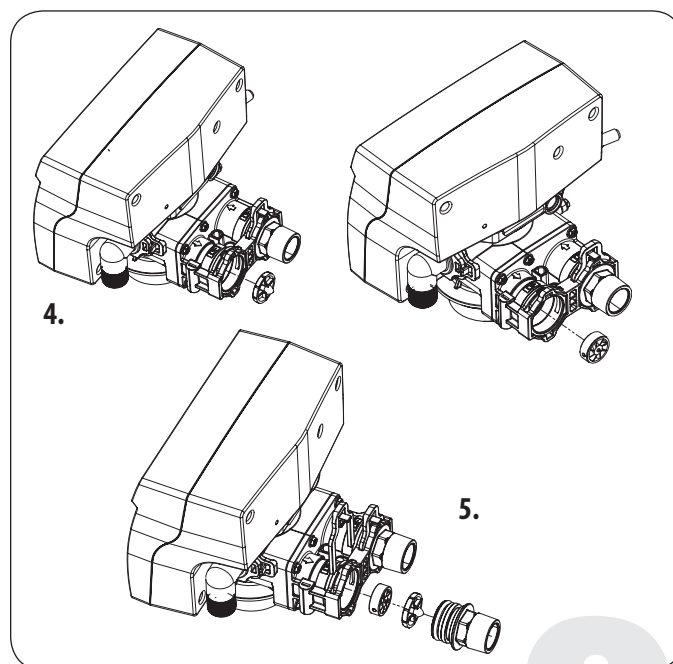


4. Remove six screws and pull out the meter support and impeller.
5. Replace meter with the help of special tool and re-assemble the removed components back in the section

METER ASSEMBLY REPLACEMENT (For Models Manufactured after Valve Serial # Date of November 2015)

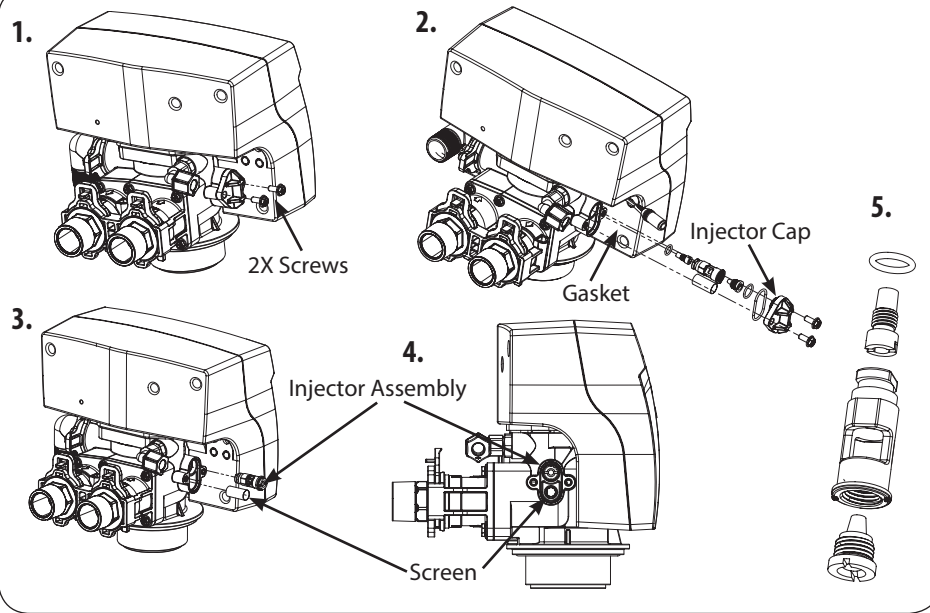


1. Disconnect the meter cable from the meter.
2. Disconnect the valve from bypass by removing clips
3. Remove the coupling adapter from the valve



4. Remove the meter support and then the impeller out from the coupling and clean it
5. Replace meter with the help of special tool and re-assemble the removed components back in the section

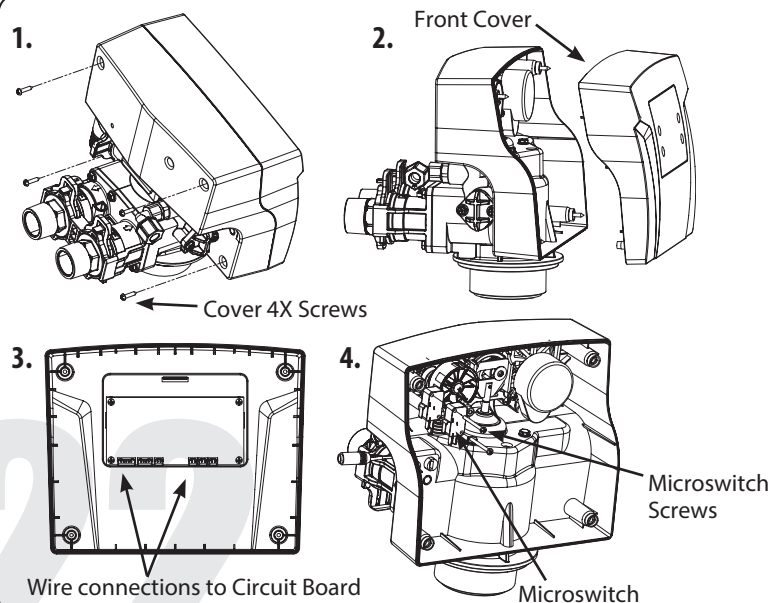
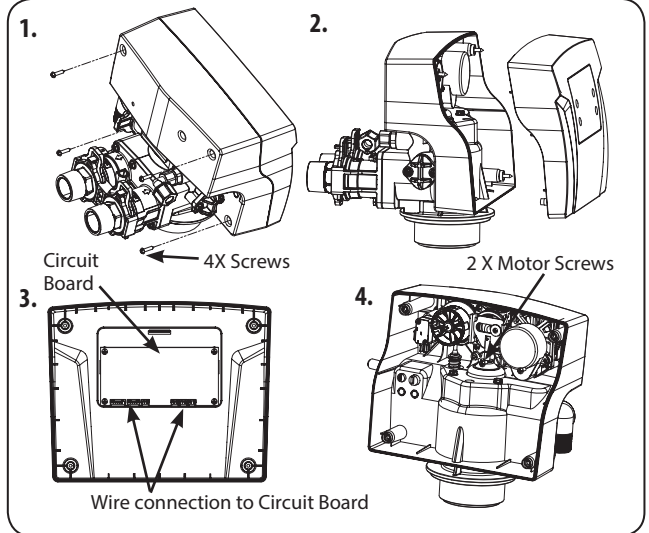
CLEAN INJECTOR ASSEMBLY



1. Remove the two screws from the injector cap
2. Pull the injector cap and gasket
3. Pull the injector assembly and Screen
4. Replace/Clean screen and injector assembly and put it back in the valve in appropriate location as shown
5. Put back the injector cap. Grease the injector assembly orings and injector cap gasket. Care should be taken to put all orings and gaskets in place and grease them so that they don't pinch

REPLACE MOTOR

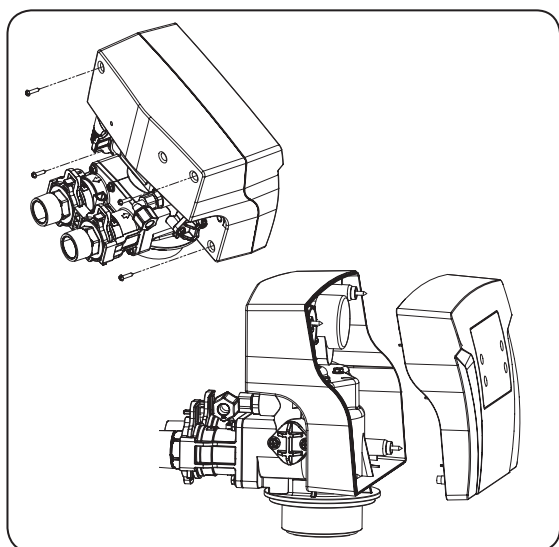
1. Remove Screws from the back of the valve and pull the cover
2. Remove all connections from the circuit board
3. Remove the two screws from the motor. Remove the motor and watch for the pin under the motor.
4. Replace the motor, connections and cover



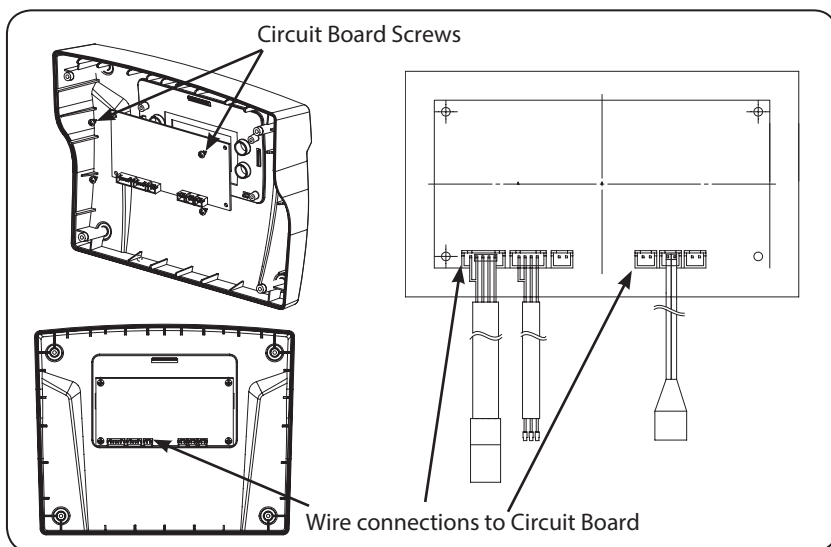
REPLACE MICROSWITCHES

1. Remove Screws from the back of the valve and pull the cover
2. Remove all connections from the circuit board
3. Remove the two screws from the microswitch
4. Replace the microswitch, connections and cover

CIRCUIT BOARD REPLACEMENT

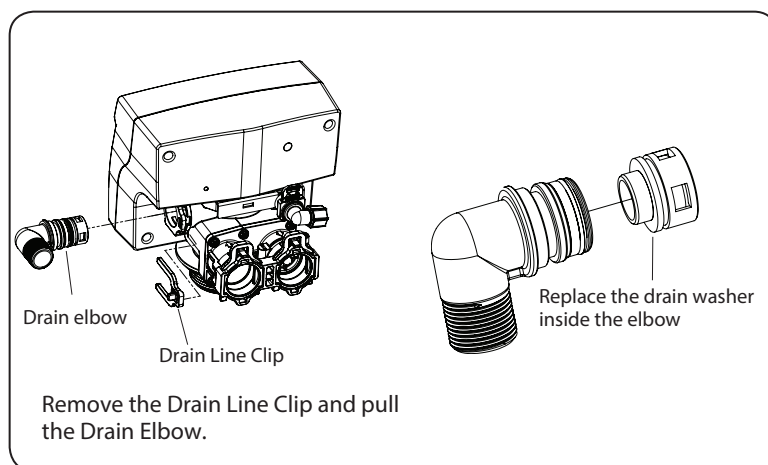


1. Remove the screws from the back of the valve and pull the front cover



2. Remove all connections from the circuit board
3. Remove the four screws from the circuit board and pull it out

DRAIN WASHER REPLACEMENT



AFTER SERVICING

1. Reconnect drain line
2. Return bypass or inlet valve to normal in service position. Water Pressure will automatically build in the filter

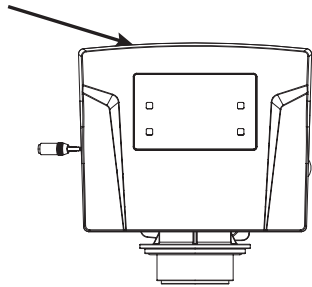
3. Check for leaks at all sealed areas. Check Drain seal with the control in the backwash position
4. Plug electrical cord into outlet
5. Set Time of Day and cycle the control valve manually to assure proper function. Make sure control valve is returned to the In Service position

NOTE

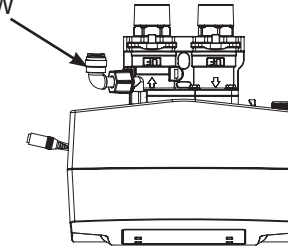
Be sure to shut off any bypass line.

PARTS BREAKDOWN

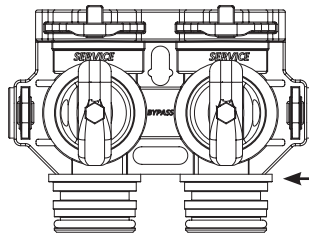
Control Valve



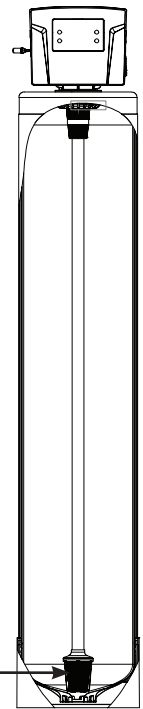
Plug - PP0812W



Bypass - 60010004

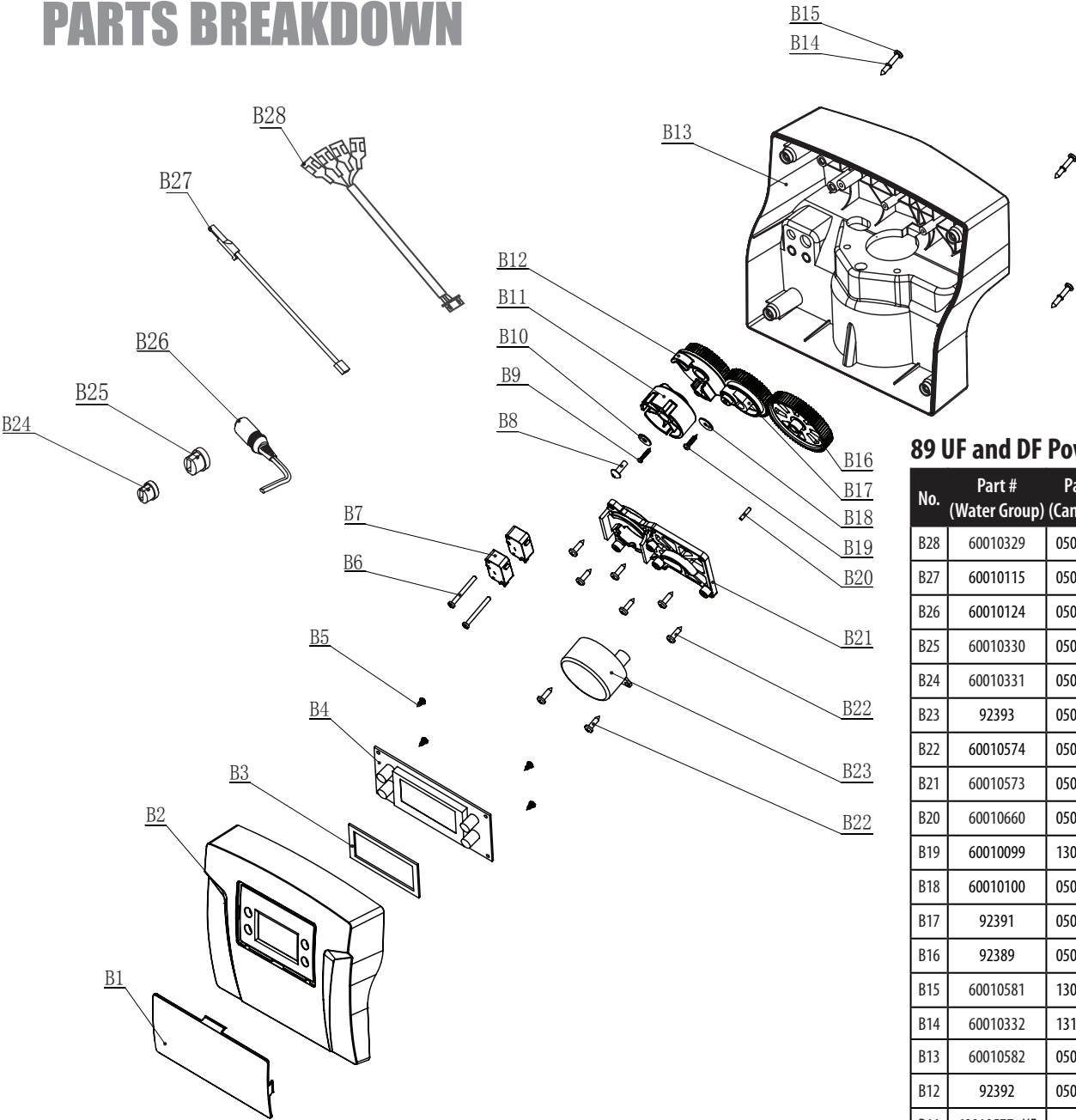


Distributor



Model	Mineral Tank Size	Tank # (Natural Color)	Tank # (Black Color)	Tank # (Blue Color)	Distrubutor#	Valve #	Media Bed #
TP-75	8 x 44	25010025	25010027	25010026	50010005	10010043	95401
TO-100	9 x 48	25010034	25010036	25010035	50010005	10010043	95402
TO-150	10 x 54	25010049	25010051	25010050	50010005	10010043	95403
TO-200	12 x 52	25010058	25010060	25010059	50010005	10010043	95404
TO-300	14 x 65	25030001 and 50040039	Not Available	Not Available	50010010	10010043	XXXXx
TO-400	16 x 65	25030002 ad 50040039	Not Available	Not Available	50010010	10010043	XXXXX
NU-75	8 x 44	25010025	25010027	25010026	50010005	10010043	93500
NU-100	9 x 48	25010034	25010036	25010035	50010005	10010043	93501
NU-150	10 x 54	25010049	25010051	25010050	50010005	10010043	93502
NU-200	12 x 52	25010058	25010060	25010059	50010005	10010043	93503
NU-300	14 x 65	25030001 and 50040039	Not Available	Not Available	50010010	10010043	xxxxx
NU-400	16 x 65	25030002 and 50040039	Not Available	Not Available	50010010	10010043	xxxxx
MM-75	8 x 44	25010025	25010027	25010026	50010005	10010043	95418
MM-100	9 x 48	25010034	25010036	25010035	50010005	10010043	95415
MM-150	10 x 54	25010049	25010051	25010050	50010005	10010043	95416
MM-200	12 x 52	25010058	25010060	25010059	50010005	10010043	95417
MM-300	14 x 65	25030001 and 50040039	Not Available	Not Available	50010010	10010043	XXXXX
MM-400	16 x 65	25030002 and 50040039	Not Available	Not Available	50010010	10010043	XXXXX
BM-75	8 x 44	25010025	25010027	25010026	50010005	10010043	95435
BM-100	9 x 48	25010034	25010036	25010035	50010005	10010043	95449
BM-150	10 x 54	25010049	25010051	25010050	50010005	10010043	95436
BM-200	12 x 52	25010058	25010060	25010059	50010005	10010043	95437
BM-300	14 x 65	25030001 and 50040039	Not Available	Not Available	50010010	10010043	95438
BM-400	16 x 65	25030002 and 50040039	Not Available	Not Available	50010010	10010043	XXXXX
Nexsand-75	8 x 44	25010025	25010027	25010026	50010005	10010043	95632
Nexsand-100	9 x 48	25010034	25010036	25010035	50010005	10010043	95633
Nexsand-150	10 x 54	25010049	25010051	25010050	50010005	10010043	95644
Nexsand-200	12 x 52	25010058	25010060	25010059	50010005	10010043	95645
Nexsand-300	14 x 65	25030001 and 50040039	Not Available	Not Available	50010010	10010043	XXXXX
Nexsand-400	16 x 65	25030002 and 50040039	Not Available	Not Available	50010010	10010043	XXXXX

PARTS BREAKDOWN

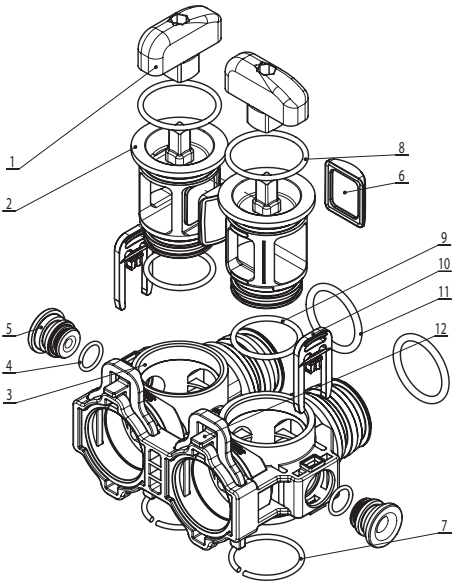


89 UF and DF Power Head Parts List

No.	Part # (Water Group)	Part # (Canature)	Description	Qty
B28	60010329	05033028	Micro Switch Cable	1
B27	60010115	05010031	Meter Cable	1
B26	60010124	05010029	Power Cable	1
B25	60010330	05010046	Meter Cable Clip	1
B24	60010331	05010035	Power Cable Clip	1
B23	92393	05056550	Motor 12VAC 3W	1
B22	60010574	05056084	Screw on Mounting Plate	8
B21	60010573	05031006	Mounting Plate	1
B20	60010660	05056098	Motor Pin	1
B19	60010099	13000426	Screw on Main Gear	1
B18	60010100	05056139	Washer on Main Gear	1
B17	92391	05031008	Main Gear	1
B16	92389	05030009	Drive Gear	1
B15	60010581	13000448	Screw on Back Cover	4
B14	60010332	13113051	Washers on Screw	4
B13	60010582	05033012	89 Back Cover(Black)	1
B12	92392	05031017	Brine Gear	1
B11	60010577 - UF 60010576 - DF	05033019	Locating wheel(UF)	1
B10	60010661	05056141B	Washer on Locating Wheel	1
B9	60010333	05033004	Screw 2.2×13	1
B8	60010575	05056166B	Screw on Locating Wheel	1
B7	60010580	05041011	Micro Switch	2
B6	60010579	13000332	Screws on Micro Switch	2
B5	60010572	13000401	Screws on PCB	4
B4	92388	05033008B	89 PCB	1
B3	60010571	05033027	PCB Absorb Shock Foam	1
B2	60010570	05033011	89 Front Cover(Black)	1
B1		05033007B	Controller Touch Panel	1

Bypass Parts List

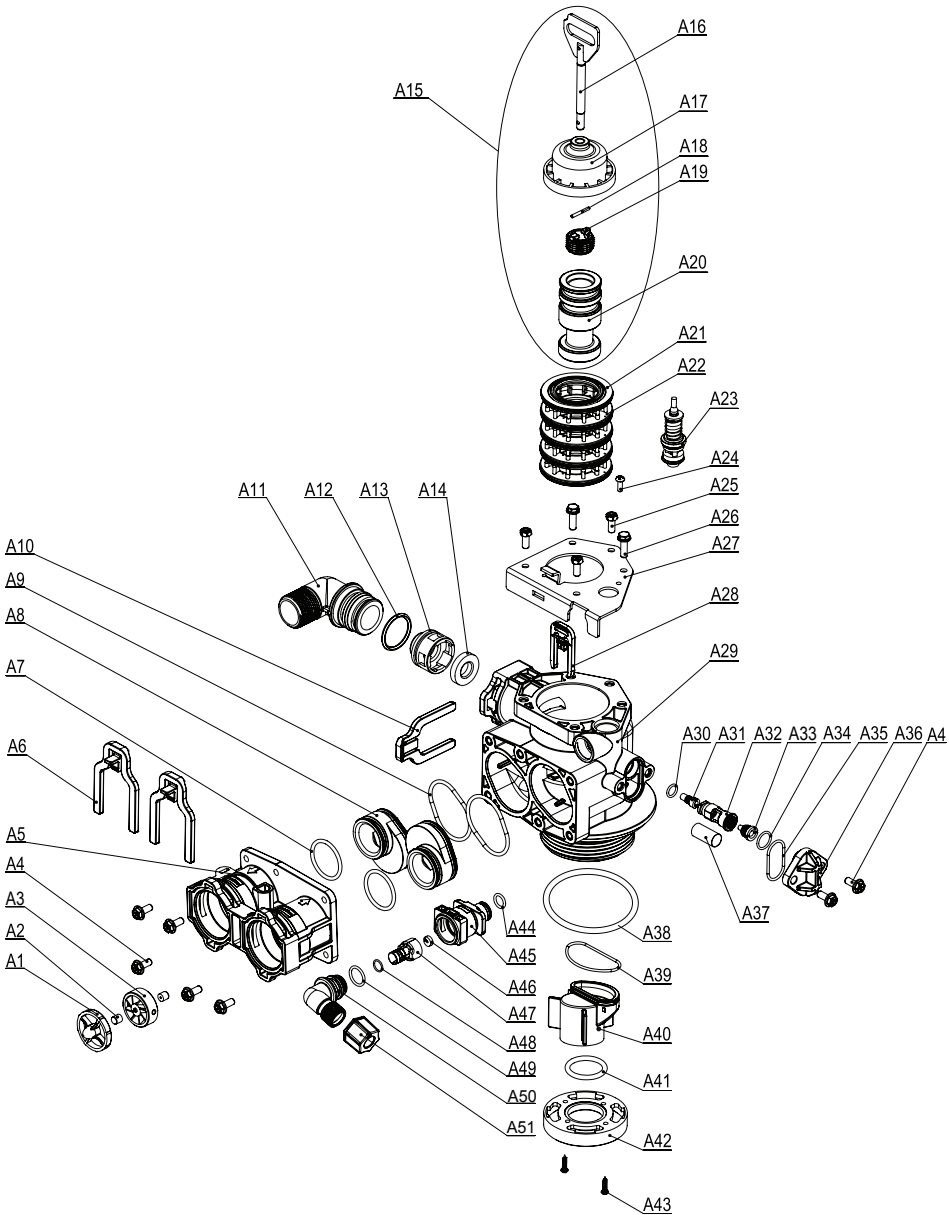
No.	Part #	Part Description	Qty
1		89 Shaft Knob	2
2		BNT 89 Bypass Shaft	2
3		BNT 89 Bypass Body	1
4		Plug O-Ring 12.42×1.78	2
5	60010209	Bypass Plug	1
6		BNT 89 Bypass Knob Seal	8
7		Steel Retainer Ring	1
8		O-Ring 35.5×2.65	1
9		O-Ring 30×2.65	1
10	60010069	Plug Clip	1
11		O-Ring 30×3.55	1
12	92387	BNT89 Valve Clip	1



PARTS BREAKDOWN

Parts list of control valve body:

No.	Part # (Water Group)	Part # (Canature)	Description	Qty
A51	60010184	21389033	Brine Line Elbow Nut	1
A50	60010172	30020013M	Brine Line Elbow	1
A49	60010044	05056134	O-ring of Brine Line Elbow	1
A48	60010188	05031033	O-ring of BLFC Holder	1
A47	60010173	05031010M	BLFC Holder	2
A46	60010128	05056206M	BLFC(0.2GPM)(Optional)	1
A45	60010340	05033033	Brine Line Connector	1
A44	60010265	26010189	O-ring on Brine Line Connector	1
A43	60010099	13000426	Screw on Valve Bottom Connector	2
A42	60010599	07060007	Valve Bottom Connector	1
A41	60010080	26010103	Distributor O-ring	1
A40	60010598	05033021M	Central Pipe Adaptor	1
A39	60010597	26010038	O-ring of Central Pipe Adaptor	1
A38	60010077	05056063	Tank Mouth O-ring	1
A37	60010715	05033009	Screen 89 Valve	1
A36	60010595	05033020	Injector Cover	1
A35	60010341	26010101	O-ring of Injector Cover	1
A34	60010186	05031019	Big O-ring of Injector Holder	1
A33			Injector Nozzle(Optional)	1
A32	60010174	05031012M	Injector Holder	1
A31			Injector Throat(Optional)	1
A30	60010187	05031020	Small O-ring of Injector Holder	1
A29		05033010	89 Valve Body	1
A28	60010069	05056172N	Secure Clip Brine Line	1
A27	60010343	05033005B	End Plug Retainer	1
A26	60010076	05056088	Valve Body Connect Screws	2
A25	60010075	05056087	End Plug Retainer Screws	3
A24	60010574	05056084	Screw 3.5×13	1
A23	60032	05056180M	Brine Valve Injector Stem Assembly	1
A22		05033015	Spacer-89 Valve	8
A21		05033006	Seal-89 Valve	5
A20	92383 - DF PISTON ASSY 92384 - UP PISTON ASSY 92385 - FILTER PISTON ASSY		Down Flow Piston-89 Valve	1
A19			92384 - UP PISTON ASSY	1
A18			92385 - FILTER PISTON ASSY	1
A17			End Plug-89 Valve	1
A16			Piston Rod-89 Valve	1
A15			Piston Assembly-89 Valve(DF)	1
A14			DLFC(2.4GPM)(Optional)	1
A13	60095694	05040030M	DLFC Holder	1
A12	60010211	05056121	O-ring on Drain Elbow	1
A11	60010253	05040130M	Drain Elbow 3/4" NPT	1
	60010254	05040131M	Drain Elbow 1" NPT	1
A10	60010227	05040018M	Secure Clip of Drain Line	1
A9	60010585	05005636M	Big O-ring of Adaptor Coupling	2
A8			Adaptor Coupling	2
A7			Small O-ring of Adaptor Coupling	2
A6			92387	05033022M
A5	60010589	05033013	89 Valve Connector	1
A4	60010596	05056508	Screws of Valve Connector	8
A3	60010238	02170055	Impeller Assembly	1
A2		05010019	Bush	2
A1	60010587	05010077	Impeller Holder	1



Item #s For All Injector Assemblies and Brine Line and Drain Line Washers

Part #		Part Description	
A46	60010110	A31 and A33	BLFC BUTTON #2 0.3GPM A32
	60010082*		BLFC BUTTON #2 0.7GPM A32
	60010128		BLFC BUTTON 0.2GPM
	60010601	A14	INJECTOR SET #0000 BLACK THROAT
	60010602		NOZZLE #0000 BLACK THROAT
	60010603		INJECTOR SET #000 GREY THROAT
	60010604		NOZZLE #000 GREY THROAT
	60010605		INJECTOR SET #00 VIOLET THROAT
	60010606		NOZZLE #00 VIOLET THROAT
	60010607		INJECTOR SET #0 RED THROAT
	60010608		NOZZLE #0 RED THROAT
	60010609*		INJECTOR SET #1 WHITE THROAT
	60010610*		NOZZLE #1 WHITE THROAT
A31 and A33	60010611	A14	INJECTOR SET #2 BLUE THROAT
	60010612		NOZZLE #2 BLUE THROAT
	60010613		INJECTOR SET #3 YELLOW THROAT
	60010614		NOZZLE #3 YELLOW THROAT
	60010685		INJECTOR SET #4 GREEN THROAT
	60010686		NOZZLE #4 GREEN THROAT
	12052		1.4 GPM DLFC WASHER
	12053		2.0 GPM DLFC WASHER
A14	60010140	A14	#4S 5.0GPM
	60010142		#7S 7.0 GPM
	60010143		#1 8.0 GPM
	60010144		#2 11.0 GPM
	60010145		#3 14.0 GPM
	60010146		#4 17.0 GPM
	60010147		#5 21.0 GPM
	60010148		#6 24.0 GPM

* Default

PARTS BREAKDOWN

DLFC PART # for 89 VALVE

No.	Part #	Part Description	Qty
1	60095720	BNT95DLFC-0(4.0 GPM)	1
2	60010143	BNT95DLFC-1(7.0GPM)	1
3	60010144	BNT95DLFC-2(11.0GPM)	1
4	60010145	BNT95DLFC-3(14.0GPM)	1
5	60010146	BNT95DLFC-4(17.0GPM)	1
6	60010147	BNT95DLFC-5(21.0GPM)	1
7	60095692	BNT95DLFC-6(24.0GPM)	1
8	60095721	BNT95DLFC-1S(2.4GPM)	1
9	60095722	BNT95DLFC-2S(3.5GPM)	1
10	60095723	BNT95DLFC-3S(4.5GPM)	1
11	60010140	BNT95DLFC-4S(5.0GPM)	1
12	60095724	BNT95DLFC-5S(6.0GPM)	1
13	60095725	BNT95DLFC-6S(6.0GPM)	1
14	60010142	BNT95DLFC-7S(7.0GPM)	1

BLFC PART # for 89 VALVE

No.	Part #	Part Description	Qty
1	60010128	BNT95BLFC (0.2 GPM)	1
2	12053	BNT95BLFC-1(2.0 GPM)	1
3	60010162	BNT95 BLFC-7(1.35 GPM)	1

INJECTOR PART # for 89 VALVE

No.	Part #	Part Description	Qty
1	60010601	INJECTOR THROAT(BLACK 0000#)	1
2	60010602	INJECTOR NOZZLE(BLACK 0000#)	1
3	60010603	INJECTOR THROAT(GREY 000#)	1
4	60010604	INJECTOR NOZZLE(GREY 000#)	1
5	60010605	INJECTOR THROAT(PURPLE 00#)	1
6	60010606	INJECTOR NOZZLE (PURPLE 00#)	1
7	60010607	INJECTOR THROAT(RED 0#)	1
8	60010608	INJECTOR NOZZLE(RED 0#)	1
9	60010609	INJECTOR THROAT (WHITE 1#)	1
10	60010610	INJECTOR NOZZLE (WHITE 1#)	1
11	60010611	INJECTOR THROAT(BLUE 2#)	1
12	60010612	INJECTOR NOZZLE(BLUE 2#)	1
13	60010613	INJECTOR THROAT(YELLOW 3#)	1
14	60010614	INJECTOR NOZZLE(YELLOW 3#)	1

**No 10 and 11 Injector
Parts Apply to AIO
Models**

TROUBLE SHOOTING GUIDE

Problem	Cause	Correction
1. Filter bleeds taste and odor or sediment	A. Bypass valve is open B. Electrical service to unit has been interrupted C. Defective or stripped media bed D. Quality of water has worsened E. Filter capacity too small F. Filter not backwashing enough G. Excessive water usage - calendar clock models	A. Close bypass valve B. Assure permanent electrical service (check fuse, plug or switch) C. Replace media D. Have water sample analyzed to determine any change E. Replace with larger unit or add another filter F. Be sure flow control is not clogged or drain line restricted. Be sure water pressure has not dropped and that pump has sufficient capacity G. Increase frequency of regeneration. Make sure there are no leaks in toilets or sinks
2. Filter fails to regenerate	A. Electrical service to unit has been interrupted B. Timer is defective C. Power failure D. Timer motor does not run	A. Assure permanent electrical service (check fuse, plug or switch) B. Replace timer C. Reset time of day D. Replace defective motor
3. Filter regenerates every day	A. Faulty gear train	A. Check the mechanical linkage on the timer control to eliminate possible binding in the gear train
4. Loss of water pressure	A. Iron or turbidity build-up in filter B. Filter not regenerating often enough C. Not enough water volume or pressure to backwash properly	A. Clean control and treat bed with Iron Out. Increase frequency of regeneration B. Increase frequency of regeneration C. Correct water supply problem
5. Loss of media through drain line	A. Air in water system B. Backwash rate too fast	A. Assure that well system has proper air eliminator control. Check for dry well condition B. Check drain flow control for proper flow rates
6. Drain flows continuously	A. Foreign material in control B. Timer motor stopped or jammed	A. Remove piston assembly and inspect bore. Remove foreign material and check control in various regeneration positions B. Replace timer motor

MASTER PROGRAMMING GUIDE

Below is how the settings are set at factory:

	PRESS '+' AND '-' FOR 8 SECONDS									PRESS MENU KEY AND SCROLL TO 'MAIN MENU'. THEN PRESS 'SET' TILL IT BEEPS		VALVE SETTINGS				
MODELS	LANGUAGE	REGION	VALVE	METER RATIO	SALT VS EFFICIENCY	AUTO CALCULATION	REGEN. MODE	BACK WASH DURATION	RINSE DURATION	REGEN TIME SETTING	REGEN DAY SETTING	Injector	Injector Color	BLFC Washer	DLFC Washer	DLFC Washer Code
BM-75	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	3.5	25
BM-100	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	4.0	35
BM-150	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	5.0	45
BM-200	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	7.0	1
BM-300	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	10.0	2
MM-75	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	5.0	45
MM-100	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	7.0	1
MM-150	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	10.0	2
MM-200	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	12.0	2
MM-300	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	15.0	3
NU-75	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	3.5	25
NU-100	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	4.0	35
NU-150	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	5.0	45
NU-200	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	7.0	1
NU-300	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	10.0	2
TO-75	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	3.5	25
TO-100	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	4.0	35
TO-150	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	5.0	45
TO-200	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	7.0	1
TO-300	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	10.0	2
NEX-75	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	5.0	45
NEX-100	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	7.0	1
NEX-150	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	10.0	2
NEX-200	ENGLISH	US GALLONS	FILTER	1.364	DONT TOUCH	OFF	DAYS	10	10	12:00AM	3 DAYS	#1	White	0	14.0	3

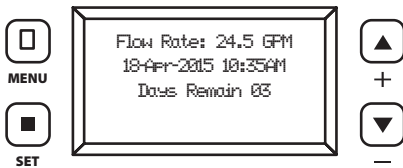
MASTER PROGRAMMING GUIDE

Key Pad Configuration:

MENU This function is to enter the basic set up information required at the time of installation.

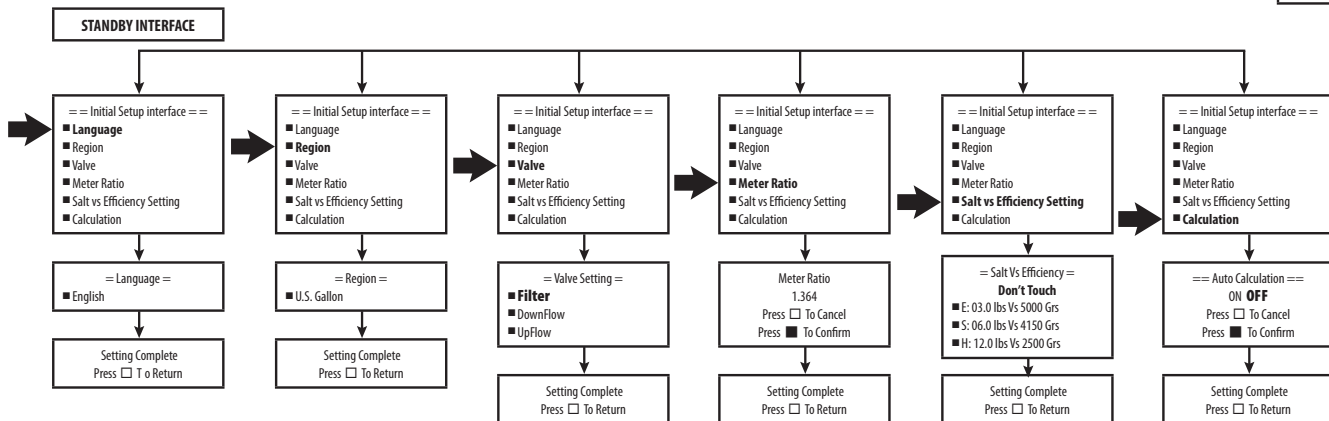
SET This function is to accept the values if changed and advance to the next page in the menu

+ / - These buttons are used to increase or decrease the value of the settings while in the programming mode



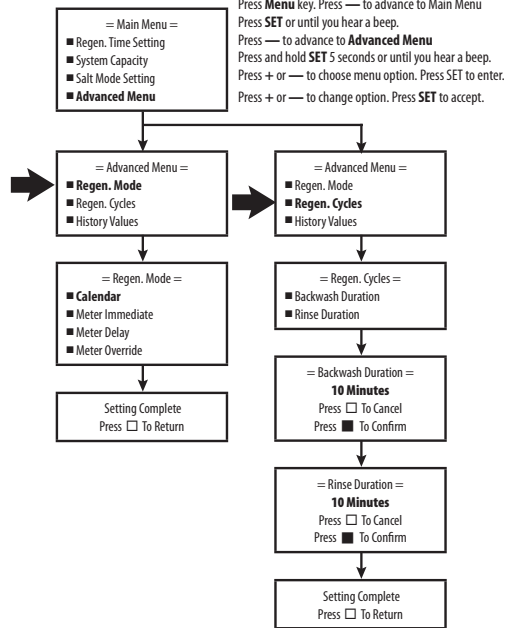
Step A - Region Setting

Press + and —. Hold until you hear a beep (8 seconds).
Press + or — to choose menu option. Press **SETTINGS** to enter.
Press + or — to change option. Press **SETTINGS** to accept.



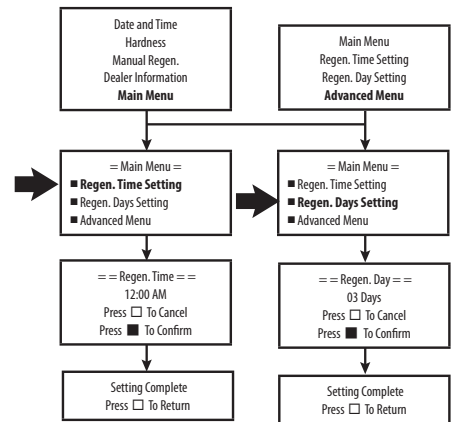
Step B - Advanced Menu

Press **Menu** key. Press — to advance to Advanced Menu
Press **SET** or until you hear a beep.
Press — to advance to **Advanced Menu**
Press and hold **SET** 5 seconds or until you hear a beep.
Press + or — to choose menu option. Press **SET** to enter.
Press + or — to change option. Press **SET** to accept.



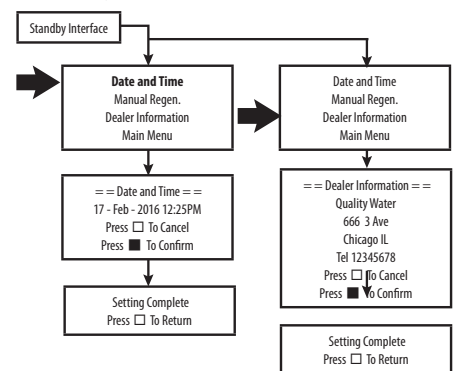
Step C - Main Menu

Press **Menu** key. Press — to advance to Advanced Menu
Press **SET** or until you hear a beep
Press + or — to choose menu option. Press **SET** to enter
Press + or — to change option. Press **SET** to accept



Step D - User Setting

Press **Menu** key
Press **SET** or until you hear a beep
Press + or — to choose menu option. Press **SET** to enter
Press + or — to change value. Press **SET** to accept



DIAGNOSTIC SCREEN

PRESS "MENU" KEY  AND SCROLL TO "MAIN MENU". THEN PRESS "SET"  TILL IT BEEPS. SCROLL TO ADVANCED MENU

Press "MENU" key . Press - to advance to Main Menu

Press "SET"  or until you hear a beep.

Press - to advance to Advanced Menu

Press and hold "SET"  5 seconds or until you hear a beep.

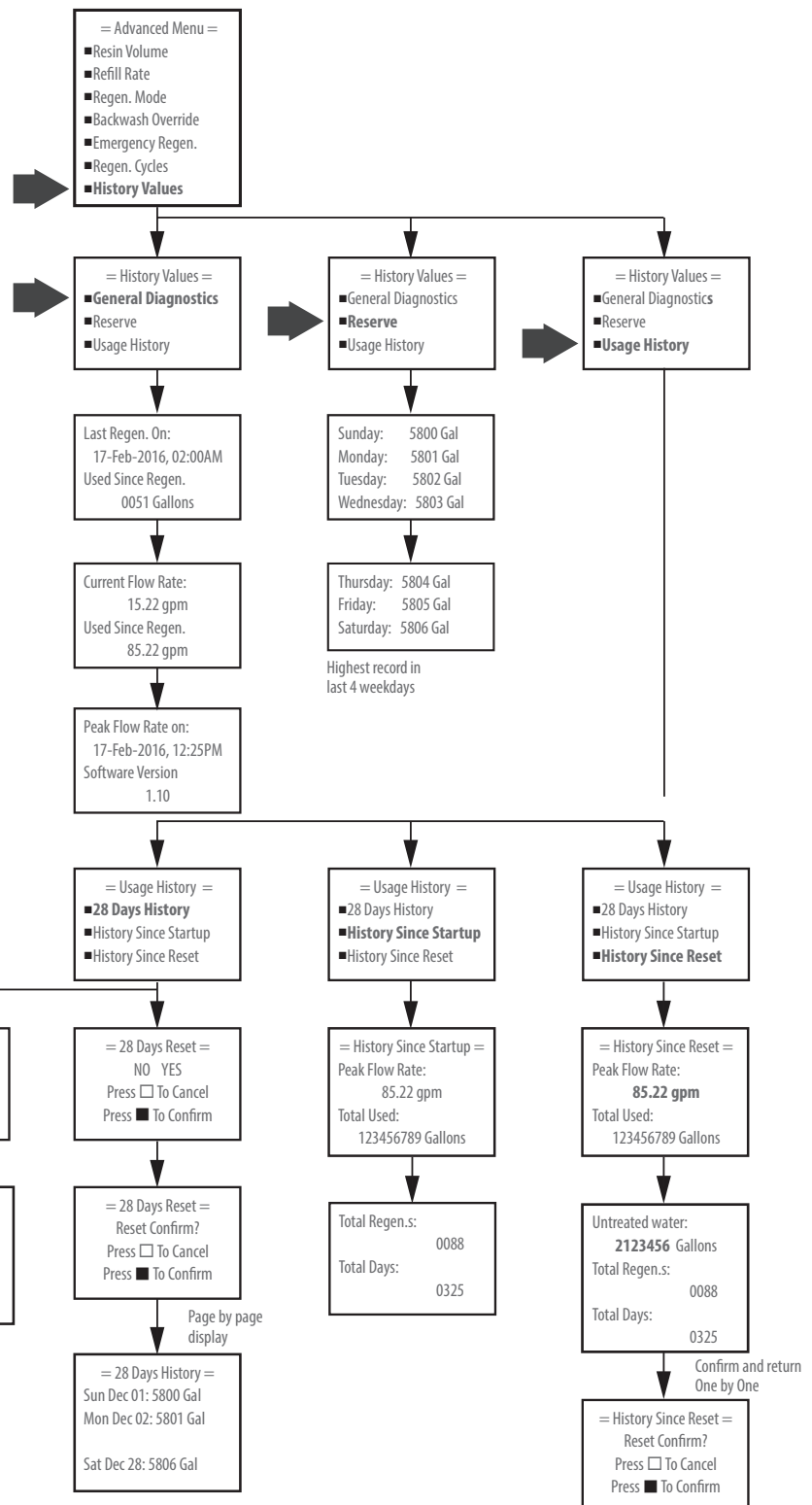
Press - to advance to History Values

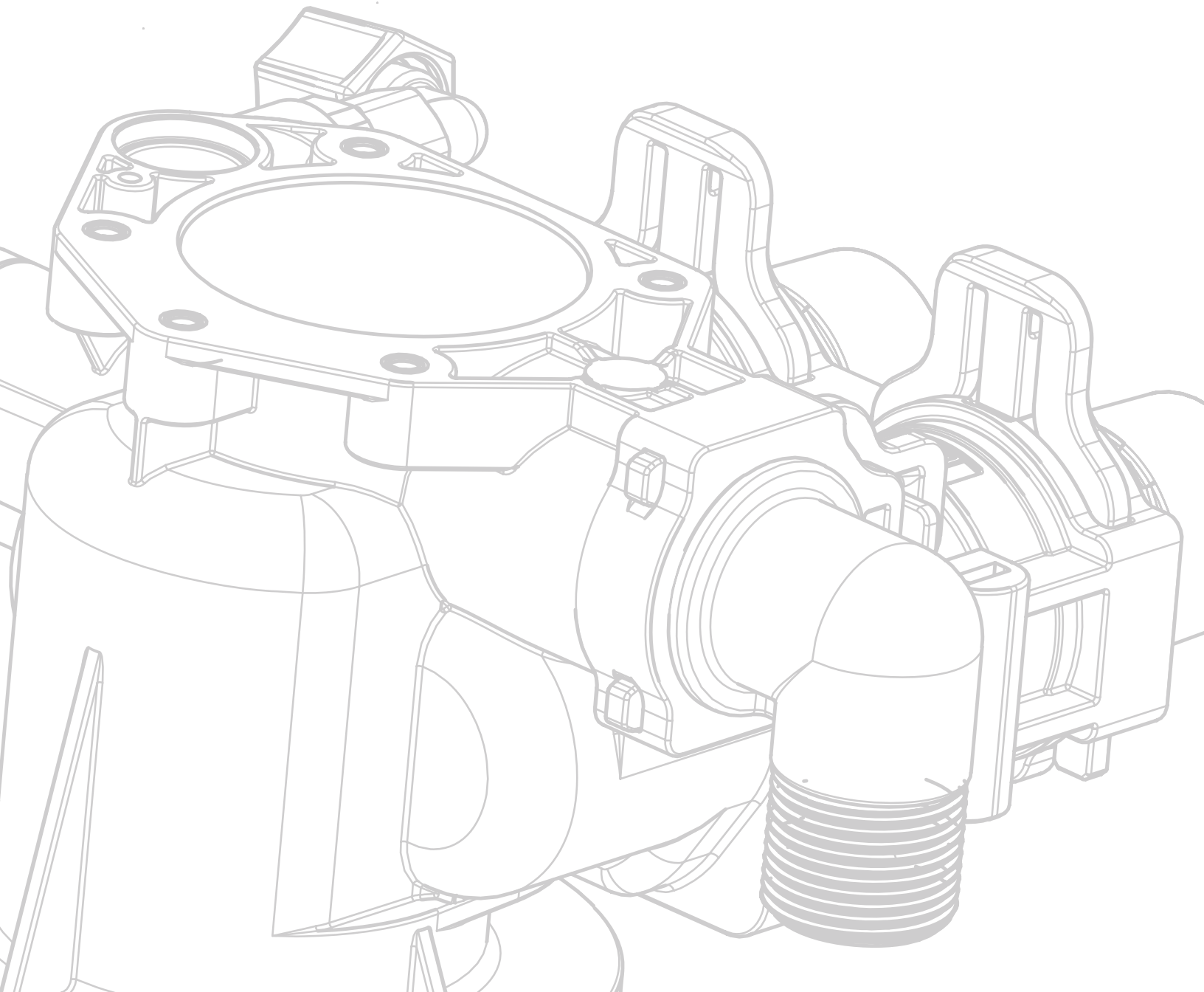
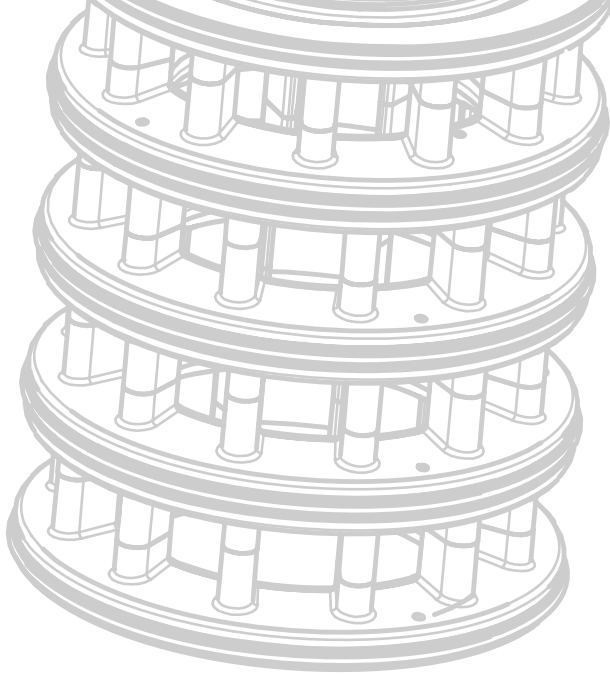
Press "SET"  or until you hear a beep.

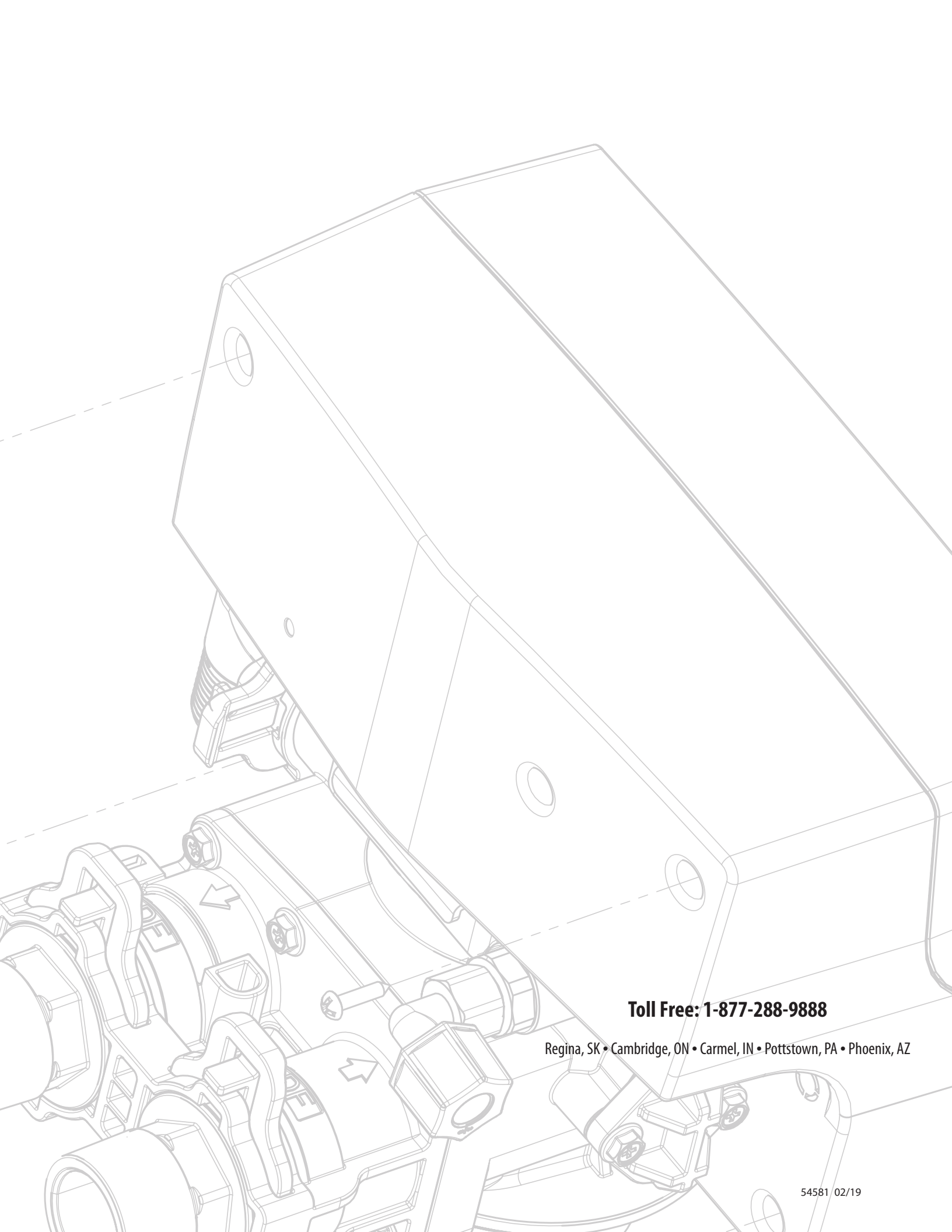
Press "+"  or "-"  to choose menu option. Press "SET"  to enter.

Press "+"  or "-"  to change option. Press "SET"  to accept.

PARAMETER	DESCRIPTION
LAST REGEN ON	Date of last system regeneration.
USED SINCE REGEN	Volume used since last regeneration.
CURRENT FLOW RATE	The current system flow rate.
PEAK FLOW RATE	The peak or highest flow rate since last regeneration.
SOFTWARE VERSION	The software version programmed on the PCB.
RESERVE	The calculated reserve for each day based on the highest days usage over the past 4 weeks.
28 DAYS HISTORY	The volume used for each of the last 28 days.
USAGE HISTORY	The usage since system start up and from the last reset.
TOTAL USED	The total volume used.
TOTAL REGENS	The total quantity of regenerations.
TOTAL DAYS	The total days in operation.







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