

# Installation Instructions and Owner's Manual

## **DF, DF-CHLORAMINE & UN Series**

### **Non-Backwashing Carbon Filter & Upflow Neutralizer Systems**



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#### **First Sales, LLC**

12630 US Highway 33 N  
Churubusco, IN 46723

Phone (260) 693-1972 Fax (260) 693-0602

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# Pre-installation Instructions

## Description of the water filter systems

**DF:** This series is designed to be installed at the point-of-entry of a chlorinated water supply after the pressure tank or water meter (whichever one applies) for the purpose of reducing chlorine taste & odor.

**DF-CHLORAMINE:** This series is designed to operate the same way as the DF filter series but is also capable of reducing chloramines and VOC's due to the use of catalytic carbon.

**UN:** This series is designed to elevate pH from as low as 6.0 to above 7.0. If pH is 5.0 – 5.9 use of a downflow backwashing neutralizer is recommended. If pH is less than 5.0 soda ash injection is recommended. NOTE: Neutralizer media will increase hardness; a softener may be required.

**NOTE: None of the filter systems above require electricity or a drain to operate.**

## Water Quality

The water should be tested to determine the concentration, or levels of the items listed below:

**Hardness** - Hardness in drinking water is defined as those minerals that dissolve in water having a positive electrical charge (cat ions). The primary components of hardness are calcium (Ca++) and magnesium (Mg++) ions. But dissolved iron (Fe++) and manganese (Mn++) also contribute to total "adjusted" hardness. Hardness produces scale, soap scum and white mineral deposits which shorten the life of water using appliances, plumbing and fixtures. Water that has less than 1 grain of hardness is considered to be "soft" water. If soft water is desired, install a softener following the CS-1.

**pH** - A measurement of the acidity of the water. pH is reported on a scale from 0 to 14. Neutral water has a pH of 7.0, lower values indicate acidic water. If your pH is below 6.8 you may consider installing an acid neutralizer before the water softener to elevate the pH.

**Iron** - A naturally occurring metallic element. Iron levels in excess of 0.3 milligrams/liter (mg/l) combine with oxygen causing orange or red (rust) stains on plumbing fixtures. Iron exists in some water sources in clear water (ferrous) state, red water (ferric) state or bacterial form. If bacterial or ferric (red water) iron is present or iron level exceeds 4.0 mg/l, an iron filter should be installed ahead of the CS-1 filter.

**Manganese** - A naturally occurring metallic element. Manganese levels as low as 0.05 milligrams/liter (mg/l) can combine with oxygen to cause dark brown or black staining on fixtures. Additionally, manganese can cause an odor in the water similar to a "rotten egg" smell. This water softener may reduce manganese as well as iron; however, an iron filter may be required in some cases.

**Tannin** - A naturally occurring humic acid. Tannin is caused by water passing through decaying vegetation. Coffee and Tea are prime examples of tannin in water. Tannin levels as low as 0.5 milligrams per liter can cause a yellow discoloration in water. Consult your dealer for a system designed to remove both tannin and hardness.

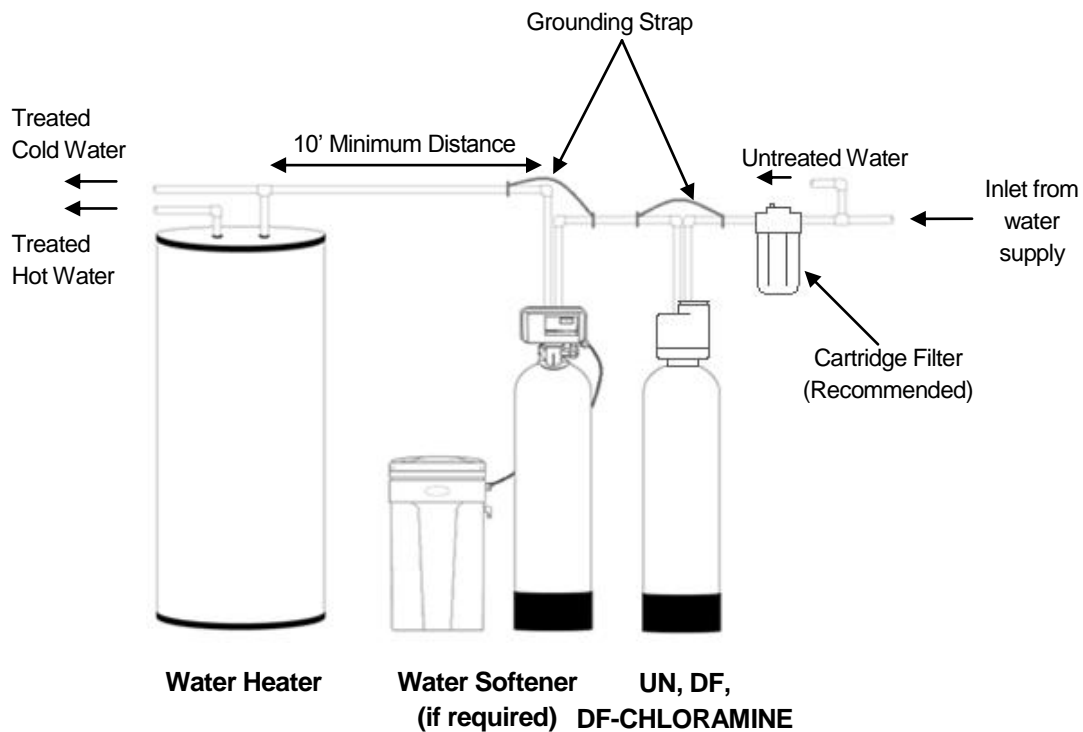
**Hydrogen Sulfide** - A naturally occurring gas. Hydrogen sulfide, more commonly referred to as sulfur, causes a distinct odor similar to "rotten eggs." Due to its gaseous nature, hydrogen sulfide must be tested at the well site within 1 minute of drawing the sample. If sulfur is present additional equipment will be required. The CS-1 can reduce low levels of sulfur in drinking water.

# Pre-installation Instructions (cont.)

## Location Considerations

The proper location to install the water filter system will ensure optimum performance and satisfactory water quality. The following factors should be considered in selecting the location of the equipment.

1. The water filter should be installed after the pressure tank (private well system only) or water meter.
2. All water conditioning equipment should be installed prior to the water heater. Water temperatures exceeding 100°F can damage the internal components of the control valve and filter tank. Install with at least 10' of pipe before the water heater to prevent thermal damage to the equipment. An expansion tank may need to be installed in the line to the water heater in order to allow for thermal expansion and comply with local plumbing codes.
3. The water filter should not be subject to freezing temperatures.
4. Install any cartridge or in-line type filter installed before the water filter to prevent foreign material from fouling the filter media or causing pressure loss in the filter.
5. Appliances requiring extended periods of continuous or high flow water use (i.e. geothermal heat pumps, swimming pools, lawn irrigation, outside hose bibs, etc.) should bypass the water filter. (see installation diagram Fig. 1).



**FIGURE 1: Typical Installation**

# DF & DF-CHLORAMINE Installation Instructions

- STEP 1:** Unpack DF filter unit, making sure to remove entire contents of the shipping container prior to disposal.
- STEP 2:** The filter should be installed after the pressure tank or water meter and before the water heater.
- STEP 3:** If filter media is already in the media tank, proceed to step 4. If media is shipped separately, remove the fill port cap by using the wrench provided turning it counter-clockwise. Remove the top screen. Add the supplied media using a funnel. Clean any media out of the fill port threads. Do not replace the fill port cap and screen yet.
- STEP 4:** Shut off water at main supply. Relieve pressure by opening nearest faucet. On private well systems, turn off power to pump and drain pressure tank. **SHUT OFF FUEL SUPPLY TO WATER HEATER!**
- STEP 5:** Attach bypass valve to the fill port head. Place the bypass in the BYPASS position by turning the handles so they point at each other. Please see Figure 1 below.
- STEP 6:** Cut main supply line as required to install any cartridge housing and sediment cartridge filter (recommended) followed by fitting the plumbing to inlet and outlet of DF filter. Use the port marked DOWNFLOW INLET for the incoming water line. Use the port marked UPFLOW INLET for the outgoing water line. DO NOT apply heat to any fitting attached to bypass or control valve.
- STEP 7:** Fill the media tank with water through the top of the fill port using a garden hose or bucket. Replace the top screen and the fill port cap.
- STEP 8:** Turn on water at main supply.
- STEP 9:** Turn the bypass valve to the SERVICE position. See Figure 1 below. Check carefully for leaks.
- STEP 10:** Run cold water **slowly** in bath tub until it is no longer cloudy.

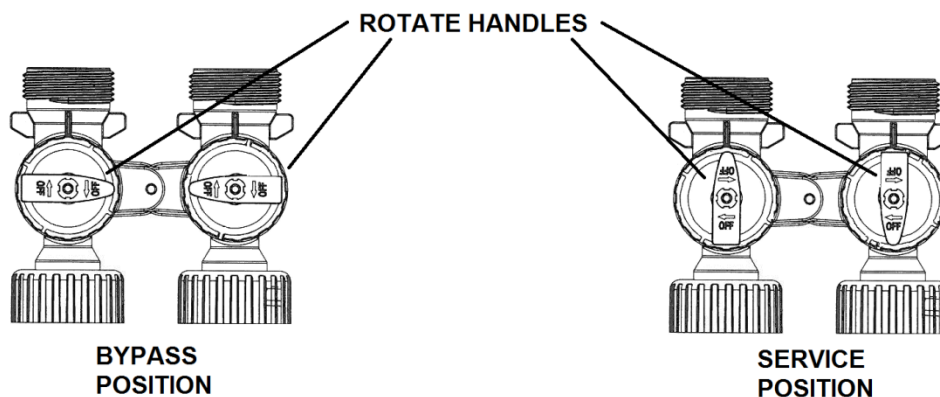
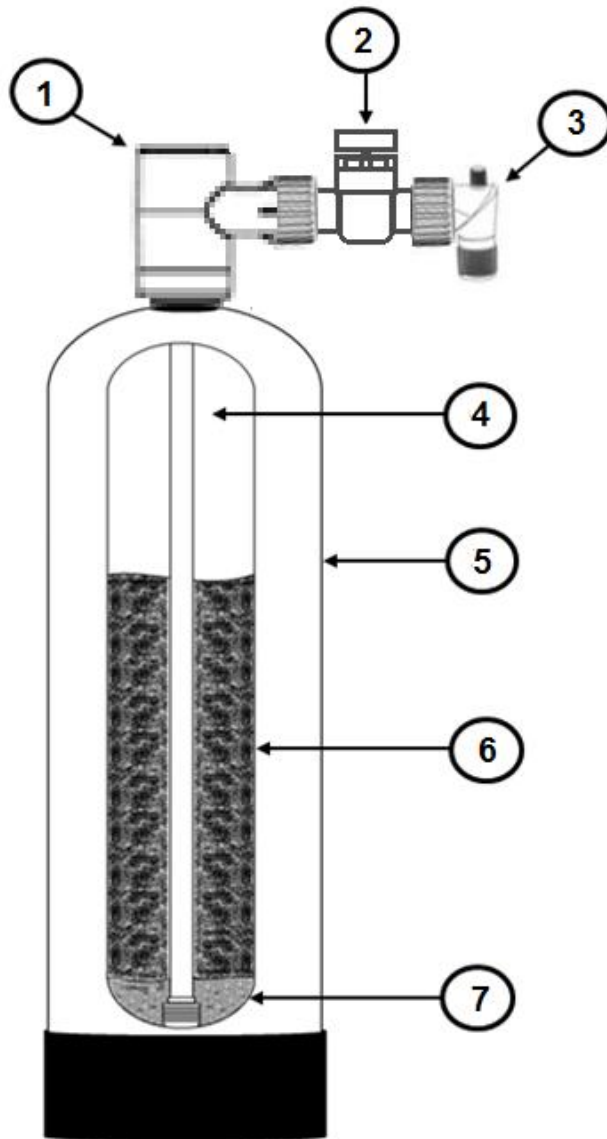


Figure 1: Bypass Valve Operation

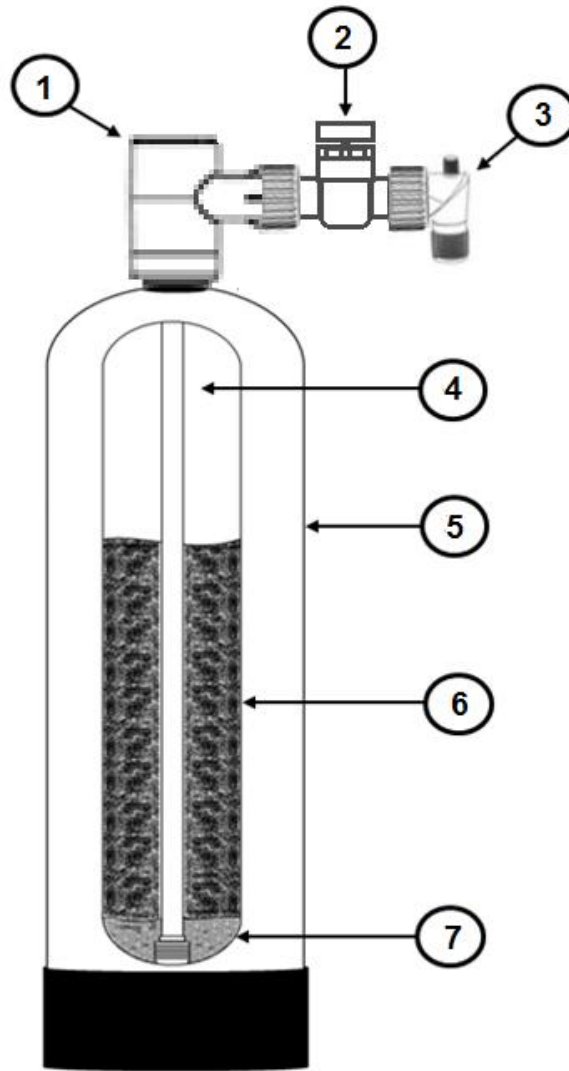
# DF Component Parts List



PART		UNIT MODEL NUMBER					
Ref #	Description	DFS10	DF10	DF15	DF20	DF25	DF30
1	Fill port head/Top screen	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101
2	Bypass valve	BP 213	BP 213	BP 213	BP 213	BP 213	BP 213
3	3/4" Elbow* (2 required)	EBA975	EBA975	EBA975	EBA975	EBA975	EBA975
4	Distributor	D100S-48	D100S-48	D100S-54	D100S-48	D100S-54	D100S-65
5	Media tank	MTP1035GR	MTP1044N	MTP1054N	MTP1248N	MTP1354N	MTP1465N
6	Activated carbon	A10	A10	QTY 3 - A05P	QTY 2 - A10	QTY 5 - A05P	QTY 3 - A10
7	1/4" x 1/8" gravel	QC20	QC20	QC20	QC20	QTY 1-1/2 - QC20	QC50
NOT SHOWN	Service wrench	IFW138	IFW138	IFW138	IFW138	IFW138	IFW138
<b>SERVICE FLOW RATES (GPM)</b>							
Service (2.5 gpm/cuft)		3	3	4	5	6	7
Peak (<25 psi loss)		10	10	9	12	13	14

**NOTE:** Suffix "-1" used for 1" elbows, instead of 3/4". Replacement P/N for 1" elbows is EBA900 (2 required).

# DF-CHLORAMINE Component Parts List



PART		UNIT MODEL NUMBER					
Ref #	Description	DFS10-1-CHLORAMINE	DF10-1-CHLORAMINE	DF15-1-CHLORAMINE	DF20-1-CHLORAMINE	DF25-1-CHLORAMINE	DF30-1-CHLORAMINE
1	Fill port head/Top screen	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101
2	Bypass valve	BP 213	BP 213	BP 213	BP 213	BP 213	BP 213
3	1" Elbow* (2 required)	EBA900	EBA900	EBA900	EBA900	EBA900	EBA900
4	Distributor	D100S-48	D100S-48	D100S-54	D100S-48	D100S-54	D100S-65
5	Media tank	MTP1035GR	MTP1044N	MTP1054N	MTP1248N	MTP1354N	MTP1465N
6	Catalytic carbon	ACC10	ACC10	QTY 3 - ACC05P	QTY 2 - ACC10	QTY 5 - ACC05P	QTY 3 - ACC10
7	1/4" x 1/8" gravel	QC20	QC20	QC20	QC20	QTY 1-1/2 - QC20	QC50
NOT SHOWN	Service wrench	IFW138	IFW138	IFW138	IFW138	IFW138	IFW138
NOT SHOWN	Cartridge housing (bracket not included)	HJ10-1	HJ10-1	HJ10-1	HJ10-1	HJ10-1	HJ10-1
NOT SHOWN	Sediment cartridge	SWJ1005	SWJ1005	SWJ1005	SWJ1005	SWJ1005	SWJ1005
<b>SERVICE FLOW RATES (GPM)</b>							
	Service (2.5 gpm /cuft)	3	3	4	5	6	7
	Peak (< 25 psi loss)	12	12	11	13	14	15

# UN Installation Instructions

- STEP 1:** Unpack UN filter unit, making sure to remove entire contents of the shipping container prior to disposal.
- STEP 2:** The filter should be installed after the pressure tank or water meter and before the water heater.
- STEP 3:** If filter media is already in the media tank, proceed to step 4. If media is shipped separately, remove the fill port cap by using the wrench provided turning it counter-clockwise and remove the top screen. Add media through the fill port using a funnel. Do not overfill the tank. At least 14" of freeboard (empty space) is required at the top of the media tank. More media may have been provided than required for initial fill. Save any extra media for future replenishment. Clean any media out of fill port threads. Do not replace the fill port cap or top screen yet.
- STEP 4:** Shut off water at main supply. Relieve pressure by opening nearest faucet. On private well systems, turn off power to pump and drain pressure tank. **SHUT OFF FUEL SUPPLY TO WATER HEATER!**
- STEP 5:** Attach bypass valve to the fill port head. Place the bypass in the BYPASS position by turning the handles so they point at each other. Please see Figure 2 below.
- STEP 6:** Cut main supply line as required to install any cartridge housing and sediment cartridge filter (recommended) followed by fitting plumbing to inlet and outlet of UN filter. Use the port marked UPFLOW INLET for the incoming water line. Use the port marked DOWNFLOW INLET for the outgoing water line. DO NOT apply heat to any fitting attached to bypass or control valve.
- STEP 7:** Fill the media tank with water through the fill port using a garden hose or bucket. Replace the top screen and fill port cap securely.
- STEP 8:** Turn on water at main supply.
- STEP 9:** Turn the bypass valve to the SERVICE position. See Figure 2 below. Check carefully for leaks.
- STEP 10:** Run cold water **slowly** in bath tub until it is no longer cloudy.

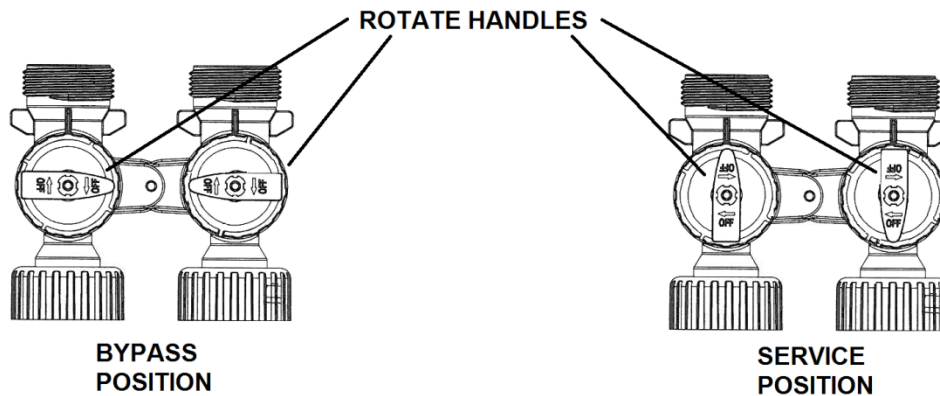
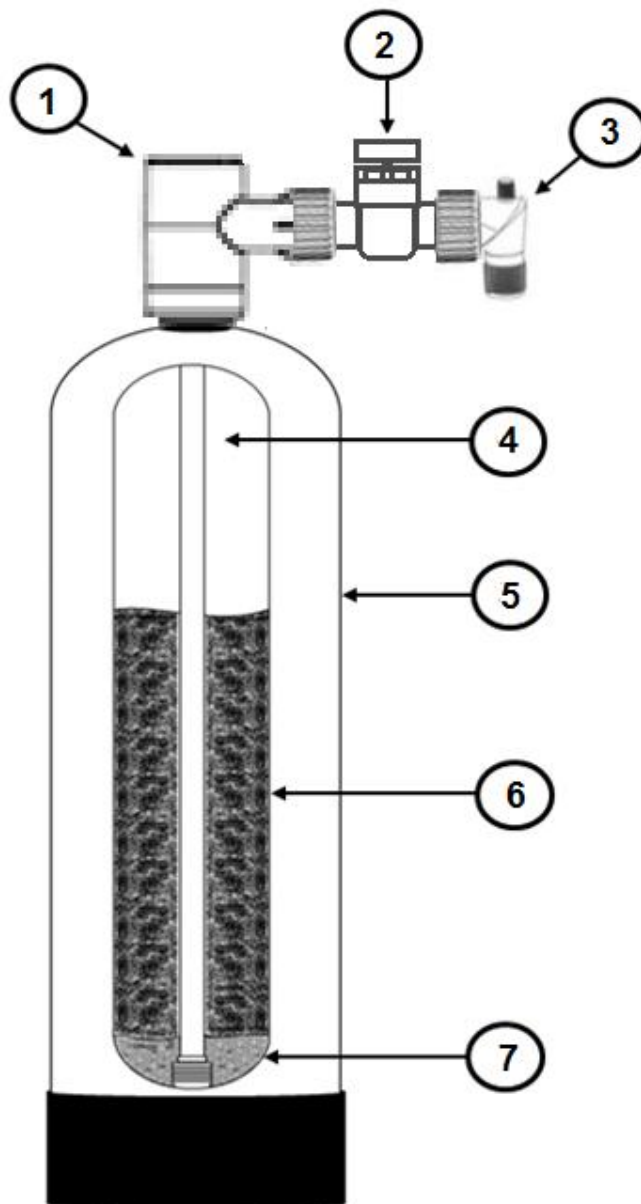


Figure 2: Bypass Valve Operation



# UN Component Parts List



PART		UNIT MODEL NUMBER					
Ref #	Description	UNS10	UN10	UN15	UN20	UN25	UN30
1	Fill port head/Top screen	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101	FP207/FPS101
2	Bypass valve	BP 213	BP 213	BP 213	BP 213	BP 213	BP 213
3	3/4" Elbow* (2 required)	EBA975	EBA975	EBA975	EBA975	EBA975	EBA975
4	Distributor	D100S-48	D100S-48	D100S-54	D100S-48	D100S-54	D100S-65
5	Media tank	MTP1035GR	MTP1044N	MTP1054N	MTP1248N	MTP1354N	MTP1465N
6	Neutralizer	QTY 2 - N05	QTY 2 - N05	QTY 3 - N05	QTY 4 - N05	QTY 5 - N05	QTY 6 - N05
7	1/4" x 1/8" gravel	QC20	QC20	QC20	QC20	QTY 1-1/2 - QC20	QC50
Not Shown	Service wrench	IFW138	IFW138	IFW138	IFW138	IFW138	IFW138
<b>SERVICE FLOW RATES (GPM)</b>							
Service		2	2	3	3	3	4
Peak		10	10	11	12	13	14

**NOTE:** Suffix "-1" used for 1" elbows, instead of 3/4". Replacement P/N for 1" elbows is EBA900 (2 required).

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## TEN YEAR LIMITED WARRANTY

**WARRANTY – First Sales, LLC. warrants this water conditioner against any defects that are due to faulty material or workmanship during the warranty period. This warranty does not include damage to the product resulting from accident, neglect, misuse, misapplication, alteration, installation or operation contrary to printed instructions, or damage caused by freezing, fire, flood, or Acts of God. From the original date of consumer purchase, we will repair or replace, at our discretion, any part found to be defective within the warranty period described below. Purchaser is responsible for any shipping cost to our facility and any local labor charges.**

- One year on the entire water filter
- Ten years on the media tank

**GENERAL CONDITIONS – Should a defect or malfunction occur, contact the dealer that you purchased the product from. If you are unable to contact the dealer, contact First Sales, LLC. @ (260)693-1972. We will require a full description of the problem, model number, date of purchase, and selling dealer’s business name and address.**

**We assume no warranty liability in connection with this water conditioner other than specified herein. This warranty is in lieu of all other warranties, expressed or implied, including warranties of fitness for a particular purpose. We do not authorize any person or representative to assume for us any other obligations on the sale of this water conditioner.**

### FILL IN AND KEEP FOR YOUR RECORDS

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<b>Original Purchaser</b>	<b>Date of Purchase</b>	<b>Model #</b>	
<b>Address of Original Installation</b>		<b>City</b>	<b>State</b>
<b>Dealer Purchased From</b>	<b>Dealer Address</b>	<b>City</b>	<b>State</b>

First Sales, LLC.  
12630 U.S. 33 North, Churubusco, IN 46723

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