Antunes

WFE-1054-R

Scan with mobile device or enter URL for product and service information.

https://tinyurl.com/aja-WFE-1054-R

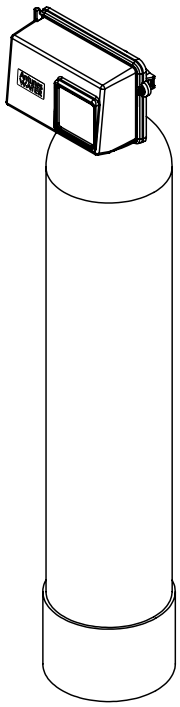
Antunes

WFE-1354-R

Scan with mobile device or enter URL for product and service information.

https://tinyurl.com/aja-WFE-1354-R

Antunes WATER



Residential Iron Filter System

Model
WFE-1054-R
WFE-1354-R

Preliminary Manual

Manufacturing Numbers:
9720021, 9720022

Original Instructions

www.antunes.com

P/N 1011681 Rev B 04/22

Contents

General

This manual provides important safety, installation, and operating procedures. All information contained in this manual should be read prior to installing and operating the system.

This system is manufactured from the finest materials available and is assembled to strict quality standards. This system has been tested at the factory to ensure dependable trouble-free operation.

Warranty Information

Please read the full text of the Limited Warranty in this manual.

If the system arrives damaged, contact the carrier immediately and file a damage claim with them. Save all packing materials when filing a claim. Freight damage claims are the responsibility of the purchaser and are not covered under warranty.

The warranty does NOT extend to:

- Damages caused in shipment or damage as result of improper use.
- Installation of electrical service.
- Normal maintenance as outlined in this manual.
- Malfunction resulting from improper maintenance.
- Damage from moisture leaking into electrical components.
- Damage from tampering with, removal of, or changing any preset control or safety device.

Service/Technical Assistance

In Case of Damage

If any parts are missing or damaged, problems with the installation or operation of this product contact Antunes Customer Service immediately toll free at +1-877-392-7856.

If there are problems with the installation or operations of this product, contact Antunes Technical Service toll free at +1-877-392-7854.

Fill in the information in the next section and have it ready when calling for assistance. The serial number is on the specification sticker located on the system.

Equipment Information to Save

Purchased from:

_____

Date of purchase:

_____

Model number:

_____

Serial number:

_____

Manufacturing number:

_____

IMPORTANT

Antunes reserves the right to change specifications and product design without notice. Such revisions do not entitle the buyer to corresponding changes, improvements, additions or replacements for previously purchased equipment.

IMPORTANT

This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

IMPORTANT

Water Flow Regulator Assemblies are NOT interchangeable. Operating the system with the wrong Water Flow Regulator or without a regulator can damage the system, cause personal injury, and voids the warranty!

IMPORTANT

Keep these instructions for future reference. If the unit changes ownership, be sure this manual accompanies the equipment.

IMPORTANT

When installed on metallic plumbing, a properly sized electrical bonding jumper must be installed across the inlet and outlet pipes serving this unit.

Important Safety Information

In addition to the warnings and cautions in this manual, use the following guidelines to safely operate the system:

- Read all instructions before using equipment.
- Install or locate the equipment only for its intended use as described in this manual.
- Do NOT use corrosive chemicals in this equipment.
- Do NOT operate this equipment if it has a damaged cord or plug; if it is not working properly, or if it has been damaged or dropped.
- This equipment should be serviced by qualified personnel only. Contact Antunes Technical Service for repair.
- Do NOT immerse cord or plug in water.
- Keep cord away from heated surfaces.
- This equipment should be supplied with only cold water.
- For installations in Massachusetts, the Commonwealth of Massachusetts Plumbing Code 248 CMR shall be adhered to. The use of saddle valves are not permitted. Please consult your local plumber.

The following warnings and cautions appear throughout this manual and should be carefully observed.

- This equipment is to be installed to comply with the local plumbing code and any other applicable code.
- Water pressure must not exceed 100 psig (690 kPa). To reduce water pressure, install a water pressure regulator and set to suit the application.
- When installed on metallic plumbing, a properly sized electrical bonding jumper must be installed across the inlet and outlet pipes serving this unit.

NOTE: If the inlet water pressure is less than 40 psig (276 kPa), it is recommended that a suitably-sized booster system be installed (outlet pressure 60 psig - 100 psig max/414-kPa - 690 kPa max).

Protect from freezing

If the unit freezes during operation or storage, irreversible damage and brittle cracking of the housing may result.

Protect from direct sunlight or other UV sources

Avoid long-term exposure to direct sunlight or other UV sources. The unit should be stored in a dark location.

Protect from high temperatures or abrupt variation in temperature

The maximum operating temperature is 100°F (38°C). Avoid abrupt variations in temperature. Any temperature variation should be made slowly.

Protect from rough handling or dropping

Mechanical damage, external breakage, and/or internal breakage of the filter can result if the system is dropped or bumped. Handle with care at all times during transportation and installation.

Protect from organic solvents and concentrated acids

Prevent any and all contact of the system with strong solvents, solvents containing chlorine, or concentrated acids. Do NOT use strong solvents or concentrated acids on any plastic parts of the filter system. Examples of some solvents to avoid: acetone, methyl acetate (nail polish remover); hexane (spot removers); turpentine, toluene (paint thinners); dry cleaning solutions, insecticides.

Protect from abrasive material

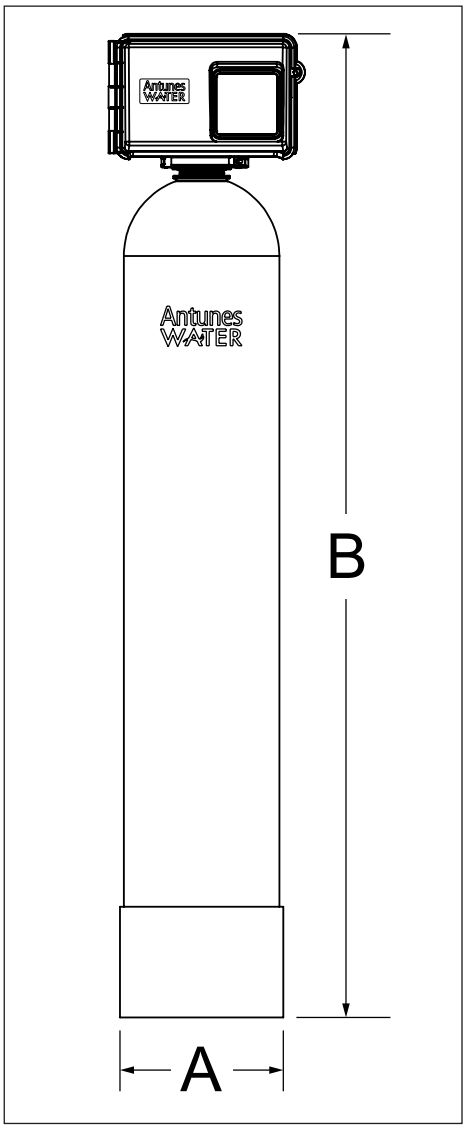
The system must be protected from abrasive materials like shavings left in a pipe. Abrasive materials in contact with the system can cause irreversible damage. All pipes must be flushed clean before installing the filter. All plastic parts of the filter system must be protected from sharp objects like knives, sand paper, or other tools. Cutting or nicking a plastic part can weaken it and cause a leak. Do NOT use abrasive cleansers on any plastic parts.

Protect from water hammer

The system must be protected from shock, pressure surges, or pulsation that may occur inside water pipes. Water hammer occurs in pipes when a valve or faucet shuts quickly. Install a water hammer arrestor (pressure vessel containing compressed air separated from the water by a diaphragm) to reduce pressure shock.

The AIO valve is designed for use when water containing contaminates subjected to oxidation is encountered. The water passes through the AIO valve then passes through the tank containing oxygen enriched filter media. The oxygen reduces all contaminates in the water to an oxide, or in the case of hydrogen sulfide gas, it is reduced to a molecule of acid. Install the AIO valve after the supply lines to the outside faucets (unless outside faucets need to be free of contaminates in water). The AIO valve is generally installed before a water filter or any taste/odor cartridges, if applicable. Due to the release of air during regeneration, the drain line should be anchored throughout the run and secured at the end of the drain line. The drain line should be sized for the backwash rate and friction loss.

Specifications



⚠ CAUTION

When installed on metallic plumbing, a properly sized electrical bonding jumper must be installed across the inlet and outlet pipes serving this unit.

Model	Drain must accommodate flow up to:
WFE-1054-R	5 gpm
WFE-1354-R	9 gpm

Model	Maximum Rated Service Flow	Water Consumption During Regeneration
WFE-1054-R 9700921	7.5 gpm	62 gallons
WFE-1354-R 9700922	15.0 gpm	94 gallons

Electrical Ratings	
Volts	120
Hertz	50/60
Watts	40 VA
Amps	0.33
Electrical Plug and Cord	US NEMA 1-15 (2 pin)

Model & Mfg. No.	Width (A)	Height (B)	Operating Weight
WFE-1054-R 9700921 Media Pressure Tank	10” (25.4 cm)	63” (160 cm)	210 lbs. (95 kg)
WFE-1354-R 9700922 Media Pressure Tank	13” (33 cm)	63” (160 cm)	275 lbs. (125 kg)

	Replacement Components
Model	**Kit, Iron Filter Control Valve Replacement**
WFE-1054-R 9700921	7010073
WFE-1354-R 9700922	7010074

Iron Filter Performance Data Sheet

Model		WFE-1054-R	WFE-1354-R
Maximum Rated Service Flow (gpm) (W/upper collector)		10.9	18.4
Pressure Drop at Rated Service Flow Rate (gpm)		8.5	22.3
Maximum Flow Rate During Regeneration (gpm)		2	3.5
Media Volume - ft³ **Media Type - Purolite C100-E**		1	2
Tank Size		9” X 48”	12” X 52”
Valve Cycle Time | Settings (Minutes)	**Backwash**	8	8
	Air Draw	46 @ 6.0 60 @ 8.0 115 @ 15.0	46 @ 12.0 60 @ 16.0 115 @ 30.0
	Rapid Rinse	8	8
Operating Pressure: 20-125 psi or 1.4-8.8kg/Centimeter², Operating Temperature: 34-110º F or 1.1-43.3ºC Acceptable			

⚠ CAUTION

When placing the unit into service, pay attention to the following guidelines:

- Water Pressure: A minimum of 40 psi (2.8 bar) of water pressure is required for the system to operate effectively.
- Electrical Facilities: An uninterrupted alternating current (120 VAC) supply is required. The control uses a transformer to supply 12 VDC. Please make sure your voltage supply is compatible with your unit before installation.
- Existing Plumbing: Condition of existing plumbing should be free from lime and iron buildup. Piping that is built up heavily with lime and/or iron should be replaced.

Unpacking

1. Remove the Iron Filter from packaging and place on a sturdy work surface.
2. Remove any packing material from the inside of the system.
3. Remove component parts from inside the cartons.
4. Inspect system for any broken components or fittings.

Equipment Setup

General

When placing the system into service, pay attention to the following guidelines:

- DO NOT immerse cord or power plug in water.
- Keep cord away from heated systems.

Electrical

The line voltage must match the voltage on the specification label. The plug on the power cord must match the appropriate outlet. DO NOT connect the system to a switched electrical outlet.

Plumbing

NOTE: The system must be connected to the COLD water line. DO NOT connect the system to the hot water line.

The Iron Filter system uses the following connections:

System Inlet	1” NPT Male
System Outlet (Filtered Water)	1” NPT Male
Drain	1/2” NPT Female

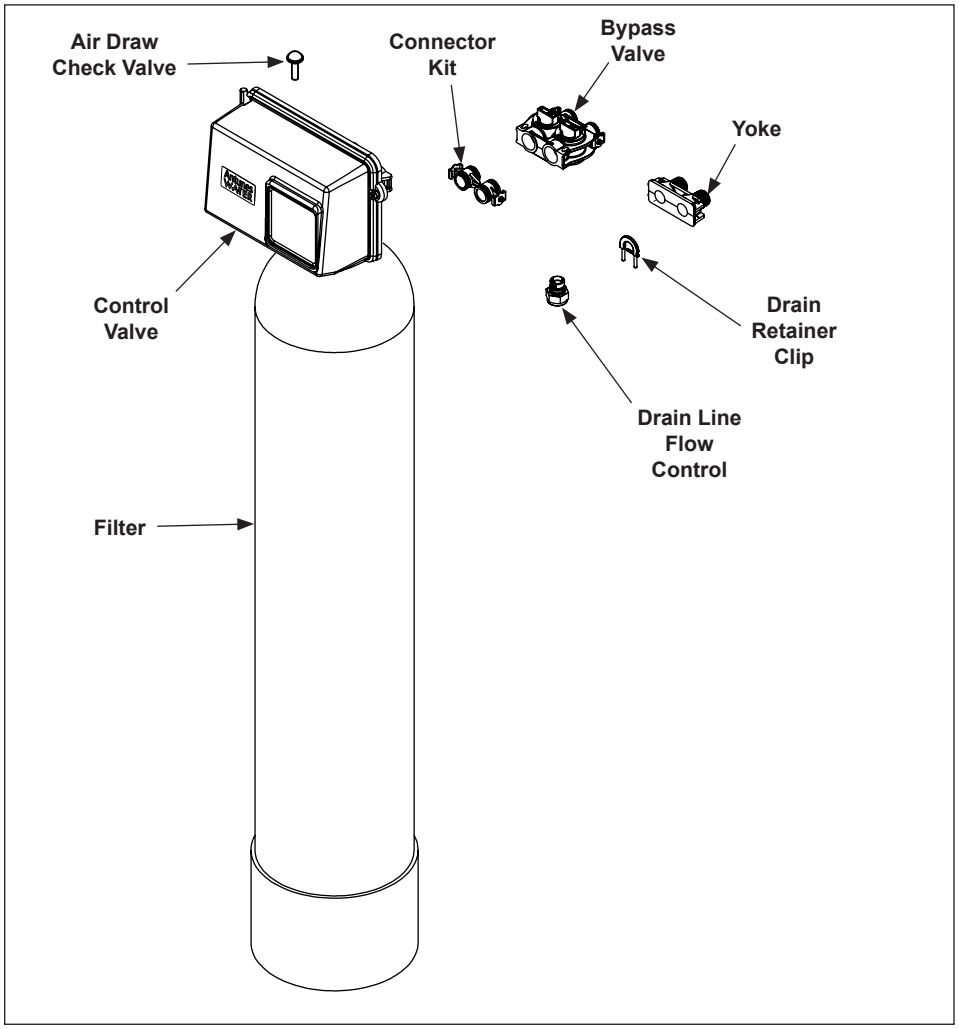


Figure 1. System Components

Installation

Suggested Tools and Supplies for Installation

The following tools and supplies are suggested to help with the installation:

- Level
- Tube Cutter
- Screw Driver
- Nut Driver
- Adjustable Wrenches
- Thread seal pipe tape
- Thread seal pipe dope
- Female adaptors, 1” NPT to connect to existing plumbing
- Pipe or tubing to connect to existing plumbing

NOTE: If any parts are damaged, contact Antunes Technical Service IMMEDIATELY at: +1-877-392-7854 (toll free).

1. Locate the Filter Media Tank on a clean, level, firm surface. Remember that the tank, when filled with water, will weigh over 100 lbs.

NOTE: If the surface is not level, make sure to level it with a non-corrosive material. Wood shims are not recommended as they could deteriorate over time.

Drain Connection

The drain is for regenerating the Filter Media and for flushing particle buildup out of the system during operation.

1. Apply pipe thread tape to threads of the drain fitting (not provided) and attach the drain fitting to the control head at the drain port. Do NOT overtighten the fitting into the control head.
2. Measure a sufficient length of piping (not provided) from the drain outlet fitting to the drain.

When connecting the drain hose, pay attention to the following guidelines:

- The drain line plumbing must be able support the flow rate when the system regenerates.
- The drain line leading out of the system must be as short as possible and slope downwards without any kinks or loops.
- The drain line plumbing must be positioned and secured at least 2 inches above the drain (Figure 3). This air gap protects the system from contamination in the event of a backed-up drain.
- The drain used must not be blocked or restricted.
- The drain used must be as large or larger than the drain line plumbing.
- The drain line from the system should be secured at the drain using appropriate mounting hardware.

3. Attach Hi-Flo bypass valve to the control head.
4. Attach the plastic yoke to the bypass valve.
5. Turn off main water supply.
6. Remove a section of existing pipe where the filter is going to be installed. The pipe removed should be large enough to allow the fittings needed to connect to the filter system.
7. Make sure to verify the inlet and outlet water flow directions on the filter and the existing plumbing before making connections.
8. Connect the incoming untreated water to the valve inlet. Connect the outlet water connection to the rest of the home plumbing.
9. Attach inlet and outlet fittings to the plastic yoke. The yoke has 1” NPT male threads. Use pipe tape and/ or pipe dope on the threads. Use a backup wrench when making pipe connections. Do NOT overtighten fittings onto the plastic yoke.

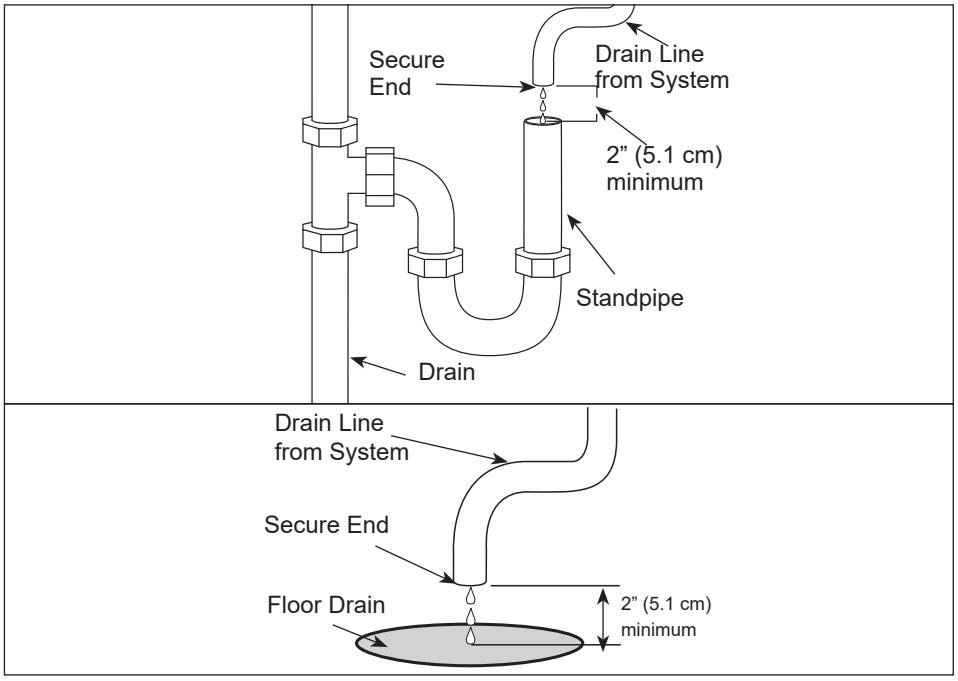


Figure 2. Drain Line Plumbing

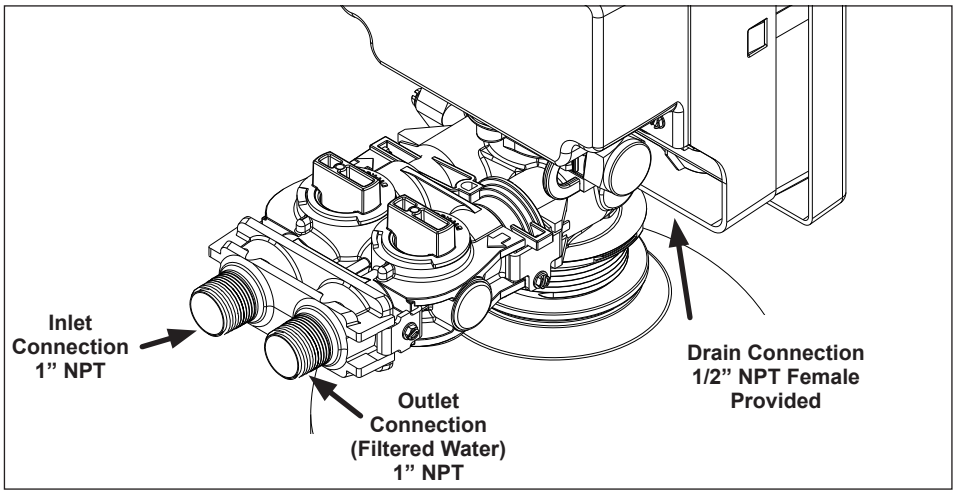


Figure 3. Control Valve Connections

NOTE: Make sure that local plumbing codes are followed when making connections.

10. Before proceeding, make sure the bypass valve is in bypass position. Bypass position is when the valve handles are across (perpendicular to) the valve bodies.
11. Turn on the main water supply and check all new fittings for leaks.
12. Secure the power transformer on the power cord to the wall or other location to remove the weight of the transformer from the cord.
13. Plug the power cord from the control head into a grounded GFCI outlet. Make sure the control panel is illuminated.

Setting the Clock

Program the controller to set the time of day.

1. Press and hold either the Up or Down arrow button on the controller until the programming icon replaces the service icon and the parameter display reads TD (Time of Day).
2. Adjust the displayed time with the Up and Down buttons.
3. When the correct time is set, press the Extra Cycle button to lock in the time and resume normal operation. The unit will also return to normal operation after 5 seconds if no buttons are pressed.

Placing the System into Service

1. After the time of day is set, open the bypass valve. The open position is when the valve handles are in line with (parallel to) the valve bodies.
2. Check for leaks at all connections on the filter control head.
3. Activate a manual regeneration by pressing and holding the extra cycle button for 5 seconds. Air and water will come out of the filter drain line.

NOTE: The regeneration will take approximately an hour to complete.

4. After the regeneration is complete, the system is operational.

Operation Check

1. Make sure the water supply to the filter is on.
2. Proper iron reduction can be checked by measuring a sample of the outlet water for iron.
3. Collect a water sample from any tap leading from the filter system. Run the water for several minutes to make sure filtered water is at the tap.
4. Measure the iron using any test that measures iron.

Maintenance

Every Month

Check Clock Time

The clock should be checked monthly to make sure the local time is set properly.

1. Look at filter display and check that displayed time is the same as local time.
2. If time is incorrect, adjust the time by following the programming steps in the Installation section.

Every Six Months

Check Iron Reduction

Due to the nature of AIO valves, it is recommended to replace the inject, air check, piston, seals and spacers, and adapter coupling every 6 to 12 months as needed.

The iron reduction should be checked every 6 months. Use any tester that measures iron.

If iron is coming from the filter system, contact the factory for more information.

Every Five Years

Replacing the Filter Media Tank

Consult the factory for replacement of the resin tank.

After a Power Failure

Power Loss

The clock should be checked after a power loss to the filter system.

1. Look at filter display and check that displayed time is the same as local time.
2. If time is incorrect, adjust the time by following the programming steps in the Installation section.

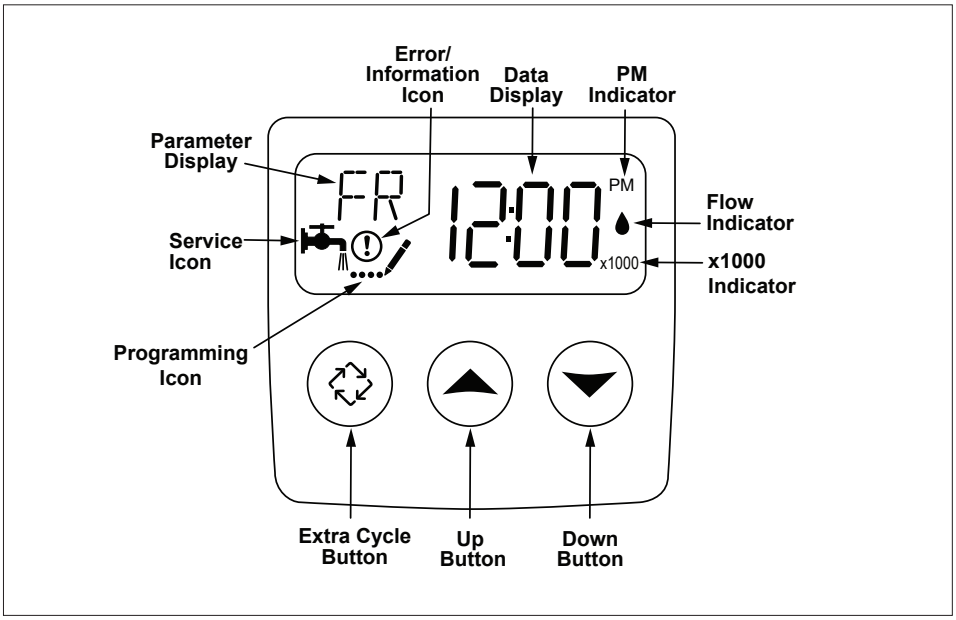


Figure 4. Filter Controller

Master Programming

Master Programming Instructions

When the Master Programming Mode is entered, all available option setting displays may be viewed and set as needed.

WARNING: These parameters are factory set and should not be changed without consulting the factory.

Enter Master Programming Mode

1. Set the Time of Day display to 12:01 PM.
2. Press the Extra Cycle button (to exit Setting Time of Day mode).
3. Then press and hold the Up and Down Arrow Buttons together until the programming icon replaces the service icon and the Display Format screen appears.
4. Use the up and down arrows to change parameter values.
5. Press the Extra Cycle button to scroll to the next parameter.
6. Press the Extra Cycle button at the last parameter to save all settings and return to normal operation.

Resets

Soft Reset

1. Press and hold the Extra Cycle and Down buttons for 25 seconds while in normal Service mode.
2. This resets all parameters to the system default values [except the volume remaining in meter immediate or meter delayed mode and days since regeneration in the time clock mode].

Master Reset

1. Hold the Extra Cycle button while powering up the system. This resets all the parameters in the unit.
2. Check and verify the choices selected in Master Programming mode.

NOTE: The control will automatically disregard any programming changes and return to normal operation if it is left in Master Programming mode for 5 minutes without any keypad input.

Programming

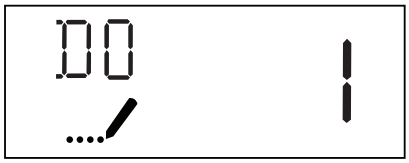
The 5600 SXT control was designed to operate under most conditions with minimal programming. Follow the procedure below to set up the control for normal operation. For more indepth programming information, see the Master Programming section.

NOTE: Some items may not be shown depending on control configuration. The control will discard any changes and exit User Programming Mode if a button is not pressed for 60 seconds.

NOTE: When variable reserve (cr) is selected from Master Programming, User Programming will display SF. However, changing the value of SF will have no effect when variable reserve is selected in Master Programming.

User Programming Mode Steps

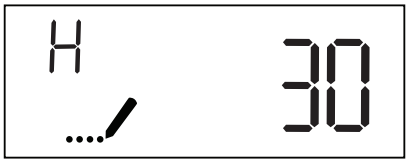
1. Press the Up and Down buttons for five seconds while in service, and the time of day is NOT set to 12:01 PM.
2. Use this display to adjust the Day Override. This option setting is identified by “DO” in the upper left corner of the screen.



3. Press the Extra Cycle button. Use this display to adjust the Regeneration Time. This option setting is identified by “RT” in the upper left corner of the screen.

Abbrev.	Parameter	Description
DO	Day Override	The control’s day override setting.
RT	Regeneration Time	The time of the day that the system will regenerate (meter delayed, time clock, and day-of-week systems)
H	Feed Water Hardness	The hardness of the inlet water - used to calculate system capacity for metered systems.
RC or SF	Safety Factor	The fixed reserve capacity of the system in gallons to maintain before the next scheduled regeneration. Can also be set as a percentage of total capacity. See Master Programming section.

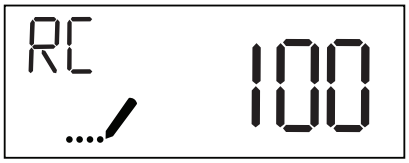
4. Press the Extra Cycle button. Use this display to adjust the Feed Water Hardness. This option setting is identified by “H” in the upper left corner of the screen.



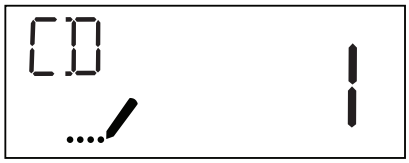
Range: 1-199 hardness

5. Press the Extra Cycle button. Use this display to adjust the Fixed Reserve Capacity. This option setting is identified by “RC” or “SF” in the upper left corner of the screen.

NOTE: This setting is dependent upon Reserve Selection setting in Master Programming. Default is RC - Reserve Capacity (Gallons). See Master Programming section for more information.



6. Press the Extra Cycle button. Use this display to set the Current Day of the Week. This option setting is identified by “CD” in the upper left corner of the screen.



7. Press the Extra Cycle button to end User Programming.

Master Programming Mode Chart

⚠ CAUTION

Before entering Master Programming, please contact Antunes Technical Service. To enter Master Programming, set time to 12:01 PM.

Master Programming Options			
Abbreviation	**Parameter**	**Option Abbreviation**	**Options**
DF	Display Format	GAL	Gallons
		Ltr	Liters
VT	Valve Type	dF1b	Downflow/Upflow Single Backwash
		dF2b	Downflow Double Backwash
		Fltr	Filter
		UFbd	Upflow Brine First
		UFtr	Upflow Filter
		Othr	Other
CT	Control Type	Fd	Meter (Flow) Delayed
		Fl	Meter (Flow) Immediate
		tc	Time Clock
		dAY	Day of Week
NT	Number of Tanks	1	Single Tank System
		2	Two Tank System
C	Unit Capacity	Value	Unit Capacity (Grains)
H	Feedwater Hardness	20 (Default)	Hardness of Inlet Water (Grains)
RS	Reserve Selection	SF	Percentage Safety Factor
SF	Safety Factor	15	Percentage of the system capacity to be used as a reserve
DO	Day Override	14	The system's day override setting
RT	Regen Time	2:00	The time of day the system will regenerate
BW, BD, RR, BF	Regen Cycle Step Times	BW BD RR BF	The time duration for each regeneration step. Adjustable from OFF and 0-199 minutes. **NOTE:** If "Othr" is chosen under "Valve Type", then R1, R2, R3, etc, will be displayed instead.
FM	Flow Meter Type	t0.7	3/4-inch Turbine Meter
		P0.7	3/4-inch Paddle Wheel Meter
		t1.0	1-inch Turbine Meter
		P1.0	1-inch Paddle Wheel Meter
		t1.5	1.5-inch Turbine Meter
		P1.5	1.5-inch Paddle Wheel Meter
		P2.0	2-inch Paddle Wheel Meter
		Gen	Generic or Other Meter
K	Meter Pulse Setting		Meter pulses per gallon/liter for generic/other flow meter

NOTE: Some items may not be shown depending on timer configuration. The timer will discard any changes and exit Master Programming Mode if any button is not pressed for sixty seconds.

Master Programming Mode

When the Master Programming Mode is entered, all available option setting displays may be viewed and set as needed. Depending on current option settings, some parameters cannot be viewed or set.

Setting the Time of Day

1. Press and hold either the **UP** or **DOWN** buttons until programming icon replaces the service icon and the parameter display reads TD.
2. Adjust the displayed time with the **UP** and **DOWN** buttons.
3. When the desired time is set, press the Extra Cycle button to resume normal operation. The unit will also return to normal operation after 5 seconds if no buttons are pressed.

Entering Master Programming Mode

Set the Time Of Day display to 12:01 PM. Press the Extra Cycle button (to exit Setting Time of Day mode). Then press and hold the Up and Down buttons together until the programming icon replaces the service icon and the Display Format screen appears.

Exiting Master Programming Mode

Press the Extra Cycle button to accept the displayed settings and cycle to the next parameter. Press the Extra Cycle button at the last parameter to save all settings and return to normal operation. The control will automatically disregard any programming changes and return to normal operation if it is left in Master Programming mode for 5 minutes without any keypad input.

Resets

Soft Reset: Press and hold the Extra Cycle and Down buttons for 25 seconds while in normal Service mode. This resets all parameters to the system default values, except the volume remaining in meter immediate or meter delayed systems and days since regeneration in the time clock system.

Master Reset: Hold the Extra Cycle button while powering up the unit. This resets all of the parameters in the unit. Check and verify the choices selected in Master Programming Mode.

Display Codes

Display Format (Display Code DF)

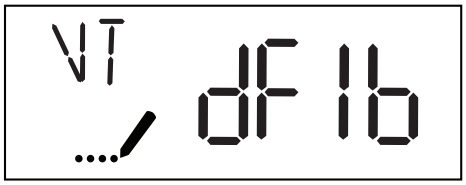
This is the first screen that appears when entering Master Programming Mode. The Display Format setting specifies the unit of measure that will be used for volume and how the control will display the Time of Day. This option setting is identified by “DF” in the upper left hand corner of the screen. There are two possible settings:

Display Format Setting	Unit of Volume	Time Display
GAL	U.S. Gallons	12-Hour AM/PM
Ltr	Liters	24-Hours

Valve Type (Display Code VT)

Press the Extra Cycle button. Use this display to set the Valve Type. The Valve Type setting specifies the type of cycle that the valve follows during regeneration. Note that some valve types require that the valve be built with specific subcomponents. Ensure the valve is configured properly before changing the Valve Type setting. This option setting is identified by “VT” in the upper left hand corner of the screen. There are six possible settings:

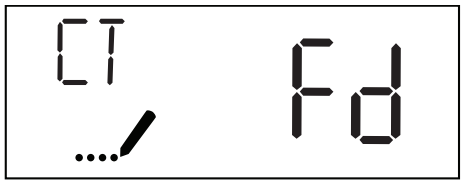
Abbrev.	Parameter
dF1b	Downflow/Upflow, Single Backwash
dF2b	Downflow Double Backwash
Fltr	Filter
UFbd	Upflow Brine First
UFtr	Upflow Filter
Othr	Other



Control Type (Display Code CT)

Press the Extra Cycle button. Use this display to set the Control Type. This specifies how the control determines when to trigger a regeneration. For details on how the various options function, refer to the “Timer Operation” section of this service manual. This option setting is identified by “CT” in the upper left hand corner of the screen. There are four possible settings:

Meter Delayed	Fd
Meter Immediate	FI
Time Clock	tc
Day of Week:	dAY

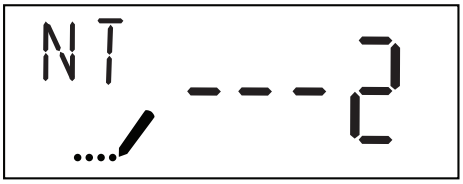


Number of Tanks (Display Code NT)

Press the Extra Cycle button. Use this display to set the Number of Tanks in your system. This option setting is identified by “NT” in the upper left hand corner of the screen. There are two possible settings:

Single Tank System: 1

Two-Tank System: 2



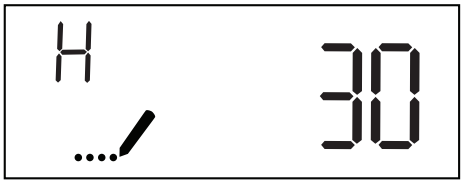
Unit Capacity (Display Code C)

Press the Extra Cycle button. Use this display to set the Unit Capacity. This setting specifies the treatment capacity of the system media. Enter the capacity of the media bed in grains of hardness when configuring a filter system, and in the desired volume capacity when configuring a filter system. This option setting is identified by “C” in the upper left hand corner of the screen. The Unit Capacity parameter is only available if the control type has been set to one of the metered options. Use the Up and Down buttons to adjust the value as needed.

Range: 1-999,900 gallons (100-9,999,000 Liters)

Feedwater Hardness (Display Code H)

Press the Extra Cycle button. Use this display to set the Feedwater Hardness. Enter the feedwater hardness in grains per unit volume for filter systems, or 1 for filter systems. This option setting is identified by “H” in the upper left hand corner of the screen. The feedwater hardness parameter is only available if the control type has been set to one of the metered options. Use the Up and Down buttons to adjust the value as needed.

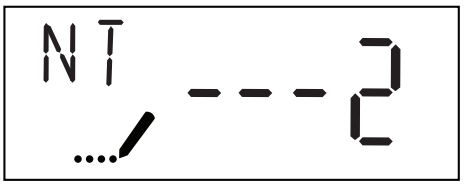


Range: 1-199 hardness

Reserve Selection (Display Code RS)

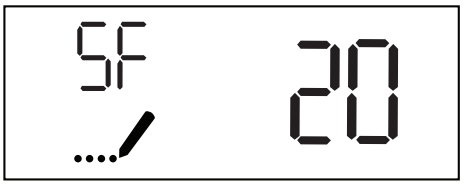
Press the Extra Cycle button. Use this display to set the Safety Factor. Use this display to select the type of reserve to be used in your system. This setting is identified by “RS” in the upper left-hand corner of the screen. The reserve selection parameter is only available if the control type has been set to one of the metered options. There are two possible settings.

FS	Safety Factor
rc	Fixed Reserve Capacity



Safety Factor (Display Code SF)

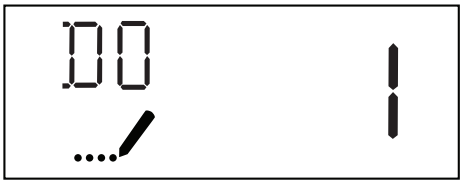
Press the Extra Cycle button. Use this display to set the Safety Factor. This setting specifies what percentage of the system capacity will be held as a reserve. Since this value is expressed as a percentage, any change to the unit capacity or feedwater hardness that changes the calculated system capacity will result in a corresponding change to the reserve volume.This option setting is identified by “SF” in the upper left hand corner of the screen. Use the Up and Down buttons to adjust the value from 0 to 50% as needed.



Range: 0-50%

Day Override (Display Code DO)

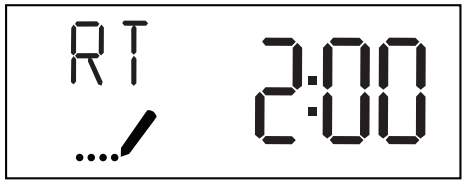
Press the Extra Cycle button. Use this display to set the Day Override. This setting specifies the maximum number of days between regeneration cycles. If the system is set to a timertype control, the day override setting determines how often the system will regenerate. A metered system will regenerate regardless of usage if the days since last regeneration cycle equal the day override setting. Setting the day override value to “OFF” disables this function. This option setting is identified by “DO” in the upper left hand corner of the screen. Use the Up and Down buttons to adjust the value as needed.



Range: Off-99 days

Regeneration Time

Press the Extra Cycle button. Use this display to set the Regeneration Time. This setting specifies the time of day the control will initiate a delayed, manually queued, or day override triggered regeneration. This option setting is identified by “RT” in the upper left hand corner of the screen. Use the Up and Down buttons to adjust the value as needed.

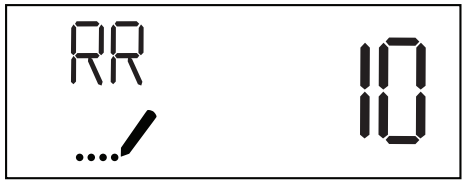


Regeneration Cycle Step Times

Press the Extra Cycle button. Use this display to set the Regeneration Cycle Step Times. The different regeneration cycles are listed in sequence based on the valve type selected for the system, and are identified by an abbreviation in the upper left-hand corner of the screen. The abbreviations used are listed below.

If the system has been configured with the “OTHER” valve type, the regeneration cycles will be identified as R1, R2, R3, R4, R5, and R6. Each cycle step time can be set from 0 to 199 minutes. Setting a cycle step time to 0 will cause the control to skip that step during regeneration, but keeps the following steps available. Use the Up and Down buttons to adjust the value as needed. Press the Extra Cycle button to accept the current setting and move to the next parameter.

Abbrev.	Cycle Step
BD	Brine Draw
BF	Brine Fill
BW	Backwash
RR	Rapid Rinse
SV	Service

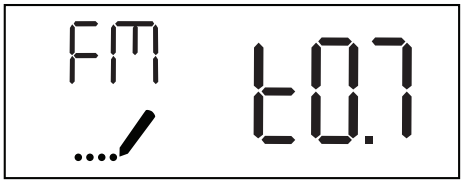


Range: 0-199 minutes

Flow Meter Type (Display Code FM)

Press the Extra Cycle button. Use this display to set the type of flow meter connected to the control. This option setting is identified by “FM” in the upper left-hand corner of the screen. Use the Up and Down buttons to select one of the seven available settings.

t0.7	Fleck 3/4-inch Turbine Meter
P0.7	Fleck 3/4-inch Paddle Wheel Meter
t1.0	Fleck 1-inch Turbine Meter
P1.0	Fleck 1-inch Paddle Wheel Meter
t1.5	Fleck 1-1/2-inch Turbine Meter
P1.5	Fleck 1-1/2-inch Paddle Wheel Meter
P2.0	Fleck 2-inch Paddle Wheel Meter
GEn	Generic/Other Meter



End of Master Programming Mode

Press the Extra Cycle button to save all settings and exit Master Programming Mode.

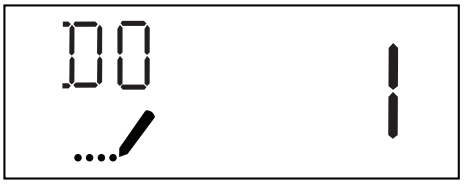
User Programming Mode

User Programming Mode Options		
Abbrev.	**Parameter**	**Description**
DO	Day Override	The timer’s day override setting.
RT	Regeneration Time	The time of day that the system will regenerate (meter delayed, time clock, and day-of-week systems)
H	Feed Water Hardness	The hardness of the inlet water - used to calculate system capacity for metered systems.
SF	Reserve Capacity	The fixed reserve capacity
CD	Current Day	The current day of the week

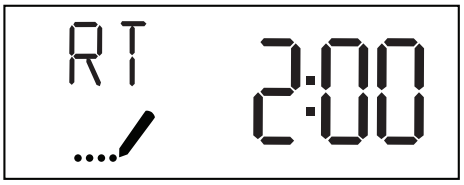
NOTE: Some items may not be shown depending on timer configuration. The timer will discard any changes and exit User Mode if any button is not pressed for sixty seconds.

User Programming Mode Steps

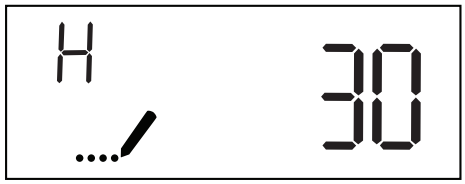
1. Press the Up and Down buttons for five seconds while in service, and the time of day is NOT set to 12:01 PM.
2. Use this display to adjust the Day Override. This option setting is identified by “DO” in the upper left hand corner of the screen.



3. Press the Extra Cycle button. Use this display to adjust the Regeneration Time. This option setting is identified by “RT” in the upper left hand corner of the screen.

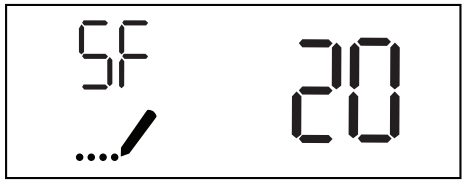


4. Press the Extra Cycle button. Use this display to adjust the Feed Water Hardness. This option setting is identified by “H” in the upper left hand corner of the screen.

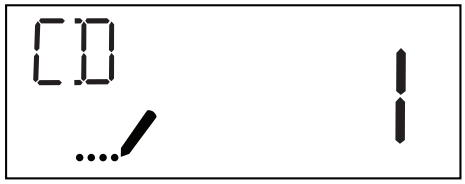


Range: 1-199 hardness

5. Press the Extra Cycle button. Use this display to adjust the Fixed Reserve Capacity. This option setting is identified by “SF” in the upper left hand corner of the screen.



6. Press the Extra Cycle button. Use this display to set the Current Day of the Week. This option setting is identified by “CD” in the upper left hand corner of the screen.



7. Press the Extra Cycle button to end User Programming Mode.

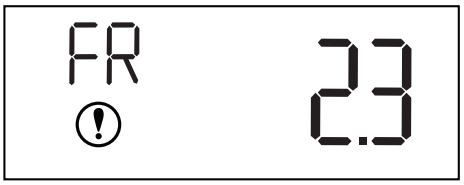
Diagnostic Programming Mode

Diagnostic Programming Mode Options		
Abbrev.	**Parameter**	**Description**
FR	Flow Rate	Displays the current outlet flow rate
PF	Peak Flow Rate	Displays the highest flow rate measured since the last regeneration
HR	Hours in Service	Displays the total hours that the unit has been in service
VU	Volume Used	Displays the total volume of water treated by the unit
RC	Reserve Capacity	Displays the system's reserve capacity calculated from the system capacity, feedwater hardness, and safety factor
SV	Software Version	Displays the software version installed on the controller

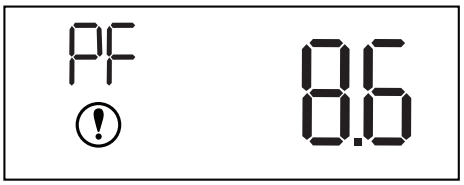
NOTE: Some items may not be shown depending on timer configuration. The timer will exit Diagnostic Mode after 60 seconds if no buttons are pressed. Press the Extra Cycle button to exit Diagnostic Mode at any time.

Diagnostic Programming Mode Steps

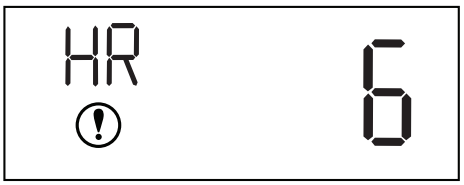
1. Press the Up and Extra Cycle buttons for five seconds while in service.
2. Use this display to view the current Flow Rate. This option setting is identified by "FR" in the upper left hand corner of the screen.



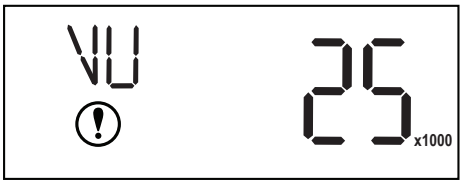
3. Press the Up button. Use this display to view the Peak Flow Rate since the last regeneration cycle. This option setting is identified by "PF" in the upper left hand corner of the screen.



4. Press the Up button. Use this display to view the Hours in Service since the last regeneration cycle. This option setting is identified by "HR" in the upper left hand corner of the screen.

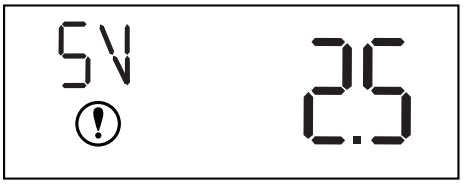


5. Press the Up button. Use this display to view the Volume Used since the last regeneration cycle. This option setting is identified by "VU" in the upper left hand corner of the screen.



6. Press the Up button. Use this display to view the Reserve Capacity. This option setting is identified by "RC" in the upper left hand corner of the screen.

7. Press the Up button. Use this display to view the Software Version. This option setting is identified by "SV" in the upper left hand corner of the screen.



8. Press the Extra Cycle button to end Diagnostic Programming Mode.

Factory Defaults

NOTE: THE FOLLOWING PARAMETERS ARE FACTORY DEFAULTS AND SHOULD ONLY BE CHANGED BY A QUALIFIED SERVICE PROFESSIONAL.

Factory Defaults				
Abbreviation	**Parameter**	**WFE-1054-R**	**WFE-1354-R**	**Description**
DF	Display Format	GAL	GAL	Gallons
VT	Valve Type	dF1b	dF1b	Standard Down-Flow Single Backwash
CT	Control Type	tc	tc	Time Clock
NT	Number of Tanks	1	1	Single Tank System
DO	Day Override	3	3	The system's day override setting
RT	Re-Gen Time	12:00 AM	12:00 AM	Time of day for regeneration
BW	Backwash	10	10	Minutes
BD	Air Draw	40	40	Minutes
RR	Rapid Rinse	5	5	Minutes
BF	Brine Refill	0	0	Minutes
Injector	**#**	**2**	**3**	
Drain Line Flow Control Rate	GPM	5	9	

Troubleshooting (2510)

Problem	Possible Cause	Corrective Action
Water conditioner fails to regenerate.	Electrical service to unit has been interrupted.	Assure permanent electrical service (check fuse, plug, pull chain, or switch).
	Timer is defective.	Replace timer.
	Power failure.	Reset time of day.
Loss of water pressure.	Iron buildup in line to water conditioner.	Clean line to water conditioner.
	Iron buildup in water conditioner.	Clean control and add mineral cleaner to mineral bed. Increase frequency of regeneration.
	Inlet of control plugged due to foreign material broken loose from pipes by recent work done on plumbing system.	Remove piston and clean control.
Loss of mineral through drain line.	Air in water system.	Assure that well system has proper air eliminator control. Check for dry well conditions.
	Improperly sized drain line flow control.	Check for proper drain rate.
Iron in conditioned water.	Fouled mineral bed.	Check backwash, brine draw, and brine tank fill. Increase frequency of regeneration. increase backwash time. Check iron buildup on check valve and piston.
Control cycles continuously.	Misadjusted, broken, or shorted switch.	Determine if switch or timer is faulty and replace it, or replace complete power head.
Drain flows continuously.	Valve is not programming correctly.	Check timer program and positioning of control. Replace power head assembly if not positioning properly.
	Foreign material in control.	Remove power head assembly and inspect bore. Remove foreign material and check control in various regeneration positions.
	Internal control leak.	Replace seals and piston assembly.

Troubleshooting (AIO)

Problem	Possible Cause	Corrective Action
Unit does not go through air draw cycle.	Electrical service to unit is interrupted.	Inspect power supply and correct if necessary.
	Power Failure.	Reset time of day.
	Timer is defective.	Verify that dial showing days moves from day today. If it does not move, replace timer.
Unit does not draw air.	Drain line is kinked	Straighten drain line.
	Water pressure to unit too low.	Pressure must be above 20 psi at all times. Increase pressure if necessary.
	Drain line flow control blocked.	Inspect DLFC and clean if necessary.
	Injectors or screen plugged.	Inspect and clean or replace as necessary.
	Internal leak in control.	Inspect piston and seals/spacers. Replace as needed.
Water flows continuously to drain.	Timer motor stopped or jammed.	Replace if necessary.
	Foreign material jammed inside control.	Remove piston and check.
	Internal leak.	Inspect piston and seals/spacers. Replace as needed.
Water is clear from tap, turns red upon standing.	Insufficient air drawn by valve.	Check valve at air draw time.
	Bypass open or leaking.	Close bypass valve and/or repair as necessary.
	Filter bed backwashed at improper frequency.	Increase backwash frequency.
Water is red when drawn from tap.	Filter bed overloaded with precipitated iron due to insufficient backwash flow rate.	Inspect drain line for kinks or obstructions. Verify drain line flow control is correct size for application. If, after correction, manual backwash does not clear bed of iron, filter bed may need chemical washing.
	Filter bed backwashed at improper frequency.	Increase backwash frequency.
Excessive pressure loss through filter.	Filter bed overloaded with precipitated iron.	Inspect drain line for kinks or obstructions. Verify drain line flow control is correct size for application. If, after correction, manual backwash does not clear bed of iron, filter bed may need chemical washing.
	Control in/outlet valves not fully open.	Open valves.
	Sand, silt, or mud collecting in filter media.	Inspect well for these conditions.
	Filter bed not properly “classified”.	Manually backwash to reclassify.
	“Cementing” or “channelling” of filter media.	Stir filter bed to break up hardened layer. Increase backwash frequency to prevent recurrence.
Milky or bubbly water.	Excessive gasses in water.	System may require cleaning. Some installations will naturally produce aerated water.
Control cycles continuously.	Misadjusted, broke, or shorted switch.	Determine if switch or time is faulty and replace it, or replace complete power head.
Drain flows continuously.	Valve is not programming correctly.	Check timer program and positioning of control. Replace power head assembly if not positioning properly.
	Foreign material in control.	Remove power head assembly and inspect bore. Remove foreign material and check control in various regeneration positions.
	Internal control leak.	Replace seals and piston assembly.

Replacement Parts

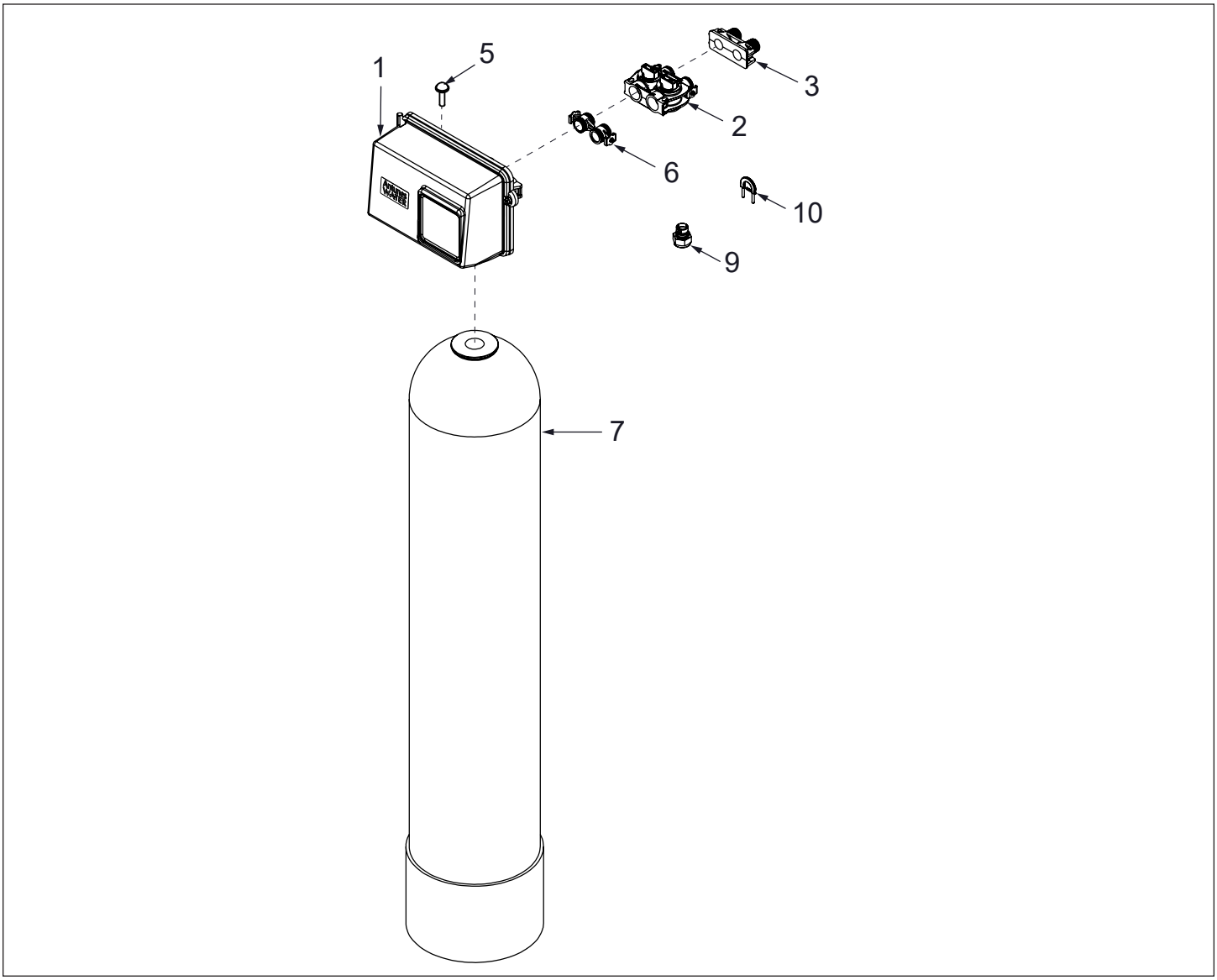
Parts List

(See Exploded Views for more information)

Item #	Part #	Description	Qty.
1	7010073	Control Valve, Plastic WFE-1054-R	1
	7010074	Control Valve, Plastic WFE-1354-R	
2	7010046	High Flow Bypass Valve, Plastic	1
3	7010047	Yoke, 1” NPT, Plastic	1
5	7010075	Air Draw Check Valve	1
6	7010076	Iron Filter Connector Kit	1

Item #	Part #	Description	Qty.
7	7010071	Pressure Resin Tank w/ Media, WFE-1054-R	1
	7010072	Pressure Resin Tank w/ Media, WFE-1354-R	1
9	7010077	Drain Line Flow Control, 5 gpm	1
	7010078	Drain Line Flow Control, 9 gpm	1
10	7010044	Drain Retainer Clip	1

Exploded Diagram



Limited Warranty

Equipment manufactured by Antunes has been constructed of the finest materials available and manufactured to high quality standards. These units are warranted to be free from defects in materials and workmanship for a period of one year from date of purchase under normal use and service, and when installed in accordance with manufacturer's recommendations*.

*To ensure continued proper operation of the units, follow the maintenance procedure outlined in the Owner's Manual.

1. This warranty does not cover failures due to improper system installation, defects caused by improper storage or handling prior to placing of the equipment into service.
2. Antunes reserves the right to make changes in design or add any improvements on any product. The right is always reserved to modify equipment because of factors beyond our control and government regulations. Changes to update equipment DO NOT constitute a warranty charge.
3. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL ANTUNES BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.
4. Prices and specifications are subject to change without notice.

Antunes WATER

Corporate Headquarters
Carol Stream, IL, USA
Phone: +1.630.784.1000
Toll Free: +1.800.253.2991
Fax: + 1.(630).784-1650

China Facility
Suzhou, China
Phone: +84.512.6841.3637
Fax: +86.512.6841.3907

India Facility
Chennai, India
Phone: +91.44.25532212
Fax: +91.44.25532415