



flotender™

Installation, Service & Troubleshooting Manual



GL Series Greywater Multi-Zone Irrigation Systems



www.flotender.com
2025



Thank you for purchasing a Flotender™ Greywater Irrigation System. This installation manual will guide you through a Flotender™ GL Series installation. Additional instructions are also included with individual kits and accessories. If you have any questions feel free to contact us at support@filtrific.com, or call (425) 643-2312.

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GETTING STARTED

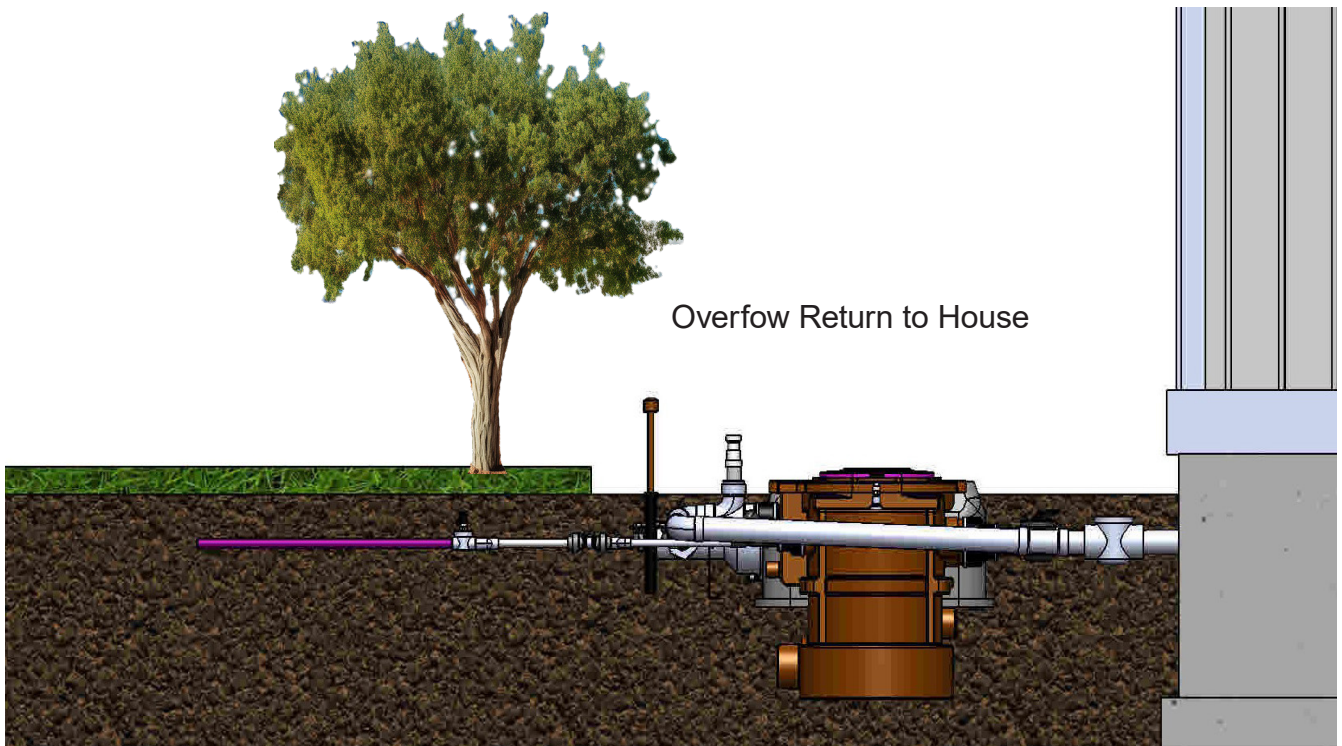
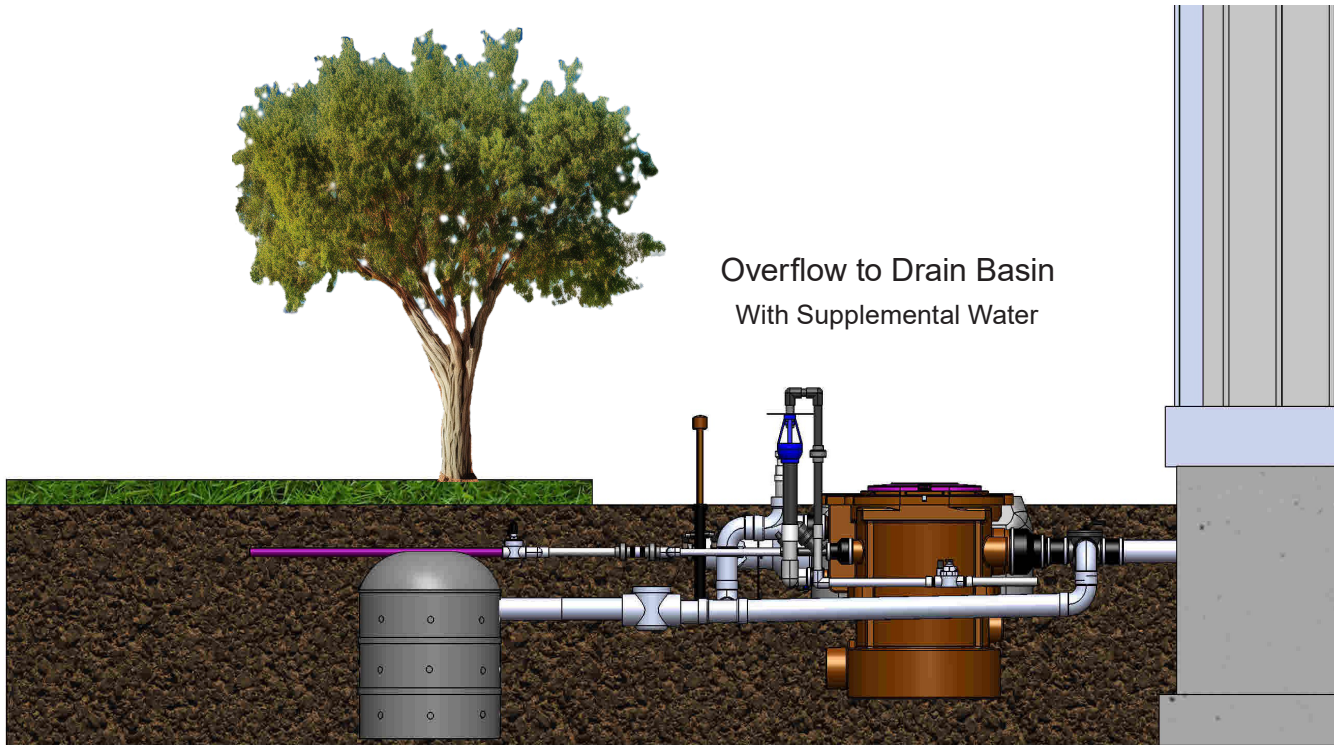
INTRODUCTION

Netafim™ BioLine®
DripLine

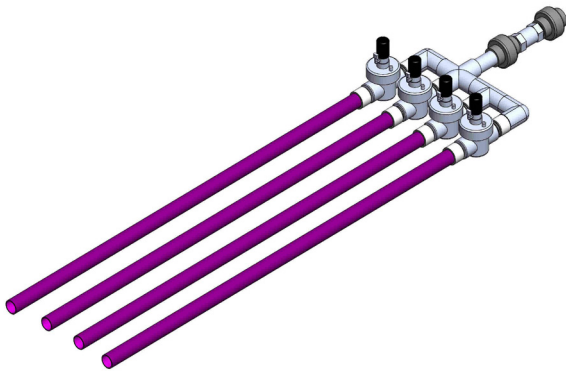
.4 GPH Emitters

.6 GPH Emitters

.9 GPH Emitters



2 GPM Flow Restrictor Maintains
Required Filter Wash Pressure



GL-2SP-MZP4
2 Stage Pump
1/2 HP, 115V, 5.5 Amps

Level landscape:

The maximum GreyWater use in one hour will be:

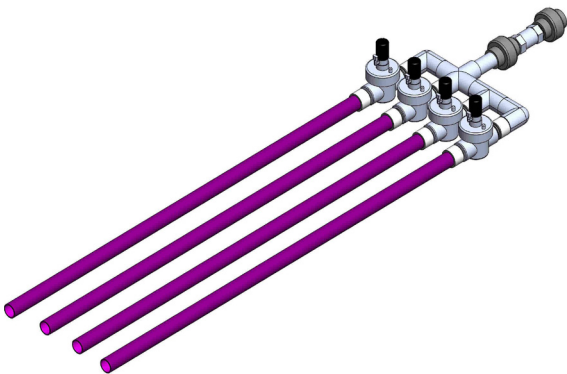
3 showers... or...2 showers and 1 load of laundry...or... 1 bath

The maximum zone size can be 120 Gallons/Hour



See Pages 30-31 For Elevated Landscapes

6 GPM Flow Restrictor Maintains
Required Filter Wash Pressure



GL-3SP-MZP4
3 Stage Pump
3/4 HP, 115V, 8.4 Amps

Level Landscape:

The maximum GreyWater source in one hour will be:

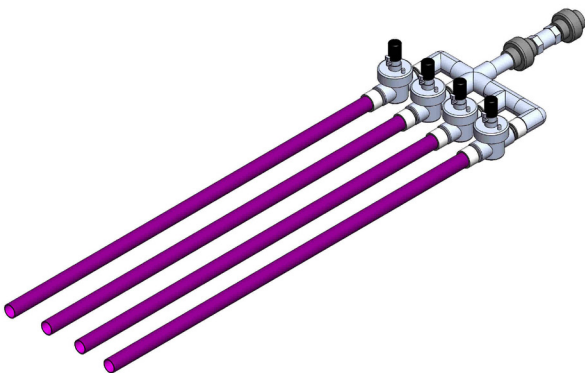
9 showers...or...6 showers and 3 loads of laundry...or...3 baths

The maximum zone size can be 360 Gallons/Hour



See Pages 30-31 For Elevated Landscapes

10 GPM Flow Restrictor Maintains
Required Filter Wash Pressure



GL-4SP-MZP4
4 Stage Pump
1 HP, 115V, 9.8 Amps

Level Landscape:

The maximum GreyWater source in one hour will be:

15 showers...or...10 showers and 5 loads of laundry...or...5 baths

The maximum zone size can be 600 Gallons/Hour

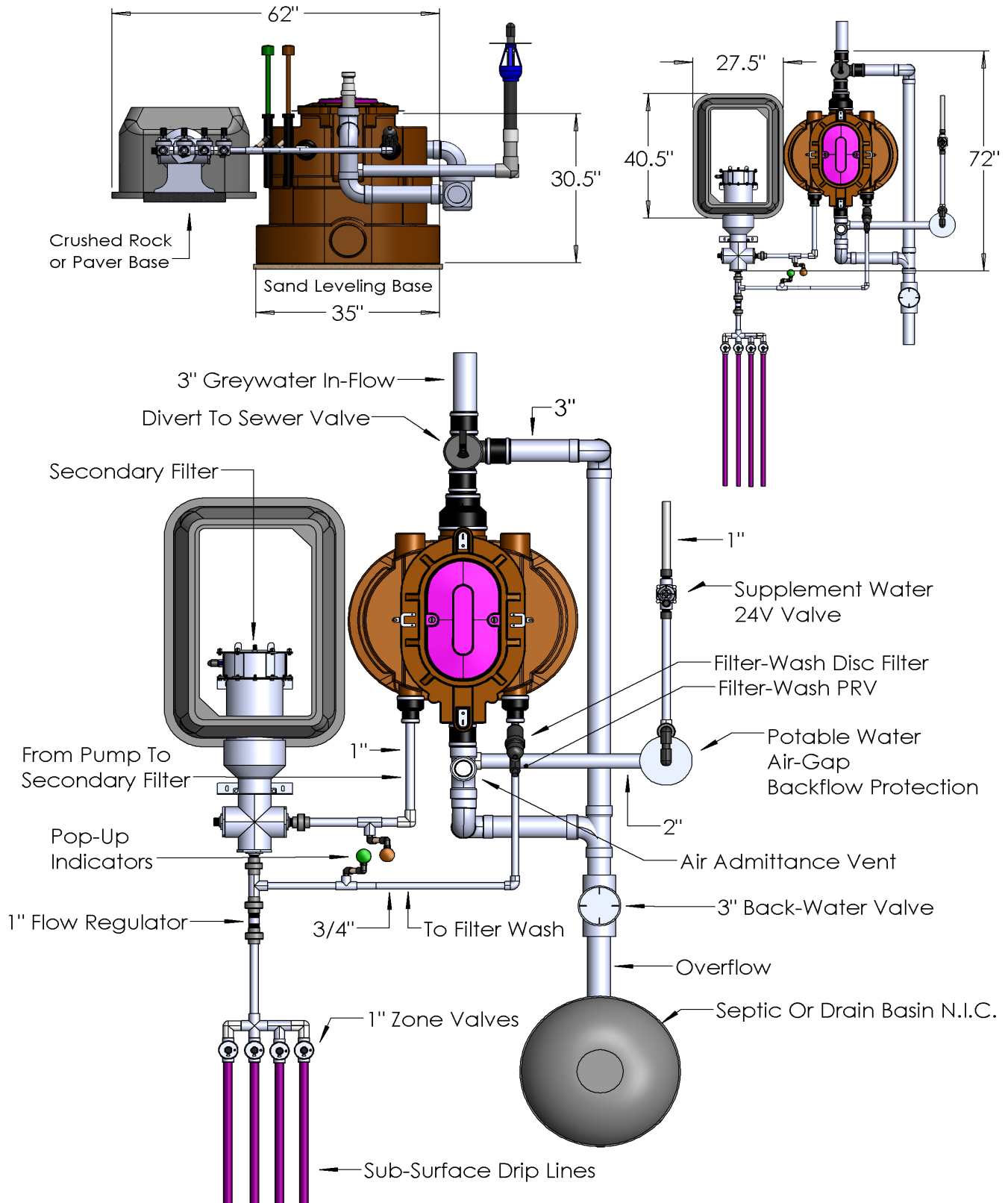


See Pages 30-31 For Elevated Landscapes

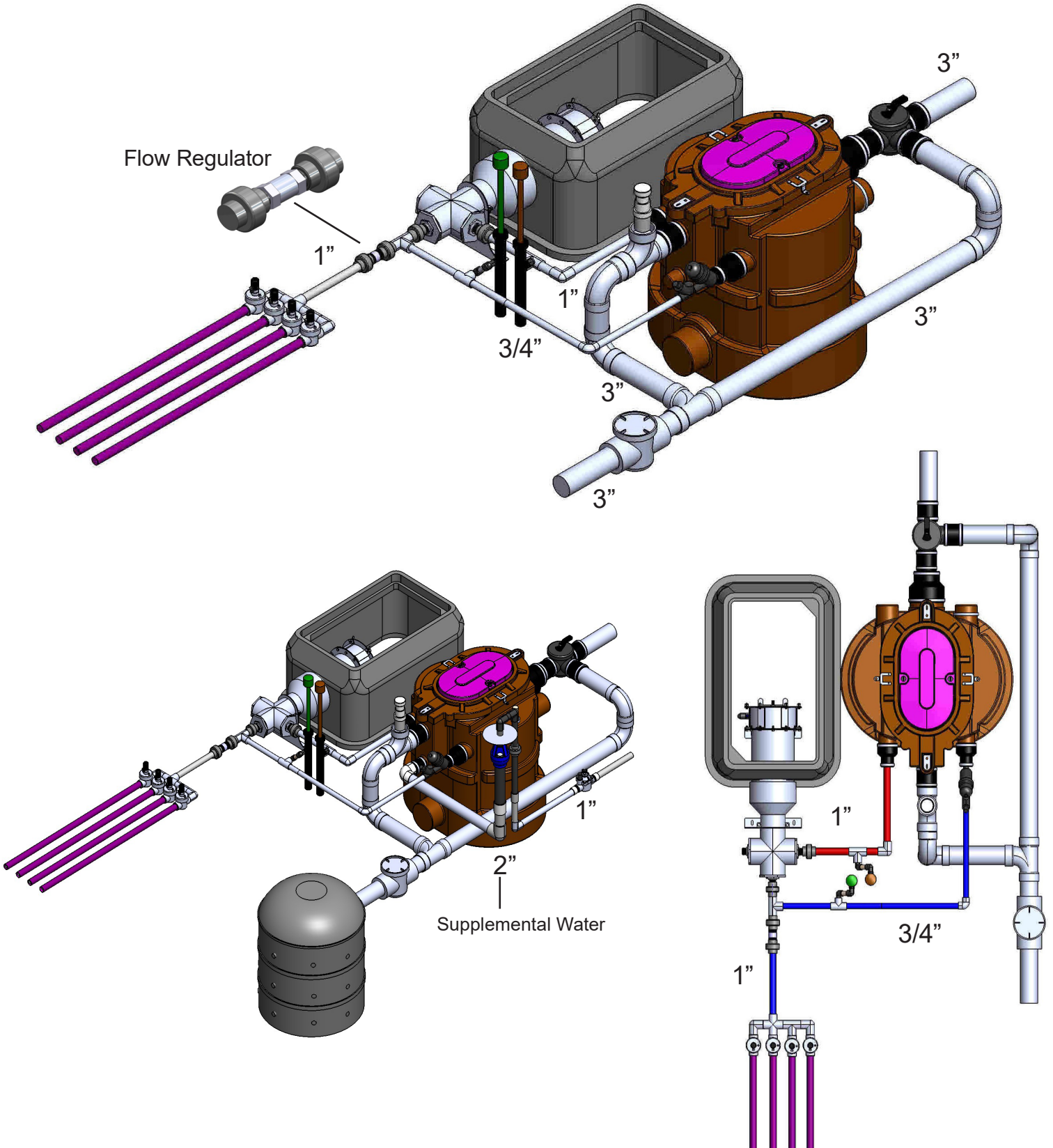
PROCESSOR OVERFLOW TO BASIN-SEPTIC

SYSTEM INSTALLATION

GL Series Processor



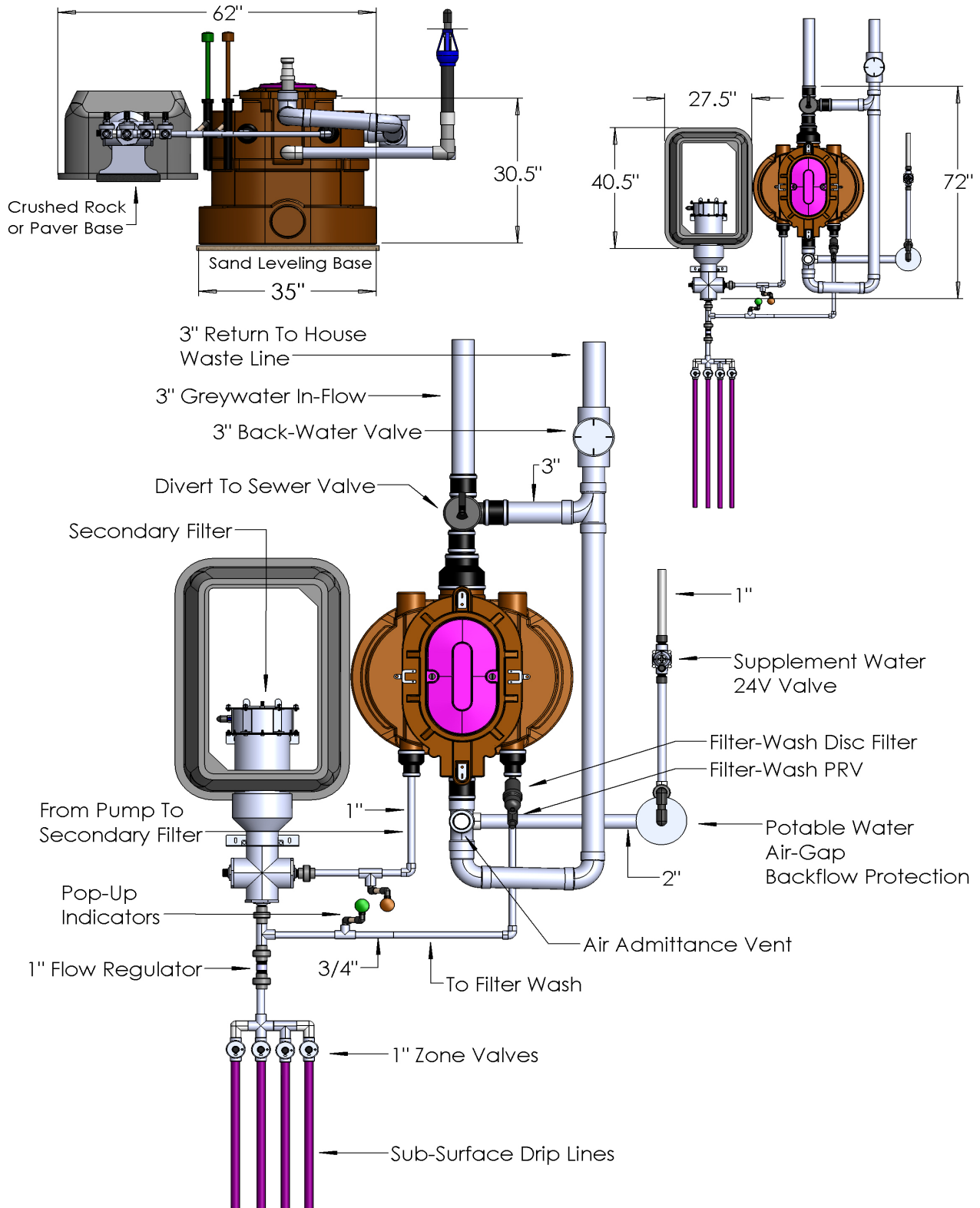
PROCESSOR OVERFLOW TO BASIN-SEPTIC



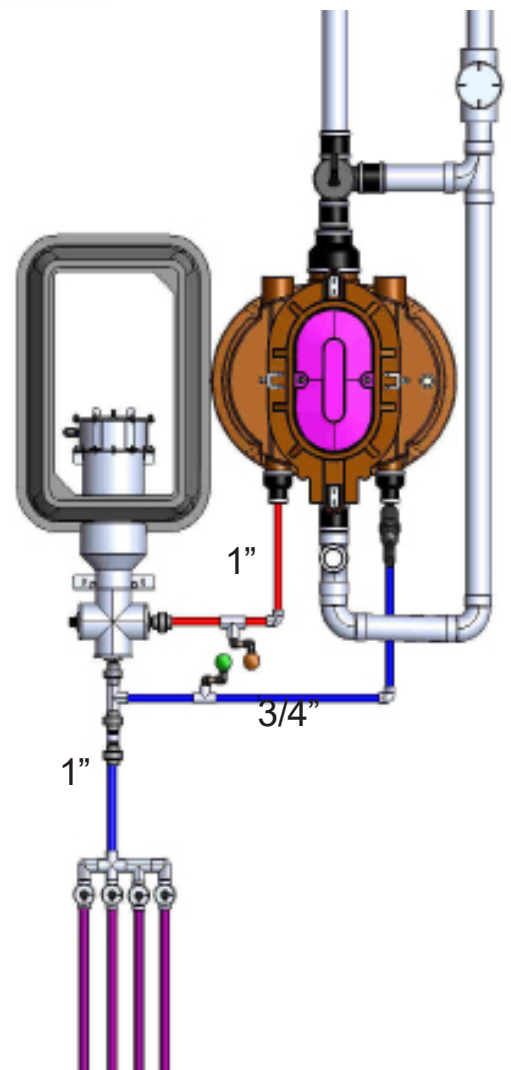
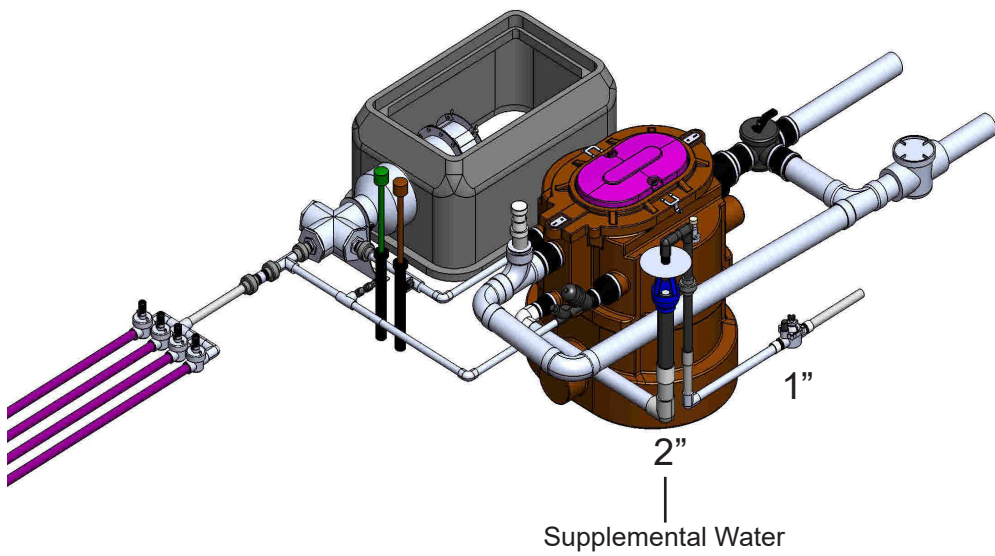
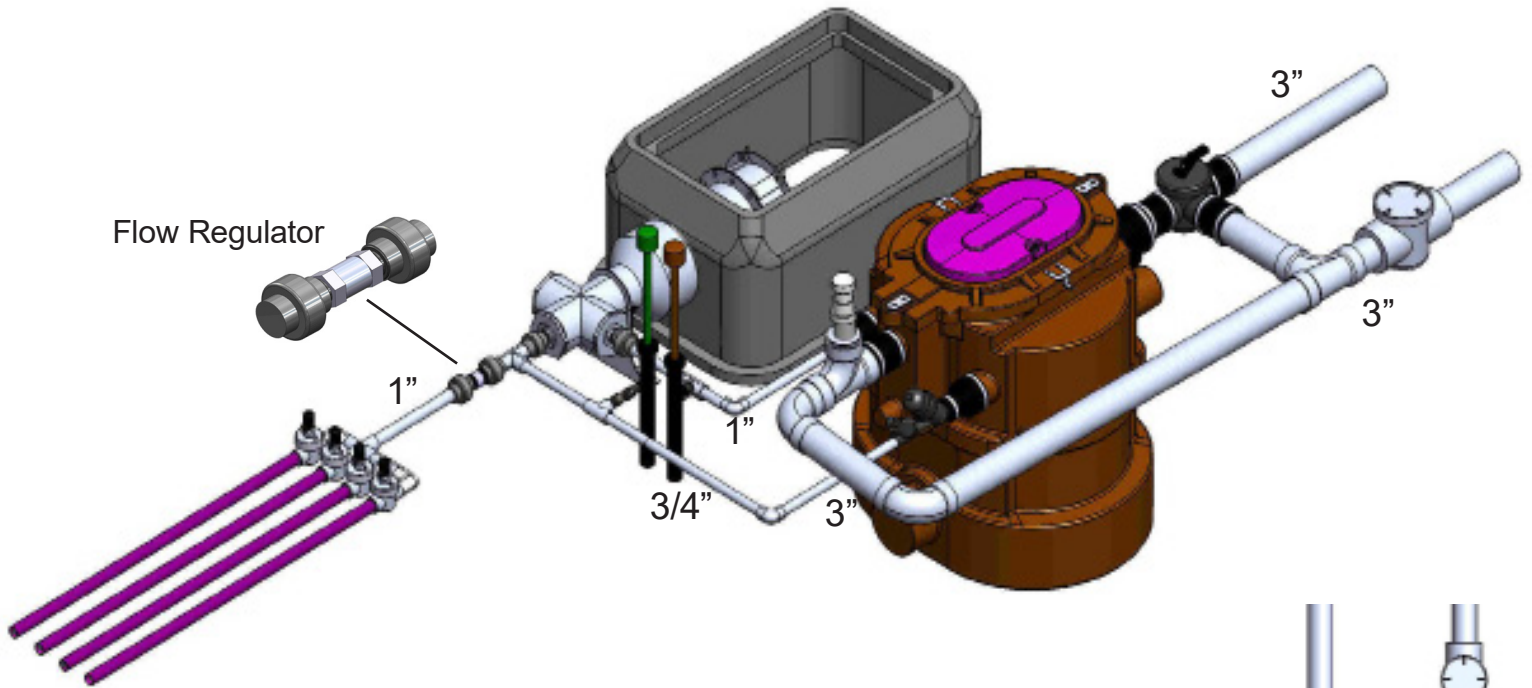
PROCESSOR OVERFLOW TO HOUSE SEWER

SYSTEM INSTALLATION

GL Series Processor

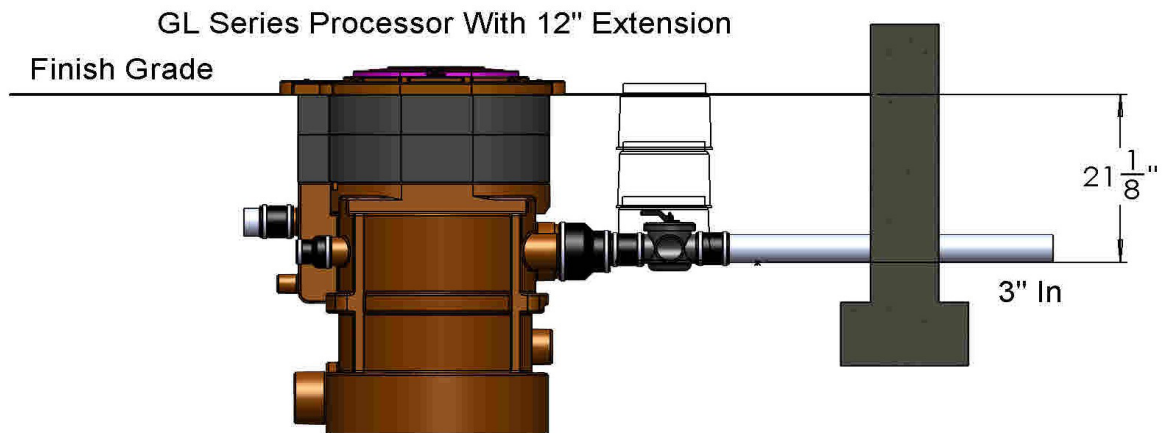
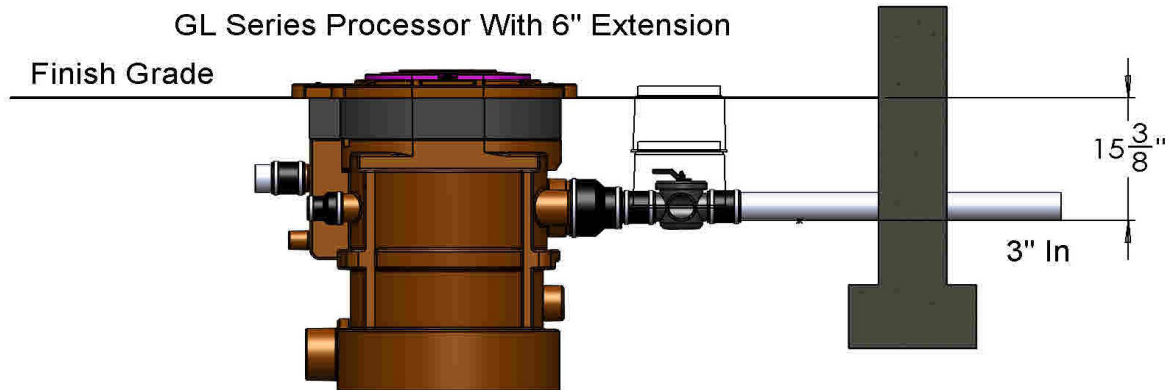
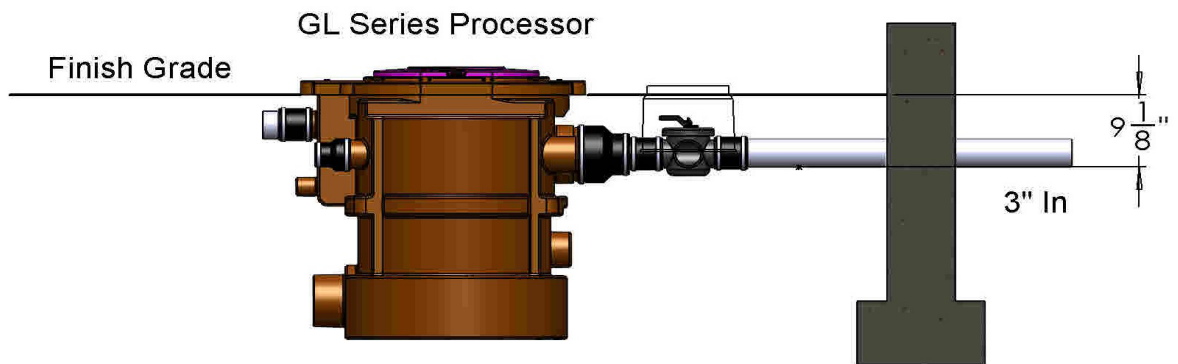


PROCESSOR OVERFLOW TO HOUSE SEWER



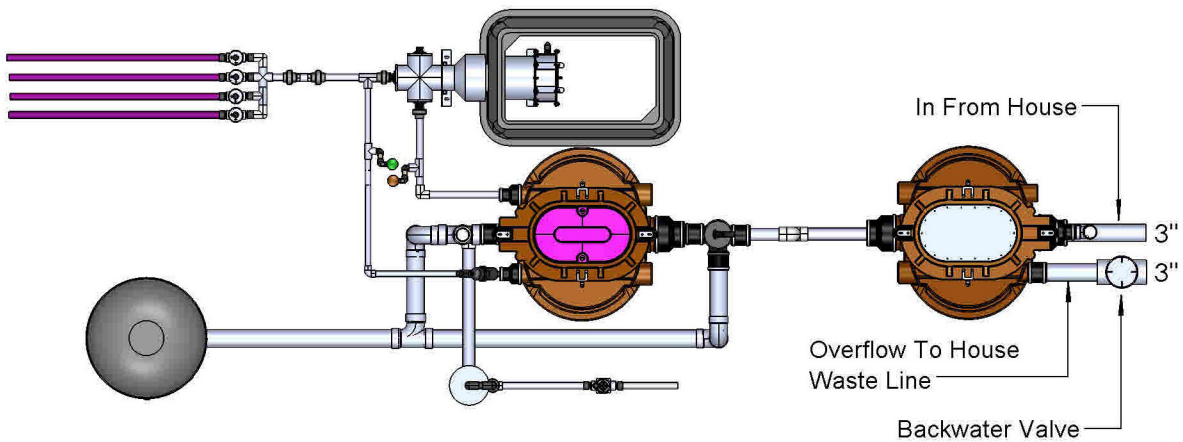
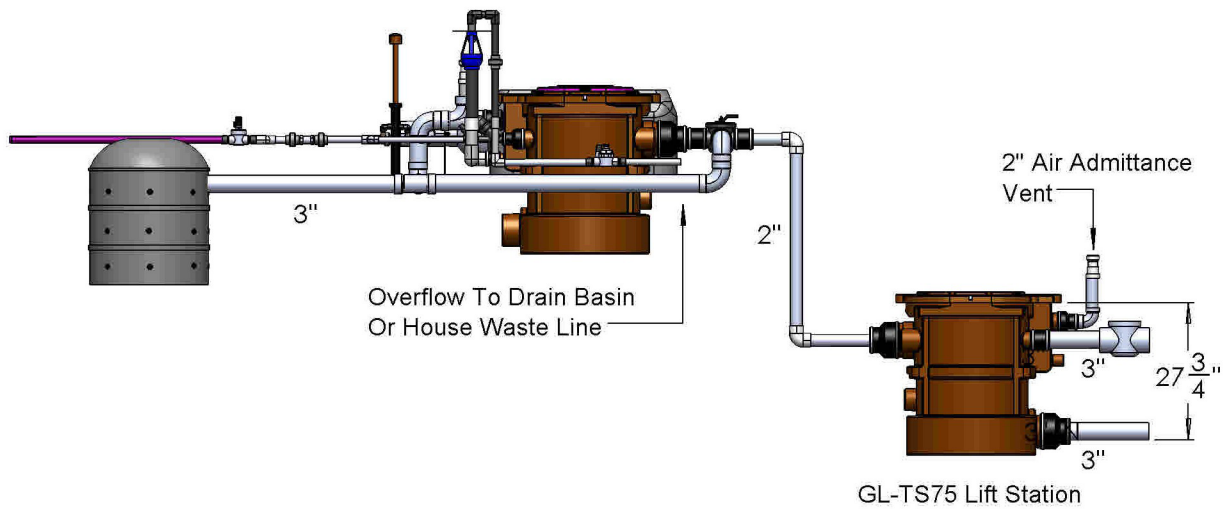
PROCESSOR PLACEMENT

SYSTEM INSTALLATION



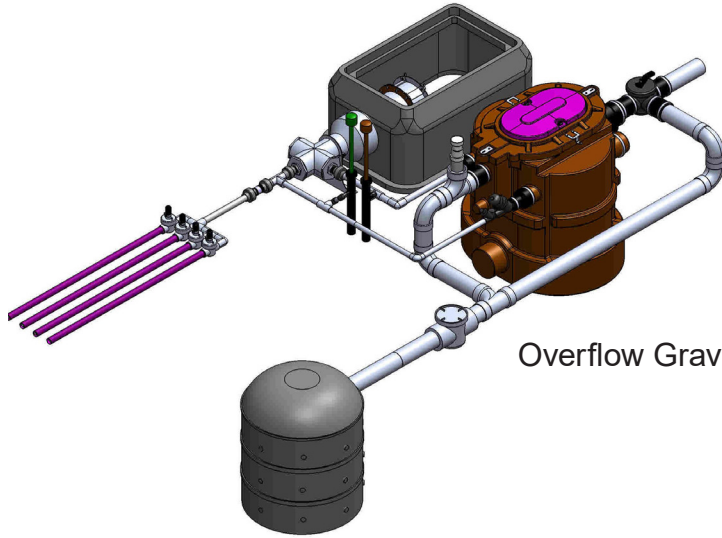
DEEP GREYWATER STUB-OUTS

For installations where the greywater stub-out is below the intake level of the processor, a lift station may be installed. The lift station features a built-in pump, and activation float switch which pumps the incoming greywater up and into the greywater processor intake port.

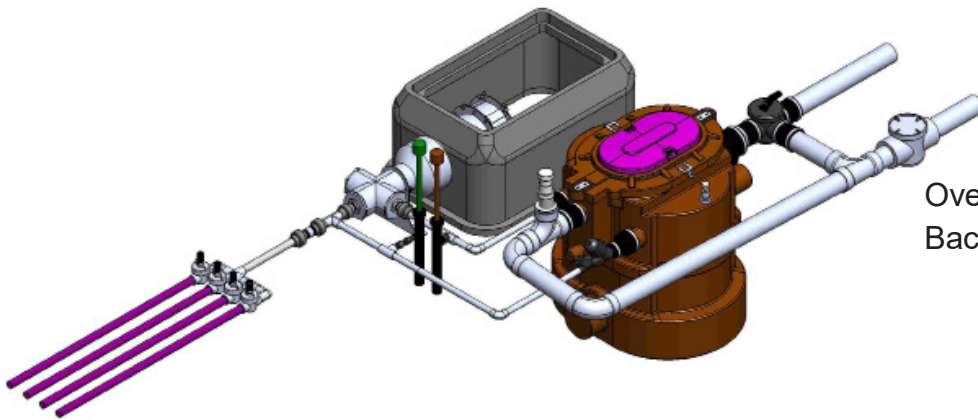


OVERFLOW OPTIONS

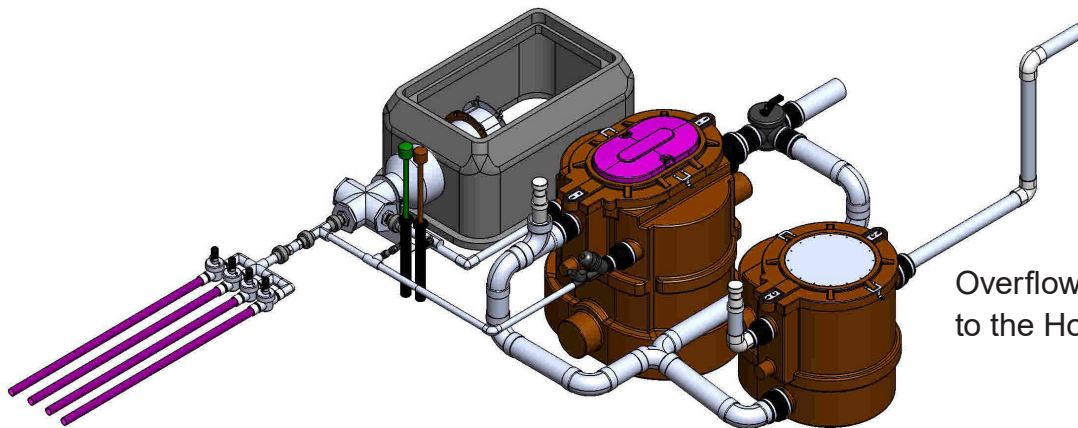
SYSTEM INSTALLATION



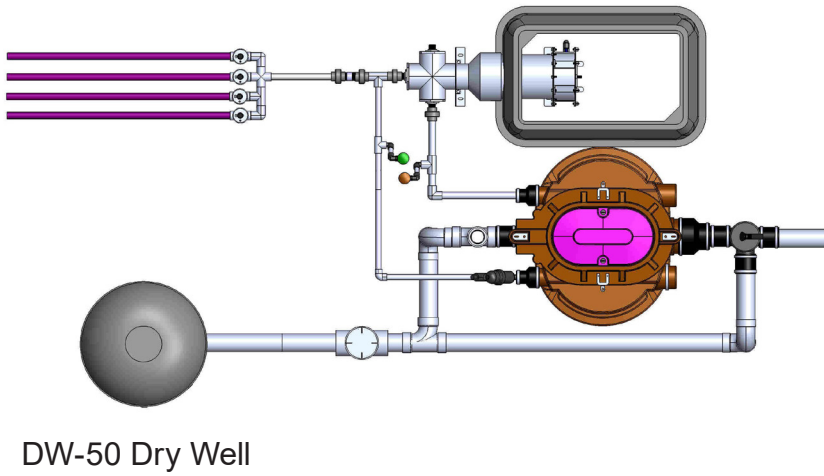
Overflow Gravity Drain to a Drain Basin



Overflow Gravity Flow
Back to the House Sewer

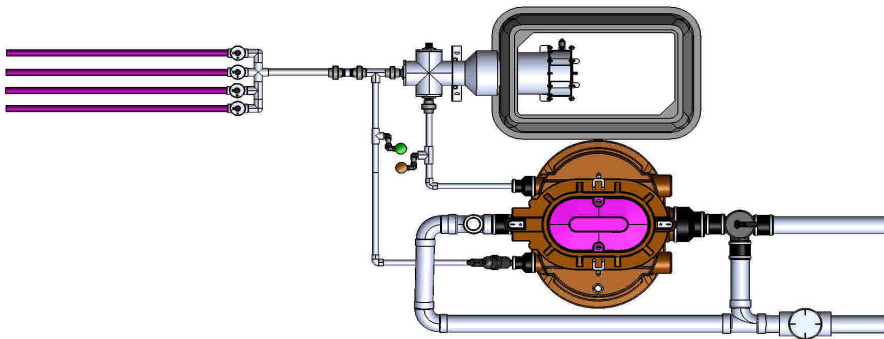


Overflow Pumped Up
to the House Sewer



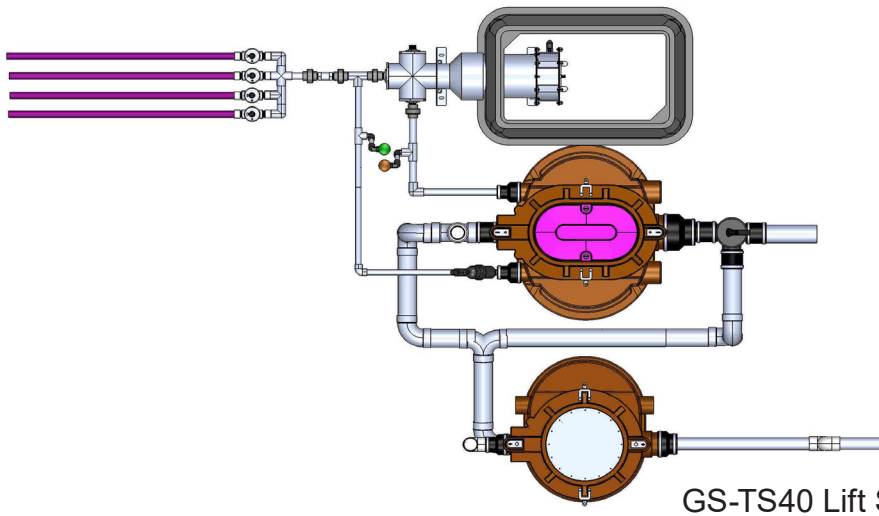
GL Series Processor

Overflow Gravity Drain
to a Drain Basin



GL Series Processor

Overflow Gravity Flow
Back to House Sewer



GL Series Processor

Overflow Pumped Up
to the House Sewer

GS-TS40 Lift Station

WATER SUPPLEMENT COMPONENTS

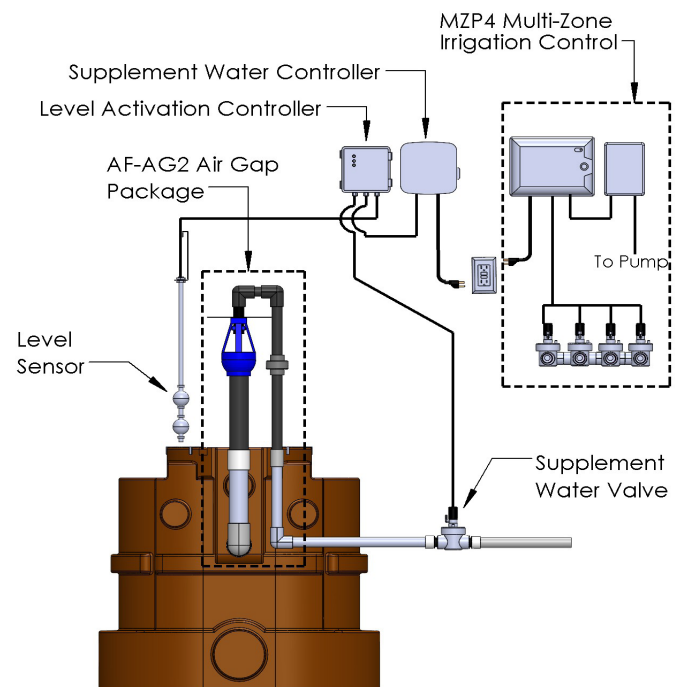
SYSTEM INSTALLATION

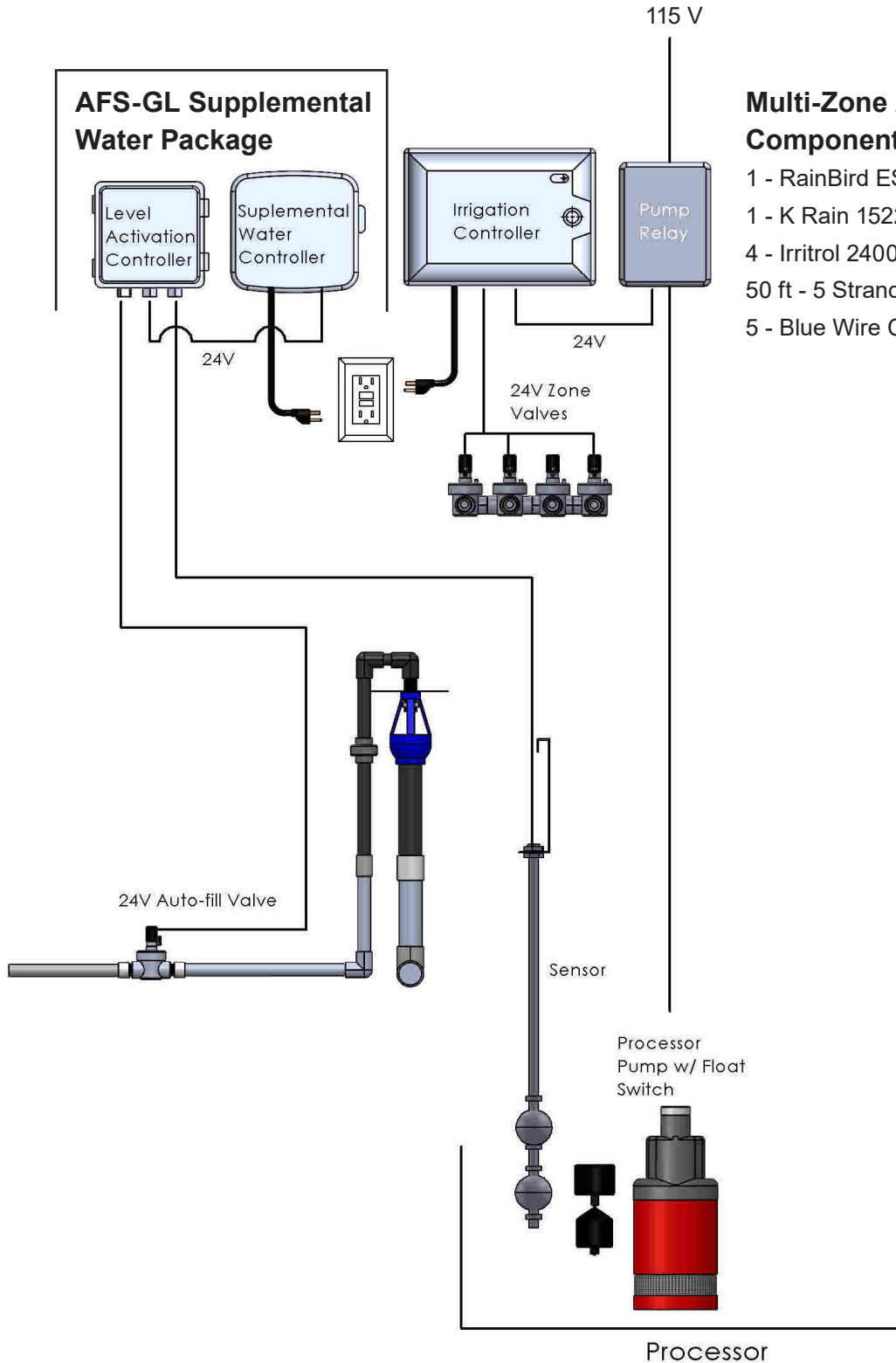
AFS-GL GL Series Supplemental Water Package

An upper and lower float switch adds water at a low water level and turns it off when water reaches the upper float. The override controller provides scheduling of supplemental water times and provides water budgeting as needed.

Includes:

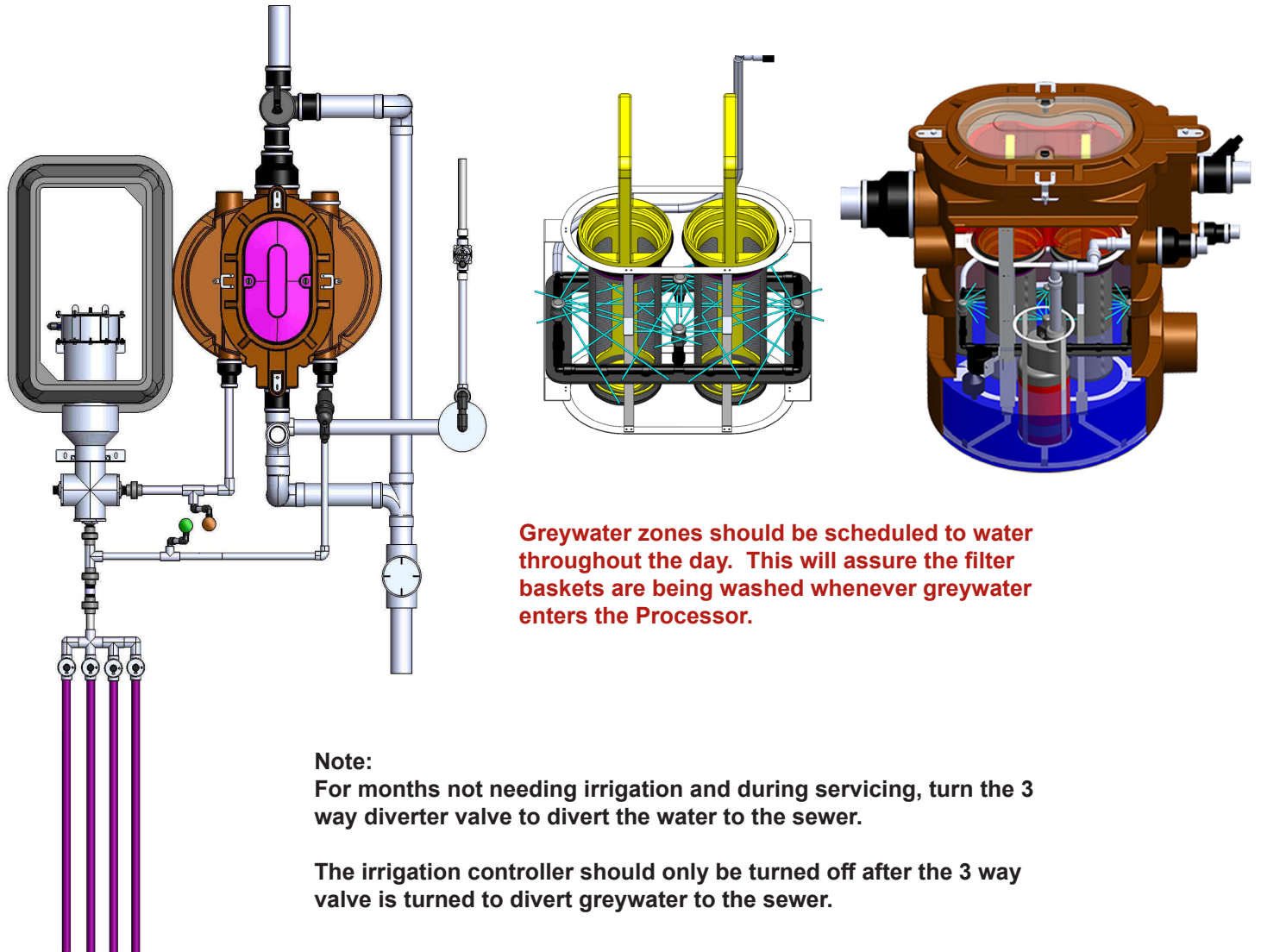
- 1 - Sensor w/ Mounting Bracket
- 1 - Level Activation Controller
- 1 - Supplemental Water Controller
- 1 - 24V Auto-Fill Valve
- 50 ft 24V 18-4 Multi-Strand
- 50 ft 24V 18-2 Multi-Strand
- 7 - Blue Spade Connectors
- 5 - Waterproof GreyBlack Wire Nuts
- 1 - AF-AG2 Air-Gap Assembly





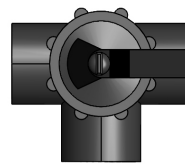
Multi-Zone Automation Components

- 1 - RainBird ESP-ME3 Controller
- 1 - K Rain 1522 Pump Start Relay
- 4 - Irritrol 2400TF Electric Valves
- 50 ft - 5 Strand Wire
- 5 - Blue Wire Connectors



Flow To Processor Is Blocked (Maintenance Position)

To Processor



In

To Sewer

Example Programing Guide For Landscapes With Similar Watering Requirements



<p><i>Supplement Controller Program A</i></p> <p><i>Station # 1</i></p> <p><i>Mon, Tues, Wed, Thurs, Fri, Sat, Sun</i></p> <p><i>Start Time # 1: 7:00 AM</i></p> <p><i>Run Time 15 Min.</i></p> <p><i>Start Time # 2: 1:00 PM</i></p> <p><i>Run Time 15Min.</i></p>	<p>Irrigation Greywater Controller Program A</p>	<p>Irrigation Greywater Controller Program B</p>	<p>Irrigation Greywater Controller Program C</p>	<p>Irrigation Greywater Controller Program D</p>
	<p>Station # 1</p>	<p>Station # 2</p>	<p>Station # 3</p>	<p>Station # 4</p>
	<p>Mon, Wed, Fri, Sun</p>	<p>Mon, Wed, Fri, Sun</p>	<p>Tues, Thurs, Sat</p>	<p>Tues, Thurs, Sat</p>
	<p>Start Time: 7:00 AM</p>	<p>Start Time: 1:00 PM</p>	<p>Start Time: 7:00 AM</p>	<p>Start Time: 1:00 PM</p>
	<p>Run Time: 6 Hrs</p>	<p>Run Time: 6 Hrs</p>	<p>Run Time: 6 Hrs</p>	<p>Run Time: 6 Hrs</p>

Only available greywater (or supplemental water added) will be dispersed during zone run times! This will happen multiple times during he time the zone is running, depending on the greywater flowing into the system.

The Supplemental Water Controller:

Set the supplemental controller to add water to zones requiring more water than is available from inflowing greywater sources. In order for supplemental water to go to an irrigation zone, it must be adding water at the same time as a zone valve is open. When a zone valve is activated, supplemental water can be added. Set the start time to match the irrigation controller. Looking at the chart above, the suggested time for this would be 7:00 AM and 1:00 PM. Turn the Supplemental Controller off during wet months or when additional water is not needed.

Example Programing Guide For Landscapes With Individual Watering Requirements



Irrigation Greywater Controller Program A	<i>Supplement Controller Program A</i>	Irrigation Greywater Controller Program B	<i>Supplement Controller Program B</i>	Irrigation Greywater Controller Program C	<i>Supplement Controller Program B</i>	Irrigation Greywater Controller Program D	<i>Supplement Controller Program C</i>
Station # 1	<i>Station # 1</i>	Station # 2	<i>Station # 1</i>	Station # 3	<i>Station # 1</i>	Station # 4	<i>Station # 1</i>
Mon, Wed	<i>Mon, Wed,</i>	Tues, Thurs	<i>Tues, Thurs</i>	Fri, Sat, Sun	<i>Fri, Sat, Sun</i>	All Days	<i>All Evenings</i>
1st Start: 7:00 AM	<i>Start: 7:00 AM</i>	1st Start: 7:00 AM	<i>Start: 7:00 AM</i>	1st Start: 7:00 AM	<i>Start: 7:00 AM</i>	Start Time: 7:00 PM	<i>Start: 7:00 PM</i>
Run Time: 6 Hrs	<i>Run Time: 15 Min.</i>	Run Time: 6 Hrs	<i>Run Time 30 Min.</i>	Run Time: 6 Hrs	<i>Run Time 30 Min.</i>	Run Time: 3 Hrs	<i>Run Time 15 Min.</i>
2nd Start: 1:00 PM		2nd Start: 1:00 PM		2nd Start: 2:00 PM			
Run Time: 6 Hrs.		Run Time: 6 Hrs.		Run Time: 6 Hrs			

Irrigation Zone Controller



Set to operate 7 days of the week

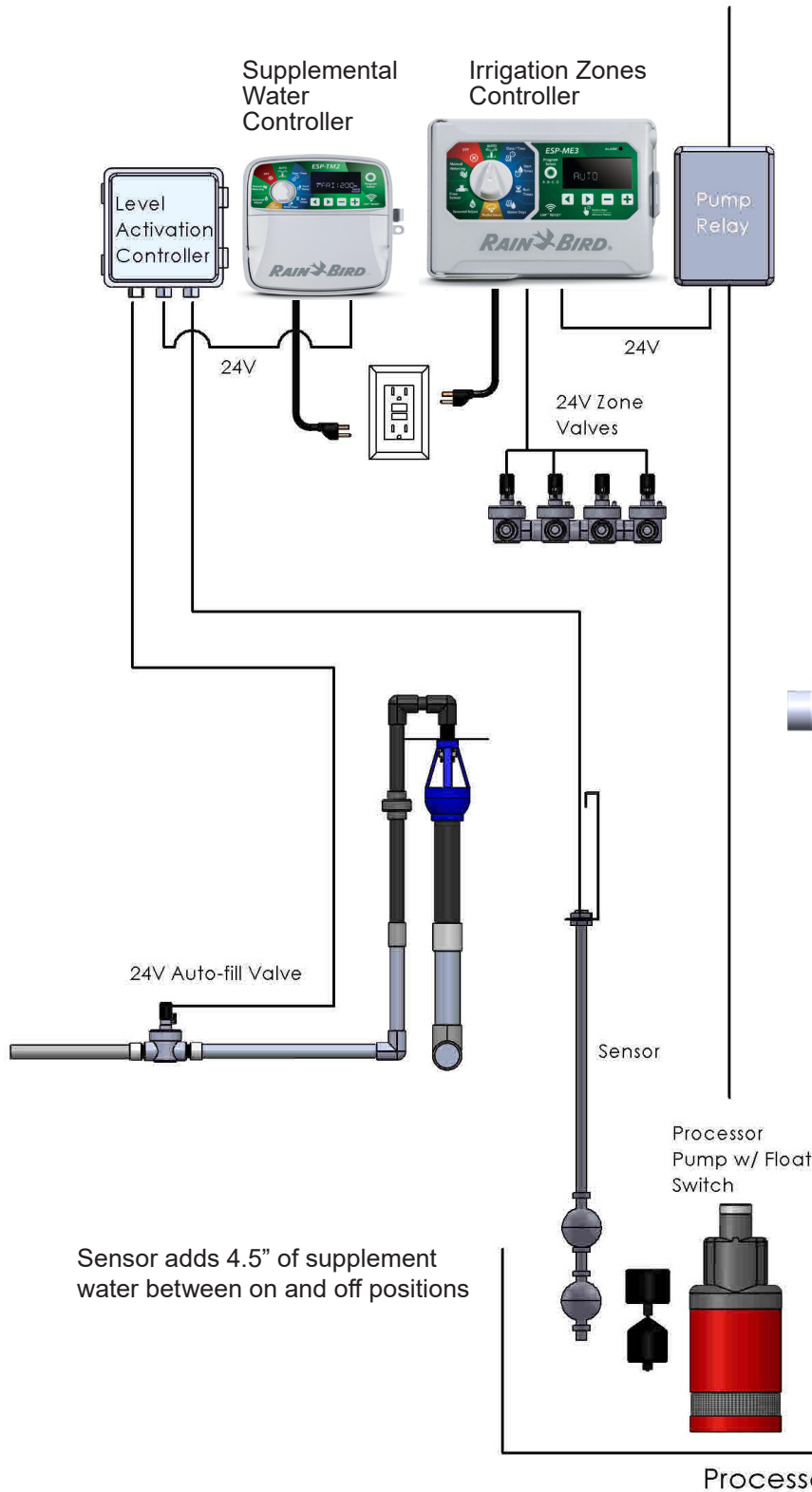
- Indoor or outdoor
- 4 stations expandable to 16.
- 4 individual programs, A,B,C,D
- 6 Independent start times per program

Supplemental Water Controller

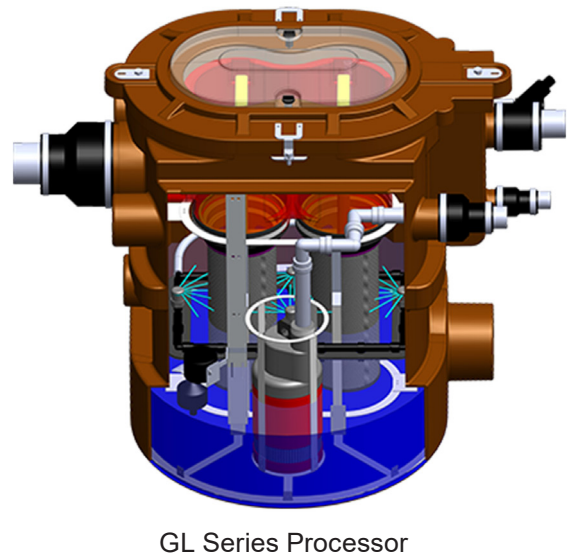


Set Station # 1 to operate the supplement electric valve the days of the week where zone supplement watering is needed.

- Indoor or outdoor
- 3 individual programs, A,B,C for station # 1.
- 4 independent start times per program
- Operates any or all days of the week as needed.



The pump shares greywater with the filtered internal wash system, and simultaneously pumps water to an open irrigation zone valve when greywater or supplement water enters the processor.



The Flotender™ GL System requires periodic maintenance. The following are recommendations based on average usage as detailed below:

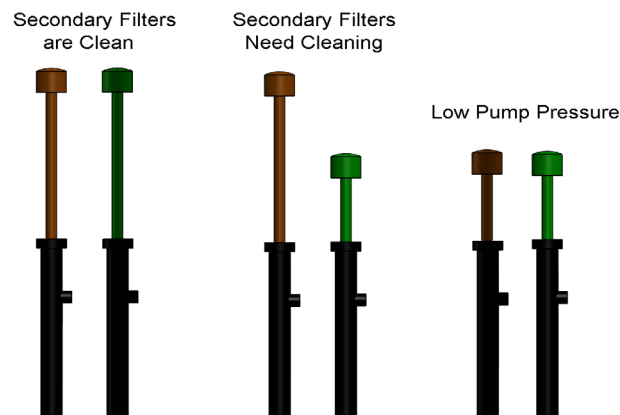
GL-2SP-MZP4 Suggested Service Guide For Shower, Sink Washing Machine and Tub Systems	
Primary Filter:	2 years
Secondary Filter:	2 years

GL-3SP-MZP Suggested Service Guide For Shower, Sink Washing Machine and Tub Systems	
Primary Filter:	1 year
Secondary Filter:	1 year

GL-4SP-MZP Suggested Service Guide For Shower, Sink Washing Machine and Tub Systems	
Primary Filter:	1 year
Secondary Filter:	1 year

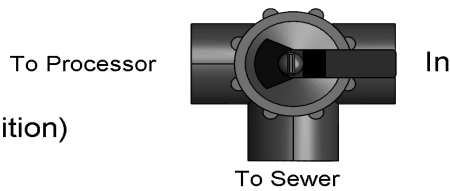
When the primary filters have collected excessive lint, the filters will flush through the overflow flush tubes, helping to remove excessive lint and debris.

The performance indicator positions shown below will indicate when the filters need cleaning.

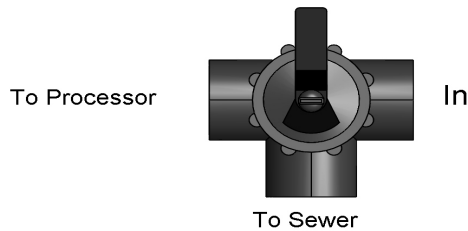


Before cleaning the Primary Filter, turn the diverter gate so it is blocking the greywater flowing into the processor. The return to sewer will be on the left or right as shown below with the handle pointing at the port being blocked.

Flow To Processor Is Blocked (Maintenance Position)



Flow To Sewer Is Blocked



REMOVE ACCESS CAP

Turn the knobs on each side of the cap so they are parallel and past the dot as shown.

REMOVING FILTER FLUSH TUBES

Occasionally, it is recommended that the primary filter is manually cleaned. In order to access the primary filters, the overflow flush tubes must be removed.



STEP 1:
Pull back on the Filter Flush Tube to disconnect pipe from the overflow port.



STEP 2:
Lift the Filter Flush Tube from the Filter Carriage. The Primary Filter Baskets can now be lifted out.

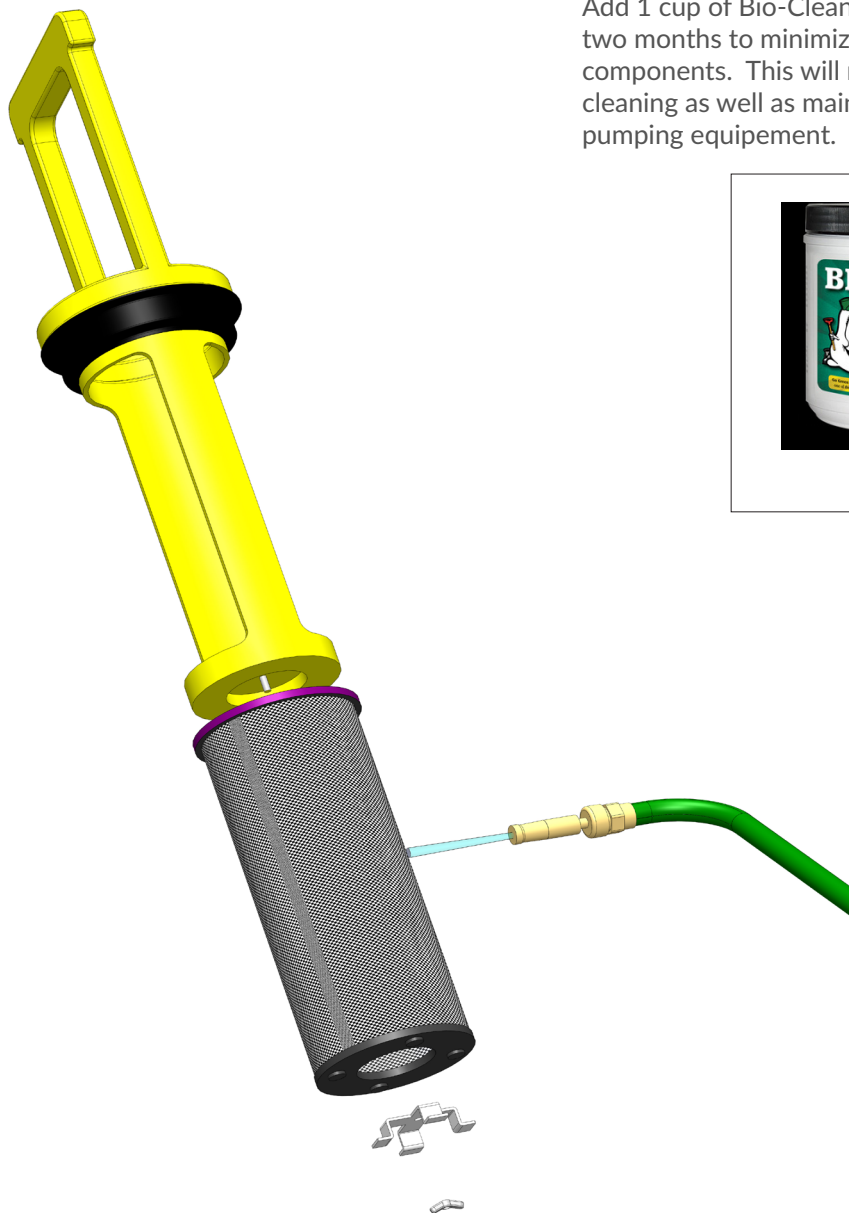


CLEANING PRIMARY FILTERS

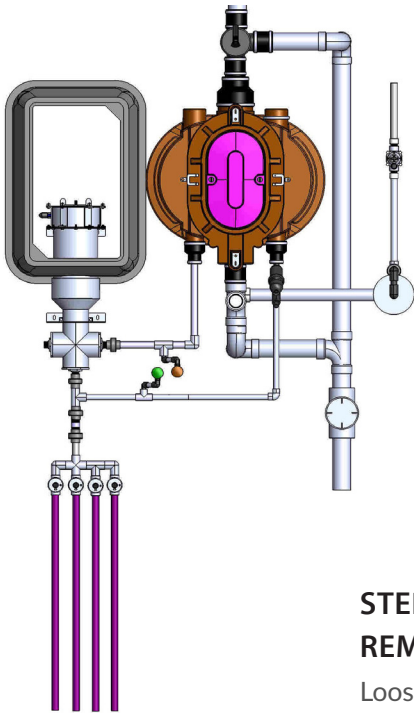
SYSTEM SERVICE

Remove the filter screen from the filter frame by loosening the wing nut on the bottom of the basket. Use a standard garden hose to spray debris from the basket. Once the debris is removed from the basket reconnect the screen, replace the basket in the processor and reconnect the overflow flush tubes.

Add 1 cup of Bio-Clean to each Filter Basket every two months to minimize bio-slime build-up on internal components. This will reduce the frequency of filter cleaning as well as maintaining the best performance of pumping equipment.



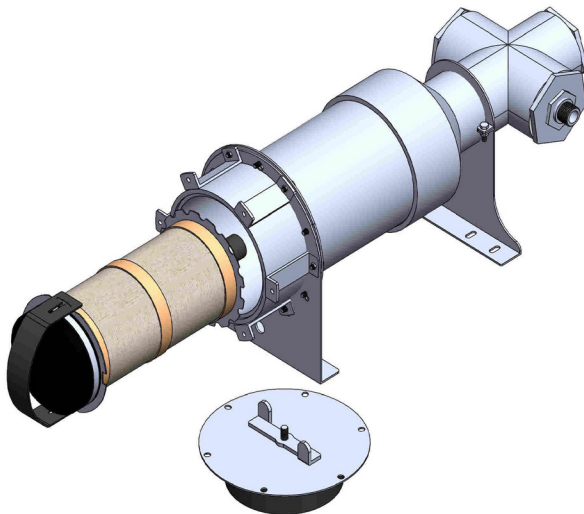
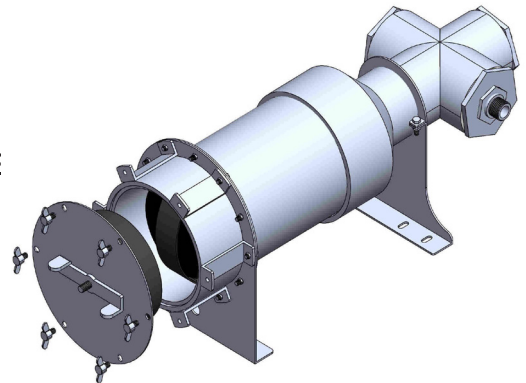
CLEANING SECONDARY FILTER



NOTE:
TURN THE IRRIGATION CONTROLLER TO OFF, OR DISCONNECT THE POWER FROM THE PUMP BEFORE CLEANING THE

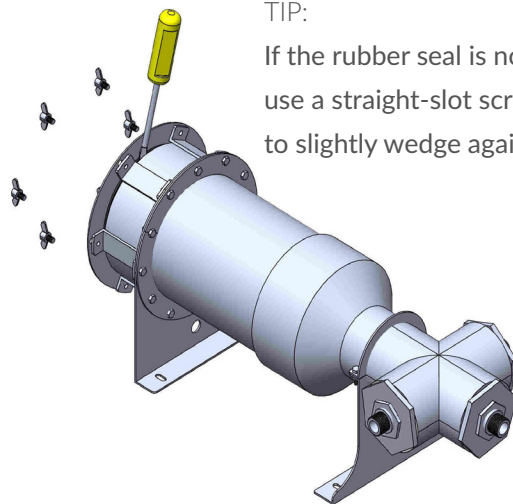
**STEP 1:
REMOVE THE FRONT ACCESS PLATE**

Loosen the wing nuts and pull back on the metal face plate to allow water to drain before removing the front access plate.



**STEP 2:
REMOVE THE FILTER ELEMENT**

Pull straight back on the filter handle to remove the filter element.

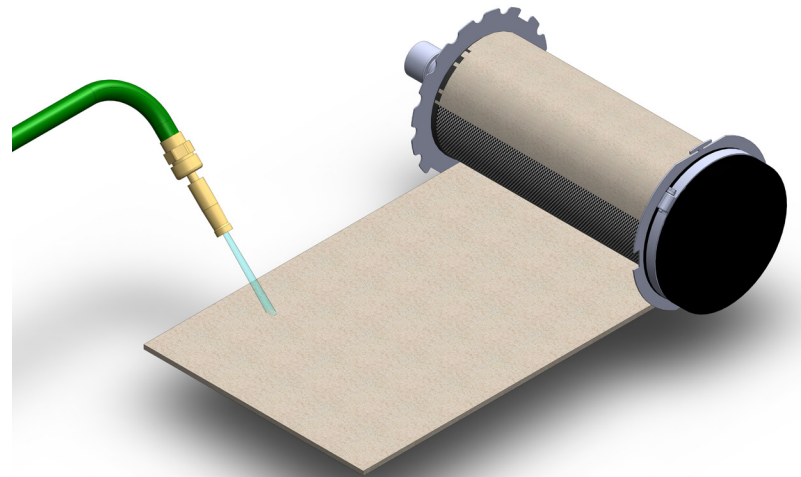
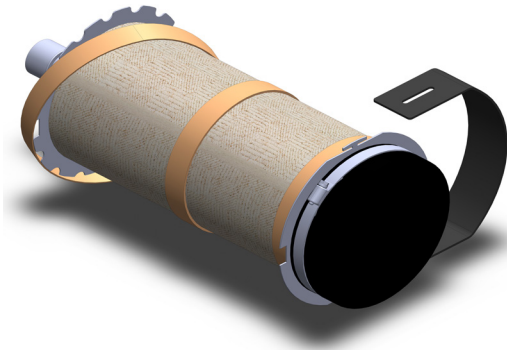


TIP:
If the rubber seal is not releasing, use a straight-slot screw driver to slightly wedge against the housing.

CLEANING SECONDARY FILTER

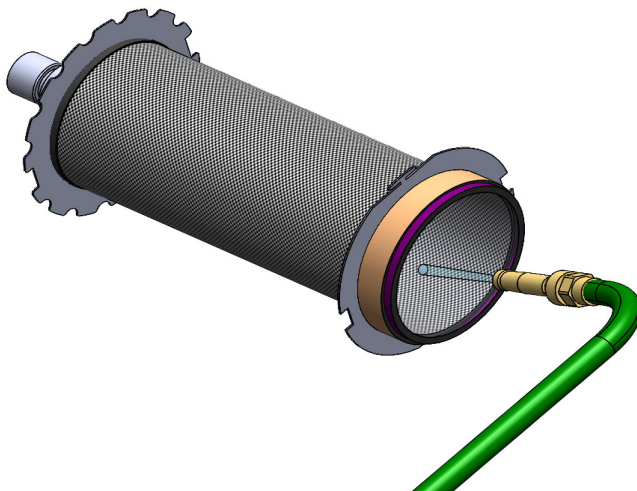
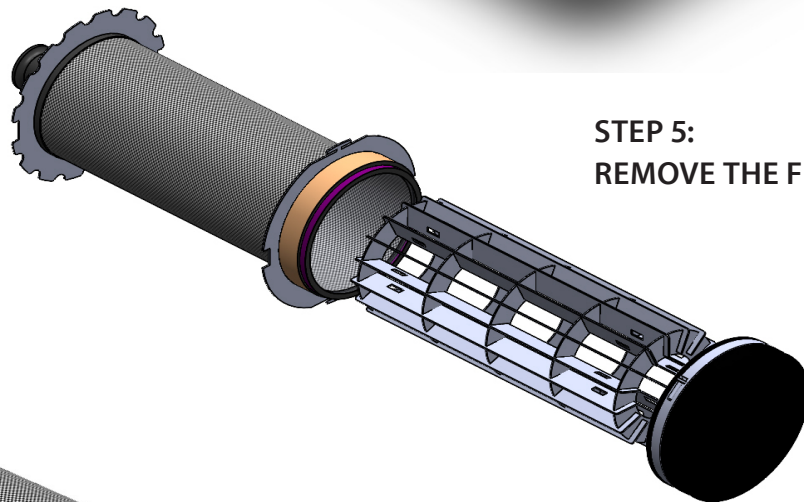
SYSTEM SERVICE

**STEP 3:
REMOVE THE HANDLE AND
SILICONE STRETCH BANDS**

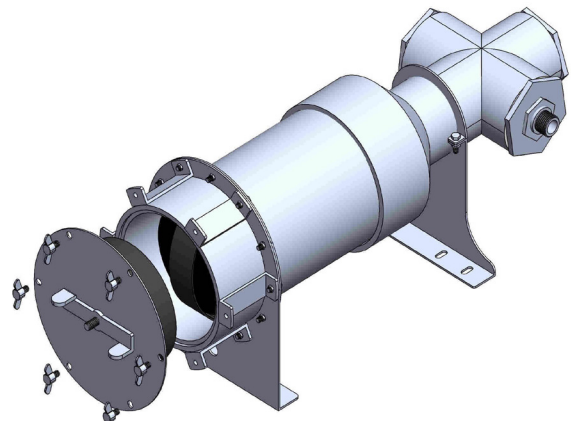
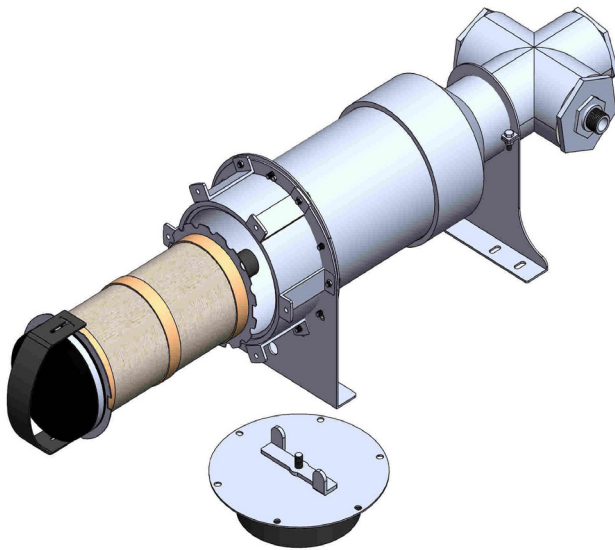


**STEP 4:
CLEAN THE FILTER FABRIC**
Unroll the filter fabric and spray off the
collected lint.

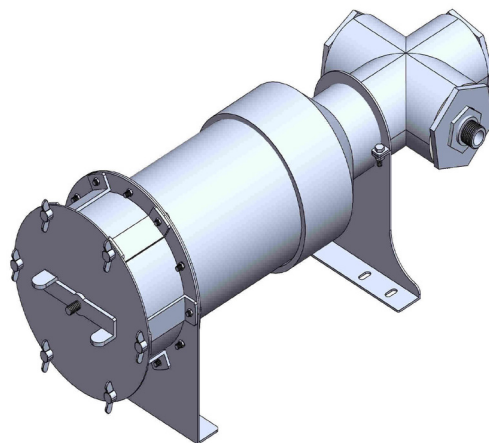
**STEP 5:
REMOVE THE FILTER FRAME**



**STEP 6:
WASH LINT FROM THE
FILTER SCREEN**
Wash away lint accumulation on the
filter element by directing a spray nozzle
against the inside of the surface of the
filter screen. This will reverse wash the
lint from the outer surface of the screen.

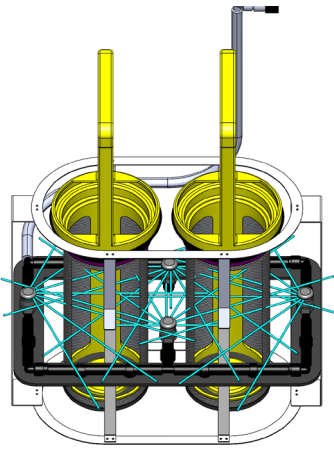
**STEP 7:****RE-ASSEMBLE**

Insert the cleaned filter element and the face plate. Hand tighten the perimeter wing nuts then firmly hand tighten the center wing nut. (Note: Once the system is operating, further hand tighten the front wing nut as needed)



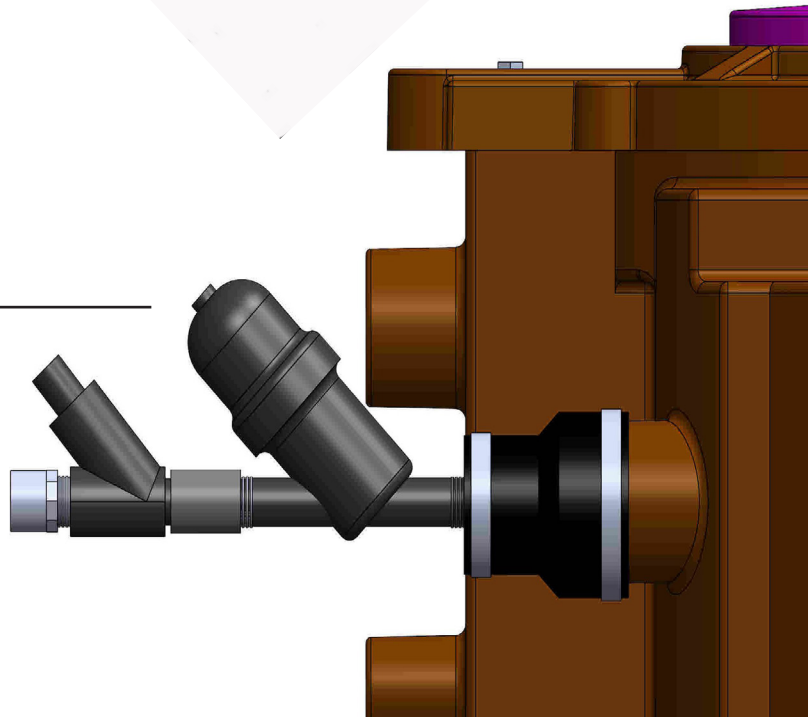
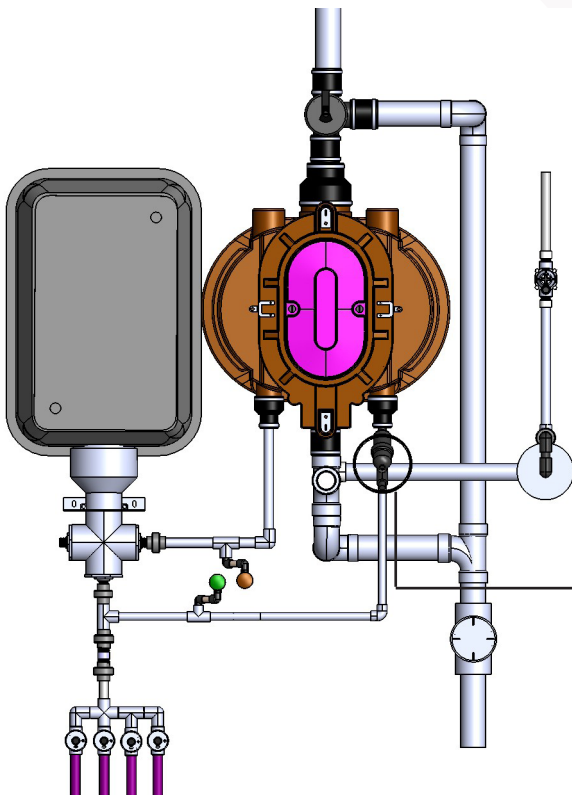
CLEANING FILTER- WASH DISC FILTER

SYSTEM SERVICE



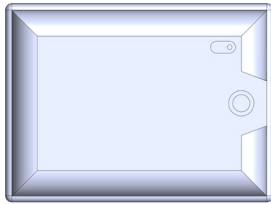
The filter wash disc filter prevents initial installation pipe debris from plugging the internal wash system. Unless there has been a disruption to the system this is not a regular maintenance item. To clean, unthread the top cover and lift out the filter disc and then rinse.

UnPlug the pump before servicing the filter.
Unscrew the top and pull out the entire filter element,
Wash the discs and re-assemble in reverse order.



NOTE:

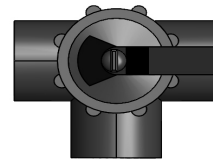
TURN THE IRRIGATION CONTROLLER TO OFF, OR DISCONNECT THE POWER FROM THE PUMP, OR TURN THE 3-WAY VALVE TO DIVERT IN-FLOWING GREYWATER BEFORE CLEANING THE SECONDARY FILTER.



Irrigation
Controller

Flow To
Processor
Is Blocked
(Maintenance Position)

To Processor

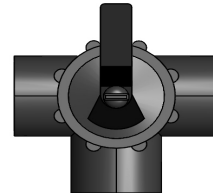


In

To Sewer

Flow To
Sewer Is
Blocked

To Processor



In

To Sewer

Follow the steps below to access the internal components inside of the Greywater Processor.



STEP 1:

Remove front and back connection bolts.



STEP 2:

Remove side connection bolts.

Continue



ACCESSING GREYWATER PROCESSOR

SYSTEM SERVICE

DISCONNECTING OVERFLOW FROM CARRIAGE:



STEP 3:
Remove The Lid



STEP 4:
Remove the bolt at the back of
the filter carriage.



STEP 5:
Remove poly-mat, overflow flush
tubes and filter baskets.



STEP 6:
Rotate the fastening nut left or right 90
degrees to free the collar from the filter
carriage and pull back on the accordian
tube.

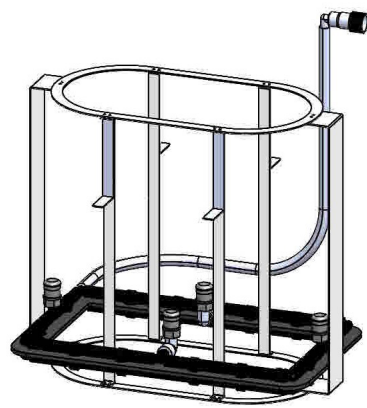


Overflow disconnected from carriage

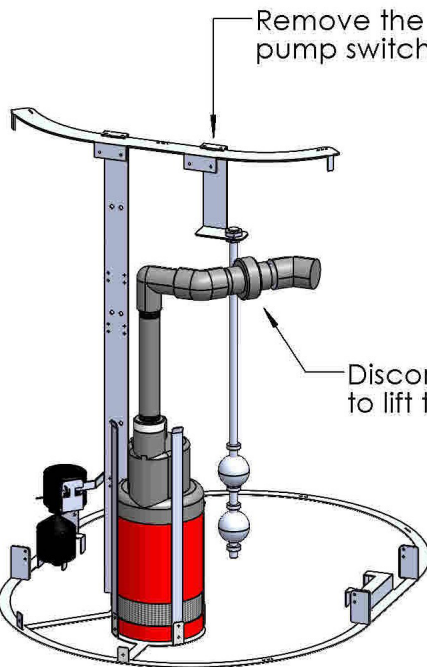


STEP 7:
Pull back of the filter carriage to
clear the metal wash assembly then
lift the filter carriage carriage out.

After the filter carriage has been lifted out, internal components are easily removed for inspection or future servicing.

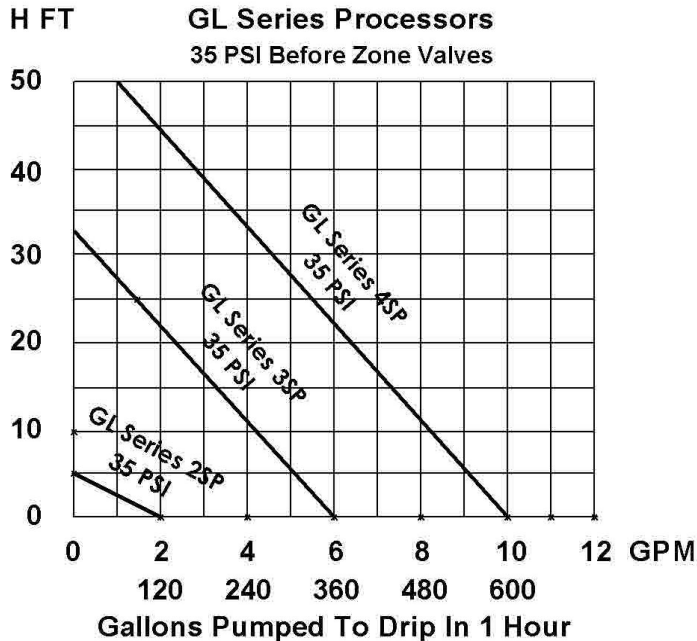


Disconnecting this union allows the spray ring assembly to be lifted out.



Remove the top two screws to lift out the pump switch and level sensor assemblies.

Disconnect this union to lift the pump out.



GL-2SP-MZP Sizing Guide:

Level Landscape:

The maximum Water Conserving GreyWater use in one hour will be:

3 showers ... or ... 2 showers and 1 load of laundry ... or ...1 bath

Drip Zone Size:

The maximum zone can be 120 Gallons/Hour



GL-3SP-MZP4 Sizing Guide:

Level Landscape:

The maximum Water Conserving GreyWater use in one hour will be:

9 showers ... or ... 6 showers and 3 loads of laundry ... or ... 3 baths

Drip Zone Size:

The maximum zone size can be 360 Gallons/Hour



10 ft Elevation Rise Landscape:

The maximum Water Conserving GreyWater use in one hour will be:

6 showers ... or ... 4 showers and 2 loads of laundry ... or ...2 baths

Drip Zone Size:

The maximum zone size can be 220 Gallons/Hour



20 ft Elevation Rise landscape:

The maximum Water Conserving GreyWater use in one hour will be:

3 showers ... or ... 2 showers and 1 load of laundry ... or ... 1 bath

Drip Zone Size:

The maximum zone size can be 120 Gallons/Hour



GL-4SP-MZP4 Sizing Guide:**Level Landscape:**

The maximum Water Conserving GreyWater use in one hour will be:
15 showers... or ...10 showers and 5 loads of laundry ... or ... 5 baths

Drip Zone Size:

The maximum zone size can be 600 Gallons/Hour

**10 ft Elevation Rise Landscape:**

The maximum Water Conserving GreyWater use in one hour will be:
12 showers ... or ... 8 showers and 4 loads of laundry ... or ... 4 baths

Drip Zone Size:

The maximum zone size can be 480 Gallons/Hour

**20 ft Elevation Rise Landscape:**

The maximum Water Conserving GreyWater use in one hour will be:
9 showers ... or ... 6 showers and 3 loads of laundry ... or ... 3 baths

Drip Zone Size:

The maximum zone size can be 360 Gallons/Hour

**30 ft Elevation Rise Landscape:**

The maximum Water Conserving GreyWater use in one hour will be:
6 showers ... or ... 4 showers and 2 loads of laundry ... or... 2 baths

Drip Zone Size:

The maximum zone size can be 300 Gallons/Hour

**40 ft Elevation Rise Landscape:**

The maximum Water Conserving GreyWater use in one hour will be:
3 showers ... or ... 2 showers and 1 load of laundry ... or ... 1 baths

Drip Zone Size:

The maximum zone size can be 150 Gallons/Hour



LIST OF COMPONENTS

Model: GL-2SP-MZP4

1 - 75 Gallon Processor With Internal
And External Secondary Filters
1 - 2 GPM Zone Flow Regulator

Model: GL-3SP-MZP4

1 - 75 Gallon Processor With Internal
And External Secondary Filters
1 - 6 GPM Zone Flow Regulator

Model: GL-4SP-MZP4

1 - 75 Gallon Processor With Internal
And External Secondary Filters
1 - 10 GPM Zone Flow Regulator

Connection Components: Models: GL-2SP-MZP4, GL-3SP-MZP4, GL-4SP-MZP4

Zone Automation Components

1 - RainBird ESP-ME3 Controller
1 - K Rain 1522 Pump Start Relay
4 - Irritrol 2400TF Electric Valves
50 ft - 5 Strand Wire
5 - Blue Wire Connectors
1 - Standard Valve Box W/ Black Lid

Mechanical Connections

Flow Regulator

1 - Regulator for the above selected Processor

Divert To Sewer

1 - 3" 3-Way Valve
3 - 3" Flex-Couplings

Disc filter & PRV

1 - 3/4" Disc Filter & PRV Assembly

Performance Indicators

2 - Performance Indicator Assembly

Overflow Vent Assembly

1 - Studor Vent / Overflow Assembly
1 - Sanitary Tee, 1 - 3" x 2" SxS RB
1 - 3" X 2" SXT RB

Backwater

1 - 3" Backwater Valve

Access Vault

1 - Secondary Filter Access Vault

PVC Fittings:

1" Fittings

2 - 1" S x T Unions
2 - 1" SxSxS Tee
3 - 1' SxS 90
1 - 1" Slip Cross
1 - 1" x 3/4" SxS Reducer Bushing

3/4" Fittings

1 - 3/4" SxS 90

PVC Overflow Fittings

4 - 3" Sanitary 90s
1 - 3" Sanitary Tee
1 - 3" Coupling

PVC Pipe:

9 ft - 3" CI 200
2 ft - 2" Sch 40
6 ft - 1" Sch 40
6 ft - 3/4" Sch 40

Note:

Drip Pipe is purchased seperately

Valve Pits

4 - 10" Valve Pits W/ Lids

Misc

2 - Pints of 717 Cement
1 - Pint Purple Primer
1 - 3/4" Teflon Tape
1 - Bio-Clean 2 lb

LIST OF COMPONENTS

Optional Components

Model: AFS-AG2

Supplemental Water Components

1 - Level Activation Sensor With Mounting Bracket (**Pre-Installed when ordered with Processor**)

1 - Level Activation Controller

1 - Activation Override Controller

1 - Irritrol 24V Electric Valve

50 ft 24V 18-4 Multi Strand

50 ft 24V 18-2 Multi Strand

7- Blue Spade Connectors

5 - Waterproof GreyBlack Wire Nuts

1 - 2" Air Gap

1 - 3" x 2" Tank Flex Coupling

2 - 1" Male Adapters

3 ft - 2" Sch 40 Pipe

3 ft - 3/4" Sch 40 Pipe

1 - 2" SxS Coupling

1 - 2" SxS 90

1 - 3/4" SxS Coupling

1 - 3/4" SxS 90

2 - 3/4" Mipt Adapters

Problem:

Neither performance indicators are fully popped up and minimal water is coming out of the drip emitters.

Solution:

Look for a break in the drip Line.

Problem:

Brown indicator pops up but green indicator does not.

Solution:

Both the primary and the secondary filters need to be cleaned.

Problem:

Primary filter baskets are requiring cleaning more frequently than usual.

Solution:

Check to make sure the spray system is operating. If the sprayers are not forcefully rotating then the filter wash disc filter needs cleaning.

Problem:

When the pump is running and both primary and secondary filters have been cleaned, the pop-up indicators are still not popping up.

Solution:

The screen at the base of the pump has become obstructed.

Remove the red filter carriage then disconnect the pump and lift it out of the pump holder.

Wash off the pump screen at the base of the pump and reconnect the pump.

If the overflow drains to a drain pit, make sure there is sufficient drainage so that excess unfiltered greywater is not backing up and flowing over the top of the red filter carriage.

Problem:

Pump does not run.

Solution:

Check to make sure there is power to the pump and the relay turns on when a zone valve is activated.

With at least 4 inches of water in the bottom of the filter tank, plug the pump in. If the pump does not turn on and you have power to the pump, unplug the low level pump float switch and plug the pump directly into the power outlet.

If the pump starts pumping then the float switch needs to be replaced. If the pump does not run then the pump will need to be replaced.

SYSTEM WARRANTY

LIMITED TRADE WARRANTY

The Filtrific Co. LLC (Filtrific) offers a 5 year warranty on all Flotender polyethylene components. All other products and accessory components are warranted to be free of defects in material and workmanship for a period of one (2) years from the original date of purchase. This warranty extends only to the original installer of the Flotender system. Filtrific will repair or replace any properly handled and installed product which fails under normal operating conditions within the warranty period, providing it was installed and maintained correctly, and all materials are returned to the factory (shipping prepaid). This warranty does not extend to labor or replacement charges, nor does it apply to any equipment of another manufacturer used in conjunction with Flotender products. Filtrific shall not be held liable for indirect, incidental, or consequential damages to Flotender products.



GL Series Greywater Multi-Zone Irrigation Systems

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