

## Description

The Wasteflow Headwork is a pre-assembled unit including filters, valves, fittings and pressure gauges mounted inside a box for direct burial, or inside a pump tank riser. It is installed between the pump and the field to filter out fine particles from entering the treatment field, and to flush fine particles that may collect in the dripfield. Recommended for maximum flow rate of 30gallons per minute and 600 gallons per day.

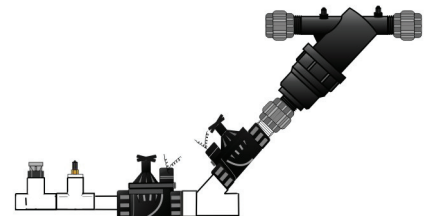
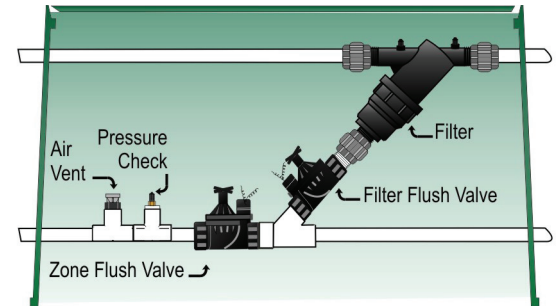
## Process

During a *dosing cycle*, the wastewater exits the pump chamber and enters the inlet fitting of the Sporty Headworks. It passes through the filter before exiting the box and going to the dripfield zone that is open. Both the field flush valve and zone flush valves are closed at this time.

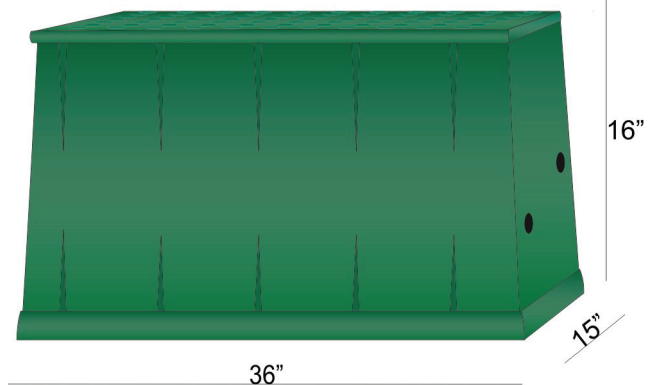
The water enters back into the Headworks through the return line, goes past the point to measure pressure and stops at the field flush valve.

During a *field flush* cycle, water enters the Headworks as above, the filter flush valve remains closed, but the field flush valve opens to allow water to circulate through the dripfield and return back into the return fitting of the headworks, past the pressure gage and through the field flush valve at an increased velocity than during normal dosing. The water passes through the field flush valve and down the flush line in the headworks to exit the headworks for return to the pump tank or pretreatment tank.

When *filter flushing*, the filter valve opens and the field flush valve is closed. While water passes through the filter to the field, part of the water is directed to the base of the filter, pushing solids down the screen, out of the filter, through the open filter flush valve, into the flush line in the ultra headworks to exit the headworks for return to the pump tank or pretreatment tank.



25"



36"

16"

15"



## Components Specification:

Enclosure: The Wasteflow Headworks Sporty enclosure shall be injection molded of structural foam polyethylene with a melt index of 10-12. The box shall be tapered with a top measurement of 25" x 16" and a bottom measurement of 33" x 23". The height shall be a minimum of 15" tall with a minimum wall thickness of 0.320". The body shall have a double wall at the top to cover seat area with a minimum thickness of 0.320". The cover seat area shall have structural support ribs on the underside of the seat. The bottom of the body shall have a 1.0" flange. The cover shall have an average thickness of 0.350".

Pressure Gauges: There shall be 3 points to measure pressure on the Sporty Wasteflow Headworks; one on each side of the filter and one on the return line. The pressure gauge is oil-filled and capable of registering pressure between 0-80 psi.

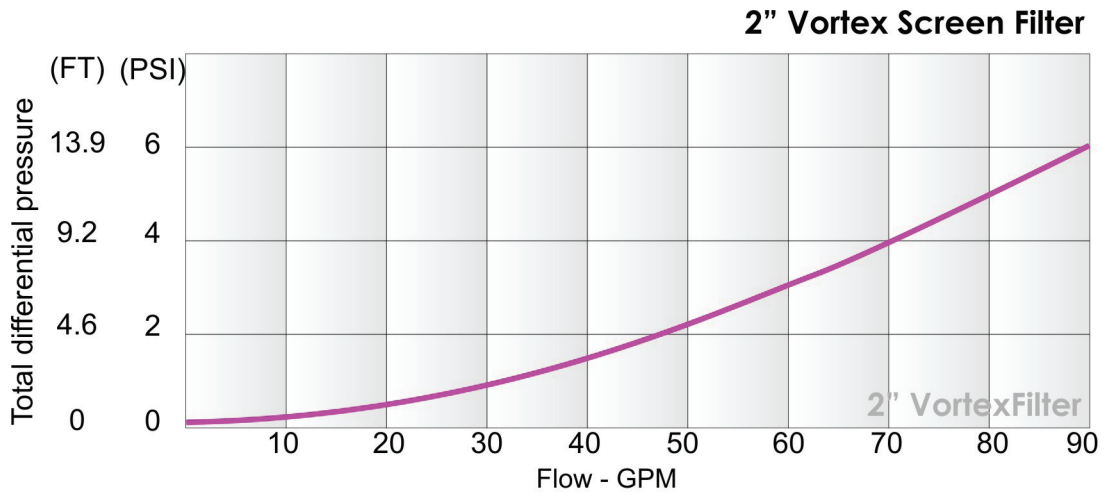
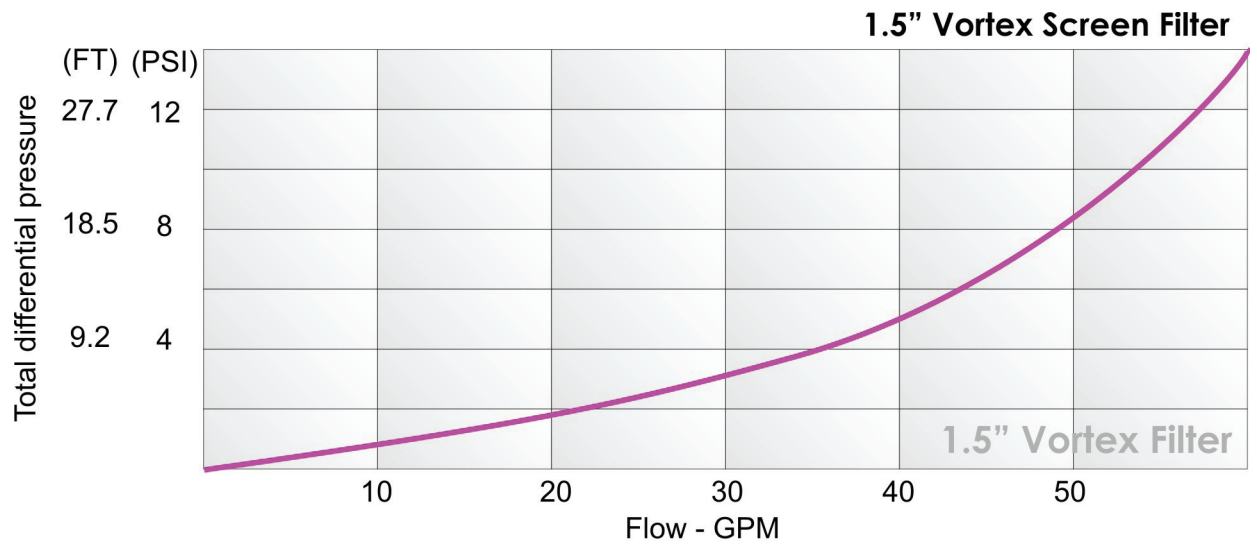
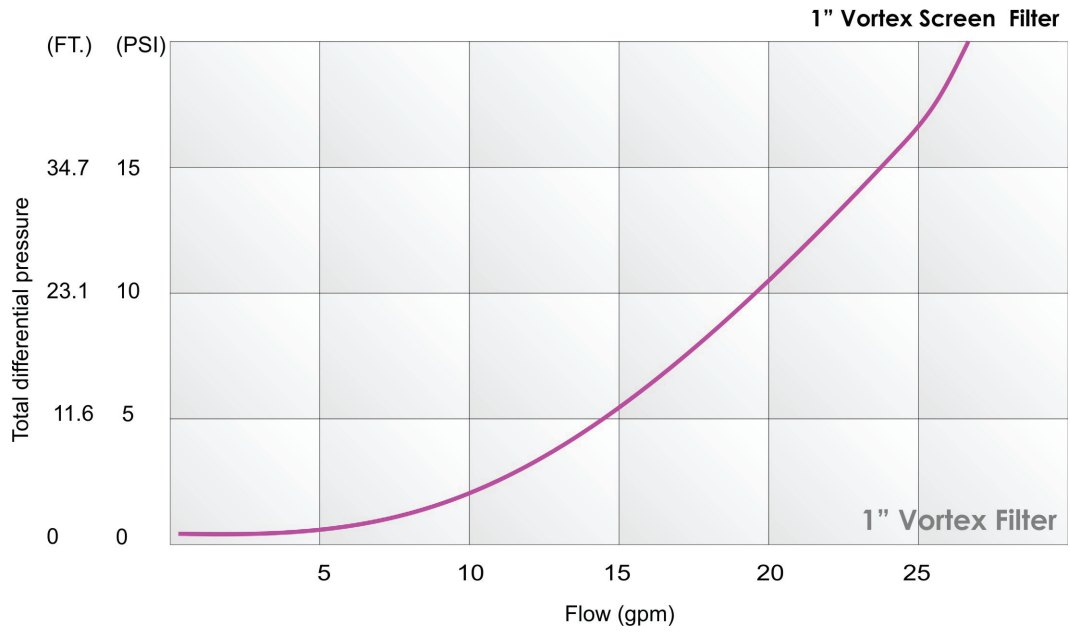
Vortex Screen Filter (AP4E-1F or AP4E1.5F or AP4E2F): The Y filter body shall be molded from glass reinforced engineering grade black plastic with a (1 or 1.5 or 2 inch) male pipe thread (MIPT) inlet and outlet. The two piece body shall be capable of being serviced by untwisting and shall include an O-ring seal. An additional 3/4 inch MIPT outlet shall be capable of periodic flushing. The 150 mesh filter screen is all stainless steel, providing a filtration area of (28.4 square inch for AP4E-1F, 60.8 square inch for AP4E-1.5F, 60.8 square inch for AP4E-2F). The screen collar shall be molded from vinyl. The filter shall be Geoflow Vortex Screen Filter model number (AP4E-1F or AP4E1.5F or AP4E2F).

Filter Flush Valve (SVLV-075): The solenoid valve shall be an electrically operated, normally closed, hydraulic valve with a 3/4" FIPT inlet and outlet. The globe shaped valve body is constructed of nylon reinforced molded epoxy resin and is waterproof, with an O-ring seal, and complies with NFC Class II circuit requirements for 24V a.c. operation. Metal parts shall be constructed of stainless steel, and the diaphragm shall be molded of natural rubber. The recommended operating pressure range is between 10-150 psi. Also available with manual flush where approved.

Field Flush Valve (SVLV-100 or SVLV-150): The solenoid valve shall be an electrically operated, normally closed, hydraulic valve with a 1" FIPT inlet and outlet. The globe shaped valve body is constructed of nylon reinforced molded epoxy resin and is waterproof, with an O-ring seal, and complies with NFC Class II circuit requirements for 24V a.c. operation. Metal parts shall be constructed of stainless steel, and the diaphragm shall be molded of natural rubber. The recommended operating pressure range is between 10-150 psi. Also available with manual flush where approved.

1/2" Air Relief Valve (ARV-05): Molded plastic air vent with rubber ring shall be used on flush end of the Headworks. It shall be capable of allowing air in at 5 gpm. Piping, Unions and Fittings shall be schedule 40 or schedule 80 grade PVC.

**Pressure Loss:**



## Description

The Wasteflow Headwork is a pre-assembled unit including filters, valves, fittings and pressure gauges mounted inside a box for direct burial, or inside a pump tank riser. It is installed between the pump and the field to filter out fine particles from entering the treatment field, and to flush fine particles that may collect in the dripfield. recommended for maximum flow rate of 30gallons per minute and 600 gallons per day.

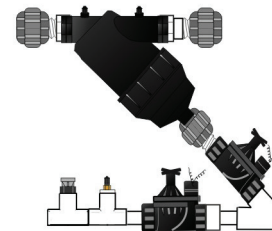
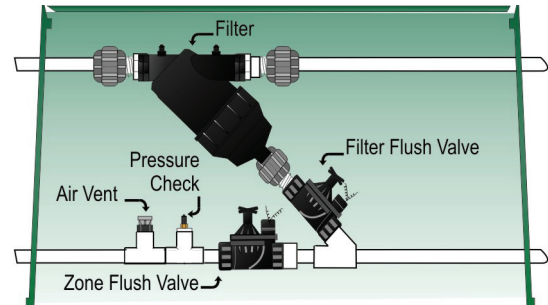
## Process

During a *dosing cycle*, the wastewater exits the pump chamber and enters the inlet fitting of the Sporty Headworks. It passes through the filter before exiting the box and going to the dripfield zone that is open. Both the field flush valve and zone flush valves are closed at this time.

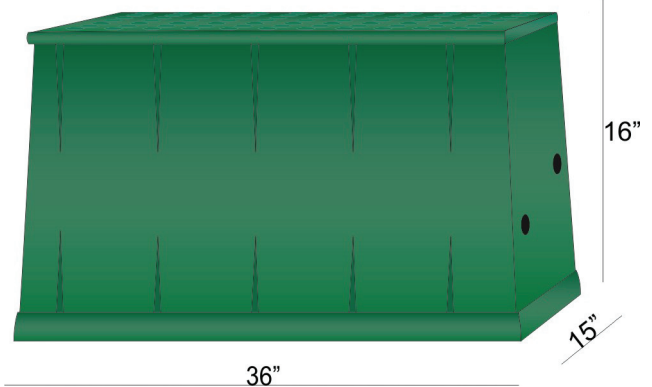
The water enters back into the Headworks through the return line, goes past the point to measure pressure and stops at the field flush valve.

During a *field flush* cycle, water enters the Headworks as above, the filter flush valve remains closed, but the field flush valve opens to allow water to circulate through the dripfield and return back into the return fitting of the headworks, past the pressure gage and through the field flush valve at an increased velocity than during normal dosing. The water passes through the field flush valve and down the flush line in the headworks to exit the headworks for return to the pump tank or pretreatment tank.

When *filter flushing*, the filter valve opens and the field flush valve is closed. While water passes through the filter to the field, part of the water is directed to the base of the filter, pushing solids down the screen, out of the filter, through the open filter flush valve, into the flush line in the ultra headworks to exit the headworks for return to the pump tank or pretreatment tank.



25"



36"

16"

15"



## Components Specification:

**Enclosure:** The Wasteflow Headworks Sporty enclosure shall be injection molded of structural foam polyethylene with a melt index of 10-12. The box shall be tapered with a top measurement of 25" x 16" and a bottom measurement of 33" x 23". The height shall be a minimum of 15" tall with a minimum wall thickness of 0.320". The body shall have a double wall at the top to cover seat area with a minimum thickness of 0.320". The cover seat area shall have structural support ribs on the underside of the seat. The bottom of the body shall have a 1.0" flange. The cover shall have an average thickness of 0.350".

**Pressure Gauges:** There shall be 3 points to measure pressure on the Sporty Wasteflow Headworks; one on each side of the filter and one on the return line. The pressure gauge is oil-filled and capable of registering pressure between 0-80 psi.

**BioDisc filter (APBIODISC-150):** The APBIODISC-150 filter body and discs shall be molded of polyethylene resins. The disc shall include **Geoshield®** anti-bacterial compound to protect the filter element against slime build-up. Filtration shall be 150 mesh/100 micron. The two piece body shall be capable of being serviced by untwisting and shall include an O-ring seal. The seals shall be manufactured from Nitrilo rubber. The inlet and outlet shall be 1.5 inch MPT. The UF disc filter shall be part number APBIODISC-150 as supplied by Geoflow, Inc.

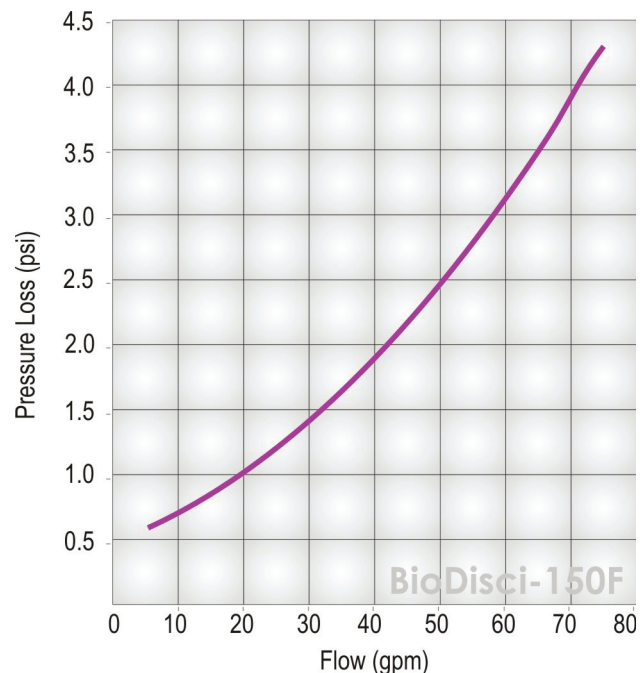
**Filter Flush Valve (SVLV-075):** The solenoid valve shall be an electrically operated, normally closed, hydraulic valve with a 3/4" FIPT inlet and outlet. The globe shaped valve body is constructed of nylon reinforced molded epoxy resin and is waterproof, with an O-ring seal, and complies with NFC Class II circuit requirements for 24V a.c. operation. Metal parts shall be constructed of stainless steel, and the diaphragm shall be molded of natural rubber. The recommended operating pressure range is between 10-150 psi. Also available with manual flush where approved.

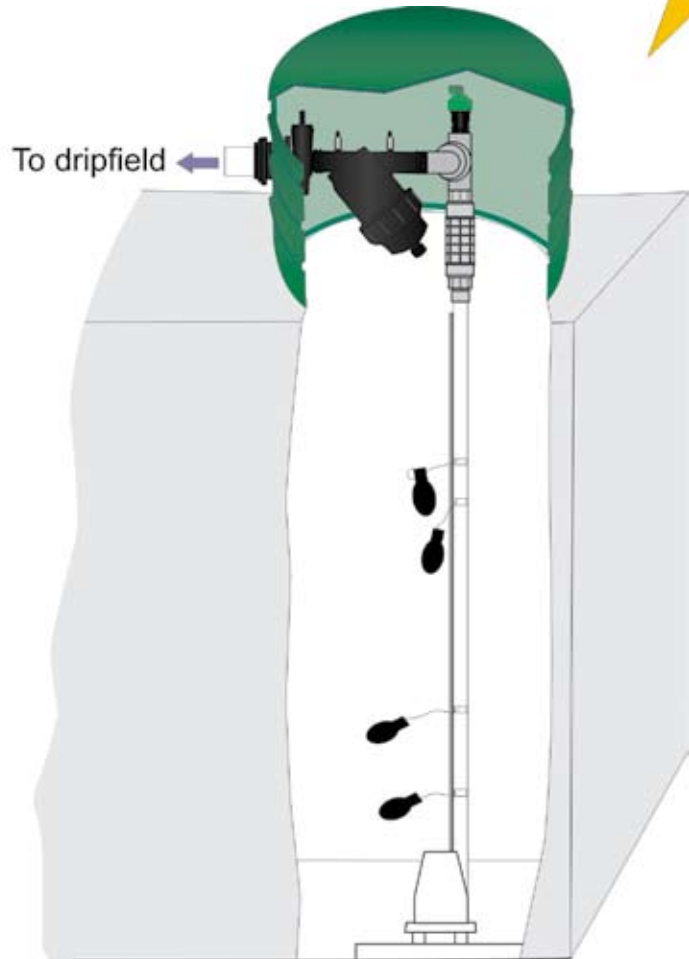
**Field Flush Valve (SVLV-100 or SVLV-150):**  
The solenoid valve shall be an electrically operated, normally closed, hydraulic valve with a 1" FIPT inlet and outlet. The globe shaped valve body is constructed of nylon reinforced molded epoxy resin and is waterproof, with an O-ring seal, and complies with NFC Class II circuit requirements for 24V a.c. operation. Metal parts shall be constructed of stainless steel, and the diaphragm shall be molded of natural rubber. The recommended operating pressure range is between 10-150 psi. Also available with manual flush where approved.

**1/2" Air Relief Valve (ARV-05):** Molded plastic air vent with rubber ring shall be used on flush end of the Headworks. It shall be capable of allowing air in at 5 gpm.

Piping, Unions and Fittings shall be schedule 40 or schedule 80 grade PVC.

**Flow vs. Pressure**





## Description

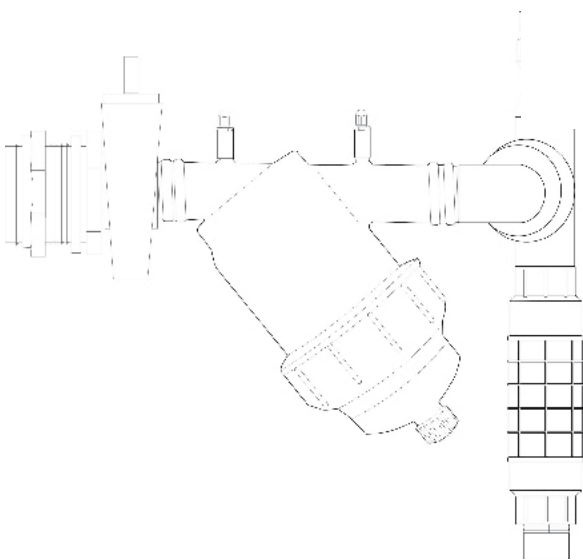
Designed to fit inside the pump tank riser with a quick disconnect fitting for easy removal and servicing. No need to maintain the filter, and flush valve on your hands and knees. The entire filter and pump come out together.

Available with either Geoflow's BioDisc or Vortex Screen filter.

No need to bury a headworks box in the ground.

No animals and flooding damage.

Reduces freezing as it stays warmer inside the pump tank.



Design patent pending

Product Sheets-2011 InTankDripHeadworks 13B18.indd



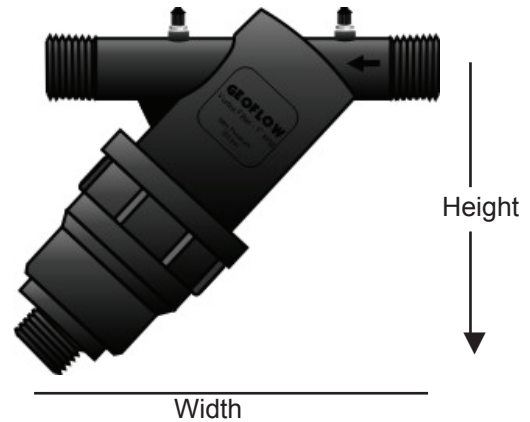
## Description

The Vortex filters are placed between the pump and dripfield to screen out any debris. Spin plates at the top of each screen direct the flow of debris to the base of the screen for easy self cleaning.

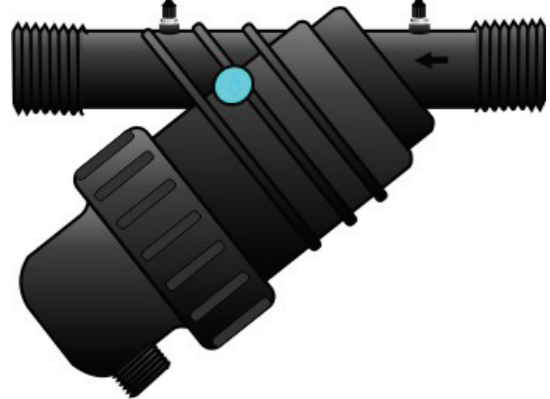
## Features

- Simple self cleaning filter. Geoflow's Vortex filter depends on a simple forward flush to self clean. Incoming water is forced through a directional nozzle plate onto the inside of the stainless steel screen. A centrifugal motion starts inside the screen chamber, throwing particles outward against the screen. Gravity moves the debris down the screen wall to the flush outlet at the base of the Vortex Filter.
- It is simple to install and operate, requiring very few moving parts.
- Can be plumbed to self clean periodically with electronically activated solenoid valves (recommended), or continuously with slightly opened ball valves.
- Sturdy stainless steel screen proven effective in onsite wastewater applications. A sintering process in which three pieces of stainless steel mesh are transformed into one; a perforated plate, 30m then 150 mesh.
- Body is a two-piece threaded housing with O-ring seal. Molded from high heat ABS and chemical resistant glass reinforced plastic.

1" Vortex Filter



1.5" and 2" Vortex

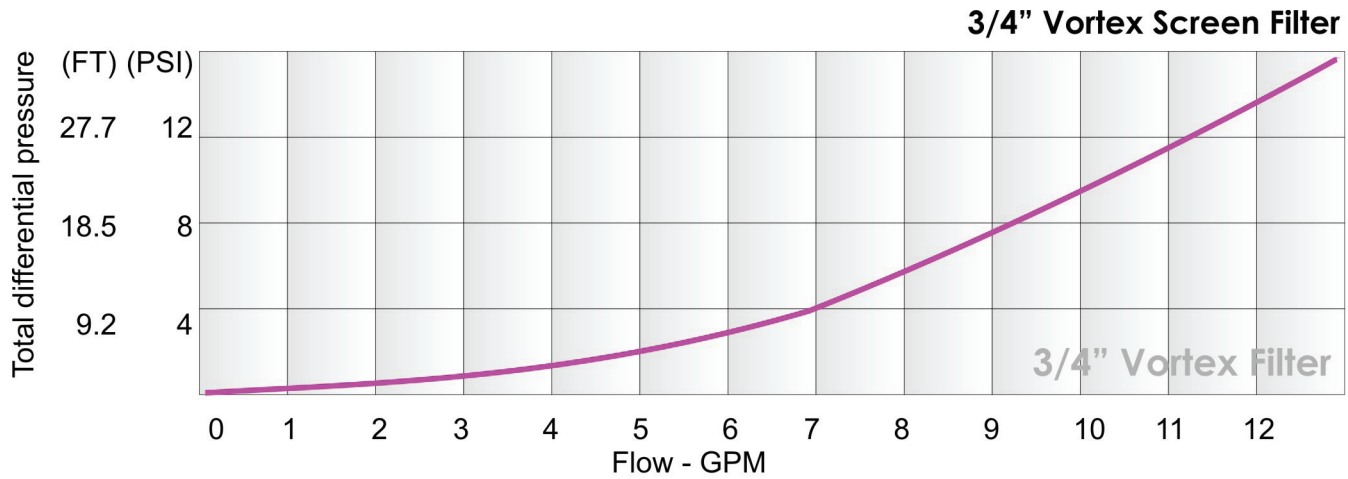


Item Number	Size (MPT)	Max. Flow rate (GPM)	Filtration (mesh)	Max. Pressure (psi) (ft.)		Width	Height	Flush Port (MPT)	Area of Filtration (inches <sup>2</sup> )
* AP4E-75F	3/4"	10	150	80	185	6.0"	6.0"	3/4"	23.4
AP4E-1F	1"	20	150	80	185	6.5"	7.0"	3/4"	28.4
AP4E-1.5F	1.5"	45	150	100	231	12"	15.5"	3/4"	60.8
AP4E-2F	2.0"	70	150	80	185	12"	16.0"	3/4"	60.8

\* AP4E-75F 3/4inch Vortex Filter has been discontinued. Please use a larger filter for onsite wastewater applications. Replacement parts are still available.

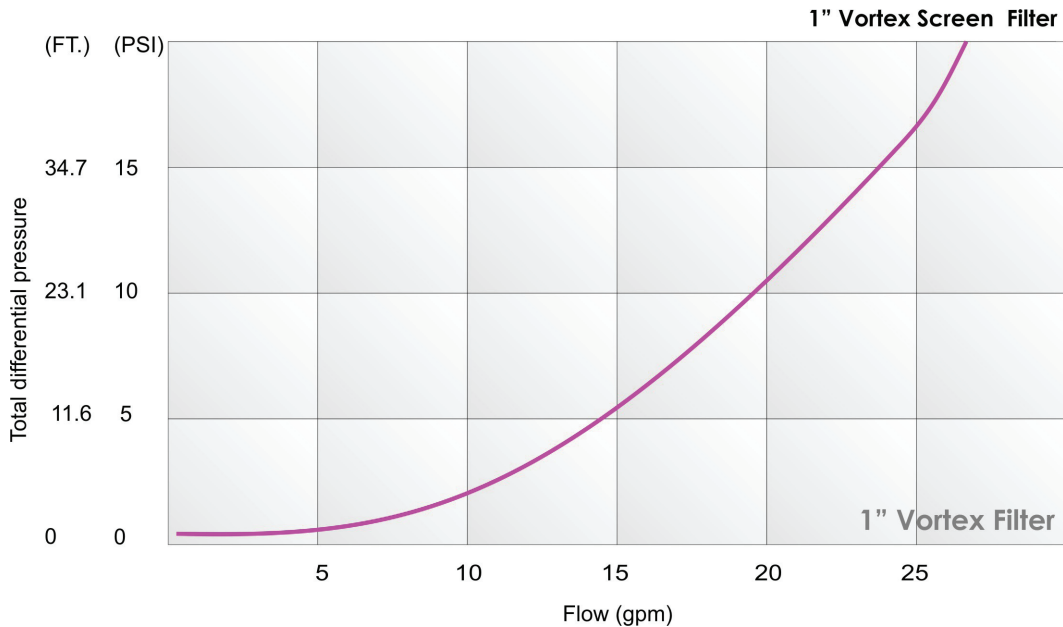
150 mesh = 100 micron

When in doubt, it is best to choose the filter with the larger screen area.



**Specification:**

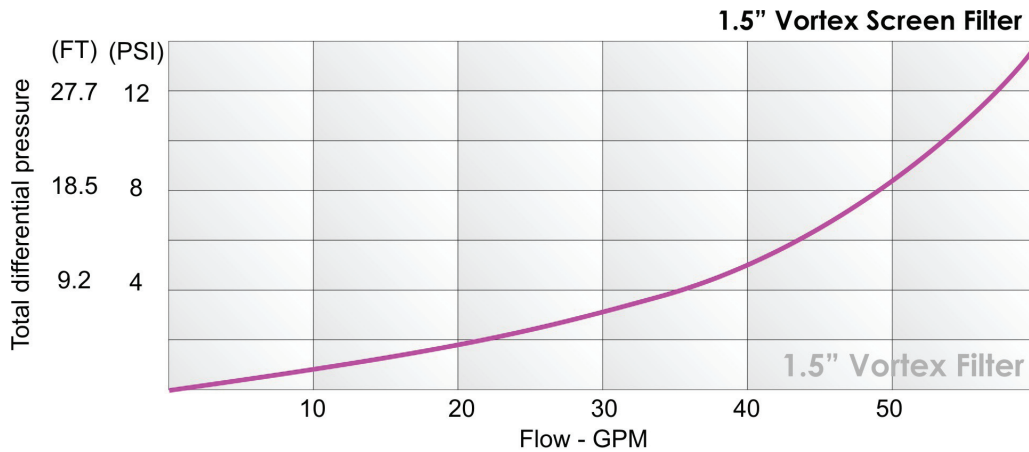
The Y filter body shall be molded from glass reinforced engineering grade black plastic with a 3/4 inch male pipe thread (MIPT) inlet and outlet. The two piece body shall be capable of being serviced by untwisting and shall include an O-ring seal. An additional 3/4 inch MIPT outlet shall be capable of periodic flushing. The 150-mesh filter screen is all stainless steel, providing a 23.4 square inch filtration area. The screen collar shall be molded from vinyl. The 3/4" filter shall be Geoflow Vortex Filter model number AP4E-75F.



**Specification:**

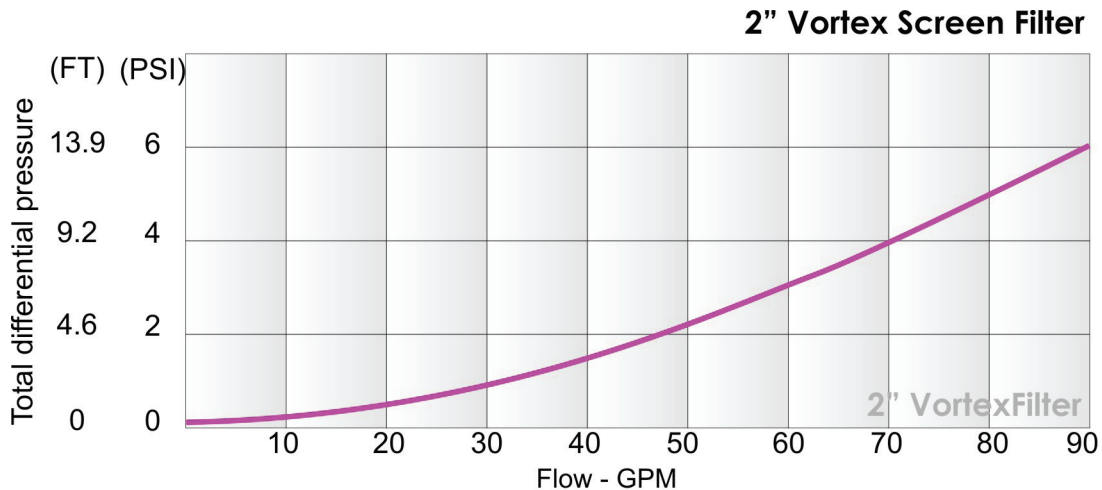
The Y filter body shall be molded from glass reinforced engineering grade black plastic with a 1 inch male pipe thread (MIPT) inlet and outlet. The two piece body shall be capable of being serviced by untwisting and shall include an O-ring seal. An additional 3/4 inch MIPT outlet shall be capable of periodic flushing. The 150 mesh filter screen is all stainless steel, providing a 28.4 square inch filtration area. The screen collar shall be molded from vinyl. The 1" filter shall be Geoflow Vortex Filter model number AP4E-1F.





**Specification**

The Y filter body shall be molded from glass reinforced engineering grade black plastic with a 1.5 inch male pipe thread (MIPT) inlet and outlet. The two piece body shall be capable of being serviced by unscrewing and shall include an O-ring seal. An additional 3/4" MIPT outlet shall be capable of periodic flushing. The 150 mesh filter screen is all stainless, providing a 60.8 square inch filtration area. The outer support shell shall be woven stainless steel wire, and the inner screen shall be made of stainless steel cloth. The inner and outer screens shall be soldered together. The screen collar shall be molded from vinyl. The 1 1/2" filter shall be Geoflow model number AP4E-1.5F.



**Specification**

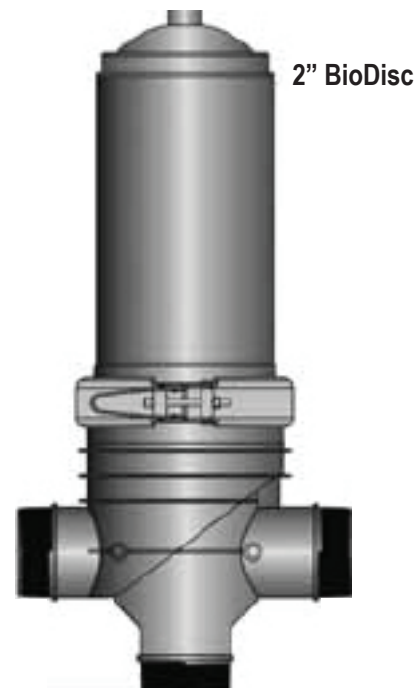
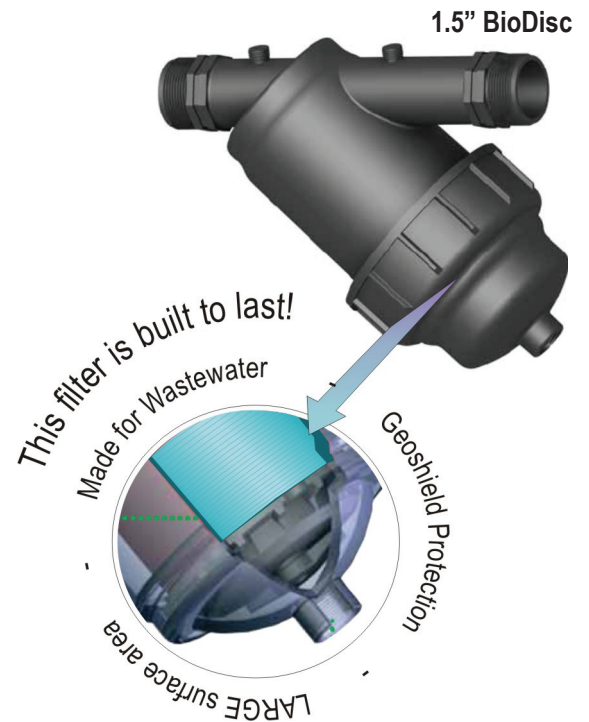
The Y filter body shall be molded from glass reinforced engineering grade black plastic with a 2 inch male pipe thread (MIPT) inlet and outlet. The two piece body shall be capable of being serviced by unscrewing and shall include an O-ring seal. An additional 3/4" MIPT outlet shall be capable of periodic flushing. The 150 mesh filter screen is all stainless, providing a 60.8 square inch filtration area. The outer support shell shall be woven stainless steel wire, and the inner screen shall be made of stainless steel cloth. The inner and outer screens shall be soldered together. The screen collar shall be molded from vinyl. The 2" filter shall be Geoflow model number AP4E-2F.

## Description

BioDisc™ filters are placed between the pump and drip field to trap debris from entering the dripline. The filtering medium, consisting of a stack of discs piled onto a sturdy nylon support, filters suspended matter from the flowing water stream. Geoflow's discs are specially treated with Geoshield® for wastewater applications. Ideal for single family homes.

## Features

Geoflow's disc filters are built to stay cleaner longer. A particularly large surface area coupled with *Geoshield®*, an antimicrobial that inhibits the growth of bacteria on the discs, these filters are robust and designed to perform with biologically active water. A single filter is often used in single family home applications. Sold separately or pre-assembled in an easy snap disc headworks.



Part No.	BioDisc-150FM	BioDisc-200FM
Inlet/Outlet	1.5 in. MPT	2 in. MPT
Flush port	0.75 in. MPT	2 in. MPT
Max. Flow Rate	30 gpm	40 gpm
Max. Rec. Daily Flow Rate	600 gpd	1500 gpd
Max. Temp.	140 oF	140 oF
Max. Pressure	116 psi/270 ft.	145 psi/335 ft.
Dimensions	10.5" x 13.5"	26" x 12.2"
Filtration	150 mesh	150 mesh

Available in pre-plumbed headworks or sold separately.

- Patent Pending
- **BioDisc™** is a trademark of A.I.Innovations.
- **Geoshield®** is a registered trademark of A.I.Innovations.

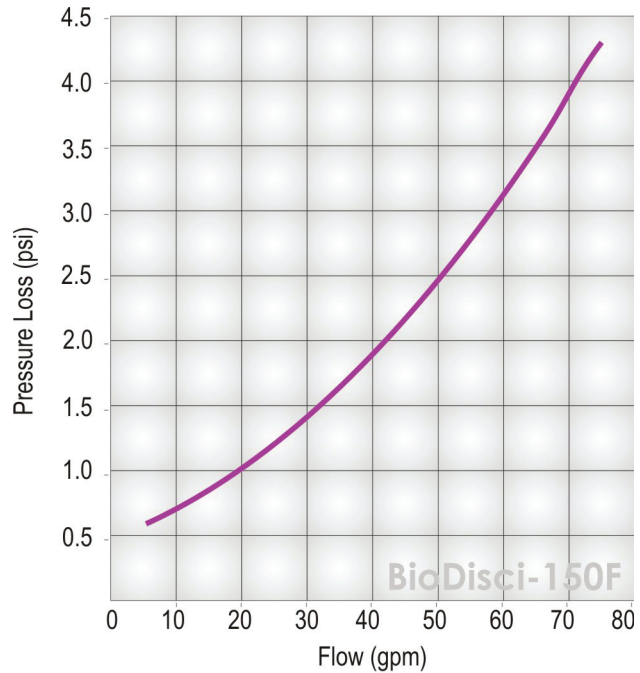


## 1.5" BioDisc Filter

### Specification

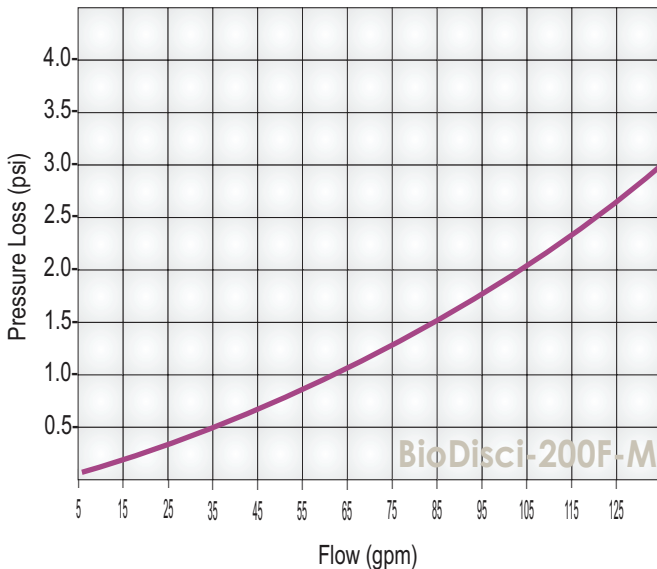
The BioDisc-150FM filter body and discs shall be molded of polyethylene resins. The disc shall include **Geoshield®** anti-bacterial compound to protect the filter element against slime build-up. Filtration shall be 150 mesh/100 micron. The two piece body shall be capable of being serviced by untwisting and shall include an O-ring seal. The seals shall be manufactured from Nitrilo rubber. The inlet and outlet shall be 1.5 inch MPT. The UF disc filter shall be part number BioDisc-150FM as supplied by Geoflow, Inc.

### Flow vs. Pressure



## 2" BioDisc Manual Filter

### Flow vs. Pressure



### Specification

The BioDisc-200FM filter body shall be molded from reinforced polyamide and the filter discs shall be made of polyethylene resins. The disc shall include **Geoshield®** anti-bacterial compound to protect the filter element against slime build-up. Filtration shall be 150 mesh/100 micron. The two piece body shall be capable of being serviced by untwisting and shall include an O-ring seal. The seals shall be manufactured from Nitrilo rubber. The inlet and outlet shall be 2 inch MPT. The UF disc filter shall be part number BioDisc-200FM as supplied by Geoflow, Inc.