



EFFECTIVE LIQUID FILTRATION SOLUTIONS

Stackable Media Filters

24" SAND MEDIA FILTERS



Breakthrough Design offers:

Improved Irrigation Design by taking less water from each zone during back flush

Ideal for poor water as this multiple small tank approach allows for high frequency or continuous back flush

Innovative underdrain design requires 40% less filter media

Lowest pressure required at 15 psi allows for energy saving irrigation designs



US Patent No. 9,358,480

Filter Tank Specifications

MANIFOLD TOGETHER AS MANY TANKS AS NEEDED FOR EACH APPLICATION

Flow Rate: 40-100 GPM per tank

Tank Pressure Rating: 80 PSI

Tank Media Volume: 20 Gallons per tank

- Back Flush Operation, Minimum* 15 PSI, 48 GPM *depends on Media
- Back Flush Operation can be initiated manually at each tank or Automatically in conjunction with the Back Flush Controller and PD Switch



US Patent No. 9,358,480

Benefits of the Water Tool Filter System

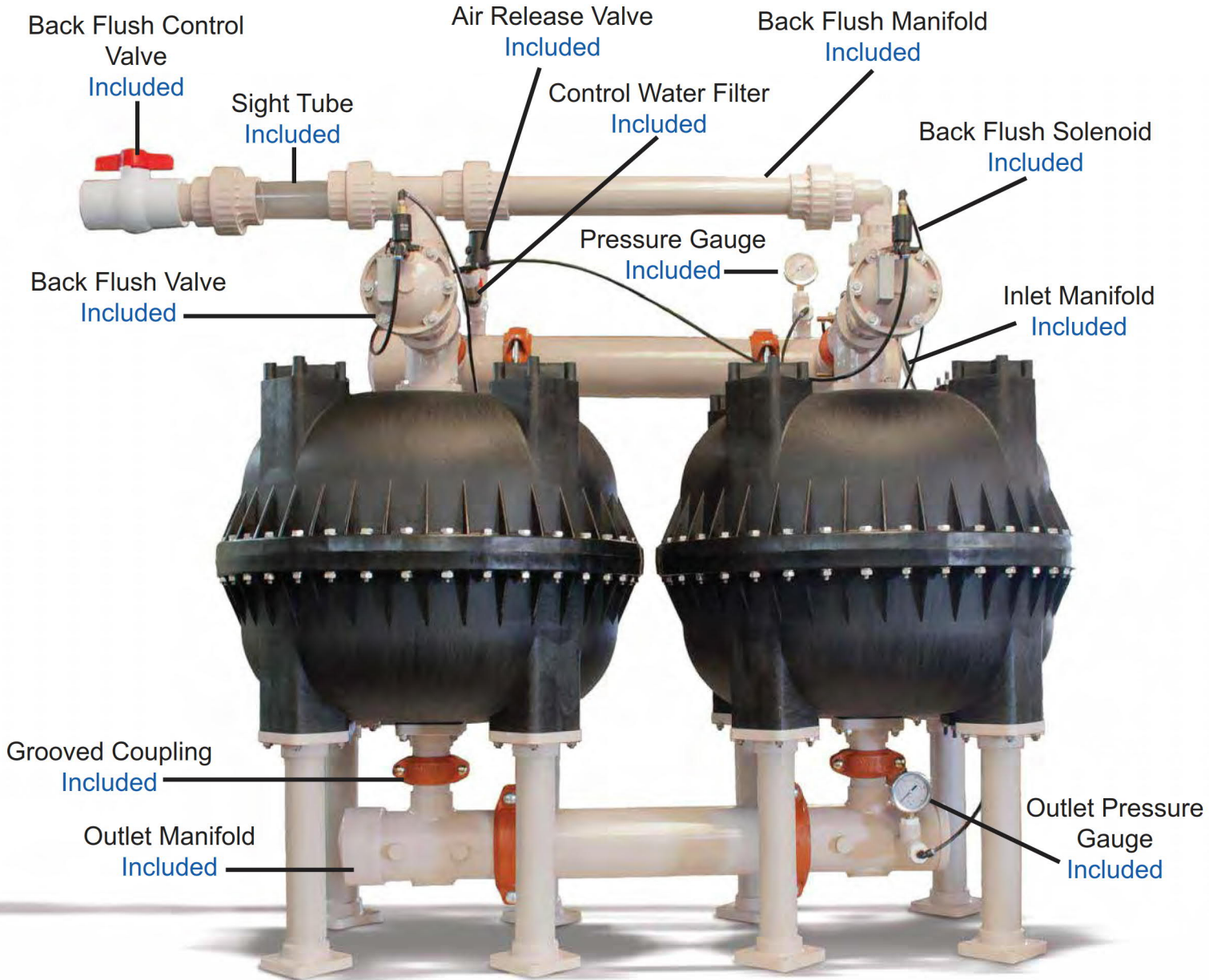
All Systems Include:

- 4" Inlet and 4" Outlet UVR PVC manifolds
- 2" Back Flush Manifold with sight tube and back flush control valve
- Also included are; Inlet and Outlet pressure gauges, Air Release Valves, Back Flush Control Water Filters, Manual Back Flush Operation Control Levers, Solenoids for Automatic Operation
- Tanks have Access Port on top and a drain port on the bottom.
- All PVC components (manifolds, fittings, valves) are manufactured "UVR" Ultra Violet Resistant PVC

Automatic Systems Also Include:

- Back Flush Controllers, Pressure Differential Switch and one Decoder for each Tank

Superior underdrain design requires less water per back flush and provides a more thorough cleaning of media bed.

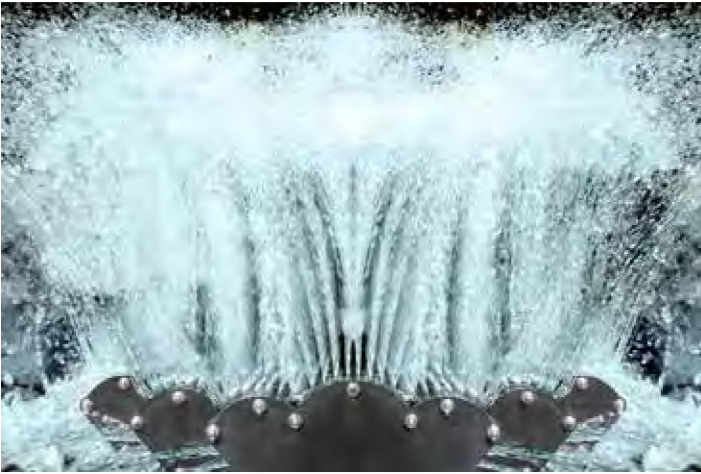


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JUST ADD MEDIA!

UNDER DRAIN

The SMF tank has both a balanced output and the largest surface area coverage of any media filter.

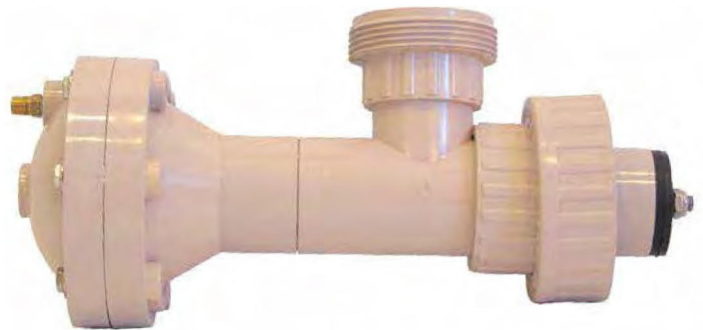


Water Tool Under Drain
All Water Directed Vertically

- All Back Flush water is directed vertically to lift and clean the entire media bed. Channeling of water is virtually eliminated. (No wasted back flush water directed downward or horizontally)
- Due to more efficient design, less runtime of Back Flush Required.
- Saves Water

BACK FLUSH VALVE

- Dedicated Custom back flush valve provides positive opening and closing at wide range of pressure (15 to 80 PSI) and flow (45 to 120 GPM).
- Back Flush Valve is easy to service or replace with union connection. Complete valve, part number SMFA-401.



AUTOMATIC SYSTEMS INCLUDE; BACK FLUSH CONTROLLER and PD SWITCH



Utilizes “Two Wire” technology
for control of all valves



Pressure Differential
Switch

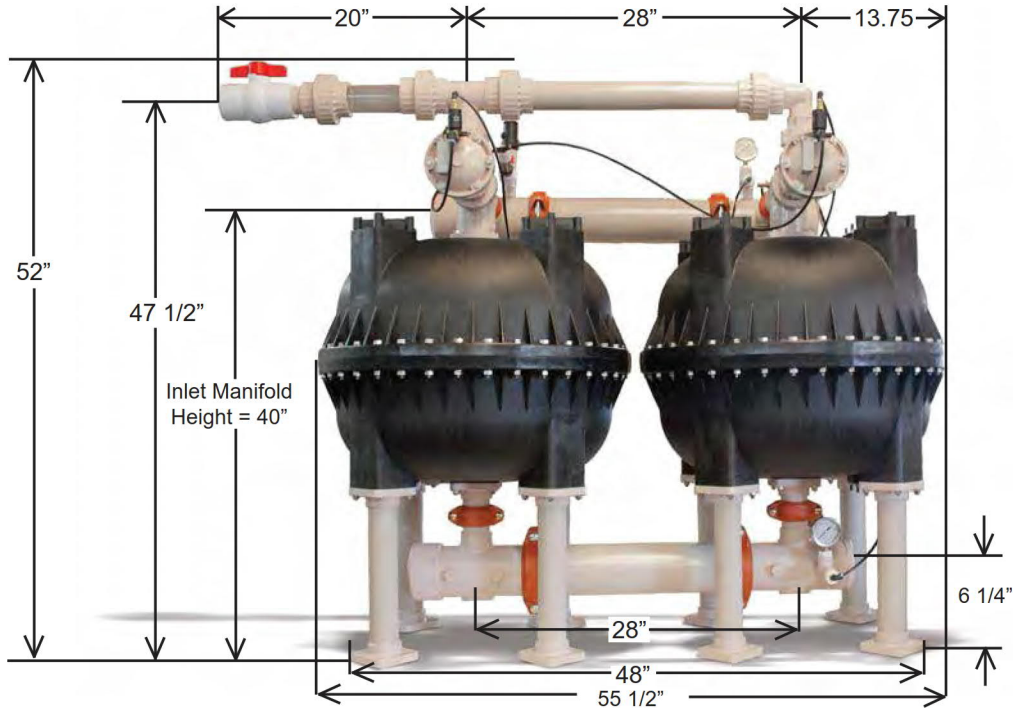
Water Tool Sand Media Filter Back Flush Controller

A Back Flush Controller specifically designed for back flushing multiple Sand Media Filters incorporating the following user friendly features.

1. Can control up to 96 separate Back Flush valves.
2. Adjustable Back Flush duration from 15 to 180 seconds in 15 second increments or from 180 to 300 seconds in 30 second increments.
3. A dwell time between each filter Back Flush can be set from 15 to 180 seconds.
4. Flushing frequency can be set from 1 to 16 hours in 1 hour increments or 16 to 24 hours in 2 hour increments.
5. May initiate a manual flush cycle anytime with a push of a button.
6. The controller can initiate a Back Flush cycle using the SMF pressure differential switch, part# SMFA-151. A Pressure Differential switch is shipped standard with all “Automatic filter systems.”
7. Controller will display the number of actual Back Flush cycles during a re-settable time period.
8. Utilizing “Logic Two Wire Technology” makes for a cost effective and efficient installation or system expansion.

All these easy to use features are in a simple Dial and Button format.

Operating System Information



	Overall Filter Dimensions			Pad Size Minimum		Pad Size Suggested		Media Gallons	Manifold Connections		PSI Rating
	L	x	W x H	L	x W	L	x W		Inlet	Outlet	
2 Tanks	62"		36 x 52"	56"	36"	80"	60"	40	4"	4"	80
3 Tanks	90"		36" x 52"	84"	36"	108"	60"	60	4"	4"	80
4 Tanks	118"		36" x 52"	112"	36"	136"	60"	80	4"	4"	80
4Q Tanks	62"		67" x 52"	56"	67"	80"	91"	80	4"	4"	80

	FILTERED PARTICLE SIZE (MICRONS)	VOLUME OF MEDIA PER TANK	BACK WASH FLOW (GPM/LPM)		MAX FLOW RATE PER TANK*
			10% EXPANSION	35% EXPANSION	
#12 SILICA SAND	~40μ	17gal	100 GPM 379 LPM	160 GPM 606 LPM	100 GPM 379 LPM
#16 SILICA SAND	~30μ	17gal	48 GPM 182 LPM	100 GPM 379 LPM	100 GPM 379 LPM
#20 SILICA SAND	~20μ	17gal	36 GPM 136 LPM	60 GPM 227 LPM	80 GPM 303 LPM
14x40 MESH ZEOLITE	<5μ	17gal	28 GPM 106 LPM	60 GPM 227 LPM	50 GPM 197 LPM

*MAXIMUM RECOMMENDED FLOW RATE FOR MEDIA TO ACHIEVE OPTIMAL EFFECTIVE FILTRATION (EXCEEDING MAX FLOW RATE WILL INCREASE PRESSURE DIFFERENTIAL AND DECREASE FILTRATION PERFORMANCE.)

FLOW RATE (GPM)	PRESSURE LOSS (PSI)				
	GLASS	ZEOLITE	#20 SAND	#16 SAND	#12 SAND
60	1.5	1.5	1.5	1.0	1.0
80	2.0	2.5*	3.0	2.0	1.5
100	4.0*	4.0*	4.5*	3.5	3.0
120*	5.5*	5.0*	5.5*	5.0*	4.5

*NOT RECOMMENDED

ORDERING INFORMATION

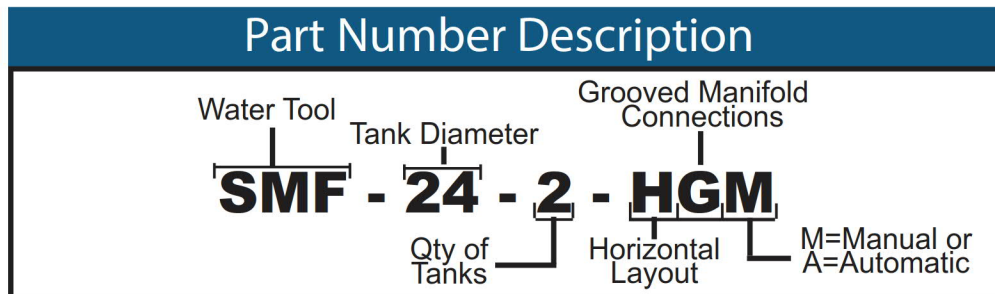
System Part Numbers

System Part Numbers include all of the following:

Inlet Manifolds, Outlet Manifolds, Back Flush Manifold(s), Sight Tube(s), Back Flush Control Valve(s), Pressure Gauges, Air Release Valves, Control Water Filter, all with proper sized groove coupler fittings.

Automatic Systems Include:

Back Flush Controller, Pressure Differential Switch and one decoder for each back flush valve.



Part Number	Layout □ = Automatic ○ = Tank	Inlet/Outlet/Backflush Grooved Connector Size	Flow in GPM
SMF - 24 - 2 - HGM		4" / 4" / 2"	80-200
SMF - 24 - 2 - HGA		4" / 4" / 2"	80-200
SMF - 24 - 3 - HGM		4" / 4" / 2"	120-300
SMF - 24 - 3 - HGA		4" / 4" / 2"	120-300
SMF - 24 - 4 - HGM		4" / 4" / 2"	160-400
SMF - 24 - 4 - HGA		4" / 4" / 2"	160-400
SMF - 24 - 4Q - HGM		4" / 4" / 2"	160-400
SMF - 24 - 4Q - HGA		4" / 4" / 2"	160-400
SMFA - 150D	Single Station Decoder		
SMFA - 150PD	Back Flush Controller 2 - 99 Tanks: Includes Ad, PDS		

For systems of 5 tanks or more, use any combination of equipment above to meet your flow requirements. Purchase one system that is Automatic and the balance of tanks manual. For each Manual tank, purchase one each SMFA-150 - D decoder to tie all tanks into the Automated system

For systems of 5 or more tanks, Don't hesitate to contact factory at **+1 (559) 288-2392** for pricing and suggested layout options. Systems can be combined for higher flow rates. Additional manifolds required.

Freight Terms: Freight terms are FOB factory

Filter Warranty:

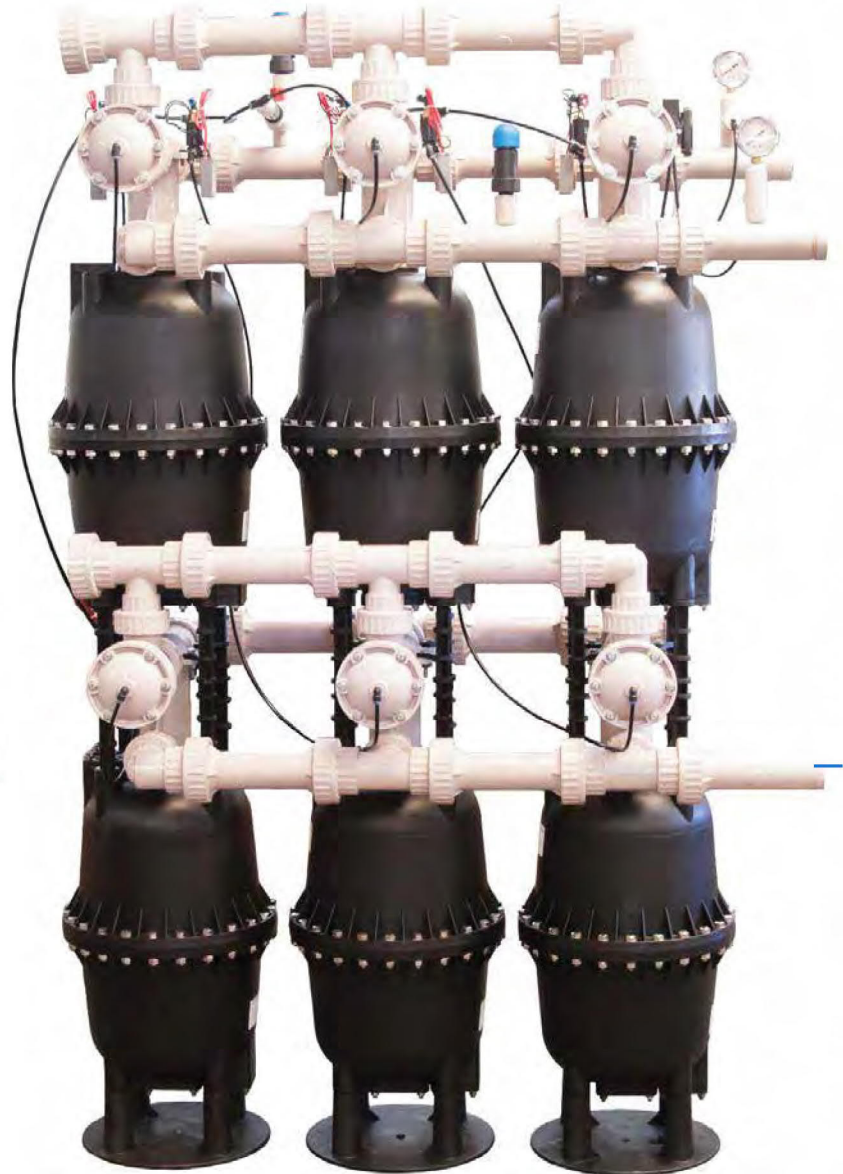
Epiphene Corporation warrants to its trade customers that its SMF products will be free from defects in material and workmanship, from the original date of purchase, for a period of ONE YEAR. Within the warranty period, Epiphene Corporation, will have at its sole discretion, the option to repair or replace all or part of defective product, or refund part or the entire purchase price. Defective products must be returned, freight prepaid, at the buyers expense after such product return authorization has been given by Epiphene Corporation to the Buyer. Epiphene Corporation does not warranty any labor claims, including but not limited to labor installation removal and reinstallation of said product. Epiphene Corporation shall not be responsible or liable for any loss of profit, lost savings or loss of sales.

FOR LOWER FLOWS... CHECK OUT THE SMF 12" SAND MEDIA FILTERS

Flow: 15-25 GPM per tank
Tank Pressure Rating: 80 PSI
Tank Media: 5 gallons per tank



30 - 50 GPM
US Patent No. 9,358,480



90 - 150 GPM
US Patent No. 9,358,480

Complete Systems, Manual or Automatic Operation



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