



EFFECTIVE LIQUID FILTRATION SOLUTIONS

Stackable Media Filters

12" 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

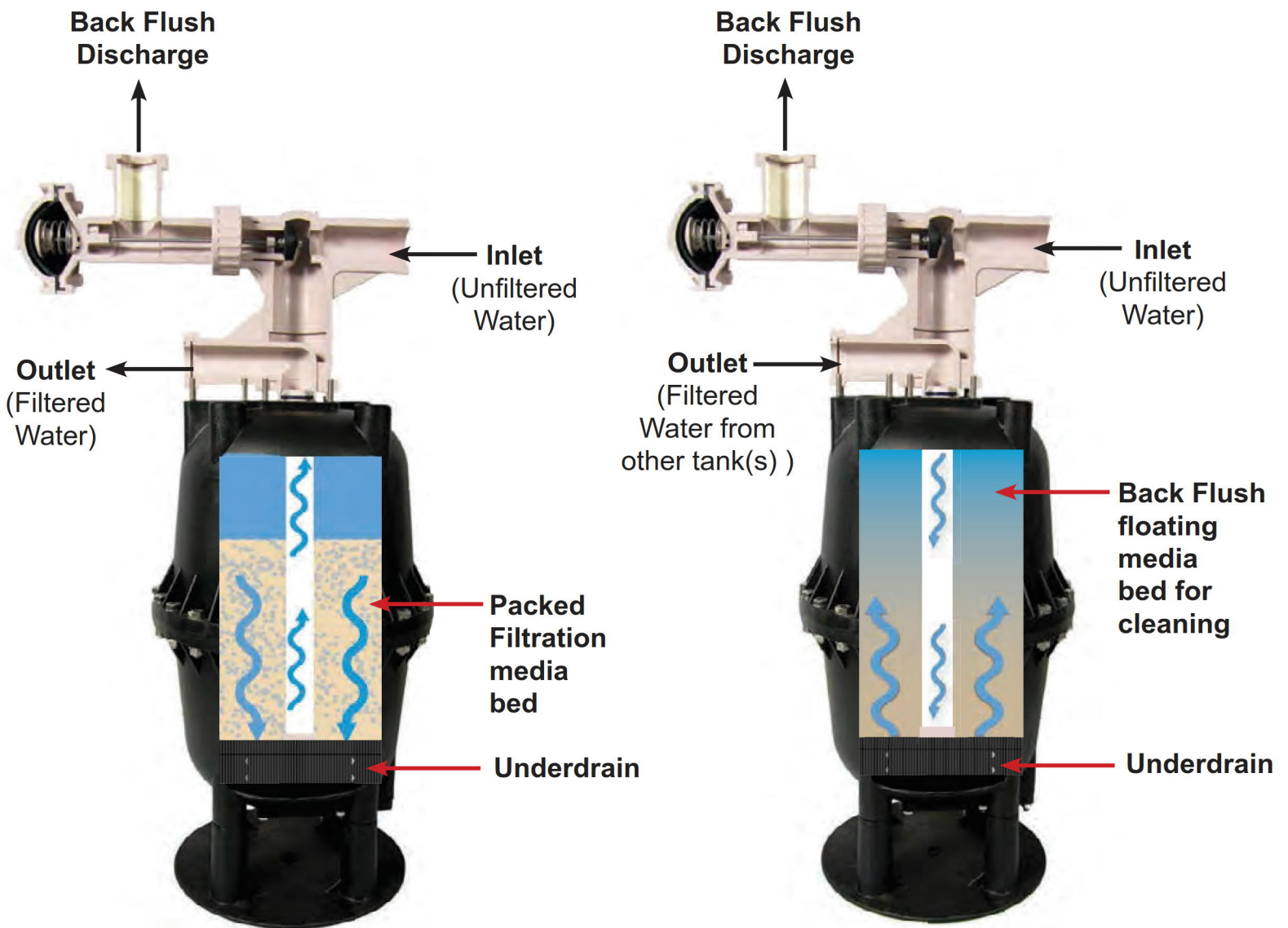


US Patent No. 9,358,480

SMF Filters

FILTRATION MODE

BACK FLUSH MODE



- Light Weight No Rust - Glass Filled Nylon and UVR PVC Construction
- Modular Design - 15-25GPM per Tank - Add as Many Tanks as Needed
- Minimal Back Flush Water - Individual Back Flush Valves
- Two Wire Back Flush Controller - 96 Station Back Flush Controller
- Pressure Differential Switch included on all Automatic Systems
- Tanks are Stackable - Smaller Footprint
- No Pressure Sustaining Valves Needed for Back Flush - Saves Extra \$
- No Forklifts Needed - Easy Installation - Quick Installation
- Only 5 Gallons of Media Per Tank - 70 Pounds
- Available with Groove Inlet/Outlet or Union Connections
- Supplied with Air Relief Valves and Pressure Gauges
- Back Flush Water Recovery System Available
- Minimum System Pressure to Operate Back Flush Valves is only 15 psi

FULL VERTICAL UNDERDRAIN



AUTOMATIC SYSTEMS INCLUDE: BACKFLUSH CONTROLLER AND PD SWITCH



Utilizes “Two Wire” technology
for control of all valves



Pressure Differential
Switch

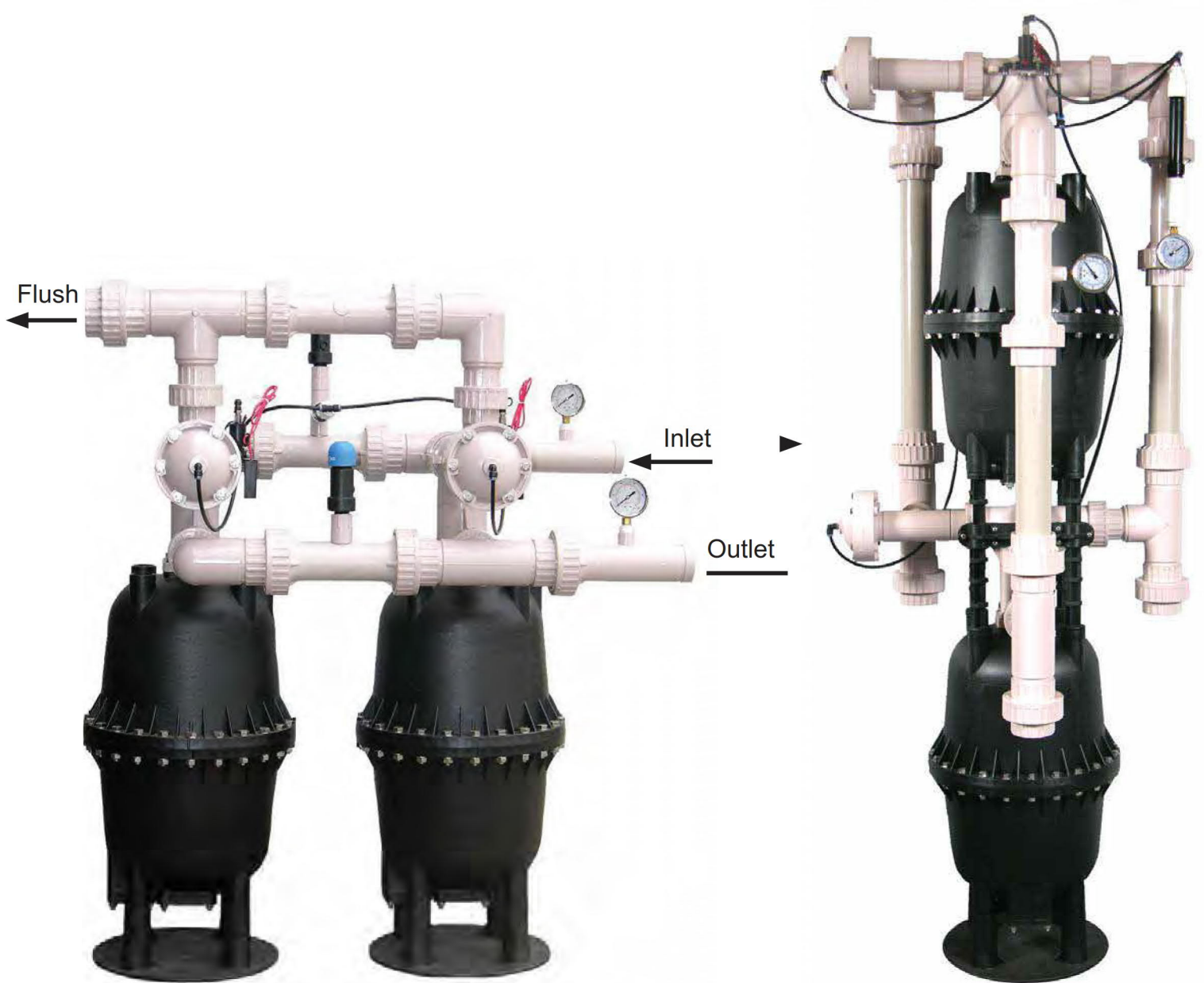
SMF Sand Media Filter Back Flush Controller

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 12 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 Water Tool 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.

2 TANK HORIZONTAL / 2 TANK VERTICAL



US Patent No. 9,358,480

30-50 GPM
113-190 L/M

US Patent No. 9,358,480

30-50 GPM
113-190 L/M

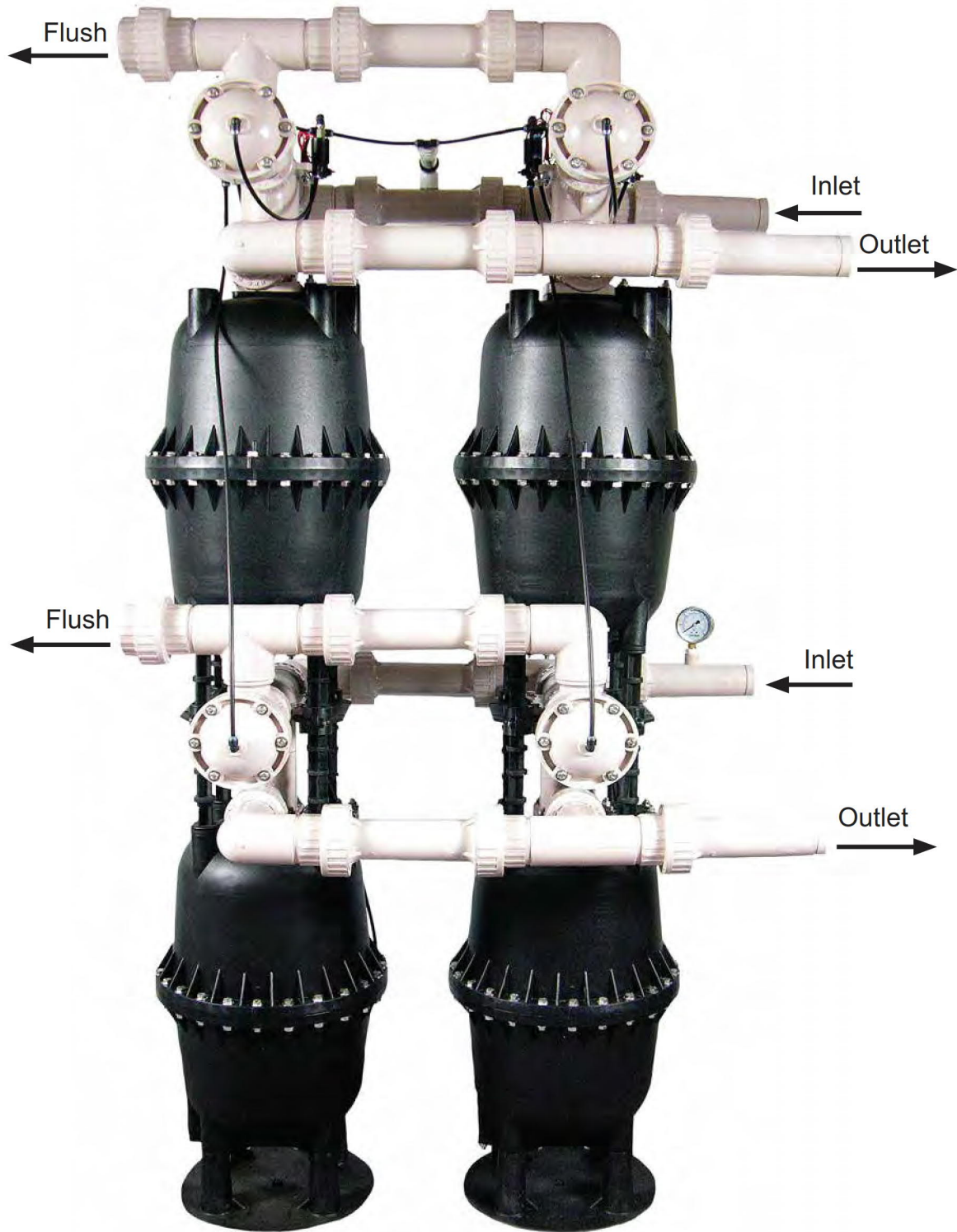
3 TANK HORIZONTAL



US Patent No. 9,358,480

45-75 GPM
170-284 L/M

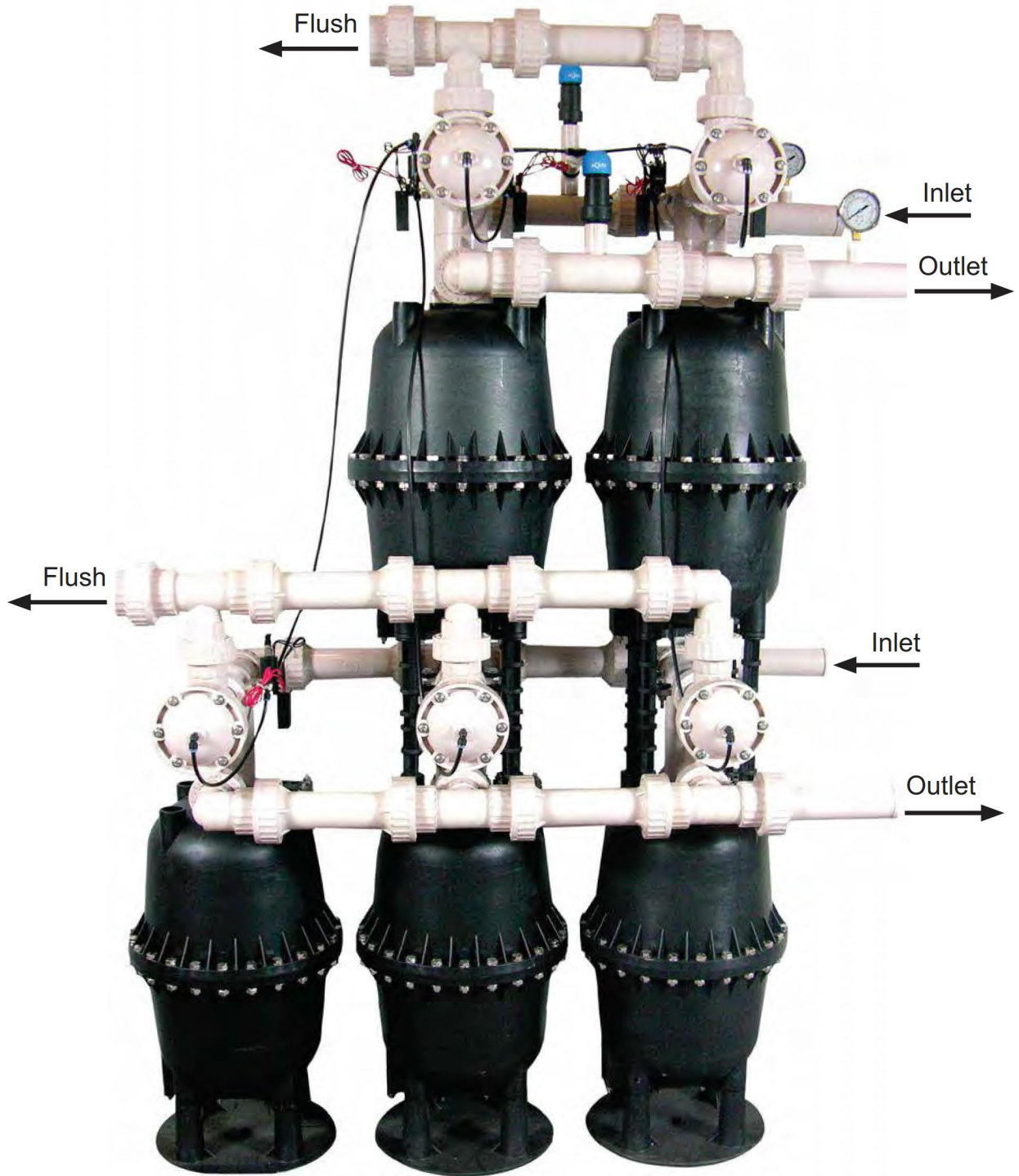
4 TANK HORIZONTAL STACKED



US Patent No. 9,358,480

60-100 GPM
227-379 L/M

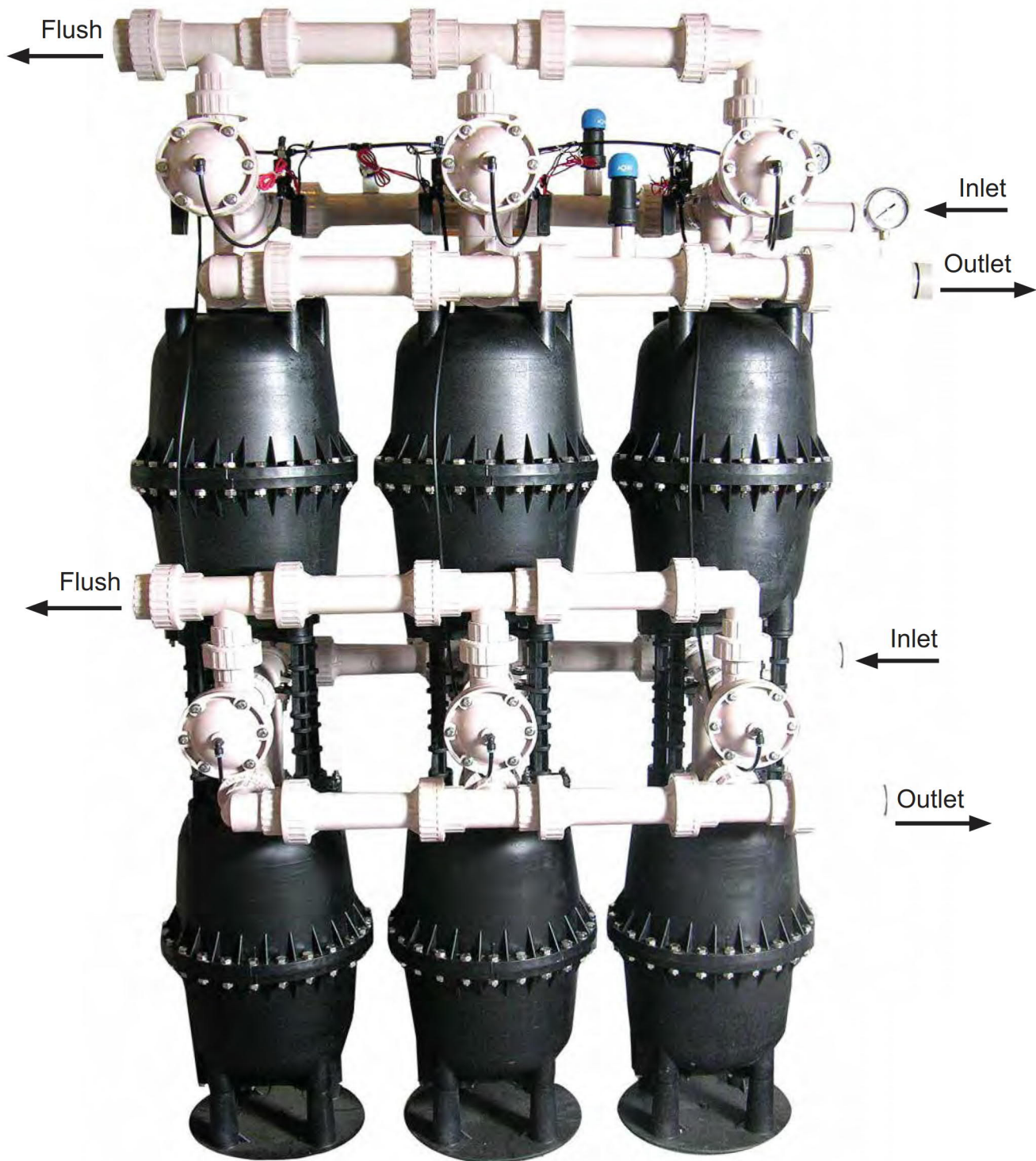
5 TANK HORIZONTAL STACKED



US Patent No. 9,358,480

75-125 GPM
284-473 L/M

6 TANK HORIZONTAL STACKED



US Patent No. 9,358,480

90-150 GPM
340-567 L/M

MULTIPLE TANKS IN UNITS OF 6 OR MORE MANIFOLDS AVAILABLE



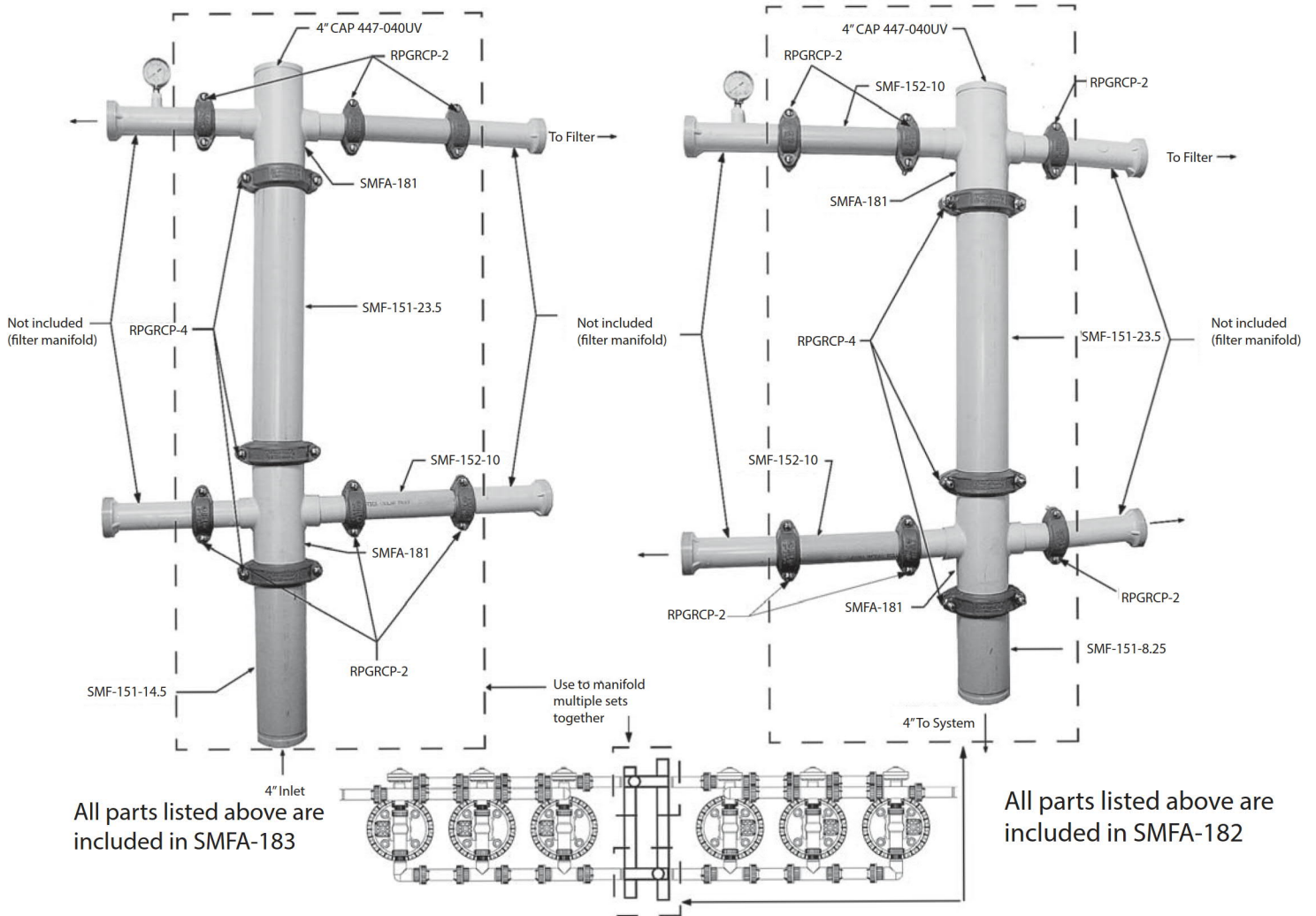
US Patent No. 9,358,480

90-150 GPM
340-567 L/M

OPTIONAL MANIFOLDS AVAILABLE

INLET MANIFOLD SMF-183

DISCHARGE MANIFOLD SMF-182



TECHNICAL INFORMATION

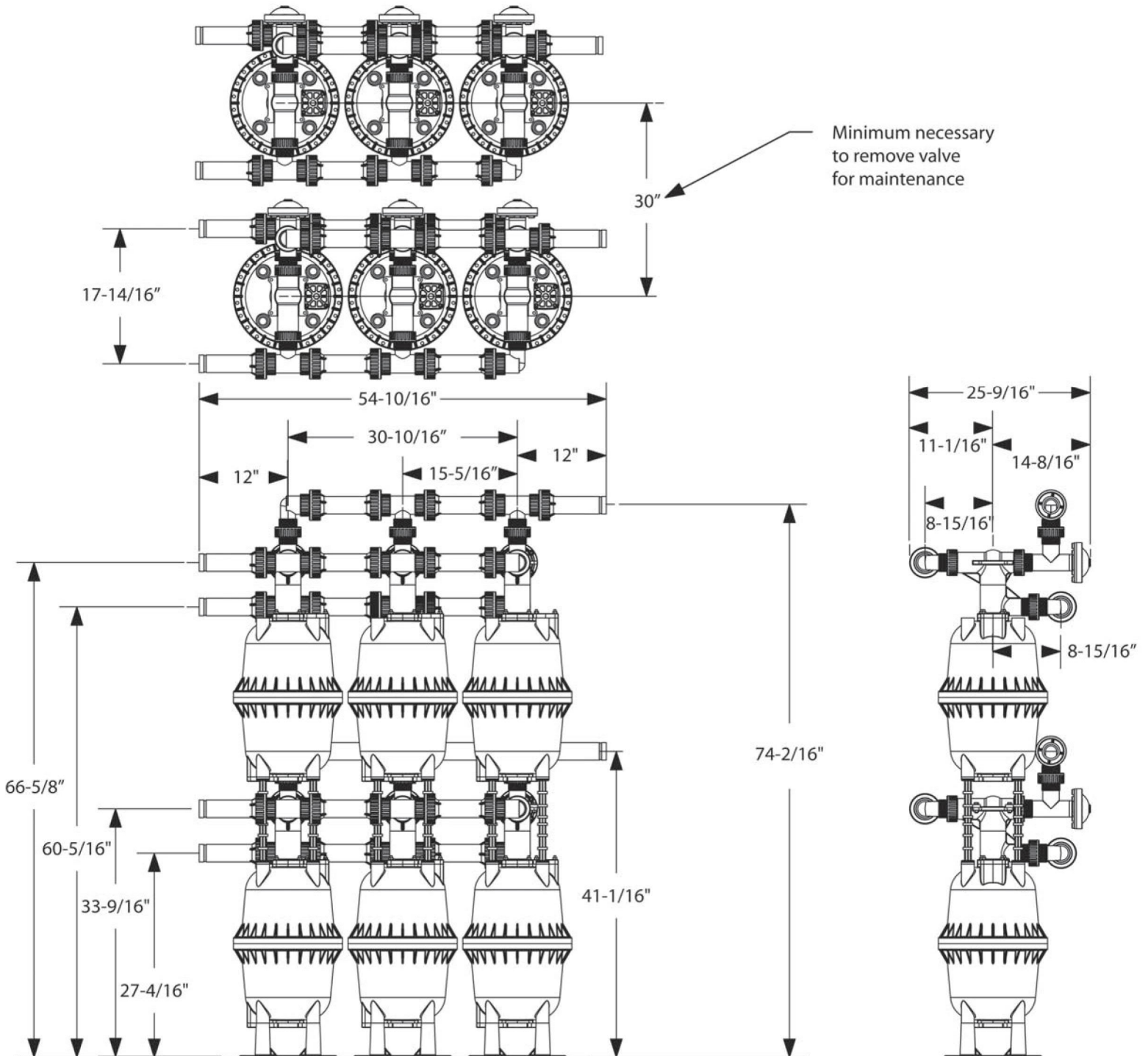
	FILTERED PARTICLE SIZE (MICRONS)	VOLUME OF MEDIA PER TANK	BACK WASH FLOW (GPM/LPM)		MAX FLOW RATE PER TANK*
			10% EXPANSION	35% EXPANSION	
#12 SILICA SAND	~40μ	5gal	25 GPM 95 LPM	40 GPM 151 LPM	25 GPM
#16 SILICA SAND	~30μ	5gal	12 GPM 45 LPM	25 GPM 95 LPM	25 GPM
#20 SILICA SAND	~20μ	5gal	9 GPM 34 LPM	15 GPM 57 LPM	20 GPM
14x40 MESH ZEOLITE	<5μ	5gal	7 GPM 26 LPM	15 GPM 57 LPM	13 GPM

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

PRESSURE DROP COMPARISON CHART - 5 GALLONS OF MEDIA APPROX. 6" BELOW TOP					
FLOW RATE GALLONS PER MIN	PRESSURE LOSS (PSI)				
	GLASS	ZEOLITE	#20 SAND	#16 SAND	#12 SAND
15	1.5	1.5	1.5	1.0	1.0
20	2.0	2.5*	3.0	2.0	1.5
25	3.5*	3.5*	4.0*	3.0	2.5
30*	5.0*	4.5*	5.0*	4.5*	4.0*

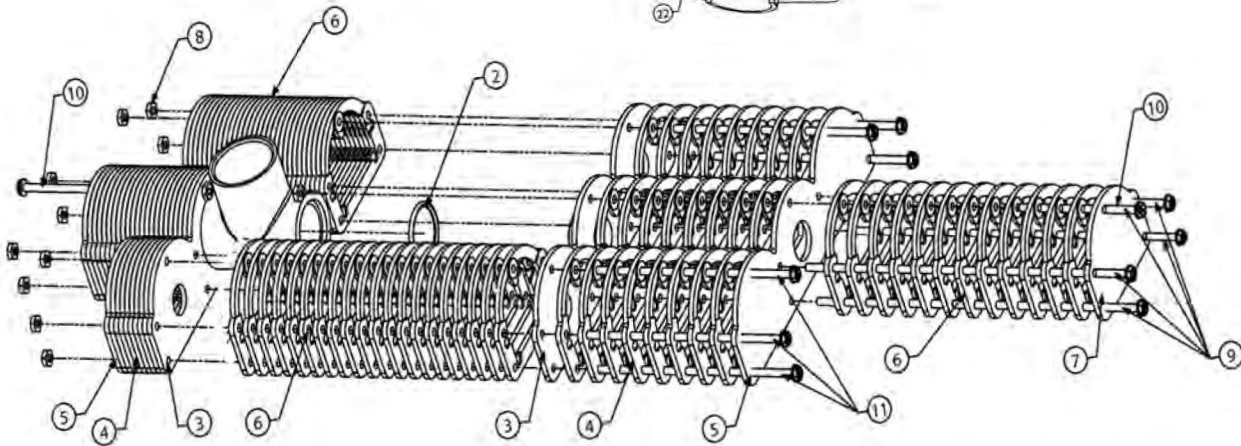
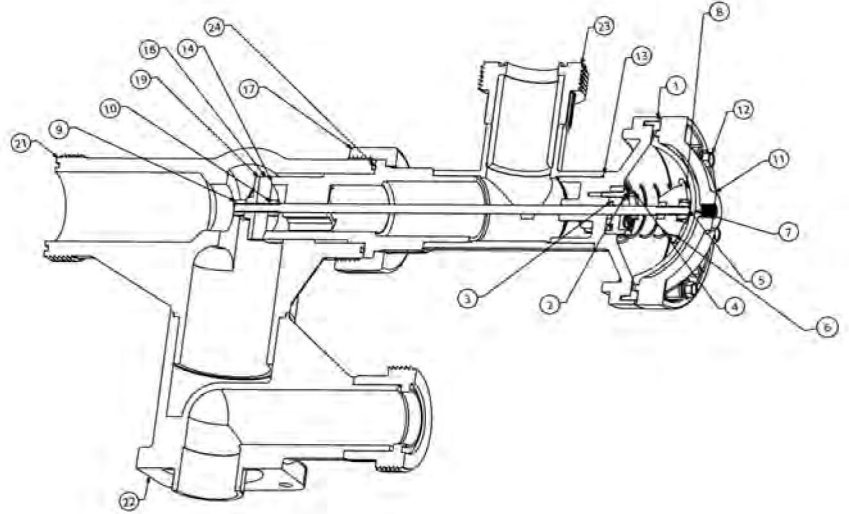
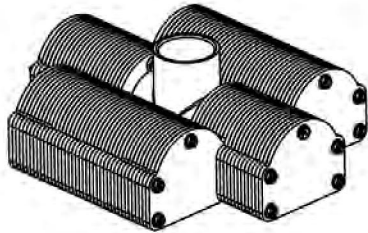
*NOT RECOMMENDED

SYSTEM DIMENSIONS



AUTO FLUSH VALVE

UNDERDRAIN



UNDERDRAIN

ITEM #.	QTY.	PART #.	DESCRIPTION
1	1	SMF-154	UNDERDRAIN TEE
2	2	SMF-155	UNDERDRAIN O-RING # 219
3	2	SMF-134	TRIPLE OPEN SEGMENT W / NIPPLE
4	16	SMF-133	TRIPLE OPEN SEGMENT
5	2	SMF-132	TRIPLE CLOSED / OPEN SEGMENT
6	64	SMF-131	SMALL OPEN SEGMENT
7	2	SMF-130	SMALL CLOSED SEGMENT
8	12	SMF-144	SEGMENT NUT 10-32
9	4	SMF-135	SEGMENT BOLT # 10-32 X 10.187
10	2	SMF-136	SEGMENT BOLT # 10-32 X 3.750
11	6	SMF-137	SEGMENT BOLT # 10-32 X 6.250

AUTO FLUSH VALVE

ITEM #.	QTY.	PART #.	DESCRIPTION
1	1	SMF-133	BACK FLUSH LOWER BODY
2	3	391-400	SS SCREWS
3	1	SMF-115	#202 - BACK FLUSH O-RING
4	1	SMF-116	BACK FLUSH SEAT
5	1	SMF-111	1/4" SS ROD
6	1	SMF-117	BACK FLUSH SPRING
7	1	391-200	2" BACK FLUSH DIAPHRAGM
8	1	SMF-120	DIAPHRAGM SUPPORT
9	2	SMF-145	1/4"-28 SS NYLON NUT
10	2	300-604	1/4"-28 SS NUT
11	1	SMF-114	BACK FLUSH UPPER BODY
12	6	SMF-146	BACK FLUSH BOLT
13	1	SMF-127	1 1/2" UVR SCH 80 TEE
14	1	SMF-112	BACK FLUSH ADAPTER
15	1	SMF-121	1 1/2" X 2" ADAPTER
17	1	SMF-118	1 1/2" UNION NUT
18	1	SMF-109	DIAPHRAGM SEAT
19	1	SMF-108	SEAT RETAINER
20	6	391-210	BRASS INSERT
21	1	SMF-107	VALVE UPPER BODY
22	1	SMF-106	VALVE LOWER BODY
23	2	SMF-119	1 1/2" UNION MALE THREAD
24	1	SMF-159	VALVE UPPER BODY O-RING #227

Ordering Information

PART #REFERENCE

H = Horizontal tank layout
 V = Vertical stacking of tanks
 G = Grooved inlet and outlet connections

U = Union inlet and outlet connections
 A = Automatic back flush with controller and decoder included
 M = Manual (no automatic back flush controller)

Part #	Description	Inlet/Outlet	Back Flush	Flow GPM	Flow L/M
SMF-2HGA	2 Tank Horizontal	Groove	Automatic	30-50	113-190
SMF-2HGM	2 Tank Horizontal	Groove	Manual	30-50	113-190
SMF-2HUA	2 Tank Horizontal	Union	Automatic	30-50	113-190
SMF-2HUM	2 Tank Horizontal	Union	Manual	30-50	113-190
SMF-2VUA	2 Tank Vertical	Union	Automatic	30-50	113-190
SMF-2VUM	2 Tank Vertical	Union	Manual	30-50	113-190
SMF-3HGA	3 Tank Horizontal	Groove	Automatic	45-75	170-284
SMF-3HGM	3 Tank Horizontal	Groove	Manual	45-75	170-284
SMF-3HUA	3 Tank Horizontal	Union	Automatic	45-75	170-284
SMF-3HUM	3 Tank Horizontal	Union	Manual	45-75	170-284
SMF-4HGA	4 Tank Horizontal Stacked	Groove	Automatic	60-100	227-379
SMF-4HGM	4 Tank Horizontal Stacked	Groove	Manual	60-100	227-379
SMF-4HUA	4 Tank Horizontal Stacked	Union	Automatic	60-100	227-379
SMF-4HUM	4 Tank Horizontal Stacked	Union	Manual	60-100	227-379
SMF-5HGA	5 Tank Horizontal Stacked	Groove	Automatic	75-125	284-473
SMF-5HGM	5 Tank Horizontal Stacked	Groove	Manual	75-125	284-473
SMF-5HUA	5 Tank Horizontal Stacked	Union	Automatic	75-125	284-473
SMF-5HUM	5 Tank Horizontal Stacked	Union	Manual	75-125	284-473
SMF-6HGA	6 Tank Horizontal Stacked	Groove	Automatic	90-150	340-567
SMF-6HGM	6 Tank Horizontal Stacked	Groove	Manual	90-150	340-567
SMF-6HUA	6 Tank Horizontal Stacked	Union	Automatic	90-150	340-567
SMF-6HUM	6 Tank Horizontal Stacked	Union	Manual	90-150	340-567
SMFA-150D	Automatic Decoder for Manual Back Flush Conversion to Automatic				
SMFA-150PD	Back Flush Controller 2 - 99 Tanks : Includes Ad, Pressure Differential Switch				

All of the above Modular units of the SMF filters include:

- Tanks
- Back flush valves
- Manifold fittings and Manifold pipes between tanks
- Pressure gauges
- Air release valves
- Back flush valve filter
- Bases and legs
- Site tube for back flush line
- Back flush control valve 1"

Automatic Units:

In addition to above, the automatic units include:

- Automatic 96 tank Back Flush Controller and Pressure Differential Switch with normally open contacts

Customer is responsible for:

- Media
- Piping for Inlet and Outlet Connections to Filter System
- Piping for Back Flush Discharge to desired location

Freight Terms:

Freight is FOB Factory

Filter Warranty:

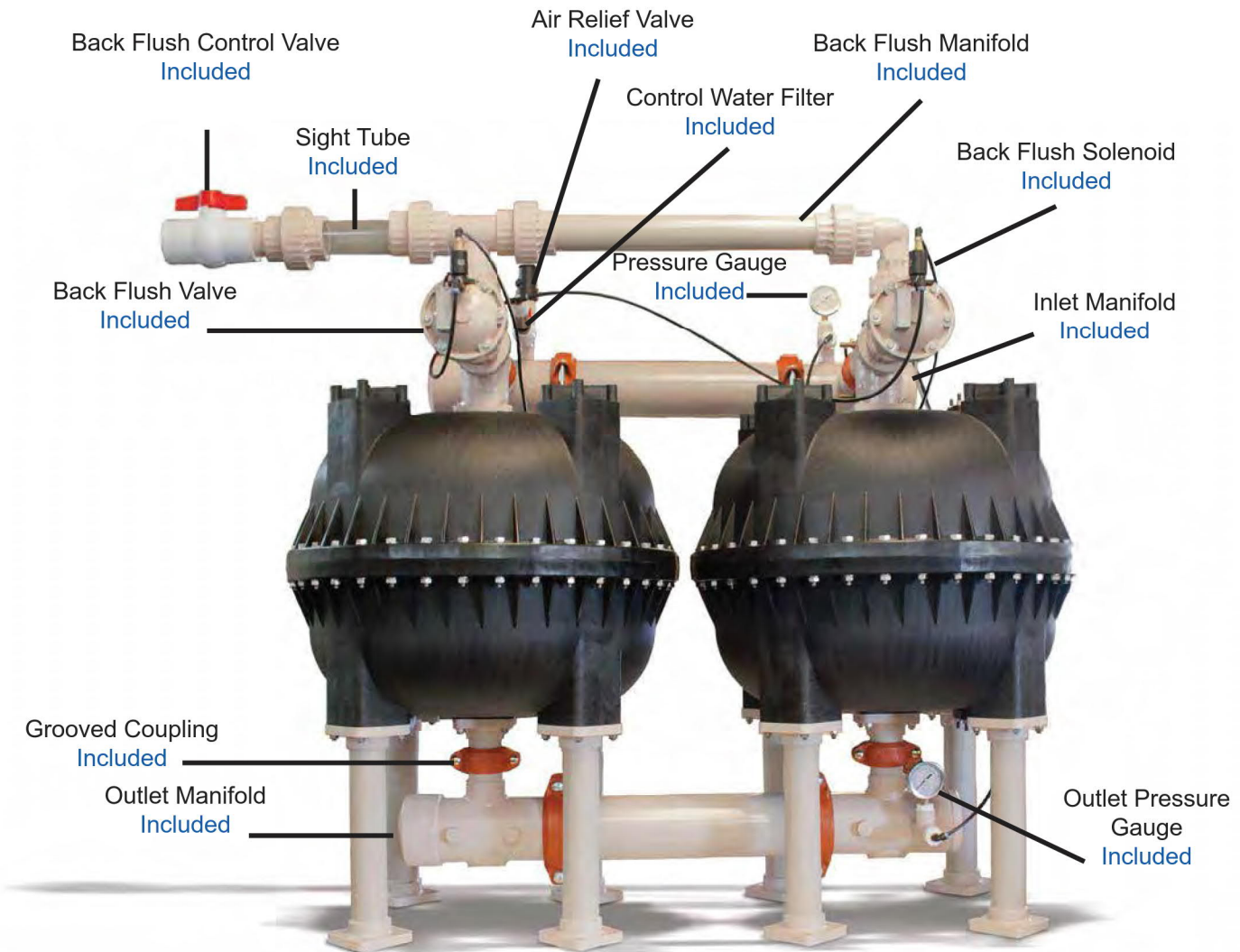
Epiphene Corporation warrants to its trade customers that its SMF Filter products will be free from defects in material and workmanship, from the original date of purchase, for a period of ONE YEAR. Within the warranty period, Epiphene Corporation, will have at its sole discretion, the option to repair 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 HIGHER FLOWS... CHECK OUT THE SMF 24" SAND MEDIA FILTERS

Flow: 40 - 100 GPM per tank

Tank Pressure Rating: 80 PSI

Tank Media: 20 gallons per tank



US Patent No. 9,358,480

Complete Systems, Manual or Automatic Operation



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