

# HMF, SMF & BMF Media Filters

## Pre-engineered HVAC Filtration Solutions

Self-cleaning, packaged filter systems designed to save you time and money



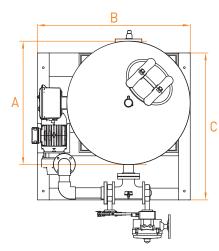
#### features:

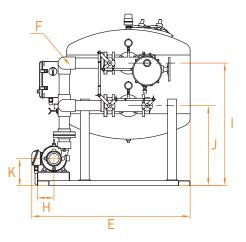
- Packaged, skid-mounted systems for easy plug-n-play installation
- Economical design
- Quick shipping for standardized packages
- Standard product submittals prepared and immediately available
- High quality, industrial grade components for long-term reliability
- Multiple offerings for a wide variety of applications
- Custom systems are available upon request

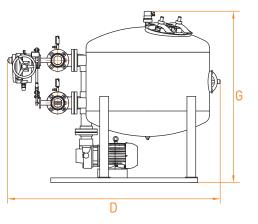
## **HMF Series**



Model		HMF-12	HMF-18	HMF-24	HMF-30	HMF-36	HMF-42	HMF-48		
General Specifications										
Median flow	rate	17 gpm	35 gpm	63 gpm	98 gpm	142 gpm	192 gpm	252 gpm		
Tank diamete	er	12"	18"	24"	30"	36"	42"	48"		
Surface area		0.78 ft. <sup>2</sup>	1.75 ft. <sup>2</sup>	3.14 ft. <sup>2</sup>	4.91 ft. <sup>2</sup>	7.07 ft. <sup>2</sup>	9.62 ft. <sup>2</sup>	12.57 ft. <sup>2</sup>		
Pump HP		1	1	2	3	3	5	5		
FLA (460)		1.45	1.45	2.7	3.67	3.67	5.9	5.9		
Inlet to pum	p (FNPT)	1.5 "	1.5 "	1.5″	2.5"	2.5"	3"	3"		
Face pipe		2"	2"	2"	2"	3"	3"	3"		
Unifill 475	Media	1	2	3	6	9	14	20		
Unigrain 50	0.5 ft. <sup>3</sup>	1	2	4	6	9	12	16		
Operating weight		668 lbs.	714 lbs.	1,076 lbs.	1,652 lbs.	2,315 lbs.	3,168 lbs.	4,123 lbs.		







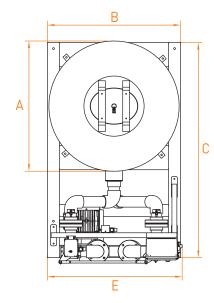
#### Dimensions

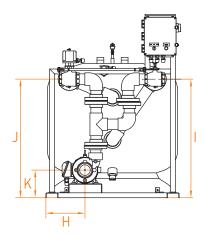
Model	HMF-12	HMF-18	HMF-24	HMF-30	HMF-36	HMF-42	HMF-48
А	12"	18"	24"	30"	36"	42"	48"
В	31"	31"	36"	41"	46"	52"	52"
С	30"	30"	34"	39"	45"	50"	54"
D	41.88"	42.88"	52.13"	58.13"	66.31"	72.31"	78.31"
E	34.88"	31"	37.06"	43.06"	48.13"	53.88"	58.13"
F	2"	2"	2"	2"	3"	3"	3"
G	47.5"	49"	55.25"	57.56"	57.25"	58.31"	59.31"
Н	4"	5"	4"	5.5"	5.38"	5.69"	5.69"
	34.13"	36.69"	42.19"	42.19"	41.63"	41.63"	41.63"
J	20.13"	20.56"	26.56"	26.56"	27.13"	27.13"	27.13"
K	8.81"	8.94"	8.81"	9.13"	9.13"	9.13"	9.13"

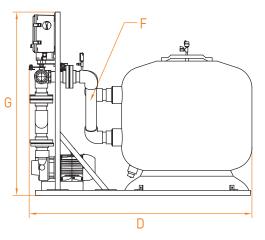
## **SMF Series**



Model		SMF2-20	SMF2-24	SMF2-30	SMF2-36	SMF2-42	SMF2-48			
General Specifications										
Median flow r	ate	43 gpm	63 gpm	98 gpm	142 gpm	192 gpm	252 gpm			
Tank diameter	-	20"	24"	30"	36"	42"	48"			
Surface area		2.18 ft. <sup>2</sup>	3.14 ft. <sup>2</sup>	4.91 ft. <sup>2</sup>	7.06 ft. <sup>2</sup>	9.61 ft. <sup>2</sup>	12.05 ft. <sup>2</sup>			
Pump HP		1	2	3	3	5	5			
FLA (460)		1.96	2.7	3.67	3.67	5.9	8.48			
Inlet to pump (FNPT)		1.5 "	1.5 "	2.5"	2.5"	3"	3"			
Face pipe		2"	2"	2"	3"	3"	3"			
Unifill 475	Media	-	-	-	10	15	16			
Unigrain 50	0.5 ft. <sup>3</sup>	4	5	8	9	12	18			
Operating weight		567 lbs.	722 lbs.	1,112 lbs.	1,840 lbs.	2,920 lbs.	4,272 lbs.			







#### Dimensions

Model	SMF2-20	SMF2-24	SMF2-30	SMF2-36	SMF2-42	SMF2-48
А	20"	24"	30"	36"	42"	48"
В	28"	28"	28"	38"	44"	44"
С	45"	45"	45"	56"	71"	71"
D	47.25"	48.06"	5.25"	63.87"	73.12"	78.69"
E	29.25"	29.25"	30.31"	38.5"	42"	48"
F	2"	2"	2"	3"	3"	3"
G	52.75"	52.75"	52.75"	60.5"	60.5"	60.5"
Н	7.25"	7.19"	7.56"	11.44"	12.87"	12.87"
I	31.94"	31.94"	31.94"	39.19"	39.12"	39.12"
J	31.94	31.94"	31.94"	39.19"	39.12"	39.12"
K	7.44"	7.44"	7.81"	9.12"	9.12"	9.12"

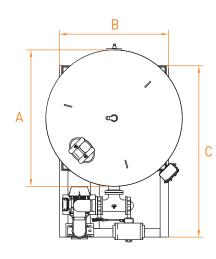
## **BMF Series**

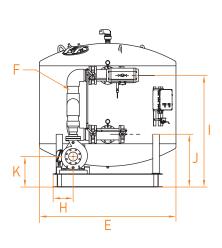
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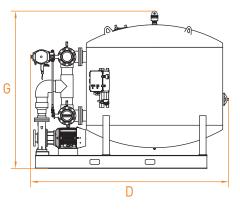
## Model BMF-54 BMF-60 BMF-66 BMF-72 BMF-78 BMF-84 BMF-90 BMF-96

#### **General Specifications**

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Median flow	rate	318 gpm	392 gpm	475 gpm	565 gpm	663 gpm	769 gpm	883 gpm	1,006 gpm
Tank diamet	Tank diameter		60"	66"	72"	78"	84"	90"	96"
Surface area	Surface area		19.6 ft. <sup>2</sup>	23.8 ft. <sup>2</sup>	28.3 ft. <sup>2</sup>	33.2 ft. <sup>2</sup>	38.5 ft. <sup>2</sup>	44.2 ft. <sup>2</sup>	50.3 ft. <sup>2</sup>
Pump HP		7.5	10	10	10	15	15	15	20
FLA (460)		8.48	11.8	12.5	12.5	17.5	17.5	17.8	24.3
Inlet to pum	Inlet to pump		3" (FNPT)	5" (flange)	5" (flange)	5" (flange)	5" (flange)	6" (flange)	6" (flange)
Face pipe	Face pipe		4"	4"	6"	6"	6"	6"	8"
Unifill 475	Media	36	46	58	74	94	112	136	162
Unigrain 50	0.5 ft. <sup>3</sup>	68	84	102	128	150	174	200	272
Operating w	veight	9,197 lbs.	11,287 lbs.	13,802 lbs.	17,704 lbs.	21,291lbs.	24,559 lbs.	29,312 lbs.	37,501 lbs.







#### Dimensions

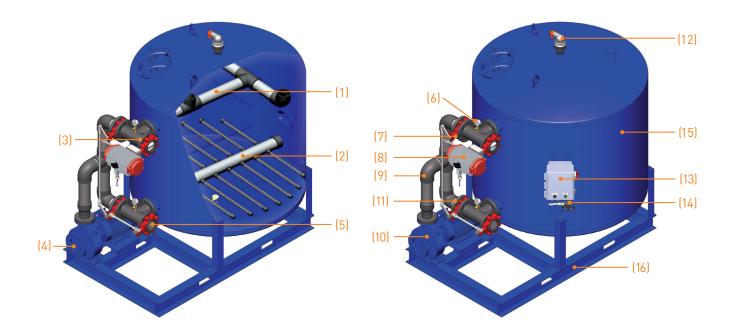
Model	BMF-54	BMF-60	BMF-66	BMF-72	BMF-78	BMF-84	BMF-90	BMF-96
А	54"	60"	66"	72"	78"	84"	90"	96"
В	42.87"	50.87"	50.87"	57.5"	63"	67.25"	70.5"	78"
С	70"	77"	82"	95.25"	100.5"	105.5"	112"	122"
D	87.31"	93.31"	99.31"	110.06"	111.06"	121.81"	128.06"	135.56"
E	56.37"	61.31"	66.44"	72"	78"	84"	90"	96"
F	4"	4"	4"	6"	6"	6"	6"	8"
G	85.81"	87.75"	88.69"	95.19"	96.12"	96.94"	97.94"	108.56"
Н	1.75"	5.75"	8.69"	7.44"	10.19"	12.31"	12.25"	13.37"
I.	62.37"	63.5"	62.5"	68.75"	68.75"	68.75"	68.75"	78.12"
J	26.12"	27.25"	27.25"	32.5"	32.5"	32.5"	32.5"	36.87"
K	13"	13.75"	13"	18.75"	18.75"	18.81"	20.12"	20"

#### **Filter Operation**

Water from the system is pumped through the over-drain assembly at the top of the filter tank and distributed evenly over the media (media not shown in image below). Unfiltered water flows downward through the filter media where suspended particles are trapped. The filtered water then passes through the vessel and out the under-drain assembly at the bottom of the filter and returns to the system. Precision slots cut in the under-drain prevent the passage of media to the outlet. When the trapped particles cause the pressure differential across the media bed to reach a pre-determined pressure (approximately 16 psi), flow is reversed through the tank by repositioning the valves. The media is backwashed with a rigorous scouring action, releasing trapped particles within the media. The dirty water passes from the filter vessel through the over-drain assembly at the top of the vessel and flows to drain. After the backwash cycle, the filter valves are again repositioned and the filtration cycle is resumed. The filter uses system water for backwash. The mechanical nature of the system guarantees an immediate improvement in water quality.

#### **Standard Package Components**

- 1. Over-drain assembly
- 2. Under-drain assembly
- 3. Waste outlet
- 4. Inlet
- 5. Outlet
- 6. Pressure gauges, 2.5" 0 -100 psi
- 7. Mechanically linked valves
- 8. Electrically actuated ball valves (SMF), pneumatically (BMF) and electrically (HMF) actuated butterfly valve
- 9. PVC Shedule 80 face piping
- 10. Cast iron pump, standard fitted, end suction, centrifugal, with TEFC close-coupled motor
- 11. System water backwash
- 12. Air release valve
- 13. NEMA 4X control panel enclosure, UL certified, 460V AC, 3-PH, 60 Hz
- 14. Differential pressure switch
- 15. Media: 1/4" x 1/8" gravel and 0.5 quartz sand
- 16. C-channel 304 stainless steel skid (SMF & HMF), epoxy coated carbon steel I-beam skid (BMF)



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### 120-J Talbert Road, Mooresville, NC 28117-7119 | 800-243-4583 | www.pepfilters.com

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