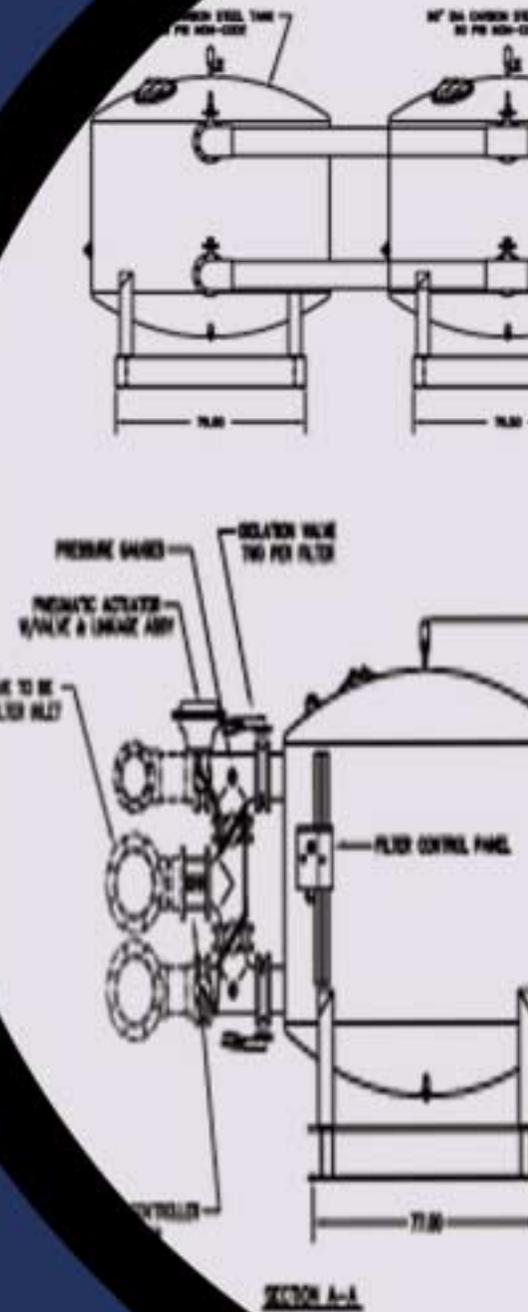


**pep**  
FILTERS



**BMF**  
**HIGH FLOW**  
**MULTI-MEDIA**  
**FILTER SYSTEM**

## BMF FILTRATION SYSTEMS

For over 25 years PEP Filters has been the leader in the industrial water filtration industry. PEP provides pre-engineered packaged systems that will deliver clean water to meet your rigorous demands for high quality water.

PEP manufactures a wide variety of standard and custom-built pressure filters used to remove impurities from water. PEP's multi-media filtration system utilizes depth media to obtain a highly efficient mechanism for removing particles and reducing turbidity. Typically the filters are sized for 20 GPM per sq.ft of surface area, slower flow rates can result in higher efficiencies and different medias can be used for removing dissolved contaminants, organics and odors.

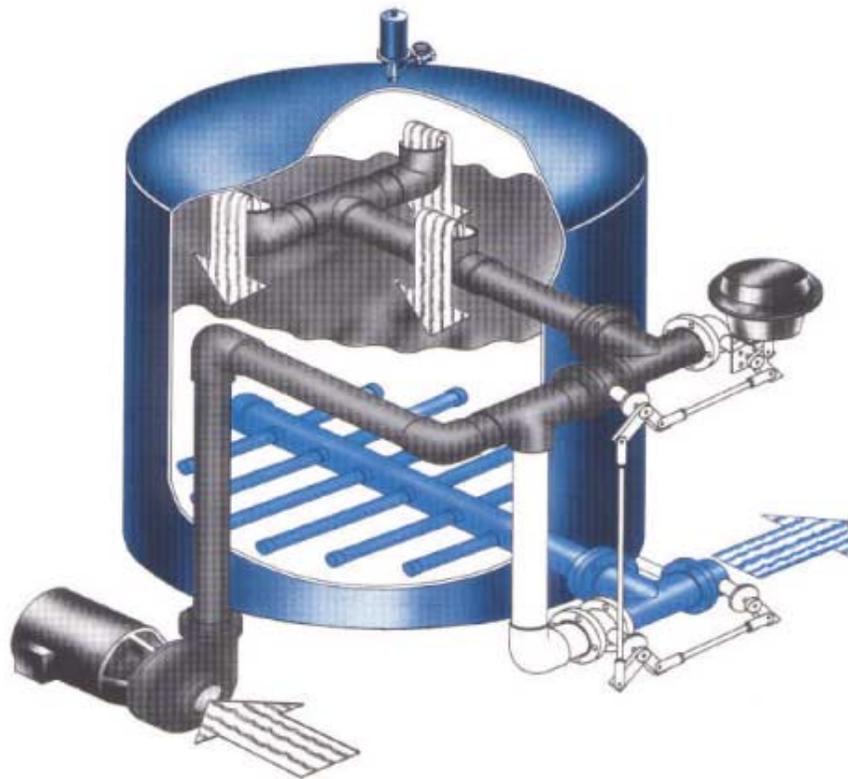
Once contaminants are trapped in the media, the lower fluidizers (under-drain) provides enough energy to fluidize the media releasing the dirt and carrying it away to the system to drain or for further processing. The mechanical nature of the system guarantees an immediate improvement in water quality.

Filters are furnished with manual, semi-automatic or fully automated backwash systems. Backwash can be initiated by manual push button, internal clock, PLC, differential pressure or building management system. The system also has an adjustable duration for each backwash and comes preset from the factory for 3 minutes. Each system

also has a timer that allows for preset backwashes at the time that best suits the process.

The BMF filtration system can be packaged in a variety of ways. It is available as a standalone filtration system utilizing pumping power available within an existing system, a side stream system totally independent of the process with its own pump. It can also be packaged as a single unit or multiple units on a common skid with a manifold tying all of the units together. The result of this type of system is a virtually limitless filtration capacity. The BMF series is capable of large volume remove of suspended solids as small as 5 micron. The standard system is 50 PSI Non ASME code construction. Higher pressures and different materials are readily available. The unit also includes NEMA 3R control panels with UL labels standard, and ASME Code stamp is an option as PEP filters is an ASME Code Section VIII facility. The tank is epoxy coated internally and externally and other coatings are available as required. The backwash mechanism is mechanically linked butterfly valves driven by a pneumatic actuator and an electric actuator is available as an option. The internals and face piping are schedule 80 PVC but many other material options are available as well.

The skid-mounted system allows for easy installation by requiring single point utility connections.



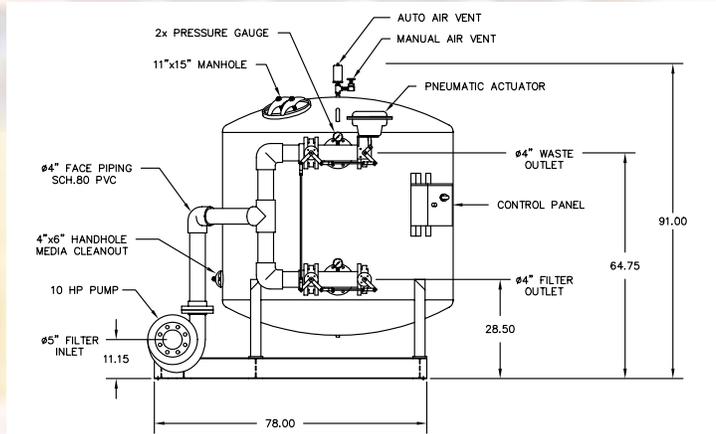
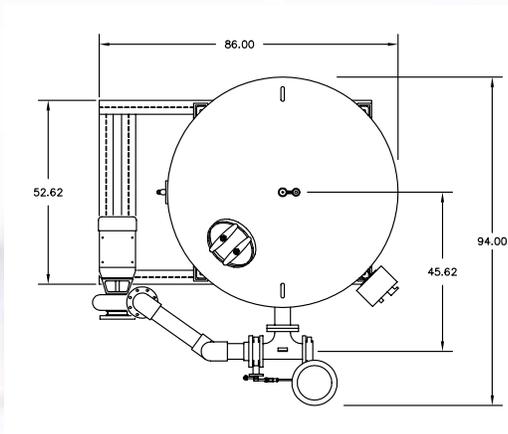
## FILTER OPERATION

In the forward flow (filtration) mode water is passed under pressure through the tank inlet and over drain assembly to be evenly distributed over the filter media (tangential flow optional).

Suspended solids are removed by the filter media and clean water then passes through the under drain to the filter outlet. Precision slots cut in the under drain prevent the passage of media to the outlet. A mechanically linked butterfly valve system, operated pneumatically or electrically, controls the direction of flow.

When in the automatic mode the backwash cycle (reverse flow) is initiated by the increasing differential pressure. As the media load with contaminant the  $\Delta P$  increases. Once a preset point is reached an backwash cycle is triggered reversing the valve from the forward mode to the reverse mode. Water is then sent under pressure through the lower fluidizers (under drain) then percolating and scouring the media releasing the trapped contaminant carrying out the over drain to the drain. After a minimum of two minutes the valves automatically return to the forward flow position.

# BMF FILTER SPECIFICATIONS



Filter Model	Valve Size in/mm	Motor hp/kW	Filter Area ft <sup>2</sup> /m <sup>2</sup>	Flow Rate* gpm/l/s	Shipping Weight lbs/kg**	Operating Weight lbs/kg**	Approximate Dimensions in/cm**		
							H	W	L
BMF 54	4/100	7.5/5.6	15.9/1.48	318/20	6685/3032	10,615/4815	91/231	82/208	81/206
BMF 60	4/100	10/7.5	19.6/1.82	392/25	8400/3810	13,500/6123	97/246	88/234	86/218
BMF 66	4/100	10/7.5	23.8/2.21	475/30	10,360/4700	16,445/7460	98/249	94/239	92/234
BMF 72	6/150	10/7.5	28.3/2.63	565/35.6	13,100/5942	20,600/9344	101/257	105/267	98/249
BMF 78	6/150	15/11.2	33.2/3.08	663/41.8	16,030/7271	25,280/11,467	104/264	111/282	104/264
BMF 84	6/150	15/11.2	38.5/3.58	769/48.5	19,600/8890	30,435/13,805	109/277	117/297	110/279
BMF 90	6/150	15/11.2	44.2/4.11	883/55.7	22,350/10,138	35,000/15,875	114/290	123/312	116/295
BMF 96	8/200	20/15	50.3/4.67	1006/63.5	28,975/13,143	43,585/19,770	122/310	129/328	122/310

\* Flow rates based on 20 gpm/ft<sup>2</sup>

\*\*Weights and dimensions are approximate

Components	Standard Design	Options
Filter Vessel	Epoxy coated carbon steel, non-ASME, 50 psig with manual & auto air vents, access ports and drain	100 and 150 psig, ASME code stamp
Internal Distribution	Schedule 80 PVC over drain and under drain	
Filter Media	Unigran 85 (10 micron)	Unigran 55 (5 micron) and Unigran 20 (0.5 micron)
Backwash Initiation	Automatic: 24-hour/7-day clock, differential pressure switch and manual push button Manual: single lever	Remote control via BMS
Backwash Source	Tower/system water or city/external source water	Auto selection dual source
Backwash Duration	3 minutes @ 20 gpm/ft <sup>2</sup> (field adjustable timer)	
Face Piping	Schedule 80 PVC	Epoxy coated carbon steel or 304 stainless steel
Pump/Motor	System matched centrifugal pump with close-coupled TEFC motor	
Control Valves	Butterfly valve, wafer style with epoxy coated cast iron body and nylon 11 coated ductile iron disc; EDPM seal	
Valve Actuation	Pneumatic diaphragm type actuator with fail safe spring-to-close	Electric Actuator
Electrical Controls	UL listed control panel in NEMA 3R enclosure with lockable access cover, power disconnect switch, thermal overload protection, and control voltage transformer with fused protected secondary side.	
Supply Power	All standard voltages @ 50 or 60 Hz (single and three phase)	
Base / Skid	Epoxy coated carbon steel I-beam base	
Warranty	One year against defects in materials and workmanship.	



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Represented by: