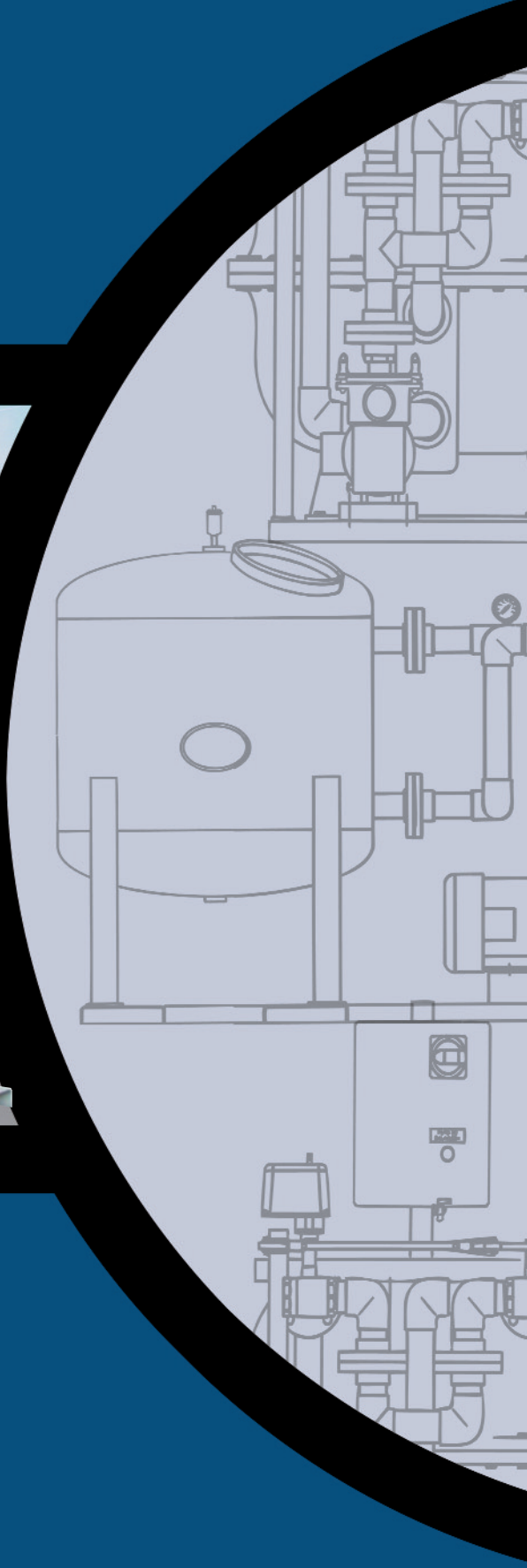
pep FILTERS



HMF2

GRANULAR MEDIA FILTER

HMF2 GRANULAR MEDIA FILTER

After 30 years, PEP Filters continues to lead the industry in the design and manufacture of the most reliable and efficient automatic continuous duty granular media filters. The new HMF2 series represents the next generation in self-cleaning media filters. In addition to high efficiency media packs, they feature our revolutionary universal face piping. The modular design enables you to achieve maximum versatility while minimizing installation costs.

PEP filter systems utilize a variety of specialized Unigran™ granular media. Unigran™ media provides excellent suspended particulate removal and unmatched "clean-ability" of the media during backwash. Particle removal efficiencies of 90% or better are typical at 10, 5 or even 0.5 micron depending on the application and media pack specified. The skid mounted stand-alone filter system arrives completely assembled, pre-wired and factory tested. Set it in place, make the necessary piping connections, load the media and bring electrical service to the control panel. The value of clean water is soon realized as the PEP filter automatically removes the suspended contaminants introduced to the system by the air scrubbing actions of cooling towers or through the use of poor quality make-up water.

Proper backwashing is a key consideration in successfully applying a granular media filter. As the filter traps suspended particles, the differential pressure across the media bed increases. When a preset time or differential pressure across the media is met, the unit automatically reverses the flow (backwashes) and lifts the trapped contaminants from the media bed and washes them to drain.

The field adjustable backwash duration timer is typically set for two minutes. Standard controls include automatic backwash initiation via manual push button, differential pressure switch and adjustable 24-hour or 7-day timer.

Located at a convenient height, the system controls are housed in a NEMA-4X non-metallic enclosure with a clear UV-resistant door The innovative HMF2 is value engineered to deliver superior performance and long-term system reliability. Design ingenuity, workmanship and high quality industrial grade components are evident throughout. A heavy-duty 600 inch-pound electric actuator controls valve operation for a smooth transition between filter and backwash cycles and prevents the damaging "water hammer" common to filter systems using snap-acting diaphragm valves. Further, the mechanically linked bronze ball valves eliminate the potential for "out of sequence" operation, another condition common to filter systems that employ diaphragm valves. Another value added benefit is that PEP's metallic ball valves and linkage require no spare parts or routine maintenance.

The versatility of PEP's modular universal piping allows the filter to be easily connected to either "tower/system" water or "city/external" water backwash. Due to the effects of seasonal changes on tower water chemistry and an increasing demand for water conservation, a "dual source" backwash option is available. With this option, the backwash source is selected via a backwash source selector switch or a control input from a conductivity meter or Building Monitoring System.

For long term dependability, industrial grade 3-way bronze ball valves control filter and backwash flow. Routine maintenance is eliminated with mechanically linked valves and heavy-duty 600 in-lb electric actuator.

NEMA 4X control panel

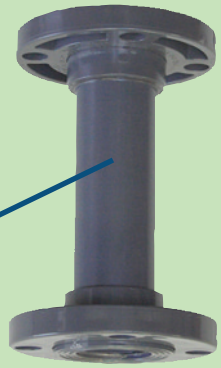
Glycerin filled inlet/outlet pressure gauges with stainless steel case

304 stainless steel vessel

Rugged base is constructed of 304 stainless steel C4 channel

System matched pump with close-coupled industrial TEFC motor

Standard choice of city or tower/system water backwash pipe



Pipe module for city water backwash

Pipe module for tower (system) water backwash

Dual source pipe module for switch selectable choice between city or tower/system water backwash

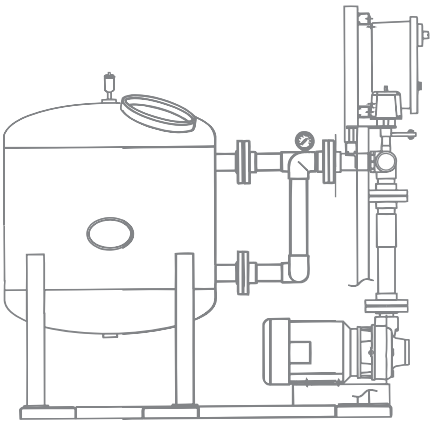
PEP's innovative modular universal face piping* provides several unique advantages:

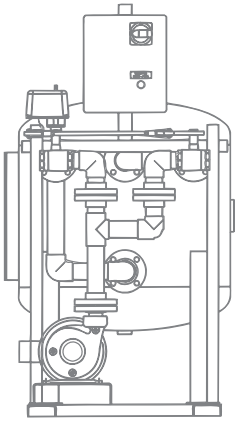
- To accommodate varying site requirements, the modular universal face piping allows for easy field conversion to either city water backwash or tower/system water backwash.
- Optional "dual source" pipe module has three modes of operation:
- **Manual Mode:** Allows selecting between tower/system water and city water at the flip of a switch.
- **Remote Mode:** Allows backwash water source selection via remote input from building monitoring system (BMS).
- **Water/Chemical Conservation Mode:** Water treatment chemical usage is optimized by allowing a conductivity meter to determine backwash water source. If system water conductivity is low, city water is utilized. If conductivity is high, instead of bleeding system water to drain, it is used to backwash the filter.

*Patent Pending

For complete product specifications visit our website at www.pepfilters.com

HMF2 FILTER SPECIFICATIONS





Filter Model	Valve Size in/mm	Motor hp/kw	Filter Area ft^2/m^2	Flow Rate* gpm/ls	Shipping Weight lbs/kg**	Operating Weight lbs/kg**	Approximate Dimensions in / cm ** H	W	L
HMF2-12	1/25.40	1/.75	0.85/0.08	17/1.07	275/125	350/159	58/147	28/71	55/140
HMF2-18	2/50.80	1/.75	1.75/0.16	35/2.21	630/286	820/372	58/147	28/71	55/140
HMF2-24	2/50.80	2/1.5	3.14/0.29	63/3.97	940/426	1,280/581	58/147	28/71	55/140
HMF2-30	2/50.80	2/1.5	4.91/0.46	98/6.18	1,295/587	1,845/837	58/147	31/79	58/147
HMF2-36	3/76.20	3/2.3	7.10/0.66	142/8.96	1,710/776	2,525/1,145	65/165	48/122	77/196
HMF2-42	3 76.20	5/3.8	9.60/0.89	192/12.11	2,355/1,068	3,515/1,594	65/165	48/122	77/196
HMF2-48	3/76.20	5/3.8	12.05/1.12	251/15.84	4,360/1,978	5,960/2,703	66/168	50/127	83/211

Note: *Flow Rates based on 20 gpm/ft2 **Weights and Dimensions are approximate

Components	Standard Design	Options
Filter Vessel	11 Gauge 304 stainless steel with carbon steel epoxy painted cover Non-ASME, 100 PSIG, with auto air vent, access port and drain	Epoxy painted carbon steel 150 PSIG, ASME code stamp
Internal Distribution	PVC (upper / lower)	304 stainless steel
Filter Media	Unigran-85 (10 micron)	Unigran-55 (5 micron)
Backwash Initiation	Automatic (24-hour / 7-day clock, differential pressure switch and manual push button) or Manual (Single Lever)	Remote control via BMS
Backwash Source	Tower / system water or city / external water	Auto selection dual source
Backwash Duration	2 minutes @ 20 gpm / ft^2	Includes adjustable timer
Face Piping	Schedule 80 PVC	304 stainless steel
Pump / Motor	System matched centrifugal pump with close-coupled TEFC motor	
Control Valves	Bronze 3-way ball valves, mechanically linked	
Valve Actuation	Single electric actuator @ 600 in-lbs torque	
Electrical Controls	NEMA-4X thermoplastic UL-labeled control panel with lockable UV-resistant clear access cover, main power disconnect switch, overload protection, pump motor starter and control voltage transformer	
Supply Power	All standard voltages @ 50hz or 60hz (1-phase or 3-phase)	
Base / Skid	Fully skid mounted on a 304 stainless steel C4 channel base	
Warranty	1 year against defects in materials and workmanship	

Represented by

PEP Filters, Inc.
322 Rolling Hill Road
Mooresville, NC 28117-9920
Toll Free (800)24-FILTER

Phone (704)662-3133
Fax (704)662-3155
Email: pepusa@pepfilters.com
www.pepfilters.com

PEP Filters Asia Pte Ltd
10 Anson Road #33-17
Singapore 079903
(65)6225-5339 ex 119
Fax (65) 6246-0668

©2003 PEP Filters, Inc.
Printed in USA