



EBD Water pressure filters provide the most effective methods of removing suspended solids, turbidity, iron, color, odor, and other particulates from the raw water. The produced high quality filtered water is suitable for the pretreatment of feedwater to Reverse Osmosis desalination plants, potable water systems, wastewater re-use, and other wide range of applications.

The Filtration Solution

Raw feedwater is introduced at the top of the filter vessel under pressure and flows downward through the filter media. During the downward flow of raw water, most of the suspended solids are trapped in the uppermost layer of the media, while some are captured in the void spaces between the filter media particles. Also, some dissolved impurities are adsorbed or absorbed in the filter media. The filter media may react with the dissolved impurities or may act as a catalyst to initiate reaction.

For treatment of raw water containing suspended solids, sand is the most common media. Coarse media such as anthracite is added to the uppermost layer of the sand media when filtering raw water with relatively high suspended solids such as wastewater. The coarse media will retain larger particles that cause premature blinding of the sand media.

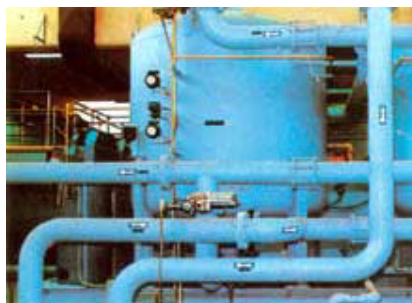
The combination of filter media of various sizes and densities arranged in layers, provides high filtration efficiency as the entire depth of the bed is utilized. Depth filtration is effective and achieves longest filter runs.

Removal of dissolved iron or manganese in raw water can be achieved using Manganese, Greensand or BIRM. BIRM is a proven media effective in precipitating dissolved iron and manganese in water, without the addition of chemicals.

Most organic impurities causing taste and odor can be effectively removed using activated carbon media. Activated carbon media is also effective in removing chlorine, toxic impurities and substances suspected of causing cancer.

EBD Range of Pressure Filters

EBD Water manufactures a wide range of pressure filters with diameters ranging from 18" to 48" using vertical GRP vessels, from 30" to 130" for vertical welded steel vessels, and from 48" to 144" for horizontal welded steel vessels.



The pressure filters can be supplied as a single unit or multiple units. Multiple filter arrangement can be in series or parallel.



PRESSURE FILTRATION

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The pressure filters can be supplied with manual or automatic valves for backwashing. For manually backwashed filters, globe, butterfly, diaphragm, and multi-port valves are normally used. Automatically backwashed filters use butterfly, diaphragm and multi-port valves with electric, hydraulic, or pneumatic actuators.



Features of EBD Pressure Filters

The EBD Water pressure filters are selected and designed to meet specific process requirements.

The GRP filter vessels are manufactured from high quality materials manufactured under strict quality control procedures. The steel vessels are fabricated according to the latest ASME code and undergo tedious inspection and testing procedures prior to their release.

The internal linings are carefully selected to be compatible with the characteristics of the water and impurities to provide years of trouble-free operation.

The internal distributor is designed to assure uniform flow within the media. The underdrain collectors are the header and lateral type, with proven effectiveness in the field during many years of operation.

There is also a wide selection of face pipework materials, such as PVC, UPVC, GRP, Polypropylene, Galvanized or Black Iron, and lined steel, depending on the characteristics of the liquid being filtered. Typical valves materials used are cast iron, steel, GRP, PVC.

The filter backwashing can be initiated manually or automatically. Automatic backwashing can be initiated by timer, pressure switch, flowmeter or any external signal. The backwashing sequence is controlled by an electro-mechanical timer with relays or programmable logic controller. The controller can also be connected to a PC based monitoring and control system.

Most of the EBD Water pressure filters are delivered to the site pre-piped complete with the valves and face piping, ready for site connection to water, drain and electrical lines. Larger filters are delivered in semi-knock down condition to minimize site work and installation procedures.



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Selective Data

Model	Capacity (gpm)	Media Volume	Capacity (gpm)	Media Volume	Capacity (gpm)	Media Volume	Capacity (gpm)	Media Volume	Filter dia (in)	Pipe Size (in)
	S	S	MM	MM	AC	AC	BM	BM		
VF-30	20	7	50	15	50	16	20	15	30	2
VF-36	30	10	70	21	70	22	30	21	36	2
VF-42	40	12	90	29	90	30	40	29	42	2
VF-48	50	16	120	38	120	40	50	38	48	3
VF-60	80	26	190	60	190	62	80	60	60	3
VF-66	95	32	240	70	240	72	95	70	66	4
VF-72	110	37	280	85	280	89	110	85	72	4
VF-78	130	44	330	100	330	105	130	100	78	4
VF-84	150	50	380	115	380	118	150	115	84	6

S=Sand, MM = Multi Media, AC = Activated Carbon, BM = Birm

Design Pressure = 100 psig

Carbon Steel vessels are designed with welded dish heads.

The above specifications apply to vertical pressure vessels.
Horizontal pressure vessels are available from 48 inch diameter and above.

Larger capacities are available.

Electric characteristics for automatic systems:
220 V, 1 PH, 60 HZ as standard
(110 V, 3 PH, 50 HZ available)

from direct sunlight.



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Optional Accessories

- Batch Flow Meter
- External Signal Initiation
- Programmable Logic Controller
- Pilot Solenoid Valves
- Process Instruments
- Test Equipment
- Spare Parts

Auxiliary Equipment

- Chemical Treatment
- Storage Tanks
- Booster Pumps
- Hydropneumatic Systems

DESALINATION PROCESSES
DEIONIZATION PROCESSES
MUNICIPAL WATER TREATMENT
INDUSTRIAL WATER TREATMENT
MUNICIPAL WASTEWATER TREATMENT
INDUSTRIAL WASTEWATER TREATMENT
CHEMICAL SERVICES
TECHNICAL SERVICES