

Commercial Media Filters

Steel Tanks: 14" to 42" Diameter

**MF-410
SERIES**

Pure Aqua's pressure filters clarify water by removing sediment, turbidity, iron, unpleasant tastes, odors, suspended particles, and unwanted color, all of which are commonly found in surface water. They can be used in a variety of services including: industrial, municipal, and institutional applications.

Standard Features

- High performance epoxy lined, primer coated, top mounted steel tank
- Automatic backwash valve
- Top mounted Fleck valve
- Time controller for scheduled backwash cycle
- Flow controller to limit backwash flow
- All internals are plastic materials
- High quality media

Available Options

- Duplex systems
- Tanks according to ASME code
- 316L or 304 stainless steel tanks
- FRP tanks
- 240V/1ph/50Hz power supply
- Pressure relief valve
- Inlet/outlet sample valves
- Inlet/outlet pressure gauges
- Differential pressure switch and gauge
- Filters using diaphragm valves
- Auxiliary switch for backwash pump start

Media Filtration Operating Cycles

Service Cycle

Water flows downward through the media while solids accumulate in the media bed. The purified water passes through to downstream processes.

Backwash Cycle

When the filter begins to clog or when the head loss (pressure drop) through the bed increases, flow rates are reduced. To prevent degradation of water quality, the flow is reversed. This is directed by the control valve(s) to drain, carrying with it, the particulate matter that has built up during service.

The required flow is specific to the media and is essential to effective cleaning of the media bed. For media filters, the backwash flow is always higher than the service flow rate.



28F24100MM-ST

28F1645MM-ST



FLECK 2750



FLECK 3150



FLECK 2850

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Pressure Gauges

Pre and post filter pressure gauges are important to monitor the filter pressure and determine the backwash frequency.



Auxiliary Switch

Auxiliary switches are used to provide a signal to start a backwash pump or to provide a status signal to a BMS system or interlock with an RO system.



DP Switch

The differential pressure gauge and switch are used to automatically initiate backwash based on the differential pressure.

Media Specifications

Pure Aqua supplies a wide range of quality filter media that meet industry standards for efficient and effective filtration.



Gravel

Anthracite

Sand

Calcite

Coconut Carbon

Turbidex

Greensand Plus

Sand

Graded in various ranges, Pure Aqua's sand can be used as filtration media or underbedding depending on particle size and application.

Calcite

Calcite media is specially graded calcium carbonate compound for neutralizing acid with consistent dissolving rates for water treatment.

Greensand Plus

GreensandPlus™ is a black filter media used to remove soluble iron, manganese, hydrogen sulfide, arsenic, and radium from groundwater supplies.

Anthracite

Anthracite is recommended as a filter media where additional silica in the water is not desirable and removes lighter weight turbidity.

Activated Carbon

Activated carbon media is used to remove taste, odor, chlorine and organic contaminants and is used in many drinking water applications.

Turbidex

Turbidex is based on a rare natural mineral. Its unique properties radically improve the performance and cost of media filtration.

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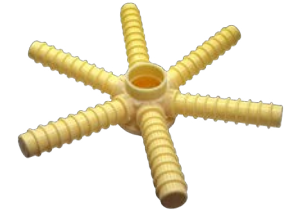
MF-410 SERIES

Advantages of Multimedia Filtration

- Proven process and most tested forms of water treatment
- Systems are robust with no moving parts inside the tanks
- Modular control valves designed for operational flexibility
- Filtration media is inexpensive and long-lasting
- Resistant to fouling (clogging)
- Faster flow rates
- Produces high quality filtered water

Operation Specifications

- Operating pressure: 25-100 psi (1.73-6.9 bar)
- Electrical: 120VAC, 1-Phase, 60 Hz, 2 Amp
- Operating temperature: 41-122°F (5-50°C)
- Filters can be supplied in 240V/1ph/50Hz



Model#		Average		Peak		Backwash		Tank Size D" xH"	Media Qty (ft ³)	Pipe Size		Approx. Weight (lbs)
Option 1	Option 2	GPM	M ³ /H	GPM	M ³ /H	GPM	M ³ /H					
Multi Layer Filters: Anthracite, Sand and Gravel (Turbidity Removal)												
27F1435MM-ST	28F1435MM-ST	10.7	2.4	16.1	3.6	16.1	3.6	14X60	3	1"	1.5"	364
27F1645MM-ST	28F1645MM-ST	13.9	3.2	20.9	4.7	20.9	4.7	16X60	4	1"	1.5"	503
28F1855MM-ST		17.7	4	26.6	6	26.6	6	18X60	5	1.5"		641
28F2065MM-ST		24.1	5.5	36.2	8.2	36.2	8.2	21X60	6	1.5"		867
28F24100MM-ST		31.4	7.1	47.1	10.7	47.1	10.7	24X60	8.5	1.5"		1045
31F30150MM-ST		49.1	11.2	73.7	16.7	73.7	16.7	30X60	13	2"		1685
31F36210MM-ST		70.7	16.1	116.2	26.4	102	23.2	36X60	19	2"		2387
31F42280MM-ST		96.2	21.9	125	28.4	105	23.9	42X60	26	2"		3495
Turbidex Filters: (Turbidity Removal)												
27F1435TX-ST	28F1435TX-ST	10.7	2.4	16.1	3.6	16.1	3.6	14X60	3	1"	1.5"	460
27F1645TX-ST	28F1645TX-ST	13.9	3.2	20.9	4.7	20.9	4.7	16X60	4	1"	1.5"	623
28F1855TX-ST		17.7	4	26.6	6	26.6	6	18X60	5	1.5"		785
28F2065TX-ST		24.1	5.5	36.2	8.2	36.2	8.2	21X60	6	1.5"		1035
28F24100TX-ST		31.4	7.1	47.1	10.7	47.1	10.7	24X60	8.5	1.5"		1285
31F30150TX-ST		49.1	11.2	73.7	16.7	73.7	16.7	30X60	13	2"		2045
31F36210TX-ST		70.7	16.1	116.2	26.4	102	23.2	36X60	19	2"		2915
31F42280TX-ST		96.2	21.9	125	28.4	105	23.9	42X60	26	2"		4215
AG Filters: Non Hydrous Silicon Dioxide (Turbidity Removal)												
27F1435AG-ST	28F1435AG-ST	7.5	1.7	12.8	2.9	10.7	2.4	14X60	3	1"	1.5"	235
27F1645AG-ST	28F1645AG-ST	9.7	2.2	16.7	3.8	13.9	3.2	16X60	4	1"	1.5"	323
28F1855AG-ST		12.4	2.8	21.2	4.8	17.7	4	18X60	5	1.5"		410
28F2065AG-ST		16.9	3.8	28.9	6.6	24.1	5.5	21X60	6	1.5"		548
28F24100AG-ST		22	5	37.7	8.6	31.4	7.1	24X60	8.5	1.5"		648
31F30150AG-ST		34.4	7.8	58.9	13.4	49.1	11.2	30X60	13	2"		1070
31F36210AG-ST		49.5	11.2	84.8	19.3	70.7	16.1	36X60	19	2"		1490
31F42280AG-ST		67.3	15.3	115.4	26.2	96.2	21.9	42X60	26	2"		2265
Activated Carbon Filters: Granular Form with High Degree of Porosity (Taste, Odor and Color Removal)												
27F1435AC-ST	28F1435AC-ST	7.5	1.7	12.8	2.9	12.8	2.9	14X60	3	1"	1.5"	243
27F1645AC-ST	28F1645AC-ST	9.7	2.2	16.7	3.8	16.7	3.8	16X60	4	1"	1.5"	333
28F1855AC-ST		12.4	2.8	21.2	4.8	21.2	4.8	18X60	5	1.5"		423
28F2065AC-ST		16.9	3.8	28.9	6.6	28.9	6.6	21X60	6	1.5"		564
28F24100AC-ST		22	5	37.7	8.6	37.7	8.6	24X60	8.5	1.5"		669
31F30150AC-ST		34.4	7.8	58.9	13.4	58.9	13.4	30X60	13	2"		1103
31F36210AC-ST		49.5	11.2	84.8	19.3	84.8	19.3	36X60	19	2"		1538
31F42280AC-ST		67.3	15.3	115.4	26.2	115.4	26.2	42X60	26	2"		2330

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Model#		Average		Peak		Backwash		Tank Size D" xH"	Media Qty (ft ³)	Pipe Size	Approx. Weight (lbs)	
Option 1	Option 2	GPM	M ³ /H	GPM	M ³ /H	GPM	M ³ /H					
Greensand Filters: Enriched Quality with High Catalytic Capacity (Fe, Mn and H₂S Reduction)												
27F1435GS-ST	28F1435GS-ST	7.5	1.7	12.8	2.9	12.8	2.9	14X60	3	1"	1.5"	694
27F1645GS-ST	28F1645GS-ST	9.7	2.2	16.7	3.8	16.7	3.8	16X60	4	1"	1.5"	935
28F1855GS-ST		12.4	2.8	21.2	4.8	21.2	4.8	18X60	5	1.5"		1175
28F2065GS-ST		16.9	3.8	28.9	6.6	28.9	6.6	21X60	6	1.5"		1542
28F24100GS-ST		22	5	37.7	8.6	37.7	8.6	24X60	8.5	1.5"		1948
31F30150GS-ST		34.4	7.8	58.9	13.4	58.9	13.4	30X60	13	2"		3059
31F36210GS-ST		49.5	11.2	84.8	19.3	84.8	19.3	36X60	19	2"		4397
31F42280GS-ST		67.3	15.3	115.4	26.2	115.4	26.2	42X60	26	2"		6243
Birm Filters: Insoluble Catalyst (Fe and Mn Reduction)												
27F1435BM-ST	28F1435BM-ST	7.5	1.7	12.8	2.9	12.8	2.9	14X60	3	1"	1.5"	292
27F1645BM-ST	28F1645BM-ST	9.7	2.2	16.7	3.8	16.7	3.8	16X60	4	1"	1.5"	399
28F1855BM-ST		12.4	2.8	21.2	4.8	21.2	4.8	18X60	5	1.5"		505
28F2065BM-ST		16.9	3.8	28.9	6.6	28.9	6.6	21X60	6	1.5"		671
28F24100BM-ST		22	5	37.7	8.6	37.7	8.6	24X60	8.5	1.5"		809
31F30150BM-ST		34.4	7.8	58.9	13.4	58.9	13.4	30X60	13	2"		1317
31F36210BM-ST		49.5	11.2	84.8	19.3	84.8	19.3	36X60	19	2"		1851
31F42280BM-ST		67.3	15.3	115.4	26.2	115.4	26.2	42X60	26	2"		2759
Calcite Filters: (pH Neutralization)												
27F1435CF-ST	28F1435CF-ST	7.5	1.7	12.8	2.9	12.8	2.9	14X60	3	1"	1.5"	460
27F1645CF-ST	28F1645CF-ST	9.7	2.2	16.7	3.8	16.7	3.8	16X60	4	1"	1.5"	623
28F1855CF-ST		12.4	2.8	21.2	4.8	21.2	4.8	18X60	5	1.5"		785
28F2065CF-ST		16.9	3.8	28.9	6.6	28.9	6.6	21X60	6	1.5"		1035
28F24100CF-ST		22	5	37.7	8.6	37.7	8.6	24X60	8.5	1.5"		1285
31F30150CF-ST		34.4	7.8	58.9	13.4	58.9	13.4	30X60	13	2"		2045
31F36210CF-ST		49.5	11.2	84.8	19.3	84.8	19.3	36X60	19	2"		2915
31F42280CF-ST		67.3	15.3	115.4	26.2	115.4	26.2	42X60	26	2"		4215

*All filters require periodic backwashing to dispose of the accumulated debris. This is accomplished by backwashing clean water through the unit and then disposing of the effluent. During this phase, the different sizes of media separate into layers, preparing the filter bed for service. Because backwashing generally occurs at higher flow rates than those seen in service, oftentimes a proper backwash flow rate is not possible because the systems are designed for required service flow rates. However, by utilizing smaller double or triple unit systems, the optimum backwash flow rate is lower; therefore, these systems operate at higher service flow rates.

Notes

- After backwash cycle, the expected pressure loss should not exceed 5 psig, based on a clean filter bed
- Dimensions are estimate only. Please allow a minimum of 24" above height dimension for media loading. Call factory for skid mounted systems dimensions.
- Shipping weights are estimate only. Weights include media and support gravel, which are added to the tanks after installation. For twin or duplex systems, please double the weight.



Pure Aqua also supplies: Custom Engineered Solutions, Multimedia Pretreatment, Activated Carbon Pretreatment, Water Conditioning, Chemical Dosing Systems, Ultraviolet (UV) Sterilizers and Ozonation Systems.

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