

Commercial Media Filters

FRP Tanks: 9" to 48" Diameter

**MF-300
SERIES**

Pure Aqua's pressure filters clarify water by removing sediment, turbidity, iron, unpleasant tastes and 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 FRP tank
- Automatic backwash valve
- Top mounted Clack valve
- Time controller for scheduled backwash
- Flow controller to limit backwash flow
- All internals are plastic materials
- High quality media

Available Options

- Duplex systems
- Stainless steel tanks
- Epoxy coated steel tanks
- Tanks according to ASME code for 18" and larger
- 240V/1ph/50Hz power supply
- Vacuum breaker
- 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
- Side mount valve

Operation Specifications

- Operating pressure: 25-100 psi (1.73-6.9 bar)
- Operating temperature: 2-38°C (35-100°F)
- Electrical: 120VAC, 1-Phase, 60 Hz, 2 Amp

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.



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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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Model #	Flow Rate						Tank Size D"xH"	Media Qty (ft ³)	Pipe Size	Approx. Weight (lbs)
	Average		Peak		Backwash					
	GPM	M ³ /H	GPM	M ³ /H	GPM	M ³ /H				
Multi Layer Filters: Anthracite, Sand and Gravel (Turbidity Removal)										
100C910MM	4.4	1	6.6	1.5	6.6	1.5	9x48	1	1"	118
100C1015MM	5.4	1.2	8.1	1.8	8.1	1.8	10x54	1.5	1"	156
100C1220MM	7.8	1.8	11.7	2.7	11.7	2.7	12x52	2	1"	204
125C1325MM	9.2	2.1	13.8	3.1	13.8	3.1	13x54	2.5	1-1/4"	267
125C1435MM	10.7	2.4	16.1	3.6	16.1	3.6	14x65	3	1-1/4"	366
125C1645MM	13.9	3.2	20.9	4.7	20.9	4.7	16x65	4	1-1/4"	462
150C1855MM	17.7	4	26.6	6	26.6	6	18x65	5	1-1/2"	577
150C2175MM	24.1	5.5	36.2	8.2	36.2	8.2	21x62	6.5	1-1/2"	761
150C24100MM	31.4	7.1	47.1	10.7	47.1	10.7	24x72	8.5	1-1/2"	1,000
200C30150MM	49.1	11.2	73.7	16.7	73.7	16.7	30x72	13	2"	1,544
200C36210MM	70.7	16.1	116.2	26.4	102	23.2	36x72	19	2"	2,150
200C42280MM	96.2	21.9	125	28.4	105	23.9	42x72	26	2"	3,000
300C48400MM	125.7	29	250	56.8	188	42.8	48x72	34	3"	4,100
AG Filters: Non-Hydrous Silicon Dioxide (Turbidity Removal)										
100C910AG	3.1	0.7	5.3	1.2	4.4	1	9x48	1	1"	62
100C1015AG	3.8	0.9	6.5	1.5	5.4	1.2	10x54	1.5	1"	125
100C1220AG	5.5	1.2	9.4	2.1	7.8	1.8	12x52	2	1"	160
125C1325AG	6.4	1.5	11	2.5	9.2	2.1	13x54	2.5	1-1/4"	208
125C1435AG	7.5	1.7	12.8	2.9	10.7	2.4	14x65	3	1-1/4"	285
125C1645AG	9.7	2.2	16.7	3.8	13.9	3.2	16x65	4	1-1/4"	360
150C1855AG	12.4	2.8	21.2	4.8	17.7	4	18x65	5	1-1/2"	450
150C2175AG	16.9	3.8	28.9	6.6	24.1	5.5	21x62	6.5	1-1/2"	595
150C24100AG	22	5	37.7	8.6	31.4	7.1	24x72	8.5	1-1/2"	780
200C30150AG	34.4	7.8	58.9	13.4	49.1	11.2	30x72	13	2"	1,200
200C36210AG	49.5	11.2	84.8	19.3	70.7	16.1	36x72	19	2"	1,677
200C42280AG	67.3	15.3	115.4	26.2	96.2	21.9	42x72	26	2"	2,340
300C48400AG	88	20	150	34	125	28.4	48x72	34	3"	3,200
Activated Carbon Filters: Granular Form with High Degree of Porosity (Taste, Odor and Color Removal)										
100C910AC	3.1	0.7	5.3	1.2	5.3	1.2	9x48	1	1"	62
100C1015AC	3.8	0.9	6.5	1.5	6.5	1.5	10x54	1.5	1"	125
100C1220AC	5.5	1.2	9.4	2.1	9.4	2.1	12x52	2	1"	160
125C1325AC	6.4	1.5	11	2.5	11	2.5	13x54	2.5	1-1/4"	208
125C1435AC	7.5	1.7	12.8	2.9	12.8	2.9	14x65	3	1-1/4"	285
125C1645AC	9.7	2.2	16.7	3.8	16.7	3.8	16x65	4	1-1/4"	360
150C1855AC	12.4	2.8	21.2	4.8	21.2	4.8	18x65	5	1-1/2"	450
150C2175AC	16.9	3.8	28.9	6.6	28.9	6.6	21x62	6.5	1-1/2"	595
150C24100AC	22	5	37.7	8.6	37.7	8.6	24x72	8.5	1-1/2"	780
200C30150AC	34.4	7.8	58.9	13.4	58.9	13.4	30x72	13	2"	1,200
200C36210AC	49.5	11.2	84.8	19.3	84.8	19.3	36x72	19	2"	1,677
200C42280AC	67.3	15.3	115.4	26.2	115.4	26.2	42x72	26	2"	2,340
300C48400AC	88	20	125	28.4	150.8	34.3	48x72	34	3"	3,200

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WS2



WS1



WS2H



WS3

Model #	Flow Rate						Tank Size D"xH"	Media Qty (ft ³)	Pipe Size	Approx. Weight (lbs)
	Average		Peak		Backwash					
	GPM	M ³ /H	GPM	M ³ /H	GPM	M ³ /H				
Birm Filters: Insoluble Catalyst (Fe and Mn Reduction)										
100C910BM	3.1	0.7	5.3	1.2	5.3	1.2	9x48	1	1"	62
100C1015BM	3.8	0.9	6.5	1.5	6.5	1.5	10x54	1.5	1"	125
100C1220BM	5.5	1.2	9.4	2.1	9.4	2.1	12x52	2	1"	160
125C1325BM	6.4	1.5	11	2.5	11	2.5	13x54	2.5	1-1/4"	208
125C1435BM	7.5	1.7	12.8	2.9	12.8	2.9	14x65	3	1-1/4"	285
125C1645BM	9.7	2.2	16.7	3.8	16.7	3.8	16x65	4	1-1/4"	360
150C1855BM	12.4	2.8	21.2	4.8	21.2	4.8	18x65	5	1-1/2"	450
150C2175BM	16.9	3.8	28.9	6.6	28.9	6.6	21x62	6.5	1-1/2"	595
150C24100BM	22	5	37.7	8.6	37.7	8.6	24x72	8.5	1-1/2"	780
200C30150BM	34.4	7.8	58.9	13.4	58.9	13.4	30x72	13	2"	1,200
200C36210BM	49.5	11.2	84.8	19.3	84.8	19.3	36x72	19	2"	1,677
200C42280BM	67.3	15.3	115.4	26.2	115.4	26.2	42x72	26	2"	2,340
300C48400BM	88	20	125	28.4	150.8	34.3	48x72	34	3"	3,200
Calcite Filters: (pH Neutralization)										
100C910CF	3.1	0.7	5.3	1.2	5.3	1.2	9x48	1	1"	142
100C1015CF	3.8	0.9	6.5	1.5	6.5	1.5	10x54	1.5	1"	188
100C1220CF	5.5	1.2	9.4	2.1	9.4	2.1	12x52	2	1"	245
125C1325CF	6.4	1.5	11	2.5	11	2.5	13x54	2.5	1-1/4"	320
125C1435CF	7.5	1.7	12.8	2.9	12.8	2.9	14x65	3	1-1/4"	440
125C1645CF	9.7	2.2	16.7	3.8	16.7	3.8	16x65	4	1-1/4"	555
150C1855CF	12.4	2.8	21.2	4.8	21.2	4.8	18x65	5	1-1/2"	693
150C2175CF	16.9	3.8	28.9	6.6	28.9	6.6	21x62	6.5	1-1/2"	915
150C24100CF	22	5	37.7	8.6	37.7	8.6	24x72	8.5	1-1/2"	1,200
200C30150CF	34.4	7.8	58.9	13.4	58.9	13.4	30x72	13	2"	1,850
200C36210CF	49.5	11.2	84.8	19.3	84.8	19.3	36x72	19	2"	2,580
200C42280CF	67.3	15.3	115.4	26.2	115.4	26.2	42x72	26	2"	3,600
300C48400CF	88	20	125	28.4	150.8	34.3	48x72	34	3"	4,920

*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.

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