

# Commercial Media Filters

FRP Tanks: 14" to 36" Diameter

**MF-500  
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 FRP tank
- Automatic backwash valve
- Glass filled Noryl valve
- Time controller for automatic backwash cycle
- Flow controller to limit backwash flow
- All internals are plastic materials

## Available Options

- Duplex systems
- Tanks according to ASME code
- 316L stainless steel tanks
- Epoxy coated steel or 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

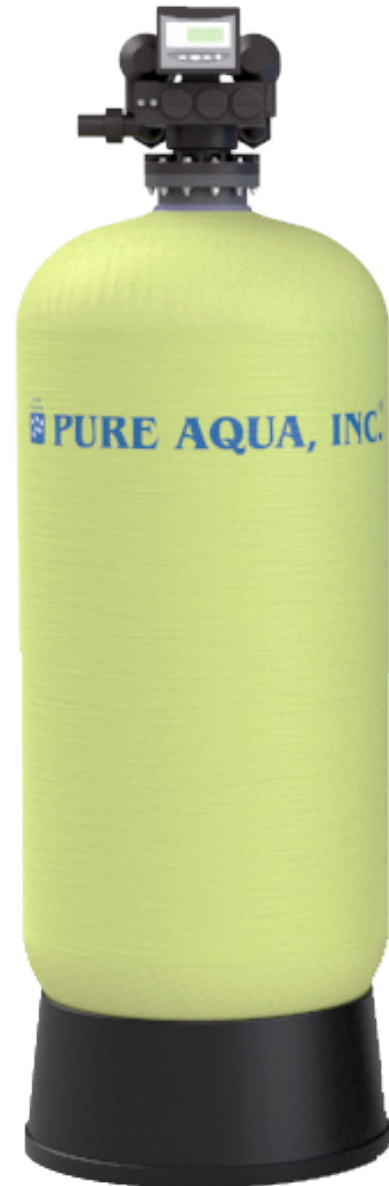
### Service Cycle

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.



CVP24100MM

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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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## Advantages of Multimedia Filtration

- 💧 Relatively inexpensive, no recurring cost of consumables
- 💧 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
- 💧 Easily cleaned and maintained
- 💧 Resistant to fouling (clogging)

## Operation Specifications

- 💧 Operating pressure: 2-6.8 bar (30-100 psi)
- 💧 Electrical: 120VAC, 1-Phase, 60 Hz, 2 Amp
- 💧 Operating temperature: 2-38°C (35-100°F)
- 💧 Filters can be supplied in 240V/1ph/50Hz

## Applications:

- 💧 Water features (fountains, etc.)
- 💧 Wastewater
- 💧 Cooling water
- 💧 Suspended solids reduction
- 💧 Commercial process water
- 💧 Storm water
- 💧 Irrigation water
- 💧 Iron and manganese removal
- 💧 Swimming pool water
- 💧 Potable (drinking) water



Model #	Flow Rate						Tank Size D"xH"	Media Qty (ft <sup>3</sup> )	Pipe Size	Approx. Weight (lbs)
	Average		Peak		Backwash					
	GPM	M <sup>3</sup> /H	GPM	M <sup>3</sup> /H	GPM	M <sup>3</sup> /H				
<b>Multi Layer Filters: Anthracite, Sand and Gravel (Turbidity Removal)</b>										
CVP1435MM	10.7	2.4	16.1	3.6	16.1	3.6	14x65	3	2"	302
CVP1645MM	13.9	3.2	20.9	4.7	20.9	4.7	16x65	4	2"	398
CVP1855MM	17.7	4.0	26.6	6.0	26.6	6.0	18x65	5	2"	521
CVP2160MM	24.1	5.5	36.2	8.2	36.2	8.2	21x62	6.5	2"	727
CVP24100MM	31.4	7.1	47.1	10.7	47.1	10.7	24x72	8.5	2"	965
CVP30150MM	49.1	11.2	73.7	16.7	73.7	16.7	30x72	13	2"	1565
CVP36210MM	70.7	16.1	116.2	26.4	102.0	23.2	36x72	19	2"	2199

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Model #	Flow Rate						Tank Size D"xH"	Media Qty (ft <sup>3</sup> )	Pipe Size	Approx. Weight (lbs)
	Average		Peak		Backwash					
	GPM	M <sup>3</sup> /H	GPM	M <sup>3</sup> /H	GPM	M <sup>3</sup> /H				
<b>AG Filters: Non Hydrus Silicon Dioxide (Turbidity Removal)</b>										
CVP1435AG	7.5	1.7	12.8	2.9	10.7	2.4	14x65	3	2"	151
CVP1645AG	9.7	2.2	16.7	3.8	13.9	3.2	16x65	4	2"	190
CVP1855AG	12.4	2.8	21.2	4.8	17.7	4.0	18x65	5	2"	228
CVP2160AG	16.9	3.8	28.9	6.6	24.1	5.5	21x62	6.5	2"	317
CVP24100AG	22.0	5.0	37.7	8.6	31.4	7.1	24x72	8.5	2"	418
CVP30150AG	34.4	7.8	58.9	13.4	49.1	11.2	30x72	13	2"	711
CVP36210AG	49.5	11.2	84.8	19.3	70.7	16.1	36x72	19	2"	1012
<b>Activated Carbon Filters: Granular Form with High Degree of Porosity (Taste, Odor and Color Removal)</b>										
CVP1435AC	7.5	1.7	12.8	2.9	12.8	2.9	14x65	3	2"	159
CVP1645AC	9.7	2.2	16.7	3.8	16.7	3.8	16x65	4	2"	200
CVP1855AC	12.4	2.8	21.2	4.8	21.2	4.8	18x65	5	2"	241
CVP2160AC	16.9	3.8	28.9	6.6	28.9	6.6	21x62	6.5	2"	424
CVP24100AC	22.0	5.0	37.7	8.6	37.7	8.6	24x72	8.5	2"	589
CVP30150AC	34.4	7.8	58.9	13.4	58.9	13.4	30x72	13	2"	983
CVP36210AC	49.5	11.2	84.8	19.3	84.8	19.3	36x72	19	2"	1350
<b>Birm Filters: Insoluble Catalyst (Fe and Mn Reduction)</b>										
CVP1435BM	7.5	1.7	12.8	2.9	12.8	2.9	14x65	3	2"	208
CVP1645BM	9.7	2.2	16.7	3.8	16.7	3.8	16x65	4	2"	266
CVP1855BM	12.4	2.8	21.2	4.8	21.2	4.8	18x65	5	2"	323
CVP2160BM	16.9	3.8	28.9	6.6	28.9	6.6	21x62	6.5	2"	531
CVP24100BM	22.0	5.0	37.7	8.6	37.7	8.6	24x72	8.5	2"	729
CVP30150BM	34.4	7.8	58.9	13.4	58.9	13.4	30x72	13	2"	1197
CVP36210BM	49.5	11.2	84.8	19.3	84.8	19.3	36x72	19	2"	1663
<b>Calcite Filters: (pH Neutralization)</b>										
CVP1435CF	7.5	1.7	12.8	2.9	12.8	2.9	14x65	3	2"	376
CVP1645CF	9.7	2.2	16.7	3.8	16.7	3.8	16x65	4	2"	490
CVP1855CF	12.4	2.8	21.2	4.8	21.2	4.8	18x65	5	2"	603
CVP2160CF	16.9	3.8	28.9	6.6	28.9	6.6	21x62	6.5	2"	895
CVP24100CF	22.0	5.0	37.7	8.6	37.7	8.6	24x72	8.5	2"	1205
CVP30150CF	34.4	7.8	58.9	13.4	58.9	13.4	30x72	13	2"	1925
CVP36210CF	49.5	11.2	84.8	19.3	84.8	19.3	36x72	19	2"	2727

\*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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