

Commercial Media Filters

FRP Tanks: 7" 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.

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
- 240V/1Ph/50Hz power supply
- Vacuum breaker
- Auxiliary micro switch
- Inlet / Outlet sample valves
- Inlet / Outlet pressure gauges
- Filters using diaphragm valve
- Differential pressure switch and gauge

Operation Specifications

- Operating pressure: 2-6.8 bar (30-100 psi)
- Operating temperature: 2-38°C (35-100°F)
- Electrical supply: 115V/1Ph/60Hz

Filter Media Types

- Sand is the most common filter media. Generally, fine mesh sand is coupled with a coarse grain support bed.
- Anthracite is used in applications where silica pick-up from sand media is undesirable.
- Gravel has a highly spherical shape that promotes good flow and even distribution in support beds.
- Filter AG is non-hydrous silicon dioxide with many advantages for the reduction of suspended matter.
- Activated Carbon is recommended for removing bad tastes, odors, dechlorination, and organic contaminants.
- Manganese Green Sand is used to reduce iron, manganese and hydrogen sulfide through oxidation.
- Multimedia is used for maximum water quality when sediment is too small to be removed by standard media.



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WS1



WS2



WS2H



WS3

Filter Media Types

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



Sand

Graded in various ranges, Pure Aqua Sand can be used as filtration medium or under-bedding depending on partial size and application.

Calcite

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

Manganese Greensand

Manganese Greensand media is treated siliceous material for treating water containing iron, manganese and hydrogen sulfide.



Anthracite

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

Activated Carbon

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

ProSand

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



Multimedia 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 proper cleaning of the media bed.

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| Model # | Max Flow (GPM) | | | | | | | | Tank Size D"xH" | Media Qty. (ft ³) | Pipe Size | Approx Weight (lbs) |
|--|----------------|-------------------|---------|-------------------|-------|-------------------|----------|-------------------|--------------------|-------------------------------|-----------|---------------------|
| | Minimum | | Average | | Peak | | Backwash | | | | | |
| | GPM | M ³ /H | GPM | M ³ /H | GPM | M ³ /H | GPM | M ³ /H | | | | |
| Multi Layer Filters: Anthracite, Sand and Gravel (Turbidity Removal) | | | | | | | | | | | | |
| 100C705MM | 2.7 | 0.6 | 4.0 | 0.9 | 5.3 | 1.2 | 4.0 | 0.9 | 7x44 | 0.5 | 3/4" | 75 |
| 100C8075MM | 3.5 | 0.8 | 5.4 | 1.2 | 7.0 | 1.6 | 5.4 | 1.2 | 8x44 | 0.75 | 3/4" | 95 |
| 100C910MM | 4.4 | 1.0 | 6.6 | 1.5 | 8.8 | 2.0 | 6.6 | 1.5 | 9x48 | 1 | 3/4" | 118 |
| 100C1015MM | 5.4 | 1.2 | 8.1 | 1.8 | 10.8 | 2.5 | 8.1 | 1.8 | 10x54 | 1.5 | 3/4" | 156 |
| 100C1220MM | 7.8 | 1.8 | 11.7 | 2.7 | 15.6 | 3.5 | 11.7 | 2.7 | 12x52 | 2 | 1" | 204 |
| 125C1325MM | 9.2 | 2.1 | 13.8 | 3.1 | 18.4 | 4.2 | 13.8 | 3.2 | 13x54 | 2.5 | 1" | 267 |
| 125C1435MM | 10.7 | 2.4 | 16.1 | 3.6 | 21.4 | 4.9 | 16.1 | 3.6 | 14x65 | 3.5 | 1-1/2" | 366 |
| 125C1645MM | 13.9 | 3.2 | 20.9 | 4.8 | 27.8 | 6.3 | 20.9 | 4.8 | 16x65 | 4.5 | 1-1/2" | 462 |
| 150C1855MM | 17.7 | 4.0 | 26.6 | 6.0 | 35.4 | 8.0 | 26.6 | 6.0 | 18x65 | 5.5 | 1-1/2" | 577 |
| 150C2175MM | 24.1 | 5.5 | 36.2 | 8.3 | 48.2 | 11.0 | 36.2 | 8.3 | 21x62 | 7.5 | 1-1/2" | 761 |
| 150C24100MM | 31.4 | 7.1 | 47.1 | 10.7 | 62.8 | 14.3 | 47.1 | 10.7 | 24x72 | 10 | 1-1/2" | 1,000 |
| 200C30150MM | 49.1 | 11.2 | 73.7 | 16.8 | 98.2 | 22.3 | 73.7 | 16.8 | 30x72 | 15 | 2" | 1,544 |
| 200C36210MM | 70.7 | 16.1 | 106.1 | 24.2 | 116.2 | 26.4 | 106.1 | 24.2 | 36x72 | 21 | 2" | 2,150 |
| 200C42280MM | 96.2 | 22.0 | 116.2 | 26.4 | 125.0 | 28.4 | 125.0 | 28.4 | 42x72 | 28 | 2" | 3,000 |
| 300C48400MM | 125.7 | 28.6 | 188.6 | 42.9 | 250.0 | 56.8 | 188.0 | 42.8 | 48x72 | 40 | 3" | 4,100 |
| AG Filters: Non-Hydrous Silicon Dioxide (Turbidity Removal) | | | | | | | | | | | | |
| 100C705AG | 2.7 | 0.6 | 4.0 | 0.9 | 5.3 | 1.2 | 4.0 | 0.9 | 7x44 | 0.5 | 3/4" | 50 |
| 100C8075AG | 3.5 | 0.8 | 5.4 | 1.2 | 7.0 | 1.6 | 5.4 | 1.2 | 8x44 | 0.75 | 3/4" | 55 |
| 100C910AG | 4.4 | 1.0 | 6.6 | 1.5 | 8.8 | 2.0 | 6.6 | 1.5 | 9x48 | 1 | 3/4" | 62 |
| 100C1015AG | 5.4 | 1.2 | 8.1 | 1.8 | 10.8 | 2.5 | 8.1 | 1.8 | 10x54 | 1.5 | 3/4" | 125 |
| 100C1220AG | 7.8 | 1.8 | 11.7 | 2.7 | 15.6 | 3.5 | 11.7 | 2.7 | 12x52 | 2 | 1" | 160 |
| 125C1325AG | 9.2 | 2.1 | 13.8 | 3.1 | 18.4 | 4.2 | 13.8 | 3.2 | 13x54 | 2.5 | 1" | 208 |
| 125C1435AG | 10.7 | 2.4 | 16.1 | 3.6 | 21.4 | 4.9 | 16.1 | 3.6 | 14x65 | 3.5 | 1-1/2" | 285 |
| 125C1645AG | 13.9 | 3.2 | 20.9 | 4.8 | 27.8 | 6.3 | 20.9 | 4.8 | 16x65 | 4.5 | 1-1/2" | 360 |
| 150C1855AG | 17.7 | 4.0 | 26.6 | 6.0 | 35.4 | 8.0 | 26.6 | 6.0 | 18x65 | 5.5 | 1-1/2" | 450 |
| 150C2175AG | 24.1 | 5.5 | 36.2 | 8.3 | 48.2 | 11.0 | 36.2 | 8.3 | 21x62 | 7.5 | 1-1/2" | 595 |
| 150C24100AG | 31.4 | 7.1 | 47.1 | 10.7 | 62.8 | 14.3 | 47.1 | 10.7 | 24x72 | 10 | 1-1/2" | 780 |
| 200C30150AG | 49.1 | 11.2 | 73.7 | 16.8 | 98.2 | 22.3 | 73.7 | 16.8 | 30x72 | 15 | 2" | 1,200 |
| 200C36210AG | 70.7 | 16.1 | 106.1 | 24.2 | 116.2 | 26.4 | 106.1 | 24.2 | 36x72 | 21 | 2" | 1,677 |
| 200C42280AG | 96.2 | 22.0 | 116.2 | 26.4 | 125.0 | 28.4 | 125.0 | 28.4 | 42x72 | 28 | 2" | 2,340 |
| 300C48400AG | 125.7 | 28.6 | 188.6 | 42.9 | 250.0 | 56.8 | 188.0 | 42.8 | 48x72 | 40 | 3" | 3,200 |
| Activated Carbon Filters: Granular Form with High Degree of Porosity (Taste, Odor and Color Removal) | | | | | | | | | | | | |
| 100C705AC | 1.9 | 0.4 | 2.1 | 0.5 | 3.2 | 0.7 | 3.2 | 0.7 | 7x44 | 0.5 | 3/4" | 50 |
| 100C8075AC | 2.5 | 0.6 | 2.8 | 0.6 | 4.2 | 1.0 | 4.2 | 1.0 | 8x44 | 0.75 | 3/4" | 55 |
| 100C910AC | 3.1 | 0.7 | 3.5 | 0.8 | 5.3 | 1.2 | 5.3 | 1.2 | 9x48 | 1 | 3/4" | 62 |
| 100C1015AC | 3.8 | 0.9 | 4.3 | 1.0 | 6.5 | 1.5 | 6.5 | 1.5 | 10x54 | 1.5 | 3/4" | 125 |
| 100C1220AC | 5.5 | 1.2 | 6.2 | 1.4 | 9.4 | 2.1 | 9.4 | 2.1 | 12x52 | 2 | 1" | 160 |
| 125C1325AC | 6.4 | 1.5 | 7.4 | 1.7 | 11.0 | 2.5 | 11.0 | 2.5 | 13x54 | 2.5 | 1" | 208 |
| 125C1435AC | 7.5 | 1.7 | 8.6 | 1.9 | 12.8 | 2.9 | 12.8 | 2.9 | 14x65 | 3.5 | 1-1/2" | 285 |
| 125C1645AC | 9.7 | 2.2 | 11.1 | 2.5 | 16.7 | 3.8 | 16.7 | 3.8 | 16x65 | 4.5 | 1-1/2" | 360 |
| 150C1855AC | 12.4 | 2.8 | 14.2 | 3.2 | 21.2 | 4.8 | 21.2 | 4.8 | 18x65 | 5.5 | 1-1/2" | 450 |
| 150C2175AC | 16.9 | 3.8 | 19.3 | 4.4 | 28.9 | 6.6 | 28.9 | 6.6 | 21x62 | 7.5 | 1-1/2" | 595 |
| 150C24100AC | 22.0 | 5.0 | 25.1 | 5.7 | 37.7 | 8.6 | 37.7 | 8.6 | 24x72 | 10 | 1-1/2" | 780 |
| 200C30150AC | 34.4 | 7.8 | 39.3 | 8.9 | 58.9 | 13.4 | 58.9 | 13.4 | 30x72 | 15 | 2" | 1,200 |
| 200C36210AC | 49.5 | 11.2 | 56.6 | 12.9 | 84.8 | 19.3 | 84.8 | 19.3 | 36x72 | 21 | 2" | 1,677 |
| 200C42280AC | 67.3 | 15.3 | 77.0 | 17.5 | 115.4 | 26.2 | 115.4 | 26.2 | 42x72 | 28 | 2" | 2,340 |
| 300C48400AC | 88.0 | 20.0 | 100.6 | 22.9 | 150.8 | 34.3 | 150.8 | 34.3 | 48x72 | 40 | 3" | 3,200 |

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| Model # | Max Flow (GPM) | | | | | | | | Tank Size D"xH" | Media Qty. (ft ³) | Pipe Size | Approx Weight (lbs) |
|--|----------------|-------------------|---------|-------------------|-------|-------------------|----------|-------------------|--------------------|-------------------------------|-----------|---------------------|
| | Minimum | | Average | | Peak | | Backwash | | | | | |
| | GPM | M ³ /H | GPM | M ³ /H | GPM | M ³ /H | GPM | M ³ /H | | | | |
| Birm Filters: (Fe, Mn, H ₂ S Reduction) | | | | | | | | | | | | |
| 100C705BM | 1.9 | 0.4 | 2.1 | 0.5 | 3.2 | 0.7 | 3.2 | 0.7 | 7x44 | 0.5 | 3/4" | 50 |
| 100C8075BM | 2.5 | 0.6 | 2.8 | 0.6 | 4.2 | 1.0 | 4.2 | 1.0 | 8x44 | 0.75 | 3/4" | 55 |
| 100C910BM | 3.1 | 0.7 | 3.5 | 0.8 | 5.3 | 1.2 | 5.3 | 1.2 | 9x48 | 1 | 3/4" | 62 |
| 100C1015BM | 3.8 | 0.9 | 4.3 | 1.0 | 6.5 | 1.5 | 6.5 | 1.5 | 10x54 | 1.5 | 3/4" | 125 |
| 100C1220BM | 5.5 | 1.2 | 6.2 | 1.4 | 9.4 | 2.1 | 9.4 | 2.1 | 12x52 | 2 | 1" | 160 |
| 125C1325BM | 6.4 | 1.5 | 7.4 | 1.7 | 11.0 | 2.5 | 11.0 | 2.5 | 13x54 | 2.5 | 1" | 208 |
| 125C1435BM | 7.5 | 1.7 | 8.6 | 1.9 | 12.8 | 2.9 | 12.8 | 2.9 | 14x65 | 3.5 | 1-1/2" | 285 |
| 125C1645BM | 9.7 | 2.2 | 11.1 | 2.5 | 16.7 | 3.8 | 16.7 | 3.8 | 16x65 | 4.5 | 1-1/2" | 360 |
| 150C1855BM | 12.4 | 2.8 | 14.2 | 3.2 | 21.2 | 4.8 | 21.2 | 4.8 | 18x65 | 5.5 | 1-1/2" | 450 |
| 150C2175BM | 16.9 | 3.8 | 19.3 | 4.4 | 28.9 | 6.6 | 28.9 | 6.6 | 21x62 | 7.5 | 1-1/2" | 595 |
| 150C24100BM | 22.0 | 5.0 | 25.1 | 5.7 | 37.7 | 8.6 | 37.7 | 8.6 | 24x72 | 10 | 1-1/2" | 780 |
| 200C30150BM | 34.4 | 7.8 | 39.3 | 8.9 | 58.9 | 13.4 | 58.9 | 13.4 | 30x72 | 15 | 2" | 1,200 |
| 200C36210BM | 49.5 | 11.2 | 56.6 | 12.9 | 84.8 | 19.3 | 84.8 | 19.3 | 36x72 | 21 | 2" | 1,677 |
| 200C42280BM | 67.3 | 15.3 | 77.0 | 17.5 | 115.4 | 26.2 | 115.4 | 26.2 | 42x72 | 28 | 2" | 2,340 |
| 300C48400BM | 88.0 | 20.0 | 100.6 | 22.9 | 150.8 | 34.3 | 150.8 | 34.3 | 48x72 | 40 | 3" | 3,200 |
| Calcite Filters: (pH Neutralization) | | | | | | | | | | | | |
| 100C705CF | 1.9 | 0.4 | 2.1 | 0.5 | 3.2 | 0.7 | 3.2 | 0.7 | 7x44 | 0.5 | 3/4" | 90 |
| 100C8075CF | 2.5 | 0.6 | 2.8 | 0.6 | 4.2 | 1.0 | 4.2 | 1.0 | 8x44 | 0.75 | 3/4" | 114 |
| 100C910CF | 3.1 | 0.7 | 3.5 | 0.8 | 5.3 | 1.2 | 5.3 | 1.2 | 9x48 | 1 | 3/4" | 142 |
| 100C1015CF | 3.8 | 0.9 | 4.3 | 1.0 | 6.5 | 1.5 | 6.5 | 1.5 | 10x54 | 1.5 | 3/4" | 188 |
| 100C1220CF | 5.5 | 1.2 | 6.2 | 1.4 | 9.4 | 2.1 | 9.4 | 2.1 | 12x52 | 2 | 1" | 245 |
| 125C1325CF | 6.4 | 1.5 | 7.4 | 1.7 | 11.0 | 2.5 | 11.0 | 2.5 | 13x54 | 2.5 | 1" | 320 |
| 125C1435CF | 7.5 | 1.7 | 8.6 | 1.9 | 12.8 | 2.9 | 12.8 | 2.9 | 14x65 | 3.5 | 1-1/2" | 440 |
| 125C1645CF | 9.7 | 2.2 | 11.1 | 2.5 | 16.7 | 3.8 | 16.7 | 3.8 | 16x65 | 4.5 | 1-1/2" | 555 |
| 150C1855CF | 12.4 | 2.8 | 14.2 | 3.2 | 21.2 | 4.8 | 21.2 | 4.8 | 18x65 | 5.5 | 1-1/2" | 693 |
| 150C2175CF | 16.9 | 3.8 | 19.3 | 4.4 | 28.9 | 6.6 | 28.9 | 6.6 | 21x62 | 7.5 | 1-1/2" | 915 |
| 150C24100CF | 22.0 | 5.0 | 25.1 | 5.7 | 37.7 | 8.6 | 37.7 | 8.6 | 24x72 | 10 | 1-1/2" | 1,200 |
| 200C30150CF | 34.4 | 7.8 | 39.3 | 8.9 | 58.9 | 13.4 | 58.9 | 13.4 | 30x72 | 15 | 2" | 1,850 |
| 200C36210CF | 49.5 | 11.2 | 56.6 | 12.9 | 84.8 | 19.3 | 84.8 | 19.3 | 36x72 | 21 | 2" | 2,580 |
| 200C42280CF | 67.3 | 15.3 | 77.0 | 17.5 | 115.4 | 26.2 | 115.4 | 26.2 | 42x72 | 28 | 2" | 3,600 |
| 300C48400CF | 88.0 | 20.0 | 100.6 | 22.9 | 150.8 | 34.3 | 150.8 | 34.3 | 48x72 | 40 | 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.

Pure Aqua also supplies: Custom Engineered Solutions, Reverse Osmosis Systems, Water Conditioning, Chemical Dosing Systems, Ultraviolet (UV) Sterilizers and Ozonation Systems.

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