

# APPLIED® FILTERS

## MANGANESE GREENSAND FILTERS, IRON REMOVAL

### About Manganese Greensand:

Manganese Greensand is capable of reducing iron, manganese and hydrogen sulfide from water through oxidation and filtration.

Manganese Greensand is formulated from a glauconite greensand which is capable of reducing iron, manganese and hydrogen sulfide from water through oxidation and filtration. Soluble iron and manganese are oxidized and precipitated by contact with higher oxides of manganese on the greensand granules. The hydrogen sulfide is reduced by oxidation to an insoluble sulfur precipitate. Precipitates are then filtered and removed by backwashing. When the oxidizing capacity power of the Manganese Greensand bed is exhausted, the bed has to be regenerated with a weak potassium permanganate (KMnO<sub>4</sub>) solution thus restoring the oxidizing capacity of the bed. 1½ to 2 ounces of potassium permanganate, in solution, per cubic foot of Manganese Greensand is considered sufficient for normal regeneration. It is required to vigorously backwash and regenerate the bed when it is placed in service and before its oxidation capacity is totally exhausted. Operating the bed after oxidation capacity is exhausted will reduce its service life and may cause staining.

### Advantages of Manganese Greensand:

- Iron reduction over a wide pH range
- Effective reduction of hydrogen sulfide in addition to iron and/or manganese
- No harmful effects from a chlorine feed
- Low attrition for long bed life

### Conditions for Operation:

- Water pH range: 6.2-8.5
- Maximum Water Temperature: 80°F/26.7°C

### Specifications:

- 100 lb. FRP Vessel
- All Systems Automatic
- Potassium Permanganate Regeneration Tanks\* (for 7"-14" Dia. Filters)



System Shown with Optional Skid Mounting and Control Panel

## Iron Filters (Manganese Greensand)

Model No.**	Media (Cu.Ft.)	Flow*** (GPM)	Backwash*** (GPM)	Fleck Valve Head	Tank Size (Dia"xH")	Regen. Tank (Dia"xH")	In/Out Conn. (In.)
W-MFI744G	0.7	1.3	3	5600	7x44	18x33	¾
W-MFI844G	0.9	1.7	4	5600	8x44	18x33	¾
W-MFI940G	1.0	2.2	5	5600	9x40	18x40	¾
W-MFI1252G	2.0	3.9	9	2510	12x52	18x40	1
W-MFI1354G	2.5	4.6	11	2510	13x54	18x40	1
W-MFI1465G	3.0	5.3	13	2510	14x65	27x41	1
W-MFI1665G	4.0	7.0	17	2510	16x65	24x41	1
W-MFI2162G	6.0	12.0	29	2850	21x62	30x48	1.5
W-MFI2471G	8.0	15.7	38	2850	24x72	39x48	1.5
W-MFI3072G	15	24.5	60	2850	30x72	39x48	1.5
W-MFI3672G	20	35.3	85	3150	36x72	39x60	2
W-MFI4272G	30	48.1	116	3900	42x72	42x60	3
W-MFI4872G	40	62.8	152	3900	48x72	60x60	3



With SS Jacket\*\*\*\*

With No Jacket

### Notes:

\* Manganese Greensand filters with tank diameters up to 14" diameter can be regenerated intermittently, and the regeneration feeder is included. Filters with tank diameters of 16" and larger require continuous injection of potassium permanganate which will require a tank and feeder. The size of the injection system (sold separately) will depend on the water quality.

\*\* Please add the appropriate voltage code to the end of the model no. when ordering.  
110v/60Hz = 116, 220v/60Hz = 216, 220v/50Hz = 215 Example: W-MFI744G-116

\*\*\* Flow rate based on 5 gpm per sq. ft. of media.

\*\*\*\* Stainless Steel Jacket available for 9-16" Diameter. To order add "-J" to the end of the part number.

Distributed By:

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