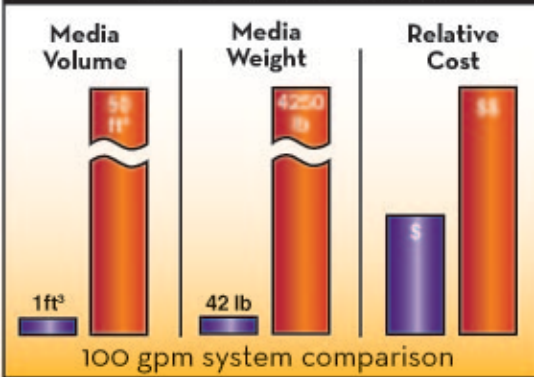


NXMF



High performance nanotechnology Iron & Manganese removal media

NXMF FeMn vs Greensand



NXMF_{Fe/Mn} systems use 1/50th the media volume, 1/100th the media weight, and cost approximately one-half a comparable greensand system.

Chemical Free



NXMF_{H₂S} requires no oxidizers, chemicals or additional oxygen.

Save Space, Save Cost



NXMF_{Fe/Mn} systems are radically smaller and cost much less than this conventional catalytic media design.

Introduction

NXMF _{Fe/Mn} is much more than the next generation of media. It represents a leap of such magnitude that it warrants the label “disruptive technology”. The application of an entirely new science, nanotechnology, is responsible for the extraordinary capabilities of NXMF _{Fe/Mn}.

Atomic level “nano-templates” on the surface of small ceramic-polymer spheres transform dissolved Fe⁺⁺ and Mn⁺⁺ to the precipitated particulate form which can then be removed by conventional filtration. Absolutely no oxidizing agents, chemicals or oxygen are required and its efficiency and effectiveness is not affected by pH or temperature.

Features

- **Unbelievably fast and efficient** – Typically less than 5 **seconds** contact time is required to precipitate Fe and Mn regardless of the concentration. In contrast, oxidative and catalytic processes require a contact time of 5-10 **minutes**.
- **Service Flow** – Up to 100gpm/ft³ (800 m³/h/m³). In contrast, oxidative and catalytic processes limit service flows to less than 2 gpm/ft³ (16 m³/h/m³)
- No oxidizing agents, chemicals or oxygen required.
- Long lasting media (>5 years) not consumed in the process.
- Simple periodic backwash keeps the media clean and operating efficiently.
- Field proven in over 750 installations.
- Small systems can incorporate NXMF _{Fe/Mn} and filtration in a single tank.

Physical Properties

- Composition: Ceramic with polymer center
- Size: 0.550-.850 mm (approx. 20x40 mesh)
- Color: Light beige
- Bulk Density: 42 lbs per ft³ (0.67 kg/L)
- Packaging: 120 liter drum (4.24 ft³) 81Kg (178lb)

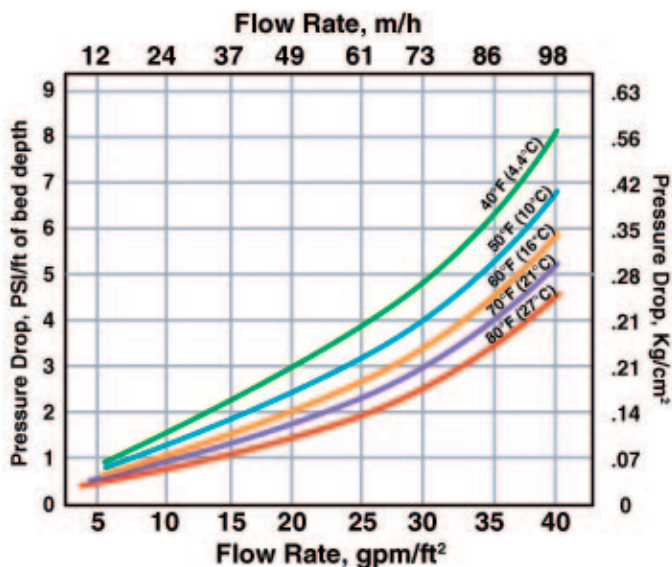
Water Chemistry & Limitations

- pH: 6.5 to 9.0
- Iron removal: 25 ppm max
- Manganese removal: 5 ppm max
- Temperature: 41 to 130° F (4.5 to 54 C)
- Iron types: Ferrous iron, Fe(II).
- Hydrogen Sulfide: Must be removed. Use NXMF _{H₂S}
- Chlorine: <3ppm
- Oil & Polyphosphates: Remove prior to NXMF _{Fe/Mn}

Application Operating Conditions & Notes

- Maximum Service Flow: (100 gpm/ft³) 811m³/hr/m³
 - Freeboard: 150% of **NXMF Fe/Mn** media depth when **NXMF Fe/Mn** is used alone.*
 - Operates in downflow mode with periodic backwash.
 - For POE systems (<750 gpd) **NXMF Fe/Mn** is typically used in a single tank system with conventional filtration media (e.g filter sand).
- * See **NXMF Fe/Mn** application sheet for filter design and construction parameters.

Pressure Drop vs Flow



Backwash Flow Required vs. Water Temp

	80°F (27° C)	70°F (21° C)	60°F (16° C)	50°F (10° C)	40°F (4.5° C)
Flow U.S. gpm/ft ²	17	15	13	11.25	9.5
Flow m/h	41.6	36.7	31.8	27.5	23.2

NXMF

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