



FILTER-OX®

Filter-Ox™ is capable of reducing iron, manganese and hydrogen sulfide from water through oxidation and filtration.



ADVANTAGES

- Iron reduction over 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.
- Certified to NSF/ANSI/CAN Standard 61.

Filter-Ox™ is a highly effective filter media 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 the catalytic coating on the Filter-Ox™ granules. The hydrogen sulfide is oxidized to an insoluble sulfur precipitate. Precipitates are then filtered and removed by backwashing.

Filter-Ox™ is an engineered media that utilizes a super high purity manganese dioxide coating bonded to a durable, lightweight silica substrate. Manganese dioxide is a powerful oxidizer and Filter-Ox™ contains more manganese dioxide than other manganese based filter medias. Manufactured in the USA, Filter-Ox™ contains almost no fines and does not require long initial backwash times. A standard sterilization treatment using chlorine is all that is needed at start up.

Untreated water should periodically be monitored for raw water parameters. Treated water should periodically be monitored for manganese, iron and hydrogen sulfide shortly before regeneration and immediately after regeneration to monitor how the filter system is functioning. Elevated treated water concentrations before regeneration may mean that the filter media reduction capacity has been exceeded. Take corrective actions as necessary. Low pH or high pH are the most likely conditions leading to media destruction.

Caution!!! Hydrogen Peroxide is specifically prohibited for use as an oxidant with Filter Ox™.

PHYSICAL PROPERTIES

Color	Grey to black
Particle Shape	Sub-Angular
Bulk Density, g/cc	1.2
Size, mm mesh	0.63–1.27 20 × 40
Specific Gravity, g/cc	2.7
Effective Size, mm	0.56
Uniformity Coefficient	1.51
Porosity, %	50
Moisture, %	<1

CONDITIONS FOR OPERATION

Temperature, °C (max.)	38
Water pH range	6.2–8.5
Bed depth, m	0.76
Backwash rate, m/h (13 °C), warmer waters require higher flow rates	29
Freeboard, % of bed depth (min.)	40
Service flow rate, m/h	5–29
Free chlorine concentration less than, ppm	3.0

METHODS OF REGENERATION AND REGENERATION REQUIREMENTS

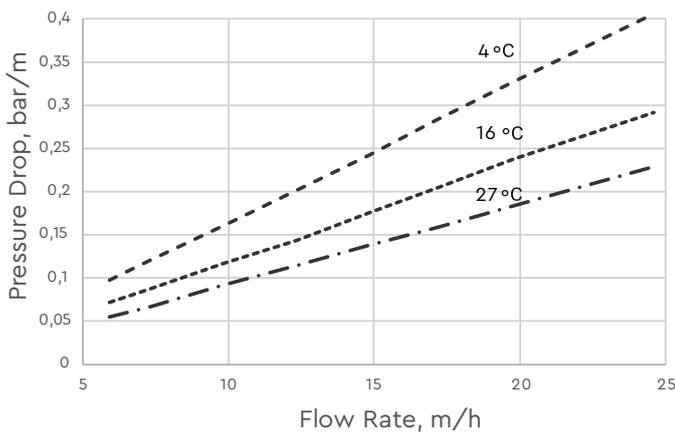
- Continuous regeneration using chlorine feed or air are recommended
- mg/l Cl₂ : (1x mg/l Fe) + (3x mg/l Mn) + (5 mg/l H₂S)
- Air draw or air injection
- Use an injector that is three sizes larger than a typical softener application
- Draw/slow rinse time greater than 50 minutes
- Down flow rinse (Fast Rinse) 4 minutes minimum

CATALYTIC OXIDATION (CO)

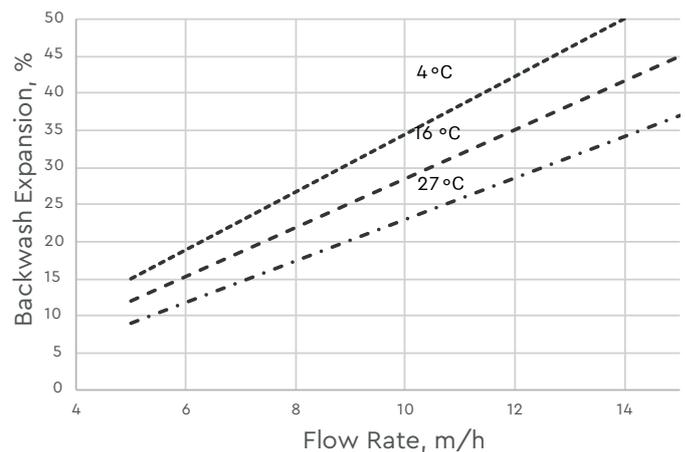
Catalytic Oxidation operation is recommended in applications where iron removal is the main objective in well waters with or without the presence of manganese. This method involves the feeding of a predetermined amount of chlorine (Cl₂) or other strong oxidant directly to the raw water before the Filter-Ox™ Filter.

Chlorine should be fed at least 10–20 seconds upstream of the filter, or as far upstream of the filter as possible to ensure adequate contact time. A free chlorine residual carried through the filter will maintain Filter-Ox™.

Service Flow Pressure Drop



Backwash Bed Expansion



Code	Description	Bag Volume, l	Bag Weight, kg
A8045	Filter-Ox™ filter media	14.15	17