

## **FILOX IRON/MANGANESE REMOVAL SYSTEM WITH AUTOMATIC BACKWASHING AND FLECK MECHANICAL VALVE**

This high performance filter system has been configured with FILOX-R to remove Iron and Manganese within the following parameters:

- 1) Oxygen level equal to or greater than 15% of the Iron and Manganese level.
- 2) pH range of 6.0 to 9.0
- 3) Organic Iron below 0.5ppm
- 4) No oil or Polyphosphates
- 5) Organic matter less than 5ppm
- 6) Iron below 27ppm, Manganese below 11ppm, Hydrogen Sulphide below 17ppm
- 7) Temperature 3-45 deg C

**Filters Assembled with Fleck 2510/2750/2850/3150 Multiport 'No-Bypass' Filter Valves.** The 2510, 2750, 2850 and 3150 backwash valves have 'No-Bypass' pistons fitted that prevent unfiltered water passing to service during the backwash cycle. A with Bypass option can be fitted if requested at the ordering stage.

### **Parts List**

This Iron Filter Kit comprises three elements :

- a) Media Vessel & Riser
- b) Filter Valve Assembly
- c) FILOX Removal Media (0.5 cu.ft. bags)
- d) Gravel Underbed

## **Assembly**

Locate vessel in its final position.

Ensure riser assembly is in the vessel, with the top covered to prevent media entering the riser tube during filling.

Using a hose, 1/3 fill the pressure vessel with water to prevent damage to the lower distributor during filling with media.

Using a funnel, carefully pour the media in to the vessel, ensuring the riser remains central , gravel first followed by Filox

Remove cover from riser tube, locate in to valve, screw valve on to vessel.

N.B. A top screen is not used on this filter to allow debris to be washed to drain. Backwash flow controller is sized to reclassify bed with correct freeboard.

Connect water inlet and outlet with flexible or plastic piping to reduce strain on vessel as it expands & contracts during cycling. Ensure pump/pressure delivery system can deliver water at least 20 psi at the backwash flow rate.

Connect drain, ensuring that there is an air break at the same level as the valve to prevent vacuum on the vessel during cycling.

Connect mains power lead to a 3 amp fused spur, or to an unswitched socket outlet using a plug with a 3 amp fuse.

## **Commissioning**

Before putting the unit in to service it must be commissioned to eliminate air from the system and to rinse fines off the filter media.

Before turning on the water or power, remove the valve cover (two thumbscrews). Swing open the timer and index the front knob slightly until the first bank of pins lifts the microswitch. This is the backwash position. Turn on the power supply and the main drive motor will slowly push the central piston in.

When the piston has stopped moving, turn off the power and slowly open the inlet tap approximately 1/4 to 1/2 way. Air will blow out of the drain line as the unit fills up with water from the bottom. When water starts to run from the drain line, open the inlet valve fully and allow water to run to drain. Once the drain is running clear turn on power, set the time of day on the valve timer and allow motor to continue cycle. The valve will advance to the rinse position

Open the outlet tap. The unit is now ready for service.

\*Do not open the outlet tap on with Bypass based systems until the unit has been commissioned, or it will bypass untreated water to service.

## **Backwash frequency**

The control valve has been set at our factory to backwash every three days. Depending on the consumption of water and the level of contaminants it may be necessary to backwash more frequently, or desirable to backwash less frequently.

A '12 day' dial is fitted given the options of backwashing every day, every other day, every three days, every four days, every six days or every twelve days. It is recommended that the valve is set to backwash at least once every six days. To alter the settings, slide the pins out on the days backwashing is needed and in on the days that backwashing should not occur.

## **Troubleshooting**

While this system is designed to work under a wide range of conditions, the following notes may be of use if performance is not up to specification.

- 1) If there is insufficient backwash pressure and flow, the system will gradually clog with Iron, reducing the service flow and the Iron removal capacity will drop off. Ensure the pump or pressure set can deliver the flow and pressure needed.
- 2) A high level of Organic Iron will foul the filter media and reduce performance. Check for Organic (Heme) Iron prior to commissioning, and pre-treat with Organic Scavenger ion exchange resin.