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DOMESTIC IRON REMOVAL FILTER SYSTEM

INSTALLATION AND OPERATION GUIDE

WARNING:

- Our system is supplied with DMI65 media. The media is activated in a strong sodium hypochlorite solution (bleach) which will negatively affect plants, living organisms and clothes with which it comes into contact. Please wear protective clothing when working with the solution.
- Media longevity is affected by turbidity, pH and oxidant levels. Turbidity should be less than 2NTU pH should be between 6 to 8. Chlorine residual downstream of the filter should be <10ppm. Overdosing chlorine (oxidant) for a long period can remove the catalytic coating from the media

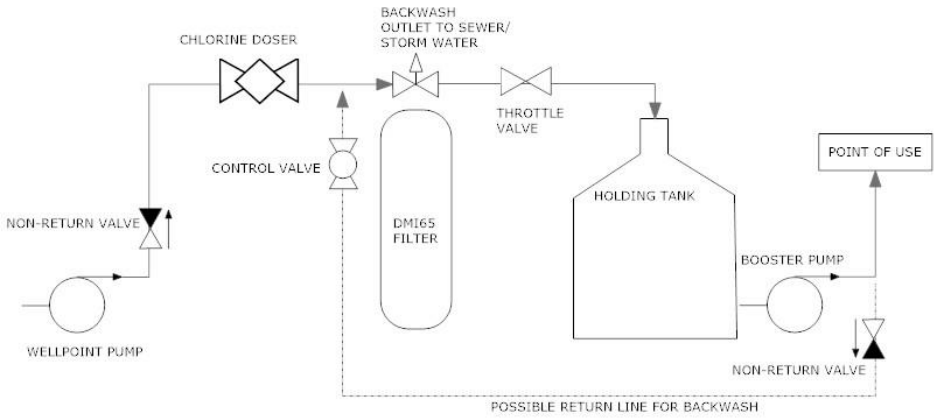
INSTALLATION

Step 1: Place the filter on a firm and level base.

Step 2: Appoint a certified electrician to install a double 220V plug point. Your electrician will also be able assist in automating the system by controlling the borehole/well point pump with a float switch. The pump should also be protected against running dry if that possibility exists.

Step 3: Plan and install pipework:

- The well point/ borehole pump is connected to the inlet.
- The outlet is usually connected to a treated water holding tank.
- Install the in-line chlorine doser in the vertical position so that the tablets can be fed down under gravity. Ideally the doser should drain free of water when the system is not in use.
- Note that the backwash water may be dark brown in colour (iron) and will stain any surfaces that it is in contact with.
- Run system with no media installed to check for leaks and any other issues.



TYPICAL LAYOUT OF DOMESTIC IRON REMOVAL SYSTEM

Step 3: Install and activate the media:

- Cover the top of the riser pipe with a cloth or plastic bag to prevent media ingress. Add the media using a funnel or scoop. Remove the cloth/plastic bag.
- For a 2 bag system (8") filter add 300mL Sodium hypochlorite to 12L water, mix and pour in over the media. Allow to stand for 12 hours
- For a 3 bag system (10") filter add 450mL Sodium hypochlorite to 20L water, mix and pour in over the media. Allow to stand for 12 hours
- The filter header valve waste/backwash outlet should be connected to a sewer for the first flush of the filter, as it will contain concentrated bleach solution. Thereafter, the waste pipe can discharge to storm water, holding tank or into the garden.

Step 4: Switch filter header valve to Backwash mode (manual available on our website) and flush the filter with clean water until it runs clear (5-10minutes). The filter should backwash at a minimum rate of 2 kL/hr (for 3 to 5 mins) to ensure proper cleaning. If the backwash rate is higher than 3 kL/hr then you risk losing media from your filter and a valve should be installed onto the on the backwash outlet closed to limit the flow.

Step 5: Switch the header valve to Rinse mode and allow it to flush for 5-10mins with clean water until no the output is running clear.

Step 6: Switch the header valve to Filter mode and adjust the valve on the filter outlet closed until the rate through the system as follows:

- 8"filter to 300LPH (5,0 LPM)
- 10"fitler to 500LPH (8,3 LPM)

A lower/higher flow rate will tend to improve/worsen filter performance respectively.

OPERATION AND MAINTENANCE

1. The system uses Calcium hypochlorite as an oxidant which is introduced via the in-line doser. The dosage is adjusted to provide a residual concentration downstream of the system of 1-3ppm as measured on a swimming pool test kit.

2. Under typical operating conditions the filter should be backwashed after treating 3-6kL of water. Backwash mode is selected on the header valve and allowed to run until the backwash water is clear. Typically backwash is set at 3-5mins.

3. The DMI-65 media should operate effectively for 5 to 10 years. After periods of low or no use it may be necessary to reactivate the media as per Step 3 above. Please contact us for replacement media should you find that reactivating is no longer improving filter performance.