



Installation Instructions

Rotorflush RF200R Self-Cleaning Filter

Safety Precautions

It is strongly advised that gloves, face protection and steel toe capped boots or shoes are worn when installing or servicing the Rotorflush RF200R self-cleaning filter unit. (Referred to as the “Filter”)

The relevant safety precautions must be taken with respect to the fluid that the Filter is being installed into. Factors that should be taken account of are: corrosive or poisonous liquids, poisonous or explosive gases, and bio-hazards for example bacteria, fungal spores and viruses.

Care should be taken when handling the filter so that there is no possibility of injury from it falling and causing injury to persons. Ensure that there is no possibility of injury from moving the filter owing to its weight.

Please note that the filter is cylindrical and when placed on its side will roll. Always place the filter on a surface with the flat plate of the filter in contact with the surface.

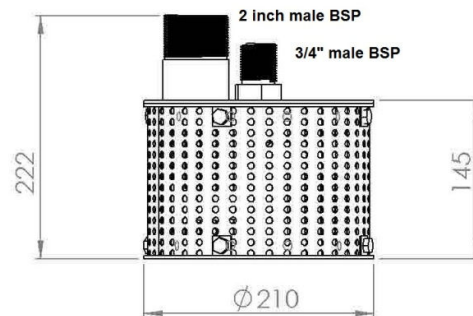
When starting the pump keep well away from all pipe work so that if there are any leaks there is no possibility of coming into contact with the fluid.

Description

The self-cleaning filter is for use as a pre-filter for pumps pumping water (2-85C) containing a maximum of (1000mg/litre) suspended solids It is designed for attachment to the end of the suction line. It has an internal cleaning rotor that continually backflushes the filter screen, removing suspended solids that are adhering to the filter screen. The cleaning rotor is powered by taking a Tee off the output of the pump.

Construction

Filter cage	304/316 Stainless Steel
Cleaning rotor	304/316 Stainless Steel
Cleaning Rotor Jets	EPDM Rubber
Bearing	Delrin
Filter screen	1.0mm - 6.0mm 316 perforated stainless steel
Weight	5kg.





The maximum usable flow through the filter, (with standard 3mm screen) is 220 litres per minute with an additional 75 litres per minute at 0.4 bar pressure, (backwash flow can be higher than this if required) required for the feed to the backflushing rotor. Maximum usable flow rate may be reduced depending on the total suspended solids contained in the fluid and the type of solids, (fatty/ sticky solids will reduce performance)

Installation.

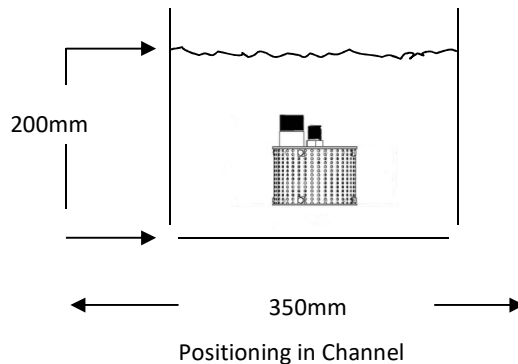
Siting of the Rotorflush Filter.

The filter can be sited in tanks, ponds/lagoons, rivers/streams and channels/flumes where it is immersed in water.

It is very important that the detritus backwashed from the filter has sufficient space to move away from the filter.

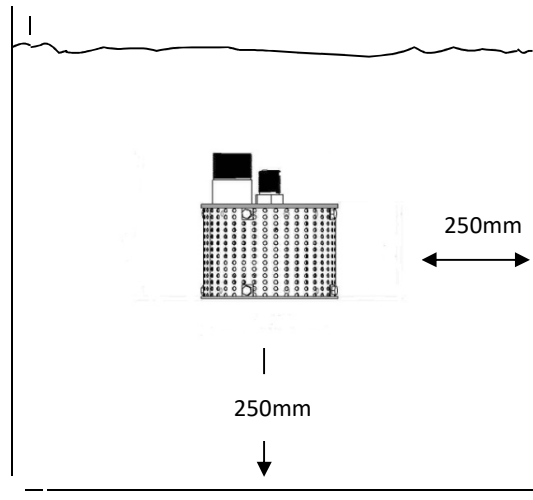
Flowing water-when siting in flowing water, (in rivers/streams, channels/flumes, where the flow is great enough to stop settlement of solids) space around the filter is not as important. Detritus backwashed from the filter will be carried away downstream by the flow.

When siting in a channel with flowing water, we would advise a minimum channel width of 350mm and a minimum depth of 200mm. In this situation the filter may sit on the floor of the channel as long as there are no obstructions stopping the flow of detritus away from the area of the filter.



Tanks ponds/lagoons – when siting in a tank or pond/lagoon, detritus backwashed from the filter will build up in the tank or pond/lagoon. Periodically this detritus will need to be removed. To allow the filter to work for as long as possible in the tank before cleaning out is required, it is important that there is sufficient space around and below the filter for detritus to move away and settle. In some circumstances the detritus may float and form a crust on the water in the tank, in this situation the filter should be sited with enough water above it so that a crust can form away from the filter.

The dimensions given are the preferred minimum. They do not take account of floating detritus that may form a crust. If this is likely the filter should be sited at a greater depth to allow crust formation above the filter.



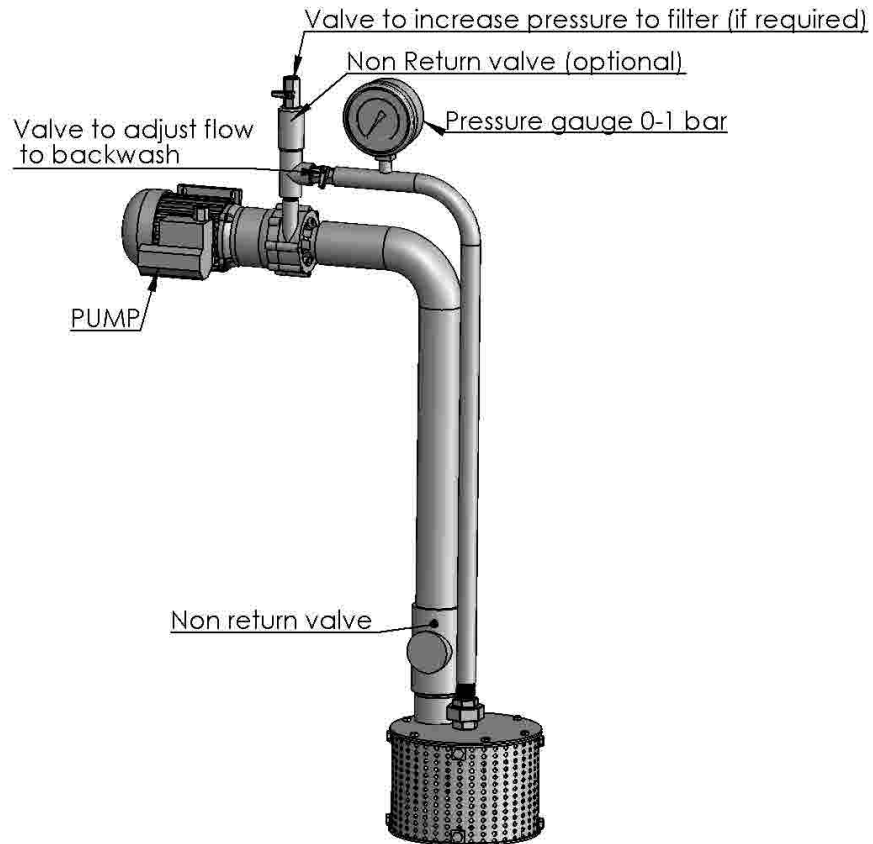
POSITIONING IN TANK, POND/LAGOON

Mounting of the Filter.

The filter can be secured in position by using a 2 inch metal pipe connected to the 2 inch pipe nipple on the Filter supplying the pump suction and securing this pipe using suitable clamps.

Pipe Connections.

1. Connect the suction pipe from the pump to the 2 inch B.S.P. pipe which is off-centre at the top of the filter. A 2" non- return valve should be fitted in the suction line near to the filter. It is important that when the pump is switched on water is immediately being returned to the back flushing rotor inside the filter
2. Take a "T" off the output pipe of the pump. The return pipe from the Tee to the fitting in the centre of the top of the filter should be a minimum of 1" to avoid excessive friction losses. A reducer will be required as the central fitting on the filter is 3/4" male BSP. When the pump is switched off the upstream pipeline may drain back through the filter backwashing line. If this is a problem, fit a non-return valve upstream of the Tee. Fit a pressure gauge (0-1 bar scales) on the backwash line. The pressure should be 0.4 bars near the to the backwash connection. This should give approx 75 l/min to the backwash rotor
3. Prime pump and run.
4. As the amount and type of contamination in the water to be filtered is variable depending on application, a certain amount of trial and error may be required to get the balance of flow to the cleaning rotor correct. It is helpful for adjustment of the flow to fit valves on the main pump output and on the line back to the cleaning rotor so that they can be adjusted to give sufficient fluid flow back to the cleaning rotor to keep the filter screen clean in the prevailing conditions.



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