rotorflush
Self-Cleaning Filters

USE AND MAINTENANCE INSTRUCTION MANUAL

for

ROTORFLUSH 200MM DIAMETER FILTERPUMPS

Omnia, Idrogo and Nauti Filterpump Ranges

Version 1.1 2026

OVERVIEW

Rotorflush Filterpumps are submersible centrifugal electric pumps with a built in automatic self-cleaning suction intake filter.

To ensure optimum performance these Filterpumps must be submerged to below their minimum water level and sited above any debris, mud or sludge. The Filterpumps must have at least their diameter clearance all round.

For three phase Filterpumps it is imperative that electrical connections are made so that the impellers rotate in the correct direction. If the Filterpumps are run in the wrong direction for more than a few seconds serious damage may result which will invalidate the guarantee.

Read section 8.3 "Rotation direction of 3 phase Filterpumps." before installation for the method of checking correct direction of rotation.

Although the filters are self-cleaning there may over time be a build-up of detritus in the pores of the mesh which the self-cleaning mechanism cannot remove.

If the pump is run with the filter screen clogged it may cause the pump to overheat and seriously damage the motor invalidating the guarantee.

For nylon screens replace the nylon filter mesh inserts; inserts are available from Rotorflush Filters Ltd.

For stainless steel filter mesh use a pressure washer to clean the outside of the mesh very thoroughly.

In most conditions the filter should be cleaned every 2 months in some situations it may require more frequent cleaning particularly with 60 and 115 micron screens.

115 micron and 60 micron nylon screens will need replacement every 1000 hours of operation, over this time the screens may break. 300 micron nylon screens should be replaced every 5000 hours. Replacement screens are available from Rotorflush Filters Ltd.

ROTORFLUSH FILTERPUMPS

USE AND MAINTENANCE INSTRUCTION MANUAL

Omnia, Idrogo and Nauti Ranges

TO BE KEPT BY THE USER

CONTENTS

Overview

Contents

1. INTRODUCTION

This publication contains all necessary information and instructions for the use and maintenance of your Rotorflush Filterpump.

Follow the advice given to ensure correct operation and optimum performance of the Filterpump.

For any other information, please contact Rotorflush Filters.

2. MANUFACTURER AND FILTERPUMP IDENTIFICATION DATA

(As 2006/42/EC)

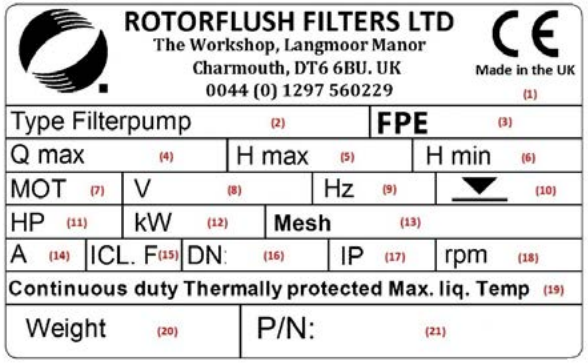
2.1 Manufacturer

Rotorflush Filters Limited
Langmoor Manor, Charmouth, Bridport,
Dorset, UK, DT6 6BU
Tel: +44 (0) 1297 560229
Fax: +44 (0) 1297 560110
Email: mail@rotorflush.com

2.2 Range and Model Nos

DESCRIPTION	SUBMERSIBLE FILTERPUMP WITH INTEGRAL SELF-CLEANING INTAKE
Omnia Range model nos:	O1608, O2008, O25010, O35012
Idrogo Range model nos:	4006, 4008, 4010, 4012, 4015, 8015, 8020
Nauti Range model nos:	N93, N94, N95, N96, N97 N98, N99

2.3 Filterpump Nameplate Data



Rating Plate Key

(1)	Date	Date of Manufacture	(12)	"P2"	Nominal power of the motor (shaft power) in kW
(2)	Model No.	Filterpump model reference number	(13)	Mesh	Intake mesh type and aperture
(3)	Serial No.	Unique Identifier	(14)	"A"	Nominal current in Amps
(4)	"Q"	Max capacity of duty point in litres / minute	(15)	"Ins. C. F S1"	Insulation class and duty type
(5)	"Hmax"	Max total head (corresponds to shut-off head)	(16)	"DN"	Outlet diameter (ID) in mm
(6)	"Hmin"	Min total head in metres	(17)	"IP"	Protection classification (IP rating)
(7)	Phase	Type of motor (single or three phase)	(18)	"min-1"	Revolution speed rpm
(8)	"V~"	Nominal voltage	(19)	"TMAX"	Rating and maximum water temperature Celsius
(9)	"Hz"	Frequency in Hertz	(20)	"Weight"	Weight in kgs
(10)	"m"	Max operational depth in metres	(21)	"P/N"	Part Number
(11)	"HP"	Nominal horse power of the motor			

3. TECHNICAL ASSISTANCE INFORMATION

If a malfunction of the Filterpump is not covered in the TROUBLESHOOTING table contact Rotorflush Filters Ltd.

4. GENERAL SAFETY WARNINGS

* Please pay particular attention and care to the following signs

DANGER

IMPROPER USE MAY LEAD TO ELECTRIC SHOCK

ELECTRIC SHOCK RISK

DANGER

IMPROPER USE MAY CAUSE SERIOUS INJURY TO PEOPLE OR DAMAGE TO PROPERTY

FAILURE TO OBSERVE THESE WARNINGS AND/OR ANY TAMPERING WITH THE FILTERPUMP EXEMPTS ROTORFLUSH FILTERS LTD FROM ALL RESPONSIBILITY IN THE EVENT OF PERSONAL INJURY OR DAMAGE TO EQUIPMENT OR PROPERTY AND/OR TO THE FILTERPUMP

Read this manual carefully and check to ensure that the Filterpump has been properly installed and connected in accordance with relevant safety standards before starting the Filterpump.

There are no RESIDUAL RISKS with Rotorflush Filterpumps.

No particular technical skills are required to use Rotorflush Filterpumps.

No personal safety devices (precaution devices) are required to use Rotorflush Filterpumps.

4.1. Preventive Measures to be Taken by the User

a) The user must specifically comply with all the accident prevention regulations in force in the respective countries in which the Filterpump is being used.

b) During operation make sure that nobody is in the water

c) Before undertaking any repairs or maintenance to the Filterpump, isolate the electricity supply by removing the plug from the socket and/or turning off the switch (if provided). This will prevent accidental starting which could cause personal injury or damage to equipment or property.

d) Any maintenance operation, installation or moving the Filterpump with the electrical system live may cause serious injury and could prove fatal.

e) During operation, avoid moving the Filterpump.

f) Before using the Filterpump, always check that the cable and all electrical devices are in perfect working order.

g) When starting up the Filterpump (by turning on the switch, if provided, or by inserting the plug in the socket) ensure (i) you do not have wet hands (ii) you are not standing in water and (iii) you are not barefoot.

h) The user must not carry out under his/her own initiative any operations or tasks not contemplated in this manual.

4.2 Significant Protection and Precautions

(As 2006/42/EC; BS EN ISO 12100-2 : 2003).

Rotorflush Filterpumps are designed so that all moving parts are shrouded by protective casings. Rotorflush Filter declines all responsibility in the event of injury or damage caused as a result of tampering with these devices.

Each lead or live part is electrically insulated to earth; there is also a further safety device in that the accessible conductive parts are connected to an earth lead so that the parts within reach cannot become dangerous in the event of failure of the principal insulation.

5. GENERAL DESCRIPTION

Rotorflush Filterpumps are used for handling water containing light loads of suspended solids at temperatures up to 40°C. Unwanted solids are separated by a self-cleaning filter in the pump suction intake which is continuously backwashed with filtered water pumped though a dual-headed rotor by a secondary impeller mounted on an extended impeller shaft attached to the pump.

Due to their small bulk and ease of transport, they may be used for fixed or temporary installations, with or without automatic start

5.1 Common Features

All Rotorflush 200 mm diameter Filterpumps are similar from the functional and constructive point of view; the only differences are the following:

- power
- flow rate
- head
- electric power supply (single phase or three phase)
- weight
- dimensions

Please ensure that the pump has not been damaged during transport, please contact the person who supplied it immediately if this is the case and do not use the pump.

5.2 Specifications

Omnia

Model	Amps	Weight (kg)	Min depth Intermittent / continuous running level*	Max depth	Max on/off cycles per hour - equally spaced	Cable length
O1608	2.4	9.5	300 / 300 mm	7 metres	30	10 metres
O2008	6	10	300 / 300 mm	7 metres	30	10 metres
O25010	4.5	10	300 / 300 mm	7 metres	30	10 metres
O35012	5.1	11.5	300 / 300 mm	7 metres	30	10 metres
O20510 60hz	8	10	300 / 300 mm	7 metres	30	10 metres

Idrogo

Model	Amps		Weight (kg)	Min depth Intermittent / continuous running level*	Max depth Metres Immersion Man / Auto	Max on/off cycles per hour - equally spaced	Cable length
	1ph	3ph					
4006	3.8	-	15	300 / 560 mm	2 / 2 metres	40	5
4008	4.3	1.9	17	300 / 560 mm	17 / 10 metres	40	20
4010	5.7	2.2	18	300 / 590 mm	17 / 10 metres	40	20
4012	6.8	2.4	19	300 / 660 mm	17 / 10 metres	40	20
4015	7.3	3	20	300 / 730 mm	17 / 10 metres	40	20
8012	6.4	2.3	18	300 / 590 mm	17 / 10 metres	40	20
8015	7.5	3.1	19	300 / 640 mm	17 / 10 metres	40	20
8020	-	3.5	20	300 /700 mm	17 / 10 metres	40	20

Nauti

Model	Amps		Weight (kg)	Min depth Intermittent / continuous running level*	Max depth	Max on/off cycles per hour - equally spaced	Cable length
	1ph	3ph					
N9316	7.5	2.8	20.7	300 / 650 mm	20 metres	40	20 metres
N9416	10.2	3.7	23.7	300 / 730 mm	20 metres	40	20 metres
N9516	11.8	5.1	25.7	300 / 760 mm	20 metres	40	20 metres
N9616	13.0	5.6	26.2	300 / 790 mm	20 metres	40	20 metres
N9716	-	6.2	26.7	300 / 820 mm	20 metres	40	20 metres
N9816	-	6.5	27.2	300 / 850 mm	20 metres	40	20 metres
N9916	-	7.1	27.7	300 / 880 mm	20 metres	40	20 metres

***Indicates minimum depths when Filterpumps are installed vertically; for all Filterpumps installed horizontally minimum depth is 500 mm**

6. USE AND LIMITATIONS

Contemplated and Non-Contemplated Use

WARNING

Failure to respect the prescribed limits constitutes a situation of use that is technically improper and may endanger the safety of persons and thus EXEMPTS ROTORFLUSH FILTERS FROM ANY RESPONSIBILITY IN THE EVENT OF ACCIDENTS TO PERSONS OR DAMAGE TO EQUIPMENT OR PROPERTY AND/OR TO THE FILTERPUMP, THEREBY RENDERING THE GUARANTEE INVALID.

6.1 Contemplated Conditions of Use

Rotorflush Filterpumps are suitable for pumping water with light loads of suspended solids.

Max liquid temperature is 40 °C

Max immersion depth must be less than the maximum depth indicated on the pump label and stated in the specifications chart listed in section 5.2

Max on/off cycles/hour not to exceed maximum recommendation of the pump manufacturer

6.2 Non-Contemplated Conditions of Use

Rotorflush Filterpumps must not be installed in swimming pools or similar environments. They **must not be used** with water containing acids and corrosive liquids in general, water with temperatures over 40°c, salt or brackish water, inflammable and dangerous liquids in general.

Rotorflush Filterpumps must never be run without water.

7. HANDLING AND TRANSPORT

(As 2006/42/EC; BS EN ISO 12100-2 : 2003).

7.1 Unpacking

Check that there are no breakages or severe dents in the packing; if there are, point this out immediately to the person who delivers the material. After removing the Filterpump from the packaging, check that it has not suffered any damage during transit; if damage is found, inform the supplier immediately. Check that the specifications stated on the plate of the Filterpump are the same as you requested in your order.

7.2 Handling and De-installing

WARNING

FAILURE TO FOLLOW THESE INSTRUCTIONS MAY CAUSE THE FILTERPUMP TO FALL AND SUFFER SEVERE DAMAGE. NEVER UNDER ANY CIRCUMSTANCES USE THE POWER CABLE TO LIFT OR DRAG THE FILTERPUMP. USE THE CORRECT LIFTING GEAR

To handle or de-install the Filterpump you must:

- disconnect from the power supply
- roll up and hold the electric power cable to avoid cable damage;
- lift the Filterpump and the delivery pipe using appropriate PPE and lifting gear.

If the Filterpump is set up for fixed applications, perform the following

operations before handling it:
- disconnect from the power supply;
- unscrew any clamps and remove the delivery pipe;
- roll up and hold the electric power cable to avoid cable damage;
- lift the Filterpump and the delivery pipe using appropriate PPE and lifting gear.

7.3 Transport

The Filterpump is packed in a box or on a pallet for transport; check the gross weight before moving or transporting the Filterpump.

8. PREPARATION FOR USE

(As 2006/42/EC; BS EN ISO 12100-2 : 2003).

8.1 General information

Before beginning to work on the electrical pump, make sure that you have disconnected the electricity from the power supply mains and that it cannot be accidentally reconnected.

The voltage variation allowed +/- 5% (single phase 220-240 V, 3-phase 380-415 V)

8.2 Electrical Connections

Ensure that the Voltage and Frequency of the electric supply is the same as that on the rating plate on the pump. (READ RATING PLATE)

DANGER
RISK OF ELECTRIC SHOCK
Installer must make sure that the electricity supply has an earth/ground wire conforming to the current laws

DANGER
RISK OF ELECTRIC SHOCK
Make sure that the electricity supply is provided with a high sensitivity circuit breaker

= 30mA (DIN VDE 0 100T739)

8.2 Electrical Connections

Connections must only be performed by an authorised electrician in compliance with the law in force. Verify that the data on the name plate match the nominal values for the power line. Make the connection after verifying the existence of a working grounding circuit.

It is the Installer's responsibility to perform the connection in compliance with regulations in force in the country of installation.

All single phase Nauti models come with a capacitor box which must be wired as per the instructions located in the box.

The Omnia, Idrogo and three phase Filterpumps do not require an external capacitor.

8.3 Rotation direction of 3 phase pumps

It is **imperative** that the pump motor rotates in the correct direction. Viewed from the top of the pump (handle end) the motor rotates in a clockwise direction. **If it is run for more than a few seconds in the wrong direction it will damage the pump and invalidate the guarantee.**

TO ENSURE CORRECT ROTATION: Connect the pump to the electricity supply and start up for a few seconds. When the pump starts it should kick-back in an anti-clockwise direction. If this is not the case invert two of the phases and do the test again.

9. INSTALLATION

Please ensure that the pump has not been damaged during transport, please contact the person who supplied it immediately if this is the case and do not use the pump.

DANGER
RISK OF ELECTRIC SHOCK

When installing, please ensure the pump is disconnected from the electricity supply

Never use the power cord to lift the pump

Ensure that there is enough water so that the pump will not switch on/off more than the maximum number of starts per hour. (see 5.2 above)

Rotorflush 3 phase Filterpumps and all Nauti models must be protected by the installation of dry run protection. Omnia and Idrogo Filterpumps (single phase only) have a thermal cut out in the windings.

If the intake blocks because of high levels of solids in the water or for some other reason the pump will run without water. This will cause the pump to run dry which will damage the pump and will invalidate any guarantee.

The pump must be protected against dry running by monitoring the power factor of the motor or by monitoring the flow/pressure from the delivery pipe.

The pump may be supplied with a float switch. Make sure that the pump switches off at the minimum depth level. Make sure that there is nothing in the way that will impede the movement of the float.

9.1 Siting the Filterpump

a) We strongly recommend that the pump is fitted with cos phi monitoring protection, so that if the filter blocks for any reason or there is insufficient water the pump is automatically stopped to prevent damage from dry running

b) The Filterpump may be installed upright or horizontally although the self-cleaning filter will work better in the upright position.

c) The Filterpump should be fully submerged if possible although this is not necessary except for frost protection. The Filterpump will operate continuously at its minimum depth (see 5.2 above, and paragraph e) below) and the filter unit and suction end of the pump are submerged

d) The maximum operating water temperature for Filterpumps is 40°C.

e) When positioning the Filterpump, observe the minimum required distances from walls, from the sides of the drain, tank or other location, so as to allow functioning, use and maintenance operations in safe conditions (BS EN ISO 12100-2: 2003).

f) When lowering the Filterpump into a well or tank, ensure that it is at least 100mm above the bottom

g) Be careful with the power cable when lowering the Filterpump. It is advisable to tie the power cable to the delivery pipe every two or three metres.

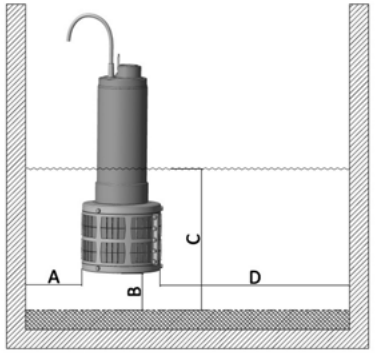


Diagram for Installation of Rotorflush Filterpumps with Minimum Functional Distances

A) 100mm min gap to side of tank / river etc
B) 100mm min gap to top of sediment or detritus at bottom of tank / river bed, etc
C) 300 mm minimum immersion from bottom of filter
D) If used with automatic float switch allow 600mm min gap to side of tank / river etc

9.2 Use and Start-up

(As 2006/42/EC; BS EN ISO 12100-2 : 2003).

The water level must never be lower than the MINIMUM WATER LEVEL (see 5.2 above), even when the pump is not running. If you fail to observe this, the Filterpump will run out of water and you will have great difficulty starting the Filterpump again. Always keep the filter pump submerged to the minimum depth level indicated.

Never continuously run the Filterpump until it is placed and installed in its final operational position. It is possible to have leakage of the Filterpump oil into the pumped liquid; however, this is not harmful to health.

To start up the Filterpump, connect the power and/or turn on the switch. When the water level reaches the minimum level disconnect the power and/or turn off the switch.

10. ASSEMBLY AND DISASSEMBLY

(As 2006/42/EC).

The basic Filterpump has no separate parts or accessories, so no assembly is required for installation.

The user must not attempt to disassemble any other component not covered in these instructions and should contact Rotorflush Filters for advice if any further disassembly is required.

FAILURE TO COMPLY WITH THIS RULE RENDERS THE GUARANTEE INVALID.

11. MAINTENANCE AND TROUBLE SHOOTING

It is recommended that the Filter Screen is manually cleaned every 2 months – 6 months; smaller aperture screens may need more frequent attention. In some conditions this may need to be more frequent. For instance, where there are oily or fatty substances in the water.

Nylon screens have a limited life. 60 and 115 micron screens must be replaced every 1000 hours of use, 300 micron screens must be replaced every 5000 hours of use.

Stainless steel screens should be thoroughly cleaned with a pressure washer by directing it on the outside of the filter. (Filter Cage removal is not always required)

If the Filterpump is not going to be used for any period of time, it must be removed from the water and thoroughly cleaned before storage. If the Filterpumps is left in water when it is not running then there may be growth of algae/bacterial films etc. on the mesh which will partially or completely block it.

FAULT	POSSIBLE CAUSE	REMEDY
Motor does not run	1. No electricity supply 2. Incorrect electric connection 3. Circuit breaker has tripped 4. Impeller Blocked 5. Motor or capacitor damaged	1. Check Supply 2. Check connections 3. Re-set circuit breaker, if it trips again call electrician 4. Check Filter Mesh for damage. If damaged contact Rotorflush 5. Contact Rotorflush
Motor runs but no water delivered	1. Filter Blocked 2. Pump is not primed. 3. Non-Return Valve blocked	1. Clean Filter. Reduce suspended solids in water. Stainless steel screens can be cleaned with a pressure washer. There is no need to dismantle the filter. Restrict pump output, filter will block less with a reduced flow through pump. 2. Disconnect pipe work so that air can exit from the pump. Alternatively pour water down the outlet hose so that it fills the pump with water and expels the air. 3. Check filter mesh for damage and clean valve
Pump delivers reduced flow/ pressure	1. Filter blocked 2. Delivery pipe obstructed 3. Impeller worn 4. Pump rotating in wrong direction (three phase version)	1. Clean Filter. Stainless steel screens can be cleaned with a pressure washer. There is no need to dismantle the filter. 2. Clean pipe 3. Contact Rotorflush 4. Invert two phases
Intermittent operation (single phase versions)	1. Impeller obstructed 2. Liquid Temperature too high 3. Motor broken	1. Check Filter Mesh for damage. If damaged call Rotorflush 2. Reduce temperature of liquid 3. Contact Rotorflush

12. INFORMATION ON AIR-BORNE NOISE

(As EEC 89/392 p. 1.7.4.f)

The weighted sound pressure level A produced by the Filterpump does not exceed the value of 70 dB(A)

13. WASTE DISPOSAL

Rotorflush Filterpumps come within the scope of Directive 2012/19/EU regarding the management of electrical and electronic equipment waste (WEEE).

Before scrapping the Filterpump, make sure the lubricating oil is separated from the other components. Do not dump lubricating oil in the environment. It must be disposed of properly.

14. DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY

We, ROTORFLUSH FILTERS LIMITED, declare under our own responsibility the following products conform to the Directives and Standards indicated below:

Omnia Range Filterpumps:

Machinery Directive 2006/42/EC
EN 60335-2-41:2003/A2:2010, EN 12050-1:2003
EN 60335-1:2012/A11:2014/A13:2008/A14:2010/A15:2011, EN ISO 12100:2010

Electromagnetic Compatibility Directive 2014/30/EU
EN 61000-6-3:2007/A1:2011, EN 61000-6-1:2007, EN 61000-6-4:2007/A1:2011,
EN 61000-6-2:2005, EN 55014-1:2006/A2:2011

Directive 2011/65/EU (ROHS II+2015/863);
EN 50581:2012

Idrogo Range Filterpumps:

Machinery Directive 2006/42/EC;
Low Voltage Directive 2014/35/EU;
Electromagnetic Compatibility Directive 2014/30/EU;
Directive 2011/65/EU (ROHS II+2015/863);
Directive EcoDesign 2009/125/EC
Harmonized technical standards: EN 809:1998+A1:2009; EN ISO 12100:2010

Nauti Range Filterpumps:

Machinery Directive 2006/42/EC;
Low Voltage Directive 2014/35/EU;
Electromagnetic Compatibility Directive 2014/30/EU;
Directive RoHS II 2011/65/EU,
Directive 2014/30/EU (ELECTROMAGNETIC COMPATIBILITY);
Directive 2011/65/EU (ROHS II+2015/863);
Directive 2012/19/EU (WEEE)
EN 809:2009; EN 60335-1:2013, EN 60335-2-41:2005; EN 62233:2005; EN
Harmonized technical standards: 61000-6-1:2007, EN 61000-6-3:2007; EN 60034-30-1:2014

N Hosford
Managing Director - Rotorflush Filters Limited

rotorflush
Self-Cleaning Filters

15. MESH AND BACKWASH JET MAINTENANCE

FOR ROUTINE CLEAN OF STAINLESS-STEEL FILTER MESH DO NOT REMOVE FILTER MESH, SIMPLY CLEAN WITH PRESSURE WASHER.

15.1 Replacing Stainless Steel Mesh

15.2 Replacing Nylon Mesh Filters

15.3 Changing Rubber Jets on Coarse Screened Filterpumps

15.4 Maintaining Cleaning Jets on Fine Screened Filterpumps

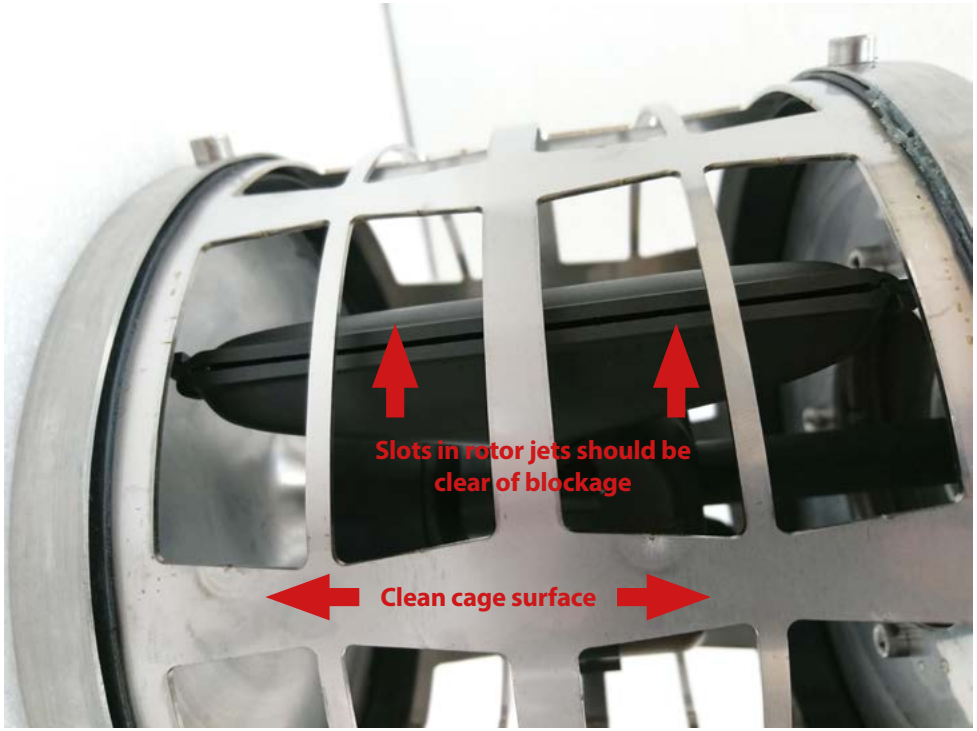
15.1 Replacing Stainless Steel Mesh

THE STAINLESS FILTER MESH HAS SHARP EDGES WEAR GLOVES TO PROTECT FROM CUTS

*Tools required. Mole grips, 10/13mm Spanner, 5/6mm Allen Key.

1 Once pump or strainer is removed from water source. Remove the M6 or M8 bolts on the Clamp Tabs located on the filter cage and remove the outer clamping ring and the filter mesh. (Retain the Stainless steel nuts and bolts for reassembly.)

2 Clean the inner Filter cage and the Clamp also. This will allow a good seal on reassembly. Whilst the Clamp and Mesh is removed check that the rotor jets are clear from blockage. (These jets would only be blocked due to larger particles entering the filter due to damaged or incorrectly fitted mesh. If this is the case please feel free to contact Rotorflush Filters Ltd)



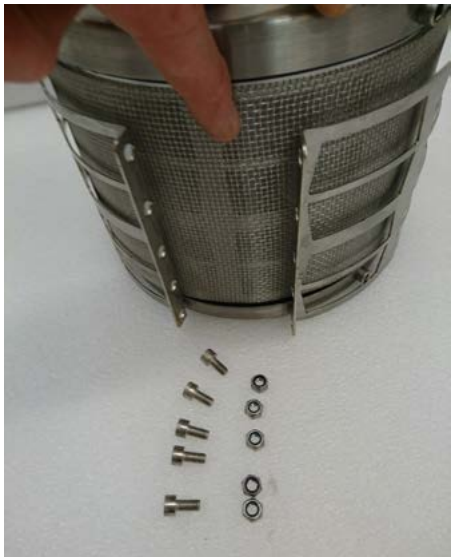
*PLEASE NOTE: Rotor and Jet configuration will vary depending pump range. But the same principles for stainless steel mesh replacement and jet checking apply.

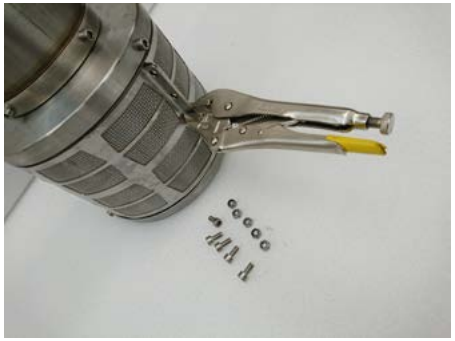
3 Place the 316 Stainless steel filter mesh around the Filter cage. (The smooth side of the mesh to the outside of the filter if it is of the duel mesh variety)

4 Place the outer clamping ring over the filter mesh (as below). This is the fiddly bit!!

5 The outer Clamping rings apertures must line up with the Inner Filter Cage apertures. The ends of the stainless steel mesh must be positioned so that they line up with one of the uprights between the apertures on the Cage. But not at the Clamp joint! (We generally try to position the mesh Joint opposite the clamping tabs)

Have a pair of mole grips handy, so that when is all in the correct position you can clamp the tabs on the outer ring to hold all in position and re-adjust as necessary.





6 Double check that the ends of the filter mesh are not visible and are firmly behind one of the uprights. If they are visible then there will be a gap where particles can enter the filter.

Example of misalignment!

7 When all is correct, reinstall the 5off M6/ M8 nuts and bolts in the Clamp tabs and tighten fully. Making sure that alignment of Cage, Clamp and Mesh is maintained!

8 Re-check alignment of both Cage with Clamp, and Mesh joint with an upright column.

Please note that failure to do these alignments will cause reduced flow and/ or larger particles to enter the pump. Either way this will eventually lead to a pump and/or filter failure.

If there is a miss-alignment please go back to step 1.

Correct alignment

9 Now with the Filter Mesh and Clamp correctly fitted reinstate pump/strainer back into water source.

*Any problems please contact **ROTORFLUSH FILTERS LTD.**

15.2 Replacing Nylon Mesh Filters

*Tools required. Mole grips, 10/13mm Spanner, 5/6mm Allen Key.

The Filterpump should be removed from the channel and the filter cage washed with pressured water every 2 months or at the hourly running times listed below.

The filter media should be replaced **every 1000 hours** of operation for 60 micron and 115 micron and **every 5000 hours** of operation for 300 micron. Filters for analysers are normally fitted with 115 micron mesh

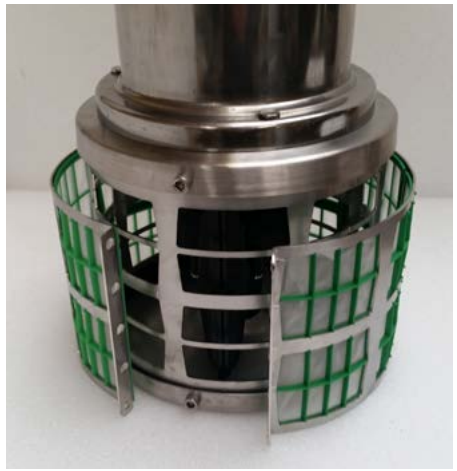
The nylon mesh will eventually breakdown if not replaced at the recommended intervals, **if this happens particles will enter the filter assembly and block the cleaning jets.**

The nylon filter mesh replacement procedure is simple and quick to exercise as follows:-

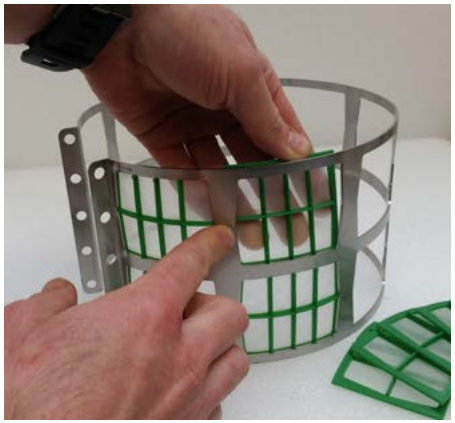
Remove the pump unit from the channel and follow the removal and replacement procedure. The operation can easily be carried out at the channel.

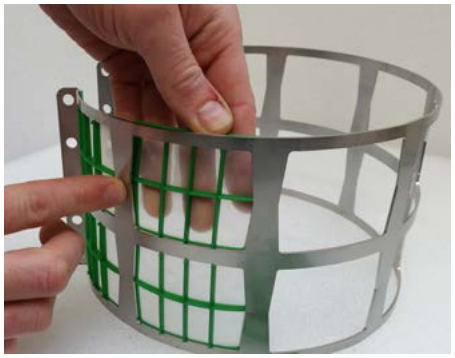
1 Filterpump removed from the water ready for the replacement of the filter media

2 The top and bottom plates are left secured to the pump and cage, only the filter retaining- cage need be removed. This is achieved by removing the retaining bolts holding the two ends of the cage together. At this stage the cleaning rotor should be checked visually. If there are signs of jet blockage the rotor assembly may be cleaned). If the rotors need to be cleaned please follow jet removal instructions found in section 15.3



3 Press out the filter inserts and replace with the new units, these are pressed into the cut outs as shown. **NOTE:- Make sure the inserts are fully inserted into the cage and they locate centrally into the cage clamp cut outs.**





4 The filter retaining clamp is replaced ensuring the two ends of the cage come together at one of the back cage support areas as shown. **IMPORTANT NOTE: - Make sure that you line up the filter inserts and clamp with the apertures in the inner filter cage. Else flow and backwash area will be reduced.**

5 The two ends should be held together using grips while the retaining bolts are secured.

6 **After a final inspection making sure inserts, cage and clamp are aligned. The pump is now ready for replacement into the channel**

15.3 Changing Rubber Jets on Coarse Screened Filterpumps (1 mm - 3 mm aperture mesh)

THE STAINLESS FILTER MESH HAS SHARP EDGES WEAR GLOVES TO PROTECT FROM CUTS

1 Once pump or strainer is removed from water source. Remove the M6 or M8 bolts on the Clamp Tabs located on the filter cage and remove the outer clamping ring and the filter mesh. (Retain the Stainless steel nuts and bolts for reassembly.)

2 Remove the Filter Cage carefully. Trying not to catch the jets on the rubber seal around the top of the filter.

3 Unscrew the 4 Self tapping Screws which hold the Rotor halves together as shown above. Now the lower can be removed (see below)

4 Before removing the Jets, please take a moment to look at the parts and the pictures below. These show the alignment vertically and horizontally. Also the side that the stainless steel Jet Shaping Clip is fitted. This clip MUST be fitted as shown in the pictures below else the Rotorflush self cleaning filter will not work.

5 **To release plastic Jet Retaining Clips (some models are fitted with jubilee clips instead)**
Use needle nose pliers as shown below. Using a sideways twisting motion disengages the binding teeth. (Shown immediately below is the Rotor Lower.

6 Now repeat the process for the Rotor Upper. Do not remove Rotor Extension Shaft, Rotor housing or Impeller!! (Special tooling is required to align the shaft within a very tight rotational tolerance. Failure to align correctly will cause irreparable damage to the rotor system and pump.)

7 Replace Jets (only available from Rotorflush Filters Ltd). Make sure that the back end of the Jet is pushed all the way onto the rotor outlet port. CHECK ALIGNMENT OF THE JET AND THAT THE STAINLESS STEEL JET SHAPING CLIP IS FITTED ON THE CORRECT SIDE. (Please refer to page 15). If the clip is fitted on the wrong side the Backwashing Rotor will not rotate.

The Jet must be fitted so that the Shaping Clip run parallel to the inside of the filter Cage. The Jet (looking from the end) must also be fitted vertically. (Please refer to page 15) Once you are happy with the positioning of your Jets fit the replacement Retaining Clip supplied. (See below) first tighten by hand. DOUBLE CHECK alignment and the Jet are fitted correctly. Then use large Mole grips or similar to tighten the Clips fully as shown.

This shows the plastic Retention Clip fully tightened.

Take care when you tighten the Clip on the Rotor Upper as it's a little tricky!

8 Re-place the Rotor Lower onto the Rotor Upper using Location Pin and Lug. Then refit screws removed on page 14. (Do not over tighten else you may strip the threads).

9 Now refit the Filter Cage carefully. A little grease can be applied around the Cage seal. Refit the 3 M6's around the top of the Cage by hand. Stand the whole unit up and apply downward pressure as you tighten the M6's (This will give a better seal onto the Top Plate)

10 Now put the unit gently back on its side to insert the M6 back into the Bottom Plate. You may need to rotate the spacer (This is the piece on the bottom of the Rotor Lower with the M6 threaded insert in it) to line up the 3mm holes in the Spacer and Bottom Plate This is to prevent rotation of the rotor assembly as you fit the M6 into the base. (The easiest way to rotate the spacer is to put your small drill or Allen key through the hole in the Bottom Plate into the insert at an angle and twist to rotate until the 3mm holes line up). Once your holes line up inserts allen key into 3mm hole and refit M6 bolt.

11 Your pump is now ready to be placed back into your water source.

*Any problems please feel free to contact **Rotorflush Filters Ltd.**

15.4 Maintaining Cleaning Jets on Fine Screened Filterpumps (50 - 315 micron aperture mesh)

THE STAINLESS FILTER MESH HAS SHARP EDGES WEAR GLOVES TO PROTECT FROM CUTS

If your Filterpump has mesh larger than 315 micron please see "Replacing Rubber Jets" in section 15.2

1 Remove the base retaining screw (M6 x 12mm + 6mm washer) Place small drill or similar through one of the 3mm holes to prevent the spacer revolving as you undo the M6 bolt. Then remove the three M6 filter retaining bolts from the pump. (Around the top of the filter, located at the pump end.) Remove the filter cage.

2 Split the cleaning rotor assembly by removing the eight screws holding the two halves together, leaving the back section on the pump rotor. Unclip the two cleaning blades and split them using a small screwdriver. Clean each piece and re-assemble.

15.5 Cleaning The Air bleed Valve

Only the Rotorflush Omnia range is fitted with an air bleed valve.

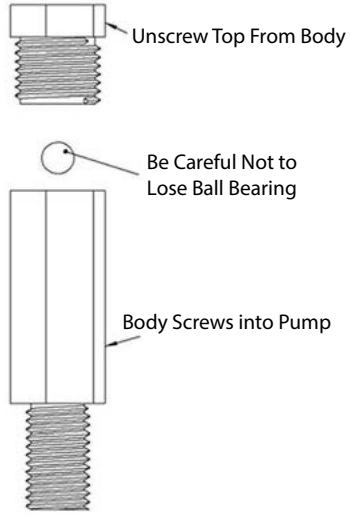
The air bleed valve is positioned at the top of the pump and allows the escape of air that would otherwise be trapped in the pump stopping it pumping water.

Place the pump in the water and air will bubble from the valve. Leave for a couple of minutes or until no more air is coming out. Then switch pump on and it should be primed.

Do not turn the pump on until all the air has come out as this will prevent the filter priming, there may be a flow from the pump but the self-cleaning filter will still have air in it and may not be self-cleaning properly.

The pressure from the pump will seal the valve, it may weep slightly.

Maintenance



Rotorflush Air Bleed Valve

Overtime the air bleed valve may become blocked.

To clean it, unscrew the top from the body and remove the small ball. Clean the valve by passing a suitable piece of stiff wire down through the valve body into the pump and do the same for the top part of the valve

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rotorflush
Self-Cleaning Filters

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