



RF100ANQ

INSTRUCTIONS



Instructions for Rotorflush Filter for Analysers Model RF100AN

The instructions for the pump are after page 6 of this document and should be read in addition to pages 1-6



1. 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 self-cleaning filter unit for analysers.

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.

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

2. Description

The Rotorflush Analyser Self Cleaning Filter system has been designed for supplying analysers with a continuous filtered sample.

It consists of a self cleaning 60 micron filter, (115 and 250 micron available), head positioned in the sample tank. This is driven by the MAG drive centrifugal pump. The pump recycles the fluid to be filtered back to a backwashing mechanism within the filter. A small amount of the fluid (maximum 15 litres/minute) is drawn off via the outlet valve and supplied to the analyser. The flow to the analyser is adjustable from 0-15 litres/minute. The lower the flow rates to the analyser the more suspended solids in the fluid to be filtered that the filter will cope with.

There must be a minimum of 15 Litres per minute flowing out of the outlet at the top right of the tank. This is to ensure that particles in the water are carried away from the filter system and to ensure that a representative sample is supplied to the analyser. Over a period there may be settlement of heavy solids in the bottom of the tank. These should be drained from time to time by the drain valve at the bottom of the tank. The flow into the bottom of the tank should be greater than 15 litres/minute + the flow to the analyser. For example if 5 litres per minute is going to the analyser then at least 20litres/minute must be entering the bottom of the tank.

The float switch in the tank is to protect the pump from dry running in the event that the supply of water to the tank is interrupted. This controls a 230/110v (depending on model) relay that controls the motor.

The valve at the bottom is to periodically drain any detritus that may over time build up in the bottom of the tank.



Materials in Contact with liquid are PVC, Acetal, Polypropylene, stainless steel, nylon.



3. Environmental Conditions

The Filter system should not be used in environments where:

The maximum ambient temperature is above 40C

The minimum ambient temperature is below 2C (unless anti frost protection is in place)

Corrosive atmospheres

Explosive and/or fire danger zones

Where it is liable to flood

If the filter system is sited in an enclosure, make sure that there is adequate ventilation for motor cooling

Where there is excessive vibration

4. Liquid to be pumped

For use with water containing suspended solids with a specific gravity of 1



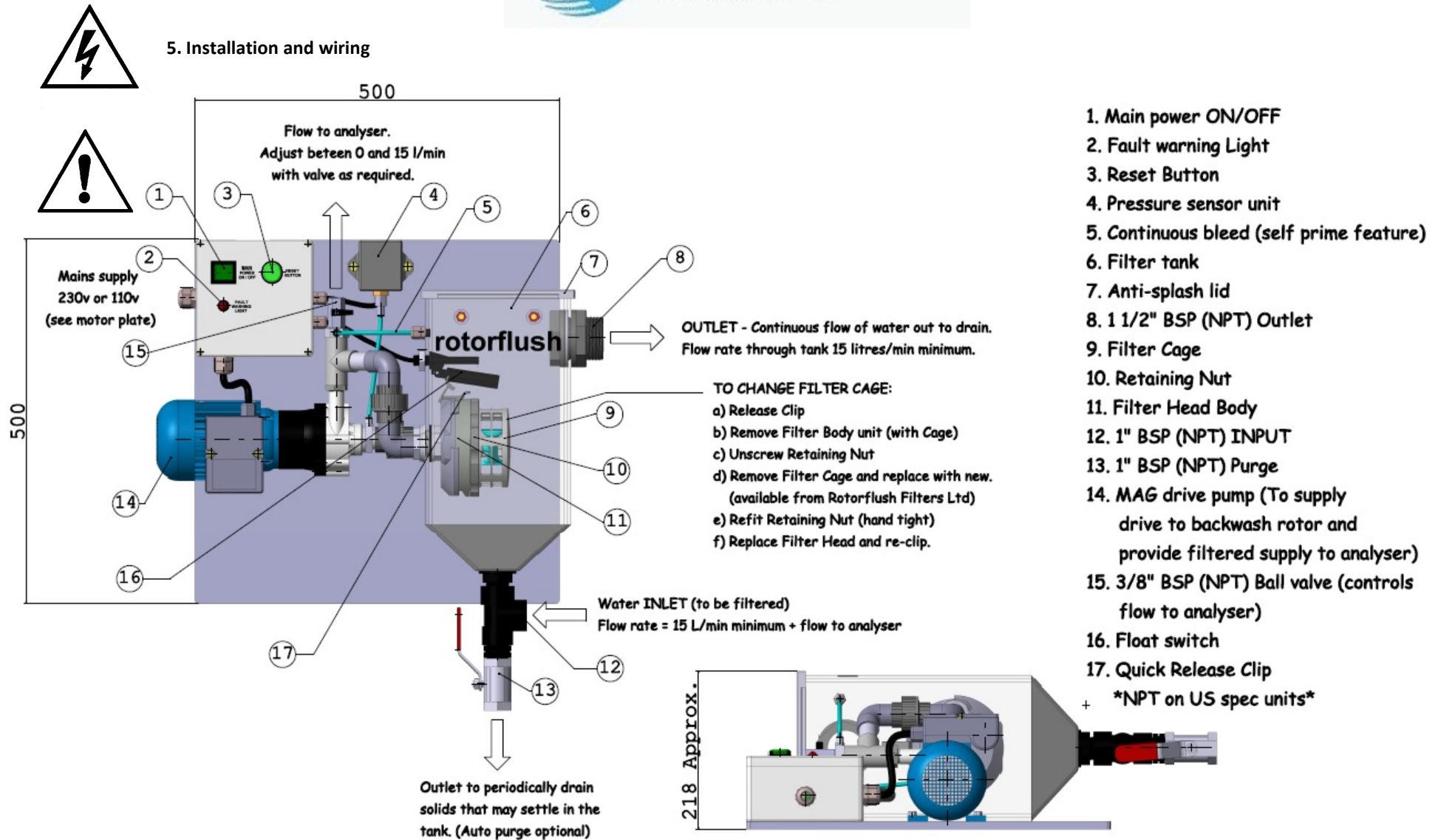
Should not be used with

Flammable liquids

Toxic liquids

Corrosive liquids

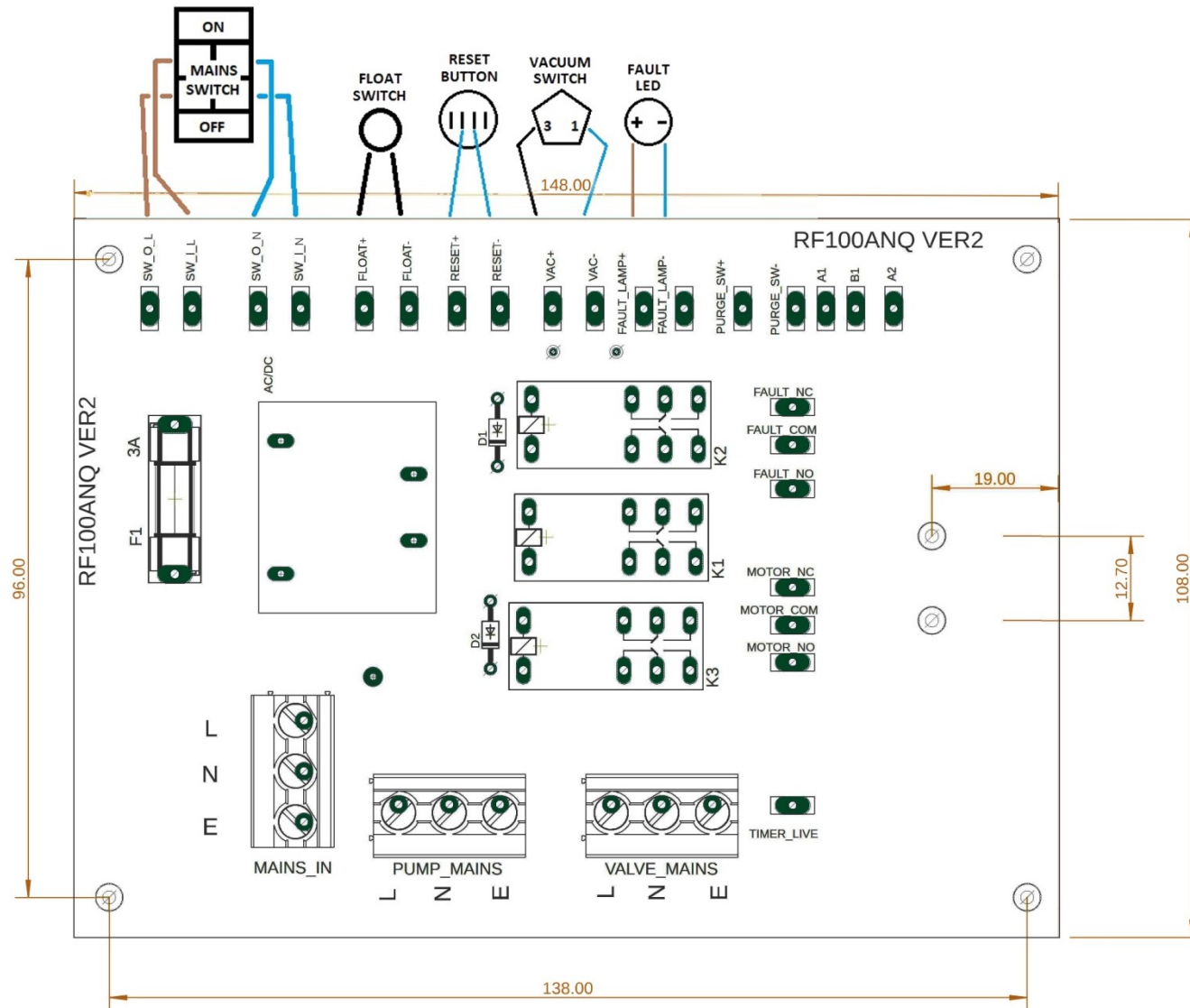
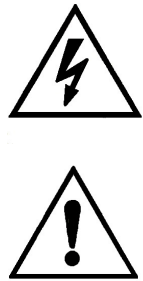
5. Installation and wiring



1. Main power ON/OFF
 2. Fault warning Light
 3. Reset Button
 4. Pressure sensor unit
 5. Continuous bleed (self prime feature)
 6. Filter tank
 7. Anti-splash lid
 8. 1 1/2" BSP (NPT) Outlet
 9. Filter Cage
 10. Retaining Nut
 11. Filter Head Body
 12. 1" BSP (NPT) INPUT
 13. 1" BSP (NPT) Purge
 14. MAG drive pump (To supply drive to backwash rotor and provide filtered supply to analyser)
 15. 3/8" BSP (NPT) Ball valve (controls flow to analyser)
 16. Float switch
 17. Quick Release Clip
- + *NPT on US spec units*



Installation (Continued)





Installation (Continued)

The Filter system is designed to be wall mounted. The PVC backboard can be drilled to accept suitable mounting fasteners.

A suitably qualified electrician must connect a supply either 240v or 110v 50Hz AC to the enclosure above the pump. Make sure that the Filter system is **earthed** and there is a suitable fuse in the supply circuit. **(see plate on pump for voltage and frequency and for value for fuse)**

Install a suitable isolator to disconnect the electricity supply to the filter system. This should be close to the filter system to enable the electricity supply to be isolated from the filter system during normal operation and in an emergency

Remove the elastic band holding the float switch up

Connect the supply of the liquid to be filtered to the 1" BSP branch of the TEE connection at the bottom of the sample tank. A non-return valve may be required in the pipe supplying the sample tank so that it does not drain when the fluid supply is stopped. It is important that once commissioned the sample tank remains full of fluid to prevent air locks on re-starting the system.

Install a valve on the sample supply to adjust the flow rate into the tank. If the flow is higher than the speed at which the water can drain by gravity from the top right connection of the tank the tank may overflow.

Connect the outflow to the 1 ½" BSP male at the top of the tank. The liquid is returned to source by gravity, so there must be sufficient fall back to source. **It is recommended that at least a 1 ½" pipe is used to make sure that the liquid is able to return to drain by gravity.**

Connect a pipe from the "outlet to the analyser" to the analyser.



6. Commissioning.

Fill the sample tank with clean water.

Slowly introduce the sample supply, adjusting the flow rate so that there is **at least 15 Litres per minute flowing out of the connection at the top right of the sample tank.**
Note: It does not matter if the flow rate is greater than 15 litres/minute, however if the flow rate is too great, then the water may not drain quickly enough from the tank outlet and the tank may overflow. If this is the case a larger outlet pipe may be required. A drop from the output fitting to return location is always required. (Remember the output flow is gravity powered so the greater the fall the better. Avoid long sections of parallel pipework especially straight out of tank)

Once commissioned adjust the flow rate to your analyser system using the valve provided on the outlet to the analyser.
Check again that at least 15 L/min is flowing out of the top right outlet of the tank.

Now that the system is commissioned it can be switched on and off without problem as long as there remains enough liquid in tank to activate the float switch.

7. Maintenance (Ensure that unit is disconnected from electricity supply before maintaining)

Over a period of time the filter head may become blocked with detritus that cannot be removed by the backwash mechanism.

The Filter cage should be replaced every 6 months, available from Rotorflush Filters, 60 micron (Part no. RF-096), 115 micron (Part no. RF-097) and 250 micron (Part no. RF-098). In most conditions the filter will only need maintenance every 6 months. However if there is a lot of detritus in the water to be filtered, particularly if it contains fatty, oil, or sticky substances or biological growth the filter cage may need to be cleaned more frequently.

Check on occasion the 6mm Self priming pipe is clear of debris as in some conditions this may become blocked or restricted over time. If replacing this pipe please ensure the restrictor in the end of this pipe is fitted to the replacement pipe. Failure to do so will use more water within the system and reduce the filter cleaning effectiveness.

*Spares are available from Rotorflush Filters Ltd.

8. To remove the Filter head.

- Drain the sample tank
- Release retaining Clip.
- Withdraw the filter head/body assembly from the sample tank.
- Unscrew the Retaining Nut holding the filter cage to the body and replace with a new filter cage. (replacement cages available from Rotorflush Filters)
- Re-assemble
- Follow the steps for commissioning as above



9. PROBLEM SOLVING

FAULT	CHECK	RESOLUTION/ACTION TO BE TAKEN
Pump will not run	<ul style="list-style-type: none"> -Power supply -Fault warning light -Float switch activated 	<ul style="list-style-type: none"> -Turn on at power supply and main switch. Check the unit has been wired correctly. -This may mean the Pressure switch has activated. This could mean the filter is blocked. Clear filter and press Reset Button. -Ensure the water level is adequate to activate the float switch. If problem continues contact Rotorflush Filters.
Fault light is on (Meaning the pressure sensor is activated)	<ul style="list-style-type: none"> -Solids level in tank -Filter blocked -Condition of filter head (Is it blocked or damaged? If there are splits in the nylon mesh a new head is required as this will allow larger solids through which will cause blockages in the pipework and could result in damage to the pump) 	<ul style="list-style-type: none"> -Purge tank (With the nature of our self cleaning filter this may be enough to clear the filter head without further action. Once purged press Reset button) -Clean or replace filter head (spares available from Rotorflush filters) If problem continues contact Rotorflush Filters.
The tank is overflowing	<ul style="list-style-type: none"> -The pipework from the 1 ½" Outlet is large enough. (Consult Installation instructions. This pipe must be 1 ½" or larger otherwise the gravity fed flow will be restricted. -There is a downward run from the tank outlet with minimal parallel run from tank level. -The Input flow into the tank from the 1" Tee 	<ul style="list-style-type: none"> -Increase pipe size -Check output is greater than 15 litres a minute. -Increase drop from tank (Please remember the output is directly related to the input flow and ability of the water to flow away from the filter tank. The steeper and larger the pipe on the output, the better water will flow through the system) -The Input flow may need to be reduced although there must be a minimum of 15 litres per minute to achieve good flow through tank taking suspended solids with it. If problem continues contact Rotorflush Filters.
Solid levels in the tank are causing the filter head to block to often	<ul style="list-style-type: none"> -Pre-filtration of feed to RF100AN wall mounted unit. -Flow through the filter tank (as above) - The flow to the analyser 	<ul style="list-style-type: none"> - We recommend the use of a Rotorflush self cleaning filter to feed the RF100AN. In most cases this is from our Self cleaning submersible range. Please consult Rotorflush filters. -If the flow to the analyser is throttled back (using ball valve above tee) This increases the backwash pressure though the cleaning rotor. If problem continues contact Rotorflush Filters.

EC Declaration of Conformity

In accordance with BS EN ISO/IEC 170509-1:2010

We: Rotorflush filters Ltd

Of: Langmoor Manor, Charmouth Dorset, DT6 6BU U.K.

Declare that for:

Equipment: Rotorflush Analyser Filter System

Model Ranges: RF100AN

The following CE Marking Directives are applicable:

2006/42/EC Conforms with essential health and safety requirements of the Machinery Directive and it's amending Directives

and has been designed and manufactured to the relevant parts of the following standards:

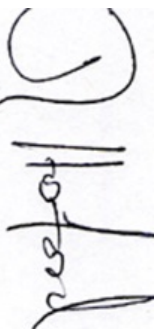
BS EN 60204-1:2006+A1:2009 Safety of machinery. Electrical equipment of machines. General requirements

BS EN 12100:2010 Safety of machinery. General principles for design. Risk of assessment and risk reduction. ISO

BS EN 809:19998+A1:2009 Pumps and pump units for liquids. Common safety requirements

I hereby declare that the equipment named above has been tested and found to comply with the relevant sections of the above referenced specifications. The unit complies with all essential requirements of the Directives

Signed by:



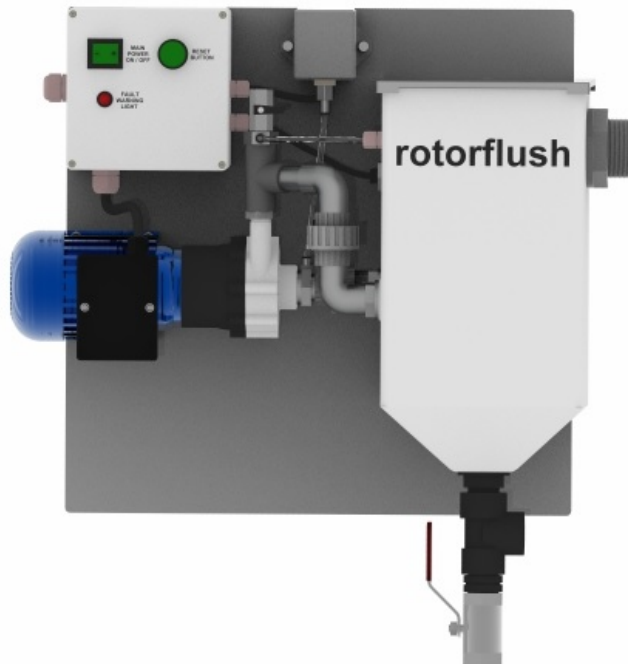
Name: Jim Hosford
Position Managing Director

Done at: Rotorflush Filters Ltd

On: 10th September 2012



Rotorflush RF100ANQ Analyser Filter - Filter cage replacement



RF100ANQ Analyser Filter System.

****Isolate electricity supply****

Turn off the supply of water to sample tank and then open drain valve to drain the tank.





Filter cage replacement (continued)

1) Remove Anti-splash Lid



*View of Retaining Clip
Check that the 2.5mm Bleed Nozzle is clear. (Unblock with wire or similar if required)



Filter cage replacement (continued)

2) Release Clip retaining Filter Head Body. (Avoiding dropping the body into the bottom of the tank).



3) Removing Filter head assembly from sample tank (Making sure that the 'O' Rings remain seated in their grooves)



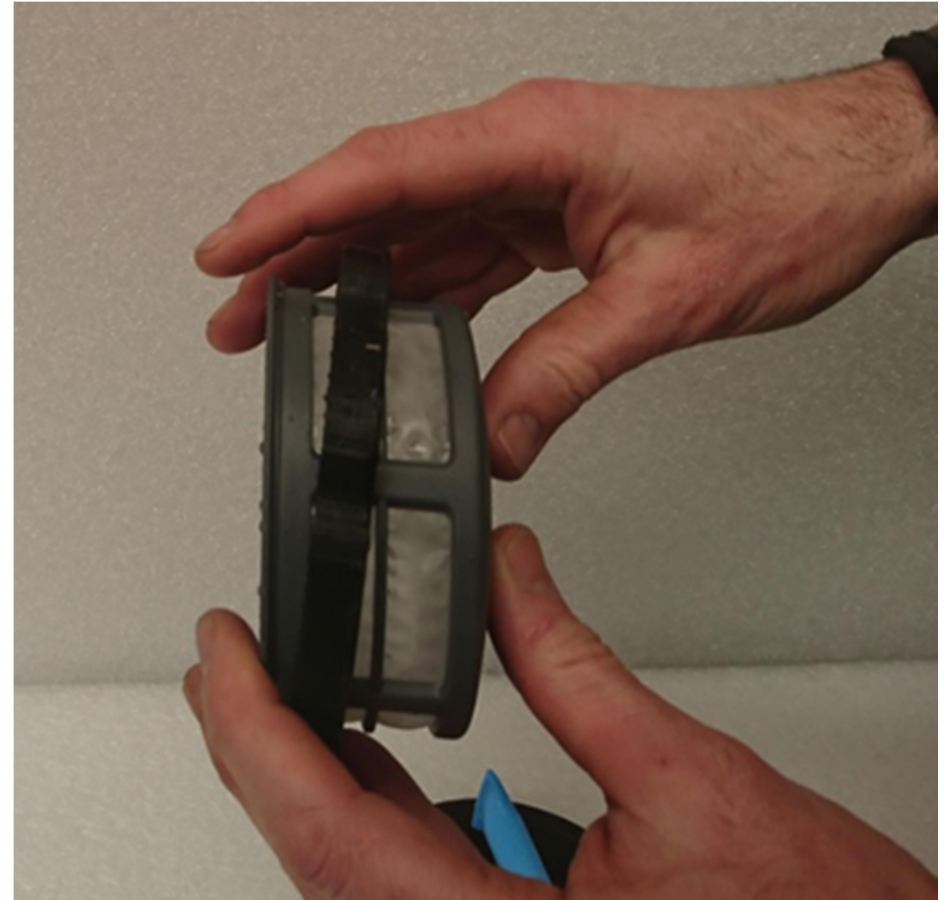


Filter cage replacement (continued)

4) Unscrew the Retaining Nut that attaches the Filter Cage to the Body.



Then remove the old Filter Cage. (press out from filter side as shown)





Filter cage replacement (continued)

NOTE: Instructions 5-7 are only required occasionally or if the Cage mesh has split in use.

5) To clean the Jets, the filter cleaning rotor must be split. Insert plain screw driver into slot to lever the Jet Rotor mouldings apart gently.



6) Clean the insides of the cleaning rotor paying particular attention to the jet slots





Filter cage replacement (continued)

7) Re-assemble cleaning rotor by pressing together. (If required gently use pliers, but usually hand pressing is sufficient.)



8) Using a new Filter cage or one that has been thoroughly cleaned, insert it into the Retaining Nut (ensuring its fully pushed in).

9) Screw the Retaining Nut fully back onto the Body (hand tight only is required!)

10) Re-install Filter Body assembly in the sample tank, **ensure mating faces are clear of debris and 'O' rings are in place.**

11) Push Retaining Clip back in its closed position.





Filter cage replacement (continued)

Once Filter maintenance is completed introduce water into system and switch on system. If safe to do so by placing your fingers on the Filter Cage it is possible to feel a pulsing as the Backwash Rotor rotates.

IT IS ESSENTIAL TO CHECK THAT FILTERED WATER IS BEING DELIVERED TO ANALYSER.

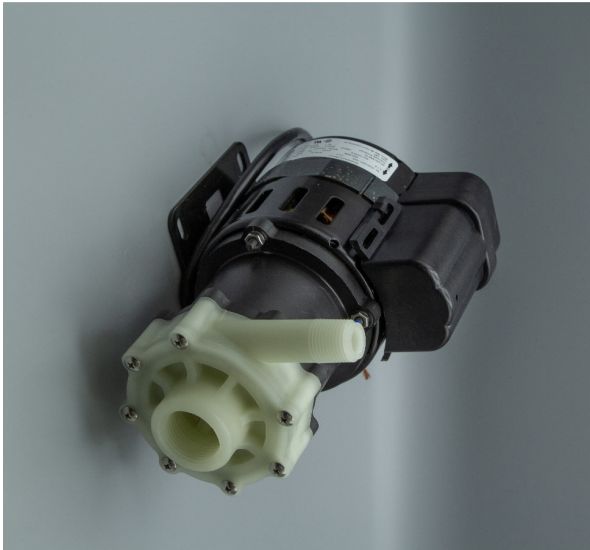
Sometimes an air lock can prevent the filter system working and will result in serious damage to the pump due to dry running. If this occurs uncouple outlet pipe to analyser and re-start until water is being pumped. Then re-attach pipe work to analyser and re-start checking that there is a supply to the analyser.

NOTES

AC-4P-MD



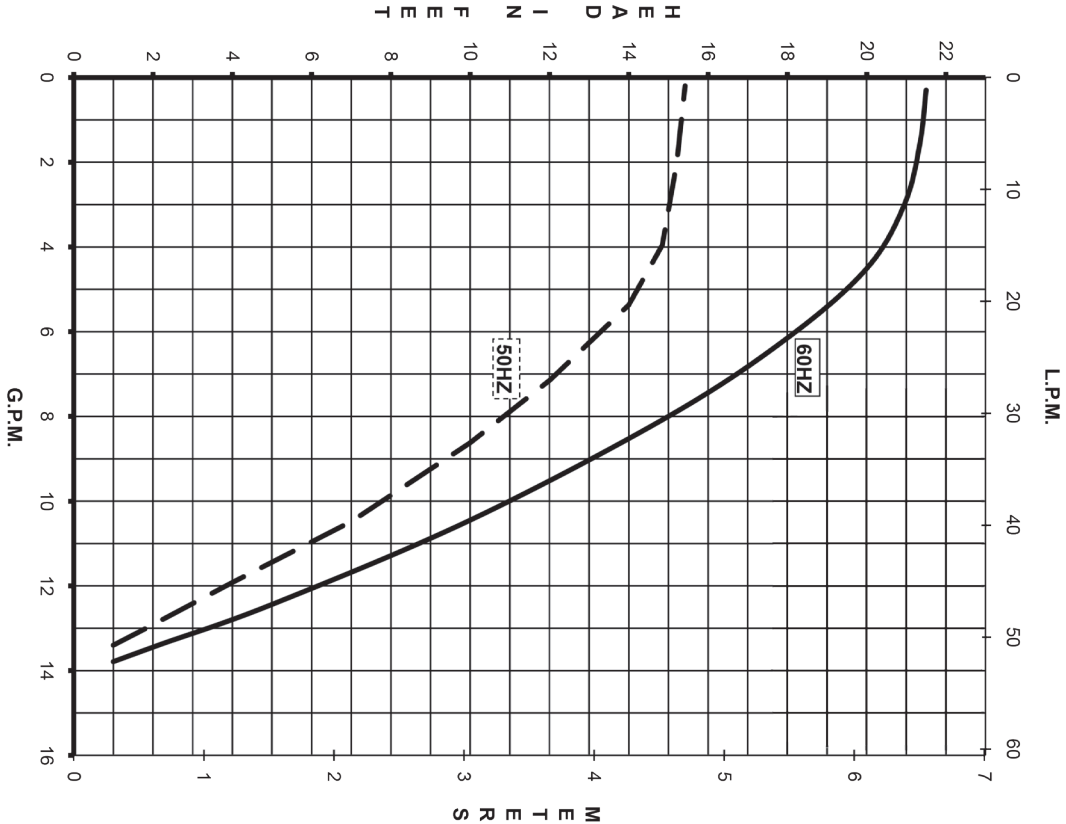
MAGNETICALLY DRIVEN, SINGLE-STAGE CENTRIFUGAL



PLEASE NOTE THAT PUMP MAY DIFFER FROM PRODUCT SHOWN

- ☑ Seal-less Magnetic drive pump
- ☑ Up to 50l/min flow
- ☑ Up to 4.7m head
- ☑ Available in 115V or 230V
- ☑ Extensively used in chemical recirculation, marine air conditioning, chemical transfer, scrubber systems, and many more

PERFORMANCE



SPECIFICATION

FEATURES

Temp:	Max 87°C
Pressure:	3.4 Bar (System)
Inlet:	1" FPT
Outlet	1/2" MPT

WETTED MATERIALS

Front Cover:	PP
O Ring:	Viton
Shaft:	Ceramic
Thrust Washer:	Ceramic
Magnet:	Ceramic Magnet
Rear Housing:	PP

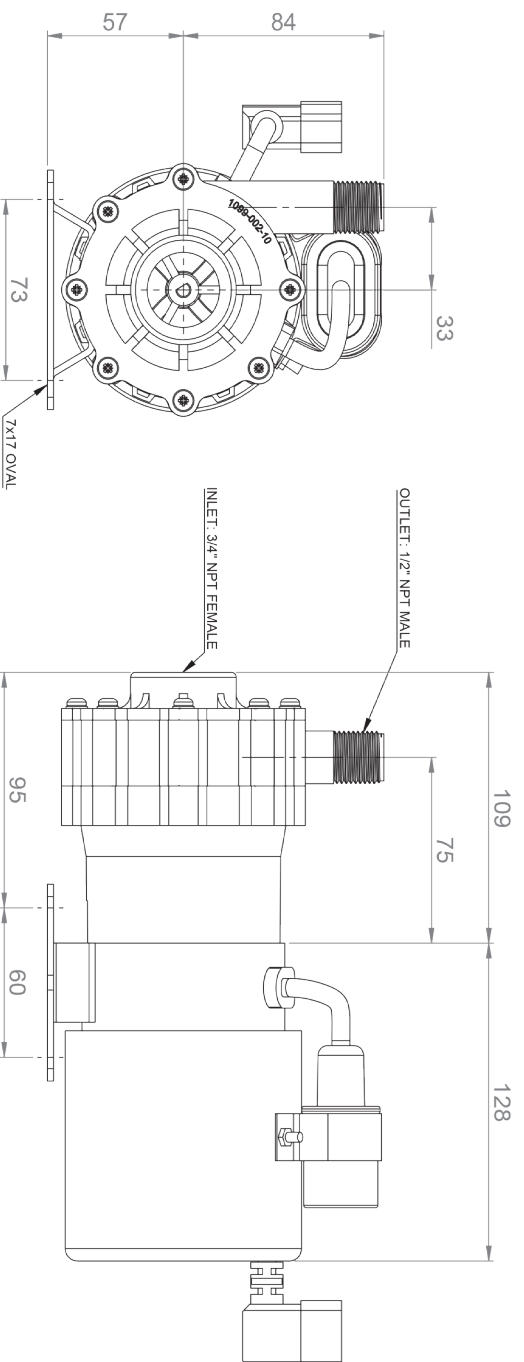


AC-4P-MD

MAGNETICALLY DRIVEN, SINGLE-STAGE CENTRIFUGAL

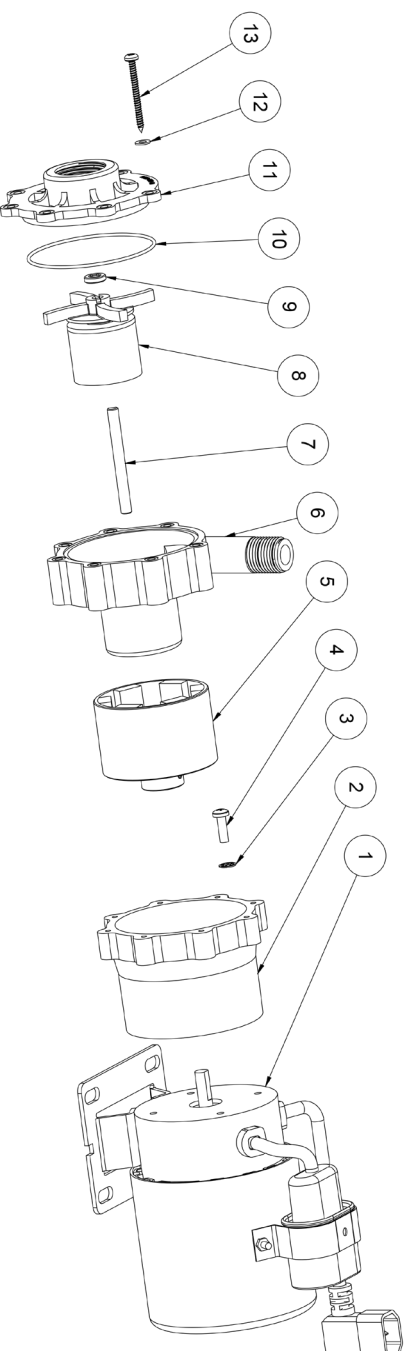


DIMENSIONS



ALL DIMENSIONS GIVEN ARE IN MM

PARTS LIST



REF	DESCRIPTION	CODE	REF	DESCRIPTION	MATERIAL
1	Motor	UE96-915-00C	8a	Impeller	0145-011-01
2	Motor Bracket	0001-050-UK	8b	Impeller Encapsulated	0145-033-02
3	Bracket Fixing Washers	0135-200-UK	9	Thrust Washer	0130-028-UK
4	Bracket Fixing Screws	0130-100-UK	10	O Ring	5020-125-31
5	Drive Magnet	0145-027-UK	11	Front Cover	1099-002-10
6	Pump Housing	0150-031-01	12	Housing Washer St/St	0150-200-UK
7	Spindle	0130-024-UK	13	Housing Screw St/St	0150-100-UK

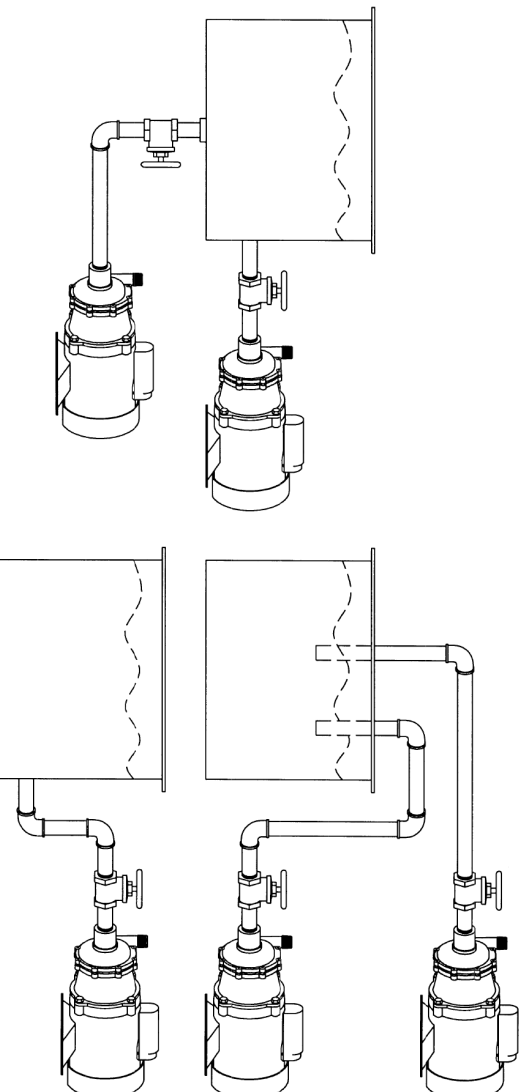


GENERAL INSTALLATION INSTRUCTIONS



GENERAL

- ☑ The pump should be mounted horizontally on a foundation and secured by anchor bolts
- ☑ Install the pump as near to the fluid source and as low as possible. The pump **inlet must be flooded**. When using an elbow, valve, etc. the inlet must have straight piping in length at least 5 times the diameter of the pipe.
- ☑ Inlet piping should not be smaller than the pump inlet size and preferably one size larger than the pump inlet. Ensure consistent pipe diameter from the fluid vessel to the pump inlet where possible. Reduce pipe size diameter, rather than increasing, when necessary and adhere to previous rules.
- ☑ Piping and valves should be independently supported. Do not allow the pump to support the weight of the piping.
- ☑ All inlet piping should be direct and short as possible with as little bending as possible. Excessive bending and pump inlet length will lead to flow distortion and pump cavitation.
- ☑ Available NPSH should exceed 120% of the pump required NPSH. Contact March May for clarification and pump requirements.
- ☑ Inlet velocity should not exceed 2 meters per second. Viscous and hot liquids will have an effect on velocity.
- ☑ If reducers or increasers are necessary, caution is required to ensure trapped air does not occur.
- ☑ Use a vacuum gauge in the inlet line and it should be as close as possible to the pump inlet. This is for the monitoring of pump performance whilst in operation.
- ☑ Ball valves may be installed on the inlet side to allow for maintenance and service. Never use the valve to limit flow into the pump
- ☑ Negative suction or suction lift is not recommended and should not be used. See illustration below



CORRECT

INCORRECT

- ☑ Suction pressure: Systems utilising high suction pressure where a pump is used to boost system pressure is of a concern. Be sure that the pressure does not exceed that of the pump design, otherwise severe damage and possible operator injury may occur
- ☑ If checking the system for leaks with air, do not exceed 1.4 Bar if plastic pumps are attached





GENERAL INSTALLATION INSTRUCTIONS

DISCHARGE

- ❑ All discharge pip size should be determined by flow velocity, which should not exceed 4.6 meters per second.
- ❑ A throttling valve should be installed for flow and pressure control. Caution - location of check valves on long discharge piping, high static discharge of 15.2 meters or more and tow or more pumps used on the same common piping.
- ❑ Install discharge pressure gauge to monitor performance during operation.
- ❑ Connect electrical power to the motor in accordance with motor manufacturer's nameplate instructions. Contact March May for clarification where required

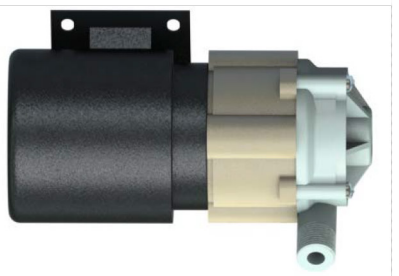
PUMP INSTALLATION

- ❑ Before running, ensure that all centrifugal pumps are primed as they have limited suction capabilities.
- ❑ Pumps should be installed on a flat, stable surface or supports which are suitable to prevent movement of the pump and motor when in operation. It is advisable to mount the motor on dampening/insulation surface to reduce noise and vibration caused by the moving components whilst in operation.
- ❑ Always ensure that the outlet port is higher than the inlet port. This allows a path for the air to escape through. If the outlet is positioned incorrectly, the air can become trapped and may cause problems within the system. See below for examples of correct and incorrect set up.



CORRECT

- ❑ The pump should never be mounted vertically with the pump head at the lowest point. This will create an air pocket within the pump chamber and may cause problems.



INCORRECT

CORRECT

INCORRECT



GENERAL INSTALLATION INSTRUCTIONS



DISCHARGE

- ☑ All discharge pip size should be determined by flow velocity, which should not exceed 4.6 meters per second.
- ☑ A throttling valve should be installed for flow and pressure control. Caution - location of check valves on long discharge piping, high static discharge of 15.2 meters or more and tow or more pumps used on the same common piping.
- ☑ Install discharge pressure gauge to monitor performance during operation.
- ☑ Connect electrical power to the motor in accordance with motor manufacturer's nameplate instructions. Contact March May for clarification where required

OPERATION

- ☑ Check the pump for proper rotation by allowing fluid into the pump (ensuring a flooded inlet) and turning power to the motor on and off in quick succession. If the motor is not rotating in correct direction, the leads should be changed to conform to the motor manufacturer's nameplate. Improper direction reduces performance of the pump.

-CAUTION-

- ☑ Do not run the pump without liquid. Be sure the pump chamber is completed flooded. If the pump is run dry, excessive heat will occur damaging internal parts and could result in operator injury.
- ☑ Open inlet valve completely.
- ☑ Open discharge valve slightly (crack).
- ☑ Observe all connections for leaks. If a leak occurs, close all valves and repair all leaks before further operation.
- ☑ Start Motor
- ☑ Open discharge valve gradually until desired flow and pressure is attained.

-CAUTION-

IF DISCHARGE VALVE IS FULLY OPEN ON START UP, DECOUPLING COULD
OCCUR OR MOTOR OVERLOAD IS POSSIBLE

- ☑ Operating the pump for excessive periods of time at shut off (discharge valve fully closed) or at near shut off conditions could cause the liquid to rise in temperature which could cause failure of internal parts and failure of pump.
- ☑ Flow rates should be controlled by the discharge valve only, never by the suction valve.
- ☑ Electrical operation is also critical. High or low voltage could have an effect on pump performance. Caution - Refer to motor specification on high/low voltages limits, contact March May for clarification.



SAFETY INSTRUCTIONS & PREVENTATIVE MAINTENANCE



HEALTH PRECAUTIONS

Magnetic drive pumps utilise magnets. any individuals with pacemakers, implanted defibrillators, electronic medical devices, metallic heart valves, or sickle cell anaemia should consult a health care professional before working with these pumps.

The pumps may be heavy, please refer to manual handling guidance before lifting and/or moving a pump

UNPACKING

Unpack the pump and/or its parts and check for signs of shipping damage. If damage is detected, take pictures and contact March May for further assistance. Check that all ordered parts are included.

Do not remove labels on the motor and/or on the exterior of the pump. Information provided on these labels, help identify the pump and its construction. Removal of such labels also voids the warranty of the pump.

For stainless steel pumps, the impeller, thrust washer, and shaft are packed separately.

INSTALLATION/OPERATION PRECAUTIONS

Installation of Complete Pump

Pumps should be securely fastened. Install the motor per local and national electrical codes. Always ground the pump motor. Only use the specified voltage listed on the nameplate, do not operate the pump with a different voltage then specified on the motor nameplate. Do not exceed the service factor of the motor. Do not cover the motor. Check all electrical connections with the wiring diagram found on the motor.

Most pumps supplied by March May are not self-priming. For pumps that are not self-priming, liquid must flow naturally to the pump. Do not operate the pump until the liquid is inside of the pump. **Never run the pump dry.**

If the pump is to be used in a hazardous environment, contact March May for **ATEX** solutions.

Do not submerge the pump, unless pump is suitable for submersion.

For further instruction, see our General Installation Guide

Operation

The pump has moving parts when in operation. Follow local safety standards for locking out the motor during assembly and disassembly.

The pump may be used for the transferring of various chemicals. Always wear the appropriate personal protective equipment (including protective eye care, gloves, clothing, etc.) and follow safety procedures during the operation of the pump.

Do not operate with a closed suction or discharge valve. Do not start with a closed suction valve.

The wet end and/or motor may become hot during operation. Ensure all parts are cool to the touch prior to handling the pump.

Always check with March May before pumping any liquids with solids.





SAFETY INSTRUCTIONS & PREVENTATIVE MAINTENANCE

Maintenance

March May has not established a general preventative maintenance schedule for its pumps, due to each application presenting its own specific conditions. The pump should be checked upon installation, first use, and monitored once a week. If any abnormality is detected concerning vibration, noise, electric current, flow or head rate, turn off the pump immediately and inspect the pumps individual parts.

The pump should be periodically inspected for wear on the impeller bushing. The frequency of the inspection should be determined by the customers own maintenance schedule.

Follow motor lubricating oil instructions as found on the motor label. (Not every motor requires lubrication)

During routine maintenance, ensure all bolts are still securely fastened

Ensure pumps are kept clean by removing all excessive dust and particles. Do not clean the exterior of the pump with any flammable solvents.

ASSEMBLY / DISASSEMBLY

Magnets

Magnets on specific models may be strong enough to pull the wet end and motor end quickly together during assembly or disassembly.

WARNING: Do not put fingers between the two mating surfaces (between impeller magnet and/or impeller vanes and the pump housing) during assembly or disassembly. Caution must be taken when assembling or disassembling any pump.

Assembly

Contact March May for proper assembly procedure concerning the drive magnet and motor bracket.

Exercise caution when removing impellers on all models of pumps, but especially on larger pumps due to the strong magnetic forces between the impeller magnet and the drive magnet. When handling the impeller, hold onto the out diameter of the impeller vanes with both hands and gently engage the impeller into the magnetic field. Hold the impeller firmly to resist the magnetic attraction. Keep magnets away and free of any metal chips and particles.

Do not over-tighten fasteners. Contact March May for appropriate torque levels.

Care must be taken that the O Ring sits in its respective groove appropriately. Ensure the O Ring does not get pinched or nicked as this may comprise the integrity of the pump chamber resulting in a leak.

Before connecting the power, rotate the motor fan to ensure there is not binding or rubbing of the drive magnet against the rear housing.

Disassembly

Disconnect the power from the pump, and drain the pump (see "draining the pump" section)

After draining, separate front cover from the pump housing. Ensure that no liquid is present on any parts.

Separate the parts, exercise caution in removing the impellers on all pumps (as previously outlined in this document)





SAFETY INSTRUCTIONS & PREVENTATIVE MAINTENANCE

If any part appears damaged or defective, take pictures and contact March May.

Individual parts are listed on the appropriate datasheet, for confirmation please contact March May.

Shut Down Procedure

1. Disconnect the power/turn off motor
2. Carefully close the discharge valve
3. Close the suction valve

*Caution must be exercised with automated valves

Draining the Pump

4. Wear appropriate safety gear
5. Disconnect the power
6. Close suction and discharge valves
7. Remove pipe/hose/tube from the inlet and discharge of the pump
8. Unscrew/Untighten the fasteners from the wet end assembly
9. Direct outlet downward and into appropriate container

NOTE: Observe local laws and regulations with regards to the handling and disposing of hazardous liquids. DO not get motors wet. Not all motors are dust proof or submersible proof.

TROUBLESHOOTING

General Notes

- ☑ Liquids containing ferrous metal fines should not be pumped.
- ☑ If magnets decouple, stop the pump. Running the pump with the magnets decoupled will weaken the magnets.

Lack of Flow/Head

- ☑ Check for air leaks in suction piping
- ☑ Make sure that the pump is primed correctly and not running dry
- ☑ System head higher than anticipated
- ☑ Make sure all valves are open
- ☑ Viscosity or specific gravity is too high
- ☑ Suction lift too high or insufficient NPSH
- ☑ System may be clogged
- ☑ Motor rotation incorrect
- ☑ Air in liquid

Loss of Prime

- ☑ Leaks in piping or air in liquid
- ☑ Foot valve problems
- ☑ Foreign objects in liquid
- ☑ Suction lift too high or insufficient NPSHa





SAFETY INSTRUCTIONS & PREVENTATIVE MAINTENANCE

Excessive Power Consumption

- ☒ Head lower than rating
- ☒ Too much flow
- ☒ Specific gravity too high
- ☒ Viscosity too high

Vibration/Noise

- ☒ Motor not properly secured
- ☒ Piping not properly secured
- ☒ Pump cavitation from improper suction
- ☒ Drive magnet rubbing against pump housing

OTHER

For further information on temperature ratings, pressure ratings, horsepower, and NPSHr, utilise the pump's specific pump manuals and performance curve. Contact March May for further assistance when required.

Always follow the recommendations of March May staff for chemical compatibility.

