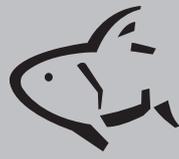


Moray



Aqua One[®]

Aquarium Pumps

Inspiring Excellence in Fish Keeping!



www.aquaone.com.au

Contents, Inhalt, Contenu, Inhoud

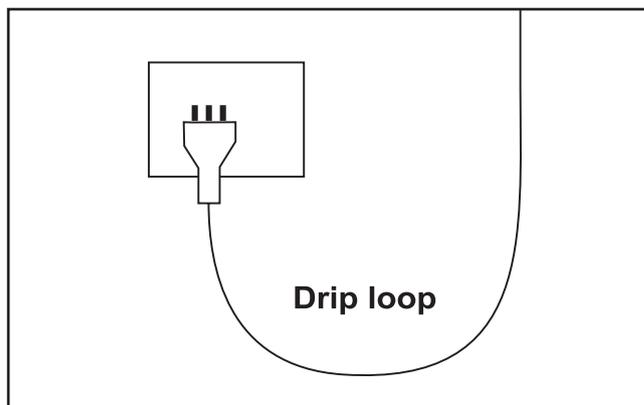
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Important Safeguards

To guard against injury, basic safety precautions should be observed, including the following:

1. Read and follow all safety instructions and important notices in these instructions as well as on the product itself.
2. This appliance is not intended for use by children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
3. To avoid possible electric shocks, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations do not attempt repairs yourself. Return the appliance to an authorised service facility for service or discard the appliance.
 - a. If the appliance or any electrical component of the appliance (non-immersible equipment only) falls into the water or gets wet, do not reach for it. Unplug it and then retrieve it.
 - b. If the appliance shows any sign of abnormal water leakage, immediately unplug it from the power source.
 - c. Carefully examine the appliance after installation. It should not be plugged in if there is water on parts which are not intended to be wet.
 - d. Do not operate the appliance if it has a damaged cord or plug, or if it is malfunctioning, or dropped or damaged in any manner.
4. A "drip loop" (see graphic) should be arranged for each cable connecting an aquarium to a power supply. The drip loop is the part of the cable below the level of the power supply. It prevents water travelling down the cable and coming into contact with the power supply. If the plug or the socket does get wet, do not unplug the appliance. Disconnect the fuse or circuit breaker that supplies the power to the appliance, then unplug and examine for presence of water in the socket.
5. Always unplug the appliance from the electrical outlet when not in use, before putting on or taking off parts, before any type of maintenance or cleaning.
6. Never yank the cable to pull it from the socket. Pull the plug carefully to disconnect.
7. Do not use the appliance for reasons other than the intended use. The use of attachments that are not recommended or sold by the manufacturer may cause the product to be unsafe. This is not recommended.
8. Do not install or store the appliance where it will be exposed to weather or temperatures below freezing.
9. Make sure any component mounted on a tank is securely installed before operating it.
10. Ensure input voltage is the same voltage as your local power supply.
11. If an extension cable is used it should have the proper rating. Care should be taken to arrange the cord so that it will not be tripped or pulled.
12. A G.F.C.I (Ground fault circuit interrupter) & surge protector is recommended for all electrical appliances.
13. Ensure your hands are dry when turning the power switch on/off and when inserting/removing the power cable from the socket.
14. If you are in any doubt about the electrical installation or safety of this product you must consult a qualified electrician.



For Guarantee Conditions, please refer to the Guarantee form that is enclosed with this product.

All products are supplied with fitted plugs. This plug should not be tampered with in any way or removed. Removal or tampering with the plug invalidates our guarantee offered with this product.

For UK a 3 pin adaptor is supplied with the product and this must be used.

Before First Use / Preparation

Read and follow all the instructions, even if you feel you are familiar with the product and find a place to keep the instructions handy for future reference. Your attention is drawn particularly to the sections concerning **“IMPORTANT SAFEGUARDS”** and the **“GUARANTEE CONDITIONS”**. Please ensure you retain your original purchase receipt in the event that guarantee service is required.

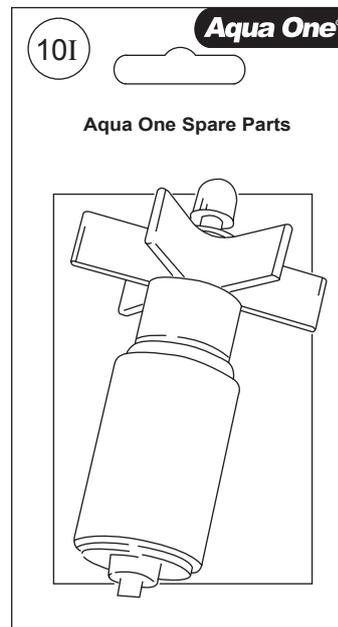
Carefully unpack the product making sure you keep all the packing material until all the parts of the product have been found and the product has been assembled.

This product is shipped to you in a factory sealed carton. Should the product malfunction in any way or if the unit is damaged and requires replacement, contact the retailer where the product was purchased for inspection.

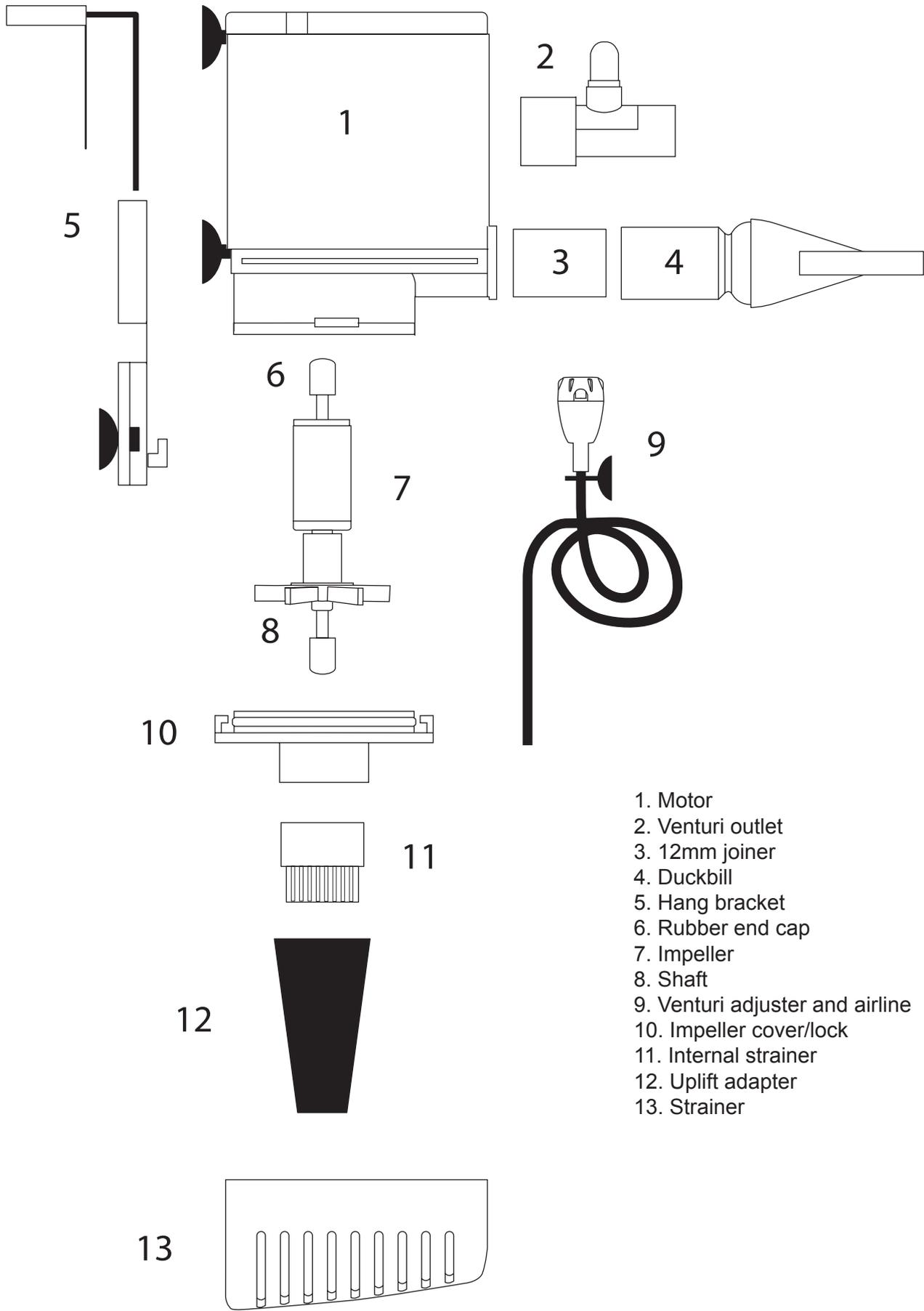
Replacement Parts & Filter Media

Use Aqua One Genuine Spare Parts Only. See your local Aqua One Dealer and look for the number listed below for the spare part you require. Alternatively you will find these numbers on the silver label located on the product.

Moray 360/480 Impeller	10i
Moray 1300 Impeller	12i
Moray 2300 Impeller	14i
Moray 3600 Impeller	17i-N
Moray 4900 Impeller	18i-N
Moray 1300 Sponge	12s
Moray 2300 Sponge	13s
Moray 3600/4900 Sponge	17s

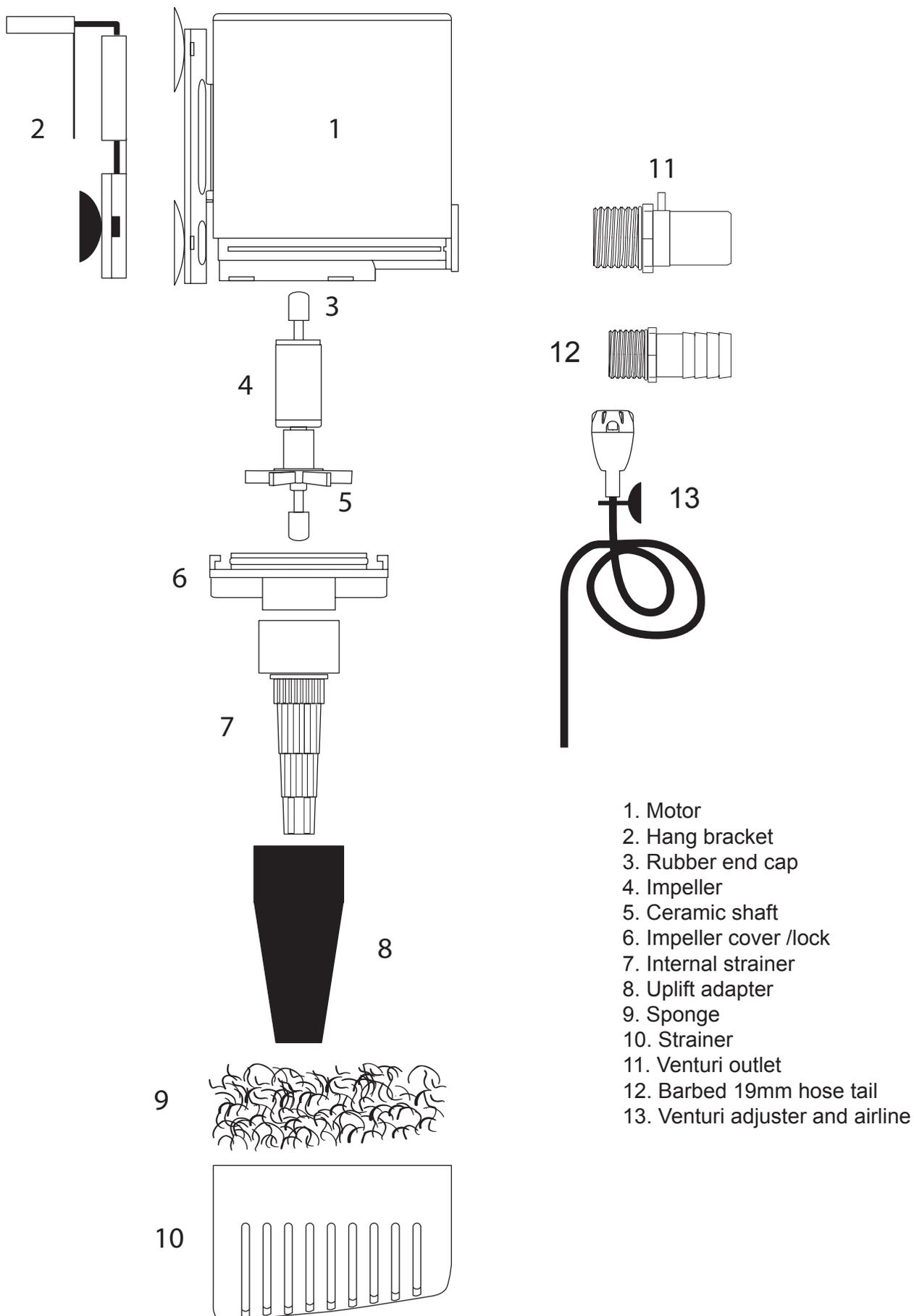


Know Your Pump: Moray 360/480



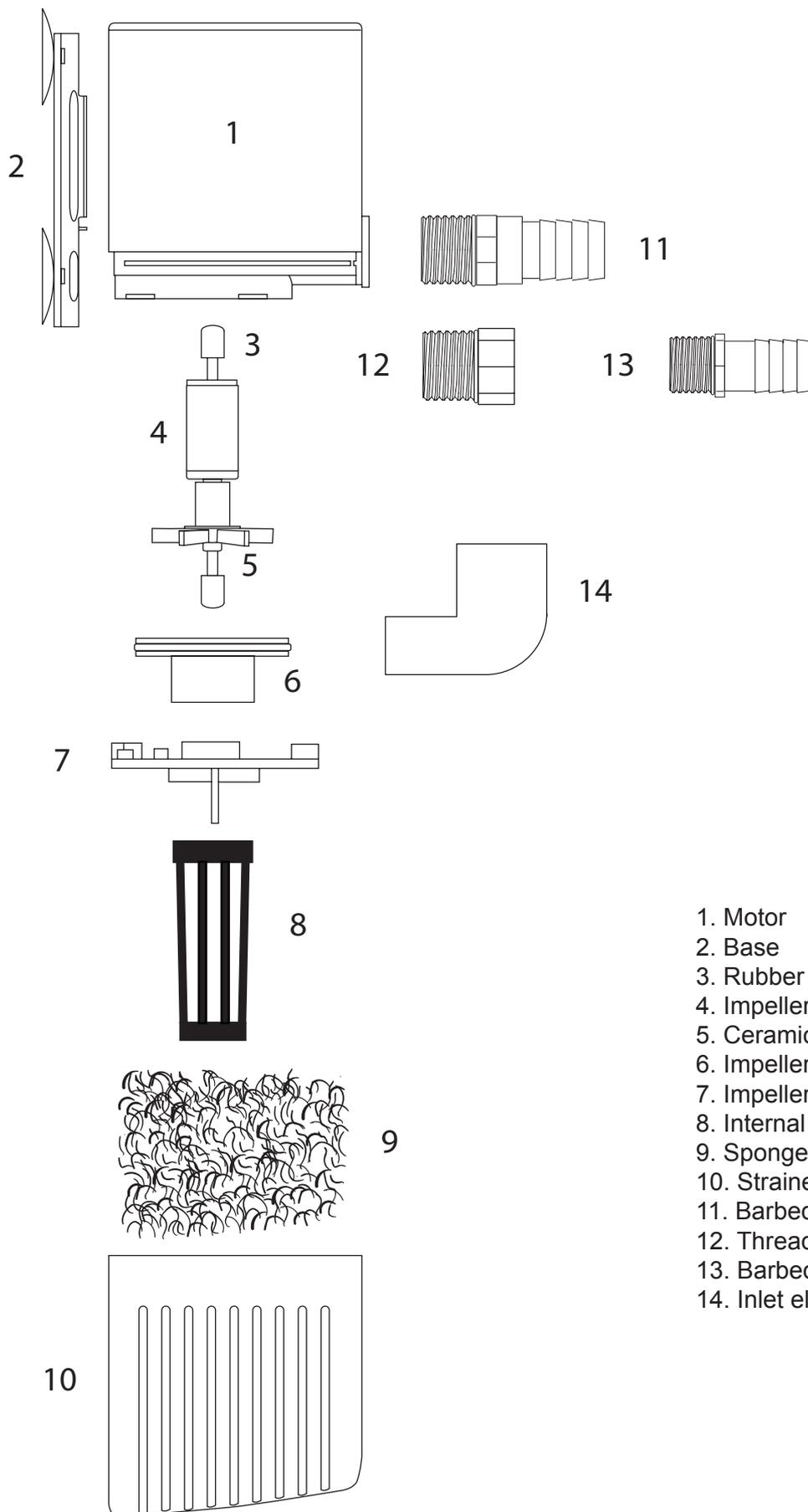
- 1. Motor
- 2. Venturi outlet
- 3. 12mm joiner
- 4. Duckbill
- 5. Hang bracket
- 6. Rubber end cap
- 7. Impeller
- 8. Shaft
- 9. Venturi adjuster and airline
- 10. Impeller cover/lock
- 11. Internal strainer
- 12. Uplift adapter
- 13. Strainer

Know Your Pump: Moray 1300



- 1. Motor
- 2. Hang bracket
- 3. Rubber end cap
- 4. Impeller
- 5. Ceramic shaft
- 6. Impeller cover /lock
- 7. Internal strainer
- 8. Uplift adapter
- 9. Sponge
- 10. Strainer
- 11. Venturi outlet
- 12. Barbed 19mm hose tail
- 13. Venturi adjuster and airline

Know Your Pump: Moray 2300/3600/4900



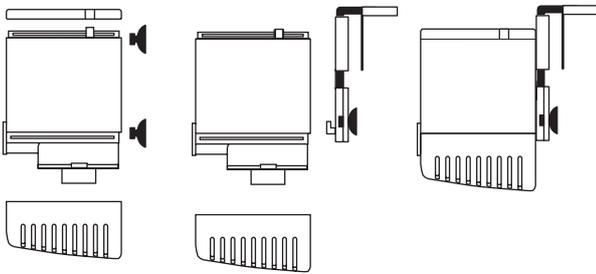
- 1. Motor
- 2. Base
- 3. Rubber end cap
- 4. Impeller
- 5. Ceramic shaft
- 6. Impeller cover
- 7. Impeller lock
- 8. Internal strainer
- 9. Sponge
- 10. Strainer
- 11. Barbed 25mm hose tail (3600/4900)
- 12. Threaded reducer (3600/4900)
- 13. Barbed 19mm hose tail
- 14. Inlet elbow (3600/4900)

Installation: 360/480/1300

The 360, 480 or 1300 series Morays can be mounted in 2 different ways and used for a variety of applications. All 3 models come with uplift pipe adapters enabling them to be used as an alternative to air driven systems on under gravel filters. Refer to the “know your pump” section at the front of this instruction booklet for part identification.

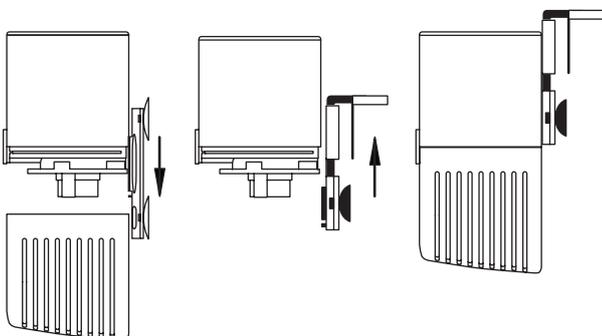
Attaching the hang bracket: 380/480 series

1. Remove the top motor cover and the strainer.
2. Remove the 4 suction cups.
3. Insert the hang mount into the 2 holes at the strainer end of the motor
4. Place the top motor cover and the strainer (If being used) back into position.

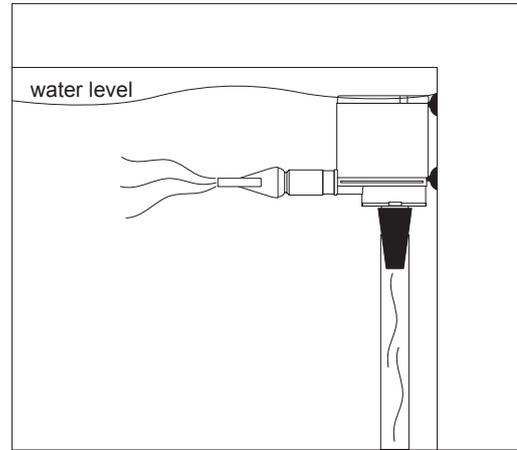


Attaching the hang bracket: 1300 series

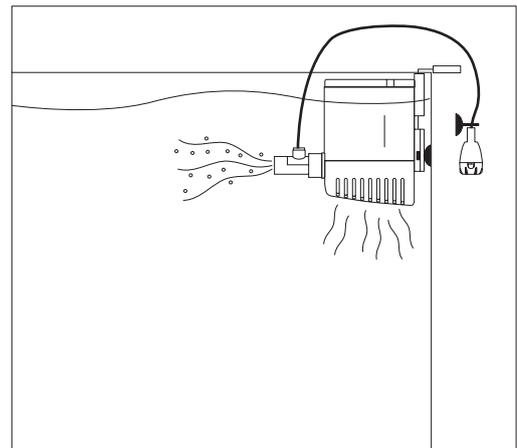
1. Remove the strainer and slide the base plate out towards the impeller.
2. Slide the hang mount into the groves at the back of the pump.
3. Replace the strainer. (If being used)



They are also provided with multiple outlet options.



1. Duckbill or multi directional outlet: allows the water to be channelled a variety of different directions. Good for providing water flow to static areas of the aquarium, thus reducing waste build up.



2. Venturi: for injecting bubbles into the aquarium. The venturi adjuster allows the water to air ratio to be adjusted by the user.

3. A 19mm barbed hose tail is also provided with the 1300 series pump. This can be used for running devices such as protein skimmers. 2300, 3600 and 4900 series pumps are dedicated sump pumps. They are provided with 19mm and 25mm barbed hose tails. They can be used for many other purposes such as running external filtration devices or simply circulating water.

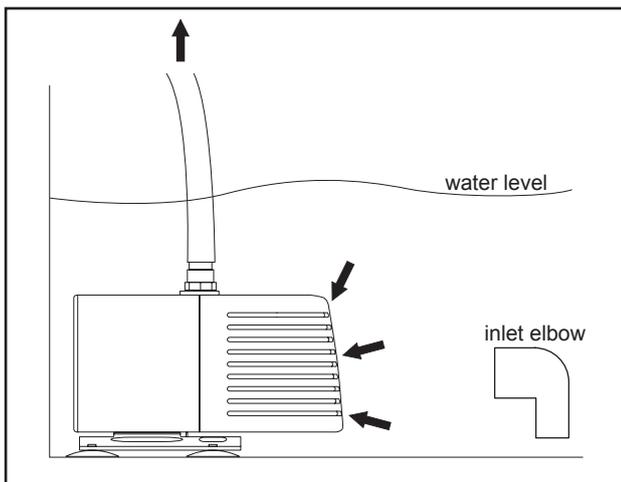
Installation 2300-4900

Before installation ensure the correct materials have been prepared and the most suitable pump position has been selected. As with all water pumps, the greatest flow efficiency will be created through the shortest length of pipe/hose and with the fewest number of bends. Avoid reducing the size of the plumbing as this will greatly reduce flow.

Note: flow is reduced less through 2 x 45° bends than through a single 90° bend.

Flexible hose is recommended over rigid pipe as this will reduce vibration of the pump. If using rigid plumbing, a short piece of flexible hose between the pump and the pipes will help to reduce vibration.

If there is a requirement to adjust the flow on your pump, it is essential that in-line taps are used only on the pressure (outlet) side of the pump. Restriction of the suction (inlet) side of the pump can cause the motor to overheat causing damage to the pump.



It is recommended that the strainer is used to prevent fish or large objects from entering the motor unit and damaging the impeller. Ensure the pump is fully submerged to prevent air from entering the pump which can result in significant loss of flow and potentially cause damage to the motor.

If the pump is being used in a clean, animal free environment the inlet elbow can be used. This gives the pump the ability to pick up water from a lower point reducing the risk of the pump running dry. NOTE: it is always recommended that the pump be fully immersed in water to avoid the unit overheating.

Maintenance

If these pumps are being used in salt water, they must be checked regularly for buildup of calcium and other deposits.

To maximise the life of your pump, it is recommended to clean the pump casing and the impeller every 6-8 weeks or earlier if flow has decreased significantly.

Prior to cleaning, disconnect the pump from the electrical power supply.

The casing of the pump and the strainer can be cleaned with a firm brush. DO NOT USE DETERGENTS AS THE USE OF THESE WILL BE POTENTIALLY LETHAL TO AQUARIUM INHABITANTS. Any objects on or around the strainer or inlet should be removed to prevent potential blockages in the pump or damage to the impeller.

Troubleshooting

LOW WATER FLOW

1. Check strainer, impeller and impeller chamber for calcium buildup or other deposits or blockages.
2. Ensure all taps or flow control valves are fully open.
3. Clean plumbing lines to and from the pump.

NO WATER FLOW

1. Ensure all taps or flow control valves are fully open.
2. Check that maximum head height has not been exceeded. Consider all bends and horizontal plumbing when calculating head height.
3. Check impeller and shaft for damage.

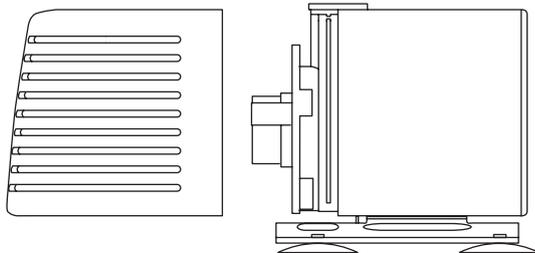
PUMP IS NOISY

1. Ensure suction cups are correctly positioned.
2. Check for blockages on the pump inlet. Restriction of inlet can cause vibration.
3. Check for damage to impeller or shaft.

Accessing The Impeller

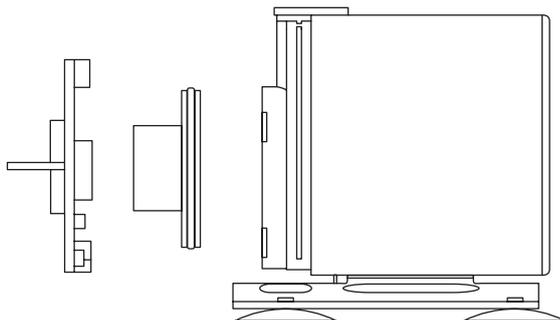
1. Turn the pump off at the main power supply and remove it from the water.

2. Remove the strainer cover from the front of the pump. To do this hold the motor with one hand and simply pull the cover away from the motor.

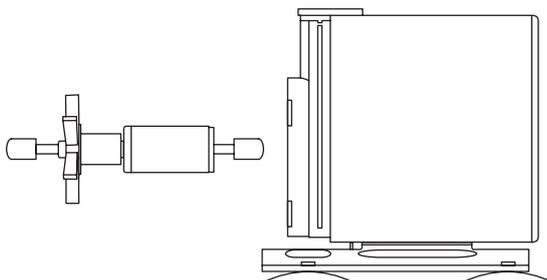


3. Now you must remove the impeller cover. Turn the impeller cover lock anti clockwise and remove.

4. Pull the impeller cover away from the motor. This will be a tight fit.

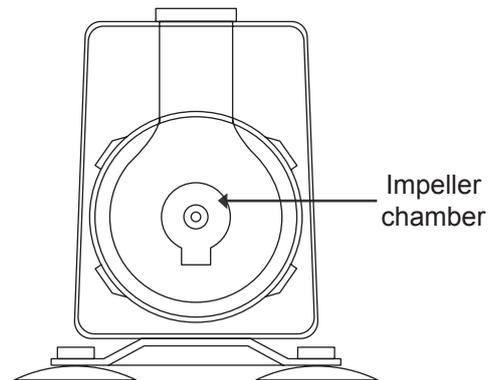


5. Clasp the impeller blades with needle nose pliers and slowly pull the impeller from the impeller chamber.



6. Clean impeller under warm running water. Do not use soap or detergent. Remove the rubber end caps and ceramic shaft and run clean water through the hole in the centre of the impeller.

7. Use an Aqua One double ended pipe brush to clean the impeller chamber thoroughly. (Where the impeller sits in the motor)



8. Please ensure the impeller chamber is free from debris before reassembling the pump, failure to do so could damage your pump.

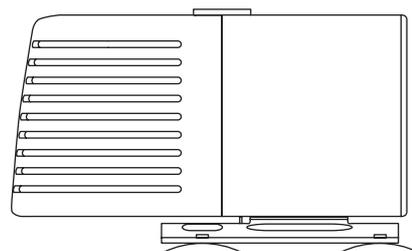
9. Ensure both rubber end caps are in the correct position. If they do not come out when the impeller is removed one should be in the impeller chamber and the other in the impeller cover. Failure to position them correctly will result in your pump being damaged.

10. Do not force the unit back together as the ceramic shaft may break. If it does not reassemble easily check the position of the rubber end caps, ceramic shaft and impeller.

11. Check the sponge. Rinse under tap water to remove any built up which may have accumulated on it. If the sponge shows signs of deterioration replace it. Note: the 360 and 480 series pumps do not include sponges.

12. Reassemble in reverse order; ensure an aquarium safe lubricant is used to lubricate the O-ring on the impeller cover.

13. Prior to reinstalling the unit into your aquarium or filter, ensure your hand is dry and there is no water on any part of the pump which is not intended to have water on it. Plug the pump in and turn on to ensure the pump is working correctly.



2300 - 4900 shown. Other models differ slightly, see Know you pump for further details

Specifications

Pump Model: Moray 360
Maximum Flow Rate: 600L\hr
Maximum Head Height: 0.86m
Power Requirements: 220 ~ 240V
Power Consumption: 6.5W
Suitable: Cold water, Tropical, Marine

Pump Model: Moray 480
Maximum Flow Rate: 720L\hr
Maximum Head Height: 0.96m
Power Requirements: 220 ~ 240V
Power Consumption: 8.5W
Suitable: Cold water, Tropical, Marine

Pump Model: Moray 1300
Maximum Flow Rate: 1100L\hr
Maximum Head Height: 1.4m
Power Requirements: 220 ~ 240V
Power Consumption: 14.6W
Suitable: Cold water, Tropical, Marine

Pump Model: Moray 2300
Maximum Flow Rate: 2200L\hr
Maximum Head Height: 2.2m
Power Requirements: 220 ~ 240V
Power Consumption: 30W
Suitable: Cold water, Tropical, Marine

Pump Model: Moray 3600
Maximum Flow Rate: 3600L\hr
Maximum Head Height: 3.4m
Power Requirements: 220 ~ 240V
Power Consumption: 79W
Suitable: Cold water, Tropical, Marine

Pump Model: Moray 4900
Maximum Flow Rate: 4800L\hr
Maximum Head Height: 3.6m
Power Requirements: 220 ~ 240V
Power Consumption: 100W
Suitable: Cold water, Tropical, Marine

Disposal of used Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)



This symbol on the product or on its packaging indicates that the product must not be disposed of with normal household waste. Instead, it is your responsibility to dispose of your waste equipment by arranging to return it to a designated collection point for the recycling of waste electrical and electronic equipment. By separating and recycling your waste equipment at the time of disposal you will help to conserve natural resources and ensure that the equipment is recycled in a manner that protects human health and the environment. For more information about recycling this product, please contact your local city office, your household waste disposal service or the shop where you have purchased the product.

Aqua One - Guarantee 2 + 1 Year

The additional 1 Year **Extended Guarantee** applies when you REGISTER online with Aqua One. Register your Extended Guarantee at www.aquaone.com.au

About this Guarantee

The Manufacturer or Distributor, of Aqua One goods, is collectively known herein as "Aqua One". Please refer to contact details for Aqua One below or on the applicable Aqua One website. Any product that is covered by its own Guarantee (as enclosed with the product) is subject to the conditions of that Guarantee.

The benefits given to the purchaser, under Guarantee, are in addition to all other statutory rights and remedies which the purchaser has in respect of goods under legislation in the applicable country of purchase. This Guarantee shall not affect any such rights and should be read subject to such legislation.

1.0. Terms and Conditions of Guarantee.

- 1.1. Aqua One warrants to the purchaser, for 2 Years from date of original purchase, to repair or replace goods where fault is found due to defective materials or faulty workmanship and where goods do not operate in accordance with the instructions.
- 1.2. All claims for repair or replacement must be made at place of purchase.
- 1.3. The original and dated Proof of Purchase (receipt) must be supplied with all goods claims. Please also provide this Guarantee where possible.
- 1.4. The Guarantee covers the Aquarium against gluing breakdown resulting in leakage.
- 1.5. All goods subject to claim under Guarantee should be prepared for transportation in the original packaging or other comparable packaging which offers the same degree of protection.
- 1.6. Where goods are repaired or replaced under Guarantee, these goods are Guaranteed for the remainder of either the original Guarantee or Extended Guarantee period.
- 1.7. Where claims on inspection reveal goods are in normal working order, Aqua One will request reimbursement of all reasonable costs incurred.

2.0. Other Terms and Conditions – Extended Guarantee

- 2.1. The Extended Guarantee period is for an additional 1 Year and commences on expiration of the standard guarantee period.
- 2.2. Application for Extended Guarantee is FREE of any registration cost to the purchaser on completion of the Extended Guarantee questionnaire which is found on the applicable Aqua One website (refer below).
- 2.3. Upon receipt and acceptance of the questionnaire, Aqua One will forward (by way of email) a Certificate of Extended Guarantee to the purchaser.
- 2.4. For more information on how we collect, hold, use and disclose personal information provided to us, please refer to our Privacy Statement on the Aqua One websites or write to our Privacy Officer, in your country of purchase.
- 2.5. Where Aqua One determines goods are being used in a manner contrary to the instructions, specifications or this Guarantee, Aqua One reserves the right to terminate Extended Guarantee for such goods and will provide written notice to the purchaser.

3.0. Exclusions and Limitations

Where permitted by local law, the following exclusions and limitations apply in regard to Guarantee:

- 3.1. Goods claims where fault is due to, but not limited by a) misuse b) neglect c) abuse d) fire or flood e) normal wear and tear f) accidental breakage g) Acts of God h) mains voltage fluctuation or supply problems i) connection to any voltage other than what is stated on the rating plate j) modification or tampering to electrical cord or plug, k) vermin, insects or foreign object l) liquid spillage or submersion of goods not designed to sustain such use or duress.
 - 3.2. Where inspections reveal goods are in normal working order including where noise or vibration is consistent with normal goods operation.
 - 3.3. Attempted repairs or modifications by unauthorised persons, including but not limited to the drilling of holes in the aquarium glass by unauthorised persons.
 - 3.4. Where the goods factory rating plate has been removed, altered, damaged or is rendered illegible.
 - 3.5. Where goods are not installed, operated or maintained in accordance with Aqua One's goods instructions, specifications or this Guarantee.
 - 3.6. Replacement or repair of worn consumables or replacement of lost goods, parts or components.
 - 3.7. Costs associated with goods transportation, removal, installation, postage or cost of insurance.
 - 3.8. Any damage incurred whilst installing, transporting or moving the goods.
 - 3.9. Subject to certain local statutory rights and obligations to the contrary, and this guarantee shall not affect those rights or obligations, where, to the full extent permitted by law: 1. all express and implied warranties and conditions under statute or general law, are expressly excluded and Aqua One, where permitted, will limit liability as follows and at Aqua One's option to: in regard to goods either a) the replacement of goods or supply of equivalent goods b) the repair of goods or the cost of replacing the goods or of acquiring equivalent goods OR in regard to services either c) the re-supply of services d) the cost to re-supply services.
2. Aqua One will not be liable for any loss or damage, including consequential loss or damage either directly or indirectly, or for any incidental expenses, of any kind, and in any way whatsoever.

The additional 1 Year Extended Guarantee applies when you REGISTER online with Aqua One. Register your Extended Guarantee at www.aquaone.com.au

(1) Consumables include items such as filter media/cartridges, impellers and shafts.

Aqua One may be contacted in:
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 PO Box 863, Ingleburn
 1890 NSW Australia
www.aquaone.com.au