

EVO12404201MAN

UK/EU English

EVOLUTION
AQUA

INNOVATION IN WATER


airpump™

High performance air pump

INSTALLATION AND OPERATING MANUAL

WARNING: PLEASE READ THE FOLLOWING SAFETY INFORMATION FIRST.

IMPORTANT SAFETY INFORMATION

- DO NOT cover this unit.
- Always isolate the unit from mains electricity before carrying out any maintenance.
- Always disconnect all pond appliances from the mains supply before putting your hands into the water.
- Use in the area of the garden pond only if the installation complies with the relevant wiring regulations.
- Power must be supplied through a Residual Current Device (RCD) with a residual operating current not exceeding 30mA.
- This unit must be earthed when earth wire is fitted.
- Never use a fuse larger than 3 amps on the power lead.
- The unit must not be submerged in water.
- The unit must be either fully frost protected or taken inside during Winter months.
- Young children should always be supervised near water.
- To avoid possible equipment electric shock, special care should be taken when the pump is used as aquarium equipment. For each of the following situations, do not attempt repairs yourself, return the air pump to an authorised service facility for servicing, or discard the pump.
 1. If the pump falls into the water, DO NOT REACH FOR IT. First unplug the pump, and then retrieve it. If the pump's electrical components get wet, unplug the pump immediately.
 2. Carefully examine the air pump after installation. It should NOT be plugged in if there is water on parts that are not intended to be wet.
 3. DO NOT operate if the cord or plug is damaged, or if the pump is malfunctioning, dropped, or damaged in any way.
 4. To prevent the plug or electrical outlet getting wet, position the aquarium tank and stand to one side of a wall mounted outlet. A "drip loop" should be arranged for each cord connecting an air pump to an electrical outlet. The "drip loop" is that part of the cord below the level of the outlet or connector if an extension cord is used. The "drip loop" prevents water travelling along the cord and coming into contact with outlet. If the plug or outlet does get wet, DO NOT UNPLUG THE CORD; disconnect the fuse or circuit breaker supplying power to the pump. Then unplug and examine for the presence of water in the outlet.
 5. DO NOT use the pump near volatile liquids such as gasoline, thinners, etc as this creates the possibility of an explosion.
 6. Built in safety switch system automatically shuts off the power.



Disposal Of Your Old Product

Your product is designed and manufactured with high quality material and components, which can be recycled and reused. When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2002/96/EC. Please contact your local authority about correct disposal for electrical and electronic equipment. Our WEEE Registration Number is WEE/FE1471RR.

Please act according to your local rules and do not dispose of your old products with your normal household waste. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.



INTRODUCING EVOLUTION AQUA AIRPUMP

Congratulations on purchasing an Evolution Aqua airpump. Evolution Aqua airpumps have been used by koi keepers all around the world for over a decade to aerate ponds and filters, and are known for their quality, value and reliability.

Oxygen is vital to all aquatic inhabitants including fish and filter bacteria. Air from an Evolution Aqua airpump injects oxygen into pond water, making a healthier environment for fish and biological filters as well as aiding breathing for sick or stressed fish, when medications have been used, or in warm weather.

The airpump range has been tested and proven to provide the highest output at any given water depth, and are economical to run. Well engineered, robust and durable, every unit has thermal protection fitted as standard.

Please read this instruction manual carefully.

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PRECAUTIONS



1. If the pump is mounted below the water level of a filter (e.g. Nexus) it **MUST** have a non-return valve fitted to prevent water siphoning into it if there's a power cut.
2. Close supervision is necessary when an appliance is used by or near children.
3. This pump is intended to deal with clean, dry air only. DO NOT, under any circumstances, attempt operation with water or other liquids, otherwise pump may be damaged.
4. The ambient operating temperature for this pump is between 41°F (5°C) and 104°F (40°C). Operation of pump in temperatures outside the recommended temperature range may result in malfunction or a severely shortened service life.
5. DO NOT block the air being discharged. Pump must have sufficient room to allow for heat dissipation. Extreme operating temperature conditions may cause failure. Pump will automatically switch off until cool. DO NOT REMOVE PUMP CASING UNLESS UNIT IS DISCONNECTED FROM MAINS SUPPLY.
6. Always unplug pump prior to servicing. Grasp plug to remove cord from outlet. DO NOT remove by pulling on power cord.
7. DO NOT use the air pump other than for its intended use. The use of attachments not recommended or not sold by the air pump manufacturer may not be safe.
8. DO NOT install pump where it will be exposed to weather, do not store pump in temperatures below freezing.
9. Ensure pump is securely mounted prior to operation.
10. Read and observe all important markings on pump.
11. Ensure that extension cords (if required) have the correct or higher rating (amperes or watts). Ensure cord is properly positioned to avoid tripping.
12. To avoid injury, do not contact moving parts or place next to hot parts such as heaters, reflectors, lamp bulbs, and the like.
13. Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning.

AIRPUMP 70 SPECIFICATIONS



Specifications

	Airpump 70 Complete Kit
Maximum Output - lpm	70
Maximum Output (USA)	62
Output at 1m Depth - lpm	52
Output at 1m Depth - USA	52
Max. operating depth	3.2m
Max. operating depth (USA)	4.2m
Power Usage - Watts	34
Noise level - dBA	<46
Voltage (VAC)	220 - 240V
Voltage (VAC) (USA)	110 - 120V

Supplied as a kit with:

- 2 x Air stones
- 1 x 4 tap manifold
- 10 metres of airline



AIRPUMP 75 AND 95 SPECIFICATIONS



Specifications

	Airpump 75	Airpump 95
Maximum Output - lpm	75	95
Maximum Output (USA)	62	95
Output at 1m Depth - lpm	59	78
Output at 1m Depth - USA	52	78
Max. operating depth	3.9m	4.35m
Max. operating depth (USA)	4.4m	4.5m
Power Usage - Watts	44	62
Noise level - dBA	<46	<47
Voltage (VAC)	220 - 240V	220 - 240V
Voltage (VAC) (USA)	110 - 120V	110 - 120V

AIRPUMP 130 AND 150 SPECIFICATIONS



Specifications

	Airpump 130	Airpump 150
Maximum Output - lpm	130	150
Maximum Output (USA)	130	155
Output at 1m Depth - lpm	110	130
Output at 1m Depth - USA	115	135
Max. operating depth	4.7m	5.5m
Max. operating depth (USA)	5.0m	5.6m
Power Usage - Watts	88	106
Noise level - dBA	<50	<50
Voltage (VAC)	220 - 240V	220 - 240V
Voltage (VAC) (USA)	110 - 120V	110 - 120V

CONNECTION TO THE ELECTRICITY SUPPLY

Electrical installations must be done by a qualified electrician.

The power supply must meet the specifications on the product.
The cores in the supply cable are coloured in accordance with the following code:

Brown = Live. Blue = Neutral. Earth = Green/Yellow
(WHERE FITTED).

DO NOT use the supply cable to lift the airpump as this may cause damage.



WARNING - A Residual Current Device (RCD), also known as the Residual Current Circuit Breaker (RCCB), with a tripping current not exceeding 30mA must be installed in the supply circuit. A means of disconnection from the supply having a contact separation of at least 3mm in all poles must be incorporated in the wiring.



Caution: Use in the area of the garden pond only if the installation complies with the relevant wiring regulations. Please consult a qualified electrician.

Caution: Always disconnect all pond appliances from the mains supply before putting your hands into the water.

All electrical installations and wiring must be adequately protected to prevent any damage.

Enough electrical cable is supplied with the unit to connect to the mains electric. This unit must be connected to permanent wiring. A switch with 3mm contact separation must be provided in the fixed wiring to provide disconnection from the electricity supply.

Install this product where it will not come into contact with water or other liquids. Install this product where it will be weather protected. Electrically ground this product. Failure to follow these instructions can result in death, fire or electrical shock.

INSTALLING THE AIRPUMP

Mounting

Install this product where it will not come into contact with water or other liquids.

This product must be installed on a flat, horizontal surface. Mounting the product to a stable, rigid operating surface and using shock mounts will reduce noise and vibration.

If the pump is mounted below the water level of a filter (e.g. nexus) it **MUST** have a non-return valve fitted to prevent water siphoning into it if there's a power cut.

Plumbing

Remove plug from the OUT port. Connect with pipe and fittings that are the same size or larger than the product's port.

Accessories

Install relief valve and gauge at outlet to monitor performance. A check valve may be required to prevent back streaming through the compressor.

Motor Control

It is your responsibility to contact a qualified electrician and assure that the electrical installation is adequate and in conformance with all national and local codes and ordinances.

Operation

Use only recommended air handling parts acceptable for pressure not less than 10 psi. When provided, motor terminal covers must be in place for safe operation. Product surfaces may become hot during operation. DO NOT direct air stream at body. Air stream from product may contain solid or liquid material that can result in eye or skin damage, wear proper eye protection. DO NOT spray flammable or combustible liquid. Failure to follow these instructions can result in burns, eye injury or other serious injury. It is your responsibility to operate this product at recommended pressure duty and room ambient temperature.

Start Up

If pump fails to start or slows down significantly under load, shut off and disconnect from power supply. Check that the voltage is correct for the pump.

MAINTAINING THE AIRPUMP

Disconnect electrical power supply cord before performing maintenance on this product. If product is hard wired into system, disconnect electrical power at the circuit breaker or fuse box before performing maintenance on this product. Failure to follow these instructions can result in death, fire or electrical shock. Product surfaces may become hot during operation, allow product surfaces to cool before handling. DO NOT direct air stream at body.

Air stream from product may contain solid or liquid material that can result in eye or skin damage, wear proper eye protection. Clean this product in a well ventilated area. Failure to follow these instructions can result in burns, eye injury or other serious injury.

It is your responsibility to:

- Regularly inspect and make necessary repairs to product in order to maintain proper operation.
- Make sure that pressure is released from product before starting maintenance.
- Never add oil to this oil-less compressor.

Check intake filter after first 500 hours of operation. Clean filter and determine how frequently filter should be checked during future operation. This one procedure will help to assure the product's performance and service life.

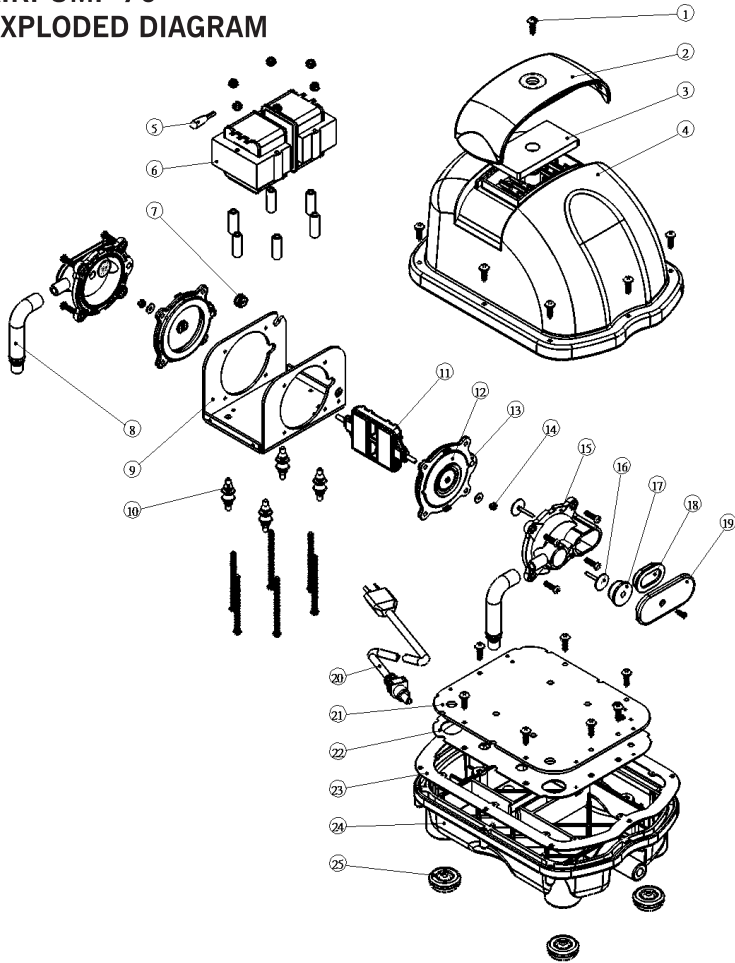
Cleaning

DO NOT use kerosene or ANY other combustible solvent to clean product.

1. Remove filter and clean using detergent and water.
2. Rinse filter well and air dry.

Check that all external accessories such as relief valves and gauges are attached to cover and are not damaged before re-operating product.

AIRPUMP 70 EXPLODED DIAGRAM



NO.	DESCRIPTION	QTY
1	TOP SCREW	1
2	FILTER COVER	1
3	FILTER	1
4	UPPER HOUSING	1
5	THERMAL PROTECTOR	1
6	ELECTROMAGNET	2
7	WIRE STOPPER	1
8	L - TUBE	2
9	U-SHAPED COIL FRAME	1
10	VIBRATION CONTROL RUBBER	4
11	ACTIVATING ARM	1
12	DIAPHRAGM	2

13	DIAPHRAGM FRAME	2
14	U NUT	2
15	DIAPHRAGM HOUSING	2
16	CHECK VALVE	4
17	CHAMBER SEAL (ROUND)	2
18	CHAMBER SEAL (OVAL)	2
19	SIDE COVER (STEEL)	2
20	POWER CORD	1
21	STEEL PLATE	1
22	GASKET-1	1
23	GASKET-2	1
24	LOWER HOUSING	1
25	RUBBER FEET	4

AIRPUMP 70 MAINTENANCE

TO CLEAN THE AIR FILTER

(Recommended once every six months)

1. Loosen the screw on top. *(As shown in figure 1)*
2. Remove the plastic filter cover.
3. Take the filter out and clean it with clean water and dry it.
4. Put it back and secure the fixing plate with the screw in.

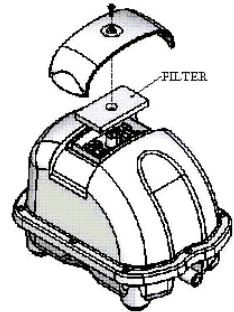


FIG. 1

TO CHANGE THE DIAPHRAGMS

IMPORTANT: To open the upper enclosure, please make sure you have unplugged the power cord before opening.

1. Loosen the eight screws around the plastic upper cover and take the cover off. *(As shown in figure 2)*
2. Loosen the four screws and disassemble the parts. *(As shown in figure 3)*
3. Loosen the U-nut in the centre of diaphragm.
4. Take the diaphragm off its place.
5. Replace a new one by mounting the rubber studs into their position.
6. Press the rim of the diaphragm into the ring.
7. Secure the magnet with U-nut and screw and put the diaphragm housing back with the four screws on.

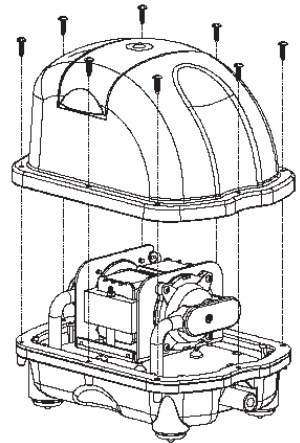


FIG. 2

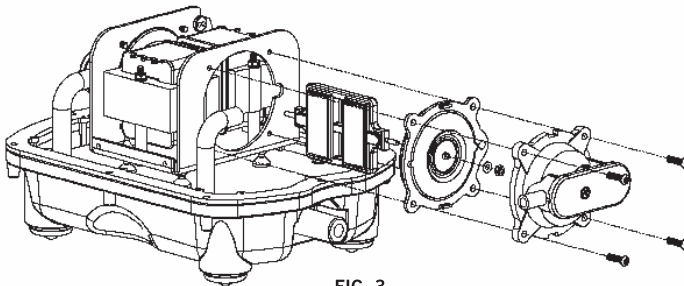
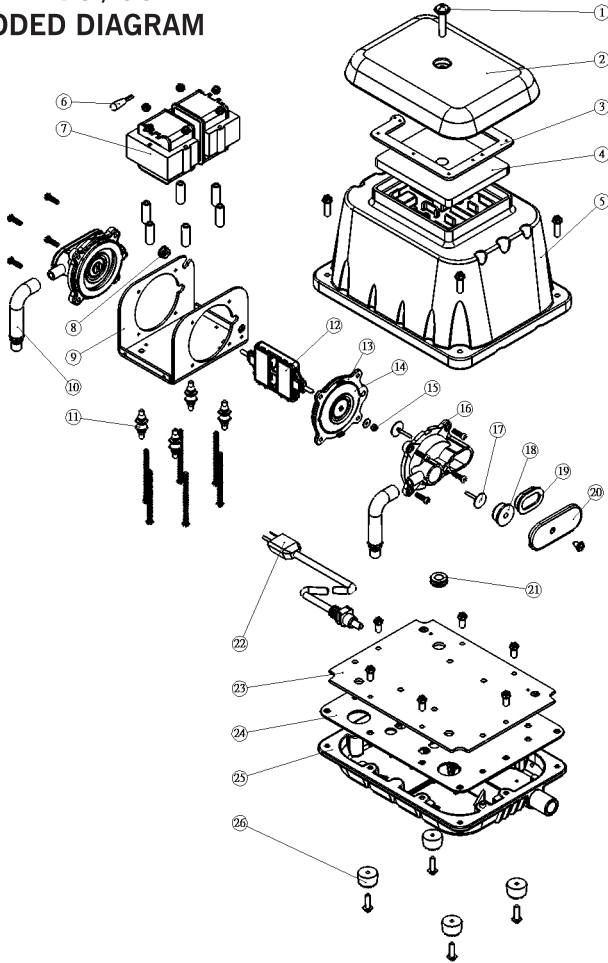


FIG. 3

AIRPUMP 75 / 95 EXPLODED DIAGRAM



NO.	DESCRIPTION	QTY
1	TOP SCREW	1
2	FILTER COVER	1
3	FOAM SEAL	1
4	FILTER	1
5	UPPER HOUSING	1
6	THERMAL PROTECTOR	1
7	ELECTROMAGNET	2
8	WIRE STOPPER	1
9	U-SHAPED COIL FRAME	1
10	L-TUBE	2
11	VIBRATION CONTROL RUBBER	4
12	ACTIVATING ARM	1
13	DIAPHRAGM FRAME	2

14	DIAPHRAGM	2
15	U-NUT	2
16	DIAPHRAGM HOUSING	2
17	CHECK VALVE	4
18	CHAMBER SEAL (ROUND)	2
19	CHAMBER SEAL (OVAL)	2
20	SIDE COVER (STEEL)	2
21	CORD PROTECTOR	1
22	POWER CORD	1
23	STEEL PLATE	1
24	GASKET	1
25	LOWER HOUSING	1
26	RUBBER FEET	4

AIRPUMP 75 / 95 MAINTENANCE

TO CLEAN THE AIR FILTER

(Recommended once every six months)

1. Loosen the screw on top. *(As shown in figure 1)*
2. Remove the plastic filter cover.
3. Take the filter out and clean it with clean water and dry it.
4. Put it back and secure the fixing plate with the screw in.

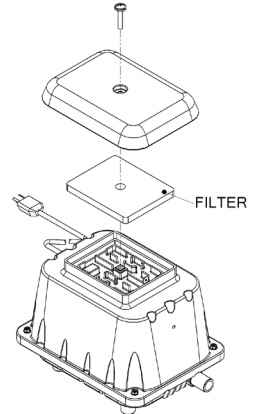


FIG. 1

TO CHANGE THE DIAPHRAGMS

IMPORTANT: To open the upper enclosure, please make sure you have unplugged the power cord before opening.

1. Loosen the eight screws around the plastic upper cover and take the cover off. *(As shown in figure 2)*
2. Loosen the four screws and disassemble the parts. *(As shown in figure 3)*
3. Loosen the U-nut in the centre of diaphragm.
4. Take the diaphragm off its place.
5. Replace a new one by mounting the rubber studs into their position.
6. Press the rim of the diaphragm into the ring.
7. Secure the magnet with U-nut and screw and put the diaphragm housing back with the four screws on.

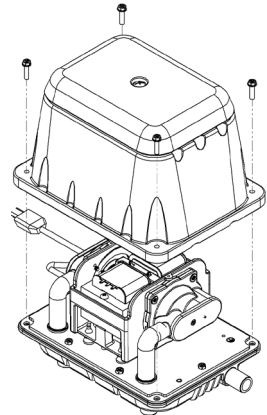


FIG. 2

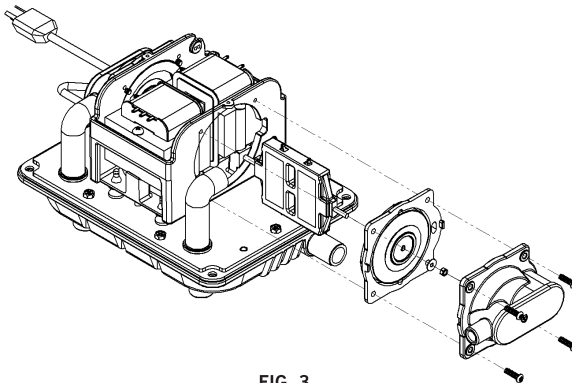
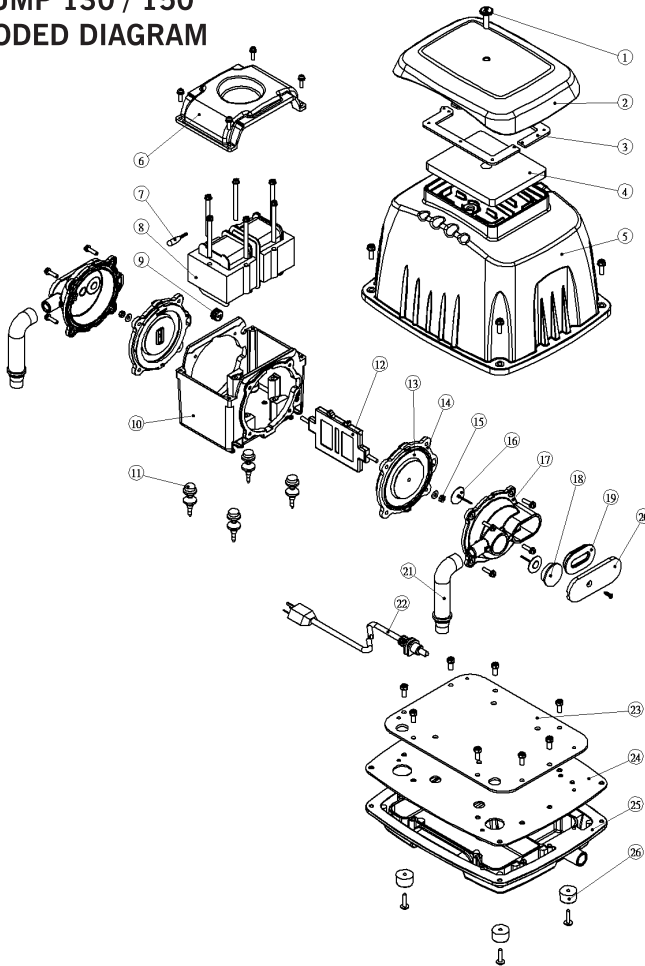


FIG. 3

AIRPUMP 130 / 150 EXPLODED DIAGRAM



NO.	DESCRIPTION	QTY
1	TOP SCREW	1
2	FILTER COVER	1
3	FOAM SEAL	1
4	FILTER	1
5	UPPER HOUSING	1
6	COIL COVER	1
7	THERMAL PROTECTOR	1
8	ELECTROMAGNET	2
9	WIRE STOPPER	1
10	COIL FRAME	1
11	VIBRATION CONTROL RUBBER	4
12	ACTIVATING ARM	1
13	DIAPHRAGM	2

14	DIAPHRAGM FRAME	2
15	U-NUT	2
16	CHECK VALVE	4
17	DIAPHRAGM HOUSING	2
18	CHAMBER SEAL (ROUND)	2
19	CHAMBER SEAL (OVAL)	2
20	SIDE COVER (STEEL)	2
21	L - TUBE	2
22	POWER CORD	1
23	STEEL PLATE	1
24	GASKET	1
25	LOWER HOUSING	1
26	RUBBER FEET	4

AIRPUMP 130 / 150 MAINTENANCE

TO CLEAN THE AIR FILTER

(Recommended once every six months)

1. Loosen the screw on top. *(As shown in figure 1)*
2. Remove the plastic filter cover.
3. Take the filter out and clean it with clean water and dry it.
4. Put it back and secure the fixing plate with the screw in.

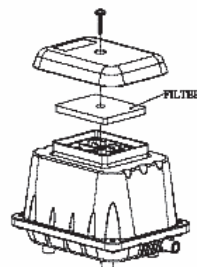


FIG. 1

TO CHANGE THE DIAPHRAGMS

IMPORTANT: To open the upper enclosure, please make sure you have unplugged the power cord before opening.

1. Loosen the four screws around the aluminium upper cover, and take the cover off. *(As shown in figure 2)*
2. Loosen the four screws around the coil cover, and take the cover off. *(As shown in figure 3)*
3. Loosen the four screws on two sides of the safety switch first, and remove the bars vertically.
4. Loosen the four screws and disassemble the diaphragm housing.
5. Loosen the U-nut in the centre of diaphragm.
6. Take the diaphragm off its place.
7. Replace a new one by mounting the rubber studs into their position.
8. Press the rim of the diaphragm into the ring.
9. Secure the magnet with a new U-nut screw and put the diaphragm housing back with the four screws on.
10. Place the two plastic safety switch bars back to their position and secure the four screws on both sides. Put on the aluminium cover and secure the four screws firmly.

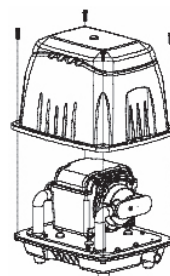


FIG. 2

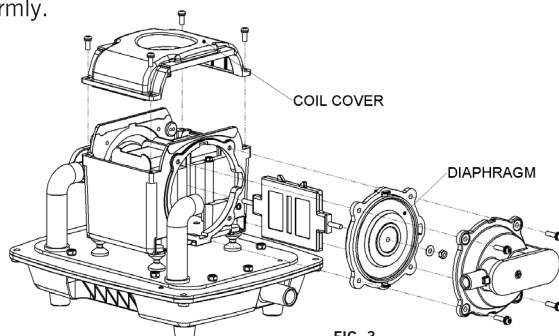


FIG. 3

NOTES

GUARANTEE

This product is guaranteed against defects in material and workmanship for 2 years from the date of purchase, under normal usage. The guarantee DOES NOT APPLY in case of improper use, negligence, lack of maintenance or accidental damage to the air pump. If the air pump fails due to a manufacturing fault within this period it will be either repaired or replaced free of charge. Liability is limited to replacement of the faulty product only; no other costs will be reimbursed. This guarantee is not transferable and does not affect your statutory rights. This guarantee does not confer any rights other than those expressly set out above. The guarantee does not cover the diaphragms and other wearable parts.

The manufacturer or supplier shall not be responsible, or held liable for any damages caused by defective components or materials of this product; or for loss incurred by interruption of service; or any consequential/incidental damages and expenses arising from the production, sale use or misuse of this product or any other consequential loss.

Any warranty claim must be accompanied by a valid, dated proof of purchase.

Evolution Aqua and its dealers shall not be held liable for any loss of fish, plants or any other livestock as a result of any failure or defect of this product.

The installation and use of your product outside of our recommendations as printed in this manual may also void the warranty.

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EVOLUTION
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Evolution Aqua are the award winning pond filtration manufacturer who put innovation, research and development at the top of their agenda. With a proven track record for delivering the latest technology to the aquatics and fish farming markets - we are the first choice for everyone from the general hobbyist to the serious fishkeeper. Find out more about our innovative products at www.evolutionaqua.com. The difference is clear.

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