



Established over 40 years ago, Blagdon are committed to producing a comprehensive range of high quality, easy to use, pond equipment. An ongoing programme of research and development ensures excellent performance and value for all their customers. This product excellence is demonstrated by Blagdon's award winning range of water gardening equipment. As a result, Blagdon's reputation for quality is unrivalled amongst experienced pond keepers and retailers alike.

Blagdon - The Pond Masters
The name you can rely on

Interpet
Dorking, Surrey RH4 3YX



THE POND MASTERS
GUIDE TO

KOI AIR

25/50/65





THE POND MASTERS GUIDE TO KOI AIR 25/50/65

Congratulations on buying a Blagdon Koi Air high output pond air pump.

Koi Air pumps have been specifically designed for water garden applications. Pond aeration is an essential part of a successful pond. Koi Air pumps are able to run numerous air stones at one time creating a healthy oxygen rich pond that will benefit your fish and biological filter bacteria. Your Koi Air pump is both cost effective to run being of a low wattage design, and can be maintained with excellent value replaceable parts.

BENEFITS OF KOI AIR POND AERATION

Fish and other pond life require oxygen-rich water in order to remain healthy. Filter bacteria, essential to the breakdown of highly toxic ammonia and nitrite, also require oxygen to flourish and keep the pond free from the build up of toxic waste. Use of a Blagdon Koi Air pump will dramatically increase the level of oxygen in the pond and reduce carbon dioxide levels, thus aiding in preventing the pond from stagnating, by injecting air into the water. Additionally, by placing air stones directly into the filter chambers, beneficial bacteria, essential to the well being of a pond will be encouraged to grow. This will improve greatly filter efficiency and fish health.

Aeration in the pond is especially important in warm weather, when water holds much less oxygen, and at night when plants stop producing oxygen and start using it up. Fish seen gulping at the surface or swimming lethargically may be showing signs of lack of oxygen.

In winter, use a Koi Air pump to keep areas of the pond ice-free, thus preventing the build up of toxic gases that can be fatal to fish and other aquatic life.

Oxygenation, provided by the use of a Koi Air pump, is essential when treating fish diseases, as many treatments deplete oxygen from the water and sick fish require higher levels of oxygen.

IMPORTANT

Please attach proof of purchase to this manual and keep in a safe place.

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Technical Specification and Performance

KOI AIR MODEL	25	50	65
Cable fitted	3M	3M	3M
Voltage	230 V	230 V	230 V
Hertz	50 Hz	50Hz	50 Hz
Wattage	18w	30w	42w
Maximum Flow	25ltr/min	50ltr/min	65ltr/min
Maximum Pressure	0.028mpa	0.032mpa	0.040mpa
Pumping Depth	2.2M	3.0M	3.5M
Number of air outlets	8	12	18

2. GETTING TO KNOW YOUR KOI AIR 25

No.	Name of part	Code
1.	Air filter cover	
2.	Intake foam seal (see No.3 for replacement)	
3.	Intake foam filter & intake seal	1019880
4.	Cover lid	
5.	Cover lid seal	1021098
6.	Outlet foam seal (see No.32 for outlet foams)	1021074
7.	Air pump base	
8.	Rubber base feet x 4	1021111
9.	Flapper valve chamber	
10.	Flapper valve	1019866
11.	Diaphragm front board	
12.	Diaphragm (see No.29 for Teflon washers)	1019828
13.	Diaphragm base ring	
14.	Diaphragm back board	
15.	Magnet frame	
16.	Motor	
17.	Motor cover	
18.	Motor base	
19.	Cable clamp	
20.	Cable locator	
21.	Plug	
22.	L shaped pipe (see No.33 for L shape pipe connector)	1021050
23.	Motor base plate	
24.	Rubber motor isolation mountings	
25.	Outlet connector pipe clip (see No.26 for outlet connector pipe)	1021128

No.	Name of part	Code
26.	Outlet connector pipe (see No.25 for outlet connector pipe clip)	
27.	8 x outlet valved metal air divider	1021012
28.	Flapper valve chamber board	
29.	Diaphragm protective Teflon washers (see No.12 for diaphragm)	
30.	Outlet flapper valve cover	
31.	Inlet flapper valve cover	
32.	Outlet foams (see No.6 for diaphragm)	
33.	L shaped pipe connector (see No.22 for L shaped pipe)	

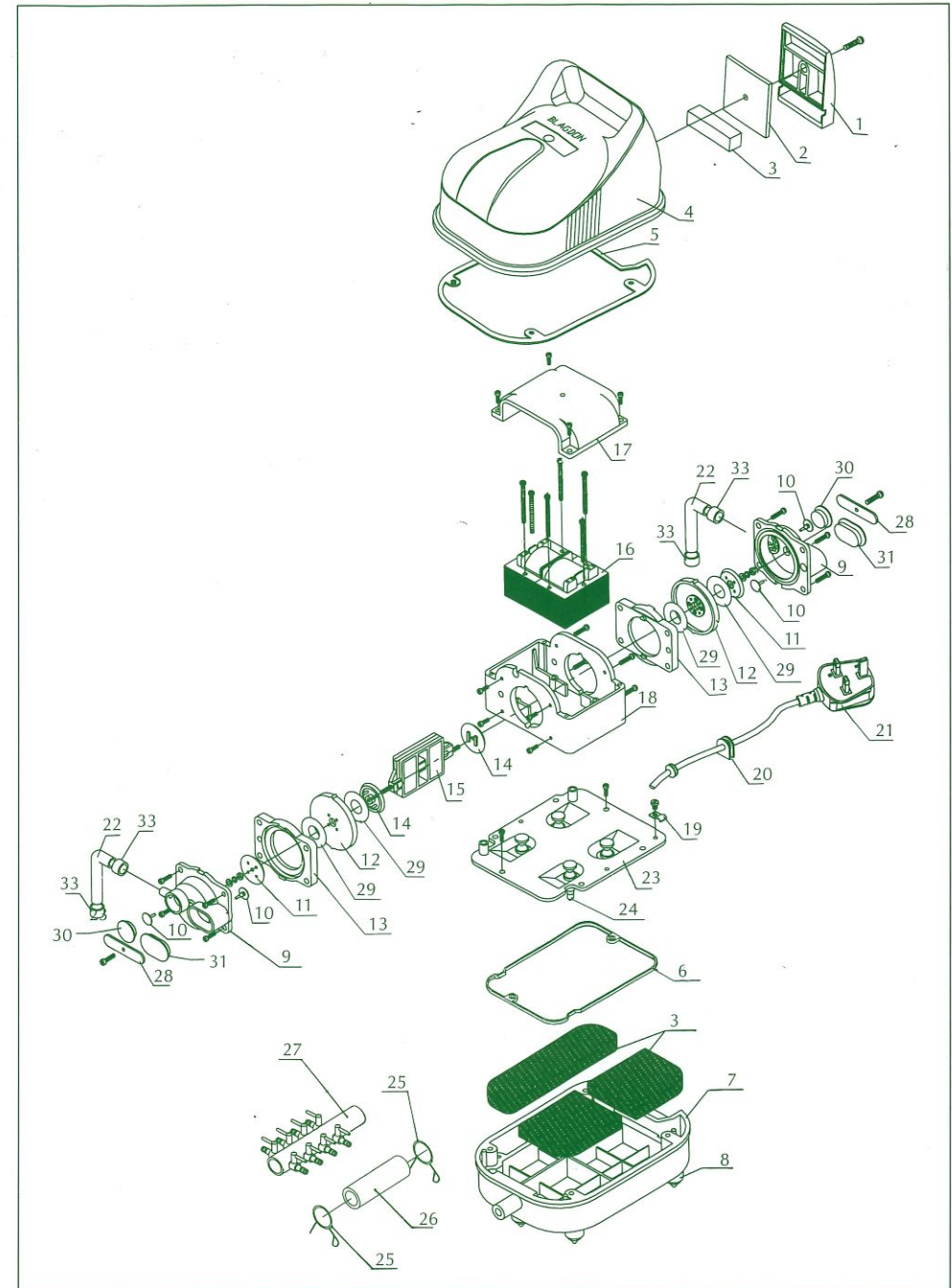
KOI AIR 25 ANNUAL MAINTENANCE MASTER SPARES KIT CODE 1019941 INCLUDES THE FOLLOWING PARTS:

- 2. Intake foam seal
- 3. Intake foam filter
- 5. Cover lid seal
- 6. Outlet foams seal
- 12. Diaphragm x 2
- 29. Diaphragm washers x 4
- 32. Outlet foams

KOI AIR 25 VALVE CHAMBER INCLUDING FLAPPER VALVES COMPLETE CODE 1019835 INCLUDES PARTS:

- 9. Flapper valve chamber
- 10. Flapper valve
- 28. Flapper valve chamber board
- 30. Outlet flapper valve cover
- 31. Inlet flapper valve cover

3. GETTING TO KNOW YOUR KOI AIR 25



4. GETTING TO KNOW YOUR KOI AIR 50 / 65

No.	Name of part	Code
1.	Air filter cover	
2.	Intake foam seal + 3 Intake foam filter	1021043
3.	Intake foam filter (see No.2 for replacement code)	
4.	Cover lid	
5.	Cover lid seal	1021104
6.	Outlet foam seal + 34 Outlet foams	1021081
7.	Air pump base	
8.	Rubber base feet x 4	1021111
9.	Flapper valve chamber board	
10.	Flapper valve chamber	
11.	Diaphragm front board	
12.	Diaphragm + 32 Teflon washers	1019842
13.	Diaphragm base ring	
14.	Diaphragm back board	
15.	Magnet frame	
16.	Motor	
17.	Motor cover	
18.	Motor housing	
19.	Cable clamp	
20.	Cable locator	
21.	Plug	
22.	L shaped pipe + 35 L shape pipe connector + 23 L pipe clip	1021067
23.	L pipe clip	
24.	Flapper valve pack of 4	1019873
25.	Motor base plate	
26.	Rubber motor isolation mountings	
27.	Outlet connector pipe clip + 28 Outlet connector pipe	1021135
28.	Outlet connector pipe (see No.27 for replacement code)	

No.	Name of part	Code
29.	Koi Air 50 12 x outlet valved metal air divider Koi Air 65 18 x outlet valved metal air divider	1021029 1021036
30.	Outlet flapper valve cover	
31.	Inlet flapper valve cover	
32.	Diaphragm protective Teflon washers (see No.12 for replacement code)	
33.	T shape outlet foam seal	
34.	Outlet foams (see No.6 for replacement code)	
35.	L shape pipe connector (see No.22 for replacement code)	

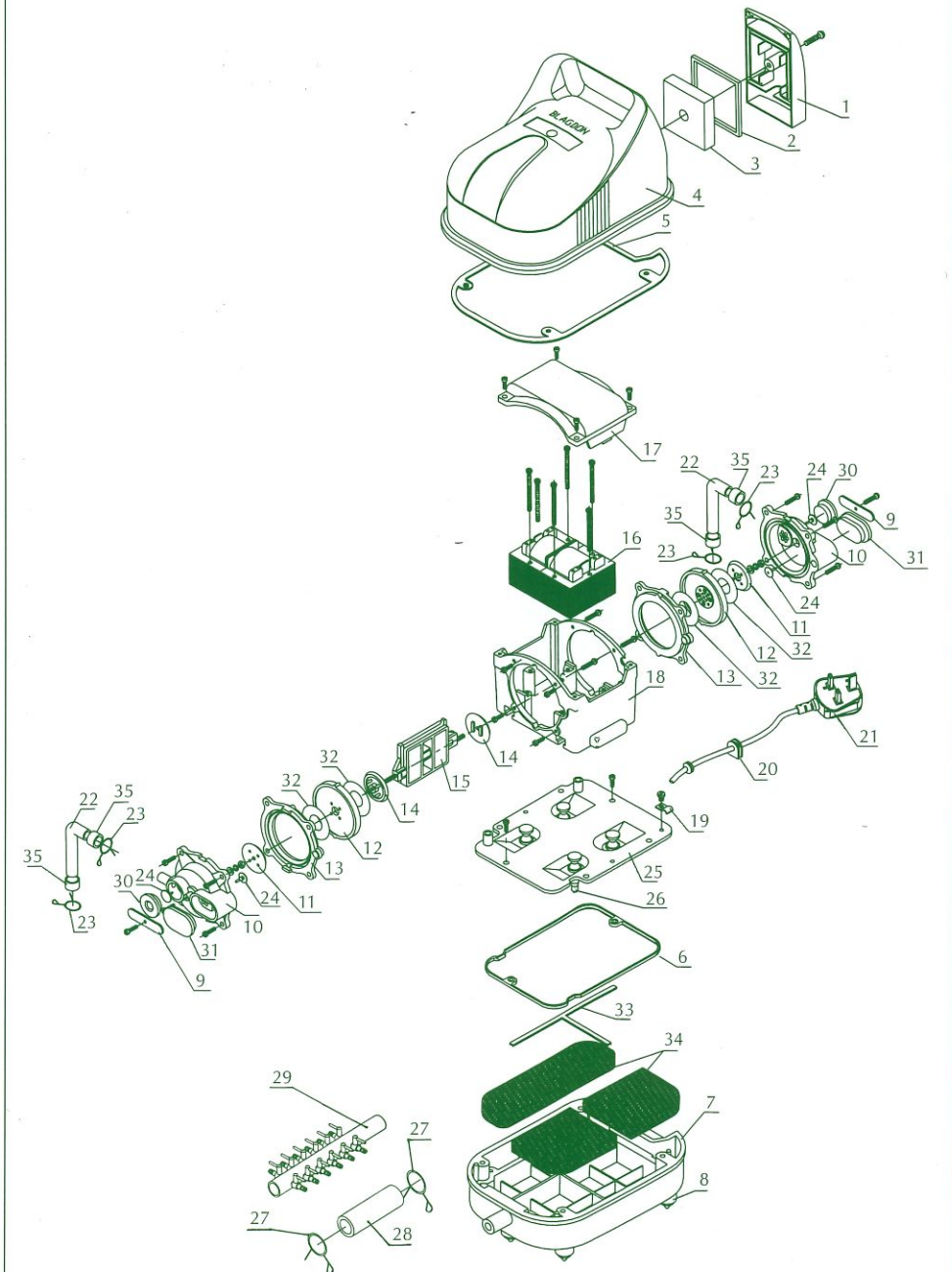
KOI AIR 50 / 65 ANNUAL MAINTENANCE MASTER SPARES KIT CODE 1019958 INCLUDES THE FOLLOWING PARTS:

- 2. Intake foam seal
- 3. Intake foam filter
- 5. Cover lid seal
- 6. Outlet foams seal
- 12. Diaphragm x 2
- 32. Diaphragm washers x 4
- 33. T shape outlet foam seal
- 34. Outlet foams

KOI AIR 50 / 65 VALVE CHAMBER INCLUDING FLAPPER VALVES COMPLETE CODE 1019859 INCLUDES PARTS:

- 9. Flapper valve chamber board
- 10. Flapper valve chamber
- 24. Flapper valve x 4
- 30. Outlet flapper valve cover
- 31. Inlet flapper valve cover

5. GETTING TO KNOW YOUR KOI AIR 50 / 65



6. INSTALLATION

Electrical Installation

This apparatus is fitted with a 13 amp (BS 1363) plug with a 3 amp fuse. With this or any other type of plug an ASTA 3 amp or 5 amp fuse to BS 1362 must be fitted either in the plug or adaptor or at the distribution board.

Replacement of Plug



IMPORTANT: This apparatus is double insulated and does not have a third (earth) wire. The wires on the lead should therefore be connected as follows:

The blue lead should be connected to the neutral terminal on your plug. This terminal may be marked with an N or coloured black or blue. The brown lead should be connected to the live terminal on your plug. This terminal may be marked with an L or coloured brown or red. Do not connect either wire to the earth terminal. If in doubt consult a qualified electrician.

The electric cable is permanently connected and sealed in the motor body. If the supply cable is damaged the pump must not be used.

Do not use the supply cable to lift the pump as this may cause damage.



WARNING - THIS PUMP MUST BE EARTHED

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 fixed wiring.

For permanent installations to the mains supply, it is necessary to conform to the regulations of the local electricity authority and this would include the use of a metal or plastic conduit to protect the cable.

Attention has been drawn to the fact that special rules may exist concerning the installation of your pond pump (i.e. local building regulations).

These pumps must not be used in swimming pools, or areas where people are in contact with the water.

Always disconnect the mains electricity supply whilst the equipment is being installed, repaired, maintained or handled. Consult a qualified electrician if in doubt about wiring this product to the mains supply.



WARNING: The Koi Air pump is provided with a thermal cut out that temporarily switches off the pump in case of overheating and the pump may automatically restart.

7. INSTALLATION

Location

Install the pump in a dry weatherproof covered area, such as a shed or garage. Install the pump and mains connections where they will not come into contact with water. Ensure the pump is installed above the pond water level to avoid back siphoning of the pond water into the air pump in the event of the power supply to the pump being cut. Alternatively, if the air pump can only be installed below the pond level install Aqua Air Check Valves into each piece of air line. The pump should be located on a firm surface that will not vibrate and act as a sounding board, a concrete floor or patio slab are ideal.

Position the pump in a clean and dust free environment. Excessive dirt will block the air filter reducing the air pumps performance and speed the wear of replaceable parts. Ensure the pump or mains connection cannot become wet or be accidentally splashed.

Connecting the Air Line and Air Stones

Your Koi Air pump has been designed to run continuously and ideally unrestricted. If possible, this will maintain maximum performance and the best possible life span for all replaceable parts e.g. diaphragms, flapper valves.

Ideally all outlets should have an air line and air stones connected and used, this will give the pond maximum aeration and ensure that damaging back pressure is kept to a minimum. Air stones will become blocked and start to reduce the performance of the pump over time, therefore it is necessary to replace air stones every twelve months as a minimum or more frequently depending on the cleanness of the air pumps environment.



IMPORTANT: If all the pump outlets or performance is not needed ensure that one of the valve outlets is opened in order to bleed off some of the airflow, therefore adjusting the output to the remaining air stones.

This will noticeably reduce noise levels by reducing the back pressure on the pump and extend the life of all replaceable parts.

Connect the outlet pipe supplied and the metal valve air divider using the clips to secure. Insert one end of each piece of air line required into the outlet nozzles of the air divider. Place air stones onto the other end of the air line. These should then be placed into the pond and /or filter.

Ensure that all the outlet valves are in the fully open position before the air pump is started.

Switch on the air pump. If the overall air output is too high it is recommended that one of the air stones and air lines is removed and the remaining valves opened to reduce the air output to the remaining air stones.

Adjustments to individual air stones can now be made. Shut off the individual valves in small increments until the desired output is achieved.

The air stones should be positioned to provide maximum aeration and circulation in the pond. (Note: For use in winter, air stones should be placed no lower than 30cm from the bottom of the pond, to ensure the warmer, lower water regions remain undisturbed).

8. MAINTENANCE

Changing Replaceable Parts

Koi Air pumps have been designed to run reliably for many years if correctly maintained. Koi Air pumps, in common with all air pumps, contain perishable rubber parts that have a limited life span. These parts have been designed so they can be easily replaced therefore maintaining the excellent pumping performance.



IMPORTANT: As a rule all perishable rubber parts should be replaced annually. This will ensure that the Koi Air is giving the optimum pumping performance.

Tools Needed

Medium sized Phillips head screwdriver.
A pair of Pliers.

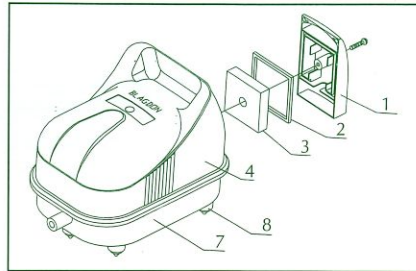
Replacing the Air Intake Foams (See Diagram)

Step by step guide

1. Remove the screw from the air filter cover part 1.
2. Remove and replace the air filter seal and air filter foam parts 2/3.

Repeat steps 1 and 2 in reverse order to reassemble.

If you wish to change the flapper valves, move to changing the flapper valves section 9.



Replacing the Intake Foams



IMPORTANT: Before commencing any maintenance on your Koi Air pump, ensure it is isolated from the mains electricity supply.

Replacing the Outlet Foams

Step by step guide for Koi Air 25 (See Diagram)

1. Remove the air filter cover part 1.
 2. Remove the 4 screws from the air pump base part 7 and remove the lid. Check that the cover lid seal part 5 remains in place.
 3. Remove the six screws from the motor base plate part 23 and gently lift the whole motor from the air pump base part 7.
 4. The three outlet foams part 32 and the outlet seal 6 can now be removed and replaced.
- Repeat steps 1 and 4 in reverse order to reassemble.

Replacing the Outlet Foams

Step by step guide for Koi Air 50 / 65 (See Diagram)

1. Remove the air filter cover part 1.
 2. Remove the 4 screws from the air pump base part 7 and remove the lid. Check that the cover lid seal part 5 remains in place.
 3. Remove the six screws from the motor base plate part 25 and gently lift the whole motor from the air pump base part 7.
 4. The three foams part 34 and the outlet seal part 33 and 6 can now be removed and replaced.
- Repeat steps 1 and 4 in reverse order to reassemble.

9. MAINTENANCE

Replacing the Flapper Valves

Step by Step guide for Koi Air 25 (See Diagram)

1. Remove the air filter cover part 1.
2. Remove the 4 screws from the air pump base part 7 and remove the lid. Check that the cover lid seal part 5 remains in place.
3. Pull the L shape pipe parts 22/33 from the flapper valve chamber number 9.
4. Work on one outlet side of the pump at a time, remove the 4 screws from the valve chamber part 9 and gently pull the part from the motor housing part 18.
5. If you have a complete valve base including flappers code number 1019835 (see getting to know your KOI AIR 25 sections 2&3). This can now be directly replaced and the steps repeated in reverse order to reassemble. Follow steps 3 to 5 on both valve chambers of the pump, if not move to step 6.
6. Remove the flapper valve chamber board part 28 and pull out the inlet and outlet covers from the valve base parts 30 and 31. You now have access to the flapper valves.
7. One at a time pull out the old flappers parts 10 and insert the new flappers on the same side as they were removed, see diagram, and pull through until the locating lug has locked the flapper securely in place.

Repeat the process on the other valve chamber.

Repeat steps 1 and 2 in reverse order to reassemble.

If you wish to replace the diaphragm, move to replacing the diaphragm section 10.

Replacing the Flapper Valves

Step By Step guide for Koi Air 50 / 65

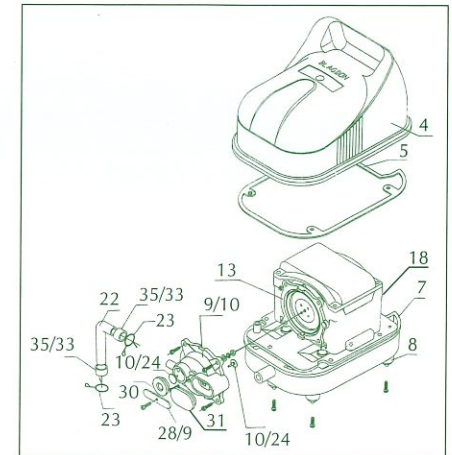
(See Diagram)

1. Remove the air filter cover part 1.
 2. Remove the 4 screws from the air pump base part 7 and remove the lid. Check that the cover lid seal part 5 remains in place.
 3. Remove the clips and L shape pipe parts 22/35 /23 from the flapper valve chamber number 10.
 4. Work on one outlet side of the pump at a time, remove the 4 screws from the valve chamber and gently pull the part from the motor housing part 18.
 5. If you have a complete valve base including flappers code number 1019859 (see getting to know your KOI AIR 50 / 65 sections 4&5). This can now be directly replaced and the steps repeated in reverse order to reassemble.
- Follow steps 3 to 5 on both valve chambers of the pump, if not move to step 6.
6. Remove the flapper valve chamber board Part 9 and pull out the inlet and outlet covers from the valve base parts 30 and 31. You now have access to the flapper valves.
 7. One at a time pull out the old flapper part 10 and insert the new flappers on the same side as they were removed (see diagram) and pull through until the locating lug has locked the flapper securely in place.

Repeat the process on the other valve chamber.

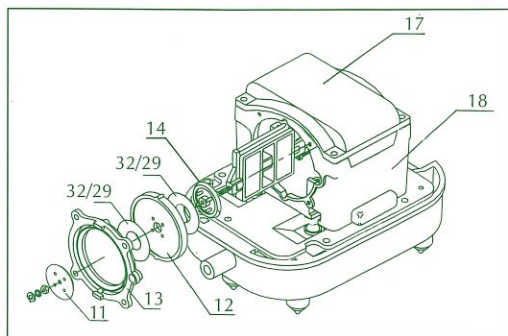
Repeat steps 1 and 2 to in reverse order to reassemble.

If you wish to replace the diaphragm, move to replacing the diaphragm section 11.

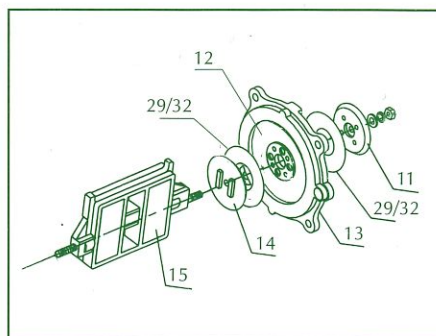


Replacing the Flapper Valves

10. MAINTENANCE



Replacing the Diaphragm



Locating Backboard

Replacing the Diaphragm

Step By Step guide for Koi Air 25 (See Diagram)

See replacing the flapper valves diagram (see section 9) for steps 1 to 4.

1. Remove the air filter cover part 1.
2. Remove the 4 screws from the air pump base part 7 and remove the lid. Check that the cover lid seal part 5 remains in place.
3. Pull the L shape pipe parts 22 / 33 from the flapper valve chamber number 9.
4. Work on one outlet side of the pump at a time, remove the 4 screws from the valve chamber part 9 and gently pull the part from the motor housing, this will expose the diaphragm part 12 and diaphragm base ring part 13. See replacing the flapper valves diagram (see section 9) for steps 1 to 4.
See above replacing the diaphragm diagram for steps 5 to 13.
5. Remove the small locating nut from the diaphragm front board part 11 and gently remove the front board and the Teflon washer part 32 from the rubber diaphragm. Ensure that all the parts from the diaphragm are kept together so that they can be clearly identified when reassembling.
6. The diaphragm base ring part 13 can be used to pull the diaphragm from the magnet frame part 15.
7. Remove the diaphragm part 12 from the base ring. Then remove the diaphragm backboard part 14 and the Teflon washer part 32.
8. Place the new diaphragm into the base ring using the locating lugs and firm into place. NOTE: It is essential that all the diaphragm parts are reassembled in the correct order or the pump will not work effectively and may cause damage to the new parts.
9. Place the Teflon washer over the four pegs on the diaphragm backboard.
10. See locating backboard diagram above.
Place the four backboard pins into diaphragm on the side that has the raised circular area. Ensure that the two vertical locating bars will line up with the locating lug on the magnet frame part 15.
11. Place the Teflon washer onto the diaphragm front board part 11 and push the front board onto the diaphragm locating it onto the four backboard pins. The smooth side of the front board should be in contact with the washer and the diaphragm.
12. The diaphragm assembly can now be placed onto the thread from the magnet frame ensuring that the backboard locating bars are lined up with the locating lug on the magnet frame.

11. MAINTENANCE

13. Place the metal washers onto the thread then secure firmly with the nut.
14. The valve base should now be fixed onto the diaphragm base ring and screwed into the motor housing using the four screws and washers.
Ensure that the outlet is on the side that will fit the L shaped pipe.
Repeat the process on the other valve chamber. Repeat steps 1 and 4 in reverse order to reassemble. If you wish to replace the outlet foams proceed to replacing the outlet foams section 8.

Replacing the Diaphragm

Step By Step guide for Koi Air 50 / 65 (See Diagram)

See replacing the flapper valves diagram (see section 9) for steps 1 to 4.

1. Remove the Air filter cover part 1.
2. Remove the 4 screws from the air pump base part 7 and remove the lid. Check that the cover lid seal part 5 remains in place.
3. Pull the L shape pipe parts 22 / 23 / 35 from the flapper valve chamber number 10.
4. Work on one outlet side of the pump at a time remove the 4 screws from the valve chamber part 10 and gently pull the part from the motor housing, this will expose the diaphragm part 12 and diaphragm base ring part 13. See replacing the flapper valves diagram (see section 9) for steps 1 to 4.
See opposite replacing the diaphragm diagram for steps 5 to 13.
5. Remove the small locating nut from the diaphragm front board part 11 and gently remove the front board and the Teflon washer part 29 from the rubber diaphragm. Ensure that all the parts from the diaphragm are kept together so that they can be clearly identified when reassembling.
6. The diaphragm base ring part 13 can be used to pull the diaphragm from the magnet frame part 15.
7. Remove the diaphragm part 12 from the base ring. Then remove the diaphragm backboard part 14 and the Teflon washer part 32.
8. Place the new diaphragm into the base ring using the locating lugs and firm into place. NOTE: It is essential that all the diaphragm parts are reassembled in the correct order or the pump will not work effectively and may cause damage to the new parts.
9. Place the Teflon washer over the four pegs on the diaphragm backboard.
10. See opposite locating backboard diagram section 10.
Place the four backboard pins into diaphragm on the side that has the raised circular area. Ensure that the two vertical locating bars will line up with the locating lug on the magnet frame part 15.
11. Place the Teflon washer onto the diaphragm front board part 11 and push the front board onto the diaphragm locating it onto the four backboard pins. The smooth side of the front board should be in contact with the washer and the diaphragm.
12. The diaphragm assembly can now be placed onto the thread from the magnet frame ensuring that the backboard locating bars are lined up with the locating lug on the magnet frame.
13. Place the metal washers onto the thread then secure firmly with the nut.
14. The valve base should now be fixed onto the diaphragm base ring and screwed into the motor housing using the four screws and washers.
Ensure that the outlet is on the side that will fit the L shaped pipe. Repeat the process on the other valve chamber. Repeat steps 1 and 4 in reverse order to reassemble. If you wish to replace the outlet foams proceed to replacing the outlet foams section 8.

12. TROUBLESHOOTING



IMPORTANT: Before commencing any maintenance on your Koi Air pump, ensure it is isolated from the mains electricity supply.

Low Air Output / Noisy Operation

- Is the pump on a sounding board, such as a wooden shed floor, if so place the pump on a patio slab that will reduce the effect or relocate.
- Tip, using silicone air line will help reduce noise. Ensure that no more than 15% of the air pumps output is being restricted (see below).
- Are the air line check valves blocked or the air lines kinked.
- If the pump is too powerful for your immediate requirements opening one of the air divider valves without any air line will bleed off unwanted air flow and dramatically reduce the noise, and strain on the air pump, therefore extending the life of all replaceable parts.
- Placing the air stones deeper in the water increases the backpressure on the pump, as it must work harder it may become noisy. Placing the air stones at a more shallow depth is recommended.
- Check and replace old blocked and dirty air stones.
- Replace blocked or dirty air intake foams see section 8.
- Replace damaged or worn flapper valves see section 9.
- Check diaphragms for wear and tear and replace if needed see sections 10 & 11.
- Check and replace the air outlet filters in the base of the Koi Air see section 8.
- Excessive noise and wear will be caused if the pump is not in a clean and dust / dirt free environment.

No Air Output / Pump Stopped

- Check power supply is on.
- Check fuses and wiring (see electrical installation).
- Check that the metal air divider valves are opened and not fully closed.
- If the pump is situated below the pond level and has been installed without check valves, water may have been siphoned back into the motor.
- The temperature sensitive thermal cutout protection circuit may have switched off the pump to prevent permanent damage temporarily. Check ventilation is adequate and all other points on the troubleshooting guide. Restriction or damage to internal components of the air pump may cause overheating if not checked and resolved.
- All flapper valves may have failed see section 9.
- Both diaphragms may have failed see sections 10 & 11.
- Intake or outlet foams may be severely blocked see section 8.

If none of the above resolves the fault contact Interpet (Blagdon) Consumer advice department (see faults problems procedure inside back cover).

IMPORTANT FAULTS - PROBLEMS PROCEDURE

Before returning your Koi Air pump to your dealer or contacting our Consumer Advice department, please carry out the following steps. This will solve most problems quickly and easily.

1. Ensure electrical procedures have been followed fully. Check fuses and any cable connectors/switch boxes.
NOTE: If the pump has overheated the automatic thermal overload protection circuit will temporarily switch off the air pump. The pump will restart when the motor has cooled (see troubleshooting).
2. (a) Follow routine maintenance and check pump. (b) Follow troubleshooting guide. (c) Follow annual maintenance guide.
3. Return pump to the point of purchase for inspection and advice (you will need proof of purchase).

Consumer Advice contact details

Interpet (Blagdon) Consumer Advice Department
Vincent Lane, Dorking, Surrey RH4 3YX

Telephone: 01306 743747

(Monday to Friday 10am to 4pm except Bank Holidays - Times may vary)

Fax: 01306 876712 **E-mail:** customercare@interpet.co.uk

GUARANTEE

This Guarantee is offered as an extra benefit and does not affect your statutory rights as a consumer in any way. This product is guaranteed against defects in material and workmanship for 1 year from the date of purchase, under normal usage. The guarantee does not apply in cases of improper use, negligence, lack of maintenance or accidental damage either to the pump or the replaceable parts. If the 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. Excludes air intake foams, flapper valves, diaphragms and air outlet foams.