

LIMITED WARRANTY

Within two years from the date of original purchase, Marineland Aquarium Products will repair or replace, at its option, any Penguin BIO-Wheel Power Filter which is deemed defective in workmanship or materials.

Please return the unit (postage paid), together with proof of date of purchase, to:

Marineland Aquarium Products
6100 Condor Drive, Moorpark, CA 93021

Damage or injuries resulting from negligence or misuse are not covered by this warranty. Incidental or consequential damages are specifically excluded.* This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

* Because some states do not allow the exclusion of incidental or consequential damages, this exclusion may not apply to you.



Penguin Power Filters Systems are listed by Underwriters Laboratories to ensure that they meet stringent U.S. and Canadian safety requirements.



Marineland, BIO-Wheel, Rite-Size, Black Diamond and Penguin are trademarks of AQUARIA, Inc.



OWNER'S MANUAL



PENGUIN®

B I O - W H E E L P O W E R F I L T E R S

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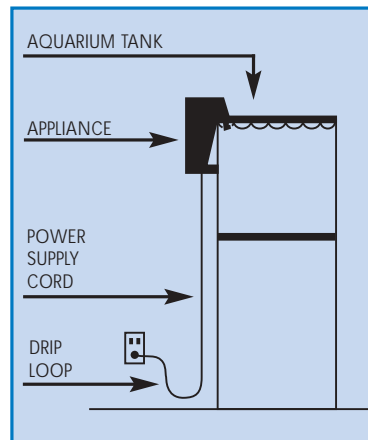
IMPORTANT SAFEGUARDS

WARNING – To guard against injury, basic safety precautions should be observed, including the following.

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

DANGER – To avoid possible electric shock, special care should be taken in the use of aquarium equipment. For each of the following situations, do not attempt repairs yourself; return the appliance to an authorized service facility for service or discard the appliance.

1. A. If the appliance falls into the water, DON'T reach for it! First unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately.
- B. If the appliance shows any sign of abnormal water leakage, immediately unplug from the power source.
- C. Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.
- D. Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or if it is dropped or damaged in any manner.
- E. To avoid the possibility of the appliance plug or receptacle getting wet, position aquarium stand and tank to one side of a wall mounted receptacle to prevent water from dripping onto the receptacle or plug. A "drip loop", shown in the Figure at right should be arranged by the user for each cord connecting an aquarium appliance to a receptacle.



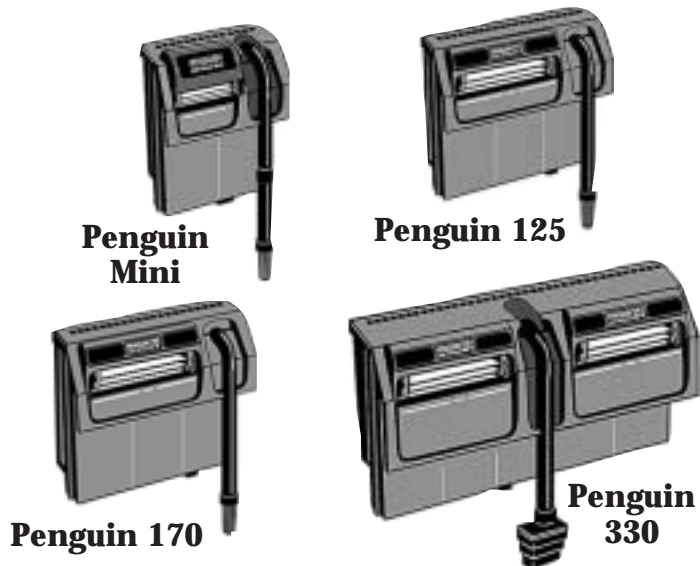
The "drip loop" is that part of the cord below the level of the receptacle or the connector, if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle. If the plug or receptacle does get wet, DON'T unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then unplug and examine for presence of water in the receptacle.

2. Close supervision is necessary when any appliance is used by or near children.
3. To avoid injury, do not contact moving parts or hot parts such as heaters, reflectors, lamp bulbs, etc.
4. Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank cord to pull plug from outlet. Grasp the plug and pull to disconnect.
5. Do not use an appliance for other than intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.
6. Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing.
7. Make sure an appliance mounted on a tank is securely installed before operating it.
8. Read and observe all the important notices on the appliance.
9. If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
10. This appliance has a polarized plug (one blade is wider than the other). As a safety feature, this plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician. Never use with an extension cord unless plug can be fully inserted. Do not attempt to defeat this safety feature.

SAVE THESE INSTRUCTIONS

Penguin BIO-Wheel® Power Filters

The Difference is Performance



Perfect for freshwater or marine applications, Penguin BIO-Wheel Power Filters deliver operational simplicity, easy maintenance, and superior 3-stage aquarium filtration.

Total 3-Stage Filtration Efficiency

A healthy, successful aquarium requires the proper filtration. Three types are necessary:

Mechanical Filtration traps solid debris like uneaten food and fish waste.

Chemical Filtration uses media (activated carbon) to adsorb (attract and hold) dissolved pollutants which can cause discoloration and odor.

The Rite-Size™ Filter Cartridge supplies both mechanical and chemical filtration. For mechanical filtration, there's a polyfiber filter pad to trap dirt and debris. For chemical filtration, each cartridge is packed with Black Diamond® Premium Activated Carbon...the best there is. The patented **ribbed** cartridge back distributes carbon evenly for full water-to-carbon contact...no "tea bag" effect, no water bypass.

Biological Filtration is the most critical kind of filtration. It depends on a culture of beneficial oxygen-breathing bacteria to eliminate toxic ammonia and nitrite that accumulate in aquarium water. The bacteria culture biologically changes the ammonia and nitrite into *nitrate*, which is removed with a partial water change.

The patented Penguin BIO-Wheel is the undisputed best when it comes to biological filtration. Better than frames or foams or fluidized beds. Better than UGF's and other submerged biomed. Years of continuing laboratory tests and field evaluation prove it.



Superior BIO-Wheel Filtration

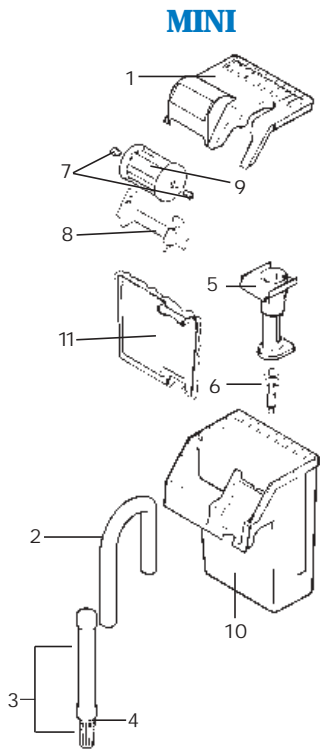
As the BIO-Wheel turns, it contacts water and air...providing the bacteria with the oxygen they need to grow. Because it is a *wet/dry* biological filter, BIO-Wheel provides bacteria with as much as 30,000 times more oxygen than any *underwater* biological filtration. More oxygen means more bacteria working many times harder (and many times faster) to keep your tank ammonia-free and sparkling. And because of this superior filtration efficiency, BIO-Wheel makes it possible for you to maintain a greater number of fish in your aquarium.

Superior Convenience

The Penguin BIO-Wheel is easy to install, easy to operate. No tubing or noisy air pumps are required. The Rite-Size Cartridge changes in seconds and the BIO-Wheel never clogs, never needs replacing, requires virtually no maintenance.

REPLACEMENT PARTS LISTS

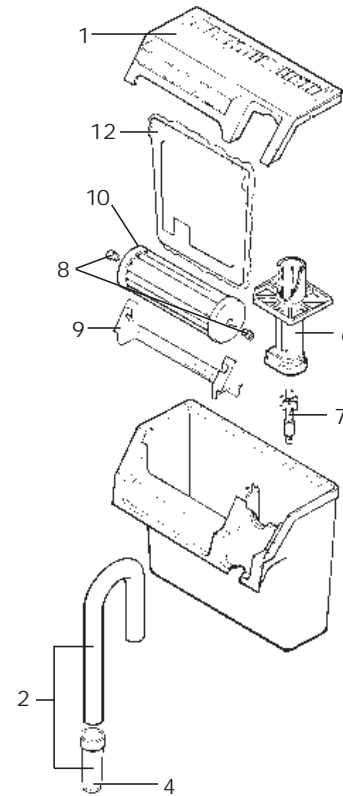
PARTS DIAGRAMS & IDENTIFICATION



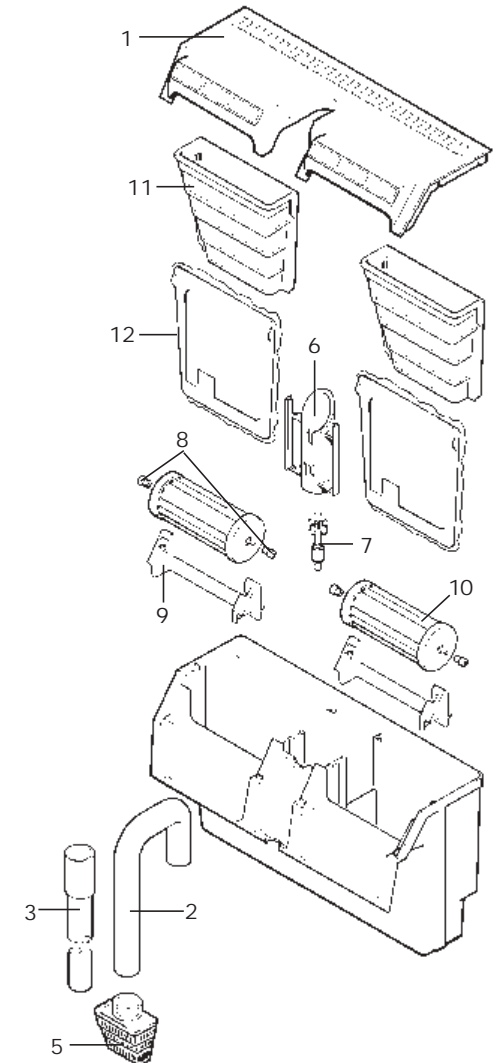
KEY	ITEM DESCRIPTION	MINI
1	Filter Box Cover	PR1950B
2	Intake Tube with Strainer	PR1701
3	Extension Tube with Strainer*	PR1702
4	Strainer (only) - pkg. 2	PR1705
5	Impeller Housing	PR1703
6	Impeller/Magnet Assembly	PR1704
7	BIO-Wheel Bearings - pkg. 2	PR1910B
8	BIO-Wheel Bracket	PR1915B
9	BIO-Wheel Assembly	PR1932B
10	Filter Box	N/A
11	Rite-Size Filter Cartridge (1-pk)	PA0135
11	Rite-Size Filter Cartridges (3-pk)	PA0135-03

* Extension tube not included with all models.

MODELS 125 & 170



MODEL 330



REPLACEMENT PARTS LISTS

KEY	PART LISTING	125	170	330
1	Filter Box Cover	PR1952B	PR1962B	PR1972B
2	Intake Tube with Strainer	PR1254	PR1254	PR2345*
3	1" Extension Tube w/Coupling	N/A	N/A	PA1240
4	3/4" Strainer (only) – Qty. 2	PR1705	PR1705	N/A
5	1" Strainer (only)	N/A	N/A	PA1241
6	Impeller Housing	PR1246	PR1247	PR2350
7	Impeller/Magnet Assembly	PR1258	PR1258	PR2355
8	BIO-Wheel Bearings – Qty. 2	PR1910B	PR1910B	PR1910B
9	BIO-Wheel Bracket	PR1920B	PR1925B	PR1930B
10	BIO-Wheel Assembly	PR1935B	PR1940B	PR1945B
11	Media Basket	N/A	N/A	PR2360
12	Rite-Size Filter Cartridge - 1pk.	PA0132	PA0133	PA0133
12	Rite-Size Filter Cartridge - 3pk.	PA0132-03	PA0133-03	PA0133-03

* Strainer sold separately.

CUSTOMER SERVICE INFORMATION

For additional assistance or to order parts direct, you may call the Customer Service Department at (800) 322-1266, Monday - Friday from 8am - 5pm (Pacific Time). Please have your manual and MasterCard or VISA ready when ordering.

NOTE: Rite-Size Filter Cartridges are not sold as replacement parts. They may be purchased from your local Marineland retail outlet in single or 3-packs.

ASSEMBLY/OPERATIONAL INSTRUCTIONS

NOTE: Assembly/Operational and Maintenance instructions for the Penguin Mini, 125, 170 and 330 BIO-Wheel Power Filters are virtually identical. For this reason, and in the interest of avoiding confusion, the sections that follow primarily feature illustrations for the Penguin Mini and 125/170 models. In those instances where steps provided are not applicable to all Penguin Power Filters, separate illustrations and directives will be included under the heading "Model 330 Only."

Most parts are preassembled and do not require disassembly prior to installation. We recommend that you read the Maintenance section that follows to familiarize yourself with the overall operation of the Penguin BIO-Wheel Power Filter.

STEP 1: POSITION FILTER BOX

Inspect filter for any visible signs of shipping damage and verify that **Magnetic Impeller Assembly** and **Impeller Housing** are properly seated (all the way down) in **Filter Box** (Fig. 1). Hang Filter Box in desired location on back of aquarium.

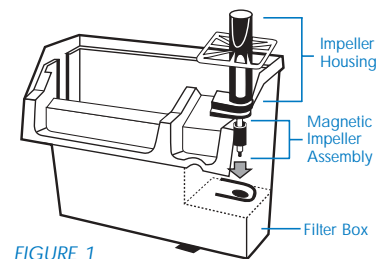


FIGURE 1

MODEL 330 ONLY
Impeller Housing for BIO-Wheel 330 slides between and is held in place by two **Rail Grooves** (Fig. 2)

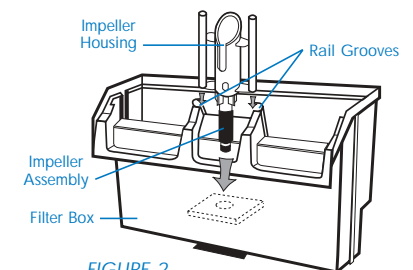


FIGURE 2

STEP 2: INSTALL RITE SIZE CARTRIDGE(S)

Rinse **Rite-Size Filter Cartridge** under cold water to remove carbon dust. Shake cartridge horizontally. This helps to distribute carbon evenly for maximum water/carbon contact. Slide cartridge into channels in Filter Box (narrow side down, black side facing aquarium, Fig 3).

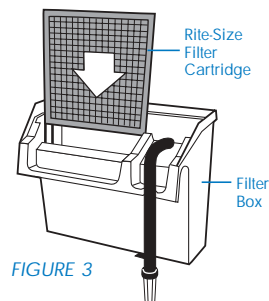


FIGURE 3

MODEL 330 ONLY

Fill **Media Baskets** with filter media of choice. Slide Media Baskets down into filter box behind cartridges (Fig. 4)

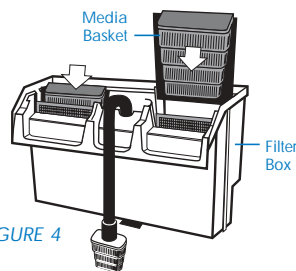


FIGURE 4

STEP 3: INSTALL INTAKE TUBE

Press **Strainer** onto long end of **Intake Tube** - or Extension Tube, if used (Fig 5).

NOTE: Strainer should rest at least one inch above surface of gravel. If necessary, tube may be cut to allow this.

Position tube in **Guide** on front of filter as shown. Insert short end all the way down into Impeller Housing. If Intake Tube is not seated *all the way down*, flow will not start.

MODEL 330 and MINI ONLY

Intake Tube adjusts up to reduce flow rate during feeding, if desired. To ensure proper startup, Intake Tube should be positioned all the way down for maximum flow.

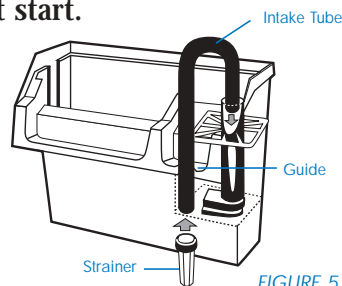


FIGURE 5

STEP 4: INSPECT BIO-WHEEL

Make sure that each **Bearing** is seated snugly into its **Bracket** and that **BIO-Wheel** rotates freely (Fig. 6).

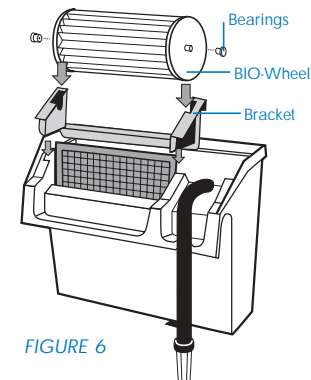


FIGURE 6

STEP 5: START FILTER

Fill Filter Box with water until Impeller Housing is completely submerged. Plug power cord into standard household receptacle. It will take approximately 45 seconds for water to achieve full flow. Place Filter Box Cover on filter.

IMPORTANT NOTE: Never allow a Penguin Power Filter to operate without water.

Once you have started your filter, take a moment to observe BIO-Wheel rotation. It may rotate irregularly. Eventually it will pause or develop a "hitch." All this is normal. A BIO-Wheel rotating at any speed is removing ammonia and nitrite. There is no reason to replace a BIO-Wheel unless it is damaged. If your BIO-Wheel fails to rotate or stops completely, consult the Troubleshooting section of this manual.

MAINTENANCE

CAUTION

- NEVER** submerge Filter Box in water.
- NEVER** use soap, detergents or any non-recommended cleaning agents on or around filter.
- ALWAYS** rinse parts with cold water after cleaning.
- ALWAYS** unplug Penguin Power Filter before performing maintenance.

Proper filter maintenance begins with frequent visual inspections to ensure normal operation and non-stressful conditions for fish.

Basic aquarium maintenance includes monthly 25% water changes and gravel cleaning, as well as regular (once a month, *minimum*) media replacement. Significantly reduced water flow (a sure sign of clogging media), excessive mechanical or water noise, cloudy and/or bad smelling water all require immediate attention.

NOTE: Water added to your aquarium should always be treated (dechlorinated). Chlorine neutralizers are available at your local pet outlet.

We recommend the following complete maintenance procedure for the BIO-Wheel Power Filter as needed (at least every month):

Before you begin, unplug your Penguin Power Filter.

1. Remove Cover.
2. Carefully remove BIO-Wheel and Bracket. If calcium deposit buildup around Bearings and Brackets interferes with rotation, carefully remove BIO-Wheel from Bracket and gently brush bearing and axle area clean. To avoid disturbing beneficial bacteria culture, handle a BIO-Wheel by the End Caps and/or Axle. Any algae, mineral or other buildup that hinder rotation can be eliminated with a gentle rinse in room temperature water.

*NOTE: Bearings can fall off axle. Before cleaning, remove bearings and put them aside. For your convenience, we have included two spare Bearings located on the underside of the **Filter Box Cover** (Fig. 7)*

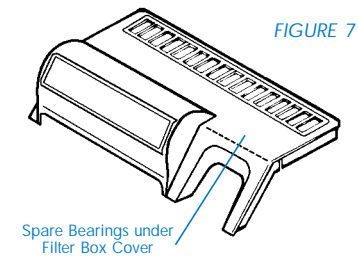


FIGURE 7

IMPORTANT: The BIO-Wheel should not be tampered with or disassembled. Discoloration of pleated BIO-Wheel material is normal and desirable. **NEVER CLEAN THE BIO-WHEEL.** If the BIO-Wheel becomes so heavily cultured that it no longer rotates, you can gently rinse the surface in order to remove the heaviest buildup. Use treated (dechlorinated), room temperature tap water only. As long as a BIO-Wheel is not damaged, it does not need to be replaced.

3. Set BIO-Wheel and Bracket aside.
4. Remove and discard used Rite-Size Cartridge(s).

MODEL 330 ONLY

Remove **BIO-Baskets**. Replace media.

5. Remove **Intake Tube** and clean inside with a flexible filter brush (Fig. 8). We recommend the **Marineland Flexi-Brush** - available at your aquarium store.

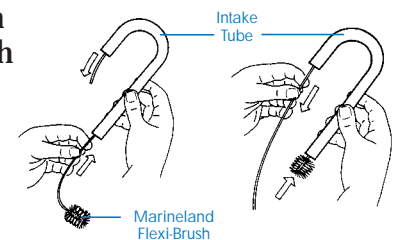


FIGURE 8

6. Lift Filter Box from back of aquarium.

TROUBLESHOOTING GUIDELINES

IMPORTANT: Always unplug your Penguin Power Filter when inspecting or disassembling for any reason.

<p>If filter fails to pump water or flow has slowed...</p>	<p><i>Make certain</i> the outlet has power and is functioning properly by first unplugging electrical cord momentarily, then reconnecting to power source to restart the Impeller.</p> <p><i>Check</i> to make sure that Impeller Housing is firmly seated in Filter Box and that water is at correct level.</p> <p><i>Remove</i> Impeller Housing and make sure the Impeller Assembly is free to rotate. A particle of carbon or gravel may be interfering.</p> <p><i>Inspect</i> aquarium water level. Maintain at 1/2 inch below frame.</p> <p><i>Clean</i> inside of Intake Tube with flexible filter brush.</p>
<p>If filter makes excessive mechanical noise...</p>	<p><i>Make sure</i> that Impeller Housing is firmly seated in Filter Box and that water is at correct level.</p> <p><i>Remove</i> Impeller Housing and make sure the Impeller Assembly is free to rotate. A particle of carbon or gravel may be interfering.</p> <p><i>Replace</i> worn Impeller Housing or worn Impeller Assembly. Consult Parts List for correct part number.</p>

<p>If air does not evacuate from system...</p>	<p><i>Check</i> for cracks in Intake Tube and replace if defective. Consult Parts List for correct part number.</p>
<p>If BIO-Wheel splashes and/or makes excessive water noise...</p>	<p><i>Allow</i> 24-28 hours for “breaking in” period. Material in a BIO-Wheel is not fully absorptive when new.</p> <p><i>Check</i> aquarium water level. Lower than normal levels can result in excessive splash or noise.</p>
<p>IF BIO-Wheel fails to move or stops...</p>	<p><i>Don't panic.</i> Irregular rotation, including brief pauses, is normal.</p> <p><i>Inspect</i> BIO-Wheel bearings and axle for dirt or mineral deposits. If evident, clean these areas carefully.</p> <p><i>Make sure</i> all parts are installed properly and that there are no obvious obstructions to free rotation.</p> <p><i>Perform</i> regular Filter maintenance.</p>

Marineland Customer Service:
800-322-1266
 Monday - Friday, 8am - 5pm (Pacific time)