



H.O.T. Magnum is listed by Underwriters Laboratories to ensure that it meets stringent U.S. and Canadian safety requirements.

Marineland, BIO-Wheel, H.O.T. Magnum, Rite-Size, and Black Diamond are trademarks of AQUARIA, Inc



H.O.T. MAGNUM

HANG ON TANK CONVERTIBLE CANISTER FILTER



OWNER'S MANUAL

IMPORTANT SAFEGUARDS

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

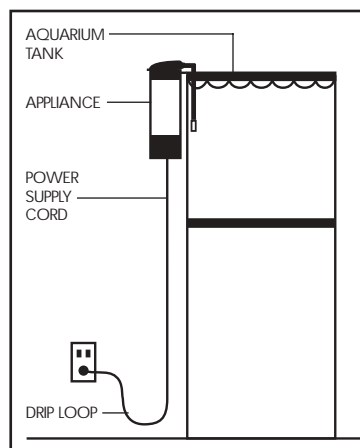
READ AND FOLLOW ALL SAFETY INSTRUCTIONS

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 from 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 an extension cord unless plug can be fully inserted. Do not attempt to defeat this safety feature.

SAVE THESE INSTRUCTIONS

Silent. Powerful. Efficient.



H.O.T. Magnum

Sleek and silent as a jungle cat, the H.O.T. Magnum is a compact canister filter of ferocious efficiency and sheer performance power. It's lightweight enough to hang directly on the back of your aquarium, yet it does the heavy duty work of two complete filtration systems. And it's simple to set up, easy to maintain and readily portable... a triumph of no-compromise design technology.

In the copycat world of aquarium filtration, there is simply nothing else like H.O.T. Magnum.

FILTRATION IN A CLASS BY ITSELF

TWICE THE FILTRATION POWER

The H.O.T. Magnum is actually TWO filters in one...perfect for everyday mechanical/chemical filtration and quick-clean water polishing. Its powerful self-starting pump silently directs a certified 250 gallons per hour through the advanced dual-flow core and sealed media...delivering total contact, total filtration, without bypass.

NO HOSES, NO HASSLES.

H.O.T. Magnum installs in minutes...a feature which makes it ideal for multiple aquarium water polishing. Snap lock, leak-proof connectors eliminate the need for hoses or tubing.

MATCHLESS DESIGN DEPENDABILITY

H.O.T. Magnum's U/L listed synchronous motor and epoxy-encapsulated electrical components are your assurance of safe operation. Superior design and highest quality materials ensure unit strength, durability and trouble-free performance.

PLUS. . .THESE NEW PERFORMANCE FEATURES

- **NEW** motor design with high energy ceramic magnet for long life and corrosion-free reliability.
- **NEW** on/off switch for maximum operational convenience.
- **NEW** extra-long line cord (8 ft.) for multiple tank usage.
- **NEW** adjustable split flow diffuser (patent pending) for bi-directional water circulation.
- **NEW** sweepline intake/outlet tubes for greater flow efficiency and cleaning ease.
- **NEW** two-year comprehensive warranty.

A Word About BIO-Wheel PRO...

The output of your H.O.T. Magnum can drive an optional BIO-Wheel PRO Wet/Dry Biological Filter. A special adapter is included.

The rotating BIO-Wheel is an incredible innovation in aquarium biological filtration. Spray Bar driven, it is the ideal culture site for beneficial, oxygen-loving bacteria...and it eliminates the need for a far less effective undergravel filter. The beneficial bacteria eliminate toxic ammonia and nitrites on contact for a cleaner, healthier aquarium.

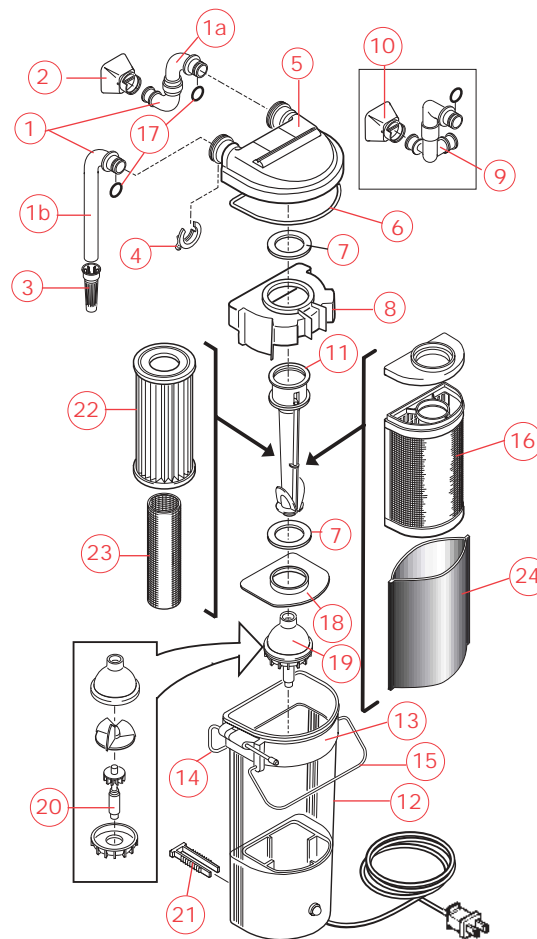
H.O.T. MAGNUM REPLACEMENT PARTS LIST

Prior to assembly, remove parts bag and filter from display box. Inspect each part carefully and note that all parts are included according to the diagrams. If all is in order, carefully fill out the Warranty and Owner Information Card and return it to Marineland. If any part is damaged or missing, call Marineland Customer Service at (800) 322-1266.

KEY	ITEM DESCRIPTION	PART NO.
1	INTAKE& OUTLET TUBE SET W/DIFFUSER	PR1500
1a	OUTLET TUBE	PR1501
1b	INTAKE TUBE	PR1502
2	SPLIT FLOW DIFFUSER - STANDARD*	PR1504
3	INTAKE STRAINER	PR1505
4	CONNECTOR CLIPS - PKG. 2*	PR1503
5	COVER W/D-RING*	PR1512
6	D-RING COVER SEAL*	PR1513
7	EXHAUST GASKET - PKG.2*	PR1514
8	INTERNAL FLOW DIFFUSER*	PR1515
9	OUTLET ADAPTER, BIO-WHEEL PRO CONNECTOR	PR1516
10	SPLIT FLOW DIFFUSER - BIO-WHEEL PRO CONNECTOR	PR1517
11	CENTER EXHAUST TUBE*	PR1530
12	MOTOR & CANISTER ASSEMBLY*	PR1536
13	CANISTER COLLAR*	PR1538
14	STAINLESS STEEL HANGER*	PR1540
15	STAINLESS STEEL SPRING LATCH*	PR1541
16	CARBON MEDIA CONTAINER*	PR1545
17	O-RING- INTAKE/OUTLET - PKG.4*	PR1550
18	BOTTOM PLATE*	PR1565
19	IMPELLER MODULE (3 PART)*	PR1568
20	MAGNETIC IMPELLER ASSEMBLY (BLUE)*	PR1581
21	LEVELING CLIP	PR1585
NS	H.O.T. MAGNUM EXT. TUBE W/COUPLER	PA1591
22	MICRON CARTRIDGE	PA0140
23	MICRON CARTRIDGE CORE	PR1420
24	RITE SIZE FOAM SLEEVE - PKG. 1	PA0115
NS	RITE SIZE FOAM SLEEVE - PKG. 3	PA0115-03
NS	BLACK DIAMOND ACTIVATED CARBON - 8 OZ.	PA0370
NS	FILTER CLEANING BRUSH - 12"	PA0590

*** PLEASE NOTE: Asterisked parts come preassembled with your new system. Exploded view is for identification of REPLACEMENT parts only.**

PARTS DIAGRAM AND IDENTIFICATION



CUSTOMER SERVICE INFORMATION

If parts are unavailable from store where filter was purchased, call our Customer Service Department at (800) 322-1266, Monday - Friday from 8AM - 5PM (Pacific Time). Please have your model number, part number and MasterCard or VISA ready when ordering.

Note: All items bearing a "PA" designation are considered accessories rather than replacement parts. They may be purchased at your local Marineland outlet.

ASSEMBLY

PRIOR TO ASSEMBLY...remove Cover from Motor/Canister Assembly and identify and inspect all parts.

To remove cover:

1. Gently release **Cover Lock**. Do not force beyond position shown (Figure 1).

2. Swing **Stainless Steel Spring Latch** out of way. Lift **Cover** straight up. It is not necessary to remove Connector Clips or D-Ring Cover Seal.

If any parts are damaged or missing, return the unit to dealer where purchased for replacement. Read all instructions completely before attempting to install and operate your H.O.T. Magnum.

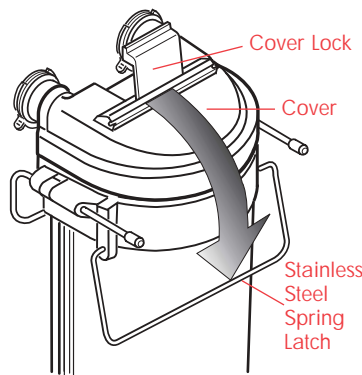
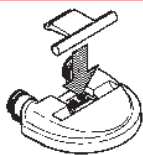


Figure 1

If Cover Lock accidentally disengages from Cover, snap it back into place by holding it parallel to cover and pushing straight down (as shown).



STEP 1: INSTALL LEVELING CLIP

Insert **Leveling Clip** into slot at bottom of **Canister** by alternately "rocking" the clip legs in the slot (Figure 2). This dampens vibration and ensures that Canister hangs vertically.

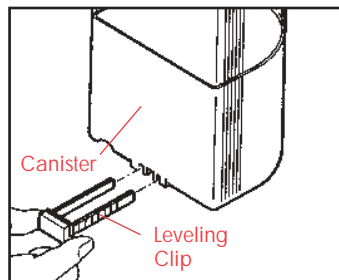


Figure 2

STEP 2: INSPECT AND INSTALL IMPELLER MODULE

Open **Impeller Module** by gently squeezing its opposite sides. Inside you will find the **Magnetic Impeller Assembly** (Figure 3a). Making sure Impeller Module and Impeller Assembly are snapped together, install assembled Impeller Module in bottom of Canister. Install **Bottom Plate** with raised lip facing upward (Figure 3b).

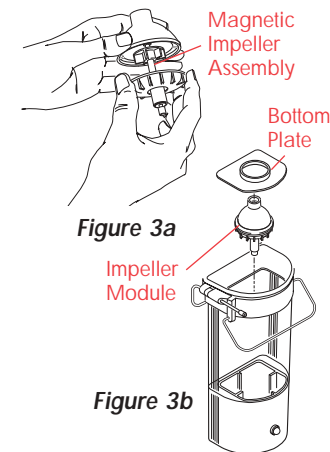
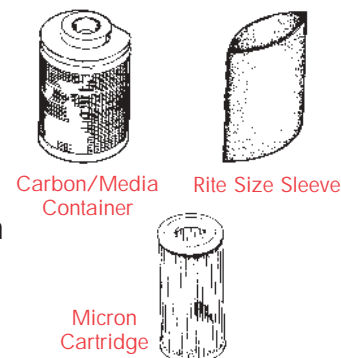


Figure 3a

Figure 3b

STEP 3: PREPARE MEDIA OF CHOICE

The H.O.T. Magnum is a convertible filter. The **Carbon/Media Container** and **Rite-Size™ Sleeve** are necessary for everyday filtration. The sleeve screens out free floating dirt and debris. Black Diamond™ Activated Carbon in the Carbon/Media Container removes toxic chemicals such as chlorine and dissolved organic pollutants which cause discoloration and odors. The **Micron Cartridge** traps microscopic dirt particles and is used periodically to polish water.



DON'T BE MISLEAD. Unlike other carbon, Black Diamond Activated Carbon is graded for uniform particle size. Grading prevents smaller media particles from escaping and seriously damaging the Impeller Assembly.

To prepare Carbon/Media Container:

Remove Container Cover and fill **Carbon/Media Container** with 8 oz. of Black Diamond Activated Carbon (included). Replace **Container Cover** and rinse thoroughly until water runs clear (Figure 4). Slide Rite-Size Sleeve over Carbon/Media Container.

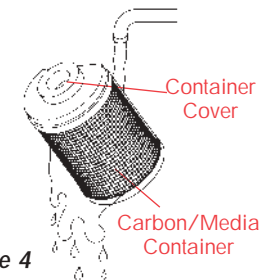


Figure 4

To prepare Micron Cartridge:

Place **Rigid Core** inside a clean **Micron Cartridge** to keep the Cartridge from collapsing during operation (Figure 5).

NOTE: Use of a Rite-Size Sleeve over Micron Cartridge is optional. A loose fit is normal.

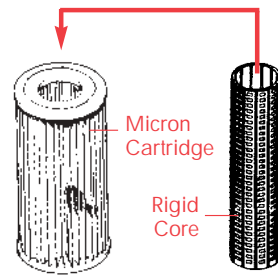


Figure 5



IMPORTANT: Although the Rite-Size Foam Filter Sleeve acts as a prefilter to capture large particles and extend the life of media, it will not prevent fine dirt from eventually entering the Carbon/Media Container or the Micron Cartridge. Always watch for flow reduction. If it occurs, service media immediately. Reduced flow and lowered oxygen levels could result if media is neglected.

STEP 4: INSTALL MEDIA

Insert **Carbon/Media Container** or Micron Cartridge into H.O.T. Magnum Canister. Make sure that bottom is centered and seated completely over raised lip of **Bottom Plate** (Figure 6).

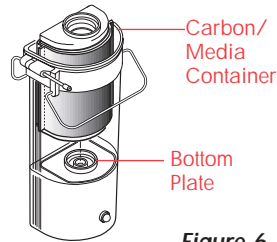


Figure 6

STEP 5: INSTALL CENTER EXHAUST TUBE

Slide **Exhaust Gasket** over narrow end of **Center Exhaust Tube** until seated against bottom of **Lower Flange** (sealing surface). Insert narrow end of Exhaust Tube through center of **Carbon/Media Container** or Micron Cartridge until it seats **inside** top of Impeller Module. When properly installed, Lower Flange and Gasket contact Carbon/Media Container (Figure 7).

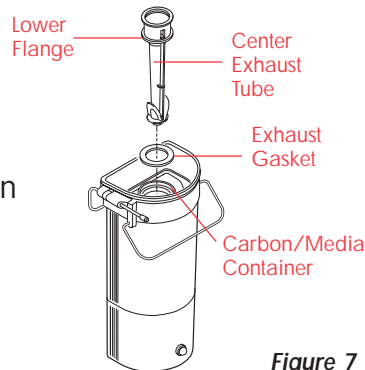


Figure 7

STEP 6: INSTALL INTERNAL FLOW DIFFUSER

Seat **Internal Flow Diffuser** – open end down – over top of **Exhaust Tube**. Place other **Exhaust Gasket** on top of Internal Flow Diffuser (Figure 8).

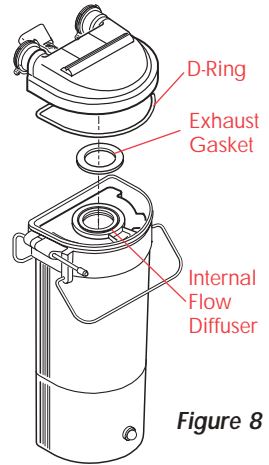


Figure 8

STEP 7: FILL CANISTER

Add water until Internal Flow Diffuser is covered. Make sure **D-Ring** is clean, undamaged and properly seated in the channel provided on underside of Cover. Wet D-Ring with aquarium water to ensure a tight seal.



CAUTION: Do not remove D-Ring unless replacing. Careless or unnecessary removal may cause damage and/or leakage.

STEP 8: CLOSE AND SEAL CANISTER COVER

With Intake and Outlet Tubes in position, place **Cover** firmly on top of **Canister**. Swing **Stainless Steel Spring Latch** completely down in groove of **Cover Lock**.

NOTE: Cover should not “rock” when properly seated. If Cover does not appear to be in solid contact with Canister, lift and recheck assembly.

Gently raise **Cover Lock** as shown (Figure 9) to engage Spring Latch. Press firmly until stainless steel wire snaps into place in the groove. Move Cover Lock down to closed position.

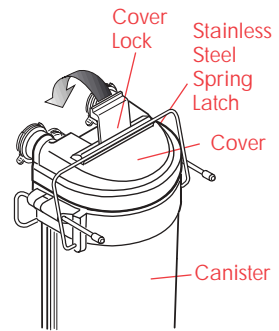


Figure 9



CAUTION: COVER TOO TIGHT? DO NOT FORCE!

If Cover Lock is difficult to close, open Canister and check for correct assembly. Proper locking action will feel firm, but should not require force.

STEP 9: HANG CANISTER

Place in desired position on outside of aquarium. Adjust **Stainless Steel Hanger** to accommodate your tank frame (Figure 10). Extend Leveling Clip as needed to ensure that Canister is vertical. **DO NOT PLUG IN!**

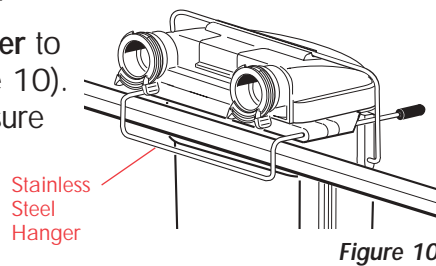


Figure 10

WARNING: TO AVOID DAMAGE, OVERHEATING, ELECTRICAL SHOCK...
NEVER turn on H.O.T. Magnum when Canister is not filled with water.
NEVER submerge entire Canister or Motor Assembly.
NEVER attempt to open Motor Housing.

STEP 10: INSTALL INTAKE STRAINER

Slide **Intake Strainer** onto long end of **Intake Tube** (Figure 11). Use extension tube with coupler provided for deeper aquariums. Cut to desired length.

NOTE: If desired, H.O.T. Magnum can power an undergravel filter (UGF) by seating UGF Adapter (snaps out of top of Intake Strainer) onto UGF lift tube and inserting Intake Tube. This will require cutting Lift Tube to accommodate length of Intake Tube and Strainer

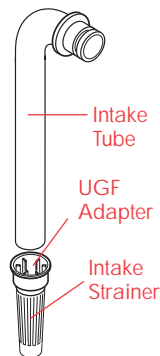


Figure 11

STEP 11: INSTALL SPLIT FLOW DIFFUSER

Install **Split Flow Diffuser** carefully on **Outlet Tube** as shown (Figure 12). Tube "lip" must be positioned *inside* Diffuser or seal will not form. For optimum flow efficiency, position Elbow below water level at all times.

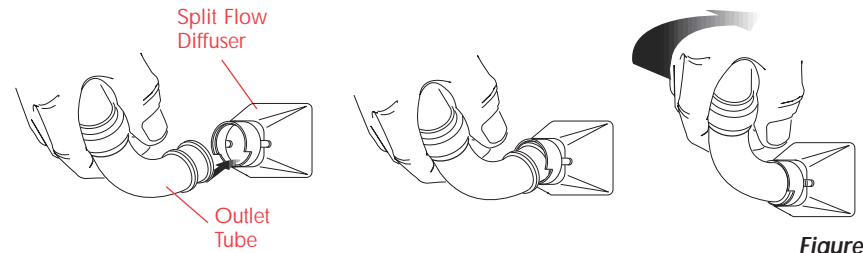


Figure 12

Adjust **Flow Diverters** inside Split Flow Diffuser to desired directional preference. In addition to providing hi-lo circulation (Figure 13a), diffuser may be rotated for wider surface area coverage (Figure 13b).

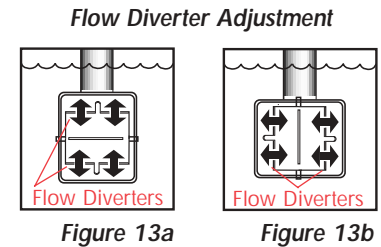


Figure 13a

Figure 13b

STEP 12: INSTALL INTAKE AND OUTLET TUBES

Wet O-Rings on tube ends with aquarium water. Snap **Intake Tube** and **Outlet Tube** into place by pushing into proper port – Intake is marked "IN", Outlet "OUT" – until **Connector Clip** engages and locks (Figure 14).

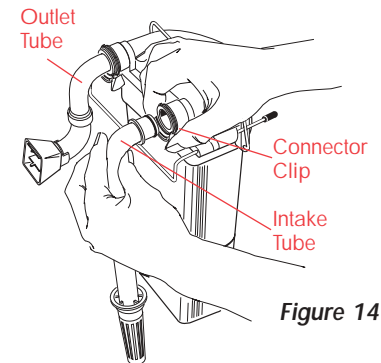


Figure 14

NOTE: To remove connector, first push (don't squeeze) Connector Clip downward (Figure 15). Do not remove clip. Slide Intake or Outlet Tube Connector out of opening and release Clip.

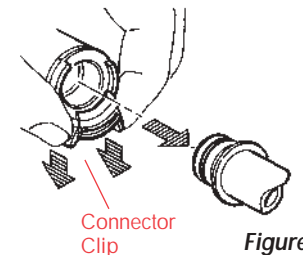


Figure 15

OPERATION

Step 1: POSITION H.O.T. MAGNUM INTAKE STRAINER

Position where it cannot ingest air bubbles. Ingesting too much air will lower the water level in the canister and result in noisy operation.

Step 2: SET SPLIT FLOW DIFFUSER

Since most oxygen absorption occurs at the water surface, agitated water absorbs oxygen much more efficiently. Therefore, set Split Flow Diffuser to create optimum surface agitation and water circulation (Figures 13a, 13b). Never operate filter without Diffuser.

Step 3: START FILTER

Plug power cord into a standard polarized outlet. Be sure to create a "drip loop" as shown in preceding Safety Instructions. Press on/off switch to start filter. If unusual noise results, press on/off switch again to cease operation and consult Troubleshooting Guide.



IMPORTANT: AIR IN CANISTER? Keep intake away from air bubble sources. H.O.T. Magnum includes a patented Air Ejector System which, under normal conditions, will evacuate most air from the Canister. This takes a few minutes. A slight "whooshing" noise will be followed by air bubbles in the outflow.

IF AIR IS NOT BEING EJECTED...

See Maintenance Guidelines (Figure 16) for additional information.

MAINTENANCE



IMPORTANT:

ALWAYS UNPLUG UNIT BEFORE PERFORMING MAINTENANCE.

Proper filter maintenance begins with frequent visual inspections to ensure normal system operation and non-stressful conditions for fish. Additionally, every aquarist should plan to devote an average of 15 minutes per week to the performance of basic maintenance and needed adjustments. These requirements include monthly 25% water changes and gravel cleaning, as well as regular (once a month, *minimum*) filter media replacement. Unusual occurrences - such as lack of water flow, excessive mechanical or water noise, cloudy and/or bad smelling water - require immediate attention.

To ensure optimum filter performance and maintain full flow, regular cleaning and media changes are recommended as necessary (at least every 2-4 weeks). Significantly reduced water flow is a sure sign of clogging media and should be dealt with immediately. Always rinse or replace Foam Sleeve when it is clogged... replace if damaged.

H.O.T. MAGNUM MAINTENANCE GUIDELINES

Remember...The H.O.T. Magnum requires no motor maintenance. There are no moving motor parts and no user-serviceable parts inside the permanently sealed motor housing. Attempts to open the motor housing will damage the unit and expose the user to electrical shock hazard.

Never use soap, abrasives or any other cleaning agents on or around filter or aquarium. Clean with water unless otherwise instructed.

Never attempt to open the motor housing.

Never submerge the motor assembly.

Please follow these instructions for proper regular care each time the H.O.T. Magnum media is serviced:

1. Shut down system and remove Canister.
2. Change media:

CARBON/MEDIA CONTAINER

Remove media and rinse container thoroughly. Refill container with Black Diamond Activated Carbon and *rinse carbon thoroughly*. Rinse or replace Rite-Size Sleeve.

Environmental Tip...Used activated carbon can be added to garden soil to aid in plant fertilization (does not apply to media used with fish medications).

MICRON CARTRIDGE

Remove and clean Cartridge – *never brush or machine wash*. Rinse off all visible dirt. Mix a solution of one part chlorine bleach to three parts water. Immerse cartridge completely in solution and soak overnight. Rinse thoroughly until chlorine smell disappears.

For Best Results...Purchase a second Micron Cartridge for alternate use while original Cartridge soaks and dries thoroughly.

3. Clean Air Ejector Tube with nylon cleaning wand provided (Figure 16).
4. Clean Canister thoroughly, especially Sump area.
5. Clean Impeller Module (gently squeeze sides to pop open).
6. Clean Impeller Assembly and inspect for wear and smooth rotation. If excess wear is noted, replace worn parts immediately.
7. Gently clean flat Exhaust Gaskets with warm water only.
8. Wash D-Ring Seating Area on Canister and Cover. Wet D-Ring before installing.
9. Reassemble system and return to operation as previously instructed.

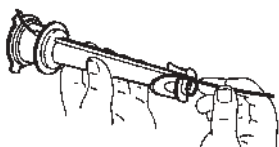


Figure 16

TROUBLESHOOTING GUIDELINES

SYMPTOM	COMMENTS/SOLUTION
If your filter fails to pump water or flow is diminished...	<p>Make certain the outlet has power and is functioning properly by first unplugging electrical cord momentarily, then reconnecting to power source, then restarting the H.O.T. Magnum.</p> <p>Check to make sure Canister is filled with water and that Impeller Module and Impeller are clean, properly installed and free to rotate.</p> <p>Make sure that Intake/Outlet Tubes are not reversed.</p> <p>Inspect Exhaust Gaskets to ensure proper positioning.</p> <p>Clean or change dirty or obstructed Intake/Outlet Tubes or Media.</p>
If your filter makes excessive mechanical noise or stops abruptly...	<p>Make sure that Impeller is not broken or impeded in any way. Replace if necessary.</p> <p>Check Impeller area for interfering gravel, carbon or debris particles.</p> <p>Clean Canister sump Impeller Module and Impeller.</p> <p>Use only Black Diamond Activated Carbon to avoid ingesting small particles into impeller mechanism.</p> <p>Inspect Impeller Magnet for instability. If it wobbles when spun on shaft or if excessive wear is evident, replace Impeller Assembly immediately.</p>
If air does not evacuate from system (air gap increases and will not stabilize)...	<p>Clean Air Ejector Tube on side of Center Exhaust Tube (Figure 16). Do not remove Air Ejector Tube.</p> <p>Move Intake away from any air bubble source.</p> <p>Check for air entering through O-Ring or D-Ring leaks. Use special Silicon Lubricant (included) as directed and replace damaged parts.</p> <p>Inspect O-Ring and D-Ring for dirt, wear, damage or improper alignment. Reinstall correctly with clean, undamaged parts.</p>

MAINTENANCE SCHEDULE

Clean equipment works best. Regular care keeps your unit operating at peak efficiency. Record the maintenance performed and the date below.

MAINTENANCE	DATE	MAINTENANCE	DATE

LIMITED WARRANTY

Within two years from the date of original purchase, Marineland Aquarium Products will repair or replace, at its option, any H.O.T. Magnum Convertible Canister Filter which is deemed defective in workmanship or materials.

Please return the unit, together with proof of date of purchase, to your local dealer or send unit (postage paid) 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.