

# Installation, Operating and Maintenance instructions for Hydro-Air pumps

## FEATURES:

- The pump is a magnetically driven centrifugal water pump. It has no seals to wear and contains no oil.
- All electrical components are encapsulated in epoxy.
- The pump combines the re-circulation as well as the aeration of water in a single device.
- The Diffuser, which must be installed on the “air” side of the device, provides a uniform dispersion of released aeration.
- Pre-filters for both inlet openings are provided and must be used in order to prevent debris in the water from being drawn into the inlets. Debris will interfere with the operation and performance of the pump and potentially cause damage to the internal components.
- Includes an Anti-Skid pad for placement on bottom surface of the pump body.
- Foam Muffler for complete sound dampening of air intake process.

## USE & APPLICATION:

- The pump can only be used in a submerged application.
- Pump should be placed on a level surface, slightly raised above the bottom of the pond. This will help in preventing any debris lying on the bottom from being drawn into the pre-filter.

## INSTALLATION:

1. Peel off backing from Anti-Skid pad (included), center the pad along bottom surface of housing and apply, pressing firmly in place.
2. Attach one end of ½” diameter flexible black vinyl tubing ( purchased separately) to the serrated stem protruding from the top side of the aeration inlet.
3. Remove the plastic nose piece from inside foam pre-filter and attach the nose piece onto the inlet neck adjacent to the end of the soft vinyl tubing.
4. Slide the foam pre-filter back over nose piece.
5. Assemble pre-filter cage (see assembly instructions included in kit) and slide onto the volute inlet neck on the opposite end of the pump.
6. Install the Air Diffuser onto the unthreaded outlet of the volute.
7. Select the desired location in the pond where you would like to place the pump. Be sure the location is a flat, level surface. **Elevate the pump off the bottom to prevent debris from being drawn into the pre-filters.** Elevating can be accomplished with a flat stone.
8. With the pump in place measure the proper length of ½” diameter flexible black vinyl tubing allowing enough tubing to exit the pond and be exposed to the atmosphere. Allow some extra length of tubing so it can be held in place to prevent it from falling back into the pond. When the final location for the the tubing is determined, the remaining length can either be cut off or coiled and hidden from sight.
9. Roll one end of the Foam Muffler between your thumb & forefinger creating a cylindrical shape and start inserting it into the open end of the ½” diameter flexible black vinyl tubing (not included ). Twisting the foam as its being inserted. Continue to roll, twist & insert the foam into the hole of the tubing until approximately ½ of the length of the foam muffler has been inserted.
10. The tubing end can now be secured to or tucked into any piece of hardscaping or coiled and hidden inside landscaping. The end of the tubing must be secured in place before powering up the pump. **Do not allow the end of the tubing to fall into or become submerged in the water. This will prevent the aeration process.**
11. Install a ¾” FPT fitting of choice onto the threaded outlet side of the volute and install soft or rigid tubing, depending on the fitting installed.
12. Plumb the water outlet side of the pump to the intended feature, ie filter, waterfall.....etc.
13. The pump can now be powered up.

## Flow Rates

### 1 1/2" PIPE SIZE

HEAD HEIGHT (Ft.)	FLOW RATE (GPH)
0	1236
1	1218
2	1158
3	1116
4	1068
5	1020
6	972
7	936
8	900
9	846
10	798
15	420
17	SHUTOFF

### 2" PIPE SIZE

HEAD HEIGHT (Ft.)	FLOW RATE (GPH)
0	1398
1	1380
2	1308
3	1260
4	1248
5	1158
6	1074
7	1056
8	948
9	918
10	840
15	540
16	SHUTOFF

#### **SERVICE AND MAINTENANCE:**

All pumps should occasionally be removed and maintained. Pumps that have operated for any length of time and have been taken out of service can run the risk of forming scale on the moving components and surrounding walls which may prevent subsequent starting. Do not use the power cord to lift or move pump. Other than the replacement parts shown, this device has no user serviceable parts. The Magnet Impeller assembly must be routinely cleaned to remove accumulations of scale, calcium or any other build-up. This procedure should be done at least once every three months depending on water conditions.

Pondmaster® PUMPGUARD™ WATER PUMP MAINTENANCE SOLUTION (sold separately) will instantly loosen scale, lime, rust and other buildup from moving parts and from inside the impeller chamber. With Pondmaster® PUMPGUARD™ WATER PUMP MAINTENANCE SOLUTION this can be done without disassembling the pump. Follow the steps outlined below:

1. Disconnect power to the pump.
2. Remove the pump from the water.
3. Remove prefilters from the ends of the pump.
4. Plug or cap-off the inlet & outlet on the water side volute. (The threads of the volute on the water flow side of the pump are 3/4" NPT. A plug or cap can be purchased at any hardware supply)
5. Position the pump vertically with the uncapped volute's inlet facing upwards.
6. Pour PumpGuard into volute inlet until the entire cavity is full.
7. Allow to soak for 2 to 3 minutes. Remove plug (or cap) and thoroughly rinse with clean water.
8. Reassemble pump components and place back into service.

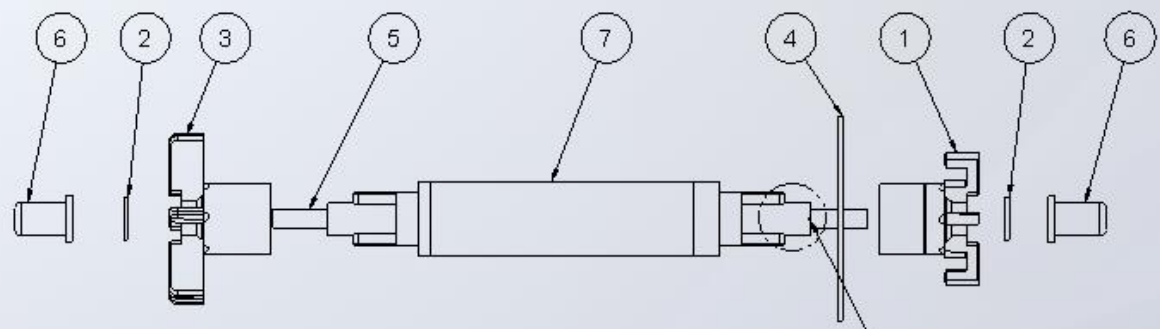
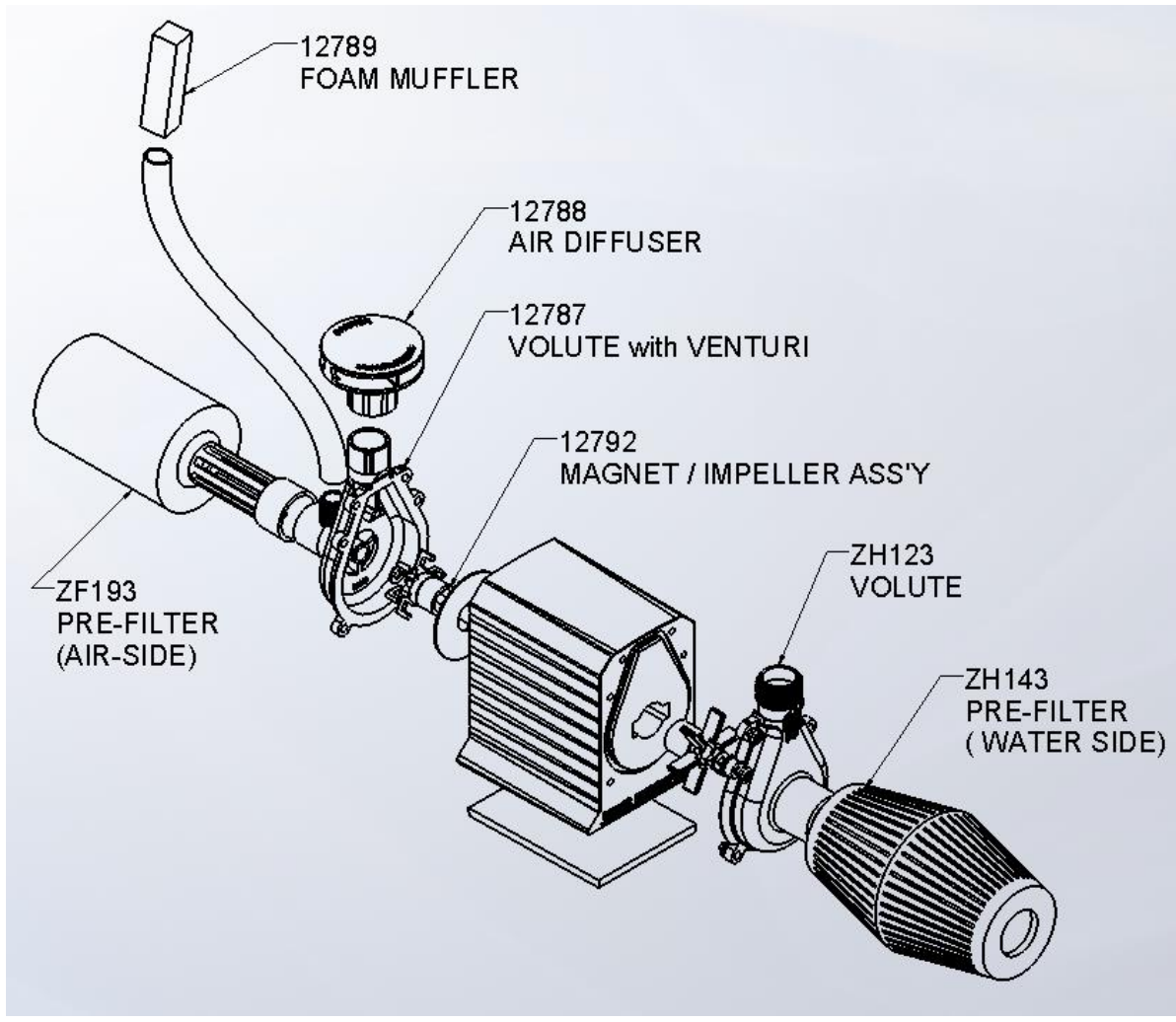
**PUMPGUARD™** pump maintenance solution is available in three sizes:

4 oz. -----Impeller/Volute Treatment -----Item # 03905

32 oz. -----Soak/Dunk & Impeller treatment-----Item # 03907

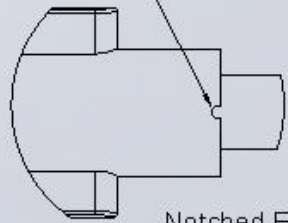
128 oz. -----Commercial Size -----Item # 03909

**HYDRO-AIR 1200 (ITEM # 02795) REPLACEMENT PARTS**



**12792 MAGNET / IMPELLER ASSEMBLY**

ITEM NO.	DESCRIPTION	PART NO.	QTY.
1	AERATING IMPELLER	ZH682	1
2	DELRIN WASHER	ZX111	2
3	IMPELLER _WATERFLOW HydroAir 1200	ZH679	1
4	BUBBLE BARRIER DISC	ZH686	1
5	CERAMIC SHAFT	ZX118	1
6	SHAFT END CAP	ZH131	2
7	MOLDED MAGNET ASSY H-A1200	ZH683	1



Notched End  
Refer to Step 10

## MAGNET / IMPELLER ASSEMBLY REPLACEMENT PROCEDURE:

1. Remove both pre-filters from both inlets of the pump.
2. Remove the Air Diffuser from the top of the air-side volute
3. Disconnect the flexible vinyl tubing from the air-side volute.
4. Remove the (6) Phillips head mounting screws from the air-side volute.
5. Pull the air-side volute straight off from the housing. Do not twist the volute in a left to right or up & down motion while removing. This motion could cause its ceramic shaft to crack.
6. Remove the (6) Phillips head mounting screws from the water-side volute.
7. At this point remove all the components that make up the Magnet / Impeller Assembly.
8. Wipe down the inside cavity of the housing where the magnet rotates with a wet cloth to remove any possible sediment buildup.
9. Layout your replacement parts in the order as shown in the Magnet / Impeller Assembly diagram.
10. Note that on one end of the magnet injection there are a pair of small notches molded into the surface near the hole where the ceramic shaft gets inserted. When replacing the magnet back into the housing be sure to insert this notched end back into the housing from the waterflow side. When done correctly the notched end of the magnet ends up on the Air-side of the pump. The same side as the Aerating impeller (item 1) and the Volute with venturi (item 12787) are located on. The Air side of the pump is where the power cord exits the housing.
11. After re-assembling all the components inside the housing replace both volutes and re-fasten the (12) Phillips head screws. DO NOT USE A POWER DRIVEN SCREWDRIVER IN THIS STEP. OVER-TORQUING THE SCREWS WILL DAMAGE THE INTERNAL THREADS OF THE HOUSING. USE A MANUAL SCREWDRIVER AND DO NOT OVER TIGHTEN THE SCREWS.
12. Re-attach flexible vinyl tubing, Air Diffuser and both pre-filters on the volute inlets.

**CAUTION** The pump is intended to pump water only. It cannot be used to pump oil, solvents, or gasoline and **MUST NEVER BE RUN DRY.**

**ELECTRICAL PRECAUTIONS: WARNING** - Risk of electric shock - This pump is supplied with a grounding conductor and grounding-type attachment plug. To reduce the risk of electric shock, be certain that it is only connected to a properly grounded, grounding-type receptacle. Always use a properly grounded outlet. Do not immerse the plug in water. **DO NOT REACH INTO THE WATER TO REMOVE THE PLUG. TURN OFF THE CIRCUIT FIRST.** A “drip loop” should be provided. The “drip loop” is a loop in the cord below the level of the receptacle or plug that prevents water from traveling along the cord. The National Electric Code requires that a ground fault circuit interrupter (GFCI) be installed in the branch circuit supplying fountain or pond equipment. Your dealer can supply GFCI units. **NEVER REMOVE THE GROUND PIN FROM THE PLUG.**

**WARNING:** FOR YOUR PROTECTION ALWAYS UNPLUG THE UNIT FROM ITS POWER SOURCE BEFORE INSTALLING OR SERVICING. SHOULD THE UNIT APPEAR TO BE NOT WORKING DO NOT REACH, REMOVE OR DISASSEMBLE IT BEFORE YOU DISCONNECT THE POWER.

**LIMITED WARRANTY** Danner pumps are warranted against failure due to defects in materials and/or workmanship as follows: Pump body, cover and filter and accessories within five years of original purchase. Impeller and internal moving parts within one year of original purchase. This warranty does not cover any replaceable filtering material supplied with the pump as it is considered expendable. This warranty covers defects occurring under normal use. The warranty and remedies set forth herein are conditional upon proper installation, use, maintenance, storage, and conformance with the applicable use. It will be based upon Danner Mfg. discretion as to whether the defects are of manufacturing origin. For warranty repair, return only the part that is defective to our factory. Please include a dated proof of purchase and \$5.00 for postage and handling. Any damages due to improper installation are not covered by this warranty. This warranty does not apply to appearance or accessory items. This warranty does not include damage due to handling, transportation, unpacking, setup, installation, repair or replacement of parts supplied by any other than Danner Mfg.; improper maintenance, modification or repairs by the purchaser; abuse, misuse, neglect, accident, fire, flood, or other acts of God. Any oral statements about this product made by the seller, the manufacturer, their representatives or any other parties do not constitute warranties and shall not be relied upon by the user and are not part of this contract. Neither the seller nor the manufacturer shall be liable for any injury, loss or damages, direct, incidental, or consequential, including but not limited to incidental or consequential damage for lost profits, lost sales, injury, and inability to use the product and the user agrees that no other remedy is available. Before using, the user shall determine the suitability of the product for their intended use and the user shall assume all risk liability whatsoever in connection there-with. To validate this warranty, keep your proof of purchase (copy of sales receipt from a certified Pondmaster or Supreme dealer). Warranty covers the repair or prorated replacement of the Danner Mfg. products. Danner Mfg. denies all liability for any other loss including but not limited to loss of equipment, income, livestock, vegetation or personal injury. **THE FOLLOWING VOIDS WARRANTY: LINE CORD OR PLUG IS ALTERED OR CUT, PRODUCT LABELS ARE DEFACED OR REMOVED. PRODUCT IS IMPROPERLY INSTALLED OR MAINTAINED BY USER OR THEIR AGENT. PRODUCT IS ABUSED, MISUSED, OR DAMAGED BY USER OR THEIR AGENT. PRODUCT IS NOT REMOVED FROM SERVICE AND DRIED OFF DURING FREEZING CONDITIONS.**