Warranty

Aquatic Eco-Systems, Inc. 12-Month Standard Warranty:

Desert Rain Fountains, when properly installed and operated under normal conditions of use, are warranted by Aquatic Eco-Systems, Inc. to be free from defects in material and workmanship for a period of 12 months from the date of invoice, unless otherwise stated. In order to obtain performance under this warranty, the buyer must promptly give verbal or written notice of the defect by calling our Returns Department at 407-886-3939, sending a fax to 407-886-6787 or by e-mail to AES@AquaticEco.com. The buyer is responsible for freight charges, both to and from Aquatic Eco-Systems, Inc. in all cases.

Aquatic Eco-Systems, Inc. warranties do not extend to any goods or parts which have been subjected to misuse, modification, lack of maintenance, neglect, transit damage or damage resulting from lightning, natural or accidental flooding, fire or accident. Operating use or circumstances outside normal conditions may also be excluded from this warranty.

THIS EXPRESS WARRANTY EXCLUDES ALL OTHER WARRANTIES OR REPRESENTATIONS EXPRESSED OR IMPLIED BY ANY LITERATURE, DATA OR PERSON. THE MAXIMUM LIABILITY OF AES UNDER THIS EXCLUSIVE REMEDY SHALL NEVER EXCEED THE COST OF THE SUBJECT PRODUCT AND AES RESERVES THE RIGHT, AT ITS SOLE DISCRETION, TO REFUND THE PURCHASE PRICE IN LIEU OF REPAIR OR REPLACEMENT.

Aquatic Eco-Systems, Inc. WILL NOT BE RESPONSIBLE OR LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND, however arising, including but not limited to those for use of any products, loss of time, inconvenience, lost profit, labor charges or other incidental or consequential damages with respect to persons, animals, business or property, whether as a result of breach of warranty, negligence or otherwise. Notwithstanding any other provision of this warranty, BUYER'S REMEDY AGAINST AES FOR GOODS SUPPLIED OR FOR NON-DELIVERED GOODS OR FAILURE TO FURNISH GOODS, WHETHER OR NOT BASED ON NEGLIGENCE, STRICT LIABILITY OR BREACH OF EXPRESS OR IMPLIED WARRANTY IS LIMITED SOLELY, AT THE OPTION OF AES, TO REPLACEMENT OF OR CURE OF SUCH NONCONFORMING OR NON-DELIVERED GOODS OR RETURN OF THE PURCHASE PRICE FOR SUCH GOODS AND, IN NO EVENT, SHALL EXCEED THE PRICE OR CHARGE FOR SUCH GOODS. AES EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE WITH RESPECT TO THE GOODS SOLD. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTIONS SET FORTH IN THIS WARRANTY, notwithstanding any knowledge of Aquatic Eco-Systems, Inc. regarding the use or uses intended to be made of goods, proposed changes or additions to goods or any assistance or suggestions that may have been made by AES personnel. Unauthorized extensions of warranties by the customer shall remain the customer's responsibility.

May 2009

Desert Rain™ Onshore Floating Fountain

(Part Nos. OSF1–OSF5)

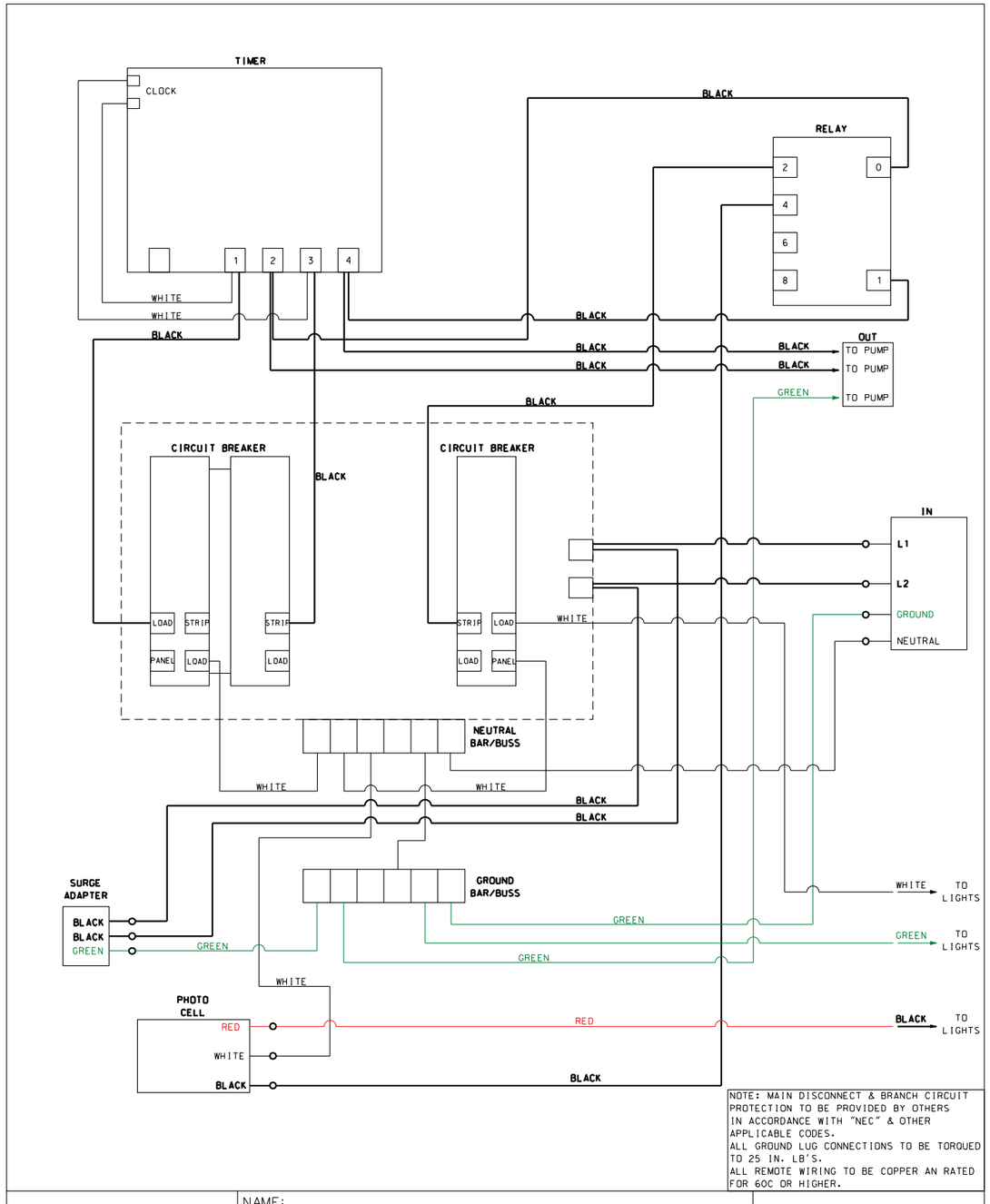
Part No. _____ Serial Number _____ Date Purchased _____

AQUATIC ECO-SYSTEMS, INC. Since1978

Desert Rain™ FLOATING FOUNTAINS

Aquatic Eco-Systems, Inc. • Phone: 800-899-2565 • Fax: 407-886-6787 • Info@DesertRain.com • AquaticEco.com • DesertRain.com

Wiring Diagram, 230V

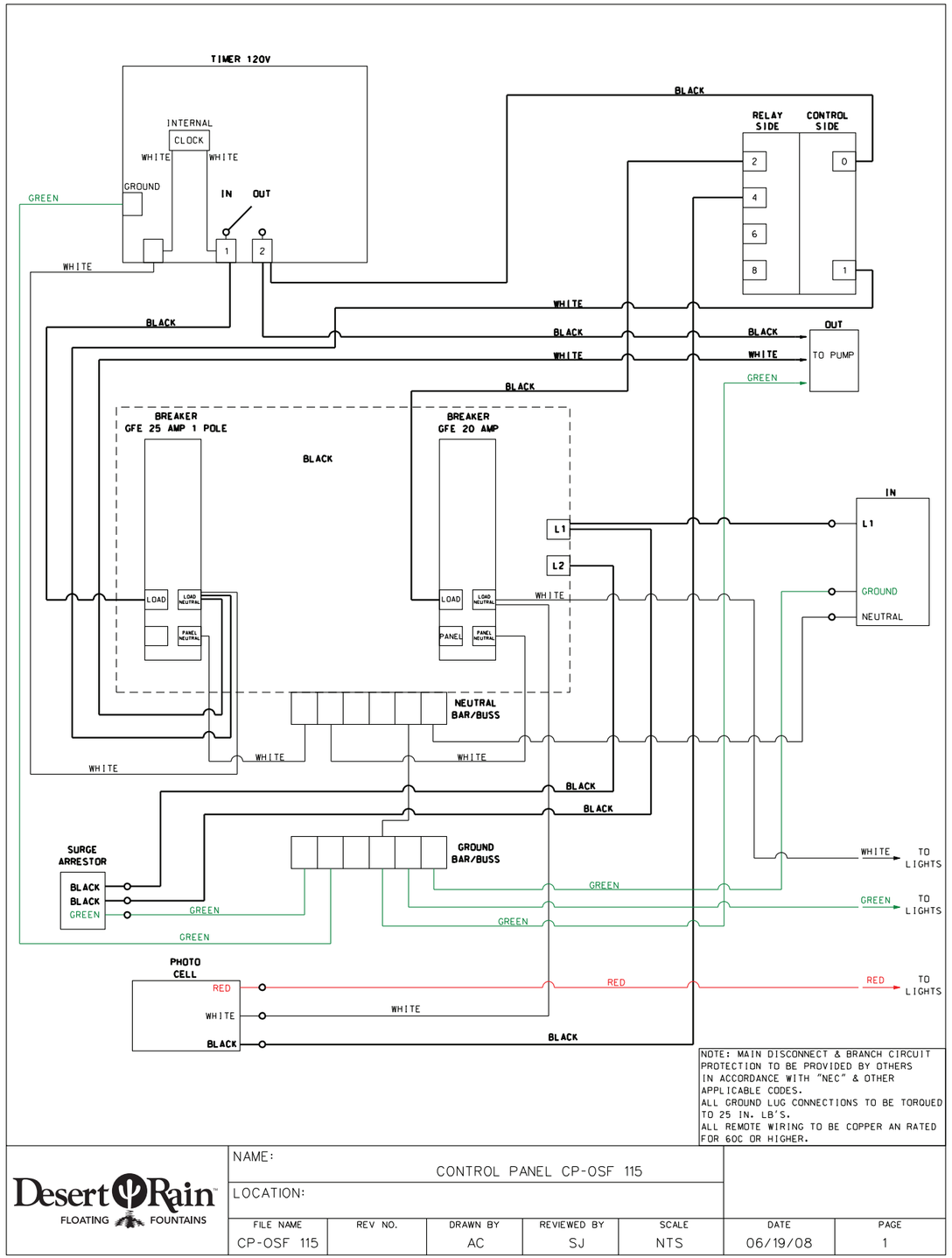


Desert Rain FLOATING FOUNTAINS

NAME:						
CONTROL PANEL CP-OSF						
LOCATION:						
FILE NAME	REV NO.	DRAWN BY	REVIEWED BY	SCALE	DATE	PAGE
CP-OSF	0	AC	SMJ	NTS	04/07/08	1

Appendix

Wiring Diagram, 115V



Desert Rain FLOATING FOUNTAINS

NAME: CONTROL PANEL CP-OSF 115						
LOCATION:						
FILE NAME	REV NO.	DRAWN BY	REVIEWED BY	SCALE	DATE	PAGE
CP-OSF 115		AC	SJ	NTS	06/19/08	1

Table of Contents

Dear Customer,
Thank you for your purchase. Our products are thoroughly tested so that we can give you reliable, accurate information about real-world operation.

Installation is easy and should take between two and four hours to complete. Please read the instructions thoroughly before beginning the installation and retain them for future reference. To provide the best performance of your new fountain and to ensure its lasting beauty, please comply with all recommendations contained in this manual.

We value your business and look forward to meeting all your needs with the world's largest selection of aquatic tools. Aquatic Eco-Systems has delivered outstanding products and service since 1978. We have the knowledge and experience to help you accomplish your goals.

Best regards,

Todd Childress
President

AES is open from 8 a.m. to 7 p.m. Monday through Thursday and 8 a.m. to 5 p.m. Friday. For technical help call 407-886-3939.

Safety Messages

Safety is important to us. We have included safety messages throughout this manual and for your protection. Please read and follow all directions.

A safety message has a safety alert symbol followed by an explanation of what the hazard is, what can happen and what you should do to avoid injury. This is the safety alert symbol:

The safety alert symbol and "WARNING" or "CAUTION" will precede all safety messages:

WARNING

You will be killed or seriously injured if you don't follow instructions.

CAUTION

You can be killed or seriously injured if you don't follow instructions.

ELECTRICAL SHOCK HAZARD

Disconnect electrical power at the circuit breaker or fuse box before installing this product. Install where it will not come into contact with water or other liquids and where it will be weather protected. Electrically ground this product. Failure to follow these instructions can result in death, fire or electrical shock.

Important Safety & Handling Instructions

- Extreme caution should be used around water, especially cold water, which poses a special hazard in and of itself.
- Do not use boats that tip easily for fountain installation (i.e., canoes).
- **Never** attempt to lift, drag or tow the fountain into place by the power cords. Use the anchoring ropes.
- **Caution** should be used when dealing with any electrical equipment, especially in wet environments.
- All Desert Rain™ fountain control panels are GFCI protected; however, no one should enter the water under any circumstances while the fountain lights are in operation.
- **Never** operate the unit or turn on the lights without an adequate supply of water as both are water-cooled and can be damaged by doing so.
- Electrical equipment may pose electrical shock hazard in the event of an equipment malfunction.
- Swimming and other water activities should be prohibited within 300' of submersed electrical equipment and cables.

WARNING

Consult NEC Article 680 Prior to Installation

It is the buyer's responsibility to check all electrical codes prior to installation of electrical equipment.

The installation and operation of electrical products around water, if not carried out by a qualified, licensed electrician in a careful and workmanlike manner in accordance with the national electrical code, applicable safety regulations and Desert Rain™ installation instructions, may present a potentially hazardous condition.

The National Electrical Code requires the use of a "class A" ground fault circuit interrupter (GFCI) on every equipment circuit above 15 volts.

Aquatic Eco-Systems, Inc., lends its full support to all provisions of NEC article of the National Electrical Code and accepts no responsibility whatsoever for direct or consequential damages arising from installations not made in accordance with all provisions of said article and all other applicable codes or restrictions.

Note: Refer to Appendix for control panel wiring diagram.

Onshore Fountain Parts List

Your new Desert Rain™ Onshore fountain has arrived partially assembled. We have left the plumbing disassembled, enabling it to be modified to fit the needs of your worksite. Check to verify that you have received all of the parts listed below. Please notify Aquatic Eco-Systems immediately of any missing or damaged parts.

A. Control Panel in Separate Box

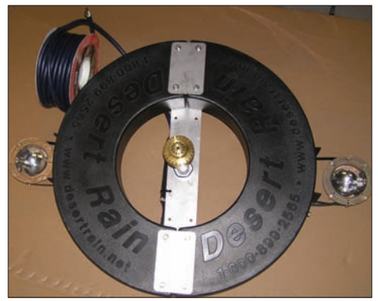
B. Intake Screen

C. Intake Tubing Assembly

D. Discharge Tubing

E. Nozzle and Pipe Adapter

F. Float Assembly



G. Pump

2" PVC 1/2 Unions

Specifications

1- to 3-hp Floating Fountain Onshore Operating System

Model	Voltage	Amps
1 hp	115/230	16/8
2 hp	115/230	21/10.5
3 hp	230	16.3

Light Cable Maximum Run

Lights	Amps	#10/3	#8/3	#6/3
2 x 250 watts	4.2	500'	920'	1,450'
2 x 500 watts	8.3	280'	460'	730'
2 x 1,000 watts	16.7	140'	230'	360'

Float

Compartmentalized polyethylene float system. Roto-cast molded sections with threaded brass inserts, stainless steel hardware: 36" O.D., 18" I.D., 4" H.

Frame

1/8" 304 stainless steel angle iron, prepunched for easy assembly. All hardware is stainless steel to prevent corrosion.

Pump

Jacuzzi® pump.

Intake Hose

PVC Suction Hose, 2" or 3" system dependent.

Discharge Hose

250-psi test mil spec hose, 2" or 3" system dependent.

Plumbing

All schedule 40 PVC, swing check valve included.

Intake Screen

Easy-to-clean 304 stainless steel, rustproof, with 1/8" holes on 3/16 staggered centers.

Control Panel

Intermatic 60-amp control center, GFCI breakers, surge protection, timer, photo cell for lights, all prewired.

Nozzle

Solid brass, thermal plastic/brass combo provides durability and strength.

Lights

UL-listed underwater bronze cast fixtures, thermally protected, quartz lamps.

Light Electrical Cable

PVC, double-jacketed heavy-duty TW submersible light cable.

Light Splice

Permanent, underwater wire-splice to prevent underwater wire connection problems. No leaks, corrosion or shorts.

To extend the life and enjoyment of your fountain, we recommend:

Adequate electricity to the motor

Your fountain must have adequate electricity with no more than a 3% voltage drop to the motor. This must be calculated and provided for prior to ordering and installing your fountain by a qualified commercial electrician with swimming pool pump experience. Transient voltage surge protection and ground fault protection are provided on your fountain to protect the motor. If your fountain can not run with these in place, then you have an electrical problem that needs to be addressed. DO NOT OVERRIDE these protections as this will most likely result in pump failure and will not be covered by your warranty.

Common signs: Your fountain shuts itself off, trips breakers or overload or has high amp readings.

What to do: Remove power at the service disconnect, call your electrician and give the electrician our technical support number, 800-899-2565.

Adequate air and water to cool the pump

Your fountain's pump is water and air cooled. It requires water and air to flow easily over the pump. Keep your pump well ventilated. Keeping your water clean will keep your fountain clear of debris, mineral deposits, plant deposits, and other water flow restricting elements. If your water is challenged with these environmental problems, periodically check your fountain and pump strainer basket for debris hazards, plant and mineral build ups. Cleaning of the intake screen is easily done with a wire brush. Motor damage caused by environmental hazards is not covered by your warranty.

Common Signs: Your fountain is shrinking in size, shuts itself off after running for a short time, trips breakers or overload, or has high amp readings.

What to do: Turn the fountain off at the disconnect, call your electrician and give the electrician our technical support number, 800-899-2565.

Lighting Maintenance

The lenses of the lights will need to be cleaned periodically to remove film. Bulbs last for about 2 years and will need to be replaced with the same voltage and wattage lamps. The lights are water cooled, so running them on land will burn them up. No fishing near the electrical light cable. Fishing hooks can damage the wire casing of the electrical cable, creating electrical leaks.

Common signs: Lights seem dim, dull or out of balance.

What to do: Replace bulbs with same size and style.

Pump Owner's Manual

A separate owner's manual for your pump is included with your fountain. Please follow those directions for your pump's installation, operation, maintenance, warranty and repair instructions.

Winterizing

In regions where there is significant freezing in the wintertime, the fountain should be removed from the water to protect it from the expansion pressure of ice. In many areas, a fountain will keep some amount of ice open through the winter (be sure to keep the intake and discharge hoses below the frost line). However, when the water is thrust into the air it is exposed to the colder air temperatures longer and can actually make ice thicker in the vicinity of the fountain. Also note that stopping the pump in temperatures below 32ºF (0ºC) may cause the motor to freeze.

Troubleshooting & Repair

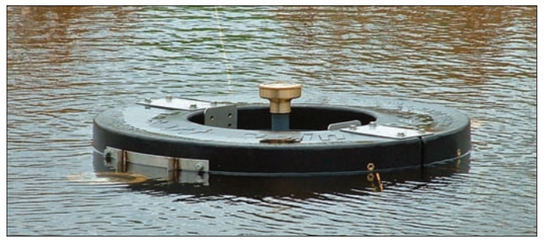
Desert Rain™ Floating Fountains are designed with ease of ownership in mind. With readily available, "off the shelf" replacement pumps and motors, down time and costs are kept to a minimum. For repair service, call Aquatic Eco-Systems. Your fountain consists of a pump and motor with a display nozzle. If the pump is in need of replacement, finding out what caused its demise is crucial.

Technical support available at 800-899-2565.

end of the electrical cable for the lights inside the conduit to be buried to the control panel. Pull enough wire into the panel and make the necessary connections. Secure the cable inside the panel. This task is best performed before floating the fountain.

Setting the Float Location

Place the float assembly without the nozzle installed in the water. Move the fountain to the desired location but do not anchor in place yet. Allow enough discharge hose and light cable length to follow the contours of your lake bottom. The hose will float until the pump is turned on for the first time. Now run the pump and allow the hose to fill with water and the line to be flushed. The hose will sink to the bottom, which will cause the float to move as the hose pressurizes and straightens out.

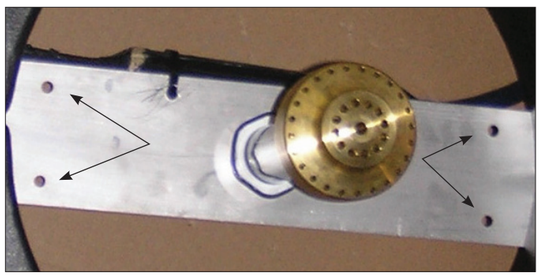


Nozzle

Install the nozzle after the lines have been flushed out to prevent clogging the nozzle with debris from the installation. The nozzle hand-screws onto a supplied PVC pipe nipple mounted in the crossbar. Use Teflon® tape only. Be sure to hand-tighten only and not to cross-thread.

Anchoring

There are four anchor holes on the crossbar, two on either side of the fountain nozzle (see arrows below left). The anchor line (#12) should be cut into two equal lengths and tied to the fountain at these points. Use 3 feet of rope for each foot of water. You can then use anchors or stakes to secure the fountain in its desired location in the pond.



Anchor holes on the crossbar.

With the fountain at its permanent location, toss the blocks out at an angle into the water on each side of the fountain so as to hold the fountain at the desired location. An alternate method is to moor the anchor ropes at opposing shorelines.

CAUTION

Metal parts may have sharp edges. Please use caution when handling these items.

Running the Fountain for the First Time

Turn on the pump and light circuit breakers. Set the correct time of day on the clock dial by lifting the wheel and aligning the pointer. Loosen the thumb screws for the on and off trips and set to desired on and off times for the fountain and lights. Move the manual start lever under each timer dial to the ON position. The clock will automatically control the fountain and lights according to your settings.

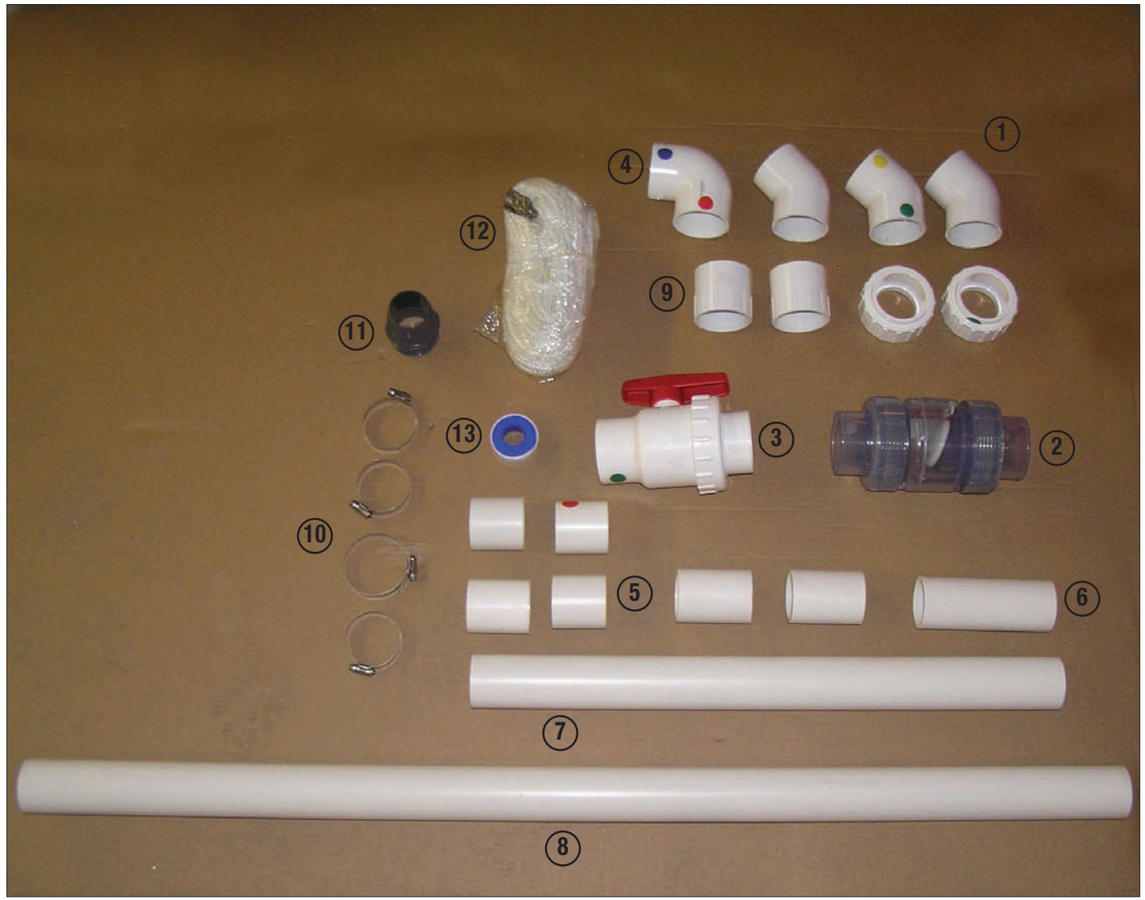
Clock Setting

The clock setting in the control panel should be checked periodically. Any interruption of power to the clock will result in an incorrect time.

Congratulations! You've successfully installed your Desert Rain™ Onshore Fountain. Now stand back and admire your work!

H. Plumbing Assembly

1. 2" PVC, 45º elbow (3)
2. True union swing check valve (1)
3. Single union ball valve (1)
4. 2" PVC, 90º elbow (1)
5. 2" PVC pipe segments, 2 3/4" (6)
6. 2" PVC pipe segment, 6" (1)
7. 2" PVC pipe segment, 24" (1)
8. 2" PVC pipe segment, 48" (1)
9. 2" PVC female adapter (2)
10. 2" stainless steel gear clamps (4)
11. 2" male adapter, MNPT x barb (1)
12. Nylon rope, 1/4" @ 100' (1)
13. Teflon® tape (1)



Recommended Tools & Supplies

- Anchors or stakes for placing fountain in the pond
- PVC pipe saw, hand saw or similar cutting device
- Schedule 40 PVC glue & primer, clear or blue
- 2" PVC (Sch 40) pipe & fittings, required lengths and number of fittings will vary based on pump location
- Shovel or spade, trenching equipment
- 5/16" nut driver, 5/16" socket & ratchet or screwdriver
- Large flagstones, 12" x 12" (4) or concrete pad 24" L x 30" x W

System Description

The Onshore system uses a centrifugal pump and motor located on the shoreline with rigid hose running from the lake to the pump. The intake line is a noncollapsing suction hose and the pump discharges through a flexible, nylon hose out to the nozzle floating in the lake.

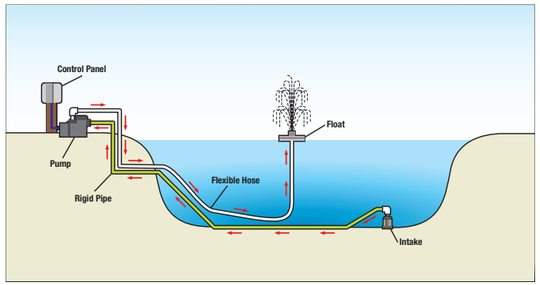


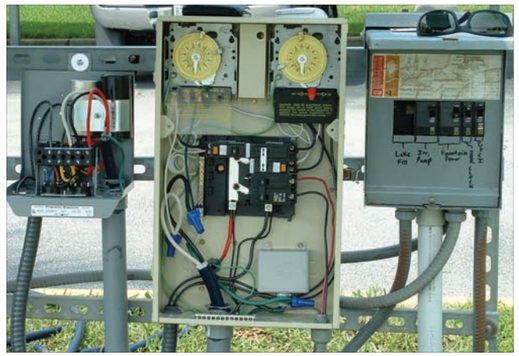
Diagram of Onshore fountain systems.

Benefits and Applications:

- Circulates shallow lakes.
- Can aid in circulation of isolated areas of stagnant water.
- Easy access to pump and motor for maintenance and repair.
- Keeps electrical cable out of water.
- Less expensive than traditional fountains.
- Easy installation.
- Recommended for fishing and/or brackish lakes.

Before Installation

Make sure you have the proper electrical supply, voltage and phase in place for your fountain and optional lights. Have a qualified commercial electrician with pump experience come out to the proposed fountain site to evaluate the electrical situation. The electrician will know right away if a dedicated line needs to be run to provide correct power for the fountain. Use this electrician for the fountain's final electrical hookups.



We recommend an electrician to wire everything.

Site Preparation

Pump and Plumbing

We recommend that the pump and equipment pad be mounted slightly above ground level and also be located higher than the known flood plane. This can be accomplished by setting a concrete pad for the pump or removing the sod, leveling and then placing flagstones or pavers as the base. The pumps used with these systems are self-priming and can pull water to them to a height of 8'.

Example of Onshore concrete pad.

Dig a trench from the shoreline to the pump location to bury the PVC pipe used for the intake and discharge runs of the pump. If your fountain has lights installed, you will also need to bury a conduit for the electrical run from the water's edge to the control panel location. The electrical cable is not rated for direct burial, so a conduit is required between the water's edge and the control panel.

Trench showing suggested pipe runs.

Control Panel

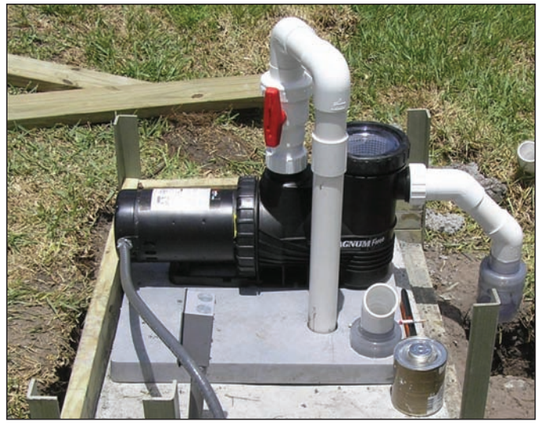
Install a Uni-strut mount for the control panel nearby the pump pad. The concrete pad and the Uni-strut should both be placed well above the highest water line or flood level, but as close to the lake's edge as possible to shorten your hose and pump runs. The shorter the runs, the less friction loss, the bigger the fountain display.

No Dry Runs

The pump shaft seals are water-cooled, so running them dry will cause damage. Pump requires priming by filling the strainer basket with water before starting for the first time. Once the system is in operation, the check valve installed at the intake strainer will hold the prime when the system is not in operation. Proper priming will ensure a long life for your pump and entire fountain assembly.

Pump Installation

Mount the pump and pad onto the concrete pad using appropriate fasteners. If you have chosen to use flagstones or bare ground, simply rest the pump and pad in the desired location. Have your electrician make the connections inside the control panel to the pump and supply power. Connect the plumbing for the suction and discharge lines to the pump. The valve on the discharge line will allow adjustment of the water flow to the desired height and display width of the fountain nozzle.



The intake and discharge plumbing fittings have been color coded with stickers to indicate suggested connections. These are recommended connections only. If your site requires a different configuration of the pipe fittings, then use our assembly as a guide. The ONLY two fittings that have designated locations are the single union ball valve, #3 (discharge/outlet), and the true union swing check valve, #4 (intake/inlet). These two fittings MUST BE LOCATED as indicated. Make sure the check valve is installed in the correct position by looking for the arrow indicating direction of flow on the body of the valve. The 24" & 48" PVC pipe lengths have been supplied as surplus for your individual use.

Intake Assembly Installation

Example of intake assembly.

Glue one end of the suction hose to the intake assembly check valve and the other end to the suction pipe from the pump. Place the assembly in a boat and take out into the lake as far as the hose will allow. Use a piece of rope that is just over twice the depth of water at the intake's location to lower the assembly to the lake bottom. Loop one end of the rope under the check valve and center the rope. Lower by holding both ends of the rope together. Once the assembly is sitting on the bottom, release one end of the rope and pull the complete length of rope to the surface. Now go back and prime the pump by filling the strainer basket. Once the pump is primed and ready to run, it's time to assemble the fountain.

Assembling the Float

The two floats bolt together easily by attaching the joiner plates onto the top of the floats. The stainless steel joiner plates are prepunched and all necessary hardware is enclosed. The Desert Rain™ embossed sides face up, rounded edges face up, square edges face down. We have preassembled the floats and attached the joiner plates and crossbar for your convenience.

Hose

Thread a hose barb fitting into the PVC female adaptor fitting of the nozzle holder and tighten. Slide a hose clamp over one end of the hose, slip the hose onto the barb fitting, position the clamp over the barb area and tighten the clamp. Attach the other end of the hose in the same manner to your pump's discharge piping.

Optional Light Fixtures

Attach the light brackets to the floats with the supplied hardware as in the above picture. The light fixtures are mounted to the brackets with two hex head bolts which allow them to be adjusted and removed from the water for lamp changes. Use the provided nylon zip ties to attach the light cable splice to the nozzle holder crossbar. Use a zip tie to coil up the excess wire to each fixture and tie to the light bracket so the coil hangs just below the fixture. In the future, the extra wire length will allow the lights to be removed from the fountain and placed in a boat for maintenance or bulb replacements without having to remove the complete fountain from the water. Feed the