

Otterbine Barebo, Inc. Giant Fountain Owners Manual



Aquastar









A Guide To More Dependable Water Attractions With Otterbine Barebo Inc.'s 7.5 - 25 Horsepower Giant Fountains

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Contact Otterbine to find to Distributor or Authorized Service Center near you.

WARNING: PHYSICALLY disconnect the unit and lights from their electrical source before entering, wading in or swimming in the water in which they are installed.

Otterbine Giant Fountain Package Contents

IMPORTANT

The Giant Fountain model must be pulled from the water and stored in a place above 32°F (0°C) in climates where temperatures drop below freezing

Warning: The motor/pump combination should be upgraded when the unit is to run in brackish water or saltwater.

Please call your local distributor for more details.

- **Float Assembly -** Included will be four large float sections. Two foam filled and two hollow. 25HP units have four additional smaller hollow float sections and the large float sections will all be foam filled. The float is shipped disassembled, and includes a box with required float assembly brackets and hardware.
- Note: It is important to assembly the Float Assembly on a flat, level surface. It is best if the this is done on a shop floor. This may be difficult to do at the site.
- **Pump/Motor/Frame Assembly -** The pump/motor unit will come assembled on to the frame assembly.
- **Nozzle** The spray nozzle(s) will be shipped mounted on most units. For those that are shipped unassembled, you will need to mount the spray nozzle(s) to the unit.
- **Cable -** Cable will be not be attached to the unit. Please verify you have the correct length/gauge that was ordered. Use the supplied splice kit and instructions to attach the cable to the Pump/Motor /Frame Assembly.
- **Power Control Center -** There will be an ID tag located on the inside door of the Power Control Center. Verify that it is wired for the horse-power and voltage you ordered.

Power Control Center (P.C.C.) Installation

P.C.C. Components: Your P.C.C. is made exclusively by Otterbine/ Barebo Inc. The control center has a weather resistant NEMA 3R rated enclosure and comes complete with a seven (7) day on/off timer, magnetic starter with thermal overload protection, circuit breaker, HOA switch, main disconnect, and surge protection. Control centers wired for 230 volts (single or three phase) come standard with a 5 milliampere, Class "A" people rated, GFCI (30 milliampere GFCI/EPD can be ordered as an option on 460 volt units). Optional accessories that can be added to your Power Control Center are: stainless steel enclosure for extra corrosion resistance; phase monitor for three phase units; wind control devise used to help control overspray; photocell controls used to turn the lights on at dusk and off at dawn, if desire; high or low water shut off; soft start controls to be used at sites where start up load is too great for the incoming power source. This devise slowly ramps the unit up to full power, this eases the load on the incoming power source.

P.C.C. Installation: It is important that **all electrical work be done by a Qualified Licensed Electrician.** This will ensure that all electrical work conforms with local and national electrical codes.

Otterbine recommends that the PCC be mounted in a shaded area if installed outdoors.

Warning: Do not "Dry Run" (run out of the water) the Giant Fountain. May cause motor bearing failure.

Caution: It is recommended that each power cable be run in it's own conduit to prevent nuisance of the GFCI device.

- Step 1: Coordinating Installation: Otterbine suggests coordinating final electrical installation with the physical installation of the fountain. We recommend that all cable burial and initial electrical site work is complete prior to the unit being delivered to the site. The installing electrician will need to be on hand to perform amperage readings, amperage balancing etc. These tests will need to be performed after the unit is installed and operating. These electrical tests are a crucial part of the installation process and mandatory for full activation of your warranty. If Lights were purchased with the unit, SEE "Light Set Power Control Center (P.C.C.) Installation" section for additional instructions.
- **Step 2: Placement:** The control center should be mounted as close to the pond's edge as possible. **The control center should not be accessible from the water.**
- Step 3: Mounting: The P.C.C. can be mounted indoors or outdoors. Indoors: The P.C.C. can be mounted directly to a wall using the stamped opening located on the top and bottom flanges of the enclosure

Outdoors: The P.C.C. should be mounted using exterior rated wood. Place two $4 \ge 4$ posts into the ground. Using an exterior rated plywood, cut and mount a backing to mount the P.C.C. Attach the backing across the two $4 \ge 4$ posts and mount the P.C.C. to it.

- Step 4: Main Power Feed: The main power feed should be brought into the P.C.C. enclosure and attached to the top terminals of the main disconnect switch. Attach the ground wire to the ground lug located next to the main disconnect. Note: On 230 Volt systems a bonded neutral is required. This should be attached to the neutral bar in the panel. See the table of contents to locate the wiring diagrams/schematics.
- Step 5: Fountain Power Feed: The power cable coming from your Giant Fountain should also be brought into the P.C.C. enclosure and attached to the bottom side of the motor starter. See Table of Contents for location of schematic/wiring diagrams in this manual. Note: Otterbine advises that you do not hook up the Fountain Power feed to the control center until after the unit has been placed and secured in the water.

Pre-Installation Procedures Removable Screen Assembly

Step 1: Mount draw tube onto main Flow Sleeve. As shown in Figure 1, slide the elbow fitting over the open end of the flow sleeve. Align the bolt hole in both parts so the draw tube is pointing up.

- Step 2: Attach the draw tube using the supplied hardware. Use one 3/8"-16 x 1-1/4" S/S hex bolt, one 3/8" S/S split lock washer, and one 3/ 8" S/S flat washer for each hole (8 Total).
- **Step 3: Mount the Screen Assembly**. Slide the "Removable Screen" over the end of the draw tube. **Note**: the screen assembly should not be secured with fasteners. The screen will be held onto the unit by water suction during operation.



Float Assembly Procedures

Step 1: Float Assembly. It is important to assemble the main float assembly on a flat, level surface. Lay the float pieces up side down (grooves facing down) and touching one another end to end. The pieces will form a circle. Open the hardware pack and spread out the hardware, separating and identifying each piece.

- Step 2: Attaching Internal Float Brackets. Using Figure 2, attach the internal brackets so that the brackets marked A and B are located as shown. Note: 25 HP Units will be shipped with 4 large foamed float pieces and 4 small unfoamed float extensions. Please turn ahead to Figure 5 for a diagram of the float assembly layout of the 25HP. Using the hardware supplied, as shown in Figure 3, loosely attach all four bracket to the float assembly. Caution: It is very important that the bolts are not tightened into place at this time. You will need to move and shift the float pieces in order to line up every bolt properly.
- **Step 3: Attaching External Float Brackets.** Refering to **Figure 4**, the external brackets can now be fitted also. Again, **do not tighten the bolts** as you are attaching each bracket, the bolts should be loosely fitted until every bolt/washer/lock washer combination is installed.
- Step 4: Securing Internal and External Float Brackets. Now that both internal and external float brackets are loosely fitted to the float, you can tighten all of the bolts. Be sure that all bolts are snugged prior to final tightening. Tighten internal float brackets first. Torque to 20 ft-lbs (2.8 kg-m)







Final Pre-Installation Assembly Procedures

- Step 1: Mount the Float Assembly to Unit Frame. Otterbine recommends attaching the float assembly to the unit frame at the site. This will allow for easier transport of the unit. Lift the float assembly and be sure it is right side up. Set the float assembly on the unit frame by aligning the internal bracket base with the matching bracket on the unit. Note: If the float brackets do not line up with the unit brackets, spin the entire float assembly 1/4 turn.
- Step 2: Secure the Float Assembly to the Unit Frame. Refer to Figure 6 and secure the float assembly to the unit frame using the hardware as noted. Loosely tighten the nuts into place. Now that all the fasteners are in place and the assembly is stable, the hardware should be tightened.



Mystic/Polaris Nozzle Assembly (if necessary) See Figures 7 & 8

- Step 1: Mystic/Polaris nozzle preparation. Thread the pipe locknut all the way onto the nozzle with the teeth of the locknut facing down. Wrap the threads of the nozzle with "Teflon" tape. For Mystic, slide the S/S sleeve onto nozzle and align the 1/8" holes. Insert 1/8" spring pin to secure sleeve to nozzle. For Polaris, insert 1/8" spring pin into leg of nozzle.
- Step 2: Attach Mystic/Polaris nozzle and screen. Carefully thread the nozzle into the reducer bushing. Important: Do not "cross-thread" the nozzle/bushing assembly. Turn the nozzle into the reducer busher until it is hand tight. Final seating is done by turning the nozzle 1/2 to 3/4 of a turn using a Spanner Wrench or Pipe Wrench. Note: Place the preferred wrench on the tabs on the legs of the nozzle. Tighten the pipe locknut down against the reducer bushing to secure the nozzle in place. Slide the screen onto the nozzle and align so it is close to but not touching the reducer bushing and is snug around nozzle using the spring pin as a guide.
- Step 3: Secure nozzle screen. Squeeze screen so it is snug around nozzle body and align screen holes with the threaded hole above the spring pin in the nozzle. Secure using a $8-32 \times 5/16$ " S/S Truss Head Screw.
- Note: The Mystic and Polaris use identical nozzles. The difference being a stainless steel sleeve used by the Mystic and the nozzle orifice sizes.



Triad/Aquastar Outer Ring Assembly

Triad/ Aquastar outer nozzle ring should be mounted using the center location on the float bracket

Step 1: Prepare inner float bracket to accept the Triad/Aquastar outer ring assembly. As shown in Figure 9 for 7.5 - 15HP or Figure 14 for 25HP (See Figure 13 for 25HP ring and bracket alignment), remove the center bolt, external tooth lock washer and flat washer combination from each of the four inner float assembly brackets. Note: when facing from the inside, you would be mounting the bracket to the right leg of the inner float bracket. Do not discard hardware, this will be reused to attach the TriadAquastar ring bracket.

- **Step 2: Attach Triad/Aquastar mounting brackets** to the float assembly using the hardware removed in step 1. Again, be sure you are mounting in the second hole down from the top of the float.
- Step 3: Attach the Triad/Aquastar Outer Nozzle Ring assembly to the brackets intalled in steps 1 and 2. Set the ring onto the brackets.
 Note: There are two tee fittings located on opposite sides of the outer ring. When placing the outer ring onto the brackets, it is very important that the ring is positioned so that these tees are









Warning: It is important that all nozzles and coupling nuts are tightened before running unit

Aquastar Upper Spray Pattern Nozzles

Step 1: Aquastar Upper Spray Pattern consists of the nozzles as shown in Figure 16. They are pre-set at the factory so they aim straight up. However, they can be adjusted to achieve desired center spray pattern by loosening the nut on the nozzle coupling.

Triad Upper and Middle Spray Pattern Nozzles

Step 1: Triad Upper and Middle Spray Patterns consist of the nozzles as shown in Figure 17. They are not adjustable.

Nova Spray Pattern Nozzles

Step 1: Nova Spray Pattern consists of the nozzles as shown in Figure 18. They are pre-set at the factory so they aim slightly inward. However, they can be adjusted to achieve desired spray pattern by loosening the nut on the nozzle coupling.



Note: Item numbers 1, 2, 3, 4, and 5 vary for each horsepower. -075 = 7.5HP -100 = 10HP -150 = 15HP -250 = 25HP All electrical connections should be done by a qualified licensed electrician and installed according local and national electrical codes

Slide Strain Relief onto Power Cable before splicing cable to Motor Leads. **Pre-Installation Unit Preparation**

Note: Otterbine recommends moving (if not already done) the unit to the location on the pond bank where it is to be launched from prior to proceeding with final unit preparation. The unit is much more easily moved now before the power and light cables are attached.

Splicing Submersible Power Cable (SOW)

The splice must be water tight. It is important that you follow the steps below (refer to Figure 19) to insure a quality splice. Caution: This splice should be done by a qualified licensed electrician.

- Step 1: Slide strain relief onto power cable. Remove 6-8 inches of the outer black jacket of the power cable. Strip the individual conductors insulation (motor leads and the power cable) only as far as necessary to fit into the long barrel butt connectors (included). Crimp power cable conductors to the motor lead conductors, connecting similar colors (white to yellow). Note: Slide epoxy melt wall shrink tube (included) onto conductors before crimping and stagger each splice as shown.
- **Step 2:** Slide epoxy melt wall shrink tube over each crimp and heat so it forms around the conductor and epoxy oozes out of each end.
- **Step 3:** Tape individual conductors with rubber mastic tape (included). Wrap tightly, eliminating air spaces as much as possible.
- **Step 4:** Tape around all conductors with rubber mastic tape (included). Tape a minimum of two inches onto black jacket of power cable. Wrap tightly, eliminating air spaces as much as possible.
- **Step 5:** Tape over the rubber mastic tape with #33 Scotch electrical tape (included) so it overlaps the end of the preceding layer by at least two inches.

Slide Epoxy Melt Wall Shrink Tube onto conductors before crimping them together.



Ottorhing R	Light and	Junction Box Mounting and							
ommonds u	conf	Configurations (if applicable)							
ing configur tion B for M tic and Nov spray Patter	 Note: Otterbine has des mounting options on the number of Step 1: Determine promum spray path configurations tions, fountain needs. 	igned the Giant Fountain line to accept a variety of light s and configurations. Many of the variations are dependent f light sets ordered with your unit. eferred light mounting configuration. For opti- tern lighting, Otterbine recommends the mounting referenced below. Note: These are only recommenda- lighting is very subjective to one's personal tastes and							
7.5 HP	One Light Set								
10 HP 15 HP	(4 lights) White and/or Amber Colored Lens	A B							
7.5 HP	Two Light Sets								
10 HP 15 HP	(8 lights) Red, Blue, and/ or Green Col- ored Lens	A B							
25 HP	Two Light Sets (8 lights) White and/or Amber Colored Lens	A B							
25 HP	Three Light Sets (12 lights) Red, Blue and/or Green Colored Lens	A Or B							

- Step 2: Attach the light brackets to the float assembly. Using one of the selected light configurations from the previous page as a guide, unwrap and lay the light sets and mounting hardware next to the unit.
- Step 3: Attach all internal light brackets. (Internal light brackets are any light brackets that are mounted on the inside diameter of the float) Referring to Figure 20, remove the center bolt and washers from the inner float bracket and secure the light bracket as shown. Otterbine suggests mounting the bracket using the lower mounting hole.



- Step 4: Attach all external light brackets (External light brackets are any and all light brackets that attach to the outer sidewall of the float). Also, attach any extension pole brackets at this time, if option purchased. Referring to Figure 21, remove the center two bolts, flat and lock washers from the external float brackets. (Do not discard hardware, it will be reused during reassembly) Align and attach the bracket(s) using the hardware previously removed as shown in Figure 21. Note: Mount extension pole bracket so the tab holding the pin is facing up.
- Step 5: Attaching the light junction brackets to the Junction Box. Referring to Figure 22a, attach two brackets per junction box. Mount the two brackets to the threaded mounting holes in the junction box lid using a philips panhead screw, a flat washer, and a split lock washer for each. The brackets must be positioned as shown in Figure 22a. NOTE: The power and light cords are not shown in order to simplify the figures.



When mounting one light set, position the Junction box in the center position. When mounting two light sets, mount the junction boxes at the outer positons in Figure 22b

For sequencing light sets, each set of lights from a particular junction box will sequence together.

- Step 6: Assemble the hose clamps so that they will make one large clamp. In the mounting kit there are 4 large hose clamps and two smaller clamps. Using two large hose clamps and one small clamp, assemble one large clamp and position around the lower pump piping as shown in Figure 22b.
- **Step 7: Secure the Junction Box to** piping by sliding the "hook-like" turns in each bracket (installed in step5) behind the hose clamps. Position the junction box so that it is upside down on top of the flow sleeve piping assembly. Tighten hose clamps.
- Step 8: Attach any light fixtures to the internal light brackets using one bolt, external tooth lock washer and lock nut as shown in Figure 20. It is important that the external tooth lock washer is placed between the light top bezel and the light bracket.
- Step 9: Attach any light fixtures to the external light brackets using one bolt, external tooth lock washer and lock nut as shown in Figure 21. It is important that the external tooth lock washer is placed between the light top bezel and the light bracket.
- Step 10: Attach extension poles, if option not purchased go to Step 13, by inserting round end into the extension pole brackets, lining up the holes, and securing with the pin attached to the bracket as shown in Figure 23A.
- Step 11: Attach any light fixtures to the extension poles using one bolt, external tooth lock washer and lock nut as shown in Figure 23B.Note: Place floats (3 total) onto extension pole before attaching lights.



- Step12: Slide first two floats to the end of the pole closest to the light fixture and hold in place by ty-rapping power cord to pole as shown in Figure 23C. Note: The third float must be positioned once unit is in the water so the light fixture is just below the water surface.
- **Step 13: Splice light power cord to** junction box pigtail (for 6awg and 4awg cable ONLY) by following splicing instructions on Page 15.
- **Step 14: Attach the Kellems strain relief of** each junction box power cord to the frame of the unit. Ty-rap any power cord slack to the frame as necessary using the large ty-raps (included, Part #46-0051). This should be done so there is little or no strain on the power connections should the cables be inadvertently pulled or tugged.
- **Step 15: Ty-rap each light fixtures cord** to the frame using the small tyraps (included, Part #GP5008) to prevent excess cord from getting tangled during unit installation and removal. Leave enough slack so each light fixture can be detached and lifted out of the water for servicing.



Light Set Power Control Center (P.C.C.) Installation

Otterbine recommends that the PCC be mounted in a shaded area if installed outdoors. P.C.C. Components: Your Light Set P.C.C. is made exclusively by

Otterbine/Barebo Inc. The control center has a weather resistant NEMA 3R rated enclosure and comes complete with a twenty-four (24) hour on/off timer, GFCI circuit breaker, main disconnect, and auxiliary contact. Optional accessories that can be added to your Power Control Center are: stainless steel enclosure for extra corrosion resistance; photocell controls used to turn the lights on at dusk and off at dawn; colored lens'; sequencer control to turn lights on and off in a predetermined pattern.

- **P.C.C. Installation:** It is important that **all electrical work be done by a Qualified Licensed Electrician.** This will ensure that all electrical work conforms with local and national electrical codes.
- **Step 1: Coordinating Installation:** Otterbine suggests coordinating final electrical installation with the physical installation of the fountain and the light set. We recommend that all cable burial and initial electrical site work is complete prior to the unit and lights being delivered to the site.
- Step 2: Placement: The control center should be mounted next to the unit control center.
- **Step 3: Main Power Feed:** The main power feed should be brought into the P.C.C. enclosure and attached to the top terminals of the main disconnect switch. Attach the ground wire to the ground lug located next to the main disconnect. See the Table of Contents to locate the wiring diagrams/schematics.
- Step 4: Light Set(s) Power Feed: The power cable(s) coming from your Light Set(s) should also be brought into the P.C.C. enclosure and attached to the terminal block. See Table of Contents to locate the wiring diagrams/schematics in this manual. Note: Otterbine advises that you do not hook up the Light Set(s) Power feed to the control center until after the unit (with the lights and junction boxes attached) has been placed and secured in the water.
- Step 5: The Auxiliary Contact in the Light Set PCC should be connected to the Auxiliary Contact in the Unit PCC using two wires (16awg minimum). This will allow the lights to come on ONLY if the unit is running and the timer contact is closed, thereby, saving electricity. If this connection is not made, a jumper must placed across the Light Set Auxiliary Contact in order for the lights to turn on. This connection has no effect on the function of the unit.

Final Installation Preparation



Step 1: Insert and adjust the float (ballast) plugs (Refer to Figure 24).

Locate the plugs in the hardware package. On the inner side of the unfoamed floats find the plug opening. Insert the plug into the opening and press lever down to secure. The plug should have a snug fit. All plugs have been preset at the factory, it is very important the fit be checked and adjusted if necessary. To adjust the fit, simply turn the brass nut on the plug clockwise to tighten the fit. Once the plug fit is adjusted, insert and secure. **Caution: Be sure that the float (ballast) plugs are secure in the unfoamed floats prior to floating the unit in the water.**

Step 2: Attach the Kellems strain relief of the unit power cord to the frame of the unit. Ty-rap any power cord slack to the frame as necessary using the large ty-raps (included, Part #46-0051). This should be done so there is little or no strain on the power connections should the cables be inadvertently pulled or tugged.





Figure 26



Figure 27

Floating/Mooring/Anchoring

- Step 1: Placing the unit. The unit is designed to be either be rolled or hoisted into the water. If the site allows for rolling the unit into the water, position the unit next to the pond bank. Assemble a ramp from plywood (See Figure 25).
- Step 2: Attach the mooring/anchoring lines. Otterbine reccomends using stainless steel braided cable and connectors to moor/anchor the unit. The unit will be moored/anchored in three places as shown in Figure 26. Connect mooring/anchoring lines to frame or hoist hooks. If mooring the unit, use either wooden stakes or "duck bill" type earth anchors to secure to the outer edge of the pond. If anchoring the unit, three 60-80 pound (27-36kg) anchors should be used.
- Step 3: Floating the unit. If rolling the unit into the water, position the ramp into the ponds edge (Be sure that the ramp has bottomed out on the pond bottom). Take another piece of plywood and lay it on the ground with it's edge meeting the edge of the ramp. Move the unit on the the single piece of plywood, and then roll the unit onto and down the ramp. Note: Have one (or more) persons available for each of the two rear mooring lines so the unit can be let down the ramp gradually.

If hoisting the unit into the water, use the four hoist hooks on the frame of the unit to lift it as shown in Figure 27. Do not lift by the float or the piping.

continued on next page (Leveling Unit) ...

Step 4: Level the unit by removing the appropriate float plug (See Figure 24) and allowing water into the unfoamed float section. Replace plug once level. Note: It may be necessary to insert a small hose into the plug hole in order to release air trapped in the top of the unfoamed float section.

Maintenance

A Field installed quick disconnect is available for your Giant Foun-	Caution: Allowing the fountain to freeze will result in motor damage. In climates where tempuratures fall below freezing (0° C / 32°F), Giant Fountains must be pulled from the water and stored.
tain.	Step 1: Maintenance Requirments. The Otterbine Barebo, Inc. Giant
Please call your local distributor for pricing and	bearings or oil that need to be changed at regular service intervals. Otterbine Barebo reccomends that Giant Fountain models are physically inspected annually.
availability	Step 2: Physical Inspection. Inspect the fountain for physical integrity. 1) Check the power control center, be sure it is clean and free of
	any debris (small rodents and insects may be using the panel as a home).
	2) Check all power cables for breaks, cuts or bites. Replace/repair as needed.
	3) Check all cable strain reliefs. Be sure that if the cable would be pulled for any reason, that the main splice or motor will not be damaged.
	4) Inspect the unit and frame assembly. Inspect all hardware and frame assemble points. Be sure that all bolts and nuts are secure.5) Check torque on 3/4" motor flange bolts. Torque to 35-40 ft lbs.
	5) Remove and clean the intake screen assembly.6) Check nozzles for debris.7) Clean the Mystic/Polaris Nozzle Screen.

WARNING: PHYSICALLY disconnect the unit and lights from their electrical source before entering, wading in or swimming in the water in which they are installed.

Troubleshooting

Distorted Spray Pattern

1) Adjust Nozzles. Any installed nozzles are preset at the factory, however, may move or become loose in shipping.

2) Check that nozzles are secure and aim as desired.

3) Nozzles may be clogged. Check nozzles for debris.

4) Intake screen may be clogged. Remove and clean screen.

Spray Pattern Rises and Falls

1) Intake screen may be clogged. Remove and clean screen.

2) Nozzles may be clogged. Check nozzles for debris.

Fountain Does Not Start

1) Verify that all electrical connections are secure

2) Take an amperage reading, If the unit is drawing high amps there is an electrical problem in the system. An authorized service center or qualified electrician should be called.3) No amperage. There is a lost connection somewhere in the system. Check all splices and connections.

	60Hz Motor Specifications										
	HP	kW	Volts	Phase	Hertz	RPM	Full Load Amps				
			230	1	60	3450	39				
	7.5	5.5	230	3	60	3450	23				
			380	3	60	3450	14				
			460	3	60	3450	11.5				
			230	1	60	3450	47				
	10	7.5	230	3	60	3450	30				
			380	3	60	3450	19				
All			460	3	60	3450	15				
Models			230	1	60	3450	67				
	15	11.0	230	3	60	3450	44				
			380	3	60	3450	28				
			460	3	60	3450	22				
			230	3	60	3450	70				
	25	18.5	380	3	60	3450	45				
			460	3	60	3450	35				

Technical Data and Operating Specifications

50Hz Motor Specifications										
Model	HP	kW	Volts	Phase	Hertz	RPM	Full Load Amps			
	7.5	5.5	380	3	50	2875	13			
			415	3	50	2875	13			
	10	7.5	380	3	50	2875	16			
All			415	3	50	2875	16			
Models	15	11.0	380	3	50	2875	24			
			415	3	50	2875	24			
	25	18.5	380	3	50	2875	40			
			415	3	50	2875	40			

60/50 Hz Operating Specifications (Subject to change without notice) Updated 10/27/99											
Model	HP	Hz	Spray I feet (m	leight eters)	Spra fe	Spray Diameter feet (meters)		Pumping Rate GPM (m ³ /hr)	Induced Circ. Rate GPM (m ³ /hr)	Min. Depth feet (meters)	
Nova	7.5	60	45' (13	.7m)		1' (30	cm)	175 (39.7)	1750 (397)	6' (2m)	
	7.5	50	42' (12	.8m)		1' (30	cm)	175 (39.7)	1750 (397)	6' (2m)	
	10	60	55' (16	.8m)	1' (30cm)			225 (51.1)	2250 (511)	6' (2m)	
	10	50	52' (15	.8m)	1' (30cm)		225 (51.1)	2250 (511)	6' (2m)		
	15	60	70' (21	.3m)	1' (30		cm)	350 (79.5)	3500 (795)	6' (2m)	
	15	50	66' (20).1m)	1' (30cm)		cm)	350 (79.5)	3500 (795)	6' (2m)	
	25	60	95' (2	9m)		1' (30	cm)	400 (90.8)	4000 (908)	6' (2m)	
	25	50	90' (27	′.4m)		1' (30cm)		400 (90.8)	4000 (908)	6' (2m)	
Mystic	7.5	60	36' (1	1m)		6' (1.8	8m)	350 (79.5)	3500 (795)	6' (2m)	
-	7.5	50	34' (10	.4m)		6' (1.8	8m)	350 (79.5)	3500 (795)	6' (2m)	
	10	60	40' (12	.2m)		6' (1.8	8m)	450 (102.2)	4500 (1022)	6' (2m)	
	10	50	38' (11	.6m)		6' (1.8	8m)	450 (102.2)	4500 (1022)	6' (2m)	
	15	60	50' (15	.2m)		6' (1.8	8m)	500 (113.5)	5000 (1135)	6' (2m)	
	15	50	47' (14	.3m)		6' (1.8	8m)	500 (113.5)	5000 (1135)	6' (2m)	
	25	60	65' (19	.8m)		6' (1.8	8m)	800 (181.6)	8000 (1816)	6' (2m)	
	25	50	62' (18	5.9m)		6' (1.8	8m)	800 (181.6)	8000 (1816)	6' (2m)	
Polaris	7.5	60	20' (6	.1m)	8' (2.4m)		4m)	525 (119.2)	5250 (1192)	6' (2m)	
	7.5	50	19' (5	19' (5.8m)		8' (2.4m)		525 (119.2)	5250 (1192)	6' (2m)	
	10	60	24' (7	.3m)	8' (2.4m)		4m)	675 (153.2)	6750 (1532)	6' (2m)	
	10	50	23' (7	7m)	8' (2.4m)		4m)	675 (153.2)	6750 (1532)	6' (2m)	
	15	60	30' (9	.1m)		8' (2.4	4m)	750 (170.3)	7500 (1703)	6' (2m)	
	15	50	28' (8	.5m)		8' (2.4	4m)	750 (170.3)	7500 (1703)	6' (2m)	
	25	60	35' (10).7m)	8' (2.4m)		4m)	1200 (272.4)	12000 (2724)	6' (2m)	
	25	50	33' (10	33' (10.1m)		8' (2.4m)		1200 (272.4)	12000 (2724)	6' (2m)	
			Upper	Lower	Uppe	er	Lower				
Aquastar	7.5	60	32' (9.8m)	6' (1.8m)	1' (300	cm)	30' (9.1m)	175 (39.7)	1750 (397)	6' (2m)	
-	7.5	50	30' (9.1m)	6' (1.8m)	1' (300	cm)	28' (8.5m)	175 (39.7)	1750 (397)	6' (2m)	
	10	60	36' (11m)	8' (2.4m)	1' (300	cm)	33' (10.1m)	225 (51.1)	2250 (511)	6' (2m)	
	10	50	34' (10.4m)	8' (2.4m)	1' (300	cm)	31' (9.4m)	225 (51.1)	2250 (511)	6' (2m)	
	15	60	40' (12.2m)	10' (3m)	1' (300	cm)	37' (11.3m)	350 (79.5)	3500 (795)	6' (2m)	
	15	50	38' (11.6m)	10' (3m)	1' (300	cm)	35' (10.7m)	350 (79.5)	3500 (795)	6' (2m)	
	25	60	50' (15.2m)	12' (3.7m)	1' (300	cm)	42' (12.8m)	400 (90.8)	4000 (908)	6' (2m)	
	25	50	47' (14.3m)	12' (3.7m)	1' (300	cm)	40' (12.2m)	400 (90.8)	4000 (908)	6' (2m)	
			Upper Mic	Idle Lower	Upper	Mide	dle Lower				
Triad	7.5	60	32' (9.8m) 16' (4.	9m) 6' (1.8m)	.5' (15cm)	30' (9.1r	n) 30' (9.1m)	200 (45.4)	2000 (454)	6' (2m)	
	7.5	50	30' (9.1m) 15' (4.	6m) 6' (1.8m)	.5' (15cm)	28' (8.5r	m) 28' (8.5m)	200 (45.4)	2000 (454)	<u>6' (2m)</u>	
	10	60	36' (11m) 18' (5.	5m) 8' (2.4m)	.5' (15cm)	33' (10.1	1m) 33' (10.1m)	300 (68.1)	3000 (681)	6' (2m)	
	10	50	34' (10.4m) 17' (5.1	2m) 8' (2.4m)	.5' (15cm)	31' (9.4r	m) 31' (9.4m)	300 (68.1)	3000 (681)	6' (2m)	
	15	60	40' (12.2m) 20' (6.	1m) 10' (3m)	.5' (15cm)	37' (11.3	3m) 37' (11.3m)	390 (88.5)	3900 (885)	6' (2m)	
	15	50	38' (11.6m) 19' (5	8m) 10' (3m)	.5' (15cm)	35' (10.7	7m) 35' (10.7m)	390 (88.5)	3900 (885)	6' (2m)	
	25	60	50' (15.2m) 26' (7.	9m) 12' (3.7m)	.5' (15cm)	42' (12.8	3m) 42' (12.8m)	500 (113.5)	5000 (1135)	6' (2m)	
	25	50	47' (14.3m) 24' (7.	3m) 12' (3.7m)	.5' (15cm)	40' (12.2	2m) 40' (12.2m)	500 (113.5)	5000 (1135)	6' (2m)	

Technical Data and Operating Specifications cont.



Power Control Center Schematics



Power Control Center Schematics



Power Control Center Schematics

Light Schematics



Limited 2 Year Warranty Otterbine® Product

WARRANTY: Barebo, Inc 3840 Main Road East, Emmaus Pennsylvania 18049,U.S.A. hereby warrants, subject to the conditions hereinbelow set forth, that should the **OTTERBINE** product prove defective by reason of improper workmanship or materials at any time during the warranty period the Purchaser at retail will be guarantee that **BAREBO** will repair or replace the said **OTTERBINE** product as may be necessary to restore it to satisfactory operating condition, without any charge for materials or labor necessarily incident to such repair or replacement, provided that:

a) The enclosed Warranty Registration Card should be mailed to **BAREBO** within fifteen (15) days of the original receipt by the Purchaser at retail in order to avoid delays:

b) The **OTTERBINE** product must be delivered or shipped, prepaid, in its original container or a container offering an equal degree of protection, to **BAREBO** or a facility authorized by **BAREBO** to render the said repair or replacement services or, if purchased from an authorized **OTTERBINE** dealer, to such dealer;

c) The **OTTERBINE** product must not have been altered, repaired or serviced by anyone other than **BAREBO**, a service facility authorized by **BAREBO** to render such service, or by an authorized **BAREBO** dealer, and the serial number of the **OTTERBINE** product must not have been removed or altered: and

d) The **OTTERBINE** product must not have been subjected to lightning strikes and other Acts of God, vandalism, freezing-in, accident, misuse or abuse, and must have been installed in conformance with applicable electrical codes (including proper electrical protection), and also installed, operated and maintained in accordance with guidelines in the Owner's Manual shipped with the Otterbine product.

No implied warranties of any kind are made by **BAREBO** in connection with this **OTTERBINE** product, and no other warranties, whether expressed or implied, including implied warranties of merchantability and fitness for a particular purpose, shall apply to this **OTTERBINE** product. Should this **OTTERBINE** product prove defective in workmanship or material, the retail Purchaser's sole remedy shall be repair or replacement as is hereinabove expressly provided and, under no circumstances, shall **BAREBO** be liable for any loss, damage or injury, direct or consequential, arising out of the use of, or inability to use, the **OTTERBINE** product, including but not limited to retail Purchaser's cost, loss of profits, goodwill, damages due to loss of product or interruption of service, or personal injuries to Purchaser or any person.

Fountain Reference Information									
Model:	Nov	a	Myst	ic	Polaris	Aquasta	ar 7	Friad	
Horsepov	wer:	7.5		10	15	25			
Voltage:		230)	380	415	46	0		
Phase:	1		3		Hertz:	50		60	
Unit Serial	#				Panel Ser	'ial #			
Power Cord Length Lights Serial #									
Options:									



Water Works With Otterbine!

Otterbine Barebo, Inc. 3840 Main Rd. East Emmaus, PA. 18049 U.S.A. www.otterbine.com 1-800-AER8TER • (610) 965-6018 FAX: (610) 965-6050