



Water Works With Otterbine



HIGH VOLUME INDUSTRIAL AERATOR Owner's Manual

A Guide to More Dependable
Water Quality Management
With Otterbine Barebo Inc.'s
1-5 Horsepower Surface Spray
Aerating Fountain



Welcome Aboard!

Welcome to the growing family of people who depend on aerating fountains for better water quality control and aesthetic improvement. All Otterbine products are safety tested and approved by ETL, ETL-C and CE

CONTENTS

SAFETY INSTRUCTIONS..... 3
WARNINGS..... 3
INSPECT AERATOR EQUIPMENT..... 4
ELECTRICAL/PCC INSTALLATION 4
HIGH VOLUME UNIT ASSEMBLY..... 7
PHYSICAL INSTALLATION..... 9
SYSTEM STARTUP 10
MAINTENANCE..... 12
WINTERIZATION 12
MAXIMUM CABLE LENGTHS 13
TROUBLESHOOTING GUIDE 13
WARRANTY 15

SAFETY INSTRUCTIONS

	WARNING
	<p>PLEASE READ THIS MANUAL COMPLETELY BEFORE INSTALLING AND USING THIS PRODUCT. SAVE THIS MANUAL FOR FUTURE REFERENCE AND KEEP IN THE VICINITY OF THE PRODUCT.</p>

ALL ELECTRICAL WORK MUST BE PERFORMED BY A QUALIFIED LICENSED ELECTRICIAN AND CONFORM WITH ALL APPLICABLE ELECTRICAL SAFETY CODES

Tous travaux électriques doivent être effectués par un électricien professionnel qualifié et conforme à tous les codes applicables sécurité électrique

ALWAYS SWITCH OFF/DISCONNECT ALL EQUIPMENT IN THE WATER BEFORE SERVICING OR PERFORMING ANY MAINTENANCE

Toujours éteindre l'équipement dans l'eau avant entretien ou de tout entretien

DO NOT OPERATE THE FOUNTAIN WHEN PEOPLE ARE IN THE WATER

Ne pas utiliser la fontaine quand les gens sont dans l'eau

CAUTION: KEEP HANDS CLEAR OF THE IMPELLER WHEN OPERATING!

ATTENTION: Garder les mains loin du turbine lors de l'utilisation!

! WARNING !




ELECTRICAL SHOCK HAZARD

Disconnect From Electrical Supply
When Servicing This Equipment

Unplug Or Switch Off All Appliances In The
Water Before Carrying Out Maintenance

This Product Must Be Properly Grounded

DANGER

STAY OUT OF WATER WHEN
EQUIPMENT IS ENERGIZED





WARNING

HAZARDOUS VOLTAGE.
Contact may cause
electric shock or burn.
Turn off and lock out
power before servicing.

DANGER

SPINNING IMPELLER
TURBINE ROTATIVE



KEEP HANDS CLEAR
TENIR LES MAINS ÉLOIGNÉES

WARNINGS

- Before entering, wading in or swimming in the water in which Otterbine Aerators or Fountains are installed, make sure they are PHYSICALLY disconnected from their electrical power sources.
- Aerators located in or near garden ponds and similar locations must be equipped with Ground Fault Circuit Interrupter. The permissible temperature range for this equipment is -12°C to 40°C (10°F to 104°F).
- It is possible for the water to become slightly polluted in the rare case that an oil leak occurs.
- If the power cord is damaged, it must be replaced by a special cord or assembly available from Otterbine/ Barebo, Inc. or an authorized Otterbine/Barebo, Inc. sales and service center.
- Avant d'entrer, pataugeant dans ou en nageant dans l'eau dans laquelle Aérateurs Otterbine ou fontaines sont installées, assurez-vous qu'ils sont physiquement déconnectés de leur source d'alimentation électrique.
- Aérateurs situés dans ou à proximité des bassins de jardin et des emplacements similaires doivent être équipés de disjoncteur.
- La plage de température admissible pour cet appareil est -12°C to 40°C (10°F to 104°F) aux.
- Il est possible pour que l'eau devient légèrement polluées dans les rares cas où une fuite d'huile se produit.
- Si le cordon d'alimentation est endommagé, il doit être remplacé par un cordon spécial ou de montage disponible à partir Otterbine / Barebo, Inc ou une autorisation Otterbine / Barebo, les ventes Inc et centre de service.

INSPECT AERATOR EQUIPMENT

Immediately report any shipping damage to the carrier that delivered your aerator.

Inspect your aerator and verify the following:

Unit - Check the nameplate located on the housing of the aerator unit to make sure you have received the correct horsepower and voltage aerator.

Power Control Center - Verify the PCC is compatible with the aerator unit horsepower and voltage. Refer to the electrical specifications on the nameplate located inside on the door of the PCC.

Power Cable Assembly - Verify the correct cable gauge and length.

For proper warranty consideration return your Otterbine warranty registration card.

ELECTRICAL/PCC INSTALLATION

ELECTRICAL INSTALLATION MUST BE PERFORMED BY A QUALIFIED LICENSED ELECTRICIAN AND CONFORM TO ALL APPLICABLE LOCAL AND NATIONAL CODES

DISCONNECT EQUIPMENT FROM ELECTRICAL SUPPLY BEFORE SERVICING OR PERFORMING MAINTENANCE

Use Only OTTERBINE power cord. Do not splice or repair the cord, replacement is necessary if damage occurs.

The standard Power Control Center includes a fiberglass NEMA 4X enclosure, Hand-Off-Auto switch, twenty-four hour weekly programmable timer (mechanical timer option available) for auto setting, branch circuit protection, motor disconnect, surge protection, motor overload protection, and class A personnel ground fault protection.

Caution: GFCI Protection is required. If GFCI protection is not used, serious or FATAL electrical shock may occur.

Attention: GFCI/RCD de protection est nécessaire. Graves ou mortelles choc électrique peut se produire s'il n'est pas utilisé.

A. Feeder

1. Proper feeder circuit protection in accordance with all applicable local and national codes **must** be provided to the power control center.
2. Be certain to properly size feeder conductors to allow for no more than 5% voltage drop for the entire circuit from the feeder source to the aerator unit. Failure to do so may damage the aerator and void product warranty.

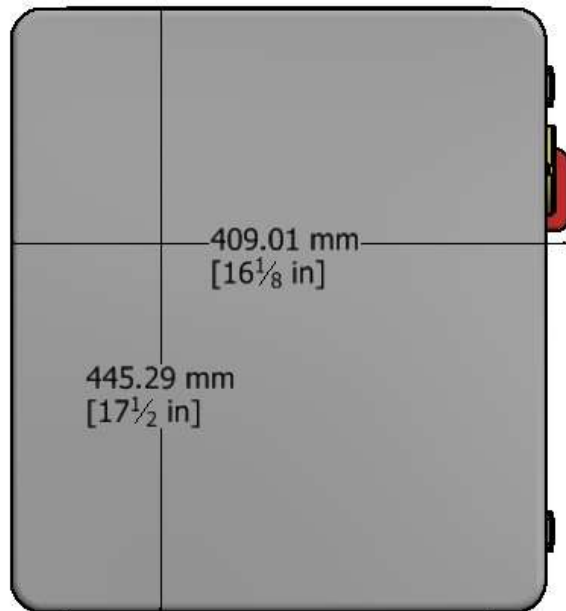
60Hz. Electrical Specifications			
HP	Volts	Phase	Full Load Amps
1	115	1	12.8
1	208/230	1	6.4
2	208/230	1	11.2
3	208/230	1	12.8
3	208/230	3	8.0
3	380	3	4.8
3	460	3	4.5
5	208/230	3	14.0
5	380	3	7.9
5	460	3	8.6
5	575	3	5.3
50Hz. Electrical Specifications			
1	230	1	6.9
2	230	1	12.4
3	230	1	15.9
3	380/415	3	4.4
5	380/415	3	8

B. PCC Location

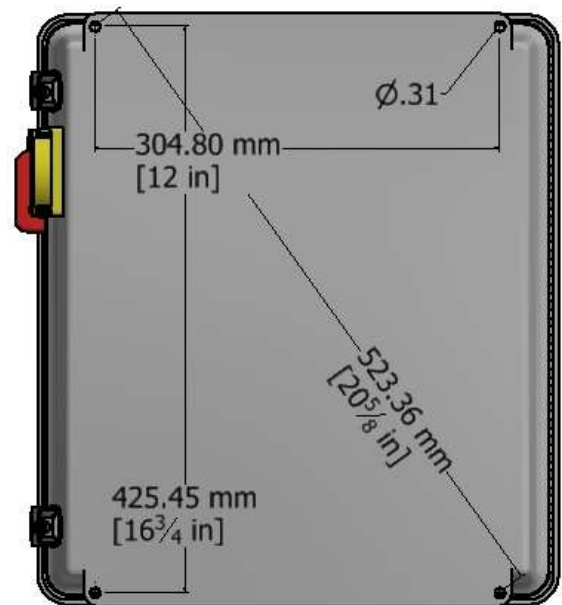
1. The power control center should be mounted where easily visible from the shoreline where the aerator is located.

Important: The power control center **shall not** be accessible from the water.

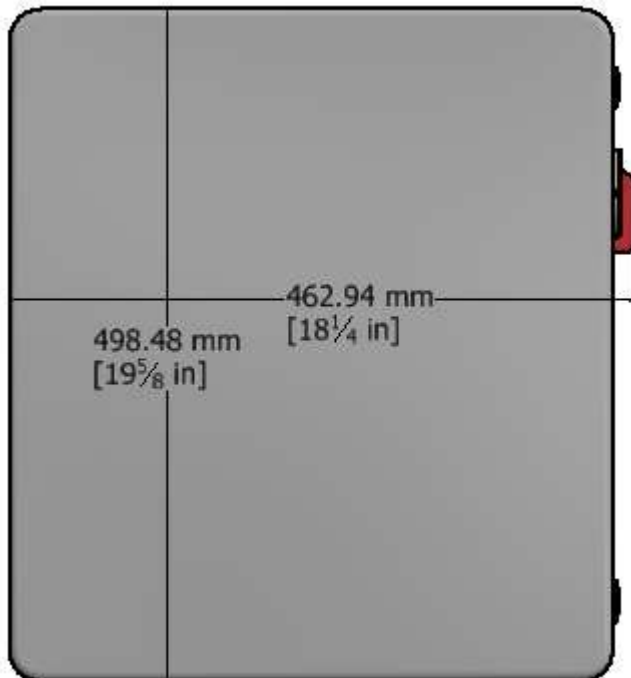
Important: Le Centre de Contrôle de la puissance ne doit pas être accessible à partir de l'eau



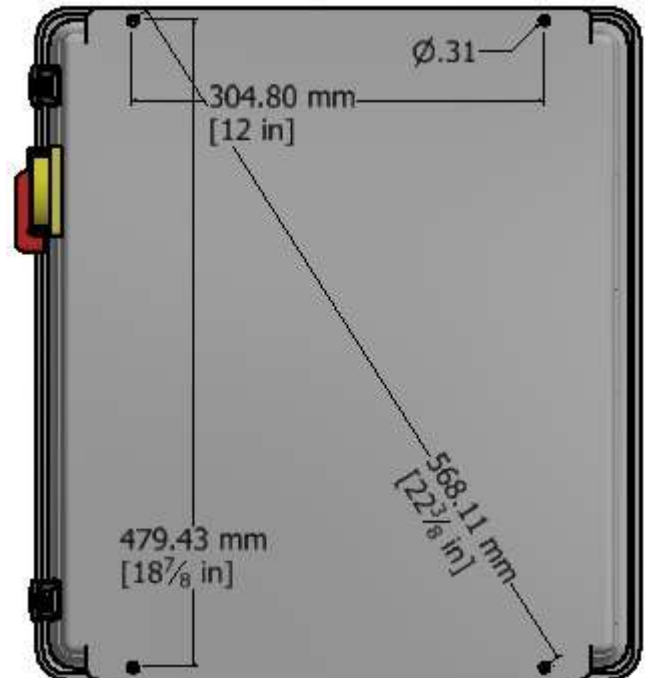
Single Phase – Overall Dimension



Single Phase – Mounting Hole Layout



Three Phase – Overall Dimension



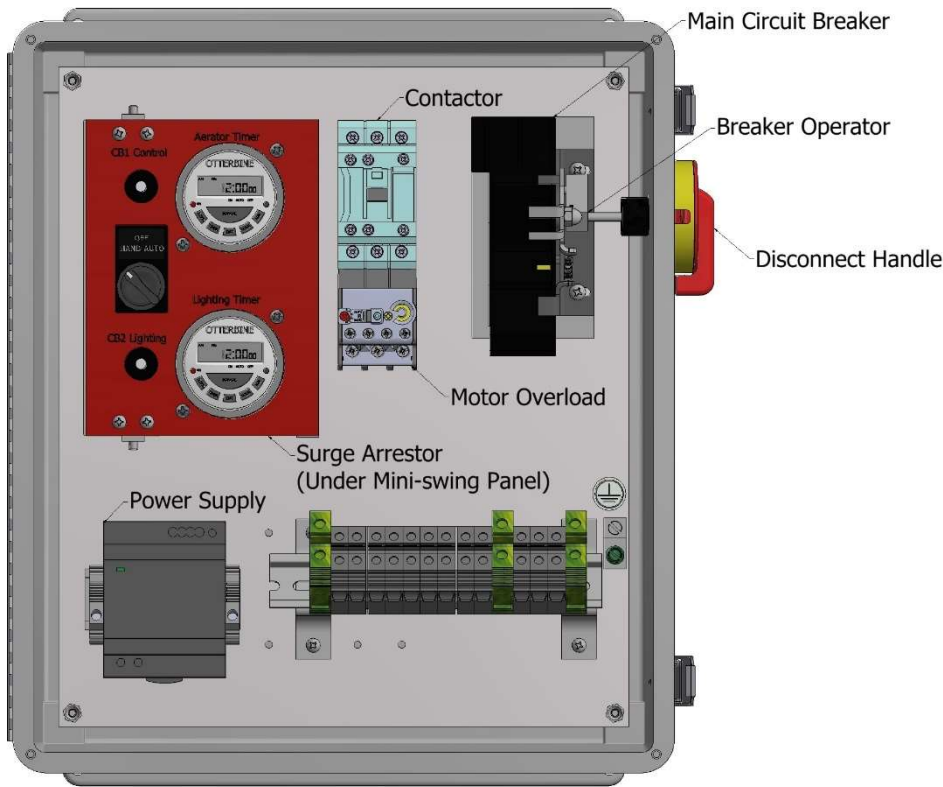
Three Phase – Mounting Hole Layout

C. PCC Mounting

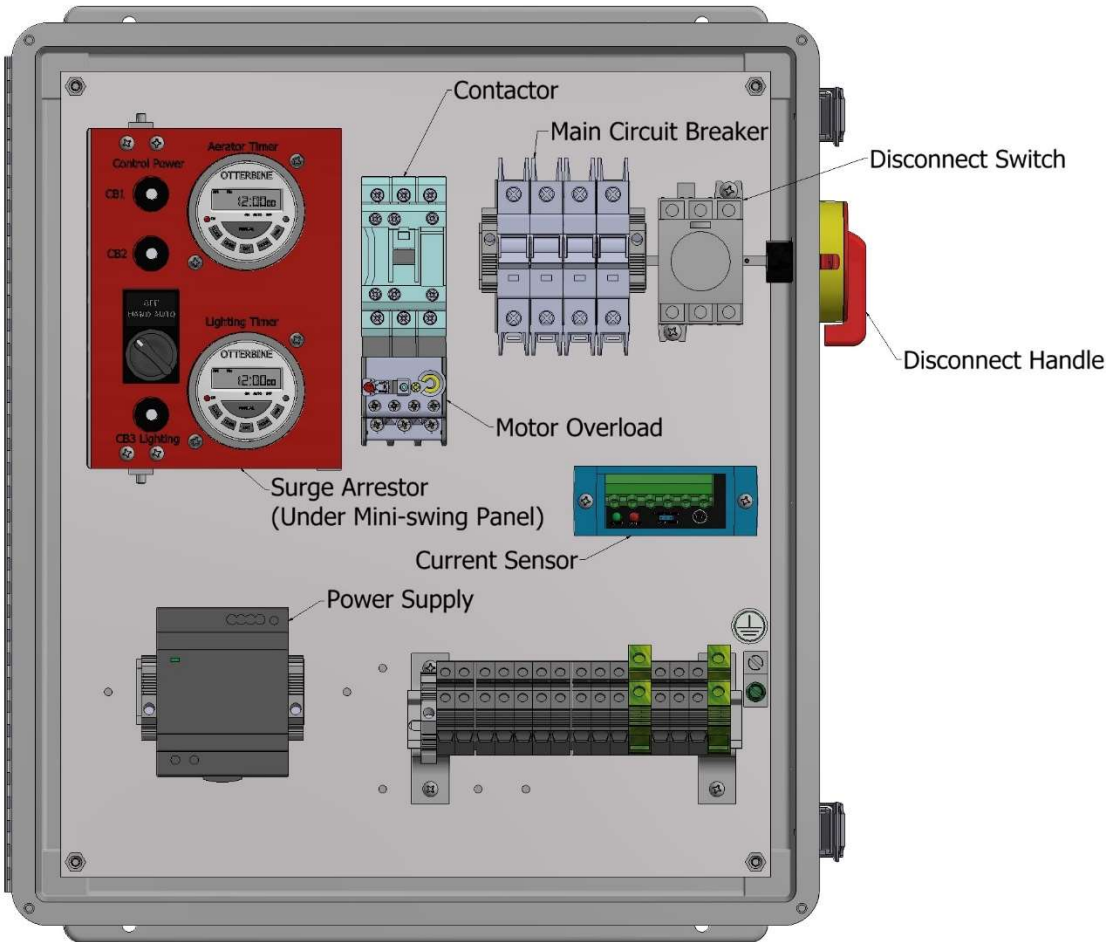
1. To prevent damage to the enclosure mount the enclosure using all four (4) mounting holes.
2. Whenever possible do not mount the PCC in direct sun light.

D. PCC Cables & Connections

1. Only Otterbine Barebo, Inc. factory approved power cord is to be used from the PCC to the aeration unit with no junction boxes or splices. **Only** use power cord gauges and lengths specified by Otterbine at the time of cable purchase. (Contact your Otterbine Distributor for proper cable sizing)
 2. It is recommended that all exposed cable between the PCC and the shoreline be installed in non-metallic conduit. It is **important** that aerator and lighting cables be installed in individual conduits to avoid induced interference between cables which could cause random GFCI tripping.
 3. **Always** use strain relief cord connectors to attach the Otterbine cable to the PCC when not using conduit.
 4. Cables and conduits must only enter into the bottom of the PCC.
 5. Factory connections may loosen during shipping. Verify tightness of all screw terminal connections before energizing.
 6. Power input and output wiring connections are accessed from the bottom of the enclosure.
- Reference label inside enclosure for terminal torque values and wire sizes.



Single Phase Panel Sub-Panel View (Optional Light Components Shown)



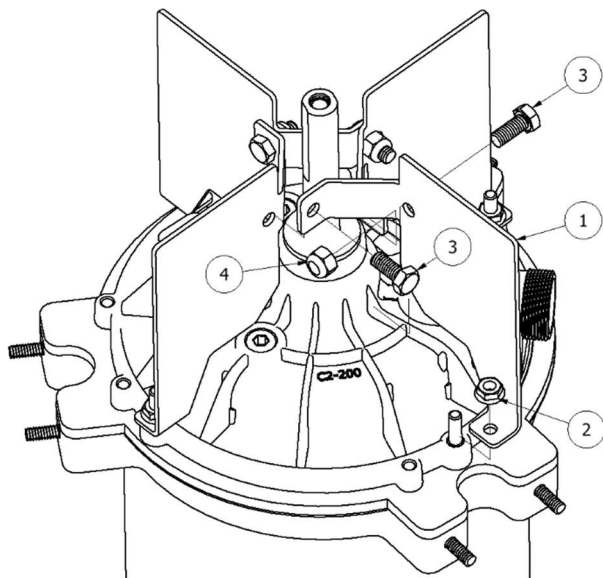
Three Phase Panel Sub-Panel View (Optional Light Components Shown)

HIGH VOLUME UNIT ASSEMBLY

Parts List			
Item	Description	Part Number	Qty
1	Plate Flow Straightener HV	40-0427	4
2	1/4"-20 S/S Flange Nut	26-0001	10
3	5/16-18 x 3/4" S/S Hex Bolt	106-302	7
4	5/16-18 S/S Nylon Hex Nut	GP1208	7
5	Adjustable Support Arm	C2-311	1
6	Impeller Set Screw	40-0002	1
7	1HP 60Hz High Volume Impeller	50-0013-001	1
	2HP 60Hz/1HP 50Hz HV Impeller	50-0013-002	
	3HP 60Hz/2HP 50Hz HV Impeller	50-0013-003	
	5HP 60Hz/3HP 50Hz HV Impeller	50-0013-005	
	5HP 50Hz HV Impeller	50-0013-006	
8	3/8 Split Lock Washer	EP6301	1
9	3/8-16 x 3/4" S/S Hex Bolt	C2-111	1
10	Support Arm Connector	C2-301	1
11	5/16" Flat Washer	28-0018	3
12	Support Arm, Short, C2	C2-310	2

A. Assemble Flow Straightener

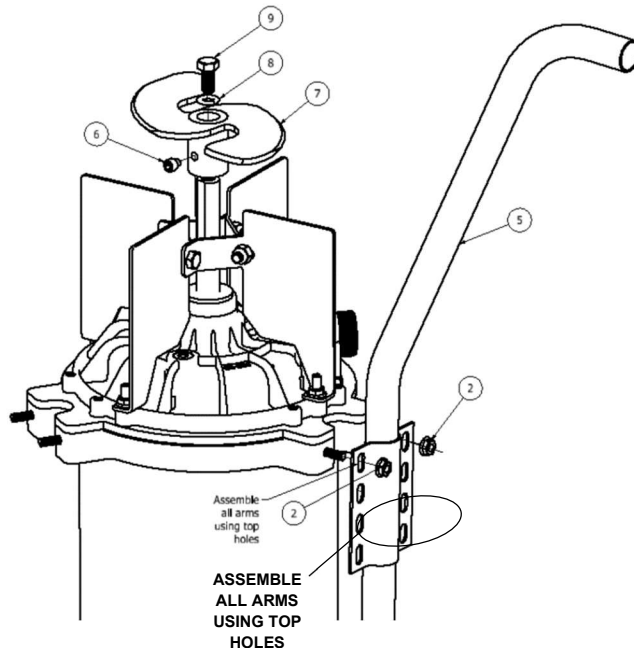
1. Place each of the flow straightener plates (1) on each of the four studs in the motor baseplate. Rotate the plates and put the bolts (3) into the central holes to align the plates. Place the flange nuts (2) on the baseplate studs and finger tighten them only. Install the locknuts (4) on the central bolts (3) and tighten them completely. Tighten the baseplate flange nuts (2).



ASSEMBLE FLOW STRAIGHTENER

B. Install Adjustable Support Arm

1. Attach the (5) Adjustable Support Arm to the mounting ring using (2) 1/4" flange nuts. Torque to 10-12 ft.-lbs. Center the bolts in the top slots as shown.



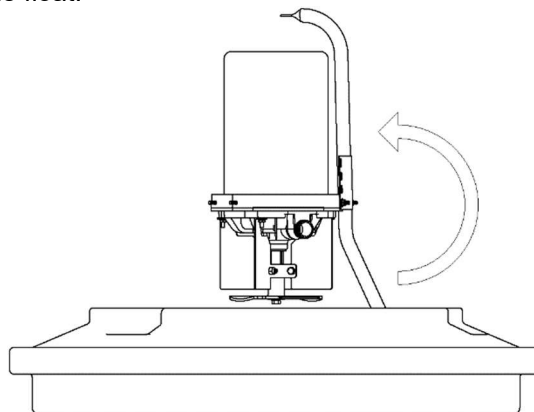
ATTACH ADJUSTABLE ARM & IMPELLER

D. Install Impeller

1. Place the impeller onto the motor shaft.
 2. Align the set screw (6) to a flat on the shaft. Tighten the set screw using a hex key driver.
 3. Install impeller bolt and split lock washer (8 & 9)
 Torque the bolt to 35 ft.-lbs.

E. Install Power Unit in Float

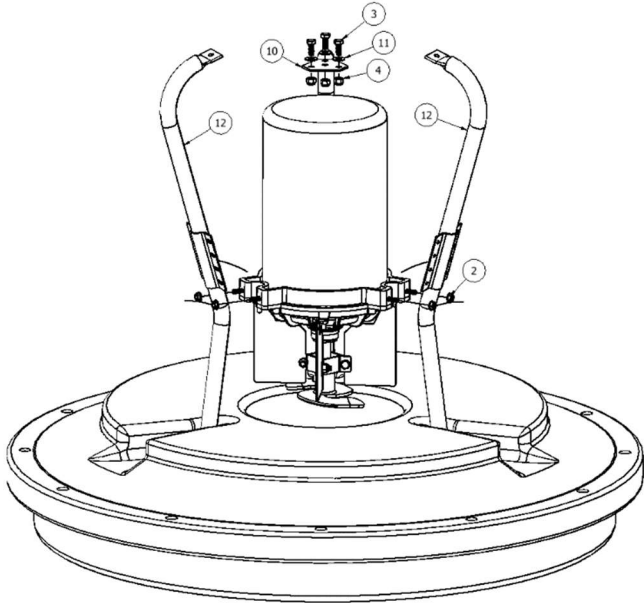
1. Place the float top side down on a flat surface.
 2. Invert the power unit assembly and insert the end of the adjustable support arm through one of the pockets in the float.



PLACE POWER UNIT IN FLOAT

F. Install Remaining Support Arms (shown on right)

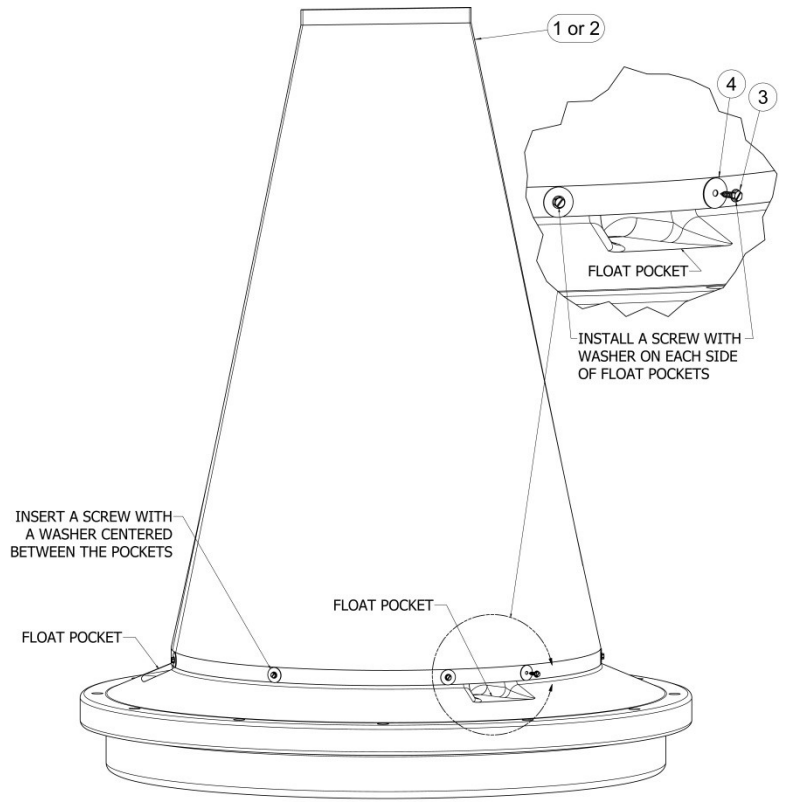
1. Insert the second and third (12) support arms into the remaining pockets of the float.
 2. Attach each of these arms to the mounting ring with (2) 1/4" flange nuts. Use the first set of holes from the float. Torque to 10-12 ft.-lbs.
 3. Attach the bottom of each support arm to the (10) support arm connector with a (3) 5/16" hex bolt, (4) 5/16" locknut, (11) 5/16" flat washer.
- Torque the bolts to 15-17 ft.-lbs.



ATTACH REMAINING SUPPORT ARMS

G. Screen Installation

1. Pull screen over motor unit and support arms until it reaches the first ridge on the float (next page)
2. Route the cord/cords through the float pockets where the support arms fit into the float. Choose one pocket for all cables. Pull approximately two inches of the screen past the Mounting Ring to adequately cover the pockets.
3. Fasten the screen to the float with the washers and screws provided. Fasten a screw and washer on both sides of each float pocket. Screw the three remaining screws and washers through the screen into float between the each pocket.



ATTACH SCREEN

Parts List			
Item	Description	Part Number	Qty
	1/4" Screen Kit	F-900-002F	
	1/2" Screen Kit	F-900-001B	
1	C2 1/4" Screen	15-0001	1
2	C2 1/2" Screen	15-0002	1
3	8-32 x 3/4" S/S Sheet Metal screw	BP2803B	9
4	#10 x 1" Fender Washer	800-011	9

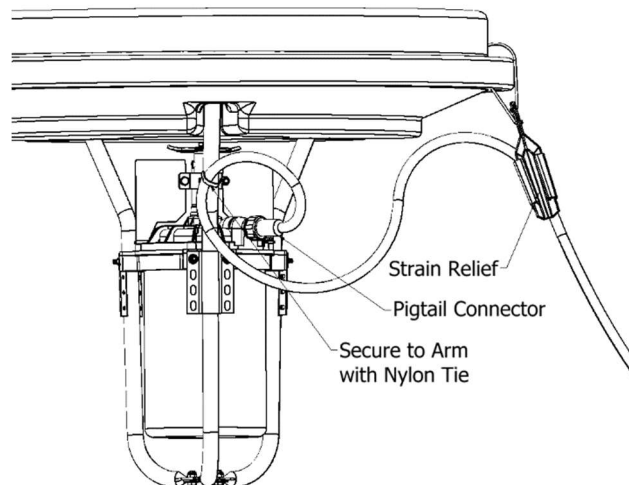
PHYSICAL INSTALLATION

WARNING: DISCONNECT POWER BEFORE INSTALLING, REMOVING, OR SERVICING UNIT

Concept 2 Otterbine aerators require a minimum 40"/1m of water depth.

A. Attach your Otterbine power cable to the aerator.

1. Align the pigtail connector on the cable up to the pin configuration on the bulkhead on the aerator. Thread the nut onto the bulkhead, hand tighten only, do not use tools on the pigtail connector nut. Do not over tighten. **Over tightening may cause the connector to fracture and possibly cause an electrical short circuit.**
2. All ratings use 4 pin connectors.
3. A small amount of silicon compound has been factory applied to the female end of the aerator connector. The compound is necessary to make a waterproof seal between the two connectors. **DO NOT REMOVE COMPOUND!** When servicing the aerator make sure to apply compound. (Otterbine P/N: 48-0001).
4. **Install the cable strain relief device.** Pass the wire hoop from the strain relief through one of the holes in the float. Reattach wire hoop to strain relief.
5. For additional protection fasten the power cable to a support arm using the cable ties provided.



B. Pre-Startup Checks (To be performed by a qualified technician)

1. Factory connections may loosen during shipping. Verify tightness of all screw terminal connections before energizing.
2. Apply power to the PCC. Verify the voltage to the PCC at the input terminals is correct and matches the nameplate rating of the aerator.

For 115V & 230V Single Phase & 230V Three Phase Units: The voltage between L1 on the input terminal block to the neutral terminal must measure a nominal 120V.

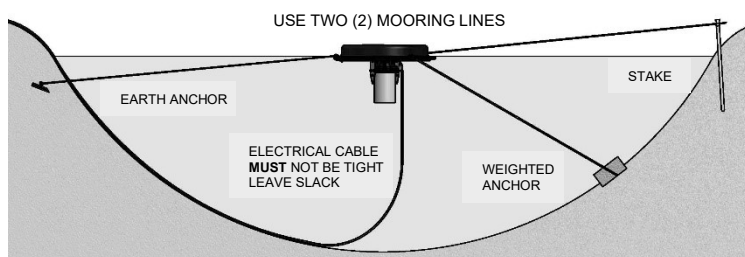
3. Allowing the main door to be open and with the cover panel in place, turn on main disconnect.
4. Make sure the ground fault protection and motor overload have been reset.
5. With the aerator unit on the shore check for correct motor rotation. Briefly "bump" (turn on only long enough to establish operation and direction of rotation) the HOA (Hand-Off-Auto) switch to "Hand" while observing the motor shaft rotation. **(IMPORTANT! Aerator Shaft rotation MUST BE CCW looking at the top/impeller end of the unit).**

!TURN OFF DISCONNECT BEFORE PROCEEDING!

C. Fasten Mooring Lines and Launch

1. Mooring using stakes: Shore mounted stakes provides the easiest access to the aerator. Use stainless steel and/or brass hardware. Otterbine recommends using 1/4"(0.63cm) or 1/2"(1.25cm) polypropylene rope or stainless steel cable for mooring lines. At the mooring points use a wooden or metal stake or duck bill type earth anchors. Earth anchors allow the mooring lines to be hidden beneath the water surface. Drive the mooring stakes securely into the ground at the edge of the pond or place earth anchors close to the shore in the water. Fasten the mooring lines to opposite outer holes in the aerator float. Launch the aerator into the water, pull into the chosen location and fasten the lines to the stakes allowing slack for the aerator to twist up to 1/4 turn. The slack in the lines allows for movement during start up, fluctuations in the water level and wave action. Proceed to System Startup.

2. Mooring using Anchors: Use stainless steel and/or brass hardware. Otterbine recommends using 1/4"(0.63cm) or 1/2"(1.25cm) polypropylene rope or stainless steel cable for anchoring lines, use two 60 - 80 lb. (27 - 36 kilo) weights for anchors and a boat may be needed. Fasten the mooring lines to opposite outer holes in the float. Launch the aerator floating upside down (motor housing facing up). With the lines attached drop the anchors into the water at the predetermined locations. Adjust the lines to allow slack for the aerator up to 1/4 turn twist. The slack in the lines allows for movement during start up, fluctuations in the water level and wave action. Flip unit back over motor end down.



SYSTEM STARTUP

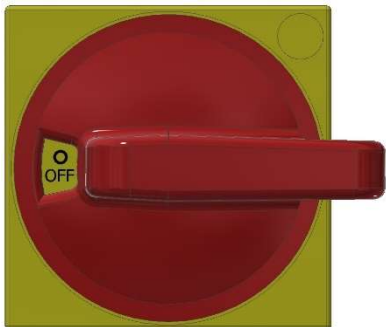
DO NOT ALLOW THE AERATOR TO OPERATE “DRY” OUT OF THE WATER

IMPORTANT: Otterbine aerators are designed to run in a Counterclockwise direction facing the top impeller end.
Current unbalance for three phase systems shall not exceed 5%.

IMPORTANT: Aérateurs Otterbine sont conçus pour fonctionner dans le sens antihoraire regardant l'extrémité supérieure de la turbine. Courant de déséquilibre pour les trois systèmes de la phase ne doit pas dépasser 5%

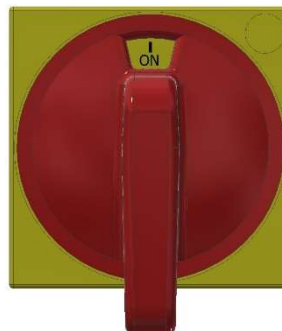
A. User Control Functions

1. Disconnect Switch



Disconnect Off – Single & 3 Phase

Removes Power to the Aerator for Maintenance/Service/Repair, Timers are not Powered



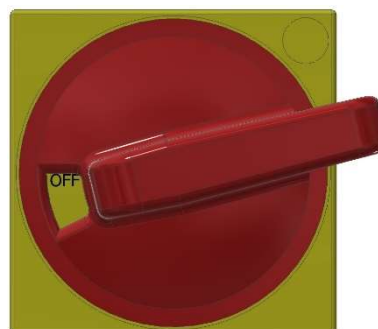
Disconnect On – Single & 3 Phase

Power Applied, Operation Depends on Position of HOA Switch, Timers are Powered



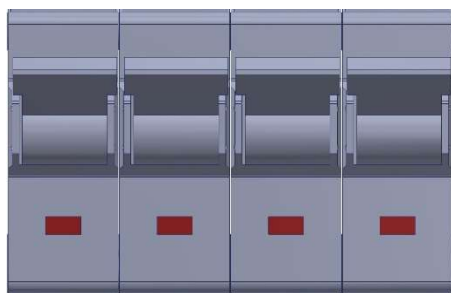
Disconnect Tripped – Single Phase Only

Indicates a ground fault trip or circuit breaker overcurrent



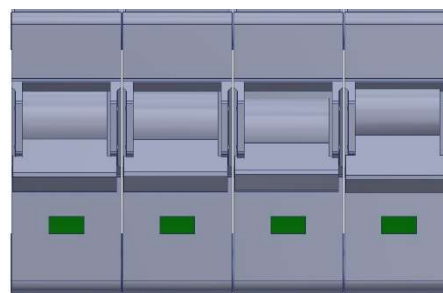
Disconnect Reset – Single Phase Only

Moving the handle slightly past the off position will reengage the circuit breaker and allow the breaker to be turned on.



Breaker On – 3 Phase Only

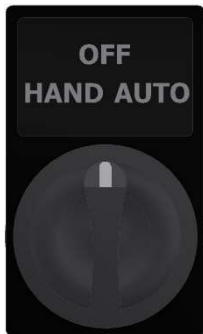
Main circuit breaker is on and aerator is ready to operate. Disconnect must also be on.



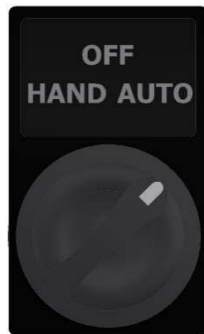
Breaker Off/Tripped – 3 Phase Only

Indicates a ground fault trip or circuit breaker overcurrent

2. HAND-OFF-AUTO switch.



H-O-A IN OFF
Aerator & Lighting Will Not Function, Timers are Powered and Operating, GFCI's may be Reset



H-O-A IN AUTO
Allows Automatic Control of Aerator & Lighting by Timers & Other Control Options



H-O-A IN HAND
Turns on Aerator, Bypasses Timer & Non-Critical Control Functions

3. Aerator Ground Fault Protection – Single Phase.

- a. Ground fault protection is built into the Square D circuit breaker.
- b. Ground fault protection is enabled whenever the circuit breaker is on.
- c. The ground fault protection should be periodically tested (Every 6 months) by pressing the yellow test button and verifying the circuit breaker turns off. Panel must be powered but aerator doesn't need to be on to test ground fault protection.

4. Aerator Ground Fault Protection – 3 Phase

- a. 3 phase panels utilize an Eaton current sensor and a shunt trip circuit breaker to provide protection.
- b. Ground fault protection is enabled whenever the green power indicator on the current sensor is lit. The indication is visible with the enclosure door open through a hole in the cover panel. If the indicator is not lit when the panel is powered (disconnect & breaker on), ground fault protection is not working and the panel should be repaired before using.
- c. The ground fault protection should be periodically tested (Every 6 months) by pressing the yellow test button and verifying the circuit breaker turns off. Disconnect and circuit breaker should be on but the aerator doesn't need to be running.

5. Lighting ground fault protection

- a. The same device(s) used to provide ground fault protection for the aerator is also used to protect the lighting circuits.

6. Timer Operation

- a. **Setting the Clock** - Press and hold the "CLOCK" key. Press the "DAY" key to display the correct day. Do the same with the "HOUR" and "MIN" keys.
- b. **Setting the Timer** - Press the "DAY" key to select one of the 15 daily programs. Then press the "TIMER" key to display "1 ON" and set the turn on time by pressing the "HOUR" and "MIN" keys. To set the turn off time press the "TIMER" key again to display "1 OFF". Then again set the hour and minutes. Repeat this process for up to 8 on/off cycles per day.
- c. To enable the timer press the "MANUAL" key until the line is above "AUTO".
- d. Refer to timer instructions supplied for more detailed operation.



B. Energizing the Unit (To be performed by a qualified technician)

1. Single Phase Units: Motor rotation is factory determined and not field adjustable.
2. Three Phase Units: Verify correct motor rotation (Counter Clockwise looking at the top/impeller end of the unit). Check current readings on each phase. Verify three phase operating currents are balanced within 5%.
To calculate the percent of current unbalance:

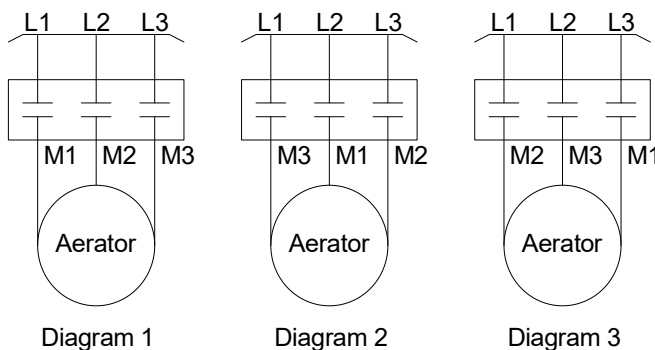
Determine the Average Current:

- a. Measure each of the three phase currents
- b. Add the three phase amperage values together.
- c. Divide the sum by three.
- d. This is the average current value.

Determine Current Unbalance:

- a. Select the phase current with the greatest difference from the average (calculated above).
- b. Determine the difference between this phase current and the average current value.
- c. Divide the difference by the average.
- d. Multiply the result by 100 to determine percent of unbalance.

3. Use connection diagram 1, 2 or 3 at right which results in the lowest current unbalance. Roll the motor cable leads on the aerator output terminal block in the same direction to avoid motor reversal. If the current unbalance is not corrected by rolling leads, locate the source of the unbalance and correct it.



a. If the phase farthest from the average current stays on the same power lead after being moved the primary cause of unbalance is the power source.

b. If the phase farthest from the average current moves on each of the connections with a particular motor lead, then the primary cause of unbalance is on the "motor side" of the circuit.

Consider: damaged cable, leaking splice, poor connection, or a faulty motor as possible causes.

4. Once the unit is operational record the operating voltage, amperage, power control center serial number, power cable length and cable gauge on the label inside the power control panel.

MAINTENANCE

For Warranty Consideration Work Must Be Performed By an Authorized Service Facility

- A. Keep the pumping chamber components and screen free of debris. Damage can occur to a clogged aerator.
- B. Once a year, disconnect the unit from the power source and physically inspect the aerator, float and electrical cable. Visible damage to the motor unit or cable should be repaired to avoid safety hazards and/or potential failure.
- C. Every three years, an oil change using "Otterbine Oil" is recommended to keep your aerator operating smoothly.

When a unit is properly cared for, it will give you years of trouble free service.

For Service, Repairs or Parts, Contact Your Local Otterbine Distributor

or

Call Otterbine Directly at 1-800-237-8837.

WINTERIZATION

If you live in a region of the country that experiences long periods of cold weather you may want to take your aerator out of the water. If an aerator becomes frozen-in, there is a possibility of motor damage.

Damage caused to the motor due to freezing will not be covered under warranty.

The spray pattern will not freeze easily due to the high volume of water. The unit will freeze in if the weather stays severe for a long enough period of time. You can decrease the chance of freezing in if you run these units 24 hours a day during long periods of extremely cold weather.

MAXIMUM CABLE LENGTHS (From Service Entrance to C2 Unit)

Concept 2 Maximum Cable Lengths											
	HP	Electrical Rating	Motor FLA	12AWG / 4mm ²		10AWG / 6mm ²		8AWG / 10mm ²		6AWG / 16mm ²	
				Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
60Hz	1	115V 1Ph 60Hz	12.8			150	45.72	250	76.2		
	1	208/230V 1Ph 60Hz	6.4	375/425	114/130	600/675	183/206	950/1000	290/305		
	2	208/230V 1Ph 60Hz	11.2	200/225	61/68.6	325/375	99.1/114	525/600	160/183	825/925	251/282
	3	208/230V 1Ph 60Hz	12.8			275/325	83.8/99.1	450/500	137/152	725/800	221/244
	3	208/230V 3Ph 60Hz	8.0	350/375	107/114	550/625	168/191	900/1000	274/305		
	3*	380V 3Ph 60Hz	4.8	1000	304.8						
	3*	460V 3Ph 60Hz	4.0	1000	304.8						
	5	208/230V 3Ph 60Hz	14	200/225	61/68.6	325/350	99.1/107	500/575	152/175		
	5*	380V 3Ph 60Hz	7.9	700	213.36	1000	304.8				
	5*	460V 3Ph 60Hz	7.0	900	374.32	1000	304.8				
	5*	575V 3Ph 60Hz	8.2	1000	304.8						
50Hz	1	220-240V 1Ph 50Hz	7.0	350	106.68	550	167.64	875	266.7		
	2	220-240V 1Ph 50Hz	12.4	225	68.58	350	106.68	575	175.26		
	3	220-240V 1Ph 50Hz	16.2			300	91.44	500	152.4		
	3*	380/415V 3Ph 50Hz	4.3	1000/1000	305/305						
	5*	380/415V 3Ph 50Hz	8.6	775/850	236/259	1000/1000	305/305				

* Cable for these systems may be available in longer lengths, call the factory to inquire.

!!IMPORTANT!!	Cable lengths are based on a 5% cable voltage drop between the PCC and the motor unit. It is important to consider the total voltage drop is 5% including the branch circuit to the PCC.
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TROUBLESHOOTING GUIDE

Small spray pattern (Spray drops gradually , i.e. minutes or hours).	Clogged intake	Remove debris
	Clogged screen	Remove debris
	Loose impeller	Tighten impeller bolt
Cavitation or low spray pattern. (Spray drops suddenly , less than one second.)	Low line voltage	Check voltage at the PCC & at the aerator. Make sure the unit is within the specified voltage range.
	Check for air bubbles surfacing around float	Make sure mooring and anchoring lines are securely tightened
	Debris between slinger and Impeller	Remove debris
Motor will not start	Breaker/fuse has tripped	Check circuit breaker or fuse, reset and/or replace, if necessary. Check voltage.
	Loose or broken terminals	Look for loose or broken terminals.
	Low voltage	Measure power to starter. Check acceptable maximum cable length (see below)
	Defective power cable	Check cable. If defective, call distributor.
	GFCI has Tripped	Reset and test GFCI device. If device trips again call electrician or distributor

Limited 3 year (moving and related parts)
+ 5 year (non-moving parts) 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.

HORSEPOWER (circle one): 1 2 3 5

VOLTAGE (circle one): 115 230 208-230 380 415 460 575

PHASE (circle one): Single Three HERTZ (circle one): 50 60

CORD GAUGE & LENGTH _____

UNIT SERIAL NUMBER _____

PANEL SERIAL NUMBER _____

OPTIONS _____



Water Works With Otterbine!

**Otterbine/Barebo, Inc.
3840 Main Rd. East
Emmaus, PA. 18049
U.S.A.**

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