

# TRISTAR AERATING FOUNTAIN SPECIFICATIONS

1HP 220V 1PH 50HZ

**MODEL:** The aerator shall be a floating, surface spray aerator with a three-tier spray pattern; a geyser type center spray surrounded by a two fan shaped patterns.

Spray dimensions for the upper pattern are: 9.9 feet (3m) in height, and 2.0 feet (0.6m) in diameter. Spray dimensions for the middle pattern are: 5.9 feet (1.8m) in height, and 8.8 feet (2.7m) in diameter. Spray dimensions for the lower pattern are: 3.0 feet (0.9m) in height, and 13.1 feet (4.0m) in diameter.

**PUMPING CAPACITIES:** The primary pumping rate of the unit is 142.7 GPM (32.4m<sup>3</sup>/hr) and the secondary or induced circulation rate is 1427 GPM (324m<sup>3</sup>/hr).

**FLOAT:** The float shall be made of seamless, one-piece high-density polyethylene plastic, filled with high density closed cell polyurethane foam. The float shall be capable of providing full flotation if the shell is punctured or cracked. The float shall have protective pockets for lights and handles molded into the bottom for easy handling. Metal floats or those with an internal void for additional ballast are not acceptable.

**FIXED FOUNTAIN STAND:** When selected the fixed fountain stand will replace the Float. The Fixed Fountain Stand shall be manufactured out of 316 stainless steel, with 304 stainless steel hardware and is designed with adjustable legs that can be used in depths between 22in to 30in (56cm to 76cm). Each stand will be supplied with rubber pads on each leg to be used with solid/mason type bottom applications, where rubber pads are to be removed for earth bottoms.

**IMPELLER:** The impeller shall be balanced and investment cast from types 304/CF8 stainless steel. A type 304 stainless steel bolt and set-screw shall secure the impeller to the motor shaft. Flexible shaft couplings are not acceptable.

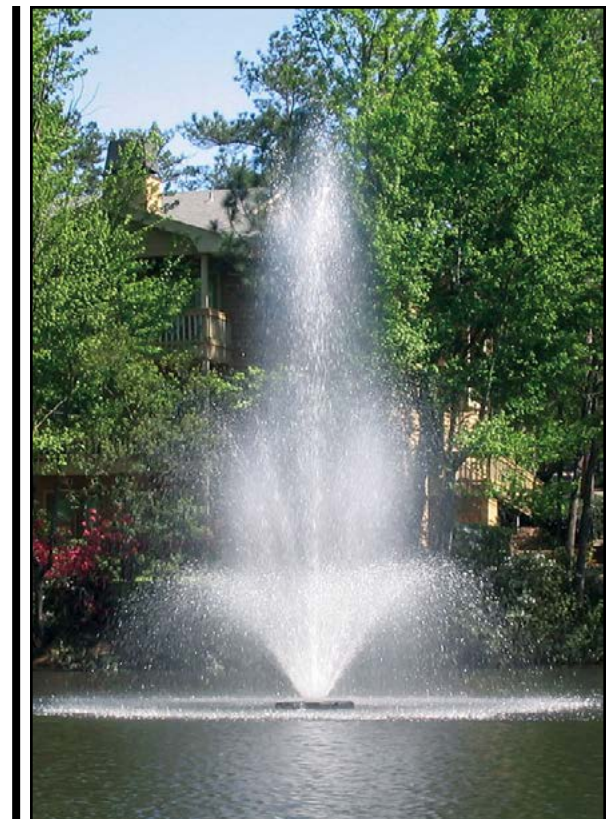
**MOTOR:** The motor shall be a 1HP, 220 volt, single phase, 60 HZ oil-cooled, submersible motor operating at 3450 RPM or 50 Hz operates at 2875 RPM. The motor shaft exposed to water shall be 316 stainless steel. The service factor shall be 1.15 except for 5HP 1Ph which shall be 1.00. The motor shall operate in a reservoir of Otterbine oil for continuous lubrication of bearings and for efficient transfer of heat through the motor housing wall. Top mounted motors and water-lubricated motors are not acceptable. The rotor shall be dynamically balanced. The winding (stator) wires shall be covered with class F rated insulation designed for complete immersion in oil. The motor shall be attached to a thermoplastic motor base plate. The motor shall be protected against oil and water leakage by a combination of rotary seals, stationary seals, and molded rubber "O" rings. Motor shall be serviceable.

**MOTOR HOUSING:** The external motor housing shall be a canister formed from deep drawn 316 stainless steel. The motor base plate shall be constructed of 420 Valox thermoplastic. A Valox boss will provide support and protection for the male electrical connector.

**FASTENERS:** All fasteners are to be metric and stainless steel.

**ELECTRICAL CONNECTORS:** The electrical connectors shall consist of a receptacle and a plug constructed of non-conductive polymers. The system shall create a vacuum seal when connected and have a threaded nut system as a backup. The plug shall have a keyway and be threaded into the motor base plate. The connector system shall be UL recognized.

**UNDERWATER POWER CABLE:** The power cables shall be type SOOW specifically designed for underwater use. The conductors shall be flexible, stranded bare copper 12, 10 or 8-gauge. The outer jacket of the cable shall be a black



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CADdetails

CPE material. All underwater connections shall be vulcanized. Power cable shall be able to be furnished in unspliced lengths up to one thousand feet (305m) if necessary.

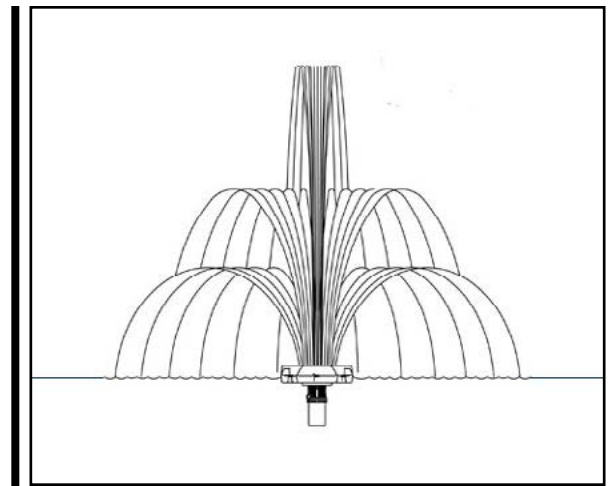
**POWER CONTROL CENTER:** The electrical components shall be mounted in a NEMA 4X rated enclosure with an externally mounted disconnect switch, and a HAND - OFF - AUTO selector switch. The electrical system for all units (115, 208-230, 380-415 & 460V) shall include a non-reversing 600V rated contactor, thermal overload relay, short circuit protection, and 24hr timer. All units shall include 5mA trip level ground fault protection. To operate the ground fault protection and control circuit on 208-230 volt systems a neutral must be present. The electrical system shall include a lightning arrester, rated for a maximum of 100,000 amperes discharge.

**TESTING:** A. Safety - Unit must be tested by ETL, ETL-C, UL or other accredited testing facilities. B.PCC (Power Control Center) must conform to UL508A and be built in a UL508A certified panel shop. Performance - Unit must have independent performance testing provided by the University of Minnesota.

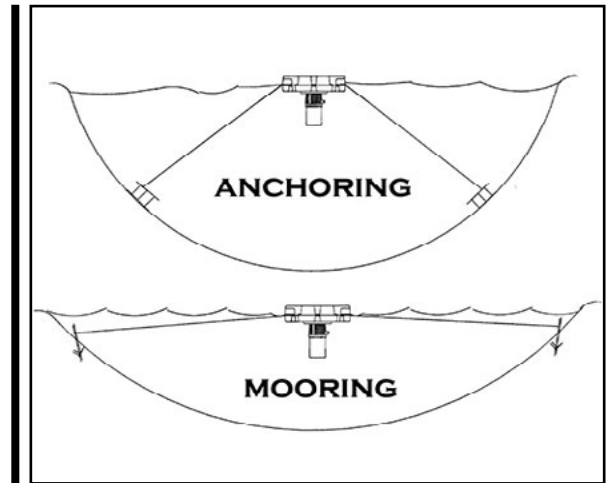
**WARRANTY:** The warranty shall be five years.

**ACCEPTABLE MANUFACTURER:** This unit shall be an OTTERBINE Gemini Aerating Fountain manufactured by OTTERBINE BAREBO, INC., 3840 MAIN ROAD EAST, EMMAUS, PA 18049 U.S.A. PH: (610) 965-6018. WEB: www.otterbine.com

**OPTIONAL LIGHT PACKAGE:** Unit to include manufacturer's suggested light package, see additional specification form.



CAD DRAWING: Tristar Aerating Fountain



INSTALLATION METHODS

## MODEL: TRISTAR AERATING FOUNTAIN

Motor	HP	Spray Height ft (m)	Spray Diameter ft (m)	Pumping Rate* GPM (m <sup>3</sup> /hr)	Electrical Rating	Running Amps	Maximum Cable Gauge/Length (*Additional cable options may be available)			Shipping Weight**
							12AWG/4mm <sup>2</sup>	10AWG/6mm <sup>2</sup>	8AWG/10mm <sup>2</sup>	
2875RPM @ 50HZ	1	UPPER: 3m MIDDLE: 1.8m LOWER: 0.9m	UPPER: 0.6m MIDDLE: 2.7m LOWER: 4m	32.4 m <sup>3</sup> /hr	220V 1Ph	8.3	99m	160m	259m	68kg
	2	UPPER: 4m MIDDLE: 2.4m LOWER: 1.2m	UPPER: 0.6m MIDDLE: 3m LOWER: 5.2m	45.3 m <sup>3</sup> /hr	220V 1Ph	12.6	61m	106m	168m	68kg
	3	UPPER: 4.6m MIDDLE: 3.2m LOWER: 2m	UPPER: 0.9m MIDDLE: 3.8m LOWER: 6.1m	59.3 m <sup>3</sup> /hr	220V 1Ph	13.5	<del>99m</del>	99m	160m	70kg
					380/415V 3Ph <sup>†</sup>	4	305m	<del>160m</del>	<del>259m</del>	
5	UPPER: 4.6m MIDDLE: 3.2m LOWER: 2m	UPPER: 0.9m MIDDLE: 3.8m LOWER: 6.1m	59.3 m <sup>3</sup> /hr	380/415V 3Ph <sup>†</sup>	4	236m	305m	<del>160m</del>	73kg	

\*Induced Circulation is 10X the Pumping Rate. \*\* Shipping weights are estimates and include unit, power control center and 50ft (15m) of cable. Minimum Operating Depths: Floating Fountain is 30in (75cm); Fixed Fountain Stand is 22in (56cm). 415V and 575V units available upon request. *Spray performance and pumping rates are approximate and may vary due to voltage, elevation and relative humidity.* Specifications are subject to change.