

1/2 HP FRACTIONAL SERIES

SPECIFICATIONS

MODEL: The Fractional Series shall be a floating aerator that includes five interchangeable configurations.

The **Gemini** shall be a “trumpet” shaped spray pattern with Spray dimensions as: 4 feet (1.2 m) in height, and 4.5 feet (1.8 m) in diameter.

The **High Volume** shall be a “boil” shaped spray pattern with Spray dimensions as: 2 feet (1 m) in height, and 2.5 feet (1.4 m) in diameter.

The **Phoenix** shall be a dual spray pattern; a geyser type center spray surrounded by a fan shaped pattern with Spray dimensions for the Upper pattern as: 10.6 feet (2.8 m) in height, and 4 feet (30 cm) in diameter. Lower pattern as: 3.8 feet (1 m) in height, and 10.6 feet (3 m) in diameter.

The **Rocket** shall be a geyser-like spray pattern dimensions as: 10.6 feet (3 m) in height, and 3 feet (40 cm) in diameter.

The **Mixer** shall be a floating horizontal mixer providing subsurface aeration and directional flow. The pumping capacity shall be sufficient to influence 245,000 cubic feet (6938 cubic meters) of water.



PUMPING CAPACITIES: The primary pumping rate of the **Gemini** unit is 506 GPM (115 m³/hr) and the secondary or induced circulation rate is 5060 GPM (1150 m³/hr). The primary pumping rate of the **High Volume** unit is 435 GPM (99 m³/hr) and the secondary or induced circulation rate is 4350 GPM (990 m³/hr). The primary pumping rate of the **Phoenix** unit is 195 GPM (44 m³/hr) and the secondary or induced circulation rate is 1950 GPM (440 m³/hr). The primary pumping rate of the **Rocket** unit is 179 GPM (41 m³/hr) and the secondary or induced circulation rate is 1790 GPM (410 m³/hr). The Mixer unit’s pumping capacity shall be sufficient to influence 245,000 cubic feet (6938 cubic meters) of water.

FLOAT: The float construction is roto-molded from a black polyethylene material and is filled with closed cell polyurethane foam. The float shall be capable of providing full floatation if the shell is punctured or cracked. Lighting fixtures snap into the float eliminating brackets and tools necessary to mount them. Metal floats or those with an internal void for additional ballast are not acceptable.

IMPELLER: The impeller shall be molded using glass reinforced thermoplastic polyurethane resin. The impeller shall be fastened to the keyed motor shaft by means of 1/8-8 Stainless Steel M6 bolt and washers (one lock washer, one flat washer). Flexible shaft couplings are not acceptable.

PUMP COMPONENTS: All pump components shall be constructed of glass reinforced thermoplastics.

MOTOR: The motor shall be a 1/2HP, _____ volt, single phase, _____ Hz thermally protected PSC (Permanent Split Capacitor) ball bearing motor operating at 3250 RPM or 50Hz operates at 2750 RPM. The internal thermal overload will reset automatically. The motor shall operate in an oil bath and be continuous duty rated with a service factor of 1.15 at 60Hz and 1.00 at 50Hz. The stator (windings) shall be coated with class F rated insulation for complete immersion in oil. The motor is to be bolted to a glass fiber reinforced Polybutylene Terephthalate (PBT) motor base plate. Water ingress and oil leakage are to be prevented using a silicon carbide mechanical rotary seal on the motor shaft and a motor base plate Buna-N o-ring.

MOTOR HOUSING: The motor housing shall be a deep drawn 316 stainless steel canister.

DEBRIS SCREEN: A debris screen constructed of 1/4" (.64cm) nylon mesh shall enclose the intake of the Fractional Series aerator.

FASTENERS: All fasteners shall be made of type 18-8 stainless steel.

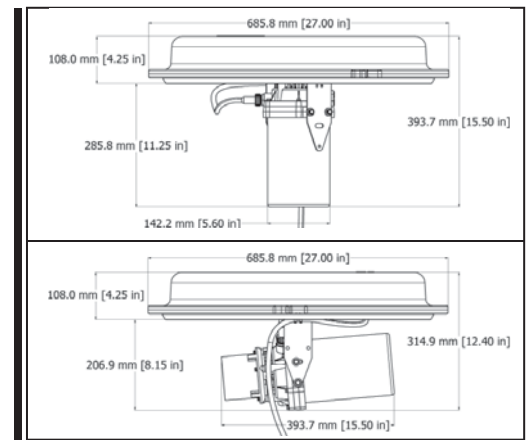
UNDERWATER POWER CABLE: The power cable shall be SJOOW 12AWG (4mm²) rated for 300 volts, constructed with synthetic rubber insulation and a thermoset jacket to resist heat, moisture, cracking and softening. It shall be UL and CSA listed.

ELECTRICAL CONTROLS: The electrical control components for the 115V units shall be mounted in a NEMA 3R enclosure, the electrical controls shall consist of a 24-hour timer and a GFCI. The electrical control components for the 230V and 220V (50Hz) units shall be mounted in a NEMA 4X enclosure and consist of a 24-hour timer, fuse, contactor, and a GFCI.

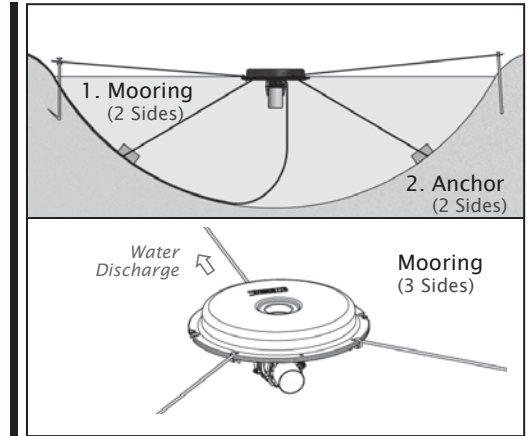
TESTING: A. Safety - The 1/2 HP Fractional Series shall be tested and approved as a unit. Separate component testing is not allowed. Unit must be tested by ETL, ETL-C, CE, UL or another accredited testing facility. B. Performance - Unit must have independent performance testing provided by GSEE, Inc.

WARRANTY: The warranty shall be two years.

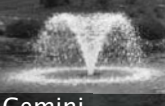




ACCEPTABLE MANUFACTURER: This unit shall be an OTTERBINE 1/2HP Fractional Series manufactured by OTTERBINE BAREBO, INC., 3840 MAIN ROAD EAST, EMMAUS, PA 18049 U.S.A. PH: (610) 965-6018. WEB: www.otterbine.com



Dimensional Drawing: (Top) Surface Aerator (Bottom) Mixer



Installation Methods: (Top) Surface Aerator (Bottom) Mixer

1/2HP FRACTIONAL SERIES								
Model	Motor RPM/Hz	Voltage/Phase	Running Amps	Spray Height	Spray Diameter	Pump Rate	Oxygen Transfer (HP/Hr)	Max Cable 12AWG/4mm ²
	3250/60	115/1	5.6	4ft	4.5ft	506GPM	2.2lbs	300ft
		230/1	2.8					600ft
Gemini	2750/50	220/1	2.8	1.2m	1.8m	115m ³ /hr	1.0kg	182.8m
	3250/60	115/1	5.2	2ft	2.5ft	435GPM	2.0lbs	300ft
		230/1	2.6					600ft
High Volume	2750/50	220/1	2.8	1m	1.4m	99m ³ /hr	.91kg	182.8m
	3250/60	115/1	6.4	Upper: 10.6ft Lower: 3.8ft	Upper: 4ft Lower: 10.6ft	195GPM	.8lbs	300ft
		230/1	3.2					600ft
Phoenix	2750/50	220/1	2.6	Upper: 2.8m Lower: 1m	Upper: 30cm Lower: 3m	44m ³ /hr	.36kg	182.8m
	3250/60	115/1	6.4	10.6ft	3ft	179GPM	.8lbs	300ft
		230/1	3.2					600ft
Rocket	2750/50	220/1	2.6	3m	40cm	41m ³ /hr	.36kg	182.8m
	3250/60	115/1	6	X		n/a*	n/a	300ft
		230/1	3					600ft
		2750/50	220/1					2.8

*1/2HP Mixer volume influenced is 245,000ft³ (6938m³) and effectively moves water 115 linear feet (35 linear meters). Induced Circulation is 10X the Pumping Rate. Estimated shipping weight is 48lbs/21.8kg; this includes unit, power control center and 50ft (15m) of cable. (50Hz units do not receive a power control center.) Minimum operating depth is 16in (41cm). Pumping rates may vary due to voltage, elevation and relative humidity. Specifications are subject to change.