VENUS SPECIFICATIONS

PUMPING CAPACITIES: The aerator shall produce a dual spray pattern; a jetted geyser type center spray surrounded by a fan shaped pattern. Inner spray dimensions are _____ feet or _____ meters in height and _____feet or _____ meters in diameter. Outer spray dimensions are _____feet _____ meters in height and _____ feet or _____ meters in diameter. The primary pumping rate of the unit is _____ GPM or _____ m^3/hr and the secondary or induced circulation rate is _____ GPM or _____ m^3/hr.

FLOAT: The float shall be made of seamless, one-piece high-density polyethylene plastic. The main float will be filled with high density closed cell polyurethane foam and capable of providing full floatation if the shell is punctured or cracked. The four wing floats are air filled and have been incorporated into the main float to allow for water intake to adjust float level and visibility. The float shall have protective pockets for lights and stainless steel float ring for easy handling. Metal floats or those with an internal void for additional ballast are not acceptable.

IMPELLER: The impeller shall be dynamically balanced and sand cast from brass. All decorative large Aerating Fountain line (AFL) impellers and pumping chambers are interchangeable.

MOTOR: The motor shall be a _____ HP, _____ volt, _____ phase, oil-cooled, submersible motor. 60 Hz operates at 3450 RPM or 50 Hz operates at 2875 RPM. The service factor shall be 1.15. 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 H rated insulation designed for complete immersion in oil. The motor shall be attached to a brass 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 rolled and fabricated 316 stainless steel. The motor base plate shall be constructed of brass.

FASTENERS: All fasteners are type 304 or 316 stainless steel.

ELECTRICAL CONNECTORS: The electrical connectors shall consist of a male and female plug constructed of nonconducting polymers. The system shall create a vacuum seal when connected and have a threaded coupling system as a backup. The connector system shall be ETL and UL approved.

UNDERWATER POWER CABLE: The power cables shall be type SOOW specifically designed for underwater use. The conductors shall be flexible, stranded bare copper 10, 8, 6, or 4 gauge, triple insulated to resist moisture, cracking, and softening. The outer jacket of the cable shall be a black CPE material. All underwater connections shall be vulcanized. Power cable shall be able to be furnished in unspliced lengths up to one thousand feet (305 m) if necessary.

POWER CONTROL CENTER: The electrical control components shall be mounted in a NEMA 3R enclosure with an externally mounted disconnect switch and a HAND - OFF - AUTO selector switch. The electrical system for units operating on 208-230 volt, single or three phase, shall include a circuit breaker and a GFCI (Ground Fault Circuit Interrupter). To operate the GFCI on 208-230 volt systems a grounded neutral must be present or an optional control transformer may be supplied. The electrical system for units operating on 400 and 460 volt shall include fuses. Fuses, if used, shall be dual-element current limiting type, mounted in three pole fuse blocks, and with spring reinforced clips. For all units the motor starter shall be a combination magnetic full-voltage non-reversing type, 600 volts maximum, with bimetallic, ambient compensated overload

relays. The electrical system shall include a lightning arrester, rated for a maximum of 100,000 amperes discharge for three phase and a maximum of 60,000 amperes discharge for single phase. The system will include a 24-hour timer.

TESTING:
Safety - The aerator system shall be tested and approved as a unit. Separate component testing not allowed. Unit must be tested by ETL, ETL-C, CE, UL, or other accredited testing facilities.

WARRANTY: Warranty shall be two years.

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

TECHNICAL SPECIFICATIONS:

Model	HP	Electrical Rating	Motor RPM	Typical Running Amps	Spray Height*		Spray Diameter*		Pumping Rate*
Venus					Inner	Outer	Inner	Outer	
	7.5	230V 1Ph 60Hz	3450 @ 60Hz	35	18ft(5.5m)	8ft(2.4m)	22ft(6.7m)	70ft(21.3m)	530 GPM
	7.5	230V 3Ph 60Hz	3450 @ 60Hz	21	18ft(5.5m)	8ft(2.4m)	22ft(6.7m)	70ft(21.3m)	530 GPM
	7.5	460V 3Ph 60Hz	3450 @ 60Hz	10.5	18ft(5.5m)	8ft(2.4m)	22ft(6.7m)	70ft(21.3m)	530 GPM
	10	230V 1Ph 60Hz	3450 @ 60Hz	45	21ft(6.4m)	10ft(3.0m)	30ft(9.1m)	82ft(25.0m)	580 GPM
	10	230V 3Ph 60Hz	3450 @ 60Hz	26	21ft(6.4m)	10ft(3.0m)	30ft(9.1m)	82ft(25.0m)	580 GPM
	10	460V 3Ph 60Hz	3450 @ 60Hz	13	21ft(6.4m)	10ft(3.0m)	30ft(9.1m)	82ft(25.0m)	580 GPM
	7.5	400V 3Ph 50Hz	2875 @ 50Hz	13.5	17ft(5.2m)	8ft(2.4m)	21ft(6.4m)	69ft(21.0m)	120.4 m^3/hr
	10	400V 3Ph 50Hz	2875 @ 50Hz	16.5	20ft(6.1m)	9ft(2.7m)	27ft(8.2m)	80ft(24.4m)	131.7 m^3/hr

* Specs based on actual and empirical data and may vary due to voltage, elevation, relative humidity and other relevant site conditions.

NOTE: **The large Aerating Fountain line will be Available in the Summer of 2006.** Contact Otterbine directly for additional information at 800-237-8837 or 610-965-6018.