

1400JF & 1400JFL Aerating Fountain Specifications

This specification is written and intended to provide bidders the necessary information pertaining to the floating aerating fountain(s) or surface aerator (s) for the _____ project.

1. 1400JF & 1400JFL INFORMATION

- a. The motor shall be ¼ HP, 1750 RPM motor operating at 120 Volts, Single Phase, 60 Hz and drawing 3.1 running amps.
- b. The fountain shall include 5 interchangeable patterns ranging from 4' tall to 10' wide.
- c. The unit shall be able to operate in as little as 12" of water.
- d. The unit shall include motor, float with mooring ropes, fountain components with built-in screening, underwater rated power cable, and 120 volt electrical control panel. The unit shall be completely assembled in the box. (Lights included if 1400JFL specified.)
- e. The SJTOW underwater rated power cable shall be 50 feet, 16 gauge, 3 conductor cable.

2. OPTIONAL LIGHTING INFORMATION

- a. The Optional Lighting Package shall be 12 Volt, Model L140050 with a single ring of 42 LED lights and built-in low voltage transformer.
- b. The SJTOW underwater rated power cable shall be 50 feet, 16 gauge, 3 conductor cable.

1400JF & 1400JFL Aerating Fountain Detailed Specifications

1. OPERATION

- 1.1. Manufacturer shall furnish a surface aeration device that is self contained with integrated float ring and capable of pumping water from below the water surface into the air creating a 5 decorative fountain displays and effectively mixing water throughout the lake or pond.
- 1.2. Submersed fountain motor with top intake shall draw water into the fountain housing and push the water past the deflector nozzle into the air creating the fountain displays.
- 1.3. Individual water droplets absorb oxygen from the atmosphere and return to the body of water transferring oxygen from the air and into the water.
- 1.4. Moving water shall mix and agitate the water, spreading oxygenated water throughout the body of water.
- 1.5. Single propeller and deflector nozzle design shall allow for greater water flow with lower likelihood of clogging.
- 1.6. U.V. resistant thermoplastic fountain housing screen shall catch large debris and assist in reducing the likelihood of clogging.

2. AERATING FOUNTAIN COMPONENTS

- 2.1. **Motor:** The motor shall be ¼ (.25) HP, 1750 RPM, 120 volt, single phase, 60 Hz, oil-cooled, continuous duty rated, submersible motor. The rotor shall have a shaft of Series 300 stainless steel, be supported by top and bottom ball bearings, and dynamically balanced. The stator windings shall be dipped and baked with a Class A insulation designed for complete immersion in oil and built-in automatic reset thermal overload protection. The Permanent Split Capacitor (PSC) shall be bolted to the motor bottom end bell with stainless steel hardware and have a 7.5 uF rating for proper motor start up. The assembled motor unit (rotor, stator, and PSC) shall be completely submersed in a no detergent, low weight, turbine oil for continuous lubrication of internal seals and ball bearings and for efficient transfer of heat to and through the stainless steel unit housing wall. The motor unit shall be sealed with an external lip seal and internal mechanical seal and O- ring. The external lip seal shall be water lubricated and protect the internal mechanical seal from grit and debris. The internal mechanical seal shall be a fully unitized, heavy duty Elastomer bellows mechanical seal, composed of ceramic, carbon, and stainless steel. The O-ring shall be molded rubber composite which expands in the presence of oil to create a water tight seal. Motor shall be attached to a thermoplastic motor top and inside a Series 300 stainless steel housing. No air or water lubricated motors are acceptable. Motor shall be serviceable.
- 2.2. **Motor Housing:** The motor housing shall be a canister formed deep drawn and annealed Series 300 austenitic stainless steel. The motor top shall be engineering grade thermoplastic with brass inserts for motor mounting bolts, and molded, threaded power cable connection with brass pins molded into the thermoplastic. The motor top shall fit into the motor housing canister with a molded rubber composite O-ring creating a water tight seal.
- 2.3. **Fountain Components:** The aerating fountain shall have a 4-blade U.V. resistant engineered thermoplastic propeller with all blades on the same plane, U.V. resistant thermoplastic fountain housing that also acts as a screen, and include 5 U.V. resistant thermoplastic deflector nozzles to create 5 unique fountain pattern designs. The fountain nozzles shall attach to the propeller or fountain housing with 300 Series stainless steel hardware. The thermoplastic fountain housing shall attach to the motor top and housing using thermoplastic clips with 300 Series stainless steel screws and washers.
- 2.4. **Fountain Nozzles/Patterns:** The aerating fountain shall include 5 interchangeable deflector nozzles creating 5 unique patterns including two “V” or Funnel patterns, one Arch pattern, one Two-Tier pattern, and one Tall Arch/Geysier pattern. The Eagle’s Nest (3.5’ Tall x 10’ Wide) and Hawk’s Nest (3’ Tall x 7’ Wide) are of a Funnel or “V” shape. The Osprey (3.5’ Tall x 7’ Wide) is of an

Arch shape. The Condor (4' Tall x 4' Wide inner tier; 2' Tall x 10' Wide outer tier) is of a Two-Tier shape. The Falcon (4' Tall x 4' Wide) is of a Tall Arch/Geysler shape.

- 2.5. **Float:** The float shall be a U.V. resistant, high density, molded thermoplastic of single piece construction. The fountain housing shall attach to the float with 300 Series stainless steel hardware. The float shall have molded light ring mounting indent. The float shall include two 15' braided nylon mooring/anchoring ropes.
- 2.6. **Underwater Power Cable:** The power cable shall be SJTOW UL, CSA, and NEC approved underwater rated, 3 conductor cable (2 Hot and 1 Ground) with a molded NEMA 5-15P plug end. The power cable shall be 50' 16 AWG.
- 2.7. **Electrical Control Panel:** The electrical control panel shall be UL listed per National Electric Code (N.E.C) and be enclosed in a NEMA Type 3R weatherproof enclosure. The electrical control panel shall be 120V with a permanent power cable with a molded NEMA 5-15P plug for plug-and-go operation. The electrical control panel shall include a 15 amp Class A Human Rated GFCI (Ground Fault Circuit Interrupter) with test and reset buttons. The electrical control panel shall have two NEMA 5-15R receptacles labeled "UNIT" and "LIGHT". A 24 hour mechanical timer with 30 minute increments shall operate both receptacles and a permanent mounted photo eye shall create secondary operation for the "LIGHT" receptacle.
- 2.8. **Fasteners:** All fasteners shall be Series 300 stainless steel.

3. SAFETY INFORMATION

- 3.1. The unit shall be total component tested and approved as a complete assembly. Individual component testing is not allowed. The aerating fountain must be tested by ETL, ETL-C, CE, UL, or other accredited testing facility.
- 3.2. The unit shall be tested as a complete unit and must meet UL (Underwriters Laboratories, Inc.) requirements in compliance with Category 778 for Motor-Operated Water Pumps and compliance with Category 50 for the Electrical Equipment (control panel). Lights must be approved as a package with the fountain unit.

4. WARRANTY INFORMATION

- 4.1. The unit shall include a 2 year manufacture's repair warranty on all components, including electrical control panel. Unauthorized tampering will void the warranty.

5. ACCEPTABLE MANUFACTURER

- 5.1. The unit shall be a KASCO 1400JF or 1400JFL Model, ¼ horsepower manufactured by Kasco Marine, Inc., 800 Deere Rd., Prescott, WI U.S.A 54021. 715-262-4488. www.KascoMarine.com.

6. INSTALLATION

- 6.1. **Unit:** The unit shall be installed per instructions included in the Owner's Manual with each unit. The unit may be anchored or moored in place. The unit is designed as a complete package and to be used with the included electrical control panel. Any alterations or substitutions, unless allowed by the instructions in the Owner's Manual will void the ETL Listing, void the manufacturer's warranty, and may cause a dangerous situation. Read the Owner's Manual thoroughly before starting the installation process and follow them carefully.
- 6.2. **Electrical Control Panel:** The electrical control panel must be installed per instructions and National Electrical Code. Any alterations or substitutions, unless allowed by the instructions in the Owner's Manual will void the ETL Listing, void the manufacturer's warranty, and may cause a dangerous situation. Read the Owner's Manual thoroughly before starting the installation process and follow them carefully.

7. OPTIONAL LIGHTING PACKAGES

- 7.1. **Fixture:** The lighting fixture shall include a single LED light ring which has 42 potted, amber colored LED lights. The light fixture shall fit into the molded float/light mounting indent and attach to the float using the 300 Series stainless steel hardware to attach the unit to the float.
- 7.2. **Underwater Power Cable:** The power cable shall be SJTOW UL, CSA, and NEC approved underwater rated, 3 conductor cable (2 Hot and 1 Ground) with open wire ends for installation into the low voltage transformer. The power cable shall have 6' of protective flex sleeving at the junction box for rodent protection. The power cable shall be 50', 16 AWG.
- 7.3. **Low Voltage Transformer:** The low voltage transformer shall be built into the power cord to transform 120 volt line voltage into 12 volt power to operate the lights. The low voltage transformer shall be sealed and weatherproof if mounted correctly per Owner's Manual instructions.