

January 2000

SUBMERSIBLE ASPIRATING AERATOR PACKAGE SPECIFICATION

A. General

The successful supplier will provide a total of _____ Submersible Aspirating Aerators, as manufactured by Aeromix of Minneapolis, Minnesota. Each will be _____ horsepower (____ kw). The aerator shall sit on the pond bottom, draw air from above the water surface and inject it into the water through a specially designed nozzle. The aspirated air discharged by the nozzle shall mix with water drawn in by a submerged pump to produce fine bubbles and thoroughly mix the oxygen with the water. The aerator should also destratify and provide horizontal water circulation without the need for additional components or accessories. All aerator components shall be completely submerged and not easily visible from the surface. The system supplied shall be complete and include all components needed to provide a functioning system. This includes, but is not limited to; aerator, submersible electrical cable, control panel and air hose.

B. Aerator Specifications

Aerator shall consist of a polyethylene enclosure with a filtered water flow entrance, housing a stainless steel submersible pump, motor, and nozzle assembly.

C. Propeller Pump Specification

A non-fouling, high-efficiency, axial-flow propeller pump shall be used. The propeller shall be precision cast stainless steel to for maximum life and to maximize abrasion resistance. The pump housing shall also be cast stainless steel for maximum corrosion and abrasion resistance. Plastic pumps or propellers or fabricated pumps or propellers are not acceptable.

D. Motor Specifications

The motor shall be a water-cooled, water-lubricated, no maintenance design, specially manufactured to operate completely submerged. It shall include a stainless steel outer housing, waterproof electrical connector assembly, hermetically-sealed windings, and stainless steel shaft. All single phase motors shall incorporate a built-in lightning arrestor to prevent damage due to lightning strike. The motor shall be U.L. recognized and incorporate special thrust bearings to take up the propeller thrust load. The motor shall be _____ VAC, _____ phase, _____ hertz.

E. Diffuser Venturi Nozzle

The venturi nozzle shall be of stainless steel and of such design that the air/liquid mixture is discharged horizontally with a directional capability determined by aerator placement.

F. Control Panel

The standard control panel supplied shall be NEMA-4X rated and include starter, lockable fused disconnect, hand-off-auto switch, timer, ground fault circuit interrupter and space for some additional components as requested. All components shall be UL and CSA recognized.

G. Submersible Electrical Cable

Each aerator shall be supplied with ____ feet (____ m) of SEO type or equal submersible electrical cable.

H. Air Line

Each aerator shall be supplied with ___ feet (____ m) of ribbed plastic air hose.

I. Cold Weather Operation

The aerator shall be designed to operate year-round in any weather condition without the need for separate heaters or additional service.

J. Testing

All aerators shall be tested in water with the nozzle installed prior to shipment to confirm proper operation and amp draw.

K. Miscellaneous

All components of the Submersible Aspirating Aerator shall be manufactured in whole or in part in the United States.