

BREEZE MASS TRANSFER SYSTEM SPECIFICATION

A. General

Provide a total of ____ BREEZE low-profile mass transfer systems as manufactured by AEROMIX Systems, Incorporated of Minneapolis, Minnesota, USA, consisting of ____ Series ____ tanks. It shall be complete with properly sized fans or blowers, internal air manifolds, diffusers, and other accessories required to provide a fully operational BREEZE system.

B. Air Blower

A total of ____ Regenerative Blower(s) and/or ____ Centrifugal Fan(s) shall be provided. Each blower/fan shall be ____ Hp, ____ Hertz, ____ phase, ____ volt and shall provide ____ CFM of total air at site conditions. The motor shall be ____ (TEFC or explosion proof).

C. Aeration Module Construction

1. Each aeration module, including all interior components shall be constructed of Type II Polypropylene with a minimum 0.75 wall thickness to prevent excess tank flexing when it is full. All joints shall be welded and completely water tight.
2. All connections shall be welded without use of adhesives. All latches, keeper plates, nuts, and bolts shall be constructed of zinc-plated latches. At least four handles shall be welded onto each tank to allow easy lifting and movement of the empty tank. All fittings shall be constructed of Polypropylene. All gaskets and washers shall be constructed of EPDM. No PVC components shall be used due to temperature and chemical resistance concerns.
3. Each tank shall include two components, one completely removable lid and one tank. The lid shall be sealed to the tank using an EPDM gasket integrally mounted on the tank lip.
4. Each tank shall be provided with ____ aeration chambers divided by baffles extending well above the water line. Each aeration chamber shall have two air diffusers. Each tank shall have one quiescent chamber. Inner baffles shall be provided to direct the flow in a serpentine path maximizing air to water contact. Ability to regulate water level in all stages shall be provided using an adjustable weir plate between the final aeration chamber and the quiescent chamber.
5. Each tank shall have one 4" threaded water inlet, one 4" threaded air inlet, one 4" threaded water outlet, one 8" flanged air outlet and one 4" threaded drain with plug. The air outlet shall be sealed to the tank using EPDM gaskets and steel fasteners. All external air and vent piping to the BREEZE module shall be threaded PVC unless otherwise specified.

D. Internal Manifold

Air shall be fed from the air inlet to the diffusers through a large internal Polypropylene manifold to prevent external air leakage. The manifold shall be provided with threaded fittings for all diffusers.

E. Diffusers

Diffusers shall be CYCLONE II diffusers specially designed for mass transfer systems such that they have extremely low head loss and excellent resistance to fouling. All diffusers shall be designed to allow the addition of a fine bubble sleeve.