

ITEM 120 BUBBLER MIXING SYSTEM

120.1 GENERAL

This section includes the Phi large bubble mixing system, Phi controller, large bubble forming plate, air compressure package, piping, mounting plate, electrical, mechanical and appurtenances.

150.2 SUBMITTALS

- A. Drawings in accordance with general provisions.
- B. Configuration sheet, which consists of manufacturer's data and descriptive literature for the equipment.

150.3 PRODUCTS

- A. Phi large bubbler air mixing system to include:
 - 1. PHi 300 controller in a NEMA 4X box A-B MicroLigix 110 PLC, color touch screen OIT mounted on interior door kit, air filter-regulator, SSt internal piping, one valve, heated.
 - 2. One large bubble plate.

150.4 MANUFACTURER

The bubbler shall be manufactured by Pulsed Hydraulics, Inc. (Phi) www.phewater.com, for local sales contact Bill Hallcroft at WWaterTech, Inc. 817-358-0551.

150.5 AIR COMPRESSOR

Kaeser Sx 5 Hp air center compressor package with receiver, dryer and foodgrade oil. The compressure shall operate on 240v single phase. The compressor shall be manufactured by Kaeser Compressor www.kaeser.com. The air compressor shall have an electrical disconnect located next to the unit.

150.6 PIPING

Provide 1-inch diameter air pipe that extends from the tank floor elevation to bubble plate. Pipe material shall be Type 304L stainless steel.

The pipe shall be designed to support all related static and dynamic loads, suitable galvanized steel brackets, guides and hangers shall be provided on the support wall and access tube at

intervals not to exceed 10-feet. The air pipe shall penetrate the access tube at a point that is a minimum of 1-foot above normal water level.

The air piping shall be designed and constructed to accommodate any differential movement caused by thermal expansion and contraction over the range of extreme temperature differences expected.

Pipe, fittings and flanges thickness shall be in accordance with the manufacturers certified pressure rating for the applicable service pressures. The design pressure rating shall be a minimum of 200 psi for piping.

150.7 EXECUTION

A. Installation

1. Installation shall be based on manufacturer's recommendation.
2. The manufacturer or authorized factory representative shall provide a minimum of one (1) day training and start up service to ensure installation and operation as required.

150.8 PAYMENT

Payment for the large bubbler system shall not be paid for directly but considered subsidiary to various bid items.

150.9 SUBSTITUTIONS

The Contractor's and/or suppliers shall seek approval of alternate equipment prior to bid opening.