Technical Specification

Wet Well/Pumping Station -Aeration/Mixing System

PART 1 - GENERAL

A. The pump station shall include a complete automatic aeration/mixing system consisting of two rotary vane air compressors, controller panel, and stainless steel coarse bubbler diffuser system. The purpose of this equipment is to provide aeration and/or mixing of the wet well contents.

B. The aeration/mixing compressor(s) and controls system shall be housed within a NEMA 3R or optional NEMA 4X enclosure for outdoor applications. The enclosure shall include all motor protection components, timing circuitry, control circuitry, selector switches, operational pressure gauge and internally mounted air compressors. Incoming service shall be protected by means of a service disconnect external to the panel by others. The incoming service to the controller shall be either 120v/60hz/1ph, 30Amp or 240v/60hz/1ph, 20Amp.

PART 2- CONTROL SYSTEM

A. The aeration/mixing controller shall be capable of receiving an interface signal from a set of dry contacts in the pump station control panel. It shall be the pump station panel supplier's responsibility to provide isolated motor starter auxiliary contact outputs for use by the aeration system. The auxiliary contacts shall be normally closed and wired in series to terminals within the enclosure, providing a start signal for the cycle timer housed within the Air-Mix controller.

Compressors will be selectable to either alternate at 50% of total cfm capacity or be run in duplex mode for 100% of total cfm capacity.

B. The controller timer shall have an independently adjustable on and off cycle with a range of 1.5 seconds to 300 hours. The controller cycle shall reset and initiate upon each pump station stop and also upon each timer cycle completion. The controller shall also stop the compressors upon the start of each pump station pumping cycle .

C. An anti-condensation heater shall be provided within the control cabinet . Heater shall be 115 volt, 125 watts, and shall be controlled by a thermostat.

D. A status run light shall be furnished in the front panel of the control cabinet.

PART 3- AERATION/MIXING SYSTEM

3.1 COMPRESSOR

A. There shall be two rotary vane compressors per panel. Each shall be a (herein specifiy x/x HP unit with an output capacity of xxx CFM at xxx static feet of head). The operating voltage shall be (herein specify voltage/hertz/ and phase). The compressor shall be of the rotary vane design.

Each individual compressor shall be mounted upon vibration isolators. Accessory equipment to be provided shall be a fifty micron inlet air filter, a manually adjustable pressure relief valve, flexible discharge connector and a system range suitable door mounted pressure gauge .

3.2 DIFFUSER SYSTEM

A. The diffuser(s) and piping assembly for the aeration system shall be completely constructed of stainless steel unless specified otherwise. The diffuser(s) shall be suspended 1 foot above the floor of the wet well. The air diffuser(s) will be of a coarse air type with deflector shield and dual range diffuser outlet ports. Each aerating assembly shall have (1) 3/4" male NPT discharge. Stainless steel pipe bracketing, furnished by others during installation, shall be utilized for installation of the 3/4" aeration pipe. The diffuser(s) are included within the Air-Mix materials to be provided and are matched to the Air-Mix system total design output. The supply and installation of all piping, fittings, and bracketing, external to the control panel, required to place the unit into operation, are the responsibility of the installing Contractor.

PART 4 - EXECUTION

A. Equipment is to be installed in accordance with manufacturer's instructions, approved submittal drawings and the Contract Documents.

PART 5 - START UP SERVICES

A. The manufacturer's representative shall perform initial start up of the unit.

PART 6 – MANUFACTURER

A. Product as Manufactured by
   1. EZ Vent, 76 Old Hilltop Road, Conowingo, MD 21918
      Phone 410 658 2000

PART 7 – WARRANTY

A. WARRANTY
B. The manufacturer shall warrant the system to operate in accordance with its intended performance for a period of one year, beginning with date of start up, not to exceed 18 months from date of shipment.
C. Warranty shall provide for the replacement of defective parts only. Labor is not included.
D. Initial start up of the equipment must be performed by the manufacturers authorized agent in order for the warranty to be in effect.

End of Section