

SECTION 40 05 78.21

AIR RELEASE VALVES FOR WASTEWATER SERVICES

PART 1: GENERAL

1.1 SCOPE

Furnish, install, and test all air release valves, vacuum relief valves, and combination air valves as shown on the Drawings.

1.2 SUBMITTALS

Submit shop drawings and manufacturer's literature to the Engineer for approval in accordance with Specification Section 01 00 04.

PART 2: PRODUCTS

2.1 MATERIALS

- A. Bodies and Covers: shall be of cast iron (ASTM A126, Class B, or ASTM A48, Class 35) or ductile iron (ASTM A536, Grade 65-45-12). Cover Bolts and nuts shall be stainless steel.
- B. Valve Connections: Flanged-end dimensions and drilling for cast-iron bodies and covers shall conform with ASME B16.1, Class 125 or Class 250. Flanged-end dimensions and drilling for ductile-iron bodies and covers shall conform with ASME B16.42, Class 150 or Class 300. Flanges shall be flat-faced unless otherwise specified by the purchaser. Threaded-end connections shall conform with the requirements for tapered pipe threads for general use, per ASME B1.20.1.
- C. Floats: Float balls and guides shall be stainless steel. For valves with inlet sizes less than 4 inches, the float shall be capable of withstanding a collapse pressure of 1,000 psig. For valves with inlet sizes 4 inches and larger, the float shall be capable of withstanding collapse pressures of 750 psig.
- D. Venting: Air release valves and the air release mechanism of combination valves shall be designed to open positively and vent air to the atmosphere at system pressures up to the maximum working pressure. Orifices shall be sized accordingly. The vent pipe shall be continuous from the valve to 2 ft (minimum) above finished grade and shall be provided with a #14 mesh screened, downward-facing elbow.

PART 3: EXECUTION

3.1 INSTALLATION

- A. Install the valves in strict accordance with the requirements contained in Specification Section 33 05 05 and Drawings.
- B. If required by MOAW Project Manager, provide services of technical representative of valve manufacturer available on site during installation of valves.
- C. Prior to installation, remove foreign matter from within valves. Inspect valves in open and closed position to verify that the parts are in satisfactory working condition.
- D. Install vales and valve manholes and vaults where indicated on Drawings or as located by the MOAW Project Manager. Set manholes and vaults plumb and as detailed. Center manholes on valves. Compact around each manhole and vault for a minimum radius of 4 feet, or to undisturbed trench face, when less than 4 feet. Provide above- ground vents for manholes and vaults as indicated on Drawings. The vent pipe shall be continuous from the valve to 2 ft (minimum) above finished grade and shall be provided with a #14 screened, downward-facing elbow

3.2 TESTING

- A. Conduct pressure and leakage tests as required by Section 33 05 05.33.

3.01 PAINTING OF PIPING AND VALVES

Paint piping and valves located in vaults, stations, and above ground.

END OF SECTION