

SECTION 33 12 16.19**AIR RELEASE AND VACUUM RELIEF VALVES****PART 1: GENERAL**

1.01 SCOPE

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

1.02 SUBMITTALS

Submit shop drawings and manufacturer's literature to the AW Project Manager for approval in accordance with Section 01 33 00.

PART 2: PRODUCTS

2.01 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 AW. 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.
- E. For sewage force main applications, provide special long-body sewage air release valves, complete with top and bottom flushing connections and hose(s).

PART 3: EXECUTION

3.01 INSTALLATION

- A. Install the valves in strict accordance with the requirements contained in Section 33 11 00 and Drawings.
- B. If required by AW 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 valves and valve manholes and vaults where indicated on Drawings or as located by the AW 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 indicted on Drawings.

3.02 DISINFECTION AND TESTING

- A. Disinfect water lines, valves, and appurtenances as required by Section 33 01 10.15.
- B. Conduct pressure and leakage tests as required by Section 33 01 10.13.

3.01 PAINTING OF PIPING AND VALVES

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

END OF SECTION 33 12 16.19