

SECTION 02642

AIR RELEASE AND VACUUM RELIEF VALVES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Air release and vacuum relief valves.

1.02 UNIT PRICES

- A. Measurement is on a lump sum basis for each valve installed.
- B. Payment includes air release valve manholes and fittings and appurtenances necessary for complete installation of valve. The Owner's Representative may request a detailed schedule of values for more complex installations.

1.03 SUBMITTALS

- A. Submittals shall conform to requirements of all provisions and sections of these specifications.
- B. Submit manufacturer's product data for proposed valves for approval.

1.04 QUALITY CONTROL

- A. Provide manufacturer's affidavit that air release and vacuum relief valves purchased for Work, were manufactured and tested in the United States, and conform to applicable requirements of this Section.

PART 2 PRODUCTS

2.01 GENERAL

- A. Combination air valve called for on Drawings means combination valve designed to fulfill functions of air release (permit escape of air accumulated in line at high point of elevation while line is under pressure) and vacuum relief. Air release and vacuum relief valves 8 inches and smaller in diameter shall be self-contained in one unit.

2.02 MATERIALS

- A. Air Release Valves: Apco No. 200, GA Industries Fig. 2-AR, or equal. Materials: body and cover, ASTM A48, Class 30, cast iron; float and leverage mechanism, ASTM A240 or A276 stainless steel; orifice and seat, stainless steel against Buna-N

or Viton mechanically retained with hex head nut and bolt; other valve internals, stainless steel or bronze. Provide inlet and outlet connections, and orifice as shown on Drawings.

- B. Air Release and Vacuum Valves: Provide single-body, standard combination or duplex-body custom combination valves as indicated on Drawings.
1. For 2-inch and 3-inch, single-body valves, provide inlet and outlet sizes as shown on Drawings and orifice sized for 100 psi working pressure. Valve materials: body, cover and baffle, ASTM A48, Class 35, or ASTM A126, Grade B cast iron; plug or poppet, ASTM A276 stainless steel; float, ASTM A240 stainless steel; seat, Buna-N; other valve internals, stainless steel. Valve exterior: Painted with shop-applied primer suitable for contact with potable water. Provide Apco Model 145C or 147C, Val-Matic Series 200, or equal valves.
 2. For 3-inch and larger duplex body valves as shown on Drawings, provide Apco Series 1700 with No. 200 air release valve, GA Industries Fig. No. AR/GH-21K/280, or equal. Air and vacuum valve materials: body and cover, ASTM A48, Class 35, cast iron; float, ASTM A240 stainless steel; seat, Type-304, stainless steel and Buna-N; other valve internals, stainless steel or bronze. Air release valve: Constructed as specified in paragraph above on Air Release Valves.
- C. Vacuum Relief Valves: Provide air inlet vacuum relief valves with flanged inlet and outlet connections as shown on Drawings. Provide air release valves in combination with inlet and outlet, and orifice as shown on Drawings. Valve shall open under pressure differential not to exceed 0.25 psi. Provide Apco Series 1500 with a No. 200A air release valve, GA Industries Fig. No. HCARV, or equal. Materials for vacuum relief valves: valve body, ASTM A48, Class 35, cast iron; seat and plug, ASTM B584 bronze, copper alloy 836; spring, ASTM A313, Type-304, stainless steel; bushing, ASTM B584 bronze, copper alloy 932; retaining screws, ASTM A276, Type-304, stainless steel.
- D. Air Release Valve Vault as detailed in Drawings.

PART 3 EXECUTION

3.01 EARTHWORK

- A. Conform to applicable provisions of Section 02227.

3.02 SETTING VALVES AND VALVE BOXES

- A. Provide services of technical representative of valve manufacturer available on site during installation of valves.
- B. Prior to installing valves, remove foreign matter from within valves. Inspect valves in open and closed position to verify that all parts are in satisfactory working condition.
- C. Install valves and valve boxes where indicated on Drawings or as located by the Owner's Representative. Set valves plumb and as detailed. Center valve boxes on valves. Carefully tamp earth around each valve box for minimum radius of 4 feet, or to undisturbed trench face if less than 4 feet. Provide above-ground vents for valve boxes as indicated on drawings.

3.03 DISINFECTION AND TESTING

- A. Disinfect valves and appurtenances as required by Section 02675 and test as required by Section 02676.

3.04 PAINTING OF PIPING

- A. Paint valves located in vaults, stations, and aboveground using ACRO Paint No. 2215, "Galveston Blue" or approved equal, unless otherwise directed by the Owner's Representative.

END OF SECTION