

## SECTION 05130 - AIR RELEASE AND VACUUM VALVES

### PART 1 - GENERAL

#### 1.1 WORK INCLUDED IN THIS SECTION

- A. The WORK of this Section includes providing above ground air release valve, air and vacuum valve, and combination air valve assemblies, and below ground manual air release valve assemblies, as indicated, complete and operable, including accessories and drain connections in accordance with the DISTRICT's Standard Drawings.
- B. The term "air valve" is used generically in this specification to refer to requirements common to all of the specified air release valves, air and vacuum valves, and combination air valves.

#### 1.2 SUBMITTALS

- A. The following shall be submitted in compliance with Section 01300.
  - 1. Shop Drawings
    - a. Manufacturer's catalog data.
    - b. Manufacturer's installation instructions.
    - c. Manufacturer's certification that products comply with the indicated requirements.
  - 2. OWNER's Manual
    - a. Manufacturer's catalog data.
    - b. Manufacturer's installation and operations instructions.
    - c. Manufacturer's maintenance procedures.
    - d. List of special tools.

### PART 2 - PRODUCTS

#### 2.1 GENERAL

- A. Air valve assemblies shall be furnished and installed by the CONTRACTOR at the locations shown on the Plans, or as required by the DISTRICT.
- B. Combination air valve assemblies shall be sized as shown below:

1. 2-inch combination air valve – pipeline sizes 12-inch and less.
2. 4-inch combination air valve – pipeline sizes 14-inch through 20-inch.
3. 6-inch combination air valve – pipeline sizes 24-inch through 36-inch.

## 2.2 AIR AND VACUUM VALVES

- A. Air and vacuum valves shall be capable of venting sufficient quantities of air as determined by the manufacturer's approved sizing methods, while pipelines are being filled and allowing air to re-enter while pipelines are being drained.
- B. Air and vacuum valves shall be of the size indicated, with flanged or screwed ends to match piping.
- C. Bodies shall be of high-strength cast iron.
- D. The float, seat, and all moving parts shall be constructed of Type 316 stainless steel.
- E. Seat washers and gaskets shall be of a material insuring water tightness with a minimum of maintenance.
- F. Valves shall be designed for minimum 150 psi water-working pressure, unless otherwise indicated.

## 2.3 AIR-RELEASE VALVES

- A. Air-release valves shall vent accumulating air while system is in service and under pressure and be of the size indicated and shall meet the same general requirements as specified for air and vacuum valves except that the vacuum feature will not be required.
- B. Air-release valves shall have the same general requirements as specified for air and vacuum valves

## 2.4 COMBINATION AIR VALVES

- A. Combination air valves shall combine the characteristics of air and vacuum valves and air release valves by exhausting accumulated air in systems under pressure and releasing or re-admitting sufficient quantities of air, as determined by the manufacturer's approved sizing methods, while a system is being filled or drained, respectively.
- B. Combination air valves shall have the same general requirements as specified for air and vacuum valves.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

#### **A. General**

1. The tap for air valve assemblies shall be installed on a section of pipe no closer than 18 inches to a valve, bell, coupling, joint, or fitting.
2. Air valve assemblies shall be disinfected and hydrotested in conjunction with the connecting pipelines.

#### **B. Air Release Valve, Air and Vacuum Valve, and Combination Air Valve Assemblies**

1. All valves shall be installed in accordance with the manufacturer's printed recommendations.
2. Assemblies shall be installed in the piping system at peaks and sharp grade changes, and where indicated or required by the District.
3. Valves shall be field coated according to Specification Section 04000.
4. Valves shall be installed above ground with security cover.
5. Valves shall be installed with a sanitary vent screen to the exhaust port of the valve, unless otherwise directed by the DISTRICT.
6. Assemblies shall have an isolation valve to permit future maintenance. Isolation valves installed above ground will have the capability to be locked out. Isolation valves installed below ground will be required to have a debris cap with a locking device.

#### **C. Manual Air Release Valve Assemblies**

1. Assemblies shall be installed in the piping system at dead-end main and isolation valve high points, and where indicated or required by the District.

END OF SECTION