



SECTION 40_XX_XX

AIR/VACUUM VALVES FOR CLEAN SERVICE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Air/Vacuum valves for clean service
- B. Related Sections:
 - 1. (provided by the engineer)
 - 2. (provided by the engineer)
 - 3. (provided by the engineer)

1.02 REFERENCES

- A. ASME B16.42 "Ductile Iron Pipe Flanges and Flanged Fittings"
- B. ASME B16.5 "Steel Pipe Flanges and Flanged Fittings"
- C. AWWA C512 "Air Release, Air/Vacuum and Combination Air Valves for Waterworks Service"

1.03 SUBMITTALS

- A. (provided by the engineer)

1.04 QUALITY ASSURANCE

- A. Valves shall be warranted by the manufacturer for defects in materials and workmanship for a period of two years (24 months) from date of shipment.

PART 2 - PRODUCTS

2.01 GENERAL

- A. (provided by the engineer)

2.02 AIR RELEASE VALVES FOR CLEAN SERVICE

- A. Manufacturers: APCO AVV or pre-approved equal
- B. Design:
 - 1. Air/Vacuum Valve shall be float operated and have a large discharge orifice, equal or greater in size than the valve inlet
 - 2. General:
 - a. Valve shall be a direct acting, float-operated, hydro-mechanical device designed to automatically release or admit large volumes of air during the filling or draining of a pipeline or piping system. Valve shall open to relieve negative pressures and will remain closed and will not reopen to vent air when the system is full and under pressure.
 - b. Inlet and outlet port areas shall be equal or greater than the valve inlet
 - c. Baffle shall be designed to protect the float from direct contact of the rushing air and water to prevent the float from closing prematurely.

- d. Seat shall be fastened into the valve cover without distortion and provide drip tight shut off. Seat shall be field replaceable without special tools.
 - e. Float shall be center guided into the seat
 - f. Outlet port shall be threaded, flanged, or hooded
- C. Materials:
 - 1. Body: Ductile Iron ASTM A536/A351 Gr 65-45-12, Cast Iron ASTM A126 Gr B, Carbon Steel ASTM A216 or 316 Stainless Steel ASTM A743
 - 2. Cover: Ductile Iron ASTM A536/A351 Gr 65-45-12, Cast Iron ASTM A126 Gr B, Carbon Steel ASTM A216 or 316 Stainless Steel ASTM A743
 - 3. Float: 316 Stainless Steel ASTM A240
 - 4. Seat: Acrylonitrile-Butadiene (NBR), Terpolymer of Ethylene, Propylene and A Diene (EPDM) or Fluoro Rubber (FKM)
 - 5. Baffle: 316 Stainless Steel ASTM A743
- D. Specifications for optional accessories:
 - 1. DAT: A double acting throttling device fitted on the discharge orifice to provide both throttling air out and full flow air in
 - 2. MRC: A mushroom cap installed in the threaded outlet for discharge protection
- E. Testing:
 - 1. Each valve shall be shop tested as a complete assembly in accordance with AWWA C512.
 - 2. Certified test reports shall be available upon request.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install valves as specified in section (filled in by the engineer) and the manufacturer's instructions.
- B. (verbiage by engineer instructing how discharge piping should be installed)

3.01 COMMISSIONING

- A. Field testing (verbiage by engineer)