



SECTION 40_XX_XX SWING CHECK VALVES FOR WATER OR SEWAGE

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Swing Check Valves for Water or Sewage
- 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 "Conforms to Bolt Pattern and Drilling"
- B. AWWA C508 "Swing-Check Valves for Waterworks Service"
- C. NSF/ANSI 61 "Drinking Water System Components - Health Effects"
- D. NSF/ANSI 372 "Drinking Water System Components - Lead Content"

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 SWING CHECK VALVES FOR WATER AND SEWAGE

- A. Manufacturers: APCO CVS-6000D or pre-approved equal.
- B. Design:
 - 1. Swing Check Valve shall be single body flanged design.
 - 2. General:
 - a. Design Maximum Working Pressure: 200 psi (1380 kPa) on valve sizes 2-12" (50-300mm and 150 psi (1035 kPa) for 14" (350mm) and larger
 - b. Maximum Fluid Temperature: Dictated by elastomer selection
 - c. Valve design to provide a full waterway flow through area
 - d. Valve disc and disc arm connection shall be one-piece construction
 - e. Valve shaft to be one-piece construction
 - f. Valve design shall be of a top-entry configuration, permitting access to all internal components for inspection, maintenance, or replacement without requiring removal of the valve body from the pipeline.

- C. Materials:
 - 1. Bodies: Ductile Iron ASTM A536
 - 2. Covers: Steel ASTM A36
 - 3. Discs: Ductile Iron ASTM A536
 - 4. Body Seat Rings: 316 Stainless Steel ASTM A351
 - 5. Disc Seats: Acrylonitrile-Butadiene (NBR), or Terpolymer of Ethylene, Propylene and A Diene (EPDM)
 - 6. Pivot Shafts: 304/316 Stainless Steel ASTM A276
 - 7. Bearings: Bronze ASTM B505/B584 for sizes 2-14" (50-350mm) and Bronze ASTM B150 for sizes 16-66" (400-1700mm)
 - 8. End Connections: Bolt Pattern and Drilling per ASME B16.42
 - 9. NSF: NSF/ANSI 372 certified lead-free and NSF/ANSI 61 certified for drinking water, when specified
- D. Specifications for closure control devices:
 - 1. LW = Lever and Weight. The weight position shall be adjustable, enabling customization of closing characteristics to suit system operation conditions.
 - 2. LS = Lever and Spring. The spring mechanism shall be adjustable, enabling customization of closing characteristics to suit system operation conditions.
 - 3. AC = Lever and Weight with Air Cushion Cylinder. The flow control valve on the cylinder shall be adjustable, enabling air restriction through the cylinder to cushion the closing.
 - 4. OB = Lever and Weight with Oil Cushion. The oil cushion absorbs the impact of the lever and weight to prevent shaft bounce or vibration.
- E. Specifications for optional accessories:
 - 1. SEL22: A mechanical limit switch indicating when the disc is fully closed
 - 2. SEL30: An inductive proximity switch that transmits an electrical signal indicating when the disc is closed
- F. Testing:
 - 1. Each valve shall be shop tested as a complete assembly in accordance with AWWA C508.
 - 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)