



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-6000A/6000 or pre-approved equal.
- B. Design:
 - 1. Swing Check Valve shall be single body flanged design.
 - 2. General:
 - a. Design Maximum Working Pressure: 250 psi (1724 kPa) on valve sizes 2-16" (50-400mm) 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 a double clevis design
 - 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: Ductile Iron ASTM A536 or Steel ASTM A36
 - 3. Discs: Ductile Iron ASTM A536
 - 4. Body Seat Rings: 316 Stainless Steel A276 or Aluminum Bronze ASTM B148
 - 5. Disc Seats: Acrylonitrile-Butadiene (NBR), Terpolymer of Ethylene, Propylene and A Diene (EPDM), Fluoro Rubber (FKM), Ultra-High Molecular Weight Polyethylene (UHMW), 316 Stainless Steel ASTM A276 or Aluminum Bronze ASTM B148
 - 6. Pivot Shafts: 303 Stainless Steel ASTM A582 or 17-4 PH ASTM 564, Type 630
 - 7. Bearings: Bronze ASTM B505/B584
 - 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. OC = Oil Controlled, Side Mounted Cylinder. The OC is available on sizes 2-20" (50-500mm). It is a three-stage closure system, with each stage independently adjustable, incorporating an oil dashpot and timing valve arrangement for controlled operation.
 - 2. BMB = Oil Controlled, Bottom Mounted Buffer. The BMB is available on sizes 6-66" (150-1700mm). It engages during the final 10% of disc travel, with field-adjustable closure time with a micrometer type flow control valve and locking set screw.
- 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
 - 3. SEL32: 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)