

Material Specification – 4 for DOUBLE-DISC GATE VALVES

1. GENERAL

Double-disc gate valves shall be designed and manufactured in accordance with AWWA C500 with the following additional requirements or exceptions.

2. SERVICE

Valves shall be suitable for frequent operation and for long periods of inactivity. Valves shall be capable of operating satisfactorily with flows in either direction and shall provide zero leakage past the seat; the operating pressure for all sizes shall be 200 psi. Components shall be suitable for exposure to chloraminated water.

3. VALVE DESCRIPTION

Valves shall be iron body, double-disc gate valves, fully bronze mounted with non-rising stem and parallel seats.

4. INSTALLATION

Valves shall be installed with the stem positioned vertically in buried horizontal water lines without gearing, bypasses, rollers, or tracks.

5. VALVE STEMS

Valve stems shall be made of bronze in accordance with ASTM B 763, Copper Alloy No. C99500; stainless steel in accordance with ASTM A 276, Type 304, Type 316, or AISI 420; or copper alloy in accordance with ASTM B 98, Copper Alloy No. C66100/HO2.

Valves shall be supplied with 2-inch square wrench nuts. The stem seal shall consist of two O-rings. Valves shall open clockwise.

6. BOLTING MATERIAL

The bonnet, gland bolts, and nuts shall be in accordance with ASTM F 593, Type 304 stainless steel or electro-plated with zinc or cadmium. The hot-dip galvanizing process is not acceptable.

7. END CONNECTIONS

A. Flanges: Flanges shall be sized and drilled in accordance with ANSI B16.1, Class 125. Flanges shall be machined to a flat surface with a serrated finish in accordance with AWWA C207.

B. Mechanical Joint: Mechanical joint components shall be in accordance with AWWA C111 with tee-head bolts and hexagon nuts fabricated from a high-strength, low alloy steel known in the industry as Cor-Ten, Usalloy, or Durabolt.

Accessories for the mechanical joint shall consist of the gasket, gland, and fasteners and shall be furnished and packaged separately from valves. Each package shall be labeled in a manner that provides for proper identification, and the number of units listed per package or bundle.

8. TESTING

Each valve, after shop assembly, shall be operated and hydrostatically tested in accordance with AWWA C500.

9. COATING

Valves shall have a fusion-bonded epoxy coating in accordance with AWWA C509 or AWWA C515 with a minimum DFT of 10 mil. Machined flange faces shall be shop coated with a rust preventive compound; they shall not be painted or coated with the same coating as the body.

10. CERTIFICATION

The manufacturer shall furnish a sworn statement that the inspection and all specified tests have been completed and that results comply with the requirements of these Standards. A copy of the Certification, including compliance with NSF/ANSI 61, shall be provided to Denver Water.

11. ACCEPTABLE MANUFACTURERS

Clow
Mueller

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