



SECTION 15100 3-WAY AND 4-WAY PLUG VALVES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. 3-Way and 4-Way Plug Valves, 3-16" (80-400mm), for the purpose of providing throttling and diversion control as indicated.

1.02 REFERENCES

- A. ASTM A126 Class B "Gray Iron Castings for Valves, Flanges and Pipe Fittings"
- B. ASTM B26 Alloy 713.0 "Aluminum-Alloy Castings"
- C. ASTM A216 Grade WCB "Carbon Steel Castings"
- D. ASTM A351 CF8M "316 Stainless Steel Castings for Valves, Flanges and Pipe Fittings"
- E. ASME B16.1 and ANSI B16.5 "Pipe Flanges and Flanged Fittings"

1.03 SUBMITTALS

- A. Submit detailed product data and descriptive literature to include dimensions and materials of construction.
- B. Provide shop drawings to show installation arrangement of major component assemblies.

1.04 QUALITY ASSURANCE

- A. Supplier shall have been manufacturing 3-Way and 4-Way plug valves for a period of at least ten years. At the engineer's request, supplier shall provide a list of installations involving equipment of similar size and application.
- B. Valves and Actuators shall be warranted by the manufacturer for defects in materials and workmanship for a period of two years (24 months) from date of shipment.
- C. Each valve and actuator shall be assembled, adjusted and tested as a unit by the valve manufacturer.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. DeZURIK
 - 1. DeZURIK 3-Way and 4-Way Plug Valve (PTW/PFW)

2.02 3-WAY AND 4-WAY PLUG VALVES

- A. Plugs shall be of solid one-piece construction, available in either single or double tapered configurations, Cast Iron ASTM A126 Class B, Aluminum ASTM B26 Alloy 713.0, Carbon Steel ASTM A216 Grade WCB or 316 Stainless Steel ASTM A351 CF8M. Metal plug shall be furnished in the same material as the valve body, except cast iron which shall have a stainless steel plug. Resilient plug facing shall be Chloroprene (CR), Acrylonitrile Butadiene (NBR), Hard Natural Rubber (NRH), Chloro-Isobutene-Isoprene (CIIR), Fluoro Rubber (FKM) or Hard Natural Rubber (NRCR) with soft rubber chloroprene overlay.
- B. Bodies, bonnets, and covers shall be Cast Iron ASTM A126 Class B, Aluminum ASTM B26 Alloy 713.0, Carbon Steel ASTM A216 Grade WCB or 316 Stainless Steel ASTM A351 CF8M. End Connections shall be flanged and drilled per ASME B16.1 and ANSI B16.5.
- C. Adjustable packing shall be Acrylonitrile-Butadiene (NBR), Polytetrafluoroethylene (PTFE) or Square Braided Fiberglass multiple V-ring type, with a packing gland follower. Packing gland shall permit inspection, adjustment or complete replacement of packing without disturbing any part of the valve or actuator assembly, except the gland follower. Non-adjustable packing or packing requiring actuator removal to replace the packing, is not acceptable.
- D. Bearings shall be 316 stainless steel, except hard rubber lined valves which are furnished with hard rubber bearings. Bearings are furnished in the body and bonnet.
- E. Handwheel actuators shall have corrosion resistant bearings on the gear sector and be totally enclosed and shall have seals and gaskets to prevent entry of dirt, water, or corrosive materials.
 - 1. Resilient plug facings provide bubble-tight shutoff when used with lift, turn, reseal levers or handwheel actuators.
 - 2. Valves with all-metal or hard rubber plugs do not provide bubble-tight shutoff.
- F. Pressure rating shall be 125 psi (860 kPa). Every valve shall be given a certified hydrostatic shell test and seat test, with test reports available upon request.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. It is recommended that the valve be installed so pipeline pressure will push the plug into the seat(s) of the port(s) being sealed.