

# DKD Series Diaphragm Valves

## Sample Specification

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#### 1. GENERAL

##### 1.1 DEFINITIONS

- A. EPDM: Ethylene Propylene Diene Monomer Elastomer.
- B. FPM: Fluoropolymer.
- C. PVC: Polyvinyl chloride Plastic.
- D. PE: Polyethylene.
- E. GFPP: Glass Filled Polypropylene.
- F. SS: Stainless Steel.

#### 2. PRODUCTS

##### 2.1 DIRECT ACTING DIAPHRAGM VALVES

- A. Direct Acting Diaphragm Valves:
  - 1. The basis of design is the IPEX DKD Series diaphragm valve:
    - a. Body:
      - 1. Xirtec® 140 Schedule 80 PVC, cell class 12454 per ASTM D1784.
    - b. Body Color: Dark Grey.
    - c. Bonnet Color: Black.
    - d. Design:
      - 1. Fail position: normally open
      - 2. GFPP bonnet with 316 SS nuts and bolts and PE plugs.
      - 3. All wetted components shall comply with NSF Standard 61 for potable water.
      - 4. All valves shall be marked to indicate size, material designation, and manufacturers name or trade mark.
      - 5. Temperature Range: 32°F to 140°F
      - 6. Nominal pressure rating: 120 PSI @ 73°F
    - e. Size: As specified on the drawings.
    - f. End connection type:
      - 1. IPS Socket shall conform to dimensional standard ASTM D2466 and ASTM D2467.
      - 2. IPS Spigot shall conform to dimensional standard ASTM D1785.
      - 3. Female NPT Thread shall conform to dimensional standard ASTM D1785.
    - g. Diaphragm Material:
      - 1. EPDM.
    - h. O-rings
      - 1. EPDM.
    - i. Actuator:
      - 1. Media:
        - a. Air.
        - b. Water.
      - 2. Operation: On / Off flow control.
      - 3. Fail Position: Normally Open.
      - 4. Control media connection: 1/4" Threaded NPT.

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5. Maximum allowable control pressure: 145 PSI at 73°F
6. Control temperature range: -4°F to 120°F
- j. Accessories:
  1. The contractor shall supply and furnish IPEX's wall mounting plate as required to secure the DKD diaphragm valve to the wall.
  2. The contractor shall supply a 3/2 ways electromagnetic pilot solenoid valve for direct or manifold mounting.
    - a. 24V DC Voltage
    - b. Operating temperature range 15°F to 130°F
    - c. Working pressure: 145 PSI
    - d. 100% Duty Cycle
    - e. IP65 enclosure rating
    - f. FPM will be used as the seal material
    - g. UL/CSA listing
    - h. The pilot solenoid control valve shall be supplied by the valve manufacturer
2. Acceptable Manufacturers
  - a. IPEX
  - b. Or approved alternate
    1. Requests for alternate material must be approved by the consulting engineer prior to the bid closing date.

### 3. EXECUTION

#### 3.1 EXAMINATION

- A. Valve Interiors: Clean and free of foreign matter, and corrosion. Remove packing used to prevent valve movement.
  1. Operate valves from fully open to fully closed positions.
  2. Verify guides and seats are clean and free of foreign matter, and corrosion.
- B. Threads on Valves Fittings and Fixtures: Inspect valve and mating pipe for form and cleanliness.
- C. Do not proceed until unsatisfactory conditions have been corrected.

#### 3.2 VALVE INSTALLATION

- A. Install products in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
  1. Valves in horizontal piping to have stems at or above pipe center.
  2. Valves to be positioned allowing full movement.
  3. Valves with threaded connections to have unions at each piece of equipment.
    - a. Arrange to allow easy access, service, maintenance, and equipment removal without system shutdown. Provide separate support where necessary.

### About the IPEX Group of Companies

As leading suppliers of thermoplastic piping systems, the IPEX Group of Companies provides our customers with some of the world's largest and most comprehensive product lines. All IPEX products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance.

Markets served by IPEX group products are:

- Electrical systems
- Telecommunications and utility piping systems
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems
- PVC, CPVC, PP, PVDF, PE, ABS, and PEX pipe and fittings

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