

VM Series Pneumatic Diaphragm Valves

Sample Specification

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1.0 Diaphragm Valves - VM Pneumatic

1.1 Material

- The valve body, including end connectors and unions, shall be made of PVC compound which shall meet or exceed the requirements of cell classification 12454 according to ASTM D1784.
- or The valve body, including end connectors and unions shall be made of Corzan® CPVC compound which shall meet or exceed the requirements of 23447 according to ASTM D1784.
- or The valve body, including end connectors and unions, shall be made of stabilized PP homopolymer compound, also containing a RAL 7032 pigment, which shall meet or exceed the requirements of Type I Polypropylene according to ASTM D4101-86.
- or The valve body, including end connectors and unions, shall be made of virgin, non-regrind PVDF compound which shall meet or exceed the requirements of Table 1 according to ASTM D3222.
- The valve bonnet assembly shall be made of high temperature, high strength, glass-filled polypropylene.

1.2 Diaphragm

- The diaphragm shall be made of EPDM.
- or The diaphragm shall be made of FPM.
- or The diaphragm shall be made of PTFE (backed with EPDM).

2.0 Connections

2.1 Spigot style

- The IPS spigot PVC end connectors shall conform to the dimensional standard ASTM D1785.
- or The IPS spigot CPVC end connectors shall conform to the dimensional standard ASTM F441.
- or The Metric spigot PP end connectors shall conform to the dimensional standard ISO 3609.
- or The Metric spigot PVDF end connectors shall conform to the dimensional standard ISO 10931.

2.2 Socket style

- The IPS socket PVC end connectors shall conform to the dimensional standards ASTM D2466 and ASTM D2467.
- or The IPS socket CPVC end connectors shall conform to the dimensional standard ASTM F439.
- or The Metric socket PP end connectors shall conform to the dimensional standard ISO 3609.
- or The Metric socket PVDF end connectors shall conform to the dimensional standard ISO 10931.

2.3 Flanged style

- The ANSI 150 flanged PVC end connectors shall conform to the dimensional standard ANSI B16.5.
- or The ANSI 150 flanged CPVC end connectors shall conform to the dimensional standard ANSI B16.5.
- or The ANSI 150 flanged PP end connectors shall conform to the dimensional standard ANSI B16.5.
- or The ANSI 150 flanged PVDF end connectors shall conform to the dimensional standard ANSI B16.5.

3.0 Design Features

- All valves shall be weir-style for throttling applications.
- All bodies to be used with EPDM or Viton® diaphragms shall feature raised molded sealing rings (concentric).
- All bodies to be used with PTFE diaphragms shall be machined flat.
- All PTFE diaphragms shall feature a raised molded ring to combine sealing performance and longer life.
- All through bolts shall be made of 304 stainless steel.
- Bodies of all sizes and materials shall have mounting brass inserts.

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3.1 Actuators

- All actuators shall be made of glass-filled polypropylene.
- All actuators shall feature a smooth top (no nut holes) for cleanliness.
- The edge of the actuator membrane shall be inside of the actuator protective housing.
- All springs shall be cut from spring grade steel for maximum memory life and epoxy coated for maximum chemical resistance.
- Fail safe to open and double-acting actuators shall feature weak springs located in the center of the actuator.
- Fail safe to close actuators shall feature three concentric springs located in the middle of the actuator.
- The following accessories shall be available for all actuators: position indicator, stroke limiter, stroke limiter with position indicator, limit switch, limit switch box, 3-15 psi positioner, 4-20 mA positioner, solenoid pilot valve.

3.2 Pressure Rating

- Valve sizes 1/2" through 2" shall be rated at 150 psi at 73°F.
- Valve sizes 2-1/2" through 4" shall be rated at 90 psi at 73°F.

3.3 Markings

- All valves shall be marked to indicate size, material designation, and manufacturers name or trade mark.

3.4 Color Coding

- All PVC valves shall be color-coded dark gray.
- or All CPVC valves shall be color-coded light gray.
- or All PP valves shall be color-coded beige gray.
- or All PVDF valves shall not be color-coded and be white in appearance.
- All bonnet assemblies shall be color-coded red.

- 4.0** All valves shall be Xirtec® 140, Corzan®, PP or PVDF by IPEX or approved equal.

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- Electrical systems
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- 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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