

Georg Fisher Diastar 10 and Diastar 16 Pneumatically Actuated Diaphragm Valves – Engineering Specification - 06/08/2010

1.0 Summary

The product specified in this document is for GF Diastar 10 and GF Diastar 16 pneumatically actuated diaphragm valve from Georg Fischer.

2.0 Specification and Certifications

The valve is to meet ASTM standards for PVC and CPVC materials. The Diastar 10 and 16 flanged valve shall meet the ANSI B16.5 150 lb standard.

Polypropylene and PVDF versions shall be FDA CFR 21 177.1520 and USP 25 Class VI (physiological non-toxic) compliant (excluding NBR diaphragm).

Polypropylene diaphragm valves will be in accordance with EN ISO 15494 specification. PVDF diaphragm valves will be in accordance with ISO 10931 specification.

2.1 Assembly/Exposed Fasteners

Valve actuator shall be connected to the lower body with a central threaded bonnet; no metal bolts shall be used. Assembly of valve requires alignment of molded indicators and must not require special torque measuring devices. Valve shall not require re-torquing.

2.2 Pressure/Temperature

The Diastar 10 valves are rated for (PVC, CPVC, PP, ABS, and PVDF):

1/2" – 1 1/2" (20-50mm) fail closed: 150 PSI on both sides of valve

2" (63mm) fail closed: 150 PSI one side of valve 90 PSI on the other side

1/2" – 2" (20mm-63mm) fail open/double acting: 150 PSI on both sides of valve

The Diastar 16 valves are rated for (PVC and PVDF):

1/2" – 1 1/2" (20-50mm) fail closed: 240 PSI on both sides of valve

2" (63mm) fail closed: 240 PSI one side of valve 150 PSI on the other side

1/2" – 2" (20mm-63mm) fail open/double acting: 240 PSI on both sides of valve

2.2 Materials

The Diastar 10 and 16 valve body shall be constructed of PVC, CPVC, Polypropylene, PVDF, or ABS. The upper body shall be made of UV resistant glass filled polypropylene. O-rings in union version shall be FPM or EPDM. Diaphragm material shall be one of the following and can be identified by external visual indicator.

- EPDM - Black
- FPM - Red
- NBR - Blue
- PTFE backed with EPDM - White
- PTFE backed with FPM – Green

2.3 Mounting

Valves shall have stainless steel inserts for securing valves with fasteners.

2.4 Function Diastar 10 and 16 True Union

Valves shall have stainless steel inserts for securing valves with fasteners. The Dias valve shall be true union allowing for easy repair or replacement in the field. A position indicator must be present to determine diaphragm position.

2.5 Function Diastar 10 and 16 Spigot

Valves shall have stainless steel inserts for securing valves with fasteners. The valve shall have spigot ends eliminating weak point of mechanical connection. The actuator of valve shall be field replaceable preventing the need to cut out valve body. A position indicator must be present to determine diaphragm position. Diastar valves shall be compatible with the George Fischer Bead and Crevice Free (BCF Plus) or Infrared (IR Plus) fusion technology.

2.6 Function Diastar 10 and 16 Flanged

Valves shall have stainless steel inserts for securing valves with fasteners. The Diastar 10 and 16 valve shall have flanged connection. A position indicator must be present to determine diaphragm position.

2.7 Function Diastar 10 and 16 Zero Static

The Diastar zero static valve shall have spigot ends and integrate in the piping system with a third port perpendicular to the flow. The valve shall have a design as not to allow liquid to sit stagnate and must be completely drainable. A position indicator must be present to determine diaphragm position. Valves shall be compatible with the George Fischer Bead and Crevice Free (BCF Plus) or Infrared (IR Plus) fusion technology.

2.8 Actuator Specification

Pneumatic actuators shall be available as fail safe close, fail safe open and double acting and have an integrated optical position indication. Actuator housing shall be made of glass filled polypropylene and shall be flame retardant and UV resistant. Actuators shall contain a preloaded spring assembly to ensure safe actuator operation and maintenance. Actuators shall contain integrated Namur air supply interface for the easy mounting of accessories. Operating pressure shall be between 60 and 90 PSI.

3.0 Accessories

- Pilot valve 24 Volt AC/DC, 110 Volt AC, or 240 Volt AC
- Electro-pneumatic positioner
- Stroke limiter
- Manual Override
- Limit switch kits Ag-Ni, Au, NPN, PNP
- AS Interface Control Box

4.0 Approved Manufacturer

Approved manufacturer is Georg Fischer with no equal.