

Georg Fisher Type 231, 232, 233 Pneumatically Actuated Ball Valve - Engineering Specification

1.0 Summary

The product specified in this document is for Type 231-233 Ball Valve from Georg Fischer.

2.0 Specification and Certifications

The valve is to meet ASTM standards for PVC and CPVC materials. Flanged versions of the 231-233 valve shall meet the ANSI B16.5 150 lb standard. PVC versions of the Type 231-233 shall be NSF-61 approved for drinking water applications. Polypropylene and PVDF versions shall be FDA CFR 21 177.1520 and USP 25 Class VI (physiological non-toxic) compliant. Polypropylene 231-233 valves will be in accordance with EN ISO 15494 specification. PVDF 231-233 valves will be in accordance with ISO 10931 specification.

2.1 Pressure/Temperature

The 231-233 ball valves are rated for:

- 232 PSI for sizes 3/8" to 4" in PVC socket at 72°F
- 232 PSI for sizes 3/8" to 4" in CPVC socket at 72°F
- 232 PSI for sizes 3/8" to 4" in PVDF fusion at 72°F
- 150 PSI for sizes 3/8" to 4" in Polypropylene at 72°F
- 150 PSI for sizes 3/8" to 4" in all materials flanged or threaded at 72°F

2.2 Materials

The 231-233 valve body shall be constructed of PVC, CPVC, Polypropylene, or PVDF. Seats are made of PTFE. Seals shall be made of FPM or EPDM.

2.3 Mounting

All ball valves shall have stainless steel inserts for securing valves with fasteners.

2.4 Function

All valve stems shall have a double o-ring. The valve shall have incorporated into its design a safety stem with a pre-determined breaking point above the O-rings, preventing any media leaking in the event of damage. Adjustable seat carrier shall be reverse thread opposite that of the union nut. All PTFE seats shall have backing o-rings. The valve nut threads shall be buttress type. The handle shall include in its design an integrated tool for removal of the union bush.

2.5 Actuator Specification

Pneumatic actuators shall be Types PA11 (for valve sizes 1/2 - 3/4") and PA21 (for valve sizes 1 - 2") and manufactured by Georg Fischer. 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. Actuators shall contain a preloaded spring assembly to ensure safe actuator operation and maintenance. Actuators shall contain integrated Namur interface for the easy mounting of positioner, limit switches and accessories. The valve shall be equipped with a Multi-functional-module for with the option for electric feedback, mounted directly between the valve body and the actuator as manufactured by Georg Fischer.

For valve size 2 ½" pneumatic actuators shall be Type PA 30 (fail safe to close or open function), Type P35 (double acting function). For valve size 3" pneumatic actuators shall be Type PA 35 (fail safe to close or open function), Type P40 (double acting function). For valve size 4" pneumatic actuators shall be Type PA 45 (fail safe to close or open function), Type 45 (double acting function). All actuators shall be manufactured by Georg Fischer. Pneumatic actuators shall have an integrated optical position indication. Actuator housing shall be made of hard anodized aluminum. Actuators shall contain integrated Namur interface for the easy mounting of positioners, limit switches, and accessories.

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.