

Grooved End Fire Protection Butterfly Valve Fig. AN7722-3 A



For Listings/Approval Details and Limitations, visit our website at www.asc-es.com or contact an ASC Engineered Solutions Sales Representative.

The Gruvlok Fig. AN7722-3A Grooved End Butterfly Valve is UL Listed and FM Approved as a system control valve. The valve is rated at 300 psi for steel pipe in the 2" to 10" sizes. The 2" through 10" sizes are agency rated for both indoor and outdoor service.

The valve is supplied with two internal switches. One is wired for supervisory service and the other is wired for use as an auxiliary switch. Both switches are rated for 11 amp at 125, 250 VAC and 0.5 amp at 125 VDC, 0.25 amp at 250 VDC. The switches and actuator internal spaces are protected from tampering.

The ductile iron valve body is encapsulated with a durable nylon coating to ensure long term service. The valve features double-seal disc design with resilient EPDM coating, and stems are 416 stainless steel. Detailed instructions for valve installation and switch wiring are included with each valve.



| PROJECT INFORMATION | APPROVAL STAMP |
|---------------------|-------------------|
| Project: | Approved |
| Address: | Approved as noted |
| Contractor: | Not approved |
| Engineer: | Remarks: |
| Submittal Date: | |
| Notes 1: | |
| Notes 2: | |

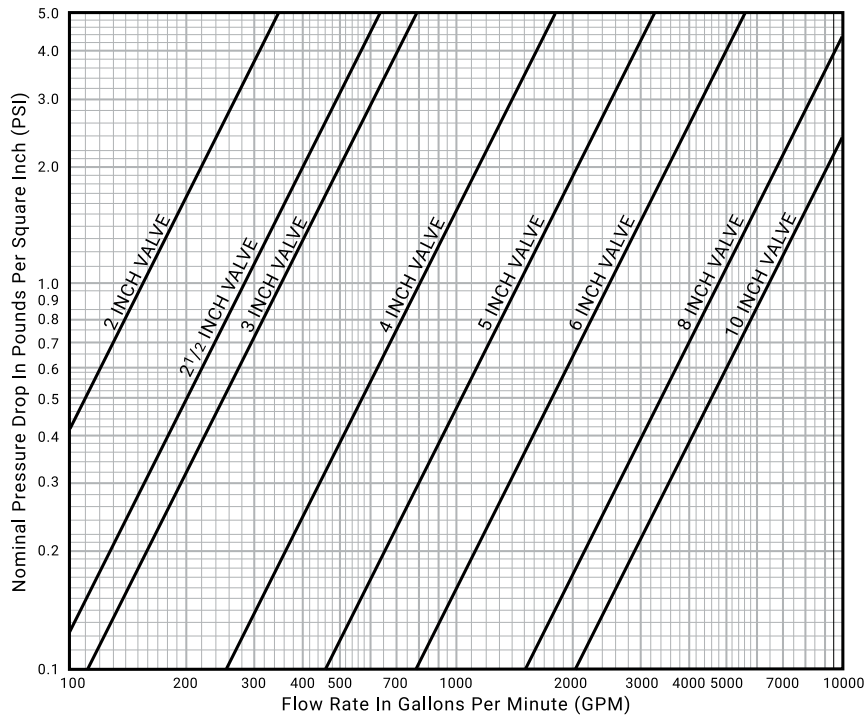
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Headloss Equivalent Length of Pipe

| Valve Size | Pipe O.D. | Equivalent Feet of Pipe* C=120 | | |
|------------|-----------|--------------------------------|---------|---------|
| | | Sch. 10 | Sch. 30 | Sch. 40 |
| In./mm | In./mm | Ft./m | Ft./m | Ft./m |
| 2 | 2.375 | 5.8 | - | 4.7 |
| | 50 | 60.3 | 1.8 | 1.4 |
| 2½ | 2.875 | 5.1 | - | 3.7 |
| | 65 | 73.0 | 1.6 | 1.1 |
| 3 | 3.500 | 9.6 | - | 7.2 |
| | 80 | 88.9 | 2.9 | 2.2 |
| 4 | 4.500 | 7.5 | - | 5.7 |
| | 100 | 114.3 | 2.3 | 1.7 |
| 5 | 5.563 | 7.0 | - | 5.6 |
| | 125 | 141.3 | 2.1 | 1.7 |
| 6 | 6.625 | 6.1 | - | 4.8 |
| | 150 | 168.3 | 1.9 | 1.5 |
| 8 | 8.625 | 6.3 | 5.7 | 5.3 |
| | 200 | 219.1 | 1.9 | 1.7 |
| 10 | 10.75 | 11.3 | 10.2 | 9.6 |
| | 250 | 273.1 | 3.4 | 3.1 |

* The equivalent feet of pipe is based on the Hazen and Williams formula and the flow rates typically used with each size valve.

Pressure Drop (PSI) vs. (GPM)



CV Values

| Valve Size | Pipe O.D. | Disc Position | | | | | | | |
|------------|-----------|----------------|------|------|-------|-------|-------|-------|-------|
| | | 25° | 30° | 40° | 50° | 60° | 70° | 80° | 90° |
| In./mm | In./mm | (Degrees Open) | | | | | | | |
| 2 | 2.375 | 4 | 7 | 19 | 44 | 48 | 80 | 111 | 158 |
| | 50 | 60.3 | 0.3 | 0.5 | 1.3 | 3 | 3.3 | 5.5 | 7.7 |
| 2½ | 2.875 | 9 | 14 | 34 | 78 | 84 | 142 | 196 | 280 |
| | 65 | 73 | 0.6 | 1 | 2.3 | 5.4 | 5.8 | 9.8 | 13.5 |
| 3 | 3.5 | 14 | 20 | 50 | 112 | 128 | 215 | 285 | 400 |
| | 80 | 88.9 | 1 | 1.4 | 3.4 | 7.7 | 8.8 | 14.8 | 19.7 |
| 4 | 4.5 | 29 | 41 | 100 | 239 | 250 | 420 | 582 | 826 |
| | 100 | 114.3 | 2 | 2.8 | 6.9 | 16.5 | 17.2 | 29 | 40.1 |
| 5 | 5.563 | 62 | 76 | 182 | 415 | 445 | 780 | 1,100 | 1,480 |
| | 125 | 141.3 | 4.3 | 5.2 | 12.5 | 28.6 | 30.7 | 53.8 | 75.8 |
| 6 | 6.625 | 96 | 141 | 325 | 755 | 809 | 1,370 | 1,920 | 2,678 |
| | 150 | 168.3 | 6.6 | 9.7 | 22.4 | 52.1 | 55.8 | 94.5 | 132.4 |
| 8 | 8.625 | 172 | 252 | 592 | 1,365 | 1,460 | 2,430 | 3,410 | 4,819 |
| | 200 | 219.1 | 11.9 | 17.4 | 40.8 | 94.1 | 100.7 | 167.5 | 235.1 |
| 10 | 10.75 | 230 | 328 | 792 | 1,825 | 1,962 | 3,260 | 4,590 | 6,431 |
| | 250 | 273.1 | 15.9 | 22.6 | 54.6 | 125.8 | 135.3 | 224.8 | 316.5 |



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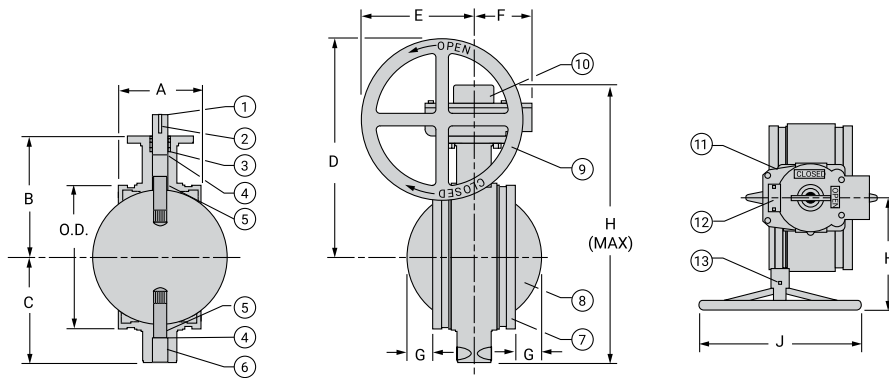


Fig. AN7722-3A UL/ULC/FM Butterfly Valve

| Valve Size | Pipe O.D. | Valve Dimensions | | | | | | | | | Approx. Wt. Ea. |
|------------|-----------|------------------|------|------|-------|------|------|------|------|-----|-----------------|
| In./DN(mm) | In./mm | A | B | C | D | E | F | G | H | J | Lbs./Kg |
| 2 | 2.375 | 3.19 | 2.97 | 3.87 | 6.17 | 4.18 | 2.25 | - | 4 | 3 | 19 |
| 50 | 60.3 | 81 | 75 | 98 | 157 | 106 | 57 | - | 102 | 76 | 9 |
| 2½ | 2.875 | 3.81 | 3.18 | 4.38 | 6.68 | 4.18 | 2.25 | - | 4 | 3 | 20 |
| 65 | 73.0 | 97 | 81 | 111 | 170 | 106 | 57 | - | 102 | 76 | 9 |
| 3 | 3.5 | 3.81 | 3.8 | 4.62 | 6.92 | 4.18 | 2.25 | - | 4 | 3 | 22 |
| 80 | 88.9 | 97 | 97 | 117 | 176 | 106 | 57 | - | 102 | 76 | 10 |
| 4 | 4.500 | 4.62 | 4.27 | 5.38 | 9.98 | 5.10 | 3.5 | - | 5 | 6 | 26 |
| 100 | 114.3 | 117 | 108 | 137 | 253 | 130 | 89 | - | 127 | 152 | 11.8 |
| 5 | 5.563 | 5.81 | 4.98 | 5.88 | 10.48 | 5.10 | 3.5 | - | 5 | 6 | 29 |
| 125 | 141.3 | 148 | 126 | 149 | 266 | 130 | 89 | - | 127 | 152 | 13.2 |
| 6 | 6.625 | 5.81 | 5.47 | 6.37 | 10.97 | 5.10 | 3.5 | 0.13 | 5 | 6 | 30 |
| 150 | 168.3 | 148 | 139 | 162 | 279 | 130 | 89 | 3 | 127 | 152 | 13.6 |
| 8 | 8.625 | 5.25 | 6.92 | 7.75 | 15.40 | 9.54 | 4 | 1.36 | 7.89 | 12 | 52 |
| 200 | 219.1 | 133 | 176 | 197 | 391 | 242 | 102 | 35 | 200 | 305 | 23.6 |
| 10 | 10.750 | 6.25 | 7.99 | 9.00 | 16.65 | 9.54 | 4 | 1.84 | 7.89 | 12 | 75 |
| 250 | 273.1 | 159 | 203 | 229 | 423 | 242 | 102 | 47 | 200 | 305 | 34.1 |

Material Specifications

- 1. Upper Stem**
Stainless Steel, ASTM A-582, Type 416
- 2. Stem Shear Pin**
for 2" thru 6" valves.
Stem Shear Key
for 8" and 10" valves.
- 3. Upper Bushing**
Sintered Bronze (8" and 10" valves only)
- 4. "O" Ring**
Nitrile
- 5. Lower Bushing**
Sintered Bronze (8" and 10" valves only)
- 6. Lower Stem**
Stainless Steel, ASTM A-582, Type 416
- 7. Body**
Ductile Iron ASTM A-536 with Nylon Coating
- 8. Disc**
Ductile Iron ASTM A-536 with EPDM Encapsulation
- 9. Handwheel**
Ductile Iron
- 10. Indicator Flag**
Steel
- 11. Gear Operator**
Ductile Iron and Steel
- 12. Nameplate**
Stainless Steel
- 13. Handwheel Shear Pin**
Carbon Steel AISI 1070



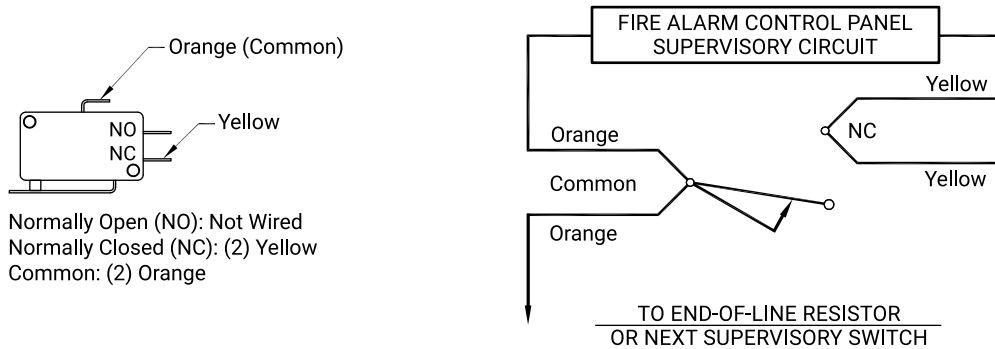
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Actuator Wiring

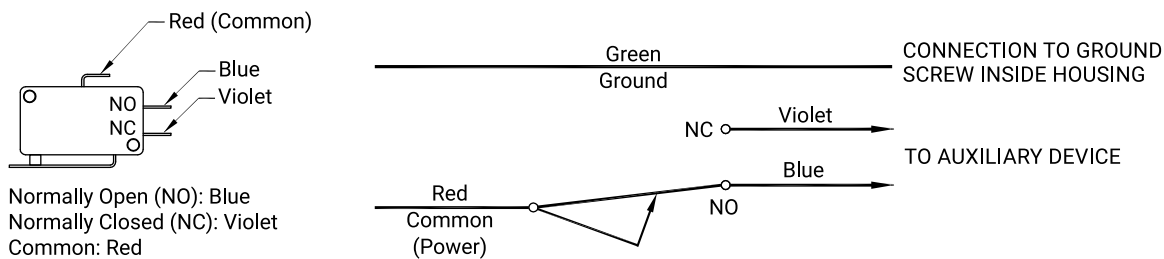
Supervisory Switch



Notes:

1. Single Pole Double Throw Switch wired "Normally Closed"; supplied with Dual Wire leads.
2. Switch Schematic shown with Valve in the Full Open Position and Switch depressed.

Auxiliary Switch



Notes:

1. Single Pole Double Throw Switch wired "Normally Closed"; supplied with Single Wire leads.
2. Switch Schematic shown with Valve in the Full Open Position and Switch depressed.

Notes:

- Single Pole Double Throw Switch; Pre-Wired
- Wire Leads: 18 AWG, 10" (254 mm) Long
- Rated to 11A @ 125, 250 VAC and 0.5A @ 125 VDC, 0.25A @ 250 VDC
- Operating Temperature: -40°C (-40°F) to 180°F (82°C)



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