

F6 Series 2-Way, ANSI Class 300 Butterfly Valve Reinforced Teflon Seat, 316 Stainless Disc



- Bubble tight shut-off to ANSI Class 300 Standards
- Long stem design allows for 2" insulation minimum
- Valve Face-to-face dimensions comply with API 609 & MSS-SP-68
- Designed to be installed between ASME/ANSI B16.5 Flanges
- Completely assembled and tested, ready for installation

Application

These valves are designed to meet the needs of HVAC and Commercial applications requiring positive shut-off for liquids at higher pressures and temperatures. Typical applications include chiller isolation, cooling tower isolation, change-over systems, large air handler coil control, bypass and process control applications. The large C_v values provide for an economical control valve solution for larger flow applications.

Dead End Service

Utilizes larger retainer ring set screws to allow the valve to be placed at the end of the line without a down stream flange in either flow direction while still holding full pressure.

| Technical Data | |
|-------------------------|---|
| Service | chilled, hot water, 60% glycol, steam to 50 psi |
| Flow characteristic | modified equal percentage, unidirectional |
| Controllable flow range | 82° |
| Sizes | 2" to 24" |
| Type of end fitting | ANSI 300 flanges |
| Materials | |
| Body | carbon steel full lug |
| Disc | 316 stainless steel |
| Seat | RPTFE |
| Shaft | 17-4 PH stainless |
| Gland seal | PTFE |
| Bushings | glass backed PTFE |
| Media temperature range | -20°F to 400°F [-30°C to 204°C] |
| Body pressure rating | ANSI Class 300 |
| Close-off pressure | 740 psi |
| Rangeability | 100:1 (for 30 deg to 70 deg range) |
| Maximum velocity | 32 FPS |
| Leakage | bubble tight |

| | | 2-way Valves | | Suitable Actuators | | | |
|--------------------|--------------------|--------------------|----------------|--------------------|-----------|---------------|------------|
| | | Valve Nominal Size | | Non Fail-Safe | | Fail-Safe | |
| | | | | | | Spring Return | Electronic |
| C _v 90° | C _v 60° | Inches | ANSI 300 2-way | | 300 | 300 | 300 |
| 102 | 56 | 2 | F650-300SHP | GM Series | PR Series | AF Series | GK Series |
| 146 | 80 | 2½ | F665-300SHP | | | | |
| 228 | 125 | 3 | F680-300SHP | | | | |
| 451 | 248 | 4 | F6100-300SHP | | | | |
| 714 | 392 | 5 | F6125-300SHP | | | | |
| 1103 | 607 | 6 | F6150-300SHP | | | | |
| 2064 | 1135 | 8 | F6200-300SHP | | | | |
| 3517 | 1934 | 10 | F6250-300SHP | | | | |
| 4837 | 2660 | 12 | F6300-300SHP | | | | |
| 6857 | 3592 | 14* | F6350-300SHP | | | | |
| | | | | | | | |
| | | | | | | | |

| Valve | Size | C _v | MOD | | | | | | | | |
|--------------|------|----------------|------|------|------|------|------|------|------|------|------|
| | | | 10° | 20° | 30° | 40° | 50° | 60° | 70° | 80° | 90° |
| F650-300SHP | 2" | 102 | 1.50 | 6.10 | 14 | 26 | 39 | 56 | 77 | 99 | 102 |
| F665-300SHP | 2½" | 146 | 2.20 | 8.80 | 20 | 37 | 55 | 80 | 110 | 142 | 146 |
| F680-300SHP | 3" | 228 | 3.40 | 14 | 32 | 57 | 87 | 125 | 171 | 221 | 228 |
| F6100-300SHP | 4" | 451 | 6.80 | 27 | 63 | 114 | 171 | 248 | 338 | 437 | 451 |
| F6125-300SHP | 5" | 714 | 11 | 43 | 100 | 180 | 271 | 393 | 536 | 693 | 714 |
| F6150-300SHP | 6" | 1103 | 17 | 66 | 154 | 278 | 419 | 607 | 827 | 1070 | 1103 |
| F6200-300SHP | 8" | 2064 | 31 | 124 | 289 | 520 | 784 | 1135 | 1548 | 2002 | 2064 |
| F6250-300SHP | 10" | 3517 | 53 | 211 | 492 | 886 | 1336 | 1934 | 2638 | 3411 | 3517 |
| F6300-300SHP | 12" | 4837 | 73 | 290 | 677 | 1219 | 1838 | 2660 | 3628 | 4692 | 4837 |
| F6350-300SHP | 14" | 6857 | 90 | 392 | 914 | 1646 | 2481 | 3592 | 4898 | 6530 | 6857 |
| F6400-300SHP | 16" | 9287 | 132 | 531 | 1230 | 2229 | 3361 | 4865 | 6634 | 8845 | 9287 |

| Maximum Dimensions (Inches) | | | | | | | | | | | |
|-----------------------------|------|--------------------|------|-------|-------|--------|-------|--------------|-------------|----------|-----------------|
| Valve | Size | C _v 90° | A | B | C | D(Max) | BHC | No. of Holes | Lug Bolt | Actuator | Close-Off (PSI) |
| F650-300SHP | 2" | 102 | 1.75 | 9.00 | 9.00 | 19.50 | 5.00 | 8 | 5/8-11 UNC | 2*AF | 150 |
| F665-300SHP | 2½" | 146 | 1.88 | 9.00 | 9.00 | 20.00 | 5.88 | 8 | 3/4-10 UNC | | 150 |
| F680-300SHP | 3" | 228 | 1.92 | 9.00 | 9.00 | 20.50 | 6.63 | 8 | 3/4-10 UNC | | 150 |
| F6100-300SHP | 4" | 451 | 2.13 | 9.00 | 9.00 | 21.00 | 7.88 | 8 | 3/4-10 UNC | | 150 |
| F650-300SHP | 2" | 102 | 1.75 | 9.00 | 9.00 | 19.50 | 5.00 | 8 | 5/8-11 UNC | GK | 150 |
| F665-300SHP | 2½" | 146 | 1.88 | 9.00 | 9.00 | 20.00 | 5.88 | 8 | 3/4-10 UNC | | 150 |
| F680-300SHP | 3" | 228 | 1.92 | 9.00 | 9.00 | 20.50 | 6.63 | 8 | 3/4-10 UNC | | 150 |
| F6100-300SHP | 4" | 451 | 2.13 | 9.00 | 9.00 | 21.00 | 7.88 | 8 | 3/4-10 UNC | | 150 |
| F650-300SHP | 2" | 102 | 1.75 | 9.00 | 9.00 | 19.50 | 5.00 | 8 | 5/8-11 UNC | 2*GK | 400 |
| F665-300SHP | 2½" | 146 | 1.88 | 9.00 | 9.00 | 20.00 | 5.88 | 8 | 3/4-10 UNC | | 400 |
| F680-300SHP | 3" | 228 | 1.92 | 9.00 | 9.00 | 20.50 | 6.63 | 8 | 3/4-10 UNC | | 400 |
| F650-300SHP | 2" | 102 | 1.75 | 9.00 | 9.00 | 19.50 | 5.00 | 8 | 5/8-11 UNC | GM | 285 |
| F665-300SHP | 2½" | 146 | 1.88 | 9.00 | 9.00 | 20.00 | 5.88 | 8 | 3/4-10 UNC | | 285 |
| F680-300SHP | 3" | 228 | 1.92 | 9.00 | 9.00 | 20.50 | 6.63 | 8 | 3/4-10 UNC | | 285 |
| F6100-300SHP | 4" | 451 | 2.13 | 9.00 | 9.00 | 21.00 | 7.88 | 8 | 3/4-10 UNC | | 150 |
| F650-300SHP | 2" | 102 | 1.75 | 8.00 | 8.00 | 22.25 | 4.75 | 8 | 5/8-11 UNC | PR/PKR | 600 |
| F665-300SHP | 2½" | 146 | 1.88 | 8.00 | 8.00 | 22.75 | 5.50 | 8 | 3/4-10 UNC | | 600 |
| F680-300SHP | 3" | 228 | 1.92 | 8.00 | 8.00 | 23.00 | 6.00 | 8 | 3/4-10 UNC | | 600 |
| F6100-300SHP | 4" | 451 | 2.13 | 8.00 | 8.00 | 23.75 | 7.50 | 8 | 3/4-10 UNC | | 600 |
| F6125-300SHP | 5" | 714 | 2.25 | 8.00 | 8.00 | 24.25 | 9.25 | 8 | 3/4-10 UNC | PR/PK | 400 |
| F6150-300SHP | 6" | 1103 | 2.29 | 8.00 | 8.00 | 24.75 | 10.63 | 12 | 3/4-10 UNC | PR/PK | 285 |
| F6200-300SHP | 8" | 2064 | 2.88 | 12.00 | 12.00 | 32.00 | 13.00 | 12 | 7/8-9 UNC | SY4... | 600 |
| F6250-300SHP | 10" | 3517 | 3.25 | 12.00 | 12.00 | 33.00 | 15.25 | 16 | 1-8 UNC | SY5... | 400 |
| | | | | | | | | | | SY7... | 600 |
| | | | | | | | | | | SY5... | 285 |
| F6300-300SHP | 12" | 4837 | 3.62 | 12.00 | 12.00 | 35.00 | 17.75 | 16 | 1 1/8-8 UNC | SY7... | 600 |
| | | | | | | | | | | SY7... | 400 |
| F6350-300SHP | 14" | 6857 | 4.62 | 14.00 | 14.00 | 36.00 | 20.25 | 20 | 1 1/8-8 UNC | SY8... | 600 |

Spring Return
Electronic Fail-Safe
Non-Spring Return
Electronic Fail-Safe (K)

Dimension "A" does not include flange gaskets. (2 required per valve)

Application Notes

- Valves are rated at 725 psi differential pressure in the closed position @ 100°F media temperature.
- Valves are furnished with lugs tapped for use between ANSI Class 250/300 flanges conforming to ANSI B16.5 Standards.
- 2-way assemblies are furnished assembled, calibrated and tested, ready for installation.
- Dimension "D" allows for actuator(s) removal without the need to remove the valve from the pipe.
- Weather shields are available, dimensional data furnished upon request.
- Dual actuated valves have actuators mounted on a single common shaft.
- Flange gaskets (2 required, not provided with valve) MUST be used between valve and ANSI flange.
- Flange bolts are not included with the valve. These are furnished by others.

Dimensions

