

Job Name \_\_\_\_\_  
 Job Location \_\_\_\_\_  
 Engineer \_\_\_\_\_  
 Approval \_\_\_\_\_

Contractor \_\_\_\_\_  
 Approval \_\_\_\_\_  
 Contractor's P.O. No. \_\_\_\_\_  
 Representative \_\_\_\_\_

## Series BFG

### Gear Operated Butterfly Valves

Sizes: 2½" – 10" (65 – 250mm)

Series BFG butterfly valves features a weatherproof actuator housing approved for indoor or outdoor use. It has a ductile iron body and disc with EPDM disc coating. The body is coated with a heat fused poly-phenylene sulfide blend to meet FM requirements and the new coating requirements for the 5th edition of UL-1091. For fire protection services, Series 702 valve is UL Listed and FM Approved for 175 psi (12.1 bar) service. Flow performance exceeds UL Specification 1091 and FM Approval Standard 1112.

#### Weatherproof Actuator

Supervisory switches for valves are available 2½ – 10" 1(65 – 50mm) pre-wired (PW).

#### Tapped Outlets

Series BFG valves are available with four ¾" NPT tapped outlets, two upstream and two downstream of the disc. Locations of these ports are detailed by the diagram on page 2.

## Materials

Body: Ductile iron conforming to ASTM A-395, grade 65-45-15, and ASTM A-536, grade 65-45-12, coated with polyphenylene sulfide blend.

Disc: Ductile iron conforming to ASTM A-395 or ASTM A-536, EPDM coating.

Disc Coating: Grade "E" EPDM (Green color code). Temperature range –30°F to +230°F (–34°C to +110°C). Recommended for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL classified in accordance with ANSI/NSF 61 for cold +86°F (+30°C) and hot +180°F (+82°C) potable water service. Not recommended for petroleum services.

Stem Bearings: Teflon® impregnated fiberglass with stainless steel backing.

Stem Bearing Nuts: Carbon steel, nickel plated.

Tap Plugs: Carbon steel, plated.

Bracket: Carbon steel, painted.

Actuator: 2¼ – 6" (65 – 150 mm): Bronze traveling nut on a steel lead screw, in a cast iron housing.

8 and 10" (200 mm – 250 mm): Steel worm and cast iron quadrant gear, in a cast iron housing.

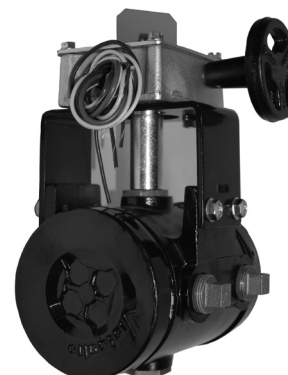
#### Supervisory Switch

2½ – 10" (65 – 250 mm) sizes: Series 702 PW – Two, single pole, double throw, pre-wired switches. Switches are rated 10A @ 125 or 250 VAC 60 Hz and 0.25A @ 250 VDC, 0.50A @ 125 VDC

For additional information send for literature RPIS-A-BFG.



**BFG**  
**8 and 10" (200mm – 250mm)**



**BFG**  
**2½" – 6" (65 – 150mm)**

### NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

## Performance

The chart expresses the frictional resistance of Ames Series BFG in equivalent feet/meters of straight pipe.

## Cv Values

Cv values for flow of water at 60°F (16°C) with a fully open valve are shown in the table to below:

Valve Size		
Nominal Outside Diameter inches/ mm	Actual Diameter inches/ mm	Equiv. Feet/ meters of Pipe
2½ 65	2.875 73.0	5 1.6
3 80	3.5 88.9	5 1.6
4 100	4.5 114.3	12 3.7
6 150	6.625 168.3	8 2.5
8 200	8.625 219.1	11 3.4
10 250	10.75 273	8 2.5

Formulas for Cv Values:

$$\Delta P = \frac{Q^2}{C_v^2}$$

$$Q = C_v \times \sqrt{\Delta P}$$

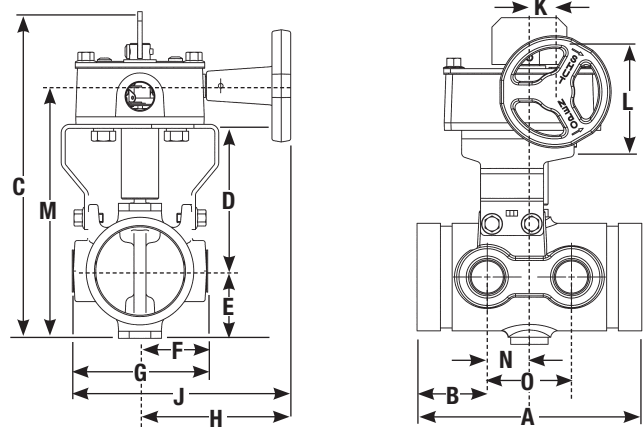
Where

Q = Flow (gpm)

ΔP = Pressure Drop (psi)

Cv = Flow Coefficient

Valve Size			Valve Size		
Nominal Outside Diameter inches/ mm	Actual Outside Diameter inches/ mm	Cv (Full Open)	Nominal Outside Diameter inches/ mm	Actual Outside Diameter inches/ mm	Cv (Full Open)
2 65	2.875 73.0	325	6 150	6.625 168.3	1850
3 80	3.5 88.9	482	8 200	8.625 219.1	3400
4 100	4.5 114.3	600	10 250	10.75 273.0	5750



## Dimensions — Weights

VALVE SIZE		DIMENSIONS — INCHES/MILLIMETERS														WEIGHT
NOMINAL OUTSIDE DIAMETER INCHES/MM	ACTUAL OUTSIDE DIAMETER INCHES/MM	E TO E A	B	HEIGHT C	D	E	F	G*	H	J	K	L	M	N	O	APPROX. WEIGHT EACH LBS./KGS.
2½ 65	2⅞ 73	6 152	3 76	8¾ 222	3⅛ 100	1⅜ 46	1¾ 45	5⅞ 135	4 102	6⅛ 170	1⅞ 17	3 76	6¾ 172	1⅞ 29	2¼ 57	7.9 3.6
3 80	3½ 88.9	6¼ 159	3⅞ 79	9½ 240	4¼ 109	2⅞ 54	2⅞ 53	5⅞ 135	4 102	6⅛ 170	1⅞ 17	3 76	7⅞ 189	1⅞ 33	2⅞ 65	8.7 3.9
4 100	4½ 114.3	6⅞ 168	3⅞ 84	10⅞ 263	4⅞ 118	2⅞ 69	2⅞ 66	5⅞ 149	4 102	7 177	1⅞ 17	3 76	8⅞ 213	1⅞ 35	2⅞ 70	14.3 6.5
6 150	6⅞ 168.3	7 178	3½ 89	13⅞ 338	5⅞ 144	3⅞ 92	3⅞ 91	7⅞ 194	5⅞ 143	9⅞ 240	1 25	4½ 114	10⅞ 263	1⅞ 42	3⅞ 85	25.0 11.3
8 200	8⅞ 219.1	8 203	4 102	17 431	7⅞ 202	5 127	5⅞ 137	10⅞ 274	6⅞ 157	11⅞ 294	1 25	6⅞ 160	14 356	1⅞ 47	3⅞ 94	45.5 20.6
10 250	10⅞ 273.0	10 254	5 127	19⅞ 487	8⅞ 221	5⅞ 148	6⅞ 157	12⅞ 325	8⅞ 212	14⅞ 369	2⅞ 52	9 229	15⅞ 404	2⅞ 72	5⅞ 144	86.0 39.0



\* Indicates maximum envelope width. ‡ Contact Ames Company for ULC Listings.

- To prevent rotation of valves, it is recommended that Series BFG be installed with Style 07 Zero-Flex®, Style 005 FireLock™ or Style HP-70 Rigid Couplings. If flexible couplings are used, additional support may be required.
- Ames grooved end butterfly valves are permitted for use with grooved end pipe (IPS) only. Not permitted for use with plain end (IPS) or grooved end cast ductile iron pipe.
- Series BFG valves are designed for ambient weather conditions as opposed to submersible service. Teflon® is a registered trademark of E. I. DuPont de Nemours and Company.

**A WATTS Brand**

**USA: Backflow** Tel: (978) 689-6066 • Fax: (978) 975-8350 • AmesFireWater.com  
**USA: Control Valves** Tel: (713) 943-0688 • Fax: (713) 944-9445 • AmesFireWater.com  
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