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2nd FLOOR | 145-157 ST.JOHNS STREET | LONDON | EC1V 4PY | UNITED KINGDOM

Butterfly Valve

Grooved end & Wafer Type 175Psi and 300Psi

2-1/2" - 8" (DN65 - DN200)

TECHNICAL DATA

MODEL	FG-BFV-G, FG-BFV-W-175Psi FG-BO-G, FG-BO-W-300Psi 2½" (DN65), 3"(DN80) 4" (DN100), 6" (DN150) 8" (DN200)
SIZE	ANSI inches/DN
APPROVALS	The 2½" through 8" Wafer type & Grooved End butterfly valves are UL Listed
MAX. WORKING PRESSURE	* 2½" - 8" (DN65-DN200) 300psi (20.7 bar)
MATERIAL OF CONSTRUCTION	
BODY & COATING	Ductile iron conforming to ASTM A-395. Polyamide
DISC	Same as body
DISC SEAT	Grade EPDM "E" encapsulated rubber conforming to ASTM D-2000
UPPER & LOWER STEM	Type 416 stainless steel conforming to ASTM 582
LOWER PLUG	PVC Operator Gear operator with iron housing
ALL LABORATORY LISTINGS AND APPROVALS ARE FOR INDOOR AND OUTDOOR USE.	

DESCRIPTION

The Grooved End & Wafer type Butterfly valves are indicating type designed for use in fire protection systems where a visual indication isrequired as to whether the valve is open or closed. They are used, for example, as system, sectional, and pump water control valves. They have cut groove inlet and outlet connectionsthat are suitable for use with grooved end pipe couplings that are listed and approved for fire protection systems.

For applications requiring supervision of the open position of the valve, the Gear Operators for the Model BV-G Butterfly Valves are provided with two sets of factory installed internal switches each having SPDT contacts. The supercisory switches transfer their electrical contacts when there is movement from the valve s normal open position during the first two revolutions of the handwheel.

Friction loss

The approximate friction loss, based on the Hazen Williams formula and ex-pressed in equivalent length of pipe with c=120, is as follows. The data is based on friction loss information collected at a typical flow rate of 15 feet per sec.

* 6.9 of 2½" Sch. 40 pipe for the 2½" valve
* 8.7 of 3" Sch. 40 pipe for the 3" valve.
* 4.5 of 4" Sch. 40 pipe for the 4" valve.
* 11.1 of 6 " Sch. 40 pipe for the 6" valve.
* 10.2 of 8" Sch. 30 pipe for the 8" valve.

WARNINGS

The Model BV-G Grooved End Butterfly valves described herein must be installed and maintained in compliance with this documents, as well as with the applicable standards of the National Fire Protection Association, in addition to the standards of any oher authorities having jurisdition. Failure to do so may impair the performance of these devices.

The owner is responsible for maintaining their fire protection system and devices in proper operation condition. The installing contractor or sprinkler manufacturer should be contacted with and questions.

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INSTALLATION

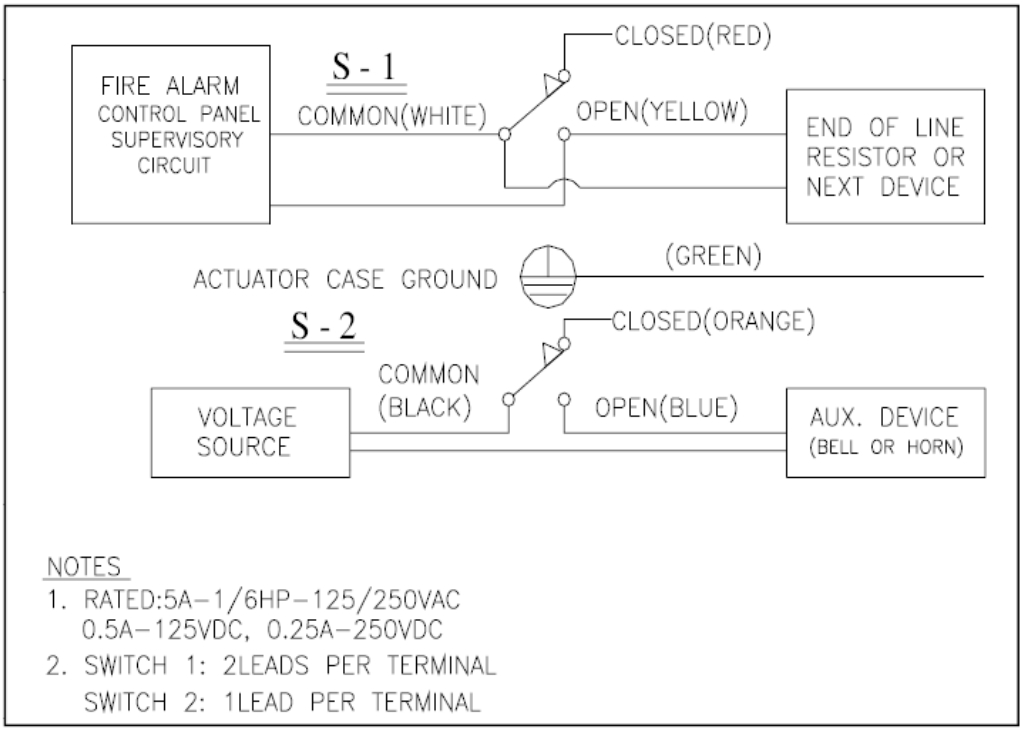
The Model BV-G Grooved End Butt-erfly valves may be installed with flow in either direction and can be positioned either norizontally or vertically. The grooved end pipe couplings used with the Model BV-G must be listed or approved for fire protection service and installed in accordance with the manufacturers instructions.

The Model BV-G Butterfly Valve may be installed with any schedule of pressure class of pipe or tubing that is listed or approved for fire protection. As applicable, refer to Figure 2 for the internal switch wiring diagram.

Conduit and electrical connections are to be made in accordance with the authority having jurisdiction and or the National Electrical Code. With reference to Figure 2, the "supervisory switch" is intended for connection to the supervisory circuit of a fire alarm control panel in accordance with NFPA 72. The "auxiliary switch" is in-tended for the unsupervised connection to auxiliary equipment in accordance with NFPA 70. National Electric code.

NOTE

For outdoor applications with internal supervisory switches, it is recommended that wiring connection be made at a temperature above 15?(-9?), in order to insure sufficient flexibility of the wire lead insulation.



Care and Maintenance

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in accordance with the applicable standards of the National Fire Protection Association (e.g., NFPA25), in addition to the standards of any authority having jurisdiction. The installing contractor or product manufacturer should be contacted sprinkler s stems be inspected tested and maintained b a q alified inspection ser ice relative to any questions. Any impairment must be immediately corrected. It is recommended that automatic systems inspected, tested, by qualified service.

NOTE

Before closing a fire protection system control valve for maintenance or inspection work on either the valve or fire protection system which it controls. permission to shut down the affected fire protection systems must be obtained from the proper authorities and all personner who may be affected by this decision must be notified.

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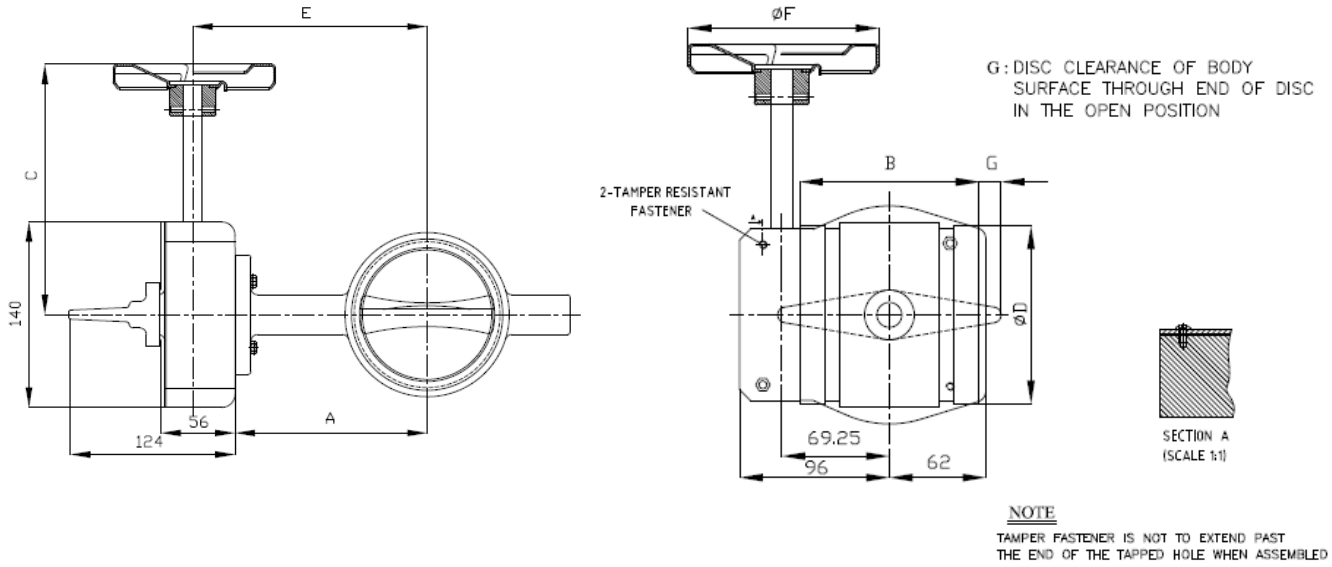
BO-G-300



DESIGN DATA	
DESIGN	GROOVED END
SIZE	2½" TO 8"
MAX. WORKING TEMP.	250°F
MAX. WORKING PRESS	300PSI
APPLICATION PIPE	SCH. 40
FLANGE	
TEST PRESS.	600PSI

MATERIAL SPEC		
VALVE	BODY	ASTM A-536
	DISC	ASTM A-536 OR B-148 B-124 AISI 304
	STEM	AISI 410
	SEAT, BODY	NYLON 11 COATING
	DISC	EPDM RUBBER
GEAR BOX	GEAR BOX	ASTM A-536
	SEGMENT GEAR	ASTM A-536
	WORM	AISI 410
	WORM SHAFT	AISI 410
	HANDLE WHEEL	ASTM A-536

DIMENSIONAL DATA UNIT(mm)							
	A	B	C	D	E	F	G
2½"	105	96.4	168	73.1	137	125	
DN65	105	96.4	168	76.1	137	125	
3"	112	96.4	168	88.9	144	125	
4"	145	115.4	168	114.3	177	125	
5"	166	132.4	208	141.3	198	225	
DN125	166	132.4	208	139.7	198	225	
6"	179	132.4	208	168.3	211	225	6.8
DN150	179	132.4	208	165.1	211	225	6.8
8"	204	147.4	208	219.1	236	225	24.2

GENERAL TOLERANCE	RANGE	OVER 0.5 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 315	OVER 315 TO 1000	OVER 1000 TO 2000
	TOLERANCE	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2

GENERAL ROUGHNESS	
▽	100S
▽▽	25S
▽▽▽	6.3S

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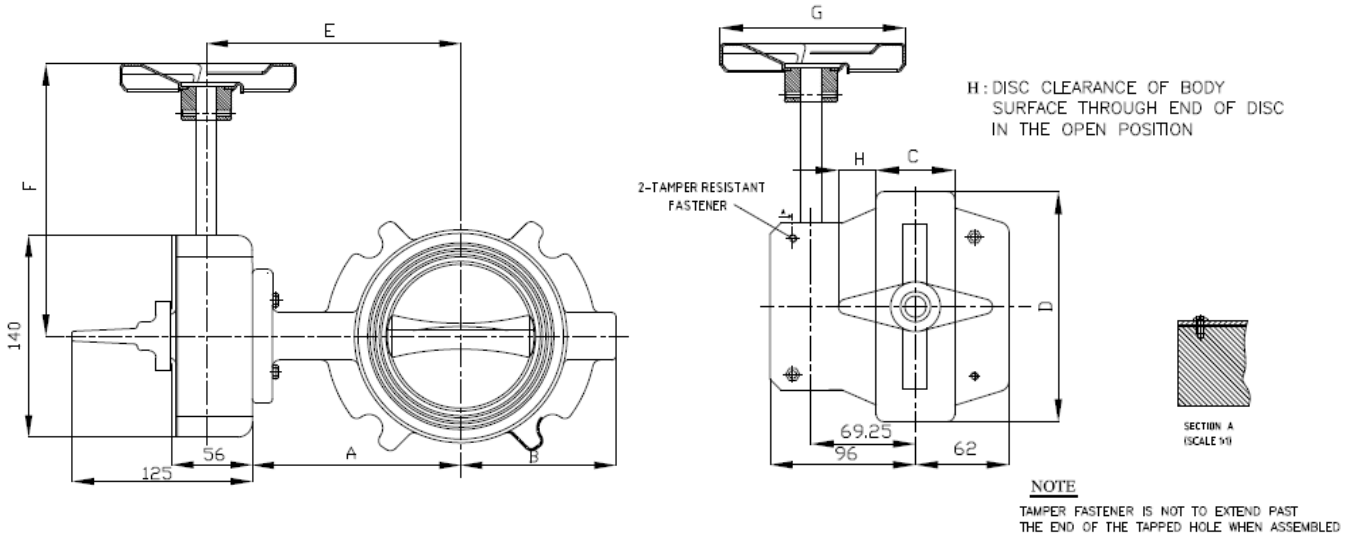
BO-W-300



DESIGN DATA	
DESIGN	WAFER
SIZE	2½" TO 8"
MAX. WORKING TEMP.	250°F
MAX. WORKING PRESS	300PSI
APPLICATION PIPE	SCH. 40
FLANGE	ANSI B 16.5 OR BS 4504
TEST PRESS.	600PSI

MATERIAL SPEC		
VALVE	BODY	ASTM A-536
	DISC	ASTM B-148 OR B-124 A-536 AISI 304
	STEM	AISI 410
	SEAT, BODY	EPDM RUBBER
	DISC	Ni-PLATED
GEAR BOX	GEAR BOX	ASTM A-536
	SEGMENT GEAR	ASTM A-536
	WORM	AISI 410
	WORM SHAFT	AISI 410
	HANDLE WHEEL	ASTM A-619

DIMENSIONAL DATA UNIT(mm)								
	A	B	C	D	E	F	G	H
2½"	120	85	46	116	152	168	125	9.5
3"	127	92	46	132	159	168	125	16
4"	145	108	52	152	177	168	125	25
6"	179	145	56	207	211	208	225	45.4
8"	204	170	60	262	236	208	225	68.5
DN65	120	85	46	116	152	168	125	9.5
DN80	127	92	46	132	159	168	125	16
DN100	145	108	52	152	177	168	125	25
DN125	170	120	56	185	202	208	225	37
DN150	179	145	56	207	211	208	225	45.4
DN200	204	170	60	262	236	208	225	68.5

GENERAL TOLERANCE								GENERAL ROUGHNESS	
	RANGE	OVER 0.5	OVER 6	OVER 30	OVER 120	OVER 315	OVER 1000		▽ 100S
		TO 6	TO 30	TO 120	TO 315	TO 1000	TO 2000		▽▽ 25S
	TOLERANCE	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2		▽▽▽ 6.3S

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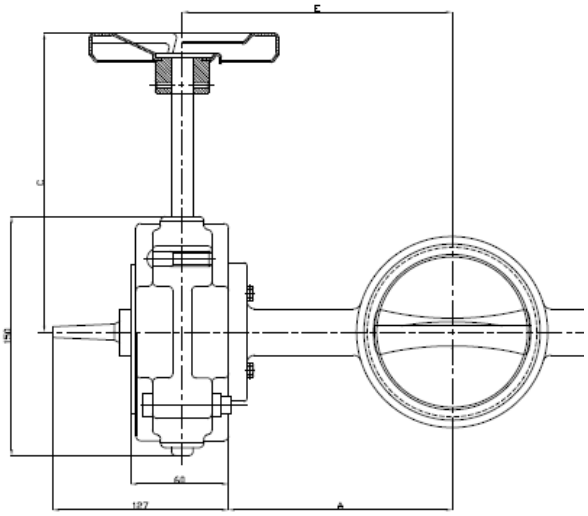
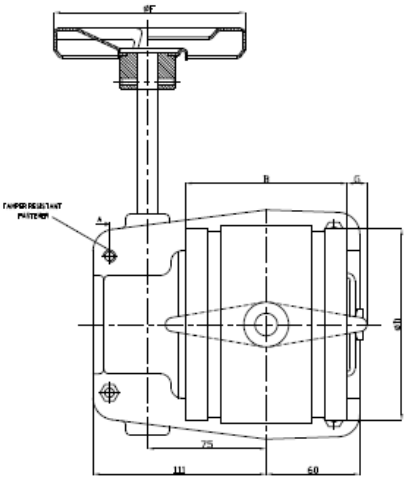
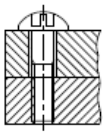
BV-G





G : DISC CLEARANCE OF BODY SURFACE THROUGH END OF DISC IN THE OPEN POSITION



(WITH-OUT NUT)
SECTION A
(SCALE NS)

NOTE

TAMPER FASTENER IS NOT TO EXTEND PAST THE END OF THE TAPPED HOLE, WHEN ASSEMBLED

DESIGN DATA	
DESIGN	GROOVED END
SIZE	2½" TO 8"
MAX. WORKING TEMP.	250°F
MAX. WORKING PRESS	175PSI
APPLICATION PIPE	SCH. 40
FLANGE	
TEST PRESS.	350PSI

MATERIAL SPEC		
VALVE	BODY	ASTM A-536
	DISC	ASTM A-536 OR B-148 B-124 AISI 410
	STEM	AISI 410
	SEAT, BODY	POLYAMID COATING
	DISC	EPDM RUBBER
GEAR BOX	HOUSING	ASTM A-536
	SEGMENT GEAR	ASTM B-124 OR B-148
	WORM	AISI 410
	WORM SHAFT	AISI 410
	HANDLE WHEEL	ASTM A-536

DIMENSIONAL DATA UNIT(mm)							
	A	B	C	D	E	F	G
2½"	105	96.4	135	73.1	135	125	
DN65	105	96.4	135	76.1	135	125	
3"	112	96.4	135	88.9	142	125	
4"	145	115.4	135	114.3	175	125	
6"	179	132.4	193	168.3	210	225	6.8
DN150	179	132.4	193	165.1	210	225	6.8
8"	204	147.4	193	219.1	234	225	24.2

GENERAL TOLERANCE								GENERAL ROUGHNESS	
	RANGE	OVER 0.5	OVER 6	OVER 30	OVER 120	OVER 315	OVER 1000		▽ 100S
		TO 6	TO 30	TO 120	TO 315	TO 1000	TO 2000		▽▽ 25S
	TOLERANCE	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2		▽▽▽ 6.3S

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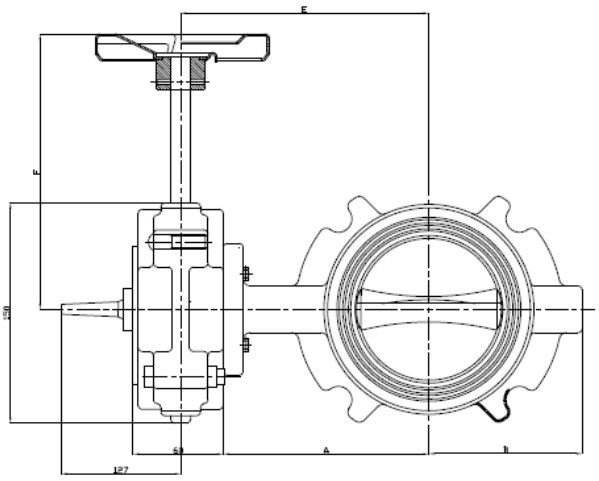
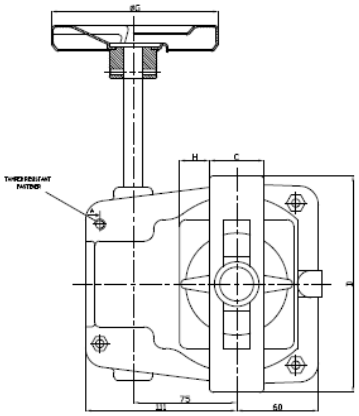
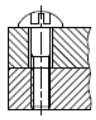
BV-W





H : DISC CLEARANCE OF BODY SURFACE THROUGH END OF DISC IN THE OPEN POSITION



(WITH-OUT NUT)
SECTION A
(SCALE NS)

NOTE

TAMPER FASTENER IS NOT TO EXTEND PAST THE END OF THE TAPPED HOLE, WHEN ASSEMBLED

DESIGN DATA	
DESIGN	WAFER
SIZE	2½" TO 8"
MAX. WORKING TEMP.	250°F
MAX. WORKING PRESS	175PSI
APPLICATION PIPE	SCH. 40
FLANGE	ANSI B 16.5
TEST PRESS.	350PSI

	MATERIAL SPEC		
VALVE	BODY	ASTM A-536	
	DISC	ASTM B-148 OR B-124 A-536 AISI 304	
	STEM	AISI 410	
	SEAT, BODY	EPDM RUBBER	
	DISC	Ni-PLATED	
GEAR BOX	HOUSING	ASTM A-536	
	SEGMENT GEAR	ASTM B-124 OR B-148	
	WORM	AISI 410	
	WORM SHAFT	AISI 410	
	HANDLE WHEEL	ASTM A-619	

DIMENSIONAL DATA UNIT(mm)								
	A	B	C	D	E	F	G	H
2½"	105	85	46	116	135	135	125	9.5
3"	112	92	46	132	142	135	125	16
4"	145	108	52	152	175	135	125	25
6"	180	145	56	207	211	193	225	45.3
8"	204	170	60	262	232	198	225	68.5
DN65	105	85	46	116	135	135	125	9.5
DN80	112	92	46	132	142	135	125	16
DN100	145	108	52	152	175	135	125	25
DN150	180	145	56	207	211	193	225	45.3
DN200	204	170	60	262	232	198	225	68.5

GENERAL TOLERANCE	RANGE	OVER 0.5 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 315	OVER 315 TO 1000	OVER 1000 TO 2000
	TOLERANCE	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2

GENERAL ROUGHNESS	
▽	100S
▽▽	25S
▽▽▽	6.3S