Control Valves & Devices | Butterfly Valves | Grooved - UL, FM & CE | BVG-1



SPECIFICATIONS	
Models	**BVG-1**: With switches
Sizes (nominal)	2"/DN50, 2-1/2" /DN65, 3"/DN80, 4"/DN100, 5"/DN125, 6"/DN150, 8"/DN200, 10"/DN250 & 12"/DN300
Approvals*	CE, UL LISTED, FM APPROVED, LPCB
Max. working pressure	• ***21 bar (300 psi)*** - UL/FM
Test pressure	• ***Models BVG-1***: Leak & Shell, 1.5x working pressure
Working temperature	0 °C - 80 °C
Connections	Grooved joint dimensions, in accordance with: ANSI/AWWA C606 or ISO 6182
Operation	Gear operated
Finish	Epoxy coated ductile iron
Supervisory switches	• ***Model BVG-1*** gearboxes are fitted with one internal supervisory position switch and one internal auxiliary switch. Switches are configured for normally-open operation. For normally-closed operation see ***BVG-1-MON***
Notes	• The valves are suitable for use outdoors. Some degradation of the painted/coated surfaces may occur (including rusting) which will not affect the performance of the valve. The UL listing specifically ensures the switch operation is not affected by outdoor conditions, providing the proper installation instructions are followed. • Butterfly valves should be installed a reasonable distance from pumps, elbows, expanders, reducers, or similar devices. Typical piping practices suggest a minimum distance of five times the pipe diameter for general use.

* See table on page 2 for details

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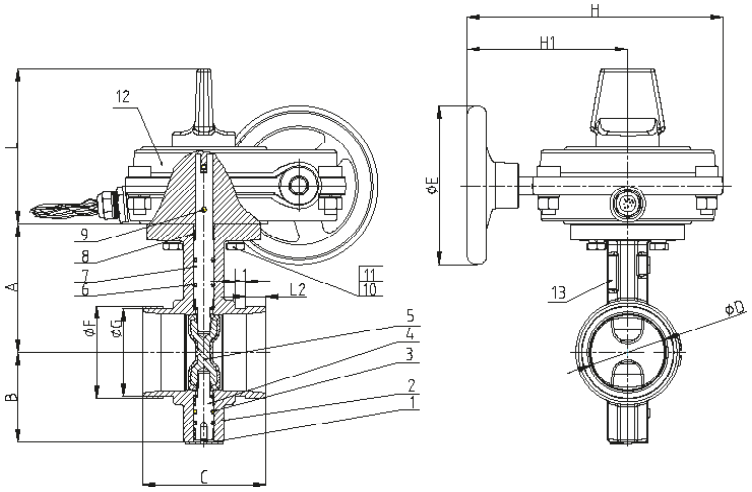
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Dimensions | BVG-1

Size	Dimensions (mm)												
	A	B	C	ØD	ØE	ØF	ØG	L	L1	L2	H1	H	ISO 5211 Actuator	Flag (BVG-1)
2“/DN50	89	65	81	50	125	60.3	57.2	123	7.9	15.9	127	202	F07	60 x 40
2-1/2"/DN65	102	71	97	61	125	73.0	69.1	123	7.9	15.9	127	202	F07	
2-1/2“/DN65	102	71	97	61	125	76.1	72.3	123	7.9	15.9	127	202	F07	
3"/DN80	109	81	97	76	125	88.9	84.9	123	7.9	15.9	127	202	F07	
4"/DN100	128	95	116	99	125	114.3	110.1	123	9.5	15.9	127	202	F07	
5"/DN125	141	111	148	123	125	139.7	135.5	123	9.5	15.9	127	202	F07	
5"/DN125	141	111	148	123	125	141.3	137.0	123	9.5	15.9	127	202	F07	
6”/DN150	153	133	148	148	225	165.1	160.1	123	9.5	15.9	127	202	F07	
6"/DN150	153	133	148	148	225	168.3	164.0	123	9.5	15.9	127	202	F07	
8"/DN200	184	164	133	199	225	219.1	214.4	123	11.1	19.1	185	260	F10	68 x 40
10"/DN250	216	196	159	252	225	273.1	268.3	123	12.7	19.1	185	260	F10	
12"/DN300	254	226	165	301	225	323.9	318.3	132	12.7	19.1	203	298	F10	

Dimensional drawing | BVG-1



Materials | BVG-1

Item	Description	Material	Specification
1	Plug	EPDM	EPDM
2	Valve body	Ductile iron	EN-GJS-450-10
3	O-Ring	NBR	NBR
4	Stub shaft	Stainless steel	AISI 431
5	Disc	Ductile iron	EN-GJS-450-10 + EPDM
6	O-Ring	NBR	NBR
7	Stem	Stainless steel	AISI 431
8	Bushing	Stainless steel	AISI 304 + PTFE
9	Cylindrical pin	Stainless steel	AISI 304
10	Hex nut	Stainless steel	AISI 304
11	Spring washer	Stainless steel	AISI 304
12	Signal gear box	Ductile iron	EN-GJS-450-10
13	Name plate	Stainless steel	SS 304

Part numbers & technical data | BVG-1

Size	BVG-1 | With supervisory switches		
	Approvals	Part number	Weight (kg)
2“/DN50	UL, FM, CE	BVG-1-060	8.0
2-1/2"/DN65	UL, FM, CE	BVG-1-073	8.6
2-1/2“/DN65	UL, FM, CE	BVG-1-076	8.6
3"/DN80	UL, FM, CE	BVG-1-089	9.2
4"/DN100	UL, FM, CE	BVG-1-114	10.7
5"/DN125	UL, FM, CE	BVG-1-139	13.7
5"/DN125	UL, FM, CE	BVG-1-141	13.7
6”/DN150	UL, FM, CE	BVG-1-165	18.1
6"/DN150	UL, FM, CE	BVG-1-168	18.1
8"/DN200	UL, FM, CE	BVG-1-219	22.7
10"/DN250	UL, FM, CE	BVG-1-273	33.7
12"/DN300	UL, FM, CE	BVG-1-324	48.6

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Design requirements | BVG-1

The butterfly valve should be connected to the piping system with approved couplings. Flow may be from either direction through the valve, and the valve may be positioned in any direction. The gearbox has been designed with a slow close handwheel operator that effectively minimizes water hammer during the opening or closing of valve during flow conditions. These valves feature minimum flow restriction and pressure loss when in the fully open position.

Installation | BVG-1

When the valves are received from Viking they should be handled carefully to avoid breakage and damage to the seating area. Before installation of the valve:

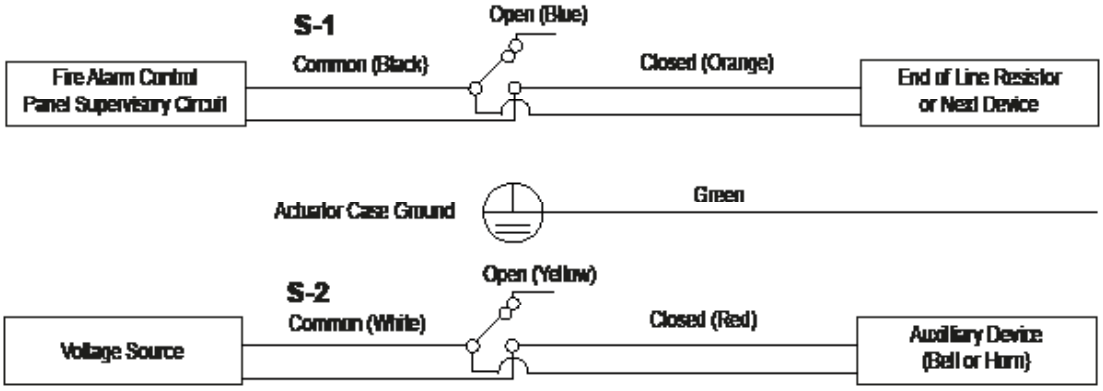
1. Check the valve pressure rating is compatible with service conditions.
2. Clean the piping, and connecting couplings.
3. Position the valve centrally between mating pipes
4. Lubricate the coupling gaskets and slide them into position. Assemble the couplings according to their instructions.
5. The valve should be installed in an almost closed position.
6. Interference between the butterfly valve disc and the mating pipes should be avoided under all circumstances. Before fully tightening the coupling bolts, carefully open the valve to the open position and check for any disc interference.
7. To prevent distortion, properly support the piping adjacent to the inlet and outlet of the valve. Avoid damage and do not use the valve to force the piping into position.
8. The valve should never be forced to seat by applying excessive torque to the gearbox or through the use of a wrench. This may distort the valve components or score the sealing surface. The use of excessive force to open or close the valve violates all warranties whether express or implied.
9. Conduit and electrical connections to the supervisory/ auxiliary switches must be in accordance with the requirements of the Authority Having Jurisdiction.

Care & maintenance | BVG-1

Inspect and verify proper operation on an annual basis or according to the requirements of the Authority Having Jurisdiction. Check for leakage at the valve pipe connection and body-to-operator connection. Installation, inspection and maintenance should be performed by a qualified person certified by the Authority Having Jurisdiction. If the valve closes hard, check to make sure that there is no debris lodged in the waterway around the seating area. Backing off the handwheel and closing the valve again can often correct this condition. All replacement parts must be obtained from the manufacturer to assure proper operation of the valve and to maintain approval of the device.

Wiring instructions | BVG-1

The BVG-1 butterfly valve comes complete with one internal supervisory position switch and one internal auxiliary switch. The supervisory/auxiliary switches operate by a cam connected to the valve stem and are designed to notify in the case of valve closure. Please refer to the relevant installation standard and Authority Having Jurisdiction. The switches will change position and close within two (2) full turns of the hand wheel from the fully open position.



Switch parameters: 16A 1/2HP 125/250VAC

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