

REL-BFG-300

Grooved End Butterfly Valves

New from Reliable are high quality fire protection control Butterfly Valves in both Grooved End and Wafer Style options. These valves are UL, ULC listed and FM approved and are available in sizes from 2½” up to 8”.

They are supplied from stock with factory installed UL listed double tamper switch for indoor and outdoor use.

Grooved End 2-1/2” - 8” (65mm up to 200mm)

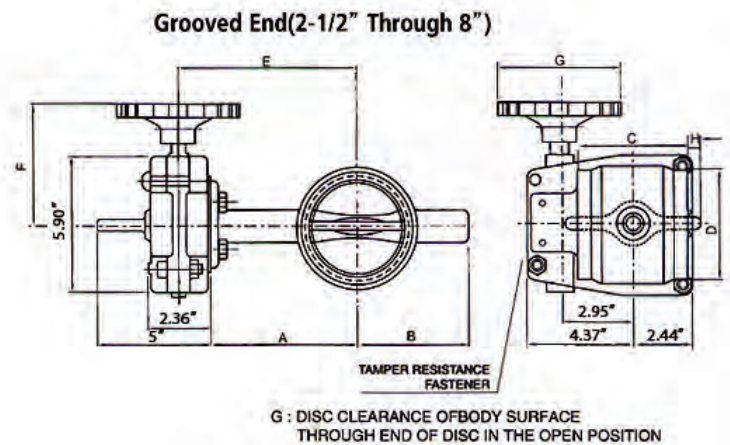
Working Pressure and Temperature

Working Pressure	300 PSI (21.4Bars)
Max. Test Pressure	600 PSI (42.8Bars)
Max. Working Temperature	250°F (120°C)



Materials List

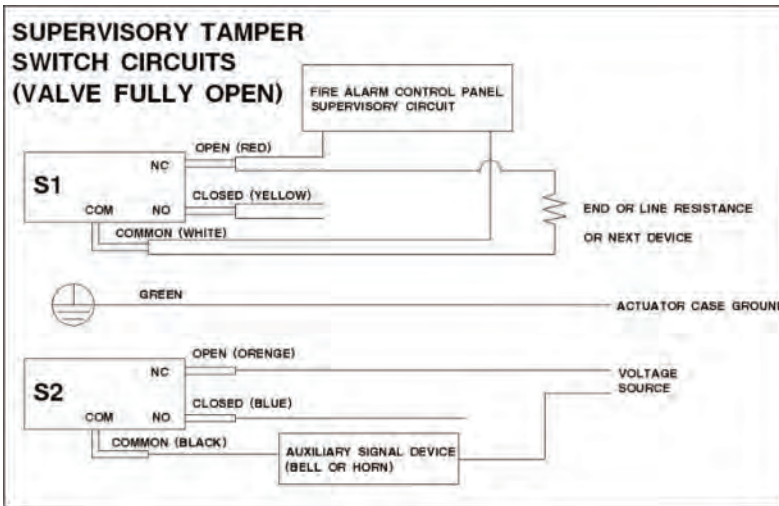
Component	Material
Body	ASTM A-536 Nylon-11 Coated
Disc	ASTM A-536 EPDM Encapsulated
Upper & Lower Stems	AISI 420-SS
Housing	ASTM A-536
Hand Wheel	ASTM A-536
Flag indicator	ASTM A-536
Shear Pin	ASTM A-510
Segment Gear	ASTM B-148 or B-584
Housing Gasket	EPDM Grade E
O-Rings (All)	EPDM Grade E



SIZE	A	B	C	D	E	F	G	H
2-1/2"	4.13 (105)	3.30 (85)	3.80 (96.4)	2.87 (73.0)	5.31 (135)	5.04 (128)	5.04 (128)	
3"	4.41 (112)	3.60 (92)	3.80 (96.4)	3.50 (88.9)	5.59 (142)	5.04 (128)	5.04 (128)	
4"	5.71 (145)	4.30 (108)	4.54 (115.4)	4.50 (114.3)	6.89 (175)	5.04 (128)	5.04 (128)	
6"	7.05 (179)	5.71 (145)	5.21 (132.4)	6.63 (168.3)	8.23 (209)	8.66 (220)	8.66 (220)	0.28 (7.10)
8"	8.03 (204)	6.70 (170)	5.80 (147.4)	8.63 (219.1)	9.21 (234)	8.66 (220)	8.66 (220)	0.95 (24.2)



Wiring Diagram

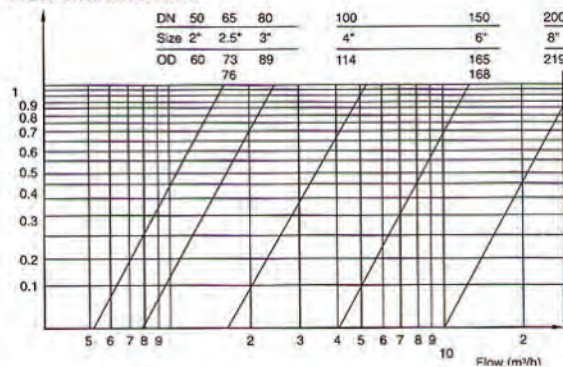


Test Data

Butterfly Valve

GROOVED END

Flow characteristics



Flow coefficient : Kv

Kv = m³/hour across valve at same standard condition (20°C, 1 bar)

DN (mm)	SIZE(in)	OD	30°	40°	50°	60°	70°	80°	90°
65	2 1/2"	73	12	27.4	53.1	96	138	156	163
65	2 1/2"	76	12	27.4	53.1	96	138	156	163
80	3"	89	18.9	39.4	78.9	144	210	243	249
100	4"	114	30	65.1	129	226	377	488	514
150	6"	165	84	184	369	634	964	1196	1286
150	6"	168	84	184	369	634	964	1196	1286
200	8"	219	165	339	677	1230	2002	2850	3129

$$CV = \frac{7}{6} KV$$

Q = flow
in m³/h

$$KV = \frac{Q}{31.6} \sqrt{\frac{\rho_1}{\Delta P}}$$

ΔP = pressure loss
in bar

$$Q = 31.6 KV \sqrt{\frac{\Delta P}{\rho_1}}$$

ρ₁ = density
in kg/m³

WAFER TYPE

Flow characteristics

DN	65	80	100	150	200
Size	2-1/2"	3"	4"	6"	8"
Kv	210	330	610	1500	2700
Cv	240	385	712	1760	3150

Kv = m³/hour across valve at same standard conditions (20°C, 1 bar)
Kv = GPM at 1 PSI differential pressure across valve at standard conditions
(60°F, 14.7 PSI)

Flow Coefficients

The flow coefficient KV is the follow in m³/h of water, at an average temperature of 20°C, crossing the valve with creating a headloss of 1 bar. The relation between Cv and KV is;

$$Cv = \frac{7}{6} Kv$$

Cv VS Disc Angle

