KEYSTONE RESILIENT SEATED BUTTERFLY VALVES

FIGURE 221 AND 222

An economical bonded resilient seated butterfly valve for bi-directional and end-of-line service
- F221 Wafer style valve
- F222 Lugged style valve

FEATURES

- Bubble tight shut-off at full rated pressure in both directions.
- The F222 lugged version is suitable for bi-directional end-of-line service at full pressure rating.
- Top and bottom bearings absorbs side thrust loads.
- A moulded-in O-ring in the seat for flange sealing eliminates the need for flange gaskets.
- Body locating holes for easy installation and centering between flanges.
- Extended neck allows adequate clearance for flange and insulation.

GENERAL APPLICATION

Ideal for building services and irrigation applications that require shut-off control. The valve has a moulded in seat and can be used in full vacuum service.

TECHNICAL DATA

Size range:	DN 50-300 (NPS 2-12)
Temperature rating:	-30°C to 120°C (-20°F to 250°F)
Pressure rating:	Full vacuum to 1600 kPa (250 psi) bi-directional bubble tight shut-off rating. Full 1600 kPa (250 psi) end-of-line shut-off capabilities with F222 lugged valve.
Standard flange drilling:	AS 2129 E, ASME Class 125 and 150 JIS table 5 and 10, PN 10 and 16*

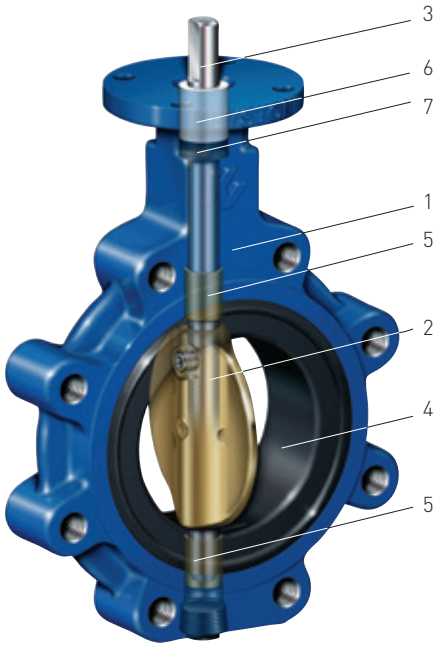
NOTE

Other drillings available upon request.

* Not available in all valve sizes.

KEYSTONE RESILIENT SEATED BUTTERFLY VALVES

FIGURE 221 AND 222



MATERIALS

Part		Material	Material standards
1	Body	Cast iron	ASTM A126 Class B
2	Disc	304 SS	ASTM A351 Grade CF8
		Aluminum bronze	ASTM B148 UNS C95200 Grade A
		316 SS	ASTM A743 Grade CF8M
3	Stem	416 SS	ASTM A582
			UNS S41600
4	Molded-in liner	EPDM	
		NBR	
5	Inboard bearings	PTFE/steel	
6	Upper bushing	Polyester	
7	Upper stem seal	NBR	

K_v VALUES vs TRAVEL POSITION

Size	Angle of opening								
(DN)	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	0	1	4	12	22	35	45	51	52
65	0	1	5	18	38	64	93	119	131
80	1	1	7	25	58	99	151	202	227
100	1	13	42	93	170	275	400	509	560
125	3	28	86	178	313	501	720	904	987
150	3	41	125	255	441	700	1003	1254	1366
200	5	73	207	389	649	1029	1517	2063	2501
250	8	115	311	564	920	1455	2183	3110	3972
300	10	166	440	777	1253	1979	3001	4398	5779

NOTE:
K_v is the valve flow capacity expressed as flow rate of water at 20°C, in cubic meters per hour, which produces a 1 bar pressure drop across the valve.

C_v VALUES vs TRAVEL POSITION

Size	Angle of opening								
(NPS)	10°	20°	30°	40°	50°	60°	70°	80°	90°
2	0	1.3	5	14	26	40	52	59	60
2½	0	1.4	6	21	44	74	107	138	150
3	0	1.5	8	29	67	115	175	234	262
4	1	15.0	48	107	196	318	463	589	647
5	3	32.0	99	206	362	579	832	1045	1141
6	4	47.0	145	295	510	810	1160	1450	1580
8	6	84.0	239	450	751	1190	1754	2385	2892
10	9	133.0	360	652	1064	1683	2524	3596	4593
12	12	192.0	509	899	1449	2288	3470	5085	6682

NOTE:
C_v is the valve flow capacity expressed as the flow rate of water at 60°F, in US gallons per minute, which produces a 1 psi pressure drop across the valve.