

HIGH PERFORMANCE BUTTERFLY VALVE

Cryogenic Soft Seat

DN50 – DN600 (2" – 24")

Leeds Valve are world leaders in the manufacture and supply of butterfly valve solutions for niche applications in many diverse industries including oil and gas, LNG, power generation, industrial gas and naval marine, in materials from carbon steel to aluminium bronze, stainless steel and titanium.

Description

The Leeds Valve cryogenic butterfly valve is a further development from the standard double offset high performance design.

The advanced seal is pressure assisted but also employs a metal energising ring to ensure the seat area of the valve is always loaded even at very low operating pressures. With the continuous seat loading over the whole operating pressure range this valve offers a cryogenic seat tightness which exceeds that of BS 6364 1984/98.

The one piece through shaft (BS6364 para 4.12) offers maximum strength and rigidity, minimizing deflection thereby minimizing wear and maximizing longevity of seal performance. The valve shaft shoulder prevents shaft blowout due to pressure in the body.

The extended bonnet is of a sufficient length to keep shaft packing away from the cold fluid. The seat design ensures low seating and breakout torque, resulting in smaller actuators and improved economy when selecting the various forms of actuation available.

When used in on/off applications, the valve provides reliable isolation and when fitted with an appropriate modulating actuator can both isolate and control.

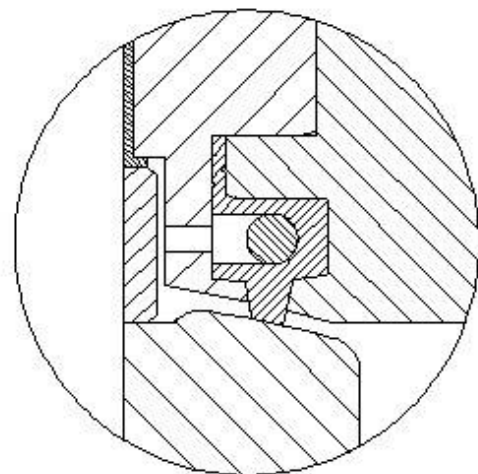
The High Performance Butterfly Valve can be drilled to suit most international standards and is available as wafer, lugged, double flanged and butt weld.

Valve size range – 50mm (2") – 600mm (24") Larger sizes available on request

Maximum shut off pressure – 100 Bar

Standard temperature range – from -200°C to +200°C, however the seat parameters may be extended dependant on line fluid and operating conditions.

Valves can be drilled to suit up to ANSI 2500lb flanges.



HIGH PERFORMANCE BUTTERFLY VALVE

Cryogenic Soft Seat

DN50 – DN600 (2" – 24")

Technical Standards

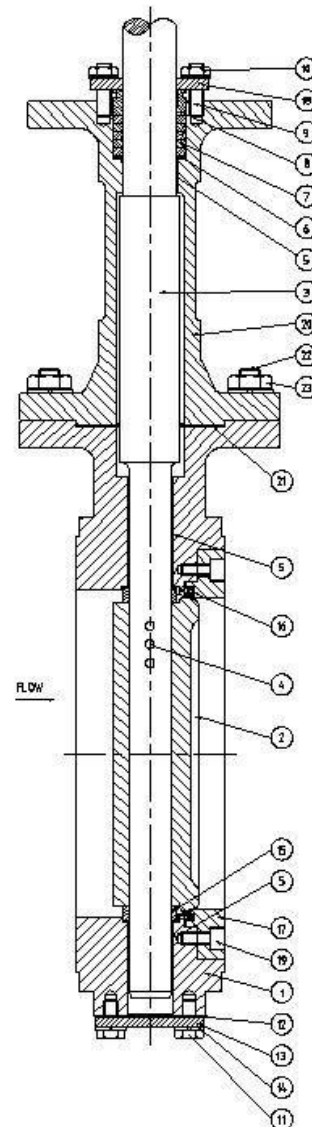
- **Design:** API 609, BS 5155, MSS SP68
- **Pressure Testing:** API 598, BS 6755 Part 1, FCI 70-2
- **Wall Thickness:** ANSI B16.34
- **Face To Face Dimensions:** BS5155, API 609, DIN 3202, ISO 5752
- **Quality Assurance:** ISO 9001:2008

Materials

	Description	Qty	Material
			Stainless Steel
1	Body	1	ASTM A351 CF8M
2	Disc	1	ASTM A351 CF8M
3	Shaft	2	ASTM A276 316
4	Taper Pin*	3	ASTM A276 316
5	Bearing	3	MP3
6	Gland Ring	1	ASTM A276 316
7	Packing*	5	PTFE
8	Gland Follower	1	ASTM A276 316
9	Stud*	4	ASTM A320 B8 Class 1
10	Nut*	4	ASTM A194 GR8
11	HX HD Screws*	4	ASTM A320 B8 Class 1
12	Gasket	1	Graphite
13	Blank End Plate	1	ASTM A240 316
14	Spring Washer*	8	BS 6105 304 Gr A4
15	Disc Spacer	2	ASTM A276 316
16	Body Seal	1	PTFE
17	Clamping Ring	1	ASTM A351 CF8M
18	Gland Plate	1	ASTM A240 316
19	Cap Screws*	16	BS 6105 316 Gr A4
20	Bonnet	1	ASTM A351 CF8M
21	Bonnet Gasket	1	Graphite
22	Bonnet Stud*	8	ASTM A320 B8 Class 1
23	Bonnet Nut*	8	ASTM A194 GR8

Valve in closed position

Note: * items quantity may differ between sizes



HIGH PERFORMANCE BUTTERFLY VALVE

Cryogenic Soft Seat

DN50 – DN600 (2" – 24")

Dimensions

ANSI 150

Valve Size (mm)	A	B	C1	C2	D	E
50	50	92	43	106	109	86
80	80	127	46	114	123	121
100	100	157	52	127	175	186
125	125	186	56	140	160	184
150	150	216	56	140	172	201
200	200	270	62	152	240	222
250	250	324	68	165	260	270
300	300	381	78	178	395	275
350	350	413	92	190	332	351
400	400	470	102	216	325	345
450	450	533	114	222	383	407
500	500	584	127	229	400	425
600	600	692	154	267	490	515

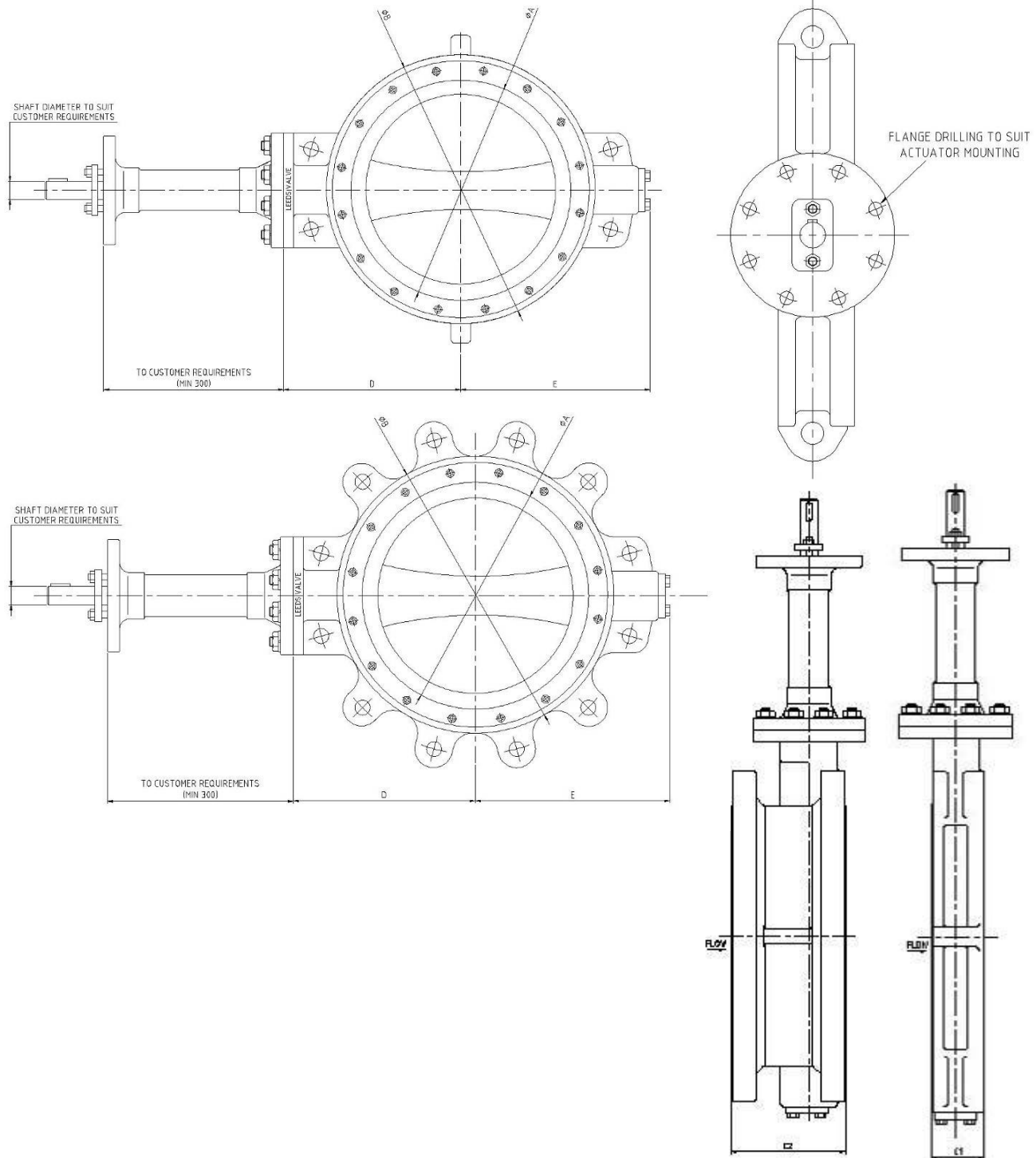
ANSI 300

Valve Size (mm)	A	B	C1	C2	D	E
50	50	92	43	150	109	136
80	80	127	49	180	110	135
100	100	157	56	190	134	171
125	125	186	56	200	160	184
150	150	216	59	210	200	220
200	200	270	71	230	225	225
250	250	324	83	250	275	290
300	300	381	92	270	320	325
350	350	413	117	290	351	376
400	400	470	133	310	395	415
450	450	533	149	330	430	450
500	500	584	159	350	470	500
600	600	692	181	390	585	590

HIGH PERFORMANCE BUTTERFLY VALVE

Cryogenic Soft Seat

DN50 – DN600 (2" – 24")



HIGH PERFORMANCE BUTTERFLY VALVE

Cryogenic Soft Seat

DN50 – DN600 (2" – 24")

CV Values

Nominal bore	ANSI Rating	10°	20°	30°	40°	50°	60°	70°	80°	90°
50	150	1.4	5.5	13	23	36	55	75	97	101
	300	1.3	5.5	12	22	33	51	70	93	99
65	150	2	8	20	34	52	78	108	140	145
	300	2	7	18	32	48	74	100	133	142
80	150	3	13	30	53	81	123	168	217	225
	300	3	12	28	50	75	115	156	208	221
100	150	6	24	59	106	159	243	331	428	446
	300	6	23	54	97	146	223	304	406	430
125	150	10	39	93	167	252	384	524	678	707
	300	9	36	86	153	230	354	481	642	681
150	150	16	64	149	267	402	595	802	1049	1092
	300	14	58	135	240	362	535	722	972	1031
200	150	27	120	280	499	753	1112	1536	1962	2043
	300	26	106	247	441	664	981	1324	1784	1891
250	150	51	205	477	851	1283	1895	2559	3343	3482
	300	44	178	413	736	1110	1640	2214	2981	3162
300	150	70	281	657	1170	1764	2606	3519	4596	4789
	300	61	245	572	1020	1538	2273	3073	4133	4384
350	150	81	353	850	1530	2307	3520	4800	6399	6788
	300	73	293	707	1272	1918	2926	3991	5321	5644
400	150	119	478	1144	2073	3126	4759	6501	8668	9194
	300	98	392	944	1699	2562	3908	5329	7693	8160
450	150	154	616	1484	2672	4029	6145	8379	11044	11286
	300	125	499	1204	2168	3268	4986	6799	9065	9615
500	150	186	745	1797	3235	4877	7438	10143	13524	14275
	300	142	567	1367	2461	3711	5659	7718	9947	11979
600	150	284	1134	2734	4922	7338	11309	15435	20580	21830
	300	218	869	2096	3773	5690	8678	11834	15778	16836

For Cv figures for larger valves or valves of a higher pressure rating, please contact the sales department.

All dimensions / weights are approximate. The information on this data sheet is accurate to the best of Leeds Valve's knowledge; however we reserve the right to alter the product specification at any time.