BARONSHIRE
valves and engineers ltd

Series "SLS" Butterfly Valves

2" - 12" (50mm - 300mm)

FEATURES AND BENEFITS

patented seat design

Baronshire's advanced Seat Lock System (SLS) is superior to conventional designs by mechanically securing the valve seat to the interior of the valve body, forming a metal reinforcement where the disc and seat make contact. This protects the seat from becoming vulnerable to the adverse performance impact of movement, distortion, and tearing often experienced by conventional designs. By securing the valve seat at all critical areas, the Baronshire design minimizes wear, requires 30-50% less torque, and is bi-directionally rated for dead end service from full vacuum up to 250 psi. In addition, the seat is manufactured using the injection molding process for greater consistency and quality. The patented Baronshire seat provides state of the art technology with superior performance and exceptional value.

disc/stem assembly

The 316 stainless steel one-piece disc/stem with a mirror finish exceeds the most stringent requirements of the food, beverage and pharmaceutical industries. Stainless steel valves are furnished with the entire disc/stem hand polished to this mirror finish as standard. The slim profile of the assembly provides minimum obstruction to flow and higher Cv's than most through-stem designs.

vertically split body

Baronshire's unique two-piece, vertically split body design allows for ease of assembly and maintenance in the field. The product is compatible with most international flange standards including ANSI, BS and DIN. Flange alignment guides provide for quick and proper installation. The vertically split body also can be studded to allow any type of screwed, clamped, or flanged ends to be directly bolted to the valve body. Baronshire utilizes 316 stainless steel as standard body material. 316 stainless steel is an excellent choice for hygienic or corrosive applications.

three radial bearings

Conventional designs normally use only one radial bearing located near the top adapter flange and far away from the critical areas of deflection. These designs rely on the rubber seat to hold the disc in place, resulting in significant disc deflection during valve travel and when closed under pressure. Baronshire's use of three radial bearings helps eliminate disc/stem deflection under pressure. Positioned below the seat, above the seat, and below the actuator mounting plate, these bearings are located in the most critical areas to reduce deflection and side loads by holding the disc/stem stable in the body under pressure. Eliminating disc/stem deflection contributes to lower valve torque and longer seat life.

ISO top adapter

Drilled to ISO 5211 to allow for the direct mounting of power actuators and gears, Baronshire's extended neck is designed to provide flexibility in extension lengths, mounting, and optional drilling patterns.

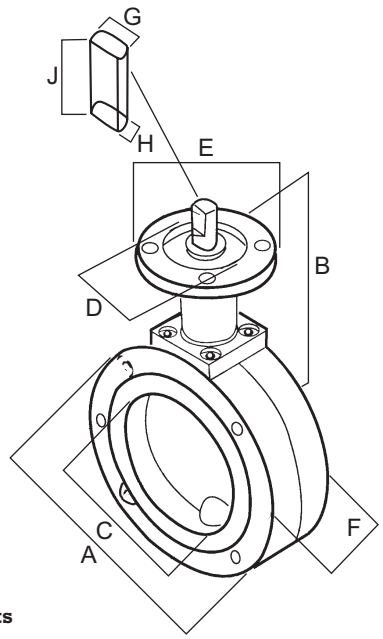
installation in the closed position

The Baronshire Seat Lock System (SLS) permits the valve to be installed with the disc in the fully closed position, saving time and eliminating many of the typical installation problems and concerns. Valves equipped with spring return/fail closed actuators can now be safely installed in the piping system without damaging the seat or increasing the operating torque.

TECHNICAL DATA

MATERIALS OF CONSTRUCTION

Body	316 Stainless Steel
Disc/Stem	Mirror Polished 316SS
Seat	EPDM Food Grade White Silicon Food Grade
Top Adapter	316 Stainless Steel



BARONSHIRE "SLS" DIMENSIONAL TABLE

A = Body O.D.
B = Centerline of valve to top of mounting flange
C = Valve Bore
D = O.D. of centering ring
E = O D. of mounting flange
F = Face - Face
G = Stem dimension -diameter
H = Stem dimension -across flats
J = Height of stem above mounting flange

IMPERIAL DIMENSIONS

Valve Size											Mounting Flange Drilling			
in.	mm	A	B	C	D	E	F	G	H	J	ISO	BC	Holes	HoleDia
2	50	4.13	4.53	2.00	1.38	2.56	1.65	0.43	0.31	0.83	F05	1.97	4	0.28
$2^{1/2}$	65	4.72	5.16	2.50	1.38	2.56	1.81	0.55	0.39	0.83	F05	1.97	4	0.28
3	80	5.35	5.43	3.00	1.38	2.56	1.81	0.55	0.39	0.83	F05	1.97	4	0.28
4	100	6.30	5.94	4.00	1.38	2.56	2.05	0.55	0.39	0.83	F05	1.97	4	0.28
5	125	7.13	6.69	4.92	2.17	3.54	2.20	0.67	0.55	0.87	F07	2.76	4	0.35
6	150	8.66	7.17	5.80	2.17	3.54	2.20	0.67	0.55	0.87	F07	2.76	4	0.35
8	200	10.67	8.35	7.80	2.17	3.54	2.36	0.83	0.63	0.91	F07	2.76	4	0.35
10	250	12.91	9.84	9.80	2.17	3.54	2.68	1.06	0.87	2.01	F07	2.76	4	0.35
12	300	14.80	12.36	11.75	3.35	5.91	3.07	1.06	0.87	2.01	F12	4.92	4	0.53

METRIC DIMENSIONS

Valve Size											Mounting Flange Drilling			
in.	mm	A	B	C	D	E	F	G	H	J	ISO	BC	Holes	HoleDia
2	50	105	115	51	35	65	42	11	8	21	F05	50	4	7
$2^{1/2}$	65	120	131	63	35	65	46	14	10	21	F05	50	4	7
3	80	136	138	76	35	65	46	14	10	21	F05	50	4	7
4	100	160	151	100	35	65	52	14	10	21	F05	50	4	7
5	125	181	170	125	55	90	56	17	14	22	F07	70	4	9
6	150	220	182	147	55	90	56	17	14	22	F07	70	4	9
8	200	271	212	200	55	90	60	21	16	23	F07	70	4	9
10	250	328	250	250	55	90	68	27	22	51	F07	70	4	9
12	300	376	314	299	85	150	78	27	22	51	F12	125	4	13.5

TORQUE (Lb.-inches)

Valve Size		Full Rated Valves Differential Pressure (PSI)					Reduced Disc Diameter
in.	mm	50	100	150	200	250	50
2	50	77	85	97	100	105	77
2 1/2	65	85	95	108	131	140	85
3	80	115	132	143	160	178	105
4	100	155	185	226	250	282	140
5	125	237	290	361	407	468	217
6	150	320	385	436	505	685	280
8	200	712	938	1050	*	*	563
10	250	1344	1692	1991	*	*	938
12	300	2032	2558	3011	*	*	1125

WEIGHT Pounds			
in.	mm	Wafer	Lug
2	50	5.5	6.5
2 1/2	65	7.5	9.5
3	80	8.5	10
4	100	11	16
5	125	15	21
6	150	19	25
8	200	31	44
10	250	45	66
12	300	67	91

TORQUE (Nm)

Valve Size		Full Rated Valves Differential Pressure (Bar)					Reduced Disc Diameter
in.	mm	3.5	7	10	14	17	3.5
2	50	9	10	11	11	12	9
2 1/2	65	10	11	12	15	16	10
3	80	13	15	16	18	20	13
4	100	17	21	26	28	32	16
5	125	27	33	41	46	53	26
6	150	36	44	49	57	78	32
8	200	80	106	119	*	*	64
10	250	152	191	225	*	*	106
12	300	229	289	340	*	*	127

WEIGHT Kilograms			
in.	mm	Wafer	Lug
2	50	2.5	2.9
2 1/2	65	3.4	4.3
3	80	3.9	4.5
4	100	5.0	7.3
5	125	6.8	9.6
6	150	8.6	11.4
8	200	14.1	20.0
10	250	20.5	30.0
12	300	30.5	41.4

** Consult factory for these applications*

1. These torque values are based on normal operating conditions. Contact the factory for other types of services and their related seating - unseating torque values.
2. Contact the factory for consideration of dynamic torque.
3. Do not apply a safety factor to the above values when determining actuator selection.

FLOW COEFFICIENT (Cv)

Valve Size		Disc Position								
in.	mm	90	80	70	60	50	40	30	20	10
2	50	229	149	90	53	30	18	10	2.3	0.3
2 1/2	65	359	330	140	83	51	29	15	3.0	0.4
3	80	543	348	212	125	71	44	23	4.4	0.5
4	100	1049	672	410	242	136	84	45	9.0	1.1
5	125	1770	1133	691	407	230	142	76	14	1.6
6	150	2320	1485	905	534	302	186	100	23	2.3
8	200	4472	2862	1745	1029	582	358	193	36	4.5
10	250	7049	4511	2750	1622	917	564	305	57	7.0
12	300	10389	6752	4051	2389	1350	832	446	114	11

Cv is defined as the number of U.S. Gallons of water at 60 degrees F. that will flow through the valve in one minute when the differential pressure across the valve is one pound per square inch. ***Kv = Cv x 0.862***