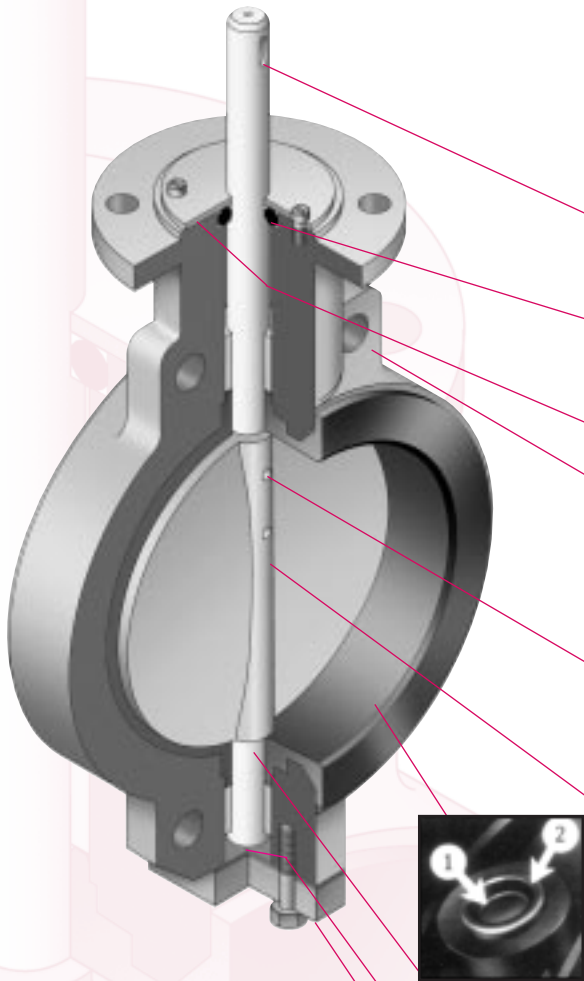


SPOOLSEAL VALVE BV 16000



SPOOLSEAL butterfly control valves incorporate the use of a replacable rubber liner for body protection. The valves are normally supplied complete with our own manual, diaphragm, cylinder or electric actuators, but other types may be offered on request.

SPINDLE Normally made from S17400 Stainless Steel or 316 Stainless Steel with Stainless Steel Vanes. Other materials such as Aluminium Bronze, Monel, Alloy 20 and Ferralium are available.

PACKING This secondary seal is a viton 'O' Ring, acting as a back-up to the primary seal which is incorporated in the liner. It also prevents ingress of dirt from the atmosphere.

PACKING COVER Zinc plated steel.

BODY Solid ring type accurately machined for liner retention, vane and spindle alignment. This ensures positive shut- off combined with lower reliable seating torques. The ring thickness is in excess of the British Standard and ANSI code ratings. The body is normally cast in iron to BS1452 grade 260 and steel to ASTM-A216 grade WCB. Other materials such as Bronze, Aluminium Bronze and Stainless Steel etc., can be supplied.

VANE PINS are supplied in 431 Stainless Steel for standard applications, 316 Stainless Steel with Stainless Steel Vanes and other materials to suit special services. The split end of the taper pin is opened out to prevent any possibility of working loose.

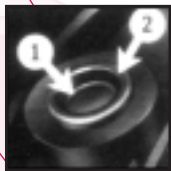
VANE Standard materials for 250mm and larger, are cast iron to BS1452 grade 260, cast steel to ASTM-A216 grade WCB and Stainless Steel to ASTM-A351 grade CF8M whilst smaller valves are supplied with Stainless Steel AS7M - A351 grade CF8M vanes as standard. Iron and steel vanes are nickel plated as standard with other coatings available on request. Vanes can also be supplied in Aluminium Bronze, Alloy 20, Monel and other castable materials. The streamlined shape provides minimum resistance to flow and the swing through action prevents damage to the liner should the valve overtravel.

LINER Snap-in type which locks into a body recess and is available in various grades of rubber. The liner includes moulded-in primary 'O' ring 1 which prevents leakage along the spindle and in addition an 'O' ring 2 moulded to the liner hub which acts to prevent leakage passing behind the liner. For valves on vacuum service the liner is chemically bonded or vulcanised to the body.

INBOARD BEARINGS PTFE-faced, self lubricating bearings are fitted to provide the high loading, low friction requirements of the Spoolseal Valve.

BLANK END GASKET High quality, non asbestos flat gasket.

BLANK END COVER Zinc-plated steel.



Standard Size Range	-50mm to 600mm
Standard Flange Ratings	-BS4504 PN10, PN16 ANSI 125 & 150
Alternative Flange	-BS4504 PN6, PN25 ANSI 250 & 300 -Ratings on request
Maximum Pressure Ratings	-Bubble tight shut off up to 10 Bars depending upon valve size (see table).
Temperature Range	-Minus 40 °C to 140 °C depending upon liner selected (see table).

SPOOLSEAL VALVE BV 16000



TORQUE AND PRESSURE DROP TABLE

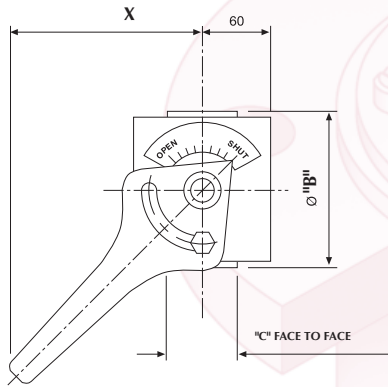
VALVE SIZE MM	SPINDLE SIZE MM	VANE MATERIAL	MAXIMUM PRESSURE DROP (BARS)						TOTAL TORQUE lbs / ins	
			SPINDLE MATERIAL AISI 316			SPINDLE MATERIAL S117400			5BARS	10BARS
			0°	60°	90°	0°	60°	90°		
50	15	IRON	10	10	10	10	10	10	112	121
		ST. STEEL	10	10	10	10	10	10		
80	15	IRON	10	9.72	3.24	10	10	6.48	167	191
		ST. STEEL	10	9.72	3.24	10	10	6.48		
100	15	IRON	10	4.22	1.40	10	8.45	2.80	280	320
		ST. STEEL	10	4.22	1.40	10	8.45	2.80		
125	16	IRON	10	2.48	0.82	10	4.96	1.65	427	494
		ST. STEEL	10	2.48	0.82	10	4.96	1.65		
150	20	IRON	10	2.88	0.94	10	5.76	1.89	600	720
		ST. STEEL	10	2.88	0.94	10	5.76	1.89		
200	20	IRON	8	1.29	0.41	8	2.57	0.82	929	1137
		ST. STEEL	8	1.29	0.41	10	2.57	0.82		
225	30	IRON	8	2.94	0.96	8	5.88	1.93	1239	1878
		ST.ST/ STEEL	10	2.94	0.96	10	5.88	1.93		
250	30	IRON	8	2.20	0.72	8	4.41	1.44	1447	2173
		ST.ST/ STEEL	10	2.20	0.72	10	4.41	1.44		
300	30	IRON	8	1.32	0.42	8	2.64	0.85	1770	2822
		ST.ST/ STEEL	10	1.32	0.42	10	2.64	0.85		
350	30	IRON	5	0.90	0.29	5	1.80	0.58	2692	4424
		ST.ST/ STEEL	9	0.90	0.29	10	1.80	0.58		
375	35	IRON	5	1.14	0.37	5	2.28	0.74	3484	5767
		ST.ST/ STEEL	9	1.14	0.37	10	2.28	0.74		
400	35	IRON	5	0.93	0.30	5	1.87	0.60	4008	6686
		ST.ST/ STEEL	6	0.93	0.30	10	1.87	0.60		
450	35	IRON	5	0.63	0.20	5	1.27	0.41	5377	8833
		ST.ST/ STEEL	5	0.63	0.20	10	1.27	0.41		
500	40	IRON	5	0.68	0.22	5	1.29	0.44	7566	12495
		ST.ST/ STEEL	5	0.68	0.22	10	1.29	0.44		
600	40	IRON	2	0.39	0.13	5	.784	0.252	11489	-
		ST.ST/ STEEL	2	0.39	0.13	5	.784	0.252		

Liner Materials	General Service	Temperature Range °C		
		Continuous		Intermittent (iii)
		Min	Max	Max
Nitrile	Water, sea water, oils, natural gas	-30	+100	+120
Ethylene Propylene	LP steam, hot water, ketones, esters, alcohols	-40	+120	+140
Butyl	Water, air, acetone, esters	-30	+100	+110
Neoprene	Some freons, oxygen, some chemicals and solvents	-30	+100	+120
E.P.D.M. (W.R.C. Approved)	Potable water	-40	+120	+140

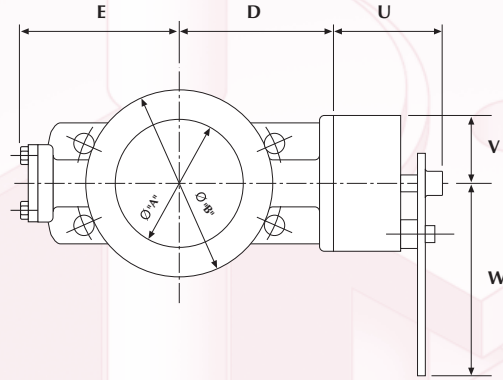
SPOOLSEAL VALVE BV 16000



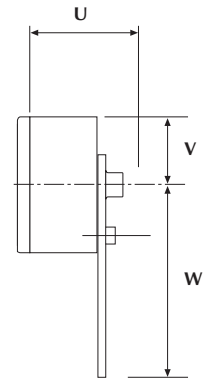
LEVER OPERATED



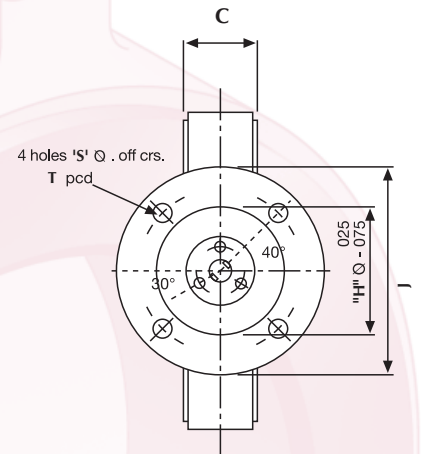
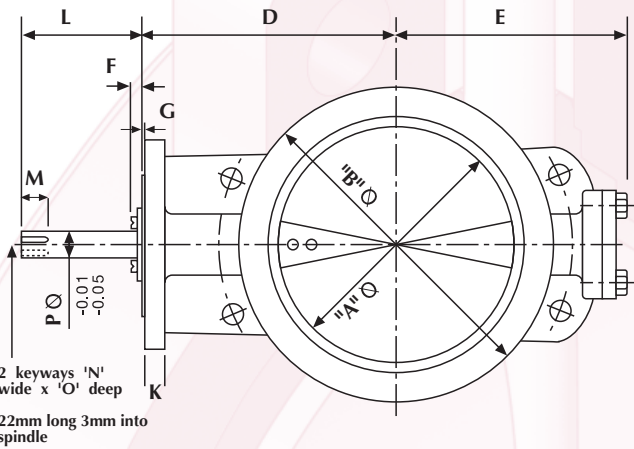
UP TO 100mm ϕ



125mm ϕ AND ABOVE



BARE SHAFT



DIMENSIONS IN MM

NOM BORE	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	S	T	KGS WEIGHT
50	51	92	57	102	95	10	3	67	127	13	102	25	5	2.5	15	11	95	5.0
80	75	124	57	124	120	10	3	67	127	13	102	25	5	2.5	15	11	95	7.5
100	100	152	57	137	133	10	3	67	127	13	102	25	5	2.5	15	11	95	9.5
125	126	184	57	159	142	10	3	108	172	19	102	25	5	2.5	16	13	136	12.5
150	151	207	57	175	161	12	3	108	172	19	102	25	6	3	20	13	136	13.0
200	199	261	63.5	210	190	12	3	108	172	19	102	25	6	3	20	13	136	19.5
225	225	296	76	223	215	12	3	108	172	19	102	25	8	3.5	30	13	136	27.0
250	248	324	76	241	236	12	3	108	172	19	102	25	8	3.5	30	13	136	32.5
300	295	375	76	286	280	12	3	108	172	19	102	25	8	3.5	30	13	136	37.5
350	336	435	76	312	306	12	3	108	172	19	102	25	8	3.5	30	13	136	53.0
375	362	457	84	320	315	14	3	108	172	19	102	25	10	4	35	13	136	60.0
400	387	483	84	343	336	14	3	108	172	19	102	25	10	4	35	13	136	72.5
450	441	533	84	362	364	14	3	108	172	19	102	25	10	4	35	13	136	80.0
500	492	584	97	400	398	14	3	108	172	19	102	25	12	4	40	13	136	95.0
600	582	692	109	470	452	14	3	108	172	22	102	25	12	4	40	13	136	160.0

LEVER OPERATED

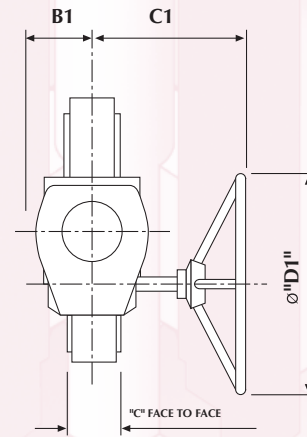
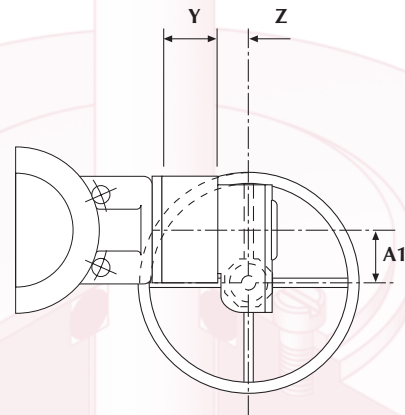
U	V	W	X	KGS WEIGHT
105	64	171	171	5.0
105	64	171	171	5.0
105	64	171	171	5.0
110	86	261	261	8.0
110	86	261	261	8.0

SPOOLSEAL VALVE BV 16000



GEARBOX OPERATED

NOM BORE	GEARBOX	MAX PRESSURE	Y	Z	A1	B1	C1	D1	KGS WEIGHT
150	M10-R8	10	78.5	35	52	86	169	203	7.8
200	M10-R8	10	78.5	35	52	86	169	203	7.8
225	M10-R8	10	78.5	35	52	86	169	203	7.8
250	M10-R8	10	78.5	35	52	86	169	203	7.8
300	M10-R10	10	78.5	35	52	86	181	254	9
350	M10-R12	10	78.5	35	52	86	193	305	10
375	M12-R12	10	78.5	42	67	86	219	305	12.5
400	M12-R12	5	78.5	42	67	86	219	305	12.5
400	M12-R14	10	78.5	42	67	86	230	356	13.5
450	M12-R18	5	78.5	42	67	86	262	457	15
450	M14-R18	10	78.5	50	89.5	99	279	457	23
500	M14-R18	10	78.5	50	89.5	99	279	457	23
600	M14-R18	5	78.5	50	89.5	99	279	457	23



FLOW COEFFICIENTS CV

Valve Sizes

Angle of opening (CV)

	inches	0° C	10° C	20° C	30° C	40° C	50° C	60° C	70° C	80° C	90° C
50	2	0	2.3	8.0	16.5	30	50	79	122	171	192
80	3	0	4.9	16.6	34	61	101	161	253	354	398
100	4	0	9.2	31.6	65	117	193	307	480	680	750
125	5	0	14.5	50	102	183	304	484	756	1058	1190
150	6	0	21	71	146	264	438	695	1087	1520	1710
200	8	0	37	126	259	465	771	1224	1910	2677	2985
225	9	0	47	160	327	591	980	1555	2430	3400	3800
250	10	0	58	196	402	724	1200	1905	2976	4170	4660
300	12	0	82	279	572	1032	1710	2714	4248	5950	6690
350	14	0	104	357	731	1314	2179	3460	5435	7560	8400
375	15	0	121	417	853	1537	2550	4050	6250	8730	9820
400	16	0	139	475	974	1753	2907	4615	7145	10020	11210
450	18	0	177	609	1246	2247	3725	5910	9220	12930	14430
500	20	0	217	746	1526	2751	4560	7240	11245	15560	17570
600	24	0	310	1065	2180	3928	6512	10340	16080	22490	25150

Longlands Industrial Estate, Ossett, West Yorkshire, WF5 9JF Tel: 01924 275931 Fax: 01924 280026

SPV.001 1/99