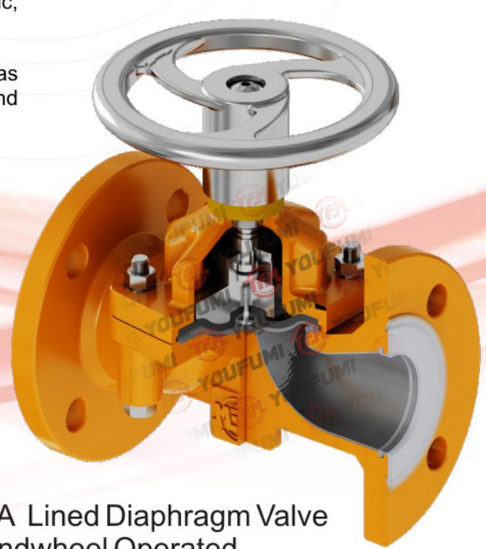
Lined Diaphragm Valve

Patent No.:ZL01210923.1
ZL201420018098.9

※Product Description

- Youfumi lined diaphragm valve is ideally suited for shut-off, flow control and throttling of corrosive process media in either liquid or gaseous state. Its main features are heavy-duty, robust construction, maintenance-free, easy replacement of components on site. Convenient, flexible and accurate open or close.
- It can sustain any corrosive medium in addition to the “molten alkali metals and fluorine elements”. It is ideal products used in chlor-alkali, industrial in organic chemicals, metal and mining, nitrogen and phosphatic fertilizers, petroleum refining, pharmaceutical etc.
- It is not applicable for diaphragm used in medium with hard particles, which will cause diaphragm damage and leakage.
- The working temperature cannot exceed the specified range.
- Open the diaphragm too frequent will influence the sealing performance.
- Lining material: PFA, FEP, PO etc.
- Operation methods: manual, worm gear, electric, pneumatic and hydraulic actuator.
- Youfumi lined diaphragm valves are available as per the needs of applications in additional sizes and other than standard materials.

PFA Lined Diaphragm Valve
Pneumatic Operated



PFA Lined Diaphragm Valve
Handwheel Operated

Lined Diaphragm Valve

YOUFUMI

※Material Specification

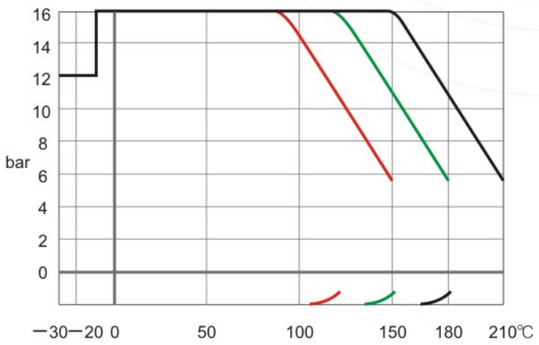
No.	Name	Materials		
1	Lock screw	A320 B8	A320 B8	A193 B8M
2	Body bolt	A320 B8	A320 B8	A193 B8M
3	Handwheel	A216 WCB	A351 CF8	
4	Sleeve	SS304		
5	Bonnet	A216 WCB	A351 CF8	A351 CF8M
6	Stem nut	Brass		
7	Stem	SS420	A182 304	A182 316
8	Adjustable pad	SS304		
9	Disc	A216 WCB	A351 CF8	A351 CF8M
10	Rubber Diaphragm	EPDM		
11	Diaphragm	PFA FEP		
12	Body	A216 WCB+ Lining material	A351 CF8+ Lining material	A351 CF8M+ Lining material
13	Nut	A194 2H	A194 8	A194 8M
14	Flat washer	1045	A182 304	A182 316
15	Outer hexagonal screw	A193 B7	A320 B8	A193 B8M

※Technical Specification

Design & Manufacture Standard		HG/T 3704, GB/T 12239			MSS-SP-88
Face-to-face Dimension Standard		HG/T 3704, GB/T 12221			EN 558-1
Flange Standard		HG/T 20592, GB/T 9119			ASME B16.5, JIS B2220
Inspection & Test Standard		GB/T 13927, JB/T 9092			API 598
Nominal Diameter		DN15~DN300			1/2"~12"
Nominal Pressure (MPa)		0.6	1.0	1.6	150Lb
Pressure Test (MPa)	Shell Test	0.9	1.5	1.5	1.5
	High Pressure Sealing	0.66	1.1	1.1	1.1
	Low Pressure Sealing	0.6	0.6	0.6	0.6
Temperature Range (°C)		PFA: −30~200		FEP: −30~150	PO: −10~80
Applicable Medium		Strong corrosive medium i.e. hydrochloric acid, Nitric acid, Hydrofluoric acid, Liquid chlorine, Sulfuric Acid and Aqua regia etc.			

Note: Test standard refers general valve standard, high pressure should be customized for processing.

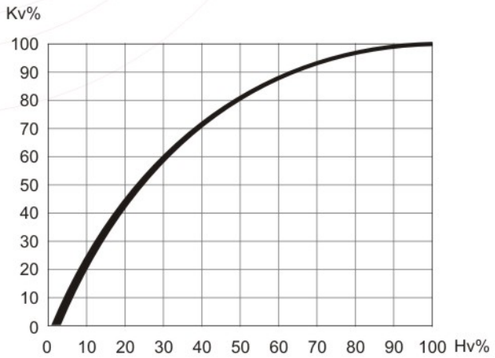
※Pressure-Temperature Curve



Vacuum
0.1mbar

Note: PFA PTFE FEP

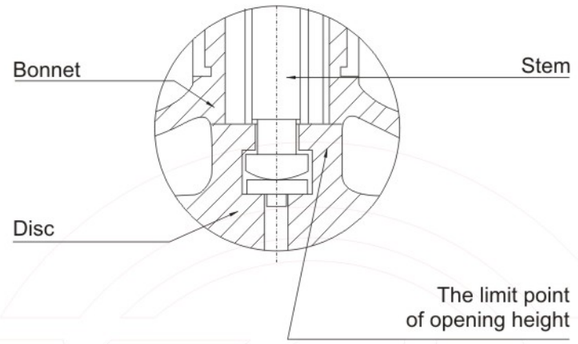
※Flow Characteristic



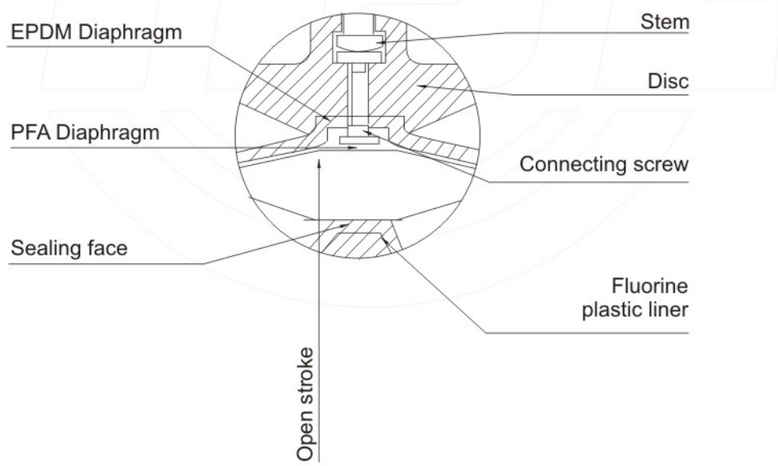
Valve Position Angle

1Cv=1.167Kv

※Structure Features

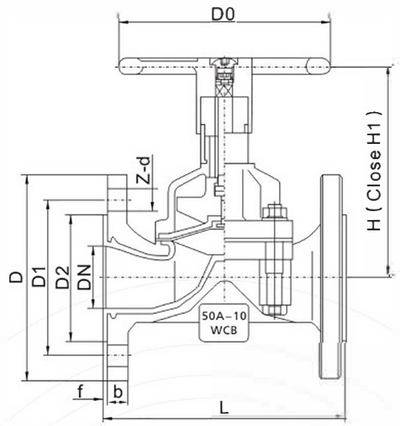


(1)Limit principle



(2)Sealing principle

GB Lined Diaphragm Valve



HG/T 20592 PN6

Unit:mm

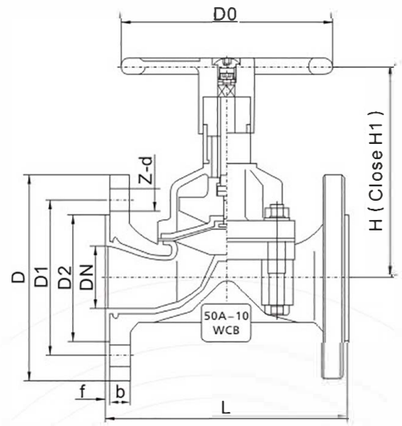
DN	L	D	D1	D2	Z-d	f	b	H	H1	D0	Wt(Kg)
15	125	80	55	40	4-12	2.5	10	116	126	120	2.8
20	135	90	65	50	4-12	2.5	12	116	126	120	3
25	145	100	75	60	4-12	2.5	12	127	140	140	4.5
32	160	120	90	70	4-14	2.5	12	132	149	140	6.5
40	180	130	100	80	4-14	3	12	155	175	160	8
50	210	140	110	90	4-14	3	12	162	188	180	10
65	250	160	130	110	4-14	3.5	12	196	230	220	16
80	300	190	150	125	4-18	3.5	14	220	262	250	21
100	350	210	170	145	4-18	4	14	272	325	280	30
125	400	240	200	175	8-18	4	16	332	397	320	52
150	460	265	225	200	8-18	4	16	372	450	360	70
200	570	320	280	255	8-18	4.5	18	496	600	400	112
250	680	375	335	310	12-18	4.5	20	570	700	450	220

HG/T 20592 PN10

15	125	95	65	45	4-14	2.5	14	116	126	120	3
20	135	105	75	55	4-14	2.5	16	116	126	120	3.4
25	145	115	85	65	4-14	2.5	16	127	140	140	5.5
32	160	140	100	78	4-18	2.5	16	132	149	140	7
40	180	150	110	85	4-18	3	16	155	175	160	9
50	210	165	125	100	4-18	3	16	162	188	180	12.5
65	250	185	145	120	4-18	3.5	16	196	230	220	20
80	300	200	160	135	4-18	3.5	18	220	262	250	26
100	350	220	180	155	8-18	4	18	272	325	280	36
125	400	250	210	185	8-18	4	20	332	397	320	60
150	460	285	240	210	8-23	4	20	372	450	360	80
200	570	340	295	265	8-23	4.5	22	496	600	400	125
250	680	395	350	320	12-23	4.5	24	570	700	450	240

Note: For more size please consult factory.

ANSI Lined Diaphragm Valve



HG/T 20592 PN16

Unit:mm

DN	L	D	D1	D2	Z-d	f	b	H	H1	D0	Wt(Kg)
15	125	95	65	45	4-14	2.5	14	116	126	120	2.8
20	135	105	75	55	4-14	2.5	16	116	126	120	3
25	145	115	85	65	4-14	2.5	16	127	140	140	4.5
32	160	140	100	78	4-18	3.5	16	132	149	140	6.5
40	180	150	110	85	4-18	3	16	155	175	160	8
50	210	165	125	100	4-18	3	16	162	188	180	10
65	250	185	145	120	4-18	3.5	16	196	230	220	16
80	300	200	160	135	4-18	3.5	18	220	262	250	21
100	350	220	180	155	8-18	4	18	272	325	280	30
125	400	250	210	185	8-18	4	20	332	397	320	52
150	460	285	240	210	8-23	4	20	372	450	360	70
200	570	340	295	265	12-23	4.5	22	496	600	400	112
250	680	405	355	320	12-25	4.5	24	570	700	450	220

ASME B16.5 Class150

1/2	125	89	60.5	35	4-16	2.5	8	116	126	120	3
3/4	135	98	70.0	43	4-16	2.5	8.9	116	126	120	3.4
1	145	108	79.5	51	4-16	2.5	9.6	127	140	140	5.5
11/4	160	117	89.0	64	4-16	3.5	11.2	132	149	140	7
11/2	180	127	98.5	73	4-19	3	12.7	155	175	160	9
2	210	152	120.5	92	4-19	3	14.3	162	188	180	12.5
21/2	250	178	139.5	105	4-19	3.5	15.9	196	230	220	20
3	300	190	152.5	127	4-19	3.5	17.5	220	262	250	26
4	350	229	190.5	157	8-18	4	22.3	272	325	280	36
5	400	254	216.0	186	8-18	4	22.3	332	397	320	60
6	460	279	241.5	216	8-23	4	23.9	372	450	360	80
8	570	343	298.5	270	8-23	4.5	27	496	600	400	125
10	680	406	362.0	324	12-23	4.5	28.6	570	700	450	240