

# Lined Ball Valve

Patent No.: ZL201430041442.1

## ✕Product Description

- Two pieces full port standard lined ball valves offer high stability, rigidity and eliminating potential leak path.
- Full port design minimizes pressure losses and increases flow capacities thus reducing energy and pumping costs.
- Full bore design almost no fluid resistance, and good shut-off performance.
- It features zero leakage, maintenance-free, one-piece stem and ball design, high sealing performance and can be used under full vacuum service.
- Lower pressure drop and high flow characterized the efficiency of Youfumi lined ball valves.
- It can work as on-off or control valve.
- 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.
- Lining material: PFA, FEP, GXPO etc.
- Operation methods: manual, worm gear, electric, pneumatic and hydraulic actuator.
- Youfumi lined ball valves are available as per the needs of applications in additional sizes and other than standard materials.



Silica Casting Lined Ball Valve



ANSI Lined Ball Valve



Three-Pieces Lined Ball Valve

# A Lined Valve

## Lined Ball Valve

### ※ Material Specification

Code	Name	Materials		
1	Nut	A194 2H	A194 8	A194 8M
2	lever	A216 WCB	A351 CF8 A351 CF8M	A351 CF3 A351 CF3M
3	Locating Plate	25# SS304		
4	Body bolt	A193 B7	A320 B8	A193 B8M
5	Gland	A216 WCB	A351 CF8 A351 CF8M	A351 CF3 A351 CF3M
6	Packing	PTFE		
7	Stuffing box	A216 WCB+ Lining material	A351 CF8 CF8M +Lining material	A351 CF3 CF3M +Lining material
8	Body bolt	A193 B7	A320 B8	A193 B8M
9	Body	A216 WCB+ Lining material	A351 CF8 CF8M +Lining material	A351 CF3 CF3M +Lining material
10	Seat	PTFE RPTFE PEEK		
11	Ball/stem	A216 WCB+ Lining material	A351 CF8 CF8M +Lining material	A351 CF3 CF3M +Lining material
12	Bonnet	A216 WCB+ Lining material	A351 CF8 CF8M +Lining material	A351 CF3 CF3M +Lining material

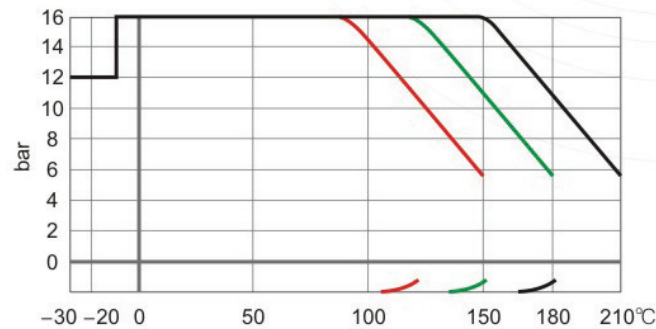


### ※ Technical Specification

Design & Manufacture Standard		HG/T 3704, GB/T 12237		API 6D
Face-to-face Dimension Standard		HG/T 3704, GB/T 12221		ASME B16.10
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~DN350		1/2"~14"
Nominal Pressure (MPa)		1.0	1.6	CLASS150
Pressure Test (MPa)	Shell Test	1.5	1.5	1.5
	High Pressure Sealing	1.1	1.1	1.1
	Low Pressure Sealing	0.6	0.6	0.6
Temperature Range (°C)		PFA: -30~200	FEP: -30~150	GXPO: -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.

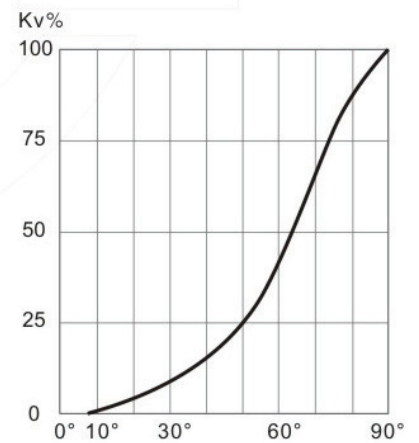
### ※ Pressure-Temperature Curve



Vacuum  
0.1mbar

Note: — PFA — PTFE — FEP

### ※ Flow Characteristic

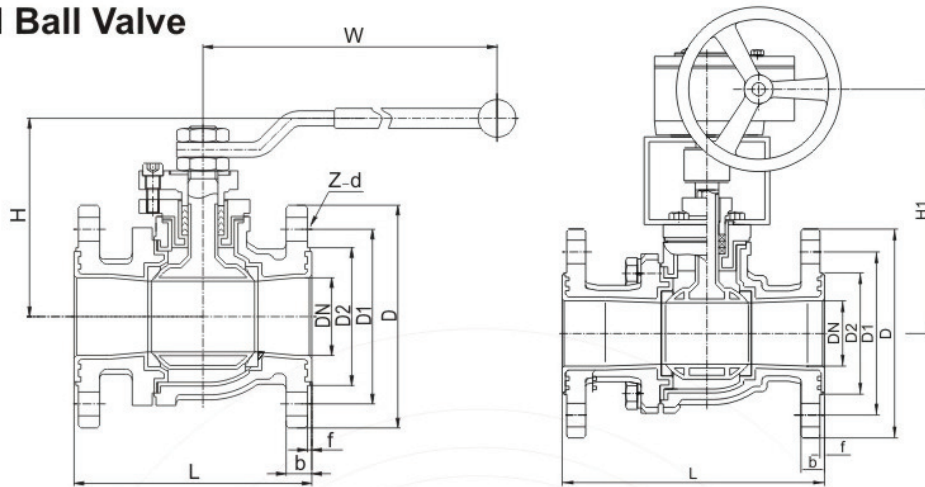


Valve Position Angle  $1Cv=1.167Kv$

# A Lined Valve

## Lined Ball Valve

### ANSI Lined Ball Valve



### ASME B16.5 Class150

Unit:mm

NPS	L	D	D1	D2	Z-d	f	b	H	W	H1	Wt(Kg)
1/2	110	89	60.5	35	4-16	2	12	100	140	-	3.5
3/4	117	98	70.0	43	4-16	2	12	105	160	-	4
1	127	108	79.5	51	4-16	2	12	110	200	-	5.5
1 1/4	140	117	89.0	64	4-16	2	13	130	200	-	7
1 1/2	165	127	98.5	73	4-16	2	15	135	220	-	9
2	178	152	120.5	92	4-19	2	16	145	220	-	15.5
2 1/2	190	178	139.5	105	4-19	2	18	155	350	-	19.5
3	203	190	152.5	127	4-19	2	19	210	400	340	30
4	229	229	190.5	157	8-19	2	24	235	400	360	40
5	254	254	216.0	186	8-22	3	24	255	550	405	57
6	267	279	241.5	216	8-22	3	26	285	550	425	73.5
8	292	343	298.5	270	8-22	3	29	328	-	505	121
10	330	406	362.0	324	12-25	4	31	370	-	540	159

### JIS B2220 10K

Unit:mm

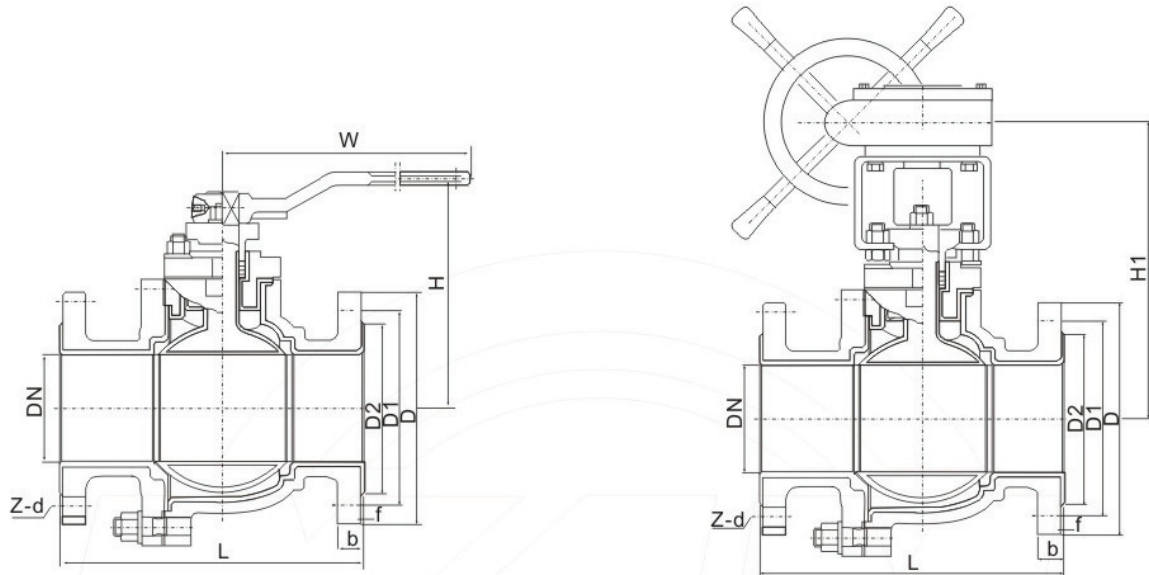
DN	L	D	D1	D2	Z-d	f	b	H	W	H1	Wt(Kg)
15	110	95	70	51	4-16	2	12	100	140	-	3.5
20	117	100	75	56	4-16	2	12	105	160	-	4
25	127	125	90	67	4-19	2	12	110	200	-	5.5
32	140	135	100	76	4-19	2	13	130	200	-	7
40	165	140	105	81	4-19	2	15	135	220	-	9
50	178	155	120	96	4-19	2	16	145	220	-	15.5
65	190	175	140	116	4-19	2	18	155	350	-	19.5
80	203	185	150	126	8-19	2	19	210	400	340	30
100	229	210	175	151	8-19	2	24	235	400	360	40
125	254	250	210	182	8-19	2	24	255	550	405	57
150	267	280	240	212	8-23	3	26	285	550	425	73.5
200	292	330	290	262	8-23	3	29	328	-	505	121
250	330	400	355	325	12-23	3	31	370	-	540	159
					12-25	4					

Note: for more size please consult factory.

# A Lined Valve

## Lined Ball Valve

### GB Lined Ball Valve



#### HG/T 20592 PN10

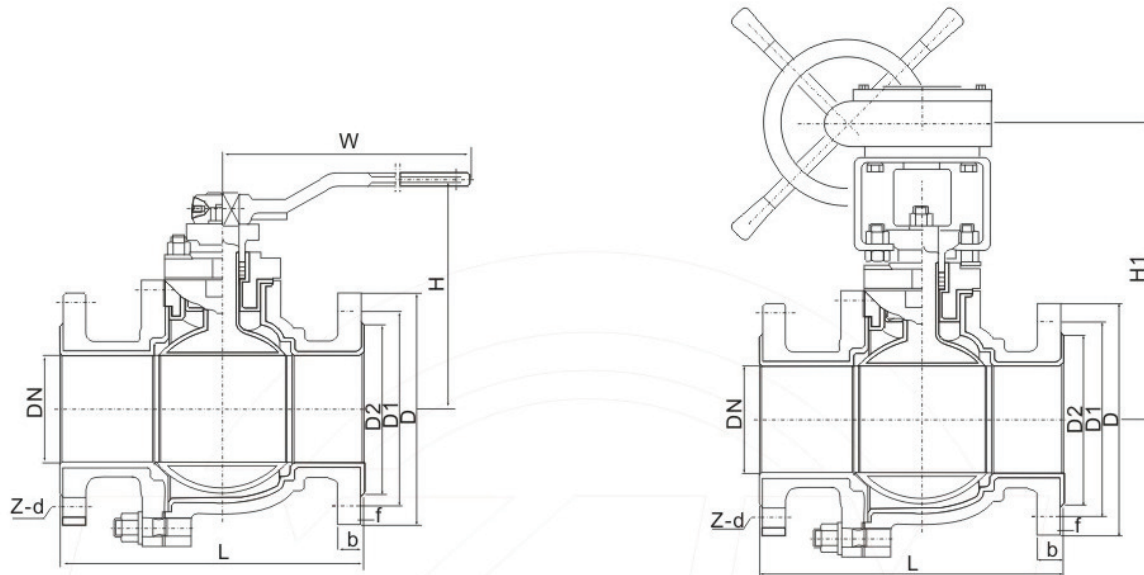
Unit:mm

DN	L	D	D1	D2	Z-d	f	b	H	W	H1	Wt(Kg)
15	132	95	65	45	4-14	2	14	140	100	-	3.5
20	142	105	75	55	4-14	2	14	160	105	-	4
25	150	115	85	65	4-14	2	14	200	110	-	5.5
32	165	140	100	78	4-18	3	16	200	130	-	7
40	180	150	110	85	4-18	3	16	220	135	-	9
50	200	165	125	100	4-18	3	16	220	145	-	15.5
65	220	185	145	120	4-18	3	18	350	155	-	19.5
80	250	200	160	135	8-18	3	20	400	210	340	30
100	280	220	180	155	8-18	3	20	400	235	360	40
125	320	250	210	185	8-18	3	22	550	255	405	56
150	360	285	240	210	8-23	3	24	550	285	425	72
200	400	340	295	265	8-23	3	26	-	328	505	119
250	450	395	350	320	12-23	4	28	-	370	540	155
300	500	445	400	368	12-23	4	29	-	-	-	202
350	610	505	460	428	16-23	5	29	-	-	-	245

Note: for more size please consult factory.

# A Lined Valve Lined Ball Valve

## GB lined Ball Valve



### HG/T 20592 PN16

Unit:mm

DN	L	D	D1	D2	Z-d	f	b	H	W	H1	Wt(Kg)
15	132	95	65	45	4-14	2	15	140	100	-	3.5
20	142	105	75	55	4-14	2	16	160	105	-	4
25	150	115	85	65	4-14	2	16	200	110	-	5.5
32	165	140	100	78	4-18	3	16	200	130	-	7
40	180	150	110	85	4-18	3	17	220	135	-	9
50	200	165	125	100	4-18	3	18	220	145	-	15.5
65	220	185	145	120	4-18	3	20	350	155	-	19.5
80	250	200	160	135	8-18	3	22	400	210	340	30
100	280	220	180	155	8-18	3	24	400	235	360	40
125	320	250	210	185	8-18	3	26	550	255	405	57
150	360	285	240	210	8-23	3	28	550	285	425	73.5
200	400	340	295	265	12-23	3	30	-	328	505	121
250	450	405	355	320	12-25	4	30	-	370	540	159
300	500	460	410	375	12-25	4	30	-	-	-	202
350	610	520	470	435	16-25	5	34	-	-	-	250

### HG/T 20592 PN25

Unit:mm

DN	L	D	D1	D2	Z-d	f	b	H	W	H1	Wt(Kg)
15	140	95	65	45	4-14	2	16	100	140	-	3.5
20	152	105	75	55	4-14	2	16	105	160	-	4
25	165	115	85	65	4-14	2	16	110	200	-	5.5
32	178	140	100	78	4-18	3	18	130	200	-	7
40	190	150	110	85	4-18	3	18	135	220	-	9
50	216	165	125	100	4-18	3	20	145	220	-	15.5
65	241	185	145	120	8-18	3	22	155	350	-	19.5
80	283	200	160	135	8-18	3	22	210	400	340	30
100	305	235	190	160	8-23	3	24	235	400	360	44
125	381	270	220	188	8-25	3	28	255	550	405	63
150	403	300	250	218	8-25	3	30	285	550	425	79
200	419	360	310	278	12-25	3	34	328	-	505	124
250	457	425	370	332	12-30	4	36	370	-	540	162
300	500	485	490	390	16-30	4	42	510	-	-	220