Lined Ball Valve

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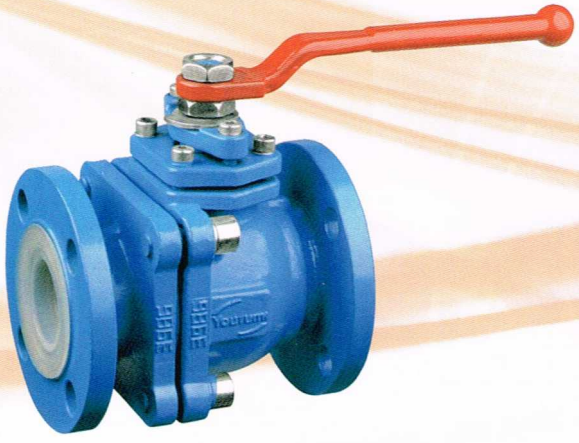
Patent No.: ZL201430041442.1

※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, PO 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.

JIS PFA Lined Ball Valve



ANSI PFA Lined Ball Valve

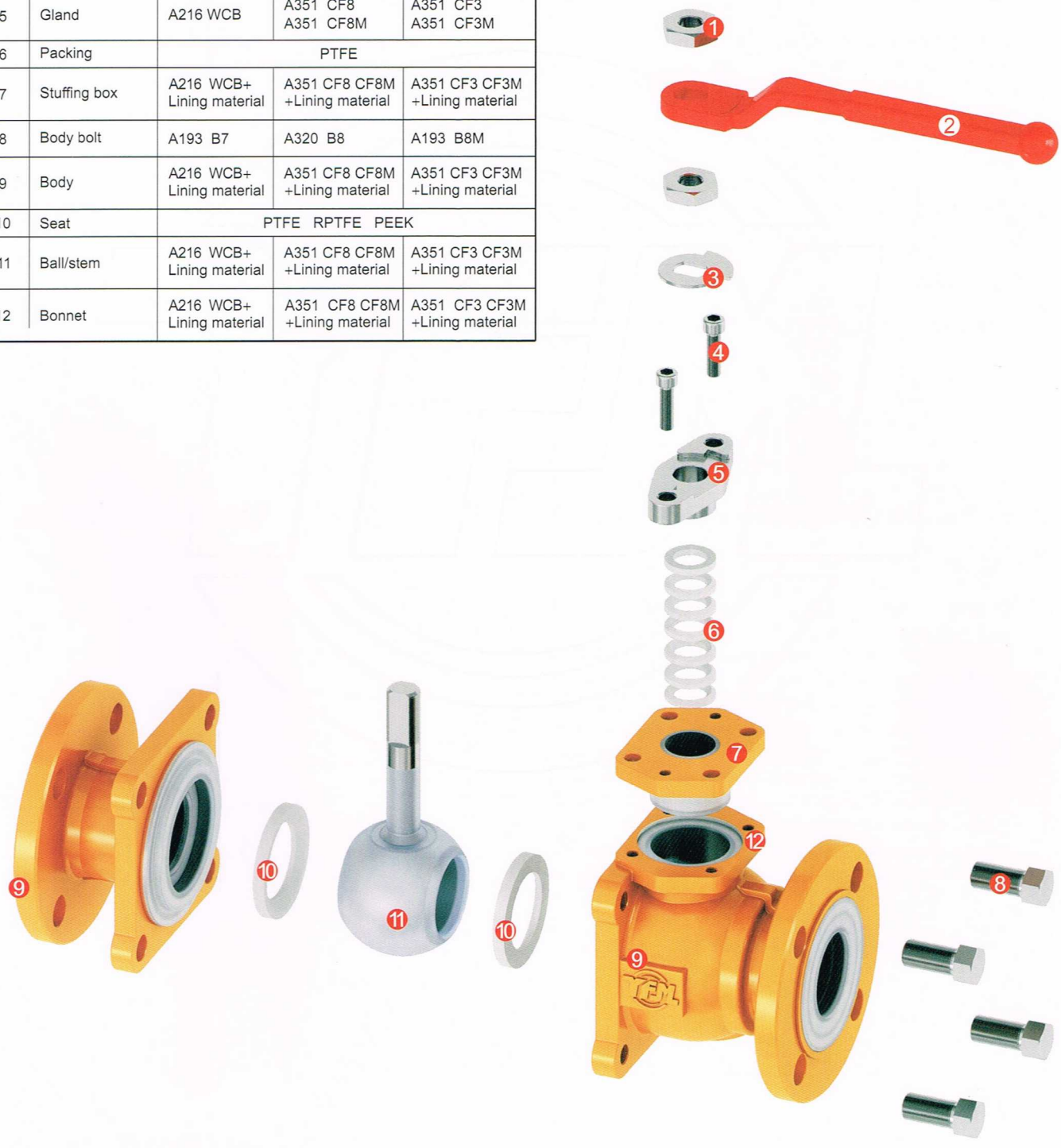
Three-Pieces Lined Ball Valve

Lined Ball Valve

YOUFUMI fluid system

※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



Lined Ball Valve

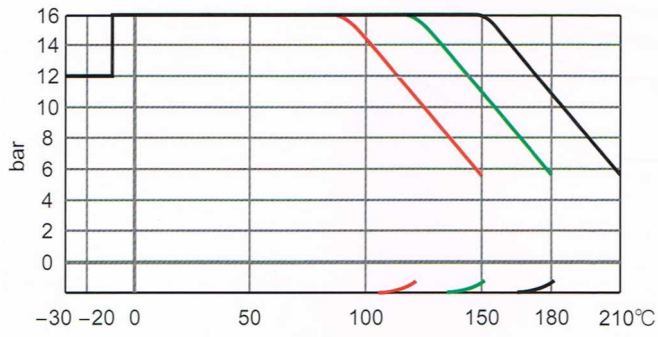
YOUFUMI fluid system

※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	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.

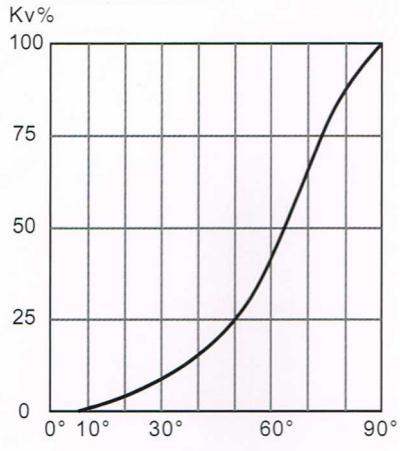
※Pressure-Temperature Curve



Vacuum
0.1mbar

Note: PFA PTFE FEP

※Flow Characteristic



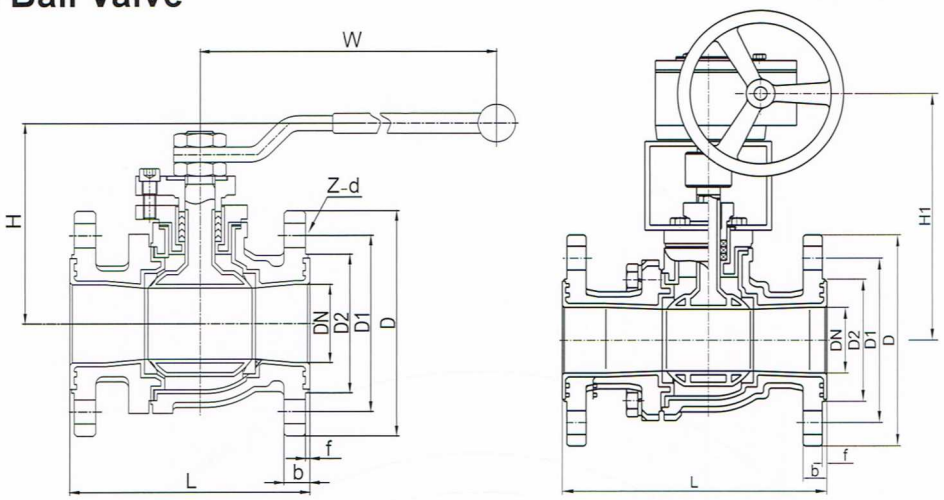
Valve Position Angle 1Cv=1.167Kv

Lined Ball Valve

YOUFUMI

fluid system

ANSI Lined Ball Valve



ASME B16.5 Class150

Unit:mm

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

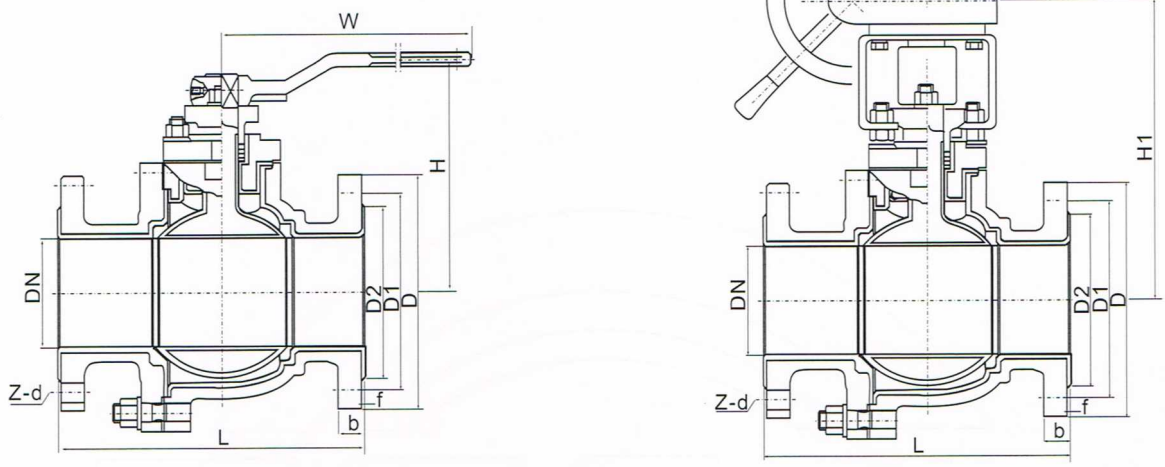
Unit:mm

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

Note: For more size please consult factory.

Lined Ball Valve

GB Lined Ball Valve



HG/T 20592 PN6

Unit:mm

DN	L	D	D1	D2	Z-d	f	b	W	H	H1	Wt(Kg)
15	132	85	55	40	4-11	2	12	140	100	-	3.5
20	142	90	65	50	4-11	2	14	160	105	-	4
25	150	100	75	60	4-11	2	14	200	110	-	5.5
32	165	120	90	70	4-14	3	16	200	130	-	7
40	180	130	100	80	4-14	3	16	220	135	-	9
50	200	140	110	90	4-14	3	16	220	145	-	15.5
65	220	160	130	110	4-14	3	16	350	155	-	19.5
80	250	190	150	125	4-18	3	16	400	210	340	30
100	280	210	170	145	4-18	3	18	400	235	360	40
125	320	240	200	175	8-18	3	18	550	255	405	56
150	360	265	225	200	8-18	3	20	550	285	425	72
200	400	320	280	255	8-18	3	22	-	328	505	119
250	450	375	335	310	12-18	4	24		370	540	155
300	500	440	395	365	12-22	4	24	-	-	-	202
350	610	490	445	415	12-22	5	24	-	-	-	245

HG/T 20592 PN10

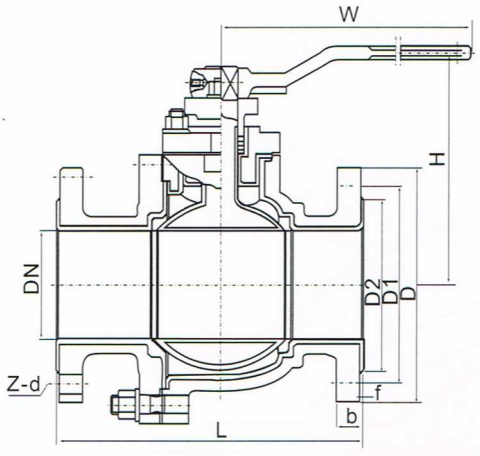
Unit:mm

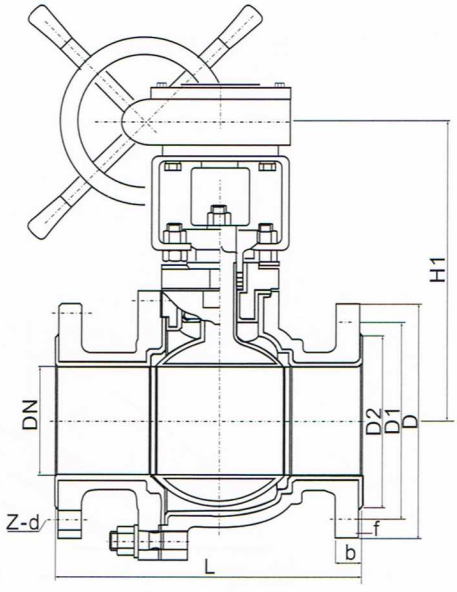
15	132	95	65	45	4-14	2	14	140	100	-	3.5
20	142	105	75	55	4-14	2	14	160	105	-	4
25	150	115	85	65	4-14	2	14	200	110	-	5.5
32	165	140	100	78	4-18	3	16	200	130	-	7
40	180	150	110	85	4-18	3	16	220	135	-	9
50	200	165	125	100	4-18	3	16	220	145	-	15.5
65	220	185	145	120	4-18	3	18	350	155	-	19.5
80	250	200	160	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.

Lined Ball Valve

GB lined Ball Valve





HG/T 20592 PN16

Unit:mm

DN	L	D	D1	D2	Z-d	f	b	W	H	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

15	140	95	65	45	4-14	2	16	140	100	-	3.5
20	152	105	75	55	4-14	2	16	160	105	-	4
25	165	115	85	65	4-14	2	16	200	110	-	5.5
32	178	140	100	78	4-18	3	18	200	130	-	7
40	190	150	110	85	4-18	3	18	220	135	-	9
50	216	165	125	100	4-18	3	20	220	145	-	15.5
65	241	185	145	120	8-18	3	22	350	155	-	19.5
80	283	200	160	135	8-18	3	22	400	210	340	30
100	305	235	190	160	8-23	3	24	400	235	360	44
125	381	270	220	188	8-25	3	28	550	255	405	63
150	403	300	250	218	8-25	3	30	550	285	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

Lined Midsplit Ball Valve

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Patent No.: ZL201420018107.4
YFM ZQ41PFA/FEP

※Product Description

- Youfumi lined midsplit ball valve adopts fluorine plastic as liner and equipped with new type structure of the ball integrated with stem, as well as the unique elastic lip type sealing seat structure to provide itself all the advantages of general ball valve.
- It offers much lower torques and being one of the most accepted and popular valve types.
- It offers economical solutions for the vast majority of chemical applications while maintaining the highest possible degree of performance in terms of in-line leakage.
- They are commonly used in chlor-alkali, industrial in organic chemicals, metal and mining, nitrogen and phosphatic fertilizers, petroleum refining, pharmaceutical, and have superior performance in: chlorine, benzene, bromine, sulfuric acid, nitric acid, hydrochloric acid, phosphoric acid, sea water etc.

PFA Lined Midsplit Ball Valve
Lever Operated

PFA Lined Midsplit Ball Valve
Pneumatic Operated

Lined Midsplit Ball Valve

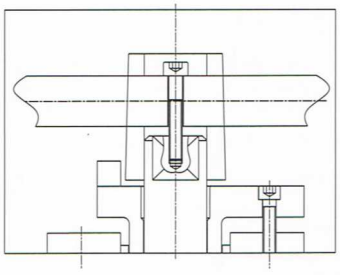
YOUFUMI fluid system

※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	150Lb
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	PO: -10~80
Applicable Medium		Strong corrosive medium i.e. hydrochloric acid, Nitric acid, Hydrofluoric acid, Liquid chlorine, Sulfuric Acid and Aqua regia etc.		

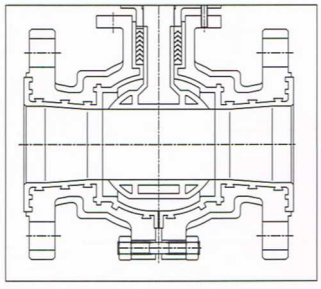
※Structure Features

◆New handle design



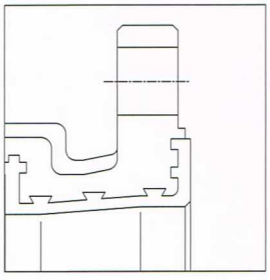
Handle designed to be movable from the operating rod, which can be adjusted to lengthen the rod. Or handle can be fixed on the operating rod to prevent from falling off. Handle seat and locating plate adopt the integral casting molding design, to get rid of traditional fission design, is more convenient for installation and positioning adjustment.

◆Lower torque



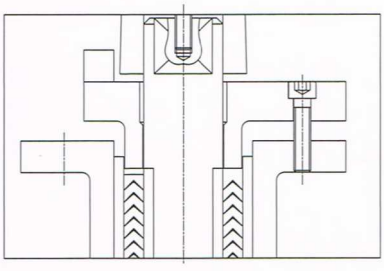
Because of midsplit body, the force on seat can be balanced on left and right side, to avoid uneven stress on body and displacement of ball. The ball is contact with a much smaller surface (seat rings). Consequently the operating torque is much lower, reducing costs, space and weight saving.

◆For vacuum service



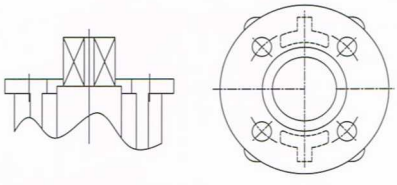
Processing dovetail groove in metal body in which lining locked to resists shrinkage, collapse and blow-out, to strengthen the adhesion between body and liner, ensuring the valve operated in the condition of slight negative pressure and full vacuum.

◆Design of less leakage point



Valve body takes design of stuffing box to replace the fission structure to reduce the leakage point.

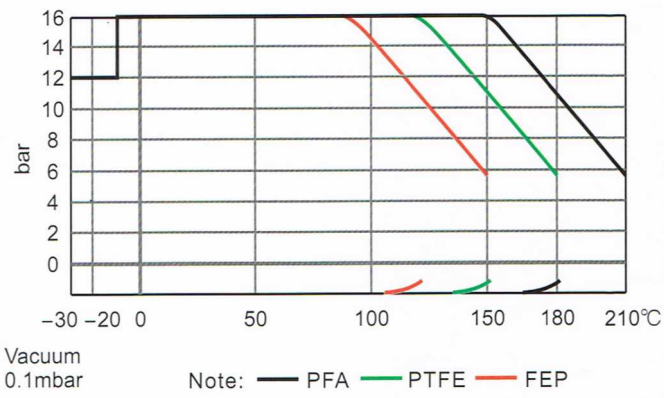
◆ISO 5211 platform design



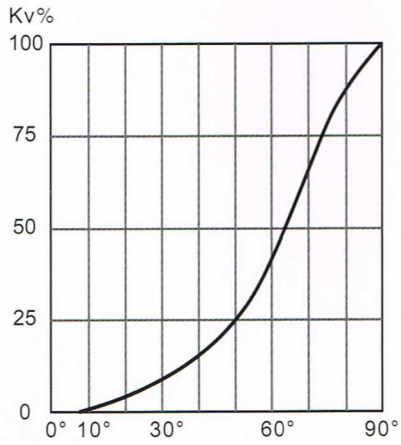
This new type ball valve with high platform fully compliance with ISO 5211 standard, allowing use of standard mounting kits. Nice appearance and tight configuration.

Lined Midsplit Ball Valve

※Pressure-Temperature Curve



※Flow Characteristic



※Instruction

◆ When examine and repair lined ball valve, shut off cut-off valve in front of lined ball valve before open it, and then release the pressure on ball valve body completely, because when ball valve in the closed state, there remain part of medium and pressure in body. If it is electric or pneumatic lined ball valve, disconnect the power and air supply before examine and repair.

Be careful to prevent PTFE seat from damage which would result in leakage when disassemble the ball valve if need to clean it.

When assemble or disassemble the lined ball valve, body bolts and nuts should be fixed and then tighten all nuts to fix at the same time. Otherwise uneven force from nuts will cause damage on flange surface, leading leakage.

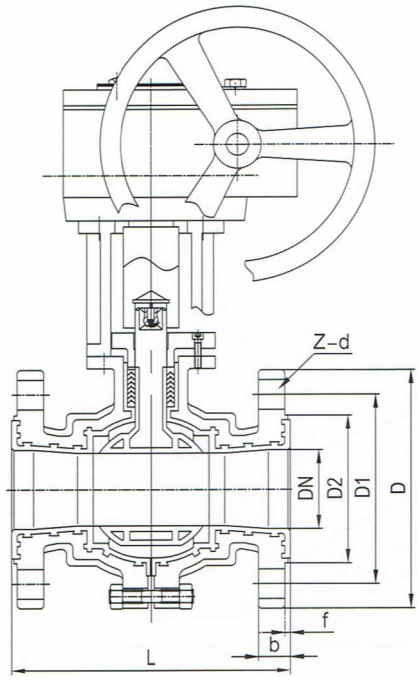
When clean the valve, do not choose the solvent that will corrode or react to the valve parts. When cleaning, thoroughly clean the traces of dirt, grease and other attached objects. If cannot clean with water, under the condition of no damage to the valve body and component, clean it with alcohol and then waiting for the solvent completely evaporated before assembly.

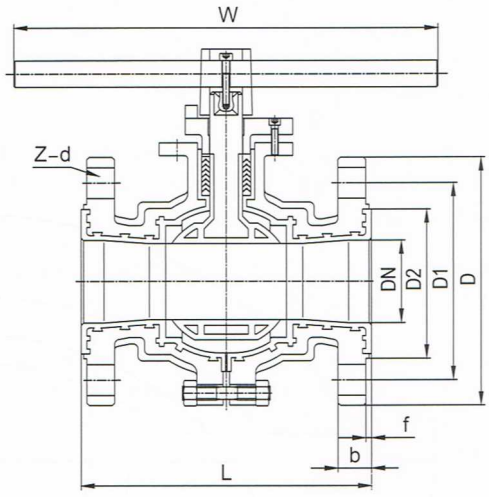
If there is a little leakage in packing position, tighten the stem nut until no leaking and no need to further tighten.

If valves stored in outdoor for a long time, it can lead to valve parts rust and increase the possibility of liner expansion or shrink. Therefore, ball valve must store indoor, or should be rainproof, waterproof, moisture proof and the flange should be protected by cover.

If the lined ball valve stored for more than 12 months, it should be retested to ensure stable performance before installing in line.

Lined Midsplit Ball Valve





HG/T 20592 PN10/PN16

Unit:mm

DN	L	D	D1	D2	Z-d	f	b	W	H	H1
15	132	95	65	45	4-14	2	15	140	100	-
20	142	105	75	55	4-14	2	16	160	105	-
25	150	115	85	65	4-14	2	16	200	110	-
32	165	140	100	78	4-18	3	16	200	130	-
40	180	150	110	85	4-18	3	17	220	135	-
50	200	165	125	100	4-18	3	18	220	145	-
65	220	185	145	120	4-18	3	20	350	155	-
80	250	200	160	135	8-18	3	22	400	210	340
100	280	220	180	155	8-18	3	24	400	235	360
125	320	250	210	185	8-18	3	26	550	255	405
150	360	285	240	210	8-22	3	28	550	285	425

ASME B16.5 Class150

Unit:mm

NPS	L	D	D1	D2	Z-d	f	b	W	H	H1
1/2	110	89	60.5	35	4-16	2	12	140	100	-
3/4	117	98	70.0	43	4-16	2	12	160	105	-
1	127	108	79.5	51	4-16	2	12	200	110	-
11/4	140	117	89.0	64	4-16	2	13	200	130	-
11/2	165	127	98.5	73	4-16	2	15	220	135	-
2	178	152	120.5	92	4-19	2	16	220	145	-
21/2	190	178	139.5	105	4-19	2	18	350	155	-
3	203	190	152.5	127	4-19	2	19	400	210	340
4	229	229	190.5	157	8-19	2	24	400	235	360
5	254	254	216.0	186	8-22	3	24	550	255	405
6	267	279	241.5	216	8-22	3	26	550	285	425

Note: For more size please consult factory.

Lined Three-Way Ball Valve

Patent No.: ZL200520107319.0

FLUID SYSTEM CO.,LTD.
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e-mail: sales@fluidsystem.co.th
tel: 0815607905

※Product Description

- Lined three-way ball valve has compact structure which permits use where space constraints are a concern. It is the best choice for corrosive diverter valve applications.
- High flow capacity with minimal pressure loss through the valve, thereby reducing plant operating costs.
- Floating ball seat design for bubble-tight shutoff across the pressure range.
- Good sealing performance and easy maintenance. Besides applicable for gas and liquid, it works better for medium with high viscosity, fibriform or suspended soft particles.
- Equipped with spring return pneumatic actuator or quarter-turn actuators, it can be applicable for various applications and becomes popular in control or cut-off pipeline system.
- 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, PO etc.
- Operation methods: manual, worm gear, electric, pneumatic and hydraulic actuator.
- Youfumi lined three-way ball valves are available as per the needs of applications in additional sizes and other than standard materials.

PFA Lined Three-way Ball Valve

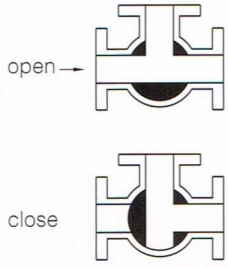
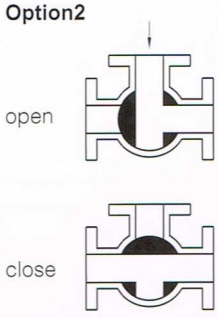
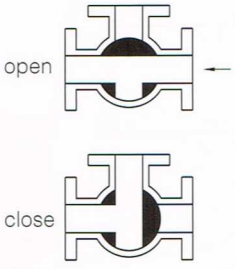
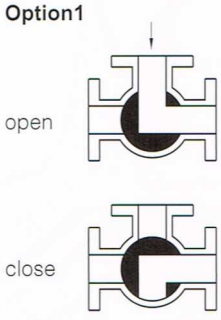
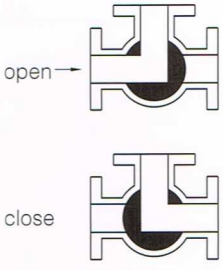
Lined Three-Way Ball Valve

※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 and Test Standard		GB/T 13927, JB/T 9092		API 598
Nominal Diameter		DN25~DN350		1"~14"
Nominal Pressure (MPa)		1.0	1.6	150Lb
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	PO: −10~80
Applicable Medium		Strong corrosive medium i.e. hydrochloric acid, Nitric acid, Hydrofluoric acid, Liquid chlorine, Sulfuric Acid and Aqua regia etc.		

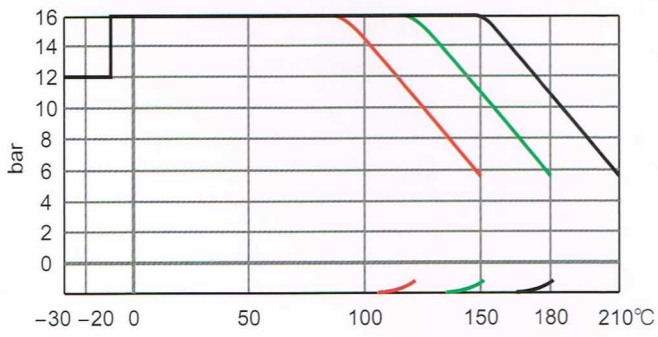
Note: Test standard refers general valve standard, high pressure should be customized for processing.

※Optional Flow Arrangements

◆T-type			◆L-type	
Option1	Option2	Option3	Option1	Option2
				

Note: For more options, please consult factory.

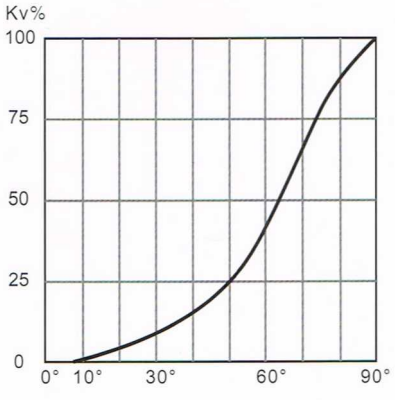
※Pressure-Temperature Curve



Vacuum
0.1mbar

Note: PFA PTFE FEP

※Flow Characteristic

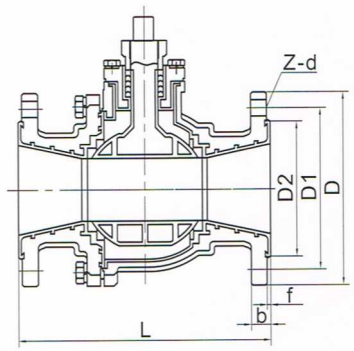


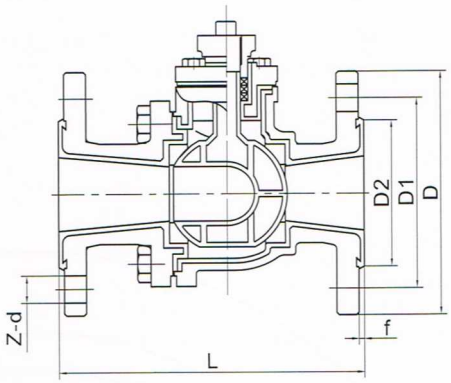
Valve Position Angle 1Cv=1.167Kv

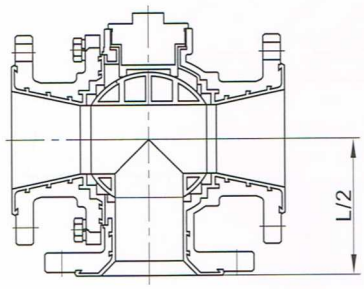
Lined Three-Way Ball Valve

YOUFUMI

GB Lined Three-way Ball Valve







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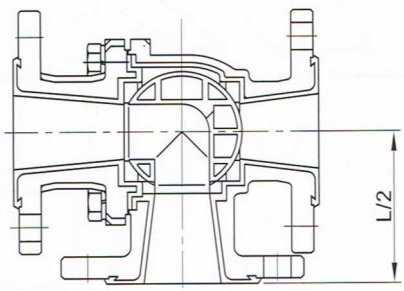


YFMQ44

HG/T 20592 PN10/PN16

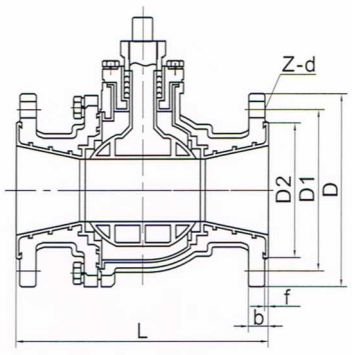
Unit:mm

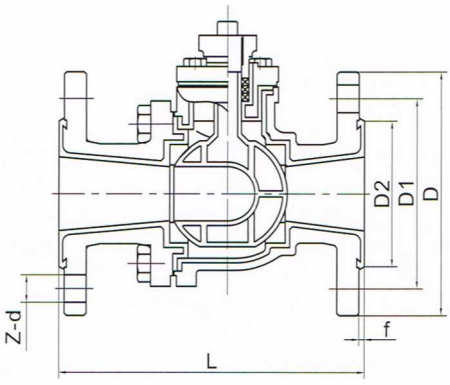
DN	L	D	D1	D2	Z-d	f	b
25	165	120	85	65	4-14	2	14
32	180	140	100	78	4-18	3	16
40	200	150	110	85	4-18	3	16
50	200	165	125	100	4-18	3	16
65	240	185	145	120	4-18	3	18
80	250	200	160	135	8-18	3	20
100	280	220	180	155	8-18	3	20
125	360	250	210	185	8-18	3	22
150	370	285	240	210	8-23	3	24

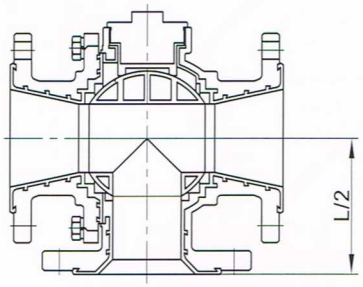
Note: For more size please consult factory.

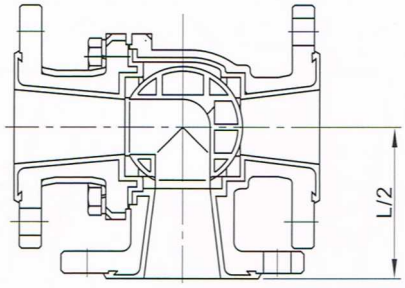
Lined Three-Way Ball Valve

ANSI Lined Three-way Ball Valve









YFMQ45

YFMQ44

ASME B16.5 Class150

Unit:mm

NPS	L	D	D1	D2	Z-d	f	b
1	165	108	79.5	51	4-16	2	12
11/4	180	117	89.0	64	4-16	2	13
11/2	200	127	98.5	73	4-16	2	15
2	200	152	120.5	92	4-19	2	16
21/2	240	178	139.5	105	4-19	2	18
3	250	190	152.5	127	4-19	2	19
4	280	229	190.5	157	8-19	2	24
5	360	254	216.0	186	8-22	3	24
6	370	279	241.5	216	8-22	3	26