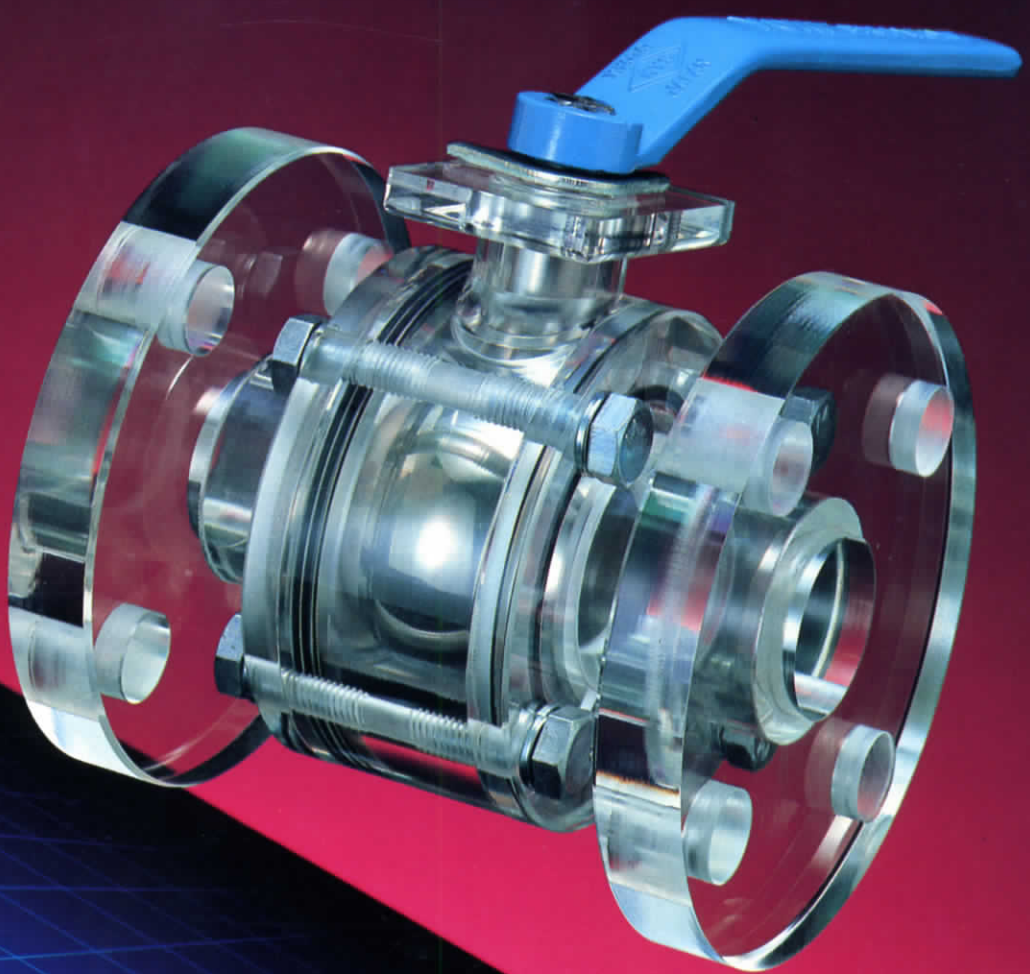
YONE
BALL VALVES



YONE
BALL VALVES

THREE PRINCIPLES OF SALES

- We should always serve customers with sincerity.
- We should always make every effort to create a market (New customers and Diversification) and develop manufactures.
- We should always bear the prosperity of a customer in mind, for which we receive proper consideration. Thereby we endeavor to contribute to the society.

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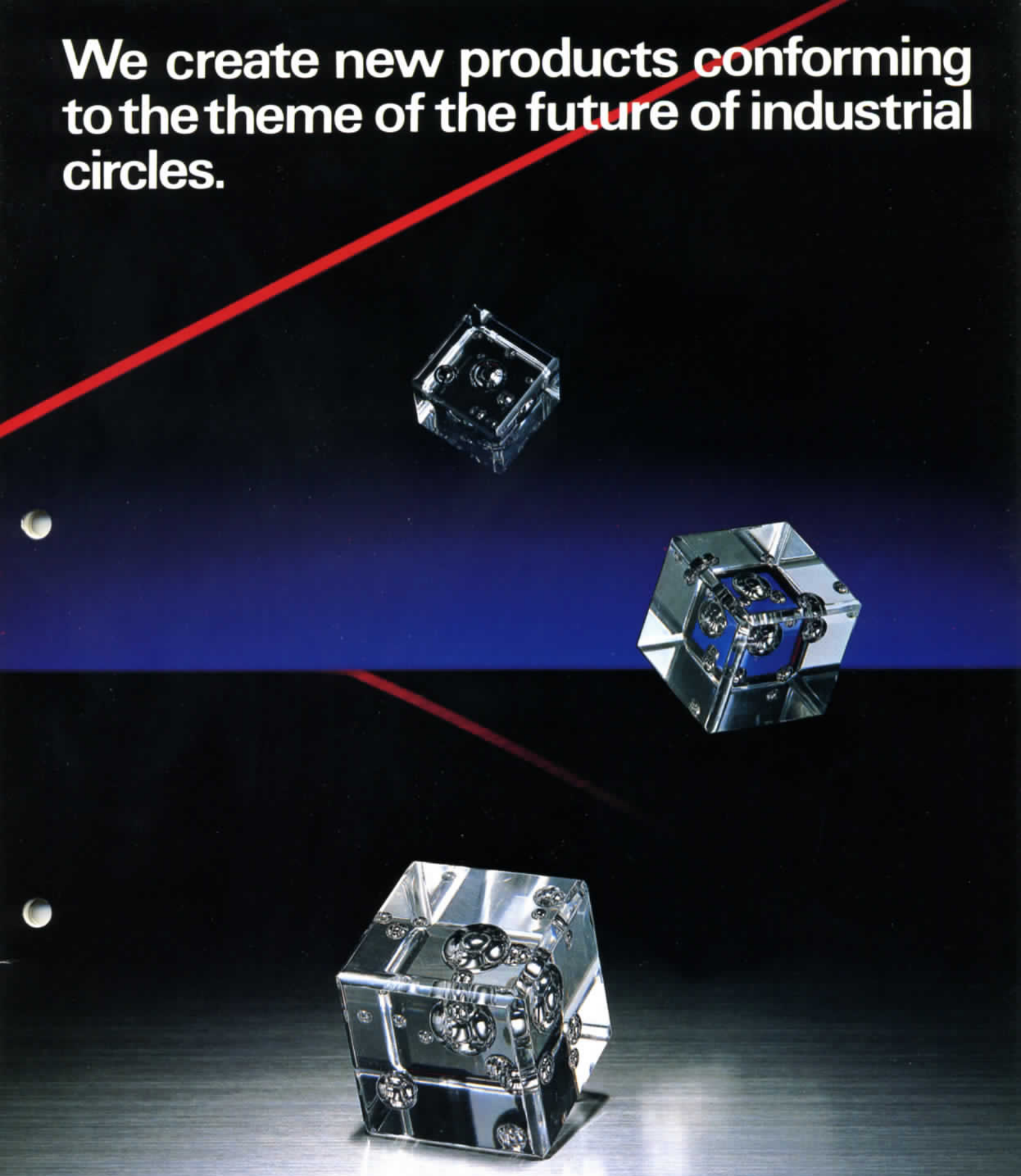
※Dimensions in this catalog may be changed without notice

We create new products conforming to the theme of the future of industrial circles.



A boundless space of the cosmos, like what we call a dreamful canvas we may be drawing a wonderful picture on the cosmos such as this. Those which meet the contemporary needs are created and the perspective narrating a bright future is drawn. Aiming at manufacturing the products to meet the timely needs, we are enjoying the dependence extended to us by the users of every country in the world thanks to our constant research and development of faithful products devoted at all times for the future theme of industrial circles. We would meet the social needs with unlimited passion under the basic conception that a delicate affection set on each product is the starting point of making dependable products.

Features of YONE Ball Valves

❶Locking Device

To limit opening/closing operation, the valve can be locked in the state of being kept open or closed, thus preventing mis-operation or incidental opening/closing.

❷Stem Seal (Fire-Safe)

The stem seal is so designed as to prevent any leakages even in case of fire and, at the same time, to prevent the stem from blow-out even if internal pressure rises in the bottom of the stem.
In addition, every sliding part of the stem is relieved of torque by the use of PTFE-based components.

❸Seat Design

PTFE seat capable of effective sealing even a low-pressure fluid is coming in contact with the surface of ball to seal up the fluid securely.

❹Fire-Safe Mechanism

Where PTFE seat has been burnt out by fire, etc., an integral seat (of metal) provided on the body will act as an auxiliary seat to prevent any excessive leakage.

❺Body Seal

While the seal between the body and cap is applied with asbestos or Viton O-rings, it is designed to a double seal construction by means of metal-to-metal touch to provide for fire-safe requirement.

❻Anti-Static Device

The engaged part of ball and stem is provided with an anti-static device.

❼Precision-Machined Ball

The ball is accurately finished to a true roundness and smooth surface, thus coming in close contact with the seat for secured sealing.

❽Manual or Power Operation.

Besides usual manual operation with levers or gear operators, automatic operation is feasible with pneumatic or electrical actuators.

Fire-safe Mechanism

■Fire-safe Mechanism

In the ball valve, in case of the fire to a degree to fully burn out the respective seal material and seat ring, the valve must have the structure not to cause remarkable leakages from ① gland part and connecting part of valve casing and ② seat part, and further ③ the device to permit valve opening & closing even after the fire.

❶Gland part, connecting part of valve casing

Since the standard product is made by the adoption of the metal touch body seal system, a simple replacement of the gaskets provides a fire-safe type.

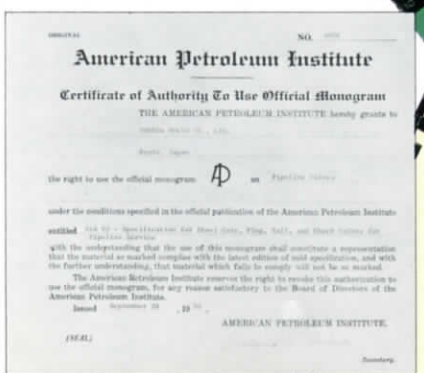
❷Seat part

When the seat has been burnt out, the ball comes into tight contact directly with the metal seat provided on a part of the body to preserve sealing, so that no excessive leakage should occur. (In case of the trunnion type, conversion into the fire safe type is obtained by the change of the trunnion system or the system of the sealing part.)

❸The type which permits opening & closing of valve even after fire

The valve is absolutely safe by the adoption of the spring up prevention stem peculiar to our company. In such cases as the abnormal rise of the pressure inside the body, some loosening or loss of the gland bolt, or buming loss of the gland packing by fire accident, the snap ring of the stem becomes the essential conditions for the safety.

To verify these performances, we are conducting every kind of testing. For example, our product has passed API 607 Fire-Safe Test conducted as an open test at WYLE LABORATORIES (Norco Calif.) being authorized in U.S.A. Our product has also passed such tests as are prescribed in API 607, BS 5146, OCMA FSV1, EXXON BP3-14-1, etc. one after another witnessed by the inspector of Lloyd's Register of Shipping. We intend to carry on hereafter any tests which could meet users' desire.



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with the understanding that the use of this monogram shall constitute a representation that the material so marked complies with the latest edition of said specification, and with the further understanding, that material which fails to comply will not be so marked.

The American Petroleum Institute reserves the right to revoke this authorization to use the official monogram, for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

Issued , 19

AMERICAN PETROLEUM INSTITUTE

(SEAL)

Secretary

API Certificate

Product Item

Item	CAST STEEL									
Class	150		300		600		900		1500	
Face to Face	ANSI B16.10, API 6D & BS5351									
Bore	Full	Reduced	Full	Reduced	Full	Reduced	Full	Reduced	Full	Reduced
Connection	ANSI Flanged Ends (ANSI B16.5)									
Material	ASTM A216–WCB (ASTM A352–LCB)									

Size (inch)	Size (mm)	FS	FV	FS	FV	FS	FV	FS	FV	FS	FV
1/4	8	✲	✲	✲	✲	✲	✲	✲	✲	✲	✲
3/8	10	✲	✲	✲	✲	✲	✲	✲	✲	✲	✲
1/2	15	☆	✲	☆	✲	☆	✲	☆	✲	☆	✲
3/4	20	☆	✲	☆	✲	☆	✲	☆	✲	☆	✲
1	25	☆	✲	☆	✲	☆	✲	☆	✲	☆	✲
1-1/4	32	☆	✲	☆	✲	☆	✲	☆	✲	☆	✲
1-1/2	40	☆	✲	☆	✲	☆	✲	☆	✲	☆	✲
2	50	☆	★	☆	★	☆	★	☆	✲	☆	✲
2-1/2	65	★	֍	★	֍	★	֍	★	֍	★	֍
3	80	★	★	★	★	★	★	★	★	★	★
4	100	★	★	★	★	★	★	★	★	★	★
5	125	★	★	★	★	★	★	★	★	★	★
6	150	★	★	★	★	★	★	★	★	★	★
8	200	★	★	★	★	★	★	★	★	★	★
10	250	★	★	★	★	★	★	★	★	★	★
12	300	★	★	★	★	★	★	★	★	★	★
14	350	★	★	★	★	★	★	★	★	★	★
16	400	★	★	★	★	★	★	★	★	★	★
18	450	★	★	★	★	★	★	★	★		★
20	500	★	★	★	★	★	★	★	★		
22	550	★	★	★	★	★	★	★	★		
24	600	★	★	★	★	★	★	★	★		
Page		6 ~ 9				12 ~ 13		14		15	

★☆ Item to be manufactured. (☆ Screwed ends type is also available.)
֍✲ Item to be manufactured depending on conditions. (✲ Screwed ends type is also available.)
shows gear type as a standard.

Item	STAINLESS STEEL									
Class	150		300		600		900		1500	
Face to Face	ANSI B16.10, API 6D & BS5351									
Bore	Full	Reduced	Full	Reduced	Full	Reduced	Full	Reduced	Full	Reduced
Connection	ANSI Flanged Ends (ANSI B16.5)									
Material	ASTM A351–CF8M (CF8)									

Size (inch)	(mm)	FS	FV	FS	FV	FS	FV	FS	FV	FS	FV
1/4	8	✲	✲	✲	✲	✲	✲	✲	✲	✲	✲
3/8	10	✲	✲	✲	✲	✲	✲	✲	✲	✲	✲
1/2	15	☆	✲	☆	✲	☆	✲	✲	✲	✲	✲
3/4	20	☆	✲	☆	✲	☆	✲	✲	✲	✲	✲
1	25	☆	✲	☆	✲	☆	✲	✲	✲	✲	✲
1-1/4	32	☆	✲	☆	✲	☆	✲	✲	✲	✲	✲
1-1/2	40	☆	✲	☆	✲	☆	✲	✲	✲	✲	✲
2	50	☆	✲	☆	✲	☆	✲	✲	✲	✲	✲
2-1/2	65	★	ᔕ	★	ᔕ	★	★	ᔕ	ᔕ	ᔕ	ᔕ
3	80	★	★	★	★	★	★	ᔕ	ᔕ	ᔕ	ᔕ
4	100	★	★	★	★	★	★	ᔕ	ᔕ	ᔕ	ᔕ
5	125	★	★	★	★	★	★	ᔕ	ᔕ	ᔕ	ᔕ
6	150	★	★	★	★	★	★	ᔕ	ᔕ	ᔕ	ᔕ
8	200	★	★	★	★	★	★	ᔕ	ᔕ	ᔕ	ᔕ
10	250	★	★	★	★	★	★	ᔕ	ᔕ	ᔕ	ᔕ
12	300	★	★	★	★	★	★	ᔕ	ᔕ	ᔕ	ᔕ
14	350	ᔕ	★	ᔕ	★	ᔕ	★	ᔕ	ᔕ	ᔕ	ᔕ
16	400	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ
18	450	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ		ᔕ
20	500	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ		
22	550	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ		
24	600	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ	ᔕ		
Page		6～9				12～13		14		15	

■In Materials
Cast Steel, Stainless Steel, Aluminum Bronze, Hastelloy, Titanium, Monel, Carpenter, Aluminum, Ductile Cast Iron, Cast Iron, Other Special Materials

■In Sizes
Please ask us in other sizes than those of Above Product Item

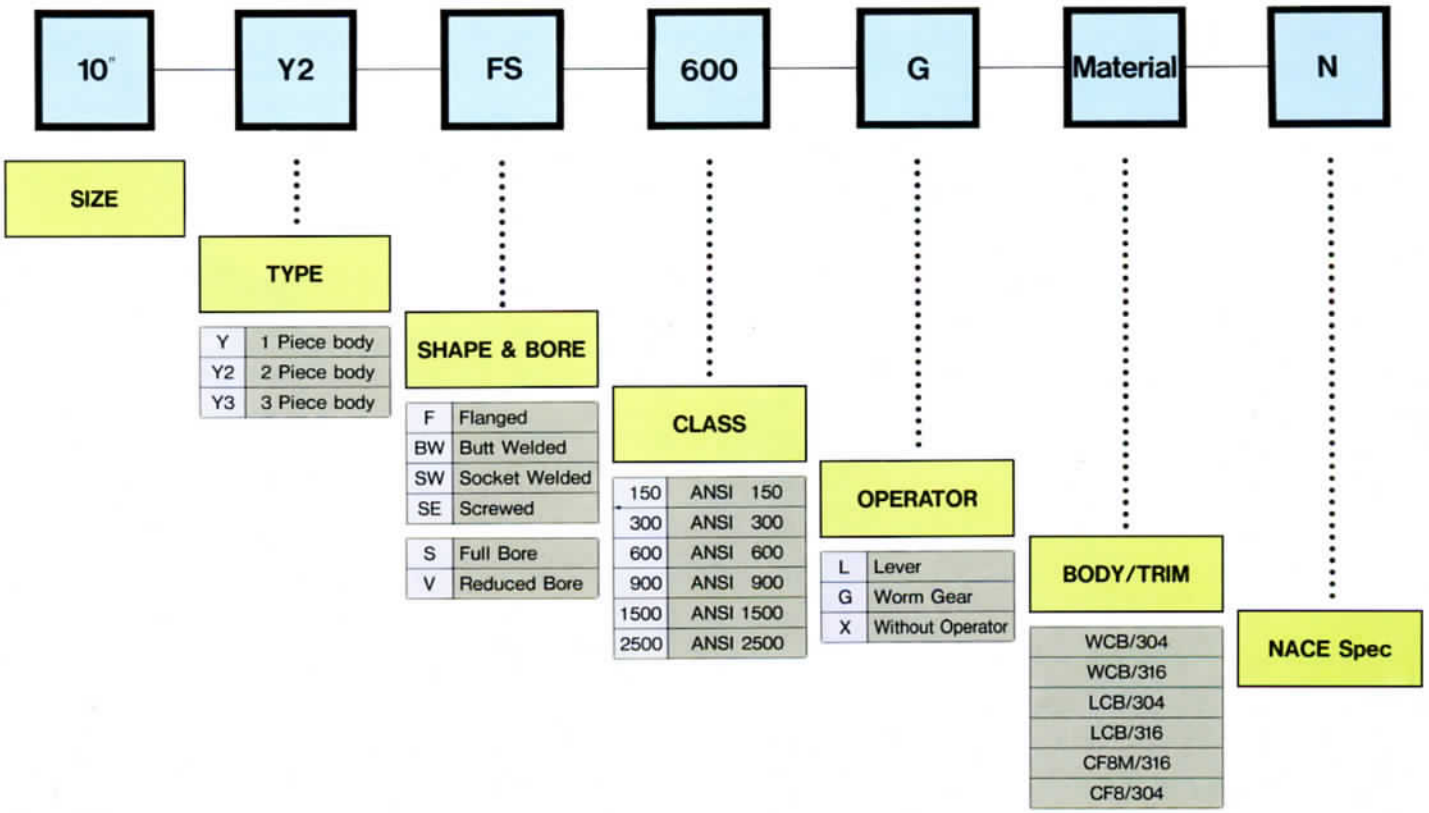
■In Pressure Ratings
ANSI: 125Lb, 150Lb, 300Lb, 400Lb, 600Lb, 900Lb, 1500Lb, 2500Lb.
JIS, DIN, BS and others

■In Operation Types
Lever Type, Worm Gear Type, Air Cylinder Operated Type, Motor Operated Type

■In Valve Shapes
Full bore, Reduced bore
2 way, 3 way, 4 way and Others

■In Connections
Screwed, Flanged, Welded, etc.

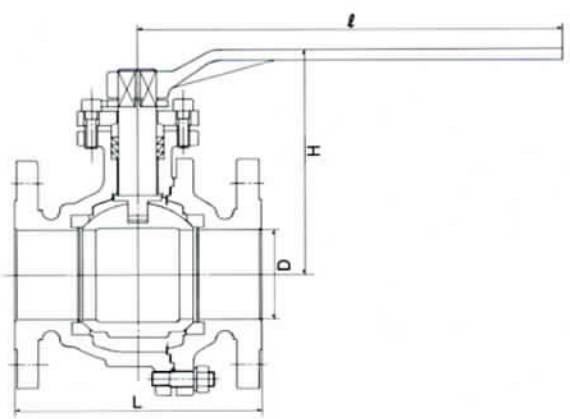
Valve Coding



Above Valve:
Size 10", 600 ANSI, 2 Piece Body, Full Bore, Firesafe, Gear Operator, WCB/304, NACE Spec.

※AS FOR OTHER MATERIALS
PLEASE REFER PAGE 5

Class 150 Cast Steel Ball Valves FULL BORE



Class	150
Fig	Y2–FS–150 Y3–FS–150

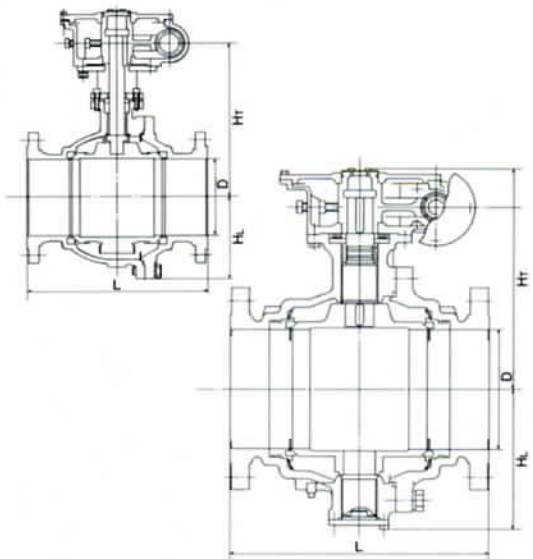
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	PTFE or Reinforced PTFE PTFE or ASBESTOS

mm

VALVE SIZE in / mm	1/2 15	3/4 20	1 25	1-1/2 40	2 50	2-1/2 65	3 80	4 100	5 125	6 150
D Bore Size	13	19	25	38	51	64	76	102	127	152
L Face to Face	108	117	127	165	178	190	203	229	356	394
H Height	90	95	110	120	137	157	188	213	238	258
ℓ Length of Lever	140	140	180	180	260	260	350	450	450	600

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 150 Cast Steel Ball Valves FULL BORE



Class	150
Fig	Y2–FS–150 Y3–FS–150

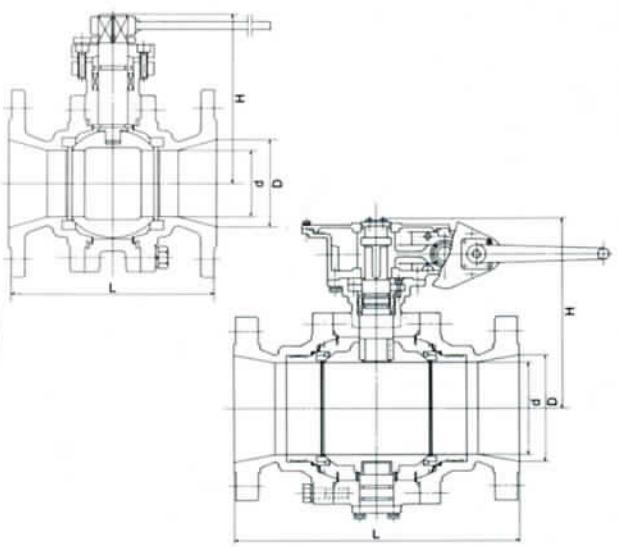
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	PTFE or Reinforced PTFE PTFE or ASBESTOS

mm

VALVE SIZE	in mm	8 200	10 250	12 300	14 350	16 400	18 450	20 500	22 550	24 600
D Bore Size		203	254	305	337	387	438	489	540	591
L Face to Face		457	533	610	686	762	864	914	991	1067
H_T Height		490	500	560	610	665	725	815	870	925
H_L Height		210	305	355	400	440	495	540	595	650

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 150 Cast Steel Ball Valves REDUCED BORE



Class	150
Fig	Y2–FV–150 Y3–FV–150

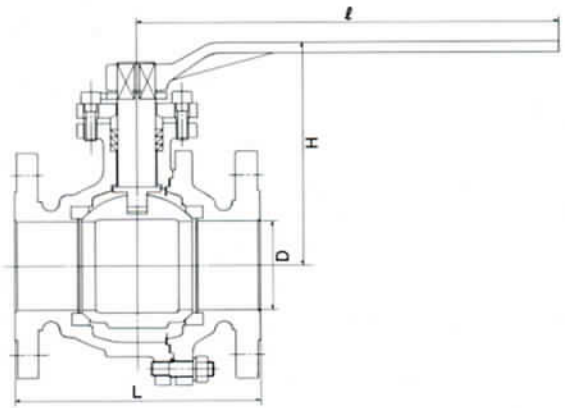
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	PTFE or Reinforced PTFE PTFE or ASBESTOS

mm

VALVE SIZE	in mm	3 80	4 100	5 125	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	22 550	24 600
D Bore Size		76	102	125	152	203	254	305	337	387	438	489	540	591
d Bore Size		51	76	102	102	152	203	254	305	337	387	438	489	489
L Face to Face		203	229	356	394	457	533	610	686	762	864	914	991	1067
H Height		157	188	213	238	258	490	500	560	610	665	725	815	815

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 300 Cast Steel Ball Valves FULL BORE



Class	300
Fig	Y2–FS–300 Y3–FS–300

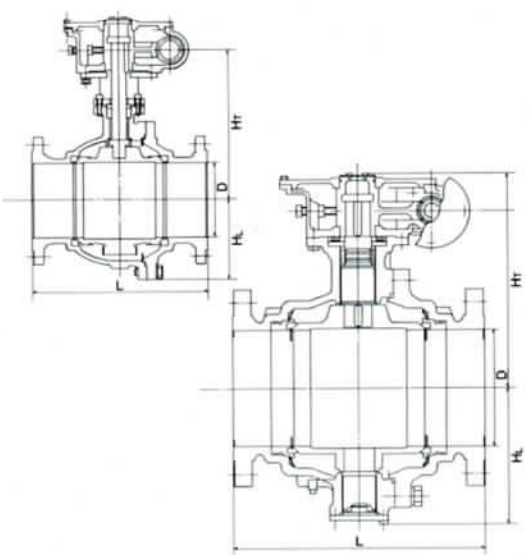
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	PTFE or Reinforced PTFE PTFE or ASBESTOS

mm

VALVE SIZE in / mm	1/2 15	3/4 20	1 25	1-1/2 40	2 50	2-1/2 65	3 80	4 100	5 125	6 150
D Bore Size	13	19	25	38	51	64	76	102	127	152
L Face to Face	140	152	165	190	216	241	283	305	381	403
H Height	90	100	110	120	137	165	188	213	233	287
ℓ Length of Lever	140	140	180	180	260	450	450	600	600	800

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 300 Cast Steel Ball Valves FULL BORE



Class	300
Fig	Y2–FS–300 Y3–FS–300

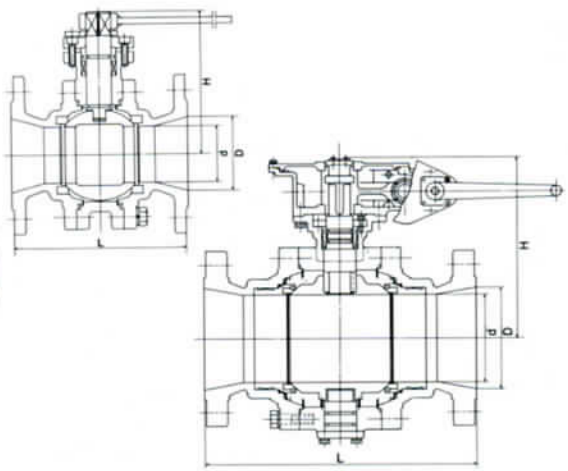
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	PTFE or Reinforced PTFE PTFE or ASBESTOS

mm

VALVE SIZE in / mm	8 200	10 250	12 300	14 350	16 400	18 450	20 500	22 550	24 600
D Bore Size	203	254	305	337	387	438	489	540	591
L Face to Face	502	568	648	762	838	914	991	1092	1143
H_T Height	490	530	565	630	680	785	800	880	970
H_L Height	220	315	365	410	455	510	580	630	710

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 300 Cast Steel Ball Valves REDUCED BORE



Class	300
Fig	Y2–FV–300 Y3–FV–300

Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	PTFE or Reinforced PTFE PTFE or ASBESTOS

mm

VALVE SIZE	in / mm	3 / 80	4 / 100	5 / 125	6 / 150	8 / 200	10 / 250	12 / 300	14 / 350	16 / 400	18 / 450	20 / 500	22 / 550	24 / 600
D Bore Size		76	102	127	152	203	254	305	337	387	438	489	540	591
d Bore Size		51	76	102	102	152	203	254	305	337	387	438	489	489
L Face to Face		283	305	381	403	502	568	648	762	838	914	991	1092	1143
H Height		165	188	213	238	287	490	530	565	630	680	785	800	800

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Stainless Steel Ball Valves (Class 150, 300)

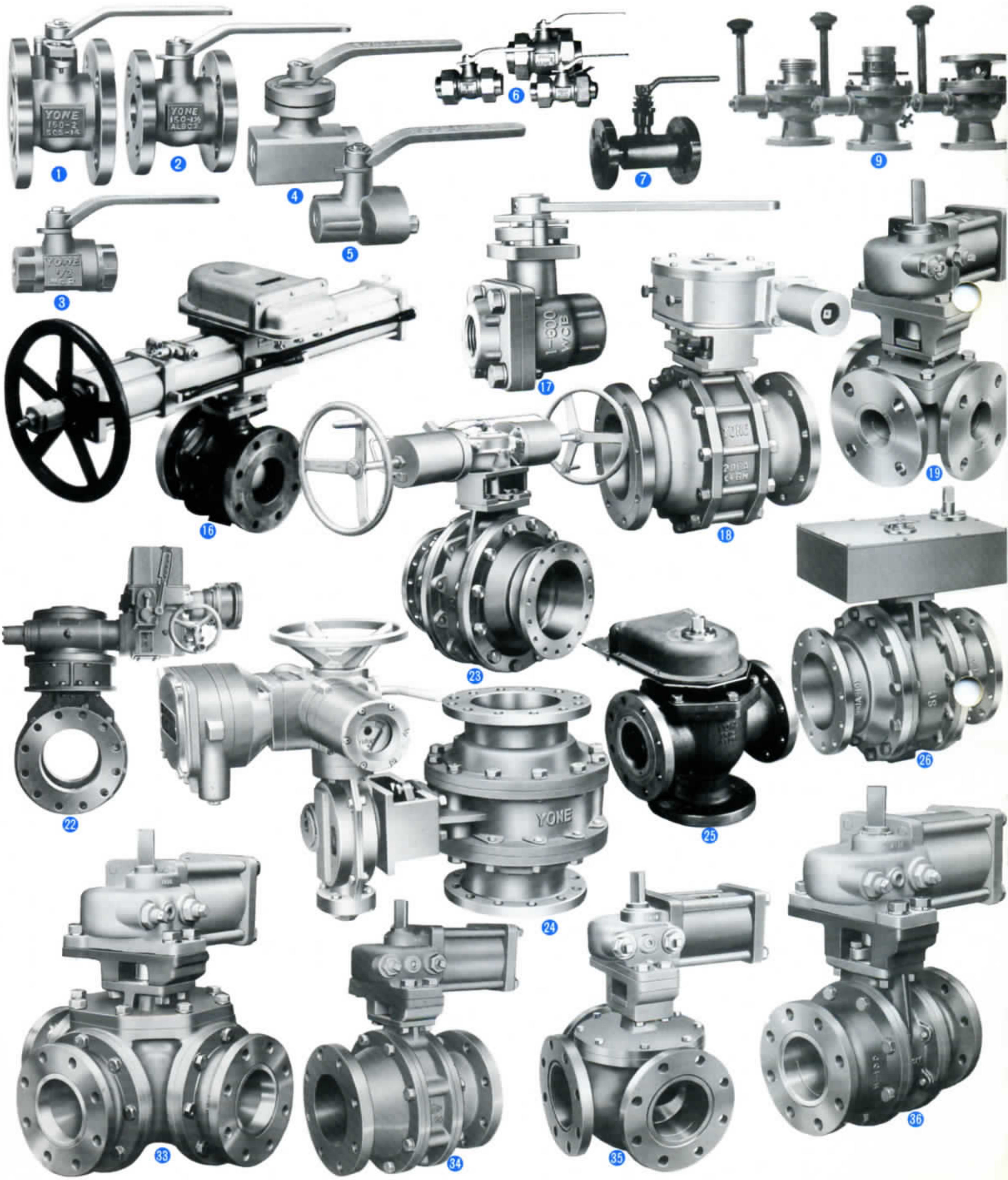
Class	150 300
Fig	Y2(Y3)–FS–150(300) Y2(Y3)–FV–150(300)

Parts Name	Material
Body Body Cap	CF8M, CF8 CF8M, CF8
Ball Stem	CF8M(316), CF8(304) 316, 304
Seat Gland Packing	PTFE or Reinforced PTFE PTFE or Reinforced PTFE

Basic dimensions are the same as those of cast steel. (However, please ask us for details of dimensions which may differ to some extent depending on sizes.)

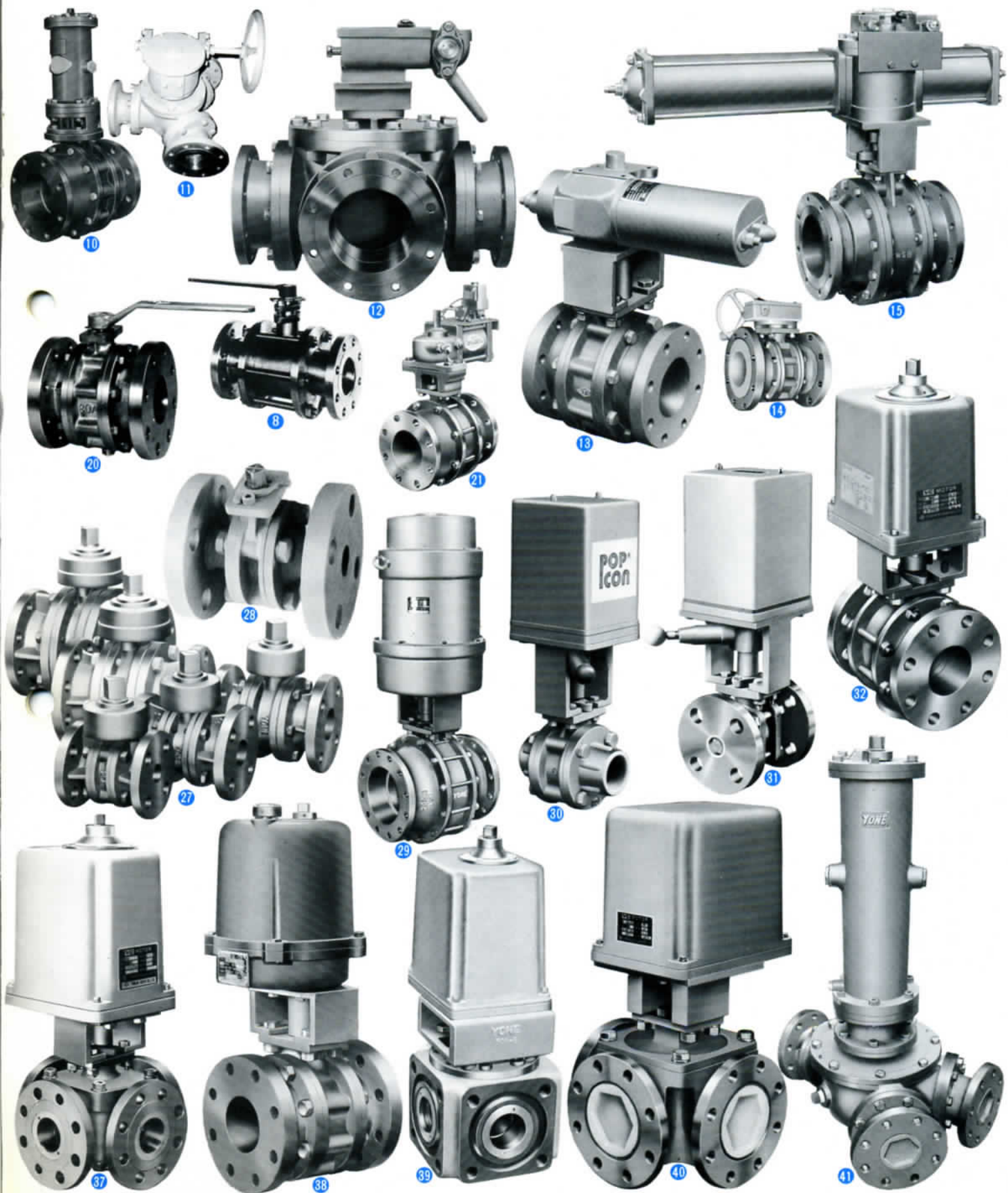
Here we are showing various kinds of our

①Stainless Steel (1 Piece Body) 1/4"−3" ②Aluminum Bronze (1 Piece Body) 1/4"−3" ③Cast Steel, Screwed 1/4"−2" ④Carbon Steel, Screwed, for High Pressure Service 1/4"
⑩Ductile Cast Iron Air Cylinder Operated 1/2"−12" ⑪Cast Steel, Branching 3 way for Pig service 2"−12" ⑫Stainless Steel, 3 way 8"−12" ⑬Cast Iron, Air Cylinder (BETTIS) (
2"−8" ⑰Cast Steel, Screwed 1/2"−2" ⑱Stainless Steel, Flanged 6"−24" ⑲Stainless Steel, 3 way, Air Cylinder Operated 1"−6" ⑳Ductile Cast Iron, Flanged 1/2"−6" ㉑
6"−24" ㉔Cast Steel, Flanged, Motor (ROTORK) Operated 6"−24" ㉕Aluminum Bronze, Angle Type 3 way 2"−6" ㉖Cast Steel, Flanged, fof GAS service 6"−24" ㉗Ductile
Motor Operated 1/2"−2" ㉛Stainless Steel, Flanged, Motor Operated 1/2"−2-1/2" ㉜Stainless Steel, Flanged, Motor Operated 1/2"−8" ㉝Ductile Cast Iron, High Frequency, 3
High Frequency, Air Cylinder Operated 2"−12" ㊲Ductile Cast Iron, 4 way, Motor Operated 1"−6" ㊳Cast Steel, Flanged, Explosion Proof Motor Operated 1/2"−6" ㊴Ductile (

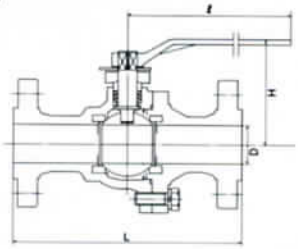


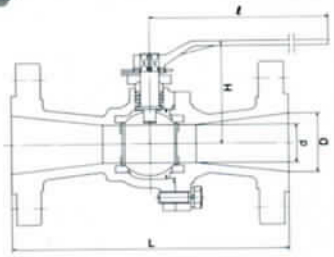
valves.

~2" ⑤Ductile Cast Iron, Screwed 1/4"~2" ⑥Aluminum Bronze, Union 1/4"~2" ⑦Titanium, Flanged 1/2"~1" ⑧Titanium, Flanged 1-1/2"~8" ⑨Ball Valve for Fire Fighting
Operated 1/2"~12" ⑭Aluminum Bronze, Flanged 3"~18" ⑮Cast Steel, Spring Return Air Cylinder Operated 1/2"~24" ⑯Aluminum Bronze, Spring Return Air Cylinder Operated
Stainless Steel, Flanged, Air Cylinder Operated 1/2"~12" ㉒Cast Steel, Flanged, Motor (LIMITORQUE) Operated 6"~24" ㉓Cast Steel, Flanged, Air Cylinder (BETTIS) Operated
Cast Iron, Flanged, for GAS service 1/2"~6" ㉕Cast Iron, Flanged 1/2"~6" ㉖Stainless Steel, Flanged, Spring Return Motor Operated 1/2"~12" ㉙Ductile Cast Iron, Screwed,
way, Air Cylinder Operated 2"~8" ㉞Ductile Cast Iron, Flanged, Air Cylinder Operated 1/2"~12" ㉟Ductile Cast Iron, 3 way, Air Cylinder Operated 1"~6" ㊱Ductile Cast Iron,
Cast Iron, 4 way, Motor Operated 2"~4" ㊵Stainless Steel, 3 way, Motor Operated 1"~6" ㊶Stainless Steel, 3 way, ⊦ type Air Cylinder Operated 2"~8"



Class 600 Cast Steel Ball Valves FULL, REDUCED BORE





Class	600
Fig	Y2–FS–600 Y2–FV–600

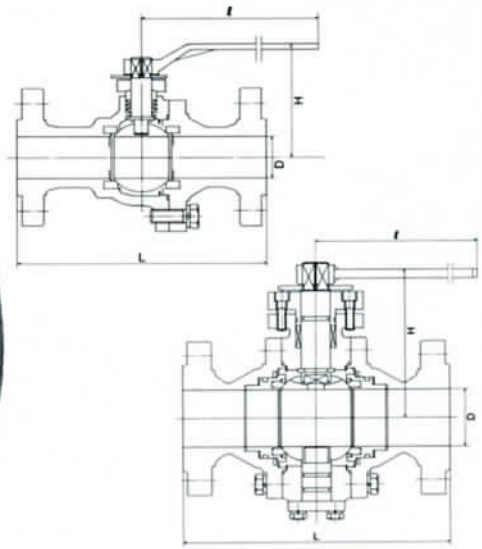
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	Reinforced NYLON PTFE or O-RING

mm

VALVE SIZE in / mm		2 50	3 80	2 50	3 80	4 100
D·d	Bore Size	51	76	51·38	76·51	102·76
L	Face to Face	292	356	292	356	432
H	Height	135	185	112	135	185
ℓ	Lenght of Lever	450	800	260	450	800

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 600 Cast Steel Ball Valves FULL BORE



Class	600
Fig	Y2–FS–600 Y3–FS–600

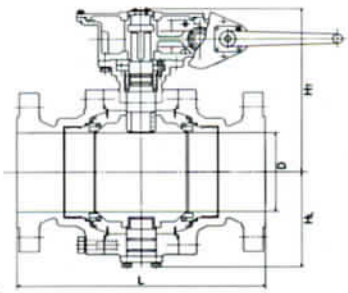
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	Reinforced PTFE PTFE or O-RING

mm

VALVE SIZE in / mm		1/2 15	3/4 20	1 25	1-1/2 40	2 50	2-1/2 65	3 80	4 100
D	Bore Size	13	19	25	38	51	64	76	102
L	Face to Face	165	190	216	241	292	330	356	432
H	Height	100	110	115	145	162	180	200	244
ℓ	Length of Lever	180	180	180	260	450	450	800	1200

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 600 Cast Steel Ball Valves FULL BORE



Class	600
Fig	Y2–FS–600 Y3–FS–600

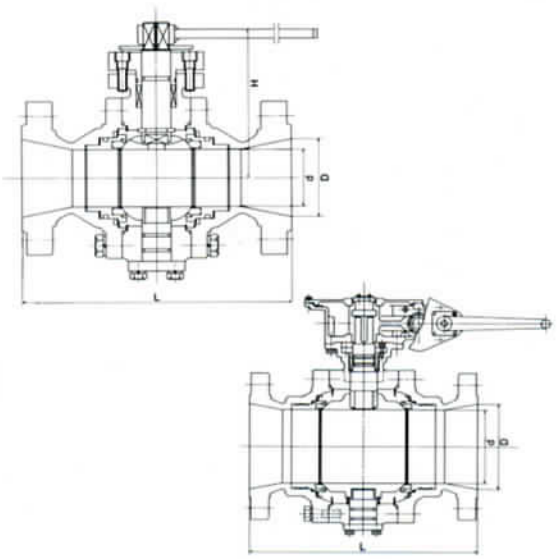
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	Reinforced PTFE PTFE or O-RING

mm

VALVE SIZE in / mm	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	22 550	24 600
D Bore Size	152	203	254	305	337	387	438	489	540	591
L Facd to Face	559	660	787	838	889	991	1092	1194	1295	1397
H_T Height	405	490	530	585	630	685	740	839	915	1050
H_L Height	210	275	310	355	410	475	510	600	710	815

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 600 Cast Steel Ball Valves REDUCED BORE



Class	600
Fig	Y2–FV–600 Y3–FV–600

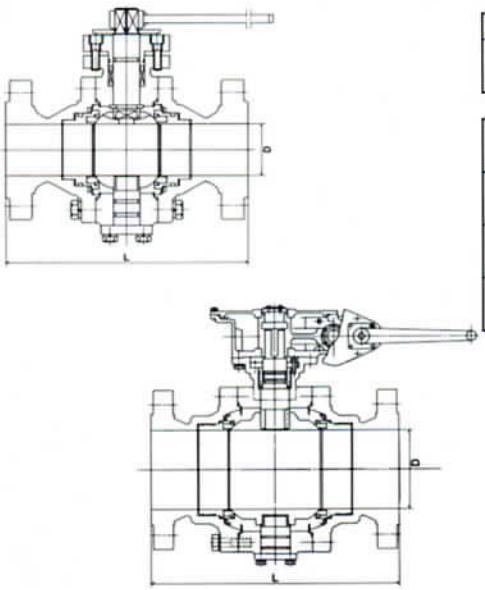
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	Reinforced PTFE PTFE or O-RING

mm

VALVE SIZE in / mm	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	22 550	24 600
D Bore Size	76	102	152	203	254	305	337	387	438	489	540	591
d Bore Size	51	76	102	152	203	254	305	337	387	438	489	489
L Face to Face	356	432	559	660	787	838	889	991	1092	1194	1295	1397
H Height	162	200	244	405	490	530	585	630	685	740	839	839

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 900 Cast Steel Ball Valves FULL BORE



Class	900
Fig	Y2–FS–900 Y3–FS–900

Part Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	Reinforced PTFE PTFE or O-RING

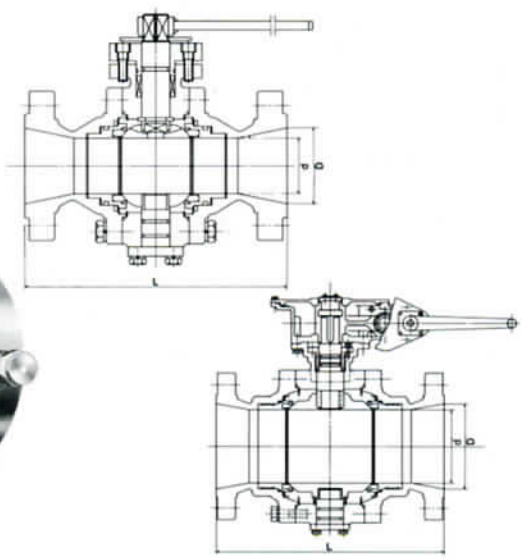
Details of Sealant Mechanism

mm

VALVE SIZE	in mm	2 50	2-1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600
D Bore Size		51	64	76	102	152	203	254	305	324	375	426	473	572
L Face to Face (R.F)		368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549
L Face to Face (R.T.J)		372	422	384	460	613	740	841	968	1038	1140	1232	1334	1569

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 900 Cast Steel Ball Valves REDUCED BORE



Class	900
Fig	Y2–FV–900 Y3–FV–900

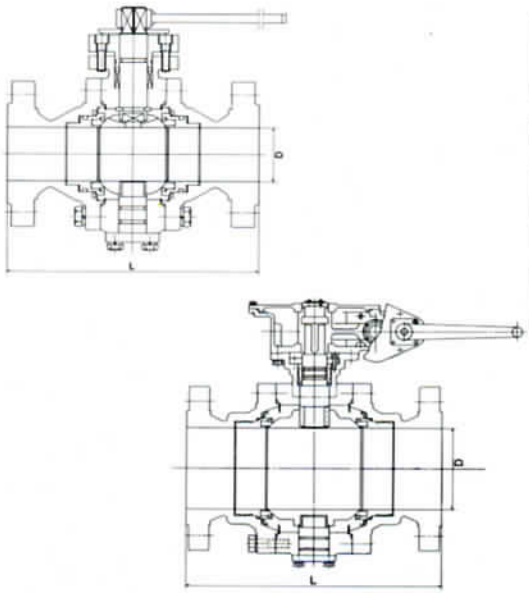
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	Reinforced PTFE PTFE or O-RING

mm

VALVE SIZE	in mm	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600
D Bore Size		76	102	152	203	254	305	324	375	426	473	572
d Bore Size		51	76	102	152	203	254	305	324	375	426	473
L Face to Face (R.F)		381	457	610	737	838	965	1029	1130	1219	1321	1549
L Face to Face (R.T.J)		384	460	613	740	841	968	1038	1140	1232	1334	1569

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 1500 Cast Steel Ball Valves FULL BORE



Class	1500
Fig	Y2–FS–1500 Y3–FS–1500

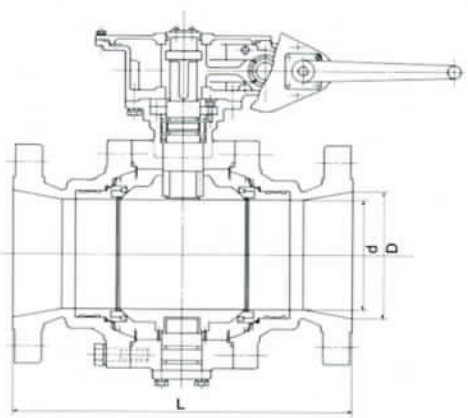
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	Reinforced PTFE PTFE or O-RING

mm

VALVE SIZE in / mm	1/2 50	2-1/2 65	3 80	4 100	6 150	8 200	10 300	12 350	14 400	16 400
D Bore Size	51	64	76	102	146	194	241	289	318	362
L Face to Face (R.F)	368	419	470	546	705	832	991	1130	1257	1384
L Face to Face (R.T.J)	372	422	473	549	711	841	1000	1146	1276	1407

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 1500 Cast Steel Ball Valves REDUCED BORE



Class	1500
Fig	Y2–FV–1500 Y3–FV–1500

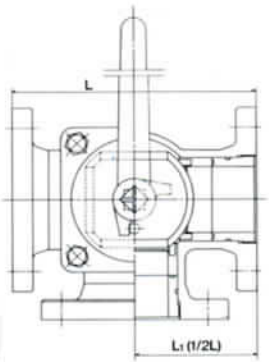
Parts Name	Material
Body Body Cap	WCB(A216), LCB(A352) WCB(A216), LCB(A352)
Ball Stem	CF8(304), CF8M(316) 304, 316
Seat Gland Packing	Reinforced PTFE PTFE or O-RING

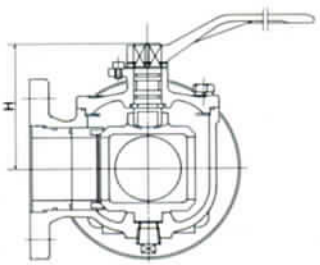
mm

VALVE SIZE in / mm	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400
D Bore Size	76	102	146	194	241	289	318	362
d Bore Size	51	76	102	146	194	241	289	318
L Face to Face (R.F)	470	546	705	832	991	1130	1257	1384
L Face to Face (R.T.J)	473	549	711	841	1000	1146	1276	1407

Please ask us for Dimension-H which may differ between 2 piece type and 3 piece type to some extent

Class 150 3 way Ball Valves (CAST STEEL / STAINLESS STEEL)





Class	150 300
Fig	Y–F3T(L)–150 Y–F3T(L)–300

Parts Name	Material
Body Body Cap	CF8M, CF8, WCB, LCB CF8M, CF8, WCB, LCB
Ball Stem	CF8M(316), CF8(304) 316, 304
Seat Gland Packing	PTFE or Reinforced PTFE PTFE or Reinforced PTFE

mm

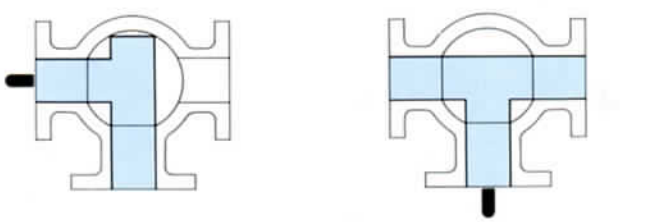
VALVE SIZE in / mm	1 25	1-1/2 40	2 50	3 80	4 100	6 150	8 200	10 250	12 300
D Bore Size	25	38	51	76	102	152	203	254	305
L Face to Face	165	190	200	240	300	450	750	850	950
L1 (1/2L)	82.5	95	100	120	150	225	375	425	475
H Height	100	130	140	160	210	260	495	545	670

3 way Ball Valves

3 way ball valves is standard in 90 degree work and flow patterns are following four types. Please specify the one type from them depending on your USE when you place an order.

TYPE Y-F3T 3 way-T port

0 degree | 90 degree | 180 degree | 270 degree

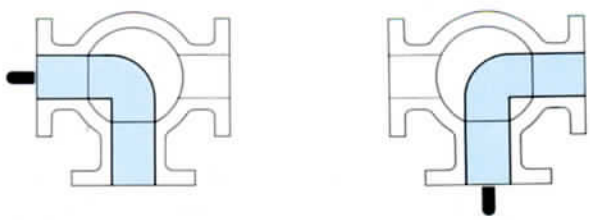


A type ····· 0 degree ←——→ 90 degree
B type ····· 90 degree ←——→ 180 degree

C type ····· 180 degree ←——→ 270 degree
D type ····· 270 degree ←——→ 0 degree

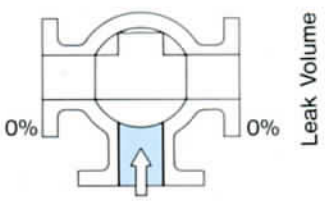
TYPE Y-F3L 3 way-L port

0 degree | 90 degree



A type ····· 0 degree ←——→ 90 degree

Concerning this 3 way ball valves, Yoneda Kogyo Co., Ltd. can guarantee the complete sealing by means of the fixed ball system and Yoneda method of 3 way ball valve seal, even if the ball valves are in type of three port 270 degree (Negative position).



YONE Ball Valve

Features

Cast steel ball valves are of such a construction as to be applicable even for pipelines. Besides, each can be provided with the following functions according to uses.

Block & Bleed

- Body cavity part permits itself to be attached with a plug.
- A vent valve can be attached to this part, if so specified.
- When the internal pressure of the body cavity has been raised abnormally by the strength of a seat spring incorporated into the seat retainer, a self-relief action may take place to prevent such abnormal rise of internal pressure in the body.
- Alternatively, design may be made so as to relieve the abnormally raised pressure in the body cavity by making the construction of Teflon seat to a specific shape.

Sealant Mechanism (Emergency revival of seal)

A sealant mechanism can be provided, if so specified.
This mechanism is intended for the emergency revival of the sealed section by a sealant supplied in case any leakages are caused on the seat and gland.

Stem Extension

In the case of such uses as for underground installation and low-temperature application, an extension type is manufactured, if so specified.
Please specify dimensions for extension.
In addition, the control equipment can be equipped with a gear mechanism, air cylinder, electric motor, etc.

Thru-Conduit

For valves used for pipelines applied with sphere and pig, the internal faces of fluid line can be machined, if so specified, to permit the passing fluid to flow smoothly.

Fire-Safe Mechanism (When PTFE has been burnt out)

Ⓐ For the floating type, the floating ball is pressed against the integral seal (of metal) provided in the secondary-end body to prevent excessive leakages.
Ⓑ For the trunnion type, the ball does not move as being fixed by the upper and lower stems. In such cases, the ball seat retainer is allowed to move forward by the force of spring provided on the back of the retainer, thus preventing any excessive leakages of fluid.

Floating Type

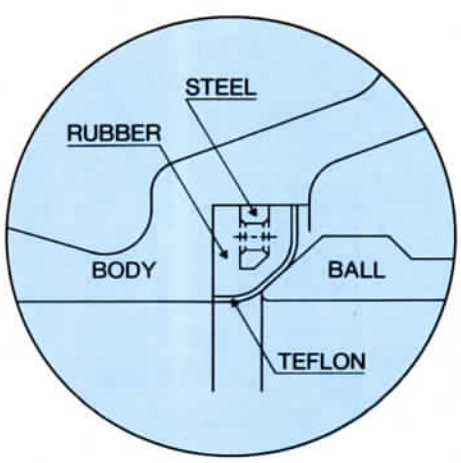
A system whereby a floating ball is pressed against the secondary-end seat under the primary pressure. Floating type is generally available as follows:
150 lb for 12" or smaller (8" or smaller, if so specified)
300 lb for 12" or smaller (8" or smaller, if so specified)
600 lb for 3" or Smaller

Trunnion Type

A system where by a ball is not allowed to move under the primary pressure to the secondary end by the ball being supported with the upper and lower stems. Trunnion type is generally available as follows:
150 lb for 14" or larger (10" or larger, if so specified)
300 lb for 14 or larger (10" or larger, if so specified)
600 lb for 4" or langer

Metarubber Seal

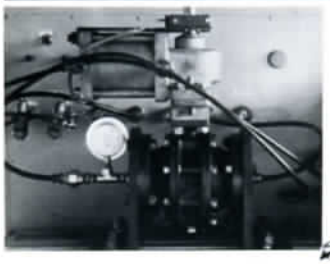
Teflon has had a certain limitation as to the applicable scope of fluid because of the property of Teflon itself which is liable to be damaged. The use of the Teflon seal has provided a cause for leakages in the transportations of the particles and the slurry-containing liquid, and has so far left various problems to be settled.
In view of the above, we quickly kept an eye to the technique of pasting together the synthetic rubber and the Teflon film which has come to be highly relied upon in recent years, and attempted to use the Teflon-pasted o-ring for ball seat and obtained the full success. In the course of 10 and odd years since then, we have realized the long records of use for fire fighting equipment, National Railway tank cars, etc. METARUBBER seal system is an epock-making and selfconfident sealing system, which for instance, can be used continuously for five years without repair for oil tank yard, and in the fire fighting application does not cause any leakage even under the state where sludge is fully accumulated in the space between the ball and the body in the pumping-up of mud containing river water.
The greatest feature of METARUBBER seal is the success in having obtained to most suitable and outstanding seal material for displaying the function of the ball valve and in permitting the opening & closing operation of valve with as small a torque as 70% of that of the solid Teflon (the torque less than 50% may also be available depending on size) by the composite action of the three functions of elasticity obtained by the use of the rubber material which has the lowest gasket coefficient (1.0) of all seal materials, steel ring which prevents deformation by liquid pressure, and use of Teflon which has the smallest friction coefficient (0.04) for the part to have contact with the ball (i.e. softness of rubber and smoothness of Teflon plus rigidity of steel)
METARUBBER seal has a characteristic to cover some flaws of its surface because of the soft elasticity of rubber and to preveht the cause for the leakage. For this reason, even if the Teflon film pasted on the surface may be damaged, the elasticity of the rubber which works under the Teflon film ensures full sealing.



Patents registered in Japan, USA, Canada, and England

Manufacturing of products challenging to the ultimate limit of perfect. Thus, only products having passed every inspection are shipped from us.

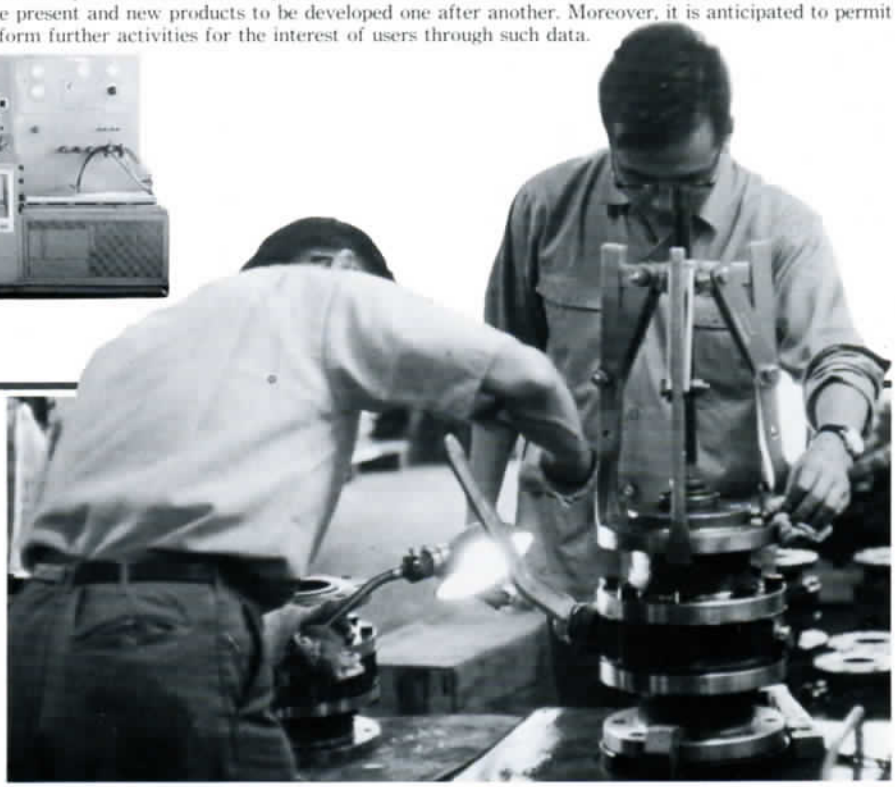
BALL VALVE ENDURANCE TESTING DEVICE



Endurance Testing Device for Ball Valves

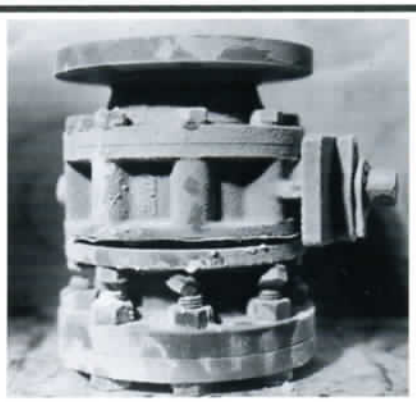
This testing device is capable of not only general testing of every function required for ball valves but also detecting by means of a recorder (oscillograph) data, obtained from severe tests in compliance with users' applications and specifications. This fresh device is expected to exercise its powerful functions on the establishment of standard of quality control and guarantee for the present and new products to be developed one after another. Moreover, it is anticipated to permit its sales force to perform further activities for the interest of users through such data.

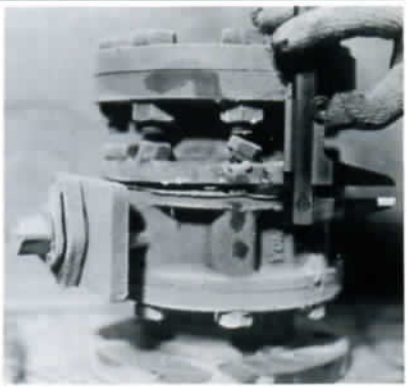
PRESSURE TESTING VIEW



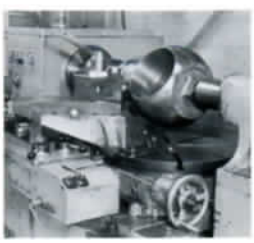
EXTERNAL STRAIN TEST

FREEZING TEST



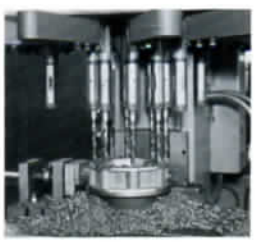


Small Ball Processing Machine



Large Ball Processing Machine

Automatic Flange Processing Machine



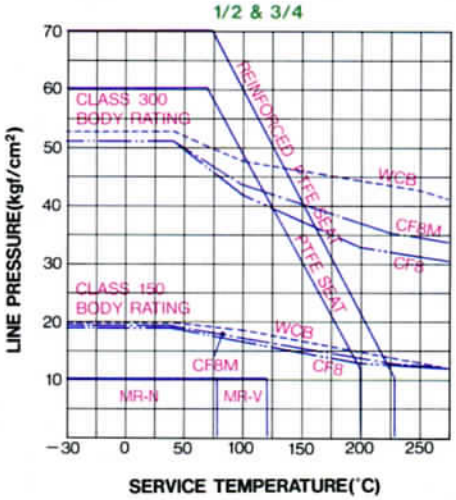
Multi-Spindle Drilling Machine

Pressure-Temperature Rating

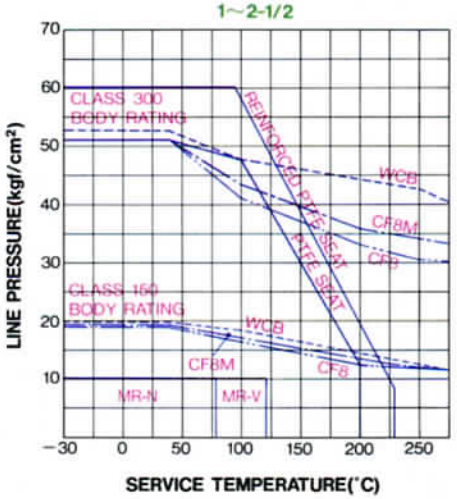
The pressure-temperature rating is set by the correlation between body rating and seat rating. However, when an O ring is used on the packing or gasket, the working temperature is limited by the restraining factors of the materials. In the figure below, "Pressure-Temperature Rating." the solid line indicates a seat rating, the broken line a body rating and the one-point broken line the marginal working temperature of the O ring.

It must be noted, however, that the maximum allowable working pressure shown here is applicable to the non-shock fluid. Therefore, it is necessary to allow for the actual working pressure, as is the case with general valves.

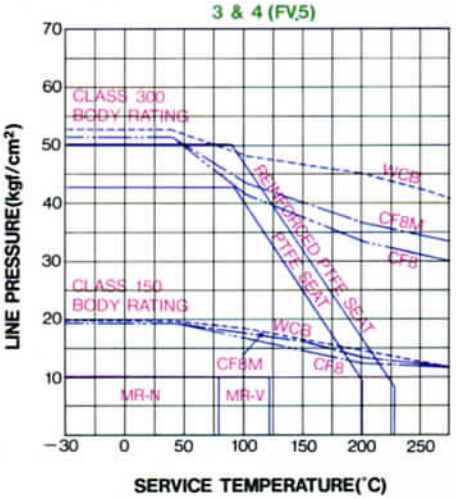
1/2 & 3/4



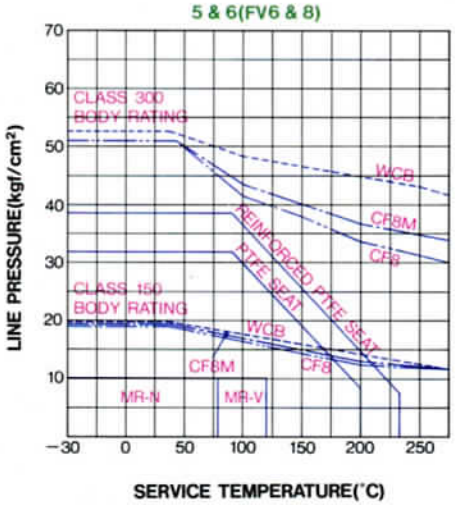
1~2-1/2



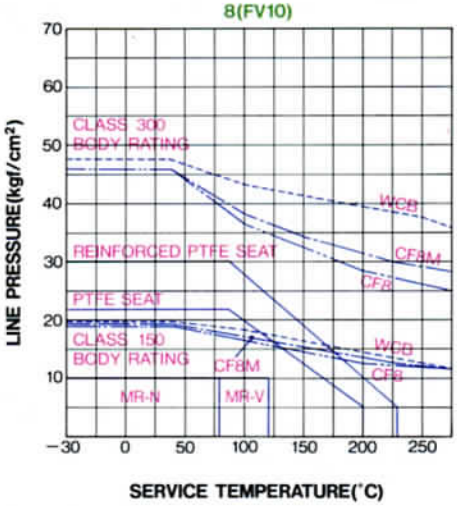
3 & 4 (FV5)



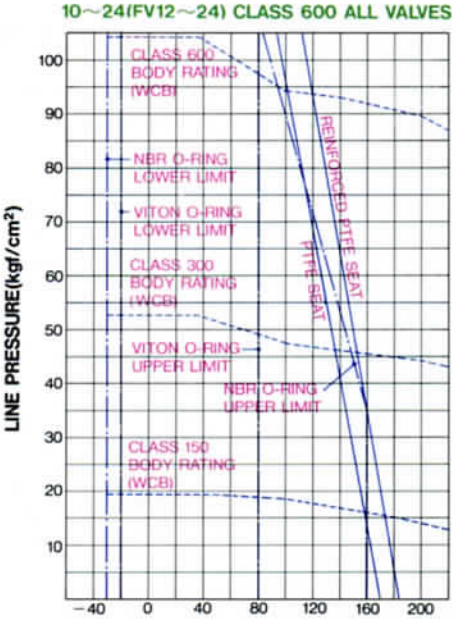
5 & 6(FV6 & 8)



8(FV10)



10~24(FV12~24) CLASS 600 ALL VALVES



- **MR-N** = Normal METARUBBER Seat (NBR)
- **MR-V** = Viton METARUBBER Seat

Ball valves thus manufactured, proud of their established supply records ranging over 2 million sets, are being shipped even today from us to every country in the world.

For further information: to Valve Division (Telex No.05422426 YONEDA J)

Explanation of Photos printed in a back cover

①Ductile Cast Iron, Motor Operated Type
②Ductile Cast Iron, Air Cylinder Operated Type
③3 way Stainless Steel, Air Cylinder Operated Type
④3 way Stainless Steel, Lever Type
⑤Cast Steel, Lever Type (3 piece Body)
⑥Stainless Steel, Air Cylinder Operated Type
⑦Stainless Steel, Lever Type (3 piece Body)
⑧Aluminum Bronze (ALBRON®), Lever Type (1 piece Body)
⑨3 way Ductile Cast Iron, Lever Type
⑩Stainless Steel, Lever Type (1 piece Body)
⑪Stainless Steel, Screwed Type (3 piece Body)
⑫Aluminum Bronze (ALBRON®),Screwed Type
⑬Carbon Steel High Pressure Screwed Type
⑭Ductile Cast Iron, Screwed Type
⑮Stainless Steel, Hand Wheel Type (1 piece Body)

A.P.I. Authorized Manufacturer

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