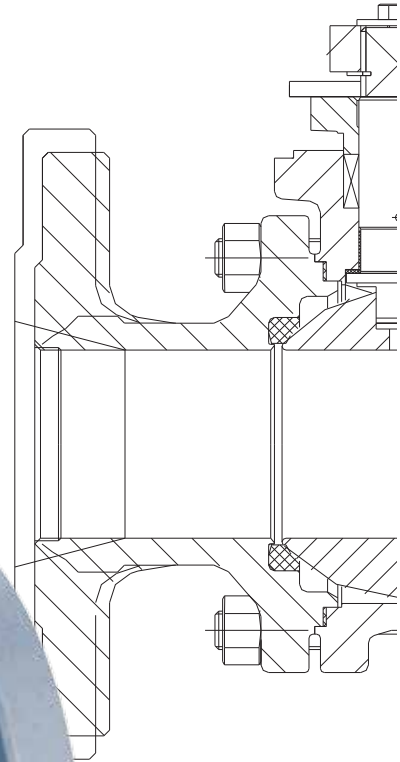
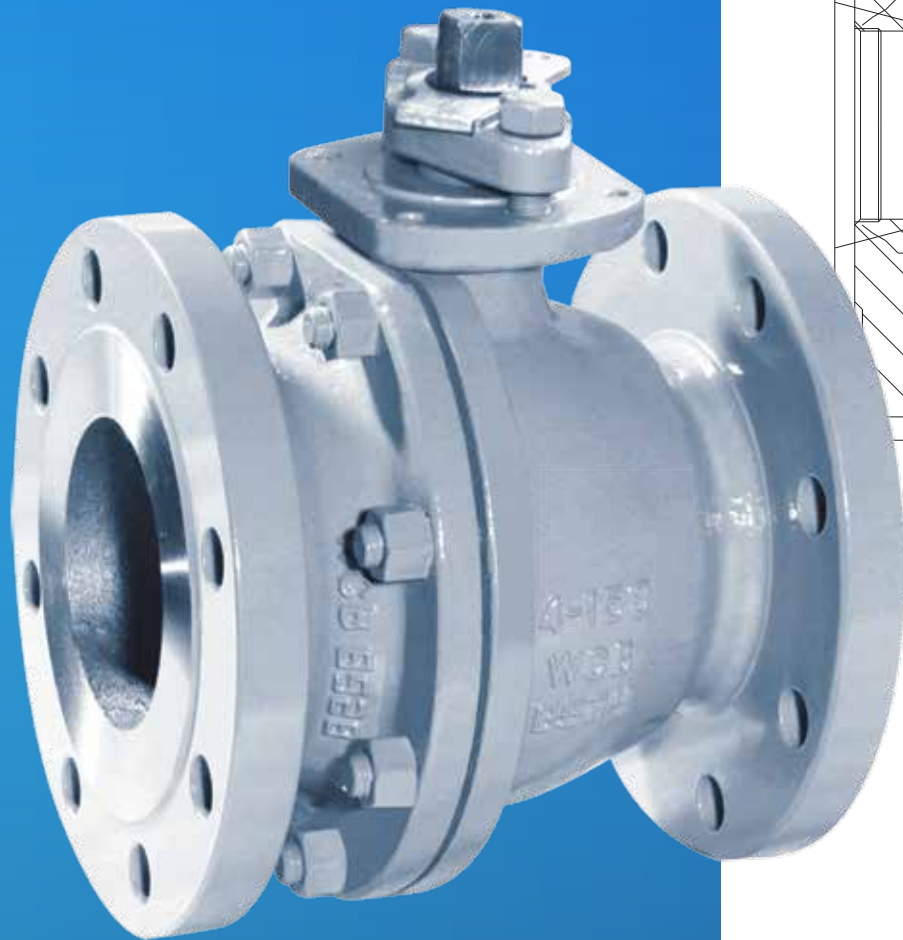




www.zafvalves.com

FLOATING BALL VALVES



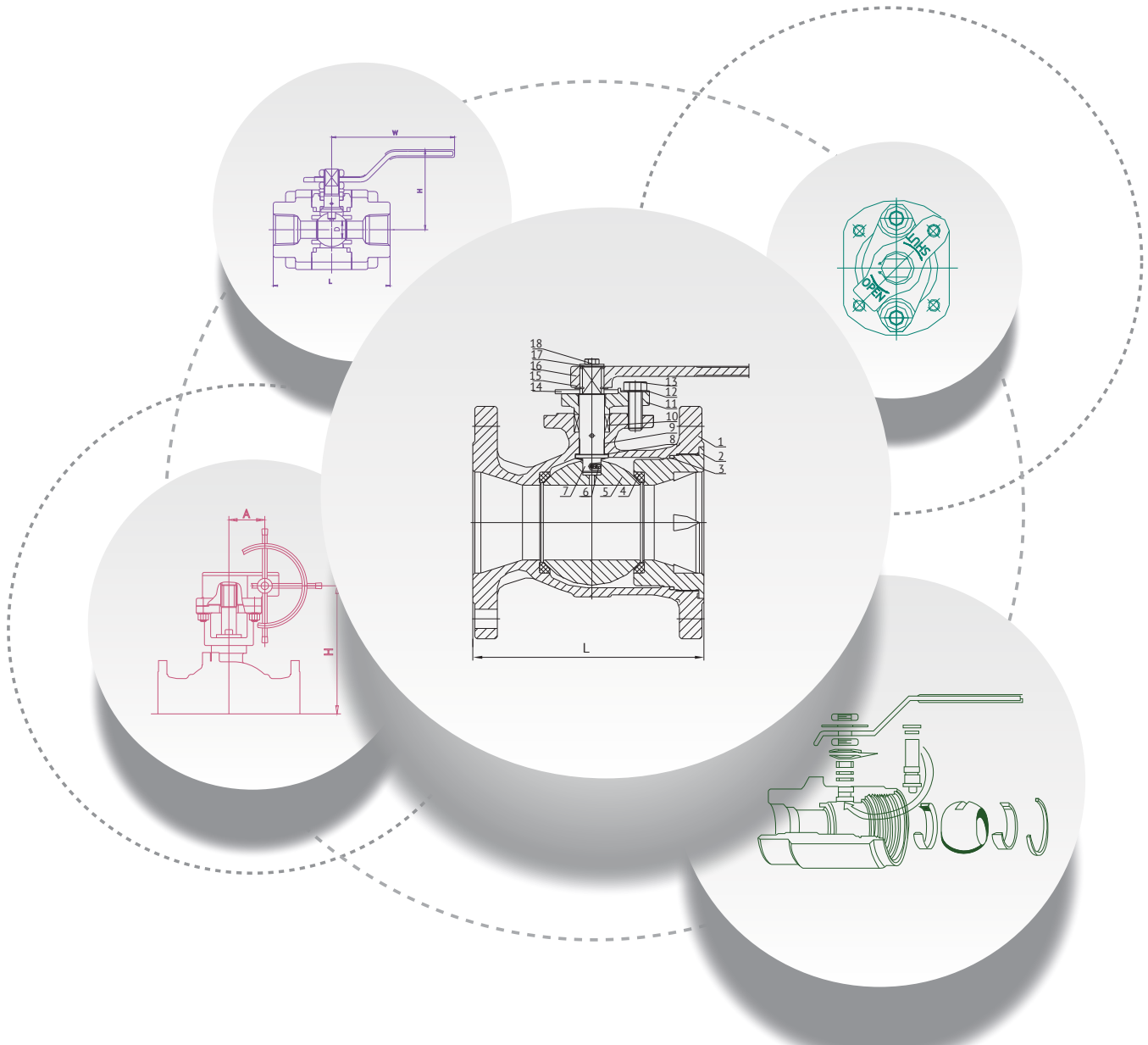
CONTENTS

FLOATING BALL VALVES

Brief Introduction	01
Quality Assurance and Control	02
Valve Ordering Guide	03
Overall Dimensions	04
Forged Steel Ball Valves	08
2-Pcs Body Forged steel Ball Valves	09
3-pcs Forged Steel ball Valves	10
3-PCS Forged Steel Valve	11
Typical Installations	12



Brief Introduction



ZAF Valves, a leading brand of Inter Equipment Co Ltd, a global premium Manufacturer, Producer, Fabricator, Stockiest, Distributor and Service provider of Precision Engineered Valves, Piping products and other oilfield components. ZAF Valves is engineered to meet the top Industrial global standards. The Manufacturing facilities is strictly in compliance with ISO 9001 Quality Management Systems Certification, CE European Union Safety Certification, ISO 14001 Environmental Management Systems Certification, OHSAS 18001 Occupational Health & Safety Certification, National Pressure Vessel Safety Registration (TS) Certification and American Petroleum Institute API6D Certification. ZAF Valves Strive for the highest level of Customer satisfaction by providing quality products and services for the most critical applications through proactive approach and innovative solutions to achieve sustained growth by promoting and nurturing service excellence.

Quality Program

The manufacturing facilities strictly implement a Quality Program comprising the Quality Management System, Environmental Management Systems, Occupational Health and Safety System, National Pressure Vessel Safety Registration, Europe Union Safety certification and American Petroleum Institute certification.



ISO 9001



CE 0035



API 6D



ISO 14001



QHAS 18001



TS 2710386

“ COMMITTED TO QUALITY ”



Spectrograph



Tensile test machine



Gama ray fault detection of
Non-destructive testing



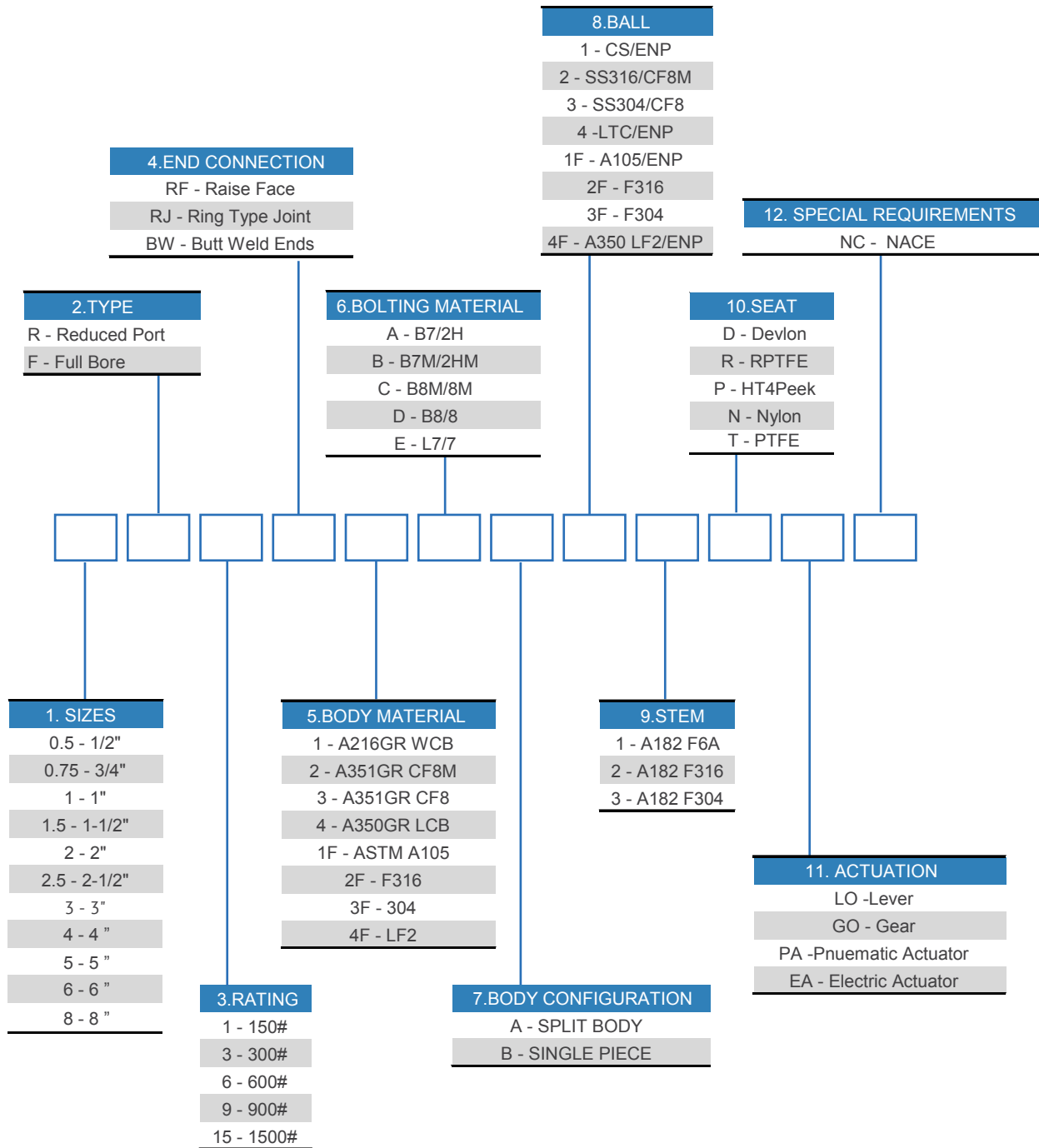
Ultrasonic test device



Metallographic analyzer



Valve Ordering Guide

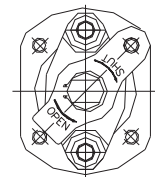
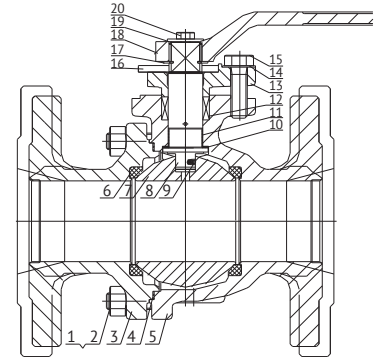


Ball Valves (Overall Dimensions)

Casting steel floating ball valve

Main part materials list

No.	Part name	Material
1	Nut	A194-2H
2	Bolt	A193-B7
3	Bonnet	A216-WCB
4	Gasket	PTFE/Graphite
5	Body	A216-WCB
6	Seat	RPTFE
7	Ball	A182-F304
8	Stem	A182-F6a
9	Spring	304
	Ball	304
10	Gasket	PTFE
11	Stem bearing	PTFE
12	Packing	PTFE/Graphite
13	Packing gland	A216-WCB
14	Spring washer	60Si2Mn
15	Screw	A193 B7
16	Stopper plate	1025+Zn
17	Back stop	65Mn
18	lever	A216 WCB
19	washer	304
20	screw	A193 B7



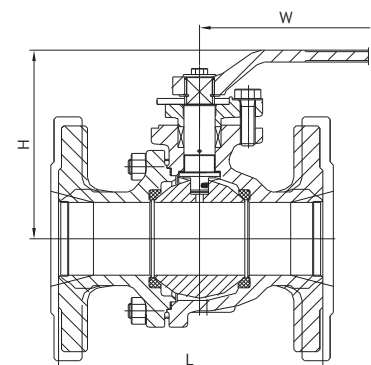
CLASS150 dimensions chart Unit(mm)

SIZE inches	DN	L	H	W
1/2	15	108	85	130
3/4X1/2	20	117	85	130
1/4	20	117	90	130
1X3/4	25	127	90	130
1	25	127	100	185
1 1/2X1	32	140	100	185
1 1/4	32	140	105	185
1 1/2X1 1/4	40	165	105	185
1 1/2	40	165	120	250
2X1 1/2	50	178	120	250
2	50	178	130	250
2 1/2X2	65	190	130	250
2 1/2	65	190	155	365
3X2 1/2	80	203	155	365
3	80	203	165	365
4X3	100	229	165	365
4	100	229	185	400
5	127	356	300	1050
6X4	150	267	185	400
6	150	394	320	1050
8X6	200	292	320	1050
8	200	457	370	1050



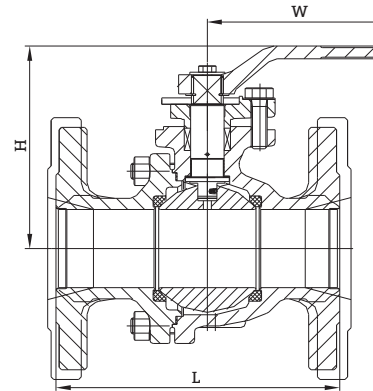
CLASS300 Dimensions Chart Unit(mm)

SIZE inches	DN	L	H	W
1/2	15	140	85	130
3/4X1/2	20	152	85	130
1/4	20	152	90	130
1X3/4	25	165	90	130
1	25	165	100	185
1 1/2X1	32	178	100	185
1 1/4	32	178	105	185
1 1/2X1 1/4	40	190	105	185
1 1/2	40	190	120	250
2X1 1/2	50	216	120	250
2	50	216	130	250
2 1/2X2	65	241	130	250
2 1/2	65	241	155	365
3X2 1/2	80	283	155	365
3	80	283	165	365
4X3	100	305	165	365
4	100	305	185	400
5	127	381	300	1050
6X4	150	403	185	400
6	150	403	320	1050
8X6	200	419	320	1050
8	200	502	370	1050



Ball Valves (Overall Dimensions)

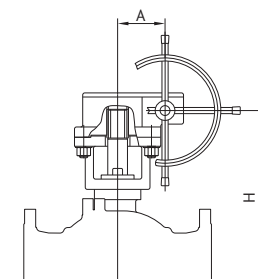
CLASS600 Dimension chart				Unit(mm)	
SIZE Inch	DN	L	H	W	
1/2	15	165	85	130	
3/4X1/2	20	190	85	130	
1/4	20	190	90	130	
1X3/4	25	216	90	130	
1	25	216	100	185	
1 1/4X1	32	229	100	185	
1 1/4	32	229	105	185	
1 1/2X1 1/4	40	241	105	185	
1 1/2	40	241	120	250	
2X1 1/2	50	292	120	250	
2	50	292	130	250	
2 1/2X2	65	330	130	250	
2 1/2	65	330	155	365	
3X2 1/2	80	356	155	365	
3	80	356	165	400	
4X3	100	432	165	400	
4	100	432	185	600	



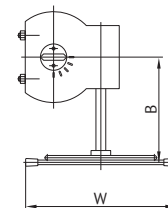
CLASS900 Dimension chart				Unit(mm)	
SIZE Inch	DN	L	H	W	
1/2	15	216	100	185	
3/4	20	229	105	185	
1	25	254	115	250	
1 1/4	32	279	125	250	
1 1/2	40	305	130	250	
2	50	368	160	365	



CLASS1500 Dimension chart				Unit(mm)	
SIZE Inch	DN	L	H	W	
1/2	15	216	100	185	
3/4	20	229	105	250	
1	25	254	115	250	
1 1/4	32	279	125	365	
1 1/2	40	305	130	365	
2	50	368	160	500	



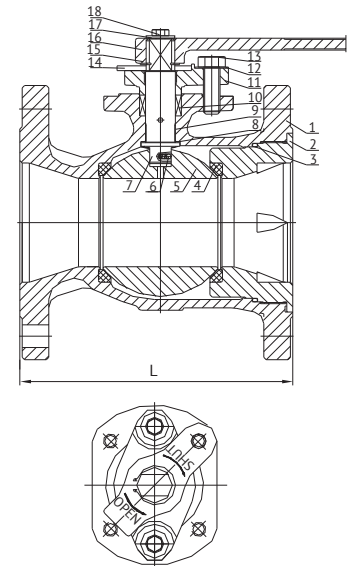
Gear operation dimension chart				Unit(mm)			
Class	150	300	Gear operator				
			H	W	B	A	
inch	6	6	350	320	214	100	
	8	8	415	350	234	120	



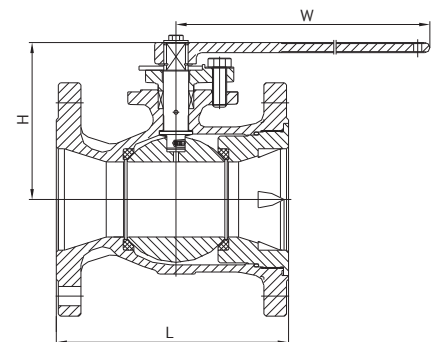
Ball Valves (Overall Dimensions)

Single Piece ball valve

Main part materials list		
No.	Part name	Material
1	Body	A216 WCB
2	Bonnet	A216 WCB
3	Gasket	PTFE/Graphite
4	Seat	RPTFE
5	Ball	A182 F304
6	Spring	304
	Ball	304
7	Stem	A182 F304
8	Gasket	PTFE
9	Stem bearing	PTFE
10	Packing	PTFE/Graphite
11	Packing Gland	A216 WCB
12	Spring Washer	60Si2Mn
13	Screw	A193 B7
14	Stopper plate	1025+Zn
15	Back stop	65Mn
16	Lever	A216 WCB
17	Washer	304
18	Screw	A193 B7



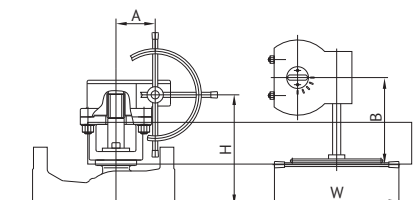
CLASS150 Dimension chart				Unit(mm)
SIZE inch	DN	L	H	W
1/2	15	108	85	130
3/4	20	117	85	130
1/4	20	117	90	130
1X1/4	25	127	90	130
1	25	127	100	185
1 1/2 X1	32	140	100	185
1 1/4	32	140	105	185
1 1/2 X1 1/4	40	165	105	185
1 1/2	40	165	120	250
2 X1 1/2	50	178	120	250
2 1/2 X2	65	190	130	250
3 X2 1/2	75	203	155	365
4 X3	100	229	165	365
6 X4	150	267	185	400
8 X6	200	292	320	1050



CLASS300 Dimension chart				Unit(mm)
SIZE inch	DN	L	H	W
1/2	15	140	85	130
3/4	20	152	85	130
1/4	20	152	90	130
1X1/4	25	165	90	130
1	25	165	100	185
1 1/2 X1	32	178	100	185
1 1/4	32	178	105	185
1 1/2 X1 1/4	40	190	105	185
1 1/2	40	190	120	250
2 X1 1/2	50	216	120	250
2 1/2 X2	65	241	130	250
3 X2 1/2	75	283	155	365
4 X3	100	305	165	365
6 X4	150	403	185	400
8 X6	200	419	320	1050



Gear Operation Dimension Chart						
Class	150	300	Gear operator			
			H	W	B	A
inch	6	6	257	350	205	125
	8	8	306	355	320	185

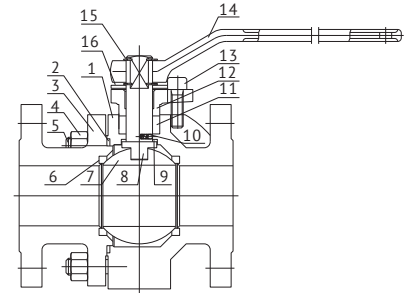


Ball Valves (Overall Dimensions)

Forged steel floating ball valve

Main part materials list

No	Part name	Carbon steel	Low Temp. steel	Stainless steel
1	Body	ASTM A105	ASTM A350 LF2	ASTM A182 F316
2	Gasket	304+Graphite	304+Graphite	316+Graphite
3	Bonnet	ASTM A105	ASTM A350 LF2	ASTM A182 F316
4	Nut	ASTM A194-2H/2HM	ASTM A194 7M	ASTM A194-2HM/8
5	Stud	ASTM A193-B7/B7M	ASTM A320 7M	ASTM A193-B7M/B8
6	Seat	RPTFE	RPTFE	RPTFE
7	Ball	ASTM A105+ENP	ASTM A350 LF2+ENP	ASTM A182 F316
8	Stem	ASTM A182-F6a	ASTM A182-F6a	ASTM A182 F316
9	Gasket	304+PTFE	304+PTFE	316+PTFE
10	Antistatic device	ASTM A182-F304	ASTM A182-F304	ASMT A182-F304/F316
11	Packing	PTFE/Graphite	PTFE/Graphite	PTFE/Graphite
12	Packing gland	Carbon steel	Carbon steel	Stainless steel
13	Screw	ASTM A193-B7/B7M	ASTM A193-7M	ASTM A193-B8
14	Lever	ASTM A216-WCB	ASTM A216-WCB	ASTM A216-WCB
15	Back stop	Carbon steel	Carbon steel	Carbon steel
16	Stopper plate	Carbon steel	Carbon steel	Stainless steel



CLASS150 Dimension chart

Unit(mm)

Nom. Dia	in	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8
	mm	15	20	25	40	50	65	80	100	125	150	200
Bore		15	20	25	40	50	65	80	100	125	150	200
L		108	117	127	165	178	190	203	229	356	394	457
H		84	88	95	120	140	160	180	208	220	335	-
W		130	130	140	250	250	400	400	450	450	1050	-

1/2"-4": Lever operation
6"-8": Optional gear operation
Test pressure
Shell(Hydrostatic):3.10MPa(450psi)
Seat(Air):0.55MPa(80psi)

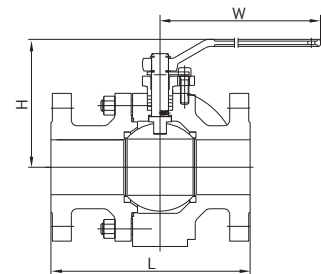


CLASS300 Dimension chart

Unit(mm)

Nom. Dia	in	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8
	mm	15	20	25	40	50	65	80	100	125	150	200
Bore		15	20	25	40	50	65	80	100	125	150	200
L		140	150	165	191	216	241	283	305	381	403	502
H		84	88	95	120	140	160	180	208	220	335	-
W		130	130	140	250	250	400	400	450	450	1050	-

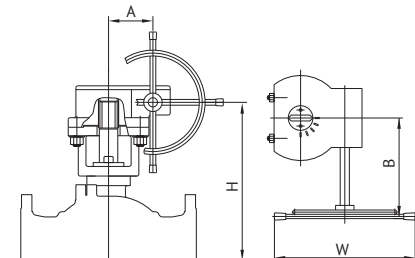
1/2"-4": Lever operation
6"-8": Optional gear operation
Test pressure
Shell(Hydrostatic):7.5MPa(1080psi)
Seat(Air):0.55MPa(80psi)



Gear operation dimension chart

Unit(mm)

CLASS	150	300	Gear operator			
			H	W	B	A
Size (inch)	6	6	257	350	205	125
	8	8	306	355	320	185



Technical specification:

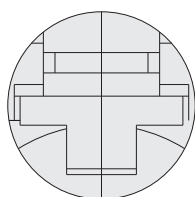
- Temp. & Pressure: ASME B16.34, BS5351
- Wall thickness : ASME B16.34, BS5351
- Bore dimension: API 6D, ASME B16.34, BS5351
- Face to Face: ASME B16.10, API 6D
- Flanges dimentions: ASME B16.5, BS1560
- Test & inspection: API 598, API 6D, BS5146
- Body material: A105N, LF2, F304, F316, F304L, F316L, F51, F53

Forged Steel Ball Valves (Smaller than 2")

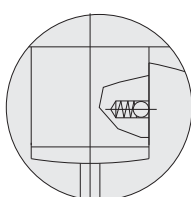
ZAF forged steel ball valves (smaller than 2") have two structures. One is of 2-PCS body structure, threaded bonnet, RPTFE or PEEK seal. The another is of 3-PCS body structure. bolted tailpieces. Different materials for seats, gaskets and packing may be chosen acc. to different using conditions.

Construction is as follows

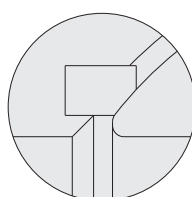
Full port or conventional port; 90° locating and lock structure; Special Y type handle; Fire proof and anti static; Mounted flange as per ISO 5211; Blow out Proof stem; Double sealing for the stem; Bolted bonnet; Socket welded ends to ASME B16.11; Screwed ends (NPT) to ANSI/ASME B1.20.1.



Blow-out proof stem



Anti-static

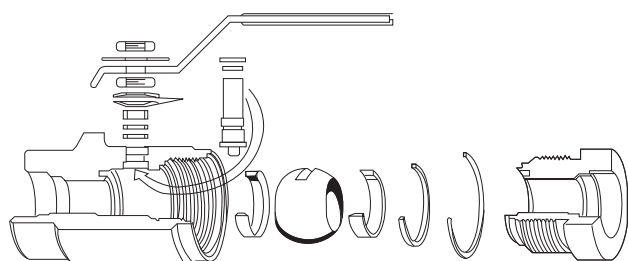


Firesafe

Design structure

Seat is made of PTFE reinforced with 25% glass fibre or PEEK. PTFE with 25% glass fibre can gain better performances normally used for class 800 ball valves. PEEK can gain better performances under high pressure and high temperature normally used for class 1500 ball valves.

Anti-static/ Firesafe/ Blow-out proof stem



ZAF compact ball valves are trusted by many customers because of its reasonable structures small space-occupation and good sealing performance

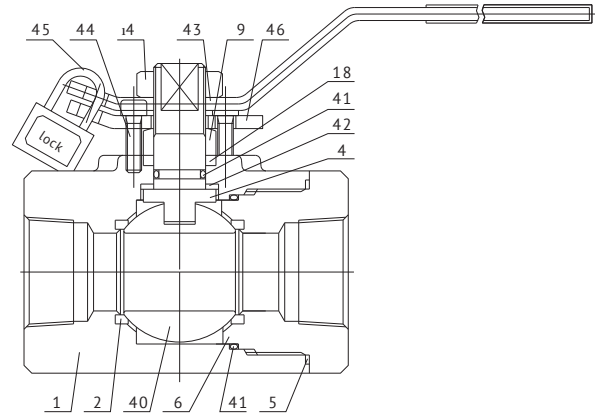


Flow coefficient Cv		
NPS	Full port	Reduced port
1/4	8	
3/8	8	
1/2	12	8
3/4	33	12
1	48	33
1 1/4	83	48
1 1/2	120	83
2	250	120

2-PCS Body Forged Steel Ball valves (Smaller than 2")

Application standards

- 1、 Design and manufacture conform to BS 5351, MSS SP-118;
- 2、 Connection ends conform to:
 - 1)Socket welded ends conform to ANSI B16.11
 - 2)Screw ends conform to ANSI B1.20.1
 - 3)Butt-welded ends conform to ANSI B16.25
 - 4)Flanged ends conform to ANSI B16.5
- 3、 Test and inspection conform to: API 598
- 4、 Structure features:
Bolted bonnet; 2-PCS Body;
- 5、 Main materials:
A105; LF2; 304(L); 316(L); F347; F321; F51; Monel; 20Alloy.

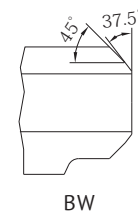
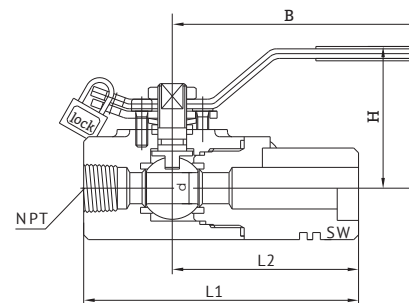
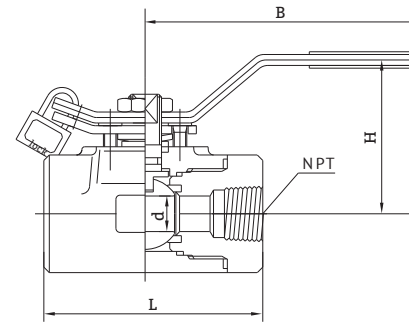


Main part materials list

No.	Part name	A105 /F6a	LF2 /304	F304(L) /304(L)	F316(L) /316(L)	F51 /F51
1	Body	A105	LF2	F304(L)	F316(L)	F51
2	Seat	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK
4	Stem	410	304	F304(L)	F316(L)	F51
5	Gasket	PTFE	PTFE	PTFE	PTFE	PTFE
6	Bonnet	A105	LF2	F304(L)	F316(L)	F51
9	Gland	410	304	F304(L)	F316(L)	F51
14	Flat nut	8	8	8	8M	8M
18	Packing	PTFE	PTFE	PTFE	PTFE	PTFE
40	Ball	F6	F304	F304(L)	F316(L)	F51
41	O-ring	VITON	VITON	VITON	VITON	VITON
42	Back seat gasket	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK
43	Wrench	ANSI 1025	ANSI 1025	ANSI 1025	ANSI 1025	ANSI 1025
44	Screw	B8	B8	B8	B8M	B8M
45	Lock	Finished product	Finished product	Finished product	Finished product	Finished product
46	Locator	ANSI 1025	ANSI 1025	ANSI 1025	ANSI 1025	ANSI 1025

Carbon steel temperature-pressure rate

- CL150-285 P.S.I @ 100°F
- CL300-740 P.S.I @ 100°F
- CL600-1480 P.S.I @ 100°F
- CL800-1975 P.S.I @ 100°F
- CL1500-3705 P.S.I @ 100°F



CLASS800 Dimension chart

Unit(mm)

Specification(NPS)	R.P F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face	L1	70	70	80	95	115	125	135	155	155
Coupling pipe end to center	L2	121	121	121	130	136	140	148	160	160
Center to handle end	B	160	160	160	160	170	230	230	280	280
Height	H	60	60	60	65	85	105	105	125	125
Height (inside bore)	H	6	9	12.5	17	24	37	37	49	49
Weight(Kg)	d	1.2	0.9	1.3	2.2	3.5	6.5	6.5	11	11

CLASS1500-2500 Dimension chart

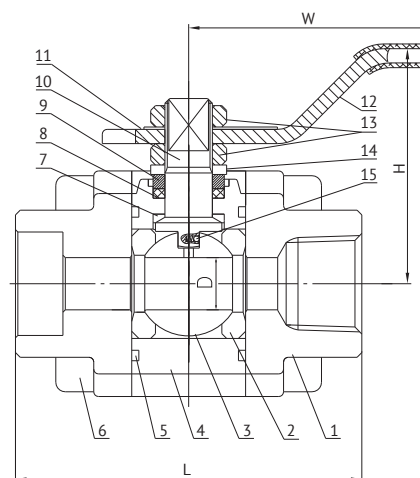
Unit(mm)

(NPS) Specification inches	F.P		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Face to face	L1	CL1500	80	80	95	115	125	135	155	155
		CL2500			125	135	155	155	155	155
Coupling pipe end to center	L2	CL1500	121	121	130	136	140	148	160	175
		CL2500			136	140	148	175	175	175
Center to handle end	B	CL1500	160	160	160	170	230	230	280	280
		CL2500			230	230	280	230	280	280
Height Weight(Kg)	H	CL1500	60	60	65	85	105	105	125	125
		CL2500			90	110	125	105	125	125
Height (inside bore)	H	CL1500	6	9	13	19	25	32	38	49
		CL2500			13	19	25	32	38	49
Weight(Kg)	d	CL1500	1.2	1.5	2.5	3.7	5.8	8.7	11.5	13.7
		CL2500			2.7	4.1	6.3	8.7	12	13.7

3PCS Forged Steel Ball Valves

Application standards

- 1、 Design and manufacture conform to BS-5351 MSS SP-118;
- 2、 Connection ends conform to:
 - 1)Socket welded ends conform to ANSI B16.11
 - 2)Screw ends conform to ANSI B1.20.1
 - 3)Butt-welded ends conform to ANSI B-16.25
 - 4)Flanged ends conform to ANSI B16.5
- 3、 Test and inspection conform to: API 598; GB/T13927; JB/T9092
- 4、 Structure features:
Bolted bonnet; 3-PCS Body;
- 5、 Materials conform to ANSI/ASTM.
- 6、 Main materials:
A105; LF2; F5; F11; F22; 304(L); 316(L); F347;
F321; F51; Monel; 20 Alloy.



Carbon steel temperature-pressure rate

- CL150-285 P.S.I @ 100°F
- CL300-740 P.S.I @ 100°F
- CL600-1480 P.S.I @ 100°F
- CL800-1975 P.S.I @ 100°F
- CL1500-3705 P.S.I @ 100°F

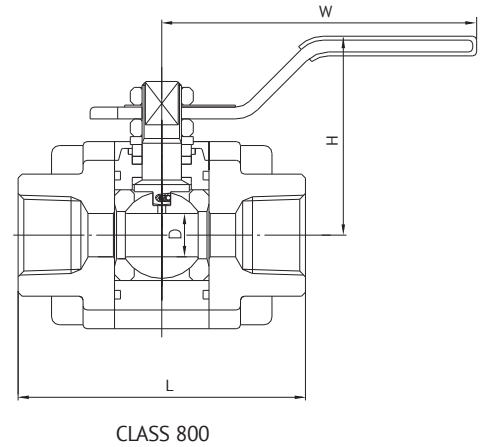
Main part materials list

No.	Part name	A105/F6a	LF2/304	F304/L/304(L)	F316/L/316(L)	F51/F51
1	Bonnet	A105	LF2	F304	F316	F51
2	Seat	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK
3	Ball	F6	F304	F304(L)	F316(L)	F51
4	Body	A105	LF2	F304(L)	F316(L)	F51
5	O-ring	VITON	VITON	VITON	VITON	VITON
6	Bolt		B8	B8	B8M	B8M
7	Gasket	PTFE	PTFE	PTFE	PTFE	PTFE
8	Packing	PTFE	PTFE	PTFE	PTFE	PTFE
9	Gland	410	304	304(L)	316(L)	F51
10	Stem	410	304	304(L)	316(L)	F51
11	Nameplate	Al	Al	Al	Al	Al
12	Lever	1045+Zn	1045+Zn	1045+Zn	1045+Zn	1045+Zn
13	Nut	2H	8	8	8M	8M
14	Elastic washer	65Mn	65Mn	304	304	304
15	Anti-static spring	304	304	304	316L	316L

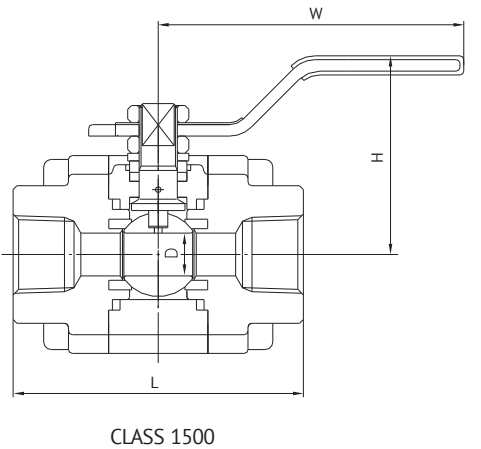


3PCS Forged Steel Valve

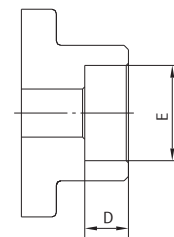
CLASS800-1500 Dimension chart											Unit(mm)
FULL PORT	Size	inch	1/4	3/8	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2	
			mm	mm	mm	mm	mm	mm	mm	mm	mm
End to End	CLASS 800	L	67	67	73	88	105	116	128	146	
	CLASS 1500	L	73	73	88	105	116	128	146	-	
Lever	CLASS 800	W	120	120	120	145	145	175	175	260	
	CLASS1500	W	120	120	145	145	175	175	260	-	
Center of Top	CLASS 800	H	50	50	52	60	65	86	93	110	
	CLASS 1500	H	52	52	60	60	86	93	110	-	
Inside Bore	CLASS 800	D	11	11	14	20.5	25	31.6	38	49	
	CLASS 1500	D	11	11	14	20.5	25	31.6	38	-	
Weight	CLASS 800	Kg	0.75	0.75	0.95	1.7	2.4	3.7	4.9	8.7	
	CLASS 1500	Kg		1.2	2.2	3.4	4.7	6.7	10.5	-	



CLASS800-1500 Dimension chart											Unit(mm)
REG.PORT	Size	inch	1/2	3/4	1	1 ¹ / ₄	1 ¹ / ₂	2			
			mm	mm	mm	mm	mm	mm	mm		
End to End	CLASS 800	L	67	73	88	105	116	128			
	CLASS 1500	L	73	88	105	116	128	146			
Lever	CLASS 800	W	120	120	145	145	175	175			
	CLASS1500	W	120	145	145	175	175	260			
Center of Top	CLASS 800	H	50	52	60	65	86	93			
	CLASS 1500	H	52	60	60	86	93	110			
Inside Bore	CLASS 800	D	11	14	20.5	25	31.6	38			
	CLASS 1500	D	11	14	20.5	25	31.6	38			
Weight	CLASS 800	Kg	0.75	0.95	1.7	2.4	3.7	4.9			
	CLASS 1500	Kg	1.2	2.2	3.4	4.7	6.7	10.5			



SOCKET WELD DIMENSIONS	Mom Size	inch	1/4	3/8	1/2	3/4	1	1 ¹ / ₂	1 ¹ / ₄	2
			mm	mm	mm	mm	mm	mm	mm	mm
	ANSI B16.11	E	14.1	17.6	21.9	27.4	34.2	42.7	48.8	61.1
		D	9.6	9.6	9.6	12.7	12.7	12.7	12.7	15.9

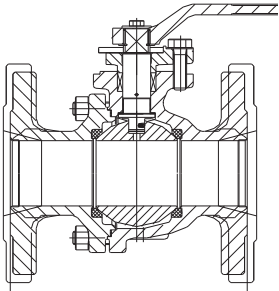


Typical Installations



Typical Installations





Flow in control with ZAF Valves

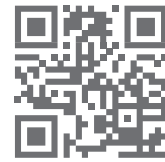
ZAF Valves, a leading brand of Inter Equipment Co Ltd is a global premium Manufacturer, Producer, Fabricator, Stockiest, Distributor and Service provider of Precision Engineered Valves, Piping products and other oilfield components. ZAF Valves are developed from 25 of experience in oil and gas pipeline products to surpass the most stringent requirements



Global Headquarters

📍 Junction #13, Road 732,
Jebel Ali Free Zone,
P.O.Box 18200,
Dubai, U.A.E
☎ +971 4 881 6000
📠 +971 4 881 0100

☎ Service Hotline: 800-INTER (46837)
✉ info@zafvalves.com
✉ sales@zafvalves.com
✉ service@zafvalves.com
✉ careers@zafvalves.com
🌐 www.zafvalves.com



Aberdeen

📍 1 Berry Street,
Aberdeen, AB25 1HF,
United Kingdom
☎ +44 122 484 5600
📠 +44 122 484 1301
✉ aberdeen@zafvalves.com



Abu Dhabi

📍 M 14, Sector # 36
Mussafah P.O. Box: 9779,
Abu Dhabi, U.A.E.
☎ +971 2 554 6600
📠 +971 2 554 6646
✉ abudhabi@zafvalves.com



Brussels

📍 Pegasuslaan 5, 1831
Diegem, Brussels,
Belgium, 1831
☎ +32 2 892 27 67
📠 +32 2 892 27 01
✉ brussels@zafvalves.com



Bucharest

📍 World Trade Center, Piata Montreal,
No 10, Entrance F, 1st Floor, Sector 1,
Bucharest, Romania, 11469
☎ +4021.202.3040
📠 +4021.202.3100
✉ bucharest@zafvalves.com



Dubai

📍 Al Quoz Industrial Area
P.O. Box: 9004,
Dubai, U.A.E.
☎ +971 4 339 2000
📠 +971 4 339 2300
✉ dubai@zafvalves.com



Milan

📍 Via Senigallia 18/2 -
Torre A, Milan,
Italy, 20161
☎ +39 0264 67 26 00
📠 +39 0264 67 24 00
✉ milan@zafvalves.com



Seoul

📍 33rd Fl. Trade Tower, 511 Young
Dong Street, Gangnam-gu,
Seoul, South Korea, 135-729
☎ +82 2 6007 2900
📠 +82 2 6007 2703
✉ seoul@zafvalves.com



Shanghai

📍 51/F Raffles City, 268 Xizang
Zhong Road, Huangpu District,
Shanghai, China, 200001
☎ +86 21 2312 7683
📠 +86 21 2312 7777
✉ shanghai@zafvalves.com



Toronto

📍 1235 Bay Street Suite 400,
Toronto, ON,
Canada, M5R3K4
☎ +1 647 771 7100
📠 +1 647 772 2700
✉ toronto@zafvalves.com