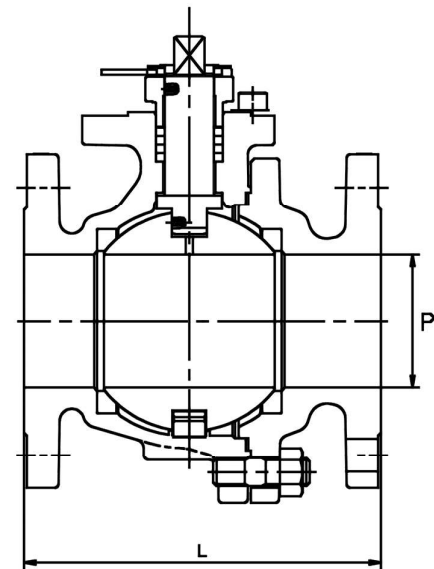




## BALL VALVES - 2 PIECE BALL VALVES - 150#, 300#, 600#, 900#, 1500# & 2500#. Flanged, Butt Welded and Screwed\* Ends

FLOWTORQ make 2 Piece design Ball Valves comes in cast two piece body in screwed, threaded and flanged types. A main body houses ball, stem and 1 seat whereas the side piece or adaptor houses 1 seat and sometimes, some portion of ball. And retainers wherever applicable. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These ball valves are also designed and manufactured with extended stem for hot and cold applications. 2 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 piece design for similar size and class variant.



DESIGN & TESTING STANDARD
Design as per BS5351, ASME B16.34 & ISO 17292
ISO 5211 Top flange
FIRE SAFE as per BS API 607
Pressure testing according, API 598 & ISO 5208
Face to Face as per ASME B16.10 / ASME B16.34
RF, RTJ End Connection as per ASME B16.5
Butt Weld as per ASME B16.25
NPT / SW as per relevant standards

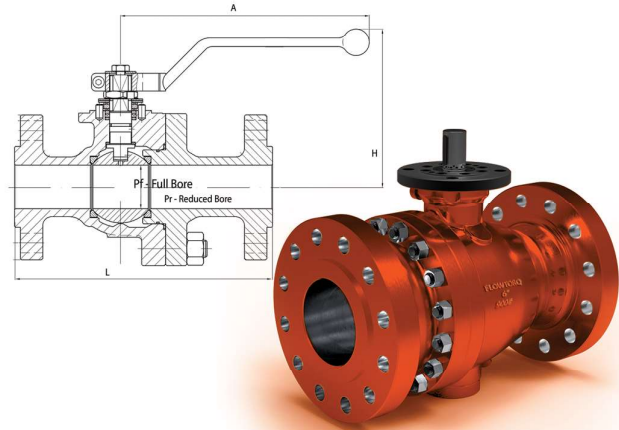
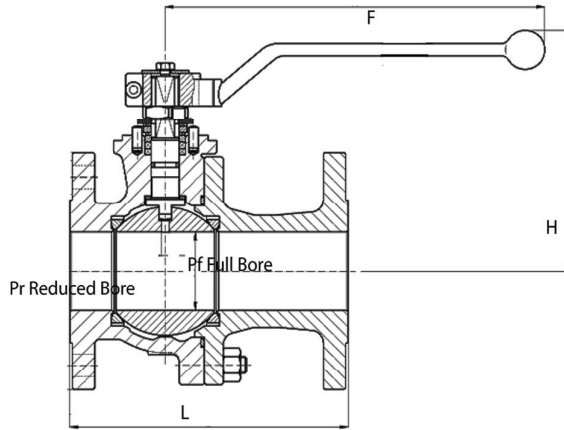
TEST / INSPECTION	METHOD	ACCEPTANCE CRITERIA
Visual Inspection		MSS SP-55
Marking		MSS SP-25 & ISO5208
Dimensional Inspection		Applicable valve
Chemical Analysis	ASTM E350	Applicable Standard
Mechanical Properties	ASTM A370	Applicable Standard
Liquid Penetrant Inspection	ASTM A165	ASME B16.34
Magnetic Particle Inspection	ASTM E709	ASME B16.34
Radiographic Inspection	ASME B16.34	ASME B16.34
Ultrasonic Inspection	ASTM A388	ASME B16.34
Pressure Testing	API 598 / ISO 5208	API 598 / ISO 5208



# BALL VALVES - 2 PIECE BALL VALVES - 150#, 300#, 600#, 900#, 1500# & 2500#. Flanged, Butt Welded and Screwed\* Ends



FLOWTORQ make 2 Piece design Ball Valves comes in cast two piece body in screwed, threaded and flanged types. A main body houses ball, stem and 1 seat whereas the side piece or adaptor houses 1 seat and sometimes, some portion of ball. And retainers wherever applicable. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These ball valves are also designed and manufactured with extended stem for hot and cold applications. 2 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 piece design for similar size and class variant.



150# - FULL BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	15	108	110	164	2
3/4"	20	117	117	164	3
1"	25	127	129	164	3.5
1.1/2"	40	165	148	213	8
2"	50	178	155	348	11
2.1/2"	65	190	169	445	16
3"	80	203	207	495	23
4"	100	229	231	698	38
6"	150	394	298	868	88
8"	200	457	352		155
10"	250	533	499		175
12"	300	610	585		295
14"	350	686	656		580
16"	400	762	770		750

(Code - PV-10", 10"<sup>c</sup>-GEN)

150# - REDUCE BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	9.5	108	81	164	2
3/4"	15	117	98	164	2.5
1"	20	127	101	164	3
1.1/2"	32	165	117	210	5.2
2"	40	178	134	210	8
2.1/2"	52				
3"	49	203	149	348	14.5
4"	76	229	189	445	26
6"	102	267	227	495	45
8"	152	292	264		77
10"	203	330	307		114
12"	254	356	342		230
14"	305				
16"	337				

(Code - PV-10", 10"<sup>c</sup>-GEN)

300# - FULL BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	15	140	110	164	3
3/4"	20	152	117	164	4
1"	25	165	129	164	5
1.1/2"	40	190	148	213	11
2"	50	216	155	213	14
2.1/2"	65	241	180	213	30
3"	80	283	207	445	32
4"	100	305	231	495	52
6"	150	511	298	698	94
8"	200	502	443		157
10"	250	568	510		263
12"	300	648	610		480
14"	350	762	664		655
16"	400	838	777		890

(Code - PV-10", 10"<sup>c</sup>-GEN)

300# - REDUCE BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	9.5	140	81	164	2
3/4"	15	152	98	164	2.5
1"	20	165	101	164	4.5
1.1/2"	32	190	117	210	8.5
2"	40	216	134	210	11
2.1/2"	52	241	177	213	28
3"	49	283	149	348	21.5
4"	76	305	189	445	29
6"	102	403	227	495	70
8"	152	419	264		115
10"	203				
12"	254				
14"	305				
16"	337				

(Code - PV-10", 10"<sup>c</sup>-GEN)

600# - FULL BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	15	165	111	164	5.5
3/4"	20	190	117	164	8
1"	25	216	119	210	10
1.1/2"	40	241	137	347	19
2"	50	292	180	445	29
2.1/2"	65	330	295	210	58
3"	80	356	228	698	42
4"	100	432	245	698	78
6"	150	559	400		192
8"	200	660	472		329
10"	250	787	548		460
12"	300	838	680		570

(Code - J)

600# - REDUCE BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	9.5	165	89	164	5
3/4"	15	190	111	164	8
1"	20	216	117	210	9
1.1/2"	32	241	119	347	15
2"	40	292	137	348	25
2.1/2"	52	330	270	210	40
3"	49	356	201	695	30
4"	76	432	228	695	64

(Code - J)

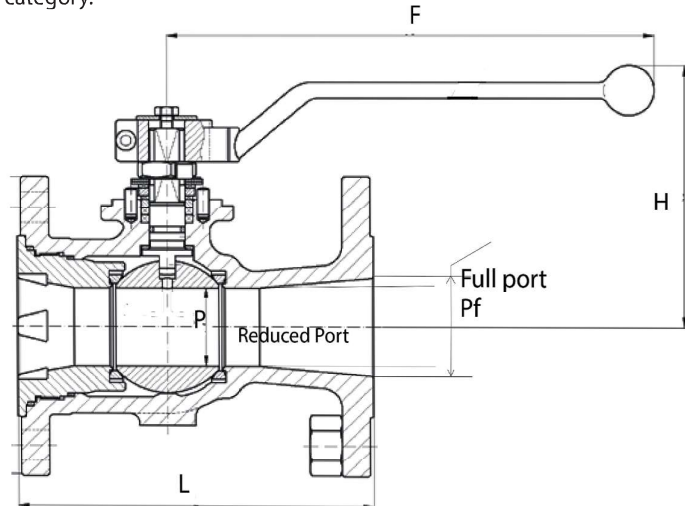




# BALL VALVES - 1 PIECE BALL VALVES - 150# & 300#



FLOWTORQ make 1 Piece design Ball Valves comes in cast single piece body in screwed, threaded and flanged types. A single body houses ball, stem, seats and retainers wherever applicable. Ball Valves are ideal in tight shut off applications in high pressure as well as low pressure services. 1 piece ball valves are designed and manufactured for limited sizes and are inexpensive as compared to other variants in its category.



150#					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	15	108	90	164	1.6
3/4"	20	118	90	164	2.1
1"	25	127	95	164	2.7
1.1/4"	32	140	95	210	4.8
1.1/2"	40	165	100	210	5.1
2"	50	178	125	213	7.9
2.1/2"	65	191	140	213	14.3
3"	80	203	175	348	25.9
4"	100	229	195	445	43.8
6"	150	267	269	495	77
8"	200	292	320	698	114
10"	250	330	405	698	230

(Code - GEN)

Weights mentioned are approximate nearest

300#					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	15	140	90	164	1.6
3/4"	20	152	90	164	2.1
1"	25	165	101	164	4.1
1.1/4"	32	178	110	210	6
1.1/2"	40	190	117	210	8.2
2"	50	216	134	213	10.9
2.1/2"	65	241	149	213	21.4
3"	80	282	189	348	28.9
4"	100	305	195	445	70
6"	150	403	257	495	110
8"	200	419	329	698	129
10"	250	457	380	698	148

(Code - GEN)

Weights mentioned are approximate nearest

Design and Manufacturing Standard	BS5351, API602
Testing Standard	API598
Face to Face Standard	ANSI B 16.10
End Connections	BSP, BSPT, NPT

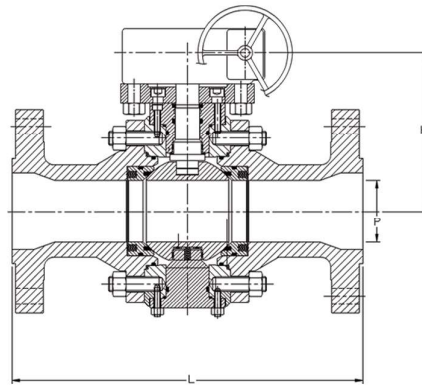
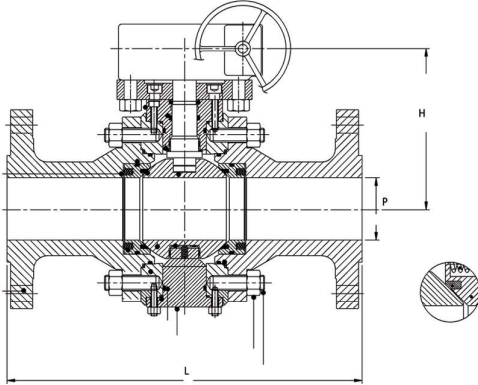






# BALL VALVES - 3 PIECE BALL VALVES - - 150#, 300#, 600#, 900#, 1500# FLOWTORQ & 2500#. Flanged & Butt Welded Ends

FLOWTORQ make 3 Piece design Ball Valves comes in cast three piece body in screwed, threaded and flanged types. A main body houses ball and stem and the 2 side pieces or adaptors house 1 seat each. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These are preferred in heavy and bulky high pressure applications primarily. These ball valves are also designed and manufactured with extended stem for hot and cold cryogenic applications. 3 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 & 2 piece design for similar size and class variants.



150# - FULL BORE						
Size (P)						
IN.	MM	L	H	F	Weight (kg)	
1/2"	15	108	89	164	4.5	
3/4"	20	118	98	164	6.8	
1"	25	127	108	164	7	
1.1/2"	40	165	127	210	9	
2"	50	178	152	213	24	
2.1/2"	65	191	178	213	28	
3"	80	203	190	348	47	
4"	100	229	229	445	86	
6"	150	267	279	495	191	
8"	200	292	343		357	
10"	250	330	406		529	
12"	300	610	822		794	
14"	350	686	894		1120	
16"	400	762	962		1473	
18"	450	864	1138		1860	
20"	500	914	1187		2589	
22"	550					
24"	600	1067	1291		4302	

(Code - PV-10", 10"<-GEN)

150# - REDUCE BORE						
Size (P)						
IN.	MM	L	H	F	Weight (kg)	
1/2"	9.5	108	51	164	3	
3/4"	15	118	72	164	4.5	
1"	20	127	88	164	5	
1.1/2"	32	165	100	210	6	
2"	40	178	123	213	8.5	
2.1/2"	52	191	145	213	17	
3"	49	203	152	348	66	
4"	76	229	189	445	75	
6"	102	267	221	495	115	
8"	152	292	242		205	
10"	203	330	278		375	
12"	254	610	822		565	
14"	305	686	894		825	
16"	337	762	962		1250	
18"	387	864	1138		1820	
20"	438	914	1187		2450	
22"						
24"	589	1067	1291		2790	

(Code - PV-10", 10"<-GEN)

300# - FULL BORE						
Size (P)						
IN.	MM	L	H	F	Weight (kg)	
1/2"	15	140	95	164	6	
3/4"	20	152	117	164	9	
1"	25	165	124	164	10	
1.1/2"	40	190	155	210	17	
2"	50	216	165	213	28	
2.1/2"	65	241	190	213	38	
3"	80	282	209	348	61	
4"	100	305	254	445	100	
6"	150	403	317	495	217	
8"	200	419	381		387	
10"	250	457	444		610	
12"	300	648	822		882	
14"	350	762	894		1296	
16"	400	838	962		1687	
18"	450	914	1138		2057	
20"	500	991	1187		2872	
22"	550					
24"	600	1143	1272		5525	

(Code - PV-10", 10"<-GEN)

300# - REDUCE BORE						
Size (P)						
IN.	MM	L	H	F	Weight (kg)	
1/2"	9.5	140	88	164	5.5	
3/4"	15	152	101	164	8	
1"	20	165	108	164	9	
1.1/2"	32	190	120	210	15	
2"	40	216	138	213	25	
2.1/2"	52	241	177	213	32	
3"	49	282	200	348	65	
4"	76	305	244	445	85	
6"	102	403	289	495	135	
8"	152	419	357		225	
10"	203	457	421		385	
12"	254	648	681		650	
14"	305	762	822		995	
16"	337	838	894		1460	
18"	387	914	962		1925	
20"	438	991	1138		2450	
22"						
24"	488	1143	1187		3250	

(Code - PV-10", 10"<-GEN)

600# - FULL BORE						
Size (P)						
IN.	MM	L	H	F	Weight (kg)	
2"	50	292	225	210	33	
2.1/2"	65	330	295	210	58	
3"	80	356	296	250	75	
4"	100	432	339	250	136	
6"	150	559	547	250	300	
8"	200	660	621		561	
10"	250	787	727		828	
12"	300	838	841		1238	
14"	350	889	905		1532	
16"	400	991	994		2137	
18"	450	1092	1109		2595	
20"	500	1194	1158		3454	
22"	550					
24"	600	1397	1293		6250	

(Code - J)

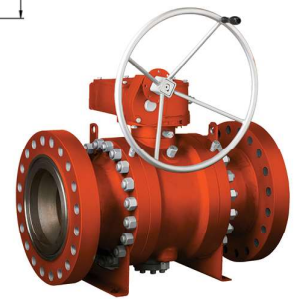
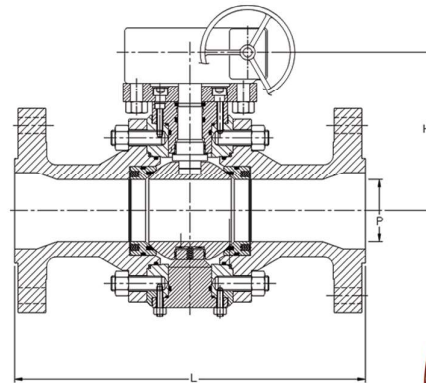
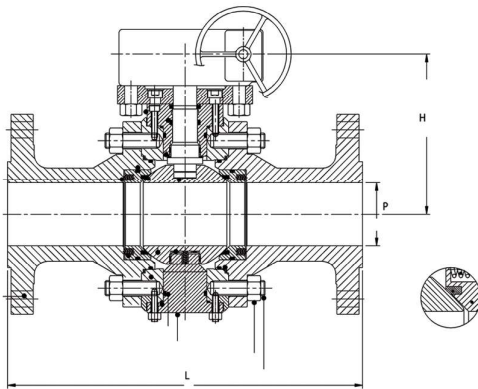
600# - REDUCE BORE						
Size (P)						
IN.	MM	L	H	F	Weight (kg)	
2"	40	292	201	210	30	
2.1/2"	52	330	270	210	40	
3"	49	356	225	250	45	
4"	76	432	296	250	96	
6"	102	559	339	250	179	
8"	152	660	547		291	
10"	203	787	621		612	
12"	254	838	727		827	
14"	305	889	841		1076	
16"	337	991	905		1292	
18"	387	1092	994		1678	
20"	438	1194	1109		2220	
22"						
24"	488	1397	1158		3119	

(Code - J)



# BALL VALVES - 3 PIECE BALL VALVES - - 150#, 300#, 600#, 900#, 1500# FLOWTORQ® & 2500#. Flanged & Butt Welded Ends

FLOWTORQ make 3 Piece design Ball Valves comes in cast three piece body in screwed, threaded and flanged types. A main body houses ball and stem and the 2 side pieces or adaptors house 1 seat each. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These are preferred in heavy and bulky high pressure applications primarily. These ball valves are also designed and manufactured with extended stem for hot and cold cryogenic applications. 3 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 & 2 piece design for similar size and class variants.



900# - FULL BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
2"	50	368	221		52
2.1/2"	65	419	295		75
3"	80	381	277		80
4"	100	457	321		170
6"	150	610	594		390
8"	200	737	686		640
10"	250	838	792		1070
12"	300	965	873		1610
14"	350	1029	926		1760
16"	400	1130	998		2240
18"	450	1219	1094		3000
20"	500	1321	1179		4360

(Code - J)

900# - REDUCE BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
2"	40	368	275		40
2.1/2"	52	419	295		55
3"	49	381	221		62
4"	76	457	277		105
6"	102	610	321		201
8"	152	737	594		436
10"	203	838	686		735
12"	254	965	792		1200
14"	305	1029	873		1795
16"	337	1130	926		2105
18"	387	1219	998		2720
20"	438	1321	1094		4050

(Code - J)

1500# - FULL BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
2"	50	368	275		51
2.1/2"	65	419	295		90
3"	80	473	293		98
4"	100	549	361		175
6"	150	711	637		491
8"	200	841	737		785
10"	250	1000	841		1464
12"	300	1146	964		2259

(Code - J)

1500# - REDUCE BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
2"	40	368	250		50
2.1/2"	52	419	270		65
3"	49	473	236		75
4"	76	549	293		115
6"	102	711	361		315
8"	152	841	637		603
10"	203	1000	737		876
12"	254	1146	841		1691

(Code - J)

2500# - FULL BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
2"	50	454	275		110
2.1/2"	65	508	335		210
3"	80	584	333		215
4"	100	683	401		385
6"	150	927	712		840
8"	200	1038	851		1435

(Code - J)

2500# - REDUCE BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
2"	40	451	295		85
2.1/2"	52	508	300		180
3"	49	584	275		213
4"	76	683	333		250
6"	102	927	401		520
8"	152	1038	712		1000

(Code - J)



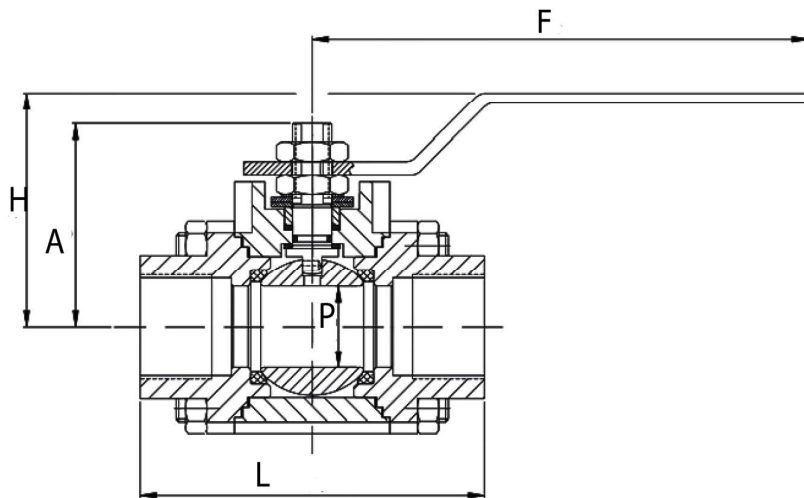


# BALL VALVES - 3 PIECE BALL VALVES - 150# & 800#

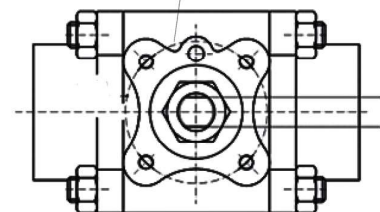
## Socket weld / Threaded Ends



FLOWTORQ make 3 Piece design Ball Valves comes in cast three piece body in screwed, socket weld & threaded types. A main body houses ball and stem and the 2 side pieces or adaptors house 1 seat each. Ideal in tight shut off applications from low pressures to high and very high pressure as well. These are preferred in heavy and bulky high pressure applications primarily. These ball valves are also designed and manufactured with extended stem for hot and cold cryogenic applications. 3 piece ball valves are designed and manufactured in smaller to higher sizes and are expensive as compared to 1 & 2 piece design for similar size and class variants.



Mounting as per ISO 5211



150#					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	15	90	58	155	3.5
3/4"	20	95	70	160	4.5
1"	25	100	44	160	5
1.1/2"	40	120	44	178	6
2"	50	130	46	178	10

(Code - PV)

800#					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/2"	15	68	43	115	4
3/4"	20	79	54	122	5
1"	25	95	68	153	6
1.1/2"	40	117	98	178	7
2"	50	130	122	178	11

(Code - PV)

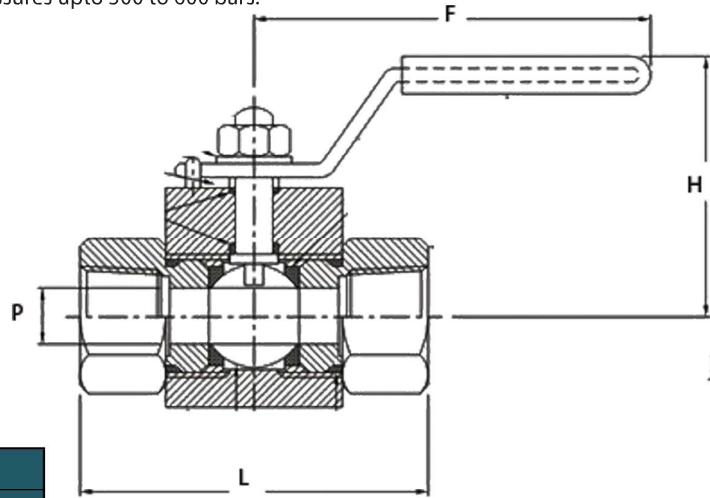
Design and Manufacturing Standard	BS5351, API602
Testing Standard	API598
Face to Face Standard	ANSI B 16.11, Mnfr's Std.
End Connections	BSP, BSPT, NPT, Socket Weld



# BALL VALVES - HIGH PRESSURE BALL VALVES



High Pressure Ball Valves are designed for high pressure applications like hydraulic, steam, utilities, etc. Made out of forged carbon steel or stainless steel (304,316 Grades), these mini ball valves are available in threaded and socket weld ends. Usually are manually operated and can serve pressures upto 500 to 600 bars.



Upto 500 Bar			
Size (P)		Pressure	Flow
IN.	MM		
1/4" BSP	7	500 BAR	30 LPM
3/8" BSP	10	500 BAR	50 LPM
1/2" BSP	15	500 BAR	70 LPM
3/4" BSP	20	350 BAR	120 LPM
1" BSP	25	350 BAR	180 LPM
1 1/4" BSP	32	315 BAR	220 LPM
1 1/2" BSP	40	315 BAR	300 LPM
2" BSP	50	315 BAR	500 LPM

(Code - ATF)



Upto 500 Bar					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1/8"	4	71	91	110	0.52
1/4"	6	71	91	110	0.49
3/8"	10	73	96	110	0.65
1/2"	13	83	99	110	0.77
3/4"	20	95	106	180	1.47
1"	25	112	116	180	2.23
1.1/4"	85	110	145	305	4.15
1.1/2"	96	130	155	305	5.54
2"	112	140	173	305	8.85

(Code - ATF)



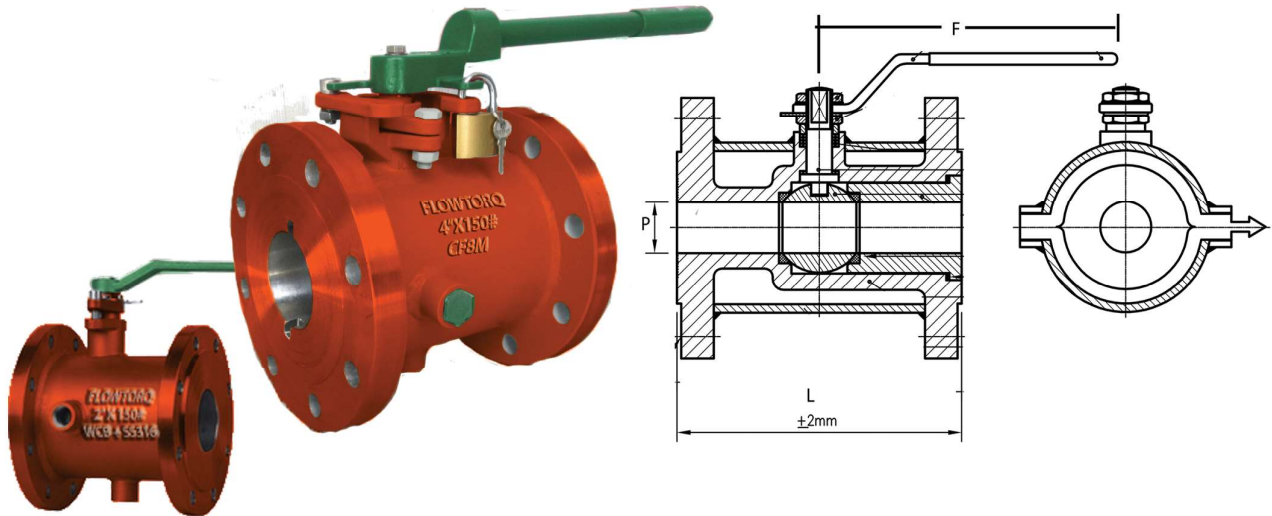




# BALL VALVES - JACKETED BALL VALVES



Check Valves come in various designs such as Swing Check, Lift Check (Piston type), Dual Plate, Tilting Disc and Non-Slam types. The basic application for all check valves are totally opposite to all the other valves. It is it prevents the back flow of process fluid. Typically the closure member is the disc which is either self operated by gravity and force by the back flow or either by a spring which forces the disc or plates to rest on body seats thereby sealing and preventing the back flow. Swing check valves are most widely used followed by lift check valves and dual plate check valves.



150# - FULL BORE					
Size (P)		L	H	F	Weight (kg)
IN.	MM				
1" X 1.1/2"	25	127	128	164	6
1.1/2" X 2"	40	165	153	164	10
2" X 2.1/2"	50	178	175	164	15
2.1/2" X 3"	65	190	199	213	20
3" X 4"	80	203	232	348	28

(Code - SM) For 300# & Above, On Request

Design and Manufacturing Standard	BS5351
Testing Standard	API598
Face to Face Standard	ANSI B 16.10
End Connections	ANSI B16.5