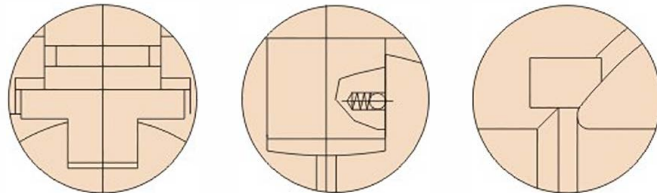


Forged steel ball valves

Rhinoflex Forged steel ball valves have two structures. one is 2PCS , threaded bonnet, RPTFE or PEEK seal. The other is 3PCS . bolted tailpieces. Different materials for seats, gaskets and packing may be chosen acc. to different working 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

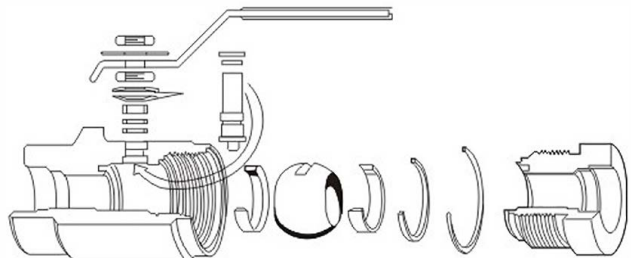
Anti static

Fire safe

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

Design structure

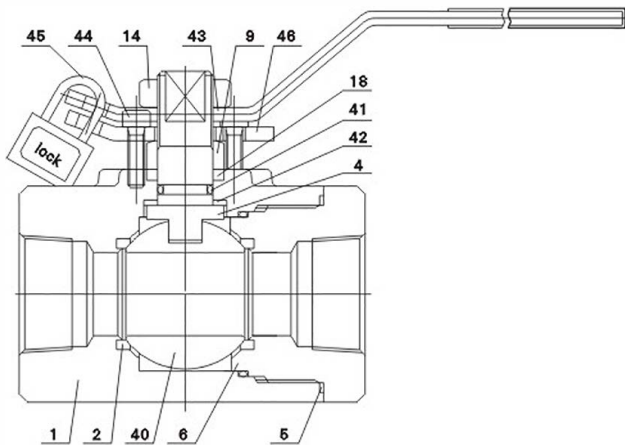
Seat is made of PTFE reinforced with 25% glass fibre or PEEK. PTFE with 25% glass fibre can gain better performances normally used for class 800 ball valves. PEEK can gain better performances under high pressure and high temperature normally used for class 1500 ball valves. Anti static/ fire safe/ blow out proof stem



Flow coefficient Cv

NPS	Cv value	
	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

2PCS Forged steel ball valves



Application standards

- 1、 Design and manufacture conform to BS5351 MSS SP-118;
- 2、 Connection ends conform to:
 - 1)Socket welded ends conform to ANSI B16.11;JB/T1751
 - 2)Screw ends conform to ANSI B1.20.1;JB/T7306
 - 3)Butt-welded ends conform to ANSI B16.25;JB/T12224
 - 4)Flanged ends conform to ANSI B16.5;JB79
- 3、 Test and inspection conform to: API 598 ; GB/T13927 ; JB/T9092
- 4、 Structure features: Bolted bonnet ; two-piece ;
- 5、 Materials conform to ANSI/ASTM.
- 6、 Main materials: A105 ; LF2 ; 304(L) ; 316(L) ; F347 ; F321 ; F51 ; Monel ; 20 Alloy.

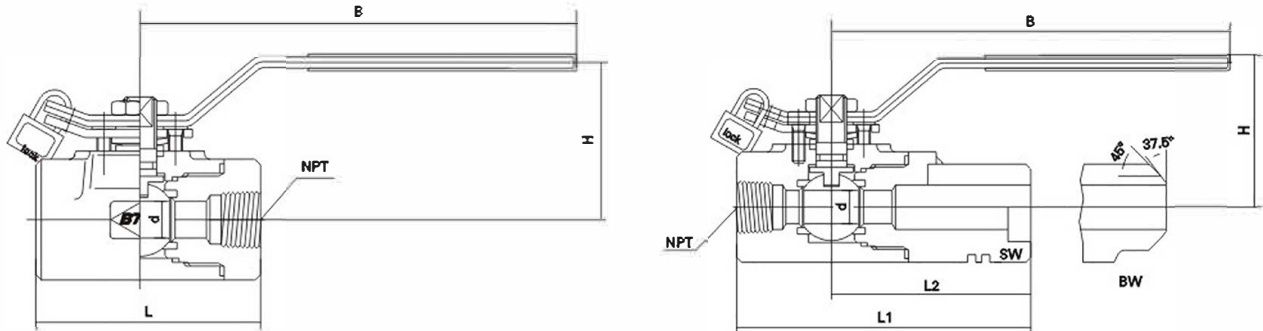
Carbon steel temperature-pressure rate

- 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	Body	A105	LF2	F304(L)	F316(L)	F51
2	Seat	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK
4	Stem	F304	F304	F304(L)	F316(L)	F51
5	Gasket	RPTFE	RPTFE	RPTFE	RPTFE	RPTFE
6	Bonnet	A105	LF2	F304	F316	F51
9	Gland	F304	304	304(L)	316(L)	F51
11	Gland flange	A105	LF2	F304	F316	F51
14	Flat nut	8	8	8	8M	8M
18	Packing	RPTFE	RPTFE	RPTFE	RPTFE	RPTFE
40	Ball	F304	F304	F304(L)	F316(L)	F51
41	O-ring	VITON	VITON	VITON	VITON	VITON
42	Back seat gasket	RPTFE	RPTFE	RPTFE	RPTFE	RPTFE
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

2PCS Forged steel ball valves



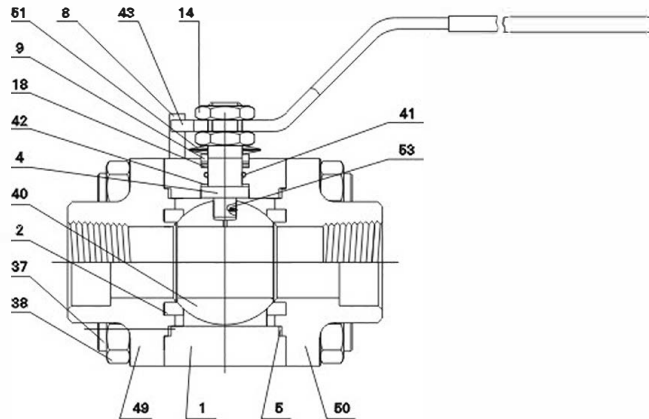
CL800 One end is welded pipe (butt-welding or socket welding) and the other is thread, design conform to BS 5351

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

CL1500-CL2500 One end is welded pipe (butt-welding or socket welding) and the other is thread, design conform to API 6D

Specification(NPS)	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	
Coupling pipe end to center	L2	CL1500	121	121	130	136	140	148	160	175
		CL2500			136	140	148		175	
Center to handle end	B	CL1500	160	160	160	170	230	230	280	280
		CL2500			230	230	280		280	130
Height Weight(Kg)	H	CL1500	60	60	65	85	105	105	125	
		CL2500			90	110	125			
Height(angle in dimension)	d	CL1500	6	9	13	19	25	32	38	49
		CL2500	6	9	13	19	25		38	42
Weight(Kg)		CL1500	1.2	1.5	2.5	3.7	5.8		11.5	13.7
		CL2500	1.5	1.9	2.7	4.1	6.3		12	15

3PCS Forged steel ball valves



Application standards

- 1、 Design and manufacture conform to BS5351 MSS SP-118;
- 2、 Connection ends conform to:
 - 1)Socket welded ends conform to ANSI B16.11;JB/T1751
 - 2)Screw ends conform to ANSI B1.20.1;JB/T7306
 - 3)Butt-welded ends conform to ANSI B16.25;JB/T12224
 - 4)Flanged ends conform to ANSI B16.5;JB79
- 3、 Test and inspection conform to: API 598; GB/T13927; JB/T9092
- 4、 Structure features: Bolted bonnet; three-piece;
- 5、 Materials conform to ANSI/ASTM.
- 6、 Main materials: A105; LF2; 304(L); 316(L); F347; F321; F51; Monel; 20 Alloy.

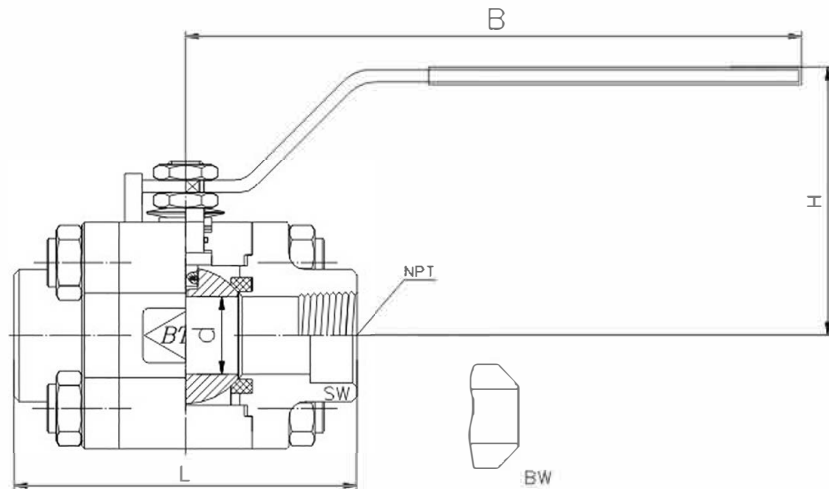
Carbon steel temperature–pressure rate

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	Body	A105	LF2	F304(L)	F316(L)	F51
2	Seat	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK
4	Stem	F304	F304	F304(L)	F316(L)	F51
5	Gasket	RPTFE	RPTFE	RPTFE	RPTFE	RPTFE
8	Pin	25	304	304	304	304
9	Gland	410	304	304(L)	316(L)	F51
14	Flat nut	8	8	8	8M	8M
18	Packing	PTFE	PTFE	PTFE	PTFE	PTFE
37	Bolt	B7	B8	B8	B8M	B8M
38	Nut	2H	8	8	8M	8M
40	Ball	F6a	F304	F304(L)	F316(L)	F51
41	O-ring	VITON	VITON	VITON	VITON	VITON
42	Back seat gasket	RPTFE	RPTFE	RPTFE	RPTFE	RPTFE
43	Wrench	ANSI 1025	ANSI 1025	ANSI 1025	ANSI 1025	ANSI 1025
49	Left bonnet	A105	LF2	F304	F316	F51
50	Right bonnet	A105	LF2	F304	F316	F51
51	Butterfly spring	65Mn	65Mn	304	304	304
53	Anti-static spring	304	304	304	316L	316L

3PCS Forged steel ball valves



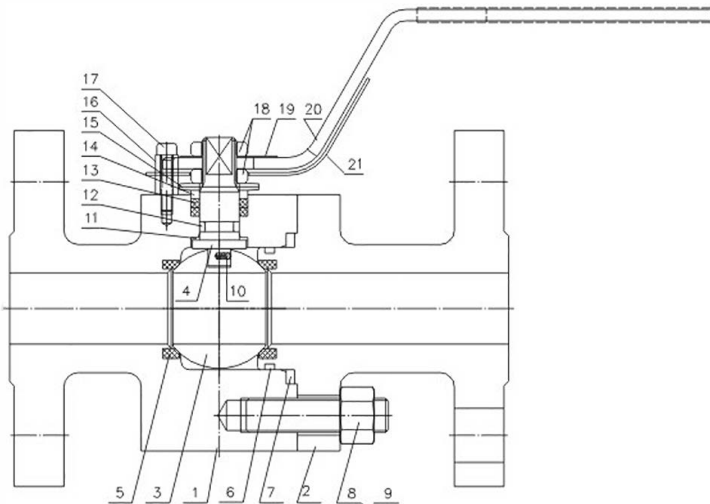
CI800 Connection ends may be pipe-welded (butt-welding or socket welding)and/or threaded, design to Bs5351

Specification(NPS)	R.P	1/2	3/4	1	1 1/4	1 1/2	2	
	F.P	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Face to face	L	67	73	88	105	116	128	146
Center to handle end	B	120	120	145	145	170	170	260
Height	H	50	52	60	65	86	93	112
Height(angle dimension)	d	11.2	14.2	20.5	25	31.6	38	49
Weight(Kg)		0.76	0.95	1.7	2.4	3.7	4.9	8.7

CI1500 Connection ends may be pipe-welded (butt-welding or socket welding)and/or threaded, design to Bs5351

Specification(NPS)	R.P	1/2	3/4	1	1 1/4	1 1/2	2
	F.P	3/8	1/2	3/4	1	1 1/4	1 1/2
Face to face	L	73	88	105	116	128	146
Center to handle end	B	120	145	145	170	175	220
Height	H	50	52	60	86	93	102
Height(angle dimension)	d	11.2	14.2	20.5	25	31.6	38
Weight(Kg)		0.95	1.7	2.4	3.7	4.6	8.9

2PCS Forged steel ball valves



Application standards

- 1、 Design and manufacture conform to BS5351 ;
- 2、 Connection ends conform to:
 - 1)Socket welded ends conform to ANSI B16.11;JB/T7746
 - 2)Screw ends conform to ANSI B1.20.1;JB/T7306
 - 3)Butt-welded ends conform to ANSI B16.25;JB/T12224
 - 4)Flanged ends conform to ANSI B16.5;JB79
- 3、 Test and inspection conform to: API 598; GB/T13927; JB/T9092
- 4、 Structure features: Bolted bonnet ; three-piece;
- 5、 Materials conform to ANSI/ASTM.
- 6、 Main materials: A105; LF2; 304(L); 316(L); F347; F321; F51; Monel; 20 Alloy.

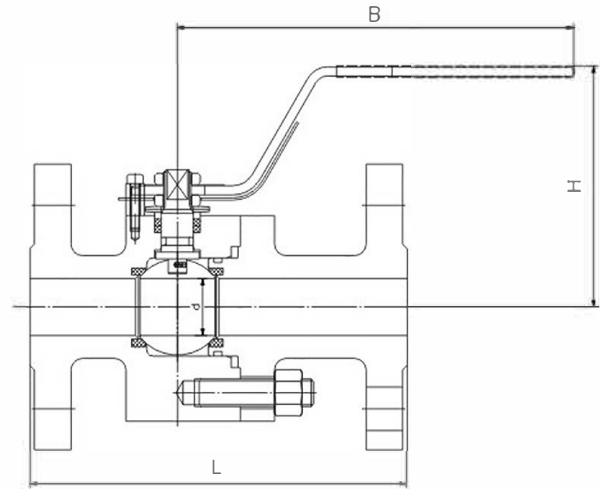
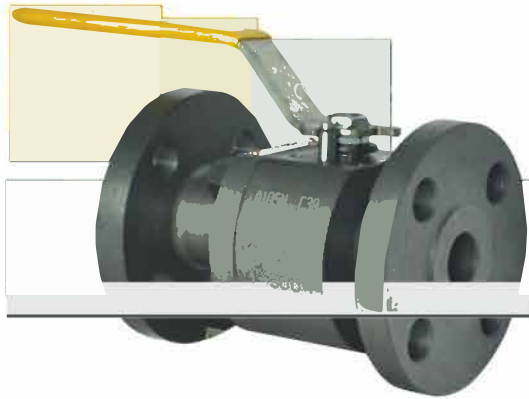
Carbon steel temperature–pressure rate

- CL150–285 P.S.I @ 100° F
- CL300–740 P.S.I @ 100° F
- CL600–1480 P.S.I @ 100° F
- CL800–1975P.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	Body	A105	LF2	F304(L)	F316	F51
2	Closure	A105	LF2	F304(L)	F316	F51
3	ball	F6a	F304	F304(L)	F316(L)	F51
4	stem	F6a	F304	F304(L)	F316(L)	F51
5	seat ring	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK	RPTFE & PEEK
6	O-ring	FPM	FPM	FPM	FPM	FPM
7	fire safe ring	SS+Graphite	SS+Graphite	SS+Graphite	SS+Graphite	SS+Graphite
8	Hex. nut	2H	7	8	8M	8M
9	stud	B7	L7	B8	B8M	B8M
10	static spring	304	304	304	304	304
11	thrust ring	RPTFE	RPTFE	RPTFE	RPTFE	RPTFE
12	O-ring	FPM	FPM	FPM	FPM	FPM
13	packing	RPTFE	RPTFE	RPTFE	RPTFE	RPTFE
14	packing gland	410	304	304(L)	316(L)	F51
15	butterfly spring	65Mn	65Mn	65Mn	65Mn	65Mn
16	positional gland	1035	1035	1035	1035	1035
17	screw	B7	L7	B7	B7	B7
18	flat nut	1035+Zn	1035+Zn	1035+Zn	1035+Zn	1035+Zn
19	nameplate	AL	AL	AL	AL	AL
20	level	1045+Zn	1045+Zn	1045+Zn	1045+Zn	1045+Zn
21	lock	Finished product	Finished product	Finished product	Finished product	Finished product

2PCS Forged steel ball valves



CL150–CL600

Connection ends may be pipe-welded (butt-welding or socket welding) and/or threaded, design to BS5351

Specification(NPS)	R.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	
Face to face	CL150	L(RF)	–	–	108	117	127	140	165	178
	CL300	L(RF)	–	–	140	152	165	178	190	216
	CL600	L(RF)	–	–	165	190	216	229	241	292
Handwheel diameter	CL150/300	B	–	–	140	140	150	180	200	250
	CL 600	B	–	–	140	140	200	200	250	300
Height	CL150/300	H	–	–	85	90	100	105	126	142
	CL 600	H	–	–	79	83	114	120	125	156
Height(angle dimension)		d	–	–	13	19	25	32	38	49
Weight (Kg)	CL150	RF	–	–	3.0	4.0	5.0	7.0	8.0	12.0
	CL300	RF	–	–	3.0	5.0	6.0	8.0	11.0	16.0
	CL 600	RF	–	–	5.0	7.0	9.0	13.0	17.0	25.0

CL900–CL1500

Connection ends may be pipe-welded (butt-welding or socket welding) and/or threaded, design to BS5351

Specification(NPS)	F.P	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Face to face	L RF/RJ			216	229	254	279	305	368
Center to handle end	B			182	200	250	300	350	500
Height	H			98	105	110	120	130	160
Height (angle dimension)	d			13	19	25	32	38	49
Weight(Kg)				10.0	14.0	17.0	25.0	33.0	48.0