

- Design Standards:
1. Design & Manufacture according to API 608, ASME B16.34.
 2. Face to Face dimensions to ASME B16.10.
 3. Fire safe to API 607.
 4. Flange dimensions to ASME B16.5.
 5. Valves tested to API 598.

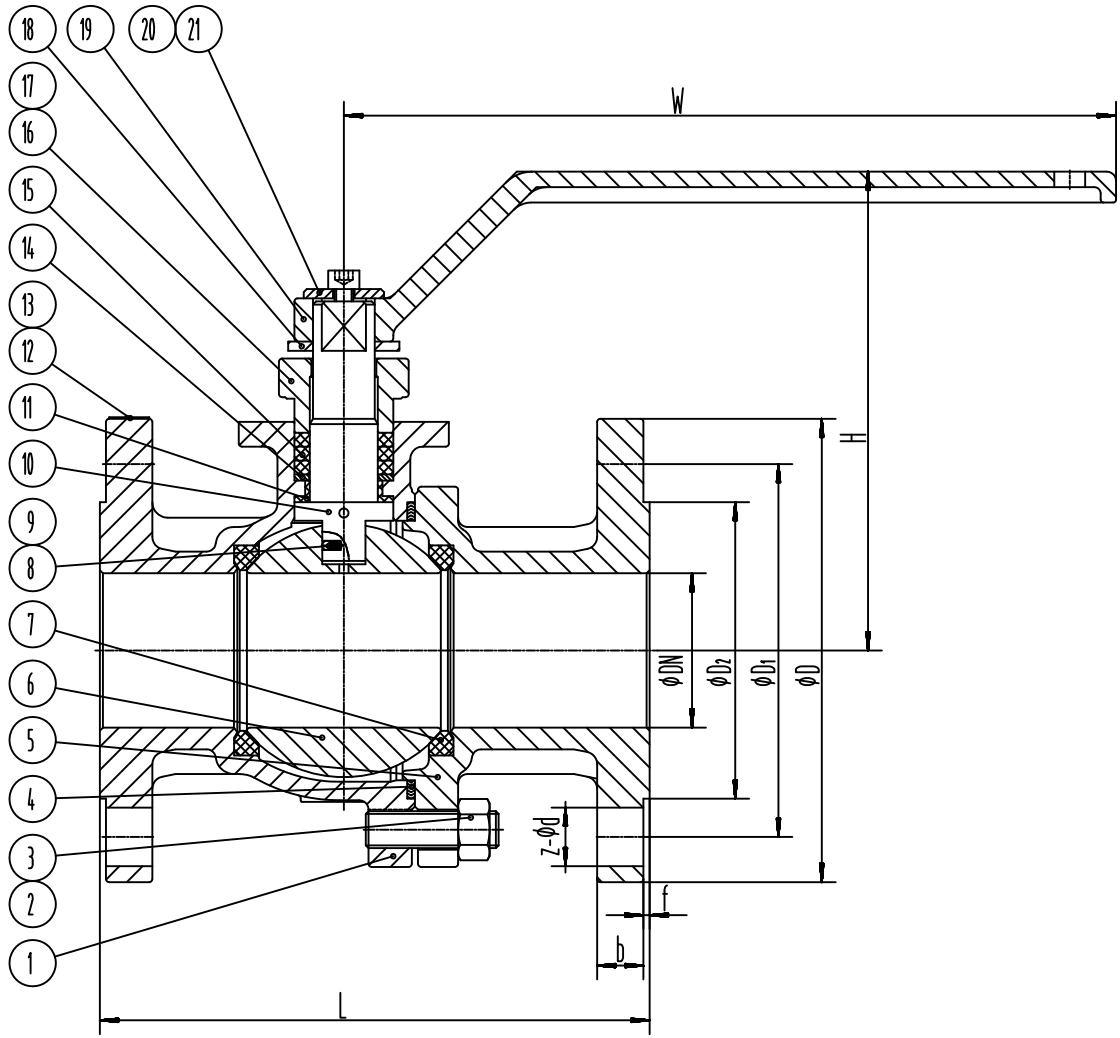
21	Cap Screw	ASTM A193 B7	1
20	Washer	SS304	1
19	Lever	ASTM A351 CF8	1
18	Stopper	SS304	1
17	Bolt	ASTM A194 B7	2
16	Packing Gland	ASTM A216 WCB	1
15	Packing	Graphite	3
14	Packing washer	RPTFE	1
13	Rivet	SS304	1
12	Nameplate	SS304	2
11	Backseat Washer	RPTFE	1
10	Stem	ASTM A182 F316	1
9	Anti-static Ball	ASTM A182 F316	2
8	Anti-static Spring	SS316	2
7	Seat	RPTFE	2
6	Ball	ASTM A182 F316	1
5	Body Closure	ASTM A216 WCB	1
4	Gasket	ASTM A240 316+Graphite	1
3	Body Nut	ASTM A194 2H	4
2	Body Bolt	ASTM A193 B7	4
1	Body	ASTM A216 WCB	1
Part No	Part Name	Material	Qty

Class	NPS	Dimensions(Inch)										Product SKU
		L	DN	D	D ₁	D ₂	b	f	Z-φd	W	H	
150	3/4	4.61	0.75	3.94	2.75	1.69	0.35	0.08	4-5/8	6.69	3.94	FZ15FRS.75
	1	5	1	4.33	3.13	2	0.38	0.08	4-5/8	7.09	4.33	FZ15FRS1
	1 1/2	6.5	1.5	4.92	3.87	2.87	0.5	0.08	4-5/8	8.66	5.16	FZ15FRS1.5

Revisions			
A			
B			
C			
D			
E			
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Checked By	YJW	Date	2016-7-28
Approved By	PJO	Date	2016-7-28
Certified By	QXL	Date	2016-7-28



Desc:		
General Arrangement Drawing FZ15FRS Floating Ball Valve		
Scale:	DWG No.:	Rev.:



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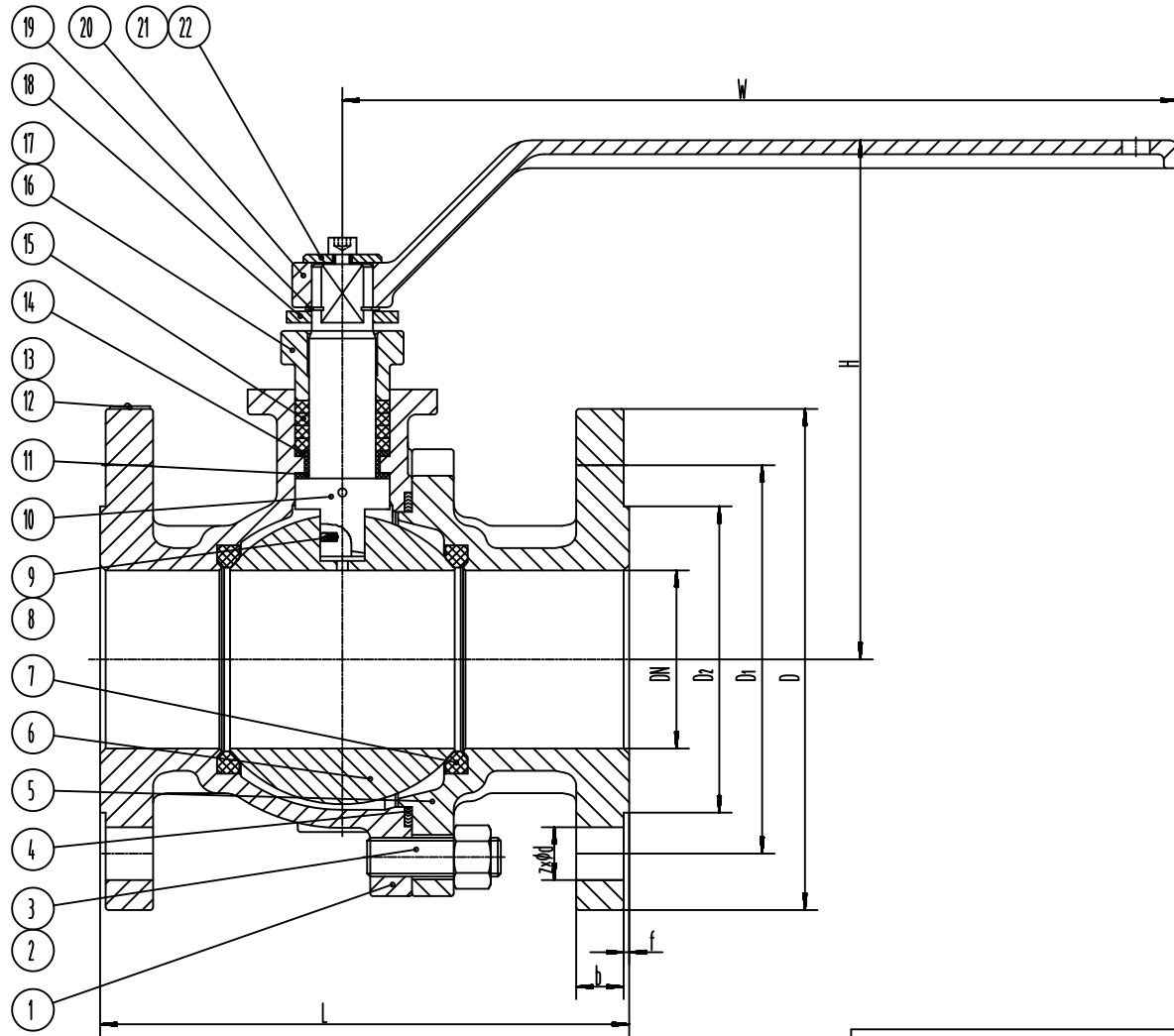
Part No	Part Name	Material	Qty
21	Cap Screw	ASTM A193 B7	1
20	Washer	SS304	1
19	Lever	ASTM A216 WCB	1
18	Stopper	SS304	1
17	Bolt	ASTM A194 B7	2
16	Packing Gland	ASTM A216 WCB	1
15	Packing	Graphite	3
14	Packing washer	RPTFE	1
13	Rivet	SS304	1
12	Nameplate	SS304	2
11	Backseat Washer	RPTFE	1
10	Stem	ASTM A182 F316	1
9	Anti-static Ball	ASTM A182 F316	2
8	Anti-static Spring	SS316	2
7	Seat	RPTFE	2
6	Ball	ASTM A182 F316	1
5	Body Closure	ASTM A216 WCB	1
4	Gasket	ASTM A240 316+Graphite	1
3	Body Nut	ASTM A194 2H	6
2	Body Bolt	ASTM A193 B7	6
1	Body	ASTM A216 WCB	1

Class	NPS	Dimensions(Inch)										Product SKU
		L	DN	D	D ₁	D ₂	b	f	Z-φd	W	H	
150	2	7	2	5.91	4.75	3.63	0.56	0.08	4-3/4	9.84	6.1	FZ15FRS2

Revisions			
A			
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5. Valves tested to API 598.

22	Cap Screw	ASTM A193 B7	1
21	Washer	SS304	1
20	Lever	ASTM A216 WCB	1
19	Stop collar	SS304	1
18	Stopper	SS304	1
17	Bolt	ASTM A194 B7	2
16	Packing Gland	ASTM A216 WCB	1
15	Packing	Graphite	4
14	Packing washer	RPTFE	1
13	Rivet	SS304	1
12	Nameplate	SS304	2
11	Backseat Washer	RPTFE	1
10	Stem	ASTM A182 F316	1
9	Anti-static Ball	ASTM A182 F316	2
8	Anti-static Spring	SS316	2
7	Seat	RPTFE	2
6	Ball	ASTM A182 F316	1
5	Body Closure	ASTM A216 WCB	1
4	Gasket	ASTM A240 316+Graphite	1
3	Body Nut	ASTM A194 2H	6
2	Body Bolt	ASTM A193 B7	6
1	Body	ASTM A216 WCB	1
Part No	Part Name	Material	Qty

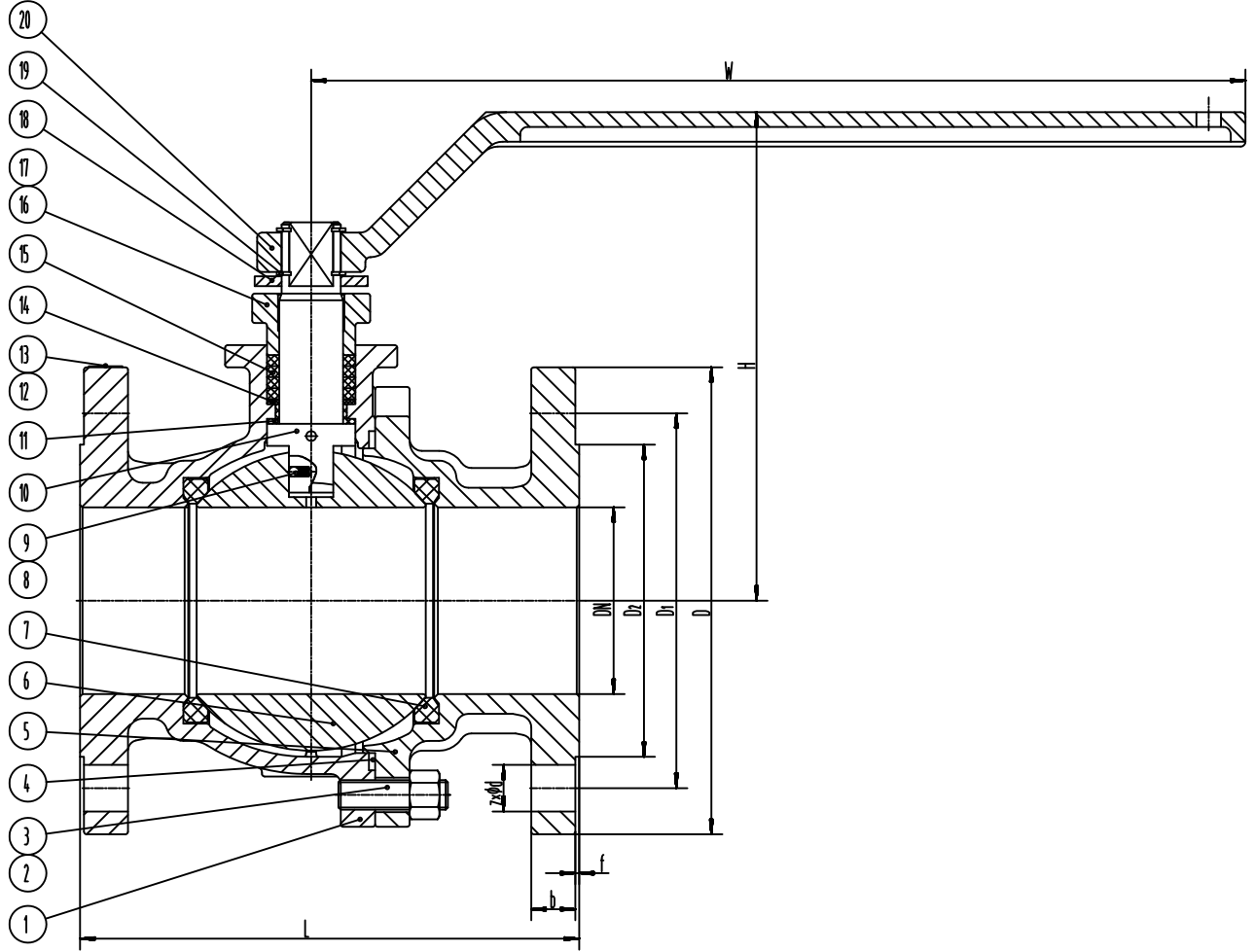
Class	NPS	Dimensions(Inch)										Product SKU
		L	DN	D	D ₁	D ₂	b	f	Z-φd	W	H	
150	2 1/2	7.5	2.5	7.09	5.5	4.13	0.63	0.08	4-3/4	11.81	7.36	FZ15FRS2.5

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Desc: General Arrangement Drawing
FZ15FRS Floating Ball Valve

Scale:	DWG No.:	Rev.:
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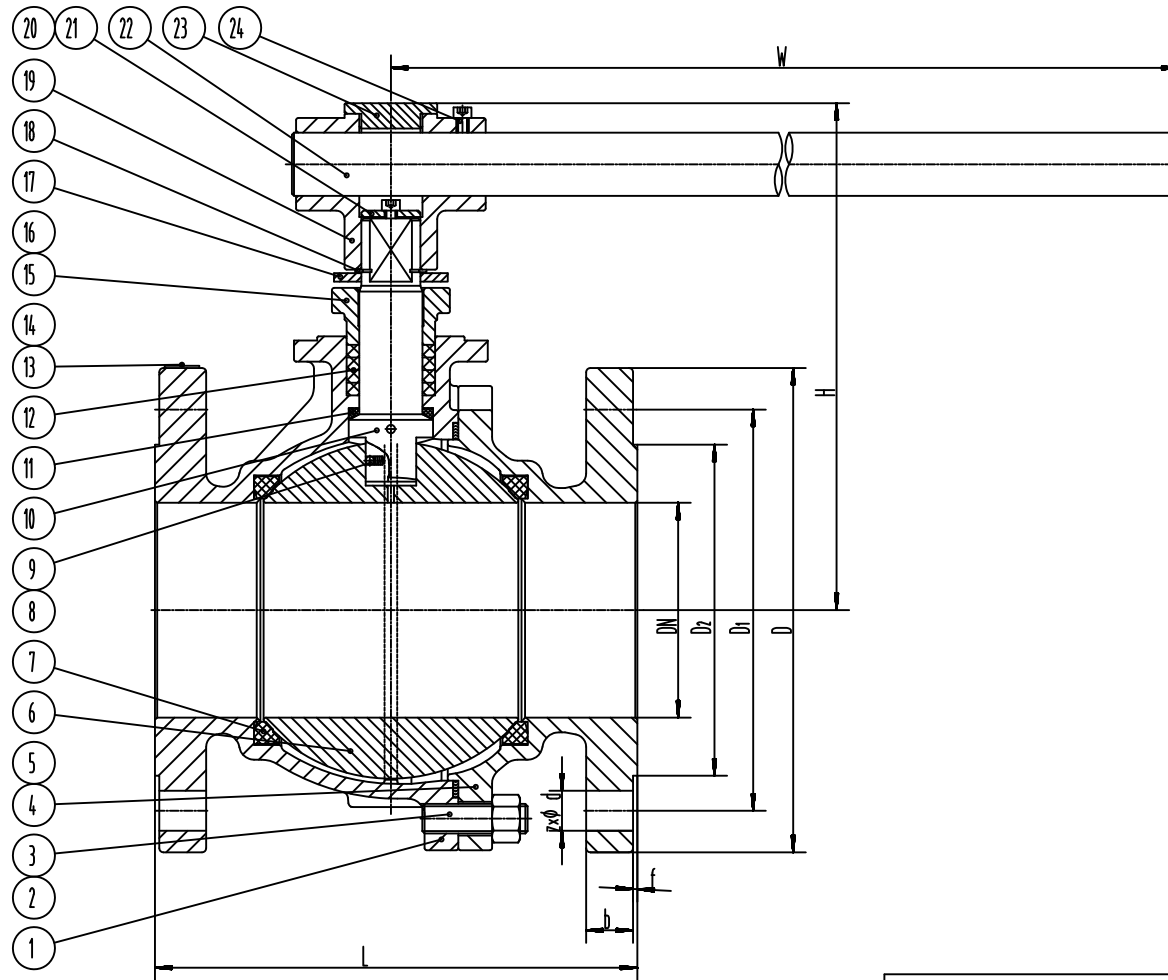
Part No	Part Name	Material	Qty
20	Lever	ASTM A216 WCB	1
19	Stop collar	SS304	2
18	Stopper	SS304	1
17	Bolt	ASTM A194 B7	2
16	Packing Gland	ASTM A216 WCB	1
15	Packing	Graphite	4
14	Packing washer	RPTFE	1
13	Rivet	SS304	1
12	Nameplate	SS304	2
11	Backseat Washer	RPTFE	1
10	Stem	ASTM A182 F316	1
9	Anti-static Ball	ASTM A182 F316	2
8	Anti-static Spring	SS316	2
7	Seat	RPTFE	2
6	Ball	ASTM A182 F316	1
5	Body Closure	ASTM A216 WCB	1
4	Gasket	ASTM A240 316+Graphite	1
3	Body Nut	ASTM A194 2H	8
2	Body Bolt	ASTM A193 B7	8
1	Body	ASTM A216 WCB	1

Class	NPS	Dimensions(Inch)										Product SKU
		L	DN	D	D ₁	D ₂	b	f	Z-φd	W	H	
150	3	8	3	7.48	6	5	0.69	0.08	4-3/4	14.96	7.83	FZ15FRS3

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Scale:	DWG No.:	Rev.:



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1. Design & Manufacture according to API 608, ASME B16.34.
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3. Fire safe to API 607.
4. Flange dimensions to ASME B16.5.
5. Valves tested to API 598.

24	Bolt	ASTM A193 B7	1
23	Top cap	ASTM 1025	1
22	Lever	ASTM 1035	1
21	Cap Screw	ASTM A193 B7	1
20	Washer	SS304	1
19	Adapter	ASTM A216 WCB	1
18	Stop collar	SS304	1
17	Stopper	SS304	1
16	Bolt	ASTM A194 B7	2
15	Packing Gland	ASTM A216 WCB	1
14	Rivet	SS304	1
13	Nameplate	SS304	2
12	Packing	Graphite	4
11	Upper Seal	RPTFE	1
10	Stem	ASTM A182 F316	1
9	Anti-static Ball	ASTM A182 F316	2
8	Anti-static Spring	SS316	2
7	Seat	RPTFE	2
6	Ball	ASTM A182 F316	1
5	Body Closure	ASTM A216 WCB	1
4	Gasket	ASTM A240 316+Graphite	1
3	Body Nut	ASTM A194 2H	8
2	Body Bolt	ASTM A193 B7	8
1	Body	ASTM A216 WCB	1
Part No	Part Name	Material	Qty

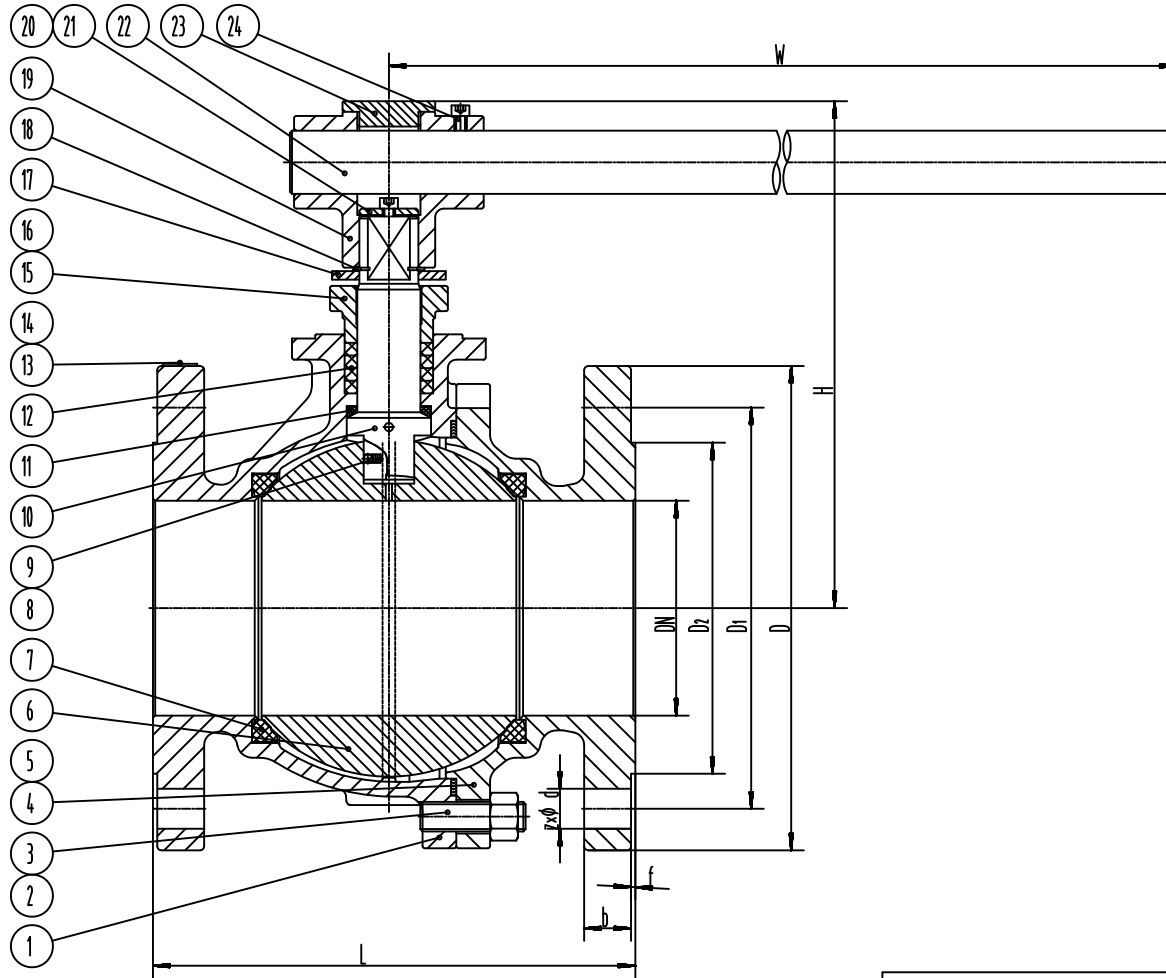
Class	NPS	Dimensions(Inch)										Product SKU
		L	DN	D	D ₁	D ₂	b	f	Z-φd	W	H	
150	4	9	4	9.06	7.5	6.19	0.88	0.08	8-3/4	19.69	9.49	FZ15FRS4

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24	Bolt	ASTM A193 B7	1
23	Top cap	ASTM 1025	1
22	Lever	ASTM 1035	1
21	Cap Screw	ASTM A193 B7	1
20	Washer	SS304	1
19	Adapter	ASTM A216 WCB	1
18	Stop collar	SS304	1
17	Stopper	SS304	1
16	Bolt	ASTM A194 B7	2
15	Packing Gland	ASTM A216 WCB	1
14	Rivet	SS304	1
13	Nameplate	SS304	2
12	Packing	Graphite	4
11	Upper Seal	RPTFE	1
10	Stem	ASTM A182 F316	1
9	Anti-static Ball	ASTM A182 F316	2
8	Anti-static Spring	SS316	2
7	Seat	RPTFE	2
6	Ball	ASTM A182 F316	1
5	Body Closure	ASTM A216 WCB	1
4	Gasket	ASTM A240 316+Graphite	1
3	Body Nut	ASTM A194 2H	10
2	Body Bolt	ASTM A193 B7	10
1	Body	ASTM A216 WCB	1
Part No	Part Name	Material	Qty

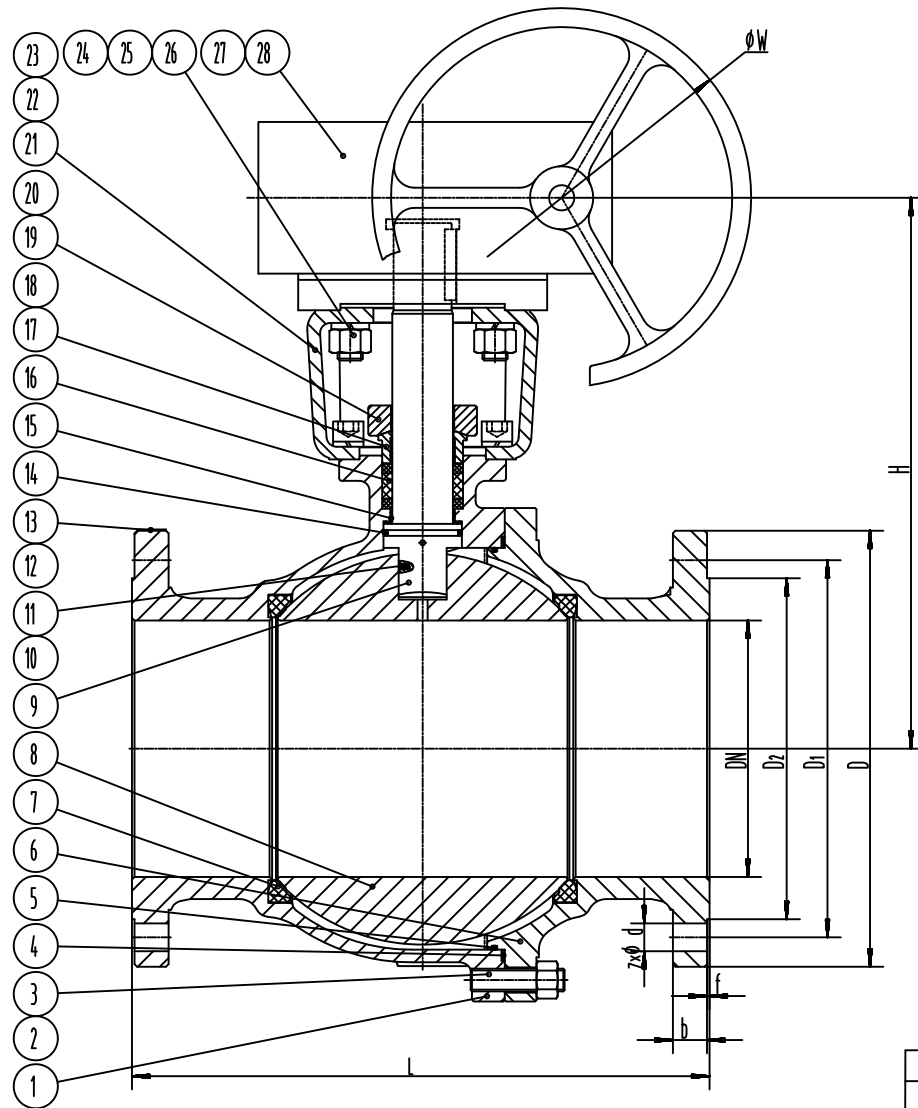
Class	NPS	Dimensions(Inch)										Product SKU
		L	DN	D	D ₁	D ₂	b	f	Z-φd	W	H	
150	6	15.5	6	11.02	9.5	8.5	0.94	0.08	8-7/8	31.5	11.93	FZ15FRS6

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FZ15FRS Floating Ball Valve**

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Class	NPS	Dimensions(Inch)										Product SKU
		L	DN	D	D ₁	D ₂	b	f	Z-φd	W	H	
150	8	18	8	13.58	11.75	10.63	1.06	0.08	8-7/8	11.81	17.17	FZ15FRS8

Design Standards:

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5. Valves tested to API 598.

28	Gear	ASTM A216 WCB	1
27	Key	ASTM 1045	1
26	Nut	ASTM A194 2H	4
25	Bolt	ASTM A193 B7	4
24	Spring gasket	ASTM 1566	4
23	Nut	ASTM A194 2H	4
22	Bolt	ASTM A193 B7	4
21	Yoke	ASTM A216 WCB	1
20	Bolt	ASTM A193 B7	2
19	Gland flange	ASTM A216 WCB	1
18	Gland	ASTM A182 F316	1
17	bushing	PTFE	1
16	Packing	Graphite	5
15	Backseat Washer	RPTFE	1
14	O ring	VITON	1
13	Rivet	SS304	2
12	Nameplate	SS304	1
11	Anti-static Ball	ASTM A182 F316	2
10	Anti-static Spring	SS316	2
9	Stem	ASTM A182 F316	1
8	Ball	ASTM A182 F316	1
7	Seat	RPTFE	2
6	Body Closure	ASTM A216 WCB	1
5	O ring	VITON	1
4	Gasket	ASTM A240 316+Graphite	1
3	Body Nut	ASTM A194 2H	12
2	Body Bolt	ASTM A193 B7	12
1	Body	ASTM A216 WCB	1
Part No	Part Name	Material	Qty

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