

## Design

KATA steel ball valves are designed manufactured to provide maximum service life and dependability. All ball valves are full ported and meet the design requirements of American Petroleum Institute standard API 608&API 6D British standard BS 5351 and generally conform to American society of Mechanical Engineers standard ASME B16.34 valves are available in a complete range of body/bonnet materials and trims.

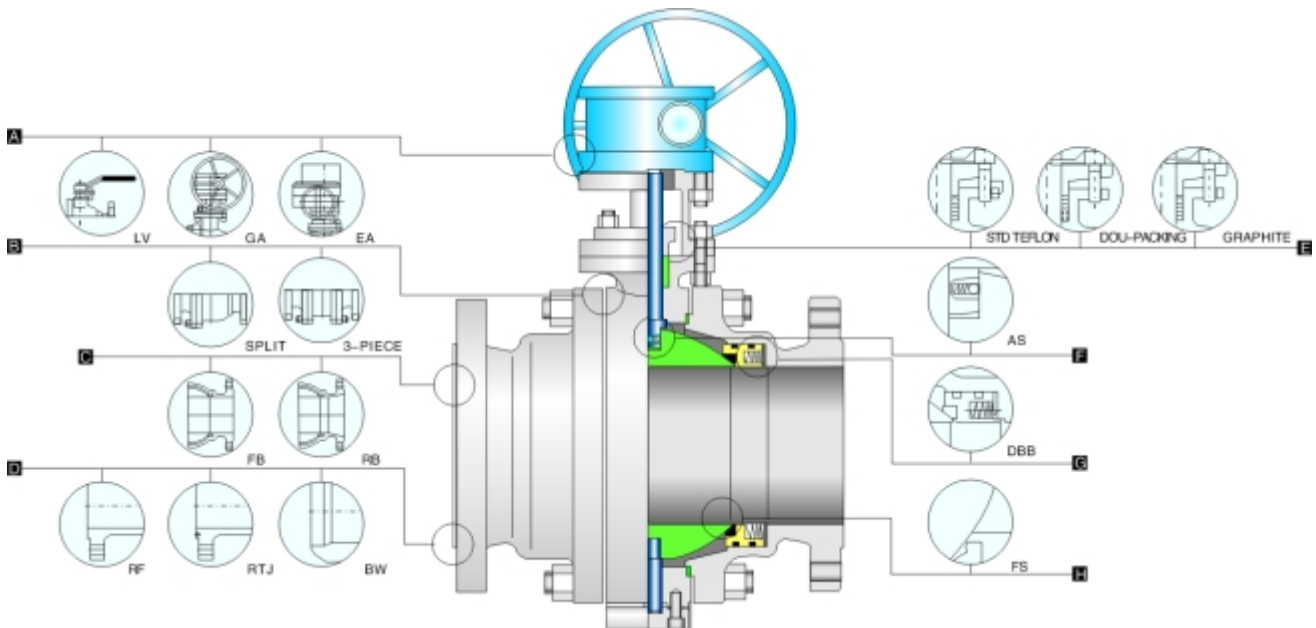
## Ranges of Materials

Standard body/bonnet materials include nine grades of carbon, low alloy and stainless steel, for special applications they can be supplied in other grades of alloy and stainless steel, there's a full range of trim materials to match any service optional packing and gasket materials are available for a full range of service conditions.

## Available Modifications For KATA Steel Valves

Trim Changes  
End Connection Modifications  
Packing And Gasket Change  
Operator Mounting  
Handwheel Extensions

Pressure Equalizing  
AS OR FD  
Customer Specified Coatings  
Weld End Bore Changes  
Oxygen & Chlorine Cleaning & Packaging



### **A** Operation

Extended lever for easy operation. Also available with gearing, motor actuators, pneumatic or hydraulic actuators for more difficult services

### **B** Body&bonnet

Split or 3-piece, split body & bonnet for 12" & small. Disassembles easily for repair or replacement of internal components.

### **C** BORE

Full bore or reduced bore . Full-bore design provides exceptional flow control.

### **D** End Connections

A choice of flanged RTJ flanged or buttwelding end for piping flexibility.

### **E** Packing

Std packing multiple v-teflon packing, combined with live loading, maintains packing compression under high-cycle and severe service applications. Graphite packing is used for high-temperature situation.

### **F** AS

Anti statics. A metallic contact is always granted between ball and stem/body to discharge eventual statics build-up during service.

### **G** DBB

Double block & bleed. The body cavity is isolated when the ball is in either fully closed or fully opened position, the medium entrapped in it can easily be bled to avoid over pressure.

### **H** FS

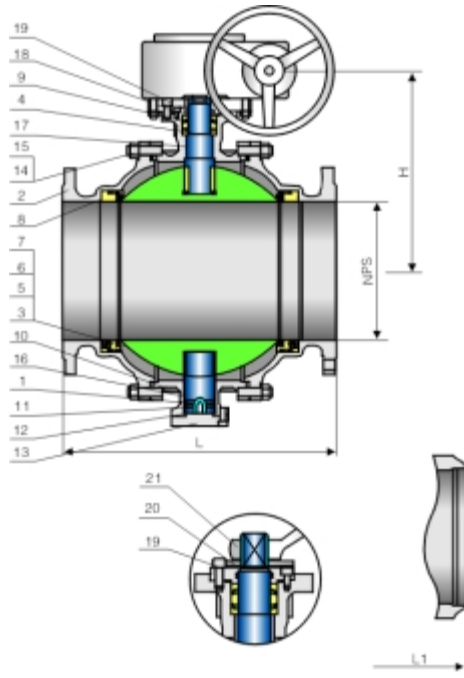
Fire safe designed to API 607 or BS 6755 to grant their operation suitability in case of fire. Secondary metal-to-metal seal acts as backup if primary seal is destroyed by fire. Valves ordered for compliance with API 607 will be provided with graphite packing and gaskets.

## Applicable Standards:

- STEEL BALL VALVES API 608/API 6D
- STEEL BALL VALVES ISO 14313
- FIRE SAFE, API 607
- ANTI STATICS, API 608
- STEEL VALVES, ASME B16.34
- FACE TO FACE ASME B16.10
- END FLANGES, ASME B16.5
- BUTTWELDING ENDS ASME B16.25
- INSPECTION AND TEST, API 598/ API 6D

## Design descriptions:

- FULL PORT DESIGN
- BB.BOLTED BONNET.SPLIT BODY
- THREE PIECES BODY FOR 12" & ABOVE
- TRUNNION MOUNTED BALL TYPE
- BLOW-OUT PROOF STEM
- FIRE SAFE CONSTRUCTION
- ANTI STATICS DEVICE
- STOPPER DEVICE
- ISO 5211 MOUNTING PAD
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH WG OPERATOR



## Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 18Cr-9Ni-2Mo	Carbon Steel
1	Body	A216-WCB	A351-CF8M	A352-LCB
2	Bonnet	A216-WCB	A351-CF8M	A352-LCB
3	Ball	A182-F304 <sup>1)</sup>	A182-F316	A182-F304 <sup>1)</sup>
4	Stem	A276-304	A276-316	A276-304
5	Seat	A105+ENP	A182-F316	A350-LF2+ENP
6	Seat Insert	Glass Filled PTFE		
7	Seat Spring	A313-304	Inconel X-750	A313-304
8	Seat O-Ring	NPR	Viton	Viton
9	Stem O-Ring	NBR	Viton	Viton
10	Bonnet Gasket	Graphite+304 <sup>2)</sup>	Graphite+316 <sup>2)</sup>	Graphite+304 <sup>2)</sup>
11	Bonnet O-Ring	NBR	Viton	Viton
12	Antistatic Spring	A313-304	A313-316	A313-304
13	Lower Cover	A216-WCB	A182-F316	A182-F304
14	Bonnet Stud	A193-B7	A193-B8	A320-L7
15	Bonnet Stud Nut	A194-2H	A194-8	A194-4
16	Trunnion	A276-304	A276-316	A276-304
17	Trunnion Bearing	304+PTFE	316+PTFE	304+PTFE
18	Gland Flange	A216-WCB	A351-CF8M	A352-LCB
19	Gland Bolt	A193-B7	A193-B8	A193-B7
20	Stop Plate	Carbon Steel	Carbon Steel+Zn	Carbon Steel
21	Handle	Carbon Steel		

Note: 1)A105+ENP optional  
2)Spiral wound construction.

## Dimensional datas of ANSI Class 150Lb

NPS DN	2	2½	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	in mm
L (RF)	7.00 178	7.50 190	8.00 203	9.00 229	15.50 394	18.00 457	21.00 533	24.00 610	27.00 686	30.00 762	34.00 864	36.00 914	42.00 1067	45.00 1143	49.00 1245	51.00 1295	54.00 1372	60.00 1524	in mm
L1 (BW)	8.50 216	9.50 241	11.12 283	12.00 305	18.00 457	20.50 521	22.00 559	25.00 635	30.00 762	33.00 838	36.00 914	39.00 991	45.00 1143	49.00 1245	53.00 1346	55.00 1397	60.00 1524	68.00 1727	in mm
H	7.00 177	7.50 190	8.25 210	9.25 235	20.88 530	24.62 625	25.62 650	30.75 780	31.00 790	36.25 920	38.25 970	43.38 1100	45.25 1150	50.75 1290	55.12 1400	64.12 1630	70.88 1840	80.75 2050	in mm
W	14 350	16 400	20 500	20 500	24 600	24 600	24 600	24 600	32 800	32 800	32 800	32 800	32 800	32 800	32 800	32 800	32 800	32 800	in mm
wt(kg)	15 13.5	19 15.5	27 24.5	38 32.5	81 76	140 132	160 147	205 182	260 241	390 370	510 495	750 726	1200 1125	1400 1250	1860 1640	2100 1930	2530 2390	2970 2760	RF BW

## Dimensional datas of ANSI Class 300Lb

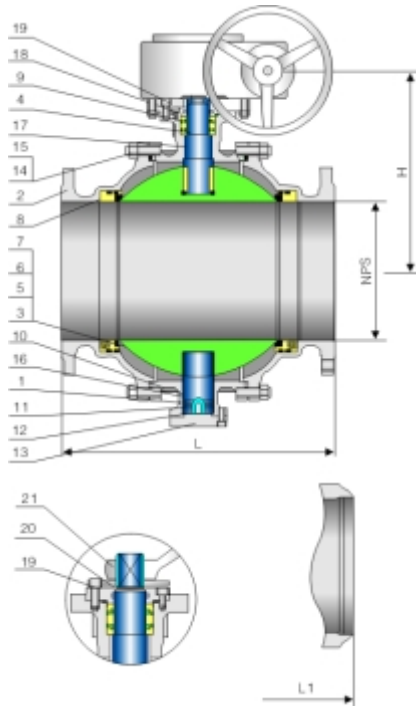
NPS DN	2	2½	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	in mm
L (RF)	8.50 216	9.50 241	11.12 283	12.00 305	15.88 403	19.75 502	22.38 568	25.50 648	30.00 762	33.00 838	36.00 914	39.00 991	45.00 1143	49.00 1245	53.00 1346	55.00 1397	60.00 1524	-	in mm
L1 (BW)	8.50 216	9.50 241	11.12 283	12.00 305	18.00 403	20.50 521	22.00 559	25.00 635	30.00 762	33.00 838	36.00 914	39.00 991	45.00 1143	49.00 1245	53.00 1346	55.00 1397	60.00 1524	-	in mm
H	7.00 177	7.50 190	8.25 210	9.25 235	20.88 530	24.62 625	25.62 650	30.75 780	31.00 790	36.25 920	38.25 970	43.38 1100	45.25 1150	50.75 1290	55.12 1400	64.12 1630	70.88 1800	-	in mm
W	14 350	16 400	20 500	20 500	24 600	24 600	24 600	24 600	32 800	32 800	32 800	32 800	32 800	32 800	32 800	32 800	32 800	32 800	in mm
wt(kg)	19 14	24 16	34 25	48 34	101 82	175 145	200 155	255 185	325 238	485 375	635 516	935 782	1500 1280	1750 1375	2225 1825	2450 2180	2870 2260	-	RF BW

### Applicable Standards:

- STEEL BALL VALVES API 608/API 6D
- STEEL BALL VALVES ISO 14313
- FIRE SAFE, API 607
- ANTI STATICS, API 608
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### Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 18Cr-9Ni-2Mo	Carbon Steel
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2	Bonnet	A216-WCB	A351-CF8M	A352-LCB
3	Ball	A182-F304 <sup>1)</sup>	A182-F316	A182-F304 <sup>1)</sup>
4	Stem	A276-304	A276-316	A276-304
5	Seat	A105+ENP	A182-F316	A350-LF2+ENP
6	Seat Insert	Glass Filled PTFE		
7	Seat Spring	A313-304	Inconel X-750	A313-304
8	Seat O-Ring	NPR	Viton	Viton
9	Stem O-Ring	NBR	Viton	Viton
10	Bonnet Gasket	Graphite+304 <sup>2)</sup>	Graphite+316 <sup>2)</sup>	Graphite+304 <sup>2)</sup>
11	Bonnet O-Ring	NBR	Viton	Viton
12	Antistatic Spring	A313-304	A313-316	A313-304
13	Lower Cover	A216-WCB	A182-F316	A182-F304
14	Bonnet Stud	A193-B7	A193-B8	A320-L7
15	Bonnet Stud Nut	A194-2H	A194-8	A194-4
16	Trunnion	A276-304	A276-316	A276-304
17	Trunnion Bearing	304+PTFE	316+PTFE	304+PTFE
18	Gland Flange	A216-WCB	A351-CF8M	A352-LCB
19	Gland Bolt	A193-B7	A193-B8	A193-B7
20	Stop Plate	Carbon Steel	Carbon Steel+Zn	Carbon Steel
21	Handle	Carbon Steel		

Note:1)A105+ENP optional  
2)Spiral wound construction.

### Dimensional datas of ANSI Class 600Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	in	mm
L/L1 (RF/BW)	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00	35.00	39.00	43.00	47.00	55.00	57.00	61.00	in	mm
	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1448	1549	mm	mm
L2 (RTJ)	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	57.50	61.50	in	mm
	295	333	359	435	562	664	791	841	892	994	1095	1200	1407	1461	1562	mm	mm
H	7.12	7.62	8.50	9.50	21.25	25.00	26.12	31.12	31.88	36.38	38.75	44.50	46.62	52.50	57.00	in	mm
	180	193	215	241	540	635	665	790	810	925	985	1130	1185	1335	1450	mm	mm
W	14	16	20	20	24	24	24	24	32	32	32	32	32	32	32	in	mm
	350	400	500	500	600	600	600	600	800	800	800	800	800	800	800	mm	mm
wt(kg)	26	35	58	81	142	287	540	780	1000	1300	1700	2100	3400	3800	4500	RF/RTJ	BW
	19	25	42	51	85	200	395	610	805	1010	1350	1656	2775	3125	3790	mm	mm

### Dimensional datas of ANSI Class 900Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in	mm
L/L1 (RF/BW)	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	40.50	44.50	48.00	52.00	61.00	in	mm
	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	mm	mm
L2 (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	48.50	52.50	61.75	in	mm
	371	422	384	460	613	740	841	968	1038	1140	1232	1334	1568	mm	mm
H	8.62	9.25	10.25	15.38	25.75	30.25	31.75	38.00	38.50	45.00	47.00	53.50	56.00	in	mm
	219	235	260	390	655	770	805	965	980	1145	1195	1360	1425	mm	mm
W	20	20	20	24	24	24	24	32	32	32	32	32	32	in	mm
	500	500	500	600	600	600	600	800	800	800	800	800	800	mm	mm
wt(kg)	31	43	68	98	171	345	650	940	1205	1565	2050	2535	3950	RF/RTJ	BW
	23	31	51	61	102	240	480	735	965	1215	1625	1995	3335	mm	mm

# Trunnion Mounted, Cast Steel Ball Valve 1500Lb/2500Lb



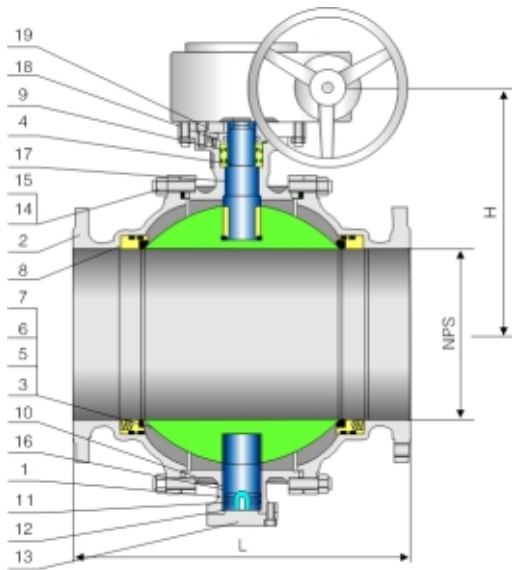
## Applicable Standards:

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## Design descriptions:

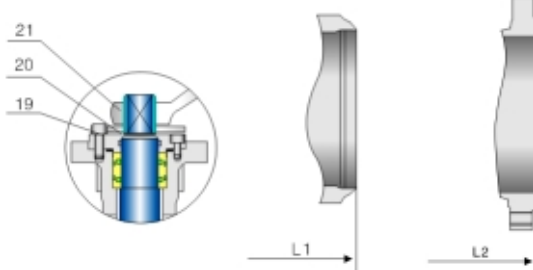
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## Materials of parts



No	Part Name	Carbon Steel	ASTM Materials 18Cr-9Ni-2Mo	Carbon Steel
1	Body	A216-WCB	A351-CF8M	A352-LCB
2	Bonnet	A216-WCB	A351-CF8M	A352-LCB
3	Ball	A182-F304 <sup>1)</sup>	A182-F316	A182-F304 <sup>1)</sup>
4	Stem	A276-304	A276-316	A276-304
5	Seat	A105+ENP	A182-F316	A350-LF2+ENP
6	Seat Insert	Glass Filled PTFE		
7	Seat Spring	A313-304	Inconel X-750	A313-304
8	Seat O-Ring	NPR	Viton	Viton
9	Stem O-Ring	NBR	Viton	Viton
10	Bonnet Gasket	Graphite+304 <sup>2)</sup>	Graphite+316 <sup>2)</sup>	Graphite+304 <sup>2)</sup>
11	Bonnet O-Ring	NBR	Viton	Viton
12	Antistatic Spring	A313-304	A313-316	A313-304
13	Lower Cover	A216-WCB	A182-F316	A182-F304
14	Bonnet Stud	A193-B7	A193-B8	A320-L7
15	Bonnet Stud Nut	A194-2H	A194-8	A194-4
16	Trunnion	A276-304	A276-316	A276-304
17	Trunnion Bearing	304+PTFE	316+PTFE	304+PTFE
18	Gland Flange	A216-WCB	A351-CF8M	A352-LCB
19	Gland Bolt	A193-B7	A193-B8	A193-B7
20	Stop Plate	Carbon Steel	Carbon Steel+Zn	Carbon Steel
21	Handle	Carbon Steel		

Note:1)A105+ENP optional  
2)Spiral wound construction.



## Dimensional datas

NPS	DN	L/L1 (RF/BW)	L2 (RTJ)	H	W	WT(kg)	L/L1 (RF/BW)	L2 (RTJ)	H	W	WT(kg)
<b>ANSI Class1500Lb</b>											
2	50	14.50	368	14.62	371	11.25	285	20	500	49	33
2 1/2	65	16.50	419	16.62	422	12.00	305	20	500	67	44
3	80	18.50	470	18.62	473	13.25	338	24	600	106	73
4	100	21.50	546	21.62	549	20.00	506	24	600	153	87
6	150	27.75	705	28.00	711	33.50	852	24	600	268	145
8	200	32.75	832	33.12	841	39.38	1000	32	800	540	345
10	250	39.00	991	39.38	1000	41.12	1045	32	800	1020	685
12	300	44.50	1130	45.12	1146	49.38	1255	32	800	1475	1050
14	350	49.50	1257	20.25	1276	50.00	1270	32	800	1885	1385
16	400	54.50	1384	44.38	1407	58.50	1485	32	800	2455	1735
in	mm	in	mm	in	mm	in	mm	in	mm	mm	mm
										RF/RTJ	BW
<b>ANSI Class2500Lb</b>											
2	50	14.50	368	14.62	371	11.25	285	20	500	49	33
2 1/2	65	16.50	419	16.62	422	12.00	305	20	500	67	44
3	80	18.50	470	18.62	473	13.25	338	24	600	106	73
4	100	21.50	546	21.62	549	20.00	506	24	600	153	87
6	150	27.75	705	28.00	711	33.50	852	24	600	268	145
8	200	32.75	832	33.12	841	39.38	1000	32	800	540	345
10	250	39.00	991	39.38	1000	41.12	1045	32	800	1020	685
12	300	44.50	1130	45.12	1146	49.38	1255	32	800	1475	1050
14	350	49.50	1257	20.25	1276	50.00	1270	32	800	1885	1385
16	400	54.50	1384	44.38	1407	58.50	1485	32	800	2455	1735
in	mm	in	mm	in	mm	in	mm	in	mm	mm	mm
										RF/RTJ	BW