

## Design

WEIKE 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.

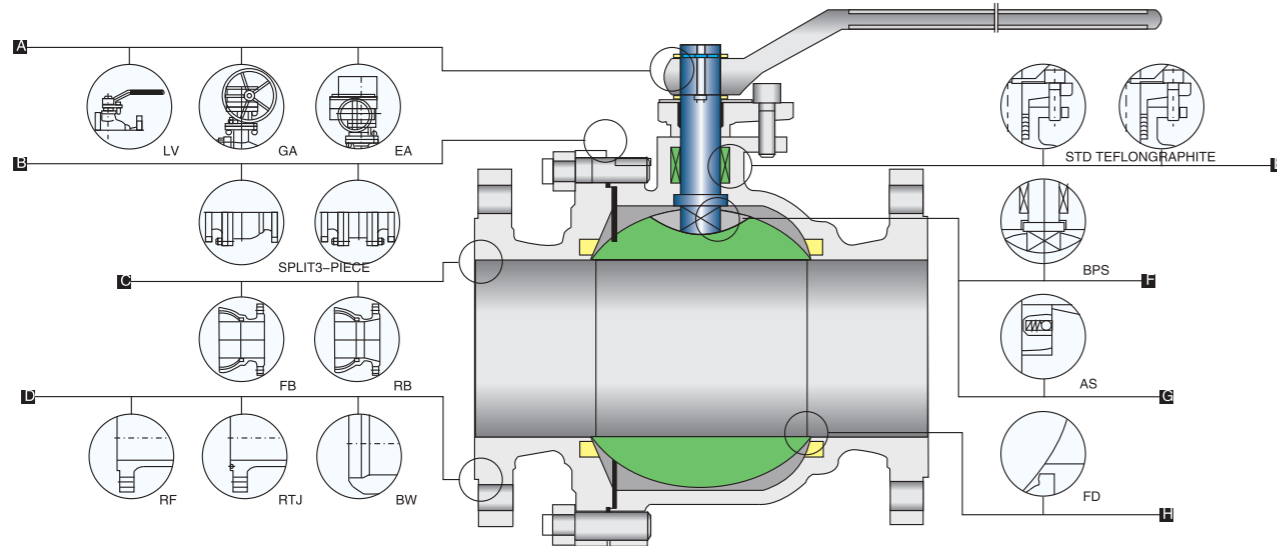
## Ranges of Materials

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 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



### Operation

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

### Body&Bonnet

Split or 3-piece, split body& bonnet for 12" & small, disassembles easily for repair components.

### BORE

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

### End Connections

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

### 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.

### BPS

Blow-out proof stem A pressure-safe stem shoulder design that protects against failure under excess pressure.

### AS

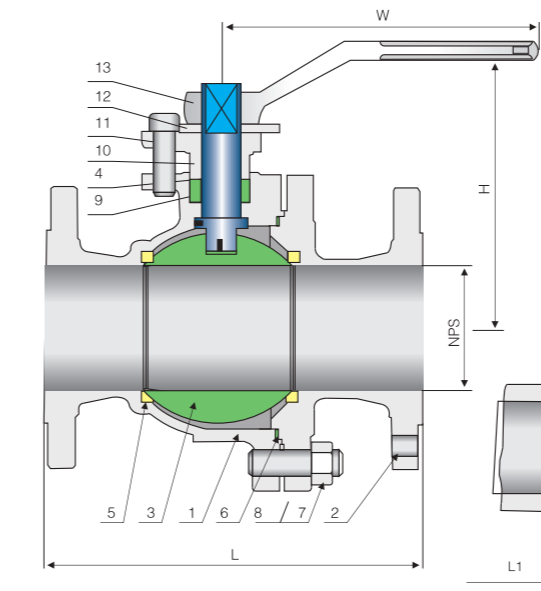
Anti statics. A metallic contact is always granted between ball and stem/body to discharge eventual statics build-up during service.

### FS

Fire safe designed to API607 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 STATIC, 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
- BG.BOLTED BONNET.SPLIT BODY
- FLOATING BALL TYPE
- BLOW-OUT PROOF STEM
- FIRE DURABLE CONSTRUCTION
- ANTI STATIC 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 Ring		R.PTFE	
6	Bonnet Gasket	Graphite+304 <sup>2)</sup>	PTFE	Graphite+304 <sup>2)</sup>
7	Bonnet stud	A193-B7	A193-B8	A320-L7
8	Bonnet Stud Nut	A194-2H	A194-8	A194-4
9	Packing		PTFE	
10	Gland Flange	A216-WCB	A351-CF8M	A352-LCB
11	Gland Bolt	A193-B7	A193-B8	A193-B7
12	Stop Plate	Carbon Steel	Carbon steel+Zn	Carbon Steel
13	Handle		Carbon Steel	

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

Fig.VK111 Dimensional datas of ANSI Class 150Lb

NPS DN	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	in
L (RF)	4.25	4.62	5.00	6.50	7.00	7.50	8.00	9.00	15.50	18.00	21.00	24.00	in
	108	117	127	165	178	190	203	229	394	457	533	610	mm
L1 (BW)	5.50	6.00	6.50	7.50	8.50	9.50	11.12	12.00	18.00	20.50	22.00	25.00	in
	140	152	165	190	216	241	283	305	457	521	559	635	mm
H	2.12	2.12	2.75	3.50	4.12	6.12	7.25	8.00	10.00	11.00	13.50	16.50	in
	55	55	70	90	105	155	185	205	255	280	345	420	mm
W	5	5	6	8	14	16	20	20	24	32	32	32	in
	130	130	160	200	350	400	500	500	600	800	800	800	mm
wt(kg)	2.3	3	4.5	7	9.5	15	19	33	93	160	200	280	RF
	1.8	2.8	3.7	6.2	8.5	14	21	35	98	170	225	295	BW

Fig. VK112 Dimensional datas of ANSI Class 300Lb

NPS DN	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	in
L (RF)	5.50	6.00	6.50	7.50	8.50	9.50	11.12	12.00	15.88	19.75	22.38	25.50	in
	140	152	165	190	216	241	283	305	403	502	568	648	mm
L1 (BW)	5.50	6.00	6.50	7.50	8.50	9.50	11.12	12.00	18.00	20.50	22.00	25.00	in
	140	152	165	190	216	241	283	305	457	521	559	635	mm
H	2.12	2.12	2.75	3.50	4.12	6.12	7.25	8.00	10.00	11.00	13.50	16.50	in
	55	55	70	90	105	153	187	206	255	280	345	420	mm
W	5	5	6	8	14	16	20	20	24	32	32	32	in
	130	130	160	200	350	400	500	500	600	800	800	800	mm
wt(kg)	2.5	3.5	5.5	10.5	14.5	23.5	30	55	118	200	250	330	RF
	1.8	2	3.2	5.5	8.7	15	18	36	85	152	182	232	BW

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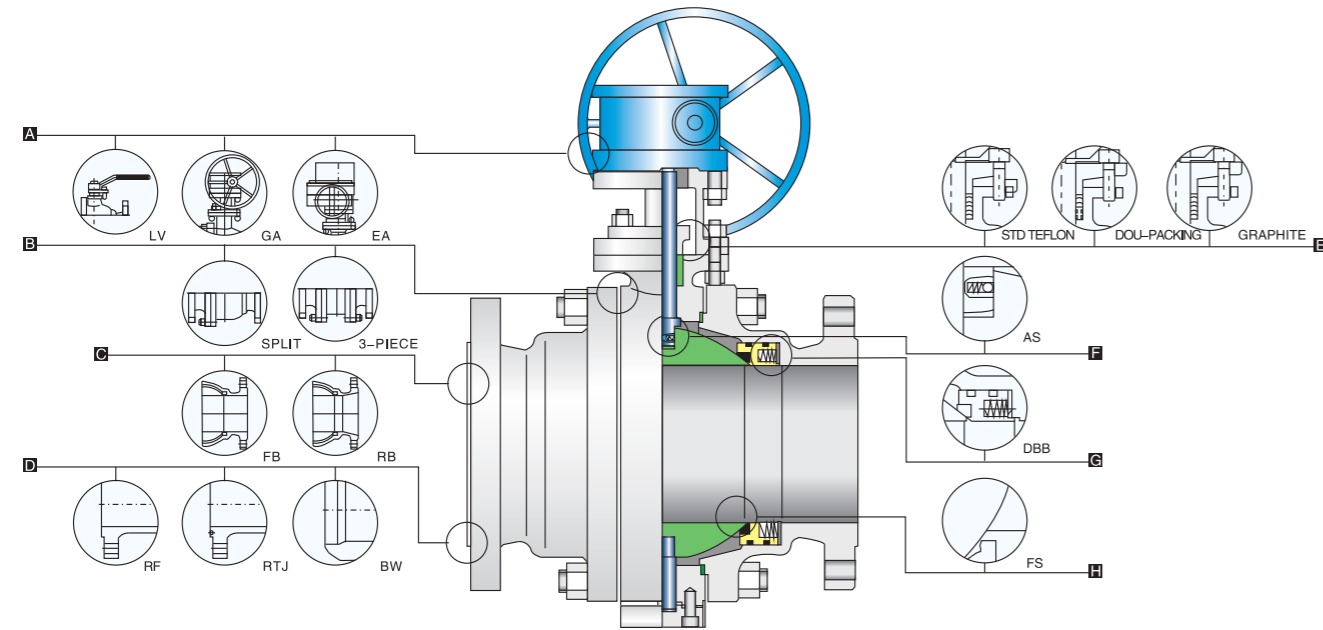
## Available Modifications for Steel Valves

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

## 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 ally 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.

- 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

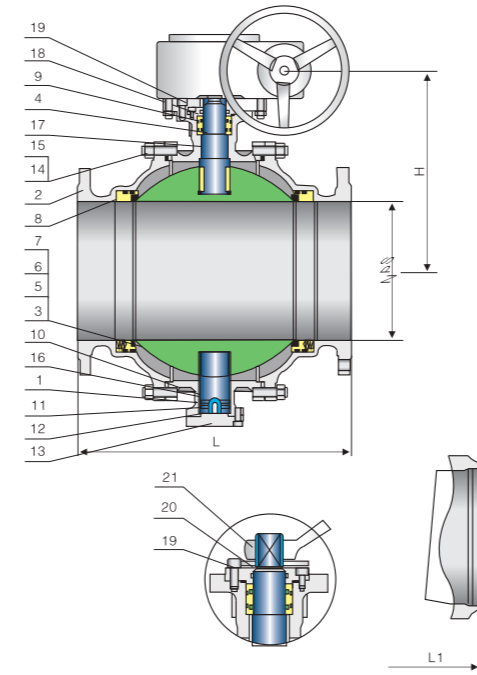
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- BUTTWELDING ENDS ASME B16.25
- INSPECTION AND TEST, API 598/ API 6D

## 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

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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)Spal wound construction.

## Fig.VK121 Dimensional datas of ANSI Class 150Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	in
L	7.00	7.50	8.00	9.00	15.50	18.00	21.00	24.00	27.00	30.00	34.00	36.00	42.00	45.00	49.00	51.00	54.00	60.00	in
(RF)	178	190	203	229	394	457	533	610	686	762	864	914	1067	1143	1245	1295	1372	1524	mm
L1	8.50	9.50	11.12	12.00	18.00	20.50	22.00	25.00	30.00	33.00	36.00	39.00	45.00	49.00	53.00	55.00	60.00	68.00	in
(BW)	216	241	283	305	457	521	559	635	762	838	914	991	1143	1245	1346	1397	1524	1727	mm
H	7.00	7.50	8.25	9.25	20.88	24.62	25.62	30.75	31.00	36.25	38.25	43.38	45.25	50.75	55.12	64.12	70.88	80.75	in
	177	190	210	235	530	625	650	780	790	920	970	1100	1150	1290	1400	1630	1840	2050	mm
W	14	16	20	20	24	24	24	24	32	32	32	32	32	32	32	32	32	32	in
	350	400	500	500	600	600	600	600	800	800	800	800	800	800	800	800	800	800	mm
wt(kg)	15	19	27	38	81	140	160	205	260	390	510	750	1200	1400	1860	2100	2530	2970	RF
	13.5	15.5	24.5	32.5	76	132	147	182	241	370	495	726	1125	1250	1640	1930	2390	2760	BW

## Fig.VK122 Dimensional datas of ANSI Class 300Lb

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	in
L	8.50	9.50	11.12	12.00	15.88	19.75	22.38	25.50	30.00	33.00	36.00	39.00	45.00	49.00	53.00	55.00	60.00	-	in
(RF)	216	241	283	305	403	502	568	648	762	838	914	991	1143	1245	1346	1397	1524	-	mm
L1	8.50	9.50	11.12	12.00	18.00	20.50	22.00	25.00	30.00	33.00	36.00	39.00	45.00	49.00	53.00	55.00	60.00	-	in
(BW)	216	241	283	305	403	521	559	635	762	838	914	991	1143	1245	1346	1397	1524	-	mm
H	7.00	7.50	8.25	9.25	20.88	24.62	25.62	30.75	31.00	36.25	38.25	43.38	45.25	50.75	55.12	64.12	70.88	-	in
	177	190	210	235	530	625	650	780	790	920	970	1100	1150	1290	1400	1630	1800	-	mm
W	14	16	20	20	24	24	24	24	32	32	32	32	32	32	32	32	32	-	in
	350	400	500	500	600	600	600	600	800	800	800	800	800	800	800	800	800	-	mm
wt(kg)	19	24	34	48	101	175	200	255	325	485	635	935	1500	1750	2225	2450	2870	-	RF
	14	16	25	34	82	145	155	185	238	375	516	782	1280	1375	1825	2180	2260	-	BW

