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WENZHOU WEIKE VALVE CO.,LTD

API VALVES

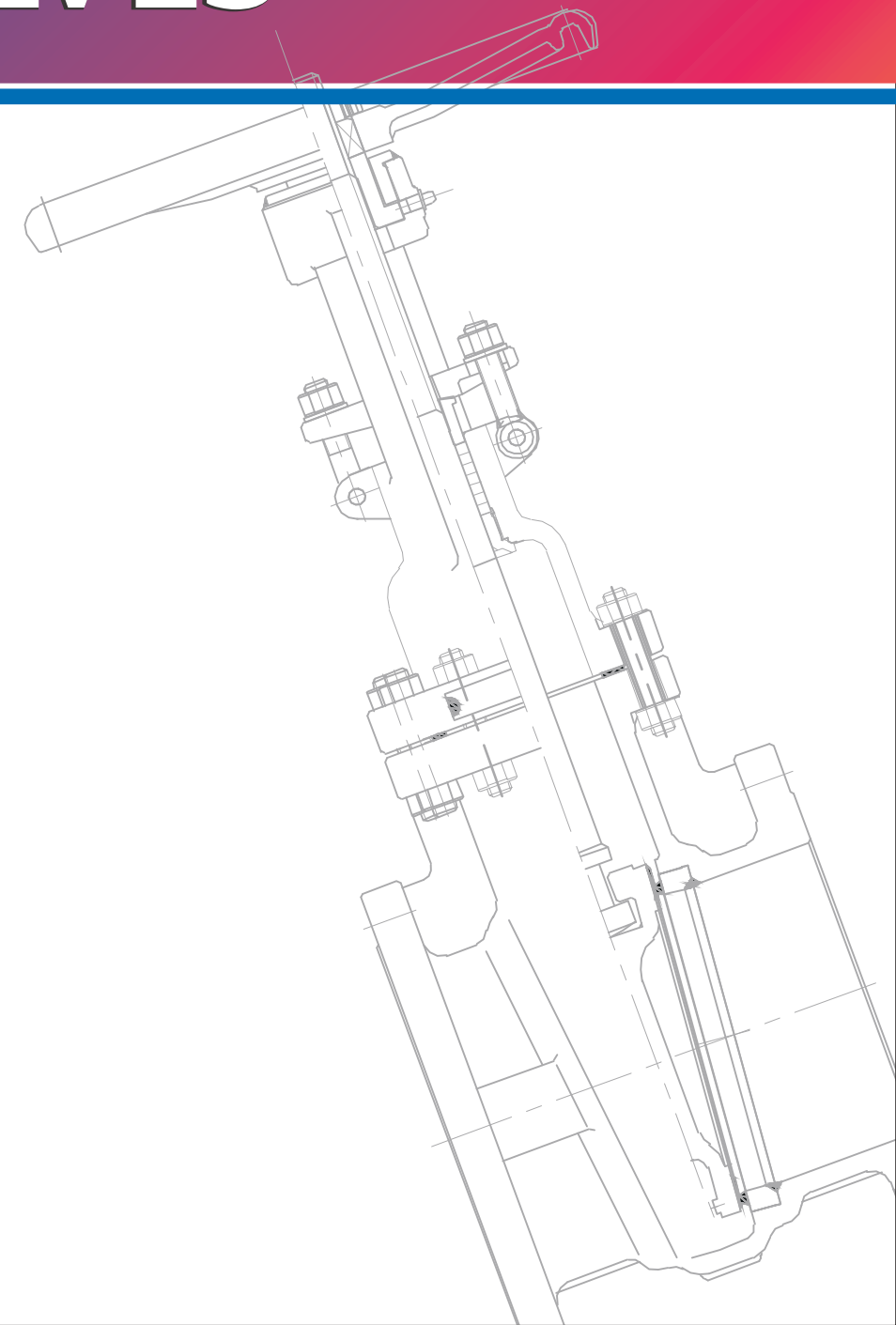


WENZHOU WEIKE VALVE CO.,LTD
Add: Baoer industrial zone,Oubei town,
Wenzhou,China
Tel: +86-0577-67388022
Fax: +86-0577-67388021
Email: info@weke-valves.com

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维柯阀门
WEKE



Create Perfect Quality!



Shell&Seal Test



Fire Safe Test

Quality Control



Pressure Test

Our testing center has also introduced in material inspection equipment for material chemical analysis,spectrum analysis,metallurgical analysis,mechanical property test,Strength of material test ect.and flaw testing equipment for materials and special working procedured including matnetic powder flaw detection; and has such advanced testing equipment as hardometer, carbon & sulfur analysis metre and torque spanner,and many sets of performance testing equipment for finished products like middle/large valve pressure test bench and life tester .All are for ensuring 100% acceptability of prodcut delivery.The core part of our products adopts products and technologies from such world-famous companies as FISHEG of America and ELSTER of Germany, to ensure advanced and reliable products.

WENZHOU WEIKE Valve tests every product strictly.The strong sense of responsibility of our checkers is integrated into every part .We are provided with a modern testing and experiment centre armed with the most testing and experiment and strict and scientific management so that all of our products can stand the careful selection of customers.It od by right of the solemn commitment ,made by Kairuite Valve to make every product reach the ex-works standard that its products are so well received.



Hardness Test



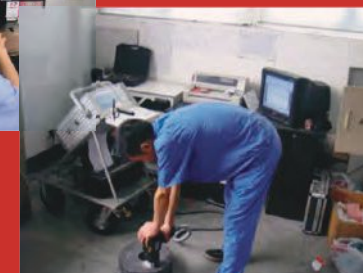
Thickness Test



Dye Penetrant(PT)



Mechanical Property Test



Spectrum Analysis



Impact Test



Ultrasonic Test(UT)

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PRODUCT EXHIBITION

TOP CONTROL QUALITY, TOP PRODUCT QUALITY



Gate Valve 150LB



Gate Valve 300LB



Gate Valve 2500LB



Cryogenic Gate Valve



Globe Valve



Swing Check Valve



Floating Ball Valve



Trunnion Ball valve



Trunnion Ball Valve



Plug Valve



Plug Valve



Y-Strainer

Design

WEKE cast steel gate valves are designed and manufactured to provide maximum service life and dependability. All gate valves are full ported and meet the design requirements of American Petroleum Institute standard API 600 & API 6D, British standard BS 1414 & BS EN 1884 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.

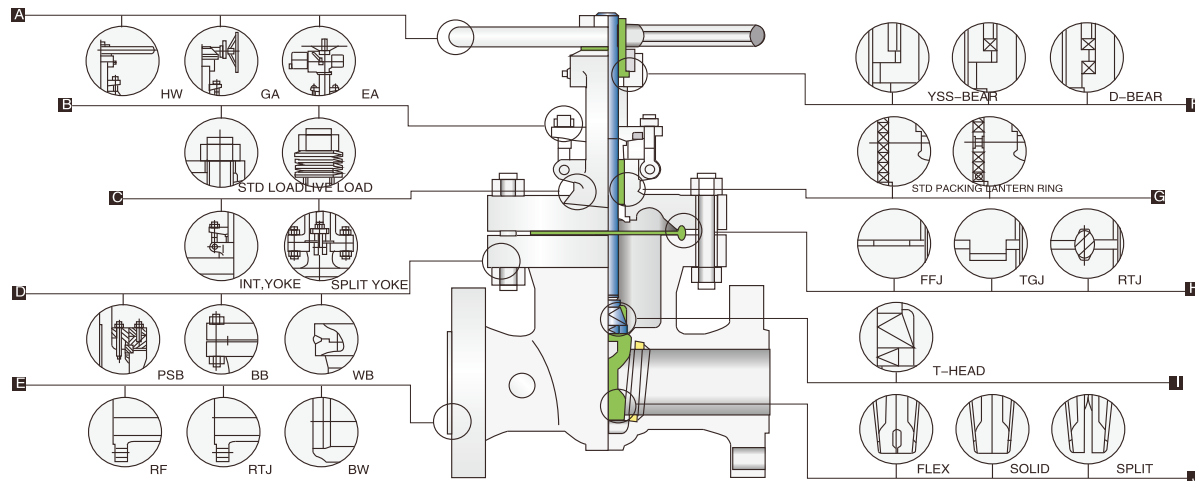
Ranges of materials

Standard body/bonnet materials include nine grades of carbon, low alloy and stainless steels. 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 Cast Steel Valves

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

Pressure Equalizing
By-Pass
Customer Specified Coatings
Weld End Bore Changes
Oxygen & Chlorine Clearing & Packaging



A Operation

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

B Live Load Packing

In services requiring frequent cycling or with high pressure/temperature variations, live loading extends the service life between maintenance periods by requiring less stemments. Belleville springs are employed to provide constant packing gland stress.

C OS&Y

Outside screw and yoke. Cast steel gate valve yoke integral with bonnet for 150Lb-8" 600Lb-6", 900Lb-4" & small.

D BB

bolted bonnet, welding bonnet and pressure seal bonnet in services requiring frequent cycling or with high pressure/temperature variations.

E End Connections

A choice of flanged, RTJ flanged or butt welding end for piping flexibility.

F Yokesleeve

Extra long thread engagement between yoke sleeve and stem provide long thread life. valves of sizes larger than 150Lb-12", 300Lb-10", 600Lb-6", 900Lb/1500Lb/2500Lb-4" are regularly provided with roll bearing yokes.

G Lantern Ring And Double Packing Set

lantern ring leak-off fitting connection and double packing stack is optionally available for critical services.

H Body-to-Bonnet Joint

A flat face gasket joint is used in the 150lb valves. A male and female joint is used in 300lb to 600lb valves. ring joint is used in the body to bonnet connections in 900lb & higher rated valves.

I Stem

All wedge gate valves are provided with upset forged T-head stems. By forging the T-head, the stem at the stem-wedge connection is strengthened, this design also allows the wedge possibility of a bent stem jamming the wedge.

J Wedge

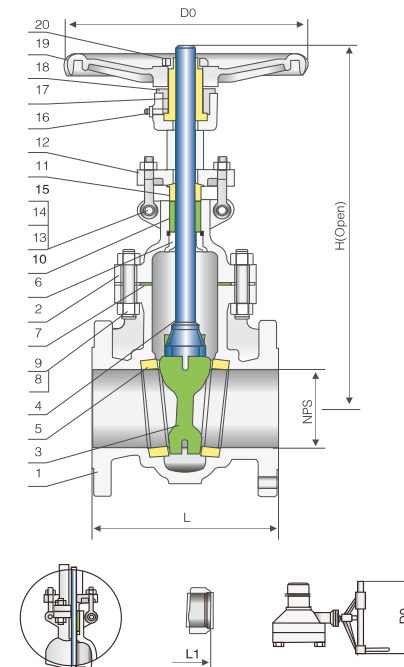
Integral guide rib faces assure self-centering of wedge. flexible wedge gate valve has a one-piece, twin-disc wedge, which is designed so that each half flexes independently, available in solid, flex split and his designs.

Applicable standards:

- STEEL GATE VALVES API 600/API 6D
- STEEL GATE VALVES ISO 10434/ISO 14313
- 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
- OS&Y OUTSIDE SCREW AND YOKE
- BB, BOLTED BONNET
- FLEXIBLE WEDGE, FULLY GUIDED
- CHOICE OF SOLID OR SPLIT WEDGE
- RENEWABLE SEAT RINGS
- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



Materials of parts

No	Part Name	Carbon steel	ASTM Material 1 1/4cr-1/2mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Bonnet	A216-WCB	A217-WC6	A352-LCB
3	Wedge	A216-WCB+CR13	A217-WC6+HF	A352-LCB+CR13
4	Stem	A182-F6a	CR-MO-V	A182-F6a
5	Seat ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
6	Stem Backseat	A276-420	A276-304	A276-420
7	Bonnet Gasket	Spiral wound (Graphite+304)		
8	Bonnet Stud	A193-B7	A193-B16	A320-L7
9	Bonnet Stud Nut	A194-2H	A194-7	A194-4
10	Packing	Graphite		
11	Gland	A276-420	A276-304	A276-420
12	Gland Flange	A216-WCB	A217-WC6	A352-LCB
13	Eye Bolt Pin	Carbon steel	A276-420	Carbon steel
14	Eye bolt	Carbon steel	A193-B7	Carbon steel
15	Eye bolt Nut	Carbon steel	A194-2H	Carbon steel
16	Grease Fitting	Brass+Steel		
17	Yoke Sleeve	Aluminum-Bronze		
18	Yokesleeve Jam nut	Carbon Steel		
19	Handwheel	Malleable Iron		
20	Handwheel Nut	Carbon Steel		

Note: 1) ductile ni-resist optional
2) wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

FIG.VK721 Dimensional datas of ANSI Gate Valve

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
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900	mm
L (RF)	7.00	7.50	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00	22.00	24.00	24.00	28.00	28.00	in
	178	191	203	229	267	292	330	356	381	406	432	457	508	559	610	610	711	711	mm
L1 (BW)	85	9.50	11.12	12.00	15.88	16.50	18.00	19.75	22.50	24.00	26.00	28.00	32.00	34.00	36.00	36.00	38.00	40.00	in
	216	241	283	305	403	419	457	502	572	610	660	711	813	864	914	914	965	1016	mm
H (open)	15.25	17.00	18.88	23.00	30.50	37.62	45.50	53.12	59.38	67.00	74.50	83.50	98.25	110.50	116.50	124.00	129.00	146.50	in
	386	434	480	584	765	956	1149	1350	1508	1703	1892	2119	2500	2806	2960	3150	3280	3720	mm
Do	8	8	10	12	14	16	15	20	22	24	26	29	29	32	32	38	40	40	in
	200	200	250	300	300	350	400	450	500	550	600	640	700	720	800	800	950	1000	mm
wt(kg)	18	25	32	50	77	121	178	265	463	463	621	792	1521	1521	1838	2261	2490	3310	RF
	15	18	26	41	69	108	156	248	424	424	587	752	1570	1570	1900	3310	2540	3380	BW

FIG.VK722 Dimensional datas of ANSI Gate Valve

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
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900	mm
L/L1 (RF/BW)	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	30.00	33.00	36.00	39.00	45.00	49.00	53.00	55.00	60.00	68.00	in
	216	241	283	305	403	419	457	502	762	838	914	991	1143	1245	1346	1397	1524	1727	mm
L2 (RTJ)	9.12	10.12	11.75	12.62	16.50	17.12	18.62	20.38	30.62	33.62	36.62	39.75	45.88	50.00	54.00	56.00	61.12	69.12	in
	232	257	298	321	419	435	473	518	778	854	930	1010	1165	1270	1372	1422	1553	1756	mm
H (open)	16.12	17.88	20.00	24.00	31.75	39.38	47.62	55.75	62.25	67.88	77.12	86.38	102.00	117.00	122.00	126.00	130.00	152.00	in
	410	453	509	612	805	1000	1210	1415	1580	1725	1960	2195	2590	2975	3100	3200	3300	3860	mm
Do	8	8	10	12	14	16	18	20	22	24	26	29	29	32	32	38	40	40	in
	200	200	250	300	350	400	450	500	550	550	600	640	720	720	800	800	950	1000	mm
wt(kg)	23	35	50	71	144	209	322	482	683	950	1145	1635	2660	3090	3310	3595	3720	3985	RF
	17	26	39	53	113	164	256	390	565	805	965	1410	2305	2540	2725	3055	3360	3630	BW

Applicable Standards:

- STEEL GATE VALVES API 600/API 6D
- STEEL GATE VALVES ISO 10434/ISO 14313
- 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
- OS&Y OUTSIDE SRCEW AND YOKE
- BB.BOLTED BONNET
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- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR

Materials of parts

No	Part Name	Carbon Steel	ASTM Material 1 1/2cr-1/2mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Bonnet	A216-WCB	A217-WC6	A352-LCB
3	Wedge	A216-WCB+CR13	A217-WC6+HF	A352-LCB+CR13
4	Stem	A182-F6a	CR-MO-V	A182-F6a
5	Seat Ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
6	Stem Backseat	A276-420	A276-304	A276-420
7	Bonnet Gasket	Spiral Wound(Graphite+304)		
8	Bonnet Stud	A193-B7	A193-B16	A320-L7
9	Bonnet Stud Nut	A194-2H	A194-7	A194-4
10	Packing	Grapite		
11	Gland	A276-420	A276-304	A276-420
12	Gland Flange	A216-WCB	A217-WC6	A352-LCB
13	Eyebolt Pin	Carbon steel	A276-420	Carbon steel
14	Eyebolt	Carbon steel	A193-B7	Carbon steel
15	Eyebolt Nut	Carbon steel	A194-2H	Carbon steel
16	Grease Fitting	Brass+steel		
17	Yokesleeve	Aluminum-bronze		
18	Yokesleeve Jam Nut	Carbon Steel		
19	Handwheel	Malleable Iron		
20	Handwheel Nut	Carbon Steel		

Note: 1) Ductile Ni-resist optional
2) Wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

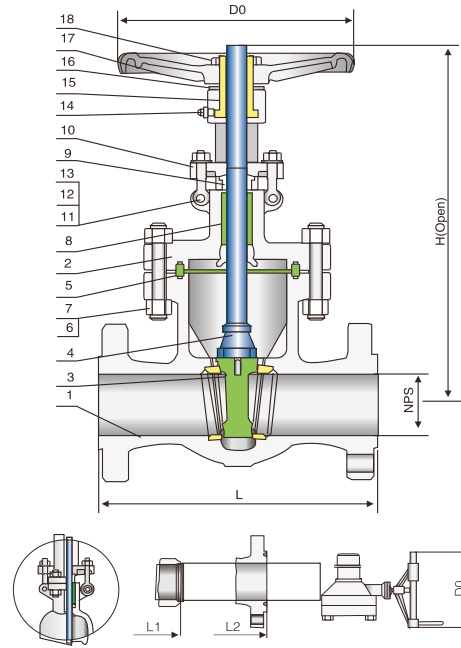


FIG.VK723 Dimensional datas of ANSI Gate Valve

Class 600LB

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	in
DN	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900	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	65.00	70.00	82.00	in
	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1448	1549	1651	1778	2083	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	65.50	70.62	82.62	in
	295	333	359	435	562	664	791	841	892	994	1095	1200	1407	1461	1562	1664	1794	2099	mm
H (open)	16.50	18.75	20.38	25.50	33.00	40.38	48.38	57.00	62.00	70.62	76.00	87.00	101.50	105.00	109.50	114.00	124.00	140.00	in
	418	476	518	646	840	1025	1230	1450	1575	1795	1930	2210	2580	2665	2780	2895	3150	3560	mm
Do	8	10	10	12	18	20	24	24	24	24	26	26	29	29	32	32	38	40	in
	200	250	250	300	450	500	600	600	600	600	640	640	720	720	800	800	950	1000	mm
wt(kg)	36	52	67	112	170	393	610	890	1245	1530	1965	2450	2995	3475	3725	4045	4185	4480	RF
	29	42	53	83	125	310	472	730	1055	1240	1625	2030	2590	2855	3065	3440	3780	4085	BW

FIG.VK724 Dimensional datas of ANSI Gate Valve

Class 900LB

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
DN	50	65	80	100	150	200	250	300	350	400	450	500	600	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
	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	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
	371	422	384	460	613	740	841	968	1038	1140	1232	1334	1568	mm
H (open)	19.62	21.50	22.50	26.62	35.50	4.50	53.00	60.00	74.88	81.00	87.00	101.00	104.00	in
	498	547	573	678	900	1103	1345	1525	1900	2055	2215	2565	264.00	mm
Do	10	10	12	18	20	24	26	29	32	32	38	38	40	in
	250	250	300	450	500	600	640	720	800	800	950	950	1000	mm
wt(kg)	74	131	101	172	335	640	1100	1600	2250	2850	3060	3935	49.00	RF
	54	105	78	135	260	515	920	1380	2010	2565	3485	3250	4065	BW

Applicable Standards:

- STEEL GATE VALVES API 600/API 6D
- STEEL GATE VALVES ISO 10434/ISO 14313
- 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
- OS&Y OUTSIDE SRCEW AND YOKE
- BB.BOLTED BONNET
- FLEXIBLE WEDGE, FULLY GUIDED
- CHOICE OF SOLID OR SPLIT WEDGE
- RENEWABLE SEAT RINGS
- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR

Materials of parts

No	Part Name	Carbon Steel	ASTM Material 1 1/2cr-1/2mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Bonnet	A216-WCB	A217-WC6	A352-LCB
3	Wedge	A216-WCB+CR13	A217-WC6+HF	A352-LCB+CR13
4	Stem	A182-F6a	CR-MO-V	A182-F6a
5	Seat Ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
6	Stem Backseat	A276-420	A276-304	A276-420
7	Bonnet Gasket	Spiral Wound(Graphite+304)		
8	Bonnet Stud	A193-B7	A193-B16	A320-L7
9	Bonnet Stud Nut	A194-2H	A194-7	A194-4
10	Packing	Grapite		
11	Gland	A276-420	A276-304	A276-420
12	Gland Flange	A216-WCB	A217-WC6	A352-LCB
13	Eyebolt Pin	Carbon steel	A276-420	Carbon steel
14	Eyebolt	Carbon steel	A193-B7	Carbon steel
15	Eyebolt Nut	Carbon steel	A194-2H	Carbon steel
16	Grease Fitting	Brass+steel		
17	Yokesleeve	Aluminum-bronze		
18	Yokesleeve Jam Nut	Carbon Steel		
19	Handwheel	Malleable Iron		
20	Handwheel Nut	Carbon Steel		

Note: 1) Ductile Ni-resist optional
2) Wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

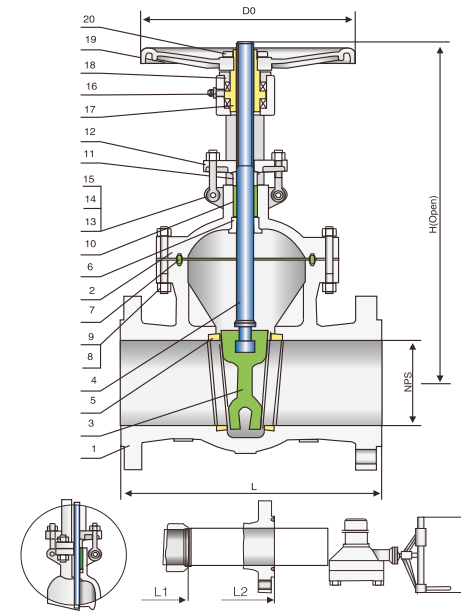


FIG.VK725 Dimensional datas of ANSI Gate Valve

Class 1500LB

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
DN	50	65	80	100	150	200	250	300	350	400	450	500	600	mm
L/L1 (RF/BW)	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	49.50	54.50	60.50	65.50	76.50	in
	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	1943	mm
L2 (RTJ)	15.50	16.62	18.62	21.62	28.00	33.12	39.38	45.12	50.25	55.38	61.38	66.38	77.62	in
	371	422	473	549	711	841	1000	1146	1276	1407	1559	1686	1972	mm
H (open)	24.25	26.00	30.00	34.12	39.50	45.00	54.00	61.00	74.88	80.50	93.75	101.50	114.75	in
	615	658	760	868	1005	1145	1370	1550	1900	2050	2380	2580	2915	mm
Do	10	12	18	20	24	18	18	24	24	24	24	24	24	in
	250	300	450	500	600	460	460	600	600	600	600	600	600	mm
wt(kg)	116	166	209	296	510	920	1910	3145	4100	6200	8965	13100	15860	RF
	105	150	188	265	412	760	1640	2755	3200	5300	8070	11790	14275	BW

FIG.VK726 Dimensional datas of ANSI Gate Valve

Class 2500LB

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
DN	50	65	80	100	150	200	250	300	350	400	450	500	600	mm
L/L1 (RF/BW)	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00	-	-	-	-	-	in
	451	508	578	673	914	1022	1270	1422	-	-	-	-	-	mm
L2 (RTJ)	17.88	20.50	23.00	26.88	36.50	40.88	50.88	56.88	-	-	-	-	-	in
	454	514	584	683	927	1038	1292	1445	-	-	-	-	-	mm
H (open)	24.88	29.00	35.00	41.50	57.00	63.38	81.75	89.75	-	-	-	-	-	in
	631	736	890	1055	1450	1610	2075	2280	-	-	-	-	-	mm
Do	12	18	20	20	24	24	24	24	-	-	-	-	-	in
	300	450	500	500	600	600	600	600	-	-	-	-	-	mm
wt(kg)	155	210	310	580	1600	2450	4570	7150	-	-	-	-	-	RF
	124	160	245	460	1310	2010	3800	6000	-	-	-	-	-	BW

Applicable Standards:

- STEEL GATE VALVES, API 600/API 6D
- STEEL GATE VALVES, ISO 10434/ISO 14313
- 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:

- PSB, PRESSURE SEAL BONNET
- FLEXIBLE WEDGE, FULLY GUIDED
- CHOICE OF SOLID OR SPLIT WEDGE
- RENEWABLE SEAT RINGS
- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR

Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 ¹ / ₄ Cr-1 ¹ / ₂ Mo	18Cr-9Ni-2Mo
1	Body	A216-WCB	A217-WC6	A351-CF8M
2	Yoke	A216-WCB	A217-WC6	A351-CF8M
3	Wedge	A216-WCB+HF	A217-WC6+HF	A351-CF8M+HF
4	Stem	A182-F6a	CR-MO-V	A182-316
5	Seat Ring	A105+HF	A182-F11+HF	A240-316+HF
6	Bonnet	A105	A182-F11	A240-316
7	Bonnet Gasket	Steel Ring	304SS RING	316SS RING
8	Adapter Ring	Carbon Steel	A276-420	A276-316
9	Retainer	Carbon Steel	A276-420	A276-316
10	Yoke Cap	Carbon Steel	Alloy Steel	Stainless Steel
11	Bonnet Stud	A193-B7	A193-B16	A193-B8M
12	Bonnet Stud Nut	A194-2H	A194-7	A194-8M
13	Packing	Graphite		
14	Gland	A276-420	A276-304	A276-316L
15	Gland Flange	A216-WCB	A217-WC6	A351-CF8M
16	Eyebolt Pin	Carbon Steel	A276-420	A276-316
17	Eyebolt	Carbon Steel	A193-B7	A193-B8
18	Eyebolt Nut	Carbon Steel	A194-2H	A194-8
19	Grease Fitting	Brass+Steel		
20	Yokesleeve	Aluminum-Bronze ²⁾		
21	Yokesleeve Jam Nut	Carbon Steel		Stainless Steel
22	Handwheel	Malleable Iron		
23	Handwheel Nut	Carbon steel		

Note: 1) Graphite optional
2) Ductile Ni-resist optional
3) Wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

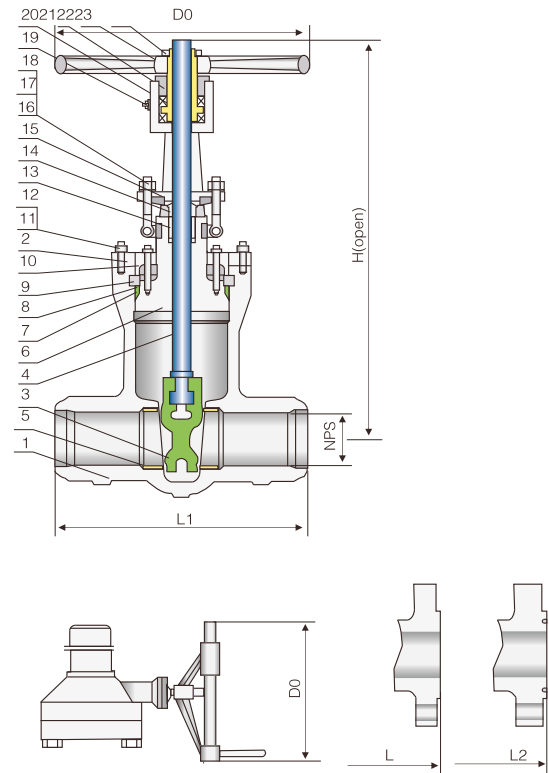


FIG.VK734 Dimensional datas of ANSI Pressure Seal Gate Valve Class 900LB

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	in
	50	65	80	100	150	200	250	300	350	400	mm
ANSI Class 900Lb											
L1 (BW)	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	in
	216	254	305	356	508	660	787	914	991	1092	mm
L (RF)	14.50	165.50	15.00	18.00	24.00	29.00	33.00	38.00	40.50	44.50	in
	368	419	381	457	610	737	838	965	1029	1130	mm
L2 (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	in
	371	422	384	460	613	740	841	968	1038	1140	mm
H (open)	17.62	17.62	19.5	22.88	32.62	67362	45.5	53.12	59	70.5	in
	448	448	495	580	830	955	1165	1350	1500	1790	mm
D0	14	14	14	14	18	24	28	34	34	34	in
	350	350	350	350	450	600	700	850	850	850	mm
WT(kg)	39	39	48	69	158	289	482	710	998	1390	BW
	69	69	72	110	253	430	710	1025	1452	1960	RF/RTJ

Applicable Standards:

- STEEL GATE VALVES, API 600/API 6D
- STEEL GATE VALVES, ISO 10434/ISO 14313
- 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:

- PSB, PRESSURE SEAL BONNET
- FLEXIBLE WEDGE, FULLY GUIDED
- CHOICE OF SOLID OR SPLIT WEDGE
- RENEWABLE SEAT RINGS
- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR

Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 ¹ / ₄ Cr-1 ¹ / ₂ Mo	18Cr-9Ni-2Mo
1	Body	A216-WCB	A217-WC6	A351-CF8M
2	Yoke	A216-WCB	A217-WC6	A351-CF8M
3	Wedge	A216-WCB+HF	A217-WC6+HF	A351-CF8M+HF
4	Stem	A182-F6a	CR-MO-V	A182-316
5	Seat Ring	A105+HF	A182-F11+HF	A240-316+HF
6	Bonnet	A105	A182-F11	A240-316
7	Bonnet Gasket	Steel Ring	304SS RING	316SS RING
8	Adapter Ring	Carbon Steel	A276-420	A276-316
9	Retainer	Carbon Steel	A276-420	A276-316
10	Yoke Cap	Carbon Steel	Alloy Steel	Stainless Steel
11	Bonnet Stud	A193-B7	A193-B16	A193-B8M
12	Bonnet Stud Nut	A194-2H	A194-7	A194-8M
13	Packing	Graphite		
14	Gland	A276-420	A276-304	A276-316L
15	Gland Flange	A216-WCB	A217-WC6	A351-CF8M
16	Eyebolt Pin	Carbon Steel	A276-420	A276-316
17	Eyebolt	Carbon Steel	A193-B7	A193-B8
18	Eyebolt Nut	Carbon Steel	A194-2H	A194-8
19	Grease Fitting	Brass+Steel		
20	Yokesleeve	Aluminum-Bronze ²⁾		
21	Yokesleeve Jam Nut	Carbon Steel		Stainless Steel
22	Handwheel	Malleable Iron		
23	Handwheel Nut	Carbon steel		

Note: 1) Graphite optional
2) Ductile Ni-resist optional
3) Wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

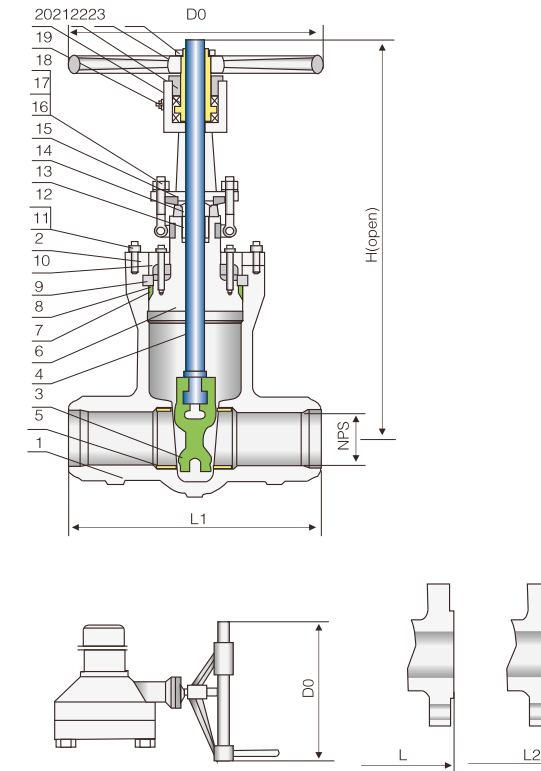


FIG.VK735/6 Dimensional datas of ANSI Pressure Seal Gate Valve Class 1500/2500LB

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	2	2 1/2	3	4	6	8	10	12	14	16	in
	50	65	80	100	150	200	250	300	350	400	50	65	80	100	150	200	250	300	350	400	mm
ANSI Class 1500Lb												ANSI Class 2500Lb									
L1 (BW)	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00	42.00	47.00	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00	-	-	in
	216	254	305	406	559	711	864	991	1067	1194	279	330	368	457	610	762	914	1041	-	-	mm
L (RF)	14.50	16.50	18.50	21.50	27.75	32.75	39.00	44.50	49.50	54.050	17.75	20.00	22.75	26.50	36.00	40.25	50.00	56.00	-	-	in
	368	419	470	546	705	832	991	1130	1257	1384	451	508	578	673	914	1022	1270	1422	-	-	mm
L2 (RTJ)	15.50	16.62	18.62	21.62	28.00	33.12	39.38	45.12	50.25	55.38	17.88	20.50	23.00	26.88	36.50	40.88	50.88	56.88	-	-	in
	371	422	473	549	711	841	1000	1146	1276	1407	454	514	584	683	927	1038	1292	1445	-	-	mm
H (open)	17.62	17.62	21.62	25.25	33.5	38.62	46.5	62.25	70.5	78	22.5	22.5	25.62	30	36.62	41.38	44.88	60.25	-	-	in
	448	448	550	640	850	980	1180	1580	1790	1980	570	570	650	760	930	1050	1140	1530	-	-	mm
D0	14	14	14	18	24	28	34	34	34	34	14	14	18	24	28	34	34	34	-	-	in
	350	350	350	450	600	700	850	850	850	850	350	350	450	600	700	850	850	850	-	-	mm
WT(kg)	45	45	55	77	175	323	540	795	1115	1556	110	110	150	175	380	575	980	1570	-	-	BW
	80	80	95	123	283	481	795	1148	1626	2195	165	195	235	316	635	910	1780	2680	-	-	RF/RTJ

Design

WEKE cast steel globe valves are designed and manufactured to provide maximum service life and dependability. All globe valve are full ported and meet the design requirements of American Petroleum Institute standard API600& 6D.BS EN 13709 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.

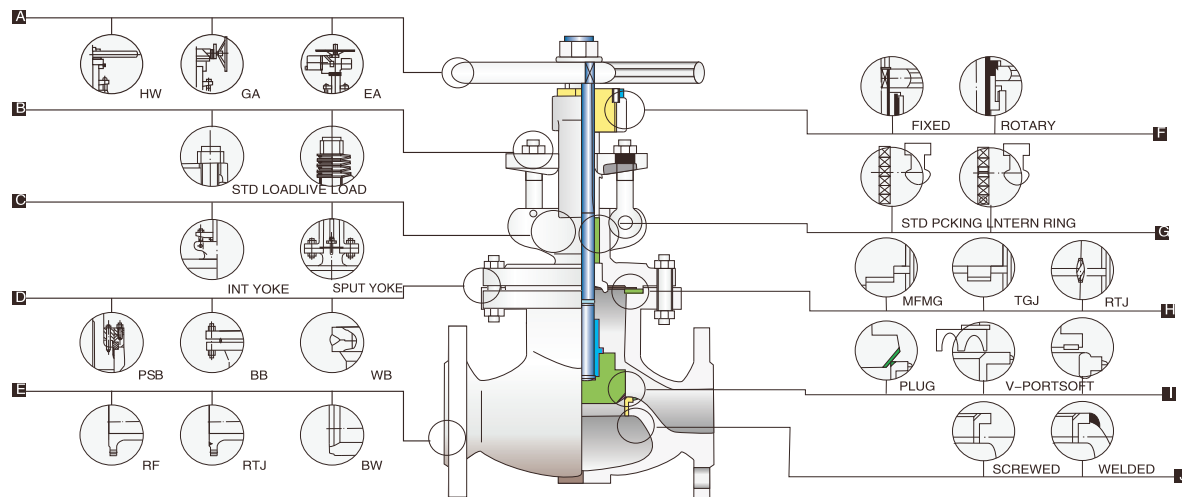
Available Modifications for WEKE Cast Globe Valves

Trim changes
End connection modifications
Packing and gasket changes
Operator mounting
Handwheel extensions

Range 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.

Pressure equalizing
By-pass
Customer specified coatings
Weld end bore changes
Oxygen & chlorine cleaning & packaging



A Operation

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

B Live Load Packing

In services requiring frequent cycling or with high pressure/temperature variations, live loading extends the service life between maintenance periods packing gland adjustments. Belleville spring are employed to provide constant packing gland stress.

C OS & Y

Outside screw and yoke. Bolted bonnet for 10" & smaller.

D BB

Bolted bonnet welding bonnet and pressure seal bonnet in services requiring frequent cycling or with high pressure/temperature variations.

E End Connections

A choice of flanged, RTJ flanged or butt welding end for piping flexibility.

F Yoke sleeve

Furnished in aluminum bronze to reduce operating torque. Most size furnished with ball bearing yoke sleeves.

G Lantern Ring And Double Packing Set

Lantern ring with leak-off fitting connection and double packing stack is optionally available for critical services.

H Body-to-Bonnet Joint

A male and female joint or tongue and groove joint is used 150Lb to 600Lb valves, ring joint is used in the body to bonnet connection in 900Lb&higher rated valves.

I Disc

Plug disc is stem guided on all size. Disc has a differential angle front the seat to provide a line contact for maximum sealing. The bottom of v-port disc is guided by the body seat ring for maximum disc stability in throttling applications, the soft teflon ring is excellent for lower temperature service where tight shut off required.

J Seat Rings

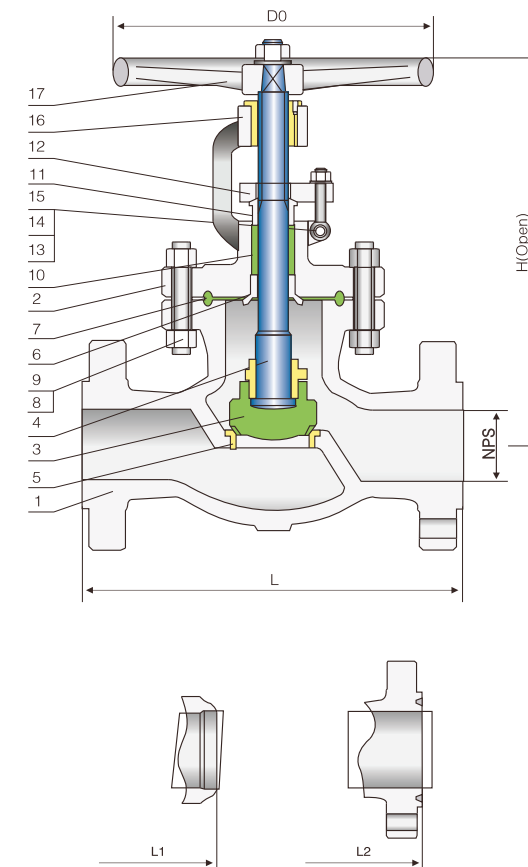
Separate heavy duty, full ported rings for easy maintenance. Screwed or welded connection into body.

Applicable Standards:

- STEEL GLOBE VALVES BS EN 13709/API 600
- 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

Design descriptions:

- STRAIGHT PATTERN BODY DESIGN
- OS&Y, OUTSIDE SCREW AND YOKE
- BB, BOLTED BONNET
- YOKE INTEGRAL WITH BONNET
- RISING STEM AND HANDWHEEL
- LOOSE DISC, CHOICE OF PLUG OR BALL
- RENEWABLE SEAT RING
- IMPACT HANDWHEEL FOR 10" & ABOVE
- HORIZONTAL SERVICE
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 1/4Cr-1/2Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Bonnet	A216-WCB	A217-WC6	A352-LCB
3	Disc	A105+CR13	A182-F11+HF	A350-LF2+CR13
4	Stem	A182-F6a	CR-MO-V	A182-F6a
5	Seat Ring	A105+HF	A182-F11+HF	A350-LF2+HF
6	Stem Backseat	A276-420	A276-304	A276-420
7	Bonnet Gasket	Steel Ring	304SS Ring	Steel Ring
8	Bonnet Stud	A193-B7	A193-B16	A320-L7
9	Bonnet Stud Nut	A194-2H	A194-7	A194-4
10	Packing	Graphite		
11	Gland	A276-420	A276-304	A276-420
12	Gland Flange	A216-WCB	A217-WC6	A352-LCB
13	Eyebolt Pin	Carbon Steel	A276-420	Carbon Steel
14	Eyebolt	Carbon Steel	A193-B7	Carbon Steel
15	Eyebolt Nut	Carbon Steel	A194-2H	Carbon Steel
16	Yokesleeve	Aluminum-Bronze ¹⁾		
17	Handwheel	Malleable Iron		

Note: 1) Ductile Ni-resist optional
2) Disc and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

FIG.VK631/2 Dimensional datas of ANSI Globe Valve

Class 150/300LB

NPS	DN	ANSI Class 150Lb		ANSI Class 300Lb		D0	WT(kg)	L/L1 (RF/BW)	L2 (RTJ)	H (open)	D0	WT(kg)										
		L/L1 (RF/BW)	L2 (RTJ)	H (open)	H (open)																	
2	50	8.00	203	8.00	203	15.00	380	7	180	18	14	10.50	267	11.12	282	16.75	425	8	200	25	20	
2 1/2	65	8.50	216	8.50	216	21.00	535	10	240	30	22	11.50	292	12.12	308	19.00	485	10	240	32	22	
3	80	9.50	241	9.50	241	17.50	445	11	280	41	33	12.50	318	13.12	333	19.88	505	11	280	38	27	
4	100	11.50	292	11.50	292	20.25	515	11	280	64	43	14.00	356	14.62	371	22.50	570	13	320	56	41	
6	150	16.00	406	16.00	406	22.00	560	13	320	86	72	17.50	444	18.12	460	25.25	640	16	400	96	75	
8	200	19.50	495	19.50	495	24.25	615	13	320	110	88	22.00	559	22.62	575	33.25	845	18	450	150	117	
10	250	24.50	622	24.50	622	32.00	815	16	400	280	245	24.50	622	25.12	638	35.50	900	20	500	360	310	
12	300	27.50	698	27.50	698	35.88	910	18	450	380	345	28.00	711	28.62	727	38.62	980	24	600	550	492	
14	350	31.00	787	31.00	787	48.38	1230	20	500	510	450	-	-	-	-	-	-	-	-	-	-	
16	400	36.00	914	36.00	914	57.00	1450	24	600	740	665	-	-	-	-	-	-	-	-	-	-	
in	mm	in	mm	in	mm	in	mm	in	mm	mm	mm	in	mm	in	mm	in	mm	in	mm	mm	mm	mm

Applicable Standards:

- STEEL GLOBE VALVES BS EN 13709/API 600
- 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

Design descriptions:

- STRAIGHT PATTERN BODY DESIGN
- OS&Y, OUTSIDE SCREW AND YOKE
- BB, BOLTED BONNET
- YOKE INTEGRAL WITH BONNET
- RISING STEM AND HANDWHEEL
- LOOSE DISC, CHOICE OF PLUG OR BALL
- RENEWABLE SEAT RING
- IMPACT HANDWHEEL FOR 10" & ABOVE
- HORIZONTAL SERVICE
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR

Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 1/4Cr-1/2Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Bonnet	A216-WCB	A217-WC6	A352-LCB
3	Disc	A105+CR13	A182-F11+HF	A350-LF2+CR13
4	Stem	A182-F6a	CR-MO-V	A182-F6a
5	Seat Ring	A105+HF	A182-F11+HF	A350-LF2+HF
6	Stem Backseat	A276-420	A276-304	A276-420
7	Bonnet Gasket	Steel Ring	304SS Ring	Steel Ring
8	Bonnet Stud	A193-B7	A193-B16	A320-L7
9	Bonnet Stud Nut	A194-2H	A194-7	A194-4
10	Packing		Graphite	
11	Gland	A276-420	A276-304	A276-420
12	Gland Flange	A216-WCB	A217-WC6	A352-LCB
13	Eyebolt Pin	Carbon Steel	A276-420	Carbon Steel
14	Eyebolt	Carbon Steel	A193-B7	Carbon Steel
15	Eyebolt Nut	Carbon Steel	A194-2H	Carbon Steel
16	Yokesleeve		Aluminum-Bronze ¹⁾	
17	Handwheel		Malleable Iron	

Note: 1) Ductile Ni-resist optional
2) Disc and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

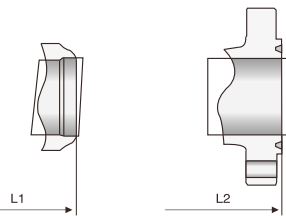
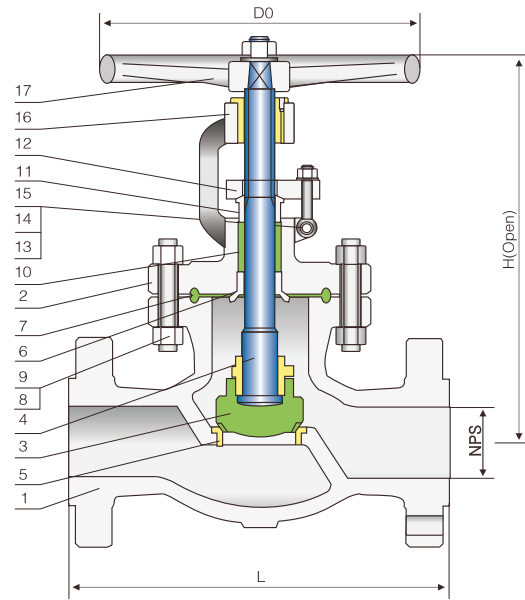


FIG. VK633/4 Dimensional datas of ANSI Globe Valve

Class 600/900LB

NPS	DN	L/L1 (RF/BW)	L2 (RTJ)	H (open)	D0	WT(kg)	L/L1 (RF/BW)	L2 (RTJ)	H (open)	D0	WT(kg)
ANSI Class 600Lb						ANSI Class 900Lb					
2	50	11.50	292	11.62	295	17.50	445	10	240	35	27
2 1/2	65	13.00	330	13.12	333	19.75	502	11	280	50	34
3	80	14.00	356	14.12	359	21.00	533	13	320	60	42
4	100	17.00	432	17.12	435	24.50	622	16	400	110	84
6	150	22.00	559	22.12	562	29.50	750	18	450	230	192
8	200	26.00	660	26.12	663	36.50	927	20	500	410	350
10	250	31.00	787	31.12	790	44.88	1140	24	600	770	680
12	300	33.00	838	33.12	841	53.12	1350	24	600	1140	1030
in	mm	in	mm	in	mm	in	mm	in	mm	RF/RTJ	BW

Applicable Standards:

- STEEL GLOBE VALVES, BS EN 13709/API 600
- 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

Design descriptions:

- PSB, PRESSURE SEAL BONNET
- OS&Y, OUTSIDE SCREW AND YOKE
- BB, BOLTED BONNET
- RENEWABLE SEAT RINGS
- RISING STEM AND HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR

Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 1/4Cr-1/2Mo	18Cr-9Ni-2Mo
1	Body	A216-WCB	A217-WC6	A351-CF8M
2	Yoke	A216-WCB	A217-WC6	A351-CF8M
3	Disc	A216-WCB+HF	A217-WC6+HF	A351-CF8M+HF
4	Stem	A182-F6a	CR-MO-V	A182-316
5	Seat Ring	A105+HF	A182-F11+HF	A240-316+HF
6	Bonnet	A105	A182-F11	A240-316
7	Bonnet Gasket ¹⁾	Steel Ring	304SS Ring	316SS Ring
8	Adapter Ring	Carbon Steel	A276-420	A276-316
9	Retainer	Carbon Steel	A276-420	A276-316
10	Yoke Cap	Carbon Steel	Alloy Steel	Stainless Steel
11	Bonnet Stud	A193-B7	A193-B16	A193-B8M
12	Bonnet Stud Nut	A194-2H	A194-7	A194-8M
13	Packing		Graphite	
14	Gland	A276-420	A276-304	A276-316L
15	Gland Flange	A216-WCB	A217-WC6	A351-CF8M
16	Eyebolt Pin	Carbon Steel	A276-420	A276-316
17	Eyebolt	Carbon Steel	A193-B7	A193-B8
18	Eyebolt Nut	Carbon Steel	A194-2H	A194-8
19	Grease Fitting		Brass+Steel	
20	Yokesleeve		Aluminum-Bronze ²⁾	
21	Yokesleeve Jam Nut	Carbon Steel		Stainless Steel
22	Handwheel		Malleable Iron	
23	Handwheel Nut		Carbon Steel	

Note: 1) Graphite optional
2) Ductile Ni-resist optional
3) Wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

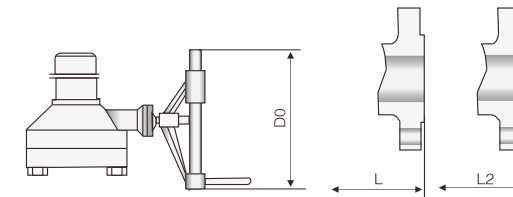
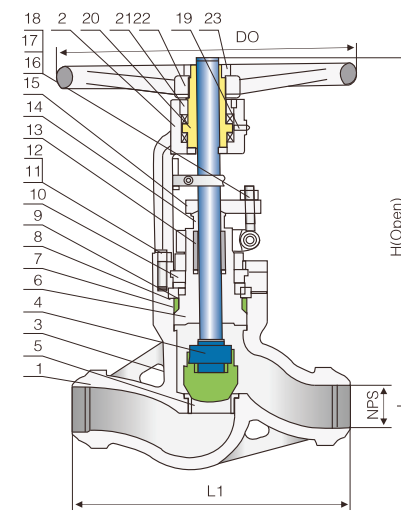


FIG. VK644 Dimensional datas of ANSI Globe Valve

Class 900LB

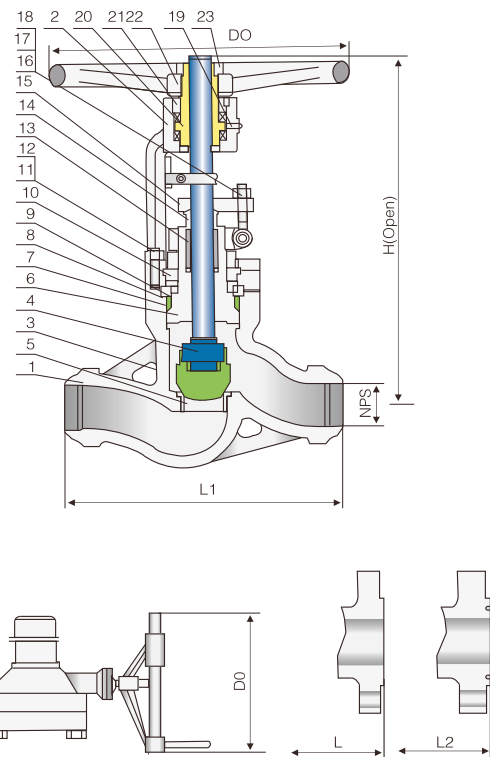
NPS	DN	2	2 1/2	3	4	6	8	10	12	in
		50	65	80	100	150	200	250	300	mm
ANSI Class 900Lb										
L1 (BW)		8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	in
		216	254	305	356	508	660	787	914	mm
L (RF)		14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	in
		368	419	381	457	610	737	838	965	mm
L2 (RTJ)		14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	in
		371	422	384	460	613	740	841	968	mm
H (open)		22	22	22	27	36.38	43.38	50.62	57	in
		557	557	557	685	925	1100	1285	1450	mm
D0		16	16	16	16	28	28	36	36	in
		400	400	400	400	700	700	900	900	mm
WT(kg)		46	53	68	100	270	450	740	1150	BW
		75	82	95	135	355	680	1050	1480	RF/RTJ

Applicable Standards:

- STEEL GLOBE VALVES, BS EN 13709/API 600
- 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

Design descriptions:

- PSB, PRESSURE SEAL BONNET
- OS&Y, OUTSIDE SCREW AND YOKE
- BB, BOLTED BONNET
- RENEWABLE SEAT RINGS
- RISING STEM AND HANDWHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 ¹ / ₄ Cr-1 ¹ / ₂ Mo	18Cr-9Ni-2Mo
1	Body	A216-WCB	A217-WC6	A351-CF8M
2	Yoke	A216-WCB	A217-WC6	A351-CF8M
3	Disc	A216-WCB+HF	A217-WC6+HF	A351-CF8M+HF
4	Stem	A182-F6a	CR-MO-V	A182-316
5	Seat Ring	A105+HF	A182-F11+HF	A240-316+HF
6	Bonnet	A105	A182-F11	A240-316
7	Bonnet Gasket ¹⁾	Steel Ring	304SS Ring	316SS Ring
8	Adapter Ring	Carbon Steel	A276-420	A276-316
9	Retainer	Carbon Steel	A276-420	A276-316
10	Yoke Cap	Carbon Steel	Alloy Steel	Stainless Steel
11	Bonnet Stud	A193-B7	A193-B16	A193-B8M
12	Bonnet Stud Nut	A194-2H	A194-7	A194-8M
13	Packing		Graphite	
14	Gland	A276-420	A276-304	A276-316L
15	Gland Flange	A216-WCB	A217-WC6	A351-CF8M
16	Eyebolt Pin	Carbon Steel	A276-420	A276-316
17	Eyebolt	Carbon Steel	A193-B7	A193-B8
18	Eyebolt Nut	Carbon Steel	A194-2H	A194-8
19	Grease Fitting		Brass+Steel	
20	Yokesleeve		Aluminum-Bronze ²⁾	
21	Yokesleeve Jam Nut	Carbon Steel		Stainless Steel
22	Handwheel		Malleable Iron	
23	Handwheel Nut		Carbon Steel	

Note: 1) Graphite optional
2) Ductile Ni-resist optional
3) Wedge and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

FIG.VK645/6 Dimensional datas of ANSI Globe Valve

Class 1500/2500LB

NPS DN	2	2 ¹ / ₂	3	4	6	8	2	2 ¹ / ₂	3	4	6	in
	50	65	80	100	150	200	50	65	80	100	150	mm
	ANSI Class 1500Lb						ANSI Class 2500Lb					
L1 (BW)	8.50	10.00	12.00	16.00	22.00	28.00	11.00	13.00	14.50	18.00	24.00	in
	216	254	305	406	559	711	279	330	368	457	610	mm
L (RF)	14.50	16.50	18.50	21.50	27.75	32.75	17.75	20.00	22.75	26.50	36.00	in
	368	419	470	546	705	832	451	508	578	673	914	mm
L2 (RTJ)	14.62	16.62	18.62	21.62	28.00	33.12	17.88	20.50	23.00	26.88	36.50	in
	371	422	473	549	711	842	454	514	584	683	927	mm
H (open)	22	22	24.38	30	44.62	54.75	23.38	23.38	28	32.25	49.62	in
	557	557	620	760	1135	1390	595	595	710	820	1260	mm
DO	16	18	20	24	28	36	16	20	24	28	36	in
	400	450	500	600	700	900	400	500	600	700	900	mm
WT(kg)	57	65	90	190	450	730	65	78	125	155	480	BW
	86	112	162	240	580	950	115	136	205	275	860	RF/RTJ

Design

WEKE cast steel check valves are designed and manufactured to provide maximum service life and dependability. All check valves meet the design requirements of American Petroleum Institute standard API600 & 6D, BS EN 13709 and generally conform to American Society of Mechanical Engineers standard ASME B16.34. Valves are available in a complete range of body/cover materials and trims.

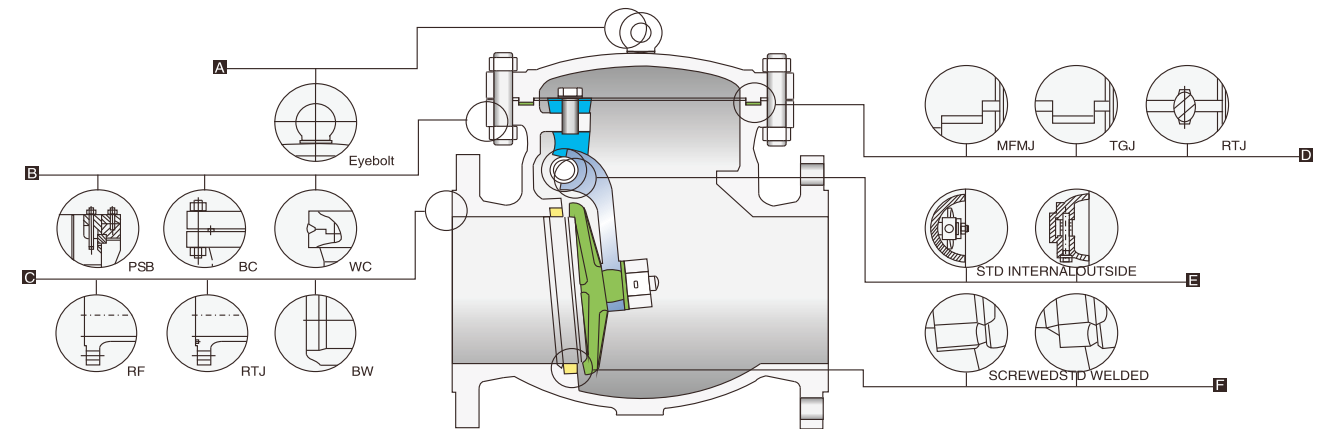
Ranges of Materials

Standard body/cover materials include nine grades of carbon, low alloy and stainless steels, 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 WEKE Cast Steel Valves

Trim changes
End connection modifications
Packing and gasket changes
Operator mounting
Handwheel extensions

Pressure equalizing
Customer specified coatings
Weld end bore changes
Oxygen & chlorine cleaning & packaging



A Eyebolt

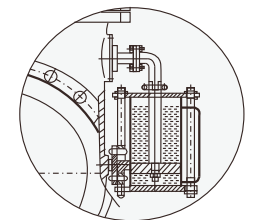
For 150Lb-8", 300Lb-8", 600Lb-6", 900Lb/1500Lb/2500Lb-4" & over.

B BC

Bolted cover, welded cover and pressure seal bonnet in services requiring frequent cycling or with high pressure/temperature variations.

C End Connections

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



D Body-to-Cover Joint

A male and female joint or tongue and groove joint is used 150Lb to 600Lb valves. Ring joint is used in the body to cover connection in 900Lb & higher rated valves.

E Outside Lever And Weight

All external hinge pin swing check valves 12" and smaller are available with an optional outside lever and weight, internal hinge available with all swing check valves.

F Seat Rings

Separate heavy duty, full ported rings for easy maintenance. Screwed or welded connection into body.

HCU weighted mechanical accumulator

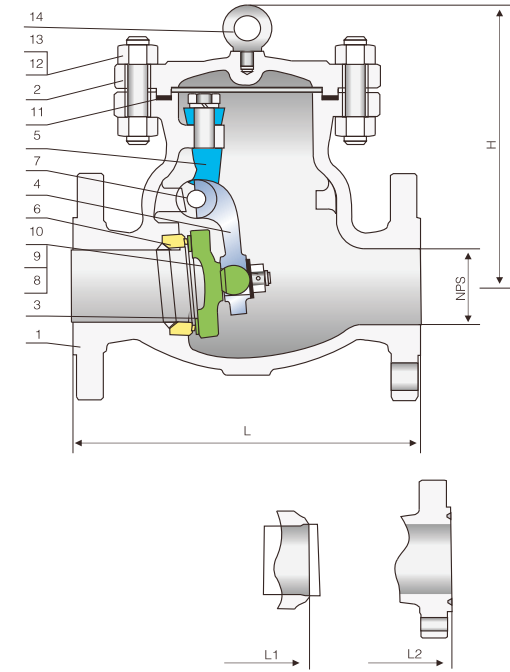
This design can be used to either dampen or assist closing of the check valve disc depending on orientation, by using the hydraulic control unit to buffer action the disc, the valve opens at lower flow rates.

Applicable Standards:

- STEEL CHECK VALVES, API 6D
- STEEL CHECK VALVES, ISO14313
- 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:

- BC, BOLTED COVER
- SWING TYPE, ANTI-ROTATION DISC
- RENEWABLE SEAT RINGS
- NON-PENETRATE DISC SHAFT
- HORIZONTAL OR VERTICAL SERVICE
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 1/4Cr-1/2Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Cover	A216-WCB	A217-WC6	A352-LCB
3	Disc ¹⁾	A105-CR13	A182-F11+HF	A350-LF2+CR13
4	Hinge	A216-WCB	A217-WC6	A352-LCB
5	Fork Part	A216-WCB	A217-WC6	A352-LCB
6	Seat Ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
7	Hinge Pin	A276-420	A276-304	A276-420
8	Disc Washer	Carbon Steel	A276-304	Carbon Steel
9	Disc Nut	Carbon Steel	A194-7	Carbon Steel
10	Disc Nut Pin	Carbon Steel	A276-420	Carbon Steel
11	Gasket	Spiral Wound(Graphite+304)		
12	Stud	A193-B7	A193-B16	A320-L7
13	Stud Nut	A194-2H	A194-7	A194-4
14	Eyebolt ²⁾	Carbon Steel		

Note: 1)Cast steel disc for NPS 4" and above.
2)NPS 6" & larger.
3)Disc and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

FIG.VK421 Dimensional datas of ANSI Swing Check Valve Class 150LB

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	36	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	900	mm
L/L1 (RF/BW)	8.00	8.50	9.50	11.50	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00	51.00	57.00	60.00	77.00	in
	203	216	241	292	356	495	622	699	787	864	978	978	1295	1295	1448	1524	1956	mm
L2 (RTJ)	8.50	9.00	10.00	12.00	14.50	20.00	25.00	28.00	31.50	34.50	39.00	39.00	51.50	-	-	-	-	in
	216	229	254	305	368	508	635	711	800	876	991	991	1308	-	-	-	-	mm
H	6.00	6.50	6.88	8.00	11.50	13.88	15.38	17.00	18.75	20.62	22.88	24.62	34.75	37.00	37.00	38.62	48.00	in
	152	165	175	204	293	353	390	432	475	525	582	627	883	940	940	980	1220	mm
wt(kg)	14	20	25	40	71	118	177	263	353	542	632	855	970	1600	1600	1990	2760	RF/RTJ
	10	12	17	29	57	96	143	227	295	468	552	755	831	1420	1420	1760	2230	BW

FIG.VK422 Dimensional datas of ANSI Swing Check Valve Class 300LB

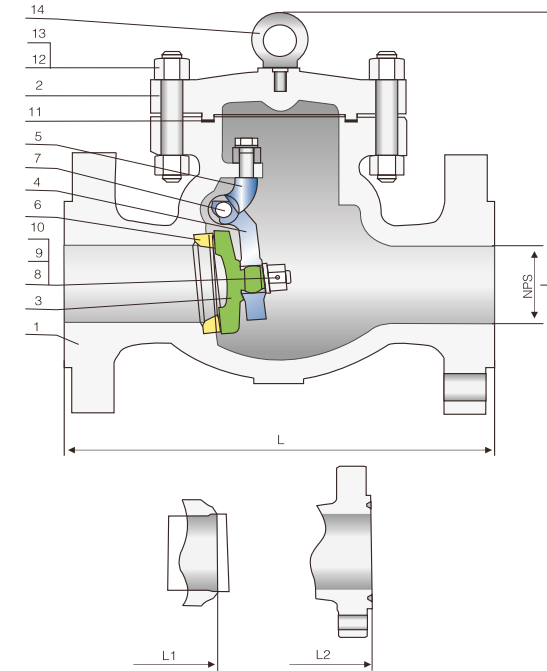
NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	36	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	900	mm
L/L1 (RF/BW)	10.50	11.50	12.50	14.00	17.50	21.00	24.50	28.00	33.00	34.00	38.50	40.00	53.00	53.00	59.00	62.75	82.00	in
	267	292	318	356	445	533	622	711	838	864	978	1016	1346	1346	1499	1594	2083	mm
L2 (RTJ)	11.12	12.12	13.12	14.62	18.12	21.62	25.12	28.62	33.62	34.62	39.12	40.75	53.88	54.00	60.00	63.75	-	in
	283	308	333	371	460	549	638	727	854	879	994	1035	1368	1372	1524	1619	-	mm
H	6.00	6.50	6.88	8.00	11.50	13.88	15.38	17.00	18.75	20.62	22.88	24.62	34.75	35.88	37.00	38.62	48.00	in
	152	165	175	204	292	353	390	432	475	525	582	627	883	910	940	980	1220	mm
wt(kg)	16	23	29	46	82	136	204	302	405	625	730	985	1115	1465	1840	2290	3180	RF/RTJ
	11	13	18	31	61	103	155	245	315	503	593	812	895	1205	1525	1895	2395	BW

Applicable Standards:

- STEEL CHECK VALVES, API 6D
- STEEL CHECK VALVES, ISO14313
- 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:

- BC, BOLTED COVER
- SWING TYPE, ANTI-ROTATION DISC
- RENEWABLE SEAT RINGS
- NON-PENETRATE DISC SHAFT
- HORIZONTAL OR VERTICAL SERVICE
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 1/4Cr-1/2Mo	Carbon Steel
1	Body	A216-WCB	A217-WC6	A352-LCB
2	Cover	A216-WCB	A217-WC6	A352-LCB
3	Disc ¹⁾	A105-CR13	A182-F11+HF	A350-LF2+CR13
4	Hinge	A216-WCB	A217-WC6	A352-LCB
5	Fork Part	A216-WCB	A217-WC6	A352-LCB
6	Seat Ring	A105+CR13	A182-F11+HF	A350-LF2+CR13
7	Hinge Pin	A276-420	A276-304	A276-420
8	Disc Washer	Carbon Steel	A276-304	Carbon Steel
9	Disc Nut	Carbon Steel	A194-7	Carbon Steel
10	Disc Nut Pin	Carbon Steel	A276-420	Carbon Steel
11	Gasket	Spiral Wound(Graphite+304)		
12	Stud	A193-B7	A193-B16	A320-L7
13	Stud Nut	A194-2H	A194-7	A194-4
14	Eyebolt ²⁾	Carbon Steel		

Note: 1)Cast steel disc for NPS 4" and above.
2)NPS 6" & larger.
3)Disc and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

FIG.VK423 Dimensional datas of ANSI Swing Check Valve Class 600LB

NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	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	in
	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	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	in
	295	333	359	435	562	664	791	841	892	994	1095	1200	1407	mm
H	7.50	8.00	8.75	10.00	14.50	17.50	19.25	21.38	23.38	25.75	28.75	31.00	43.50	in
	190	205	222	255	368	445	490	540	595	655	730	785	1105	mm
wt(kg)	24	35	44	70	125	207	310	460	615	945	1105	1495	1695	RF/RTJ
	16	19	26	44	87	147	220	350	452	720	845	1160	1280	BW

FIG.VK424 Dimensional datas of ANSI Swing Check Valve Class 900LB

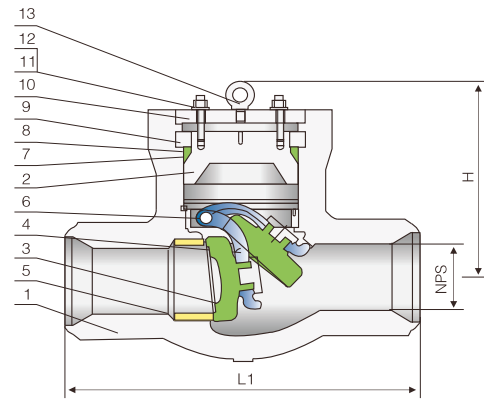
NPS DN	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	mm
L/L1 (RF/BW)	14.50	16.50	15.00	18.00	24.00	29.00	33.00	38.00	40.50	44.50	48.00	52.00	-	in
	368	419	381	457	610	737	838	965	1029	1130	1219	1321	-	mm
L2 (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	48.50	52.50	-	in
	371	422	384	460	613	740	841	968	1038	1140	1232	1334	-	mm
H	9.50	10.00	11.00	12.50	18.12	22.00	24.00	26.50	29.38	32.00	33.50	38.75	-	in
	240	256	278	320	460	560	610	675	745	815	850	985	-	mm
wt(kg)	37	54	68	109	195	321	481	711	956	1468	1870	2316	-	RF/RTJ
	21	25	34	58	115	194	290	461	597	950	1210	1533	-	BW

Applicable Standards:

- STEEL CHECK VALVES, API 594/API 6D
- STEEL CHECK VALVES, ISO 14313
- STEEL VALVES, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES, ASME B16.5
- INSPECTION AND TEST, API 598/API 6D

Design descriptions:

- PSB, PRESSURE SEAL BONNET
- FLEXIBLE DISC, FULLY GUIDED
- RENEWABLE SEAT RINGS
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 ¹ / ₄ Cr-1 ¹ / ₂ Mo	18Cr-9Ni-2Mo
1	Body	A216-WCB	A217-WC6	A351-CF8M
2	Pres. Seal Bonnet	A216-WCB	A217-WC6	A351-CF8M
3	Disc	A105+HF	A182-F11+HF	A351-CF8M+HF
4	Hinge	A216-WCB	A217-WC6	A351-CF8M
5	Seat Ring	A105+HF	A182-F11+HF	A240-316+HF
6	Hinge Pin	A276-420	A276-304	A276-316
7	Bonnet Gasket ¹⁾	Steel Ring	304SS Ring	316SS RING
8	Adapter Ring	Carbon Steel	A276-420	A276-316
9	Retainer	Carbon Steel	A276-420	A276-316
10	Cover	Carbon Steel	Alloy Steel	Stainless Steel
11	Stud	A193-B7	A193-B7	A193-B8M
12	Stud Nut	A194-2H	A194-2H	A194-8M
13	Eyebolt	Carbon Steel		

Note: 1) graphite optional
2) disc and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

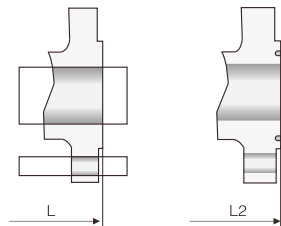


FIG.VK434 Dimensional datas of Pressure Seal Check Valve Class 900LB

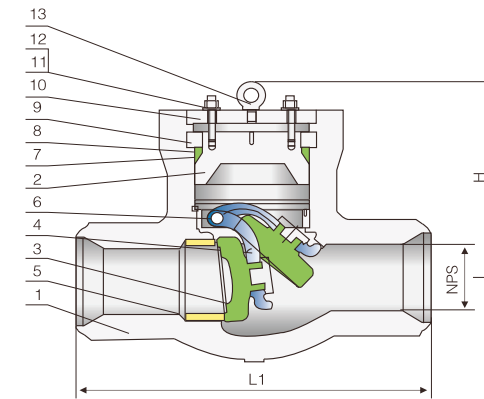
NPS DN	2	2½	3	4	6	8	10	12	14	16	in mm
	50	65	80	100	150	200	250	300	350	400	
ANSI Class900Lb											
L1 (BW)	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	in
	216	254	305	356	508	660	787	914	991	1092	mm
L (RF)	14.50	16.60	15.00	18.00	24.00	29.00	33.00	38.00	40.5	44.5	in
	368	419	381	457	610	737	838	965	1029	1130	mm
L2 (RTJ)	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	in
	371	422	384	460	613	740	841	968	1038	1140	mm
H	9.50	9.50	10.00	13.38	15.75	18.12	21.62	24.00	27.00	29.50	in
	240	240	255	340	400	460	550	610	685	750	mm
wt(kg)	22	34	38	71	176	485	761	1125	1345	1490	BW
	44	55	61	116	255	630	940	1433	1710	1820	RF/RTJ

Applicable Standards:

- STEEL CHECK VALVES, BS EN 13709/API 600
- 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

Design descriptions:

- PSB, PRESSURE SEAL BONNET
- FLEXIBLE DISC, FULLY GUIDED
- RENEWABLE SEAT RINGS
- FLANGED OR BUTTWELDING ENDS



Materials of parts

No	Part Name	Carbon Steel	ASTM Materials 1 ¹ / ₄ Cr-1 ¹ / ₂ Mo	18Cr-9Ni-2Mo
1	Body	A216-WCB	A217-WC6	A351-CF8M
2	Pres. Seal Bonnet	A216-WCB	A217-WC6	A351-CF8M
3	Disc	A105+HF	A182-F11+HF	A351-CF8M+HF
4	Hinge	A216-WCB	A217-WC6	A351-CF8M
5	Seat Ring	A105+HF	A182-F11+HF	A240-316+HF
6	Hinge Pin	A276-420	A276-304	A276-316
7	Bonnet Gasket ¹⁾	Steel Ring	304SS Ring	316SS RING
8	Adapter Ring	Carbon Steel	A276-420	A276-316
9	Retainer	Carbon Steel	A276-420	A276-316
10	Cover	Carbon Steel	Alloy Steel	Stainless Steel
11	Stud	A193-B7	A193-B7	A193-B8M
12	Stud Nut	A194-2H	A194-2H	A194-8M
13	Eyebolt	Carbon Steel		

Note: 1) graphite optional
2) disc and seat ring may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown.

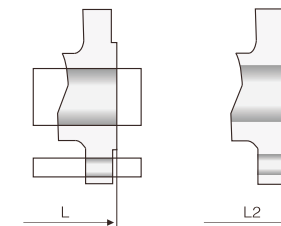
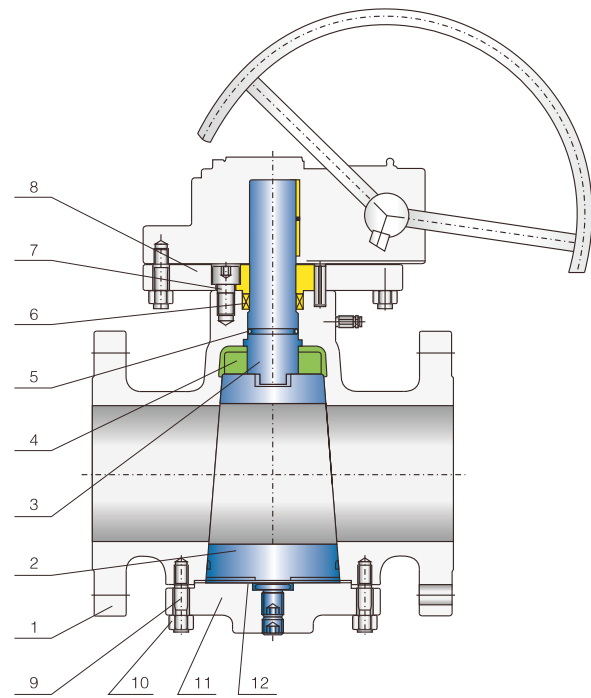


FIG.VK435/6 Dimensional datas of Pressure Seal Check Valve Class 1500/2500LB

NPS DN	2	2½	3	4	6	8	10	12	14	2	2½	3	4	6	8	10	12	in
	50	65	80	100	150	200	250	300	350	50	65	80	100	150	200	250	300	mm
ANSI Class1500Lb																		
L1 (BW)	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00	42.00	11.00	13.00	14.50	18.00	24.00	30.00	36.00	41.00	in
	216	254	305	406	559	711	864	991	1067	279	330	368	457	610	762	914	1041	mm
L (RF)	14.50	16.50	18.50	21.50	27.75	32.75	39	44.5	49.5	17.75	20.00	22.75	26.50	36.00	40.25	50	56	in
	368	419	470	546	705	832	991	1130	1257	451	508	578	673	914	1022	1270	1422	mm
L2 (RTJ)	14.62	16.62	18.62	21.62	28.00	33.12	39.38	45.12	50.25	17.88	20.50	23.00	26.88	36.50	40.88	50.88	56.88	in
	371	422	473	549	711	842	1000	1146	1276	454	514	584	683	927	1038	1292	1445	mm
H	9.50	9.50	11.88	15.38	18.00	20.62	24.00	27.00	30.00	10.25	10.25	13.75	16.12	18.88	22.38	25.25	32.00	in
	240	240	300	390	455	525	610	685	760	260	260	350	410	480	570	640	815	mm
wt(kg)	22	37	45	78	245	530	815	1213	1555	55	78	95	182	300	630	825	1580	BW
	44	61	110	155	378	675	1160	1710	2315	93	130	170	315	618	1125	1760	2910	RF/RTJ



Applicable Standards:

- STEEL PLUG VALVES API 599/API 6D
- STEEL PLUG VALVES ISO 14313
- FIRE SAFE, API 607
- ANTI STATICS, API 599
- 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:

- RUGGED, HEAVY-DUTY BODY
- BOLTED BONNET CAP
- PTFE SLEEVED, TAPERED PLUG
- LARGE PORT OPENINGS
- NON-LUBRICATED
- STEM INTEGRAL WITH PLUG
- IN-LINE ADJUSTMENT
- FIRE SAFE CONSTRUCTION
- ANTI STATICS DEVICE
- STOPPER DEVICE
- RENEWABLE SEAT RING
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH WG OPERATOR

Materials of parts

Body	WCB/LCB/CF8M/CF8/CF3M/CF3/WC6/WC9/CD3MN
Cock body	WCB+N/CA15/4140+ENP/CF8M/CF8/CF3M/CF3/CD3MN
Stem	F6a/4140+ENP/F304/F316/F304L/F316L/F51
Lower cover	A105/LF2/F304/F316/F304L/F316L/F51
O-ring	VITON/NBR
Stud	B7M/B8M/L7M/B16M
Nut	2HM/8M/7M/4M
Gasket	Flexible graphite+304/PTFE/304

Materials could be choosed according to customers' requirement & working condition.

Plug Valve Introduction

- 一、 Usage.
It is mainly used for storage and transportation of oil and gas in the chemical industry, metallurgy, paper making, food processing, shipbuilding and other industries, used to open or close, and with pneumatic and electrical devices can also achieve the long-distance operation, to ensure personal safety.
- 二、 Features.
 - 1、 lockup device, manual operation, in order to prevent misoperation, valve can be equipped with padlock device.
 - 2、 Anti-static structure, when a fire break out, the metal seal forms to prevent large leakage of media
 - 3、 valve body and stem can finish emergency injection seal, through the grease injection valve, the stop-leak compound can achieve a short-time seal, therefor to buy time handling the scene.

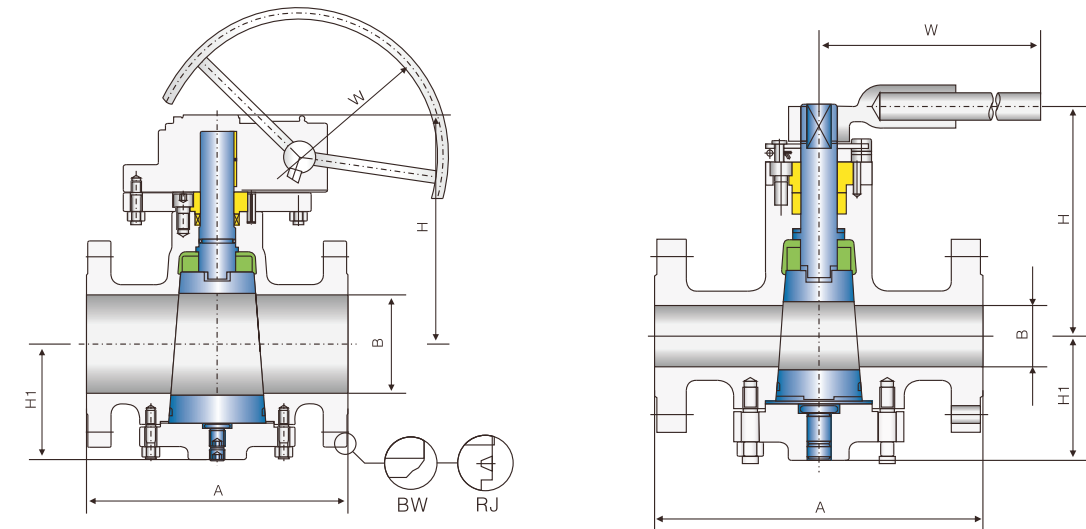


FIG.VK211 Dimensional datas of Pressuer balanced plug valve Class 150Lb

NPS inch	DN	A mm	B mm	H mm	H1 mm	W mm	M(RF) kg	T N.m	NPS inch	DN	A mm	B mm	H mm	H1 mm	W mm	M(RF) kg	T N.m
Short Series Type ANSI Class 150Lb									Venturi Type ANSI Class 150Lb								
2	50	178	51	175	106	350	18	98	★10	250	533	252	420	255	600	375	2166
3	80	203	76	190	127	600	31	180	★12	300	610	303	492	316	600	420	3199
4	100	229	102	214	158	700	50	302	★14	350	686	334	498	320	600	480	4849
★6	150	267	152	270	185	900	93	628	★16	400	762	385	645	368	700	590	6032
★8	200	292	201	370	220	600	250	2032	★18	450	864	436	687	426	760	713	9142
★10	250	330	252	420	250	600	330	2166	★20	500	914	487	742	477	760	880	12022
★12	300	356	303	490	310	600	360	3199	★24	600	1067	589	798	522	760	1203	19424

FIG.VK212 Dimensional datas of Pressuer balanced plug valve Class 300Lb

NPS inch	DN	A mm	B mm	H mm	H1 mm	W mm	M(RF) kg	T N.m	NPS inch	DN	A mm	B mm	H mm	H1 mm	W mm	M(RF) kg	T N.m
Short Series Type ANSI Class 300Lb									Venturi Type ANSI Class 300Lb								
2	50	216	51	184	108	500	25	172	6	150	403	152	307	200	900	144	1080
2 1/2	70	241	62	190	115	550	33	198	★8	200	419	303	390	230	600	280	3208
3	80	283	76	195	137	600	40	218	★10	250	457	252	433	255	600	370	3258
4	100	305	102	265	168	700	70	536	★12	300	502	303	500	320	700	408	5202
★6	150	403	152	307	200	900	144	1080	★14	350	762	334	630	340	700	510	8486
★8	200	419	201	390	230	600	280	3208	★16	400	838	385	740	376	762	630	10696
★10	250	457	252	433	255	600	370	3258	★18	450	914	436	788	436	762	750	15940
★12	300	502	303	500	320	700	408	5202	★20	500	991	487	833	497	762	890	21040
									★24	600	1143	589	889	543	762	1035	24082

FIG.VK213 Dimensional datas of Pressuer balanced plug valve Class 600Lb

NPS inch	DN	A mm	B mm	H mm	H1 mm	W mm	M(RF) kg	T N.m	NPS inch	DN	A mm	B mm	H mm	H1 mm	W mm	M(RF) kg	T N.m
Reduced Bore Type ANSI Class 600Lb									Venturi Type ANSI Class 600Lb								
2	50	292	51	194	108	500	30	292	6	150	403	152	307	200	900	144	1080
2 1/2	65	330	62	200	115	550	40	322	★8	200	419	303	390	230	600	280	3208
3	80	356	76	205	137	780	48	380	★10	250	457	252	433	255	600	370	3258
4	100	432	102	270	168	1100	85	918	★12	300	502	303	500	320	700	408	5202
★6	150	559	152	340	200	600	194	1814	★14	350	762	334	630	340	700	510	8486
★8	200	660	201	405	230	600	305	5114	★16	400	838	385	740	376	762	630	10696
★10	250	787	252	460	255	700	625	6088	★18	450	914	436	788	436	762	750	15940
									★20	500	991	487	833	497	762	890	21040
									★24	600	1143	589	889	543	762	1035	24082

Note: ★ Turbine drives

Applicable Standards:

- STEEL PLUG VALVES API 599/API 6D
- STEEL PLUG VALVES ISO 14313
- FIRE SAFE, API 607
- ANTI STATICS, API 599
- 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

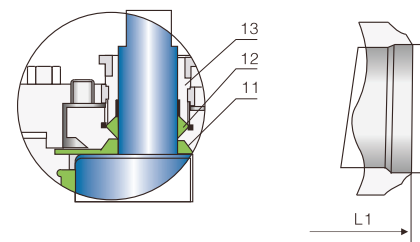
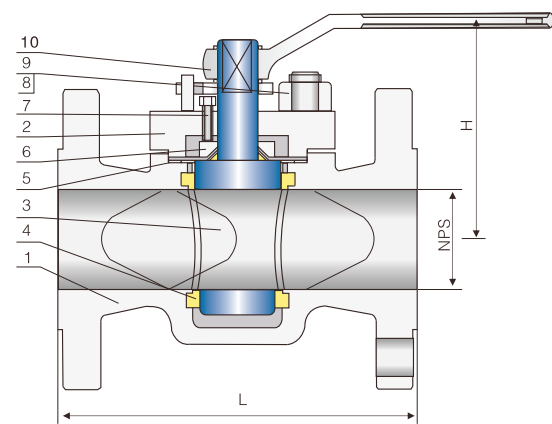
Design descriptions:

- RUGGED, HEAVY-DUTY BODY
- BOLTED BONNET CAP
- PTFE SLEEVED, TAPERED PLUG
- LARGE PORT OPENINGS
- NON-LUBRICATED
- STEM INTEGRAL WITH PLUG
- IN-LINE ADJUSTMENT
- FIRE SAFE CONSTRUCTION
- ANTI STATICS DEVICE
- STOPPER DEVICE
- RENEWABLE SEAT RING
- 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	Plug	A182-F304 ¹⁾	A182-F316	A182-F304 ¹⁾
4	Sleeve	Glass Filled PTFE		
5	Bonnet Gasket	Graphite+304 ²⁾	Graphite+316 ²⁾	Graphite+304 ²⁾
6	Adjusting Gasket	A182-F6a	A182-F316	A182-F6a
7	Adjusting Bolt	A193-B7	A193-B8	A320-L7
8	Bonnet Stud	A193-B7	A193-B8	A320-L7
9	Bonnet Bolt	A194-2H	A194-8	A194-4
10	Handle	Carbon Steel		
11	Diaphragm	A167-304+PTFE	A167-316+PTFE	A167-304+PTFE
12	Packing	Graphite		
13	Gland Flange	A216-WCB	A217-WC6	A352-LCB

Note: 1) A105+ENP optional
2) Jacketed construction



Plug Valve Introduction

一、Usage.

It is mainly used for storage and transportation of oil and gas in the chemical industry, metallurgy, paper making, food processing, shipbuilding and other industries, used to open or close, and with pneumatic and electrical devices can also achieve the long-distance operation, to ensure personal safety.

二、Features.

- 1、lockup device, manual operation, in order to prevent misoperation, valve can be equipped with padlock device.
- 2、Anti-static structure, when a fire break out, the metal seal forms to prevent large leakage of media
- 3、valve body and stem can finish emergency injection seal, through the grease injection valve, the stop-leak compound can achieve a short-time seal, therefor to buy time handling the scene.

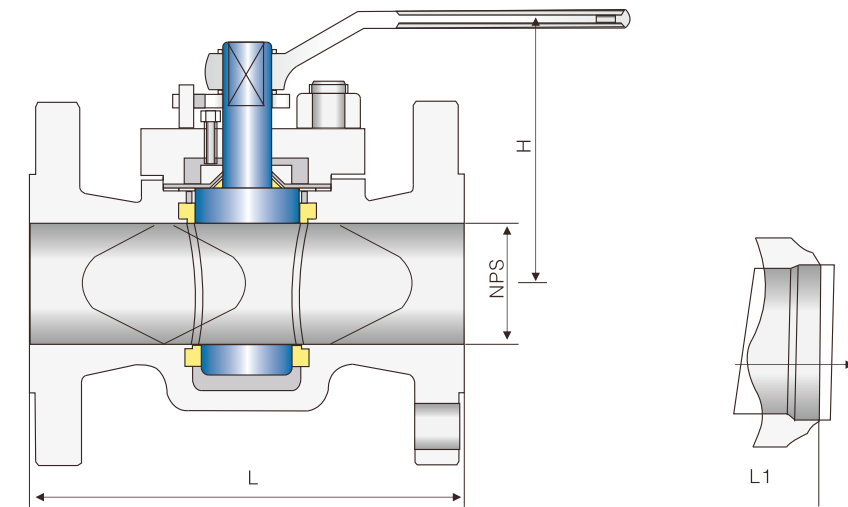


FIG.VK221/2 Dimensional datas of Sleeve soft plug valve Class 150/300LB

NPS	DN	ANSI Class150Lb					ANSI Class300Lb																
		L (RF)	L1 (BW)	H	W	WT(kg)	L (RF)	L1 (BW)	H	W	WT(kg)												
2	50	7.00	178	10.50	267	6.00	150	13	320	17	13	8.5	216	10.50	267	6.00	150	13	320	17	13		
2 1/2	65	7.50	191	12.00	305	6.50	165	14	350	20	14	9.5	241	12.00	305	6.50	165	14	350	20	14		
3	80	8.00	203	13.00	330	7.12	180	16	410	25	17.5	11.0	283	13.00	330	7.12	180	16	410	25	17.5		
4	100	9.00	229	14.00	356	15.00	380	13	320	40	29	12.0	305	14.00	356	15.00	380	13	320	40	29		
6	150	10.50	267	18.00	457	20.50	520	13	320	70	55	16.0	403	18.00	457	20.50	520	13	320	70	55		
8	200	11.50	292	20.50	521	22.88	580	13	320	135	110	16.5	419	20.50	521	22.88	580	13	320	135	110		
10	250	13.00	330	22.00	559	24.50	620	14	350	220	182	18.0	457	22.00	559	24.50	620	14	350	220	182		
12	300	14.00	356	25.00	635	26.75	680	15	380	300	247	20.0	502	25.00	635	26.75	680	15	380	300	247		
in	mm	in	mm	in	mm	in	mm	in	mm	RF	BW	in	mm	in	mm	in	mm	in	mm	in	mm	RF	BW

FIG.VK223/4 Dimensional datas of Sleeve soft plug valve Class 600/900LB

NPS	DN	ANSI Class600Lb					ANSI Class900Lb																
		L (RF)	L1 (BW)	H	W	WT(kg)	L (RF)	L1 (BW)	H	W	WT(kg)												
2	50	11.50	292	11.62	295	6.12	155	14	350	28	21	14.50	368	14.62	371	6.12	155	14	350	52	32		
2 1/2	65	13.00	330	13.12	333	6.75	170	16	410	33	23.5	16.50	419	16.62	422	6.75	170	16	410	60	34		
3	80	14.00	356	14.12	359	7.25	185	13	320	387	23	15.00	381	15.12	384	7.25	185	13	320	70	47		
4	100	16.00	432	16.12	435	15.38	390	13	320	75	46	18.00	457	18.12	460	15.38	390	13	320	92	55		
6	150	19.50	559	19.62	562	20.88	530	13	320	142	97	24.00	610	24.12	613	20.88	530	13	320	195	120		
8	200	23.50	660	23.62	664	23.25	590	14	350	250	167	29.00	737	29.12	740	23.25	590	14	350	320	197		
10	250	26.50	787	26.62	791	24.88	630	15	350	365	227	33.00	838	33.12	841	24.88	630	15	380	455	277		
12	300	30.00	838	30.12	841	27.12	690	15	380	515	354	38.00	965	38.12	968	27.12	690	15	380	625	405		
in	mm	in	mm	in	mm	in	mm	in	mm	RF/RTJ	BW	in	mm	in	mm	in	mm	in	mm	in	mm	RF/RTJ	BW

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.

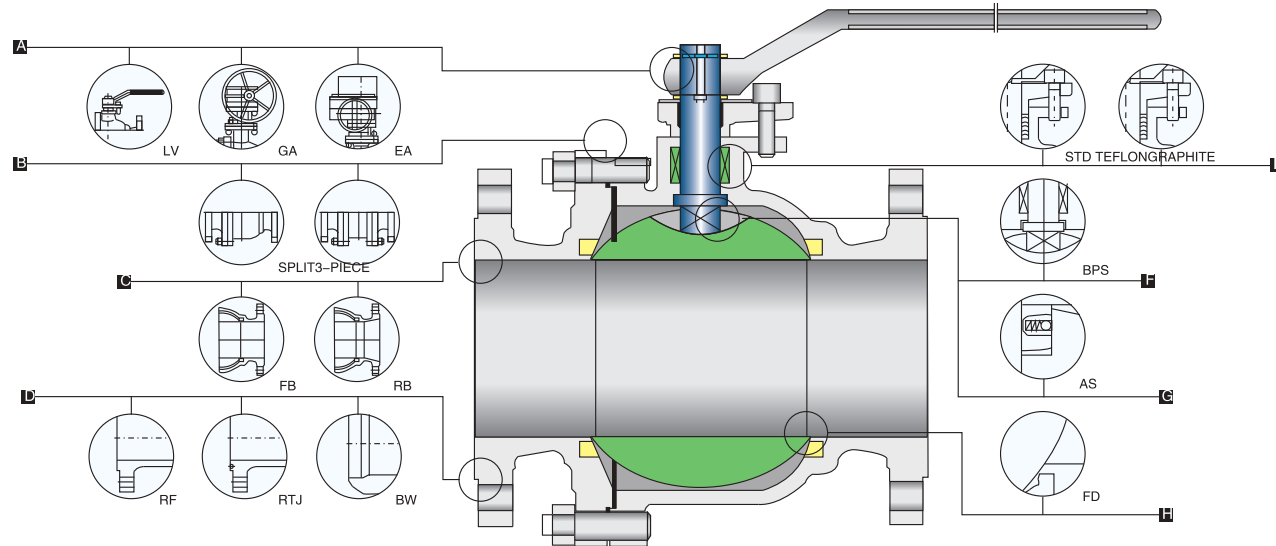
Ranges of Materials

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

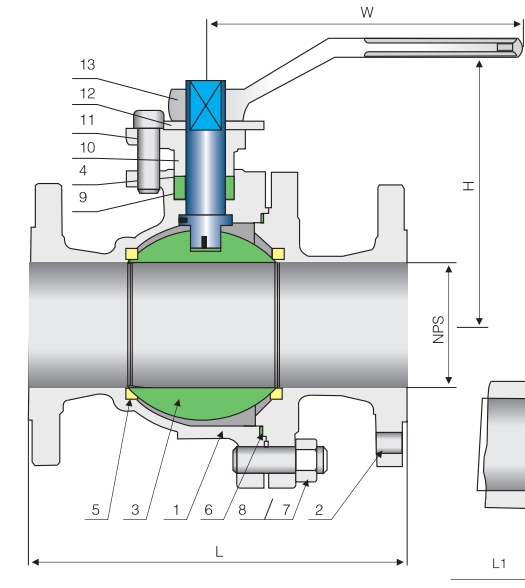
Anti statics. A metallic contact is always granted between ball and stem/body to discharge eventual statics build-up during service.

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 ¹⁾	A182-F316	A182-F304 ¹⁾
4	Stem	A276-304	A276-316	A276-304
5	Seat Ring		R.PTFE	
6	Bonnet Gasket	Graphite+304 ²⁾	PTFE	Graphite+304 ²⁾
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

Design

WEKE 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 BS5351 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.

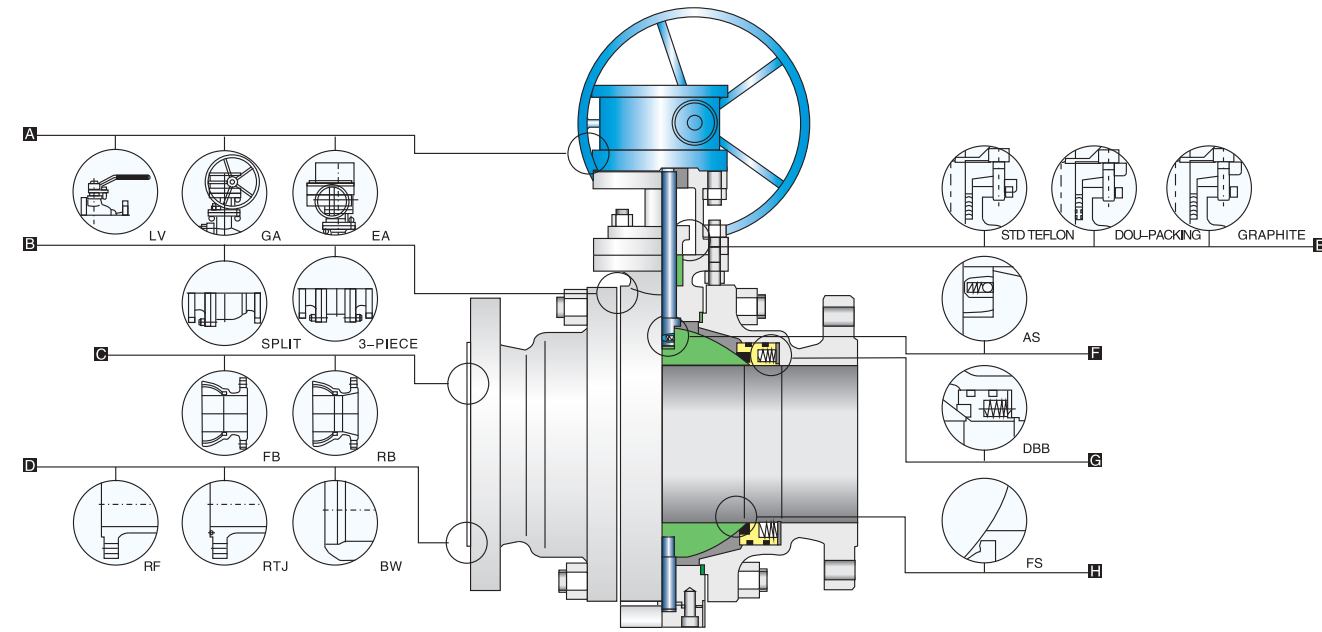
Available Modifications for Steel Valves

- 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

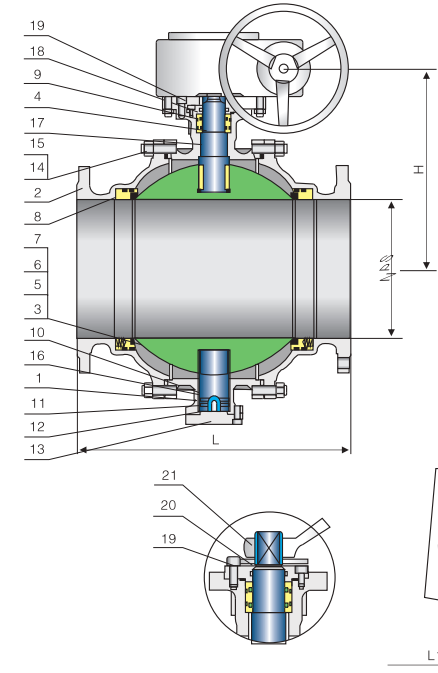
Fire safe designed to API607 or BS 6755 to grant their operation suitability in case of fire. Secondary metal-to metal seal acts as backup if primary seal is destroyed by fire. Valves ordered for compliance with API 607 will be provided with graphite packing and gaskets.

Applicable Standards:

- STEEL BALL VALVES API 608/API 6D
- STEEL BALL VALVES ISO 14313
- FIRE SAFE, API 607
- ANTI 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 ¹⁾	A182-F316	A182-F304 ¹⁾
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 ²⁾	Graphite+316 ²⁾	Graphite+304 ²⁾
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 (BW)	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
	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 (BW)	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
	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

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 ¹⁾	A182-F316	A182-F304 ¹⁾
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 ²⁾	Graphite+316 ²⁾	Graphite+304 ²⁾
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.

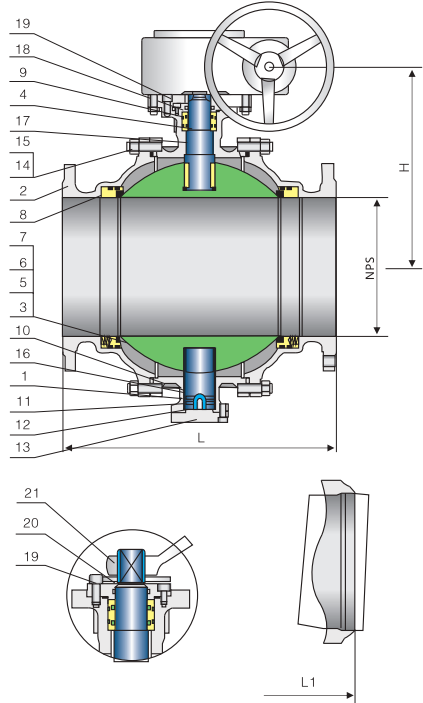


Fig.VK123 Dimensional datas of ANSI Class 600Lb

NPS DN	2	2½	3	4	6	8	10	12	14	16	18	20	24	26	28	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	mm
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
	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1448	1549	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
	295	333	359	435	562	664	791	841	892	994	1095	1200	1407	1461	1562	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
	180	193	215	241	540	635	665	790	810	925	985	1130	1185	1335	1450	mm
W	14	16	20	20	24	24	24	24	32	32	32	32	32	32	32	in
	350	400	500	500	600	600	600	600	800	800	800	800	800	800	800	mm
wt(kg)	26	35	58	81	142	287	540	780	1000	1300	1700	2100	3400	3800	4500	RF/RTJ
	19	25	42	51	85	200	395	610	805	1010	1350	1656	2775	3125	3790	BW

Fig.VK124 Dimensional datas of ANSI Class 900Lb

NPS DN	2	2½	3	4	6	8	10	12	14	16	18	20	24	in
	50	65	80	100	150	200	250	300	350	400	450	500	600	mm
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
	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	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
	371	422	384	460	613	740	841	968	1038	1140	1232	1334	1568	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
	219	235	260	390	655	770	805	965	980	1145	1195	1360	1425	mm
W	20	20	20	24	24	24	24	32	32	32	32	32	32	in
	500	500	500	600	600	600	600	800	800	800	800	800	800	mm
wt(kg)	31	43	68	98	171	345	650	940	1205	1565	2050	2535	3950	RF/RTJ
	23	31	51	61	102	240	480	735	965	1215	1625	1995	3335	BW

Applicable Standards:

- STEEL STRAINER, ASME B16.34
- FACE TO FACE, ASME B16.10
- END FLANGES, ASME B16.5
- BUTTWELDING ENDS, ASME B16.25
- INSPECTION AND TEST, API 598

Design descriptions:

- Y-PATTERN TYPE
- BOLTED BONNET CAP WITH DRAIN PLUG
- PERFORATED STAINLESS STEEL SCREEN
- STRAINER DENSITY 100 MESH DESIGN
- FULL RANGE OF STRAINER DENSITY
- RENEWABLE STRAINER DENSITY
- FLANGED OR BUTTWELDING ENDS

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 Cap	A216-WCB	A351-CF8M	A350-LCB
3	Screen	A240-304	A240-316	A240-304
4	Bonnet Gasket	Graphite+304 ¹⁾	PTFE	Graphite+304 ¹⁾
5	Bonnet Stud	A193-B7	A193-B8	A320-L7
6	Bonnet Stud Nut	A194-2H	A194-8	A194-7
7	Drain Plug	A276-410	A276-316	A276-410

Note: 1)spiral wound construction

Percentage of open area

MESH	A SWG	B m/m	C m/m	D %
5	20	0.914	4.166	67.3
10	22	0.711	1.829	51.8
20	28	0.356	0.914	51.8
30	32	0.274	0.572	45.7
40	36	0.193	0.442	48.4
50	37	0.172	0.336	43.6
60	38	0.152	0.271	41.0
80	40	0.122	0.195	37.8
100	42	0.102	0.152	35.8
120	43	0.092	0.119	31.8
150	45½	0.066	0.103	37.1
180	46½	0.053	0.088	38.9
200	47	0.051	0.076	35.8
250	48	0.040	0.062	37.7
300	48	0.039	0.044	27.6

Even the mesh*is same:
open area is not always same
due to the diameter of wire.
The details of wire as follows:

- A: Number of Wire
- B: Diameter of Wire
- C: Width of Opening
- D: Percentage of OPEN AREA

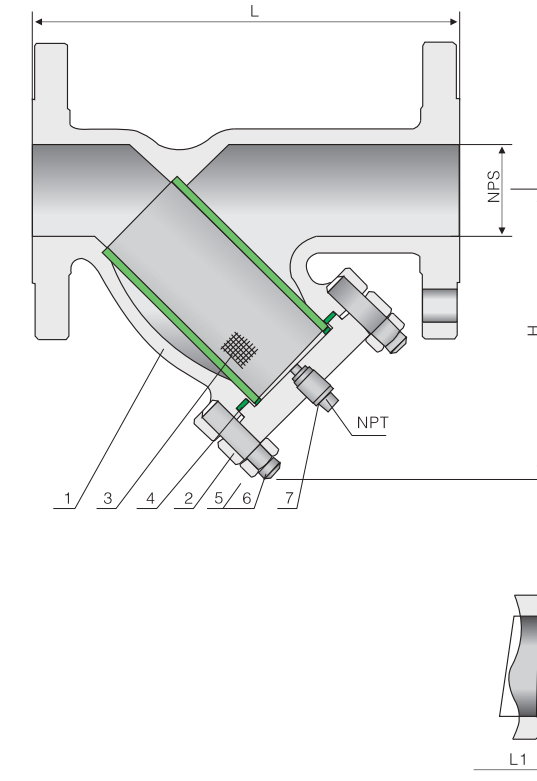
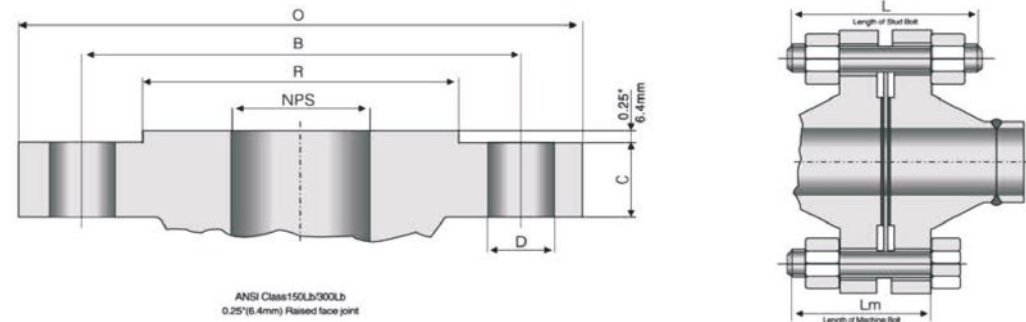


Fig.VK521/522 Dimensional datas of ANSI Class 150/300Lb

NPS	DN	L/L1 (RF/BW)	H	PLUG (NPT)	WT (KG)	L/L1 (RF/BW)	H	PLUG (NPT)	WT (KG)				
		ANSI Class 150Lb				ANSI Class 300Lb							
1/2	15	108	3.38	87	1/8	2.1	0.8	152	3.38	87	1/8	2.5	1.2
3/4	20	117	4.12	105	1/2	2.3	1.2	178	4.12	105	1/2	3.4	1.8
1	25	127	4.50	114	1/2	3.1	1.4	203	4.50	114	1/2	4.2	2.6
1½	40	165	6.12	156	1/2	6.2	3.7	229	6.12	156	1/2	8.6	4.8
2	50	203	7.12	181	1/2	9.7	6.7	267	7.12	181	1/2	11.12	8.2
2½	65	216	10.25	259	3/4	23.5	16.5	292	10.25	259	3/4	29	20
3	80	241	11.50	293	3/4	28	22	318	11.50	293	3/4	38	27
4	100	292	12.75	324	3/4	37	28	356	12.75	324	3/4	57	39
6	150	406	17.62	448	3/4	67	59	444	17.62	448	3/4	105	74
8	200	495	21.00	535	3/4	91	78	559	21.00	535	3/4	176	131
10	250	622	27.12	690	1	135	113	622	27.12	690	1	230	164
12	300	699	30.75	780	1	168	151	711	30.75	780	1	360	268
in	mm	mm	in	mm	in	RF	BW	mm	in	mm	in	RF	BW



ANSI Class150Lb/300Lb
0.25"(6.4mm) Raised face joint

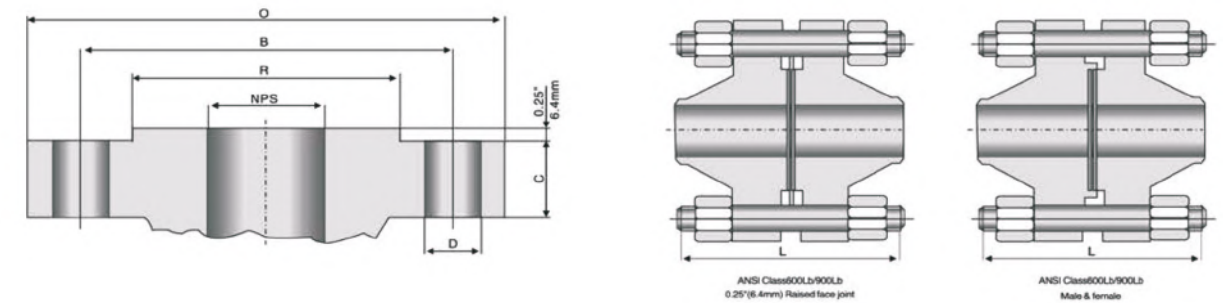
Class150Lb

NPS		O		C		R		B		D		Bolt		L		Lm	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY	Diam	in	mm	in	mm
2	50	6.00	152.4	0.75	19.1	3.62	91.9	4.75	120.7	0.75	19.1	4	5/8	3.25	82.6	2.75	69.9
2 1/2	65	7.00	177.8	0.88	22.4	4.12	104.6	5.50	139.7	0.75	19.1	4	5/8	3.50	88.9	3.00	76.2
3	80	7.50	190.5	0.94	23.9	5.00	127.0	6.00	152.4	0.75	19.1	4	5/8	3.50	88.9	3.00	76.2
4	100	9.00	228.6	0.94	23.9	6.19	157.2	7.50	190.5	0.75	19.1	8	5/8	3.50	88.9	3.00	76.2
5	125	10.00	254.0	0.94	23.9	7.37	185.7	8.50	215.9	0.88	22.4	8	3/4	3.75	95.3	3.25	82.6
6	150	11.00	279.4	1.00	25.4	8.50	215.9	9.50	241.3	0.88	22.4	8	3/4	4.00	101.6	3.25	82.6
8	200	13.50	342.9	1.12	28.4	10.62	269.7	11.75	298.5	0.88	22.4	8	3/4	4.25	108.0	3.50	88.9
10	250	16.00	406.4	1.19	30.2	12.75	323.9	14.25	362.0	1.00	25.4	12	7/8	4.50	114.3	4.00	101.6
12	300	19.00	482.6	1.25	31.8	15.00	381.0	17.00	431.8	1.00	25.4	12	7/8	4.75	120.7	4.00	101.6
14	350	21.00	533.4	1.38	35.1	16.25	412.8	18.75	476.3	1.12	28.4	12	1	5.25	133.4	4.50	114.3
16	400	23.50	596.9	1.44	36.6	18.50	469.9	21.25	539.8	1.12	28.4	16	1	5.25	133.4	4.50	114.6
18	450	25.00	635.0	1.56	39.6	21.00	533.4	22.75	577.9	1.25	31.8	16	1 1/8	5.75	146.1	5.00	127.0
20	500	27.50	698.5	1.69	42.9	23.00	584.2	25.00	635.0	1.25	31.8	20	1 1/8	6.25	158.8	5.50	139.7
24	600	32.00	812.8	1.88	47.8	27.25	692.2	29.50	749.3	1.38	35.1	20	1 1/4	6.75	171.5	6.00	152.4
26	650	34.25	870.0	2.00	50.8	29.50	749.3	31.75	806.5	1.38	35.1	24	1 1/4	7.25	184.2	6.50	165.1
28	700	36.50	927.1	2.12	53.8	31.50	800.1	34.00	863.6	1.38	35.1	28	1 1/4	7.75	196.9	7.00	177.8
30	750	38.75	984.3	2.25	57.1	33.75	857.3	36.00	914.4	1.38	35.1	28	1 1/4	8.25	209.6	7.50	190.5
32	800	41.75	1060.5	2.38	60.5	36.00	914.4	38.50	977.9	1.62	41.1	28	1 1/2	9.75	247.7	8.75	222.3
34	850	43.75	1111.3	2.50	63.5	38.00	965.2	40.50	1028.7	1.62	41.1	32	1 1/2	10.00	254.0	9.00	228.6
36	900	46.00	1168.4	2.62	66.5	40.25	1022.4	42.75	1085.9	1.62	41.1	32	1 1/2	10.50	266.7	9.50	241.3

Class300Lb

NPS		O		C		R		B		D		Bolt		L		Lm	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY	Diam	in	mm	in	mm
2	50	6.50	165.1	0.88	22.4	3.62	91.9	5.00	127.0	0.75	19.1	8	5/8	3.50	88.9	3.00	76.2
2 1/2	65	7.50	190.5	1.00	25.4	4.12	104.6	5.88	149.4	0.88	22.4	8	3/4	4.00	101.6	3.25	82.6
3	80	8.25	209.6	1.12	28.4	5.00	127.0	6.62	168.1	0.88	22.4	8	3/4	4.25	108.0	3.50	88.9
4	100	10.00	254.0	1.25	31.8	6.19	157.2	7.88	200.2	0.88	22.4	8	3/4	4.50	114.3	3.75	95.3
5	125	11.00	279.4	1.38	35.1	7.37	185.7	9.25	235.0	0.88	22.4	8	3/4	4.75	120.7	4.25	108.0
6	150	12.50	317.5	1.44	36.6	8.50	215.9	10.62	269.7	0.88	22.4	12	3/4	4.75	120.7	4.25	108.0
8	200	15.00	381.0	1.62	41.1	10.62	269.7	13.00	330.2	1.00	25.4	12	7/8	5.50	139.7	4.75	120.7
10	250	17.50	444.5	1.88	47.8	12.75	323.9	15.25	387.4	1.12	28.4	16	1	6.25	158.8	5.50	139.7
12	300	20.50	520.7	2.00	50.8	15.00	381.0	17.75	450.9	1.25	31.8	16	1 1/8	6.75	171.5	5.75	146.1
14	350	23.00	584.2	2.12	53.8	16.25	412.8	20.25	514.4	1.25	31.8	20	1 1/8	7.00	177.8	6.25	158.8
16	400	25.50	647.7	2.25	57.1	18.50	469.9	22.50	571.5	1.38	35.1	20	1 1/4	7.50	190.5	6.50	165.1
18	450	28.00	711.2	2.38	60.5	21.00	533.4	24.75	628.7	1.38	35.1	24	1 1/4	7.75	196.9	6.75	171.5
20	500	30.50	774.7	2.50	63.5	23.00	584.2	27.00	685.8	1.38	35.1	24	1 1/4	8.00	203.2	7.25	184.2
24	600	36.00	914.4	2.75	69.9	27.25	692.2	32.00	812.8	1.62	41.1	24	1 1/2	9.00	228.6	8.00	203.2
26	650	38.25	971.6	3.12	79.2	29.50	749.3	34.50	876.3	1.75	44.5	28	1 5/8	10.25	260.3	9.25	235.0
28	700	40.75	1035.1	3.38	85.9	31.50	800.1	37.00	939.8	1.75	44.5	28	1 5/8	10.75	273.1	9.75	247.7
30	750	43.00	1092.2	3.62	91.9	33.75	857.3	39.25	997.0	1.88	47.8	28	1 3/4	11.50	291.5	10.50	266.7
32	800	45.25	1149.4	3.88	98.6	36.00	914.4	41.50	1054.1	2.00	50.8	28	1 7/8	12.25	311.3	11.25	285.8
34	850	47.50	1206.5	4.00	101.6	38.00	965.2	43.50	1104.9	2.00	50.8	28	1 7/8	12.75	323.9	11.75	298.5
36	900	50.00	1270.0	4.12	104.6	40.25	1022.4	46.00	1168.4	2.12	53.8	32	2	13.25	336.6	12.25	311.2

- a). NPS24 " and smaller flanged ends by ANSI B16.5, NPS26 " and larger by MSS SP-44.
- b). Flange of 150Lb and 300Lb with the raised face of 0.06(1.6mm) is included in the smallest flange of thickness C.
- c). The length L of the double - end bolt doesn ' t include the terminal length.
- d). Flange gasket of the matching flange ASME B16.20.

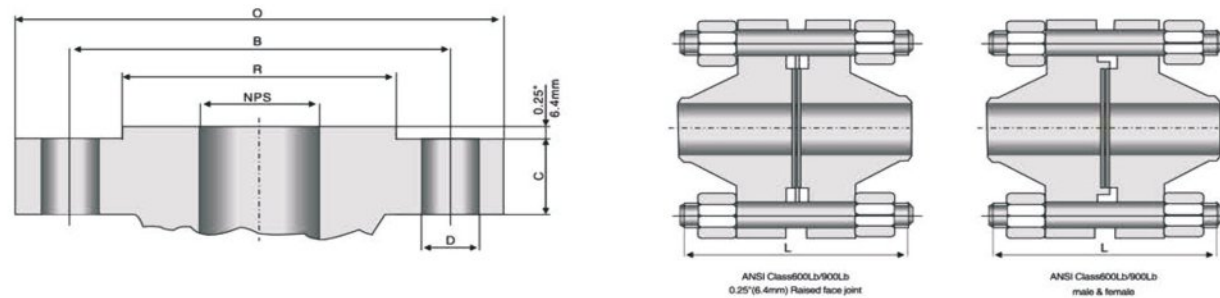


ANSI Class600Lb/900Lb
0.25"(6.4mm) Raised face joint

ANSI Class600Lb/900Lb
Male & female

Class600Lb

NPS		O		C		R		B		D		Bolt		L		LRTJ		Lm	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY	Diam	in	mm	in	mm	in	mm
2	50	6.50	165.1	1.00	25.4	3.62	91.9	5.00	127.0	0.75	19.1	8	5/8	4.25	108.0	4.25	108.0	4.00	101.6
2 1/2	65	7.50	190.5	1.12	28.4	4.12	104.6	5.88	149.4	0.88	22.4	8	3/4	4.75	120.7	4.75	120.7	4.50	114.3
3	80	8.25	209.6	1.25	31.8	5.00	127.0	6.62	168.1	0.88	22.4	8	3/4	5.00	127.0	5.00	127.0	4.75	120.7
4	100	10.75	273.1	1.50	38.1	6.19	157.2	8.50	215.9	1.00	25.4	8	7/8	5.75	146.1	5.75	146.1	5.50	139.7
5	125	13.00	330.2	1.75	44.5	7.31	185.7	10.50	266.7	1.12	28.4	8	1	6.50	165.1	6.50	165.1	6.25	158.8
6	150	14.00	355.6	1.88	47.8	8.50	215.9	11.50	292.1	1.12	28.4	12	1	6.75	171.5	6.75	171.5	6.50	165.1
8	200	16.50	419.1	2.19	55.6	10.62	269.7	13.75	349.3	1.25	31.8	12	1 1/8	7.50	190.5	7.50	190.5	7.25	184.2
10	250	20.00	508.8	2.50	63.5	12.75	323.9	17.00	431.8	1.38	35.1	16	1 1/4	8.50	215.9	8.50	215.9	8.25	209.6
12	300	22.00	558.8	2.62	66.5	15.00	381.0	19.25	489.0	1.38	35.1	20	1 1/4	8.75	222.3	8.75	222.3	8.50	215.9
14	350	23.75	603.3	2.75	69.9	16.25	412.8	20.75	527.1	1.50	38.1	20	1 3/8	9.25	235.0	9.25	235.0	9.00	228.6
16	400	27.00	685.8	3.00	76.2	18.50	469.9	23.75	603.3	1.62	41.1	20	1 1/2	10.00	254.0	10.00	254.0	9.75	247.7
18	450	29.25	743.0	3.25	82.6	21.00	533.4	25.75	685.1	1.75	44.5	20	1 5/8	10.75	273.1	10.75	273.1	10.50	266.7
20	500	32.00	812.8	3.50	88.9	23.00	584.2	28.50	723.9	1.75	44.5	24	1 5/8	11.25	285.8	11.25	285.8	11.00	279.4
24	600	37.00	939.8	4.00	101.6	27.25	692.2	33.00	838.2	2.00	50.8	24	1 7/8	13.00	330.2	13.25	336.6	12.75	323.9
26	650	40.00	1016.0	4.25	108.0	29.50	749.3	36.00	914.4	2.00	50.8	28	1 7/8	14.00	355.6	14.00	355.6	13.75	349.3
28	700	42.25	1073.2	4.38	111.3	31.50	800.1	38.00	965.2	2.12	53.8	28	2	14.50	368.3	14.50	368.3	14.25	362.0
30	750	44.50	1130.3	4.50	114.3	33.75	857.3	40.25	1022.4	2.12	53.8	28	2	15.00	381.0	14.75	375.7	14.75	374.7
32	800	47.00	1193.8	4.62	117.3	36.00	914.4	42.50	1079.5	2.38	60.5	28	2 1/4	15.50	393.7	15.75	400.1	15.25	387.4
34	850	49.00	1244.6	4.75	120.7	38.00	965.2	44.50	1130.3	2.38	60.5	28	2 1/4	16.25	412.8	16.25	412.8	16.00	406.4
36	900	51.75	1314.5	4.88	124.0	40.25	1022.4	47.00	1193.8	2.62	66.5	28	2 1/2	15.75	400.1	16.75	425.5	15.50	



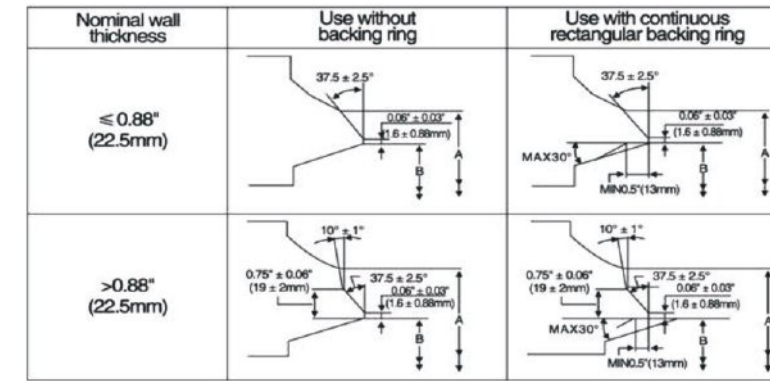
Class1500Lb

NPS		O		C		R		B		D		Bolt		L		LRTJ		Lm	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY	Diam	in	mm	in	mm	in	mm
2	50	8.50	215.9	1.50	38.1	3.62	91.9	6.50	165.1	1.00	25.4	8	7/8	5.75	146.1	5.75	146.1	5.50	139.7
2 1/2	65	9.62	244.3	1.62	41.1	4.12	104.6	7.50	190.5	1.012	28.4	8	1	6.25	158.8	6.25	158.8	6.00	152.4
3	80	10.50	266.7	1.88	47.8	5.00	127.0	8.00	203.2	1.25	31.8	8	1 1/8	7.00	177.8	7.00	177.8	6.75	171.5
4	100	12.25	311.2	2.12	53.8	6.19	157.2	9.50	241.3	1.38	35.1	8	1 1/4	7.75	196.9	7.75	196.9	7.50	190.5
5	25	14.75	374.7	2.88	73.2	7.31	185.7	11.50	292.1	1.62	41.1	8	1 1/2	9.75	247.7	9.75	247.7	9.50	241.3
6	150	15.50	393.7	3.25	82.6	8.50	215.9	12.50	317.5	1.50	38.1	12	1 3/8	10.25	260.4	10.50	266.7	10.00	254.0
8	200	19.00	482.6	3.62	91.9	10.62	269.7	15.50	393.7	1.75	44.5	12	1 5/8	11.50	292.1	12.75	323.9	11.25	285.8
10	250	23.00	584.2	4.25	108.0	12.75	323.9	19.00	482.6	2.00	50.8	12	1 7/8	13.25	336.6	13.50	342.9	13.00	330.2
12	300	26.50	673.1	4.88	124.0	15.00	381.0	22.50	571.5	1.12	53.8	16	2	14.75	374.7	15.25	387.4	14.50	368.3
14	350	29.50	749.3	5.25	133.4	16.25	412.8	25.00	635.0	2.38	60.5	16	2 1/4	16.00	406.4	16.75	425.5	15.75	400.1
16	400	33.50	854.2	5.75	146.1	18.50	469.9	27.50	704.9	2.62	66.5	16	2 1/2	17.50	444.5	18.50	469.9	17.25	438.2
18	450	36.00	914.4	6.38	162.1	21.00	533.4	30.50	774.7	2.88	73.2	16	2 3/4	19.50	495.3	20.75	527.1	19.25	489.0
20	500	38.7	984.3	7.00	177.8	23.00	584.2	32.75	831.9	3.12	79.2	16	2	21.25	539.8	22.25	565.2	21.00	533.4
24	600	46.00	1168.4	8.00	203.2	27.25	692.2	39.00	990.6	3.62	91.9	16	3 1/2	24.25	616.0	25.5	647.7	24.00	609.6

Class1500Lb

NPS		O		C		R		B		D		Bolt		L		LRTJ		Lm	
in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	QTY	Diam	in	mm	in	mm	in	mm
2	50	9.25	235.0	2.00	50.8	3.62	91.9	6.75	171.5	1.12	28.4	8	1	7.00	177.8	7.00	177.8	6.75	171.5
2 1/2	65	10.50	266.7	2.25	57.2	4.12	104.6	7.75	196.9	1.25	31.8	8	1 1/8	7.75	196.9	8.00	203.2	7.50	190.5
3	80	12.00	304.8	2.62	66.5	5.00	127.0	9.00	228.6	1.38	35.1	8	1 1/4	8.75	222.3	9.00	228.6	8.50	215.9
4	100	14.00	355.6	3.00	76.2	6.19	157.2	10.75	273.1	1.62	41.1	8	1 1/2	10.00	254.0	10.25	260.4	9.75	247.7
5	25	16.50	419.1	3.62	91.9	7.31	185.7	12.75	323.9	1.88	47.8	8	1 3/4	11.75	298.5	12.25	311.2	11.50	292.1
6	150	19.00	482.6	4.25	108.0	8.50	215.9	14.50	368.3	2.12	53.8	8	2	13.50	342.9	14.00	355.6	13.25	336.6
8	200	21.75	552.5	5.00	127.0	10.62	269.7	17.25	438.2	2.12	53.8	12	2	15.00	381.0	15.50	393.7	14.75	374.7
10	250	26.50	673.1	6.50	165.1	12.75	323.9	21.25	539.8	2.12	66.5	12	2 1/2	19.25	489.0	20.00	508.0	19.00	482.6
12	300	30.00	762.0	7.25	184.2	15.00	381.0	24.38	619.3	2.88	73.2	12	2 3/4	21.25	539.8	22.00	558.8	21.00	533.4

- a). NPS24 " and smaller flanged ends by ANSI B16.5, NPS26 " and larger by MSS SP-44.
- b). Flange of 1500Lb and 2500Lb with the raised face of 0.06(1.6mm) is included in the smallest flange of thickness C.
- c). The length L of the double- end bolt doesn ' t include the terminal length.
- d). Flange gasket of the matching flange ASME B16.20.



Class150 and 300 valve which size equal to 12 inch and smaller and 12 inch valves which contract with standard wall pipe(0.375 " thickness)are regularly machined. Unless there is other recluirement.

Order for class 150 and 300 butt-welding valves which size equal to 14 and larger and class 400 and higher valve ro all sizes. it should be specified the diameter of the pipe that contact with valves. it need backing ring. indicate specification.

Other types of wald end preparation would be furnished of specified.

ASME B16.25-Butt-Welding Ends

1 Nominal Pipe Diameter		2 Wall Thickness of pipe Number	3 Outside Diameter of Welding End				5 Nominal Inside Diameter of Pipe		6 Machined Inside Diameter of Pipe		7 Nominal Wall Thickness	
NPS			Steel Valves		Forged ¹⁾		B		C		t	
in	mm		in	mm	in	mm	in	mm	in	mm	in	mm
2 1/2	65	40	2.96	75	2.88	73.0	2.469	62.5	2.479	62.93	0.203	5.16
		80	2.96	75	2.88	73.0	2.323	59	2.351	59.69	0.276	7.01
		160	2.96	75	2.88	73.0	2.125	54	2.178	55.28	0.375	9.53
3	80	xxs	2.96	75	2.88	73.0	1.771	45	1.868	47.43	0.552	14.02
		40	3.59	91	3.50	88.9	3.068	78	3.081	78.25	0.216	5.49
		80	3.59	91	3.50	88.9	2.900	73.5	2.934	74.53	0.300	7.62
3 1/2	90	160	3.59	91	3.50	88.9	2.624	66.5	2.692	68.38	0.438	11.13
		xxs	3.59	91	3.50	88.9	2.300	58.5	2.409	61.19	0.600	15.24
		40	4.12	105	4.00	101.6	3.548	90	3.564	90.52	0.226	5.74
4	100	80	4.12	105	4.00	101.6	3.364	85.5	3.402	86.42	0.318	8.08
		40	4.62	117	4.50	114.3	4.026	102	4.044	102.73	0.237	6.02
		80	4.62	117	4.50	114.3	3.826	97	3.869	98.28	0.337	8.56
5	125	120	4.62	117	4.50	114.3	3.624	92	3.692	93.78	0.438	11.13
		160	4.62	117	4.50	114.3	3.438	87.5	3.530	89.65	0.531	13.49
		xxs	4.62	117	4.50	114.3	3.152	80	3.279	83.30	0.674	17.12
6	150	40	5.69	144	5.56	141.3	5.047	128	5.070	128.80	0.258	6.55
		80	5.69	144	5.56	141.3	4.813	122	4.866	123.58	0.375	9.53
		120	5.69	144	5.56	141.3	4.563	116	4.647	118.04	0.500	12.70
8	200	160	5.69	144	5.56	141.3	4.313	109.5	4.428	112.47	0.625	15.88
		xxs	5.69	144	5.56	141.3	4.063	103	4.209	106.92	0.750	19.05
		40	6.78	172	6.62	168.3	6.065	154	6.094	154.82	0.280	7.11
10	250	80	6.78	172	6.62	168.3	5.761	146.5	5.828	148.06	0.432	10.97
		120	6.78	172	6.62	168.3	5.501	140	5.600	142.29	0.562	14.27
		160	6.78	172	6.62	168.3	5.187	132	5.326	135.31	0.719	18.26
12	300	xxs	8.78	223	8.62	219.1	4.897	124.5	5.072	128.85	0.864	21.95
		40	8.78	223	8.62	219.1	7.981	203	8.020	203.75	0.322	8.18
		60	8.78	223	8.62	219.1	7.813	198.5	7.873	200.02	0.406	10.31
14	350	80	8.78	223	8.62	219.1	7.625	193.5	7.709	195.84	0.500	12.70
		100	8.78	223	8.62	219.1	7.437	189	7.544	191.65	0.597	15.09
		120	8.78	223	8.62	219.1	7.187	182.5	7.326	186.11	0.719	18.26
16	400	140	8.78	223	8.62	219.1	7.001	178	7.163	181.98	0.812	20.62
		160	8.78	223	8.62	219.1	6.875	174.5	7.053	189.16	0.875	22.23
		160	8.78	223	8.62	219.1	6.813	173	6.998	177.79	0.906	23.01
18	450	40	10.94	278	10.75	273.0	10.020	254.5	10.070	255.74	0.365	9.27
		60	10.94	278	10.75	273.0	9.750	247.5	9.384	249.74	0.500	12.70
		80	10.94	278	10.75	273.0	9.562	243	9.670	245.55	0.594	15.09
20	500	100	10.94	278	10.75	273.0	9.312	236.5	9.451	240.01	0.719	18.26
		120	10.94	278	10.75	273.0	9.062	230	9.232	234.44	0.844	21.44
		140	10.94	278	10.75	273.0	8.750	222	8.959	227.51	1.000	25.40
24	600	160	10.94	278	10.75	273.0	8.500	216	8.740	227.95	1.125	28.58

ASME B16.25-Butt-Welding Ends

1 Nominal Pipe Diameter		2 Wall Thickness of pipe Number	3 Outside Diameter of Welding End				4 Nominal Inside Diameter of Pipe		5 Machined Inside Diameter of Pipe		7 Nominal Wall Thickness	
NPS in	DN mm		Steel Valves		Forged ¹⁾		B	C	t	in	mm	
			A	A1	in	mm						
12	300	STD	12.97	329	12.75	323.8	12.00	305	12.053	306.08	0.375	9.53
		40	12.97	329	12.75	323.8	11.938	303	11.999	304.72	0.406	10.31
		XS	12.97	329	12.75	323.8	11.750	298.5	11.834	300.54	0.500	12.70
		60	12.97	329	12.75	323.8	11.626	295	11.725	297.79	0.562	14.27
		80	12.97	329	12.75	323.8	11.374	289	11.505	292.17	0.688	17.48
		100	12.97	329	12.75	323.8	11.062	281	11.232	285.24	0.844	21.44
		120	12.97	329	12.75	323.8	10.750	273	10.959	278.31	1.00	25.40
14	350	STD	14.25	362	14.00	355.6	13.250	336.5	13.303	337.88	0.375	9.53
		40	14.25	362	14.00	355.6	13.124	333.5	13.192	335.08	0.438	11.13
		XS	14.25	362	14.00	355.6	13.000	330	13.084	332.34	0.500	12.70
		60	14.25	362	14.00	355.6	12.812	325.5	12.920	328.15	0.594	15.09
		80	14.25	362	14.00	355.6	12.500	317.5	12.646	321.22	0.750	19.05
		100	14.25	362	14.00	355.6	12.124	308	12.318	312.86	0.938	23.83
		120	14.25	362	14.00	355.6	11.812	300	12.044	305.93	1.094	27.79
16	400	STD	16.25	413	16.00	406.4	15.250	387.5	15.303	388.68	0.375	9.53
		40	16.25	413	16.00	406.4	15.000	381	15.084	383.14	0.500	12.70
		60	16.25	413	16.00	406.4	14.688	373	14.811	376.21	0.656	16.66
		80	16.25	413	16.00	406.4	14.312	363.5	14.482	367.84	0.844	21.44
		100	16.25	413	16.00	406.4	13.938	354	14.155	359.53	1.031	26.19
		120	16.25	413	16.00	406.4	13.562	344.5	13.826	351.18	1.219	30.96
		140	16.25	413	16.00	406.4	13.124	333.5	13.442	341.43	1.438	36.53
18	450	STD	18.28	464	18.00	457.2	17.250	438	17.303	439.48	0.375	9.53
		XS	18.28	464	18.00	457.2	17.000	432	17.084	433.94	0.500	12.70
		40	18.28	464	18.00	457.2	16.876	428.5	16.975	431.19	0.562	14.27
		60	18.28	464	18.00	457.2	16.500	419	16.646	422.82	0.750	19.05
		80	18.28	464	18.00	457.2	16.124	409.5	16.318	414.46	0.938	23.83
		100	18.28	464	18.00	457.2	15.688	398.5	15.936	404.78	1.156	29.36
		120	18.28	464	18.00	457.2	15.250	387.5	15.553	395.03	1.375	34.93
20	500	STD	20.31	516	20.00	508.0	19.250	489	19.303	490.28	0.375	9.53
		XS	20.31	516	20.00	508.0	19.000	482.5	19.084	484.74	0.500	12.70
		40	20.31	516	20.00	508.0	18.812	478	18.920	480.55	0.594	15.09
		60	20.31	516	20.00	508.0	18.376	467	18.538	470.88	0.812	20.62
		80	20.31	516	20.00	508.0	17.938	455.5	18.155	461.13	1.031	26.19
		100	20.31	516	20.00	508.0	17.438	443	17.717	450.02	1.281	32.54
		120	20.31	516	20.00	508.0	17.000	432	17.334	440.29	1.500	38.10
22	550	STD	22.34	567	22.00	558.8	21.250	520	21.303	541.08	0.375	9.53
		XS	22.34	567	22.00	558.8	21.000	533	21.084	535.54	0.500	12.70
		40	22.34	567	22.00	558.8	20.250	514	20.428	518.86	0.875	22.23
		60	22.34	567	22.00	558.8	19.750	502	19.990	507.75	1.125	28.58
		80	22.34	567	22.00	558.8	19.250	488.5	19.553	496.63	1.375	34.93
		100	22.34	567	22.00	558.8	18.750	476	19.115	485.52	1.625	41.28
		120	22.34	567	22.00	558.8	18.250	464	18.678	474.41	1.875	47.63
24	600	STD	24.38	619	24.00	609.6	23.250	609.6	23.250	609.6	0.375	9.53
		XS	24.38	619	24.00	609.6	23.000	609.6	23.000	609.6	0.500	12.70
		40	24.38	619	24.00	609.6	22.876	609.6	22.876	609.6	0.562	14.27
		60	24.38	619	24.00	609.6	22.624	609.6	22.624	609.6	0.688	17.48
		80	24.38	619	24.00	609.6	22.062	609.6	22.062	609.6	0.969	24.61
		100	24.38	619	24.00	609.6	21.562	609.6	21.562	609.6	1.219	30.96
		120	24.38	619	24.00	609.6	20.938	609.6	20.938	609.6	1.531	38.89
26	650	STD	26.38	670	26.00	660.4	25.376	660.4	25.376	660.4	0.312	7.92
		XS	26.38	670	26.00	660.4	25.000	660.4	25.000	660.4	0.500	12.70
		40	26.38	670	26.00	660.4	24.876	660.4	24.876	660.4	0.562	14.27
		60	26.38	670	26.00	660.4	24.624	660.4	24.624	660.4	0.688	17.48
		80	26.38	670	26.00	660.4	24.062	660.4	24.062	660.4	0.969	24.61
		100	26.38	670	26.00	660.4	23.562	660.4	23.562	660.4	1.219	30.96
		120	26.38	670	26.00	660.4	22.938	660.4	22.938	660.4	1.531	38.89
28	700	STD	28.38	721	28.00	711.2	27.376	711.2	27.376	711.2	0.312	7.92
		XS	28.38	721	28.00	711.2	27.000	711.2	27.000	711.2	0.500	12.70
		40	28.38	721	28.00	711.2	26.750	711.2	26.750	711.2	0.562	14.27
		60	28.38	721	28.00	711.2	26.500	711.2	26.500	711.2	0.688	17.48
		80	28.38	721	28.00	711.2	26.062	711.2	26.062	711.2	0.969	24.61
		100	28.38	721	28.00	711.2	25.562	711.2	25.562	711.2	1.219	30.96
		120	28.38	721	28.00	711.2	24.938	711.2	24.938	711.2	1.531	38.89
30	750	STD	30.38	772	30.00	762.0	29.376	762.0	29.376	762.0	0.312	7.92
		XS	30.38	772	30.00	762.0	29.000	762.0	29.000	762.0	0.500	12.70
		40	30.38	772	30.00	762.0	28.750	762.0	28.750	762.0	0.562	14.27
		60	30.38	772	30.00	762.0	28.500	762.0	28.500	762.0	0.688	17.48
		80	30.38	772	30.00	762.0	28.062	762.0	28.062	762.0	0.969	24.61
		100	30.38	772	30.00	762.0	27.562	762.0	27.562	762.0	1.219	30.96
		120	30.38	772	30.00	762.0	26.938	762.0	26.938	762.0	1.531	38.89
32	800	STD	32.50	825	32.00	812.8	31.376	812.8	31.376	812.8	0.312	7.92
		XS	32.50	825	32.00	812.8	31.000	812.8	31.000	812.8	0.500	12.70
		40	32.50	825	32.00	812.8	30.750	812.8	30.750	812.8	0.562	14.27
		60	32.50	825	32.00	812.8	30.500	812.8	30.500	812.8	0.688	17.48
		80	32.50	825	32.00	812.8	30.062	812.8	30.062	812.8	0.969	24.61
		100	32.50	825	32.00	812.8	29.562	812.8	29.562	812.8	1.219	30.96
		120	32.50	825	32.00	812.8	28.938	812.8	28.938	812.8	1.531	38.89
34	850	STD	34.50	876	34.00	863.6	33.376	863.6	33.376	863.6	0.312	7.92
		XS	34.50	876	34.00	863.6	33.000	863.6	33.000	863.6	0.500	12.70
		40	34.50	876	34.00	863.6	32.750	863.6	32.750	863.6	0.562	14.27
		60	34.50	876	34.00	863.6	32.500	863.6	32.500	863.6	0.688	17.48
		80	34.50	876	34.00	863.6	32.062	863.6	32.062	863.6	0.969	24.61
		100	34.50	876	34.00	863.6	31.562	863.6	31.562	863.6	1.219	30.96
		120	34.50	876	34.00	863.6	30.938	863.6	30.938	863.6	1.531	38.89
36	900	STD	36.50	927	36.00	914.4	35.376	914.4	35.376	914.4	0.312	7.92
		XS	36.50	927	36.00	914.4	35.000	914.4	35.000	914.4	0.500	12.70
		40	36.50	927	36.00	914.4	34.750	914.4	34.750	914.4	0.562	14.27
		60	36.50	927	36.00	914.4	34.500	914.4	34.500	914.4	0.688	17.48
		80	36.50	927	36.00	914.4	34.062	914.4	34.062	914.4	0.969	24.61
		100	36.50	927	36.00	914.4	33.562	914.4	33.562	914.4	1.219	30.96
		120	36.50	927	36.00	914.4	32.938	914.4	32.938	914.4	1.531	38.89

Note: 1). Forged or machined component part
a. STD=standard wall thickness
b. XS=intensifying wall thickness
c. XXS=double intensifying wall thickness

