



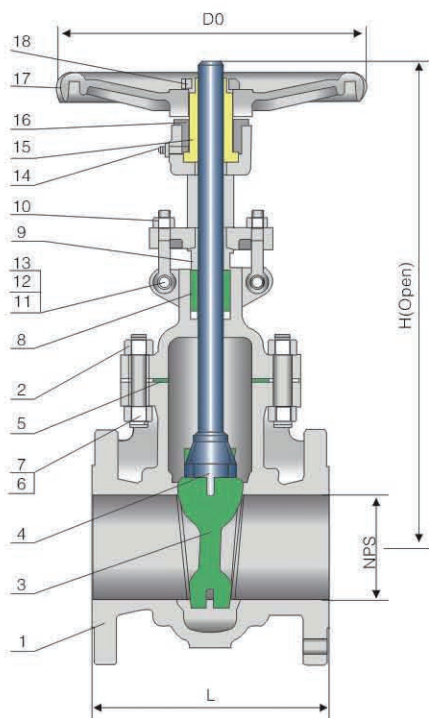
API 603 Gate, Globe & Check Valve

Applicable Standards:

- STEEL GATE VALVES, API 603
- 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:

- FULL PORT DESIGN
- OS&Y, OUTSIDE SCREW AND YOKE
- BB, BOLTED BONNET
- FLEXIBLE WEDGE, FULLY GUIDED
- CHOICE OF SOLID OR SPLIT WEDGE
- SEAT RINGS INTEGRAL WITH BODY
- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HAND WHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



Materials of parts

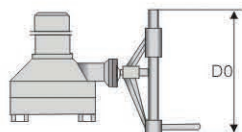
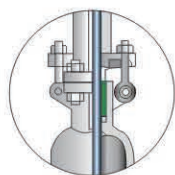
No	Part Name	18Cr-18Ni	ASTM Materials 18Cr-9Ni-2Mo	17Cr-9Ni-2Mo
1	Body	A351-CF8	A351-CF8M	A351-CF3M
2	Bonnet	A351-CF8	A351-CF8M	A351-CF3M
3	Wedge	A351-CF8	A351-CF8M	A351-CF3M
4	Stem	A182-F304	A182-F316	A182-F316L
5	Bonnet Gasket ¹⁾	Graphite+304	Graphite+316	Graphite+316L
6	Bonnet Stud	A193-B8	A193-B8M	A193-B8M
7	Bonnet Stud Nut	A194-8	A194-8M	A194-8M
8	Packing ²⁾	Graphite		
9	Gland	A276-304	A276-316	A276-316L
10	Gland Flange	A351-CF8	A351-CF8M	A351-CF8M
11	Eyebolt Pin	A276-304	A276-316	A276-316
12	Eyebolt	A193-B8	A193-B8	A193-B8
13	Eyebolt Nut	A194-8	A194-8	A194-8
14	Grease Fitting	Carbon steel Ni Plated		
15	Yokesleeve	Aluminum-Bronze ³⁾		
16	Yokesleeve Jam Nut	A276-304		
17	Handwheel	Malleable Iron		
18	Handwheel Nut	Carbon Steel		

Note: 1) Spiral wound construction, teflon optional

2) Teflon optional.

3) Ductile Ni-resist optional.

4) Wedge and seat (integral with body) may either be solid facing material or a base material equal to or better than the body/ bonnet material with facing as shown.



Dimensional datas

NPS DN	1/2 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	in mm
ANSI Class 150Lb															
L (RF)	4.25 108	4.62 117	5.00 127	6.50 165	7.00 178	7.50 190	8.00 203	9.00 229	10.50 267	11.50 292	13.00 330	14.00 356	15.00 381	16.00 406	in mm
L1 (BW)	4.25 108	4.62 117	5.50 140	7.00 178	7.50 191	8.00 203	8.50 216	9.50 242	11.00 280	12.00 305	13.50 343	14.50 369	15.50 394	16.50 419	in mm
H (open)	8.25 210	8.50 215	9.25 235	11.75 300	15.25 386	17.00 434	18.88 480	23.00 584	30.50 765	37.62 956	45.50 1149	53.12 1350	59.38 1508	67.00 1703	in mm
D0	4 100	4 100	6 140	6 140	8 200	8 200	10 250	12 300	12 300	14 350	16 400	18 450	20 500	22 550	in mm
WT(kg)	3 2.5	3.5 3	5.5 4	9.2 8	15 12.5	21 15	27 21.5	42 34	64.5 58	101 90	149 130.5	221 207	303 275	387 355	BW RF/RTJ

API 603 Corrosion-Resistant Valves Cast Stainless Steel Gate Valves 300Lb/600Lb

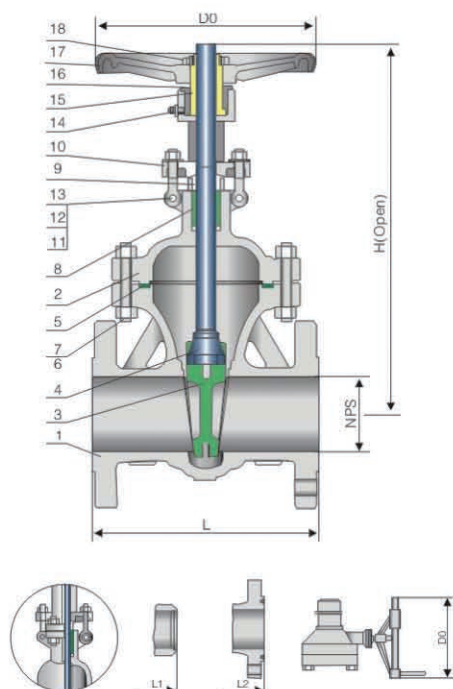
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Applicable Standards:

- STEEL GATE VALVES, API 603
- 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:

- FULL PORT DESIGN
- OS&Y, OUTSIDE SCREW AND YOKE
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- CHOICE OF SOLID OR SPLIT WEDGE
- SEAT RINGS INTEGRAL WITH BODY
- FORGED T-HEAD STEM
- RISING STEM AND NON-RISING HAND WHEEL
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



Materials of parts

No	Part Name	ASTM Materials		
		18Cr-18Ni	18Cr-9Ni-2Mo	17Cr-9Ni-2Mo
1	Body	A351-CF8	A351-CF8M	A351-CF3M
2	Bonnet	A351-CF8	A351-CF8M	A351-CF3M
3	Wedge	A351-CF8	A351-CF8M	A351-CF3M
4	Stem	A182-F304	A182-F316	A182-F316L
5	Bonnet Gasket ¹⁾	Graphite+304	Graphite+316	Graphite+316L
6	Bonnet Stud	A193-B8	A193-B8M	A193-B8M
7	Bonnet Stud Nut	A194-8	A194-8M	A194-8M
8	Packing ²⁾	Graphite		
9	Gland	A276-304	A276-316	A276-316L
10	Gland Flange	A351-CF8	A351-CF8M	A351-CF8M
11	Eyebolt Pin	A276-304	A276-316	A276-316
12	Eyebolt	A193-B8	A193-B8	A193-B8
13	Eyebolt Nut	A194-8	A194-8	A194-8
14	Grease Fitting	Carbon steel Ni Plated		
15	Yokesleeve	Aluminum-Bronze ³⁾		
16	Yokesleeve Jam Nut	A276-304		
17	Handwheel	Malleable Iron		
18	Handwheel Nut	Carbon Steel		

Note: 1) Spiral wound construction, teflon optional

2) Teflon optional

3) Ductile Ni-resist optional

4) Wedge and seat (integral with body) may either be solid facing material or a base material equal to or better than the body/ bonnet material with facing as shown.

Dimensional datas of ANSI Class 300Lb

NPS DN	1/2 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	in mm
L/L1 (RF/BW)	5.50 140	6.00 152	6.50 165	7.50 190	8.50 216	9.50 241	11.12 283	12.00 305	15.88 403	16.50 419	18.00 457	19.75 502	30.00 762	33.00 838	in mm
L2 (RTJ)	-	-	-	-	9.12 232	10.12 257	11.75 298	12.62 321	16.50 419	17.12 435	18.62 473	20.38 518	30.62 778	33.62 854	in mm
H (open)	6.34 161	6.42 163	7.72 196	9.88 251	16.12 410	17.88 453	20.00 509	24.00 612	31.75 805	39.38 1000	47.62 1210	55.75 1415	62.25 1580	67.88 1725	in mm
D0	4 100	4 100	6 140	6 140	8 200	8 200	10 250	10 250	14 350	16 400	18 450	20 500	22 550	22 550	in mm
WT(kg)	3.3 2.7	4 3.5	6.5 4.7	10.5 8.5	20 14.5	30 22.5	43 33	61 45.5	123 97	179 140	276 219	413 334	585 484	813 689	BW RF/RTJ

Dimensional datas of ANSI Class 600Lb

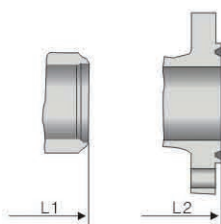
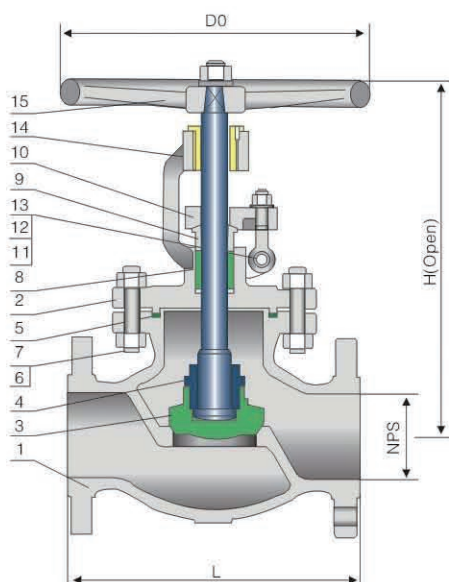
NPS DN	1/2 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	in mm
L (RF)	6.50 165	7.50 190	8.50 216	9.50 241	11.50 292	13.00 330	14.00 356	17.00 432	22.00 559	26.00 660	31.00 787	33.00 838	35.00 889	39.00 991	in mm
L1 (BW)	-	-	-	-	11.62 295	13.12 333	14.12 359	17.12 435	22.12 562	26.12 664	31.12 791	33.12 841	35.12 892	39.12 994	in mm
H (open)	6.34 161	6.42 163	7.72 196	9.88 251	16.50 418	18.76 476	20.38 518	25.50 646	33.00 840	40.38 1025	48.38 1230	57.00 1450	62.00 1575	70.62 1795	in mm
D0	4 100	6 140	6 140	8 200	8 200	10 250	10 250	12 300	18 450	20 500	24 600	24 600	24 600	24 600	in mm
WT(kg)	4.5 3.7	5.5 4.2	8.5 6.5	16.5 9.5	32 26	46 37	59 47	99 74	151 111	348 275	540 418	789 647	1103 935	1359 1098	BW RF/RTJ

Applicable Standards:

- STEEL GLOBE VALVES, API 603
- 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 PLUG OR BALL
- SEAT RINGS INTEGRAL WITH BODY
- IMPACT HANDWHEEL FOR 10" & ABOVE
- HORIZONTAL SERVICE
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



Materials of parts

No	Part Name	ASTM Materials		
		18Cr-18Ni	18Cr-9Ni-2Mo	17Cr-9Ni-2Mo
1	Body	A351-CF8	A351-CF8M	A351-CF3M
2	Bonnet	A351-CF8	A351-CF8M	A351-CF3M
3	Disc	A351-CF8	A351-CF8M	A351-CF3M
4	Stem	A182-F304	A182-F316	A182-F316L
5	Bonnet Gasket ¹⁾	Graphite+304	Graphite+316	Graphite+316L
6	Bonnet Stud	A193-B8	A193-B8M	A193-B8M
7	Bonnet Stud Nut	A194-8	A194-8M	A194-8M
8	Packing ²⁾	Graphite		
9	Gland	A276-304	A276-316	A276-316L
10	Gland Flange	A351-CF8	A351-CF8M	A351-CF3M
11	Eyebolt Pin	A276-304	A276-316	A276-316
12	Eyebolt	A193-B8	A193-B8	A193-B8
13	Eyebolt Nut	A194-8	A194-8	A194-8
14	Yokesleeve	Aluminum-Bronze ³⁾		
15	Handwheel	Malleable Iron		

Note: 1) Spiral wound construction, teflon optional

2) Teflon optional.

3) Ductile Ni-resist optional.

4) Disc and seat (integral with body) may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown

Dimensional datas

NPS DN	1/2 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	in mm
ANSI Class 150Lb															
L1 (RF/BW)	4.25 108	4.62 117	5.00 127	6.50 165	8.00 203	8.50 216	9.50 241	11.50 292	16.00 406	19.50 495	24.50 622	27.50 698	31.00 787	36.00 914	in mm
L2 (RTJ)	-	-	-	-	8.50 216	9.00 229	10.00 254	12.00 305	16.50 419	20.00 508	25.00 635	28.00 711	31.50 800	36.50 927	in mm
H (open)	7.00 180	7.5 190	8.25 210	9.25 235	15.00 380	21.00 535	17.50 445	20.25 515	22.00 560	24.25 615	32.00 815	35.88 910	48.38 1230	57.00 1450	in mm
D0	4 100	4 100	4 100	6 140	7 180	10 240	11 280	11 280	13 320	13 320	16 400	18 450	20 500	24 600	in mm
WT(kg)	3 2.5	3.5 3	4.5 4	11 8	18 14	30 22	41 33	64 43	86 72	110 88	280 245	380 345	510 450	740 665	BW RF/RTJ

API 603 Corrosion-Resistant Valves Cast Stainless Steel Globe Valves 300Lb/600Lb

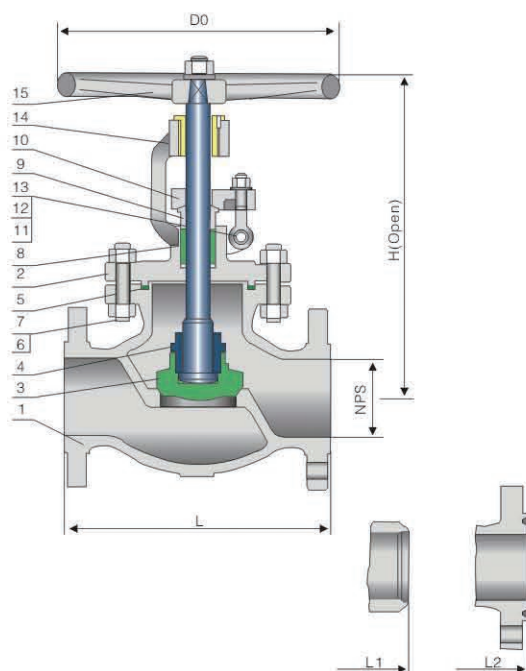
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Applicable Standards:

- STEEL GLOBE VALVES, API 603
- 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 PLUG OR BALL
- SEAT RINGS INTEGRAL WITH BODY
- IMPACT HANDWHEEL FOR 10" & ABOVE
- HORIZONTAL SERVICE
- FLANGED OR BUTTWELDING ENDS
- AVAILABLE WITH BG OPERATOR



Materials of parts

No	Part Name	ASTM Materials		
		18Cr-18Ni	18Cr-9Ni-2Mo	17Cr-9Ni-2Mo
1	Body	A351-CF8	A351-CF8M	A351-CF3M
2	Bonnet	A351-CF8	A351-CF8M	A351-CF3M
3	Disc	A351-CF8	A351-CF8M	A351-CF3M
4	Stem	A182-F304	A182-F316	A182-F316L
5	Bonnet Gasket ¹⁾	Graphite+304	Graphite+316	Graphite+316L
6	Bonnet Stud	A193-B8	A193-B8M	A193-B8M
7	Bonnet Stud Nut	A194-8	A194-8M	A194-8M
8	Packing ²⁾	Graphite		
9	Gland	A276-304	A276-316	A276-316L
10	Gland Flange	A351-CF8	A351-CF8M	A351-CF8M
11	Eyebolt Pin	A276-304	A276-316	A276-316
12	Eyebolt	A193-B8	A193-B8	A193-B8
13	Eyebolt Nut	A194-8	A194-8	A194-8
14	Yokesleeve	Aluminum-Bronze ³⁾		
15	Handwheel	Malleable Iron		

Note: 1) Spiral wound construction, teflon optional

2) Teflon optional.

3) Ductile Ni-resist optional.

4) Disc and seat (integral with body) may either be solid facing material or a base material equal to or better than the body/bonnet material with facing as shown

Dimensional datas of ANSI Class 300Lb

NPS DN	1/2 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	in mm
L1 (RF/BW)	6.00 152	7.00 178	8.00 203	9.00 229	10.50 267	11.50 292	12.50 318	14.00 356	17.50 444	22.00 559	24.50 622	28.00 711	-	-	in mm
L2 (RTJ)	-	-	-	-	11.12 282	12.12 308	13.12 333	14.62 371	18.12 460	22.62 575	25.12 638	28.62 727	-	-	in mm
H (open)	7.00 180	7.50 190	8.25 210	9.25 235	16.75 425	19.00 485	19.88 505	22.50 570	25.25 640	33.25 845	35.50 900	38.62 980	-	-	in mm
D0	4 100	4 100	4 100	6 140	8 200	10 240	11 280	13 320	16 400	18 450	20 500	24 600	-	-	in mm
WT(kg)	4 3	4.5 3.5	6 5	15 12	25 20	32 22	38 27	56 41	96 75	150 117	360 310	550 492	-	-	BW RF/RTJ

Dimensional datas of ANSI Class 600Lb

NPS DN	1/2 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	in mm
L1 (RF/BW)	6.50 165	7.50 190	8.50 216	9.50 241	11.50 292	13.00 330	14.00 356	17.00 432	22.00 559	26.00 660	31.00 787	33.00 838	-	-	in mm
L2 (RTJ)	-	-	-	-	11.62 295	13.12 333	14.12 359	17.12 435	22.12 562	26.12 663	31.12 790	33.12 841	-	-	in mm
H (open)	7.25 185	7.62 195	9.00 230	11.00 280	17.50 445	19.75 502	21.00 533	24.50 622	29.50 750	36.50 927	44.88 1140	53.12 1350	-	-	in mm
D0	4 100	4 100	6 140	5 200	10 240	11 280	13 320	16 400	18 450	20 500	24 600	24 600	-	-	in mm
WT(kg)	6 4.8	8 6.2	14 9.5	23 16.5	35 27	50 34	60 42	110 84	230 192	410 350	770 680	1140 1030	-	-	BW RF/RTJ

Applicable Standards:

- STEEL CHECK VALVES, API 603
- 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:

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

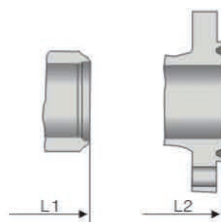
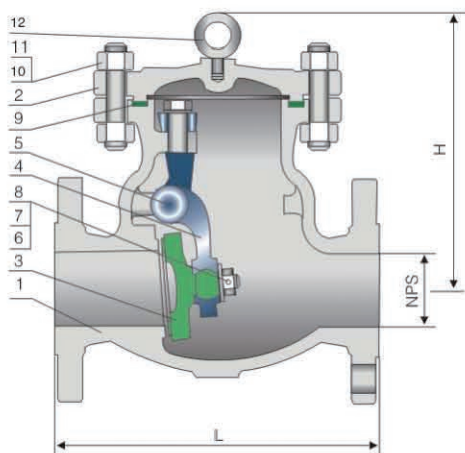
Materials of parts

No	Part Name	ASTM Materials		
		18Cr-18Ni	18Cr-9Ni-2Mo	17Cr-9Ni-2Mo
1	Body	A351-CF8	A351-CF8M	A351-CF3M
2	Cover	A351-CF8	A351-CF8M	A351-CF3M
3	Disc	A351-CF8	A351-CF8M	A351-CF3M
4	Hinge	A351-CF8	A351-CF8M	A351-CF3M
5	Hinge Pin	A276-304	A276-316	A276-316L
6	Disc Washer	A276-304	A276-316	A276-316L
7	Disc Nut	A193-B8	A193-B8M	A193-B8M
8	Disc Nut Pin	A276-304	A276-316	A276-316L
9	Bonnet Gasket ¹⁾	Graphite+304	Graphite+316	Graphite+316L
10	Bonnet Stud	A193-B8	A193-B8M	A193-B8M
11	Bonnet Stud Nut	A194-8	A194-8M	A194-8M
12	Eyebolt ²⁾	A194-8	A194-8	A194-8

Note: 1) Spiral wound construction, teflon optional

2) Nps 6" & larger

3) Disc and seat (integral with body) may either be solid facing material or a base material equal to or better than body/bonnet material with facing as shown.



Dimensional datas

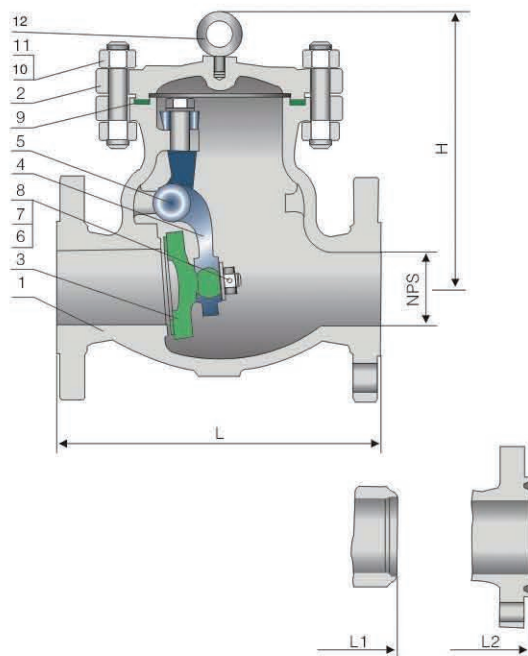
NPS DN	1/2 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600	26 650	in mm
ANSI Class 150Lb																			
L/L1 (RF/BW)	4.25	4.62	5.00	6.50	8.00	8.50	9.50	11.50	14.00	19.50	24.50	27.50	31.00	34.00	38.50	38.50	51.00	-	in
	108	117	127	165	203	216	241	292	356	495	622	699	787	864	978	978	1295	-	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	3.12	3.38	3.88	4.38	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	-	in
	80	85	100	110	152	165	175	204	293	353	390	432	475	525	582	627	883	-	mm
WT(kg)	2.5	3.5	5	7.5	14	20	25	40	71	118	177	263	353	542	632	855	970	-	BW
	2	3	3.5	5.5	10	12	17	29	57	96	143	227	295	468	552	755	831	-	RF/RTJ

Applicable Standards:

- STEEL CHECK VALVES, API 603
- 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:

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



Materials of parts

No	Part Name	ASTM Materials		
		18Cr-18Ni	18Cr-9Ni-2Mo	17Cr-9Ni-2Mo
1	Body	A351-CF8	A351-CF8M	A351-CF3M
2	Cover	A351-CF8	A351-CF8M	A351-CF3M
3	Disc	A351-CF8	A351-CF8M	A351-CF3M
4	Hinge	A351-CF8	A351-CF8M	A351-CF3M
5	Hinge Pin	A276-304	A276-316	A276-316L
6	Disc Washer	A276-304	A276-316	A276-316L
7	Disc Nut	A193-B8	A193-B8M	A193-B8M
8	Disc Nut Pin	A276-304	A276-316	A276-316L
9	Bonnet Gasket ¹⁾	Graphite+304	Graphite+316	Graphite+316L
10	Bonnet Stud	A193-B8	A193-B8M	A193-B8M
11	Bonnet Stud Nut	A194-8	A194-8M	A194-8M
12	Eyebolt ²⁾	A194-8	A194-8	A194-8

Note: 1) Spiral wound construction, teflon optional

2) Nps 6" & larger

3) Disc and seat (integral with body) may either be solid facing material or a base material equal to or better than body/bonnet material with facing as shown.

Dimensional datas of ANSI Class 300Lb

NPS DN	2/1 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600	26 650	in mm
L/L1 (RF/BW)	6.00 152	7.00 178	8.00 203	9.00 229	10.50 267	11.50 292	12.50 318	14.00 356	17.50 445	21.00 533	24.50 622	28.00 711	33.00 838	34.00 864	38.50 978	40.00 1016	53.00 1346	-	in mm
L2 (RTJ)	-	-	-	-	11.12 283	12.12 308	13.12 333	14.62 371	18.12 460	21.62 549	25.12 638	28.62 727	33.62 854	34.62 879	39.12 994	40.75 1035	53.88 1368	-	in mm
H	3.12 80	3.38 85	3.88 100	4.38 110	6.00 152	6.50 165	6.88 175	8.00 204	11.50 293	13.88 353	15.38 390	17.00 432	18.75 457	20.62 525	22.88 582	24.62 627	34.75 883	-	in mm
wt(kg)	3 2.5	4 3.5	6 5	10 7	16 11	23 13	29 18	46 31	82 61	136 103	204 155	302 245	405 315	625 503	730 593	985 812	1115 895	-	RF/RTJ BW

Dimensional datas of ANSI Class 600Lb

NPS DN	2/1 15	3/4 20	1 25	1 1/2 40	2 50	2 1/2 65	3 80	4 100	6 150	8 200	10 250	12 300	14 350	16 400	18 450	20 500	24 600	26 650	in mm
L/L1 (RF/BW)	6.50 165	7.50 190	8.50 216	9.50 241	11.50 292	13.00 330	14.00 356	17.00 432	22.00 559	26.00 660	31.00 787	33.00 838	35.00 889	39.00 991	43.00 1092	47.00 1194	55.00 1397	-	in mm
L2 (RTJ)	-	-	-	-	11.62 295	13.12 333	14.12 359	17.12 435	22.12 562	26.12 664	31.12 791	33.12 841	35.12 892	39.12 994	43.12 1095	47.25 1200	55.38 1407	-	in mm
H	3.38 85	3.50 90	4.50 115	5.50 140	7.50 190	8.00 205	8.75 222	10.00 255	14.50 368	17.50 445	19.25 490	21.38 540	23.38 595	25.75 655	28.75 730	31.00 785	43.50 11305	-	in mm
wt(kg)	5.5 4	7.5 6	12 8	15 12.5	24 16	35 19	44 26	70 44	125 87	207 147	310 220	460 350	615 452	945 720	1105 845	1495 1160	1695 1280	-	RF/RTJ BW