

WALWORTH API 602 GATE VALVES

The Gate Valve is used when the need exists for a device that allows an interruption or cut off in the flow of fluid. Gate Valves are not to be used for flow modulation as the high velocity through a partially open valve may result in erosive damage to the wedge and seats. Under normal operating conditions, the valve should remain either fully open or fully closed. Installation of a Gate Valve is independent of the flow direction.

DESIGN FEATURES

- Valves in accordance with API-602..
- Socket Weld, Threaded, Combined or Flanged RF or RTJ ends.
- Bolted Bonnet or Welded Bonnet options.
- Expanded Seat Rings.
- Low fugitive emissions control.
- NACE Service either MR-0175 or MR-0103.
- Test in accordance with API-598.

Rising stem with precision acme double thread for quick operation.

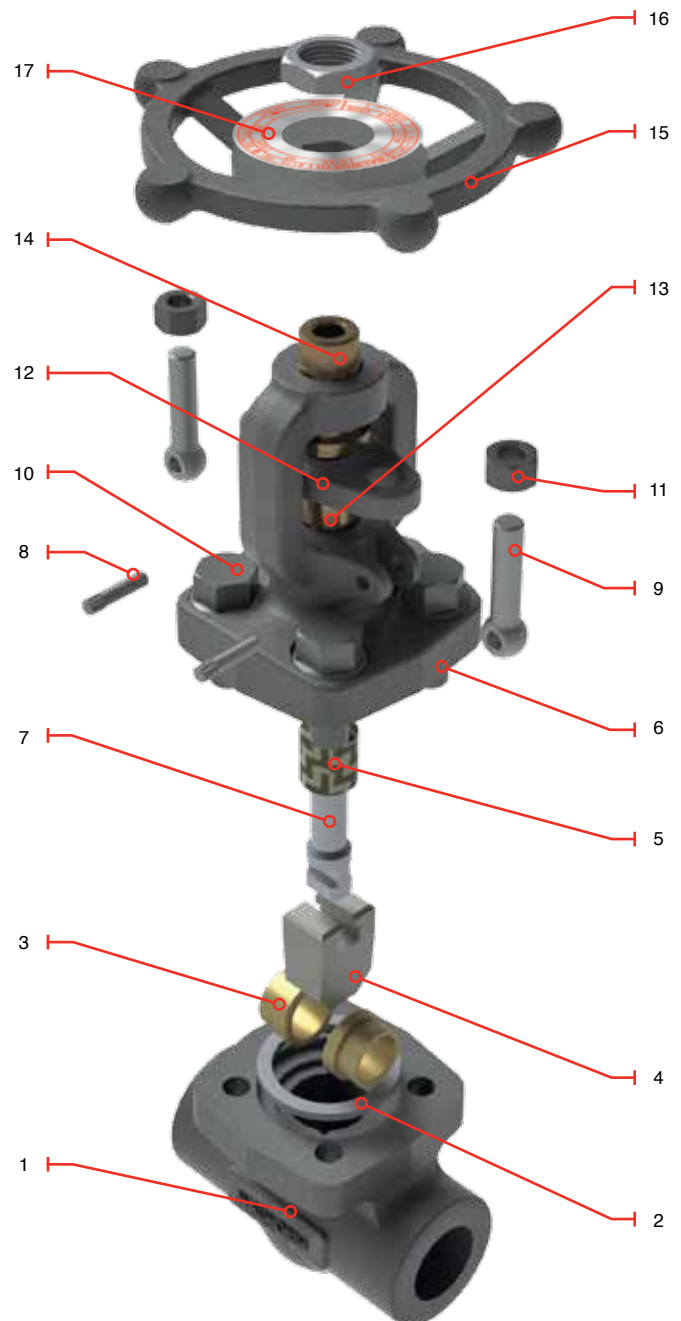
Stem-gate connection designed so that under severe applied loads (stuck gate), the stem will fail outside of the stuffing box pressure boundary.

Stem packing is designed for optimum control of fugitive emissions leakage to the atmosphere. The ultra-low emission leakage rate is assured by the fine finish on the stem sealing area, the reduced diametrical clearances and the stem straightness control.

Backseat designed to relieve back pressure on the stem packing when fully seated. Replacing stem packing under pressure is not recommended.

Body to bonnet joint designed to apply a uniform load to the gasket to assure a leak proof seal.

Stellite seat rings provide increased resistance to wear, abrasion and erosion of the sealing surfaces.



REGULAR BILL OF MATERIALS

No.	DESCRIPTION	TRIM 8 A 105
1	BODY	A105
2	BONNET GASKET	304+FLEXIBLE GRAPHITE
3	SEAT	A276-410+STL
4	WEDGE	A276-420
5	STEM PACKING	FLEXIBLE GRAPHITE
6	BONNET	A105
7	STEM	A276-410
8	EYE BOLT PIN	A276-304
9	EYE BOLT	A193-B7
10	BONNET BOLTS	A193-B7
11	GLAND NUT	A276-420
12	GLAND PLATE	A105
13	GLAND BUSHING	A276-420
14	STEM NUT	A276-410
15	HANDWHEEL	A197
16	HANDWHEEL NUT	A194-2H
17	IDENTIFICATION PLATE	ALUMINIUM

API 602 GATE VALVES TH & SW, CLASS 800

Design Characteristics

- API 602 & ASME B16.34
- Bolted or Welded Bonnet
- Solid Wedge
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld
- Spiral Wound Gasket
- Expanded Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ENDS TYPES
Standard	800 Bolted Bonnet	950S	Threaded
		950SW	Socket Weld
		950SSW	Threaded X Socket Weld
Full	800 Bolted Bonnet	958S	Threaded
		958SW	Socket Weld
		958SSW	Threaded X Socket Weld
Standard	800 Welded Bonnet	957S	Threaded
		957SW	Socket Weld
		957SSW	Threaded X Socket Weld
Full	800 Welded Bonnet	959S	Threaded
		959SW	Socket Weld
		959SSW	Threaded X Socket Weld

Dimensions and Weights

Fig. 950 Standard Port, Bolted Bonnet

Sizes	in	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	6	10	13	19	25	32	38	51
A	in	3.11	3.11	3.11	3.62	4.37	4.72	4.72	5.51
	mm	79	79	79	92	111	120	120	140
B (open)	in	5.87	5.87	6.02	6.02	7.28	8.74	9.45	10.98
	mm	149	149	153	153	185	222	240	279
C	in	3.94	3.94	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	100	100	125	160	160	180
D	in	0.31	0.39	0.51	0.51	0.71	1.14	1.14	1.44
	mm	8	10	13	13	18	29	29	36.5
E	in	1.34	1.34	1.34	1.57	1.93	2.52	2.52	3.07
	mm	34	34	34	40	49	64	64	78
Weight	lb	4.18	4.18	4.4	4.84	7.92	12.1	13.64	21.34
	kg	1.9	1.9	2.0	2.2	3.6	5.5	6.2	9.7

Fig. 957 Standard Port, Welded Bonnet

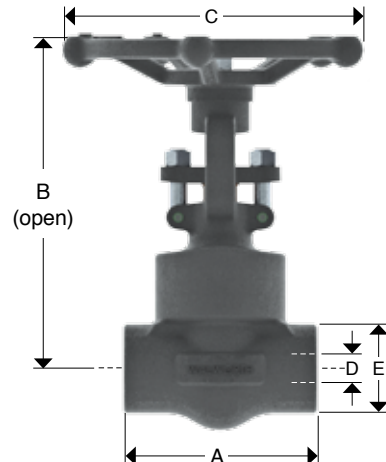
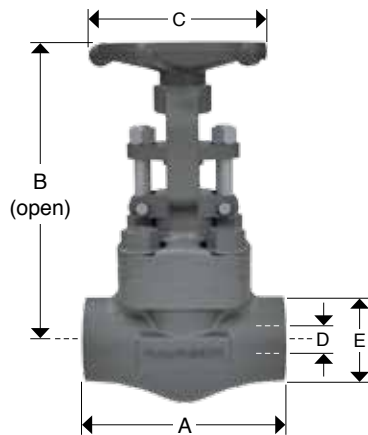
Sizes	in	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	6	10	13	19	25	32	38	51
A	in	3.11	3.11	3.11	3.62	4.37	4.72	4.72	5.51
	mm	79	79	79	92	111	120	120	140
B (open)	in	6.18	6.18	6.34	6.34	7.48	8.66	9.45	10.98
	mm	157	157	161	161	190	220	240	279
C	in	3.94	3.94	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	100	100	125	160	160	180
D	in	0.31	0.39	0.51	0.51	0.71	1.14	1.14	1.45
	mm	8	10	13	13	18	29	29	36.8
E	in	1.34	1.34	1.34	1.57	1.93	2.52	2.52	3.07
	mm	34	34	34	40	49	64	64	78
Weight	lb	3.74	3.74	3.96	4.4	7.48	11.66	13.2	20.9
	kg	1.7	1.7	1.8	2.0	3.4	5.3	6.0	9.5

Fig. 958 Full Port, Bolted Bonnet

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A	in	3.62	4.37	4.72	4.72	5.51	6.30
	mm	92	111	120	120	140	160
B (open)	in	6.02	7.28	8.74	9.45	10.98	13.11
	mm	153	185	222	240	279	333
C	in	3.94	4.92	6.30	6.30	7.09	7.87
	mm	100	125	160	160	180	200
D	in	0.51	0.71	0.94	1.14	1.45	1.89
	mm	13	18	24	29	37	48
E	in	1.57	1.93	2.28	2.4	3.07	3.23
	mm	40	49	58	61	78	82
Weight	lb	7.26	8.36	12.76	14.74	22.66	33.44
	kg	3.3	3.8	5.8	6.7	10.3	15.2

Fig. 959 Full Port, Welded Bonnet

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A	in	3.62	4.37	4.72	4.72	5.51	6.30
	mm	92	111	120	120	140	160
B (open)	in	6.34	7.48	8.66	9.45	10.98	12.56
	mm	161	190	220	240	279	319
C	in	3.94	4.92	6.30	6.30	7.09	7.87
	mm	100	125	160	160	180	200
D	in	0.51	0.71	0.94	1.14	1.45	1.45
	mm	13	18	24	29	36.8	36.8
E	in	1.57	1.93	2.28	2.4	3.07	3.46
	mm	40	49	58	61	78	88
Weight	lb	7.04	8.14	12.54	14.52	22.44	33.22
	kg	3.2	3.7	5.7	6.6	10.2	15.1



API 602 GATE VALVES TH & SW, CLASS 1500

Design Characteristics

- API 602 & ASME B16.34
- Bolted or Welded Bonnet
- Solid Wedge
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld
- Spiral Wound Gasket
- Expanded Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ENDS TYPES
Standard	1500 Bolted Bonnet	1950S	Threaded
		1950SW 1950SSW	Socket Weld Threaded X Socket Weld
Full	1500 Bolted Bonnet	1951S	Threaded
		1951SW 1951SSW	Socket Weld Threaded X Socket Weld
Standard	1500 Welded Bonnet	1957S	Threaded
		1957SW 1957SSW	Socket Weld Threaded X Socket Weld
Full	1500 Welded Bonnet	1958S	Threaded
		1958SW 1958SSW	Socket Weld Threaded X Socket Weld

Dimensions and Weights

Fig. 1950 Standard Port, Bolted Bonnet

Sizes	in	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	6	10	13	19	25	32	38	51
A	in	3.11	3.62	3.62	4.37	4.72	4.72	5.51	6.30
	mm	79	92	92	111	120	120	140	160
B (open)	in	6.89	7.01	7.13	7.13	8.58	9.33	10.79	12.56
	mm	175	178	181	181	218	237	274	319
C	in	3.94	3.94	4.92	4.92	6.30	6.30	7.09	7.87
	mm	100	100	125	125	160	160	180	200
D	in	0.31	0.51	0.51	0.51	0.71	0.94	1.14	1.45
	mm	8	13	13	13	18	24	29	36.8
E	in	1.34	1.57	1.65	1.93	2.28	2.52	3.07	3.46
	mm	34	40	42	49	58	64	78	88.0
Weight	lb	6.60	7.04	7.70	8.80	13.20	15.40	23.76	34.10
	kg	3.0	3.2	3.5	4.0	6.0	7.0	10.8	15.5

Fig. 1957 Standard Port, Welded Bonnet

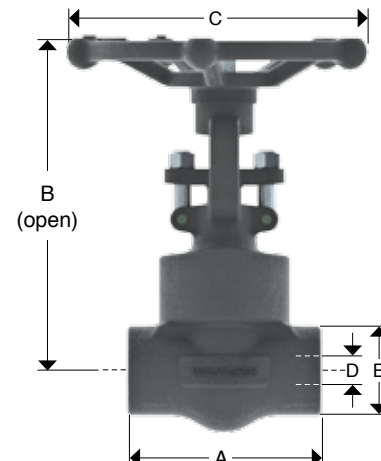
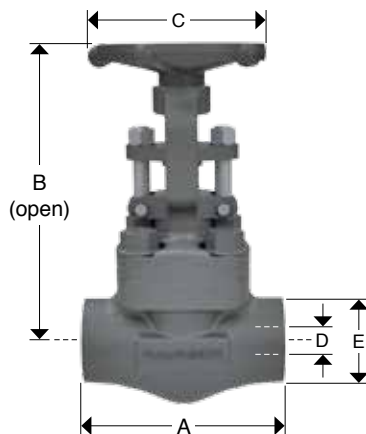
Sizes	in	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	6	10	13	19	25	32	38	51
A	in	3.11	3.62	3.62	4.37	4.72	4.72	5.51	6.30
	mm	79	92	92	111	120	120	140	160
B (open)	in	6.89	7.01	7.13	7.13	8.58	9.33	10.79	12.56
	mm	175	178	181	181	218	237	274	319
C	in	3.94	3.94	4.92	4.92	6.30	6.30	7.09	7.87
	mm	100	100	125	125	160	160	180	200
D	in	0.31	0.51	0.51	0.51	0.71	0.94	1.14	1.45
	mm	8	13	13	13	18	24	29	36.8
E	in	1.34	1.57	1.65	1.93	2.28	2.52	3.07	3.46
	mm	34	40	42	49	58	64	78	88
Weight	lb	6.16	6.6	7.26	8.14	12.54	14.74	23.1	33.44
	kg	2.8	3.0	3.3	3.7	5.7	6.7	10.5	15.2

Fig. 1951 Full Port, Bolted Bonnet

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A	in	4.37	4.72	4.72	5.51	6.30	9.06
	mm	111	120	120	140	160	230
B (open)	in	7.13	8.58	9.33	10.79	12.56	13.58
	mm	181	218	237	274	319	345
C	in	4.92	6.30	6.30	7.09	7.87	7.87
	mm	125	160	160	180	200	200
D	in	0.51	0.71	0.94	1.14	1.45	1.89
	mm	13	18	24	29	37	48
E	in	1.93	2.28	2.52	3.07	3.46	3.46
	mm	49	58	64	78	88	88
Weight	lb	9.46	13.86	16.06	24.64	34.98	36.3
	kg	4.3	6.3	7.3	11.2	15.9	16.5

Fig. 1958 Full Port, Welded Bonnet

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A	in	4.37	4.72	4.72	5.51	6.30	9.06
	mm	111	120	120	140	160	230
B (open)	in	7.13	8.58	9.33	10.79	12.56	13.58
	mm	181	218	237	274	319	345
C	in	4.92	6.30	6.30	7.09	7.87	7.87
	mm	125	160	160	180	200	200
D	in	0.51	0.71	0.94	1.14	1.45	1.89
	mm	13	18	24	29	37	48
E	in	1.93	2.28	2.52	3.07	3.46	3.46
	mm	49	58	64	78	88	88
Weight	lb	9.24	13.64	15.84	24.42	34.76	36.08
	kg	4.2	6.2	7.2	11.1	15.8	16.4



API 602 GATE VALVES TH & SW, CLASS 2500

Design Characteristics

- API 602 & ASME B16.34
- Welded Bonnet
- Solid Wedge
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld
- Expanded Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ENDS TYPES
Standard	2500 Welded Bonnet	952S	Threaded
		952SW	Socket Weld
		952SSW	Threaded X Socket Weldr
Full	2500 Welded Bonnet	962S	Threaded
		962SW	Socket Weld
		962SSW	Threaded X Socket Weldr

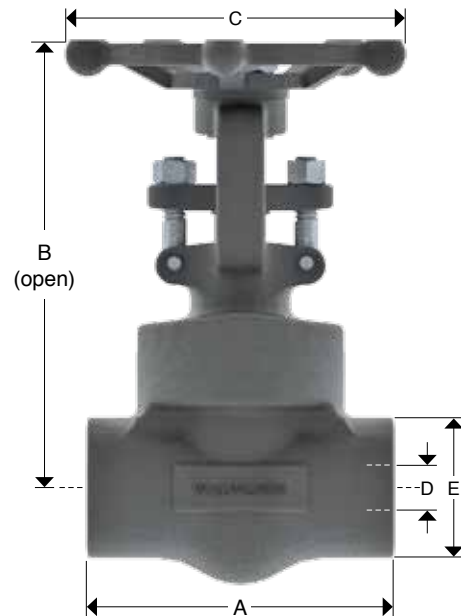
Dimensions and Weights

Fig. 952 Welded Bonnet, Standard Port

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A	in	5.91	5.91	6.69	7.87	7.87	9.84
	mm	150	150	170	200	200	250
B (open)	in	11.1	11.1	12.8	14.7	14.8	17
	mm	284	284	327	374	377	434
C	in	6.30	6.30	7.87	9.84	9.84	11.81
	mm	160	160	200	250	250	300
D	in	0.55	0.55	0.75	0.98	1.10	1.38
	mm	14	14	19	25	28	35
E	in	2.05	2.05	2.52	3.15	3.15	3.74
	mm	52.0	52.0	64.0	80.0	80.0	95.0
Weight	lb	22	21.56	49.5	69.74	70.4	83.6
	kg	10	9.8	22.5	31.7	32	38

Fig. 962 Welded Bonnet, Full Port

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A	in	5.91	6.69	7.87	7.87	9.84	PCR
	mm	150	170	200	200	250	
B (open)	in	11.1	12.8	14.7	14.8	17	PCR
	mm	284	327	374	377	434	
C	in	6.30	7.87	9.84	9.84	11.81	PCR
	mm	160	200	250	250	300	
D	in	0.55	0.75	0.98	1.10	1.38	PCR
	mm	14	19	25	28	35	
E	in	2.05	2.52	3.15	3.15	3.74	PCR
	mm	52.0	64.0	80.0	80.0	95.0	
Weight	lb	21.56	49.5	69.74	70.4	83.6	PCR
	kg	9.8	22.5	31.7	32	38	



API 602 GATE VALVES RF/RTJ, CLASS 150, 300 & 600

Design Characteristics

- API 602 & ASME B16.34
- Bolted Bonnet
- Solid Wedge
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard Port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral wound gasket
- Expanded Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ENDS TYPES
Standard	150	9515RF 9515RTJ	Flanged Raised Face Flanged Ring Type Joint
Standard	300	9530RF 9530RTJ	Flanged Raised Face Flanged Ring Type Joint
Standard	600	9560RF 9560RTJ	Flanged Raised Face Flanged Ring Type Joint

Dimensions and Weights

Fig. 9515 Standard Port

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A (RF)	in	4.25	4.63	5.00	5.50	6.50	7.00
	mm	108	117	127	140	165	178
A (RJ)	in	-	-	5.50	6.00	7.00	7.50
	mm	-	-	140	153	178	191
B (open)	in	6.02	6.02	7.28	8.74	9.45	10.98
	mm	153	153	185	222	240	279
C	in	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	125	160	160	180
D	in	0.51	0.51	0.71	0.94	1.14	1.45
	mm	13	13	18	24	29	36.8
Weight	lb	6.6	7.7	12.1	14.96	22.88	31.68
	kg	3.0	3.5	5.5	6.8	10.4	14.4

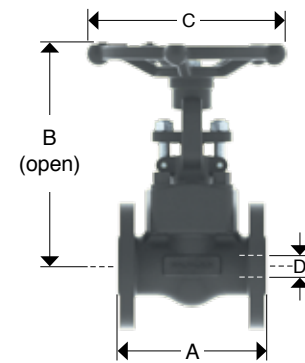


Fig. 9530 Standard Port

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A (RF)	in	5.50	6.00	6.50	7.00	7.50	8.50
	mm	140	152	165	178	190	216
A (RJ)	in	5.94	6.50	7.00	7.50	8.00	9.13
	mm	151	165	178	191	203	232
B (open)	in	6.02	6.02	7.28	8.74	9.45	10.98
	mm	153	153	185	222	240	279
C	in	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	125	160	160	180
D	in	0.51	0.51	0.71	0.94	1.14	1.45
	mm	13	13	18	24	29	36.8
Weight	lb	7.92	10.78	15.4	20.68	29.26	39.6
	kg	3.60	4.90	7.00	9.40	13.30	18.00

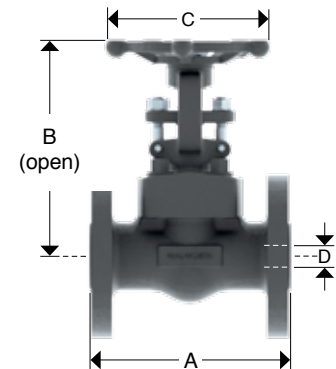
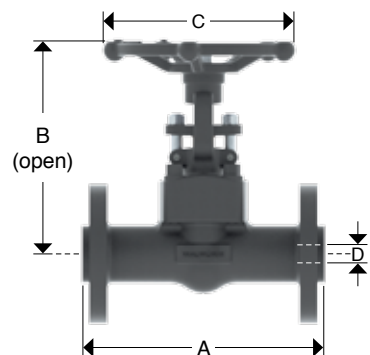


Fig. 9560 Standard Port

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A (RF)	in	6.50	7.50	8.50	9.00	9.50	11.50
	mm	165	190	216	229	241	292
A (RJ)	in	6.44	7.50	8.50	9.00	9.50	11.63
	mm	163	190	216	229	241	295
B (open)	in	6.02	6.02	7.28	8.74	9.45	10.98
	mm	153	153	185	222	240	279
C	in	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	125	160	160	180
D	in	0.51	0.51	0.71	0.94	1.14	1.45
	mm	13	13	18	24	29	36.8
Weight	lb	9.24	12.76	19.36	26.62	33	42.9
	kg	4.20	5.80	8.80	12.10	15.00	19.50



API 602 GATE VALVES RF/RTJ, CLASS 150, 300 & 600

Design Characteristics

- API 602 & ASME B16.34
- Bolted Bonnet
- Solid Wedge
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Full Port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral wound gasket
- Expanded Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ENDS TYPES
Full	150	9518RF	Flanged Raised Face
		9518RTJ	Flanged Ring Type Joint
Full	300	9538RF	Flanged Raised Face
		9538RTJ	Flanged Ring Type Joint
Full	600	9568RF	Flanged Raised Face
		9568RTJ	Flanged Ring Type Joint

Dimensions and Weights

Fig. 9518 Full Port

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A (RF)	in	4.25	4.63	5.00	5.50	6.50	7.00
	mm	108	117	127	140	165	178
A (RJ)	in	-	-	5.50	6.00	7.00	7.50
	mm	-	-	140	153	178	191
B (open)	in	6.02	6.02	7.28	8.74	9.45	10.98
	mm	153	153	185	222	240	279
C	in	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	125	160	160	180
D	in	0.51	0.71	0.94	1.14	1.45	1.89
	mm	13	18	24	29	37	48
Weight	lb	6.6	7.7	12.1	14.96	22.88	31.68
	kg	3.0	3.5	5.5	6.8	10.4	14.4

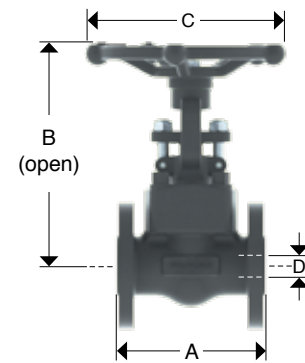


Fig. 9538 Full Port

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A (RF)	in	5.50	6.00	6.50	7.00	7.50	8.50
	mm	140	152	165	178	190	216
A (RJ)	in	5.94	6.50	7.00	7.50	8.00	9.13
	mm	151	165	178	191	203	232
B (open)	in	6.02	6.02	7.28	8.74	9.45	10.98
	mm	153	153	185	222	240	279
C	in	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	125	160	160	180
D	in	0.51	0.71	0.94	1.14	1.45	1.89
	mm	13	18	24	29	37	48
Weight	lb	7.92	10.78	15.4	20.68	29.26	39.6
	kg	3.60	4.90	7.00	9.40	13.30	18.00

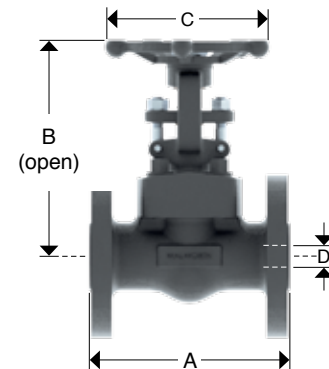
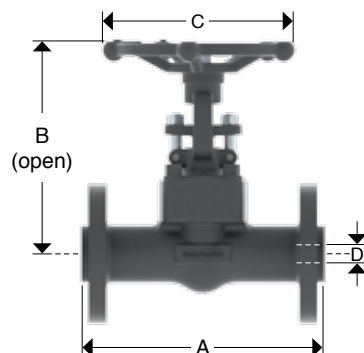


Fig. 9568 Full Port

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A (RF)	in	6.50	7.50	8.50	9.00	9.50	11.50
	mm	165	190	216	229	241	292
A (RJ)	in	6.44	7.50	8.50	9.00	9.50	11.63
	mm	163	190	216	229	241	295
B (open)	in	6.02	6.02	7.28	8.74	9.45	10.98
	mm	153	153	185	222	240	279
C	in	3.94	3.94	4.92	6.30	6.30	7.09
	mm	100	100	125	160	160	180
D	in	0.51	0.71	0.94	1.14	1.45	1.89
	mm	13	18	24	29	37	48
Weight	lb	9.24	12.76	19.36	26.62	33	42.9
	kg	4.20	5.80	8.80	12.10	15.00	19.50



API 602 GATE VALVES RF/RTJ, CLASS 1500

Design Characteristics

- API 602 & ASME B16.34
- Bolted Bonnet
- Solid Wedge
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral wound gasket
- Expanded Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ENDS TYPES
Standard	1500 Bolted Bonnet	19515RF 19515RTJ	Flanged Raised Face Flanged Ring Type Joint
Full	1500 Bolted Bonnet	19185RF 19185RTJ	Flanged Raised Face Flanged Ring Type Joint

Dimensions and Weights

Fig. 19515 Standard Port, Bolted Bonnet

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A (RJ)	in	-	-	10.00	11.00	12.00	14.50
	mm	-	-	254	279	305	368
A (RJ)	in	-	-	10.00	11.00	12.00	14.63
	mm	-	-	254	279	305	371
B (open)	in	7.13	7.13	11.06	9.33	10.79	12.56
	mm	181	181	281	237	274	319
C	in	4.92	4.92	6.30	6.30	7.09	7.87
	mm	125	125	160	160	180	200
D	in	0.51	0.51	0.71	0.94	1.14	1.45
	mm	13	13	18	24	29	36.8
Weight	lb	15.84	25.3	34.32	35.64	50.16	62.04
	kg	7.2	11.5	15.6	16.2	22.8	28.2

Fig. 19185 Full Port, Bolted Bonnet

Sizes	in	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	mm	13	19	25	32	38	51
A (RJ)	in	-	-	10.00	11.00	12.00	14.50
	mm	-	-	254	279	305	368
A (RJ)	in	-	-	10.00	11.00	12.00	14.63
	mm	-	-	254	279	305	371
B (open)	in	7.13	7.13	9.33	10.79	12.56	13.78
	mm	181	181	237	274	319	350
C	in	4.92	6.30	6.30	7.09	7.87	8.66
	mm	125	160	160	180	200	220
D	in	0.51	0.71	0.94	1.14	1.45	1.88
	mm	13	18	24	29	37	48
Weight	lb	25.3	34.32	35.64	50.16	62.04	77
	kg	11.5	15.6	16.2	22.8	28.2	35.0

