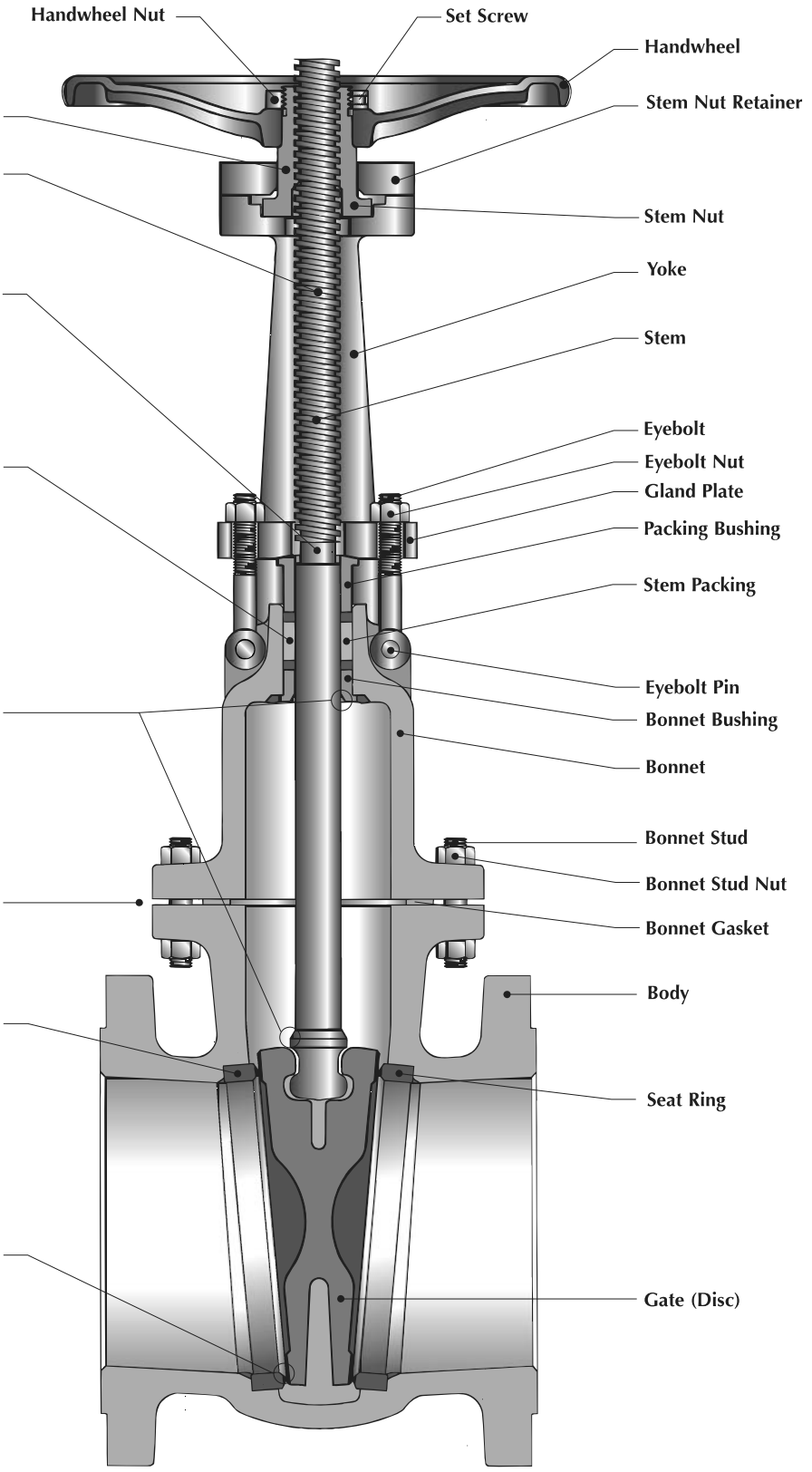
GATE VALVES

CARBON, ALLOY AND STAINLESS STEEL

Cast Steel Gate Valves with fixed handwheel and rising stem (outside screw and yoke) (OS&Y)



Stem Nut, replaceable in line.

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 boundry.

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.

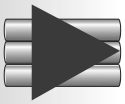
Backseat, designed to relieve back pressure on the stem packing when fully seated. Replacing stem packing under pressure is not recommended.

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

Seat rings are seal welded to provide a bubble tight joint.

Stellited Seat Rings provide increased resistance to wear, abrasion and erosion of the sealing surfaces.

WALWORTH CAST STEEL GATE VALVES, CLASS 150



- **Solid Wedge Gate: 2" to 4"**
- **Flexible Wedge Gate: 5" and 6"**

Figure No.	Type of Ends
5202RF	Flanged Raised Face
5202RJ	Flanged Ring Type Joint
5202WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Wedge Gate	ASTM A 216 GR WCB + 13%Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST 6
5	Stem	ASTM A 276 Type 410
6	Stem Nut Retainer	ASTM A 108 GR 1020
7	Set Screw	Alloy Steel
8	Grease Fitting	Commercial Steel
9	Stem Nut	ASTM B 148 UNS C95600
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eyebolt Pin	Alloy Steel
15	Stem Packing	Graphite
16	Bonnet Bushing	ASTM A 276 Type 410
17	Bonnet Gasket	Graphite/Stainless 316
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 108 GR 1020
22	Set Screw	Alloy Steel
* 23	Identification Plate	Stainless Steel

*Not shown

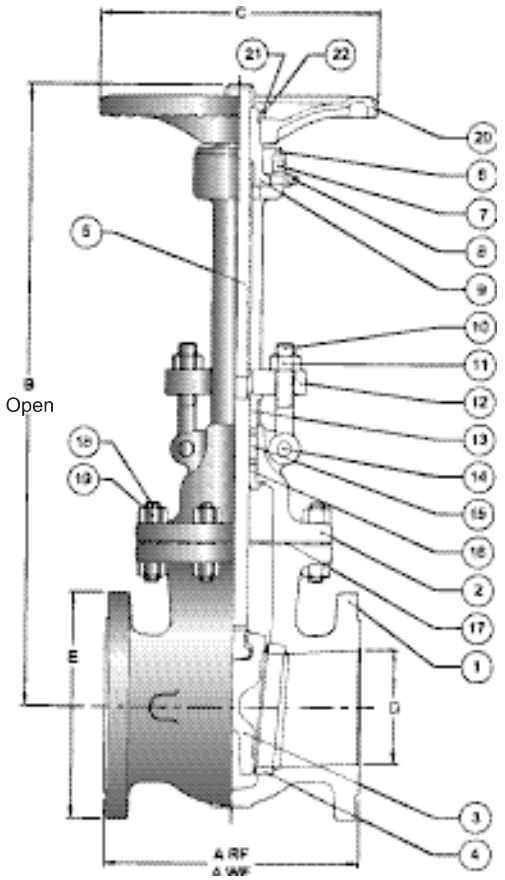
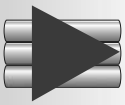


Fig. 5202RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	127	152
		inch	2	2 1/2	3	4	5	6
A	(RF)	mm.	177.8	190.5	203.2	228.6	254.0	266.7
		inch	7	7 1/2	8	9	10	10 1/2
A	(WE)	mm.	215.9	241.3	282.5	304.8	381.0	403.2
		inch	8 1/2	9 1/2	11 1/8	12	15	15 7/8
B		mm.	477.8	482.6	552.5	674.7	812.8	830.3
		inch	18 13/16	19	21 3/4	26 9/16	32	32 11/16
C		mm.	203.2	177.8	254	254	304.8	304.8
		inch	8	7	10	10	12	12
E		mm.	152.4	177.8	190.5	228.6	254.0	279.4
		inch.	6	7	7 1/2	9	10	11
Weight 5202RF		kg.	19	30.8	32	47	70.0	73
		lb.	42	68	71	104	154	161
Weight 5202WE		kg	22	27.2	27	44	60.0	67.1
		lb.	48	60	60	97	132	148

WALWORTH CAST STEEL GATE VALVES, CLASS 150



- **Flexible Wedge Gate**
- **Sizes 36" and 48", Normally supplied with gear box**
- **36" supplied with flanges in accordance to MSS-SP-44 and thickness to ANSI B16.1 class 125**

Figure No.	Type of Ends
5202RF	Flanged Raised Face
5202RJ	Flanged Ring Type Joint
5202WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Wedge Gate	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST6
5	Stem	ASTM A 276 Type 410
6	Yoke	ASTM A 216 GR WCB
7	Stem Nut Retainer	ASTM A 36
8	Grease Fitting	Commercial Steel
9	Stem Nut	ASTM B 148 UNS C95600
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eyebolt Pin	Alloy Steel
15	Stem Packing	Graphite
16	Bonnet Bushing	ASTM A 276 Type 410
17	Bonnet Gasket	Graphite/Stainless 316
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 108 GR 1020
22	Set Screw	Alloy Steel
23	Yoke Stud	Alloy Steel
24	Yoke Stud Nut	ASTM A 307
25	Retainer Bolt	Alloy Steel
26	Retainer Bolt Nut	ASTM A 307
* 27	Identification Plate	Stainless Steel

*Not shown

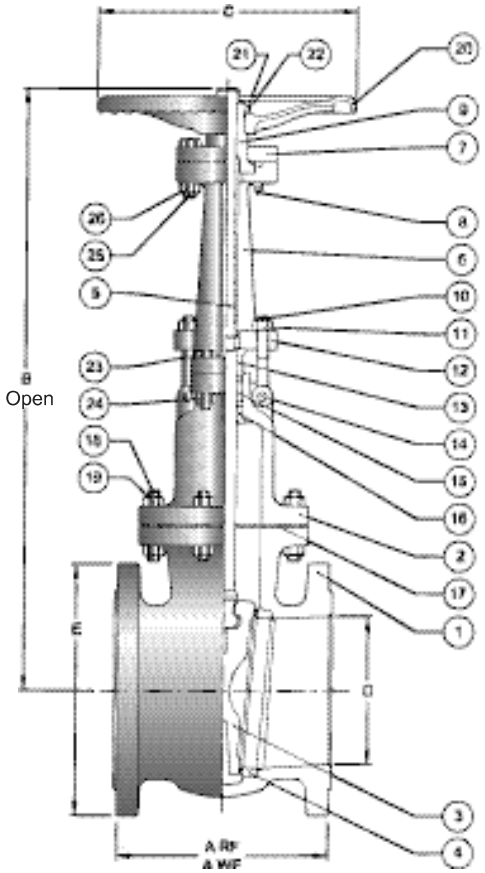


Fig. 5202RF

Dimensions and Weights

D Nominal Diameter	mm. / inch	203 / 8	254 / 10	305 / 12	356 / 14	406 / 16	457 / 18	508 / 20	610 / 24	762 / 30	914 / 36	1219 / 48
A (RF)	mm.	292.1	330.2	355.6	381	406	432	457	508	610	711	927
	inch	11 1/2	13	14	15	16	17	18	20	24	28	36 1/2
A (WE)	mm.	419.1	457.2	501.65	572	610	660	711	813	762	864	–
	inch	16 1/2	18	19 3/4	22 1/2	24	26	28	32	30	34	–
B	mm.	1062	1253	1461	1661	1835	2027	2265	2711	3219	3969	6350
	inch.	41 13/16	49 5/16	57 1/2	65 3/8	72 1/4	79 13/16	89 3/16	106 3/4	126 3/4	156 1/4	250
C	mm.	355.6	406.4	508	559	660	711	762	864	965	965	1168
	inch	14	16	20	22	26	28	30	34	38	38	46
E	mm.	343	406	483	533	597	635	699	813	984	1168	1511
	inch	13 1/2	16	19	21	23 1/2	25	27 1/2	32	38 3/4	46	59 1/2
Weight 5202RF	kg.	133	200	270	492	598	784	1004	1522	2154	3890	7050
	lb.	293	440	595	1084	1317	1727	2211	3352	4744	8568	15529
Weight 5202WE	kg	116	183	258	421	555	751	885	1345	1910	3198	–
	lb.	256	403	568	927	1222	1654	1950	2963	4207	7050	–

WALWORTH CAST STEEL GATE VALVES, CLASS 300

- **Solid Wedge Gate: Sizes 2" to 4"**
- **Flexible Wedge Gate: Sizes 5" and 6"**

Figure No.	Type of Ends
5206RF	Flanged Raised Face
5206RJ	Flanged Ring Type Joint
5206WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Yoke/Bonnet	ASTM A 216 GR WCB
3	Wedge Gate	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70
5	Stem	ASTM A 276 Type 410
6	Stem Nut Retainer	ASTM A 108 GR 1020
7	Stem Retainer Set Screw	Alloy Steel
8	Grease Fitting	Commercial Steel
9	Stem Nut	ASTM B 148 UNS C95600
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eyebolt Pin	Alloy Steel
15	Stem Packing	Graphite
16	Bonnet Bushing	ASTM A 276 Type 410
17	Bonnet Gasket	Spiral Stainless 304/Graphite
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 108 GR 1020
22	Set Screw	Alloy Steel
* 23	Identification Plate	Stainless Steel

*Not shown

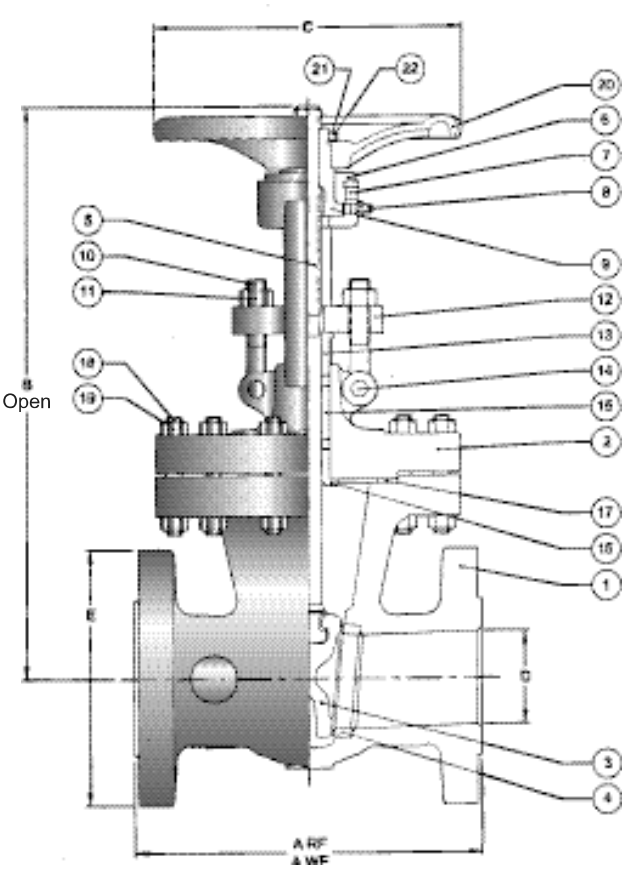
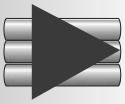


Fig. 5206RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	127	152
		inch	2	2 1/2	3	4	5	6
A (RF y WE)		mm.	215.9	241.3	282.5	304.8	381.0	403.2
		inch	8 1/2	9 1/2	11 1/8	12	15	15 7/8
B		mm.	473	568	546	673	1549	935
		inch	18 5/8	22 3/8	21 1/2	26 1/2	61	36 13/16
C		mm.	203.2	203.2	254	254	355.6	355.6
		inch	8	8	10	10	14	14
E		mm.	165.1	190.5	210	254	179.4	317.5
		inch	6 1/2	7 1/2	8 1/4	10	11	12 1/2
Weight 5206RF		kg.	26	47	43	68	149.5	136
		lb.	57	104	95	189	329	300
Weight 5206WE		kg	20	38	32	59	113.2	124
		lb.	44	84	70	70	249	273

WALWORTH CAST STEEL GATE VALVES, CLASS 300



- **Flexible Wedge Gate**
- **Sizes 36" to 42" Normally supplied with gear box**

Figure No.	Type of Ends
5206RF	Flanged Raised Face
5206RJ	Flanged Ring Type Joint
5206WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Wedge Gate	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70
5	Stem	ASTM A 276 Type 410
6	Yoke	ASTM A 216 GR WCB
7	Stem Nut Retainer	ASTM A 36
8	Grease Fitting	Commercial Steel
9	Stem Nut	ASTM B 148 UNS C95600
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eyebolt Pin	Alloy Steel
15	Stem Packing	Graphite
16	Bonnet Bushing	ASTM A 276 Type 410
17	Bonnet Gasket	Spiral Stainless Steel 304/Graphite
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 108 GR 1020
22	Set Screw	Alloy Steel
23	Retainer Bolt	Alloy Steel
24	Retainer Bolt Nut	ASTM A 307
25	Yoke Stud	Alloy Steel
26	Yoke Stud Nut	ASTM A 307
* 27	Identification Plate	Stainless Steel

*Not shown

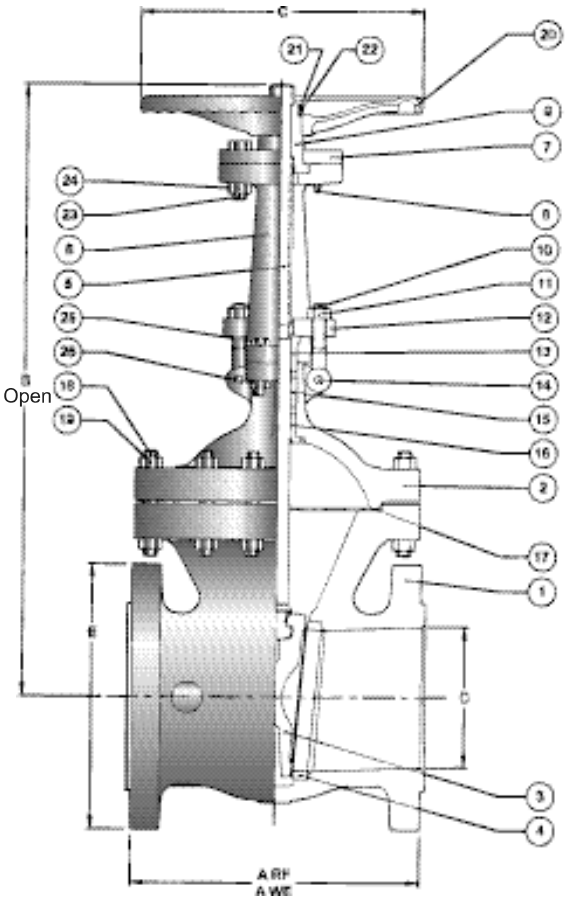
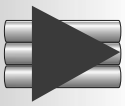


Fig. 5206RF

Dimensions and Weights

D Nominal Diameter		203 8	254 10	305 12	356 14	406 16	457 18	508 20	610 24	762 30	914 36	1067 42
A	mm.	419.1	457.2	501.65	762	838	914	991	1143	1397	1727	2045
(RF y WE)	inch.	16 1/2	18	19 3/5	30	33	36	39	45	55	68	80 1/2
B	mm.	1083	1314	1594	1730	1924	2105	2334	2810	3664	4048	4636
	inch	42 5/8	51 3/4	62 3/4	68 1/8	75 3/4	82 7/8	91 7/8	110 5/8	136 3/8	159 3/8	182 1/2
C	mm.	406.4	508	508	660	711	864	864	864	965	914	914
	inch	16	20	20	26	28	34	34	34	38	36	36
E	mm.	381	444.5	520.7	584	648	711	775	914	1092	1270	1289
	inch	15	17 1/2	20 1/2	23	25 1/2	28	30 1/2	36	43	50	50 3/4
Weight	kg.	212	343	491.5	907	1202	1633	2064	2268	2626	8797	11045
5206RF	lb.	467	756	1083	2000	2650	3600	4550	5000	5790	19394	24328
Weight	kg	194.6	299.9	407.3	762	1043	1383	1864	1950	2313	8353	10436
5206WE	lb.	428	659	896	1676	2294	3042	4100	4290	5088	18376	22959

WALWORTH CAST STEEL GATE VALVES, CLASS 600



- **Flexible Wedge Gate: 2" to 36"**
- **Sizes 24", 30" and 36" Normally supplied with gear box**
- **Stem Nut with bearings: 6" and larger**

Figure No.	Type of Ends
5232RF	Flanged Raised Face
5232RJ	Flanged Ring Type Joint
5232WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Wedge Gate	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST6
5	Stem	ASTM A 276 Type 410
6	Yoke	ASTM A 216 GR WCB
7	Stem Nut Retainer	ASTM A 36
8	Grease Fitting	Commercial Steel
9	Stem Nut	ASTM B 148 UNS C95600
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland Plate	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eye Lug Bolt	Alloy Steel
15	Stem Packing	Graphite
16	Bonnet Bushing	ASTM A 276 Type 410
17	Bonnet Gasket	ASTM A 108 GR 1010
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 108 GR 1020
22	Set Screw	Alloy Steel
23	Retainer Cap Screw	Alloy Steel
24	Handwheel Key	Alloy Steel
25	Yoke Bolt	Alloy Steel
26	Yoke Bolt Nut	ASTM A 307
27	Stem Nut Bearing	Commercial Steel
28	Stem Nut Oil Seal	Rubber/Commercial Steel
* 29	Identification Plate	Stainless Steel

*Not shown

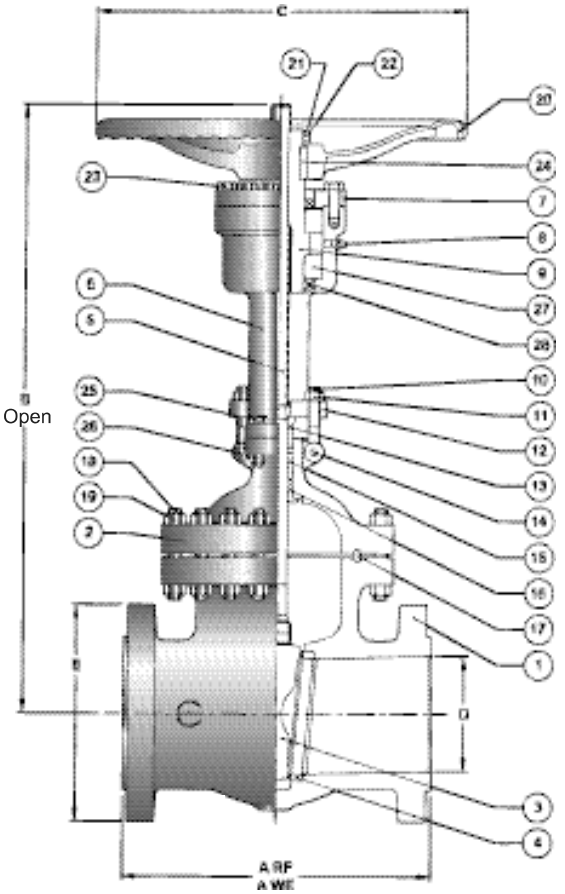


Fig. 5232RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	152	203	254	305	356	406	457	508	610	762	914
		inch	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	30	36
A		mm.	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1651	2083
(RF y WE)		inch	11 1/2	13	14	17	22	26	31	33	35	39	43	47	55	65	82
B		mm.	527	592	622	811	1076	1291	1645	1900	1870	2032	2154	2496	2807	3505	4121
		inch	20 3/4	23 5/16	24 1/2	31 15/16	42 3/8	50 13/16	64 3/4	74 13/16	73 5/8	80	84 13/16	98 1/4	110 1/2	138	162 1/4
C		mm.	178	203	254	406	457	508	660	660	762	762	914	914	914	914	914
		inch	8	8	10	16	18	20	26	26	30	30	36	36	36	36	38
E		mm.	165	191	205	273	356	419	508	559	603	686	743	813	940	1130	1314
		inch	6 1/2	71/2	81/4	10 3/4	14	16 1/2	20	22	23 3/4	27	29 1/4	32	37	44 1/2	51 3/4
Weight		kg.	41	52	74	141	312	538	884.5	1088.5	1500	1995	2508	3120	4500	9890	14000
5232RF		lb.	90	115	163	311	687	1185	1948	2398	3300	4389	5524	6872	9900	21784	30837
Weight		kg	35	41	63	119	270	429	740	874	1300	1729	2086	2705	3901	9041	12840
5232WE		lb.	77	90	138	261	594	943	1628	1863	2860	3803	4590	5951	8582	19890	28248

WALWORTH CAST STEEL GATE VALVES, CLASS 900

- **Flexible Wedge Gate**
- **Sizes 18" and 20" Normally supplied with gear box**
- **Stem Nut with bearings: 4" and larger**

Figure No.	Type of Ends
5247RF	Flanged Raised Face
5247RJ	Flanged Ring Type Joint
5247WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Wedge Gate	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST6
5	Stem	ASTM A 276 Type 410
6	Yoke	ASTM A 216 GR WCB
7	Stem Nut Retainer	ASTM A 36
8	Grease Fitting	Commercial Steel
9	Stem Nut	ASTM B 148 UNS C95600
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland Plate	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eye Bolt Pin	Alloy Steel
15	Stem Packing	Graphite
16	Bonnet Bushing	ASTM A 276 Type 410
17	Bonnet Gasket	ASTM A 108 GR 1010
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 108 GR 1020
22	Set Screw	Alloy Steel
23	Retainer Cap Screw	Alloy Steel
24	Handwheel Key	Alloy Steel
25	Yoke Bolt	Alloy Steel
26	Yoke Bolt Nut	ASTM A 307
27	Stem Nut Bearing	Commercial Steel
28	Stem Nut Oil Seal	Rubber/Commercial Steel
* 29	Identification Plate	Stainless Steel

*Not shown

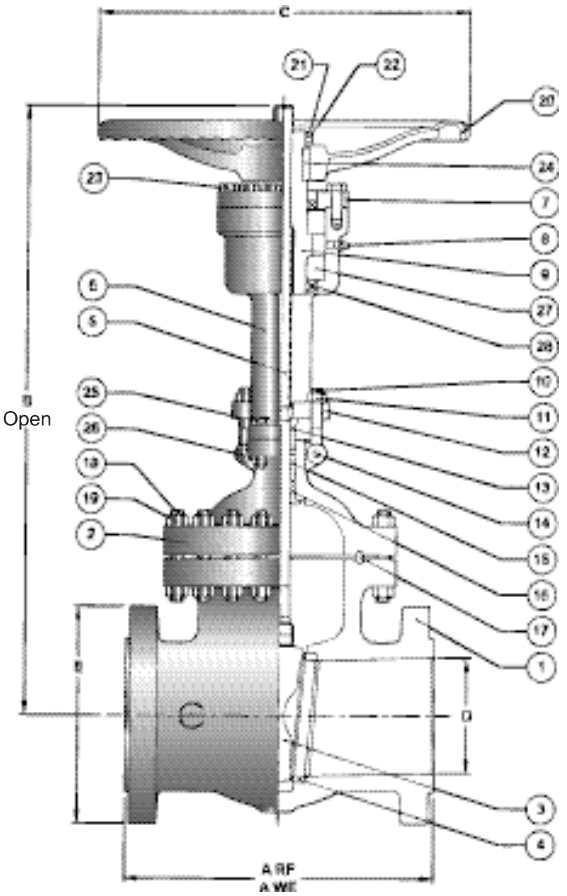
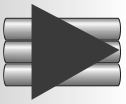


Fig. 5247RF

Dimensions and Weights

D Nominal Diameter		76	102	127	152	203	254	305	356	406	457	508
	mm.	3	4	5	6	8	10	12	14	16	18	20
A	mm.	381	457	559	610	737	838	965	1029	1130	1219	1321
(RF y WE)	inch	15	18	22	24	29	33	38	40 1/2	44 1/2	48	52
B	mm.	772	959	1057	1199	1391	1730	1956	2200	1986	2197	2388
	inch	30 3/8	37 3/4	41 5/8	47 3/16	54 3/4	68 1/8	77	86 5/8	78 3/16	86 1/2	94
C	mm.	406	457	508	559	610	762	965	965	965	914	914
	inch	18	20	22	22	24	30	38	38	38	36	36
E	mm.	241	292	349	318	470	546	610	641	705	787	857
	inch	9 1/2	11 1/2	13 3/4	15	18 1/2	21 1/2	24	25 1/4	27 3/4	31	33 3/4
Weight	kg.	150	251	367	489	839	129	2025	2778	3459	3975	4785
5247RF	lb.	330	553	810	1077	1850	8.5	4465	6125	7625	8755	10540
Weight	kg	126	213	313	417	735	2860	1784	2415	3016	3425	4230
5247WE	lb.	278	470	690	920	1620	1179	3934	5325	6650	7544	9317

WALWORTH CAST STEEL GATE VALVES, CLASS 1500



- **Flexible Wedge Gate**
- **Stem Nut with bearings - Size 4" and larger**
- **Size 18" Normally Supplied with gear box**

Figure No.	Type of Ends
5262RF	Flanged Raised Face
5262RJ	Flanged Ring Type Joint
5262WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Wedge Gate	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST6
5	Stem	ASTM A 276 Type 410
6	Yoke	ASTM A 216 GR WCB
7	Stem Nut Retainer	ASTM A 36
8	Grease Fitting	Commercial Steel
9	Stem Nut	ASTM B 148 UNS C95600
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland Plate	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eye Bolt Pin	Alloy Steel
15	Stem Packing	Graphite
16	Bonnet Bushing	ASTM A 276 Type 410
17	Bonnet Gasket	ASTM A 108 GR 1010
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Handwheel	ASTM A 197
21	Handwheel Nut	ASTM A 108 GR 1020
22	Set Screw	Alloy Steel
23	Retainer Cap Screw	Alloy Steel
24	Handwheel Key	Alloy Steel
25	Yoke Bolt	Alloy Steel
26	Yoke Bolt Nut	ASTM A 307
27	Stem Nut Bearing	Commercial Steel
28	Stem Nut Oil Seal	Rubber/Commercial Steel
* 29	Identification Plate	Stainless Steel

*Not shown

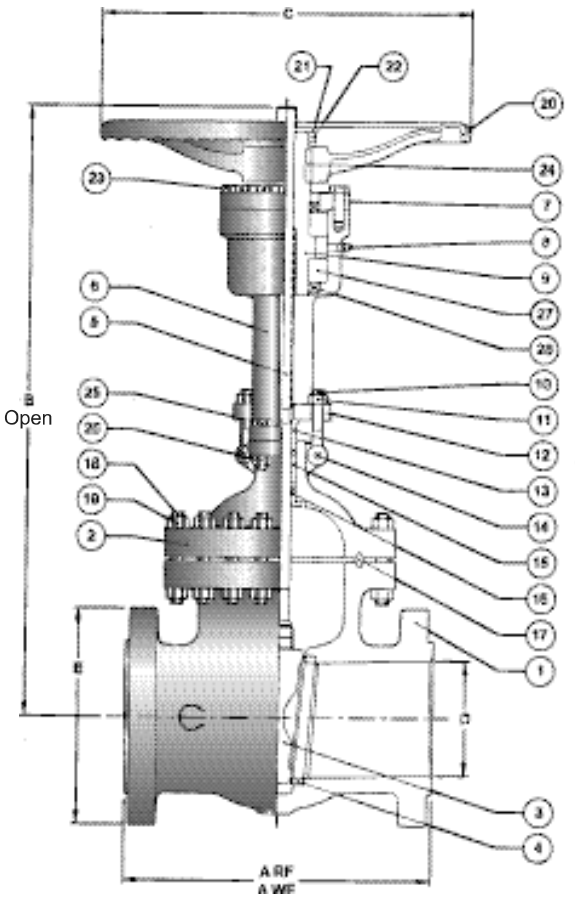
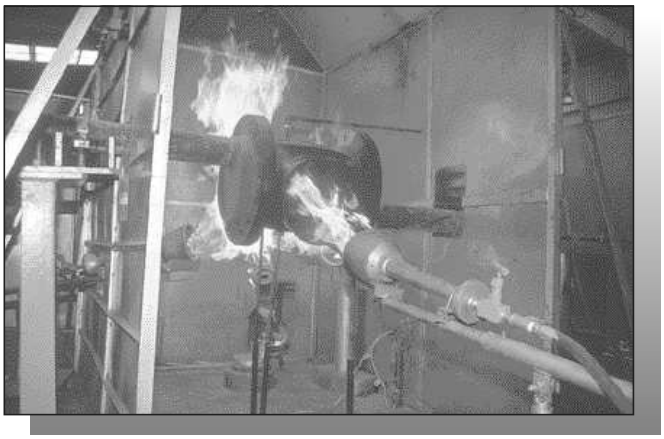


Fig. 5262RF

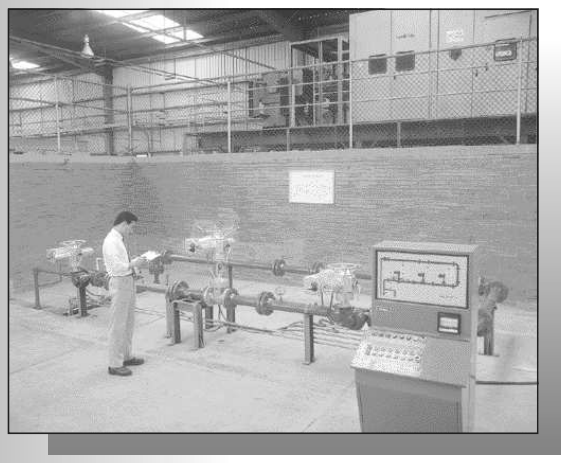
Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	127	152	203	254	305	356	406	457
		inch	2	2 1/2	3	4	5	6	8	10	12	14	16	18
A		mm.	368	419	470	546	673	705	832	991	1130	1257	1384	1537
(RF y WE)		inch	14 1/2	16 1/2	18 1/2	21 1/2	26 1/2	27 3/4	32 3/4	39	44 1/2	49 1/2	54 1/2	60 1/2
B		mm.	591	698	876	994	1079	1191	1435	1740	2054	2172	2254	2210
		inch	23 1/4	27 1/2	34 1/2	39 1/8	42 1/2	46 7/8	56 1/2	68 1/2	80 7/8	85 1/2	88 3/4	87
C		mm.	254	305	305	508	559	610	711	864	965	965	965	914
		inch	10	12	12	20	24	24	28	34	38	38	38	36
E		mm.	216	244	267	311	375	394	483	584	673	749	826	914
		inch	8 1/2	9 5/8	10 1/2	12 1/4	14 3/4	15 1/2	19	23	26 1/2	29 1/2	32 1/2	36
Weight		kg.	109	159	259	366	582	739	1455	2408	3428	4460	5600	7105
5262RF		lb.	240	350	571	808	1284	1630	3208	5309	7557	9824	12335	15650
Weight		kg	93	130	245	319	493	635	1251	2000	2974	3990	5110	5969
5262WE		lb.	205	286	540	703	1086	1400	2758	4409	6557	8789	11256	13148

Certified Quality Control

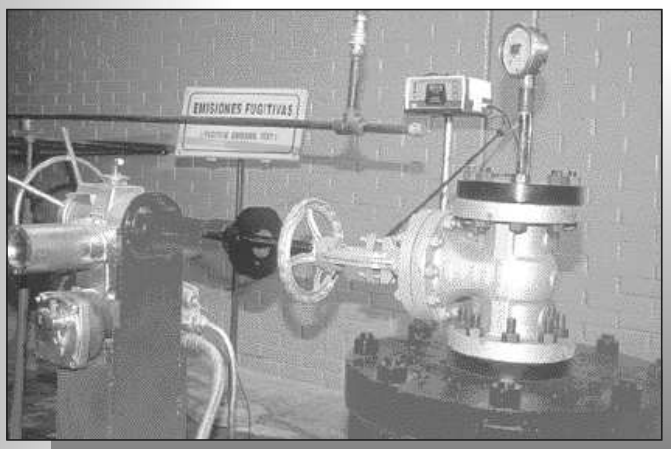


Fire Testing
Installation area for valves subject to fire testing under API requirements. The test exposes the valve to a flame temperature of 1400°F to 1800°F for 30 minutes with controlled limits on leakage.

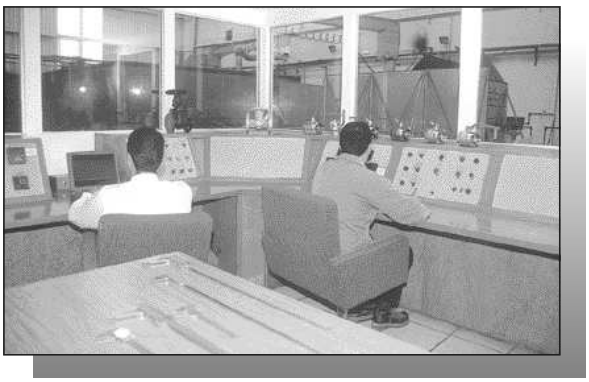


Test Loop
This is where valve designs are verified and validated, by cycling the valves open-closed and opening under pressure. This requires from four (4) to six (6) months to complete 3000 to 5000 cycles.

Pressure Transients Test Loop
This test exposes plug valves to the extreams of both positive and negative pressure transients to verify that the plug in a balanced plug design will not lock-up in the body.



Fugitive Emissions Test
The measurement of emissions through the body/bonnet joint and past the stem packing are made under full rated pressure. The measurements are made in both the static and dynamic conditions under both ambient and thermal cycle operations.



Control and Recording
A computerized system is used to control the test and to record the results. This provides accurate and permanent documentation.

GLOBE VALVES

CARBON, ALLOY AND STAINLESS STEEL

Cast Steel Globe Valve with Rising Handwheel and Stem

Impactor Handwheel, the mechanism is based on transmitting the momentum generated by the mass of the handwheel through the impact/impulse generated during the snap closure action of the handwheel. This type of handwheel is used when a standard handwheel cannot create enough closing force to effect a seal.

Stem Nut replaceable in the line.

Revolving rising stem with precision ACME thread.

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 in the stem, the reduced diametrical clearences and the stem straightness control.

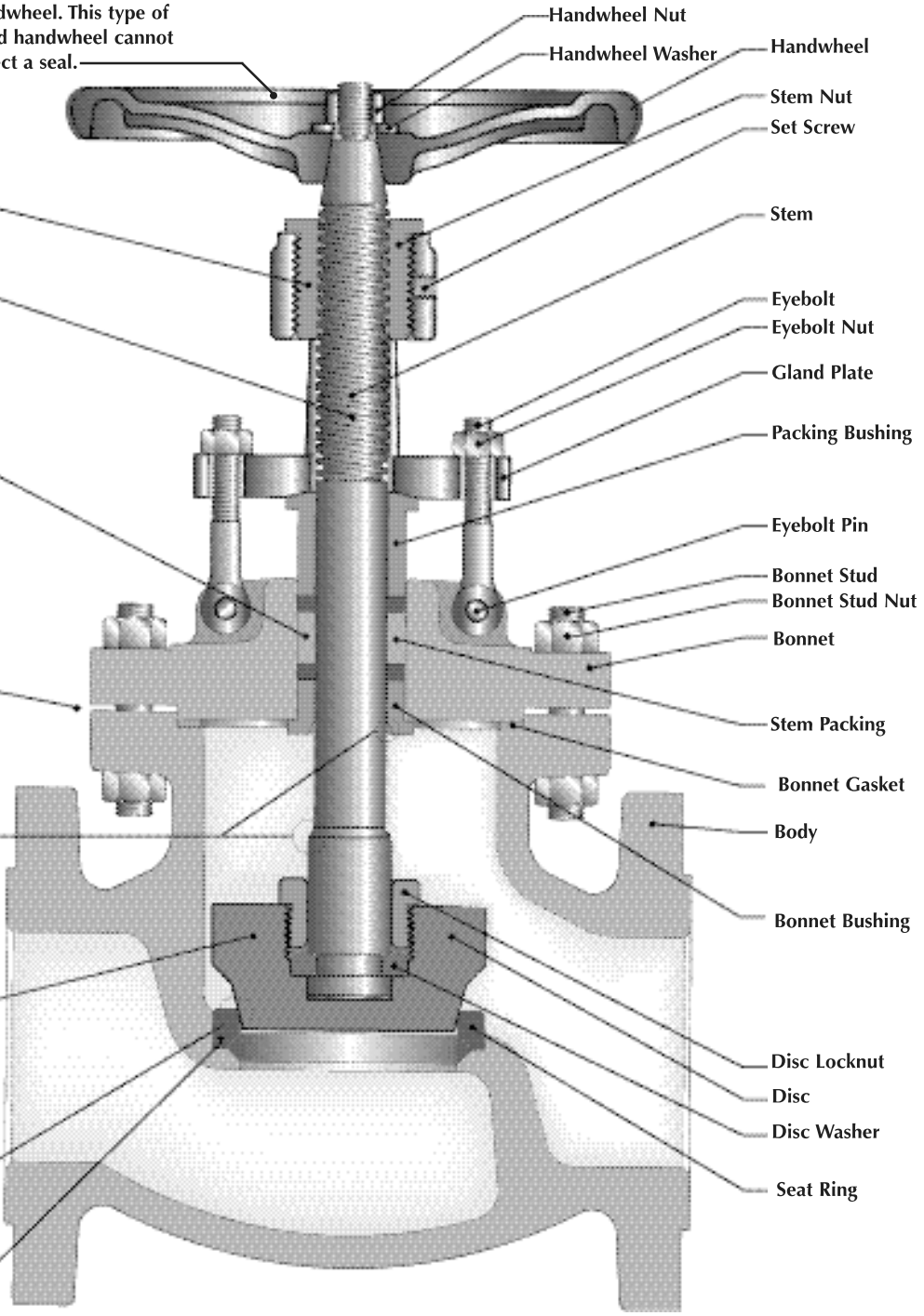
Body to Bonnet Joint designed to apply a uniform load to the gasket to assure a leak proof seal.

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

Conical Disc, integrally guided to assure true alignment between disc and valve body. The loose disc design allows the disc and seat ring sealing surface to seat correctly without damage.

Stellited Seat Ring, providing increased resistance to ware, abrasion and erosion of the sealing surface.

Seat ring is seal welded to provide a bubble tight joint..



WALWORTH CAST STEEL GLOBE VALVES, CLASS 150

- **Rising Stem and Handwheel: 12" and smaller**
- **Rising Stem and Fixed Handwheel: 14" and larger**
- **Bonnet with Bearings: 14" and larger**

Figure No.	Type of Ends
5275RF	Flanged Raised Face
5275RJ	Flanged Ring Type Joint
5275WE	Buttweld
*5278RF	Flanged Raised Face
*5278RJ	Flanged Ring Type Joint
*5278WE	Buttweld

*Angle Type Valves

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Locknut	Alloy Steel
5	Disc Washer	ASTM A 276 Type 410
6	Seat Ring	ASTM A 515 GR 70+ST6
7	Stem	ASTM A 276 Type 410
8	Stem Nut	ASTM B 148 UNS C95600
9	Set Screw	Alloy Steel
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland Plate	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eyebolt Pin	Alloy Steel
15	Bonnet Stud	ASTM A 193 GR B7
16	Bonnet Stud Nut	ASTM A 194 GR 2H
17	Bonnet Gasket	Graphite/Stainless Steel 316
18	Bonnet Bushing	ASTM A 276 Type 410
19	Stem Packing	Graphite
20	Handwheel	ASTM A 197
21	Handwheel Washer	Commercial Steel
22	Handwheel Nut	ASTM A 307
* 23	Identification Plate	Stainless Steel

*Not shown

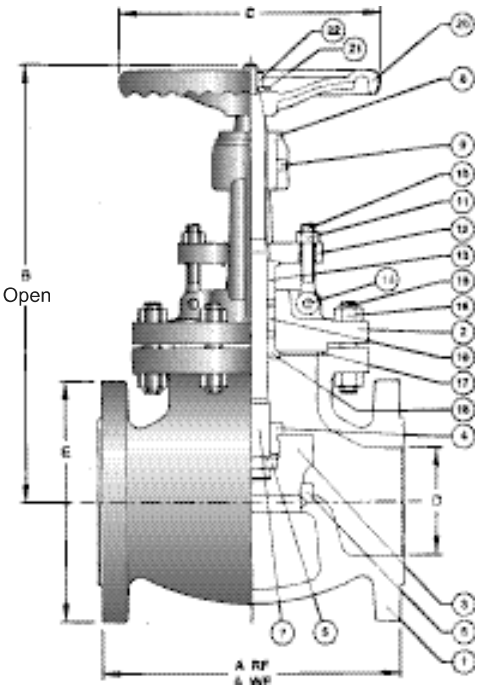


Fig. 5275RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	152	203	254	305	356	406	508
		inch	2	2 1/2	3	4	6	8	10	12	14	16	20
A		mm.	203.2	215.9	241.3	292.1	406.4	495.3	622.3	698.5	787.4	914.4	977.9
(RF y WE)		inch	8	8 1/2	9 1/2	11 1/2	16	19 1/2	24 1/2	27 1/2	31	36	38 1/2
A´		mm.	101.6	108	120.6	146	203.2	247.6	311	349	-	-	-
(RF Y WE)		inch	4	4 1/4	4 3/4	5 3/4	8	9 3/4	12 1/4	13 3/4	-	-	-
		mm.	329	386	354	432	513	643	669	830	1292	1378	1502
B		inch	12 15/16	15 3/16	13 15/16	17	20 3/16	25 5/16	26 5/16	32 11/16	50 7/8	54 1/4	59 1/8
		mm.	203.2	177.8	203.2	254	355.6	406.4	457	609.6	965	965	965
C		inch	6	8	8	10	14	16	18	24	38	38	38
		mm.	152.4	177.8	190.2	228.6	279.4	342.9	406.4	482.6	533.4	596.9	698.5
E		inch.	6	8	71/2	9	11	131/2	16	19	21	23 1/2	27 1/2
Weight 5275RF		kg.	20	28	28	59	85	194	275	445	490	900	1500
		lb.	45	62	62	130	187	427	606	981	1080	1984	3307
5278RF		kg.	-	-	-	-	-	-	-	-	-	-	-
		lb.-	-	-	-	-	-	-	-	-	-	-	-
Weight 5275WE		kg.	15	25	21	41	63	155	233	394	425	780	1300
		lb.	33	55	46	90	138	341	513	868	937	1720	2866
5278WE		kg.	-	-	-	-	-	-	-	-	-	-	-
		lb.-	-	-	-	-	-	-	-	-	-	-	-

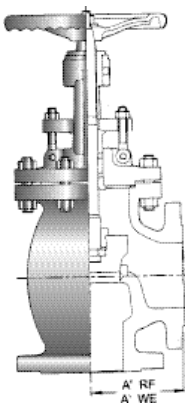


Fig. 5278RF

WALWORTH CAST STEEL GLOBE VALVES, CLASS 300

- **Rising Stem and Handwheel: 6" and smaller**
- **Rising Stem and Fixed Handwheel: 8" and larger**
- **Bonnet with Bearings: 8" and larger**

Figure No.	Type of Ends
5281RF	Flanged Raised Face
5281RJ	Flanged Ring Type Joint
5281WE	Buttweld
*5283RF	Flanged Raised Face
*5283RJ	Flanged Ring Type Joint
*5283WE	Buttweld

*Angle Type Valves

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Disc Washer	ASTM A 276 Type 410
6	Seat Ring	ASTM A 515 GR 70+ST6
7	Stem	ASTM A 276 Type 410
8	Stem Nut	ASTM B 148 UNS C95600
9	Screw	Alloy Steel
10	Eyebolt	Alloy Steel
11	Eyebolt Nut	ASTM A 307
12	Gland Plate	ASTM A 515 GR 70
13	Packing Bushing	ASTM A 108 GR 1020
14	Eyebolt Pin	Alloy Steel
15	Bonnet Stud	ASTM A 193 GR B7
16	Bonnet Stud Nut	ASTM A 194 GR 2H
17	Bonnet Gasket	Spiral Stainless 304/Graphite
18	Bonnet Bushing	ASTM A 276 Type 410
19	Stem Packing	Graphite
20	Handwheel	ASTM A 197
21	Handwheel Washer	Commercial Steel
22	Handwheel Nut	ASTM A 307
* 23	Identification Plate	Stainless Steel

*Not Shown

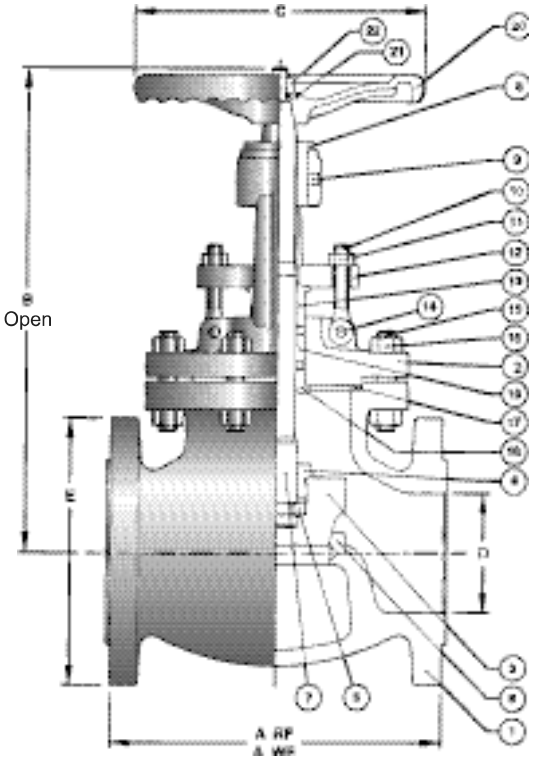


Fig. 5281RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	152	203	254	305	356
		inch	2	2 1/2	3	4	6	8	10	12	14
A		mm.	266.7	292.1	317.5	355.6	444.5	558.8	622.3	711.2	838.2
(RF y WE)		inch	10 1/2	11 1/2	12 1/2	14	17 1/2	22	24 1/2	28	33
A'		mm.	133.3	146	158.7	177.8	222.2	279.4	311.1	355.6	-
(RF y WE)		inch	5 1/4	5 3/4	6 1/4	7	8 3/4	11	12 1/4	14	-
B		mm.	360	505	418	511	621	854	1000	1180	1583
		inch	14 3/16	19 7/8	16 7/16	20 1/8	24 7/16	33 5/8	39 3/8	46 7/16	62 5/16
C		mm.	203.2	254	254	355.6	457	610	762	965	965
		inch	8	10	10	14	18	24	30	38	38
E		mm.	165.1	190.5	209.5	254	317.5	381	444.5	520.7	584
		inch	61/2	71/2	8 1/4	10	12 1/2	15	17 1/2	20 1/2	23
Weight 5281 RF		kg.	27	50	51	78	168	305	446	860	1100
		lb.	60	110	112	172	370	672	983	1896	2425
5283 RF		kg.	-	-	-	-	-	-	-	-	-
		lb.	-	-	-	-	-	-	-	-	-
Weight 5281 WE		kg.	22	46	40	60	148	254	381	745	955
		lb.	48	101	88	132	325	558	838	1639	2101
5283 WE		kg.	-	-	-	-	-	-	-	-	-
		lb.	-	-	-	-	-	-	-	-	-

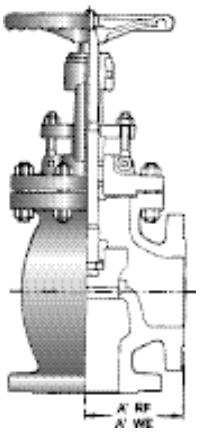


Fig. 5283RF

WALWORTH CAST STEEL GLOBE VALVES, CLASS 600

- Rising Stem and Handwheel: 2" to 6"
- With separate yoke on valves 4", 8" and 12".
- Bonnet with Bearings: 8" and larger
- Rising stem and Fixed Handwheel; 8" to 14"

Figure No.	Type of Ends
5295RF	Flanged Raised Face
5295RJ	Flanged Ring Type Joint
5295WE	Buttweld
*5297RF	Flanged Raised Face
*5297RJ	Flanged Ring Type Joint
*5297WE	Buttweld

*Angle Type Valves

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Lock Nut	Alloy Steel
5	Disc Washer	ASTM A 276 Type 410
6	Seat Ring	ASTM A 515 GR 70+ST6
7	Stem	ASTM A 276 Type 410
8	Stem Nut	ASTM B 148 UNS C95600
9	Yoke Cap	ASTM A 36
10	Yoke Cap Screw	Alloy Steel
11	Bearing	Commercial Steel
12	Stem Nut Oil Seal	Rubber/Commercial Steel
13	Eyebolt	Alloy Steel
14	Eyebolt Nut	ASTM A 307
15	Gland Plate	ASTM A 515 GR 70
16	Packing Bushing	ASTM A 108 GR 1020
17	Eyebolt Pin	Alloy Steel
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Stem Packing	Graphite
21	Bonnet Gasket	ASTM A 108 GR 1010
22	Bonnet Bushing	ASTM A 276 Type 410
* 23	Yoke	ASTM A 216 GR WCB
* 24	Yoke Bolt	Alloy Steel
* 25	Yoke Bolt Nut	ASTM A 307
* 26	Torque Key	Alloy Steel
27	Torque Key Screw	Alloy Steel
28	Grease Fitting	Commercial Steel
29	Handwheel	ASTM A 197
30	Handwheel Nut	ASTM A 307
31	Clamp	Commercial Steel
32	Yoke Nut Key	Alloy Steel
33	Impact Bushing	ASTM A 216 GR WCB
* 34	Stem Nut Set Screw	Alloy Steel
* 35	Identification Plate	Stainless Steel

* Not Shown

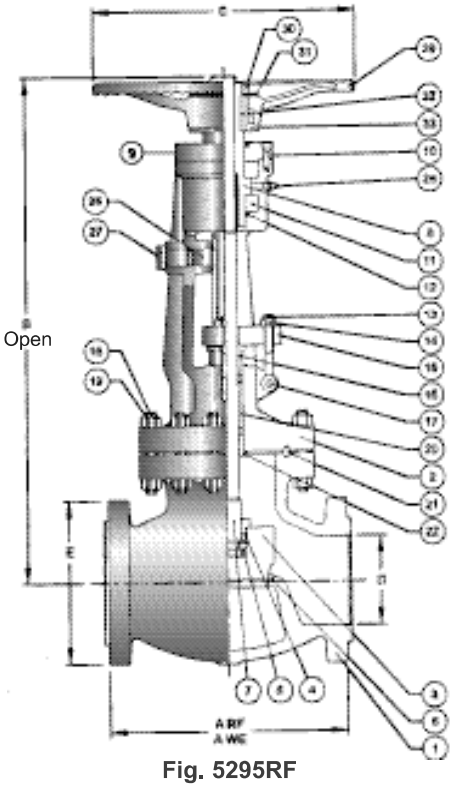


Fig. 5295RF

Dimensions and Weights

D Nominal Diameter	mm. / inch	51 / 2	64 / 2 1/2	76 / 3	102 / 4	152 / 6	203 / 8	254 / 10	305 / 12	356 / 14
A	mm.	292.1	330.2	355.6	431.8	558.8	660.4	787.4	838.2	889
(RFy WE)	inch	11 1/2	13	14	17	22	26	31	33	35
A´	mm.	146	165.1	177.8	215.9	279.4	330.2	393.7	419.1	-
(RFy WE)	inch	5 3/4	6 1/2	7	8 1/2	11	13	15 1/2	16 1/2	-
B	mm.	470	533	565	508	902	1219	1486	1714	2015
	inch	18 1/2	21	22 1/4	20	35 1/2	48	58 1/2	67 1/2	79 5/16
C	mm.	254	356	356	406	610	762	965	762	965
	inch	10	14	14	16	24	30	38	30	38
E	mm.	1 65.1	190.5	209.5	273	355.6	419	508	559	603
	inch	6 1/2	7 1/2	8 1/4	10 3/4	14	16 1/2	20	22	23 3/4
Weight 5295RF	kg.	30	47	64	1 30	265	510	730	1 040	1390
	lb.	66	104	141	286	584	1125	1609	2293	3064
5297RF	kg.	-	-	-	-	-	-	-	-	-
	lb.	-	-	-	-	-	-	-	-	-
Weight 5295WE	kg.	30	47	64	1 30	265	510	730	1 040	1390
	lb.	66	104	141	286	584	1125	1609	2293	3064
5297WE	kg.	-	-	-	-	-	-	-	-	-
	lb.	-	-	-	-	-	-	-	-	-

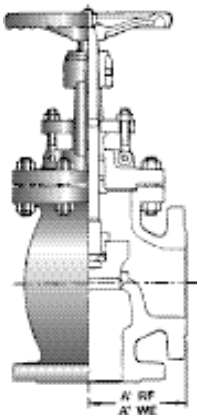


Fig. 5297RF

WALWORTH CAST STEEL GLOBE VALVES, CLASS 900

- **Rising Stem and Handwheel: 3"**
- **Rising Stem and Fixed Handwheel: 4" to 14"**
- **Yoke on Valves 4" and larger**
- **Yoke with Bearings: 4" and larger**

Figure No.	Type of Ends
5301RF	Flanged Raised Face
5301RJ	Flanged Ring Type Joint
5301WE	Buttweld
*5303RF	Flanged Raised Face
*5303RJ	Flanged Ring Type Joint
*5303WE	Buttweld

*Angle Type Valves

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Bonnet	ASTM A 216 GR WCB
3	Disc	ASTM A 276 Type 410
4	Disc Locknut	Alloy Steel
5	Disc Washer	ASTM A 276 Type 410
6	Seat Ring	ASTM A 515 GR 70+ST6
7	Stem	ASTM A 276 Type 410
8	Stem Nut	ASTM B 148 UNS C95600
9	Yoke Cap	ASTM A 36
10	Yoke Cap Screw	Alloy Steel
11	Bearing	Commercial Steel
12	Stem Nut Oil Seal	Rubber/Commercial Steel
13	Eyebolt	Alloy Steel
14	Eyebolt Nut	ASTM A 307
15	Gland Plate	ASTM A 515 GR 70
16	Packing Bushing	ASTM A 108 GR 1020
17	Eyebolt Pin	Alloy Steel
18	Bonnet Stud	ASTM A 193 GR B7
19	Bonnet Stud Nut	ASTM A 194 GR 2H
20	Stem Packing	Graphite
21	Bonnet Gasket	ASTM A 108 GR 1010
22	Bonnet Bushing	ASTM A 276 Type 410
* 23	Yoke	ASTM A 216 GR WCB
* 24	Yoke Bolt	Alloy Steel
* 25	Yoke Bolt Nut	ASTM A 307
26	Torque Key	Alloy Steel
27	Torque Key Screw	Alloy Steel
28	Grease Fitting	Commercial Steel
29	Handwheel	ASTM A 197
30	Handwheel Nut	ASTM A 307
31	Clamp	Commercial Steel
32	Yoke Nut Key	Alloy Steel
33	Impact Bushing	ASTM A 216 GR WCB
* 34	Stem Nut Set Screw	Alloy Steel
* 35	Identification Plate	Stainless Steel

* *Not Shown

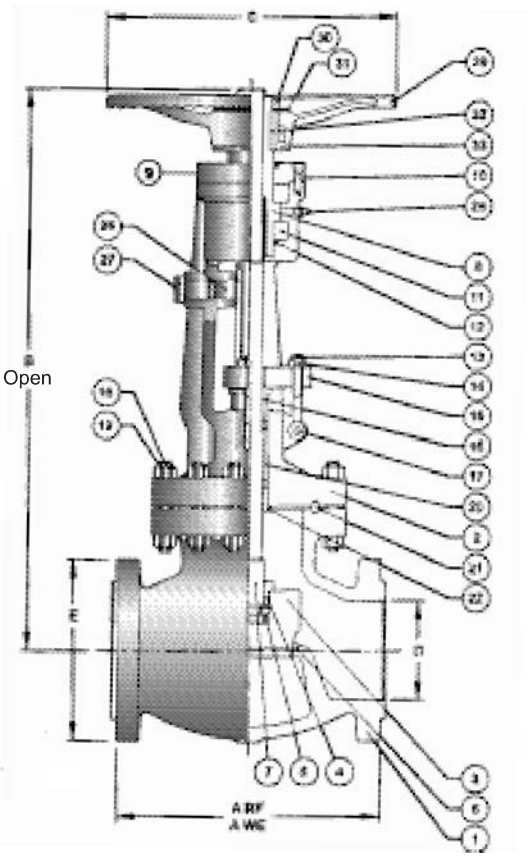


Fig. 5301RF

Dimensions and Weights

D Nominal Diameter		mm.	76	102	152	203	254	305	356
		inch	3	4	6	8	10	12	14
A		mm.	381	457	610	737	838	965	1029
(RF y WE)		inch.	15	18	24	29	33	38	40 1/2
A´		mm.	190	229	305	368	419	483	-
(RF y WE)		inch	7 1/2	9	12	14 1/2	16 1/2	19	-
B		mm.	729	1098	1422	1702	1562	1626	2083
		inch	28 11/16	43 1/4	56	67	61 1/2	64	82
C		mm.	508	610	956	762	956	956	956
		inch	20	24	38	30	38	38	38
E		mm.	241	292	381	470	546	610	641
		inch	9 1/2	11 1/2	15	18 1/2	21 1/2	24	25 1/4
Weight									
5301RF		kg.	180	320	600	1290	1750	2200	2900
		Lb.	397	705	1323	2844	3858	4850	6393
5303RF		kg.	-	-	-	-	-	-	-
		Lb.	-	-	-	-	-	-	-
Weight									
5301WE		kg.	160	280	520	1120	1520	1910	2525
		Lb.	352	617	1145	2466	3347	4206	5560
5303WE		kg.	-	-	-	-	-	-	-
		Lb.	-	-	-	-	-	-	-

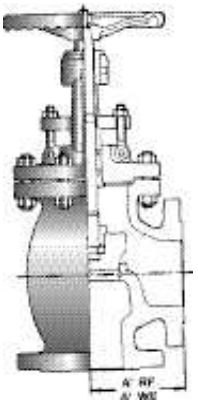


Fig. 5303RF

WALWORTH CAST STEEL GLOBE VALVES, CLASS 1500

- **Rising Stem and Handwheel: 2" and 2 1/2"**
- **Rising Stem and Fixed Handwheel: 3" and larger**
- **Yoke with Bearings: 3" and larger**

Figure No.	Type of Ends
5308RF	Flanged Raised Face
5308RJ	Flanged Ring Type Joint
5308WE	Buttweld
*5310RF	Flanged Raised Face
*5310RJ	Flanged Ring Type Joint
*5310WE	Buttweld

*Angle Type Valves

Component Parts and Materials List

	No.	DESCRIPTION	STANDARD MATERIAL
	1	Body	ASTM A 216 GR WCB
	2	Bonnet	ASTM A 216 GR WCB
	3	Disc	ASTM A 276 Type 410
	4	Disc Locknut	Alloy Steel
	5	Disc Washer	ASTM A 276 Type 410
	6	Seat Ring	ASTM A 515 GR 70+ST6
	7	Stem	ASTM A 276 Type 410
	8	Stem Nut	ASTM B 148 UNS95600
	9	Yoke Cap	ASTM A 36
	10	Yoke Cap Screw	Alloy Steel
	11	Bearing	Commercial Steel
	12	Stem Nut Oil Seal	Rubber/Commercial Steel
	13	Eyebolt	Alloy Steel
	14	Eyebolt Nut	ASTM A 307
	15	Gland Plate	ASTM A 515 GR 70
	16	Packing Bushing	ASTM A 108 GR 1020
	17	Eyebolt Pin	Alloy Steel
	18	Bonnet Stud	ASTM A 193 GR B7
	19	Bonnet Stud Nut	ASTM A 194 GR 2H
	20	Stem Packing	Graphite
	21	Bonnet Gasket	ASTM A 108 GR 1010
	22	Bonnet Bushing	ASTM A 276 Type 410
*	23	Yoke	ASTM A 216 GR WCB
*	24	Yoke Bolt	Alloy Steel
*	25	Yoke Bolt Nut	ASTM A 307
	26	Torque Key	Alloy Steel
	27	Torque Key Screw	Alloy Steel
	28	Grease Fitting	Commercial Steel
	29	Handwheel	ASTM A 197
	30	Handwheel Nut	ASTM A 307
	31	Clamp	Commercial Steel
	32	Yoke Nut Key	Alloy Steel
	33	Impact Bushing	ASTM A 216 GR WCB
*	34	Stem Nut Set Screw	Alloy Steel
*	35	Identification Plate	Stainless Steel

* Not Shown

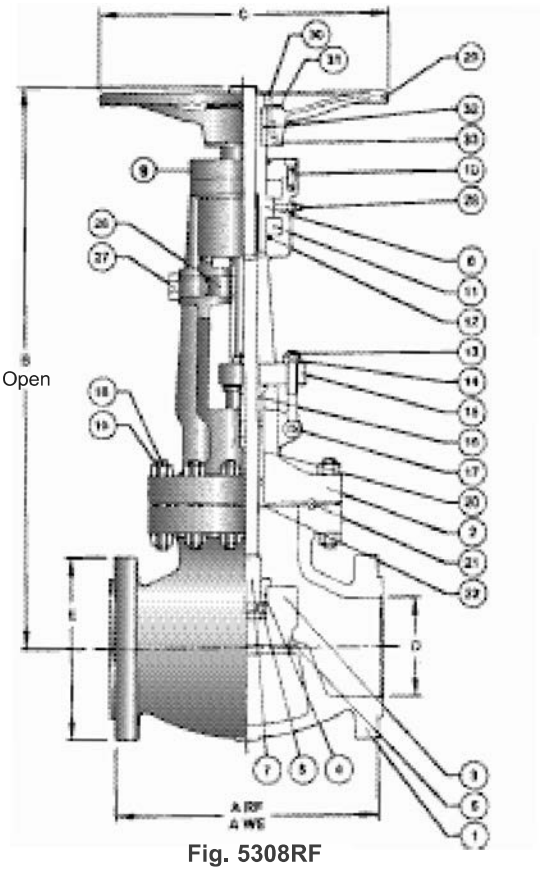


Fig. 5308RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	152	203	254	305
		inch	2	2 1/2	3	4	6	8	10	12
A		mm.	368	419	470	546	705	832	991	1130
(RF y WE)		inch	14 1/2	16 1/2	18 1/2	21 1/2	27 3/4	32 3/4	39	44 1/2
A´		mm.	184	209	235	273	352	416	495	565
(RF y WE)		inch	7 1/4	8 1/4	9 1/4	10 3/4	13 7/8	16 3/8	19 1/2	22 1/4
B		mm.	737	795	1003	1248	1422	1537	1943	2045
		inch	29	31 5/16	39 1/2	49 1/8	56	60 1/2	76 1/2	80 1/2
C		mm.	457	457	610	762	965	965	965	965
		inch	18	18	24	30	38	38	38	38
E		mm.	216	244	267	311	394	483	584	673
		inch	8 1/2	9 5/8	10 1/2	12 1/4	15 1/2	19	23	26 1/2
Weight										
5308RF		kg.	120	172	261	544	1202	1860	2650	3500
		Lb.	264	380	575	1200	2650	4100	5842	7716
5310RF		kg.	-	-	-	-	-	-	-	-
		Lb.	-	-	-	-	-	-	-	-
Weight										
5308WE		kg.	105	149	225	499	1093	1724	2300	3040
		Lb.	231	328	496	1100	2410	3800	5070	6702
5310WE		kg.	-	-	-	-	-	-	-	-
		Lb.	-	-	-	-	-	-	-	-

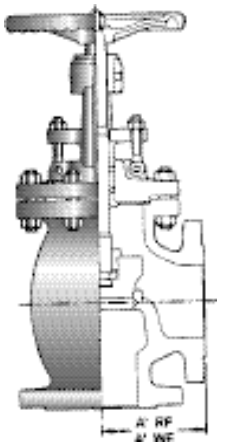


Fig. 5310RF

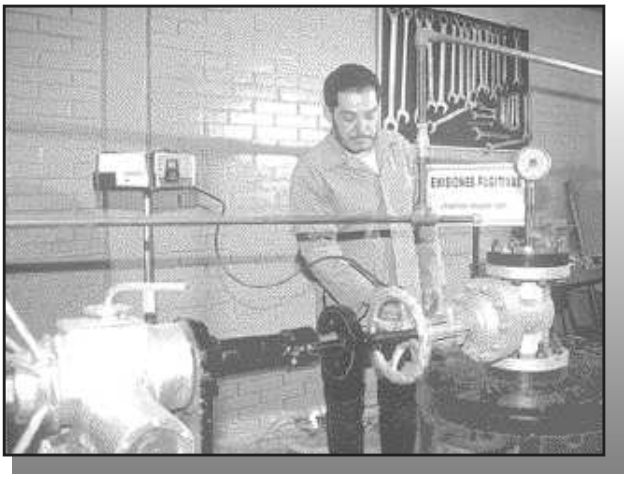
FUGITIVE EMISSIONS

Walworth® remains a leader in the development of new valve technology just as it has been since it was established in 1842. One example of our continued development is the extensive testing of many different Packing Systems for improved/lower fugitive emissions in our standard " valves.

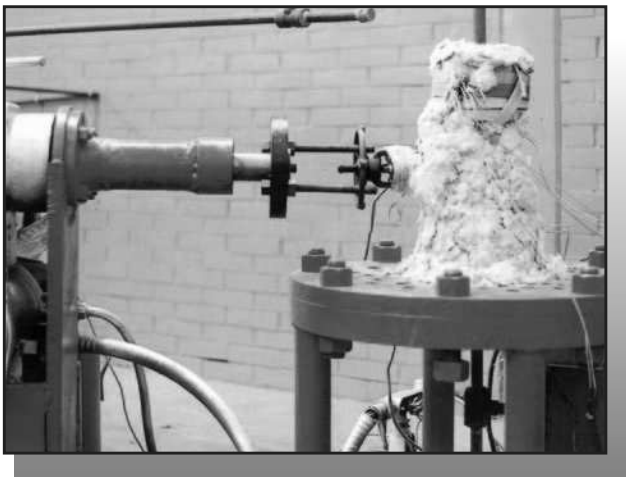
A great number of different volatile organic compounds (VOC) have been identified as potentially damaging to the atmosphere and human health. These VOC's are generally found in processes used in refineries and chemical plants and can be emitted to the atmosphere past sealing members of various pressure vessels such as pumps, compressors, valves, etc. Close control of these fugitive emissions has become a law enforced by the Environmental Protection Agency (EPA) and other International Environmental Control Agencies.

Walworth® has tested body to bonnet seals for zero leakage and developed and tested new technology for stem packing that achieves a lower than 50 PPM leakage rate. This technology is standard in all **Walworth®** off-the-shelf valves making our standard valve acceptable in countries and facilities where strict control of emissions is required.

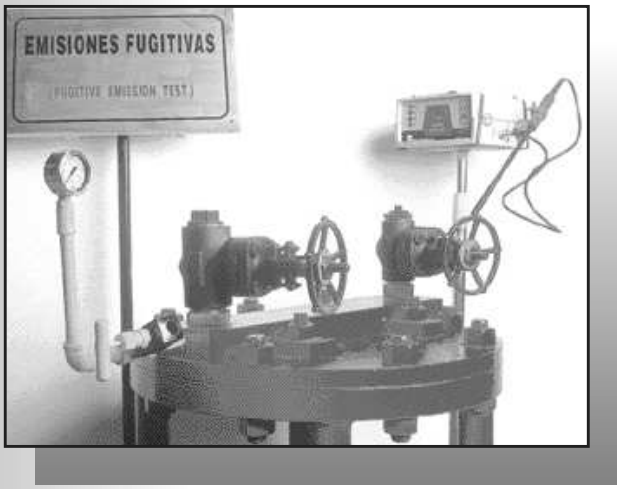
Walworth® can also furnish an ultra low emissions stem packing utilizing a live loading system to achieve a consistant long term very low emission leakage rate.

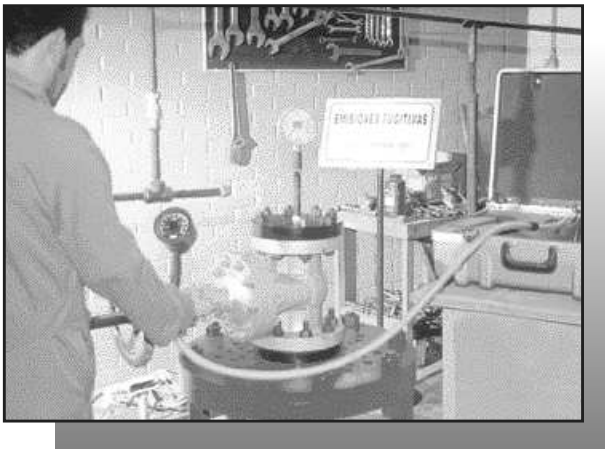


Fugitive emissions test at ambient temperature.



Fugitive emissions test at high temperature.

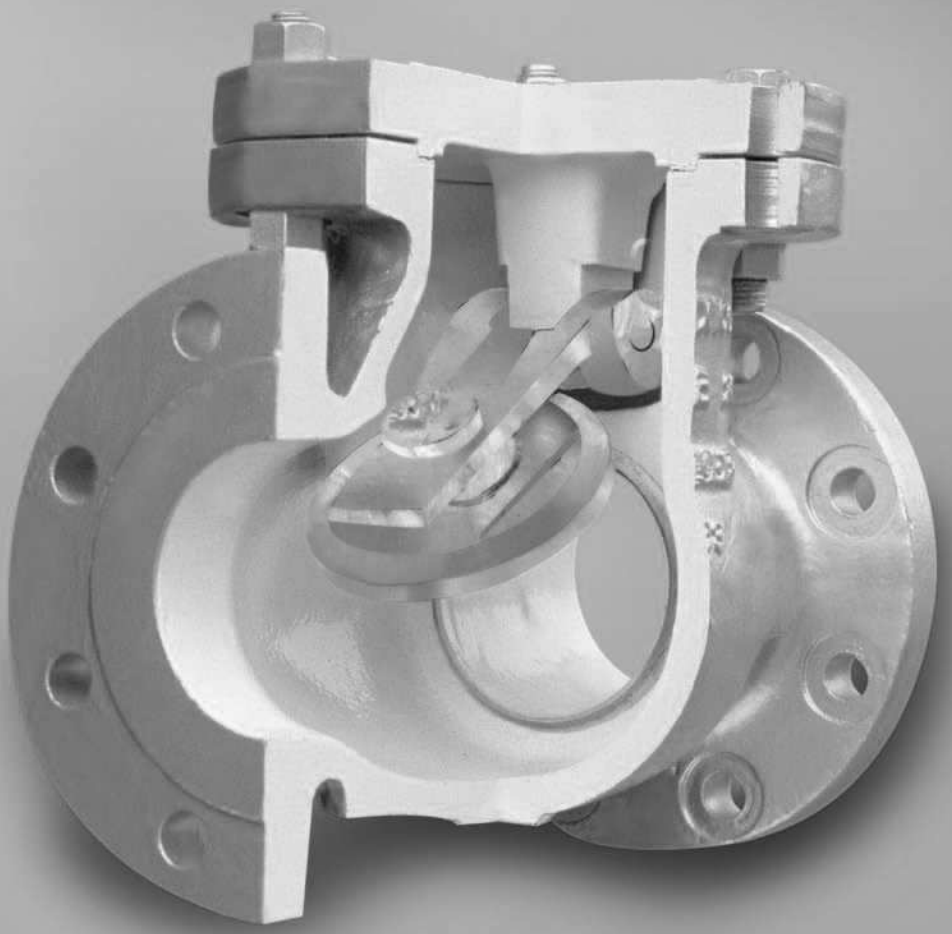




Equipment and installation for fugitive emission measurement with methane and helium gass at bott ambient temperature and hight temperature.

CHECK VALVES

CARBON, ALLOY AND STAINLESS STEEL



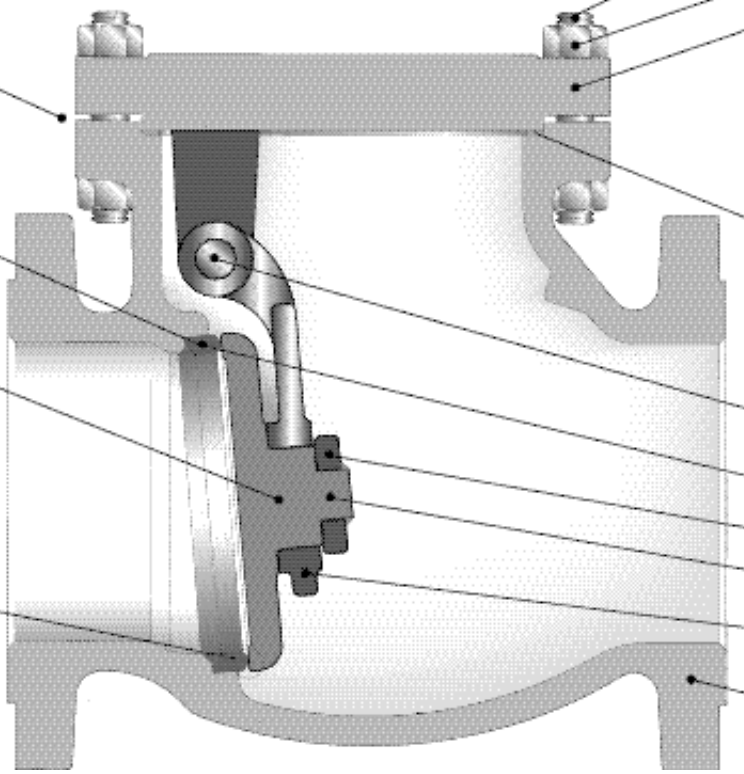
Cast Steel Swing Check Valve

Body to Cover Joint designed to apply a uniform load to the gasket to assure a leak proof seal. Seat Rings are seal welded to provide a bubble tight joint.

Disc to Hanger connection allows the disc a controlled movement independent of the hanger to assure proper disc alignment with the seat at closure.

The connection is secured by a welded disc nut to prevent disassembly due to vibration and closure impact.

Stellited Seat Ring provides increased resistance to wear abrasion and erosion of the sealing surface.



WALWORTH CAST STEEL CHECK VALVES, CLASS 150

Figure No.	Type of Ends
5341RF	Flanged Raised Face
5341RJ	Flanged Ring Type Joint
5341WE	Buttweld

Component Parts and Materials List

	No.	DESCRIPTION	STANDARD MATERIAL
	1	Body	ASTM A 216 GR WCB
	2	Cover	ASTM A 216 GR WCB
	3	Disc	ASTM A 216 GR WCB + 13% Cr.
	4	Seat Ring	ASTM A 515 GR 70 + ST 6
	5	Hanger	ASTM A 216 GR WCB
	6	Hanger Pin	ASTM A 276 Type 410
	7	Cover Gasket	Graphite/Stainless 316
	8	Cover Stud	ASTM A 193 GR B7
	9	Cover Stud Nut	ASTM A 194 GR 2H
	10	Disc Nut	Alloy Steel
*	11	Body Plug +	Alloy Steel
*	12	Identification Plate	Stainless Steel

* Not Shown
+ 14" and larger

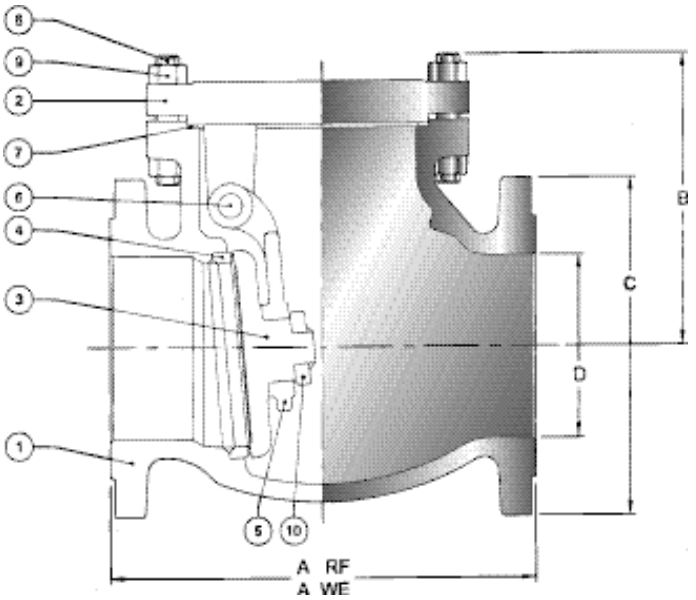


Fig. 5341RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	152	203	254	305	356	406	457	508	610
		inch	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24
A	(RF y WE)	mm.	203.2	215.9	241.3	292.1	355.6	495.3	622.3	698.5	787.4	762	838.2	914.4	1066.8
		inch	8	81/2	9 1/2	11 1/2	14	19 1/2	241/2	271/2	31	30	33	36	42
B		mm.	134	164	162	205	238	290	349	381	457	502	573	606	702
		inch	5 9/32	6 7/16	6 3/8	8 1/16	9 3/8	11 7/16	13 3/4	15	18	19 3/4	22 9/16	23 7/8	27 5/8
C		mm.	152.4.	177.8	190.5	228.6	279.4	342.9	406.4	482.6	533.4	596.9	635	698.5	812.8
		inch	6	7	7 1/2	9	11	131/2	16	19	21	23 1/2	25	27 1/2	32
Weight		kg.	15	23	26	36	77	152	242	350	527	650	950	1150	1596
5341RF		Lb.	33	50	57	79	170	335	533	772	1162	1433	2094	2535	3518
Weight		kg.	13	19	17	30	55	132	210	305	458	565	825	1000	1388
5341WE		Lb.	29	41	37	66	121	291	463	672	1010	1245	1819	3748	3060

WALWORTH CAST STEEL CHECK VALVES, CLASS 300

Figure No.	Type of Ends
5344RF	Flanged Raised Face
5344RJ	Flanged Ring Type Joint
5344WE	Buttweld

Component Parts and Materials List

	No.	Description	Standard Material
	1	Body	ASTM A 216 GR WCB
	2	Cover	ASTM A 216 GR WCB
	3	Disc	ASTM A 216 GR WCB + 13% Cr.
	4	Seat Ring	ASTM A 515 GR 70 + ST 6
	5	Hanger	ASTM A 216 GR WCB
	6	Hanger Pin	ASTM A 276 Type 410
	7	Cover Gasket	Spiral Stainless 304/Graphite
	8	Cover Stud	ASTM A 193 GR B7
	9	Cover Stud Nut	ASTM A 194 GR 2H
	10	Disc Nut	Alloy Steel
*	11	Body Plug +	Alloy Steel
*	12	Identification Plate	Stainless Steel

* Not Shown

+ 14" and larger

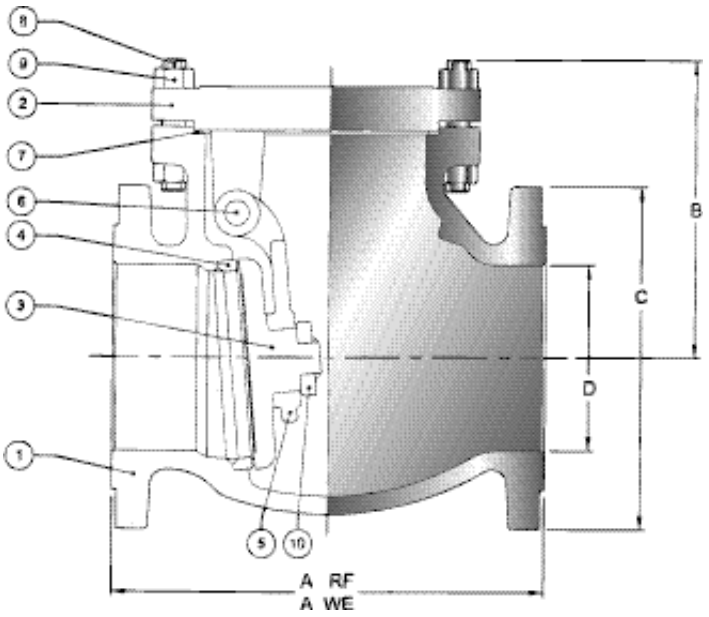


Fig. 5344RF

Dimensions and Weights

D Nominal Diameter		51	64	76	102	152	203	254	305	356	406	457	508	610
	mm.	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24
A	mm.	267	292	318	357	445	533	622	711	838	864	978	1016	1346
(RF y WE)	inch	10 1/2	11 1/2	12 1/2	14	17 1/2	21	24 1/2	28	33	34	38 1/2	40	53
B	mm.	144	179	184	221	260	348	395	456	524	567	597	648	797
	inch	5 11/16	71/16	71/4	8 11/16	10 1/4	13 11/16	15 9/16	17 15/16	20 5/8	22 5/16	23 1/2	25 1/2	313/8
C	mm.	165	191	219	254	318	381	445	521	584	648	711	775	914
	inch	6 1/2	7 1/2	8 1/4	10	12 1/2	15	17 1/2	20 1/2	23	25 1/2	28	30 1/2	36
Weight	kg.	24	38	38	52	118	209	352	542	770	862	1200	1650	2260
5344RF	Lb.	53	84	84	115	260	460	776	1195	1697	1900	2645	3637	4982
Weight	kg.	19	32	31	40	95	159	305	470	670	750	1040	1435	1965
5344WE	Lb.	42	70	68	88	209	350	672	1036	1477	1653	2293	3164	4332

Figure No.	Type of Ends
5350RF	Flanged Raised Face
5350RJ	Flanged Ring Type Joint
5350WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Cover	ASTM A 216 GR WCB
3	Disc	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST 6
5	Hanger	ASTM A 216 GR WCB
6	Hanger Pin	ASTM A 276 Type 410
7	Cover Gasket	ASTM A 108 GR 1010
8	Cover Stud	ASTM A 193 GR B7
9	Cover Stud Nut	ASTM A 194 GR 2H
10	Disc Washer	ASTM A 276 Type 410
11	Disc Nut	Alloy Steel
* 12	Body Plug	Alloy Steel
* 13	Identification Plate	Stainless Steel

* * Not Shown

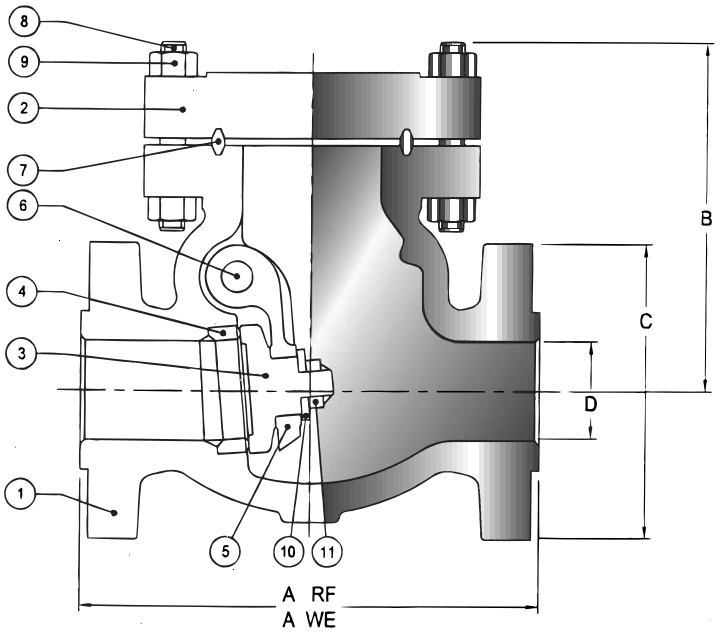


Fig. 5350RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	152	203	254	305	356	406	457	508	610	762
		inch	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	30
A		mm.	292.1	330.2	355.6	431.8	558.8	660.4	787.4	838.2	889	990.6	1092.2	1193.8	1397	1651
(RF y WE)		inch	11 1/2	13	14	17	22	26	31	33	35	39	43	47	55	65
B		m.	175	190	219	262	344	422	486	536	687	643	717	840	817	959
		inch	6 7/8	7 1/2	8 5/8	10 5/16	13 9/16	16 5/8	19 1/8	21 1/8	27 1/16	25 5/16	28 1/4	33 1/16	32 3/16	37 3/4
C		mm.	165.1	190.5	209.6	273	355.6	419.1	508	558.8	603.2	685.8	743	812.8	939.8	1130.3
		inch	6 1/2	7 1/2	8 1/4	10 3/4	14	16 1/2	20	22	23 3/4	27	29 1/4	32	37	44 1/2
Weight		kg.	36	47	62	119	248	528	700	1000	1250	1724	2400	3000	3450	6200
5350RF		Lb.	79	104	137	262	547	1164	1543	2205	2756	3801	5291	6614	7606	13668
Weight		kg.	30	40	50	100	220	460	605	870	1085	1520	2085	2605	3000	5390
5350WE		Lb.	66	88	110	220	485	1014	1334	1918	2392	3351	4596	5743	6614	11883

WALWORTH CAST STEEL CHECK VALVES, CLASS 900

Figure No.	Type of Ends
5353RF	Flanged Raised Face
5353RJ	Flanged Ring Type Joint
5353WE	Buttweld

Component Parts and Materials List

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Cover	ASTM A 216 GR WCB
3	Disc	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST 6
5	Hanger	ASTM A 216 GR WCB
6	Hanger Pin	ASTM A 276 Type 410
7	Cover Gasket	ASTM A 108 GR 1010
8	Cover Stud	ASTM A 193 GR B7
9	Cover Stud Nut	ASTM A 194 GR 2H
10	Disc Washer	ASTM A 276 Type 410
11	Disc Nut	Alloy Steel
* 12	Body Plug	Alloy Steel
* 13	Identification Plate	Stainless Steel

* Not Shown

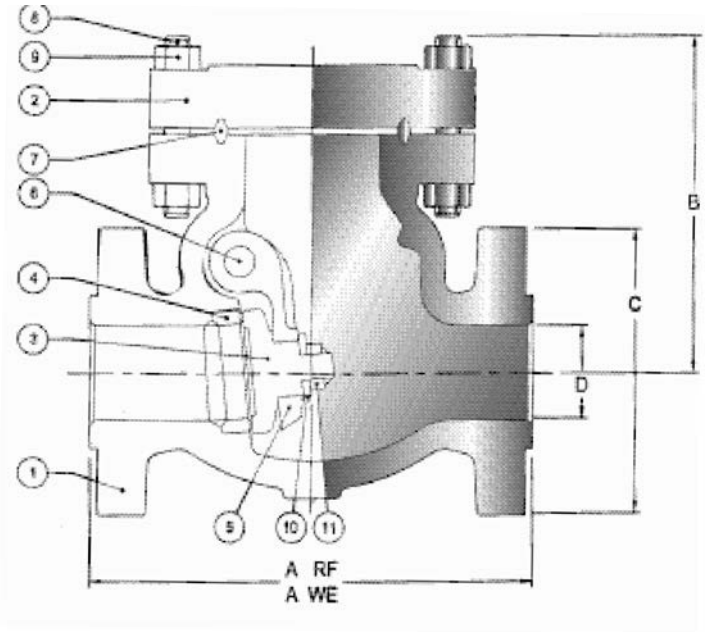


Fig. 5353RF

Dimensions and Weights

D Nominal Diameter		mm.	76	102	152	203	254	356
		inch	3	4	6	8	10	14
A		mm.	381	457	610	737	838	1029
(RF y WE)		inch	15	18	24	29	33	40 1/2
B		mm.	294	344	408	443	678	635
		inch	11 9/16	13 9/16	16 1/16	17 7/16	26 11/16	25
C		mm.	241	292	381	470	546	641
		inch	9 1/2	11 1/2	15	18 1/2	21 1/2	25 1/4
Weight		kg.	109	191	382	807	1021	1480
5353RF		Lb.	240	420	842	1780	2251	3263
Weight		kg.	91	156	330	680	885	1285
5353WE		Lb.	200	345	727	1500	1951	2833

WALWORTH CAST STEEL CHECK VALVES, CLASS 1500

Figure No.	Type of Ends
5356RF	Flanged Raised Face
5356RJ	Flanged Ring Type Joint
5356WE	Buttweld

Component Parts and Materials List

NO.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A 216 GR WCB
2	Cover	ASTM A 216 GR WCB
3	Disc	ASTM A 216 GR WCB + 13% Cr.
4	Seat Ring	ASTM A 515 GR 70 + ST 6
5	Hanger	ASTM A 216 GR WCB
6	Hanger Pin	ASTM A 276 Type 410
7	Cover Gasket	ASTM A 108 GR 1010
8	Cover Stud	ASTM A 193 GR B7
9	Cover Stud Nut	ASTM A 194 GR 2H
10	Disc Washer	ASTM A 276 Type 410
11	Disc Nut	Alloy Steel
* 12	Body Plug	Alloy Steel
* 13	Identification Plate	Stainless Steel

* Not Shown

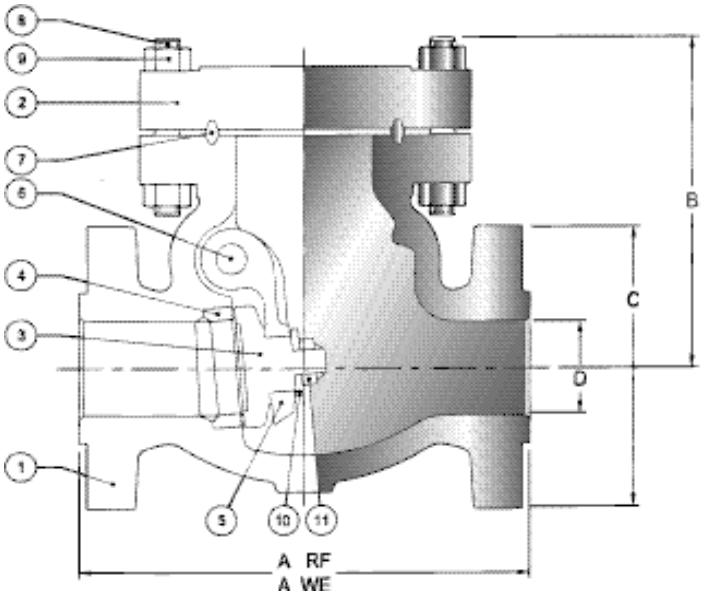


Fig. 5356RF

Dimensions and Weights

D Nominal Diameter		mm.	51	64	76	102	152	203	508
		inch	2	2 1/2	3	4	6	8	20
A		mm.	368	419	470	546	705	832	1664
(RF y WE)		inch	14 1/2	16 1/2	18 1/2	21 1/2	27 3/4	32 3/4	65 1/2
B		mm.	290	294	308	367	514	667	1135
		inch	11 7/16	11 9/16	12 1/8	14 1/16	20 1/4	26 1/4	44 11/16
C		mm.	216	244	267	311	394	483	984
		inch	8 1/2	9 5/8	10 1/2	12 1/4	15 1/2	19	38 3/4
Weight		kg.	85	125	159	232	667	1021	5500
5356RF		Lb.	200	275	350	512	1470	2250	12125
Weight		kg.	73	98	113	179	558	885	4780
5356WE		Lb.	160	215	250	394	1230	1950	10538

TRIM MATERIALS

The trim materials refer to the internal parts in contact with flow through the valve, such as seat rings, gate (disc), stem (hanger pin) and bonnet bushing.
The trim materials indicated for seat rings and gate (disc) only refer to the sealing surfaces as specified in the API Standard.

The API trim No. 8 (UT) is supplied on **Walworth®** Valves as the standard trim. Materials for other trims are in accordance with the following table.

Trim		Internal Parts			Recommended Service
API	Walworth	Seat Ring	Gate (Disc)	Stem Hanger Pin Bonnet Bushing	
8	*UT	Stellite No. 6	13% Cr. (SS 410)	13% Cr. (SS 410)	General service for water, oil and gas, superheated steam to 399°C (750°F) saturated steam, heavy hydrocarbons like gasoline, kerosene, oil lubricants, fuel oil, gas, sour oil mix, phenol and heavy hydrocarbon steam to 399°C (750°F). This trim provides good resistance to wear, abrasion, erosion and galling of the seat sealing surfaces.
1	AA	13% Cr. (SS 410)	13% Cr. (SS 410)	13% Cr. (SS 410)	General service for water, oil and gas, superheated steam to 399°C (750°F), saturated steam, heavy hydrocarbons like gasoline, kerosene, oil lubricants, fuel oil, gas, sour oil mix, phenol and heavy hydrocarbon steam to 399°C (750°F) temperature.
5	HF	Stellite No. 6	Stellite No. 6	13% Cr. (SS 410)	Handling of superheated steam to 538°C (1000°F), heavy hydrocarbons like gasoline, kerosene, oil lubricants, fuel oil, gas, sour oil mix, phenol and heavy hydrocarbon steam to 538°C (1000°F).Excellent resistance to abrasive and corrosive fluids.
-	1HF	Stellite No. 21	Stellite No. 21	Stainless 316**	Handling of superheated steam to 538°C (1000°F), heavy hydrocarbons like gasoline, kerosene, oil lubricants, fuel oil, gas, sour oil mix, phenol and heavy hydrocarbon steam to 538°C (1000°F).Excellent resistance to abrasive and corrosive fluids.
2	304	Stainless 304	Stainless 304	Stainless 304	Handling of moderately corrosive fluids like organic acids, acetic and phosphoric, alogenic salts, marine water, mine water and alkaline solutions to 427°C(800°F) temperature, also handling of fluids at low temperatures.
-	4HF	Stellite No. 6	Stainless 304	Stainless 304	Handling of moderately corrosive fluids like organic acids, acetic and phosphoric, alogenic salts, marine water, mine water and alkaline solutions to 427°C(800°F) temperature; handling of fluids at low temperatures. This trim provides good resistance to wear, erosion and galling of the seat sealing surfaces.
10	316	Stainless 316	Stainless 316	Stainless 316	Handling of corrosive fluids like organic acids, acetic and phosphoric, alogenic salts, marine water, mine water and alkaline solutions to 427°C (800°F) temperature as well as fluids to low temperatures.
12	3HF	Stellite No. 6	Stainless 316	Stainless 316	Handling of moderately corrosive fluids like organic acids, acetic and phosphoric, alogenic salts, marine water, mine water and alkaline solutions to 427°C(800°F) temperature; handling of fluids at low temperatures. This trim provides good resistance to wear abrasion, erosion and galling of the seat sealing surfaces.
6	AAA	Monel	13% Cr. (SS 410)	13% Cr. (SS 410)	General service for water, oil and gas, superheated steam to 399°C (750°F) saturated steam. Light hydrocarbons like light gasoline, propane, butane, methane, hexane, etc. and light hydrocarbons steam to 399°C (750°F) temperature.
9	A	Monel	Monel	Monel	Handling of corrosive fluids like diluted sulphuric and chloridic acids, fluorhidric acid, alkalis, organic solutions, non-oxidizing solutions and saline solutions, brine, marine water, food products. Services where prevention of copper contamination is not required, alquenization processes to produce high-octane additives for aviation gasoline and motor fuel.
-	HC	Hastelloy C	Hastelloy C	Hastelloy C	Handling of corrosive fluids like sulfuric acid. Diluted and concentrated nitric acid, acetic acid, hydrochloric acid, diluted lactic acid, diluted hydrobromic acid, water with oxidant salts, acetaldehyde, ammonia hydroxide, mercury, silver nitrate solutions, calcium and sodium hypochlorous, coper sulphate solutions, saline solutions, brine and marine water.

*UT-Trim (Universal Trim)
**Bonnet Bushing material is 13% Cr. (Stainless 410)

Materials Body, Bonnet, Yoke, Gate (Disc) and Cover

Walworth® offers a line of API 600 Cast Steel Valves in a variety of materials that can be used in combination with standard API Trims and/or special Trims, to meet customer requirements.
In addition to the normal carbon steels and low alloy steels, **Walworth®** offers the standard API 600 valve design in selected stainles steel materials meeting ASME B16.54 Group 2 requirements. This affords the user the opportunity to have an API 600 heavy wall valve that also meets the requirements of the API 603 standards.

Chemical Composition and Mechanical Properties

Elements and Properties	Carbon Steel				Alloy Steel				Stainless Steel		
	ASTM A 216 **WCB**	ASTM A 216 **WCC**	ASTM A 352 **LCB**	ASTM A 352 **LCC**	ASTM A 217 **WC6**	ASTM A 217 **WC9**	ASTM' A 217 **C5**	ASTM A 217 **C12**	ASTM A 351 **CF8**	ASTM A 351 **CF8M**	ASTM A 351 **CF8C**
Carbon	0.30	0.25	0.30	0.25	0.05-0.20	0.05-0.18	0.20	0.20	0.08	0.08	0.08
Manganese	1.00	1.20	1.00	1.20	0.50-0.80	0.40-0.70	0.40-0.70	0.35-0.65	1.50	1.50	1.50
Phosphorus	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Sulphur	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.04	0.04	0.04
Silicon	0.60	0.60	0.60	0.60	0.60	0.60	0.75	1.00	2.00	1.50	2.00
Nickel	0.50	0.50	0.50	0.50	-	-	-	-	8.00-11.0	9.00-12.0	9.00-12.0
Chromium	0.50	0.50	0.50	0.50	1.00-1.50	2.00-2.75	4.00-6.50	8.00-10.0	18.00-21.0	18.00-21.0	18.00-21.0
Molybdenum	0.20	0.20	0.20	0.20	0.45-0.65	0.90-1.20	0.45-0.65	0.90-1.20	0.50	2.00-3.00	0.50
Copper	0.30	0.30	0.30	0.30	0.50	0.50	0.50	0.50	-	-	-
Columbium	-	-	-	-	-	-	-	-	-	-	(2)
Vanadium	0.03	0.03	0.03	0.03	-	-	-	-	-	-	-
Tensile Strength PSI minimum	70,000-95,000	70,000	65,000	70,000-95,000	70,000	70,000	90,000 115,000	90,000 115,000	70,000	70,000	70,000
Yield Strength PSI minimum	36,000	40,000	35,000	40,000	40,000	40,000	60,000	60,000	30,000	30,000	30,000
Elongation In 2"% minimum	22	22	24	22	20	20	18	18	35	30	30
Reduction Area % minimum	35	35	35	35	35	35	35	35	-	-	-
Hardness (HB) Maximum	185	185	190	200	200	200	237	237	-	-	-

Notes:

1. The percentage (%) shown on the elements is the maximum except where ranges are indicated.
2. Steel CF8C should have a Columbium content of not less than 8 times the carbon content, but not exceeding 1%.

PRESSURE-TEMPERATURE RATINGS

CAST STEEL ASTM A 216 GR WCB

°F Temperature °C		MAXIMUM ALLOWABLE NON-SHOCK WORKING PRESSURE IN PSIG BY CLASS						
		150	300	400	600	900	1500	2500
-20 to 100	-29 to 38	285	740	990	1,480	2,220	3,705	6,170
200	93	260	675	900	1,350	2,025	3,375	5,625
300	149	230	655	875	1,315	1,970	3,280	5,470
400	204	200	635	845	1,270	1,900	3,170	5,280
500	260	170	600	800	1,200	1,795	2,995	4,990
600	316	140	550	730	1,095	1,640	2,735	4,560
650	343	125	535	715	1,075	1,610	2,685	4,475
700	371	110	535	710	1,065	1,600	2,665	4,440
750	399	95	505	670	1,010	1,510	2,520	4,200
800	427	80	410	550	825	1,235	2,060	3,430
850	454	65	270	355	535	805	1,340	2,230
900	482	50	170	230	345	515	860	1,430
950	510	35	105	140	205	310	515	860
1000	538	20	50	70	105	155	260	430

For prolonged usage at temperatures above 800°F (427°C), consideration should be given to the possibility of graphite formation in Carbon Steel.

CAST STEEL ASTM A 352 GR LCB

°F Temperature °C		MAXIMUM ALLOWABLE NON-SHOCK WORKING PRESSURE IN PSIG BY CLASS						
		150	300	400	600	900	1500	2500
-20 to 100	-29 to 38	265	695	925	1,390	2,085	3,470	5,785
200	93	250	655	875	1,315	1,970	3,280	5,470
300	149	230	640	850	1,275	1,915	3,190	5,315
400	204	200	620	825	1,235	1,850	3,085	5,145
500	260	170	585	775	1,165	1,745	2,910	4,850
600	316	140	535	710	1,065	1,600	2,665	4,440
650	343	125	525	695	1,045	1,570	2,615	4,355
700	371	110	520	690	1,035	1,555	2,590	4,320
750	399	95	475	630	945	1,420	2,365	3,945
800	427	80	390	520	780	1,175	1,955	3,260
850	454	65	270	355	535	805	1,340	2,230
900	482	50	170	230	345	515	860	1,430
950	510	35	105	140	205	310	515	860
1000	538	20	50	70	105	155	260	430

Not to be used over 650°F (343°C)

CAST STEEL ASTM A 217 GR C5

°F Temperature	°C	MAXIMUM ALLOWABLE NON-SHOCK WORKING PRESSURE IN PSIG BY CLASS						
		150	300	400	600	900	1500	2500
-20 to100	-29 to 38	290	750	1,000	1,500	2,250	3,750	6,250
200	93	260	745	995	1,490	2,235	3,725	6,205
300	149	230	715	955	1,430	2,150	3,580	5,965
400	204	200	705	940	1,410	2,115	3,530	5,880
500	260	170	665	885	1,330	1 995	3,325	5,540
600	316	140	605	805	1,210	1,815	3,025	5,040
650	343	125	590	785	1,175	1,765	2,940	4,905
700	371	110	570	755	1,135	1,705	2,840	4,730
750	399	95	530	705	1,055	1,585	2,640	4,400
800	427	80	510	675	1,015	1,525	2,540	4,230
850	454	65	485	645	965	1,450	2,415	4,030
900	482	50	370	495	740	1,110	1,850	3,085
950	510	35	275	365	550	825	1,370	2,285
1000	538	20	200	265	400	595	995	1,655
1050	566	20 (*)	145	190	290	430	720	1,200
1100	593	20 (*)	100	135	200	300	495	830
1150	621	20 (*)	60	80	125	185	310	515
1200	649	15 (*)	35	45	70	105	170	285

(*) For welding ends valves only. Flanged ends ratings terminate at 1000°F (538°C).

CAST STEEL ASTM A217 GR C12

°F Temperature	°C	MAXIMUM ALLOWABLE NON-SHOCK WORKING PRESSURE IN PSIG BY CLASS						
		150	300	400	600	900	1500	2500
-20 to 100	-29 to 38	290	750	1,000	1,500	2,250	3,750	6,250
200	93	260	750	1,000	1,500	2,250	3,750	6,250
300	149	230	730	970	1,455	2,185	3,640	6,070
300	204	200	705	940	1,410	2,115	3,530	5,880
500	260	170	665	885	1,330	1,995	3,325	5,540
600	316	140	605	805	1,210	1,815	3,025	5,040
650	343	125	590	785	1,175	1,765	2,940	4,905
700	371	110	570	755	1,135	1,705	2,840	4,730
700	399	95	530	710	1,065	1,595	2,660	4,430
800	427	80	510	675	1,015	1,525	2,540	4,230
850	454	65	485	650	975	1,460	2,435	4,060
900	482	50	450	600	900	1,350	2,245	3,745
950	510	35	375	505	755	1,130	1,885	3,145
1000	538	20	255	340	505	760	1,270	2,115
1050	566	20 (*)	170	230	345	515	855	1,430
1100	593	20 (*)	115	150	225	340	565	945
1150	621	20 (*)	75	100	150	225	375	630
1200	649	20 (*)	50	70	105	155	255	430

(*) For welding ends valves only. Flanged ends ratings terminate at 1000°F (538°C).

CAST STEEL ASTM A 351 GR CF8

°F Temperature	°C	MAXIMUM ALLOWABLE NON-SHOCK WORKING PRESSURE IN PSIG BY CLASS						
		150	300	400	600	900	1500	2500
-20 to 100	-29 to 38	275	720	960	1,440	2,160	3,600	6,000
200	93	230	600	800	1,200	1,800	3,000	5,000
300	149	205	540	720	1,080	1,620	2,700	4,500
400	204	190	495	660	995	1,490	2,485	4,140
500	260	170	465	620	930	1,395	2,330	3,880
600	316	140	435	580	875	1,310	2,185	3,640
650	343	125	430	575	860	1,290	2,150	3,580
700	371	110	425	565	850	1,275	2,125	3,540
750	399	95	415	555	830	1,245	2,075	3,460
800	427	80	405	540	805	1,210	2,015	3,360
850	454	65	395	530	790	1,190	1,980	3,300
900	482	50	390	520	780	1,165	1,945	3,240
950	510	35	380	510	765	1,145	1,910	3,180
538	1000	20	320	430	640	965	1,605	2,675
566	1050	20(*)	310	410	615	925	1,545	2,570
593	1100	20(*)	255	345	515	770	1,285	2,145
621	1150	20(*)	200	265	400	595	995	1,655
649	1200	20(*)	155	205	310	465	770	1,285
677	1250	20(*)	115	150	225	340	565	945
704	1300	20(*)	85	115	170	255	430	715
732	1350	20(*)	60	80	125	185	310	515
760	1400	20(*)	50	65	95	145	240	400
788	1450	15(*)	35	45	70	105	170	285
816	1500	10(*)	25	35	55	80	135	230

(*) For welding ends valves only. Flanged ends ratings terminate at 1000°F (538°C).

CAST STEEL ASTM A 351 GR CF8M

°F Temperature	°C	MAXIMUM ALLOWABLE NON-SHOCK WORKING PRESSURE IN PSIG BY CLASS						
		150	300	400	600	900	1500	2500
-20 to 100	-29 to 38	275	720	960	1,440	2,160	3,600	6,000
200	93	235	620	825	1,240	1,860	3,095	5,160
300	149	215	560	745	1,120	1,680	2,795	4,660
400	204	195	515	685	1,025	1,540	2,570	4,280
500	260	170	480	635	955	1,435	2,390	3,980
600	316	140	450	600	900	1,355	2,255	3,760
650	343	125	445	590	890	1,330	2,220	3,700
700	371	110	430	580	870	1,305	2,170	3,620
750	399	95	425	570	855	1,280	2,135	3,560
800	427	80	420	565	845	1,265	2,110	3,520
850	454	65	420	555	835	1,255	2,090	3,480
900	482	50	415	555	830	1,245	2,075	3,460
950	510	35	385	515	775	1,160	1,930	3,220
538	1000	20	350	465	700	1,050	1,750	2,915
566	1050	20(*)	345	460	685	1,030	1,720	2,865
593	1100	20(*)	305	405	610	915	1,525	2,545
621	1150	20(*)	235	315	475	710	1,185	1,970
649	1200	20(*)	185	245	370	555	925	1,545
677	1250	20(*)	145	195	295	440	735	1,230
704	1300	20(*)	115	155	235	350	585	970
732	1350	20(*)	95	130	190	290	480	800
760	1400	20(*)	75	100	150	225	380	630
788	1450	20(*)	60	80	115	175	290	485
816	1500	20(*)	40	55	85	125	205	345

(*) For welding ends valves only. Flanged ends ratings terminate at 1000°F (538°C).

WALWORTH®

Since 1842

Cast Iron Valves

Gate

Globe

Check

www.walworthmx.com

Index

INTRODUCTION

WALWORTH® is one of the most important industrial valve manufacturers in Mexico and the world. Founded in 1842, **WALWORTH®** has dedicated itself to the design and manufacture of an array of valves for fluid control. We satisfy varied industry and customer requirements by adhering to the highest quality standards. **WALWORTH®** relies on its broad experience in supplying valves to the petrochemical, chemical, gas, petroleum, nuclear energy generation, pulp and paper, water, cryogenic and geothermal industries, among others.

WALWORTH® has developed an extensive range of production and products in order to satisfy the different needs of the world valve market, including Gate, Globe, Check, Trunnion Mounted, Floating Ball, Plug, Safety and Relief, Pressure Seal and Slab Gate valves in materials such as Cast and Forged Steel, Iron, Bronze, special alloys with different trims and any requirement that may be requested by our customers.

Our Quality Assurance System has allowed **WALWORTH®** to be certified under strict international standards such as API, ANSI, ASME, ASTM, MSS, NACE, AWWA, BSI, CSA and ISO-9001:2000, among others. The system requires a rigorous quality control and selection of raw materials from approved vendors, as well as control over the manufacturing process. **WALWORTH®** has been granted the right by API (American Petroleum Institute) to use the official API monogram on its products manufactured to API Specification 6A and API Specification 6D.

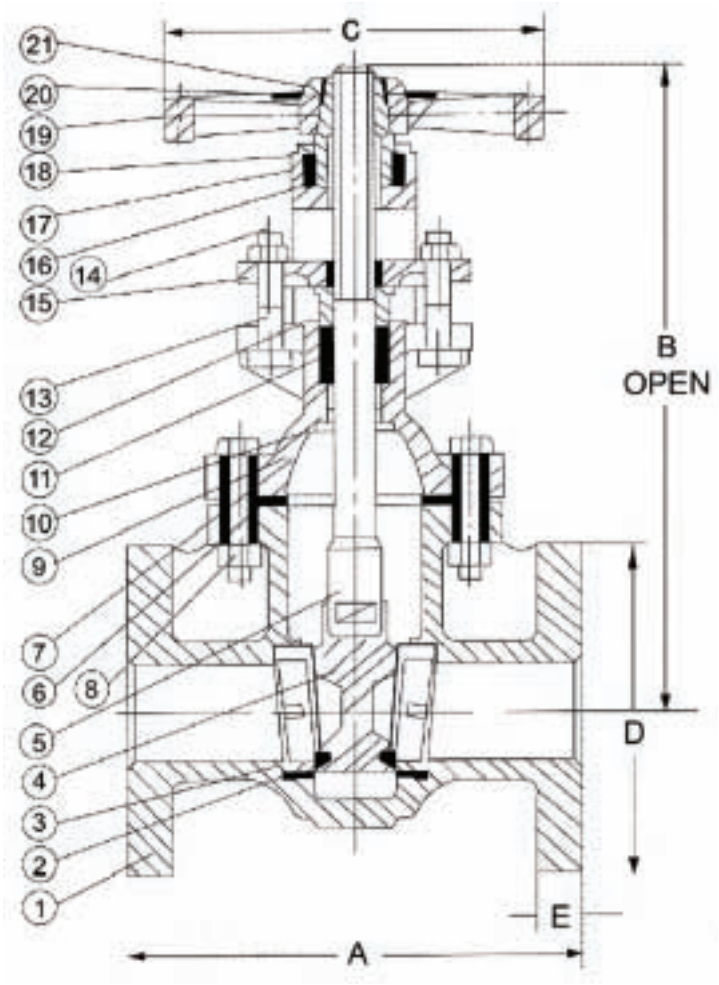
Another important element of **WALWORTH®** valves is their identification and traceability. Each valve is issued an identification number and an identification plate with the part information. The identification number enables **WALWORTH®** to monitor the product as it goes through the production process and provides traceability to materials used in the manufacturing process.

The **WALWORTH®** team relies on extensive experience. **WALWORTH®'s** main manufacturing facility located in Mexico consists of more than 500 employees, state-of-the-art technology and sophisticated equipment, manufacturing the highest quality product at competitive prices.

WALWORTH CAST IRON GATE VALVE CLASS 125

- Design According to MSS SP-70
- Flanges Drilled According to ANSI B16.1
- Face to Face Dimensions According to ANSI B16.10
- Solid Wedge
- Bolted Bonnet
- Rising Stem
- Working Pressure: 125 WSP, 200 WOG
- Service Conditions, WSP-Steam Sevice, WOG-Water, Oil, Gas Service
- Construction Available in all Types of Iron

Figure No.	Ends
W726F	Flat Face



No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A126 Class B
2	Seat Ring	ASTM B62
3	Wedge Face Ring	ASTM B62
4	Wedge	ASTM A126 Class B
5	Stem	ASTM B16
6	Body Gasket	Non Asbestos
7	Bolts	ASTM A307-B
8	Nuts	ASTM A307-B
9	Bonnet	ASTM A126 Class B
10	Back Seat Bushing	ASTM B584
11	Packing	Non Asbestos
12	Packing Gland	ASTM B584
13	Gland Follower Bolts	ASTM A307-B
14	Gland Follower Nuts	ASTM A307-B
15	Gland Follower	ASTM A536 65-45-12
16	Yoke Bushing	ASTM B62
17	Yoke Bushing Nut	ASTM A126 Class B
18	Screw	ASTM A307-B
19	Handwheel	ASTM A126 Class B
20	Identification Plate	Aluminum
21	Handwheel Nut	ASTM A536 65-45-12

Dimensions

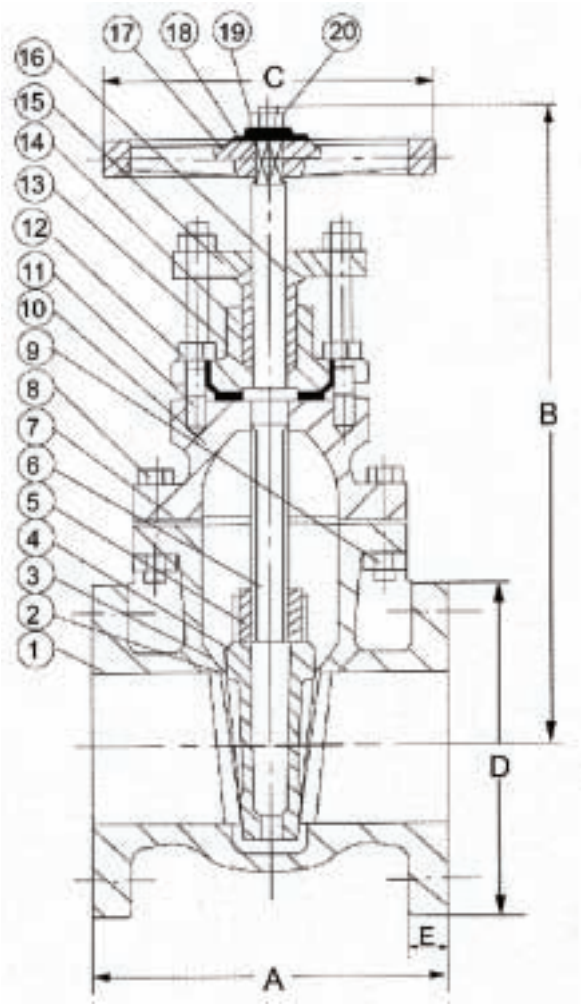
D Nominal Diameter	MM / INCH	50 2	65 2 1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12	350 14	400 16	450 18	500 20	600 24
A	MM	177.8	190	203.2	228.6	254	266.7	292.1	330.2	355.6	381	406.4	431.8	457.2	508
	INCH	7	7 1/2	8	9	10	10 1/2	11 1/2	13	14	15	16	17	18	20
B	MM	349	391	454	562	660	781	930	1184	1391	1640	1804	2090	2490	2960
	INCH	13 3/4	15 3/8	17 7/8	22 1/8	26	30 3/4	36	5/8	54 3/4	64 9/16	71	82 1/4	98 1/32	116 1/2
C	MM	178	178	200	254	300	300	348	400	457	508	558	610	610	762
	INCH	7	7	8	10	12	12	13 11/16	16	18	20	22	24	24	30
D	MM	152	178	180	229	254	279.4	343	406	483	533	597	635	699	813
	INCH	6	7	7 1/2	9	10	11	13 1/2	16	19	21	23 1/2	25	27 1/2	32
E	MM	15.9	17.5	19.1	23.8	23.8	25.4	28.6	30.2	31.8	35.0	36.6	39.7	42.9	47.7
	INCH	5/8	1 1/16	3/4	15/16	15/16	1	1 1/8	1 3/16	1 1/4	1 3/8	1 7/16	19/16	1 11/16	1 7/8
Weight	KG	17	23	28	50	70	92	129	208	289	496	647	789	946	1445
	LB	37.5	50.7	61.7	110.2	154.3	202.8	284.4	458.5	637.1	1093.5	1426.4	1739.4	2085.5	3185.6

WALWORTH CAST IRON GATE VALVE CLASS 125

- Design According to MSS SP-70
- Flanges Drilled According to ANSI B16.1
- Face to Face Dimensions According to ANSI B16.10
- Solid Wedge
- Bolted Bonnet
- Non-Rising Stem
- Working Pressure: 125 WSP, 200 WOG
- Service Conditions, WSP-Steam Sevice, WOG-Water, Oil, Gas Service
- Construction Available in all Types of Iron

Figure No.	Ends
W719F	Flat Face

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A126 Class B
2	Seat Ring	ASTM B62
3	Wedge Face Ring	ASTM B62
4	Wedge	ASTM A126 Class B
5	Wedge Connection	ASTM B62
6	Stem	ASTM B16
7	Body Gasket	Non Asbestos
8	Bolts	ASTM A307-B
9	Nuts	ASTM A307-B
10	Bonnet	ASTM A126 Class B
11	Gland Follower Bolts	ASTM A307-B
12	Stuffing Box Gasket	Non Asbestos
13	Stuffing Box	ASTM A126 Class B
14	Packing	Non Asbestos
15	Gland Follower	ASTM A536 65-45-12
16	Packing Gland	ASTM B584
17	Handwheel	ASTM A126 Class B
18	Identification Plate	Aluminum
19	Washer	ASTM A307-B
20	Handwheel Nut	ASTM A307-B



Dimensions

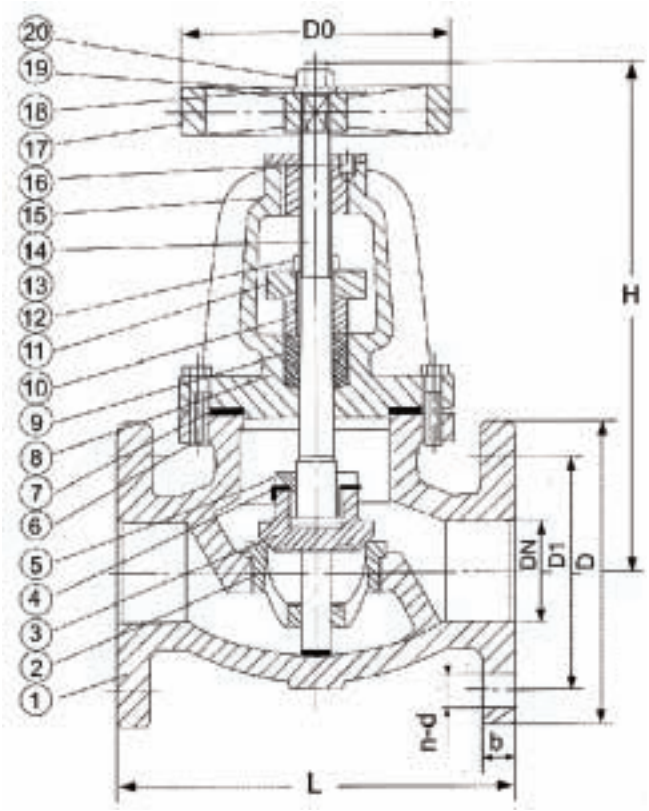
D Nominal Diameter	MM / INCH	50 2	65 2 1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12	350 14	400 16	450 18	500 20	600 24	750 30	900 36
A	MM	177.8	190	203.2	228.6	254	266.7	292.1	330.2	355.6	381	406.4	431.8	457.2	508	609.2	711.2
	INCH	7	7 1/2	8	9	10	10 1/2	11 1/2	13	14	15	16	17	18	20	24	28
B	MM	280	318	333	387	453	502	635	735	875	940	1080	1180	1380	1460	2140	2340
	INCH	11	12 1/2	13 1/8	15 1/4	17 13/16	19 3/4	25	28 15/16	34 7/16	37	42 1/2	46 1/4	54 5/16	57 1/2	84 1/4	92 1/8
C	MM	178	178	200	254	300	300	348	400	457	508	558	610	610	762	762	762
	INCH	7	7	8	10	12	12	13 11/16	16	18	20	22	24	24	30	30	30
D	MM	152	178	190	229	254	279.4	343	406	483	533	597	635	699	813	984	1168
	INCH	6	7	7 1/2	9	10	11	13 1/2	16	19	21	23 1/2	25	27 1/2	32	38 3/4	46
E	MM	15.9	17.5	19.1	23.8	23.8	25.4	28.6	30.2	31.8	35	36.6	39.7	42.9	50	64	60.4
	INCH	5/8	11/16	3/4	15/16	15/16	1	1 1/8	1 3/16	1 1/4	1 3/8	1 7/16	1 9/16	1 11/16	1 7/8	2 1/8	2 3/8
Weight	KG	16.5	21.6	26.6	47.2	68	87	118	197	275	440	614	772	993	1432	2728	4000
	LB	36.4	47.6	58.6	104.1	149.9	191.8	260.1	434.3	606.3	970	1353.6	1702.6	2189.2	3157	6014.1	8818

WALWORTH CAST IRON GLOBE VALVE CLASS 125

- Design According to MSS SP-85
- Flanges Drilled According to ANSI B16.1
- Face to Face Dimensions According to ANSI B16.10
- Bolted Bonnet
- Rising Stem
- Working Pressure: 125 WSP, 200 WOG
- Service Conditions, WSP-Steam Sevice, WOG-Water, Oil, Gas Service

Figure No.	Ends
W906F	Flat Face

No.	DESCRIPTION	STANDARD MATERIAL
1	Body	ASTM A126 Class B
2	Seat Ring	ASTM B62
3	Wedge Face Ring	ASTM B62
4	Gasket	ASTM B16
5	Swivel Nut	ASTM B584
6	Bolts	ASTM A307-B
7	Body Gasket	Non Asbestos
8	Bonnet	ASTM A126 Class B
9	Packing	Non Asbestos
10	Packing Gland	ASTM B584
11	Gland Follower	ASTM A536 65-45-12
12	Gland Follower Bolts	ASTM A307-B
13	Nuts	ASTM A307-B
14	Stem	ASTM B16
15	Yoke Bushing	ASTM B62
16	Screws	ASTM A307-B
17	Handwheel	ASTM A126 Class B
18	Identification Plate	Aluminum
19	Washer	ASTM A307-B
20	Handwheel Nut	ASTM A307-B



Dimensions

D Nominal Diameter	MM / INCH	50 2	65 2 1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12
L	MM	203.2	251.9	241.3	292.1	330.2	355.6	495.3	622.3	698.5
	INCH	8	8 1/2	9 1/2	11 1/2	13	14	19 1/2	24 1/2	27 1/2
D	MM	152	178	190	228.6	254	279.4	343	406	483
	INCH	6	7	7 1/2	9	10	11	13 1/2	16	19
D1	MM	121	140	152.5	190.5	215.9	241.3	298.5	362	432
	INCH	4 3/4	5 1/2	6	7 1/2	8 1/2	9 1/2	11 3/4	14 1/2	17
b	MM	15.9	17.5	19	23.8	23.8	25.4	28.6	30.2	31.8
	INCH	5/8	11/16	3/4	15/16	15/16	1	1 1/8	1 3/16	1 1/4
n-d	MM	4-19	4-19	4-19	8-19	8-22.5	8-22.5	8-22.5	12-25.4	12-25.4
	INCH	4-3/4	4-3/4	4-3/4	8-3/4	8-7/8	8-7/8	8-7/8	12-1	12-1
DO	MM	178	178	200	254	300	300	348	400	457
	INCH	7	7	8	10	12	12	13 11/16	16	18
H	MM	259	300	318	402	419	479	537	640	733
	INCH	10 3/16	11 13/16	12 1/2	15 13/16	16 1/2	18 7/8	21 1/8	25 3/16	28 7/8
Weight	KG	13	20	24	42	64	83	141	227	335
	LB	28.6	44.1	52.9	92.6	141.1	183	310.8	500.4	738.5

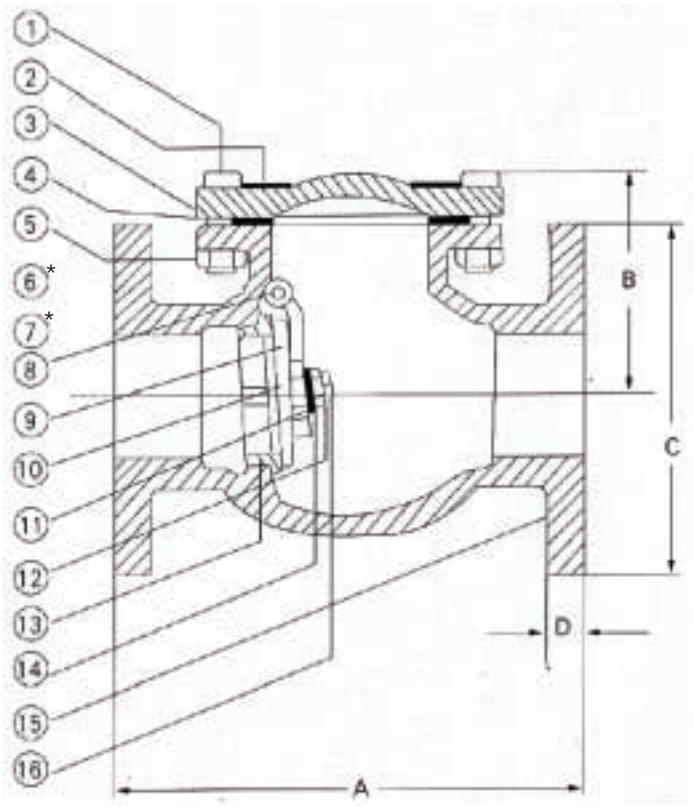
WALWORTH CAST IRON SWING CHECK VALVE CLASS 125

- Design According to MSS SP-71
- Flanges Drilled According to ANSI B16.1
- Face to Face Dimensions According to ANSI B16.10
- Bolted Flanged Cover
- Working Pressure: 125 WSP, 200 WOG
- Service Conditions, WSP-Steam Sevice, WOG-Water, Oil, Gas Service

Figure No.	Ends
W928F	Flat Face

No.	DESCRIPTION	STANDARD MATERIAL
1	Bolts	ASTM A307-B
2	Identification Plate	Aluminum
3	Cover	ASTM A126 Class B
4	Body Gasket	Non Asbestos
5	Nuts	ASTM A307-B
6	Side Plug*	ASTM B16
7	Plug Gasket	Non Asbestos
8	Hanger Pin	ASTM B16
9	Hanger	ASTM A536 65-45-12
10	Disc	ASTM A126 Class B
11	Disc Ring	ASTM B62
12	Washer	ASTM A307-B
13	Split Pin	Stainless Steel 420
14	Seat Ring	ASTM B62
15	Disc Nut	ASTM A307-B
16	Body	ASTM A126 Class B
17	Stud Bolt	ASTM A307-B

*NOT SHOWN



Dimensions

D Nominal Diameter	MM / INCH	50 / 2	65 / 2 1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12
A	MM	203.2	251.9	241.3	292.1	330.2	355.6	495.3	622.3	698.5
	INCH	8	8 1/2	9 1/2	11 1/2	13	14	19 1/2	24 1/2	27 1/2
B	MM	113	133	142	163	197	212	257	299	331
	INCH	4 7/16	5 1/4	5 5/8	6 13/32	7 3/4	8 11/32	10 1/8	11 3/4	13
C	MM	152	178	190	228.6	254	279.4	343	406	483
	INCH	6	7	7 1/2	9	10	11	13 1/2	16	19
D	MM	15.95	17.5	19	23.8	23.8	25.4	28.6	30.2	31.8
	INCH	5/8	11/16	3/4	15/16	15/16	1	1 1/8	1 3/16	1 1/4
Weight	KG	20	22.4	29	42.5	62	88.4	143	220	290
	LB	44.1	49.4	63.9	93.7	136.7	194.9	315.2	485	639.3

PRESSURE-TEMPERATURE CHART FOR GRAY IRON VALVES

Walworth Iron-Bodied Gate, Globe and Check Valves, Maximum Allowable Pressure, Psig, in accordance with MSS-SP-70

GRAY IRON			
Temperature in degrees ºF	Class 125 200 WOG NPS 2"-12"	NPS 14"-24"	NPS 30"-48"
-20 to 100	200	150	150
200	190	135	115
225	180	130	100
250	175	125	85
275	170	120	65
300	165	110	50
325	155	105	
350	150	100	
375	145		
400	140		
425	130		
**450	125		

The temperature indicated for the corresponding classification will be the temperature of the metal of the pressure-containing parts. It will be assumed that the temperature of the metal will be the temperature of the fluid content.

** Maximum temperature for bronze trims.

CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES

MATERIAL SPECIFICATIONS — CAST IRON

Cast gray iron is an iron alloy composed of iron, carbon, silicon and manganese. Cast gray iron is the most versatile of all foundry metals. The high carbon content is responsible for ease of melting and casting in the foundry and for ease of machining in subsequent manufacturing. The low degree or absence of shrinkage and high fluidity provide a quality casting.

This grade of cast gray iron is a higher strength iron modified to control the microstructure and hardness. It achieves its greater strength as a result of fine control of the chemical composition and graphite flake size and type. It is through the control of these elements and through the addition of other alloy elements that the desired stress properties are obtained.

Cast gray iron is used extensively in valve fittings and other pressure containing parts of various sizes.

GRAY IRON	ASTM A126 Class B
Chemical Requirements	**percentage**
Phosphorus	0.75 max.
Sulfur	0.15 max.
Stress Requirements	
Tensile Strength, psi	31000 min.
Hardness	195 Hb.

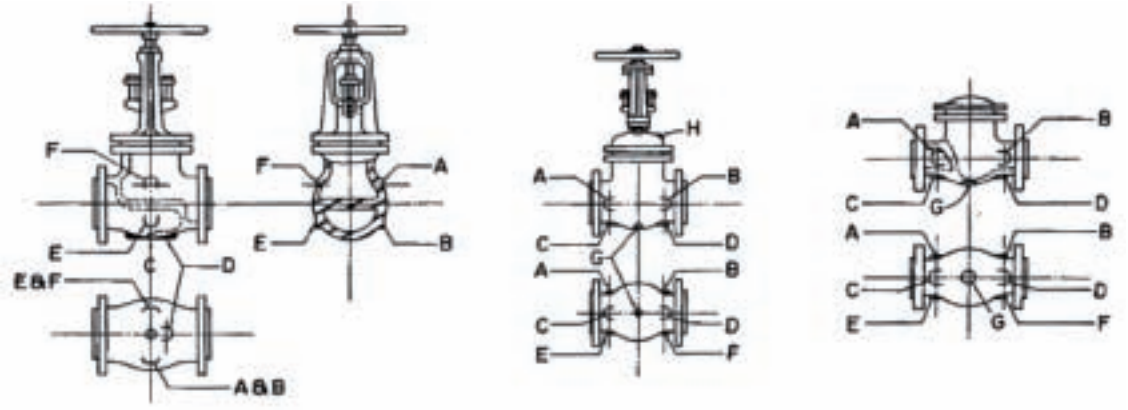
CHAIN WHEEL OPERATORS

All **Walworth®** handwheel or gear operated valves can be furnished with chain wheels. Chain wheels are normally furnished with chain guides to prevent the chain from jumping off the wheel and to increase traction. To order specify the valve size, figure number, the type of chain wheel required and length of chain.

BYPASSES AND DRAINS

Walworth® Iron Body Valves can be furnished with bypasses suitable for equalizing pressure around the main valve or for warming up the line preparatory to opening the main valve. Bosses for bypasses and drains are provided on iron valve castings at locations in accordance with MSS-SP-45 and may be tapped and/or plugged according to the size chart. The bypass valve will be a globe valve.

The standard method for designating the location(s) of bypass and/or drain connections is shown on the drawings. Always specify the valve size, figure number and tap location by letter. Should a tapping or boss be required at some other point, both the inquiry and order should be accompanied by a sketch clearly indicating the desired location.



MSS Standard Practice SP-45 Series A for Steam Service			
Size of Main Valve, Inches	4	5 to 8	10 to 24
Size of Bypass Valve, Inches	1/2	3/4	1

OPERATING NUTS

Non-rising stem gate valves may be provided with operating nuts instead of handwheels when the valve is to be installed in an inaccessible location. All operating nuts are a standard 2” square which permits operation with a square socket wrench. Specify valve size and figure number when ordering.

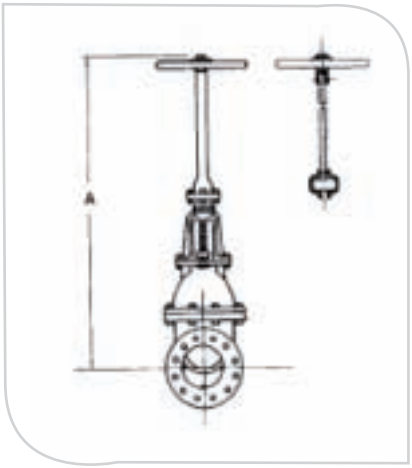
IRON VALVE ACCESSORIES

POSITION INDICATOR

Non-rising stem gate valves may be fitted with position indicators to indicate the valve disc position. A needle is provided that indicates full open, partly open or closed as the valve is operated. Installation may be factory or field mounted. Specify the size and figure number of the valve when ordering.

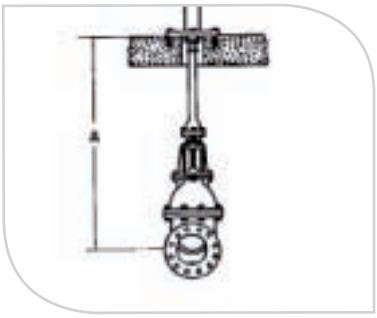
STEM EXTENSIONS

Stem extensions are designed to permit remote operation of valves by providing an extension to the valve stem long enough to reach the desired operating location. The user must provide supports that keep long extensions that are over 12 ft from buckling. The support must be rigid and strong enough to prevent “wind up”, deflection or transmit abnormal forces to the valve. Specify valve size, figure number and dimension (A) from the center of the pipeline to the top of the handwheel when ordering.



FLOOR STANDS

Floor stands are designed to operate valves that are installed under floors or operating platforms and may also be equipped with position indicators. To order specify the valve size, figure number and dimension (A) from the pipeline center to the top of the floor and if a position indicator is required.



LEVER

Walworth® Swing Check Valves are available with an outside lever and weight. The lever and weight arrangement is used to prevent disc flutter and also to assist/control the disc closing under rapid flow reversal conditions to prevent damage to the disc or seat. A spring can also be used with a lever to provide more rapid closing. A dash pot or snubber can be used to soften the closing during a flow reversal. Add LW as a suffix to the figure number.

Lever and spring swing check

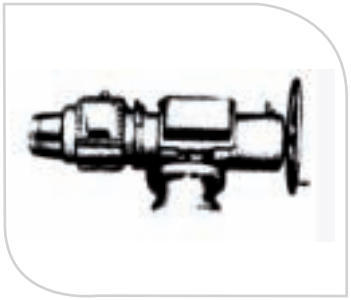
Outside lever and weight

ACTUATORS

Operation by conventional handwheel or lever is not always suitable to perform the function of the valve. A manual gear unit may be furnished to gain mechanical advantage or to retard the closing and opening speed of operation. An electric or air actuator may be utilized to operate from a remote location. Process computerization may require sophisticated electric actuators.

Walworth® Valves can be furnished with any of these types of valve operators. It is extremely important that the correct method of operation to be selected and that all relevant details of the required device to be stated when ordering the valve/operator unit.

ELECTRIC ACTUATORS



The following information is required along with the size and type of valve:

- Maximum differential pressure across valve
- Opening and closing speed in seconds
- Electric characteristics (AC or DC, voltages, phases, cycles)
- Maximum temperature of line medium and ambient temperature at valve location
- Type of frequency of service (regulating or intermittent)
- Class desired (weatherproof or explosion-proof)
- Type of contact-panel enclosure
- Type of control-station enclosure
- Control voltage
- Any special equipment not covered above

AIR, GAS OR HYDRAULIC MOTOR ACTUATORS

When a compressed air or gas supply is the power source, an actuator utilizing an “air” motor may be used. The following information is required along with the size and type of valve:

- Maximum differential pressure across valve
- Opening and closing speed in seconds
- Pressure of compressed gas supply
- Method of control and control accessories required

The valves may also be equipped with an actuator utilizing a Hydraulic Motor.

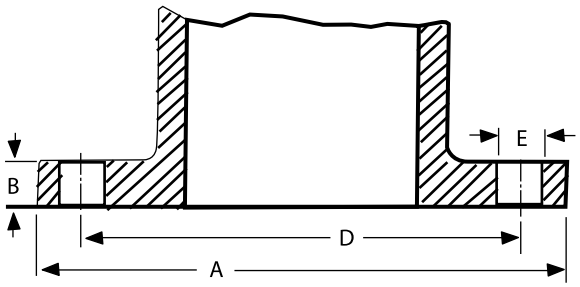
MANUAL GEARING

When the handwheel or lever is to be replaced by a manual gear unit the following information is required along with the size and type of valve:

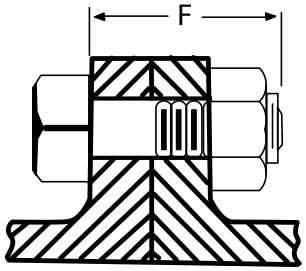
- Maximum differential pressure across valve
- Is the operator for buried service
- Is the operator weatherproof
- Is hammer blow feature required
- Position of handwheel on gearing in relation to pipeline

DIMENSIONS OF PIPE FLANGES AND UNIONS

Dimensions of Iron Pipe Flanges According to ANSI B16.1



Class 125 Cast Iron



Length of Machine Bolt

CLASS 125 CAST IRON FLANGES

Dimensions in Inches

Flanges			Drilling			Bolting	
Nominal Pipe Size	Flange Diameter A	Flange Thickness B	Bolt Hole Circle Diameter D	Bolt Hole Diameter E	Number of Stud Bolts E	Stud Bolt Diameter	Stud Bolt Length F
1	4 1/4	7/16	3 1/8	5/8	4	1/2	1 3/4
1 1/4	4 5/8	1/2	3 1/2	5/8	4	1/2	2
1 1/2	5	9/16	3 7/8	5/8	4	1/2	2
2	6	5/8	4 3/4	3/4	4	5/8	2 1/4
2 1/2	7	11/16	5 1/2	3/4	4	5/8	2 1/2
3	7 1/2	3/4	6	3/4	4	5/8	2 1/2
4	9	15/16	7 1/2	3/4	8	5/8	3
5	10	15/16	8 1/2	7/8	8	3/4	3
6	11	1	9 1/2	7/8	8	3/4	3 1/4
8	13 1/2	1 1/8	11 3/4	7/8	8	3/4	3 1/2
10	16	1 3/16	14 1/4	1	12	7/8	3 3/4
12	19	1 1/4	17	1	12	7/8	3 3/4
14	21	1 3/8	18 3/4	1 1/8	12	1	4 1/4
16	23 1/2	1 7/16	21 1/4	1 1/8	16	1	4 1/2
18	25	1 9/16	22 3/4	1 1/4	16	1 1/8	4 3/4
20	27 1/2	1 11/16	25	1 1/4	20	1 1/8	5
24	32	1 7/8	29 1/2	1 3/8	20	1 1/4	5 1/2
30	38 3/4	2 1/8	36	1 3/8	28	1 1/4	6 1/4
36	46	2 3/8	42 3/4	1 5/8	32	1 1/2	7

- The lengths of the stud bolts refer to the flange thicknesses specified above.
- For valves or fittings with integral flanges the bolt holes, which are in multiples of four are machined with equidistant bolt holes and aligned with the center line of the valve or fitting.
- Class 125 Cast Iron flanges have flat faces.

APPLICABLE STANDARDS AND CODES

ASME STANDARDS

B16.1	Cast Iron Pipe Flanges and Flanged Fittings
B16.10	Face to Face and End to End Dimensions of Ferrous Valves
B16.21	Non-Metallic Flat Gasket for Pipe Flanges

MSS STANDARDS

MSS SP-6	Standard Finishes for Contact Faces of Pipe Flanges and Connecting End Flanges of Valves and Fittings
MSS SP-9	Spot Facing for Bronze, Iron and Steel Flanges
MSS SP-25	Standard Marking System for Valves, Fittings, Flanges and Unions
MSS SP-45	Bypass and Drain Connection Standard
MSS SP-70	Cast Iron Gate Valves, Flanged and Threaded Ends
MSS SP-71	Cast Iron Swing Check Valves, Flanged and Threaded Ends
MSS SP-82	Valve Pressure Test Methods
MSS SP-85	Cast Iron Globe and Angle Valves, Flanged and Threaded Ends
MSS SP-91	Guidelines for Manual Operation of Valves


G. W719
GATE
WALWORTH
FIG. W726

TERMS AND CONDITIONS

Acceptance: All quotations for acceptance within 30 days from date of quotation unless extended in writing. In the event a purchase order is placed after this period of time, TWC The Valve Company reserves the right to requote base prices of all valves offered. All order and contracts are subject to credit approval and acceptance by TWC The Valve Company.

Freight: When prices are F.O.B. point of shipment – no freight allowance, Walworth will attempt to route shipments in the method which will result in the lowest cost unless otherwise instructed. All shipments will be freight charges collect except when stipulated on the purchase order in which case the buyer will be invoiced for all transportation charges.

Delivery of material to a common carrier shall be considered to be delivery to Buyer and shall be at Buyer's risk thereafter.

The Buyer shall file claims of loss or damage to material in transit directly with the carrier.

Prices: There will be added to all prices quoted, any sales, use, occupation, excise or similar tax which Seller may be required to pay or collect in connection with the sale. Seller reserves the right to cancel any order in the event that selling price(s) shall be established by the Federal, State or other government regulation with respect to the product(s) covered by the order which shall be lower than the price(s) specified in the order.

Escalation Terms: Price shown in the price schedule reflects the cost in effect at the time of publication.

These prices will remain firm on all products with a quoted delivery of twenty-six (26) weeks or less.

On products which have a scheduled delivery of more than twenty-six (26) weeks the goods will be invoiced.

Based on the applicable price sheet in effect at the time of the shipment. In no event will the invoiced price be less than the price originally quoted.

Purchased Components: (i.e. motors, gearing, etc.) Prices are quoted on supplier price in effect at time of quotation. Actual invoice price may be adjusted in accordance with the supplier's escalation policy.

Deferred Shipments: If for any reason the customer desires to delay shipments more than 30 days after manufacturing is complete or to place a hold or stop to the order during the manufacturing cycle, TWC The Valve Company reserves the right to consider the order cancelled and to invoke cancellation charges per the schedule below.

Cancellation: After order acceptance by Walworth, items or complete orders may be cancelled and Buyer will be charged for work performed, based on the following schedule:

Five (5%) percent of price of stock items.

Ten (10%) percent of price of stock items ordered in quantities which exceed normal inventory levels.

Five (5%) percent of price prior to drawing submittal on made to order items.

Fifteen (15%) percent drawing approval, but prior to the start of castings.

Thirty (30%) to Fifty (50%) percent during casting cycle, depending on the state of completion.

Fifty-Five (55%) to Seventy-Five (75%) percent during machining and assembly operations, depending on the state of completion.

One hundred (100%) percent after final assembly and test.

Remittances: Remittances must be made to the address indicated on the invoice.

Credit Terms: As quote. Invoices on balances overdue will be subject to a service charge of one and a half ($1\frac{1}{2}$%) percent per month on such indebtedness.

Deliveries: Shipments and deliveries shall at all times be subject to the approval of Seller's Credit Department. If the Buyer shall fail to make any payments according to the terms of the contract, Seller may in addition to and not in limitation of its other rights and remedies, at its option, cancel all or any part of Buyer's contracts with Seller except upon receipt of satisfactory security or for cash before shipment.

All schedules of shipment are estimated as closely as possible and Seller will use its best efforts to ship within the time scheduled, but does not guarantee to do so. Schedules commence with the date Seller receives authorization to proceed with the order, subject to the provisions of the next sentence. The order will not be released for manufacture until complete specifications and approved drawings (if drawings approval is required) are received at the plant of manufacture and the estimated schedule of shipment will commence with the date of such receipt.

Seller shall not be liable for any direct, indirect or consequential damage or loss caused by any delay in delivery, regardless of the cause of delay. Without limiting the generality of the foregoing, Seller assumes no responsibility for delays in delivery resulting from fire, flood, accidents, riots, strikes, transportation delays, labor or material shortages, existing or future laws, acts of any governmental authority, or any other cause beyond Seller's control. Items offered from stock are subject to prior sale.

Inspection: Final inspection and acceptance of products must be made at the plant facility, unless otherwise provided in the order and/or agreed upon specifications. Prices do not include charges for special tests or inspections performed at the request of the Buyer, unless called for in the order and/or in agreed upon specifications.

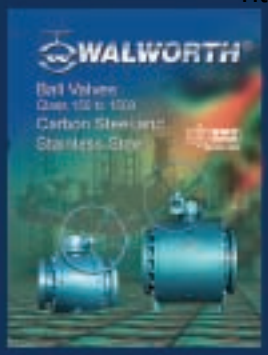
Returns: Permission in writing and return tagging instructions must be obtained from Seller before any goods returned for credit or adjustment will be accepted. Where returned goods are accepted, a minimum charge of twenty-five percent (25%) of the invoice price will be made, plus freight from both directions and costs of reconditioning the material for resale as new.

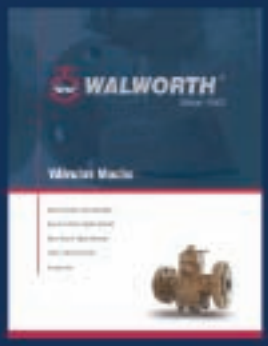
Warranty: Seller will replace without charge or refund the purchase price of products manufactured by Seller which prove to be defective in material or workmanship, provided in each case that the product is properly installed and is used in the service for which the Seller recommends it and that a written claim, specifying the alleged defect, is presented to Seller within one year from date of shipment. Seller shall in no event be responsible for (a) claims for labor, expenses or other damages occasioned by defective products or (b) for consequential or secondary damages. **THE WARRANTY STATED IN THIS PARAGRAPH IS IN LIEU OF ALL OTHER WARRANTIES EITHER EXPRESSED OR IMPLIED. WITH RESPECT TO WARRANTIES THIS PARAGRAPH STATES BUYER'S EXCLUSIVE REMEDY AND SELLER'S EXCLUSIVE LIABILITY.**

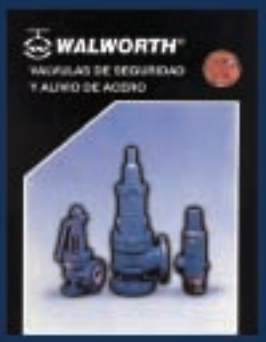
Design, etc.: Seller reserves the right to change design, materials or specifications without notice. There will be a charge for modifying an order after it has been entered when such change or modification results in additional engineering or clerical work for either TWC The Valve Company or our suppliers.

Minimum charge: Orders totaling less than $100.00 (one hundred 00/100 U.S. CY) net will be billed at a minimum charge of $50.00 (fifty 00/100 U.S. CY).

Note: We reserve the right to correct obvious clerical errors in quotations, invoices and other contracts.







WALWORTH®

Since 1842

MEXICO
Industrial de Válvulas S.A. de C.V.
Feacc. de la Industrial El Trébol
C.P. 54600 Tepotzotlán
Edo. de México
Tel. (52 55) 5899-1700
Tel. (52 55) 5876-0100
Fax. (52 55) 5899-1782
Fax. (52 55) 5899-1703
E-mail: ventas@walworth.com.mx
www.walworthmx.com

USA
TWC The Valve Company L.L.C.
4300 Campbell Road
Suite 100
Houston, TX 77041
Phone. (1 713) 996-9696
Toll Free. (1 800) 697-1842
Fax. (1 713) 996-9669
Toll Free. (1 800) 472-1842
E-mail: info@twcwalworth.com
www.twcwalworth.com

WALWORTH FORGED STEEL **GATE VALVES**

The Gate Valve is used when the need exist for a device that allows an interruption or cut off the flow of a fluid.
Gate Valves are not to be used for flow modulation as the high velocity of the 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.
- Renewable or integral seats.
- 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 atmoshphere. The ultra-low emission leakage rate is assured by the fine finish on the stem sealing area, the reduced diametrical clearences 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.

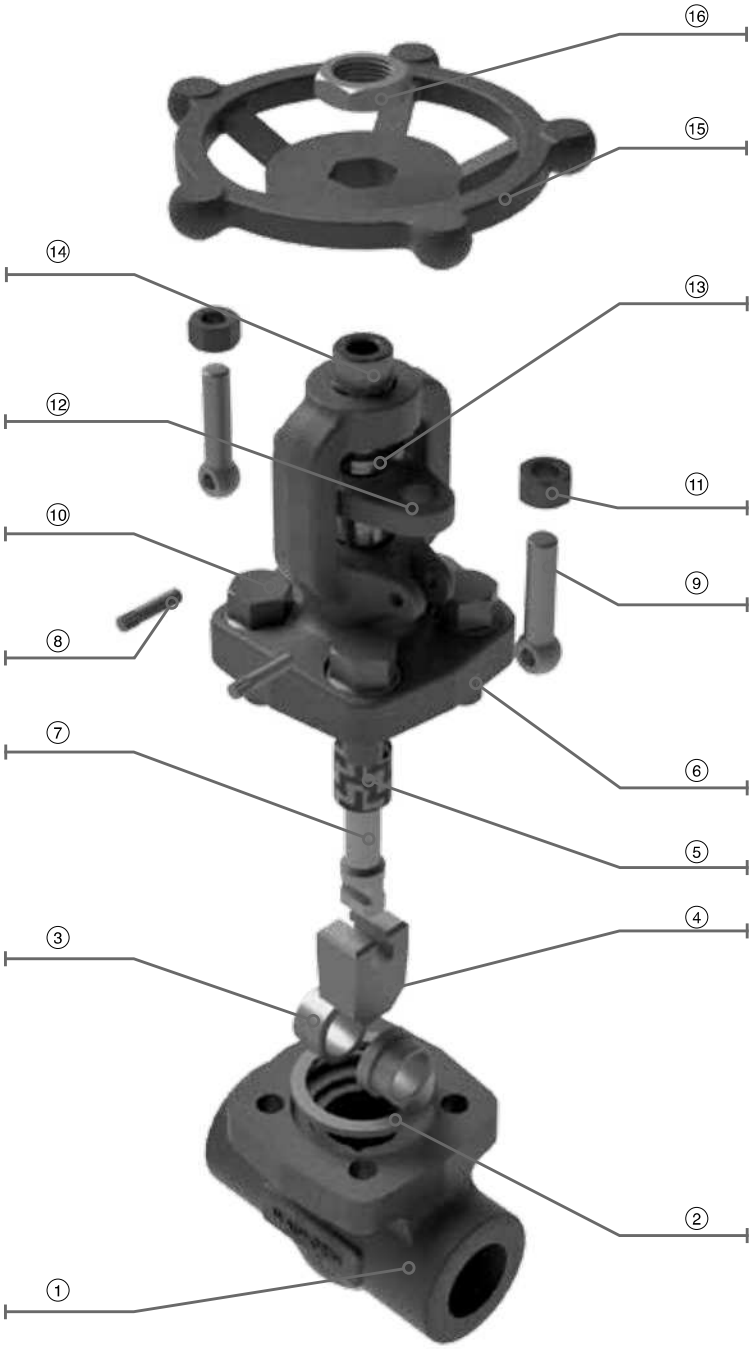
Body to bonnet joint designed to apply a uniform load to the gasket to assure a leak proof seal.

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	EYED BOLT PIN	A276-304
9	EYED 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

* NOT SHOWN



FORGED STEEL GATE VALVE **THREADED 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
- Stellite Renewable Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	800 Bolted Bonnet	950S 950SW 950SSW	950S 950SW 950SSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Full	800 Bolted Bonnet	958S 958SW 958SSW	958S 958SW 958SSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Standard	800 Welded Bonnet	957S 957SW 957SSW	957S 957SW 957SSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Full	800 Welded Bonnet	959S 959SW 959SSW	959S 959SW 959SSW	THREADED SOCKET WELD THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 950 STANDARD PORT, BOLTED BONNET

SIZES	INCHES / MM	1/4" 6	3/8" 10	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 5
A	INCHES	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)	INCHES	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	INCHES	3.94	3.94	3.94	3.94	4.72	6.30	6.30	7.09
	MM	100	100	100	100	120	160	160	180
D	INCHES	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	INCHES	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	POUNDS	4.18	4.18	4.4	4.84	7.92	12.1	13.64	21.34
	KILOGRAMS	1.9	1.9	2.0	2.2	3.6	5.5	6.2	9.7

FIG. 957 STANDARD PORT, WELDED BONNET

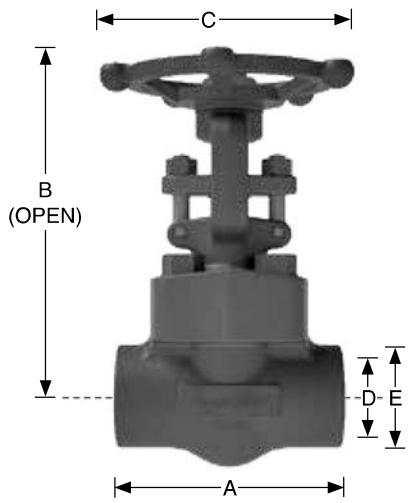
SIZES	INCHES / MM	1/4" 6	3/8" 10	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.11	3.11	3.11	3.62	4.37	4.72	4.72	5.51
	MM	79	79	79	92	111	120	120	140
B (OPEN)	INCHES	6.18	6.18	6.34	6.34	7.48	8.66	9.45	10.98
	MM	157	157	161	161	190	220	240	279
C	INCHES	3.94	3.94	3.94	3.94	4.72	6.30	6.30	7.09
	MM	100	100	100	100	120	160	160	180
D	INCHES	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	INCHES	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	POUNDS	3.74	3.74	3.96	4.4	7.48	11.66	13.2	20.9
	KILOGRAMS	1.7	1.7	1.8	2.0	3.4	5.3	6.0	9.5

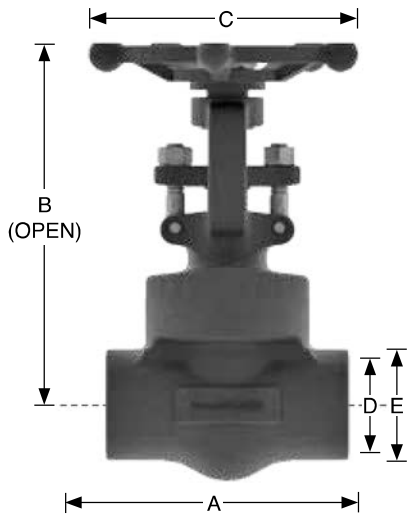
FIG. 958 FULL PORT, BOLTED BONNET

SIZES	INCHES / MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.62	4.37	4.72	4.72	5.51	6.30
	MM	92	111	120	120	140	160
B (OPEN)	INCHES	6.02	7.28	8.74	9.45	10.98	13.11
	MM	153	185	222	240	279	333
C	INCHES	3.94	4.72	6.30	6.30	7.09	7.87
	MM	100	120	160	160	180	200
D	INCHES	0.51	0.71	0.94	1.14	1.45	1.89
	MM	13	18	24	29	37	48
E	INCHES	1.57	1.93	2.28	2.52	3.07	3.23
	MM	40	49	58	64	78	82
WEIGHT	POUNDS	7.26	8.36	12.76	14.74	22.66	33.44
	KILOGRAMS	3.3	3.8	5.8	6.7	10.3	15.2

FIG. 959 FULL PORT, WELDED BONNET

SIZES	INCHES / MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.62	4.37	4.72	4.72	5.51	6.30
	MM	92	111	120	120	140	160
B (OPEN)	INCHES	6.34	7.48	8.66	9.45	10.98	12.56
	MM	161	190	220	240	279	319
C	INCHES	3.94	4.72	6.30	6.30	7.09	7.87
	MM	100	120	160	160	180	200
D	INCHES	0.51	0.71	0.94	1.14	1.45	1.45
	MM	13	18	24	29	36.8	36.8
E	INCHES	1.57	1.93	2.28	2.52	3.07	3.46
	MM	40	49	58	64	78	88
WEIGHT	POUNDS	7.04	8.14	12.54	14.52	22.44	33.22
	KILOGRAMS	3.2	3.7	5.7	6.6	10.2	15.1





FORGED STEEL GATE VALVE THREADED 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
- Stellite Renewable Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	1500 Bolted Bonnet	1950S	1950S	THREADED
		1950SW	1950SW	SOCKET WELD
		1950SSW	1950SSW	THREADED X SOCKET WELD
Full	1500 Bolted Bonnet	1951S	1951S	THREADED
		1951SW	1951SW	SOCKET WELD
		1951SSW	1951SSW	THREADED X SOCKET WELD
Standard	1500 Welded Bonnet	1957S	1957S	THREADED
		1957SW	1957SW	SOCKET WELD
		1957SSW	1957SSW	THREADED X SOCKET WELD
Full	1500 Welded Bonnet	1958S	1958S	THREADED
		1958SW	1958SW	SOCKET WELD
		1958SSW	1958SSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 1950 STANDARD PORT, BOLTED BONNET

SIZES	INCHES / MM	1/4" 6	3/8" 10	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	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)	INCHES	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	INCHES	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	INCHES	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	INCHES	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	POUNDS	6.60	7.04	7.70	8.80	13.20	15.40	23.76	34.10
	KILOGRAMS	3.0	3.2	3.5	4.0	6.0	7.0	10.8	15.5

FIG. 1957 STANDARD PORT, WELDED BONNET

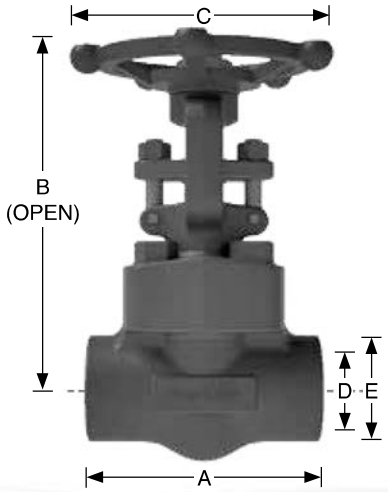
SIZES	INCHES / MM	1/4" 6	3/8" 10	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.11	3.62	3.62	4.37	4.72	4.72	5.51	6.30
	MM	79	92	92	111	120	120	140	160
B (OPEN)	INCHES	6.89	7.01	7.13	7.13	8.58	9.33	10.79	12.56
	MM	175	178	181	181	218	237	274	319
C	INCHES	3.94	3.94	4.92	4.92	6.30	6.30	7.09	7.87
	MM	100	100	125	125	160	160	180	200
D	INCHES	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	INCHES	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	POUNDS	6.16	6.6	7.26	8.14	12.54	14.74	23.1	33.44
	KILOGRAMS	2.8	3.0	3.3	3.7	5.7	6.7	10.5	15.2

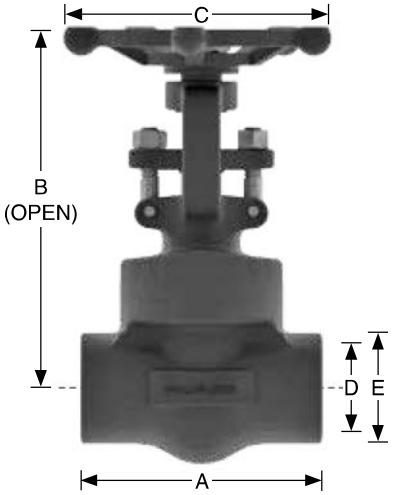
FIG. 1951 FULL PORT, BOLTED BONNET

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

FIG. 1958 FULL PORT, WELDED BONNET

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





FORGED STEEL GATE VALVE **THREADED 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.
- Stellite Renewable Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
STANDARD	2500	952S	952S	THREADED
	WELDED	952SW	952SW	SOCKET WELD
	BONNET	952SSW	952SSW	THREADED X SOCKET WELD
FULL	2500	962S	962S	THREADED
	WELDED	962SW	962SW	SOCKET WELD
	BONNET	962SSW	962SSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 952 WELDED BONNET, STANDARD PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A	INCHES	5.91	5.91	6.69	7.87	7.87	9.84
	MM	150	150	170	200	200	250
B (OPEN)	INCHES	9.96	9.96	11.46	13.35	13.46	15.67
	MM	253	253	291	339	342	398
C	INCHES	6.30	6.30	7.87	9.84	9.84	11.81
	MM	160	160	200	250	250	300
D	INCHES	0.55	0.55	0.75	0.98	1.10	1.38
	MM	14	14	19	25	28	35
E	INCHES	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	POUNDS	15.4	14.96	22	33	43.34	57.2
	KILOGRAMS	7.0	6.8	10.0	15.0	19.7	26.0

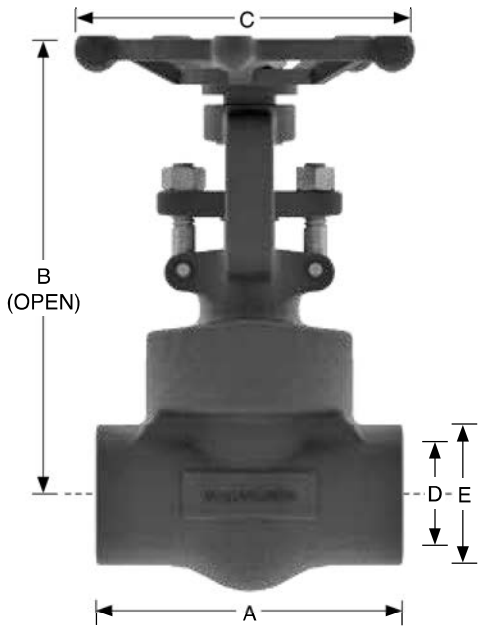


FIG. 962 WELDED BONNET, FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A	INCHES	5.91	6.69	7.87	7.87	9.84	10.63
	MM	150	170	200	200	250	270
B (OPEN)	INCHES	9.96	11.46	13.35	13.46	15.67	16.54
	MM	253	291	339	342	398	420
C	INCHES	6.30	7.87	9.84	9.84	11.81	12.60
	MM	160	200	250	250	300	320
D	INCHES	0.55	0.75	0.98	1.10	1.38	1.57
	MM	14	19	25	28	35	40
E	INCHES	2.05	2.52	3.15	3.15	3.74	3.94
	MM	52.0	64.0	80.0	80.0	95.0	100.0
WEIGHT	POUNDS	14.96	22	33	43.34	57.2	66
	KILOGRAMS	6.8	10.0	15.0	19.7	26.0	30.0

FORGED STEEL GATE VALVE **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
- Stellite Renewable Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	150	9515RF	9515F	FLANGED RAISED FACE
		9515RTJ	9515RTJ	FLANGED RING TYPE JOINT
Standard	300	9530RF	9530F	FLANGED RAISED FACE
		9530RTJ	9530RTJ	FLANGED RING TYPE JOINT
Standard	600	9560RF	9560F	FLANGED RAISED FACE
		9560RTJ	9560RTJ	FLANGED RING TYPE JOINT

DIMENSIONS & WEIGHTS

FIG. 9515 STANDARD PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	4.25	4.63	5.00	5.50	6.50	7.00
	MM	108	118	127	140	165	178
A (RJ)	INCHES	4.76	5.19	5.50	6.00	7.00	7.50
	MM	121	132	140	178	178	191
B (OPEN)	INCHES	6.02	6.02	7.28	8.74	9.45	10.98
	MM	153	153	185	222	240	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.71	0.94	1.14	1.45	1.89
	MM	13	18	24	29	37	48
WEIGHT	POUNDS	6.6	7.7	12.1	14.96	22.88	31.68
	KILOGRAMS	3.0	3.5	5.5	6.8	10.4	14.4

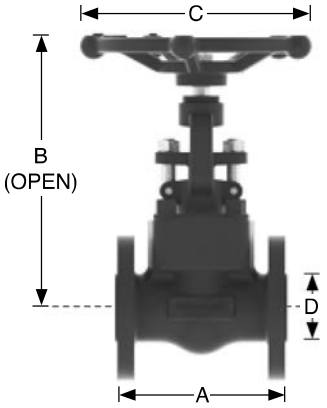


FIG. 9530 STANDARD PORT

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

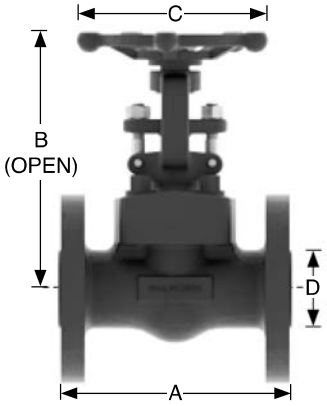
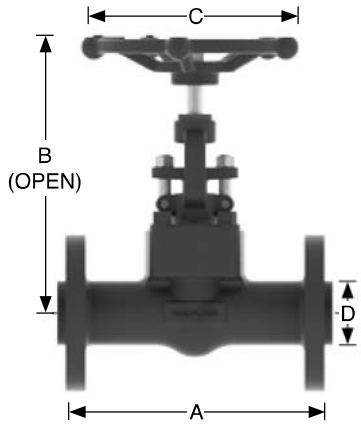


FIG. 9560 STANDARD PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	6.50	7.50	8.50	9.00	9.50	11.50
	MM	165	191	216	229	241	292
A (RJ)	INCHES	6.44	7.50	8.50	9.00	9.50	11.63
	MM	164	191	216	229	241	295
B (OPEN)	INCHES	6.02	6.02	7.28	8.74	9.45	10.98
	MM	153	153	185	222	240	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.71	0.94	1.14	1.45	1.89
	MM	13	18	24	29	37	48
WEIGHT	POUNDS	9.24	12.76	19.36	26.62	33	42.9
	KILOGRAMS	4.20	5.80	8.80	12.10	15.00	19.50



FORGED STEEL GATE VALVE **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
- Stellite Renewable Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Full	150	9518RF	9518F	FLANGED RAISED FACE
		9518RTJ	9518RTJ	FLANGED RING TYPE JOINT
Full	300	9538RF	9538F	FLANGED RAISED FACE
		9538RTJ	9538RTJ	FLANGED RING TYPE JOINT
Full	600	9568RF	9568F	FLANGED RAISED FACE
		9568RTJ	9568RTJ	FLANGED RING TYPE JOINT

DIMENSIONS & WEIGHTS

FIG. 9518 FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	4.25	4.63	5.00	5.50	6.50	7.00
	MM	108	118	127	140	165	178
A (RJ)	INCHES	4.76	5.19	5.50	6.00	7.00	7.50
	MM	121	132	140	178	178	191
B (OPEN)	INCHES	6.02	6.02	7.28	8.74	9.45	10.98
	MM	153	153	185	222	240	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.71	0.94	1.14	1.45	1.89
	MM	13	18	24	29	37	48
WEIGHT	POUNDS	6.6	7.7	12.1	14.96	22.88	31.68
	KILOGRAMS	3.0	3.5	5.5	6.8	10.4	14.4

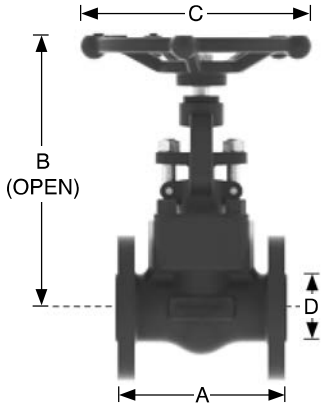


FIG. 9538 FULL PORT

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

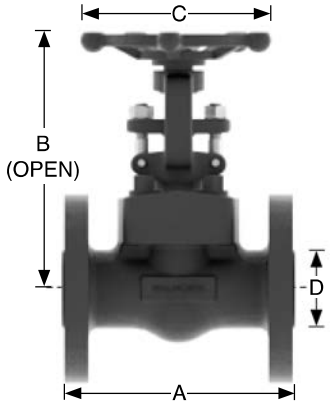
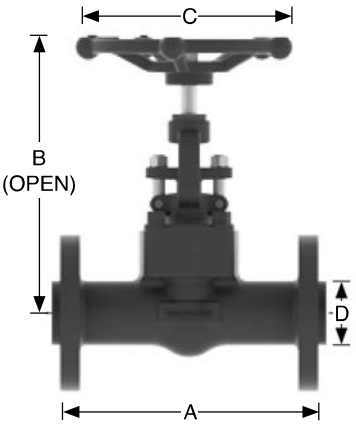


FIG. 9568 FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	6.50	7.50	8.50	9.00	9.50	11.50
	MM	165	191	216	229	241	292
A (RJ)	INCHES	6.44	7.50	8.50	9.00	9.50	11.63
	MM	164	191	216	229	241	295
B (OPEN)	INCHES	6.02	6.02	7.28	8.74	9.45	10.98
	MM	153	153	185	222	240	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.71	0.94	1.14	1.45	1.89
	MM	13	18	24	29	37	48
WEIGHT	POUNDS	9.24	12.76	19.36	26.62	33	42.9
	KILOGRAMS	4.20	5.80	8.80	12.10	15.00	19.50



FORGED STEEL GATE VALVE **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
- Stellite Renewable Seat Rings

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	1500 Bolted Bonnet	19515RF	19515F	FLANGED RAISED FACE
		19515RTJ	19515RTJ	FLANGED RING TYPE JOINT
Full	1500 Bolted Bonnet	19185RF	19185F	FLANGED RAISED FACE
		19185RTJ	19185RTJ	FLANGED RING TYPE JOINT

DIMENSIONS & WEIGHTS

FIG. 19515 STANDARD PORT, BOLTED BONNET

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A	INCHES	8.58	9.02	10.00	10.98	12.01	14.49
	MM	218	229	254	279	305	368
B (OPEN)	INCHES	7.13	7.13	11.06	9.33	10.79	12.56
	MM	181	181	281	237	274	319
C	INCHES	4.92	4.92	6.30	6.30	7.09	7.87
	MM	125	125	160	160	180	200
D	INCHES	0.51	0.51	0.71	0.94	1.14	1.45
	MM	13	13	18	24	29	36.8
WEIGHT	POUNDS	15.84	25.3	34.32	35.64	50.16	62.04
	KILOGRAMS	7.2	11.5	15.6	16.2	22.8	28.2

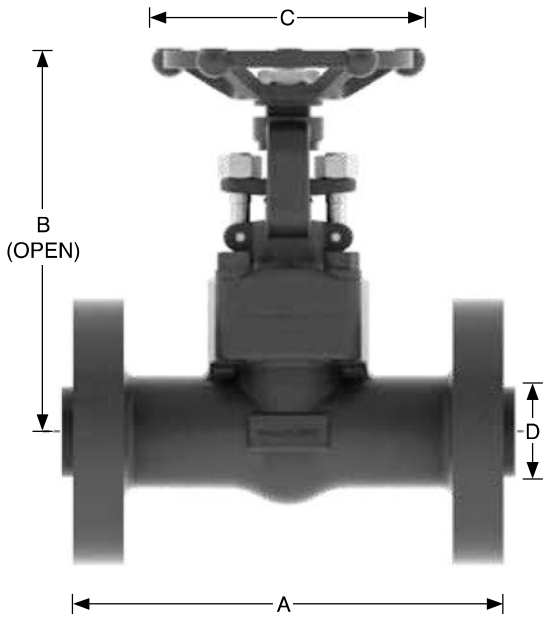


FIG. 19185 FULL PORT, BOLTED BONNET

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A	INCHES	9.02	10.00	10.98	12.01	14.49	15.75
	MM	229	254	279	305	368	400
B (OPEN)	INCHES	7.13	11.06	9.33	10.79	12.56	13.78
	MM	181	281	237	274	319	350
C	INCHES	4.92	6.30	6.30	7.09	7.87	8.66
	MM	125	160	160	180	200	220
D	INCHES	0.51	0.71	0.94	1.14	1.45	1.77
	MM	13	18	24	29	37	45
WEIGHT	POUNDS	25.3	34.32	35.64	50.16	62.04	77
	KILOGRAMS	11.5	15.6	16.2	22.8	28.2	35.0

WALWORTH FORGED STEEL **GLOBE VALVES**

The Globe Valves are primarly used to modulate or regulate the volume of the flow.

A Globe Valve is not recommended when a continuous full flow of fluid is required due to the high pressure drop inherent to the design of a Globe Valve.

This type of valve should always be installed so the flow intake enters through the base of the valve seat. The valve has an arrow stamped on the body to indicate the preferred direction on flow.

Globe Valves may be used with fluids containing particles in suspension.

DESIGN **FEATURES**

- Valves in accordance with API-602.
- Socket Weld, Threaded, Combined or Flanged RF or RTJ ends.
- Bolted Bonnet or Wel ded Bonnet options.
- Standard or Full Port.
- Low fugitive emissions control.
- NACE Service either MR-0175 or MR-0103.
- Test in accordance with API-598

Rising stem with precision acme thread.

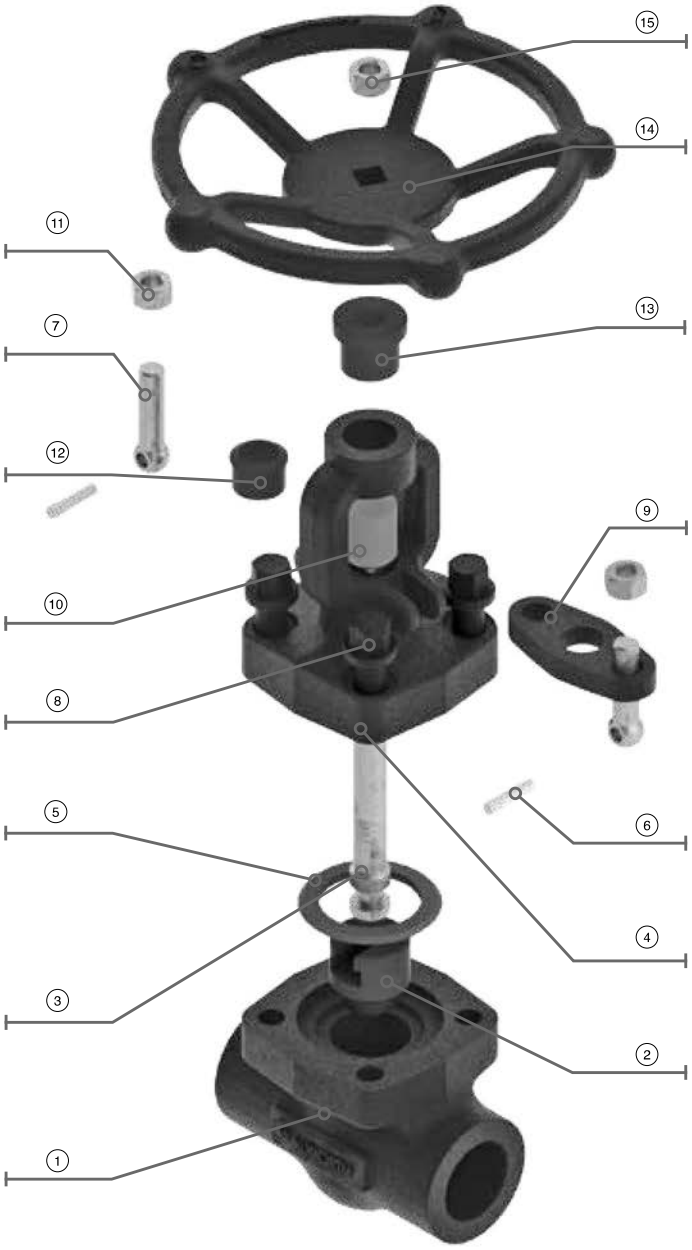
Stem packing is designed for optimum control of fugitive emissions leakage to the atmosphere. The ultra-low emission leakage rate is assured by the fine finish on the stem, the reduced diametrical clearances and the stem straightness control.

Backseat designed to reliev e 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.

Stellited seat ring, providing increased resistance to wear, abrasion and erosion of the sealing surface.

Integral welded seat or threaded seat.



REGULAR BILL OF MATERIALS

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

* NOT SHOWN

FORGED STEEL GLOBE VALVE **THREADED SW CLASS 800**

Design Characteristics

- API 602 & ASME B16.34
- Bolted or Welded Bonnet
- Tapered loose disc
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld.
- Spiral Wound Gasket
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	800 Bolted Bonnet	5520S 5520SW 5520SSW	5520S 5520SW 5520SSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Full	800 Bolted Bonnet	5528S 5528SW 5528SSW	5528S 5528SW 5528SSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Standard	800 Welded Bonnet	5527S 5527SW 5527SSW	5527S 5527SW 5527SSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Full	800 Welded Bonnet	5529S 5529SW 5529SSW	5529S 5529SW 5529SSW	THREADED SOCKET WELD THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5520 STANDARD PORT, BOLTED BONNET

SIZES	INCHES / MM	1/4" 6	3/8" 10	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.11	3.11	3.11	3.62	3.62	4.72	5.98	6.77
	MM	79	79	79	92	92	120	152	172
B (OPEN)	INCHES	6.06	6.06	6.22	6.22	6.22	8.94	9.45	10.98
	MM	154	154	158	158	158	227	240	279
C	INCHES	3.94	3.94	3.94	3.94	3.94	6.30	6.30	7.09
	MM	100	100	100	100	100	160	160	180
D	INCHES	0.26	0.39	0.39	0.51	0.51	0.91	1.12	1.38
	MM	6.5	10.0	10.0	13.0	13.0	23.0	28.5	35.0
E	INCHES	1.34	1.34	1.34	1.57	1.57	2.24	2.52	3.07
	MM	34	34	34	40	40	57	64	78
WEIGHT	POUNDS	4.62	4.62	4.4	4.84	5.5	12.1	15.4	25.3
	KILOGRAMS	2.1	2.1	2.0	2.2	2.5	5.5	7.0	11.5

FIG. 5527 STANDARD PORT, WELDED BONNET

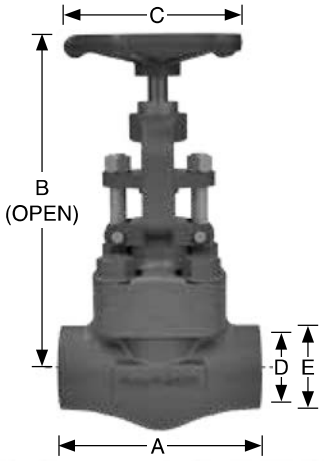
SIZES	INCHES / MM	1/4" 6	3/8" 10	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.11	3.11	3.11	3.62	4.37	4.72	5.98	6.77
	MM	79	79	79	92	111	120	152	172
B (OPEN)	INCHES	6.06	6.06	6.22	6.22	7.56	8.94	9.45	10.98
	MM	154	154	158	158	192	227	240	279
C	INCHES	3.94	3.94	3.94	3.94	4.72	6.30	6.30	7.09
	MM	100	100	100	100	120	160	160	180
D	INCHES	0.26	0.39	0.39	0.51	0.69	0.91	1.12	1.38
	MM	6.5	10.0	10.0	13.0	17.5	23.0	28.5	35.0
E	INCHES	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	POUNDS	4.4	4.4	4.18	4.62	8.14	11.88	15.18	25.08
	KILOGRAMS	2.0	2.0	1.9	2.1	3.7	5.4	6.9	11.4

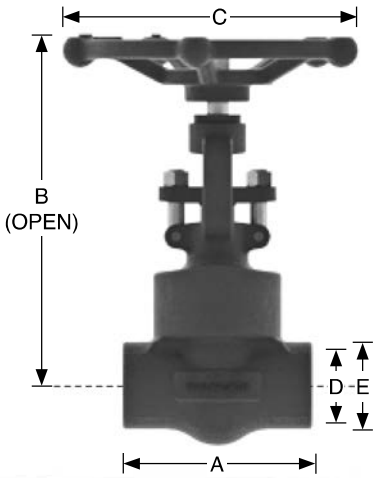
FIG. 5528 FULL PORT, BOLTED BONNET

SIZES	INCHES / MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.62	4.37	4.72	5.98	6.77	8.66
	MM	92	111	120	152	172	220
B (OPEN)	INCHES	6.22	7.56	8.94	9.45	10.98	12.80
	MM	158	192	227	240	279	325
C	INCHES	3.94	4.72	6.30	6.30	7.09	7.87
	MM	100	120	160	160	180	200
D	INCHES	0.51	0.69	0.91	1.12	1.40	1.85
	MM	13	17.5	23.0	28.5	35.5	47.0
E	INCHES	1.57	1.93	2.28	2.52	3.07	3.46
	MM	40	49	58	64	78	88
WEIGHT	POUNDS	4.84	8.36	12.1	15.4	25.3	26.4
	KILOGRAMS	2.2	3.8	5.5	7.0	11.5	12.0

FIG. 5529 FULL PORT, WELDED BONNET

SIZES	INCHES / MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.62	4.37	4.72	5.98	6.77	8.66
	MM	92	111	120	152	172	220
B (OPEN)	INCHES	6.22	7.56	8.94	9.45	10.98	12.80
	MM	158	192	227	240	279	325
C	INCHES	3.94	4.72	6.30	6.30	7.09	7.87
	MM	100	120	160	160	180	200
D	INCHES	0.51	0.69	0.91	1.12	1.42	1.85
	MM	13	17.5	23.0	28.5	36.0	47.0
E	INCHES	1.57	1.93	2.28	2.52	3.11	3.46
	MM	40	49	58	64	79	88
WEIGHT	POUNDS	4.62	8.14	11.88	15.18	25.08	26.18
	KILOGRAMS	2.1	3.7	5.4	6.9	11.4	11.9





FORGED STEEL GLOBE VALVE THREADED SW CLASS 1500

Design Characteristics

- API 602 & ASME B16.34
- Bolted or Welded Bonnet
- Tapered loose disc
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld.
- Spiral Wound Gasket
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	1500	5521S	5521S	THREADED
	Bolted	5521SW	5521SW	SOCKET WELD
	Bonnet	5521SSW	5521SSW	THREADED X SOCKET WELD
Full	1500	5538S	5538S	THREADED
	Bolted	5538SW	5538SW	SOCKET WELD
	Bonnet	5538SSW	5538SSW	THREADED X SOCKET WELD
Standard	1500	5537S	5537S	THREADED
	Welded	5537SW	5537SW	SOCKET WELD
	Bonnet	5537SSW	5537SSW	THREADED X SOCKET WELD
Full	1500	5539S	5539S	THREADED
	Welded	5539SW	5539SW	SOCKET WELD
	Bonnet	5539SSW	5539SSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5521 STANDARD PORT, BOLTED BONNET

SIZES	INCHES MM	1/4" 6	3/8" 10	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.11	3.62	3.62	4.37	4.72	5.98	6.77	8.66
	MM	79	92	92	111	120	152	172	220
B (OPEN)	INCHES	6.89	7.01	7.36	7.36	8.94	9.53	10.94	12.80
	MM	175	178	187	187	227	242	278	325
C	INCHES	3.94	4.92	4.92	4.92	6.30	6.30	7.09	7.87
	MM	100	125	125	125	160	160	180	200
D	INCHES	0.26	0.39	0.39	0.51	0.69	0.91	1.12	1.38
	MM	6.5	10.0	10.0	13.0	17.5	23.0	28.5	35.0
E	INCHES	1.34	1.65	1.65	1.93	2.28	2.52	3.07	3.46
	MM	34	42	42	49	58	64	78	88.0
WEIGHT	POUNDS	6.6	6.6	7.7	8.8	13.86	17.6	27.5	42.9
	KILOGRAMS	3.0	3.0	3.5	4.0	6.3	8.0	12.5	19.5

FIG. 5537 STANDARD PORT, WELDED BONNET

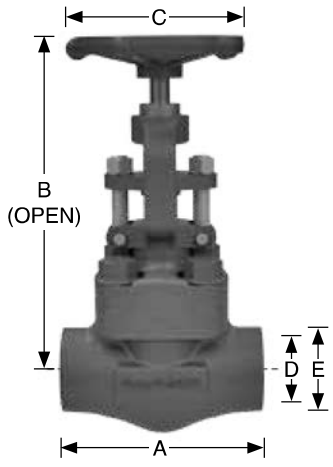
SIZES	INCHES MM	1/4" 6	3/8" 10	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	3.11	3.62	3.62	4.37	4.72	5.98	6.77	8.66
	MM	79	92	92	111	120	152	172	220
B (OPEN)	INCHES	6.22	6.22	7.36	7.36	8.94	9.53	10.94	12.80
	MM	158	158	187	187	227	242	278	325
C	INCHES	3.94	3.94	4.92	4.92	6.30	6.30	7.09	7.87
	MM	100	100	125	125	160	160	180	200
D	INCHES	0.39	0.51	0.51	0.51	0.69	0.91	1.12	1.38
	MM	10	13	13	13	17.5	23.0	28.5	35.0
E	INCHES	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	POUNDS	6.6	6.6	7.7	8.8	13.86	17.6	27.5	42.9
	KILOGRAMS	3.0	3.0	3.5	4.0	6.3	8.0	12.5	19.5

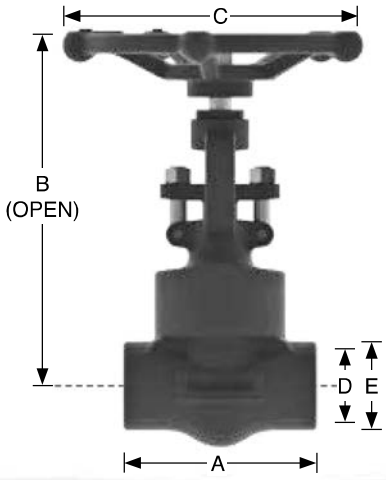
FIG. 5538 FULL PORT, BOLTED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.37	4.72	5.98	6.77	8.66	9.84
	MM	111	120	152	172	220	250
B (OPEN)	INCHES	7.36	8.94	9.53	10.94	12.80	13.98
	MM	187	227	242	278	325	355
C	INCHES	4.92	6.30	6.30	7.09	7.87	7.87
	MM	125	160	160	180	200	200
D	INCHES	0.51	0.69	0.91	1.12	1.38	1.85
	MM	13	17.5	23.0	28.5	35.0	47.0
E	INCHES	1.93	2.28	2.52	3.07	3.46	3.46
	MM	49	58	64	78	88	88
WEIGHT	POUNDS	8.8	13.86	17.6	27.5	42.9	44
	KILOGRAMS	4.0	6.3	8.0	12.5	19.5	20.0

FIG. 5539 FULL PORT, WELDED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.37	4.72	5.98	6.77	8.66	8.66
	MM	111	120	152	172	220	220
B (OPEN)	INCHES	7.36	8.94	9.53	10.94	12.80	13.98
	MM	187	227	242	278	325	355
C	INCHES	4.92	6.30	6.30	7.09	7.87	7.87
	MM	125	160	160	180	200	200
D	INCHES	0.51	0.69	0.91	1.12	1.38	1.85
	MM	13	17.5	23.0	28.5	35.0	47.0
E	INCHES	1.93	2.28	2.52	3.07	3.46	3.46
	MM	49	58	64	78	88	88
WEIGHT	POUNDS	8.8	13.86	17.6	27.5	42.9	44
	KILOGRAMS	4.0	6.3	8.0	12.5	19.5	20.0





FORGED STEEL GLOBE VALVE THREADED SW CLASS 2500

Design Characteristics

- API 602 & ASME B16.34
- Welded Bonnet
- Tapered loose disc
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld.
- Spiral Wound Gasket
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	2500	5522S	5522S	THREADED
		5522SW	5522SW	SOCKET WELD
		5522SSW	5522SSW	THREADED X SOCKET WELD
Full	2500	5622S	5622S	THREADED
		5622SW	5622SW	SOCKET WELD
		5622SSW	5622SSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5522 WELDED BONNET, STANDARD PORT

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	5.91	5.91	6.69	7.87	7.87	9.84
	MM	150	150	170	200	200	250
B (OPEN)	INCHES	9.80	9.80	11.50	12.87	12.87	15.00
	MM	249	249	292	327	327	381
C	INCHES	6.30	6.30	7.87	9.84	9.84	11.81
	MM	160	160	200	250	250	300
D	INCHES	0.55	0.55	0.75	0.98	1.10	1.38
	MM	14	14	19	25	28	35
E	INCHES	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	POUNDS	18.7	16.06	27.5	46.2	45.54	79.2
	KILOGRAMS	8.5	7.3	12.5	21.0	20.7	36.0

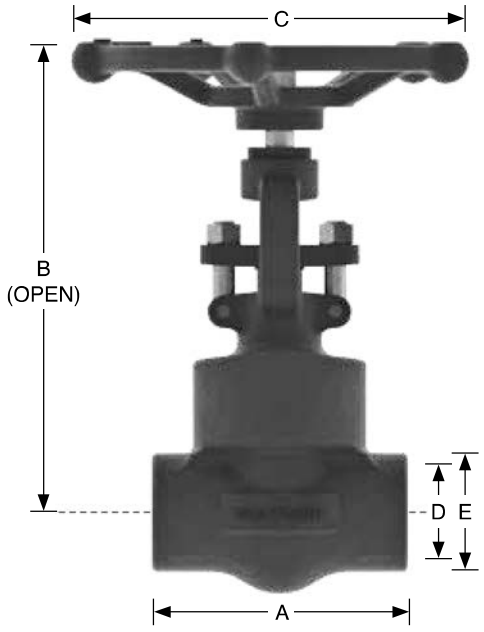


FIG. 5622 WELDED BONNET, FULL PORT

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	5.91	6.69	7.87	7.87	9.84	10.63
	MM	150	170	200	200	250	270
B (OPEN)	INCHES	9.80	11.50	12.87	12.87	15.00	15.75
	MM	249	292	327	327	381	400
C	INCHES	6.30	7.87	9.84	9.84	11.81	12.60
	MM	160	200	250	250	300	320
D	INCHES	0.55	0.75	0.98	1.10	1.38	1.57
	MM	14	19	25	28	35	40
E	INCHES	2.05	2.52	3.15	3.15	3.74	3.94
	MM	52.0	64.0	80.0	80.0	95.0	100.0
WEIGHT	POUNDS	16.06	27.5	46.2	45.54	79.2	88
	KILOGRAMS	7.3	12.5	21.0	20.7	36.0	40.0

FORGED STEEL GLOBE VALVE RF/RTJ CLASS 150, 300 & 600

Design Characteristics

- API 602 & ASME B16.34
- Bolted Bonnet
- Tapered loose disc
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard Port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral Wound Gasket
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
STANDARD	150	5615RF	5615F	FLANGED RAISED FACE
		5615RTJ	5615RTJ	FLANGED RING TYPE JOINT
STANDARD	300	5630RF	5630RF	FLANGED RAISED FACE
		5630RTJ	5630RTJ	FLANGED RING TYPE JOINT
STANDARD	600	5660RF	5660RF	FLANGED RAISED FACE
		5660RTJ	5660RTJ	FLANGED RING TYPE JOINT

DIMENSIONS & WEIGHTS

FIG. 5615 STANDARD PORT

SIZES	INCHES	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	13	19	25	32	38	51
A (RF)	INCHES	4.25	4.63	5.00	5.50	6.50	8.00
	MM	108	118	127	140	165	203
A (RJ)	INCHES	5.50	5.50	5.50	6.00	7.00	8.50
	MM	140	140	140	178	178	216
B (OPEN)	INCHES	6.02	6.22	7.56	8.94	9.49	10.98
	MM	153	158	192	227	241	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.69	0.91	1.12	1.40	1.85
	MM	13	17.5	23.0	28.5	35.5	47.0
WEIGHT	POUNDS	9.9	15.2	21.6	29.7	42.9	61.6
	KILOGRAMS	4.5	6.9	9.8	13.5	19.5	28.0

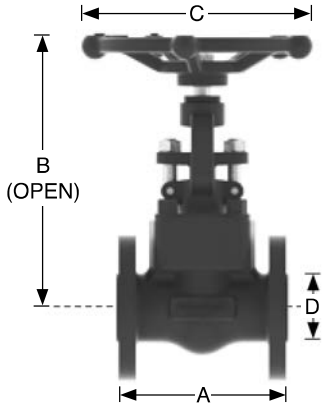


FIG. 5630 STANDARD PORT

SIZES	INCHES	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	13	19	25	32	38	51
A (RF)	INCHES	6.00	7.00	8.00	8.50	9.00	10.50
	MM	152	178	203	216	229	267
A (RJ)	INCHES	6.44	7.50	8.50	9.00	9.50	11.12
	MM	164	191	216	229	241	282
B (OPEN)	INCHES	6.22	6.22	7.56	8.94	9.49	10.98
	MM	158	158	192	227	241	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.69	0.91	1.12	1.40	1.85
	MM	13	17.5	23.0	28.5	35.5	47.0
WEIGHT	POUNDS	10.56	16.94	24.2	36.96	46.64	71.72
	KILOGRAMS	4.80	7.70	11.00	16.80	21.20	32.60

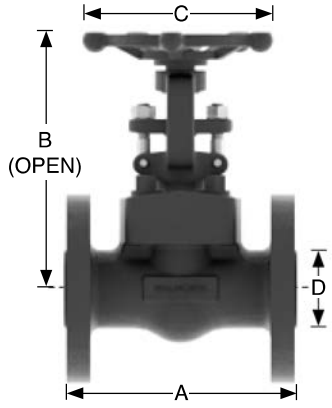
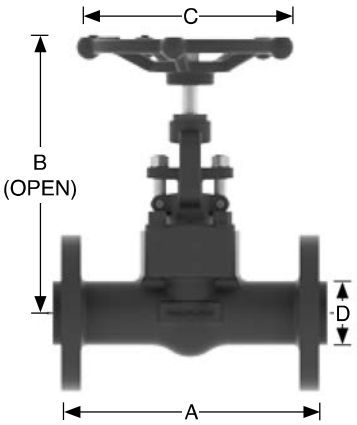


FIG. 5660 STANDARD PORT

SIZES	INCHES	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	13	19	25	32	38	51
A (RF)	INCHES	6.50	7.50	8.50	9.00	9.50	11.50
	MM	165	191	216	229	241	292
A (RJ)	INCHES	6.44	7.50	8.50	9.00	9.50	11.62
	MM	164	191	216	229	241	295
B (OPEN)	INCHES	6.22	6.22	7.56	8.94	9.49	10.98
	MM	158	158	192	227	241	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.69	0.91	1.12	1.40	1.85
	MM	13	17.5	23.0	28.5	35.5	47.0
WEIGHT	POUNDS	12.32	17.16	27.5	37.4	51.7	85.36
	KILOGRAMS	5.60	7.80	12.50	17.00	23.50	38.80



FORGED STEEL GLOBE VALVE RF/RTJ CLASS 150, 300 & 600

Design Characteristics

- API 602 & ASME B16.34
- Bolted Bonnet
- Tapered loose disc
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Full Port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral Wound Gasket
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
FULL	150	5618RF 5618RTJ	5618RF 5618RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT
FULL	300	5638RF 5638RTJ	5638RF 5638RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT
FULL	600	5668RF 5668RTJ	5668RF 5668RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT

DIMENSIONS & WEIGHTS

FIG. 5618 FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	4.25	4.63	5.00	5.50	6.50	8.00
	MM	108	118	127	140	165	203
A (RJ)	INCHES	5.50	5.50	5.50	6.00	7.00	8.50
	MM	140	140	140	178	178	216
B (OPEN)	INCHES	6.02	6.22	7.56	8.94	9.49	10.98
	MM	153	158	192	227	241	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.69	0.91	1.12	1.40	1.85
	MM	13	17.5	23.0	28.5	35.5	47.0
WEIGHT	POUNDS	9.9	15.2	21.6	29.7	42.9	61.6
	KILOGRAMS	4.5	6.9	9.8	13.5	19.5	28.0

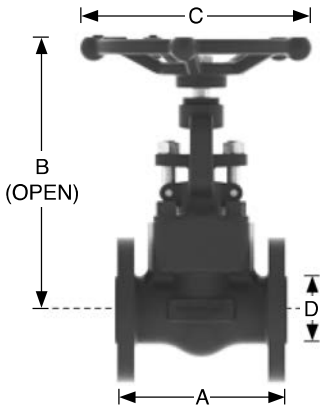


FIG. 5638 FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	6.00	7.00	8.00	8.50	9.00	10.50
	MM	152	178	203	216	229	267
A (RJ)	INCHES	6.44	7.50	8.50	9.00	9.50	11.12
	MM	164	191	216	229	241	282
B (OPEN)	INCHES	6.22	6.22	7.56	8.94	9.49	10.98
	MM	158	158	192	227	241	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.69	0.91	1.12	1.40	1.85
	MM	13	17.5	23.0	28.5	35.5	47.0
WEIGHT	POUNDS	10.56	16.94	24.2	36.96	46.64	71.72
	KILOGRAMS	4.80	7.70	11.00	16.80	21.20	32.60

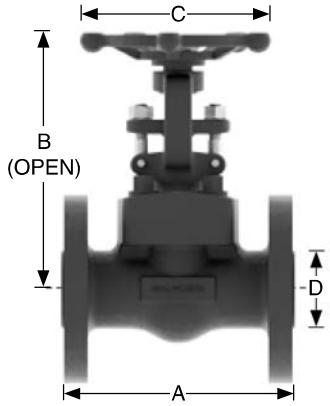
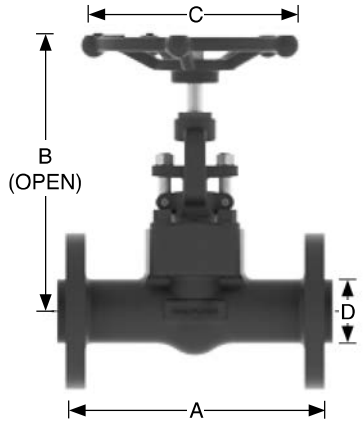


FIG. 5668 FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	6.50	7.50	8.50	9.00	9.50	11.50
	MM	165	191	216	229	241	292
A (RJ)	INCHES	6.44	7.50	8.50	9.00	9.50	11.62
	MM	164	191	216	229	241	295
B (OPEN)	INCHES	6.22	6.22	7.56	8.94	9.49	10.98
	MM	158	158	192	227	241	279
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.51	0.69	0.91	1.12	1.40	1.85
	MM	13	17.5	23.0	28.5	35.5	47.0
WEIGHT	POUNDS	12.32	17.16	27.5	37.4	51.7	85.36
	KILOGRAMS	5.60	7.80	12.50	17.00	23.50	38.80



FORGED STEEL GLOBE VALVE **RF/RTJ CLASS 1500**

Design Characteristics

- API 602 & ASME B16.34
- Bolted Bonnet
- Tapered loose disc
- 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
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	1500 Bolted Bonnet	15615RF	15615F	FLANGED RAISED FACE
		15615RTJ	15615RTJ	FLANGED RING TYPE JOINT
Full	1500 Bolted Bonnet	15685RF	15685F	FLANGED RAISED FACE
		15685RTJ	15685RTJ	FLANGED RING TYPE JOINT

DIMENSIONS & WEIGHTS

FIG. 15615 STANDARD PORT, BOLTED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	8.50	9.02	10.00	10.98	12.01	14.49
	MM	216	229	254	279	305	368
B (OPEN)	INCHES	7.36	7.36	8.94	9.53	10.94	12.80
	MM	187	187	227	242	278	325
C	INCHES	4.92	4.92	6.30	6.30	7.09	7.87
	MM	125	125	160	160	180	200
D	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
WEIGHT	POUNDS	24.2	29.04	38.28	41.8	53.9	68.2
	KILOGRAMS	11.0	13.2	17.4	19.0	24.5	31.0

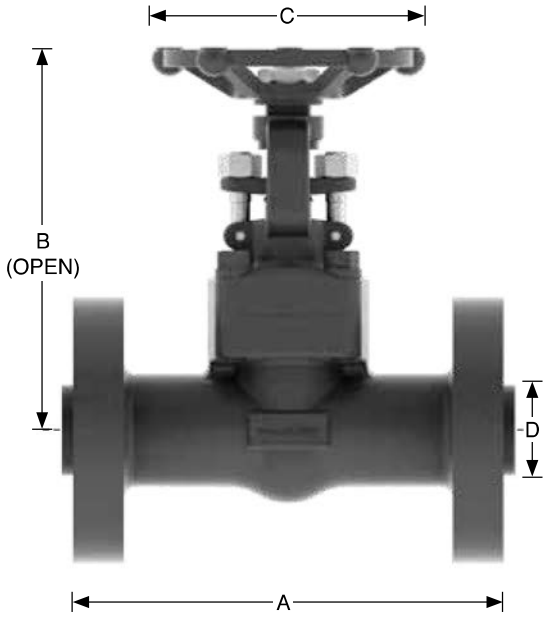


FIG. 15685 FULL PORT, BOLTED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	9.02	10.00	10.98	12.01	14.49	15.75
	MM	229	254	279	305	368	400
B (OPEN)	INCHES	7.36	8.94	9.53	10.94	12.80	13.78
	MM	187	227	242	278	325	350
C	INCHES	4.92	6.30	6.30	7.09	7.87	8.66
	MM	125	160	160	180	200	220
D	INCHES	0.51	0.69	0.91	1.12	1.38	1.57
	MM	13.0	17.5	23.0	28.5	35.0	40.0
WEIGHT	POUNDS	29.04	38.28	41.8	53.9	68.2	79.2
	KILOGRAMS	13.2	17.4	19.0	24.5	31.0	36.0

WALWORTH FORGED STEEL "Y" PATTERN GLOBE VALVES

The "Y" Pattern Globe Valves are primarly used to modulate or regulate the volume of the flow when a minor flow is required.

A "Y" Pattern Globe Valve is recommended when a continuous full flow of fluid is required due to the highest CV against a "T" Pattern Globe valve.

Also suitable to solve some troubles in the field when space limit the usage of standard "T" Pattern Globe valve.

This type of valve should always be installed so the flow intake enters through the base of the valve seat. The valve has an arrow stamped on the body to indicatethe preferred direction on flow.

Globe Valves may be used with fluids containing particles in suspension.

DESIGN FEATURES

- Valves in accordance with API-602.
- Socket Weld, Threaded, Combined Threaded x Socket Weld.
- Bolted Bonnet or Weld ed Bonnet options.
- Standard or Full Port.
- Low fugitive emissions control.
- NACE Service either MR-0175 or MR-0103.
- Test in accordance with API-598

Rising stem with precision acme thread.

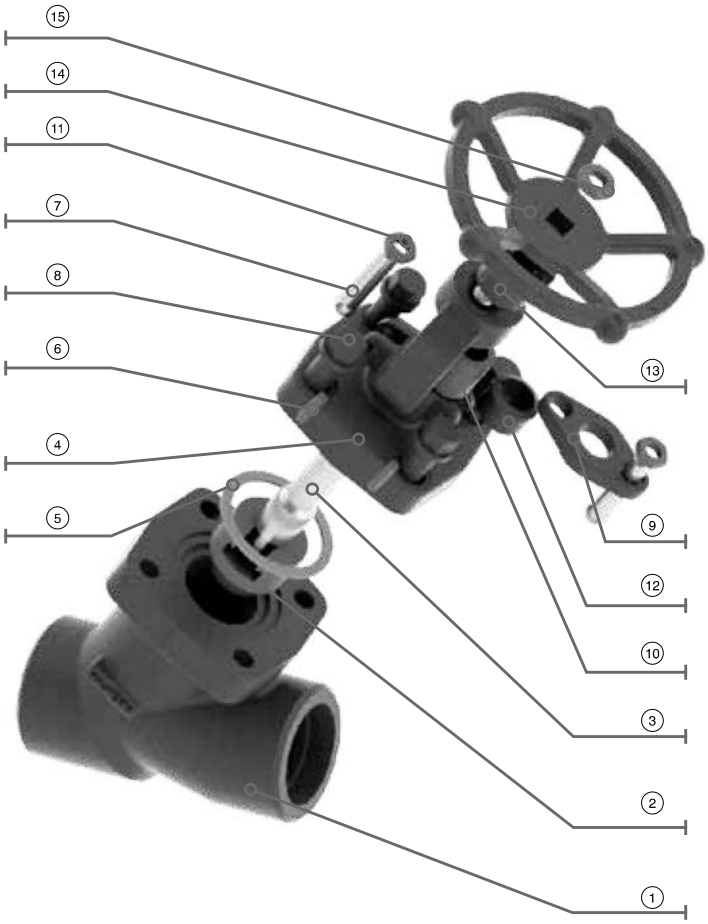
Stem packing is designed for optimum control of fugitive emissions leakage to the atmosphere. The ultra-low emission leakage rate is assured by the fine finish on the stem, the reduced diametrical clearances and the stem straightness control.

Backseat designed to reliev e 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.

Stellited seat ring, providing increased resistance to wear, abrasion and erosion of the sealing surface.

Integral welded seat or threaded seat.



REGULAR BILL OF MATERIALS

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

* NOT SHOWN

FORGED STEEL "Y" PATTERN GLOBE VALVE **SW CLASS 800**

Design Characteristics

- API 602 & ASME B16.34
- Bolted or Welded Bonnet
- Tapered loose disc
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld.
- Spiral Wound Gasket
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	800	5520YS	5520YS	THREADED
	Bolted	5520YSW	5520YSW	SOCKET WELD
	Bonnet	5520YSSW	5520YSSW	THREADED X SOCKET WELD
Full	800	5528YS	5528YS	THREADED
	Bolted	5528YSW	5528YSW	SOCKET WELD
	Bonnet	5528YSSW	5528YSSW	THREADED X SOCKET WELD
Standard	800	5527YS	5527YS	THREADED
	Welded	5527YSW	5527YSW	SOCKET WELD
	Bonnet	5527YSSW	YSSW	THREADED X SOCKET WELD
Full	800	5529YS	5529YS	THREADED
	Welded	5529YSW	5529YSW	SOCKET WELD
	Bonnet	5529YSSW	5529YSSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5520 Y STANDARD PORT, BOLTED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.17	4.17	4.72	5.98	5.98	7.09
	MM	106	106	120	152	152	180
B (OPEN)	INCHES	6.69	6.69	7.95	9.80	9.80	11.06
	MM	170	170	202	249	249	281
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
E	INCHES	1.61	1.61	1.97	2.52	2.52	3.15
	MM	41	41	50	64	64	80
WEIGHT	POUNDS	4.4	4.84	8.36	12.1	15.4	25.3
	KILOGRAMS	2.0	2.2	3.8	5.5	7.0	11.5

FIG. 5527Y STANDARD PORT, WELDED BONNET

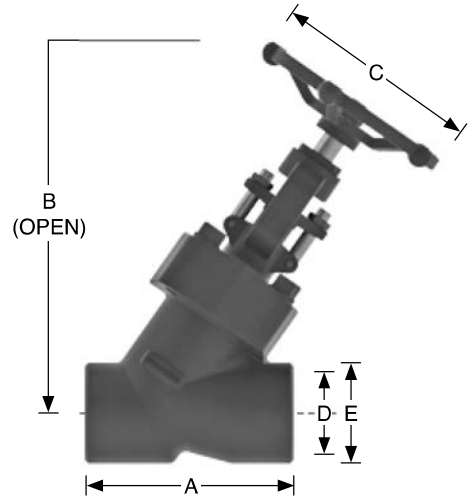
SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.17	4.17	4.72	5.98	5.98	7.09
	MM	106	106	120	152	152	180
B (OPEN)	INCHES	6.54	6.54	7.76	9.57	9.57	10.71
	MM	166	166	197	243	243	272
C	INCHES	3.94	3.94	4.92	6.30	6.30	7.09
	MM	100	100	125	160	160	180
D	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10	13.0	17.5	23.0	28.5	35.0
E	INCHES	1.61	1.61	1.97	2.52	2.52	3.15
	MM	41	41	50	64	64	80
WEIGHT	POUNDS	4.4	4.84	8.36	12.1	15.4	25.3
	KILOGRAMS	2.0	2.2	3.8	5.5	7.0	11.5

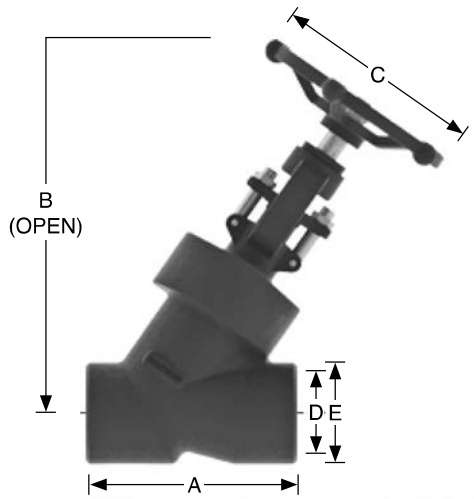
FIG. 5528Y FULL PORT, BOLTED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.17	4.72	5.98	5.98	7.09	7.87
	MM	106	120	152	152	180	200
B (OPEN)	INCHES	6.69	7.95	9.80	9.80	11.06	11.81
	MM	170	202	249	249	281	300
C	INCHES	3.94	4.92	6.30	6.30	7.09	7.87
	MM	100	125	160	160	180	200
D	INCHES	0.51	0.69	0.91	1.12	1.38	1.57
	MM	13.0	17.5	23.0	28.5	35.0	40.0
E	INCHES	1.61	1.97	2.52	2.52	3.15	3.54
	MM	41	50	64	64	80	90
WEIGHT	POUNDS	4.84	8.36	12.1	15.4	25.3	30.8
	KILOGRAMS	2.2	3.8	5.5	7.0	11.5	14.0

FIG. 5529Y FULL PORT, WELDED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.17	4.72	5.98	5.98	7.09	7.87
	MM	106	120	152	152	180	200
B (OPEN)	INCHES	6.54	7.76	9.57	9.57	10.71	11.42
	MM	166	197	243	243	272	290
C	INCHES	3.94	4.92	6.30	6.30	7.09	7.87
	MM	100	125	160	160	180	200
D	INCHES	0.51	0.69	0.91	1.12	1.38	1.57
	MM	13.0	17.5	23.0	28.5	35.0	40.0
E	INCHES	1.61	1.97	2.52	2.52	3.15	3.54
	MM	41	50	64	64	80	90
WEIGHT	POUNDS	4.84	8.36	12.1	15.4	25.3	30.8
	KILOGRAMS	2.2	3.8	5.5	7.0	11.5	14.0





FORGED STEEL "Y" PATTERN GLOBE VALVE SW CLASS 1500

Design Characteristics

- API 602 & ASME B16.34
- Bolted or Welded Bonnet
- Tapered loose disc
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld.
- Spiral Wound Gasket
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	1500 Bolted Bonnet	5521YS 5521YSW 5521YSSW	5521YS 5521YSW 5521YSSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Full	1500 Bolted Bonnet	5538YS 5538SW 5538YSSW	5538YS 5538SW 5538YSSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Standard	1500 Welded Bonnet	5537YS 5537YSW 5537YSSW	5537YS 5537YSW 5537YSSW	THREADED SOCKET WELD THREADED X SOCKET WELD
Full	1500 Welded Bonnet	5539YS 5539YSW 5539YSSW	5539YS 5539YSW 5539YSSW	THREADED SOCKET WELD THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5521 Y STANDARD PORT, BOLTED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.72	4.72	5.98	5.98	7.09	7.87
	MM	120	120	152	152	180	200
B (OPEN)	INCHES	7.87	7.87	9.84	9.84	11.14	12.76
	MM	200	200	250	250	283	324
C	INCHES	4.92	4.92	6.30	6.30	7.09	7.87
	MM	125	125	160	160	180	200
D	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
E	INCHES	1.97	1.97	2.52	2.52	3.15	3.54
	MM	50	50	64	64	80	90.0
WEIGHT	POUNDS	4.4	4.84	8.36	12.1	15.4	25.3
	KILOGRAMS	2.0	2.2	3.8	5.5	7.0	11.5

FIG. 5537 Y STANDARD PORT, WELDED BONNET

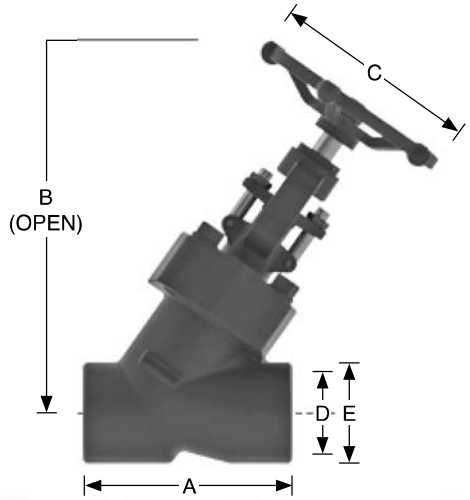
SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.72	4.72	5.98	5.98	7.09	7.87
	MM	120	120	152	152	180	200
B (OPEN)	INCHES	7.56	7.56	9.45	9.45	10.75	12.44
	MM	192	192	240	240	273	316
C	INCHES	4.92	4.92	6.30	6.30	7.09	7.87
	MM	125	125	160	160	180	200
D	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
E	INCHES	1.97	1.97	2.52	2.52	3.15	3.54
	MM	50	50	64	64	80	90.0
WEIGHT	POUNDS	4.4	4.84	8.36	12.1	15.4	25.3
	KILOGRAMS	2.0	2.2	3.8	5.5	7.0	11.5

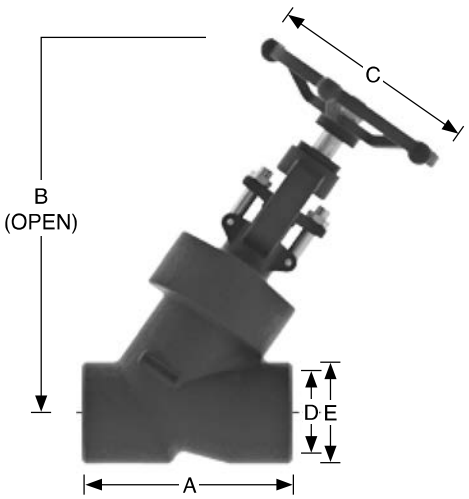
FIG. 5538 Y FULL PORT, BOLTED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.17	4.72	5.98	5.98	7.09	7.87
	MM	106	120	152	152	180	200
B (OPEN)	INCHES	6.69	7.95	9.80	9.80	11.06	11.81
	MM	170	202	249	249	281	300
C	INCHES	3.94	4.92	6.30	6.30	7.09	7.87
	MM	100	125	160	160	180	200
D	INCHES	0.51	0.69	0.91	1.12	1.38	1.57
	MM	13.0	17.5	23.0	28.5	35.0	40.0
E	INCHES	1.61	1.97	2.52	2.52	3.15	3.54
	MM	41	50	64	64	80	90
WEIGHT	POUNDS	4.84	8.36	12.1	15.4	25.3	30.8
	KILOGRAMS	2.2	3.8	5.5	7.0	11.5	14.0

FIG. 5539 Y FULL PORT, WELDED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	4.72	5.98	5.98	7.09	7.87	8.66
	MM	120	152	152	180	200	220
B (OPEN)	INCHES	7.56	9.45	9.45	10.75	12.44	12.99
	MM	192	240	240	273	316	330
C	INCHES	4.92	6.30	6.30	7.09	7.87	8.66
	MM	125	160	160	180	200	220
D	INCHES	0.51	0.69	0.91	1.12	1.38	1.57
	MM	13.0	17.5	23.0	28.5	35.0	40.0
E	INCHES	1.97	2.52	2.52	3.15	3.54	3.94
	MM	50	64	64	80	90.0	100.0
WEIGHT	POUNDS	4.84	8.36	12.1	15.4	25.3	30.8
	KILOGRAMS	2.2	3.8	5.5	7.0	11.5	14.0





FORGED STEEL "Y" PATTERN GLOBE VALVE **SW CLASS 2500**

Design Characteristics

- API 602 & ASME B16.34
- Bolted or Welded Bonnet
- Tapered loose disc
- Stem with ACME Threaded (OS&Y)
- Bolted Gland Bushing
- Standard or Full Port
- Threaded, Socket Weld or Threaded x Socket Weld.
- Integral or renewable stellite seat ring

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	2500	5522YS	5522YS	THREADED
	Welded	5522YSW	5522YSW	SOCKET WELD
	Bonnet	5522YSSW	5522YSSW	THREADED X SOCKET WELD
Full	2500	5622YS	5622YS	THREADED
	Welded	5622YSW	5622YSW	SOCKET WELD
	Bonnet	5622YSSW	5622YSSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5522 Y STANDARD PORT, WELDED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	5.98	5.98	7.09	7.87	7.87	9.06
	MM	152	152	180	200	200	230
B (OPEN)	INCHES	9.57	9.57	11.42	13.19	13.19	15.35
	MM	243	243	290	335	335	390
C	INCHES	6.30	6.30	7.87	9.84	9.84	11.81
	MM	160	160	200	250	250	300
D	INCHES	0.43	0.55	0.75	0.98	1.10	1.38
	MM	11.0	14.0	19.0	25.0	28.0	35.0
E	INCHES	2.52	2.52	3.15	3.54	3.54	3.82
	MM	64	64	80	90	90	97.0
WEIGHT	POUNDS	4.4	4.84	8.36	12.1	15.4	25.3
	KILOGRAMS	2.0	2.2	3.8	5.5	7.0	11.5

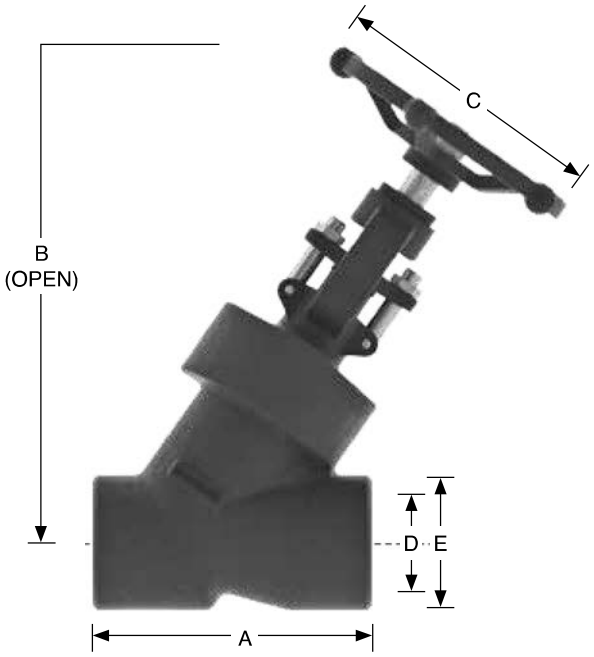


FIG. 5622 Y FULL PORT, WELDED BONNET

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES	5.98	7.09	7.87	7.87	9.06	9.84
	MM	152	180	200	200	230	250
B (OPEN)	INCHES	9.57	11.42	13.19	13.19	15.35	16.14
	MM	243	290	335	335	390	410
C	INCHES	6.30	7.87	9.84	9.84	11.81	12.60
	MM	160	200	250	250	300	320
D	INCHES	0.55	0.75	0.98	1.10	1.38	1.57
	MM	14.0	19.0	25.0	28.0	35.0	40.0
E	INCHES	2.52	3.15	3.54	3.54	3.82	3.94
	MM	64	80	90	90	97.0	100.0
WEIGHT	POUNDS	4.84	8.36	12.1	15.4	25.3	30.8
	KILOGRAMS	2.2	3.8	5.5	7.0	11.5	14.0

WALWORTH FORGED STEEL **PISTON CHECK VALVES**

Piston Check valves are generally used to protect pumps or similar equipment, allowing the flow only in one direction and preventing flow reversal due to back pressure.

The piston check valves are designed with globe valve bodies, producing an increased drop pressure in the pipeline. This design provides a tighht seal as well as a fast reaction to the closure impulse.

Metal seated check valves may not provide drop tight sealing when used in gas system or fluid system with low back flow pressure or fluids contaning particles.

DESIGN **FEATURES**

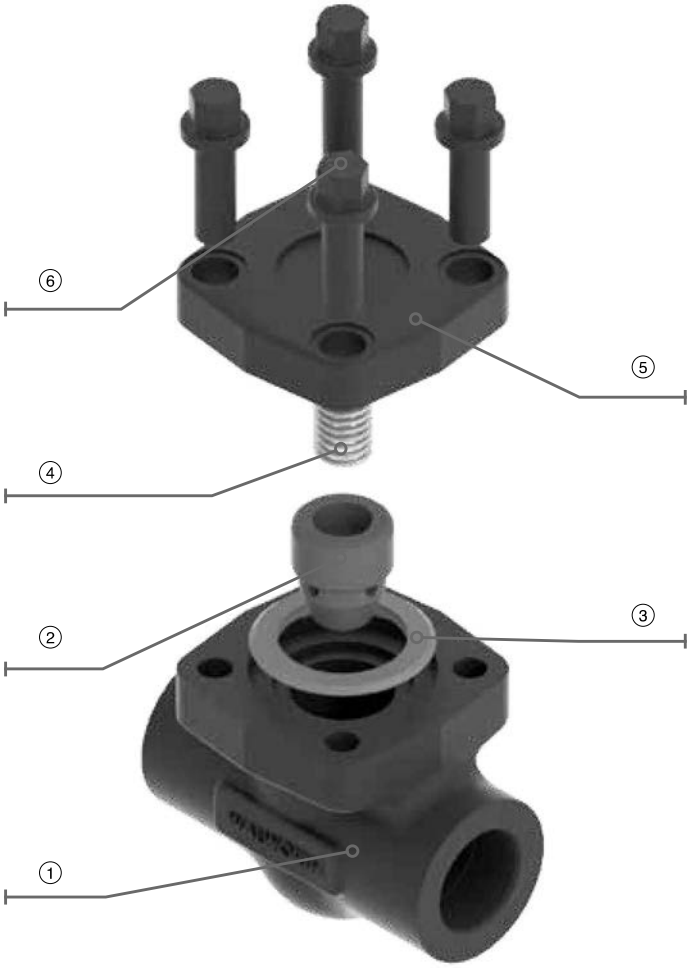
- Valves in accordance with API-602
- Socket weld, threaded, combined or flanged RF or RTJ ends.
- Bolted or Welded Bonnet options.
- Low fugitive emissions control.
- Nace service either MR-0175 or MR-0103
- Test in accordance with API-598
- Horizontal Fluid Control
- Vertical Fluid Control with Spring

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

Guided piston to assure a correct seal.

Spring to allow a mounting in a vertical line available upon request.

Stellite seat provides increased resistance to wear abrasion and erosion of sealing surface.



REGULAR BILL OF MATERIALS

No.	DESCRIPTION	TRIM 8 A 105N
1	BODY	A105
2	PISTON	A276-420
3	GASKET	304+FLEXIBLE GRAPHITE
4	SPRING	A276-304
5	COVER	A105
6	COVER BOLT	A193-B7
7	IDENTIFICATION PLATE *	ALUMINIUM

* NOT SHOWN

FORGED STEEL PISTON CHECK VALVE THREADED SW CLASS 800

Design Characteristics

- API 602 & ASME B16.34
- Bolted cover
- Piston type disc
- Standard or Full Port
- Threaded, Socket Weld Or Threaded X Socket Weld
- Spiral wound gasket
- Integral or renewable stellite seat ring
- Horizantal Fluid Control
- Piston with spring optional for vertical fluid control

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	800	5540S	5540S	THREADED
	Bolted	5540SW	5540SW	SOCKET WELD
	Bonnet	5540SSW	5540SSW	THREADED X SOCKET WELD
Full	800	5548S	5548S	THREADED
	Bolted	5548SW	5548SW	SOCKET WELD
	Bonnet	5548SSW	5548SSW	THREADED X SOCKET WELD
Standard	800	5547S	5547S	THREADED
	Welded	5547SW	5547SW	SOCKET WELD
	Bonnet	5547SSW	5547SSW	THREADED X SOCKET WELD
Full	800	5549S	5549S	THREADED
	Welded	5549SW	5549SW	SOCKET WELD
	Bonnet	5549SSW	5549SSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5540 BOLTED BONNET, STANDARD PORT

SIZES	INCHES	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	INCHES	3.11	3.11	3.11	3.62	4.37	4.72	5.98	6.77
	MM	79	79	79	92	111	120	152	172
B	INCHES	2.15	2.15	2.15	2.15	2.83	3.19	3.70	4.41
	MM	54.5	54.5	54.5	54.5	72.0	81.0	94.0	112.0
C	INCHES	0.26	0.39	0.39	0.51	0.69	0.91	1.12	1.38
	MM	6.5	10.0	10.0	13.0	17.5	23.0	28.5	35.0
D	INCHES	1.34	1.34	1.34	1.57	1.93	2.28	2.52	3.07
	MM	34.0	34.0	34.0	40.0	49.0	58.0	64.0	78.0
WEIGHT	POUNDS	3.3	3.3	3.08	4.18	5.72	9.24	11.66	19.8
	KILOGRAMS	1.5	1.5	1.4	1.9	2.6	4.2	5.3	9.0

FIG. 5547 WELDED BONNET, STANDARD PORT

SIZES	INCHES	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	INCHES	3.11	3.11	3.11	3.62	4.37	4.72	5.98	6.77
	MM	79	79	79	92	111	120	152	172
B	INCHES	2.15	2.15	2.15	2.15	2.83	3.19	3.70	4.41
	MM	54.5	54.5	54.5	54.5	72.0	81.0	94.0	112.0
C	INCHES	0.26	0.39	0.39	0.51	0.69	0.91	1.12	1.38
	MM	6.5	10.0	10.0	13.0	17.5	23.0	28.5	35.0
D	INCHES	1.34	1.34	1.34	1.57	1.93	2.28	2.52	3.07
	MM	34.0	34.0	34.0	40.0	49.0	58.0	64.0	78.0
WEIGHT	POUNDS	3.3	3.3	3.08	4.18	5.72	9.24	11.66	19.8
	KILOGRAMS	1.5	1.5	1.4	1.9	2.6	4.2	5.3	9.0

FIG. 5548 BOLTED BONNET, FULL PORT

SIZES	INCHES	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	13	19	25	32	38	51
A	INCHES	3.62	4.37	4.72	5.98	6.77	8.66
	MM	92	111	120	152	172	220
B	INCHES	2.17	2.83	3.19	3.70	4.41	5.20
	MM	55	72	81	94	112	132
C	INCHES	0.51	0.69	0.91	1.12	1.38	1.38
	MM	13	17.5	23	28.5	35	35.0
D	INCHES	1.57	1.93	2.28	2.52	3.07	3.46
	MM	40	49.0	58	64.0	78	88.0
WEIGHT	POUNDS	4.18	5.72	9.24	11.66	19.8	24.2
	KILOGRAMS	1.9	2.6	4.2	5.3	9.0	11.0

FIG. 5549 WELDED BONNET, FULL PORT

SIZES	INCHES	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	13	19	25	32	38	51
A	INCHES	3.62	4.37	4.72	5.98	6.77	8.66
	MM	92	111	120	152	172	220
B	INCHES	2.17	2.83	3.19	3.70	4.41	5.20
	MM	55	72	81	94	112	132
C	INCHES	0.51	0.69	0.91	1.12	1.38	1.38
	MM	13	17.5	23	28.5	35	35.0
D	INCHES	1.57	1.93	2.28	2.52	3.07	3.46
	MM	40	49.0	58	64.0	78	88.0
WEIGHT	POUNDS	4.18	5.72	9.24	11.66	19.8	24.2
	KILOGRAMS	1.9	2.6	4.2	5.3	9.0	11.0

FORGED STEEL PISTON CHECK VALVE THREADED SW CLASS 1500

Design Characteristics

- API 602 & ASME B16.34
- Bolted cover
- Piston type disc
- Standard or Full Port
- Threaded, Socket Weld Or Threaded X Socket Weld
- Spiral wound gasket
- Integral or renewable stellite seat ring
- Horizantal Fluid Control
- Piston with spring optional for vertical fluid control

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	1500	5541S	5541S	THREADED
	Bolted	5541SW	5541SW	SOCKET WELD
	Bonnet	5541SSW	5541SSW	THREADED X SOCKET WELD
Full	1500	5559S	5559S	THREADED
	Bolted	5559SW	5559SW	SOCKET WELD
	Bonnet	5559SSW	5559SSW	THREADED X SOCKET WELD
Standard	1500	5545S	5545S	THREADED
	Welded	5545SW	5545SW	SOCKET WELD
	Bonnet	5545SSW	5545SSW	THREADED X SOCKET WELD
Full	1500	5569S	5569S	THREADED
	Welded	5569SW	5569SW	SOCKET WELD
	Bonnet	5569SSW	5569SSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5541 BOLTED BONNET, STANDARD PORT

SIZES	INCHES	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	INCHES	3.11	3.11	3.62	4.37	4.72	5.98	6.77	8.66
	MM	79	79	92	111	120	152	172	220
B	INCHES	2.87	2.87	2.87	2.87	3.31	3.82	4.53	5.20
	MM	73	73	73	73	84	97	115	132
C	INCHES	0.26	0.39	0.39	0.51	0.69	0.91	1.12	1.38
	MM	6.5	10.0	10.0	13.0	17.5	23.0	28.5	35.0
D	INCHES	1.34	1.34	1.65	1.93	2.28	2.52	3.07	3.46
	MM	34.0	34.0	42.0	49.0	58.0	64.0	78.0	88.0
WEIGHT	POUNDS	4.84	4.84	5.28	6.38	10.12	14.3	23.1	34.1
	KILOGRAMS	2.2	2.2	2.4	2.9	4.6	6.5	10.5	15.5

FIG. 5545 WELDED BONNET, STANDARD PORT

SIZES	INCHES	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	INCHES	3.11	3.11	3.62	4.37	4.72	5.98	6.77	8.66
	MM	79	79	92	111	120	152	172	220
B	INCHES	2.87	2.87	2.87	2.87	3.31	3.82	4.53	5.20
	MM	73	73	73	73	84	97	115	132
C	INCHES	0.26	0.39	0.39	0.51	0.69	0.91	1.12	1.38
	MM	6.5	10.0	10.0	13.0	17.5	23.0	28.5	35.0
D	INCHES	1.34	1.34	1.65	1.93	2.28	2.52	3.07	3.46
	MM	34.0	34.0	42.0	49.0	58.0	64.0	78.0	88.0
WEIGHT	POUNDS	4.84	4.84	5.28	6.38	10.12	14.3	23.1	34.1
	KILOGRAMS	2.2	2.2	2.4	2.9	4.6	6.5	10.5	15.5

FIG. 5549 BOLTED BONNET, FULL PORT

SIZES	INCHES	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	13	19	25	32	38	51
A	INCHES	4.37	4.72	5.98	6.77	8.66	10.24
	MM	111	120	152	172	220	260
B	INCHES	2.87	3.31	3.82	4.53	5.20	5.20
	MM	73	84	97	115	132	132
C	INCHES	0.51	0.69	0.91	1.12	1.38	1.38
	MM	13.0	17.5	23.0	28.5	35.0	35.0
D	INCHES	1.93	2.28	2.52	3.07	3.46	3.46
	MM	49.0	58.0	64.0	78.0	88.0	88.0
WEIGHT	POUNDS	6.38	10.12	14.3	23.1	34.32	37.4
	KILOGRAMS	2.9	4.6	6.5	10.5	15.6	17.0

FIG. 5559 WELDED BONNET, FULL PORT

SIZES	INCHES	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
	MM	13	19	25	32	38	51
A	INCHES	4.37	4.72	5.98	6.77	8.66	7.87
	MM	111	120	152	172	220	200
B	INCHES	2.87	3.31	3.82	4.53	5.20	5.20
	MM	73	84	97	115	132	132
C	INCHES	0.51	0.69	0.91	1.12	1.38	1.38
	MM	13.0	17.5	23.0	28.5	35.0	35.0
D	INCHES	1.93	2.28	2.52	3.07	3.46	3.46
	MM	49.0	58.0	64.0	78.0	88.0	88.0
WEIGHT	POUNDS	6.38	10.12	14.3	23.1	34.32	37.4
	KILOGRAMS	2.9	4.6	6.5	10.5	15.6	17.0

FORGED STEEL PISTON CHECK VALVE THREADED SW CLASS 2500

Design Characteristics

- API 602 & ASME B16.34
- Welded cover
- Piston type disc
- Standard or Full Port
- Threaded, Socket Weld Or Threaded X Socket Weld
- Spiral wound gasket
- Integral or renewable stellite seat ring
- Horizantal Fluid Control
- Piston with spring optional for vertical fluid control

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	2500	5542S	5542S	THREADED
	Welded	5542SW	5542SW	SOCKET WELD
	Bonnet	5542SSW	5542SSW	THREADED X SOCKET WELD
Full	2500	5642S	5642S	THREADED
	Welded	5642SW	5642SW	SOCKET WELD
	Bonnet	5642SSW	5642SSW	THREADED X SOCKET WELD

DIMENSIONS & WEIGHTS

FIG. 5542 WELDED BONNET, STANDARD PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A	INCHES	5.91	5.91	6.69	7.87	7.87	9.84
	MM	150	150	170	200	200	250
B	INCHES	4.02	4.02	4.21	5.04	5.04	5.63
	MM	102	102	107	128	128	143
C	INCHES	0.43	0.55	0.75	0.98	1.10	1.38
	MM	11	14	19	25	28	35
D	INCHES	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	POUNDS	18.04	17.6	27.06	44	43.56	60.5
	KILOGRAMS	8.2	8.0	12.3	20.0	19.8	27.5

FIG. 5642 WELDED BONNET, FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A	INCHES	5.91	6.69	7.87	7.87	9.84	10.63
	MM	150	170	200	200	250	270
B	INCHES	4.02	4.21	5.04	5.04	5.63	5.91
	MM	102	107	128	128	143	150
C	INCHES	0.55	0.75	0.98	1.10	1.38	1.57
	MM	14	19	25	28	35	40
D	INCHES	2.05	2.52	3.15	3.15	3.74	3.94
	MM	52.0	64.0	80.0	80.0	95.0	100.0
WEIGHT	POUNDS	17.6	27.06	44	43.56	60.5	66
	KILOGRAMS	8.0	12.3	20.0	19.8	27.5	30.0

FORGED STEEL PISTON CHECK VALVE **RF/RTJ CLASS 150, 300 & 600**

Design Characteristics

- API 602 & ASME B16.34
- Bolted cover
- Piston type disc
- Standard port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral wound gasket
- Integral or renewable stellite seat ring
- Horizantal Fluid Control
- Piston with spring optional for vertical fluid control

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	150	5815RF 5815RTJ	5815F 5815RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT
Standard	300	5830RF 5830RTJ	5830F 5830RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT
Standard	600	5860RF 5860RTJ	5860F 5860RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT

DIMENSIONS & WEIGHTS

FIG. 5815 STANDARD PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	4.25	4.61	5.00	5.51	6.50	7.99
	MM	108.0	117.0	127.0	140.0	165.0	203.0
A (RJ)	INCHES	4.76	5.12	5.51	6.02	7.01	8.50
	MM	121.0	130.0	140.0	153.0	178.0	216.0
B	INCHES	2.15	2.15	2.83	3.19	3.58	4.41
	MM	54.5	54.5	72.0	81.0	91.0	112.0
C	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
WEIGHT	POUNDS	7.48	9.68	18.04	19.58	26.4	31.46
	KILOGRAMS	3.4	4.4	8.2	8.9	12.0	14.3

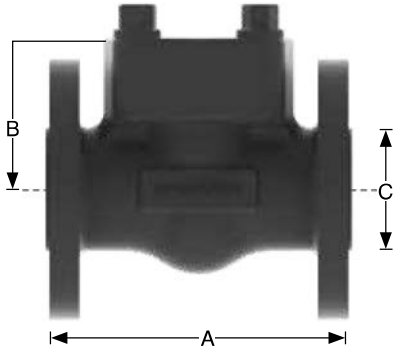


FIG. 5830 STANDARD PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	5.98	7.01	8.50	9.02	9.49	10.51
	MM	152.0	178.0	216.0	229.0	241.0	267.0
A (RJ)	INCHES	6.42	7.52	9.02	9.53	10.00	11.14
	MM	163.0	191.0	229.0	242.0	254.0	283.0
B	INCHES	2.15	2.15	2.83	3.19	3.58	4.41
	MM	54.5	54.5	72.0	81.0	91.0	112.0
C	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
WEIGHT	POUNDS	8.14	10.56	19.36	21.12	30.14	39.16
	KILOGRAMS	3.7	4.8	8.8	9.6	13.7	17.8

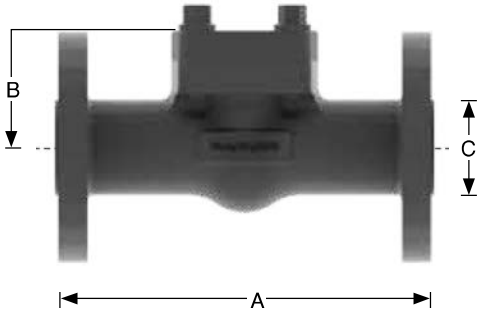
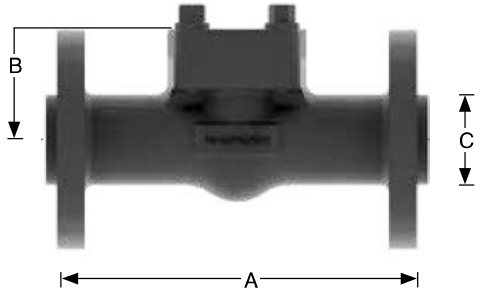


FIG. 5860 STANDARD PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	6.50	7.52	8.50	9.02	9.49	11.50
	MM	165.0	191.0	216.0	229.0	241.0	292.0
A (RJ)	INCHES	6.50	7.52	8.50	9.02	9.49	11.61
	MM	165.0	191.0	216.0	229.0	241.0	295.0
B	INCHES	2.15	2.15	2.83	3.19	3.58	4.41
	MM	54.5	54.5	72.0	81.0	91.0	112.0
C	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
WEIGHT	POUNDS	8.14	12.76	20.9	22.88	34.32	53.9
	KILOGRAMS	3.7	5.8	9.5	10.4	15.6	24.5



FORGED STEEL PISTON CHECK VALVE **RF/RTJ CLASS 150, 300 & 600**

Design Characteristics

- API 602 & ASME B16.34
- Bolted cover
- Piston type disc
- Full Port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral wound gasket
- Integral or renewable stellite seat ring
- Horizantal Fluid Control
- Piston with spring optional for vertical fluid control

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Full	150	5818RF 5818RTJ	5818F 5818RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT
Full	300	5838RF 5838RTJ	5838F 5838RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT
Full	600	5868RF 5868RTJ	5868F 5868RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT

DIMENSIONS & WEIGHTS

FIG. 5818 FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	4.25	4.61	5.00	5.51	6.50	7.99
	MM	108.0	117.0	127.0	140.0	165.0	203.0
A (RJ)	INCHES	4.76	5.12	5.51	6.02	7.01	8.50
	MM	121.0	130.0	140.0	153.0	178.0	216.0
B	INCHES	2.15	2.83	3.19	3.70	4.41	5.20
	MM	54.5	72.0	81.0	94.0	112.0	132.0
C	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
WEIGHT	POUNDS	7.48	9.68	18.04	19.58	26.4	31.46
	KILOGRAMS	3.4	4.4	8.2	8.9	12.0	14.3

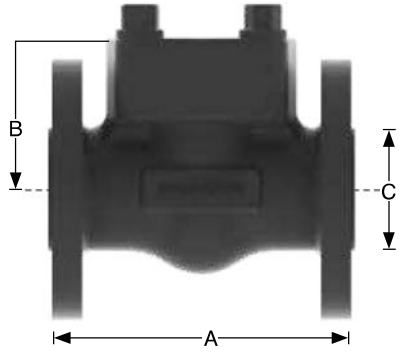


FIG. 5838 FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	5.98	7.01	8.50	9.02	9.49	10.51
	MM	152.0	178.0	216.0	229.0	241.0	267.0
A (RJ)	INCHES	6.42	7.52	9.02	9.53	10.00	11.14
	MM	163.0	191.0	229.0	242.0	254.0	283.0
B	INCHES	2.15	2.83	3.19	3.70	4.41	5.20
	MM	54.5	72.0	81.0	94.0	112.0	132.0
C	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
WEIGHT	POUNDS	8.14	10.56	19.36	21.12	30.14	39.16
	KILOGRAMS	3.7	4.8	8.8	9.6	13.7	17.8

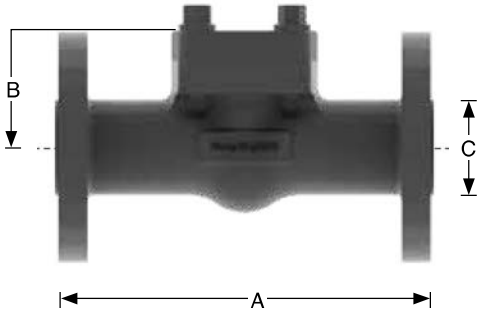
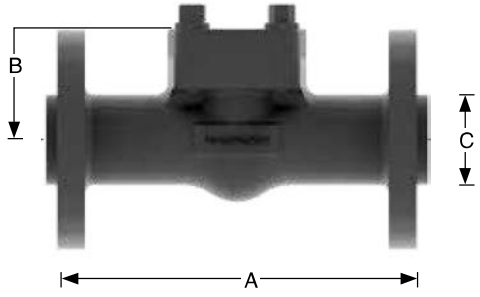


FIG. 5868 FULL PORT

SIZES	INCHES / MM	1/2" / 13	3/4" / 19	1" / 25	1 1/4" / 32	1 1/2" / 38	2" / 51
A (RF)	INCHES	6.50	7.52	8.50	9.02	9.49	11.50
	MM	165.0	191.0	216.0	229.0	241.0	292.0
A (RJ)	INCHES	6.50	7.52	8.50	9.02	9.49	11.61
	MM	165.0	191.0	216.0	229.0	241.0	295.0
B	INCHES	2.15	2.83	3.19	3.70	4.41	5.20
	MM	54.5	72.0	81.0	94.0	112.0	132.0
C	INCHES	0.39	0.51	0.69	0.91	1.12	1.38
	MM	10.0	13.0	17.5	23.0	28.5	35.0
WEIGHT	POUNDS	8.14	12.76	20.9	22.88	34.32	53.9
	KILOGRAMS	3.7	5.8	9.5	10.4	15.6	24.5



FORGED STEEL PISTON CHECK VALVE **RF/RTJ CLASS 1500**

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Standard	1500 Bolted Bonnet	15815RF 15815RTJ	15815F 15815RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT

Design Characteristics

- API 602 & ASME B16.34
- Bolted Cover
- Piston type disc
- Standard Port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral wound gasket
- Integral or renewable stellite seat ring
- Horizantal Fluid Control
- Piston with spring optional for vertical fluid control

PORT	CLASS	CATALOG FIGURE No.	ID PLANT FIGURE No.	ENDS TYPES
Full	1500 Welded Bonnet	15885RF 15885RTJ	15885F 15885RTJ	FLANGED RAISED FACE FLANGED RING TYPE JOINT

Design Characteristics

- API 602 & ASME B16.34
- Welded Cover
- Piston type disc
- Full Port
- Integral flanged ends (Raised Face or Ring Type Joint)
- Spiral wound gasket
- Integral or renewable stellite seat ring
- Horizantal Fluid Control
- Piston with spring optional for vertical fluid control

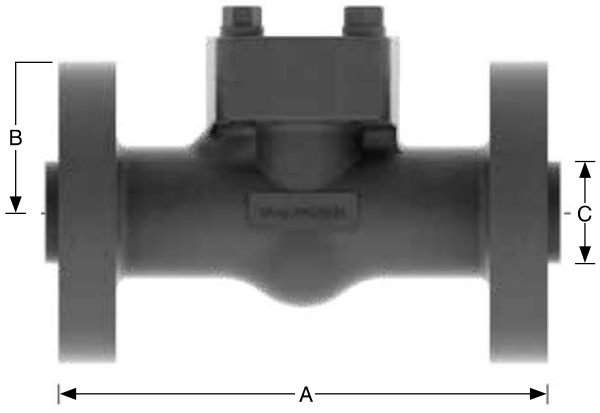
DIMENSIONS & WEIGHTS

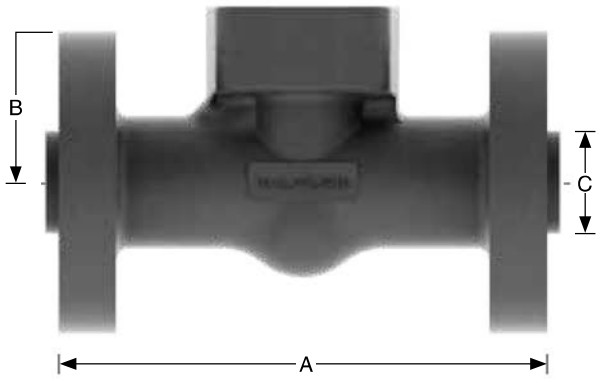
FIG. 15815 BOLTED BONNET, STANDARD PORT

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES MM	8.50 216	9.02 229	10.00 254	10.98 279	12.01 305	14.49 368
B	INCHES MM	2.87 73	2.87 73	3.31 84	3.82 97	4.53 115	5.20 132
C	INCHES MM	0.39 10.0	0.51 13.0	0.69 17.5	0.91 23.0	1.12 28.5	1.38 35.0
WEIGHT	POUNDS KILOGRAMS	20.68 9.4	24.64 11.2	31.68 14.4	35.2 16.0	47.3 21.5	61.6 28.0

FIG. 15885 WELDED BONNET, FULL PORT

SIZES	INCHES MM	1/2" 13	3/4" 19	1" 25	1 1/4" 32	1 1/2" 38	2" 51
A	INCHES MM	9.02 229	10.00 254	10.98 279	12.01 305	14.49 368	15.35 390
B	INCHES MM	2.87 73	3.31 84	3.82 97	4.53 115	5.20 132	5.71 145
D	INCHES MM	0.51 13.0	0.69 17.5	0.91 23.0	1.12 28.5	1.38 35.0	1.57 40.0
WEIGHT	POUNDS KILOGRAMS	24.64 11.2	31.68 14.4	35.2 16.0	47.3 21.5	61.6 28.0	70.4 32.0





WALWORTH®

VALVULAS DE SEGURIDAD Y ALIVIO DE BRONCE

QMS REGISTERED
ISO 9001:2000

WALWORTH® INTRODUCCION

El nombre ***WALWORTH®*** en válvulas industriales, es la marca que define la más alta tecnología en válvulas tipo compuerta, globo, retención, ángulo, macho, seguridad y alivio en materiales como bronce, hierro, acero fundido y acero forjado desde hace más de un siglo.

Las válvulas de seguridad y alivio ***WALWORTH®*** fueron desarrolladas para satisfacer las necesidades de la industria con el propósito de proteger al personal, equipo, producción e instalación industriales.

Las válvulas de seguridad y alivio de bronce ***WALWORTH®*** en sus modelos 1541, 1542 y 1478 ofrecen un amplia variedad en rangos de calibración y una diversidad de materiales para cubrir las diferentes demandas de la industria.

Personal altamente especializados en ingeniería y desarrollo, con diseños asistidos por computadora (Cad, Análisis de Esfuerzos por medio de Elementos Finitos), brindan la mejor asistencia y servicio técnico oportuno a los clientes de ***WALWORTH®***.

WALWORTH® manufactura productos bajo un programa de aseguramiento de calidad garantizando un servicio óptimo.

WALWORTH®

INDICE

VALVULAS DE SEGURIDAD Y ALIVIO DE BRONCE

GARANTIA

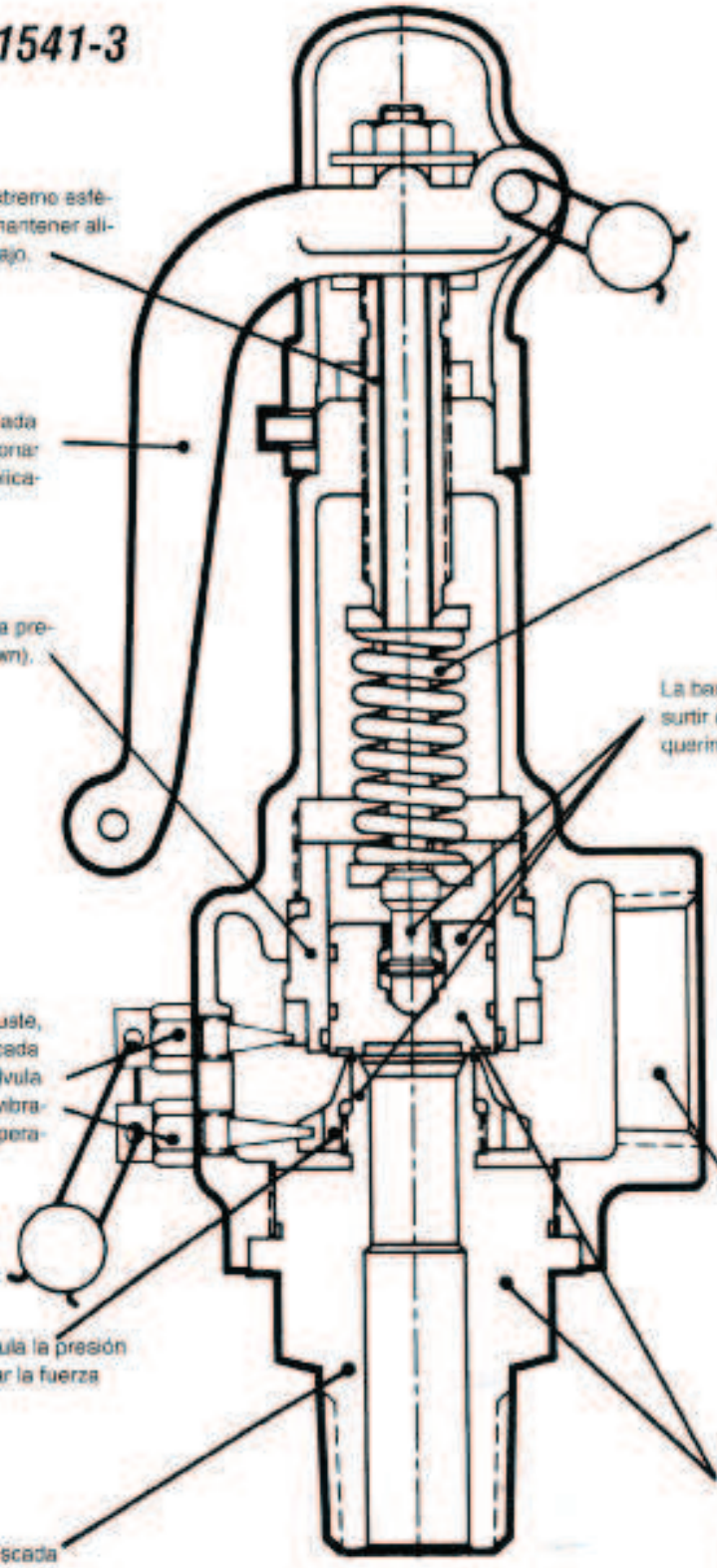
El fabricante garantiza sus productos contra cualquier defecto de fabricación, calidad de materiales o mano de obra, por un año a partir de la fecha de instalación ó dieciocho meses a partir de la fecha de embarque; lo que ocurra primero.

Esta garantia consiste en la reparación ó reemplazo del articulo defectuoso, siempre y cuando haya sido instalado y operado correctamente en las condiciones de servicio recomendadas por ASME Sección I y ***WALWORTH®*** La garantia no es válida cuando el articulo haya sido dañado por accidente, corrosión, abuso o negligencia, ni cuando haya sido desensamblado y/o reparado por personal no autorizado por la fábrica.

En ningún caso será ***WALWORTH®*** , responsable por disminución de utilidades, pérdidas por paro de plantas, aumento en costos de operación u otros daños consecuentes del uso del articulo.

Nota: Las ilustraciones que aparecen en este catálogo son representaciones de un modelo de cada linea de productos pero no necesariamente representan toda la linea con todo detalle. ***WALWORTH®*** se reserva el derecho de efectuar cambios en materiales, diseño y especificaciones sin notificación previa conforme a una política de mejoramiento de sus productos.

MODELO 1541 Y 1541-3



Tornillo de ajuste con extremo esférico para estabilizar y mantener alineadas las partes de trabajo.

Palanca de levantamiento, diseñada de una sola pieza para proporcionar rigidez y evitar mecanismos complicados.

Anillo de ajuste superior, regula la presión requerida de cierre (blowdown).

Los pernos de los anillos de ajuste, proporcionan la inmovilidad de cada uno de los anillos, para que la válvula no se descalibre por golpes o vibración durante su manejo o en operación.

Anillo ajuste inferior, regula la presión requerida para estabilizar la fuerza del resorte (simmer).

Conexión de entrada macho, roscada según ANSI B1.20.1.

Resorte de acero al carbón cadmiinizado o zincado, también se puede surtir de acero inoxidable, según requerimientos del ususario.

La base, el disco y la aguja se pueden surtir en acero inoxidable según requerimientos del usuario.

Descarga lateral del fluido a la línea. Salida hembra, roscada según ANSI B1.20.1.

Base y disco lapeados por separado. El disco está acuñado en el extremo del barreno, para evitar descalibración por cedencia del material en operación.

VALVULAS DE SEGURIDAD

WALWORTH®

MOD. 1541, 1541-3

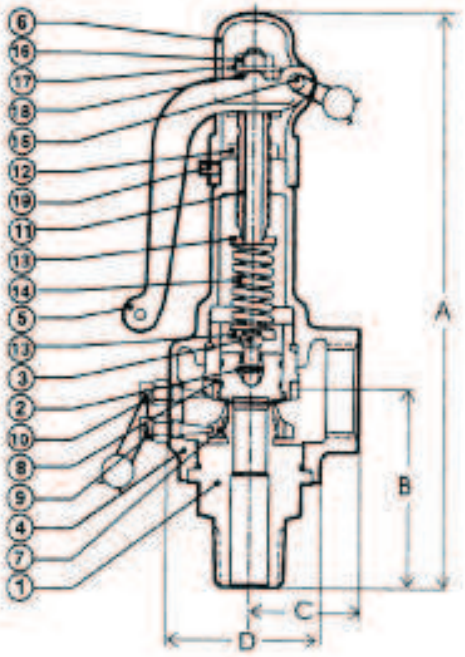
MATERIALES

REF.	DESCRIPCION	MODELO 1541	MODELO 1541-3 (1) (2)
1	BASE	LATON NAVAL BRASS	AC. INOX. 304
2	DISCO	LATON NAVAL BRASS	AC. INOX. 304
3	AGUJA	AC. AL CARBON	AC. INOX. 304
4	BONETE	FUND. DE BRONCE	FUND. DE BRONCE
5	PALANCA	FUND. DE BRONCE	FUND. DE BRONCE
6	CASQUILLO	FUND. DE BRONCE	FUND. DE BRONCE
7	ANILLO DE AJUSTE INF.	LATON FORJADO	LATON FORJADO
8	ANILLO DE AJUSTE SUP.	LATON FORJADO	LATON FORJADO
9	PERNO ANILLO AJUSTE INF.	LATON	LATON
10	PERNO ANILLO AJUSTE SUP.	LATON	LATON
11	TORNILLO DE COMPRESION	LATON	LATON
12	TCA. TOR. DE COMPRESION	LATON	LATON
13	ROLDANAS DE RESORTE	LATON	LATON
14	RESORTE	AC. AL CARBON	AC. AL CARBON
15	PERNO DE LA PALANCA	COMERCIAL	COMERCIAL
16	CONTRATUERCA	COMERCIAL	COMERCIAL
17	ROLDANA	COMERCIAL	COMERCIAL
18	TUERCA	COMERCIAL	COMERCIAL
19	PRISIONERO ALLEN	COMERCIAL	COMERCIAL

(1) DISPONIBLE con interiores de AC. INOX. 316 (BASE, DISCO Y AGUJA)
(2) DISPONIBLE con resorte de AC. INOXIDABLE, solicitar información con el departamento de ventas

CARACTERISTICAS DE DISEÑO:

- Válvulas de seguridad para servicio de vapor, aire o gas
- Descarga lateral (a la línea)
- Roscas N.P.T. (Macho-Hembra) cónicas para tubería según ANSI B 1.20.1
- Medidas nominales desde 13mm. (1/2") hasta 64mm. (2 1/2")
- Presión mínima de calibración 0.35 Kg/cm² (5 PSIG)
- Presión máxima de operación (vapor):
  MOD. 1541: 17.58 Kg/cm² (250 PSIG)
  MOD. 1541-3: 21.10 Kg/cm² (300 PSIG)
  En servicio de aire o gas incrementar 3.52 Kg/cm² (50 PSIG) en ambos casos.
- Temperatura máxima de operación:
  MOD. 1541: 208 °C (406 °F)
  MOD. 1541-3: 215 °C (420 °F)



DIMENSIONES Y PESOS

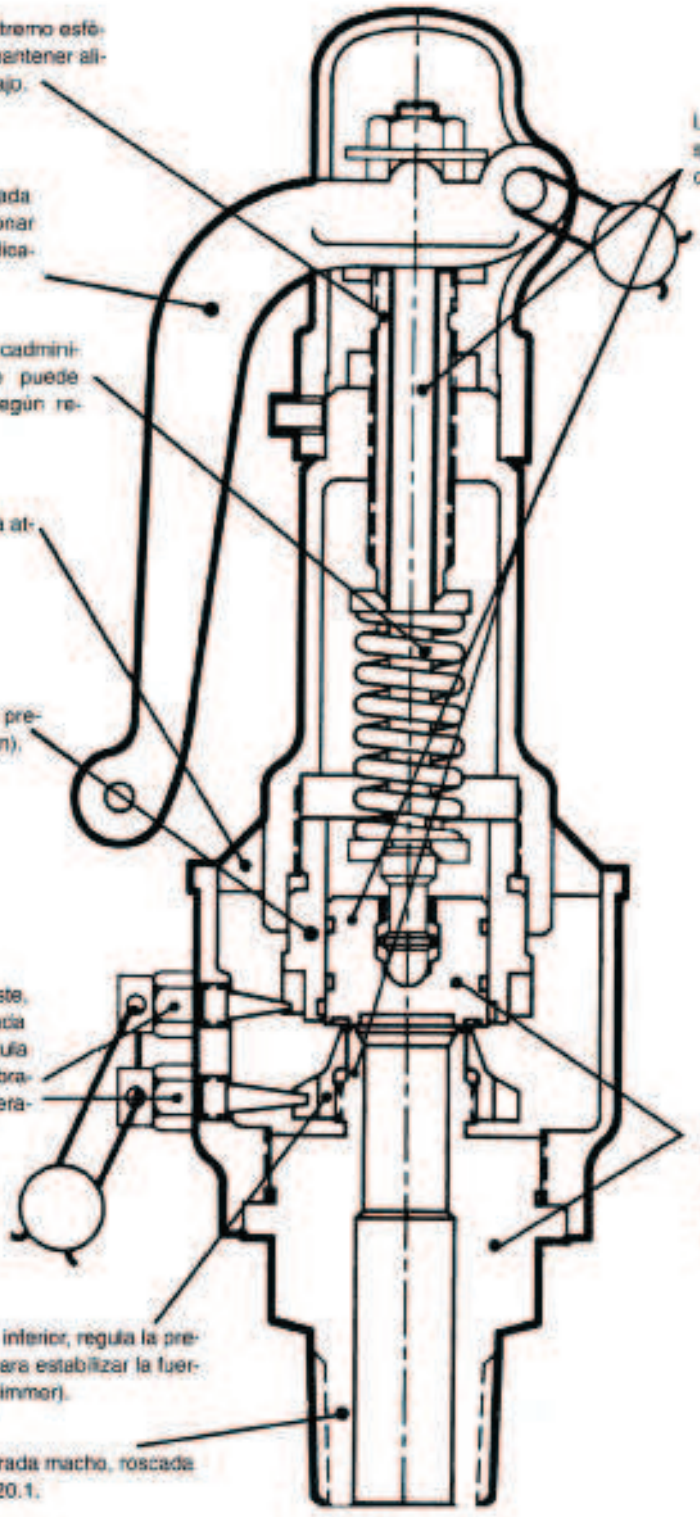
MEDIDA Pulg.	MEDIDA mm.	UNID.	A	B	C	D	ALTURA MINIMA DE MONTAJE	PESO APROX.
1/2	13	Pulg.	6 5/8	2 5/16	1 1/4	1 15/16	8 1/4	2.0 Lb.
		mm.	168.3	58.7	31.8	49.2	209.6	0.9 Kg.
3/4	19	Pulg.	6 5/8	2 5/16	1 1/4	1 15/16	8 1/4	2.0 Lb.
		mm.	168.3	58.7	31.8	49.2	209.6	0.9 Kg.
1	25	Pulg.	7	2 9/16	1 7/16	2 1/8	8 5/8	3.0 Lb.
		mm.	177.8	65.1	36.5	54.0	219.1	1.4 Kg.
1 1/4	32	Pulg.	8 7/8	2 15/16	1 13/16	2 3/4	10 3/4	4.6 Lb.
		mm.	225.4	74.6	46.0	69.9	273.1	2.1 Kg.
1 1/2	38	Pulg.	9 5/8	3 1/8	2 1/8	3 3/8	11 5/8	7.8 Lb.
		mm.	244.5	79.4	54.0	85.7	295.3	3.5 Kg.
2	51	Pulg.	11 1/8	3 9/16	2 5/8	4 1/8	13 3/8	10.6 Lb.
		mm.	282.6	90.5	66.7	104.8	339.8	4.8 Kg.
2 1/2	64	Pulg.	12 13/16	4 1/16	3 1/4	4 7/8	15 1/8	17.8 Lb.
		mm.	325.4	103.2	84.1	123.8	384.2	8.1 Kg.

CARACTERISTICAS DEL DISEÑO

MODELO	MEDIDA NOMINAL pulg.	MEDIDA NOMINAL mm.	ORIFICIO AREA pulg.²	ORIFICIO AREA mm.²	ORIFICIO DESIGNACION	CONEXIONES N.P.T. ENTRADA (Macho)	CONEXIONES N.P.T. SALIDA (Hembra)	LIMITES MAXIMOS DE PRESION-TEMPERATURA 1541 (1) (2) PSIG.	Kg/cm²	°F	°C	1541-3 (1) (3) PSIG.	Kg/cm²	°F	°C
1541 ORL	1/2	13	0.037	23.9	ORL	1/2"	3/4"	250	17.6	406	207.8	300	21.1	420	215.6
1541 D	3/4	19	0.110	71.0	D	3/4"	3/4"	250	17.6	406	207.8	300	21.1	420	215.6
1541 E	1	25	0.196	126.5	E	1"	1"	250	17.6	406	207.8	300	21.1	420	215.6
1541 F	1 1/4	32	0.307	198.2	F	1 1/4"	1 1/4"	250	17.6	406	207.8	300	21.1	420	215.6
1541 G	1 1/2	38	0.503	324.7	G	1 1/2"	1 1/2"	250	17.6	406	207.8	300	21.1	420	215.6
1541 H	2	51	0.785	506.7	H	2"	2"	250	17.6	406	207.8	300	21.1	420	215.6
1541 J	2 1/2	64	1.287	830.7	J	2 1/2"	2 1/2"	250	17.6	406	207.8	300	21.1	420	215.6

(1) PARA SERVICIO DE VAPOR
(2) 21.1 Kg/cm2 (300 PSIG.) EN SERVICIO DE AIRE O GAS
(3) 24.1 Kg/cm2 (350 PSIG.) EN SERVICIO DE AIRE O GAS

MODELO 1542 Y 1542-3



Tornillo de ajuste con extremo esférico para estabilizar y mantener alineadas las partes de trabajo.

Palanca de levantamiento, diseñada de una sola pieza para proporcionar rigidez y evitar mecanismos complicados.

Resorte de acero al carbón cadminizado o zincado, también se puede surtir de acero inoxidable, según requerimientos del ususario.

Descarga superior del fluido, a la atmósfera.

Anillo de ajuste superior, regula la presión requerida de cierre (blowdown).

Los pernos de los anillos de ajuste, proporcionan la inmovilidad de cada uno de los anillos, para que la válvula no se descalibre por golpes o vibración durante su manejo o en operación.

Anillo de ajuste inferior, regula la presión requerida para estabilizar la fuerza del roscrto (simmer).

Conexión de entrada macho, roscada según ANSI B1.20.1.

La base, el disco y la aguja se pueden surtir en acero inoxidable, según requerimientos del usuario.

Base y disco lapeados por separac
El disco está acuñado en el extren
del barreno, para evitar descalibr
ción por cedencia del material
operación.

VALVULAS DE SEGURIDAD
MOD. 1542, 1542-3

WALWORTH®

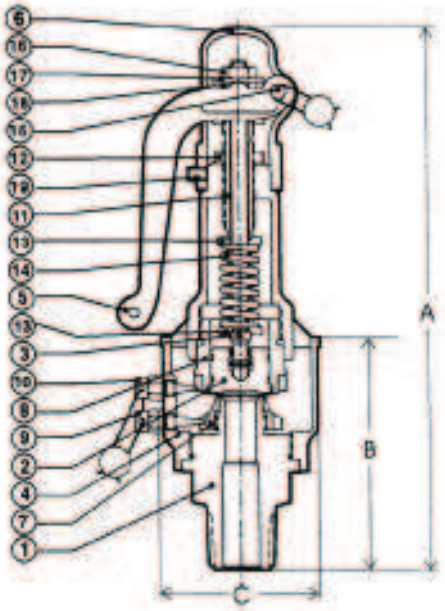
MATERIALES

REF.	DESCRIPCION	MODELO 1542	MODELO 1542-3 (1) (2)
1	BASE	LATON NAVAL BRASS	AC. INOX. 304
2	DISCO	LATON NAVAL BRASS	AC. INOX. 304
3	AGUJA	AC. AL CARBON	AC. INOX. 304
4	BONETE	FUND. DE BRONCE	FUND. DE BRONCE
5	PALANCA	FUND. DE BRONCE	FUND. DE BRONCE
6	CASQUILLO	FUND. DE BRONCE	FUND. DE BRONCE
7	ANILLO DE AJUSTE INF.	LATON FORJADO	LATON FORJADO
8	ANILLO DE AJUSTE SUP.	LATON FORJADO	LATON FORJADO
9	PERNO ANILLO AJUSTE INF.	LATON	LATON
10	PERNO ANILLO AJUSTE SUP.	LATON	LATON
11	TORNILLO DE COMPRESION	LATON	LATON
12	TCA. TOR. DE COMPRESION	LATON	LATON
13	ROLDANAS DE RESORTE	LATON	LATON
14	RESORTE	AC. AL CARBON	AC. AL CARBON
15	PERNO DE LA PALANCA	COMERCIAL	COMERCIAL
16	CONTRATUERCA	COMERCIAL	COMERCIAL
17	ROLDANA	COMERCIAL	COMERCIAL
18	TUERCA	COMERCIAL	COMERCIAL
19	PRISIONERO ALLEN	COMERCIAL	COMERCIAL

(1) DISPONIBLE con interiores de AC. INOX. 316 (BASE, DISCO Y AGUJA)
(2) DISPONIBLE con resorte de AC. INOXIDABLE, solicitar información con el Departamento de ventas

CARACTERISTICAS DE DISEÑO:

- Valvulas de seguridad para servicio de vapor, aire o gas
- Descarga a la atmosfera
- Entrada rosca N.P.T. (Macho) cónica para tubería segun ANSI B 1.20.1
- Medidas nominales desde 13 mm. (1/2") hasta 64 mm (2 1/2")
- Presión mínima de calibración 0.35 Kg/cm² (5 PSIG)
- Presión maxima de operación (vapor):
  MOD. 1542: 17.58 Kg/cm² (250 PSIG)
  MOD. 1542-3: 21.10 Kg/cm² (300 PSIG)
  En servicio de aire o gas incrementar 3.52 Kg/cm² (50 PSIG) en ambos casos.
- Temperatura máxima de operación:
  MOD. 1542: 208 °C (406 °F)
  MOD. 1542-3: 215 °C (420 °F)



DIMENSIONES Y PESOS

MEDIDA Pulg.	MEDIDA mm.	UNID.	A	B	C	ALTURA MINIMA DE MONTAJE	PESO APROX.
1/2	13	Pulg.	6 5/8	2 3/4	1 15/16	8 1/4	2.0 Lb.
		mm.	168.3	69.9	48.2	209.6	0.9 Kg.
3/4	19	Pulg.	6 5/8	2 3/4	1 15/16	8 1/4	2.0 Lb.
		mm	168.3	69.9	49.2	209.6	0.9 Kg.
1	25	Pulg.	7	2 15/16	2 3/16	8 5/8	2.6 Lb.
		mm.	177.8	74.6	55.6	219.1	1.3 Kg.
1 1/4	32	Pulg.	8 7/8	3 5/8	2 13/16	10 3/4	4.3 Lb.
		mm.	225.4	92.1	71.4	273.1	1.9 Kg.
1 1/2	38	Pulg.	9 5/8	4	3 3/8	11 5/8	7.5 Lb.
		mm	244.5	101.6	85.7	295.3	3.4 Kg.
2	51	Pulg.	11 1/8	4 7/16	4 1/4	13 3/8	10.3 Lb.
		mm.	282.6	112.7	108.0	339.8	4.7 Kg.
2 1/2	64	Pulg.	12 13/16	4 13/16	4 15/16	15 1/8	17.0 Lb.
		mm.	325.4	122.2	125.4	384.2	7.7 Kg.

CARACTERISTICAS DEL DISEÑO

MODELO	MEDIDA NOMINAL pulg.	MEDIDA NOMINAL mm.	ORIFICIO AREA pulg.²	ORIFICIO AREA mm.²	ORIFICIO DESIGNACION	CONEXIONES ENTRADA N.P.T. (Macho)	CONEXIONES SALIDA	LIMITES MAXIMOS DE PRESION-TEMPERATURA 1542 (1) (2) PSIG.	Kg/cm²	°F	°C	1542-3 (1) (3) PSIG.	Kg/cm²	°F	°C
1542 DRL	1/2	13	0.037	23.9	DRL	1/2"	ATMOSFERICA	250	17.6	406	207.8	300	21.1	420	215.6
1542 D	3/4	19	0.110	71.0	D	3/4"		250	17.5	406	207.8	300	21.1	420	215.6
1542 E	1	25	0.196	126.5	E	1"		250	17.6	406	207.8	300	21.1	420	215.6
1542 F	1 1/4	32	0.307	198.2	F	1 1/4"		250	17.6	406	207.8	300	21.1	420	215.6
1542 G	1 1/2	38	0.503	324.7	G	1 1/2"		250	17.6	406	207.8	300	21.1	420	215.6
1542 H	2	51	0.785	506.7	H	2"		250	17.6	406	207.8	300	21.1	420	215.6
1542 J	2 1/2	64	1.267	830.7	J	2 1/2"		250	17.6	406	207.8	300	21.1	420	215.6

(1) PARA SERVICIO DE VAPOR
(2) 21.1 Kg/cm² (300 PSIG.) EN SERVICIO DE AIRE O GAS
(3) 24.6 Kg/cm² (350 PSIG.) EN SERVICIO DE AIRE O GAS

TABLA DE CAPACIDADES (MOD. 1541-1542)

WALWORTH®

TABLA DE CAPACIDADES EN LIBRAS POR HORA DE VAPOR SATURADO CODIGO A.S.M.E. 90% CAPACIDAD REAL AL 3% DE SOBREPRESION (VAPOR SATURADO A 100°C)

PRESION DE AJUSTE		DESIGNACION DE MEDIDA, ORIFICIO Y AREA DE DESCARGA						
		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
		DRL	D	E	F	G	H	J
PSIG	Kg/cm²	.037	.110	.196	.307	.503	.785	1.287
5	0.35	39	99	176	275	451	702	1150
10	0.70	41	124	221	346	568	885	1450
15	1.05	50	150	267	418	685	1067	1750
20	1.41	58	175	312	489	802	1250	2050
25	1.76	67	201	358	561	918	1432	2350
30	2.11	75	226	403	632	1035	1615	2650
35	2.46	84	252	449	703	1152	1797	2950
40	2.81	93	278	495	775	1269	1980	3250
45	3.16	101	303	540	846	1386	2162	3547
50	3.52	110	329	586	917	1503	2346	3847
55	3.87	118	354	631	989	1620	2527	4145
60	4.22	127	380	677	1060	1737	2710	4445
65	4.57	135	405	722	1132	1854	2892	4745
70	4.92	144	431	768	1203	1971	3075	5045
75	5.27	152	457	814	1274	2088	3259	5342
80	5.62	161	482	859	1346	2205	3440	5640
85	5.98	169	507	905	1417	2322	3622	5940
90	6.33	177	533	950	1488	2439	3805	6240
95	6.68	186	559	996	1560	2556	3987	6539
100	7.03	195	584	1041	1632	2673	4172	6839
105	7.38	203	610	1087	1703	2790	4352	7138
110	7.73	212	636	1133	1774	2906	4535	7435
115	8.09	220	661	1178	1845	3023	4717	7735
120	8.44	229	687	1224	1917	3140	4900	8035
125	8.79	237	712	1269	1988	3257	5082	8335
130	9.14	246	738	1315	2059	3374	5265	8635
135	9.49	255	764	1360	2131	3491	5447	8933
140	9.84	263	789	1406	2202	3608	5630	9230
145	10.19	272	815	1451	2274	3725	5812	9530
150	10.55	280	840	1497	2345	3842	5995	9830
155	10.90	289	866	1543	2416	3959	6177	10130
160	11.25	297	891	1588	2488	4076	6360	10430
165	11.60	306	917	1634	2559	4193	6542	10730
170	11.95	314	943	1679	2630	4310	6725	11030
175	12.30	323	968	1725	2702	4427	6907	11328
180	12.66	331	994	1770	2773	4544	7090	11625
185	13.01	340	1019	1816	2845	4661	7272	11925
190	13.36	348	1045	1862	2916	4778	7455	12225
195	13.71	357	1070	1907	2987	4894	7637	12525
200	14.06	365	1096	1953	3059	5012	7822	12824
205	14.41	374	1122	1998	3130	5128	8002	13123
210	14.76	382	1147	2044	3201	5245	8185	13420
215	15.12	391	1173	2089	3273	5362	8367	13720
220	15.47	399	1198	2135	3344	5479	8550	14020
225	15.82	408	1224	2181	3416	5596	8732	14320
230	16.17	416	1249	2226	3487	5713	8915	14620
235	16.52	425	1275	2272	3558	5830	9097	14918
240	16.87	434	1301	2317	3630	5947	9280	15215
245	17.23	442	1326	2363	3701	6064	9462	15515
250	17.58	451	1352	2408	3772	6181	9645	15815
255	17.93	459	1377	2454	3844	6298	9827	16115
260	18.28	468	1403	2500	3915	6415	10010	16415
265	18.64	476	1429	2545	3986	6532	10193	16712
270	18.99	485	1454	2591	4058	6649	10376	17011
275	19.34	493	1480	2637	4129	6766	10559	17311
280	19.69	502	1505	2682	4200	6883	10741	17610
285	20.04	510	1531	2728	4272	7000	10924	17909
290	20.39	519	1556	2774	4343	7117	11107	18208
295	20.75	527	1582	2819	4415	7234	11289	18507
300	21.10	536	1607	2865	4486	7351	11472	18806

TABLA DE CAPACIDADES (MOD. 1541-1542)

TABLA DE CAPACIDADES EN LIBRAS POR HORA DE VAPOR SATURADO CODIGO A.S.M.E. 100% CAPACIDAD REAL AL 10% DE SOBREPRESION (VAPOR SATURADO A 100°C)

PRESION DE AJUSTE		DESIGNACION DE MEDIDA, ORIFICIO Y AREA DE DESCARGA						
		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
		DRL	D	E	F	G	H	J
PSIG.	Kg/cm²	.037	.110	.196	.307	.503	.785	1.287
5	0.35	37	110	196	306	502	783	1284
10	0.70	47	140	249	400	638	996	1628
15	1.05	57	170	302	473	775	1210	1977
20	1.41	66	199	355	556	912	1422	2326
25	1.76	76	229	408	640	1048	1635	2675
30	2.11	86	259	462	726	1181	1848	3024
35	2.46	96	289	515	807	1322	2061	3373
40	2.81	106	319	568	890	1458	2274	3722
45	3.16	116	349	621	973	1595	2487	4071
50	3.52	125	375	675	1060	1742	2700	4420
55	3.87	136	409	728	1140	1868	2913	4769
60	4.22	146	438	781	1224	2005	3126	5118
65	4.57	156	468	834	1307	2141	3339	5467
70	4.92	166	498	888	1390	2278	3552	5816
75	5.27	176	528	941	1474	2415	3765	6165
80	5.62	186	558	994	1557	2551	3978	6514
85	5.98	196	588	1047	1641	2688	4191	6863
90	6.33	206	618	1101	1724	2825	4404	7212
95	6.68	216	648	1154	1807	2961	4617	7561
100	7.03	225	675	1210	1893	3105	4830	7910
105	7.38	236	707	1260	1974	3234	5043	8559
110	7.73	246	737	1314	2057	3371	5256	8608
115	8.09	256	767	1367	2141	3508	5468	8957
120	8.44	266	797	1420	2224	3644	5682	9306
125	8.79	276	827	1473	2308	3781	5895	9655
130	9.14	286	857	1527	2391	3918	6108	10004
135	9.49	296	887	1580	2474	4054	6321	10313
140	9.84	306	917	1633	2558	4191	6534	10702
145	10.19	315	946	1686	2641	4327	6321	11051
150	10.55	325	976	1739	2725	4464	6108	11400
155	10.90	335	1006	1793	2808	4601	7173	11749
160	11.25	345	1036	1846	2891	4737	7385	12098
165	11.60	355	1066	1899	2975	4874	7599	12447
170	11.95	365	1096	1952	3058	5011	7812	12796
175	12.30	375	1126	2006	3142	5147	8025	13145
180	12.66	385	1156	2059	3225	5284	8238	13494
185	13.01	395	1185	2112	3308	5421	8451	13843
190	13.36	405	1215	2165	3392	5557	8664	14192
195	13.71	415	1245	2219	3475	5694	8877	14541
200	14.06	425	1275	2280	3560	5840	9090	14890
205	14.41	435	1305	2325	3642	5967	9303	15239
210	14.76	445	1335	2378	3725	6104	9516	15588
215	15.12	455	1365	2432	3809	6240	9729	15937
220	15.47	465	1395	2485	3892	6377	9942	16286
225	15.82	475	1425	2538	3975	6514	10155	16635
230	16.17	485	1454	2591	4059	6650	10368	16984
235	16.52	495	1484	2645	4142	6787	10581	17333
240	16.87	505	1514	2698	4226	6923	10794	17682
245	17.23	515	1544	2751	4309	7060	11007	18031
250	17.58	525	1574	2804	4392	7197	11220	18380
255	17.93	535	1604	2858	4476	7333	11433	18729
260	18.28	545	1634	2911	4559	7470	11646	19078
265	18.64	555	1664	2968	4643	7810	11859	19427
270	18.99	565	1694	3022	4726	7747	12072	19776
275	19.34	575	1725	3077	4810	7885	12285	20125
280	19.69	585	1755	3132	4893	8022	12498	20474
285	20.04	595	1785	3186	4977	8160	12711	20823
290	20.39	605	1815	3240	5060	8297	12924	21172
295	20.75	615	1845	3295	5144	8435	13137	21521
300	21.10	625	1875	3350	5227	8572	13350	21870

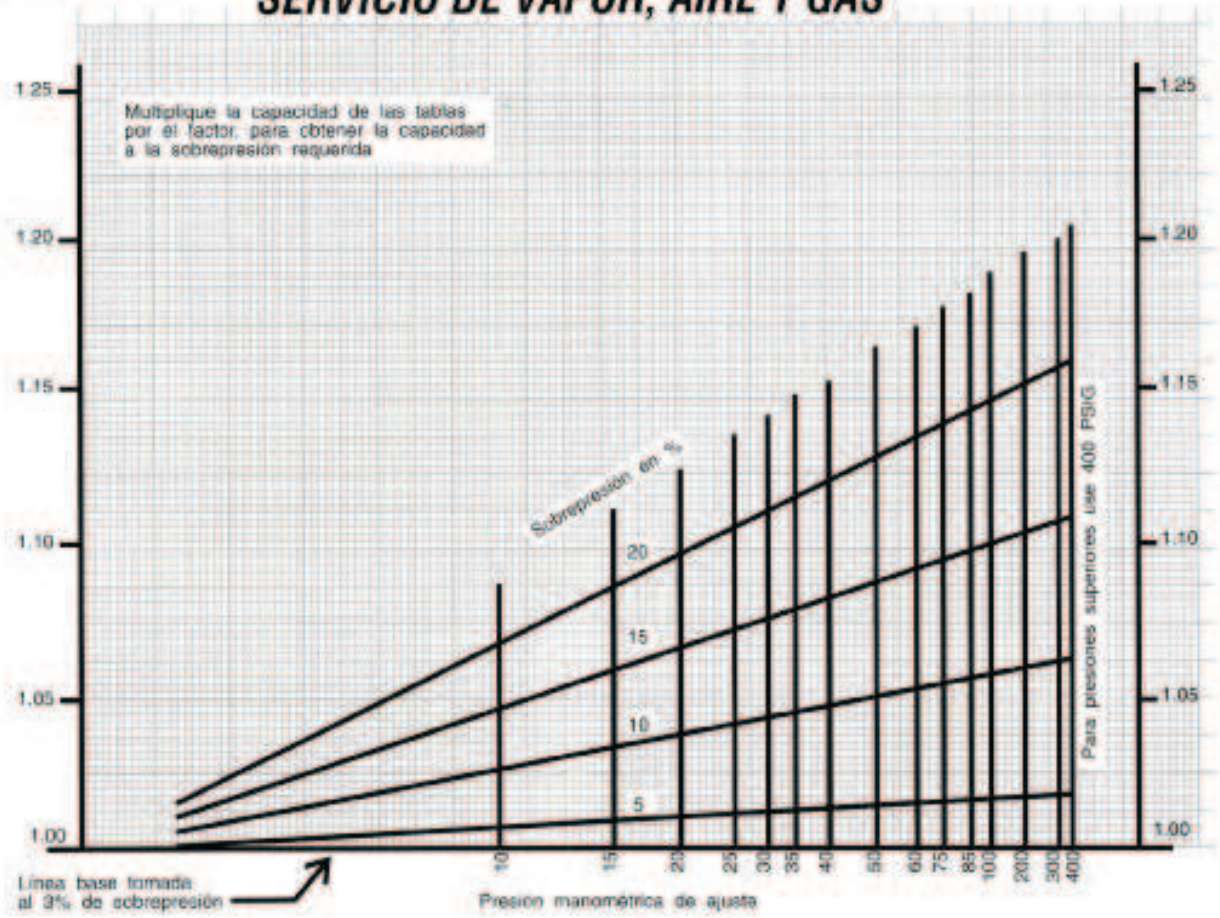
WALWORTH®

TABLA DE CAPACIDADES (MOD. 1541-1542)

TABLA DE CAPACIDADES EN PIES CUBICOS POR MINUTO DE AIRE, CODIGO A.S.M.E. 100% CAPACIDAD REAL AL 10% DE SOBREPRESION A 15.6°C

PRESION DE AJUSTE		DESIGNACION DE MEDIDA, ORIFICIO Y AREA DE DESCARGA						
		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
		DRL	D	E	F	G	H	J
PSIG	Kg/cm²	.037	.110	.196	.307	.503	.785	1.287
5	0.35	13	39	70	109	179	279	457
10	0.70	17	50	89	142	227	355	579
15	1.05	20	61	108	168	276	431	704
20	1.41	24	71	126	198	325	506	829
25	1.76	27	82	145	228	373	582	952
30	2.11	31	92	164	258	420	656	1077
35	2.46	34	103	183	287	471	734	1200
40	2.81	38	114	202	317	519	810	1325
45	3.16	41	124	221	346	568	885	1449
50	3.52	45	134	240	377	620	961	1574
55	3.87	49	146	259	406	665	1037	1698
60	4.22	52	156	278	436	714	1113	1822
65	4.57	56	167	297	465	762	1189	1946
70	4.92	59	177	316	495	811	1265	2070
75	5.27	63	188	335	525	860	1340	2195
80	5.62	66	199	354	554	908	1416	2319
85	5.98	70	209	373	584	957	1492	2443
90	6.33	73	220	392	614	1006	1568	2567
95	6.68	77	230	411	643	1054	1644	2692
100	7.03	80	240	431	673	1106	1719	2816
105	7.38	84	251	448	703	1151	1795	2940
110	7.73	87	262	468	732	1200	1871	3064
115	8.09	91	273	487	762	1249	1947	3188
120	8.44	95	284	506	792	1297	2022	3313
125	8.79	98	294	524	822	1346	2099	3437
130	9.14	102	305	544	851	1395	2174	3561
135	9.49	105	316	562	881	1443	2250	3671
140	9.84	109	326	581	911	1492	2326	3810
145	10.19	112	337	600	940	1540	2402	3934
150	10.55	116	347	619	970	1589	2478	4058
155	10.90	119	358	638	1000	1638	2554	4183
160	11.25	123	369	657	1029	1686	2629	4307
165	11.60	126	379	679	1059	1735	2706	4431
170	11.95	130	390	696	1089	1784	2781	4555
175	12.30	134	401	714	1119	1832	2857	4680
180	12.66	137	412	733	1148	1881	2933	4803
185	13.01	141	422	752	1178	1930	3009	4928
190	13.36	144	433	771	1208	1978	3085	5052
195	13.71	148	443	790	1237	2027	3160	5177
200	14.06	151	454	812	1267	2079	3236	5301
205	14.41	155	465	828	1297	2124	3314	5425
210	14.76	158	475	847	1325	2173	3387	5549
215	15.12	162	486	866	1355	2221	3464	5674
220	15.47	166	497	885	1385	2270	3539	5798
225	15.82	169	507	904	1415	2319	3615	5887
230	16.17	173	518	922	1445	2367	3691	6046
235	16.52	176	528	942	1475	2416	3767	6170
240	16.87	180	539	960	1504	2465	3843	6295
245	17.23	183	550	979	1534	2513	3917	6419
250	17.58	187	560	998	1564	2562	3994	6543
255	17.93	190	571	1017	1593	2611	4070	6667
260	18.28	194	582	1036	1623	2659	4176	6792
265	18.64	197	592	1055	1653	2708	4226	6928
270	18.99	201	603	1074	1682	2757	4302	7053
275	19.34	204	613	1093	1712	2805	4378	7177
280	19.69	208	624	1112	1742	2854	4454	7302
285	20.04	212	635	1131	1771	2902	4530	7426
290	20.39	215	645	1150	1801	2951	4606	7551
295	20.75	219	656	1169	1831	3000	4682	7675
300	21.10	222	667	1188	1860	3048	4758	7800

FACTORES DE SOBREPRESION PARA VALVULAS DE SEGURIDAD SERVICIO DE VAPOR, AIRE Y GAS



FACTORES DE CORRECCION POR TEMPERATURA PARA AIRE-GAS EN TEMPERATURAS DIFERENTES A 60°F (15.6°C)

°F	°C	Factor	°F	°C	Factor	°F	°C	Factor
0	-17.8	1.062	140	60.0	.931	380	193.3	.767
10	-12.2	1.051	160	71.1	.916	400	204.4	.778
20	-6.7	1.041	180	82.2	.902	420	215.6	.769
30	-1.1	1.030	200	93.3	.888	440	226.7	.760
40	4.4	1.020	220	104.4	.874	460	237.8	.752
50	10.0	1.009	240	115.6	.862	480	248.9	.744
60	15.5	1.000	260	126.7	.849	500	260.0	.737
70	21.1	.991	280	137.8	.838	550	287.8	.718
80	26.7	.981	300	148.9	.828	600	315.6	.701
90	32.2	.972	320	160.0	.817	650	343.3	.685
100	37.8	.964	340	171.1	.806	700	371.1	.669
120	48.9	.947	360	182.2	.796	750	398.9	.656

FACTORES DE CORRECCION DE LA DENSIDAD RELATIVA PARA AIRE - GAS PARA GRAVEDAD ESPECIFICA DIFERENTE A 1.0

Grav. Esp.	Factor	Grav. Esp.	Factor	Grav. Esp.	Factor
.07	3.770	.75	1.155	1.40	.845
.08	3.530	.80	1.117	1.50	.817
.09	3.333	.85	1.085	1.60	.791
.10	3.160	.90	1.055	1.70	.768
.20	2.240	.95	1.025	1.80	.745
.30	1.825	1.00	1.000	1.90	.725
.40	1.580	1.05	.975	2.00	.707
.50	1.414	1.10	.955	2.50	.633
.55	1.350	1.15	.933	3.00	.577
.60	1.290	1.20	.913	3.50	.535
.65	1.240	1.25	.895	4.00	.500
.70	1.195	1.30	.877	4.50	.471

CAPACIDADES DE TUBERIAS

El obtener un control exacto del fluido a manejar es tan importante como calcular correctamente el tamaño de una válvula de seguridad. Este tamaño debe ser determinado, basándose en **el trabajo a realizar** y no por el tamaño de la tubería existente. Cuando la cantidad de fluido, que pasa a través de una válvula no es conocida, el tamaño máximo de la misma puede ser determinado por la capacidad de la tubería en la salida de la válvula.

NOTA: Las tablas de capacidades mostradas son una guía para seleccionar el tamaño correcto de las válvulas. Sin embargo, existen varios factores involucrados en el flujo de fluidos, que pueden afectar la capacidad de válvulas y tuberías. Es imposible obtener una tabla que tome en consideración todas las variantes anteriores, sin embargo, el uso de las tablas adjuntas proporciona capacidades muy cercanas a la realidad.

Nota: No debe conectarse una válvula de línea ni antes ni después de una válvula de seguridad.

LIBRAS POR HORA DE VAPOR SATURADO

Longitud de tubería equivalente a 240 diámetros
Caída de presión 2 PSIG.

PRESION DE AJUSTE		DIAMETRO DE TUBERIA EN PULGADAS									
PSIG	kg/cm²	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6
5	0.35	61	113	198	388	550	966	1423	2378	4352	10.837
10	0.70	68	125	219	431	610	1072	1580	2641	4832	12.030
15	1.05	74	136	238	469	665	1168	1720	2875	5262	13.095
20	1.41	80	148	256	504	714	1256	1850	3091	5655	14.083
25	1.76	85	156	273	537	761	1336	1968	3290	6020	14.986
30	2.11	89	165	288	567	804	1412	2081	3478	6364	15.847
40	2.81	99	182	315	624	884	1552	2286	3820	6991	17.406
50	3.52	106	197	343	674	955	1678	2472	4132	7560	18.820
60	4.22	114	210	366	721	1022	1796	2645	4422	8090	20.141
70	4.92	120	223	389	765	1084	1906	2806	4691	8586	21.368
80	5.62	126	235	410	805	1143	2008	2958	4943	9044	22.518
90	6.33	132	239	432	845	1205	2104	3097	5175	9510	23.515
100	7.03	141	258	450	880	1256	2189	3232	5396	9900	24.341
125	8.79	151	284	494	972	1376	2414	3545	5939	10626	26.700
150	10.55	156	293	510	1001	1425	2492	3669	6117	11241	28.800

PIES CUBICOS POR MINUTO DE AIRE

Longitud de tubería 100 pies - Caída de presión 2 PSIG.

PRESION DE AJUSTE		DIAMETRO DE TUBERIA EN PULGADAS									
PSIG	kg/cm²	1/4	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6
10	0.70	3	12	24	40	80	125	240	400	650	1300	4200
30	2.11	4	16	32	55	110	170	320	540	900	1800	5500
50	3.52	5	20	40	68	130	210	380	650	1100	2200	7000
80	5.62	6	24	43	85	160	250	480	770	1300	2600	8000
100	7.03	6.5	26	45	90	175	270	500	850	1400	2800	9000

APLICACION Y SELECCION DE VALVULA 1541-1542

WALWORTH®

APLICACION

Las aplicaciones más usuales de las válvulas de seguridad **WALWORTH®** son desalojar el exceso de presión en sistemas de tuberías y equipos, tales como:

- *Calderas*
- *Autoclaves*
- *Compresores*
- *Generadores de vapor*
- *Recipientes de aire a presión*
- *Carros tanque que transportan gases*
- *Servicios de aire o gas no corrosivos al bronce*

SELECCION

La correcta selección de una válvula de seguridad debe hacerse conociendo los datos inherentes al servicio para el cual va a ser destinada; se incluyen a continuación los mínimos requeridos para una selección adecuada.

- *Fluidos a manejar*
- *Tipo de descarga*
- *Presión de ajuste*
- *Temperatura de operación*
- *Capacidad de descarga requerida*

EJEMPLO DE SELECCION

Se necesita proteger un recipiente que contiene aire a presión, con las siguientes características:

- *Medida: (Por seleccionar)*
- *Fluido a manejar: Aire*
- *Tipo de descarga: lateral (a la línea)*
- *Presión de ajuste: 10.5 kg/cm² (150 Lb/pulg²)*
- *Temperatura de operación: 15.6 °C (60 °F)*
- *Capacidad de descarga requerida: 450 pies³/min.*

Encontrar que válvula debemos utilizar para proteger este equipo.

SOLUCION

Por el fluido a manejar, tipo de descarga y límites de presión y temperatura, nos damos cuenta que requerimos una válvula 1541 (ver características, pág. 3). Ahora, para calcular el tamaño de la válvula usaremos la capacidad de descarga y la presión de ajuste requeridas, de la siguiente forma:

1.- En la tabla de la página 8, encontrar en la columna de la izquierda la presión de ajuste requerida. 10.5 Kg./cm² (150 Lb./pulg²) y en este renglón buscar la capacidad inmediata superior a la requerida (450 pies³/min.) en nuestro caso la inmediata superior es de 619 pies³/min., la cual corresponde a la columna del orificio E (.196 pulg²).

2.- En la tabla de características de diseño para la válvula 1541, que se encuentra en la página 3, podemos ver que a un orificio E (.196 pulg²) corresponde una medida nominal de 25 mm. (1"). Por lo tanto, la válvula que debemos seleccionar es una 1541 de 1".

NOTA: Para temperaturas diferentes de 15.6°C (60°F) y/o sobrepresiones diferentes a las indicadas en las tablas, consultar la gráfica y tablas de la página 9.

Para una mejor selección, consulte con nuestro departamento de Ventas.

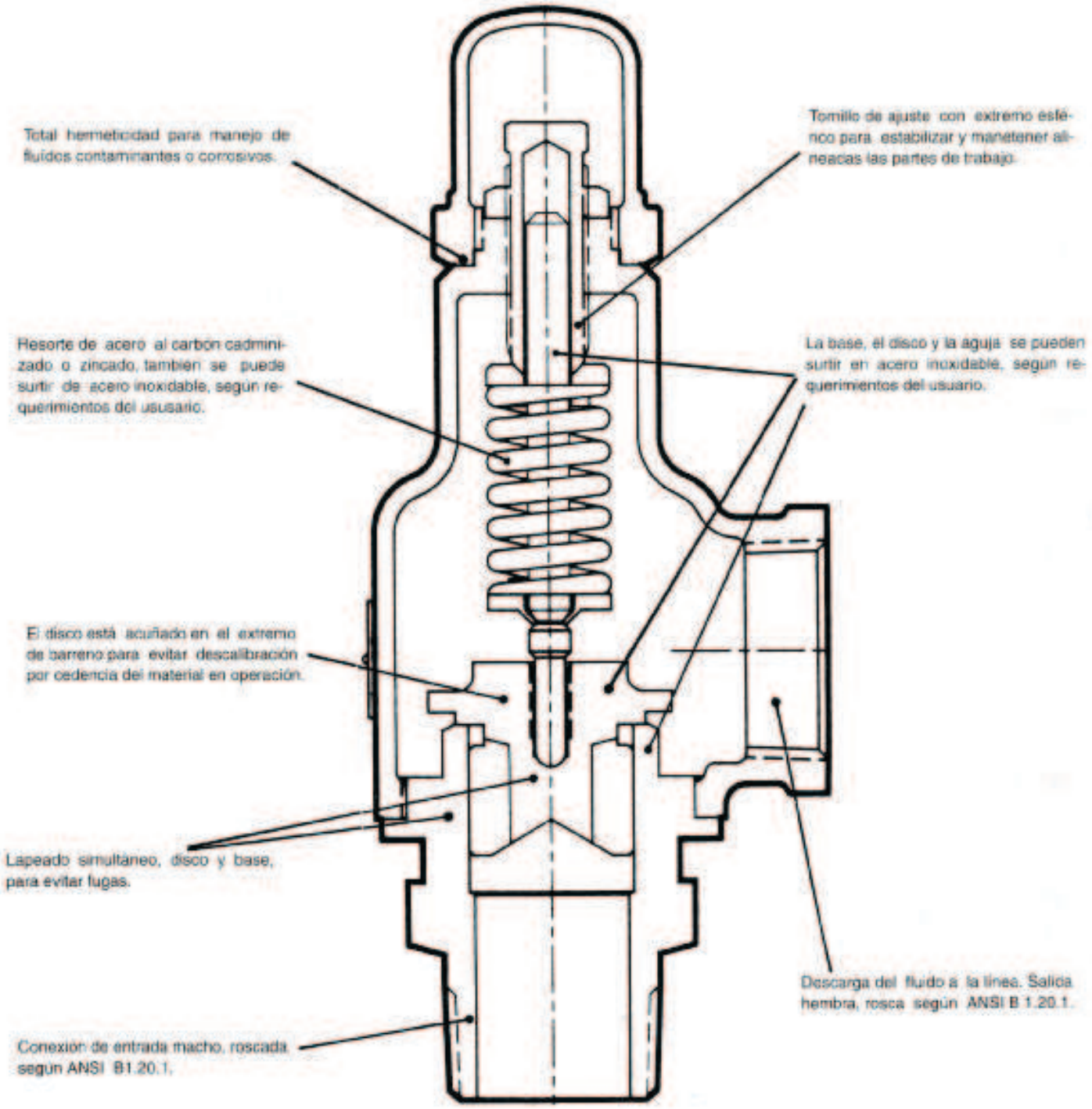
FORMA DE ORDENAR (EJEMPLO)

MEDIDA	MODELO	PRESION DE AJUSTE	FLUIDO A MANEJAR *	SOBREPRESION *	TEMPERATURA *
25mm(1")	1541-E	10.5 Kg/cm²(150 PSIG)	Aire	10%	15.6 °C (60 °F)

* Para garantizar el correcto funcionamiento de la válvula se requiere que el cliente proporcione correctamente estos datos, si no es así, **WALWORTH®** surtirá bajo las siguientes características como estándar:

1.- FLUIDO: Aire
2.- SOBREPRESION: 10%
3.- TEMPERATURA: 16.5°C (60°F)

MODELO 1478 Y 1478-3



VALVULAS DE ALIVIO MODELO 1478

WALWORTH®

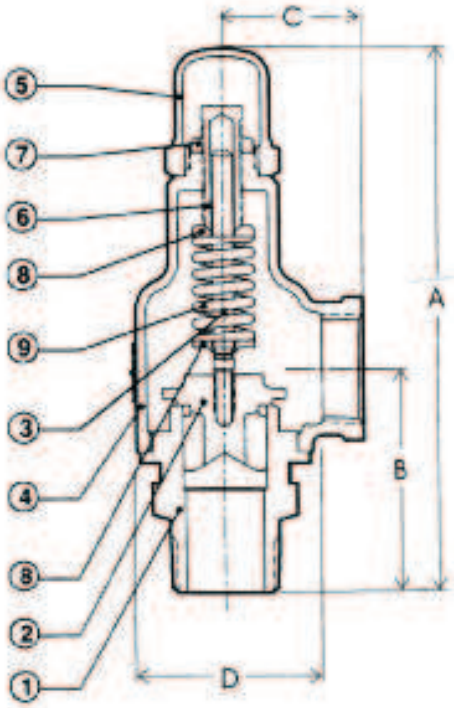
MATERIALES

REF.	DESCRIPCION	MODELO 1478	MODELO 1478-3 (1) (2)
1	BASE	LATON NAVAL BRASS	AC. INOX. 304
2	DISCO	LATON NAVAL BRASS	AC. INOX. 304
3	AGUJA	AC. AL CARBON	AC. INOX. 304
4	BONETE	FUND. DE BRONCE	FUND. DE BRONCE
5	CASQUILLO	FUND. DE BRONCE	FUND. DE BRONCE
6	TORNILLO DE COMPRENSION	LATON	LATON
7	TCA. TOR. DE COMPRENSION	LATON	LATON
8	ROLDANAS DEL RESORTE	LATON	LATON
9	RESORTE	AC. AL CARBON	AC. AL CARBON

(1) DISPONIBLE con internos de AC. INOX. (Y/o (BASE, DISCO Y AGUJA)
(2) DISPONIBLE con resorte de AC. INOXIDABLE: solicitar información con el departamento de ventas

CARACTERISTICAS DE DISEÑO:

- Válvulas de alivio para servicio de líquidos no corrosivos al bronce
- Descarga lateral (a la línea)
- Roscas N.P.T. (Macho-Hembra) conicas para tubería según ANSI B 1.20.1
- Medidas nominales desde 13mm. (1/2") hasta 76mm (3")
- Presión mínima de calibración 0.35 Kg/cm.^{2} (5 PSIG)
- Presión máxima de operación (EXCEPTO 3"):
  21.10 Kg/cm^2 (300 PSIG); para 3" 10.55 kg/cm^2 (150 PSIG)
- Temperatura máxima de operación:
  208° C (405 °F)



DIMENSIONES Y PESOS

MEDIDA Pulg.	MEDIDA mm.	UNID.	A	B	C	D	ALTURA MINIMA DE MONTAJE	PESO APROX.
1/2	13	Pulg.	5 9/16	2 3/8	1 5/16	1 11/16	6 7/8	1.3 Lb.
		mm.	141.3	60.3	33.3	42.9	174.6	0.6 Kg.
3/4	19	Pulg.	5 9/16	2 3/8	1 5/16	1 11/16	6 7/8	1.3 Lb.
		mm.	141.3	60.3	33.3	42.9	174.6	0.6 Kg.
1	25	Pulg.	6 9/16	2 11/16	1 5/8	2 1/8	8 1/8	2.3 Lb.
		mm.	166.7	68.3	41.3	54.0	206.4	1.0 Kg.
1 1/4	32	Pulg.	7 9/16	2 15/16	2	2 9/16	9 1/4	3.5 Lb.
		mm.	192.1	74.6	50.8	65.1	234.9	1.6 Kg.
1 1/2	38	Pulg.	8 5/16	3 5/16	2 1/8	2 7/8	10 1/4	4.5 Lb.
		mm.	211.1	84.1	54.0	73.0	260.4	2.0 Kg.
2	51	Pulg.	10 1/2	3 7/8	2 11/16	3 13/16	12 3/4	9.5 Lb.
		mm.	266.7	98.4	68.3	96.8	323.9	4.3 Kg.
2 1/2	64	Pulg.	12 3/8	4 5/8	3 1/8	4 13/32	15 3/8	17.0 Lb.
		mm.	314.4	117.5	79.4	340.5	390.5	7.7 Kg.
3	76	Pulg.	12 11/16	6 1/16	3 1/2	5 3/16	15	24.0 Lb.
		mm.	322.3	154.0	89.0	131.8	381.0	10.9 Kg.

CARACTERISTICAS DEL DISEÑO

MODELO	MEDIDA NOMINAL Pulg.	MEDIDA NOMINAL mm.	CONEXIONES N.P.T. ENTRADA (Macho)	CONEXIONES N.P.T. SALIDA (Hembra)	LIMITES MAXIMOS PRESION-TEMPERATURA PSIG.	Kg/cm^2	°F	°C
1478	1/2	13	1/2"	1/2"	300	21.1	406	207.8
1478	3/4	19	3/4"	3/4"	300	21.1	406	207.8
1478	1	25	1"	1"	300	21.1	406	207.8
1478	1 1/4	32	1 1/4"	1 1/4"	300	21.1	406	207.8
1478	1 1/2	38	1 1/2"	1 1/2"	300	21.1	406	207.8
1478	2	51	2"	2"	300	21.1	406	207.8
1478	2 1/2	64	2 1/2"	2 1/2"	300	21.1	406	207.8
1478	3	76	3"	3"	150	10.5	406	207.8

TABLA DE CAPACIDADES EN LIQUIDOS

WALWORTH®

(MOD. 1478)

GALONES POR MINUTO DE AGUA AL 25% DE SOBREPRESION

PRESION DE AJUSTE		TAMAÑO						
PSIG	Kg/cm²	1/2" y 3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
5	0.35	4.4	7.3	13	21	38	52	72
10	0.70	6.2	10.5	18	29	53	73	102
15	1.05	7.6	12.8	22	36	66	90	125
20	1.41	8.8	14.8	26	41	78	103	144
25	1.76	9.8	16.5	29	46	88	115	161
30	2.11	10.7	18.1	32	50	98	126	177
35	2.46	11.6	19.6	34	55	100	137	191
40	2.81	12.4	20.8	36	58	107	146	204
45	3.16	13.2	22.2	39	62	114	155	217
50	3.52	13.9	23.4	41	65	120	163	229
55	3.87	14.5	24.5	43	68	126	171	239
60	4.22	15.2	25.6	45	71	131	179	250
65	4.57	15.8	26.7	46	74	137	186	260
70	4.92	16.4	27.7	48	77	142	194	271
75	5.27	17.0	28.7	50	80	147	200	280
80	5.62	17.5	29.8	52	82	152	207	289
85	5.98	18.0	30.5	53	85	156	213	297
90	6.33	18.6	31.4	55	87	161	219	306
95	6.68	19.1	32.3	56	90	165	225	314
100	7.03	19.6	33.1	58	92	170	231	322
105	7.38	20.1	33.9	59	95	174	237	331
110	7.73	20.5	34.7	60	97	178	242	339
115	8.09	21.0	35.5	62	99	182	247	345
120	8.44	21.5	36.3	63	101	186	253	354
125	8.79	21.9	37.0	64	103	190	258	361
130	9.14	22.3	37.7	66	105	193	263	368
135	9.48	22.8	38.5	67	107	197	268	375
140	9.84	23.2	39.2	68	109	200	273	382
145	10.19	23.6	39.8	68	111	204	278	389
150	10.55	24.0	40.6	71	113	208	283	396
155	10.90	24.4	41.2	72	115	211	288	-
160	11.25	24.8	41.8	73	117	214	293	-
165	11.60	25.2	42.5	74	119	218	298	-
170	11.95	25.6	43.2	75	120	221	303	-
175	12.30	25.9	43.7	76	122	224	308	-
180	12.66	26.3	44.4	77	124	227	313	-
185	13.01	26.7	45.0	78	126	231	318	-
190	13.36	27.0	45.6	79	127	234	323	-
195	13.71	27.4	46.2	80	129	237	328	-
200	14.06	27.7	46.8	81	130	239	333	-
205	14.41	28.1	47.4	82	132	243	338	-
210	14.76	28.4	48.0	83	134	245	343	-
215	15.12	28.8	48.5	84	135	249	348	-
220	15.47	29.1	49.2	85	137	251	353	-
225	15.82	29.4	49.7	86	138	254	358	-
230	16.17	29.9	50.3	87	140	257	363	-
235	16.52	30.1	50.7	88	142	260	368	-
240	16.87	30.4	51.3	89	143	263	373	-
245	17.23	30.7	51.8	90	145	265	378	-
250	17.58	31.0	52.4	91	146	268	383	-
255	17.93	31.3	52.9	92	147	270	388	-
260	18.28	31.6	53.4	93	149	273	393	-
265	18.64	31.9	53.9	94	150	275	398	-
270	18.99	32.2	54.4	94	151	278	403	-
275	19.34	32.5	54.9	95	153	280	408	-
280	19.69	32.8	55.4	96	154	283	413	-
285	20.04	33.1	55.9	97	156	285	418	-
290	20.39	33.4	56.4	98	157	288	423	-
295	20.75	33.7	56.9	99	158	290	428	-
300	21.10	34.0	57.4	100	159	293	433	-

NOTA: PARA CAPACIDADES A UNA MAS BAJA SOBRESION, CONSULTAR LA GRAFICA DE LA PAG. 15

DATOS DE INGENIERIA

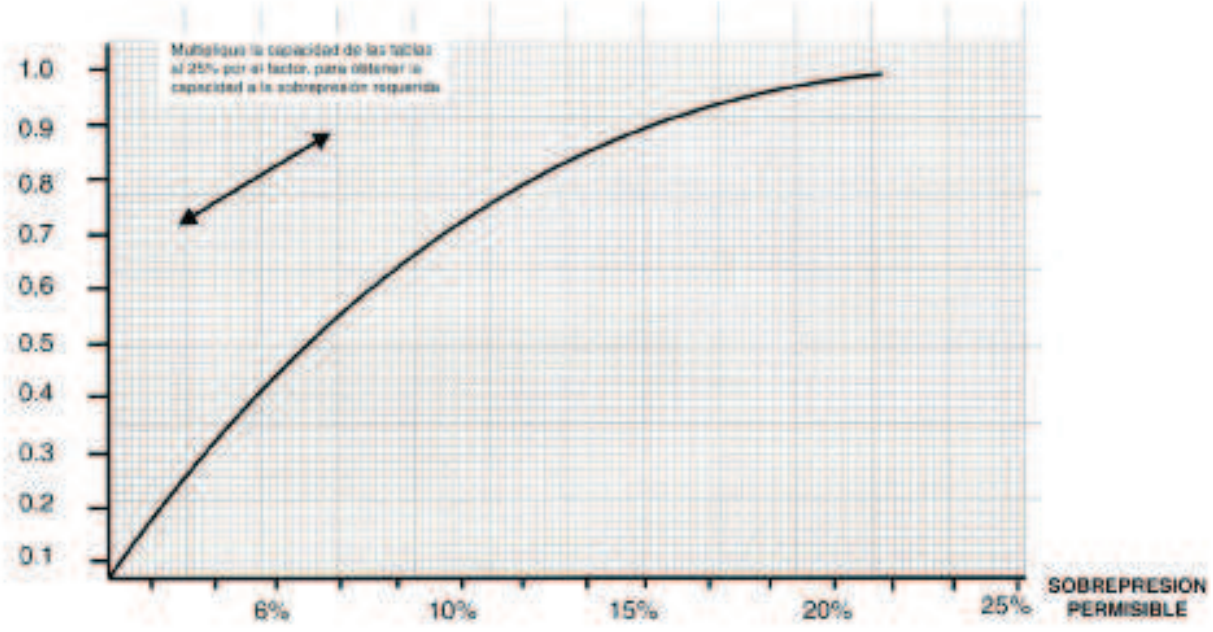
El obtener un control exacto del fluido o manejar, es tan importante como calcular correctamente el tamaño de una válvula de alivio. Este debe ser determinado, basándose en el **trabajo a realizar** y no por el tamaño de la tubería existente. Cuando la cantidad de fluido que pasa a través de una válvula no es conocida, el tamaño máximo de la misma puede ser determinado por la capacidad de la tubería en la salida de la válvula.

NOTA: La tabla de capacidad mostrada es una guía para seleccionar el tamaño correcto de las válvulas. Sin embargo, existen varios factores involucrados en el flujo de fluidos que pueden afectar la capacidad de válvula y tubería. Es imposible obtener una tabla que tome en consideración todas las variantes anteriores. No obstante, el uso de la tabla adjunta proporciona capacidades muy cercanas a la realidad.

GALONES DE AGUA POR MINUTO
Basado en velocidades máximas recomendadas

Diametro de la tuberia		Galones por minuto	Diámetro de la tuberia		Galones por minuto
pulg.	mm.		mm.	pulg.	
1/2	13	2.5	64	2 1/2	94
3/4	19	6.0	76	3	155
1	25	10.0	102	4	310
1 1/4	32	22.0	152	6	830
1 1/2	38	38.0	203	8	1500
2	51	59.0	254	10	2450

FACTORES DE SOBREPRESION PARA VALVULAS DE ALIVIO
SERVICIO EN LIQUIDOS



APLICACION Y SELECCION DE VALVULA 1478

WALWORTH®

APLICACION

Las válvulas de alivio ***WALWORTH®*** están diseñadas para proteger equipos y procesos contra el exceso de presión de líquidos. Las aplicaciones más usuales son en tanques, tuberías y otros recipientes en donde no se requiera gran capacidad de relevo. Deben ser usadas en servicio de líquidos no corrosivos al bronce.

SELECCION

La correcta selección de una válvula de alivio debe hacerse conociendo los datos del servicio al cual va a ser destinada; se incluyen a continuación los mínimos requeridos para una selección adecuada.

- *Fluidos a manejar*
- *Presión de ajuste*
- *Temperatura de operación*
- *Capacidad de descarga requerida*

EJEMPLO DE SELECCION

Se necesita proteger un recipiente que contiene aire a presión, con las siguientes características:

- *Fluido a manejar: Agua.*
- *Presión de ajuste: 8.79 Kg/cm² (125 PSIG).*
- *Temperatura de operación: 15.6 °C (60 °F)*
- *Capacidad de descarga requerida: 75 gal/min.*
- *Sobrepresión : 25%*

Encontrar que válvula debemos utilizar para proteger este equipo.

SOLUCION

Por el tipo de fluido a manejar y límites de presión y temperatura, nos damos cuenta que requerimos una válvula 1478 (ver características, pág. 13). Ahora, para calcular el tamaño de la válvula usaremos la capacidad de descarga y la presión de ajuste requeridas, de la siguiente forma:

En la tabla de la página 14, encontrar en la columna de la izquierda la presión de ajuste requerida. (8.79 Kg./cm²)(125 Lb./pulg²) y en este renglón buscar la capacidad inmediata superior a la requerida (75 gal/min.) en nuestro caso la inmediata superior es de 103 gal/min., la cual corresponde a la columna de la válvula de 1 1/2". Por lo tanto, la válvula que debemos seleccionar es una 1478 de 1 1/2".

NOTA: Para obtener capacidades con sobrepresiones diferentes al 25% consultar la página 15.

¡PROTEJA SU EQUIPO!

FORMA DE ORDENAR (EJEMPLO)

MEDIDA	MODELO	PRESION DE AJUSTE	FLUIDO A MANEJAR*	SOBREPRESION *	TEMPERATURA*
38mm (1 1/2")	1478	8.79 Kg/cm2(125 PSIG)	Agua	25%	15.6 °C(60 °F)

* Para garantizar el correcto funcionamiento de la válvula se requiere que el cliente proporcione correctamente estos datos, si no es así, ***WALWORTH®*** surtirá bajo las siguientes características como estándar.

1.- FLUIDO: Agua
2.- SOBREPRESION: 25%
3.- TEMPERATURA: 15.6°C (60°F)

TABLA DE CONVERSION DE TEMPERATURAS

WALWORTH®

°C	-459.4° a 0°	°F	°C	1° a 60°	°F	°C	61° a 290°	°F	°C	300° a 890°	°F	°C	900° a 3000°	°F
-273	-459.4		-17.2	1	33.8	16.1	61	141.8	149	300	572	482	900	1652
-268	-450		-16.7	2	35.6	16.7	62	143.6	154	310	590	488	910	1670
-262	-440		-16.1	3	37.4	17.2	63	145.4	160	320	608	493	920	1688
-257	-430		-15.6	4	39.2	17.8	64	147.2	166	330	626	499	930	1706
-251	-420		-15.0	5	41.0	18.3	65	149.0	171	340	644	504	940	1724
-246	-410		-14.4	6	42.8	18.9	66	150.8	177	350	662	510	950	1742
-240	-400		-13.9	7	44.6	19.4	67	152.6	182	360	680	516	960	1760
-234	-390		-13.3	8	46.4	20.0	68	154.4	188	370	698	521	970	1778
-229	-360		-12.8	9	48.2	20.6	69	156.2	193	380	716	527	980	1796
-223	-370		-12.2	10	50.0	21.1	70	158.0	199	390	734	532	990	1814
-218	-360		-11.7	11	51.8	21.7	71	159.8	204	400	752	538	1000	1832
-212	-350		-11.1	12	53.6	22.2	72	161.6	210	410	770	549	1020	1868
-207	-340		-10.6	13	55.4	22.8	73	163.4	216	420	788	560	1140	1904
-201	-330		-10.0	14	57.2	23.3	74	165.2	221	430	806	571	1160	1940
-196	-320		- 9.4	15	59.0	23.9	75	167.0	227	440	824	582	1180	1976
-190	-310		- 8.9	16	60.8	24.4	76	168.8	232	450	842	593	1100	2012
-184	-300		- 8.3	17	62.6	25.0	77	170.6	238	460	860	604	1120	2048
-179	-290		- 7.8	18	64.4	25.6	78	172.4	243	470	878	615	1140	2084
-173	-280		- 7.2	19	66.2	26.1	79	174.2	249	480	896	627	1160	2120
-169	-273	-459.4	- 6.7	20	68.0	26.7	80	176.0	254	490	914	638	1180	2156
-168	-270	-454	- 6.1	21	69.8	27.2	81	177.8	260	500	932	649	1200	2192
-162	-260	-436	- 5.6	22	71.6	27.8	82	179.6	266	510	950	660	1220	2228
-157	-250	-418	- 5.0	23	73.4	28.3	83	181.4	272	520	968	671	1240	2264
-151	-240	-400	- 4.4	24	75.2	28.9	84	183.2	277	530	986	682	1260	2300
-146	-230	-382	- 3.9	25	77.0	29.4	85	185.0	282	540	1004	693	1280	2336
-140	-220	-364	- 3.3	26	78.8	30.0	86	186.8	288	550	1022	704	1300	2372
-134	-210	-346	- 2.8	27	80.6	30.6	87	188.6	293	560	1040	732	1650	2462
-129	-220	-328	- 2.2	28	82.4	31.1	88	190.4	299	570	1058	760	1400	2552
-123	-190	-310	- 1.7	29	84.2	31.7	89	192.2	304	580	1076	788	1450	2642
-118	-180	-292	- 1.1	30	86.0	32.2	90	194.0	310	590	1094	816	1500	2732
-112	-170	-274	- 0.6	31	87.8	32.8	91	195.8	316	600	1112	843	1550	2822
-107	-160	-256	0.0	32	89.6	33.3	92	197.5	321	610	1130	871	1600	2912
-101	-150	-238	0.6	33	91.4	33.9	93	199.4	327	620	1148	899	1650	3002
- 96	-140	-220	1.1	34	93.2	31.4	94	201.2	332	630	1166	927	1700	3092
- 90	-130	-202	1.7	35	95.0	35.0	95	203.0	338	640	1184	954	1750	3182
- 84	-120	-184	2.2	36	96.8	35.6	96	204.8	343	650	1202	982	1800	3272
- 79	-110	-166	2.8	37	98.6	36.1	97	206.6	349	660	1220	1010	1850	3362
- 73	-100	-148	3.3	38	100.4	36.7	98	208.4	354	670	1238	1038	1900	3452
- 68	- 90	-130	3.9	39	102.2	37.2	99	210.2	360	680	1256	1066	1950	3542
- 62	- 80	-112	4.4	40	104.0	37.8	100	212.0	366	690	1274	1093	2000	3623
- 57	- 70	- 94	5.0	41	105.8	43	110	230	371	700	1292	1121	2050	3722
- 51	- 60	- 76	5.6	42	107.6	49	120	248	377	710	1310	1149	2100	3812
- 46	- 50	- 58	6.1	43	109.4	54	130	266	382	720	1328	1177	2150	3902
- 40	- 40	- 40	6.7	44	111.2	60	140	284	388	730	1346	1204	2200	3992
- 34	- 30	- 22	7.2	45	113.0	66	150	302	393	740	1364	1232	2250	4082
- 29	- 20	- 4	7.8	46	114.8	71	160	320	399	750	1382	1260	2300	4172
- 23	- 10	- 14	8.3	47	116.6	77	170	338	404	760	1400	1288	2350	4262
- 17.8	- 0	- 32	8.9	48	118.4	82	180	356	410	770	1418	1316	2400	4352
			9.4	49	120.2	88	190	374	416	780	1436	1343	2450	4442
			10.0	50	122.0	93	200	392	421	790	1454	1371	2500	4532
			10.6	51	123.8	99	210	410	427	800	1472	1399	2550	46 22
			11.1	52	125.6	100	212	413.6	432	810	1490	1427	2600	4712
			11.7	53	127.4	104	220	428	438	820	1508	1454	2650	4802
			12.2	54	129.2	110	230	446	443	830	1526	1482	2700	4892
			12.8	55	131.0	116	240	464	449	840	1544	1510	2750	4982
			13.3	56	132.8	212	250	482	454	850	1562	1538	2800	5072
			13.9	57	134.6	127	260	500	460	860	1580	1565	2850	5162
			14.4	58	136.4	132	270	518	466	870	1598	1593	2900	5252
			15.0	59	138.2	138	280	536	471	880	1616	1621	2950	5342
			15.6	60	140.0	143	290	554	477	890	1634	1649	3000	5432

Nota: Los datos que se encuentra en las columnas centrales pueden ser indistintamente °C ó °F , a a derecha encontrará el valor °F y a la izquierda el valor °C