

STOCKHAM

Iron Valves



SETTING THE STANDARD IN SERVICE

CRANE Energy Flow Solutions

SETTING THE STANDARD IN SERVICE

The Stockham Pledge

Stockham is committed to setting the standard in quality service to the Commercial Construction industry.

Our pledge to our customers is:

- A friendly voice every time you call
- Quick response to your quotes and questions
- On-time delivery
- Accurate shipments

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For Commonly Used Valves

BRONZE

GLOBE

	<u>Stockham</u>	<u>NIBCO</u>	<u>Milwaukee</u>
Class 125	B-16	T-211-B	502
Class 300 SS Trim	B-74	T-276AP	593A
	B-66	T-275-B	572

GATE

Class 125 RS-Thread	B-100	T-111	148
Class 125 NRS-Thread	B-103	T-113	105
Class 125 RS-Solder	B-108	S-111	149
Class 125 NRS-Solder	B-104	S-113	115
Class 150 Union Bonnet	B-120	T-134	1151
Class 300 SS Trim	B-145	T-174-SS	1184

CHECK

Class 125 Thread	B-319Y	T-413-BY	509
Class 125 Solder	B-309Y	S-413-B	1509
Class 300 Swing Check	B-375	T-473-B	507
	B-321	T-433-B	515

IRON

GATE

	<u>Stockham</u>	<u>NIBCO</u>	<u>Milwaukee</u>	<u>Powell</u>	<u>Walworth</u>
Class 125 NRS	G-612	F-619	F2882 A	1787	W719F
Class 125 OS&Y	G-623	F-617-0	F2885 A	1793	W726F
Class 250 OS&Y	F-667	F-667-0	F2894 A	1797	W786F

GLOBE

Class 125	G-512	F-718-B	F2981 A	241	W906F
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SWING CHECK

Class 125 Flanged	G-931	F-918-B	F2974 A	559	W928F
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STOP CHECK

Class 250 Straight-way Y-Pattern	F-540	----	----	----	----
Class 250 Angle Y-Pattern	F-541	F-869-B	----	----	----

Stockham iron body valves are proven performers in mechanical systems of commercial buildings throughout America. Chemical plants, steel mills, shipyards, refineries, pulp and paper mills, and utilities have also found that Stockham iron body valves do the job better and longer for their many general services.

QUALITY MANAGEMENT

Stockham is committed to a philosophy of total quality management. It begins with design, to comply with pertinent MSS and ASME Standards. Continuous improvement are applied in a process to improve materials and services to meet or exceed customer needs.

MATERIALS

The iron used as the basic valve material conforms to the chemical and physical requirements of the American Society of Testing and Materials A-126 Class B for Cast Iron Valves. Cast iron valves with 3% nickel content can also be provided. All valve materials are listed and described in the Technical Data Booklet.

RATED WORKING PRESSURES

The pressure-temperature ratings of Stockham iron body valves in this catalog section are as follows:

TEMPERATURE °F	PRESSURE (PSIG)				
	CLASS 125 CAST IRON			CLASS 250 CAST IRON	
	SIZES 2-12	SIZES 14-24	SIZES 30-36	SIZES 2-12	SIZES 14-24
-20 to 100	200	150	150	500	300
150	200	150	150	500	300
200	190	135	115	460	280
225	180	130	100	440	270
250	175	125	85	415	260
275	170	120	65	395	250
300	165	110	50	375	240
325	155	105		355	230
350	150	100		335	220
375	145			315	210
400	140			290	200
425	130			270	
450	125			250	
500					
600					
650					

The temperature shown for a corresponding pressure rating is the temperature of the pressure containing shell of the component. In general, this temperature is the same as that of the contained fluid. Composition disc valves are excluded from these ratings.

DESIGN:

GATE VALVES-CLASSES 125 and 250

Stem—All stems are designed for ample strength and are machined to function easily. Backseats are provided on OS&Y valves.

Packing Gland Assembly—Glands and gland flanges have a ball and socket joint which assures alignment. It provides for proper packing compression without binding against the stem.

Packing—Non-Asbestos.

Disc—Strong, solid wedge discs have disc guides for precision seating with minimum friction against body seats.

Yoke and Bonnet—One-piece yoke bonnets are utilized on 12" and smaller size OS&Y valves. Larger sizes have separate yokes and bonnets.

Stuffing Box—NRS valves have stuffing boxes assembled to bonnets to accommodate the packing gland assembly.

Seat Ring—Buttress-type seat rings are bottom-seated with accurately machined faces to match disc faces.

Handwheel or Operating Nut—Handwheels have large diameters for good leverage. Operating nuts, 2" square may be furnished on any NRS valve if specified.

Yoke Bushing—Yoke bushings on OS&Y valves have Acme threads for stem engagement, and handwheels fit snugly over bushings. Handwheels are securely locked to yoke bushings with locknuts. Bolted yoke cap secures the yoke bushing to yoke.

Body—Body sections are evenly distributed for maximum strength. Dimensions and drilling of end flanges of cast iron valves conform to the ASME Standard B16.1 for Classes 125 and 250 Cast Iron Flanges. Face-to-face dimensions comply with ASME Standard B16.10.

DESIGN:
GLOBE AND ANGLE VALVES-OUTSIDE SCREW AND YOKE-CLASSES 125 and 250

Stem—Stems are machined with Acme threads which fully engage the yoke bushing threads at all times.

Packing Gland Assembly—Glands and gland flanges have a ball and socket joint which assures alignment and proper packing compression.

Packing—Non-Asbestos.

Backseat Bushing—Bushings are threaded into bonnets, providing beveled seats for backseating on stem shoulders.

Disc—Bronze discs are furnished in Class 125 and 250 globe and angle valves, which are regrindable. Disc nuts thread into disc. The Class 250 nonreturn stop-check valve conforms to ASME boiler codes and utilizes a dashpot and piston design to cushion the disc action.

Yoke Bonnet—One-piece yoke bonnets are fastened to bodies with capscrews.

Seat Rings—Seat rings are bottom seated and are readily renewable.

Handwheel—Handwheels have large diameters for ample leverage.

Yoke Bushing—Accurate Acme threads engage stem threads. Set screws fasten yoke bushings to yoke.

Body—Bodies are designed with uniform sections evenly distributed for maximum strength. Dimensions and drilling of end flanges on flanged valves conform to the ASME Standard B16.1 for Classes 125 and 250 Cast Iron Flanges. Face-to-face dimensions comply with the ASME Standard B16.10.

DESIGN:
SWING CHECK VALVES-CLASSES 125 and 250

Cap—Caps are bolted to bodies.

Hinge—Hinges are precisely drilled for assembly with discs.

Hinge Pin—Pins are located by side plugs screwed into bodies.

Disc—Disc faces are accurately machined for tight seal with seat rings.

Seat Ring—Buttress design of renewable seat rings provides bottom seating and good strength.

Body—Dimensions and drilling of end flanges on flanged valves conform to ASME Standard B16.1 for Classes 125 and 250 Cast Iron Flanges. Face-to-face dimensions comply with ASME B16.10.

ACCESSORIES—Stockham iron body valves may be furnished with motor operators, gearings, bypasses, floorstands, extension stems, lever and weight attachment or other accessories.

MARKING—Numerals indicate the size and pressure class. Cast arrows indicate direction of flow on check, globe and angle valves.

TESTING AND INSPECTION—Before shipment, each valve is individually tested under pressure for soundness of castings and tight closure to MSS Standards.

FINISH—External cast iron parts are coated with a durable black finish.

WEIGHTS AND DIMENSIONS—Dimensions and weights shown in this catalog section are furnished for estimating purposes only and are subject to change without notice. It is our intent to maintain basic dimensional requirements of accepted standards.

C_v COEFFICIENTS*

(For estimating purposes only)

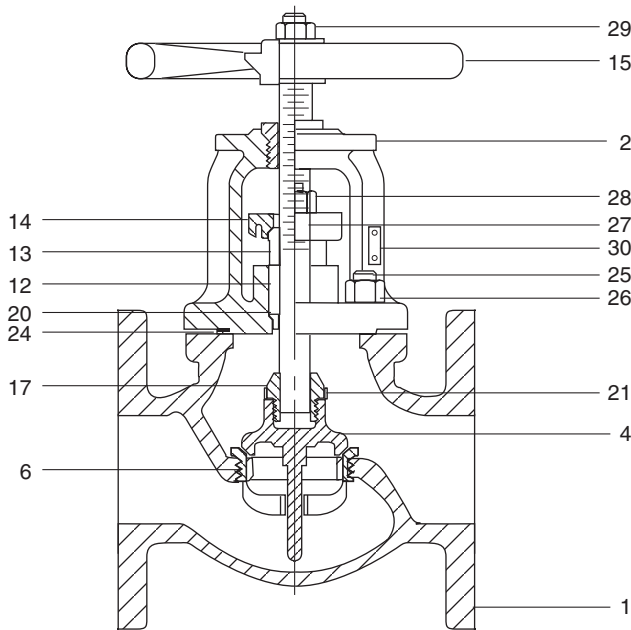
Size	Gate	Globe	Swing Check
2	327	50	131
2½	480	74	192
3	742	114	297
4	1314	202	526
5	2129	327	852
6	3175	487	1270
8	5691	873	2276
10	8970	1376	3588
12	13351	—	5340
14	16277	—	6511
16	21562	—	8625
18	28715	—	11486
20	35760	—	14304
24	52165	—	20866
30	82563	—	—
36	119910	—	—

*Fully open. C_v=GPM @ 1 PSI ΔP, 60°F Water

The above values for Swing Check Valves are correct only when the valve is fully open. This corresponds to a velocity of 6 ft./sec. for water flow.

Figure G-512

Class 125 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Hi-Str. Cast Iron
2	Bonnet	Hi-Str. Cast Iron
4	Disc	2" - 6" Bronze 8" - 10" Cast Iron
6	Body Seat Ring	Bronze
*7	Disc Seat Ring	8" & 10" Bronze
8	Stem	Manganese Bronze
9	Yoke Bushing	Manganese Bronze
12	Packing	Non-Asbestos Rings
13	Gland	(2" - 4") Brass (5" - 10") Bronze
14	Gland Flange	Ductile
15	Handwheel	Ductile
17	Disc Stem Ring	Bronze
20	Stem Hole Bushing	Brass
21	Locking Device	2" - 6" 18-8 SST Sheet
*22	Disc Guide Stem	8" & 10" Brass
*23	Disc Guide Stem Pin	8" & 10" Brass
24	Bonnet Gasket	Non-Asbestos Sheet
25	Bonnet Studs	Steel
26	Bonnet Stud Nuts	Steel
27	Gland Studs	Naval Brass
28	Gland Stud Nuts	Brass
29	Handwheel Nut	Steel - Phos. Coated
30	Identification Plate	Aluminum

* Not shown

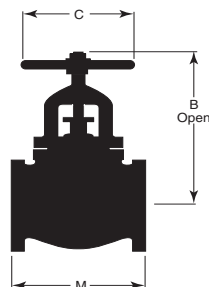
Industry Standards

Complies with MSS SP-85 Type 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

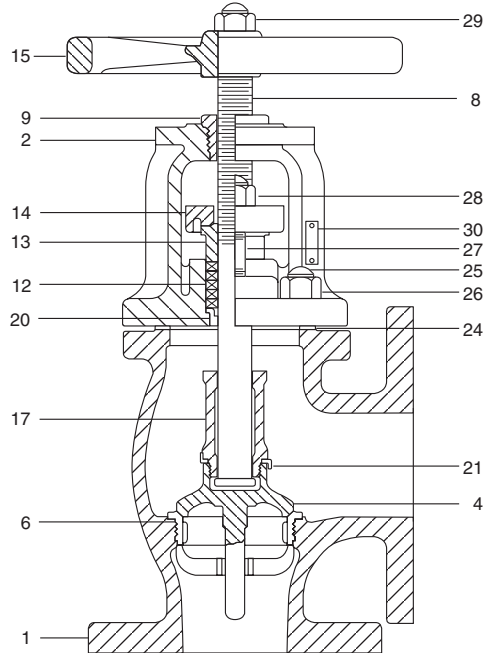
Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions			WT
	B	C	M	
2	11.12 (282)	8.00 (203)	8.00 (203)	35 (46)
2 ½	11.50 (292)	8.00 (203)	8.50 (216)	40 (18)
3	13.25 (337)	9.00 (229)	9.50 (241)	57 (26)
4	15.50 (394)	10.00 (254)	11.50 (292)	95 (43)
5	17.50 (445)	10.00 (254)	13.00 (330)	126 (57)
6	19.50 (495)	12.00 (305)	14.00 (336)	176 (79)
8	25.00 (508)	16.00 (406)	19.50 (495)	344 (155)
10	30.50 (775)	18.00 (457)	24.50 (622)	570 (256)

Figure G-515

Class 125 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged End



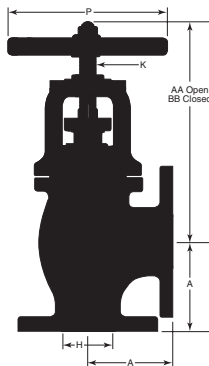
Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	Bronze
6	Seat Ring	Bronze
8	Stem	Manganese Bronze
9	Yoke Bushing	Manganese Bronze
12	Packing	Non-Asbestos Rings
13	Gland	(2" - 4") Brass
		(6") Bronze
14	Gland Flange	Ductile
15	Handwheel	Ductile
17	Disc Stem Ring	Bronze
20	Stem Hole Bushing	Brass
21	Locking Device	18-8 Stainless Steel
24	Bonnet Gasket	Non-Asbestos Sheet
25	Bonnet Studs	Carbon Steel
26	Bonnet Stud Nuts	Carbon Steel
27	Gland Studs	Naval Brass
28	Gland Stud Nuts	Brass
29	Handwheel Nut	Carbon Steel
30	Identification Plate	Aluminum

Industry Standards

Complies with MSS SP-85 Type 2

See page 4 for Pressure Temperature Ratings



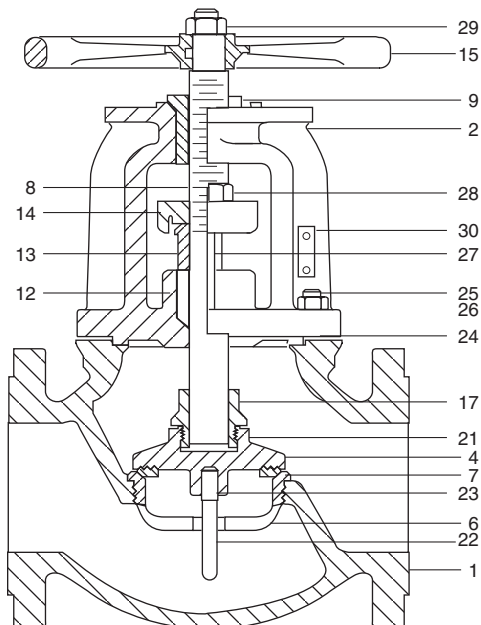
Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions						WT
	A	H	K	P	AA	BB	
2	4.00	2.00	0.88	8.00	11.00	10.25	32
	(102)	(51)	(22)	(203)	(279)	(260)	(15)
2 1/2	4.25	2.50	0.88	8.00	11.50	10.50	38
	(108)	(64)	(22)	(203)	(292)	(267)	(17)
3	4.75	3.00	1.00	9.00	12.75	11.75	54
	(121)	(76)	(25)	(229)	(324)	(299)	(25)
4	5.75	4.00	1.12	10.00	15.00	13.75	88
	(146)	(102)	(29)	(254)	(381)	(349)	(40)
6	7.00	6.00	1.25	12.00	19.50	17.75	158
	(178)	(152)	(32)	(305)	(495)	(451)	(72)

Figure F-532

Class 250 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged Ends



Materials of Construction

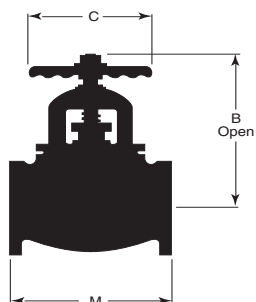
No.	Description	Material
1	Body	Hi-Str. Cast Iron
2	Bonnet	Hi-Str. Cast Iron
4	Disc	2" - 3" Bronze
		4" - 8" Cast Iron
6	Body Seat Ring	Bronze
7	Disc Seat Ring	Bronze
8	Stem	Manganese Bronze
9	Yoke Bushing	Manganese Bronze
12	Packing	Non-Asbestos Rings
13	Gland	Bronze
14	Gland Flange	2", 3" & 6" Steel
		2½", 4", 5" & 8" Mall. Iron
15	Handwheel	Malleable Iron
17	Disc Stem Ring	Bronze
21	Locking Device	2" - 5" 18-8 SST Sheet
22	Disc Guide Stem	Steel
23	Disc Guide Stem Pin	Steel
24	Gasket	Non-Asbestos Sheet
25	Bonnet Studs	Steel
26	Bonnet Stud Nuts	Steel
27	Gland Studs	Steel - Phos. Coated
28	Gland Stud Nuts	Steel - Phos. Coated
29	Handwheel Nut	Steel - Phos. Coated
30	Identification Plate	Aluminum
*31	Disc - Disc Stem Ring Pin	Steel

* Not Shown

Industry Standards

Complies with MSS SP-85 Type 1

See page 4 for Pressure Temperature Ratings



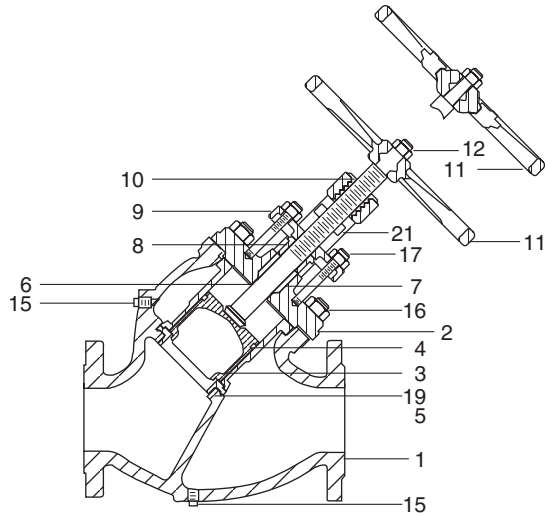
Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions			WT
	B	C	M	
2	13.75	9.00	10.50	62
	(349)	(229)	(267)	(28)
2 ½	14.75	10.00	11.50	82
	(375)	(254)	(292)	(37)
3	16.50	10.00	12.50	118
	(419)	(254)	(318)	(53)
4	18.50	12.00	14.00	167
	(470)	(305)	(356)	(75)
6	23.25	16.00	17.50	320
	(591)	(406)	(445)	(144)
8	28.50	20.00	21.00	570
	(724)	(508)	(533)	(257)

Figure F-540

Class 250 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged Ends



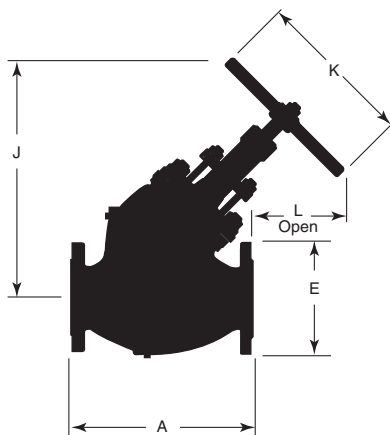
Materials of Construction

No.	Description	Material
1	Body	Gray Cast Iron
2	Bonnet	Gray Cast Iron
3	Disc	2 1/2", 3", 4", 5" 6", 8", 10" Steam Bronze Gray Cast Iron
4	Liner	2 1/2", 3", 4", 5" 6", 8", 10" Gray Cast Iron Gray Cast Iron- Nickel Plated
5	Body Seat Ring	Steam Bronze
6	Stem	Carbon Steel - Nickel Plated
7	Packing	Non-Asbestos Rings
8	Gland	2 1/2", 3", 4", 5", 6" 8", 10" Brass Brass
9	Gland Flange	Ductile Iron
10	Yoke Bushing	Manganese Bronze
11	Handwheel	2 1/2", 3", 4", 5", 6" 8", 10" Ductile Iron Brass
12	Handwheel Nut	Carbon Steel
**13	Piston Ring	6", 8", 10" Chrome Vanadium Steel
*14	Throttling Lip	6", 8", 10" Steam Bronze
15	Drain Plug	Carbon Steel - Zinc Plated
16	Bonnet Studs	Carbon Steel
	Bonnet Stud Nuts	Carbon Steel
17	Gland Studs	Carbon Steel - Zinc Plated
	Gland Stud Nuts	Carbon Steel - Zinc Plated
*18	Bonnet Gasket	Non-Asbestos Sheet
19	Seat Ring Gasket	Non-Asbestos Sheet
*20	Locking Pin	6", 8", 10" Carbon Steel - Zinc Plated
21	ID Plate	Aluminum

* Not Shown

** Sizes 5" and smaller made without Piston Ring

See pages 38 - 40 for sizing and other Technical Data



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

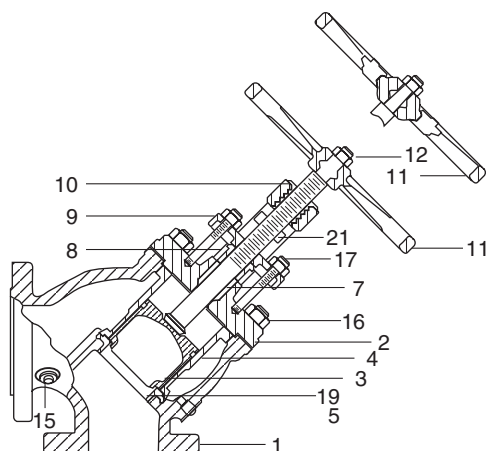
Valve Size	Dimensions					WT
	A	E	J	K	L	
2 1/2	13.00 (330)	7.50 (191)	15.75 (400)	9.00 (229)	5.00 (127)	103 (46)
3	14.75 (375)	8.25 (210)	19.75 (502)	10.00 (254)	7.25 (184)	140 (63)
4	17.00 (432)	10.00 (254)	21.75 (552)	10.00 (254)	7.75 (197)	226 (102)
5	19.00 (483)	11.00 (279)	25.75 (654)	14.00 (356)	10.50 (267)	307 (138)
6	21.50 (546)	12.50 (318)	29.25 (743)	16.00 (406)	11.75 (298)	420 (189)
8	26.00 (660)	15.00 (381)	36.75 (933)	20.00 (508)	16.25 (413)	737 (332)
10	30.00 (762)	17.50 (445)	41.75 (1,060)	20.00 (508)	17.75 (450)	1250 (563)

Iron Angle Stop Check Valves



Figure F-541

Class 250 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged Ends



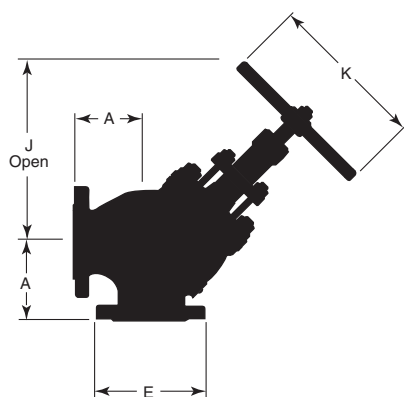
Materials of Construction

No.	Description	Material
1	Body	Gray Cast Iron
2	Bonnet	Gray Cast Iron
3	Disc	2 1/2", 3", 4", 5" 6", 8", 10" Steam Bronze Gray Cast Iron
4	Liner	2 1/2", 3", 4", 5" 6", 8", 10" Gray Cast Iron Gray Cast Iron - Nickel Plated
5	Body Seat Ring	Steam Bronze
6	Stem	Carbon Steel - Nickel Plated
7	Packing	Non-Asbestos Rings
8	Gland	2 1/2", 3", 4", 5", 6" 8", 10" Brass Brass
9	Gland Flange	Ductile Iron
10	Yoke Bushing	Manganese Bronze
11	Handwheel	2 1/2", 3", 4", 5", 6" 8", 10" Ductile Iron Brass
12	Handwheel Nut	Carbon Steel
**13	Piston Ring	6", 8", 10" Chrome Vanadium Steel
*14	Throttling Lip	6", 8", 10" Steam Bronze
15	Drain Plug	Carbon Steel - Zinc Plated
16	Bonnet Studs	Carbon Steel
	Bonnet Stud Nuts	Carbon Steel
17	Gland Studs	Carbon Steel - Zinc Plated
	Gland Stud Nuts	Carbon Steel - Zinc Plated
*18	Bonnet Gasket	Non-Asbestos Sheet
19	Seat Ring Gasket	Non-Asbestos Sheet
*20	Locking Pin	6", 8", 10" Carbon Steel - Zinc Plated
21	ID Plate	Aluminum

* Not Shown

** Sizes 5" and smaller made without Piston Ring

See pages 38 - 40 for sizing and other Technical Data



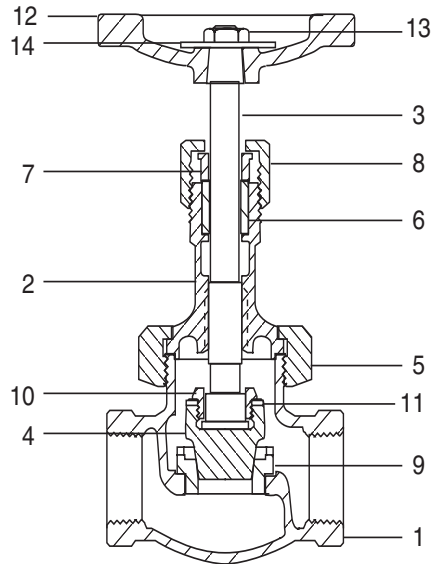
Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions				WT
	A	E	J	K	
2 1/2	5.75 (146)	7.50 (191)	13.25 (337)	9.00 (229)	86 (39)
3	6.25 (159)	8.25 (210)	14.75 (375)	10.00 (254)	123 (55)
4	7.00 (178)	10.00 (254)	16.25 (413)	10.00 (254)	186 (84)
5	7.88 (200)	11.00 (279)	19.50 (495)	14.00 (356)	250 (113)
6	8.75 (222)	12.50 (318)	22.50 (572)	16.00 (406)	340 (153)
8	10.50 (267)	15.00 (381)	28.75 (730)	20.00 (508)	640 (288)
10	12.25 (311)	17.50 (445)	32.50 (826)	20.00 (508)	1025 (462)

Figure G-574

Class 300 • Union Bonnet • Rising Stem • Nickel Plug • Threaded Ends



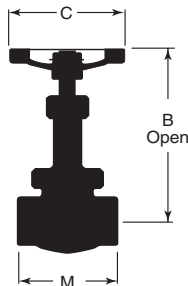
Materials of Construction

No.	Description	Material
1	Body	Malleable Iron
2	Bonnet	Malleable Iron
3	Stem	Malleable Iron
4	Plug	Nickel Alloy
5	Union Ring	Malleable Iron
6	Packing	Asbestos Free
7	Gland	Mild Steel
8	Packing Nut	Malleable Iron
9	Body Seat Ring	13% Chrome Steel
10	Disc Stem Ring	13% Chrome Steel
11	Lock Washer	18-8 Stainless Steel
12	Handwheel	Malleable Iron
13	Handwheel Nut	Steel (Phosphated)
14	Identification Plate	

Temperature Valve Ratings		Working Pressures, Non-shock, PSI	
°F	°C	PSI	kPa
-20 to 150	-30 to 65	1000	6894
200	93	960	6618
250	121	925	6377
300	149	890	6136
350	177	850	5860
400	205	810	5584
450	232	775	5343
500	260	740	5102
550	288	700	4826

Dimensions and Weights

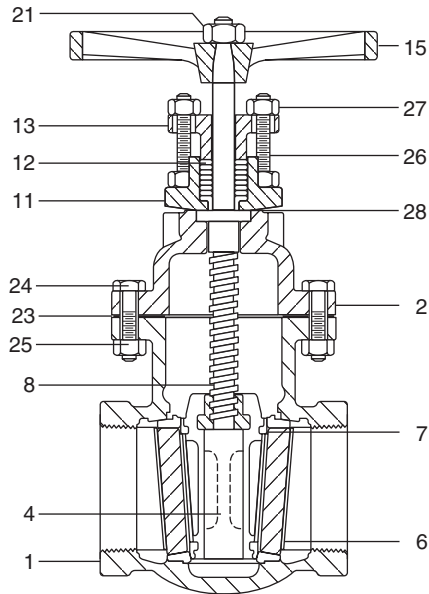
Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions			WT
	B	C	M	
1/4	5.38 (137)	2.56 (65)	3.62 (92)	1.8 (.82)
3/8	5.38 (137)	2.56 (65)	3.62 (92)	1.8 (.82)
1/2	5.24 (133)	2.56 (65)	2.79 (71)	1.54 (.74)
3/4	5.31 (135)	2.75 (70)	3.31 (84)	2.53 (1.14)
1	6.73 (171)	3.07 (78)	3.89 (99)	3.8 (1.71)
1 1/4	7.68 (195)	3.52 (92)	4.41 (112)	5.93 (2.67)
1 1/2	8.62 (219)	4.06 (103)	4.92 (125)	8.07 (3.63)
2	9.80 (249)	4.76 (121)	5.98 (152)	12.76 (5.74)

Figure G-608

Class 125 • Bolted Bonnet • Non-Rising Stem • Bronze Trim • Threaded Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	2" - 3" Bronze
		4" Cast Iron
6	Seat Ring	Bronze
7	Disc Ring	4" Bronze
8	Stem	Manganese Bronze
11	Stuffing Box	Ductile
12	Packing	Non-Asbestos Rings
13	Gland Flange	Ductile
15	Handwheel	Ductile
21	Handwheel Nut	Carbon Steel
23	Bonnet Gasket	Non-Asbestos Sheet
24	Bonnet Bolt	Carbon Steel
25	Bonnet Bolt Nut	Carbon Steel
26	Gland Bolt	Carbon Steel
27	Gland Bolt Nut	Carbon Steel EZP
28	Stuffing Box Gasket	Non-Asbestos Sheet
*34	Stuffing Box Bolt	Carbon Steel
*35	Stuffing Box Bolt Nut	Carbon Steel

* Not shown

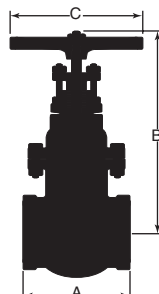
Industry Standards

Complies with MSS SP-70 Type 1 and WW-V-58 Type 1, Class 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

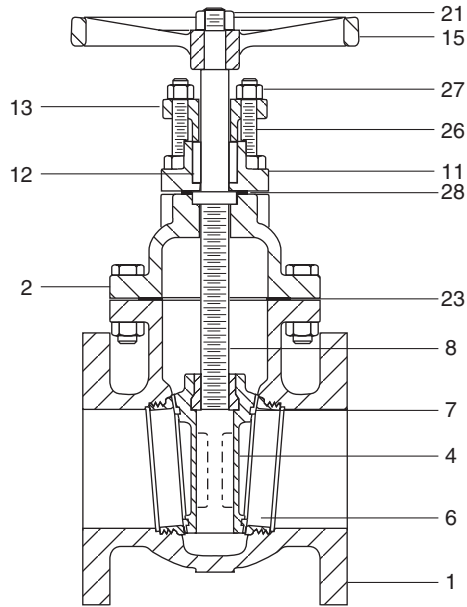
Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions			WT
	A	B	C	
2	5.38 (137)	11.31 (287)	8.00 (203)	25 (11)
2 ½	6.62 (168)	12.40 (315)	8.00 (203)	31 (14)
3	7.00 (178)	13.25 (337)	8.00 (203)	44 (20)
4	8.00 (203)	16.31 (414)	10.00 (254)	71 (32)

Figure G-612

Class 125 • Bolted Bonnet • Non-Rising Stem • Bronze Trim • Flanged Ends



Materials of Construction

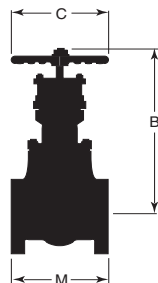
No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	2" - 3" Bronze
		4" - 24" Cast Iron
6	Seat Ring	2" - 12" Bronze
		14" - 24" Bronze
7	Disc Ring	4" - 12" Bronze
		14" - 24" Bronze
8	Stem	2" - 12" Manganese Bronze
		14" - 24" Copper-Silicon Bronze
11	Stuffing Box	2" - 8" Ductile
		10" - 24" Cast Iron
12	Packing	Non-Asbestos Rings
13	Gland Flange	2" - 8" Ductile
		14" - 24" Ductile
*14	Gland	10" - 12" Bronze
15	Handwheel	Ductile
21	Handwheel Nut	Carbon Steel
23	Bonnet Gasket	Non-Asbestos Sheet
24	Bonnet Bolt	Carbon Steel
25	Bonnet Bolt Nut	Carbon Steel
26	Gland Bolt	Carbon Steel
27	Gland Bolt Nut	Carbon Steel EZP
28	Stuffing Box Gasket	Non-Asbestos Sheet
*34	Stuffing Box Bolt	Carbon Steel
*35	Stuffing Box Bolt Nut	Carbon Steel
*55	Gland Follower	10" - 12" Ductile

* Not shown

Industry Standards

Complies with MSS SP-70 Type 1

See page 4 for Pressure Temperature Ratings



Dimensions and Weights

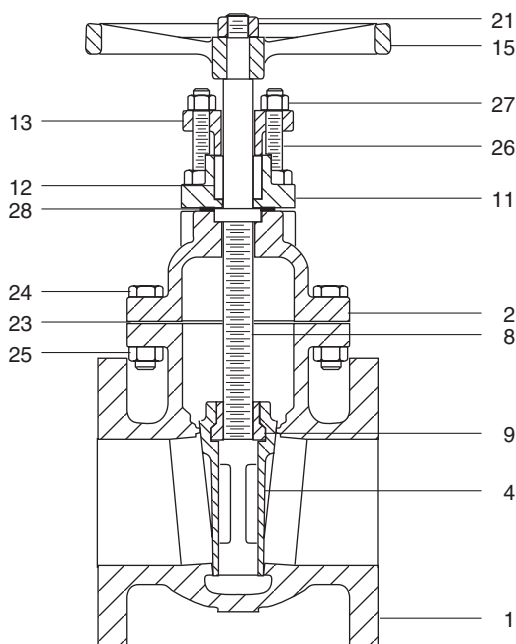
Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions			WT
	B	C	M	
2	11.31	8.00	7.00	30
	(287)	(203)	(178)	(14)
2 1/2	12.40	8.00	7.50	40
	(315)	(203)	(191)	(18)
3	13.25	8.00	8.00	56
	(337)	(203)	(203)	(25)
4	16.31	10.00	9.00	90
	(414)	(254)	(229)	(41)
5	18.00	10.00	10.00	126
	(457)	(254)	(254)	(57)
6	20.69	12.00	10.50	152
	(526)	(305)	(267)	(68)
8	24.12	14.00	11.50	260
	(613)	(356)	(292)	(117)
10	32.25	16.00	13.00	484
	(819)	(406)	(330)	(220)

Valve Size	Dimensions			WT
	B	C	M	
12	36.00	18.00	14.00	685
	(914)	(457)	(356)	(311)
14	40.50	20.00	15.00	968
	(1029)	(508)	(381)	(440)
16	46.62	22.00	16.00	1350
	(1184)	(559)	(406)	(614)
18	50.75	22.00	17.00	1701
	(1289)	(559)	(432)	(772)
20	56.12	24.00	18.00	2188
	(1426)	(610)	(457)	(993)
24	64.00	30.00	20.00	3150
	(1626)	(762)	(508)	(1432)

Figure G-613

Class 125 • Bolted Bonnet • Non-Rising Stem • All Iron • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	Cast Iron
8	Stem	Steel - Nickel Plated
9	Disc Nut	4" - 8" 13 CR Stainless Steel
11	Stuffing Box	Ductile
12	Packing	Non-Asbestos Rings
13	Gland Flange	Ductile
15	Handwheel	Ductile
21	Handwheel Nut	Carbon Steel
23	Bonnet Gasket	Non-Asbestos Sheet
24	Bonnet Bolt	Carbon Steel
25	Bonnet Bolt Nut	Carbon Steel
26	Gland Bolt	Carbon Steel
27	Gland Bolt Nut	Carbon Steel EZP
28	Stuffing Box Gasket	Non-Asbestos Sheet
*34	Stuffing Box Bolt	Carbon Steel
*35	Stuffing Box Bolt Nut	Carbon Steel

* Not shown

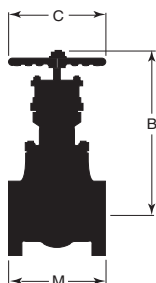
Industry Standards

Complies with MSS SP-70 Type 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

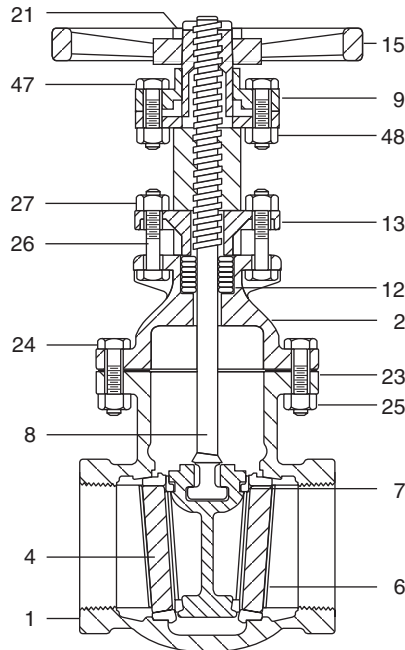
Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions			WT
	B	C	M	
2	11.31 (287)	8.00 (203)	7.00 (178)	32 (14)
2 ½	12.40 (315)	8.00 (203)	7.50 (191)	44 (20)
3	13.25 (337)	8.00 (203)	8.00 (203)	56 (25)
4	16.31 (414)	10.00 (254)	9.00 (229)	91 (41)
6	20.69 (526)	12.00 (305)	10.50 (267)	152 (68)
8	24.12 (613)	14.00 (356)	11.50 (292)	260 (117)

Figure G-620

Class 125 • Bolted Bonnet • OS&Y • Bronze Trim • Threaded Ends



Materials of Construction

No.	Description		Material
1	Body		Cast Iron
2	Yoke Bonnet		Cast Iron
4	Disc	2"	Bronze
		2 1/2" - 3"	Bronze
		4"	Cast Iron
6	Seat Ring		Bronze
7	Disc Ring	4"	Bronze
8	Stem		Manganese Bronze
9	Yoke Sleeve		Manganese Bronze
12	Packing		Non-Asbestos Rings
13	Gland		Ductile
15	Handwheel		Ductile
21	Handwheel Nut		Sintered Nickel Steel
23	Bonnet Gasket		Non-Asbestos Sheet
24	Bonnet Bolt		Carbon Steel
25	Bonnet Bolt Nut		Carbon Steel
26	Gland Bolt		Carbon Steel
27	Gland Bolt Nut		Carbon Steel E Z P
*46	Yoke Cap		Ductile
47	Yoke Cap Bolt		Carbon Steel
48	Yoke Cap Bolt Nut		Carbon Steel

* Not shown

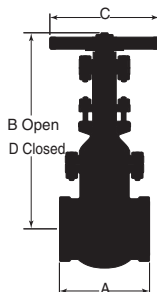
Industry Standards

Complies with MSS SP-70 Type 1 and WW-V-58 Type 1, Class 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

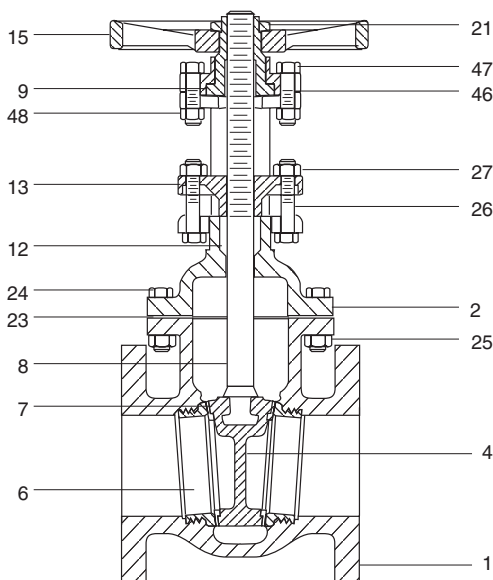
Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions				WT
	A	B	C	D	
2	5.38 (137)	14.75 (375)	8.00 (203)	12.50 (318)	25 (11)
2 1/2	6.62 (168)	16.06 (408)	8.00 (203)	13.31 (338)	38 (17)
3	7.00 (178)	17.38 (442)	8.00 (203)	13.88 (353)	46 (21)
4	8.00 (203)	21.44 (545)	10.00 (254)	17.06 (433)	77 (35)

Figure G-623

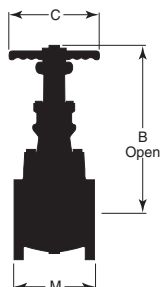
Class 125 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged Ends



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions			WT
	B	C	M	
2	14.75 (375)	8.00 (203)	7.00 (178)	33 (15)
2 1/2	16.06 (408)	8.00 (203)	7.50 (191)	47 (21)
3	17.38 (441)	8.00 (203)	8.00 (203)	58 (26)
4	21.44 (545)	10.00 (254)	9.00 (229)	97 (44)
5	25.81 (656)	10.00 (254)	10.00 (254)	135 (61)
6	30.31 (770)	12.00 (305)	10.50 (267)	162 (73)
8	37.75 (959)	14.00 (356)	11.50 (292)	280 (126)
10	44.94 (1141)	16.00 (406)	13.00 (330)	502 (228)
12	53.69 (1364)	18.00 (457)	14.00 (356)	670 (304)
14	64.88 (1648)	20.00 (508)	15.00 (381)	1093 (496)
16	75.25 (1911)	22.00 (559)	16.00 (406)	1425 (647)
18	82.00 (2083)	22.00 (559)	17.00 (432)	1738 (789)
20	90.62 (2302)	24.00 (610)	18.00 (457)	2085 (946)
24	105.38 (2677)	30.00 (762)	20.00 (508)	3183 (1445)



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	2" Bronze 2 1/2 & 3" Bronze 4" - 24" Cast Iron
6	Body Seat Ring	2" - 12" Bronze 14" - 24" Bronze
7	Disc Seat Ring	4" - 12" Bronze 14" - 24" Bronze
8	Stem	2" - 12" Manganese Bronze 14" - 24" Brass
9	Yoke Sleeve	2" - 12" Manganese Bronze 14" - 24" Ductile Iron
12	Packing	Non-Asbestos Rings
13	Gland (1 Piece)	2" - 8" Ductile Iron 14" - 24" Ductile Iron
*13	Gland	10" & 12" Bronze
*13	Gland Flange	10" & 12" Ductile Iron
15	Handwheel	Ductile Iron
21	Handwheel Nut	2" - 8" Sintered Nickel Steel 10" - 24" Ductile Iron
23	Bonnet Gasket	Non-Asbestos Sheet
24	Bonnet Bolt	Carbon Steel
25	Bonnet Bolt Nut	Carbon Steel
26	Gland Bolt	2" - 12" Carbon Steel
*26	Gland Eyebolt	14" - 24" Carbon Steel
27	Gland Bolt Nut	Carbon Steel
46	Yoke Cap	2" - 8" Ductile Iron 10" - 12" Cast Iron
47	Yoke Cap Bolt	2" - 12" Carbon Steel
48	Yoke Cap Bolt Nut	2" - 12" Carbon Steel
*49	Stem Collar Seat	14" - 24" Brass
*50	Disc Pin	14" - 24" Brass
*51	Yoke Bolt	14" - 24" Carbon Steel
*52	Yoke Bolt Nut	14" - 24" Carbon Steel
*53	Yoke to Bonnet Bolt	14" - 24" Carbon Steel
*54	Backseat Bushing	14" - 24" Brass
*55	Eyebolt Pin	14" - 24" Carbon Steel
*56	Yoke	14" - 24" Cast Iron

* Not shown

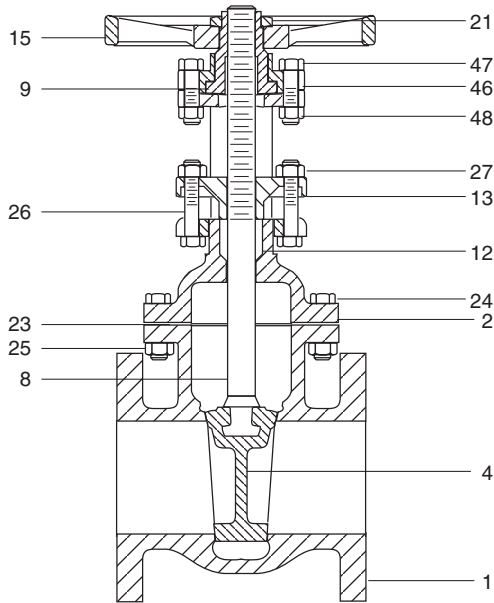
Industry Standards

Complies with MSS SP-70 Type 1

See page 4 for Pressure Temperature Ratings

Figure G-624

Class 125 • Bolted Bonnet • OS&Y • All Iron • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	Cast Iron
6	Seat Ring	12" Cast Iron
8	Stem	Carbon Steel, NI-PLA
9	Yoke Sleeve	Manganese Bronze
12	Packing	Non-Asbestos Rings
13	Gland	2" - 8" Ductile 10" - 12" Carbon Steel ZN-PLA
15	Handwheel	Ductile
21	Handwheel Nut	2" - 10" Sintered Nickel Steel 12" Ductile
23	Bonnet Gasket	Non-Asbestos Sheet
24	Bonnet Bolt	Carbon Steel
25	Bonnet Bolt Nut	Carbon Steel
26	Gland Bolt	Carbon Steel
27	Gland Bolt Nut	Carbon Steel, ZN-PLA
46	Yoke Cap	Ductile
47	Yoke Cap Bolt	Carbon Steel
48	Yoke Cap Bolt Nut	Carbon Steel
*55	GLD Follower	10" - 12" Ductile

* Not shown

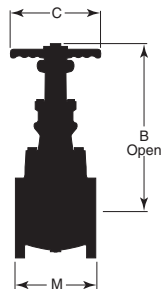
Industry Standards

Complies with MSS SP-70 Type 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

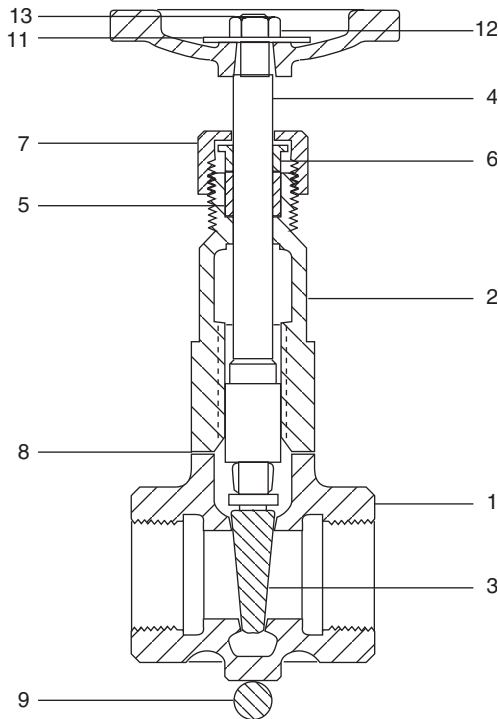
Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions			WT
	B	C	M	
2	14.75 (375)	8.00 (203)	7.00 (178)	33 (15)
2 ½	16.06 (408)	8.00 (203)	7.50 (191)	47 (21)
3	17.38 (441)	8.00 (203)	8.00 (203)	58 (26)
4	21.44 (545)	10.00 (254)	9.00 (229)	97 (44)
5	25.81 (656)	10.00 (254)	10.00 (254)	135 (61)
6	30.31 (770)	12.00 (305)	10.50 (267)	162 (73)
8	37.75 (959)	14.00 (356)	11.50 (292)	280 (126)
10	44.94 (1141)	16.00 (406)	13.00 (330)	502 (228)
12	53.69 (1364)	18.00 (457)	14.00 (356)	670 (304)

Figure G-675

Class 150 • U-Bolt Bonnet • Rising Stem • All Iron • Threaded Ends



Materials of Construction

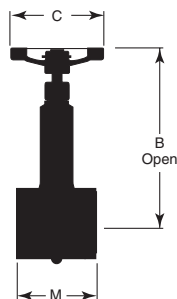
No.	Description	Material
1	Body	Malleable Iron
2	Bonnet	Malleable Iron
3	Disc	Malleable Iron
4	Stem	Nickel Plated Steel
5	Packing	Asbestos Free
6	Gland	N/Plated Steel
7	Packing Nut	Malleable Iron
8	Gasket	Asbestos Free
9	"U" Bolt	Mild Steel
*10	"U" Bolt Nuts	Mild Steel
11	Identification Plate	Aluminum
12	Handwheel Nut	Mild Steel
13	Handwheel	Malleable Iron

* Not shown

Temperature		Working Pressures, Non-shock			
Valve Ratings		1/4" - 2" (6mm - 50mm)		2 1/2" - 4" (65mm - 100mm)	
		150 psi, Sat. Steam		125 psi, Sat. Steam	
°F	°C	PSI	kPa	PSI	kPa
-20 to 150	-30 to 65	225	1550	175	1210
200	93	210	1450	165	1140
225	107	200	1380	160	1100
250	121	190	1310	150	1030
275	135	185	1280	145	1000
300	149	175	1210	140	970
325	163	165	1140	135	930
350	177	160	1100	125	860
375	191	150	1030	120	830

Dimensions and Weights

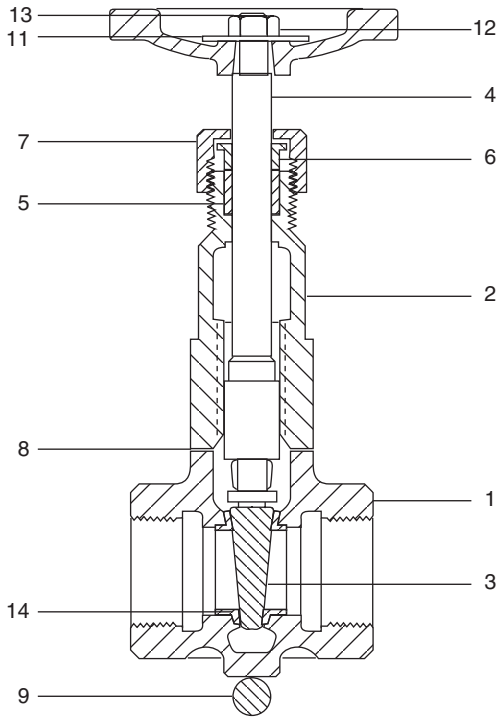
Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions			WT
	B	C	M	
1/4	5.08 (129)	2.06 (52)	3.00 (76)	1.40 (0.64)
3/8	5.08 (129)	2.06 (52)	3.00 (76)	1.40 (0.64)
1/2	5.08 (129)	2.06 (52)	2.06 (52)	1.76 (0.80)
3/4	6.18 (157)	2.56 (65)	2.32 (59)	2.44 (1.10)
1	7.40 (188)	2.76 (70)	2.56 (65)	3.53 (1.60)
1 1/4	8.90 (226)	3.07 (78)	2.87 (73)	5.73 (2.60)
1 1/2	9.96 (253)	3.62 (92)	3.15 (80)	7.11 (3.20)
2	11.61 (295)	4.06 (103)	3.62 (92)	11.33 (5.10)
2 1/2	12.91 (328)	4.76 (121)	4.13 (105)	20.00 (9.00)
3	15.35 (390)	5.98 (152)	4.57 (116)	23.33 (10.50)
4	19.76 (502)	9.02 (229)	5.55 (141)	52.67 (23.70)

Figure G-679

Class 150 • U-Bolt Bonnet • Rising Stem • Bronze Trim • Threaded Ends



Materials of Construction

No.	Description	Material
1	Body	Malleable Iron
2	Bonnet	Malleable Iron
3	Disc	Bronze
4	Stem	Brass
5	Packing	Asbestos Free
6	Gland	½"-3" Rod Brass
		4" Bronze
7	Packing Nut	Malleable Iron
8	Gasket	Asbestos Free
9	"U" Bolt	Mild Steel
*10	"U" Bolt Nuts	Mild Steel
11	Identification Plate	Aluminum
12	Handwheel Nut	Mild Steel
13	Handwheel	Malleable Iron
14	Body Seat Rings	Bronze

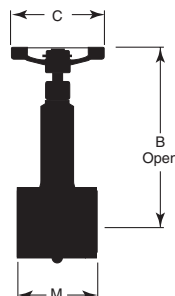
* Not shown

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions			WT
	B	C	M	
¼	5.08	2.06	3.00	1.40
	(129)	(52)	(76)	(0.64)
⅜	5.08	2.06	3.00	1.40
	(129)	(52)	(76)	(0.64)
½	5.08	2.06	2.06	1.76
	(129)	(52)	(52)	(0.80)
¾	6.18	2.56	2.32	2.44
	(157)	(65)	(59)	(1.10)
1	7.40	2.76	2.56	3.53
	(188)	(70)	(65)	(1.60)
1¼	8.90	3.07	2.87	5.73
	(226)	(78)	(73)	(2.60)
1½	9.96	3.62	3.15	7.11
	(253)	(92)	(80)	(3.20)
2	11.61	4.06	3.62	11.33
	(295)	(103)	(92)	(5.10)
2½	12.91	4.76	4.13	20.00
	(328)	(121)	(105)	(9.00)
3	15.35	5.98	4.57	23.33
	(390)	(152)	(116)	(10.50)
4	19.76	9.02	5.55	52.67
	(502)	(229)	(141)	(23.70)

Temperature		Working Pressures, Non-shock			
Valve Ratings		¼" - 2" (6mm - 50mm)		2½" - 4" (65mm - 100mm)	
		150 psi, Sat. Steam 225 psi, CWP		125 psi, Sat. Steam 175 psi, CWP	
°F	°C	PSI	kPa	PSI	kPa
-20 to 150	-30 to 65	225	1550	175	1210
200	93	210	1450	165	1140
225	107	200	1380	160	1100
250	121	190	1310	150	1030
275	135	185	1280	145	1000
300	149	175	1210	140	970
325	163	165	1140	135	930
350	177	160	1100	125	860
375	191	150	1030	120	830

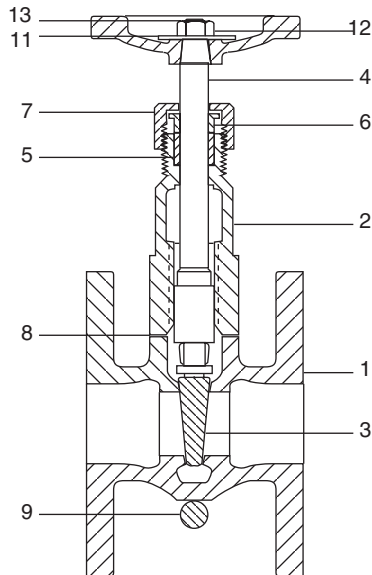


Malleable Iron Gate Valves



Figure G-676

Class 125 • U-Bolt Bonnet • Rising Stem • All Iron • Flanged Ends

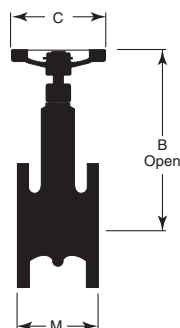


Materials of Construction

No.	Description	Material
1	Body	Malleable Iron
2	Bonnet	Malleable Iron
3	Disc	Malleable Iron
4	Stem	N/plated Steel
5	Packing	Asbestos Free
6	Gland	Ni Plated Steel
7	Packing Nut	Malleable Iron
8	Gasket	Asbestos Free
9	"U" Bolt	Mild Steel
*10	"U" Bolt Nuts	Steel
11	Identification Plate	Aluminum
12	Handwheel Nut	Mild Steel
13	Handwheel	Malleable Iron

* Not shown

Temperature		Working Pressures, Non-shock			
Valve Ratings		1" - 2" (25mm - 50mm)		2½" - 4" (65mm - 100mm)	
		200 psi, CWP		175 psi, CWP	
°F	°C	PSI	kPa	PSI	kPa
-20 to 150	-30 to 65	200	1380	175	1210
200	93	185	1280	165	1140
225	107	175	1210	160	1100
250	121	165	1140	150	1030
275	135	155	1070	145	1000
300	149	145	1000	140	970
325	163	135	930	135	930
350	177	130	900	125	860
375	191	120	830	120	830



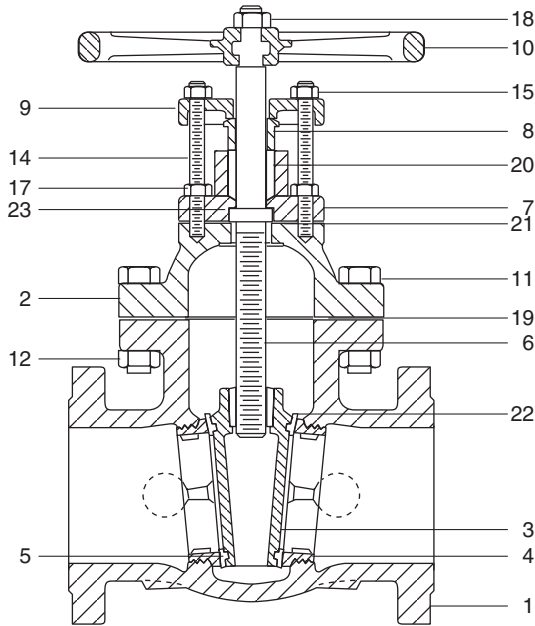
Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions			WT
	B	C	M	
1	7.40 (188)	2.76 (70)	3.19 (81)	5.56 (2.50)
1½	9.96 (253)	3.62 (92)	3.74 (95)	10.14 (4.60)
2	11.61 (295)	4.06 (103)	4.25 (108)	14.44 (6.50)
2½	12.91 (328)	4.76 (121)	4.92 (125)	22.22 (10.00)
3	15.35 (390)	5.98 (152)	5.08 (129)	32.22 (14.50)
4	19.76 (502)	9.02 (229)	6.77 (172)	60.00 (27.00)

Figure F-661

Class 250 • Bolted Bonnet • Non-Rising Stem • Bronze Trim • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
3	Disc	2" - 4" Bronze
		6" - 12" Cast Iron
4	Seat Ring	Bronze
5	Disc Ring	6" - 12" Bronze
6	Stem	2" - 8" Manganese Bronze
		10" Naval Brass
		12" Manganese Bronze
7	Stuffing Box	2" - 4" Ductile
		6" - 12" Cast Iron
8	Gland	2" - 4" Ductile
		6" - 12" Bronze
9	Gland Flange	6" - 12" Ductile
10	Handwheel	Ductile
11	Bonnet Bolts	Carbon Steel
12	Bonnet Bolt Nuts	Carbon Steel
*13	Stuffing Box Bolts	Carbon Steel
14	Gland Studs 2 1/2", 3", 4", 6"	Carbon Steel
	Gland Bolts 2", 8", 10", 12"	Carbon Steel
15	Gland Stud or Bolt Nuts	Steel EZP
*16	Stuffing Box Studs	Carbon Steel
17	Stuff Box Stud - Bolt Nuts	Carbon Steel
18	Handwheel Nut	Carbon Steel
19	Bonnet Gasket	Non-Asbestos Sheet
20	Packing	Non-Asbestos Rings
21	Stuffing Box Gasket	Non-Asbestos Sheet
22	Disc Bushing	Bronze
23	Identification Plate	Aluminum

*Not shown

Industry Standards

Complies with MSS SP-70 Type 1 and WW-V-58, Type 1, Class 1
See page 4 for Pressure Temperature Ratings

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions			WT
	B	C	M	
2	11.00 (279)	8.00 (203)	8.50 (216)	47 (21)
2 1/2	13.25 (337)	9.00 (229)	9.50 (241)	87 (39)
3	14.75 (375)	10.00 (254)	11.12 (282)	113 (51)
4	17.50 (445)	12.00 (305)	12.00 (305)	175 (79)
6	23.00 (584)	16.00 (406)	15.88 (403)	335 (151)
8	30.75 (781)	20.00 (508)	16.50 (419)	545 (246)
10	36.00 (914)	22.00 (559)	18.00 (457)	854 (385)
12	39.75 (1,010)	24.00 (610)	19.75 (502)	1250 (563)

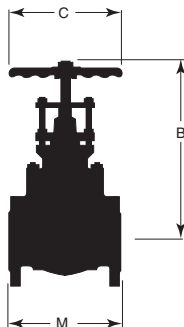
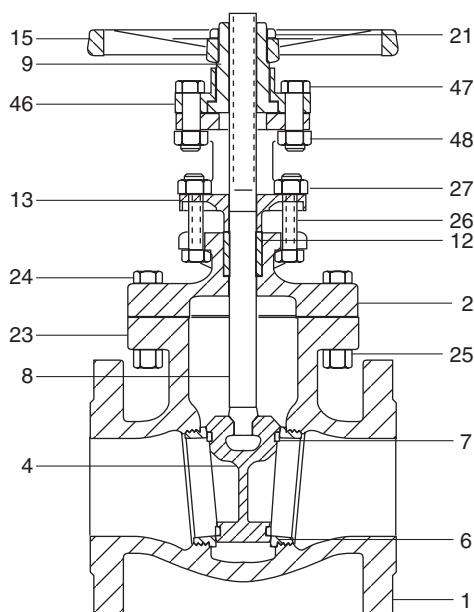


Figure F-667

Class 250 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged Ends



Materials of Construction

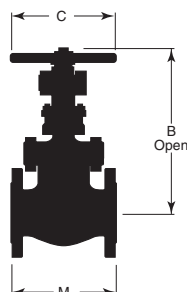
No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	2" - 3" Bronze
		4" - 12" Cast Iron
6	Seat Ring	Bronze
7	Disc Ring	4" - 12" Bronze
8	Stem	2", 2½", 3", 4", 6", 8" Manganese Bronze
		5", 10", 12" Naval Brass
9	Yoke Sleeve	Manganese Bronze
12	Packing	Non-Asbestos Rings
13	Gland	2", 2½", 3", 4", 6" Ductile
		8" - 12" Bronze
*14	Gland Flange	5" Carbon Steel
		8", 10", 12" Ductile
15	Handwheel	Ductile
21	Handwheel Nut	2" - 6" Sintered Nickel Steel
		8" - 12" Ductile
23	Bonnet Gasket	Non-Asbestos Sheet
24	Bonnet Bolt	Carbon Steel
25	Bonnet Bolt Nut	Carbon Steel
26	Gland Bolt	2", 2½", 3", 4", 6", 8" Carbon Steel
		5", 10", 12" Carbon Steel
27	Gland Bolt Nut	Carbon Steel FZP
46	Yoke Cap	2", 2½", 3", 4", 6" Ductile
		8" Cast Iron
47	Yoke Cap Bolt	Carbon Steel
48	Yoke Cap Bolt Nut	Carbon Steel
*51	Yoke Hub Bolt	5", 10", 12" Carbon Steel
*52	Yoke Hub Bolt Nut	5", 10", 12" Carbon Steel
*53	Yoke Pad Bolt	5", 10", 12" Carbon Steel

*Not shown

Industry Standards

Complies with MSS SP-70 Type 1 and WW-V-58, Type 1, Class 1

See page 4 for Pressure Temperature Ratings



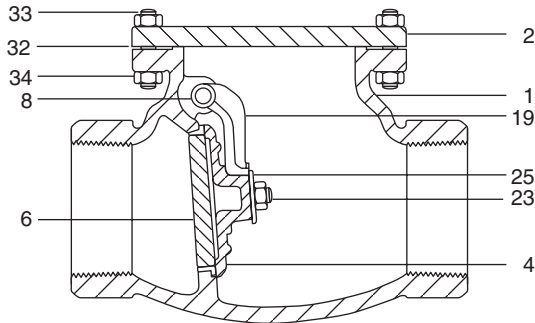
Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions			WT
	B	C	M	
2	15.06 (382)	8.00 (203)	8.50 (216)	54 (24)
2 ½	16.69 (424)	8.00 (203)	9.50 (241)	80 (36)
3	18.75 (476)	10.00 (254)	11.12 (282)	114 (52)
4	23.44 (595)	12.00 (305)	12.00 (305)	174 (79)
5	29.75 (756)	14.00 (356)	15.00 (381)	280 (127)
6	31.75 (806)	16.00 (406)	15.88 (403)	332 (151)
8	39.88 (1,012)	18.00 (457)	16.50 (419)	600 (270)
10	54.25 (1378)	22.00 (559)	18.00 (457)	920 (417)
12	62.88 (1597)	24.00 (610)	19.75 (502)	1400 (635)

Figure G-927

Class 125 • Bolted Cap • Bronze Trim • Threaded Ends



Materials of Construction

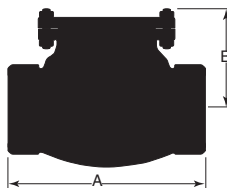
No.	Description	Material
1	Body	Cast Iron
2	Cap	Cast Iron
4	Disc	Bronze
6	Seat Ring	Bronze
8	Hinge Pin	Alum Silicon Bronze
19	Hinge	Bronze
23	Disc Nut	Brass
*24	Side Plug	Brass
25	Disc Washer	Brass
*28	Hinge Pin Bushing	Brass
32	Bonnet Gasket	Non-Asbestos Sheet
33	Cap Bolt	Carbon Steel
34	Cap Bolt Nut	Carbon Steel
36	Identification Plate	Aluminum

* Not shown

Industry Standards

Complies with MSS SP-71, Type 1

See page 4 for Pressure Temperature Ratings



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

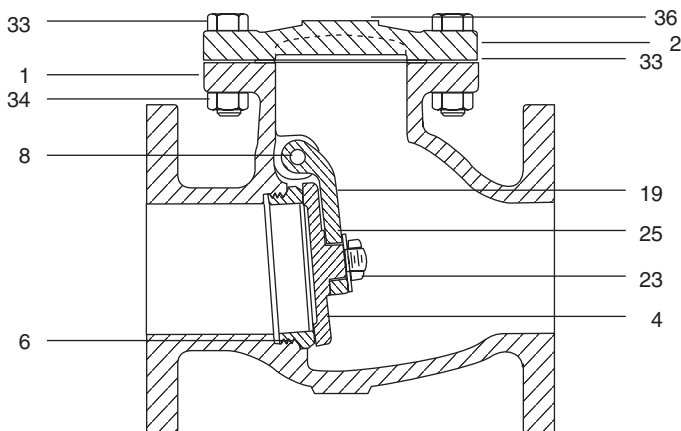
Valve Size	Dimensions		WT
	A	B	
2	6.12 (155)	4.50 (114)	18 (8)
2 ½	7.25 (184)	5.38 (137)	22 (10)
3	8.00 (203)	5.88 (149)	29 (13)
4	9.25 (235)	6.62 (168)	54 (25)

Iron Check Valves



Figure G-931

Class 125 • Bolted Cap • Bronze Trim • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Cap	Cast Iron
4	Disc	2" - 6" Bronze
		8" - 24" Cast Iron
6	Seat Ring	2" - 12" Bronze
		14" - 24" Bronze
7	Disc Ring	8" - 12" Bronze
		14" - 24" Bronze
8	Hinge Pin	2" - 8" Alum Silicon Bronze
		10" - 12" Naval Brass
		14" - 16" Stainless Steel
		18" - 24" Stainless Steel
19	Hinge	2" - 6" Bronze
		8" - 12" Ductile
		18" - 24" Ductile
		14" - 16" Carbon Steel
20	Disc Stud	8" - 16" Steel
		18" - 24" Steel
21	Disc Stud Pin	8" - 16" 18-8 Stainless Steel
		18" - 24" Steel
23	Disc Nut	2" - 6" Brass
		8" - 24" Steel
24	Side Plug	2" - 16" Brass
		18" - 24" Ductile
25	Disc Washer	2" - 6" Brass
		8" - 16" Steel
*26	Lockwasher	18" - 24" Steel
*27	Plain Washer	18" - 24" Steel
*28	Hinge Pin Bushing	2" - 12" Brass
		14" - 16" Bronze
32	Bonnet Gasket	Non-Asbestos Sheet
33	Cap Bolt	Carbon Steel
34	Cap Bolt Nut	Carbon Steel
36	Identification Plate	Aluminum

* Not shown

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions		WT
	B	M	
2	4.50 (114)	8.00 (203)	25 (11)
2 ½	5.38 (137)	8.50 (216)	30 (14)
3	5.88 (149)	9.50 (241)	42 (19)
4	6.62 (168)	11.50 (292)	74 (33)
5	7.75 (197)	13.00 (330)	100 (45)
6	8.25 (210)	14.00 (356)	125 (56)
8	10.25 (260)	19.50 (495)	230 (104)
10	12.00 (333)	24.50 (622)	490 (219)
12	13.75 (387)	27.50 (699)	660 (317)
14	16.88 (429)	31.00 (787)	1060 (481)
16	19.12 (486)	36.00 (914)	1500 (682)
18	24.00 (610)	38.00 (965)	1970 (895)
20	27.62 (702)	40.00 (1016)	2590 (1117)
24	31 (787)	46.00 (1168)	3840 (1745)

Industry Standards

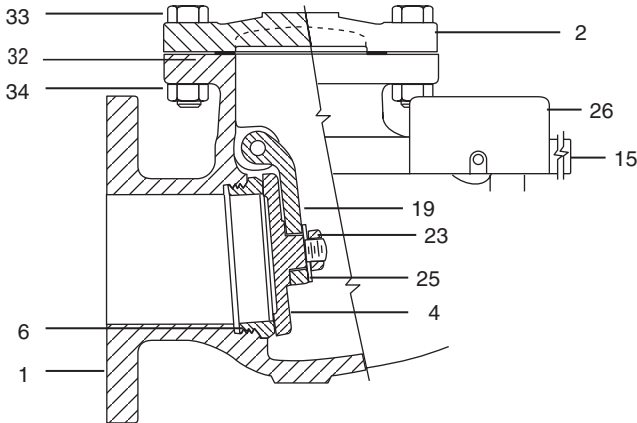
Complies with Military Spec. MIL-V-18436 and MSS SP-71, Type 1

See page 4 for Pressure Temperature Ratings



Figure G-931 L&W

Class 125 • Bolted Cap • Bronze Trim • Flanged End • Lever & Weight

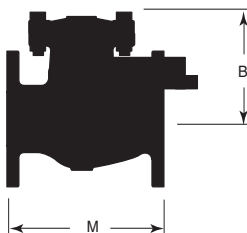


Materials of Construction

No.	Description	Material
1	Body	Ferrosteel
2	Cap	Ferrosteel
4	Disc	2" - 6" Bronze 8" Ferros Steel
6	Body Seat Ring	Bronze
*7	Disc Seat Ring	8" Bronze
†*8	Hinge Pin	Exelloy
†*11	Stuffing Box	Brass
†*12	Packing	Non-Asbestos
†*14	Packing Nut	Bronze
†15	Lever	Malleable Iron
†19	Hinge	2" - 6" Bronze 8" Malleable Iron
*20	Disc Stud	8" Steel
*21	Disc Stud Pin	8" 18-8 Stainless Steel
†*22	Hinge Pin Key	Steel
23	Nut for Disc	2" - 6" Brass 8" Steel
*24	Hinge Pin Plug	Brass
25	Disc Washer	2" - 6" Brass 8" Steel
†26	Weight	Cast Iron
*27	Hinge Pin Bushing	Bronze
†*28	Lever Washer	Steel
†*29	Coupling	Malleable Iron
†*30	Gib-Key	Steel
†*31	Lever Nut	Steel Di-Chromate
†32	Gasket	Non-Asbestos Sheet
33	Cap Bolts	Steel
34	Cap Bolt Nuts	Steel
*36	ID Plate	Aluminum

* Not shown

† Parts indicated are necessary for changing regular valve to outside lever and weight



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions		WT
	B	M	
2	4.50 (114)	8.00 (203)	30 (14)
2 ½	5.38 (137)	8.50 (216)	40 (18)
3	5.88 (149)	9.50 (241)	54 (24)
4	6.62 (168)	11.50 (292)	85 (38)
6	8.25 (210)	14.00 (356)	137 (62)
8	10.25 (260)	19.50 (495)	240 (108)
10	13.06 (333)	24.50 (622)	482 (219)

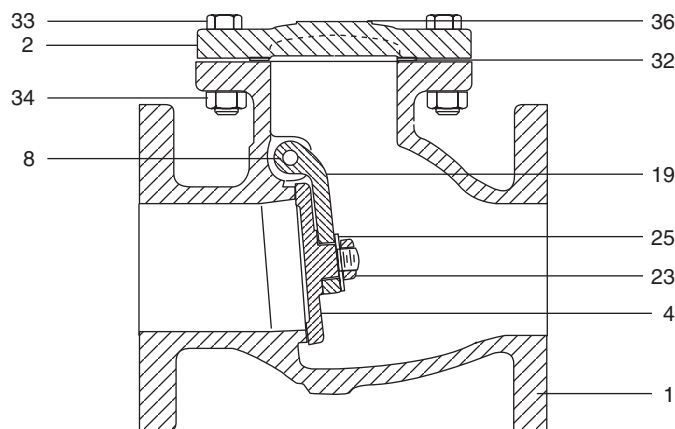
Valve Size	Dimensions		WT
	B	M	
12	15.25 (387)	27.50 (699)	700 (317)
14	16.88 (429)	31.00 (787)	1060 (481)
16	19.12 (486)	36.00 (914)	1500 (682)
18	24.00 (610)	38.00 (965)	1970 (895)
20	27.62 (702)	42.00 (1067)	2590 (1117)
24	31.00 (787)	46.00 (1168)	3840 (1745)

Iron Check Valves



Figure G-933

Class 125 • Bolted Cap • All Iron • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Cap	Cast Iron
4	Disc	2" - 4" Ductile
		6" - 24" Cast Iron
*6	Seat Ring	5", 10" - 24" Cast Iron
		2" - 4", 6" - 8" Cast Iron (Integral)
8	Hinge Pin	Stainless Steel
19	Hinge	Ductile
20	Disc Stud	8" - 16" Steel
		18" - 24" Steel
21	Disc Stud Pin	8" - 16" 18-8 Stainless Steel
		18" - 24" Steel
23	Disc Nut	8" - 24" Steel
*24	Side Plug	2" - 12" Carbon Steel
		14" - 24" Ductile
25	Disc Washer	2" - 12" Carbon Steel
*26	Lockwasher	14" - 24" Steel
*27	Plain Washer	14" - 24" Steel
*28	Hinge Pin Bushing	2" - 12" Carbon Steel
32	Cap Gasket	Non-Asbestos Sheet
33	Cap Bolt	Carbon Steel
34	Cap Bolt Nut	Carbon Steel
36	Identification Plate	Aluminum

* Not shown

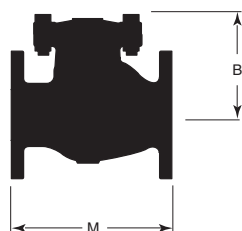
Industry Standards

Complies with Military Spec. MIL-V-18436 and MSS SP-71, Type 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

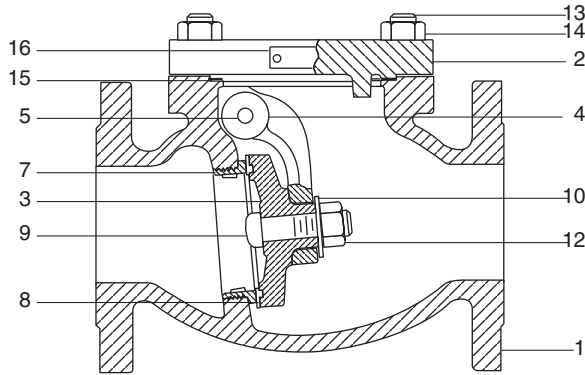


Valve Size	Dimensions		WT
	B	M	
2	4.50 (114)	8.00 (203)	25 (11)
2 1/2	5.38 (137)	8.50 (216)	30 (14)
3	5.88 (149)	9.50 (241)	42 (19)
4	6.62 (168)	11.50 (292)	74 (33)
5	7.75 (197)	13.00 (330)	103 (47)
6	8.25 (210)	14.00 (356)	127 (58)
8	10.25 (260)	19.50 (495)	230 (104)

Valve Size	Dimensions		WT
	B	M	
10	13.06 (333)	24.50 (622)	482 (219)
12	15.25 (387)	27.50 (699)	700 (317)
14	16.88 (429)	31.00 (787)	1060 (481)
16	19.12 (486)	36.00 (914)	1500 (682)
18	24.00 (610)	38.00 (965)	1970 (895)
20	27.62 (702)	42.00 (1067)	2590 (1117)
24	31.00 (787)	46.00 (1168)	3840 (1745)

Figure F-947

Class 250 • Bolted Cap • Bronze Trim • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Ferrosteel
2	Cap	Ferrosteel
3	Disc	2" - 3" Bronze 4" - 8" Cast Iron
4	Hinge	Malleable Iron
5	Hinge Pin	2" - 3" 13 Cr. Stainless Steel 4" - 8" Bronze
*6	Hinge Pin Plug	Bronze
7	Body Seat Ring	Bronze
8	Disc Seat Ring	4" - 8" Bronze
9	Disc Bolt	4" - 8" Steel
10	Disc Nut Washer	Steel
12	Disc Bolt Nut	Steel - Dichromate Fin.
13	Cap Studs	Steel
14	Cap Stud Nuts	Steel
15	Gasket	Non-Asbestos Sheet
16	Identification Plate	Aluminum

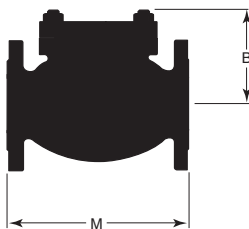
*Not shown

Industry Standards

Complies with MSS SP-71 Type 1 and
Military Specifications MIL-V-18436 Group B, Type 3, Trim 5
See page 4 for Pressure Temperature Ratings

Dimensions and Weights

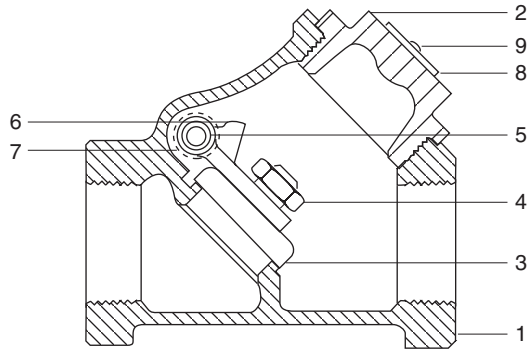
Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions		WT
	B	M	
2	5.25 (133)	10.50 (267)	46 (21)
2 ½	6.00 (152)	11.50 (292)	64 (29)
3	6.25 (159)	12.50 (318)	90 (41)
4	7.25 (184)	14.00 (356)	133 (60)
6	9.00 (229)	17.50 (445)	250 (113)
8	11.00 (279)	21.00 (533)	410 (185)

Figure G-975

Class 300 • Threaded Cap • Y-Pattern • All Iron • Threaded Ends



Materials of Construction

No.	Description	Material
1	Body	Malleable Iron
2	Cap	Malleable Iron
3	Disc	½" & ¾"
		1" - 2"
4	Disc Hinge Nut	Steel
5	Hinge Pin	13% Chrome Steel
6	Hinge	Malleable Iron
7	Hinge Pin Plug	13% Chrome Steel
8	Identification Plate	Aluminum
9	Drive Screw	Steel

Temperature Valve Ratings		Working Pressures, Non-shock, PSI	
°F	°C	PSI	kPa
-20 to 150	-30 to 65	1000	6894
200	93	960	6618
250	121	925	6377
300	149	890	6136
350	177	850	5860
400	205	810	5584
450	232	775	5343
500	260	740	5102
550	288	700	4826

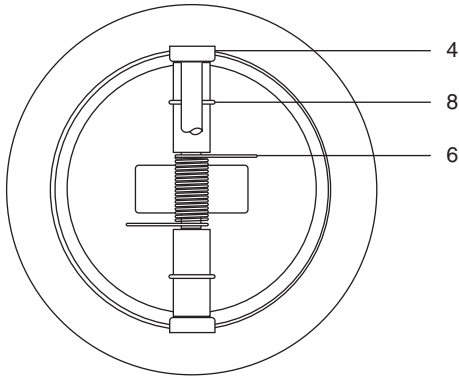
Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions		WT
	M	B	
½	2.75	1.69	.96
	(70.1)	(42.7)	(.43)
¾	3.27	2.00	1.44
	(83.3)	(50.5)	(.65)
1	4.06	2.44	2.47
	(102.9)	(62.2)	(1.11)
1¼	4.72	2.87	2.89
	(120.4)	(72.6)	(1.30)
1½	5.39	3.31	5.80
	(137.2)	(83.5)	(2.61)
2	6.61	4.29	10.02
	(168.1)	(108.7)	(4.51)

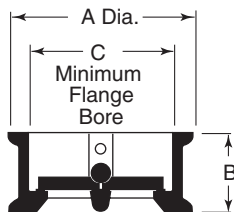
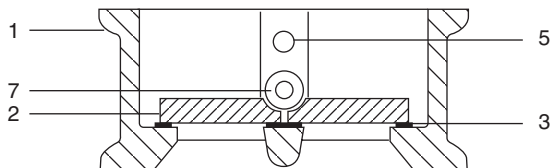
Figure WG-961
200 CWP • Iron Body • EPDM Seat



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Disc*	Stainless Steel
3	Seal	EPDM
4	Pin Retainer	Cast Iron
5	Stop Pin	Stainless Steel
6	Spring	Stainless Steel
7	Hinge Pin	Stainless Steel
8	Plate Bearing	PTFE

*2", 2½", 5", 10", & 12" Material: Aluminum Bronze



Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

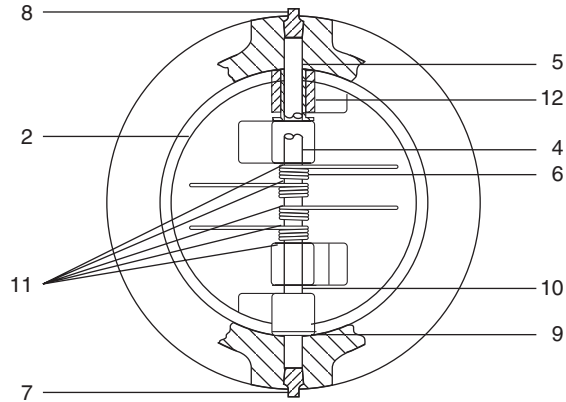
Valve Size	Dimensions			WT
	A	B	C	
2	4.12 (105)	2.12 (54)	2.06 (52)	5.00 (2.27)
2 ½	4.88 (124)	2.12 (54)	2.47 (63)	7.00 (3.17)
3	5.38 (137)	2.25 (57)	3.06 (78)	9.00 (4.08)
4	6.88 (175)	2.50 (64)	4.00 (102)	13.00 (5.90)
5	7.75 (197)	2.75 (70)	5.00 (127)	22.00 (9.98)
6	8.75 (222)	3.00 (76)	6.06 (154)	31.00 (14.06)
8	11.00 (279)	3.75 (95)	7.97 (202)	69.00 (31.29)
10	13.38 (340)	4.25 (108)	10.00 (254)	95.00 (43.08)
12	16.12 (409)	5.62 (143)	11.94 (303)	156.00 (70.20)

Iron Wafer Check Valves



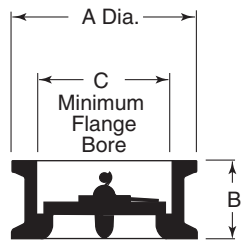
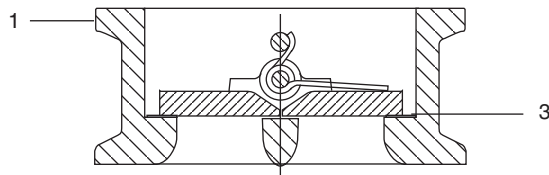
Figure WG-970

Class 125 • Iron Body • Buna-N Seat



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Plate	Aluminum Bronze
3	Seal	Buna-N
4	Stop Pin	316 Stainless Steel
5	Hinge Pin	316 Stainless Steel
6	Spring	316 Stainless Steel
7	Stop Pin Retainer	316 Stainless Steel
8	Hinge Pin Retainer	316 Stainless Steel
9	Body Bearing	PTFE
10	Plate Bearing	PTFE
11	Spring Bearing	PTFE



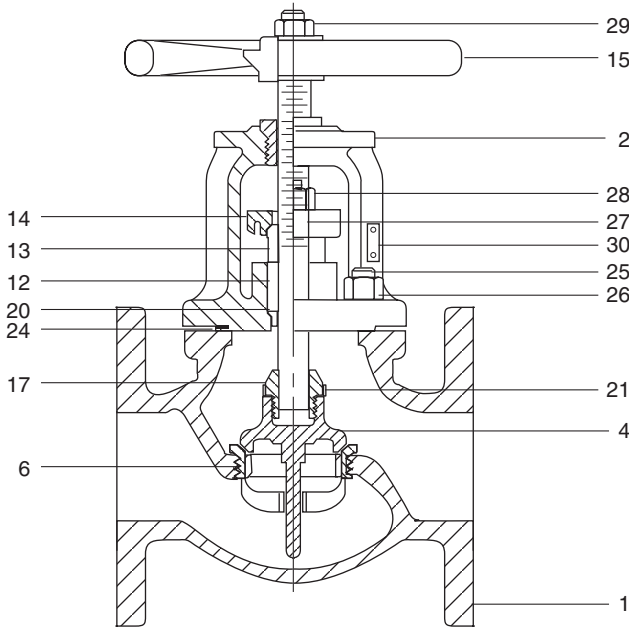
Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

Valve Size	Dimensions			WT
	A	B	C	
2	4.12 (105)	2.12 (54)	2.06 (52)	5.00 (2.27)
2 ½	4.88 (124)	2.12 (54)	2.47 (63)	7.00 (3.17)
3	5.38 (137)	2.25 (57)	3.06 (78)	9.00 (4.08)
4	6.88 (175)	2.50 (64)	4.00 (102)	13.00 (5.90)
5	7.75 (197)	2.75 (70)	5.00 (127)	22.00 (9.98)
6	8.75 (222)	3.00 (76)	6.06 (154)	31.00 (14.06)
8	11.00 (279)	3.75 (95)	7.97 (202)	69.00 (31.28)
10	13.38 (340)	4.25 (108)	10.00 (254)	95.00 (43.08)
12	16.12 (409)	5.62 (143)	11.94 (303)	156.00 (70.75)
14	17.75 (451)	7.25 (184)	12.50 (316)	203 (92.06)
16	20.25 (514)	7.50 (191)	15.00 (381)	247.00 (112.02)
18	21.62 (549)	8.00 (203)	16.88 (429)	303.00 (137.01)
20	23.88 (607)	8.38 (213)	18.81 (478)	390.00 (176.87)
24	28.25 (724)	8.75 (222)	22.62 (575)	566.00 (256.69)
30	34.75 (883)	12.00 (305)	29.25 (743)	1083.00 (491.15)
36	41.25 (1048)	14.50 (368)	35.00 (889)	1505.00 (682.54)

Figure G-512-I*

Class 125 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Hi-Str. Cast Iron
2	Bonnet	Hi-Str. Cast Iron
4	Disc	2" - 6" Bronze 8" - 10" Cast Iron
6	Body Seat Ring	Bronze
*7	Disc Seat Ring	8" & 10" Bronze
8	Stem	Manganese Bronze
9	Yoke Bushing	Manganese Bronze
12	Packing	Non-Asbestos Rings
13	Gland	(2" - 4") Brass (5" - 10") Bronze
14	Gland Flange	Ductile
15	Handwheel	Ductile
17	Disc Stem Ring	Bronze
20	Stem Hole Bushing	Brass
21	Locking Device	2" - 6" 18-8 SST Sheet
*22	Disc Guide Stem	8" & 10" Brass
*23	Disc Guide Stem Pin	8" & 10" Brass
24	Bonnet Gasket	Non-Asbestos Sheet
25	Bonnet Studs	Steel
26	Bonnet Stud Nuts	Steel
27	Gland Studs	Naval Brass
28	Gland Stud Nuts	Brass
29	Handwheel Nut	Steel - Phos. Coated
30	Identification Plate	Aluminum

* Not shown

Industry Standards

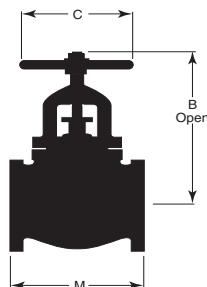
Complies with MSS SP-85 Type 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

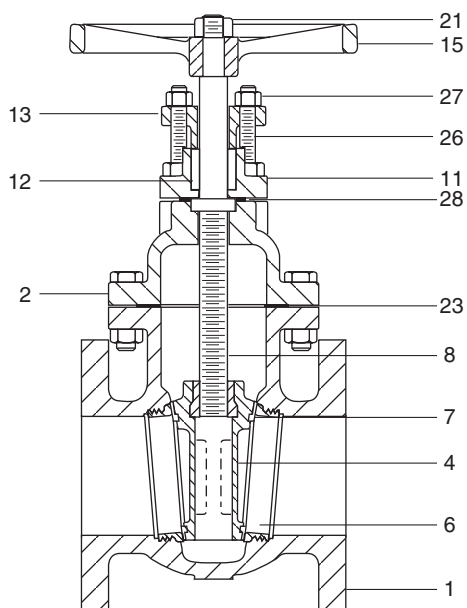
Valve Size	Dimensions			WT
	B	C	M	
2	11.12 (282)	8.00 (203)	8.00 (203)	35 (46)
2 ½	11.50 (292)	8.00 (203)	8.50 (216)	40 (18)
3	13.25 (337)	9.00 (229)	9.50 (241)	57 (26)
4	15.50 (394)	10.00 (254)	11.50 (292)	95 (43)
5	17.50 (445)	10.00 (254)	13.00 (330)	126 (57)
6	19.50 (495)	12.00 (305)	14.00 (336)	176 (79)
8	25.00 (508)	16.00 (406)	19.50 (495)	344 (155)
10	30.50 (775)	18.00 (457)	24.50 (622)	570 (256)



* NOTE: All International Iron valves are painted gray.

Figure G-612-I*

Class 125 • Bolted Bonnet • Non-Rising Stem • Bronze Trim • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	2" - 3" Bronze
		4" - 12" Cast Iron
6	Seat Ring	Bronze
7	Disc Ring	4" - 12" Bronze
8	Stem	Manganese Bronze
11	Stuffing Box	2" - 8" Ductile
		10" - 12" Cast Iron
12	Packing	Non-Asbestos Rings
13	Gland Flange	2" - 8" Ductile
*14	Gland	10" - 12" Bronze
15	Handwheel	Ductile
21	Handwheel Nut	Carbon Steel
23	Bonnet Gasket	Non-Asbestos Sheet
24	Bonnet Bolt	Carbon Steel
25	Bonnet Bolt Nut	Carbon Steel
26	Gland Bolt	Carbon Steel
27	Gland Bolt Nut	Carbon Steel EZP
28	Stuffing Box Gasket	Non-Asbestos Sheet
*34	Stuffing Box Bolt	Carbon Steel
*35	Stuffing Box Bolt Nut	Carbon Steel
*55	Gland Follower	10" - 12" Ductile

* Not shown

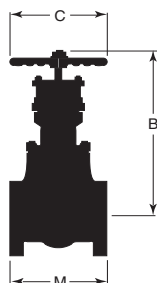
Industry Standards

Complies with MSS SP-70 Type 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

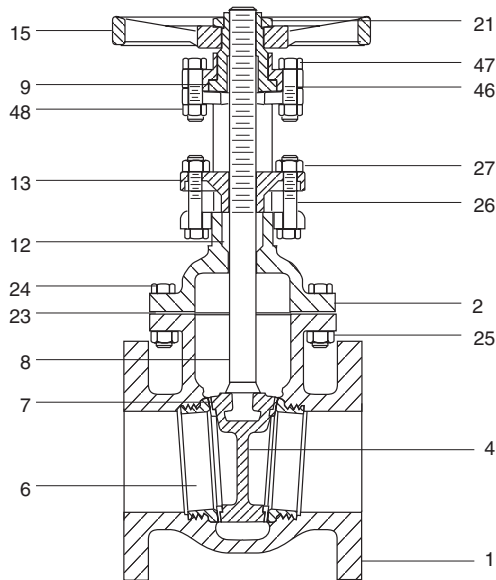


Valve Size	Dimensions			WT
	B	C	M	
2	11.31 (287)	8.00 (203)	7.00 (178)	30 (14)
2 1/2	12.40 (315)	8.00 (203)	7.50 (191)	40 (18)
3	13.25 (337)	8.00 (203)	8.00 (203)	56 (25)
4	16.31 (414)	10.00 (254)	9.00 (229)	90 (41)
5	18.00 (457)	10.00 (254)	10.00 (254)	126 (57)
6	20.69 (526)	12.00 (305)	10.50 (267)	152 (68)
8	24.12 (613)	14.00 (356)	11.50 (292)	260 (117)
10	32.25 (819)	16.00 (406)	13.00 (330)	484 (220)
12	36.00 (914)	18.00 (457)	14.00 (356)	685 (311)

* NOTE: All International Iron valves are painted gray.

Figure G-623-I*

Class 125 • Bolted Bonnet • OS&Y • Bronze Trim • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Bonnet	Cast Iron
4	Disc	2" Bronze
		2 1/2" & 3" Bronze
		4" - 12" Cast Iron
6	Body Seat Ring	Bronze
7	Disc Seat Ring	4" - 12" Bronze
8	Stem	Manganese Bronze
9	Yoke Sleeve	Manganese Bronze
12	Packing	Non-Asbestos Rings
13	Gland (1 Piece)	2" - 8" Ductile Iron
*13	Gland	10" & 12" Bronze
*13	Gland Flange	10" & 12" Ductile Iron
15	Handwheel	Ductile Iron
21	Handwheel Nut	2" - 8" Sintered Nickel Steel
		10" - 12" Ductile Iron
23	Bonnet Gasket	Non-Asbestos Sheet
24	Bonnet Bolt	Carbon Steel
25	Bonnet Bolt Nut	Carbon Steel
26	Gland Bolt	Carbon Steel
*26	Gland Eyebolt	Carbon Steel
27	Gland Bolt Nut	Carbon Steel
46	Yoke Cap	2" - 8" Ductile Iron
		10" - 12" Cast Iron
47	Yoke Cap Bolt	Carbon Steel
48	Yoke Cap Bolt Nut	Carbon Steel

* Not shown

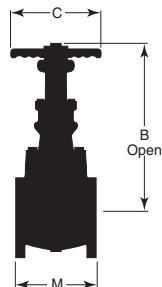
Industry Standards

Complies with MSS SP-70 Type 1

See page 4 for Pressure Temperature Ratings

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)

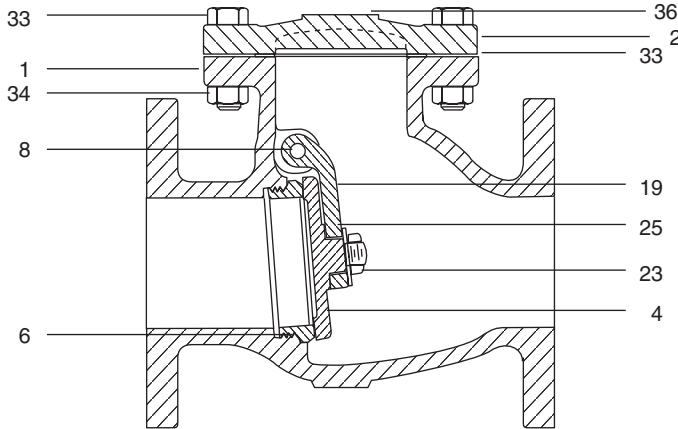


Valve Size	Dimensions			
	B	C	M	WT
2	14.75	8.00	7.00	33
	(375)	(203)	(178)	(15)
2 1/2	16.06	8.00	7.50	47
	(408)	(203)	(191)	(21)
3	17.38	8.00	8.00	58
	(441)	(203)	(203)	(26)
4	21.44	10.00	9.00	97
	(545)	(254)	(229)	(44)
5	25.81	10.00	10.00	135
	(656)	(254)	(254)	(61)
6	30.31	12.00	10.50	162
	(770)	(305)	(267)	(73)
8	37.75	14.00	11.50	280
	(959)	(356)	(292)	(126)
10	44.94	16.00	13.00	502
	(1141)	(406)	(330)	(228)
12	53.69	18.00	14.00	670
	(1364)	(457)	(356)	(304)

* NOTE: All International Iron valves are painted gray.

Figure G-931-I*

Class 125 • Bolted Cap • Bronze Trim • Flanged Ends



Materials of Construction

No.	Description	Material
1	Body	Cast Iron
2	Cap	Cast Iron
4	Disc	2" - 6" Bronze 8" - 12" Cast Iron
6	Seat Ring	Bronze
7	Disc Ring	8" - 12" Bronze
8	Hinge Pin	2" - 8" Alum Silicon Bronze 10" - 12" Naval Brass
19	Hinge	2" - 6" Bronze 8" - 12" Ductile
20	Disc Stud	8" - 12" Steel
21	Disc Stud Pin	8" - 12" 18-8 Stainless Steel
23	Disc Nut	2" - 6" Brass 8" - 12" Steel
24	Side Plug	Brass
25	Disc Washer	2" - 6" Brass 8" - 12" Steel
*28	Hinge Pin Bushing	Brass
32	Bonnet Gasket	Non-Asbestos Sheet
33	Cap Bolt	Carbon Steel
34	Cap Bolt Nut	Carbon Steel
36	Identification Plate	Aluminum

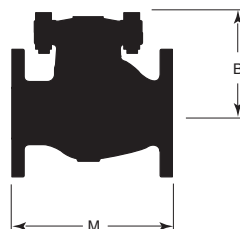
* Not shown

Industry Standards

Complies with Military Spec. MIL-V-18436 and MSS SP-71, Type 1
See page 4 for Pressure Temperature Ratings

Dimensions and Weights

Inches (millimeters) - Pounds (kilograms)



Valve Size	Dimensions		WT
	B	M	
2	4.50 (114)	8.00 (203)	25 (11)
2 ½	5.38 (137)	8.50 (216)	30 (14)
3	5.88 (149)	9.50 (241)	42 (19)
4	6.62 (168)	11.50 (292)	74 (33)
5	7.75 (197)	13.00 (330)	100 (45)
6	8.25 (210)	14.00 (356)	125 (56)
8	10.25 (260)	19.50 (495)	230 (104)
10	12.00 (333)	24.50 (622)	490 (219)
12	13.75 (387)	27.50 (699)	660 (317)

* NOTE: All International Iron valves are painted gray.

Technical Data

Y-Pattern Stop Check Valve

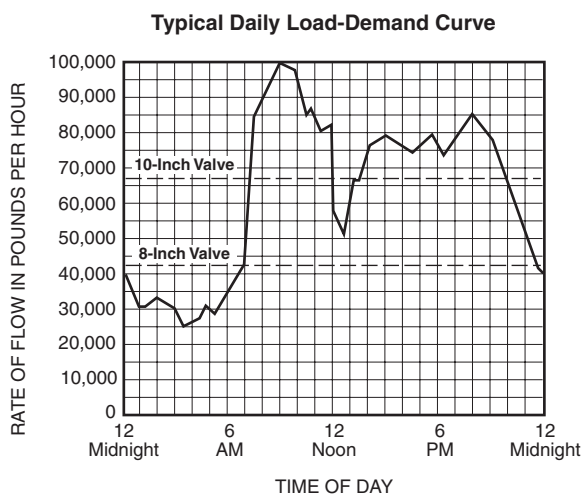
Selecting the Proper Size – Determining Pressure Drop

Since stop-check valves have a floating disc member, it is important the valve be sized to provide full disc lift under flow conditions prevailing during the major portion of the service life. If the valve is too large, the disc will float in a partially open position and may cause fluttering of the disc and rapid wear. Conversely, if the valve is too small, pressure drop will be excessive.

The chart on the following page is a graphic presentation of flow data determined by test. Its use offers a simple method of determining the best size stop-check valve, as well as the pressure drop under varying conditions of flow, without any computation.

How to Use the Chart Shown on the Following Page

Given: Steam Pressure-Temperature...250 psig 450°F
Flow Rate...Typical Daily Demand Curve



Find: Valve Catalog No. and the best size for above installation.

Solution:

1. Enter the Temperature chart at 450°F. Move vertically upward to the curved line for 250 psi, then horizontally to the right to establish a point on the specific volume scale. From this point, draw a line through the flow rate being investigated (100,000 Lb/H) and establish a point on Index 1.

2. From that point, draw another line through the valve size, for example the 8-inch size, and establish a point on Index 2. Now move horizontally to the diagonal pressure drop line on the right side. Where these lines intersect, the pressure drop is 7.5 psi for the 8-inch, Class 250 globe valve and 8.5 psi for the 8-inch Class 250 angle valve.

Chart solutions resulting in a point on Index 2 that falls below the Line A-A for Class 250 valves indicate the disc will not be fully lifted under the flow conditions used. Operation under such conditions is not recommended but, at times, must be tolerated for short periods during the low loads.

3. Enter the chart where Line A-A intersects Index 2 for Class 250 valves. Move diagonally upward through the size being investigated (8-inch) and establish a second point on Index 1. From this point, extend a line to the specific volume established in Step 1 and at its intersection with the flow rate line, read 48,000 Lb/H as the minimum flow rate at which the disc will be in the fully lifted position. The pressure drop at this flow rate is 1.9 psi for globe and 2.1 psi for angle valves.
4. Repeat Steps 2 and 3 for other possible valve sizes, tabulate results, and make size selection on basis of pressure drop and duration of partial disc lift considerations.

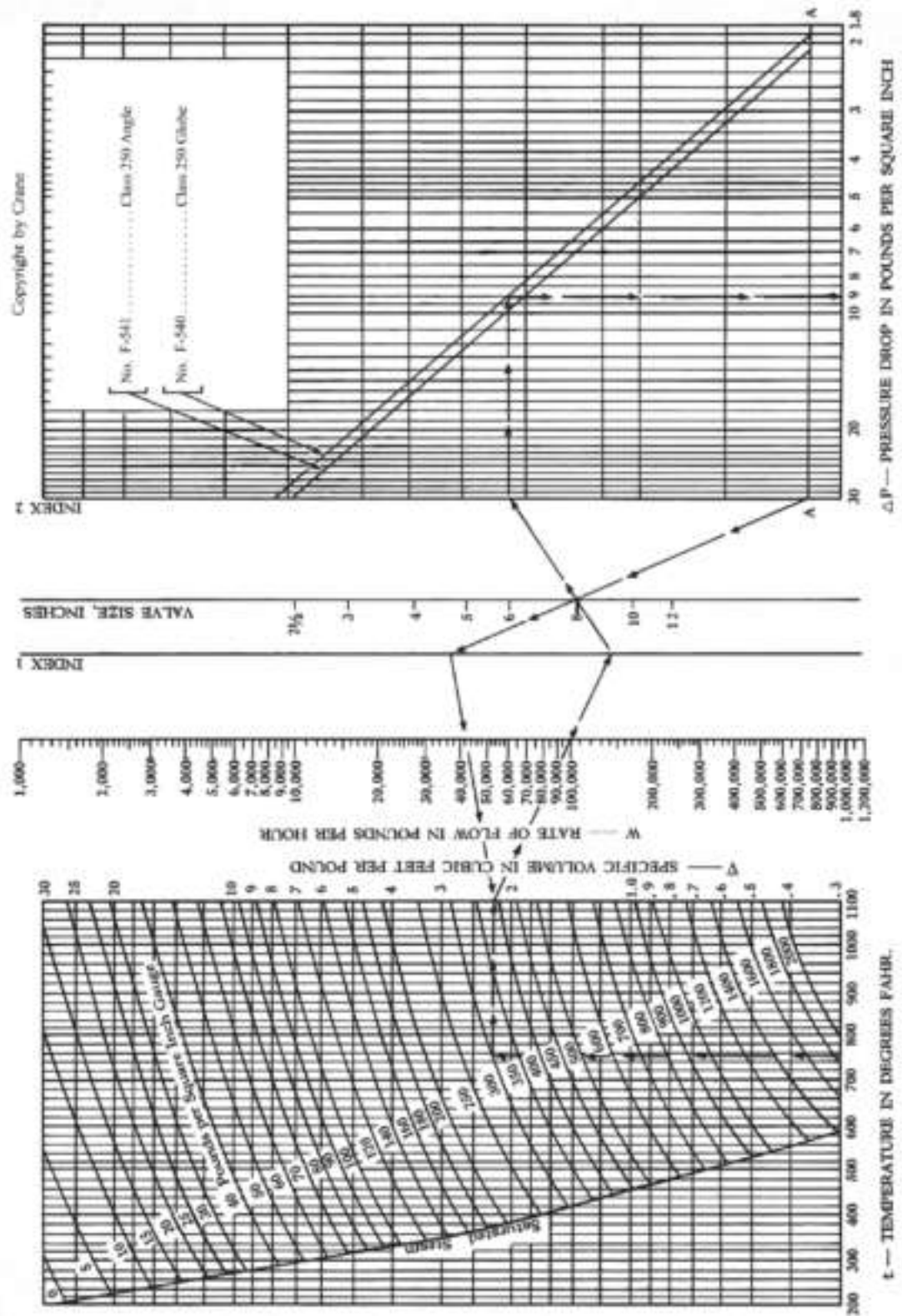
Valve Size (Inches)	Press drop @ Max.Min. Flow rate (100,000 #/Hr.), psi		Flow Rate for Wide open valve #/Hr.
	Globe	Angle	
6	20.5	22.5	26,500
8	7.5	8.5	48,000
10	3.3	3.6	68,000

Dotted lines on Demand Curve indicate minimum flow rates for wide open 8" and 10" valves.

5. The best choice for this example would be the 10" size because pressure drop is much lower and duration of partially lifted disc is only slightly greater than for the 8" size.
6. Pressure drop for any intermediate flow condition can be determined as outlined in Steps 1 and 2.

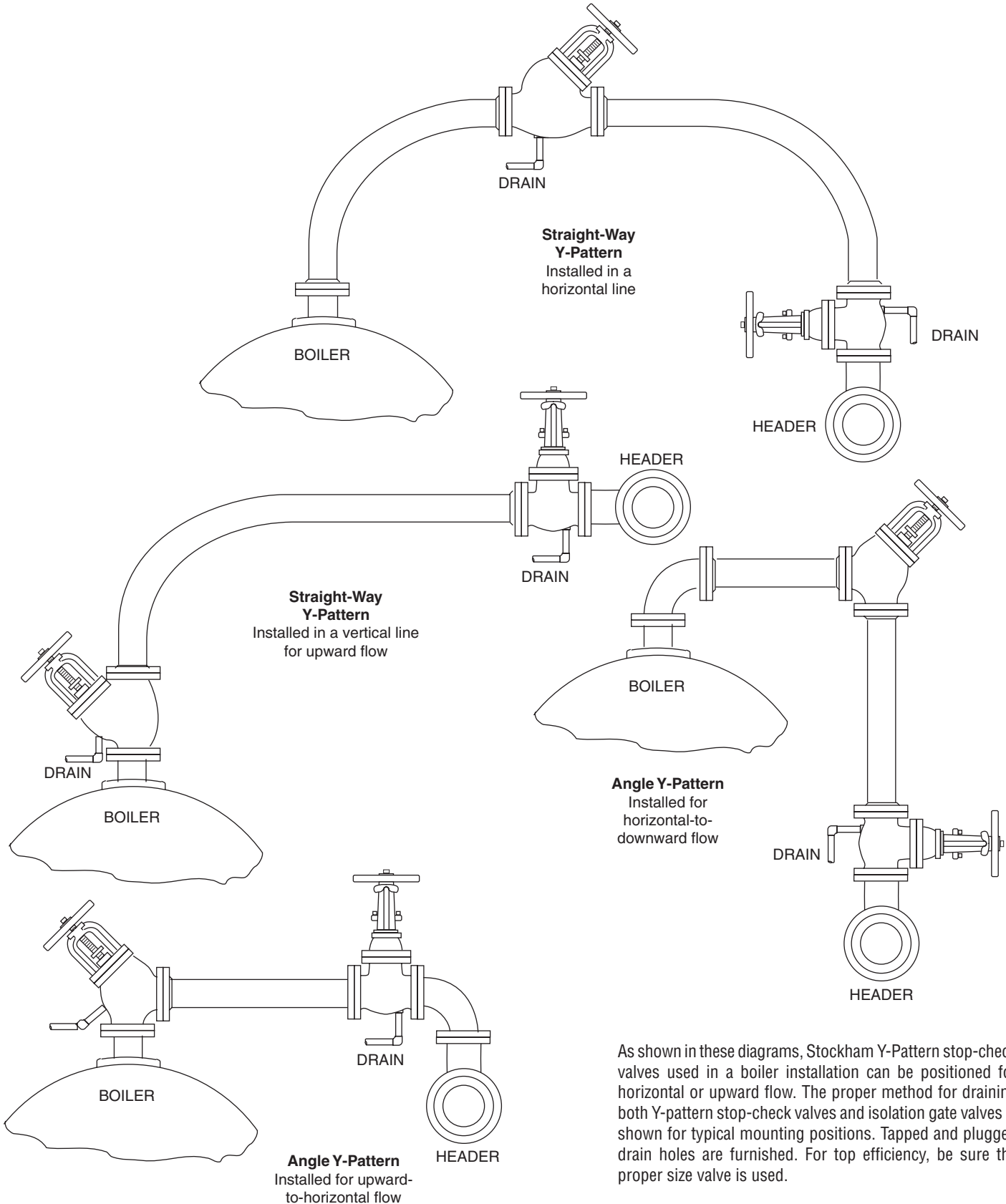
Technical Data Y-Pattern Stop Check Valve

Stockham Bolted Bonnet Stop-Check Valves Selecting the Proper Size – Determining Pressure Drop

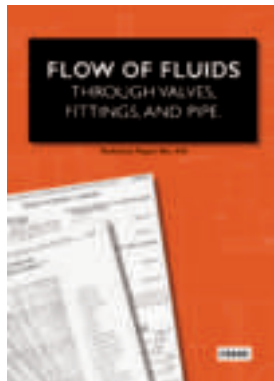


Installation Recommendations

Y-Pattern Stop-Check and Isolation Gate Valves



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