



**WILLIAMS**  
VALVE CORPORATION

**BRONZE AND  
MARINE VALVES**





Founded in 1918, the William E. Williams Valve Corporation has continuously produced high quality valves for industrial and commercial applications including: oil & gas, midstream pipeline, terminal storage, chemical processing, power generation, mining, paper, pharmaceutical processes, as well as commercial and military shipbuilding.

Williams' valves are designed, manufactured and tested to meet and exceed all applicable specifications. Valves are constructed and constant improvements to meet the latest environmental standards are always being implemented. Our goal is to produce high quality valves, with fully traceable quality records, at prices competitive in the global marketplace and deliveries to match the "just in time" requirements of today's business world. In order to accomplish this goal, we maintain large inventories of finished products to support our distribution network.

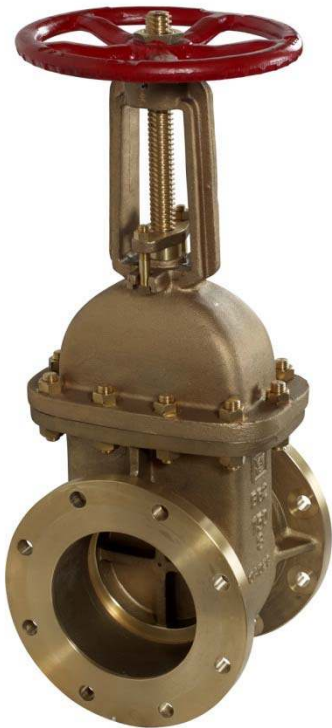
We have years of experience working on special requirements: electric, hydraulic or pneumatic automation, gear operators, emergency shut-off valves, soft seats and discs, by-pass valve installations and extended bonnets are no challenge for Williams.

We believe that William E. Williams has a record of quality equal to or better than any in the valve industry. We are a privately owned company whose accomplishments have been achieved by the dedication and commitment of our employees to provide a standard of excellence in all our products for you, our present and future customers.

This marine valve catalog is intended to provide an overview of our products. Detailed drawings are available in several formats. We appreciate your business and want to be your primary valve source.

Sincerely,

Nicholas Sherman  
President



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*\* Because of a policy of continuous product improvement, William E. Williams Valve Corporation reserves the right to change designs, materials or specifications without notice.*



## INTRODUCTION to Marine Valves

For over ninety years William E. Williams Valve Corporation has been delivering efficient and dependable performance for practically every known valve service. The very name Williams is your assurance that every valve meets or exceeds the specification required for your application. As with all our valves, the Williams Cast Steel & Bronze Marine Valve Line is a reflection of a commitment to a standard of excellence and product innovation.

All William's valves are designed, engineered, manufactured and tested to meet or exceed all applicable industry standards including ASTM, ANSI and MSS. In addition to quality, Williams takes pride in its customer service and delivery.

Williams is a flexible manufacturer and remains one of the few companies willing to help customers meet unique or special applications. Whether your needs are for standard products from our well stocked inventories throughout the U.S. or custom modifications, remember to specify **WILLIAMS**.



## General Specifications



- A. GATE VALVES** are designed to offer minimum pressure drop in the fully open position. Not intended for throttling; they serve as efficient shut-off valves for flow in either direction. They are dependable for use in steam, water, oil, vapor and other high pressure services. Rising stem designs employ a tee-head stem connection to the one-piece flexible wedge. Position of the valve is readily visible. Non-rising stem design is offered for minimal space or buried services. In both cases the wedges are guided throughout their travel to assure alignment and proper seating.
- B. GLOBE VALVES** are efficient for throttling when pressure drop is about 20% of inlet pressure. They are effective stop valves and are suitable for regulating the liquid flow. Our valves incorporate a bolted bonnet design with a rising stem and handwheel. Williams GLOBE VALVES can be supplied as screw-down stop checks. The stop check valve is installed with pressure under the disc. The disc is raised from its seat by the pressure of upward fluid flow. The disc is reseated by gravity when flow is stopped or reversed. Alignment of the disc is maintained through its travel by an extended disc nut and /or a guided seat ring.
- C. ANGLE VALVES** are essentially GLOBE VALVES with inlet and outlet connections at right angles. Like GLOBE VALVES, ANGLES are used for throttling service and offer less resistance to flow. The right-angle form of the body reduces pipe joints. These valves are also adaptable to stop check configuration.
- D. SWING CHECK VALVES** are self-contained and prevent the reversal of flow through the line. The pressure of the flowing fluid opens the valve. The weight of the disc assembly and reversal of flow closes it. Williams SWING CHECK VALVES are best used on services with low fluid velocities and where flow reversals are infrequent. SWING CHECKS are automatic in operation and offer minimum resistance to flow.

## Warranty

Seller warrants the material to be free of defects in material and workmanship, under normal use and proper operation, for a period of one year from date of delivery to a common carrier for shipment to buyer. Seller's obligation is limited to: (1) Repair of the material, or (2) replacement of any part or parts proven defective in material or workmanship, or (3) refund of the purchase price. The choice of said remedies shall be determined by seller in its sole discretion.

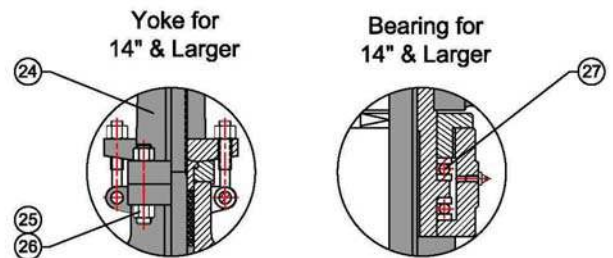
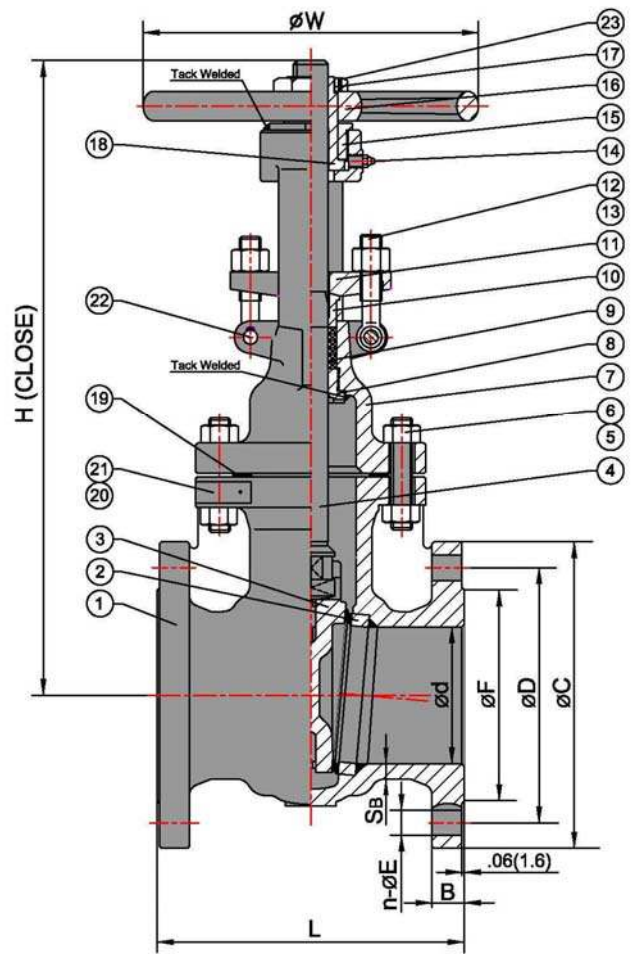
All implied warranties, including the implied warranties of merchantability and fitness for a particular purpose, are hereby disclaimed and excluded. The within limited warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of seller. In no event shall seller be liable for consequential or incidental damages.

# Cast Steel Marine Gate Valves (Rising Stem)

## Class 150lb

### Fig. No. 15F4AB

NO.	PART	MATERIAL
1	Body	ASTM A216 Gr WCB
2	Seat Ring	ASTM A105+sCu6328
3	Wedge	ASTM A216 Gr WCB+EcuAl-A2
4	Stem	ASTM B148-C95500
5	Bonnet Bolt	ASTM A193 Gr B7
6	Bonnet Nut	ASTM A194 Gr 2H
7	Bonnet	ASTM A216 Gr WCB
8	Backseat	ASTM A276 Gr 410
9	Packing Ring	Graphite
10	Gland	ASTM A276 Gr 410
11	Gland Flange	ASTM A216 Gr WCB
12	Eye Bolt	ASTM A193 Gr B7
13	Eye Bolt Nut	ASTM A194 Gr 2H
14	Oil Filler	ASTM A570 Gr A
15	Gland Nut	ASTM A29-1035
16	Handwheel	Nodular Cast Iron
17	Handwheel Nut	ASTM A29-1035
18	Stem Nut	ASTM A439 D-2
19	Gasket	304 + Graphite
20	Nameplate	304SS
21	Rivet	304SS
22	Pin	ASTM A29-1035
23	Screw	Carbon Steel
24	Yoke	ASTM A216 Gr WCB
25	Yoke Bolt	ASTM A193 Gr B7
26	Yoke Nut	ASTM A194 Gr 2H
27	Bearing	Steel



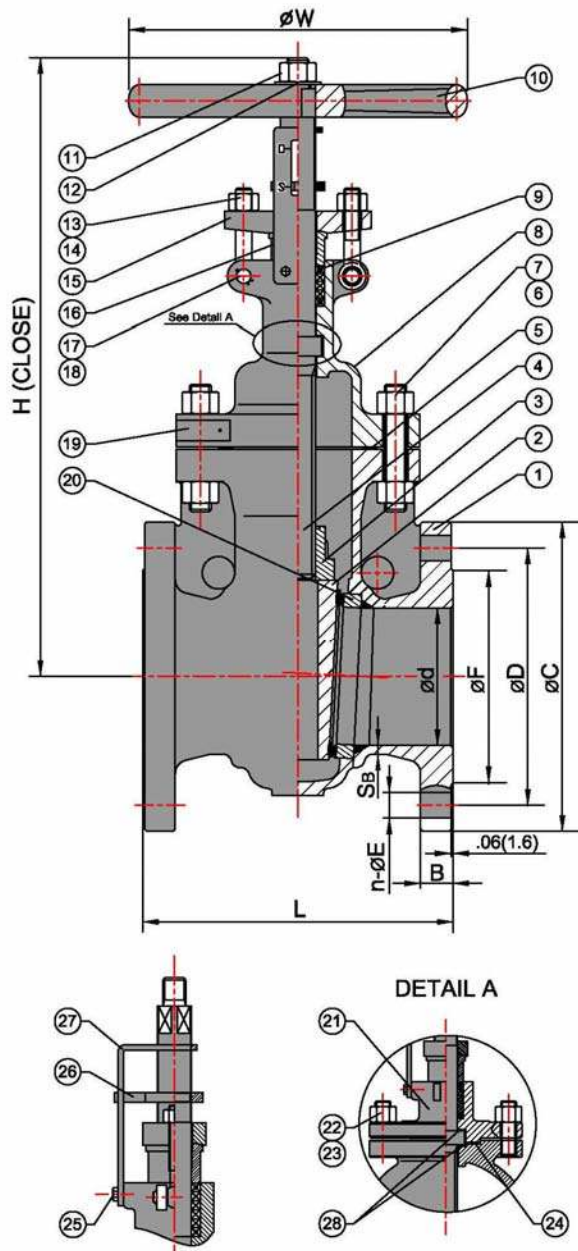
### Product Features

- A.** Aluminum Bronze Trim
- B.** Seal-welded seats
- C.** Bosses for taps & bypass
- D.** Graphite packing
- E.** Fully guided, wedge
- F.** Fugitive emission tested

SIZE	d	L	B	C	D	n	E	F	H	W	SB
2"	2(50)	7(178)	0.62(16)	6(152)	4.75(120.7)	4	0.75(19)	3.62(92.1)	12.68(322)	7.87(200)	0.34(8.6)
2-1/2"	2.50(65)	7.50(190)	0.68(17.5)	7(178)	5.50(139.7)	4	0.75(19)	4.12(104.8)	13.93(354)	7.87(200)	0.37(9.5)
3"	3(80)	8(203)	0.75(19)	7.50(190)	6(152.4)	4	0.75(19)	5(127)	15.39(391)	9.84(250)	0.41(10.5)
4"	4(100)	9(229)	0.94(24)	9(229)	7.50(190.5)	8	0.75(19)	6.18(157.2)	18.31(465)	9.84(250)	0.45(11.5)
5"	5(125)	10(254)	0.94(24)	10(254)	8.50(215.9)	8	0.87(22)	7.31(185.7)	21.18(538)	11.81(300)	0.47(12)
6"	6(150)	10.50(267)	1.02(26)	11(279)	9.50(241.3)	8	0.87(22)	8.50(215.9)	23.23(590)	11.81(300)	0.47(12)
8"	8(200)	11.50(292)	1.14(29)	13.50(343)	11.75(298.5)	8	0.87(22)	10.62(269.9)	28.70(729)	13.77(350)	0.50(12.7)
10"	10(250)	13(330)	1.22(31)	16(406)	14.25(362)	12	1(25)	12.75(323.8)	34.84(885)	15.75(400)	0.57(14.5)
12"	12(300)	14(356)	1.25(32)	19(483)	17(431.8)	12	1(25)	15(381)	39.88(1013)	17.71(450)	0.62(16)
14"	13.27(350)	15(381)	1.37(35)	21(533)	18.75(476.3)	12	1.14(29)	16.25(412.8)	45.31(1151)	19.68(500)	0.67(17)
16"	15.25(400)	16(406)	1.46(37)	23.50(597)	21.25(539.8)	16	1.14(29)	18.50(469)	51.37(1305)	22(560)	0.68(17.5)

# Cast Steel Marine Gate Valves (Non-Rising Stem) Class 150lb

**Fig. No. N15F4AB & N15F2N**



NO.	PART	MATERIAL
1	Body	ASTM A216 Gr WCB
2	Wedge	ASTM A216 Gr WCB+Alum Brz
3	Stem Nut	ASTM A439 D-2
4	Stem	ASTM B148-C95500
5	Gasket	304 + Graphite
6	Bonnet Bolt	ASTM A193 Gr B7
7	Bonnet Nut	ASTM A194 Gr 2H
8	Bonnet	ASTM A216 Gr WCB
9	Packing	Graphite
10	Handwheel	Nodular Cast Iron
11	Handwheel Nut	ASTM A29-1035
12	Washer	ASTM A276-410
13	Eye Bolt	ASTM A193 Gr B7
14	Eye Nut	ASTM A194 Gr 2H
15	Gland Flange	ASTM A216 Gr WCB
16	Gland	ASTM A276-410
17	Split Pin (6" & up)	ASTM A570 Gr.A
18	Pin	ASTM A29-1035
19	Nameplate	304SS
20	Body Ring	ASTM A105+sCu6328
21	Bonnet (6" & up)	ASTM A216 Gr WCB
22	Bolt (6" & up)	ASTM A193 Gr B7
23	Nut (6" & up)	ASTM A194 Gr 2H
24	Gasket (6" & up)	304SS + Graphite
25	Bolt	ASTM A193 Gr B7
26	Indicator	ASTM A29-1045
27	Indication Rod	ASTM A29-1020
28	Thrust Washer	AL-BRZ-B148

## Product Features

- A.** Aluminum Bronze Trim (as shown above) or API Trim 8
- B.** Seal-welded seats
- C.** Bosses for taps & bypass
- D.** Graphite packing
- E.** Calibrated position indicator
- F.** Adaptable for reach-rod systems

inches(mm)

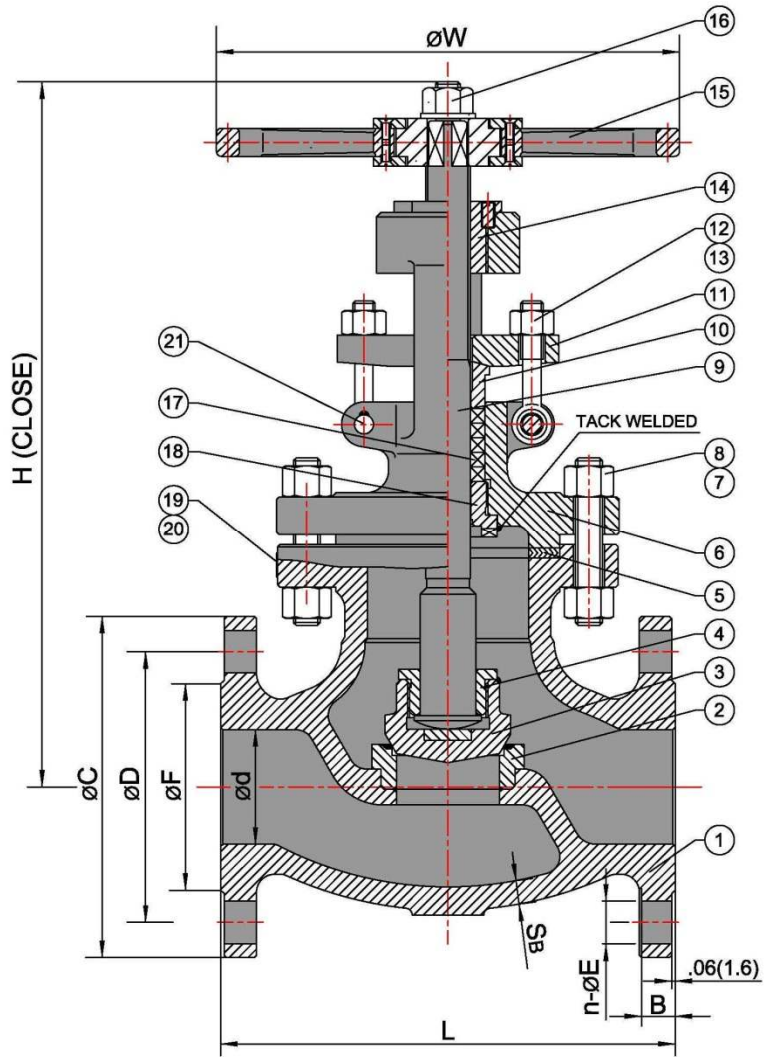
SIZE	d	L	B	C	D	n	E	F	H	W	SB
2"	2(50)	7(178)	0.62(16)	6(152)	4.75(120.7)	4	0.75(19)	3.62(92.1)	12.68(322)	7.87(200)	0.34(8.6)
2-1/2"	2.50(65)	7.50(190)	0.68(17.5)	7(178)	5.50(139.7)	4	0.75(19)	4.12(104.8)	13.93(354)	7.87(200)	0.37(9.5)
3"	3(80)	8(203)	0.75(19)	7.50(190)	6(152.4)	4	0.75(19)	5(127)	15.39(391)	9.84(250)	0.41(10.5)
4"	4(100)	9(229)	0.94(24)	9(229)	7.50(190.5)	8	0.75(19)	6.18(157.2)	18.31(465)	9.84(250)	0.45(11.5)
5"	5(125)	10(254)	0.94(24)	10(254)	8.50(215.9)	8	0.87(22)	7.31(185.7)	21.18(538)	11.81(300)	0.47(12)
6"	6(150)	10.50(267)	1.02(26)	11(279)	9.50(241.3)	8	0.87(22)	8.50(215.9)	23.23(590)	11.81(300)	0.47(12)
8"	8(200)	11.50(292)	1.14(29)	13.50(343)	11.75(298.5)	8	0.87(22)	10.62(269.9)	28.70(729)	13.77(350)	0.50(12.7)
10"	10(250)	13(330)	1.22(31)	16(406)	14.25(362)	12	1(25)	12.75(323.8)	34.84(885)	15.75(400)	0.57(14.5)
12"	12(300)	14(356)	1.25(32)	19(483)	17(431.8)	12	1(25)	15(381)	39.88(1013)	17.71(450)	0.62(16)
14"	13.27(350)	15(381)	1.37(35)	21(533)	18.75(476.3)	12	1.14(29)	16.25(412.8)	45.31(1151)	19.68(500)	0.67(17)
16"	15.25(400)	16(406)	1.46(37)	23.50(597)	21.25(539.8)	16	1.14(29)	18.50(469)	51.37(1305)	22(560)	0.68(17.5)

# Cast Steel Marine Globe Valves

## Class 150lb

### Fig. No. 152F4AB

NO.	PART	MATERIAL
1	Body	ASTM A216 Gr WCB
2	Seat	ASTM A105+ Alum Brz
3	Disc	ASTM A216 Gr WCB+Alum Brz
4	Disc Cover	ASTM A276 Gr 410
5	Gasket	304SS + Graphite
6	Bonnet	ASTM A216 Gr WCB
7	Bonnet Bolt	ASTM A193 Gr B7
8	Bonnet Nut	ASTM A194 Gr 2H
9	Stem	ASTM B148-C95500
10	Gland	ASTM A276 Gr 410
11	Gland Flange	ASTM A216 Gr WCB
12	Eye Bolt	ASTM A193 Gr B7
13	Eye Bolt Nut	ASTM A194 Gr 2H
14	Stem Nut	ASTM A439 D-2
15	Handwheel	Nodular Cast Iron
16	Handwheel Nut	ASTM A29-1035
17	Packing Ring	Graphite
18	Backseat Bushing	ASTM A276 Gr 410
19	Nameplate	304SS
20	Rivet	304SS
21	Pin	ASTM A29-1035



### Product Features

- A. Aluminum Bronze Trim
- B. Seal-welded seats
- C. Bosses for taps & bypass
- D. Graphite packing
- E. Stop Check Feature (Optional)

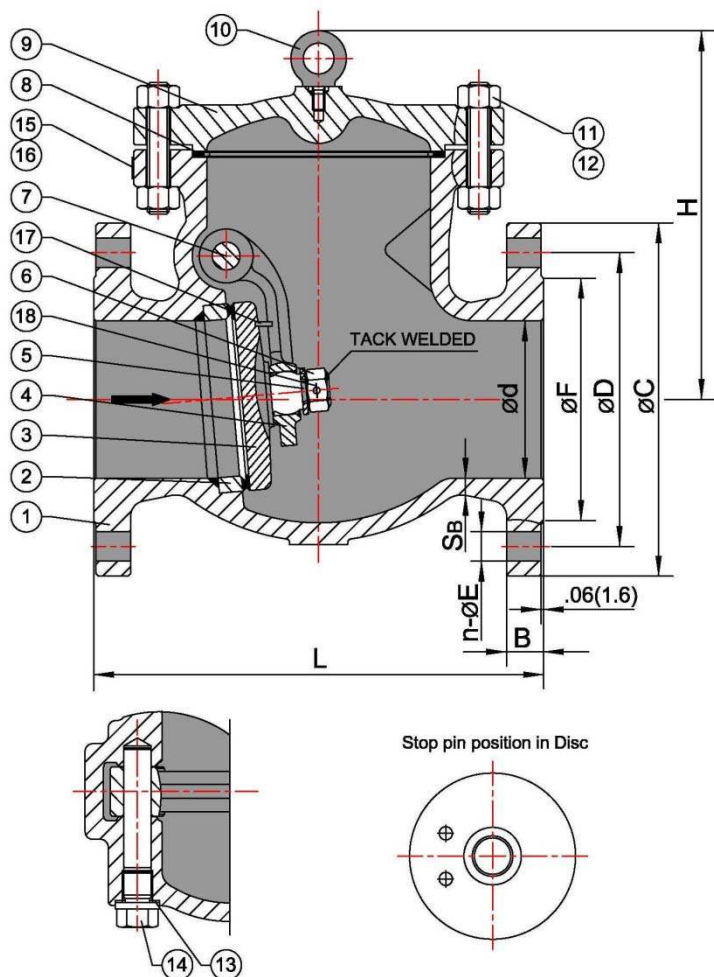
SIZE	inches(mm)										
	d	L	B	C	D	n	E	F	H	W	SB
2"	2(50)	8(203)	0.62(16)	6(152)	4.75(120.7)	4	0.75(19)	3.62(92.1)	12.87(327)	7.87(200)	0.35(9)
2-1/2"	2.50(65)	8.50(216)	0.68(17.5)	7(178)	5.50(139.7)	4	0.75(19)	4.12(104.8)	13.50(343)	9.84(250)	0.37(9.5)
3"	3(80)	9.50(241)	0.75(19)	7.50(190)	6(152.4)	4	0.75(19)	5(127)	13.77(350)	9.84(250)	0.41(10.3)
4"	4(100)	11.50(292)	0.94(24)	9(229)	7.50(190.5)	8	0.75(19)	6.18(157.2)	17.36(441)	11.81(300)	0.44(11.2)
5"	5(125)	14(356)	0.94(24)	10(254)	8.50(215.9)	8	0.87(22)	7.31(185.7)	18.11(460)	11.81(300)	0.45(11.5)
6"	6(150)	16(406)	1.02(26)	11(279)	9.50(241.3)	8	0.87(22)	8.50(215.9)	18.43(468)	13.77(350)	0.47(11.9)
8"	8(200)	19.50(495)	1.14(29)	13.50(343)	11.75(298.5)	8	0.87(22)	10.62(269.9)	21.34(542)	17.71(450)	0.50(12.7)
10"	10(250)	24.50(622)	1.22(31)	16(406)	14.25(362)	12	1(25)	12.75(323.8)	25.03(636)	17.71(450)	0.55(14)
12"	12(300)	27.50(699)	1.25(32)	19(483)	17(431.8)	12	1(25)	15(381)	32.68(830)	22(560)	0.62(16)
14"	13.27(350)	31(787)	1.37(35)	21(533)	18.75(476.3)	12	1.14(29)	16.25(412.8)	34.53(877)	22(560)	0.67(17)
16"	15.25(400)	36(914)	1.46(37)	23.50(597)	21.25(539.8)	16	1.14(29)	18.50(469)	34.57(878)	22(560)	0.68(17.5)



# Cast Steel Marine Swing Check Valves

## Class 150lb

### Fig. No. 151F4AB



NO.	PART	MATERIAL
1	Body	ASTM A216 Gr WCB
2	Disc	ASTM 105+Alum Brz
3	Disc	ASTM A105+Alum Brz
4	Hinge	ASTM A216 Gr WCB
5	Gasket	ASTM A276-410
6	Nut	ASTM A276-410
7	Pin	ASTM B148 C95500
8	Gasket	SS304+Graphite
9	Bonnet	ASTM A216 Gr WCB
10	Eyebolt	ASTM A29-1035
11	Nut	ASTM A194 Gr 2H
12	Bolt	ASTM A193 Gr B7
13	Gasket	ASTM A276-304
14	Plug	ASTM A276-410
15	Nameplate	304SS
16	Rivet	304SS
17	Pin	ASTM A29-1020
18	Pin	316SS

#### Product Features

- A.** Aluminum Bronze Trim
- B.** Seal-welded seats
- C.** Bosses for taps & bypass
- D.** Graphite packing

inches(mm)

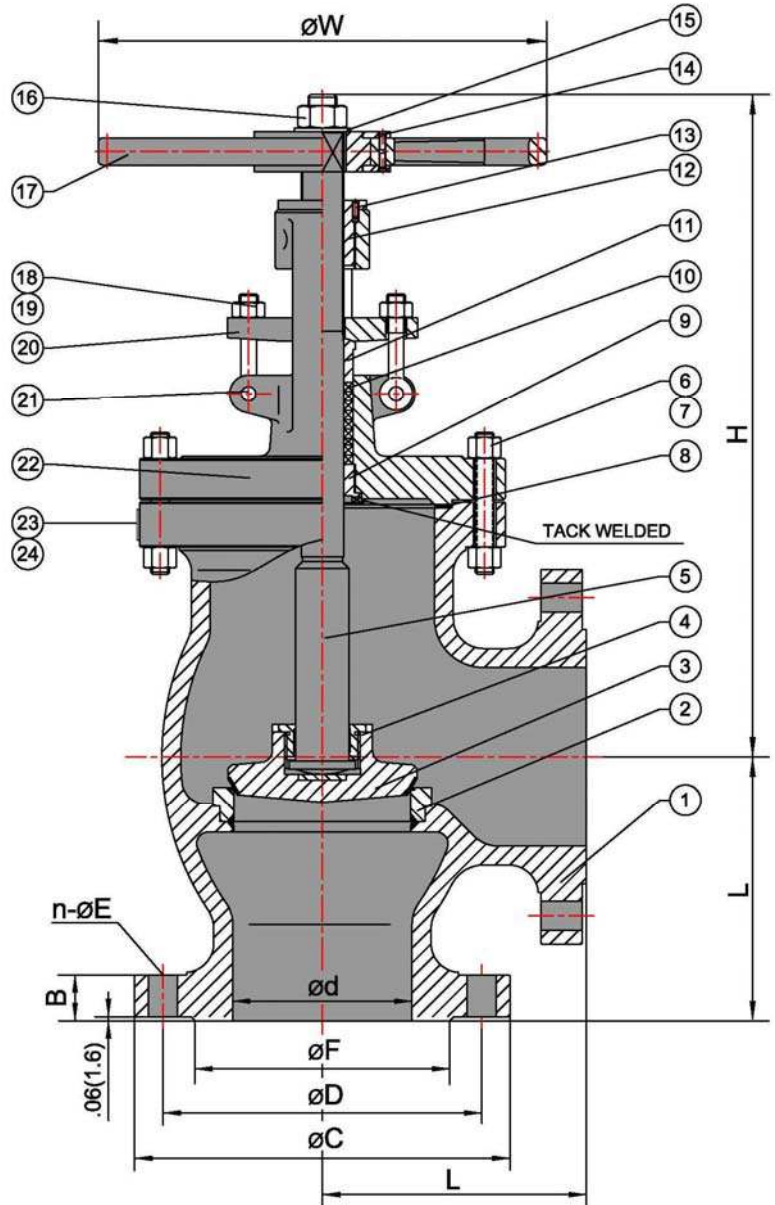
SIZE	d	L	B	C	D	n	E	F	H	SB
2"	2(50)	8(203)	0.62(16)	6(152)	4.75(120.7)	4	0.75(19)	3.62(92.1)	5.39(137)	0.34(8.6)
2-1/2"	2.50(65)	8.50(216)	0.68(17.5)	7(178)	5.50(139.7)	4	0.75(19)	4.12(104.8)	6.18(157)	0.37(9.5)
3"	3(80)	9.50(241)	0.75(19)	7.50(190)	6(152.4)	4	0.75(19)	5(127)	6.69(170)	.41(10.5)
4"	4(100)	11.50(292)	0.94(24)	9(229)	7.50(190.5)	8	0.75(19)	6.18(157.2)	9(229)	0.45(11.5)
5"	5(125)	13(330)	0.94(24)	10(254)	8.50(215.9)	8	0.87(22)	7.31(185.7)	10.59(269)	0.47(12)
6"	6(150)	14(356)	1.02(26)	11(279)	9.50(241.3)	8	0.87(22)	8.50(215.9)	10.75(273)	0.47(12)
8"	8(200)	19.50(495)	1.14(29)	13.50(343)	11.75(298.5)	8	0.87(22)	10.62(269.9)	13.42(341)	0.50(12.7)
10"	10(250)	24.50(622)	1.22(31)	16(406)	14.25(362)	12	1(25)	12.75(323.8)	15.86(403)	0.57(14.5)
12"	12(300)	27.50(698)	1.25(32)	19(483)	17(431.8)	12	1(25)	15(381)	18.54(471)	0.62(16)
14"	13.27(350)	31(787)	1.37(35)	21(533)	18.75(476.3)	12	1.14(29)	16.25(412.8)	20.07(510)	0.67(17)
16"	15.25(400)	34(864)	1.46(37)	23.50(597)	21.25(539.8)	16	1.14(29)	18.50(469)	22.83(580)	0.68(17.5)

# Cast Steel Marine Angle Valves

## Class 150lb

### Fig. No. 153F4AB

NO.	PART	MATERIAL
1	Body	ASTM A216 Gr WCB
2	Seat	ASTM A105+Alum Brz
3	Disc	ASTM A105+Alum Brz
4	Disc Cover	ASTM A276 Gr 410
5	Stem	ASTM B148-C95500
6	Bonnet Bolt	ASTM A193 Gr B7
7	Bonnet Nut	ASTM A194 Gr 2H
8	Gasket	304SS + Graphite
9	Backseat Bushing	ASTM A276 Gr 410
10	Packing Ring	Graphite
11	Gland	ASTM A276 Gr 410
12	Stem Nut	ASTM A439 D-2
13	Screw	ASTM A29-1035
14	Screw	ASTM A29-1035
15	Washer	ASTM A29-1035
16	Handwheel Nut	ASTM A29-1035
17	Handwheel	Nodular Cast Iron
18	Eye Bolt	ASTM A193 Gr B7
19	Eye Bolt Nut	ASTM A194 Gr 2H
20	Gland Flange	ASTM A216 Gr WCB
21	Pin	ASTM A29-1035
22	Bonnet	ASTM A216 Gr WCB
23	Rivet	304SS
24	Nameplate	304SS

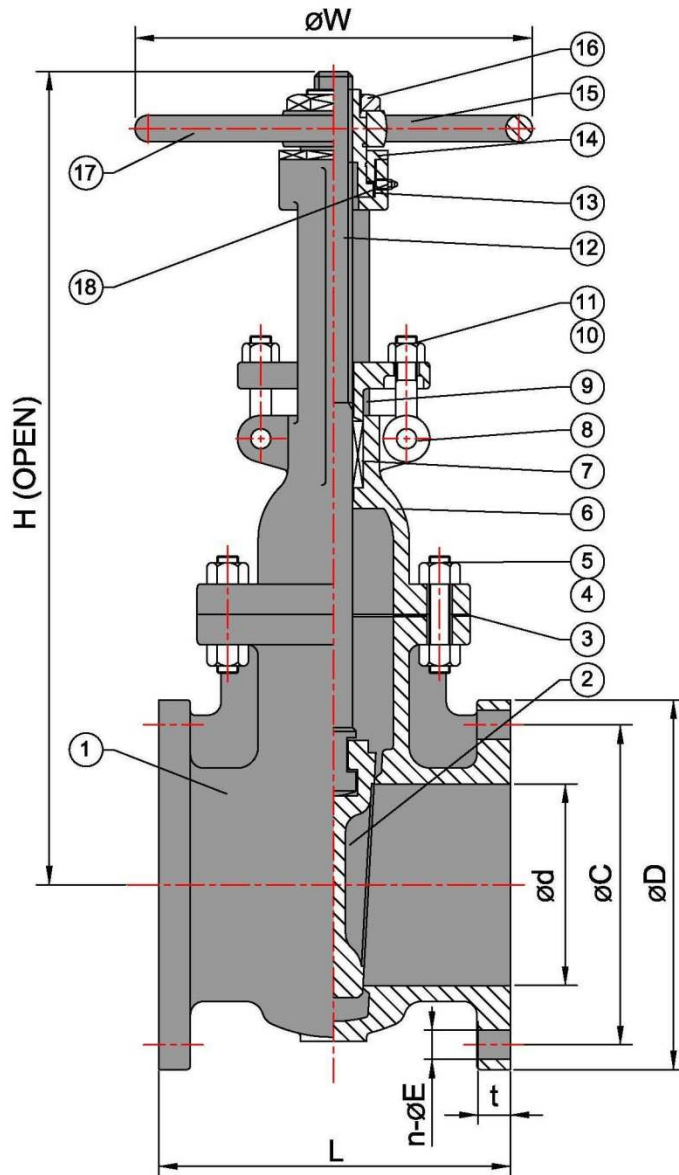


### Product Features

- A.** Aluminum Bronze Trim
- B.** Seal-welded seats
- C.** Bosses for taps & bypass
- D.** Graphite packing
- E.** Stop Check Feature (Optional)

SIZE	Inches(mm)									
	d	L	B	C	D	n	E	F	H	W
2"	2(50)	4(101.5)	0.62(16)	6(152)	4.75(120.7)	4	0.75(19)	3.62(92.1)	12.87(327)	7.87(200)
2-1/2"	2.50(65)	4.25(108)	0.68(17.5)	7(178)	5.50(139.7)	4	0.75(19)	4.12(104.8)	13.50(343)	9.84(250)
3"	3(80)	4.75(121)	0.75(19)	7.50(190)	6(152.4)	4	0.75(19)	5(127)	13.77(350)	9.84(250)
4"	4(100)	5.75(146)	0.96(24.5)	9(229)	7.50(190.5)	8	0.75(19)	6.18(157.2)	17.36(441)	11.81(300)
5"	5(125)	7(177.8)	0.94(24)	10(254)	8.50(215.9)	8	0.87(22)	7.31(185.7)	18.11(460)	13.77(350)
6"	6(150)	8(203.2)	1.02(26)	11(279)	9.50(241.3)	8	0.87(22)	8.50(215.9)	18.43(468)	13.77(350)
8"	8(200)	9.75(247.6)	1.14(29)	13.50(343)	11.75(298.5)	8	0.87(22)	10.62(269.9)	21.34(542)	17.71(450)

# Bronze Marine Gate Valves (Rising Stem) Class 150lb Fig. No. 142F



NO.	PART	MATERIAL
1	Body	ASTM B62
2	Wedge	ASTM B62
3	Gasket	Non-Asbestos
4	Bonnet Nut	ASTM B16
5	Bonnet Stud	ASTM B16
6	Bonnet	ASTM B62
7	Packing	Teflon
8	Pin	ASTM B16
9	Gland Flange	ASTM B62
10	Eye Bolt Nut	ASTM B16
11	Eye Bolt	ASTM B16
12	Stem	ASTM B124
13	Stem Nut	ASTM B62
14	Yoke Cap Nut	ASTM B62
15	Handwheel	ASTM A197
16	Handwheel Nut	C/S 1020
17	Set Screw	Steel
18	Grease Nipple	Steel

### Product Features

- A.** B62-Bronze
- B.** Rising Stem – OS&Y, Bolted Bonnet
- C.** Solid wedge
- D.** Integral backseat
- E.** Position Indicator

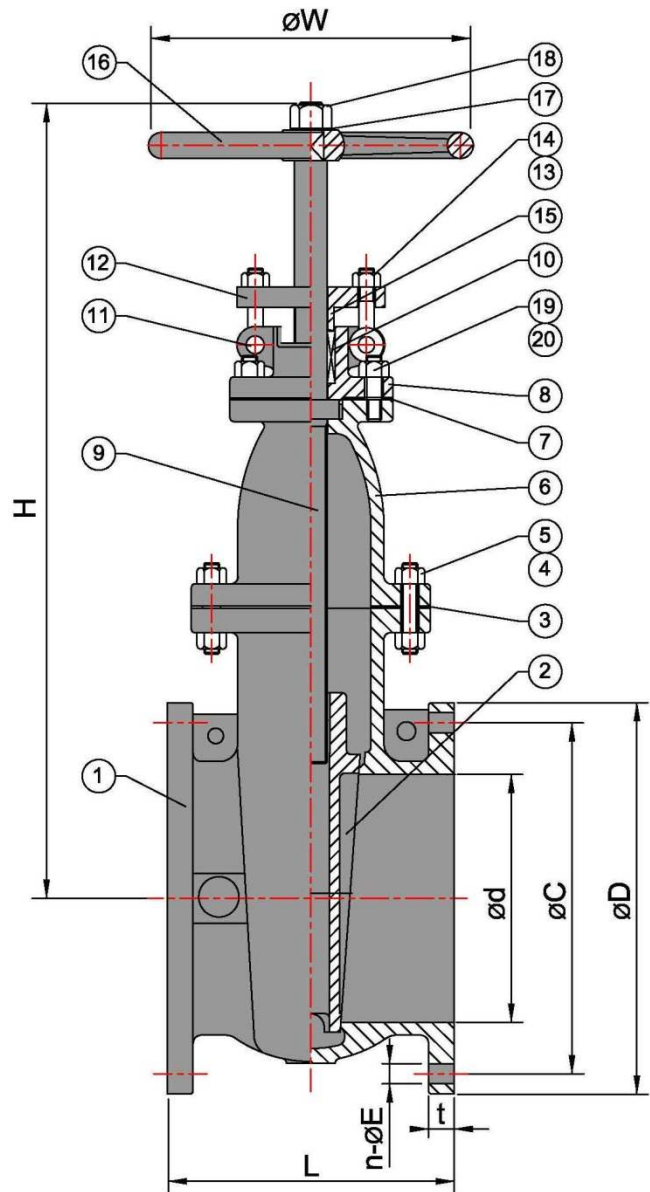
SIZE	d	L	t	D	C	n	E	W	H	Wt.(lbs)
2"	2(50)	7(178)	0.50(12.7)	6(152)	4.75(120.7)	4	0.75(19)	7.50(191)	11.50(292)	36
2-1/2"	2.50(65)	7.50(191)	0.56(14)	7(178)	5.50(139.7)	4	0.75(19)	7.50(191)	14.75(375)	62
3"	3(80)	8(203)	0.63(16)	7.50(190)	6(152.4)	4	0.75(19)	7.87(200)	16.06(408)	68
4"	4(100)	9(229)	0.69(17.5)	9(229)	7.50(190.5)	8	0.75(19)	8.81(224)	20.12(511)	84
5"	5(125)	10(254)	0.75(19)	10(254)	8.50(215.9)	8	0.87(22)	9.84(250)	24.12(613)	109
6"	6(150)	10.50(267)	0.81(20.6)	11(279)	9.50(241.3)	8	0.87(22)	12.41(315)	28.44(722)	139
8"	8(200)	11.50(292)	0.94(23.9)	13.50(343)	11.75(298.5)	8	0.87(22)	14(356)	35.63(905)	273
10"	10(250)	13(330)	1(25.4)	16(406)	14.25(362)	12	1(25)	14(356)	44.81(1138)	433
12"	12(300)	14(356)	1.06(26.9)	19(483)	17(431.8)	12	1(25)	17.75(450)	52.62(1336)	832

# Bronze Marine Gate Valves (Non-Rising Stem)

## Class 150lb

### Fig. No. 141F

NO.	PART	MATERIAL
1	Body	ASTM B62
2	Wedge	ASTM B62
3	Gasket	Non-Asbestos
4	Bonnet Nut	ASTM B16
5	Bonnet Stud	ASTM B16
6	Bonnet	ASTM B62
7	Stuffing Box Gasket	Teflon
8	Stuffing Box	ASTM B62
9	Stem	ASTM B124
10	Packing	Teflon
11	Hinge Pin	ASTM B16
12	Packing Gland	ASTM B62
13	Gland Nut	ASTM B16
14	Gland Bolt	ASTM B16
15	Gland Flange	ASTM B62
16	Handwheel	ASTM A197
17	Washer	Brass
18	Handwheel Nut	ASTM B16
19	Stuffing Box Nut	ASTM B16
20	Stuffing Box Stud	ASTM B16



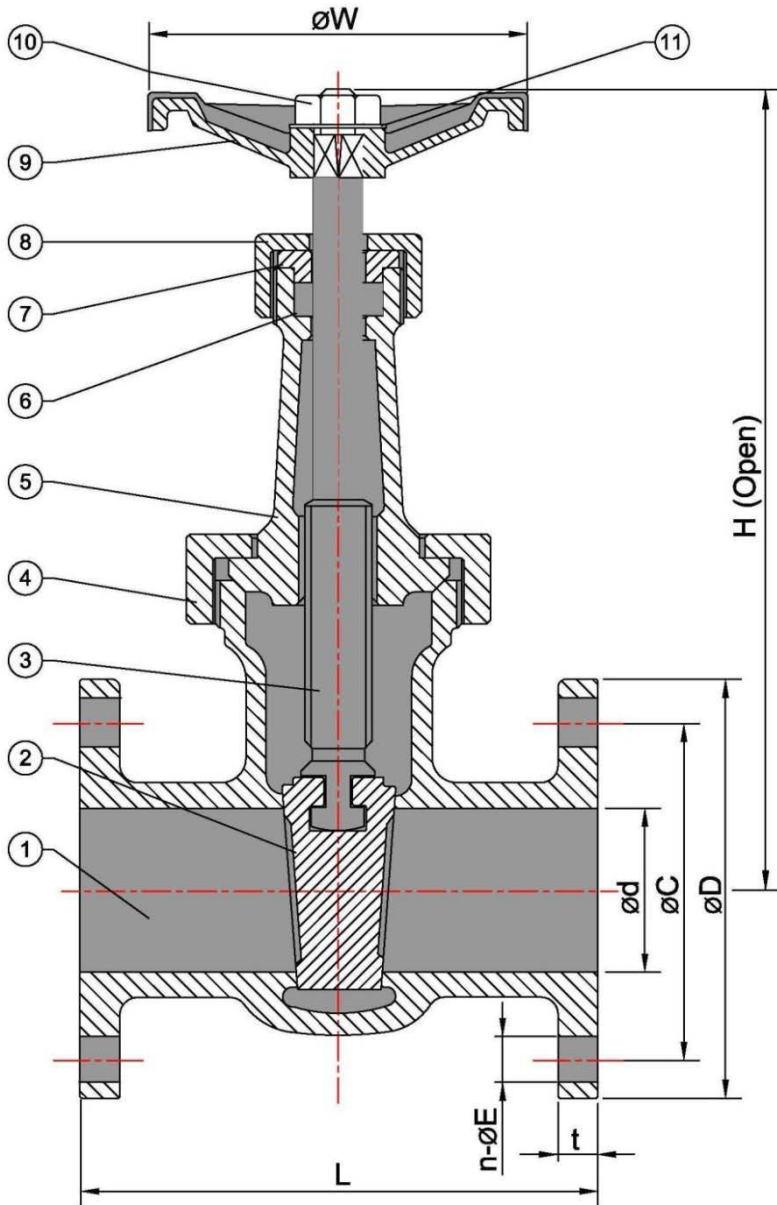
### Product Features

- A. B62-Bronze
- B. Non-Rising Stem-NRS
- C. Bolted Bonnet
- D. Solid wedge
- E. Integral backseat

SIZE	d	L	t	D	C	n	E	W	H	Wt.(lbs)
2"	2(50)	7(178)	0.50(12.7)	6(152)	4.75(120.7)	4	0.75(19)	7.50(191)	10.18(258)	36
2-1/2"	2.50(65)	7.50(191)	0.56(14)	7(178)	5.50(139.7)	4	0.75(19)	7.50(191)	11.18(284)	62
3"	3(80)	8(203)	0.63(16)	7.50(190)	6(152.4)	4	0.75(19)	7.87(200)	13.06(332)	68
4"	4(100)	9(229)	0.69(17.5)	9(229)	7.50(190.5)	8	0.75(19)	8.81(224)	15.62(397)	84
5"	5(125)	10(254)	0.75(19)	10(254)	8.50(215.9)	8	0.87(22)	9.84(250)	16.50(419)	109
6"	6(150)	10.50(267)	0.81(20.6)	11(279)	9.50(241.3)	8	0.87(22)	12.41(315)	20.50(521)	139
8"	8(200)	11.50(292)	0.94(23.9)	13.50(343)	11.75(298.5)	8	0.87(22)	14(356)	22.31(567)	273
10"	10(250)	13(330)	1(25.4)	16(406)	14.25(362)	12	1(25)	14(356)	29.28(744)	433
12"	12(300)	14(356)	1.06(26.9)	19(483)	17(431.8)	12	1(25)	17.75(450)	33.25(844)	832

inches(mm)

# Bronze Marine Union Bonnet Gate Valves Class 150lb Fig. No. 111F



NO.	PART	MATERIAL
1	Body	ASTM B62
2	Wedge	ASTM B62
3	Stem	ASTM B124
4	Union Nut	ASTM B62
5	Bonnet	ASTM B62
6	Packing	Teflon
7	Packing Gland	ASTM B124
8	Packing Nut	ASTM B62
9	Handwheel	ASTM A126 Gr B
10	Handwheel Nut	ASTM B16
11	Washer	ASTM B16

### Product Features

- A. B62-Bronze
- B. Rising Stem – Union Bonnet (Inside Screw)
- C. Solid wedge
- D. Integral seats
- E. Integral backseat

SIZE	d	L	t	D	C	n	E	W	H	Wt.(lbs)
1/2"	0.50(15)	3.16(80)	0.312(7.9)	3.50(89)	2.37(60.2)	4	0.62(16)	2.25(57)	6.18(157)	5
3/4"	0.75(20)	3.94(102)	0.343(8.7)	3.88(98.5)	2.75(70)	4	0.62(16)	2.63(67)	7.32(186)	6
1"	1(25)	4.25(108)	0.375(9.5)	4.25(108)	3.12(79)	4	0.62(16)	3.06(78)	7.68(195)	8
1-1/4"	1.25(32)	4.50(114)	0.406(10.3)	4.63(118)	3.50(89)	4	0.62(16)	3.25(82.5)	9.50(241)	9
1-1/2"	1.50(40)	4.68(119)	0.437(12)	5(127)	3.87(98.3)	4	0.62(16)	4(102)	10.43(265)	11
2"	2(50)	5.50(140)	0.500(12.7)	6(152)	4.75(121)	4	0.75(19)	4(102)	12.68(322)	18
2-1/2"	2.50(65)	6.50(165)	0.562(14.3)	7(178)	5.50(140)	4	0.75(19)	4.75(120.6)	15.25(387)	28
3"	3(80)	7.50(191)	0.625(15.9)	7.50(191)	6(152)	4	0.75(19)	6.50(165)	18.25(464)	44
4"	4(100)	9.00(229)	0.687(17.4)	9(229)	7.50(191)	8	0.75(19)	8(203)	21.50(546)	62

inches(mm)

# Bronze Marine Globe Valves

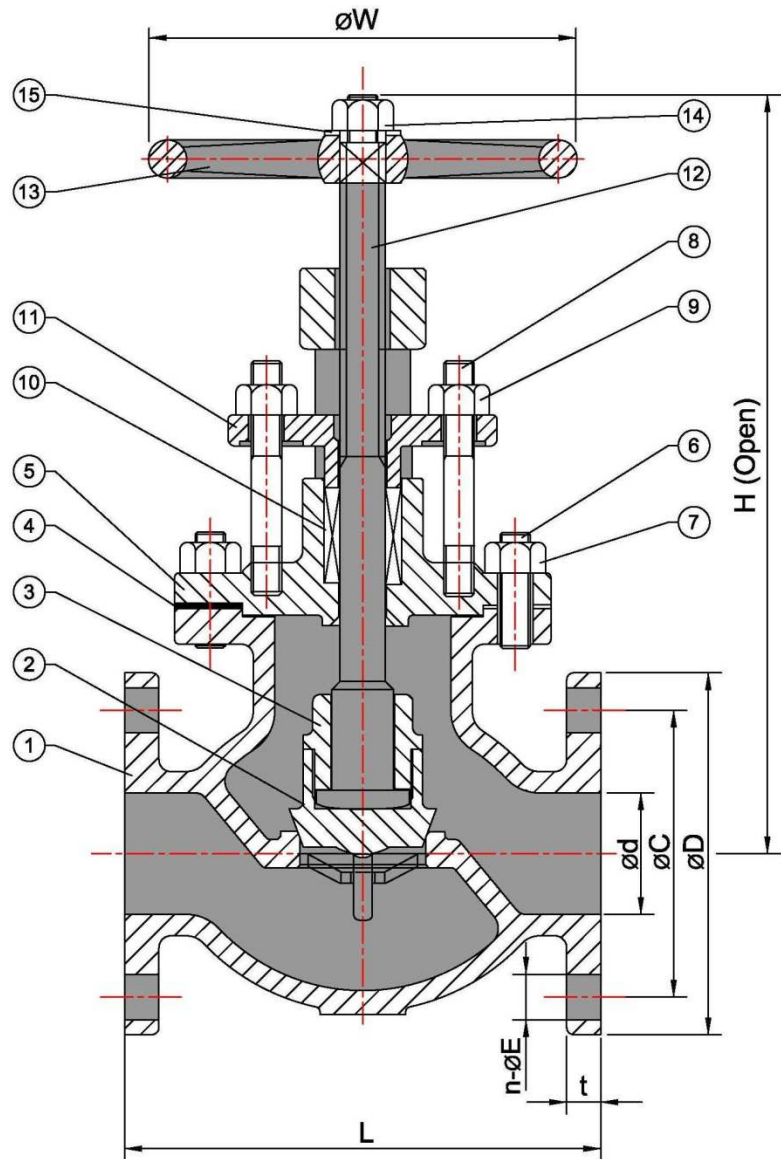
## Class 150lb

### Fig. No. B15G

NO.	PART	MATERIAL
1	Body	ASTM B62
2	Disc	ASTM B62
3	Disc Nut	ASTM B124
4	Gasket	ASTM B62
5	Bonnet	ASTM B62
6	Bonnet Stud	ASTM B16
7	Bonnet Nut	ASTM B16
8	Gland Stud	ASTM B16
9	Gland Nut	ASTM B16
10	Packing	Teflon
11	Gland Flange	ASTM B62
12	Stem	ASTM B124
13	Handwheel	ASTM A197
14	Handwheel Nut	ASTM B16
15	Washer	Brass

### Product Features

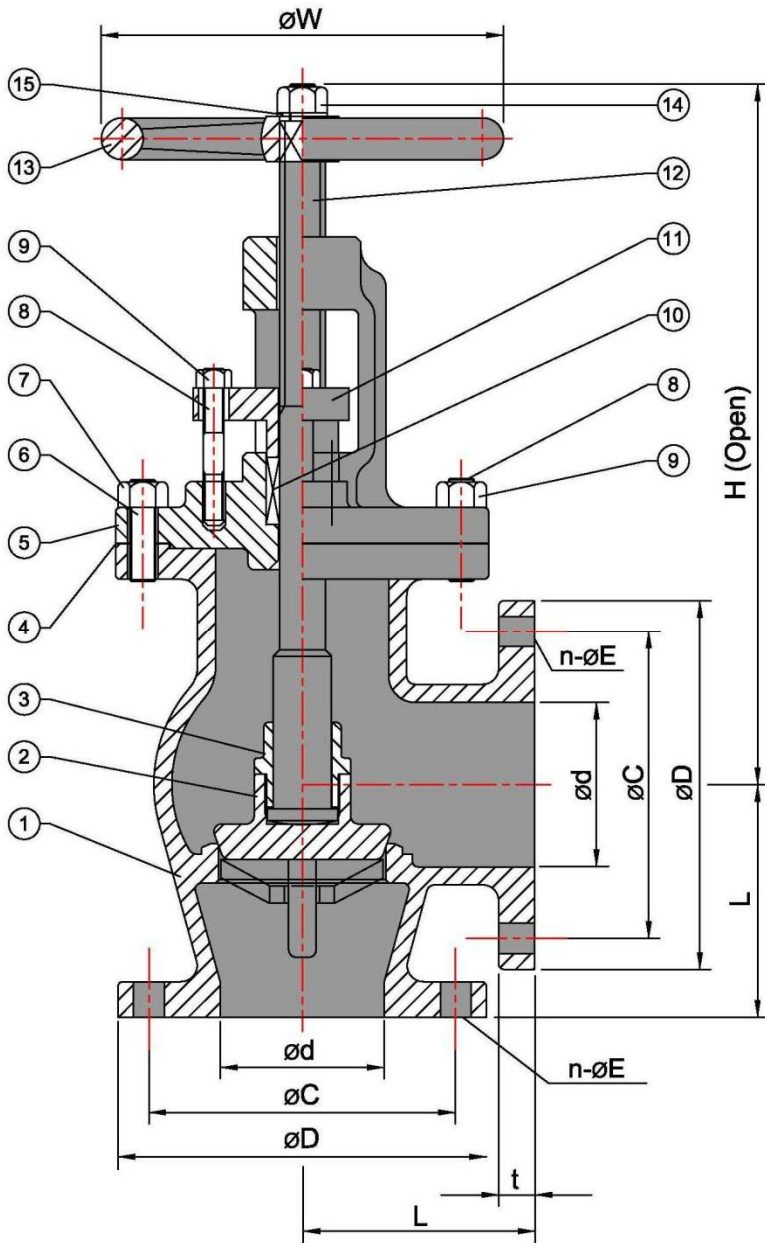
- A. B62-Bronze
- B. Rising Handwheel
- C. Bolted Bonnet
- D. Integral backseat
- E. Swivel disc design
- F. Bottom guide (2" & up)
- G. Stop Check Feature (Optional)



inches(mm)

SIZE	d	L	t	D	C	n	E	W	H	Wt.(lbs)
1-1/2"	1.50(40)	6.50(165)	0.437(12)	5(127)	3.87(98.3)	4	0.62(16)	5.50(140)	9.25(235)	33
2"	2(50)	7(178)	0.500(12.7)	6(152)	4.75(121)	4	0.75(19)	7.12(180)	10.94(278)	41
2-1/2"	2.50(65)	8.50(216)	0.562(14.3)	7(178)	5.50(140)	4	0.75(19)	7.12(180)	12.41(315)	69
3"	3(80)	9.12(232)	0.625(16)	7.50(191)	6(152)	4	0.75(19)	7.87(200)	14(356)	74
4"	4(100)	12(305)	0.687(17.4)	9(229)	7.50(191)	8	0.75(19)	8.81(224)	14(356)	76
5"	5(125)	14(356)	0.750(19)	10(254)	8.50(216)	8	0.87(22)	12.41(315)	16.25(413)	177
6"	6(150)	16.62(422)	0.813(20.6)	11(279)	9.50(241)	8	0.87(22)	14(356)	18(457)	251
8"	8(200)	19.50(495)	0.938(23.8)	13.50(343)	11.75(298)	8	0.87(22)	14(356)	21.25(540)	392

# Bronze Marine Angle Valves Class 150lb Fig. No. B15A



NO.	PART	MATERIAL
1	Body	ASTM B62
2	Disc	ASTM B62
3	Disc Nut	ASTM B124
4	Gasket	ASTM B62
5	Bonnet	ASTM B62
6	Bonnet Stud	ASTM B16
7	Bonnet Nut	ASTM B16
8	Gland Stud	ASTM B16
9	Gland Nut	ASTM B16
10	Packing	Teflon
11	Gland Flange	ASTM B62
12	Stem	ASTM B124
13	Handwheel	ASTM A197
14	Handwheel Nut	ASTM B16
15	Washer	Brass

## Product Features

- A. B62-Bronze
- B. Rising Handwheel
- C. Bolted Bonnet
- D. Integral backseat
- E. Swivel disc design
- F. Bottom guide (2" & up)
- G. Stop Check Feature (Optional)

SIZE	d	L	t	D	C	n	E	W	H	Wt.(lbs)
1-1/2"	1.50(40)	3.25(83)	0.437(12)	5(127)	3.87(98.3)	4	0.62(16)	5.50(140)	9.25(235)	21
2"	2(50)	4(102)	0.500(12.7)	6(152)	4.75(121)	4	0.75(19)	7.12(180)	10.94(278)	34
2-1/2"	2.50(65)	4.13(105)	0.562(14.3)	7(178)	5.50(140)	4	0.75(19)	7.12(180)	12.41(315)	41
3"	3(80)	4.63(118)	0.625(16)	7.50(191)	6(152)	4	0.75(19)	7.87(200)	14(356)	50
4"	4(100)	5.63(143)	0.687(17.4)	9(229)	7.50(191)	8	0.75(19)	8.81(224)	14(356)	105
5"	5(125)	7(178)	0.750(19)	10(254)	8.50(216)	8	0.87(22)	12.41(315)	16.25(413)	165
6"	6(150)	7.37(187)	0.813(20.6)	11(279)	9.50(241)	8	0.87(22)	14(356)	18(457)	198
8"	8(200)	9.75(248)	0.938(23.8)	13.50(343)	11.75(298)	8	0.87(22)	14(356)	21.25(540)	268

# Bronze Marine Union Bonnet Globe Valves

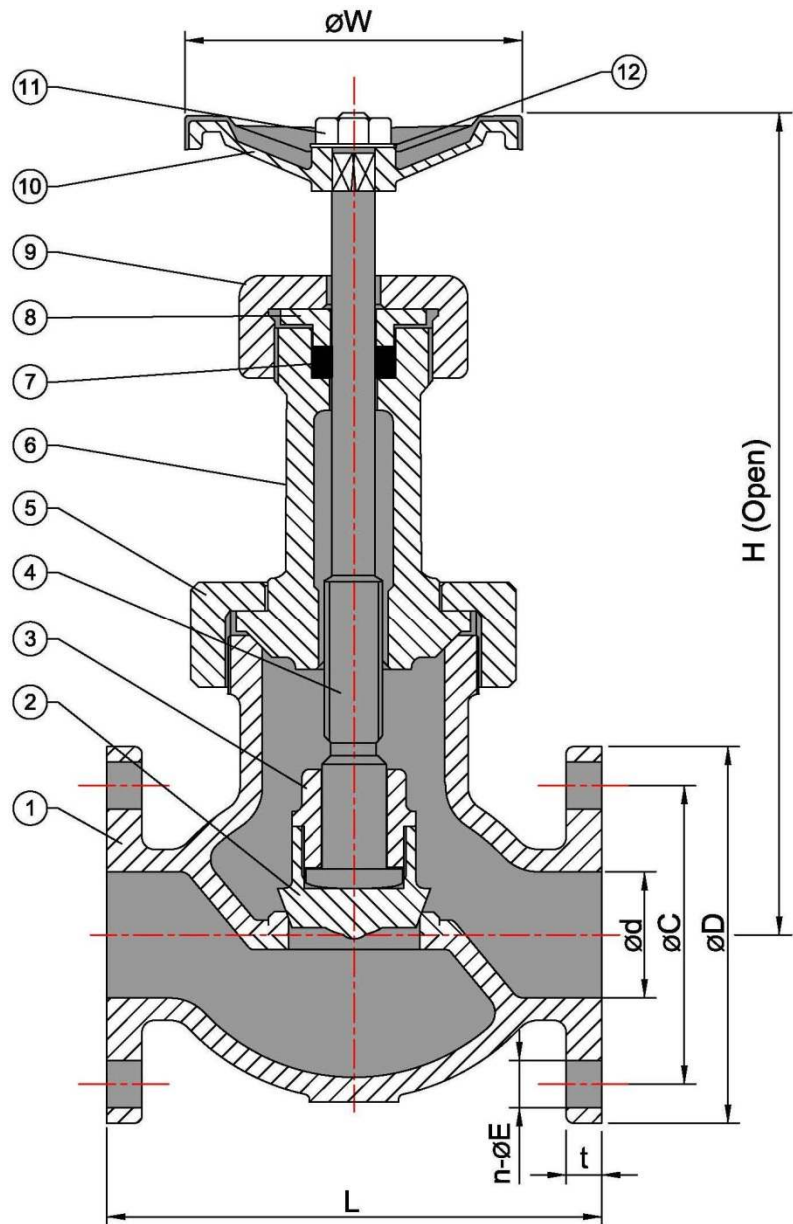
## Class 150lb

### Fig. No. 1160F

NO.	PART	MATERIAL
1	Body	ASTM B62
2	Disc	ASTM B62
3	Disc Nut	ASTM B62
4	Stem	ASTM B124
5	Union Nut	ASTM B62
6	Bonnet	ASTM B62
7	Packing	Teflon
8	Packing Gland	ASTM B62
9	Packing Nut	ASTM B62
10	Handwheel	ASTM A126 Gr B
11	Handwheel Nut	ASTM B16
12	Washer	ASTM B16

### Product Features

- A. B62-Bronze
- B. Rising Stem – Union Bonnet (Inside Screw)
- C. Swivel disc design
- D. Integral seats
- E. Integral backseat
- F. Stop Check Feature (Optional)

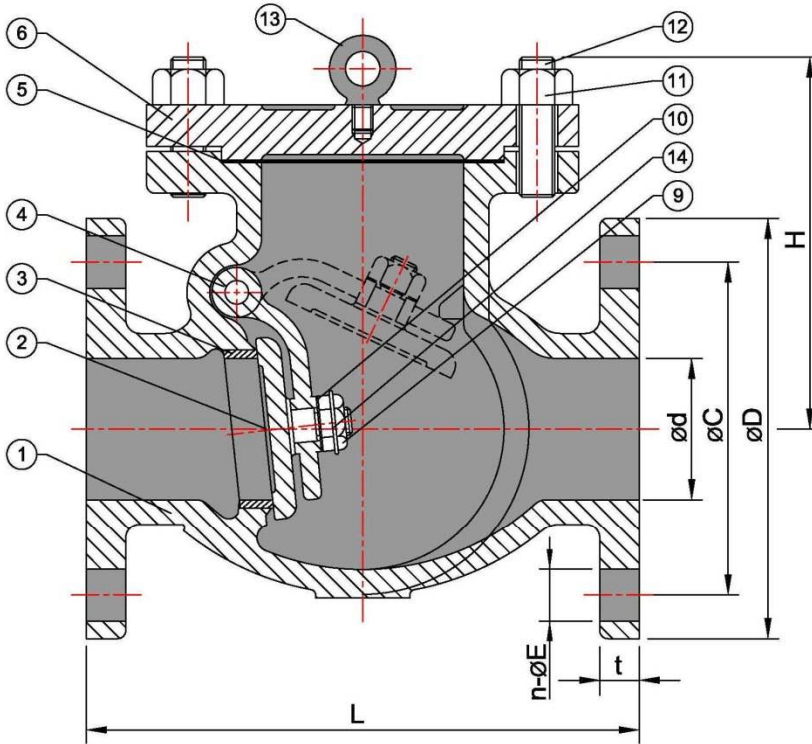


inches(mm)

SIZE	d	L	t	D	C	n	E	W	H	Wt.(lbs)
1/2"	0.50(15)	3.34(85)	0.312(7.9)	3.50(89)	2.37(60.2)	4	0.62(16)	2.37(60)	4.37(111)	3
3/4"	0.75(20)	3.75(95)	0.343(8.7)	3.88(98.5)	2.75(70)	4	0.62(16)	2.63(67)	4.88(124)	4
1"	1(25)	4.16(106)	0.375(9.5)	4.25(108)	3.12(79)	4	0.62(16)	3.06(78)	5.31(135)	6
1-1/4"	1.25(32)	4.56(116)	0.406(10.3)	4.63(118)	3.50(89)	4	0.62(16)	3.25(82.5)	6.75(171)	9
1-1/2"	1.50(40)	5.31(135)	0.437(12)	5(127)	3.87(98.3)	4	0.62(16)	4(102)	7.19(183)	12
2"	2(50)	6.00(152)	0.500(12.7)	6(152)	4.75(121)	4	0.75(19)	4(102)	8.19(208)	16
2-1/2"	2.50(65)	6.75(171)	0.562(14.3)	7(178)	5.50(140)	4	0.75(19)	4.75(120.6)	9.12(232)	26
3"	3(80)	7.94(202)	0.625(15.9)	7.50(191)	6(152)	4	0.75(19)	6.50(165)	10.81(274)	36



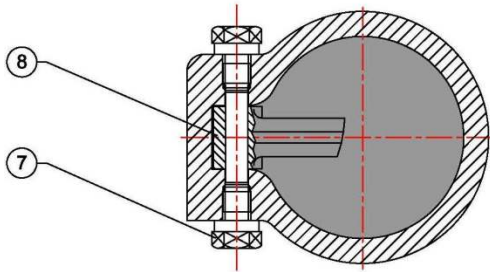
# Bronze Marine Swing Check Valves Class 150lb Fig. No. B15SW



NO.	PART	MATERIAL
1	Body	ASTM B62
2	Disc	ASTM B62
3	Seat Ring	ASTM B62
4	Hinge Arm	ASTM B62
5	Gasket	Non-Asbestos
6	Cover	ASTM B62
7	Side Plug	ASTM B16
8	Hinge Pin	ASTM B36
9	Disc Nut	ASTM B16
10	Washer	ASTM B16
11	Cover Nut	ASTM B16
12	Cover Stud	ASTM B16
13	Eyebolt	Steel
14	Cotter Pin	Brass

### Product Features

- A. B62 Bronze
- B. Bolted Cover
- C. Horizontal or Vertical Installation
- D. End plugs on both sides



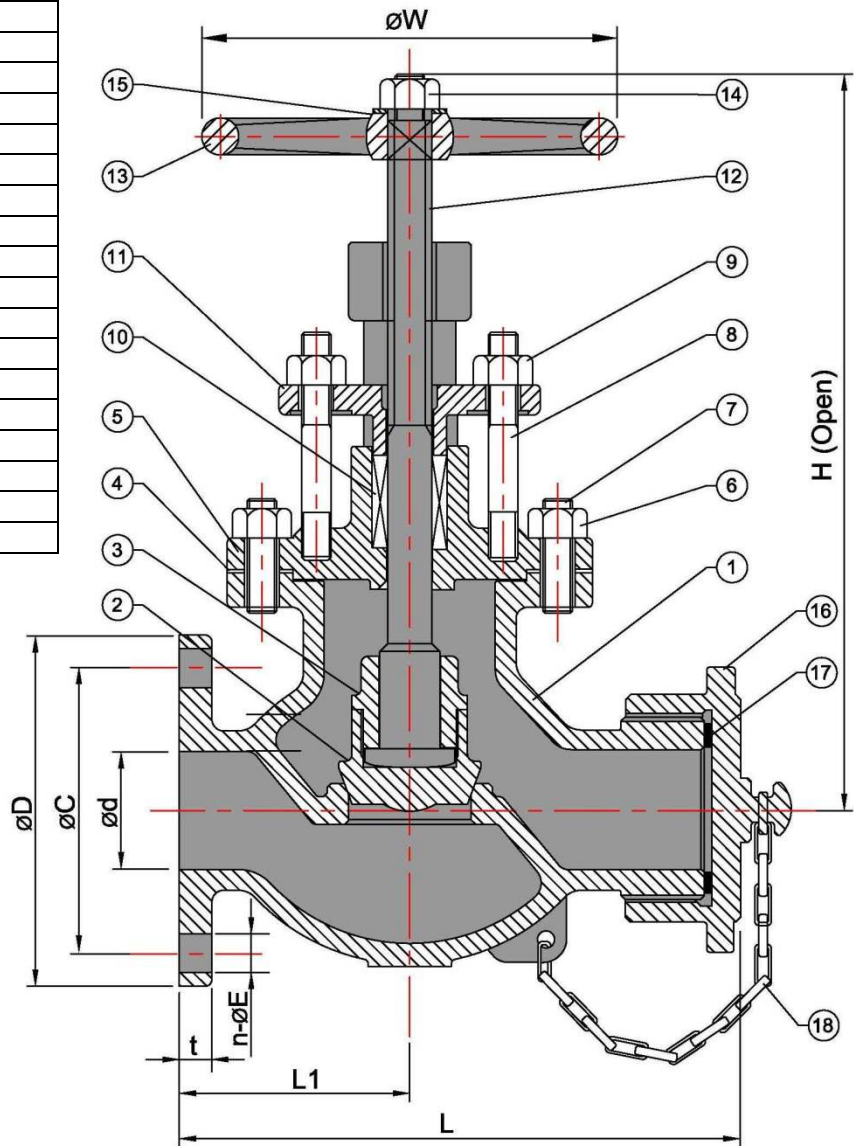
SIZE	inches(mm)								
	d	L	t	D	C	n	E	H	Wt.(lbs)
1-1/2"	1.50(40)	6.50(165)	0.437(12)	5(127)	3.87(98)	4	0.62(16)	4.812(122)	16
2"	2(50)	8(203)	0.500(12.7)	6(152)	4.75(121)	4	0.75(19)	5.25(133)	23
2-1/2"	2.50(65)	8.50(216)	0.562(14.3)	7(178)	5.50(140)	4	0.75(19)	5.75(146)	34
3"	3(80)	9.50(241)	0.625(16)	7.50(191)	6(152)	4	0.75(19)	6.18(157)	41
4"	4(100)	11.50(292)	0.687(17.4)	9(229)	7.50(191)	8	0.75(19)	7(178)	71
5"	5(125)	13(330)	0.750(19)	10(254)	8.50(216)	8	0.87(22)	7.81(198)	95
6"	6(150)	13(330)	0.813(20.6)	11(279)	9.50(241)	8	0.87(22)	8.25(210)	141
8"	8(200)	19.50(495)	0.938(23.8)	13.50(343)	11.75(298)	8	0.87(22)	10.18(259)	251
10"	10(250)	24.50(622)	1(25)	16(406)	14.25(362)	12	1(25)	12.06(306)	396
12"	12(300)	27.50(698)	1.06(27)	19(483)	17(432)	12	1(25)	12.50(317)	710

# Bronze Marine Hose End Globe Valves

## Class 150lb

### Fig. No. 115F - Flanged x NST Globe

NO.	PART	MATERIAL
1	Body	ASTM B62
2	Disc	ASTM B62
3	Disc Nut	ASTM B124
4	Gasket	ASTM B62
5	Bonnet	ASTM B62
6	Bonnet Nut	ASTM B16
7	Bonnet Stud	ASTM B16
8	Gland Stud	ASTM B16
9	Gland Nut	ASTM B16
10	Packing	Teflon
11	Gland Flange	ASTM B62
12	Stem	ASTM B124
13	Handwheel	Aluminum
14	Handwheel Nut	ASTM B16
15	I.D. Tag	Aluminum
16	Cap	ASTM B62
17	Cap Gasket	Rubber
18	Chain	Brass



#### Product Features

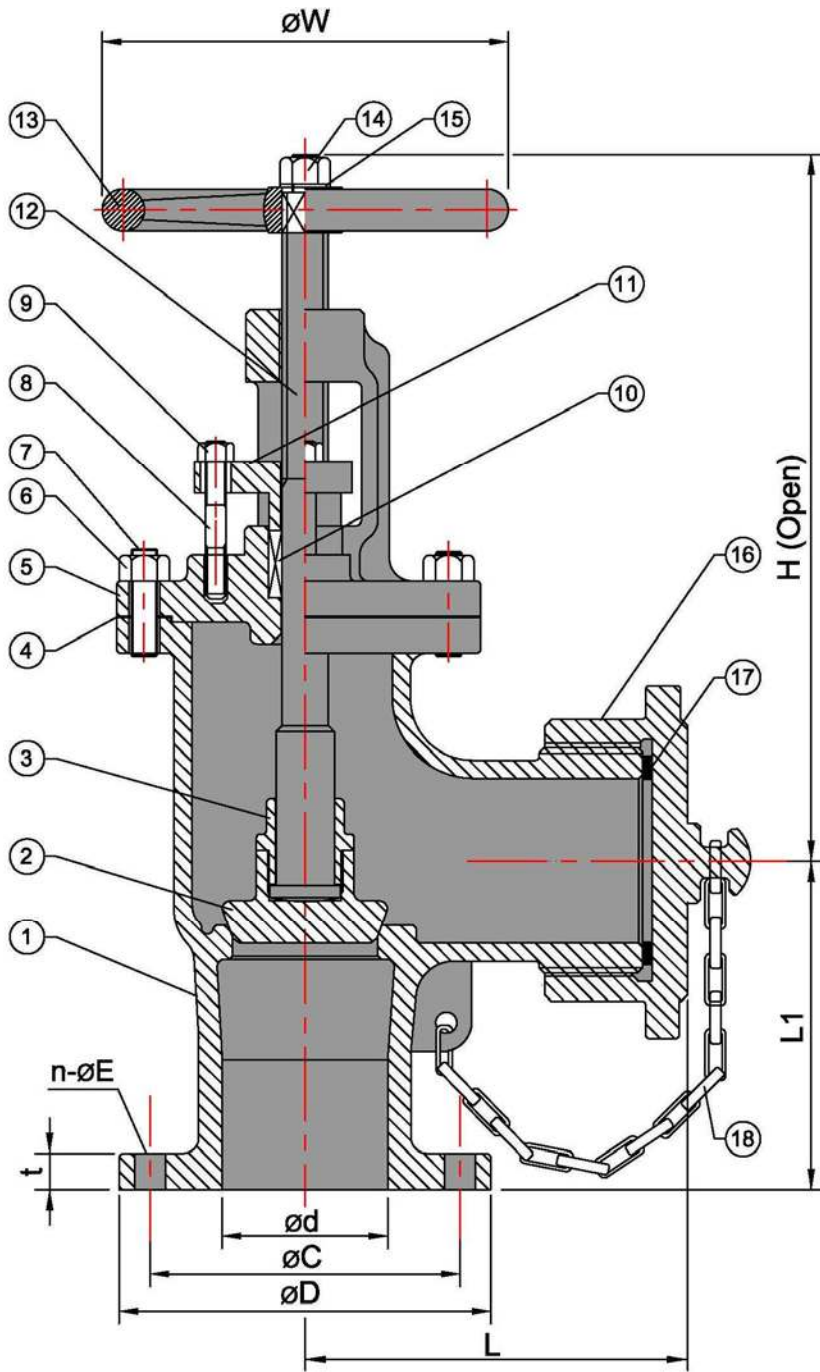
- A. B62-Bronze
- B. Rising Handwheel
- C. Cap & Chain
- D. Integral seats
- E. Integral backseat
- F. National Standard Hose Thread x Mfrs. Std. Conn.

SIZE	d	L1	L	t	D	C	n	E	W	H	Wt.(lbs)
1-1/2"	1.50(40)	3.31(84)	6.63(168)	0.437(12)	5(127)	3.87(98.3)	4	0.62(16)	5.50(140)	7.37(187)	20
2-1/2"	2.50(65)	4.63(118)	9.63(245)	0.562(14.3)	7(178)	5.50(140)	4	0.75(19)	7.50(191)	13.03(331)	30

inches(mm)

# Bronze Marine Hose End Angle Globe Valves Class 150lb

## Fig. No. 215F - Flanged x NST Angle



NO.	PART	MATERIAL
1	Body	ASTM B62
2	Disc	ASTM B62
3	Disc Nut	ASTM B124
4	Gasket	ASTM B62
5	Bonnet	ASTM B62
6	Bonnet Nut	ASTM B16
7	Bonnet Stud	ASTM B16
8	Gland Stud	ASTM B16
9	Gland Nut	ASTM B16
10	Packing	Teflon
11	Gland Flange	ASTM B62
12	Stem	ASTM B124
13	Handwheel	Aluminum
14	Handwheel Nut	ASTM B16
15	I.D. Tag	Aluminum
16	Cap	ASTM B62
17	Cap Gasket	Rubber
18	Chain	Brass

### Product Features

- A.** B62-Bronze
- B.** Rising Handwheel
- C.** Cap & Chain
- D.** Integral seats
- E.** Integral backseat
- F.** National Standard Hose Thread x Mfrs. Std. Conn.

SIZE	d	L	L1	t	D	C	n	E	W	H	Wt.(lbs)
1-1/2"	1.50(40)	3.43(87)	3.25(83)	0.437(12)	5(127)	3.87(98.3)	4	0.62(16)	5.50(140)	6.63(168)	20
2-1/2"	2.50(65)	4.93(125)	4.75(121)	0.562(14.3)	7(178)	5.50(140)	4	0.75(19)	7.50(191)	11.75(298)	30

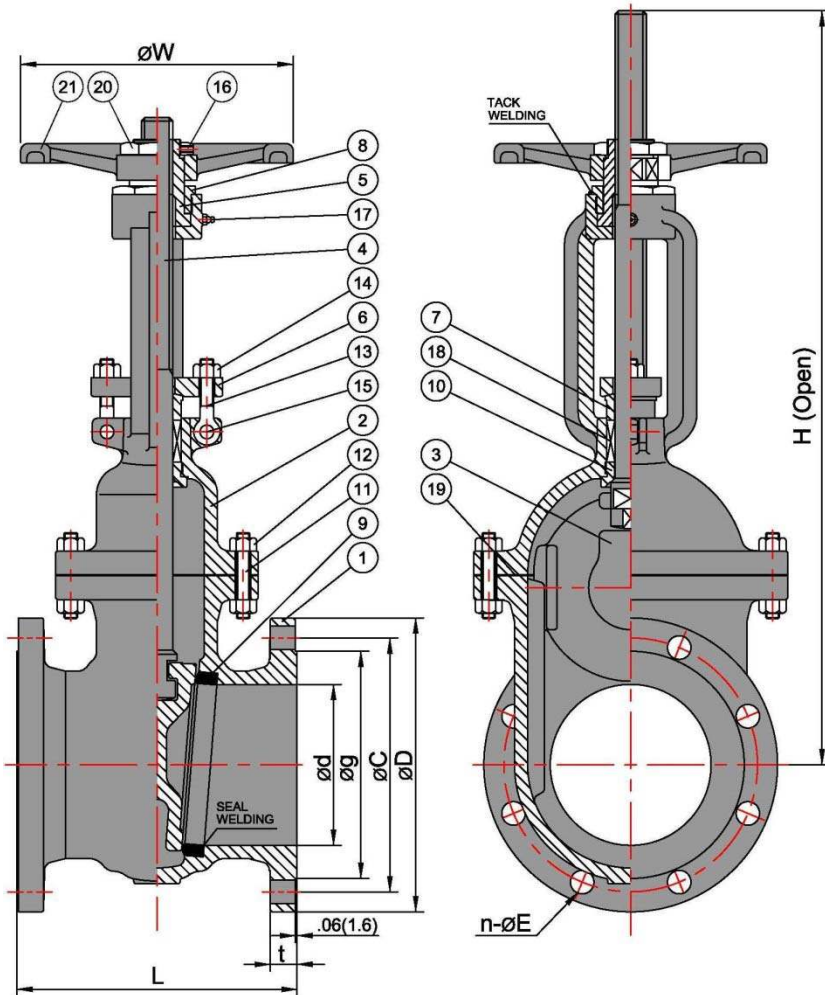
inches(mm)

## Mil-Spec Valves General Information

William's military specification valves are designed, engineered, and manufactured in our Long Island City, New York factory. Mil-spec valves are specifically design to meet government contract requirements. Williams offer mil-spec valves in accordance to MIL-V-18110(*Gates*), MIL-V-22052(*Globes*) and MIL-V-18436(*Swing Checks*). All mil-spec valve orders & inquiries are handled by our Williams New York office.



# Mil-Spec Gate, Globe & Swing Check Valves Class 150lb & 300lb (Made in USA)



Example: 6" Figure No. S15F3-316-MIL

NO.	PART	MATERIAL
1	Body	ASTM A351-CF8M
2	Bonnet	ASTM A351-CF8M
3	Disc	ASTM A351-CF8M+Stellite
4	Stem	ASTM A276-316
5	Yoke Sleeve	ASTM A439-D2C
6	Gland Flange	ASTM A351-CF8
7	Packing Gland	ASTM A276-304
8	Yoke Cap	ASTM A351-CF8
9	Seat Ring	ASTM A182-F316+Stellite
10	Back Seat Bushing	ASTM A276-316
11	Bonnet Bolt	A193-B8
12	Bonnet Nut	A194-8
13	Hinged Eyebolt	A193-B8
14	Nut	A194-8
15	Hinge Pin	ASTM A276-304
16	Set Screw	ASTM A276-304
17	Grease Nipple	Steel
18	Packing	Graphite
19	Gasket	316Hoop+Graphite
20	Handwheel Nut	ASTM A351-CF8
21	Handwheel	A536

## Mil-Spec Product Features

- A. Made in U.S.A.
- B. Stainless body (Other materials available)
- C. Class 150lb or 300lb
- D. Valve Size Range: 3/8" thru 12"

SIZE	d	L	g	t	D	C	n	E	W	H
6"	6(150)	10.50(267)	8.50(216)	1(25.4)	11(279)	9.50(241)	8	0.87(22)	11.75(298)	30.71(780)

inches(mm)

**\*Note:** Mil-spec valves are special orders for the U.S. government only.

# Valve Actuation, Accessories & Modifications

## ACTUATION

- Electric Motor Operators
- Pneumatic Operators
- Air Motor Operators
- Cylinder Operators

## ACCESSORIES / MODIFICATIONS

- TFE (Soft Seat)-Block & Bleed
- Bosses & Drain Tappings
- Floorstands-Handwheel Extensions
- Optional Packing Materials:  
TFE  
Graphoil
- Swing Check Valves with Lever & Spring or Weight
- Optional Gasket Materials:  
Spiral Wound Graphoil  
Metal Reinforced Graphoil  
TFE

## 150lb Class Pressure Temperature Ratings

### PER ANSI B16.24-2001

SERVICE TEMPERATURE Deg. F		0 to 150	175	200	225	250	275	300	350	400	406	450	500	550
WORKING PRESSURE FOR	ASTM B62	225	220	210	205	195	190	180	165	-	150	135	-	-
	ASTM B61	225	220	215	210	205	200	195	180	170	-	160	150	140

### PER ANSI B16.34-2013

SERVICE TEMPERATURE Deg. F		-20 to 100	200	300	400	500	600	650	700	750	800	850	900	950	1000
WORKING PRESSURE FOR	A216 WCB	285	260	230	200	170	140	125	110	95	80	65	50	35	20

## Engineering/Material Specifications

### • ASTM B61 Alloy 922

This cast metal, commonly known as Composition M, retains a larger percentage of its strength and ductility up to 550°F than to most of the cast copper base alloys suitable for valve purposes.

#### Chemical Composition

	percent
Copper .....	86.0 to 90.0
Tin .....	5.5 to 6.5
Lead .....	1.0 to 2.0
Zinc .....	3.0 to 5.0
Nickel .....	1.0 Max.

#### Tensile Properties

Tensile Strength, psi.....	34000 Min.
Yield Strength, psi.....	16000 Min.
Elongation, percent in 2".....	22 Min.

### • ASTM B62 Alloy 836

Commonly known as eight-five and three fives; (85/5-5-5), this alloy is used for pressure containing parts of Williams bronze valves at service temperatures up to 450°F.

#### Chemical Composition

	percent
Copper .....	84.0 to 86.0
Tin .....	4.0 to 6.0
Lead .....	4.0 to 6.0
Zinc .....	4.0 to 6.0
Nickel .....	1.0 Max.

#### Tensile Properties

Tensile Strength, psi.....	30000 Min.
Yield Strength, psi.....	14000 Min.
Elongation, percent in 2".....	20 Min.

### • ASTM A216 Grade WCB Carbon Steel

Service Recommendations/Limitations: Non-corrosive applications including steam, water, oil vapor & gas and general services at temperatures -20° to 1000°F.

#### Chemical Composition

	percent
Carbon .....	min. to 0.30
Manganese .....	min. to 0.04
Phosphorus .....	min. to 1.00
Sulfur .....	min. to 0.045
Silicon .....	min. to 0.60

#### Chemical Composition

	percent
Chromium .....	min. to 0.40
Molybdenum .....	min. to 0.25
Nickel .....	min. to 0.50
Copper .....	min. to 0.50
Vanadium .....	min. to 0.03

## How To Order – Williams Figure Number

CAST STEEL MARINE VALVES												
A	B		C		D		E		F		H	
SIZE	BODY MATERIAL PREFIX		CLASS AND VALVE TYPE		ENDS		TRIM		BODY SUFFIX		ACCESSORIES	
		none	Carbon Steel	15	150# Gate	F	RF Flanged	2	API Trim 8	none	WCB	none
			N15	150# NRS Gate			4AB	Aluminum Bronze			GO	Gear Operator
			151	150# Swing Check							MO	Motor Operated
			152	150# Globe							BS	Bare Stem
			153	150# Angle Globe							HO	Hydraulic Operator
											O2	Oxy Cleaned
											EX	Extended Body

**CAST STEEL MARINE VALVE EXAMPLE: 3" N15F-4AB**

3" 150# RF NRS Gate Valve (Non-Rising Stem), WCB Body and Trim 4AB, Bolted Bonnet

A	B	C	D	E	F	H
3"		N15	F	4AB		

BRONZE MARINE VALVES					
A	B		C		
SIZE	BODY MATERIAL PREFIX		CLASS AND VALVE TYPE		
		none	B62 Bronze	B15A	150# Flat Faced Bronze Angle Globe
			B15G	150# Flat Faced Bronze Globe	
			B15SW	150# Flat Faced Bronze Swing Check	
			111F	150# Flat Faced Union Bonnet Bronze Gate	
			115F	150# Flat Faced Bronze Hose End Globe	
			141F	150# Flat Faced NRS Bronze Gate	
			142F	150# Flat Faced OS&Y Bronze Gate	
			215F	150# Flat Faced Bronze Hose End Angle	
			1160F	150# Flat Faced Union Bonnet Bronze Globe	

**BRONZE MARINE VALVE EXAMPLE: 6" 142F**

6" 150# FF Gate Valve, B62 Bronze Body, Bolted Bonnet OS&Y Rising Stem

A	B	C
6"		142F



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