ALOYCO®

brands you trust.

ALOYCO® Corrosion Resistant Stainless Steel Valves

CRANE®

Crane ChemPharma & Energy

www.cranecpe.com

Key Features and Applications

Key Features and Benefits

1. Full material offering including CF8M, CF3M, and CN7M (Alloy 20)
2. Broad pressure classes including Class 150, Class 300, Class 600, and 200 CWP
3. 100% testing for quality assurance

Typical Applications

- Pulp and Paper
- Mining
- Chemical Processing
- Food Processing
- Waste Water
- Fertilizer Processing

Index

How to Order

HOW TO SPECIFY AND ORDER THE CORRECT VALVES

This catalog has been published to assist you in choosing the correct valve for a vast number of piping conditions. The Aloyco® product line makes available to you a very broad choice of valves. These valves are described in this catalog.

Care should be taken to select the most suitable valves for your service(s). Exact specification of each valve should be made to avoid possible ambiguity. When requesting quotations and/or ordering the product a fully adequate description should be made.

SELECTING THE VALVE SIZE

Nominal size of the pipeline into which the valve will be placed must be determined.

VALVE MATERIAL

The following facts should be considered in determining the correct valve material:

- the medium or media which will be controlled
- the temperature range of the line medium (media)
- the pressure range to which the valve will be subjected
- possible atmospheric conditions which may affect the valve
- possible extraordinary stresses to which the valve will be subjected
- safety standards and/or piping codes which must be met

TYPE OF VALVE

What is the control function of the valve? Each valve configuration has been developed to perform certain control functions. Do not expect one type of valve to perform all the valving jobs in a system.

PRESSURE-TEMPERATURE RATINGS

Please pay careful attention that the pressure-temperature ratings of a particular valve are in keeping with the requirements of the service. Pay especially careful attention to the packing and gasket materials as this may limit the rating as is the case with PTFE used as the standard in Aloyco® valves. We offer graphite packing and gaskets in many sizes and pressure classes. Specify graphite or alternative packing and/or gasket materials as necessary to meet or exceed your service requirements. Body Pressure/Temperature in compliance with ASME B16.34. PTFE gasket and packing maximum temperature 400°F continuous and 450°F intermittent with lowered pressure capabilities.

VALVE AND CONNECTIONS

Considerations as to pipeline integrity, future maintenance, corrosion factors, field assembly, weight and safety should be given in determining the method of connecting the valve in the pipeline.

METHOD OF OPERATION

The means by which the valve is operated as supplied are shown for the valves in this catalog. Many optional operating devices are regularly supplied by Aloyco®.

ORDERING THE VALVE

Please state the following information when ordering a valve in order to avoid unnecessary delays and to insure we supply you with the valve you have requested.

1. Valve size.
2. Pressure boundary material - metallurgy of the castings and components.
3. Type of valve - gate, globe, check, etc.
4. End connection including wall thickness of connecting pipe if weld end and any special flange facings or finishes.
5. Any material deviations from standard - packing, gasket, bolting, etc.
6. Any accessories - acid shield, locking devices, chain operation, etc.
7. Manual or power actuators, please include details of requirements.
8. For convenience in ordering, specify by figure number.

Contact Aloyco® for additional assistance in valve selection.

How to Specify and Order the Correct Valves

ORDERING INFORMATION

Designate the valve size and the complete catalog number, including prefix and suffix letters, when applicable, to identify regular cataloged items as described on the following pages.

Any special requirements such as Gear operation, Oxygen Cleaning, Acid Shield, etc. must also be specified on purchase orders.

EXAMPLE

117 F C03 *020 *LE

- *LE — Modification code
- *020 — Suffix denoting valve size
- C03 — Suffix denoting basic valve material
- F — Suffix denoting flexible or solid wedge, or trim other than API 10/13
- 117 — Basic figure number defined in catalog pages

BODY MATERIALS

Part No. Suffix	ASTM Classification	Material Classification
C02*	A351 CF8M A351 CF3M	Stainless Steel 316(L)
C03	A351 CN7M	Alloy 20
C04	A494-M35-1	NiCu Alloy
C05	A351 CF8	Stainless Steel 304

* 316 (CF8M) standard on flanged end and 316L (CF3M) standard on socket weld/threaded for body material

VALVE MODIFICATION SUFFIX IDENTIFICATION

S.I.	Description	S.I.	Description	S.I.	Description
LE	API 622 Packing + Stainless Steel w/Graphite Gasket	E70 OV D15	Acid Shield Gear Operator Live Load Packing	E16 E63	O2 Cleaning Threaded X Socket Weld Ends

TRIM MATERIAL

Part No. Suffix	API Trim Number	Nominal Trim	Seating Surfaces	Disk	Stem Material
Standard for C04	9	NiCu Alloy	NiCu Alloy	NiCu Alloy	NiCu Alloy
Standard for C02	10	316 / 316 (2)	316 SS	316 SS	316 SS
LUF*	12	316 / HF (2) (1)	CoCr-A	316 SS	316 SS
Standard for C03	13	Alloy 20	Alloy 20	Alloy 20	Alloy 20
LUUF*	16	316 / HF (2) (1)	CoCr-A	CoCr-A	316 SS

(1) Hard Facing CoCr-A is weld deposited Cobalt base alloy.
(2) Austenitic Stainless Steel is a Ni-Cr-Mo stainless steel in the AISI Type 316 category.
*F denotes Flex Wedge (only applies to Gate Valves).

Notes: You may not build figure numbers to specify all possible combinations listed above.
NiCu alloy commonly referred to as Monel® a registered trademark of Special Metals Corporation.

Dimensions 200 CWP • Threaded Bonnet • Solid Wedge Disc

FIGURE 90

Gate Valve, Rising Stem, Solid Wedge Disc, Threaded Ends

FIGURE 190

Gate Valve, Non-Rising Stem, Solid Wedge Disc, Threaded Ends

SIZE RANGE:

½ through 2 inches

DESIGN FEATURES:

- Threaded Ends
- Integral Seat
- Figure 190 - Inside Screw/Non-rising Stem
- MSS SP-42
- ASME B16.34

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)		Dimensions (inches)			
			A	B (open)	B (open)	C
	90	190		90	190	
½	1.0	0.9	2.2	5.9	3.6	2.7
¾	1.3	1.5	2.4	6.7	3.9	2.7
1	1.7	2.5	2.6	7.6	4.5	3.1
1 ½	3.4	3.2	3.4	10.6	5.8	3.8
2	5.2	7.0	3.8	12.4	6.6	3.8

Please refer to page 4 for Pressure-Temperature Ratings.

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Bolt	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Stem	316 SS
5	Gland	PTFE
6	Packing	316 SS
7	Nut Gland	ASTM A351 CF8M
8	Packing Washer	316 SS
9	Gasket	PTFE
10	Hardwheel	Aluminum
11	Hardwheel Nut	304 SS
12	ID Tag	Aluminum

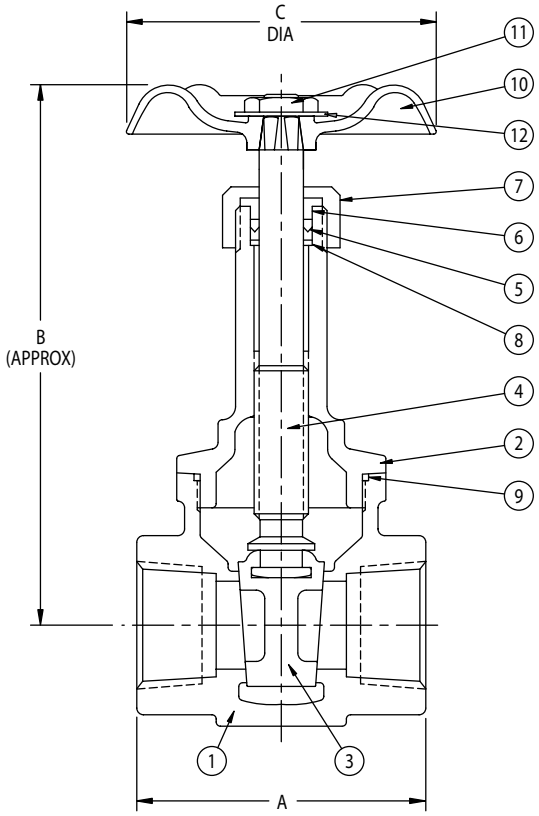


Fig. 190

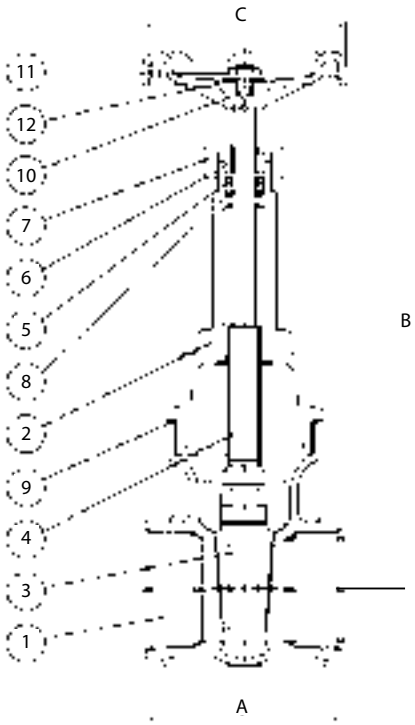


Fig. 90

Industry Standards

End Flanges	ASME B1.20.1
End-to-End	Manufacturer's Standard

Dimensions Class 150 • OS&Y • Solid or Flexible Wedge Disc

FIGURE 110

Gate Valve, Threaded Ends,
Solid Wedge Disc (½ - 1")
Flexible Wedge Disc (1½ - 2")

FIGURE 114

Gate Valve, Socket Weld Ends,
Solid Wedge Disc (½ - 1")
Flexible Wedge Disc (1½ - 2")

SIZE RANGE:

½ through 2 inches

DESIGN FEATURES:

- Bolted Bonnet
- Rising Stem
- Integral Seat
- MSS SP-42
- API 603 (except for end connections)
- ASME B16.34

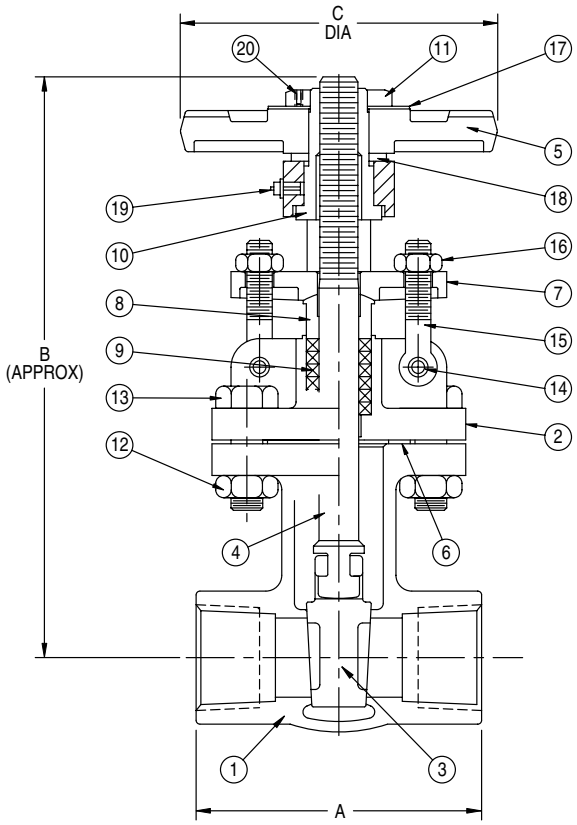


Fig. 110

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		A	B (open)	C
½	6.8	2.76	8.1	3.9
¾	7.2	3.15	8.5	3.9
1	9.8	3.54	9.1	3.9
1 ½	14.9	4.13	11.0	6.3
2	20.1	4.72	12.6	7.9

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

Pipe Threads	ASME B1.20.1
Wall Section	ASME B16.34
Socket Weld Ends	ASME B16.11
End-to-End	Manufacturer's Standard
Pressure-Temp Rating	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Bonnet	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Stem	ASTM A276 T316
5	Handwheel	ASTM A536
6	Gasket	PTFE
7	Gland Flange	ASTM A351 CF8
8	Gland	ASTM A276 T316
9	Packing	PTFE
10	Stem Nut	ASTM A439, D2
11	Handwheel Nut	ASTM A276 T316
12	Bonnet Bolt Nut	ASTM A194 GR 8
13	Bonnet Bolt	ASTM A193 GR B8
14	Eyebolt Pin	ASTM A276 T304
15	Eyebolt	ASTM A193 GR B8
16	Eyebolt Nut	ASTM A194 GR 8
17	ID Tag	304 Stainless
18	Washer	ASTM A536
19	Grease Fitting	Nickel-plated Copper
20	Set Screw	Steel

Dimensions Class 150 • OS&Y • Solid or Flexible Wedge Disc

FIGURE 117

Gate Valve, Raised Face, Flanged Ends,
Solid Wedge Disc (½ - 1")
Flexible Wedge Disc (1½ - 24")

SIZE RANGE:

½ through 24 inches

DESIGN FEATURES:

- Bolted Bonnet
- Rising Stem
- Integral Seat
- MSS SP-42
- API 603
- ASME B16.34

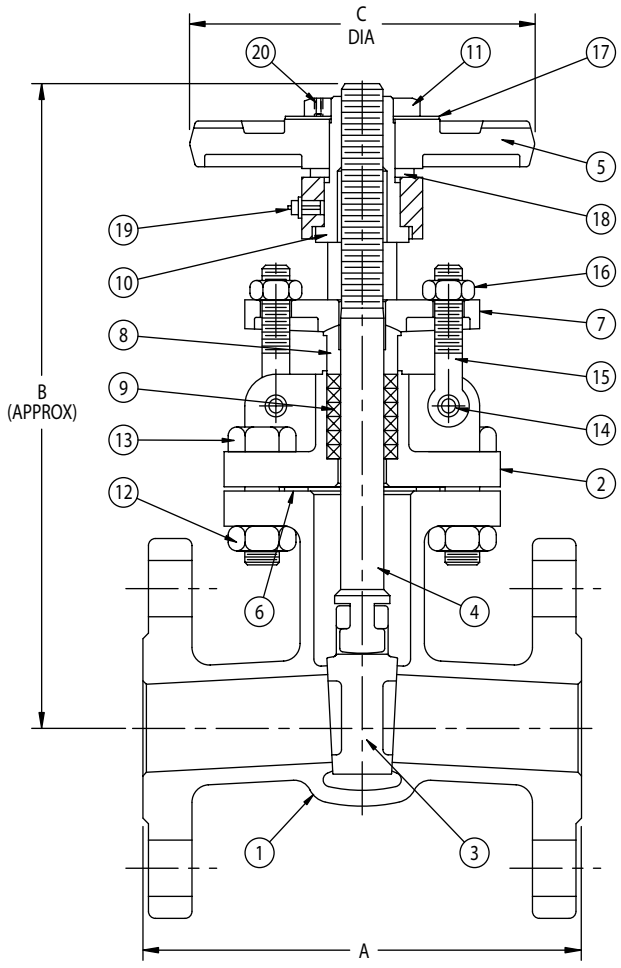


Fig. 117

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		A	B (open)	C
½	7.4	4.25	8.1	3.9
¾	8.3	4.63	8.5	3.9
1	10.0	5.00	9.1	3.9
1 ½	18.0	6.50	11.0	6.3
2	27.0	7.00	12.6	7.9
2 ½	37.5	7.50	15.1	9.8
3	46.3	8.00	16.7	9.8
4	75.0	9.00	20.9	9.8
6	128.0	10.50	28.7	11.8
8	216.1	11.50	36.9	11.8
10	291.1	13.00	43.9	15.7
12	436.6	14.00	51.9	17.7
14	703.4	15.00	58.5	17.7
16	1018.7	16.00	66.9	19.7
18	1190.7	17.00	74.8	22.0
20	1631.7	18.00	82.5	28.0
24	2434.3	20.00	97.4	31.5

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp Ratings	ASME B16.34
Design	API 603
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Bonnet	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Stem	ASTM A276 T316
5	Handwheel	ASTM A536
6	Gasket	PTFE
7	Gland Flange	ASTM A351 CF8
8	Gland	ASTM A276 T316
9	Packing	PTFE
10	Stem Nut	ASTM A439, D2
11	Handwheel Nut	ASTM A276 T304
12	Bonnet Bolt Nut	ASTM A194 GR 8
13	Bonnet Bolt	ASTM A193 GR B8
14	Eyebolt Pin	ASTM A276 T304
15	Eyebolt	ASTM A193 GR B8
16	Eyebolt Nut	ASTM A194 GR 8
17	ID Tag	304 SS
18	Washer	ASTM A536
19	Grease Fitting	Nickel-plated Copper
20	Set Screw	Steel

Dimensions Class 300 • OS&Y • Solid or Flexible Wedge Disc

FIGURE 2117

Gate Valve, Raised Face, Flanged Ends,
Solid Wedge Disc (½ - 2")
Flexible Wedge Disc (2½ - 24")

SIZE RANGE:

½ through 24 inches

DESIGN FEATURES:

- Bolted Bonnet
- Rising Stem
- Recessed Retained Gasket
- Integral Seat
- MSS SP-42
- ASME B16.34

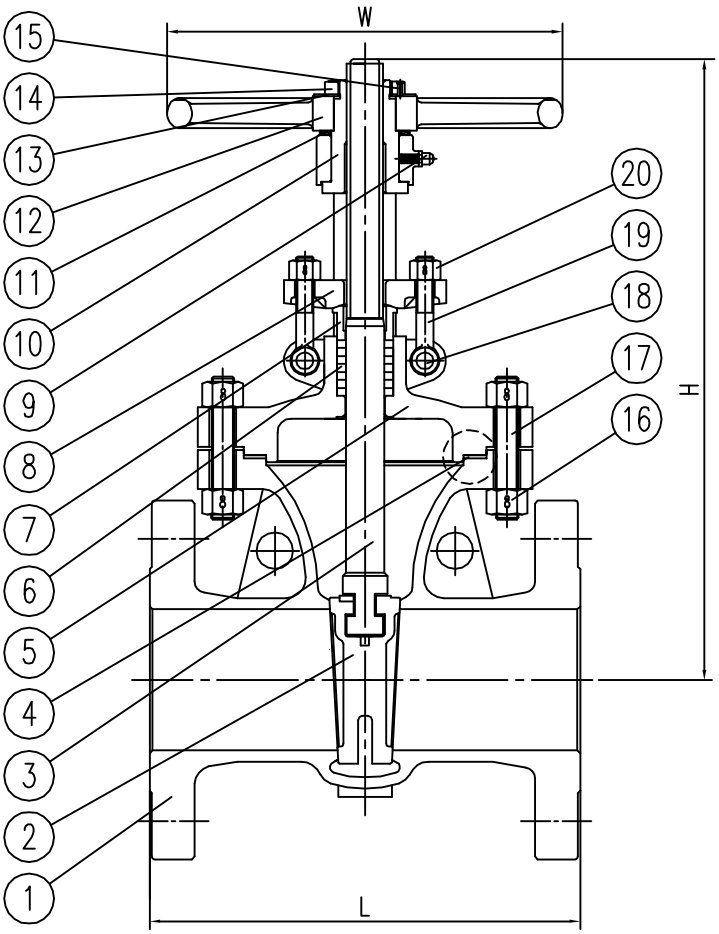


Fig. 2117

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		L	H (open)	W
½	9	5.51	8.19	3.94
¾	11	5.98	8.19	3.94
1	16	6.50	10.08	6.3
1 ½	28	7.48	12.01	7.87
2	34	8.50	13.36	7.87
2 ½	68	9.50	17.00	9.8
3	90	11.12	19.30	9.8
4	119	12.00	23.10	9.80
6	586	22.01	33.07	19.69
8	439	16.50	38.70	15.75
10	622	18.00	48.35	17.72
12	950	19.76	56.34	19.68
14	957.0	30.00	59.8	22.0
16	1206.1	33.00	66.7	24.8
18	1764.0	36.00	75.2	28.0
20	3281.0	39.00	83.4	31.5
24	4956.8	45.00	98.1	35.4

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp Ratings	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Disc	ASTM A351 CF8M
3	Stem	ASTM A276 316
4	Gasket	PTFE
5	Bonnet	ASTM A351 CF8M
6	Packing	PTFE
7	Gland	ASTM A276 T316
8	Gland Flange	ASTM A351 CF8M
9	Grease Fitting	Nickel-Plated Copper
10	Yoke Nut	ASTM A439, D2
11	Washer	PTFE
12	Handwheel	ASTM A439, D2
13	Name Plate	304 SS
14	Handwheel Nut	ASTM A276 304
15	Set Screw	ASTM A276 304
16	Nut	ASTM A194 8
17	Bonnet Bolt	ASTM A193 GR B8
18	Hinge Pin	ASTM A276 304
19	Eyebolt	ASTM A193 GR B8
20	Nut	ASTM A194 8

Dimensions Class 600 • OS&Y • Flexible Wedge Disc

FIGURE 4117

Gate Valve, Raised Face, Flanged Ends, Flexible Wedge Disc

SIZE RANGE:

2 through 12 inches

DESIGN FEATURES:

- Bolted Bonnet
- Inside Screw
- Rising Stem
- Ring Type Joint Bonnet Gasket
- Integral Seat
- Tested to API 598
- MSS SP-42
- ASME B16.34

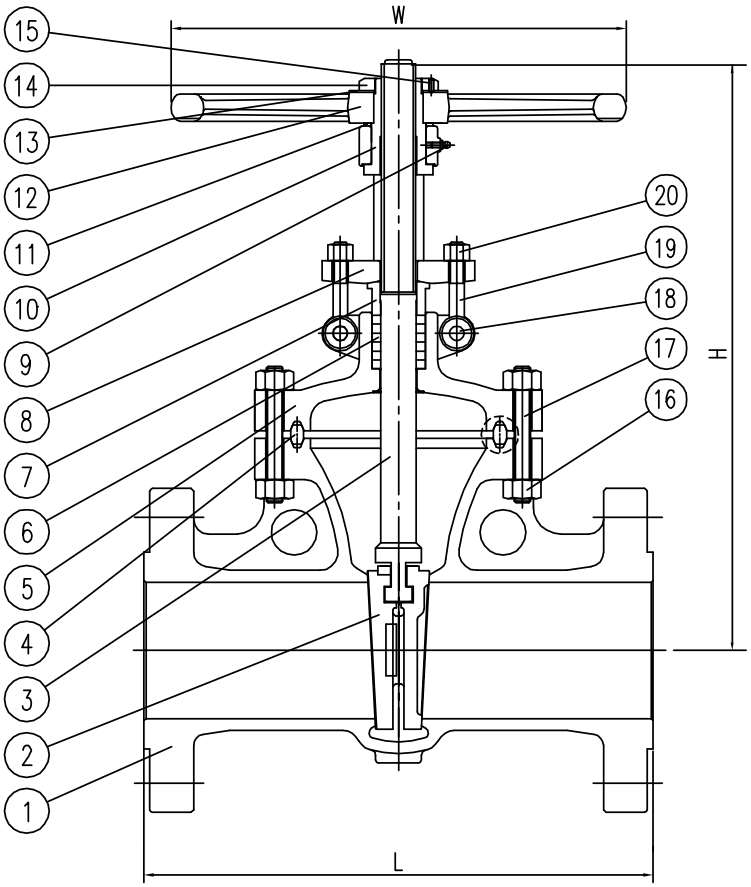


Fig. 4117

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		L	H (open)	W
2	55	11.5	16.0	11.8
3	106	14.0	19.8	11.8
4	209	17.0	24.0	13.7
6	434	22.0	33.0	17.7
8	747	26.0	42.5	21.6
10	1390.5	31.00	50.0	26.0
12	1993.4	33.00	63.0	27.5

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp Ratings	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Flexible Gate Disc	ASTM A351 CF8M
3	Stem	ASTM A276 316
4	Ring Type Joint Gasket	ASTM A276 304/316
5	Bonnet	ASTM A351 CF8M
6	Packing	PTFE
7	Gland	ASTM A276 316
8	Gland Flange	ASTM A351 CF8
9	Grease Fitting	Nickel-plated Copper
10	Yoke Nut	ASTM A439 D2
11	Washer	ASTM A395 65 45 15
12	Handwheel	ASTM A395 65 45 15
13	Name Plate	304 SS
14	Handwheel Nut	ASTM A276 304/ ASTM A351 CF8
15	Fixed Screw	ASTM A276 304
16	Nut	ASTM A194 8
17	Bonnet Bolt	ASTM A193 GR B8
18	Hinge Pin	ASTM A276 304
19	Eyebolt	ASTM A193 GR B8
20	Nut	ASTM A194 8

Dimensions 200 CWP • Threaded Bonnet • Plug Type Disc

FIGURE 40

Globe Valve, Threaded Ends, Plug Type Disc

SIZE RANGE:

½ through 2 inches

DESIGN FEATURES:

- Threaded Bonnet
- Inside Screw
- Rising Stem
- Integral Seat
- MSS SP-42
- ASME B16.34

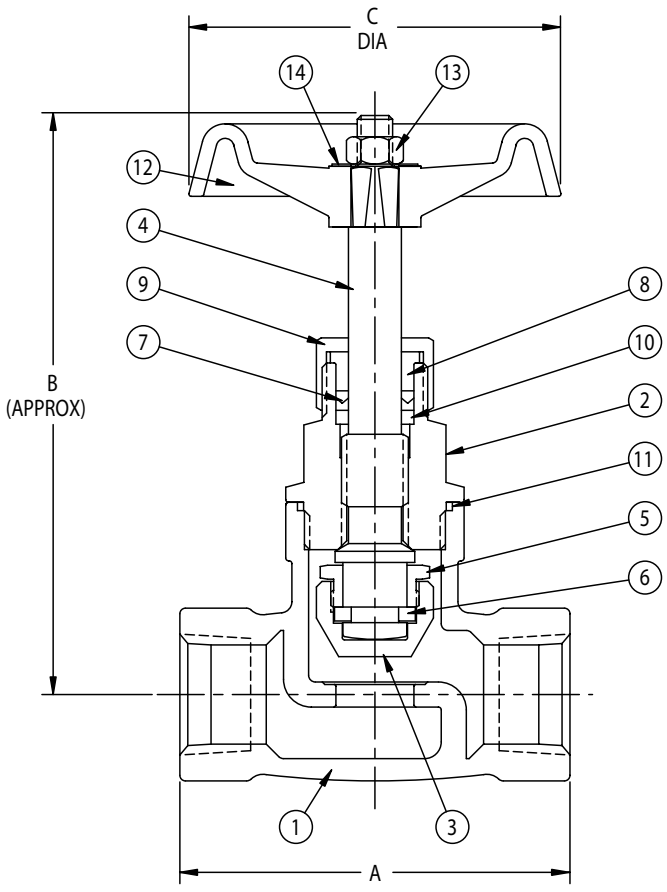


Fig. 40

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		A	B (open)	C
½	1.0	2.60	3.7	2.7
¾	1.4	3.20	3.8	2.7
1	1.8	3.54	4.5	3.1
1 ½	3.3	4.72	5.8	3.8
2	4.9	5.55	6.6	3.8

Please refer to page 4 for Pressure-Temperature Ratings.

Globe valves are ideal for throttling service. Their flow characteristics permit accurate and repeatable flow control. However, caution must be exercised to avoid extremely close throttling when pressure drop exceeds 20%. This creates excessive noise, vibration and possible damage to valves and piping. CRANE® does not recommend applications in excess of this due to possible damage to the valve.

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Bonnet	ASTM A351 CF8M
3	Disc	316 SS
4	Stem	316 SS
5	Disc Nut	316 SS
6	Disc Washer	316 SS
7	Packing	PTFE
8	Gland	316 SS
9	Gland Nut	316 SS
10	Packing Washer	316 SS
11	Gasket	PTFE
12	Handwheel	Aluminum
13	Handwheel Nut	304 SS
14	ID Tag	Aluminum

Dimensions Class 150 • OS&Y • Plug Type Disc

FIGURE 310

Globe Valve, Threaded Ends, Plug Type Disc

FIGURE 314

Globe Valve, Socket Weld Ends, Plug Type Disc

SIZE RANGE:

½ through 2 inches

DESIGN FEATURES:

- Bolted Bonnet
- Recessed Retained Gasket
- Rising Stem
- Integral Seat
- MSS SP-42
- ASME B16.34

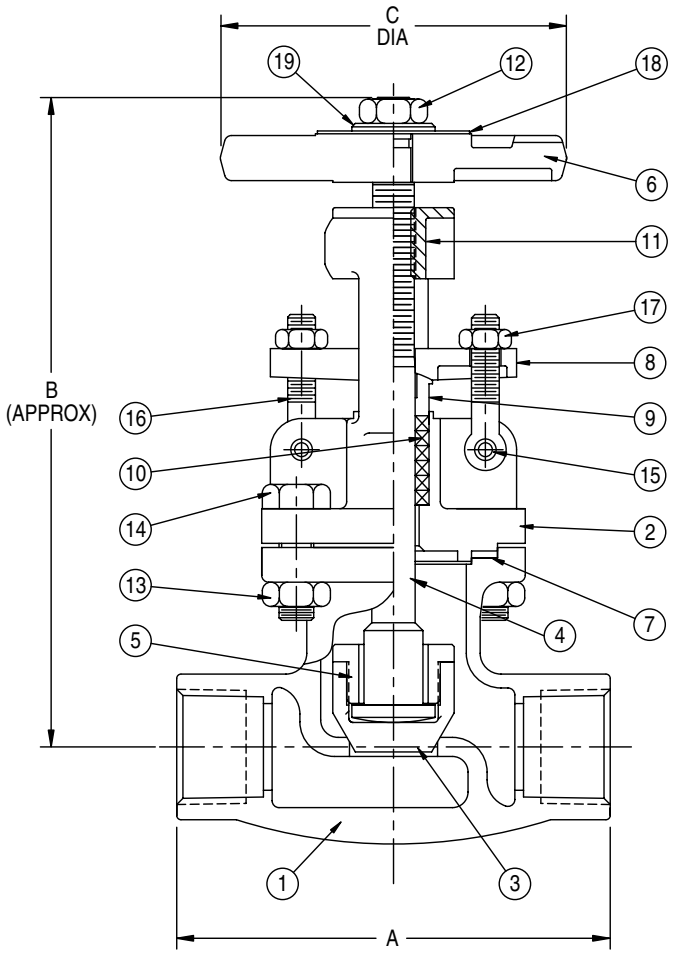


Fig. 310

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)			
		A	B (open)	C	D*
½	6.6	3.74	7.1	3.9	.38
¾	6.9	4.53	7.3	3.9	.50
1	8.7	4.92	7.9	3.9	.50
1 ½	12.6	5.52	9.2	6.3	.50
2	17.3	6.50	10.2	7.9	.31

*For Figure 314 only - Socket weld depth

Please refer to page 4 for Pressure-Temperature Ratings.

Globe valves are ideal for throttling service. Their flow characteristics permit accurate and repeatable flow control. However, caution must be exercised to avoid extremely close throttling when pressure drop exceeds 20%. This creates excessive noise, vibration and possible damage to valves and piping. CRANE® does not recommend applications in excess of this due to possible damage to the valve.

INDUSTRY STANDARDS

Pipe Threads	ASME B1.20.1
Wall Section	ASME B16.34
Socket Weld Ends	ASME B16.11
End-to-End	Manufacturer's Standard
Pressure-Temp Rating	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF3M
2	Bonnet	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Stem	ASTM A276 T316
5	Disc Nut	ASTM A276 T316
6	Handwheel	ASTM A536
7	Gasket	PTFE
8	Gland Flange	ASTM A351 CF8
9	Gland	ASTM A276 T316
10	Packing	PTFE
11	Stem Nut	ASTM A439, D2
12	Handwheel Nut	ASTM A194 GR 8
13	Bonnet Bolt Nut	ASTM A194 GR 8
14	Bonnet Bolt	ASTM A193 GR B8
15	Eyebolt Pin	ASTM A276 T304
16	Eyebolt	ASTM A193 GR B8
17	Eyebolt Nut	ASTM A194 GR 8
18	ID Tag	304 SS
19	Washer	ASTM A276 T304

Dimensions Class 150 • OS&Y • Plug Type Disc

FIGURE 317

Globe Valve, Raised Face, Flanged Ends, Plug Type Disc

SIZE RANGE:

½ through 12 inches

DESIGN FEATURES:

- Bolted Bonnet
- Recessed Retained Gasket
- Rising Stem
- Integral Seat
- Disc Guide Below Seat
- MSS SP-42
- ASME B16.34

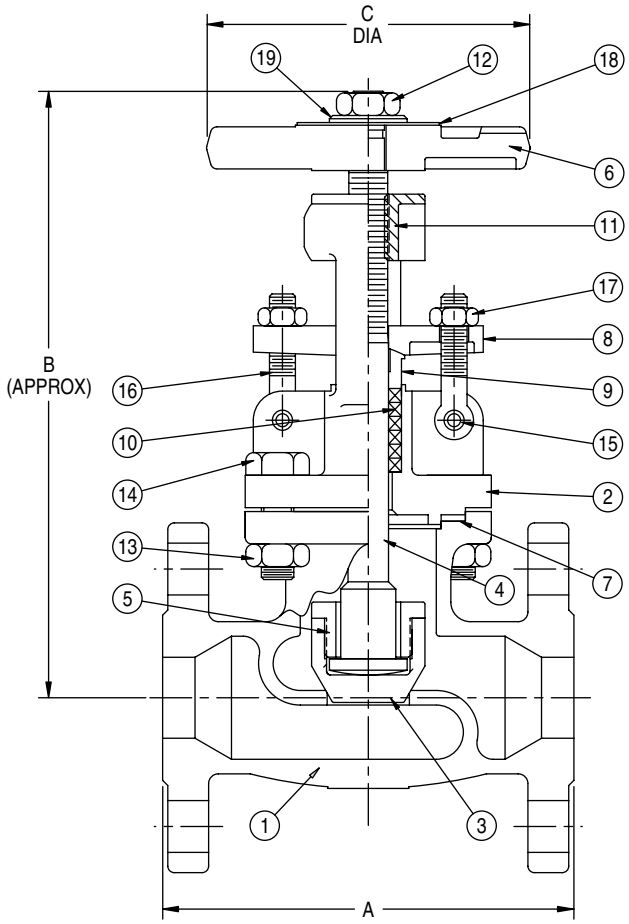


Fig. 317

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		A	B (open)	C
½	7.6	4.25	7.1	3.9
¾	8.9	4.63	7.3	3.9
1	11.6	5.00	7.9	3.9
1 ½	16.4	6.50	9.2	6.3
2	25.2	8.00	10.2	7.9
2 ½	46.3	8.50	11.1	9.8
3	61.7	9.50	13.5	9.8
4	97.0	11.50	14.8	11.8
6	198.5	16.00	16.9	11.0
8	383.7	19.50	22.0	11.8
10	546.8	24.50	29.7	15.7
12	848.9	27.50	32.5	15.7

Please refer to page 4 for Pressure-Temperature Ratings.

Globe valves are ideal for throttling service. Their flow characteristics permit accurate and repeatable flow control. However, caution must be exercised to avoid extremely close throttling when pressure drop exceeds 20%. This creates excessive noise, vibration and possible damage to valves and piping. CRANE® does not recommend applications in excess of this due to possible damage to the valve.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp Rating	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Bonnet	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Stem	ASTM A276 T316
5	Disc Nut	ASTM A276 T316
6	Handwheel	ASTM A536
7	Gasket	PTFE
8	Gland Flange	ASTM A351 CF8
9	Gland	ASTM A276 T316
10	Packing	PTFE
11	Stem Nut	ASTM A439, D2
12	Handwheel Nut	ASTM A194 GR 8
13	Bonnet Bolt Nut	ASTM A194 GR 8
14	Bonnet Bolt	ASTM A193 GR B8
15	Eyebolt Pin	ASTM A276 T304
16	Eyebolt	ASTM A193 GR B8
17	Eyebolt Nut	ASTM A194 GR 8
18	ID Tag	304 SS
19	Washer	ASTM A276 T304

Dimensions Class 300 • OS&Y • Plug Type Disc

FIGURE 2317

Globe Valve, Raised Face, Flanged Ends, Plug Type Disc

SIZE RANGE:

½ through 8 inches

DESIGN FEATURES:

- Bolted Bonnet
- Recessed Retained Gasket
- Rising Stem, Rising Handwheel
- Integral Seat
- MSS SP-42
- ASME B16.34

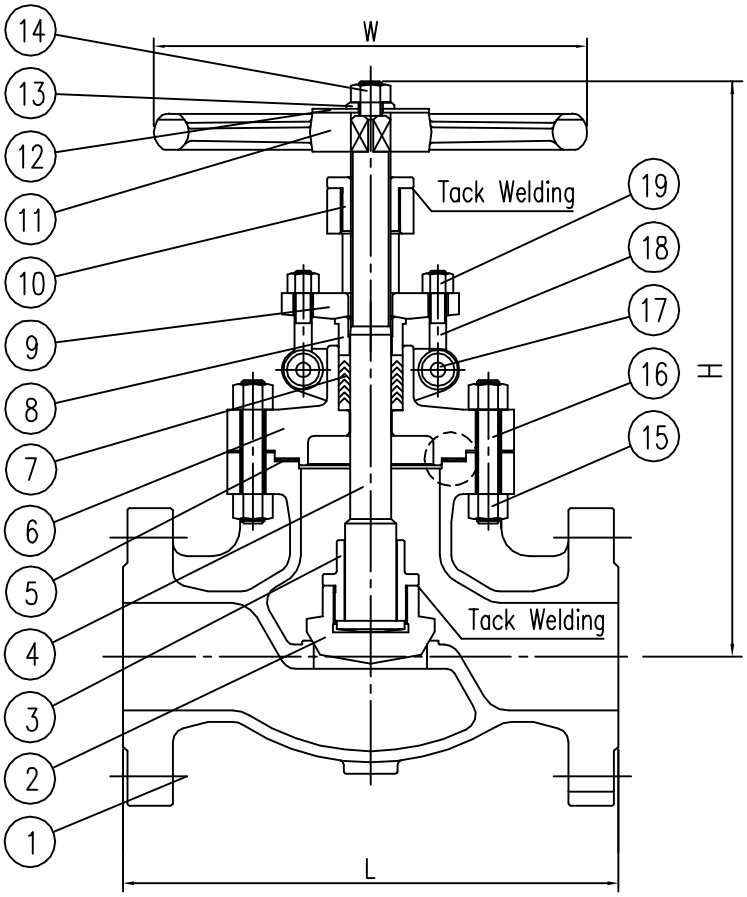


Fig. 2317

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		L	H (open)	W
½	8.5	6.00	7.8	3.9
¾	10.8	7.00	7.8	3.9
1	16.3	8.00	9.0	6.3
1 ½	28.3	9.00	10.7	7.9
2	34.2	10.50	11.3	7.9
3	83.8	12.50	16.7	11.8
4	130.1	14.00	18.5	11.0
6	317.5	17.50	28.0	13.8
8	562.3	22.00	32.3	15.8

Please refer to page 4 for Pressure-Temperature Ratings.

Globe valves are ideal for throttling service. Their flow characteristics permit accurate and repeatable flow control. However, caution must be exercised to avoid extremely close throttling when pressure drop exceeds 20%. This creates excessive noise, vibration and possible damage to valves and piping. CRANE® does not recommend applications in excess of this due to possible damage to the valve.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp Rating	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Disc	ASTM A351 CF8M
3	Disc Cap	ASTM A351 CF8M
4	Stem	ASTM A276 T316
5	Gasket	PTFE
6	Bonnet	ASTM A351 CF8M
7	Packing	PTFE
8	Gland	ASTM A276 T317
9	Gland Flange	ASTM A351 CF8
10	Yoke Sleeve	ASTM A439 D2
11	Handwheel	ASTM A536
12	ID Tag	304 SS
13	Washer	ASTM A276 420
14	Handwheel Nut	ASTM A194 GR 8
15	Nut	ASTM A194 GR 8
16	Bonnet Bolt	ASTM A193 GR B8
17	Hinge Pin	ASTM A276 T304
18	Bolt	ASTM A193 GR B8
19	Nut	ASTM A194 GR 8

Dimensions Class 600 • OS&Y • Plug Type Disc

FIGURE 4317

Globe Valve, Raised Face, Flanged Ends

SIZE RANGE:

2 through 6 inches

DESIGN FEATURES:

- Bolted Bonnet
- Ring Type Joint Bonnet Gasket
- Rising Stem, Rising Handwheel
- Integral Seat
- MSS SP-42
- ASME B16.34

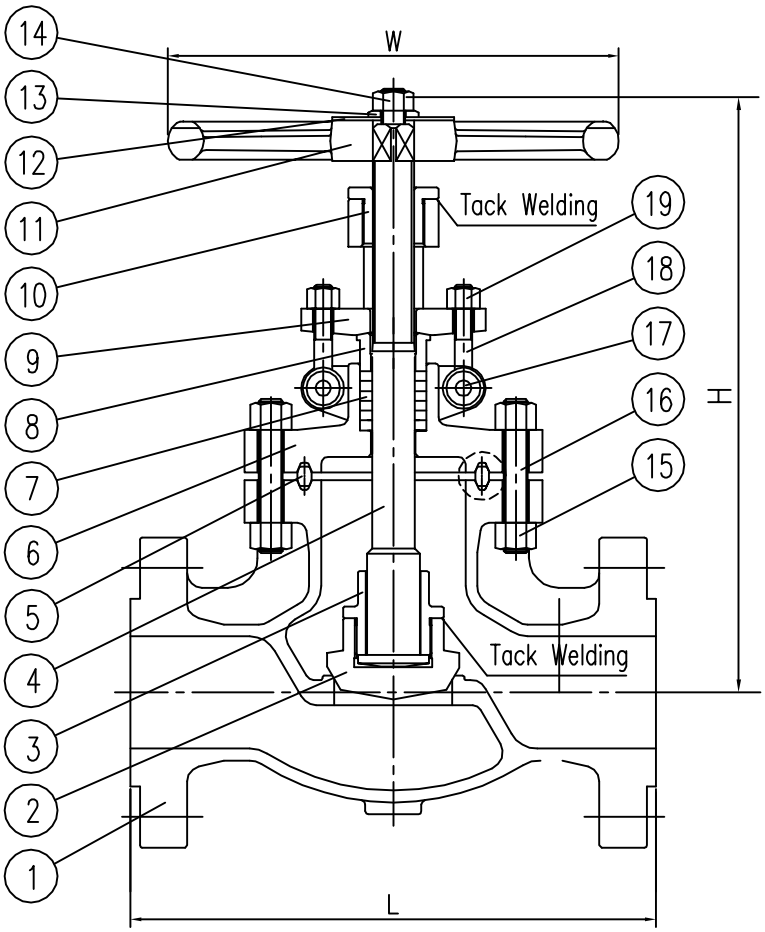


Fig. 4317

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		L	H (open)	W
2	---	11.50	11.3	11.8
2 ½	119.1	13.00	17.0	11.8
3	138.9	14.00	18.8	13.8
4	264.6	17.00	20.9	17.7
6	480.7	22.00	26.6	19.7

Please refer to page 4 for Pressure-Temperature Ratings.

Globe valves are ideal for throttling service. Their flow characteristics permit accurate and repeatable flow control. However, caution must be exercised to avoid extremely close throttling when pressure drop exceeds 20%. This creates excessive noise, vibration and possible damage to valves and piping. CRANE® does not recommend applications in excess of this due to possible damage to the valve.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp Rating	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Disc	ASTM A351 CF8M
3	Disc Cap	ASTM A351 CF8M
4	Stem	ASTM A276 T316/304
5	Ring Type Joint Gasket	ASTM A276 T316/304
6	Bonnet	ASTM A351 CF8
7	Packing	PTFE
8	Gland	ASTM A276 T316/304
9	Gland Flange	ASTM A351 CF8M
10	Yoke Nut	ASTM A439, D2
11	Handwheel	ASTM A395 65 45 15
12	ID Tag	304 SS
13	Handwheel	ASTM A276 T304
14	Handwheel Nut	ASTM A194 GR 8
15	Nut	ASTM A194 GR 8
16	Bonnet Bolt	ASTM A193 GR B8
17	Hinge Pin	ASTM A276 T304
18	Eyebolt	ASTM A193 GR B8
19	Nut	ASTM A194 GR 8

Dimensions 200 CWP • Y-Pattern • Threaded Cap

FIGURE 49

Check Valve, Threaded Ends

SIZE RANGE:

½ through 2 inches

DESIGN FEATURES:

- Integral Seat
- Y Pattern
- MSS SP-42
- ASME B16.34

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)	
		A	B
½	0.7	2.56	1.8
¾	1.1	3.15	2.0
1	1.5	3.54	2.4
1 ½	3.1	4.72	3.2
2	4.6	5.51	3.7

Please refer to page 4 for Pressure-Temperature Ratings.

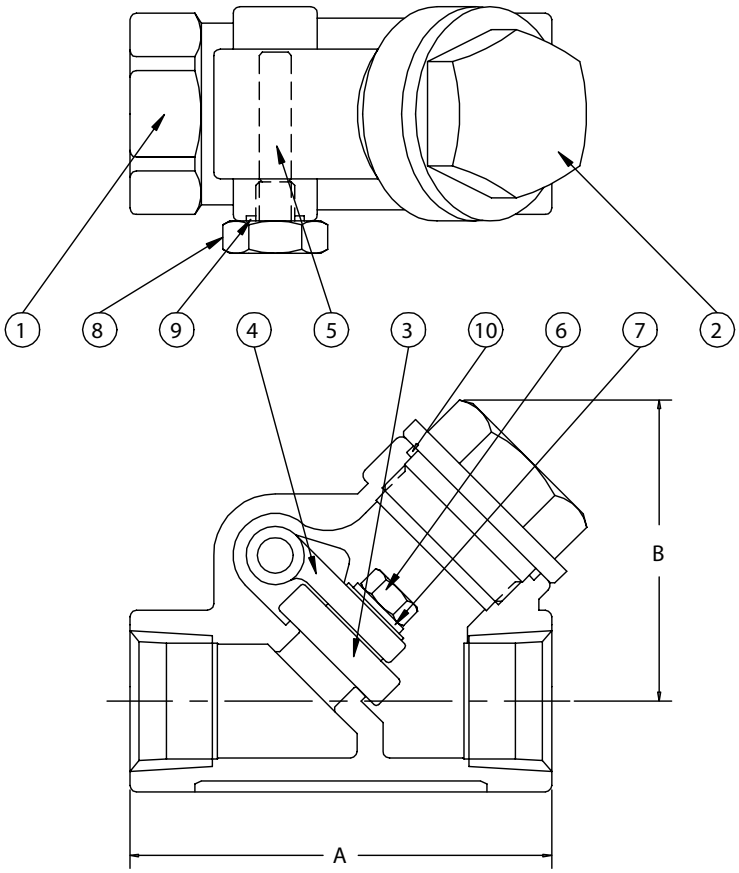


Fig. 49

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Cap	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Hinge Arm	ASTM A351 CF8M
5	Hinge Pin	316 SS
6	Disc Nut	316 SS
7	Disc Washer	316 SS
8	Plug	316 SS
9	Seal	PTFE
10	Gasket	PTFE

Dimensions Class 150 • Bolted Cover

FIGURE 370

Check Valve, Threaded Ends

FIGURE 374

Check Valve, Socket Weld Ends

SIZE RANGE:

½ through 2 inches

DESIGN FEATURES:

- Integral Seat
- Recessed Retained Gasket
- MSS SP-42
- ASME B16.34

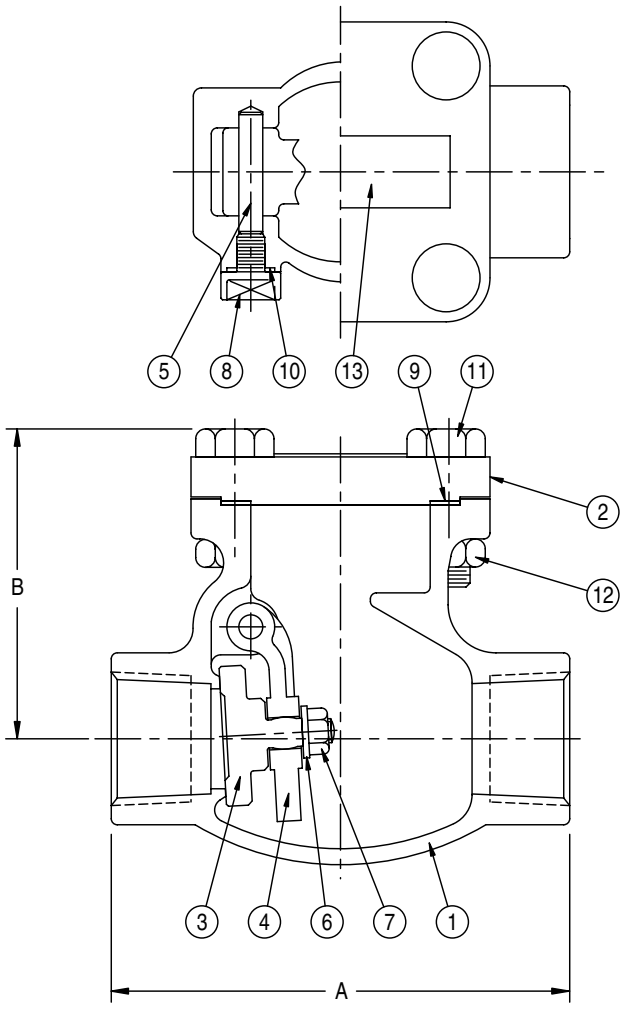


Fig. 370

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)		
		A	B (open)	C*
½	3.5	3.35	2.4	.38
¾	3.7	3.74	2.8	.50
1	5.5	4.53	3.1	.50
1 ½	8.6	4.92	4.1	.50
2	10.3	5.91	4.6	.62

* For Figure 374 only - socket weld depth

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

Pipe Threads	ASME B1.20.1
Wall Section	ASME B16.34
Socket Weld Ends	ASME B16.11
End-to-End	Manufacturer's Standard
Pressure Temp. Ratings	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF3M
2	Cover	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Hinge Arm	ASTM A351 CF8M
5	Hinge Pin	ASTM A276 T316
6	Disc Washer	ASTM A276 T316
7	Disc Nut	ASTM A194 GR 8M
8	Plug	ASTM A276 T316
9	Gasket	PTFE
10	Plug Seal	PTFE
11	Cover Bolt	ASTM A193 GR B8
12	Cover Bolt Nut	ASTM A194 GR 8
13	ID Tag	ASTM A276 T304

Dimensions Class 150 • Bolted Cover

FIGURE 377

Check Valve, Raised Face, Flanged Ends

SIZE RANGE:

½ through 12 inches

DESIGN FEATURES:

- Integral Seat
- Recessed Retained Gasket
- MSS SP-42
- ASME B16.34

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)	
		L	H
½	4.2	4.25	2.6
¾	5.6	4.61	2.8
1	8.4	5.00	5.0
1 ½	13.5	6.50	3.8
2	20.4	8.00	4.3
2 ½	50.7	8.50	6.2
3	57.3	9.50	6.5
4	99.2	11.50	8.6
5	N/A	13.00	13.8
6	172.0	14.00	16.0
8	299.9	19.50	18.3
10	471.9	24.50	21.2
12	707.8	27.50	19.0

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp Ratings	ASME B16.34
Testing	API 598

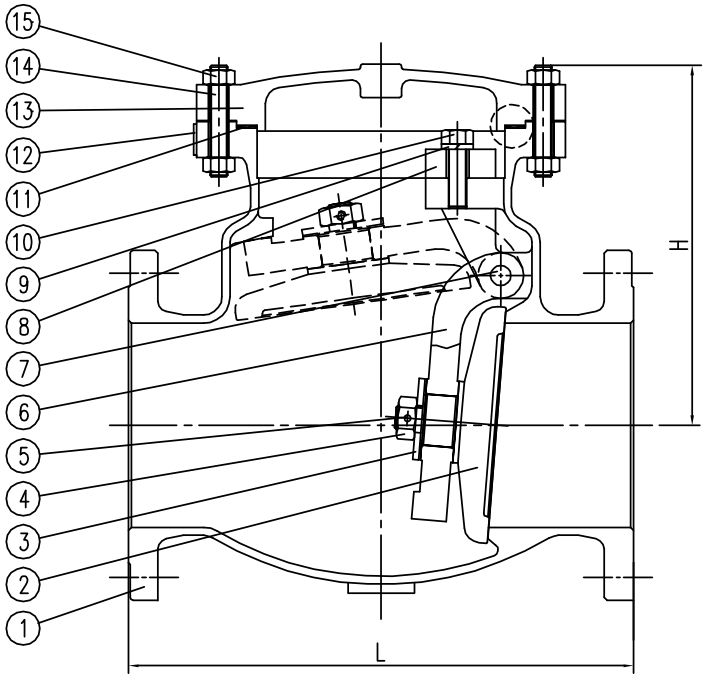


Fig. 377

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Disc	ASTM A351 CF8M
3	Hinge	ASTM A276 316
4	Nut	ASTM A194 GR 8M
5	Pin	ASTM A276 316
6	Hinge	ASTM A351 CF8M
7	Hinge Pin	ASTM A276 316
8	Yoke	ASTM A351 CF8M
9	Spring Gasket	ASTM A276 316
10	Bolt	ASTM A193 GR B8
11	Gasket	PTFE
12	Name Plate	ASTM A276 304
13	Bonnet	ASTM A351 CF8M
14	Bolt	ASTM A193 GR B8
15	Nut	ASTM A194 GR 8M

Dimensions Class 300 • Bolted Cover

FIGURE 2370

Check Valve, Threaded Ends

FIGURE 2374

Check Valve, Socket Weld Ends

SIZE RANGE:

½ through 2 inches

DESIGN FEATURES:

- Integral Seat
- Recessed Retained Gasket
- MSS SP-42
- ASME B16.34

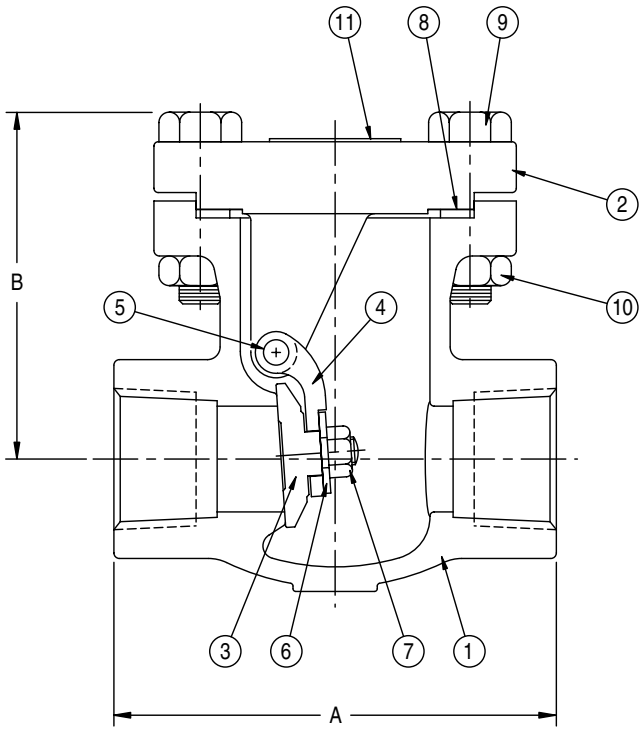


Fig. 2370

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)	
		A	B
½	4.2	3.23	3.3
¾	4.2	3.23	3.3
1	5.8	4.13	3.4
1 ½	10.1	4.92	3.9
2	13.1	5.31	4.1

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

Pipe Threads	ASME B1.20.1
Wall Section	ASME B16.34
Socket Weld Ends	ASME B16.11
End-to-End	Manufacturer's Standard
Pressure Temp. Ratings	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF3M
2	Cover	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Hinge Arm	ASTM A351 CF8M
5	Hinge Pin	ASTM A276 T316
6	Disc Washer	ASTM A276 T316
7	Disc Nut	ASTM A194 GR 8M
8	Gasket	PTFE
9	Cover Bolt	ASTM A193 GR B8
10	Cover Bolt Nut	ASTM A194 GR 8
11	ID Tag	ASTM A276 T304

Dimensions Class 300 • Bolted Cover

FIGURE 2377

Check Valve, Raised Face, Flanged Ends

SIZE RANGE:

½ through 12 inches

DESIGN FEATURES:

- Integral Seat
- Recessed Retained Gasket
- MSS SP-42
- ASME B16.34

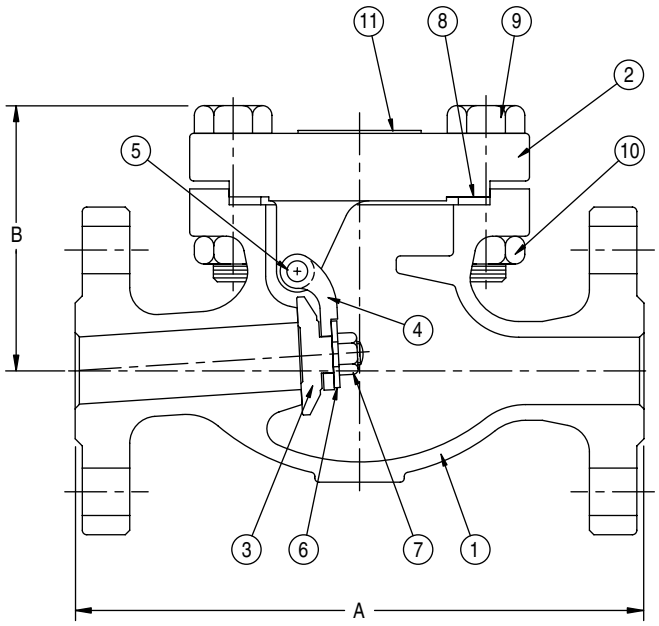


Fig. 2377

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)	
		A	B
½	8.5	6.00	3.4
¾	11	7.00	3.6
1	16.5	8.50	4.0
1 ½	27.8	9.50	6.2
2	34.4	10.50	6.8
2 ½	81.6	11.50	8.9
3	92.6	12.50	13.8
4	141.1	14.00	16.0
6	273.4	17.50	18.3
8	489.5	21.00	21.2
10	643.9	24.50	14.0
12	979.0	28.00	15.5

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp. Ratings	ASME B16.34
Testing	API 598

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Cover	ASTM A351 CF8M
3	Disc	ASTM A351 CF8M
4	Hinge Arm	ASTM A351 CF8M
5	Hinge Pin	ASTM A276 T316
6	Disc Washer	ASTM A276 T316
7	Disc Nut	ASTM A194 GR 8M
8	Gasket	PTFE
9	Cover Bolt	ASTM A193 GR B8
10	Cover Bolt Nut	ASTM A194 GR 8
11	ID Tag	ASTM A276 T304

Dimensions Class 600 • Bolted Cover

FIGURE 4377

Check Valve, Raised Face, Flanged Ends

SIZE RANGE:

2½ through 12 inches

DESIGN FEATURES:

- Integral Seat
- Ring Type Joint Bonnet Gasket
- MSS SP-42
- ASME B16.34

DIMENSIONS AND WEIGHTS

Valve Size	Weight (lbs)	Dimensions (inches)	
		L	H
2 ½	108.0	13.00	7.9
3	123.5	14.00	9.0
4	227.1	17.00	11.8
6	449.8	22.00	14.7
8	754.1	26.00	17.7
10	1375.9	31.00	18.0
12	1711.1	33.00	23.0

Please refer to page 4 for Pressure-Temperature Ratings.

INDUSTRY STANDARDS

End Flanges	ASME B16.5
Wall Section	ASME B16.34
Face-to-Face	ASME B16.10
Pressure-Temp. Ratings	ASME B16.34
Testing	API 598

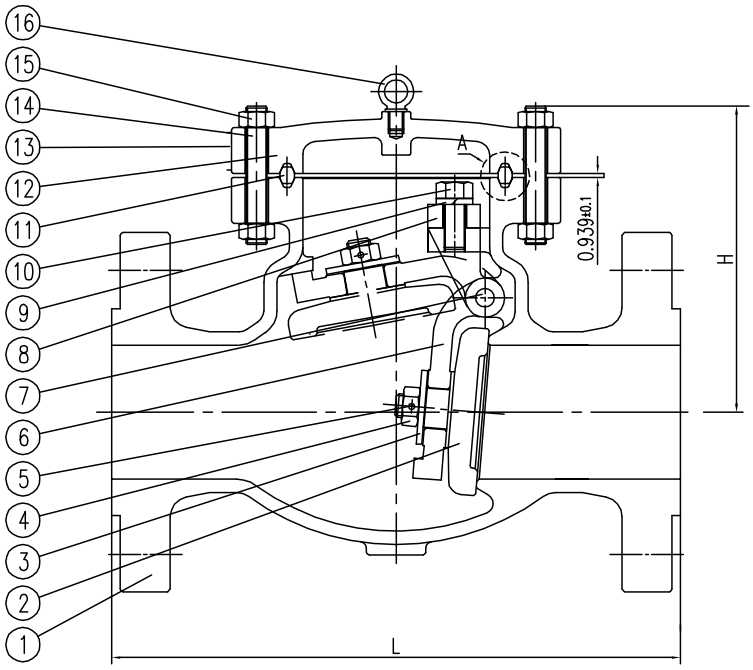


Fig. 4377

MATERIALS OF CONSTRUCTION

1	Body	ASTM A351 CF8M
2	Disc	ASTM A351 CF8M
3	Hinge	ASTM A276 T304/316
4	Nut	ASTM A193 GR B8M
5	Pin	ASTM A276 T304/316
6	Hinge	ASTM A351 CF8M
7	Hinge Pin	ASTM A276 T304/316
8	Yoke	ASTM A351 CF8M
9	Spring Gasket	ASTM A276 T304/316
10	Bolt	ASTM A193 GR B8M
11	Ring Type Joint Gasket	ASTM A276 T304/316
12	Bonnet	ASTM A351 CF8M
13	ID Tag	ASTM A276 T304
14	Bolt	ASTM A193 GR B8M
15	Nut	ASTM A194 GR 8
16	Bolt	Steel

Materials of Construction

Composition %, ASTM A351			
Element	CF8M	CF3M	CN7M
Carbon	0.08	0.03	0.07
Chromium	18.0 - 21.0	17.0 - 21.0	19.0 - 22.0
Columbium (Niobium)	0.00	0.00	0.00
Copper	0.00	0.00	3.0 - 4.0
Iron	0.00	0.00	0.00
Manganese	1.50	1.50	1.50
Molybdenum	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Nickel	9.0 - 12.0	9.0 - 13.0	27.5 - 30.5
Phosphorus	0.04	0.04	0.04
Silicon	1.50	1.50	1.50
Sulfur	0.04	0.04	0.04
Tungsten	0.00	0.00	0.00
Vanadium	0.00	0.00	0.00

Assume all values are maximum, unless a range is given.

Tensile Requirements			
	CF8M	CF3M	CN7M
Tensile Strength	70,000	70,000	62,000
Yield Strength	30,000	30,000	25,000
Elongation in 2 inches, %	30.0%	30.0%	35.0%

Pressure Temperature

Temp °F	ASTM A351 Gr. CF8M [1] & CF3M [2] Working Pressure (psig)			ASTM A351 Gr. CN7M [3] Working Pressure (psig)		
	CL. 150	CL. 300	CL. 600	CL. 150	CL. 300	CL. 600
-20 to 100	275	720	1,440	230	600	1,200
200	235	620	1,240	200	520	1,045
300	215	560	1,120	190	490	980
400	195	515	1,025	190	490	980
500	170	480	955	170	490	980
600	140	450	900	140	490	980
650	125	445	890	125	490	980
700	110	430	870	110	490	980
750	95	425	855	95	490	980
800	80	420	845	80	490	980
850	65	420	835			

(1) At temperatures over 1,000°F, use only when the carbon content is 0.04% or higher.
(2) Not to be used over 850°F
(3) Use solution annealed material only.

Hydrostatic Shell Test Pressures

Class	150	300	600
Pressure	425	1,100	2,175

Notes: These are design pressure ratings from ASME B16.34-2017 and apply to castings only. Packing and gasket materials may limit temperature range of specific products.

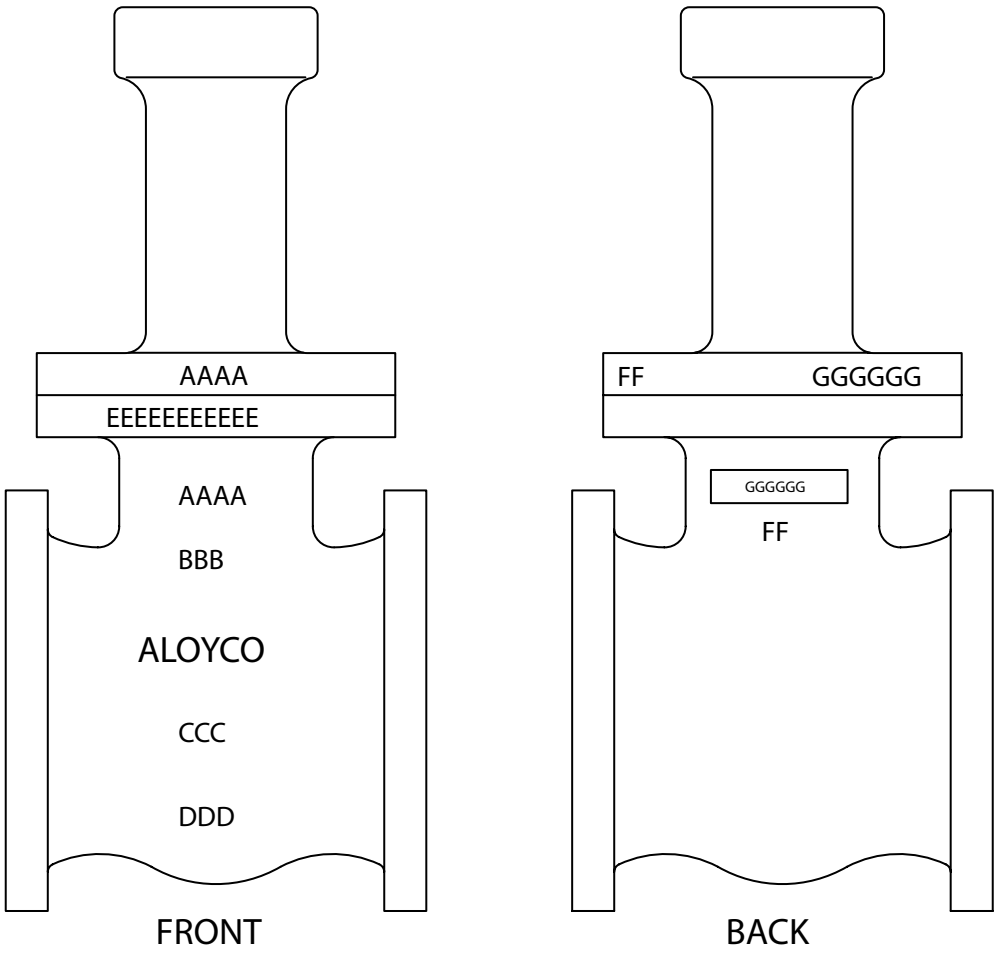
Valve Marking System **Gate Valve**

It is important to properly identify valves in service to allow for the ordering of replacement parts or to address questions or concerns relating to Aloyco® products. The valve marking system shown here will help customers identify valves accurately, speeding responses to customer service issues.

VALVE MARKING SYSTEM CODES

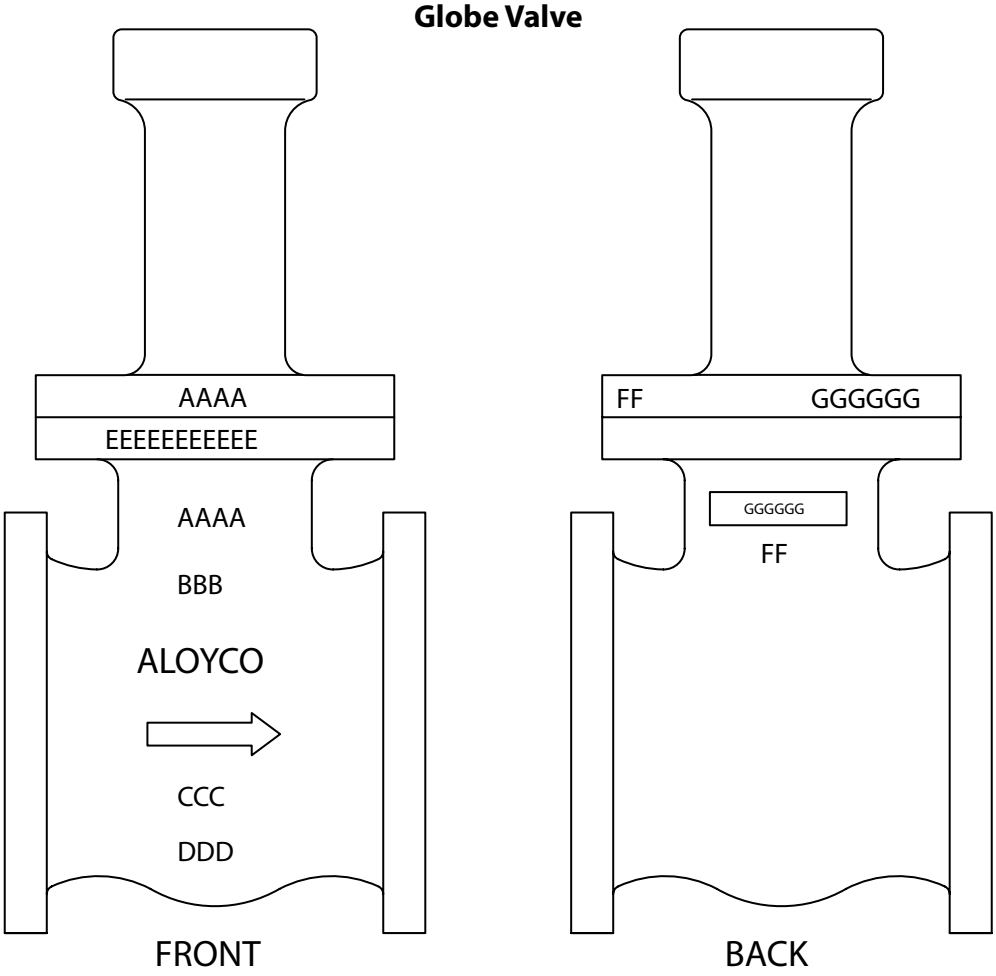
AAAA Material (CF3M, CF8M, etc.)
BBB Size (½", 4", etc.)
CCC Class (150, 300, 600)
DDD Manufacturer ID Number
EEEEEEEEEE Serial Number
FF Foundry Number
GGGGGG Heat Number

Gate Valve

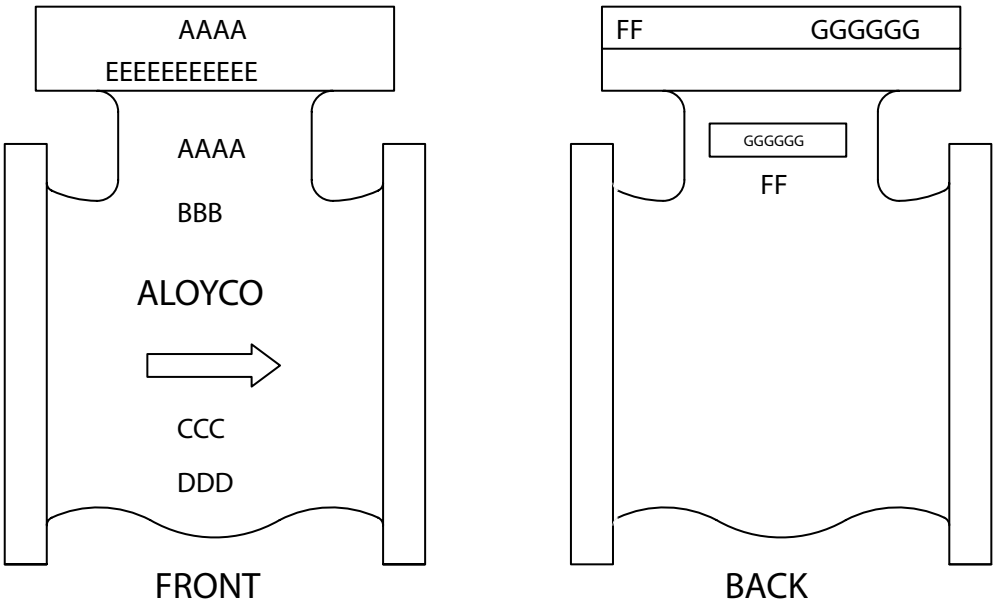


Valve Marking System **Globe and Check Valve**

Globe Valve



Check Valve



Notes

Notes

Crane ChemPharma & Energy

CRANE ChemPhamra & Energy
4526 Research Forest Drive, Suite 400
The Woodlands, Texas 77381 U.S.A.
Tel.: (1) 936-271-6500
Fax.: (1) 936-271-6510

www.cranecpe.com

Aloyco Customer Service
2129 3rd Avenue, S.E.
Cullman, Alabama 35055
Tel.: (1) 256-775-3800
Fax.: (1) 256-775-3860

brands you trust.

CPE-ALOYCO-STAINLESS_STEEL-EN-BU-LIT-2021_02_04