



*The Right Connection®*

## Eagle Bellows Seal Valves

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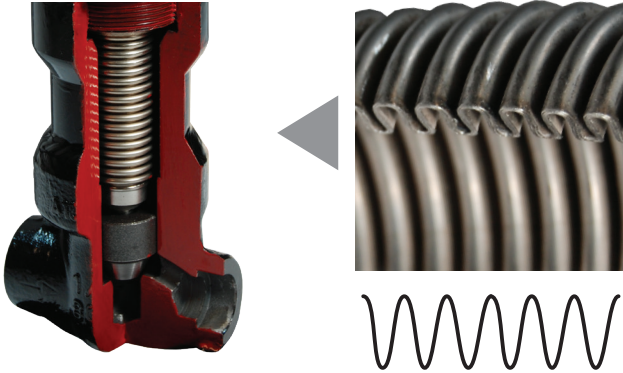


## Benefits of Bellows

The metal bellows in Dixon Eagle's high quality globe and gate valves are maintenance free with high operational reliability and a long service life. These bellows are specifically designed to maintain a pressure seal within the relative motion caused by opening and closing the valve. This seal is also a safety device that prevents deadly or flammable gases from escaping into the atmosphere and provides an economical way to deter product loss. The seal also acts as a barrier to keep contaminants from entering the flow media.

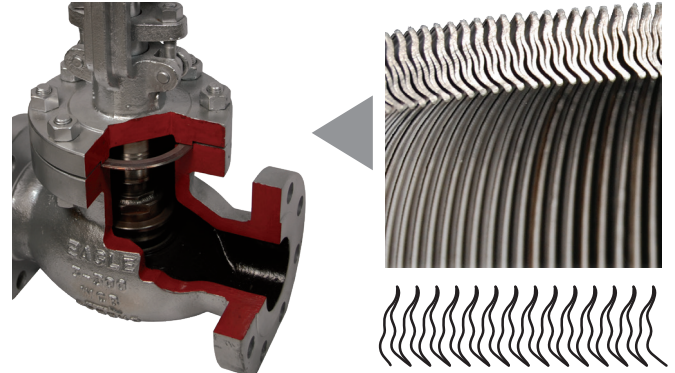
### How It Works

#### Hydraulically Formed Bellows



Formed bellows are more economical but require more vertical space

#### Welded Bellows



Welded piles "nest" together to create a shorter height; convenient for small spaces

### Bellow Materials

- We offer Inconel™ 625 bellows in all our valves due to its strength and added pressure and temperature resistance.
- Our welded bonnet design comes standard with a 321 stainless steel bellows, Inconel™ is optional.
- Hastelloy™ C-276 is available and commonly used for chlorine applications.
- Other exotic alloys, such as Monel™ are available.

### Testing

Dixon Eagle bellows are manufactured to have a high compressive strength, are heat and corrosion resistant, leak tight and highly flexible. They have also been emission tested per API 622 and earned the title of Low E valves. The bellows is designed to meet ASME B16.34 valve test requirements withstanding 1.5 times the working pressure of the valve. They are 100% pressure tested and 100% Helium leak tested under vacuum. The bellows leak rate must be less than  $1 \times 10^{-6}$  scc/sec in order to pass our stringent test requirements.

Our metal bellows are designed and tested to meet or exceed the requirements of MSS SP-117 Bellows Seals for Globe and Gate Valves, and API 602 Annex C Type Testing of Bellows Stem Seals.

The bellows cycle life tests are done while the bellows are under pressure and subjected to both ambient and elevated temperatures. The minimum cycle life requirements for sizes ½" - 4" up to 800 class are 2,000 for gate valves and 5,000 for globe valves.

Dixon Eagle offers a **5 Year Bellows Fatigue Warranty** on all of our standard products.

### Warning & Safety

Dixon Eagle valves are designed to work safely for their intended use. Failure to know and understand the intended use or to consider the size, temperature, application, media, pressure and manufacturers recommendations when selecting the proper valve assembly components can result in accidents and injuries, including death and serious and permanent injuries. Dixon recommends that all valve assemblies be tested in accordance with ASME and API recommendations and be inspected regularly to ensure that their use remains appropriate and that they are not damaged.

At no charge, Dixon is available to consult, train and recommend the proper selection and application of all valves we sell. We strongly recommend that distributors and end users make use of Dixon's Testing and Recommendation Services.

## F8 Series: 1/2" - 2" Welded Bonnet

Globe Valves ANSI Class 150-800: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.

### Applications:

- For use in applications where leakage into or out of the valve is unacceptable such as heat transfer oil, toxic fluids, steam and regulated media.

### Features:

- stainless steel bellows (Inconel™ bellows available) provide long life and maximum corrosion resistance
- zero stem leakage eliminates media loss and satisfies environmental regulations
- zero maintenance results in lower operating costs / no downtime
- reduces monitoring costs
- three stem seals for safety: metallic bellows, graphite packing, backseat in open position
- hardfaced Stellite® 6 seating surface provides long life: soft seat available
- additional alloys, trims and other end configurations available

### Standards:

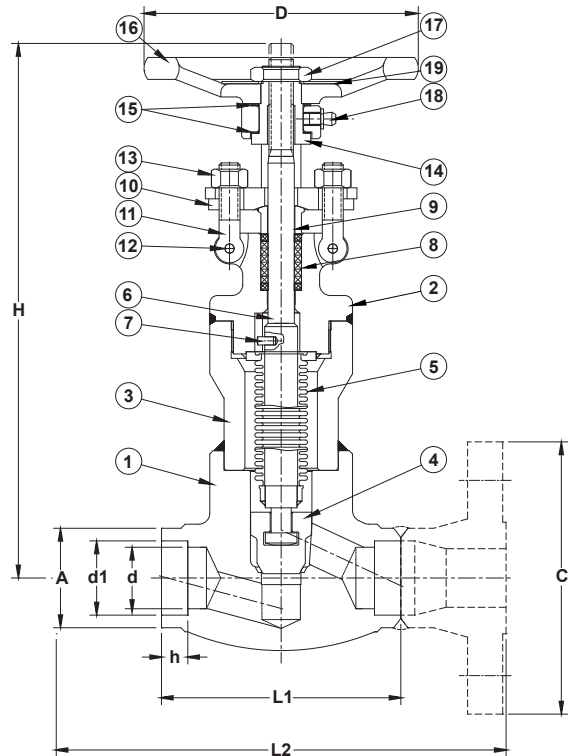
- valve tested to ASME B16.34 / API 598
- meets MSS SP-117



### Materials

No.	Description	Carbon Steel (C22)
1	body	A105 <sup>1</sup>
2	bonnet	A105
3	extension	A105
4	disc	type 420 stainless
5	bellows assembly	type 321 stainless
6	stem	type 410 stainless
7	guide pin	carbon steel
8	gland packing	graphite
9	gland bushing	type 410 stainless
10	gland plate	carbon steel
11	gland bolt	type 410 stainless
12	pin	type 410 stainless
13	hex nut	carbon steel
14	yoke sleeve	type 410 stainless
15	thrust collar	type 410 stainless
16	handwheel	malleable iron
17	handle nut	carbon steel
18	grease fitting	copper alloy
19	name plate	aluminium

<sup>1</sup>Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.



### Operating Characteristics and Dimensions

#### Socket Weld / Threaded Globe Valves

Size	d	A	d1	h	L1	H	D	LIFT	Wt (lbs)	Cv
1/2	.63	1.34	.855	.39	3.11	8.7	3.94	.26	6.5	2.7
3/4	.87	1.57	1.065	.51	3.62	8.7	3.94	.26	7.0	3.1
1	1.10	1.93	1.330	.51	4.37	9.6	4.92	.26	10.4	5.4
1 1/2	1.65	2.56	1.915	.51	5.98	12.6	6.30	.43	20.7	13.4
2	2.05	3.07	2.406	.63	6.77	13.6	7.09	.49	29.4	23.0

#### Flanged Globe Valves

Size	150			300			600		
	L2	C	Wt (lbs)	L2	C	Wt (lbs)	L2	C	Wt (lbs)
1/2	4.25	3.50	8.5	6.00	3.75	10.5	6.50	3.75	10.5
3/4	4.62	3.88	10.0	7.00	4.62	14.0	7.50	4.62	15.0
1	5.00	4.25	18.0	8.00	4.88	22.0	8.50	4.88	23.0
1 1/2	6.50	5.00	22.0	9.00	6.12	30.0	9.50	6.12	31.0
2	8.00	6.00	41.0	10.50	6.50	49.0	11.50	6.50	51.0



# G Series Forged Steel Globe Valve

## G8 Series: 1/2" - 2" Bolted Bonnet

Globe Valves ANSI Class 150-800: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.

### Applications:

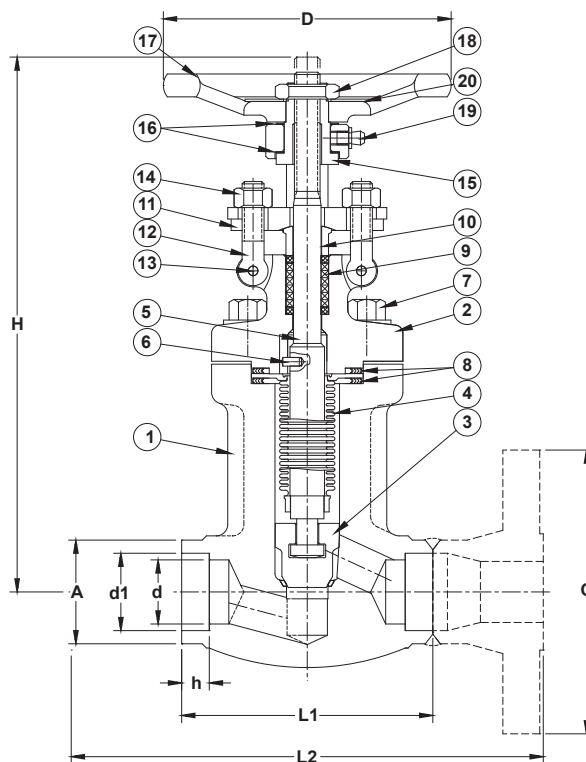
- For use in applications where leakage into or out of the valve is unacceptable such as heat transfer oil, toxic fluids, steam and regulated media.

### Features:

- Inconel™ bellows provide long life and maximum corrosion resistance
- zero stem leakage eliminates media loss and satisfies environmental regulations
- zero maintenance results in lower operating costs / no downtime
- reduces monitoring costs
- three stem seals for safety: metallic bellows, graphite packing, backseat in open position
- hardfaced Stellite® 6 seating surface provides long life
- additional alloys, trims and other end configurations available

### Standards:

- valve tested to ASME B16.34 / API 598
- meets MSS SP-117



No.	Description	Carbon Steel (C22)	316L Steel (S44)
1	body	A105 <sup>1</sup>	A182 F316L <sup>1</sup>
2	bonnet	A105	A182 F316L
3	disc	type 420 stainless	type 316 stainless <sup>1</sup>
4	bellows assy.	Inconel™ 625 <sup>2</sup>	Inconel™ 625 <sup>2</sup>
5	stem	type 410 stainless	type 316 stainless
6	guide pin	carbon steel	carbon steel
7	joint bolt	A193 B7	A193 B8
8	gasket	graphite / 316 SS	graphite / 316 SS
9	gland packing	graphite	graphite
10	gland bushing	type 410 stainless	type 304 stainless
11	gland plate	carbon steel	type 316 stainless
12	gland bolt	type 410 stainless	type 304 stainless
13	pin	type 410 stainless	type 304 stainless
14	hex nut	carbon steel	type 304 stainless
15	yoke sleeve	type 410 stainless	copper alloy
16	thrust collar	type 410 stainless	type 410 stainless
17	handwheel	malleable iron	malleable iron
18	handle nut	carbon steel	type 304 stainless
19	grease fitting	copper alloy	copper alloy
20	name plate	aluminium	aluminium

<sup>1</sup>Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.

<sup>2</sup>Inconel™ is a trademark of Huntington Alloys, Inc.

### Operating Characteristics and Dimensions

#### Socket Weld / Threaded Globe Valves

Size	d	A	d1	h	L1	H	D	LIFT	Wt (lbs)	Cv
1/2	.63	1.34	.855	.39	3.11	8.3	3.94	.26	5.9	2.7
3/4	.87	1.57	1.065	.51	3.62	8.3	3.94	.26	6.2	3.1
1	1.10	1.93	1.330	.51	4.37	9.2	4.92	.26	11.0	5.4
1 1/2	1.65	2.56	1.915	.51	5.98	11.9	6.30	.43	21.0	13.4
2	2.05	3.07	2.406	.63	6.77	12.8	7.09	.49	30.0	23.0

#### Flanged Globe Valves

Size	150			300			600		
	L2	C	Wt (lbs)	L2	C	Wt (lbs)	L2	C	Wt (lbs)
1/2	4.25	3.50	8.0	6.00	3.75	10.0	6.50	3.75	10.0
3/4	4.62	3.88	9.0	7.00	4.62	13.0	7.50	4.62	14.0
1	5.00	4.25	15.0	8.00	4.88	19.0	8.50	4.88	20.0
1 1/2	6.50	5.00	27.0	9.00	6.12	35.0	9.50	6.12	36.0
2	8.00	6.00	41.0	10.50	6.50	49.0	11.50	6.50	51.0

## H8 Series: 1/2" - 2" Welded Bonnet

Gate Valves ANSI Class 150-800: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.

### Applications:

- For use in applications where leakage into or out of the valve is unacceptable such as heat transfer oil, toxic fluids, steam and regulated media.

### Features:

- stainless steel bellows (Inconel™ bellows available) provide long life and maximum corrosion resistance
- zero stem leakage eliminates media loss and satisfies environmental regulations
- zero maintenance results in lower operating costs / no downtime
- reduces monitoring costs
- three stem seals for safety: metallic bellows, graphite packing, backseat in open position
- hardfaced Stellite® 6 seating surface provides long life
- additional alloys, trims and other end configurations available

### Standards:

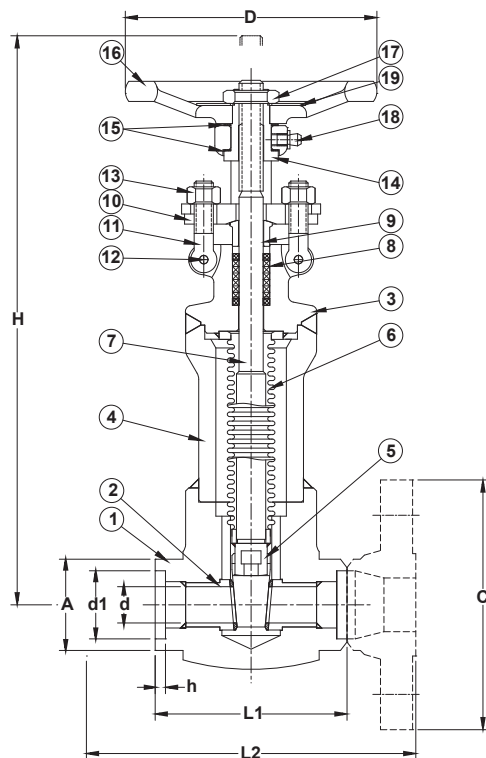
- valve tested to ASME B16.34 / API 598
- meets MSS SP-117



### Materials

No.	Description	Carbon Steel (C22)
1	body	A105
2	seat ring	type 316 stainless <sup>1</sup>
3	bonnet	A105
4	extension	A105
5	gate	type 420 stainless
6	bellows assy.	type 321 stainless
7	stem	type 410 stainless
8	gland packing	graphite
9	gland bushing	type 410 stainless
10	gland plate	carbon steel
11	gland bolt	type 410 stainless
12	pin	type 410 stainless
13	hex nut	carbon steel
14	yoke sleeve	type 410 stainless
15	thrust collar	type 410 stainless
16	handwheel	malleable iron
17	handle nut	carbon steel
18	grease fitting	copper alloy
19	name plate	aluminium

<sup>1</sup>Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.



### Operating Characteristics and Dimensions

#### Socket Weld / Threaded Globe Valves

Size	d	A	d1	h	L1	H	D	LIFT	Wt (lbs)	Cv
1/2	.39	1.34	.855	.39	3.11	9.8	3.94	.51	6.4	7.1
3/4	.54	1.57	1.065	.51	3.62	10.9	3.94	.67	7.2	15.0
1	.71	1.93	1.330	.51	4.37	13.1	4.92	.87	11.0	25.0
1 1/2	1.14	2.56	1.915	.51	4.72	17.0	6.30	1.34	20.0	75.0
2	1.45	3.07	2.406	.63	5.51	20.3	7.09	1.69	30.0	120.0

#### Flanged Globe Valves

Size	150			300			600		
	L2	C	Wt (lbs)	L2	C	Wt (lbs)	L2	C	Wt (lbs)
1/2	4.25	3.50	9.0	5.50	3.75	11	6.50	3.75	12
3/4	4.62	3.88	11.0	6.00	4.62	15	7.50	4.62	16
1	5.00	4.25	15.0	6.50	4.88	19	8.50	4.88	21
1 1/2	6.50	5.00	26.0	7.50	6.12	34	9.50	6.12	36
2	7.00	6.00	40.0	8.50	6.50	48	11.50	6.50	51



# W Series Forged Steel Gate Valve

## W8 Series: 1/2" - 2" Bolted Bonnet

Gate Valves ANSI Class 150-800: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.

### Applications:

- For use in applications where leakage into or out of the valve is unacceptable such as heat transfer oil, toxic fluids, steam and regulated media.

### Features:

- Inconel™ bellows provide long life and maximum corrosion resistance
- very compact, lower piping costs
- zero stem leakage eliminates media loss and satisfies environmental regulations
- zero maintenance results in lower operating costs / no downtime
- reduces monitoring costs
- three stem seals for safety: metallic bellows, graphite packing, backseat in open position
- hardfaced Stellite® 6 seating surface provides long life
- additional alloys, trims and other end configurations available

### Standards:

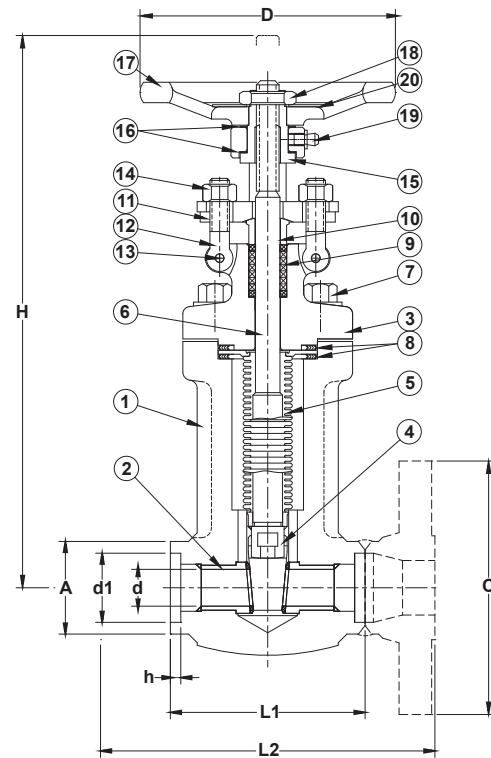
- valve tested to ASME B16.34 / API 598
- meets MSS SP-117



No.	Description	Carbon Steel (C22)	316L Steel (S44)
1	body	A105	A182 F316L
2	seat ring	type 316 stainless <sup>1</sup>	type 316 stainless <sup>1</sup>
3	bonnet	A105	A182 F316L
4	gate	type 420 stainless	type 316 stainless <sup>1</sup>
5	bellows assy.	Inconel™ 625 <sup>2</sup>	Inconel™ 625 <sup>2</sup>
6	stem	type 410 stainless	type 316 stainless
7	joint bolt	A193 B7	A193 B8
8	gasket	graphite / 316 SS	graphite / 316 SS
9	gland packing	graphite	graphite
10	gland bushing	type 410 stainless	type 304 stainless
11	gland plate	carbon steel	type 316 stainless
12	gland bolt	type 410 stainless	type 304 stainless
13	pin	type 410 stainless	type 304 stainless
14	hex nut	carbon steel	type 304 stainless
15	yoke sleeve	type 410 stainless	copper alloy
16	thrust collar	type 410 stainless	type 410 stainless
17	handwheel	malleable iron	malleable iron
18	handle nut	carbon steel	type 304 stainless
19	grease fitting	copper alloy	copper alloy
20	name plate	aluminium	aluminium

<sup>1</sup> Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.

<sup>2</sup> Inconel™ is a trademark of Huntington Alloys, Inc.



### Operating Characteristics and Dimensions

#### Socket Weld / Threaded Globe Valves

Size	d	A	d1	h	L1	H	D	LIFT	Wt (lbs)	Cv
1/2	.39	1.34	.855	.39	3.11	9.3	3.94	.51	7	7.1
3/4	.54	1.57	1.065	.51	3.62	10.1	3.94	.67	8	15.0
1	.71	1.93	1.330	.51	4.37	12.2	4.92	.87	14	25.0
1 1/2	1.14	2.56	1.915	.51	4.72	16.0	6.30	1.34	25	75.0
2	1.45	3.07	2.406	.63	5.51	18.6	7.09	1.69	40	120.0

#### Flanged Globe Valves

Size	150			300			600		
	L2	C	Wt (lbs)	L2	C	Wt (lbs)	L2	C	Wt (lbs)
1/2	4.25	3.50	10	5.50	3.75	12	6.50	3.75	13
3/4	4.62	3.88	12	6.00	4.62	16	7.50	4.62	17
1	5.00	4.25	18	6.50	4.88	22	8.50	4.88	24
1 1/2	6.50	5.00	31	7.50	6.12	39	9.50	6.12	41
2	7.00	6.00	50	8.50	6.50	58	11.50	6.50	61

## GY Series: 1/2" - 2" Welded Bonnet

Globe Valves ANSI Class 800: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.

### Applications:

- For use in applications where leakage into or out of the valve is unacceptable such as heat transfer oil, toxic fluids, steam and regulated media.

### Features:

- stainless steel bellows provide long life and maximum corrosion resistance
- zero stem leakage eliminates media loss and satisfies environmental regulations
- zero maintenance results in lower operating costs / no downtime
- reduces monitoring costs
- three stem seals for safety: metallic bellows, graphite packing, backseat in open position
- hardfaced Stellite® 6 seating surface provides long life
- additional alloys, trims and other end configurations available

### Standards:

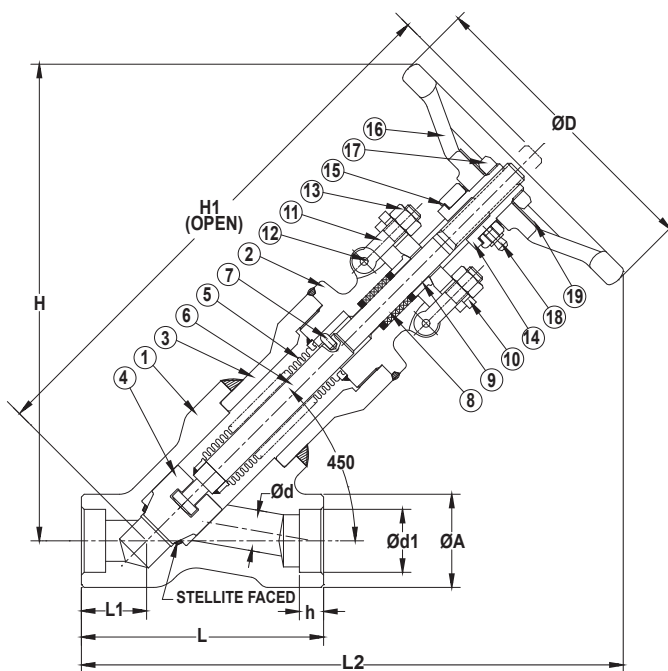
- valve tested to ASME B16.34 / API 598
- meets MSS SP-117



### Materials

No.	Description	Carbon Steel (C22)
1	body	carbon steel A105 <sup>1</sup>
2	bonnet	carbon steel A105
3	extension	carbon steel A105
4	disc	type 420 stainless steel
5	bellows assembly	type 321 stainless steel
6	stem	type 410 stainless steel
7	guide pin	carbon steel
8	gland packing	graphite
9	gland bushing	type 410 stainless steel
10	gland plate	carbon steel
11	gland bolt	type 410 stainless steel
12	pin	type 410 stainless steel
13	hex nut	carbon steel
14	yoke sleeve	type 410 stainless steel
15	thrust collar	type 410 stainless steel
16	handwheel	malleable iron
17	handwheel nut	carbon steel
18	grease fitting	copper alloy
19	name plate	aluminium

<sup>1</sup>Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.



### Operating Characteristics and Dimensions

#### Socket Weld / Threaded Globe Valves

Size	d	A	d1	h	L	L1	L2	H	H1	D	LIFT	Wt (lbs)	Cv
1/2	.51	1.81	.855	.39	4.25	1.24	10.35	9.1	11.0	4.92	.43	10	5
3/4	.67	1.81	1.065	.51	4.25	1.24	10.35	9.1	11.0	4.92	.43	10	8
1	.87	1.97	1.330	.51	5.12	1.38	11.42	10.1	11.6	6.30	.52	13	13
1 1/2	1.38	2.68	1.915	.51	6.30	1.54	15.70	14.1	17.1	7.09	.72	24	37
2	1.73	3.23	2.406	.63	7.48	1.81	16.88	15.0	18.9	7.09	.91	34	57

# GA Series Forged Steel Globe Valve

## GA Series: 1/2" - 2" Welded Bonnet

Globe Valves ANSI Class 1500: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.

### Applications:

- For use in applications where leakage into or out of the valve is unacceptable such as heat transfer oil, toxic fluids, steam and regulated media.

### Features:

- Inconel™ bellows provide long life and maximum corrosion resistance
- zero stem leakage eliminates media loss and satisfies environmental regulations
- zero maintenance results in lower operating costs / no downtime
- reduces monitoring costs
- three stem seals for safety: metallic bellows, graphite packing, backseat in open position
- hardfaced Stellite® 21 seating surface provides long life
- additional alloys, trims and other end configurations available

### Standards:

- valve tested to ASME B16.34 / API 598
- meets MSS SP-117

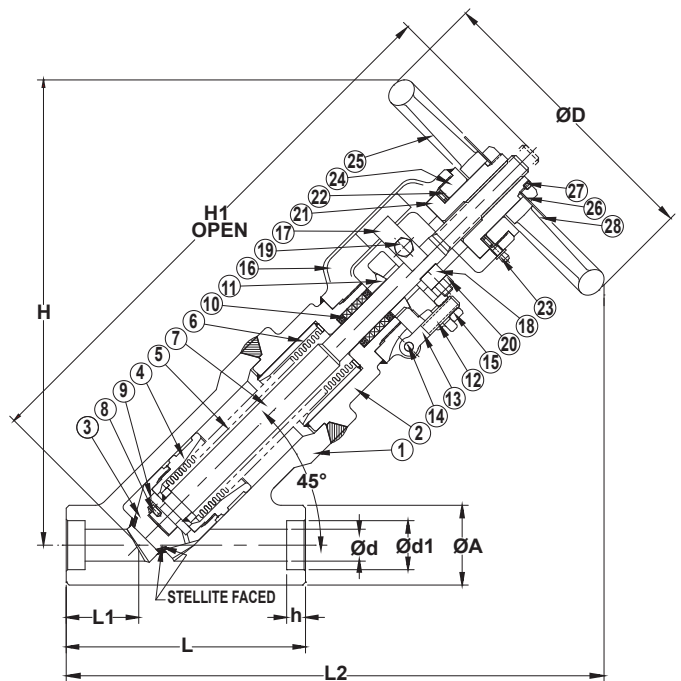


### Materials

No.	Description	(A105)	(F22)
1	body	forged steel A105 <sup>1</sup>	alloy steel A182 F22 <sup>1</sup>
2	bonnet	forged steel A105	alloy steel A182 F22
3	disc	type 316 stainless <sup>1</sup>	type 316 stainless <sup>1</sup>
4	disc guide	type 316 stainless	type 316 stainless
5	bellows assembly	Inconel™ 625 <sup>2</sup>	Inconel™ 625 <sup>2</sup>
6	bellows guide	type 316 stainless	type 316 stainless
7	stem	type 410 stainless	type 410 stainless
8	guide pin	type 304 stainless	type 304 stainless
9	split ring	type 410 stainless	type 410 stainless
10	gland packing	graphite	graphite
11	gland bushing	type 410 stainless	type 410 stainless
12	gland plate	carbon steel	carbon steel
13	gland bolt	type 410 stainless	type 410 stainless
14	pin	type 410 stainless	type 410 stainless
15	hex nut	carbon steel	carbon steel
16	yoke	forged steel A105	forged steel A105
17	guide plate (A)	carbon steel	carbon steel
18	guide plate (B)	carbon steel	carbon steel
19	hex bolt	carbon steel	carbon steel
20	hex nut	carbon steel	carbon steel
21	yoke sleeve	copper alloy	copper alloy
22	thrust bearing	bearing steel	bearing steel
23	grease fitting	copper alloy	copper alloy
24	yoke bushing	carbon steel	carbon steel
25	handwheel	malleable iron	malleable iron
26	handwheel nut	carbon steel	carbon steel
27	set screw	carbon steel	carbon steel
28	name plate	aluminium	aluminium

<sup>1</sup>Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.

<sup>2</sup>Inconel™ is a trademark of Huntington Alloys, Inc.



### Operating Characteristics and Dimensions

#### Socket Weld / Threaded Globe Valves

Size	d	A	d1	h	L	L1	L2	H	H1	D	LIFT	Wt (lbs)	Cv
1/2	.51	2.17	.855	.39	6.50	1.97	14.6	12.6	15.1	7.87	.38	28	5
3/4	.71	2.17	1.065	.51	6.50	1.97	14.6	12.6	15.1	7.87	.38	28	9
1	.87	2.17	1.330	.51	6.50	1.97	14.6	12.6	15.1	7.87	.38	28	13
1 1/2	1.42	3.46	1.915	.51	9.50	2.75	19.7	17.0	19.7	11.81	.62	65	39
2	1.65	3.46	2.406	.63	9.50	2.75	19.7	17.0	19.7	11.81	.62	65	52



## J Series: 2½" - 16"

Globe Valves ANSI Class 150-600: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.



### Applications:

- For use in applications where leakage into or out of the valve is unacceptable such as heat transfer oil, toxic fluids, steam and regulated media.

### Features:

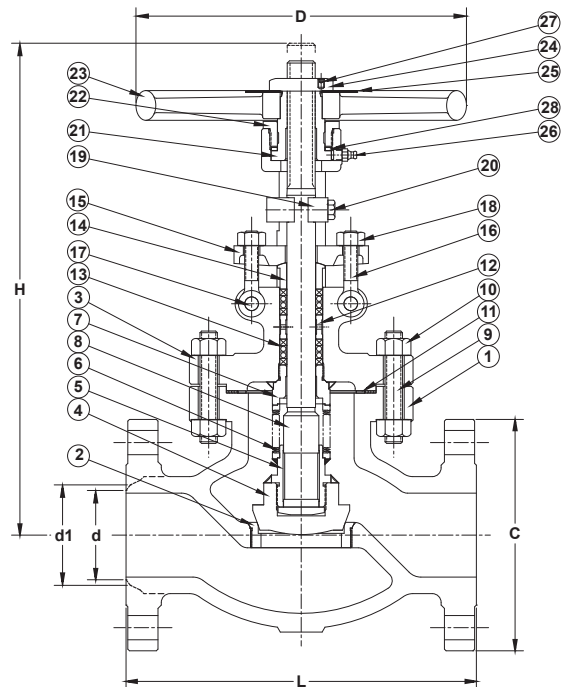
- Inconel™ bellows provide long life and maximum corrosion resistance
- very compact, lower piping costs
- zero stem leakage eliminates media loss and satisfies environmental regulations
- zero maintenance results in lower operating costs / no downtime
- reduces monitoring costs
- three stem seals for safety: metallic bellows, graphite packing, backseat in open position
- hardfaced Stellite® 6 seating surface provides long life
- additional sizes, alloys, trims and other end configurations available

### Standards:

- valve tested to ASME B16.34 / API 598
- meets MSS SP-117

### Materials

No.	Description	Carbon Steel (C22)
1	body	A216 WCB
2	seat ring	A105 <sup>1</sup>
3	bonnet	A216 WCB
4	disc	A216 WCB + 13CR
5	disc nut	type 316 stainless
6	bellows assy.	Inconel™ 625 <sup>2</sup>
7	bonnet bushing	type 316 stainless
8	stem	type 410 stainless
9	joint bolt	A193 B7
10	hex nut	A194 2H
11	gasket	graphite / 316 stainless
12	packing washer	type 410 stainless
13	gland packing	graphite
14	gland bushing	type 410 stainless
15	gland plate	A216 WCB
16	gland bolt	A193 B7
17	pin	carbon steel
18	hex nut	A194 2H
19	guide plate	carbon steel
20	hex bolt	carbon steel
21	sleeve	ductile iron
22	yoke cap	carbon steel
23	handwheel	malleable iron
24	handle nut	carbon steel
25	name plate	aluminium
26	grease fitting	copper alloy
27	set screw	alloy steel
28	thrust collar	copper alloy



<sup>1</sup> Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.

<sup>2</sup> Inconel™ is a trademark of Huntington Alloys, Inc.

### Operating Characteristics and Dimensions

#### Flanged and Butt Weld End - ANSI 150

Size	d	d1	C	L	H	D	LIFT	Cv	Wt (lbs) FL	Wt (lbs) BW
2½	2.469	2.96	7.00	8.50	15	10	.63	55	70	55
3	3.068	3.59	7.50	9.50	17	12	.63	85	90	80
4	4.026	4.62	9.00	11.50	19	14	.79	150	150	120
6	6.065	6.78	11.00	16.00	23	18	1.18	360	260	245
8	7.981	8.78	13.50	19.50	28	20	1.57	650	430	400
10	10.020	10.94	16.00	24.50	30	22	2.00	1100	590	510

#### Flanged and Butt Weld End - ANSI 300

Size	d	d1	C	L	H	D	LIFT	Cv	Wt (lbs) FL	Wt (lbs) BW
2½	2.469	2.96	7.50	11.50	17	10	.63	55	105	85
3	3.068	3.59	8.25	12.50	18	12	.63	85	120	90
4	4.026	4.62	10.00	14.00	21	16	.79	150	180	140
6	6.065	6.78	12.50	17.50	24	18	1.18	360	340	270
8	7.981	8.78	15.00	22.00	31	20	1.57	650	570	450
10	10.020	10.94	17.50	24.50	39	24	2.00	1100	1200	1070



# L Series Cast Steel Gate Valve

## L Series: 2½" - 24"

Gate Valves ANSI/API Class 150-600: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.



### Applications:

- For use in applications where leakage into or out of the valve is unacceptable such as heat transfer oil, toxic fluids, steam and regulated media.

### Features:

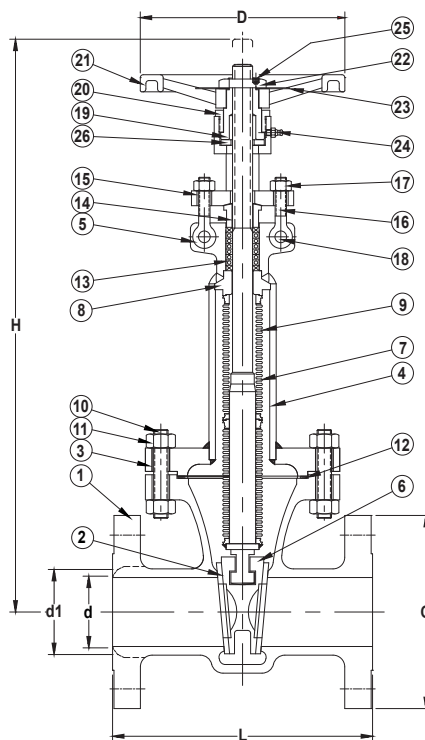
- Inconel™ bellows provide long life and maximum corrosion resistance
- zero stem leakage eliminates media loss and satisfies environmental regulations
- zero maintenance results in lower operating costs / no downtime
- reduces monitoring costs
- three stem seals for safety: metallic bellows, graphite packing, backseat in open position
- hardfaced Stellite® 6 seating surface provides long life
- additional sizes, alloys, trims and other end configurations available

### Standards:

- valve tested to ASME B16.34 / API 598
- meets MSS SP-117

### Materials

No.	Description	Carbon Steel (C22)
1	body	A216 WCB
2	seat ring	A105 <sup>1</sup>
3	bonnet	A216 WCB
4	extension	1025
5	yoke	A216 WCB
6	gate	A216 WCB <sup>1</sup>
7	bellows assy.	Inconel™ 625 <sup>2</sup>
8	bonnet bushing	type 316 stainless
9	stem	type 410 stainless
10	joint bolt	A193 B7
11	hex nut	A194 2H
12	gasket	graphite / 316 stainless
13	gland packing	graphite
14	gland bushing	type 410 stainless
15	gland plate	A216 WCB
16	gland bolt	A193 B7
17	hex nut	A194 2H
18	pin	carbon steel
19	sleeve	ductile iron
20	yoke cap	carbon steel
21	handwheel	malleable iron
22	handle nut	carbon steel
23	name plate	aluminium
24	grease fitting	carbon steel
25	set screw	alloy steel
26	thrust collar	copper alloy



<sup>1</sup> Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.  
<sup>2</sup> Inconel™ is a trademark of Huntington Alloys, Inc.

### Operating Characteristics and Dimensions

#### Flanged End - ANSI 150

#### Butt Weld End - ANSI 150

Size	C	L	H	D	Wt (lbs)	d	d1	L	H	D	LIFT	Cv	Wt (lbs)
3	7.50	8.00	29	10	75	3.068	3.59	11.12	29	10	3.48	710	113
4	9.00	9.00	36	12	130	4.026	4.62	12.00	36	12	4.45	1300	135
6	11.00	10.50	53	16	210	6.065	6.78	15.88	53	16	6.45	3110	345
8	13.50	11.50	61	18	370	7.981	8.78	16.50	61	18	8.50	5700	500
10	16.00	13.00	71	18	500	10.020	10.94	18.00	72	20	10.40	8900	690
12	19.00	14.00	82	18	710	12.000	12.97	19.75	85	20	12.50	13300	920

#### Flanged and Butt Weld End - ANSI 300

Size	d	d1	C	L	H	D	LIFT	Cv	Wt (lbs) FL	Wt (lbs) BW
3	3.068	3.59	8.25	11.12	29	10	3.48	710	136	113
4	4.026	4.62	10.00	12.00	36	12	4.45	1300	179	135
6	6.065	6.78	12.50	15.88	53	16	6.45	3110	420	345
8	7.981	8.78	15.00	16.50	61	18	8.50	5700	600	500
10	10.020	10.94	17.50	18.00	72	20	10.40	8900	820	690
12	12.000	12.97	20.50	19.75	85	20	12.50	13300	1150	920

## C Series: 1/2" - 2" Bolted Bonnet

Globe Valves ANSI Class 150 - 800: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.

### Applications:

- For use in cryogenic (to - 198°C / - 325°F) applications where leakage into or out of the valve is unacceptable

### Features:

- Inconel™ bellows provide long life and maximum corrosion resistance
- zero stem leakage eliminates media loss and satisfies environmental regulations
- versatile seating arrangements, both hardfaced and soft are available
- three stem seals for safety: metallic bellows, TFE packing, backseat in open position
- purge ports on bonnet eliminate icing inside the bellows
- butt weld, flanged, socket weld, threaded and tube end connections
- fully actuated valves available upon request

### Standards:

- vacuum helium leak test with mass spectrometer

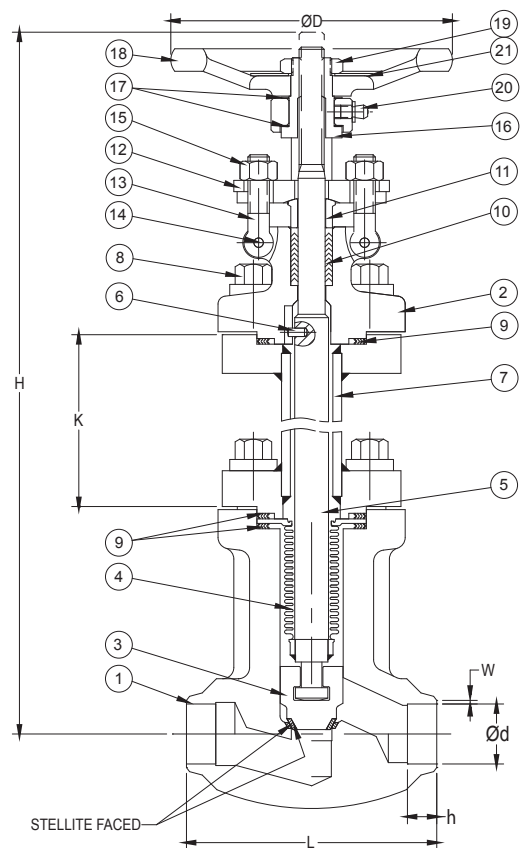


### Materials

No.	Description	Carbon Steel (C22)
1	body	A182 F316L stainless <sup>1</sup>
2	bonnet	A182 F316L stainless
3	disk	316 stainless <sup>1</sup>
4	bellows assembly	Inconel™ 625 <sup>2</sup>
5	stem	316 stainless
6	guide pin	304 stainless
7	extension	316 stainless
8	joint bolt	A193 B8
9	gasket	TFE/316 stainless
10	gland packing	TFE
11	gland bushing	304 stainless
12	gland plate	316 stainless
13	gland bolt	304 stainless
14	pin	304 stainless
15	hex nut	304 stainless
16	yoke sleeve	copper alloy
17	thrust collar	410 stainless
18	handwheel	malleable iron
19	handwheel nut	304 stainless
20	grease fitting	copper alloy
21	name plate	aluminium

<sup>1</sup>Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.

<sup>2</sup>Inconel™ is a trademark of Huntington Alloys, Inc.



### Operating Characteristics and Dimensions

#### Buttweld Globe Valves

Size *	d	W	h	L CL.150	L CL.300	L CL.600	H	D	K	LIFT	Wt. Lbs	Cv
1/2	0.62	0.06	0.39	4.25	6.00	6.50	16.30	3.94	8.00	0.26	9	2.7
3/4	0.82	0.06	0.51	4.62	7.00	7.50	16.30	3.94	8.00	0.26	9	3.1
1	1.05	0.06	0.51	5.00	6.50	8.50	17.30	4.92	8.00	0.26	15	5.4
1 1/2	1.61	0.06	0.51	6.50	7.50	9.50	19.90	6.30	8.00	0.43	29	13.4
2	2.07	0.06	0.63	8.00	8.50	11.50	20.80	7.09	8.00	0.49	41	23.0

\* sizes 3" - 6" also available

## C Series: 2½" and Larger Bolted Bonnet

Globe Valves ANSI Class 150 - 600: our **bellows technology** keeps corrosive or harmful atmospheric conditions from entering the process.



### Applications:

- For use in cryogenic (to - 198°C / - 325°F) applications where leakage into or out of the valve is unacceptable

### Features:

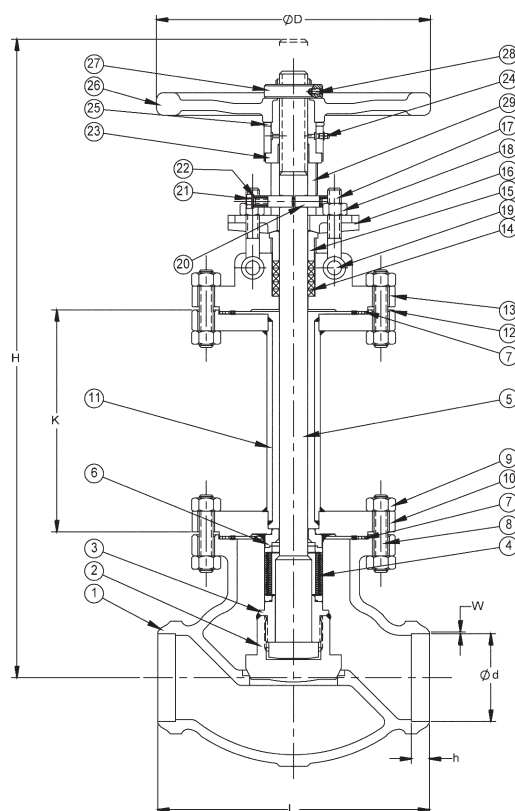
- Inconel™ bellows provide long life and maximum corrosion resistance
- zero stem leakage eliminates media loss and satisfies environmental regulations
- versatile seating arrangements, both hardfaced and soft are available
- three stem seals for safety: metallic bellows, TFE packing, backseat in open position
- purge ports on bonnet eliminate icing inside the bellows
- butt weld, flanged, socket weld, threaded and tube end connections
- fully actuated valves available upon request

### Standards:

- vacuum helium leak test with mass spectrometer

### Materials

No.	Description	Stainless Steel (S44)
1	body	A351 CF8M
2	disk	A351 CF8M
3	disk nut	A276 316 SS
4	bellows assembly	Inconel™ 625/316 SS
5	stem	316 stainless
6	bonnet bushing	316 stainless
7	gasket	TFE/316 stainless
8	joint bolt	A193 B8
9	hex nut	A194 8
10	lower flange	316 stainless
11	extension pipe	316 stainless
12	upper flange	316 stainless
13	bonnet	A351 CF8M
14	gland packing set	TFE
15	gland bushing	A276 316 SS
16	gland plate	A351 CF8
17	gland bolt	A193 B8
18	hex nut	A194 8
19	pin	304 stainless
20	guide plate	316 stainless
21	hex bolt	18-8 stainless
22	lock washer	18-8 stainless
23	yoke sleeve	copper alloy
24	grease fitting	18-8 stainless
25	thrust collar	copper alloy
26	hand wheel	ductile iron A536
27	hand wheel nut	316 stainless
28	set screw	18-8 stainless
29	name plate	aluminium



<sup>1</sup> Stellite™ overlay on seating area. Stellite™ is a registered trademark of Thermadyne.  
<sup>2</sup> Inconel™ is a trademark of Huntington Alloys, Inc.

### Operating Characteristics and Dimensions

#### Buttweld Globe Valves

Size *	d	W	h	L CL.150	L CL.300	L CL.600	H	D	K	LIFT	Wt. Lbs	Cv
3	3.07	0.06	0.50	9.50	12.50	14.00	15.13	6.48	8.00	0.64	62	98.0
4	4.03	0.06	0.50	11.50	14.00	17.00	23.00	11.90	8.00	0.79	80	189.0
6	6.07	0.06	0.50	16.00	17.50	22.00	26.12	13.80	8.00	1.18	180	470.0

\* larger sizes also available