



# CAST STAINLESS STEEL

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## GATE, GLOBE & CHECK VALVES

- API 603 & 600, 200 WOG
- ASME Classes 150 ~ 1500, 200 WOG
- Stainless Steel 316, 304 & 317, & Alloy 20
- Flanged, Butt Weld, Threaded & Socket Weld

# 01 COMPANY INFORMATION

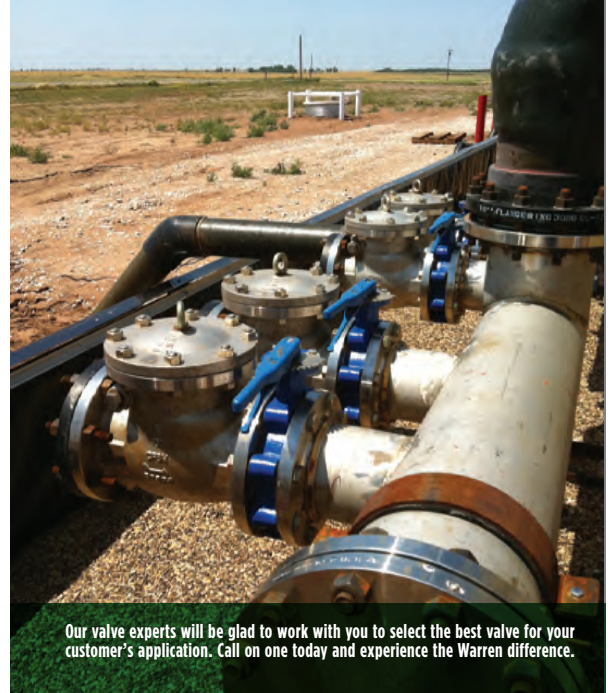
**Warren Valve is a high quality manufacturer of valves in gate, globe, check, ball, and strainer configurations, available in a wide variety of material and pressure classes.**

Warren Valves are engineered to meet ASTM, NACE, ASME, and API Standards, satisfying the strict requirements of petroleum refineries, chemical processing plants, power-generating plants, pulp and paper, food processing, mining, and other critical applications.

Warren Valves are subject to rigorous quality inspections. Our comprehensive evaluation includes on-site audits, inspection at the source, receiving inspections, and destructive material testing. This ongoing process, led by our in-house metallurgist and QA/QC team, ensures that Warren Valves are manufactured to the highest industry standards.

Warren Valves are offered exclusively through Warren Alloy. For half a century, Warren Alloy has been a Master Distributor of Stainless Steel and High Alloy pipe, tubing, flanges, fittings, and its exclusive line of Warren Valves. Warren Alloy is dedicated to our customers by maintaining and extensive inventory, providing 24-hour emergency service, and fast shipment.

Warren's in-house capabilities include pipe cutting, threading, machining, and valve modification.



Our valve experts will be glad to work with you to select the best valve for your customer's application. Call on one today and experience the Warren difference.

## WHY WARREN?

TURN TO WARREN VALVE WHEN YOUR CUSTOMER REQUIREMENTS INCLUDE:

### QUALITY CONTROL

Warren's strict quality control ensures that each valve is manufactured to endure the most demanding applications.

In-house testing assures valves meet our highest quality standards and production is certified to ISO standards. Mill test reports are always available.

### AVAILABILITY

Project level inventories are maintained; same or next day shipment is our standard.

### COMPETITIVE PRICING

Warren's prices offer an economical alternative to the big name valves.

### MATERIALS



Warren carries one of the most varied material inventories in the industry; including carbon steel, low-temp carbon steel, forged carbon, stainless steels (316, 304, 317), Alloy 20, and Hastelloy-C. Other exotic alloys and stainless steels are available on a POA basis.




Warren Valve is ISO-Certified in Houston, Charlotte, and Salt Lake City and performs valve modifications in-house.



Valves are stocked and ready to ship from each of our 11 locations throughout North America.

<b>CAST STAINLESS STEEL GATE VALVES</b>		<b>03</b>
	CLASS 150	<b>04</b>
	CLASS 300	<b>06</b>
	CLASS 600	<b>06</b>
	CLASS 900	<b>07</b>
	CLASS 1500	<b>07</b>
<b>CAST STAINLESS STEEL GLOBE VALVES</b>		<b>08</b>
	CLASS 150	<b>09</b>
	CLASS 300	<b>11</b>
	CLASS 600	<b>11</b>
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	CLASS 1500	<b>12</b>

<b>CAST STAINLESS STEEL CHECK VALVES</b>		<b>13</b>
	CLASS 150	<b>14</b>
	CLASS 300	<b>16</b>
	CLASS 600	<b>16</b>
	CLASS 900	<b>17</b>
	CLASS 1500	<b>17</b>

<b>CAST STAINLESS STEEL 200 WOG</b>	<b>18</b>
<b>TOPWORKS DATA</b>	<b>21</b>
<b>PRESSURE/TEMPERATURE CHART</b>	<b>23</b>
<b>LOW EMISSION VALVES</b>	<b>24</b>
<b>CERTIFICATIONS / CRYOGENICS</b>	<b>25</b>

<b>VALVE SIZES OFFERED (API 603 &amp; 600)*</b>																					
		Class	Figure No.	Size (inches)																	
				0.5	0.75	1	1.5	2	2.5	3	4	5	6	8	10	12	14	16	18	20	24
Flanged End	Gate	150	1156	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		300	1306	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		600	1606			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
		900	1906							X	X		X	X	X	X	X	X	X	X	X
		1500	1506			X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
	Globe	150	2156	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		300	2306	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
		600	2606					X		X	X		X	X	X	X	X	X	X	X	X
		900	2906							X	X		X	X	X	X					
		1500	2506					X	X	X	X		X	X							
	Swing Check	150	3156	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
		300	3306	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
		600	3606			X	X	X		X	X		X	X	X	X	X	X	X	X	X
		900	3906								X	X		X	X						
		1500	3506			X	X	X	X	X	X		X	X	X	X					
Butt Weld	Gate	150	1156-W					X		X	X		X								
	Globe	150	2156-W					X		X	X		X								
	Check	150	3156-W					X		X	X		X								
Threaded	Gate	150	1156-T	X	X	X	X	X													
	Globe	150	2156-T	X	X	X	X	X													
	Check	150	3156-T	X	X	X	X	X													
Socket Weld	Gate	150	1156-S	X	X	X	X	X													
	Globe	150	2156-S	X	X	X	X	X													
	Check	150	3156-S	X	X	X	X	X													

<b>VALVE SIZES OFFERED (200 WOG)</b>																				
		Class	Figure No.	Size (inches)																
				0.5	0.75	1	1.5	2	2.5	3	4	5	6	8	10	12	14	16	18	20
Threaded	Gate	150	221	X	X	X	X	X	X	X										
	Globe	150	222	X	X	X	X	X												
	Check	150	223	X	X	X	X	X	X	X										

\* Also available in 304, 317, and Alloy 20. Hastelloy-C also available on factory order.

# 03 CAST STAINLESS STEEL API 603 & 600 GATE VALVES



## CAST STAINLESS STEEL API 603 & 600 GATE VALVES\*

Warren Valve's line of Cast Stainless Steel Gate Valves is offered in classes 150, 300, 600, 900, and 1500. End connections include flanged, threaded, butt weld and socket weld.

Warren Valves are subject to rigorous quality inspections. Our comprehensive evaluation includes on-site audits, inspection at the source, receiving inspections, and destructive material testing. Mill test reports are always available.

### CAST STAINLESS STEEL GATE VALVES

FEATURES	API 603 RF FLANGED	API 600 RF FLANGED	CLASS 150# THR & SW
OS&Y	X	X	X
Rising Stem	X	X	X
Flexible Wedge	X	X	
Solid Wedge			X
Bolted Bonnet	X	X	X
Welded Seat Rings		X	
Integral Seats	X		X

\*Also available in 304, 317, and Alloy 20. Hastelloy-C also available on factory order.

### GENERAL DESIGN STANDARDS

Cast Stainless Steel Flanged & Butt Weld Gate Valves	
Design	API 603 & API 600 (Class 600 & Up)
Pressure Temperature Rating	ANSI B16.34
Testing	API 598 <sup>1</sup>
Face to Face Dimensions	ANSI B16.10
End Flange Dimensions	ANSI B16.5
Weld End Dimensions	ANSI B16.25
Visual Inspection of Castings	MSS-SP-55

<sup>1</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.

Cast Stainless Steel Threaded & Socket Weld Gate Valves	
Design	API 603 <sup>1</sup>
Pressure Temperature Rating	ANSI B16.34
Testing	API 598 <sup>2</sup>
Face to Face Dimensions	Manufacturer's Standards
Pipe Threads	ASME B1.20.1
Socket Weld Ends	ASME B16.11
Visual Inspection of Castings	MSS-SP-55

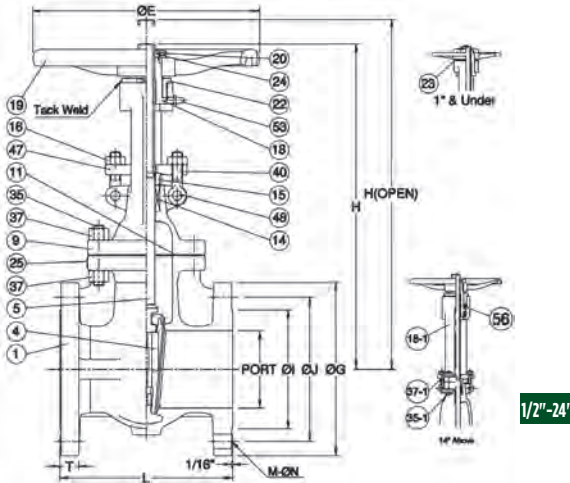
<sup>1</sup> Except for end connections

<sup>2</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.

# CAST STAINLESS STEEL GATE VALVES API 603 04

**CLASS 150 FIG NO. 1156**

AVAILABLE IN 1/2"-24"



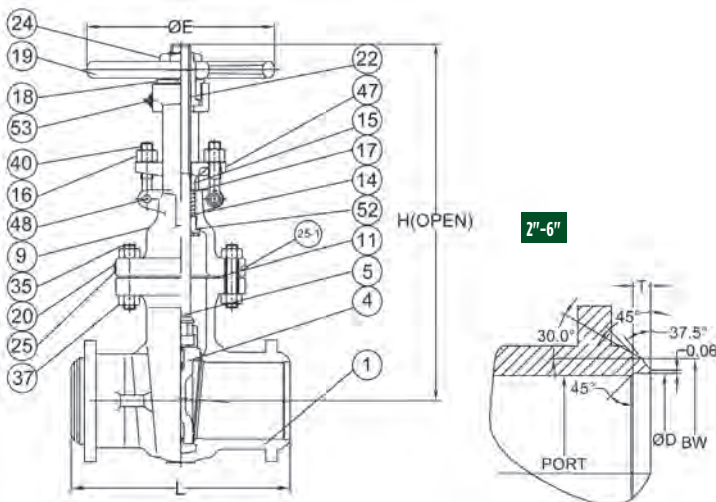
API 603	
FIGURE NO.	FEATURES
1156 (as shown)	API Trim 10 (316/316) Integral Seats

DIMENSIONS												
SIZE	PORT	L	ØE	H	H(OPEN)	ØG	ØJ	ØI	T	M	ØN	Wt(lbs)
1/2"	0.59	4.25	3.94	7.01	7.72	3.50	2.38	1.38	0.38	4	0.62	7
3/4"	0.75	4.62	3.94	7.87	8.66	3.88	2.75	1.69	0.41	4	0.62	9
1"	1.00	5.00	5.91	9.13	10.24	4.25	3.12	2.00	0.44	4	0.62	15
1-1/2"	1.50	6.50	7.09	10.35	12.13	5.00	3.88	2.88	0.56	4	0.62	23
2"	2.00	7.00	7.09	10.98	13.27	6.00	4.75	3.62	0.62	4	0.75	29
2-1/2"	2.50	7.50	7.87	12.95	15.87	7.00	5.50	4.12	0.69	4	0.75	42
3"	3.11	8.00	7.87	14.41	17.83	7.50	6.00	5.00	0.75	4	0.75	53
4"	4.00	9.00	11.81	16.93	21.42	9.00	7.50	6.19	0.94	8	0.75	82
5"	5.00	10.00	11.81	19.96	25.59	10.00	8.50	7.31	0.94	8	0.88	111
6"	6.00	10.50	11.81	22.52	29.13	11.00	9.50	8.50	1.00	8	0.88	133
8"	8.00	11.50	13.78	28.54	37.17	13.50	11.75	10.62	1.12	8	0.88	228
10"	10.00	13.00	15.75	34.37	45.08	16.00	14.25	12.75	1.19	12	1.00	309
12"	12.00	14.00	17.72	39.72	52.44	19.00	17.00	15.00	1.25	12	1.00	540
14"	13.25	15.00	19.69	44.41	58.35	21.0	18.75	16.25	1.38	12	1.12	672
16"	15.25	16.00	23.62	50.39	66.50	23.50	21.25	18.50	1.44	16	1.12	864
18"	17.25	17.00	23.62	55.75	73.86	25.00	22.75	21.00	1.56	16	1.25	/
20"	19.25	18.00	27.56	61.69	81.62	27.50	25.00	23.00	1.69	20	1.25	/
24"	23.25	20.00	30.12	/	/	32.00	29.50	27.25	1.88	20	1.38	/

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Wedge	ASTM A351 Gr.CF8M (Flexible Wedge)
5	Stem	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	PTFE.
14	Packing	PTFE
15	Gland	ASTM A351 Gr.CF8M
16	Eye Bolt Nut	ASTM A194 Gr.8MA (Heavy)
18	Sleeve	ASTM A439 Gr. D2C
18-1	Yoke	ASTM A216 Gr.WCB (14" Above)
19	Handwheel	ASTM A536 Ductile Iron
20	Set Screw	ASTM A193 Gr.B8
22	Stem Nut	ASTM A351 Gr. CF8 (1 - 1/2" Above)
23	Washer	ASTM A276 Gr.304 (1" Under)
24	Handwheel Nut	ASTM A351 Gr.CF8
25	Name Plate	ASTM A666-304
35	Bonnet Stud	ASTM A193 Gr. B8MA
35-1	Yoke Bolt	ASTM A193 Gr. B8MA (14" Above)
37	Bonnet Nut	ASTM A194 Gr.8MA (Heavy)
37-1	Yoke Nut	ASTM A194 Gr.8MA (14" Above)
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Eye Bolt Pin	ASTM A276 Gr.304
53	Oil Filler	ANSI 304 (1 - 1/2" Above)
56	Bearing	STEEL (14" Above)

**CLASS 150 FIG NO. 1156-W**

AVAILABLE IN 2"-6"



API 603	
FIGURE NO.	FEATURES
1156-W (as shown)	API Trim 10 (316/316) Integral Seats

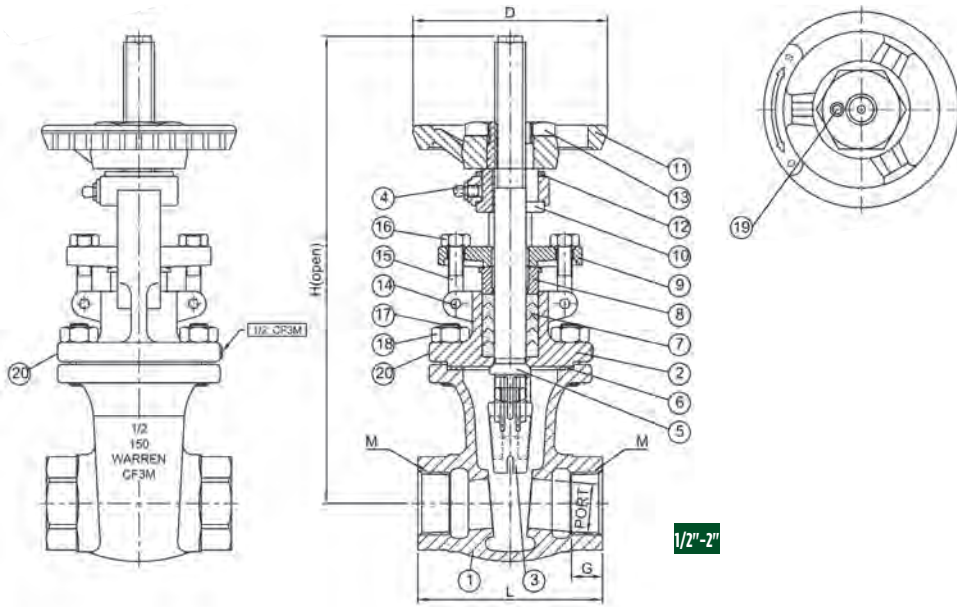
DIMENSIONS									
SIZE	SCH	PORT	L	ØD	BW	T	ØE	H	Wt(lbs)
2"	40	2.00	8.50	2.07	2.44	0.31	7.87	15.20	41
3"	40	3.00	11.12	3.07	3.59	0.39	9.84	19.02	73
4"	40	4.00	12.00	4.03	4.62	0.43	9.84	23.11	103
6"	40	6.00	15.88	6.07	6.78	0.47	11.81	30.31	165

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Wedge	ASTM A351 Gr.CF8M+STL#6
5	Stem	ASTM A182 Gr.F316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	316+Flexible Graphite
14	Packing	Flexible Graphite
15	Gland	ASTM A276 Gr.316
16	Eye Nut	ASTM A194 Gr.8MA
17	Packing	Stainless Steel Wire+Graphite
18	Sleeve	ASTM A276 Gr.410
19	Handwheel	ASTM A536 Gr.65-45-12
20	Rivet	SS304
22	Stem Nut	ASTM A439 Gr.D-2C
24	Lock Nut	ASTM A276 Gr.410
25	Nameplate	SS304
25-1	Low Emission Nameplate	SS304
35	Bonnet Stud	ASTM A193 Gr. B8M
37	Nut	ASTM A194 Gr.8M
40	Eye Bolt	ASTM A193 Gr.B8M
47	Gland Flange	ASTM A351 Gr.CF8
48	Pin	ASTM A276 Gr.202
52	Back Seat	ASTM A276 Gr.316
53	Oil Filler	ASTM A276 Gr.202

# 05 CAST STAINLESS STEEL GATE VALVES API 603

**CLASS 150 FIG NO. 1156-T**

AVAILABLE IN 1/2"-2"



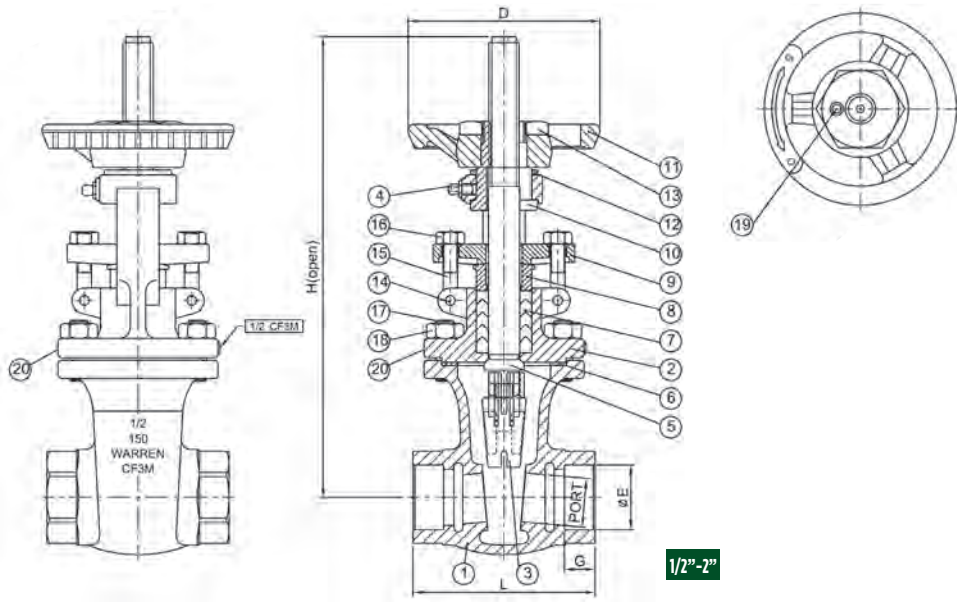
API 603	
FIGURE NO.	FEATURES
1156-T (as shown)	API Trim 10 (316/316) Integral Seats

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF3M
2	Bonnet	ASTM A351 Gr.CF3M
3	Disc	ASTM A351 Gr.CF3M
4	Grease Feeder	ANSI SS304
5	Stem	ASTM A276 Gr. 316
6	Gasket	PTFE
7	Packing	PTFE
8	Gland	ASTM A351 Gr.CF3M
9	Gland Flange	ASTM A351 Gr.CF8
10	Stem Nut	ASTM A439 Gr.CD2C
11	Handwheel	ASTM A536 Gr.65-45-12
12	Washer	ASTM A276 Gr.304
13	Handwheel Nut	ASTM A276 Gr.304
14	Eyebolt Pin	ASTM A276 Gr.304
15	Eyebolt	ASTM A193 Gr. B8MA
16	Eyebolt Nut	ASTM A194 Gr. B8A
17	Bonnet Stud	ASTM A193 Gr. B8MA
18	Bonnet Nut	ASTM A194 Gr. B8A
19	Set Screw	ASTM A276 Gr.304
20	Nameplate	ASTM A666-304

DIMENSIONS							
SIZE	PORT	G	L	M	H(OPEN)	D	Wt(lbs)
1/2"	0.59	0.53	2.76	NPT	7.68	3.54	4.29
3/4"	0.79	0.55	3.00	NPT	8.03	3.54	4.60
1"	1.00	0.63	3.50	NPT	8.66	3.94	6.30
1-1/2"	1.50	0.85	4.49	NPT	10.87	5.51	12.71
2"	2.00	0.98	4.76	NPT	13.23	6.30	16.60

**CLASS 150 FIG NO. 1156-S**

AVAILABLE IN 1/2"-2"



API 603	
FIGURE NO.	FEATURES
1156-S (as shown)	API Trim 10 (316/316) Integral Seats

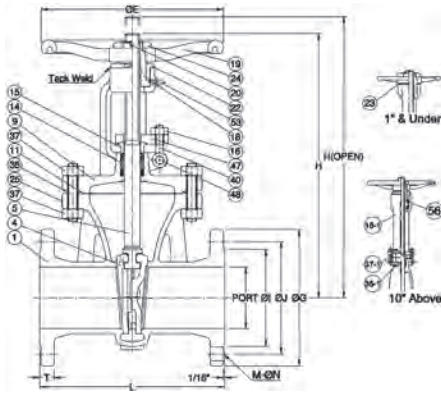
MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF3M
2	Bonnet	ASTM A351 Gr.CF3M
3	Disc	ASTM A351 Gr.CF3M
4	Grease Feeder	ANSI SS304
5	Stem	ASTM A276 Gr. 316
6	Gasket	PTFE
7	Packing	PTFE
8	Gland	ASTM A351 Gr.CF3M
9	Gland Flange	ASTM A351 Gr.CF8
10	Stem Nut	ASTM A439 Gr.CD2C
11	Handwheel	ASTM A536 Gr.65-45-12
12	Washer	ASTM A276 Gr.304
13	Handwheel Nut	ASTM A276 Gr.304
14	Eyebolt Pin	ASTM A276 Gr.304
15	Eyebolt	ASTM A193 Gr. B8MA
16	Eyebolt Nut	ASTM A194 Gr. B8A
17	Bonnet Stud	ASTM A193 Gr. B8MA
18	Bonnet Nut	ASTM A194 Gr. B8A
19	Set Screw	ASTM A276 Gr.304
20	Nameplate	ASTM A666-304

DIMENSIONS							
SIZE	PORT	E	G	L	H(OPEN)	D	Wt(lbs)
1/2"	0.59	0.85	0.39	2.76	7.68	3.54	4.29
3/4"	0.79	1.07	0.50	3.00	8.03	3.54	4.60
1"	1.00	1.33	0.50	3.50	8.66	3.94	6.30
1-1/2"	1.50	1.91	0.63	4.49	10.87	5.51	12.71
2"	2.00	2.41	0.71	4.76	13.23	6.30	16.60

# CAST STAINLESS STEEL GATE VALVES API 603 / 600 06

## CLASS 300 FIG NO. 1306

AVAILABLE IN 1/2"-24"



1/2"-24"

### DIMENSIONS

SIZE	PORT	L	ØE	H	H(OPEN)	ØG	ØJ	ØI	T	M	ØN	Wt(lbs)
1/2"	0.59	5.50	3.94	7.20	7.91	3.75	2.62	1.38	0.56	4	0.63	8.82
3/4"	0.75	6.00	3.94	7.95	8.86	4.62	3.25	1.69	0.62	4	0.75	12.35
1"	1.00	6.50	5.91	9.41	10.55	4.88	3.50	2.00	0.69	4	0.78	19.18
1-1/2"	1.50	7.50	7.87	10.55	12.24	6.12	4.50	2.88	0.81	4	0.88	33.07
2"	2.00	8.50	7.87	11.85	14.17	6.50	5.00	3.62	0.88	8	0.88	39.24
2-1/2"	2.50	9.49	7.87	13.15	16.02	7.50	5.88	4.13	1.00	8	0.88	63.93
3"	3.11	11.13	11.81	14.49	17.91	8.25	6.62	5.00	1.12	8	0.88	86.64
4"	4.00	12.00	11.81	17.17	21.57	10.00	7.88	6.19	1.25	8	1.00	123.46
6"	6.00	15.88	13.78	24.02	30.59	12.50	10.62	8.50	1.44	12	1.12	/
8"	8.00	16.50	15.75	29.57	38.07	15.00	13.00	10.62	1.62	12	1.25	/
10"	10.00	18.00	17.72	35.75	46.42	17.50	15.25	12.75	1.88	16	1.12	/
12"	12.00	19.75	17.72	41.54	54.29	20.50	17.75	15.00	2.00	16	1.25	/
14"	13.25	30.00	/	/	/	23.00	20.25	16.25	2.12	20	1.25	/
16"	15.25	33.00	/	/	/	25.50	22.50	18.50	2.25	20	1.38	/
18"	17.25	36.00	/	/	/	28.00	24.75	21.00	2.38	24	/	/
20"	19.25	39.00	/	/	/	30.50	27.00	23.00	2.50	24	/	/

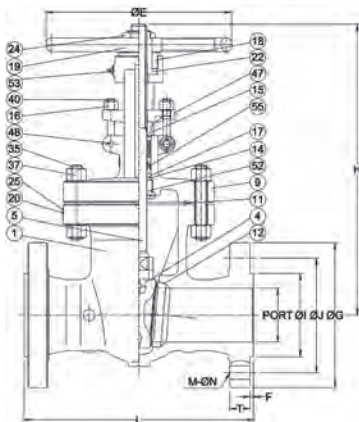
API 603	
FIGURE NO.	FEATURES
1306 (as shown)	API Trim 10 (316/316) Integral Seats

### MATERIAL LIST

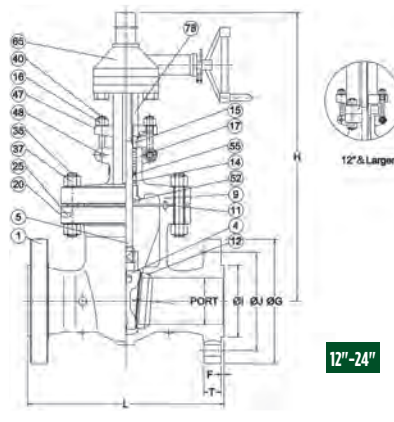
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Wedge	ASTM A351 Gr.CF8M (Flexible Wedge)
5	Stem	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	316 Spiral Wound + PTFE
14	Packing	PTFE
15	Gland	ASTM A351 Gr.CF8M
16	Eye Bolt Nut	ASTM A194 Gr.B8MA (Heavy)
18	Sleeve	ASTM A439 Gr.D2C
18-1	Yoke	ASTM A216 Gr.WCB (10" Above)
19	Handwheel	ASTM A536 Ductile Iron
20	Set Screw	ASTM A193 Gr.B8
22	Stem Nut	ASTM A351 Gr.CF8 (1 - 1/2" Above)
23	Washer	ASTM A276 Gr.304 (1" Under)
24	Handwheel Nut	ASTM A351 Gr.CF8
25	Nameplate	ASTM A666-304
35	Bonnet Stud	ASTM A193 Gr. B8MA
35-1	Yoke Bolt	ASTM A193 Gr. B8MA (10" Above)
37	Bonnet Nut	ASTM A194 Gr.B8MA (Heavy)
37-1	Yoke Nut	ASTM A194 Gr.B8MA (10" Above)
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Eye Bolt Pin	ASTM A276 Gr.304
53	Oil Filler	ANSI 304 (1 - 1/2" Above)
56	Bearing	STEEL (10" Above)

## CLASS 600 FIG NO. 1606

AVAILABLE IN 1"-24"



2"-10"



12"-24"

### DIMENSIONS

SIZE	PORT	L	ØE	H	ØG	ØJ	ØI	T	F	M	ØN	Wt(lbs)
2"	2.00	11.50	9.84	16.81	6.50	5.00	3.62	1.00	0.25	8	0.75	90.4
3"	3.00	14.00	11.81	21.18	8.25	6.62	5.00	1.25	0.25	8	0.88	194.0
4"	4.00	17.00	13.78	25.87	10.75	8.50	6.19	1.50	0.25	8	1.00	288.9
6"	6.00	22.00	19.68	34.33	14.00	11.50	8.50	1.88	0.25	12	1.13	557.9
8"	7.87	26.00	22.05	43.35	16.50	13.75	10.62	2.19	0.25	12	1.25	910.7
10"	9.75	31.00	25.20	50.35	20.00	17.00	12.75	2.50	0.25	16	1.38	1373.8
12"	11.75	33.00	23.60	58.50	22.00	19.25	15.00	2.62	0.25	20	1.38	1728.7
14"	12.87	35.00	25.20	64.70	23.75	20.75	16.25	2.75	0.25	20	1.50	2840.0
16"	14.75	39.00	25.20	70.80	27.00	23.75	18.50	3.00	0.25	20	1.63	4013.1
18"	16.50	43.00	25.20	82.72	29.25	25.75	21.00	3.25	0.25	20	1.75	4740.8
20"	18.25	47.00	31.50	88.94	32.00	28.50	23.00	3.50	0.25	24	1.75	5600.7
24"	22.00	55.00	31.50	104.33	37.00	33.00	27.25	4.00	0.25	24	2.00	8048.3

API 600	
FIGURE NO.	FEATURES
1606 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

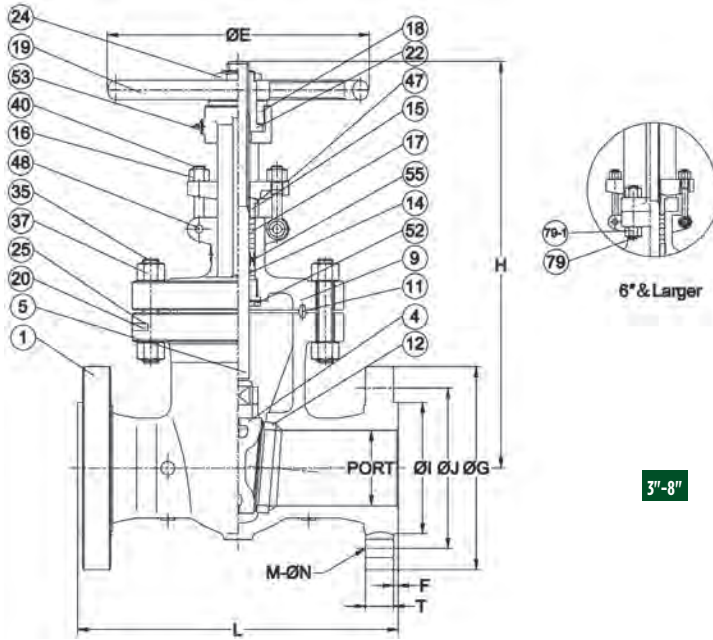
### MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Wedge	ASTM A351 Gr.CF8M
5	Stem	ASTM A182 Gr. F316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
14	Packing	Flexible Graphite
15	Gland	ASTM A276 Gr.316
16	Eye Nut	ASTM A194 Gr.B8MA
17	Packing	Stainless Steel Wire + Flexible Graphite
18	Sleeve	ASTM A276 Gr.410
19	Handwheel	ASTM A536 Gr.65-45-12
20	Rivet	ASTM A276 Gr.202
22	Stem Nut	ASTM A439 Gr.410
24	Lock Nut	ASTM A276 Gr.410
25	Nameplate	SS304
35	Bolt	ASTM A193 Gr. B8MA
37	Nut	ASTM A194 Gr.B8MA
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Pin	ASTM A276 Gr.202
52	Back Seat	ASTM A276 Gr.316
53	Oil Filler	ASTM A276 Gr.202
55	Distance Ring	ASTM A276 Gr.410 (12" Above)
65	Gear Box	BA-1
78	Yoke	ASTM A216 Gr. WCB

# 07 CAST STAINLESS STEEL GATE VALVES API 600

**CLASS 900 FIG NO. 1906**

AVAILABLE IN 3"-24"



API 600	
FIGURE NO.	FEATURES
1906 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

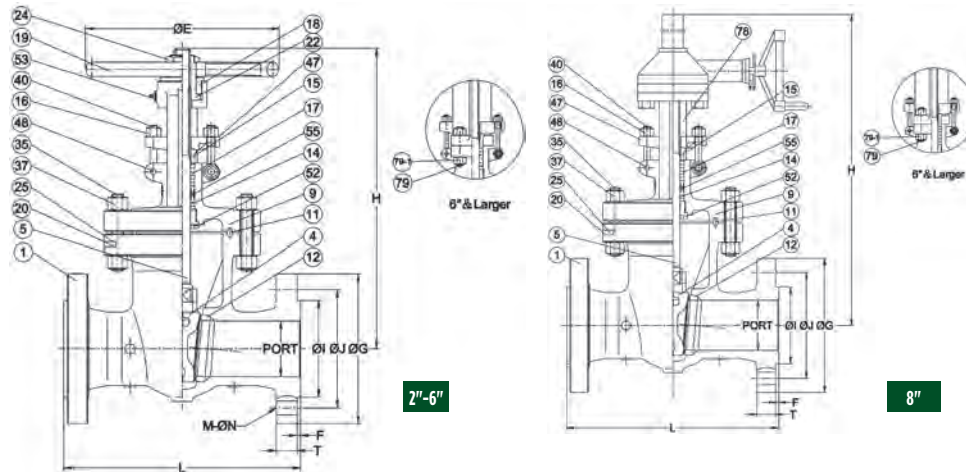
MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Wedge	ASTM A351 Gr.CF8M
5	Stem	ASTM A182 Gr. F316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
14	Packing	Flexible Graphite
15	Gland	ASTM A276 Gr.316
16	Eye Nut	ASTM A194 Gr.8MA
17	Packing	Stainless Steel Wire + Flexible Graphite
18	Sleeve	ASTM A276 Gr.410
19	Handwheel	ASTM A536 Gr.65-45-12
20	Rivet	SS304
22	Stem Nut	ASTM A439 Gr.D-2C
24	Lock Nut	ASTM A276 Gr.410
25	Nameplate	SS304
35	Bolt	ASTM A193 Gr. B8MA
37	Nut	ASTM A194 Gr.8MA
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Pin	ASTM A276 Gr.202
52	Back Seat	ASTM A276 Gr.316
53	Oil Filler	ASTM A276 Gr.202
55	Distance Ring	ASTM A276 Gr.316
79	Bolt	ASTM A193 Gr.B8MA
79-1	Nut	ASTM A194 Gr.8MA

### DIMENSIONS

SIZE	PORT	L	ØE	H	ØG	ØJ	ØI	T	F	M	ØN	Wt(lbs)
3"	2.87	15.00	15.75	25.51	9.50	7.50	5.00	1.50	0.25	8	1.00	271.2
4"	3.87	18.00	17.72	28.70	11.50	9.25	6.19	1.75	0.25	8	1.25	326.3
6"	5.75	24.00	22.05	40.98	15.00	12.50	8.50	2.19	0.25	12	1.25	926.1
8"	7.50	29.00	25.20	49.61	18.50	15.50	10.62	2.50	0.25	12	1.50	1433.3

**CLASS 1500 FIG NO. 1506**

AVAILABLE IN 1"-24"



API 600	
FIGURE NO.	FEATURES
1506 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

### MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Wedge	ASTM A351 Gr.CF8M
5	Stem	ASTM A182 Gr. F316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
14	Packing	Flexible Graphite
15	Gland	ASTM A276 Gr.316
16	Eye Nut	ASTM A194 Gr.8MA
17	Packing	Stainless Steel Wire + Flexible Graphite
18	Sleeve	ASTM A276 Gr.410
19	Handwheel	ASTM A536 Gr.65-45-12
20	Rivet	SS304, ASTM A276 Gr.202 (8")
22	Stem Nut	ASTM A439 Gr.D-2C
24	Lock Nut	ASTM A276 Gr.410
25	Nameplate	SS304
35	Bolt	ASTM A193 Gr. B8MA
37	Nut	ASTM A194 Gr.8MA
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Pin	ASTM A276 Gr.202
52	Back Seat	ASTM A276 Gr.316
53	Oil Filler	ASTM A276 Gr.202
55	Distance Ring	ASTM A276 Gr.316, ASTM A276 Gr.410 (8")
78	Yoke	ASTM A216 Gr.WCB
79	Bolt	ASTM A193 Gr.B8MA
79-1	Nut	ASTM A194 Gr.8MA

### DIMENSIONS

SIZE	PORT	L	ØE	H	ØG	ØJ	ØI	T	F	M	ØN	Wt(lbs)
2"	1.87	14.50	13.78	21.54	8.50	6.50	3.62	1.50	0.25	8	1.00	258.0
2-1/2"	2.25	16.50	15.75	27.56	9.62	7.50	4.12	1.62	0.25	8	1.13	385.9
3"	2.75	18.50	17.72	31.73	10.50	8.00	5.00	1.88	0.25	8	1.25	529.2
4"	3.62	21.50	19.69	34.92	12.25	9.50	6.19	2.12	0.25	8	1.38	743.1
6"	5.37	27.75	22.05	42.48	15.50	12.50	8.50	3.25	0.25	12	1.50	1499.4
8"	7.00	32.75		53.94	19.00	15.50	10.62	3.62	0.25	12	1.75	2707.7

## CAST STAINLESS STEEL API 603 & 600 GLOBE VALVES\*

Warren Valve's line of Cast Stainless Steel Globe Valves is offered in classes 150, 300, 600, 900, and 1500. End connections include flanged, threaded, butt weld and socket weld.

Warren Valves are subject to rigorous quality inspections. Our comprehensive evaluation includes on-site audits, inspection at the source, receiving inspections, and destructive material testing. Mill test reports are always available.



### GENERAL DESIGN STANDARDS

#### Cast Stainless Steel Flanged & Butt Weld Globe Valves

Design	ANSI B16.34 <sup>1</sup>
Pressure Temperature Rating	ANSI B16.34
Testing	API 598 <sup>2</sup>
Face to Face Dimensions	ANSI B16.10
End Flange Dimensions	ANSI B16.5
Weld End Dimensions	ANSI B16.25
Visual Inspection of Castings	MSS-SP-55

<sup>1</sup> Conforms to API 603, API 600 (Class 600 & Up)

<sup>2</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.

#### Cast Stainless Steel Threaded & Socket Weld Globe Valves

Design	ANSI B16.34 <sup>1</sup>
Pressure Temperature Rating	ANSI B16.34
Testing	API 598 <sup>2</sup>
Face to Face Dimensions	Manufacturer's Standards
Pipe Threads	ASME B1.20.1
Socket Weld Ends	ASME B16.11
Visual Inspection of Castings	MSS-SP-55

<sup>1</sup> Conforms to API 603

<sup>2</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.

### CAST STAINLESS STEEL GATE VALVES

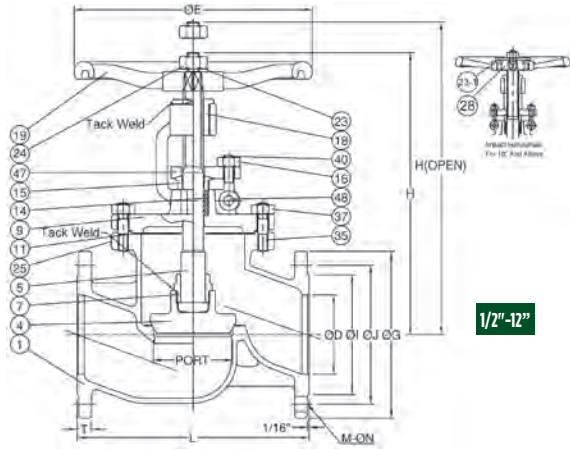
FEATURES	API 603 RF FLANGED	API 600 RF FLANGED	CLASS 150# THR & SW
OS&Y	X	X	X
Rising Stem	X	X	X
Plug Disc	X	X	
Bolted Bonnet	X	X	X
Welded Seat Rings		X	
Integral Seats	X		X

\*Also available in 304, 317, and Alloy 20. Hastelloy-C also available on factory order.

# 09 CAST STAINLESS STEEL GLOBE VALVES API 603

**CLASS 150 FIG NO. 2156**

AVAILABLE IN 1/2"-24"



API 603	
FIGURE NO.	FEATURES
2156 (as shown)	API Trim 10 (316/316) Integral Seats

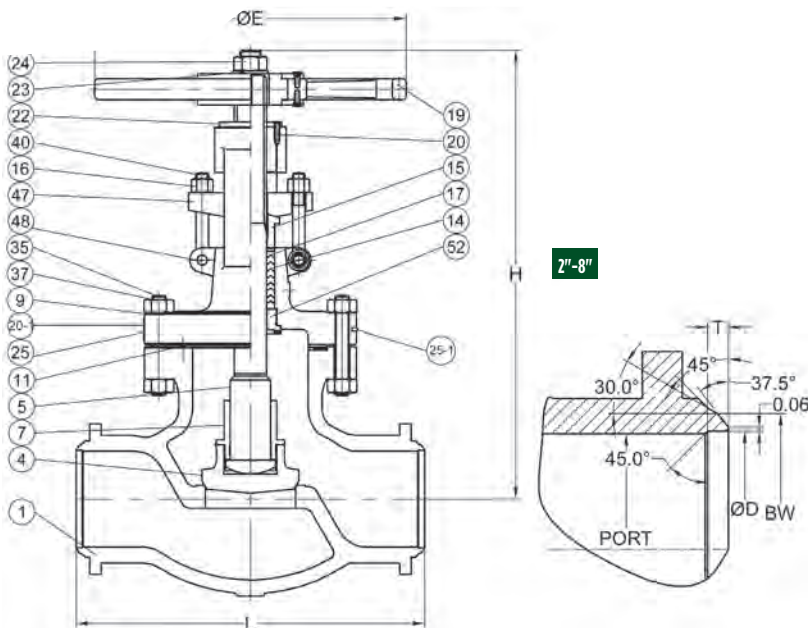
## MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Disc	ASTM A276 Gr.316
5	Stem	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
7	Disc Nut	ASTM A276 Gr.316
11	Gasket	PTFE
14	Packing	PTFE
15	Gland	ASTM A351 Gr.CF8M
16	Eye Bolt Nut	ASTM A194-8 (Heavy)
18	Yoke Sleeve	ASTM A439 Gr. D2C
19	Handwheel	ASTM A536 Ductile Iron
23	Spring Washer	ANSI 304
23-1	Washer	ASTM A240 Gr.304
24	Handwheel Nut	ASTM A194-8
25	Nameplate	ASTM A666-304
28	Impact Block	ASTM A216 Gr.WCB
35	Bonnet Stud	ASTM A193-B8 Class 2
37	Bonnet Nut	ASTM A194-8 (Heavy)
40	Eye Bolt	ASTM A193-B8
47	Gland Flange	ASTM A351-CF8
48	Eye Bolt Pin	ASTM A276-304

DIMENSIONS													
SIZE	PORT	L	ØE	H	H(OPEN)	ØG	ØJ	ØI	T	M	ØN	ØD	Wt(lbs)
1/2"	0.59	4.25	3.94	6.22	6.71	3.50	2.38	1.38	0.38	4	5/8	0.59	6
3/4"	0.75	4.62	3.94	6.22	6.85	3.88	2.75	1.69	0.41	4	5/8	0.75	7
1"	0.95	5.00	3.94	6.50	7.22	4.25	3.12	2.00	0.44	4	5/8	0.95	8
1-1/2"	1.50	6.50	7.09	8.27	9.09	5.00	3.88	2.88	0.56	4	5/8	1.50	15
2"	1.93	8.00	7.09	8.86	9.69	6.00	4.75	3.62	0.62	4	3/4	2.00	23
2-1/2"	2.50	8.50	7.87	11.69	13.03	7.00	5.50	4.12	0.69	4	3/4	2.50	40
3"	3.00	9.50	9.84	13.54	14.92	7.50	6.00	5.00	0.75	4	3/4	3.11	54
4"	3.94	11.50	11.81	14.80	16.38	9.00	7.50	6.19	0.94	8	3/4	4.00	86
5"	5.00	14.00	15.75	16.24	17.93	10.00	8.50	7.31	0.94	8	7/8	5.00	148
6"	6.00	16.00	15.75	17.44	19.33	11.00	9.50	8.50	1.00	8	7/8	6.00	185
8"	8.00	19.50	17.72	22.24	24.96	13.50	11.75	10.62	1.12	8	7/8	8.00	313
10"	10.00	24.50	17.72	22.83	26.06	16.00	14.25	12.75	1.19	8	1.00	10.00	509
12"	12.00	27.50	22.05	25.98	29.53	19.00	17.00	15.00	1.25	8	1.00	12.00	648

**CLASS 150 FIG NO. 2156-W**

AVAILABLE IN 2"-8"



API 603	
FIGURE NO.	FEATURES
2156-W (as shown)	API Trim 10 (316/316) Integral Seats

## MATERIAL LIST

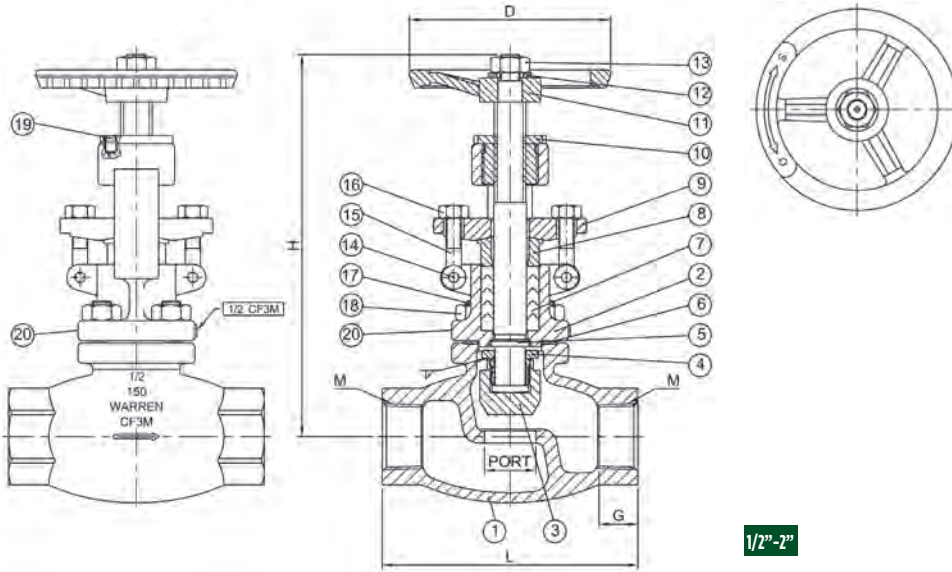
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Disc	ASTM A182 F316+STL#6
5	Stem	ASTM A182 Gr.F316
7	Disc Cover	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	304+Flexible Graphite
14	Packing	Flexible Graphite
15	Gland	ASTM A276 Gr.316
16	Eye Nut	ASTM A194 Gr.8MA
17	Packing	Stainless Steel Wire + Graphite
19	Handwheel	ASTM A536 Gr.65-45-12
20	Screw	Stainless Steel
20-1	Rivet	SS304
22	Stem Nut	ASTM A439 Gr.D-2C
23	Washer	Stainless Steel
24	Nut	Stainless Steel
25	Name Plate	SS304
25-1	Low Emission Nameplate	SS304
35	Bolt	ASTM A193 Gr.B8MA
37	Nut	ASTM A194 Gr.8MA
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Pin	ASTM A276 Gr.410
52	Back Seat	ASTM A276 Gr.316

DIMENSIONS							
SIZE	SCH	PORT	L	BW	ØD	T	Wt(lbs)
2"	STD	2.00	8.00	2.44	2.07	0.31	53.1
2-1/2"	STD	2.50	8.50	2.96	2.47	0.35	71.5
3"	STD	3.00	9.50	3.59	3.07	0.39	79.7
4"	STD	4.00	11.50	4.62	4.03	0.43	120.5
6"	STD	6.00	16.00	6.78	6.06	0.47	211.5
8"	STD	8.00	19.50	8.78	7.98	0.55	315.8
10"	STD	10.00	24.50	10.94	10.02	0.59	

# CAST STAINLESS STEEL GLOBE VALVES API 603 10

**CLASS 150 FIG NO. 2156-T**

AVAILABLE IN 1/2"-2"



1/2"-2"

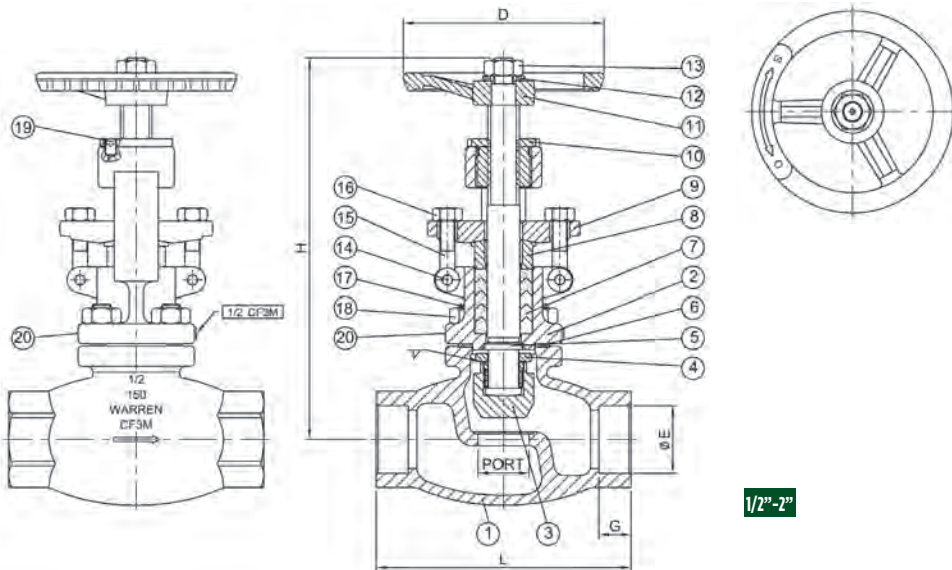
API 603	
FIGURE NO.	FEATURES
2156-T (as shown)	API Trim 10 (316/316) Integral Seats

DIMENSIONS							
SIZE	PORT	G	L	M	H(OPEN)	D	Wt.(lbs)
1/2"	0.61	0.57	3.39	NPT	6.50	3.54	3.89
3/4"	0.83	0.57	3.74	NPT	6.54	3.54	4.14
1"	1.00	0.71	4.25	NPT	6.65	3.94	5.11
1-1/2"	1.58	0.85	5.51	NPT	8.43	5.51	10.96
2"	2.03	0.98	6.50	NPT	9.06	6.30	15.80

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF3M
2	Bonnet	ASTM A351 Gr.CF3M
3	Disc	ASTM A276 Gr.316L
4	Disc Nut	ASTM A276 Gr.316L
5	Stem	ASTM A276 Gr. 316
6	Gasket	PTFE
7	Packing	PTFE
8	Gland	ASTM A351 Gr.CF3M
9	Gland Flange	ASTM A351 Gr.CF8
10	Stem Nut	ASTM A439 Gr.D2C
11	Handwheel	ASTM A536 Gr.65-45-12
12	Washer	ASTM A240 Gr.304
13	Handwheel Nut	ASTM A276 Gr.304
14	Eyebolt Pin	ASTM A276 Gr.304
15	Eyebolt	ASTM A193 Gr.B8MA
16	Eyebolt Nut	ASTM A194 Gr.8MA
17	Bonnet Stud	ASTM A193 Gr.B8MA
18	Bonnet Nut	ASTM A194 Gr.8MA
19	Screw	ASTM A276 Gr.304
20	Nameplate	ASTM A666-304

**CLASS 150 FIG NO. 2156-S**

AVAILABLE IN 1/2"-2"



1/2"-2"

API 603	
FIGURE NO.	FEATURES
2156-S (as shown)	API Trim 10 (316/316) Integral Seats

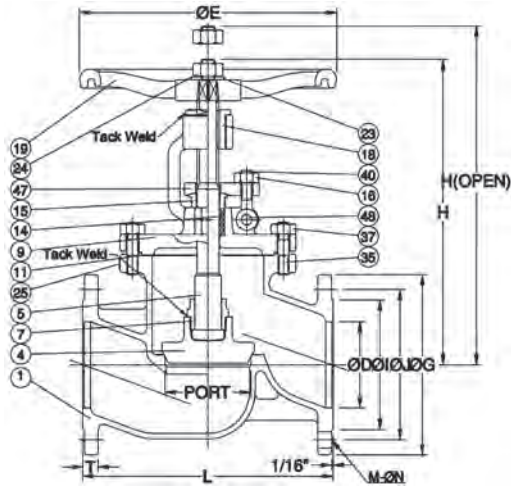
DIMENSIONS							
SIZE	PORT	E	G	L	H(OPEN)	D	Wt.(lbs)
1/2"	0.61	0.85	0.39	3.39	6.50	3.54	3.89
3/4"	0.83	1.07	0.50	3.74	6.54	3.54	4.14
1"	1.00	1.33	0.55	4.25	6.65	3.94	5.11
1-1/2"	1.58	1.91	0.63	5.51	8.43	5.51	10.96
2"	2.03	2.41	0.71	6.50	9.06	6.30	15.80

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF3M
2	Bonnet	ASTM A351 Gr.CF3M
3	Disc	ASTM A276 Gr.316L
4	Disc Nut	ASTM A276 Gr.316L
5	Stem	ASTM A276 Gr. 316
6	Gasket	PTFE
7	Packing	PTFE
8	Gland	ASTM A351 Gr.CF3M
9	Gland Flange	ASTM A351 Gr.CF8
10	Stem Nut	ASTM A439 Gr.D2C
11	Handwheel	ASTM A536 Gr.65-45-12
12	Washer	ASTM A240 Gr.304
13	Handwheel Nut	ASTM A276 Gr.304
14	Eyebolt Pin	ASTM A276 Gr.304
15	Eyebolt	ASTM A193 Gr.B8MA
16	Eyebolt Nut	ASTM A194 Gr.8MA
17	Bonnet Stud	ASTM A193 Gr.B8MA
18	Bonnet Nut	ASTM A194 Gr.8MA
19	Screw	ASTM A276 Gr.304
20	Nameplate	ASTM A666-304

# 11 CAST STAINLESS STEEL GLOBE VALVES API 603 / 600

**CLASS 300** FIG NO. 2306

AVAILABLE IN 1/2"-24"



1/2"-12"

**DIMENSIONS**

SIZE	PORT	L	ØE	H	H(OOPEN)	ØG	ØJ	ØI	T	M	ØN	Wt(lbs)
1/2"	0.59	6.00	3.94	6.77	7.28	3.75	2.62	1.38	0.56	4	5/8	7.94
3/4"	0.75	7.00	3.94	6.84	7.36	4.62	3.25	1.69	0.62	4	3/4	9.26
1"	0.95	8.00	5.91	8.31	9.06	4.88	3.50	2.00	0.69	4	3/4	15.43
1-1/2"	1.50	9.00	7.87	10.04	10.83	6.12	4.50	2.88	0.81	4	7/8	26.46
2"	1.93	10.50	7.87	10.12	10.94	6.50	5.0	3.62	0.88	8	3/4	33.07
2-1/2"	2.50	11.50	9.84	11.61	12.44	7.50	5.88	4.12	1.00	8	7/8	58.86
3"	3.00	12.50	11.81	12.40	14.21	8.25	6.62	5.00	1.12	8	7/8	71.21
4"	3.94	14.00	15.75	15.87	17.13	10.00	7.88	6.19	1.25	8	7/8	114.64
6"	6.00	17.50	/	/	/	12.50	10.62	8.50	1.44	12	7/8	/
8"	8.00	22.00	/	/	/	15.00	13.00	10.62	1.62	12	1	/
10"	10.00	24.50	/	/	/	17.50	15.25	12.75	1.88	16	1 1/8	/
12"	12.00	28.00	/	/	/	20.50	17.25	15.00	2.00	16	1 1/4	/

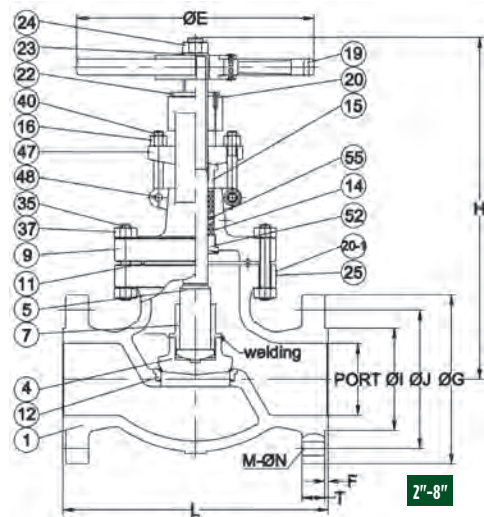
API 603	
FIGURE NO.	FEATURES
2306 (as shown)	API Trim 10 (316/316) Integral Seats

**MATERIAL LIST**

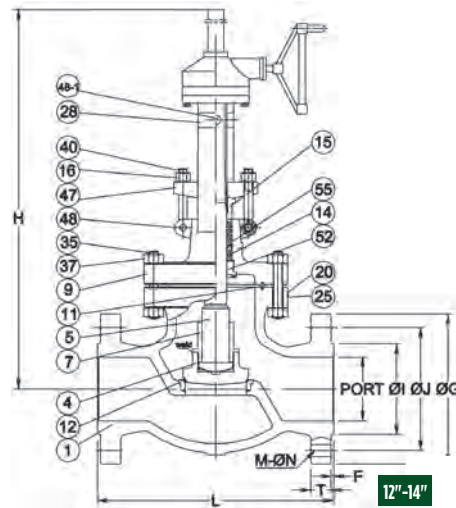
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Disc	ASTM A351 Gr.CF8M (3" Above) ASTM A276 Gr.316 (2-1/2" Under)
5	Stem	ASTM A276 Gr.316
7	Disc Nut	ASTM A351 Gr. CF8M (4" Above) ASTM A276 Gr. 316 (3" Under)
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	S.S Spiral Wound+PTFE.
14	Packing	PTFE.
15	Gland	ASTM A276 Gr.316
16	Eye Bolt Nut	ASTM A194 Gr.8MA (Heavy)
18	Yoke Sleeve	ASTM A439 Gr.D2C
19	Handwheel	ASTM A536 Ductile Iron
23	Spring Washer	ANSI 304
24	Handwheel Nut	ASTM A194 Gr.8
25	Nameplate	ASTM A666-304
35	Bonnet Stud	ASTM A193 Gr. B8MA
37	Bonnet Nut	ASTM A194 Gr.8MA (Heavy)
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Eye Bolt Pin	ASTM A276 Gr.304

**CLASS 600** FIG NO. 2606

AVAILABLE IN 2"-24"



2"-8"



12"-14"

**DIMENSIONS**

SIZE	PORT	L	ØE	H	ØG	ØJ	ØI	T	F	M	ØN	Wt(lbs)
2"	2.00	11.50	9.84	16.73	6.50	5.00	3.62	1.00	0.25	8	0.75	86.0
3"	3.00	14.00	13.78	20.51	8.25	6.62	5.00	1.25	0.25	8	0.88	161.0
4"	4.00	17.00	15.75	24.41	10.75	8.50	6.19	1.50	0.25	8	1.00	264.6
6"	6.00	22.00	19.68	34.89	14.00	11.50	8.50	1.88	0.25	12	1.13	721.0
8"	7.87	26.00	22.04	36.69	16.50	13.75	10.62	2.19	0.25	12	1.25	1062.8
12"	11.75	33.00	/	50.39	22.00	19.25	15.00	2.62	0.25	20	1.25	1984.5
14"	12.87	35.00	/	58.27	23.75	20.75	16.25	2.75	0.25	20	1.38	5071.5

API 600	
FIGURE NO.	FEATURES
2106 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

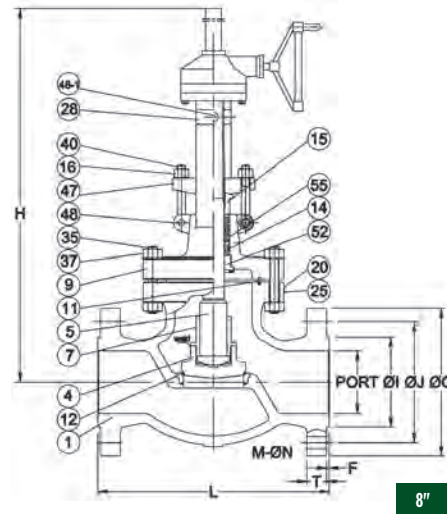
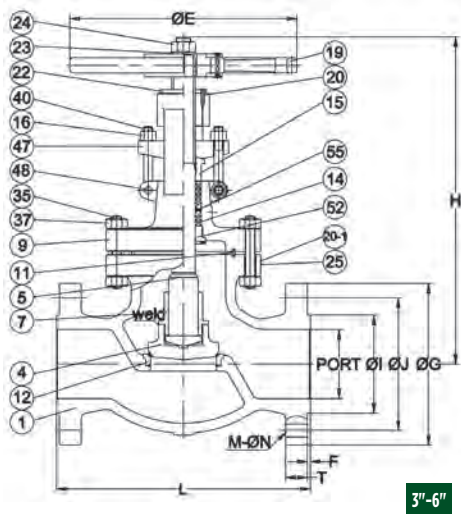
**MATERIAL LIST**

No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Disc	ASTM A182 Gr.F316
5	Stem	ASTM A182 Gr. F316
7	Disc Cover	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
14	Packing	Stainless Steel Wire+Flexible Graphite
15	Gland	ASTM A276 Gr.316
16	Eye Nut	ASTM A194 Gr.8MA
19	Handwheel	ASTM A536 Gr.65-45-12
20	Screw	ASTM A276 Gr.202
20-1	Rivet	ASTM A276 Gr.202
22	Stem Nut	ASTM A439 Gr.D-2C
23	Washer	ASTM A276 Gr.410
24	Nut	ASTM A276 Gr.202
25	Nameplate	SS304
28	Guide Plate	ASTM A276 Gr.410
35	Bolt	ASTM A193 Gr. B8M
37	Nut	ASTM A194 Gr.8MA
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Pin	ASTM A276 Gr.202
48-1	Pin	ASTM A276 Gr.410
52	Back Seat	ASTM A276 Gr.316
55	Distance Ring	ASTM A276 Gr.316

# CAST STAINLESS STEEL GLOBE VALVES API 600 12

**CLASS 900 FIG NO. 2906**

AVAILABLE IN 3"-12"



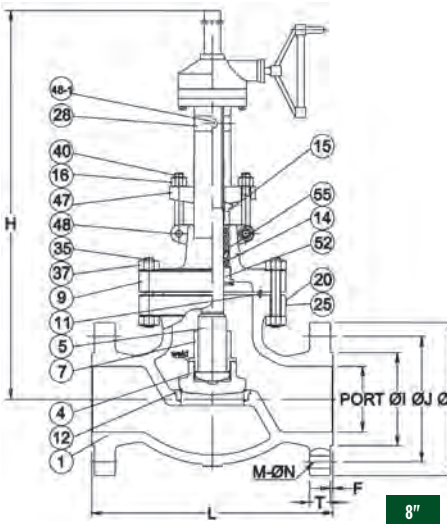
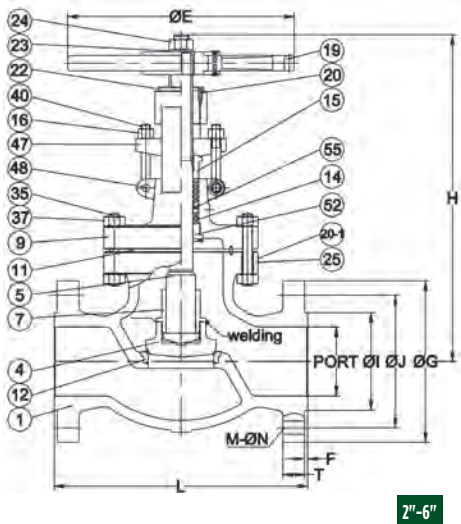
API 600	
FIGURE NO.	FEATURES
2906 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Disc	ASTM A182 Gr.F316
5	Stem	ASTM A182 Gr. F316
7	Disc Cover	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
14	Packing	Stainless Steel Wire+Flexible Graphite
15	Gland	ASTM A276 Gr.316
16	Eye Nut	ASTM A194 Gr.8MA
19	Handwheel	ASTM A536 Gr.65-45-12
20	Screw	ASTM A276 Gr.202
20-1	Rivet	ASTM A276 Gr.202
22	Stem Nut	ASTM A439 Gr.D-2C
23	Washer	ASTM A276 Gr.410
24	Nut	ASTM A276 Gr.202
25	Nameplate	SS304
28	Guide Plate	ASTM A276 Gr.410
35	Bolt	ASTM A193 Gr. B8MA
37	Nut	ASTM A194 Gr.8MA
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Pin	ASTM A276 Gr.202
48-1	Pin	ASTM A276 Gr.410
52	Back Seat	ASTM A276 Gr.316
55	Distance Ring	ASTM A276 Gr.316

DIMENSIONS												
SIZE	PORT	L	ØE	H	ØG	ØJ	ØI	T	F	M	ØN	Wt(lbs)
3"	2.87	15.00	15.75	24.17	9.50	7.50	5.00	1.50	0.25	8	1.00	288.9
4"	3.87	18.00	17.72	31.06	11.50	9.25	6.19	1.75	0.25	8	1.25	480.7
6"	5.75	24.00	22.05	34.88	15.00	12.50	8.50	2.19	0.25	12	1.25	996.7
8"	7.50	29.00		36.69	18.50	15.50	10.62	2.50	0.25	12	1.50	1565.6

**CLASS 1500 FIG NO. 2506**

AVAILABLE IN 2"-8"



API 600	
FIGURE NO.	FEATURES
2506 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
4	Disc	ASTM A182 Gr.F316
5	Stem	ASTM A182 Gr. F316
7	Disc Cover	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
14	Packing	Stainless Steel Wire+Flexible Graphite
15	Gland	ASTM A276 Gr.316
16	Eye Nut	ASTM A194 Gr.8MA
19	Handwheel	ASTM A536 Gr.65-45-12
20	Screw	ASTM A276 Gr.202
20-1	Rivet	ASTM A276 Gr.202
22	Stem Nut	ASTM A439 Gr.D-2C
23	Washer	ASTM A276 Gr.410
24	Nut	ASTM A276 Gr.202
25	Nameplate	SS304
28	Guide Plate	ASTM A276 Gr.410
35	Bolt	ASTM A193 Gr. B8MA
37	Nut	ASTM A194 Gr.8MA
40	Eye Bolt	ASTM A193 Gr.B8MA
47	Gland Flange	ASTM A351 Gr.CF8
48	Pin	ASTM A276 Gr.202
48-1	Pin	ASTM A276 Gr.410
52	Back Seat	ASTM A276 Gr.316
55	Distance Ring	ASTM A276 Gr.316

DIMENSIONS												
SIZE	PORT	L	ØE	H	ØG	ØJ	ØI	T	F	M	ØN	Wt(lbs)
2"	1.87	14.50	13.78	23.31	8.50	6.50	3.62	1.50	0.25	8	1.00	247.0
2-1/2"	2.25	16.50	15.75	25.95	9.62	7.50	4.12	1.62	0.25	8	1.13	310.9
3"	2.75	18.50	17.72	27.24	10.50	8.00	5.00	1.88	0.25	8	1.25	502.7
4"	3.62	21.50	19.69	35.71	12.25	9.50	6.19	2.12	0.25	8	1.38	740.9
6"	5.37	27.75	25.20	39.96	15.50	12.50	8.50	3.25	0.25	12	1.50	1812.5
8"	7.00	32.75		45.08	19.00	15.50	10.62	3.62	0.25	12	1.75	1587.6

# 13 CAST STAINLESS STEEL API 603 & 600 CHECK VALVES

## CAST STAINLESS STEEL API 603 & 600 CHECK VALVES\*



Warren Valve's line of Cast Stainless Steel Check Valves is offered in classes 150, 300, 600, 900, and 1500. End connections include flanged, threaded, butt weld and socket weld.

Warren Valves are subject to rigorous quality inspections. Our comprehensive evaluation includes on-site audits, inspection at the source, receiving inspections, and destructive material testing. Mill test reports are always available.

### CAST STAINLESS STEEL GATE VALVES

FEATURES	API 603 RF FLANGED	API 600 RF FLANGED	CLASS 150# THR & SW
Bolted Cover	X	X	X
Exterior Hinge Pin	X	X	X
Swing Type Disc	X	X	
Welded Seat Rings		X	X
Integral Seats	X		X

\*Also available in 304, 317, and Alloy 20. Hastelloy-C also available on factory order.

### GENERAL DESIGN STANDARDS

Cast Stainless Steel Flanged & Butt Weld Globe Valves	
Design	ANSI B16.34 <sup>1</sup>
Pressure Temperature Rating	ANSI B16.34
Testing	API 598 <sup>2</sup>
Face to Face Dimensions	ANSI B16.10
End Flange Dimensions	ANSI B16.5
Weld End Dimensions	ANSI B16.25
Visual Inspection of Castings	MSS-SP-55

<sup>1</sup> Conforms to API 603, API 600 (Class 600 & Up)

<sup>2</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.

Cast Stainless Steel Threaded & Socket Weld Check Valves	
Design	ANSI B16.34 <sup>1</sup>
Pressure Temperature Rating	ANSI B16.34
Testing	API 598 <sup>2</sup>
Face to Face Dimensions	Manufacturer's Standards
Pipe Threads	ASME B1.20.1
Socket Weld Ends	ASME B16.11
Visual Inspection of Castings	MSS-SP-55

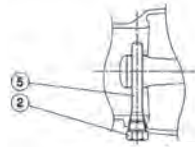
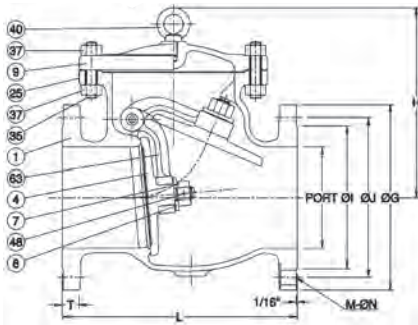
<sup>1</sup> Conforms to API 603

<sup>2</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.

# CAST STAINLESS STEEL CHECK VALVES API 603/600 14

## CLASS 150 FIG NO. 3156

AVAILABLE IN 1/2"-24"



1/2"-24"

API 603	
FIGURE NO.	FEATURES
3156 (as shown)	API Trim 10 (316/316) Integral Seats

### DIMENSIONS

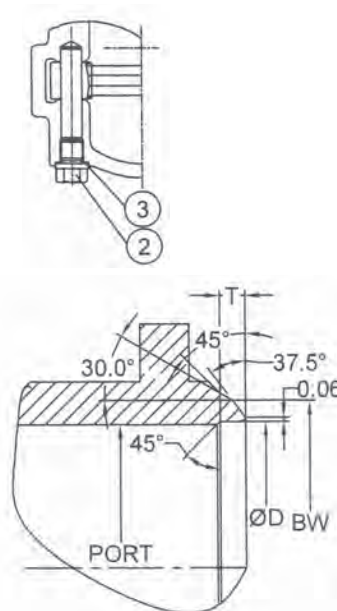
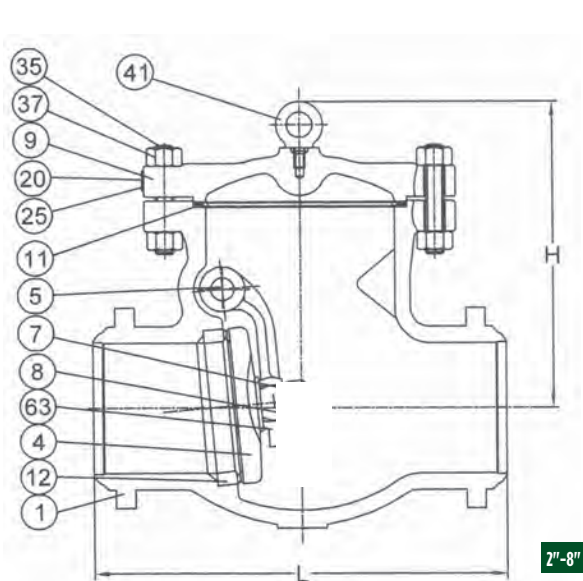
SIZE	PORT	L	H	ØG	ØJ	ØI	T	M	ØN	Wt.(lbs)
1/2"	0.59	4.25	3.15	3.50	2.38	1.38	0.38	4	0.62	4
3/4"	0.75	4.62	3.15	3.88	2.75	1.69	0.41	4	0.62	6
1"	1.00	5.00	3.76	4.25	3.12	2.00	0.44	4	0.62	8
1-1/2"	1.50	6.50	4.80	5.00	3.88	2.88	0.56	4	0.62	15
2"	2.00	8.00	5.59	6.00	4.75	3.62	0.62	4	0.75	24
2-1/2"	2.50	8.50	5.83	7.00	5.50	4.12	0.69	4	0.75	36
3"	3.11	9.50	6.34	7.50	6.00	5.00	0.75	4	0.75	46
4"	4.00	11.50	7.36	9.00	7.50	6.19	0.94	8	0.75	66
5"	5.00	13.00	10.28	10.00	8.50	7.31	0.94	8	0.88	111
6"	6.00	14.00	11.30	11.00	9.50	8.50	1.00	8	0.88	133
8"	8.00	19.50	12.44	13.50	11.75	10.62	1.12	8	0.88	238
10"	10.00	24.50	15.47	16.00	14.25	12.75	1.19	12	1.00	370
12"	12.00	27.50	16.85	19.00	17.00	15.00	1.25	12	1.00	474
14"	13.25	31.00	18.11	21.00	18.75	16.25	1.38	12	1.12	/
16"	15.25	36.00	20.17	23.50	21.25	18.50	1.44	16	1.12	/
18"	17.25	38.50	/	25.00	22.75	21.00	1.56	16	1.25	/
20"	19.25	38.50	/	27.50	25.00	23.00	1.69	20	1.25	/
24"	23.25	51.00	/	32.00	29.50	27.25	1.88	20	1.38	/

### MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
2	Plug	ASTM A276 Gr.316
4	Disc	ASTM A351 Gr.CF8M (1 1/2" Above) ASTM A276 Gr.316 (1" Under)
5	Hinge Pin	ASTM A276 Gr.316
7	Disc Nut	ASTM A194 Gr.8MA
8	Disc Washer	ASTM A276 Gr.316
9	Cover	ASTM A351 Gr.CF8M
11	Gasket	PTFE.
25	Nameplate	ASTM A666-304
35	Cover Stud	ASTM A193 Gr.B8MA
37	Cover Nut	ASTM A194 Gr.8MA (Heavy)
40	Eye Bolt	ASTM A36+Zn PLATE (5" Above)
48	Pin	ASTM A276 Gr.316
63	Swing Arm	ASTM A351 Gr.CF8M

## CLASS 150 FIG NO. 3156-W

AVAILABLE IN 2"-8"



2"-8"

API 603	
FIGURE NO.	FEATURES
API 600 (as shown)	API Trim 12 (316/316) Integral Seats

### DIMENSIONS

SIZE	SCH	PORT	L	ØD	BW	T	H	Wt.(lbs)
2"	STD	2.00	8.00	2.44	2.07	0.31	5.31	33.00
2-1/2"	STD	2.50	8.50	2.97	2.47	0.35	6.10	42.00
3"	STD	3.00	9.50	3.59	3.07	0.39	6.61	57.20
4"	STD	4.00	11.50	4.63	4.03	0.43	9.06	86.00
6"	STD	6.00	16.00	6.78	6.07	0.47	10.91	154.00
8"	STD	8.00	19.50	8.78	7.98	0.55	13.35	226.90

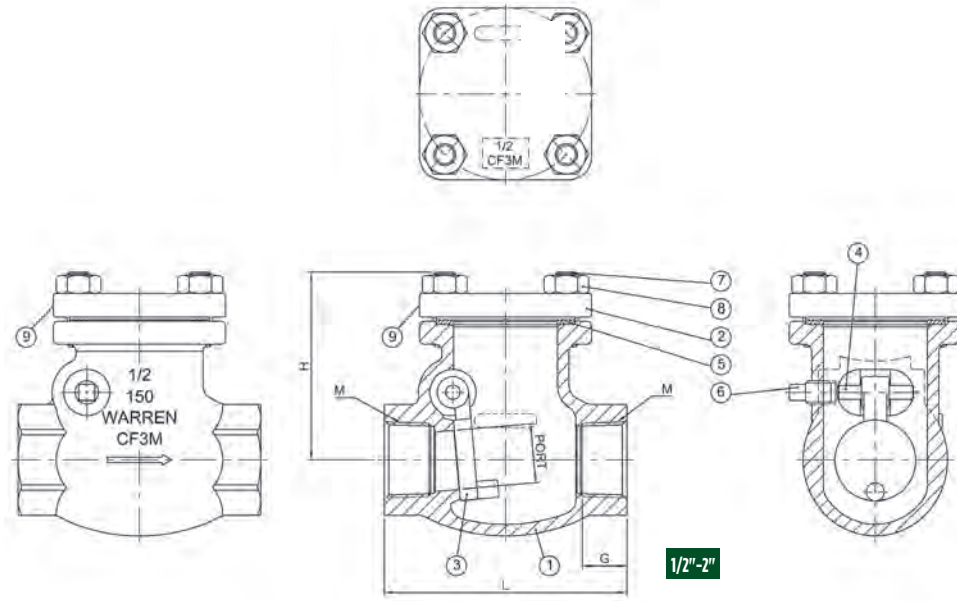
### MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
2	Plug	ASTM A276 Gr.316
3	Plug Seal	ASTM A276 Gr.316
4	Disc	ASTM A351 Gr.CF8M
5	Pin	ASTM A276 Gr.316
7	Disc Nut	ASTM A276 Gr.316
8	Disc Washer	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	316+Flexible Graphite
12	Seat Ring	ASTM A182 Gr.F316+STL#6
20	Rivet	SS304
25	Name Plate	SS304
35	Bolt	ASTM A193 Gr.B8M
37	Nut	ASTM A194 Gr.8M
40	Snap Ring	ASTM A182 Gr.F316
63	Hinge	ASTM A351 Gr.CF8M

# 15 CAST STAINLESS STEEL CHECK VALVES API 603

**CLASS 150 FIG NO. 3156-T**

AVAILABLE IN 1/2"-2"



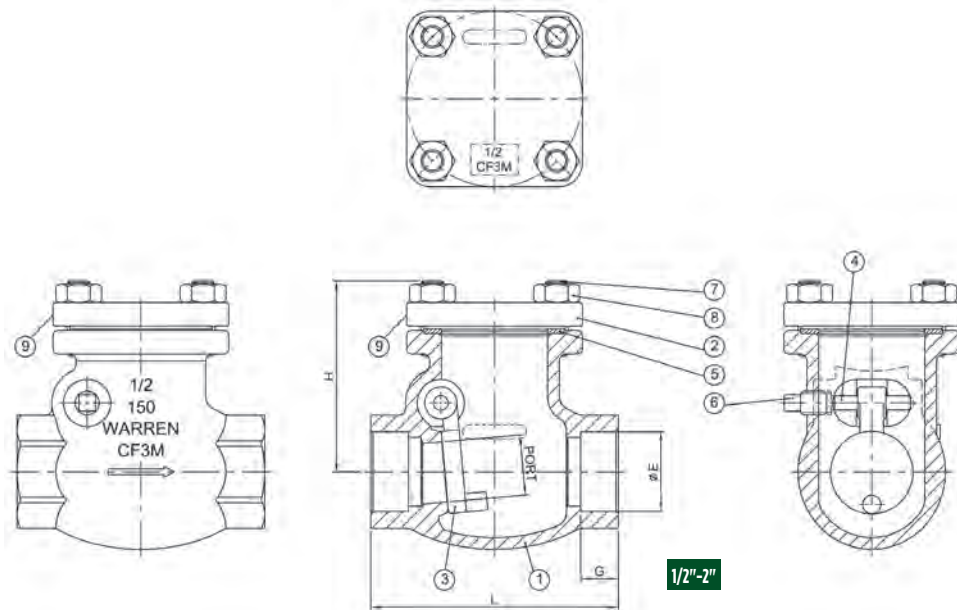
API 603	
FIGURE NO.	FEATURES
3156-T (as shown)	API Trim 10 (316/316) Integral Seats

DIMENSIONS						
SIZE	PORT	G	L	H	M	Wt(lbs)
1/2"	0.59	0.53	3.39	2.54	NPT	1.88
3/4"	0.79	0.63	3.74	2.95	NPT	2.64
1"	1.00	0.77	4.53	3.19	NPT	4.22
1-1/2"	1.54	0.85	4.92	3.86	NPT	7.85
2"	2.00	0.95	5.91	4.27	NPT	11.65

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF3M
2	Cover	ASTM A351 Gr.CF3M
3	Hinge Arm	ASTM A351 Gr.CF3M
4	Hinge Pin	ASTM A276 Gr.316L
5	Gasket	PTFE.
6	Plug	ASTM A276 Gr.316L
7	Stud	ASTM A193 Gr.B8MA
8	Cover Bolt Nut	ASTM A194 Gr.8MA
9	Nameplate	ASTM A666-304

**CLASS 150 FIG NO. 3156-S**

AVAILABLE IN 1/2"-2"



API 603	
FIGURE NO.	FEATURES
3156-S (as shown)	API Trim 10 (316/316) Integral Seats

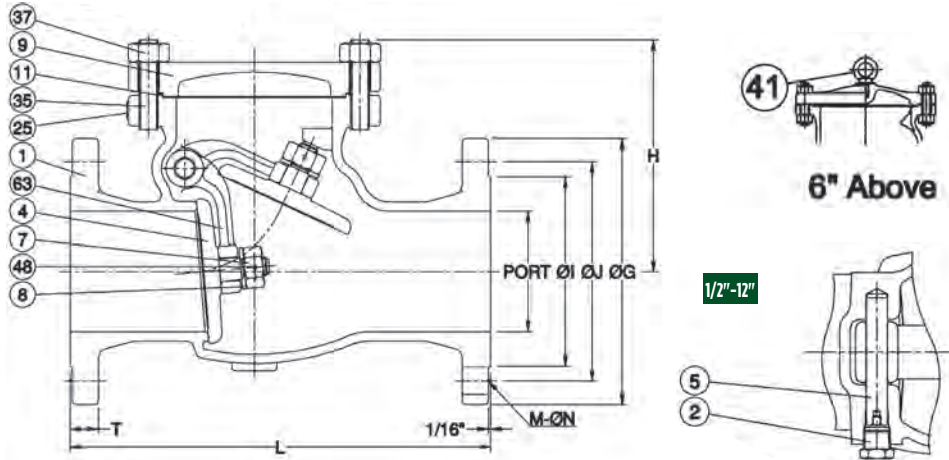
DIMENSIONS						
SIZE	PORT	E	G	L	H	Wt(lbs)
1/2"	0.59	0.85	0.39	3.39	2.54	1.88
3/4"	0.79	1.07	0.50	3.74	2.95	2.64
1"	1.00	1.33	0.55	4.53	3.19	4.22
1-1/2"	1.54	1.91	0.63	4.92	3.86	7.85
2"	2.00	2.41	0.71	5.91	4.27	11.65

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF3M
2	Cover	ASTM A351 Gr.CF3M
3	Hinge Arm	ASTM A351 Gr.CF3M
4	Hinge Pin	ASTM A276 Gr.316L
5	Gasket	PTFE.
6	Plug	ASTM A276 Gr.316L
7	Stud	ASTM A193 Gr.B8MA
8	Cover Bolt Nut	ASTM A194 Gr.8MA
9	Nameplate	ASTM A666-304

# CAST STAINLESS STEEL CHECK VALVES API 603 / 600 16

**CLASS 300 FIG NO. 3306**

AVAILABLE IN 1/2"-24"



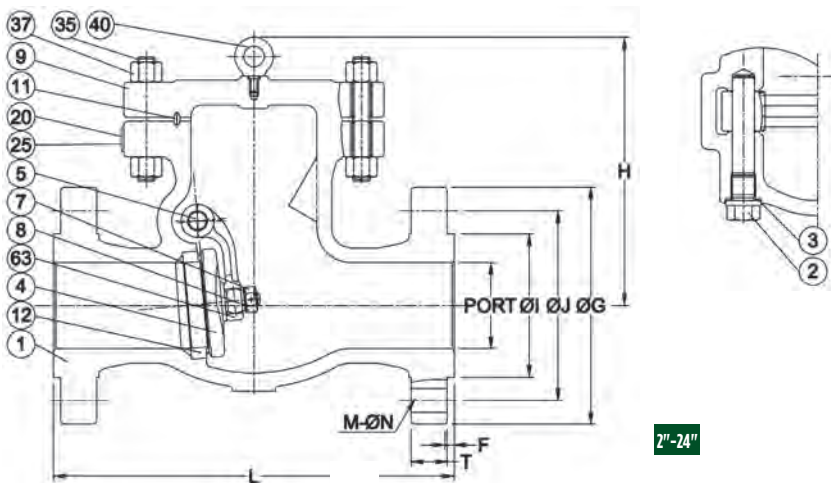
API 603	
FIGURE NO.	FEATURES
3306 (as shown)	API Trim 10 (316/316) Integral Seats

DIMENSIONS											
SIZE	PORT	L	H	ØG	ØJ	ØI	T	M	ØN	Wt.(lbs)	
1/2"	0.59	6.00	3.15	3.75	2.62	1.38	0.56	4	0.63	5.51	
3/4"	0.75	7.00	3.15	4.62	3.25	1.69	0.62	4	0.75	7.28	
1"	1.00	8.50	3.76	4.88	3.50	2.00	0.69	4	0.75	11.02	
1-1/2"	1.50	9.50	4.84	6.12	4.50	2.88	0.81	4	0.88	22.05	
2"	2.00	10.50	5.59	6.50	5.00	3.62	0.88	8	0.75	31.97	
2-1/2"	2.50	11.50	6.18	7.50	5.88	4.13	1.00	8	0.88	39.02	
3"	3.11	12.50	6.61	8.25	6.62	5.00	1.12	8	0.88	59.52	
4"	4.00	14.00	7.72	10.00	7.88	6.19	1.25	8	0.88	79.81	
6"	6.00	17.50	11.67	12.50	10.62	8.50	1.44	12	0.88	187.39	
8"	8.00	21.00	13.89	15.00	13.00	10.62	1.62	12	1.00	315.26	
10"	10.00	24.50	18.43	17.50	15.25	12.75	1.88	16	1.12	/	
12"	12.00	28.00	20.63	20.50	17.25	15.00	2.00	16	1.25	/	

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
2	Plug	ASTM A276 Gr.316
4	Disc	ASTM A351 Gr.CF8M (1 1/2" Above) ASTM A276 Gr.316 (1" Under)
5	Hinge Pin	ASTM A276 Gr.316
7	Disc Nut	ASTM A194 Gr.8MA
8	Disc Washer	ASTM A276 Gr.316
9	Cover	ASTM A351 Gr.CF8M
11	Gasket	SS Spiral Wound+PTFE.
25	Nameplate	ASTM A666-304
35	Cover Stud	ASTM A193 Gr.B8MA
37	Cover Nut	ASTM A194 Gr.8MA (Heavy)
41	Snap Ring	ASTM A316+Zn PLATE (6" Above)
48	Pin	ASTM A276 Gr.316
63	Hinge	ASTM A351 Gr.CF8

**CLASS 600 FIG NO. 3606**

AVAILABLE IN 1"-24"



API 600	
FIGURE NO.	FEATURES
3606 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

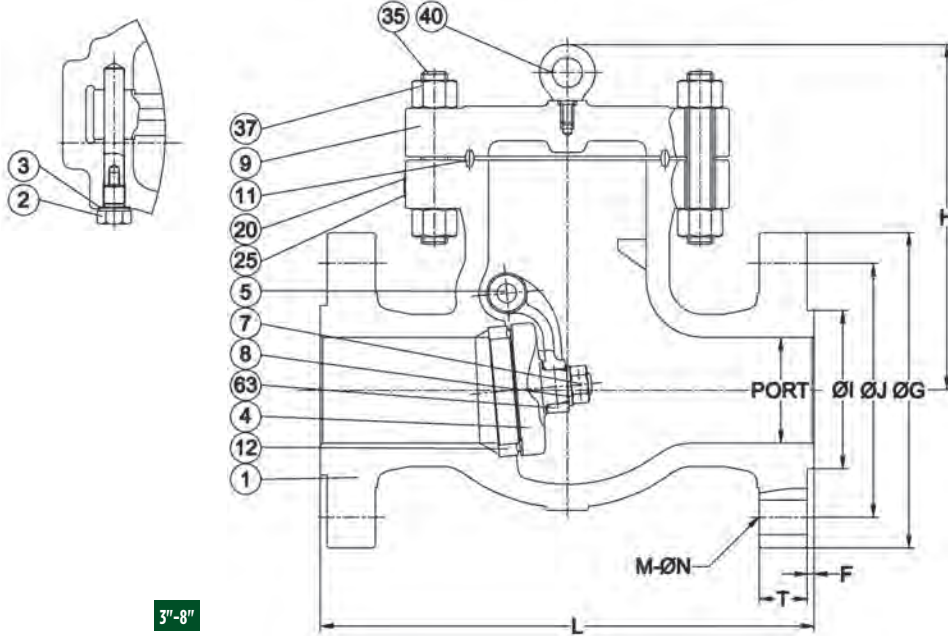
DIMENSIONS											
SIZE	PORT	L	H	ØG	ØJ	ØI	T	F	M	ØN	Wt.(lbs)
2"	2.00	11.50	7.76	6.50	5.00	3.62	1.00	0.25	8	0.75	79.4
3"	3.00	14.00	9.09	8.25	6.62	5.00	1.25	0.25	8	0.88	149.9
4"	4.00	17.00	11.06	10.75	8.50	6.19	1.50	0.25	8	1.00	244.8
6"	6.00	22.00	14.25	14.00	11.50	8.50	1.88	0.25	12	1.13	507.2
8"	7.87	26.00	17.20	16.50	13.75	10.62	2.19	0.25	12	1.25	917.3
10"	9.75	31.00	12.29	20.00	17.00	12.75	2.50	0.25	16	1.25	1484.0
12"	11.75	33.00	20.79	22.00	19.25	15.00	2.62	0.25	20	1.25	1929.4
14"	12.87	35.00	22.52	23.75	20.75	16.25	2.75	0.25	20	1.50	2081.5
16"	14.75	39.00	25.98	27.00	23.75	18.50	3.00	0.25	20	1.63	2690.1
18"	16.50	43.00	28.35	29.25	25.75	21.00	3.25	0.25	20	1.75	3572.1
20"	18.25	47.00	29.45	32.00	28.50	23.00	3.50	0.25	24	1.75	4674.6
24"	22.00	55.00	37.80	37.00	33.00	27.25	4.00	0.25	24	2.00	6835.5

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
2	Plug	ASTM A276 Gr.316
3	Plug Seal	ASTM A276 Gr.316
4	Disc	ASTM A182 Gr.F316
5	Pin	ASTM A276 Gr.316
7	Disc Nut	ASTM A194 Gr.8MA
8	Disc Washer	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
20	Rivet	SS304
25	Name Plate	SS304
35	Bolt	ASTM A193 Gr.B8MA
37	Nut	ASTM A194 Gr.8MA
40	Lifting Ring	ASTM A276 Gr.202
63	Hinge	ASTM A351 Gr.CF8M

# 17 CAST STAINLESS STEEL CHECK VALVES API 600

**CLASS 900** FIG NO. 3906

AVAILABLE IN 3"-8"



3"-8"

### DIMENSIONS

SIZE	PORT	L	H	ØG	ØJ	ØI	T	F	M	ØN	Wt(lbs)
3"	2.87	15.00	10.24	9.50	7.50	5.00	1.50	0.25	8	1.00	200.7
4"	3.88	18.00	12.60	11.50	9.25	6.19	1.75	0.25	8	1.25	319.7
6"	5.75	24.00	15.04	15.00	12.50	8.50	2.19	0.25	12	1.25	571.1
8"	7.50	29.00	20.87	18.50	15.50	10.62	2.50	0.25	12	1.50	1245.8

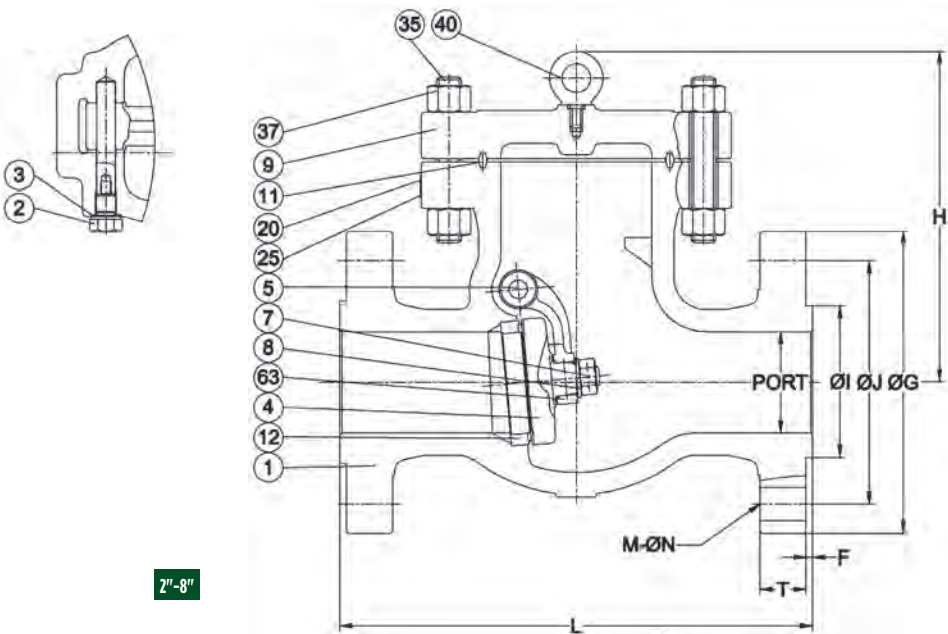
API 600	
FIGURE NO.	FEATURES
3906 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

### MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
2	Plug	ASTM A276 Gr.316
3	Plug Seal	ASTM A276 Gr.316
4	Disc	ASTM A182 Gr.F316
5	Pin	ASTM A276 Gr.316
7	Disc Nut	ASTM A194 Gr.8MA
8	Disc Washer	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
20	Rivet	SS304
25	Name Plate	SS304
35	Bolt	ASTM A193 Gr.B8MA
37	Nut	ASTM A194 Gr.8MA
40	Lifting Ring	ASTM A276 Gr.202
63	Hinge	ASTM A351 Gr.CF8M

**CLASS 1500** FIG NO. 3506

AVAILABLE IN 1"-12"



2"-8"

### DIMENSIONS

SIZE	PORT	L	H	ØG	ØJ	ØI	T	F	M	ØN	Wt(lbs)
2"	1.87	14.50	9.45	8.50	6.50	3.62	1.50	0.25	8	1.00	152.1
2-1/2"	2.25	16.50	12.20	9.62	7.50	4.12	1.62	0.25	8	1.13	205.1
3"	2.75	18.50	12.99	10.50	8.00	5.00	1.88	0.25	8	1.25	308.7
4"	3.62	21.50	13.98	12.25	9.50	6.19	2.12	0.25	8	1.38	511.6
6"	5.37	27.75	15.75	15.50	12.50	8.50	3.25	0.25	12	1.50	1080.5
8"	7.00	32.75	20.87	19.00	15.50	10.62	3.62	0.25	12	1.75	2183.0

API 600	
FIGURE NO.	FEATURES
3506 (as shown)	API Trim 12 (316/HF), Seats are Seal Welded in Place

### MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
2	Plug	ASTM A276 Gr.316
3	Plug Seal	ASTM A276 Gr.316
4	Disc	ASTM A182 Gr.F316
5	Pin	ASTM A276 Gr.316
7	Disc Nut	ASTM A194 Gr.8MA
8	Disc Washer	ASTM A276 Gr.316
9	Bonnet	ASTM A351 Gr.CF8M
11	Gasket	ASTM A276 Gr.316
12	Seat Ring	ASTM A182 Gr.F316+STL#6
20	Rivet	SS304
25	Name Plate	SS304
35	Bolt	ASTM A193 Gr.B8MA
37	Nut	ASTM A194 Gr.8MA
40	Lifting Ring	ASTM A276 Gr.202
63	Hinge	ASTM A351 Gr.CF8M

## CAST STAINLESS STEEL 200 WOG GATE VALVES

Warren's Cast Stainless Steel 200 WOG Gate Valves are offered from 1/2" to 3" with threaded end connections.

Warren Valves are subject to rigorous quality inspections. Our comprehensive evaluation includes on-site audits, inspection at the source, receiving inspections, and destructive material testing. Mill test reports are always available.

### GENERAL DESIGN STANDARDS

#### Cast Stainless Steel 200 WOG Gate Valves

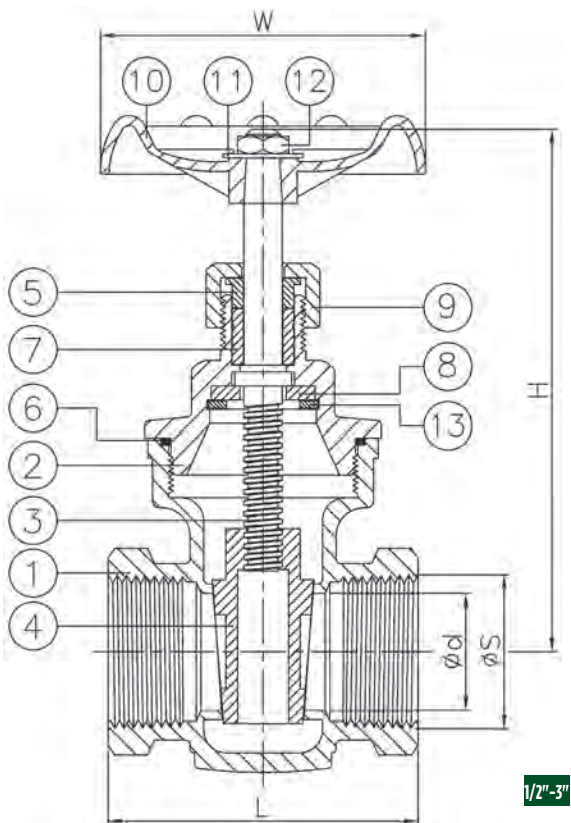
Pipe Threads	ASME B1.20.1
Testing	API 598 <sup>1</sup>
Visual Inspection of Castings	MSS-SP-55

<sup>1</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.



### 200 WOG FIG NO. 221

AVAILABLE IN 1/2"-3"



1/2"-3"

### MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr. CF8M
2	Bonnet	ASTM A351 Gr. CF8M
3	Stem	SS 316
4	Disc	SS 316
5	Gland	ASTM A351 Gr. CF8M
6	Gasket	PTFE
7	Packing	PTFE
8	Washer	SS304
9	Gland Nut	ASTM A351 Gr. CF8M
10	Handle Wheel	FC20
11	Washer	SS304
12	Nut	SS304
13	C Snap Ring	SS301

### DIMENSIONS

SIZE	d	L	H	W	S	Wt.(lbs)	CV
1/2"	0.63	2.24	3.86	2.44	48.10	1.15	19.00
3/4"	0.80	2.38	4.09	2.44	59.80	1.39	37.00
1"	1.02	2.64	4.53	2.91	74.50	1.79	64.00
1-1/4"	1.25	2.99	5.02	2.91	93.90	2.60	103.00
1-1/2"	1.57	3.43	6.77	3.74	107.40	4.41	143.00
2"	1.98	3.74	7.44	3.94	134.90	6.22	360.00
2-1/2"	2.44	4.57	10.24	/	/	10.14	/
3"	2.99	5.16	11.61	/	/	14.77	/

## CAST STAINLESS STEEL 200 WOG GLOBE VALVES

Warren's Cast Stainless Steel 200 WOG Globe Valves are offered from 1/2" to 2" with threaded end connections.

Warren Valves are subject to rigorous quality inspections. Our comprehensive evaluation includes on-site audits, inspection at the source, receiving inspections, and destructive material testing. Mill test reports are always available.



### FEATURES

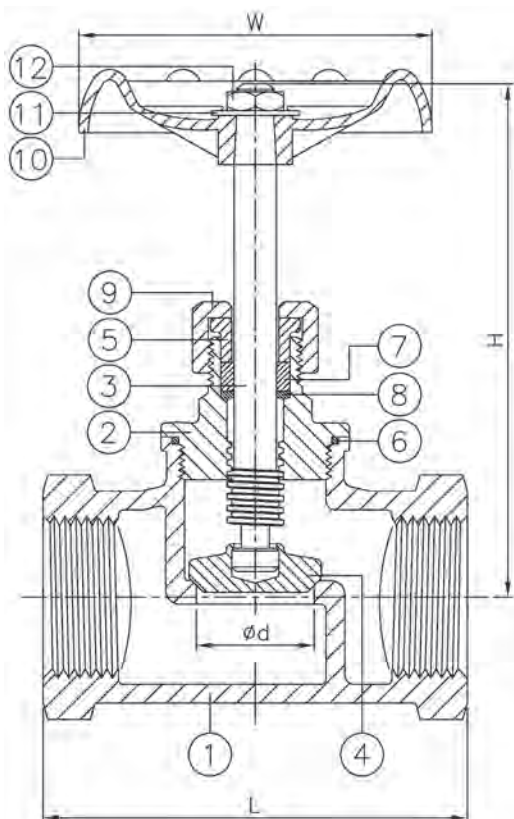
- Bolted Cover
- Exterior Hinge Pin
- Swing Type Disc
- Welded Seat Rings

Cast Stainless Steel 200 WOG Globe Valves	
Pipe Threads	ASME B1.20.1
Testing	API 598 <sup>1</sup>
Visual Inspection of Castings	MSS-SP-55

<sup>1</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.

200 WOG FIG NO. 222

AVAILABLE IN 1/2"-2"



1/2"-2"

MATERIAL LIST		
No.	Part Name	Material
1	Body	ASTM A351 Gr.CF8M
2	Bonnet	
3	Stem	AISI 316
4	Disc	
5	Gland Ring	PTFE
6	Gasket	
7	Packing	AISI 316
8	Washer	
9	Gland Nut	ASTM A351 Gr.CF8M
10	Handle Wheel	FC20
11	Name Plate	Aluminum
12	Nut	AISI 304

DIMENSIONS							
SIZE	d	L	H		W	Wt(lbs)	CV
			OPEN	CLOSE			
1/2"	0.47	2.60	3.74	3.52	2.44	0.93	19.00
3/4"	0.59	2.70	3.90	3.51	2.44	1.01	37.00
1"	0.79	3.08	4.02	3.64	2.91	1.37	64.00
1-1/4"	0.98	3.27	4.97	4.65	2.91	2.31	103.00
1-1/2"	1.30	3.86	5.33	4.61	3.74	3.09	143.00
2"	1.57	4.35	6.13	5.59	4.76	4.63	360.00

## CAST STAINLESS STEEL 200 WOG CHECK VALVES

Warren's Cast Stainless Steel 200 WOG Check Valves are offered from 1/2" to 3" with threaded end connections.

Warren Valves are subject to rigorous quality inspections. Our comprehensive evaluation includes on-site audits, inspection at the source, receiving inspections, and destructive material testing. Mill test reports are always available.



### Cast Stainless Steel 200 WOG Check Valves

Pipe Threads	ASME B1.20.1
Testing	API 598 <sup>1</sup>
Visual Inspection of Castings	MSS-SP-55

### FEATURES

- Bolted Cover
- Exterior Hinge Pin
- Swing Type Disc
- Welded Seat Rings

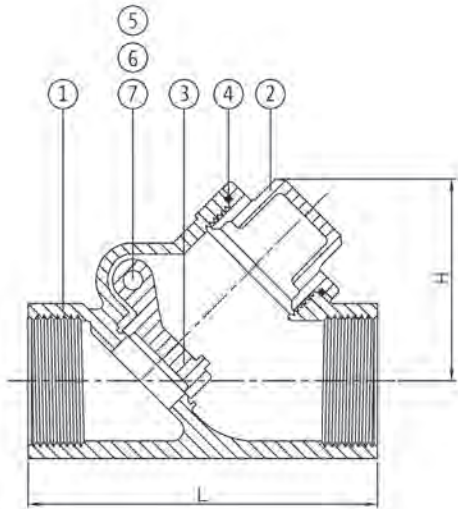
<sup>1</sup> Every Warren Valve is 100% pressure tested according to API 598 requirements. MTRs are available upon request.

**200 WOG FIG NO. 223**

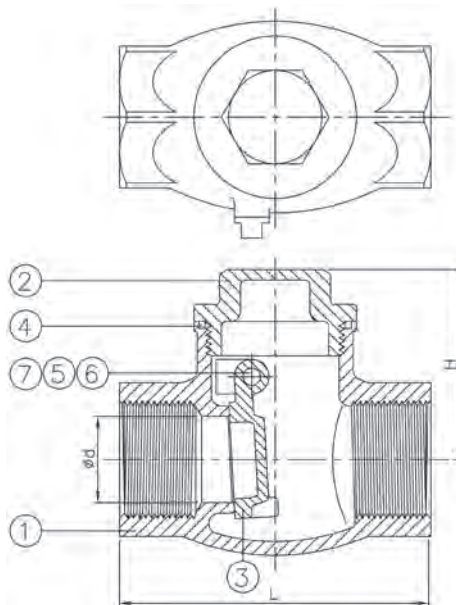
AVAILABLE IN 1/2"-3"

### MATERIAL LIST

No.	Part Name	Material
1	Body	ASTM A351 Gr. CF8M
2	Cap	
3	Disc	
4	Gasket	PTFE
5	Plug Seal	
6	Plug	AISI 316 (2" DOWN)
7	Pin	ASTM A276 Gr. 316 (2-1/2" ABOVE)



1/2"-2"



2 1/2"-3"

### DIMENSIONS

SIZE	d	H	L	Wt(lbs)
1/2"	/	1.57	2.70	0.68
3/4"	/	1.99	3.33	1.15
1"	/	2.13	3.84	1.39
1-1/4"	/	2.60	4.51	2.29
1-1/2"	/	2.99	5.10	3.35
2"	/	3.54	6.04	4.63
2-1/2"	2.56	6.26	3.54	8.38
3"	3.15	7.48	4.09	13.01

# 21 API 603 & 600 CAST STAINLESS TOP WORKS DATA

## GATE VALVE TORQUES : INCH LBS

Size (in)	150					300					600				
	Figure 1156					Figure 1306					Figure 1606				
	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)
0.5	50	0.005	0.100	0.100	7.09	52	0.005	0.100	0.100	7.09					
0.75	56	0.563	0.100	0.100	7.87	61	0.563	0.100	0.100	7.87					
1	67	0.625	0.125	0.125	8.82	77	0.625	0.125	0.125	8.82					
1.5	75	0.625	0.125	0.125	14.17	119	0.750	0.125	0.125	10.63					
2	85	0.625	0.125	0.125	18.27	153	0.750	0.167	0.167	13.7	301	0.750	0.167	0.167	14
2.5	98	0.625	0.125	0.125	23.31	196	0.750	0.167	0.167	17.48	513	0.875	0.167	0.167	
3	142	0.750	0.167	0.167	20.55	278	0.875	0.167	0.167	20.55	726	1.000	0.200	0.200	17
4	216	0.875	0.167	0.167	26.93	545	1.000	0.200	0.200	22.44	1319	1.125	0.200	0.200	23
5	385	1.000	0.200	0.200	28.15	911	1.250	0.200	0.200	27.36					
6	489	1.000	0.200	0.200	33.07	1236	1.250	0.200	0.200	32.87	3275	1.500	0.250	0.250	27
8	825	1.125	0.200	0.200	43.11	2337	1.375	0.250	0.250	34.17	5452	1.625	0.25X2	0.500	18
10	1300	1.250	0.200	0.200	53.54	3783	1.500	0.250	0.250	42.99	9630	1.875	0.25X2	0.500	22
12	2036	1.375	0.250	0.250	50.87	5698	1.625	0.250	0.250	51.02	14640	2.000	0.25X2	0.500	26
14	3070	1.625	0.250	0.250	55.91										
16	4179	1.750	0.250	0.250	64.41										
18	6890	1.875	0.250	0.500	36.3										
20	8795	2.000	0.250	0.500	40.08										
24	13553	2.250	0.500	0.500	48.58										

Size (in)	900					1500				
	Figure 1906					Figure 1506				
	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)
2	549	1.000	0.200	0.200	14	867	1.000	0.200	0.200	14
3	1195	1.125	0.200	0.200	17	1983	1.250	0.200	0.200	18
4	1903	1.250	0.200	0.200	23	3239	1.375	0.200	0.200	17

## GLOBE VALVE TORQUE: Nm

Size (in)	150					300				
	Figure 2156					Figure 2306				
	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)
0.5	46	0.438	0.083	0.083	6.05	59	0.500	0.100	0.100	5.04
0.75	50	0.438	0.083	0.083	7.46	72	0.500	0.100	0.100	5.24
1	56	0.438	0.083	0.083	8.79	113	0.625	0.125	0.125	5.91
1.5	92	0.563	0.100	0.100	8.27	220	0.750	0.167	0.167	4.64
2	140	0.625	0.125	0.125	6.61	332	0.750	0.167	0.167	4.90
2.5	193	0.750	0.167	0.167	4.91	383	0.750	0.167	0.167	4.94
3	274	0.875	0.167	0.167	6.38	580	0.750	0.167	0.167	6.40
4	536	1.000	0.200	0.200	6.30	1166	0.875	0.200	0.200	6.31
5	894	1.250	0.200	0.200	8.43					
6	1210	1.250	0.200	0.200	9.45					
8	2442	1.500	0.250	0.250	9.45					
10	4187	1.750	0.250	0.250	10.55					
12	6625	2.000	0.250	0.250	11.81					

Size (in)	600					900				
	Figure 2606					Figure 2906				
	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)	Torque (lbf-in)	Stem Dia. (in)	Pitch (in)	Lead (in)	Turns (No.)
1	68	0.875	0.167	0.167	5	114	1.250	0.200	0.200	6
3	182	1.250	0.200	0.200	6	267	1.375	0.250	0.250	5
4	340	1.375	0.250	0.250	7	521	1.625	0.250	0.250	6
6	1050	2.000	0.250	0.250	10	1433	2.125	6.350	6.350	9

# 23 CAST STAINLESS PRESSURE TEMPERATURE CHART

Temp °F	WORKING PRESSURE (psig)																	
	ASTM A351 Gr. CF8M			ASTM A351 Gr. CF8			ASTM A351 Gr. CF3M			ASTM A351 Gr. CN7M			ASTM A494 M-35-1			ASTM A494 Gr. CW-12MW		
	150	300	600	150	300	600	150	300	600	150	300	600	150	300	600	150	300	600
-20 to 100	275	720	1,440	275	720	1440	230	600	1,220	230	600	1,200	230	600	N/A	230	600	1,200
200	235	620	1,240	230	600	1200	195	505	1,015	200	520	1,045	200	525	N/A	205	540	1,080
300	215	560	1,120	205	540	1080	175	455	910	190	490	980	190	490	N/A	195	505	1,015
400	195	515	1,025	190	495	995	160	415	825	190	490	980	180	475	N/A	185	480	960
500	170	480	955	170	495	995	145	380	765	170	490	980	170	470	N/A	170	455	910
600	140	450	900	140	435	875	140	360	720	140	490	980	140	470	N/A	140	440	880
650	125	445	890	125	430	860	125	350	700	125	490	980	125	435	N/A	125	425	850
700	110	430	870	110	425	850	110	345	685	110	490	980	110	405	N/A	110	420	840
750	95	425	855	95	415	830	95	335	670	95	490	980	95	405	N/A	95	415	825
800	80	420	845	80	405	805	80	330	660	80	490	980	80	405	N/A	80	410	815
850	65	420	835	65	395	790	65	320	645				65	325	N/A	65	400	795
900	50	415	830	50	390	780							50	245	N/A	50	395	790
950	35	385	775	35	380	765							25	120	N/A	35	385	775
1000	20	350	700	20	320	640										20	365	725
1050	20*	345	685															
1100	20*	305	610															
1150	20*	235	475															
1200	20*	185	370															
1250	20*	145	295															
1300	20*	115	235															
1350	20*	95	190															
1400	20*	75	150															
1450	20*	60	115															
1500	15*	40	85															

Hydrostatic Shell Test Pressures			
Class	150	300	600
Pressure	425	1,100	2,175

\* Rating for weld-end valves. Flanged end valves rated to 1000°F maximum  
 Use solution annealed material only. Not to be used over 1000°F maximum

Note: These are design pressure ratings from ASME B16.34-1996 and apply to castings only. Packing and gasket materials may limit temperature range of specific products.

## FUGITIVE EMISSIONS AND THE NEED FOR CONTROL

Volatile Organic Compounds (VOCs) released from refineries, chemical plants, pulp and paper mills, and power generating plants have been found to cause pollution as well as health problems.

The emission of VOCs lead to the enactment of the Clean Air Act in North America and the TA Luft regulation in Europe. These regulations set limits on the amount of VOC emissions allowed from any source. All plants handling harmful gas must periodically detect leaks and repair or replace any equipment with emissions exceeding 500 ppm.

With more concern for environmental protection in the world, low emission valves have become widely used in order to prevent unsafe medium from leaking to pollute the air and in order to meet the minimum fugitive emissions requirements.

## WARREN VALVE'S LOW EMISSION PROMISE\*

WARREN VALVES ARE TESTED IN ACCORDANCE WITH EPA FUGITIVE EMISSIONS REGULATIONS

Warren's valves have been engineered and tested to ensure they meet the requirements of the Clean Air Act. **All Warren Valves are low emission to under 100 ppm** – satisfying the requirements of the federal US government-enforced maximum of 500 ppm in addition to California's maximum of 100 ppm. The body to bonnet joint and the valve stem packing are the two sources of VOC emissions from a valve. Warren's low emission valves address these two sources through the following design features:

### BONNET GASKETS

Gaskets types depend on the type and pressure class of the valve. Class 150 gaskets are stainless steel inserted flexible graphite. Class 300 utilize graphite-filled spiral wound gaskets with an inner ring. Metal ring joint gaskets are used for Class 600 and higher.

### PLUG GASKETS (*Check Valves*)

Class 150 & 300 check valves gaskets are stainless steel inserted flexible graphite sheet. Class 600 and higher utilize spiral wound flexible graphite gaskets.

### GLAND PACKING

Warren Valve's gland packing utilizes 4 flexible cup and cone graphite rings and 2 braided flexible graphite rings – one upper and one lower. Class 300 and higher also consists of a carbon spacer bush. Gasket resiliency is tested regularly and inspected at the factory during the receiving process to ensure quality.

### STEM & STUFFING BOX

Warren Valve tests for the following tolerances on diametrical interface clearance: 0.020" to 0.31" for stem/gland interface; 0.020" to 0.31" for stem-bonnet bush interface, and 0.004"–0.012" for stuffing box interface.

The stem is hardened and ground to a maximum of 32 RMS surface finish. Other tolerances include 0.001" per inch straightness, and .003" cylindricity.

A maximum of 125 RMS surface finish is allowed for the stuffing box.

\*Applies to Warren Valve's Flanged Gate, Globe, & Check valves



# 25 CERTIFICATIONS / CRYOGENICS

Warren Valve has been awarded the following certifications for their Cast Stainless Steel Gate, Globe, and Check Valves:

- ISO 9001:2008
- API 6D
- ABS
- CE -PED Certified



Warren Valve Certifications

## LOW TEMPERATURE AND CRYOGENIC CAPABILITIES

Liquefied gases such as liquid nitrogen, liquid helium, and Liquefied Natural Gas (LNG) are used in many cryogenic applications which require insulated, quality high performance valves.

Warren Valve offers Stainless Steel Gate and Globe valves with extended bonnets to provide additional insulation - and therefore preventing the gland packing rings from freezing and decreasing in size.

Warren's cryogenic valves are leak-free and tested to a low temperature of -155°F. More details are available upon request.



## OPTIONS

CHOICES TO CUSTOMIZE  
YOUR VALVE SOLUTION

**PACKING GASKET**

**MATERIALS**

**TRIM CHANGES**

**CRYOGENICS**

**BLEED HOLES**

**VENTING CONFIGURATIONS**

**STEAM JACKET INSERTS**

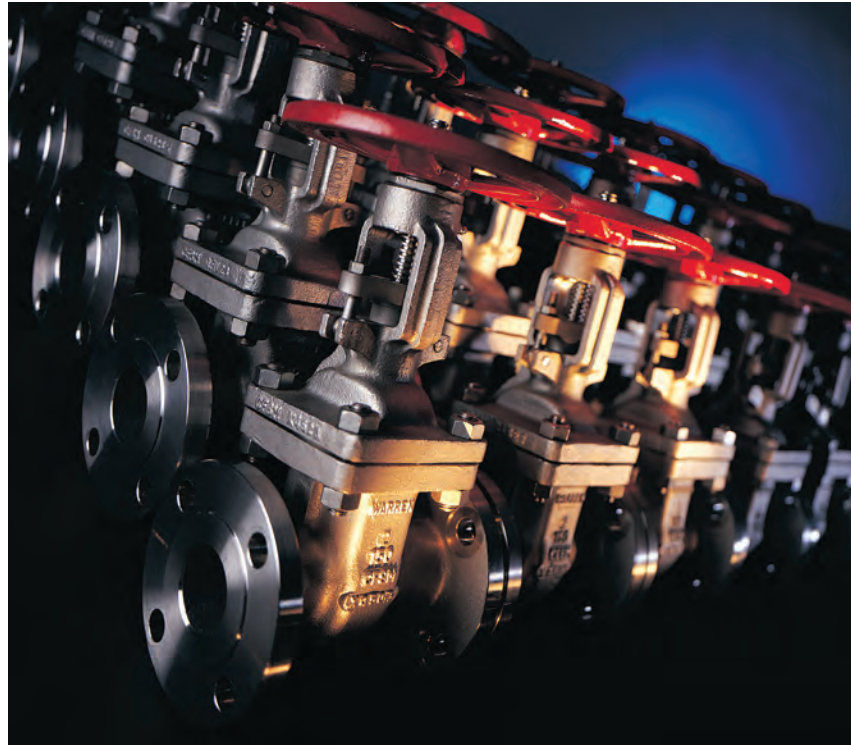
**DISC INSERTS**

**SPECIAL CLEANING SERVICES**

Warren can also custom manufacture in other material grades. Contact us to discuss your specific requirements.

**Every Warren valve is tested and fully checked for proper operation before shipment.**

Our famous triple checking of each outgoing order ensures shipment accuracy, and most of our valves are available for same day shipment. There is a reason Warren has been the trusted partner of industrial distributors for fifty years.



## WARRANTY

Warren Alloy warrants to the Buyer that the products covered by its invoices will, for the period of one year (1) year from the date of its invoice, be free of defects in materials and workmanship. All warranty claims shall be presented by Buyer, in writing, within one (1) year of the invoice date, and Buyer shall afford Warren Alloy access to and a reasonable opportunity to inspect all allegedly defective products. Warren Alloy will, at its option, repair, replace or without replacement, render credit for any products which, if properly stored, handled, used and installed in accordance with the original manufacturer's specifications or designs, industry standards or other or strict liability in tort, including, but not limited to, claims for property damage, personal injury, delay or loss of business or profit, Warren Alloy invoice references to Buyer's specifications or designs, industry standards or other requirements are for descriptive and/or identification purposes only, and no representation or warranty shall be created thereby or implied therefrom. Descriptions, illustrations, samples or references to Warren Alloy products in any catalogue, brochure, price list, circular or similar literature of Warren Alloy, and any technical assistance or advice provided by Warren Alloy with respect to those products, shall be for informational use only and shall neither cre-

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