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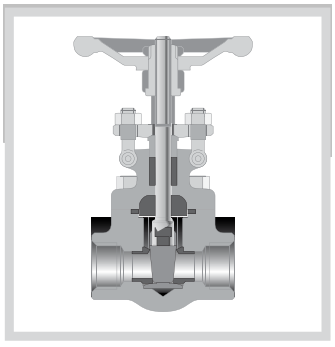
Technical Data Sheet

Forged Steel A105N GGC Valves

Effective: June 15, 2015



INDEX:

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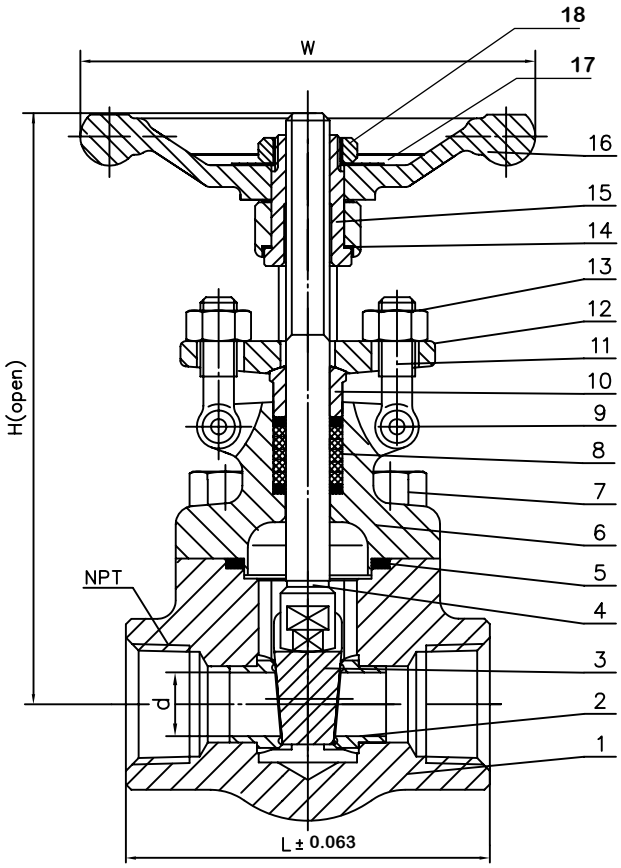
Forged Steel Gate Valve
Class 800 Conventional Port (NPT)

Figure Number: 8800

Gate valve, Conventional Port,
Bolted Bonnet, OS&Y, NPT Ends



inch / NPS	L	NPT	W	H	d			
2	5.12	2"	6.30	10.39	1.44			
11/2	4.72	11/2"	6.30	9.21	1.14			
11/4	4.49	11/4"	6.30	8.46	0.94			
1	3.94	1"	4.92	7.20	0.69			
3/4	3.15	3/4"	3.94	6.02	0.51			
1/2	2.87	1/2"	3.94	5.71	0.37			
3/8	2.87	3/8"	3.94	5.71	0.37			
1/4	2.87	1/4"	3.94	5.71	0.37			

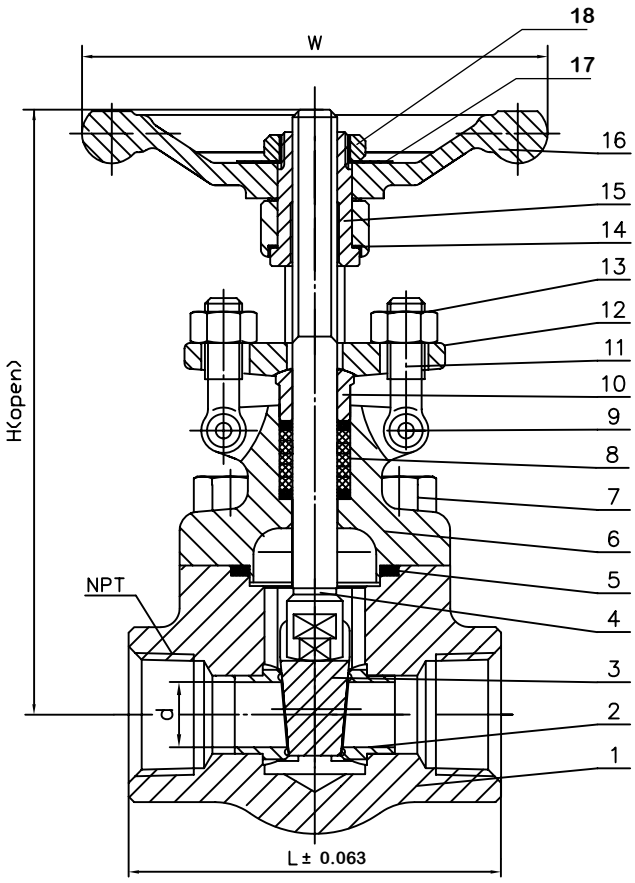
No.	Name	Material	No.	Name	Material
9	Pin	ASTM A276 304	18	Handwheel Nut	
8	Packing	Graphite	17	Nameplate	
7	Bolt	ASTM A193 B7	16	Handwheel	ASTM A197
6	Bonnet	ASTM A105N	15	Yoke nut	ASTM A276 410
5	Gasket	304+Graphite	14	Gasket	ASTM A276 410
4	Stem	ASTM A182 F6a	13	Nut	ASTM A194 2H
3	Wedge	ASTM A276 420	12	Gland flange	ASTM A105N
2	Seat	ASTM A276 410+STL	11	Eye bolt	ASTM A193 B7
1	Body	ASTM A105N	10	Gland	ASTM A276 420

Technical Requirements

1. Design & manufacture conform to API 602
2. Test & inspect conform to API 598
3. Face to Face dimension conform to manufacturer's standard
4. NPT ends conform to ASME B1.20.

Figure Number: 8888

Gate valve, Full Port, Bolted
Bonnet, OS&Y, NPT Ends



inch / NPS	L	NPT	W	H	d			
2	5.71	2"	7.87	12.20	1.73			
11/2	5.12	11/2"	6.30	10.39	1.44			
11/4	4.72	11/4"	6.30	9.21	1.14			
1	4.49	1"	6.30	8.46	0.94			
3/4	3.94	3/4"	4.92	7.20	0.69			
1/2	3.15	1/2"	3.94	6.02	0.51			

No.	Name	Material	No.	Name	Material
9	Pin	ASTM A276 304	18	**Handwheel Nut**	
8	Packing	Graphite	17	**Nameplate**	
7	Bolt	ASTM A193 B7	16	Handwheel	ASTM A197
6	Bonnet	ASTM A105N	15	Yoke nut	ASTM A276 410
5	Gasket	304+Graphite	14	Gasket	ASTM A276 410
4	Stem	ASTM A182 F6a	13	Nut	ASTM A194 2H
3	Wedge	ASTM A276 420	12	Gland flange	ASTM A105N
2	Seat	ASTM A276 410+STL	11	Eye bolt	ASTM A193 B7
1	Body	ASTM A105N	10	Gland	ASTM A276 420

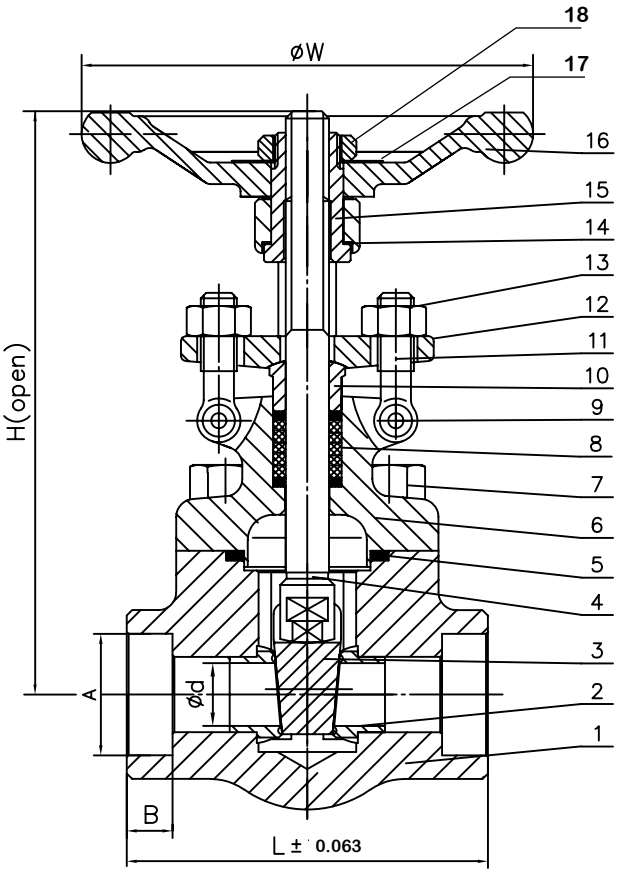
Technical Requirements

1. Design & manufacture conform to API 602
2. Test & inspect conform to API 598
3. Face to Face dimension conform to manufacturer's standard
4. NPT ends conform to ASME B1.20.1

Forged Steel Gate Valve
Class 800 Conventional Port (Socket Weld)

Figure Number: 8800W

Gate valve, Conventional Port,
Bolted Bonnet, OS&Y, Socket Weld Ends



inch / NPS	L	A	B	W	H	d		
2	5.12	2.41	0.63	6.30	10.39	1.44		
11/2	4.72	1.92	0.50	6.30	9.21	1.14		
11/4	4.49	1.68	0.50	6.30	8.46	0.94		
1	3.94	1.33	0.50	4.92	7.20	0.69		
3/4	3.15	1.07	0.50	3.94	6.02	0.51		
1/2	2.87	0.86	0.38	3.94	5.71	0.37		
3/8	2.87	0.69	0.38	3.94	5.71	0.37		
1/4	2.87	0.56	0.38	3.94	5.71	0.37		

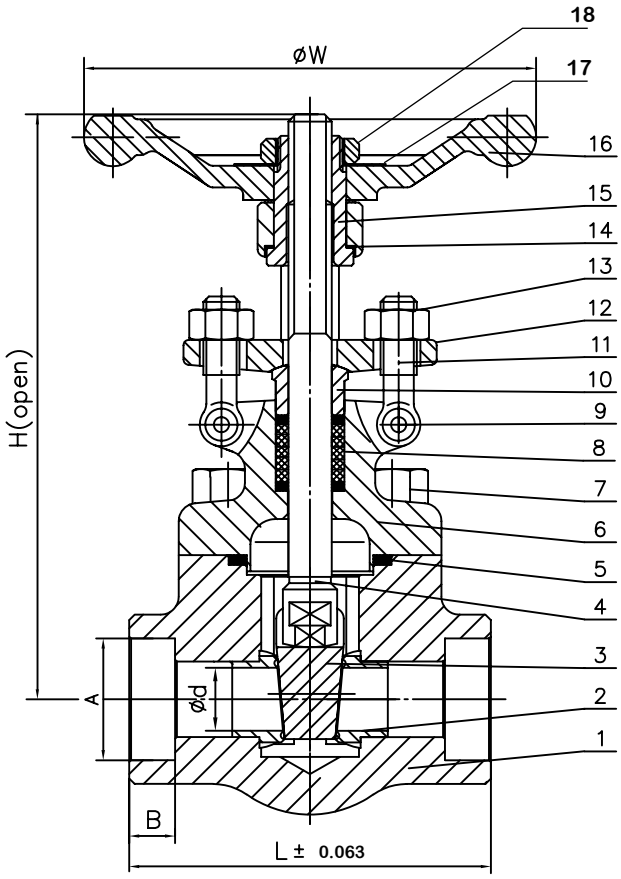
No.	Name	Material	No.	Name	Material
9	Pin	ASTM A276 304	18	Handwheel Nut	
8	Packing	Graphite	17	Nameplate	
7	Bolt	ASTM A193 B7	16	Handwheel	ASTM A197
6	Bonnet	ASTM A105N	15	Yoke nut	ASTM A276 410
5	Gasket	304+Graphite	14	Gasket	ASTM A276 410
4	Stem	ASTM A182 F6a	13	Nut	ASTM A194 2H
3	Wedge	ASTM A276 420	12	Gland flange	ASTM A105N
2	Seat	ASTM A276 410+STL	11	Eye bolt	ASTM A193 B7
1	Body	ASTM A105N	10	Gland	ASTM A276 420

Technical Requirements

1. Design & manufacture conform to API 602
2. Test & inspect conform to API 598
3. Face to Face dimension conform to manufacturer's standard
4. SW ends coform to ASME B16.11

Figure Number: 8888W

Gate valve, Full Port, Bolted
Bonnet, OS&Y, Socket Weld Ends



inch / NPS	L	A	B	W	H	d		
2	5.71	2.41	0.63	7.87	12.20	1.73		
11/2	5.12	1.92	0.50	6.30	10.39	1.44		
11/4	4.72	1.68	0.50	6.30	9.21	1.14		
1	4.49	1.33	0.50	6.30	8.46	0.94		
3/4	3.94	1.07	0.50	4.92	7.20	0.69		
1/2	3.15	0.86	0.38	3.94	6.02	0.51		

No.	Name	Material	No.	Name	Material
9	Pin	ASTM A276 304	18	**Handwheel Nut**	
8	Packing	Graphite	17	**Nameplate**	
7	Bolt	ASTM A193 B7	16	Handwheel	ASTM A197
6	Bonnet	ASTM A105N	15	Yoke nut	ASTM A276 410
5	Gasket	304+Graphite	14	Gasket	ASTM A276 410
4	Stem	ASTM A182 F6a	13	Nut	ASTM A194 2H
3	Wedge	ASTM A276 420	12	Gland flange	ASTM A105N
2	Seat	ASTM A276 410+STL	11	Eye bolt	ASTM A193 B7
1	Body	ASTM A105N	10	Gland	ASTM A276 420

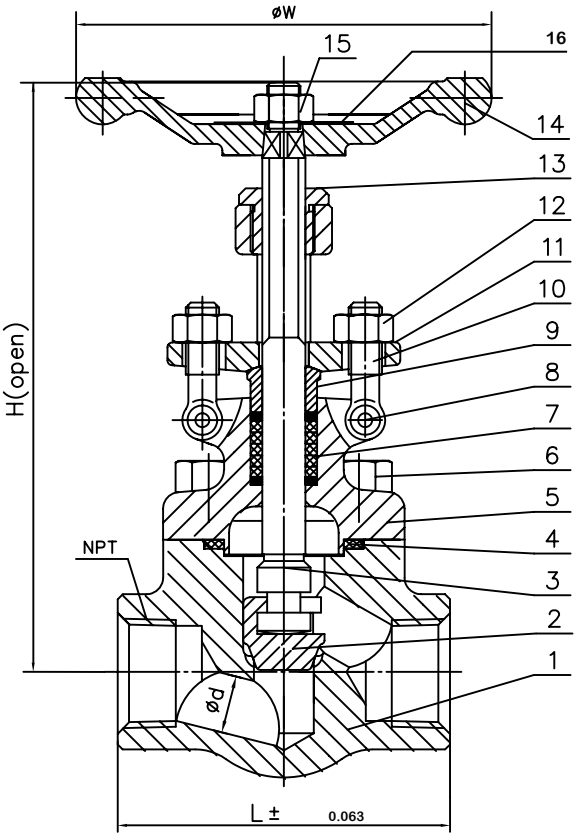
Technical Requirements

1. Design & manufacture conform to API 602
2. Test & inspect conform to API 598
3. Face to Face dimension conform to manufacturer's standard
4. SW ends coform to ASME B16.11

Forged Steel Globe Valve
Class 800 Conventional Port (NPT)

Figure Number: 8G80

Globe valve, Conventional Port,
Bolted Bonnet, OS&Y, NPT Ends



inch NPS	L	NPT	øW	H	ød			
2	6.30	2"	7.09	10.39	1.42			
11/2	5.71	11/2"	6.30	8.74	1.14			
11/4	4.49	11/4"	6.30	8.35	0.89			
1	3.94	1"	4.92	7.40	0.69			
3/4	3.15	3/4"	3.94	6.18	0.47			
1/2	2.87	1/2"	3.94	6.10	0.35			
3/8	2.87	3/8"	3.94	6.10	0.35			
1/4	2.87	1/4"	3.94	6.10	0.28			

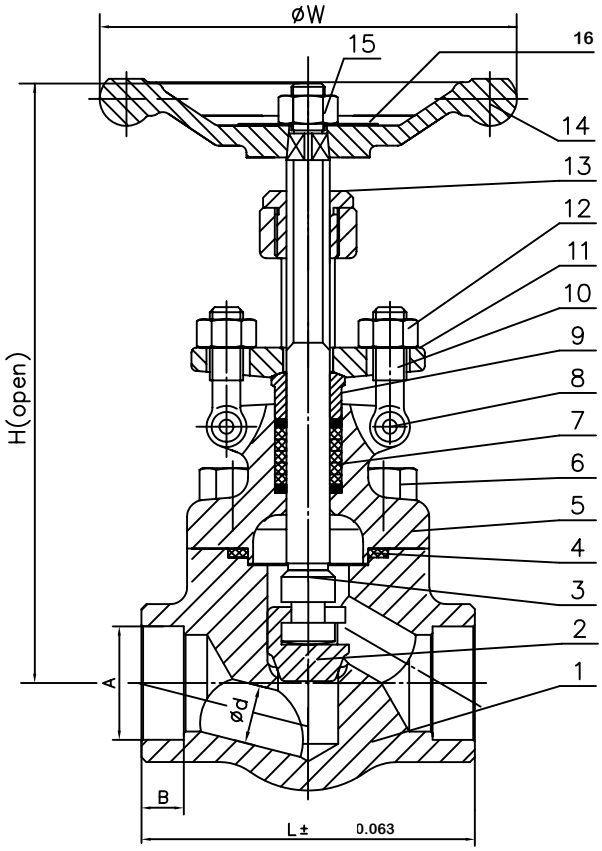
No.	Name	Material	No.	Name	Material
9	Gland	ASTM A276 420			
8	Pin	ASTM A276 304			
7	Packing	Graphite	16	Nameplate	
6	Bolt	ASTM A193 B7	15	Nut	1035 plate Zn
5	Bonnet	ASTM A105N	14	Handwheel	ASTM A197
4	Gasket	304+Graphite	13	Yoke nut	ASTM A276 410
3	Stem	ASTM A182 F6a	12	Nut	ASTM A194 2H
2	Disc	ASTM A276 420	11	Gland flange	ASTM A105N
1	Body	ASTM A105N+STL	10	Eye bolt	ASTM A193 B7

Technical Requirements

1. Design & manufacture conform to API 602
2. NPT ends conform to ASME B1.20.1
3. Face to Face dimension conform to manufacturer's standard
4. Inspection and test as per API 598

Figure Number: 8G80W

Globe valve, Conventional Port,
Bolted Bonnet, OS&Y, Socket Weld Ends



inch / NPS	L	A	B	øW	H	ød		
2	6.30	2.41	0.63	7.09	10.39	1.42		
11/2	5.71	1.92	0.50	6.30	8.74	1.14		
11/4	4.49	1.68	0.50	6.30	8.35	0.89		
1	3.94	1.33	0.50	4.92	7.40	0.69		
3/4	3.15	1.07	0.50	3.94	6.18	0.47		
1/2	2.87	0.86	0.38	3.94	6.10	0.35		
3/8	2.87	0.69	0.38	3.94	6.10	0.35		
1/4	2.87	0.56	0.38	3.94	6.10	0.28		

No.	Name	Material	No.	Name	Material
9	Gland	ASTM A276 420			
8	Pin	ASTM A276 304			
7	Packing	Graphite	16	Nameplate	
6	Bolt	ASTM A193 B7	15	Nut	1035 plate Zn
5	Bonnet	ASTM A105N	14	Handwheel	ASTM A197
4	Gasket	304+Graphite	13	Yoke nut	ASTM A276 410
3	Stem	ASTM A182 F6a	12	Nut	ASTM A194 2H
2	Disc	ASTM A276 420	11	Gland flange	ASTM A105N
1	Body	ASTM A105N+STL	10	Eye bolt	ASTM A193 B7

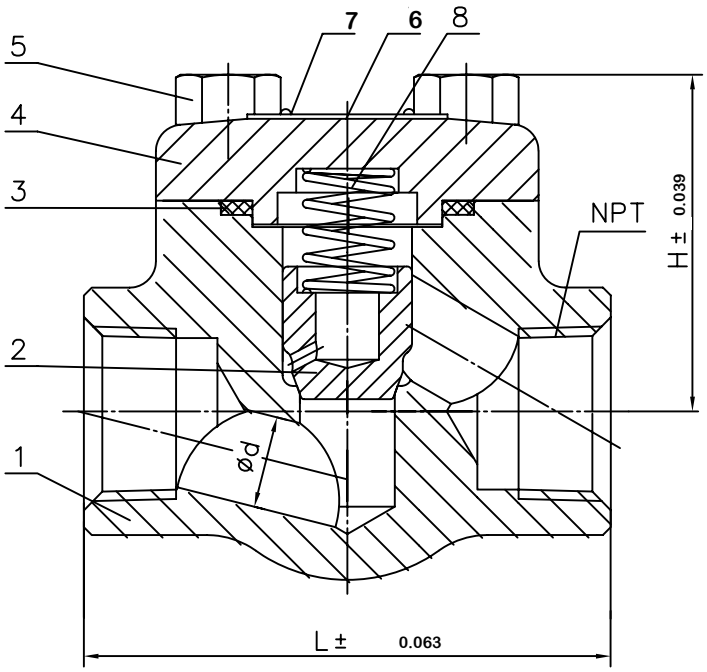
Technical Requirements

1. Design & manufacture conform to API 602
2. Test & Inspect conform to API 598
3. Face to Face dimension conform to manufacturer's standard
4. SW ebds conform to ASME B16.11

Forged Steel Piston Check Valve
Class 800 Conventional Port (NPT)

Figure Number: 8C80

Piston Check valve, Conventional Port,
Bolted Bonnet, NPT Ends



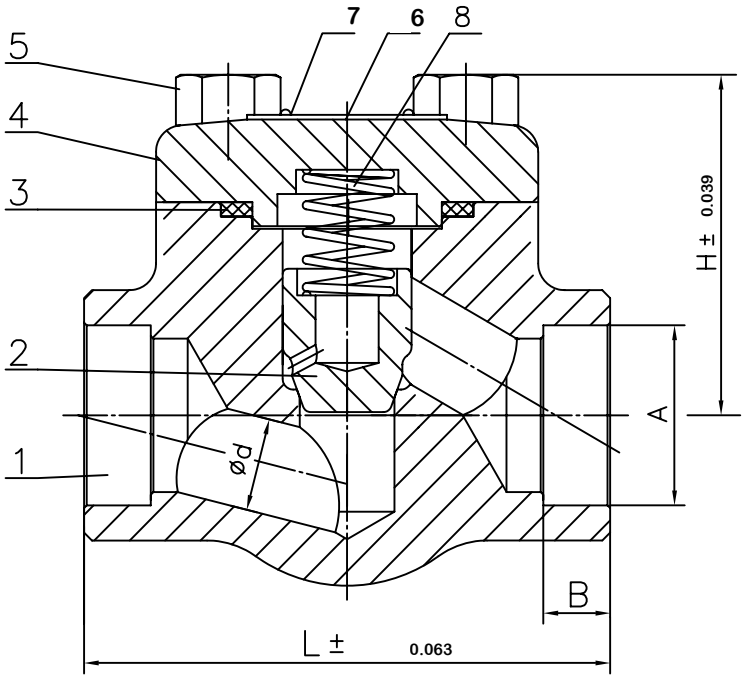
inch NPS	L	NPT	H	d				
2	6.30	2"	4.02	1.42				
11/2	5.71	11/2"	3.35	1.14				
11/4	4.49	11/4"	3.15	0.89				
1	3.94	1"	2.56	0.69				
3/4	3.15	3/4"	2.20	0.47				
1/2	2.87	1/2"	2.09	0.35				
3/8	2.87	3/8"	2.09	0.35				
1/4	2.87	1/4"	2.09	0.28				

No.	Name	Material	No.	Name	Material
5	Bolt	ASTM A193 B7			
4	Bonnet	ASTM A105N			
3	Gasket	304+Graphite	8	Spring	SS304
2	Disc	ASTM A276 420	7	Rivet	H62
1	Body	ASTM A105N+STL	6	Nameplate	304

Technical Requirements
1. Design & manufacture conform to API 602
2. Test & inspect conform to API 598
3. Face to Face dimension conform to manufacturer's standard
4. NPT ends conform to ASME B1.20.1

Figure Number: 8C80W

Piston Check valve, Conventional Port,
Bolted Bonnet, Socket Weld Ends



inch / NPS	L	A	B	H	d			
2	6.30	2.41	0.63	4.02	1.42			
11/2	5.71	1.92	0.50	3.35	1.14			
11/4	4.49	1.68	0.50	3.15	0.89			
1	3.94	1.33	0.50	2.56	0.69			
3/4	3.15	1.07	0.50	2.20	0.47			
1/2	2.87	0.86	0.38	2.09	0.35			
3/8	2.87	0.69	0.38	2.09	0.35			
1/4	2.87	0.56	0.38	2.09	0.28			

No.	Name	Material	No.	Name	Material
5	Bolt	ASTM A193 B7			
4	Bonnet	ASTM A105N			
3	Gasket	304+Graphite	8	Spring	SS304
2	Disc	ASTM A276 420	7	Rivet	H62
1	Body	ASTM A105N+STL	6	Nameplate	304

Technical Requirements

1. Design & manufacture conform to API 602
2. Test & inspect conform to API 598
3. Face to Face dimension conform to manufacturer's standard
4. SW ends coform to ASME B16.11

Pressure Temperature and Performance Standards
A105N Forged Steel GGC Valves

Temperature F	Max Pressure (PSI)	
	800# Valves	1500 # Valves
-20 to 100	1975	3705
200	1810	3395
300	1745	3270
400	1690	3170
500	1610	3015
600	1515	2840
650	1465	2745
700	1415	2665
750	1350	2535
800*	1100	2055

Temperature C	Max Pressure (MPa)	
	800# Valves	1500# Valves
-29 to 38	13.62	25.53
50	13.37	25.06
100	12.43	23.3
150	12.02	22.54
200	11.68	21.9
250	11.18	20.9
300	10.62	19.91
325	10.32	19.36
350	10.02	18.78
375	9.7	18.18
400	9.26	17.36
425*	7.67	14.38

* Max Temperature is 800 °F (425 °C)

Performance Standard		
Class 800		
Minimum Test Pressure (MPa)	Shell Test	20.5
	Back Seat Test*	14.9
	Seal Test	14.9
*Not Applicable To Check Valves		

Performance Standard		
Class 1500		
Minimum Test Pressure (MPa)	Shell Test	38.3
	Back Seat Test*	28.0
	Seal Test	28.0
*Not Applicable To Check Valves		

Notes

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