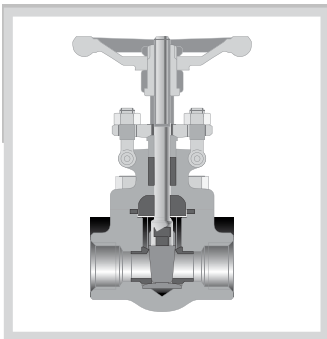




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Technical Data Sheet  
**Forged Steel A105N GGC Valves**  
Effective: June 15, 2015



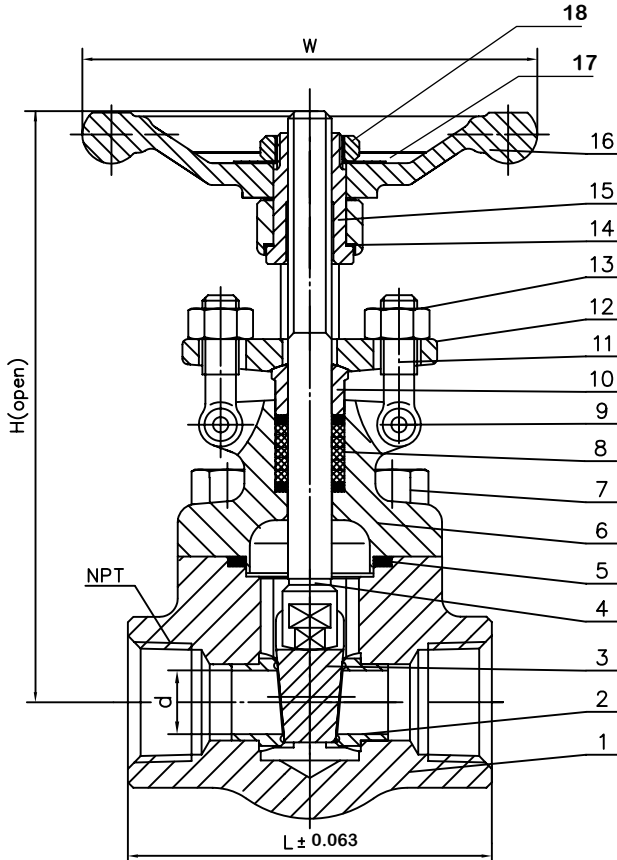
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# Forged Steel Gate Valve Class 800 Conventional Port (NPT)

## Figure Number: 8800

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



	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		
	inch							
	NPS	L	NPT	W	H	d		
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	
No.	Name	Material		No.	Name	Material		

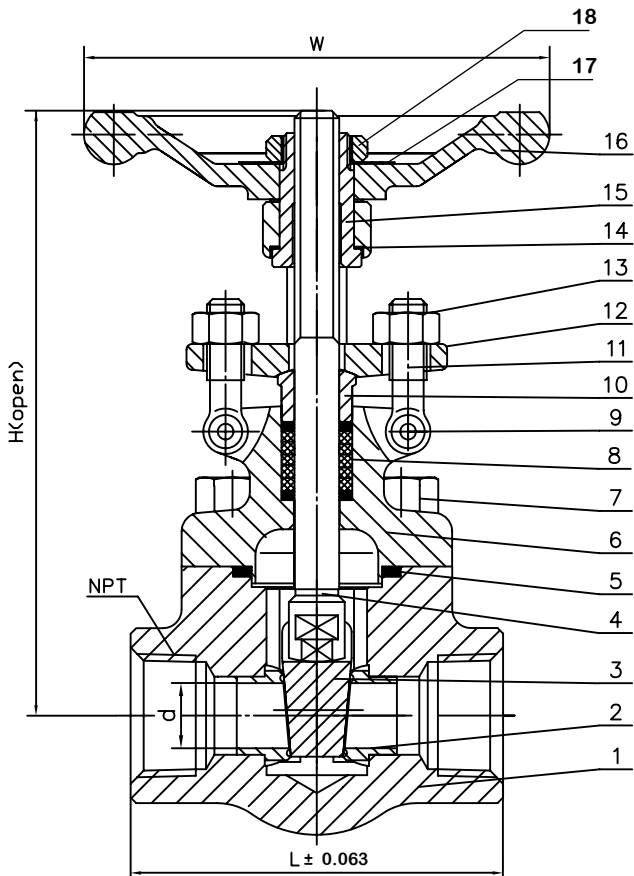
### Technical Requirements

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.

# Forged Steel Gate Valve Class 800 Full Port (NPT)

## Figure Number: 8888

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



2	5.71	2"	7.87	12.20	1.73		
1 1/2	5.12	1 1/2"	6.30	10.39	1.44		
1 1/4	4.72	1 1/4"	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		
inch							
NPS	L	NPT	W	H	d		
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		
No.	Name	Material	No.	Name	Material		

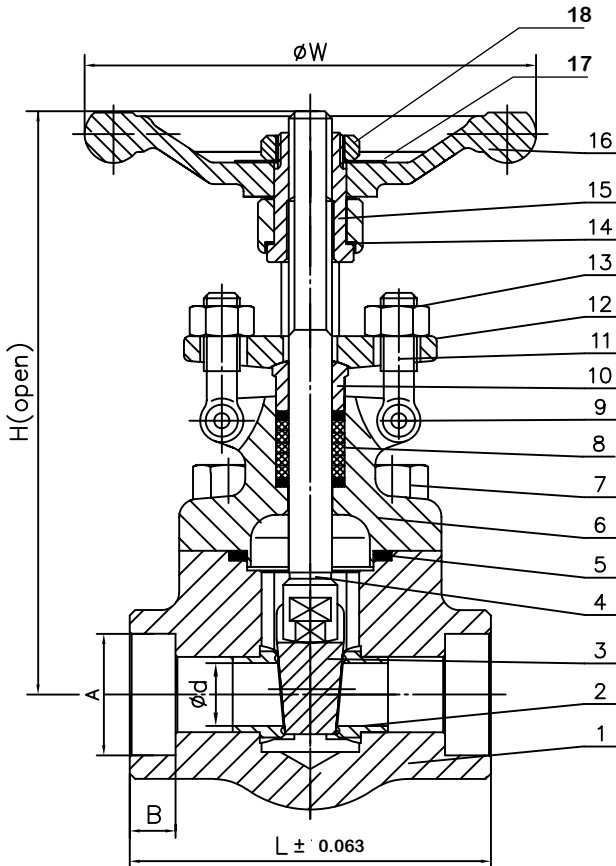
### Technical Requirements

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



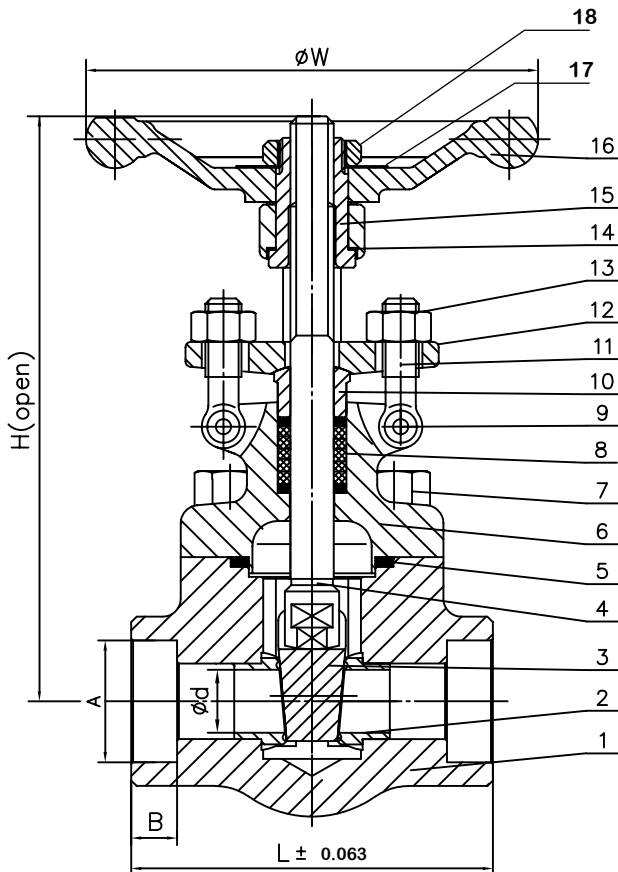
	2	5.12	2.41	0.63	6.30	10.39	1.44		
	11/2	4.72	1.92	0.50	6.30	9.21	1.14		
	11/4	4.49	1.68	0.50	6.30	8.46	0.94		
	1	3.94	1.33	0.50	4.92	7.20	0.69		
	3/4	3.15	1.07	0.50	3.94	6.02	0.51		
	1/2	2.87	0.86	0.38	3.94	5.71	0.37		
	3/8	2.87	0.69	0.38	3.94	5.71	0.37		
	1/4	2.87	0.56	0.38	3.94	5.71	0.37		
inch									
NPS	L	A	B	W	H	d			
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			
No.	Name	Material		No.	Name	Material			

## 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 conform to ASME B16.11

# Forged Steel Gate Valve Class 800 Full Port (Socket Weld)

**Figure Number: 8888W**  
Gate valve, Full Port, Bolted  
Bonnet, OS&Y, Socket Weld Ends



2	5.71	2.41	0.63	7.87	12.20	1.73		
1 1/2	5.12	1.92	0.50	6.30	10.39	1.44		
1 1/4	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		
inch								
NPS	L	A	B	W	H	d		
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			
No.	Name	Material	No.	Name	Material			

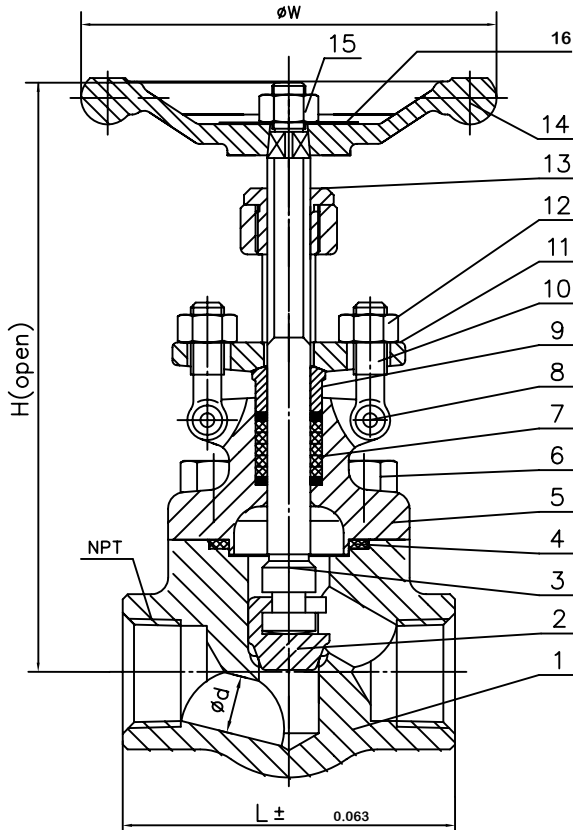
### Technical Requirements

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 conform 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



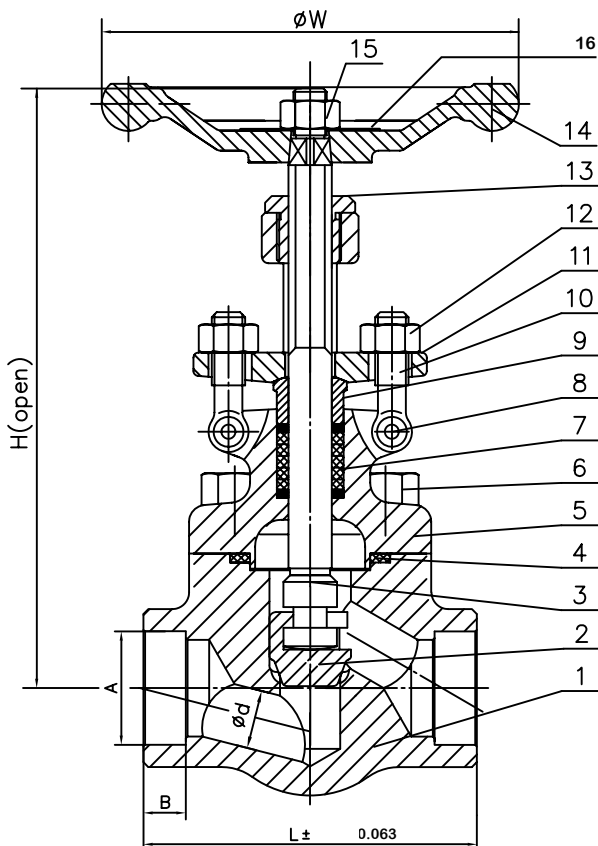
inch NPS	L	NPT	$\phi W$	H	$\phi d$			
2	6.30	2"	7.09	10.39	1.42			
1 1/2	5.71	1 1/2"	6.30	8.74	1.14			
1 1/4	4.49	1 1/4"	6.30	8.35	0.89			
1	3.94	1"	4.92	7.40	0.69			
3/4	3.15	3/4"	3.94	6.18	0.47			
1/2	2.87	1/2"	3.94	6.10	0.35			
3/8	2.87	3/8"	3.94	6.10	0.35			
1/4	2.87	1/4"	3.94	6.10	0.28			
9	Gland		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
No.	Name		Material		No.	Name		Material

### 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

# Forged Steel Globe Valve Class 800 Conventional Port (Socket Weld)

**Figure Number: 8G80W**  
Globe valve, Conventional Port,  
Bolted Bonnet, OS&Y, Socket Weld Ends



	2	6.30	2.41	0.63	7.09	10.39	1.42		
	1 1/2	5.71	1.92	0.50	6.30	8.74	1.14		
	1 1/4	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		
	inch								
	NPS	L	A	B	$\phi W$	H	$\phi d$		
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			
No.	Name	Material		No.	Name	Material			

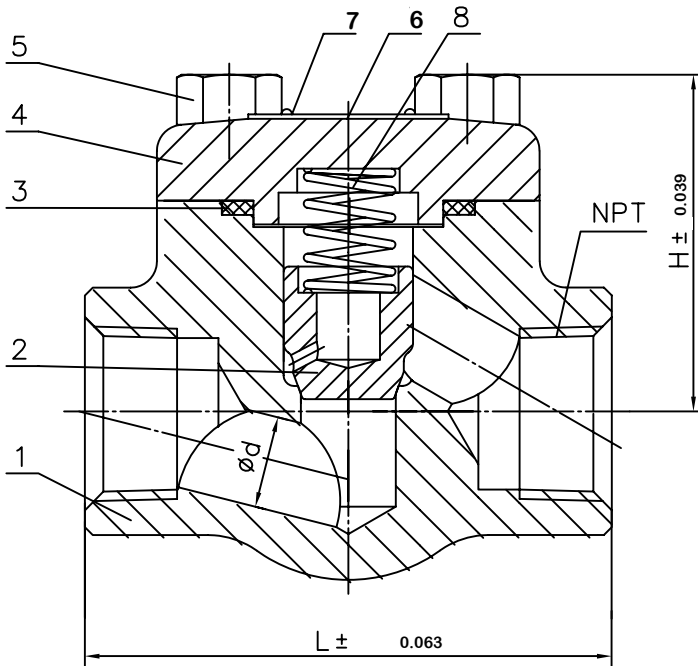
## Technical Requirements

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



2	6.30	2"	4.02	1.42				
1 1/2	5.71	1 1/2"	3.35	1.14				
1 1/4	4.49	1 1/4"	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				
inch								
NPS	L	NPT	H	d				
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	
No.	Name		Material		No.	Name		Material

### Technical Requirements

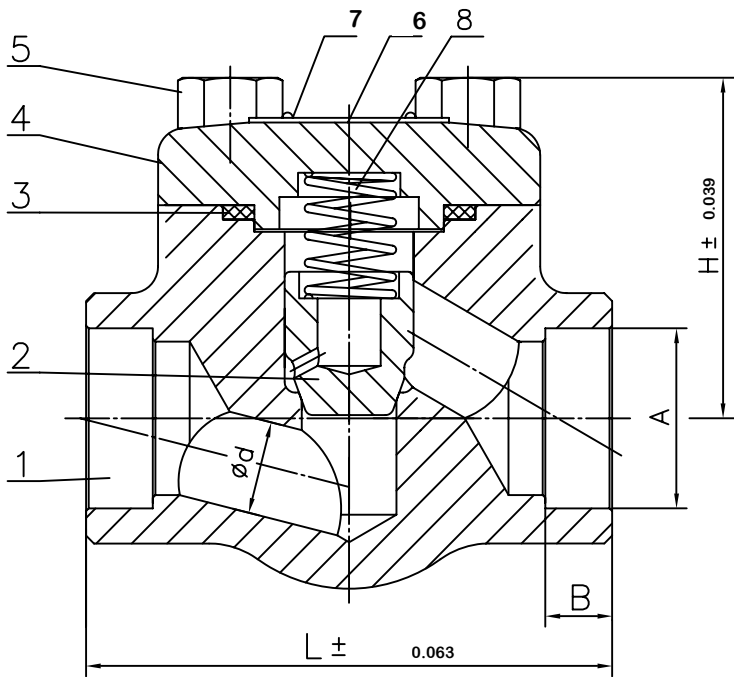
1. Design & manufacture conform to API 602
2. Test & inspect conform to API 598
3. Face to Face dimension conform to manufacturer's standard
4. NPT ends conform to ASME B1.20.1



# Forged Steel Piston Check Valve Class 800 Conventional Port (Socket Weld)

**Figure Number: 8C80W**

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



2	6.30	2.41	0.63	4.02	1.42			
1 1/2	5.71	1.92	0.50	3.35	1.14			
1 1/4	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			
inch								
NPS	L	A	B	H	d			
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	
No.	Name		Material		No.	Name		Material

### 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 conform 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		





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