

**Gate, Globe & Check Valve
Forged Steel, Bolted / Welded Bonnet
Socket weld ends**



Type GTF



Type GLF



Type PCF

1/4" - 2" (6-50)

Class 800, 1500, 2500, 4500

Design Accordance with API 602 & ASME B 16.34

Applications

- General Industry, power stations, process engineering
- For water, steam, gas, oil and other non-aggressive media
- Further applications on request

Operating data

- Pressure range upto 776 Bar / 11250 PSI
- Temperature range up to +593°C/1100°F
- Minimum temperature 0°C (less than 0°C on request)
- Pressure temperature rating as per ASME B 16.34, Standard class

Materials

- ASTM A 105 from 0°C to 425°C
- ASTM A 182 316L from 0°C to 450°C
- ASTM A 182 F22 from 0°C to 593°C
- ASTM A 182 F91 from 0°C to 593°C

Design

- As per API 602 # 800 & # 1500 Valves
- As per ASME B 16.34 # 2500 & # 4500 Valves
- Bolted Bonnet Construction for # 800 Valves
- Welded Bonnet Construction for # 1500, # 2500 & # 4500 Valves
- Hard faced Seats (13% Cr / Stellite)
- Encapsulated gasket for #800 Valves
- The Valves meet the safety requirement of the Pressure Equipment Directive 97/23/EC(PED) of annex I for fluids of the groups 1 and 2.

Variants on request

- Locking arrangement
- Flanged Ends to # 150/300/600
- Threaded / Butt Weld connections
- Position indicator

Remarks :

(Type Series Booklet References)

SICCA 900-2500 GTC	: 7241.2/06-16
SICCA 900-2500 GLC	: 7242.2/06-16
SICCA 900-2500 SCC	: 7243.2/06-16
SICCA 150-600 GTC	: 7244.2/06-16
SICCA 150-600 GLC	: 7245.2/06-16
SICCA 150-600 SCC	: 7246.2/06-16
Operating instructions no.	: 0500.80/07 - 18 G3

On all enquiries / orders please specify :

- | | |
|--------------------------|--------------------------------------|
| 1. Type | 8. Material of construction |
| 2. ASME pressure class | 9. Flow medium |
| 3. Size | 10. Flow rate Min. / Max. |
| 4. Design pressure | 11. Type of end connection |
| 5. Operating pressure | 12. Variants |
| 6. Operating temperature | 13. Type Series Booklet no. |
| 7. Differential pressure | 14. Valve data sheet (if applicable) |

When ordering spares, Indicate Serial number of Valve.



Authorised Dealer;
PUSHKARNA SALES PVT LTD
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Pressure Temperature chart

Material : A 105 Standard Class

Note : Permissible, but not recommended for prolonged usage above about 800°F

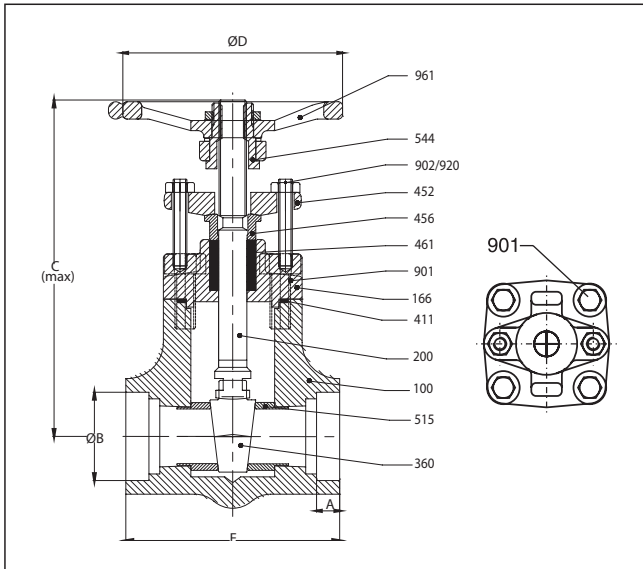
Temperature		Pressure Class													
		#150		#300		#600		#800		#1500		#2500		#4500	
°F	°C	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²
-20 to 100	-29 to 38	285	20	740	52	1480	104.1	1975	138.9	3705	260.5	6170	433.8	11110	781
200	93.3	260	18.3	680	47.8	1360	95.6	1810	127.3	3395	238.7	5655	397.6	10185	716
300	148.9	230	16.2	655	46.1	1310	92.1	1745	122.7	3270	229.9	5450	383.2	9815	690
400	204.4	200	14.1	635	44.6	1265	88.9	1690	118.8	3170	222.9	5280	371.2	9505	668
500	260	170	12	605	42.5	1205	84.7	1610	113.2	3015	212	5025	353.3	9040	636
600	315.6	140	9.8	570	40.1	1135	79.8	1515	106.5	2840	199.7	4730	332.6	8515	599
650	343.3	125	8.8	550	38.7	1100	77.3	1465	103	2745	193	4575	321.7	8240	579
700	371.1	110	7.7	530	37.3	1060	74.5	1415	99.5	2665	187.4	4425	311.1	7960	560
750	398.9	95	6.7	505	35.5	1015	71.4	1350	94.9	2535	178.2	4230	297.4	7610	535
800	426.7	80	5.6	410	28.8	825	58	1100	77.3	2055	144.5	3430	241.2	6170	434
850	454.4	65	4.6	320	22.5	640	45	850	59.8	1595	112.1	2655	186.7	4185	294
900	482.2	50	3.5	230	16.2	460	32.3	615	43.2	1150	80.9	1915	134.6	3455	243
950	510	35	2.5	135	9.5	275	19.3	365	25.7	685	48.2	1145	80.5	2055	144
1000	537.8	20	1.4	85	6	170	12	225	15.8	430	30.2	715	50.3	1285	90

Material : A 182 F22 Standard Class

Note : Use normalised and tempered material only

Temperature		Pressure Class													
		#150		#300		#600		#800		#1500		#2500		#4500	
°F	°C	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²	PSI	kg/cm ²
-20 to 100	-29 to 38	290	20.4	750	52.7	1500	105.5	2000	140.6	3750	263.7	6250	439.4	11251	791
200	93.3	260	18.3	750	52.7	1500	105.5	2000	140.6	3750	263.7	6250	439.4	11211	788
300	148.9	230	16.2	730	51.3	1455	102.3	1940	136.4	3640	255.9	6070	426.8	10925	765
400	204.4	200	14.1	705	49.6	1410	99.1	1880	132.2	3530	248.2	5880	413.4	10585	744
500	260	170	12	665	46.8	1330	93.5	1775	124.8	3325	233.8	5540	389.5	9965	701
600	315.6	140	9.8	605	42.5	1210	85.1	1615	113.5	3025	212.7	5040	354.3	9070	633
650	343.3	125	8.8	590	41.5	1175	82.6	1570	110.4	2940	206.7	4905	344.9	8825	620
700	371.1	110	7.7	570	40.1	1135	79.8	1515	99.8	2840	199.7	4730	322.6	8515	599
750	398.9	95	6.7	530	37.3	1065	74.9	1420	95.3	2660	187	4430	311.5	7970	560
800	426.7	80	5.6	510	35.9	1015	71.4	1355	91.4	2540	178.6	4230	297.4	7610	535
850	454.4	65	4.6	485	34.1	975	68.5	1300	84.4	2435	171.2	4060	285.4	7305	514
900	482.2	50	3.5	450	31.6	900	63.3	1200	72.1	2245	157.8	3745	263.3	6740	474
950	510	35	2.5	385	27.1	755	53.1	1025	49.9	1930	135.7	3220	226.4	5795	407
1000	537.8	20	1.4	265	18.6	535	37.6	710	32.7	1335	93.9	2230	156.8	4010	282
1050	565.6	20	1.4	175	12.3	350	24.6	465	32.7	875	61.5	1455	102.3	2625	185
1100	593.3	20	1.4	110	7.7	220	15.5	295	20.7	550	38.7	915	64.3	1645	116
1150	621.1	20	1.4	70	4.9	135	9.5	180	12.7	345	24.3	570	40.1	1030	72
1200	648.9	15	1.1	40	2.8	80	5.6	110	7.7	205	14.4	345	24.3	615	43

*Pressure/Temperature class values as per API 602

800 Gate Valve

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	212	2975	Water
Back Seat	155	2175	
Seat Leak	4 to 7	58 to 100	Air
Design Specifications			
General valve design & Pr. Temp. rating		API 602	
Socket weld end dimensions		ASME B 16.11	
End to end as per manufacturer's standard			

SS 316 L - Shell : 169 kg/cm² / 2400 PSI
 Back Seat : 125 kg/cm² / 1775 PSI

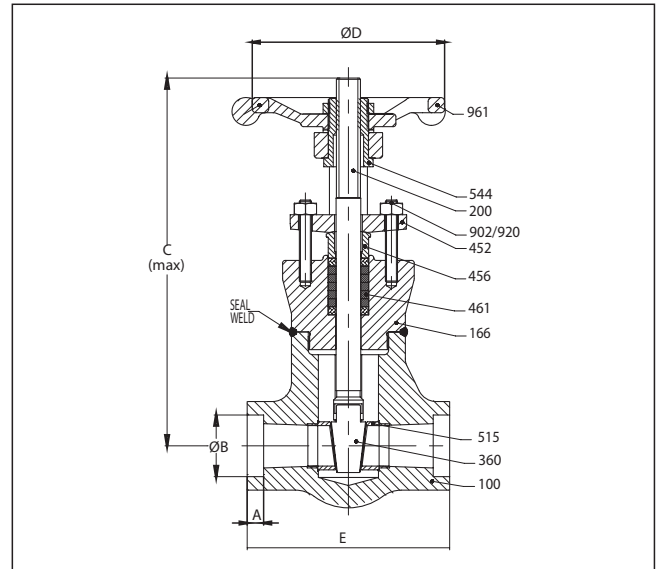
B. Dimensions

Size		E		ØB		C (Open)		ØD		A	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	2.9	73	0.6	14.4	5.5	140	3.8	96	0.4	9.5
3/8	10	2.9	73	0.7	17.6	5.5	140	3.8	96	0.4	9.5
1/2	15	2.9	73	0.9	21.8	5.5	140	3.8	96	0.4	9.5
3/4	20	3.2	82	1.1	27.2	5.4	155	3.7	96	0.5	12.5
1	25	3.2	90	1.3	33.9	5.9	170	4.1	103	0.5	12.5
1½	40	5	127	1.9	48.8	8.1	240	5	127	0.5	12.5
2	50	5.8	148	2.4	61.2	9.5	285	5.9	152	0.6	16

C. Materials

Part	Part Name	Materials		MOC
100	Body	A 105	A 182-F316 L	LF2
166	Bonnet	A 105	A 182-F316 L	LF2
200	Stem	A 479-410-2	A 276-316L	A 276-304
360	Wedge	A 217-CA15 / A 217-CA15+ST6 ¹⁾	A 315-CF3M	A 351-CF8M
411	Gasket	SS 304+Graph-ite	SS 316+Graph-ite	SS 304+Graph-ite
452	Gland Flange	A 105	A 182-F316L	A 105
456	Gland Bush	A 216-410	A 276-316L	A 105
461	Gland Packing	Graphite		
515	Seat Ring	A 276-410(H) ²⁾ / A 276-410+ST6	A 276-316L	A 276-304+ST6
544	Stem Nut	A 582-416		
901	Hex. Bolt	A 193-B7	A 193-B8M	A 193-B8M
902	Stud	A 193-B6	A 193-B8M	A 193-B8M
920	Hex. Nut	A 194-2H	A 194-B8	A 194-B8
961	Handwheel	Carbon Steel		

1) A 217-CA15+ST6 for trim 5 only 2) A 276-410(H) for trim 1 only

1500 Gate Valve

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	396	5625	Water
Back Seat	291	4125	
Seat Leak	4 to 7	58 to 100	Air
Design Specifications			
General valve design & Pr. Temp. rating		API 602	
Socket weld end dimensions		ASME B 16.11	
End to end as per manufacturer's standard			

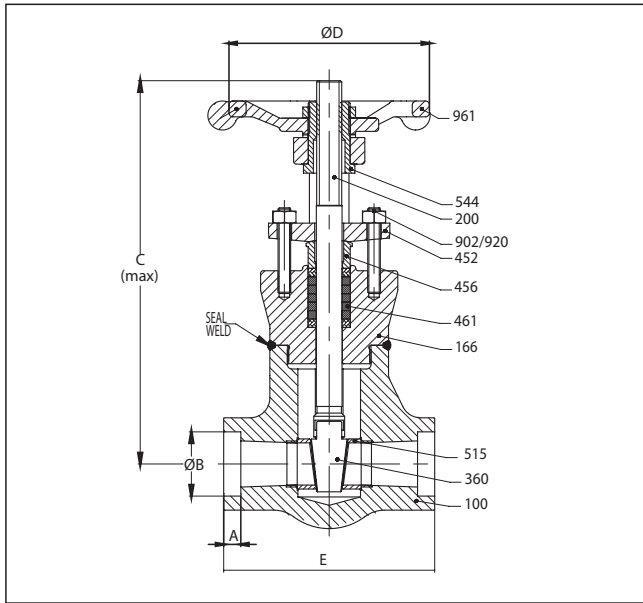
B. Dimensions

Size		E		ØB		C (Open)		ØD		A	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	2.9	73	0.6	14.4	7.7	195	3.8	96	0.4	9.5
3/8	10	2.9	73	0.7	17.6	7.7	195	3.8	96	0.4	9.5
1/2	15	2.9	73	0.9	21.8	7.7	195	3.8	96	0.4	9.5
3/4	20	3.7	94	1.1	27.2	9.3	235	3.7	96	0.5	12.5
1	25	4.8	122	1.3	33.9	10	255	5	127	0.5	12.5
1½	40	6.3	160	1.9	48.8	13	330	5.8	150	0.5	12.5
2	50	7	178	2.4	61.2	14	355	5.8	150	0.6	16

C. Materials

Part	Part Name	Materials		MOC
100	Body	A 105	A 182-22	LF2
166	Bonnet	A 105	A 182-22	LF2
200	Stem	A 479-410-2	A 479-410-2	A 276-304
360	Wedge	A 217-CA15 / A 217-CA15+ST6 ¹⁾	A 217-CA15 / A 217-CA15+ST6 ¹⁾	A 351-CF8M
452	Gland Flange	A 105	A 105	A 105
456	Gland Bush	A 216-410	A 276-316L	A 276-304
461	Gland Packing	Graphite		
515	Seat Ring	A 276-410(H) ²⁾ / A 276-410+ST6	A 276-410+ST6	A 276-304+ST6
544	Stem Nut	A 582-416		
902	Stud	A 193-B8M Cl.2	A 193-B8M Cl.2	A 193-B8M
920	Hex. Nut	A 194-2H	A 194-2H	A 194-B8
961	Handwheel	Carbon Steel		

1) A 217-CA15+ST6 for trim 5 only 2) A 276-410(H) for trim 1 only

2500 Gate Valve

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	660	9375	Water
Back Seat	484	6875	
Seat Leak	4 to 7	58 to 100	Air
Design Specifications			
General valve design & Pr. Temp. rating		ASME B 16.34	
Socket weld end dimensions		ASME B 16.11	
End to end as per manufacturer's standard			

B. Dimensions

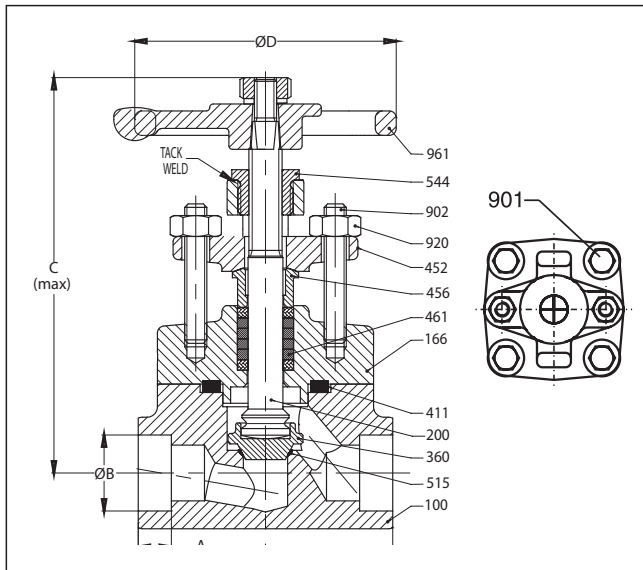
Size		E		ØB		C (Open)		ØD	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	3.7	94	0.6	14.4	9.8	248	5.0	127
3/8	10	3.7	94	0.7	17.6	9.8	248	5.0	127
1/2	15	3.7	94	0.9	21.8	9.8	248	5.0	127
3/4	20	3.7	94	1.1	27.1	10.0	253	5.0	127
1	25	4.8	122	1.3	33	11.9	303	6.0	152
1½	40	6.3	160	1.9	48.7	13.2	335	8.0	203
2	50	7.0	178	2.4	61.1	15.4	390	10.0	254

C. Materials

Part	Part Name	Materials		MOC
100	Body	A 105	A 182-22	LF2
166	Bonnet	A 105	A 182-22	LF2
200	Stem	A 479-410-2	A 479-410-2	A 276-304
360	Wedge	A 217-CA15 / A 217-CA15+ST6 ¹⁾	A 217-CA15 / A 217-CA15+ST6 ¹⁾	A 351-CF8M
452	Gland Flange	A 105	A 105	A 105
456	Gland Bush	A 216-410	A 276-316L	A 276-304
461	Gland Packing	Graphite		
515	Seat Ring	A 276-410(H) ²⁾ / A 276-410+ST6	A 276-410+ST6	A 276-304+ST6
544	Stem Nut	A 582-416		
902	Stud	A 193-B8M Cl.2	A 193-B8M Cl.2	A 193-B8M
920	Hex. Nut	A 194-2H	A 194-2H	A 194-B8
961	Handwheel	Carbon Steel		

1) A 217-CA15+ST6 for trim 5 only

2) A 276-410(H) for trim 1 only

800 GLOBE VALVE

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	212	2975	Water
Back Seat	155	2175	
Seat Leak	155	2175	
Design Specifications			
General valve design & Pr. Temp. rating		API 602	
Socket weld end dimensions		ASME B 16.11	
End to end as per manufacturer's standard			

SS316L - SHELL : 169 kg/cm² / 2400 PSI
 Seat / Back Seat : 125 kg/cm² / 1775 PSI

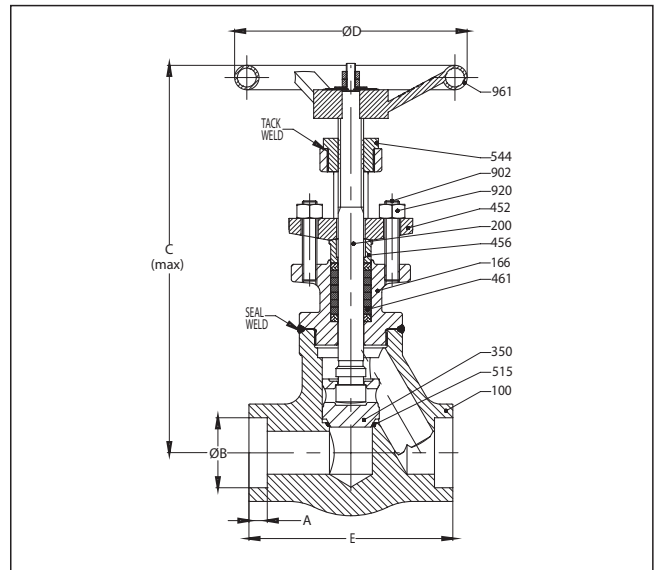
B. Dimensions

Size		E		ØB		C (Open)		ØD		A	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	2.9	73	0.6	14.4	4.9	125	3.0	75	0.4	9.5
3/8	10	2.9	73	0.7	17.6	4.9	125	3.0	75	0.4	9.5
1/2	15	2.9	73	0.9	21.8	4.9	125	3	75	0.4	9.5
3/4	20	3.2	82	1.1	27.2	5.2	142	3	75	0.5	12.5
1	25	4.3	108	1.3	33.9	5.8	180	4.7	120	0.5	12.5
1 1/2	40	6	152	1.9	48.8	8	220	5.7	144	0.5	12.5
2	50	5.8	148	2.4	61.2	10.4	285	5.7	144	0.6	16

C. Material

Part	Part Name	Materials		MOC
100	Body	A 105	A 182-F316 L	LF2
166	Bonnet	A 105	A 182-F316 L	LF2
200	Stem	A 479-410-2	A 276-316L	A 276-304
360	Disc	A 276-410(H) / A217-CA15+ST6 ¹⁾	A 315-CF3M	A 351-CF8M
411	Gasket	SS 304+Graphite		
452	Gland Flange	A 105	A 182-F316L	A 105
456	Gland Bush	A 276-410	A 276-316L	A 105
461	Gland Packing	Graphite		
515	Seat	ST6 (Integral)	Integral	ST6 (Integral)
544	Stem Nut	A 582-416		
901	Hex. Bolt	A 193-B7	A 193-B8M	A 193-B8M
902	Stud	A 193-B6	A 193-B8M	A 193-B8M
920	Hex. Nut	A 194-2H	A 194-B8	A 194-B8
961	Handwheel	Carbon Steel		

1) A 276-304+ST6 for trim 5 only

1500 GLOBE VALVE

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	396	5625	Water
Back Seat	291	4125	
Seat Leak	291	4125	
Design Specifications			
General valve design & Pr. Temp. rating		API 602	
Pressure Temperature rating		ASME B 16.34	
Socket weld end dimensions		ASME B 16.11	
End to end as per manufacturer's standard			

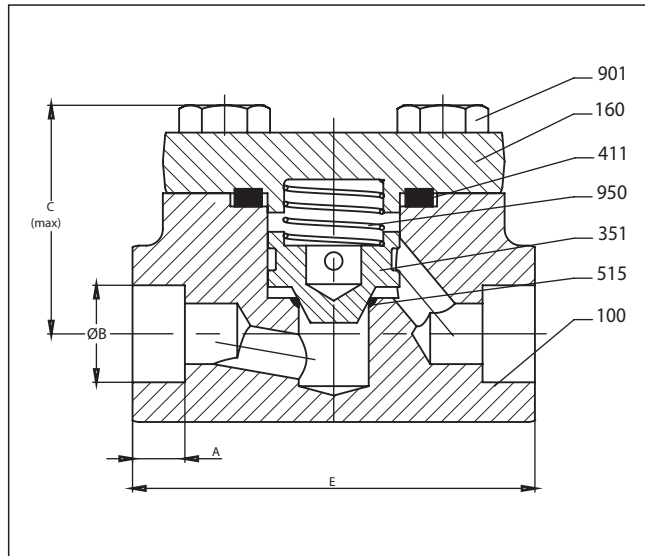
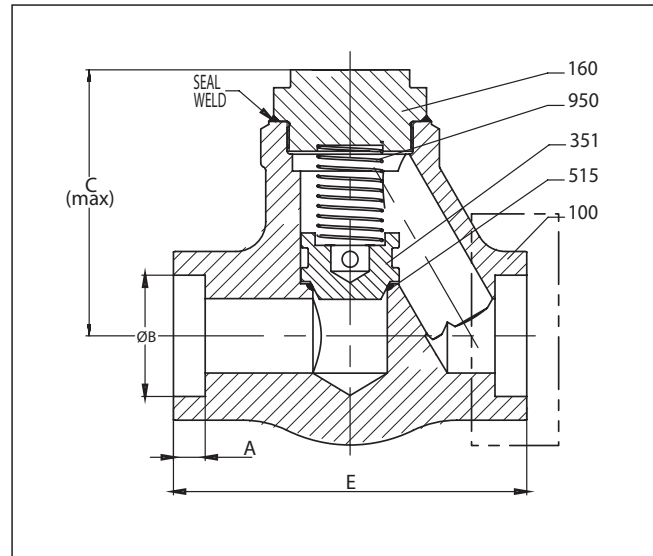
B. Dimensions

Size		E		ØB		C (Open)		ØD		A	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	2.9	73	0.6	14.4	7.8	197	5.0	127	0.4	9.5
3/8	10	2.9	73	0.7	17.6	7.8	197	5.0	127	0.4	9.5
1/2	15	2.9	73	0.9	21.8	7.8	197	5	127	0.4	9.5
3/4	20	3.7	94	1.1	27.2	9.5	241	6.9	176	0.5	12.5
1	25	4.8	122	1.3	33.9	9.6	244	6.9	176	0.5	12.5
1 1/2	40	6.3	160	1.9	48.8	12.8	326	8	203	0.5	12.5
2	50	7	178	2.4	61.2	14.8	360	8	203	0.6	16

C. Material

Part	Part Name	Materials		MOC
100	Body	A 105	A 182-22	LF2
166	Bonnet	A 105	A 182-22	LF2
200	Stem	A 479-410-2	A 479-410-2	A 276-304
360	Disc	A 217-410 (H) / A 276-304+ST6 ¹⁾	A 276-410 (H) / A 276-304+ST6 ¹⁾	A 276-304
452	Gland Flange	A 105	A 105	A 105
456	Gland Bush	A 216-410	A 276-410	A 276-304
461	Gland Packing	Graphite		
515	Seat	ST6 (Integral)	ST6 (Integral)	ST6 (Integral)
544	Stem Nut	A 582-416		
902	Stud	A 193-B8M Cl.2	A 193-B8M Cl.2	A 193-B8M
920	Hex. Nut	A 194-2H	A 194-2H	A 194-B8
961	Handwheel	Carbon Steel		

1) A 276-304+ST6 for trim 5 only

800 CHECK VALVE

1500 CHECK VALVE

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	212	2975	Water
Back Seat	155	2175	
Design Specifications			
General valve design & Pr. Temp. rating			API 602
Socket weld end dimensions			ASME B 16.11
End to end as per manufacturer's standard			

SS 316 L - Shell : 169 kg/cm² / 2400 PSI
 Seat : 125 kg/cm² / 1775 PSI

B. Dimensions

Size		E		ØB		C (Open)		A	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	2.9	73	0.6	14.4	2.0	50	0.4	9.5
3/8	10	2.9	73	0.7	17.6	2.0	50	0.4	9.5
1/2	15	2.9	73	0.9	21.8	2	50	0.4	9.5
3/4	20	3.2	82	1.1	27.2	2.4	60	0.5	12.5
1	25	4.3	108	1.3	33.9	2.6	65	0.5	12.5
1 1/2	40	6	152	1.9	48.8	3.5	90	0.5	12.5
2	50	5.8	148	2.4	61.2	4.9	125	0.6	16

C. Materials

Part	Part Name	Materials as per ASTM		MOC LF2
100	Body	A 105	A 182-F316 L	LF2
160	Cover	A 105	A 182-F316 L	LF2
351	Disc	A 216-410 (H) / A 276-304+ST6 ¹⁾	A 276-316L	A 276-304
411	Gasket	SS 304+Graphite	SS 316+Graphite	SS 304+Graphite
515	Seat	SS 304+Graphite	SS 316+Graphite	SS 304+Graphite
901	Hex Bolt	A 193-B7	A 193-B8M Cl.2	A 193-B8M
950	Spring	A 313-SS 302	SS 304	A 313-SS 302

1) A 217-304+ST6 for Trim 5 only

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	396	5625	Water
Back Seat	291	4125	
Design Specifications			
General valve design			API 602
Pressure temperature rating			ASME B 16.34
Socket weld end dimensions			ASME B 16.11
End to end as per manufacturer's standard			

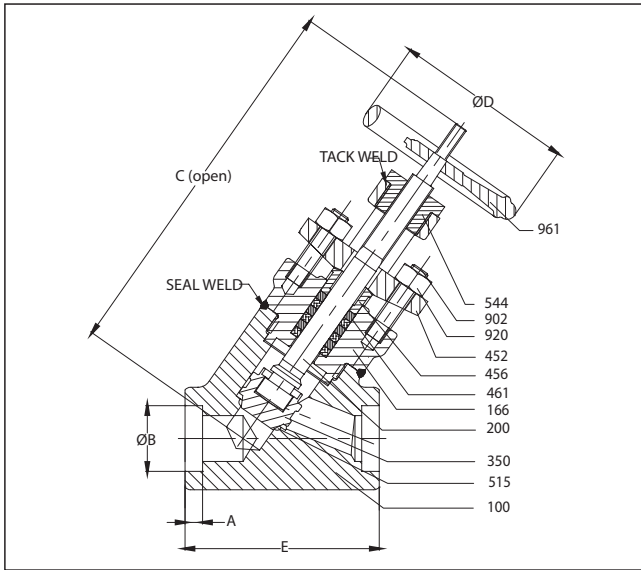
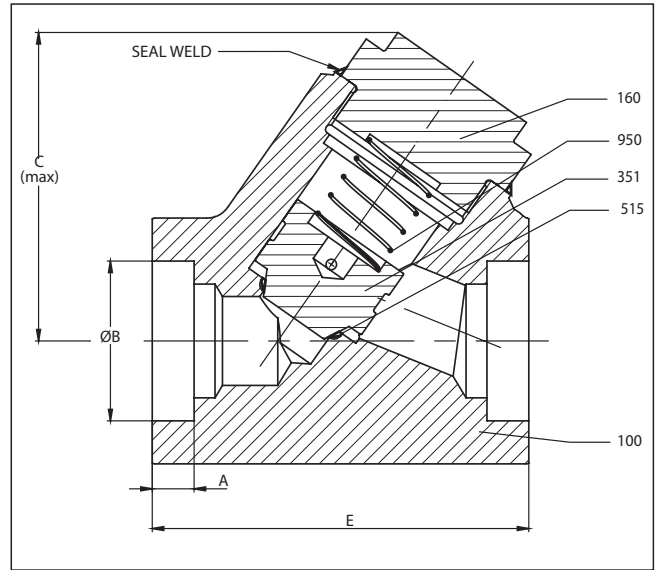
B. Dimensions

Size		E		ØB		C (Open)		A	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	2.9	73	0.6	14.4	2.6	65	0.4	9.5
3/8	10	2.9	73	0.7	17.6	2.6	65	0.4	9.5
1/2	15	2.9	73	0.9	21.8	2.6	65	0.4	9.5
3/4	20	3.7	94	1.1	27.2	3.1	80	0.5	12.5
1	25	4.8	122	1.3	33.9	3.7	95	0.5	12.5
1 1/2	40	6.3	160	1.9	48.8	4.7	120	0.5	12.5
2	50	7	178	2.4	61.2	5.5	140	0.6	16

C. Materials

Part	Part Name	Materials as per ASTM		MOC LF2
100	Body	A 105	A 182-F316 L	LF2
160	Cover	A 105	A 182-F316 L	LF2
351	Disc	A 216-410 (H) / A 276-304+ST6 ¹⁾	A 276-316L	A 276-304
515	Seat	ST 6 (Integral)	ST 6 (Integral)	ST 6 (Integral)
950	Spring	A 313-SS 302	A 313-SS 302	A 313-SS 302

1) A 217-304+ST6 for Trim 5 only

2500 Y - GLOBE

2500 Y - CHECK

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	660	9375	Water
Back Seat	484	6875	
Seat Leak	484	6875	
Design Specifications			
General valve design & Pr. Temp. rating		ASME B 16.34	
Socket weld end dimensions		ASME B 16.11	
End to end as per manufacturer's standard			

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	660	9375	Water
Seat Leak	484	6875	
Design Specifications			
General valve design & Pr. Temp. rating		ASME B 16.34	
Socket weld end dimensions		ASME B 16.11	

B. Dimensions

Size		E		ØB		C (Open)		ØD		A	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	3.3	85	0.6	14.4	7.8	197	5.0	127	0.4	9.5
3/8	10	3.3	85	0.7	17.6	7.8	197	5.0	127	0.4	9.5
½	15	3.3	85	0.9	21.8	7.8	197	5.0	127	0.4	9.5
¾	20	3.9	98	1.1	27.2	9.6	243	7.3	152	0.5	12.5
1	25	4.1	104	1.3	33.9	11.4	290	7.3	152	0.5	12.5
1½	40	5.7	146	1.9	48.8	13.8	351	8.0	203	0.5	12.5
2	50	6.8	172	2.4	61.2	14.9	378	10	255	0.6	16

B. Dimensions

Size		E		ØB		C (max)		A	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/4	8	3.3	85	0.6	14.4	3.1	80	0.4	9.5
3/8	10	3.3	85	0.7	17.6	3.1	80	0.4	9.5
½	15	3.3	85	0.9	21.8	3.1	80	0.4	9.5
¾	20	3.9	98	1.1	27.2	3.0	80	0.5	12.5
1	25	4.1	104	1.3	33.9	3.5	90	0.5	12.5
1½	40	5.7	146	1.9	48.8	4.7	120	0.5	12.5
2	50	6.8	172	2.4	61.2	5.0	130	0.6	16

C. Materials

Part	Part Name	Materials		MOC
100	Body	A 105	A 182-F316 L	LF2
166	Bonnet	A 105	A 182-F316 L	LF2
200	Stem	A 479-410-2	A 276-316L	A 276-304
360	Wedge	A 217-CA15 / A 217-CA15+ST6 ¹⁾	A 315-CF3M	A 351-CF8M
411	Gasket	SS 304+Graph-ite	SS 316+Graph-ite	SS 304+Graph-ite
452	Gland Flange	A 105	A 182-F316L	A 105
456	Gland Bush	A 216-410	A 276-316L	A 105
461	Gland Packing	Graphite		
515	Seat Ring	A 276-410(H) ²⁾ / A 276-410+ST6	A 276-316L	A 276-304+ST6
544	Stem Nut	A 582-416		
901	Hex. Bolt	A 193-B7	A 193-B8M	A 193-B8M
902	Stud	A 193-B6	A 193-B8M	A 193-B8M
920	Hex. Nut	A 194-2H	A 194-B8	A 194-B8
961	Handwheel	Carbon Steel		

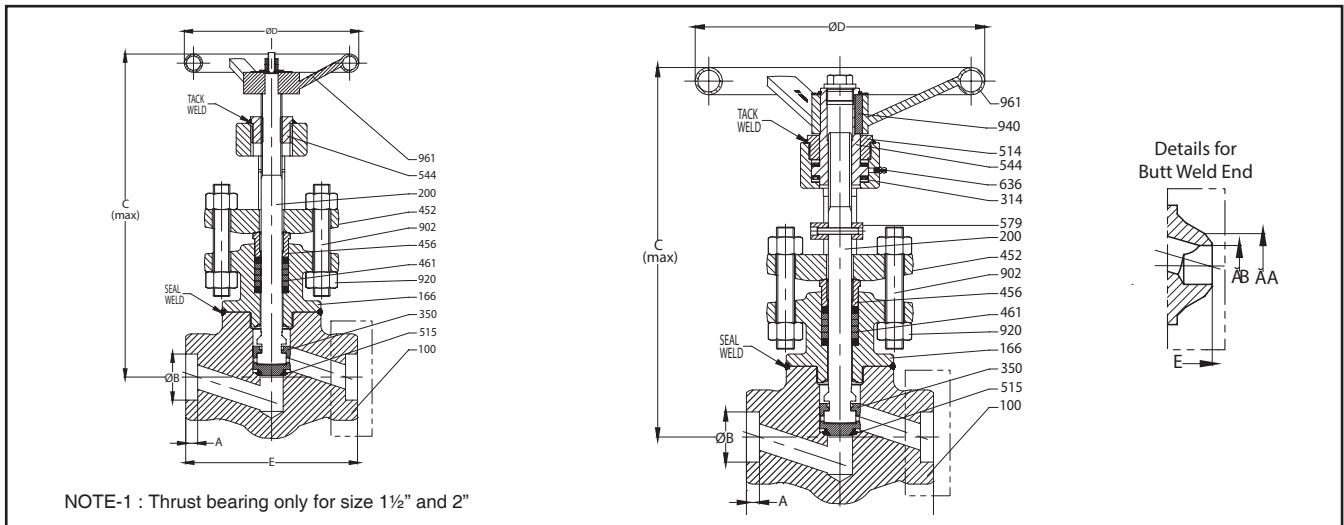
C. Materials

Part	Part Name	Materials		MOC
100	Body	A 105	A 182-22	LF2
166	Bonnet	A 105	A 182-22	LF2
200	Stem	A 479-410-2	A 479-410-2	A 276-304
360	Wedge	A 217-CA15 / A 217-CA15+ST6 ¹⁾	A 217-CA15 / A 217-CA15+ST6 ¹⁾	A 351-CF8M
452	Gland Flange	A 105	A 105	A 105
456	Gland Bush	A 216-410	A 276-316L	A 276-304
461	Gland Packing	Graphite		
515	Seat Ring	A 276-410(H) ²⁾ / A 276-410+ST6	A 276-410+ST6	A 276-304+ST6
544	Stem Nut	A 582-416		
902	Stud	A 193-B8M Cl.2	A 193-B8M Cl.2	A 193-B8M
920	Hex. Nut	A 194-2H	A 194-2H	A 194-B8
961	Handwheel	Carbon Steel		

1) A 217-CA15+ST6 for trim 5 only 2) A 276-410(H) for trim 1 only

1) A 217-CA15+ST6 for trim 5 only 2) A 276-410(H) for trim 1 only

4500 GLOBE VALVE



A. Design / test specification

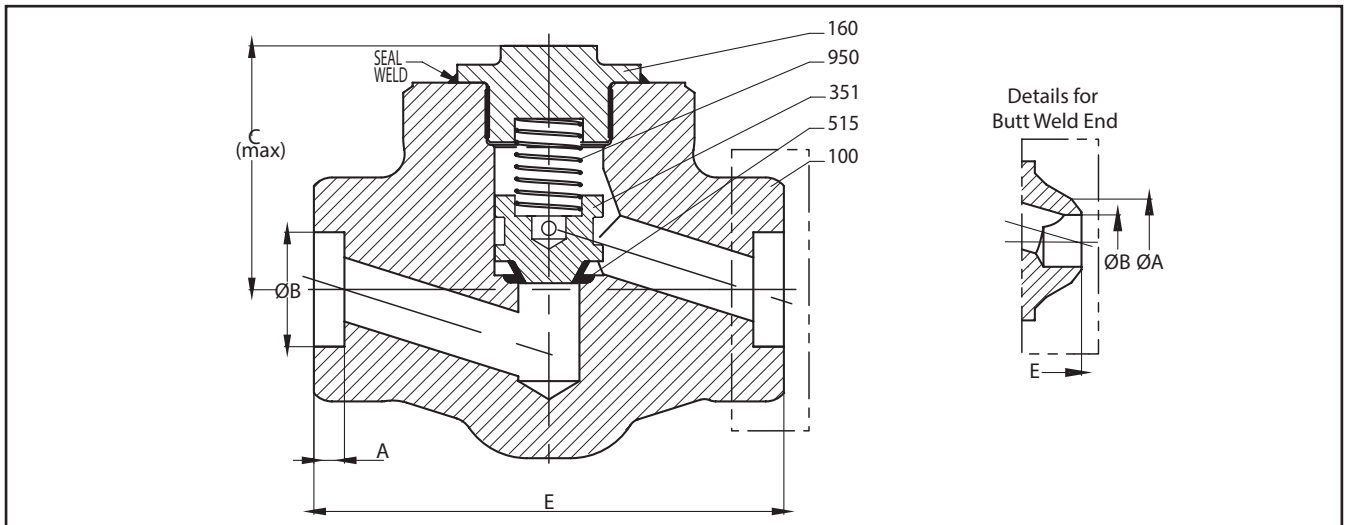
Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	1189	16900	Water
Back Seat	872	12400	
Seat Leak	872	12400	
Design Specifications			
General valve design & Pr. Temp. rating		ASME B 16.34	
Butt weld end dimensions		API 602	
Socket weld end dimensions		ASME B 16.11	
End to end as per manufacturer's standard			

B. Dimensions

Size		A		ØA (BWE)		ØB (BWE)		ØB (SWE)		C		ØD		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/2	15	0.4	10.0	0.8	21.3	0.4 - 0.6	10 - 16	0.9	21.7	12.2	309.0	10.0	254.0	5.5	140.0
3/4	20	0.5	13.0	1.1	26.7	0.4 - 0.6	10 - 16	1.1	27.1	12.2	309.0	10.0	254.0	5.5	140.0
1	25	0.5	13.0	1.3	33.4	0.5 - 0.8	12 - 20	1.3	33.8	13.7	348.0	12.0	305.0	6.7	170.0
1.5	40	0.5	13.0	1.9	48.3	0.7 - 1.2	18 - 30	1.9	48.7	17.5	444.0	10.0	254.0	7.9	200.0
2	50	0.6	16.0	2.4	60.3	0.9 - 1.5	24 - 38	2.4	61.7	17.9	455.0	14.0	356.0	9.1	230.0

C. Materials

Part	Part Name	A 105 Trim 5	A 182-F22 Trim 5	A 182-F91 Trim 5
100	Body	A 105	F22	F91
166	Bonnet	A 105	F22	F91
200	Stem	A 479-410-2	A 479-410-2	A479-XM19
314	Thrust Brg.	Steel	Steel	Steel
350	Disc	CF8+ST6		
452	Gland Flange	A 105	A 105	F22
456	Gland Bush	A 216-410		
461	Gland Packing	Graphite		
514	Threaded Ring	IS:2073-C40		
515	Seat	ST6 (Integral)		
544	Stem Nut	A 582-416		
562	Grooved Pin	A 276-410		
579	Stop	IS:2002-2		
902	Stud	A 193-B8M Cl.2		
920	Hex. Nut	A 194-2H		
940	Key	IS:2073-C40		
961	Handwheel	Fabricated Steel		

4500 Check Valve

A. Design / test specification

Test (API 598)	(kg/cm ²)	(PSI)	Testing medium
Shell	1189	16900	Water
Back Seat	872	12400	
Design Specifications			
General valve design & Pr. Temp. rating		ASME B 16.34	
Butt weld end dimensions		API 602	
Socket weld end dimensions		ASME B 16.11	
End to end as per manufacturer's standard			

B. Dimensions

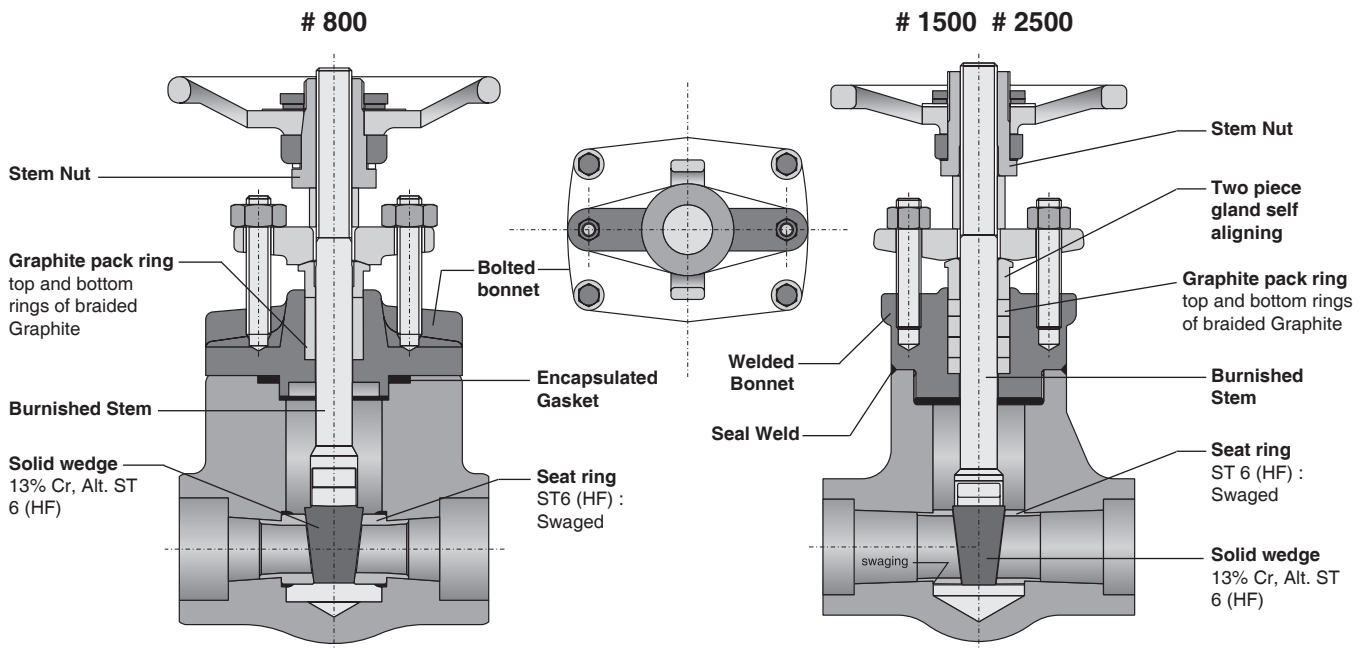
Size		A		ØA (BWE)		ØB (BWE)		ØB (SWE)		C (Open)		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/2	15	0.4	10.0	0.8	21.3	0.4 - 0.6	10 - 16	0.9	21.7	3.1	80.0	5.5	140.0
3/4	20	0.5	13.0	1.1	26.7	0.4 - 0.6	10 - 16	1.1	27.1	3.1	80.0	5.5	140.0
1	25	0.5	13.0	1.3	33.4	0.5 - 0.8	12 - 20	1.3	33.8	3.7	95.0	6.7	170.0
1.5	40	0.5	13.0	1.9	48.3	0.7 - 1.2	18 - 30	1.9	48.7	4.3	110.0	7.9	200.0
2	50	0.6	16.0	2.4	60.3	0.9 - 1.5	24 - 38	2.4	61.7	4.3	110.0	9.1	230.0

C. Materials

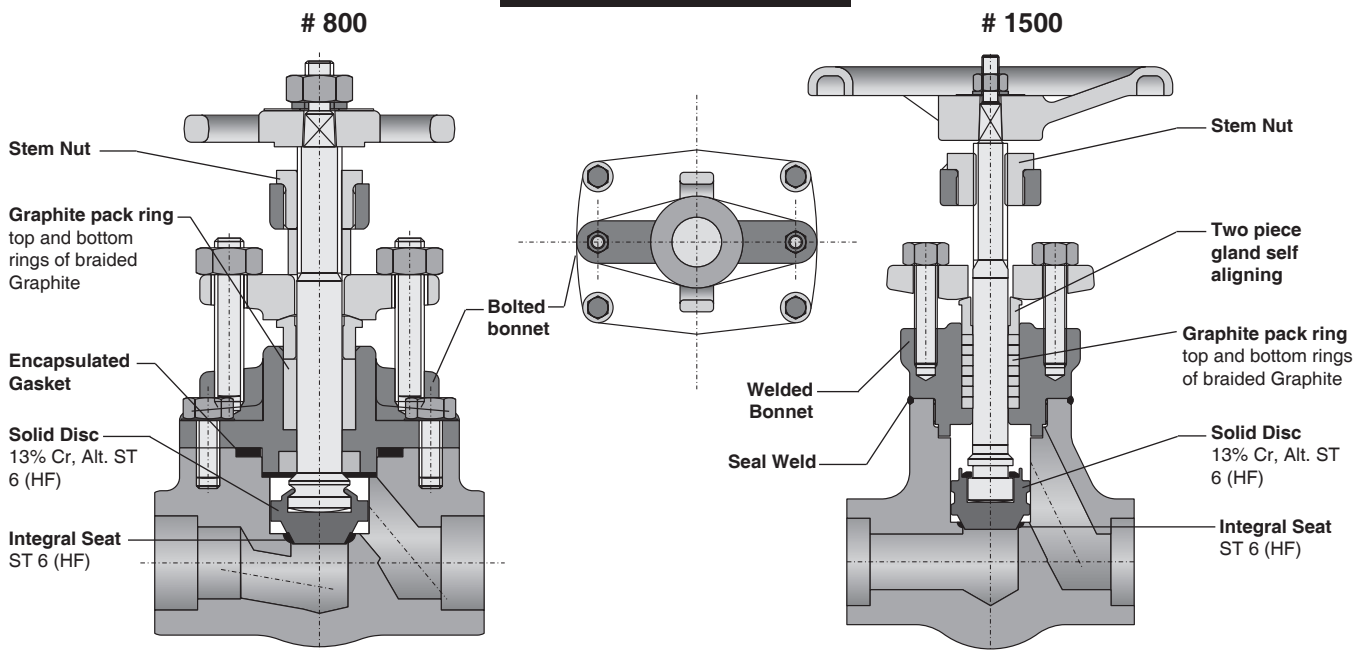
Part	Part Name	A 105 Trim 5	A 182-F22 Trim 5	A 182-F91 Trim 5
100	Body	A 105	F22	F91
166	Bonnet	A 105	F22	F91
200	Stem	A 479-410-2	A 479-410-2	A479-XM19
314	Thrust Brg.	Steel	Steel	Steel
350	Disc	CF8+ST6		
452	Gland Flange	A 105	A 105	F22
456	Gland Bush	A 216-410		
461	Gland Packing	Graphite		
514	Threaded Ring	IS:2073-C40		
515	Seat	ST6 (Integral)		
544	Stem Nut	A 582-416		
562	Grooved Pin	A 276-410		
579	Stop	IS:2002-2		
902	Stud	A 193-B8M Cl.2		
920	Hex. Nut	A 194-2H		
940	Key	IS:2073-C40		
961	Handwheel	Fabricated Steel		

Product features to our Customer's benefit

Gate Valve

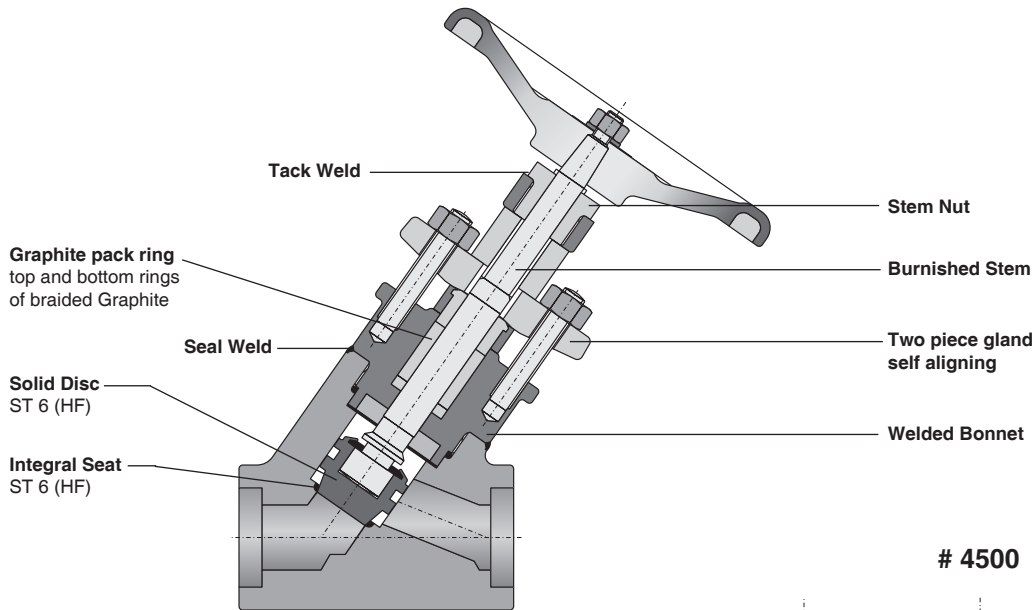


Globe Valve

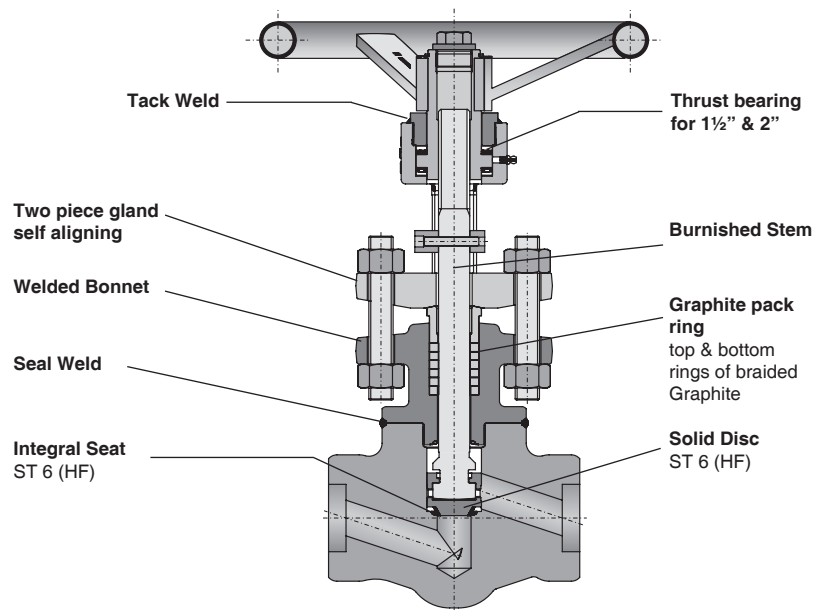


Globe Valve

2500

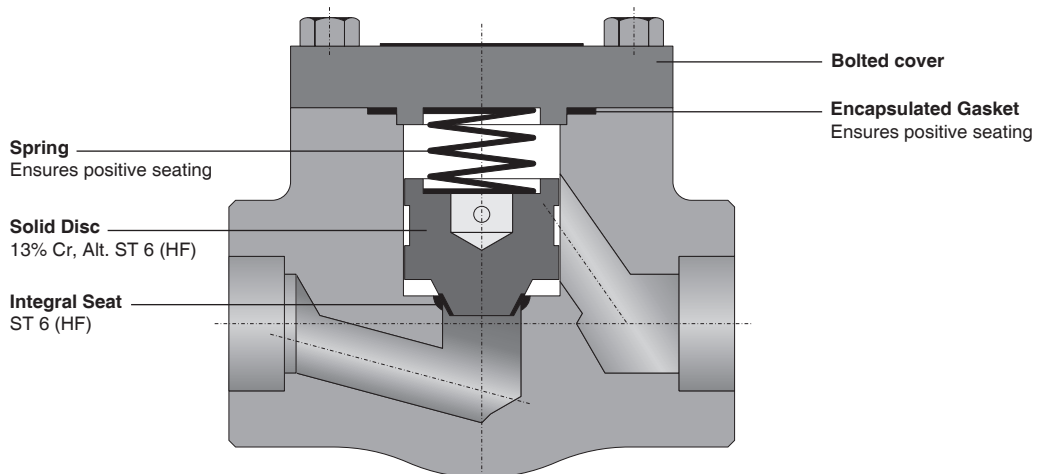


4500



Check Valve

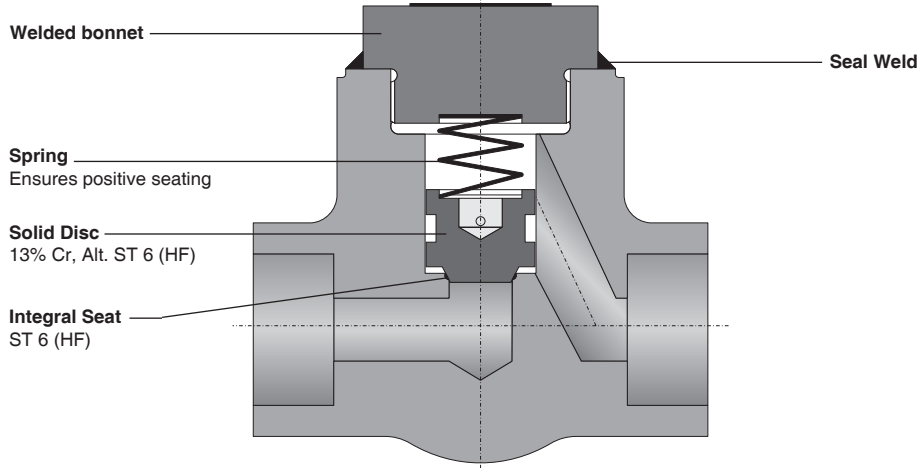
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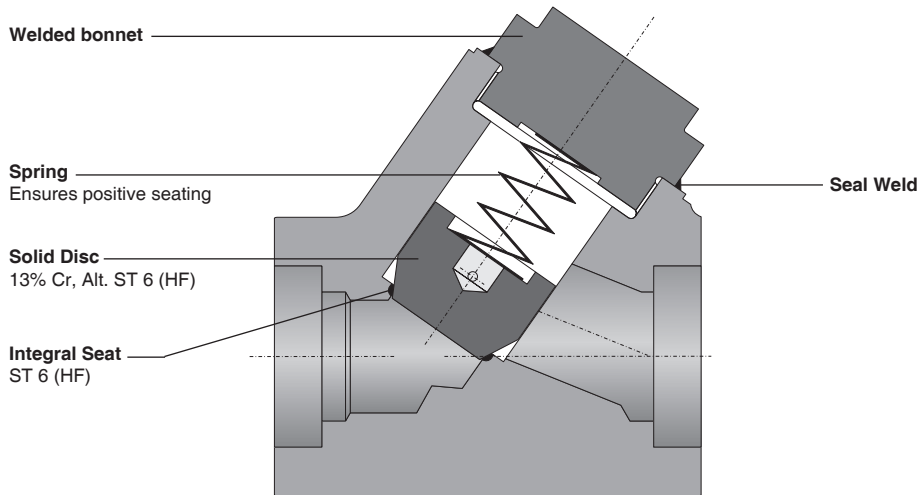
Product features to our Customer's benefit

Check Valve

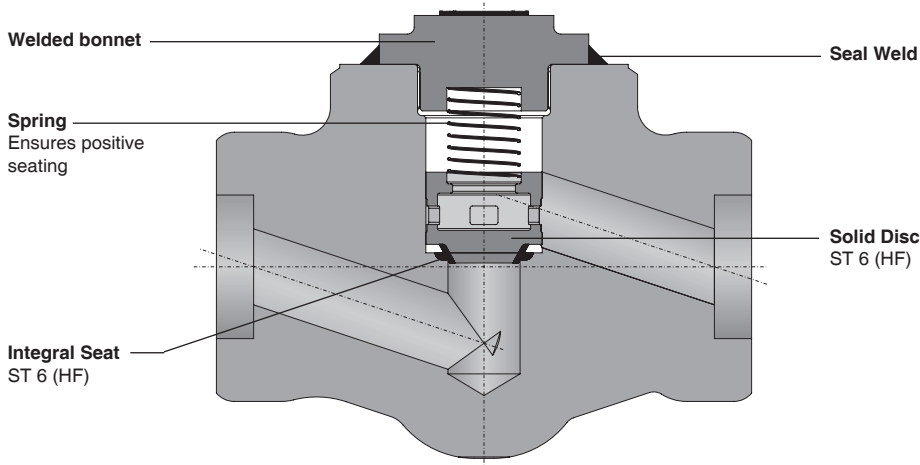
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2500



4500



Technical matter. Subject to change without notice.