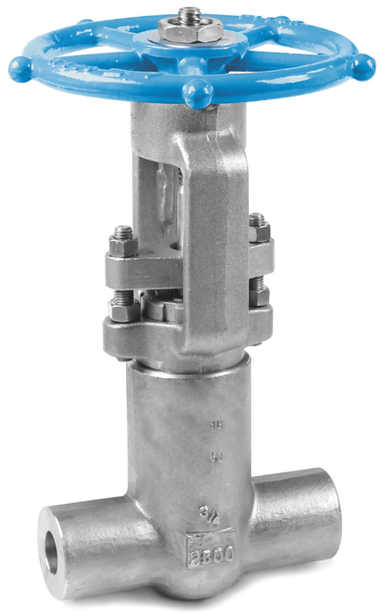
Gate Valves

GT Series



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GS0420409

FITOK
Valves and Fittings

Forged Steel Gate Valves

GT Series

- Size: 1/4 ~ 2" (8 ~ 50 mm)
- Class: 150 ~ 2500

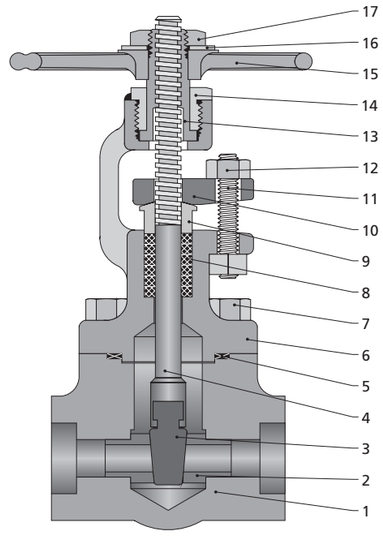
Specifications

- Design: ANSI B16.34, API 602
- Testing: ANSI B16.34 and API 598
- Marking: MSS-SP-25
- Socket weld ends: ASME B16.11
- Butt weld ends: ASME B16.25
- Threaded ends: ASME B1.20.1
- Flanged: ASME B16.5

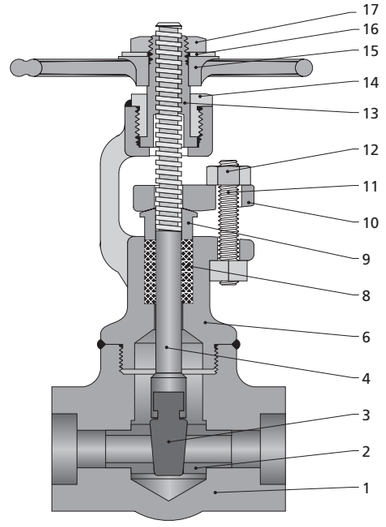
Features

- Three types of bonnet designs:
  - Bolted Bonnet, Outside Screw and Yoke (Class 150 to Class 1500)
    Stronger and leakproof body bonnet encases fully a spiral wound gasket.
  - Welded Bonnet, Outside Screw and Yoke (Class 150 to Class 1500)
    For welded bonnet valves, the bonnet is threaded in and torqued to an engineered torque value and the body bonnet joint is strength-welded, offering double protection against leakage. (body/bonnet threads and strength-weld).
  - Pressure Seal Bonnet, Outside Screw and Yoke (Class 1500 to Class 2500)
    Pressure seal bonnet, the body bonnet joint is threaded, packing rings are compressed to provide a high integrity seal by the drawing-in stud.
- Seating faces ground and lapped to 2 RMS.
- Fully guided wedge reduces wear on seating surfaces.
- Backseat bevel on the stem, not on the disc, meet specifications API-600 and API-602.
- Packing chamber burnished and combination graphite rings individually prestressed for tight seal.
- Removal of handwheel without affecting the position of valve (closed or open).
- A compact but extremely sturdy design for high pressure-temperature service.
- Handwheel is rugged and knobbed to make sure the grip even when wearing gloves.
- Optional handwheel colors are available.

Standard Material of Construction



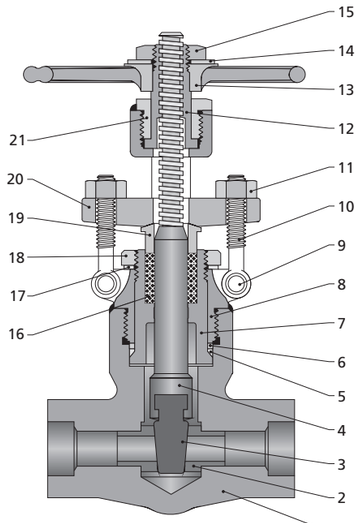
Bolted Bonnet



Welded Bonnet

Item	Part	Valve Materials				
		A105	F11	F22	F51	F316
1	Body	A105N	F11/A182	F22/A182	F51/A182	F316/A182
2	Seat	410 SS/A276			S31803/A276	316 SS/276
3	Wedge	F6a			F51/A182	F316/A182
4	Stem	410 SS/A276			S31803/A276	316 SS/276
5	Gasket	304 SS + Graphite			316 SS + Graphite	
6	Bonnet	A105N	F11/A182	F22/A182	F51/A182	F316/A182
7	Bolt	B7			B8M2	
8	Packing	Graphite				
9	Gland	410 SS/A276			S31803/A276	316 SS/276
10	Gland flange	A105			F304/A182	
11	Gland bolt	B7			B8M	
12	Hex nut	2H			8M	
13	Stem nut	410 SS				
14	Yoke bushing	1020				
15	Handwheel	Malleable iron (painted)				
16	Name plate	304 SS				
17	Handwheel nut	steel				

Standard Material of Construction

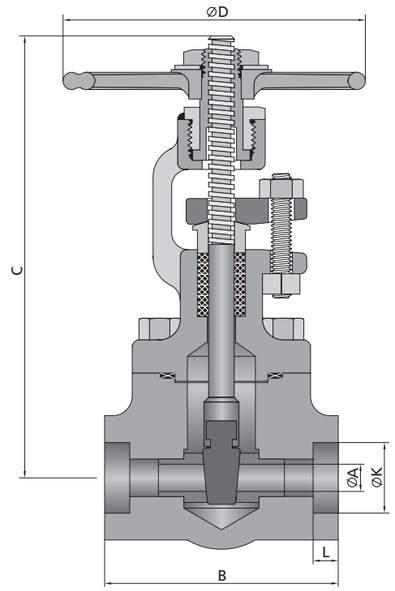


Pressure Sealing

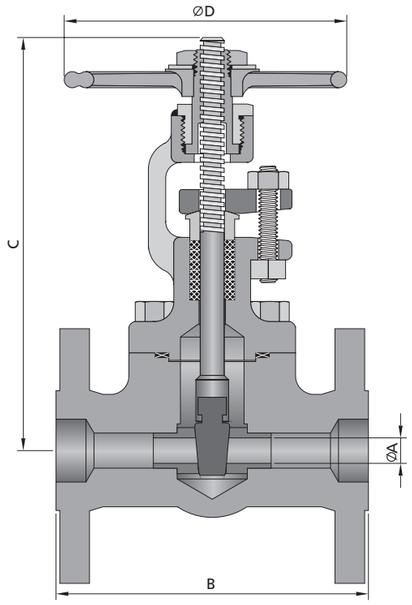
Item	Part	Valve Materials				
		A105	F11	F22	F51	F316
1	Body	A105N	F11/A182	F22/A182	F51/A182	F316/A182
2	Seat	410 SS/A276			S31803/A276	316 SS/276
3	Wedge	F6a			F51/A182	F316/A182
4	Stem	410 SS/A276			S31803/A276	316 SS/276
5	P.S ring	304 SS/A276			S31803/A276	316 SS/276
6	Seal ring gasket	304 SS/A276			S31803/A276	316 SS/276
7	P.S seat	304 SS/A276			S31803/A276	316 SS/276
8	Bonnet	A105N	F11/A182	F22/A182	F51/A182	F316/A182
9	Pin	410 SS			304 SS	
10	Gland eyebolt	B7			B8M	
11	Gland Nut	2H			8M	
12	Stem Nut	410 SS/A276				
13	Handwheel	Malleable iron (painted)				
14	Name Plate	304 SS				
15	Handwheel Nut	Steel				
16	Packing	Graphite				
17	Nut pad	410 SS				
18	Draw-in stud	1018/A108			316 SS/276	
19	Gland	410 SS/A276			316 SS/276	
20	Packing Flange	A105			F304/A182	
21	Yoke bushing	1020				

Contact the authorized representative or FITOK Group for valves of other materials

Bolted Bonnet



Threaded or Weld
ASME Class 800
ASME Class 1500



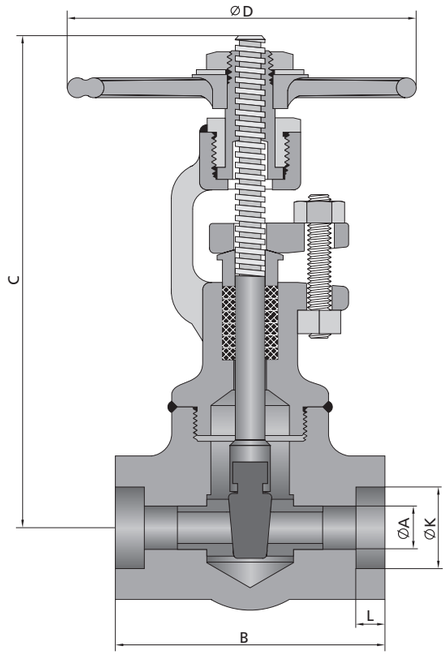
Flanged
ASME Classes
150,300,600,1500

Bolted Bonnet Gate Dimensions and Weights

Size NPS DN	ØA in. mm		B in. mm		C in. mm		ØD in. mm		ØK in. mm	L in. mm	Weight lb kg		B			
	Port		End to End		Center to Top		Open Handwheel		Socket Weld Bore	Socket Weld Depth			Flanged Valves			
	800	1500	800	1500	800	1500	800	1500			800	1500	150	300	600	1500
1/4 8	0.25 6	0.25 6	3.00 76	4.00 102	5.19 132	7.75 196	2.50 64	3.50 89	0.555 14.10	0.38 10	3.00 1.4	8.00 3.6	4.00 102	6.00 152	6.50 165	8.50 216
3/8 10	0.25 6	0.35 9	3.00 76	4.00 102	5.19 132	7.75 196	2.50 64	3.50 89	0.690 17.53	0.38 10	3.00 1.4	8.00 3.6	4.00 102	6.00 152	6.50 165	8.50 216
1/2 15	0.38 10	0.50 13	3.00 76	4.00 102	5.19 132	7.75 196	2.50 64	3.5 89	0.855 21.72	0.38 10	3.00 1.4	8.00 3.6	4.25 108	6.00 152	6.50 165	8.50 216
3/4 20	0.50 13	0.50 13	3.25 83	5.00 127	6.75 171	7.88 200	3.5 89	3.5 89	1.065 27.05	0.50 13	5.00 2.3	9.00 4.1	4.62 117	7.00 178	7.50 190	9.00 229
1 25	0.69 17	0.69 17	3.50 89	6.00 152	7.38 188	9.63 244	3.5 89	4.75 120	1.330 33.78	0.50 13	6.00 2.7	21.00 9.5	5.00 127	8.00 203	8.50 216	10.00 254
1 1/4 32	1.25 32	1.25 32	5.00 127	7.00 178	9.12 232	10.63 270	4.75 120	6.00 152	1.675 42.55	0.50 13	14.00 6.4	30.00 13.6	5.50 140	8.50 216	9.00 229	11.00 279
1 1/2 40	1.25 32	1.25 32	5.00 127	7.00 178	9.12 232	10.63 270	4.75 120	6.00 152	1.915 48.64	0.50 13	14.00 6.4	30.00 13.6	6.50 165	9.00 229	9.50 241	12.00 305
2 50	1.5 38	1.5 38	5.25 133	9.00 229	10.56 268	12.30 312	6.00 152	10.00 254	2.406 61.11	0.63 16	18.00 8.2	45.00 20.4	7.00 178	10.50 266	11.50 292	14.50 368

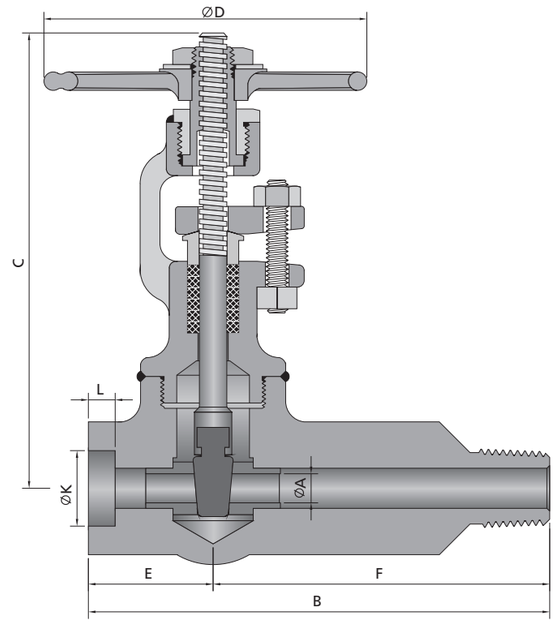
1. The constructions and dimensions of ASME Class 150, Class 300, Class 600 valves with threaded or welded ends are same with Class 800 valve.
2. The construction and dimension of Class 900 valve is same with Class 1500 valve.

Welded Bonnet



Threaded or Weld
ASME Class 800
ASME Class 1500

Welded Bonnet Extended body



Threaded or Weld
ASME Class 800
ASME Class 1500

Welded Bonnet Gate Dimensions and Weights

Size NPS DN	ØA in mm		B in mm		C in mm		ØD in mm		ØK in mm	L in mm	Weight lb kg	
	Port		End to End		Center to Top Open		Handwheel		Socket Weld Bore	Socket Weld Depth		
	800	1500	800	1500	800	1500	800	1500			150~800	900~1500
1/4 8	0.25 6	0.25 6	3.00 76	3.50 89	5.13 130	6.75 171	2.50 64	3.50 89	0.555 14.10	0.38 10	3.00 1.4	6.00 2.7
3/8 10	0.25 6	0.25 6	3.00 76	3.50 89	5.13 130	6.75 171	2.50 64	3.50 89	0.690 17.53	0.38 10	3.00 1.4	6.00 2.7
1/2 15	0.38 9	0.38 9	3.00 76	3.50 89	5.13 130	6.75 171	2.50 64	3.5 89	0.855 21.72	0.38 10	3.00 1.4	6.00 2.7
3/4 20	0.50 13	0.50 13	3.25 83	3.50 89	6.63 168	6.80 173	3.5 89	3.5 89	1.065 27.05	0.50 13	4.50 2.0	6.00 2.7
1 25	0.69 17	0.69 17	3.50 89	5.00 127	6.95 175	8.80 224	3.5 89	4.75 120	1.330 33.78	0.50 13	5.00 2.3	12.00 5.4
1 1/4 32	1.25 32	1.25 32	5.00 127	5.25 133	9.12 232	10.80 274	4.75 120	6.00 152	1.675 42.55	0.50 13	10.00 4.5	17.00 7.7
1 1/2 40	1.25 32	1.25 32	5.00 127	5.25 133	9.12 232	10.80 274	4.75 120	6.00 152	1.915 48.64	0.50 13	10.00 4.5	17.00 7.7
2 50	1.5 38	1.5 38	5.25 133	10.00 254	10.40 264	14.10 358	6.0 152	10.0 254	2.406 61.11	0.63 16	13.00 5.9	45.00 20.4

Extended body

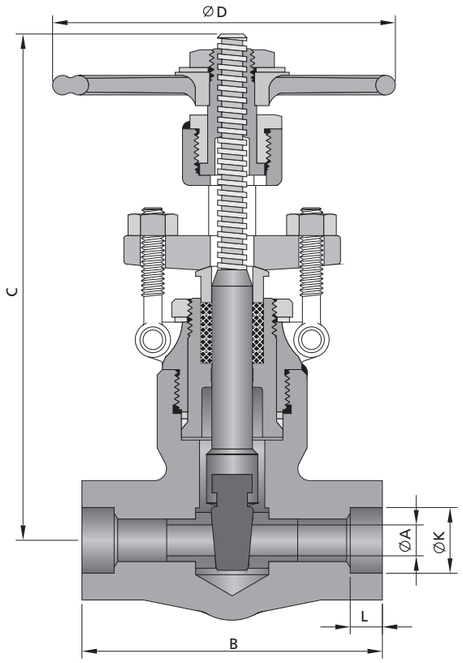
Standard end	Extended end
Female thread	Male Thread, Couplet or Socket
Socket weld	Couplet or Socket

Welded Bonnet Extended body Gate Dimensions and Weights

Size NPS DN	ØA in mm	B in mm		C in mm		ØD in mm		E in mm		F in mm		ØK in mm	L in mm	Weight lb kg	
	Port	End to End		Center to Top Open		Handwheel		Short End to Center		Long End to Center		Socket Weld Bore	Socket Weld Depth		
	800-1500	800	1500	800	1500	800	1500	800	1500	800	1500			150~800	900~1500
1/2 15	0.38 9	5.63 143	5.75 146	5.13 130	6.75 171	2.50 64	3.5 89	1.63 41	1.75 44	4.00 102	4.00 102	0.855 21.72	0.38 10	4.50 2.0	7.00 3.2
3/4 20	0.50 13	5.63 143	5.75 146	6.63 168	6.80 173	3.5 89	3.5 89	1.63 41	1.75 44	4.00 102	4.00 102	1.065 27.05	0.50 13	4.50 2.0	8.00 3.6
1 25	0.69 17	5.75 146	7.25 184	6.95 175	8.80 224	3.5 89	4.75 120	1.75 44	2.50 64	4.00 102	4.75 121	1.330 33.78	0.50 13	5.50 2.5	15.00 6.8
1 1/4 32	1.25 32	7.00 178	—	9.12 232	—	4.75 120	—	2.25 57	—	4.75 121	—	1.675 42.55	0.50 13	12.00 5.4	—
1 1/2 40	1.25 32	7.25 184	7.88 200	9.12 232	10.80 274	4.75 120	6.00 152	2.50 64	2.63 67	4.75 121	5.25 133	1.915 48.64	0.50 13	12.00 5.4	22.00 10.0
2 50	1.5 38	7.88 200	12.25 311	10.40 264	14.10 358	6.0 152	10.0 254	2.63 67	5.00 127	5.25 133	7.25 184	2.406 61.11	0.63 16	17.00 7.7	50.00 22.7

1. Extended end matches female tapered threads or socket welded end.
2. Extended end, namely extended body with male tapered threads or welded ends.
3. Extended body with male tapered threads only can be applied in size 3/4≤NPS≤2 Class 800 valves.
4. Extended body with welded end only can be applicable in size 3/4≤NPS≤2 Class 800 and Class 1500 valves.

Pressure Sealing



Threaded or Weld
ASME Class 1500
ASME Class 2500

Pressure Sealing Globe Dimensions and Weights

Size NPS DN	ØA in. mm		B in. mm		C in. mm		ØD in. mm		ØK in. mm	L in. mm	Weight lb kg	
	Port		End to End		Center to Top Open		Handwheel		Socket Weld Bore	Socket Weld Depth		
	1500	2500	1500	2500	1500	2500	1500	2500			1500	2500
1/2 15	0.50 13	0.43 11	5.50 140	7.25 185	12.5 318	12.8 325	8.0 203	8.0 203	0.855 21.72	0.38 10	25 11	8.00 3.6
3/4 20	0.55 14	0.55 14	5.50 140	7.25 185	12.5 318	12.8 325	8.0 203	8.0 203	1.065 27.05	0.50 13	24 11	24 11
1 25	0.75 19	0.75 19	5.50 140	7.25 185	12.67 322	12.88 327	8.0 203	8.0 203	1.330 33.78	0.50 13	24 11	24 11
1 1/4 32	1.1 28	1 25	7.00 178	9.25 235	18.4 468	18.4 468	11.0 279	11.0 279	1.675 42.55	0.50 13	44 20	57 26
1 1/2 40	1.38 35	1.1 28	7.00 178	9.25 235	18.4 468	18.4 468	11.0 279	11.0 279	1.915 48.64	0.50 13	44 20	62 28
2 50	1.5 38	1.38 35	8.50 216	11.00 279	21.3 540	21.3 540	12.0 305	12.0 305	2.406 61.11	0.63 16	122 55	132 60

Pressure - Temperature Ratings

ANSI B16.34 - Classes 150, 300, 600, 1500, 2500,
API - Class 800

Materials	A105 & A350-LF2							F11							F22					
Class	150	300	600	800	1500	2500	4500	150	300	600	800	1500	2500		150	300	600	800	1500	2500
Temp. °F	psig																			
-20 to 100	285	740	1480	1975	3705	6170	11110	290	750	1500	2000	3750	6250		290	750	1500	2000	3750	6250
200	260	675	1350	1800	3375	5625	10120	260	750	1500	1900	3750	6250		260	750	1500	2000	3750	6250
300	230	655	1315	1750	3280	5470	9845	230	720	1455	1795	3610	6015		230	730	1455	1940	3640	6070
400	200	635	1270	1690	3170	5280	9505	200	695	1385	1755	3465	5775		200	705	1410	1880	3530	5880
500	170	600	1200	1595	2995	4990	8980	170	665	1330	1710	3325	5540		170	665	1330	1775	3325	5540
600	140	550	1095	1460	2735	4560	8210	140	605	1210	1615	3025	5040		140	605	1210	1615	3025	5040
650	125	535	1075	1430	2685	4475	8055	125	590	1175	1570	2940	4905		125	590	1175	1570	2940	4905
700	110	535	1065	1420	2665	4440	7990	110	570	1135	1515	2840	4730		110	570	1135	1515	2840	4730
750	95	505	1010	1345	2520	4200	7560	95	530	1065	1420	2660	4430		95	505	1065	1420	2660	4430
800	80	410	825	1100	2060	3430	6170	80	510	1015	1355	2540	4230		80	530	1015	1355	2540	4230
850	65	270	535	715	1340	2230	4010	65	485	975	1300	2435	4060		65	510	975	1300	2435	4060
900	—	—	—	—	—	—	—	50	450	900	1200	2245	3745		50	450	900	1200	2245	3745
950	—	—	—	—	—	—	—	35	320	640	1005	1595	2655		35	375	755	1005	1885	3145
1000	—	—	—	—	—	—	—	20	215	430	595	1080	1800		20	260	520	695	1305	2170
1050	—	—	—	—	—	—	—	20	145	290	365	720	1200		20	175	350	465	875	1455
1100	—	—	—	—	—	—	—	20	95	190	225	480	800		20	110	220	295	550	915
1150	—	—	—	—	—	—	—	—	60	125	140	310	515		—	70	135	180	345	570
1200	—	—	—	—	—	—	—	—	—	—	—	—	—		—	40	82	110	205	345

Materials	F51						F91							F316					
Class	150	300	600	800	1500	2500	150	300	600	800	1500	2500	4500	150	300	600	800	1500	2500
Temp. °F	psig																		
-20 to 100	290	750	1500	2000	3750	6250	290	750	1500	2000	3750	6250	11250	275	720	1440	1920	3600	6000
200	260	720	1440	1920	3600	6000	260	750	1500	2000	3750	6250	11250	235	620	1240	1655	3095	5160
300	230	665	1330	1770	3325	5540	230	730	1455	1940	3640	6070	10925	215	560	1120	1495	2795	4660
400	200	615	1230	1640	3070	5120	200	705	1410	1880	3530	5880	10585	195	515	1025	1370	2570	4280
500	170	575	1150	1535	2880	4800	170	665	1330	1775	3325	5540	9965	170	480	955	1275	2390	3980
600	140	555	1115	1480	2785	4640	140	605	1210	1615	3025	5040	9070	140	450	900	1205	2255	3760
650	—	—	—	—	—	—	125	590	1175	1570	2940	4905	8825	125	445	890	1185	2220	3700
700	—	—	—	—	—	—	110	570	1135	1515	2840	4730	8515	110	430	870	1160	2170	3620
750	—	—	—	—	—	—	95	530	1065	1420	2660	4430	7970	95	425	855	1140	2135	3560
800	—	—	—	—	—	—	80	510	1015	1355	2540	4230	7610	80	420	845	1125	2110	3520
850	—	—	—	—	—	—	65	485	975	1300	2435	4060	7305	65	420	835	1115	2090	3480
900	—	—	—	—	—	—	50	450	900	1200	2245	3745	6740	50	415	830	1105	2075	3460
950	—	—	—	—	—	—	35	385	775	1030	1930	3220	5795	35	385	775	1030	1930	3220
1000	—	—	—	—	—	—	20	365	725	970	1820	3030	5450	20	350	700	935	1750	2915
1050	—	—	—	—	—	—	20	360	720	960	1800	3000	5400	20	345	685	915	1720	2865
1100	—	—	—	—	—	—	20	300	605	805	1510	2515	4525	20	305	610	815	1525	2545
1150	—	—	—	—	—	—	20	225	445	595	1115	1855	3345	20	235	475	630	1185	1970
1200	—	—	—	—	—	—	20	145	290	385	720	1200	2160	20	185	370	495	925	1545
1250	—	—	—	—	—	—	—	—	—	—	—	—	—	20	145	295	390	735	1230

1. A105 permissible but not recommended for prolonged usage above about 800°F (425°C).
2. F11 and F22 permissible but not recommended for prolonged usage above about 1100°F(593°C).
3. Please contact the authorized representative or FITOK Group for Pressure-Temperature ratings of other valve material.

Part Number Description

GTSS – FNS8D – 16BWR

Series	Body Material	Type Of Connection	Size Of Connection	Class	Trim Material	Body and Bonnet Connection	Handwheel Color
GT	CS A105 LF2 LF2 LF3 LF3 11 F11 22 F22 D5 F51 91 F91 92 F92 SS F316 6L F316L S4 F304 S1 F321 M Monel (Alloy 400)	PS Pipe Socket Weld PB Pipe Butt Weld FNS Female NPT FRP Female BSPP FRT Female BSPT FF Smoth Finish Flat Face Flanged RF Smoth Finish Raised Face Flanged RFS Spiral Finish Raised Face Flanged RJ Ring Type Joint Flanged	4 1/4 (DN8) 6 3/8 (DN10) 8 1/2 (DN15) 12 3/4 (DN20) 16 1 (DN25) 20 1 1/4 (DN32) 24 1 1/2 (DN40) 32 2 (DN50)	A 150 CL B 300 CL C 600 CL D 800 CL E 900 CL F 1500 CL G 2500 CL PN16 1.6 MPa PN20 2.0 MPa PN25 2.5 MPa PN40 4.0 MPa PN50 5.0 MPa PN63 6.3 MPa PN100 10.0 MPa PN110 11.0 MPa PN150 15.0 MPa PN260 26.0 MPa PN420 42.0 MPa X Special			

Symbol	Disc Surface	Seat Surface	Stem Material
	Standard		
1	13%Cr	13%Cr	F6a/A182
2	18%Cr, 8%Ni	18%Cr, 8%Ni	F304/A182
5	Stellite	Stellite	F6a/A182
8	13%Cr	Stellite	F6a/A182
9	Monel	Monel	Ni Cu Alloy Monel
10	18%Cr, 8%Ni	18%Cr, 8%Ni	F316/A182
12	18%Cr, 8%Ni	Stellite	F316/A182
13	Alloy 20 19%Cr, 29%Ni	Alloy 20 19%Cr, 29%Ni	ASTM B473
16	Stellite	Stellite	F316/A182

	Bolted Bonnet
BW	Welded Bonnet
WE	Welded Bonnet Extended body
PS	Pressure Sealing

	Blue
B	Black
G	Green
R	Red
Y	Yellow

1. Class 800 should be selected for Class 150, Class 300, Class 600 Gate valves with threaded or welded ends.
2. Class 1500 should be selected for Class 900 Gate valves.

Note: "Part Number Description" is used for composition rules of FITOK product model, Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK company or authorized agents.