

FORGED STEEL GATE VALVE

CLASS 150 / 300 / 600 / 800

**TYPE FH401-FS (NPT/SW)
 FH411-FS (FLANGED)**

DESIGN DESCRIPTION

Bolted Bonnet
 Outside Screw and Yoke
 Wedge Disc
 Rising Stem and Non-Rising Handwheel
 Renewable Seat Ring
 Screwed Ends
 Socket Weld Ends

APPLICABLE STANDARDS

Steel Gate Valves, API 602
 Steel Valve, ANSI B16.34
 Screwed Ends, ANSI B1.20.1
 Socket Weld Ends, ANSI B16.11

TEST PRESSURE

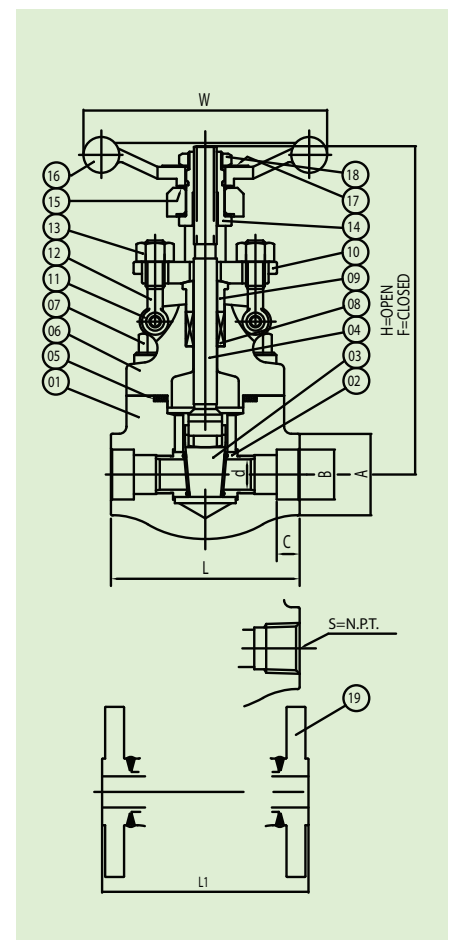
Class	Shell Test (Water)	Seat Test (Water)	Seat Test (Air)
150	450 (32 kg/cm ²)	314 (22 kg/cm ²)	80 (6 kg/cm ²)
300	1125 (79 kg/cm ²)	814 (57 kg/cm ²)	80 (6 kg/cm ²)
600	2225 (158 kg/cm ²)	1628 (114 kg/cm ²)	80 (6 kg/cm ²)
800	3000 (211 kg/cm ²)	2200 (154 kg/cm ²)	80 (6 kg/cm ²)

PARTS AND MATERIALS

No	Parts	Materials				
		A105	F304	F316	F11	F22
1	Body	A105	A182-F304	A182-F316	A182-F11	A182-F22
2	Seat	A276-410 +H/F STL #6	A276-304 +H/F STL #6	A276-316 +H/F STL #6	A276-410 +H/F STL #6	A276-410 +H/F STL #6
3	Wedge	A276-420J2	A276-304	A276-316	A276-420J2	A276-420J2
4	Stem	A276-410	A276-304	A276-316	A276-410	A276-410
5	Bonnet Gasket	304 +GRAPHITE	304 +GRAPHITE	316 +GRAPHITE	304 +GRAPHITE	304 +GRAPHITE
6	Bonnet	A105	A182-F304	A182-F316	A182-F11	A182-F22
7	Bonnet Bolt	A193-B7	A193-B8	A193-B8	A193-B16	A193-B16
8	Packing Ring	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
9	Gland	A276-410	A276-304	A276-316	A276-410	A276-410
10	Gland Flange	A105	A182-F304	A182-F304	A105	A105
11	Pin	A276-410	A276-304	A276-304	A276-410	A276-410
12	Gland Bolt	A193-B8	A193-B8	A193-B8	A193-B8	A193-B8
13	Gland Nut	A194-2H	A194-8	A194-8	A194-2H	A194-2H
14	Stem Nut	A276-410	A276-410	A276-410	A276-410	A276-410
15	Washer	A176-430	A176-430	A176-430	A176-430	A176-430
16	Hand Wheel	A536	A536	A536	A536	A536
17	Name Plate	A666-304	A666-304	A666-304	A666-304	A666-304
18	Hand Wheel Nut	A36	A36	A36	A36	A36
19	Flange	A105	A182-F304	A182-F316	A182-F11	A182-F22

DIMENSION

Size		A	B	C	d	F	H	S	W	L	L1			Wt	
A (mm)	B (inch)	ANSI	JIS								150 LB	300 LB	600 LB	(kg)	
15	½	34	21.84	22.2	9.6	12.7	143.1	160	½	102	79	108	140	165	2.4
20	¾	40	27.18	27.7	12.7	12.7	143.1	160	¾	102	92	118	152	190	2.6
25	1	48	33.91	34.5	12.7	17.5	167.3	190	1	121	111	127	165	216	3.7
40	1½	65	48.77	49.1	12.7	28.6	217.5	252	1½	146	120	165	190	241	7.4
50	2	80	61.24	61.1	15.9	36.5	237.3	280	2	178	140	178	216	292	10.5



FORGED STEEL GLOBE VALVE

CLASS 150 / 300 / 600 / 800

**TYPE FH402-FS (NPT/SW)
 FH412-FS (FLANGED)**

DESIGN DESCRIPTION

Bolted Bonnet
 Outside Screw and Yoke
 Loose Disc
 Rising Stem and Handwheel
 Integral Seat
 Screwed Ends
 Socket Weld Ends

APPLICABLE STANDARDS

Socket Weld Ends, ANSI B16.11
 Screwed Ends, ANSI B1.20.1
 Steel Valves, ANSI B16.34

TEST PRESSURE

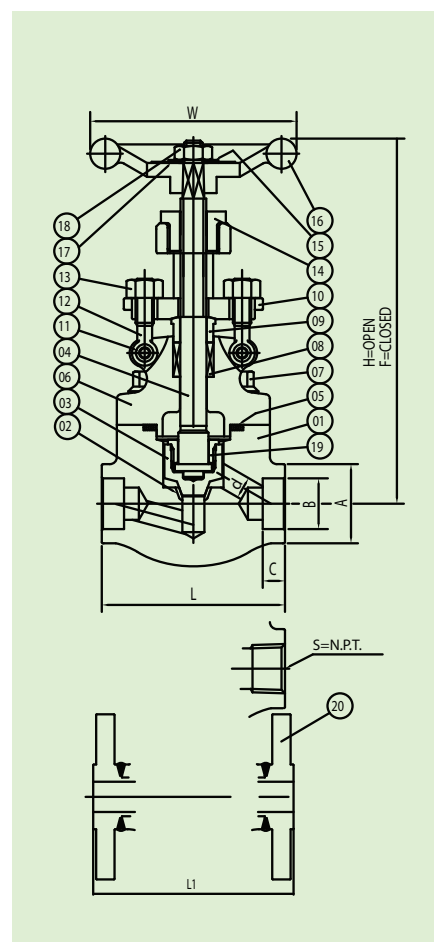
Class	Shell Test (Water)	Seat Test (Water)
150	450 (32 kg/cm ²)	314 (22 kg/cm ²)
300	1125 (79 kg/cm ²)	814 (57 kg/cm ²)
600	2225 (158 kg/cm ²)	1628 (114 kg/cm ²)
800	3000 (211kg/cm ²)	2200 (154 kg/cm ²)

PARTS AND MATERIALS

No	Parts	Materials				
		A105	F304	F316	F11	F22
1	Body	A105	A182-F304	A182-F316	A182-F11	A182-F22
2	Seat Facing	Stellite #6	Stellite #6	Stellite #6	Stellite #6	Stellite #6
3	Disc	A276-420J2	A276-304	A276-316	A276-420J2	A276-420J2
4	Stem	A276-410	A276-304	A276-316	A276-410	A276-410
5	Bonnet Gasket	304 +GRAPHITE	304 +GRAPHITE	304 +GRAPHITE	304 +GRAPHITE	304 +GRAPHITE
6	Bonnet	A105	A182-F304	A182-F316	A182-F11	A182-F22
7	Bonnet Bolt	A193-B7	A193-B8	A193-B8	A193-B16	A193-B16
8	Packing Ring	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
9	Gland	A276-410	A276-304	A276-316	A276-410	A276-410
10	Gland Flange	A105	A182-F304	A182-F304	A105	A105
11	Pin	A276-410	A276-304	A276-304	A276-410	A276-410
12	Gland Bolt	A193-B8	A193-B8	A193-B8	A193-B8	A193-B8
13	Gland Nut	A194-2H	A194-8	A194-8	A194-2H	A194-2H
14	Stem Nut	A276-410	A276-410	A276-410	A276-410	A276-410
15	Washer	A176-430	A176-430	A176-430	A176-430	A176-430
16	Hand Wheel	A536	A536	A536	A536	A536
17	Name Plate	A666-304	A666-304	A666-304	A666-304	A666-304
18	Hand Wheel Nut	A36	A36	A36	A36	A36
19	Disc Nut	A276-410	A276-304	A276-316	A276-410	A276-410
20	Flange	A105	A182-F304	A182-F316	A182-F11	A182-F22

DIMENSION

Size		A	B	C	d	F	H	S	W	L	L1			Wt	
A (mm)	B (inch)	ANSI	JIS								150 LB	300 LB	600 LB	(kg)	
15	½	34	21.84	22.2	9.6	9.5	156	165	½	89	79	108	152	165	2.4
20	¾	40	27.18	27.7	12.7	13	161	170	¾	89	92	118	178	190	2.5
25	1	48	33.91	34.5	12.7	17.5	187	202.5	1	102	111	127	203	216	3.6
40	1½	65	48.77	49.1	12.7	30	226.5	251.5	1½	146	152	165	229	241	7.9
50	2	80	61.24	61.1	15.9	38.1	257	285.5	2	178	172	203	267	292	11.6



FORGED STEEL CHECK VALVE

CLASS 150 / 300 / 600 / 800

**TYPE FH407-FS (NPT/SW)
 FH417-FS (FLANGED)**

DESIGN DESCRIPTION

Bolted Cap
 Piston Type
 Spring Loaded
 Integral Seat
 Screwed Ends
 Socket Weld Ends

APPLICABLE STANDARDS

Steel Valves, ANSI B16.34
 Screwed Ends, ANSI B1.20.1
 Socket Weld Ends, ANSI B16.11

TEST PRESSURE

Class	Shell Test (Water)	Seat Test (Water)
150	450 (32 kg/cm ²)	314 (22 kg/cm ²)
300	1125 (79 kg/cm ²)	814 (57 kg/cm ²)
600	2225 (158 kg/cm ²)	1628 (114 kg/cm ²)
800	3000 (211kg/cm ²)	2200 (154 kg/cm ²)

PARTS AND MATERIALS

No	Parts	Materials				
		A105	F304	F316	F11	F22
1	Body	A105	A182-F304	A182-F316	A182-F11	A182-F22
2	Seat Facing	Stellite #6	Stellite #6	Stellite #6	Stellite #6	Stellite #6
3	Disc	A276-420J2	A276-304	A276-316	A276-420J2	A276-420J2
4	Name Plate	A666-304	A666-304	A666-304	A666-304	A666-304
5	Cap Gasket	304 +GRAPHITE	304 +GRAPHITE	316 +GRAPHITE	304 +GRAPHITE	304 +GRAPHITE
6	Cap	A105	A182-F304	A182-F316	A182-F11	A182-F22
7	Cap Bolt	A193-B7	A193-B8	A193-B8	A193-B16	A193-B16
8	Spring	SUS304	SUS304	SUS316	SUS304	SUS304
9	Name Plate Screw	A666-304	A666-304	A666-304	A666-304	A666-304
10	Flange	A105	A182-F304	A182-F316	A182-F11	A182-F22

DIMENSION

Size		A	B	C	d	H	S	L	L1			Wt	
A (mm)	B (inch)	ANSI	JIS						150 LB	300 LB	600 LB	(kg)	
15	½	34	21.84	22.2	9.6	9.5	59	½	79	108	152	165	1.6
20	¾	40	27.18	27.7	12.7	13	59	¾	92	118	178	190	1.7
25	1	48	33.91	34.5	12.7	17.5	73	1	111	127	203	216	2.5
40	1½	65	48.77	49.1	12.7	30	101	1½	152	165	229	241	5.9
50	2	80	61.24	61.1	15.9	38.1	120.5	2	172	203	267	292	8.7

