

# Gate Valves

## 1. Cast Iron a. Class 125



### CLASS 125 CAST IRON GATE VALVE

Bolted bonnet, Inside screw, Non-rising stem, Solid wedge disc, Flanged ends conform to ANSI B16.1 with indicator.

#### Working Pressure.

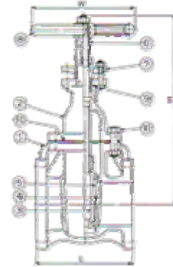
200psi. Non-shock (water, oil, gas.)  
125psi. Saturated steam.  
Size 14: 150psi WOG

#### Hydrostatic Test Pressure.

Shell 300psi.  
Seat 200psi.



Fig. FUA



#### Materials

No.	Description	Material	Remark
1	Body	Cast iron	ASTM A126 Class B
2	Bonnet	Cast iron	ASTM A126 Class B
3	Disc	Cast iron	ASTM A126 Class B
4	Body seat	Gunmetal	ASTM B62
5	Disc seat	Gunmetal	ASTM B62
6	Stem	Brass	ASTM B124-C37700
7	Gland	Cast iron	ASTM A126 Class B
8	Handwheel	Cast iron	ASTM A126 Class B
9	Gland packing	Graphite asbestos	
10	Gasket	Asbestos sheet	
11	Bolt/nut	Carbon steel	ASTM A307-A

#### Dimensions

Size	in	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
		mm	48	50	65	80	100	125	150	200	250	300	350	400	450	500
L	in	6½	7	7½	8	9	10	10½	11½	13	14	15	16	17	18	20
	mm	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H	in	9½	10½	11½	13¼	17½	19½	20½	25½	29½	35	37	39½	44½	49	55½
	mm	250	275	310	365	415	465	535	650	760	880	940	1000	1130	1245	1410
W	in	4½	5½	6½	7½	7½	7½	8½	11	12½	14	15½	17½	19½	22	23½
	mm	125	140	160	180	200	200	224	280	315	355	400	450	500	560	600

D: Flange dimensions of ANSI B16.1 see page 13.  
Available up to 48"

### CLASS 125 CAST IRON GATE VALVE

Bolted bonnet, Outside screw and yoke, Rising stem. Solid wedge disc, Flanged ends conform to ANSI B16.1

#### Working Pressure.

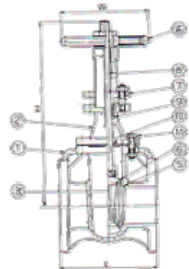
200psi. Non-shock (water, oil, gas.)  
125psi. Saturated steam.  
Size 14: 150psi WOG

#### Hydrostatic Test Pressure.

Shell 300psi.  
Seat 200psi.



Fig. FVA



#### Materials

No.	Description	Material	Remark
1	Body	Cast iron	ASTM A126 Class B
2	Bonnet	Cast iron	ASTM A126 Class B
3	Disc	Cast iron	ASTM A126 Class B
4	Handwheel	Cast iron	ASTM A126 Class B
5	Body seat	Gunmetal	ASTM B62
6	Disc seat	Gunmetal	ASTM B62
7	Gland	Cast iron	ASTM A126 Class B
8	Stem	Brass	ASTM B124-C37700
9	Gland packing	Graphite asbestos	
10	Gasket	Asbestos sheet	
11	Bolt/nut	Carbon steel	ASTM A307-A

#### Dimensions

Size	in	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
		mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500
L	in	6½	7	7½	8	9	10	10½	11½	13	14	15	16	17	18	20
	mm	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H Open	in	11½	13½	15½	17½	21¼	27½	32½	39	49½	55½	58½	65½	76½	82½	99½
	mm	300	340	390	445	540	690	820	990	1250	1420	1505	1670	1920	2125	2535
W	in	4½	6½	7½	7½	8½	8½	9½	11	14	15½	15½	17½	19½	23½	27½
	mm	120	160	180	180	224	224	250	280	355	400	400	450	500	600	710

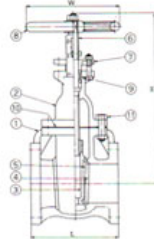
D: Flange dimensions of ANSI B16.1 see page 13.  
Available up to 48"

b. 10k

JIS CAST IRON 10K GATE VALVE, NON-RISING STEM, FLANGED



Fig. FUJ



Working Pressure

Condition of fluid	Maximum working pressure
Pulsating water at 120°C or under	10kgf/cm <sup>2</sup> (0.98 MPa)
Saturated steam	7kgf/cm <sup>2</sup> (0.69 MPa)
Non-shock water at 120°C or under	14kgf/cm <sup>2</sup> (1.37 MPa)

Hydrostatic Test Pressure

Nominal pressure	10kgf/cm <sup>2</sup> (0.98 MPa)		
Test pressure	Nominal size	300 and smaller	350 and larger
	Shell	21kgf/cm <sup>2</sup> (2.06 MPa)	15kgf/cm <sup>2</sup> (1.47 MPa)
	Seat	16kgf/cm <sup>2</sup> (1.57 MPa)	10kgf/cm <sup>2</sup> (0.98 MPa)

Materials

No.	Description	Material	Remark
1	Body	Cast iron	FC200
2	Bonnet	Cast iron	FC200
3	Disc	Cast iron	FC200
4	Body seat	Gunmetal	BC 6
5	Disc seat	Gunmetal	BC 6
6	Stem	Brass	BSBF
7	Gland	Cast iron	FC200
8	Handwheel	Cast iron	FC200
9	Gland packing	Graphite asbestos	V/#2190
10	Gasket	Asbestos sheet	V/#1500
11	Bolt/nut	Carbon steel	SS41

Dimensions

Unit: mm

Nominal size	L	A	H
50	180	140	275
65	190	160	310
80	200	180	365
100	230	200	415
125	250	200	465
150	270	224	535
200	290	280	650
250	330	315	760
300	350	355	880
350	380	400	940

D: Flange dimensions of JIS B2212 10kgf/cm<sup>2</sup> see page 14.

JIS CAST IRON 10K GATE VALVE, RISING STEM, FLANGED

Working Pressure

Condition of fluid	Maximum working pressure
Pulsating water at 120°C or under	10kgf/cm <sup>2</sup> (0.98 MPa)
Saturated steam	7kgf/cm <sup>2</sup> (0.69 MPa)
Non-shock water at 120°C or under	14kgf/cm <sup>2</sup> (1.37 MPa)

Hydrostatic Test Pressure

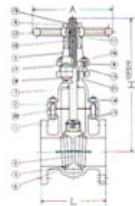
Nominal pressure	10kgf/cm <sup>2</sup> (0.98 MPa)		
Test pressure	Nominal size	300 and smaller	350 and larger
	Shell	21kgf/cm <sup>2</sup> (2.06 MPa)	15kgf/cm <sup>2</sup> (1.47 MPa)
	Seat	16kgf/cm <sup>2</sup> (1.57 MPa)	10kgf/cm <sup>2</sup> (0.98 MPa)

Materials

Part No.	Description	Material	
		BC Trim	SUS Trim
1	Body		FC200
2	Bonnet		FC200
3	Yoke		FC200
4	Disc		FC200
5	Disc seat ring	BC 6	SUS403
6	Body seat ring	BC 6	SUS403
7	Stem	BsBF	SUS403
8	Packing gland		FCMB270
9	Handwheel nut		FCMB270
10	Yoke sleeve		BC 6
11	Washer		BsPI-0
12	Handwheel		FC 200
13	Bonnet bolt		SS41
14	Nut for bonnet bolt		SS41
15	Gland bolt		SS41
16	Nut for gland bolt		SS41
17	Yoke bolt		SS41
18	Nut for yoke bolt		SS41
19	Set screw		SS41
20	Gasket		V/#1500
21	Packing		V/#2190



Fig. FVJ



Dimensions

Unit: mm

Nominal size	L	A	H (OPEN)
50	180	160	340
65	190	180	390
80	200	180	445
100	230	224	540
125	250	224	690
150	270	250	820
200	290	280	990
250	330	355	1250
300	350	400	1420
350	380	400	1505
400	410	450	1670
450	430	500	1920
500	450	600	2125
600	500	710	2535

D: Flange dimensions of JIS B2212 10kgf/cm<sup>2</sup> see page 14.

c. PN10

## BS5150 PN10, PN16 CAST IRON GATE VALVE

Bolted bonnet, Inside screw, Non-rising stem, Solid wedge disc, with indicator, Flanged ends conform to BS4504 PN10, PN16

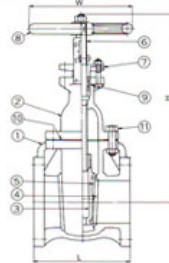


### Working Pressure and Test Pressure

Standard of flange	Size	Working pressure	Hydrostatic test pressure	
			Shell	Seat
BS4504 PN10	200mm ~ 600mm	10 Bars (Non-shock) at -10°C ~ 120°C	15 Bars	10 Bars
BS4504 PN16	40mm ~ 600mm	16 Bars (Non-shock) at -10°C ~ 120°C	24 Bars	16 Bars



Fig. FUP



### Materials

No.	Description	Material	Remark
1	Body	Cast iron	BS1452 Gr14
2	Bonnet	Cast iron	BS1452 Gr14
3	Disc	Cast iron	BS1452 Gr14
4	Body seat	Gunmetal	BS1400 LG2
5	Disc seat	Gunmetal	BS1400 LG2
6	Stem	Brass	BS2874 CZ122
7	Gland	Cast iron	BS1452 Gr14
8	Handwheel	Cast iron	BS1452 Gr14
9	Gland packing	Graphite asbestos	
10	Gasket	Asbestos sheet	
11	Bolt/nut	Carbon steel	

### Dimensions

Size	Flange dimensions (mm)															
	in 1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	
L	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	in	6½	7	7½	8	9	10	10½	11½	13	14	15	16	17	18	20
H	mm	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508
	in	9%	10%	11½%	13%	17%	19%	20%	25%	29%	35	37	39%	44½	49	55½
W	mm	250	275	310	365	415	465	535	650	760	880	940	1000	1130	1245	1410
	in	4½%	5½	6½%	7½%	7%	7%	8½%	11	12½	14	15½	17½	19%	22	23%
	mm	125	140	160	180	200	200	224	280	315	355	400	450	500	560	600

D: Flange dimensions of BS4504 PN10, PN16 see page 13.  
Available up to 48"

## BS5150 PN10, PN16 CAST IRON GATE VALVE

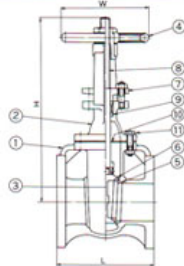
Bolted bonnet, Outside screw and yoke, Rising stem. Solid wedge disc, Flanged ends conform to BS4504 PN10, PN16

### Working Pressure and Test Pressure

Standard of flange	Size	Working pressure	Hydrostatic test pressure	
			Shell	Seat
BS4504 PN10	200mm ~ 600mm	10 Bars (Non-shock) at -10°C ~ 120°C	15 Bars	10 Bars
BS4504 PN16	40mm ~ 600mm	16 Bars (Non-shock) at -10°C ~ 120°C	24 Bars	16 Bars



Fig. FVP



### Materials

No.	Description	Material	Remark
1	Body	Cast iron	BS1452 Gr14
2	Bonnet	Cast iron	BS1452 Gr14
3	Disc	Cast iron	BS1452 Gr14
4	Handwheel	Cast iron	BS1452 Gr14
5	Body seat	Gunmetal	BS1400 LG2
6	Disc seat	Gunmetal	BS1400 LG2
7	Gland	Cast iron	BS1452 Gr14
8	Stem	Brass	BS2874 CZ122
9	Gland packing	Graphite asbestos	
10	Gasket	Asbestos sheet	
11	Bolt/nut	Carbon steel	

### Dimensions

Size	Flange dimensions (mm)															
	in 1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24	
L	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
	in	6½	7	7½	8	9	10	10½	11½	13	14	15	16	17	18	20
H Open	mm	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508
	in	11½%	13%	15%	17½	21¼	27½%	32½%	39	49½%	55½%	58%	65%	75½%	82%	99½%
W	mm	300	340	390	445	540	690	820	990	1250	1420	1505	1670	1920	2125	2535
	in	4½%	6½%	7½%	7½%	8½%	8½%	9%	11	14	15½	15½	17½	19%	23%	27½%
	mm	125	160	180	180	224	224	250	280	355	400	400	450	500	600	710

D: Flange dimensions of BS4504 PN10, PN16 see page 13.  
Available up to 48"

## BS5150 PN10, PN16 CAST IRON GATE VALVE

Bolted bonnet, Inside screw, Non-rising stem, Solid wedge disc, with indicator, Flanged ends conform to BS4504 PN10, PN16

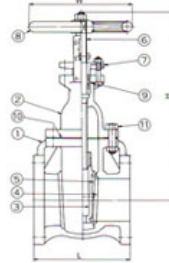
**FVC**

### Working Pressure and Test Pressure

Standard of flange	Size	Working pressure	Hydrostatic test pressure	
			Shell	Seat
BS4504 PN10	200mm ~ 600mm	10 Bars (Non-shock) at -10°C ~ 120°C	15 Bars	10 Bars
BS4504 PN16	40mm ~ 600mm	16 Bars (Non-shock) at -10°C ~ 120°C	24 Bars	16 Bars



Fig. FUP



### Materials

No.	Description	Material	Remark
1	Body	Cast iron	BS1452 Gr14
2	Bonnet	Cast iron	BS1452 Gr14
3	Disc	Cast iron	BS1452 Gr14
4	Body seat	Gunmetal	BS1400 LG2
5	Disc seat	Gunmetal	BS1400 LG2
6	Stem	Brass	BS2874 CZ122
7	Gland	Cast iron	BS1452 Gr14
8	Handwheel	Cast iron	BS1452 Gr14
9	Gland packing	Graphite asbestos	
10	Gasket	Asbestos sheet	
11	Bolt/nut	Carbon steel	

### Dimensions

Size	in		2		3		4		5		6		8		10		12		14		16		18		20		24	
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600												
L	in	6½	7	7½	8	9	10	10½	11½	13	14	15	16	17	18	20												
	mm	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508												
H	in	9%	10%	11¼	13¼	17%	19%	20%	25%	29%	35	37	39%	44½	49	55½												
	mm	250	275	310	365	415	465	535	650	760	880	940	1000	1130	1245	1410												
W	in	4½	5½	6½	7½	7½	7½	8½	11	12½	14	15½	17½	19%	22	23%												
	mm	125	140	160	180	200	200	224	280	315	355	400	450	500	560	600												

D: Flange dimensions of BS4504 PN10, PN16 see page 13.  
Available up to 48"

## BS5150 PN10, PN16 CAST IRON GATE VALVE

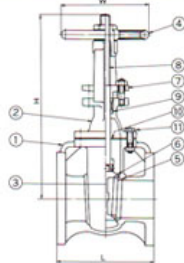
Bolted bonnet, Outside screw and yoke, Rising stem. Solid wedge disc, Flanged ends conform to BS4504 PN10, PN16

### Working Pressure and Test Pressure

Standard of flange	Size	Working pressure	Hydrostatic test pressure	
			Shell	Seat
BS4504 PN10	200mm ~ 600mm	10 Bars (Non-shock) at -10°C ~ 120°C	15 Bars	10 Bars
BS4504 PN16	40mm ~ 600mm	16 Bars (Non-shock) at -10°C ~ 120°C	24 Bars	16 Bars



Fig. FVP



### Materials

No.	Description	Material	Remark
1	Body	Cast iron	BS1452 Gr14
2	Bonnet	Cast iron	BS1452 Gr14
3	Disc	Cast iron	BS1452 Gr14
4	Handwheel	Cast iron	BS1452 Gr14
5	Body seat	Gunmetal	BS1400 LG2
6	Disc seat	Gunmetal	BS1400 LG2
7	Gland	Cast iron	BS1452 Gr14
8	Stem	Brass	BS2874 CZ122
9	Gland packing	Graphite asbestos	
10	Gasket	Asbestos sheet	
11	Bolt/nut	Carbon steel	

### Dimensions

Size	in		2		3		4		5		6		8		10		12		14		16		18		20		24	
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600												
L	in	6½	7	7½	8	9	10	10½	11½	13	14	15	16	17	18	20												
	mm	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508												
H Open	in	11¼	13%	15%	17½	21¼	27½	32½	39	49½	55½	58%	65%	75½	82%	99½												
	mm	300	340	390	445	540	690	820	990	1250	1420	1505	1670	1920	2125	2535												
W	in	4½	6½	7½	7½	8½	8½	9%	11	14	15½	15½	17½	19%	23%	27½												
	mm	125	160	180	180	224	224	250	280	355	400	400	450	500	600	710												

D: Flange dimensions of BS4504 PN10, PN16 see page 13.  
Available up to 48"

## 2. DUCTILE

### a. class 150

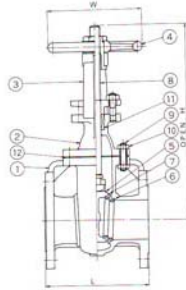
## CLASS 150 DUCTILE IRON GATE VALVE

Bolted bonnet, Outside screw and yoke, Rising stem. Solid wedge disc.  
Flanged ends conform to ANSI B16.5

**FVC**



Fig V15D



**Test Pressures**  
Shell 400Psi hydrostatic  
Seat 300Psi hydrostatic  
80Psi air

### Description of Parts

1	Body	Ductile iron	ASTM A395
2	Bonnet	Ductile iron	ASTM A395
3	Yoke	Ductile iron	ASTM A395
4	Hand wheel	Malleable iron	ASTM A338
5	Disc	Ductile Iron	ASTM A395
6	Body seat ring	Stainless steel	ASTM A182 GrF6a
7	Disc seat ring	Stainless steel	ASTM A182 GrF6a
8	Stem	Stainless steel	ASTM A182 GrF6a
9	Bonnet bolt	Carbon steel	ASTM A193-B7
10	Bonnet nut	Carbon steel	ASTM A194-2H
11	Gland packing	Graphite asbestos	
12	Gasket	Asbestos sheet	

### Dimensions

Size	in	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
	mm	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L	in	7.00	7.50	8.00	9.00	10.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00
	mm	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H Open	in	14.00	15.12	18.88	22.06	25.75	30.12	38.00	46.88	55.38	58.88	65.38	75.19	82.88	99.06
	mm	355	385	455	560	655	765	965	1190	1415	1505	1670	1920	2125	2535
W	in	5.50	6.31	7.88	8.81	8.81	9.88	11.00	12.38	14.00	15.75	17.75	19.62	23.62	27.94
	mm	140	160	200	224	224	250	280	315	355	400	450	500	600	710

### b. class 300

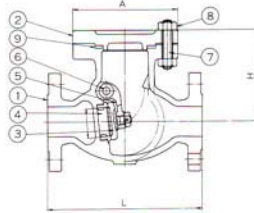
## CLASS 300 DUCTILE IRON SWING CHECK VALVE

Bolted cover, Swing type disc.  
Flanged ends conform to ANSI B16.5

**FVC**



Fig X30D



**Test Pressures**  
Shell 975Psi hydrostatic  
Seat 750Psi hydrostatic  
80Psi air

### Description of Parts

1	Body	Ductile iron	ASTM A395
2	Cover	Ductile iron	ASTM A395
3	Disc	Stainless st. cast	ASTM A296CA-15
	Disc	Cast steel	WCB 13Cr. 5&Larger
4	Body seat ring	Stainless steel	ASTM A182 GrF6a
5	Arm	Cast steel	ASTM A216 Gr WCB
6	Hinge pin	Stainless steel	ASTM A276 Type 403
7	Bonnet bolt	Carbon steel	ASTM A193-B7
8	Bonnet nut	Carbon steel	ASTM A194-2H
9	Gasket	Asbestos sheet	

### Dimensions

Size	in	2	2½	3	4	6	8	10	12
	mm	50	65	80	100	150	200	250	300
L	in	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00
	mm	267	292	318	356	444	533	622	711
H Open	in	6.00	6.88	7.50	8.75	10.81	12.50	13.88	15.38
	mm	153	175	190	223	275	318	353	390
W	in	7.12	8.25	9.19	10.62	13.00	15.75	17.75	20.06
	mm	180	210	233	270	330	400	450	510

### c. 10k

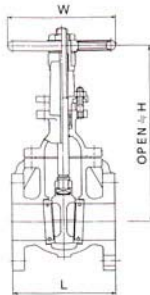
## CLASS 10K DUCTILE IRON GATE VALVE, RISING STEM, FLANGED

### Working Pressure

Non-shock water and 120°C or under ..... 14kgf/cm<sup>2</sup> 1.37MPa  
 Steam, air, gas, oil and pulsating water at 220°C or under  
 ..... 12kgf/cm<sup>2</sup> 1.18MPa  
 Steam, air, gas, oil and pulsating water at 300°C  
 ..... 10kgf/cm<sup>2</sup> 0.98 MPa



Fig. JV10D



### Test pressure

Shell	24kgf/cm <sup>2</sup>	2.35MPa
Seat	15kgf/cm <sup>2</sup>	1.47MPa
	6kgf/cm <sup>2</sup> (Air)	0.59MPa

### Description of parts

Description	Material
Body	FCD450
Bonnet	FCD450
Stem	SUS403
Disc	SCS2 (80 and smaller) FCD450
Seat ring	SUS403
Packing gland	FCMB270
Packing	Graphite asbestos
Handwheel	FC200
Bonnet bolt/nut	SS41/SS41
Gasket	Asbestos sheet

### Dimensions

Unit: mm

Nominal size	L	W	H (OPEN)
40	165	160	317
50	178	180	367
65	190	200	420
80	203	224	490
100	229	250	583
125	254	280	677
150	267	300	804
200	292	355	1002
250	330	400	1205
300	356	450	1405
350	381	500	1630
400	406	600	1825
450	432	600	2030
500	457	700	2280
550	480	800	2480
600	508	800	2705

## d. 16k

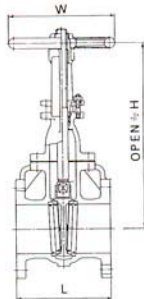
## CLASS 16K DUCTILE IRON GATE VALVE, RISING STEM, FLANGED

### Working Pressure

Non-shock water at 120°C or under ..... 22kgf/cm<sup>2</sup> 2.16MPa  
 Steam, air, gas, oil and pulsating water at 220°C or under  
 ..... 20kgf/cm<sup>2</sup> 1.96MPa  
 Steam, air, gas, oil and pulsating water at 300°C  
 ..... 18kgf/cm<sup>2</sup> 1.76MPa  
 Steam, air, gas, oil and pulsating water at 350°C  
 ..... 16kgf/cm<sup>2</sup> 1.57MPa



Fig. JV16D



### Test pressure

Shell	35kgf/cm <sup>2</sup>	3.43MPa
Seat	25kgf/cm <sup>2</sup>	2.45MPa
	6kgf/cm <sup>2</sup> (Air)	0.59MPa

### Description of parts

Description	Material
Body	FCD450
Bonnet	FCD450
Stem	SUS403
Disc	SCS2 (80 and smaller) FCD450
Packing gland	FCMB270
Packing	Graphite asbestos
Handwheel	FCMB270
Gasket	Asbestos sheet
Seat ring	SUS403
Bonnet bolt/nut	S45C/SS41
Gland bolt/nut	SS41/SS41

### Dimensions

Unit: mm

Nominal size	L	W	H (OPEN)
40	165	160	317
50	178	180	367
65	190	200	420
80	203	224	490
100	229	250	583
125	254	280	677
150	267	300	804
200	292	355	1002
250	330	400	1205
300	356	450	1405
350	381	500	1630
400	406	600	1825
450	432	600	2030
500	457	700	2280
550	480	800	2480
600	508	800	2705

## e. 20k

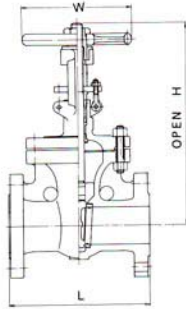
## CLASS 20K DUCTILE IRON GATE VALVE, RISING STEM, FLANGED

### Working Pressure

Non-shock water at 120°C or under ..... 28kgf/cm<sup>2</sup> 2.74MPa  
 Steam, air, gas, oil and pulsating water at 220°C or under  
 ..... 25kgf/cm<sup>2</sup> 2.45MPa  
 Steam, air, gas, oil and pulsating water at 300°C  
 ..... 23kgf/cm<sup>2</sup> 2.25MPa  
 Steam, air, gas, oil and pulsating water at 350°C  
 ..... 20kgf/cm<sup>2</sup> 1.96MPa



Fig. JV20D



### Test pressure

Shell	44kgf/cm <sup>2</sup>	4.31MPa
	32kgf/cm <sup>2</sup>	3.14MPa
Seat	6kgf/cm <sup>2</sup> (Air)	0.59MPa

### Description of parts

Description	Material
Body	FCD450
Bonnet	FCD450
Stem	SUS403
Disc	SCS2 (125 and smaller) FCD450
Seat ring	SUS403
Packing gland	FCMB270
Packing	Graphite asbestos
Handwheel	FCMB270
Bonnet bolt/nut	S45C/SS41
Gasket	Asbestos sheet

### Dimensions

Unit: mm

Nominal size	L	W	H (OPEN)
50	216	180	409
65	241	200	487
80	283	224	498
100	305	250	596
125	381	300	800
150	403	300	793
200	419	355	1004
250	457	560	1380
300	502	600	1560

## 3. Stainless Steel 10k / 20k

### CLASS 10K/20K STAINLESS STEEL GATE VALVE

OS&Y, Rising stem, Solid wedge disc, Renewable seat ring, Flanged ends.

**FVC**

### Working Pressure

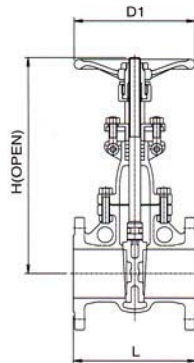
Non-shock water \ oil \ gas at 120°C or under(10K) .....  
 ..... 14kgf/cm<sup>2</sup> 1.37MPa  
 Steam \ oil \ gas and pulsating water at 220°C or under(10K) ....  
 ..... 12kgf/cm<sup>2</sup> 1.18MPa  
 Steam \ oil \ gas and pulsating water at 220°C or under(20K) ....  
 ..... 31kgf/cm<sup>2</sup> 3.04MPa

#### • Applicable JIS-10K/20K Standards:

Face-To-Face: JIS B2002  
 End Flanges: JIS B2238  
 P-T Rating: JIS B2238



Fig. S02-Y



### Test Pressure

Shell (Hydrostatic)	21.1kgf/cm <sup>2</sup>	2.07MPa(10K)
	30.0kgf/cm <sup>2</sup>	2.94MPa(20K)
Seat (Hydrostatic)	15.4kgf/cm <sup>2</sup>	1.51MPa(10K)
	22.0kgf/cm <sup>2</sup>	2.15MPa(20K)
	6.0kgf/cm <sup>2</sup> (Air)	0.59MPa

NO.	PART NAME	MATERIAL
1	Body	SCS13 (5" below for precision investment casting, 10K only)
2	Bonnet	SCS13
3	Stem	SUS304
4	Disc	SCS13
5	Gland	SCS13
6	Gland packing	PTFE+Glass Fiber
7	Hand wheel	FC200
8	Gasket	PTFE+Glass Fiber
9	Hinge	SUS304
10	Bolt/Nut	SUS304
11	Yoke sleeve	BC6
12	Handwheel nut	BC6

SIZE	L(10K)	H(10K)	D1(10K)
1/2"	108	180	100
3/4"	117	186	100
1"	127	211	100
1-1/4"	140	218	140
1-1/2"	165	275	140
2"	178	309	160
2-1/2"	190	352	180
3"	203	449	200
4"	229	523	225
5"	254	606	250
6"	267	707	250
8"	292	920	300
10"	330	1117	350
12"	356	1324	400

SS STEEL

## 4. Bronze a. Class 150

## CLASS 150 BRONZE GATE VALVE

Union bonnet, Rising stem, Solid wedge disc, Threaded ends.

# FVC

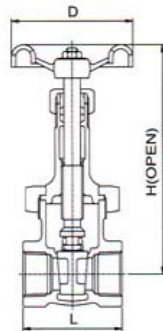
### Working Pressure

Non-shock water, oil, gas at 120°C or under ..... 225psi

Steam, oil, gas and pulsating water at 220°C or under ..... 150psi



Fig.B02-RU



### Test Pressure

Shell	450 psi (Hydrostatic)
Seat	300 psi (Hydrostatic)
	80 psi (Air)

NO.	PART NAME	MATERIAL
1	Body	Bronze
2	Bonnet	Bronze
3	Stem	(DZR#)
4	Disc	Bronze
5	Packing nut	Brass(1/2"-1&1/2") Bronze(2")
6	Union nut	Bronze
7	Gland	Brass
8	Packing	PTFE+Glass Fiber
9	Handwheel	Cast iron
10	Handwheel nut	Steel
11	Name plate	Aluminum

#DZR is special brass developed for anti-dezincification.

SIZE	L	H	D
1/2"	54	127	62
3/4"	57	155	70
1"	66.5	192	70
1-1/4"	73	219	85
1-1/2"	79.5	255	95
2"	89	308	105

BRONZE

## CLASS 150 BRONZE GATE VALVE

Screwed over bonnet, Non-rising stem, Solid wedge disc, Threaded ends.

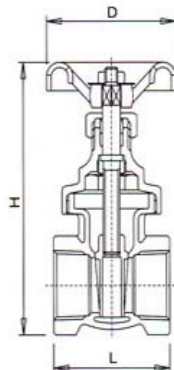
### Working Pressure

Non-shock water, oil, gas at 120°C or under ..... 225psi

Steam, oil, gas and pulsating water at 220°C or under ..... 150psi



Fig.B02-NO



### Test Pressure

Shell	450 psi (Hydrostatic)
Seat	300 psi (Hydrostatic)
	80 psi (Air)

NO.	PART NAME	MATERIAL
1	Body	Bronze
2	Bonnet	Bronze
3	Stem	DZR#
4	Disc	Bronze
5	Lock nut	Brass
6	Packing nut	Brass
7	Gland	Brass
8	Packing	PTFE+Glass Fiber
9	Handwheel	Cast iron
10	Handwheel nut	Steel
11	Name plate	Aluminum

#DZR is special brass developed for anti-dezincification.

SIZE	L	H	D
1/2"	43	76	54
3/4"	49	90	54
1"	55	105	62
1-1/4"	60	122	69
1-1/2"	65	132	77
2"	72	158	85



**CLASS 150 CAST STEEL GATE VALVES  
FLANGED & BUTT-WELDING**

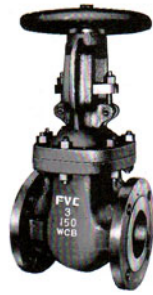
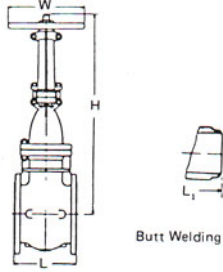


Fig V-15



Butt Welding Ends

**Description of Parts**

Body	Cast steel	ASTM A216 Grade WCB
Bonnet	Cast steel	ASTM A216 Grade WCB
Yoke	Cast steel	ASTM A216 Grade WCB
Hand wheel	Malleable iron or Ductile iron	ASTM A338 or A395
Body seat ring	Stainless steel	ASTM A276 Type 420
Disc seat ring	Stainless steel	ASTM A276 Type 420
Stem	Stainless steel	ASTM A276 Type 403
Disc	Cast steel	ASTM A216 Grade WCB

Test pressure (psi)		
Shell	Seat	
Hydrostatic	Hydrostatic	Air
450	314	85

unit : inch

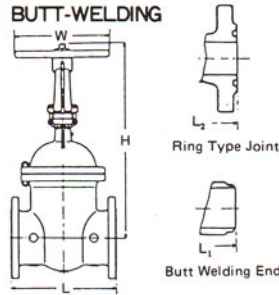
Mark	Size	1½	2	2½	3	4	6	8	10	12	14	16	18	20	24
L	6½	7	7½	8	9	10½	11½	13	14	15	16	17	18	20	20
L <sub>1</sub>	—	8½	9½	11½	12	15½	16½	18	19¾	22½	24	26	28	32	32
H	12¾	13½	15½	17½	22¾	31¾	38¾	48	56½	62	73¾	83½	92	108	108
W	7	8	8	10	10	11	12	16	20	22	24	28	31½	34	34

**b. Class 300**

**CLASS 300 CAST STEEL GATE VALVES  
FLANGED & BUTT-WELDING**



Fig V-30



Ring Type Joint

Butt Welding Ends

**Description of Parts**

Body	Cast steel	ASTM A216 Grade WCB
Bonnet	Cast steel	ASTM A216 Grade WCB
Yoke	Cast steel	ASTM A216 Grade WCB
Hand wheel	Malleable iron or Ductile iron	ASTM A338 or A395
Body seat ring	Stainless steel	ASTM A276 Type 420
Disc seat ring	Stainless steel	ASTM A276 Type 420
Stem	Stainless steel	ASTM A276 Type 403
Disc	Cast steel	ASTM A216 Grade WCB

Test pressure (psi)		
Shell	Seat	
Hydrostatic	Hydrostatic	Air
1,125	814	85

unit : inch

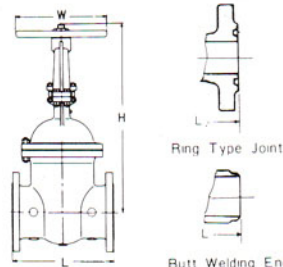
Mark	Size	1½	2	2½	3	4	6	8	10	12	14	16	18	20	24
L & L <sub>1</sub>	7½	8½	9½	11½	12	15½	16½	18	19¾	30	33	36	39	45	45
L <sub>2</sub>	8	9½	10½	11¾	12¾	16½	17½	18½	20¾	30¾	33¾	36¾	39¾	45	45
H	16¾	18	19¾	21¾	26½	37	46	54	62¾	68¾	81¾	89¾	98½	111¾	111¾
W	8	9	9	10	12	14	16	18	20	24	28	31½	35½	38	38

**c. Class 400**

**CLASS 400 CAST STEEL GATE VALVES  
FLANGED & BUTT-WELDING**



Fig V-40



Ring Type Joint

Butt Welding Ends

**Description of Parts**

Body	Cast steel	ASTM A216 Grade WCB
Bonnet	Cast steel	ASTM A216 Grade WCB
Yoke	Cast steel	ASTM A216 Grade WCB
Hand wheel	Malleable iron or Ductile iron	ASTM A338 or A395
Body seat ring	Stainless steel	ASTM A276 Type 420
Disc seat ring	Stainless steel	ASTM A276 Type 420
Stem	Stainless steel	ASTM A276 Type 403
Disc	Cast steel	ASTM A216 Grade WCB

Test pressure (psi)		
Shell	Seat	
Hydrostatic	Hydrostatic	Air
1,500	1,000	85

unit : inch

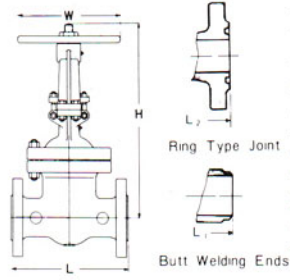
Mark	Size	4	6	8	10	12	14	16	18	20	24
L & L <sub>1</sub>	16	19½	23½	26½	30	32½	35½	38½	41½	48½	48½
L <sub>2</sub>	16½	19¾	23¾	26¾	30½	32¾	35¾	38¾	41¾	48¾	48¾
H	28¾	37¾	46¾	55¾	67¾	74¾	83½	90¼	100½	113¾	113¾
W	12	16	20	24	26	28	30	30	36	38	38

**d. Class 600**

**CLASS 600 CAST STEEL GATE VALVES  
FLANGED & BUTT-WELDING**



Fig V-60



**Description of Parts**

Body	Cast steel	ASTM A216 Grade WCB
Bonnet	Cast steel	ASTM A216 Grade WCB
Yoke	Cast steel	ASTM A216 Grade WCB
Hand wheel	Malleable iron or Ductile iron	ASTM A338 or A395
Body seat ring	Stainless steel	ASTM A276 Type 420
Disc seat ring	Stainless steel	ASTM A276 Type 420
Stem	Stainless steel	ASTM A276 Type 403
Disc	Cast steel	ASTM A216 Grade WCB

Test pressure (psi)		
Shell	Seat	
Hydrostatic	Hydrostatic	Air
2,225	1,628	85

unit : inch

Size	1½	2	2½	3	4	6	8	10	12	14	16	18	20
L & L <sub>1</sub>	9½	11½	13	14	17	22	26 5/8	31	33	35	39	43	47
L <sub>2</sub>	9½	11 5/8	13 1/8	14 1/8	17 1/8	22 1/8	26 1/8	31 1/8	33 1/8	35 1/8	39 1/8	43 1/8	47 1/4
H	16 3/4	20 5/8	22	23 1/8	31 3/16	42 3/4	51 3/4	62 1/4	70	77	83 3/4	90 3/4	101 1/8
W	10	12	12	12	14	20	24	28	30	34	36	38	38