

GLOBE VALVES

1. Cast Iron

a. Class 125

CLASS 125 CAST IRON GLOBE VALVE

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

Working Pressure.

200psi. Non-shock (water, oil, gas.)
125psi. Saturated steam.

Hydrostatic Test Pressure.

Shell 300psi.
Seat 200psi.

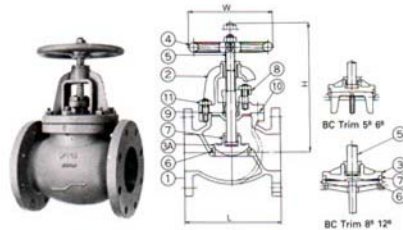


Fig. FWA

Materials

No.	Description	Material	Remark
1	Body	Cast iron	ASTM A126 Class B
2	Bonnet	Cast iron	ASTM A126 Class B
3	Disc 5 & larger	Cast iron	ASTM A126 Class B
3A	Disc 4 & smaller	Gunmetal	ASTM B62
4	Handwheel	Cast iron	ASTM A126 Class B
5	Stem	Brass	ASTM B124-C37700
6	Body seat	Gunmetal	ASTM B62
7	Disc seat	Gunmetal	ASTM B62
8	Gland	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
	mm	40	50	65	80	100	125	150	200	250	300
L	in	6½	8	8½	9½	11½	13	14	19½	24½	27½
	mm	165	203	216	241	292	330	356	495	622	699
H Open	in	7½	8¼	9¾	10¾	12½	14¾	16½	21¼	24¾	28¾
	mm	195	210	238	263	326	370	418	540	620	720
W	in	4½	5½	6¼	7¼	8½	9¾	11	14	15¼	15¼
	mm	125	140	160	180	224	250	280	355	400	400

D: Flange dimensions of ANSI B16.1 see page 13.
Available up to 16"

b. 10k

JIS CAST IRON 10K GLOBE VALVE, FLANGED

Working Pressure

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

Hydrostatic Test Pressure

Nominal pressure	10kgf/cm ² (0.98 MPa)	
Test pressure	Shell	21kgf/cm ² (2.06 MPa)
	Seat	16kgf/cm ² (1.57 MPa)

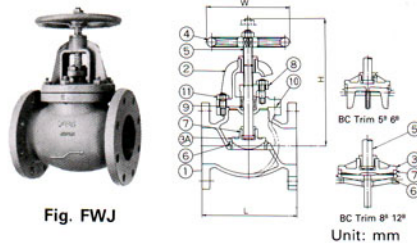


Fig. FWJ

Materials

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

Nominal size	L	A	H (OPEN)
40	190	125	195
50	200	140	210
65	220	160	238
80	240	180	263
100	290	224	326
125	360	250	370
150	410	280	418
200	500	355	540
250	620	400	620
300	700	400	720

D: Flange dimensions of JIS B2212 10kgf/cm² see page 14.

c. pn10

BS5152 PN10, PN16 CAST IRON GLOBE VALVE

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

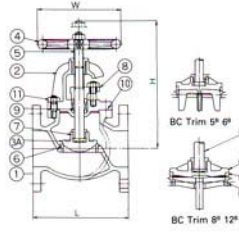
Working Pressure and Test Pressure

Standard of flange	Size	Working pressure	Hydrostatic test pressure	
			Shell	Seat
BS4504 PN10	200mm ~ 300mm	10 Bars (Non-shock) at -10°C ~ 120°C	15 Bars	10 Bars
BS4504 PN16	40mm ~ 300mm	16 Bars (Non-shock) at -10°C ~ 120°C	24 Bars	16 Bars

Materials



Fig. FWP



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

Dimensions

Size		1½	2	2½	3	4	5	6	8	10	12
		L	in	6½	8	8½	9½	11½	13	14	19½
	mm	165	203	216	241	292	330	356	495	622	699
H Open	in	7½	8¼	9¾	10¾	12¾	14¾	16½	21¼	24¾	28¾
	mm	195	210	238	263	326	370	418	540	620	720
W	in	4¾	5½	6¼	7¼	8¾	9¾	11	14	15¾	15¾
	mm	125	140	160	180	224	250	280	355	400	400

D: Flange dimensions of BS4504 PN10, PN16 see page 13.
Available up to 16"

d. PN16

BS5152 PN10, PN16 CAST IRON GLOBE VALVE

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

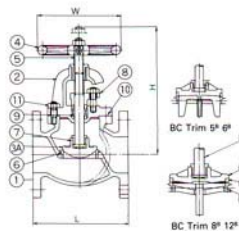
Working Pressure and Test Pressure

Standard of flange	Size	Working pressure	Hydrostatic test pressure	
			Shell	Seat
BS4504 PN10	200mm ~ 300mm	10 Bars (Non-shock) at -10°C ~ 120°C	15 Bars	10 Bars
BS4504 PN16	40mm ~ 300mm	16 Bars (Non-shock) at -10°C ~ 120°C	24 Bars	16 Bars

Materials



Fig. FWP



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

Dimensions

Size		1½	2	2½	3	4	5	6	8	10	12
		L	in	6½	8	8½	9½	11½	13	14	19½
	mm	165	203	216	241	292	330	356	495	622	699
H Open	in	7½	8¼	9¾	10¾	12¾	14¾	16½	21¼	24¾	28¾
	mm	195	210	238	263	326	370	418	540	620	720
W	in	4¾	5½	6¼	7¼	8¾	9¾	11	14	15¾	15¾
	mm	125	140	160	180	224	250	280	355	400	400

D: Flange dimensions of BS4504 PN10, PN16 see page 13.
Available up to 16"

2. DUCTILE

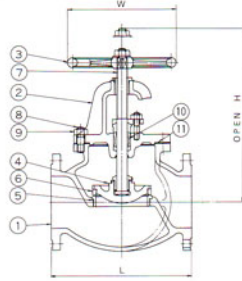
a. class 150

CLASS 150 DUCTILE IRON GLOBE VALVE

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



Fig W15D



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

Dimensions

Size	in	2	2½	3	4	5	6	8	10	12
	mm	50	65	80	100	125	150	200	250	300
L	in	8.00	8.50	9.50	11.50	13.00	14.00	19.50	24.50	27.50
	mm	203	216	241	292	330	356	495	622	699
H Open	in	8.25	9.38	10.38	12.88	14.56	16.50	21.25	24.38	28.38
	mm	210	238	263	326	370	418	540	620	720
W	in	5.50	6.25	7.06	8.81	9.88	11.00	14.00	15.75	15.75
	mm	140	160	180	224	250	280	355	400	400

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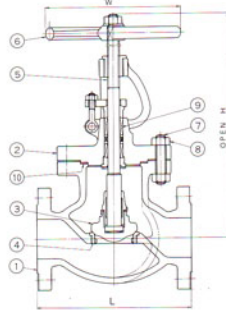
b. class 300

CLASS 300 DUCTILE IRON GLOBE VALVE

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



Fig W30D



Test Pressures

Shell 975Psi hydrostatic
Seat 750Psi hydrostatic
80Psi air

Description of parts

1	Body	Ductile iron	ASTM A395
2	Bonnet	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	Stem	Stainless steel	ASTM A182 GrF6a
6	Hand wheel	Malleable iron	ASTM A338
7	Bonnet bolt	Carbon steel	ASTM A193-B7
8	Bonnet nut	Carbon steel	ASTM A194-2H
9	Gland packing	Graphite asbestos	
10	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	559	622	711
H Open	in	15.94	17.50	18.50	22.44	28.50	34.25	40.00	40.75
	mm	405	445	470	570	725	870	1015	1035
W	in	8.81	9.88	11.00	14.00	17.75	21.62	26.75	29.88
	mm	224	250	280	355	450	550	680	760

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c. 10k ductile iron

CLASS 10K DUCTILE IRON GLOBE VALVE, FLANGED

Working Pressure

Non-shock water at 120°C or under 14kgf/cm² 1.37MPa
 Steam, air, gas, oil and pulsating water at 220°C or under
 12kgf/cm² 1.18MPa
 Steam, air, gas, oil and pulsating water at 300°C
 10kgf/cm² 0.98MPa

Test pressure

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

Description of parts

Description	Material
Body	FCD450
Bonnet	FCD450
Stem	SUS403
Disc	SCS2 (65 and smaller) FCD450
Seat ring	SUS403
Packing gland	FCMB270
Packing	Graphite asbestos
Handwheel	FC200
Handwheel nut	SS41
Bonnet bolt/nut	SS41/SS41
Gasket	Asbestos sheet

Dimensions

Unit: mm

Nominal size	L	W	H (OPEN)
50	203	180	272
65	216	200	298
80	241	224	334
100	292	250	386
125	356	280	424
150	406	315	500
200	495	400	610
250	622	450	735
300	699	500	898

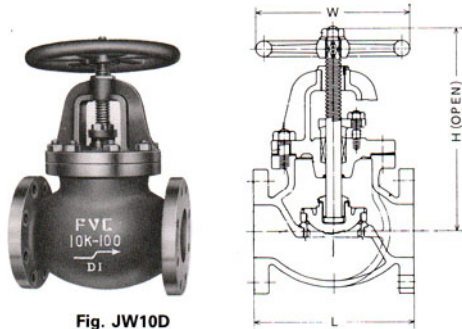


Fig. JW10D

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d. 16k ductile iron

CLASS 16K DUCTILE IRON GLOBE VALVE, FLANGED

Working Pressure

Non-shock water at 120°C or under 22kgf/cm² 2.16MPa
 Steam, air, gas, oil and pulsating water at 220°C or under
 20kgf/cm² 1.96MPa
 Steam, air, gas, oil and pulsating water at 300°C
 18kgf/cm² 1.76MPa
 Steam, air, gas, oil and pulsating water at 350°C
 16kgf/cm² 1.57MPa

Test pressure

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

Description of parts

Description	Material
Body	FCD450
Bonnet	FCD450
Stem	SUS403
Disc	SCS2 (65 and smaller) FCD450
Packing gland	FCMB270
Packing	Graphite asbestos
Handwheel	FCMB270
Gasket	Asbestos sheet
Body seat ring	SUS403
Disc seat ring	SUS403
Bonnet bolt/nut	S45C/SS41

Dimensions

Unit: mm

Nominal size	L	W	H (OPEN)
40	165	180	332
50	203	200	352
65	216	200	374
80	241	250	400
100	292	250	450
125	356	315	492
150	406	355	537
200	495	400	636
250	622	500	750
300	699	500	895

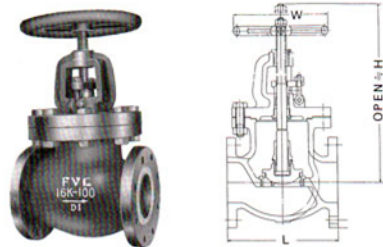


Fig. JW16D

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e. 20k ductile iron

CLASS 20K DUCTILE IRON GLOBE VALVE, FLANGED

Working Pressure

Non-shock water at 120°C or under 28kgf/cm² 2.74MPa
 Steam, air, gas, oil and pulsating water at 220°C or under 25kgf/cm² 2.45MPa
 Steam, air, gas, oil and pulsating water at 300°C 23kgf/cm² 2.25MPa
 Steam, air, gas, oil and pulsating water at 350°C 20kgf/cm² 1.96MPa

Test pressure

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

Description of parts

Description	Material
Body	FCD450
Bonnet	FCD450
Stem	SUS403
Disc	SCS2 (100 and smaller) FCD450
Seat ring	SUS403
Packing gland	FCMB270
Packing	Graphite asbestos
Handwheel	FCMB270
Bonnet bolt/nut	S45C/SS41
Gasket	Asbestos sheet

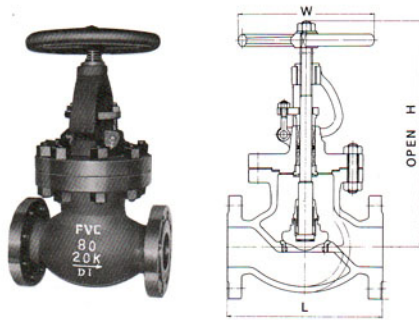


Fig. JW20D

Dimensions

Unit: mm

Nominal size	L	W	H (OPEN)
50	267	224	405
65	292	250	445
80	318	280	470
100	356	355	570
125	400	400	660
150	444	450	725
200	559	550	870
250	622	680	1015
300	711	760	1035

CLASS 150 BRONZE GLOBE VALVE
Rising stem, Union bonnet, Renewable PTFE disc seat ring, 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

Test Pressure

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

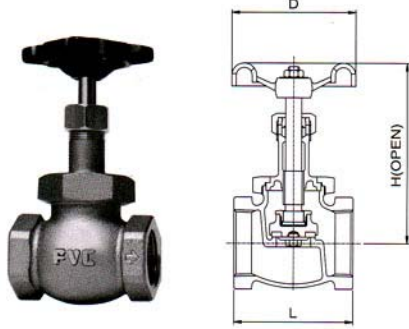


Fig. B04-RU

NO.	PART NAME	MATERIAL
1	Body	Bronze
2	Bonnet	Bronze
3	Stem	DZR#
4	Disc	PTFE+15%GF
5	Lock nut	Brass
6	Packing nut	Brass or Bronze
7	Gland	Brass
8	Packing	PTFE+Glass Fiber
9	Hand wheel	Cast iron
10	Disc nut	Brass or Bronze
11	Disc Holder	Bronze & DZR
12	Name plate	Aluminum
13	Hand wheel nut	Steel
14	Name plate	Aluminum

#DZR is special brass developed for anti-dezincification.

SIZE	L	H	D
1/2"	55	100	62
3/4"	66	115	70
1"	75	135	75
1-1/4"	87	150	85
1-1/2"	100	168	95
2"	120	195	105

BR

4. STAINLESS STEEL
a. 10k

CLASS 10K/20K STAINLESS STEEL GLOBE VALVE
OS&Y, Rising stem, Bolted bonnet, Swivel integral disc, Flanged ends.

STAINLESS

Working Pressure

Non-shock water \ oil \ gas at 120°C or under(10K)
 14kgf/cm² 1.37MPa
 Steam \ oil \ gas and pulsating water at 220°C or under(10K)
 12kgf/cm² 1.18MPa
 Steam \ oil \ gas and pulsating water at 220°C or under(20K)
 31kgf/cm² 3.04MPa

Test Pressure

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

- Applicable JIS-10K/20K Standards:
 Face-To-Face: JIS B2002
 End Flanges: JIS B2238
 P-T Rating: JIS B2238

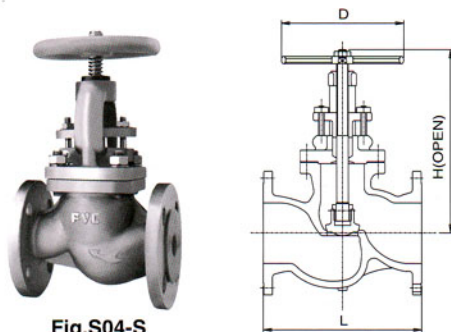


Fig. S04-S

NO.	PART NAME	MATERIAL
1	Body	SCS13
2	Bonnet	SCS13
3	Stem	SUS304
4	Disc	SUS304
5	Gland	SCS13
6	Gland packing	PTFE+Glass Fiber
7	Hand wheel	FC200
8	Gasket	PTFE+Glass Fiber
9	Bolt/nut	SUS304
10	Yoke sleeve	FCD

SIZE	L(10K)	H(10K)	D(10K)
1/2"	108	185	90
3/4"	117	195	90
1"	127	205	100
1-1/2"	165	240	140
2"	203	250	160
2-1/2"	216	270	180
3"	241	290	200
4"	292	350	225
5"	356	410	250
6"	406	520	300
8"	495	570	350
10"	622	670	400
12"	698	736	500

b. 20k

CLASS 10K/20K STAINLESS STEEL GLOBE VALVE

OS&Y,Rising stem,Bolted bonnet,Swivel integral disc,Flanged ends.

Working Pressure

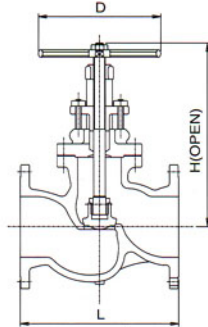
Non-shock water \ oil \ gas at 120°C or under(10K)	14kg/cm ² 1.37MPa
Steam \ oil \ gas and pulsating water at 220°C or under(10K)	12kg/cm ² 1.18MPa
Steam \ oil \ gas and pulsating water at 220°C or under(20K)	31kg/cm ² 3.04MPa

● Applicable JIS-10K/20K Standards:

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



Fig.S04-S



Test Pressure

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

NO.	PART NAME	MATERIAL
1	Body	SCS13
2	Bonnet	SCS13
3	Stem	SUS304
4	Disc	SUS304
5	Gland	SCS13
6	Gland packing	PTFE+Glass Fiber
7	Hand wheel	FC200
8	Gasket	PTFE+Glass Fiber
9	Bolt/nut	SUS304
10	Yoke sleeve	FCD

SIZE	L(10K)	H(10K)	D(10K)
1/2"	108	185	90
3/4"	117	195	90
1"	127	205	100
1-1/2"	165	240	140
2"	203	250	160
2-1/2"	216	270	180
3"	241	290	200
4"	292	350	225
5"	356	410	250
6"	406	520	300
8"	495	570	350
10"	622	670	400
12"	698	736	500

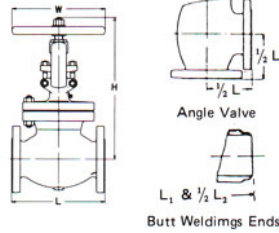
5. CAST STEEL

a. class 150

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



Fig W-15



Description of Parts

Body	Cast steel	ASTM A216 Grade WCB
Bonnet	Cast steel	ASTM A216 Grade WCB
Hand wheel	Malleable iron	ASTM A338
Body seat ring	Stainless steel	ASTM A182 Grade F6
Stem	Stainless steel	ASTM A276 Type 403
Disc	Cast steel	ASTM A216 Grade WCB
Disc seat ring	Stainless steel	ASTM A276 Type 420

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

unit : inch

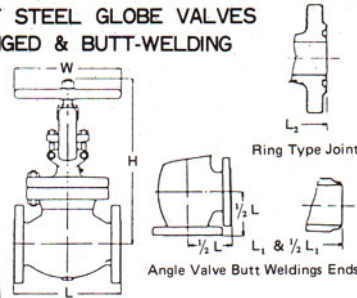
Size	1 1/2	2	2 1/2	3	4	6	8	10	12
Mark									
L & L ₁	6 1/2	8	8 3/4	9 1/2	11 1/2	16	19 1/2	24 1/2	27 1/2
1/2 L & 1/2 L ₁	3 1/4	4	4 1/4	4 3/4	5 3/4	8	9 3/4	12 1/4	13 3/4
H	13 3/8	13 1/8	14 3/8	16 3/8	18	22	26	32 3/8	35 3/8
W	8	8	9	10	11	14	16	22	24

b. class 300

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



Fig W-30



Description of Parts

Body	Cast steel	ASTM A216 Grade WCB
Bonnet	Cast steel	ASTM A216 Grade WCB
Hand wheel	Malleable iron	ASTM A338
Body seat ring	Stainless steel	ASTM A182 Grade F6
Stem	Stainless steel	ASTM A276 Type 403
Disc	Cast steel	ASTM A216 Grade WCB
Disc seat ring	Stainless steel	ASTM A276 Type 420

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

unit : inch

Size	1 1/2	2	2 1/2	3	4	6	8	10	12
Mark									
L & L ₁	9	10 1/2	11 1/2	12 1/2	14	17 1/2	22	24 1/2	28
L ₂	9 1/2	11 1/8	12 1/8	13 1/8	14 3/8	18 1/8	22 3/8	25 1/8	28 3/8
1/2 L & 1/2 L ₁	4 1/2	5 1/4	5 3/4	6 1/4	7	8 3/4	11	12 1/4	
1/2 L ₂	4 3/4	5 5/8	6 1/8	6 5/8	7 5/8	9 1/8	11 1/8	12 5/8	
H	14 3/4	15 1/8	17 1/8	17 3/4	21 1/4	26 1/8	32 1/4	36 3/4	40 3/4
W	8	9	10	11	14	18	22	24	30

c. class 400

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

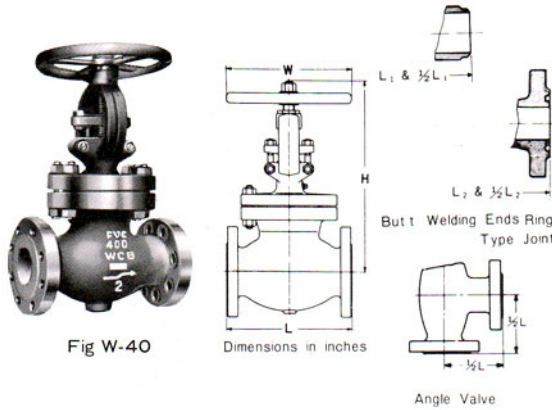


Fig W-40

Dimensions in inches

Description of Parts

Body	Cast steel	ASTM A216 Grade WCB
Bonnet	Cast steel	ASTM A216 Grade WCB
Hand wheel	Malleable iron	ASTM A338
Body seat ring	Stainless steel	ASTM A182 Grade F6
Stem	Stainless steel	ASTM A276 Type 403
Disc	Cast steel	ASTM A216 Grade WCB
Disc seat ring	Stainless steel	ASTM A276 Type 420

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

unit : inch

Size	4	6	8
Mark			
L & L ₁	16	19½	23½
L ₂	16⅝	19⅝	23⅝
½ L & ½ L ₁	8	9¾	11¾
½ L ₂	8⅛	9⅞	11⅞
H	22½	29	33⅝
W	16	20	24

d. class 600

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

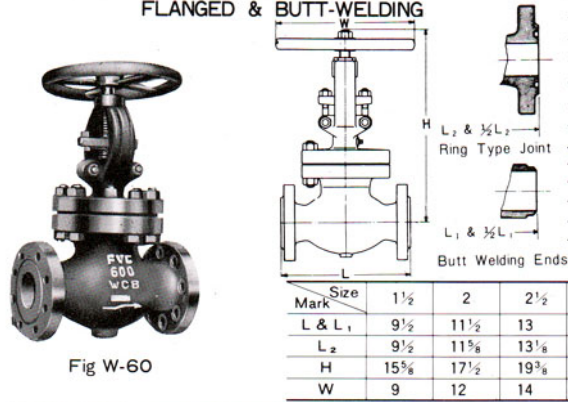


Fig W-60

Description of Parts

Body	Cast steel	ASTM A216 Grade WCB
Bonnet	Cast steel	ASTM A216 Grade WCB
Hand wheel	Malleable iron	ASTM A338
Body seat ring	Stainless steel	ASTM A182 Grade F6
Stem	Stainless steel	ASTM A276 Type 403
Disc	Cast steel	ASTM A216 Grade WCB
Disc seat ring	Stainless steel	ASTM A276 Type 420

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
Mark									
L & L ₁	9½	11½	13	14⅝	17	22	26	31	33
L ₂	9½	11⅝	13⅝	14⅝	17⅝	22⅝	26⅝	31⅝	33⅝
H	15⅝	17½	19⅝	21⅝	26⅝	32¼	37⅝	40⅝	44½
W	9	12	14	16	20	24	28	31½	35⅝