



QUALITY RELIABILITY & SERVICE ASSURED

Bronze, Cast Iron and Steel

Globe Valves

3

HATTERSLEY Valves are made under
BSI Registered Firms Scheme

Bronze and Cast Iron Globe Valves

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We have endeavoured in this catalogue to make the information as accurate as possible, but we cannot accept any responsibility should it be found that in any respect the information is inaccurate or incomplete or becomes so as a result of further development.

Bronze Globe Valves

The majority of Hattersley bronze globe valves are inside screw pattern having either a screwed bonnet or union bonnet configuration. A wide choice of disk and seat materials is offered in this range to enable the user to select a valve most suited for the intended service.

The BSI Kitemark against a figure number in the table below indicates that all or part of that range is Kitemarked to the relevant British Standard.

There are five basic seat and disk arrangements available these are:

- 1) Metal to metal: the seat being integral with the body.
- 2) Renewable nickel/copper alloy or stainless steel disk and seat.
- 3) Renewable composition or elastomeric disk.

4) Renewable composition elastomeric disk and nickel/copper alloy seat.

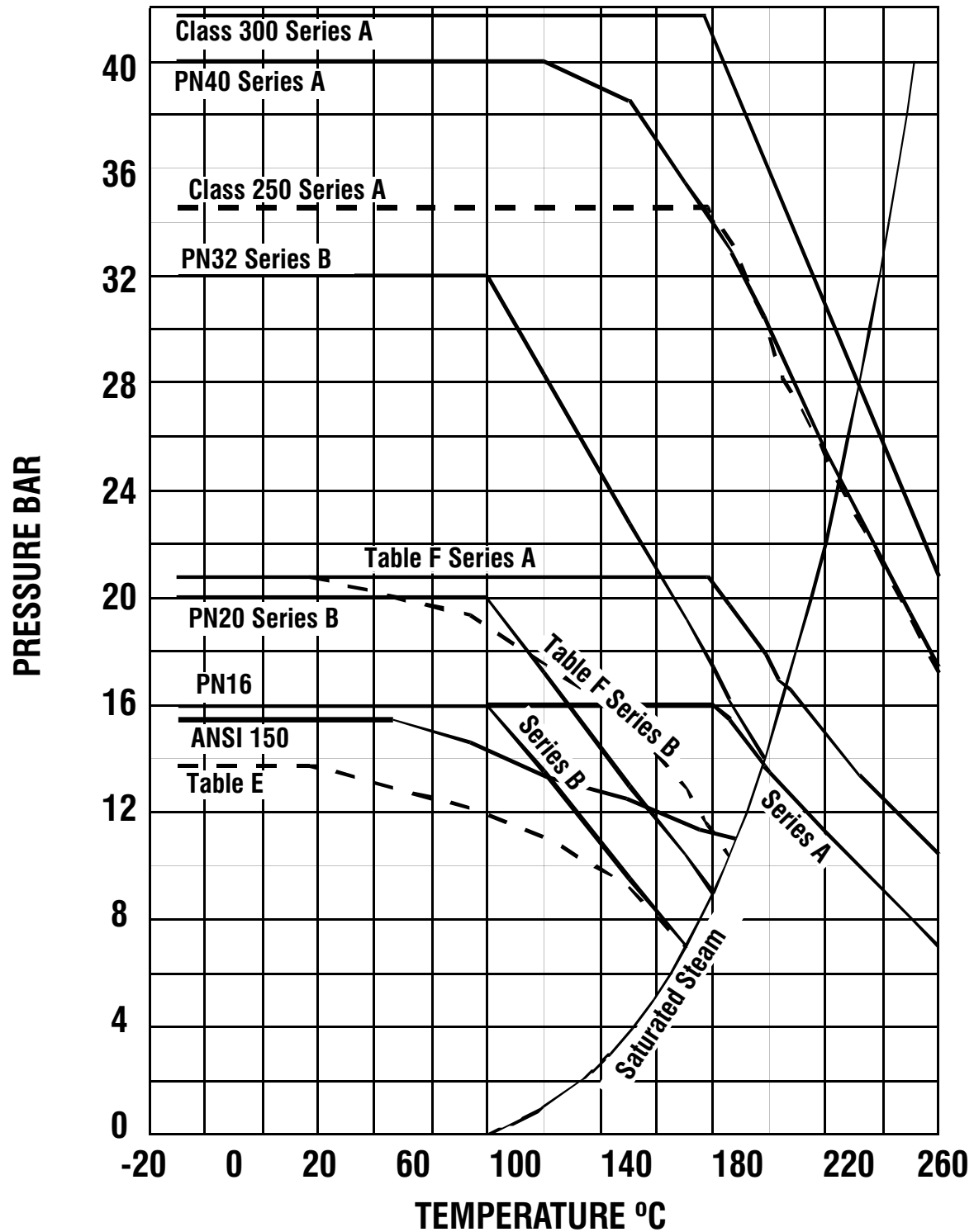
5) Vee-Reg pattern stainless steel disk and seat giving protection against wire drawing on steam service.

For fuel and other hydrocarbon services Viton disk facing is available on request.

* Kitemarked to the relevant British Standard

Fig No	PN Rating	Series	Class Rating	End Connections	Size Range	Bonnet Type	Disk Material	Seat Material
52P	4	B	-	Screwed	1/2 - 2in	-	Rubber	Integral
9PN16*	16	B	-	Flanged	15 - 50mm	Screwed	Bronze	Integral
9ANSI	-	B	150	Flanged	1/2 - 2in	Screwed	Bronze	Integral
9E/F	-	B	100/150	Flanged	1/2 - 2in	Screwed	Bronze	Integral
17PN16*	16	B	-	Flanged	15 - 80mm	Screwed	Composition	Integral
17E/F	-	B	100/150	Flanged	1/2 - 3in	Screwed	Composition	Integral
18PN16*	16	A	-	Flanged	15 - 80mm	Screwed	Ni/Cu Alloy	Ni/Cu Alloy
18F/H	-	A	150/250	Flanged	1/2 - 3in	Screwed	Ni/Cu Alloy	Ni/Cu Alloy
014PN16	16	A	-	Flanged	15 - 50mm	Screwed	Stainless Steel	Stainless Steel
014F	-	A	150	Flanged	1/2 - 2in	Screwed	Stainless Steel	Stainless Steel
018PN16	16	A	-	Flanged	15 - 50mm	Screwed	Stainless Steel	Stainless Steel
018F	-	A	150	Flanged	1/2 - 2in	Screwed	Stainless Steel	Stainless Steel
HS125	32	B	200	Screwed	1/4 - 2in	Screwed	Polymer Insert	Integral
5N	32	B	200	Screwed	1/8 - 2in	Screwed	Bronze	Integral
5*	32	B	200	Screwed	1/4 - 2in	Screwed	Bronze	Integral
13*	32	B	200	Screwed	1/4 - 3in	Screwed	Composition	Integral
1200PN40*	40	A	-	Flanged	15 - 50mm	Screwed	Ni/Cu Alloy	Ni/Cu Alloy
14	-	A	200	Screwed	1/4 - 3in	Union	Ni/Cu Alloy	Ni/Cu Alloy
16	-	A	200	Screwed	1/4 - 3in	Screwed	Ni/Cu Alloy	Ni/Cu alloy
27H	-	A	250	Flanged	1/2 - 3in	Union	Composition	Ni/Cu Alloy
0123	-	A	250	Screwed	1/4 - 2in	Screwed	Stainless Steel	Stainless Steel
0143	-	A	250	Flanged	1/2 - 2in	Screwed	Stainless Steel	Stainless Steel
0173	-	A	250	Screwed	1/4 - 3in	Screwed	Stainless Steel	Stainless Steel
0183	-	A	250	Flanged	1/2 - 3in	Screwed	Stainless Steel	Stainless Steel
12X	-	A	300	Screwed	1/4 - 3in	Union	Bronze	Integral
12	-	A	300	Screwed	1/4 - 3in	Union	Composition	Ni/Cu Alloy
23	-	A	300	Screwed	1/4 - 3in	Union	Stainless Steel	Stainless Steel

Pressure/Temperature Ratings for Bronze Globe Valves



Bronze Globe Valve

PN32 Series B

Fig. HS 125

Pressure/Temperature Rating

BS5154 PN32 Series B

14 bar at 198°C

32 bar from -10 to 100°C

Test Pressures (Hydraulic)

Shell: 48 bar

Seat: 35.2 bar

Specification

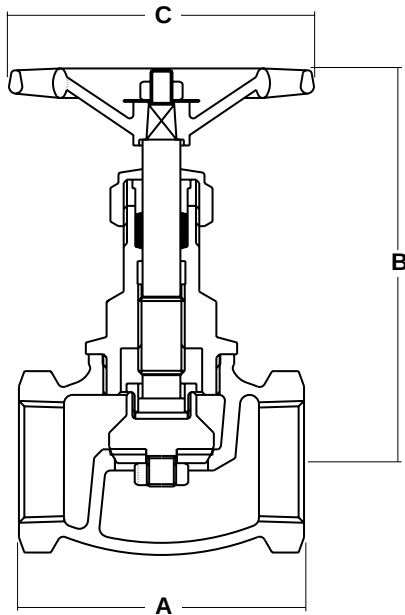
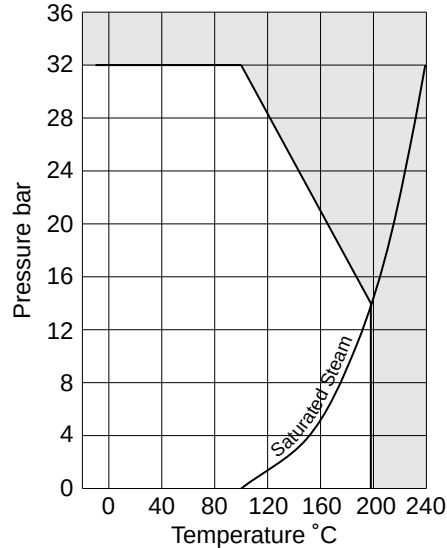
Rising stem

Screwed bonnet

Renewable dynamic disk

BS21 Taper threaded (ISO R7)

Available with NPT ends (HS125AT)



Material Specification

Component	Material	Specification	
		BS EN	ASTM
Stem	Brass	12164 CW614N	B455 385
Gland Packing	Non Asbestos		
Swivel Nut	Brass	12164 CW614N	B455 385
Disk Case	Brass	12164 CW614N	B455 385
Disk (Renewable)	Glass Filled PTFE		
Disk Plate	Brass	12164 CW614N	B455 385
Bonnet	Brass	12165 CW617N	B124 Alloy 2
Body	Gunmetal	1982 CC491K	B62

Dimensions

Size	in	1/2	3/4	1
A	mm	57	65	78
B (Open)	mm	95	98	114
C	mm	70	80	85
Weight	kg	0.4	0.55	0.85

Bronze Globe Valve

PN32 Series B

Fig. 5



BS 5154

Pressure/Temperature Rating

BS5154 PN32 Series B

14 bar at 198°C

32 bar from -10 to 100°C

Test Pressures (Hydraulic)

Shell: 48 bar

Seat: 35.2 bar

Specification

Rising stem

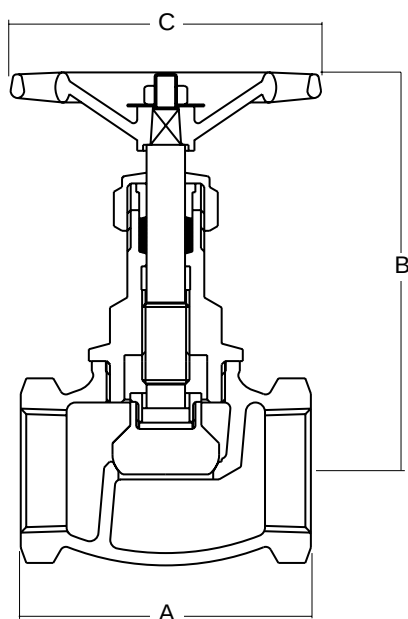
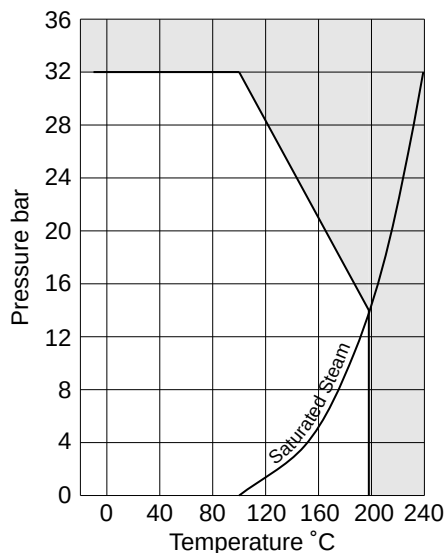
Screwed bonnet

Metal to metal seat and disk

BS21 Taper threaded (ISO R7)

Available with NPT ends (5AT)

sizes 1/2" to 2"



Material Specification

Component	Material	Specification	
		BS EN	ASTM
Stem	Brass	12164 CW614N	B455 385
Gland Packing	Non Asbestos		
Swivel Nut	Brass	12164 CW614N	B455 385
Disk	Brass	12164 CW617N	B455 385
Bonnet	Brass	12165 CW617N	B124 Alloy 2
Body	Gunmetal	1982 CC491K	B62

Dimensions

Size	in	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
A	mm	44	46	57	65	78	89	100	121
B (Open)	mm	76	76	95	98	114	138	159	170
C	mm	60	60	75	75	85	95	105	120
Weight	kg	0.2	0.2	0.4	0.55	0.85	1.4	1.9	2.8

Bronze Needle Valves

PN32 Series B

Fig. 5N - 5NLS

Pressure/Temperature Rating

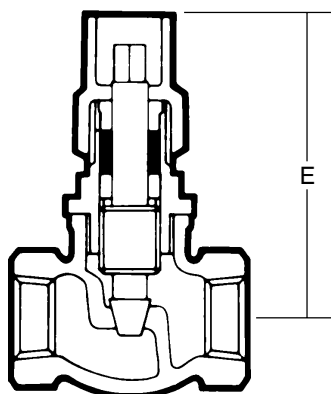
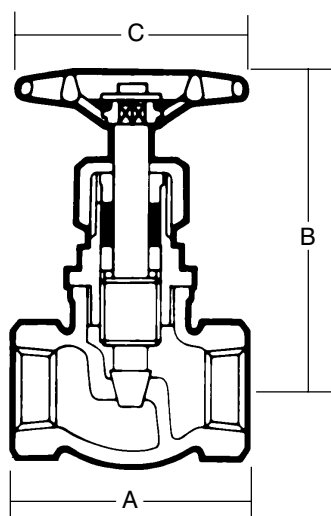
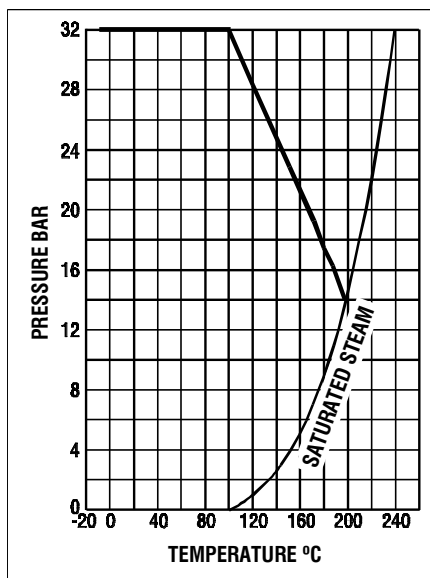
BS5154 PN32 Series B
 14 bar at 198°C
 32 bar from -10 to 100°C

Test Pressures (Hydraulic)

Shell: 48 bar
 Seat: 35.2 bar

Specification

Rising stem
 Screwed bonnet
 Metal to metal seat and needle disk
 BS21 Taper thread (ISO R7)
 Available with American thread (5NAT)
 Available with lockshield (5NLS) in sizes
 $\frac{1}{4}$ to $\frac{1}{2}$ in



Material Specification

Component	Material	Specification		
		BS	ASTM	DIN
Stem	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
Gland Packing	Asbestos Free			
Bonnet	Brass	2872-CZ122	B124 Alloy 2	17660 MS58CuZn40Pb2
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	in	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	2
A	mm	44	44	46	57	65	78	89	100	121
B (open)	mm	74	74	75	96	105	119	140	154	175
C	mm	60	60	60	70	80	85	95	105	120
E	mm	-	70	70	85	-	-	-	-	-
Lockshield Key	Fig No	391	391	391						
	Ref	1P	1P	1P						
Weight	kg	0.2	0.2	0.2	0.4	0.6	0.9	1.5	1.9	3.1

Bronze Globe Valve

PN32 Series B

Fig. 13



BS 5154

Pressure/Temperature Rating

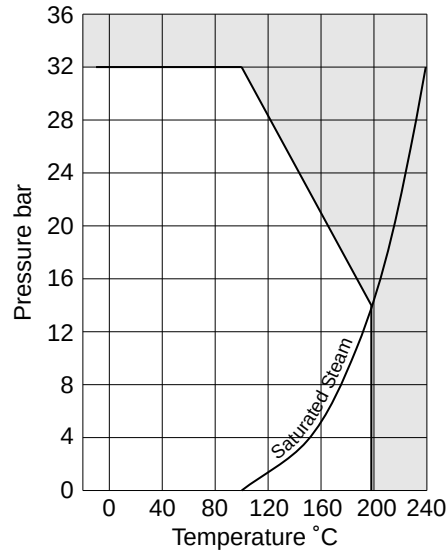
BS5154 PN32 Series B
 14 bar at 198°C
 32 bar from -10 to 100°C

Test Pressures (Hydraulic)

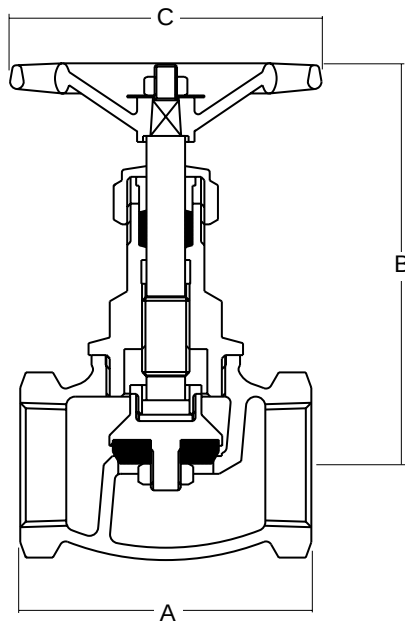
Shell: 48 bar
 Seat: 35.2 bar

Specification

Rising stem
 Screwed bonnet
 Renewable glass filled PTFE disk
 BS21 Taper threaded (ISO R7)
 Available with NPT ends (13AT)



Material Specification



Component	Material	Specification	
		BS EN	ASTM
Stem	Brass	12164 CW614N	B455 385
Gland Packing	Non Asbestos		
Swivel Nut	Brass	12164 CW614N	B455 385
Disk Case (1/4 & 2 in)	Brass	12164 CW617N	B455 385
(2 1/2 to 3 in)	Brass	12165 CW617N	B124 Alloy 2
Disk	Glass Filled PTFE		
Disk Nut (1/4 to 2 in)	Brass	12164 CW614N	B455 385
(2 1/2 to 3 in)	Brass	12165 CW617N	B124 Alloy 2
Bonnet (1/4 to 2 in)	Brass	12165 CW617N	B124 Alloy 2
(2 1/2 & 3 in)	Gunmetal	1982 CC491K	B62
Body	Gunmetal	1982 CC491K	B62

Dimensions

Size	in	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	mm	44	46	57	65	78	89	100	121	171	205
B (Open)	mm	76	76	95	98	114	138	159	170	220	225
C	mm	60	60	75	75	85	95	105	120	155	180
Weight	kg	0.22	0.22	0.38	0.52	0.85	1.35	1.7	2.7	7.9	9.5

Bronze Globe Valves

Class 200 Series A

Fig. 14

Pressure/Temperature Rating

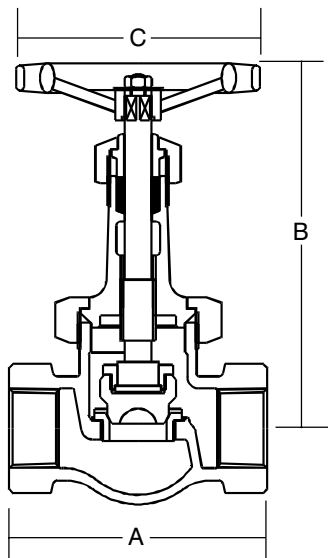
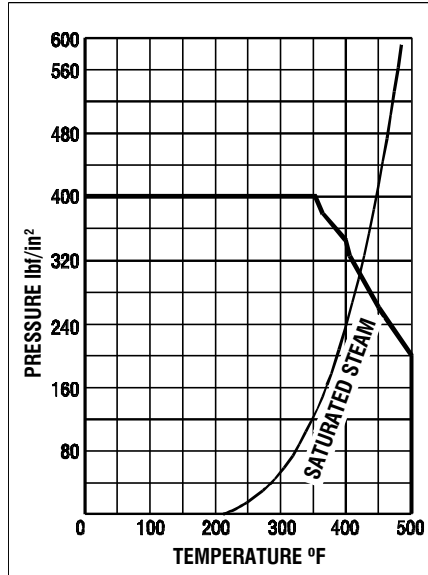
Class 200 Series A
200 lbf/in² at 500°F
400 lbf/in² WOG (non-shock)

Test Pressures (Hydraulic)

Shell: 600 lbf/in²
Seat: 400 lbf/in²

Specification

Rising stem
Union bonnet
Ni/Cu alloy disk and seat
BS21 Taper thread (ISO R7)
Available with American thread (14AT)



Material Specification

Component	Material	Specification		
		BS	ASTM	DIN
Stem	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Gland Packing	Asbestos Free			
Bonnet	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Union Bonnet Ring	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Disk (Renewable)	40/52 Ni/Cu Alloy			
Swivel Nut	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Seat (Renewable)	40/52 Ni/Cu Alloy			
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	in	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	mm	56	60	68	78	92	105	121	149	176	202
B (open)	mm	106	108	127	146	170	202	222	252	289	325
C	mm	60	60	80	85	105	120	140	155	180	200
Weight	kg	0.4	0.5	0.7	1.0	1.6	2.6	3.5	6.2	11.6	17.0

Bronze Globe Valves

Class 200 Series A

Fig. 16

Pressure/Temperature Rating

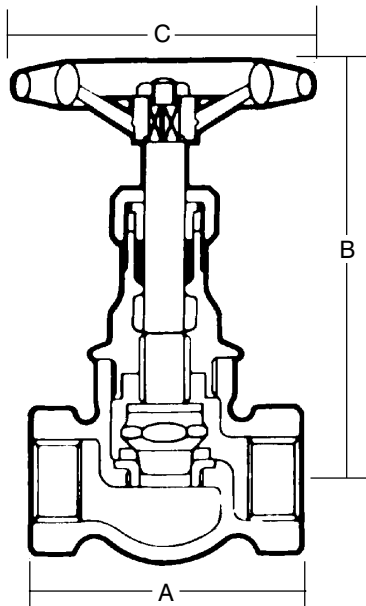
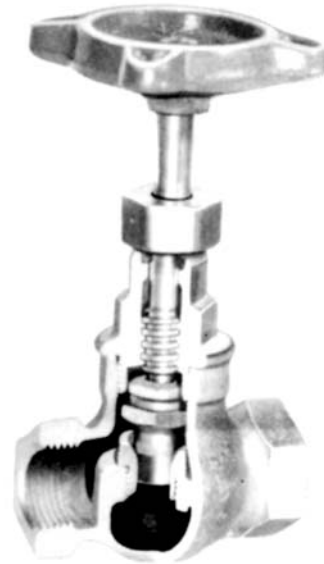
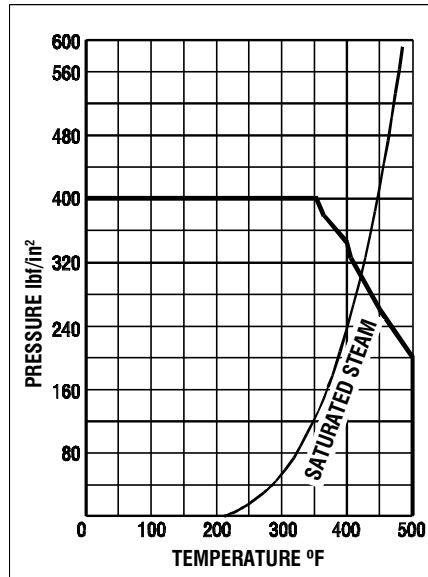
Class 200 Series A
200 lbf/in² at 500°F
400 lbf/in² WOG (non-shock)

Test Pressures (Hydraulic)

Shell: 600 lbf/in²
Seat: 400 lbf/in²

Specification

Rising stem
Screwed bonnet
Ni/Cu alloy disk and seat
BS21 Taper thread (ISO R7)
Available with American thread (16AT)



Material Specification

Component	Material	Specification		
		BS	ASTM	DIN
Stem	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Gland Packing	Asbestos Free			
Bonnet	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Swivel Nut	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Disk (Renewable)	40/52 Ni/Cu Alloy			
Seat (Renewable)	40/52 Ni/Cu Alloy			
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	in	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	mm	56	60	68	78	92	105	121	149	175	203
B (open)	mm	91	91	116	137	152	178	197	229	267	279
C	mm	60	60	80	85	105	120	140	155	180	200
Weight	kg	0.4	0.5	0.7	1.0	1.5	2.3	3.0	5.4	10.9	15.7

Bronze Globe Valves

Class 300 Series A

Fig. 12

Pressure/Temperature Rating

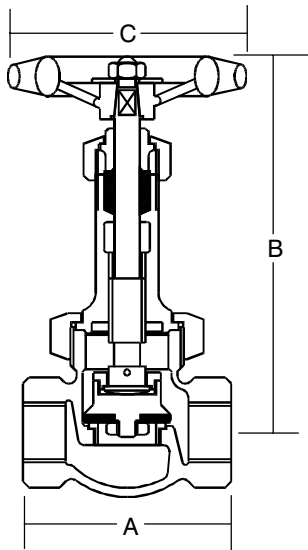
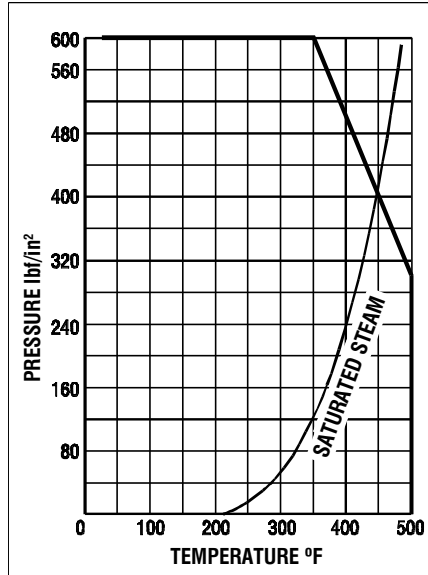
Class 300 Series A
300 lbf/in² at 500°F
600 lbf/in² WOG (non-shock)

Test Pressures (Hydraulic)

Shell: 900 lbf/in²
Seat: 600 lbf/in²

Specification

Rising stem
Union bonnet
Ni/Cu alloy seat
Disk (renewable) suitable for steam service
Rubber disk can be fitted but will restrict the maximum temperature to 90°C
BS21 Taper thread (ISO R7)
Available with American thread (12AT)



Material Specification

Component	Material	Specification		
		BS	ASTM	DIN
Stem	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Gland Packing	Asbestos Free			
Bonnet	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Union Bonnet Ring	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Swivel Nut	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Disk Case (1/4 to 1in)	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
(1 1/4 to 3in)	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Disk (Renewable)	Victrex Peek			
Disk Nut (1/4 to 2in)	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
(2 1/2 & 3in)	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Seat (Renewable)	40/52 Ni/Cu Alloy			
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	in	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	mm	56	60	73	89	108	121	130	157	184	216
B (Open)	mm	106	108	127	146	170	202	222	252	289	325
C	mm	60	60	80	85	105	120	140	155	180	200
Weight	kg	0.4	0.5	0.9	1.4	2.2	3.1	4.2	7.6	12.8	19.0

Bronze Globe Valves

Class 300 Series A

Fig. 23

Pressure/Temperature Rating

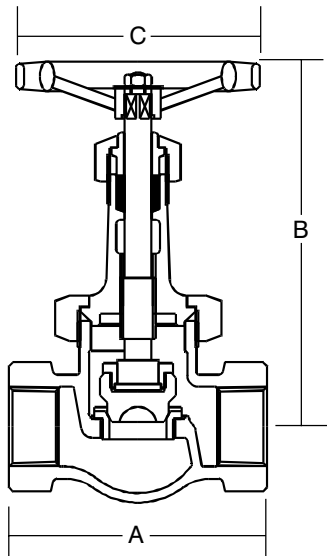
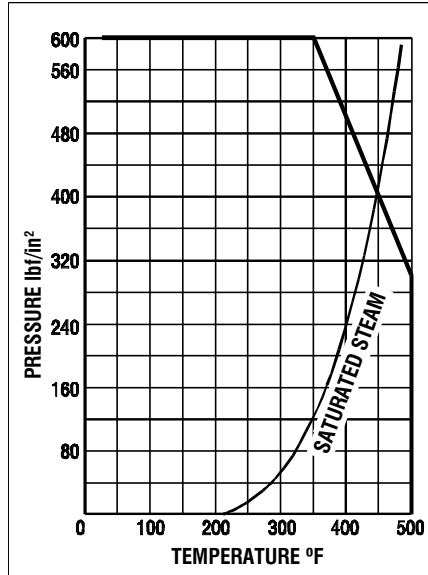
Class 300 Series A
300 lbf/in² at 500°F
600 lbf/in² WOG (non-shock)

Test Pressures (Hydraulic)

Shell: 900 lbf/in²
Seat: 600 lbf/in²

Specification

Rising stem
Union bonnet
Stainless steel disk and seat
BS21 Taper thread (ISO 7)
Available with American thread (23AT)



Material Specification

Component	Material	Specification		
		BS	ASTM	DIN
Stem	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Gland Packing	Asbestos Free			
Bonnet	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Union Bonnet Ring	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Swivel Nut	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Disk	Stainless Steel	970 316		
Seat (Renewable)	Stainless Steel	970 431S29	AISI 431	17 440 X22CrNi17
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	in	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	mm	56	60	73	89	108	121	130	157	184	216
B (Open)	mm	106	108	127	146	170	202	222	252	289	325
C	mm	60	60	80	85	105	120	140	155	180	200
Weight	kg	0.4	0.5	0.9	1.4	2.2	3.1	4.2	7.6	12.8	19.0

Bronze Globe Valves - Pedal Operated

4 bar

Fig. 52P

Pressure/Temperature Rating

4 bar at 90°C

Test Pressures (Hydraulic)

Shell: 6 bar

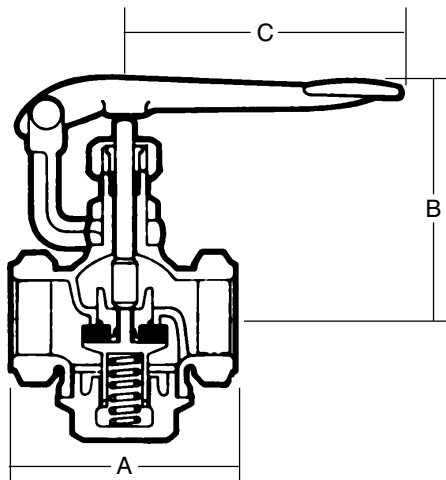
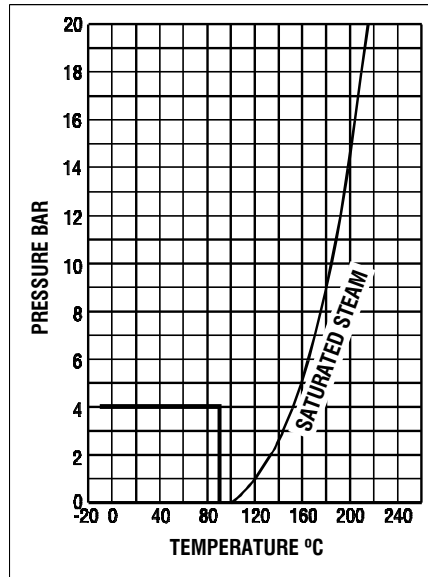
Seat: 4 bar

Specification

Nitrile rubber disk

BS21 Taper thread (ISO R7)

Available with American thread (52PAT)



Material Specification

Component	Material	Specification		
		BS	ASTM	DIN
Stem	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
Gland Packing	Asbestos Free			
Disk Case (1/2 in)	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
(3/4 to 2 in)	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Disk (Renewable)	Nitrile Rubber			
Disk Nut	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Spring	Stainless Steel			
Cap	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	in	1/2	3/4	1	1 1/4	1 1/2	2
A	mm	71	83	95	111	122	149
B	mm	87	92	103	111	137	148
C	mm	87	87	121	121	152	152
Weight	kg	0.9	1.1	1.6	2.5	3.9	5.6



BS 5154
Flanged PN16

Bronze Globe Valves

PN16 Series B - ANSI 150

Fig. 9PN16 - 9ANSI

Pressure/Temperature Rating

BS5154 PN16 Series B
7 bar at 170°C
16 bar from -10 to 100°C

ANSI Class 150 Series B

150 lbf/in² at 406°F
225 lbf/in² WOG

Test Pressures (Hydraulic)

PN16

Shell: 24 bar
Seat: 17.6 bar

Class 150

Shell: 350 lbf/in²
Seat: 225 lbf/in²

Specification

Rising stem

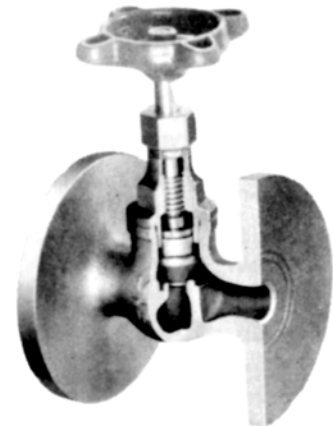
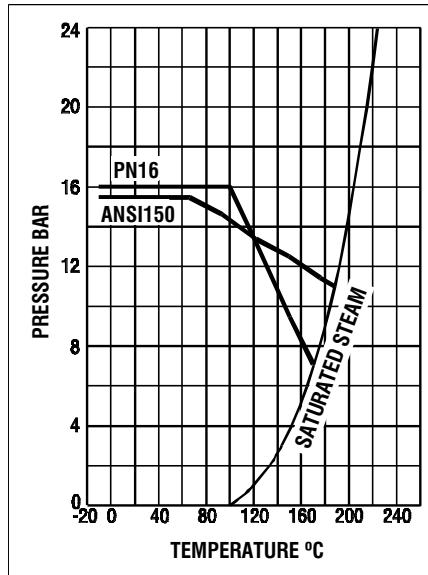
Screwed bonnet

Metal to metal seat

Flanged to BS4504 PN16

Also available flanged to BS10 Table E and F

The face to face and flange diameter of the figure 9ANSI valve is as shown and does not comply with BS5154:1989 and BS1560

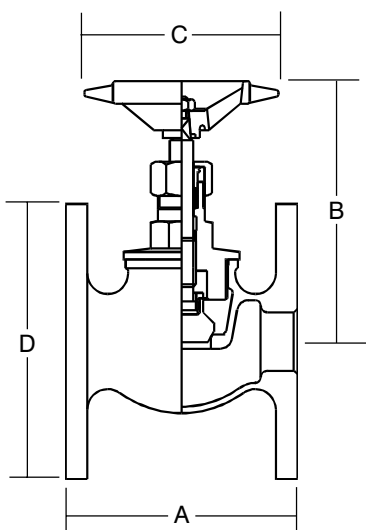


Material Specification

Component	Material	Specification		
		BS	ASTM	DIN
Stem	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
Gland Packing	Asbestos Free			
Bonnet	Brass	2872-CZ122	B124 Alloy 2	17660 MS58CuZn40Pb2
Swivel Nut	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
Disk (15 & 20mm)	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
(25 to 50mm)	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	mm	15	20	25	32	40	50
	in	1/2	3/4	1	1 1/4	1 1/2	2
A (PN)	mm	80	90	100	110	120	135
A (ANSI 150)	in	3	3 1/2	4	-	5	5 3/4
A (Table E)	in	3	3 1/2	3 3/4	4	4 1/2	5 1/4
A (Table F)	in	3	3 1/2	4	4 1/2	5	5 3/4
B (Open)	mm	105	110	130	155	160	175
C	mm	70	80	85	95	105	120
D (PN16)	mm	95	105	115	140	150	165
D (ANSI 150)	in	3 3/4	4	4 3/4	-	5 1/2	6 1/2
D (Table E)	in	3 3/4	4	4 1/2	4 3/4	5 1/4	6
D (Table F)	in	3 3/4	4	4 3/4	5 1/4	5 1/2	6 1/2
Weight	kg	1.3	1.7	2.5	3.8	4.8	6.5



Bronze Globe Valves

PN16 Series B - ANSI 150

Fig. 17PN16 - 17ANSI



BS 5154
Sizes 15 to 50mm

Pressure/Temperature Rating

BS5154 PN16 Series B
7 bar at 170°C
16 bar from -10 to 100°C

ANSI Class 150 Series B

150 lbf/in² at 406°F
225 lbf/in² WOG

Test Pressures (Hydraulic)

Shell: 24 bar
Seat: 17.6 bar

Class 150

Shell: 350 lbf/in²
Seat: 225 lbf/in²

Specification

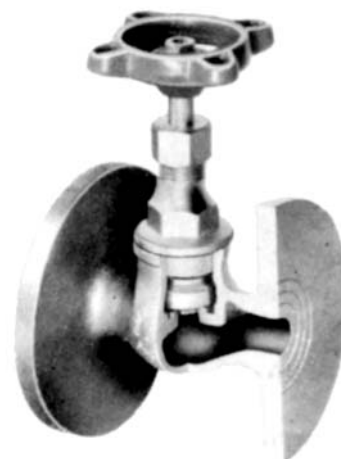
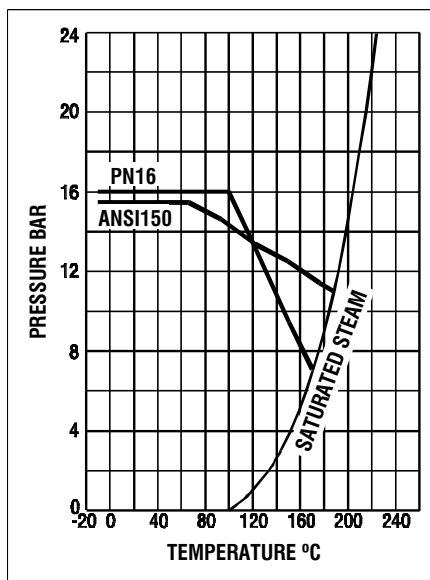
Rising stem
Screwed bonnet
Disk (renewable) suitable for steam service

Rubber disk can be fitted but will restrict the maximum temperature to 90°C

Flanged to BS4504 PN16

Also available flanged to BS10 Table E and F

The face to face and flange diameter of the figure 17ANSI valve is as shown and does not comply with BS5154:1989 and BS1560

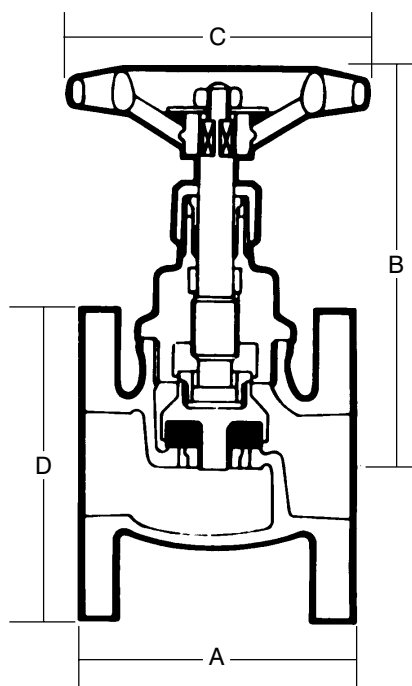


Material Specification

Component	Material	Specification BS	ASTM	DIN
Stem	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
Gland Packing	Asbestos Free			
Bonnet (15 to 50mm)	Brass	2872-CZ122	B124 Alloy 2	17660 MS58CuZn40Pb2
(65 to 80mm)	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Swivel Nut (15mm)	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
(20 to 80mm)	Brass	2872-CZ122	B124 Alloy 2	17660 MS58CuZn40Pb2
Disk Case	Brass	2872-CZ122	B124 Alloy 2	17660 MS58CuZn40Pb2
Disk (Renewable)	Glass Filled PTFE			
Disk Nut (15mm)	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
(20 to 80mm)	Brass	2872-CZ122	B124 Alloy 2	17660 MS58CuZn40Pb2
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	mm	15	20	25	32	40	50	65	80
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A (PN)	mm	80	90	100	110	120	135	165	185
A (ANSI 150)	in	3	3 1/2	4	-	5	5 3/4		
A (Table E)	in	3	3 1/2	3 3/4	4	4 1/2	5 1/4	6	6 3/4
A (Table F)	in	3	3 1/2	4	4 1/2	5	5 3/4	6 1/2	7 1/4
B (open)	mm	105	110	130	150	175	190	220	255
C	mm	70	80	85	95	105	120	155	180
D (PN16)	mm	95	105	115	140	150	165	185	200
D (ANSI 150)	in	3 3/4	4	4 3/4	-	5 1/2	6 1/2	7	7 1/2
D (Table E)	in	3 3/4	4	4 1/2	4 3/4	5 1/4	6	6 1/2	7 1/4
D (Table F)	in	3 3/4	4	4 3/4	5 1/4	5 1/2	6 1/2	7 1/4	8
Weight	kg	1.3	1.8	2.6	4.0	5.3	7.1	12	16





BS 5154

Bronze Globe Valves

PN16 Series A

Fig. 18PN16 - 18ANSI

Pressure/Temperature Rating

BS5154 PN16 Series A
7 bar at 260°C
16 bar from -10 to 180°C

ANSI Class 150

150 lbf/in² at 406°F
225 lbf/in² WOG

Test Pressures (Hydraulic)

PN16

Shell: 24 bar
Seat: 17.6 bar

Class 150

Shell: 350 lbf/in²
Seat: 225 lbf/in²

Specification

Rising stem

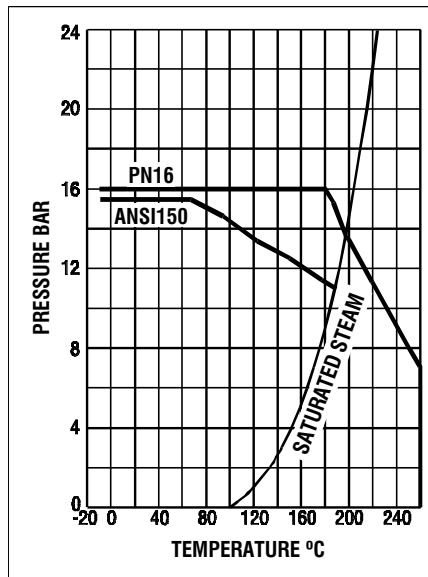
Screwed bonnet

Ni/Cu Alloy disk and seat

Flanged to BS4504 PN16

Also available flanged to BS10 Table F and H

The face to face and flange diameter of the figure 18ANSI valve is as shown and does not comply with BS5154:1989 and BS1560

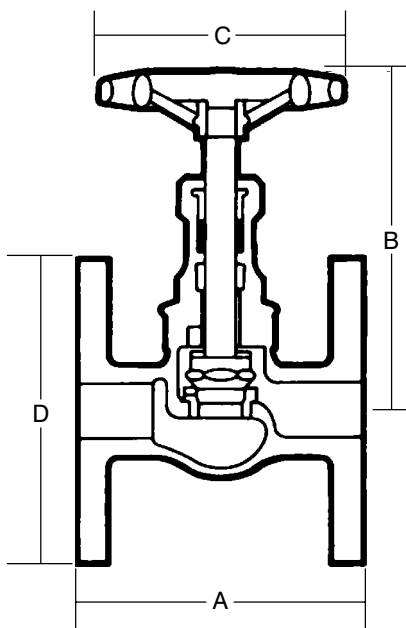


Material Specification

Component	Material	Specification BS	ASTM	DIN
Stem	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Gland Packing	Asbestos Free			
Bonnet	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Swivel Nut	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Disk (Renewable)	40/52 Ni/Cu Alloy			
Seat (Renewable)	40/52 Ni/Cu Alloy			
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	mm	15	20	25	32	40	50	65	80
	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A (PN)	mm	108	117	127	146	159	190	216	254
A (ANSI 150)	in								
A (Table F)	in	3 1/2	4	4 1/2	5	5 1/2	6 1/2	7 1/2	8 1/2
A (Table H)	in	4	4 1/2	5	5 1/2	6	7	9	10
B (open)	mm	116	137	152	178	197	229	267	279
C	mm	80	85	105	120	140	155	180	200
D (PN16)	mm	95	105	115	140	150	165	185	200
D (ANSI 150)	in	3 3/4	4	4 3/4	-	5 1/2	6 1/2	7	7 1/2
D (Table F)	in	3 3/4	4	4 3/4	5 1/4	5 1/2	6 1/2	7 1/4	8
D (Table H)	in	4 1/2	4 1/2	4 3/4	5 1/4	5 1/2	6 1/2	7 1/4	8
Weight	kg	1.4	2.0	3.0	4.1	5.3	7.6	13	17



Bronze Globe Valve

Class 250 Series A

Fig. 24H

Pressure / Temperature Rating

BS 2060 Class 250 Series A

250 lbf/in² at 500°F (260°C)

500 lbf/in² WOG (non shock)

Test Pressure (Hydraulic)

Body: 750 lbf/in²

Seat: 500 lbf/in²

Specification

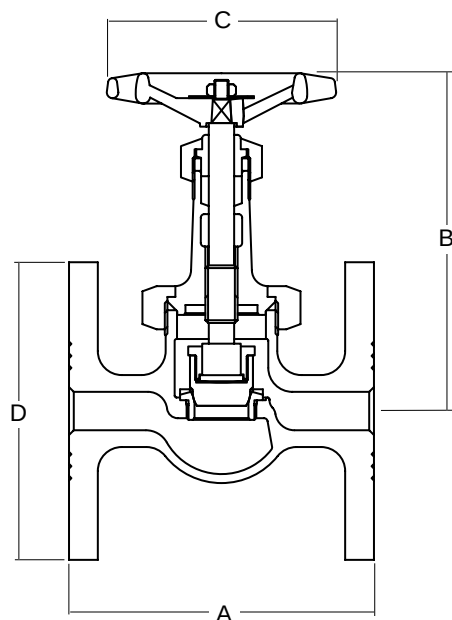
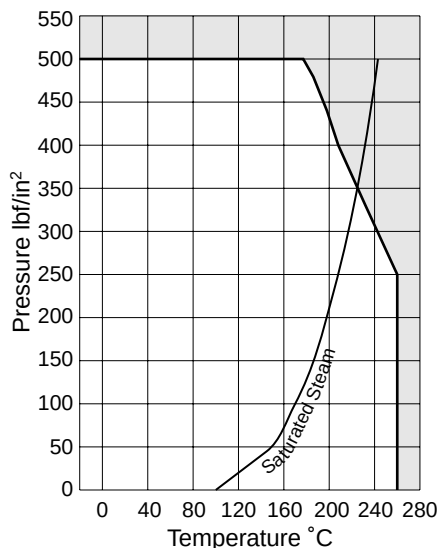
Rising stem

Union bonnet

Stainless steel disk and seat

Renewable seat

Flanged to BS10 Table H



Material Specification

Component	Material	Specification	
		BS EN	ASTM
Stem	Manganese Bronze	12163 CW705R	
Gland Packing	Asbestos Free		
Bonnet	Gunmetal	1982 CC491K	B62
Union Bonnet Ring	Gunmetal	1982 CC491K	B62
Swivel Nut	Manganese Bronze	12163 CW705R	
Disk	Stainless Steel	10088-1 X5CrNiMo17-12-2	
Seat	Stainless Steel	10088-1 X17CrNi 16-2	AISI 431
Body	Gunmetal	1982 CC491K	B62

Dimensions

Nom Size	in	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	mm	114	127	140	159	178	203	229	254
B	mm	127	146	172	203	223	254	289	327
C	mm	80	85	105	120	140	155	180	205
D	mm	114	114	121	133	140	165	184	203
Weight	kg	3.0	3.5	5.0	7.2	8.4	13.5	20	30.5



BS 5154

Bronze Globe Valves

PN40 Series A

Fig. 1200PN40

Pressure/Temperature Rating

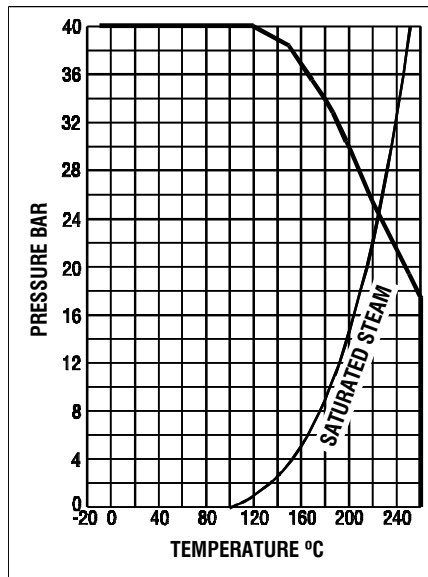
BS5154 PN40 Series A
17.5 bar at 260°C
40 bar from -10 to 120°C

Test Pressures (Hydraulic)

Shell: 60 bar
Seat: 44 bar

Specification

Rising stem
Screwed bonnet
Flanged to BS4504 PN40
Available with regulating disk and double regulating device - see Commissioning Valve Catalogue Section 6a for details

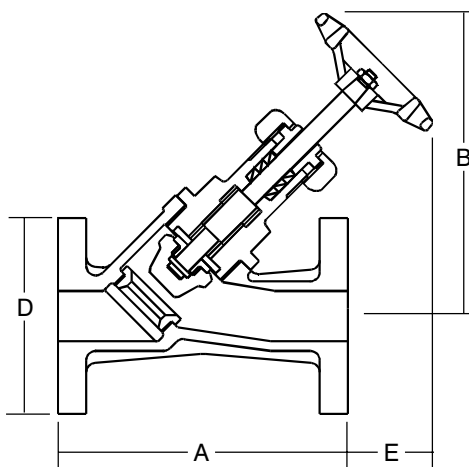


Material Specification

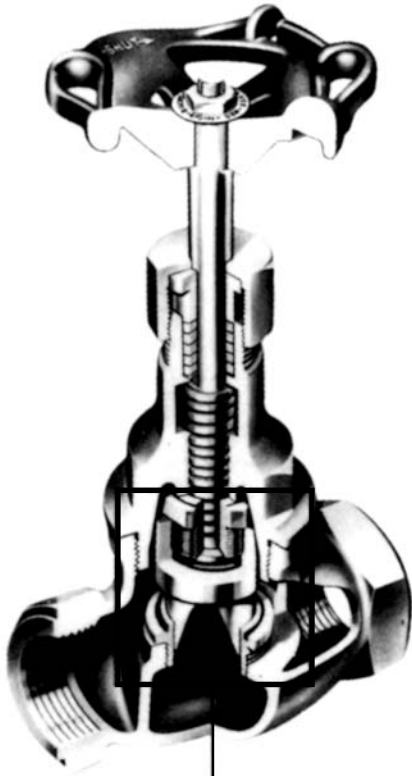
Component	Material	Specification		
		BS	ASTM	DIN
Stem	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Gland Packing	Asbestos Free			
Bonnet	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Swivel Nut	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Disk	40/52 Ni/Cu Alloy			
Seat	40/52 Ni/Cu Alloy			
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	mm	15	20	25	32	40	50
A	mm	133	146	162	184	200	238
B (open)	mm	144	162	176	200	229	264
D	mm	95	105	115	140	150	165
E (open)	mm	41	51	54	64	79	79
Weight	kg	4.3	4.5	5.7	7.8	11	17



The Vee-Reg Protected Disk and Seat

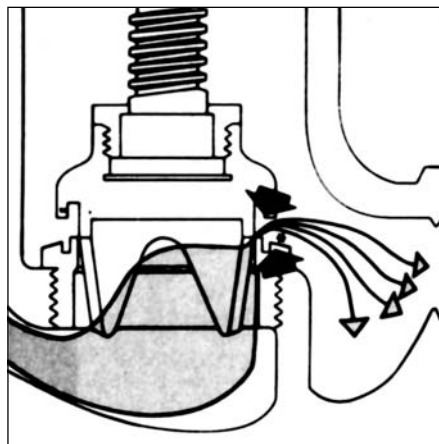
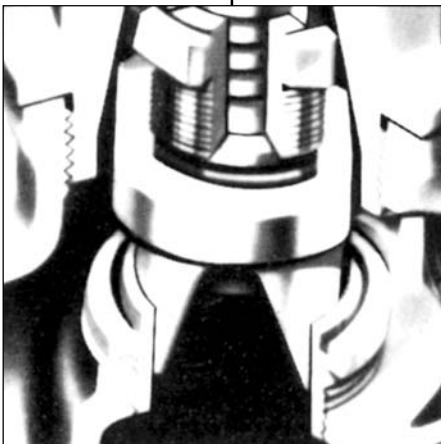


Wire drawing of the conventional globe valve disk and seat occurs when the valve is in, or passing through, the cracked position. The unique configuration of the Vee-Reg disk and seat ensures that the seating surfaces are protected at this critical stage of operation.

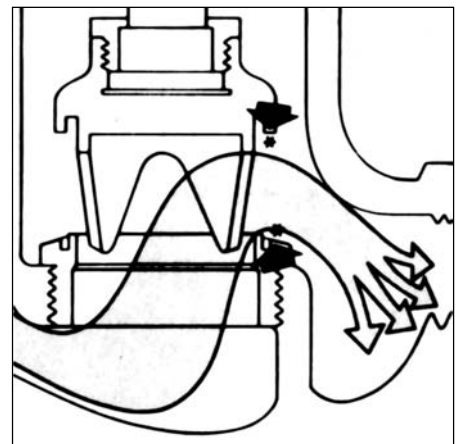
Reference to the 'Just Open' illustration shows that when the valve is being opened from the fully closed position the flow across the disk and seat is severely throttled until the seating surfaces are wide apart. It can also be seen that the throttling is done by non-seating surfaces so any cutting action taking place is not damaging the disk and seating surfaces.

When the valve lift is increased (see fully opened illustration) the flow passes through the V ports which deflect the fluid away from the seating surfaces. This protective action continues throughout the valve lift and remains effective when closing the valve.

* Critical Seating Surfaces



Just Open



Fully Open

The Vee-Reg Protected Disk and Seat

Typical Applications

BOILER FEED WATER
 (STOP AND CHECK)
 CONTINUOUS BLOW DOWN
 DRAIN AND METERING
 FUEL OIL CONTROL
 HIGH PRESSURE HOT WATER
 NUCLEAR CO₂
 REGULATING DUTIES FOR OIL, AIR
 AND GAS SERVICES
 STEAM TRAP, ISOLATING AND BYPASS
 BREWERY INSTALLATIONS CONCRETE
 DRYING

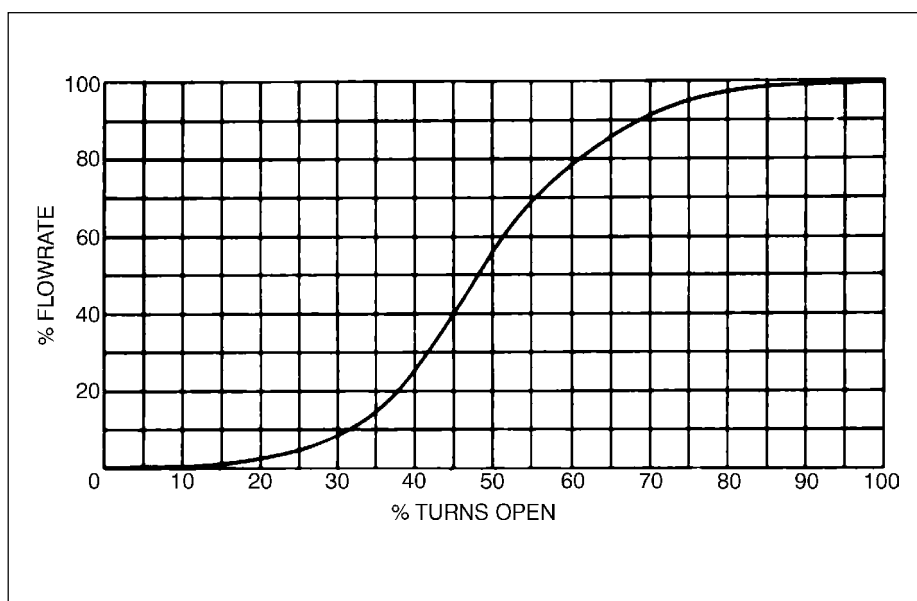
PAPERMILL DRYERS
 RUBBER MOULDING MACHINERY
 STEAM TRACING
 AND DRY CLEANING
 STEAM STERILIZING EQUIPMENT (FOR
 HOSPITALS ETC.)

Flow characteristics

In common with other flow control valves, it is essential that the Vee-Reg valve is correctly sized so that the maximum valve lift movement is used to control the flow.

Flow tests have been carried out on the whole range of Vee-Reg valves so that accurate sizing can be established. As a result of these tests, graphs of Head Loss versus Number of Turns Open, % Flowrate versus Turns Open and Pressure Drop versus Flow have been compiled and are available to engineers.

It can be seen from the graph below that at some stage of valve operation flow through a Vee-Reg valve is approximately proportional to valve lift, thus offering accurate flow control.



Bronze Vee-Reg Valves

Class 250 Series A

Fig. 0123

Pressure/Temperature Rating

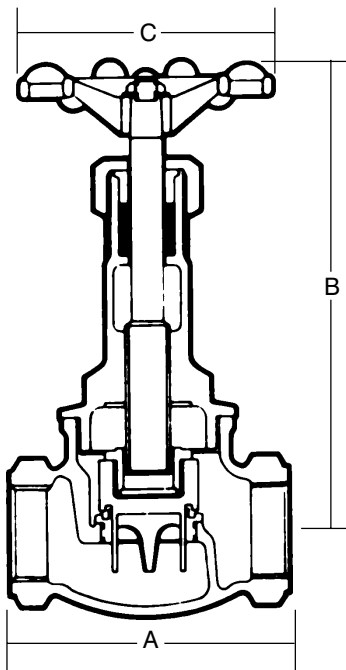
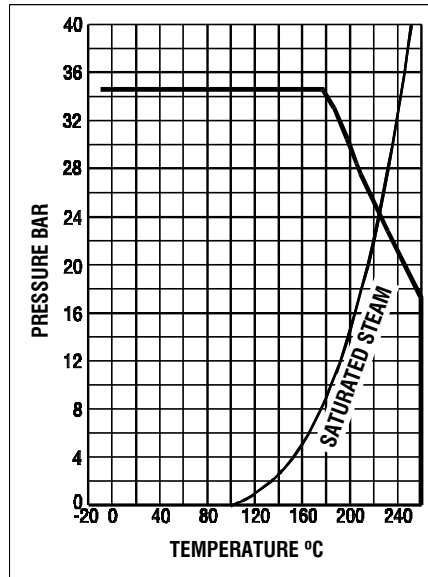
Class 250 Series A
17.3 bar at 260°C
34.5 bar from -10 to 178°C

Test Pressures (Hydraulic)

Shell: 51.7 bar
Seat: 34.5 bar

Specification

Rising stem
Screwed bonnet
BS21 Taper thread (ISO R7)
Available with American thread (0123AT)
Available with bonnet lock ring for hot water service (0133)



Material Specification

Component	Material	Specification BS	ASTM	DIN
Stem	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Gland Packing	Asbestos Free			
Packing Ring	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
Bonnet	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Swivel Nut	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Disk	Stainless Steel	970 431S29	AISI 431	17440 X22CrNi17
Seat	Stainless Steel	970 431S29	AISI 431	17440 X22CrNi17
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	in	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
A	mm	76	76	73	89	95	114	124	148
B (Open)	mm	138	138	137	159	176	205	233	264
C	mm	70	70	70	80	90	95	105	140
Weight	kg	0.7	0.7	0.8	1.1	1.6	2.4	3.4	5.4

Bronze Globe Valves

PN16 Series A

Fig. 014PN16

Pressure/Temperature Rating

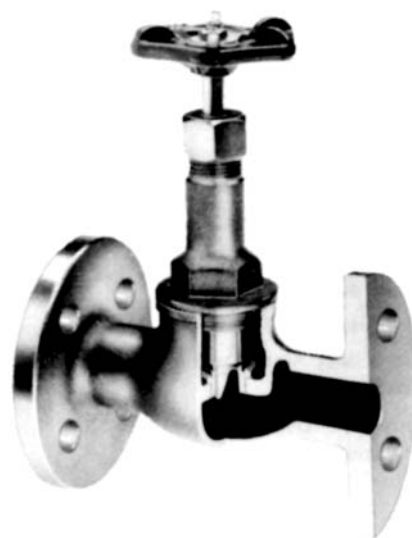
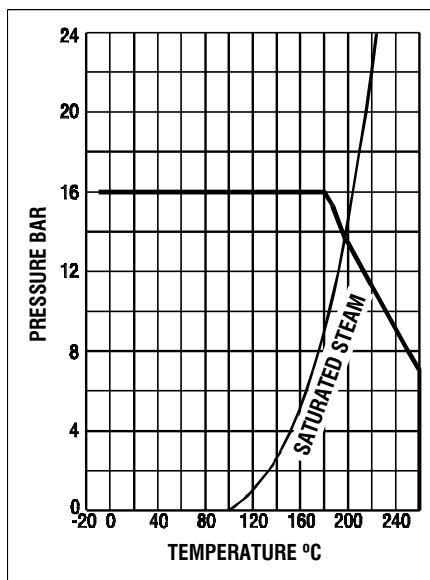
BS5154 PN16 Series A
7 bar at 260°C
16 bar from -10 to 180°C

Test Pressures (Hydraulic)

Shell: 24 bar
Seat: 17.6 bar

Specification

Rising stem
Screwed bonnet
Flanged to BS4504 PN16
Also available flanged to BS10 Table F (fig 014F) and Table H (fig 0143H)
Available with bonnet lock ring for hot water service (015PN16)



Material Specification

Component	Material	Specification		
		BS	ASTM	DIN
Stem	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Gland Packing	Asbestos Free			
Packing Ring	Brass	2874-CZ121	B455-385	17660 CuZn39Pb3
Bonnet	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb
Swivel Nut	Manganese Bronze	2874-CZ116	-	1709 CuZn34Al5
Disk	Stainless Steel	970 431S29	AISI 431	17440 X22CrNi17
Seat	Stainless Steel	970 431S29	AISI 431	17440 X22CrNi17
Body	Gunmetal	1400 LG2	B62	1705 G-CuSn5ZnPb

Dimensions

Nominal Size	mm	15	20	25	32	40	50
	in	1/2	3/4	1	1 1/4	1 1/2	2
A (PN)	mm	108	117	127	146	159	190
A (Table F)	in	3 1/2	4	4 1/2	5	5 1/2	6 1/2
A (Table H)	in	4	4 1/2	5	5 1/2	6	7
B (open)	mm	137	159	176	205	233	264
C	mm	70	80	90	95	105	140
D (PN16)	mm	95	105	115	140	150	165
D (Table F)	in	3 3/4	4	4 3/4	5 1/4	5 1/2	6 1/2
D (Table H)	in	4 1/2	4 1/2	4 3/4	5 1/4	5 1/2	6 1/2
Weight	kg	1.8	2.4	3.5	5.3	5.7	9.4

