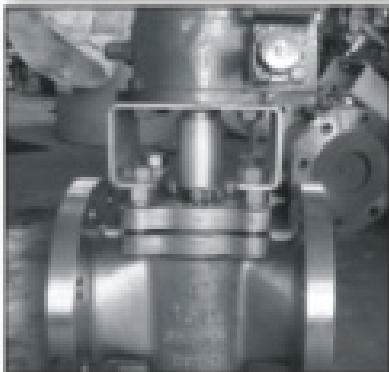


VATAC

World Quality, The World Valves

Oil, Petrol, Gas, Nuclear



● **Globe**

VATAC INC. USA
VANGO VALVES CHINA

INDEX

● P01~P18: Globe Valves

COMPANY

Vatac is a leading manufacturer and supplier of industrial valves in the world. As an USA Based international trademark which has been well registered in many famous industrial countries like USA, Germany, Italy and China, our primary goal is to provide a unique solution for the services of Oil, Gas, Nuclear, Refinery, Chemical, Marine, Potable Water, Waste Water, Sewage, Power Station and Pipeline Industries.

We have established several joint ventures specialized in valves manufacturing, including ball valve, gate valve, globe valve, butterfly valve, conduit gate valve, knife gate valve, bellow valve and strainer etc. A broad line of materials are offered and fabricated, Steel ranges from conventional cast or forged steel to special alloy materials like Monel, Inconel, Hastelloy or Duplex steel. Cast Iron Materials in GG20, GG25 or ASTM A126 Gr. B, Ductile Iron of GGG40, GGG50 or A536. Designing and Manufacturing standards strictly conform to API, ASTM, ANSI, AWWA, JIS, DIN, BS and ISO.

After over 3 decades of development and innovation, Vatac has acquired API 6D and CE certification as well as the quality management system ISO9001:2000. Vatac today has over 700,000 square feet manufacturing facilities and over 450 employees, through its conviction to provide only the sound quality products and perfect services to all of customers, Vatac has established itself as one of the leading active player in the valves industry.

Vatac always places the product quality and customers' needs on the utmost position and strives to better serve our valued customers. We conform to the latest standards and emphasize on managerial, technical and technological innovation. With an extensive network of sales, service and distribution, Vatac can respond to customers' requests faster and more efficiently, offers an in-time delivery of various requirements for our customers, can become one of your best partners.

Adhering to the tenet "World Quality, The World Valves", Vatac is stepping towards to the first class manufacturer and supplier of industrial valves and fittings in the world.



6D-0844



0575



TS 2710



ISO9001:2000



World Quality, The World Valves



Vatac Aims To Find Any Reliable Solution With Its Best Service System. All Of Vatac Solutions Are With Qualified Materials Which Are Well-Considered On Its Application Areas and Personnel Securities.

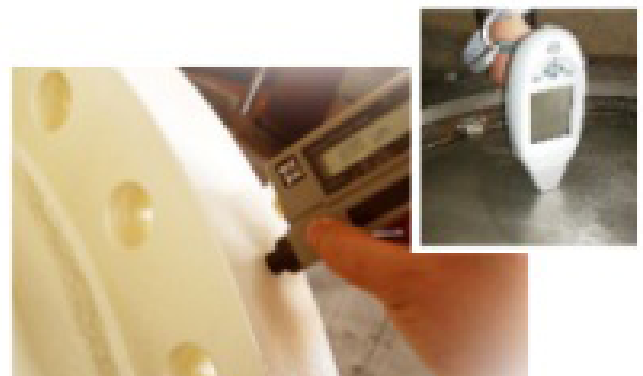
Adopting The Updated Equipments, All Of Products From Vatac Can Be Endured A Continuous And Precise Inspection . Well-know The Valves System From All of Aspects Is The Best Present For All Of Vatac's Valued Customers .

Choose Vatac Means That You Have Selected A Right Area Leading Supplier.



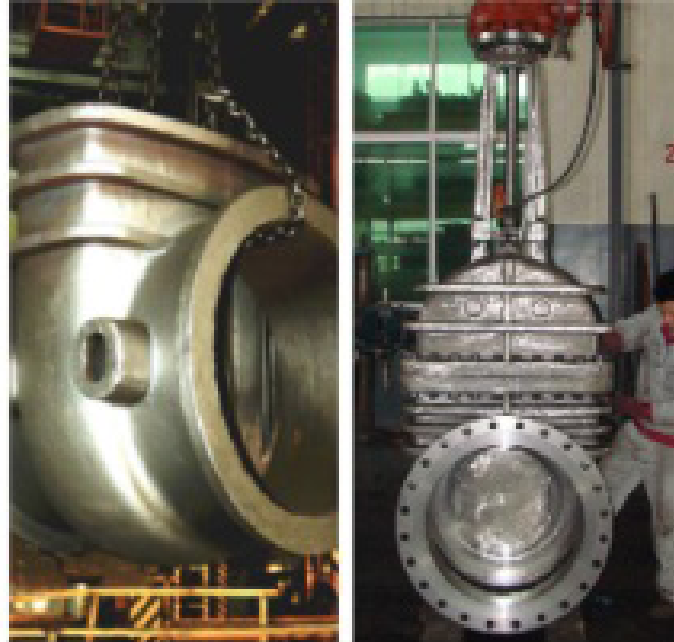
We Are Aiming At Supplying Quality Products , As An Organization Which Is Grouped By Experts Spaced In Every Where and Every Minute. Vatac Experts Give All Timely Technical Supports And Consultations No Matter On The Assembling , Inspection or Operation .

Only The Inspected And Well-Controlled Products Can be Valued As Quality Products.



Continuously Technical Developments
 Innovation Aims And Technique Advantages
 Agile Solution To Different Cases
 Most Perfect Service System
 Continuously And Meticulous Technical Supports
 Global Marketing Service System

Advanced Schedule System
 Insurance , Effective Allocations
 And Requirements On Different
 Products , Vatac Organized Innovation
 And Production Based On The Market
 Latest Developments Which Effectively
 Shortened The "Feedback" Time.



TYPE	SIZE	ENDS	CLASS
Cast Gates, Globes & Checks	2"~50"	RF, RTJ, B.W	CL150~CL900, PN10~PN260
Pressure Sealed	1/2"~24"	FLGD, THRD, SW, B.W	CL600~CL2500, PN100~PN420
Wafer Checks	1/2"~60"	WAFER, FLGD, HUB	CL150~CL2500, PN10~PN420
Forged Gates, Globes & Checks	1/2"~4"	FLGD, THRD, SW, B.W	CL150~CL2500, PN10~PN420
Plugs	1/2"~36"	FLGD, THRD, SW, B.W	CL150~CL2500, PN10~PN420
Through Conduit Gates	1/2"~36"	FLGD, THRD, SW, B.W	CL150~CL2500, PN10~PN420

MAIN PARTS MATERIAL	RANGE DESIGNATION
Body/Bonnet	Cast/Forged Carbon Steel and Stainless Steel, Cast and Forged Alloy, Specials
Trim	Stainless Steel, Stellite, Monel, Alloy, Bronze, Aluminum Bronze, Special

Today the whole Vatac valves design, manufacturing and testing process is covered by a quality assurance program certified and continuously audited by accredited inspection authorities in accordance with ISO 9001:2000, API Spec. 6D and Directive 94/9/EC

Strictly Raw Material Inspection Ensuring The Products Max. Security. Strictly Production Procedures Control. Timely and Reliable Report Follows On Each Product Production Procedures and Applications.

Vatac Is Not Only Your Qualified Supplier, But Also Can Be Valued As Your Credible Partner Depending On Its Excellent Capabilities And Various Of Production Requirements That Can Be Met.







TEST LAB

CRYOGENIC TEST

The cryogenic tests are used to characterize and qualify phenomena and materials in fields of physics dealing with low temperatures, magnets and accelerators which is applied to those items are subjected to the low temperature applications



FIRE TESTING

Installation area for valves subject to fire testing under API requirements. The test exposes the valve to a flame temperature of 1400° F to 1800° F (761°C to 980°C) for 30 minutes with controlled limits on leakage.



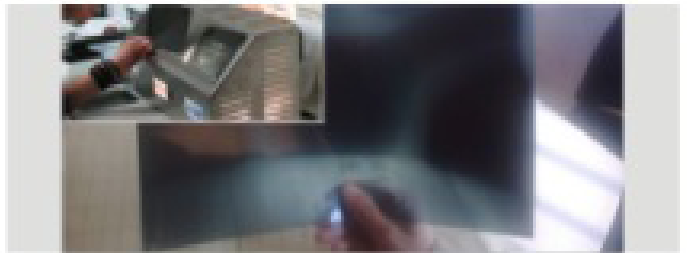
ULTRASONIC FLAW DETECTORS

Ultrasonic flaw detection is basically a comparative technique for non-destructive tests. A trained operator identifies specific corresponding to the response from good parts and from representative flaws.



RADIOGRAPHIC TEST

RT involves gamma- or X-radiation to examine internal features of a test subject. To ensure quality materials are used onto all of fabrications, R.T tests are frequently performed onto vatac manufacturing procedures.



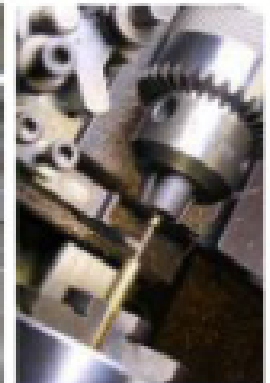
POSITIVE MATERIAL IDENTIFICATION (PMI)

The raw materials are verified by sampling with the Qualified Material Analyzer before being released for the machining process to make sure that they comply with the specified chemical properties.



CONTROL AND RECORDING

In addition to a routine inspection of Dimensional Control, Hydra-static and Leakage Tests. A computerized system is used to control the test and to record the results. This provides accurate and permanent documentation.



STANDARD FEATURES OF VATAC CAST STEEL VALVES

LOW FUGITIVE EMISSION SERVICE

Vatrac standard Cast Steel Gate, Globe and Check Valves are designed and manufactured to ensure leakage of less than 100 ppm (parts per million) of volatile organic compounds. Extensive base line laboratory testing (static and cycle testing) has been performed establishing critical design parameters necessary to achieve low emission sealing in the Vatrac stem packing

seal area for Gate and Globe Valves and in the bonnet gasket sealing area (cover gasket for Check Valves).

In-house testing procedure has been developed and is periodically performed to ensure that standard product design and manufacturing criteria consistently result in the Vatrac Gate, Globe and Check Valve meeting a maximum of 100 ppm VOC leakage prior to shipment.

CRITICAL DESIGN AND MANUFACTURING CONTROLS APPLIED TO PRODUCE LOW EMISSION SERVICE VALVES IN VATAC STANDARD PRODUCTS.

Stem Straightness and Roundness
Stem Surface Finish To Max. 32 Ra
Stuffing Box Surface Finish To Max. 125 Ra
Stuffing Box and Gland Cylindricity
Self Centering Gland Design
Gland Packing: Die-formed Graphite Rings with Braided Graphite Top and Bottom Rings.
Bonnet Gaskets:
Class 150 Gate: 316 SS Tanged Clad Graphite
Class 150 Globe & Check: 316 SS Spiral Wound Grafoil
Class 300 Valves: 316 SS Spiral Wound
Class 600 & Higher: Ring Type Joint

LOW EMISSION DESIGN OPTIONS LIVE LOAD PACKING

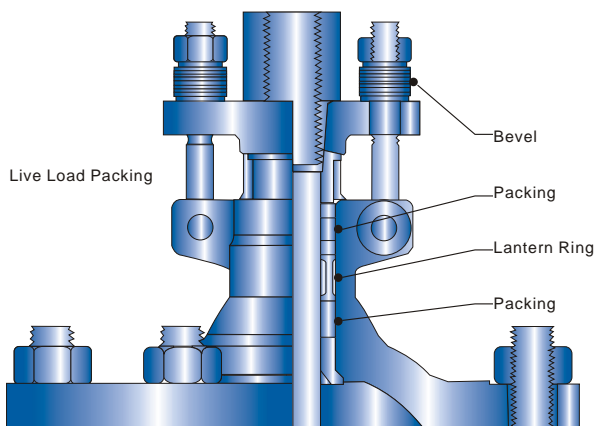
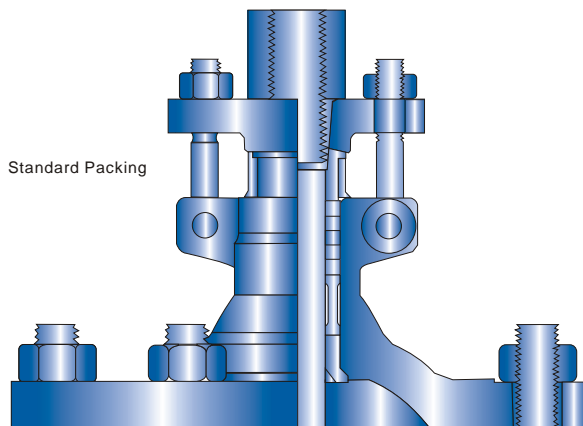
In services requiring frequent cycling or with high pressure/temperature variations, live loading extends the service life between maintenance periods by requiring less frequent packing gland adjustments. Belleville springs are employed to provide constant packing gland stress.

Lantern Ring and Double Packing Set
Lantern ring with leak-off fitting connection and double packing stack is optionally available for critical services.

PACKING SYSTEM

Vatrac Cast Steel Gate and Globe valves use a combination of dieformed flexible graphite and interbraided graphite in a predetermined arrangement to ensure an effective seal. Graphite packing achieves its maximum ability to isolate the atmosphere when it is contained within a chamber that is precise in finish

and dimension. Vatrac Gate and Globe valves are manufactured with stem finishes better than 32 Ra and stuffing box wall finishes for 125 Ra. In addition, stem straightness and taper are closely controlled.



AVAILABLE MODIFICATIONS FOR VATAC CAST STEEL VALVES

Packing and Gasket Changes	Weld End Bore Changes
End Connection Modifications	Customer Specified Coatings
Gear Operator Mounting	Outside Lever and Weight for Check Valves
Trim Changes	Slam Retarders for Check Valves
Actuation	Chain Wheel Operator
Cryogenic Gas Columns	Block and Bleed
Hand Wheel Extensions	
Teflon Disc Inserts	NDE Testing Available
Drilled & Tapped Body/Bonnet Connections	Dye Penetrant Test
By-Pass	Magnetic Particle Test
Pressure Equalizing	Radiography
Acid Shields	PMI (Positive Material Identification)
Oxygen & Chlorine Cleaning & Packaging	API Performance Testing

BODY/BONNET MATERIALS

Vatrac cast steel valves are available in a wider range of body/bonnet materials and optional trim materials. Listed below are some of the more popular materials. Additional materials are available. Please contact Vatac or your local distributor for details.

Vatrac Material Designation	Common Description	ASTM Specs.	Body/Bonnet Material Service Limitations
WCB	Carbon Steel	A216	Non-corrosive service water, oil, & gases at temperatures between -20° F & +800° F
LCC	Low Temp Carbon	A352	Low temperature service between -50° F & +650° F
WC6	1.25% Chrome & .5% Moly	A217	Non-corrosive service water, oil, & gases at temperatures between -20° F & +1100° F
WC9	2.25% Chrome & 1% Moly	A217	Non-corrosive service water, oil, & gases at temperatures between -20° F & +1100° F
C5	5% Chrome & .5% Moly	A217	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
C12	9% Chrome & 1% Moly	A217	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
C12A	9% Chrome, 1% Moly, & V	A217	Corrosive, non-corrosive, or erosive service at temperatures between -20° F & +1200° F
C8M	Cast 316	A351	Corrosive, cryogenic or high temperature service between -450° F & +1200° F
A20	Alloy 20	A351	Corrosive service at temperatures between -20° F & +300° F

TRIM MATERIALS

THE FOLLOWING ARE VATAC STANDARD TRIM DESIGNATIONS.

VATAC Trim Number	Common Name	API 600 Trim No.	Seat Ring Facing (1)	Wedge or Disc Facing (1)	Stem	Other Trim Parts (2)	Service Limitations
1	13 Chrome	1	CR 13	CR 13	CR 13	CR 13	Non-corrosive applications. Steam, gas, & general service to 700° F. Oil & oil vapor to 900° F
2	Half Stellite	8	HF	CR 13	CR 13	CR 13	Steam, gas, & general service to 1000° F. Standard trim for gate valves
3	Full Stellite	5	HF	HF	CR 13	CR 13	Premium trim service to 1200° F. Excellent for high pressure water and steam service
4	316	10	316	316	316	316	Corrosive services to 850° F. Low temperature service standard for 316 SS valves
4/3	316/Half Stellite	12	HF	316	316	316	
5	316/Full Stellite	16	HF	HF	316	316	
5/2	Monel	9	NiCu	NiCu	NiCu	NiCu	Corrosive services to 750° F
5/3	Monel/Half Stellite	11	HF	NiCu	NiCu	NiCu	
6	Monel/Full Stellite	-	HF	HF	NiCu	NiCu	
7	Alloy 20	13	A20	A20	A20	A20	Corrosive services to 300° F
7	Bronze	-	BRZ	BRZ	BRZ	BRZ	Water, gas, or low pressure steam to 450° F
A7	Aluminum Bronze	-	AL BRZ	AL BRZ	AL BRZ	AL BRZ	
8	Iron	-	Iron	Iron	STL	Iron or STL	
X	Special	Special	Special	Special	Special	Special	Customer to specify

(1) Facing is defined as the seating surface of a seat ring and wedge/disc

(2) Other trim parts are defined as small internal parts that are normally in contact with the service fluid. This includes the stem, backseat bushing in gate and globe valves and the swing check disc nut

AUXILIARY CONNECTION LOCATIONS (BYPASSES, DRAINS, ETC.)

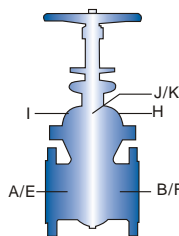
Please refer to ASME B16.34 for exact auxiliary connection locations, sizes, and threading information.

Each letter in the illustration(s) identify the possible hole locations for auxiliary connection(s). These illustrations are for reference purposes only.

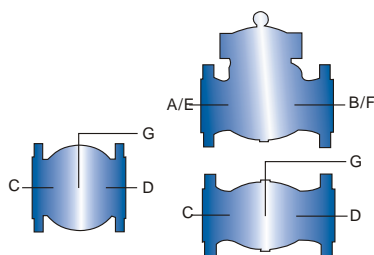
Unless specified otherwise, auxiliary connection hole sizes shall be drilled and tapped as follows:

- 2" thru 4" utilizes a .50" hole
- 5" thru 8" utilizes a .75" hole
- 10" and larger utilizes a 1" hole

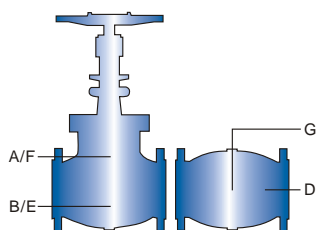
Gate Valve



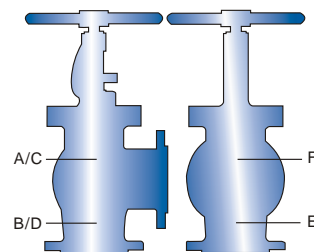
Check Valves



Globe Valves

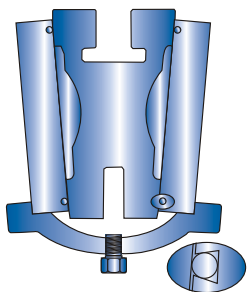


Angle Valves



DESIGN FEATURES

The dovetail groove feature in the seating holds the O-Ring seal in place while allowing it to expand or contract during service and still maintains the proper compression to provide uniform sealing.



The precision ground metal to metal seats with the O-Ring feature as secondary seal provides dual seating and eliminates any media contamination.

A bleed plug is provided at position G to verify shut-off.

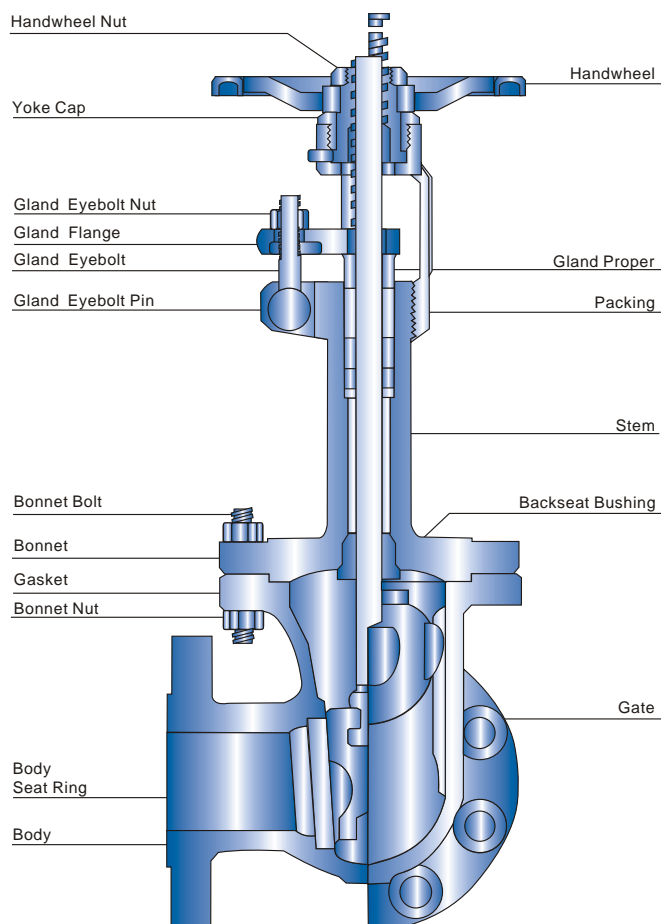
SEAT MATERIALS

Teflon is considered our standard. It is the most widely used elastomer because of its resistance to corrosive and abrasive conditions. We can also offer other materials. Seat insert materials should be specified along with actual service conditions when ordering.

Type Temperature Operating Range

Teflon	-100° F +400° F
PTFE	

CAST STEEL CRYOGENIC GATE, GLOBE AND CHECK VALVES



Vatac Cryogenic Valves are manufactured to the latest edition of API Standard 600 and/or 603 and tested to API Standard 598.

APPLICATION & FUNCTION

During the processes of production, transportation, storage and usage of liquefied gases, countless technical problems can be experienced. Vatac cryogenic valves are designed to assure safety and reliability under these critical conditions.

All of Vatac cryogenic valves are thoroughly cleaned and dehydrated. Afterwards the end ports are sealed to prevent contamination. This process is performed in an approved and designated clean room.

BODY & BONNET

The design of the body and bonnet is calculated to achieve the most regular distribution of stress in all directions, as well as the minimum turbulence and resistance to flow.

The extended bonnet provides a gas column which thermally isolates the stem packing and stem nut from the extreme temperatures so they remain functional. Usually the customer specifies the column length.

The body-bonnet joint is bolted using applicable ASTM specified bolting for low temperature/cryogenic conditions.

GASKET

We can supply any style of gasket required by your customer; however, we recommend gaskets that are oxygen compatible.

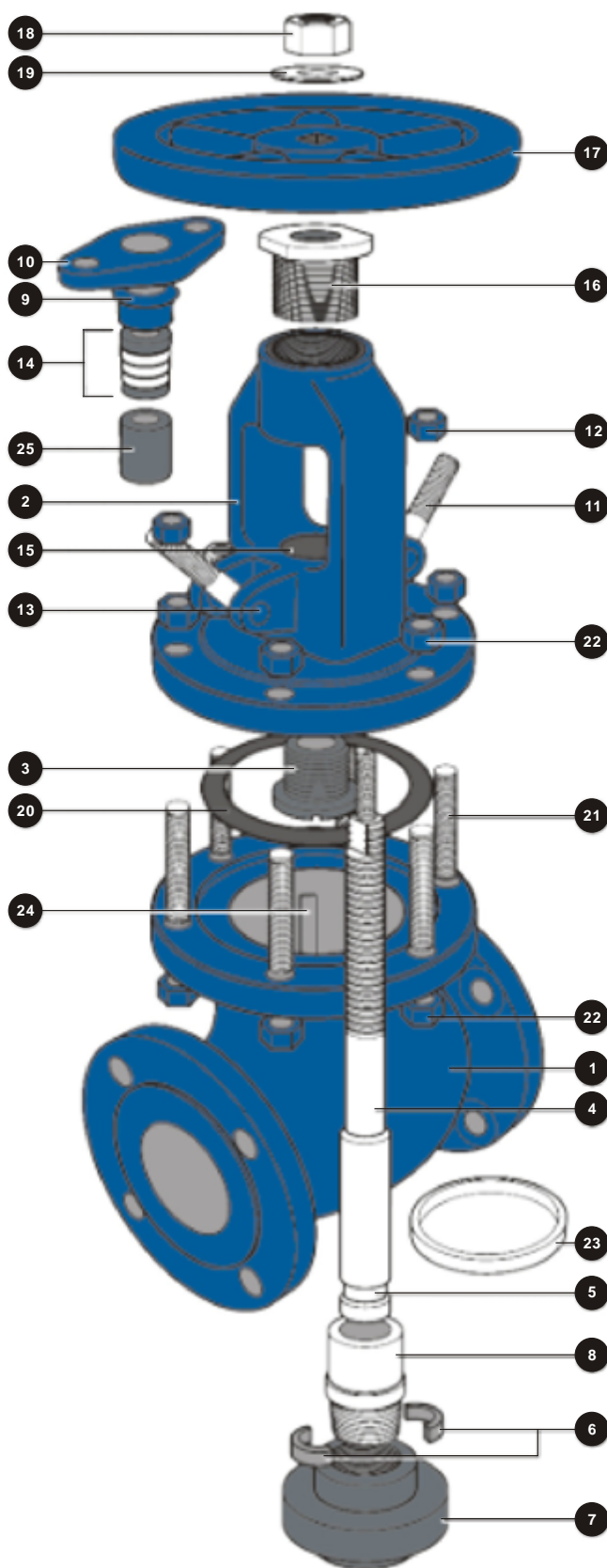
CLOSURES

GLOBE VALVES - The valve is normally supplied with the plug type disc. The disc rotates freely on the stem and incorporates a differential angle from that on the seating. This design provides the maximum assurance of shut off, is less likely to stick in the body seat and is considered the simplest design for field repair. Bottom guided discs are available.

Other soft inserts are available upon request.

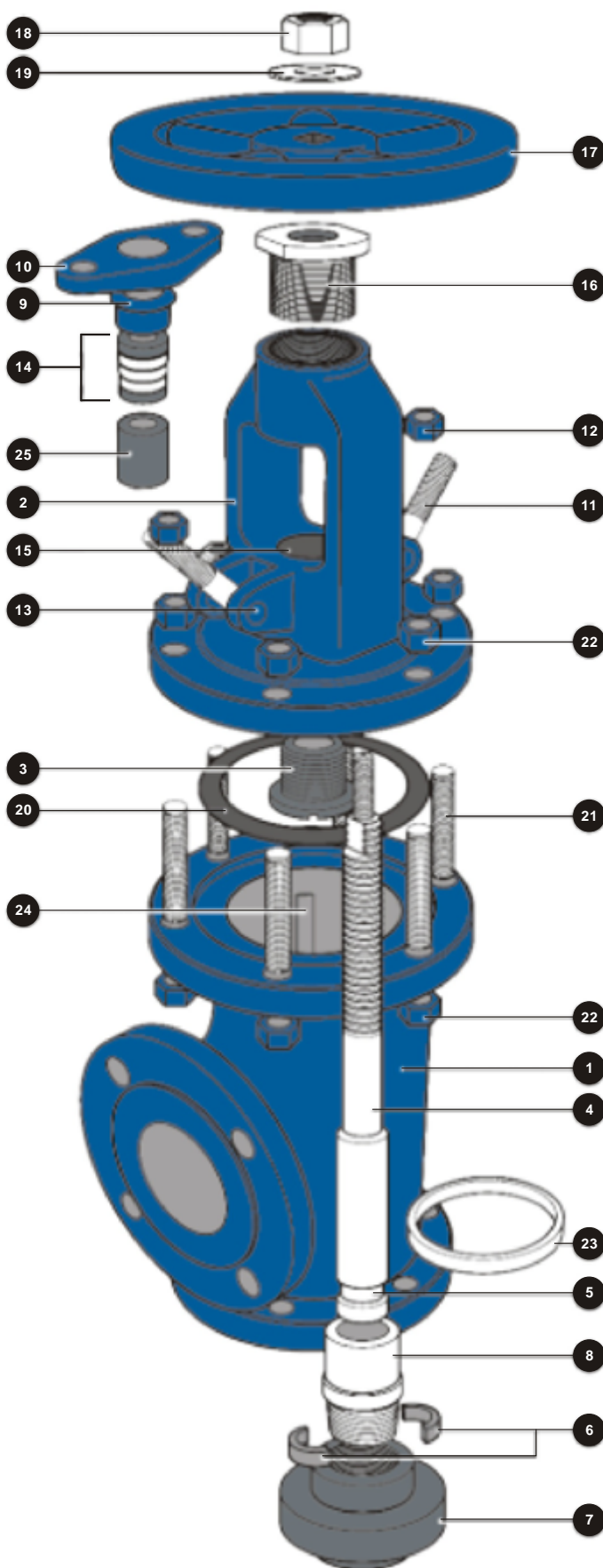
TYPICAL VATAC CAST STEEL BOLTED BONNET GLOBE VALVE EXPANDED VIEW

1. Body: Vatac cast steel bodies provide low resistance flow and optimum strength and performance.
2. Bonnet: Vatac bonnet assemblies are built to the same standards as the bodies.
3. Back Seat Bushing: The back seat, when engaged with the stem head, provides a stable shutoff to the stuffing box which isolates the packing from flow exposure.
4. Stem: The stem inserts vertically into the disc.
5. Lock Groove: The lock groove receives the split lock ring which allows the disc nut to lift the disc during cycling.
6. Split Ring: The split ring allows the disc nut to lift the disc during cycling.
7. Disc: Vatac plug type disc is machined to the tightest tolerances to ensure trouble free shutoff and cycling.
8. Disc Nut: The disc nut, in conjunction with the split lock ring, secures the disc to the stem.
9. Gland: Compresses the packing to create a stem seal above the back seat, between the bonnet and stem.
10. Gland Flange: Applies pressure to the gland for accurate packing compression.
- 11 & 12. Gland Bolts & Nuts: The gland bolt and nut allows for easy adjustments for packing compression.
13. Gland Bolt Pin: The gland bolt pin secures the gland bolts to the yoke & bonnet.
14. Packing: The packing creates a seal above the back seat, between the bonnet and stem.
15. Stuffing Box: The stuffing box contains the packing.
16. Stem Nut: The stem nut provides a precision guide for proper stem alignment.
17. Handwheel: The handwheel cycles the valve.
18. Handwheel Nut: The handwheel nut secures the handwheel to the bonnet assembly.
19. Handwheel Washer: The washer helps to prevent loosening or distributes pressure evenly.
20. Bonnet Gasket: The bonnet gasket creates a leakproof seal between the bonnet and body.
- 21 & 22. Bonnet Studs & Nuts: The bonnet studs and nuts secure the bonnet to the body.
23. Seat Ring: To ensure a stable shutoff, the seat rings are aligned and seal-welded into the valve, then precision ground for optimal seating.
24. Disc Guide: The disc guides provide a stable track for keeping the disc aligned with the seat during cycling.
25. Spacer Ring: Assists the packing rings in creating a seal above the back seat, between the bonnet and stem.



TYPICAL VATAC CAST STEEL BOLTED BONNET ANGLE VALVE EXPANDED VIEW

1. Body: Vatac cast steel bodies provide low resistance flow and optimum strength and performance.
2. Bonnet: Vatac bonnet assemblies are built to the same standards as the bodies.
3. Back Seat Bushing: The back seat, when engaged with the stem head, provides a stable shutoff to the stuffing box which isolates the packing from flow exposure.
4. Stem: The stem inserts vertically into the disc.
5. Lock Groove: The lock groove receives the split lock ring which allows the disc nut to lift the disc during cycling.
6. Split Ring: The split ring allows the disc nut to lift the disc during cycling.
7. Disc: Vatac disc is machined to the tightest tolerances to ensure trouble-free shutoff and cycling.
8. Disc Nut: The disc nut, in conjunction with the split lock ring, secures the disc to the stem.
9. Gland: Compresses the packing to create a stem seal above the back seat, between the bonnet and stem.
10. Gland Flange: Applies pressure to the gland for accurate packing compression.
- 11 & 12. Gland Bolts & Nuts: The gland bolt and nut allows for easy adjustments for packing compression.
13. Gland Bolt Pin: The gland bolt pin secures the gland bolts to the yoke & bonnet.
14. Packing: The packing creates a seal above the back seat, between the bonnet and stem.
15. Stuffing Box: The stuffing box contains the packing.
16. Stem Nut: The stem nut provides a precision guide for proper stem alignment.
17. Handwheel: The handwheel cycles the valve.
18. Handwheel Nut: The handwheel nut secures the handwheel to the bonnet assembly.
19. Handwheel Washer: The washer helps to prevent loosening or distributes pressure evenly.
20. Bonnet Gasket: The bonnet gasket creates a leakproof seal between the bonnet and body.
- 21 & 22. Bonnet Studs & Nuts: The bonnet studs and nuts secure the bonnet to the body.
23. Seat Ring: To ensure a stable shutoff, the seat rings are aligned and seal-welded into the valve, then precision ground for optimal seating.
24. Disc Guide: The disc guides provide a stable track for keeping the disc aligned with the seat during cycling.
25. Spacer Ring: Assists the packing rings in creating a seal above the back seat, between the bonnet and stem.



CAST STEEL GLOBE AND ANGLE VALVES

STANDARD PARTS AND MATERIALS

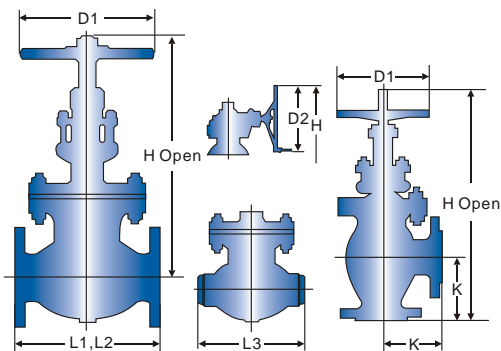
NO.	PART NAME	CARBON STEEL		ALLOY STEEL				STAINLESS STEEL
		TYPE WCB	TYPE LCB	TYPE WC6	TYPE WC9	TYPE C5	TYPE C12	TYPE CF8M
1	BODY	A216-WCB	A352-LCB	A217-WC6	A217-WC9	A217-C5	A217-C12	A351-CF8M
2	BONNET	A216-WCB	A352-LCB	A216-WC6	A217-WC9	A217-C5	A217-C12	A351-CF8M
3	DISC1	A217 CA15 or WCB+410	A351 CF8M or LCB+316	A217 CA15 or WCB+410	A217 CA15 or WC9+410	A217 CA15 or C5+410	A217 CA15 or C12+410	A351-CF8M
4	STEM	A479-410	A479-316	A479-410	A479-410	A479-410	A479-410	A479-316
5	HANDWHEEL	A216-WCB or A197	A216-WCB or A197	A216-WCB or A197	A216-WCB or A197	A216-WCB or A197	A216-WCB or A197	A216-WCB or A197
6	SEAT RING	C/S 1020+410	A182-F304	A182 F11+STL	A182 F5a+STL	A182 F9+STL	A182 F9+STL	A479-316
7	BACKSEAT BUSHING	A479-410	A479-304	A479-410	A479-410	A479-410	A479-410	A479-316
8	GLAND PROPER	C/S 1020+ Cr Plate	A479-410	A479-410	A479-410	A479-410	A479-410	A479-316
9	GLAND FLANGE	A105 or A283-D	A105 or A283-D	A105 or A283-D	A105 or A283-D	A105 or A283-D	A105 or	A351-CF8
10	STEM NUT	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2	A439-D2
11	BONNET BOLT	A193-B7	A320-L7	A193-B16	A193-B16	A193-B16	A193-B16	A193-B8
12	BONNET NUT	A194-2H	A194-4	A194-4	A194-4	A194-4	A194-4	A194-8
13	GLAND EYEBOLT	A307B	A307B	193-B7	193-B7	193-B7	193-B7	A193-B8
14	GLAND ADJUSTMENT NUT	A307B	A307B	A194-2H	A194-2H	A194-2H	A194-2H	A194-8
15	GLAND EYEBOLT PIN	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	A479-304
16	DISC NUT	A479-410	A479-304	A479-410	A479-410	A479-410	A479-410	A479-316
17	HANDWHEEL NUT	A307B	A307B	BA307	A307B	A307B	A307B	A194-8
18	PACKING	Flex. Graphite	Flex. Graphite	Flex. Graphite	Flex. Graphite	Flex. Graphite	Flex. Graphite	Flex. Graphite
19	GASKET	Graphite + 304SS	Graphite + 304SS	Graphite + 304SS	Graphite + 304SS	Graphite + 304SS	Graphite + 304SS	Graphite + 316SS
20	NAMEPLATE	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel

- Other materials available on request.
- STL =Stellite #6.

CAST STEEL GLOBE AND ANGLE VALVE

- Cast steel globe valve, outside screw and yoke
- Bolted bonnet, rising stem, swivel plug disc
- Available in welded and threaded seatings
- Designed according to API-600

Face to Face	ASME/ANSI B16.10
End Flange	ASME/ANSI B16.5
Buttweld	ASME/ANSI B16.25
Rating	ASME/ANSI Class 150



CLASS 150 DIMENSION

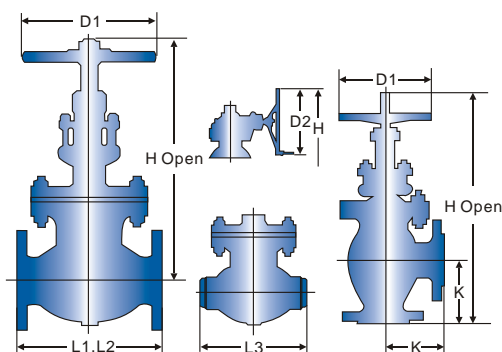
SIZE (in.)	1-1/2"	2"	2-1/2"	3"	4"	6"	8"
Unit: inch							
L1: R F	6.50	8.00	8.50	9.50	11.50	16.00	19.50
L2: RTJ	7.00	8.50	9.00	10.00	12.00	16.50	20.00
L3: BW	6.50	8.00	8.50	9.50	11.50	16.00	19.50
K: RF/BW	3.25	4.00	4.25	4.75	5.75	8.00	9.75
H	11.42	12.44	12.99	14.37	16.30	19.87	24.53
D1	7.09	2.87	2.87	8.82	11.02	13.98	15.75
D2	-	-	-	-	-	13.98	17.72
W.T R F	38	46	62	75	114	209	371
(lbs) BW	33	36	53	60	90	163	316

SIZE (in.)	10"	12"	14"	16"	18"	20"
Unit: inch						
L1: R F	24.50	27.50	31.00	36.00	38.50	38.50
L2: RTJ	25.00	28.00	31.50	36.50	39.00	39.00
L3: BW	24.50	27.50	31.00	36.00	38.50	38.50
K: RF/BW	12.25	13.75	15.50	18.00	-	-
H	31.61	33.03	52.99	60.98	70.00	78.98
D1	17.72	19.69	22.05	24.80	31.50	31.50
D2	17.72	19.69	22.05	24.80	27.95	31.50
W.T R F	534	891	1,365	1,808	2,156	2,822
(lbs) BW	426	786	1,234	1,655	1,964	2,597

CAST STEEL GLOBE AND ANGLE VALVE

- Cast steel globe valve, outside screw and yoke
- Bolted bonnet, rising stem, swivel plug disc
- Available in welded and threaded seatings
- Designed according to API-600

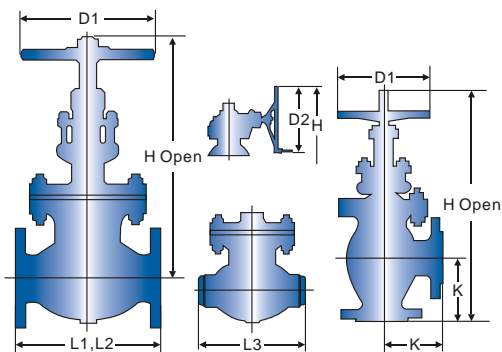
Face to Face	ASME/ANSI B16.10
End Flange	ASME/ANSI B16.5
Buttweld	ASME/ANSI B16.25
Rating	ASME/ANSI Class 300/600



CAST STEEL GLOBE AND ANGLE VALVE

- Cast steel globe valve, outside screw and yoke
- Bolted bonnet, rising stem, swivel plug disc
- Available in welded and threaded seatings
- Designed according to API-600

Face to Face	ASME/ANSI B16.10
End Flange	ASME/ANSI B16.5
Buttweld	ASME/ANSI B16.25
Rating	ASME/ANSI Class 900/1500



CLASS 300 DIMENSION

SIZE (in.)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
Unit: inch										
L1: R F	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00	33.00	34.00
L2: RTJ	11.13	12.13	13.13	14.63	18.13	22.63	25.13	28.63	33.63	34.63
L3: BW	10.50	11.50	12.50	14.00	17.50	22.00	24.50	28.00	33.00	34.00
K: RF/BW	5.25	5.75	6.25	7.00	8.75	11.00	12.25	14.00	-	-
H	13.78	15.39	16.54	19.37	24.41	31.22	45.08	49.61	55.28	62.99
D1	7.87	8.82	11.02	13.98	17.72	22.05	22.05	24.80	27.95	27.95
D2	-	-	-	-	17.72	19.69	22.05	24.80	24.80	27.96
W.T R F	58	88	116	176	370	546	1,005	1,340	2,008	2,650
(lbs) BW	53	80	94	142	299	440	860	1,143	1,720	2,260

CLASS 600 DIMENSION

SIZE (in.)	2"	2-1/2"	3"	4"	6"	8"	10"	12"
Unit: inch								
L1: R F	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00
L2: RTJ	11.63	13.13	14.13	17.13	22.13	26.13	31.13	33.13
L3: BW	11.50	13.00	14.00	17.00	22.00	26.00	31.00	33.00
K: RF/BW	5.25	5.75	6.25	8.00	9.75	11.75	13.25	15.00
H	15.43	17.00	18.82	20.87	26.57	28.39	38.27	42.28
D1	8.82	11.02	12.40	13.98	19.69	22.05	24.80	27.95
D2	-	-	-	13.98	19.69	22.05	22.05	24.80
W.T R F	82	89	137	253	525	800	1,505	1,984
(lbs) BW	68	70	109	198	415	637	1,235	1,671

CLASS 900 DIMENSION

SIZE (in.)	2"	3"	4"	6"	8"	10"	12"
Unit: inch							
L1: R F	14.50	15.00	18.00	24.00	29.00	33.00	38.00
L2: RTJ	14.63	15.13	18.13	24.13	29.13	33.13	38.13
L3: BW	14.50	15.00	18.00	24.00	29.00	33.00	38.00
K: RF/BW	7.25	7.50	9.00	12.00	-	-	-
H	19.57	20.20	23.74	28.70	38.10	55.40	61.00
D1	12.40	13.98	15.75	22.05	24.80	27.95	31.50
D2	-	-	15.75	19.69	22.05	24.80	27.95
W.T R F	215	225	390	920	2,673	4,050	5,247
(lbs) BW	160	180	330	650	2,370	3,700	4,752

CLASS 1500 DIMENSION

SIZE (in.)	2"	3"	4"	6"	8"	10"	12"
Unit: inch							
L1: R F	14.50	18.50	21.50	27.75	32.75	39.00	44.50
L2: RTJ	14.62	18.62	21.62	28.00	33.12	39.38	45.13
L3: BW	14.50	18.50	21.50	27.75	32.75	39.00	44.50
K: RF/BW	7.25	8.25	9.25	10.75	13.88	-	-
H	19.57	23.00	28.10	36.00	46.90	58.00	65.00
D1	12.40	15.75	15.75	20.00	24.80	28.00	31.50
D2	-	13.98	15.75	24.80	27.96	31.50	31.50
W.T R F	215	462	772	1,810	4,170	6,330	8,712
(lbs) BW	160	265	425	1,500	3,540	5,544	7,524

STANDARD DESIGN FEATURES OF VATAC PRESSURE SEAL VALVES

Vatac Pressure Seal valves are intended for high pressure, high temperature applications in all types of fluid except where severe coking is a factor. The design and material selections provide excellent service in steam-generation stations, industrial chemical plants and thermal power plants.

Most Pressure Seal valves are offered in Cast Steel and Forged Steel body designs. These options make the Vatac Pressure Seal product line an excellent choice for users with various application requirements.

Vatac Pressure Seal valves provide the most efficient flow passage and sealing features possible, resulting in significant weight savings, easy installation and in-line maintenance.

GENERAL DESIGN SPECIFICATIONS

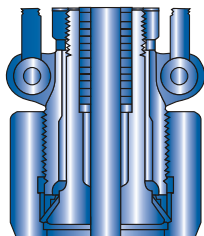
Vatac Pressure Seal Valves are manufactured and tested in strict accordance with the following standards:

*ASME B16.34 *ASME B16.10 *ASME B16.25 *API 598

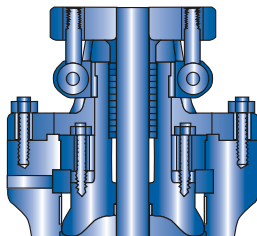
STANDARD CONSTRUCTION FEATURES

BODY

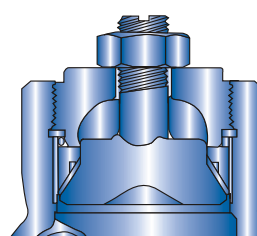
Flow areas are specifically designed for minimum turbulence and pressure drop.



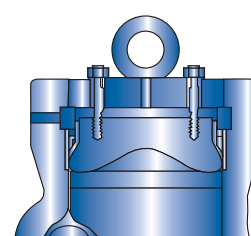
Bonnet Type A



Bonnet Type B



Bonnet Type C



Bonnet Type D

Globe
Class 600, 900 & 1500
Size 4" and smaller

Globe
Class 600, 900 & 1500
Size 6" and larger

Class 2500
Size 3" and smaller

Class 2500
Size 4" and larger

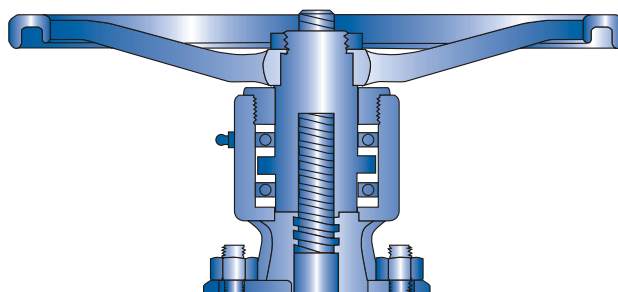
Class 2500
Size 3" and smaller

Class 2500
Size 4" and larger

BALL BEARING-TYPE YOKE SLEEVE

Large, high-pressure valves can require a tremendous amount of torque to open and close. By utilizing ball bearings in the yoke sleeve, the operating torques of these difficult-to-operate valves are reduced by as much as 50 percent.

Hammer blow wheels are furnished on sizes 6" and larger globe valves.



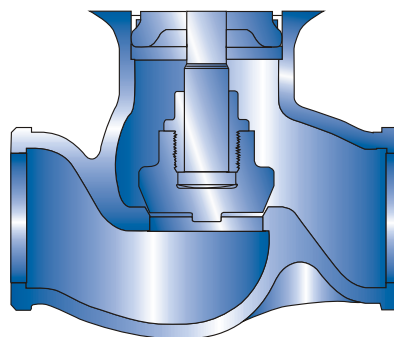
YOKE SLEEVE BALL BEARING-TYPE EQUIPPED VALVES

Class	Gate	Globe
600	Size 6" and larger	Size 6" and larger
900	Size 2", 2 1/2" and 6" and larger	Size 6" and larger
1500	Size 2" and larger	Size 6" and larger
2500	Size 2" and larger	Size 3" and larger

STRAIGHT AND Y-PATTERN SEATING DESIGN (GLOBE VALVES)

All Vatac globe valves utilize the same seating design which consist of guided disc which seals fully with the seat to provide an effective tight seal. Seating surfaces are hardfaced with Stellite to increase the cycle life.

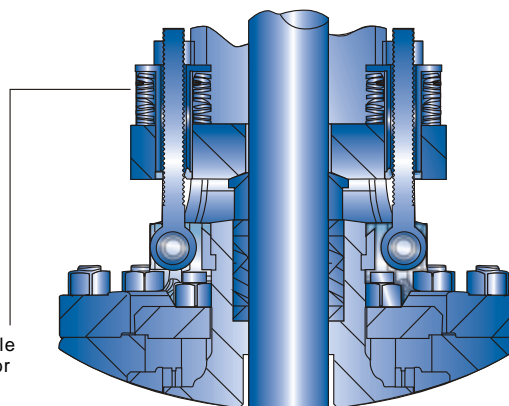
All Vatac globe valves are unidirectional. A non-return stop check feature is available on request.

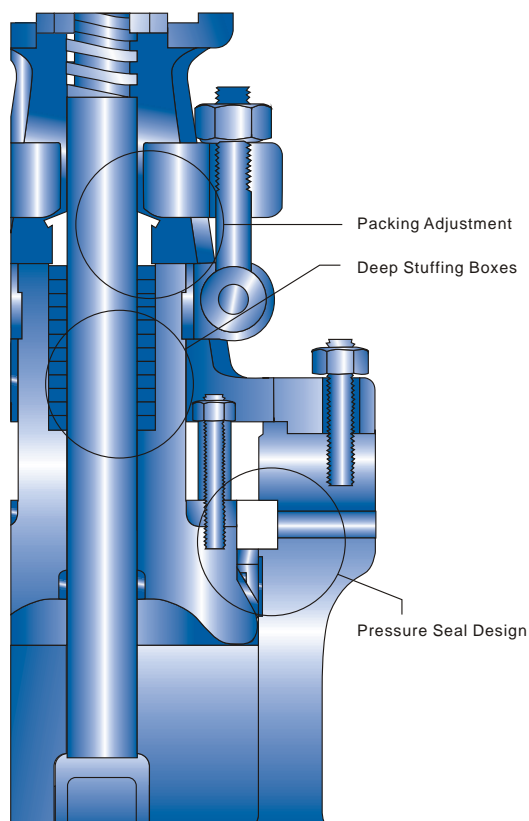


ENGINEERING AND DESIGN OPTIONS

Live Loading Options
(Gate & Globe Valves)

Live loading extends low emission service life especially in service in high pressure and temperature conditions, Frequent Cycling or where it is desirable to eliminate the need for occasional adjustment of the packing to compensate for the variations during operation





SPECIAL FEATURES OF ALL PRESSURE SEAL GATE AND GLOBE VALVES

PACKING ADJUSTMENT

All gate and globe valves are provided with a two-piece packing gland to minimize the possibility of scoring the stem if the gland is tightened unevenly. Eyebolts remain fastened to the bonnet. The eyebolts swing out of the way to simplify packing replacement, and are oriented so they can be adjusted from one side of the valve.

DEEP STUFFING BOXES

Deep stuffing boxes are standard on gate and globe valves. The design provides extra packing for a more reliable stem seal, or sufficient depth for packing with an optional lantern ring in the middle. When equipped with a lantern ring, a tapped and plugged hole is provided; when specified, it can be fitted with an injection fitting.

PRESSURE SEAL DESIGN

The segmental thrusting absorbs all the thrust applied by internal pressure. A hardened Stainless Steel protective ring prevents deformation of the top surface of the soft steel, 304 Stainless or 316 Stainless with a high density graphite gasket. The gasket can be removed freely without damaging the sealing surface of the body.

A single warranty then applies to each modified product, with each product inspected for quality and conformance to our customer's specifications and industry standards.

AVAILABLE MODIFICATIONS FOR VATAC PRESSURE SEAL VALVES

- Gear Operator Mounting
- Trim Changes
- Actuation
- Cryogenic Gas Columns
- Hand Wheel Extensions
- Drilled & Tapped Body/Bonnet Connections
- By-Pass
- Pressure Equalizing
- Acid Shields
- Oxygen & Chlorine Cleaning & Packaging
- Weld End Bore Changes
- Customer Specified Coatings
- Outside Lever and Weight for Check Valves
- Slam Retarders for Check Valves
- Chain Wheel Operator

NDE TESTING AVAILABLE

- Dye Penetrant Test
- Magnetic Particle Test
- Radiography
- PMI (Positive Material Identification)
- API/ANSI Performance Testing

PRESSURE SEAL CAST STEEL GLOBE VALVES

PARTS AND MATERIALS .CLASS 600, 900, 1500 & 2500

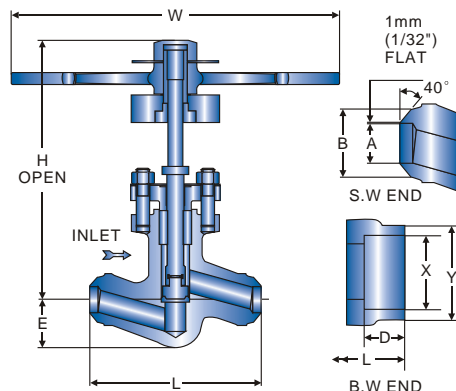
Item	Part Name	WCB	WC6	WC9	C5	C12	CF8M
1	Body	A216-WCB	A217-WC6	A217-WC9	A217-C5	A217-C12	A351-CF8M
2	Bonnet	A216-WCB	A217-WC6	A217-WC9	A217-C5	A217-C12	A351-CF8M
3	Disc	A216-WCB+HF	A217-WC6+HF	A217-WC9+HF	A217-C5+HF	A217-C12+HF	A351-CF8M+HF
4	Stem	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
5	Handwheel	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB	A197 or WCB
6	Body seat Ring	A216-WCB+HF	A217-WC6+HF	A217-WC9+HF	A217-C5+HF	A217-C12+HF	A351-CF8M+HF
7	Backseat	A216-WCB+13Cr	A217-WC6+13Cr	A217-WC9+13Cr	A217-C5+13Cr	A217-C12+13Cr	A351-CF8M
8	Gasket	Soft Steel	304 SS	304 SS	304 SS	304 SS	316 SS
9	Packing	Graphite	Graphite	Graphite	Graphite	Graphite	Graphite
10	Gland Flange	A283 D	A283 D	A283 D	A283 D	A283 D	A351 B8
11	Gland Bolt	A307 B	A307 B	A307 B	A307 B	A307 B	A193 B8
12	Gland Nut	A307 B	A307 B	A307 B	A307 B	A307 B	A193 8
13	Packing Gland	C/S 1020+Cr	A479 410	A479 410	A479 410	A479 410	A479 316
14	Bonnet Bolt	A193 B7	A193 B16	A193 B16	A193 B16	A193 B16	A193 B8
16	Bonnet Nut	A194 2H	A194 4	A194 4	A194 4	A194 4	A194 8
17	Yoke Cap	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020+Cr
18	Yock Sleeve	A439 D2	A439 D2	A439 D2	A439 D2	A439 D2	A439 D2
19	Lock Nut	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
20	Disc Thrust Pad	A479 410	A479 410	A479 410	A479 410	A479 410	A479 410
21	Yoke	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A351-WCB
22*	Yoke Bolt	A193 B7	A193 B7	A193 B7	A193 B7	A193 B7	A193 B7
23*	Yoke Bolt Nut	A194 2H	A194 2H	A194 2H	A194 2H	A194 2H	A194 8
25*	Bonnet Clamp	C/S 1045	C/S 1045	C/S 1045	C/S 1045	C/S 1045	A240 304
26	Retainer	C/S 1045+Cr	A240 304	A204 304	A240 304	A240 304	A240 316
27	Adopter Ring	C/S 1045+Cr	C/S 1045	A204 304	A240 304	A240 304	A240 316
30	Handle Nut	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020+Zn
34	Grease Nipple	Steel	Steel	Steel	Steel	Steel	Steel
35	Stopper	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A351-CF8
36	Stopper Bolt	A307 B	A307 B	A307 B	A307 B	A307 B	A193 B8
38	Set Screw	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020	C/S 1020
39	Bearing	Steel	Steel	Steel	Steel	Steel	Steel
40**	Bonnet Clamp	C/S 1045	C/S 1045	C/S 1045	C/S 1045	C/S 1045	A240 304
41**	Washer	A479 410	A479 410	A479 410	A479 410	A479 410	A479 316
42	Hinge Clamp	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A216-WCB	A351-CF8
44	Gland Clamp Bolt	A307 B	A307 B	A307 B	A307 B	A307 B	A193 B8
45	Gland Clamp Nut	A307 B	A307 B	A307 B	A307 B	A307 B	A194 8

*6" and above. **4" and below. Note: HF reflects hardfaced with Stellite. For other materials, contact your salesperson.

PRESSURE SEALED GLOBE VALVE

- Cast Steel Globe Valve, Outside Screw and York,
- Pressure Sealed, Rising Stem, Plug Disc
- Designed to ASME B16.34

Face to Face	ASME/ANSI B16.10
End Flange	ASME/ANSI B16.5
Buttweld	ASME/ANSI B16.25
Class	ASME/ANSI CL600~CL2500



CLASS 600~2500 DIMENSION

BUTT WELD END

SIZE (in.)	A	B	L	H	E	W	W.T(lbs)
Unit: inch							
1/2	0.500	1.125	5.50	8.750	1.50	6	11
3/4	0.781	1.375	5.50	8.750	1.50	6	11
1	1.000	1.656	7.875	13.250	2.375	13	29
1 1/4	1.250	2.250	7.875	13.250	2.375	13	29
1 1/2	1.500	2.625	9.875	14.750	2.750	21	44
2	1.844	3.375	11.812	16.500	3.563	26.750	110

CLASS 600~2500 DIMENSION

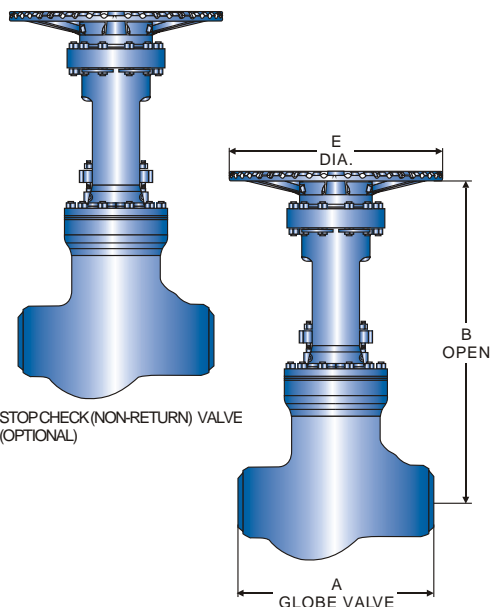
SOCKET WELD END

SIZE (in.)	X	Y	L	H	E	W	W.T(lbs)
Unit: inch							
1/2	1.750	0.855	5.50	8.750	1.50	6	11
3/4	1.750	1.065	5.50	8.750	1.50	6	11
1	2.562	1.330	7.875	13.250	2.375	13	29
1 1/4	2.562	1.675	7.875	13.250	2.375	13	29
1 1/2	2.937	1.915	9.875	14.750	2.750	21	44
2	4.125	2.406	11.812	16.500	3.563	26.750	110

PRESSURE SEALED GLOBE VALVE

- Cast Steel Globe Valve, Outside Screw and York,
- Pressure Sealed, Rising Stem, Plug Disc
- Designed to ASME B16.34

Face to Face	ASME/ANSI B16.10
End Flange	ASME/ANSI B16.5
Buttweld	ASME/ANSI B16.25
Class	ASME/ANSI CL600~CL2500



CLASS 600 DIMENSION

SIZE(in.)	2-1/2	3	4	6	8	10	12	14	16	18	20	24	Unit: inch
A	8.50	10.00	12.00	18.00	23.00	28.00	32.0	35.00	39.00	43.00	47.00	55.00	
B	23	25	28	33.50	44	49	53	62	70	78	85	98	
E	12	12	14	18	20	24	30	30	34	34	38	30IHW	
W.T(lbs)	71	75	135	285	520	885	1425	1780	2640	3100	4200	5200	

CLASS 900 DIMENSION

SIZE(in.)	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24	Unit: inch
A	8.50	10.00	12.00	14.00	20.00	26.00	31.00	36.00	39.00	43.00	48.00	52.00	55.00	
B	23	24	28	31	37	46	51	55	65	76	80	88	95	
E	12	14	14	18	20	24	30	30IHW	30IHW	30IHW	38IHW	38IHW	38IHW	
W.T(lbs)	70	95	105	160	430	850	1200	1850	2625	3130	3800	4600	6400	

CLASS 1500 DIMENSION

SIZE(in.)	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24	Unit: inch
A	8.50	10.00	12.00	16.00	22.00	28.00	34.00	39.00	42.00	47.00	53.00	58.00	58.00	
B	23	24	28	31	37	47	52	58	65	75	80	88	95	
E	12	14	14	18	20	24	30	30IHW	30IHW	38IHW	38IHW	38IHW	38IHW	
W.T(lbs)	70	95	105	160	450	880	1750	2650	38.00	4730	5800	7900	10200	

CLASS 2500 DIMENSION

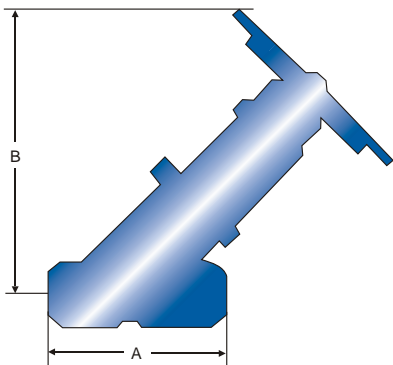
SIZE(in.)	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24	Unit: inch
A	11	13.00	14.50	18.00	24.00	30.00	36.00	41.00	44.00	49.00	55.00	58.00	58.00	
B	24	26	26	33	39	51	53	61	70	79	87	96	105	
E	14	18	18	20	24	30	30IHW	30IHW	30IHW	38IHW	38IHW	38IHW	38IHW	
W.T(lbs)	130	140	150	235	530	1150	1980	3140	4730	6650	7400	9800	12900	

I.H.W: IMPACTOR HANDWHEEL

Y PATTERN PRESSURE SEALED GLOBE VALVE

- Cast Steel Globe Valve, Y Pattern,
- Outside Screw and York, Rising Stem
- Pressure Sealed, , Plug Disc
- Designed to ASME B16.34, BS1873

Face to Face	ASME/ANSI B16.10
End Flange	ASME/ANSI B16.5
Buttweld	ASME/ANSI B16.25
Class	ASME/ANSI CL900~CL2500



CLASS 900/1500 DIMENSION

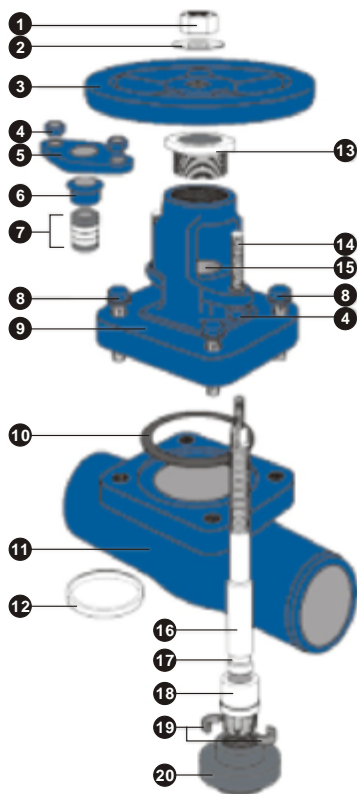
SIZE (in.)	2-1/2	3	4	6	8	10	12	14	16	18	20	24	Unit:inch
A	14.50	14.50	16.00	27.75	30.00	36.25	43.00	43.00	54.00	58.00	55.00	59.50	
B	25.25	25.25	25.25	37.00	46.00	50.00	60.00	60.00	74.00	74.00	78.00	95.00	
W.T (lbs)	225	225	275	800	1750	2375	3375	3375	7500	7500	10000	13600	

CLASS 2500 DIMENSION

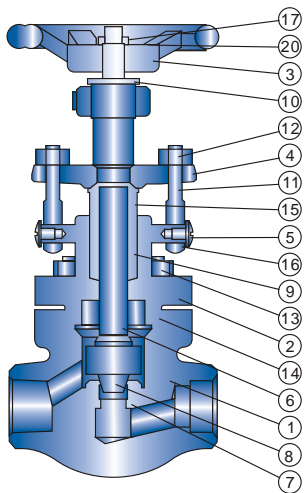
SIZE (in.)	2-1/2	3	4	6	8	10	12	14	16	18	20	Unit:inch
A	14.50	14.50	18.00	24.00	30.00	36.00	41.00	48.75	48.75	58.00	58.00	
B	25.25	25.25	25.25	39.00	45.00	50.00	55.00	55.00	61.00	78.00	78.00	
W.T (lbs)	225	225	275	935	1800	3000	5100	5100	7000	12000	12000	

VATAC FORGED STEEL GLOBE VALVE EXPANDED VIEW

1. Handwheel Nut: The handwheel nut secures the handwheel to the bonnet assembly.
2. Handwheel Washer: The washer helps to prevent loosening.
3. Handwheel: The handwheel cycles the valve.
- 4 & 14. Gland Bolts & Nuts: The gland bolt and nut allows for easy adjustments for packing compression.
5. Gland Flange: Applies pressure to the gland for accurate packing compression.
6. Gland: Compresses the packing to create a stem seal above the back seat, between the bonnet and stem.
7. Packing: The packing creates a seal above the back seat, between the bonnet and stem.
8. Bonnet Bolts: The bonnet bolts secure the bonnet to the body.
9. Bonnet: Vatac bonnet assemblies are built to the same standards as the bodies.
10. Bonnet Gasket: The bonnet gasket creates a leakproof seal between the bonnet and body.
11. Body: Vatac forged steel bodies provide low resistance flow and optimum strength and performance.
12. Seat Ring: To ensure a stable shutoff, the seating is aligned into the valve, then precision ground for optimal seating.
13. Stem Nut: The stem nut provides a precision guide for proper stem alignment.
15. Stuffing Box: The stuffing box contains the packing.
16. Stem: The stem inserts vertically into the disc.
17. Lock Groove: The lock groove receives the split lock ring which allows the disc nut to lift the disc during cycling.
18. Disc Nut: The disc nut, in conjunction with the split lock ring, secures the disc to the stem.
19. Split Ring: The split ring allows the disc nut to lift the disc during cycling.
20. Disc: Vatac plug type disc is machined to the tightest tolerances to ensure trouble free shutoff and cycling.



BOLTED & WELDED BONNET • CLASS 150, 300, 600, 800, 1500 & 2500



No.	Part	Material
1	Body	ASTM A105N Carbon Steel
2	Bonnet	ASTM A105N Carbon Steel
3	Handwheel	Carbon Steel
4	Gland Flange	ASTM A105 Carbon Steel
5	Eyebolt Screws	Zinc Plated Carbon Steel
6	Stem	ASTM A182 F6 Alloy Steel
7	Seat	ASTM S182 F6/Stellite 6 Facing
8	Disc	ASTM A182 F6 Alloy Steel
9	Packing	Graphite Stack
10	Yoke Nut	AISI Type 416 Stainless Steel
11	Eyebolts	ASTM A193 B8 Stainless Steel
12	Eyebolt Nuts	ASTM A194 2HM Carbon Steel
13	Cap Screws	ASTM A193 B7M Alloy Steel
14	Gasket	316 SS Spiral Wound Grafoil
15	Packing Gland	AISI Type 416 Stainless Steel
16	Lock Nut Washer	Stainless Steel
17	Handwheel Nut	Carbon Steel
20	Name Plate	Stainless Steel

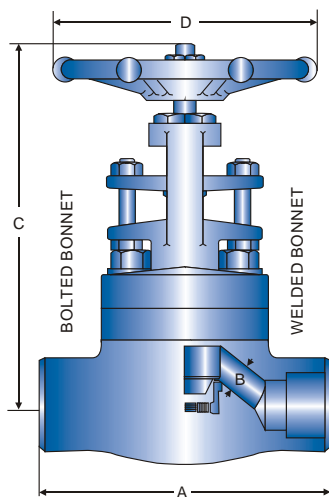
VATAC FORGED VALVES ARE MANUFACTURED IN STRICT ACCORDANCE WITH THE FOLLOWING STANDARDS:

API602	Compact steel gate valves
API598	Valve Inspection and Test
ANSI/ASME B16.34	Steel valve, flanged and butt-welding end
ANSI/ASME B16.5	Steel pipe flanges and flanged fittings
ANSI/ASME B16.10	Face-to-face and end-to-end dimensions of ferrous valves
ANSI/ASME B 16.11	Forged steel fittings, socket welding and threaded
ANSI/ASME B 1.20.1	Pipe threads, general purpose
ANSI/ASME B31.3	Chemical plant and petroleum refinery piping
MSS-SP-25	Standard marking system for valves, fittings, flanges and unions
MSS-SP-6	Standard finishes for contact faces of pipe, flanges and connecting end flanges of valves and fittings
NACE MR-01-75	Material requirements: Sulfide stress cracking resistant metallic materials for oil field equipment.

FORGED STEEL GLOBE VALVE

- Forged Steel Globe Valve, Outside Screw and York,
- Bolted, Welded & Union Bonnet, Rising Stem
- Threaded, Socketed, Buttwelded Ends
- Conventional Ports
- Designed to API 602

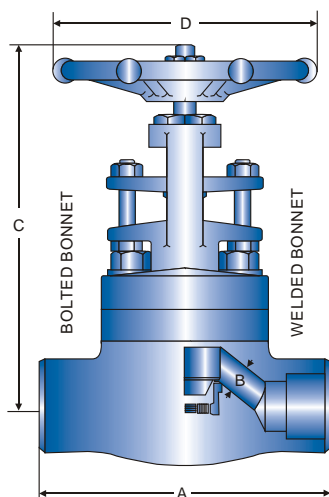
Face to Face	VATAC Standard
Pipe Threads, G.P	ASME B1.20.1
Threaded Ends	ASME B16.11
Buttweld	ASME B16.25
Class	ASME CL800/1500



FORGED STEEL GLOBE VALVE

- Forged Steel Globe Valve, Outside Screw and York,
- Bolted, Welded & Union Bonnet, Rising Stem
- Threaded, Socketed, Buttwelded Ends
- Conventional Ports
- Designed to API 602

Face to Face	VATAC Standard
Pipe Threads, G.P	ASME B1.20.1
Threaded Ends	ASME B16.11
Buttweld	ASME B16.25
Class	ASME CL2500



CLASS 800 DIMENSION CLASS 800 WB

SIZE (in.)	A	B	C	D	W.T (lbs)
					Unit: inch
1/2	3.2	0.35	6.3	3.2	4
3/4	3.5	0.49	6.7	3.2	4.4
1	4.3	0.68	7.9	3.9	7.3
1-1/4	5	0.88	9.3	4.7	11.9
1-1/2	6.1	1.15	9.3	5.5	17.4
2	6.7	1.37	11.4	6.7	23.8

CLASS 800 DIMENSION CLASS 800 BB

SIZE (in.)	A	B	C	D	W.T (lbs)
					Unit: inch
1/2	3.2	0.35	6.3	3.2	4
3/4	3.5	0.49	6.7	3.2	4.4
1	4.3	0.68	7.9	3.9	7.3
1-1/4	5	0.88	9.3	4.7	11.9
1-1/2	6.1	1.14	9.3	5.5	17.4
2	6.7	1.37	11.4	6.7	23.8

CLASS 1500 DIMENSION CLASS 1500 WB

SIZE (in.)	A	B	C	D	W.T (lbs)
					Unit: inch
1/2	3.5	0.35	6.5	3.2	4.2
3/4	4.3	0.43	7.7	4.7	7
1	4.7	0.57	9.3	5.5	12.1
1-1/4	5.1	0.75	10.4	5.5	17.6
1-1/2	6.7	1.06	11	5.5	24.2
2	8.3	1.22	13.2	6.7	29.6

CLASS 1500 DIMENSION CLASS 1500 BB

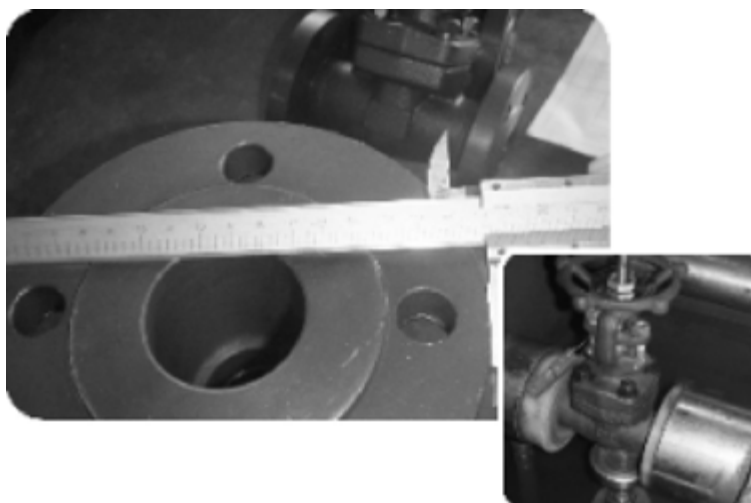
SIZE (in.)	A	B	C	D	W.T (lbs)
					Unit: inch
1/2	3.5	0.35	6.5	3.2	4.4
3/4	4.3	0.43	7.7	4.7	7.3
1	4.7	0.57	9.1	5.5	12.1
1-1/4	5.1	0.75	10.2	5.5	19.8
1-1/2	6.7	1.06	11.2	6.7	26.4
2	8.3	1.22	13	6.7	39.6

CLASS 2500 DIMENSION CLASS 2500 WB

SIZE (in.)	A	B	C	D	W.T (lbs)
					Unit: inch
1/2	4.3	0.43	7.7	4.7	8.6
3/4	4.7	0.55	8.9	5.5	14.1
1	5.1	0.75	10	5.5	19.9
1-1/4	8.3	0.94	12.8	6.7	44
1-1/2	8.3	11	13	6.7	48.4
2	9.5	1.42	14.6	10.2	61.6

CLASS 2500 DIMENSION CLASS 2500 BB

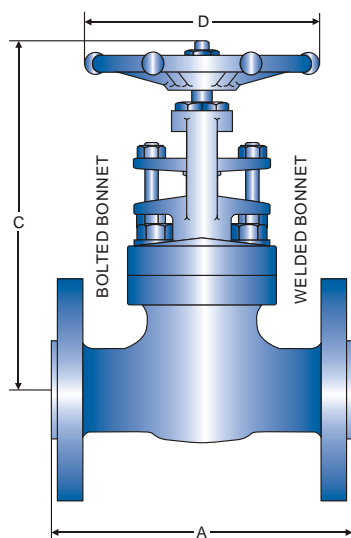
SIZE (in.)	A	B	C	D	W.T (lbs)
					Unit: inch
1/2	4.3	0.43	10.6	4.7	11
3/4	4.7	0.55	10.8	5.5	17.6
1	5.1	0.75	11.4	5.5	23.5
1-1/4	8.3	0.94	15.4	6.7	52.8
1-1/2	8.3	11	16.3	10.2	70.4
2	9.5	1.42	16.7	10.2	81.4



FORGED STEEL FLANGED GLOBE VALVE

- Forged Steel Globe Valve, Outside Screw and York,
- Bolted, Welded & Union Bonnet, Rising Stem
- Flanged Ends, Conventional Ports
- Designed to API 602

Face to Face	ASME/ANSI B16.10
Pipe Threads, G.P	ASME B1.20.1
Threaded Ends	ASME B16.11
Buttweld	ASME B16.25
Class	ASME CL150~CL1500



CLASS 150 DIMENSION

CLASS 150 BB&WB

SIZE (in.)	A	B	C	D	W.T (lbs)
Unit: inch					
1/2	4.25	0.39	5.2	5.20	9.9
3/4	4.63	0.39	5.4	5.80	15.2
1	5.00	0.69	7	7.20	21.6
1-1/4	-	0.9	8.3	-	29.7
1-1/2	6.50	1.18	8.4	9.20	42.9
2	8.00	1.46	10.3	10.50	61.6

CLASS 300 DIMENSION

CLASS 300 BB&WB

SIZE (in.)	A	B	C	D	W.T (lbs)
Unit: inch					
1/2	6.00	0.39	5.2	3.9	10.6
3/4	7.00	0.39	5.4	3.9	16.9
1	8.00	0.69	7	4.9	24.2
1-1/4	-	0.9	8.3	-	37
1-1/2	9.00	1.18	8.4	6.3	48.8
2	10.5	1.46	10.3	7.1	71.7

CLASS 600 DIMENSION

CLASS 600 BB&WB

SIZE (in.)	A	B	C	D	W.T (lbs)
Unit: inch					
1/2	6.50	0.39	5.2	3.15	12.3
3/4	7.50	0.39	5.4	3.15	17.2
1	8.50	0.69	7	3.94	27.5
1-1/4	-	0.9	8.3	-	37.4
1-1/2	9.51	1.18	8.4	5.51	51.7
2	-	1.46	10.3	5.51	85.4

CLASS 1500 DIMENSION

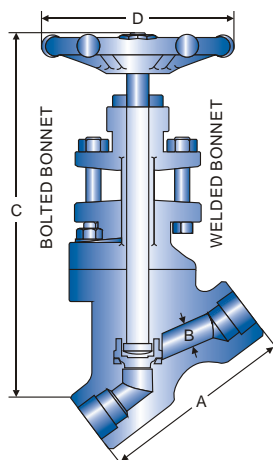
CLASS 1500 BB&WB

SIZE (in.)	A	B	C	D	W.T (lbs)
Unit: inch					
1/2	3.15	0.39	8.1	3.15	4.4
3/4	3.54	0.51	8.1	3.15	8.4
1	4.33	0.66	9.4	3.94	9.3
1-1/4	4.99	0.9	10.2	4.72	17.6
1-1/2	6.10	1.18	11.4	5.51	29.1
2	14.5	1.49	13.3	5.51	37

FORGED STEEL Y PATTERN GLOBE VALVE

- Forged Steel Globe Valve, Outside Screw and York,
- Bolted, Welded & Union Bonnet, Rising Stem
- Threaded, Socketed, Buttwelded Ends
- Y Pattern, Conventional Ports
- Designed to API 602

Face to Face	VATAC Standards
Pipe Threads, G.P	ASME B1.20.1
Threaded Ends	ASME B16.11
Buttweld	ASME B16.25
Class	ASME CL800~CL2500



CLASS 800 DIMENSION

SIZE (in.)	A	B	C	D	W.T (lbs)
Unit: inch					
1/2	3.6	0.39	7.5	3.7	4.4
3/4	3.6	0.51	7.5	3.7	4.4
1	4.4	0.69	9.3	4.3	9
1-1/4	6	0.94	11.2	5.5	19.8
1-1/2	6	1.22	11.2	5.5	19.8
2	6.8	1.46	12.8	6.7	30.4

CLASS 1500 DIMENSION

SIZE (in.)	A	B	C	D	W.T (lbs)
Unit: inch					
1/2	3.9	0.51	7.3	3.9	6.6
3/4	4.3	0.69	9.1	5.5	8.8
1	4.9	0.89	9.4	5.5	11
1-1/4	5.9	1.1	12	6.7	20.9
1-1/2	6.3	1.38	13.4	7.9	24.2
2	7.5	1.73	15.7	10.2	37.4

CLASS 2500 DIMENSION

SIZE (in.)	A	B	C	D	W.T (lbs)
Unit: inch					
1/2	3.9	0.47	9.1	4.7	8.8
3/4	4.9	0.59	9.4	5.5	11
1	6.3	0.79	12	6.7	20.9
1-1/4	6.3	0.98	12	6.7	23.1
1-1/2	7.5	1.22	13.6	7.9	37.4
2	8.3	1.49	15.7	10.2	50.6

FORGED STEEL CVVALUES GATES, GLOBES, CHECKS

Vatac	NPS	150 - 800	150 - 800	1500	1500	2500
Forged		Full Bore	Reduced Bore	Full Bore	Reduced Bore	Full Bore
Gate Valves	1/2	12	6	13	6	5
	3/4	23	10	24	11	12
	1	43	26	44	27	23
	1-1/4	57	44	59	45	43
	1-1/2	98	65	100	66	56
	2	200	103	*	99	97

Vatac	NPS	800	1500	2500
Forged				
Y-Pattern	1/2	5	5	3
Globe Valves	3/4	11	11	6
	1	14	15	12
	1-1/4	-	-	-
	1-1/2	37	35	27
	2	68	68	36

Vatac	NPS	150 - 800	150 - 800	1500	1500
Forged		Full Bore	Reduced Bore	Full Bore	Reduced Bore
Lift Check	1/2	3	1	3	2
Valves	3/4	5	3	6	3
	1	11	6	11	5
	1-1/4	-	-	-	-
	1-1/2	18	15	19	11
	2	32	18	22	19

Vatac	NPS	150 - 800	150 - 800	1500	1500
Forged		Full Bore	Reduced Bore	Full Bore	Reduced Bore
Globe Valves	1/2	3	2	3	2
	3/4	6	4	6	3
	1	12	6	12	6
	1-1/4	15	10	-	-
	1-1/2	21	18	20	16
	2	38	22	24	20

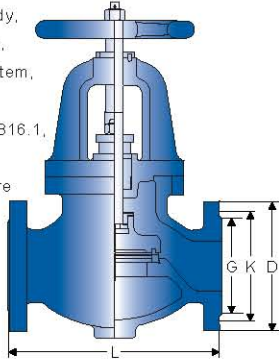
Vatac	NPS	150 - 800	150 - 800	1500	1500
Forged		Full Bore	Reduced Bore	Full Bore	Reduced Bore
Swing Check	1/2	5	4	-	-
Valves	3/4	12	6	-	-
	1	17	13	-	-
	1-1/4	26	18	-	-
	1-1/2	54	28	-	-
	2	101	55	-	-

Vatac	NPS	800	1500	2500
Forged				
Y-Pattern	1/2	4	4	3
Lift Check	3/4	11	11	6
Valves	1	13	14	12
	1-1/4	-	-	-
	1-1/2	36	34	27
	2	67	67	36

Table Applies to Both Piston and Ball Check Valves

ANSI GLOBE VALVE

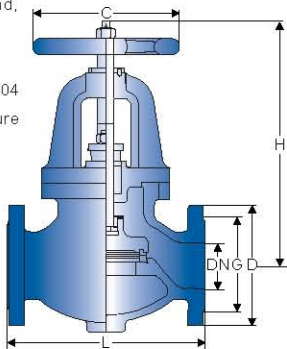
- Cast or Ductile Iron Body, Bonnet, Disc and Gland,
- Metal Seated, Rising Stem, Bolted Bonnet,
- Flanged Ends to ANSI B16.1, CL125, B16.5 CL150
- Design and Manufacture to ANSI



Face to Face	ANSI B16.10
End Flange	ANSI B16.1 CL125, ANSI B16.5 CL150
Class	ANSI 125, ANSI 150

BS5152 GLOBE VALVE

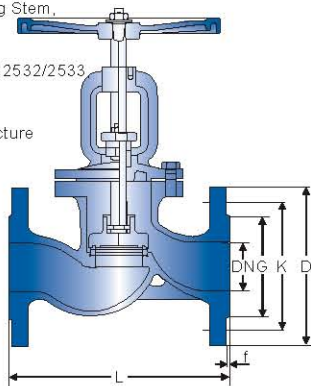
- Cast or Ductile Iron Body, Bonnet, Disc and Gland,
- Metal Seated, Rising Stem, Bolted Bonnet,
- Flanged Ends to BS4504
- Design and Manufacture to BS5152



Face to Face	BS5152
End Flange	BS4504, EN1092
Class	PN10/16

DIN3202 F1 GLOBE VALVE

- Cast or Ductile Iron Body, Bonnet, Disc and Gland,
- Metal Seated, Rising Stem, Bolted Bonnet,
- Flanged Ends to DIN2532/2533, BS EN1092
- Design and Manufacture to DIN 3202 F1



Face to Face	DIN3202 F1
End Flange	DIN2532/2533, BS EN1092
Class	PN10/16

50 ≤ DN ≤ 250 f=3mm; DN ≥ 300 f=4mm

SIZE (in.)	2"	2-1/2"	3"	4"	5"	6"	8"	10"	12"
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Unit: mm

L	203	216	241	292	330	356	495	622	698
D	152	178	191	229	254	279	343	406	483
K	121	140	152	191	216	241	298	362	432
G	92	105	127	157	186	213	270	324	381
HOLE NO.	4	4	4	8	8	8	8	12	12
HOLE DIA.	19	19	19	19	22	22	22	25	25
W.T(KG)	17	24	32	55	61	96	136	178	255

SIZE (DN)	50	65	80	100	125	150	200
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Unit: mm

L	203	216	241	292	330	356	495
D	165	185	200	220	250	285	340
C	203	203	254	254	305	305	356
G	102	122	138	158	188	212	268
H	273	298	311	352	375	425	514
HOLE NO.	4	4	8	8	8	8	12
HOLE DIA.	18	18	18	18	18	22	22
W.T(KG)	17	24	32	55	61	96	136

SIZE (DN)	L	D		K		G		n-Φd		W.T (Kg)
		PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16	

Unit: mm

50	230	165	165	125	125	102	102	4-18	4-18	18
65	290	185	185	145	145	122	122	4-18	4-18	25
80	310	200	200	160	160	138	138	4-18	8-18	34
100	350	220	220	180	180	158	158	8-18	8-18	57
125	400	250	250	210	210	188	188	8-18	8-18	64
150	480	285	285	240	240	212	212	8-23	8-23	101
200	600	340	340	295	295	268	268	8-23	12-23	143
250	730	395	405	350	355	320	320	12-23	12-27	185
300	850	445	460	400	410	370	378	12-23	12-27	265