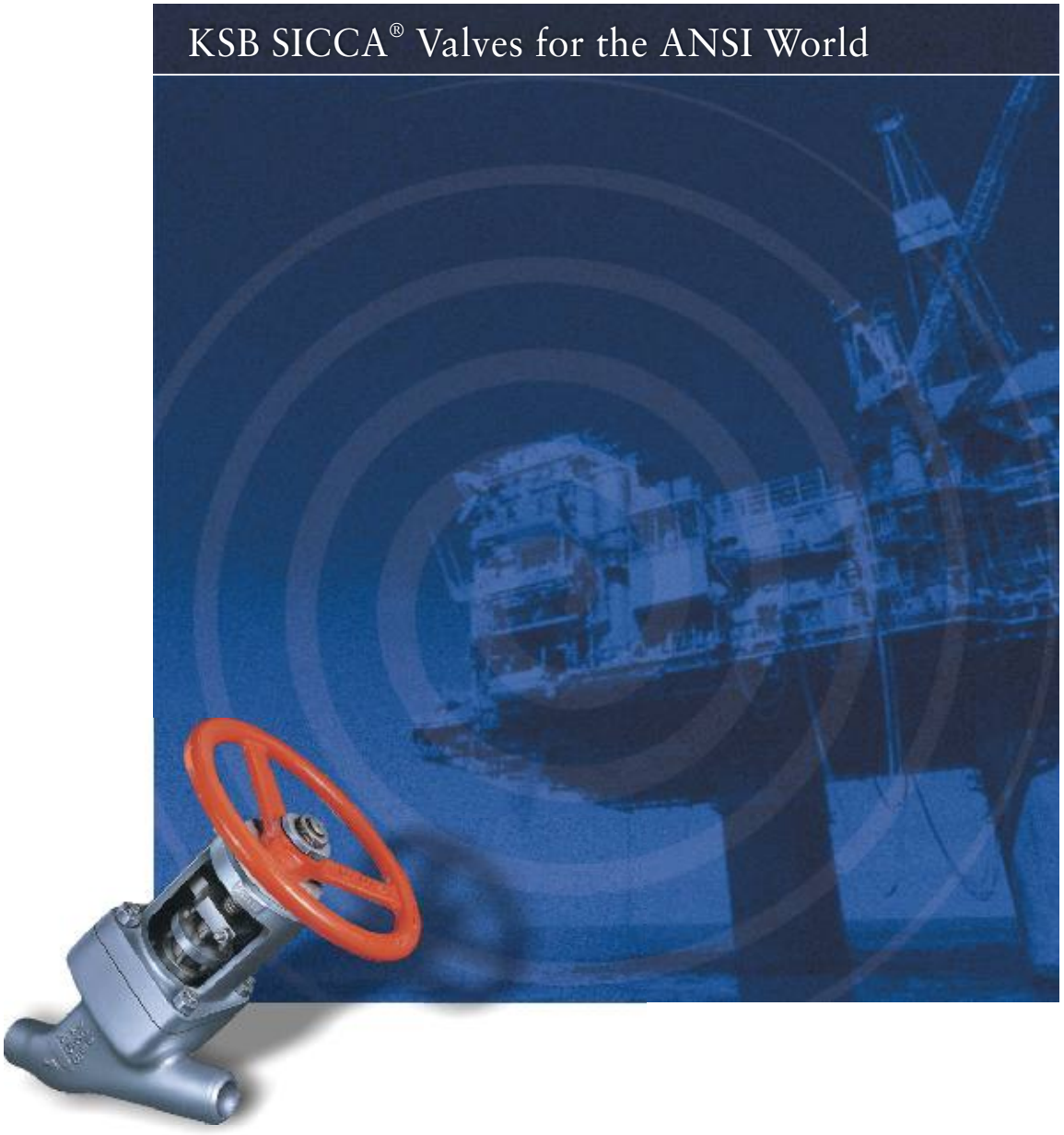
KSB SICCA® Valves for the ANSI World



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For all valves use operating instructions no. S500.80/01-18 G3

KSB Impetus

A catalyst for prosperity

Fluid, a force concealing an unrealised potential to animate or inanimate the subordinate elements, is one of the most turbulent forces of nature. Whenever there aries a need to harness this vibrant energy, KSB provides the ultimate technology. Wherever the task, whatever the expectations, KSB yields a free flow of solutions. Right from transportation and distribution of water, waste water and industrial fluids, to thermal and air conditioning problems... KSB regulates every element to perfection, economically, efficiently and reliably. A technology leader offering total fluid dynamics and handling solutions, KSB specialises in high-quality customer care. Support that is extended through consultation, planning, installation, maintenance and round the clock back-up. Committed to technological progress, KSB works closely with academic and industrial research partners located around the globe. An international conglomerate today, KSB specialises in customising products, systems, services and solutions to conquer the most dynamic, elemental force in the world.

KSB Milestones

Superlative success over the years

In 1871, Johannes Klein received a Belgian patent for his boiler feed apparatus; and the seeds of a revolution in pump and valve technology were sown. Since its inception in Frankenthal, in 1871, KSB has been a saga of success and glory.

Some Milestones in Valve Technology

1871 : Commencement of valve production in Germany.

1921 : The first patent of surface improvement of mild steel through weld deposition of Stainless Steel

1922 : Development of acid resisting special alloy steel called Thermisilid together with Krupp for captive consumption by KSB. This became subsequently known in the industry under the nomendclature V2A and V4A.

1928 : The first patent on hard faced valve body seats. This paved the way for stelliting of valve seats to become a norm for all reputed valve manufacturers.

1929 : The patent for development of full flow 'Y' type Globe valve with very low flow resistance at 100 bar pressure and 500^{0}C.

1937 : Development of the first BOA Globe Valve.

1940 : Development of Silicon valves for sulphuric acid.

1955 : '56 Development of Ship-side valves of sizes 16" & 32" manufactured for the first time in nodular Cast Iron with approvals from Bureau Veritas, Det Norske Veritas and Lyold's Registrar.

1957 : Development of Bellow-seal valves for 160 bar pressure.

1963 : Radial Gate valve patented jointly with M/s Siemens with flow resistance of a gate valve and closing time of Globe valve.

1966 : Isolation valves of sizes 20" & 24" with spring loaded actuators, with a closing time of 3 to 5 seconds.

1968 : Bellow-seal valves with ceramic seat and disc for handling uranium suspension.

1973 : Development of the first Bellow-sea,l valve BOA - H for building services and steam applicationPN 16 - 40.

1974 : The first high temperature Gate and Globe valves for steam at 650 0C in ATS Steel (16 % Cr / 16% Ni).

1983 : 32" Globe valve medium controlled (stam) weighing 27.5 tons with an amazing closing time of 5 seconds for nuclear application, designed for 'g' value of 6 and the body machined out of a single piece forging weighing 100 tons.

1987 : Start of ANSI-valve production in Coimbatore (India).

1989 : Acquisition of AMRI Butterfly valves in La Roche Chalais (France), one of the leading Butterfly valve manufacturers in the world. The first valve in the world with oval seats - the BOA-Compact range.

1998 : BOA - Super Compact Globe Valve with end-to-end dimension equal to diameter, driven by the urge to serve the customer with the best in technology.

1999 : BOA Control IMS the first balancing valve with integrated sensor.

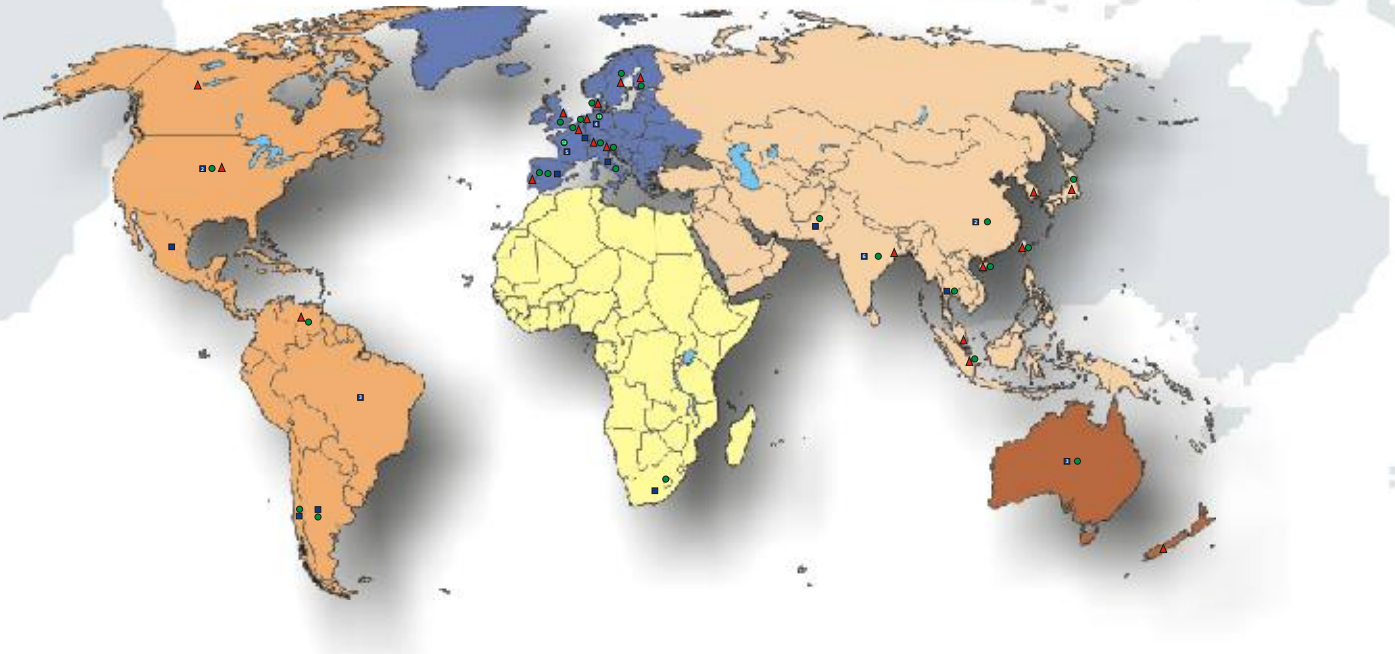
And the spirit of innovation lives on...

Frankenthal,1871 : Johannes Klein, Friedrich Schanzlin and August Becker set up a company called Klein, Schanzlin & Becker and KSB was born.

KSB Universe

Thriving through global proximity

The world is a small place and it is even smaller and simple where KSB is a part of life. KSB enjoys global leadership established by complete customer satisfaction, high level of competency and excellent Research and Development. The company has an international structure that brings about a free flow of products, services and staff, accessible through convenient product sites, offices or service centres at any point of time. Today, KSB has its presence in over 100 countries, with sales organisations, offices and 30 manufacturing sites. A dedicated team of more than 12,800 employees extend their services to clients in Europe, Asia, Australia, Africa and America. So whether it is a water treatment plant in Istanbul or an oil industry in Sãb Paulo or a power station in China, KSB solutions are available to ascertain the smooth flow of any project.



■ Production plants ▲ Sales offices ● Service activities

Valves on the fast track

The valves programme got a shot in the arm on 1st January, 1997 with the formation of a partially autonomous ''Valves'' unit. The valves unit includes the German KSB Armaturen GmbH, founded at the start of the year. It also covers the AMRI valves division of KSB S.A. in France and SISTO Armaturen S.A. in Luxembourg.

A multinational team of design engineers from KSB Armaturen GmbH, KSB Pumps Limited, India and MIL Controls Limited, KSB's control valve manufacturer in India, have developed an extensive range of ANSI gate, globe and check valves made of carbon steel conforming to ASTM valve material standards. These global products are designed to cater to the requirements of customers in industry, oil and gas, chemicals and power engineering applications.

Today, KSB offers a full range of isolating, non-return and regulating globe valves, butterfly valves, swing check valves, gate valves, diaphragm valves, strainers, as well as actuated valves and control valves. Valves are available in the nominal diameter spectrum from DN 8 to DN 3200 to cover operating pressures of up to 600 bar and service temperatures from -200^{0}C to 650^{0}c.

Works at Pegnitz

DN 300/250 PN 63Gate valve with pneumatic Actuator under testing

Painting of NORI 320 Globe valve

Potential extraordinaire

Coimbatore Valves Division

Horizontal Machining Centre

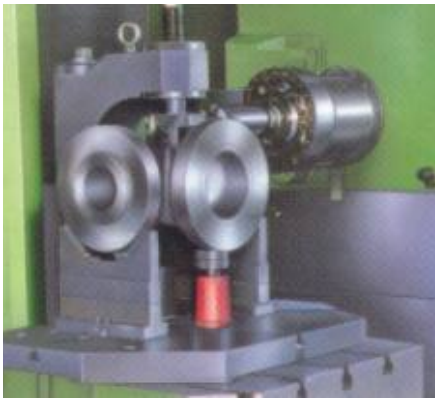
Test Rig

KSB Competence

Energy keeps the world on the move KSB gives it a proper flow. Established in 1987, the well equipped Coimbatore plant manufactures SICCA® range - Cast and Forged Steel Gate, Globe, Check valves and a range of Ball and Butterfly valves for customer in Thermal Power, Fertilizer, Petrochemical, Refinery and a host of Process Plants. spread over an area of 32,000 sq.m. and furnished with the latest manufacturing and testing facilities, KSB Coimbatore, identified as a Competence Centre, is the prime source of ANSI valves today for meeting the exacting needs of KSB customers world wide. An ISO 9001 organisation, KSB believes in more partnership, more knowledge and more service. The proof of this belief is its partnership with KSB-AMRI, France, for the production and supply of Centred Disc Rubber Lined Butterfly valves to the world market.

Valves assembly and testing bay

Plasma transferred arc welding



Body machining on Machining Centre

Pressure Seal Valves

Pressure Seal Gate Valve

SICCA® 900-2500

Type GTC

Applications

- Power stations, general industry, process engineering
- For water, steam, gas, oil & other non-agressive media
- Further applications on request

Operating Data

- Pressure up to 439 bar (6250 PSI)
- Temperature up to +593°C/1100°F
- Pressure-temperature ratings as per ASME B 16.34, Special class

Materials

ANSI Special class (as per ASME B 16.34)

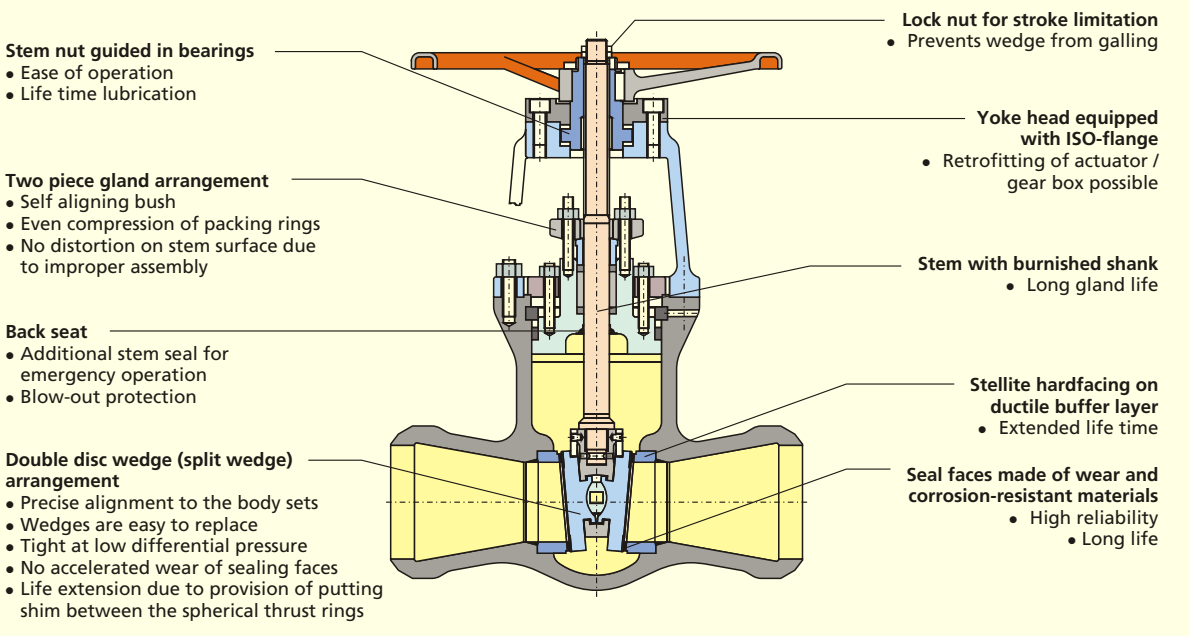
- # 900/1500/2500 - A 216 WCB from 0°C to 425°C
- # 900/1500/2500 - A 217 WC6/WC9 from 0°C to 593°C
- # Other materials on request

Design

- As per ASME B 16.34
- Pressure Seal Bonnet Design
- Stellite hard-faced Seats & Disc surface
- Graphite gaskets & packings with Braided wiping rings
- Direct retrofitting of Actuator
- Double disc wedge design

Variants on Request

- By-pass execution
- Actuator execution / Gear execution
- Bonnet pressure relief execution
- Position indicator
- Locking arrangement
- Other materials
- Other executions



Flow Seal

- Fully stellited Body & Disc seats
- Seat rings - seal welded to body
- Lapped Seat & Disc faces for leak tightness
- Streamlined flow path ensures minimum pressure drop

Disc Design

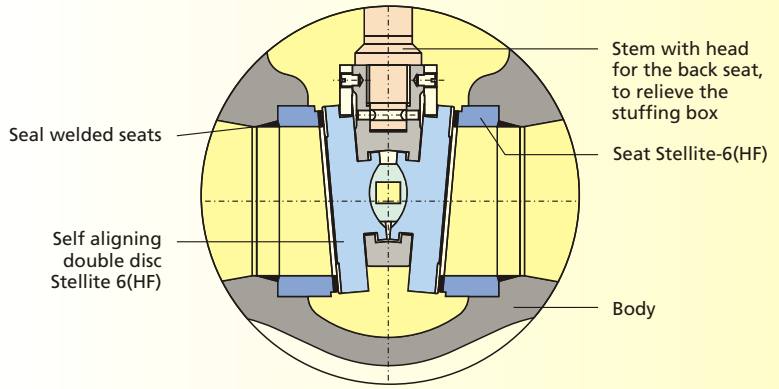
- Self aligning double disc arrangement ensures perfect seating
- Wedging action ensures leak tightness
- Leak tightness at low & high differential pressure
- Extended wedge wear life by possibility of shim addition

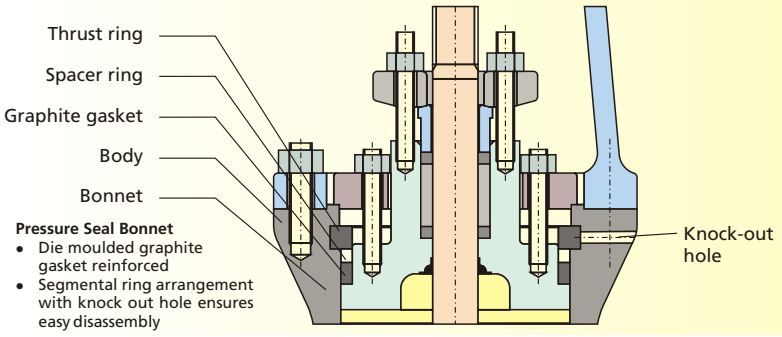
Stem Wedge Connection

- Strong stem-disc joint capable of withstanding higher operating forces

Pressure Seal Bonnet

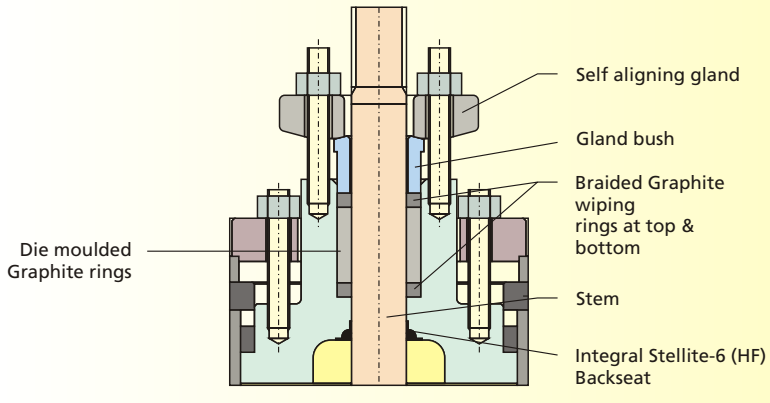
- Die moulded graphite gasket with reinforcement
- Segmental ring arrangement with knock out hole ensures easy disassembly

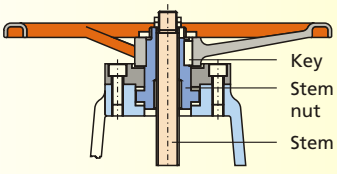




Gland Seal

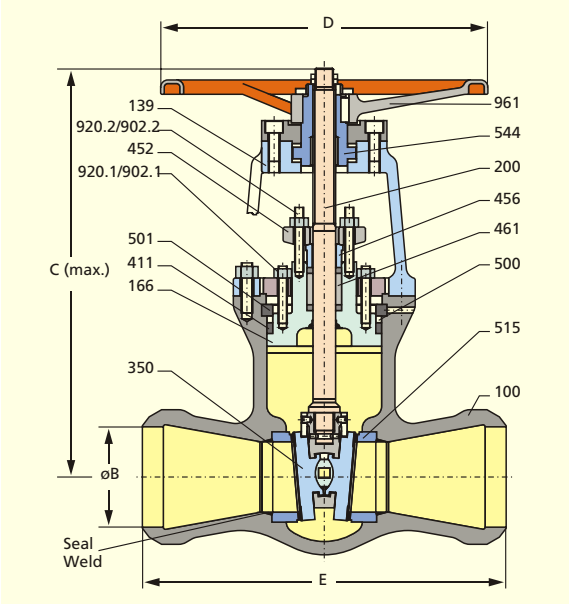
- Die moulded graphite rings ensures effective sealing to atmosphere
- Top & bottom rings are braided graphite
- Braided rings offer smooth wiping action thereby arresting graphite depletion
- Smooth finished & polished stem and smooth stuffing box surfaces improve gland sealing life
- Two piece self aligning gland bolting arrangement
- Integral hard faced back seat for maximum service life





Mount Actuator with non-thrust base.
Type `E' or `B' after removing handwheel.

Retrofitting of Actuator



Design Specifications

General valve design & pressure, temperature rating	:	ASME B 16.34 Special class
Butt weld end design	:	ASME B 16.25
End to end dimension	:	ASME B 16.10
Testing	:	API 598

Dimensions

Class 900		2"	3"	4"	6"	8"	10"	12"
E	Inch	8.5	12.0	14.0	20.0	26.0	31.0	36.0
	mm	215.9	304.8	355.6	508.0	660.4	787.4	914.4
ØB*	Inch	1.9	2.9	3.6	5.5	7.2	9.1	10.8
	mm	48.0	73.5	92.0	140.0	182.5	230.0	273.0
C (max.)	Inch	15.7	15.7	22.4	23.4	31.5	38.6	46.5
	mm	400.0	400.0	570.0	595.0	800.0	980.0	1180.0
ØD	Inch	10.0	10.0	14.0	18.0	18.0	24.0	24.0
	mm	254.0	254.0	356.0	457.0	457.0	610.0	610.0

* Schedule 80 up to 3". Schedule 120 for 4" and above.
Alternate schedule on request.

Class 1500		2"	3"	4"	6"	8"	10"	12"
E	Inch	8.5	12.0	16.0	22.0	28.0	34.0	39.0
	mm	215.9	304.8	406.0	559.0	711.0	865.0	991.0
ØB*	Inch	1.7	2.6	3.43	5.2	6.8	8.5	10.1
	mm	43.0	66.5	87.5	132.0	173.0	216.0	257.0
C (max.)	Inch	18.9	17.7	18.3	24.0	34.3	39.8	46.9
	mm	480.0	450.0	465.0	610.0	870.0	1011.0	1190.0
ØD	Inch	10.0	10.0	14.0	18.0	24.0	24.0	24.0
	mm	254.0	254.0	356.0	457.0	610.0	610.0	610.0

* Schedule 160. Alternate schedule on request.

Class 2500		2"	3"	4"	6"	8"	10"	12"
E	Inch	11.0	14.5	18.0	24.0	30.0	36.0	41.0
	mm	279.0	368.0	459.0	610.0	762.0	914.4	1041.4
ØB*	Inch	1.5	2.3	3.2	4.9	6.8	8.5	10.1
	mm	38.0	58.5	80.0	124.5	173.0	216.0	257.0
C (max.)	Inch	19.1	17.3	22.2	27.4	34.4	61.0	61.0
	mm	485.0	440.0	565.0	695.0	875.0	1550.0	1550.0
ØD	Inch	14.0	18.0	20.0	20.0	24.0	$	$
	mm	356.0	457.0	508.0	508.0	610.0		

* Schedule XXS up to 6". Schedule 160 for 8".
Alternate schedule on request.
$ Mandatory Gear Box

Materials

Part No.	Description	Material		
100	Body	A 216-WCB	A 217-WC9	A 217-WC6
139	Yoke	A 216-WCB	A 216-WCB	A 216-WCB
166	Bonnet *	A 216-WCB+ST6	A 217-WC9+ST6	A 217-WC6+ST6
200	Stem	A 479-410-2	A 479-410-2	A 479-410-2
350	Disc	A 216-WCB-ST6	A 217-WC9+ST6	A 217-WC6+ST6
411	Gasket	Graphite	Graphite	Graphite
452	Gland Flange	A 216-WCB	A 216-WCB	A 216-WCB
456	Gland Bush	A 276-410	A 276-410	A 276-410
461	Gland Packing	Graphite	Graphite	Graphite
500	Spacer Ring	A 217-CA15	A 217-CA15	A 217-CA15
501	Thrust Ring	A 182-F22	A 182-F22	A 182-F22
515	Seat Ring	A 216-WCB+ST6	A 217-WC9+ST6	A 217-WC6+ST6
544	Stem Nut	Al. Bronze	Al. Bronze	Al. Bronze
902.1/902.2	Stud	A 193-B7	A 193-B16	A 193-B16
920.1/920.2	Hex. Nut	A 194-2H	A 194-4	A 194-4
961	Handwheel	SG 400/12	SG 400/12	SG 400/12

* Integral Bonnet back seat ST6 (HF)

Pressure Seal Globe Valve

SICCA® 900-2500

Type GLC

Applications

- Power stations, general industry, process engineering
- For water, steam, gas, oil & other non-agressive media
- Further applications on request

Operating Data

- Pressure up to 439 bar (6250 PSI)
- Temperature up to +5930C/11000F
- Pressure-temperature ratings as per ASME B 16.34, Special class

Materials

ANSI Special class (as per ASME B 16.34)

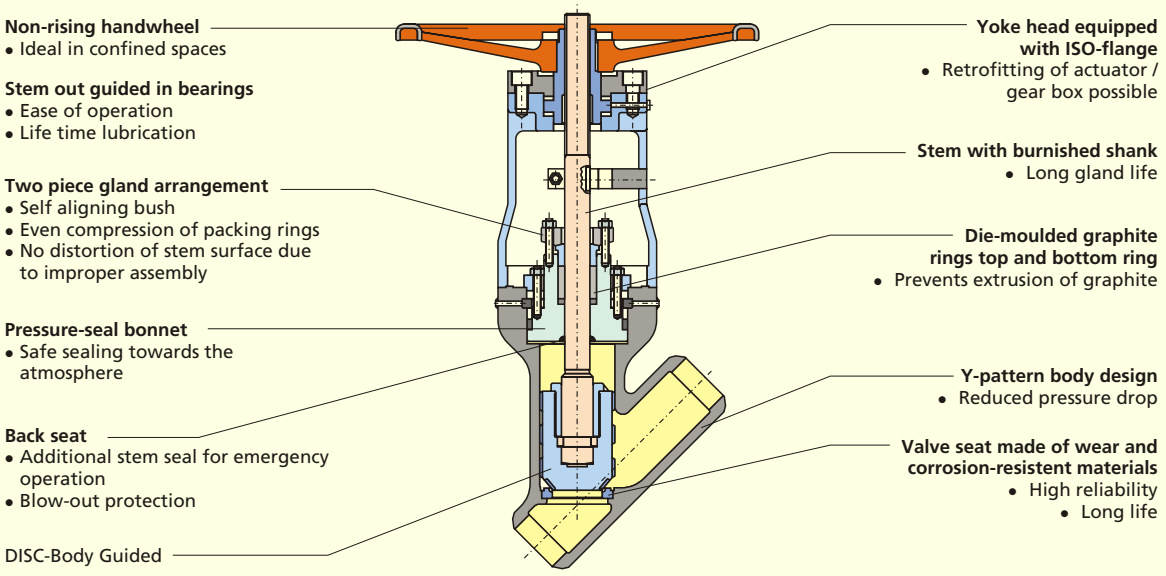
- # 900/1500/2500 - A 216 WCB from 0°C to 425°C
- # 900/1500/2500 - A 217 WC6/WC9 from 0°C to 593°C
- # Other materials on request

Design

- As per ASME B 16.34
- Pressure Seal Bonnet Design
- Stellite hard-faced Seats & Disc surface
- Graphite gaskets & packings with Braided wiping rings
- Direct retrofitting of Actuator

Variants on Request

- By-pass execution
- Actuator execution / Gear Box execution
- Position indicator
- Locking arrangement
- Other materials
- Other executions



Flow Seal

- Fully stellited body seat & disc seat
- Seat rings - seal welded to body
- Valve sizes 6" and above will be reverse flow design to ensure leak tightness at full differential pressure

Disc Design

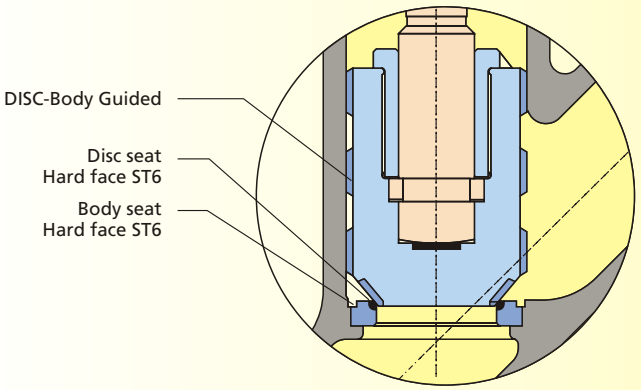
- Disc designed to reduce pressure drop across the valve
- Stellite-6 hard faced seating surface enhances sealing life

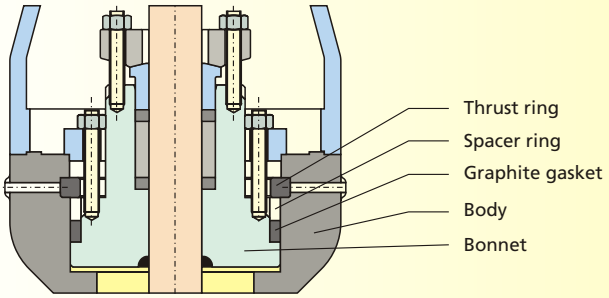
Stem Disc Connection

- Stem-disc joint capable of withstanding vibration during valve opening

Pressure Seal Bonnet

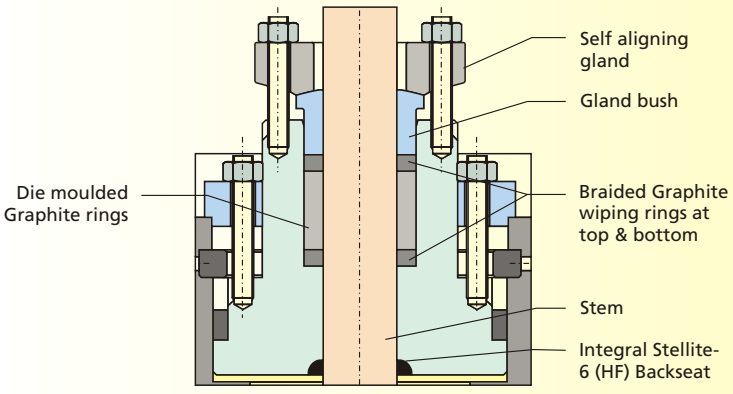
- Die moulded graphite gasket with reinforcement
- Segmental ring arrangement with knock- out hole ensures easy disassembly

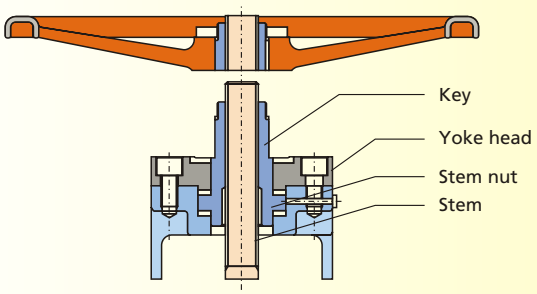


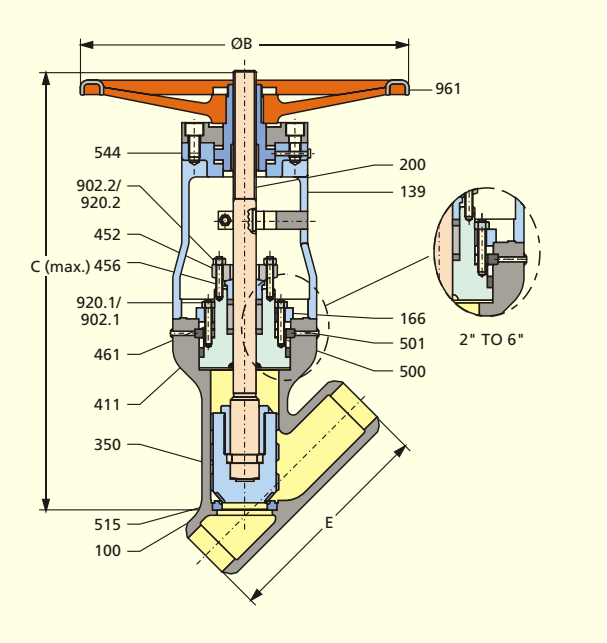


Gland Seal

- Die moulded graphite rings ensures effective sealing to atmosphere
- Top & bottom rings are braided graphite
- Braided rings offer smooth wiping action thereby arresting graphite depletion
- Smooth finished & polished stem and smooth stuffing box surfaces improve gland sealing life
- Two piece self aligning gland bolting arrangement
- Integral hard faced back seat for maximum service life







Design Specifications

General valve design & pressure, temperature rating	:	ASME B 16.34 Special class
Butt weld end design	:	ASME B 16.25
End to end dimension	:	ASME B 16.10
Testing	:	API 598 ASME B 16.34 Section 8

Dimensions

Class 900		2"	3"	4"	6"	8"
E	Inch	14.5	12.0	14.0	20.0	26.0
	mm	368.3	304.8	355.6	508.0	660.4
ØB*	Inch	1.9	2.9	3.6	5.5	7.2
	mm	48.0	73.5	92.0	140.0	182.5
C (max.)	Inch	19.7	24.6	28.0	33.9	36.6
	mm	500.0	625.0	710.0	860.0	930.0
ØD	Inch	14.0	18.0	20.0	20.0	20.0
	mm	356.0	457.0	508.0	508.0	508.0

* Schedule 80 up to 3". Schedule 120 for 4" and above.
Alternate schedule on request.

Class 1500		2"	3"	4"	6"
E	Inch	14.6	18.5	16.0	27.8
	mm	369.8	469.9	406.4	706.4
ØB*	Inch	1.7	2.6	3.4	5.2
	mm	43.0	66.5	87.5	132.0
C (max.)	Inch	27.2	28.1	34.6	41.1
	mm	690.0	715.0	880.0	1045.0
ØD	Inch	14.0	20.0	20.0	24.0
	mm	356.0	508.0	508.0	610.0

* Schedule 160. Alternate schedule on request.

Class 2500		2"	3"	4"	6"
E	Inch	17.8	14.5	26.5	36.0
	mm	451.0	368.3	673.1	914.4
ØB*	Inch	1.5	2.3	3.2	4.9
	mm	38.0	58.5	80.0	124.5
C (max.)	Inch	27.2	29.5	32.3	44.5
	mm	690.0	750.0	820.0	1130.0
ØD	Inch	14.0	18.0	20.0	24.0
	mm	356.0	457.0	508.0	610.0

* Schedule XXS.
Alternate schedule on request.

Materials

Part No.	Description	Material		
100	Body	A 216-WCB	A 217-WC9	A 217-WC6
139	Yoke	A 216-WCB	A 216-WCB	A 216-WCB
166	Bonnet *	A 216-WCB+ST6	A 217-WC9+ST6	A 217-WC6+ST6
200	Stem	A 479-410-2	A 479-410-2	A 479-410-2
350	Disc	A 216-WCB-ST6	A 217-WC9+ST6	A 217-WC6+ST6
411	Gasket	Graphite	Graphite	Graphite
452	Gland Flange	A 216-WCB	A 216-WCB	A 216-WCB
456	Gland Bush	A 276-410	A 276-410	A 276-410
461	Gland Packing	Graphite	Graphite	Graphite
500	Spacer Ring	A 217-CA15	A 217-CA15	A 217-CA15
501	Thrust Ring	A 182-F22	A 182-F22	A 182-F22
515	Seat Ring	A 216-WCB+ST6	A 217-WC9+ST6	A 217-WC6+ST6
544	Stem Nut	Al. Bronze	Al. Bronze	Al. Bronze
902.1/902.2	Stud	A 193-B7	A 193-B16	A 193-B16
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961	Handwheel	SG 400/12	SG 400/12	SG 400/12

* Integral Bonnet back seat ST6 (HF)

Pressure Seal Check Valve

SICCA® 900-2500

Type SCC

Applications

- Power stations, general industry, process engineering
- For water, steam, gas, oil & other non-agressive media
- Further applications on request

Operating Data

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- Temperature up to +593°C/1100°F
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Materials

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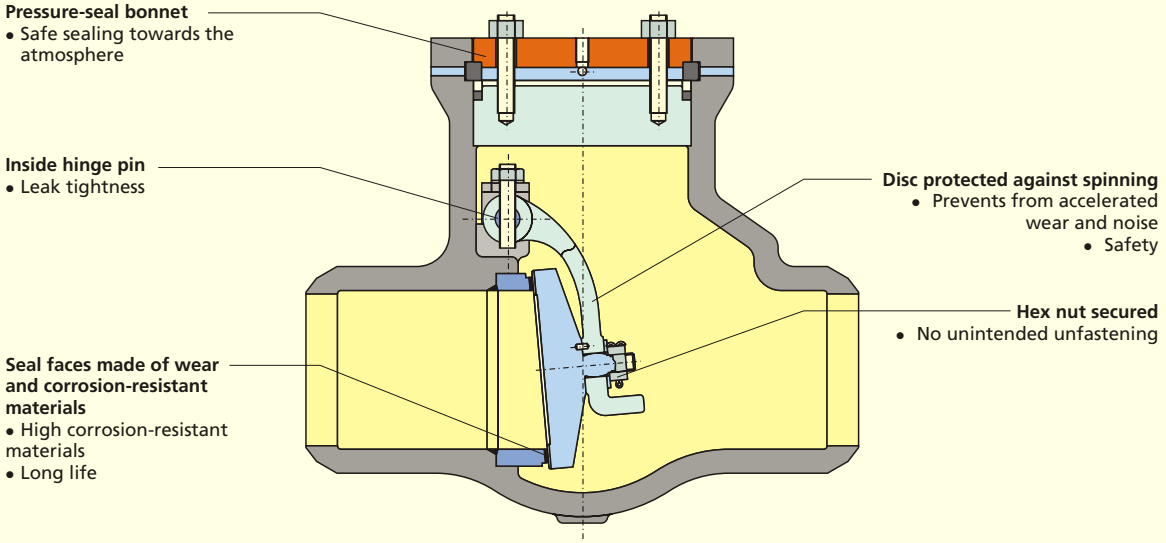
- # 900/1500/2500 - A 217 WC9/WC6 from 0°C to 593°C
- # Other materials on request

Design

- As per ASME B 16.34
- Pressure Seal Bonnet Design
- Stellite hard-faced Seats & Disc surface
- Graphite gaskets



Flow Seal

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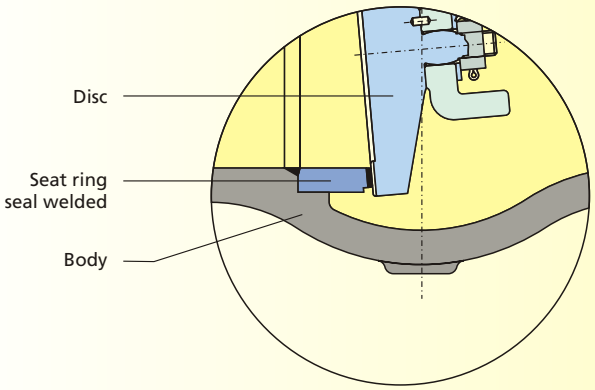
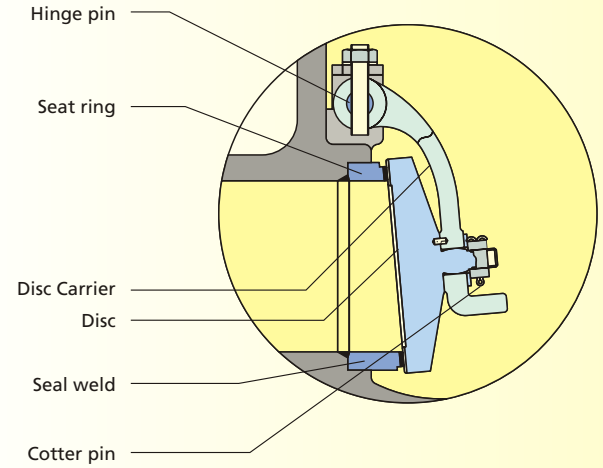
- Seat rings - seal welded to body
- Lapped Seat & Disc faces for leak tightness
- Streamlined flow path ensures minimum pressure drop



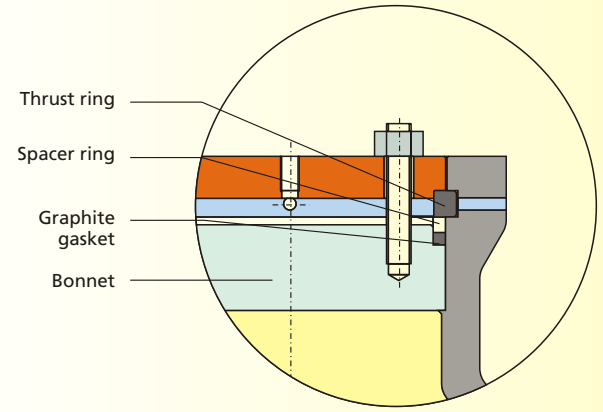
Disc Design

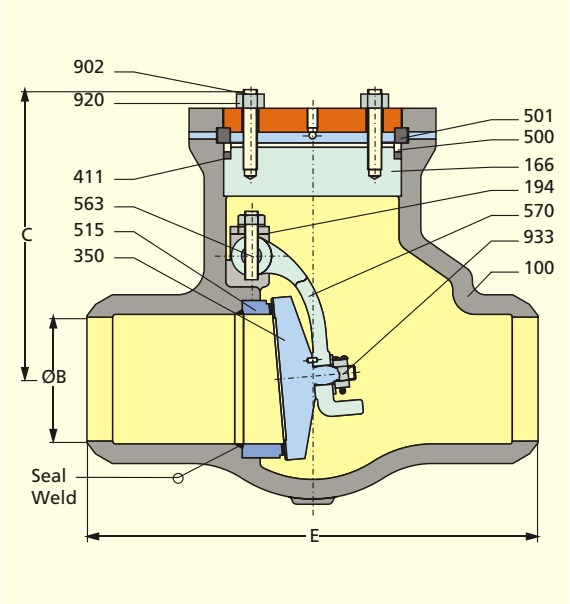
- Self aligning disc ensures perfect seating
- Designed to open at low differential pressure



Pressure seal

- Die-moulded graphite gasket with reinforcement
- Segmental ring arrangement with knock out holes provides for easy disassembly





Design Specifications

General valve design & pressure, temperature rating	:	ASME B 16.34 Special class
Butt weld end design	:	ASME B 16.25
End to end dimension	:	ASME B 16.10
Testing	:	API 598

Dimensions

Class 900		2"	3"	4"	6"	8"	10"	12"
E	Inch	14.5	12.0	14.0	20.0	26.0	31.0	36.0
	mm	215.9	304.8	355.6	508.0	660.4	787.4	914.4
ØB*	Inch	1.9	2.9	3.6	5.5	7.2	9.0	10.8
	mm	48.0	73.5	92.0	150.0	182.5	230.0	273.0
C	Inch	6.5	8.5	11.0	12.2	14.0	17.0	20.1
	mm	165.0	215.0	280.0	310.0	356.0	431.0	511.0

* Schedule 80 up to 3". Schedule 120 for 4" and above.
Alternate schedule on request.

Class 1500		2"	3"	4"	6"	8"	10"	12"
E	Inch	8.5	12.0	16.0	22.0	28.0	34.0	39.0
	mm	215.9	304.8	407.9	558.8	711.2	863.6	990.6
ØB*	Inch	1.7	2.6	3.4	5.2	6.8	8.5	10.1
	mm	43.0	66.5	87.5	132.0	173.0	216.0	257.0
C	Inch	8.2	10.0	12.2	15.1	17.7	18.5	25.2
	mm	210.0	255.0	310.0	385.0	450.0	470.0	640.0

* Schedule 160. Alternate schedule on request.

Class 2500		2"	3"	4"	6"	8"	10"	12"
E	Inch	11.0	14.5	18.0	24.0	30.0	36.0	41.0
	mm	279.4	368.3	458.7	609.4	762.0	914.4	1041.4
ØB*	Inch	1.5	2.3	3.2	4.9	6.8	8.5	10.1
	mm	38.0	58.5	80.0	124.5	173.0	216.0	257.0
C	Inch	8.3	10.0	12.4	15.1	16.7	19.7	24.8
	mm	210.0	255.0	315.0	385.0	425.0	500.0	630.0

* Schedule XXS up to 6". Schedule 160 for 8" and above.
Alternate schedule on request.

Materials

Part No.	Description	Material		
100	Body	A 216-WCB	A 217-WC9	A 217-WC6
166	Cover	A 216-WCB	A 217-WC9	A 217-WC6
194	Hinge Bracket	A 216-WCB	A 217-WC9	A 217-WC6
350	Disc	A 216-WCB+ST6	A 217-WC9+ST6	A 217-WC6+ST6
411	Gasket	Graphite	Graphite	Graphite
500	Spacer Ring	A 217-CA15	A 217-CA15	A 217-CA15
501	Trust Ring	A 182-F22	A 182-F22	A 182-F22
515	Seat Ring	A 216-WCB+ST6	A 217-WC9-ST6	A 217-WC6+ST6
563	Hinge Pin	A 479-410-1	A 479-410-1	A 479-410-1
570	Disc Carrier	A 216-WCB	A 217-WC9	A 217-WC9
902	Stud	A 193-B7	A 193-B16	A 193-B16
920	Hex. Nut	A 194-2H	A 194-4	A 194-4
933	Cotter Pin	A 276-304	A 276-304	A 276-304

Low Pressure Valves

Low Pressure Gate Valve

SICCA® 150-600

Type GTC

Applications

- Refineries, Power stations, Process & General Industry
- For water, steam, gas, oil and other non-agressive media
- Further applications on request

Operating data

- Pressure range up to 104 bar (1480 PSI)
- Temperature range up to +593°C/1100°F
- Minimum temperature is 0°C (less than 00C on request)
- Pressure-temperature ratings as per ASME B 16.34 Standard class

Materials

ANSI Standard Class (as per ASME B 16.34)

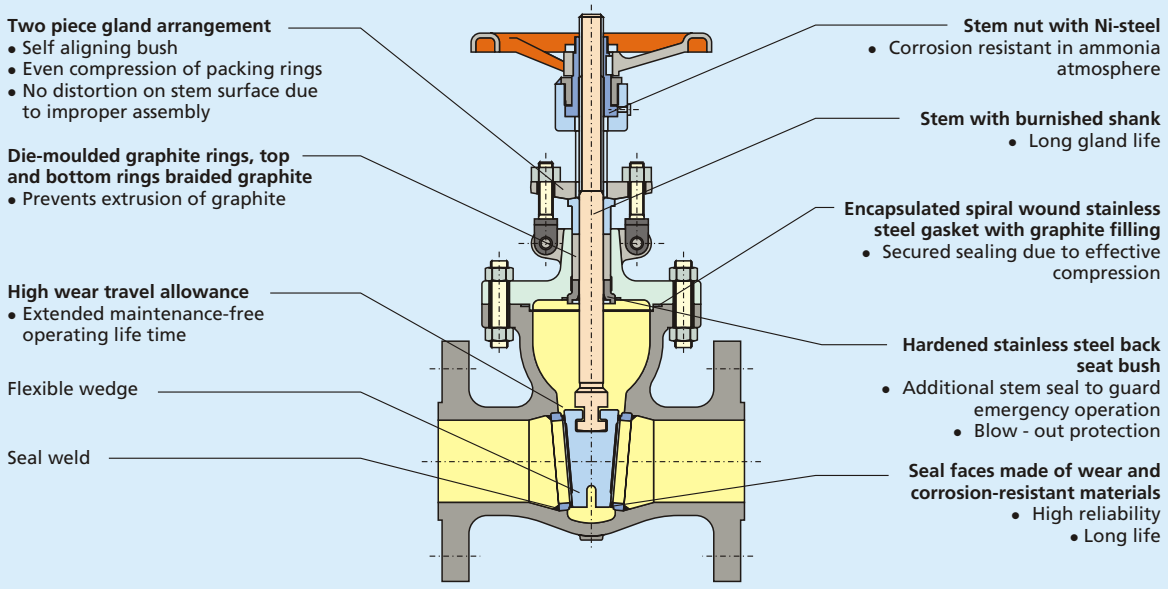
- #150/300/600 - A 216 WCB from 0°C to 425°C
- #600 - A 217 WC6 from 0°C to 593°C
- #150/300 - A 351 CF8 from 0°C to 537°C
- ASME Special class on request.

Design

- As per API 600
- Pressure, Temperature rating as per ASME B 16.34
- Stellite hard-faced Seats
- Graphite gaskets and graphite packings with Braided wiping rings

Variants on Request

- Bypass execution
- Actuator execution
- Trim 8, Trim 5 for #150 / 300 valves
- Trim 5 for #600 WCB valves
- Trim 8 for #600 WC6 valves
- Other material of construction on request
- Position indicator
- Locking arrangement



Flow Seal

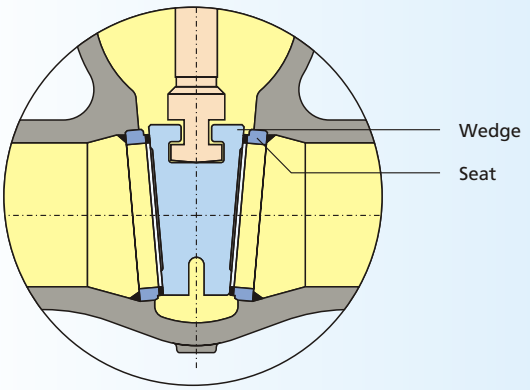
- Stellited body seats (KSB recommends harder seats)
- Seat rings - seal welded to body
- Lapped seat and wedge faces for leak tightness
- Streamlined flow path hence no pressure drop

Wedge Design

- Flexible wedge ensures perfect seating
- Wedging action ensures leak tightness
- Leak tightness at low and high differential pressure

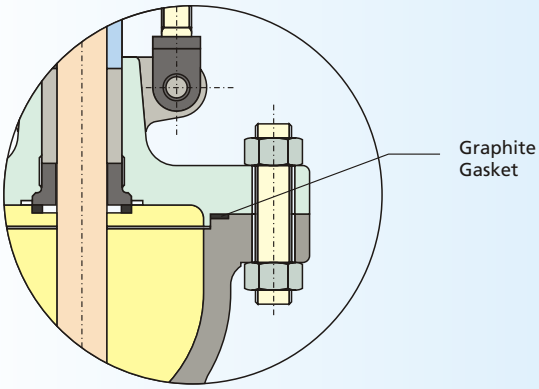
'T' head stem wedge connection

- Low centre stem to wedge contact reduces the operating torque



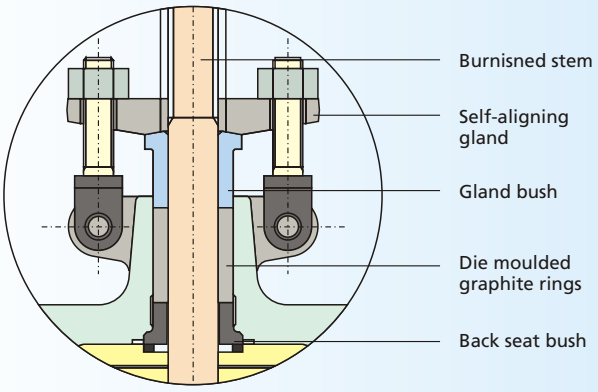
Bolted Bonnet

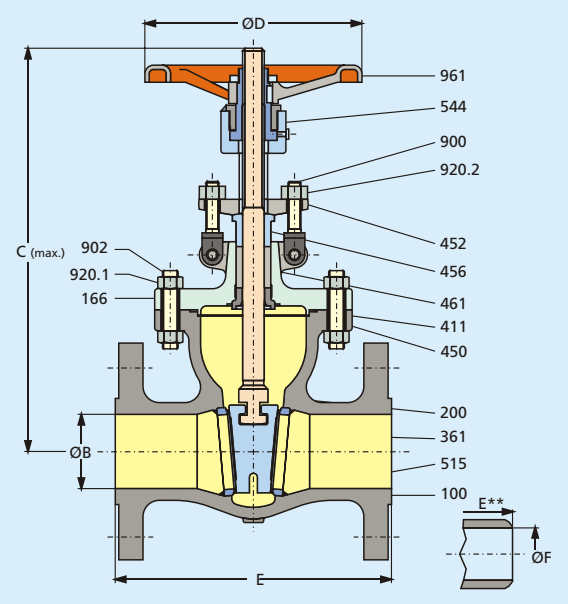
- Encapsulated Gasket ensures leak proof joint and prevents unwinding of SS strips
- #150 valve with oval/rectangular bonnet has flat gasket



Gland Seal

- Die moulded graphite rings ensures effective sealing to atmosphere
- Top & bottom rings are braided graphite offer smooth wiping action & prevents Graphite depletion
- Burnished stem and smooth stuffing box surfaces improve gland sealing life
- Two piece self aligning gland bolting arrangement
- Hardened [A276-410 (H)] back seat for maximum service life





Design Specifications

General valve design	:	API 600
Pressure, temperature rating	:	ASME B 16.34 Standard class
Flanged end design	:	ASME B 16.5
End to end dimension	:	ASME B 16.10
Testing standard	:	API 598

Dimensions

Class 150		2"	3"	4"	6"	8"	10"	12"
E	Inch	7.0	8.0	9.0	10.5	11.5	13.0	14.0
	mm	178.0	203.0	229.0	266.7	292.1	330.0	356.0
ØB*	Inch	2.0	3.0	4.0	6.0	8.0	10.0	12.0
	mm	51.0	76.0	102.0	152.0	203.0	254.0	305.0
C (max.)	Inch	12.2	14.2	16.5	22.1	28.7	35.4	42.5
	mm	310.0	360.0	420.0	560.0	730.0	900.0	1080.0
ØD	Inch	8.0	10.0	10.0	14.0	18.0	18.0	20.0
	mm	203.0	254.0	254.0	356.0	457.0	457.0	508.0
E**	Inch	8.5	11.1	12.0	15.9	16.5	18.0	19.8
	mm	216.0	282.0	305.0	403.0	419.0	457.0	502.0
ØF	Inch	2.0	3.1	4.0	6.1	8.0	10.0	11.9
	mm	52.5	78.0	102.0	154.0	203.0	254.0	303.0

* Schedule 40 for class 150. Alternate schedule on request.

Class 300		2"	3"	4"	6"	8"	10"	12"
E	Inch	8.5	11.1	12.0	15.9	16.5	18.0	19.8
	mm	216.0	282.0	305.0	403.0	419.0	457.0	502.0
ØB*	Inch	2.0	3.0	4.0	6.0	8.0	10.0	12.0
	mm	51.0	76.0	102.0	152.0	203.0	254.0	305.0
C (max.)	Inch	13.4	16.1	20.1	26.4	31.7	38.6	43.7
	mm	340.0	410.0	510.0	670.0	805.0	980.0	1110.0
ØD	Inch	8.0	10.0	10.0	14.0	18.0	20.0	20.0
	mm	203.0	254.0	254.0	356.0	457.0	508.0	508.0
E**	Inch	8.5	11.1	12.0	15.9	16.5	18.0	19.8
	mm	216.0	282.0	305.0	403.0	419.0	457.0	502.0
ØF	Inch	2.0	3.1	4.0	6.1	8.0	10.0	11.9
	mm	52.5	78.0	102.0	154.0	203.0	254.5	303.0

* Schedule 40 for class 300. Alternate schedule on request.
E** - End to End of BW end valves.

Class 600		2"	3"	4"	6"	8"	10"	12"
E	Inch	11.5	14.0	17.0	22.0	26.0	31.0	33.0
	mm	292.0	356.0	432.0	559.0	660.0	787.0	838.0
ØB*	Inch	2.0	3.0	4.0	6.0	8.0	9.8	11.7
	mm	51.0	76.0	102.0	152.0	200.0	248.0	298.0
C (max.)	Inch	14.6	17.3	20.9	28.4	33.3	38.9	48.03
	mm	370.0	440.0	530.0	720.0	845.0	990.0	1220.0
ØD	Inch	8.0	10.0	14.0	20.0	20.0	20.0	24.0
	mm	203.0	254.0	356.0	508.0	508.0	508.0	610.0
E**	Inch	11.5	14.0	17.0	22.0	26.0	31.0	33.0
	mm	292.0	356.0	432.0	559.0	660.0	787.0	838.0
ØF	Inch	1.9	2.9	3.8	5.8	7.6	9.6	11.4
	mm	49.0	73.5	97.0	146.5	193.5	243.0	289.0

* Schedule 80 for class 600. Alternate schedule on request.
E** - End to End of BW end valves.

Materials

Part No.	Description	Material			
100	Body	A 216-WCB	A 217-WC6	A 351-CF8	A 351-CF8M
166	Bonnet	A 216-WCB	A 217-WC6	A 351-CF8	A 351-CF8M
200	Stem	A 479-410-2	A 479-410-2	A 276-304	A 276-316
361	Wedge	A 217-CA15 / A 216-WCB+13%Cr	A 217-WC6+ST6	A 351-CF8	A 351-CF8M
* 411	Gasket	SS 316 + GRPH	SS 316 + GRPH	SS 316 + GRPH	SS 316 + GRPH
450	Back Seat	A 276-410 (H)	A 276-410 (H)	A 276-304	A 276-316
452	Gland Flange	A 105	A 105	A 351-CF8	A 351-CF8M
456	Gland Bush	A 276-410	A 276-410	A 276-304	A 276-316
461	Gland Packing	Graphite	Graphite	Graphite	Graphite
515	Seat Ring	A 216-WCB+13%Cr	A 217-WC6+ST6	A 351-CF8	A 351-CF8M
544	Stem Nut	A 439-D2	A 439-D2	A 439-D2	A 439-D2
900	Gland Bolt	A 307-B	A 307-B	A 182-F304	A 182-F304
902	Stud	A 193-B7	A 193-B16	A 193-B8	A 193-B8M
920.1	Hex. Nut	A 194-2H	A 194-2H	A 194-8	A 194-8M
920.2	Hex. Nut		A 194-4	A 194-8	A 194-8M
961	Handwheel	SG 400/12	SG 400/12	SG 400/12	SG 400/12

* Flat graphite with SS reinforcement for # 150 only. Spiral wound gasket for # 300 and # 600.
Note : Subject to change without notice on account of continuous improvement.

Low Pressure Globe Valve

SICCA® 150-600

Type GLC

Applications

- Refineries, Power stations, Process & General Industry
- For water, steam, gas, oil and other non-agressive media
- Further applications on request

Operating data

- Pressure range up to 104 bar (1480 PSI)
- Temperature range up to +593°C/1100°F
- Minimum temperature is 0°C (less than 0°C on request)
- Pressure-temperature ratings as per ASME B 16.34 Standard class

Design

- As per BS 1873
- Pressure, Temperature rating as per ASME B 16.34
- Stellite hard-faced Seat
- Graphite gaskets and graphite packings with Braided wiping rings

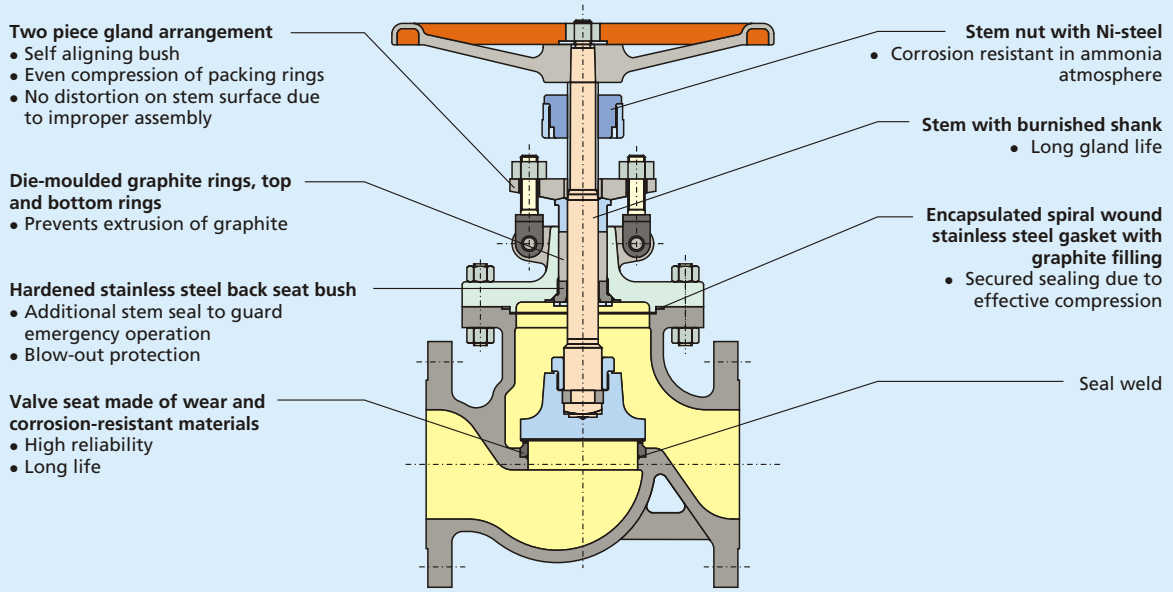
Materials

ANSI Standard Class (as per ASME B 16.34)

- #150/300/600 - A 216 WCB from 0°C to 425°C
- #600 - A 217 WC6 from 0°C to 593°C
- #150/300 - A 351 CF8 from 0°C to 537°C
- ASME Special class on request.

Variants on Request

- Bypass execution
- Actuator execution
- Trim 8, Trim 5 for #150 / 300 valves
- Trim 5 for #600 WCB valves
- Trim 8 for #600 WC6 valves
- Other material of construction on request
- Position Indicator
- Locking arrangement



Flow Seal

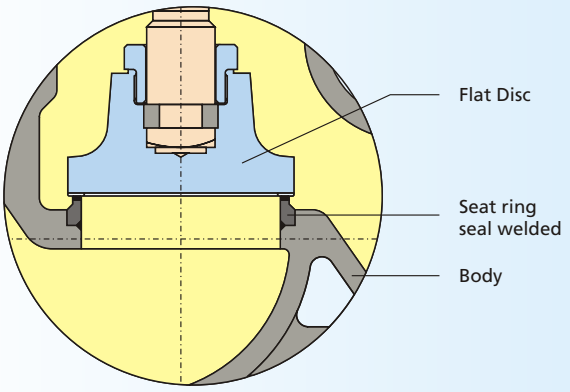
- Stellited body seat (KSB recommends harder seats)
- Seat rings seal welded to body
- Lapped seat and disc faces for leak tightness

Disc Design

- Rotating, self aligning disc
- Flat seating faces hence wide area of contact

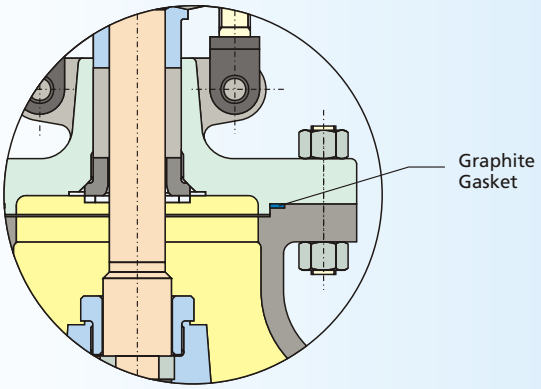
Stem Disc Connection

- Stem-disc joint capable of withstanding vibration during valve opening



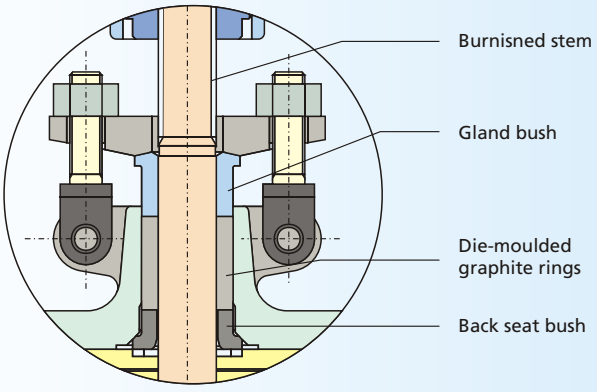
Bolted Bonnet

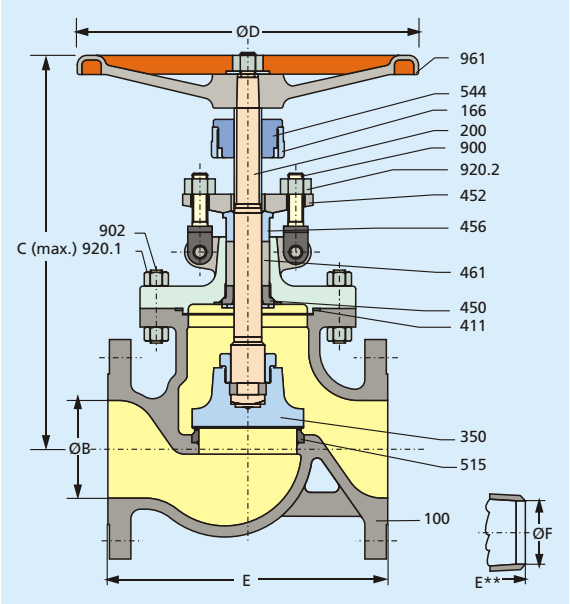
- Encapsulated Gasket ensures leak proof joint prevents unwinding of SS strip



Gland Seal

- Die moulded graphite rings ensures effective sealing to atmosphere
- Top & bottom rings are braided graphite
- Braided rings offer smooth wipping action thereby arresting graphite depletion
- Burnished stem and smooth stuffing box surfaces improve gland sealing life
- Two piece self aligning gland bolting arrangement
- Hardened back seat for maximum service life





Design Specifications

General valve design	:	BS 1873
Pressure, temperature rating	:	ASME B 16.34 Standard class
Flanged end design	:	ASME B 16.5
End to end dimension	:	ASME B 16.10
Testing standard	:	API 598

Dimensions

Class 150		2"	3"	4"	6"	8"	10"
E	Inch	8.0	9.5	11.5	16.0	19.5	24.5
	mm	203.0	241.0	292.0	406.0	495.0	622.0
ØB*	Inch	2.0	3.0	4.0	6.0	8.0	10.0
	mm	51.0	76.0	102.0	152.0	203.0	254.0
C (max.)	Inch	12.6	15.0	16.7	20.5	22.4	30.3
	mm	320.0	380.0	425.0	520.0	570.0	770.0
ØD	Inch	8.0	10.0	14.0	14.0	18.0	20.0
	mm	203.0	254.0	356.0	356.0	457.0	508.0
E**	Inch	8.0	9.5	11.5	16.0	19.5	24.5
	mm	203.0	241.0	292.0	406.0	495.0	622.0
ØF	Inch	2.1	3.1	4.0	6.1	8.0	10.0
	mm	52.5	78.0	102.0	154.0	203.0	254.5

* Schedule 40 for class 150. Alternate schedule on request.
E** - End to End of BW end valve.

Class 300		2"	3"	4"	6"	8"	10"
E	Inch	10.5	12.5	14.0	17.5	22.0	24.5
	mm	267.0	318.0	356.0	445.0	559.0	622.0
ØB*	Inch	2.0	3.0	4.0	6.0	8.0	10.0
	mm	51.0	76.0	102.0	152.0	203.0	254.0
C (max.)	Inch	13.4	15.8	17.9	21.5	28.5	32.7
	mm	340.0	400.0	456.0	545.0	725.0	830.0
ØD	Inch	8.0	10.0	14.0	18.0	20.0	20.0
	mm	203.0	254.0	356.0	457.0	508.0	508.0
E**	Inch	10.5	12.5	14.0	17.5	22.0	24.5
	mm	267.0	318.0	356.0	445.0	559.0	622.0
ØF	Inch	2.0	3.1	4.0	6.1	8.0	10.0
	mm	52.5	78.0	102.0	154.0	203.0	254.5

* Schedule 40 for class 300. Alternate schedule on request.
E** - End to End of BW end valve.

Class 600		2"	3"	4"	6"	8"	10"
E	Inch	11.5	14.0	17.0	22.0	26.0	31.0
	mm	292.0	356.0	432.0	559.0	660.0	787.0
ØB*	Inch	2.0	3.0	4.0	6.0	8.0	9.8
	mm	51.0	76.0	102.0	152.0	200.0	248.0
C (max.)	Inch	14.6	17.3	19.3	27.2	31.5	40.9
	mm	370.0	440.0	490.0	690.0	800.0	1040.0
ØD	Inch	10.0	14.0	14.0	20.0	24.0	24.0
	mm	254.0	356.0	356.0	508.0	610.0	610.0
E**	Inch	11.5	14.0	17.0	22.0	26.0	31.0
	mm	292.0	356.0	432.0	559.0	660.0	787.0
ØF	Inch	1.9	2.9	3.8	5.8	7.6	9.6
	mm	49.0	73.5	97.0	146.5	193.5	243.0

* Schedule 80 for class 600. Alternate schedule on request.
E** - End to End of BW end valve.

Materials

Part No.	Description	Material			
100	Body	A 216-WCB	A 217-WC6	A 351-CF8	A 351-CF8M
166	Bonnet	A 216-WCB	A 217-WC6	A 351-CF8	A 351-CF8M
200	Stem	A 479-410-2	A 479-410-2	A 276-304	A 276-316
350	Disc	A 217-CA15	A 217-WC6+ST6	A 351-CF8	A 351-CF8M
		A 216-WCB+13%Cr			
411	Gasket	SS 316 + GRPH	SS 316 + GRPH	SS 316 + GRPH	SS 316 + GRPH
450	Back Seat	A 276-410 (H)	A 276-410 (H)	A 276-304	A 276-316
452	Gland Flange	A 105	A 105	A 351-CF8	A 351-CF8M
456	Gland Bush	A 276-410	A 276-410	A 276-304	A 276-316
461	Gland Packing	Graphite	Graphite	Graphite	Graphite
515	Seat Ring	A 216-WCB+ST6	A 217-WC6+ST6	A 351-CF8	A 351-CF8M
544	Stem Nut	A 439-D2	A 439-D2	A 439-D2	A 439-D2
900	Gland Bolt	A 307-B	A 307-B	A 182-F304	A 182-F304
902	Stud	A 193-B7	A 193-B16	A 193-B8	A 193-B8M
920.1	Hex. Nut	A 194-2H	A 194-2H	A 194-8	A 194-8M
920.2	Hex. Nut		A 194-4	A 194-8	A 194-8M
961	Handwheel	SG 400/12	SG 400/12	SG 400/12	SG 400/12

Note : Subject to change without notice on account of continuous improvement.

Low Pressure Check Valve

SICCA® 150-600

Type SCC

Applications

- Refineries, Power stations, Process & General Industry
- For water, steam, gas, oil and other non-agressive media
- Further applications on request

Operating data

- Pressure range up to 104 bar (1480 PSI)
- Temperature range up to +593°C/1100°F
- Pressure-temperature ratings as per ASME B 16.34 Special class

Materials

ANSI Standard Class (as per ASME B 16.34)

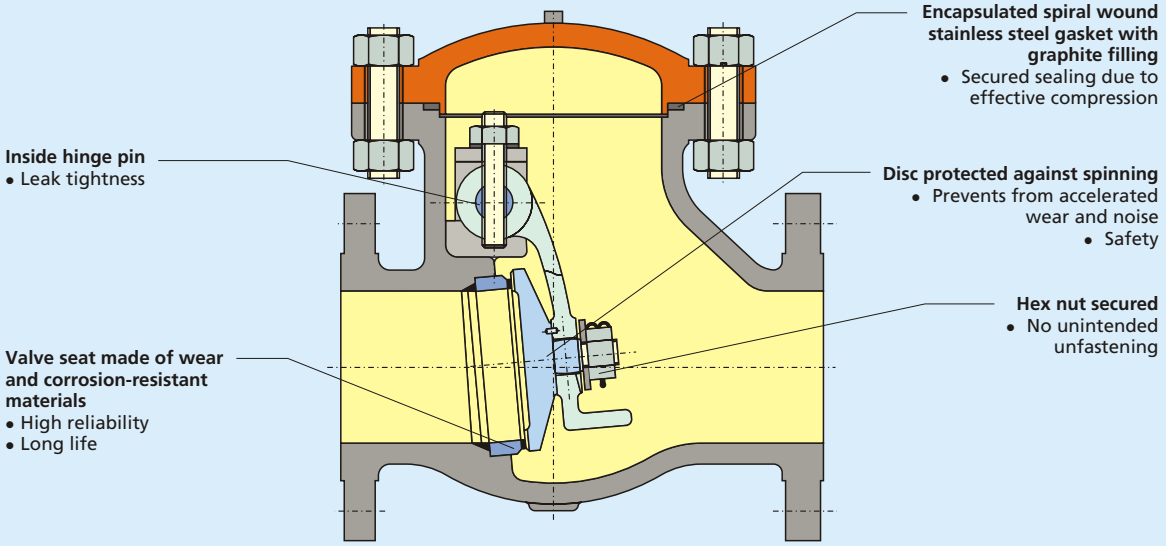
- #150/300/600 - A 216 WCB from 0°C to 425°C
- #600 - A 217 WC6 from 0°C to 593°C
- #150/300 - 351 CF8 from 0°C to 537°C
- ASME Special class on request.

Design

- As per BS 1868
- Pressure, Temperature rating as per ASME B 16.34
- Stellite hard-faced Seats

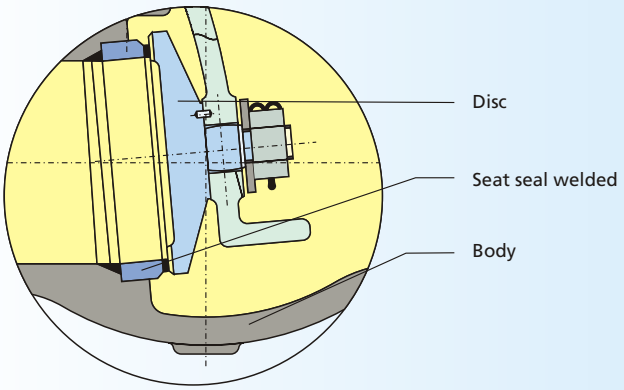
Variants on Request

- Trim 8, Trim 5 for #150 / 300 valves
- Trim 5 for #600 WCB valves
- Trim 8 for #600 WC6 valves
- Other material of construction on request
- Drain Plug



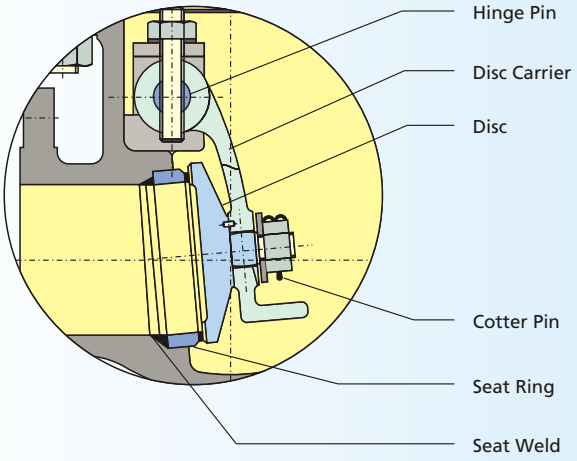
Flow Seal

- Stellited seat
- Seat rings - seal welded to body
- Lapped Seat & Disc faces for leak tightness
- Streamlined flow path ensures minimum pressure drop



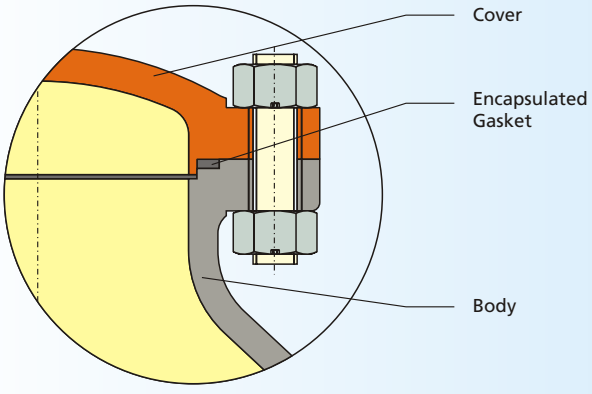
Disc Design

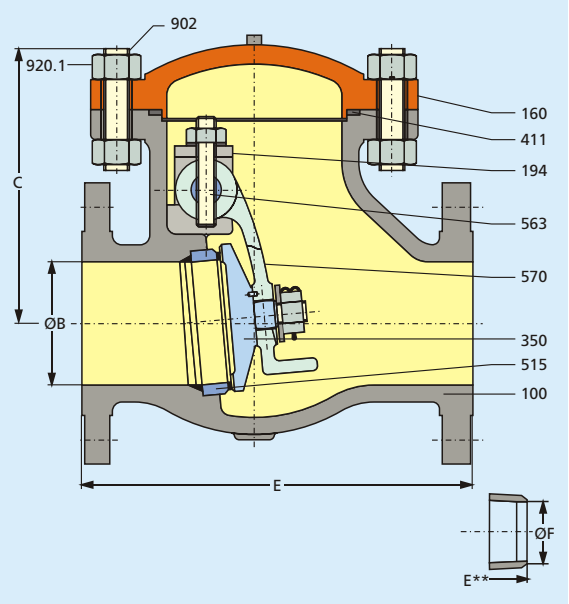
- Self aligning disc ensures perfect seating
- Designed to open at low differential pressure



Body Cover Joint

- Encapsulated Gasket ensures leak-proof and unwinding of SS spiral metal





Design Specifications

General valve design	:	BS 1868
Pressure, temperature rating	:	ASME B 16.34 Standard class
Flanged end design	:	ASME B 16.5
End to end dimension	:	ASME B 16.10
Testing standard	:	API 598

Dimensions

Class 150		2"	3"	4"	6"	8"	10"	12"
E	Inch	8.0	9.5	11.5	14.0	19.5	24.5	27.5
	mm	203.0	241.0	292.0	356.0	495.0	622.0	699.0
ØB	Inch	2.0	3.0	4.0	6.0	8.0	10.0	12.0
	mm	51.0	76.0	102.0	152.0	203.0	254.0	305.0
C	Inch	6.3	7.5	9.1	10.2	12.0	15.0	16.1
	mm	160.0	190.0	230.0	260.0	305.0	380.0	410.0
E**	Inch	8.0	9.5	11.5	14.0	19.5	24.5	27.5
	mm	203.0	241.0	292.0	356.0	495.0	622.0	699.0
ØF	Inch	2.1	3.1	4.0	6.1	8.0	10.0	11.9
	mm	53.0	78.0	102.0	154.0	203.0	255.0	303.0

* Schedule 40 for class 150. Alternate schedule on request.
E** - End to End of BW end valves.

Class 300		2"	3"	4"	6"	8"	10"	12"
E	Inch	10.5	12.5	14.0	17.5	21.0	24.5	28.0
	mm	267.0	318.0	356.0	445.0	533.0	622.0	711.0
ØB	Inch	2.0	3.0	4.0	6.0	8.0	10.0	12.0
	mm	51.0	76.0	102.0	152.0	203.0	254.0	305.0
C	Inch	5.9	8.7	9.4	11.4	13.4	15.4	17.3
	mm	150.0	220.0	240.0	290.0	340.0	390.0	440.0
E**	Inch	10.5	12.5	14.0	17.5	21.0	24.5	28.0
	mm	267.0	318.0	356.0	445.0	533.0	622.0	711.0
ØF	Inch	2.1	3.1	4.0	6.1	8.0	10.0	11.9
	mm	53.0	78.0	102.0	154.0	203.0	255.0	303.0

* Schedule 40 for class 300. Alternate schedule on request.

Class 600		2"	3"	4"	6"	8"	10"	12"
E	Inch	11.5	14.0	17.0	22.0	26.0	31.0	33.0
	mm	292.0	356.0	432.0	559.0	660.0	787.0	838.0
ØB	Inch	2.0	3.0	4.0	6.0	8.0	9.8	11.7
	mm	51.0	76.0	102.0	152.0	200.0	248.0	298.0
C	Inch	7.5	9.4	10.2	12.2	15.7	18.1	21.3
	mm	190.0	240.0	260.0	310.0	400.0	460.0	540.0
E**	Inch	11.5	14.0	17.0	22.0	26.0	31.0	33.0
	mm	292.0	356.0	432.0	559.0	660.0	787.0	838.0
ØF	Inch	1.9	2.9	3.8	5.8	7.6	9.6	11.4
	mm	49.0	74.0	97.0	146.5	194.0	243.0	289.0

* Schedule 80 for class 600. Alternate schedule on request.
E** - End to End of BW end valves.

Materials

Part No.	Description	Material			
100	Body	A 216-WCB	A 217-WC6	A 351-CF8	A 351-CF8M
160	Cover	A 216-WCB	A 217-WC6	A 351-CF8	A 351-CF8M
194	Hinge Bracket	A 216-WCB	IS 2062	A 182-F304	A 182-F304
350	Disc	A 217-CA15	A 217-WC6 + ST6	A 351-CF8	A 351-CF8M
		A 216-WCB+13%Cr			
411	SW Gasket	SS 316 + GRPH	SS 316 + GRPH	SS 316 + GRPH	SS 316 + GRPH
515	Seat Ring	A 216-WCB + ST6	A 182-F11 + ST6	A 351-CF8	A 351-CF8M
563	Hinge Pin	A 276-410 (H)	A 276-410 (H)	A 276-304	A 276-304
570	Disc Carrier	A 216-WCB	A 217 - WC6	A 351-CF8	A 351 - CF8M
902	Stud	A 193-B7	A 193-B16	A 193-B8	A 193 - B8M
920.1	Hex. Nut	A 194-2H	A 194-4	A 193-B8	A 194-8M

Note : Subject to change without notice on account of continuous improvement.

Forged Valves

Forged Gate Valve

SICCA® 800-1500

Type GTF

Applications

- Power stations, general industry, process engineering
- For water, steam, gas, oil & other non-agressive media
- Further applications on request

Operating Data

- Pressure range up to 439 bar/ (6250 PSI)
- Temperature range up to + 593°C / 1100°F
- Pressure-temperature ratings as per API 602 (# 800) and ASME B 16.34 (1500, 2500)

Materials

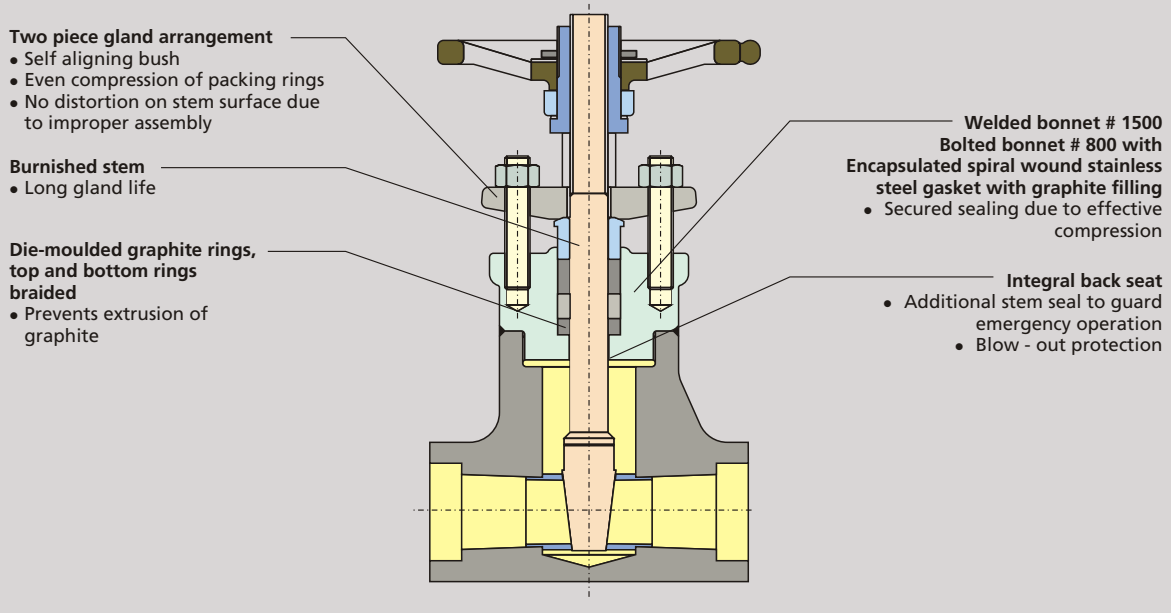
- A 105 up to 425°C / 800 °F
- A 182-F22 up to 593 °C / 1100 °F
- # Other materials on request

Design

- API 602 (# 800 / 1500)
- Bolted bonnet for # 800
- Welded bonnet for # 1500 / 2500
- Socket weld for # 800-2500, socket thread NPT (F) for # 800
- Trim No. 8 (Stellite - 13% Cr) for # 800
  Trim No. 8 (Stellite - 13% Cr) and No. 5 for # 1500
- Solid wedge
- Integral back seat
- Outside screw and yoke
- Non-rotating stem

Standard Variants

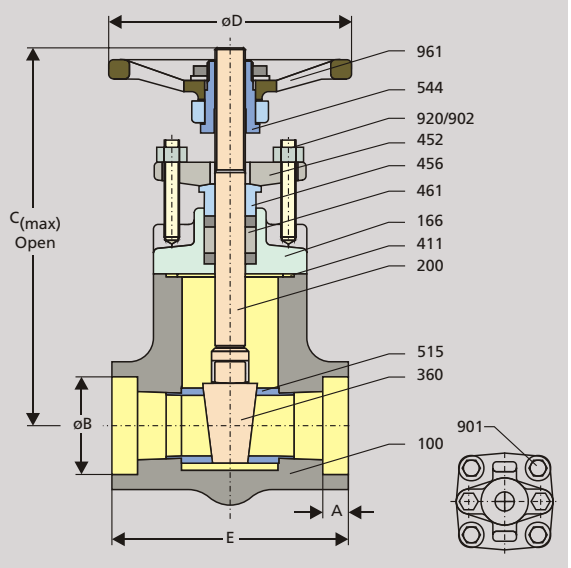
- Locking device
- Flanged ends to # 150 / 300 / 600 (welded on flanges)
- Actuator
- Other materials and Trim-Nos. on request
- Other variants on request



800 Gate Valve

Design Specifications

General valve design : API 602
Pressure-temp. ratings : API 602
Socket weld end dimension : ASME B 16.11
End to end as per manufacturer's standard



Materials

Part No.	Part Name	Materials as per ASTM
100	Body	A 105
166	Bonnet	A 105
200	Stem	A 479-410-2
360	Wedge	A 217-CA15
411	Gasket	SS+Graphite
452	Gland flange	A 105
456	Gland bush	A 276-410
461	Gland packing	Graphite
515	Seat ring	A 276-410+ST6
544	Stem nut	A 473-416
901	Hex bolt	A 193-B7
902	Stud	A 193-B6
920	Hex nut	A 194-2H
961	Handwheel	IS 2108-A

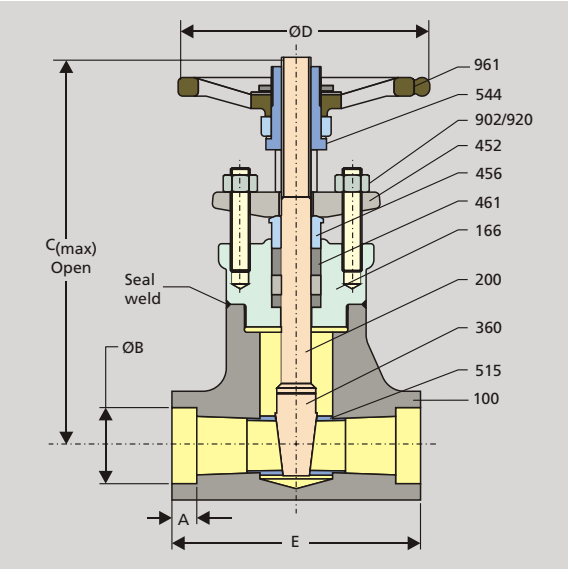
Dimensions

Size		A		B		C		D		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
½	15	0.4	9.5	0.9	21.8	4.96	126	3.74	95	2.9	73
¾	20	0.5	13.0	1.1	27.1	5.35	136	3.74	95	3.2	82
1	25	0.5	13.0	1.3	33.8	5.91	150	4.06	103	3.5	90
1½	40	0.5	13.0	1.9	48.7	8.07	205	5.00	127	5.0	127
2	50	0.6	16.0	2.4	61.1	9.53	242	5.79	147	5.8	148

1500 Gate Valve

Design Specifications

General valve design : API 602
Pressure-temp. ratings : ASME B 16.34
Socket weld end dimension : ASME B 16.11
End to end as per manufacturer's standard



Materials

Part No.	Part Name	Materials as per ASTM	
100	Body	A 105	A 182-F22
166	Bonnet	A 105	A 182-F22
200	Stem	A 479-410-2	
360	Wedge	A 217-CA15	Stellited
452	Gland flange	A 105	
456	Gland bush	A 276-410	
461	Gland packing	Graphite	
515	Seat ring	A 276-410+ST6	
544	Stem nut	A 473-416	
902	Stud	A 193-B8M Cl.2	
920	Hex nut	A 194-2H	
961	Handwheel	IS 2108-A	

Dimensions

Size		A		B		C		D		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
½	15	0.4	9.5	0.9	21.8	6.10	155	3.74	95	2.9	73
¾	20	0.5	13.0	1.1	27.1	6.50	165	3.74	95	3.7	94
1	25	0.5	13.0	1.3	33.8	7.48	190	5.00	127	4.8	122
1½	40	0.5	13.0	1.9	48.7	10.04	255	5.79	147	6.3	160
2	50	0.6	16.0	2.4	61.1	10.63	270	5.79	147	7.0	178

Forged Globe Valve

SICCA® 800-2500

Type GLF

Applications

- Power stations, general industry, process engineering
- For water, steam, gas, oil & other non-agressive media
- Further applications on request

Operating Data

- Pressure range up to 439 bar/ (6250 PSI)
- Temperature range up to + 593°C / 1100°F
- Pressure-temperature ratings as per API 602 (# 800) and ASME B 16.34 (1500, 2500)

Materials

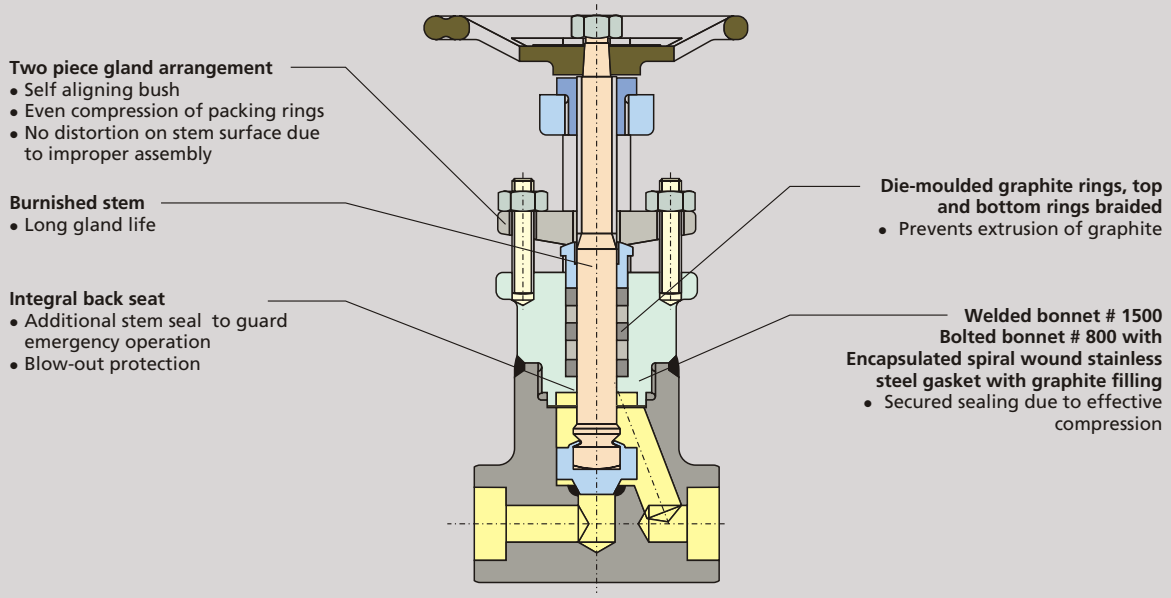
- A 105 up to 425°C / 800 °F
- A 182-F22 up to 593 °C / 1100 °F

Design

- BS 5352 (# 800 / 1500)
- ASME B 16.34 (# 2500)
- Bolted bonnet for # 800
- Welded bonnet for # 1500/2500
- Socket weld for # 800-2500, socket thread NPT (F) for # 800
- Trim No. 8 (Stellite - 13% Cr) for # 800
  Trim No. 8 (Stellite - 13% Cr) and
  Trim No. 5 for # 1500
  Trim No. 5 for # 2500
- Integral back seat
- Outside screw and yoke
- Rotating stem

Standard Variants

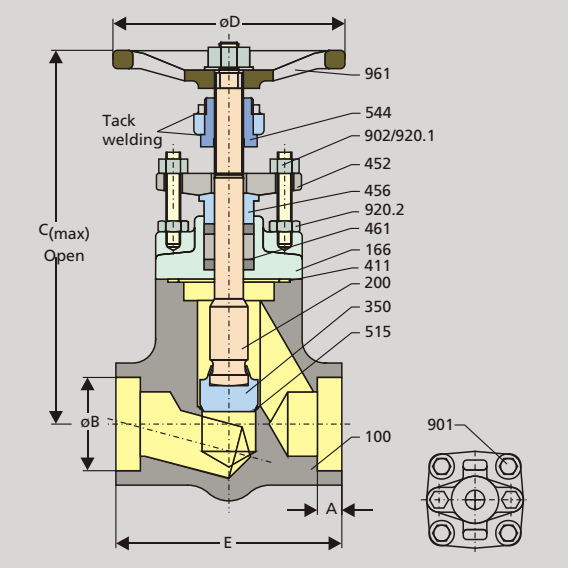
- Locking device
- Flanged ends to # 150 / 300 / 600
- Actuator
- Butt weld execution for # 800
- Other materials and Trim-Nos. on request
- Other variants on request



800 Globe Valve

Design Specifications

General valve design : BS 5352
Pressure-temp. ratings : ASME B 16.34
Socket weld end dimension : ASME B 16.11
End to end as per manufacturer's standard



Materials

Part No.	Part Name	Materials as per ASTM
100	Body	A 105
166	Bonnet	A 105
200	Stem	A 479-410-2
350	Disc	A 276-410 (H)
411	Gasket	SS+Graphite
452	Gland flange	A 105
456	Gland bush	A 276-410
461	Gland packing	Graphite
515	Seat	ST6 (Integral)
544	Stem nut	A 582-416
901	Hex bolt	A 193-B7
902	Stud	A 193-B6
920.1	Hex nut	A194-2H
920.2		
961	Handwheel	IS 2108-A

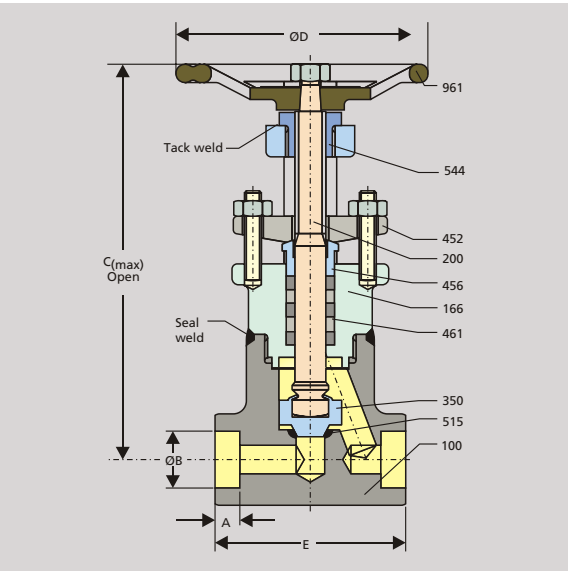
Dimensions

Size		A		B		C		D		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
½	15	0.4	9.5	0.9	21.8	4.65	118	2.95	75	2.9	73
¾	20	0.5	13.0	1.1	27.1	5.24	133	2.95	75	3.7	82
1	25	0.5	13.0	1.3	33.8	5.83	148	4.72	120	4.8	90
1½	40	0.5	13.0	1.9	48.7	7.95	202	5.67	144	6.3	127
2	50	0.6	16.0	2.4	61.1	10.43	265	5.67	144	7.0	148

1500 Globe Valve

Design Specifications

General valve design : BS 5352
Pressure-temp. ratings : ASME B 16.34
Socket weld end dimension : ASME B 16.11
End to end as per manufacturer's standard



Materials

Part No.	Part Name	Materials as per ASTM	
100	Body	A 105	A 182-F22
166	Bonnet	A 105	A 182-F22
200	Stem	A 479-410-2	
350	Disc	A 276-410 (H)	SS 304+ST6
452	Gland flange	A 105	
456	Gland bush	A 276-410	
461	Gland packing	Graphite	
515	Seat	ST6 (Integral)	
544	Stem nut	A 582-416	
902.1	Stud	A 193-B8M Cl.2	
920.1	Hex nut	A 194-2H	
920.2			
961	Handwheel	IS 2108-A	

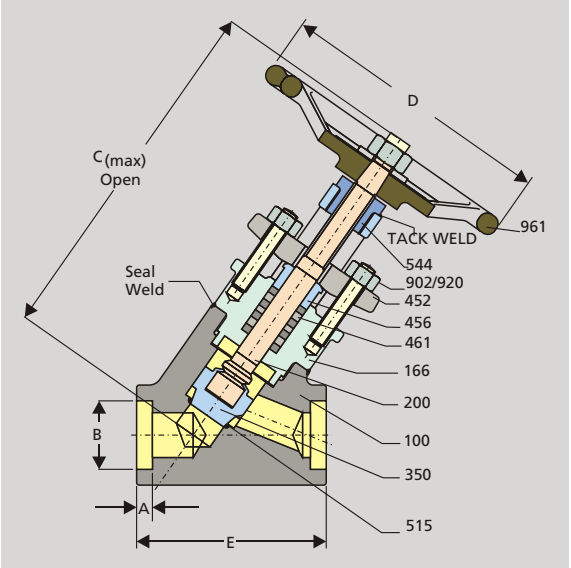
Dimensions

Size		A		B		C		D		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
½	15	0.4	9.5	0.9	21.8	6.73	171	5.00	127	2.9	73
¾	20	0.5	13.0	1.1	27.1	8.66	220	7.28	185	3.7	94
1	25	0.5	13.0	1.3	33.8	9.29	236	7.28	185	4.8	122
1½	40	0.5	13.0	1.9	48.7	11.61	295	7.99	203	6.3	160
2	50	0.6	16.0	2.4	61.1	12.20	310	7.99	203	7.0	178

2500 Globe Valve

Design Specifications

General valve design : ASME B 16.34
Pressure-temp. ratings : ASME B 16.34
Socket weld end dimension : ASME B 16.11
End to end as per manufacturer's standard



Materials

Part No.	Part Name	Materials as per ASTM	
100	Body	A 105	A 182-F22
166	Bonnet	A 105	A 182-F22
200	Stem	A 479-410-2	
350	Disc	SS 304+ST6	
452	Gland flange	A 105	
456	Gland bush	A 276-410	
461	Gland packing	Graphite	
515	Seat	ST6 (Integral)	
544	Stem nut	A 582-416	
902	Stud	A 193-B8M-Cl.2	
920	Hex nut	A 194-2H	
961	Handwheel	IS 2108-A	

Dimensions

Size		A		B		C		D		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
½	15	0.4	9.5	0.9	21.8	7.32	186	5.00	127	3.3	85
¾	20	0.5	13.0	1.1	27.1	8.66	220	7.28	185	3.9	98
1	25	0.5	13.0	1.3	33.8	9.45	240	7.28	185	4.1	104
1½	40	0.5	13.0	1.9	48.7	11.81	300	7.99	203	5.7	144
2	50	0.6	16.0	2.4	61.1	14.96	380	10.04	255	5.7	144

Forged Check Valve

SICCA® 800-2500

Type PCF

Applications

- Power stations, general industry, process engineering
- For water, steam, gas, oil & other non-agressive media
- Further applications on request

Operating Data

- Pressure range up to 439 bar/ (6250 PSI)
- Temperature range up to + 593°C / 1100°F
- Pressure-temperature ratings as per API 602 (# 800) and ASME B 16.34 (1500, 2500)

Materials

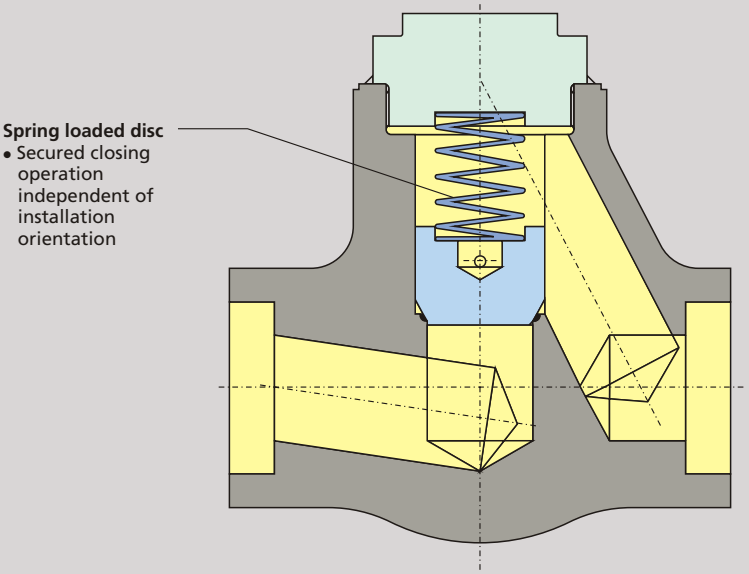
- A 105 up to 425°C / 800 °F
- A 182-F22 up to 593 °C / 1100 °F

Design

- BS 5352 (# 800 / 1500)
- ASME B 16.34 (# 2500)
- Bolted cover for # 800
- Welded cover for # 1500 / 2500
- Socket weld for # 800-2500, socket thread NPT (F) for # 800
- Trim No. 8 (Stellite - 13% Cr) for # 800
  Trim No. 8 (Stellite - 13% Cr) and No. 5 for # 1500
  Trim No. 5 for # 2500
- Spring loaded disc

Standard Variants

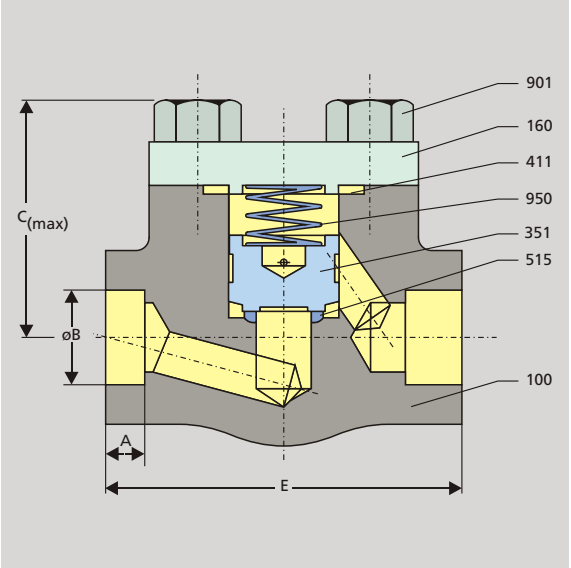
- Flanged ends to # 150 / 300 / 600
- Butt weld execution for # 800
- Other materials and Trim-Nos. on request
- Other variants on request



800 Check Valve

Design Specifications

General valve design : BS 5352
Pressure-temp. ratings : ASME B 16.34
Socket weld end dimension : ASME B 16.11
End to end as per manufacturer's standard



Materials

Part No.	Part Name	Materials as per ASTM
100	Body	A 105
160	Cover	A 105
351	Disc	A 279-410 (H)
411	Gasket	SS+Graphite
515	Seat	ST6 (Integral)
901	Hex bolt	A 193-B7
950	Spring	A 313-SS 302

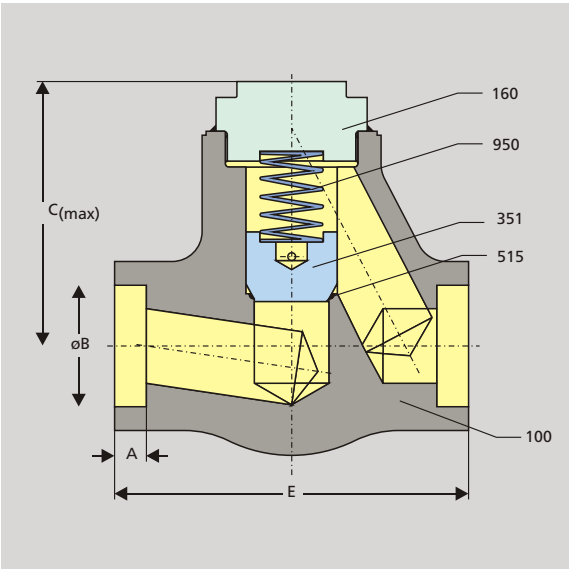
Dimensions

Size		A		B		C		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
½	15	0.4	9.5	0.9	21.8	1.97	50	2.9	73
¾	20	0.5	13.0	1.1	27.1	2.36	60	3.2	82
1	25	0.5	13.0	1.3	33.8	2.56	65	3.5	90
1½	40	0.5	13.0	1.9	48.7	3.54	90	5.0	127
2	50	0.6	16.0	2.4	61.1	4.92	125	5.8	148

1500 Check Valve

Design Specifications

General valve design : BS 5352
Pressure-temp. ratings : ASME B 16.34
Socket weld end dimension : ASME B 16.11
End to end as per manufacturer's standard



Materials

Part No.	Part Name	Materials as per ASTM	
100	Body	A 105	A 182-F22
160	Cover	A 105	A 182-F22
351	Disc	A 279-410 (H)	SS 304+ST6
515	Seat	ST6 (Integral)	ST6 (Integral)
950	Spring	A 313-SS 302	A 313-SS 302

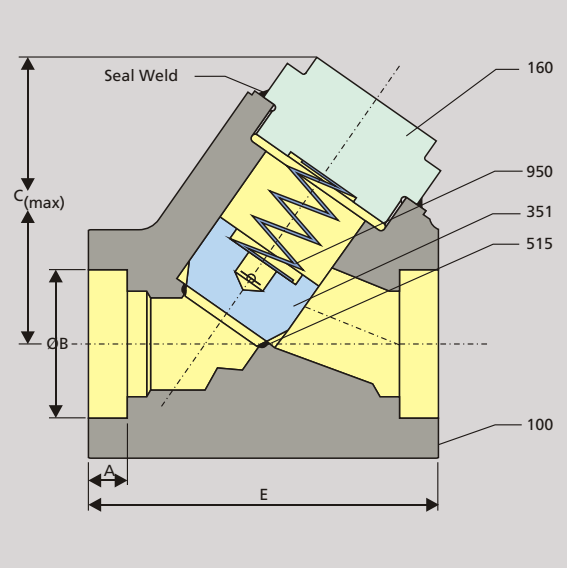
Dimensions

Size		A		B		C		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
½	15	0.4	9.5	0.9	21.8	2.56	65	2.9	73
¾	20	0.5	13.0	1.1	27.1	3.15	80	3.2	82
1	25	0.5	13.0	1.3	33.8	3.74	95	3.5	90
1½	40	0.5	13.0	1.9	48.7	4.72	120	5.0	127
2	50	0.6	16.0	2.4	61.1	5.51	140	5.8	148

2500 Check Valve

Design Specifications

General valve design : ASME B 16.30
Pressure-temp. ratings : ASME B 16.34
Socket weld end dimension : ASME B 16.11
End to end as per manufacturer's standard



Materials

Part No.	Part Name	Materials as per ASTM	
100	Body	A 105	A 182-F22
160	Cover	A 105	A 182-F22
351	Disc	SS 304+ST6	SS 304+ST6
515	Seat	ST6 (Integral)	ST6 (Integral)
950	Spring	A 313-SS 302	A 313-SS 302

Dimensions

Size		A		B		C		E	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
½	15	0.4	9.5	0.9	21.8	2.99	76	3.4	85
¾	20	0.5	13.0	1.1	27.1	2.99	76	3.9	98
1	25	0.5	13.0	1.3	33.8	3.54	90	4.1	104
1½	40	0.5	13.0	1.9	48.7	4.72	120	5.7	144
2	50	0.6	16.0	2.4	61.1	5.00	127	5.7	144