

Bellows Sealed Globe Valve



Description

Exclusively designed Armstrong bellows sealed globe valve has a sealing combination featured by using double walls stainless steel bellows as the stem seal elements and graphite packing as seal accessory to prevent leakage. The finely polished planar sealing between the valve and the seat ensures a long-term reliable operation whenever the stem is moving or not. Therefore, it can display remarkable sealing characteristics at any applications.

Armstrong bellows sealed globe valves can be widely applied in the water, steam, oil and other non-corrosion systems in petrochemical, electricity, metallurgy, electronics, textile and other industries.

Connections

Screwed (NPT/BSPT), socket weld, flanged (HG20592 RF, other flanges available, please consult factory).



Bellows Sealed Globe Valves				
Model	Body Material	Norm. Pressure (MPa)	Size	Connection Type
BD16	Ductile Iron	1.6	DN15~DN300	Flanged
BD25	Ductile Iron	2.5		
BCS16	Carbon Steel	1.6	DN15~DN50	Flanged
BCS25	Carbon Steel	2.5		
BCS40	Carbon Steel	4.0	DN15~DN50	Flanged, Screwed, SW
			DN65~DN200	Flanged

Design Features					
Model	BD16	BD25	BCS16	BCS25	BCS40
Max. Allowable Pressure	2.5MPa@ 20℃	4.0MPa@ 20℃	2.5MPa@ 20℃	4.0MPa@ 20℃	6.4MPa @20℃
Max. Operating Pressure	1.6MPa	2.5MPa	1.6MPa	2.5MPa	4.0MPa
Max. Allowable Temperature	350℃	350℃	425℃	425℃	425℃
Min. Operating Temperature	-10℃	-10℃	-30℃	-30℃	-30℃

Pressure-Temperature Ratings						
Model	≤120℃	150℃	200℃	250℃	300℃	350℃
BD16	1.6MPa	1.52MPa	1.44MPa	1.28MPa	1.12MPa	0.88MPa
BD25	2.5MPa	2.43MPa	2.25MPa	2.18MPa	2.00MPa	1.75MPa
BCS16	1.6MPa	1.57MPa	1.52MPa	1.44MPa	1.28MPa	1.12MPa
BCS25	2.5MPa	2.45MPa	2.38MPa	2.25MPa	2.00MPa	1.75MPa
BCS40	4.0MPa	3.92MPa	3.80MPa	3.60MPa	3.20MPa	2.80MPa

• Long-term Operation

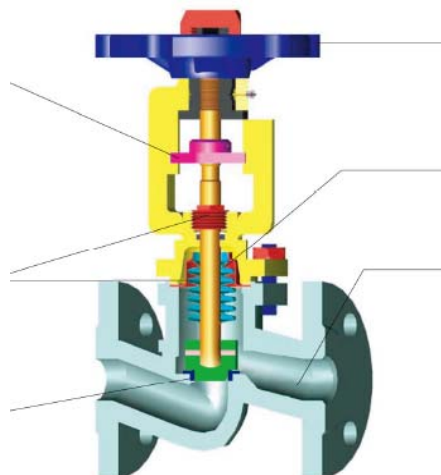
Its compact yet rugged construction and anti-twist device on the bellows offers long, corrosion resistant service.

• Double bellows sealing

It combines double walls stainless steel bellows seal with graphite packing seal.

• Planar sealing

The planar sealing between the valve and the seat ensures reliable sealing and operation.



• Easy to Operate

Non-rising handwheel travels less and makes responses quicker; free opening/closing in narrow space; on/off position indicator makes operation easier.

• Maintenance-free

Being the key component, double wall bellows seal keeps you free from valve leakage and maintenance.

• Wide Applications

It can be widely used under different pressures, temperatures or vibrating conditions, which makes it ideal for many applications.

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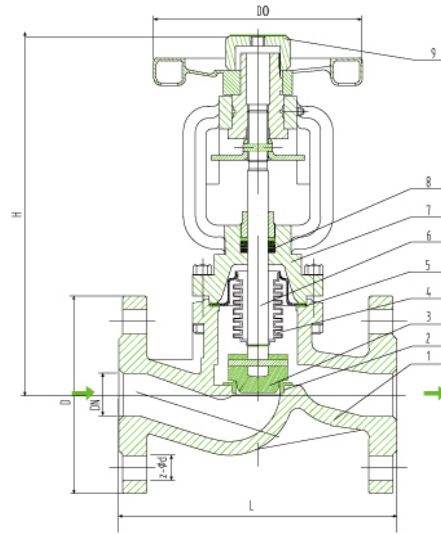


Fig. 1 Bellows Sealed Globe Valve (Flanged)

Globe Valve Physical Data (mm)						
Model	DN	D0 (φ)	D (φ)	H	L	z-φd
Ductile Iron BD16/BD25	15	130	95	250	130	4-φ14
	20	130	105	260	150	4-φ14
	25	130	115	275	160	4-φ14
	32	170	140	305	180	4-φ18
	40	170	150	310	200	4-φ18
	50	170	165	320	230	4-φ18
	65	280	185	465	290	4-φ18/8-φ18
	80	280	200	470	310	8-φ18
	100	280	220/235	510/515	350	8-φ18/8-φ22
	125	280	250/270	610/615	400	8-φ18/8-φ26
	150	420	285/300	680/685	480	8-φ22/8-φ26
	200	420	340/360	760/770	600	12-φ22/12-φ26
	250	550	405/425	985/1000	650	12-φ26/12-φ30
300	550	460/485	1060/1070	750	12-φ26/12-φ30	
Carbon Steel BCS16/BCS25/BCS40	15	130	95	250	130	4-φ14
	20	130	105	260	150	4-φ14
	25	130	115	275	160	4-φ14
	32	170	140	305	180	4-φ18
	40	170	150	310	200	4-φ18
	50	170	165	320	230	4-φ18
Carbon Steel BCS40	65	270	185	370	290	8-φ18
	80	270	200	380	310	8-φ18
	100	270	235	405	350	8-φ22
	125	270	270	480	400	8-φ26
	150	425	300	550	480	8-φ26
	200	425	375	600	600	12-φ30

Bellows Sealed Globe Valve

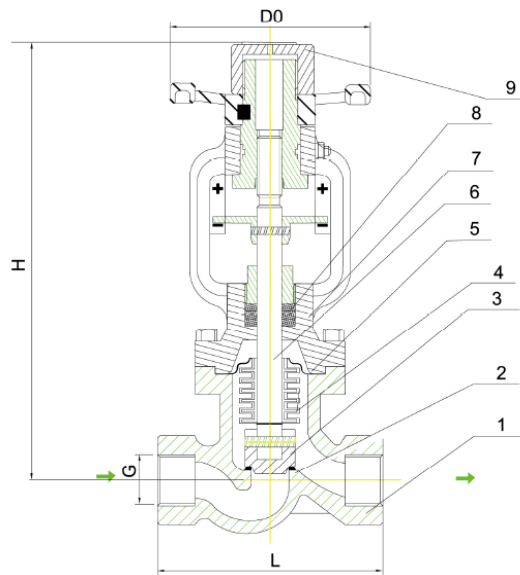


Fig. 2 Bellows Sealed Globe Valve (Screwed)

Globe Valve Physical Data for Screwed Connections (mm)					
Model	DN	D0 (φ)	H	L	G
Carbon Steel BCS40	15	φ80	250	90	1/2"
	20	φ80	260	100	3/4"
	25	φ100	275	120	1"
	32	φ120	305	140	1-1/4"
	40	φ140	310	170	1-1/2"
	50	φ160	320	200	2"

List of Materials			
Part No.	Part Name	BD16/BD25	BCS16/BCS25/BCS40
1	Body	ASTM A395 Ductile Iron	ASTM A216 WCB Cast Steel
2	Seat	304 Stainless Steel	304 Stainless Steel
3	Valve	420 Stainless Steel	420 Stainless Steel
4	Bellows	304 Stainless Steel	304 Stainless Steel
5	Gasket	Stainless Steel+Expanded Graphite	Stainless Steel+Expanded Graphite
6	Stem	420 Stainless Steel	420 Stainless Steel
7	Cap	ASTM A395 Ductile Iron	ASTM A216 WCB Cast Steel
8	Gland Packing	Expanded Graphite	Expanded Graphite
9	Handwheel	ASTM A216 WCB Cast Steel	ASTM A216 WCB Cast Steel

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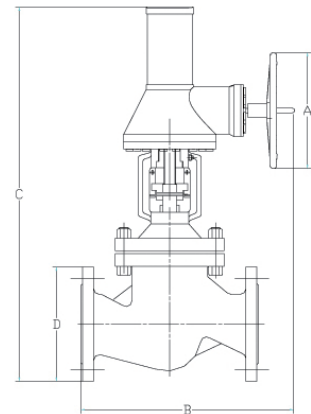


Performance Parameters															
Name of Parameter	Size Model	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN	DN
		15	20	25	32	40	50	65	80	100	125	150	200	250	300
Flow Coefficient (Kv)	BD16/BD25	5	11	14	20	33	52	74	118	200	285	400	720	1130	1590
	BCS16/BCS25/BCS40	5	11	14	20	33	52	74	118	200	285	400	720	-	-
Valve Stem Stroke (mm)	BD16/BD25	8	10	12	14	15	18	25	28	35	45	58	65	80	94
	BCS16/BCS25/BCS40	8	10	12	14	15	18	25	28	35	45	58	65	-	-
Weight (kg)	BD16	4.5	5	6	9	10	14	23	29	33	71	113	170	275	383
	BD25	4.5	5	6	9	10	14	26	32	38	75	118	176	290	400
	BCS16/ BCS25	4.5	5	6	9	10	14	-	-	-	-	-	-	-	-
	BCS40	6	7	9	12	17	24	33	44	60	89	98	190	-	-
	BCS40(Screwed)	1.5	2	3	5	7	8	-	-	-	-	-	-	-	-

Lift Type Worm Drive Device

The worm drive device featuring high reduction ratio is able to transmit power and perform steadily. It can be widely installed on large sized globe valves serving as valve opening assisting device.

BA series worm drives are optional. See the following table for details.



Worm Drive Device Dimensions and Weights (mm)							
Model	Worm Drive Model	Globe Valve Size	A (φ)	B	C	D (φ)	Weight (kg) *
BD16	BA-1	DN150	460	680	960	285	167
		DN200	460	740	1000	340	224
		DN250	460	765	1260	405	329
	BA-2	DN300	460	857	1330	460	437
BD25	BA-1	DN150	460	680	960	300	167
		DN200	460	740	1000	360	224
		DN250	460	765	1260	425	329
	BA-2	DN300	460	857	1330	485	437
BCS40	BA-1	DN150	460	680	1095	425	152
		DN200	460	740	1170	425	234

Note: The weight consists of the weight of globe valve and the worm drive device.

Please indicate when ordering

- Model
- Max. Operating Pressure
- Max. Temperature
- Nom. Pressure
- Connection Type
- Options

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.