

SVF Flow Controls

I N C O R P O R A T E D

13560 Larwin Circle
Santa Fe Springs, CA 90670
800.783.7836 Fax: 562.802.3114
Sales@SVF.net www.SVF.net

SERIES 41, B41 & B42

FLANGED BALL VALVES
API 607 4TH EDITION

Size Range:

1/2" - 8"

Pressure Rating:

ANSI 150# & 300#
Flanged

Body Material:

Carbon Steel
316 Stainless Steel
Alloy 20
Hastelloy C

Features:

Fire Safe
Anti-Static
Tested API 598
NACE





Series 41, B41 & B42 Ball Valves

SVF 41, B41 & B42 Series Ball Valves Meet the Latest Standards of API-607-4th Edition

Design Features

Metal-to-Metal Secondary Seals-In the enormous heat of an industrial fire the soft seat is totally sublimated. The floating ball moves down stream and seats against the metal secondary seat to form a tight seal.

Graphite Body Seal-Graphite is a remarkable, high temperature body seal material capable of withstanding the heat of a fire. To assure body seal integrity during and after a fire, graphite seals are used in all of our fire-tested ball valves.

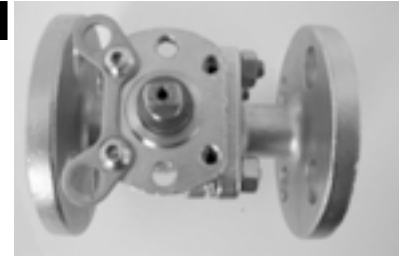
Anti-Static Feature-All SVF fire-tested ball valves are designed with positive grounding to eliminate static charges from the energy of the flowing media or from external sources.

API-607-4th Edition Standard-This is the designation for a fire test developed by The American Petroleum Institute for soft seated valves. The test measures the ability of a valve to withstand and to retard the propagation of a fire. SVF valves have passed these stringent tests.

Other Features

Standard Locking Device-All valves feature a locking device that ensures security in all applications. This device is removable for actuation.

ISO Mounting-SVF 41, B41 & B42 Series valves are produced with internationally recognized ISO-5211 mounting dimensions to simplify actuator attachment.



Locking Device & Mounting Pad

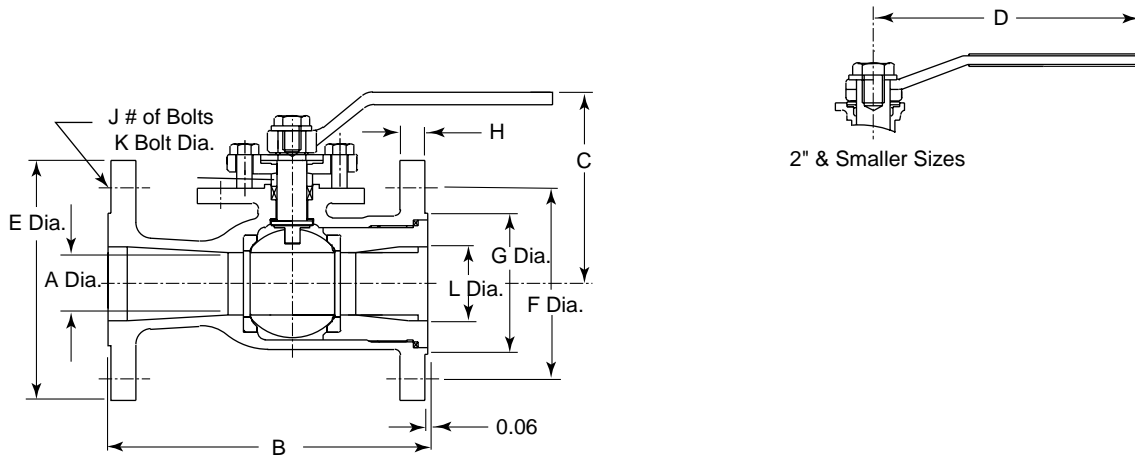
Standards

Anti-Static - Fire-Safe Ball Valve	API 607-4
Design - Metal Ball Valve - Flanged & Butt Weld Ends	API 608
Testing - Valve Inspection & Testing	API 598
Wall & Pressure Rating - Flanged, Threaded & Welded End Valves	ASME/ANSI B16-34
Face/Face - Face to Face of Valves	ASME/ANSI B16-10
Flanged Dimension - Steel Pipe Flanges & Flange Fittings	ASME/ANSI B16-5
NACE - Sulfide Stress Cracking Corrosion Resistant	NACE/MRO 175
General Ball Valve Service	MSS-SP-72

Series 41 Class 150, Reduced Bore, Sizes 1 1/2" - 6"

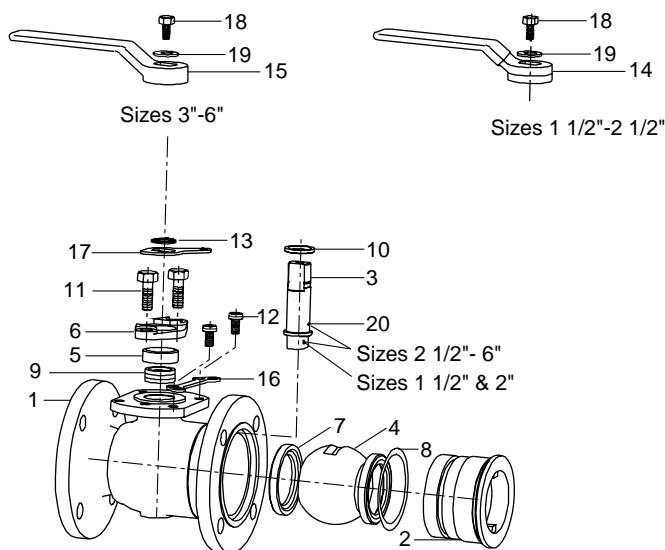


Dimensions & Weights



Size	A	B	C	D	E	F	G	H	J	K	L	M	N	Wt. CS	Wt. SS
1 1/2	1.00	6.50	4.00	6.00	5.00	3.88	2.87	0.56	4	0.62	1.50	0.551	0.315	11	11
2	1.50	7.00	5.00	9.00	6.00	4.75	3.62	0.62	4	0.75	2.00	0.787	0.472	21	19
3	2.32	8.00	6.06	13.80	7.50	6.00	5.00	0.75	4	0.75	3.00	1.063	0.669	39	40
4	3.00	9.00	6.69	13.80	9.00	7.50	6.19	0.94	8	0.75	4.00	1.063	0.669	60	62
6	4.01	10.50	8.11	17.70	11.00	9.50	8.50	1.00	8	0.88	6.00	1.339	0.866	104	103

Materials of Construction



► Remove for actuator mounting.

No.	Description	Material	
		Carbon Steel	Stainless Steel
1	Body	A216-WCB	A351-CF8M
2	Plug	A216-WCB	A351-CF8M
3	Stem	A276-316	A276-316
4	Ball	A351-CF8M	A351-CF8M
5	Gland	A276-316	A276-316
6	Gland Flange	A351-CF8	A351-CF8
7	Seat	*RTFE	*RTFE
8	Seal	Graphite	Graphite
9	Gland Packing	**	**
10	Thrust Washer	RTFE 25% C.	RTFE 25% C.
11	Gland Bolt	A193-B8	A193-B8
12	Locking Bolt	A193-B8	A193-B8
13	Snap Ring	A686-W1***	A686-W1***
14	Handle, Vinyl Coat	A108-1020	A108-1020
15	Handle	A536	A536
16	Locking Plate	A167-304	A167-304
17	Stop/Lock	A167-304	A167-304
18	Handle Bolt	A276-304	A276-304
19	Washer	A167-304	A167-304
20	Anti-Static Device	316 SS	316 SS

* 15% Glass Standard, 25% Carbon Optional

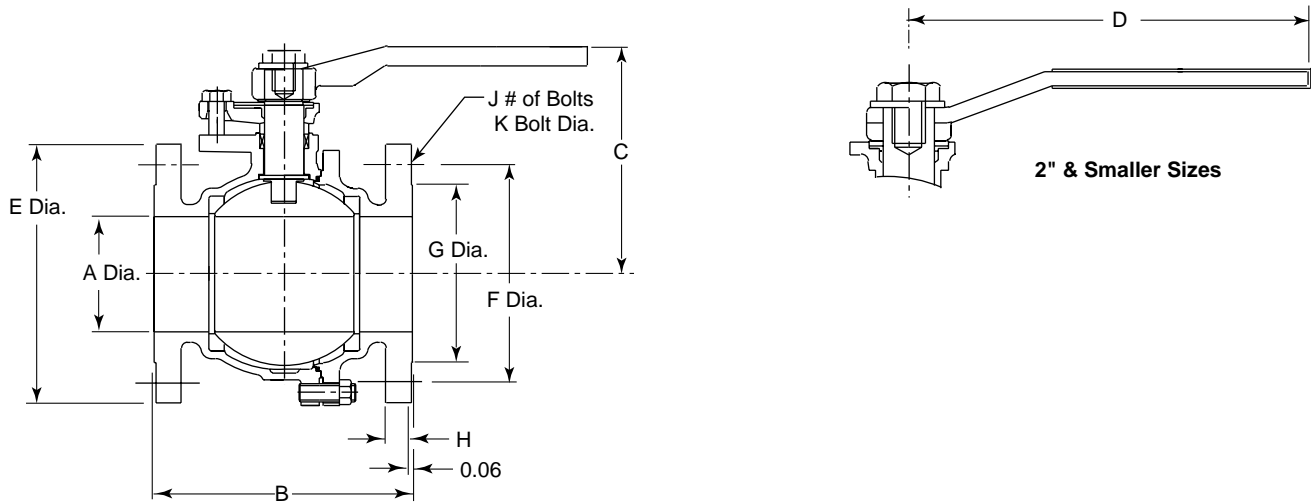
** Expanded Graphite + Corrosion Inhibitor

*** Cr Plated



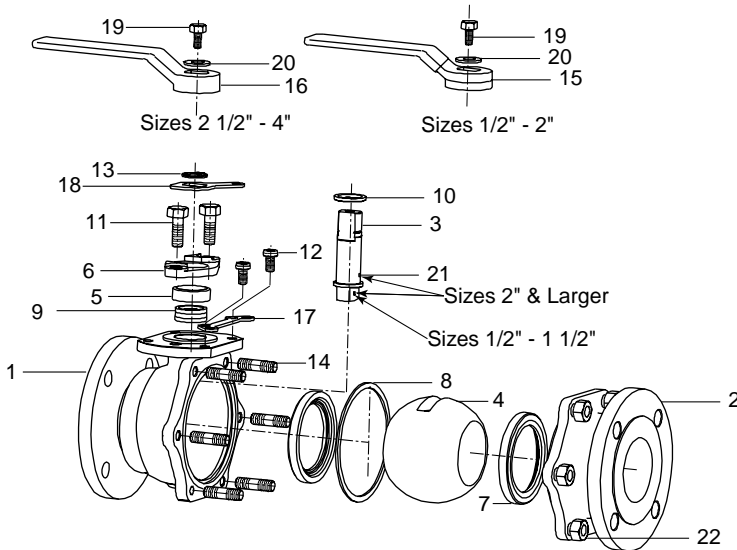
Series B41 Class 150, Full Bore, Sizes 1/2" - 4"

Dimensions & Weights



Size	A	B	C	D	E	F	G	H	J	K	CS Wt.	SS Wt.
1/2	0.51	4.25	3.30	5.10	3.50	2.38	1.38	0.44	4	0.62	4	4
3/4	0.75	4.61	3.46	5.10	3.88	2.75	1.69	0.44	4	0.62	5	5
1	1.00	5.00	4.01	5.10	4.25	3.12	2.00	0.44	4	0.62	7	7
1 1/2	1.50	6.50	5.00	9.10	5.00	3.88	2.88	0.56	4	0.62	15	15
2	2.00	7.00	5.59	9.10	6.00	4.75	3.62	0.62	4	0.75	22	22
2 1/2	2.50	7.50	5.98	13.80	7.00	5.50	4.12	0.69	4	0.75	34	35
3	3.00	8.00	6.69	13.80	7.50	6.00	5.00	0.75	4	0.75	44	45
4	4.00	9.00	8.11	17.70	8.50	7.50	6.19	0.94	8	0.75	75	77

Materials of Construction



► Remove for actuator mounting.

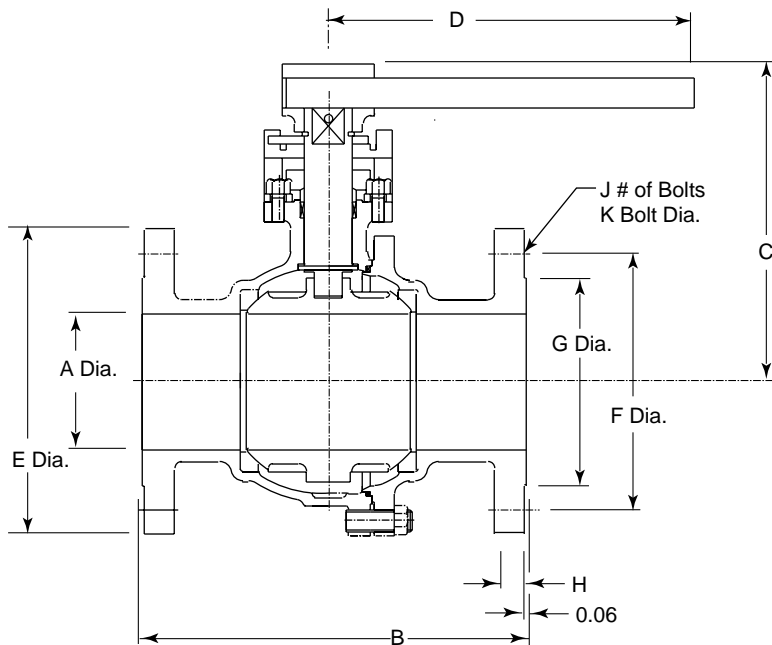
No.	Description	Material	
		Carbon Steel	Stainless
1	Body	A216-WCB	A351-CF8M
2	Cap	A216-WCB	A351-CF8M
3	Stem	A276-316	A276-316
4	Ball	A351-CF8M	A351-CF8M
5	Gland	A276-316	A276-316
6	Gland Flange	A351-CF8	A351-CF8
7	Seat	*RTFE	*RTFE
8	Seal	SPW304+Graphite	SPW304+Graphite
9	Gland Packing	**	**
10	Thrust Washer	RTFE 25% C.	RTFE 25% C.
11	Gland Bolt	A193-B8	A193-B8
12	Locking Bolt	A193-B8	A193-B8
13	Snap Ring	A686-W1***	A686-W1***
14	Body Bolt	A193-B7	A193-B8
15	Handle, Vinyl Coat	A108-1020****	A108-1020****
16	Handle	A536****	A536****
17	Locking Plate	A167-304	A167-304
18	Stop/Lock	A167-304	A167-304
19	Handle Bolt	A276-304	A276-304
20	Washer	A167-304	A167-304
21	Anti-Static Device	316 SS	316 SS
22	Body Nut	A194-2H	A194-8

* 15% Glass Standard, 25% Carbon Optional
 ** Expanded Graphite + Corrosion Inhibitor
 *** Cr Plated
 **** 2" & Smaller
 ***** 2 1/2"-4"

Series B41 Class 150, Full Bore, Sizes 6" & 8"

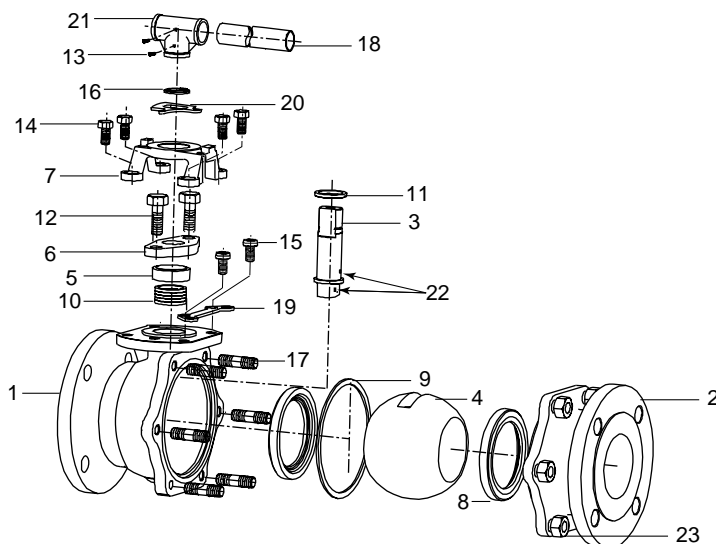


Dimensions & Weights



Size	A	B	C	D	E	F	G	H	J	K	CS Wt.	SS Wt.
6	6.00	15.50	13.03	23.60	11.00	9.50	8.50	1.00	8	0.88	162	149
8	8.00	18.00	15.98	31.50	13.50	11.75	10.62	1.12	8	0.88	266	266

Materials of Construction



► Remove for actuator mounting.

No.	Description	Material	
		Carbon Steel	Stainless
1	Body	A216-WCB	A351-CF8M
2	Cap	A216-WCB	A351-CF8M
3	Stem	A276-316	A276-316
4	Ball	A351-CF8M	A351-CF8M
5	Gland	A276-316	A276-316
6	Gland Flange	A351-CF8	A351-CF8
7	Yoke	A216-WCB	A351-CF8
8	Seat	*RTFE	*RTFE
9	Seal	SPW304+Graphite	SPW304+Graphite
10	Gland Packing	**	**
11	Thrust Washer	RTFE 25% C.	RTFE 25% C.
12	Gland Bolt	A193-B8	A193-B8
13	Set Screw	A108-1020	A108-1020
14	Yoke Bolt	A193-B8	A193-B8
15	Locking Bolt	A193-B8	A193-B8
16	Snap Ring	A686-W1***	A686-W1***
17	Body Bolt	A193-B7	A193-B8
18	Pipe Handle	Carbon Steel	Carbon Steel
19	Locking Plate	A167-304	A167-304
20	Stop/Lock	A167-304	A167-304
21	Handle Guide "T"	A216-WCB	A216-WCB
22	Anti-Static Device	316 SS	316 SS
23	Body Nut	A194-2H	A194-8

* 15% Glass Standard, 25% Carbon Optional

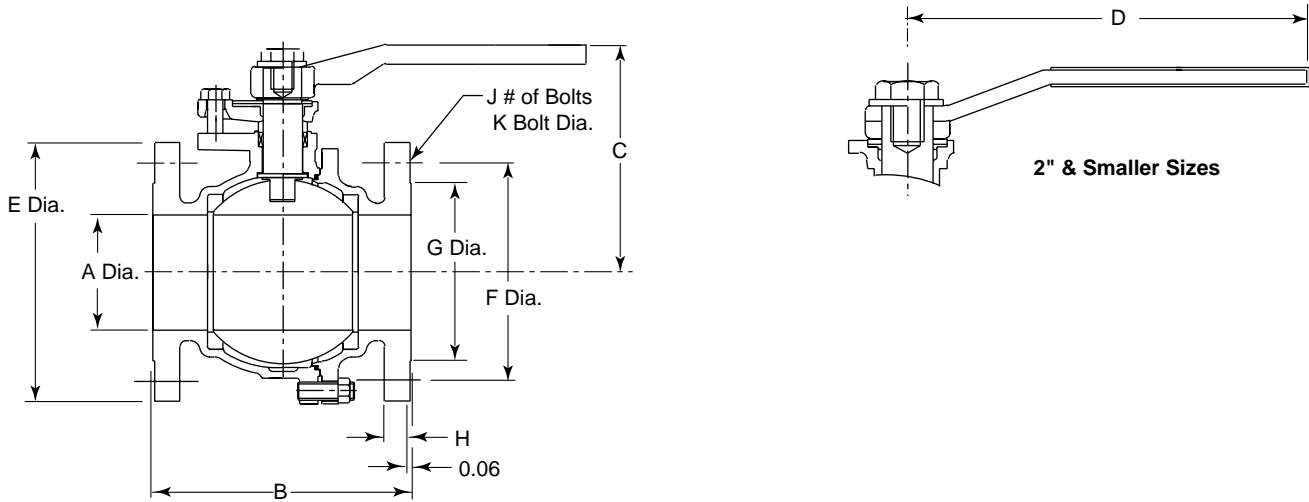
** Expanded Graphite + Corrosion Inhibitor

*** Cr Plated



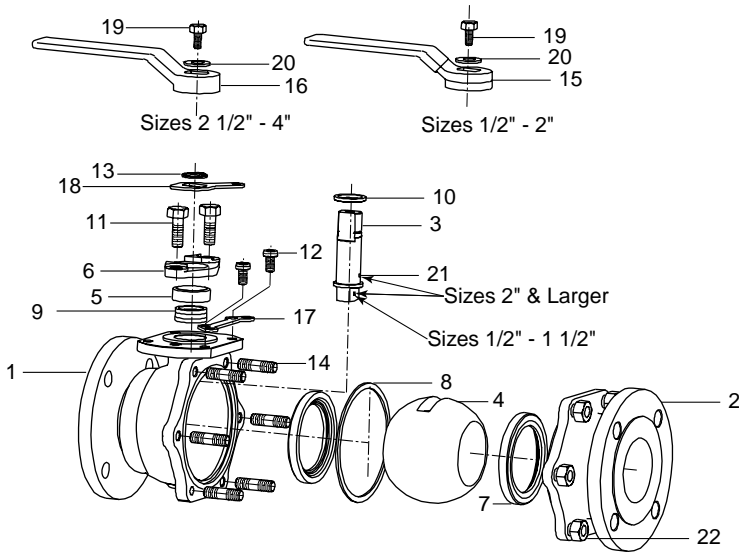
Series B42 Class 300, Full Bore, Sizes 1/2" - 4"

Dimensions & Weights



Size	A	B	C	D	E	F	G	H	J	K	CS Wt.	SS Wt.
1/2	0.51	5.50	3.30	5.10	3.50	2.62	1.38	0.56	4	0.62	6	6
3/4	0.75	6.00	3.46	5.10	4.62	3.25	1.69	0.62	4	0.75	8	8
1	1.00	6.50	4.01	6.10	4.88	3.50	2.00	0.69	4	0.75	12	12
1 1/2	1.50	7.50	5.19	9.10	6.12	4.50	2.88	0.81	4	0.88	24	24
2	2.00	8.50	5.79	9.10	6.50	5.00	3.62	0.88	8	0.75	31	32
2 1/2	2.50	9.50	5.98	13.80	7.50	5.88	4.12	1.00	8	0.88	48	48
3	3.00	11.13	6.93	13.80	8.25	6.62	5.00	1.12	8	0.88	65	66
4	4.00	12.00	8.27	17.70	10.00	7.88	6.19	1.25	8	0.88	107	110

Materials of Construction



► Remove for actuator mounting.

No.	Description	Material	
		Carbon Steel	Stainless
1	Body	A216-WCB	A351-CF8M
2	Cap	A216-WCB	A351-CF8M
3	Stem	A276-316	A276-316
4	Ball	A351-CF8M	A351-CF8M
5	Gland	A276-316	A276-316
6	Gland Flange	A351-CF8	A351-CF8
7	Seat	*RTFE	*RTFE
8	Seal	SPW304+Graphite	SPW304+Graphite
9	Gland Packing	**	**
10	Thrust Washer	RTFE 25% C.	RTFE 25% C.
11	Gland Bolt	A193-B8	A193-B8
12	Locking Bolt	A193-B8	A193-B8
13	Snap Ring	A686-W1***	A686-W1***
14	Body Bolt	A193-B7	A193-B8
15	Handle, Vinyl Coat	A108-1020****	A108-1020****
16	Handle	A536*****	A536*****
17	Locking Plate	A167-304	A167-304
18	Stop/Lock	A167-304	A167-304
19	Handle Bolt	A276-304	A276-304
20	Washer	A167-304	A167-304
21	Anti-Static Device	316 SS	316 SS
22	Body Nut	A194-2H	A194-8

* 15% Glass Standard, 25% Carbon Optional

** Expanded Graphite + Corrosion Inhibitor

*** Cr Plated

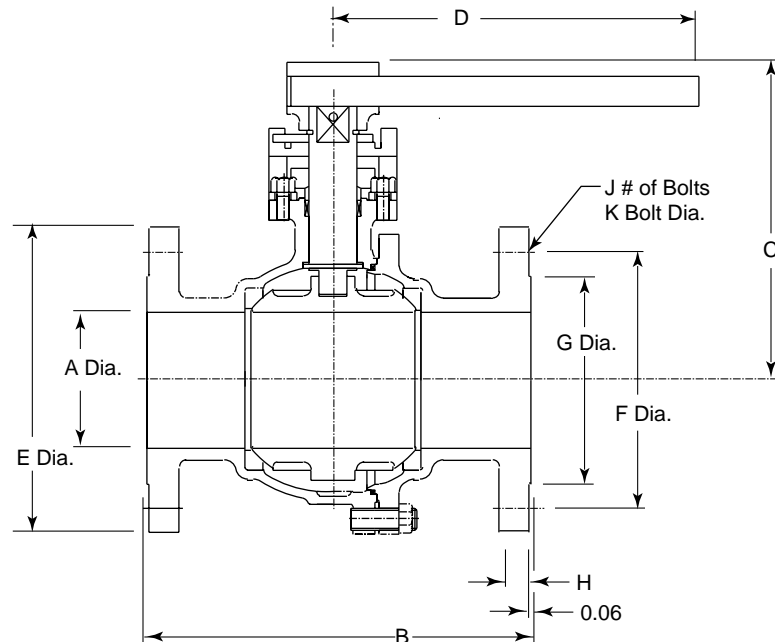
**** 2" & Smaller

***** 2 1/2"-4"

Series B42 Class 300, Full Bore, Sizes 6" & 8"

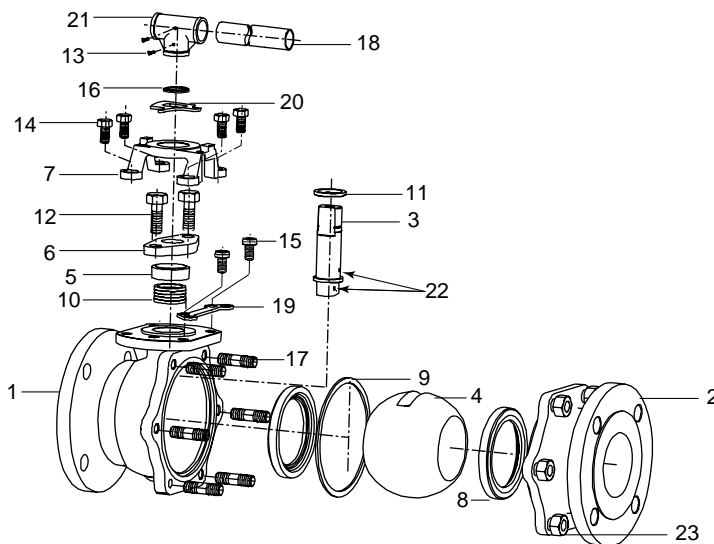


Dimensions & Weights



Size	A	B	C	D	E	F	G	H	J	K	CS Wt.	SS Wt.
6	6.00	15.86	13.03	23.60	12.50	10.62	8.50	1.44	12	0.88	221	212
8	8.00	19.75	15.98	31.50	15.00	13.00	10.62	1.62	12	1.00	381	390

Materials of Construction



► Remove for actuator mounting.

No.	Description	Material	
		Carbon Steel	Stainless
1	Body	A216-WCB	A351-CF8M
2	Cap	A216-WCB	A351-CF8M
3	Stem	A276-316	A276-316
4	Ball	A351-CF8M	A351-CF8M
5	Gland	A276-316	A276-316
6	Gland Flange	A351-CF8	A351-CF8
7	Yoke	A216-WCB	A351-CF8
8	Seat	*RTFE	*RTFE
9	Seal	SPW304+Graphite	SPW304+Graphite
10	Gland Packing	**	**
11	Thrust Washer	RTFE 25% C.	RTFE 25% C.
12	Gland Bolt	A193-B8	A193-B8
13	Set Screw	A108-1020	A108-1020
14	Yoke Bolt	A193-B8	A193-B8
15	Locking Bolt	A193-B8	A193-B8
16	Snap Ring	A686-W1***	A686-W1***
17	Body Bolt	A193-B7	A193-B8
18	Pipe Handle	Carbon Steel	Carbon Steel
19	Locking Plate	A167-304	A167-304
20	Stop/Lock	A167-304	A167-304
21	Handle Guide "T"	A216-WCB	A216-WCB
22	Anti-Static Device	316 SS	316 SS
23	Body Nut	A194-2H	A194-8

* 15% Glass Standard, 25% Carbon Optional

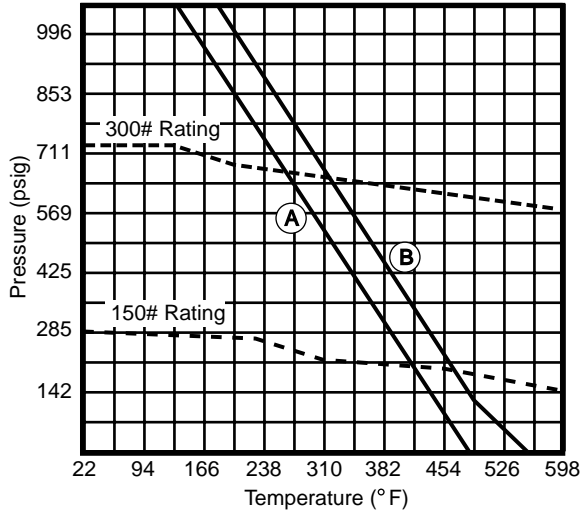
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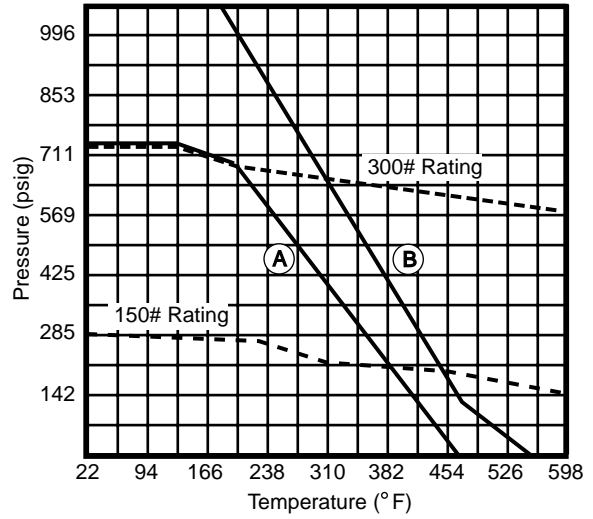


B41 & B42 Pressure-Temperature Ratings

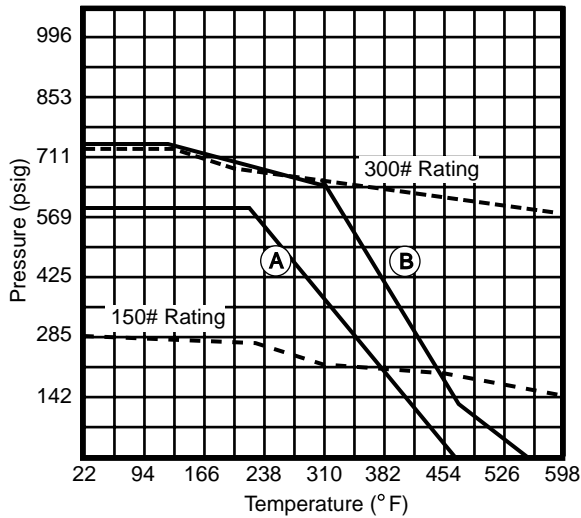
Full Bore 1/2", 3/4"



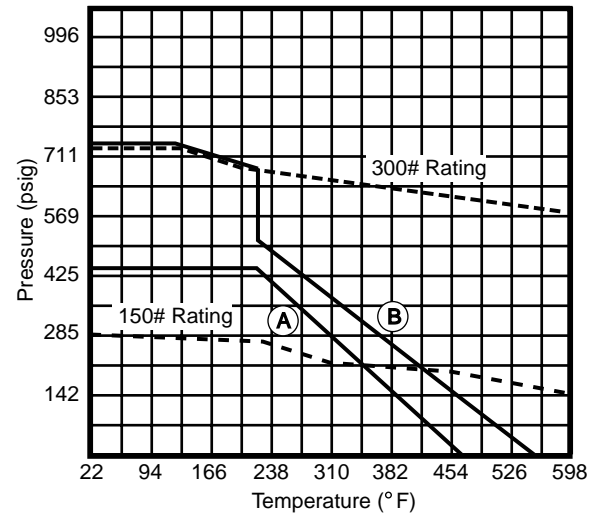
Reduced Bore 1 1/2" - 3" Full Bore 1" - 2 1/2"



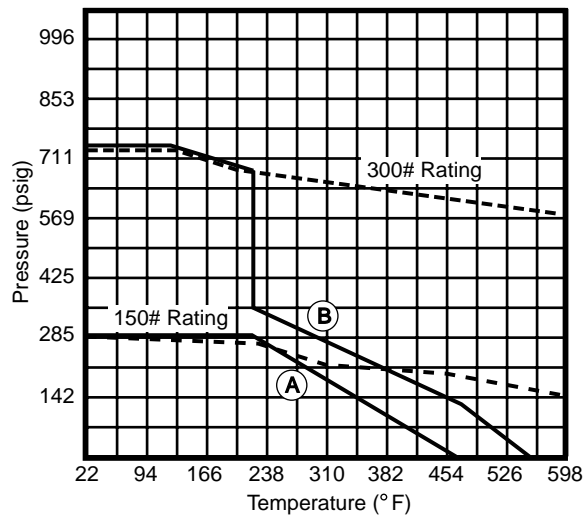
Reduced Bore 4" - 6" Full Bore 3" - 4"



Full Bore 6"



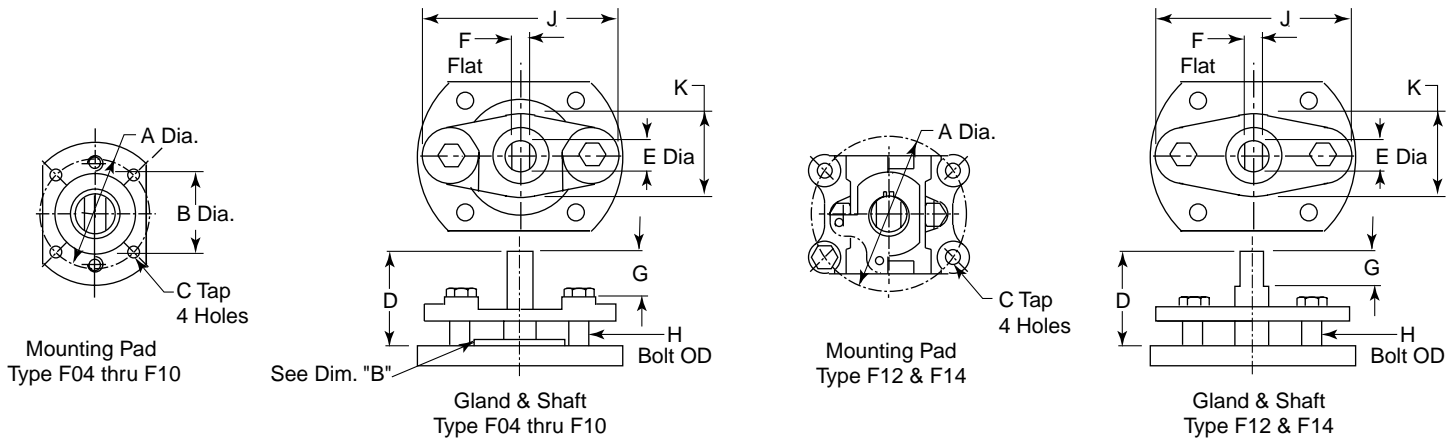
Full Bore 8"



Note:

- (A) Glass-filled PTFE (Standard seat material)
- (B) Carbon Filled PTFE (Optional seat material)

Mounting Dimensions



Series 41 - Reduced Port

Size	A	B	C	D	E	F	G*	H	J	K	Type
1 1/2	1.97	1.38	1/4-20 UNC	0.92	0.55	0.31	0.23	0.31	2.57	1.26	F05
2	2.76	1.38	5/16-18 UNC	1.24	0.78	0.47	0.29	0.38	3.17	1.43	F07
3	4.02	2.44	3/8-16 UNC	1.83	1.06	0.66	0.71	0.50	4.34	2.28	F10
4	4.02	2.44	3/8-16 UNC	1.75	1.06	0.66	0.65	0.50	4.34	2.28	F10
6	4.02	2.44	3/8-16 UNC	2.10	1.33	0.86	0.95	0.50	4.34	2.28	F10

Series B41 & B42 - Full Port

Size	A	B	C	D	E	F	G*	H	J	K	Type
1/2	1.65	0.94	1/4-20 UNC	0.80	0.39	0.23	0.16	0.31	2.26	0.94	F04
3/4	1.65	0.94	1/4-20 UNC	0.80	0.39	0.23	0.16	0.31	2.26	0.94	F04
1	1.97	1.38	1/4-20 UNC	0.91	0.55	0.31	0.25	0.31	2.56	1.25	F05
1 1/2	2.76	1.81	5/16-18 UNC	1.30	0.78	0.47	0.37	0.38	3.17	1.43	F07
2	2.76	1.81	5/16-18 UNC	1.34	0.78	0.47	0.31	0.38	4.34	2.27	F07
2 1/2	4.02	2.44	3/8-16 UNC	1.82	1.06	0.66	0.74	0.50	4.34	2.27	F10
3	4.02	2.44	3/8-16 UNC	1.88	1.06	0.66	0.69	0.50	4.34	2.27	F10
4	4.02	2.76	3/8-16 UNC	2.53	1.33	0.86	0.94	0.50	4.34	2.27	F10
6	4.92	N/A	1/2-12 UNC	3.26	1.71	1.02	1.50	0.50	4.57	2.58	F12
8	5.51	N/A	5/8-11 UNC	4.44	2.00	1.26	1.78	0.62	5.88	3.06	F14

* "G" is the length of the flatted area of the valve shaft for actuator/coupling attachment.

The above dimensions are to only 2 decimal places. SVF is not responsible for mounting kits not supplied by SVF.



Operating Torque (Lbf.-ins.)

Operating Torque (Lbf.-ins.)

Seat: R 15% Glass-Filled TFE

Series			PSI				
B42	B41	41	25	50	100	150	285
1/2"	1/2"		70	70	70	70	70
3/4"	3/4"		80	80	80	80	80
1"	1"	1.5"	100	100	100	100	100
1.5"	1.5"	2"	180	180	185	190	190
2"	2"	2 1/2"	250	250	250	250	275
2 1/2"	2 1/2"	3"	400	400	400	400	400
3"	3"	4"	650	650	700	750	850
4"	4"		1,200	1,200	1,300	1,500	1,700
		6"	1,700	1,700	2,000	2,200	2,900
6"	6"		2,800	2,800	3,300	3,700	4,750
8"	8"		5,200	5,200	6,000	7,100	10,000

Series		PSI				
B42		350	450	550	650	720
1/2"		75	75	75	85	80
3/4"		85	85	90	100	100
1"		110	120	130	140	150
1 1/2"		190	210	240	280	300
2"		290	310	375	450	500
2 1/2"		420	475	600	700	800
3"		900	1,000	1,200	1,300	1,400
4"		1,800	1,900	2,000	2,000	2,000
6"		5,500	6,500	7,000	7,500	8,000
8"		13,000	16,000	16,000	16,000	18,000

Seat: C 25% Carbon-Filled TFE

Series			PSI				
B42	B41	41	25	50	100	150	285
1/2"	1/2"		80	80	80	80	80
3/4"	3/4"		110	110	110	110	115
1"	1"	1 1/2"	125	125	125	125	135
1 1/2"	1 1/2"	2"	230	230	240	250	270
2"	2"	2 1/2"	310	310	320	350	390
2 1/2"	2 1/2"	3"	480	480	480	480	500
3"	3"	4"	790	790	850	900	1,100
4"	4"		1,500	1,500	1,700	1,800	2,100
		6"	2,000	2,000	2,500	2,750	3,500
6"	6"		3,400	3,400	3,750	4,400	6,000
8"	8"		6,100	6,100	7,100	8,000	14,000

Series		PSI				
B42		350	450	550	650	720
1/2"		80	90	90	90	100
3/4"		120	125	130	135	140
1"		140	145	150	160	180
1 1/2"		280	300	350	400	450
2"		400	450	510	650	700
2 1/2"		550	610	690	800	910
3"		1,200	1,500	1,600	1,700	1,750
4"		2,200	2,400	2,500	2,500	2,500
6"		7,000	8,000	9,500	10,000	10,100
8"		15,000	17,000	18,000	19,000	19,000



Determining Valve Torque

Valve operating torque is a function of the differential pressure across the valve when it is in the closed position. The torque tables on the opposite page shows operating values for valves in clean, clear, particle-free liquid. For other services it is necessary to apply a Torque Safety Factor as outlined below:

Torque Safety Factors

Media	Factor
Oils, lubricating media	X 0.8
Liquid, clean (particle-free)	X 1.0
Liquid, dirty (slurry), raw water	X 1.8
Gas, clean & wet (saturated steam)	X 1.2
Gas, dry (superheated steam)	X 1.3
Gas, dirty (natural gas)	X 1.5
Oxygen, Chlorine	X 1.5
<i>For other conditions contact SVF.</i>	

Cv Values

41 Series

1 1/2"	2"	2 1/2"	3"	4"	6"
106	153	276	317	449	899

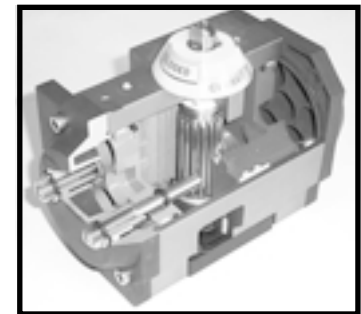
B41 & B42 Series

1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
26	61	113	270	500	800	1,200	2,200	5,300	9,700

Control Accessories

SVF flanged ball valves are available with a complete selection of control accessories for automation and communication.

Device	Model	Brochure
Actuators	Aero Rack & Pinion Pneumatic	Aero Actuator
	Electric Actuators	"E" Series
	Compact4 Pneumatic	"Compact4"
Communication	LTD4 Limit Switches	"LTD4", Limit Switches
	Pilot/Solenoid valve	"SV"
	Bus-type Network cards	"ASI" & "DeviceNet"



Aero Actuator



Electric Actuator



Network Solutions

Torque Values for Gland Packing and Body Bolts

Valve Size	Gland Bolt		Body Flange Bolt	
	41/B41 Class 150	B42 Class 300	B41 Class 150	B42 Class 300
1/2"	52		87	87
3/4"	52		87	87
1"	78		191	191
1 1/2"	104		191	339
2"	104		339	868
2 1/2"	174		339	868
3"	174		339	868
4"	174		547	868
6"	347		1701	2300
8"	347		2300	2864



Product Line



Series R8
Process Quality



Series P3
High Pressure



Series N8
Steam & Thermal Fluid



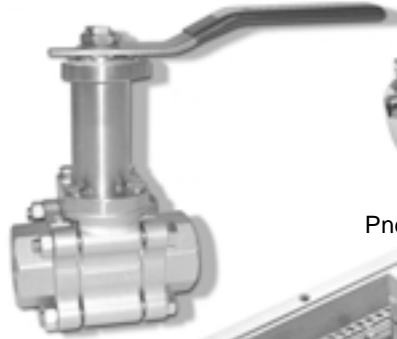
Series L8
Instrument Valve



Series B8
Full Port



Series D6/D7
Diverter Valve



Series E8
"Therma-Safe"



Aero
Pneumatic Actuator



Aero-Lite
Light Weight Actuator



Fire Safe
Flanged



**Series SB7-
CleanFLOW**
High Purity



ASI-Position Controllers



ProSpec
Custom Valves



Series BEV
Full Port



Series 79
Hastelloy-C



Series 41, B41, B42
Flanged



Series C8
Chlorine



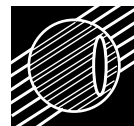
AL6XN
Process Quality

How to Order

1" B41 4 4 6 6 R G 150

SIZE	STYLE	BODY & END MATERIAL	BALL & STEM MATERIAL	SEAT	SEAL	FLANGE
1/2"	41 - 150#	4 - Carbon Steel	6 - 316 Stainless Steel	R - Reinforced TFE	G - Grafoil (Standard)	150#
3/4"	Flanged	6 - 316 Stainless Steel	8 - Alloy 20	C - Carbon Filled TFE	T - TFE*	300#
1"	(Standard Port)	8 - Alloy 20	9 - Hastelloy C			
1-1/2"	B41	9 - Hastelloy C				
2"	(150# F/P Flanged)					
3"	B42					
4"	(300# F/P Flanged)					
6"						
8"						

*Note: TFE body seal available. Valve is not Fire-Safe with TFE seal.



SVF Flow Controls

INCORPORATED

13560 Larwin Circle, Santa Fe Springs, CA 90670 800.783.7836 Fax: 562.802.3114 Sales@SVF.net www.SVF.net

Specifications subject to change without notice.