

NPS ½"–10" full port

NPS 5"–10" reduced port

Ideally suited for positive shut-off, flow control and throttling of corrosive or even toxic process media in either liquid or gaseous state.

Modular Design

Ball Valves SBV Series are available with hand lever for manual quarter turn operation as per standard or with bare shaft for easy installation of actuator units.

The sturdy design bodies are made of cast steel 1.0619 (WCB), RAL 5005 signal-blue epoxy-coated or stainless steel 1.4408 (CF8M), with corrosion resistant linings such as PFA or PFA-AS (conductive).



CE Conformity according to European Pressure Equipment Directive 2014/68/EU (PED)

Main Features

- Heavy-duty, robust construction, maintenance-free
- Body halves metal-to-metal (Live-loaded)
- Bubble-tight shut-off throughout the full pressure and temperature range
- One-piece ball/shaft, PFA-encapsulated
- Zero stem leakage provided by an innovative (Live-loaded) stem sealing mechanism
- Consistent low operating torque
- Maximum flow rates at lowest pressure drops
- Integrated ISO top flange for standard actuators
- Flanges acc. to EN 1092-1, PN 16/40 or ASME B16.5, CL 150
- FDA compliant

Example



Automated

Body 1.0619 (WCB)/PFA-lined, pneumatic quarter turn actuator, FC/FO or DA

Further options on request



Stainless Steel

Body 1.4408 (CF8M)/PFA-AS lined, bare shaft



Padlock

Hand lever on ISO top flange with safety lock

Operating Conditions

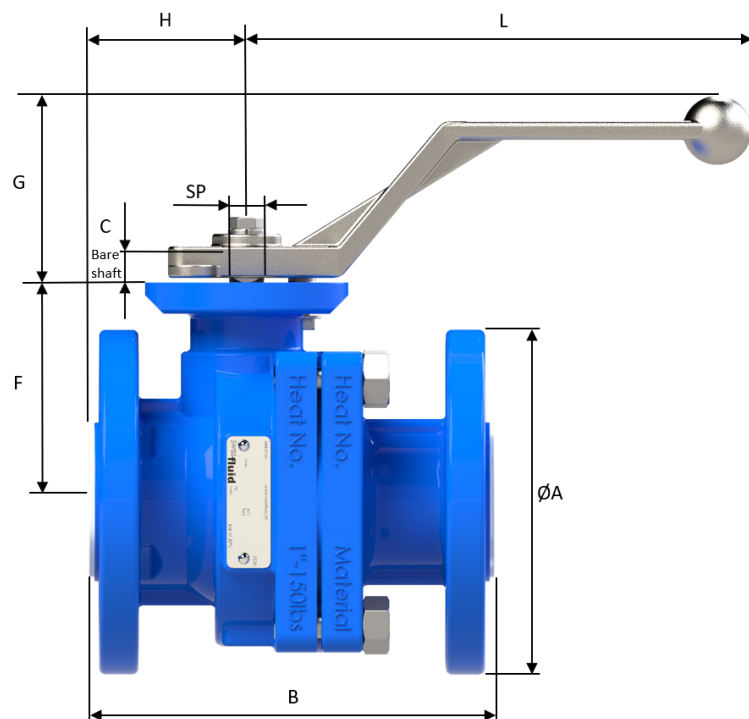
- Temperature ranges from -40 °F up to +400 °F, depending on lining material
- Pressure ranges from 0.01 psi up to 232 psi, depending on size/temperature

Testing/Marking

- Pressure- and tightness testing acc. to EN 12266-1, leakage rate A, resp. API 598
- Marking of valves on body and name plate acc. to EN 19
- Material- resp. test certificates acc. to EN 10204-3.1/2.2/2.1

Manual Valve

Standard version with hand lever



Dimensions in inch

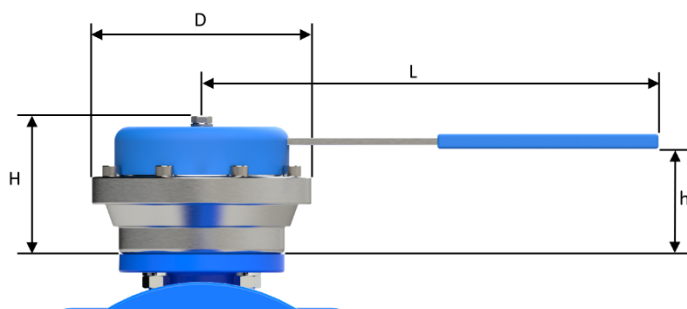
NPS	ØA	B	C	SP	ISO	F	H	lbs	G	L	lbs
Size nom.	ANSI							ANSI			Handle
1/2"	3.50	5.12	0.43	0.43	F05	2.52	1.97	9	2.28	6.34	0.7
3/4"	3.88	5.91	0.43	0.43	F05	2.60	1.97	10	2.28	6.34	0.7
1"	4.25	5.00	0.43	0.43	F05	2.76	1.97	11	2.28	6.34	0.7
1 1/4"	4.62	7.10	0.43	0.43	F05	2.95	2.36	15	2.28	6.34	0.7
1 1/2"	5.00	6.50	0.59	0.55	F07	3.43	2.52	20	2.28	8.31	0.8
2"	6.00	7.00	0.59	0.55	F07	3.70	2.80	25	2.28	8.31	0.8
2 1/2"	7.00	7.50	0.59	0.55	F07	4.17	3.03	33	2.28	12.40	0.9
3"	7.50	8.00	0.59	0.55	F07	4.53	3.19	46	2.28	12.40	0.9
4"	9.00	9.00	0.67	0.67	F10	5.12	3.62	73	2.44	12.40	2.0
6"	11.00	10.50	0.87	0.87	F12	7.44	9.45	150	-	-	-
8"	13.50	18.00	1.38	Ø1.97/KB 0.55	F14	9.25	8.88	320	-	-	-
10"	16.00	21.00	2.36	Ø2.36/KB 0.71	F16	12.00	10.47	668	-	-	-
5" RP	10.00	10.00	0.67	0.67	F10	5.12	4.06	-	2.44	12.40	2.0
6" RP	11.00	10.50	0.67	0.67	F10	5.12	4.41	142	2.44	12.40	2.0
8" RP	13.50	11.50	1.18	0.87	F12	7.44	7.87	185	-	-	-
10" RP	16.00	13.00	1.38	Ø1.97/KB 0.55	F14	9.25	6.38	355	-	-	-

Face to face B acc. to DIN EN 558-1 range 1 resp. ASME B16.10

RP = reduced

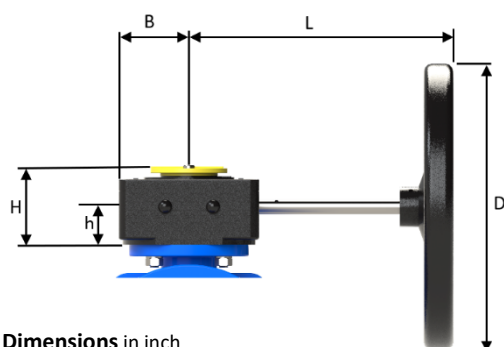
Manual Valve

Versions with spring return hand lever or manual gearbox. **Note:** Gearbox mounted perpendicular to pipeline.



Dimensions in inch

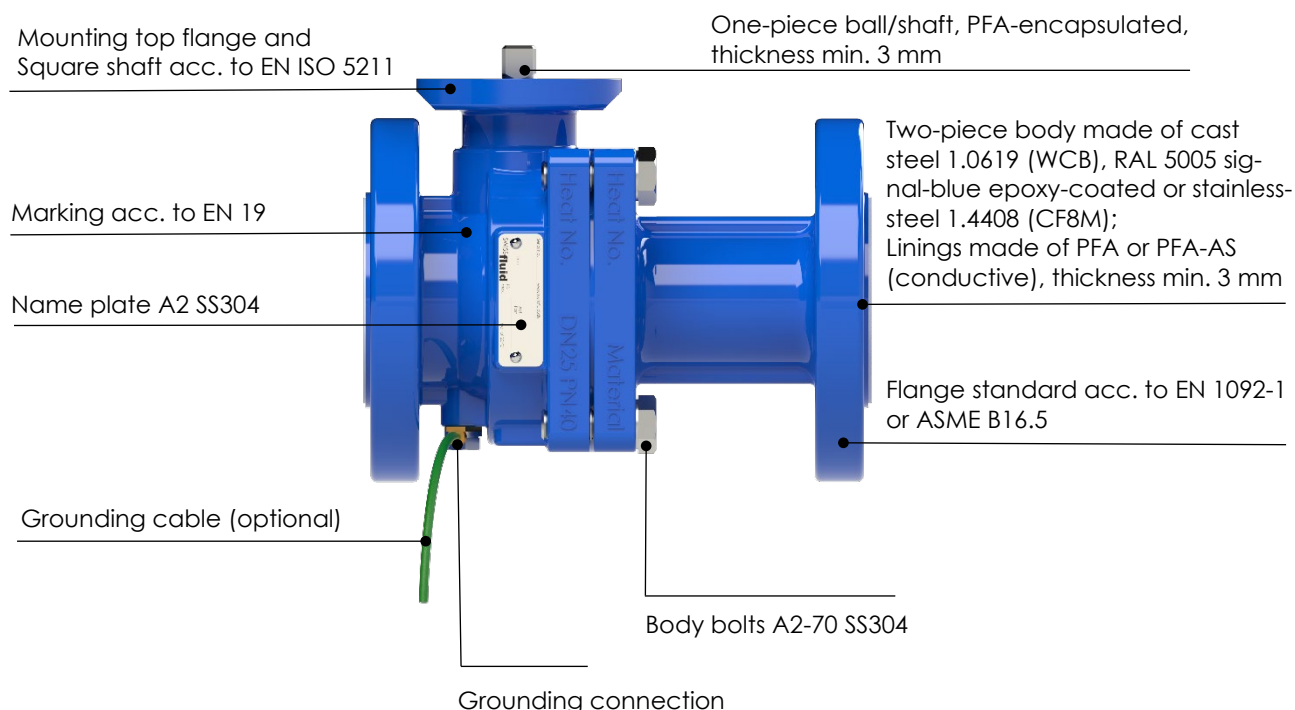
NPS Size nom.	L	H	h	D	lbs Spring Return Handlever
½"	9.76	2.91	2.24	4.69	6
¾"	9.76	2.91	2.24	4.69	6
1"	9.76	2.91	2.24	4.69	6
1¼"	9.76	2.91	2.24	4.69	6
1½"	9.76	2.91	2.24	4.69	6
2"	9.76	2.91	2.24	4.69	6



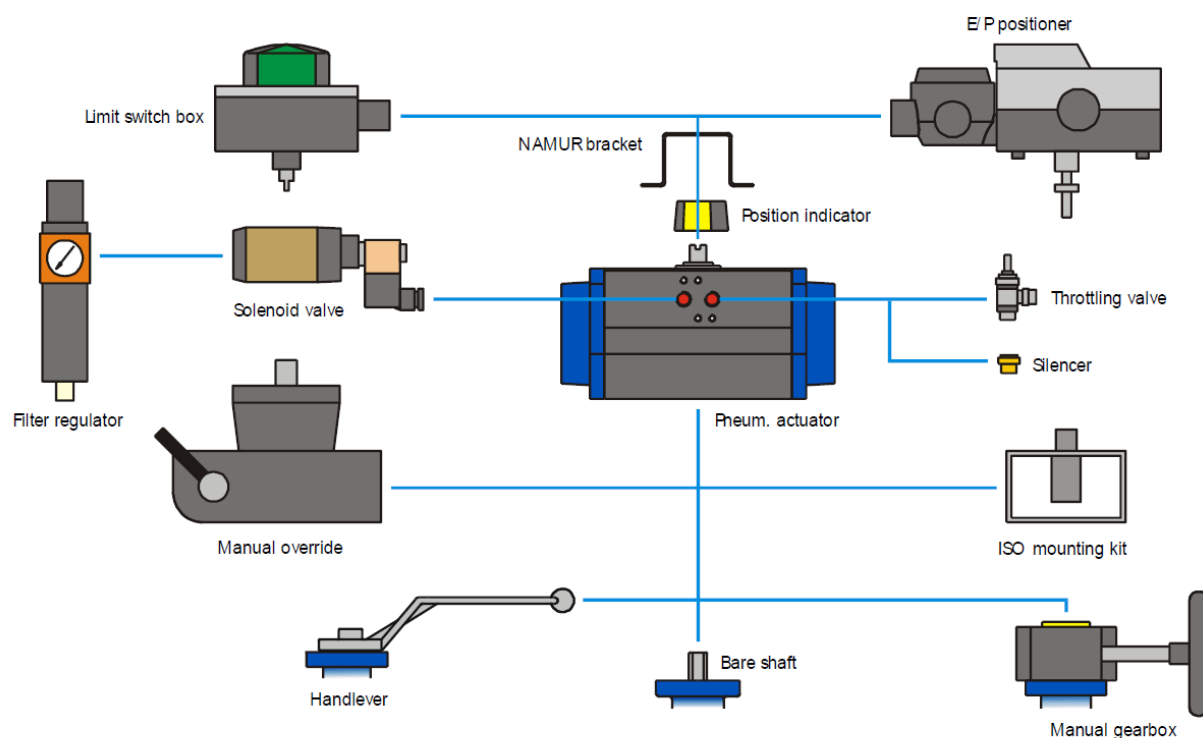
Dimensions in inch

NPS Size nom.	L	B	H	h	D	lbs Manual gearbox
½"	5.83	1.65	2.52	1.12	4.92	6
¾"	5.83	1.65	2.52	1.12	4.92	6
1"	5.83	1.65	2.52	1.12	4.92	6
1¼"	5.83	1.65	2.52	1.12	4.92	6
1½"	5.83	1.65	2.52	1.12	4.92	6
2"	5.83	1.65	2.52	1.12	4.92	6
2½"	5.83	1.65	2.52	1.12	4.92	6
3"	5.83	1.65	2.52	1.12	4.92	6
4"	8.66	2.20	2.95	1.34	7.87	11
6"	11.34	2.68	3.58	1.69	11.81	20
8"	12.72	3.54	3.94	1.97	15.75	37
10"	15.07	5.55	5.04	2.17	15.75	74
5" RP	8.66	2.20	2.95	1.34	7.87	11
6" RP	8.66	2.20	2.95	1.34	7.87	11
8" RP	11.34	2.68	3.58	1.69	11.81	20
10" RP	12.72	3.54	3.94	1.97	15.75	37

Construction of Valve

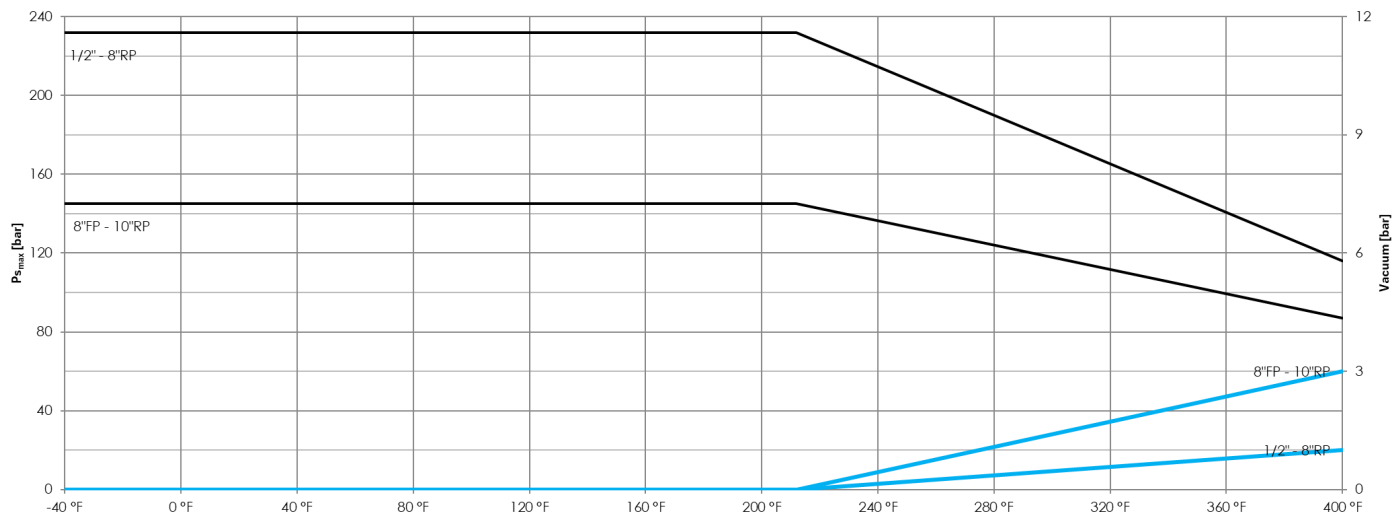


Mounting Options



Pressure-/Temperature Diagram for PFA/PFA-AS

Low temperature or austenitic steels are required for use below 14 °F operating temperature



Torque Values in lbs

Max. torque values for PFA-encapsulated balls and PFA-lined bodies

NPS	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"/5"RP/6"RP	6"/8"RP	8"/10"RP	10"
Torque nom.	71	71	106	159	204	266	443	575	841	2'125	5'300	10'600
max allow.	1'283	1'283	1'283	1'283	1'283	1'823	2'832	2'832	6'196	10'621	48'679	35'403

Stated values to be break-away torques without any consideration of safety factors (min. 1.3) for pneum. actuators

Flow Rate Values Cv

NPS	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"/5"RP/6"RP	6"/8"RP	8"/10"RP	10"
Flow Rate	19	36	58	100	140	212	430	615	962	2'320	3'945	4'452

Options

V-Port-Ball

NPS ½"-6"

Suitable for control applications, with various contours



Cs-Ball

NPS ½"-6"

To prevent media residues inside ball cavity, for full drainage



C-Ball

NPS ½"-2"



Vented Ball

NPS ½"-6"

With drilled vent hole, suited for upstream pressure relief



Typical Service Applications

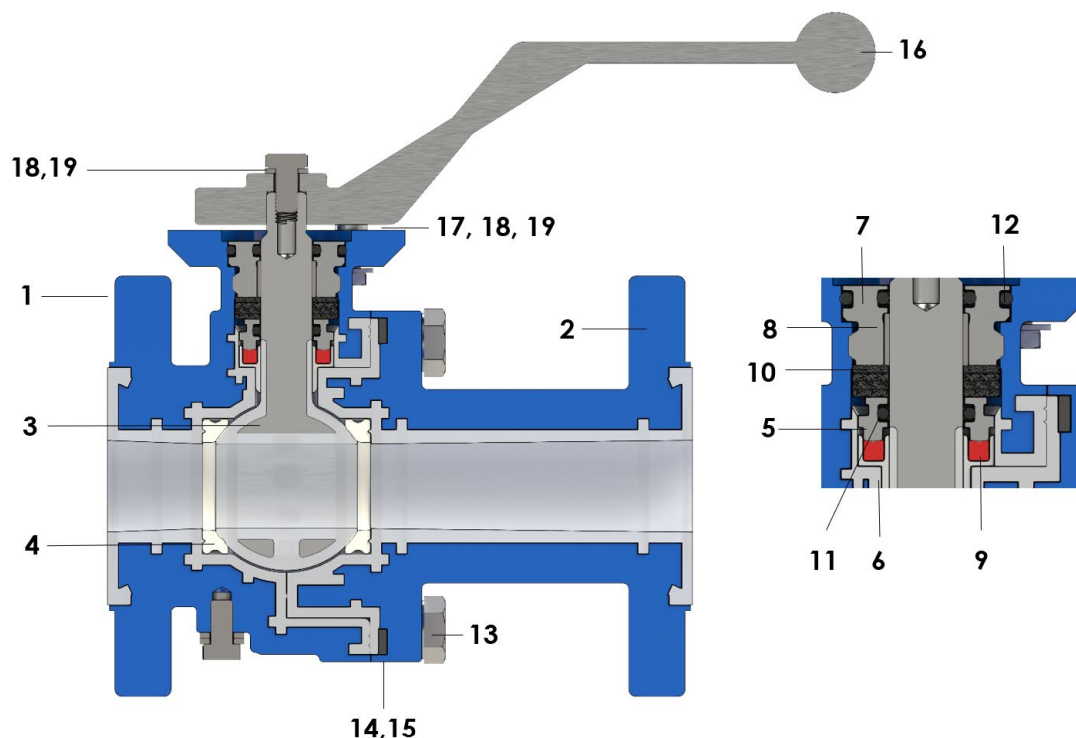
- Chemical
- Petro-Chemical
- Bio-Technical
- Pharmaceutical industry
- Pulp and paper
- Food processing
- Paint and pigments
- Fertilizers
- Textile industry
- Mining and steel
- Water treatment
- ...

Special trims upon request

Standard Version (Picture showing valve DN 50, WCB, PFA-lined, with hand lever)

Parts list

Manual valve compl



Item	Qty.	Description	Material Description	Material No. DIN 17440/41
1	1	Body half left, lined, RAL 5005	WCB/PFA	1.0619
2	1	Body half right, lined, RAL 5005	WCB/PFA	1.0619
3	1	Ball/Shaft one-piece, encapsulated	Duplex/PFA	1.4469
4	2	Ball seat	PTFE	
5	1	Pressure sleeve	SS316L	1.4404
6	1	Sealing sleeve	PTFE	
7	1	Threaded bushing	SS316L	1.4404
8	1	Bearing	C.Steel/PTFE	
9	1	Elastomer insert	VMQ	
10	4	Belleville spring	Spring Steel	1.8159
11	2	O-Ring	FPM	
12	1	O-Ring	FPM	
13	4	Hex. head cap screw	A2-70	1.4310
14	1	Name plate	A2	1.4301
15	2	Hammer screw	A2	1.4310
16	1	Hand lever	SS304	1.4308
17	1	Stop	SS316L	1.4404
18	2	Hex. head cap screw	A2-70	1.4310
19	2	Lock washer	SS304	1.4310

Specification

Project-/Customer Data

Inquiry/Date:		Ref. SF	
Project:		Contact Person:	
Company:		Function:	
Address:		Department:	
ZIP/Place:		Phone direct:	
		Phone.:	
		E-Mail:	
		Mobile:	

Operation Conditions

Media/Chemical Composition:

☐ Liquid	☐ Powdery	☐ Crystallizing	☐ Sticky	☐ Spec. Grav. ____
☐ Gaseous	☐ Solids ____ %	☐ Viscous	☐ Flow velocity ____ m/s	
☐ Abrasive	☐ Particle ____ mm	☐ Visc. ____ cp	☐ Flow rate ____ m ³ /hr	

Pressure

max. ____ bar

min. ____ bar

Temperature

max. ____ °C

min. ____ °C

Mode
☐ On/Off

☐ Flow control

____ Cycles/ ____

Installation/Environment
☐ Horizontal

☐ Vertical

☐ ____

☐ Room dry

☐ Room humid

☐ Outdoor

Remarks:

SBV Product Code

Specification of a complete Ball Valve SBV Series

Product code	Nom. size	Flange conn.	Body	Lining body	Elastomer	Ball Encaps./solid	Shaft end	Options
SBV	-	-	-	-	-	-	-	-
	NPS ½"-10" NPS 5"RP-10"RP	Class 150 Class 300	G10 WCB G15 CF8M	A85 PFA A86 PFA-AS A88 PVDF A91 ETFE	E60 EPDM E67 FPM E68 VMQ E72 FFKM E73 FFKM	U85 PFA U86 PFA-AS U88 PVDF U91 ETFE S40 Ti. Gr.2 S41 Ti. Gr.7 S43 Alloy 276 Z00 Ceramic	SP Square parallel KB Keyway	HL Hand lever Vp15 15° V-port Vp30 30° V-port Vp45 45° V-port Vp60 60° V-port Cs Cs-Ball C C-Ball Vh Vented Ball BC276 Bolting in C276 CLS Chlorine Service B7 B7 body bolts RAL... Special coating GC Grounding Cable

Note: Actuator options and accessories to be specified on orders separately