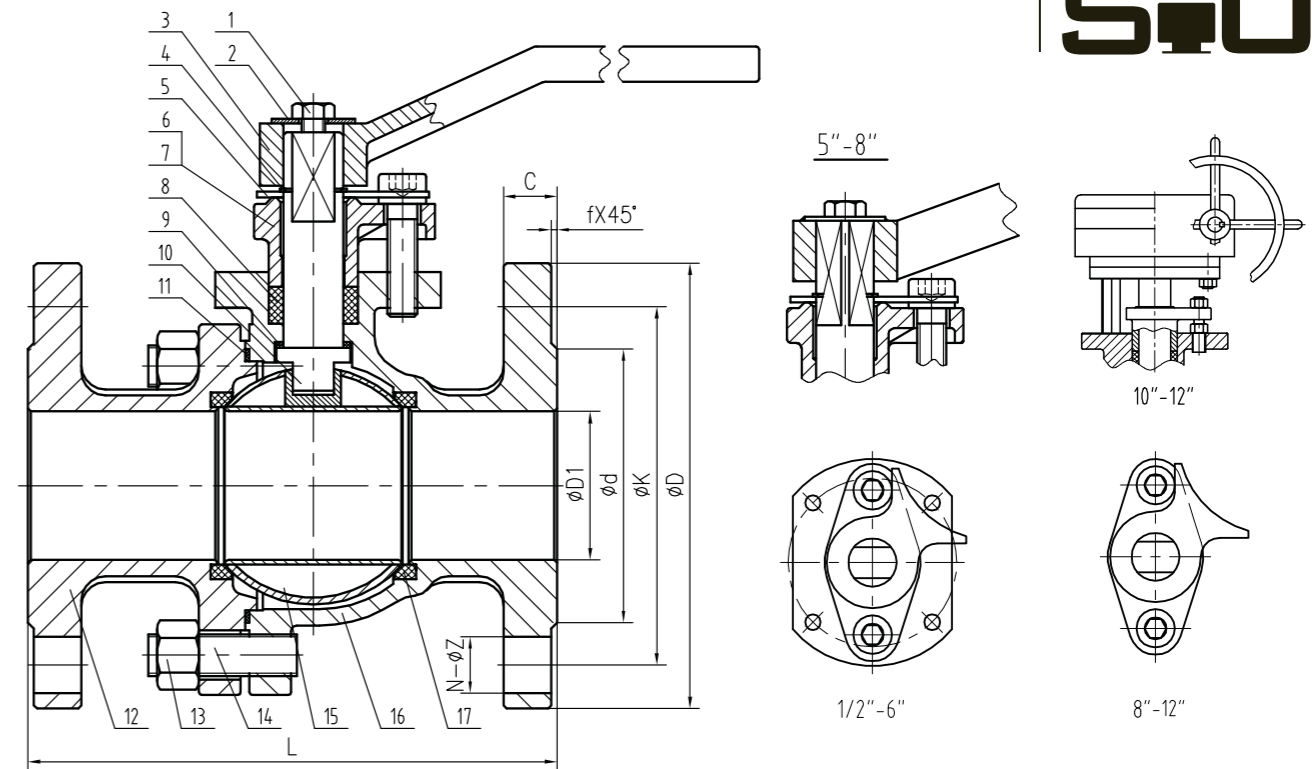


Actuator Operated

- Válvula de esfera paso total Bridada ANSI Clase 150
- full port ball valve, ANSI Class 150 Flanged ends.

CARACTERÍSTICAS	FEATURES
"1. Válvula de esfera paso total, 2 piezas.	1. Full port ball valve, 2 pieces.
2. Extremos Bridados según ASME B 16.5.	2. Flanged ends according to ASME B 16.5.
3,ANSI Clase 150.	3,ANSI Class 150
4. Construcción en Acero al Carbono WCB,Inox	4. Made of Carbon Steel and Stainless Steel
5. Normas de diseño ASME B 16.34.	5. Design according to ASME B 16.34.
6. Longitud entre caras según ASME B 16.10.	6. Face to Face according to ASME B 16.10.
7. Vástago inextinguible.	7. Blow-out proof stem.
8. Inspección y ensayos según API 598	8. Inspection & Testing: API 598,
9. Presión de trabajo máxima 285PSI	9. Max. Working pressure 285PSI
10. Temperatura de trabajo -25 °C + 150 °C."	10. Working Temperature -25 °C + 150 °C."

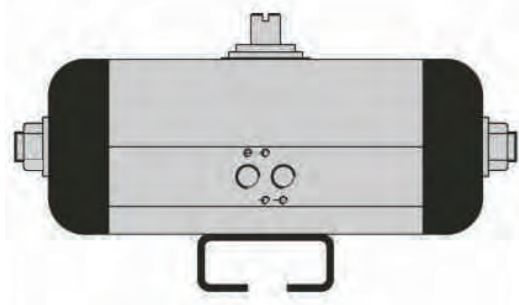
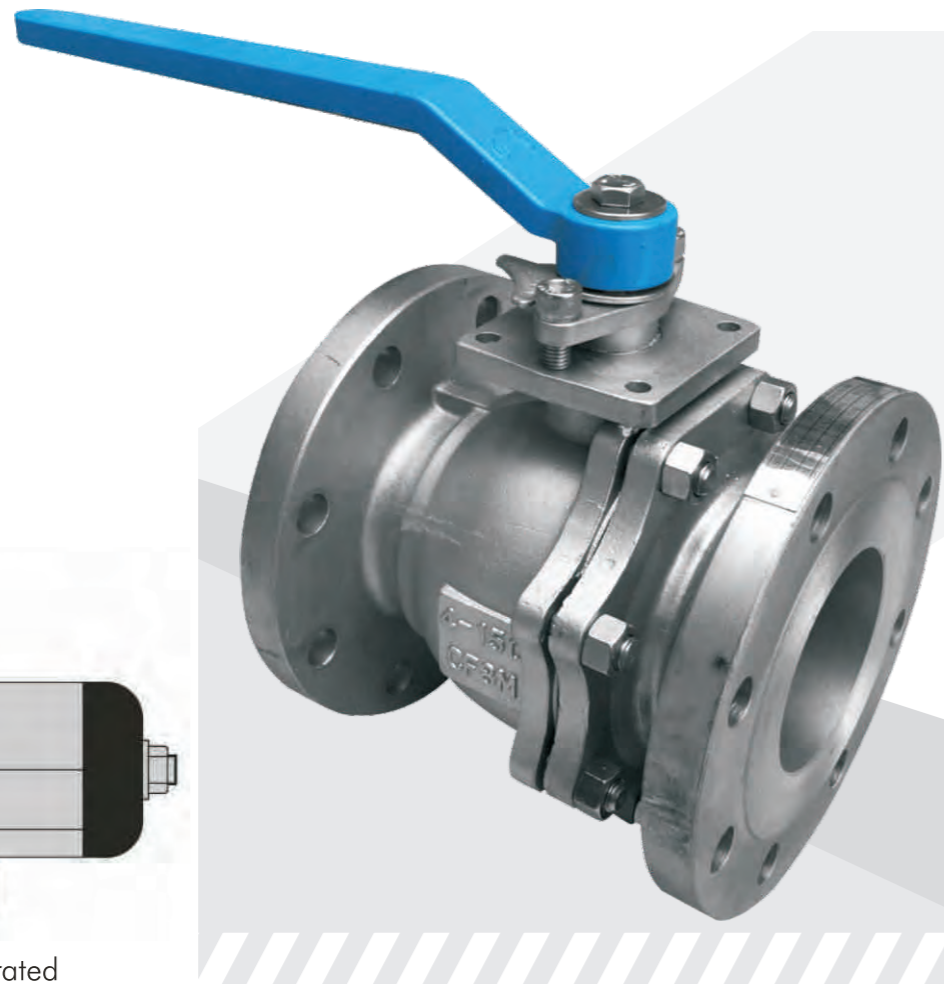
OPCIÓN/OPTION:
1. Dispositivo Antiestático./Antistatic device.
2. Diseño anti-fuego (según API 607)./Fire-safe design (according to API 607).



No	Denominación / Name	Material			
		S061	S062	S063	S064
1	Tornillo / Bolt	B7			
2	Arandela / Washer	Acero Inox 201			
3	Maneta / Handle	Acero Carbono WCB /Carbon steel WCB			
4	anillo de retención/retaining ring	65Mn			
5	parche de orientación/orientation patch	Acero Carbono WCB /Carbon steel WCB	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316	Acero Inox AISI 304 /SS 304
6	Tornillo / Bolt	B7			
7	Anillo Prensa / Gland	Acero Carbono WCB /Carbon steel WCB	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316	Acero Inox AISI 304 /SS 304
8	A. Prensa / Stem packing	Teflón / PTFE			
9	Anillo fricción / Friction ring	Teflón / PTFE			
10	Eje / Stem	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316
11	Junta / Gasket	Teflón / PTFE			
12	Tapa / Cap	Acero Carbono WCB /Carbon steel WCB	Acero Inox AISI 304/SS 304(CF8)	Acero Inox AISI 316 /SS 316 (CF8M)	Acero Inox AISI 304 /SS 304
13	Tuerca / Nut	2H			
14	Perno / Stud Bolt	B7			
15	Bola / Ball	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316
16	Cuerpo / Body	Acero Carbono WCB /Carbon steel WCB	Acero Inox AISI 304/SS 304(CF8)	Acero Inox AISI 316 /SS 316(CF8M)	Acero Inox AISI 304 /SS 304
17	Asiento / Ball seat	Teflón / PTFE / RPTFE (Teflón + 15%FV / PTFE + 15%G)			

Dimensiones Generales / General Dimensions:

Medida / Size	Dimensiones / Dimensions (mm)							
	D1	d	K	D	C	f	N-ΦZ	L
1/2"	15	34.9	60.3	90	10.0	2	4-16	108
3/4"	20	42.9	69.9	100	10.9	2	4-16	117
1"	25	50.8	79.4	110	11.6	2	4-16	127
1 1/4"	32	63.5	88.9	115	13.2	2	4-16	140
1 1/2"	38	73.0	98.4	125	14.7	2	4-16	165
2"	50	92.1	120.7	150	16.3	2	4-19	178
2 1/2"	65	104.8	139.7	180	17.9	2	4-19	190
3"	80	127.0	152.4	190	19.5	2	4-19	203
4"	100	157.2	190.5	230	24.3	2	8-19	229
5"	125	185.7	215.9	255	24.3	2	8-22	356
6"	150	215.9	241.3	280	25.9	2	8-22	394
8"	200	269.9	298.5	345	29.0	2	8-22	457
10"	250	323.8	362.0	405	30.6	2	12-25	533
12"	300	381.0	431.8	485	32.2	2	12-25	610

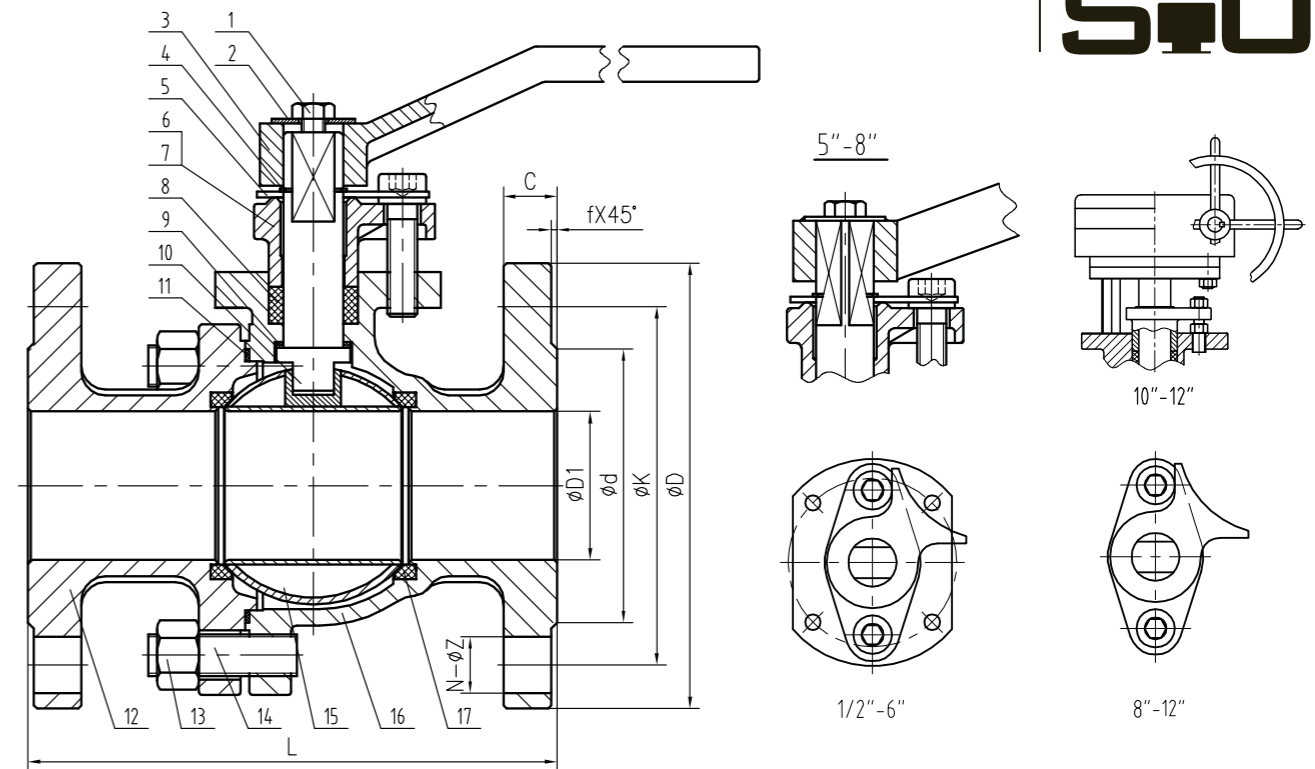


Actuator Operated

- Válvula de esfera paso total Bridada ANSI Clase 150
- full port ball valve, ANSI Class 150 Flanged ends.

CARACTERÍSTICAS	FEATURES
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2. Extremos Bridados según ASME B 16.5.	2. Flanged ends according to ASME B 16.5.
3,ANSI Clase 150.	3,ANSI Class 150
4. Construcción en Acero al Carbono WCB,Inox	4. Made of Carbon Steel and Stainless Steel
5. Normas de diseño ASME B 16.34.	5. Design according to ASME B 16.34.
6. Longitud entre caras según ASME B 16.10.	6. Face to Face according to ASME B 16.10.
7. Vástago inextinguible.	7. Blow-out proof stem.
8. Inspección y ensayos según API 598	8. Inspection & Testing: API 598,
9. Presión de trabajo máxima 285PSI	9. Max. Working pressure 285PSI
10. Temperatura de trabajo -25 °C + 150 °C."	10. Working Temperature -25 °C + 150 °C."

OPCIÓN/OPTION:
1. Dispositivo Antiestático./Antistatic device.
2. Diseño anti-fuego (según API 607)./Fire-safe design (according to API 607).



No	Denominación / Name	Material			
		S061	S062	S063	S064
1	Tornillo / Bolt	B7		Acero Inox AISI 304/SS 304	Acero Inox AISI 304 / SS 304
2	Arandela / Washer	Acero Inox 201		Acero Inox AISI 304/SS 304	Acero Inox AISI 304 / SS 304
3	Maneta / Handle	Acero Carbono WCB /Carbon steel WCB			
4	anillo de retención/retaining ring	65Mn			
5	parche de orientación/orientation patch	Acero Carbono WCB /Carbon steel WCB	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316	Acero Inox AISI 316 /SS 316
6	Tornillo / Bolt	B7		Acero Inox AISI 304/SS 304	Acero Inox AISI 304 / SS 304
7	Anillo Prensa / Gland	Acero Carbono WCB /Carbon steel WCB	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316	Acero Inox AISI 316 /SS 316
8	A. Prensa / Stem packing	Teflón / PTFE			
9	Anillo fricción / Friction ring	Teflón / PTFE			
10	Eje / Stem	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316
11	Junta / Gasket	Teflón / PTFE			
12	Tapa / Cap	Acero Carbono WCB /Carbon steel WCB	Acero Inox AISI 304/SS 304(CF8)	Acero Inox AISI 316 /SS 316 (CF8M)	Acero Inox AISI 316 /SS 316 (CF8M)
13	Tuerca / Nut	2H		Acero Inox AISI 304/SS 304	Acero Inox AISI 304 / SS 304
14	Perno / Stud Bolt	B7		Acero Inox AISI 304/SS 304	Acero Inox AISI 304 / SS 304
15	Bola / Ball	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316	Acero Inox AISI 304/SS 304	Acero Inox AISI 316 /SS 316
16	Cuerpo / Body	Acero Carbono WCB /Carbon steel WCB	Acero Inox AISI 304/SS 304(CF8)	Acero Inox AISI 316 /SS 316(CF8M)	Acero Inox AISI 316 /SS 316(CF8M)
17	Asiento / Ball seat	Teflón / PTFE / RPTFE (Teflón + 15%FV / PTFE + 15%G)			

Dimensiones Generales / General Dimensions:

Medida / Size	Dimensiones / Dimensions (mm)							
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3/4"	20	42.9	69.9	100	10.9	2	4-16	117
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1 1/4"	32	63.5	88.9	115	13.2	2	4-16	140
1 1/2"	38	73.0	98.4	125	14.7	2	4-16	165
2"	50	92.1	120.7	150	16.3	2	4-19	178
2 1/2"	65	104.8	139.7	180	17.9	2	4-19	190
3"	80	127.0	152.4	190	19.5	2	4-19	203
4"	100	157.2	190.5	230	24.3	2	8-19	229
5"	125	185.7	215.9	255	24.3	2	8-22	356
6"	150	215.9	241.3	280	25.9	2	8-22	394
8"	200	269.9	298.5	345	29.0	2	8-22	457
10"	250	323.8	362.0	405	30.6	2	12-25	533
12"	300	381.0	431.8	485	32.2	2	12-25	610

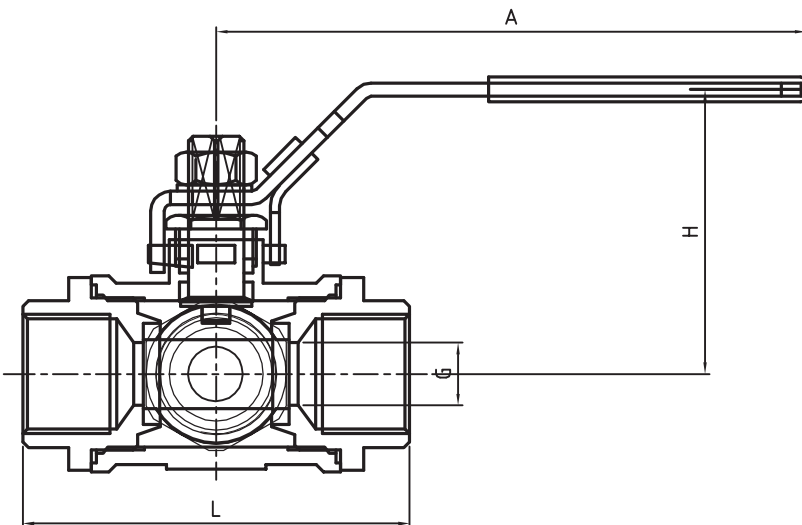
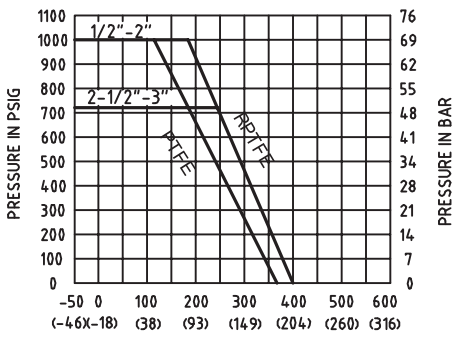
3 Way Ball Valve - S37

Design Feature

- High Quality Investment Casting
- Body And Caps Blow-out Proof Stem
- Connection: Threaded BSP, NPT, BSPT
- Material: CF8, CF8M
- Pressure Rate: 1000PSI
- Temperature Range: -20~210°C
- Reduced Bore/ "L", "T" Port



Pressure Vs Temperature Chart



Dimension:(mm)

DN	G	L	B	A	H
15	1/2"	70	12	110	58
20	3/4"	83	14	120	60
25	1"	92	18	140	70
32	1-1/4"	125	25	140	82
40	1-1/2"	140	32	180	95
50	2"	155	38	200	100

Materials of Main Construction:

Name	Material
Body	SS316/304
Cop	SS316/304
Ball	SS316/304
Body Seat	PTFE
Body Seat	PTFE
Stem Seat	PTFE
Stem Packing	PTFE
Stem Woshr	SS304
Spring Washer	SS304
Stem nut	SS304
Stem	SS316/304
Handle	SS201
Handle sleeve	plastic

Swing Check Valve-S15



Investment casting body

Pressure Rating: 200 PSI (PN16)

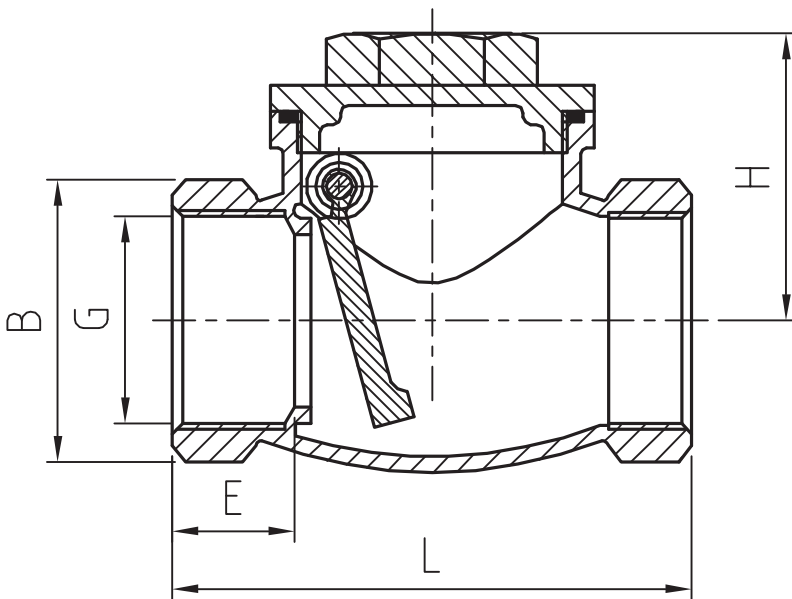
Working Temperature: -25 ~180°C

Medium : Water, Oil, Gas

Material : 304, 316, 1.4308, 1.4408, CF8, CF8M

Thread:ASME B1.20.1 BS21.DIN2999/259,

ISO228-1,JIS B 0203,ISO7/1



Main component materials:

Description Of Parts	Material
Body	SS304/316
Bonnet	SS304/316
Valve flap	SS304/316
Gasket	PTFE

Dimension:(mm)

SIZE	DN	L	E	B	H
1/2"	15	64	12	26	45
3/4"	20	80	17	32	53
1"	25	90	20	41	60
1-1/4"	32	105	20	51	64
1-1/2"	40	120	20	58	76
2"	50	140	23	69	82
2-1/2"	65	165	27	86	89

Vertical Spring Check Valve (Metal Seated)-S16

Investment casting body

Pressure Rating: 1000 PSI

Working Temperature: -25 ~180°C

Medium: Water, Oil, Gas

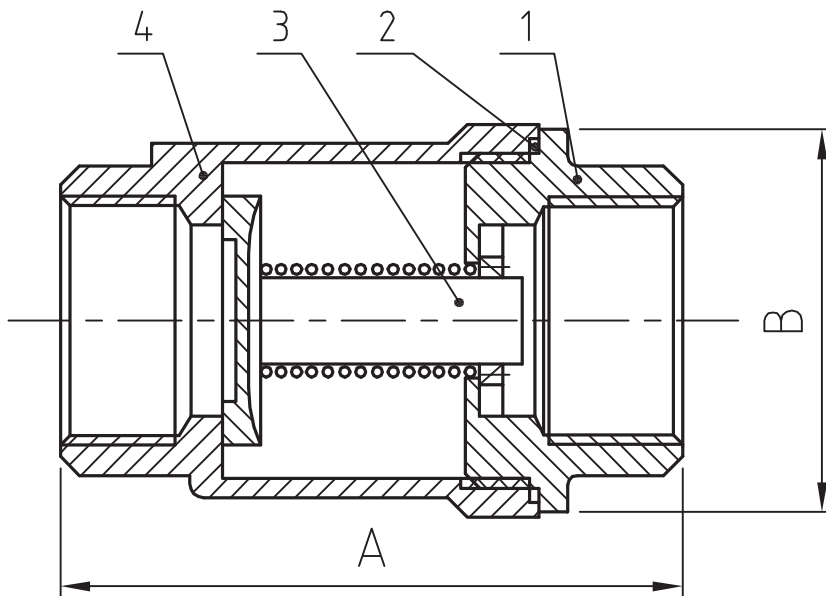
Material: 304, 316, 1.4308, 1.4408, CF8, CF8M

Thread: ASME B1.20.1 BS21.DIN2999/259, ISO228-1, JIS B 0203, ISO7/1



Main Part Material

No.	Name	Material
1	Cap	SS316
2	Gasket	PTFE
3	Stem	SS316
4	Body	SS316



Dimension: (mm)

DIZE	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
A	57	63	78	82	100	116
B	34.5	41.5	48	60.5	71	87

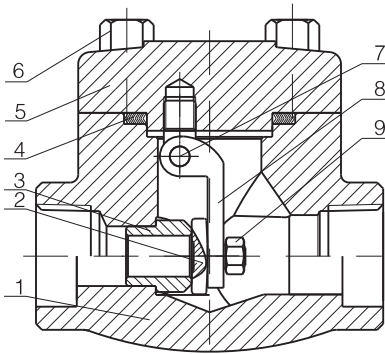
SIO reserves the right to make any modifications without notice.

Forged Steel Check Valve-S22/23

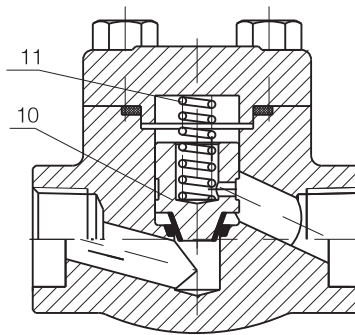


Applicable standards

1. Design and Manufacture
API 602, BS5352, ASME B16.34
2. Connection end
Socket Weld End(SW):ASME B16.11
Threaded End(NPT):ASME B1.20.1
Butt-Weld End(BW):ASME B16.25
Flange End(RF/RTJ):ASME B16.5
3. Test & Inspection
API 602, API 598
4. Design Description
Bolted Bonnet(BB),
Welded Bonnet(WB),
5. Main Materials:
A105, LF2, F5, F11, F22,
304(L), 316(L), F347, F321,
F51, Alloy 20, Monel



S22



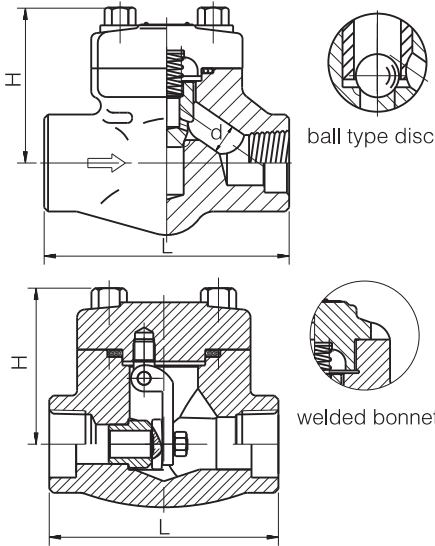
S23



welded bonnet

No.	PART	ASTM Material					
		A105	LF2	F11	F304(L)	F316(L)	F51
1	BODY	A105	LF2	F11	F304(L)	F316(L)	F51
2	DISC	F6a	F6a	F6a+STL	F304(L)	F316(L)	F51
3	SEAT	410	410	410+STL	304(L)	316(L)	F51
4	GASKET	304 + Graphite			304+Graphite	316(L)+Graphite	316(L)+Graphite
5	BONNET	A105	LF2	F11	F304(L)	F316(L)	F51
6	BOLT	B7	L7	B16	B8(M)	B8(M)	B8M
7	PIN	410			304(L)	316(L)	F51
8	HINGE	304			304(L)	316(L)	F51
9	NUT	A194 2H			8	8M	8M
10	SPRING	SS304					

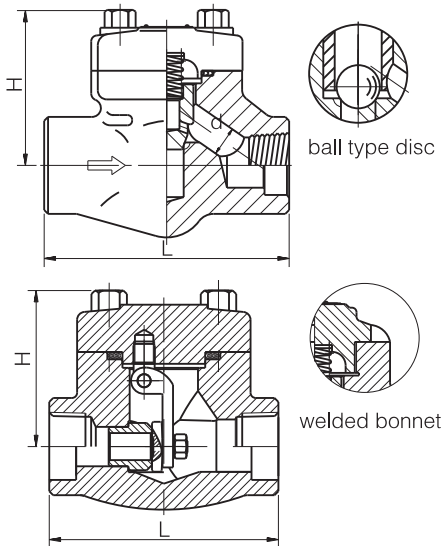
Different Trim are available upon request.



CL800

Bolted Bonnet/Welded Bonnet, Full Port /Reduced Port, Outside Screw and Yoke (OS&Y), Threaded, Butt Weld, Socket Weld. Design: API 602

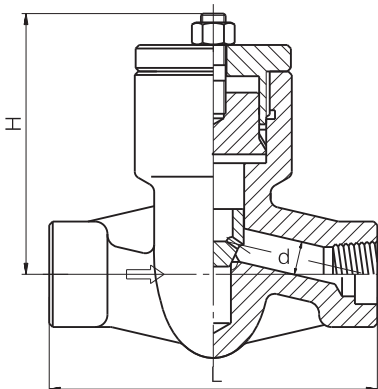
Size (NPS)	R.P		1/2	3/4	1	1.1/4	1.1/2	2	
	F.P		3/8	1/2	3/4	1	1.1/4	1.1/2	2
Face To Face	L	Lift type	79	92	111	120	152	172	220
		Swing type	79	92	111	120	120	140	178
Height	H	Lift type	61	61	78	84	103	118	132
		Swing type	61	61	78	84	101	120	133
Flow Port Diameter	d	Lift type	10.5	13.5	17	22	28	34	43
		Swing type	10.3	13.5	18	23	29	36	45



CL900~1500

Pressure Seal Bonnet, Full Port /Reduced Port, Outside Screw and Yoke (OS&Y), Threaded, Butt Weld, Socket Weld. Design: ASME B16.34

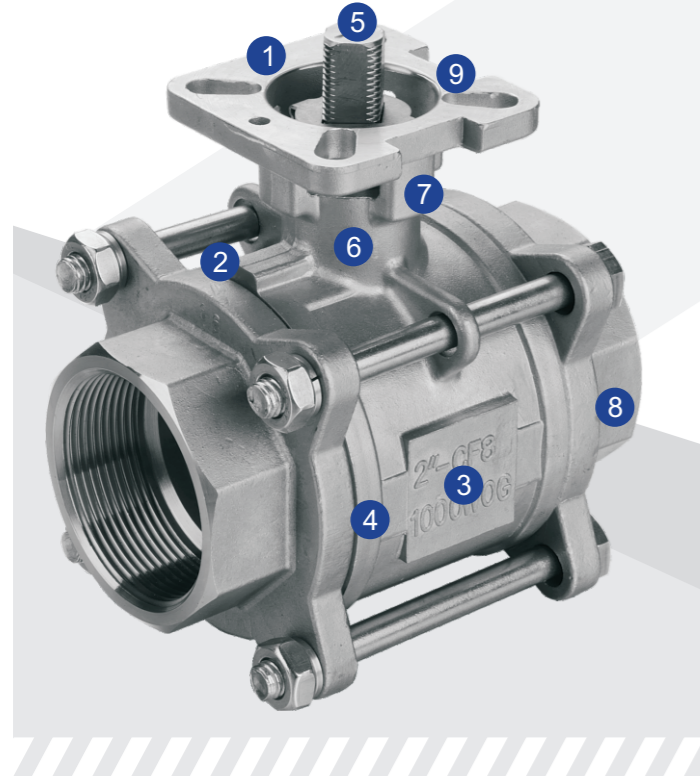
Size (NPS)	R.P		1/2	3/4	1	1.1/4	1.1/2	2
	F.P		3/8	1/2	3/4	1	1.1/4	1.1/2
Face To Face	L	Lift type	92	111	120	152	172	220
		Swing type	92	111	120	120	140	178
Height	H	Lift type	78	78	84	103	118	132
		Swing type	78	78	84	101	120	133
Flow Port Diameter	d	Lift type	10.5	13.5	17	22	28	34
		Swing type	10.3	13.5	18	23	29	36



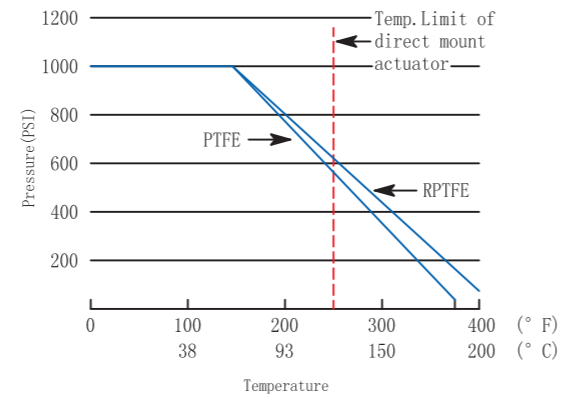
CL900~1500 CL2500

Pressure Seal Bonnet, Reduce Port, Outside Screw and Yoke (OS&Y), Threaded, Butt-Weld, Socket Weld, Design: ASME B16.34

Size (NPS)	R.P		1/2	3/4	1	1.1/4	1.1/2	2
Face to Face	L	CL900~CL1500	140	140	140	178	178	216
		CL2500	186	186	186	232	232	279
Height	H	CL900~CL1500	117	117	117	152	152	195
		CL2500						
Flow Port Diameter	d		10.5	13.5	18	22	28	34



Design: ANSI/ASME B16.34
Face to Face: Manufacturer's
Pressure Testing API 598
Max Working Pressure: 1000PSI
For Steam: 150 psi
Size: 1/2"~4"
Working Temperature: -29 ~180



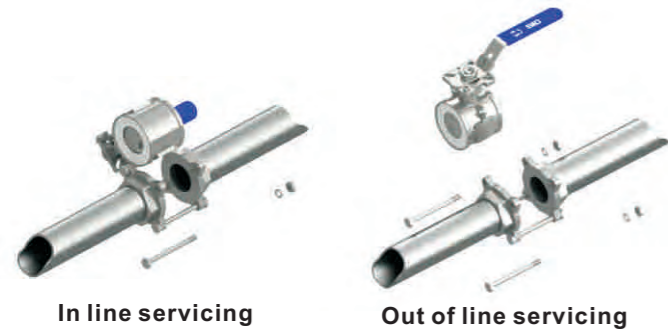
1. Top Mounting Pad

Two sets of ISO5211 mounting patterns are available to accommodate a great range of actuators. Machined flat surface ensures correct alignment of actuator to the stem top for minimum side loading during operation



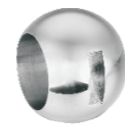
2. 3 Pieces Valve Body Design

easy for in line and out of line servicing.



3. Ball

Balls are precision machined and mirror finished for bubble-tight shut off with less operating torque. ball edges have machined curvatures to reduce seat wear and provide a high cycle life.



4. Seat

seat designed to ensure bi-directional, bubble-tight sealing while providing the lowest possible torque. This seat design reduces friction, minimizes seat wear and reduces operating torque.



5. Stem

The sturdy blow-out proof stem is designed for direct mounting of actuator that meets ISO5211 specifications.

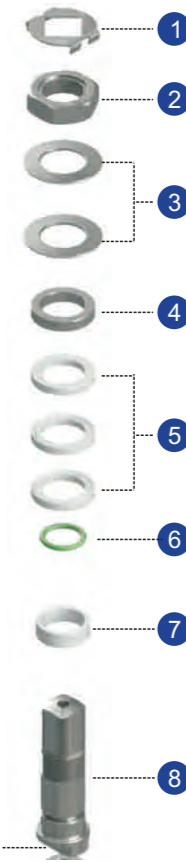


6. High Cycle Stem Design Features

- **Live Loading Stem Sealing**
The live load seals considerably increase the number of cycles between maintenance adjustment.
- **Anti-Static Device:** To eliminate the possibility of static electrical charges within the valve, two grounding connections are set in the stem to ensure electrical continuity for the entire ball valve.

Three stages of stem sealing for effective control of stem leakage:

- **Pyramidal Body and Stem Seal (1st Stage):** Internal pressure of the valve pushes the pyramidal stem sealing upward. Because of its shape, the sealing expands to fill all the air pockets that might become a potential leakage path in the lower stem area.
- **Viton® O-Ring (2nd Stage):** The elastic nature of the Viton® O-Ring serves as an effective sealing for gaseous medium that might escape the 1st stage sealing.
- **V-Ring Stem Packing (3rd Stage):** Live loading action of the Bellville washer expands the V-Ring stem packing, filling all the air pockets in the outer stem area. It effectively seals internal media within as well as keeping external media from entering the system



PARTS

1. tab lock washer
2. Lock nut
3. Belleville Washers
4. Gland
5. V-Ring Stem Packing
6. O-Ring
7. Pyramidal Stem Seal
8. Stem
9. Anti-Static Device

7. High neck design, easy to install and uninstall actuators

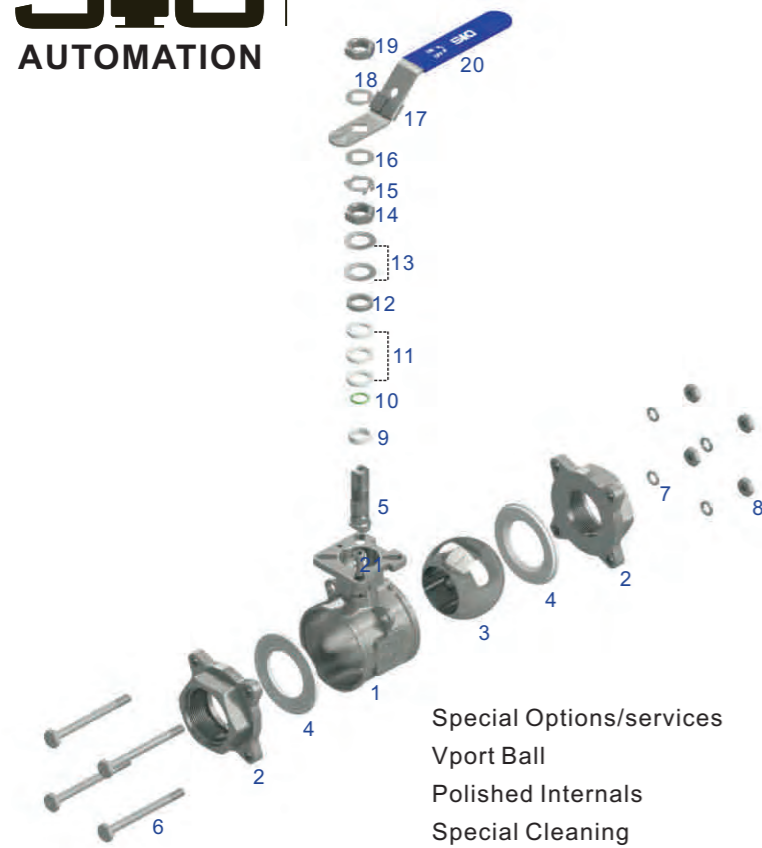


8. End connections

- Threaded: ASME B1.20.1 NPT
BS21 BSP/DIN2999/259/ISO228-1
JIS B0203/ISO7/1
- BUTT WELD :ASME B16.25(SCH40)
- SOCKET WELD: ASME B16.11
- TUBE ENDS:US/3A
- ANSI FLANGE: ASME B16.50
- DIN FLANGE: DIN2501,PN10-40
- Tri-Clamp

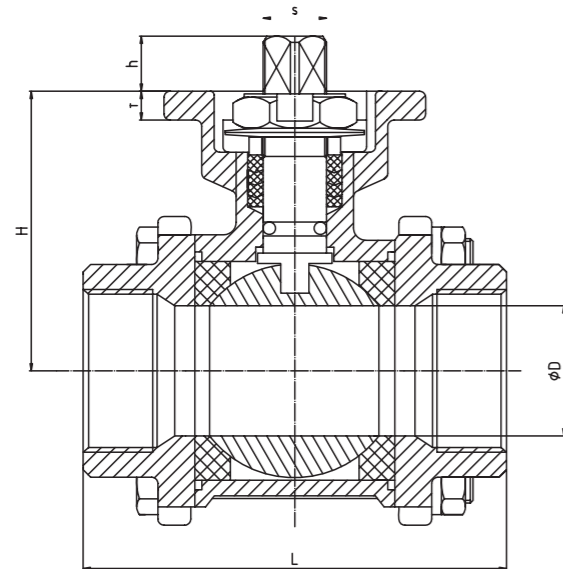


9. Lockable handle with stopper

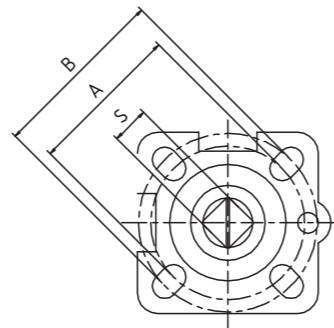


Special Options/services
Vport Ball
Polished Internals
Special Cleaning

COMPONENTS AND MATERIALS		
Code	Name	Material
1	Body	ASTMA351 Gr CF8/CF8M
2	End Cap	ASTMA351 Gr CF8/CF8M
3	Ball	SS304/316
4	Seat	RPTFE/TFM
5	Stem	SS304/316
6	Bolt	SS304/316
7	Spring Washer	SS304/316
8	Nuts	SS304/316
9	Pyramidal stem seal	RPTFE/TFM
10	O Ring	Viton
11	V-Ring Stem Packing	RPTFE/TFM
12	Gland	SS304/316
13	Belleville Washer	SS304/316
14	Stem Nuts	SS304/316
15	Tab lock washer	SS304/316
16	washer	SS304/316
17	handle	SS304/316
18	washer	SS304/316
19	Hex Nuts	SS304/316
20	Sleeve	PVC
21	stopper	SS304/316
22	Anti-stactic device(not shown)	SS304/316

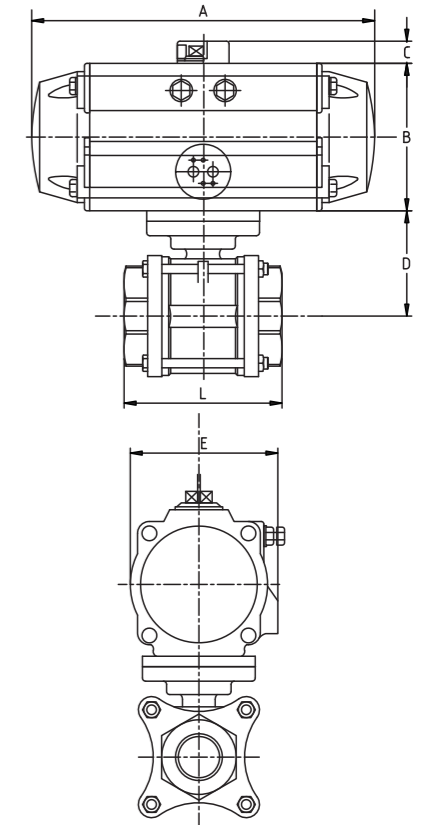


Main Dimension(mm)



Dime Size	D	H	h	T	L	ISO-5211		S	W(kg)	Torque (N/m)
						A	B			
1/2"	15	41	8	6	70	F03	F04	9	0.62	3
3/4"	20	49	10	6	77	F03	F04	9	0.77	4
1"	25	58	10	6	85	F04	F05	11	1.12	7
1-1/4"	32	64	8	6	104	F04	F06	11	1.79	14
1-1/2"	40	77	16	8	114	F05	F07	14	2.55	21
2"	50	85	16	8	135	F05	F07	14	3.25	29
2-1/2"	65	95	17	8	176	F07	F010	17	7.42	51
3"	80	105	22	10	206	F07	F010	17	10.2	85
4"	100	125	22	10	265	F10	F12	22	15.6	105

Three Pieces Ball Valve with Pneumatic Actuator



With Dobule Acting Actuator

Main Dimension(mm)

SIZE	ACT	A	B	C	E	L	D
1/2"	50	155	69	20	70	70	41
3/4"	50	69	69	20	70	77	49
1"	63	168	85	20	83	85	58
1 1/4"	63	168	85	20	83	104	64
1 1/2"	75	219	102.5	20	95.5	114	77
2"	75	219	102.5	20	95.5	135	85
2 1/2"	90	249	115	20	105.5	176	95
3"	90	249	115	20	105.5	206	105
4"	100	274	127.5	20	122	265	125

With Spring Return Actuator (10 springs)

Main Dimension(mm)

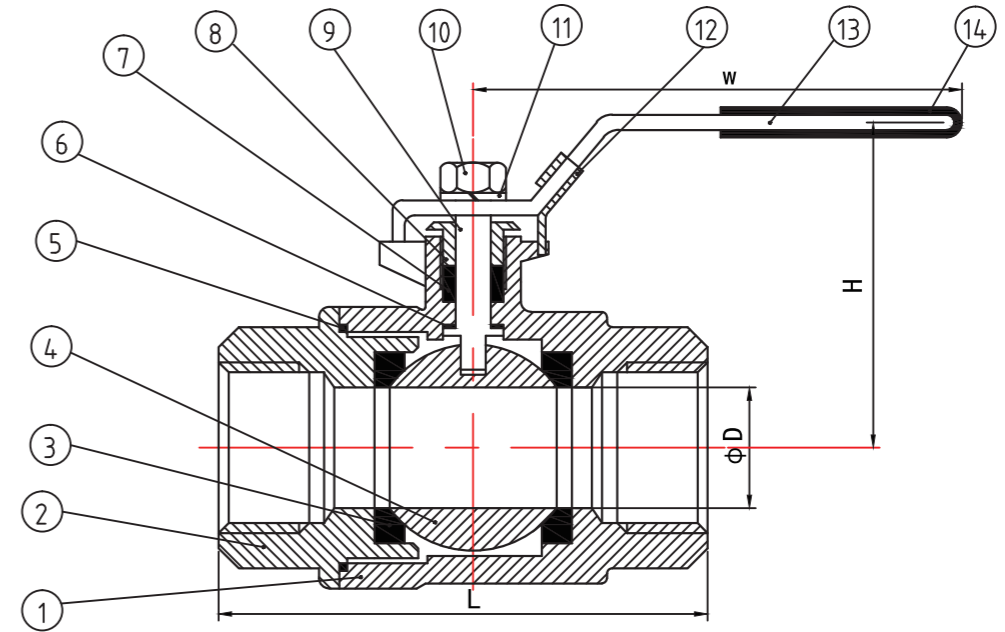
SIZE	ACT	A	B	C	E	L	D
1/2"	50	155	69	20	70	70	41
3/4"	50	69	69	20	70	77	49
1"	63	168	85	20	83	85	58
1 1/4"	75	219	102.5	20	95.5	104	64
1 1/2"	90	249	115	20	105.5	114	77
2"	100	274	127.5	20	122	135	85
2 1/2"	115	315	140	30	132.5	176	95
3"	145	417	176	30	169.5	206	105
4"	145	417	176	30	169.5	265	125

S04



- Válvula de esfera paso total 2 piezas Acero Carbono WCB
- Carbon steel full port ball valve, 2 pieces

CARACTERÍSTICAS	FEATURES
1. Válvula esfera 2 piezas	1. Carbon Steel Ball Valve, 2 piece.
2. Extremos roscados NPT ANSI B 2.1. BSP BS21	2. Thread ends according ANSI B 2.1 NPT. BS21 BSP
3. paso total.	3. Full Bore
4. Construcción en Acero Carbono WCB	4. Made of Carbon Steel WCB
5. Presión de trabajo máxima 1000WOG	5. Max.. Working pressure 1000WOG
6. Temperatura de trabajo -25 °C + 150 °C.	6 Working Temperature -25 °C + 150 °C
7. Vástago inexpulsable.	7. Blow-out proof stem
8. Sistema de bloqueo	8. locking system.



No	Denominación / Name	Material		
		S04(*N/B)	S044R(*N/B)	S046(*N/B)
1	Cuerpo / Body	Acero Carbono WCB / Carbon Steel		
2	Tapa / Cap	Acero Carbono WCB / Carbon Steel		
3	Asiento / Ball Seat	Teflón (PTFE)		
4	Bola / Ball	Acero Inox AISI 201 / SS 201	Acero Inox AISI 304 / SS 304	Acero Inox AISI 316 / SS 316
5	Junta / Gasket	Teflón (PTFE)		
6	Anillo fricción / Friction ring	Teflón (PTFE)		
7	Anillo Prensa / Stem packing	Teflón (PTFE)		
8	Anillo Prensa / Gland	Acero Inox AISI 201 / SS 201	Acero Inox AISI 304 / SS 304	Acero Inox AISI 316 / SS 316
9	Eje / Stem	Acero Inox AISI 201 / SS 201	Acero Inox AISI 304 / SS 304	Acero Inox AISI 316 / SS 316
10	Tuerca / Nut	Acero Inox AISI 201 / SS 201		
11	Arandela muelle /Spring Washer	Acero Inox AISI 201 / SS 201		
12	Sistema de bloqueo/Locking Device	Acero Inox AISI 201 / SS 201		
13	Maneta / Handle	Acero Inox AISI 201 / SS 201		
14	Funda / Handle Sleeve	PVC		PVC

N: Extremos roscados NPT ANSI B 2.1 / Thread ends according ANSI B 2.1 NPT

B: Extremos roscados BSP BS21 / Thread ends according BS21 BSP

Dimensiones Generales / General Dimensions:

Medida / Size	Dimensiones / Dimensions (mm)				Peso / Weight(g)
	D	W	H	L(+2)	
1/4"	8	102	54	52	0.22
3/8"	10	102	54	52	0.22
1/2"	15	105	57	55	0.23
3/4"	20	105	60	60	0.3
1"	25	110	71	70	0.5
1 1/4"	32	126	77	81	0.82
1 1/2"	38	155	88	92	1.1
2"	49	165	100	106	1.5
2 1/2"	63	230	125	150	3.5
3"	76	260	145	165	5.6
4"	100	300	165	200	9.6

VALORES DE Kv / Kv VALUES

Kv (m³/h) = Es la cantidad de metros cúbicos por hora que pasará a través de la válvula generando unaperdida de carga de 1 bar.

Kv (m³/h) = Flow rate of water in cubic meter per hour that will generate a pressure drop of 1 bar across the valve.

1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
6	10	24	43	83	130	205	340	520	1100	1820

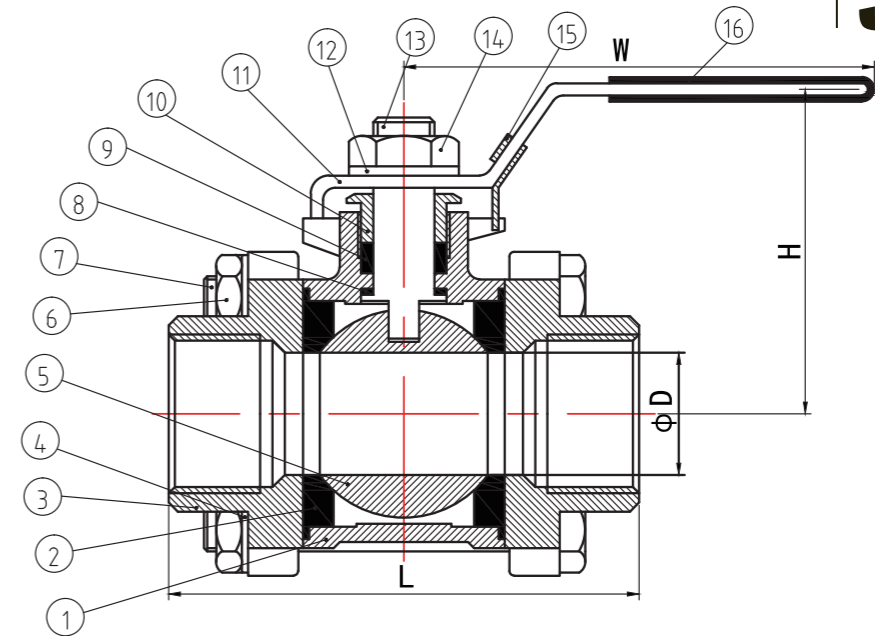
SIO

S05



- Válvula de esfera paso total 3 piezas Acero Carbono WCB
- Stainless steel full port ball valve, 3 pieces

CARACTERÍSTICAS	FEATURES
1. Válvula esfera paso total 3 piezas	1. Stainless steel ball valve, 3 piece.
2. Extremos roscados NPT ANSI B 2.1. BSP BS21	2. Thread ends according ANSI B 2.1 NPT. BS21 BSP
3. Paso total.	3. Full Bore
4. Construcción en Acero Carbono WCB	4. Made of Carbon Steel WCB
5. Presión de trabajo máxima 1000WOG	5. Max.. Working pressure 1000WOG
6. Temperatura de trabajo -25 °C + 150 °C.	6 Working Temperature -25 °C + 150 °C
7. Vástago inextinguible.	7. Blow-out proof stem
8. Sistema de bloqueo	8. locking system.



No	Denominación / Name	Material		
		S05(*N/B)	S054R(*N/B)	S056(*N/B)
1	Cuerpo / Body	Acero Carbono WCB / Carbon Steel		
2	Asiento / Ball Seat	Teflón (PTFE)		
3	Tapa / Cap	Acero Carbono WCB / Carbon Steel		
4	Arandela muelle /Spring Washer			
5	Bola / Ball	Acero Inox AISI 201 / SS 201	Acero Inox AISI 304 / SS 304	Acero Inox AISI 316 / SS 316
6	Tuerca / Nut	Acero Inox AISI 201 / SS 201		
7	Tornillo / Bolt	Acero Inox AISI 201 / SS 201		
8	Anillo fricción / Friction ring	Teflón (PTFE)		
9	Anillo Prensa / Stem packing	Teflón (PTFE)		
10	Anillo Prensa / Gland	Acero Inox AISI 201 / SS 201	Acero Inox AISI 304 / SS 304	Acero Inox AISI 316 / SS 316
11	Maneta / Handle	Acero Inox AISI 201 / SS 201		
12	Arandela muelle /Spring Washer	Acero Inox AISI 201 / SS 201		
13	Eje / Stem	Acero Inox AISI 201 / SS 201	Acero Inox AISI 304 / SS 304	Acero Inox AISI 316 / SS 316
14	Tuerca / Nut	Acero Inox AISI 201 / SS 201		
15	Sistema de bloqueo/Locking Device	Acero Inox AISI 201 / SS 201		
16	Funda / Handle Sleeve	PVC		PVC

N: Extremos roscados NPT ANSI B 2.1 / Thread ends according ANSI B 2.1 NPT

B: Extremos roscados BSP BS21 / Thread ends according BS21 BSP

Dimensiones Generales / General Dimensions:

Medida / Size	Dimensiones / Dimensions (mm)				
	D	W	H	L(+2)	Peso / Weight(g)
1/4"	8	98	55	62	0.4
3/8"	10	98	55	62	0.4
1/2"	15	102	63	65	0.44
3/4"	20	105	65	72	0.56
1"	25	110	71	81	0.76
1 1/4"	32	128	75	95	1.28
1 1/2"	38	155	86	104	1.6
2"	49	165	92	125	2.3
2 1/2"	63	205	125	145	4.9
3"	76	220	145	198	7.52
4"	100	275	165	245	13.2

VALORES DE Kv / Kv VALUES

Kv (m³/h) = Es la cantidad de metros cúbicos por hora que pasará a través de la válvula generando unapérdida de carga de 1 bar.
Kv (m³/h) = Flow rate of water in cubic meter per hour that will generate a pressure drop of 1 bar across the valve.

1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
6	10	24	43	83	130	205	340	520	1100	1820

Cone Check Valves Type 561/562



General

- **Size:** 3/8"–4"
- **Material:** PVC, CPVC, PROGEF® Standard PP, ABS, SYGEF® Standard PVDF
- **Seals:** EPDM, FPM
- **Spring:** 304 stainless steel
- **End Connection:** Solvent cement socket, threaded, flanged, fusion spigot, fusion socket

Key Certifications

- **FDA CFR 21 177.1520:** PP
- **FDA CFR 21 177.2600:** EPDM and FPM
- **FDA CFR 21 177.1550:** PTFE
- **USP 25 Class VI (physiological non-toxic):** PP
- **ABS:** All materials

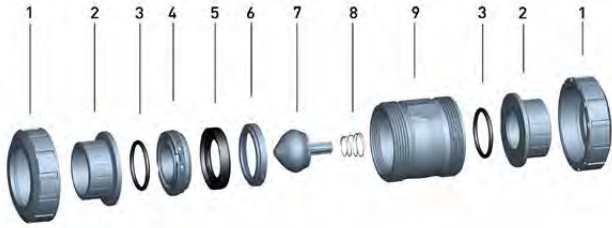
Optional Features

- **Strainer:** Foot valve applications, PVC only
- **Spring:** Nimonic 90, Halar coated SS 304
- **End Connection:** Alternatives available upon request
- **Cleaned:** Silicone free/oil free

Sample Specification

The Type 561/562 Cone Check Valve shall be true union and fully serviceable. The Type 561 shall be used in vertical applications only. The Type 562 shall be used in both horizontal and vertical applications. The cone shall be stabilized by a guide rod. The carrier shall be adjustable and reverse threaded. The valve nut threads shall be of buttress type. All elastomeric seals shall be of like material. ANSI flanged versions shall meet ANSI B16.5 150lb standards. All valves shall be tested in accordance to ISO9393 and designed to ISO16137 standards. All valves shall be manufactured under ISO9001 for Quality and ISO14001 for Environmental Management. Following assembly, every valve shall be tested and certified bubble tight exceeding Class VI standards. PVC valves shall meet ASTM D1784 cell classification 12454 standards. CPVC valves shall meet ASTM D1784 cell classification 23447-B standards. PP valves shall meet ASTM D5847-14 cell classification PP0510B66851 standards. ABS valves shall meet ASTM D3965 cell classification 42222 standards. PVDF valves shall be type 1, grade 2 according to ASTM D3222 standards. Valves of all materials shall be RoHS compliant.

Components



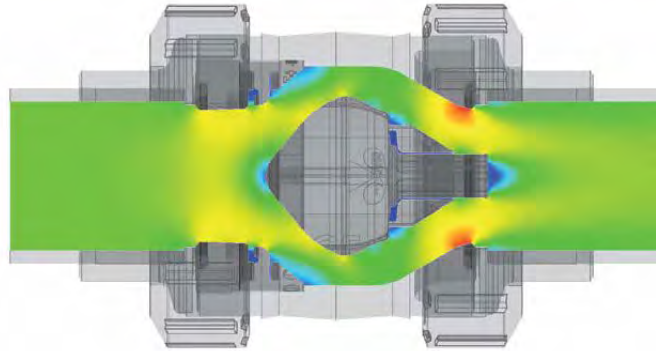
Key Design Features

The Type 561/562 Cone Check Valves are designed to optimize the flow path through the valve. The streamlined cone decreases resistance and significantly improves Cv when compared to traditional ball check valves. The internal geometry of the valve body features smooth transitions and radii, the contour is designed to direct media around the cone in order decrease pressure loss.



Valve Components

Part	Description	Material
1	Valve nut	PVC, CPVC, PP, ABS or PVDF
2	Valve end	PVC, CPVC, PP, PPn, ABS, PE or PVDF
3	Face seal	EPDM or FPM
4	Carrier	PVC, CPVC, PP, ABS or PVDF
5	Cone seal	EPDM or FPM
6	Backup ring	PVC, CPVC, PP, ABS or PVDF
7	Cone	PVC, CPVC, PP-TV20, ABS or PVDF
8	Spring	304 Stainless steel
9	Valve body	PVC, CPVC, PP, ABS or PVDF



The Type 562 Cone Check Valves are designed for both vertical and horizontal applications. A spring is seated between the cone and the guide to allow the valve to properly seal in applications where a traditional ball check valve would not.

The cone is stabilized by a guide rod, which maintains a cone's position at full stroke, preventing rattling and decreasing the potential for damage.

Technical Data

System Conditions

The following information is based on water applications at 68° F

Size (inch)	d (mm)	561 Cracking (psi)	562 Cracking (psi)	561 Sealing (psi)	562 Sealing (psi)	Full Stroke (gpm)
3/8	16	0.04	0.41	2.9	1.45	2.11
1/2	20	0.04	0.41	2.9	1.45	2.38
3/4	25	0.04	0.44	2.9	1.45	3.43
1	32	0.07	0.44	2.9	1.45	4.76
1 1/4	40	0.07	0.51	2.9	1.45	9.25
1 1/2	50	0.15	0.58	2.9	1.45	18.49
2	63	0.29	0.73	2.9	1.45	26.42
2 1/2	75	0.36	0.87	2.9	1.45	31.70
3	90	0.44	0.87	2.9	1.45	44.91
4	110	0.44	0.87	2.9	1.45	66.05

Cracking pressure is amount of pressure on the inlet side of the valve required to unseat a closed valve and allow media to begin to pass through the valve. Sealing pressure is the amount of pressure on the outlet side of the valve required to seat an open valve and seal it so no media can pass through. The full stroke flowrate is the volume of media required to maintain the ideal position of the cone in order to optimize the valve's performance.

Cone Density

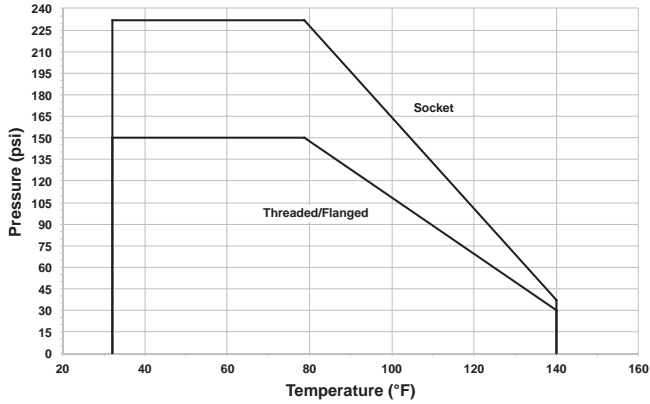
Material	Density (g/cm ³)
PVC	1.38
CPVC	1.50
PP-TV20 (PPh with 20% Talc)	1.05
ABS	1.03
PVDF	1.78

It is not recommended to use Type 561/562 Cone Check Valves in applications in which the media is of greater density than the cone. This will cause the cone to float, thus interfering with the valve's ability to seal properly. PP-TV20 cone used in PP valves.

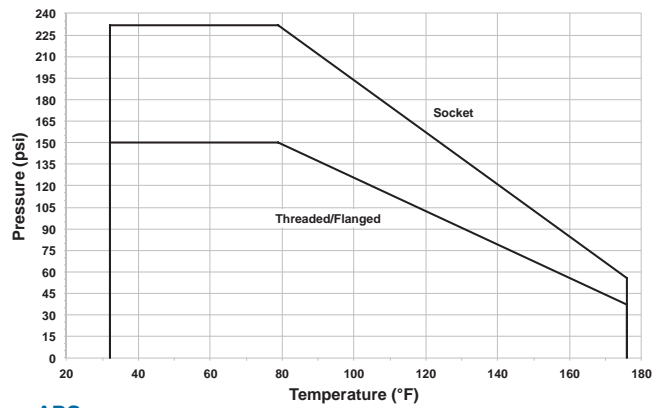
Pressure Temperature Curves

The following graphs are based on a 25 year lifetime water or similar media application

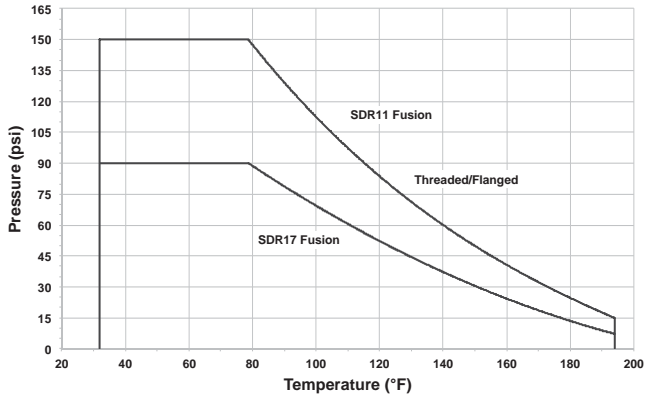
PVC



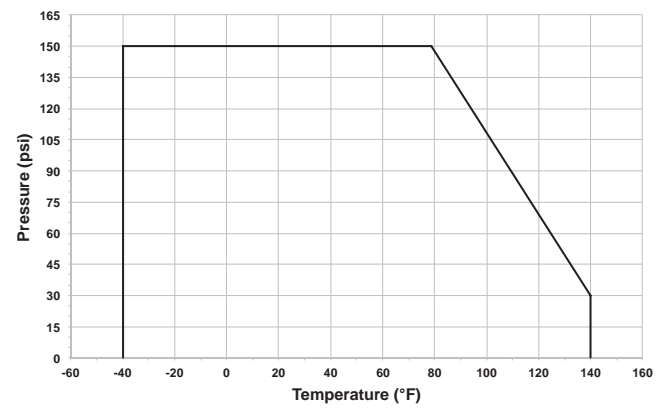
CPVC



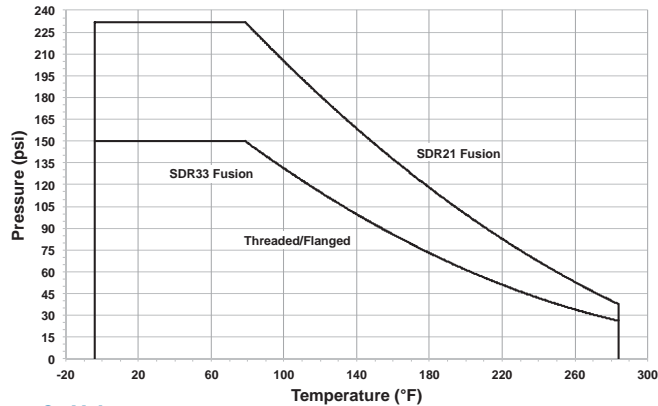
PP



ABS



PVDF



Pressure-Temperature

Material	Temperature Range (°F)	Max Pressure (psi)
PVC	32 to 140	232*
CPVC	32 to 176	232*
PP	32 to 176	150*
ABS	-40 to 140	150
PVDF	-4 to 284	232*

*Dependant on end connection as shown in P-T curves

Cv Value

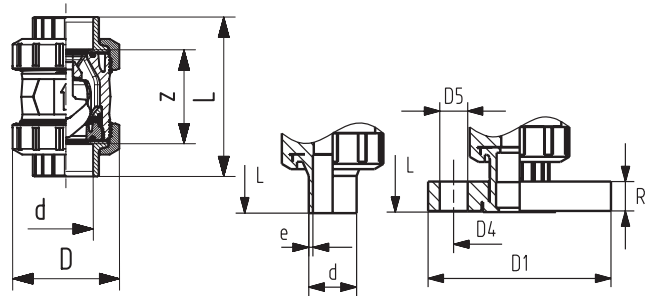
Size (inch)	d (mm)	Cv (gal/min)
3/8	16	13
1/2	20	13
3/4	25	26
1	32	32
1 1/4	40	59
1 1/2	50	75
2	63	115
2 1/2	75	204
3	90	248
4	110	286

Vacuum Service

Type 561/562 Cone Check Valves are conditionally rated for vacuum service. Please consult GF with application details before commissioning.

Dimensions

The following tables are shown in millimeters unless otherwise specified



All Materials

Size (inch)	d (mm)	D
3/8	16	50
1/2	20	50
3/4	25	58
1	32	68
1 1/4	40	84
1 1/2	50	97
2	63	124
2 1/2	75	166
3	90	200
4	110	238

PVC/CPVC

Size (inch)	IPS Socket		Threaded NPT		ANSI Flanged				
	L	z	L	z	L	D1 (inch)	D4 (inch)	D5 (inch)	R (inch)
3/8	105	67	98	69	-	-	-	-	-
1/2	105	61	98	65	149	3.5	2.38	0.5	0.57
3/4	121	70	111	74	165	3.88	2.75	0.5	0.58
1	133	76	127	82	184	4.25	3.13	0.5	0.66
1 1/4	154	90	147	98	206	4.63	3.5	0.5	0.69
1 1/2	164	94	157	110	221	5	3.88	0.5	0.76
2	183	107	183	135	251	6	4.75	0.63	0.82
2 1/2	233	144	234	166	311	7	5.5	0.63	0.98
3	254	151	255	175	343	7.5	6	0.63	1.02
4	301	174	302	214	397	9	7.5	0.63	1.11

PP

d (mm)	Metric Socket		Metric IR/Butt		Threaded NPT		ANSI Flanged				
	L	z	L	e	L	z	L	D1 (inch)	D4 (inch)	D5 (inch)	R (inch)
16	93	67	-	-	96	71	-	-	-	-	-
20	95	66	130	1.9	99	64	166	3.74	2.36	0.63	0.63
25	109	77	143	2.3	111	76	177	4.13	2.76	0.63	0.67
32	119	83	150	2.9	127	83	191	4.53	3.11	0.63	0.71
40	135	99	171	3.7	146	100	209	5.51	3.5	0.63	0.79
50	147	105	191	4.6	157	111	229	5.91	3.86	0.63	0.87
63	168	117	220	5.8	183	134	253	6.5	4.76	0.75	0.94
75	233	167	266	6.8	-	-	416	7.28	5.51	0.75	1.02
90	254	180	264	8.2	-	-	414	7.87	5.98	0.75	1.06
110	301	215	301	10.0	-	-	451	9.02	7.48	0.75	1.1

ABS

d (mm)	Metric Socket	
	L	z
16	92	64
20	95	64
25	110	72
32	123	79
40	146	94
50	157	95
63	183	107
75	233	144
90	254	151
110	301	174

PVDF

d (mm)	Metric Socket		Metric IR/Butt		Threaded NPT		ANSI Flanged				
	L	z	L	e	L	z	L	D1 (inch)	D4 (inch)	D5 (inch)	R (inch)
16	93	67	-	-	96	69	-	-	-	-	-
20	95	66	130	1.9	99	64	174	3.74	2.36	0.63	0.63
25	109	77	143	1.9	111	76	189	4.13	2.76	0.63	0.67
32	119	83	150	2.4	127	83	199	4.53	3.11	0.63	0.71
40	135	99	171	2.4	146	101	235	5.51	3.5	0.63	0.79
50	147	105	191	3.0	157	111	243	5.91	3.86	0.63	0.87
63	168	117	220	3.0	183	135	261	6.5	4.76	0.75	0.94
75	233	167	270	3.6	-	-	426	7.28	5.51	0.75	1.02
90	254	180	265	4.3	-	-	426	7.87	5.98	0.75	1.06
110	301	215	305	5.3	-	-	487	9.02	7.48	0.75	1.1

True Union Ball Valve Type 375

CORZAN®



General

- **Size:** 3/8"–4"
- **Material:** PVC, CORZAN® CPVC, or PPn
- **Seat:** PTFE
- **Seals:** EPDM or FPM
- **End Connection:** Solvent cement socket, threaded, flanged, PPro-Seal™ electrofusion socket
- **Standard Pack Quantity:** 1 valve

Key Certifications

- **NSF 61:** PVC and CPVC
- **USP 25 Class VI (physiological non-toxic):** PP
- **FDA CFR 21 177.1520:** PPn
- **CORZAN:** CPVC

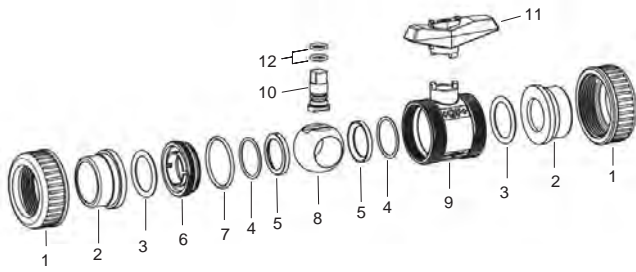
Optional Features

- **Vented Ball:** For sodium hypochlorite use

Sample Specification

The Type 375 Ball Valve shall be true union and utilize a floating ball design. The ball shall be full port with two way blocking capability. The stem shall be blowout proof and utilize a double o-ring seal. The seat carrier shall be adjustable with the handle doubling as a seat carrier adjustment or removal tool. Ball seats shall have an elastomeric backing o-ring and all elastomeric seals shall be of like material. ANSI flanged versions shall meet the ANSI B16.5 150lb standard. All valves shall be tested in accordance to ISO9393 and designed to ISO16135 standards. All valves shall be manufactured under ISO9001 for Quality and ISO14001 for Environmental Management. PVC valves shall meet ASTM D1784 cell classification 12454 standards. CPVC valves shall meet ASTM D1784 cell classification 23447 standards. PPn valves shall meet ASTM D4101 standards. Valves of all materials shall be RoHS compliant.

Components



Key Design Features

An arrow is molded on the body of the Type 375 to indicate the side of the valve with a fixed seat. The valve is bidirectional, so the installation direction does not affect the valve's performance. However, the installation direction of the fixed side of the valve does provide benefits for both upstream and downstream installs. When a valve is closed, the ball seal in a pressurized system is provided by the downstream seat, it is therefore advantageous to install the valve with the fixed side downstream. Depending on system design, it can be easier to adjust the seat carrier of a valve if the fixed seat is upstream because the upstream side of the valve does not need to be depressurized.



Valve Components

Part	Description	Material
1	Valve nut	PVC, CPVC or PPn
2	Valve end	PVC, CPVC, PPn or PE
3	Face seal	EPDM or FPM
4	Backing seal	EPDM or FPM
5	Seat	PTFE
6	Seat carrier	PVC, CPVC or PPn
7	Body seal	EPDM or FPM
8	Ball	PVC, CPVC or PPn
9	Body	PVC, CPVC or PPn
10	Stem	PVC, CPVC or PPn
11	Handle	Glass filled PP
12	Stem seal	EPDM or FPM

Material Availability

Material	Range (inch)	Range (mm)
PVC	3/8-4	16-110
CPVC	3/8-2	16-63
PPn	1/2-2	20-63



The Type 375 stem utilizes a redundant O-ring design to provide an added barrier against leak out. It also features an oversized base to prevent blowout.

Vented Ball: Optional Feature

A vented ball is an optional feature with all variations of the Type 375 Ball Valve. This version of the valve has dedicated part numbers that utilize a special ball with a 1/8 inch hole. This ball is designed for applications in which the media requires out-gassing such as sodium hypochlorite. The hole functions as a vent for media that would normally be trapped inside a closed ball. The vent prevents potentially dangerous pressure from building up inside the valve. The vent is located on the seat carrier side of the ball valve and this side is recommended to be installed upstream.

Chemical applications vary from system to system and variations such as concentration, temperature and pressure need to be considered. It is the responsibility of the individual user to verify compatibility and GF recommends that every application be verified and tested by internal experts or a third party.

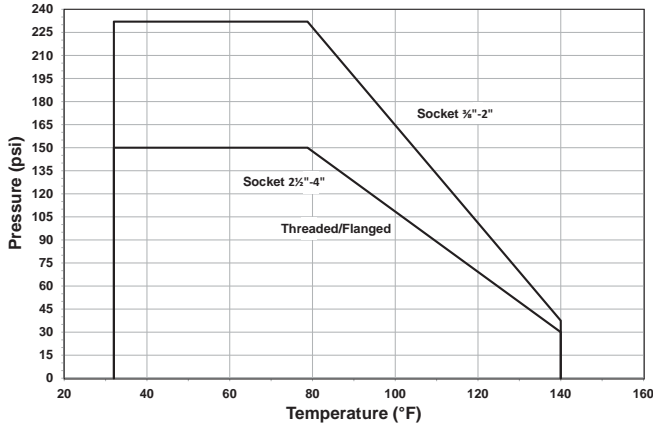


Technical Data

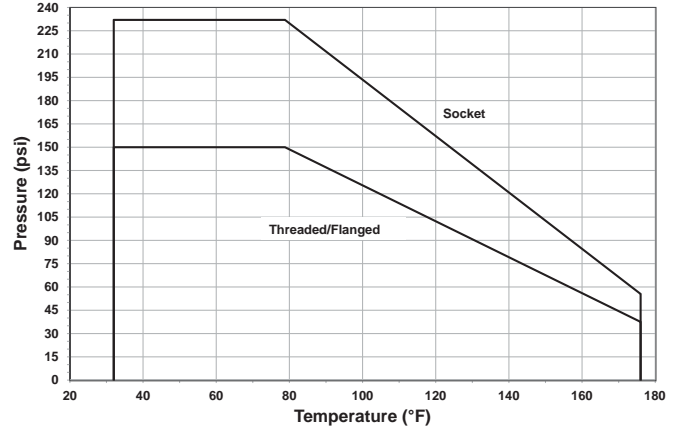
Pressure Temperature Curves

The following graphs are based on a 25 year lifetime water or similar media application

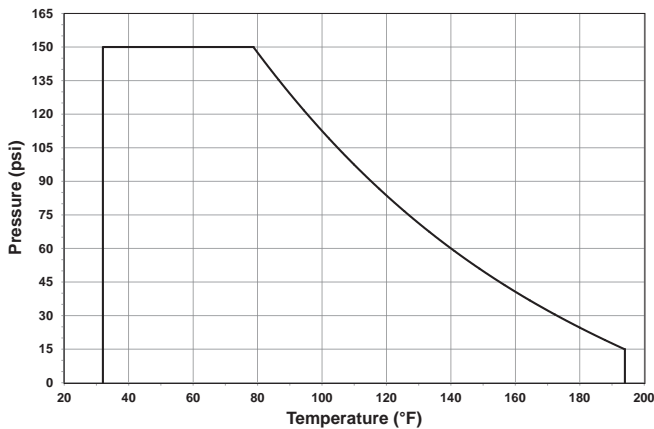
PVC



CPVC



PPn



Pressure-Temperature

Material	Temperature Range (°F)	Max Pressure (psi)
PVC	32 - 140	232*
CPVC	32 - 176	232*
PPn	32 - 176	150

*Dependant on end connection as shown in P-T curves

Vacuum Service

The Type 375 is rated for full vacuum service. Maximum differential pressure of 15psi at 122°F.

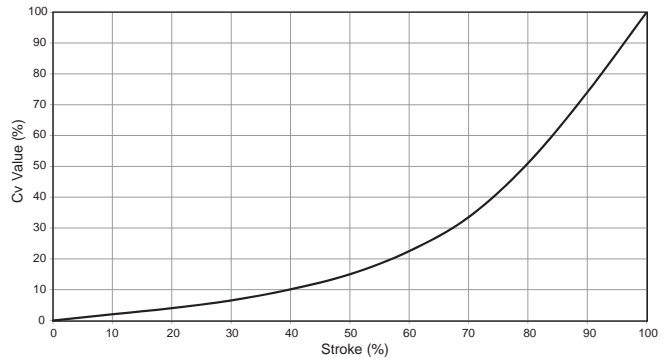
Flow

The following information is based on water applications at 68° F

Cv Value

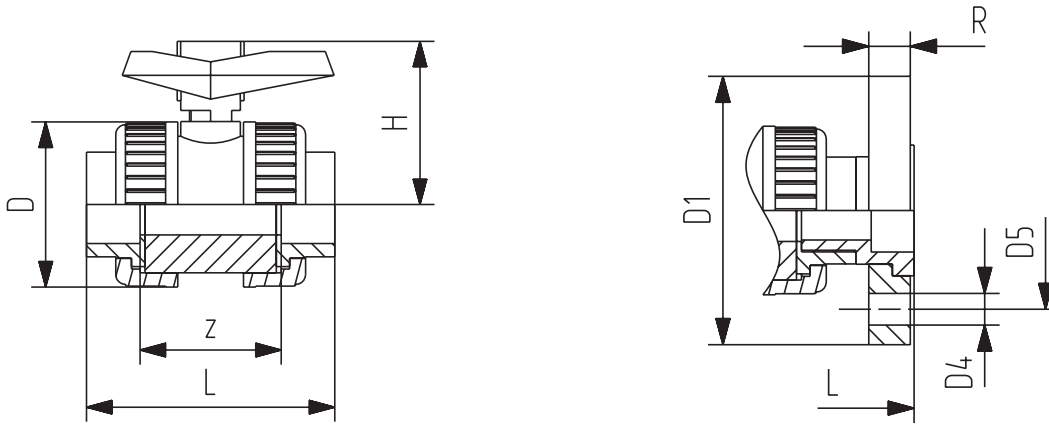
Size (inch)	d (mm)	Cv (gal/min)
1/2	20	15
3/4	25	21
1	32	55
1 1/4	40	81
1 1/2	50	126
2	63	245
2 1/2	75	364
3	90	490
4	110	700

Flow Characteristics



Dimensions

The following tables are shown in millimeters unless otherwise specified



All Materials

Size (inch)	D	H
3/8	50	53
1/2	50	53
3/4	59	60
1	68	67
1 1/4	80	79
1 1/2	94	90
2	115	107
2 1/2	145	129
3	168	143
4	210	169

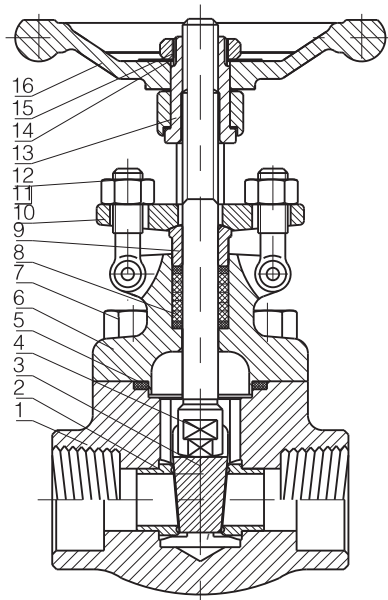
PPn

Size	PPro-Seal Socket	
	L	z
1/2	98	47
3/4	111	53
1	123	59
1 1/2	149	80
2	171	93
3	244	144

PVC/CPVC

Size	IPS Socket		Threaded NPT		ANSI Flanged				
	L	z	L	z	L	D1 (inch)	D4 (inch)	D5 (inch)	R (inch)
3/8	83	51	73	53	-	-	-	-	-
1/2	91	47	89	55	135	3.5	0.5	2.38	0.57
3/4	104	53	90	59	148	3.88	0.5	2.75	0.58
1	116	59	102	66	167	4.25	0.5	3.13	0.66
1 1/4	131	67	117	75	183	4.63	0.5	3.5	0.69
1 1/2	149	80	127	86	206	5	0.5	3.88	0.76
2	171	93	151	98	239	6	0.63	4.75	0.82
2 1/2	209	118	-	-	287	7	0.63	5.5	0.98
3	244	144	-	-	333	7.5	0.63	6	1.02
4	287	164	-	-	383	9	0.63	7.5	1.11

Forged Steel Gate Valve-S20



Applicable Standards

1. Design and Manufacture
API 602, BS5352, ASME B16.34
2. Connection end
Socket Weld End(SW): ASME B16.11
Threaded End(NPT): ASME B1.20.1
Butt-Weld End(BW): ASME B16.25
Flange End(RF/RTJ): ASME B16.5
3. Test & Inspection
API 602, API 598
4. Design Description
Bolted Bonnet(BB),
Welded Bonnet(WB),
Outside Screw and Yoke(OS&Y)
5. Main Materials:
A105, LF2, F5, F11, F22,
304(L), 316(L), F347, F321,
F51, Alloy 20, Monel

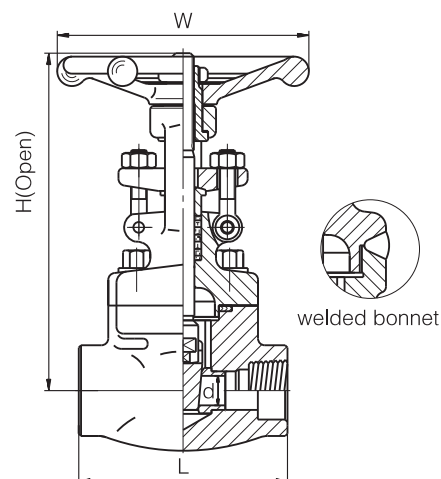
No.	PART	ASTM Material					
		A105	LF2	F11	F304(L)	F316(L)	F51
1	BODY	A105	LF2	F11	F304(L)	F316(L)	F51
2	SEAT	410	410	410+STL	304(L)	316(L)	F51
3	GATE	F6a	F6a	F6a+STL	F304(L)	F316(L)	F51
4	STEM	410	410	410	304(L)	316(L)	F51
5	GASKET	304 + Graphite			304+Graphite	316(L)+Graphite	316(L)+Graphite
6	BONNET	A105	LF2	F11	F304(L)	F316(L)	F51
7	BOLT	B7	L7	B16	B8(M)	B8(M)	B8M
8	PACKING	Flexible Graphite					
9	GLAND	A182 F6	LF2	F11	F304	F304	F304
10	GLAND FLANGE	A105	LF2	F11	F304	F304	F304
11	NUT	A194 2H			8		
12	EYEBOLT	A193 B7			B8		
13	STEM NUT	A276 410					
14	NAMEPLATE	AL					
15	LOCK NUT	AISI 1035					
16	HANDWHEEL	ASTM A197					

Different Trim are available upon request.

CL800

Bolted Bonnet/Welded Bonnet, Full Port/Reduced Port, Outside Screw and Yoke (OS&Y), Threaded, Butt Weld, Socket Weld. Design: API 602

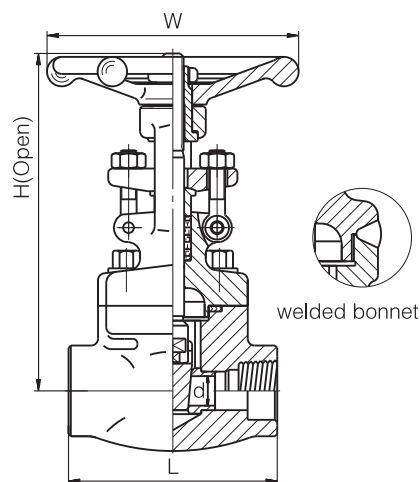
Size (NPS)	R.P	1/2	3/4	1	1.1/4	1.1/2	2	2. 1/2
	F.P	3/8	1/2	3/4	1	1.1/4	1.1/2	2
Face To Face	L	79	92	111	120	120	140	178
Handwheel Diameter	W	100	100	125	160	160	180	200
Height	H	161	163	196	223	251	290	333
Flow Port Diameter	d	10.3	13.5	18	23	29	36	45



CL900~1500

Bolted Bonnet/Welded Bonnet, Full Port/Reduced Port, Outside Screw and Yoke (OS&Y), Threaded, Butt Weld, Socket Weld. Design: API 602

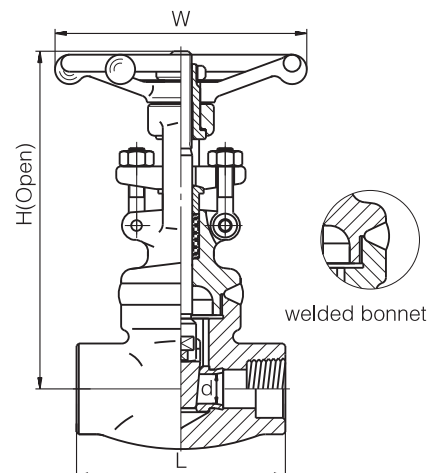
Size (NPS)	R.P	1/2	3/4	1	1.1/4	1.1/2	2	2.1/2
	F.P	3/8	1/2	3/4	1	1.1/4	1.1/2	2
Face To Face	L	92	111	120	120	140	178	—
Handwheel Diameter	W	100	125	160	160	180	200	—
Height	H	191	191	219	243	296	316	—
Flow Port Diameter	d	10.5	13.5	18	23	29	36	—



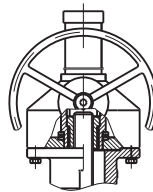
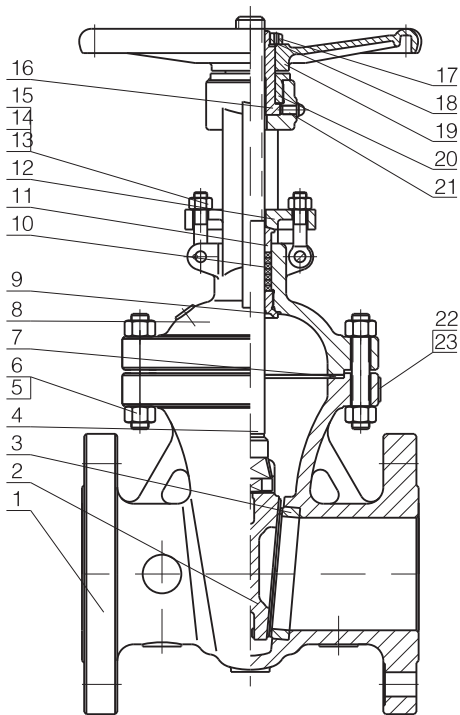
CL2500

Welded Bonnet, Full Port/Reduced Port, Outside Screw and Yoke (OS&Y), Threaded, Butt Weld, Socket Weld. Design: ASME B16.34

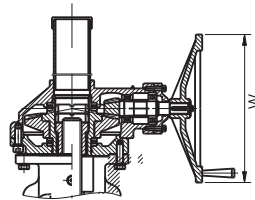
Size (NPS)	R.P	3/8	1/2	3/4	1	1.1/4	1.1/2	2
Face To Face	L	111	120	120	120	140	—	—
Handwheel Diameter	W	125	125	125	125	250	—	—
Height	H	215	218	220	238	271	—	—
Flow Port Diameter	d	8	10.3	13.5	18	23	—	—



Cast Steel Gate Valve Series



Available With Gear Box



Applicable Standards:

Design and Manufacture : API 600 ASME B16.34
 Face to Face and End to End: ASME B16.10
 Flanged End: ASME B16.5/ASME B16.47
 Butt Welded End: ASME B16.25
 Test & Inspection: API 598

Design Description:

Full bore design
 Outside Screw and Yoke(OS & Y)
 Bolted Bonnet(BB)
 Flexible wedge, fully guided
 Solid or split wedge gate
 Renewable seat rings upon request
 Forged T-head stem
 Rising stem and non-rising handwheel
 Flanged or butt welding ends
 Available with bevel gear operator

Main Materials:

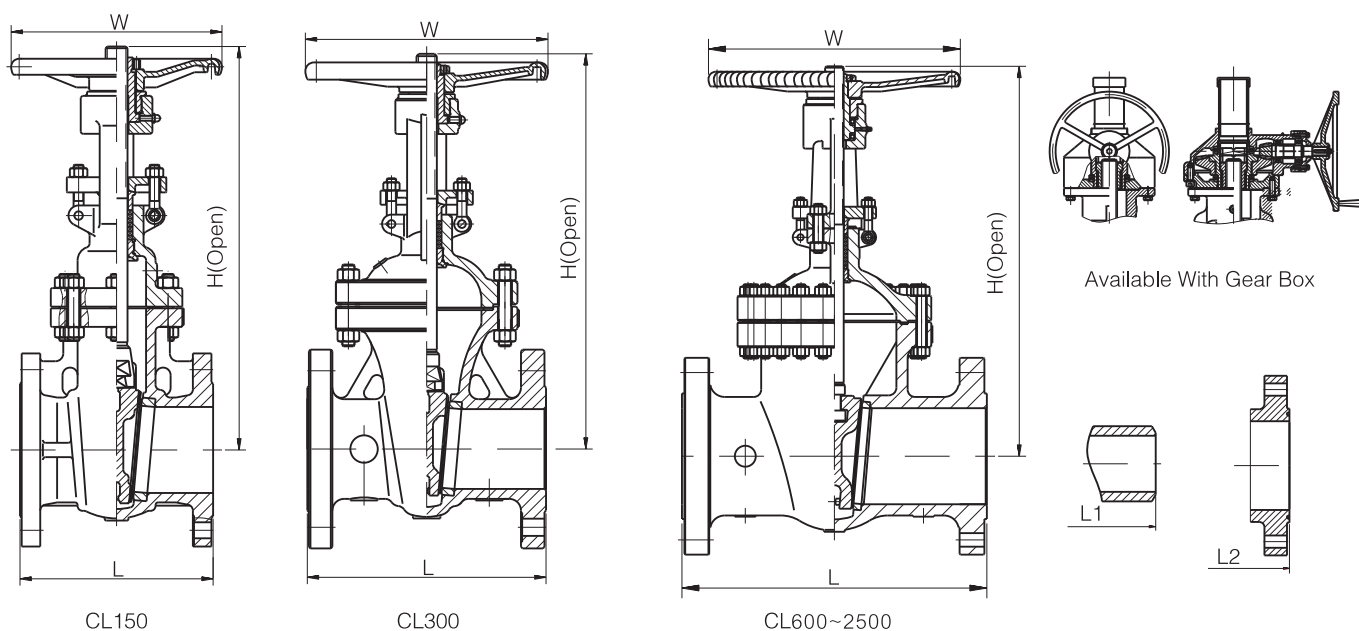
WCB, LCB, WC6, WC9, CF8, CF8M,
 CF3, CF3M, A995 4A, A995 5A, A995 6A,
 Alloy 20, Monel, Inconel

Main Parts Material Sheet

NO.	PART	ASTM Material				
		WCB	LCB ⁽¹⁾	WC6	CF8(M)	CF3(M)
1	BODY	A216 WCB	A352 LCB	A217 WC6	A351 CF8(M)	A351 CF3(M)
2	GATE	A216 WCB+13Cr	A352 LCB+13Cr	A217 WC6+STL	A351 CF8(M)	A351 CF3(M)
3	SEAT	A216 WCB+13Cr	A352 LCB+13Cr	A217 WC6+STL	A351 CF8(M)	A351 CF3(M)
4	STEM	A182 F6	A182 F6	A182 F6	A182 F304 / F316	A182 F304L(F316L)
5	BONNET BOLT	A193 B7	A320 L7	A193 B16	A193 B8(M)	A193 B8(M)
6	BONNET NUT	A194 2H	A194 7	A194 4	A194 8(M)	A194 8(M)
7	GASKET	SS304+GRAPHITE			PTFE / SS304+GRAPHITE	PTFE / SS316+GRAPHITE
8	BONNET	A216 WCB	A352 LCB	A217 WC6	A351 CF8(M)	A351 CF3(M)
9	BACKSEAL	A182 F6	A182 F6	A182 F6	-	-
10	PACKING	FLEXIBLE GRAPHITE			PTFE / FLEXIBLE GRAPHITE	
11	GLAND	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304L(F316L)
12	GLAND FLANGE	A216 WCB	A352 LCB	A217 WC6	A351 CF8(M)	A351 CF3(M)
13	GLAND EYEBOLT		A193 B7		A193 B8	A193 B8
14	NUT		A194 2H		A194 8	A194 8
15	PIN		AISI 1025		AISI 1025	
16	STEM NUT		BRONZE		BRONZE	
17	HANDWHEEL NUT		AISI 1035		AISI 1035	
18	SCREW		ASTM A36		ASTM A36	
19	HANDWHEEL		A536 60-40-18		A536 60-40-18	
20	BEARING GLAND		AISI 1035		AISI 1035	
21	GREASE NIPPLE		BRASS		BRASS	
22	NAMEPLATE		SS304		SS304	

Different Trim are available upon request.

Cast Steel Gate Valve Series



Available With Gear Box

Dimensions CLASS 150

Size	in	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	40	42	48
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900	1000	1050	1200
L (RF)	in	7.00	7.50	8.00	9.00	10.50	11.50	13.00	14.00	15.00	16.00	17.00	18.00	20.00	22.00	24.00	24.00	28.00	28.00	30	31	34
	mm	178	191	203	229	267	292	330	356	381	406	432	457	508	559	610	610	711	711	762	787	864
L1 (BW)	in	8.5	9.50	11.12	12.00	15.88	16.50	18.00	19.75	22.50	24.00	26.00	28.00	32.00	34.00	36.00	36.00	38.00	40.00	42	43	46
	mm	216	241	283	305	403	419	457	502	572	610	660	711	813	864	914	914	965	1016	1067	1092	1168
L2 (RTJ)	in	7.5	8	8.5	9.5	11	12	13.5	14.5	15.5	16.5	17.5	18.5	20.5	-	24.5	24.5	26.5	28.5	-	-	-
	mm	191	203	216	242	279	305	343	368	394	419	445	470	521	-	622	622	673	724	-	-	-
H (Open)	in	15.25	17.00	18.88	23.00	30.50	37.62	45.50	53.12	59.38	67.00	74.50	83.50	98.25	110.50	116.50	124.00	129.00	146.50	183.86	193.75	217.5
	mm	368	434	480	584	765	956	1149	1350	1508	1703	1892	2119	2500	2806	2960	3150	3280	3720	4670	4920	5525
W	in	8	8	10	12	12	14	16	18	20	22	24	26	29	29	32	32	38	40	30	30	30
	mm	200	200	250	300	300	350	400	450	500	550	600	640	720	720	800	800	950	1000	760	760	760

Dimensions CLASS 300

Size	in	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	26	28	30	32	36	40	42	48
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	650	700	750	800	900	1000	1050	1200
L/L1 (RF/BW)	in	8.50	9.50	11.12	12.00	15.88	16.50	18.00	19.75	30.00	33.00	36.00	39.00	45.00	49.00	53.00	55.00	60.00	68.00	76	78	88
	mm	216	241	283	305	403	419	457	502	762	838	914	991	1143	1245	1346	1397	1524	1727	1930	1981	2235
L2 (RTJ)	in	9.12	10.12	11.75	12.62	16.50	17.12	18.62	20.38	30.62	33.62	36.62	39.75	45.88	50.00	54.00	56.00	61.12	69.12	-	-	-
	mm	232	257	298	321	419	435	473	518	778	854	930	1010	1165	1270	1372	1422	1553	1756	-	-	-
H (OPEN)	in	16.12	17.88	20.00	24.00	31.75	39.38	47.62	55.75	62.25	67.88	77.12	86.38	102.00	117.00	122.00	126.00	130.00	152.00	188.63	198.13	217.38
	mm	410	453	509	612	805	1000	1210	1415	1580	1725	1960	2195	2590	2975	3100	3200	3300	3860	4791	5032	5522
W	in	8	8	10	12	14	16	18	20	22	22	24	26	29	29	32	32	38	40	24	24	24
	mm	200	200	250	300	350	400	450	500	550	550	600	640	720	720	800	800	950	1000	610	610	610

Globe Valve-S13



Investment casting body

Pressure Rating: 200 PSI

Working Temperature: -25 ~180°C

Medium: Water, Oil, Gas

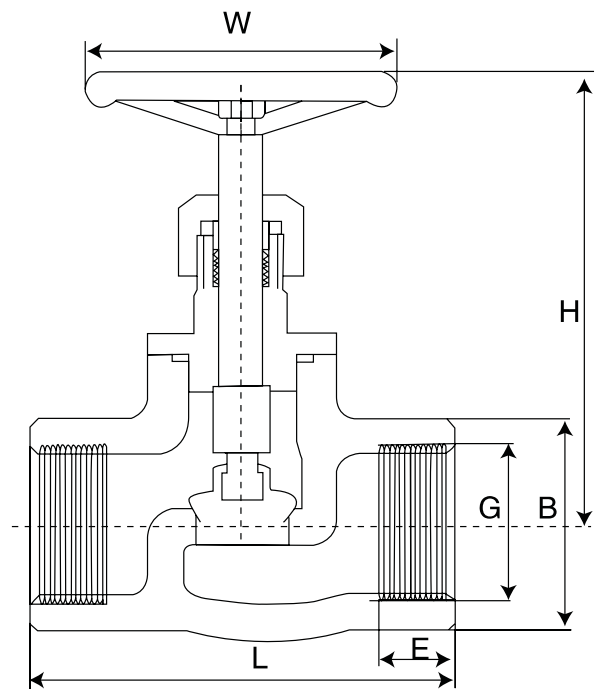
Material: 304, 316, 1.4308, 1.4408, CF8, CF8M

Thread: ASME B1.20.1 BS21.DIN2999/259,

ISO228-1,JIS B 0203,ISO7/1

Main component materials:

Description Of Parts	Material
Body	SS304/316
Bonnet	SS304/316
Valve flap	SS304/316
Stem	SS304/316
Sealing	SS304/316
Packing	PTFE



Dimension:(mm)

DN	G	L	E	B	H	W
15	1/2"	65/65	16	31	88	70
20	3/4"	70/75	18	38	95	70
25	1"	80/90	20	46	110	80
32	1-1/4"	90/105	21.5	56	123	100
40	1-1/2"	100/120	23	63	135	100
50	2"	120/140	24.5	76	150	100

Wafer Style Butterfly Valve Type 567



General

- **Size:** 2"–12"
- **Outer Body:** Glass-filled PP
- **Material:** PVC, CPVC, PROGEF® Standard PP, ABS, SYGEF® Standard PVDF
- **Seals:** EPDM, FPM, PTFE/FPM
- **Stem:** 316 stainless steel
- **Operation:** Bare shaft, lever, gear
- **Connection:** Both ANSI 150 and DIN 2501
- **Standard Pack Quantity:** 1 valve

Key Certifications

- **NSF 61:** PVC and CPVC
- **FDA CFR 21 177.1520:** PP and PVDF
- **FDA CFR 21 177.2600:** EPDM and FPM
- **FDA CFR 21 177.1550:** PTFE
- **USP Class VI (physiological non-toxic):** EPDM, FPM, PTFE, PP and PVDF

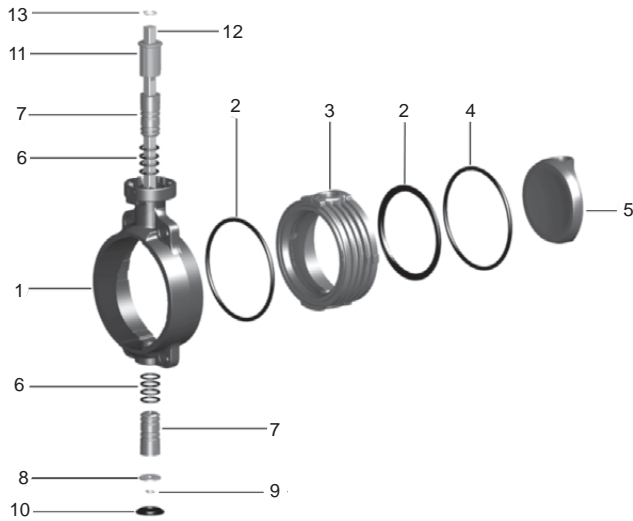
Sample Specification

The Type 567 Butterfly Valve shall be wafer style compatible with both ANSI B16.5 150 lb and DIN 2501 flange patterns. The disk operation shall utilize double eccentric design principles. The shaft shall be non-wetted by a bushing assembly with double O-ring seals and fixed at both ends. The face seal shall be a Q-ring compatible with flat and serrated flange adapters. The face, disk and shaft seals shall operate independently. The wetted body and disk shall be of like materials. Valves shall be rated for bidirectional use. The handle shall be lockable with standard adjustment increments of 5 degrees. The operator mounting flange shall be comply with ISO standards. All valves shall be tested in accordance to ISO9393 and designed to ISO16136 standards. All valves shall be manufactured under ISO9001 for Quality and ISO14001 for Environmental Management. Following assembly, every valve shall be tested and certified bubble tight exceeding Class VI standards.

Material Specification

PVC valves shall meet ASTM D1784 cell classification 12454 standards. CPVC valves shall meet ASTM D1784 cell classification 23447-B standards. PP valves shall meet ASTM D5847-14 cell classification PP0510B66851 standards. ABS valves shall meet ASTM D3965 cell classification 42222 standards. PVDF valves shall be type 1, grade 2 according to ASTM D3222 standards. Valves of all materials shall be RoHS compliant.

Components



Optional Features

- **Actuation:** Electric, pneumatic
- **Limit Switches:** Mechanical, inductive
- **Handle:** Find adjustment lever (1°)
- **Stem Extension:** Two piece stainless steel
- **Shaft:** Titanium, Hastelloy-C
- **Operation:** Chain operator, square operating nut
- **Gear Operator:** Stainless steel housing
- **Hardware:** Alternatives available upon request
- **Cleaned:** Silicone free/oil free

Valve Components

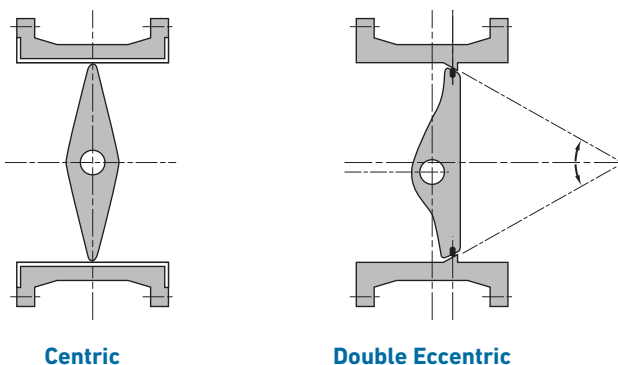
Part	Description	Material
1	Outer body	Glass filled PP
2	Face seal	EPDM or FPM
3	Inner body	PVC, CPVC, PP, ABS or PVDF
4	Disk seal	EPDM, FPM or PTFE/FPM
5	Disk	PVC, CPVC, PP, ABS or PVDF
6	Shaft seal	EPDM or FPM
7	Shaft bushing	PVC, CPVC, PP, or PVDF
8	Washer	304 stainless steel
9	Lower retaining clip	304 stainless steel
10	Shaft cap	Glass filled PP
11	End stop	Glass filled PP
12	Shaft	316 stainless steel
13	Upper retaining clip	304 stainless steel

Material Availability

Material	Range (inch)	Range (mm)
PVC	2-16	63-400
CPVC	2-12	63-315
PP	2-24	63-630
ABS	2-12	63-315
PVDF	2-12	63-315

It is not possible to use inner housings with disks of different material. Valves of all sizes and materials are available with both EPDM and FPM seals. Only CPVC, PP and PVDF valves are available with PTFE encapsulated FPM disc seals. GF does not offer disc seals that deviate from their standard product offering.

Key Design Features



Double Eccentric Design Principle

The Type 567 Butterfly Valve is designed using the double eccentric disc principle. When opening and closing, the disc is not in contact with the seat, significantly reducing component wear. This design principle greatly reduces the operating torque and required elastomeric sealing material. The reduction in sealing material decreases the impact of elastomeric swelling. The benefits of double eccentric valves include ease of manual usage, reduction in required actuator torque and extended valve lifetime.

Key Design Features



Seals

The Type 567 Butterfly Valve features a truly non-wetted shaft design. The shaft is sealed with a bushing assembly on either side of the disc. Each bushing utilizes a double o-ring seal totalling eight shaft seals in every valve.

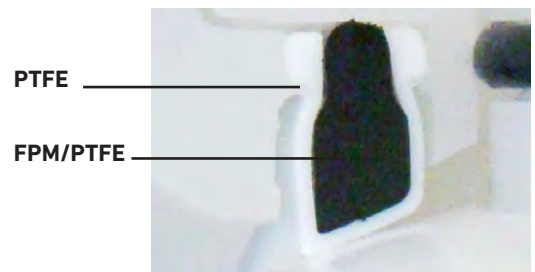
Alternative o-ring shaft sealing designs are commonly found in competitive boot style thermoplastic butterfly valves. However, these solutions often rely upon elastomer on elastomer seals which can be unreliable, especially in chemical process applications or when working temperatures deviate from standard conditions. The Type 567 shaft seal design eliminates the need elastomer on elastomer seals, providing an industry tested dynamic double o-ring seal against a ridged thermoplastic surface.



The shaft, disc and face seals all operate independently from one another. This eliminates issues common to booted style centric valves such as crimping, where the compression of the valve between two flanges causes the boot to ripple. This can lead to increased operating torque and wear, ultimately reducing the useful life of the valve.

PTFE Disc Seal

The Type 567 Butterfly Valve is available with a PTFE encapsulated FPM disc seal. The FPM core provides flexibility to the PTFE shell and allows for a reliable seal. The double eccentric design limits the amount of PTFE required. The face and shaft seals are FPM blended with approximately 15% PTFE.

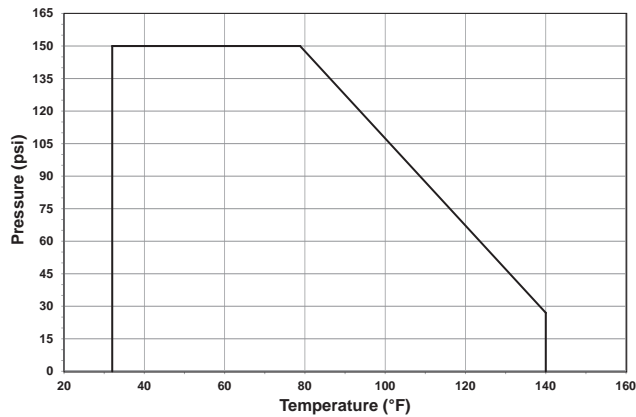


Technical Data

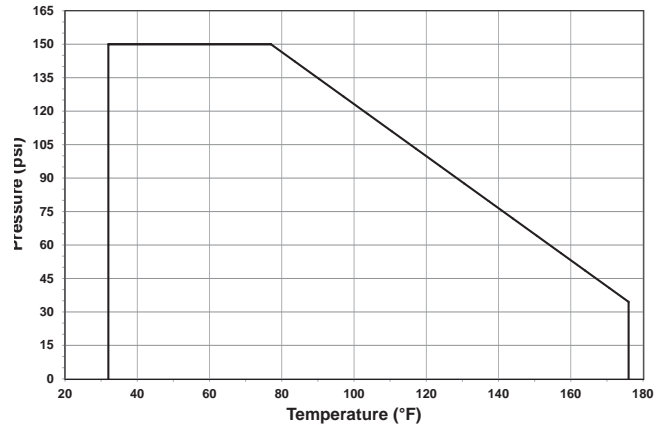
Pressure-Temperature Curves

The following graphs are based on a lifetime of 25 years of water or similar media applications

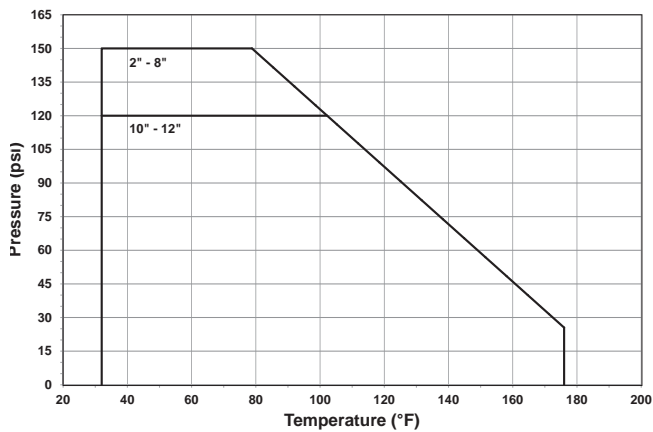
PVC



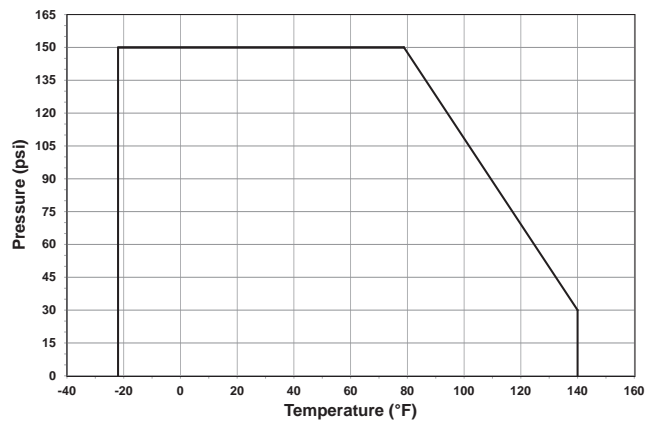
CPVC



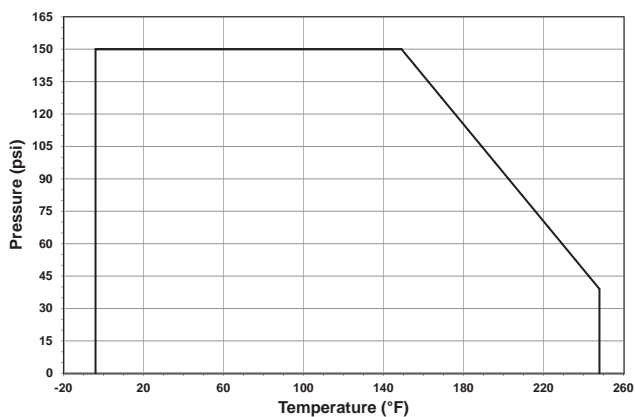
PP



ABS



PVDF



Pressure-Temperature

Material	Temperature Range (°F)	Max Pressure (psi)
PVC	32 to 140	150
CPVC	32 to 176	150
PP	32 to 176	150*
ABS	-40 to 140	150
PVDF	-4 to 284	150

*Dependant on size as shown in P-T curves

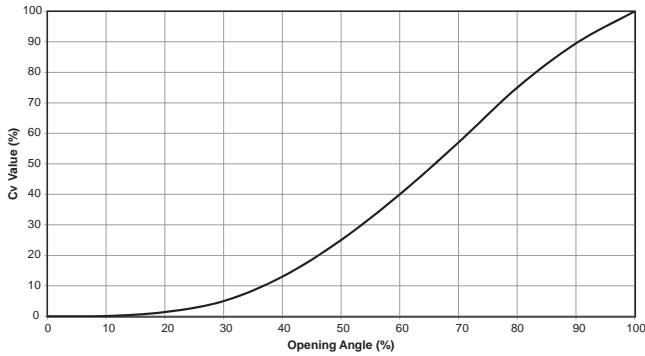
Vacuum Service

The Type 567 is rated for full vacuum service. Maximum differential pressure of 15psi at 122°F.

Flow

The following graphs are based on a lifetime of 25 years of water or similar media applications

Flow Characteristics



Cv Value

Size (inch)	d (mm)	Cv (gal/min)
2	63	103
2½	75	154
3	90	210
4	110	455
5	140	805
6	160	1162
8	225	2772
10	280	3570
12	315	5110

Breakaway Torque

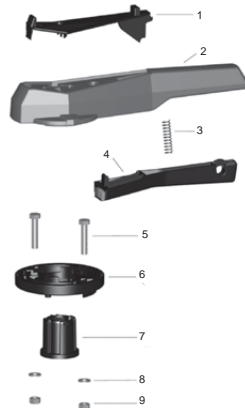
The following tables show average values at nominal pressure

Size (inch)	d (mm)	At 75psi Torque (ft-lb)	At 150psi Torque (ft-lb)
2	63	10	25
2½	75	10	30
3	90	20	45
4	110	30	60
5	140	40	75
6	160	50	90
8	225	75	120
10	280	100	170
12	315	130	220

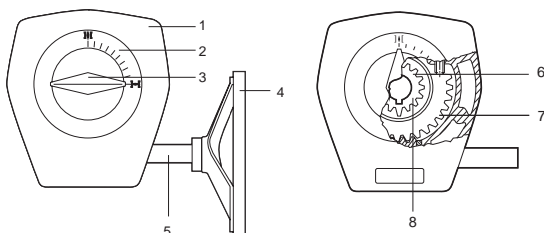
For non-GF actuators, a safety factor should be used in calculating the required actuator torque. This safety factor can vary depending on the application conditions and end user's preference. (e.g. control time, medium, temperature, etc.).

Operator Components

Lever



Gear Operator



Lever Components

Part	Description	Material
1	Handle clip	Glass-filled PP
2	Handle	Glass-filled PP
3	Spring	304 Stainless steel
4	Lever	Glass-filled PP
5	Bolts	304 Stainless steel
6	Index plate	Glass-filled PP
7	Turn limiter	Glass-filled PP
8	Washers	304 Stainless steel
9	Nuts	304 Stainless steel

Gear Components

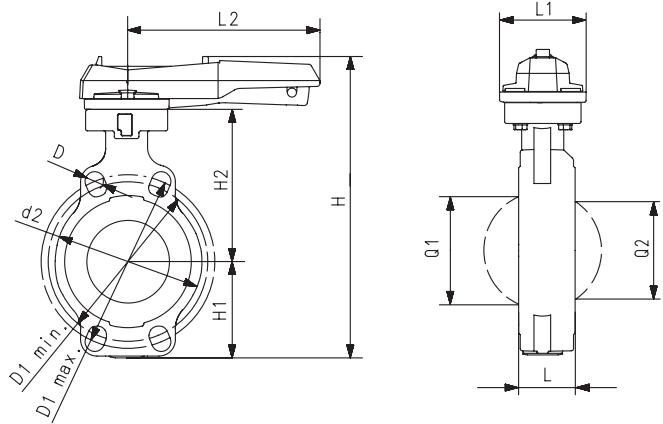
Part	Description	Material
1	Housing	Aluminum
2	Indicator cap	PE
3	Indicator	PE
4	Handle	Aluminum
5	Wormshaft	Nitempered steel
6	Drive bushing	Sintered copper steel
7	Quadrant	Sintered copper steel
8	Thrust bearing	Type AXK

Dimensions

The following tables are shown in millimeters unless otherwise specified

Bare Shaft

Size (inch)	ISO	D3	D4	H3	H4	H5
2	F07	70	90	27	23	11
2½	F07	70	90	27	23	11
3	F07	70	90	27	23	11
4	F07	70	90	16	23	14
5	F07	70	90	16	23	14
6	F07	70	90	19	23	17
8	F07	70	90	19	23	17
10	F10	102	125	40	23	22
12	F10	102	125	40	23	22

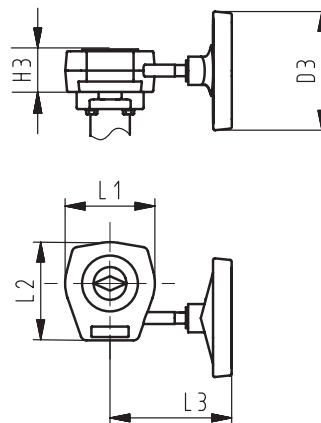


Lever

Size (inch)	d (mm)	d2	D	D1 min	D1 max	D2	H	H1	H2	L	L1	L2	Q1	Q2
2	63	104	19	120	125	104	264	77	134	45	106	205	40	-
2½	75	115	19	140	145	115	277	83	140	46	106	205	54	35
3	90	131	19	150	160	131	289	89	146	49	106	205	67	50
4	110	161	19	175	191	161	325	104	167	56	106	255	88	74
5	140	187	23	210	216	187	352	117	181	64	106	255	113	97
6	160	215	24	241	241	215	373	130	189	72	106	255	139	123
8	225	267	23	290	295	267	435	158	210	73	140	408	178	169
10	280	329	25	353	362	329	554	205	264	113	149	408	210	207
12	315	379	25	400	432	379	598	228	285	113	149	408	256	253

Gear

Size (inch)	d (mm)	D3	H3	L1	L2	L3
2	63	160	62	78	112	179
2½	75	160	62	78	112	179
3	90	160	62	78	112	179
4	110	160	62	78	112	179
5	140	160	62	78	112	179
6	160	160	62	78	112	179
8	225	160	62	78	112	179
10	280	200	69	97	130	198
12	315	200	69	97	130	198



Y-Strainer-S14



Investment casting body and bonnet

Pressure Rating: 800 PSI

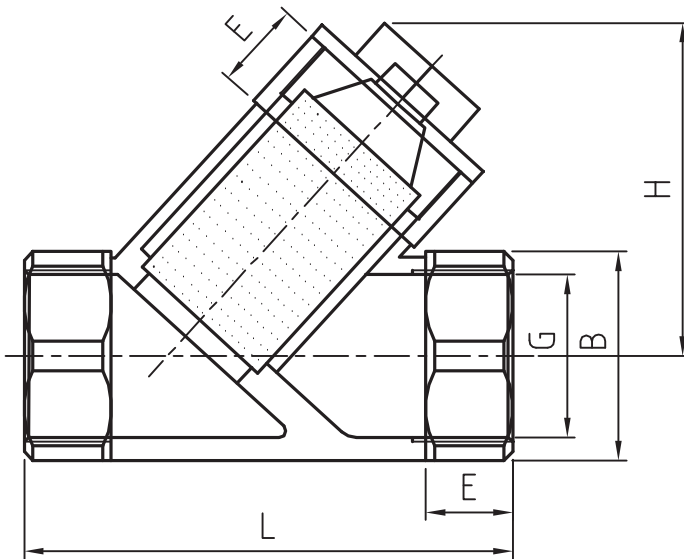
Working Temperature: -25 ~180°C

Medium: Water, Oil, Gas

Material: 304, 316, 1. 4308, 1. 4408, CF8, CF8M

Thread: ASME B1. 20. 1 BS21. DIN2999/259,

ISO228-1, JIS B 0203, ISO7/1



Main component materials:

Description Of Parts	Material
Body	SS316
Bonnet	SS316
Mesh	SS316
Gasket	PTFE

Dimension:(mm)

SIZE	DN	L	E	B	H
1/2"	15	64	14	26	44
3/4"	20	75	15	32	52
1"	25	89	17	41	64
1-1/4"	32	102	20	49	68
1-1/2"	40	118	20	56	76
2"	50	139	22	69	88
2-1/2"	65	155	27	86	108
3"	80	187	32	97	120