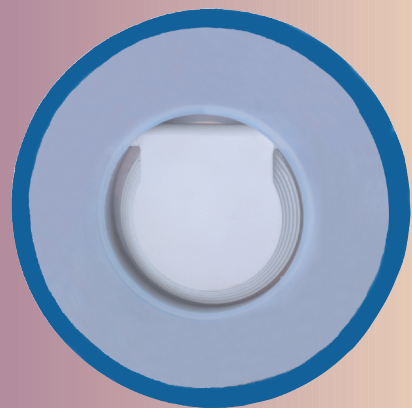
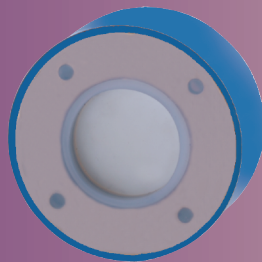
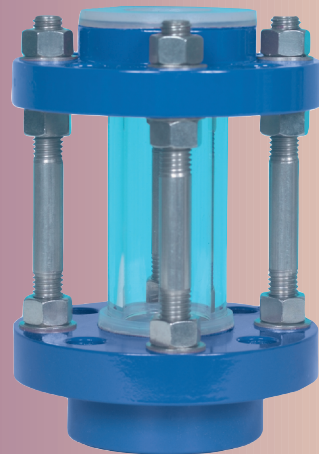
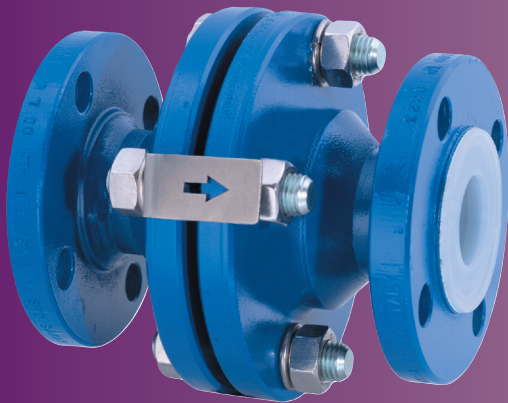
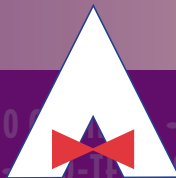


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Aegis VNRA-V Series Vertical Lined Ball Check Valves

Aegis fully lined ball check valves are ideally designed for the non-return flow control of all fluids and gaseous media. The VNRA-V series valves are engineered to be installed in vertical pipelines in-between ANSI 150 lb. and DIN PN 10/16 flanges.

- The valves are normally equipped with solid PTFE balls. For specific applications, hollow PTFE balls are available upon request.
- The polyurethane coated A 216 WCB body is constructed to provide a high level of safety and external corrosion protection. The two-piece body design eliminates a potential leak path.
- The full port design is engineered to minimize pressure drop and offer improved flow characteristics.
- The minimum unseating pressure (opening pressure) required to unseat the valve is 1 PSI (0.07 Bar).
- The face to face dimensions conform to ASME B 16.10 and DIN 3202 F1.
- For gas tight applications, seat seals are available in Viton, Kalrez or FEP encapsulated Viton.
- Linings are available in PFA, Conductive PFA, PVDF and Polypropylene.
- Maximum Pressure: 150 PSIG
- Temperature Range: - 20° F to 400° F depending on lining materials.

Material Specifications

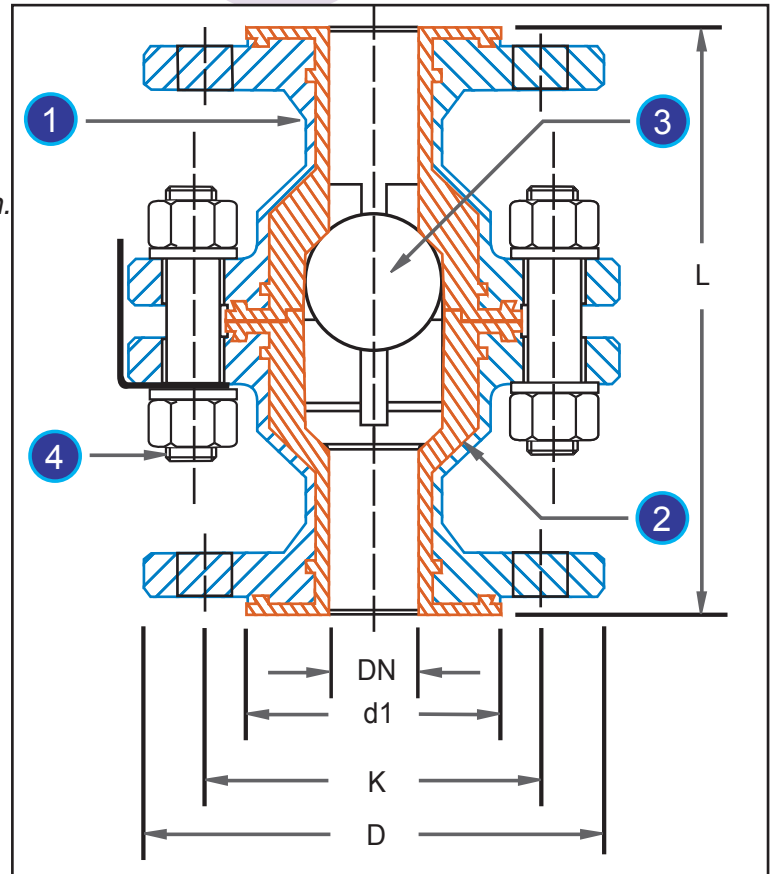
Qty	Description	Materials
1	Valve Body	ASTM A 216 WCB/316 SS
2	Lining	Virgin PFA, PVDF
3	Ball	Solid Virgin PTFE
4	Body Bolts	Stainless Steel

Dimensions

Size	L	D	K	d1	Bolting	wt/lbs
1/2"	5.12	3.50	2.37	1.38	4 x 1/2	8.0
3/4"	5.90	3.87	2.75	1.69	4 x 1/2	8.2
1"	6.00	4.25	3.13	2.01	4 x 1/2	14.0
1 1/2"	7.00	5.00	3.87	2.87	4 x 1/2	19.8
2"	8.00	6.00	4.75	3.62	4 x 5/8	30.0
3"	9.50	7.50	6.00	5.00	4 x 5/8	61.0
4"	11.50	9.00	7.50	6.22	8 x 5/8	94.0
6"	14.00	11.00	9.50	8.50	8 x 3/4	170
8"	18.00	13.50	11.75	10.63	8 x 3/4	365

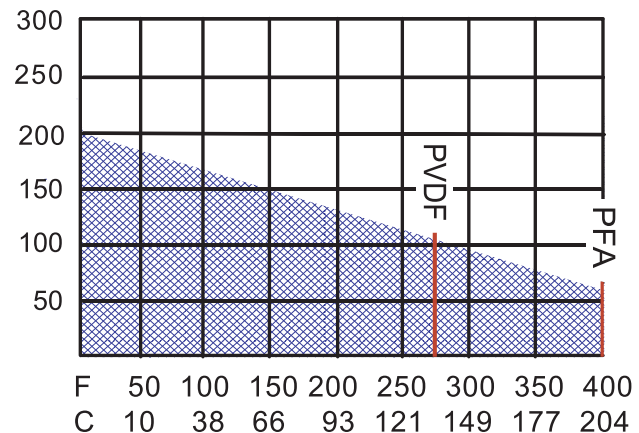
CV Values

Size	DN	CV
1/2"	15	13
3/4"	20	22
1"	25	36
1 1/2"	40	98
2"	50	148
3"	80	384
4"	100	620
6"	150	1,488
8"	200	2,080



Pressure-Temperature Ratings

(Valves with PFA and PVDF linings)



Aegis VNRA-0 Series Horizontal Lined Ball Check Valves

Aegis fully lined ball check valves are ideally designed for the non-return flow control of all fluids and gaseous media. The VNRA-O series valves are engineered to be installed in horizontal pipelines in-between ANSI 150 lb. and DIN PN 10/16 flanges.

- The valves are normally equipped with solid PTFE balls. For specific applications, hollow PTFE balls are available upon request.
- The polyurethane coated A 216 WCB body is constructed to provide a high level of safety and external corrosion protection. The two-piece body design eliminates a potential leak path.
- The full port design is engineered to minimize pressure drop and offer improved flow characteristics.
- The minimum unseating pressure (opening pressure) required to unseat the valve is 1 PSI (0.07 Bar).
- The face to face dimensions conform to ASME B 16.10 and DIN 3202 F1.
- For gas tight applications, seat seals are available in Viton, Kalrez or FEP encapsulated Viton.
- Linings are available in PFA, Conductive PFA, PVDF and Polypropylene.
- Maximum Pressure: 150 PSIG
- Temperature Range: - 20° F to 400° F depending on lining materials.

Material Specifications

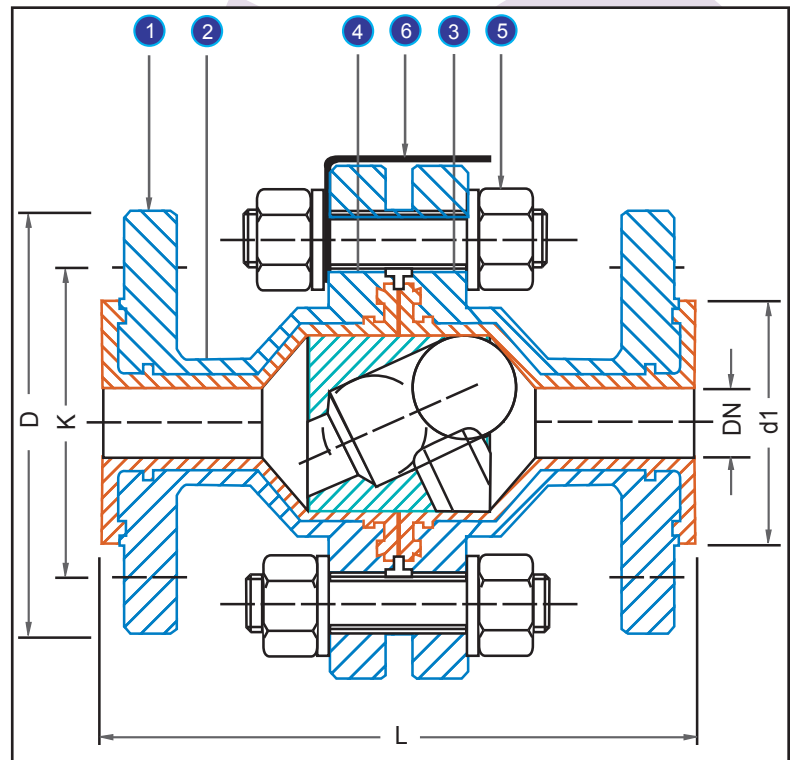
Qty	Description	Materials
1	Valve Body	ASTM A 216 WCB/316 SS
2	Lining	Virgin PFA, PVDF
3	Ball	Solid Virgin PTFE
4	Ball Guide	PTFE
5	Body Bolts	Stainless Steel
6	Flow Arrow	Stainless Steel

Dimensions

Size	L	D	K	d1	Bolting	wt/lbs
1/2"	5.12	3.50	2.37	1.38	4 x 1/2	8.0
3/4"	5.90	3.87	2.75	1.69	4 x 1/2	8.2
1"	6.00	4.25	3.13	2.00	4 x 1/2	14.0
1 1/2"	7.00	5.00	3.87	2.87	4 x 1/2	19.8
2"	8.00	6.00	4.75	3.62	4 x 5/8	30.0
3"	9.50	7.50	6.00	5.00	4 x 5/8	61.0
4"	11.50	9.00	7.50	6.22	8 x 5/8	94.0

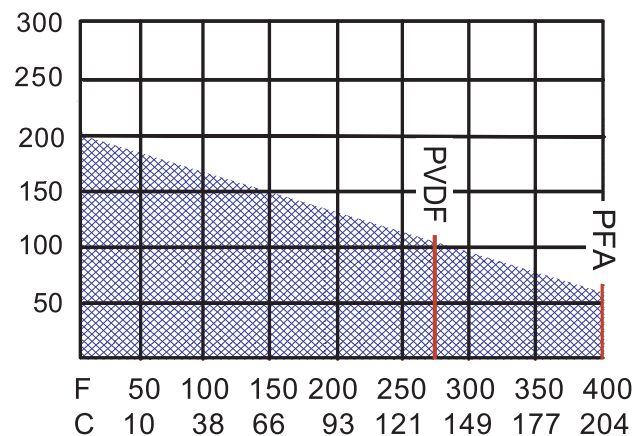
CV Values

Size	DN	CV
1/2"	15	13
3/4"	20	22
1"	25	33
1 1/2"	40	91
2"	50	133
3"	80	369
4"	100	596



Pressure-Temperature Ratings

(Valves with PFA and PVDF linings)



LSCV – Lined Swing Check Valve

A high integrity PFA molded wafer check valve, with a fully encapsulated one piece disc / hinge assembly ensuring maintenance free service. Suitable for PTFE lined or unlined piping systems in all corrosive process conditions.

Product Features

- PFA fluoropolymer lining for the most demanding chemical & high purity applications.
- T-slots machined in to body securely lock the liner in position.
- Patent pending seat liner support arrangement.
- Angled seat assures positive location in horizontal lines.
- Retained hinge design assuring reliable operation.
- Available to suit both ASME 150 lb. & DIN PN 10/16 systems.

Material Specifications

Item	Qty	Description	Materials
1	1	Body	A216 Gr WCB, 316 SS / PFA
2	1	Disc	A216 Gr WCB, 316 SS / PFA
3	1	Retaining Plate	Carbon Steel, 316 SS / PFA
4	1	Circlip	Stainless Steel
		Paint Finish	75µ High Gloss Polyurethane

Dimensions

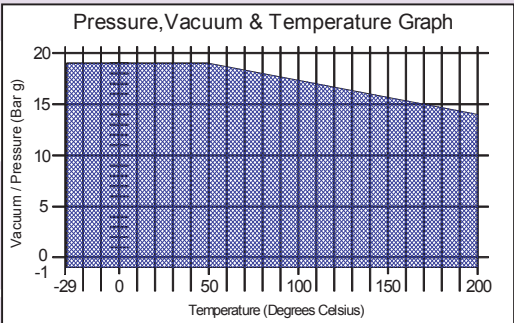
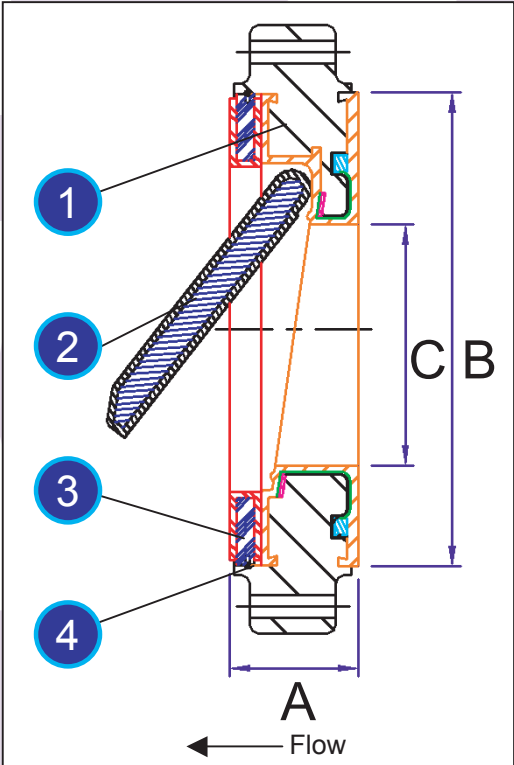
Size	DIM A	DIM B		DIM C	WT (LBS)
		ASME 150lb	DIN PN 10/16		
1 1/2"	1.30	3.23	3.63	0.87	4
2"	1.70	4.02	4.21	1.18	6
3"	1.81	5.24	5.60	2.17	11
4"	2.06	6.78	6.38	2.83	15
6"	2.20	8.63	8.58	4.34	24
8"	2.37	10.87	10.75	5.91	42
10"	2.69	13.27	12.91	7.88	62
12"	3.08	16.03	14.88	9.85	86
14"	3.08	17.60	17.25	10.83	143
16"	4.02	20.12	19.25	12.00	198
18"	4.40	21.50	21.22	13.98	231

* Face to Face dimensions in accordance with DIN3202/T3/K1 & API 609 standards.

** Sizes greater than 18" available on seperate data sheets.

Options

Component	Description
Body & Disc	Stainless Steel, Titanium
	Antistatic Liner
Seat	Soft seats, Kalrez & Viton for gas applications
Flanges	To suit BS10 flange dimensions



FPCV - Flanged Piston Check Valve

The FPCV fully PFA lined check valve features a flanged spring assisted piston suitable for reliable operation in a wide range of process applications. The flanged end connections satisfy the requirements of ASME B16.10 and DIN specifications.

Product Features

- Piston lift pressure (unseating pressure) 14 mBar.
- Crush resistant design prevents installation abuse.
- Spring assisted piston designed to perform in both horizontal and vertical installations.

Material Specification

Item	Qty	Description	Materials
1	2	Flanged Ends	Carbon Steel / PFA
2	8/8	Nuts/Washers	Stainless Steel
3	1	Valve Body	Carbon Steel / PFA
4	1	Spring	PFA Encap. C276
5	4	Studs	Stainless Steel
6	1	Poppet	PTFE
7	1	Seat Plate	Stainless Steel / PFA
8	1	Circlip	Stainless Steel
		Paint Finish	75µ High Gloss Polyurethane

Dimensions

ASME 150 LB.

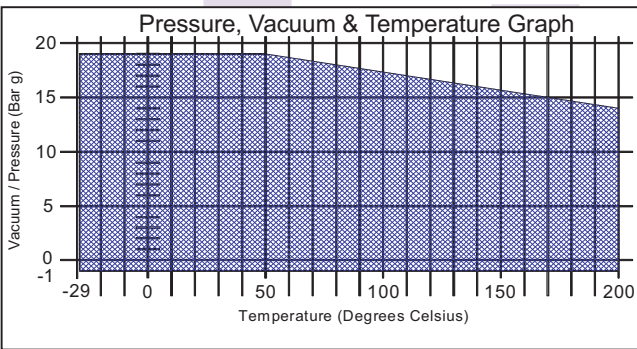
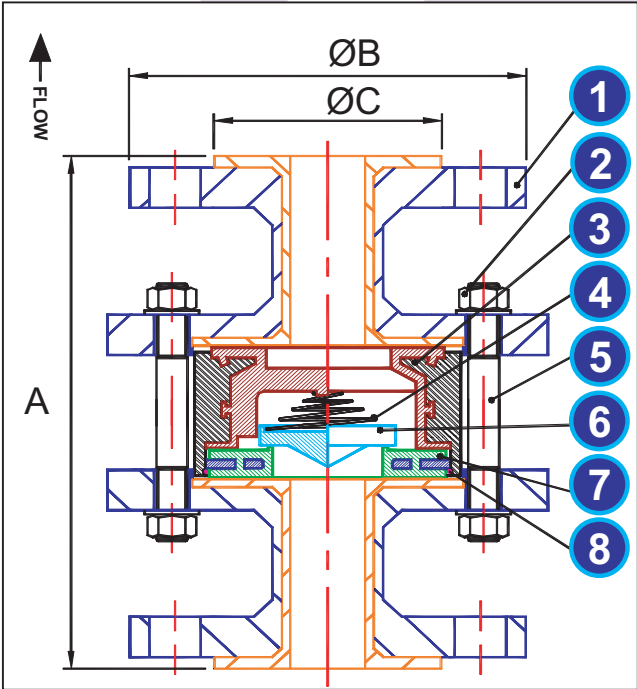
SIZE	DIM A	DIM B	DIM C	WT (LBS)
1"	6.00	4.25	2.01	7
1 1/2"	7.00	5.00	2.87	15
2"	8.00	5.98	3.62	22
3"	9.50	7.48	5.00	40
4"	11.50	9.02	5.98	62
6"	14.00	11.00	8.50	95

DIN PN 10/16

SIZE	DIM A	DIM B	DIM C	WT (KG)
1"	152	115	51	4
1 1/2"	178	150	73	7
2"	203	165	92	10
3"	241	200	127	20
4"	292	220	152	30
6"	356	280	216	44

Options

Component	Description
Flanged Ends / Valve Body	Stainless Steel, Dual Laminate
	To suit BS10 piping systems
	Special Face to Face dimensions
Spring	Alternative pressure ratings
	PTFE encapsulated



WPCV - Wafer Piston Check Valve

The WPCV fully PFA lined check valve features a wafer style spring assisted piston suitable for reliable operation in a wide range of process applications. The PFA, PTFE & Hastelloy all wetted parts ensures long-term, high cycle performance. The light weight design is ideal for use with non-metallic piping systems.

Product Features

- Standard wafer valve dimensions providing interchangeability.
- Position located piston and spring prevents misalignment.
- PFA lining keyed into the body assures full vacuum operation.
- Piston lift pressure (unseating pressure) 14 mBar.
- Crush resistant design prevents installation abuse.
- Spring assisted piston design assures performance in both horizontal and vertical installations.

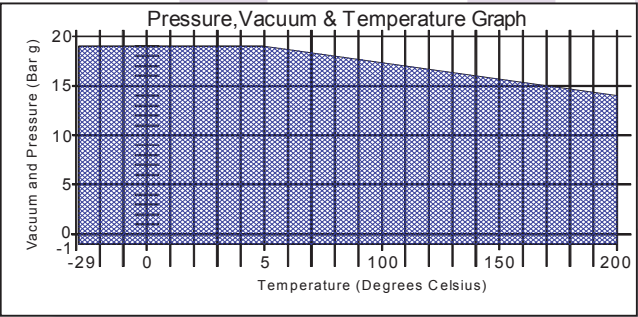
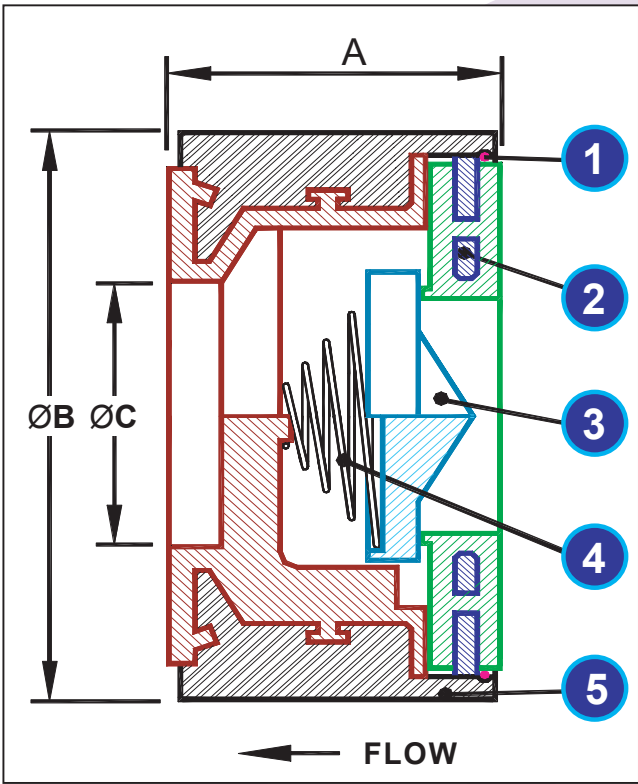
Material Specifications

Item	Qty	Description	Materials
1	1	Circlip	Stainless Steel
2	1	Seat Plate	Stainless Steel / PFA
3	1	Poppet	PTFE
4	1	Spring	PFA Encap. C276
5	1	Valve Body	Carbon Steel / PFA
6		Paint Finish	75µ High Gloss Polyurethane

Dimensions		DIM B	DIM B		
		ASME	DIN PN		
Size	DIM A	150 lb.	10/16	DIM C	WT (LBS)
1/2"	1.18	1.77	2.01	0.63	0.44
1"	1.38	2.48	2.87	0.98	1.1
1 1/2"	1.77	3.23	3.62	1.42	2.45
2"	2.20	3.98	4.21	1.97	3.75
3"	2.80	5.24	5.60	2.60	7.7
4"	3.15	6.73	6.38	3.46	11.68
6"	4.92	10.50	10.50	5.25	17.00

Options

Component	Description
Valve Body	Stainless steel
	To suit BS10 piping systems
Spring	Alternative pressure ratings
	PTFE encapsulated
	Alternative spring materials
	Spring removed (floating poppet)



BESG - Sight Flow Indicator

A high integrity, fully PFA lined sight flow indicator having a full bore viewing area through two borosilicate glass windows positioned 180 degrees apart.

Product Features

- PFA fluoropolymer lining and Borosilicate Glass for the most demanding chemical & thermal applications.
- Full port design for maximum flow with minimal pressure drop.
- Dual windows ensure clear viewing from both sides.
- Heavy wall PFA liners provide the highest levels of corrosion resistance and performance.
- Operating pressure from full vacuum to 19 Bars at 200 degrees C.
- Available to suit both ASME 150 lb. & DIN PN 10/16 systems.

Material Specifications

Item	Qty	Description	Materials
1	1	Body	ASTM A216 WCB, 316 SS /PFA
2	2	Glass Window	Borosilicate Glass DIN 7080 & DIN 7079
3	2	Gasket	Non Asbestos
4	4/8	Fasteners	Stainless Steel
5	2	Window Flange	ASTM A216 WCB, 316 SS /PFA
		Paint Finish	75µ High Gloss Polyurethane

Dimensions

ASME 150 LB.

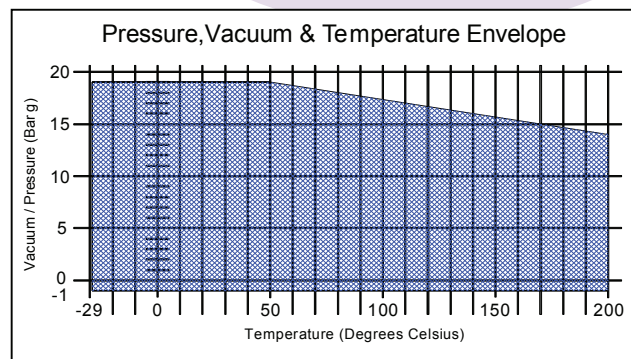
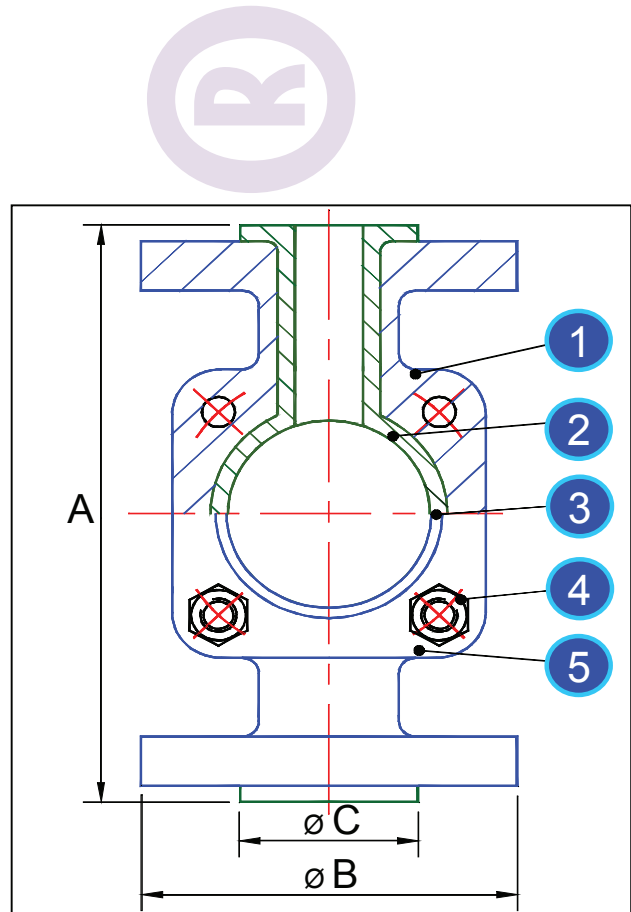
Size	DIM A	DIM B	DIM C	WT (LBS)
1"	6.00	4.25	2.01	9.5
1 1/2"	7.00	5.00	2.87	15
2"	8.00	5.98	3.62	22
3"	9.50	7.48	5.00	39
4"	11.50	9.00	6.18	62
6"	14.00	10.98	8.50	134
8"	18.00	13.50	10.63	165

DIN PN 10/16

Size	DIM A	DIM B	DIM C	WT (Kg)
1"	152	115	68	5
1 1/2"	178	150	88	9
2"	203	165	102	13
3"	241	190	138	20
4"	292	229	162	29
6"	356	279	218	61
8"	457	343	270	75

Options

Component	Description
Liner	Antistatic
Flanges	To suit BS10 flange dimensions
Option	Viewing Lamp
Windows	Double window for added safety
	PFA / FEP lining for glass windows



TPSG – Combination Tee Piece Sight Flow Indicator

A combined fully PFA lined sight flow indicator and tee is a cost effective, dual purpose fitting. The unit allows for monitoring of process flow and mixture while offering considerable space saving benefits.

Product Features

- PFA fluoropolymer lining and Borosilicate Glass per DIN 7080 specifications for the most demanding chemical & thermal applications.
- Full port design for maximum flow with minimal pressure drop.
- Dual windows ensure clear viewing from both sides.
- Heavy wall PFA liners provide the highest levels of corrosion resistance and performance. Operating pressure from full vacuum to 19 Bars at 200 degrees C
- Available to suit both ASME 150 lb. & DIN PN 10/16 systems.

Material Specifications

Item	Qty	Description	Materials
1	1	Body	ASTM A395 DI, 316 SS / PFA
2	2	Glass Window	Borosilicate Glass
3	2	Gasket	Non Asbestos
4	4/8	Fasteners	Stainless Steel
5	2	Window Flange	ASTM A395 DI, 316 SS / PFA
		Paint Finish	75µ High Gloss Polyurethane

Dimensions

ASME 150 LB.

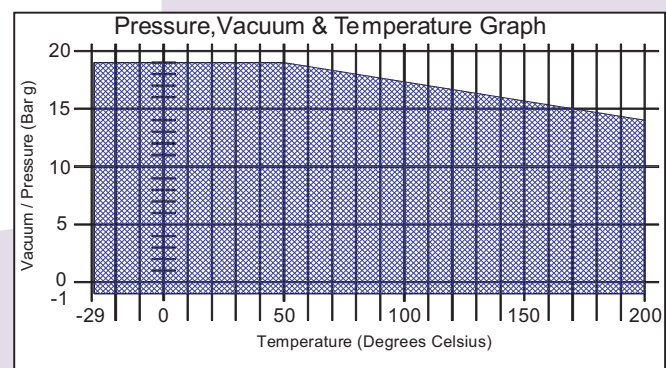
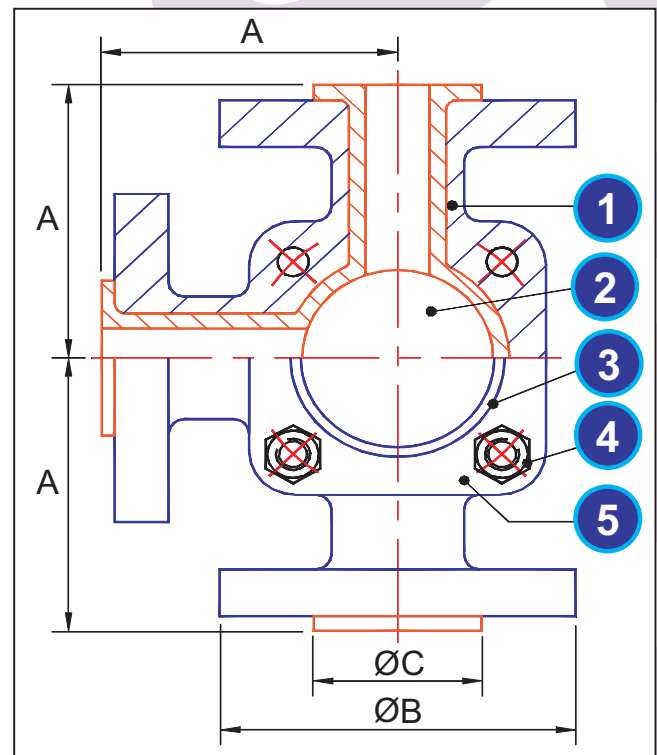
Size	DIM A	DIM B	DIM C	WT (LBS)
1"	3.50	4.25	2.01	16
1 1/2"	4.02	5.00	2.87	25
2"	4.50	5.98	3.62	42
3"	5.51	7.48	5.00	61
4"	6.50	9.02	6.18	107
6"	8.00	10.98	8.50	211

DIN PN 10/16

Size	DIM A	DIM B	DIM C	WT (Kg)
1"	110	115	68	9
1 1/2"	150	150	88	13
2"	120	165	102	21
3"	165	200	138	30
4"	205	220	162	51
6"	285	285	218	92

Options

Component	Description
Liner	Antistatic
Flanges	To suit BS10 flange dimensions
Option	Viewing Lamp
Windows	Double window for added safety
	PFA / FEP lining for glass windows



BFSG - Sight Glass c/w Integral Ball Float

A combined heavy duty Borosilicate Sight Glass with an integral hollow PTFE ball check valve. For use in sampling systems and to prevent vent-line contamination in process vacuum pumps.

Product Features

- Full 360 degree viewing allowing clear indication of the floating ball position.
- Designed for extremely corrosive applications with the construction being PTFE, PFA and Borosilicate Glass.

Material Specifications

Item	Qty	Description	Materials
1	16/16	Nuts / Washers	Stainless Steel
2	2	Sight Glass Flange	Carbon Steel / PFA
3	1	Ball Seat	Glass Filled PTFE
4	4	Tie Rod	Stainless Steel
5	1	Sight Glass Tube	Borosilicate Glass
6	1	Hollow Ball	PTFE / PFA
7	1	Castellated Ball Trap	Glass Filled PTFE
		Paint Finish	75µ High Gloss Polyurethane

Dimensions

ASME 150 LB.

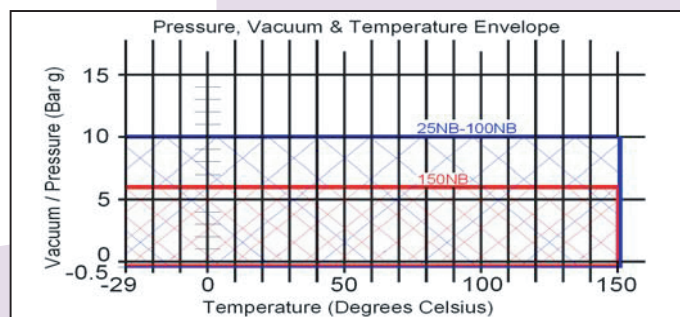
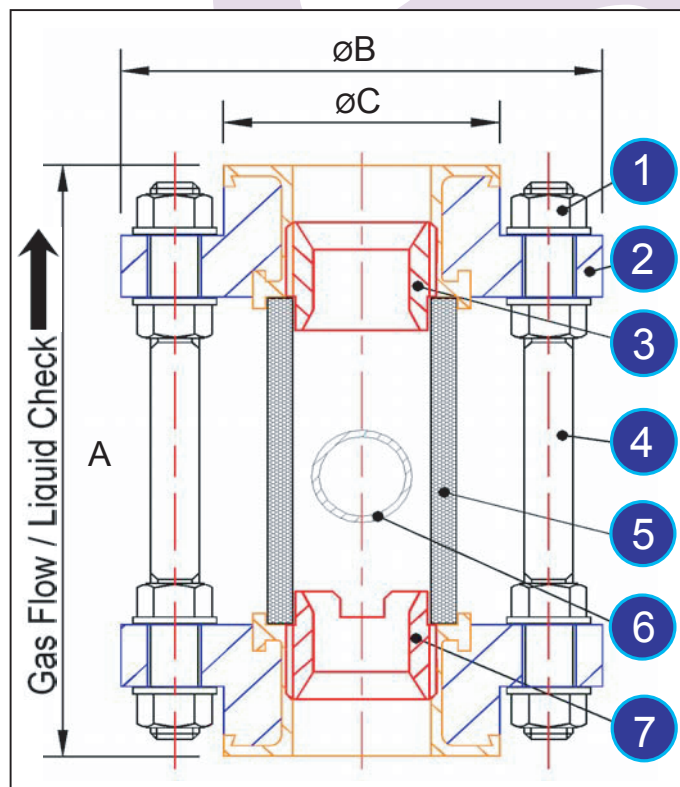
Size	DIM A	DIM B	DIM C	WT (LBS)
1"	6.00	4.25	2.01	8
1 1/2"	7.00	5.00	2.87	11
2"	8.00	5.98	3.62	16
3"	9.50	7.48	5.00	25
4"	11.50	9.02	5.98	38
6"	14.00	10.98	8.46	57

DIN PN 10/16

Size	DIM A	DIM B	DIM C	WT (Kg)
1"	160	115	68	4
1 1/2"	200	150	88	5
2"	230	165	102	8
3"	310	190	138	12
4"	350	229	162	19
6"	480	279	218	32

Options

Component	Description
Flanges	Stainless Steel
Sight Glass	Perspex Safety Shield
Seat	Soft seat Viton O-Rings
Face to Face	Custom Lengths available
Sight Glass	Graduation Scale



CTSG - Tubular Sight Glass

The unique construction of the CTSG Sight Glass provides full 360° process viewing. Manufactured from heavy wall Borosilicate Glass and PFA molded flanges for use in the most demanding corrosive and toxic applications.

Product Features

- Stainless steel tie rods offering maximum strength against side loads.
- Available to suit both ASME 150 lb. & DIN PN 10/16 systems.
- Full vacuum rated.

Material Specifications

Item	Qty	Description	Materials
1	16	Nuts / Washers	Stainless Steel
2	2	Flange	Carbon Steel / PFA
3	4	Tie Rod	Stainless Steel
4	1	Glass Tube	Borosilicate Glass
		Paint Finish	75μ High Gloss Polyurethane

Dimensions

ASME 150 LB.

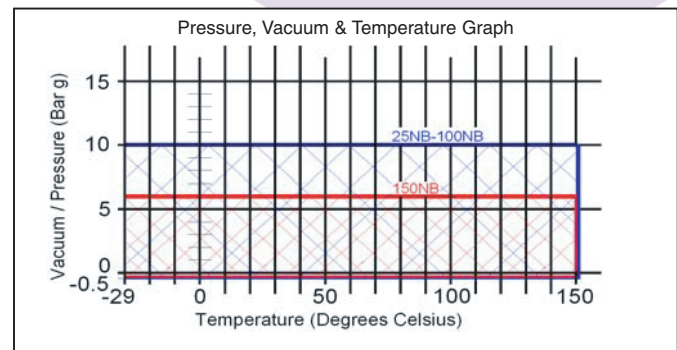
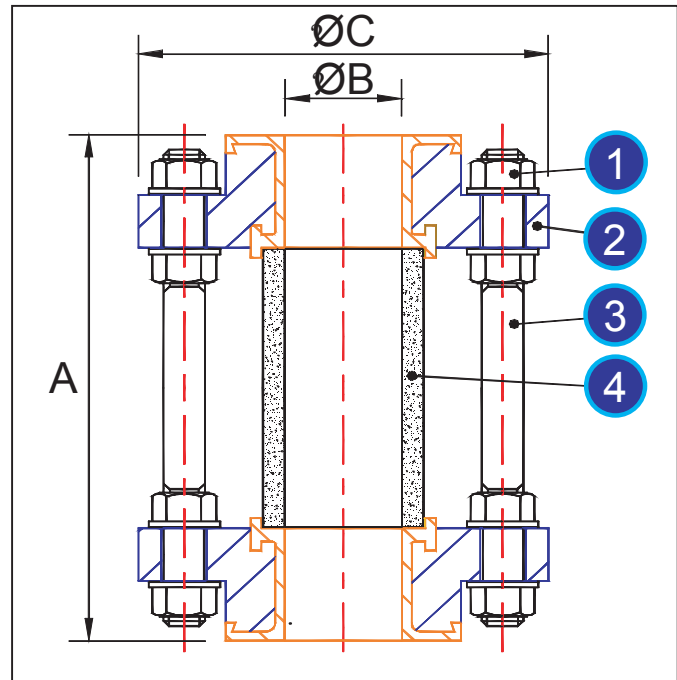
Size	DIM A	DIM B	DIM C	WT (LBS)
1"	6.00	0.79	4.25	8
1 1/2"	7.00	1.42	5.00	11
2"	8.00	1.65	5.98	15
3"	9.50	2.83	7.48	25
4"	11.50	4.06	9.02	38
6"	14.00	5.98	10.98	57

DIN PN 10/16

Size	DIM A	DIM B	DIM C	WT (Kg)
1"	160	20	115	4
1 1/2"	200	36	150	6
2"	230	42	165	8
3"	310	72	200	12
4"	350	103	220	19
6"	480	152	285	29

Options

Component	Description
Flanges	Stainless Steel
Shield	Perspex Safety Shield
Glass	Internally lined with FEP for use in caustic processes



SPCV - Sight Glass / Piston Check Valve

The SPCV unique design incorporates a spring assisted piston check valve and a tubular sight glass in a one piece, cost effective unit.

Product Features

- All wetted parts are PFA / PTFE and Borosilicate glass providing excellent corrosion resistance.
- Full 360 degree viewing of process.
- Lift pressure (unseating pressure) 14 mBar.
- Clear vision of valve poppet function.

Material Specifications

Item	Qty	Description	Materials
1	12/12	Nuts / Washers	Stainless Steel
2	1	Sight Glass Flange	Carbon Steel / PFA
3	4	Tie Rod	Stainless Steel
4	1	Sight Glass Tube	Borosilicate Glass
5	1	Valve Body	Carbon Steel / PFA
6	1	Spring	Hastelloy C276 / PFA
7	1	Piston	PTFE
8	1	Seat Plate	Stainless Steel / PFA
9	1	Circlip	Stainless Steel
		Paint Finish	75µ High Gloss Polyurethane

Dimensions

ASME 150 LB.

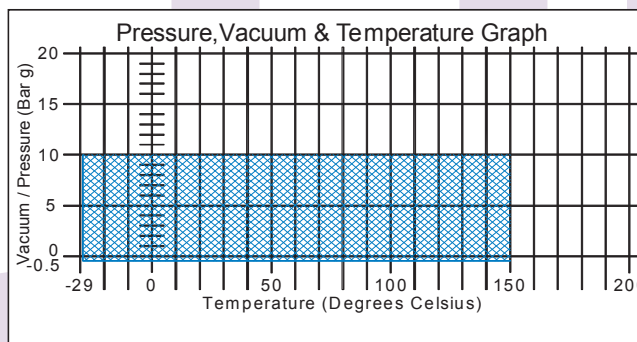
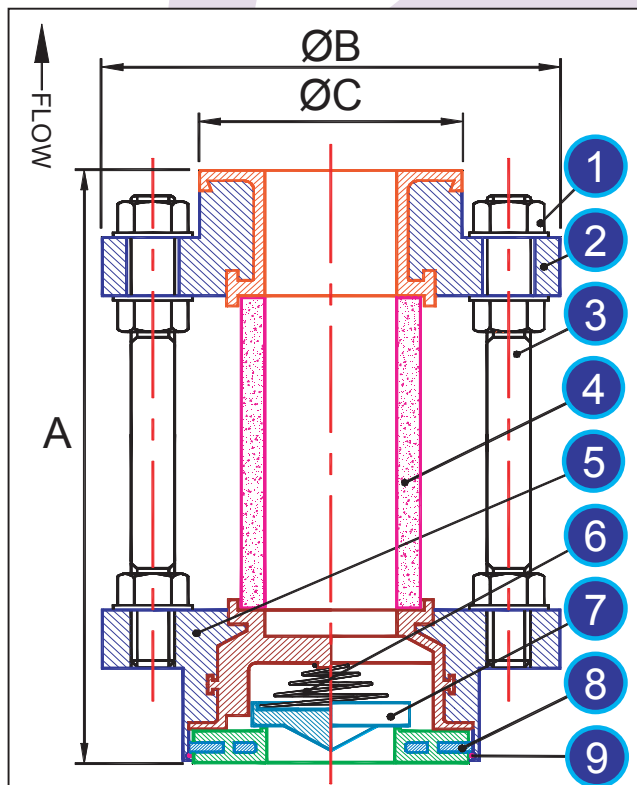
Size	DIM A	DIM B	DIM C	WT (LBS)
1"	6.00	4.25	2.00	9
1 1/2"	7.00	5.00	2.87	13
2"	8.00	6.00	3.62	29
3"	9.50	7.48	5.00	33
4"	11.50	9.00	6.18	51

DIN PN 10/16

Size	DIM A	DIM B	DIM C	WT (Kg)
1"	160	115	51	4
1 1/2"	200	150	73	6
2"	230	165	92	9
3"	310	200	127	15
4"	350	220	152	23

Options

Component	Description
Flange ends	Stainless Steel
Sight Glass	Perspex Safety Shield
Length	Special Face to Face dimensions



LINED ACCESSORIES

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