



Bradford™ Check Valves

Check Valve Selection

Product Specifications



Size range:

- ½" - 4" OD tube

Materials:

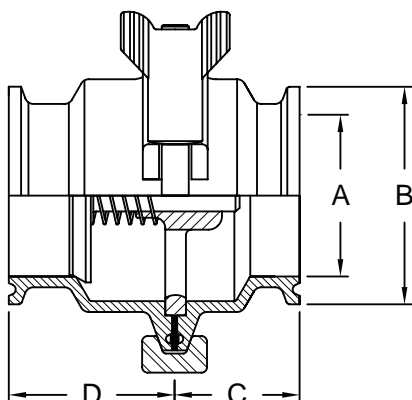
- G = 304 stainless steel
- R = 316L stainless steel

Finish:

- 3A sanitary finish ID and OD

Spring Check Valves

Product Specifications



Features:

- 3A authorized 58-00
- full size flow plate
- long stem bushing for increased cycle life
- suitable for low and medium viscosity fluids
- field serviceable (no special tools required)
- various end connections available
- sizes from ½" thru 4"
- operating temperature range: 15°F to 200°F
- maximum operating pressure: 145 PSI

Size	A	B	C	D	316L Stainless Steel Part Number	316L Stainless Steel - all FKM Part Number
½"	0.37	0.99	1.10	1.60	B45MP-R50	B45MP-R50V
¾"	0.62	0.99	1.10	1.60	B45MP-R75	B45MP-R75V
1"	0.87	1.99	1.37	1.92	B46MP-R100	B46MP-R100V
1½"	1.37	1.99	1.44	1.92	B46MP-R150	B46MP-R150V
2"	1.87	2.52	1.44	1.92	B46MP-R200	B46MP-R200V
2½"	2.37	3.05	1.44	1.92	B46MP-R250	B46MP-R250V
3"	2.87	3.58	1.44	1.92	B46MP-R300	B46MP-R300V
4"	3.84	4.69	1.88	2.15	B46MP-R400	B46MP-R400V

All dimensions are in inches unless otherwise noted. Engineering dimensions are available upon request.
Specifications are subject to change without notice.

repair kits

Size	Part Number
½"	B45MP-RK050
¾"	B45MP-RK075
1"	B46MP-RK100
1½"	B46MP-RK150
2"	B46MP-RK200
2½"	B46MP-RK250
3"	B46MP-RK300
4"	B46MP-RK400

Repair Kit contains:

½" - ¾"

- (1) 316L stainless spring
- (1) FKM stem seat
- (1) Buna body O-ring

1" - 4"

- (1) 316L stainless spring
- (1) FKM stem seat
- (1) Buna clamp gasket

Size	FKM Part Number
½"	B45MP-RKV050
¾"	B45MP-RKV075
1"	B46MP-RKV100
1½"	B46MP-RKV150
2"	B46MP-RKV200
2½"	B46MP-RKV250
3"	B46MP-RKV300
4"	B46MP-RKV400

FKM Repair Kit contains:

½" - ¾"

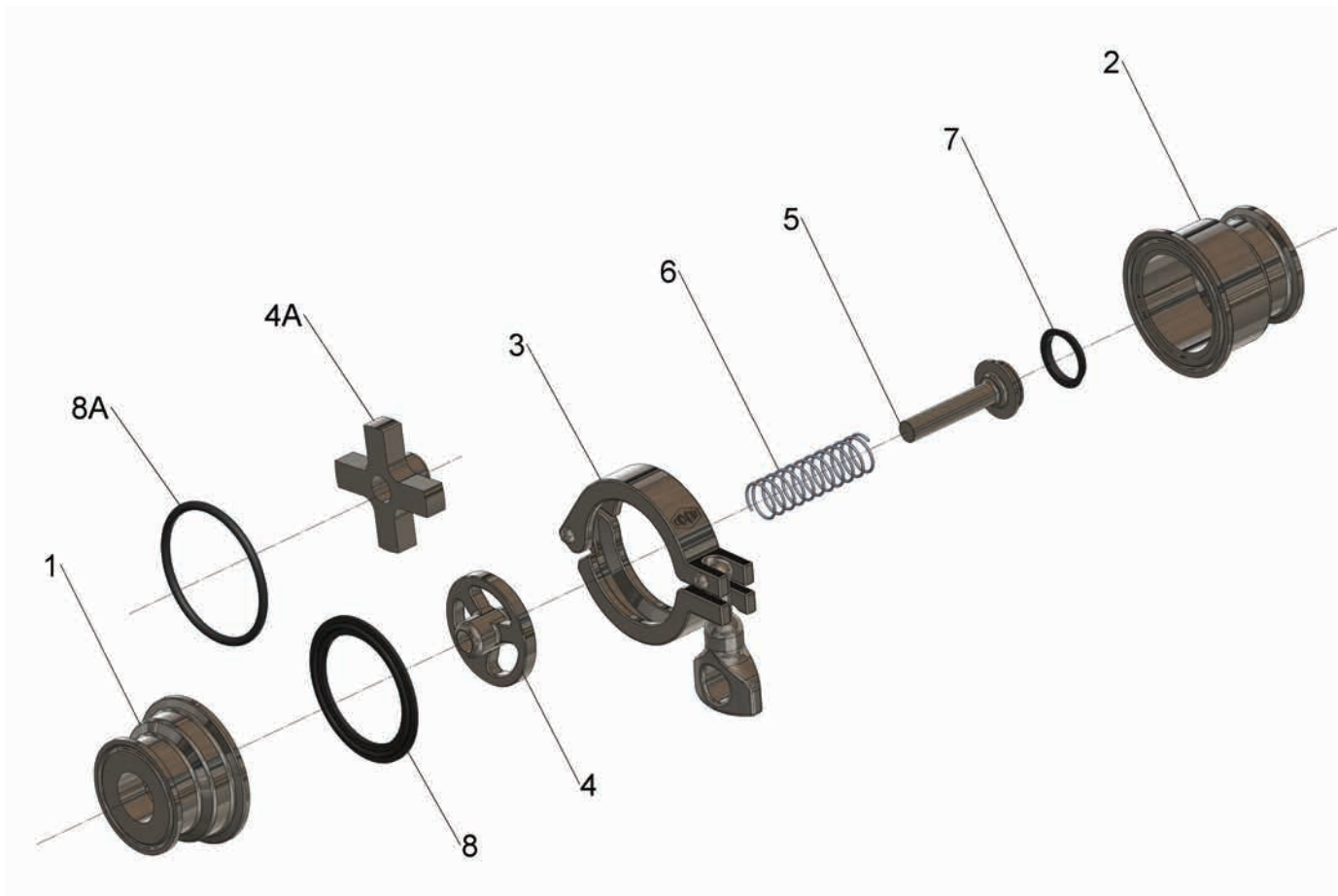
- (1) 316L stainless spring
- (1) FKM stem seat
- (1) FKM body O-ring

1" - 4"

- (1) 316L stainless spring
- (1) FKM stem seat
- (1) FKM clamp gasket

Spring Check Valves

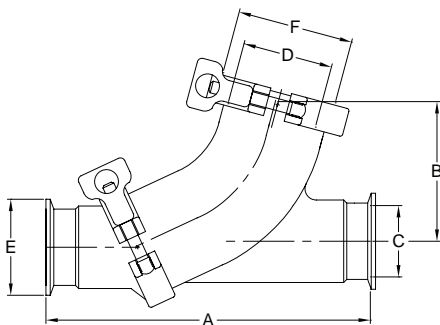
Bill of Materials



Item #	Description	Material	Quantity Required	
			1/2" - 3/4"	1" - 4"
1	upper body housing	316L stainless	1	1
2	lower body housing	316L stainless	1	1
3	single pin clamp	CF8 stainless	1	1
4	flow plate	CF8M stainless	n/a	1
4A	flow plate	CF8M stainless	1	n/a
5	plunger	316L stainless	1	1
6	spring	316L stainless	1	1
7	stem seat	FKM	1	1
8	clamp gasket	Buna	n/a	1
8A	body O-ring	NBR (Buna)	1	n/a

Y - Ball Check Valves

Product Specifications



When liquid flows through the valve, the ball is forced into the branch of the valve allowing full fluid flow. When the liquid stops, equalizing the pressure, the ball drops back into the seat, preventing backflow. Should reverse flow occur, the differential pressure will cause the ball to seal firmly against the seat preventing leakage.

Features:

- 3A authorized 58-00
- two-piece construction
- replace seat instead of entire valve
- PTFE ball
- field serviceable (no special tools required)
- all metal product surfaces are 316L stainless steel construction
- operating temperature range: **15°F to 200°F**
- maximum operating pressure: **150 PSI**

Valve Size	Clamp & Cap Size	A	B	C	D	E	F	Ball Diameter	Weight (lbs)	316L Stainless Steel Part Number
1½"	2"	7.50	3.30	1.36	1.87	1.98	2.51	1.6	4.9	B45BY-R150
2"	2½"	8.50	3.90	1.86	2.33	2.51	3.04	2.1	6.6	B45BY-R200
2½"	3"	10.00	4.50	2.37	2.87	3.04	3.57	2.7	10.5	B45BY-R250
3"	4"	11.50	5.30	2.87	3.83	3.57	4.68	3.6	17.5	B45BY-R300

All dimensions are in inches unless otherwise noted. Engineering dimensions are available upon request. Specifications are subject to change without notice.

Repair and Seal Kits

Repair Kit contains:

- (1) EPDM cap gasket
- (1) PTFE ball
- (1) EPDM/CF8M seat

Seal kit contains:

- (1) EPDM cap gasket
- (1) EPDM/CF8M seat

FKM Seal kit contains:

- (1) FKM cap gasket
- (1) FKM /CF8M seat

Size	Repair Kit Part Number	Seal Kit Part Number	FKM Seal Kit Part Number	Replacement Ball Only Part Number
1½"	B45BY-RK150	B45BY-SK150	B45BY-SKV150	B45BY-TB150
2"	B45BY-RK200	B45BY-SK200	B45BY-SKV200	B45BY-TB200
2½"	B45BY-RK250	B45BY-SK250	B45BY-SKV250	B45BY-TB250
3"	B45BY-RK300	B45BY-SK300	B45BY-SKV300	B45BY-TB300

Y-Ball Check Valves

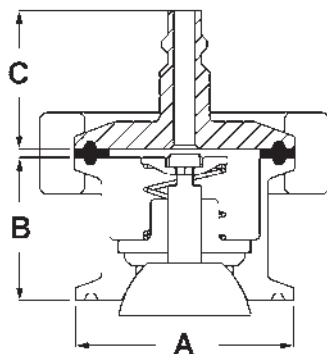
Bill of Materials



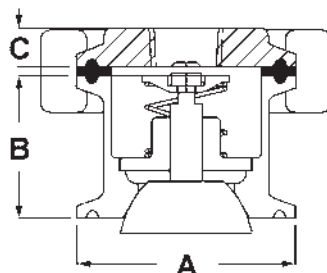
Item #	Description	Material	Quantity
1	angle body	316L stainless	1
2	inlet body	316L stainless	1
3	single pin clamp	CF8 stainless	2
4	clamp end cap	316L stainless	1
5	cap gasket	EPDM	1
6	ball	PTFE	1
7	seat	EPDM/CF-8M stainless	1

Air Blow Check Valves

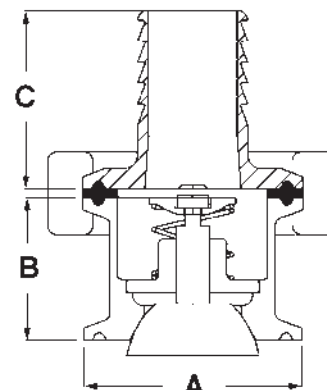
Product Specifications



B45AB



B45BC



B45CC

Features:

- 3A authorized 58-00
- 316L stainless steel with EPDM stem seat and gasket
- maximum operating temperature: **212°F**
- maximum operating pressure: **145 PSI**

Size	A	B	Quick-Connect Plug Part Number	Dim. C	Female NPT Part Number	Dim. C	Hose Barb Part Number	Dim. C
1" - 1½"	1.984	1.30	B45AB-R100150	1.26	B45BC-R100150	0.6	B45CC-R100150	1.7
2"	2.516	1.30	B45AB-R200	1.26	B45BC-R200	0.6	B45CC-R200	1.7
2½"	3.047	1.30	B45AB-R250	1.26	B45BC-R250	0.6	B45CC-R250	1.7
3"	3.579	1.30	B45AB-R300	1.26	B45BC-R300	0.6	B45CC-R300	1.7
4"	4.682	1.30	B45AB-R400	1.26	B45BC-R400	0.6	B45CC-R400	1.7

All dimensions are in inches unless otherwise noted. Engineering dimensions are available upon request.
Specifications are subject to change without notice.

Repair Kit

repair kit, **B45AB-RK**, contains:

- (1) EPDM / 316L stainless perforated disc
- (1) 304 stainless spring retainer
- (1) 304 stainless spring
- (1) nylon stem guide
- (1) 316L / EPDM stem and plug

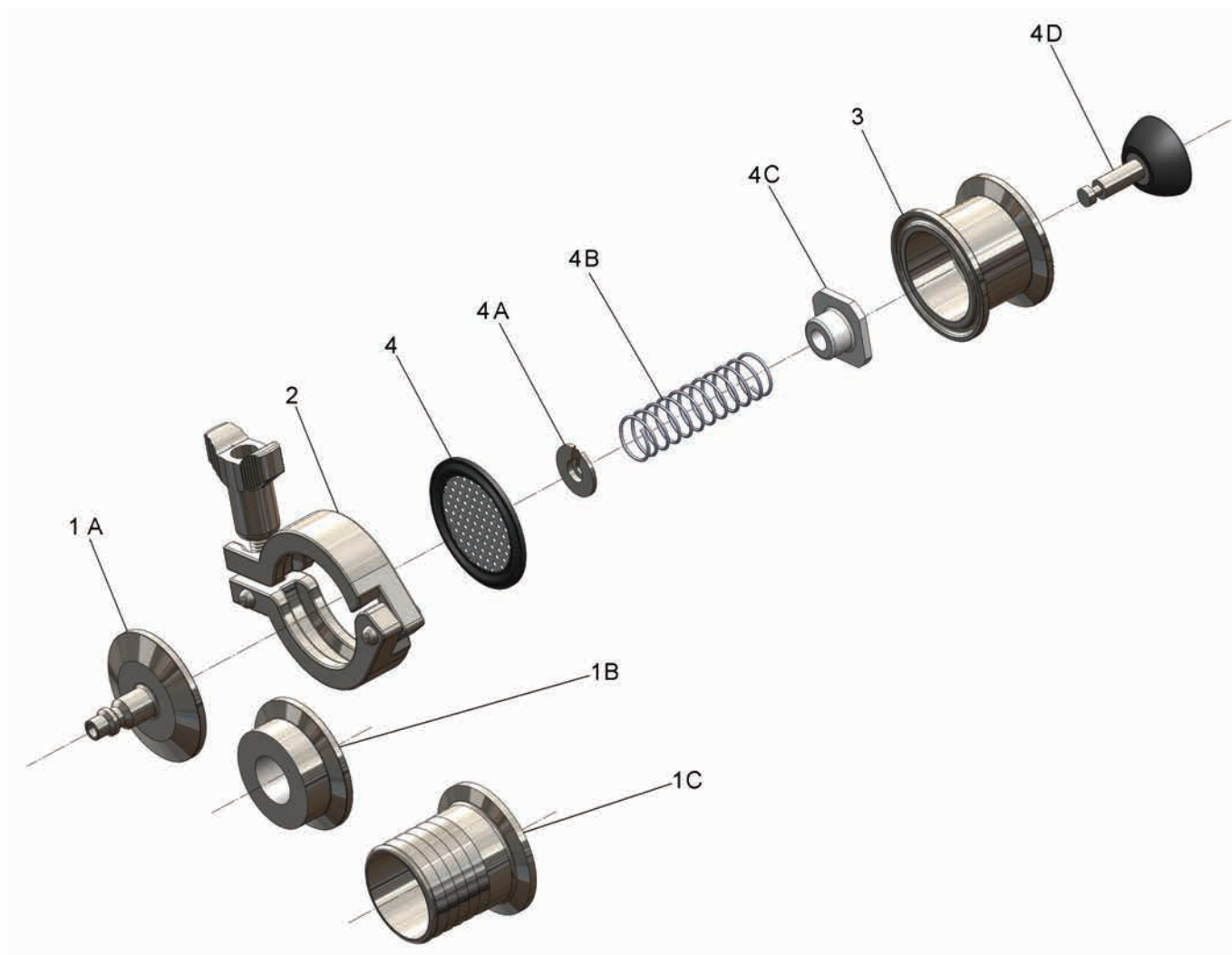
Sizing Chart

When using air blow check valves with ball check valves, refer to the sizing chart below.

Ball Check Valve size	Air Blow Check Valve size
1½"	2"
2"	2½"
2½"	3"
3"	4"

Air Blow Check Valves

Bill of Materials

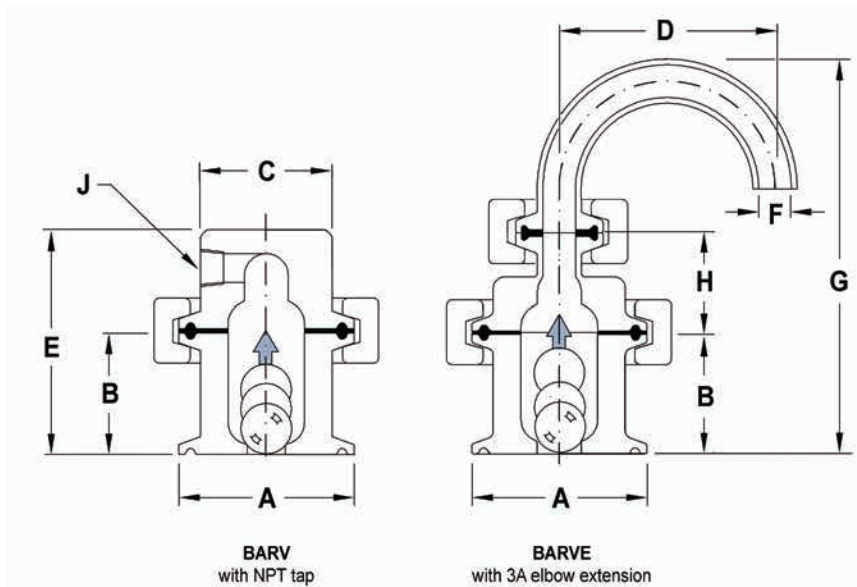


Item	Description	Material	Quantity
1A	¼" air line quick connect	316L	1
1B	½" NPT cap	316L	1
1C	1" hose barb	316L	1
2	single pin clamp	CF8	1
3	valve body	316L	1
4	perforated disc	EPDM/316L	1
4A	spring retainer	304	1
4B	spring	304	1
4C	stem guide	nylon	1
4D	stem and plug	316L/EPDM	1
Filter Discs (optional) <i>Must be used when installed in 3A applications</i>			
B45ABFD150	filter disc pack	1 micron filter	50

- filter discs (optional) must be used when installed for Accepted Practice 3A 604-05, Supplying Air under Pressure in Contact With Milk, Milk products and Product Contact.



Air Relief Valves

Product Specifications



Features:

- 3A authorized 58-00
- no special tools required
- ball and gaskets are replaceable
- The valve seals for both pressure and vacuum.
- All product contact surfaces have a radius of 1/4" or better.
- The valve ball is constructed of FDA, 3A approved polypropylene.
- PTFE valve ball is available
- other gasket materials available
- maximum operating temperature: 212°F
- maximum PSI: 145

Description	A	B	C	D	E	F	G	H	J	304 Stainless Steel Part Number
1½" air relief valve with tapped blind end	1.98	1.40	1.50	---	2.40	---	---	---	1/8" NPT	BARV-G150
2" air relief valve with tapped blind end	2.51	1.40	1.50	---	2.40	---	---	---	1/8" NPT	BARV-G200
1½" air relief valve with 180° elbow	1.98	1.40	---	1.50	---	0.37	4.50	1.10	---	BARVE-G150 
2" air relief valve with 180° elbow	2.51	1.40	---	1.50	---	0.37	4.50	1.10	---	BARVE-G200 

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Working Principle

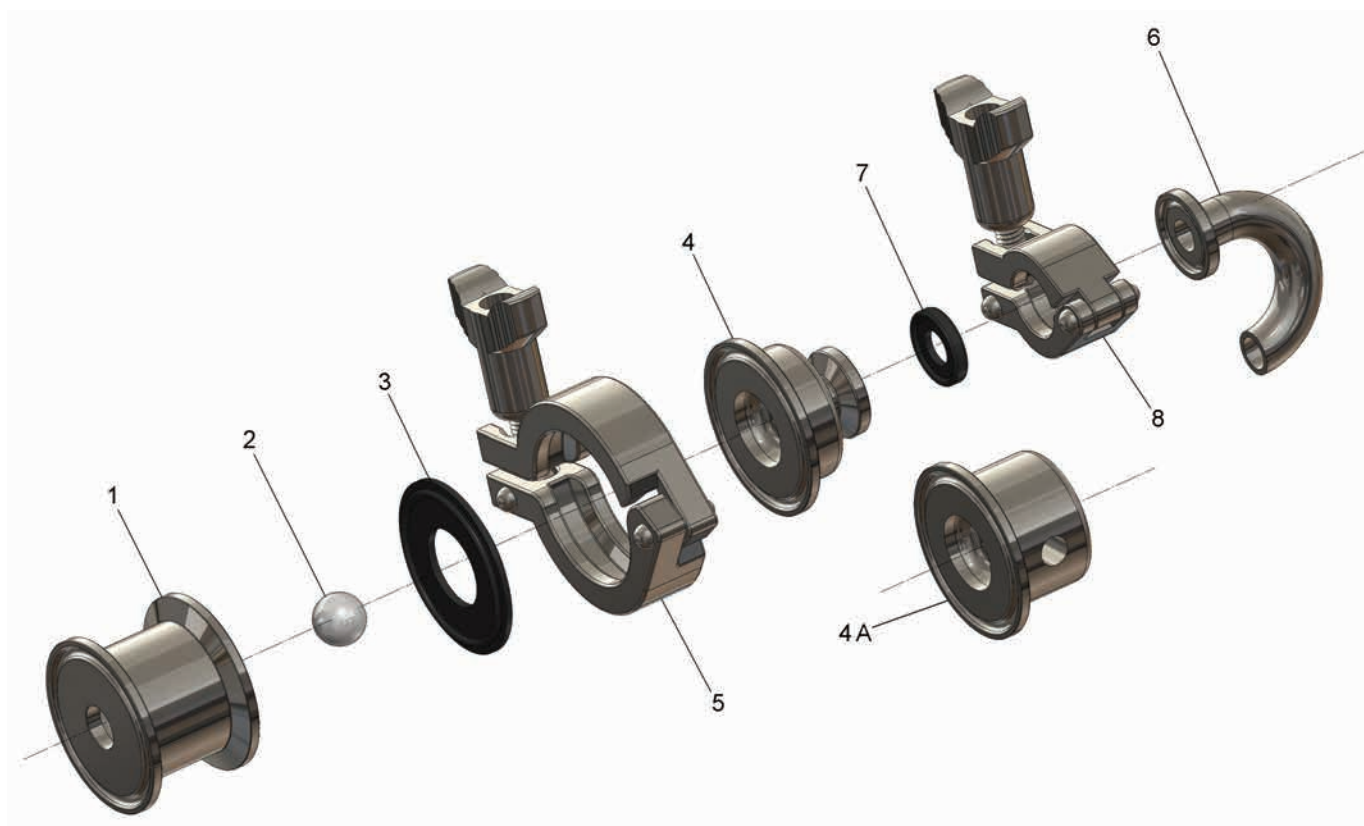
The Bradford™ air relief valve allows air to be removed from a line or container without the liquid flowing out. Its design does not allow air to enter the line or container, even if subjected to a negative pressure. It is a double-seated valve with a freely moving polypropylene ball. The ball, which is lighter than water, closes against the upper or lower seat, depending on the pressure conditions.

Applications

1. Bleeding of a tube line where an air pocket has formed. This application calls for installation at the top of the tube.
2. Bleeding of a tube on the suction side of a pump. The suction side is bled automatically, before the pump starts, establishing a vacuum. Binding of air to liquid will be prevented, and so will subsequent cavitation. In this application the valve is mounted in front of the pump, on the top of the inlet tube.

Air Relief Valves

Bill of Materials



Item #	Description	Material	Quantity Required	
			elbow	tapped
1	body	304 stainless	1	1
2	ball	polypropylene	1	1
3	gasket	EPDM	1	1
4	3A cover	304 stainless	1	n/a
4A	tapped cover	304 stainless	n/a	1
5	1½" clamp	CF8 stainless	1	1
6	180° tube ferrule	304 stainless	1	n/a
7	½" gasket	EPDM	1	n/a
8	½" clamp	CF8 stainless	1	n/a

Replacement Parts

Part Number	Description	Material	Quantity Required
BARVE3P-G150	ball	polypropylene	1
BARVE3T-G150	ball	PTFE	1