
SLURRYTUFF™ EZI-VAC

AIR RELEASE/VACUUM BREAK VALVES

MODELS EV | ET | EB



 **Bray**®

BRAY.COM

THE HIGH PERFORMANCE COMPANY

INTRODUCTION

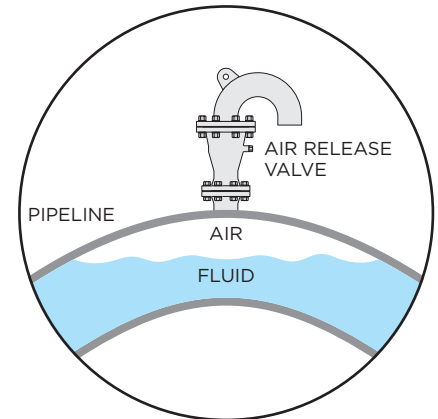
A RELIABLE INVESTMENT

Bray's SlurryTuff™ brand includes the EZI-VAC line of **air release and vacuum break valves**. Available in single-acting, double-acting, and triple-acting models, the valves are designed to discharge large amounts of air from pipelines while being filled.

OPERATING FEATURES

Engineered for extreme conditions, EZI-VAC operating features include:

- > Full bore design — provides high discharge and intake capabilities.
- > Large port — prevents clogging.
- > High-wear seat and float design — offers large sealing area, to provide drip-tight sealing under all conditions.
- > Self-operating — no actuator required.
- > Simple construction — allows for ease of maintenance.
- > Fabricated design — allows for inline repairs.



OPERATING CONDITIONS

- > Specifically designed for extreme conditions, such as slurry, dirty water, and applications that produce heavy scale (such as salts).
- > CWP of 20, 50 and 100 bar (290, 725, and 1450 psi).
- > Standard operating temperature up to 80°C (176°F).

APPLICATIONS

- > Slurry pipelines
- > High pressure pipelines
- > Pipelines with scale
- > Waterlines
- > Mine dewatering
- > Sewage
- > Deep well pumping



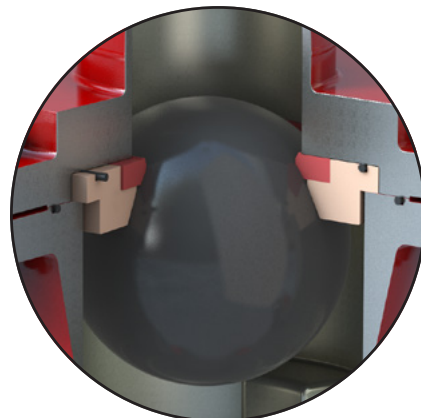
MODEL EV | Single Entry • Double Action

Air Release/Vacuum Break

This valve uses a single moving part — a **spherical float**. As media fills the valve, the float is guided toward an annular seal ring, creating a positive seal that increases as pressures rise.

The spherical float is available in two material options:

- > Urethane-coated, lightweight aluminum core — for pressures reaching 3,000 kPa.
- > Solid, high-density polyethylene (HDPE) — for pressures reaching 10,000 kPa.



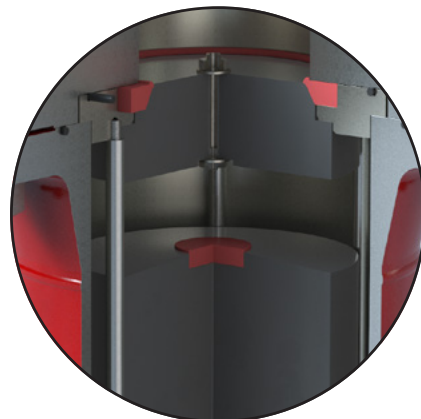
MODEL ET¹ | Single Entry • Triple Action

Air Release/Vacuum Break & Air Release

This valve uses two floats — a **cylindrical float** and a **disc float** — contained in a stainless steel cage. The disc float contains a secondary stainless steel outlet, which exhausts air while under pressure.

The floats are both made of the same material:

- > Cylindrical float in high-density polyethylene (HDPE)
- > Disc float in high-density polyethylene (HDPE)



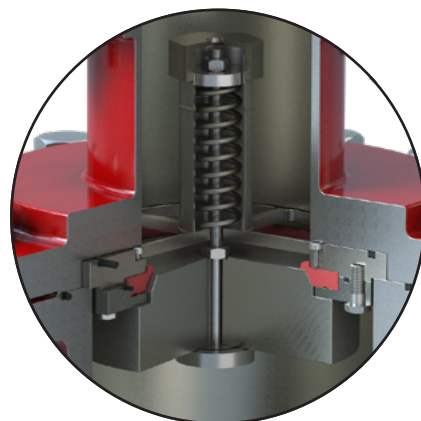
MODEL EB | Single Entry • Single Action

Vacuum Break Only

This valve uses a **spring-loaded disc**, which is biased to remain closed, unless a vacuum is drawn. The vacuum works on the disc to compress the spring, thus allowing air into the pipeline.

The disc is available in two material options, determined by a combination of size and working pressure:

- > High-density polyethylene (HDPE)
- > Stainless steel



NOTES

¹ Valve shown in operation, relieving pressurized air released from the media.

SPECIFICATIONS AND OPTIONS

SPECIFICATIONS

Purpose	Air Release Vacuum Break
Size Range	DN 25 to 400 NPS 1 to 16
Temperature Range	Up to 80°C Up to 176°F
Pressure Ratings¹	ANSI B16.5 Class 150/300/600 @ 35°C Nominal
Connection²	Flanged ANSI B16.5 RF Class 150/300/600 (or as requested)

NOTES

1 All Bray valves are tested to 110% of rated pressure to ensure bubble-tight shutoff.

2 All international flanges available on request. Contact Bray for more information.

DESIGN STANDARDS

Valve Design	ASME B16.34
Flange Drilling	ASME B16.5
Process Piping	ASME B31.3
Testing	AS 4037-1999
	EN 12266 Pt 1 & 2
	API 598
	AWWA M51
Approvals	Canadian CRN

CUSTOMIZABLE FOR YOUR NEEDS

Long-lasting and maintenance-free, all EZI-VAC valves are built to **meet and exceed the high demands** of heavy duty slurry air release valves.

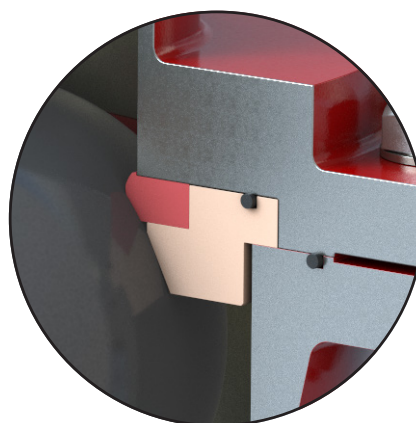
Optional configurations, materials, and linings allow customization to suit your specific requirements.

MATERIALS & OPTIONS

- > Body & outlet materials include carbon steel, 316/304 stainless steel, duplex stainless steel, super duplex, and Hastelloy.
- > Exterior coatings suitable for highly aggressive environments.
- > Standard inner lining of natural rubber, with urethane or EPDM options.
- > Replaceable float available in HDPE, urethane-coated aluminium, or custom materials.
- > Replaceable locating seat in HDPE.
- > Anti-surge or soft-close device, to prevent high-velocity closure.
- > Drain/flush point in body.
- > Bird screen available on some models.

BUBBLE TIGHT SEAL SHUTOFF

All valve styles use a **40 DURO natural rubber annular seal**. Its large sealing surface rolls with the float as it closes, creating a bubble-tight seal.




MODEL EV

MODEL ET

MODEL EB








Body & Outlet Cover	Fabricated Carbon Steel		
	Cast ASTM A216		
	Stainless Steel		
	Duplex Steel		
Float (replaceable)	High Density Polyethylene (Spherical)	High Density Polyethylene (Cylindrical)	—
	Urethane Coated Aluminum (Spherical)	High Density Polyethylene (Disc)	—
Disc	—	—	High Density Polyethylene
	—	—	Stainless Steel
Seal	Chutex Wear-resistant Natural Rubber (standard)		
	Other options as required		
Gasket	BS-N90 Shore O-ring (between body and outlet flange for high-pressure seal)		
Fasteners	Class 8.8 Galvanised Carbon Steel		
	Stainless Steel option as required		
Internal Lining	Natural Rubber		
	EPDM (Ethylene Propylene Diene Monomer)		
	Nitrile		
	Urethane		
	Bromobutyl		
Finish	Grit Blast 2.5 and two-part Epoxy Paint		

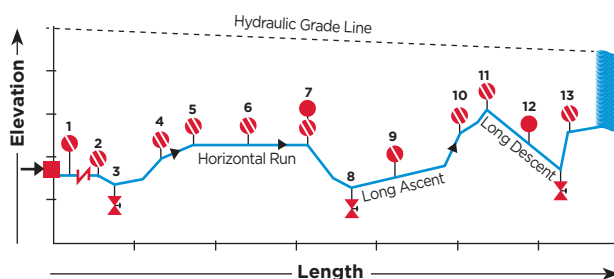
NOTES

¹ Other materials are available on request. Contact Bray for more information.

MODEL APPLICATION GUIDE

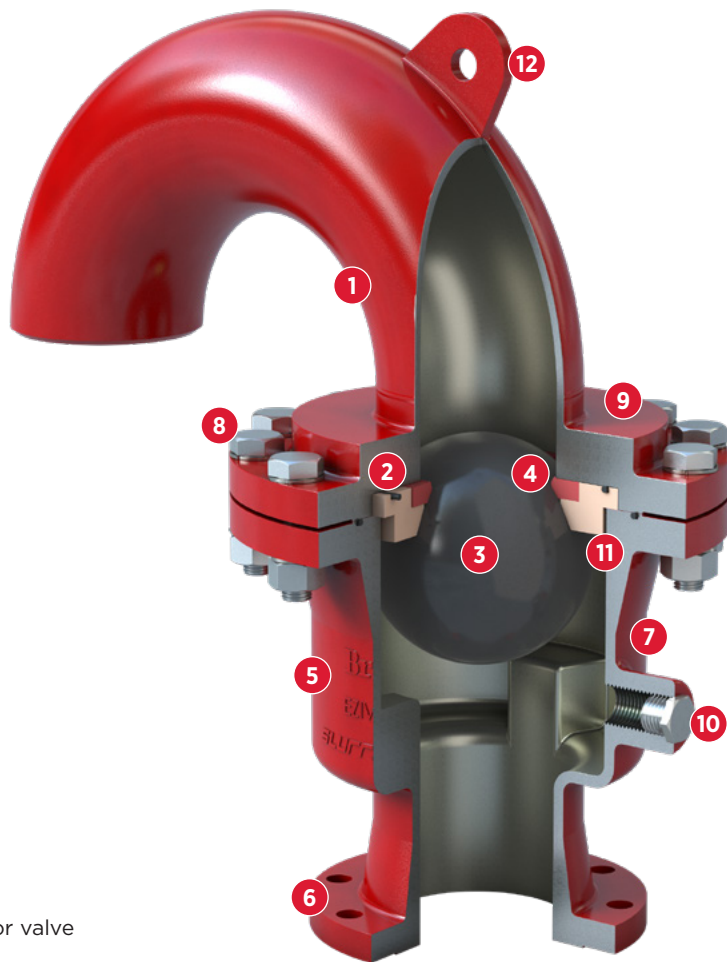
KEY

-  EB Valve
-  EV Valve
-  ET Valve
-  Check Valve
-  Drain Valve
-  Pump
-  Reservoir



FEATURES & BENEFITS

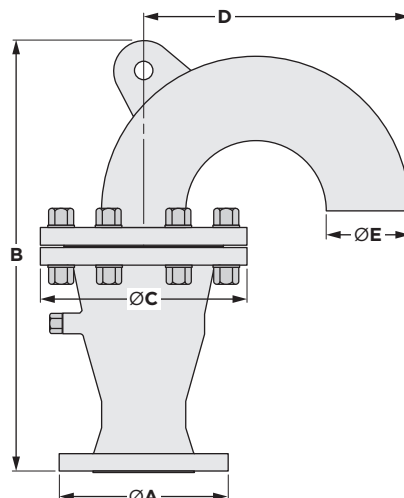
MODEL EV



- 1 ON-SITE INSPECTION:** Removable bonnet for valve inspection, cleaning, or modification.
- 2 SEAL TO ATMOSPHERE:** Standard nitrile o-rings are used for a high-pressure seal.
- 3 SPHERICAL FLOAT:** Urethane coated, lightweight aluminum core or high-density polyethylene (HDPE).
- 4 PRIMARY SEAL:** The seal is designed for full-bore airflow, and constructed of material selected specifically for slurry and heavy-duty applications.
- 5 BODY:** Fully fabricated from carbon steel or cast steel. Internal lining is optional.
- 6 END CONNECTION:** For ease of maintenance, the EZI-VAC valve is normally fixed to an isolation valve, which is in turn fastened to a stand pipe.
- 7 BODY COATINGS:** The internal and external body have a minimum coat of 250 micron DFT. The body is coated with a hard, two-part epoxy paint, applied in a Bray standard red finish, that provides excellent corrosion and wear resistance.

- 8 FASTENERS:** Fasteners are carbon steel galvanised structural assemblies.
- 9 LABEL PLATE:** (Not shown) The stainless steel label details valve model and serial numbers.
- 10 FLUSH PORT:** Based on valve size, either 1/2 or 1 inch flush port is fitted to de-pressurise the valve during maintenance, or for flushing when required.
- 11 SEAL RETAINER/LOCATING RING:** The seal is housed in the HDPE locating ring, which aligns with the float and outlet, to guide the float as the valve closes — creating a positive seal under all conditions.
- 12 APPROVED LIFTING LUG:** To aid during transportation, installation, or removal.

MODEL EV



NOTES

1 Dimensions and weights do not include lining material.

mm | kg

ANSI CLASS 150 | 1960 kPa

Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
50	152	500	228	182	60	26
80	190	602	254	273	89	35
100	228	705	279	362	114	49
150	280	840	405	388	168	122
200	343	1010	482	516	220	175
250	406	1230	598	644	273	280
300	483	1345	635	771	324	366
400	598	1600	813	1016	406	830

ANSI CLASS 300 | 5100 kPa

Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
50	165	454	254	182	60	33
80	210	562	280	273	89	55
100	254	618	317	362	114	74
150	317	752	445	388	168	165
200	381	973	520	516	220	246
250	445	1142	650	644	273	419
300	521	1273	712	771	324	556
400	650	1614	914	1016	406	1210

ANSI CLASS 600 | 10100 kPa

Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
80	210	625	330	273	89	94
100	273	685	356	362	114	126
150	356	840	508	465	168	335
200	420	1055	559	592	220	450
250	508	1252	686	694	273	720

inch | lb

ANSI CLASS 150 | 284 psi

Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
2	6.00	19.69	9.00	7.25	2.38	57
3	7.50	23.70	10.00	11.00	3.50	77
4	9.00	27.76	11.00	14.50	4.50	108
6	11.00	33.07	16.00	15.50	6.62	269
8	13.50	39.76	19.00	20.50	8.63	386
10	16.00	48.43	23.50	25.75	10.80	617
12	19.00	52.95	25.00	30.80	12.80	807
16	23.50	62.99	32.00	40.65	16.00	1830

ANSI CLASS 300 | 740 psi

Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
2	6.50	17.87	10.00	7.25	2.38	73
3	8.25	22.13	11.00	11.00	3.50	121
4	10.00	24.33	12.50	14.50	4.50	163
6	12.50	29.61	17.50	15.50	6.62	364
8	15.00	38.31	20.50	20.50	8.63	542
10	17.50	44.96	25.50	25.75	10.80	924
12	20.50	50.12	28.00	30.80	12.80	1226
16	25.50	63.54	36.00	40.65	16.00	2668

ANSI CLASS 600 | 1465 psi

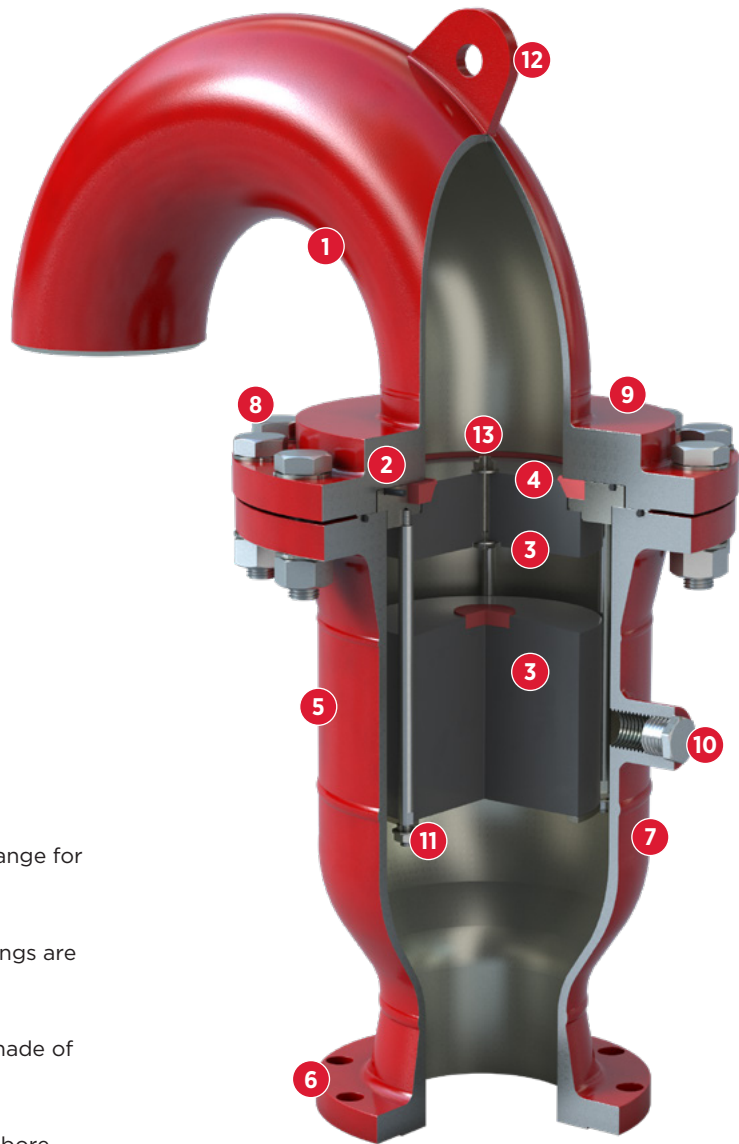
Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
3	8.25	24.61	13.00	11.00	3.50	207
4	10.75	26.97	14.00	14.50	4.50	278
6	14.00	33.07	20.00	18.60	6.62	739
8	16.50	41.54	22.00	23.68	8.63	992
10	20.00	49.29	27.00	28.00	10.75	1587

FEATURES & BENEFITS

MODEL ET¹

NOTES

¹ Valve shown in operation, relieving pressurized air released from the media.



1 ON-SITE INSPECTION: Removable bonnet flange for valve inspection, cleaning, or modification.

2 SEAL TO ATMOSPHERE: Standard nitrile o-rings are used for a high-pressure seal.

3 CYLINDRICAL FLOAT & DISC FLOAT: Both made of high-density polyethylene (HDPE).

4 PRIMARY SEAL: The seal is designed for full-bore airflow, and constructed of material selected specifically for slurry and heavy-duty applications.

5 BODY: Fully fabricated from carbon steel or cast steel. Internal lining is optional.

6 END CONNECTION: For ease of maintenance, the EZI-VAC valve is normally fixed to an isolation valve, which is in turn fastened to a stand pipe.

7 BODY COATINGS: The internal and external body have a minimum coat of 250 micron DFT. The body is coated with a hard, two-part epoxy paint, applied in a Bray standard red finish, that provides excellent corrosion and wear resistance.

8 FASTENERS: Fasteners are carbon steel galvanised structural assemblies.

9 LABEL PLATE: (Not shown) The stainless steel label details valve model and serial numbers.

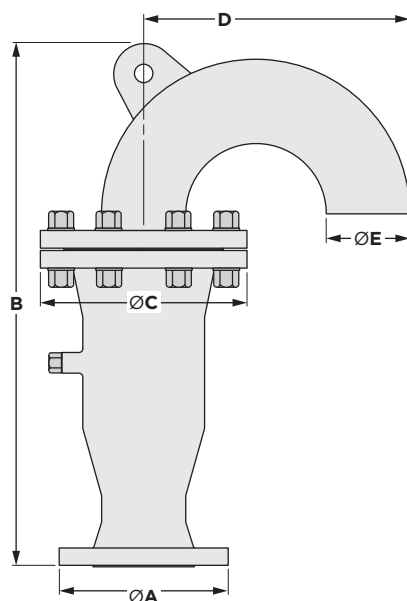
10 FLUSH PORT: Based on valve size, either 1/2 or 1 inch flush port is fitted to de-pressurise the valve during maintenance, or for flushing when required.

11 STAINLESS STEEL CAGE/LOCATING RING: Aligns with the float and outlet, to guide the float as the valve closes — creating a positive seal under all conditions.

12 APPROVED LIFTING LUG: To aid during transportation, installation, or removal.

13 SECONDARY OUTLET (316SS): To exhaust entrapped air while in operation.

MODEL ET



NOTES

1 Dimensions and weights do not include lining material.

mm | kg

ANSI CLASS 150 | 1960 kPa

Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
50	152	500	228	182	60	26
80	190	602	254	273	89	35
100	228	705	279	362	114	49
150	280	840	405	388	168	122
200	343	1010	482	516	220	175
250	406	1230	598	644	273	280
300	483	1345	635	771	324	366
400	598	1600	813	1016	406	830

ANSI CLASS 300 | 5100 kPa

Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
50	165	454	254	182	60	33
80	210	562	280	273	89	55
100	254	618	317	362	114	74
150	317	752	445	388	168	165
200	381	973	520	516	220	246
250	445	1142	650	644	273	419
300	521	1273	712	771	324	556
400	650	1614	914	1016	406	1210

ANSI CLASS 600 | 10100 kPa

Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
80	210	625	330	273	89	94
100	273	685	356	362	114	126
150	356	840	508	465	168	335
200	420	1055	559	592	220	450
250	508	1252	686	694	273	720

inch | lb

ANSI CLASS 150 | 284 psi

Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
2	6.00	19.69	9.00	7.25	2.38	57
3	7.50	23.70	10.00	11.00	3.50	77
4	9.00	27.76	11.00	14.50	4.50	108
6	11.00	33.07	16.00	15.50	6.62	269
8	13.50	39.76	19.00	20.50	8.63	386
10	16.00	48.43	23.50	25.75	10.80	617
12	19.00	52.95	25.00	30.80	12.80	807
16	23.50	62.99	32.00	40.65	16.00	1830

ANSI CLASS 300 | 740 psi

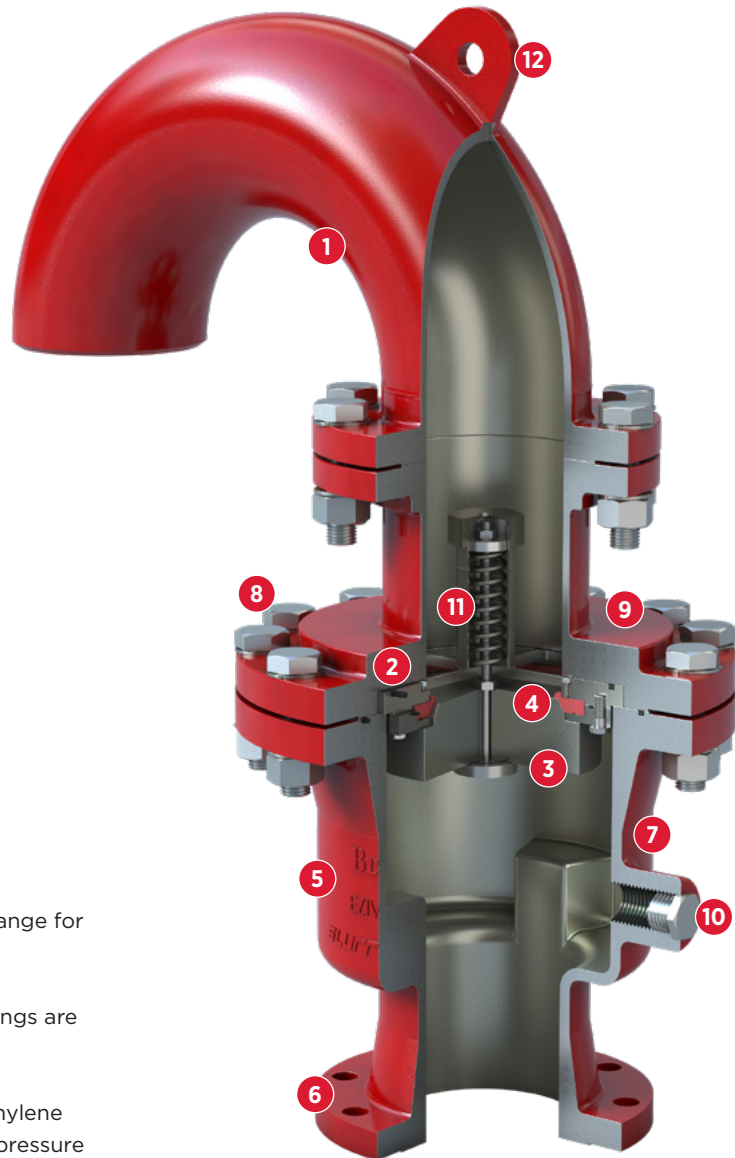
Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
2	6.50	17.87	10.00	7.25	2.38	73
3	8.25	22.13	11.00	11.00	3.50	121
4	10.00	24.33	12.50	14.50	4.50	163
6	12.50	29.61	17.50	15.50	6.62	364
8	15.00	38.31	20.50	20.50	8.63	542
10	17.50	44.96	25.50	25.75	10.80	924
12	20.50	50.12	28.00	30.80	12.80	1226
16	25.50	63.54	36.00	40.65	16.00	2668

ANSI CLASS 600 | 1465 psi

Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
3	8.25	24.61	13.00	11.00	3.50	207
4	10.75	26.97	14.00	14.50	4.50	278
6	14.00	33.07	20.00	18.60	6.62	739
8	16.50	41.54	22.00	23.68	8.63	992
10	20.00	49.29	27.00	28.00	10.75	1587

FEATURES & BENEFITS

MODEL EB



1 ON-SITE INSPECTION: Removable bonnet flange for valve inspection, cleaning, or modification.

2 SEAL TO ATMOSPHERE: Standard nitrile o-rings are used for a high-pressure seal.

3 SPRING-LOADED DISC: High-density polyethylene (HDPE) or stainless steel, based on size and pressure requirements.

4 PRIMARY SEAL: The seal is designed for full-bore airflow, and constructed of material selected specifically for slurry and heavy-duty applications.

5 BODY: Fully fabricated from carbon steel or cast steel. Internal lining is optional.

6 END CONNECTION: For ease of maintenance, the EZI-VAC valve is normally fixed to an isolation valve, which is in turn fastened to a stand pipe.

7 BODY COATINGS: The internal and external body have a minimum coat of 250 micron DFT. The body is coated with a hard, two-part epoxy paint, applied in a Bray standard red finish, that provides excellent corrosion and wear resistance.

8 FASTENERS: Fasteners are carbon steel galvanised structural assemblies.

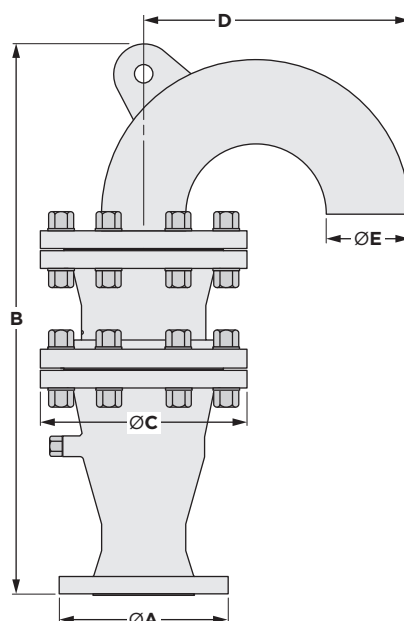
9 LABEL PLATE: (Not shown) The stainless steel label details valve model and serial numbers.

10 FLUSH PORT: Based on valve size, either 1/2 or 1 inch flush port is fitted to de-pressurise the valve during maintenance, or for flushing when required.

11 STAINLESS STEEL SPRING ASSEMBLY/LOCATING RING: Aligns the vacuum disc. The disc stays closed at all times, only opening when there is a vacuum.

12 APPROVED LIFTING LUG: To aid during transportation, installation, or removal.

MODEL EB



NOTES

1 Dimensions and weights do not include lining material.

mm | kg

ANSI CLASS 150 | 1960 kPa

Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
50	152	530	228	182	60	34
80	190	650	254	273	89	47
100	228	750	279	362	114	66
150	280	920	405	388	168	148
200	343	1180	482	516	220	215
250	406	1275	598	644	273	339
300	483	1390	635	771	324	454

inch | lb

ANSI CLASS 150 | 284 psi

Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
2	6.00	20.87	9.00	7.25	2.38	75
3	7.50	25.59	10.00	11.00	3.50	104
4	9.00	29.53	11.00	14.50	4.50	146
6	11.00	36.22	16.00	15.50	6.62	326
8	13.50	46.46	19.00	20.50	8.63	474
10	16.00	50.20	23.50	25.75	10.80	747
12	19.00	54.72	25.00	30.80	12.80	1000

ANSI CLASS 300 | 5100 kPa

Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
50	165	560	254	182	60	40
80	210	713	280	273	89	67
100	254	775	317	362	114	91
150	317	975	445	388	168	191
200	381	1225	520	516	220	286
250	445	1415	650	644	273	478
300	521	1564	712	771	324	644

ANSI CLASS 300 | 740 psi

Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
2	6.50	22.05	10.00	7.25	2.38	88
3	8.25	28.07	11.00	11.00	3.50	148
4	10.00	30.51	12.50	14.50	4.50	201
6	12.50	38.39	17.50	15.50	6.62	421
8	15.00	48.23	20.50	20.50	8.63	631
10	17.50	55.71	25.50	25.75	10.80	1054
12	20.50	61.57	28.00	30.80	12.80	1420

ANSI CLASS 600 | 10100 kPa

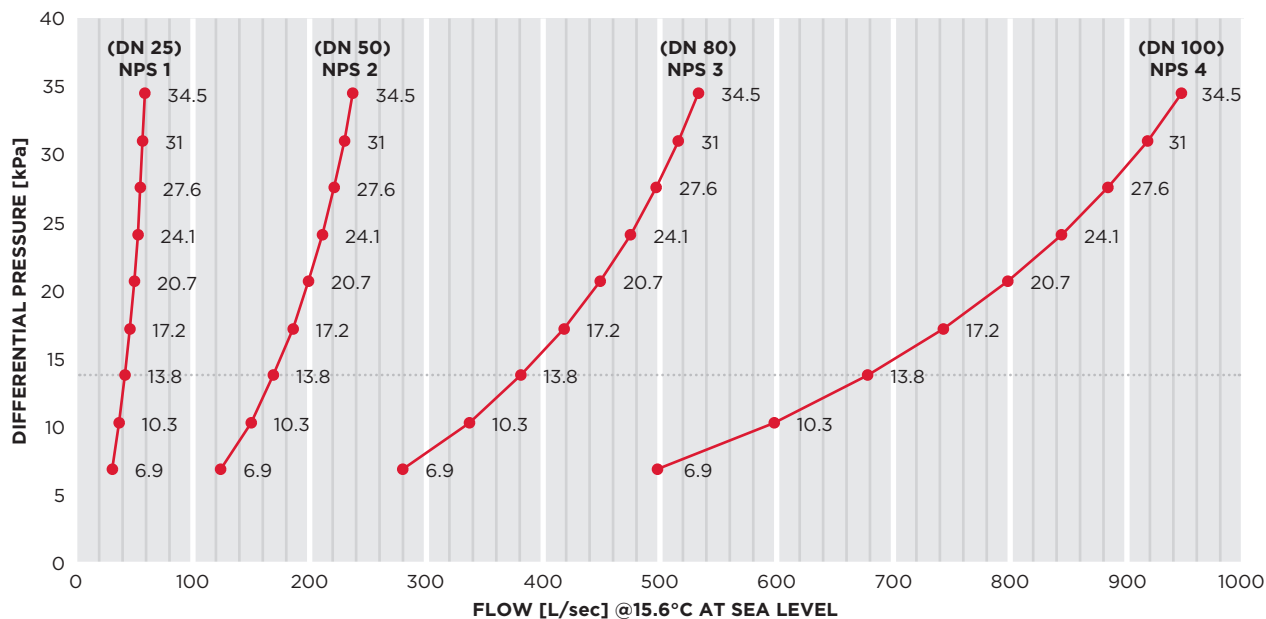
Size DN	ØA mm	B mm	ØC mm	D mm	ØE mm	Wgt (kg)
80						
100						
150		Consult factory				
200						
250						

ANSI CLASS 600 | 1465 psi

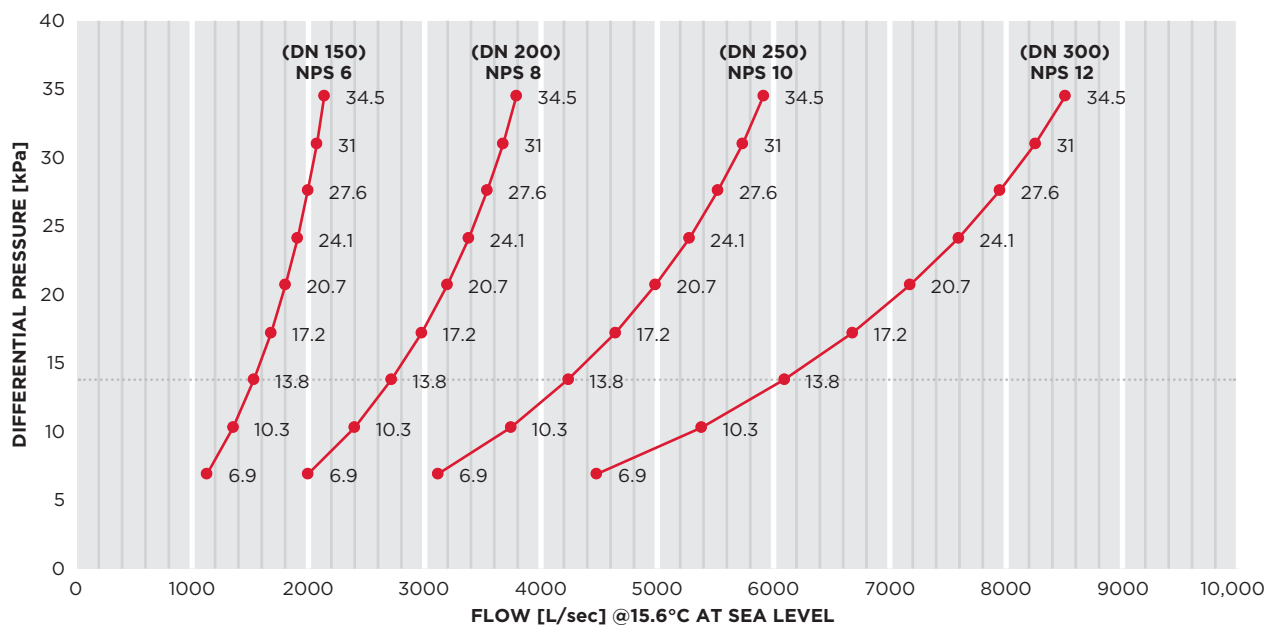
Size NPS	ØA in	B in	ØC in	D in	ØE in	Wgt (lb)
3						
4						
6		Consult factory				
8						
10						

VACUUM AIR INFLOW

MODELS EV • EB • ET | DN 25 to 100 (NPS 1 to 4)



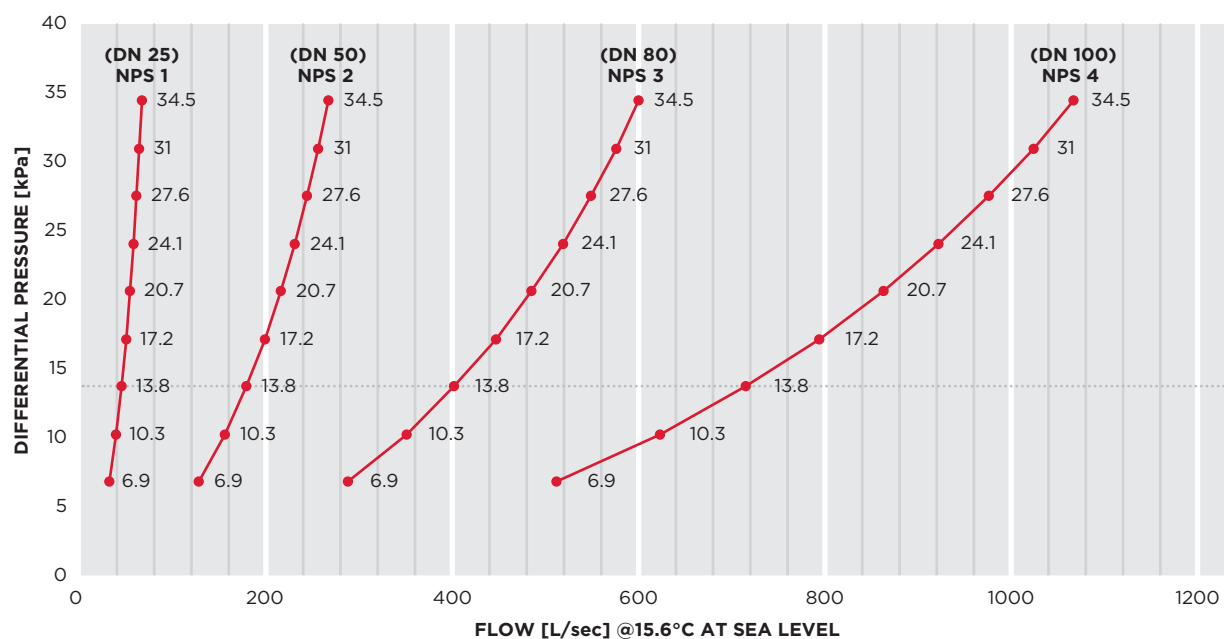
MODELS EV • EB • ET | DN 150 to 300 (NPS 6 to 12)



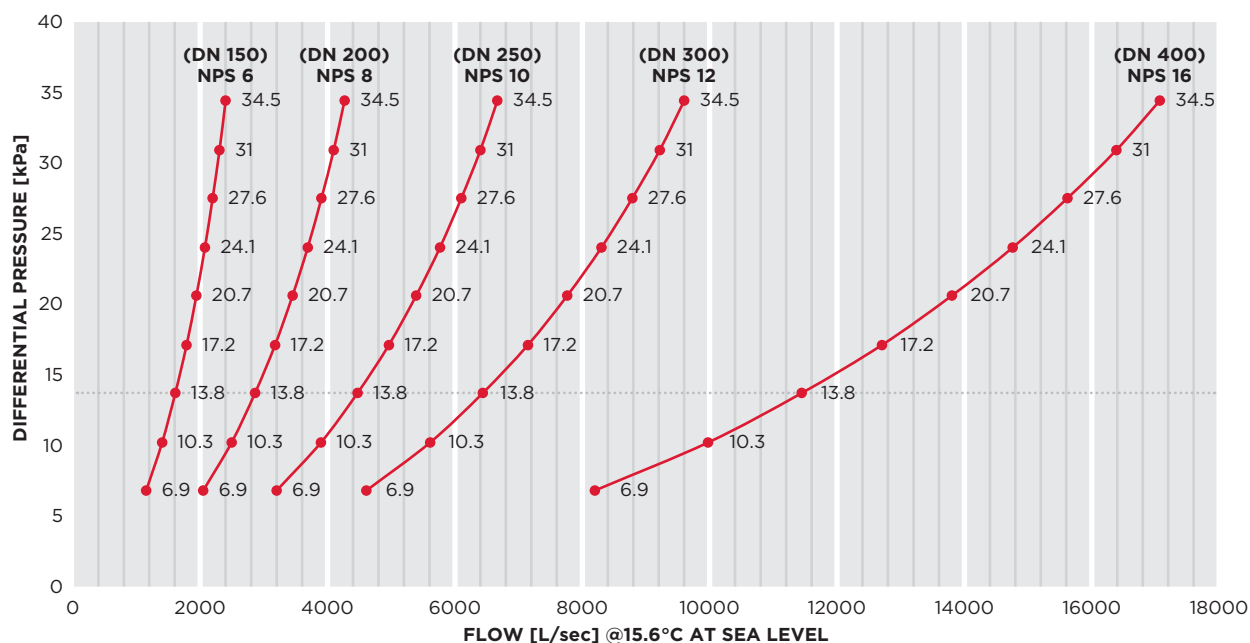
NOTES

1 13.8kPa is the typical venting pressure differential to atmosphere when filling pipelines, according to AWWA M51.

MODELS EV • ET | DN 25 to 100 (NPS 1 to 4)



MODELS EV • ET | DN 150 to 400 (NPS 6 to 16)



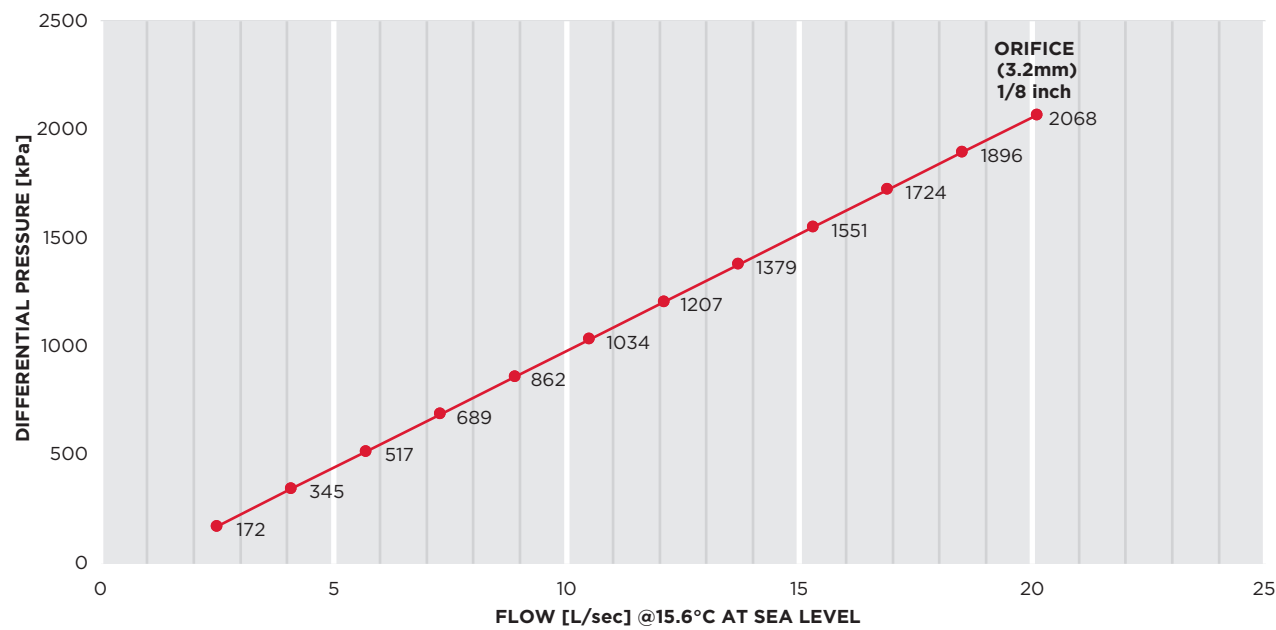
NOTES

1 Air discharge according to AWWA M51 Table 4-2. These figures highlight the differential air pressure (kPa) compared to flow rates (L/sec) in DN 25 TO 400 EZI-VAC valves.

2 13.8kPa is the typical venting pressure differential to atmosphere when filling pipelines, according to AWWA M51.

SECONDARY AIR DISCHARGE¹

MODEL ET | ORIFICE 3.2mm (1/8 inch)



NOTES

1 Air discharge according to AWWA M51A Table 4-2.

ISOLATION AND SHUT-OFF VALVES THAT FIT YOUR PROCESS

At Bray, we understand you are constantly faced with the need to safely and reliably isolate many different types of processes. To make this easier, Bray has an extensive isolation valve portfolio comprised of high-performance butterfly valves, ball valves, and knife gate valves. These valves are designed and tested to provide the reliability necessary to keep your processes operating at maximum efficiency.



HIGH PERFORMANCE BUTTERFLY VALVES SERIES 40/42 & 41/43

A double offset butterfly valve features an innovative design that offers rugged reliability and bidirectional shutoff to full rated pressure.



FLANGED BALL VALVES SERIES F15/F30

Two-piece body with floating ball design offers low torque and increased cycle life. An ideal solution for tight shutoff in a wide range of industrial applications.



BIDIRECTIONAL KNIFE GATE VALVES Series 740

One-piece cast body with flexible wire reinforced elastomer seat for bidirectional zero leakage shutoff in a wide range of industrial applications.



BIDIRECTIONAL SLURRY VALVES SERIES 768

Two-piece bolted body with twin elastomer seats and a push-through gate designed for bidirectional zero leakage shutoff with self cleaning in demanding slurries.

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