

## Delta™ HP Air Release and Vacuum Break Valve for Slurry

**ASME B16.34 ASME B16.5 ASME B31.3**

Soft seat design, Kinetic single orifice air release and vacuum break valve -vertical pattern- full bore design. Disposal of large volumes of air during fill of the pipes of system. Add great amount of air to the system during the purge of the pipes. Made in top quality materials and fully lined EPDM, Delta™ HP is the best option for hard work and highly aggressive environments

*The Delta™ HP air vent is designed for most severe conditions, including slurry and sea water. The large port design prevents clogging while the HI-WEAR seat and float design offer a large sealing area. Common uses for Delta™ HP are desalination process, sea water, chemical waste, sand pulp, dewatering sewage, mining slurry, general pulp, and treatment plants*

### Features:

- A) **Body Material:** made in Carbon Steel ASTM A105 Epoxy Paint
- B) **Interior:** made in top quality SS304 CF8 Stainless Steel Lined EPDM
- C) **Floating Ball:** and other metal parts made in Stainless Steel SS316L CF3M
- D) **Wet Parts:** All wet parts in contact with the media made in SS316L CF3M or Lined EPDM
- (E) **Full Bore:** Full bore design to prevent clogging
- (F) **Drop:** Reduces pressure drop.
- (G) HI-WEAR primary seal allows drip tight sealing under all conditions
- (H) Available in Class #150 and #300
- (I) Lined EPDM interior for highly aggressive environments.



### Technical Data

1. Size range: NPS 2"~8"
2. Pressure ratings: 150LB / 300LB
3. Working temperature: -29°~ +120°C.
4. Suitable Medium: Slurry / Sea Water/ Sewage
5. Body Material: ASTM A105 Epoxy
6. Lined: EPDM / Ebonite
7. Trim Material: SS316L
9. Easy and convenient maintenance.
10. Screen Filtering made in SS316L

### Performance Standard

1. Design & Manufacture standard as to: ASME B31.3ASME B16.34
1. Height dimension (H) standard as to: MFR-STD
3. Flange dimension conforms as to: ASME B16.5 / BS EN 1092
4. Testing and Inspection as to: API 598
5. Pressure-temperature conforms as to: ASME B16.34
6. Anti Corrosion as per NACE MR-0175(2002) requirement

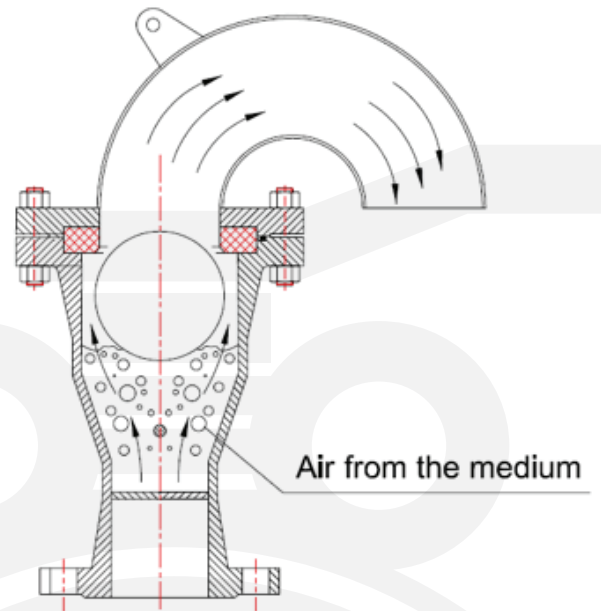
### Performance

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## Delta™ HP Air Release and Vacuum Break in Action

### Out Flow process: Water-filled pipe during operation

- 1.- Discharge air in the pipeline and let water smoothly pass.
- 2.-After the air inside the pipe is emptied, water come into the low pressure air vent, the floating ball rises because of buoyancy, seal the exhaust hole.

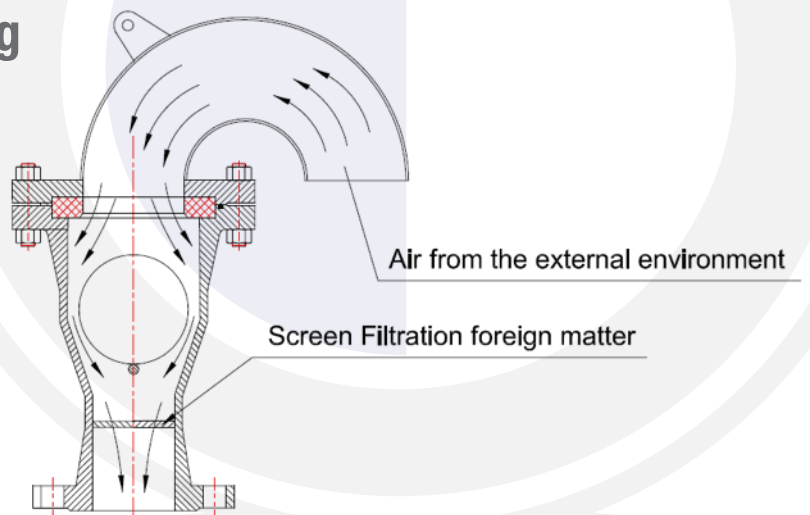


Venting

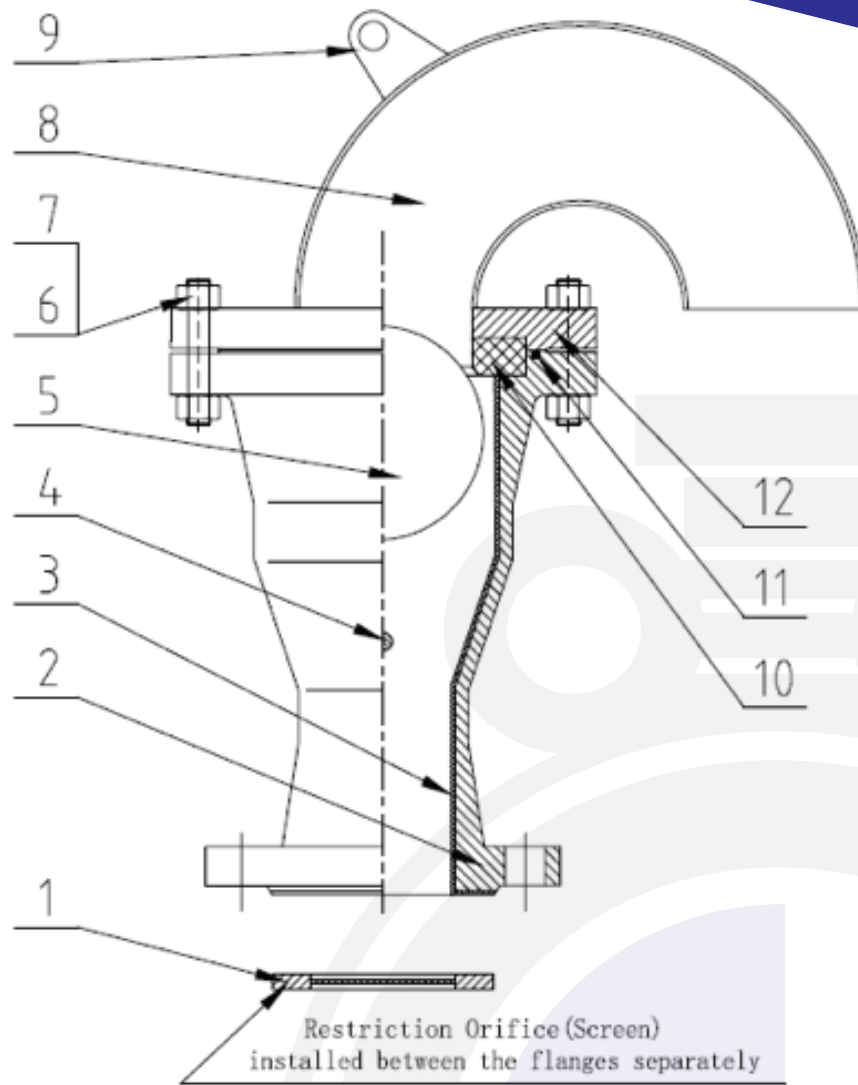
## Delta™ HP Air Release and Vacuum Break in Action

### In flow Process: when the negative pressure occurs within the Piping system

- 1.- Low pressure intake to the air vent, the floating ball will immediately drop, open exhaust hole.
- 2.- Air will enter the system, remove the negative pressure and protect system.

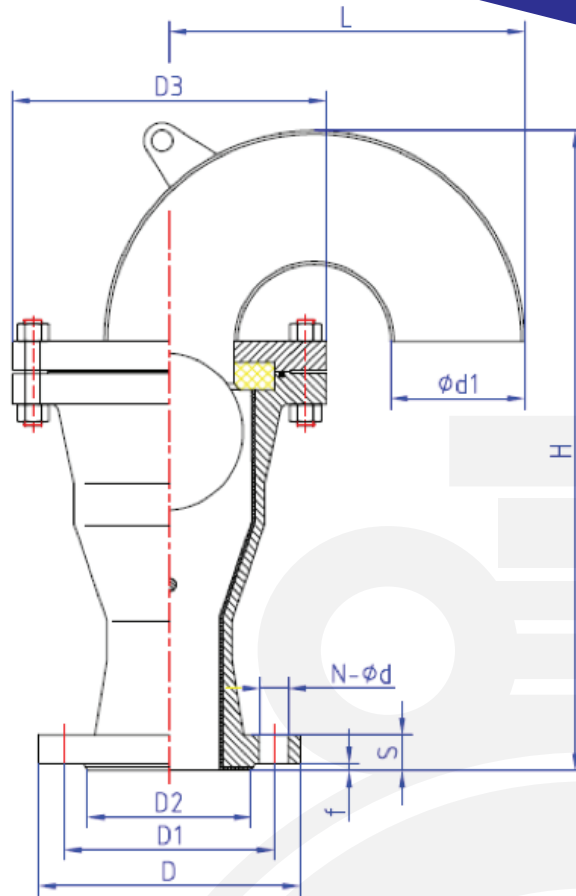


Suction



## Part List:

No.	Part Name	Material	Standard
1.	Restriction Orifice	SS316L	ASTM A276
2.	Body	C.S.	ASTM A105
3.	Body Lined	Rubber	EPDM / Ebonite
4.	Ball Retainer	F316L	ASTM A182
5.	Floating Ball	SS316L	ASTM A276
6.	Bolt	SS304	ASTM A193 Gr.B8
7.	Nut	SS304	ASTM A194 Gr.8
8.	Vent Pipe	C.S.	ASTM A234 WPB
9.	Lifting Lug	C.S.	AISI 1025
10.	Elastomer Seat	Rubber	EPDM
11.	O-Ring	Rubber	EPDM
12.	Cover	C.S.	ASTM A105



## Main dimension

### Class 150LB RF

Flange dimension standard conforms as to: ASME B16.5

NPS	H	Φd1	L	D3	D	D1	D2	S	N-Φ	f	Weight
2"	375	60	182	228	150	120.7	92	17.5	4-Φ19	2	18 Kg
3"	490	89	273	254	190	152.4	127	22.5	4-Φ19	2	32 Kg
4"	541	114	362	279	230	190.5	157	22.5	8-Φ19	2	42 Kg
5"	580	114	362	279	255	215.9	186	22.5	8-Φ22	2	45 Kg
6"	685	168	540	343	280	241.3	216	24	8-Φ22	2	52 Kg
8"	882	219	720	482	345	298.5	270	27	8-Φ22	2	68 Kg

### Class 300LB RF

Flange dimension standard conforms as to: ASME B16.5

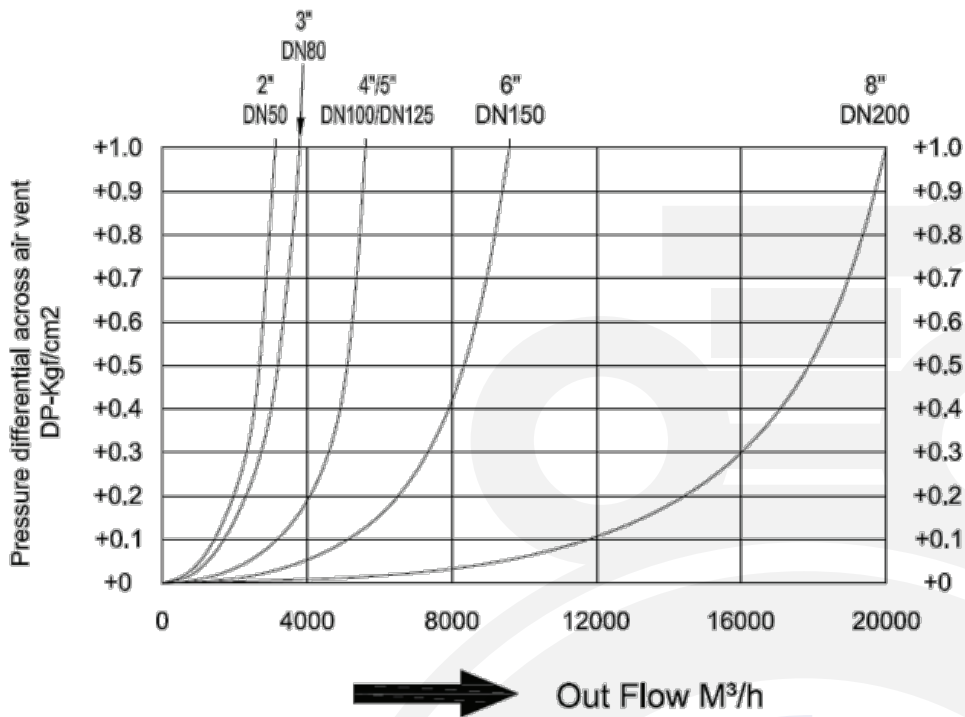
NPS	H	Φd1	L	D3	D	D1	D2	S	N-Φ	f	Weight
2"	375	60	182	254	165	127	92	21	8-Φ19	2	19 Kg
3"	490	89	273	280	210	168.3	127	27	8-Φ22	2	36 Kg
4"	541	114	362	317	255	200	157	30.5	8-Φ22	2	46 Kg
5"	580	114	362	317	280	235	186	33.5	8-Φ22	2	46 Kg
6"	685	168	540	381	320	269.9	216	35	12-Φ22	2	55 Kg
8"	882	219	720	520	380	330.2	270	40	12-Φ25.5	2	76 Kg

Delta™ HP Air Vent discharge capacity by size, and air and vacuum flow rate by size

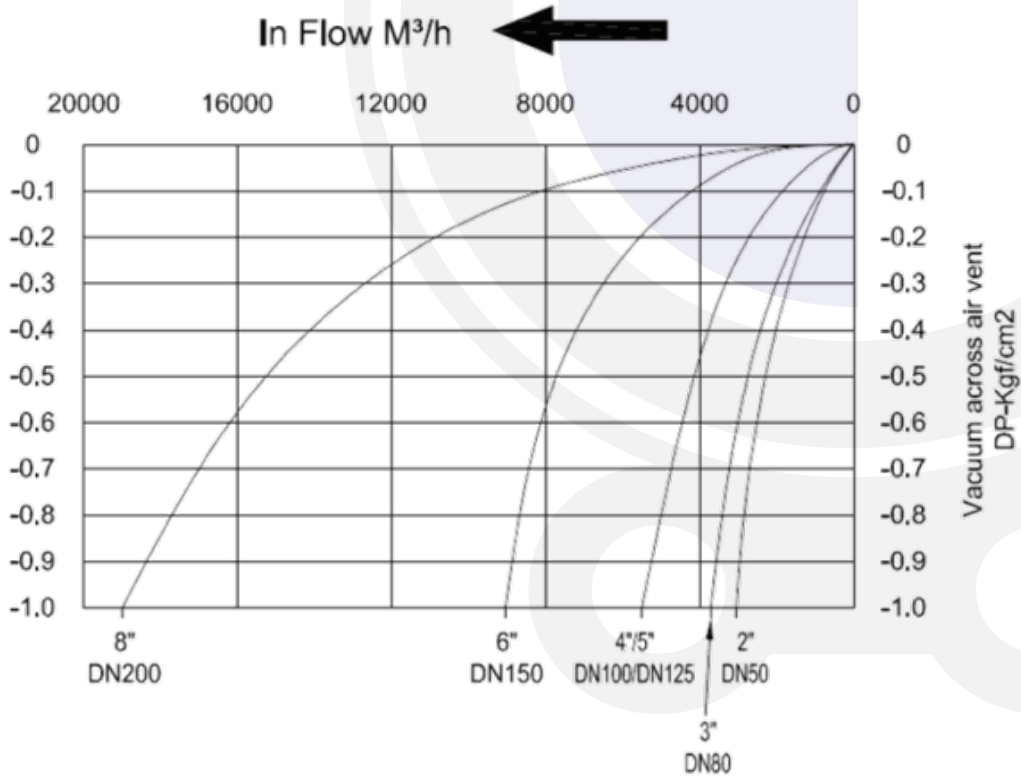
Discharge Capacity by Size up to 8"

Charge Capacity by Size up to 8"

## Discharge Capacity by Size up to 8"



## Charge Capacity by Size up to 8"



## ORDERING CODE:

**Example: DELFS-13-150RF-200**

Model: DELTA AIR VENT HP SERIES  
Standard A105 Forged Steel Epoxy Body  
Standard EPDM Seat  
SS304 Lined EPDM  
SS316L Floating ball and SS316L Restriction Orifice  
Ansi Class 150 Flanged End RF  
Size: 2"

## Available Lined Interior:

SS304 CF8 Lined EPDM: 1  
SS316 CF8M Lined EPDM: 2  
SS316L CF3M Lined EPDM: 3

## Available Floating Ball and Restriction Orifice Material Code

SS304 CF8 Stainless Steel: 1  
SS316 CF8M Stainless Steel: 2  
SS316L CF3M Stainless Steel: 3

## Available Size Code:

2": 200  
2 ½": 250  
3": 300  
4" 400  
6": 600  
8": 800