

AIR VALVE

AIR VALVE

Catalog





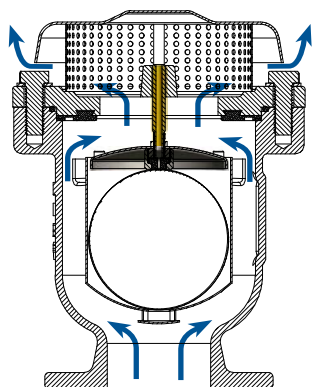
DESIGN FEATURES

- smooth Cage outside float keep float moving in specified guide rail
- Spill Free - Valve will not spill before shutting off
- Anti-insects screen
- nonslam, anti water hammer system design
- Strong Float to prevent damage during water hammer
- Internal body guide and round wall to keep float moving and liquid turbulence within this area
- full bore design
- was approved Fully FBE coated inside and outside 300 μm
- Optional 316 Stainless Steel floats and internals

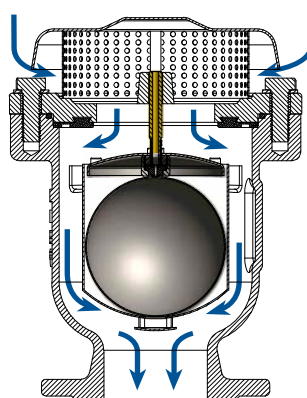
APPLICATIONS

- water distribution system
- irrigation system
- main transmission pipeline
- fire fighting

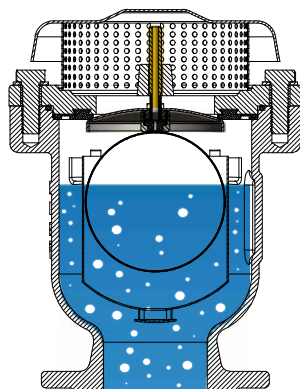
TRIPLE FUNCTIONS



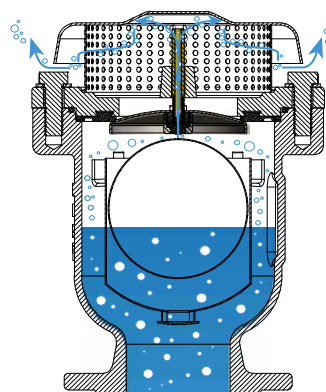
- ① **Release of large quantities of air:**
During filling, the line will be ventilated via the large orifice with big volume



- ② **Entrance of large volumes of air:**
During pipeline drainage bring in large volume air to avoid negative pressure

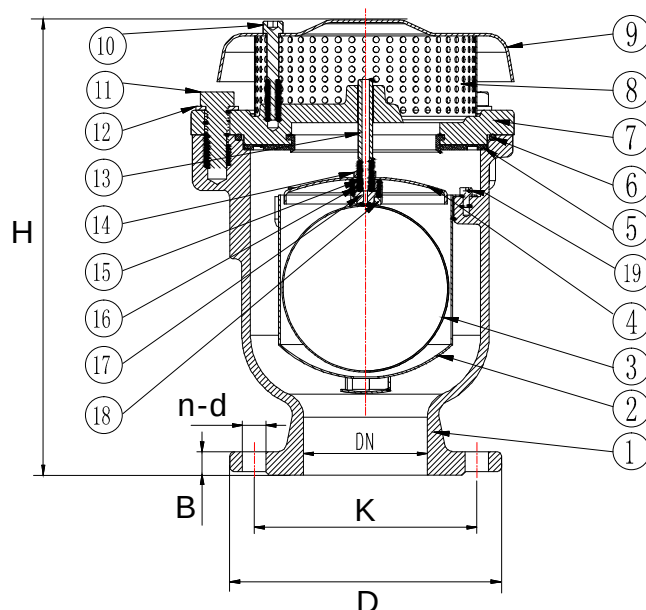


- ③ **Closure:**
After ventilation the valve closes automatically



- ④ **Release of small quantities of air:**
During operation of a line, ventilation is carried out via the top small orifice

DIMENSION, MATERIALS



19	Screw	SS304 / SS316
18	Sealing sleeve	Brass CuZn39Pb1
17	Sealing plug	Silcon
16	Lock nut	Brass CuZn39Pb1
15	O-Ring	NBR / EPDM rubber
14	Nut	SS304 / SS316
13	Guide rod	Brass CuZn39Pb1
12	Flat washer	SS304 / SS316
11	Bolt	SS304 / SS316
10	Screw	SS304 / SS316
9	Upper cover	Carbon steel
8	Insect screen	SS304 / SS316
7	Bonnet	Ductile iron GJS500-7
6	O-Ring	NBR / EPDM rubber
5	Seal ring	NBR / EPDM rubber
4	Disc	SS304 / SS316
3	Floating ball	SS304 / SS316
2	Busing	SS304 / SS316
1	Body	Ductile iron GJS500-7

SIZE		Height	Flange to EN1092-2 / BS4504 (mm)							
			End Flange PN10/16				End Flange PN25			
DN	inch	H	D	K	n-d	B	D	K	n-d	B
DN50	2"	305	165	125	4-φ19	19	165	125	4-φ19	19
DN65	2.5"	305	185	145	4-φ19	19	185	145	8-φ19	19
DN80	3"	330	200	160	8-φ19	19	200	160	8-φ19	19
DN100	4"	370	220	180	8-φ19	19	235	190	8-φ23	19
DN150	6"	450	285	240	8-φ23	19	300	250	8-φ28	20
DN200	8"	500	340	295	8-φ23 12-φ23	20	360	310	12-φ28	22
DN250	10"	685	395 405	350 355	12-φ23 12-φ28	22	425	370	12-φ31	24.5
DN300	12"	780	445 460	400 410	12-φ23 12-φ28	24.5	485	430	16-φ31	27.5
DN350	14"	780	505 520	460 470	16-φ23 16-φ28	26.5	555	490	16-φ34	30
DN400	16"	780	565 580	515 525	16-φ28 16-φ31	28	620	550	16-φ37	32

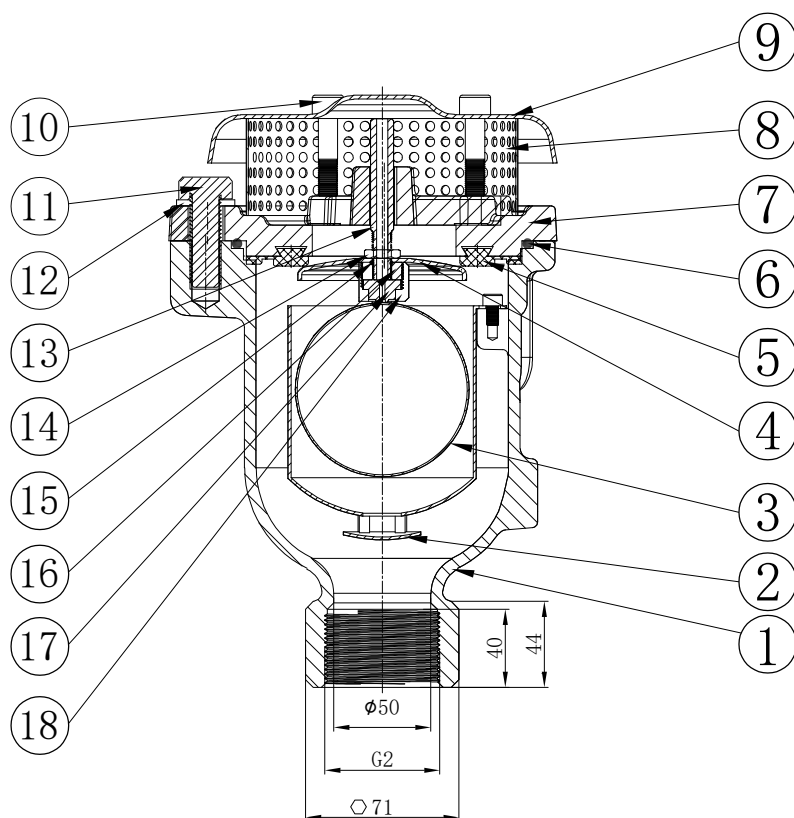
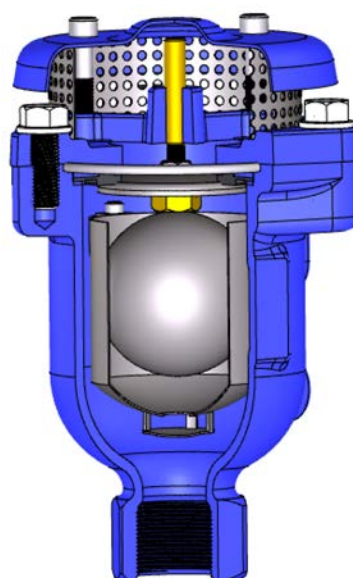
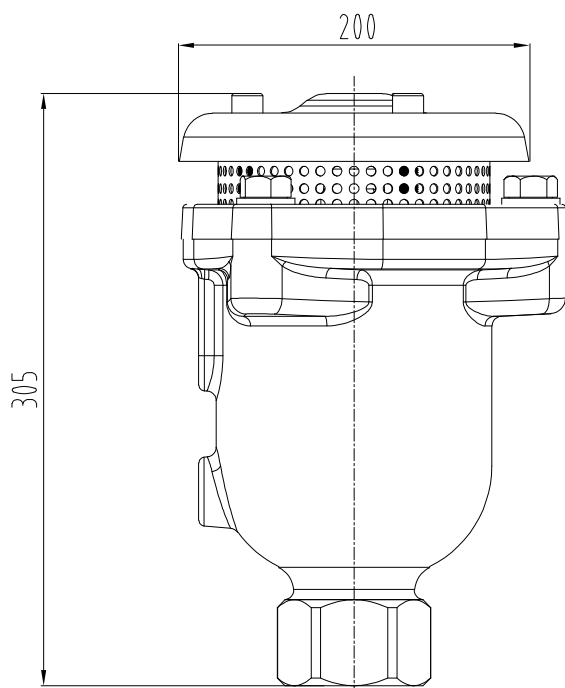
*DN40 drilled based on DN50 flange

*DN125 drilled based on DN150 flange

Illustrations, technical data, dimensions (all dimensions in mm) and weights (all weights in kg) are subject to alteration without notice.

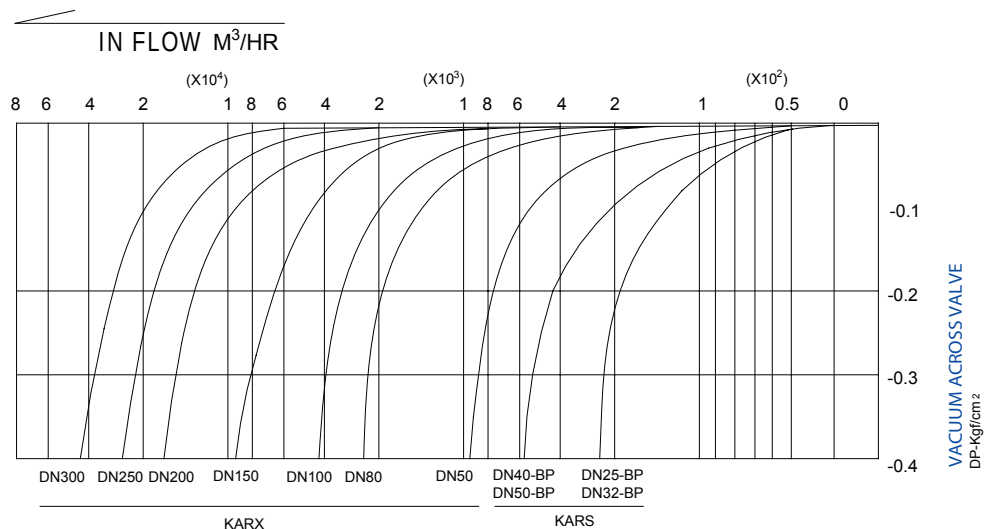
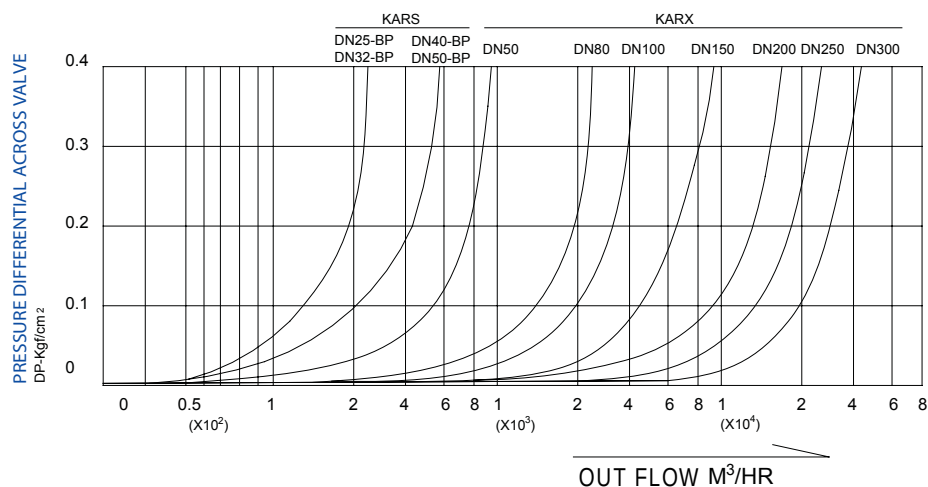
DIMENSION, MATERIALS

- DN50/2" size BSP threaded

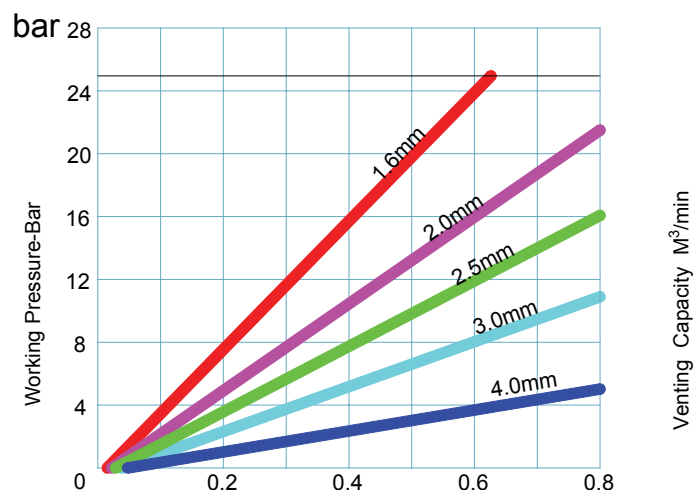


18	Sealing sleeve	Brass CuZn39Pb1
17	Sealing plug	Silcon
16	Lock nut	Brass CuZn39Pb1
15	O-Ring	NBR / EPDM rubber
14	Nut	SS304 / SS316
13	Guide rod	Brass CuZn39Pb1
12	Flat washer	SS304 / SS316
11	Bolt	SS304 / SS316
10	Screw	SS304 / SS316
9	Upper cover	Carbon steel
8	Insect screen	SS304 / SS316
7	Bonnet	Ductile iron GJS500-7
6	O-Ring	NBR / EPDM rubber
5	Seal ring	NBR / EPDM rubber
4	Disc	SS304 / SS316
3	Floating ball	SS304 / SS316
2	Busing	SS304 / SS316
1	Body	Ductile iron GJS500-7

FLOW PERFORMANCE



Air release during working conditions



DESIGN FEATURES

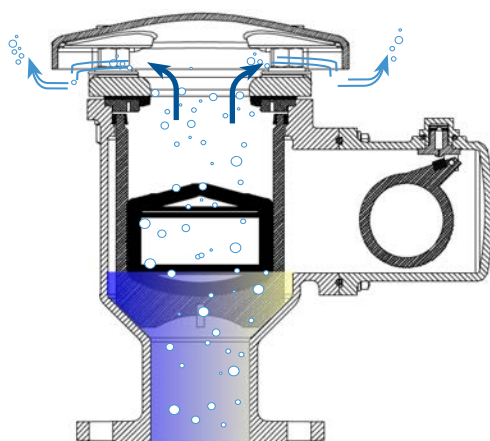


- Manufacturing standards meets BS EN 1074-4 and AWWA C512
- ABS float ball
- full bore body design
- anti-insect screen upon request
- Fasteners Stainless Steel 304 as standard
- **Large air flow capacity**
- float moving in the specified guide rail
- no moving parts contact the internal coating
- all internal parts are replaceable
- was approved Fully FBE coated inside and outside 300 µm

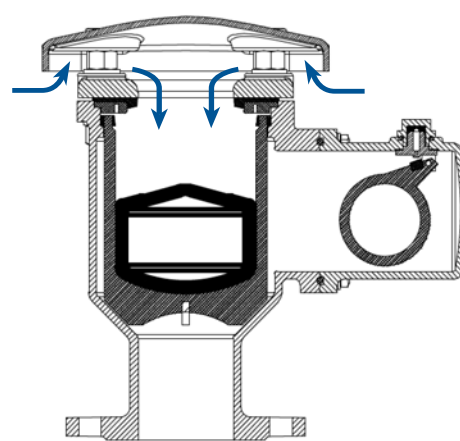
APPLICATIONS

- water distribution system
- main transmission pipeline
- irrigation system
- fire fighting

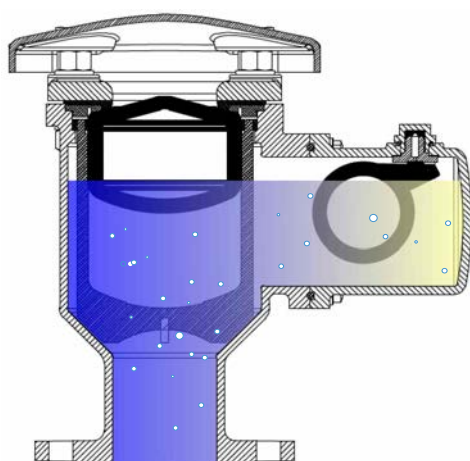
TRIPLE FUNCTIONS



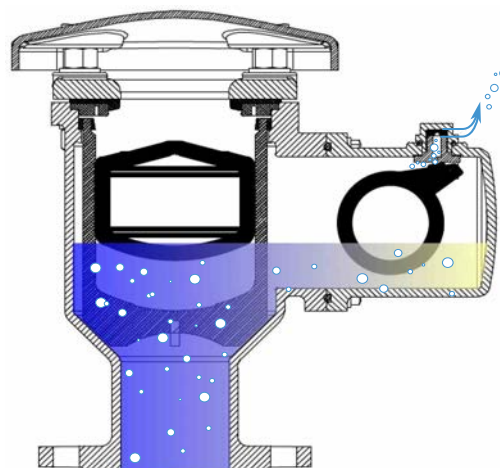
- ① **Release of large quantities of air:**
During filling, the line will be ventilated via the large orifice with big volume



- ② **Entrance of large volumes of air**
During pipeline drainage bring in large volume air to avoid negative pressure

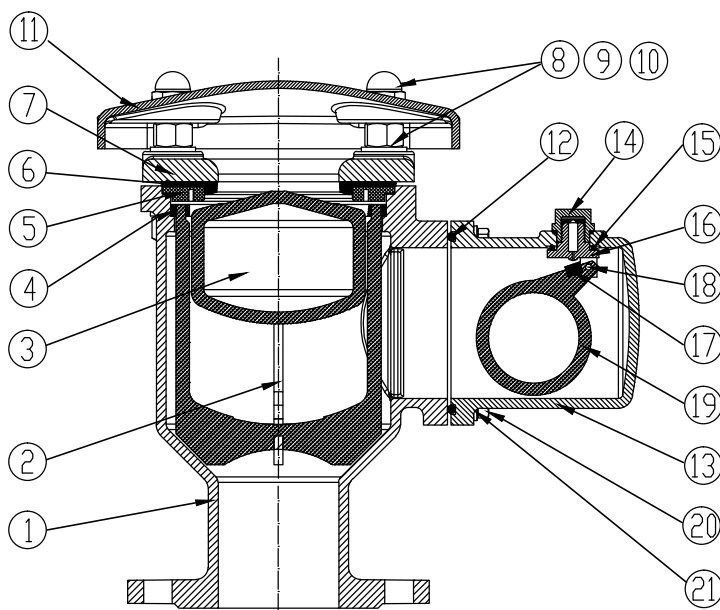


- ③ **Closure:**
After ventilation the valve closes automatically

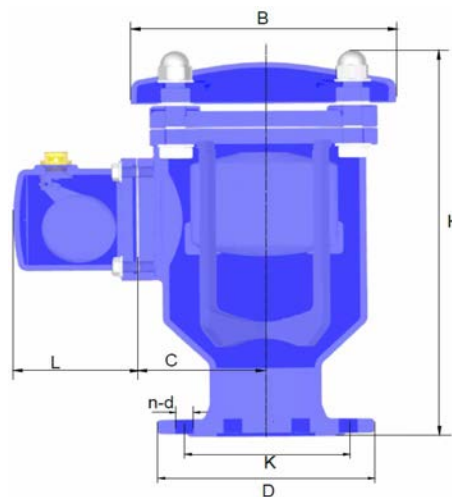
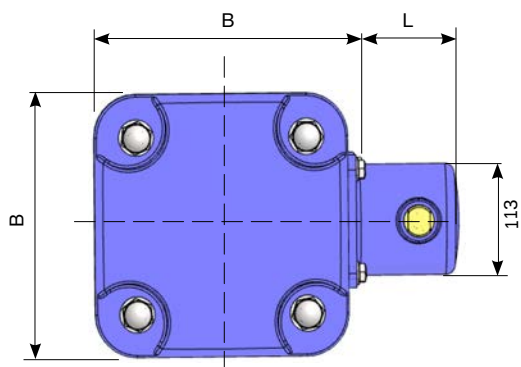


- ④ **Release of small quantities of air:**
During operation of a line, ventilation is carried out via the top small orifice

DIMENSION, MATERIALS



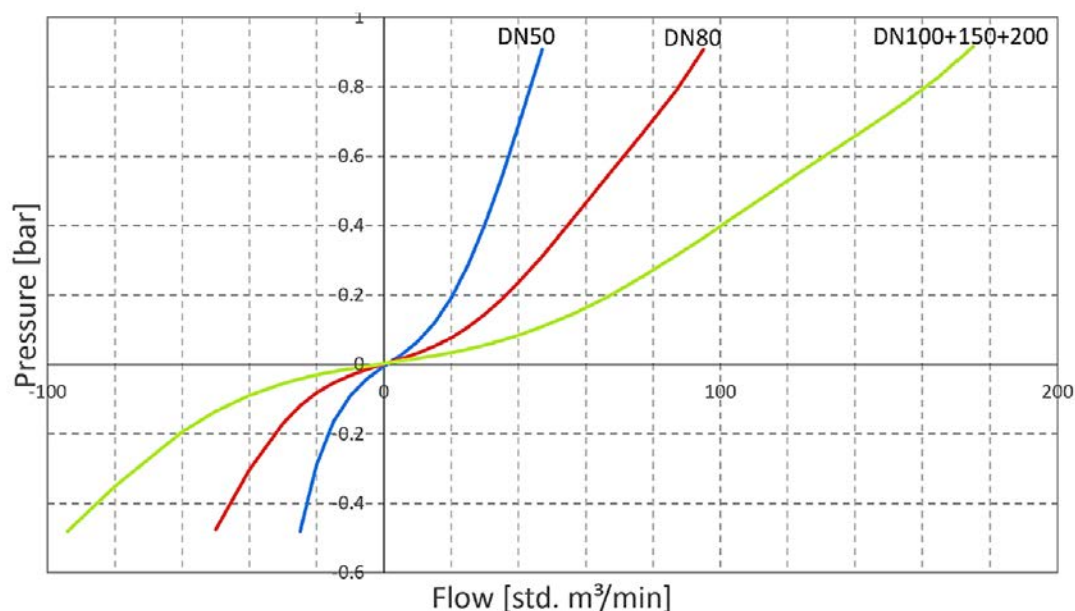
1	Body of big chamber	ductile iron GJS 500-7
2	Float Guide	ABS plastic
3	Float of big chamber	ABS plastic
4	Support	ABS plastic
5	Sealing Ring	NBR/EPDM rubber
6	Seat Support	ABS plastic
7	Cover	ductile iron GJS 500-7
8	Bolt	SS304
9	Nut	SS304
10	Washer	SS304
11	Cowl	ductile iron GJS 500-7
12	O-Ring	NBR/EPDM rubber
13	Body of small chamber	ductile iron GJS 500-7
14	Vent Cap	CuZn39Pb1 Brass
15	O-Ring	NBR/EPDM rubber
16	Bracket	CuZn39Pb1 Brass
17	Seat	NBR/EPDM rubber
18	Hing Pin	SS304
19	Float of small chamber	ABS plastic
20	Bolt	SS304
21	Washer	SS304



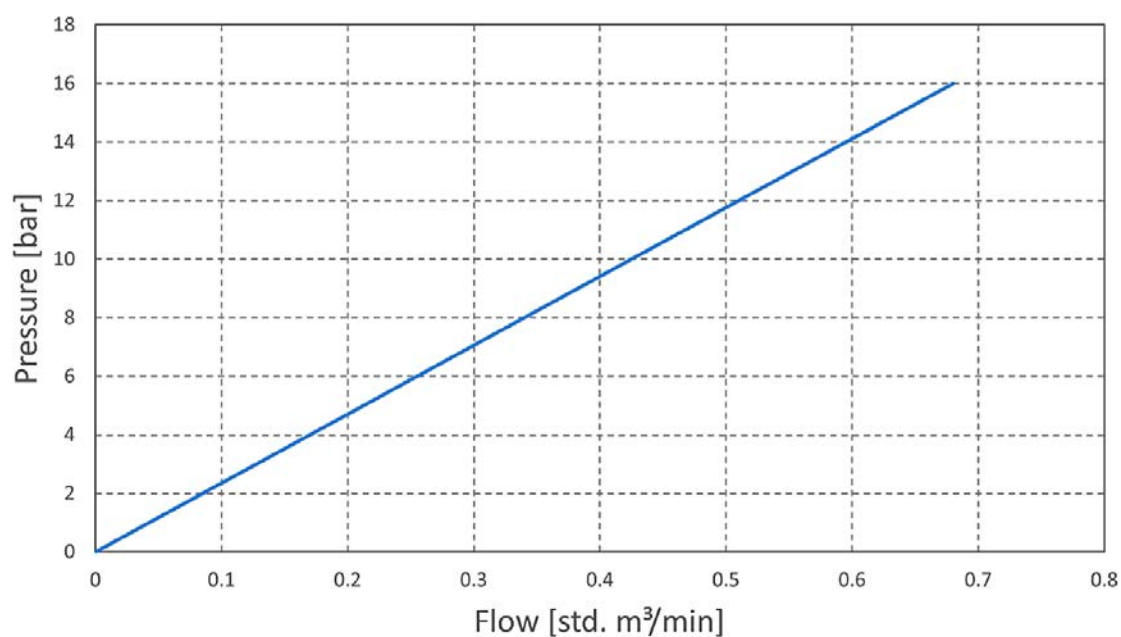
DN	OUTLINE mm				END FLANGE PN10/16 - CL125/150 mm								
					EN1092-2			ASME B16.1/B16.42			AS4087		
	A	B	C	L	D	K	n-d	D	K	n-d	D	K	n-d
50	270	165	88	125	165	125	4-Ø19	152	120.5	4-Ø19	—	—	—
65	300	165	88	125	185	145	4-Ø19	180	139.5	4-Ø19	—	—	—
80	355	240	112	125	200	160	8-Ø19	191	152.5	4-Ø19	185	146	4-Ø18
100	430	270	128	125	220	180	8-Ø19	229	190.5	8-Ø19	215	178	4-Ø18
150	480	315	158	125	285	240	8-Ø23	279	241.5	8-Ø22	280	235	8-Ø18
200	510	390	200	125	340	295	8-Ø23/12-Ø23	343	298.5	8-Ø22	335	292	8-Ø18

FLOW PERFORMANCE

Air discharge and intake - large orifice valve



Air venting - small orifice valve



DESIGN FEATURES

- Flow Media – Sewage Water
- Manufacturing standards meets BS EN 1074-4 and AWWA C512
- Spill Free - Valve will not spill before shutting off
- Keeps dirty or corrosive liquids inside the body so no harm to surrounding environment
- Outside screen to prevent ingress of insects
- Body design to lower sewage water flow speed
- Strong Float to prevent damage during water hammer
- Internal body guide and round wall to keep float moving and liquid turbulence within this area
- Large air flow through nozzle to cater for high velocity
- Fasteners Stainless Steel
- Fully FBE coated inside and outside 300 µm
- Flange Drilling in accordance to BS EN1092-2
- Optional 316 Stainless Steel floats and internals

APPLICATIONS

- water distribution system
- main transmission pipeline
- irrigation system
- fire fighting

(1) High geometrical points

To size an air valve, maximum flow rate in such point must be determined in case of pipe bursting.

(2) Negative slope changes

They are identified as descending segment slope increase or ascending segment slope decrease.

(3) Long ascending segments

If the ascending segment is long, an air release valve should be placed at the top of the section and one every 600 m./ 2000 feet to guarantee air outflow and infow during pipeline filling and draining operations.

(4) Long descending segments

Air release valve choice and placement considerations are exactly like those regarding ascending sections.

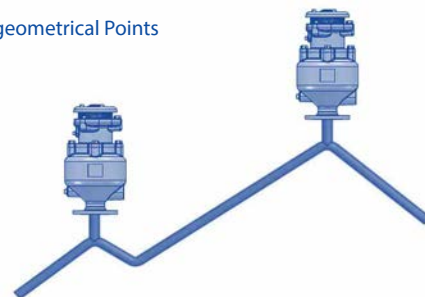
(5) Long horizontal runs

Long horizontal segments must be avoided as much as possible, but if it is not possible, we suggest to place an air release valve every 600 m./2000 feet, dimensioning them according to conduct filling operations.

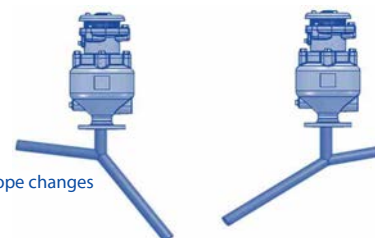
(6) Pumping station - downstream check valve

Air valve flow rate must be equivalent to pump capacity. Let's suppose a pump suddenly stops causing column separation. Conventional air valves in this point are not able to control air discharge when the two waves fronts start to join and thus they will cause a water hammer. Air vessels or special and controlled air outflow valves, are used to prevent this phenomenon.

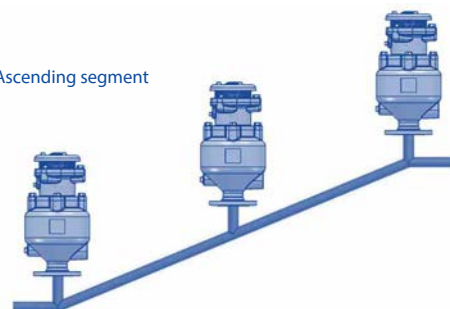
High geometrical Points



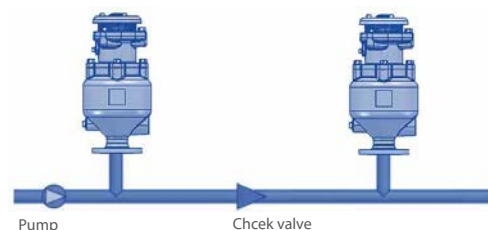
Negative slope changes



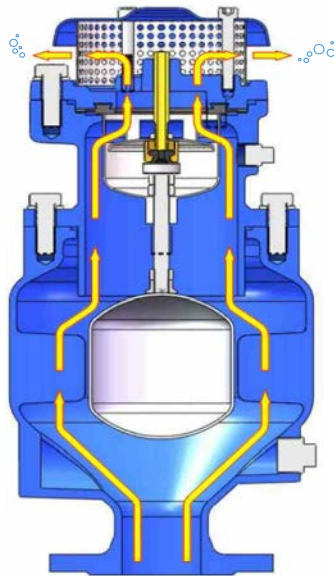
Ascending segment



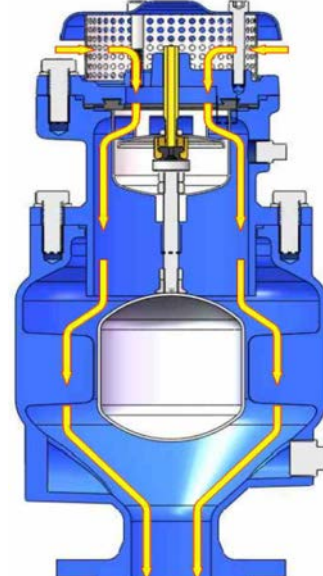
Pumping Station



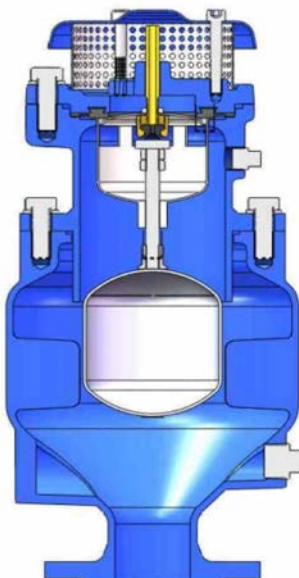
TRIPLE FOUNDCTIONS



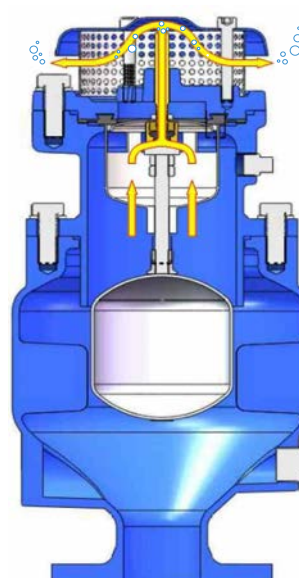
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During filling, the line will be ventilated via the large orifice with big volumn



- ② **Entrance of large volumes of air**
During pipeline drainage bring in large volumn air to avoid negative pressure

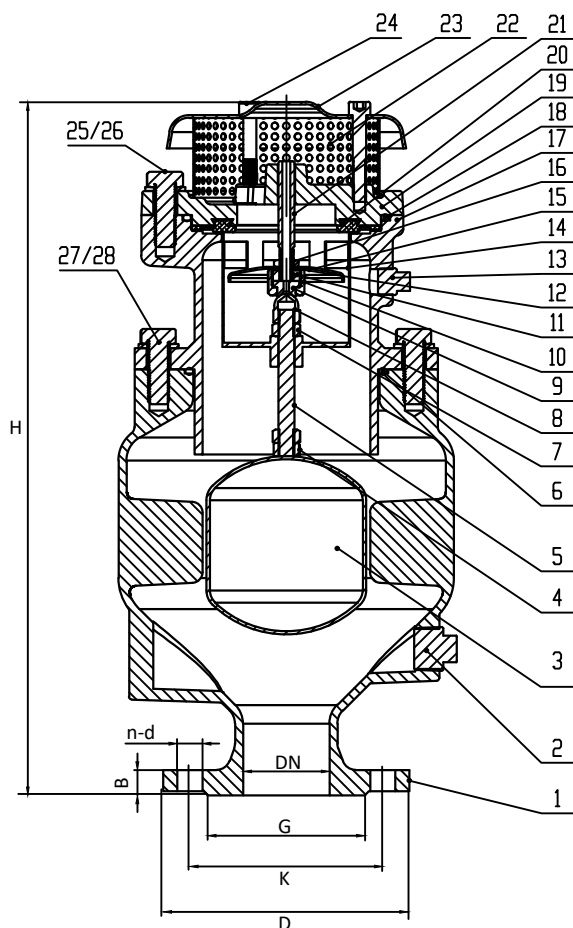
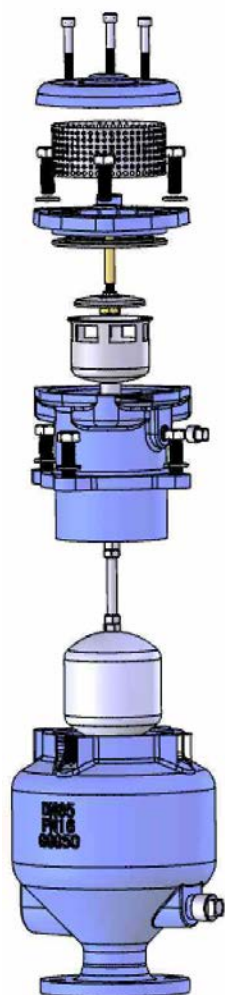


- ③ **Closure:**
After ventilation the valve closes automatically



- ④ **Release of small quantities of air:**
During operation of a line, ventilation is carried out via the top small orifice

DIMENSION, MATERIALS

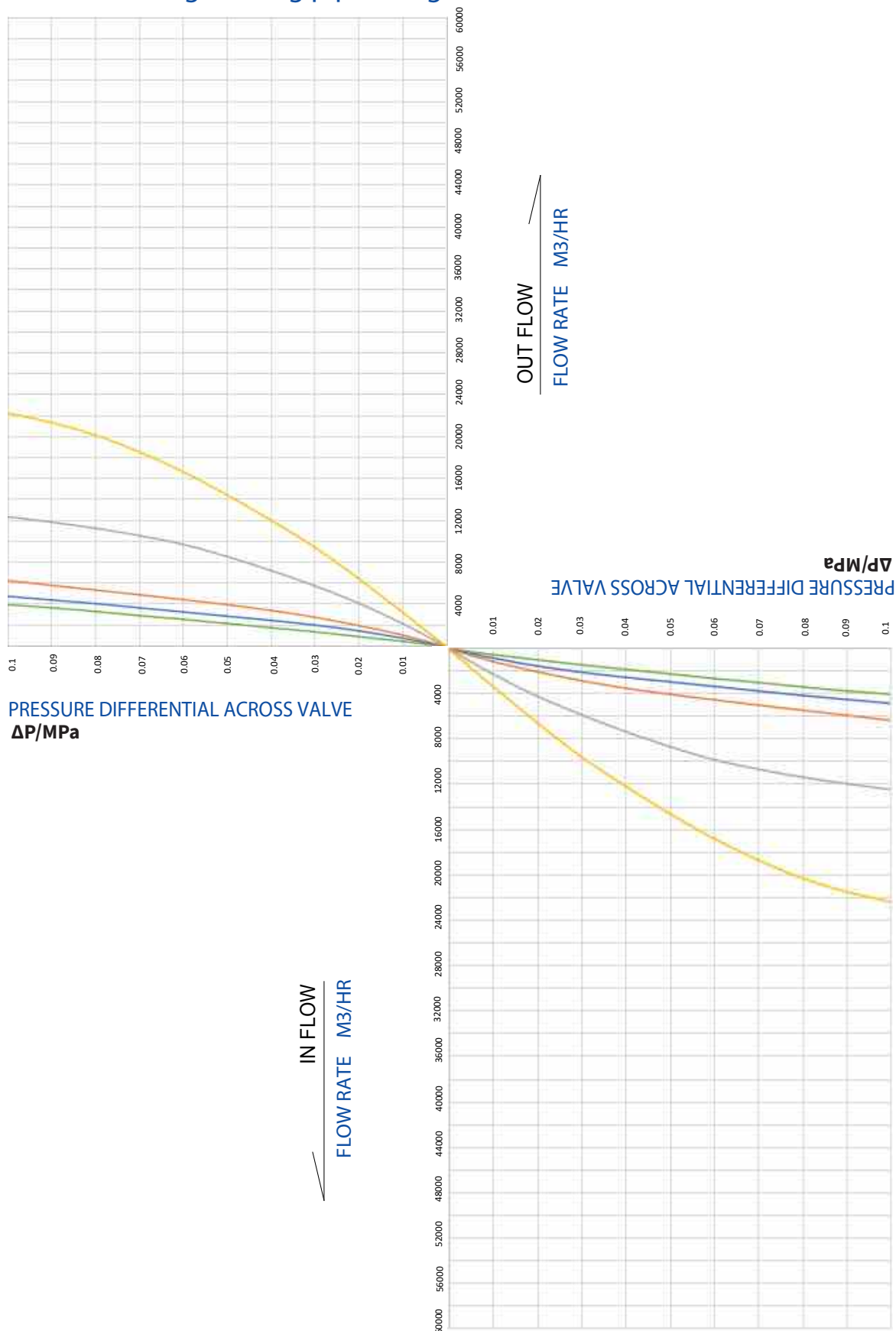


28	Flat Washer	SS304 / SS316
27	Hex bolt	SS304 / SS316
26	Flat washer	SS304 / SS316
25	Hex bolt	SS304 / SS316
24	Hex socket bolt	SS304 / SS316
23	Dust Cover	Q235
22	Screen	SS304 / SS316
21	Disc guide	Brass Cu59-1
20	Seal gasket	NBR rubber
19	Bonnet	DI EN-GJS-500/7
18	O-Ring	NBR rubber
17	Mid body	DI EN-GJS-500/7
16	Hex nut	SS304 / SS316
15	Disc	SS304 / SS316
14	Bucker float	SS304 / SS316
13	Plug	SS304 / SS316
12	O-Ring	NBR rubber
11	Lock nut	Brass Cu59-1
10	Seal sleeve	Brass Cu59-1
9	Seal plug	Silicone
8	Cap nut	SS304 / SS316
7	Hex nut	SS304 / SS316
6	O-Ring	NBR rubber
5	Float guide	SS304 / SS316
4	Hex nut	SS304 / SS316
3	Float	SS304 / SS316
2	Plug	SS304 / SS316
1	Body	DI EN-GJS-500/7
Item	Name	Material

DN	H	EN1092-2/BS4504,PN10				EN1092-2/BS4504,PN16				B
		D	K	G	n-d	D	K	G	n-d	
DN50	521	165	125	99	4-19	165	125	99	4-19	19
DN65	521	185	145	118	4-19	185	145	118	4-19	19
DN80	588	200	160	132	8-19	200	160	132	8-19	19
DN100	631	220	180	156	8-19	220	180	156	8-19	19
DN150	719	285	240	211	8-23	285	240	211	8-23	19
DN200	631	340	295	266	8-23	340	295	266	12-23	20

FLOW PERFORMANCE

inflow and Air discharge during pipe filling





AIR RELEASE VALVE SEWAGE-COMBINATION

-Small Orifice upto 4mm diameter for high speed venting

-Stainless steel float for sewerage liquid

-Triple function

Design acc. : AWWA C512/EN1074-4/CJ-T 217-2005

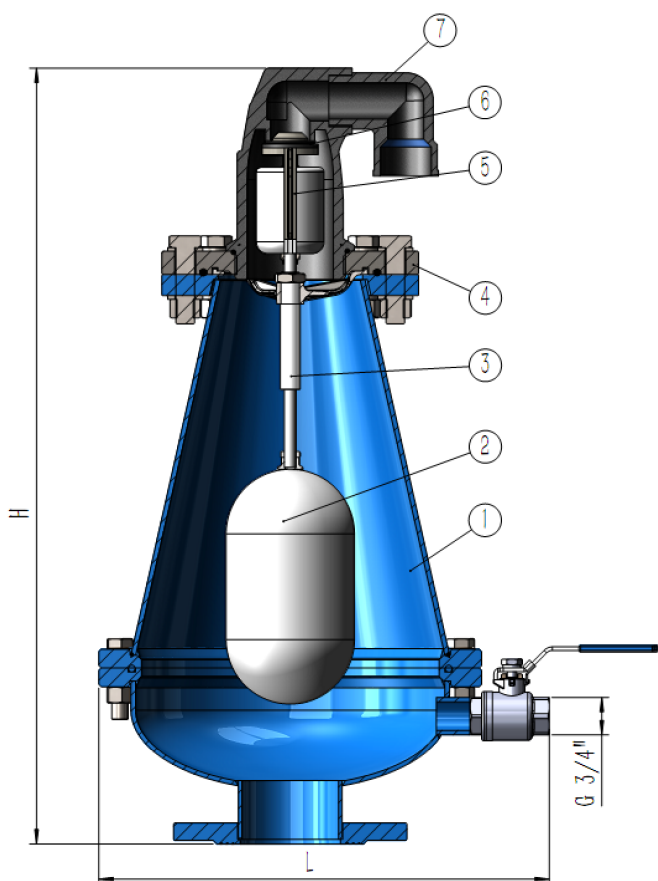
Thread acc.: BSP / ISO228-1

Flange acc.: EN1092-1/2, ASME B16.1/16.5

Testing acc. To: EN1074-1 & 4 /EN12266

Working Presssure: PN10/16, CLASS 125/150

Heavy duty epoxy coating acc. EN14901



NO.	DESCRIPTION	Material
1	BODY	C.S./DI
2	FLOAT	SS304/316
3	KINETIC BAR	SS304/316
4	TOP FLANGE	SS304/316
5	VENTING SET	PA
6	GASKET	EPDM/NBR
7	VENT COVER	PE

VALVE SIZE		2"(DN50)	3"(DN80)	4"(DN100)	6"(DN150)	8"(DN200)
H overall height	mm	640	640	640	640	640
W overall width	mm	328	328	328	328	328
A vent orifice area	square mm	12.56	12.56	12.56	12.56	12.56
K big orifice area	square mm	855/1965	855/1965	855/1965	855/1965	855/1965

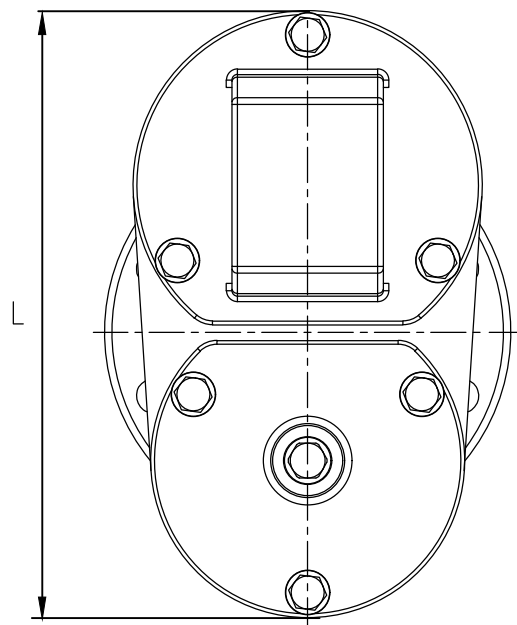
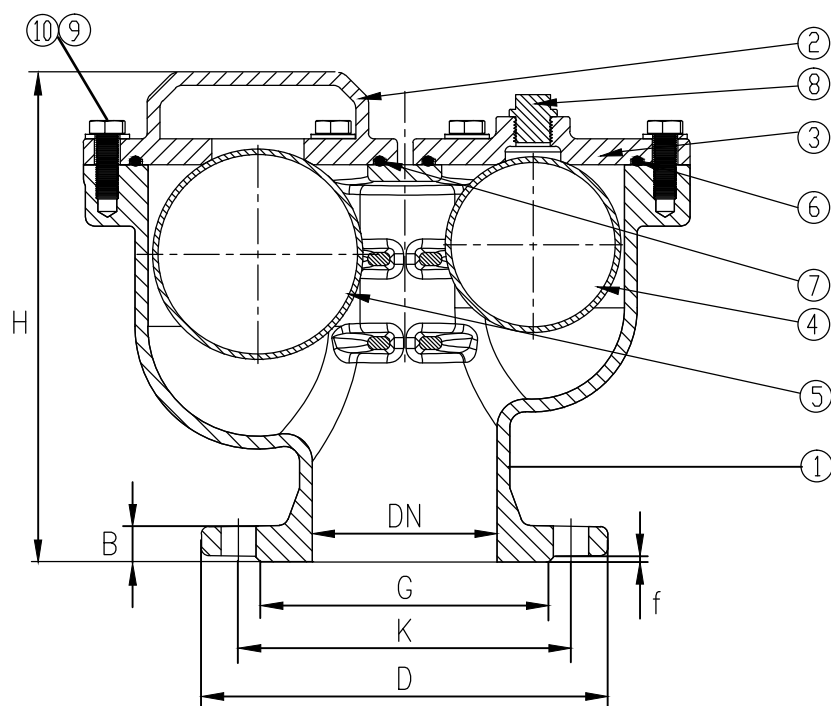
(Orifice=Outlet)

Illustrations, technical data, dimensions (all dimensions in mm) and weights (all weights in kg) are subject to alteration without notice.



AIR RELEASE VALVE DOUBLE ORIFICE- LIGHT TYPE

- to discharge a large air flow from a water pipeline
- to admit a large air flow into a water pipeline
- to purge entrapped air from pipeline under pressure
- Hydrostatic tests according to EN-12266-1, class A.
- Designed to EN-1074/4 and AWWA C-512
- Flanges to EN-1092/2, BS4504, or ANSI-150



SIZE		L	H	Flange (mm) EN1092-2, PN10/16					
DN	inch			n-d	K	D	G	f	B
*DN40	1.5"	241	200	4-φ19	110	165	99	3	19
DN50	2"	241	200	4-φ19	125	165	99	3	19
DN65	2.5"	241	200	4-φ19	145	185	118	3	19
DN80	3"	306	250	8-φ19	160	200	132	3	19
DN100	4"	329	265	8-φ19	180	220	156	3	19
*DN125	5"	394	320	8-φ19	210	285	211	3	19
DN150	6"	394	320	8-φ23	240	285	211	3	19

*DN40 drilled based on DN50 flange

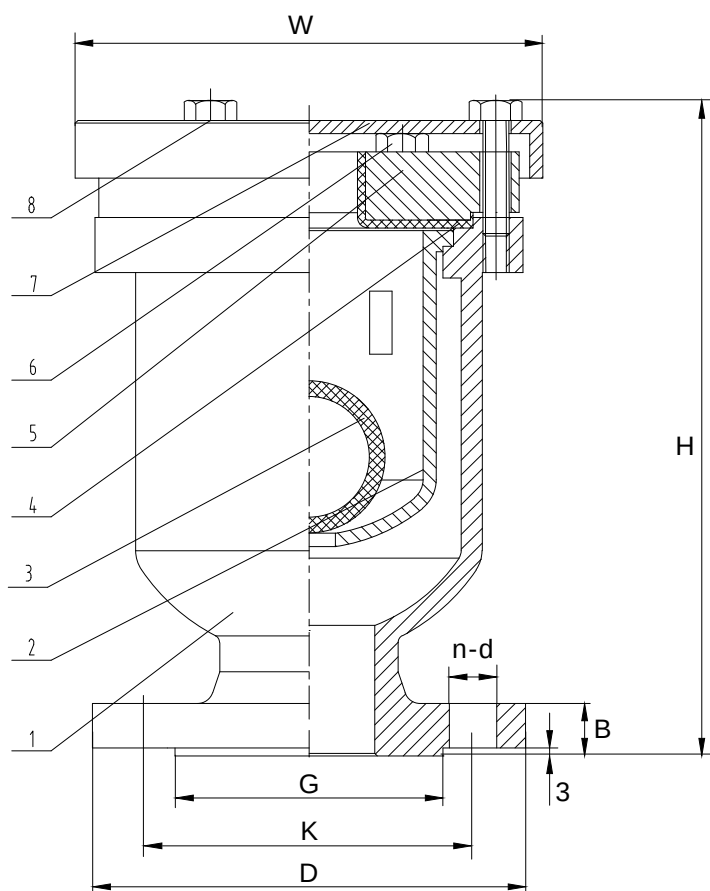
*DN125 drilled based on DN150 flange

no.	part name	material
10	Washer	AISI304 STAINLESS STEEL
9	Bolt	AISI304 STAINLESS STEEL
8	Exhaust Nut	AISI304 STAINLESS STEEL
7	O Ring	NBR
6	O Ring	NBR
5	Floating Ball	NBR/EPDM+WOOD
4	Floating Ball	NBR/EPDM+WOOD
3	Exhaust Cover	DUCTILE IRON
2	Bonnet	DUCTILE IRON
1	Body	DUCTILE IRON



AIR RELEASE VALVE SINGLE ORIFICE, TWO FUNCTION

- to discharge a large air flow from a water pipeline
- to admit a large air flow into a water pipeline
- Hydrostatic tests according to EN-12266-1, class A.
- Designed to EN-1074/4 and AWWA C-512
- Flanges to EN-1092/2, BS4504, or ANSI-150



SIZE		W	H	Flange (mm) EN1092-2, PN10/16				
DN	inch			n-d	K	D	G	B
DN40	1.5"	φ166	224	4-φ19	110	165	99	19
DN50	2"	φ178	236	4-φ19	125	165	99	19
DN65	2.5"	φ199	244	4-φ19	145	185	118	19
DN80	3"	φ202	248	8-φ19	160	200	132	19
DN100	4"	φ233	284	8-φ19	180	220	156	19
*DN125	5"	φ282	324	8-φ19	210	285	211	19
DN150	6"	φ282	324	8-φ23	240	285	211	19

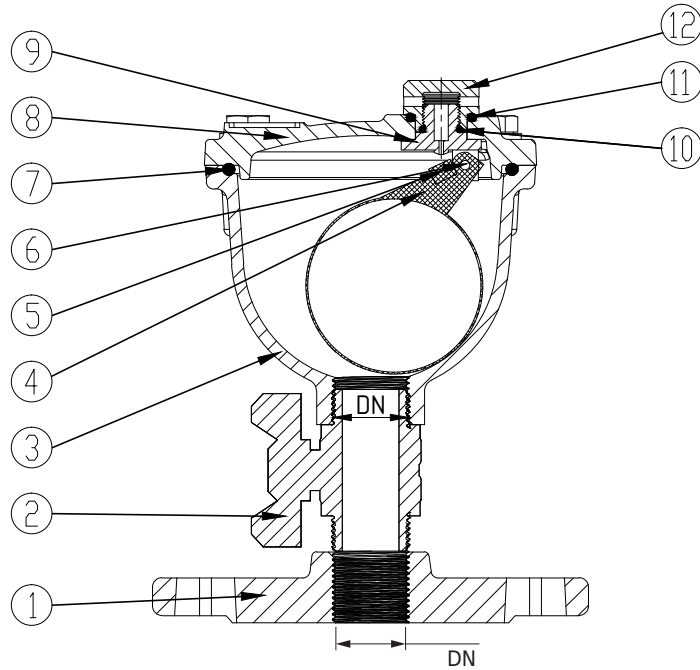
no.	part name	material
8	Bolt	CARBON STEEL
7	Outside Cover	DUCTILE IRON
6	Bolt	CARBON STEEL
5	Inside Cover	DUCTILE IRON
4	Gasket	NBR
3	Ball Float	ABS
2	Bucket	DUCTILE IRON
1	Body	DUCTILE IRON

*DN125 drilled based on DN150 flange



AIR RELEASE VALVE BSP FEMALE INSIDE THREAD

- Hydrostatic tests to EN-12266-1, class A. 1.1XPN
- Designed to EN-1074/4 and AWWA C-512
- 1" / 25mm BSP female inside thread



12	Washer	CARBON STEEL GAIVANIZED
11	Bolt	CARBON STEEL GAIVANIZED
10	Cap	BRASS
9	O Ring	NBR
8	O Ring	NBR
7	Bracket	BRASS
6	Bonnet	DUCTILE IRON
5	O Ring	NBR
4	Hinge Pin	AISI304 STAINLESS STEEL
3	Seat	EPDM
2	Float	ABS
1	Body	DUCTILE IRON

