V301
NON SLAM DYNAMIC AIR REALASE VALVE

Product Description

TVN V301 Dynamic Triple Function Air Release Valve is a unique valve operating without a float, utilizing the rolling diaphragm principle. This unique structure allows the dynamic valves to discharge air from the water system in a controlled and gradual manner, preventing slam and local up-surges. When vacuum occurs, the valves fast reaction will draw in large volumes of air into the water system, impeding down-surges and, consequently, all pressure surges in the line. The valves are normally closed when the line is not operating, thus preventing the infiltration of foreign particles and insects into the water system.

Technical Data	
Size range	DN50 - DN300
Pressure range	PN 10 -16 - 25 - 40
Temperature	-10°C to +130 °C
Design	EN 1074 - 4
Connection	EN 1092-2 ISO 7005-2 - Flanged
Coating	Thermoplastic Powder Epoxy
Testing	EN 12266-1
Marking	EN 19
Operation	Automatic

Application Range

- Water transmission
- Water distribution
- Pump suction line
- Peaks points on pipeline
- Next to by-pass valve

Related Products

- V151 Gate Valve Resilient Seated
- V106 Butterfly Valve Flanged
- V251 Dismantling Joint

IRRIGATION

POTABLE WATER

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Product Features

- Ventilation outlet in nominal size (large opening cross-section according to the flange size).
- Intake of large volumes of air on shut-off of the system, while pipelines are being drained.
- Efficient, high performance ventilation protects pipeline from vacuum related damages.
- High velocity air discharge prevents premature closure, thus safeguarding optimum ventilation during the process of filling pipelines or containers.
- Large orifice for outlet and intake of large air volumes, during filling and emptying of pipeline.
- Continuously reliable ventilation of air inlets under normal operating conditions.
- Non slam closure by the help of two stage closing design.
- Excellent corrosion protection, all stainless-steel internal parts
- The housing is made of ductile iron and coated with high quality epoxy powder All uncoated metal is stainless steel.
- High capacity inlet sectional area and outlet are equal area.
- Casting Standard: EN 1563:2011 / TS EN 1074-4 / TS EN 1092-2.
- Hydrostatic test pressure for seat: PN x 1.1 , for shell: PN x 1.5 according to EN 12266-1.

*V301 Dynamic Air Release Valve is a available for OEM branding alternative.

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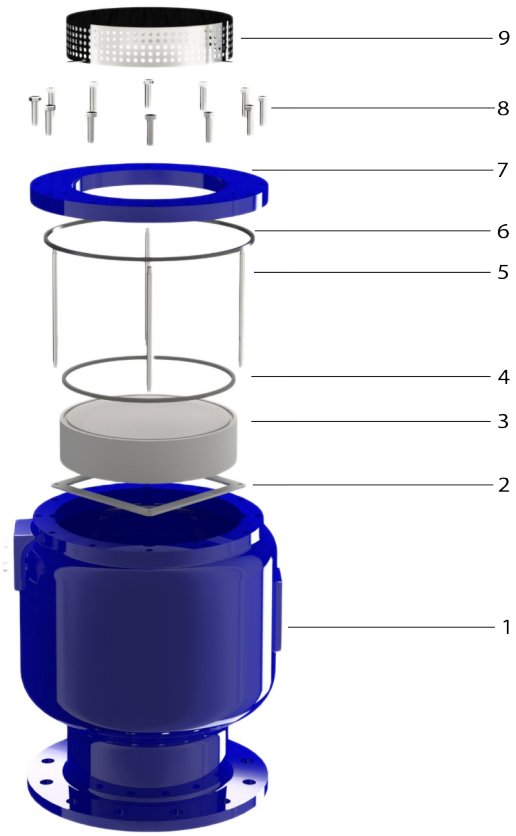
Material List



Item No	Part	Material
1	Body	Ductile Iron GGG40/50
2	Float Guide	Stainless Steel 304 / 316
3	Float	PE / AISI 304 (Optional)
4	Float Sealing	EPDM / NBR
5	Guide Pin	Stainless Steel 304 / 316
6	Bonnet Sealing	EPDM / NBR
7	Bonnet	ST 37 / GGG40
8	Bolts	8.8 / A2 / A4
9	Filter	Stainless Steel 304 / 316

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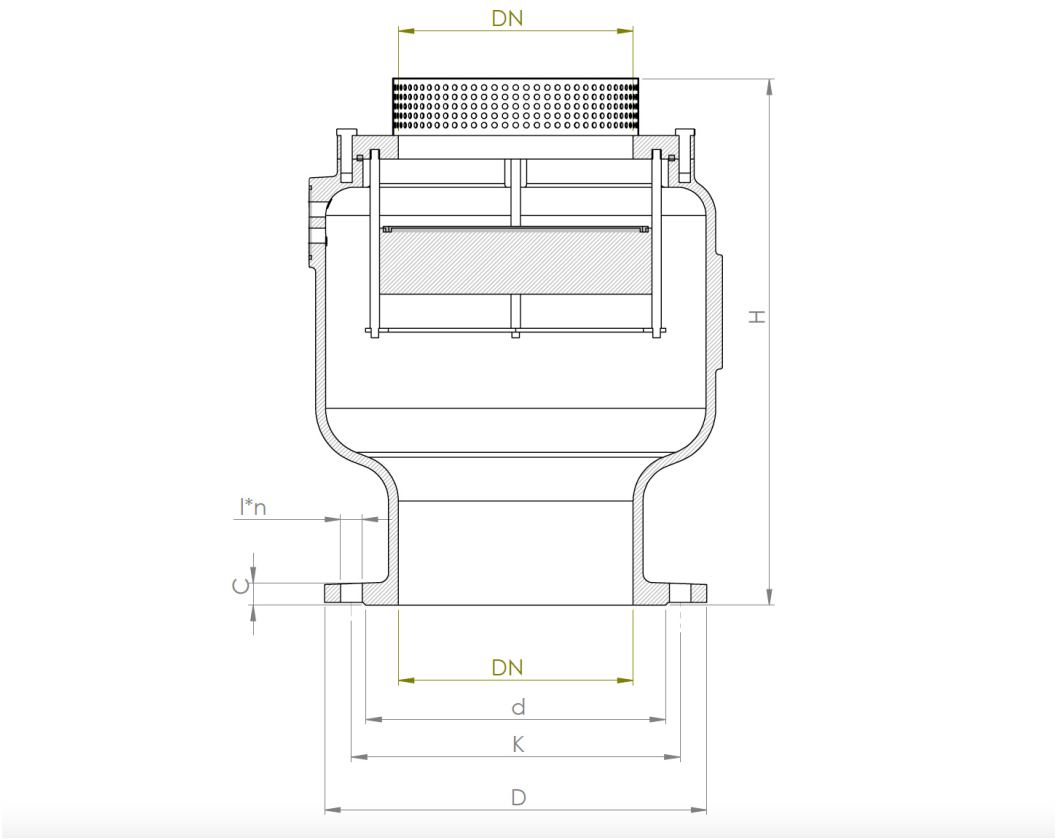
Dimensions Table



PN10							
DN	f	D	K	d	C	l*n	H
50	3	165	125	99	19	19*4	260
65	3	185	145	118	19	19*4	270
80	3	200	160	132	19	19*8	280
100	3	220	180	156	19	19*8	310
125	3	250	210	184	19	19*8	330
150	3	285	240	211	19	23*8	380
200	3	340	295	266	20	23*8	525
250	3	405	350	319	22	23*12	590
300	4	460	400	370	24,5	23*12	650

PN16							
DN	f	D	K	d	C	l*n	H
50	3	165	125	99	19	19*4	260
65	3	185	145	118	19	19*4	270
80	3	200	160	132	19	19*8	280
100	3	220	180	156	19	19*8	310
125	3	250	210	184	19	19*8	330
150	3	285	240	211	19	23*8	380
200	3	340	295	266	20	23*12	525
250	3	405	355	319	22	28*12	590
300	4	460	410	370	24,5	28*12	650

PN25							
DN	f	D	K	d	C	l*n	H
50	3	165	125	99	19	19*4	270
65	3	185	145	118	19	19*4	280
80	3	200	160	132	19	19*4	290
100	3	235	190	156	19	23*8	320
125	3	270	220	184	19	28*8	340
150	3	300	250	211	20	28*8	390
200	3	360	310	274	22	28*12	540
250	3	450	370	330	24,5	31*12	600
300	4	485	430	389	27,5	31*12	670

PN40							
DN	f	D	K	d	C	l*n	H
50	3	165	125	99	19	19*4	270
65	3	185	145	118	19	19*4	280
80	3	200	160	132	19	19*8	290
100	3	235	190	156	19	23*8	320
125	3	270	220	184	23,5	28*8	340
150	3	300	250	211	26	28*8	390
200	3	375	320	284	30	31*12	540
250	3	450	385	345	34,5	34*12	600
300	4	515	450	409	39,5	34*12	670

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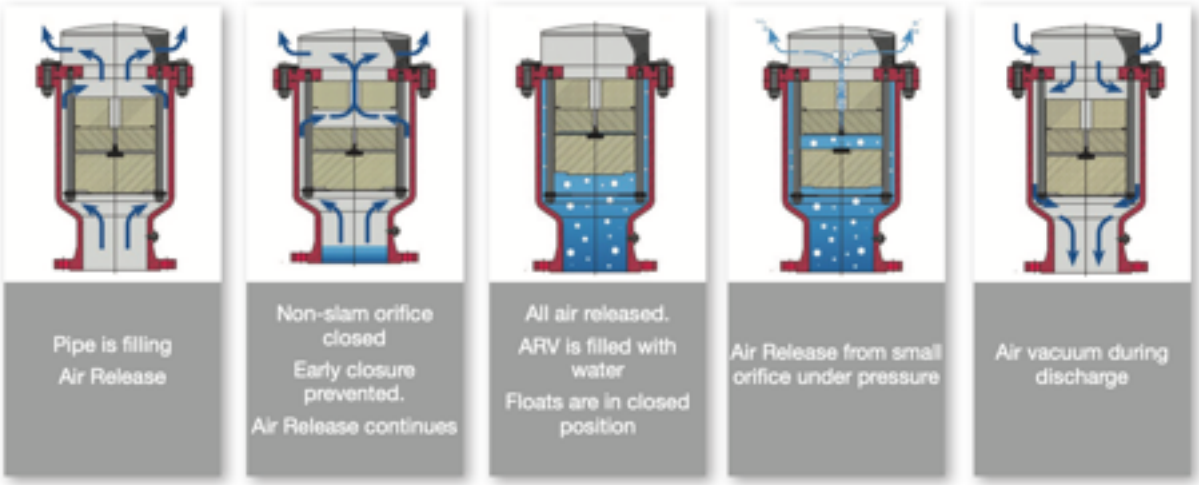
Effects of Air in Pipelines

Air release and vacuum is crucial for the pipelines during line filling and line emptying. Problems occurs when air left in the pipeline

- Pipes are already filled with water before commissioning
- %2 of dissolved air already exists in water
- Pumps absorb air while operating
- Air accumulating in the pipeline narrows the water passage area even may stop the entire flow

Dynamic Air Release Valve Working Principle



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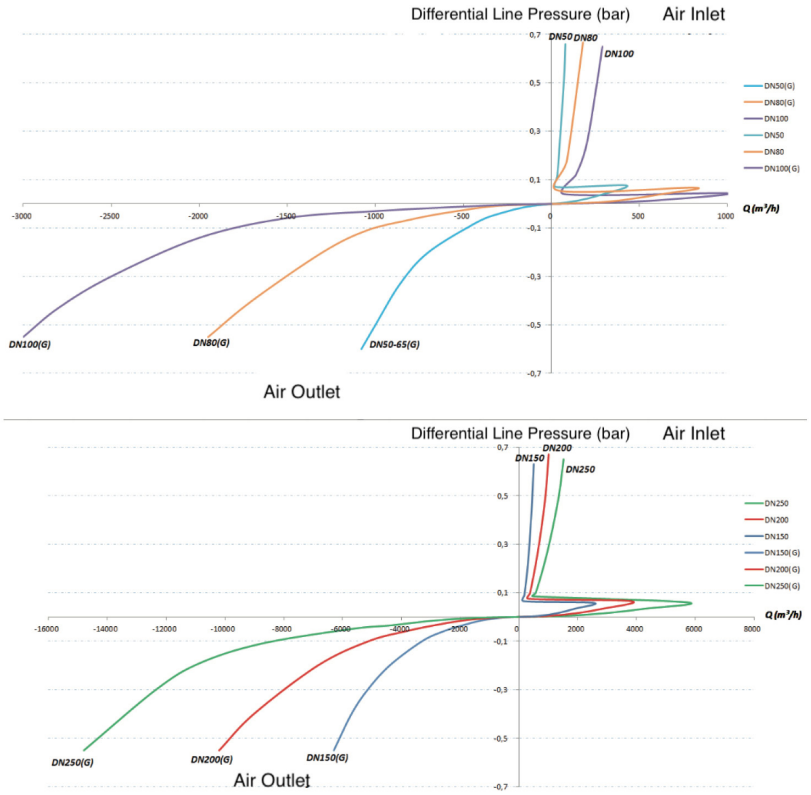
ARV Selection Criteria



Test Procedures

- Hydrostatic test
- Air release test
- Air release under pressure
- Air vacuum test
- Low pressure sealing test
- Body resistance test