DOUBLE ORIFICE NON-SLAM (KINETIC) ARV
FAF 7340



PRODUCTION STANDARTS

DN50 ➔DN300
PN 10-16-25

Design	EN 1074-4
End Connection	EN 1092-2 / ISO 7005-2
Marking	EN 19
Tests	EN 12266
Corrosion Protection	Industrial Epoxy

Features

- Double Orifice Non-Slam Kinetic ARV is installed to the pipe with a flanged connection.
- Double Orifice Kinetic ARV's are known as four function ARV's; air release, air vacuum, prevent blocking due to sudden closure and releasing air under pressure with the help of the second orifice.
- Provides a big advantage during installation and operation with its single body design and low weight.
- High resistant float parts made of PP (Polipropilen) eliminates the negative effects of deformation and abrasion.
- Ductile Iron Body, flanged connection according to EN 1092-2. Float part made of polyethylene which can be replaced easily.
- Release valves can be manufactured with flanged or screwed ends.
- Working pressure range: 0.2 – 25 bar.
- In order to prevent possible external waste in the field from entering the ARV, the filter and cover sheet has a structure that completely covers the body. The hole area of the filter is larger than the cross-sectional area of the nominal diameter and is made of stainless steel.
- Provides 100% sealing.
- The cross-sectional area of the body and the cross-sectional area of the large float at the air outlet have the minimum cross-sectional area of the valve nominal diameter. In this way, the amount of fluid entering the body increases the air discharge capacity without being subject to constriction.
- Floaters suitable for drinking water.
- To provide corrosion resistance, the body and cover are ductile iron coated with powder epoxy, while the parts in contact with the fluid are made of stainless steel.
- An aerodynamic structure that prevents premature closure without disrupting the air flow.
- HDPE floats are equipped with stainless steel guides and studs around them. These contacts ensure the precise operation of the float and minimize its wear.
- The floating element will not turn off when the air outlet speed is less than 30 m/s.

Temperature

- +70 °C

Product Description

FAF7340 Double Orifice Non-Slam Kinetic ARV; to be used for the purpose of releasing the exsiting air in the potable water transmission lines and water networks after installation or during emptying and refilling the pipeline due to maintenance works.

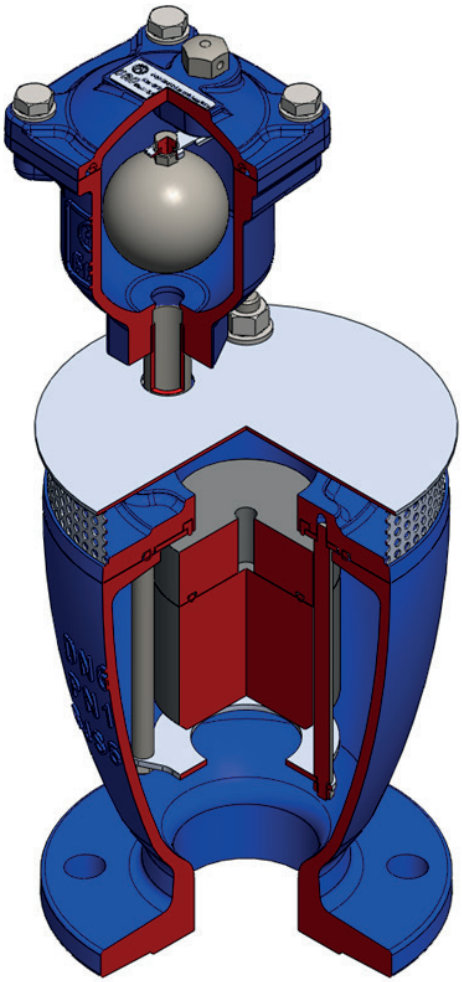
Accessories

- Gate valve, FAF6000
- Butterfly valve, FAF3500-3600
- Flange adaptor, FAF3960

Scope of Application

- Pump suction lines
- Water lines
- Water supply network
- Line valves
- Venturimeters
- Plunger & turbine pumps

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PRODUCTS MODEL CODES	
FAF7310	SINGLE ORIFICE ARV
FAF7320	DOUBLE ORIFICE ARV
FAF7330	NON-SLAM DYNAMIC ARV
FAF7340	**DOUBLE ORIFICE NON-SLAM (Kinetic) ARV**
FAF7350	COMBINATION (Underground -Street) ARV

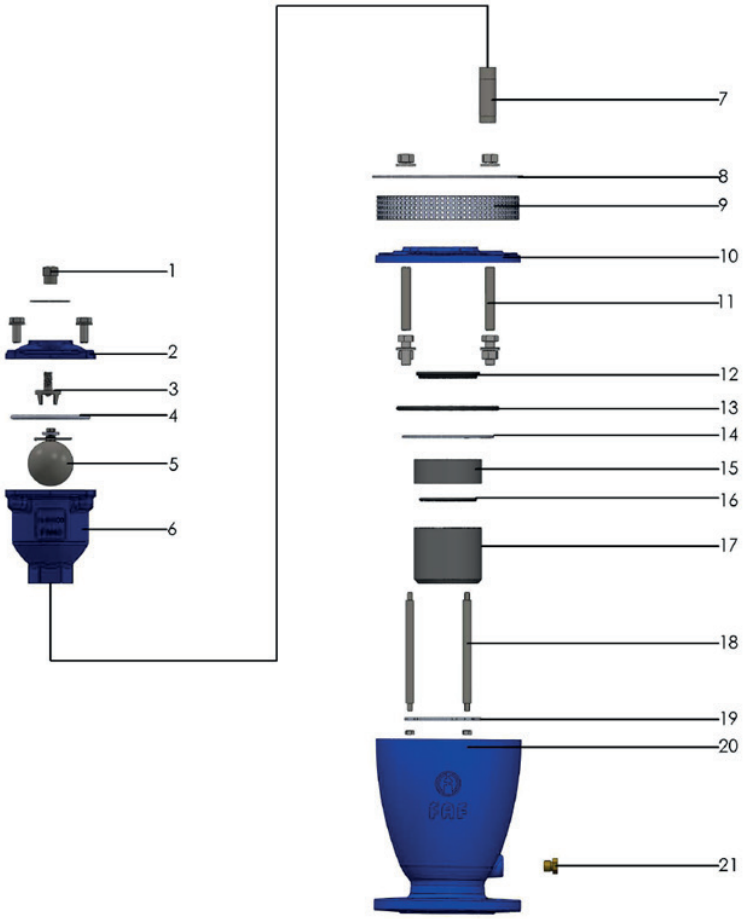
VALVE TEST PRESSURE (Bar)		
MAX. OPERATING PRESSURE	BODY / SHELL TEST	SEAT TEST
10	15	11
16	24	17,6
25	37,5	27,5
All the valves are applied to hydrostatic tests at FAF factories.		

Note

- For proper use and safety precautions please follow the installation and operating instructions.

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Material List

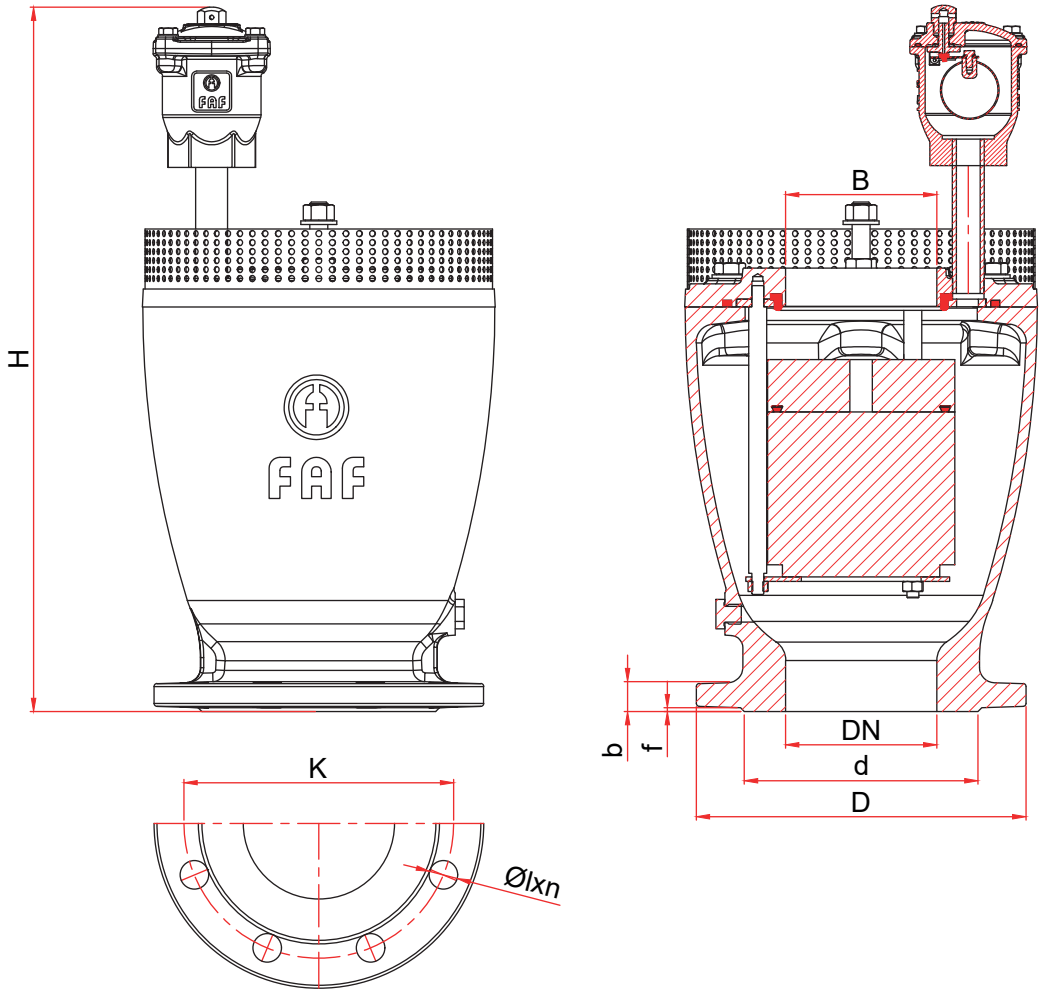


NO	ITEM	MATERIALS
1	ORIFICE COVER	AISI 420 STAINLESS STEEL
2	COVER	EN-GJS-500 DUCTILE IRON
3	ORIFICE	AISI 420 STAINLESS STEEL
4	O-RING	NBR
5	FLOAT SET	
6	BODY	EN-GJS-500 DUCTILE IRON
7	PIPE	AISI 304 STAINLESS STEEL
8	PROTECTION COVER	AISI 430 STAINLESS STEEL
9	FILTER	AISI 430 STAINLESS STEEL
10	BONNET	STEEL
11	STUD	AISI 420 STAINLESS STEEL
12	SEALING RING	EPDM
13	O-RING	NBR
14	COVER FLANGE	AISI 430 STAINLESS STEEL
15	UPPER FLOAT	HDPE
16	O-RING	NBR
17	LOWER FLOAT	HDPE
18	STUD	AISI 420 STAINLESS STEEL
19	FLANGE	AISI 420 STAINLESS STEEL
20	BODY	EN-GJS-500 DUCTILE IRON
21	DRAIN PLUG	BRASS

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Technical Details & Drawing, Dimensions



DIMENSIONS PN10									
DN (mm)	PN	D	K	d	Øl x n	f	b	H	B
50	10-16-25	165	125	99	19x4	3	19	430	50
65	10-16	185	145	118	19x4	3	19	435	65
	25	185	145	118	19x8	3	19	435	65
80	10-16-25	200	160	132	19x8	3	19	450	80
100	10-16	220	180	156	19x8	3	19	520	100
	25	235	190	156	23x8	3	19	520	100
150	10-16	285	240	211	23x8	3	19	660	150
	25	300	250	211	28x8	3	20	660	150
200	10	340	295	266	23x8	4	20	730	200
	16	340	295	266	23x12	4	20	730	200
	25	360	310	274	28x12	4	22	730	200
250	10	400	350	319	23x12	4	22	786	250
	16	400	355	319	28x12	4	22	786	250
	25	425	370	330	31x12	4	24,5	786	250
300/250	10	455	400	370	23x12	4	24,5	786	250
	16	455	410	370	28x12	4	24,5	786	250
	25	485	430	389	31x16	4	27,5	786	250

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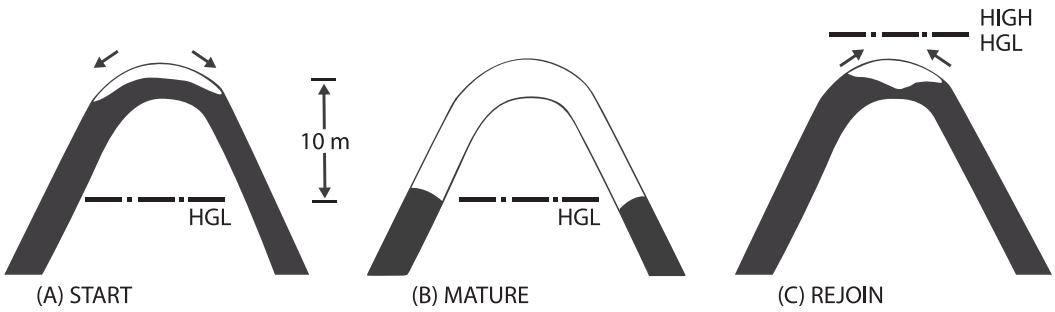
General Information About Arv's

Air vacuum and release is vital for the pipeline operation and safety. Many problems faced with the pipelines are actually related with the air left inside the pipe that cannot be released.

- Where does the air in the pipeline come from?
- Pipeline is already filled with air before filling with water.
- There exists 2% dissolved air in the water, which can vaporise by temperature change or pressure drop.
- Each pump absorbs a certain amount of air.
- Incorrect installations.

Effects of Air

- Air in the pipeline, narrows the filled water section and increases operation costs.
- Sometimes trapped air can stop the entire flow, depending on the nature of the pump
- At the peaks, the air that is trapped moves suddenly. This creates turbulence and vibration on the pipeline.
- Corrosion rate accelerates.
- Causes errors in flow meter readings.
- Effects the operation of control valves.
- In some cases, the compressed air can be caused to explosion of the pipeline.



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Pipe is filling
Air Release



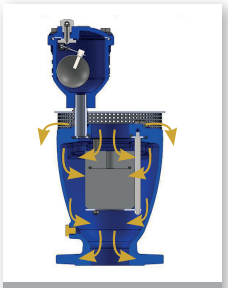
Non-slam orifice closed
Early closure prevented.
Air Release continues



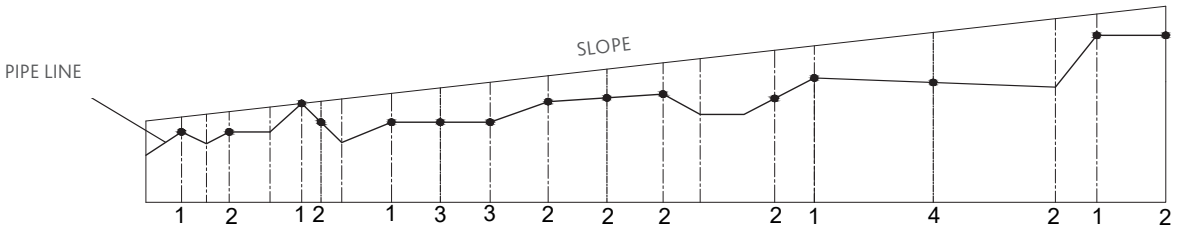
All air released.
ARV is filled with water
Floats are in closed position



Air Release from small orifice under pressure



Air vacuum during discharge



ARV placement suggestions on the pipeline

1. Full peak points
2. In case of increase in downward slope or decrease in upward slope.
3. At every 600 to 1000 mt. at long linear pipelines
4. At long sloping lines, maximum at every 600 mt.
5. At every 400-500 mt in water networks.

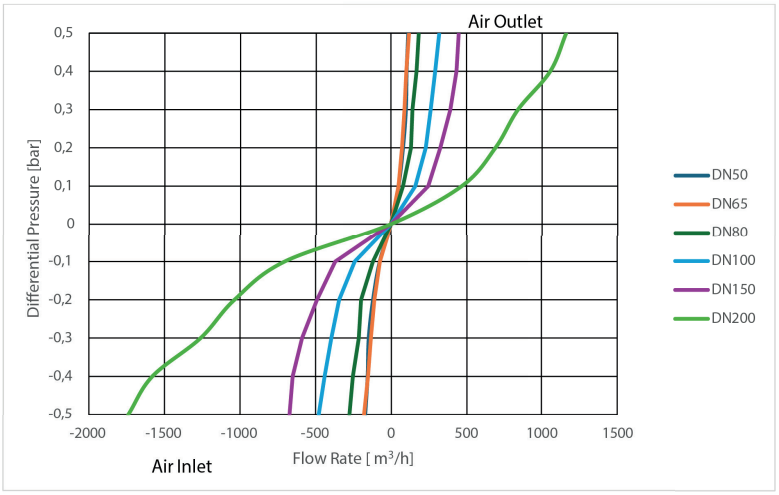
In addition to 3th and 4th item, suggested ARV placement range can be calculated as PIPELINE DIAMETER DN (mm) X 1 (mt).

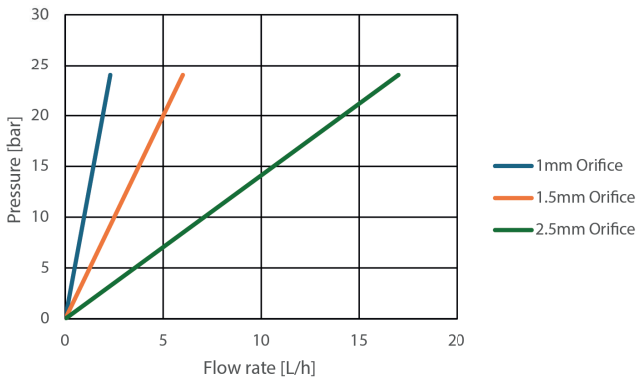
(DN1000 mm X 1mt. = 1000 mt)

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ARV Selection Criteria





ORIFICE SELECTION	
ARV Size	Orifice Size
DN50	1 mm
DN65	1 mm
DN80	1.5 mm
DN100	1.5 mm
DN150	1.5 mm
DN200	2.5 mm
DN250	2.5 mm
DN300/250	2.5 mm

Recommended ARV Sizes According to Pipe Diameters	
Pipe Inner Diameter - mm	ARV - DN
65 - 150	50
200 - 250	65
300 - 400	80
450 - 600	100
700 - 900	150
1000 - 1200	200
1400 - 1600	250
1800 - 2000	300

ARV Acceptance Test Requirements

1. Resistance Test
2. Hydrostatic Test
3. Low Pressure Sealing Test
4. Air Release
5. Air Release under pressure
6. Vacuum tests