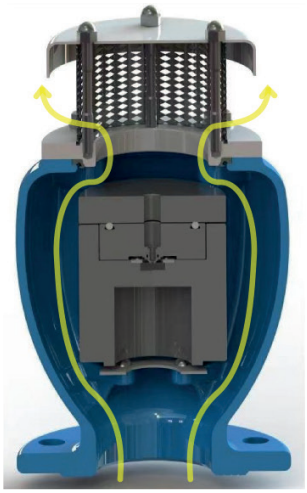
AIR VALVES 4F3F - A500

Specifications

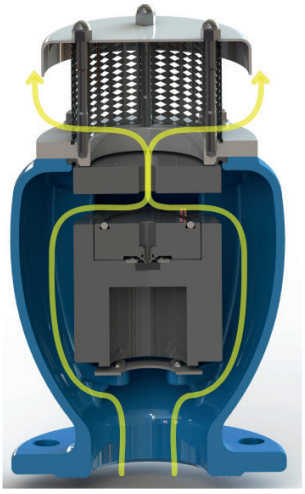
DN mm	DN 50 - DN 300
DN inch	2 - 12”
Temperature	0°C to 70°C
Type of body	Flanged
Application	Main transmission lines, water distribution networks, irrigation systems
Flange	PN10, PN16, PN25, PN40
Flange standard	BS EN1092-2 PN10-16-25-40, ANSI Class 125-150-250
Design and Test Standard	Designed in compliance with EN-1074/4 and AWWA C-512 epoxy painting applied through fluidized bed technology blue RAL 5005
Medium	Clear water
Pressure	Minimum 0.2 bar (lower on request) - maximum 40 bar
Option	Customized changes on the flanges and painting on request.

Advantages

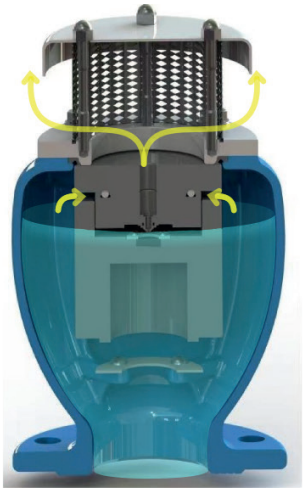
1. Single chamber with a golden ratio design to generate fantastic outline.
2. Full bore and reduced bore body in ductile iron and stainless steel, maximum PN 40 bar rated, provided with internal ribs for accurate guiding of the floats.
3. Aerodynamic flow path of air discharge, air release and air entrance.
4. Tangential drainage to ensure fully drain.
5. Composed of cylindrical floats achieve miscellaneous functions.
6. Replacement between three floats and two floats can be easily performed from the top.
7. Stainless steel plate under the bottom float to eliminate surged flow impact to the floats in short time.
8. Nozzle can be different port size to fit for demands of different valve models.
9. Flat venting screen in stainless steel as a standard to prevent the entrance of insects, while umbrella venting screen as a premium.



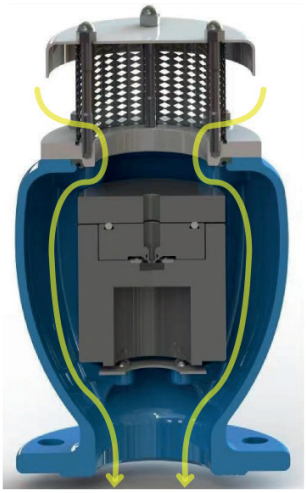
Discharge significant air volumes
When filling the pipe, it's essential to release air while water enters. The A500 equipped with an aerodynamic full-port body and deflector, ensures the prevention of premature closures of the mobile block during this phase.



Regulated Outflow
During pipe filling, if the differential air pressure surpasses a specific threshold without control, there is a potential risk of water hammer and system damage. In such a scenario, the PP top float will automatically rise, diminishing the outflow and consequently slowing down the



Air Release in Operational Conditions
While in operation, the air generated by the pipeline accumulates in the upper section of the air valve. Gradually, it undergoes compression, and the pressure reaches the water pressure level. Consequently, its volume expands, pushing the water level downward and facilitating the release of air through the nozzle.

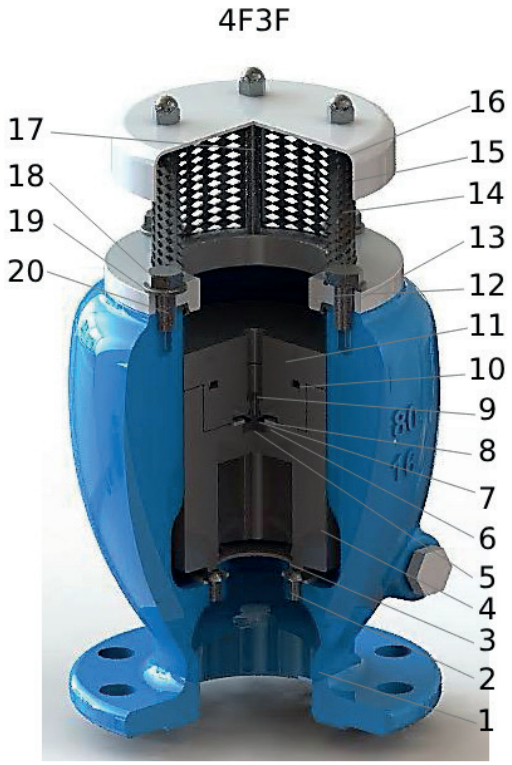


Inflow of Significant Air Volumes
During pipeline drainage or pipe bursts, it is essential to introduce an equivalent amount of air as the outflowing water to prevent negative pressure and potential serious damage to the pipeline and the entire system.

Dimensions

DN	⌀ D (mm)				⌀ K (mm)				N-⌀ d (mm)				Full Bore		Reduced Bore	
mm	PN10	PN16	PN25	PN40	PN10	PN16	PN25	PN40	PN10	PN16	PN25	PN40	H (mm)	Weight (kg)	H (mm)	Weight (kg)
50	165				⌀ 125				⌀ 4-19				220	14	-	-
80	200				⌀ 160				⌀ 8-19				300	25	220	16
100	220		235		⌀ 180		⌀ 190		⌀ 8-19		8- ⌀ 23		370	33	300	27
150	285		300		⌀ 240		⌀ 250		⌀ 8-23		⌀ 8-28		520	68	370	38
200	340		360	375	⌀ 295		⌀ 310	⌀ 320	8-⌀ 23	12-⌀ 23	12-⌀ 28	12-⌀ 31	650	125	520	74
250	395	405	425	450	⌀350	⌀ 355	⌀ 370	⌀ 385	12-⌀ 23	12-⌀ 28	12-⌀ 31	12-⌀ 34	800	180	650	135
300	445	460	485	515	⌀ 400	⌀ 410	⌀ 430	⌀ 450	12-⌀ 23	12-⌀ 28	16-⌀ 31	16-⌀ 34	980	280	800	200

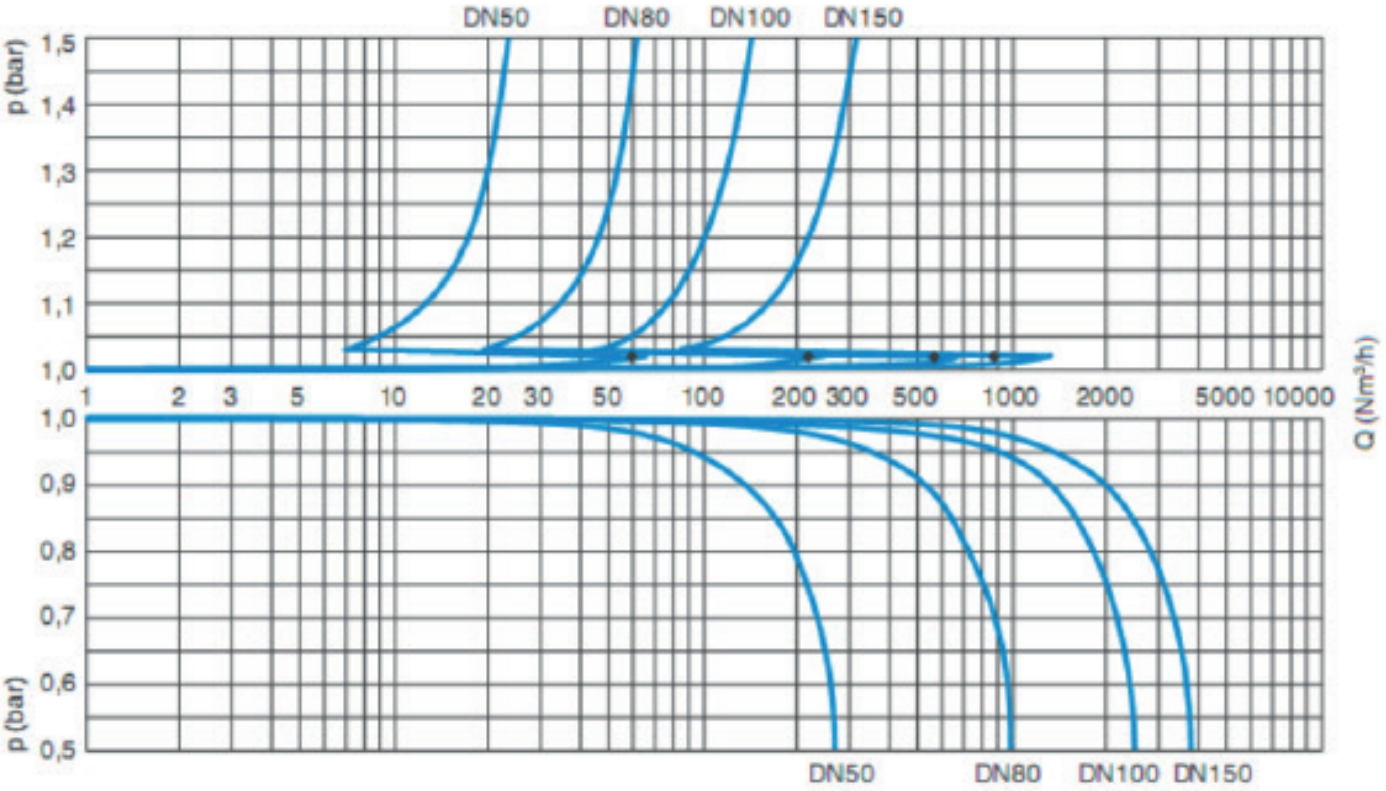
Nomenclature



Designation	Materials	Remarks
1.Valve body	DI	
2.Screw	A2	
3.Plate Ring	SS304	
4.Lower float	PP	
5.Seal	EPDM	
6.Seal retainer	SS304	
7.Screw	A2	
8.Middle float	PP	For 4F3F model only
9.Nozzle	SS304	
10.Oring	NBR	For 4F3F model only
11.Top float	PP	
12.Seal ring	FKM	
13.Top flange	SS304	
14.Screen	SS304	
15.Cap	SS304	
16.Screw	A2	
17.Bolt	A2	
18.Nut	A2	
19.Washer	A2	
20.Bolt	A2	

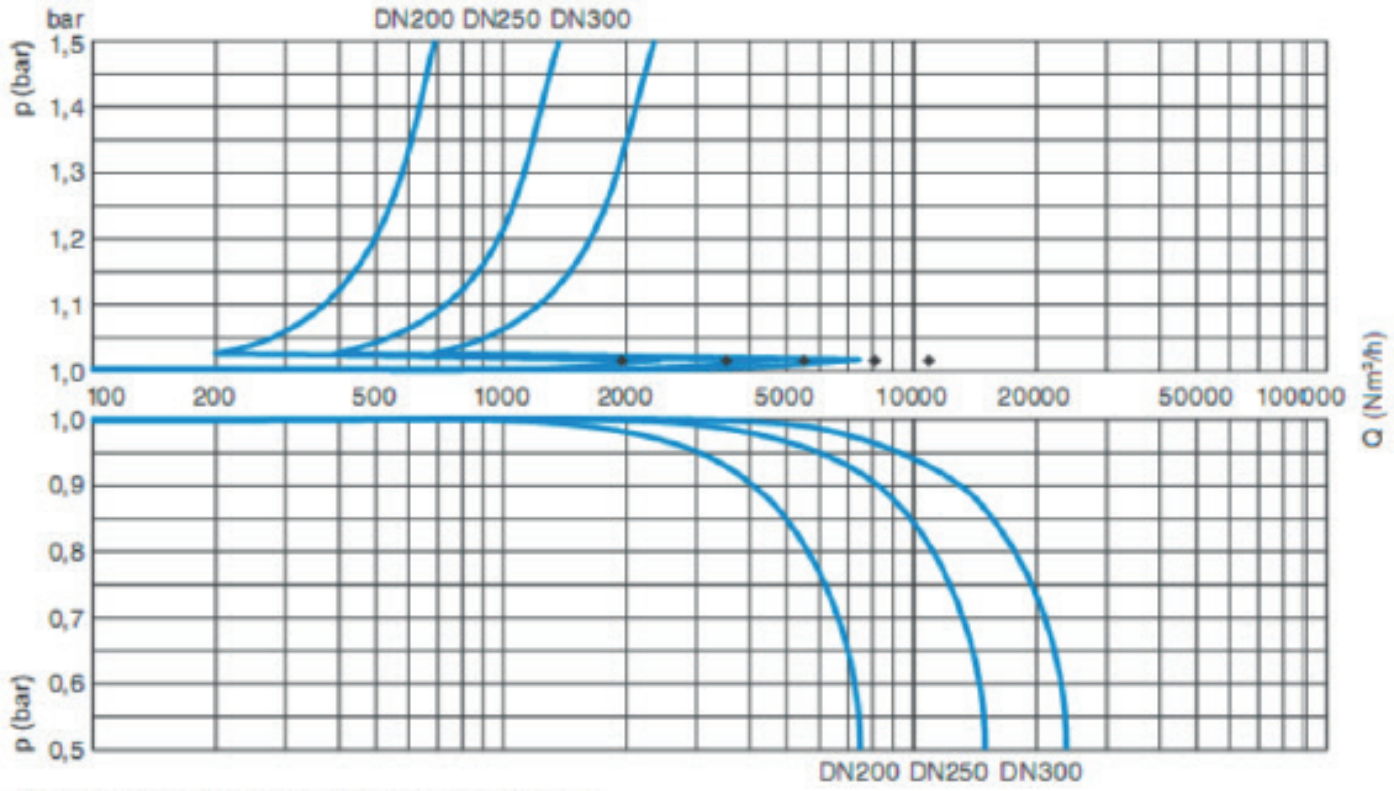
Air Performance

AIR DISCHARGE DURING PIPE FILLING



AIR ENTRANCE DURING PIPE DRAINING

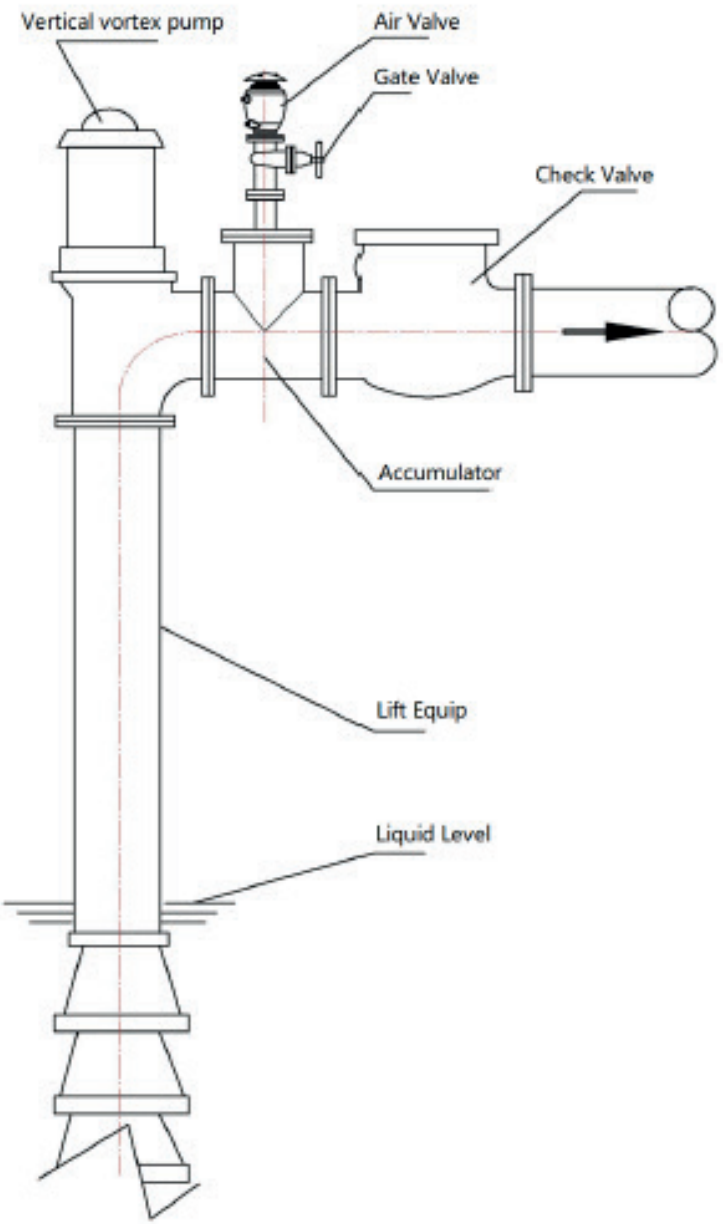
AIR DISCHARGE DURING PIPE FILLING



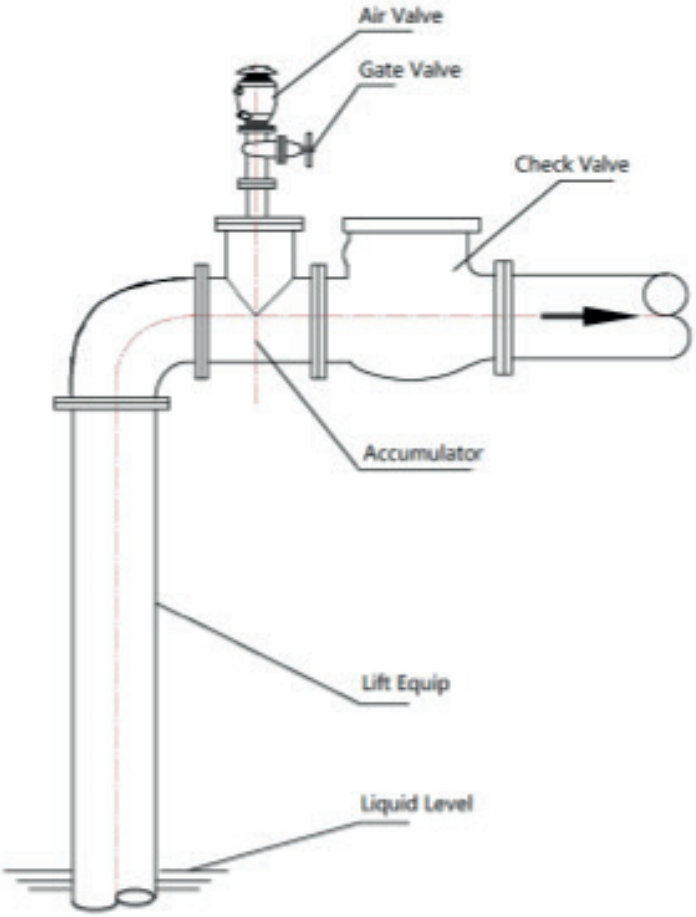
AIR ENTRANCE DURING PIPE DRAINING

Installation Suggestion

Vertical Vortex Pump Application



Well Application



Centrifugal Pump Application