

Air Release Valve

The Supreme Industries Ltd., is an acknowledged leader of India's plastic industry. It is credited with pioneering several path breaking products and has been a torch bearer in the transition from conventional to advanced plastic piping products in the country. Its customer centric approach fuels its research for designing unmatched quality products to meet the aspirations of its quality conscious customers. The innovative product portfolio offered by Supreme is extensive in range and application and comprises variety of pipes and vast spectrum of fittings totaling over 8000 diverse products.

'**Air Release Valve**' installed to release the air automatically when a pipeline is being filled and also to permit the air to enter in the pipeline when it is being

emptied. Additionally air valve also release any entrapped air which might accumulate at high points in the pipeline during normal operations. In the absence of ARV, accumulated air and vacuum can cause problems like pipe rupture, bursting, squeezing etc. Thus, ARV is very much required to protect the pipelines and to protect the metering devices and control valves from damages. This valve can be used for variety of applications including lift irrigation, water supply and housing projects etc. Considering this requirement Supreme has introduced Air release valve in engineering plastics which are quite strong and sturdy and provides permanent solution to the problems.

Unique Features

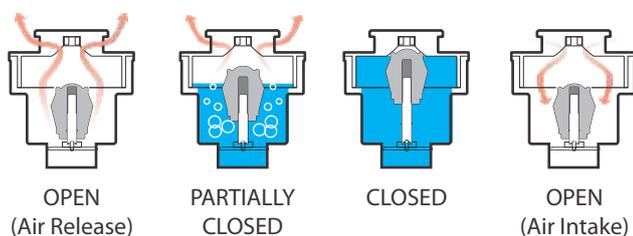
- Compact double action design
- Lighter, simple and reliable
- Robust construction made from composite plastic
- Durable to last a lifetime
- Easy to install and maintain
- Excellent chemical and corrosion resistance
- UV stabilized
- Available in ¾" to 2" sizes



Need of Air Release Valves in a Pipeline

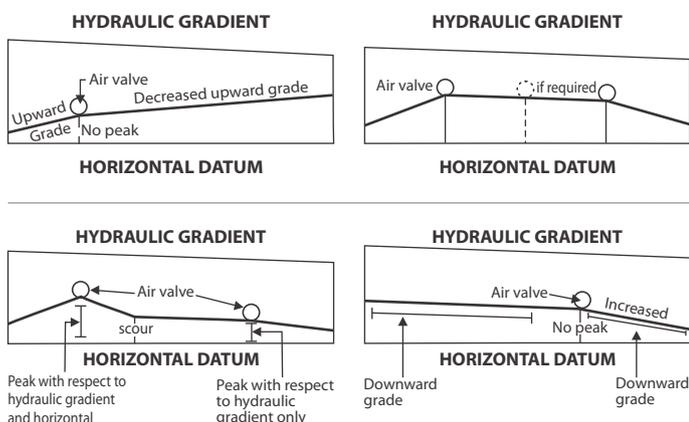
Entrapped air in pressure piping system can adversely affect its operation. Air pockets in pipe reduces the effective cross section of the pipe, this reduces the flow efficiency and increases power required for pumping. Big air pockets can create flow restrictions called as airlocks. This causes pressure surge, pipe rupture, damages etc. On the other hand, when negative pressure develops in the system, there is a need of air to get admitted into the pipeline to protect it from squeezing.

Working Mechanism



Supreme double action Air Release Valve is designed to expel the air from the pipeline and also to allow the air into the pipeline. Initially when the float of valve is at the bottom rest position, air travelled with flowing water through the empty pipeline is released through top orifice of the valve. As the air is fully released and water reaches to the valve, the float is lifted up with water and valve is sealed and does not allow water to go out. When pressure in the pipeline falls below atmospheric pressure the float drops to its original position and orifice opens to admit the air into the system immediately.

Diagrams Showing use of Air Valves



Product Range

Std. Dia. (mm)	Pressure Class	Type of Joint
20	PN 10	Female Threaded
25	PN 10	Male Threaded
32	PN 10	Male Threaded
40	PN 10	Male Threaded
63	PN 10	Solvent Weld

Applications

- Lift Irrigation projects
- Drinking water supply lines
- Agricultural and drip irrigation supply lines
- Housing projects
- Any pressure or non pressure pipelines

Installation Procedure

1. Size and locations of the air release valve should be decided in consultation with the engineer, normally size of air release valve should be 1/4th to 1/6th of the pipe diameter.
2. Hole on the pipeline should be made of full size in accordance with size of the branch pipe used for connecting valve.
3. Service saddle or strap saddle should be used for making the branch connection for fixing air release valve.
4. For fixing ARV on branch connection MTA or FTA should be used.
5. After installation, ensure that air valve is operating properly without any leakage.
6. Air valve should be properly protected by suitable encasing or by constructing the chamber around it.
7. Air valves should be periodically opened and cleaned, if required ball or sealing element should be replaced.
8. It is recommended that the air valve should be installed at a distance of every 1200 feet for trouble free operation of the pipeline.
9. For safe operation of pressure piping system, generally air valves should be provided at all peaks with respect to maximum hydraulic gradient. Additionally it is required just after the pump in delivery line.

The Supreme Industries Ltd., (Plastic Piping Division)

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