



AIR VENTS

**Rapid Initial Air Vent
Automatic Air Vent**



Free Float for Venting Air & Gas* from Liquid Piping

* Do not use for toxic, flammable or otherwise hazardous fluids.

No failure-prone levers or hinges. Only one moving part, the free float, eliminates concentrated wear and provides long, maintenance-free service life.

- **Rapid Initial Air Vent**
VAS
VA1/VA4/VA5
VS1A
- **Automatic Air Vent**
VC2/VC4
VS1C



Precision-ground float with three-point seating provides the tightest seal at high water level.

- **Rapid Initial Air Vent**
VS1A
- **Automatic Air Vent**
VS1C



VAS



VA Series



VS1A



VC Series



VS1C

Rapid Initial Air Vents

VAS / VA Series / VS1A

Used for venting large amounts of initial air at system start-up. Once the valve closes after discharging initial air, it will not open again, even if air accumulates inside the product, until the internal pressure drops to near atmospheric pressure.



If air is expected to accumulate in the piping during operation, use together with an automatic air vent.

Automatic Air Vents

VC Series / VS1C

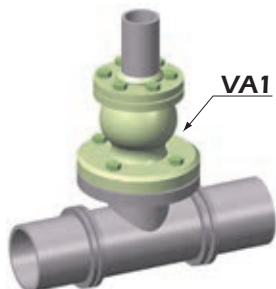
Discharge air or gas automatically as it enters the vent at start-up and during operation. Facilitates drainage of the system by introducing air at system shutdown.



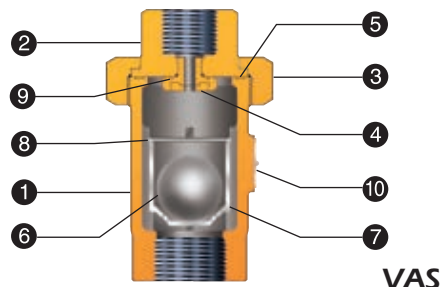
If a large volume of air needs to be discharged at start-up, use together with a rapid initial air vent.

Rapid Initial Air Vents

Application Example

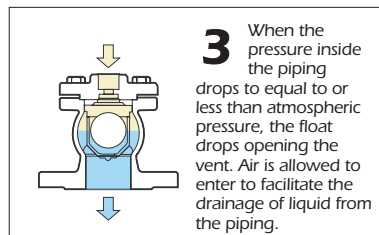
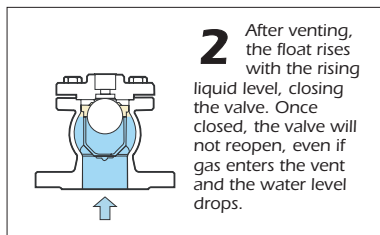
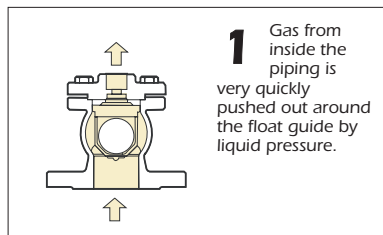


- Simple construction and trouble free operation
- Only one moving part, the free float, eliminates concentrated wear and provides long service life
- Precision-ground float and valve seat rubber contact assures seal tightness when vent is closed
- Also functions as a vacuum breaker



No.	Part Name	No.	Part Name
①	Body	⑥	Float
②	Union	⑦	Float Guide
③	Cap Nut	⑧	Snap Ring
④	Valve Seat	⑨	Union Gasket
⑤	Valve Seat Gasket	⑩	Nameplate

Rapid Initial Air Vent Operation: VA Series

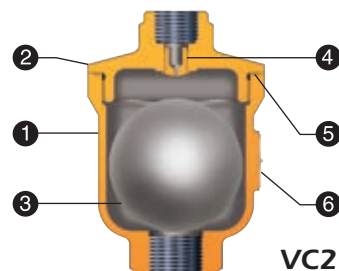


Automatic Air Vents

Application Example



- Simple construction and trouble free operation
- Only one moving part, the free float, eliminates concentrated wear and provides long service life
- Precision-ground float and valve seat rubber contact assures seal tightness when vent is closed
- Also functions as a vacuum breaker

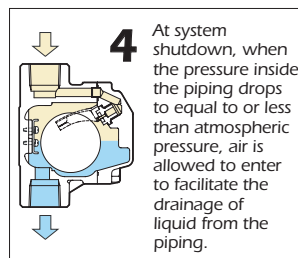
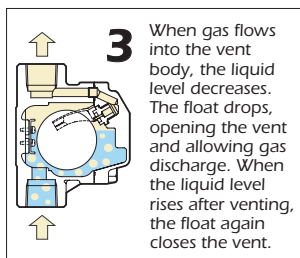
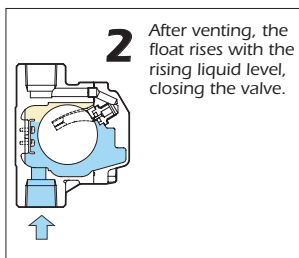
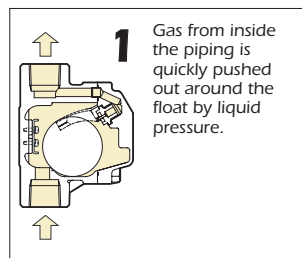


No.	Part Name
①	Body
②	Cover
③	Float
④	Valve Seat
⑤	Cover Gasket
⑥	Nameplate

VS1C

- Works in liquids with low specific gravity ($\rho \geq 0.8$)
- High corrosion resistance due to stainless steel body and fluorine rubber (FPM) valve seat
- Useable with high pressures and temperatures

Automatic Air Vent Operation: VS1C



X-element for Venting Air & Gas from Steam Systems

LA Series

Remove air from steam systems and shorten start-up time. Facilitates drainage of the system by introducing air at system shutdown.



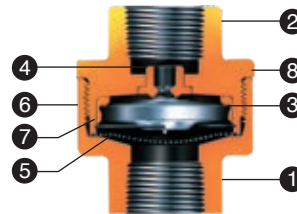
What is the X-element?

A multi-diaphragm valve mechanism filled with a thermoliquid which opens and closes the vent at a temperature approximately 40 °F less than saturated steam temperature, allowing the discharge of any air or gas.

Application Example



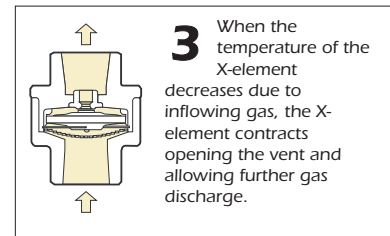
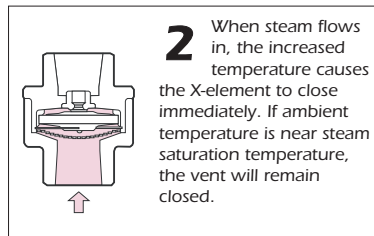
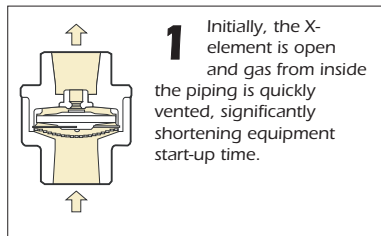
- Vents hot air up to approx. 40 °F below saturated steam temperature
- Fail-open mechanism
- High heat resistance
- Compact with large venting capacity



LA21

No.	Part Name
①	Body
②	Cover
③	X-element
④	Valve Seat
⑤	Screen
⑥	Nameplate
⑦	Snap Ring
⑧	Cover Gasket

Automatic Air Vent for Steam Operation: LA Series



Selection Guide

Air Vent Class	Medium	Piping Direction	Operating Pressure Range (psig)	Max. Operating Temp. (°F)	Max. Venting Capacity (scfm)*	Body Material	Model	
Rapid Initial Air Vent	Water, Hot Water	Vertical Piping	1.5 – 150	212	18	Cast Iron	VAS	
					140		VA1	
					620		VA4	
					1190		VA5	
	Special Fluids (Non-Toxic and Non-Flammable)	Vertical Piping	1.5 – 300	302 (428 with optional metal valve seat**)	103	Cast Stainless Steel	VS1A	
Automatic Air Vent	Water, Hot Water	Vertical Piping	7 – 75	194	0.9	Bronze	VC2	
			15 – 150		14	Cast Iron	VC4	
			Special Fluids (Non-Toxic and Non-Flammable)	1.5 – 150	302 (428 with optional metal valve seat)	6.0	Cast Stainless Steel	VS1C-10
				1.5 – 300		4.4		VS1C-21
Automatic Air Vent	Steam	Vertical Piping	1.5 – 300	455	70	Cast Stainless Steel	LA21	

* Capacities are equivalent capacities of air at 68 °F under atmospheric pressure. Pressure differential is 15 psi for rapid initial air vents, and maximum operating pressure for automatic air vents.

** Maximum valve leak rate: 1 lb/h

Full product details (sizes, pressures, capacities and materials) are included in the individual specification data sheets (SDS).



To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.



DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE. Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

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TLV CO., LTD.
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