



S-021

PAT. PAND.



Automatic Air Release Valve Specially Suited for Reclaimed Water

Description

The presence of air in a **reclaimed water** system can reduce the effective cross sectional flow area resulting in increased pressure loss and decreased flow.

Unwanted air may also cause water hammer and metering inaccuracies, while hastening corrosion.

The Automatic Air Release valve discharges accumulated air from the system while it is under pressure.

Operation

A.R.I. model S-021 is an automatic air release valve for **reclaimed water** systems. As the **reclaimed water** level rises and enters the valve, the float and the seal plug assembly also rise, to close the valve, drip tight. The entrapped air, which is at system pressure, creates an air pocket between the **reclaimed water** and the sealing mechanism. The conical shape of the valve body ensures complete separation of the reclaimed water from the seal plug assembly. The spring loaded connection of the float and sealing mechanism, allows for minor increases and decreases in the system pressure, without opening the sealing mechanism. As air and gas accumulate and displace the **reclaimed water** in the valve body, the liquid level is lowered and the float loses buoyancy. As the float drops the flexible rolling seal rolls away from the orifice opening. The accumulated air and gas is released through the open orifice. The liquid refills the valve and the float rises again to roll back the flexible seal against the orifice opening, which seals the orifice. The remaining air gap prevents the **reclaimed water** from reaching the sealing mechanism and interfering with drip tight sealing.

Note that automatic air valves are specifically designed to release air as it accumulates at the high points of a pressurized, operating system. Because of their inherently small orifices, they are not recommended for vacuum protection or for venting large quantities of air or gas, although they will admit some air into the system

under vacuum conditions.

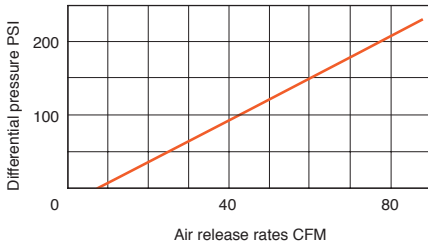
Main Features

- Working pressure range: 3-150 psi.
- Testing pressure: 250 psi.
- Working Temperature: 140^o f.
- Maximum working temperature for short time period: 194^o f.
- Conical body shape maintains maximum air gap, and spring loaded float and seal plug connection, combine to ensure no contact between the **reclaimed water** and the seal.
- Funnel shaped lower body automatically drains **reclaimed water** into the system, allowing valve internals to remain clean and unobstructed.
- Rolling, resilient seal, provides smooth positive opening, closing, and leak free sealing, over a wide range of pressure differentials.
- Internal metal parts are made of corrosion resistant stainless steel. drainage tap with ball valve is provided.
- 1/8" threaded discharge outlet enables removal of excess fluids.
- Body made of composite plastic material, resistant to corrosion.

Valve Selection

- These valves are available 1", 2" valve is also available with NPT male threads.
- Available with purple top by request.

AUTOMATIC AIR RELEASE



DIMENSIONS AND WEIGHT

Nominal Size	Dimensions				Orifice Area Sq.in	Weight Lbs.
	A	B	Internal C	external		
1", 2"	8.5	12.7	1/8	0.7	0.0186	3.9

PARTS LIST AND SPECIFICATION

No.	Part	Material
1.	Body	Reinforced Nylon
2.	Discharge Outlet	Polypropylene
3.	Rolling Seal	E.P.D.M.
4.	Clamping Stem	Reinforced Nylon
5.	Float	Foamed Polypropylene
6.	O-Ring	BUNA-N
7.	Body	Reinforced Nylon
8.	Float Stem	Stainless Steel SAE 316
9.	Clamp	Reinforced Nylon
10.	O-Ring	BUNA-N
11.	Bolt & Nut	Stainless Steel SAE 316
12.	Float	Foamed Polypropylene
13.	Base	Reinforced Nylon
14.	Seal	Reinforced Nylon
15.	Ball Valve	Stainless Steel

