S-021 PN 10

RAW WATER | SAWEGE | WATER SUPPLY

AUTOMATIC AIR RELEASE VALVE FOR RAW WATER

Description

The presence of air in a raw watre system can reduce the effective cross sectional flow area resulting in increased pressure loss and deceased flow.
Unwanted air may also cause water hammer and metering inaccuracies, while hastening corrosion.

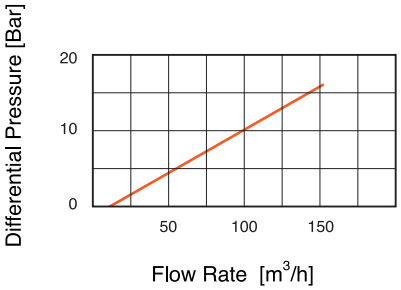
Operation

A.R.I. model S-021 is an automatic air release valve for raw watre systems. As the raw watre 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 raw watre and the sealing mechanism. The conical shape of the valve body ensures complete separation of the raw watre 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 raw watre 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 prevent the raw watre from reaching the sealing mechnism 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

- Conical body shape maintains maximum air gap, and spring loaded float and seal plug connection, combine to ensure no contact between the raw watre and the seal.
- Funnel shaped lower body automatically drains raw watre 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. Body drain with ball valve is provided.
- Working pressure range: 0.2-10 bar. Tested: 16 bar.
- 3/8" threaded drainage outlet enables removal of excess fluids.
- Body made of composite plastic material, resistant to corrosion.
- Maximum working temperature 90° C.

AUTOMATIC AIR DISCHARGE



DIMENSIONS AND WEIGHT

Nominal Size	Dim. mm A	Dim. mm B	Weight Kg.	Orifice Area mm²
1" (25mm)	216	324	1.42	12
2" (50mm)	216	324	1.42	12

PARTS LIST AND SPECIFICATION

No.	Part	Material
1.	Body S-050 1"	Reinforced Nylon
2.	Drainage Elbow	Polypropylene
3.	Rolling Seal	E.P.D.M.
4.	Clamping Stem	Reinforced Nylon
5.	Float	Foamed Polypropylene
6.	O-Ring	BUNA-N
7.	Stopper	Acetal
8.	Body	Reinforced Nylon
9.	Float Stem	Stainless Steel SAE 316
10.	Clamp	Reinforced Nylon
11.	O-Ring	BUNA-N
12.	Bolt & Nut	Stainless Steel SAE 316
13.	Float	Foamed Polypropylene
14.	Base	Reinforced Nylon