



# S-014 PN 40

# S-016 PN 64



## Automatic Air Release Valve for High-Pressure Systems

### Description

The S-014, S-016 series automatic air release valve releases accumulated air from the system while it is under pressure. The presence of air in a 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.

### Applications

- On high-pressure pumps.
- On high-pressure delivery pipelines.

### Operation

The automatic air release valve releases entrapped air from pressurized systems.

Pockets of accumulated air may cause the following destructive phenomena:

- Impediment of effective flow and hydraulic conductivity of the system along with a throttling effect as would a partially closed valve. In extreme cases this will cause complete flow stoppage.
- Accelerate cavitation damages.
- High- pressure surges.
- Accelerate corrosion of metal parts.
- Danger of a high-energy burst of compressed air.
- Inaccuracies in flow metering.

**The valve functions while the system is under pressure, according to the following stages:**

1. Entrapped air, which accumulates at peaks along the system (where combination air valves should be installed), rises to the top of the valve, which in turn displaces the liquid in the valve's body.
2. The float descends, unsealing the rolling seal. The automatic air release orifice opens and the accumulated air is released.
3. Liquid penetrates into the valve and the float rises, pushing the rolling seal back to its sealing position.

**Note:** Automatic air release valves are designed to release air as it accumulates at peaks in pressurized systems. They are not normally recommended for vacuum protection or for discharging large volumes of air, because of their inherently small orifices. For this purpose, air & vacuum valves are recommended as they have much larger orifices.

However, air release valves will permit air to re-enter the system under vacuum conditions. If this is not desirable, specify the one-way out check valve.

### Main Features

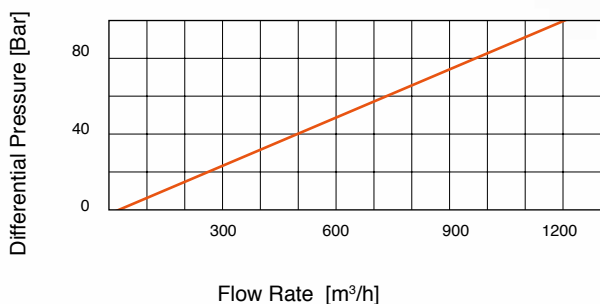
- Working pressure range:
  - S-014: 0.2-40 bar
  - S-016: 0.2-64 bar
- Test pressure for the air valve is 1.5 times its working pressure.
- Maximum working temperature: 60° C.
- Maximum intermittent temperature: 90° C.
- All operating parts are made of specially selected corrosion-resistant materials.
- A.R.I. patented rolling seal mechanism:
  - Dramatically reduces the possibility of obstruction by debris.
  - One size orifice for a wide pressure range up to 64 bar.
  - Self-cleaning mechanism.
- Lightweight, small dimensions, simple and reliable structure.

### Valve Selection

- D-014 (40 bar), D-016 (64 bar) are available in 3/4", 1", male threaded BSP and NPT connections / flanged.
- Standard metal body - baked FBE coating according to the international standard DIN 30677-2.
- Other coatings are available upon request.
- For best suitability, it is recommended to send the fluid chemical properties along with the valve request.

**Upon ordering, please specify: model, size, working pressure, threads standard and type of liquid.**

## AUTOMATIC AIR DISCHARGE



## DIMENSIONS AND WEIGHT

Model	Dimensions mm		Weight Kg.	Orifice Area mm²
	A	B		
S-016	197	295	13	15

## PARTS LIST AND SPECIFICATION

No. Part	Material
1. Plastic Cover	Polypropylene
2. Washer	Brass ASTM B124
3. O-Ring	BUNA-N
4. Cover	Cast Steel ASTM A216 WCB
5. Orifice	Acetal
6. Rolling Seal	Rubber E.P.D.M
7. O-Ring	BUNA-N
8. Bolt and Nut	Steel Zinc Cobalt Plated
9. Lever Seal	Acetal
10. Pin	Stainless Steel SAE 303
11. Float	Polycarbonate / Stainless Steel SAE 316L
12. Body	Cast Steel ASTM A216 WCB
13. Male Adaptor	Brass ASTM B124

