

S-050 PN 16

S-050-C PN 16

S-052 PN 25



Automatic Air Release Valve

Description

The S-050 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 head loss and decreased flow. Unwanted air may also cause water hammer and metering inaccuracies, while hastening corrosion. In spite of its compact and light weight structure, the S-050 series Automatic Air Release Valve has a 12mm² orifice that enables it to release air at high flow rates and is not exposed to obstruction by debris.

Applications

- On most types of pumps.
- After filters, pressure reducers and fertilizer injection systems.
- On heads of landscape systems.

S-050-C S-052 additional applications:

- Water pipelines vulnerable to vandalism and/or water theft.
- Water systems found in remote areas.

Operation

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

Without air valves, pockets of accumulated air may cause the following hydraulic disturbances:

- Restriction of effective flow due to a throttling effect as would a partially closed valve. In extreme cases this will cause complete flow stoppage.
- Obstruction of efficient hydraulic transmission due to air flow disturbances.
- Accelerate cavitation damages.
- Pressure transients and surges.
- Corrosion in pipes, fittings and accessories.
- 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 and along the system, 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 enters 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, automatic air release valves will permit air to enter the system under vacuum conditions. If this is not desirable, specify the one-way out check valve.

Main Features

- Working pressure range:
 - S-050 0.2 - 16 bar
 - S-050-C 0.2 - 16 bar
 - S-052 0.2 - 25 bar
- Test pressure for the air valve is 1.5 times its working pressure.
- Maximum working temperature: 60° C.
- Maximum intermittent temperature: 90° C.
- The body is made of high strength composite materials and all operating parts are made of specially selected corrosion-resistant materials.
- The larger than usual orifice enables it to release air at higher flow rates than other automatic air release valves of its kind.
- The enlarged orifice is less exposed to obstruction by debris.
- The valve's rolling seal mechanism design is less sensitive to different pressures than a direct float seal, thus enabling a one size orifice for a wide pressure range (from 0.2 up to 25 bar).
- Lightweight, simple and reliable structure.
- A discharge outlet enables removal of excess fluids.

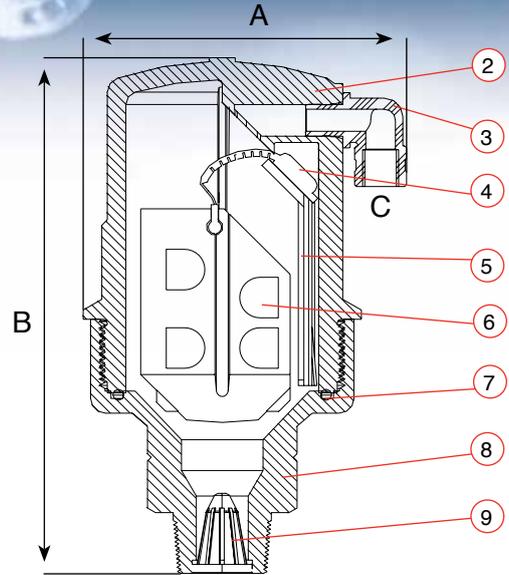
Valve Selection

- Available in male threaded sizes: 1/2", 3/4", 1" - BSP / NPT
- **S-050** is pressure rated for 16 bar.
- **S-050-C** vandalism protected by a metal shell covering the air release component, pressure rated for 16 bar.
- **S-052** vandalism protected by a metal shell covering the air release component, pressure rated for 25 bar.
- **SG-10** For low pressures (0.2-10 bar)
- **S-050 LP** For low pressures (0.05-6 bar)
- **S-050 B** With a brass base (0.2-16 bar)
- **S-050 V, S-050-C-V** Vacuum check valve - Available as a valve that will only release air from the system and will not admit air to the system when negative pressure conditions occur. This characteristic is obtained by adding a check valve to the air outlet.
- 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.



S-050 / S-050 B



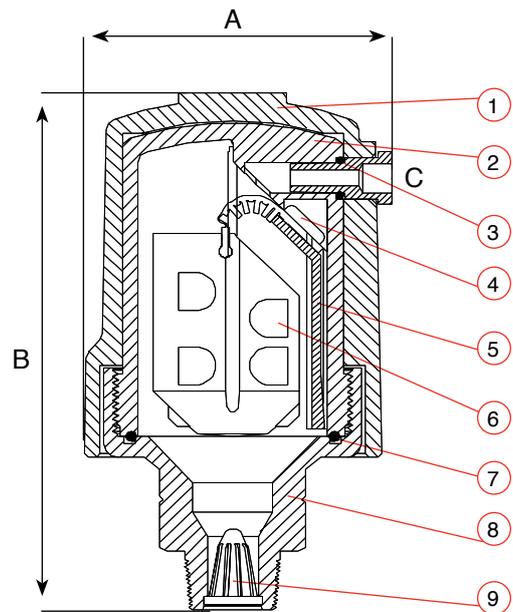
DIMENSIONS AND WEIGHTS

Model	Dimensions mm		Connection	Weight Kg.	Orifice Area mm ²
	A	B			
S-050	87	143	1/8" BSP Female	0.3	12
S-050 B	87	143	1/8" BSP Female	0.65	12
S-050-C	85	148	1/8" BSP Female	1.65	12
S-052	85	148	1/8" BSP Female	1.65	9

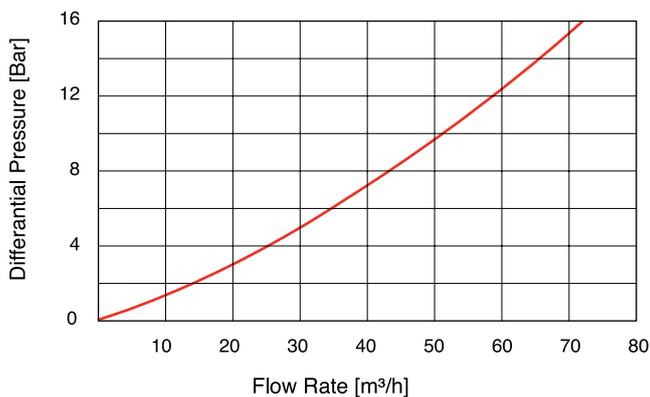
PARTS LIST AND SPECIFICATION

No.	Part	Material
1.	Shell	
	S-050-C	Cast Iron ASTM A-48 CL35B
	S-052	Ductile Iron ASTM A-536-60-40-18
2.	Body	Reinforced Nylon
3.	Discharge Outlet	
	S-050	Polypropylene
	S-050-C/S-052	Brass ASTM B-124
4.	Rolling Seal	E.P.D.M.
5.	Clamping Stem	Reinforced Nylon
6.	Float	Foamed Polypropylene
7.	O-Ring	BUNA-N
8.	Base	
	S-050	Reinforced Nylon / Brass ASTM B-124
	S-050-C/S-052	Brass ASTM B-124
9.	Strainer	Nylon

S-050-C / S-052



S-050 / S-050-C AUTOMATIC AIR RELEASE FLOW RATE



S-052 AUTOMATIC AIR RELEASE FLOW RATE

