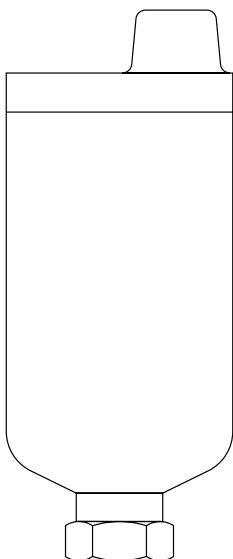


AE50S

Automatic Air and Gas Vent for Liquid Systems
Installation and Maintenance Instructions



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1. General safety information

Safe operation of the unit can only be guaranteed if it is properly installed, commissioned and maintained by a qualified person (see Section 11 of the attached Supplementary Safety Information) in compliance with the operating instructions. General installation and safety instructions for pipeline and plant construction, as well as the proper use of tools and safety equipment must also be complied with.

Isolation

Consider whether closing isolating valves will put any other part of the system or personnel at risk. Dangers might include; isolation of vents and protective devices or alarms. Ensure isolation valves are turned off in a gradual way to avoid system shocks.

Pressure

Before attempting any maintenance consider what is or may have been in the pipeline. Ensure that any pressure is isolated and safely vented to atmospheric pressure before attempting to maintain the product, this is easily achieved by fitting Spirax Sarco depressurisation valves type DV (see separate literature for details). Do not assume that the system is depressurised even when a pressure gauge indicates zero.

Temperature

Allow time for temperature to normalise after isolation to avoid the danger of burns and consider whether protective clothing (including safety glasses) is required.

Disposal

The product is recyclable. No ecological hazard is anticipated with the disposal of this product providing due care is taken.

— 2. General product information —

2.1 General description

The AE50S automatic air and gas vent is designed for use on liquid systems. It has welded construction and the body is manufactured in 304L austenitic stainless steel.

Certification

The product is available with material certification EN 10204 3.1.B for bowl, cover and inlet connection as standard.

Note:

For further information see the following Technical Information Sheet, TI-P017-10, which gives full details of: Materials, sizes and pipe connections, dimensions, weights, operating ranges and capacities.

2.2 Sizes and pipe connections

Inlet: ¾" female BSP or NPT

Outlet: ½" female BSP or NPT

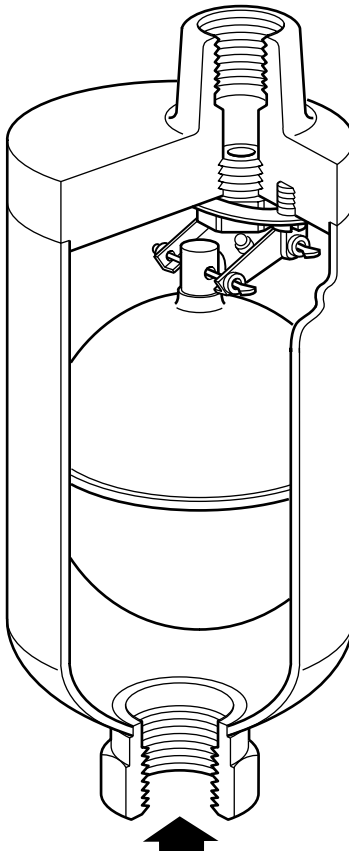
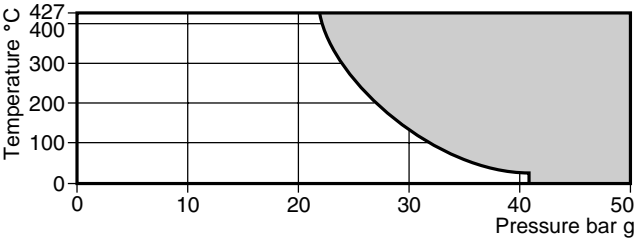



Fig. 1 AE50S

2.3 Limiting conditions

| | | |
|---|-------------|-------------|
| Maximum body design conditions | ANSI 300 | |
| PMA - Maximum allowable pressure | 41.4 bar g | (600 psi g) |
| TMA - Maximum allowable temperature | 427°C | (800°F) |
| PMO - Maximum operating pressure | 41.4 bar g | (600 psi g) |
| TMO - Maximum operating temperature | 427°C | (800°F) |
| ΔPMX - Maximum differential pressure | 30 bar | (435 psi) |
| Designed for a maximum cold hydraulic test pressure of: | 63 bar g | (880 psi g) |
| Minimum specific gravity of liquid | 0.65 | |

2.4 Operating range



 The product must not be used in this region.

3. Installation

Note: Before actioning any installation observe the 'Safety information' in Section 1.

Referring to the Installation and Maintenance Instructions, name-plate and Technical Information Sheet, check that the product is suitable for the intended installation:

- 3.1** Check materials, pressure and temperature and their maximum values. If the maximum operating limit of the product is lower than that of the system in which it is being fitted, ensure that a safety device is included in the system to prevent overpressurisation.
- 3.2** Determine the correct installation situation and the direction of fluid flow.
- 3.3** Remove protective covers from all connections.
- 3.4** The AE50S should be installed vertically with the inlet at the bottom. Because of the way automatic air and gas vents operate they all dribble water and liquid when discharging air and gas. This is perfectly normal.
We recommend piping the discharge to a safe visible point or drain via an air break.
- 3.5 For installation on superheated water applications:** We at Spirax Sarco recommend 1 to 2 m of $\frac{3}{4}$ " vertical pipeline should be fitted prior to the inlet of the vent. On superheated water systems the outlet pipework must be sized to accommodate any flash steam created during discharge.
Direct the outlet pipework to a safe point of discharge where there is no risk of injury to persons or damage to property.

Because of the way automatic air vents operate they all dribble water when discharging air. This is perfectly normal, because of this we recommend piping the discharge to a drain via an air break.

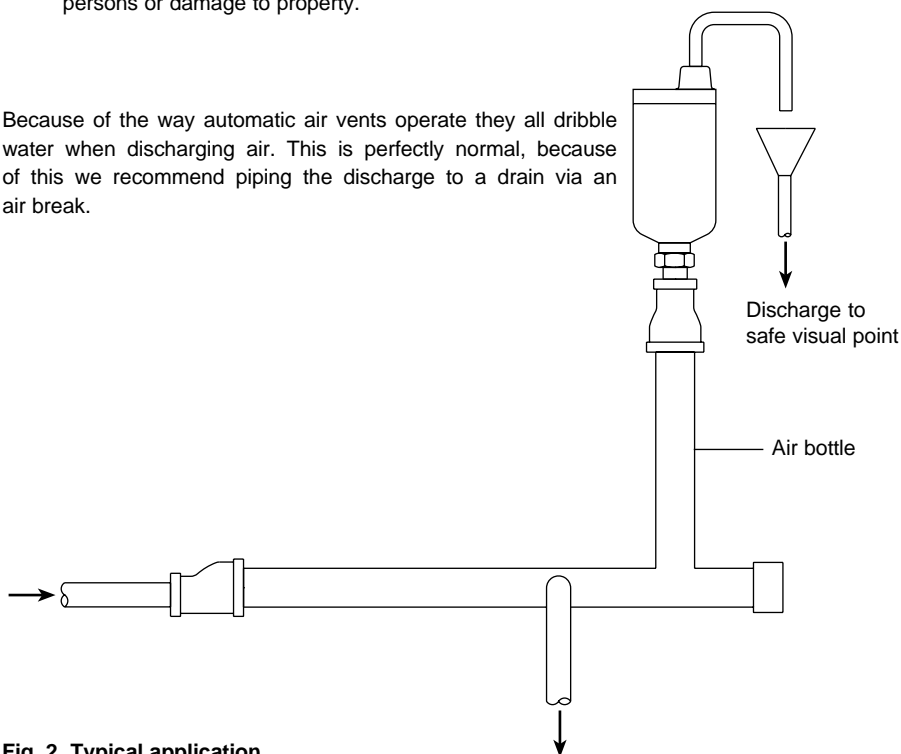


Fig. 2 Typical application

4. Commissioning

After installation or maintenance ensure that the system is fully functioning. Carry out tests on any alarms or protective devices.

5. Operation

At start-up the air vent is open allowing air to pass through the main valve. As soon as water reaches the vent the float is raised and the lever mechanism closes the valve. When more air reaches the vent it displaces water and the float falls thus opening the valve. After the air is discharged the valve is closed, as the water level rises to replace the air.

6. Maintenance

Note: Before actioning any maintenance program observe the 'Safety information' in Section 1.

The AE50S is a sealed automatic air and gas vent. It is adjustable and requires no maintenance.

7. Spare parts

The AE50S is a sealed automatic air and gas vent, no spare parts are available.

How to order a new product:

Example: 1 off ¾" Spirax Sarco AE50S automatic air and gas vent manufactured in austenitic stainless steel screwed BSP.

