Data Sheet

# AV13 Air vent for Steam Systems

RS **stock number**

**365-7075** ½”

**365-6713** ¾”

## Description

The AV13 is a maintainable balanced pressure thermostatic air vent with angled connections.

## Sizes and pipe connections

½” and ¾”

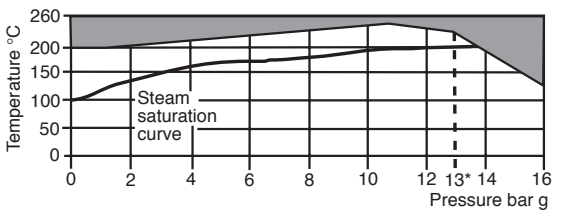
Screwed BSP (BS 21 parallel)

## Limiting conditions (ISO 6552)

| | |
|---|---|
| Maximum body design conditions | PN16 |
| PMA - Maximum allowable pressure | 16 bar g |
| TMA - Maximum allowable temperature | 260°C |
| Cold hydraulic test pressure | 24 bar g |

## Operating range

Figure 1




* PMO - Maximum operating pressure, recommended 13 bar g.

## Materials

(Fig. 2)

| No | Part | Material | |
|---|---|---|---|
| 1 | Body | Brass | BS 2872 CZ 122 |
| 2 | Cap | Brass | BS 2872 CZ 122 |
| 3 | ‘O’ ring Synthetic rubber high fluorine fluorocarbon | | |
| 4 | Capsule | Stainless steel | |
| 5 | Spring | Stainless steel | BS 2056 302 S26 |
| 6 | Spacer plate | Stainless steel | BS 1449 304 S16 |
| 7 | Seat | Stainless steel | BS 970 431 S29 |
| 8 | Seat gasket | Stainless steel | BS 1449 304 S11 |

## $K_V$ value

$K_V$ value 0.45 (cold)

For conversion $C_V$ (UK)=$K_V$ x 0.97 $C_V$ (US)=$K_V$ x 1.17

Figure 2

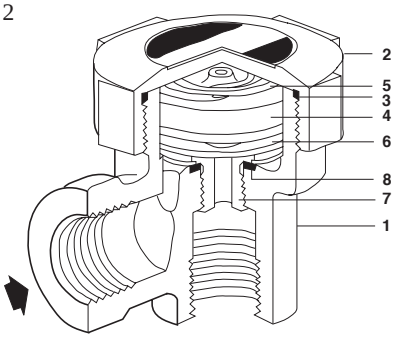
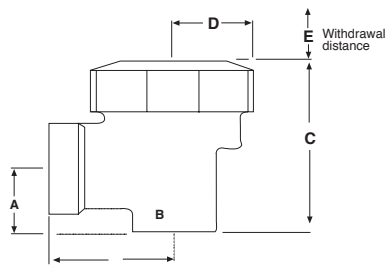



Figure 3




## Dimensions/weights (approximate) in mm and kg

| Size | A | B | C | D | E | Weight |
|---|---|---|---|---|---|---|
| ½” | 20 | 38 | 53 | 25 | 55 | 0.40 |
| ¾” | 27 | 40 | 62 | 25 | 55 | 0.45 |

## Installation

The air vent should be positioned at the highest point of the main or plant where the air collects. The outlet should be piped to a safe place.

## Maintenance

all maintenance work must be carried out by a suitably competent person. Before starting work ensure that suitable tools are available. Use only Spirax Sarco replacement parts.

### Seal replacement

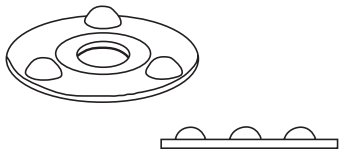
The original gasketed AV13 uses a copper jacketed asbestos free gasket which were trapped between pre-machined faces on the body and cap. If an AV13 with these machined faces is used, the copper gasket spares set must be used.

### How to fit

Allow to cool, remove cap and lift out capsule, spring and spacer plate. Remove valve seat and gasket. Screw in new seat and gasket. Drop in spacer plate. Replace new capsule, spring and screw on cap using new ‘O’ ring assembled into groove in top of cap, or in older models using new gasket. Always fit complete assembly when replacing the capsule. After maintenance ensure that the system is fully functioning.

Note: Early spacer plates where uni-directional (see diagram below) and must be fitted with the high points uppermost. This does not apply to later models.

Figure 4



## Safety

### Pressure

Before attempting any maintenance of the air vent consider what is or has been in the pipeline. Ensure that any pressure is isolated upstream and downstream of the product and safely vented to atmosphere before attempting to maintain the air vent. This is easily achieved by fitting Spirax Sarco depressurisation valves type DV. 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. If a product which contains a fluorocarbon rubber component has been subjected to a temperature approaching 315°C or higher, then it may have been decomposed and formed hydrofluoric acid. Avoid skin contact and inhalation of any fumes as the acid will cause deep skin burns and damage to the respiratory system.

### Isolation

Consider whether closing isolating valves will put any other part of the system or worker at risk.

Dangers might include: isolation of vents, protective devices or alarms. Ensure isolation valves are turned on and off in a gradual way to avoid system shocks.

## Disposal

The product is recyclable. No ecological hazard is anticipated with disposal of this product providing due care is taken. However, if the recycling process involves a temperature approaching 315°C, caution is advised regarding decomposition of the fluorocarbon rubber component.

## How to order

½" RS Stock No. 365-7075

¾" RS Stock No. 365-6713

## Spare parts

(Fig.5)

The spare parts available are shown in heavy outline. Parts drawn in broken line are not supplied as spares.

### Available spare

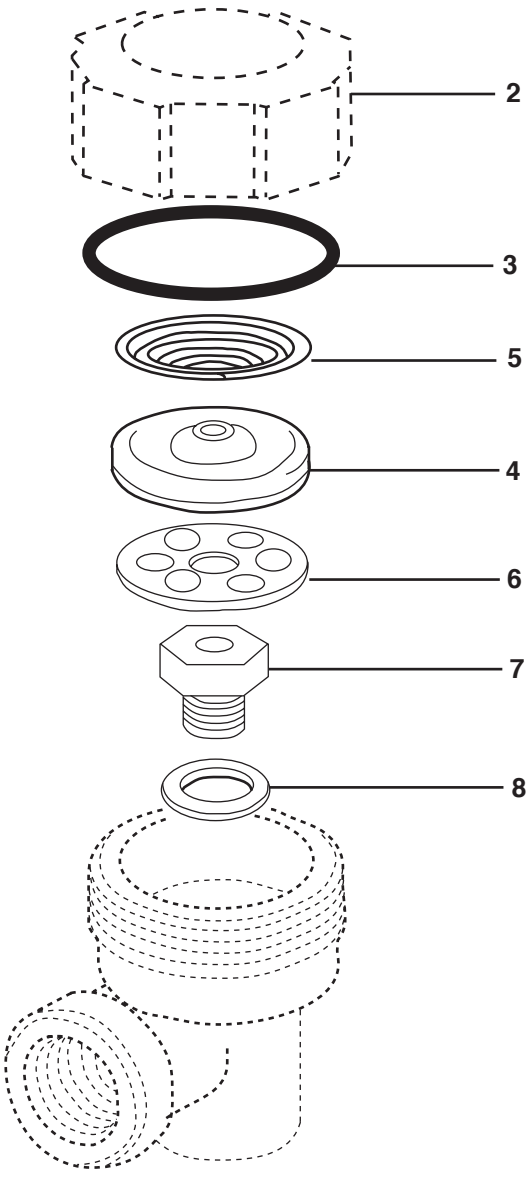
| | | | |
|---|---|---|---|
| Capsule and seat assembly | | | 4, 7, 3, 8, 6, 5 |
| Cap gasket | (earlier models) | (packet of 3) | 3 |
| 'O' ring | (current models) | 2 x (packet of 3) | 3 |

Notes: Earlier models were fitted with conventional gaskets. Current models are fitted with an 'O' ring to seal cap. There are two types of 'O' ring. the 'O' ring used is dependent on the body type.

### Recommended tightening torques

| Item | Part |  or mm |  Nm |
|---|---|---|---|
| 2 | Gasket | 50 A/F | 90 - 100 |
| | 'O' ring | 50 A/F | 50 - 60 |
| 7 | Seat | 17 A/F | 35-40 |

Figure 5




RS Components shall not be liable for any liability or loss of any nature (howsoever caused and whether or not due to RS Components' negligence) which may result from the use of any information provided in RS technical literature.