



Cert. No. LRQ 0963008

ISO 9001

# spirax/sarco

TI-P010-02

ST Issue 8

## AV13 Air Vent for Steam Systems

### Description

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

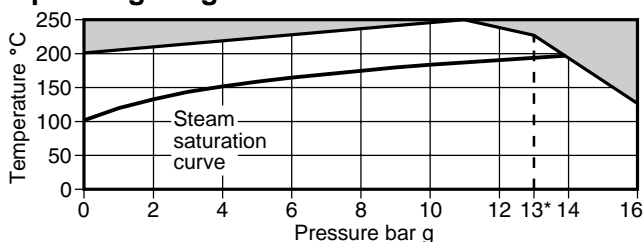
### Sizes and pipe connections

3/8", 1/2" and 3/4" screwed BSP (BS 21 parallel) or NPT.

### Limiting conditions (ISO 6552)

Body design conditions	PN16
PMA - Maximum allowable pressure	16 bar g
TMA - Maximum allowable temperature	250°C
PMO - Maximum operating pressure	13 bar g
TMO - Maximum operating temperature	225°C
Designed for a maximum cold hydraulic test pressure of 24 bar g	

### Operating range



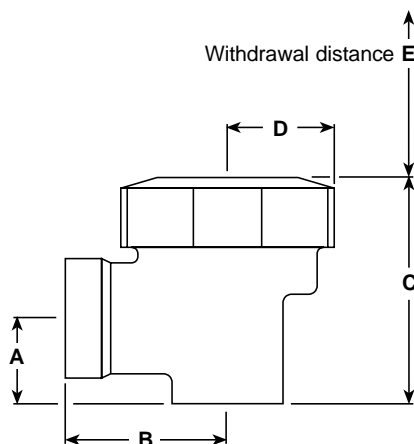
\*PMO Maximum operating pressure recommended for saturated steam 13 bar g.

### K<sub>v</sub> value

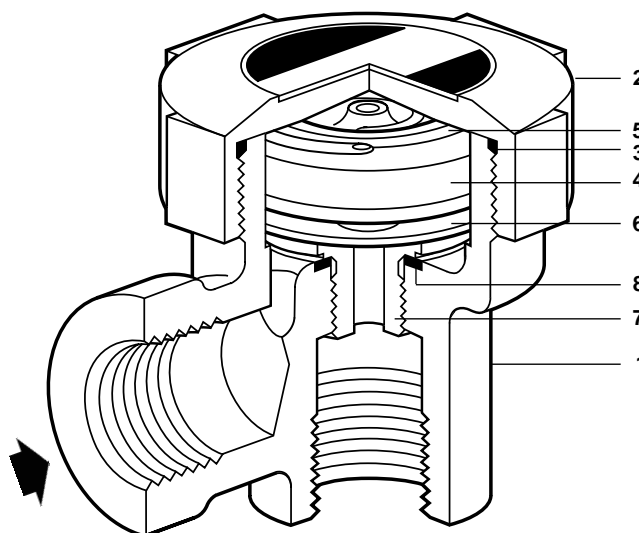
K<sub>v</sub> value 0.45 (cold)

For conversion  $C_v$  (UK) =  $K_v \times 0.97$   $C_v$  (US) =  $K_v \times 1.17$

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



Size	A	B	C	D	E	Weight
3/8"	18	32	49	25	55	0.40
1/2"	20	38	53	25	55	0.40
3/4"	27	40	62	25	55	0.45



### Materials

No.	Part	Material
1	Body	Brass BS EN 12165 CW 617N
2	Cap	Brass BS EN 12165 CW 617N
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

### Certification

This product is available with certification to EN 10204 2.2.  
**Note:** All certification/inspection requirements must be stated at the time of order placement.

## Safety information

For full details see the Installation and Maintenance Instructions (IM-P010-07) supplied with the product.

### 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 (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. 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.

## Installation

For full details see the Installation and Maintenance Instructions (IM-P010-07) supplied with the product.

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

For full details see the Installation and Maintenance Instructions (IM-P010-07) supplied with the product.

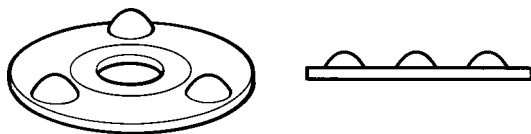
All maintenance work must be carried out by a suitably competent person. Before starting work ensure that suitable tools are available. Use only Spirax Sarco replacement parts.

### 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 capsule and seat assembly

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 were uni-directional (see diagram below) and must be fitted with the high points uppermost. This does not apply to later models.**



## 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

**Example:** 1 off ½" Spirax Sarco AV13 air vent screwed BSP.

## Spare parts

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

### Available spares

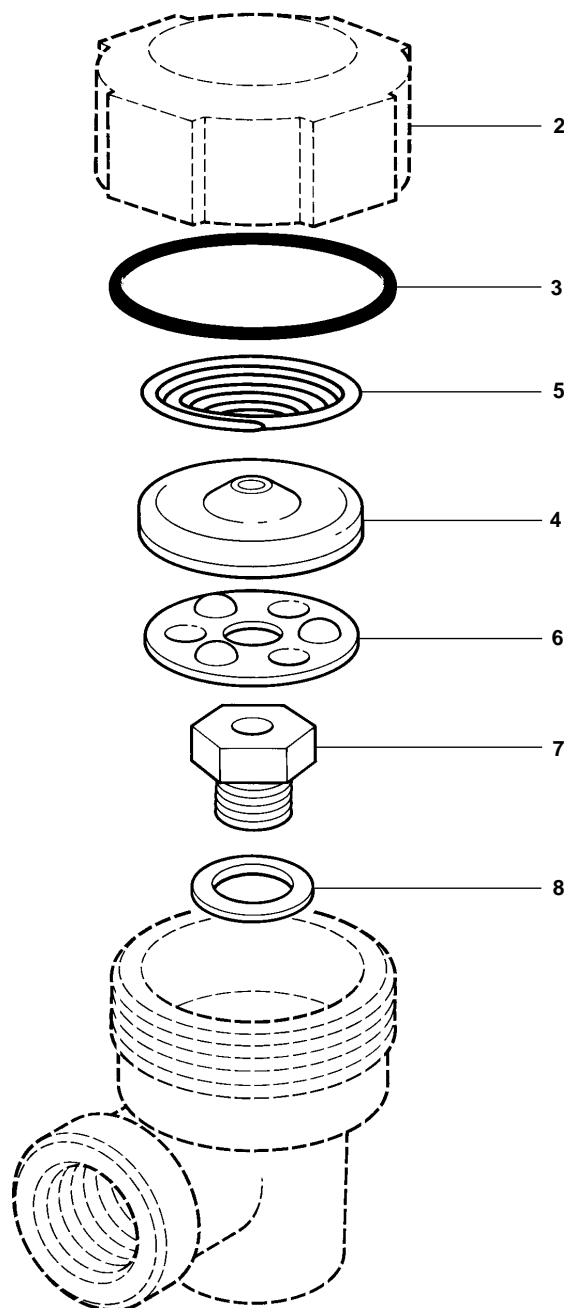
Capsule and seat assembly	3, 4, 5, 6, 7, 8
Cap gasket (earlier models) (packet of 3)	3
'O' ring (current models) 2 x (packet of 3)	3

**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.



### How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and type of air vent.

**Example:** 1 - Capsule and seat assembly for ½" Spirax Sarco AV13.



### Recommended tightening torques

Item No.	Part	 or  mm	N m
2	Gasket	50 A/F	90 - 100
	'O' ring	50 A/F	50 - 60
7	Seat	17 A/F	35 - 40