

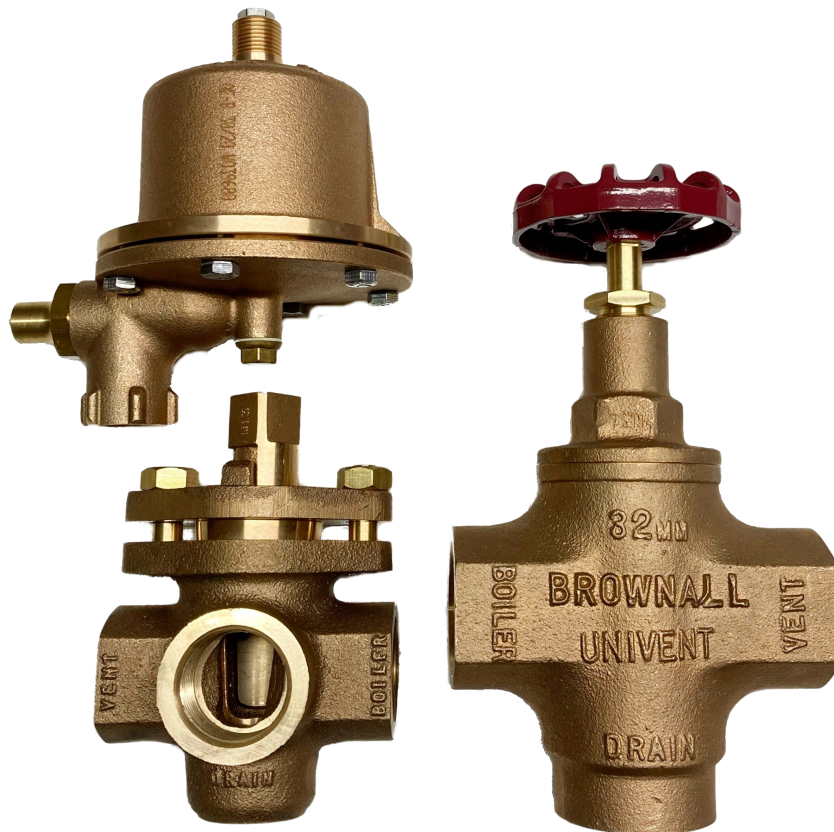
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# brownall®



Certificate Number 9027  
ISO 9001  
ISO 14001

## PLANT ROOM VALVES



Automatic Air Eliminators and Boiler Vent Valves



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Engineering Ltd**

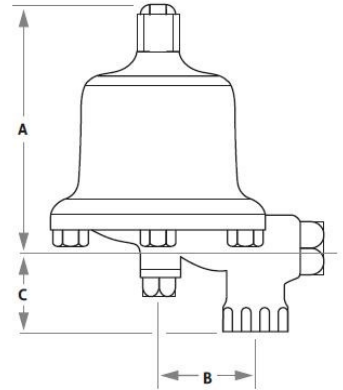
Unit 12 Latham Close, Bredbury Industrial Park  
Stockport, Cheshire, SK6 2SD, United Kingdom  
Tel: +44 (0) 161 430 4000 Fax: +44 (0) 161 494 1461  
Email: sales@bonut.co.uk Website: www.bonut.co.uk

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## Features

- Proven reliability extending over long service life
- Robust construction & reliable operation for industrial environments
- AAEs suitable for use with fresh water, aviation fuels, diesel, light oils and glycol
- Manufactured from body materials resistant to stress corrosion cracking
- AAEs units available to suit different pressures and temperatures



## Heritage

With a proven track record for high quality, Brownall offers an exclusive range of Automatic Air Eliminators (AAE) covering low, medium and high pressure applications, complemented by the Three-way Vent Valves and Vent Cocks for boilers.

Offering efficient performance, the Brownall range removes inevitable and potentially dangerous air trapped in the system. Installed at the highest point of the fluid carrying system, the trapped air will enter the float chamber of the air eliminator. This reduces the float buoyancy and allows air to escape through the outlet orifice.

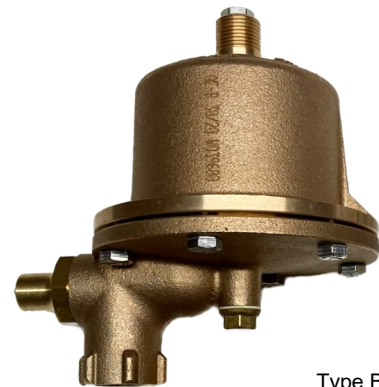


To compliment the AAE, the Univent and Vent Cocks are installed to provide a direct connection from the boiler to the atmosphere. Designed to simplify the venting process, for single or multi point boiler and calorifier installations, the range offers savings in time and costs. Bronze body parts enable the range to operate in high turbulence, aerated hot water, which can be a very corrosive environment. All the above make Brownall the number one choice with professional building services, consulting engineers and specifying authorities.

## Air separation saves the system!

Air in a central heating system can lead to a reduced heat emission and has harmful consequences for the whole installation- particularly the pump, which is often the first component to suffer damage.

Air leads to noisy installation, loss of performance, corrosion and premature failure. Installing good venting equipment can help alleviate these problems.



Type B

## The importance of a clean system

Dirt or other foreign matter can cause problems which reduce the efficiency of the system, particularly in the case of air elimination. It is therefore recommended that the system is flushed prior to installing the Automatic Air Eliminator. In addition, a pipeline strainer should be installed immediately before the inlet to the AAE.

Brownall strongly recommends that discharge pipework should be fitted to the outlet of the AAE to allow for safe venting and water carry-over.



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## Selection of the most suitable Automatic Air Eliminator

There are several types of air eliminator available so evaluating system requirements is essential. The following factors must be taken into consideration:

### System Parameters

For systems operating at 10 bar and 93°C, use Type A, B and D AAEs on the pump outlet where there is positive pressure. The Type C is fitted with a non return valve that allows air to be removed from the system, but stops air being drawn in where there is negative pressure on a pump inlet. Use MPHW and HPHW air eliminators on the pump outlet where there is a positive pressure. Ensure that the pressure and temperature rating meet the requirements of the system.

### Materials of Construction

Quality of manufacture and materials used in construction are critical. All pressure containing parts are bronze. Corrosion and clogging of valve mechanisms are potential problems if incorrect materials are used.

### Reliability

An automatic valve, usually operating in an inaccessible roof space or system header, must be capable of long term, trouble free operation and the vent outlet must be piped off to a suitable safe point.



**1.**  
Large float construction to provide maximum re-seating force which reduces the risk of leakage and seals at a minimum of 0.15 Bar

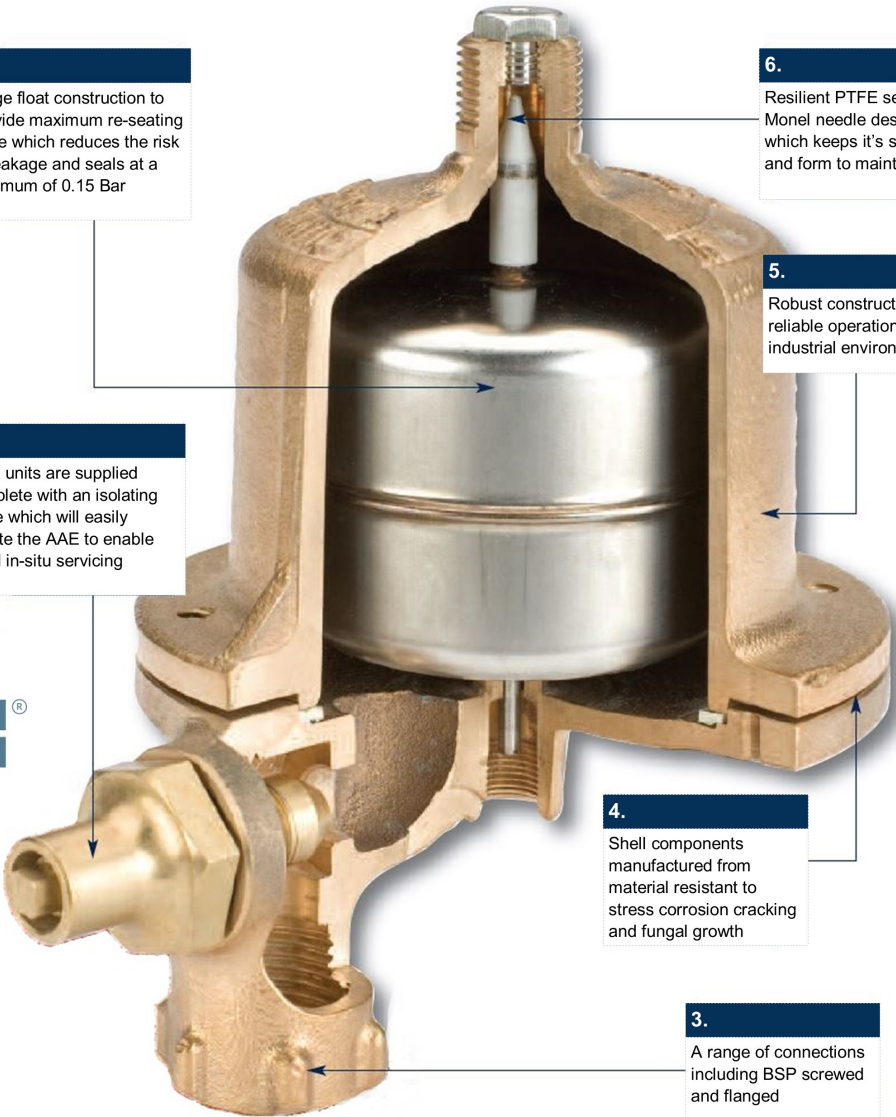
**2.**  
Most units are supplied complete with an isolating valve which will easily isolate the AAE to enable rapid in-situ servicing

**6.**  
Resilient PTFE seat / Monel needle design which keeps it's shape and form to maintain a

**5.**  
Robust construction and reliable operation for industrial environments

**4.**  
Shell components manufactured from material resistant to stress corrosion cracking and fungal growth

**3.**  
A range of connections including BSP screwed and flanged



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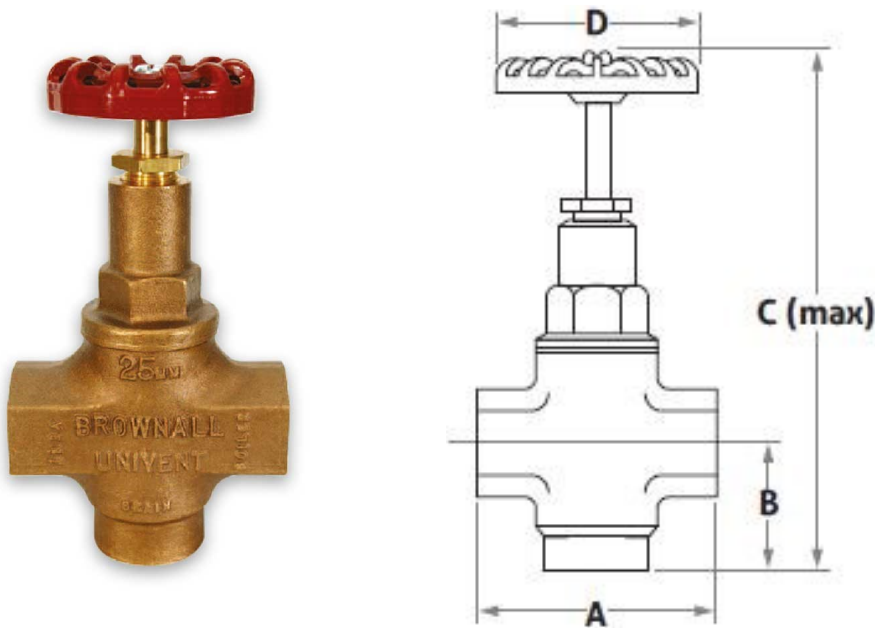
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The Figure 1688 Three-way Univent is designed for use on vented hot water systems to ensure that there is always a direct connection from the boiler/calorifier to the atmosphere. Made from body materials resistant to stress corrosion cracking, it can be used for single or multi-boiler installations.

In-line servicing, using **Univent replacement cartridges**, allows valve maintenance to be carried out without disturbing the pipework.

The Univent can be opened and closed using the integral hand wheel. To close the drain port and open the vent, turn the handwheel clockwise to its full travel. Turn the handwheel anti-clockwise to open the drain and close the vent.



Nominal Size	Product Code	A	B	C (Max)	D	Weight Kg
25mm (1")	UV-1688-025D	96	47	200	89	1.83
32mm (1-1/4")	UV-1688-032D	118	63	237	102	2.93
40mm (1-1/2")	UV-1688-040D	144	74	269	127	4.39
50mm (2")	UV-1688-050D	160	79	283	152	6.10
65mm (2-1/2")	UV-1688-065D	190	115	395	200	14.25

**Note:** The dimensions shown are nominal

## Technical Data

Max pressure: 7 Bar  
 Max temperature: 93°C  
 Connections: BS EN 10226-1:2004 – Rp (Female)

## Materials

Body: Bronze (Gunmetal)  
 Head: Bronze (Gunmetal)  
 Trim: Brass  
 Spindle: Brass  
 Renewable Valve Head: EPDM/Brass

## Principle of operation

A soft seated valve (EPDM) with easy to change cartridge unit containing all moving parts



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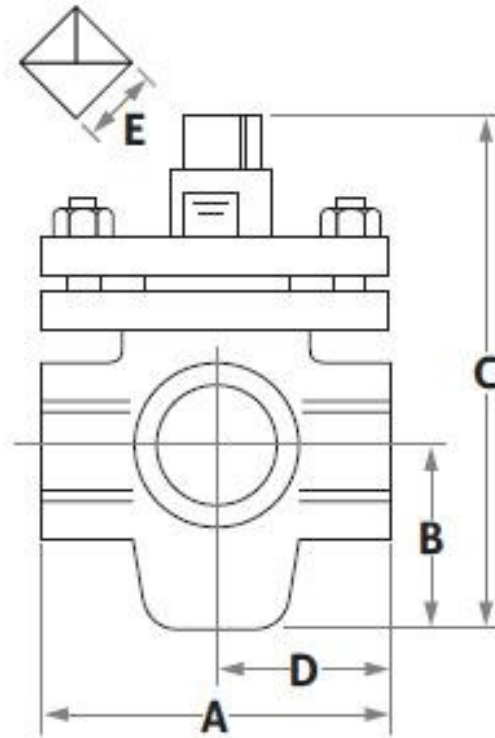
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The Figure 1988 is resistant to stress corrosion cracking and used on single, multi-boiler or calorifier installations.

Fitting a Three-way Vent Cock ensures a constant connection from the boiler or calorifier to the atmosphere.

The use of specially designed 3-way vent cock on multi-boiler vented hot water heating systems, ensures that there is always a direct connection from the boiler or calorifier to atmosphere, i.e. either to open vent or drain position, enabling maintenance to be carried out on individual boilers.



Nominal Size	Product Code	A	B	C	D	E
25mm (1")	VCN-1988-025	90	43	132	45	18
32mm (1-1/4")	VCN-1988-032	122	48	155	61	20
40mm (1-1/2")	VCN-1988-040	143	57	177	71.5	25
50mm (2")	VCN-1988-050	165	66	204	82.5	36

**Note:** The dimensions shown are nominal

## Technical Data

Max pressure: 7 Bar  
 Max temperature: 93°C  
 Connections: BS EN 10226-1:2004 – Rp (Female)

## Materials

Body: Bronze (Gunmetal)  
 Plug: Bronze (Gunmetal)  
 Gland: Bronze (Gunmetal)

## Principle of operation

90° operation of the plug opens and closes vent as shown on the top of the spindle. The built-in stop only allows 90° movement.



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