LABSS INFORMATION PAPER INFOP10 - 2016 Version 1 - 12 April 2016

ALTERATIONS TO EXISTING BUILDINGS or NEW BUILD

Installation of Air Admittance Valves

Applicable to Domestic and Non-Domestic Buildings in relation to

Section 3: Environment

Clause 3.7.8 Ventilation of a drainage system

QUERY

Is it acceptable to have air admittance valves fitted to a drainage system to a single building or number of buildings without that drainage system being ventilated at its highest point?

DECISION

The second paragraph of clause 3.7.8 identifies air admittance valves as an alternative to the requirements of BS EN 12056-2: 2000 as a means of ventilating a drainage system. The guidance makes two provisos relating to the design/manufacture of air admittance valves and their installation in accordance with the conditions of certification of a notified body. With regard to the conditions of certification of a notified body, "a drainage system designed in accordance with BS EN 12056-2: 2000", means it is to be designed in accordance with the "requirements" of the main body of the Standard rather than the entire code. That is, it is intended to exclude the informative National Annexes.

BACKGROUND

AIR ADMITTANCE VALVES – TECHNICAL HANDBOOKS

3.7.8 Ventilation of a drainage system

A Wastewater drainage system serving a building should be ventilated to limit the pressure fluctuations within the system and minimise the possibility of foul air entering the building. A system should be installed in accordance with the guidance in Sections 4, 5, 6 and National Annex ND of BS EN 12056-2: 2000.

Air admittance valves are another method of ventilating a drainage system as they allow air to enter the drainage system, but not to escape, thus limiting pressure fluctuations within the system. Care should be taken when installing these valves that they are located where they will operate effectively. Air admittance valves should be installed:

a. in accordance with the recommendations in BS EN 12380: 2002, and
b. in compliance with the conditions of certification of a notified body.

FEEDBACK FROM NOTIFIED BODY: BBA CERTIFICATES: EXAMPLES

DURGO

Air admittance valves should not be used when the discharge stack provides the only ventilation to septic tanks or cesspools.

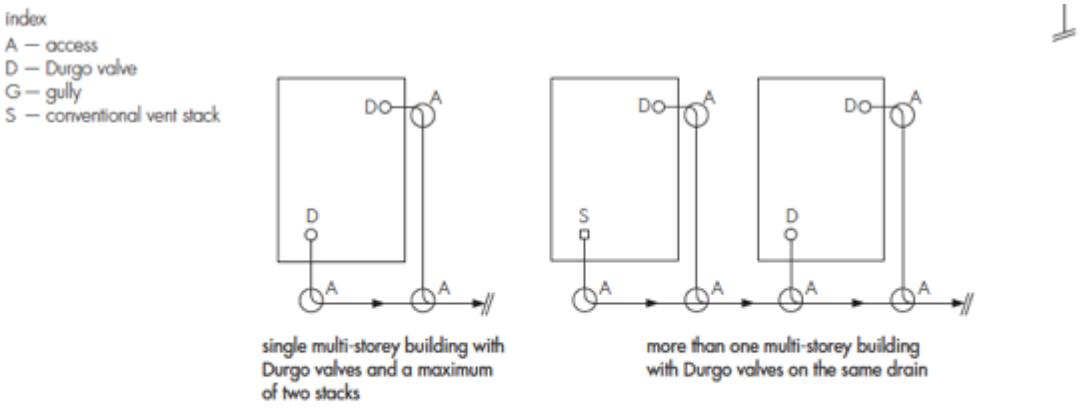
To contribute to the ventilation of the underground drain and to minimise the effects of excessive back pressures when a drain blockage occurs, the branch or main drain serving a stack, or stacks, fitted with Durgo valves may require venting at a point upstream of the stack connection.

For guidance the following should be noted (see Figure 5):

- for up to and including four dwellings, one, two or three storeys in height, **additional drain venting is not required**. Where a drain serves more than four such dwellings equipped with the valves, the drain should be vented according to the following rule, either by a conventional open topped ventilation or discharge stack: — 5

to 10 such dwellings — conventional ventilation to be provided at the head of the system — 11 to 20 such dwellings — conventional ventilation to be provided at the mid-point and at the head of the system.

- for multi-storey domestic dwellings (other than those referred to above) and non-domestic buildings, conventional drain venting should be provided if more than one such building, each equipped with the valves, is connected to either a common drain, itself not vented by means of a ventilation stack, or to a discharge stack not fitted with a valve.



Notes: Access arrangements shown are indicative only and may be varied to suit particular system layouts.
The underground drain must be designed in accordance with BS EN 752 : 2008.
If the branch drain is fitted with an intercepting trap before the connection to the main drain/sewer then a conventional open-topped ventilation discharge stack must be provided at the nearest point upstream of the intercepting trap.

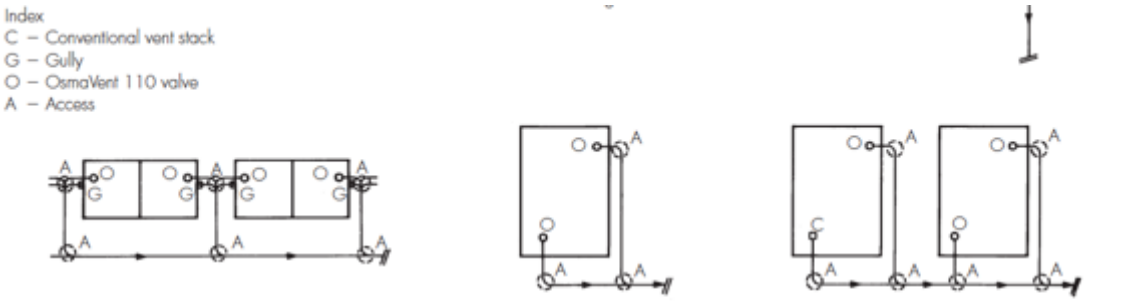
WAVIN

Air admittance valves should not be used as the only ventilation to a drainage system discharging to septic tanks or cesspools.

To contribute to the ventilation of the underground drain and to minimise the effects of excessive back pressures when a drain blockage occurs, the branch or main drain serving a stack or stacks fitted with OsmaVent valves may require venting at a point upstream of the stack connection. For guidance see Table 3 and Figure 5.

Table 3 Air admittance valve disposition

Number of dwellings	Up to three storeys in height	Multi-storey domestic dwellings and non-domestic buildings
1–4	Additional drain venting not required	Conventional drain venting to be provided if more than one such building, each equipped with the valves, is connected to a common drain which is not itself vented by means of a ventilation stack or a discharge stack not fitted with a valve
5–10	Conventional ventilation (open-topped or discharge stack) to be provided at the vent stack closest to the main drain sewer	
11–20	Conventional ventilation (open-topped or discharge stack) to be provided at the vent closest to the main drain sewer and at the mid-point of the system	



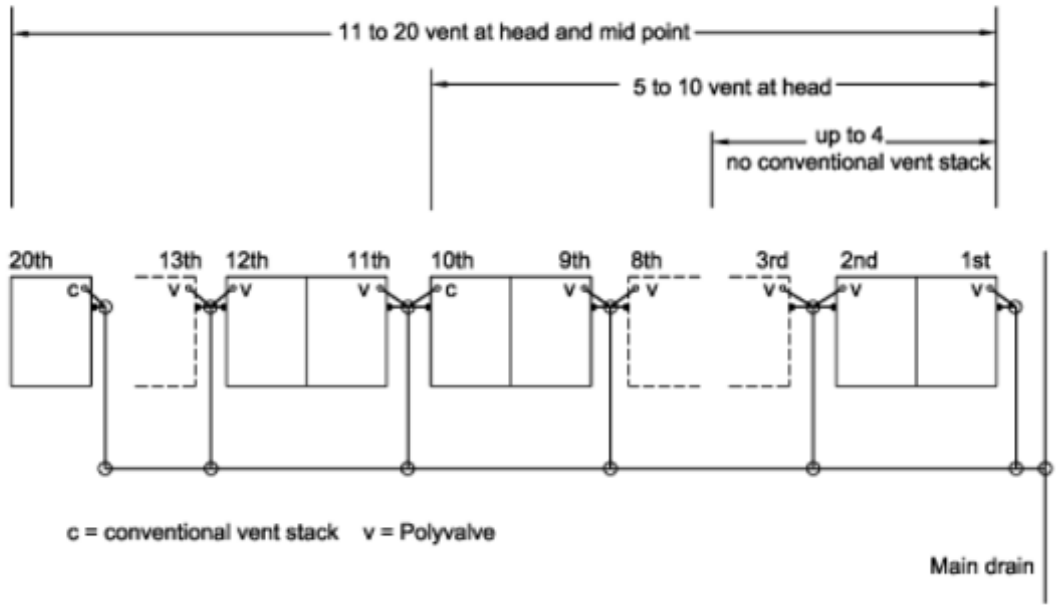
NOTES:
- Access arrangements shown are indicative only and may be varied to suit particular system layouts.
- The underground drain must be designed in accordance with BS EN 752-1 : 1996, BS EN 752-2 : 1997, BS EN 752-3 : 1997, BS EN 752-4 : 1998.
- If the branch drain is fitted with an intercepting trap before the connection to the main drain/sewer then a conventional open-topped ventilation discharge stack must be provided at the nearest point upstream of the intercepting trap.

POLYPIPE

Installation of 20 Dwellings

1. For up to and including four dwellings, one, two or three storeys in height, additional drain venting is not required.
2. For five to 10 dwellings, a conventional vent stack should be provided at the head of the drain run.
3. For eleven to 20 dwellings, a conventional vent stack should be provided at the mid-point and head of the drain run.
4. For multi-storey domestic dwellings (other than those referred to above) and non domestic buildings, conventional drain venting should be provided if more than one such building, each equipped with the valves, is connected to either a common drain, itself not vented by means of a ventilation stack, or to a discharge stack not fitted with a valve.

Drain Ventilation Provision



OSMA

6.2 To contribute to the ventilation of the underground drain and to minimise the effects of excessive back pressures when a drain blockage occurs, the branch or main drain serving a stack or stacks fitted with OsmaVent valves may require venting at a point upstream of the stack connection. For guidance see Table 3 and Figure 5.

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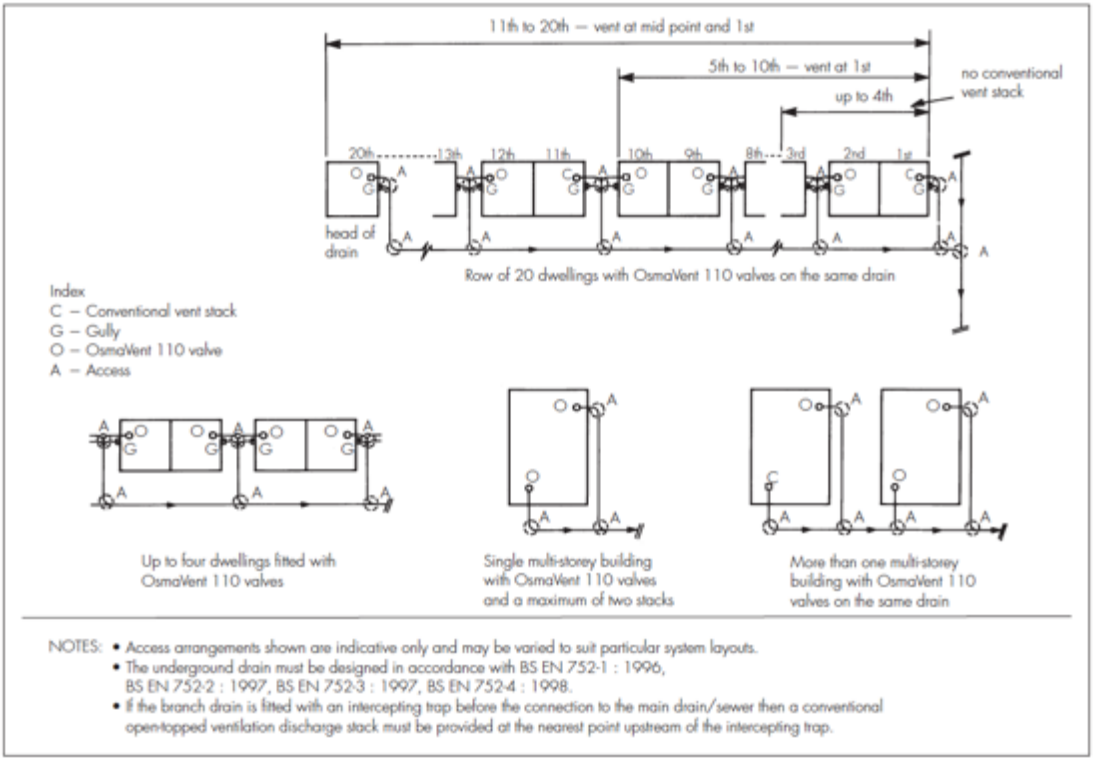
Figure 5 Examples of drain ventilation provisions



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