
Installation requirements of Air Admittance Valves [AAV's]

To: Licensees / Contractors/ the Plumbing and Drainage Industry
From: PIAS, Better Regulation Division, Parramatta
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Scope: Applies to all metropolitan and regional areas in New South Wales

Issue:

This technical note has been developed as a guide to the correct use and installation of Air Admittance Valves (AAV's).

An Air Admittance Valve may be installed in certain situations, as an alternative to an open vent pipe extending above the roof line. With the increased use of AAV's, there have been circumstances where the AAV may have been installed incorrectly. The majority of non-compliant installations identified relate to location or termination of the valve, and/or the correct sizing of the AAV.

Permitted uses for AAV's

AAV's can be used in the following plumbing installations:

- 1) As a trap vent, where the system of plumbing consists of:
 - a) a fully ventilated stack
 - b) a fully ventilated modified stack
 - c) a single stack
 - d) a sanitary plumbing system where a fixture discharge pipe exceeds the maximum permitted distance.
- 2) As a group vent, where the system of plumbing consists of:
 - a) a fully ventilated modified stack,
 - b) a sanitary plumbing system - where a common discharge pipe connecting a group of fixtures requires a vent
- 3) As a stack vent in any system of plumbing where the stack does not extend through 10 or more floor levels.
- 4) As a branch drain vent in any sanitary drainage system branch drain. AAV(s) shall only be used in sanitary drainage systems that have at least one (1) open upstream vent off the main drain.

Prohibited uses for AAV's

AAV's are *prohibited* from use in the following plumbing installations:

- 1) AAV's shall not be used for the upstream venting of a main drain.
- 2) Where three (3) or more residential buildings on one [1] allotment drain to the sewerage system, the sanitary drainage system to each building shall have an open upstream vent. The upstream vent shall be sized as a drainage vent in accordance with AS/NZS3500.2:2018 Clause 3.9.3 and shall be at least DN50 in size.

- 3) Drains that incorporate a boundary trap shall be provided with an open vent for both the upstream and downstream vent, complying with AS/NZS3500.2:2018 Clause 3.9.1 (AAV's should not be used in this situation)
- 4) Where a sanitary plumbing system has a relief vent fitted to the stack, the relief vent must be extended separately to atmosphere as an open vent.

Selecting Air Admittance Valves

When selecting an AAV for use, it is important that the vent is adequately sized to meet the determined air flow capacity in litres/second (L/s) to suit the fixture unit loading of the discharge pipe/stack, as outlined in AS/NZS3500.2:2018 Tables 6.10.2(A) and 6.10.2(B). The determined airflow in (L/s) shall be indicated on each valve along with a Water Mark, the manufacturer's name, brand or trademark and the suitability of the valve to be installed in direct sunlight.

Location and Installation of Air Admittance Valves

AAV's shall be located and installed so that:

- 1) they are accessible for service, repair or replacement
- 2) adequate air can enter the valve
- 3) provided with ventilation openings when located in a wall space
- 4) they are not installed where air is contaminated with solvents
- 5) installed in areas where the ambient temperature or water discharge may drop below 0°C or exceed 60°C.
- 6) they are protected from insect entry
- 7) they are protected from ultra violet rays unless UV protection is provided by the inherent properties of the materials of the valve body, and the AAV is marked to indicate this.
- 8) protected from mechanical damage
- 9) installed upright within 5° of vertical
- 10) the valve is to be clear of any ceiling or wall insulation

NOTE: *For information regarding the use and any restrictions of AAV's on trade waste installations, please contact the Network Utility Operator (NUO).*

Reference:

- 1) Plumbing Code of Australia 2019
- 2) Australian Standard 3500.2:2018

This technical note has been approved for issue by the PIAS Technical Review Committee. Information contained within this document is current as at May 2021 and refers to codes and standards current at the time of writing.

This technical note must not be relied on as legal advice. For more information please refer to the appropriate legislation or seek legal advice.

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