

Mechanical Services MS 03| Condensation Drainage from Air Conditioning systems (Self Sealing Devices)

Audience

The audience/s for this Practice Note include/s:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Architects/ Designers | <input type="checkbox"/> Owner Builders |
| <input checked="" type="checkbox"/> Builders | <input checked="" type="checkbox"/> Plumbers |
| <input checked="" type="checkbox"/> Building Surveyors/ Inspectors | <input type="checkbox"/> Real estate management agents |
| <input checked="" type="checkbox"/> Engineers | <input type="checkbox"/> Trades and Maintenance (inc. Electricians) |
| <input type="checkbox"/> Home Owners / Residential Tenants | <i>Other</i> |

Purpose

This Practice Note provides guidance on Condensation Drainage Utilising Self Sealing Devices for Air Conditioning Systems

- General requirements for self-sealing devices and tundishes
- Connection to a vertical discharge pipe
- Connection to a dishwasher connection
- Connection to a vent in a ceiling space
- Connection to a vent with the self-sealing device on grad



For guidance on the plumbing regulatory framework refer to Plumbing Practice Note RF 01 Regulatory Framework Plumbing NCC 2022

Abbreviations & Definitions

The abbreviations and definitions set out below are for guidance only. They are not intended to vary those set out in the Building Act 1993, the Building Regulations 2018 or the National Construction Code.

- **AS** – Australian Standard
- **AS/NZS** – Australian/ New Zealand Standard
- **NCC** – National Construction Code 2022 Volume 3
- **Regulations** – Plumbing Regulations 2018
- **HB** - Hand Book



This practice note may be read in conjunction with other practice notes that contain further information relating to condensate drainage for air conditioning systems.



General requirements for self-sealing devices and tundishes

A self-sealing device is, in effect, a waterless trap which is designed to close after waste discharge and prevent the admittance of foul air into the building. It offers the advantage in the case of condensate drainage of continuing to prevent foul air entry during times of little or no flow when a conventional water trap seal may evaporate.

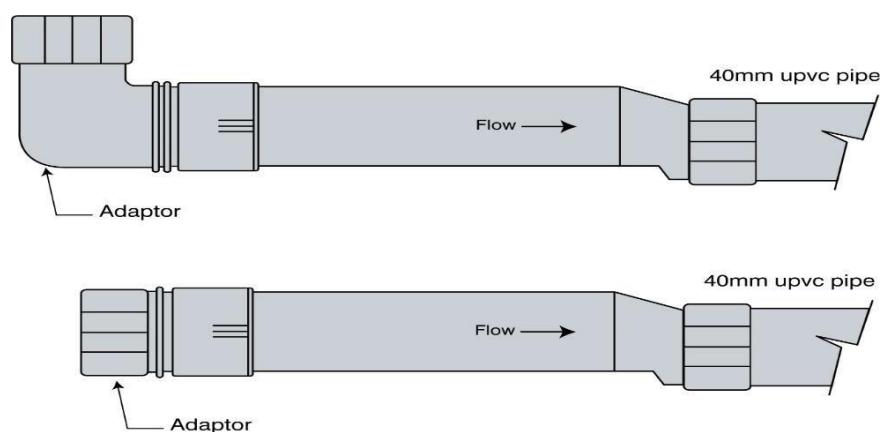
The device is designed for DN40 PVC-U pipe and can be installed in the vertical or on grade position. An adaptor fitting (available from the manufacturer, or regular fittings) may be required for the upstream end of the trap to provide for the connection of DN40 pipe or a tundish (see Figure 1)

- Self-sealing devices must be installed in accessible locations.
- Self-sealing devices must be installed internal of the building and not subject to UV.
- The discharge pipe, device and condensate drain must be adequately supported
- There must be a physical air gap of 20mm over the top of a tundish.

In all installations, test the system under full operating conditions to ensure there is no splashing or spillage from the tundish.

Figure 1 - Self-sealing devices

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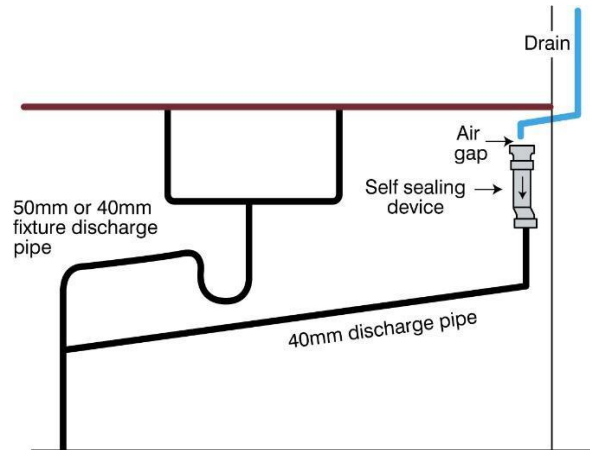


Connection to a vertical discharge pipe

A junction and device are installed by the sanitary plumber in the vertical section of discharge pipe (DN50 or DN40) below the trap seal of the fixture and the self-sealing device is installed in the vertical position as high as is practical to the underside of the bench top.

Figure 2 – Depicts condensate drain to vertical discharge pipe.

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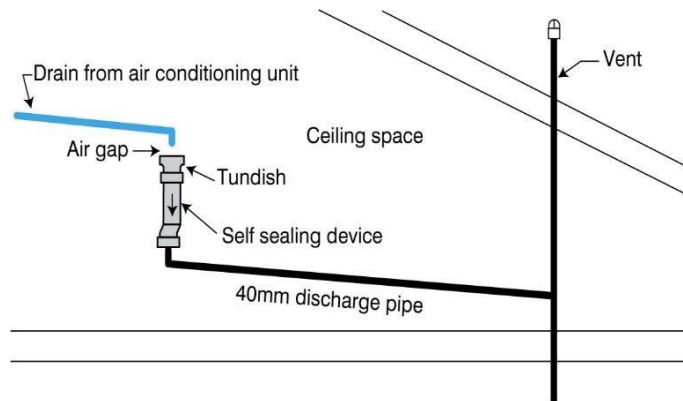


Connection to a dishwasher connection

A dishwasher connection point on a DN50 fixture trap utilised alternatively. The drain may discharge to the dishwasher connection point on a DN50 fixture trap using appropriate flexible hose and fittings.

Figure 3 – Depicts condensate drain to dishwasher connection.

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Connection to a vent in a ceiling space

Waste or vent in a roof/ceiling space.

The condensate drainage from an air conditioning or heating appliance may be discharged to a vent pipe via a self-sealing device located in a ceiling or roof space. The junction and device are to be installed by the sanitary plumber and must be supported in accordance with AS/ NZS 3500.2. It is preferable for the device to be installed in the vertical position with an air gap provided over a tundish (see Figure 4).

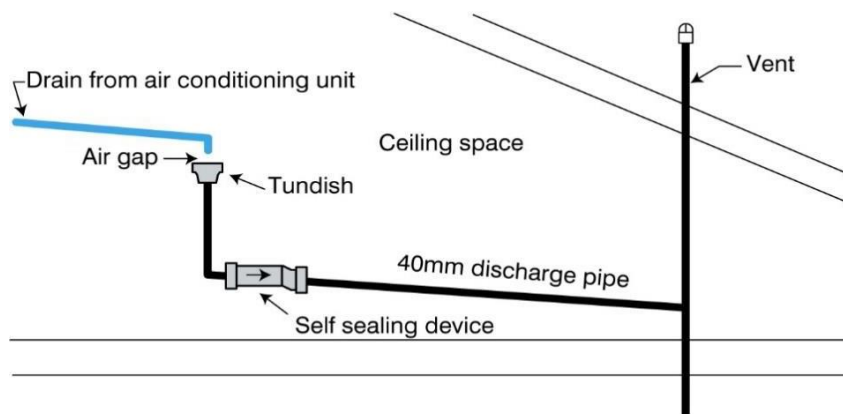


Figure 4 – Depicts condensate drainage vent vertical.

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Condensate drainage using a self-sealing device

If it is not practical to install the device in the vertical position, it is acceptable in an on-grade position if a tundish incorporating an air gap is provide

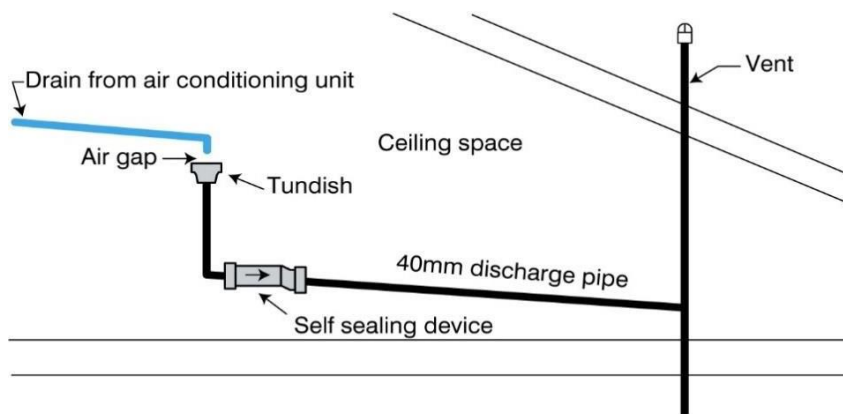
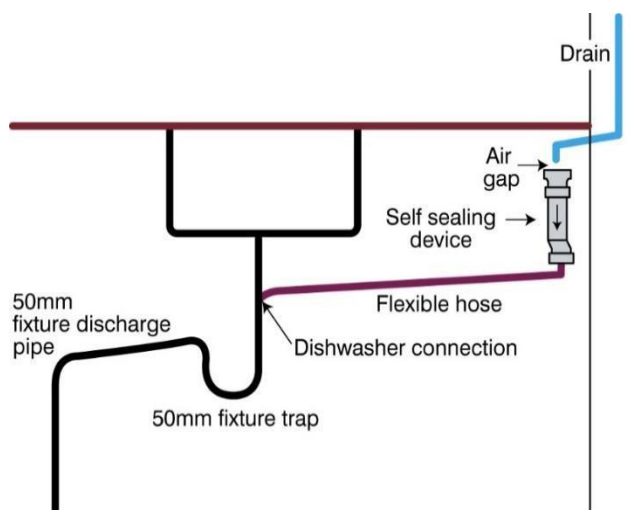


Figure 5 – Depicts condensate drain to drainage vent horizontal.

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Related Documentation

- National Construction Code 2022 Volume Three - Plumbing Code of Australia: VIC E2.
- AS/NZS 3500.2:2021 – Part 2: Sanitary Plumbing and Drainage
- HB276- Residential heating, cooling, and air conditioning plant and equipment.

List of Amendments

- Update to reflect Volume 3 NCC 2022
- Updated template and formatting

Document history

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