VICTORIAN BUILDING AUTHORITY

PLUMBING PRACTICE NOTE

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

Audience

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

- ☒ Architects/ Designers
- ☒ Builders
- ☒ Building Surveyors/ Inspectors
- ☒ Engineers
- ☒ Home Owners / Residential Tenants
- ☒ Owner Builders
- ☒ Plumbers
- ☒ Real estate management agents
- ☒ Trades and Maintenance (inc. Electricians)

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 discharge pipe beneath a sink, trough, or vanity basin
- Connection to a dishwasher connection point on a DN 50mm fixture trap
- Connection to waste or vent in roof/ceiling space
- Connection to a vent with the self-sealing device on grade

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.

VICTORIA State Government

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 on to the ceiling. Check that the condensate drain allows a free flow of water and does not hold water at any point, apart from any P-trap installed.

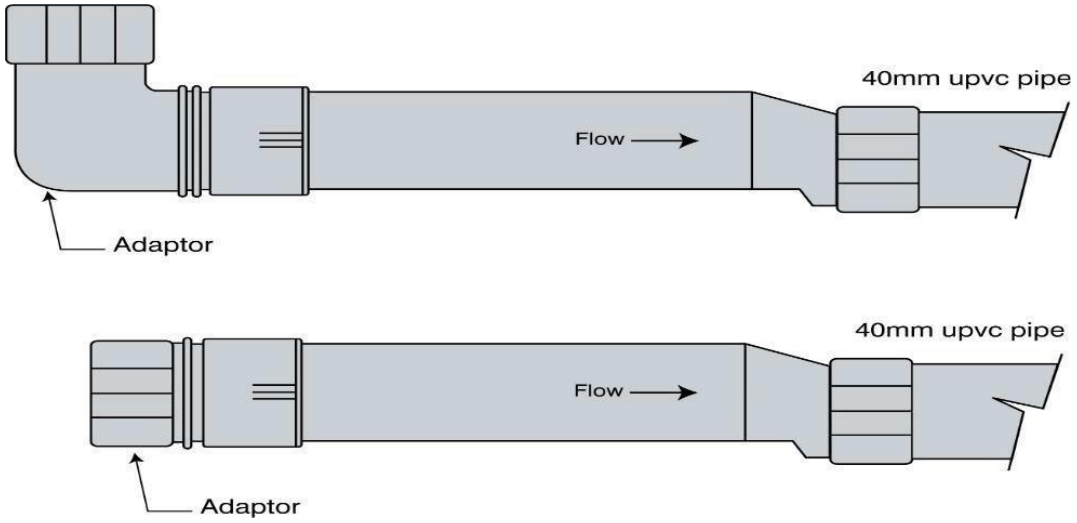

Figure 1 - General requirements for self-sealing devices and tundishes

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Connection to discharge pipe beneath a sink, trough or vanity basin

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.

The discharge pipe, device and condensate drain must be adequately supported. A tundish is required on the top of the device to provide a physical air gap (20mm) in the condensate drain. (See Figure 2 below).

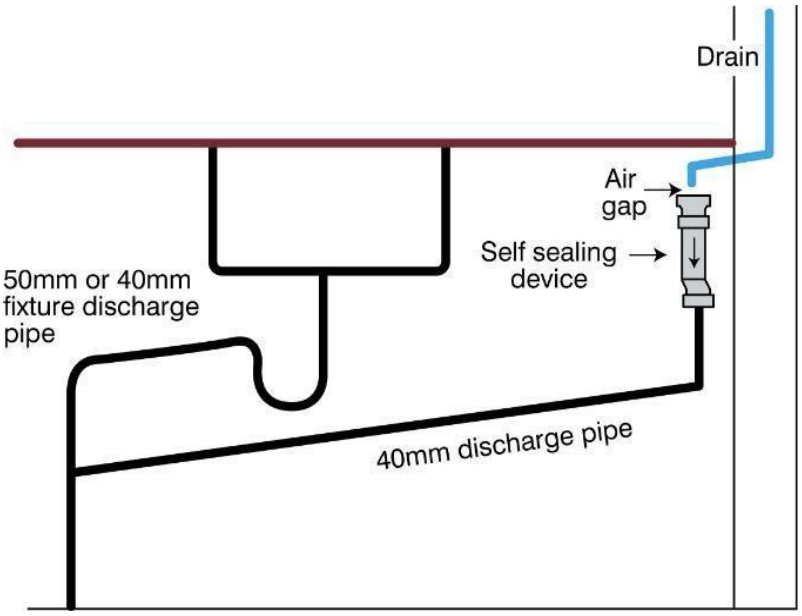

Figure 2 - Connection to discharge pipe beneath a sink, trough, or vanity basin
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Connection to a dishwasher connection point on a DN 50mm fixture trap

Alternatively, the drain may discharge to the dishwasher connection point on a 50mm fixture trap using appropriate flexible hose and fittings providing all the conditions described in the example of Figure 2 can be met. (See Figure 3 below)

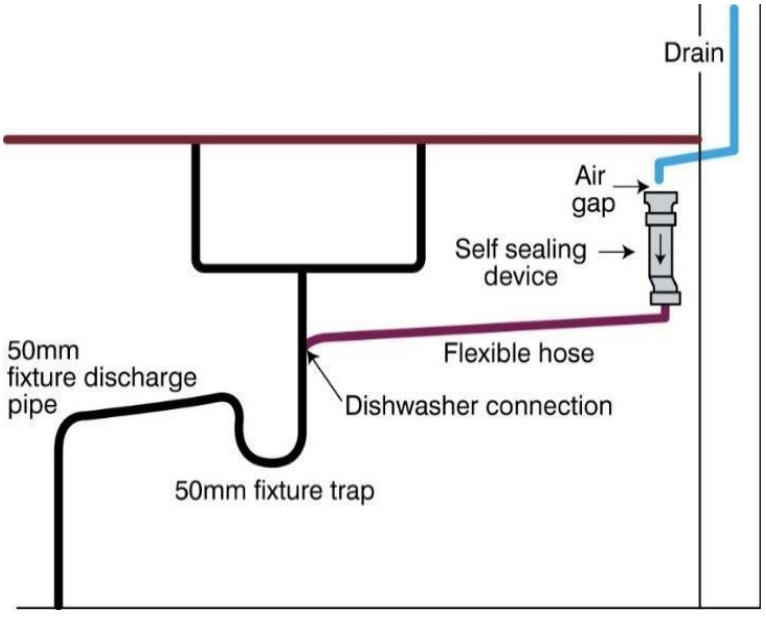

Figure 3 - Connection to a dishwasher connection point on a DN 50mm fixture trap
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Connection to waste or vent in a roof / ceiling space

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 below)

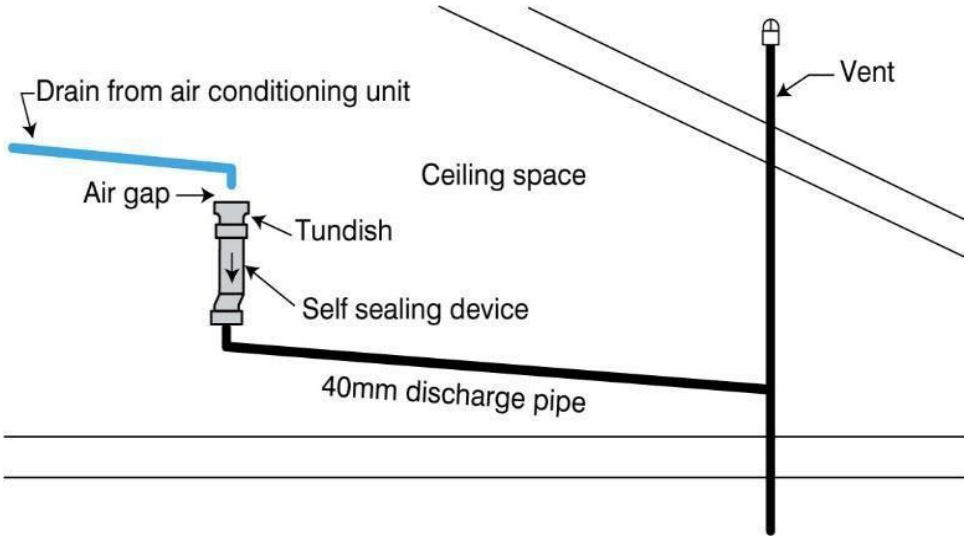

Figure 4 – Connection to waste or vent in roof / ceiling space

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Connection to a vent with a self-sealing device on grade

If it is not practical to install the device in the vertical position, it is acceptable in an on-grade position as long as a tundish incorporating an air gap is provided. (See Figure 5 below)

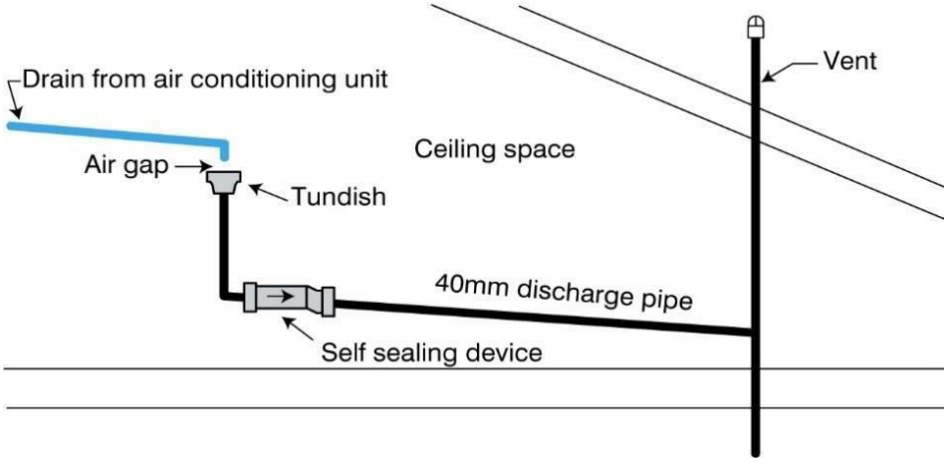

Figure 5 – Connection to a vent with the self-sealing device on grade

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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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