

7 : MECHANICAL SERVICES

Condensate drainage for air conditioning systems

Note this technical solution is in addition to previously published technical solutions relating to split system installation and condensate drainage methods and may also be used for applications such as high efficiency ducted heaters and evaporative coolers.

■ Condensate drainage using a self sealing device

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 40mm upvc pipe and can be installed in the vertical or on grade position but must be within a building, accessible and out of direct sunlight. An adaptor fitting (available from the manufacturer, or regular fittings) may be required for the upstream end of the valve to provide for the connection of 40mm pipe or a tundish. (See fig.1 opposite.)

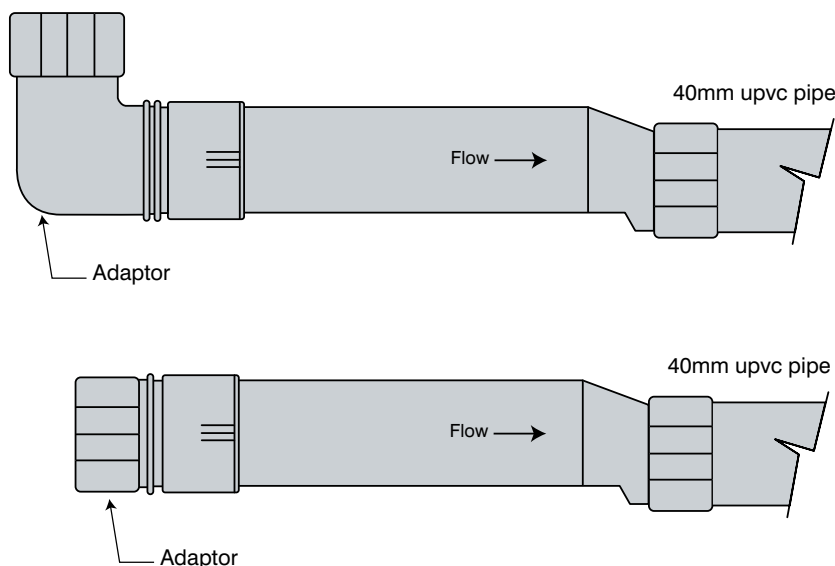


Fig. 1 Self sealing device

■ Permitted locations

- 1(a) Via the discharge pipe beneath a sink, trough or vanity basin.

A junction and device is installed **by the sanitary plumber** in the vertical section of discharge pipe (50mm or 40mm) 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 benchtop. 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 fig. 2 opposite.)

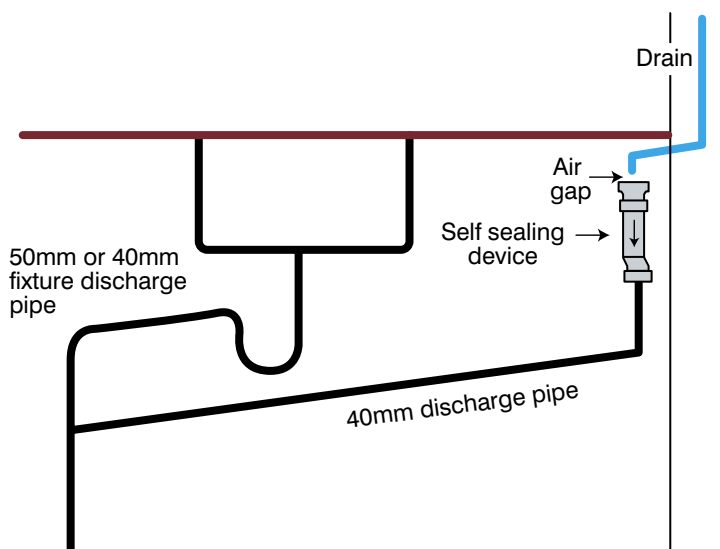


Fig. 2 Via a discharge pipe beneath a sink, trough or vanity basin

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Condensate drainage for air conditioning systems **Cont.**

Permitted locations cont.

1(b) Via 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 1(a) can be met. (See fig. 3 opposite.)

2. 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 is to be **installed by the sanitary plumber** and must be supported in accordance with AS 3500. It is preferable for the device to be installed in the vertical position with an air gap provided over a tundish. (See fig. 4 opposite.)

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 fig. 5 below, opposite.)

In the case of ceiling space installations, test the system under full operating conditions to ensure there is no splashing or spillage from the tundish on to the ceiling.

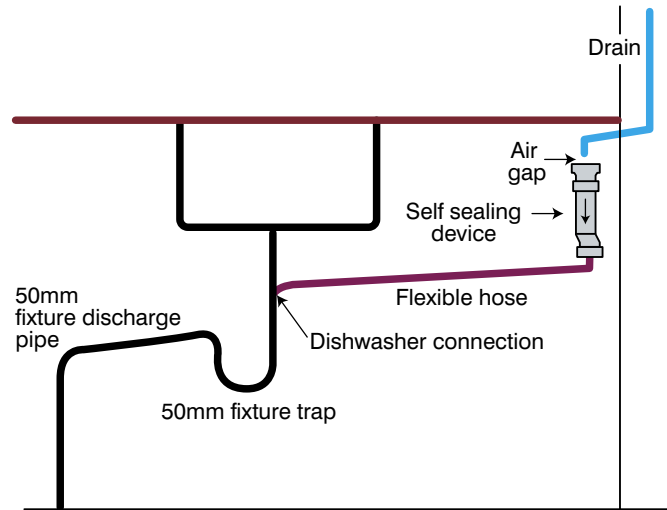


Fig. 3 Dishwasher connection point on a DN 50mm fixture trap

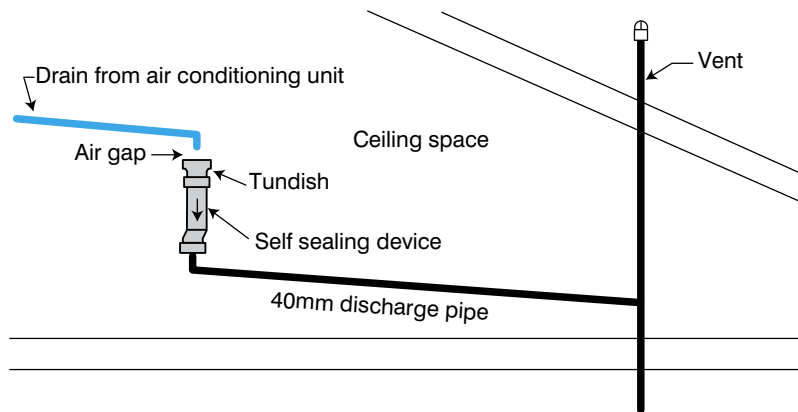


Fig. 4 To a vent in a ceiling space – vertical position

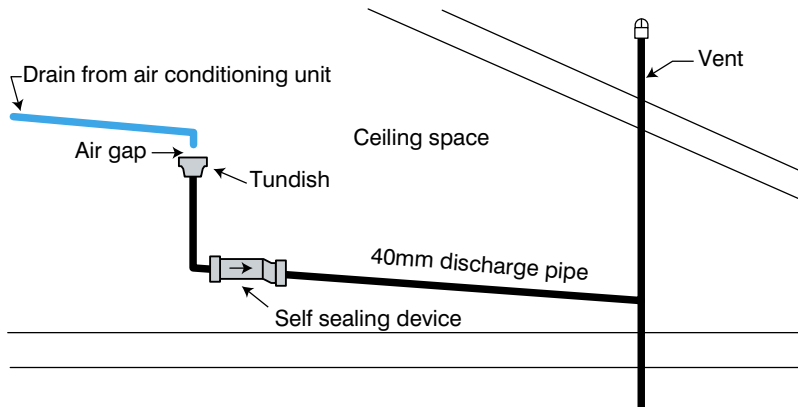


Fig. 5 To a vent in a ceiling space – on grade