

7 : MECHANICAL SERVICES

Ductwork for the Heating Cooling and Ventilation of a building

Q Does the ductwork used for the heating and cooling of a building including evaporative coolers need to be insulated?

A AS4426 Clause 6.5.12 requires insulation of ductwork where the temperature range for the heating and cooling air is between 10° and 80°C.

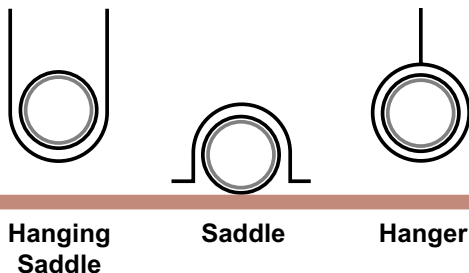
AS4426 requires that all ductwork insulation material must comply with the requirements of AS4254 which sets the standards relating to product fire performance.

Q When fixing flexible duct in a ceiling space, can hangers and saddles be used to secure flexible duct?

A Flexible ductwork can be supported as required by AS4254 Clause 2.8.5 Hangers and support systems. Fig. 2.8.5 (b) illustrates typical support systems and provided that the hanger or saddle material in contact with the duct does not restrict the internal diameter of the duct, then alternative fixing systems can be adopted.

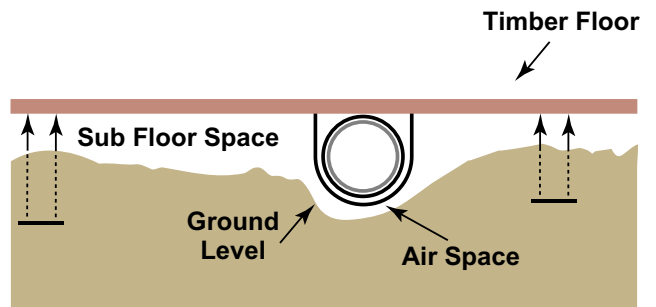
NOTE: Hanging Saddles, Hangers, and Saddles can be used to fix duct to roofing and ceiling members. This will comply provided that the internal diameter of the duct is not restricted. The 40mm deviation must also comply but in the case where insulation material has been installed in the ceiling space, then this may not present as such a problem.

Duct installed, looped over hanging beams should be installed in such a manner as to ensure the changes of direction are gradual, which may require the support of the duct with the use of hangers.



Q Can the flexible ductwork be in contact with the ground surface when installed in a sub floor space?

A The standards for acceptable installation work are the same no matter where the installation takes place, but in the case where the duct is installed in a sub floor space, then the duct must be installed clear of the ground surface at all points: this may necessitate trenching of sections of the sub floor space.



AS4254 - 1995: Ductwork for airhandling systems in buildings.

AS4426 - 1997: Thermal insulation of pipework ductwork and equipment selection insulation and finish.

NOTE: Both these standards reference a range of companion standards that may also need to be considered.