



ADVISORY NOTICE

BUILDING

06/00

Advisory Notices are issued to assist in the interpretation of the Development Act 1993

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Building Code of Australia 1996 Volume 1

Class 2-9 Buildings

COMPLIANCE OF MECHANICAL VENTILATION AND AIR CONDITIONING SYSTEMS

Mechanical ventilation and air conditioning systems installed in Class 2 to 9 buildings must comply with the following legislative requirements:

- BCA Specification C1.10, Fire Hazard Properties, Clauses 7 and 8,
- BCA Part F4, Light and Ventilation, Clause 4.5 Ventilation of rooms, and
- The Environmental Protection Act 1993 & Regulations for noise emission control of equipment.

More and more often, developers are installing domestic style air conditioning plant in commercial projects and where such systems also incorporate ducting for air distribution, this practice may result in some legislative requirements not being met.

Fire Hazard Properties of Ductwork

Where air conditioning systems incorporate ducting for air distribution, unsuitable ducting materials (ie only permitted for Class 1 buildings) are often proposed. Practitioners are reminded that domestic ducting materials used for domestic do not generally meet the fire hazard properties required for Class 2 to 9 buildings.

For Class 2 to 9 buildings, rigid and flexible ductwork must comply with the fire hazard properties set out in AS 4254, ie the assembled duct system must pass the UL 181 burning test, and the bulk insulation used for sound absorption and thermal stability must have a smoke developed index not greater than '3' and a spread of flame index not greater than '0' when tested in accordance with AS 1530.3 (both faces of insulation must be tested).

Ventilation Requirements

Most domestic style air conditioning units (room air conditioners) and split-packaged wall, ceiling or floor console type air conditioning systems do not introduce and circulate outside air at adequate rates for ventilation purposes.

These systems are therefore not suitable for use in Class 2 to 9 buildings unless ventilation is provided by other means, either naturally through doors, windows or the like, (BCA Clauses F4.6 & 4.7) or by a separate mechanical ventilation system. The rates of outside air required for mechanical ventilation purposes are set out in AS 1668.2 (generally in the region of 10 L/s.person for environments maintained at temperatures below 27°C).

Noise Control

Some external components of air-conditioning systems generate noise at levels that could lead to a complaint being lodged under the *Environmental Protection Act 1993* if the equipment is located too close to adjoining properties. Designers and installers should check the 1994 environment policies *Machine Noise* and *Industrial Noise* issued under the *Environmental Protection Act 1993*, which define requirements for measurement of noise and permitted noise levels, before locating noise generating equipment on site.

Further information

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