2.0 Ventilation of Spaces Containing Gas-fuel Appliances

2.1 Natural ventilation

2.1.1 Natural ventilation systems for appliances burning gas fuel designed to operate under *natural draught* conditions shall:

a) Supply air under equal pressure conditions to the burners and to the *draught diverter* i.e. in the same room and as close as possible to the appliance, and

b) For non *room-sealed appliances* having a combined gas input exceeding 1 kW for each m^3 of the space in which they are installed, be provided with vents, in addition to the ventilation required by Paragraphs 1.1 and 1.2. The vents shall be sized and located according to Paragraphs 2.1.3 to 2.1.8.

2.1.2 Domestic gas cookers in non room-sealed spaces which are also used for sleeping, require permanent venting to the outside. The size of the vent shall be appropriate to the gas input to the cooker and shall be subject to specific design.

2.1.3 Vent sizes

Two permanent vent openings, one high level and one low level, shall be provided, each with a free ventilation area per kW of gas input (of all appliances in the space) of no less than:

a) 1200 mm^2 for spaces vented directly to the outside, and

b) 2300 mm^2 for spaces vented via adjacent spaces.

2.1.4 The vent opening areas given in Paragraph 2.1.3 may be halved for plant rooms and boiler rooms infrequently occupied by people.

2.1.5 Vent openings shall have vertical dimensions of no less than 50 mm, and no dimension of less than 6.0 mm in any other direction.

2.1.6 Low-level vents shall have their lower edge no more than 100 mm above floor level, and upper-level vents shall have their lower edge no less than 75 mm above the top of the draught diverter relief opening.

2.1.7 A louvred door is also an acceptable method of ventilation provided the bottom of the free area extends to not less than 100 mm above the floor, and the requisite high-level free area is available from the level of 75 mm above the *draught diverter* relief opening.

2.1.8 In plant room or boiler room installations, low- and high-level vents may be combined into a single opening, provided it reaches from floor to ceiling and has a total free area equivalent to that required for the two separate vents.

2.2 Mechanical ventilation

2.2.1 When mechanical ventilation is used, the system shall have either:

a) Mechanical supply with mechanical extraction, or

b) Mechanical supply with natural exhaust.

2.2.2 A mechanical ventilation system shall:

a) For each kW of gas consumption (of all appliances in the plant room) provide *outdoor air* at the rate of:

   i) 3.6 m^3/h for *forced or induced draught appliances*, and

   ii) 7.2 m^3/h for appliances with *atmospheric burners*, and

b) Remove exhaust air from the room either:

   i) mechanically at one third the inlet rate, or

   ii) naturally via high-level openings having a free ventilation area of no less than 600 mm2 per kW of total gas consumption for all appliances in the room.

2.3 Flue construction

2.3.1 A *flue* system shall have:

a) The cross-sectional area of a *natural draught flue* system external to the appliances, no less than the cross-sectional area of the appliance outlet, or

b) The *flue* designed to comply with AS/NZS 5601.1, section 6.7 and Appendix H, and

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c) If a *draught diverter* is not fitted: