

Energy efficiency

- (xiii) Door grilles must not exceed a pressure drop of 12 Pa.
- (xiv) Active chilled beams must not exceed a pressure drop of 150 Pa.
- (e) The requirements of (a), (b), (c) and (d) do not apply to—
 - (i) fans in unducted *air-conditioning* systems with a supply air capacity of less than 1000 L/s; and
 - (ii) smoke spill fans, except where also used for *air-conditioning* or ventilation; and
 - (iii) the power for process-related components; and
 - (iv) kitchen exhaust systems.

J5.5 Ductwork insulation

- (a) Ductwork and fittings in an *air-conditioning* system must be provided with insulation—
 - (i) complying with AS/NZS 4859.1; and
 - (ii) having an insulation *R-Value* greater than or equal to—
 - (A) for flexible ductwork, 1.0; or
 - (B) for cushion boxes, that of the connecting ductwork; or
 - (C) that specified in Table J5.5.
- (b) Insulation must—
 - (i) be protected against the effects of weather and sunlight; and
 - (ii) be installed so that it—
 - (A) abuts adjoining insulation to form a continuous barrier; and
 - (B) maintains its position and thickness, other than at flanges and supports; and
 - (iii) when conveying cooled air—
 - (A) be protected by a vapour barrier on the outside of the insulation; and
 - (B) where the vapour barrier is a membrane, be installed so that adjoining sheets of the membrane—
 - (aa) overlap by at least 50 mm; and
 - (bb) are bonded or taped together.
- (c) The requirements of (a) do not apply to—
 - (i) ductwork and fittings located within the only or last room served by the system; or
 - (ii) fittings that form part of the interface with the *conditioned space*; or
 - (iii) return air ductwork in, or passing through, a *conditioned space*; or
 - (iv) ductwork for *outdoor air* and exhaust air associated with an *air-conditioning* system; or
 - (v) the floor of an in-situ air-handling unit; or
 - (vi) packaged air conditioners, split systems, and variable refrigerant flow *air-conditioning* equipment complying with *MEPS*; or
 - (vii) flexible fan connections.
- (d) For the purposes of (a), (b) and (c), fittings—
 - (i) include non-active components of a ductwork system such as cushion boxes; and
 - (ii) exclude active components such as air-handling unit components.

Table J5.5 Ductwork and fittings - Minimum insulation R-Value

Location of ductwork and fittings	<i>Climate zone 1, 2, 3, 4, 5, 6 or 7</i>	<i>Climate zone 8</i>
Within a conditioned space	1.2	2.0
Where exposed to direct sunlight	3.0	3.0
All other locations	2.0	3.0