

## ENERGY EFFICIENCY

Table 3.12.5.2 HEATING AND COOLING DUCTWORK AND FITTINGS—MINIMUM MATERIAL R-VALUE

Ductwork element	Minimum material <i>R-Value</i> for ductwork and fittings in each <i>climate zone</i>				
	Heating-only system or cooling-only system including an evaporative cooling system		Combined heating and refrigerated cooling system		
	1, 2, 3, 4, 5, 6 and 7	8	1, 3, 4, 6 and 7	2 and 5	8
Ductwork	1.0	1.5	1.5 (see note)	1.0	1.5
Fittings	0.4				

**Note:** The minimum material *R-Value required* for ductwork may be reduced by 0.5 for combined heating and refrigerated cooling systems in *climate zones* 1, 3, 4, 6, and 7 if the ducts are—

(a) under a suspended floor with an enclosed perimeter; or

(b) in a roof space that has insulation of not less than R0.5 directly beneath the roofing.

**Explanatory information:**

- For information on an enclosed perimeter, refer to the explanatory information following [Table 3.12.1.4](#).
- Insulation for refrigerated cooling ductwork should have a vapour barrier to prevent possible damage by condensation.
- The insulation levels in the following table are typical examples of materials that can be used to insulate ductwork and fittings and the *R-Values* they contribute. Other methods are available for meeting the minimum material *R-Value required* by [Table 3.12.5.2](#).

Insulation	<i>R-Value</i>
<b>Fittings</b>	
11 mm polyurethane	0.4
<b>Flexible ductwork</b>	
45 mm glasswool (11 kg/m <sup>3</sup> )	1.0
70 mm polyester (6.4 kg/m <sup>3</sup> )	1.0
63 mm glasswool (11 kg/m <sup>3</sup> )	1.5
90 mm polyester (8.9 kg/m <sup>3</sup> )	1.5
85 mm glasswool (11 kg/m <sup>3</sup> )	2.0
<b>Sheetmetal ductwork — external insulation</b>	
38 mm glasswool (22 kg/m <sup>3</sup> )	1.0