

DUCT INSULATION TO MEET NEW BCA REQUIREMENTS

The Energy Efficiency Provisions contained in the Building Code of Australia 2006 specify minimum levels of insulation for air conditioning ductwork in Class 5 to 9 commercial buildings.

This guide can be used to determine the correct Fletcher Insulation products for ductwork insulation.

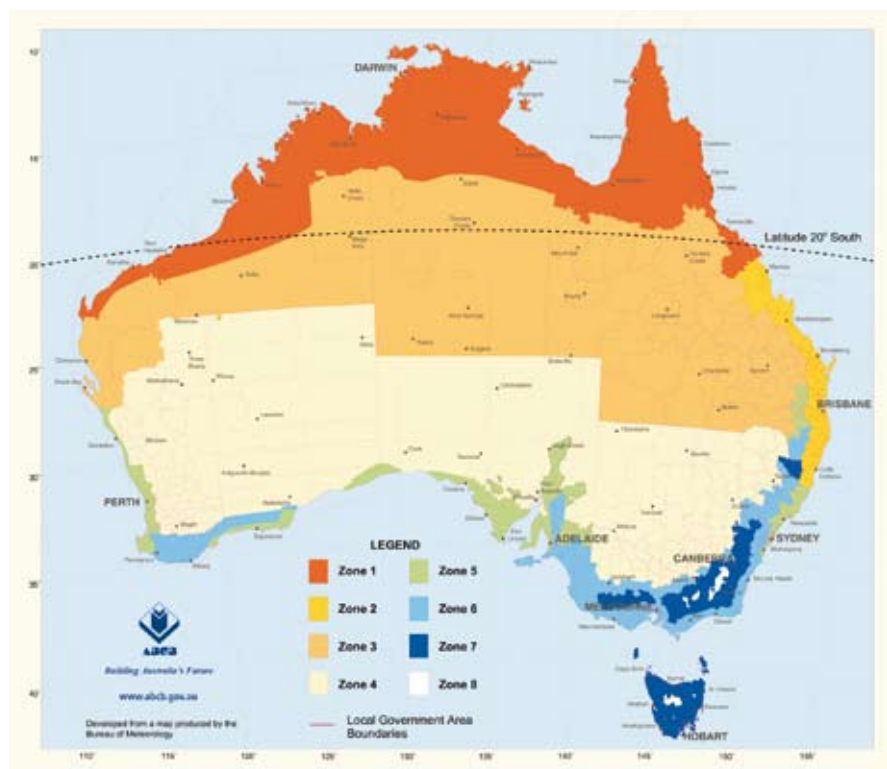
The requirements outlined in this guide are based on the minimum mandatory levels of insulation required to comply with BCA 2006. Increased levels of insulation can lower the load on the air conditioning system which may reduce both the size of the plant required, and the running costs.

The BCA provisions specify minimum mandatory levels of insulation according to location, plant size and duct type.

Follow the simple three step process to determine the correct Fletcher Insulation products for your project.

Step 1:

Determine which climate zone your project is located in from the map below.



The BCA divides Australia into eight climate zones which specify minimum levels of insulation for roofs, walls, floors and ductwork.

Step 2:

From the following tables, look up the R value required for the size of air conditioning system and location of the duct in the building.

DUCTWORK – MINIMUM INSULATION (For systems of no more than 65kW capacity)									
Location and element	Minimum Total R-Value for Ductwork								
	Evaporative cooler	Heating system or refrigerated cooling system							
Climate Zones	All climate zones	1	2	3	4	5	6	7	8
1. In a roof space with insulation installed directly beneath the roofing	R0.6	R1.0	R1.0	R1.0	R1.0	R1.0	R1.0	R1.0	R1.5
2. Under an enclosed suspended floor									
3. In a plant room									
All other locations including:									
1. External to the building	R0.6	R1.5	R1.0	R1.5	R1.5	R1.0	R1.5	R1.5	R1.5
2. Under an enclosed suspended floor									
3. In a roof space with insulation installed at the ceiling level									

DUCTWORK – MINIMUM INSULATION (For systems greater than 65kW capacity)									
Location and element	Minimum Total R-Value for Ductwork								
	Evaporative cooler	Heating system or refrigerated cooling system							
Climate Zones	All climate zones	1	2	3	4	5	6	7	8
Within a conditioned space other than where the pace is the only or last space served	Nil	R1.0	R1.0	R1.0	R1.0	R1.0	R1.3	R1.3	R1.5
1. In a roof space with insulation installed directly beneath the roofing	R0.9	R1.3	R1.5	R1.3	R1.3	R1.5	R1.8	R1.8	R1.8
2. Under an enclosed suspended floor									
3. In a plant room									
All other locations including:									
1. External to the building	R0.9	R1.8	R1.5	R1.8	R1.8	R1.5	R1.8	R1.8	R2.0
2. Under an enclosed suspended floor									
3. In a roof space with insulation installed at the ceiling level									

Step 3:

From the table below, specify the product to meet the BCA minimum requirement.

MINIMUM REQUIRED INSULATION			
BCA minimum R-Value	Product recommended		
	External	Internal	Flexible duct > 3m
R0.6	FI22 Ductwrap 25mm	FI32 Ductliner 25mm	FI11 Ductflex R1.0
R0.9	FI22 Ductwrap38mm	FI32 Ductliner 38mm	FI11 Ductflex R1.0
R1.0	FI22 Ductwrap 38mm	FI32 Ductliner 38mm	FI11 Ductflex R1.0
	DuctBoard 33mm- All in one duct fabrication		
R1.3	FI22 Ductwrap 50mm	FI32 Ductliner 50mm	FI11 Ductflex R1.5
R1.5	FI22 Ductwrap 50mm	FI32 Ductliner 50mm	FI11 Ductflex R1.5
R1.8	FI22 Ductwrap 75mm	FI32 Ductliner 75mm	FI11 Ductflex R2.0
R2.0	FI22 Ductwrap 75mm	FI32 Ductliner 75mm	FI11 Ductflex R2.0