

# National Construction Code 2013

## Changes to BCA Volume One and Two

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### THE NEW VBA

- Minister Launched the VBA
- Single over arching body
- One stop shop
- New Board with 5 Commissioners
- CEO

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## The National Construction Code Series

Changes to Building Code of Australia 2013

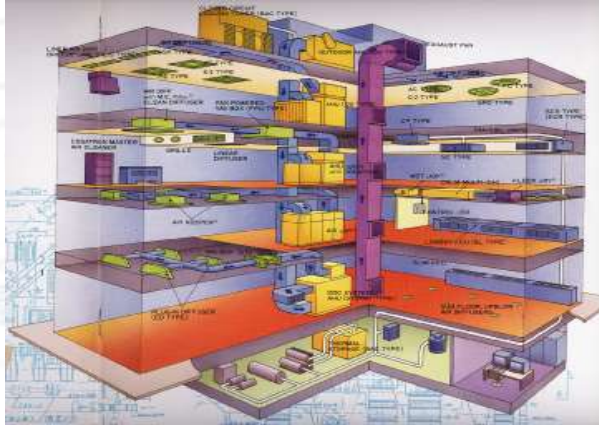


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Main Changes to the BCA  
Volumes One and Two

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## HVAC Standards



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HVAC Standards

New edition of AS 1668.2-2012 – Ventilation in buildings – mechanical ventilation (Referenced in NCC)

New Standard – AS 1668.4-2012 – Ventilation in buildings – natural ventilation (Not referenced in NCC)

New 2012 editions of AS 4254 Ductwork for air-handling systems in buildings:

- Part 1 Flexible Duct
- Part 2 Rigid Duct

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## HVAC Standards

AS 1668.2-1991 Ventilation in buildings – mechanical ventilation - retained for a 12 month transition

AS/NZS 1668.2-2012 - Major revision from 1991.

Referenced in all volumes of the NCC

Environmental tobacco smoke provisions which were part of the 2002 edition removed

References to design requirements for natural ventilation systems removed (see AS 1668.4-2012)

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## **AS/NZS 1668.2-2012**

Demand Control Ventilation (DCV) recognised as an acceptable control strategy

Changes to the provisions for ventilation in car parks to align with industry practice. (note natural ventilation provisions now contained in AS 1668.4)

New provisions related to the minimum requirements for ventilation in Health Care Facilities

Generally improved and updated the document to deal with industry changes, product and material changes and alignment with other Codes and Standards (from 1991)

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## **AS/NZS 4254 Ductwork in buildings series – summary of major changes**

### **AS 4254.1 (Flexible Duct)**

Testing criteria for performance of flexible duct

Normative Duct Compliance Report ( AS 1530.3 and UL 181)

Provisions for labelling on the outer jacket / sleeve of insulated flexible duct repeated at 1000mm intervals

- Name of manufacturer
- Compliance certificate
- The R value of the flexible duct

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## **AS/NZS 4254 Ductwork in buildings series**

### **AS 4254.2 (Rigid Duct)**

Significant update to the document to reflect changes in industry practice / technology

Updated provisions for air leakage testing for systems with a capacity > 3000 L/s

Requires component testing to AS 1530.3 and system testing to UL 181

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## Referenced Documents Provision Changes

### Spec JV Clause 2

(iii) The internal heat gains in a building—

(A) From the occupants—

(aa) 75 W per person sensible heat gain and 55 W per person latent heat gain; or

(bb) Metabolic rate from Table 45 AIRAH-DA09; or

(cc) Heat emission rate from Table 6.3 CIBSE Guide A



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## New Provisions for Buildings in Flood Hazard Areas



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## ABCB Standard for Construction of Buildings in Flood Hazard Areas

### Clause 2.9.3

#### 2.9.3 Mechanical and HVAC systems, tanks and the like

Ductwork, tanks, gas storage cylinders and the like must be placed above the *Flood Hazard Level* or designed, constructed, installed and anchored to resist all flood-related actions and other actions during the *Defined Flood Event (DFE)* with appropriate load factors as given in 2.3.7.

Potential buoyancy and other flood related actions on the empty tank during the *DFE* condition must be considered.

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## ABCB Standard for Construction of Buildings in Flood Hazard Areas



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## Openable Windows D2.24 and 3.9.2.5

New provisions for protection of openable windows, applies to:

- Only Bedrooms in Class 1, 2, 3 and Class 4 Part
- Class 9b early childhood centre

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## Openable Windows D2.24 and 3.9.2.5

- **Current:** 865 mm barrier for openable window, when floor is 4 m above surface beneath
- **New:** Protection for openable window, when floor is 2 m above surface beneath in early childhood centres and bedrooms of residential buildings



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## Openable Windows D2.24 and 3.9.2.5

- A device to restrict the window opening;  
or
- A screen with secure fittings,
  - Not permit a 125 mm sphere to pass through
  - Restrict a force of 250 N
  - Child resistant release mechanism if screen or device is able to be removed



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### Section J Application of Parts J1.1, J2.1, J3.1

#### **J1.1 Application of Part**

The *Deemed-to-Satisfy Provisions* of this Part apply to building elements forming the envelope of a Class 2 to 9 building ~~other than—~~

- ~~(a) a Class 7, 8 or 9b building that does not have a conditioned space; or~~
- ~~(b) an atrium or solarium that is not a conditioned space and is separated from the remainder of the building by an envelope.~~

Non-conditioned space removed from application

Envelope in broad terms refers to conditioned space or habitable rooms

Therefore non-conditioned spaces are excluded in the first instance

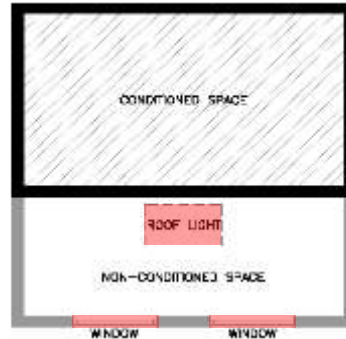
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## Concession for envelope walls Table J1.5(b)

Table J1.5(b) has been clarified

3 triggers for use of provision which allows a concession to the Total R-Value requirements:

- Ventilation
- Glazing
- Roof lights

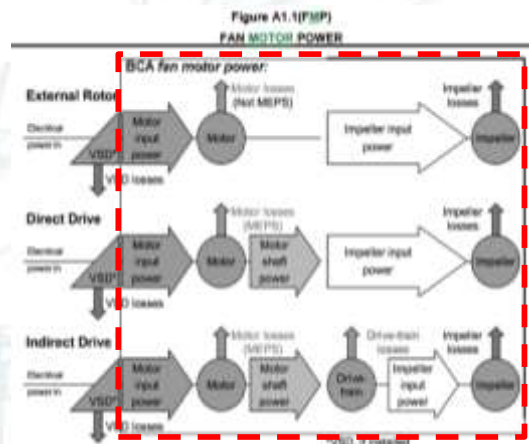


Example of where provision J1.5(b) could be applied

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## Fan Motor Power – Part J5

- Change to BCA definition of fan motor power
- Now includes motor input power
- Changes to J5.2 including Table J5.2



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**Table J5.2 Maximum Fan Motor Power**

Air-conditioning sensible heat load (W/m <sup>2</sup> of the floor area of the conditioned space)	Maximum fan <u>motor</u> power (W/m <sup>2</sup> of the floor area of the conditioned space)	
	For air-conditioning system serving not more than 500m <sup>2</sup>	For and air-conditioning system serving more than 500m <sup>2</sup>
Up to 100	<del>4.4</del> 5.3	<del>6.4</del> 8.3
101 to 150	<del>7.3</del> 9.5	<del>10.4</del> 13.5
151 to 200	<del>10.5</del> 13.7	<del>14.4</del> 18.3
201 to 300	<del>17.4</del> 22.2	<del>24.5</del> 28.0
301 to 400	<del>23.6</del> 30.7	<del>28.4</del> 37.0

Note: For more than 400W/m<sup>2</sup> air-conditioning sensible heat load-  
 (a) in a building of not more than 500m<sup>2</sup> floor area, use 0.097 W of fan motor power for each watt of internal air-conditioning sensible heat load; and  
 (b) in a building of more than 500m<sup>2</sup> floor area, use 0.1209 W of fan motor power for each watt of internal air-conditioning sensible heat load.

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## Heating and Cooling Systems J5.4(b)(ii)(H)

The sub-clause has been relocated so that all forms of heating (A) to (G) can be used in combination

- (ii) for heating a space other than via water, must be—
  - (A) a solar heater; or
  - (B) a gas heater; or
  - (C) an oil heater, but only if reticulated gas is not available at the allotment boundary; or
  - (D) a heat pump heater; or
  - (E) a solid-fuel burning heater; or
  - (F) a heater using reclaimed heat from another process such as reject heat from a refrigeration plant; or
  - (G) electric only—
  - (H) a combination of (A) to (G), and

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## PRACTICE NOTES

[PN 2013-64: Classification of Buildings](#)

[PN 2013-65: Flood hazard areas and Building Regulations](#)

[PN 2013-66: \\_Occupancy Permits for Places of Public Entertainment](#)

Available on our website [www.vba.vic.gov.au](http://www.vba.vic.gov.au)



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