Overview: New BCBC 2024 Requirements for Overheating Protection

Scope of the Issue

- BCBC 2024 adds overheating protection
- At least one living space must stay ≤ 26°C
- Applies to all new residential units
- Compliance process updates needed

Impacts for the Authority Having Jurisdiction

- AHJ verifies new buildings meet code
- Overheating Protection requires new procedures
- AHJ must add new compliance checks
- Local governments must update bylaws

Resources for Compliance Process Updates

- Training presentation (recording + template)
- Bulletin, policy brief, and RDH report
- CSDSB B24-08 and CSDSB B25-03
- HVAC Designers of Canada guideline

Pathways for BCBC 2024 Overheating Protection Compliance

Part 9

Small and single-family homes

Except where it can be shown it to be unnecessary, dwelling units shall be equipped with cooling facilities. - BCBC 9.33.2.1.(2)

Cooling facilities shall be capable of maintaining an indoor air temperature of not more than 26 °C in at least one living space in each dwelling unit. - BCBC 9.33.3.1.(2).

Compliant With Mechanical Cooling

or

Compliant Without Mechanical Cooling

Full Mechanical Cooling
Business as Usual

or

Partial Mechanical Cooling
"Cooling Zone"

or

Passive Only
No Mechanical Cooling

see next page

see next page

Part 3

Multi-unit and mixed-use

Indoor design temperatures for residential buildings shall be those established in Article 9.33.3.1. - BCBC 6.2.1.1.(2)

"Good engineering practice" by a Registered Professional

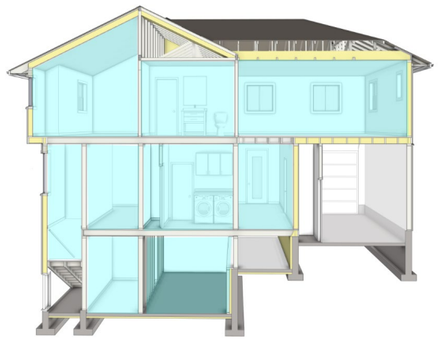
see next page

Part 9

Pathways for BCBC 2024 Overheating Protection Compliance Continued

Part 3

Full Mechanical Cooling
Business as Usual

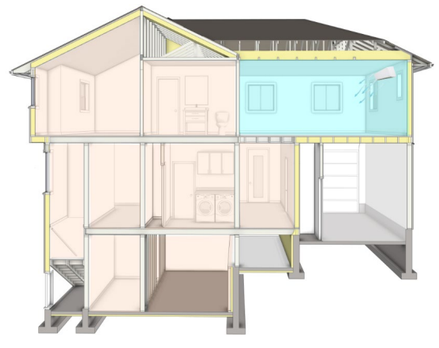


No Additional Documentation Required

- Calculated per CSA F280.
- Verified CSA F280 software.
- Indoor cooling setpoint ≤ 26°C.
- Outdoor temp = AHJ value or 2.5% July dry-bulb.
- Internal loads included per CSA F280.
- Envelope inputs match permit.
- CSA F280 Summary Report provided.
- Proposed equipment identified.

or

Partial Mechanical Cooling
"Cooling Zone"



Additional Documentation Required

Same as Full Mechanical Cooling plus:

- Each unit has its own Cooling Zone
- Cooling Zone is a living space, accessible and fits all occupants.
- Calculated per CSDSB B25-03
- Zone separated from rest of dwelling.
- Full occupant load and adjacent heat gains included.
- Supplemental Cooling Zone compliance report provided.
- CSA F280 Summary Report shows equipment sized to 100% load.

or

Passive Only
No Mechanical Cooling

Registered Professional Required

- Designed by Registered Professional per BCBC Part 6.
- Hourly modelling tool validated to ASHRAE 140.
- Shading capability and supplemental analysis as needed.
- Modelling per COV EMGs.
- Envelope/assembly inputs match permit drawings.
- No occupant-controlled strategies.
- Sealed report provided with inputs, assumptions, results, and confirmation of ≤ 26°C.
- Letters of Assurance for design and field review recommended.

Full Cooling | Partial Cooling | Passive Only

Registered Professional Required

- Designed by a Registered Professional in accordance with good engineering practice and BCBC Part 6 requirements.
- Sealed report provided with inputs, assumptions, results, and confirmation of ≤ 26°C.
- The report demonstrates that cooling equipment sizing is based on the applicable full, partial, or passive parameters, or on requirements specific to Part 3 buildings.
- Letters of Assurance for design and field review.