

## GARAGE CEILINGS

This edition of OnBoard provides the Knauf requirements for installation of plasterboard in Garage Ceilings.



Garage Ceilings are subject to conditions that are more demanding than in other parts of the home. This is the case even when garages are located under the same roof as the rest of the home. Garages have large doors that, when open, let in rain and strong wind. Cars are garaged wet, and they are not normally heated spaces. These factors call for a more durable installation to avoid future maintenance issues.

### Minimum conditions to use plasterboard in garage ceilings

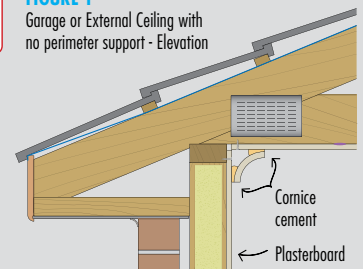
- The plasterboard framing must be designed for the appropriate wind loading conditions.
- The cavity above the plasterboard must have cross ventilation [See Condensation and Ventilation].

### Installation requirements for garage ceilings

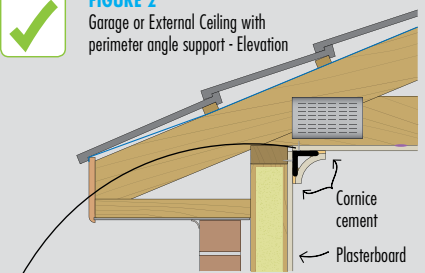
- Fix the ceilings sheets using the 'Screw Only Method' or the 'One Third Fixing Method'.
- Provide additional framing around perimeter by inserting trimmers between ceiling frames or installing steel angles [Refer to Figures 2 to 5].
- Fix the perimeter of the sheets using screws at 300mm maximum spacing.
- Avoid windy conditions during and immediately after installation to ensure adhesive sets intact.
- Back-block all plasterboard joints.
- Roll or brush on a high quality sealer undercoat designed for exterior use.
- Use a premium exterior paint system that includes a mould inhibitor.



**FIGURE 1**  
Garage or External Ceiling with no perimeter support - Elevation



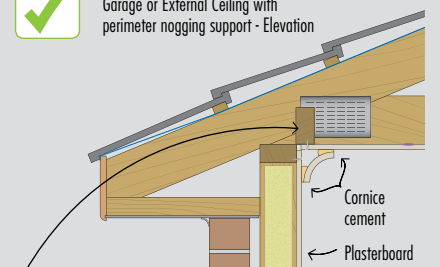
**FIGURE 2**  
Garage or External Ceiling with perimeter angle support - Elevation



Angle (Rondo No.P18) for perimeter sheet support. Fix angle to top plate at 600mm max centres and 100mm from ends.



**FIGURE 3**  
Garage or External Ceiling with perimeter nogging support - Elevation



Nogging between trusses for perimeter sheet support. Fix plasterboard to nogging also.

## Condensation and ventilation

Plasterboard must not be installed until the building is weatherproof, particularly in coastal areas subject to sea spray. Complete all walls, windows, the roof and exterior doors, before installing plasterboard. Prevent rain from entering the building, avoid water on floors or other sources of open water and allow wet concrete or masonry to dry. These precautions will reduce excessive humidity that may be absorbed by timber or unpainted plasterboard and minimise defects caused by timber shrinkage or moist plasterboard.

Condensation of water onto either the face or back of the plasterboard must be avoided. Insufficient protection from condensation can result in joint distortion, plasterboard sagging, mould growth and fastener popping.

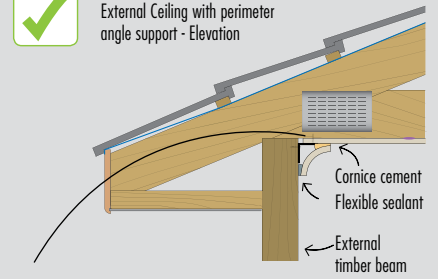
Many interrelated factors must be taken into account to control condensation. Good practice is to make use of wall and ceiling insulation, vapour barriers and especially ventilation. Ventilation must be considered for the spaces in walls, under floors and in particular, under roofs.

## To minimise the effects of condensation

- Use moisture barriers or sarking. However, it is important that the right type selection is made for the type of construction and that it is installed correctly [Refer to the manufacturer's specifications].
- Use sarking or foil backed insulation under metal roofs as they are susceptible to forming condensation.
- Install eave and gable vents or roof ventilators in the roof cavity.
- Remove humidity from bathrooms via an exhaust fan to the outside.
- In hot and humid climates where the building is air-conditioned below the dew point of the outside air, the wall and ceiling framing members and internal linings should be fully protected by moisture barriers to separate them from the humid external air. The moisture barriers should be thermally insulated to maintain them at a temperature above the dew point.
- Use a quality paint system to provide protection against paint peeling and condensation soaking into plasterboard and compounds.



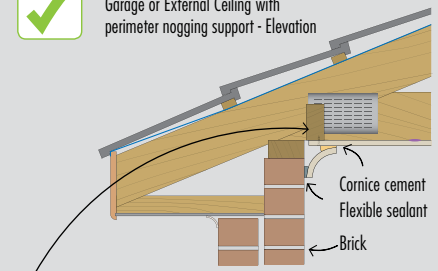
**FIGURE 4**  
External Ceiling with perimeter angle support - Elevation



Angle (Rondo No.P18) for perimeter sheet support. Fix angle to top plate at 600mm max centres and 100mm from ends.



**FIGURE 5**  
Garage or External Ceiling with perimeter nogging support - Elevation



Nogging between trusses for perimeter sheet support. Fix plasterboard to nogging also.

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