

VENTILATION IS VERY IMPORTANT - THE KEY TO DURABLE AND HEALTHY FAÇADE CONSTRUCTION

In modern building construction, moisture management is one of the most critical factors for long-term façade performance. A well-designed façade must not only protect against rain and weather but also be able to dry efficiently.



That is why Ventilation Is Essential

At TWEHA®, we strongly believe that proper ventilation is one of the foundations of a durable ventilated façade system.

The Importance of Moisture Balance

The long-term performance of every building enclosure depends on maintaining the correct balance between:

- Wetting;
- Drying;
- Proper application and detailing.

Even the highest-quality façade materials can develop problems if moisture is unable to escape from the construction.

Without sufficient drying capacity, moisture accumulation may lead to:

- Condensation;
- Mold formation;
- Algae growth;
- Structural deterioration;
- Reduced insulation performance;
- Premature façade ageing.

A Simple Example: The Camping Tent

The principle of a ventilated façade can actually be compared to a camping tent with a Flysheet.

The outer flysheet protects against rain and condensation, but it only works effectively because it remains separated from the inner tent by an air gap.

This air space allows:

- Ventilation;
- Moisture removal;
- Drying.

Without this separation and airflow, condensation would quickly accumulate inside the tent.

A Ventilated Façade Works the Same Way

A ventilated rainscreen façade system applies exactly the same principle to buildings. The façade cladding is separated from the structural wall by A Ventilated Air Cavity. This cavity prevents moisture from directly penetrating the building structure while allowing water and humidity to be safely removed.

Why the Air Cavity Is So Important

A properly designed ventilated façade system contains:

- A continuous air space;
- Openings at the top and bottom;
- Open joints for airflow.

This creates natural ventilation behind the façade cladding.

The airflow promotes convective drying which allows moisture to evaporate and leave the façade construction quickly.

Moisture Can Enter Every Façade

Even well-designed façades may occasionally experience moisture entering the cavity through:

- Wind-driven rain;
- Water runoff;
- Capillary action;
- Open façade joints;
- Condensation.

The purpose of a ventilated façade is therefore not only to block water — but also to Remove Moisture Efficiently before damage can occur.

Improved Energy Performance

Many modern ventilated façade systems also include Water-Resistant Rigid Insulation positioned on the exterior wall.

This improves:

- Thermal insulation;
- Energy efficiency;
- Indoor comfort;
- Condensation control.

However, insulation alone is not enough.

Without proper ventilation behind the cladding, moisture may still become trapped inside the façade system.

Ventilation Protects the Entire Façade Construction

The ventilation cavity plays a vital role in maintaining a healthy moisture balance within the façade assembly.

Proper airflow helps:

- Keep the cavity dry;
- Reduce condensation risks;
- Protect structural components;
- Extend façade lifespan;
- Improve overall building durability.

Good Design and Execution Are Essential

A ventilated façade only performs correctly when both:

- The design;
- And the installation;

are executed properly.

This requires careful attention to:

- Air cavity dimensions;
- Ventilation openings;
- Joint detailing;
- Moisture drainage;
- Correct installation practices.

Even small execution mistakes can negatively affect airflow and long-term façade performance.

Smart Façades Start with Proper Ventilation

Modern ventilated façade systems offer major advantages in terms of:

- Durability;
- Moisture management;
- Energy efficiency;
- Long-term building protection.

But these benefits can only be achieved when ventilation is treated as a fundamental part of the façade system.

At TWEHA®, we know that successful façade engineering is not only about selecting the right materials — it is about creating façade systems that can breathe, dry, and perform reliably for decades.

TWEHA®, 2026