

YOU DO NOT HAVE TO LEARN THE HARD WAY!

One poorly ventilated façade detail can cause serious long-term damage.

The image above shows the result of inadequate ventilation behind a façade panel — even though the panel itself was mechanically screwed and not bonded. It is a powerful reminder that a ventilated façade system is much more than simply fixing panels onto a wall.

A ventilated façade only performs correctly when the entire system is properly engineered, detailed and installed.

At TWEHA®, we have spent decades helping façade professionals worldwide avoid exactly these kinds of costly mistakes.

A Ventilated Façade Is a Complete System

A ventilated façade system consists of:

- A structural wall
- Thermal insulation
- A ventilated cavity
- A subframe
- The façade cladding panels

The façade panels act as both:

- A protective rainscreen
- An architectural exterior finish

These panels are mounted onto a substructure which is fixed to the building façade.

Depending on the design, the joints between the panels may remain open to allow proper airflow throughout the cavity.

The key to the system's performance lies in one essential principle: **Continuous ventilation behind the façade.**

The Chimney Effect: Natural Ventilation at Work

Ventilated façades work according to the natural chimney effect.

As the sun heats the façade, warm air inside the cavity rises upward through convection.

This movement pulls cooler outside air into the cavity through the lower ventilation openings and panel joints.

This continuous airflow:

- Removes moisture
- Reduces condensation
- Helps regulate temperature
- Keeps the insulation dry
- Protects the structural wall

Without proper airflow, moisture becomes trapped behind the façade — creating the perfect conditions for contamination, deterioration and long-term structural problems.

Proper Air Gap Dimensions Are Critical

For effective ventilation, the cavity behind the façade must have sufficient depth.

The recommended minimum distance between:

- The rear side of the façade panels and
- The outer surface of the insulation material

must be: **Minimum 20 mm**

This air gap is essential to allow proper air circulation throughout the façade system. Insufficient cavity depth can interrupt airflow and significantly reduce the performance of the ventilated façade.

Moisture Must Be Able to Escape

A properly ventilated façade naturally removes:

- Rainwater penetration
- Condensation moisture
- Water vapor accumulation

The airflow within the cavity helps keep the complete façade construction dry and effective over time.

This directly contributes to:

- Longer façade lifespan
- Better thermal performance
- Reduced maintenance
- Improved building durability

When ventilation is inadequate, moisture remains trapped inside the system — often resulting in visible damage, contamination and premature failure.

Details Make the Difference

Ventilated façade systems may appear simple from the outside, but the technical detailing behind the façade is critical.

Every detail matters:

- Ventilation openings
- Cavity continuity
- Joint design
- Subframe positioning
- Moisture drainage
- Installation quality

Improper detailing or poor execution can completely compromise the performance of the entire façade system.

And when mistakes occur, the consequences are often expensive and difficult to repair.

Learn from Experience — Not from Failure

At TWEHA®, we believe professionals should not have to learn through costly failures.

With decades of experience in bonded ventilated cladding systems, we support architects, façade engineers and installers with:

- Technical expertise
- Façade engineering advice
- Ventilation detailing
- Bonding technology
- Installation support
- Project-specific guidance

Because successful ventilated façades depend on much more than just panels and adhesives — they depend on knowledge, engineering and proper execution.

Build Durable Ventiladed Façades with Confidence

A properly designed ventilated façade system protects the building, improves sustainability and guarantees long-term performance.

But only when every detail is executed correctly.

With TWEHA® bonded façade technology and technical support, you can avoid costly mistakes and create façade systems that continue to perform reliably for decades.

Because in ventilated façade construction, details are not optional — they are everything.

TWEHA®, 2026