



Building with conscience.

StoVentec R Facade System

A ventilated rainscreen facade system
with a seamless render finish

Facade



With almost no limits to facade design due to the flexible sub construction, sustainable recycled glass carrier boards and the unlimited variety of finishing renders, StoVentec R allows for outstanding designs to be realised.

Tested for weathertightness, structural stability and resistance to fire spread, StoVentec ensures all the building performance requirements are satisfied.





More to it than meets the eye

A peak behind the facade.

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Creating exciting architecture – or refurbishing existing facades

StoVentec R is the ideal option, both for renovation projects and for new buildings. Its special physical properties make this seamless system the perfect solution for new or old facades and iconic refurbishments. In renovation work, StoVentec R frequently proves to be the sole means of giving apparently hopeless cases a vital facelift in the shortest of time.

Exploiting the recoverables – recycled glass

The core element of StoVentec R is the carrier board produced using innovative expanded glass granulate. The outstanding properties of this recycled glass material – such as low thermal and hygric expansion, weather resistance, low weight and ecological purity – have won over planners and investors worldwide. The fact that well over 3 million m² of this material have been installed in all of the earth's climatic zones to date speaks for itself.

Optional Thermal Insulation

Thermal insulation has become a mainstream topic. Energy resources are declining worldwide; heating and cooling energy costs are on the rise, and building activity is regulated by ever more stringent economical and ecological requirements. Architects and investors alike are well acquainted with this problem, which they have long sought to counter with energy-efficient construction. An ideal balance of economy and functionality is crucial to the choice of facade insulation.

Letting off steam

As a ventilated facade system, StoVentec R offers crucial advantages, particularly in applications involving high levels of moisture. The system features an open cavity between the building substrate and the render carrier board. The continuous exchange of air facilitates the discharge of any moisture, ensuring sustained protection and effectiveness for the substrate and insulation boards, preventing structural stress and water retention behind the facade.

Flexible on all substrates

However severe the damage to the substrate, a solution is at hand. The adaptable StoVentec sub-construction permits variable spacing between the wall and render carrier board. This levels out unevenness, however extreme the irregularities involved. Sub-construction problems are virtually unheard of, even on cracked walls or unstable old plaster.

Cover: UTS Thomas Street, Sydney, Au
Architectural firm: Durbach Block Jagggers & BVN Architecture

Right: Central and University Library, Lucerne, CH
 The Zurich-based architects Enzmann Fischer Partner AG planned the white rendered facade of their "city window" as a ventilated rainscreen cladding system with StoVentec R. The design is based around the stripped-back building shell of the former sorting office in Lucerne, which dates back to the 1980s.



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System Verification

- E2/VM2 weathertightness testing with supplementary AS/NZS 4284 testing to 4.5 kPa ULS.
- BS 8414-2 spread of fire testing with evaluation against BR 135.
- ISO 5660 testing – Type A classification.

Area of application

- Old and new buildings.

On all wall structures

- Timber and steel framed walls.
- Masonry (concrete, sand-lime block, brick, porous concrete).
- Fair-faced masonry.
- Slab-type constructions.

Design scope

- Broad variety of different finishes.
- Can be used as a soffit.
- Suitable for dark colours (no limits on the LRV).
- Suitable for curved surfaces.

Special features

- Ventilated cavity design.
- Moisture discharged via air exchange process.
- Ideal for problematic or uneven substrates.
- High level of sound protection.
- Seamless installation (minimal control joints).

Installation

- Installation by Sto Registered Contractor (Licensed Building Practitioner).
- Simple joining sub-construction.
- Readily interfaces with other facade systems.
- StoArmat 20 Year Warranty with StoService Assurance.



Plenty of design scope

Maximum design freedom for ventilated facades.

Maximum system dependability is the defining pillar of an outstanding facade system. StoVentec R is founded on this strength. At the same time, architecture is more than just a means to an end. Aesthetic aspects have been acquiring increasing prominence in the building sector for some years now. Both architects and investors strive for unique design, a perfect integration of form and function. StoVentec R opens up fresh scope for creativity and innovation.

Anything is possible

Modern architecture would be inconceivable without the necessary versatility in the field of facade design. StoVentec R engenders new creative scope for all tastes and all types of buildings. The exceptional properties of the carrier board enable StoVentec R to be combined with the most diverse surface finishes. The carrier boards provide an excellent base for Sto renders in numerous textures, grain sizes and colours. Furthermore, Glass mosaics (StoVentec M), ceramics (StoVentec C) and natural stone (StoVentec S) can also be applied directly at the construction site. Even then it remains a lightweight system.

Like a single entity

The low coefficient of expansion of expanded glass granulate and the low modulus of elasticity of the carrier board ensure that changes in temperature give rise to only very minimal forces in the board joints. This minimises the risk of cracking and is crucial to producing dependable large-area facades.

All-round malleability

Seamless, curved surfaces produce dynamic, sweeping effects. Apart from retaining sufficient mobility to absorb shocks even under the greatest levels of stress, StoVentec R's outstanding malleability allows it to provide the perfect facing even for curved surfaces.

Black is beautiful

A further advantage of StoVentec R in the design field is its suitability for virtually any colour. The darker the facade, the higher the thermal load. StoVentec R imposes no limits on the light reflectance value of the coating. This means that the system remains impervious even to extreme climatic conditions.

Right: Auditorium and congresses,
"Infanta Doña Elena", Aguilas, ES
Architectural firm: Barozzi Veiga, Barcelona



Left: The StoVentec R carrier board is made of 96% recycled expanded glass granulate and reinforced on both sides with glass fibre mesh for superior impact resistance.



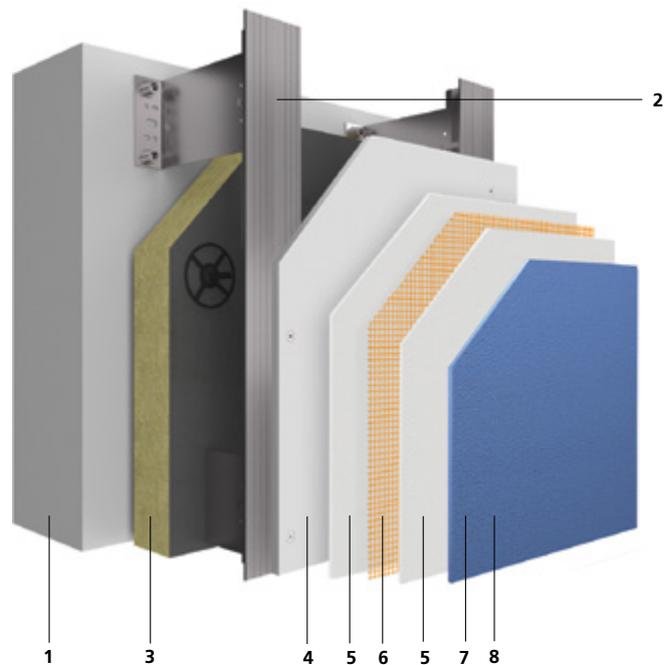
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Anyone seeking to produce outstanding facades needs a firm foundation to build on to counter the elements now and in the future. StoVentec R is more than just a “pretty face”. As stunning as the wall system may look, behind the scenes shows that its true beauty comes from within. Without the intricate workings of the individual system components and the perfection with which they interact, the beauty of even the most head-turning facade would be of only a short-lived nature.

A facade that is designed solely to stun will only impress at first glance. Those investing in new buildings or renovation projects look beyond this however, and are not content with an immaculate finish alone. Sto quality is more than just skin-deep. Sto quality means dependability. Dependability means durability. Durability means added value.

For StoVentec R, this means that every individual component of the system and the perfect interaction of the system components are subject to an ongoing process of development and optimisation. And for you, this means that you will be able to depend on StoVentec R now, and in the in future, too.



1. Substrate:

Timber and steel frame, concrete masonry, slab-type construction.

2. Sub Construction:

Sub-construction consisting of wall brackets made of stainless steel or aluminium with low thermal bridging, and adjustable aluminium carrier profiles.

3. Optional Insulation:

Mineral wool or other insulation as specified.
Thickness according to thermal insulation requirements.

4. StoVentec Carrier Board:

Recycled glass (90%+ expanded glass granulate), with mesh reinforcement on both sides.
Thickness 12 mm, format 1.20 x 0.80 m and 2.40 x 1.20 m;
low weight of approx. 6 kg/m², of limited combustibility in accordance with EN13501-1.

5. StoArmat Reinforcement Render:

An organic, weather resistant, cement-free and breathable, high-impact render, with a crack resistance ten times higher than that of standard cement-based plasters.

6. Sto Glass Fibre Mesh:

Easy-to-install, meets the highest requirements for crack, stress and alkalinity resistance.

7. Stolit Coloured Finishing Renders:

Organically bound, highly weather resistant, strong, hard-wearing, impact-resistant, pre-coloured finishing renders.

8. StoColor or StoClear Facade Coatings:

StoColor coating based on IQ Technology for functional facades or a StoClear sealer.

Alternative options consist of: Ceramics, glass mosaics, ashlar.
Frost-resistant and suitable for bonding directly on site, for broad design scope.



**StoArmat 20 Year Warranty
with StoService Assurance**



StoVentec C with ceramics



StoVentec M with glass mosaics



StoVentec S with natural stone



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