



StoVentec R
Ventilated rainscreen facade
system with render finish

StoVentec R: More to it than meets the eye

A peek behind the facade

A rendered ventilated rainscreen facade system. The StoVentec R combines mechanical efficiency with a broad scope for individual design.

Creating exciting architecture – or refurbishing existing facades

StoVentec R is the ideal option, both for renovation projects and for new buildings. Its special building physical properties make this seamless system the perfect solution for new or old commercial facades and iconic refurbishments. In renovation work on old buildings, StoVentec R frequently proves 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 in the innovative material 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 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, 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. The masonry dries out quickly over large areas, ensuring sustained protection and effectiveness for substrate and insulating 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 sub-construction permits variable spacing between wall and render carrier board. This levels out unevenness and provides for rendition of the surface as detailed and drawn, however extreme the irregularities involved. Sub-construction problems are virtually unheard of, even on moist, cracked walls or unstable old plaster.



**Auditorium and congresses,
"Infanta Doña Elena", Aguilas /Spain
Architectural firm: Barozzi Veiga,
Barcelona**

Economic arguments

Economic aspects are a key factor. StoVentec R fits the bill here, too.

The system is

- particularly durable, as it is weather-resistant and shock-proof.
- suitable for installation without requiring any expensive, drawn-out substrate treatment.
- a time-saver and cost-cutter, thanks to the simple installation process.



Plenty of design scope into the bargain

Keeping your options open

Maximum system dependability are defining pillars of an outstanding facade systems. StoVentec R is also founded on these strengths. 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 also provide an excellent base for Sto renders in numerous textures and grain sizes – and in all 800 colours of the StoColor System or matched to any colour. Furthermore Glass mosaics (StoVentec M) and ceramics (StoVentec C) 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 joints of the boarding. This minimises the risk of cracking. This 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 lightness value. This means that the system remains impervious even to extreme climatic conditions.

Sto Warranty

Installations are carried out by a Sto Registered Contractor with the added protection of a StoArmat 20 Year Warranty and StoService Assurance, guaranteeing building code compliant materials are used and application meets building code standards, including a service plan for long-term security.



above:
KLPD police headquarters,
Waddinxveen, Netherlands

right:
Application of StoVentec R carrier board



Student Housing, München, Germany
Architectural firm: Spengler + Wischolak, Hamburg, Germany

At a glance:
One system – a host of advantages.

Design scope

- Broad variety of different finishes
- Can be used as a ceiling soffit
- Also suitable for very dark colours (no limits on the lightness value)
- Suitable for curved surfaces

Special features

- Ventilated design for ideal building physical properties
- Moisture discharged via air exchange process
- Ideal for problematic substrates: Levels even major unevenness
- High level of sound protection
- Seamless installation (minimal control joints)

System dependability

- Proven system, approved by the German building inspectorate
- Resistant to wind, frost and other weather influences
- Crack-resistant
- Shock-proof and impact-resistant, yet malleable
- Excellent water vapour diffusion
- StoArmat 20 Year Warranty with StoService Assurance

Simple handling

- Handy format combined with low weight
- Simple to install, easily workable
- Readily interfaces with other facade systems

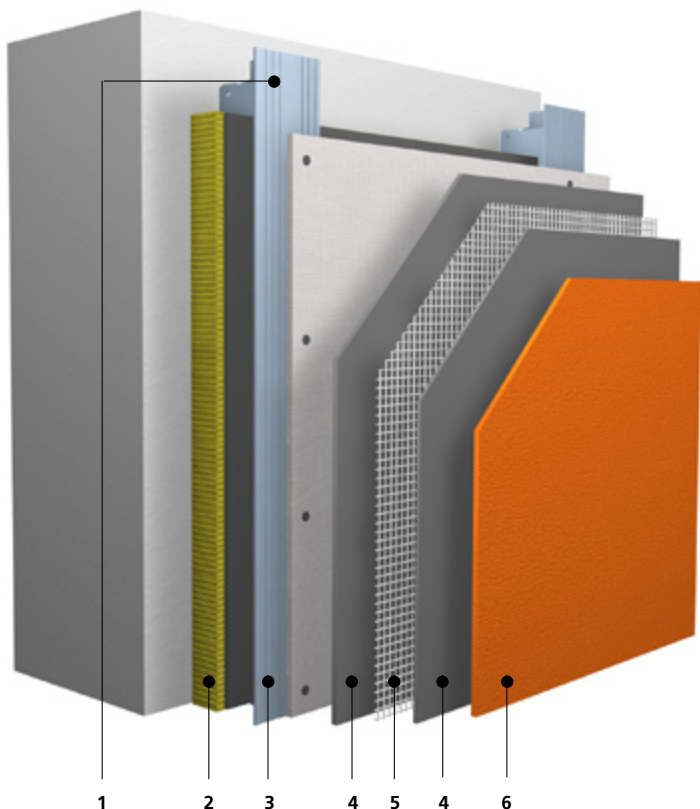
Matched components for perfection

The beauty's in the detail

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 all 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.



StoArmat 20 Year Warranty with StoService Assurance

The perfected modular principle

- 1 Sub-construction:**
Sub-construction consisting of aluminium profiles to fix the carrier boards in place. Anchored in the substrate with Sto approved fixings in accordance with the New Zealand Building Code.
- 2 Optional Insulation:**
Seamless exterior mineral wool or other insulation as specified. Thickness according to thermal insulation requirements.
- 3 Render carrier board:**
StoVentec R carrier board
Render carrier board consisting of recycled glass (expanded glass granulate), with mesh reinforcement on both sides, thickness 12 mm, format 1.20 x 0.80 m and 1.20 x 2.40 m; low weight of approx. 6 kg/m², of limited combustibility in accordance with DIN 4102, frost-resistant.
- 4 Reinforcement fibre render:**
StoArmat Render.
Organic, cement free, ready-to-use bonding and reinforcing compound. Highly expandable, crack-resistant and highly resistant to mechanical stress.
- 5 Reinforcing mesh:**
Sto Glass Fibre Mesh
Alkali-resistant reinforcing mesh, non-shifting with optimised capacity to absorb forces.
- 6 Finishes:**
Stolit (organic plaster) cement-free, ready-to-use finishing renders. Highly weather resistant, minimal susceptibility to soiling, highly elastic, resistant to mechanical stress. Selected StoColor IQ facade paints for intelligent solutions. Alternative options consist of: Ceramics, glass mosaics, ashlar Frost-resistant and suitable for bonding directly on site, for broad design scope.



StoVentec S with natural stone

Office building Drienerbeek, Enschede, Netherlands

Architectural firm: I/AA Architects & Engineers, Enschede, Netherlands



StoVentec C with ceramics

Townhouse, Zürich, Switzerland

Architectural firm: huggen_berger gmbh, Zürich, Switzerland



StoVentec M with glass mosaics

Gewoge Haus, Brunnckstr, Ludwigshafen

Architectural firm: Allmann Sattler Wappner, München, Germany

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Area of application

- Old and new buildings

On all wall structures

- Masonry (concrete, sand-lime block, brick, porous concrete)
- Fair-faced masonry
- Slab-type constructions
- On timber framed walls

Functions/characteristics

- Levels unevenness by means of a flexible sub-construction
- Very high crack resistance
- Improvement of up to 10 dB in the airborne sound insulation index
- Mechanically resistant
- Highly effective thermal insulant
- Weather resistant
- Frost-resistant in accordance with DIN 52104

Appearance

- Organic and silicone resin renders
- Variety of different colours: Tintable according to the StoColor System
- No limits on the lightness value
- Ceramic coverings or Brick Slips (StoVentec C)
- Sto-Natural Stone Tiles (StoVentec S)
- Glass Mosaics (StoVentec M)

Installation

- Simple joining sub-construction
- Fast screw fix installation
- StoArmat render technology
- IQ intelligent technology

Approvals

- The relevant European and/or national approvals apply.

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