StoVentec
Ventilated rainscreen cladding systems
StoVentec: More to it than meets the eye
A peek behind the facade.

Thermal insulation has long become a mainstream topic. Energy resources are declining worldwide, heating and cooling energy costs are on the rise, building activity is regimented by ever more stringent economical and ecological requirements. Architects and investors alike are well acquainted with this problem area, which they have long sought to counter through energy-efficient construction. An ideal balance of economy, functionality and innovative design is crucial to their choice of facade insulation systems. In this context, the StoVentec ventilated rainscreen-cladding system combines particularly good efficiency with broad scope for individual design.

Creating great new architecture and maintaining our architectural heritage
StoVentec 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 old and new commercial and prestige buildings. In renovation work on old buildings, StoVentec frequently proves the sole means of giving apparently hopeless cases a vital facelift in the shortest of possible time.

Exploiting recoverables – recycled glass
The core element of StoVentec 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.

Letting off steam
As a ventilated facade insulation system, StoVentec offers crucial advantages over conventional insulation systems particularly in indoor applications involving high levels of moisture, e.g. at swimming baths, dairies and breweries. The system features a cavity between the insulation layer and the render carrier board. A continuous exchange of air is possible in this cavity, substantially facilitating the discharge of moisture. The masonry dries out quickly over large areas, ensuring sustained protection and effectiveness for walling and insulating boards. Cracking and damage to plastering are prevented.

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 absolutely perpendicular surfaces, however extreme the irregularities involved. Fixation problems are virtually unheard of, even on moist, cracked walls or unstable old plaster.

Multiple dwelling Nordlyset Plads, Copenhagen/Denmark
Architectural firm: C.F. Moller’s tegnestue

Economic arguments
Economic aspects are a key factor. StoVentec 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.

Optimum insulating properties and maximum system dependability are the defining pillars of an outstanding facade insulation system. StoVentec 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 opens up fresh scope for creativity and innovation.

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’s outstanding malleability allows it to provide the perfect facing even for curved surfaces.

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

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

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

Multiple dwelling Scylla 2, Malmö/Sweden
Architectural firm: White arkitekter AB, Malmö/Sweden
Anyone seeking to produce outstanding facades needs a firm foundation on which they will be able to rely in the future. StoVentec is more than just a “pretty face”. As stunning as the walls the system adorns may be, a 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 glory 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, 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 in future, too.

1 Sub-construction:
Sub-construction consisting of wood or aluminium profiles to fix the carrier boards in place. Anchored in the substrate with dowels approved for general applications by the building inspectorate.

2 Insulation:
Sto VHF Mineral Fibre Board
Thermal insulation board made of mineral fibre. Application type W, non-combustible. Thickness variable according to thermal insulation requirements.

3 Render carrier board:
StoVentec 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 plaster:
Sto Reinforcement Fibre Plaster
Organic, ready-to-use bonding and reinforcing compound. Highly expandable, crack-resistant, highly resistant to mechanical stress.

5 Reinforcing mesh:
Sto Glass Fibre Mesh
Alkali-resistant reinforcing mesh, non-shifting with optimized capacity to absorb forces. The alternative: Sto-Shield Mesh AES
Shielding and reinforcing mesh to provide protection against electro-smog. Protection from over 99 % of high frequency electromagnetic radiation. Damping of low-frequency fields.

6 Top coat:
Stolit (organic plaster) or StoSilco (silicone resin plaster)
Cement-free, ready-to-use finishing plasters. Highly weather resistant, minimal susceptibility to soiling, highly elastic, resistant to mechanical stress. Film-conserved for enhanced resistance to micro-organisms. The alternative: Ceramics, glass mosaics, ashlar
Frost-resistant and suitable for bonding directly on site, for broad design scope.
StoVentec

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 external 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
• Limited combustibility
  B1 in accordance with DIN 4102
• Frost-resistant in accordance with DIN 52104

Appearance
• Synthetic and silicone resin renders
• Variety of different colours: Tintable according to the StoColor System
• No limits on the lightness value
• StoDeco Profiles
• StoDeco Rustications
• Ceramic coverings
• Sto Brick Slips
• Glass mosaics and ashlar

Installation
• Cement-free, ready-to-use system components
• Efficient installation through use of StoSilo facilities and construction site logistics
• Swift installation
• QS-technology

Approvals
• Z-33.2-394 national technical approval with plastered surface
• Z-33.2-776 national technical approval with glass mosaics, ceramics or ashlar
Head office
Sto Ltd.
2 Gordon Avenue
Hillington Park
Glasgow
G52 4TG
Tel +44 (0)141 892 8000
Fax +44 (0)141 404 9001
info.uk@sto.com
www.sto.co.uk

Midlands Training & Distribution Centre
Sto Ltd.
Unit 700
Catesby Park
Kings Norton
Birmingham
B38 8SE
Tel +44 (0)121 459 5149
Fax +44 (0)121 459 0632

London Showroom
Sto Werkstatt
7-9 Woodbridge Street
Clerkenwell
London
EC1R 0LL
Tel +44 (0)20 7222 2221
werkstatt@sto.com
werkstatt.sto.com

Ireland Office & Distribution Centre
Sto Ltd.
E7 Riverview Business Park
Nangor Road
Clondalkin
Dublin 12
D12 AD93
Tel +353 (0)1460 2305
Fax +353 (0)1460 2455
info.ie@sto.com
www.sto.ie

Sto | Building with conscience.