



Building with conscience.

# StoVentec® Render

Ventilated Rainscreen® cladding system

## Facades



StoVentec® Render redefines rain screen system design and construction by combining innovative materials with proven products and practices. The result is a wall system that blends unique, elegant beauty with economical construction, and delivers the performance, reliability and durability of a fully tested complete Rainscreen® system.



# Innovation in Rainscreen system design

StoVentec Render brings new thinking and new possibilities to Rainscreen walls. The result is appearances never previously obtainable, at a cost that makes beauty and performance affordable for a wide range of building types.

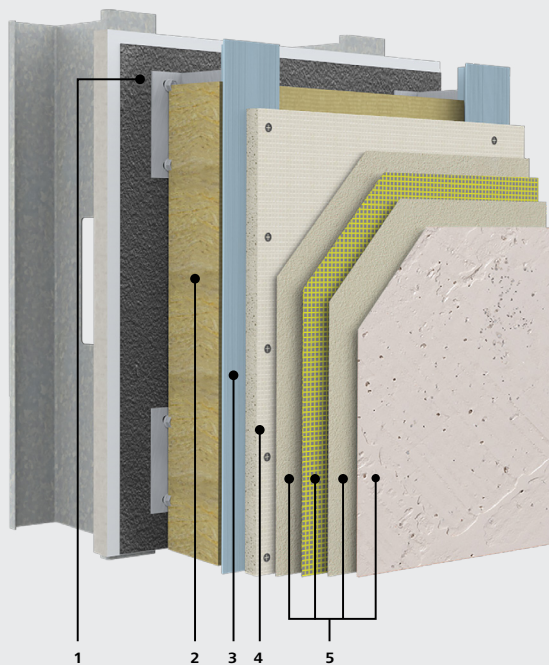
## High Performance from a Complete System

High performance begins with premium materials that have been developed and tested to work together seamlessly. The durability of StoVentec Render starts with Sto AirSeal®, the latest and most advanced part of the StoGuard® family of air and moisture control products. Owens Corning® Thermafiber® RainBarrier® 45 mineral wool provides thermal insulation and sound transmission control. German engineered StoVentro™ Sub-construction securely attaches StoVentec Carrier Board A+, a structural glass composite board that is the canvas on which finishes are applied. Finally, choose from the wide variety of Sto

Architectural Finish Systems to provide color, form and texture with optional self-cleaning and water-shedding properties.


Simplicity, economy and reliability are enhanced when the right things can be done immediately. Site-built StoVentec Render does not rely on extended supply chains, bespoke panels and intricate measurements. One installation team can manage all aspects of the StoVentec Render Rainscreen wall assembly, from air and moisture barrier to architectural finish system.

Each aspect of StoVentec Render has been designed holistically. All components work together in a synergistic manner. The result is a revolution in Rainscreen wall design.



1. **Air and Moisture Barrier** – Sto AirSeal® provides a single source, seamless and fully integrated layer for air and weather tightness.
2. **Thermal Insulation** – Owens Corning® Thermafiber® RainBarrier® 45 mineral wool made of non-combustible fiber. Variable thicknesses can accommodate for design thermal requirements.
3. **StoVentro Sub-Construction** – StoVentro stainless steel brackets are anchored into the substrate. StoVentro T-profiles provide mounting support for StoVentec Carrier Board A+.
4. **StoVentec Carrier Board A+** – A versatile carrier backing board that is double-sided mesh reinforced and consists of more than 90% recycled glass.
5. **Sto Architectural Finish System**
  - **Sto Base coat** – StoArmat Classic plus, a ready-mixed, high build acrylic based plaster material used as a base coat in the StoVentec Render Rainscreen wall system
  - **Sto Mesh** – Alkali-resistant reinforcing mesh with an optimized capacity to absorb impact.
  - **Sto Aesthetic Surface** – Premium Sto finishes or other surface options, available in a variety of colors, textures, shapes and properties, including self-cleaning.





Every aspect of StoVentec Render has been carefully selected and designed to work together. Air gaps sized for AAMA 509 V9 ventilation and W1 water penetration ratings are specified and easily installed using adjustable StoVentro™ Sub-construction. The performance of these gaps, combined with fire breaks and other specifically detailed aspects of StoVentec Render, have directly demonstrated compliance with NFPA 285, CAN/ULC S134 and other fire test requirements.





# Structural glass composite board meets adjustable sub-construction

New possibilities arise when innovative materials and systems come together. StoVentec Carrier Board A+ is a unique material with astounding properties. It is comprised of high tensile strength fiberglass faces that sandwich a core of expanded glass granules made from post-consumer recycled glass. The core provides light weight and high compressive strength. Core and face are held together with a thermoset resin.

The resulting structural glass composite board is strong, stiff, lightweight, impact-resistant, flexible and noncorroding. It can be scored and cut like drywall, with no special tools and minimal dust generation.

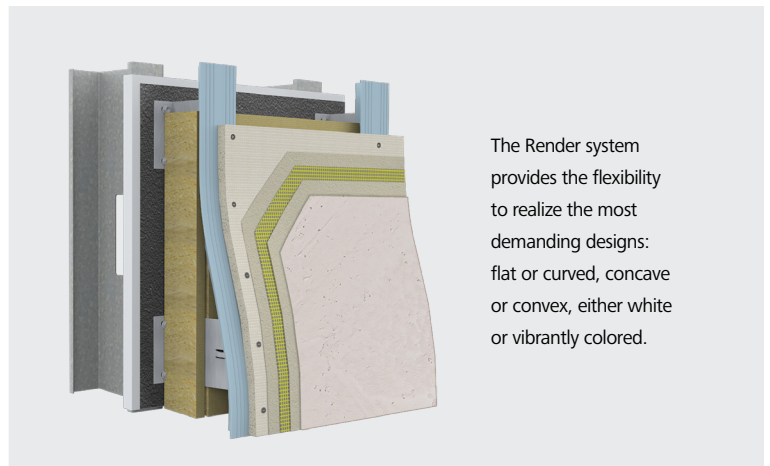
## Seamless Walls and Curved Surfaces

With Sto Architectural Finish Systems, StoVentec Carrier Board A+ makes seamless walls a practical reality. Up to 25 meter (82-foot) spans can be created without interruptions. Visible sealant joints are not needed within StoVentec systems.



This design flexibility is taken to its fullest potential when the possibilities of StoVentro Sub-construction are utilized. The adjustable StoVentro Sub-construction not only makes substrate imperfections easy to manage, it can also be formed and adjusted to create unique curved surfaces, making use of the flexible nature of StoVentec Carrier Board A+.

This opens a new world of design possibilities. Sweeping, radiused surfaces can easily and economically be created. Barriers to the artistry of form and shape are removed.











# The Finish You Want

Finish design and selection can be challenging. It must look fantastic, be durable, stay clean, and meet cost targets. Sto Architectural Finish Systems meet these challenges with advanced chemistry.

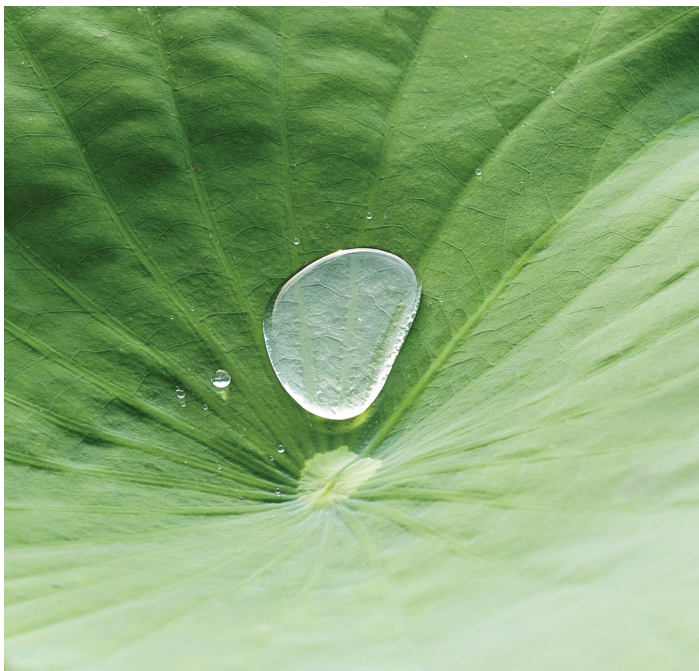
## Bright, Bold, Long-Lasting Color

The finish you want must be the right color and stay that way. Sto Architectural Finish systems have no color limits – they can be as dark as you like. Bright, highly chromatic colors are available. Sto high performance colorants optimize weathering resistance.

## Long Term Beauty with Minimal Maintenance

The best-looking buildings are clean. To keep them that way, the chemists at Sto looked to nature for inspiration, and discovered surface chemistry biomimicry. StoColor® Lotusan® coatings and finishes mimic the microtextured surface found on the Lotus leaf to repel water, letting walls self-clean with every rainshower.

StoColor® Dryonic® coatings mimic the surface chemistry of the fog-basking beetle shell. By quickly shedding water, StoColor Dryonic® coatings minimize or eliminate unsightly mold and algae growth.



Inspiration for StoColor Lotusan



Inspiration for StoColor Dryonic









# Science matters

Hygrothermal performance is the ability of a wall system to manage heat and moisture movement effectively. It is key to the longevity of a building.

StoVentec Rainscreen walls perform well because they control moisture effectively. The primary facade cladding blocks most precipitation from entering the wall. An air gap creates a capillary break, preventing moisture from entering the base wall. Convective air movement within the gap allows the wall to dry.

All of this depends on an effective air barrier, to keep outdoor air out and indoor air in. Sto AirSeal fluid-applied air and moisture barrier is vapor permeable, offers 500% elongation, meets the requirements of ASTM C1305 Low

Temperature Crack Bridging Test, and provides building code compliance confirmed by ICC-ESR 1233. It is suitable for use on all substrates from porous lightweight CMU to gypsum and wood-based sheathing. StoGuard® accessories allow seamless air and moisture sealing across gaps, dissimilar substrates, at penetrations, and at transitions to roof and foundation air barrier materials.

Thermal performance is the other hygrothermal consideration. Owens Corning® Thermafiber® RainBarrier® 45 insulation is effective, noncombustible and reduces sound transmission by up to 10 dB.









# The best designs are synergistic

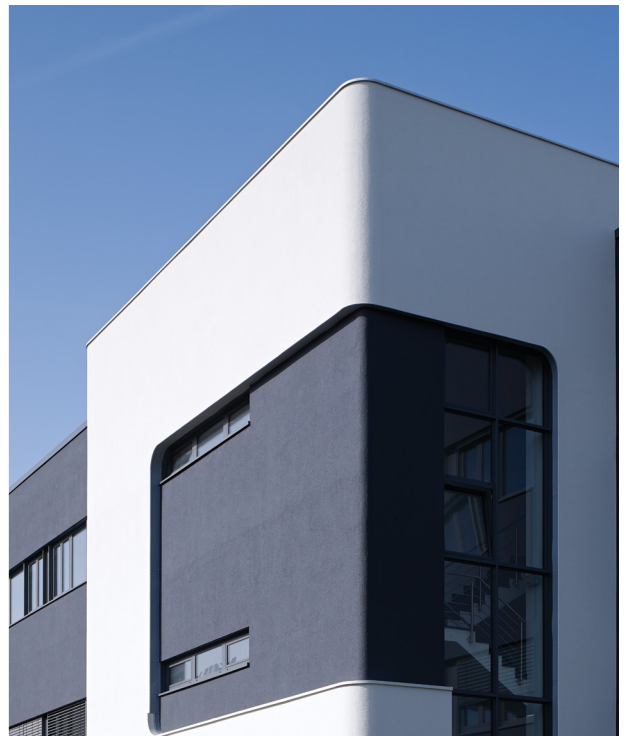
Synergism happens when the whole is greater than the sum of its parts. StoVentec Render is a complete Rainscreen system, with synergies and multiple redundancies that create high performance.

StoVentec Carrier Board A+ has outstanding properties because of the synergy between expanded glass granules, fiberglass reinforcement and thermoset resin. Its high impact strength is extended by StoArmat Classic plus basecoat.

Sto AirSeal, mineral wool insulation and StoVentro Sub-construction work synergistically with defined fire breaks to create thermally efficient, moisture resistant walls that meet all fire requirements. Sto AirSeal further provides a secondary capillary break and a defined moisture drainage plane.

Additional synergy can be found between flexible StoVentec Carrier Board A+, StoVentro Sub-construction and self-cleaning finishes, to create dynamic, sweeping radiused wall spans that look fantastic. In addition to freedom of shape, StoVentec Carrier Board A+ is unaffected by ambient temperature extremes, allowing use of the darkest finish colors.

Perhaps the greatest synergy is found when carefully prepared architectural details, application instructions and expert technical support come together to facilitate the highest quality installation.











# Superior performance for inspired designs

Inspiration favors the open mind. With Sto, your creative exploration can take you anywhere. Our proven products give you unmatched freedom and the ability to achieve your vision in any color, any form, any texture, any material.

Clever design finds opportunity in diversity of form, color and texture. It also brings form and function together with economics, creating wall systems that are visually stunning, durable, thermally efficient and cost-effective.

The wide range of StoVentec Render textures, colors and effects is only the beginning. Super-premium StoVentec Glass integrates seamlessly and easily with StoVentec Render, helping take your building design to a whole new place. High performance walls have never looked better.



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