



Building with conscience.

# StoVentec<sup>®</sup> Render

Ventilated Rainscreen<sup>®</sup> cladding system

Facades



StoVentec<sup>®</sup> Render redefines rainscreen 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<sup>®</sup> 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.

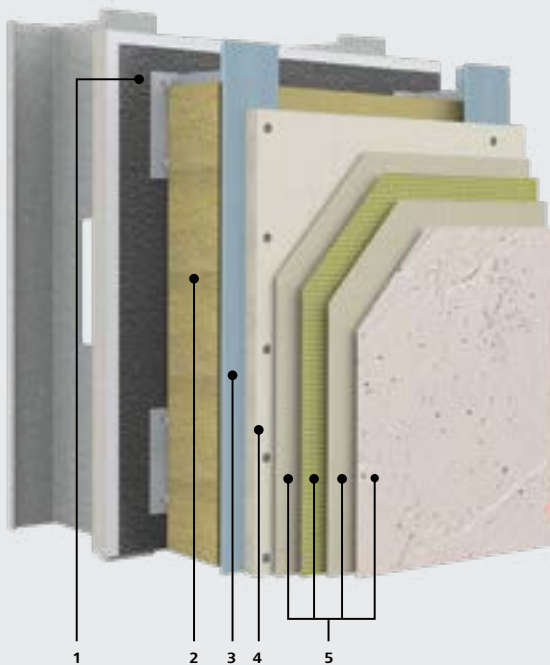
## High Performance from a Complete System

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 water-resistive 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.


With StoVentec Render, the creative possibilities are virtually limitless. Choose from a wide variety of premium finishes with different shapes, textures, effects, and properties. Sto even has finishes that look like real brick and wood.

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 water-resistive barrier to architectural finish system.

The Render system offers prescriptive options that save engineering costs and reduce installation labor. It's one system and two ways to save money. Because there are already pre-engineered solutions for high, medium, and low wind pressure designs as well as a hurricane cycle/impact resistance option, engineering costs are all but eliminated.



1. **Water-Resistive 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 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.

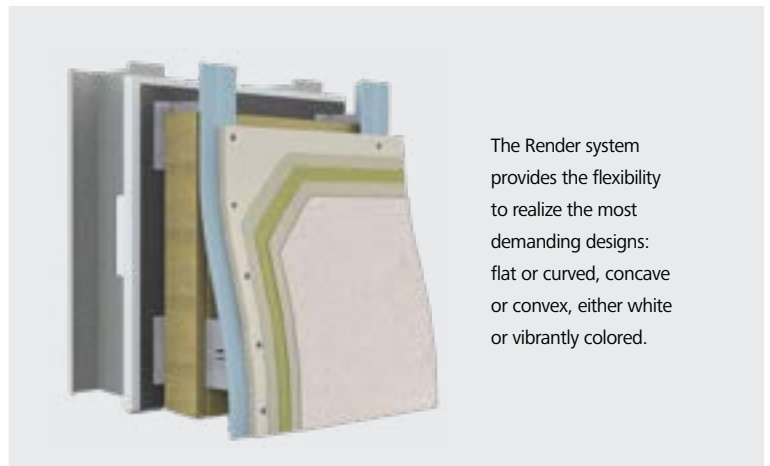
## Seamless Walls and Curved Surfaces

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.



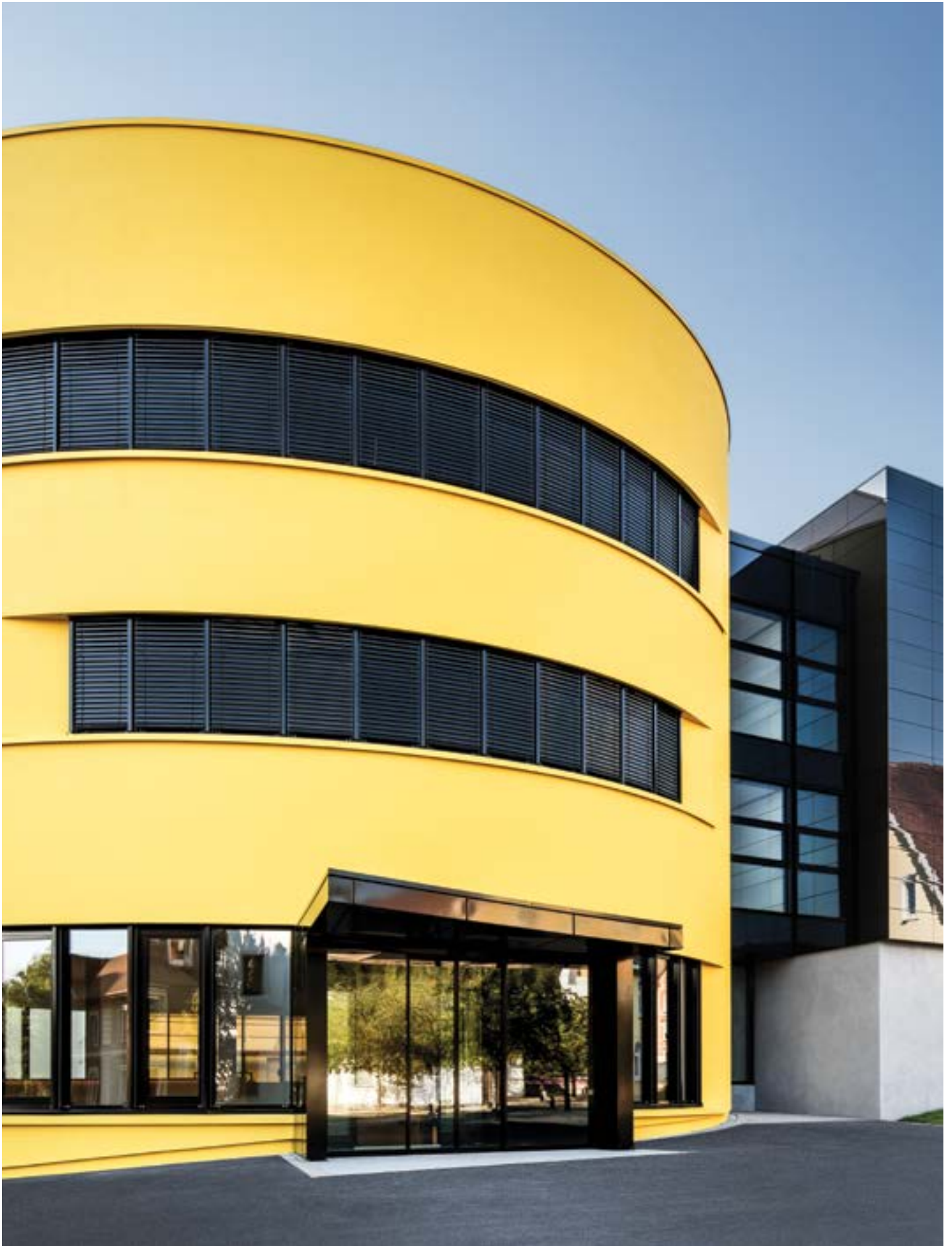
This design flexibility is taken to its fullest potential when the possibilities of StoVentro Sub-construction are utilized. The adjustable StoVentro Sub-construction not only makes substrate imperfections easy to manage, it can also be formed and adjusted to create unique curved surfaces, making use 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 Render system provides the flexibility to realize the most demanding designs: flat or curved, concave or convex, either white or vibrantly colored.







# The finish you want



StoVentec Render system offer ultimate design freedom. Unique shapes, details, textures, colors and finish effects are all possible with Sto's unmatched offering of standard and specialty finishes, or your choice of masonry veneer surfaces. Combined with the unique aesthetics of StoSignature® or StoCast Brick or StoCast Wood for instance, it is easy to create multi-cladding aesthetic combinations, while maintaining the protective continuity of the StoVentec Render wall system across the entire building.

## Ultimate Creativity with StoSignature®

StoSignature with its unique combination of color, texture, and application techniques, gives you the ability to create a signature design, using standard Sto finishes and creative application techniques. StoSignature allows you to achieve traditional surface aesthetics like stone, wood, brick and concrete or develop your own creative textures with an endless array of colors, tones, and effects.

## 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 created Sto iQ technology™ coatings, which incorporate 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.

StoCast Brick and StoCast Wood resin-cast shapes offer an authentic look and feel of brick and wood while boasting superior performance. They can be applied over a wide variety of Sto's building enclosure systems giving additional design freedom to your facade.

StoCast Brick and StoCast Wood joins a wide range of aesthetic options from Sto, allowing designers to achieve a multitude of looks while enjoying the continuity and compatibility of the wall cladding.







# 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 water-resistive 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.

Independent ASTM E330 and Florida TAS 201-202-203 testing, guided by third-party engineers from planning to execution, back Render's prescriptive/pre-engineered installation design options and allow for tailored wind resistance design for individual projects without the need for extensive engineering. The Render system meets the latest and most stringent standards for energy efficiency and fire resistance in the New York Building codes and allows you to stay ahead of the constantly updating codes in other jurisdictions.









# The best designs are synergistic

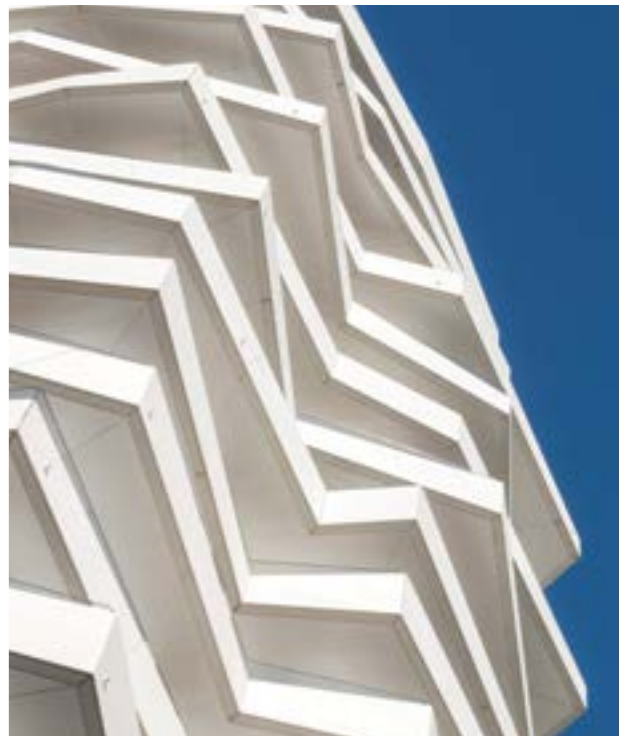
Synergism happens when the whole is greater than the sum of its parts. StoVentec Render is a complete Rainscreen system, with synergies and multiple redundancies that create high performance.

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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