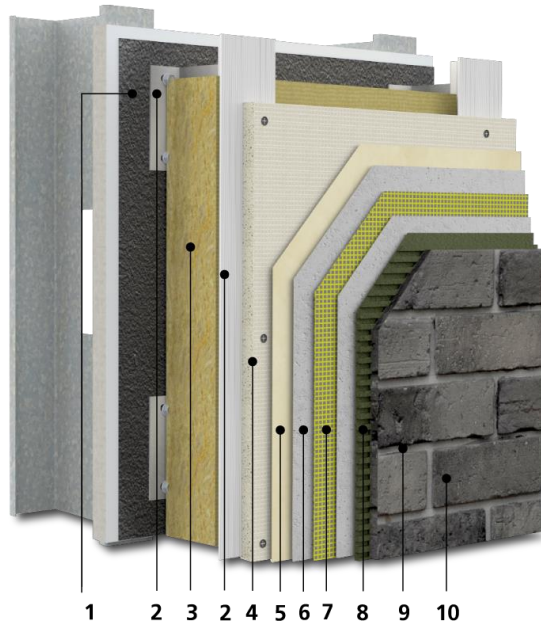


# StoVentec®

for Masonry Veneer Facades



Structural Back-up Wall (by others): Steel or wood frame with Glass Mat Gypsum sheathing in compliance with ASTM C1177, code compliant wood-based sheathing (plywood or OSB), concrete or core filled concrete masonry, existing structurally sound, uncoated brick, or other masonry wall construction.

1)	Air and Moisture Barrier: Sto AirSeal®
2)	Sub-construction: StoVentec™ Bracket, StoVentec™ T-Profile, and StoVentec™ L-Profile
3)	Thermal Insulation: Rockwool Cavityrock®
4)	Carrier Board: StoVentec® Carrier Board, with recycled glass granulate and double sided glass fiber mesh reinforcement
5)	Primer: Sto Prime
6)	Base Coat: Sto Primer/Adhesive
7)	Reinforcement: Sto Mesh 6oz
8)	Masonry Veneer Adhesive: StoColl
9)	Masonry Veneer Grout: ANSI 118.7 compliant portland cement-based grout (by others)
10)	Masonry Veneer: thin brick in conformance with ASTM C1088 (by others)

## System Description

StoVentec for Masonry Veneer Facades is a lightweight and energy efficient drained and back-ventilated rainscreen wall system that combines superior air and weather tightness with excellent thermal performance and fire protection. It is an engineered wall system with thin brick veneer that incorporates noncombustible continuous exterior insulation and a continuous air and moisture barrier with Sto Ventro™ Sub-construction, and Sto high strength masonry veneer adhesive to produce an advanced high-performance wall assembly.

## Uses

StoVentec for Masonry Veneer Facades can be used on exterior and interior residential, commercial, and institutional wall construction where energy efficiency, superior aesthetics, and air and moisture control are essential in the climate extremes of the Americas.

## Features

Variety of thin brick veneers that integrate seamlessly with Sto finishes  
 Drained and back-ventilated rainscreen wall design  
 High density mineral wool insulation  
 Fully integrated seamless air and moisture barrier  
 Impact and puncture resistant cladding  
 Fully tested, building code compliant wall assembly

## Benefits

Design versatility on a single compatible substrate  
 Excellent moisture control  
 Continuous noncombustible exterior thermal control layer  
 Compatible air, water, and vapor control layer from a single source  
 Withstands abuse, reduced maintenance  
 Peace of mind

## Properties

Weight (Variable based on cavity depth, does not include sheathing and backup wall)	US Weight 19 lb/ft² Metric Weight 90.86 kg/m² includes maximum nominal 15 lb/ft² (70 kg/m²) masonry veneer
Assembly Thickness (from outside face of sheathing)	Min. 4 inches (102 mm) plus 5/8 inch (16mm) thick masonry veneer. See Design Guide for system thicknesses
Insulation combustibility, flame spread	Noncombustible, 0 flame spread, 0 smoke development
R-value (from outside face of sheathing)	0.74 m²•K/W per 25mm (-4.3ft²•h•F / Btu per in)
Wind Load Resistance¹ (varies with stiffness of stud wall and sub-construction attachment)	Capable of achieving ultimate load capacity of -160 lb/ft² - 7.66 KPa

## Warranty

10-years

## Maintenance

Requires periodic cleaning to maintain appearance, repair of cracks and impact damage if they occur. Sealants and other façade components must be maintained to prevent water infiltration.

1. Some height restrictions apply (see page 2)

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## Design Guidance and Limitations

Fire resistance rated wall assemblies: maintain fire resistance rating of existing load bearing or non-load bearing wall assemblies.

Not for use on horizontal or low slope surfaces, below grade, roofs or roof-like surfaces, extended soffits, ceilings, or in areas of water immersion, pooling or ponding water. For use on vertical above grade walls only up to 6-stories or 72ft (22m) in height (whichever is less) – refer to the Tech Hotline: 0821-M, *Quick Reference Guide on Adhered Masonry Veneers in Exterior Wall Construction*.

Structural back-up wall must be level to within 6 mm in 3.0 m (~1/4 inch in 10 ft)

Pull-out or withdrawal capacity of anchoring elements into structural wall must be sufficient to resist negative wind loads (with appropriate safety factor as required by applicable building code).

Wind load resistance: structural back-up wall construction must be designed for maximum allowable deflection of L/400, normal to the plane of the wall. Stud spacing: 406mm (~16 inches) on center maximum. Capable of achieving ultimate wind load capacity of -160 lb/ft<sup>2</sup> (-7.66 KPa). Refer to Sto Design Guide and Detail Booklet for wind load ratings.

Insulation board thickness: (Standard) 51-178mm (~2-7 inches). Thicker insulation board available by custom order and with special design and engineering analysis by qualified design professional.

Ventilation cavity depth: 20-50 mm (~3/16 – 2 inches).

Aesthetics: no color restrictions apply.

Refer to specific component product bulletins and packaging for other limitations that apply on use, handling, and storage of component materials.

Moisture Control: design and detail air/moisture barrier as a continuous assembly, incorporate flashing and coping to shed water and prevent water entry into wall construction, select compatible wall assembly components at material interfaces and to seal penetrations. For more information refer to Sto Detail Booklet, and Sto Tech Hotlines: TH-0403-BSC, *Critical Detail Checklist for Wall Assemblies*, and TH 0603-BSC, *Moisture Control Principles for Design and Construction of Wall Assemblies*.

Joints: provide expansion joints where they exist in the supporting wall construction, at control joints or cold joints in the supporting wall construction, at changes in support construction (e.g., masonry to frame wall), at junctures with dissimilar construction, at different substrates, at floor lines in multi-story wall construction, at changes in building height and other areas of stress concentration, and within areas of not greater than 144 ft<sup>2</sup> (13.4m<sup>2</sup>) with length or height not more than 18 ft (5.5m) for thin brick, with length/height or height/length ratio not greater than 2-1/2 to 1. Do not bridge expansion joints, control joints, or cold joints in wall construction with masonry veneer. Refer to StoVentec for Masonry Veneer Facades Design Guide.

Mortar Joints: must be grouted / pointed with grout/pointing mortar in conformance with ANSI 118.7. Open joints are not permitted.

Masonry veneer units are limited in thickness, size and weight by the IBC and IRC: Maximum thickness: 2 inches (51mm),

Maximum allowable weight: 15 lb/ft<sup>2</sup> (70 kg/m<sup>2</sup>), Maximum size: not to exceed 36 inches (914mm) in any face dimension and not in excess of 5 ft<sup>2</sup> (0.46m<sup>2</sup>)

Efflorescence is a normal occurrence in portland cement-based materials and can affect final appearance of finish products. To minimize risk of efflorescence, follow best construction practices to prevent water entry into walls through proper design detailing, and the proper use of flashing, copings, and sealant. Refer to StoVentec for Masonry Veneer Facades Design Guide and Detail booklet.

## Sustainable Design

### Recycled Content

Carrier Board is comprised of 90+% post-consumer recycled glass

### Air Quality and VOC Compliance

Adhesive mortar, air barrier joint treatments and coatings meet SCAQMD (Rule 1113) VOC standard for Building Envelope Coating: less than 50 g/L.

### LEED Credit Eligibility

The system has high potential for LEED and other sustainability program credits based on efficient and effective use of a continuous air barrier and continuous exterior insulation for energy savings and resulting reductions in greenhouse gas emissions, and through the use of light gauge metal framing with recycled content. The system also has potential positive impacts on life cycle energy use based on reduced dead load, permitting the use of lighter gauge metal studs, and supporting structural members and foundation footings, when compared to full thickness/weight masonry units.

### Regulatory Compliance and Standards Testing

ICC ESR No. 1233	Sto AirSeal AMB complies with 2012, 2015, 2018 IBC, IRC and IECC
ASTM E2178, E2357	Sto AirSeal AMB meets air leakage requirements as a material and as an assembly
ASTM C612	Insulation conforms to applicable standard for board thermal insulation
NFPA 220	Insulation complies with criteria for non-combustibility
NFPA 285	System meets requirements for use on all types of construction with some height limitations
AAMA 509	System achieved W1 water penetration rating and V9 ventilation rating
ASTM E330	System tested up to -160 (lb/ft <sup>2</sup> ) -7.66 (kN/m <sup>2</sup> ) without failure

## System Bulletin

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IBC, IRC, ASTM E2570	System WRB conforms with requirements of 2015 IBC Section 1408, 2018 IBC Section 1407, and 2015 and 2018 IRC Section R703.9.2
IECC	System meets requirements for continuous insulation and $\alpha$ R-value requirements for above grade walls of 2015 and 2018 IECC Section 402.2 and contributes to U-value for above grades walls when figuring compliance based on U-factor.
ASHRAE 90.1-2016	System complies with Section 5, Building Envelope, air barrier requirements
ASTM E119	System meets requirements for hourly rated wall assemblies.
Listings/Approvals	NFPA 285 certification listing by Intertek: Design No. Sto/CWP 30-02 – meets requirements for use on noncombustible construction. CAN/ULC S134 certification listing by Intertek: Sto/CWP 25-02 – meets requirements for use on noncombustible construction. Intertek Code Compliance Research Report 0454

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### SB\_9000M

Revision: 003  
Date: 5/2025

### Attention

Sto products are intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. They should be installed in accordance with those specifications and Sto's instructions. Sto Corp. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, or for other construction activities beyond Sto's control. Improper use of Sto products or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to this product, and to the structure of the building or its components. **STO CORP. DISCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED EXCEPT FOR EXPLICIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH STO'S WARRANTY PROGRAMS WHICH ARE SUBJECT TO CHANGE FROM TIME TO TIME.** For the fullest, most current information on proper application, clean-up, mixing and other specifications and warranties, cautions and disclaimers, please refer to the Sto Corp. website, [www.stocorp.com](http://www.stocorp.com).