

System Bulletin Building with conscience.

StoVentec® Glass

Rainscreen wall system with opaque glass cladding, continuous insulation and continuous air and moisture barrier



Structural Back-up Wall (by others): Steel or wood frame with glass mat gypsum sheathing in compliance with ASTM C1177, code compliant OSB or plywood sheathing, concrete or concrete masonry, existing structurally sound, uncoated brick or other

| masonry wall construction. | | | | |
|----------------------------|--|--|--|--|
| 1) | Air and Moisture Barrier: Sto AirSeal ® | | | |
| 2) | Sub-construction: Sto Ventro™ Bracket, StoVentro T- Profile | | | |
| 3) | Thermal Insulation: Owens Corning Thermafiber® RainBarrier 45 | | | |
| 4) | Pre-fabricated Glass Panel Assembly: StoVentec® Glass Panel Assembly, 62mm – 64mm (2-7/16in – 2-1/2in) Dimension from face of T-Profile to face of Glass Panel and includes Agraffe Profile to Panel Profile connection dimension | | | |
| | StoVentro™ Panel Profile, 28.8mm (1-1/8in) | | | |
| | • StoVentec® Carrier Board A+, 20mm (13/16in) | | | |
| | • StoVentec® Structural Adhesive, ~4mm ~(13/16in) | | | |
| | Glass Panels, 6mm or 8mm thick (1/4in or 5/16in) | | | |

System Description

StoVentec Glass is an open joint, drained and back-ventilated rainscreen wall system from a single source that combines superior air and weather tightness with excellent thermal performance and fire protection. It incorporates noncombustible continuous exterior insulation and a continuous air and moisture barrier with StoVentro™ sub-construction and StoVentec Glass Panel to produce an advanced high performance wall assembly.

Uses

StoVentec Glass can be used on interior or exterior residential, commercial, and institutional wall construction

| commercial, and institutio | nal wal | l construction. | | | |
|--|---|---|--|--|--|
| Features | | Benefits | | | |
| Open joint drained and ba ventilated rainscreen wall design | ick- | Excellent moisture control | | | |
| High density mineral wool insulation | | Continuous noncombustible exterior thermal control layer | | | |
| Fully integrated seamless and moisture barrier | air | Compatible air, water, and vapor control layer from a single source | | | |
| Multiple opaque glass colo options and panel sizes without visible attachmen | | Elegant aesthetics for new build, façade restoration, or interiors | | | |
| Fire tested in accordance with NFPA 285 | | Can be used on all types of construction without height limitation ¹ | | | |
| Properties | | | | | |
| Weight: glass panel and sub-construction | 6mm glass: 33.98 kg/m² (~6.96 lb/ft²) 8mm glass: 38.96 kg/m² (~7.98 lb/ft²) | | | | |
| Insulation combustibility, flame spread | Noncombustible, 0 flame spread, 0 smoke development | | | | |
| Insulation RSI-value (R-value) | | 0.74 m²•K / W per 25mm (4.3 ft²•h•°F / Btu per in) | | | |
| Pre-fabricated Glass panels | Tempered and heat soaked security glass, fully bonded to a carrier board made of recycled expanded glass granulate | | | | |
| Warranty | | | | | |
| Ten year limited warranty | | | | | |
| Maintenance | | | | | |
| May require cleaning of glass to maintain appearance. Sealants and other façade components must be maintained to prevent water infiltration into or behind the system. | | | | | |

1. Some height restrictions apply based on ultimate wind load resistance of the system (see page 2)



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Precautions and Limitations

Not for use on horizontal or low slope surfaces, below grade, roofs or roof-like surfaces, or in areas of water immersion, pooling or ponding water. For use on vertical above grade walls only.

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

Pull-out or withdrawal capacity of fasteners 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/300, normal to the plane of the wall. Refer to Sto Design Guide and Detail Booklet for wind load ratings.

Insulation board thickness (Standard): 51-178mm ($\sim 2-7$ in). Thicker insulation available by custom order and with special design and engineering analysis by gualified design professional.

Ventilation cavity depth: 20-50mm (~13/16 - 2in)

Min glass panel size: Portrait Orientation, 100 x 250mm (~3-15/16 x 9-13/16 in). Landscape orientation, 250 x 175mm (~9-3/16 x 6-7/8 in) Max 6mm glass panel Height x Width, Portrait Orientation: 100 to 1500mm x 2800mm (~3-15/16 to 4ft 11-1/16in x 9 ft - 2-1/4 in) Max 6mm glass panel Width x Height, Landscape Orientation: 100 to 2800 mm x 1500mm (~3-15/16" to 9 ft 2-1/4in x 4ft 11-1/16in) Max 8mm glass panel Height x Width, Portrait Orientation: 100 to 1250mm x 4500mm (~3-15/16 in to 4ft 1-3/16in x 14ft 9-3/16in) Max 8mm glass panel Width x Height, Landscape Orientation: 100 to 3750mm x 1500mm (~3-15/16 to 12ft 3-5/8in x 4ft 11-1/16in)

Joint width between glass panels: 5-12mm (~3/16-1/2in)

Aesthetics: opaque glass color tolerance from approved sample between individual panels and subsequent deliveries: $\Delta E < 2.9$ in accordance with CIELAB color system when viewed at a distance of 3m (\sim 9 ft 10 in).

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

| Sustainable Design | | | |
|---|--|--|--|
| Regulatory Compliance and Standards Testing | | | |
| IECC, ASTM E2178 | Air barrier component complies with 2015 and 2018 IECC Section C402.5 as an air barrier material | | |
| ASTM C612 | Insulation conforms to applicable standard for board thermal insulation | | |
| NFPA 220 | Insulation complies with criteria for non-combustibility | | |
| ASTM E84 | Insulation has 0 flame spread, 0 smoke development | | |
| NFPA 285 | System meets requirements for use on all types of construction without height limitation (other than height restrictions based on wind load resistance) | | |
| AAMA 509 | System achieved W1 water penetration rating and V2 ventilation rating | | |
| ASTM E330 | System tested up to -100 lb/ft² (-4.78 kN/m²) without failure | | |
| IBC, IRC, ASTM E 2570 | 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 ci R-value requirements for above grade walls of 2015 and 2018 IECC Section 402.2, and contributes to U-value for above grade walls when figuring compliance based on U-factor | | |
| Listings/Approvals | NFPA 285 certification listing by Intertek: Design No. Sto/CWP 30-01 | | |

| Sto Corp. 3800 Camp Creek Parkway Building 1400, Suite 120 Atlanta, GA 30331 Tel: 404-346-3666 Toll Free: 1-800-221-2397 Fax: 404 346-3119 | SB_9000G Revision: 003 Date: 09/2020 | 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 5to's control. Improper use of 5to products or use as part of an improperly designed or constructinger assembly or building may result in serious damage to this product, and to the structure of the building or its components. STO CANADA LTD. INSCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED EXCEPT FOR EXPLICIT UNITED 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 Canada Ltd. website, www.stocorp.com |
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