STEKAR

DATA SHEET

# MULTIFAÇADES™ SYSTEM

Window and wall cladding systems

## PRODUCT DESCRIPTION

Multifaçades™ is a rainscreen cladding system that creates contemporary buildings with a flush surface across the entire façade. It also boasts a proprietary multi-material mounting system that's compatible with windows and virtually every kind of opaque material.

## FEATURES AND BENEFITS

- ✓ Sleek appearance that allows windows to fit perfectly flush with the rest of the envelope.
- ✓ Complies with all market norms and standards, in addition to meeting enhanced energy efficiency requirements.
- ✓ Components and panels are factory made and assembled in a stable, controlled environment to create a sturdy, air- and watertight rainscreen.
- ✓ Most of the components are manufactured and assembled in the workshop; only some of the connectors need to be adjusted on site, making installation quick and efficient.

## WARRANTY

This product is covered by Stekar Systems' standard warranty certifying that the work will be free from defects in workmanship or installation under normal use.

## MAINTENANCE

Once work is complete, the Multifaçades™ system should be cleaned using products and techniques that do not compromise the system's performance or surface treatments. Regular maintenance must also be performed annually using the same procedures.

## Test reports - Window

| | | |
|---|---|---|
| Structural strength (deflection) | Maximum deflection of L/300 at 90.2 psf | ASTM E330 |
| Structural strength (pressure) | Design pressure of 90.2 psf | ASTM E330 |
| Water resistance | No water penetration at 31 psf of pressure | ASTM E331<br>ASTM E547 |
| Air infiltration and exfiltration | • $q_A \leq 0.01$ CFM/ft$^2$ @ 1.57 psf (fixed and operable)<br>• $q_A \leq 0.03$ CFM/ft$^2$ @ 6.27 psf (fixed and operable) | ASTM E283 |
| Heat transfer coefficient (overall U-value) | • U ≤ 0.30 Btu/hrft$^2$F; 1 in double IGU with low-E coating<br>• U ≤ 0.25 Btu/hrft$^2$F; 1 in double IGU with low-E coating and pyrolytic coating on side #4<br>• U ≤ 0.23 Btu/hrft$^2$F; 1¾ in triple IGU with low-E coatings on face #2 and #4 | NFRC 100 (GWCW) |

## Test reports for AAMA 508 – Pressure Equalized Rain Screen Wall Cladding Systems

| | | |
|---|---|---|
| Pressure cycling with pressure equalization | Less than or equal to 0.029 seconds | ASTM E1233 |
| Structural strength | The structural strength of the system depends on the wall on which it is hung. The wall must be composed of an assembly certified by a structural engineer. | ASTM E330 |
| Water resistance | No more than 1.6% of the air barrier must be wet. | ASTM E331<br>AAMA 501.1 |

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## Components and raw materials

• Aluminum profiles must be AA6063 alloys with T5 or T6 hardening and comply with ASTM B221.
• The silicone must be a high-performance multi-component structural type (such as Dow Corning Dowsil 983 or Tremco Proglaze II).
• The system must be available in Class I or II anodic finishes and in painted finishes depending on the project needs (DURANAR, DURANAR XL, D2000 and greater).
• The aluminum must always be kept separate from other metals and masonry with an inert material or compliant dielectric paint.
• Low conductivity structural elements are made of glass fiber enhanced polyamide (Nylon 66).
• Generally, silicone and glazing tape are black. These can be gray when used behind a pale cladding whose opacity level is not 100%.

## Window Hardware

• Stainless steel limit device (C8628 from Ferco)
• Heavy duty four-bar stainless-steel hinges (301SS from Truth)
• Silver two-fork handle (Spacio G46552 from Ferco)
• Brass corner drive (Ferco Alu-Jet)
• Adjustable brass keeper plate (Ferco E-17719)
• Brass lock (Ferco Alu-Jet)
• Brass snubber (Ferco 9-32832-00-0-1)
• Clear anodized slide (Stekar STE-17, compatible with a 15/20 mm Euro groove)
• Retractable screen (optional)

## Design criteria

• The following maximum tolerances must be observed when manufacturing the panels.

Length ±1/16 in up to 4 ft

Length ±1/8 in up to 10 ft

Height ±1/16 in up to 4 ft

Height ±1/8 in up to 10 ft

Maximum diagonal 5/32 in

Arc 0.2% of length, maximum 3/16 in

• The size of the pane dictates the type and location of the hardware.

• Reinforcements/Stiffeners may be required under certain conditions and can have a visual impact if needed behind a pale cladding.

## Installation conditions

• Multifaçades™ cladding must be used on a wall assembly that meets the ASHRAE and ABAA prescribed waterproofing level, i.e. with maximum leakage of 0.04 CFM/ft$^2$ under a pressure differential of 1.57 psf as per ASTM E2357.

• The backup wall assembly must contain an air barrier element tested using the procedure in ASTM E2178 and found to have a rating of no more than 0.004 CFM/ft$^2$ at a pressure differential of 1.57 psf.

• To ensure the cladding system performs well, the building must be sufficiently compartmented. Stekar recommends subdividing the back of the cladding into compartments 2 stories high and 20 ft wide. The compartment width must be reduced to 5 ft at the corners.

## Limitations

| Product | Limitations |
|---|---|
| **Multifaçades™ Vision** Double IGU – FIXED | **A ≤40 sq. ft.** H ≤10 ft. (c-c) |
| **Multifaçades™ Vision** Double IGU– OPERABLE | **Awning: A ≤24 sq. ft.** H ≤6.5 ft. (c-c) |
| **Multifaçades™ Vision** Laminated or triple IGU – FIXED | **A ≤32 sq. ft.** H ≤8 ft. (c-c) |
| **Multifaçades™ Vision** Laminated or triple IGU – OPERABLE | **Awning: A ≤16 sq. ft.** H ≤5 ft. (c-c) |
| **Opaque cladding** | **A ≤50 sq. ft. if $H_{built}$ ≤3 stories** **Otherwise: A ≤40 sq. ft.** H or W ≤10 ft. (c-c) |

- Dimensions valid for a 1 in double IGU, a 1¼ in laminated IGU, or a 1¾ in triple IGU.
- A change in glass thickness can cause structural problems for the surrounding parts and hardware.
- For awning windows only. For casement windows, please contact our team to discuss your options.
- For more information, contact the Stekar team. They will be able to discuss your needs and help you bring your project to life.


668, 5TH Avenue
Beauceville QC G5X 1L6

P 418-774-2424
F 418-774-2425
Toll-free **1-877-317-8355**

SALES

ventes@stekar.com