

Opaque and Curtain Wall Systems

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Professor Kurasek
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Building Technology 3

Glazed Aluminum Curtain Wall System

MetroView® FG 501T

Window Wall

NEW PRODUCTS ▶

1620UT/1620UT SSG CURTAIN WALL SYSTEM

2500 UT UNITWALL® SYSTEM

METROVIEW® FG 501T WINDOW WALL

METROVIEW® FG 601T PG WINDOW WALL

AA@3200M THERMAL SLIDING DOORS

250T/350T/500T INSULPOUR® THERMAL ENTRANCES

AA@250/425 THERMAL ENTRANCES

INFRAME® INTERIOR FRAMING SYSTEM

GLASSVENT® UT (ULTRA THERMAL) WINDOWS

OPTIQ® AA@5450 SERIES WINDOWS

8225TLF THERMAL WINDOWS

MARKET SOLUTIONS ▶

HIGH-THERMAL PERFORMANCE PRODUCTS

HURRICANE RESISTANT PRODUCTS

BLAST MITIGATING PRODUCTS

ENTRANCES ▶

SWING

STOREFRONT FRAMING ▶

FIXED

SLIDING MALL

CURTAIN WALL ▶

TRADITIONAL

UNITIZED

WINDOW WALL

WINDOWS ▶

HUNG

HORIZONTAL SLIDING

CASEMENT

PROJECTED

TILT TURN

FIXED

HORIZONTAL RIBBON

KAWNEER WINDOW ACCESSORIES

NX WINDOW ACCESSORIES

TR WINDOW ACCESSORIES

MISCELLANEOUS

BALCONY DOORS ▶

SWING

SLIDING

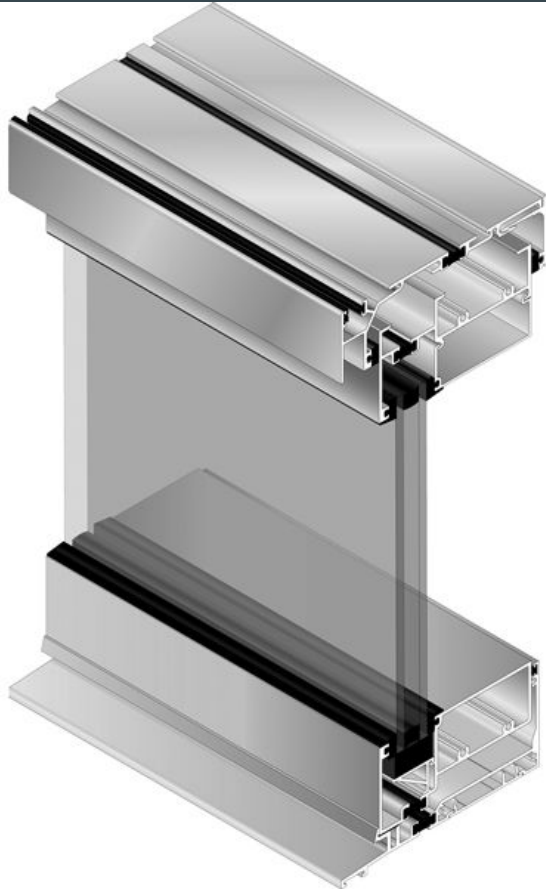
SUN CONTROL PRODUCTS ▶

OVERHEAD GLAZING ▶

INTERIOR FRAMING ▶

VIEW PRODUCTS A TO Z ▶

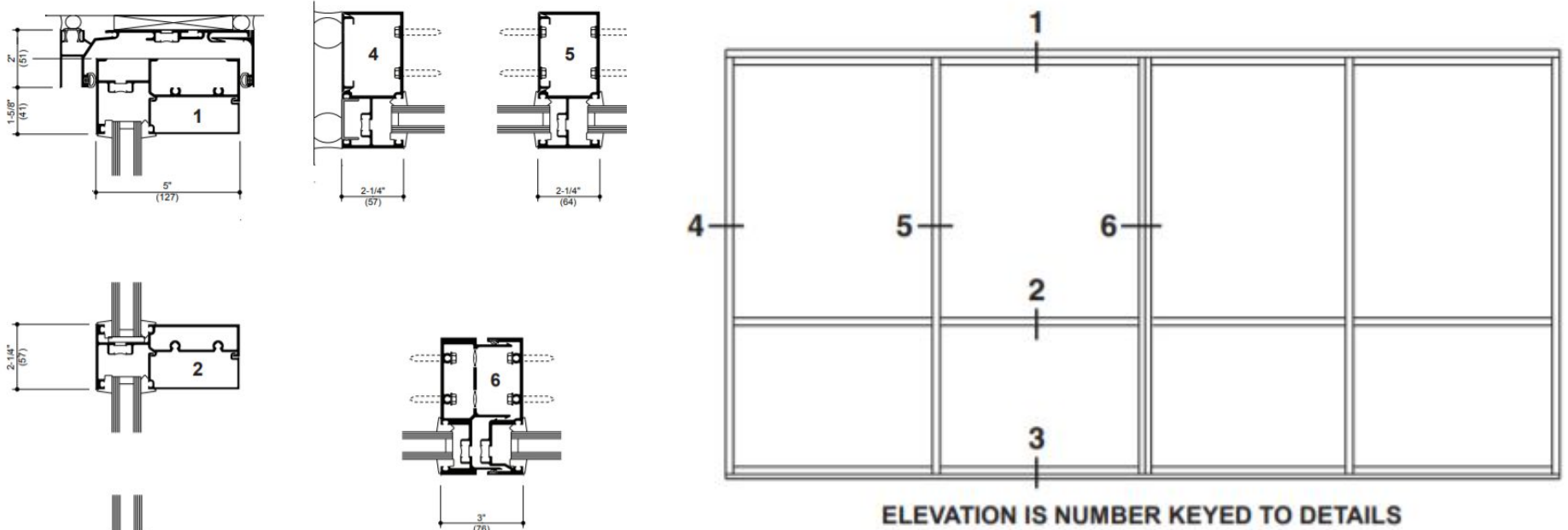
MetroView® FG 501T Window Wall



“Sleek, efficient and versatile. FG 501T Window Wall – the first in the MetroView® Window Wall series – packs the desired aesthetics of a curtain wall into a cost-efficient window wall system. Ideal for mid-rise commercial projects and sophisticated multi-family housing, MetroView® FG 501T Window Wall delivers the refined design features that are so popular in today’s urban and near-urban cityscapes.”

MetroView® FG 501T Window Wall

How does it function structurally? or how does it attach to the building?



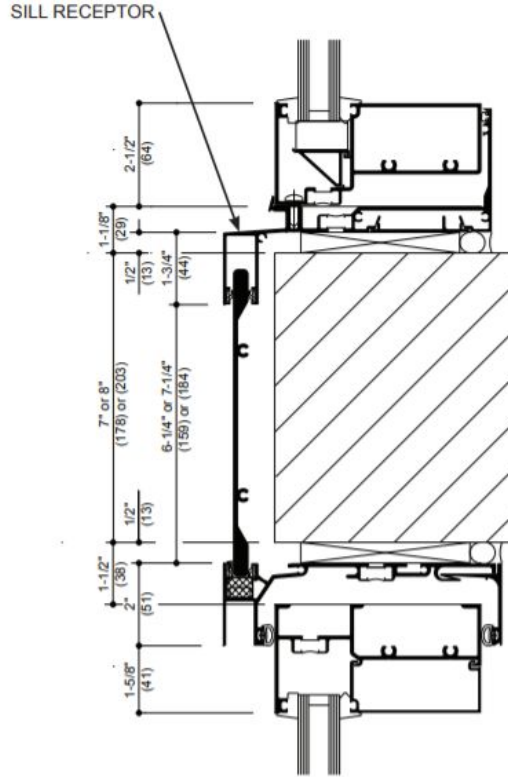
This wall system is not structural, it is a Glass curtain wall. It goes on the exterior as a series of panels with aluminum framing. It is 5 inches deep so it would not take up a lot of space.

MetroView® FG 501T

Window Wall

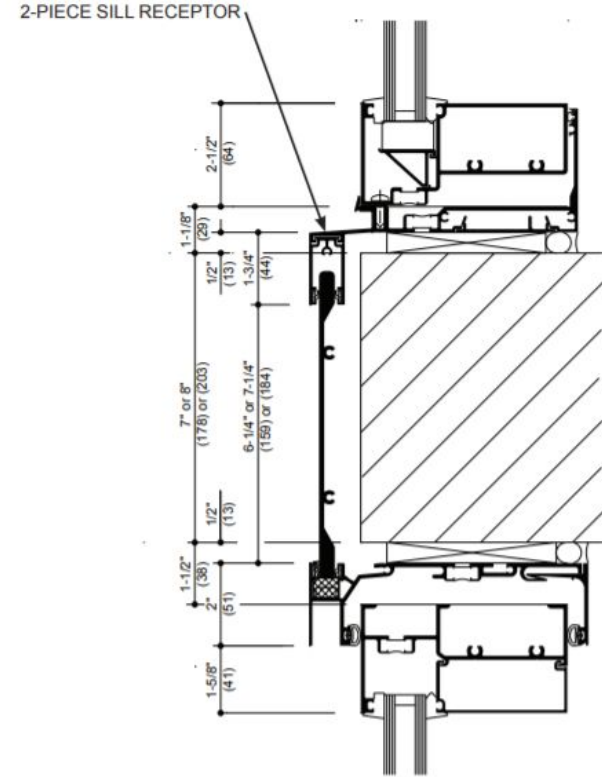
This window wall system also provides a way to protect the slab while blending in with the glass by only using 2 materials which are aluminum and glass. This creates a seamless transition.

STANDARD SILL RECEPTOR
WITH 7" SLAB COVER
(8" SLAB COVER SIMILAR)



HEAD RECEPTOR
(INTERIOR INSTALLED)

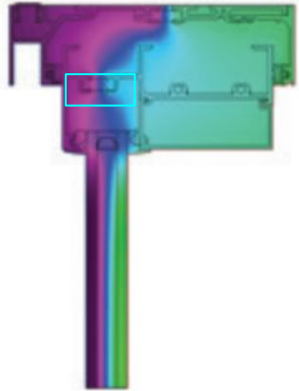
2-PIECE SILL RECEPTOR
WITH 7" SLAB COVER
(8" SLAB COVER SIMILAR)



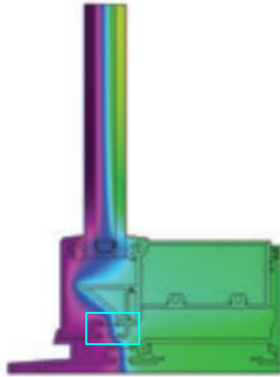
HEAD RECEPTOR
(INTERIOR INSTALLED)

MetroView® FG 501T Window Wall

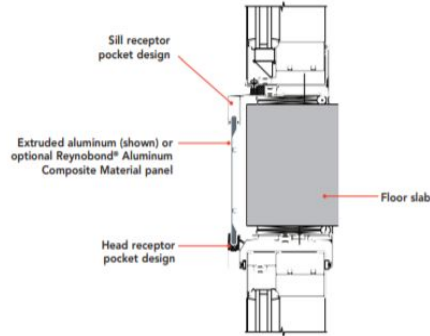
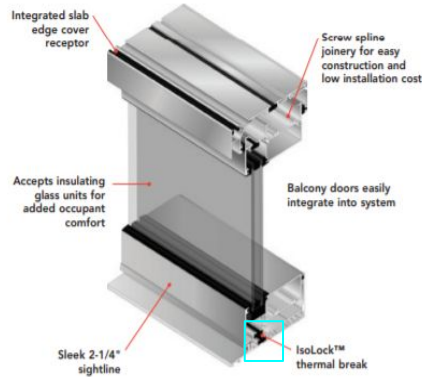
How does it provide thermal resistance? or how is it insulated? where do we see thermal bridges or thermal breaks?



Head member assembly with 1" glass



Sill member assembly with 1" glass



IsoLock Thermal breakers are used to disrupt the temperature intake in the building. The IsoLock™ thermal break process is used to eliminate expansion and contraction of the polyurethane. This thermal barrier also improves the U-factor and condensation resistance.

MetroView® FG 501T Window Wall

How does it waterproof the building? To fully waterproof a building we must look at the roof, the facade & windows & the foundation – all sides of the building.

A **curtain wall** is designed to resist air and **water** infiltration, absorb sway induced by wind and seismic forces acting on the building, withstand wind loads, and support its own dead load weight forces.

“(Our) products not only withstand the wrath of hurricanes and storms but provide increased security throughout the year. Our range of hurricane resistant products have been independently tested and received Florida Product Approvals (FL #s) and Texas Department of Insurance (TDI #s). Products continue to be tested and submitted to for additional product approvals. Our hurricane resistant products meet the testing standards for Wind-Borne Debris as set forth in ASTM E 1886 and 1996, and Florida Building Code (FBC) Protocols TAS 201, TAS 202 and TAS 203. A growing list of states throughout the East Coast and Gulf Coast Areas of the United States from New York to Texas continue to reference these standards in current building codes. These codes mandate the use of hurricane resistant products in Wind-Borne Debris Regions.”

Opaque Wall System

Fiber Cement Boards

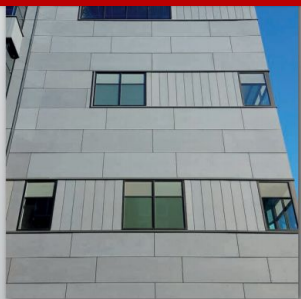
Corrugated Fiber Cement Boards

Continuous Insulation Rain-Screen

Counter Tops

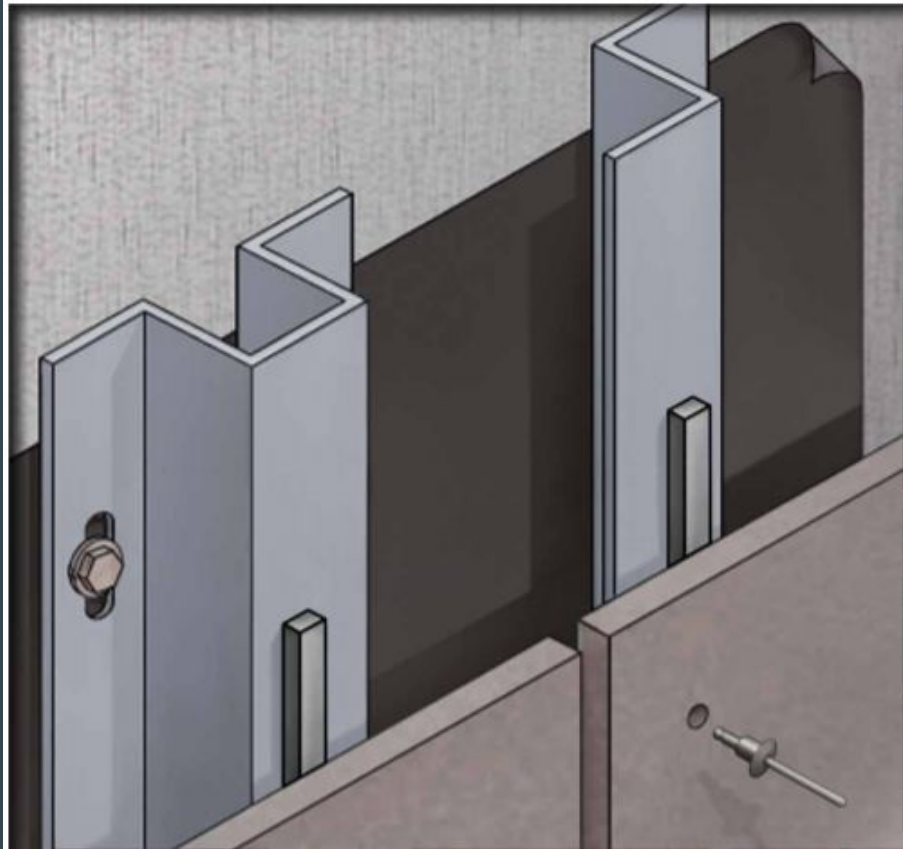
Cembrit Transparent (True) Fiber Reinforced Concrete Building Panels

Composite



Cembrit Transparent (True) Fiber Reinforced Cement Composite Building Panels

How does it function structurally? or how does it attach to the building?

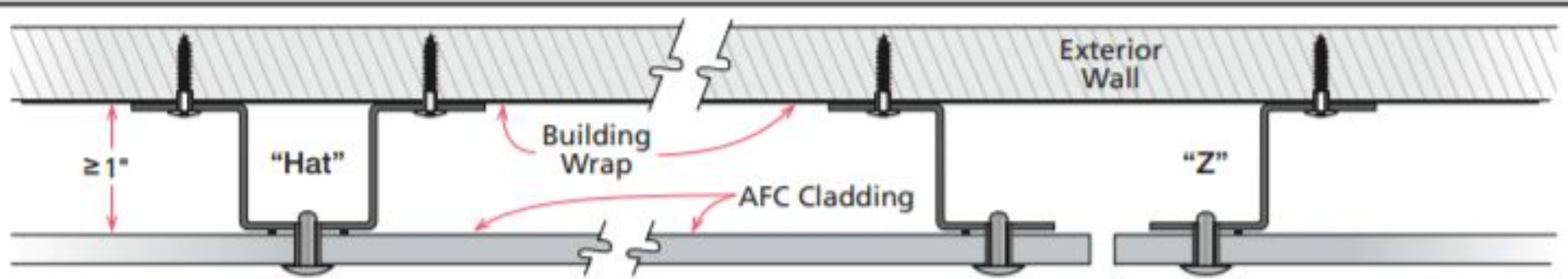


“Cembrit Transparent (formerly True) facade boards combine the textured nuances and natural characteristics of the base board with a long lasting performance of the transparent top coat. The color added to the fibre cement reveals and highlights the fibres and other raw materials that provide its strength and character. The extremely durable transparent coating then protects the board and ensures a smooth surface with a long service life.”

This type of building panel does not offer any structural support. They hang on the exterior of the building. Using a “Hat” and a “Z” bracket.

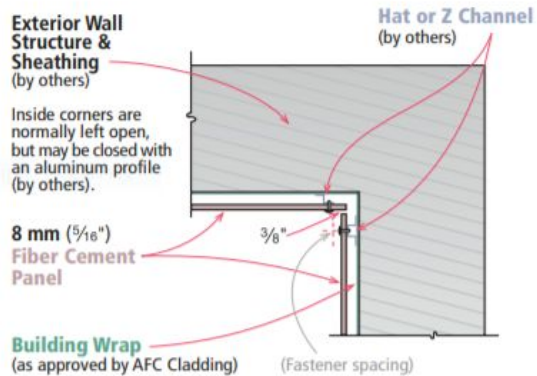
Cembrit Transparent (True) Fiber Reinforced Cement Composite Building Panels

How does it function structurally? or how does it attach to the building?

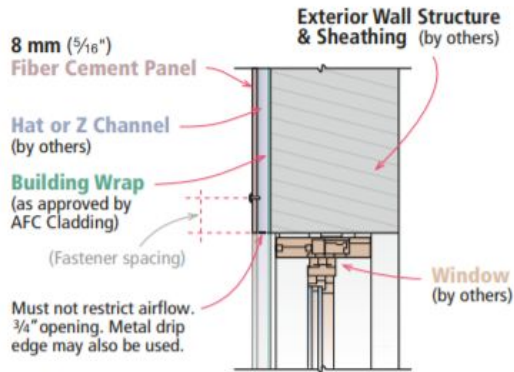


The wall panels are screwed 1 inch away from the exterior wall with screws and a "h=Hat" and "Z" bracket. The exterior wall has a building wrap and the panels have AFC Cladding on the back. Connecting

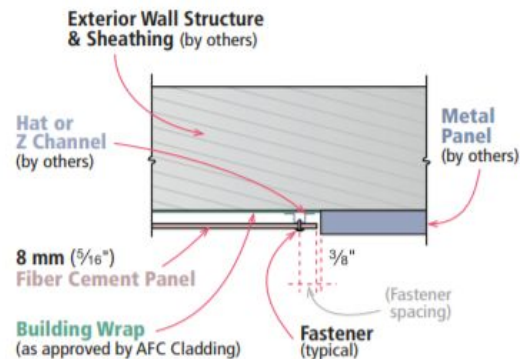
Typical Inside Corner – Plan View



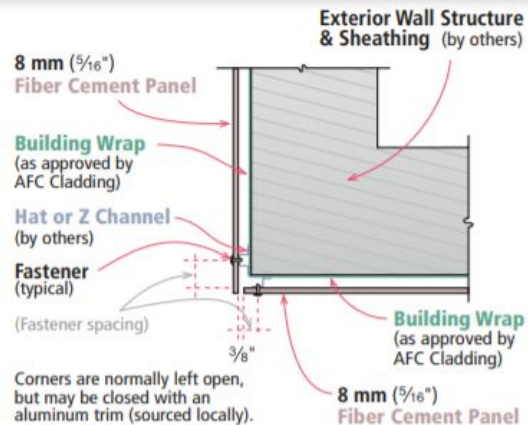
Typical Panel @ Window Head



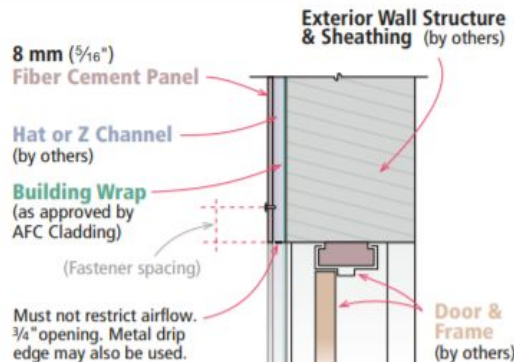
Typical Panel End @ Metal Panel



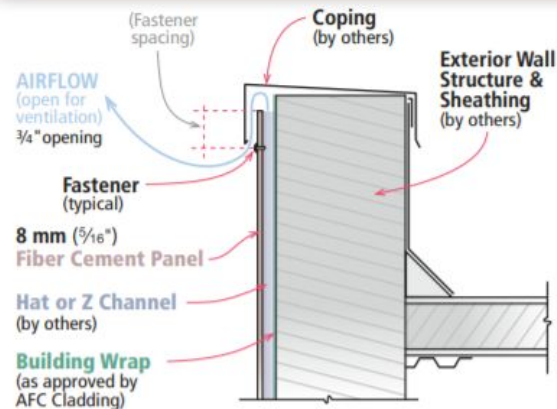
Typical Outside Corner – Plan View



Typical Panel @ Door Head

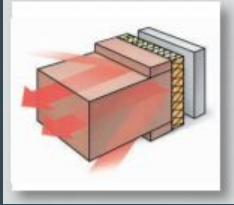


Typical Panel @ Parapet

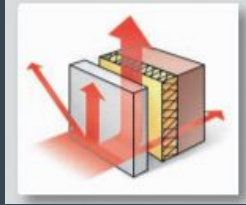


Cembrit Transparent (True) Fiber Reinforced Cement Composite Building Panels

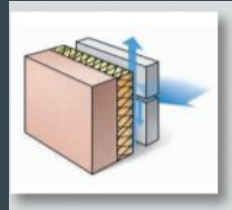
How does it provide thermal resistance? or how is it insulated? where do we see thermal bridges or thermal breaks? & How does it waterproof the building? To fully waterproof a building we must look at the roof, the facade & windows & the foundation – all sides of the building.



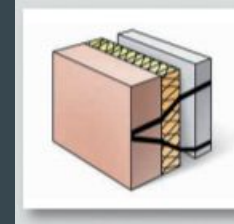
As the insulating material is on the outside of the structural wall, this way any thermal bridges that occur at each floor slab can be prevented. These thermal bridges are also the cause of surface condensation that may result in fungus growth.



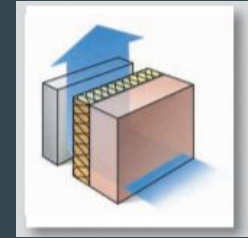
The ventilated rainscreen cladding system has a cooling effect when temperatures outside are high. The sun's rays are reflected away from the building. Heat passing through the exterior wall panel partially disappears because of the space between the exterior cladding panel and the structural wall.



Architectural wall-cladding panels act as a rainscreen on the outside of the building and keep the structural wall absolutely dry. The air space connected to the outside air evacuates water and humidity that might have penetrated behind the wall-cladding panels through its horizontal or vertical joints.



The insulation material is applied to the outside of the building so changes in temperature are very minor. This works in favor in summer and winter in both hot and cold climates.



Insulation material can be applied to the outside of the structural wall because it is protected effectively by the architectural exterior wall panel.