



# 6450 UCW CURTAIN WALL

High-Performance Unitized Curtain Wall

MANULIFE BUILDING  
VANCOUVER, BC, CANADA

High Performance  
High Quality  
Off-site Construction  
Quick Installation  
Versatile

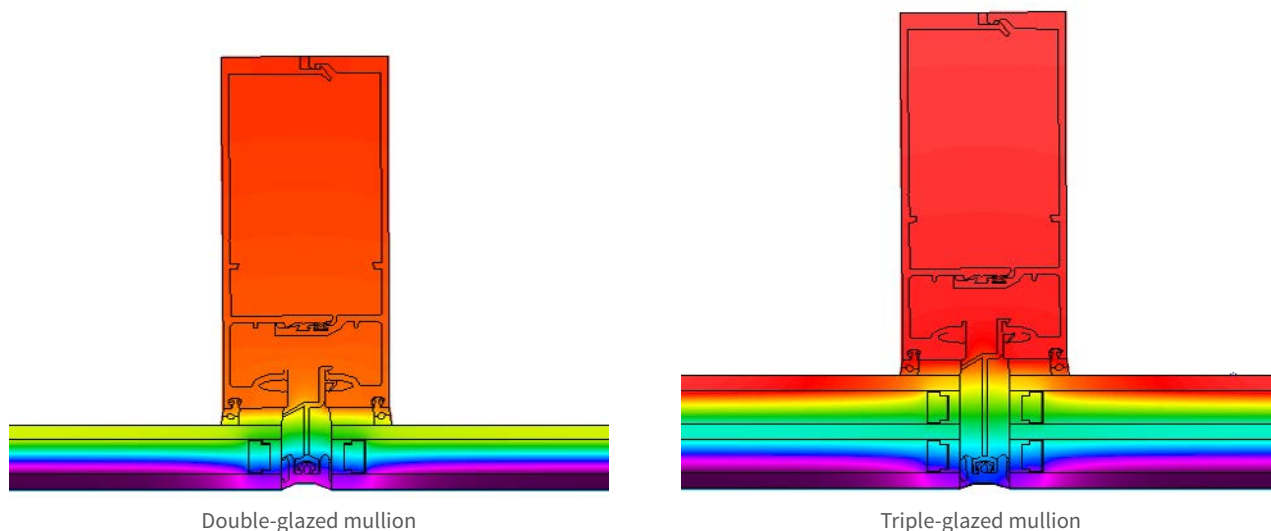
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## PERFORMANCE VALUE

6450 UCW is an innovative and versatile unitized curtain wall system designed to curb a building's energy appetite and protect against the effects of today's harsh climate. 6450 UCW is designed to be assembled and glazed in a controlled environment for increased quality assurance of critical seals and components. Fully Engineered and completed unitized frames are shipped directly to the jobsite permitting rapid installation. 6450 UCW's adaptability to fulfill most Architectural needs lends itself to being one of the most versatile and leading curtain wall systems in today's market. 6450 UCW can easily be customized to seamlessly interface with market leading window and door systems.

## THERMAL MODELS



Total System U-factors: (4 Sided SSG When simulated in accordance with AAMA1503.1 and NFRC 102)

2.20 W/m<sup>2</sup>-K (0.39 BTU/h-ft<sup>2</sup>-°F), using 25mm (1") IGU with U<sub>cog</sub> = 1.7 W/m<sup>2</sup>-K (0.29 BTU/h-ft<sup>2</sup>-°F)

2.00 W/m<sup>2</sup>-K (0.35 BTU/h-ft<sup>2</sup>-°F), using 25mm (1") IGU with U<sub>cog</sub> = 1.4 W/m<sup>2</sup>-K (0.25 BTU/h-ft<sup>2</sup>-°F)

1.16 W/m<sup>2</sup>-K (0.20 BTU/h-ft<sup>2</sup>-°F), using 44mm (1-3/4") IGU with U<sub>cog</sub> = 0.7 W/m<sup>2</sup>-K (0.12 BTU/h-ft<sup>2</sup>-°F)

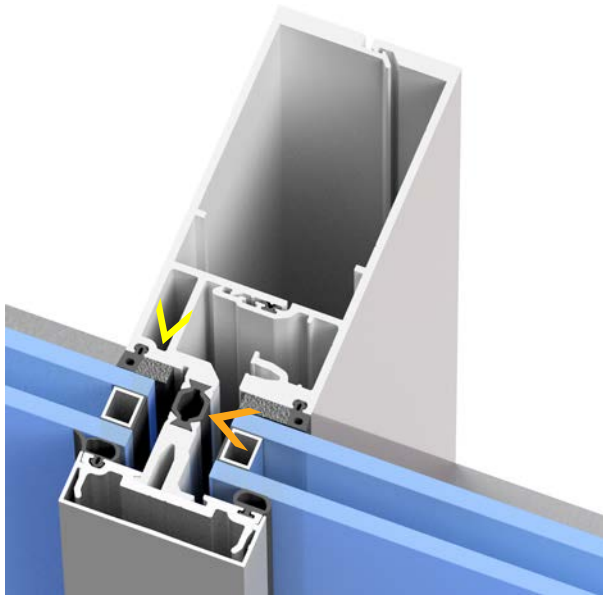
Note to Specifier: The U-factor and CRF (condensation resistance) for the glazed system as a whole will be affected by the characteristics of the glass specified.

## PERFORMANCE & DESIGN FLEXIBILITY

- Versatile framing design
- 2 1/2" (63.5mm) sightline, with multiple system depths
- 4-side captured (horizontal and/or vertical)
- 2-side captured glazing (horizontal and/or vertical)
- 4-side structural silicone glazing
- Polyamide thermal breaks for captured systems
- Thermal barrier minimizes heat transfer, providing improved occupant comfort \* (fiberglass optional)
- Increased condensation resistance
- Standard perimeter silicone heal beads in all captured vision applications. Does not rely on compression gasket to maintain air and water tightness
- Accommodates 20mm (13/16") differential floor to floor movement
- 90° inside and outside corners
- Silicone setting blocks
- Structural setting block chairs
- Pre-installed silicone exterior weatherseal gaskets
- 3-way adjustable curtain wall anchors
- 300 series stainless steel assembly fasteners
- Dual finish capability (inside/outside finish)

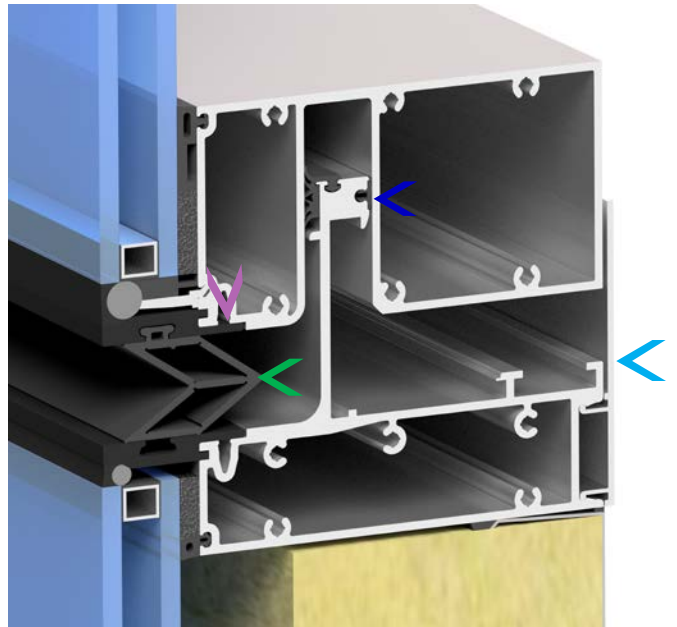
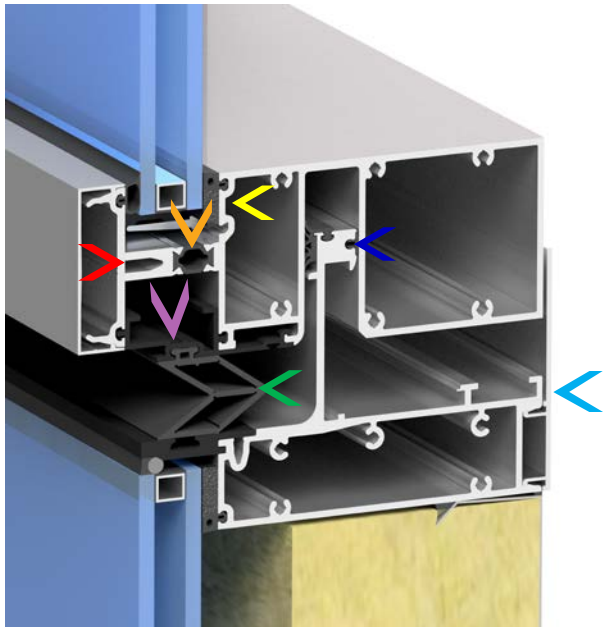
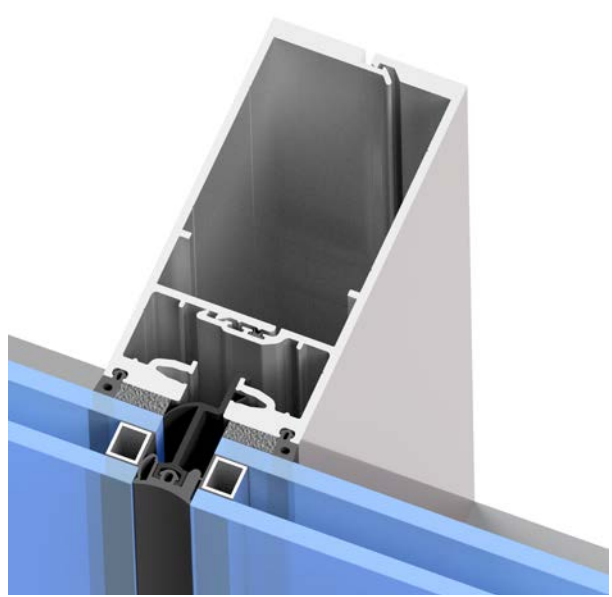
## CAPTURED GLAZING

- Horizontal and/or vertically captured
- Double & triple glazing



## STRUCTURAL SILICONE GLAZING

- Horizontal and/or vertically SSG
- Double & triple glazing



- Optional fiberglass pressure plate for enhanced thermal performance and occupant comfort
- Assured air / water tightness, resulting from a continuous perimeter structural silicone heal bead around Vision lites. Unlike other curtain wall systems, Flynn's 6450 UCW System does not rely on compression gaskets alleviating the concern for unwanted water infiltration around IGU's. Custom molded Silicone Sleeves and accessories to ensure a quality and consistent installation. Captured curtain wall systems feature innovative Technoform Bautec Polyamide thermal breaks for enhanced performance.

- Silicone Accordion style silicone weather seal for durability and thermal protection, providing consistent appearance between SSG and Captured options
- Thermal isolators to reduce cold transfer
- Noise reduction separation
- Polyamide Thermal Break
- Optional integrated interior trims and accessories

## TECHNICAL INFORMATION

Glazing Type	Double Glazed IGU Center-of- Glass U-Value (Btu/h-ft <sup>2</sup> -F)	Overall "U" Value (Btu/h-ft <sup>2</sup> -F)	Overall "U" Value (W/m <sup>2</sup> K)
4 Sided SSG	0.20	0.30	1.73
	0.25	0.35	1.98
	0.29	0.39	2.20
4 Sided Captured (aluminum Pressure Plate)	0.20	0.33	1.87
	0.25	0.37	2.12
	0.29	0.41	2.34
Horizontally Captured (aluminum Pressure Plate)	0.20	0.31	1.78
	0.25	0.36	2.03
	0.29	0.40	2.25
Vertically Captured (aluminum Pressure Plate)	0.20	0.32	1.82
	0.25	0.36	2.07
	0.29	0.40	2.28

Glazing Type	Triple Glazed IGU Center-of- Glass U-Value (Btu/h-ft <sup>2</sup> -F)	Overall "U" Value (Btu/h-ft <sup>2</sup> -F)	Overall "U" Value (W/m <sup>2</sup> K)
4 Sided SSG	0.12	0.20	1.16

Notes: Overall U-Values are based on NFRC size of 2m x 2m (78 ¾" x 78 ¾") with intermediate vertical

**Air Infiltration:** Completed curtain wall systems will meet 0.3 l/s-m<sup>2</sup> (0.06 cfm/ft<sup>2</sup>) maximum allowable infiltration when tested in accordance with ASTM E 283 at a differential static pressure of 300 Pa (6.24 psf).

**Water Infiltration:** No uncontrolled water on indoor face of any component when tested in accordance with:

- ASTM E331 at a static pressure of 718 Pa (15 psf)
- AAMA 501.1 at a dynamic pressure of 718 Pa (15 psf)

**Deflection:** Maximum allowable deflection in any member when tested in accordance with ASTM E 330

- For spans less than 4.1m (13'-6"): L/175 or 19.1mm (3/4") maximum
- For spans greater than or equal to 4.1m (13'-6") but less than 12.2m (40'-0"): L/175 or L/240 + 6.4mm (1/4")

**Thermal Cycling:** (AAMA 501.5) Provide for thermal movement caused by 82.2 °C (180 °F) surface temperature, without causing buckling stresses on glass, joint seal failure, undue stress on structural elements, damaging loads on fasteners, reduction of performance.

**Temperature Index "I":**

(Estimated using Therm and Window Energy Model)

- Min. 68 based on HP double glazing with thermal spacer
- Min. 72 based on HP triple glazing with thermal spacer

**Horizontal Interstory Drift:** (AAMA 501.4) Three cycles in each directions from nominal position of 20mm (13/16").

**Interstory Vertical Movement:** Three cycles in each directions from nominal position of 20mm (13/16").