

MOSAIC CENTRE ACHIEVES NET ZERO IN EDMONTON'S SEVERE CLIMATE



THE MOSAIC CENTRE WITH CURTAIN WALL VENT ADAPTORS BY CASCADIA WINDOWS & DOORS LTD. VISIBLE ON THE SOUTH AND EAST ELEVATION. [PHOTO: COOPER + O'HARA].

Cascadia's fibreglass curtainwall Vent Adapter improves envelope performance



Located at the edge of a commercial strip of a rapidly urbanizing area on the outskirts of Edmonton, the Mosaic Centre office building is pursuing both LEED Platinum and Living Building Challenge certification. The net zero energy requirement of the Living Building Challenge is a particularly ambitious target given Edmonton's severe climate.

To maximize passive solar for net zero energy design, the location of the building on its site was determined by considering the overshadowing potential of different development scenarios on adjacent sites. In addition, the building is oriented on an east-west axis for best solar exposure.

This orientation, and the access to daylight it affords to south-facing spaces guided the interior organization of the building. Accordingly, the most densely occupied spaces are located on the south side where they receive the most light.

The curtain wall system is fibreglass-based with triple glazing and three low-e coatings. For natural ventilation, the system makes use of the Curtain Wall Vent Adaptor by Cascadia Windows & Doors Ltd. In Langley, BC.

The Fibreglass Curtain Wall Vent Adaptor

A fibreglass vent adaptor solves a compromise that has been traditionally present in aluminum curtainwall glazing systems at operable vents - a drop in the thermal performance of the curtainwall due to the added amount of aluminum at the vent's sash and frame.

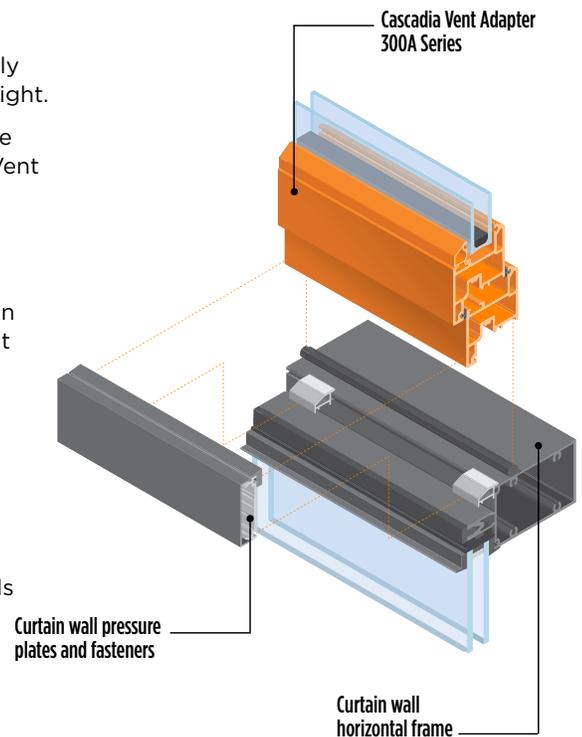
Insulated fibreglass frames have similar thermal performance as the best double-glazed IG units [centre of glass] available today, so when coupled with double glazing, the frame doesn't drag down the thermal performance. Triple glazing increases the performance even further.

Energy efficient, commercial-grade fibreglass vent adaptors allow designers and glaziers to meet the toughest new energy efficiency codes and standards that would otherwise severely limit the number and size of aluminum operable vents adaptors.

Cascadia's fibreglass vent adaptors permit as much venting as desired without lowering thermal performance.



DETAIL OF THE CURTAIN WALL VENT ADAPTOR.



Further details at: <http://www.cascadiawindows.com/products/series/85.php>

Exploded view of Cascadia Fibreglass Vent Adaptor