

# Sophisticated architectural design

## Pyramids and skylights

A unique design of various shear blocks and connectors allows to design, fabricate and install different shapes and properly integrate them into the building envelope, whether is:

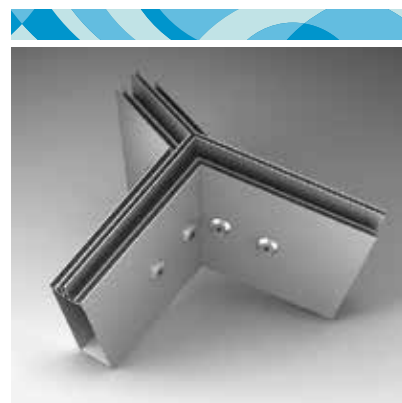
- Pyramids
- Curved surfaces
- Slopped surfaces
- Tilted and rotated surfaces



- Engineered custom angle connection

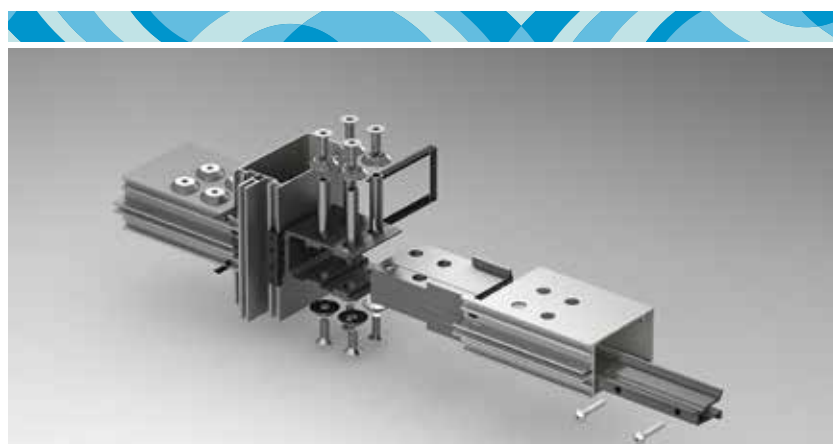


- Engineered Y-connection



## Ultra heavy infill units installation

Swivel brackets and mounts, continuous mullion reinforcers and heavy duty blocks make possible of heavy glass infill units installation up to up to 1100 lb with mullions spaced 11,5 ft apart.



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## Modern design

- Different facade design options: captured, «horizontal-line», semi-structural, structural.
- Integrated units: in-swing and out-swing windows, zero sight line operable units, manual and motorized skylights etc.

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## High thermal performances

- High performance thermal insulation achieved due to ALT F50 splitting seal and thermal breaks made from foamed materials.
- Integrated windows have high thermal insulation level due to utilization of multi chamber polyamide thermal breaks, PVC profiles and multi-contour sealing system.

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## Functionality

- Different options of infill types and thickness: from 1/8" to 2" (4-50 mm)
- Different options of integrated units

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## Effectiveness

- Special plastic and rubber fittings provide a necessary level of thermal compensation, effective transition and removal of condensate.
- A big number of connecting elements allow realization of various design solutions, utilization of different processing methods and different types of profiles' connection.



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Curtain wall system

# Post-Transom Facade System ALT F50



The ALT F50 curtain wall system has been developed for fabrication of envelope translucent constructions of various complexity: curtain walls, inclined translucent surfaces, skylights, sun rooms.

A huge number of technical solutions have been contemplated while designing the system.

Various door and window types can be integrated in the system.

## Product information

Internal visible width	1 15/16" (50 mm)
External visible width	1 15/16" (50 mm)
Mullion depth	1/2" to 10 1/2" (12-270 mm)
Glazing thickness	from 5/32" up to 2 3/16" (4-56 mm)
Max infill weight	1100 lb (500 kg)
Glass fixing method	pressure plates and beauty caps
Types of opening elements	All ALT window and door systems, integrated facade windows and smoke removal hatches
Thermal conductivity	Uf = 0,6 – 1,8 W/m <sup>2</sup> K acc. to EN ISO 10077-2:2008

## System performance with 1" glass unit (tested acc. to ASTM E283-04, ASTM E330-14, ASTM E331, ASTM E541)

Sound transmission	STC 33, OITC 27 (pressure captured)
Air infiltration	(6,24 psf) 0,15 L/s/m <sup>2</sup>
Water penetration resistance	12,0 psf
Design pressure	70,0 psf
Uniform load structural test	105,0 psf

## System components and color options

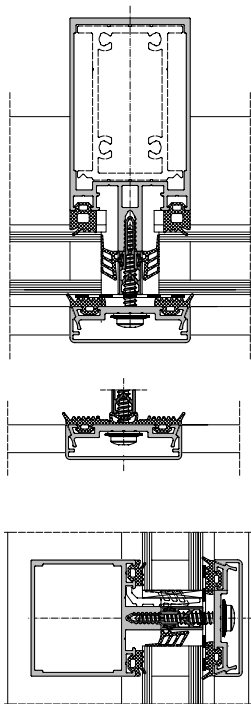
- **Aluminum extrusions**  
EN AW 6063 T6 AIMgSi F20
- **Seals**  
EPDM DIN 7863
- **Gaskets**  
PVC-U-HI long-lasting, low temperatures resistant, plasticized material with low thermal conductivity and long endurance period
- **Insulating moldings**  
PVC-U-HI long-lasting, temperature resistant, plasticized material with low thermal conductivity
- **Mounts and brackets**  
Aluminum, stainless steel and other corrosion resistant materials
- **Coating types**  
Qualicoat grade powder coating, over 200 RAL colors, special customized colors. Qualanod grade anodizing, 9 colors

# ALT F50 design options



## Captured ALT F50 curtain wall

With visible decorative covers 1 15/16" wide, of various configuration



## Semi-structural glazing

### ALT F50 SSG

#### Imitation of structural glazing

The main difference of this solution is that instead of 1 15/16" pressure plates and beauty caps narrow and almost invisible moldings are used. Plain, glass adjoining profiles create an illusion of structural glazing.



## Semi-structural glazing

### ALT F50 HL

#### «Horizontal line»

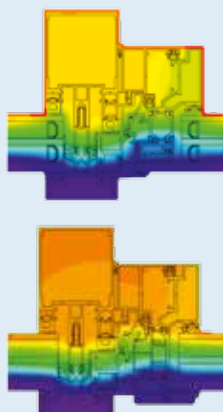
In this facade modification, a vertical or a horizontal line is outlined with the help of various massive shield bars (oval, hemispheric or rectangular), therefore adding some horizontal or vertical volume. Along other lines the clamping bars are replaced by seam sealing or the space between the IGUs is filled up by silicon seam sealant.



## Structural glazing

### ALT F50 SG

This system allows fabrication of all-glass look facades of any configuration without aluminum profiles on the outside surface. Insulated glass is fixed to mullions with hidden clamps.



## High thermal performance

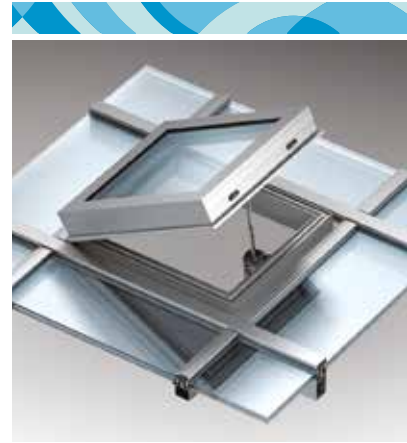
Due to a good arrangement of different materials and four sealing contours high thermal insulation parameters of the facade are achieved.

Due to utilization of multi chamber 3/8" (34 mm) polyamide thermal breaks in the profiles, thermal conductivity factor of a typical section «frame-leaf» is decreased to  $U_f = 1,9/1,7 \text{ W}/(\text{m}^2 \cdot \text{K})$  which is much higher than the indexes of European equivalents in facade windows segment.

# ALT F50 integrated windows

## Integrated windows «Hidden sash» type ALT F50

This F50 system solution provides possibility to manufacture integrated outside opening windows. The sash can be furnished with fittings providing awning or parallel-set-side opening types. Manual mechanism or chain electric drive can be used as an opening element.



## Visible integrated window ALT F50

This ALT F50 system integrated window con assumes installation of a rectangular IGU which is followed by appearance of aluminum line of 1 5/8" (41 mm) thickness.

This option preserves all technological advantages of the «hidden sash».



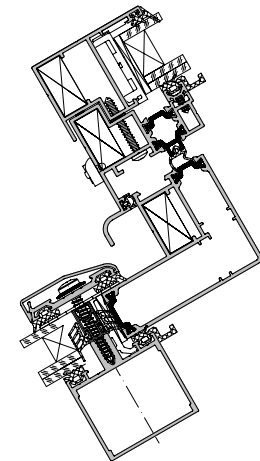
## ALT F50 smoke removal hatch

These windows are installed into the inclined facades and used to equalize pressure inside and outside of a premise, and to provide ventilation and smoke removal.

It is recommended to use an electric power drive for the hatch opening and closing. Due to extended surface of the frame profile the rack and chain drives produced by well known European manufacturers can be applied with the hatch.

## «Hidden sash» without thermal insulation

Window with a single glazed unit is used in facades without thermal insulation.



## Relation of $U_f(W/m^2 \cdot K)$ section to the finfill unit thickness

