sapa:

NRGY 62

Innovative Curtain Walling

School buildling, Linz, Austria - Photography: Hans Couckuyt

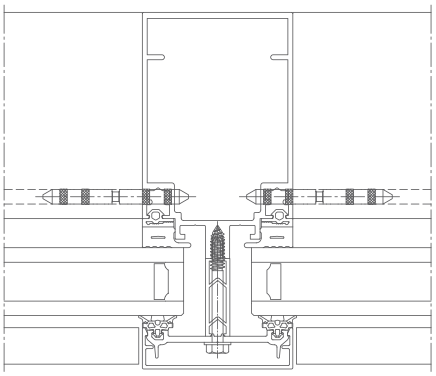
NRGY 62
Innovative Curtain Walling

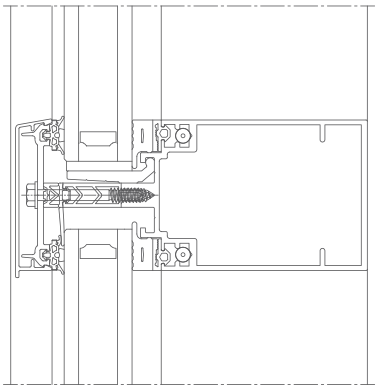
NRGY 62 is an innovative façade system that combines intelligent profile design with the demands of contemporary building requirements. It accommodates large glass sizes to maximise light penetration.

In this age of global warming, we must act to preserve the future of our planet. Buildings are throughout their lifecycle largely contributing to emissions. Sapa Building System's aim is to be part of the solution. Our mission is to constantly challenge ourselves to develop and deliver better solutions for zero energy buildings (ZEB). A high performance building skin is key to achieve zero energy buildings. High insulated and airtight façade systems contribute largely to preserve energy. By adding solar shading, controlling the opening parts and integrating decentralised ventilations, the use of energy is minimal. On site renewable energy production by solar electricity generation via building integrated photovoltaic's.

The NRGY 62 curtain walling system provides sustainability through recycling. The rigid thermal break strips are produced from recycled material as standard, with the aluminium profiles available from fully traceable recycled material upon request. At the end of its service life, the curtain wall can be easily seperated, with items such as mullions, transoms, pressure plates, feature caps, thermal breaks, centre seals and external glazing gaskets being recycled for use again.

NRGY 62
Transom - Transom





At the heart of the NRGY 62 concept is a transom-transom connection phylosophy, allowing a common profile to be used both vertically and horizontally, whilst maintaining the over lapping connection security afforded by the more traditional transom-mullion approach.

The one profile means infinite drainage level possibilities, allowing the designer to dream when it comes fenestration, as the profile shape allows a robust connection to itself, and a safe transfer of water within the facade until it reaches a drainage outlet position.

The one profile can also mean greater efficiency, with the vertical off-cuts then utilised as horizontal members for less wastage.

Each transom profile has been specially designed achieve the maximum inertia using the east amount of material, thus reducing weight and cost.

When it comes to drainage, the transom-transom solution can be either mullion drained or pane drained.
Mullion drainage is carried out via a concealed water reject spout applied to the vertical profile as and when required. The overlapping horizontal connection can either be machined or applied using a component, and allows water to be safely transferred to the mullion drainage channel.

Pane drainage can either be concealed via dedicated cut-outs in the horizontal centre seal gasket and corresponding horizontal pressure plate gaskets, or using the more classical approach with slotted holes machined in the horizontal pressure plates and feature caps. In both instances, the overlapping horizontal connection is made using a component that also blocks the mullion drainage channel and transfers water towards the drainage outlets.

NRGY 62
Transom - Mullion

The NRGY 62 concept also maintains the traditional approach of transom-mullion connection, with over lapping transom security.

A range of dedicated mullion profiles are are available with depths that match their transom counter-parts. These profiles have significantly higher inertia values for increased vertical spans and larger drainage channels for sloped glazing and roof applications.

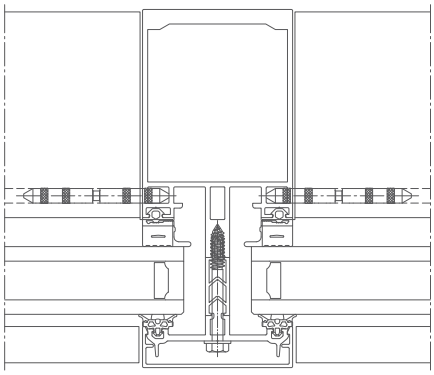
The solution can be mixed with transom-transom, allowing the designer to use the dedicated mullion profiles on the longest spans, and switch to transom-transom on the intermediate fenestration where necessary.

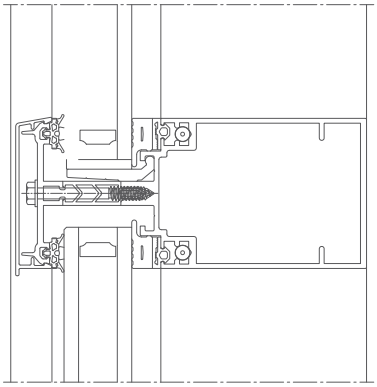
Each mullion profile has been specially designed achieve the maximum inertia using the east amount of material, thus reducing weight and cost.

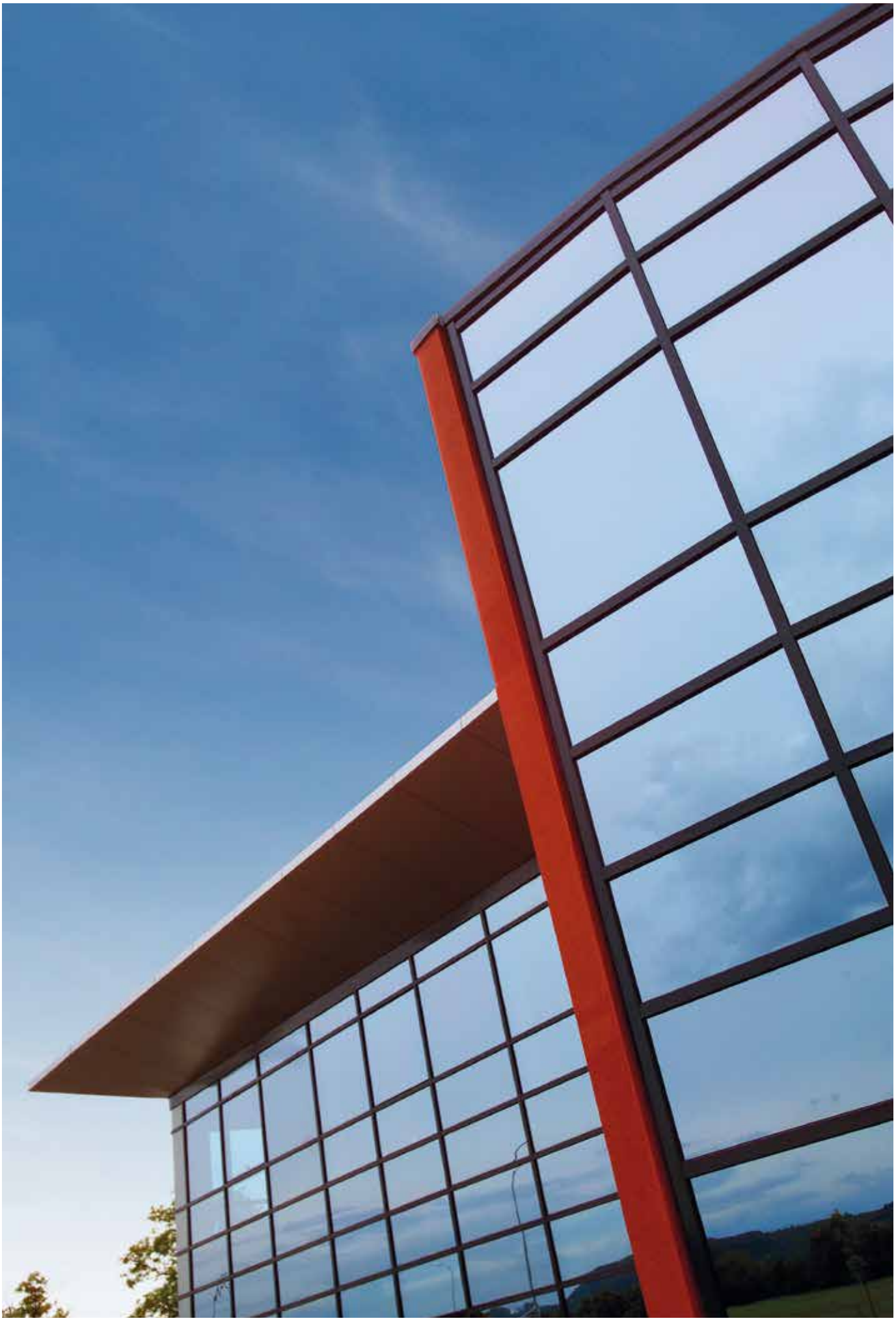
When it comes to drainage, the mullion-transom solution can only be mullion drained.

Mullion drainage is carried out via a concealed water reject spout applied to the vertical profile as and when required. The overlapping horizontal connection is machined and allows water to be safely transferred to the mullion drainage channel.
In conjunction with mullion-transom, a range of dedicated ½ or split mullions are also available.

When combined as an arrangement, the pair of ½ or split mullions have the same 62mm internal and external appearance, but can accommodate some degree of building and thermal movement.
They also allow the curtain wall fabricator to part-assemble the curtain wall in the factory by making ladder frames that can be transported to site, reducing the time on site associated with setting out and installing.

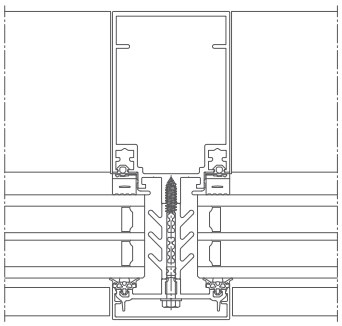




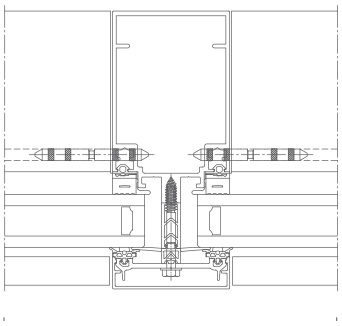


NRGY 62 ST
Capped Curtain Walling

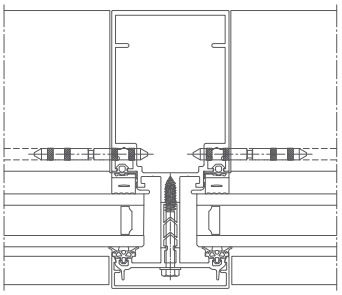
NRGY 62 ST is the robust and flexible platform upon which all of the aesthetic and performance variants are then constructed.



NRGY 62 SHI
Super High Insulated



NRGY 62 SI
Super Insulated



NRGY 62 ST

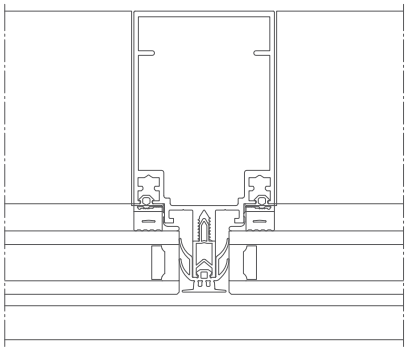
- 62 mm frame width for increased glass coverage/ clearance accommodates live load movements
- Smart pin technology to support glass weight up to 680 kg
- Multi-slot feature to facilitate simple integration of solar shading or other hanging devices
- Concealed mullion and pane drainage options
- Infinite fenestration possibilities using the same drainage level profile (transom-transom)
- Dedicated range of mullion profiles for increased inertia on vertical spans (transom-mullion)
- Dedicated range of ½ mullion profiles for ladder production and thermal expansion
- Modular thermal break steps using recycled PVC
- Optional centre seal for increased thermal performance
- Sapa Building System Foampower© technology for maximum U-values and 'Passivhaus' certification by IFT Rosenheim
- Factory installed glazing gaskets for quality and time efficiency on site
- Innovative 2-component glazing gaskets provide increased compensation of glass thickness tolerance
- Outstanding weather and seismic performances tested in accordance with EN and CWCT standards
- Increased compensation of glass thickness tolerances using innovative 2-component gaskets

Edinburgh Station, United Kingdom - Photography: Adrian Toon

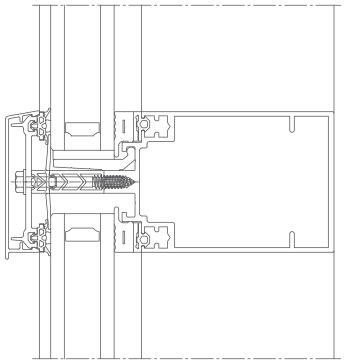
Business Port, Istanbul, Turkey - Photography: Hans Couckuyt

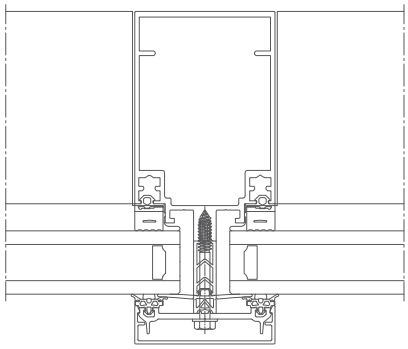
NRGY 62 HL / VL
Semi-Capped Curtain Walling

NRGY 62 HL/VL solutions create an external emphasis on the horizontal or vertical aspect, by minimising the glass-to-glass visual aspect of the adjacent line.

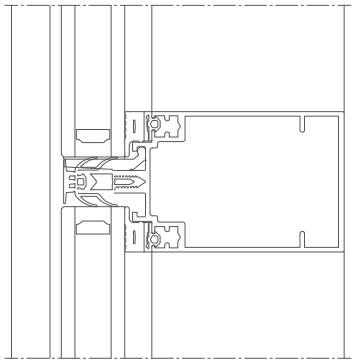


NRGY 62 HL - horizontal line





NRGY 62 VL - vertical line



- Based on the transom-transom connection and drainage principles of NRGY 62 ST
- Emphasis of the horizontal line (HL) or vertical line (VL), by use of projecting feature caps that can be further accentuated by colour
- Compatible with standard thermal break profiles from NRGY 62 ST
- Dry gasket in between the glass panes for a consistent external aesthetic
- Concertina gasket available for facetted mullion when using HL
- Depending on the glass pane dimensions and external wind loads, safety pieces may be required to ensure the glass is adequately sealed against the backed structure on the non-emphasised line where there is no pressure plate or cover cap

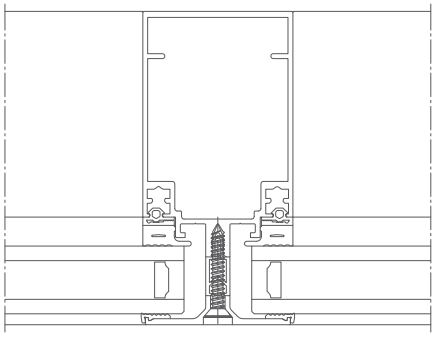
AZ Damiaan Hospital, Belgium - Architect: Boeckx Architecture & Engineering - Photography: Hans Cockuyt

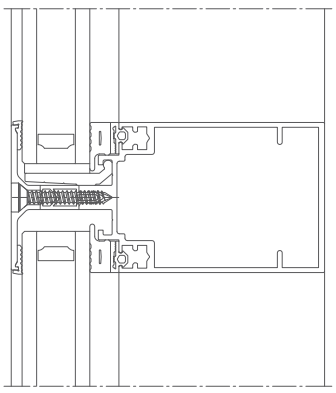
NRGY 62 FL

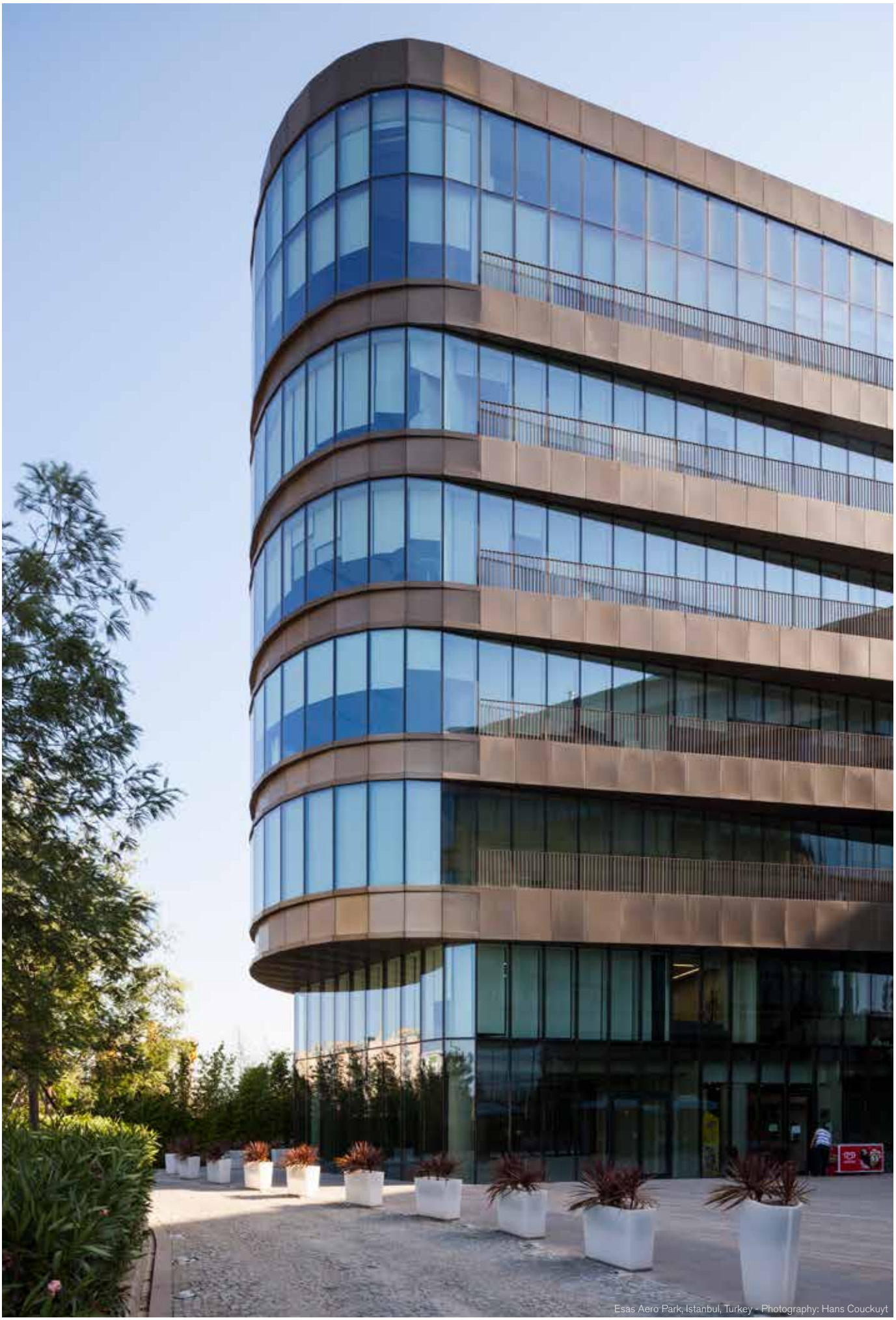
Low Profile Capped Curtain Walling

NRGY 62 FL provides an alternative to structural glazing, using a low profile feature cap to create the illusion of a flush line (FL) between the two glass units.

- Based on the connection principles of NRGY 62 ST
- Pane drained when used as a complete facade solution
- Black finished low profile cap emphasises the flush line (FL) between two glass units
- 4 mm step between the face of the cap and the surface of the glass
- Compatible with standard thermal break profiles from NRGY 62 ST
- Alternative to the dry glazed gasket used with the standard HL and VL solution (no safety pieces required)







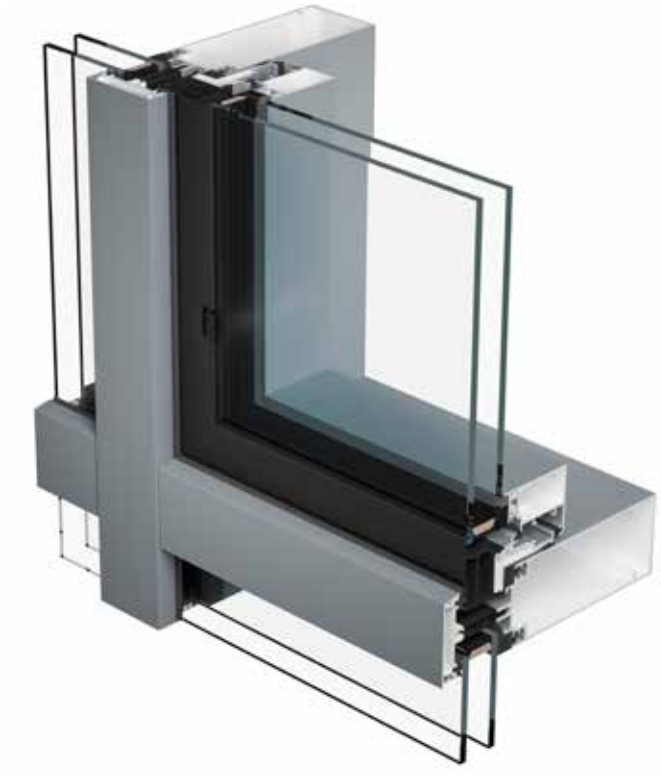
Esas Aero Park, Istanbul, Turkey - Photography: Hans Couckuyt

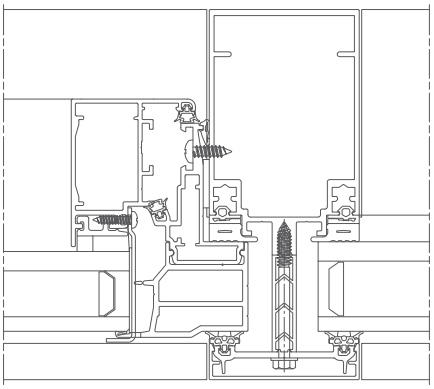
NRGY HV

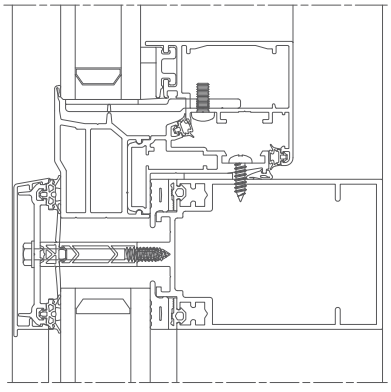
Inward opening integrated windows

NRGY HV is an inward opening window-system, specifically designed with minimal visual aspect opening vents, for integration with all variants of the NRGY 62 curtain wall family.

- The NRGY HV window system can be operated as a side hung open-in casement or alternatively as a turn before tilt vent
- Two depths of outer frame are available, depending on the glass thickness required, with both having the same visual sight line appearance
- The smaller outer frame is for use with 33 mm glazed units in conjunction with a universal vent profile
- The larger outer frame is for use with 41 mm glazed units in conjunction with a universal vent profile
- Both outer frames are applied with a common thermal adaptor profile and glazed into the curtain wall
- Glazed units are bonded to the vents using structural silicone.
- Non stepped glass is used when placing the windows into the ST, HL, VL and FL variants of the NRGY 62
- The glazed units are retained with security clips to ensure total safety







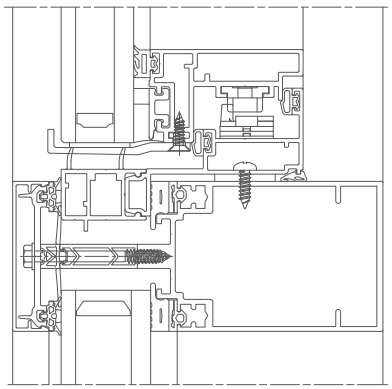
OLV Ziekenhuis, Aalst, Belgium - Architect: VK Studio, Architects, Planners & Designers - Photography: Hans Couckuyt

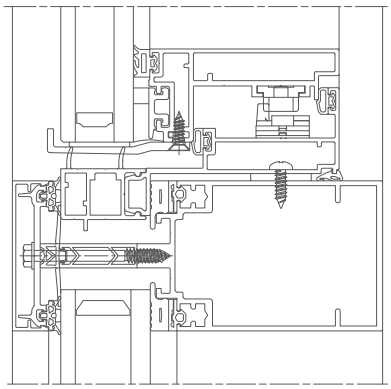
NRGY IT

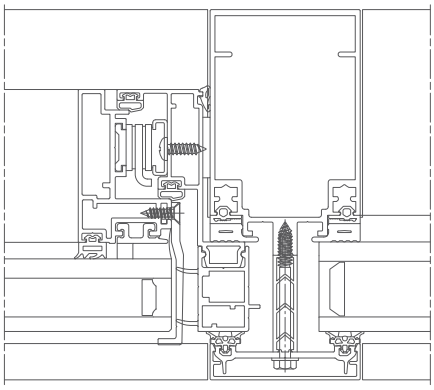
Outward opening Integrated Windows

NRGY IT is an outward opening window-system, specifically designed with minimal visual aspect opening vents, for integration with all variants of the NRGY 62 curtain wall family.

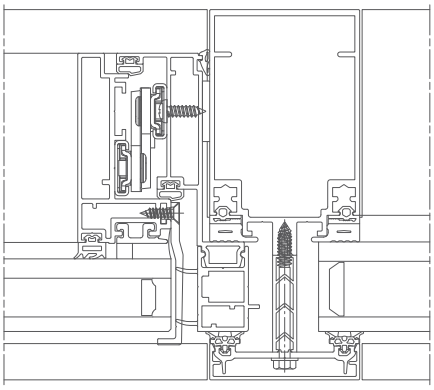
- The NRGY IT window system is available in two depths of vent and frame, depending on the size and weight required, both having the same visual sight line appearance
- The smaller vent and frame combination is dedicated for projected top-hung vents only
- The larger heavy duty vent and frame combination can be used for both projected top-hung vents and parallel opening vents
- All outer frames are applied with a thermal adaptor profile and glazed into the curtain wall
- Glazed units are bonded to the vents using structural silicone. Non stepped glass is used when placing the windows into the ST, HL, VL and FL variants of the NRGY 62 system, whereas stepped edge glass is used with SGC
- In all cases the glazed units are retained with security clips to ensure total safety
- Motorised solutions for all variants are available with discrete housing profiles







Top hung vent solution



Parallel opening vent solution

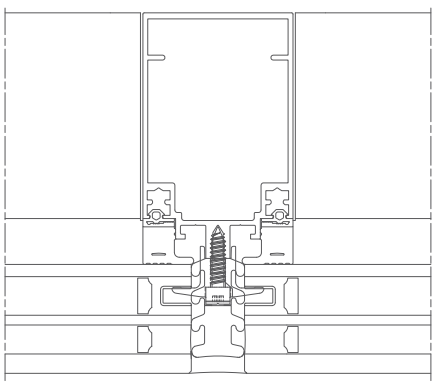
Offices MC, Liège, Belgium

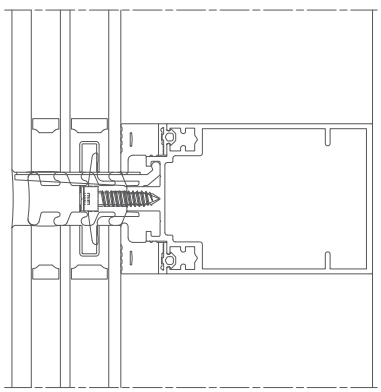
NRGY 62 SGC

Intermittently Structurally Clamped Curtain Walling

NRGY 62 SGC is a low-cost alternative to full structural silicone glazing, creating a flush glazed appearance using concealed toggles.

- Based on the transom-transom connection and mullion drained principles of NRGY 62 ST, the NRGY 62 SGC solution uses specialist double and triple glazed units with a silicone seal between adjacent panes for a flush glazed appearance
- The double or triple glazed units of NRGY 62 SGC are retained using single or double concealed toggle brackets
- The double and triple glazed units incorporate an intermittent and system specific channel profile around the perimeter, into which the toggle brackets are located and secured directly into the nosing of the mullion and transom profiles
- This solution provides a highly thermal and economic alternative to traditional structurally glazed curtain walls, creating a flush surface appearance
- Where openings are required, the NRGY IT window can be seamlessly integrated





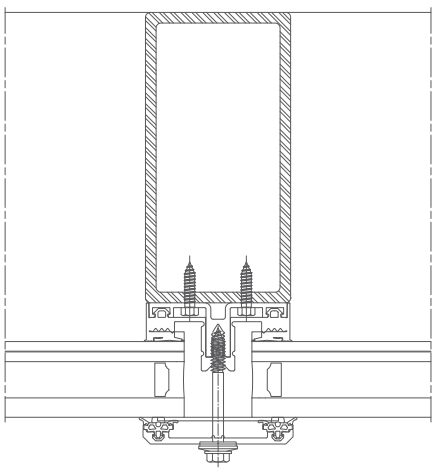
Rectoraat Hasselt, Belgium - Photography: Hans Couckuyt

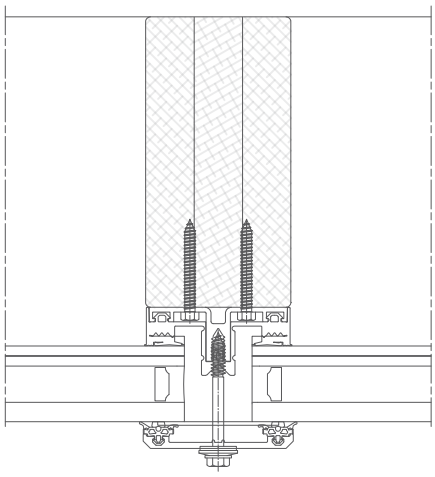
NRGY 62 AP

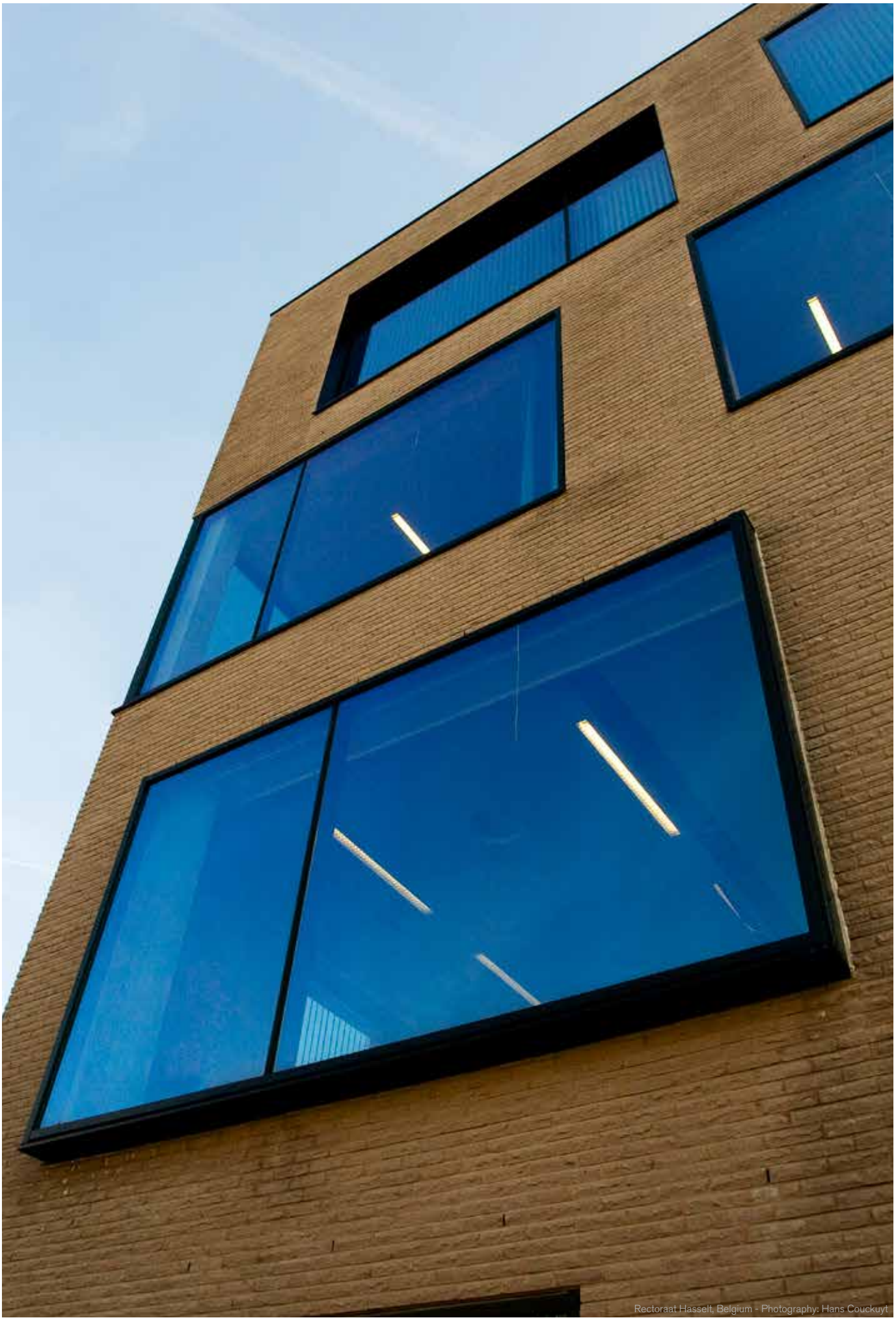
Applied on Wood or Steel

Designed for vertical and sloped curtain wall applications, NRGY 62 AP can be be applied to any steel or timber supporting structure with a minimum width of 60 mm.

- Dedicated profile for both mullion and transom
- Applied on steel or timber supporting structures, with a minimum width of 60 mm
- Utilises pressure plates and feature caps from NRGY 62 ST/HL/VL/FL
- Integrated drainage system using continuous gaskets







Rectoraat Hasselt, Belgium - Photography: Hans Couckuyt

NRGY 62 RC

Enhanced security curtain walling

NRGY 62 RC provides an easy security upgrade across all system variants to achieve burglary resistance classification RC 2 and RC 3.

Successfully tested in accordance with:

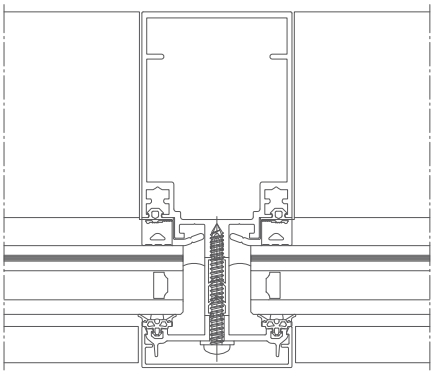
- EN 1628:2011
- EN 1629:2011
- EN:1630:2011

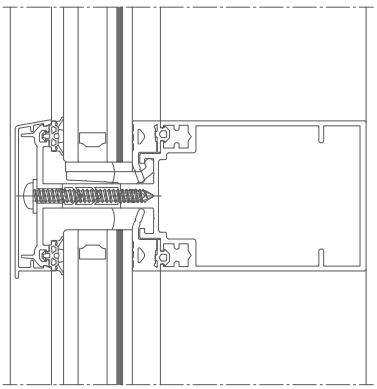
Using a consistent glazing principle, means a resistance classification of RC 2 and RC 3 in accordance with EN 1627:2011, can be extended across the following system variants:

- NRGY 62 ST
- NRGY 62 HL/VL
- NRGY 62 FL
- NRGY 62 SGC**

Security enhanced glazing is intermittently sealed to the mullion and transom nose using a structural silicone

A dedicated internal glazing gasket creates a bond break between the glass and the nose of the transom and mullion profile when the structural silicone is applied





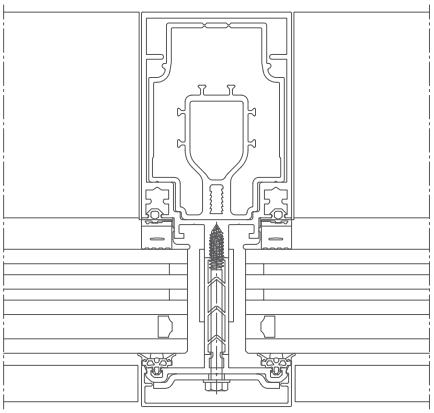
Roy Hill Mining Company, Perth, Australia - Photography: S

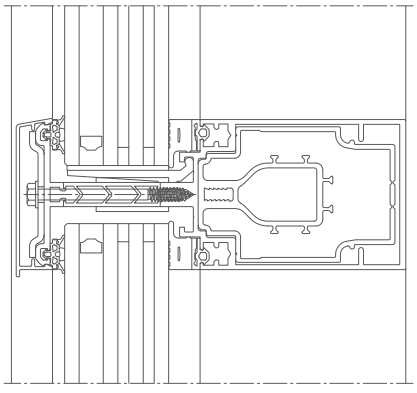
NRGY 62 FR

E160 fire reated curtain walling

NRGY 62 FR provides outstanding fire protection whilst maintaining the same simplistic ethos as the standard capped solution.

- Based on the same core solution as NRGY 62 ST, the NRGY 62 FR is therefore identical in appearance, providing visual continuity with adjacent non-fire rated elements, and allowing the mixing of both solutions where partial compartmentation is required
- A combination of intumescent strips, steel pressure plate clips, cooling materials and fire resistant glazing combines in an EI 60 classification
- Achieving integrity and insulation means the solution will not only provide protection against the fire, but will also control excessive heat transfer through the facade





sapa:

Sapa offers architects, specifiers, metal fabricators, investors and home-owners worldwide an extensive range of innovative, reliable and aesthetically pleasing aluminium systems for curtain walling, doors, windows and building integrated photovoltaics. Sapa is one of the largest suppliers of aluminium building systems in Europe and is part of the global aluminium company Hydro.

Windows, Doors, Sliding Systems, Curtain Walls, Conservatories, Balustrades, Gates, Solar Shading and BIPV

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