



**HansenMillennium®**

**The slimmest window & door system**

Options, possibilities and technical details

 **hansen** products

# HansenMillennium®

The Hansen Millennium system was initially crafted to address the challenges posed by the renovation and replacement of steel windows in older buildings afflicted by issues like cold bridges and inadequate insulation.

HansenMillennium offers a revolutionary solution featuring the slimmest aluminium profiles available, making it the ideal replacement for traditional steel systems.

These slim profiles not only extrude modern elegance but also offer exceptional performance and aesthetics. Good thermal performance and variety of shapes are only a few of the advantages that has made the system gain popularity by aligning with contemporary architectural trends favoring slim profiles, authentic dividers, and versatile bending capabilities.





## Main Features

- **Slimline Profiles:** Get the most modern look with super slim aluminium frames - the slimmest on the market!
- **Complex Window Geometries:** Whether you prefer circular or arched windows, we can create them to match your unique taste.
- **Easy Installation:** Enjoy hasslefree installation with pre-glazed windows, saving you time and effort.
- **Flexible Glazing:** You can use stylebars inside and/or outside which is perfect for unique projects and spandrel panel areas.
- **Concealed Sash:** For inward opening windows we have hidden the frame for a sleek and stylish look.
- **Easy Conversion:** Combine traditional curtain wall designs with our innovative window system - enhancing both functionality and aesthetics.
- **Large Dimensions:** Our windows can be impressively large. In fact our largest window to date measured 2,44m (8 feet) in width and 12,8m (42 feet) in height. Imagine the incredible views!
- **Low emission aluminium:** Millennium is manufactured with low emission aluminium and can be manufactured with recycled aluminium if required.

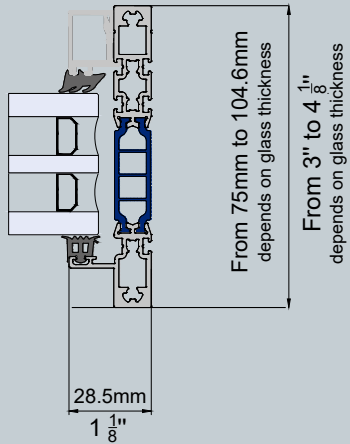


## Ultra Slim Design

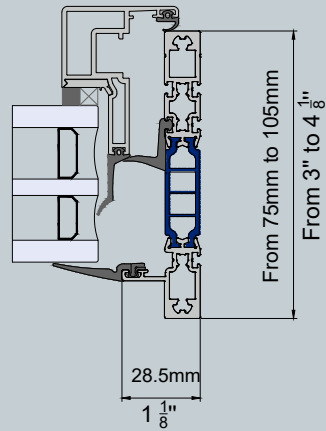




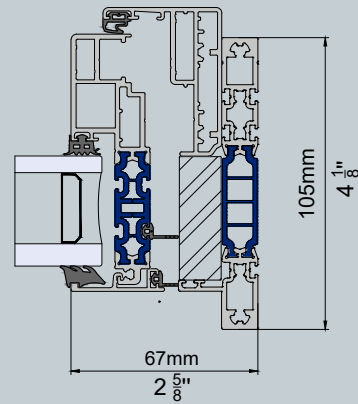
Fixed



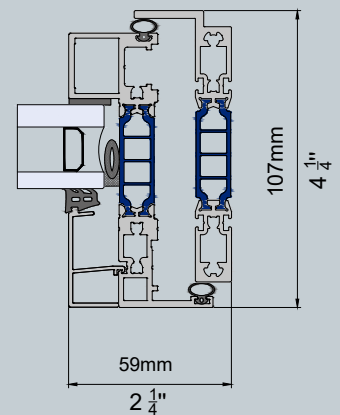
Tilt & Turn (Hopper)  
(Concealed hinges)



Awning & Casement  
(Concealed hinges)



Door & Casement  
(Heavy solution, visible hinges)

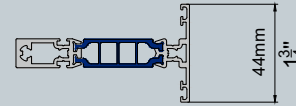
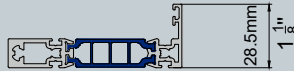


All window solutions can be double or triple glazed

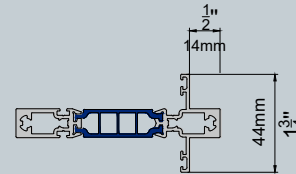
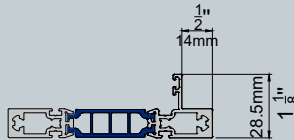
# Profiles

All profiles can be manufactured with different "nose" profiles

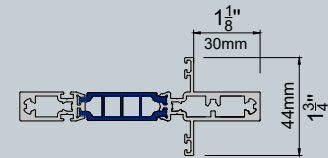
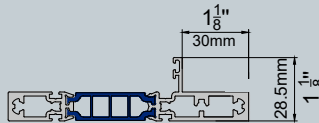
## FLAT



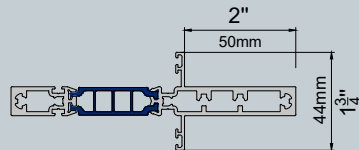
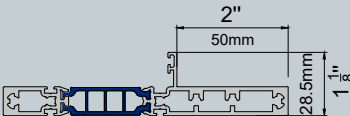
## STANDARD



## LARGE NOSE



## EXTRA LARGE NOSE





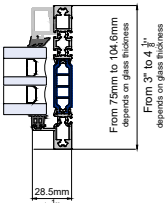
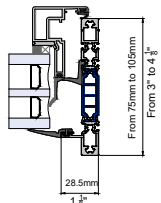
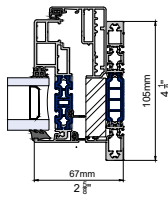
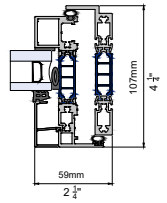
## Operable size details

Defining the exact maximum dimensions for **Hansen**Millennium windows can be a challenging task.

The size of your windows depends only on the width-to-height ratio and the number of mullions.

Below we present the critical dimensions of window sashes.

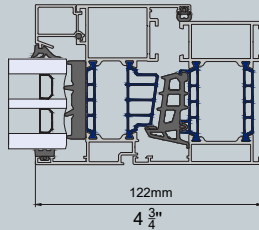
We trust that this information will be invaluable during the design phase.

Fixed	Tilt & Turn Hopper Concealed hinges	Awning & Casement Concealed hinges	Door & Casement Sidehung Heavy solution Visible hinges
			

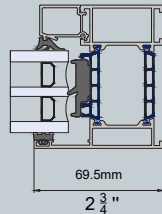
Max weight	500 kg / 1100 lb	150 kg / 330 lb	180 kg / 400 lb	136 kg / 300 lb
Max area	15 m <sup>2</sup> / 160 ft <sup>2</sup>	3 m <sup>2</sup> / 32 ft <sup>2</sup>	3 m <sup>2</sup> / 32 ft <sup>2</sup>	3 m <sup>2</sup> / 32 ft <sup>2</sup>
Min. width	20 cm / 8"	38 cm / 1' 3"	43 cm / 1' 5"	60 cm / 1' 12"
Max. width	590 cm / 19' 4"	172 cm / 5' 8"	160 cm / 5' 3"	150 cm / 4' 11"
Min. height	20 cm / 8"	46 cm / 1' 6"	48 cm / 1' 7"	60 cm / 1' 12"
Max. height	590 cm / 19' 4"	280 cm / 9' 2"	250 cm / 8' 2"	305 cm / 10"

## HansenMillennium versus others

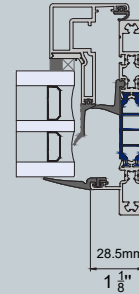
HansenMillennium combines modern design with exceptional functionality, offering numerous advantages compared to standard aluminium windows. Discover why HansenMillennium is an investment that will revolutionize your interior spaces.



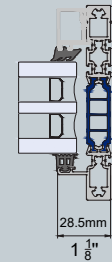
**TYPICAL ALUMINIUM TILT & TURN WINDOW**



**TYPICAL ALUMINIUM FIXED WINDOW**



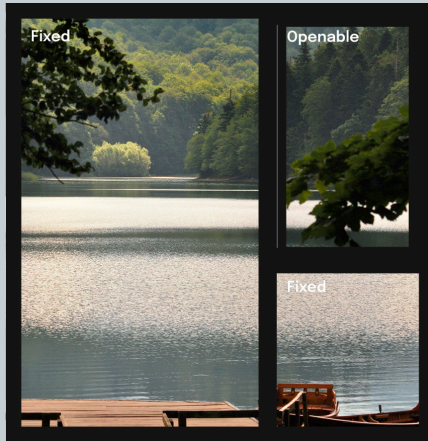
**HansenMillennium TILT & TURN**



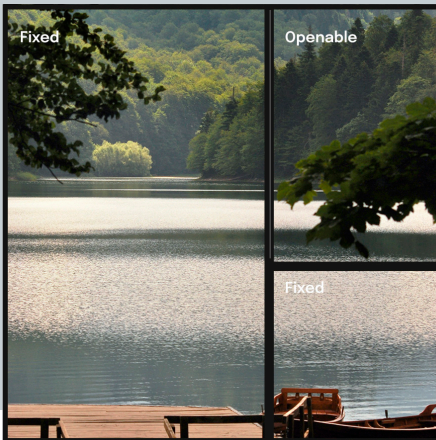
**HansenMillennium FIXED WINDOW**



## Typical window system



## HansenMillennium



### Minimalistic Appearance

**HansenMillennium** stands out with its elegant, minimalist design. Thanks to its slim profiles, this window perfectly complements both modern and classic interior designs. It provides an unobstructed view of the surroundings, allowing ample natural light to flood your living spaces.

### Enhanced Thermal Insulation

Compared to traditional aluminium windows, **HansenMillennium** offers significantly improved thermal insulation. You can find energy ratings on later pages in this brochure. Utilizing advanced technologies and materials, this window helps minimize heat loss, resulting in lower heating and cooling bills.

### Quiet Operation

Thanks to precisely engineered mechanisms of concealed hinges, **HansenMillennium** operates quietly. You will avoid annoying noises when opening and closing the windows - ensuring daily comfort.

### Exceptional Durability

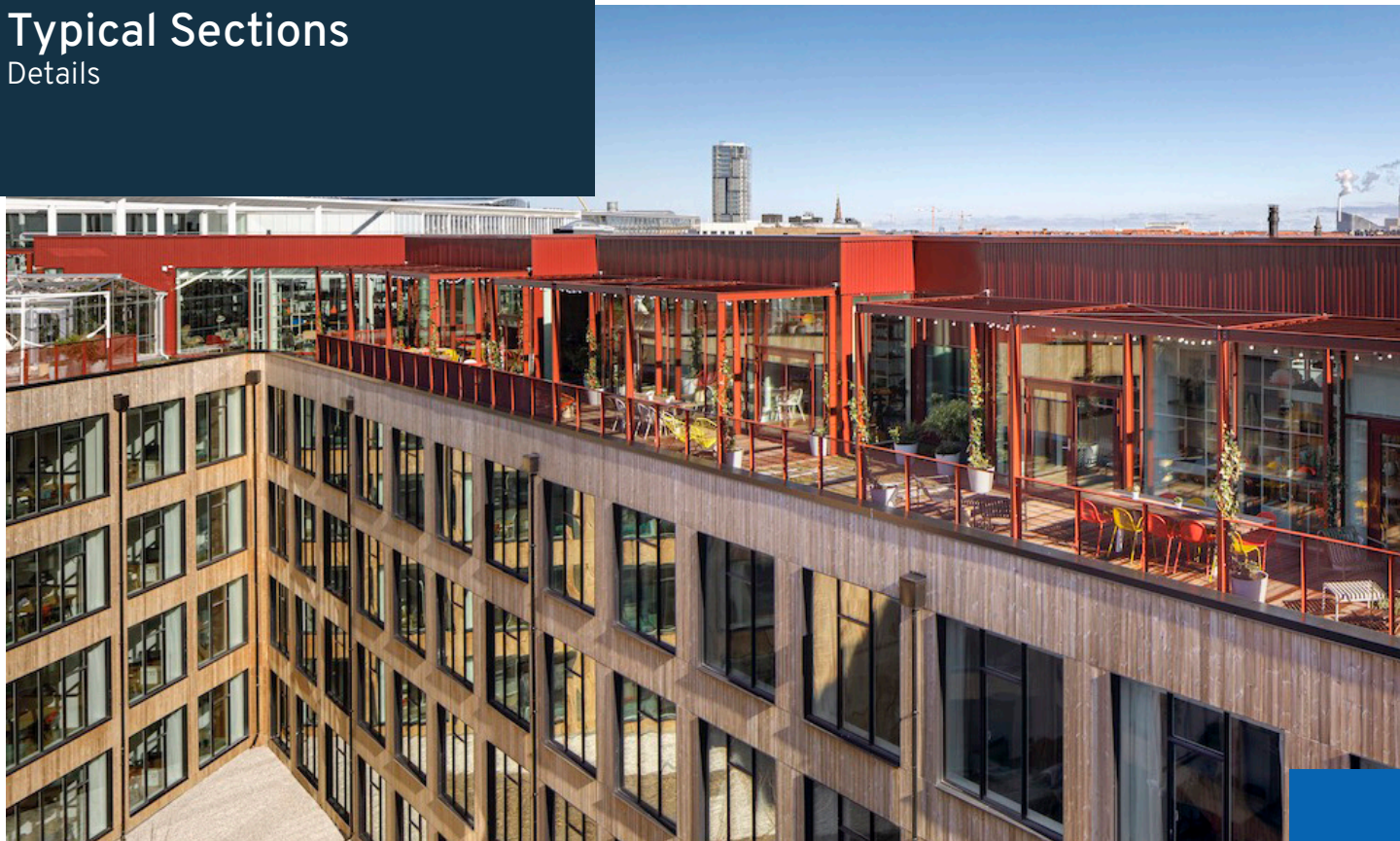
Our slim-profile aluminium windows are designed for durability. Aluminium is corrosion resistant, meaning **HansenMillennium** will maintain its excellent properties for years with minimum need for frequent maintenance.

### Tailored to Your Needs

**HansenMillennium** offers a wide range of customization options, including colours, sizes and types of glass. You can personalize them to your preferences and your home's style.

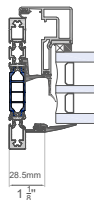
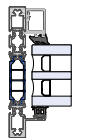
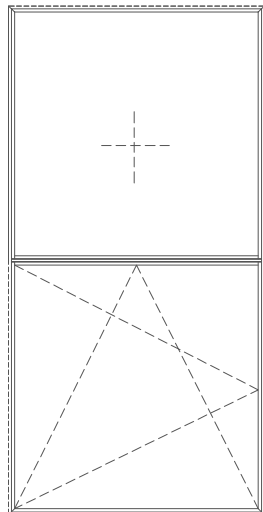
# Typical Sections

## Details

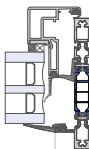
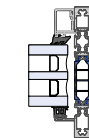




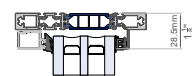
TILT&TURN (OR HOPPER) + FIXED



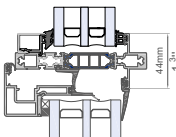
28.5mm  
1 <sup>3</sup>/<sub>8</sub>"



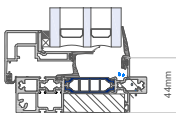
28.5mm  
1 <sup>3</sup>/<sub>8</sub>"



28.5mm  
1 <sup>3</sup>/<sub>8</sub>"

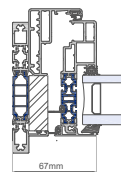
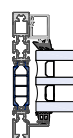
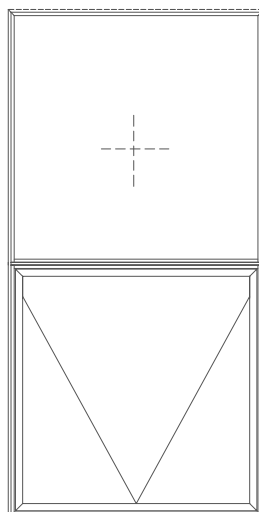


4.4mm  
1 <sup>3</sup>/<sub>4</sub>"

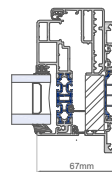


4.4mm  
1 <sup>3</sup>/<sub>4</sub>"

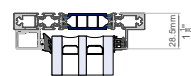
AWNING + FIXED



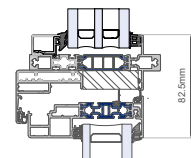
67mm  
2 <sup>5</sup>/<sub>8</sub>"



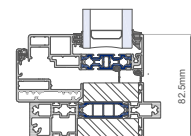
67mm  
2 <sup>5</sup>/<sub>8</sub>"



28.5mm  
1 <sup>3</sup>/<sub>8</sub>"



82.5mm  
3 <sup>1</sup>/<sub>4</sub>"



82.5mm  
3 <sup>1</sup>/<sub>4</sub>"

## Various Window Shapes



## Examples

**Hansen**Millennium combines modern design with exceptional functionality. In the world of aluminium windows we take pride in offering more than just traditional designs. Our range of unconventional shapes opens doors to endless creative possibilities. From sleek and contemporary to uniquely artistic, our aluminium windows challenge the norm and invite you to explore innovative architectural expressions.

These unconventional shapes go beyond standard rectangles and squares. They offer a canvas for your imagination, making a bold statement in design and functionality. Our windows are not just practical - they are a reflection of your creativity and unique style.

Whether you are an architect seeking to push the boundaries of design, a homeowner yearning for windows that stand out or a builder looking to make a statement, our aluminium window shapes have you covered. They are a testament to the infinite possibilities aluminium can offer, delivering both aesthetics and performance.





## Your unique ideas are our inspiration

Below are just a few typical examples of window shapes that can be made - but do not hesitate to share your special design ideas with us.

All shapes are based on a combination between true dividers and grids/style-bars if neccessary.



HALF ROUND



HALF ROUND



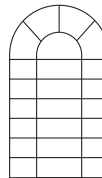
ROUND CORNERS



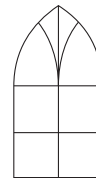
INVERTED ROUND  
CORNERS



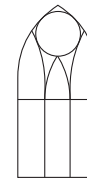
ELLIPSE



ROUND TOP



GOTHIC



GOTHIC



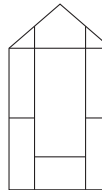
ROUND TOP



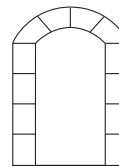
POLYGON



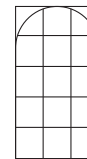
HALF ROUND



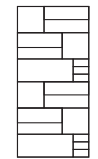
PEAK



SEGMENTED ROUND  
TOP



SIMULATED ROUND  
TOP

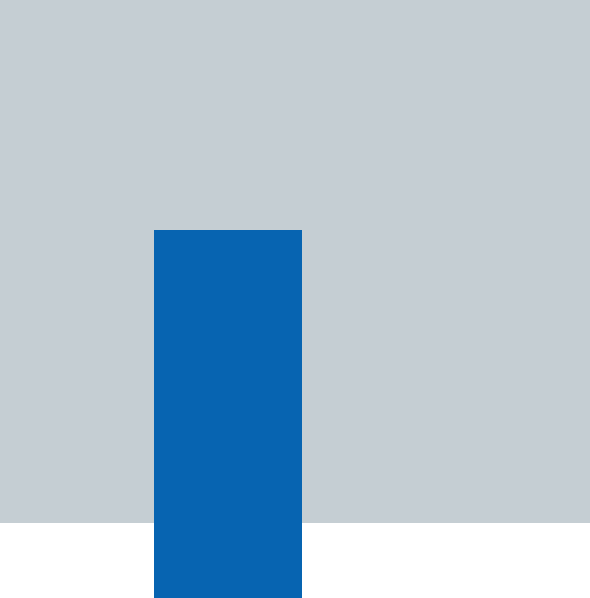


RECTANGLE



TRAPEZOID

and many others ...

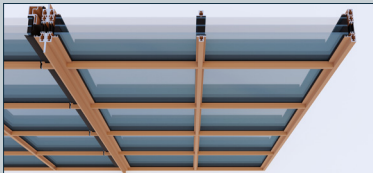


# Simulated Divided Lite

SDL are a decorative element that can be added to windows to enhance their visual appeal. These bars are designed to mimic the look of traditional windows with divided panes.



Bonded stylebars



Stylebars between glass



Mechanically fixed stylebars



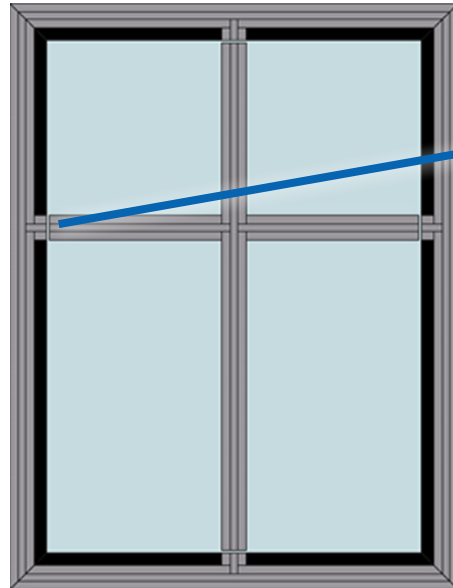
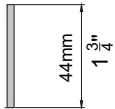
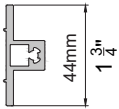


## Simulated Divided Lite (SDL)

This solution has the advantage of providing a consistent and indistinguishable external appearance between our stick-on grids and true dividers. This makes maintenance easy and enhances the overall curb appeal of your property while offering customization options to suit your design preferences.

We pay attention to detail!

Special attention should be given to details like how the stick-on profile is trimmed when used with an opening window.



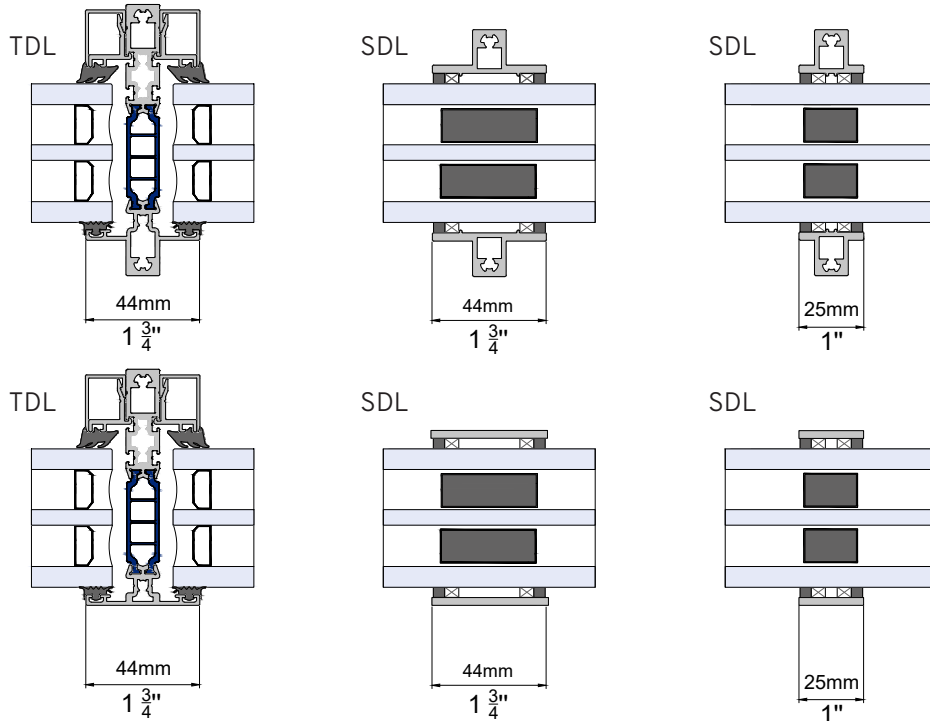
# SDL vs TDL

## Details



## SDL (Simulated Divided Lites) vs TDL (True Divided Lites)

Our SDL grids can have the same size as true divider profiles - they look identical from the outside. But if you are looking for a slimmer SDL profile it is also an option. They can be supplied in two different colours to match your interior.





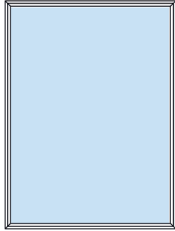
# Opening functions

The opening function for windows and doors depends on several factors such as the design, layout, and purpose of your space. By selecting the right opening function, you can improve the aesthetics, functionality, and security.

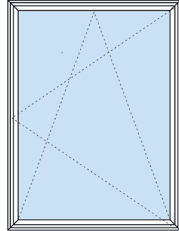




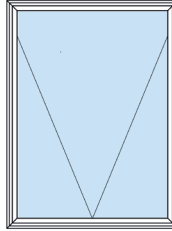
Window  
Fixed



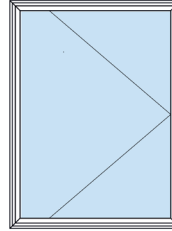
Tilt&Turn (Hopper)  
Inward opening



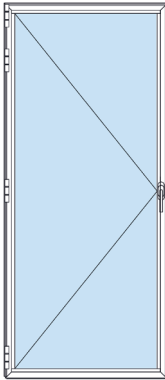
Awning (Top Hung)  
Outward opening



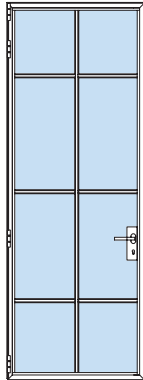
Casement (side Hung)  
Outward opening



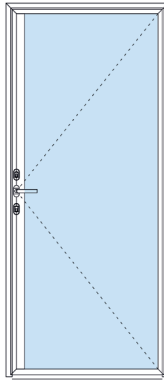
Terrace door  
Outward opening



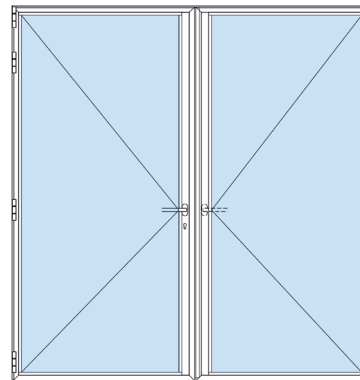
Single steel look door  
Outward & Inward opening



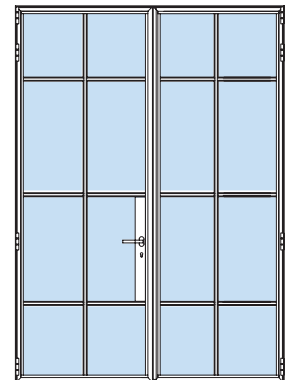
Single door  
Outward & Inward Opening



Double door  
Outward & Inward Opening

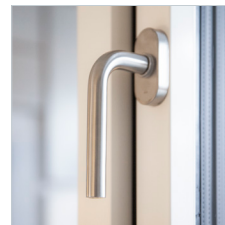


Double steel look door  
Outward & Inward opening

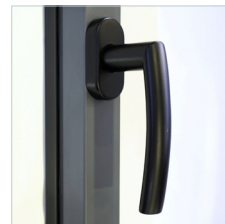


# Handles

Window and door handles are crucial for both function and aesthetics. We offer standard handles but can also provide unique custom-made handles to match style and preferences. The classic handles can be supplied in all RAL colours.



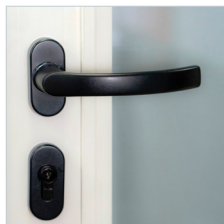
Stainless Steel (window)



Black standard handle (window)



Classic (window)



Black standard handle (door)



Stainless Steel (door)



Classic (single door)

# Colours

HansenMillennium windows and doors are delivered with surface treatment customized to our customers preferences and architectural style.

We offer our windows and doors in all RAL colours, anodized aluminium or with sandblasted surfaces.

It is possible to use different colors for the exterior and interior of the windows.



Windows & Doors



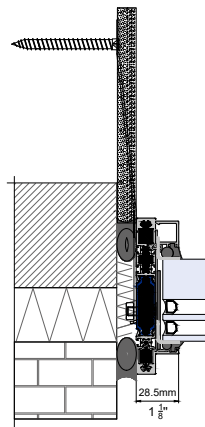
# Fire Safety

**HansenMillennium El60** has been tested for fire resistance from both the inside and outside according to EN 1364-1:2015.

The fire test of **Hansen Millennium El60** includes window elements and is only approved as fixed window sections.

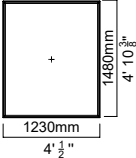
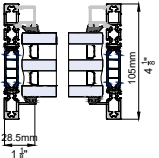
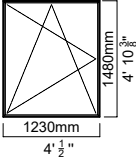
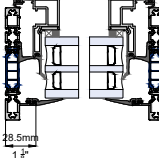
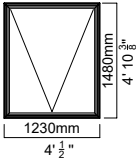
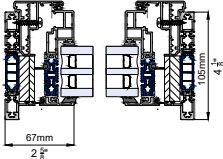
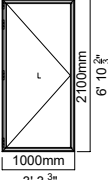
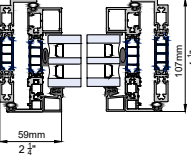
**HansenMillennium El60** is based on the Hansen Millennium system.

Therefore, it can be combined with standard windows without any visual difference.





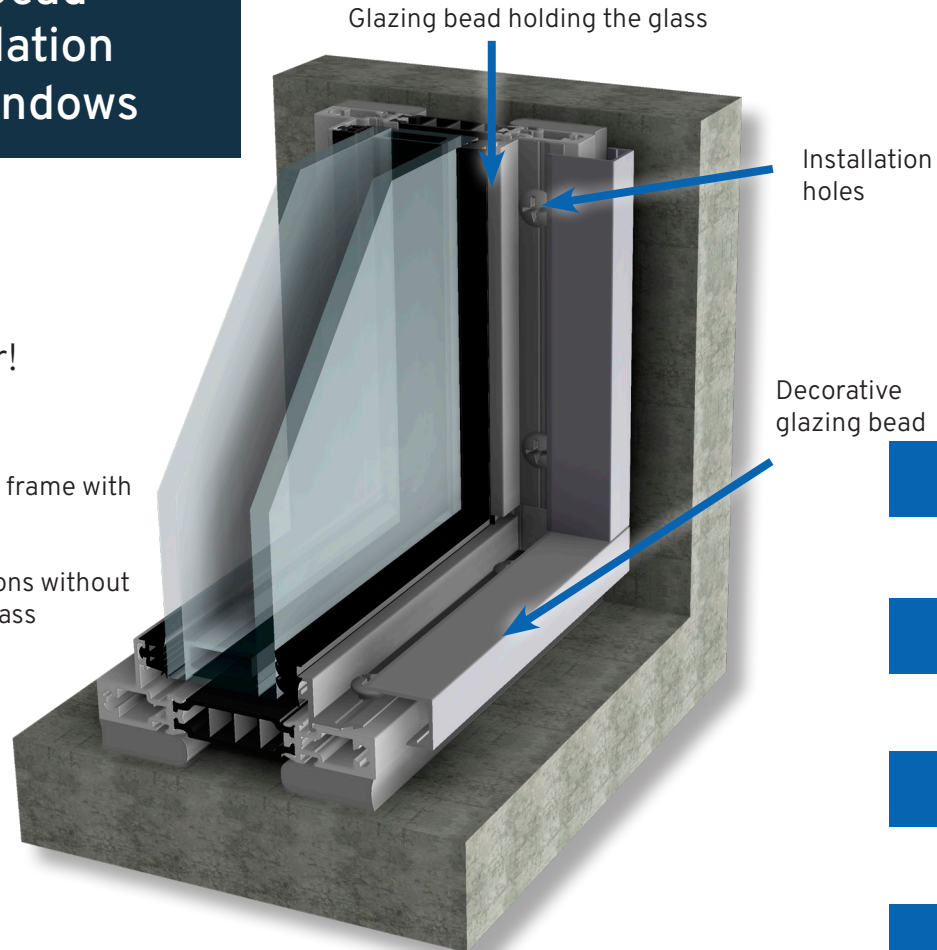
# Energy Performance

Window Section	Sections	DGU (Ug=1,0) Double glass unit	TGU (Ug=0,5) Triple glass unit
		<p>1,2 W/(m²K) 0,21 Btu/h ft² °F</p>	<p>0,75 W/(m²K) 0,13 Btu/h ft² °F</p>
		<p>1,3 W/(m²K) 0,23 Btu/h ft² °F</p>	<p>0,84 W/(m²K) 0,15 Btu/h ft² °F</p>
		<p>1,3 W/(m²K) 0,23 Btu/h ft² °F</p>	<p>0,91 W/(m²K) 0,16 Btu/h ft² °F</p>
		<p>1,3 W/(m²K) 0,23 Btu/h ft² °F</p>	<p>0,91 W/(m²K) 0,16 Btu/h ft² °F</p>

# Double Glazing Bead for easiest installation of fully glazed windows

Window installation  
has never been easier!

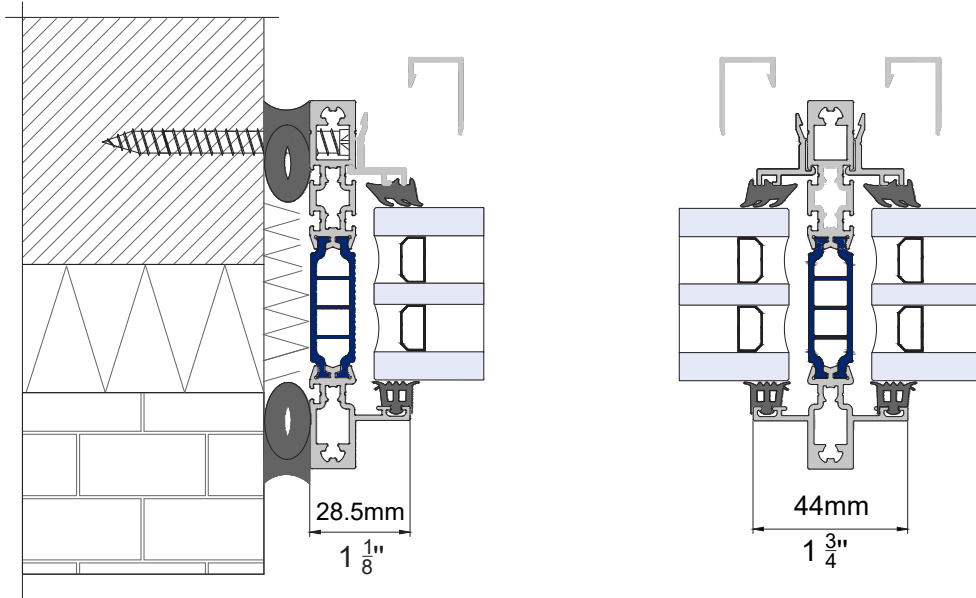
- Double glazing bead
- Installation direct through frame with factory prepared holes
- Fully glazed window sections without the need to remove the glass



## Double glazing bead

The glazing bead inside the window, pre-drilled during manufacturing, holds the glass in place.

The second glazing bead is a decorative element added after the window is installed in the wall.



# Easy Installation

Three recommended ways of installing fully glazed windows

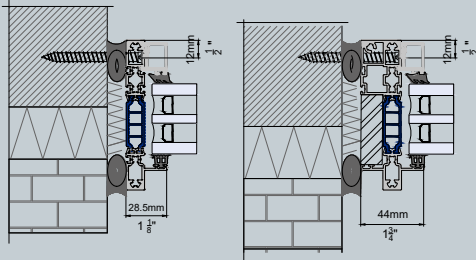




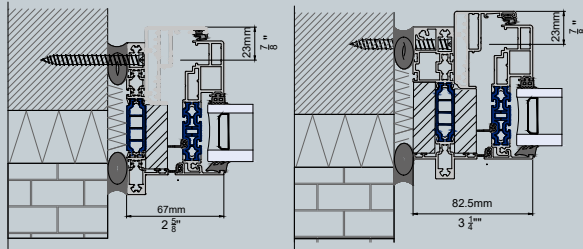
## Installation option 1: Installation direct through frame

The first and most popular is the previously shown "directly through frame" installation.

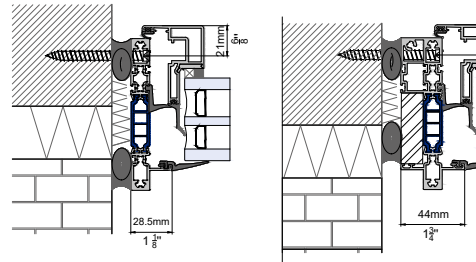
**FIXED ELEMENTS**



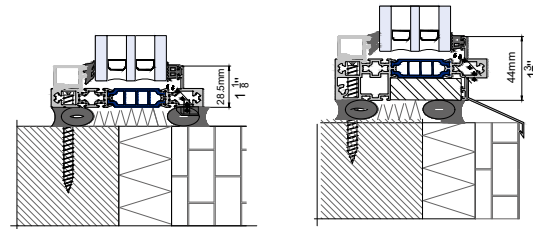
**CASEMENT/AWNING**



**TILT&TURN (hopper)**



**BOTTOM FRAME DETAIL / DRAINAGE**



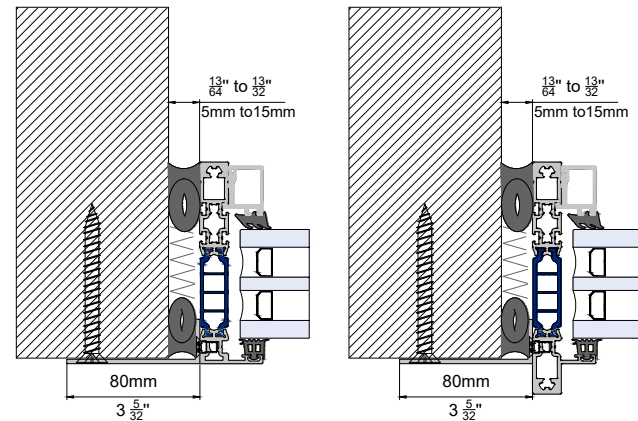
## Installation option 2: Nail flange

Only recommended for **FIXED** (non-openable) elements.

The second method of installation involves using a nail flange.

Our nailing flange plays a pivotal role in securing your window to the wall sheathing during installation, ensuring a stable foundation for further adjustments with shims and screws.

This flange is not just about structural integrity; it also works in harmony with flashing and a weather resistant barrier to safeguard your home against wind and water, providing peace of mind and long-lasting protection.

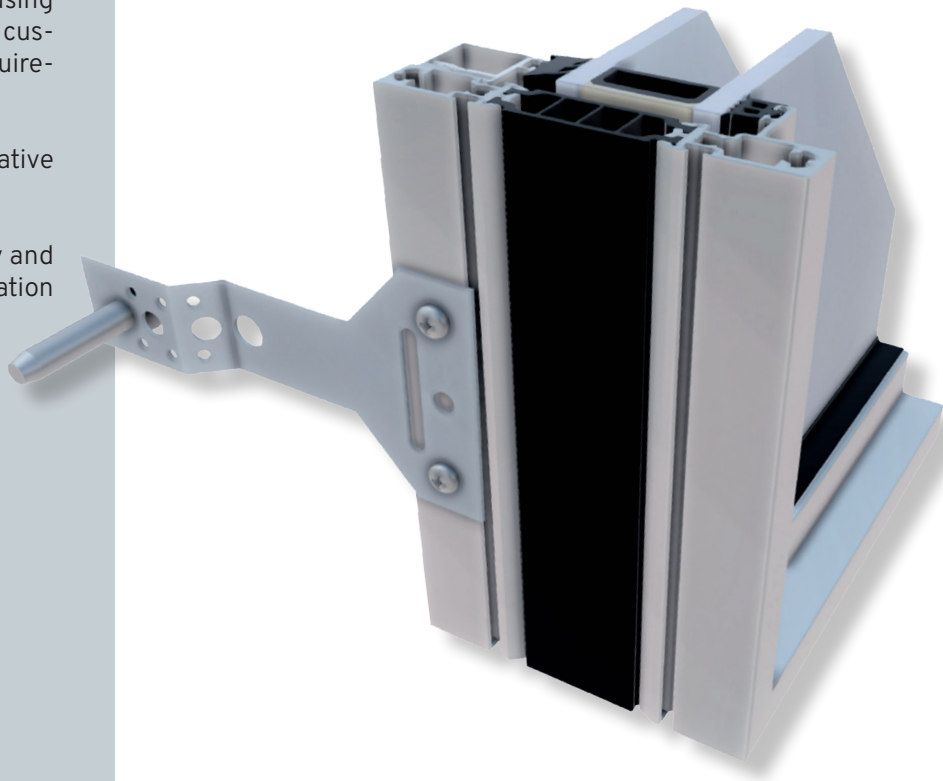


## Installation option 3: Installation with brackets

The final type of installation involves using brackets, which can either be standard or custom made to suit the specific project requirements.

Brackets enable to offset the window relative to the supporting wall by a few inches.

The system was designed for functionality and ease of use by installers if typical installation direct through frame is not possible.



# External Glazing

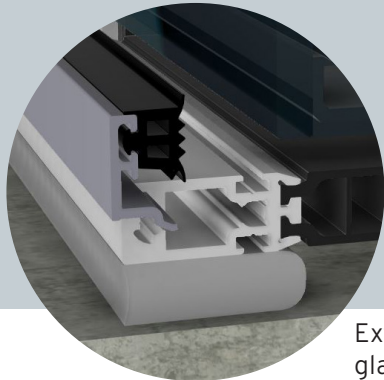
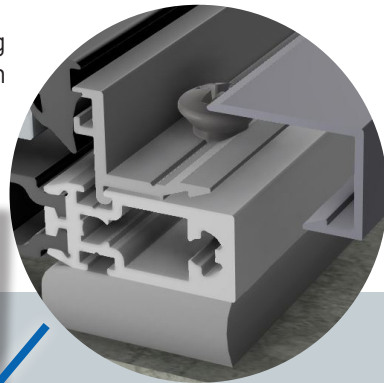
Great solution for spandrel areas

## External glazing beads

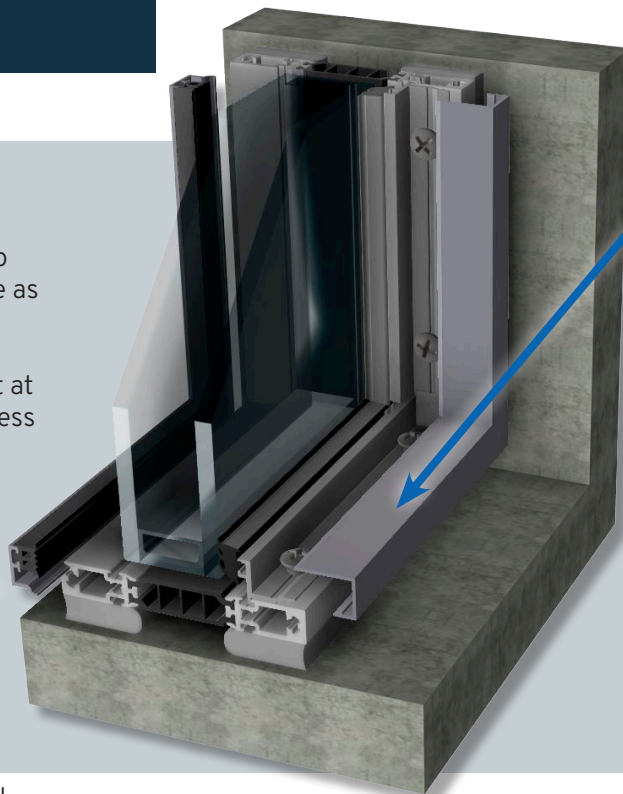
**HansenMillennium** offers the option to use a glazing bead on the exterior side as well.

This is an ideal solution for spandrel panels, allowing for glass replacement at any time when there is no interior access to the window.

Internal double-glazing  
bead system



External  
glazing bead



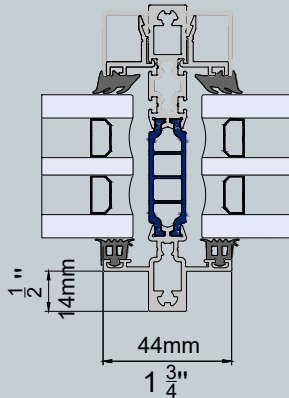


## External glazing

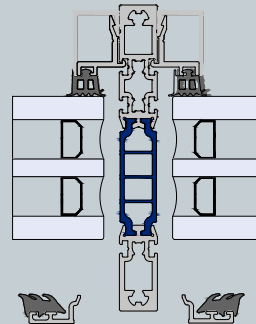
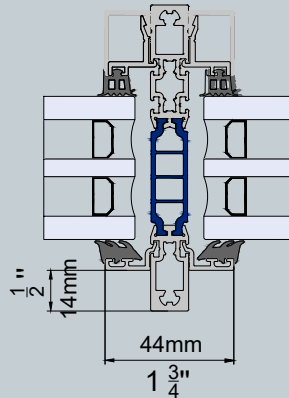
Below you will see typical section details that demonstrate how the profile looks the same whether it has an external glazing bead or not.

There is no noticeable difference.

Internal Glazing



External Glazing



# Joining the windows

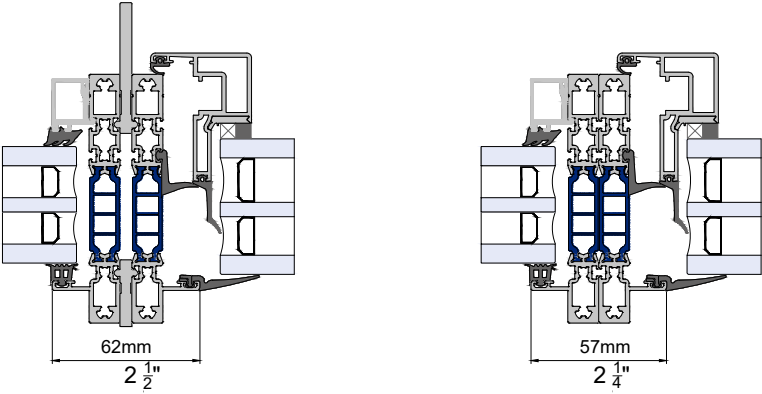
For easier delivery & better statics



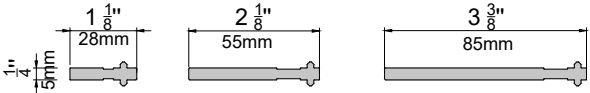
The **HansenMillennium** window system makes it easy to connect window partitions.

This also means that we can replace traditional curtain walls with our slim-profile window system while meeting technical requirements.

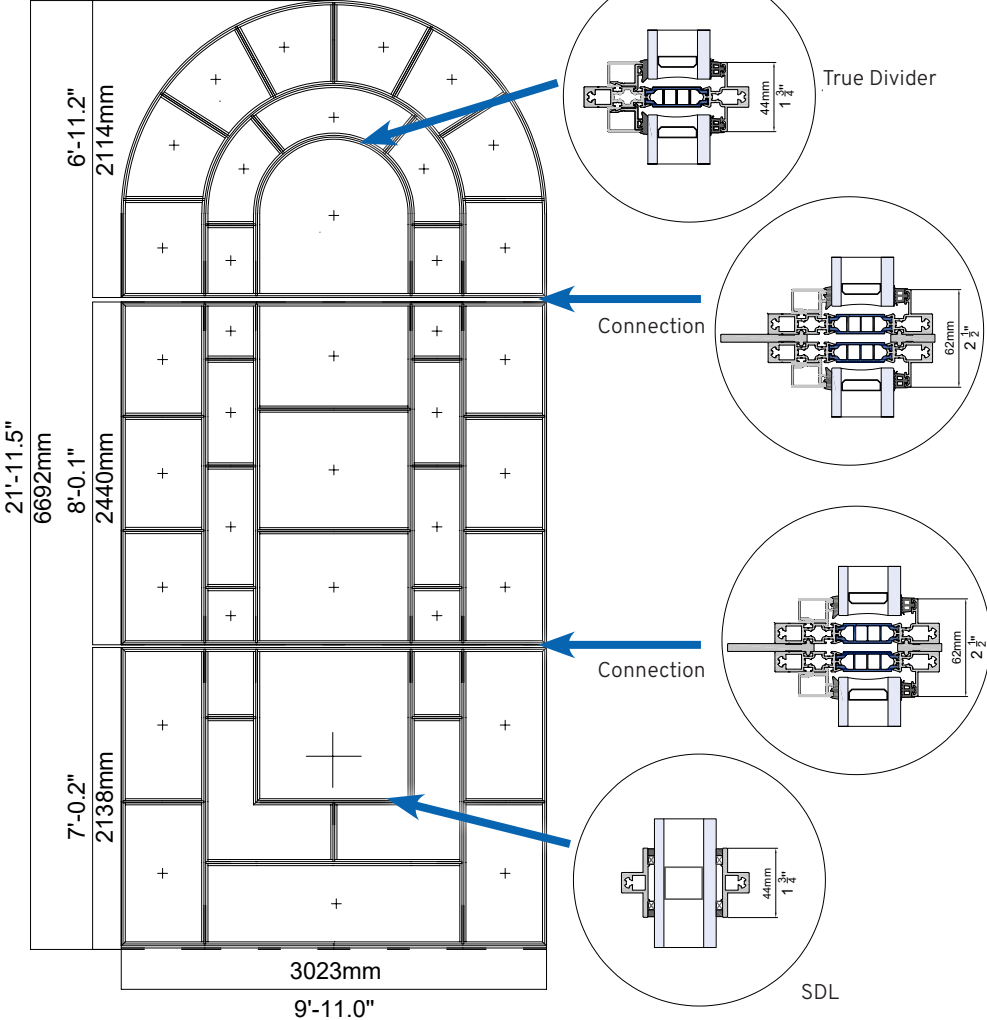
Check out the elegance of our reinforcing profiles.



**Connection/Reinforcement profiles sizes possibility**



Showcase project







## Concealed sash

For inward opening windows we have hidden the frame, so it is practically invisible from the outside.

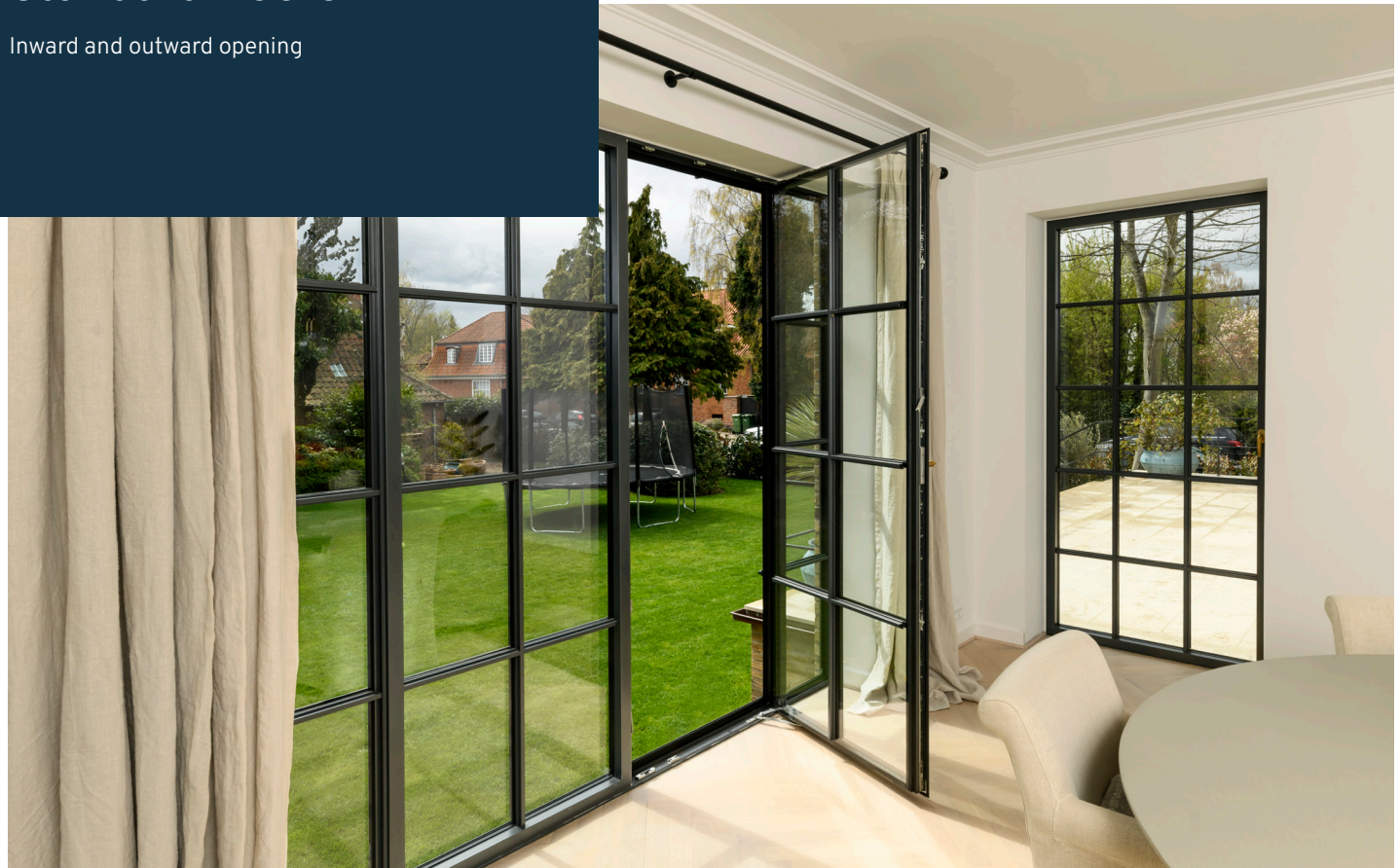




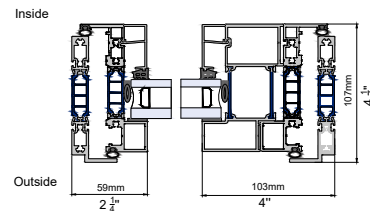
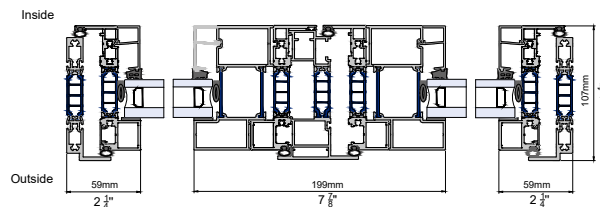
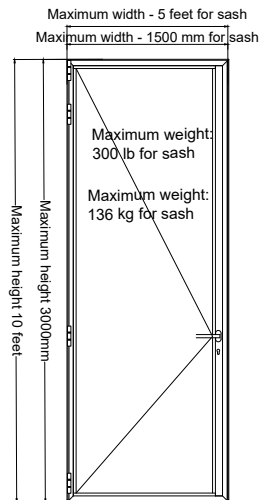
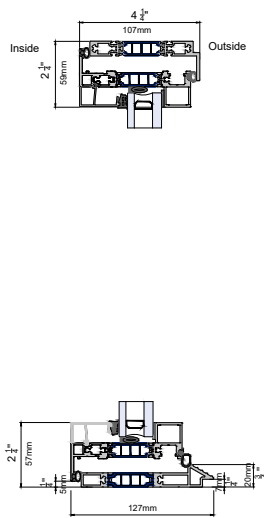
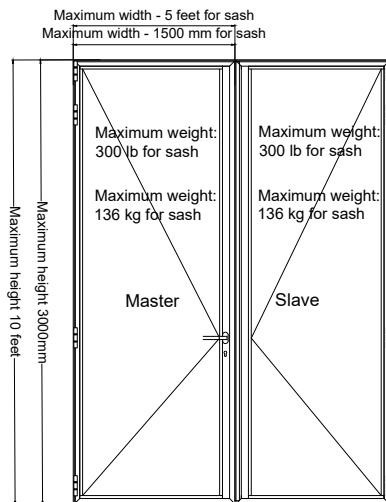


# Standard Doors

Inward and outward opening







Illustrations according til European norms

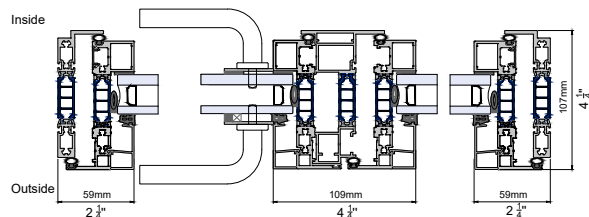
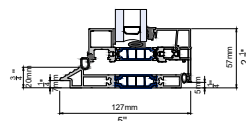
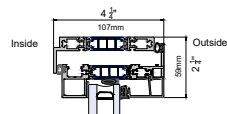
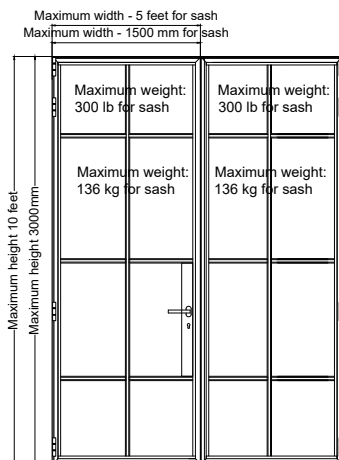
## Steel Look Door

(Inward & Outward opening)

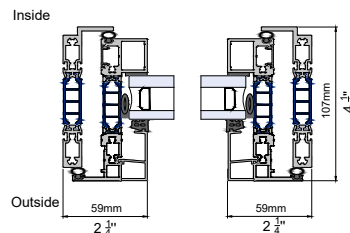
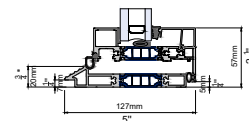
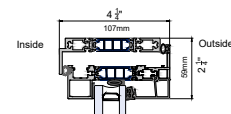
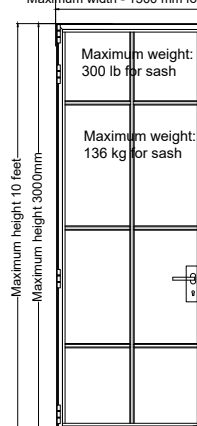
## Balcony Door

(Only outward opening)





Maximum width - 5 feet for sash  
Maximum width - 1500 mm for sash



Illustrations according til European norms



# Inspirational projects

Be inspired by some of our previous projects with  
HansenMillennium Windows and Doors



