

LET'S BUILD A BETTER FUTURE

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Mullion and transom curtain wall system
Mullion and transom curtain wall system
Parallel tilting-sliding windows opening outwards
Semi - structural curtain wall system
Horizontal line
Bespoke curtain walling system with integrated window
Overlay system for wood and steel
Overlay system for wood and steel
Roof window
Curtain wall fire rated systems
Mullion and transom curtain wall system integrated with SkyFlow venetian blinds and SkyRoll screens NEW
Mullion and transom curtain wall system
Mullion and transom curtain wall system
Mullion-transom system for spatial structures
Unitised curtain wall
Window-cladding solution based on window system
Winter garden
Ventilated facade system
Brise soleil system

Window & door system that provide the highest thermal insulation performance
Window & door system NEW
Concealed casement window
Outward opening windows
Folding door NEW
Innovative system with thermal break NEW
invisible sash window systems variety
outward opening windows
Window & door system
Concealed casement window
Listed building renovation systems
Invisible sash and narrow frame
Anti-burglary windows
Outward opening windows
Pivot window
MB-104 Passive & MB-86 - based system
Narrow-profile windows
Window system with slim profiles
Sliding door with invisible frame
Sliding door system with invisible frame
Lift & Slide door with enhanced thermal performance
Lift & Slide balcony door
Balcony sliding door
Balcony sliding door
Fire rated doors and wall partitions
Silicone-jointed glazed partitions
Fire rated partitions
Fire rated doors and wall partitions
Fire rated windows, doors and walls
Fire-resistant glass
Interior glass partition systems NEW
Interior glass partition systems
Fixed and moveable partition walling system with clamp profiles
Mobile partition walling system with clamp profiles
Partition walling systems
Fixed and operable partition walling system
Window & door system
Smoke-proof partitions and doors
Door system
Fire partition walls with door EW30
Sliding doors
Sliding window
Automatic and manual sliding door
Smoke exhaust systems
External Juliet balcony
Warm installation system

The main idea behind the issue of the "Architectural Product Guide" is to present the complete offer of Aluprof, with descriptions of the systems, basic technical information and selected typical structure cross-sections. The guide has been prepared for all designers, investors and entities involved in construction who are interested in the ALUPROF offer.

ALUPROF ENERGY EFFICIENT SYSTEMS – A NEW STANDARD IN BUILDING

Our range of products includes modern constructions, which, thanks to the excellent thermal insulation and innovative technical solutions, can perfectly meet the requirements of green building. That is the case with numerous buildings constructed using Aluprof systems, awarded with prestigious certifications BREEAM, LEED or Green Building. Products in this group are labeled "Recommended for energy-efficient buildings". This includes façade systems such as MB-TT50, MB-SR50N HI +, as well as the following window & door systems: MB-86N, MB-104 Passive, MB-77HS or panelled door. Improving building energy use and thermal comfort in buildings can successfully be done with the majority of "protective" solutions such as roller shutter, external louvers and shutters.

GAIN VALUABLE TIME

ALUPROF systems offer includes specialised solutions: fire-resisting, smoke-proof and smoke exhaust structures up to EI120 class. Using these products in situations that threaten the life or health can buy time for safe evacuation while increasing chances to control the fire and reducing losses caused by fire.

SOLUTIONS FOR YOUR NEEDS

Today's architecture poses a real challenge for the contractors. Complicated structures, original shapes or very large spaces often require customized solutions dedicated to a specific building. For modern facilities, Aluprof has prepared special systems, materials and projects, thanks to which buildings look exceptionally grand.

Aluprof SA

Aluprof SA is one of the leading European distributors of aluminium systems for the building industry. The company's offer includes windows and doors, curtain walls, roller shutters and gates systems. Large logistical facilities, modern machinery, profile embossing within the Group and own paint shops provides the company with full independent and market flexibility – which, for many years, has resulted in the growth of the portfolio of customers and distribution areas.



Manufacturing plant in Bielsko-Biała



Manufacturing plant in Opole



Manufacturing plant in Goleszów



Manufacturing plant in Złotów



Manufacturing plant in Ogródzona

Aluprof SA manufacturing plants are located in Bielsko-Biała, Opole, Goleszów, Złotów and Ogródzona, and have a surface area of over 230 K m², and a modern equipment including:

- automated line for the production of composite sections,
- ten latest generation lines for the production of roller shutters and boxes,
- high bay warehouses, equipped with automatic shelving system for profiles,
- modern, fully automated lines for powder painting, including two cutting-edge vertical powder coating lines for profiles,
- efficient transport fleet.





Offices of the Management Board of Grupa Kapitałowa Kęty SA

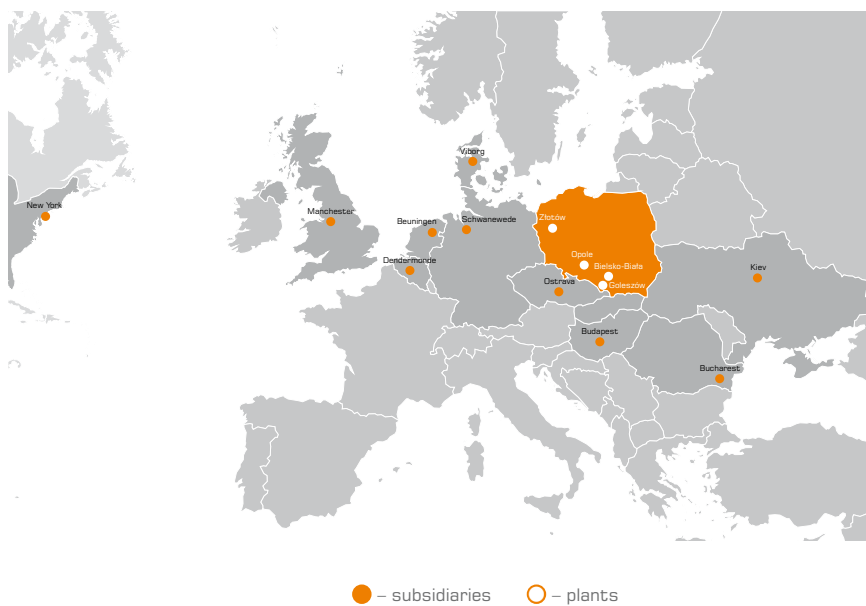


Aluprof S.A. belongs to Grupa Kapitałowa Kęty S.A. (Kęty Group) – the most advanced and fastest growing company in the aluminium industry in Poland. The company is set up as a holding that combines 24 businesses operating in Poland and abroad that all together process nearly 110,000 tons of aluminium and sell their products to dozens of countries in Europe and around the world. The Kęty Group is the leader in the Polish market of aluminium profiles, aluminium systems, and flexible packaging. The Group's list of some 4,700 customers includes international corporations, large and medium-sized enterprises, as well as wholesale companies and workshops representing almost every branch of the industry, starting with construction, through automotive, interior furnishing, electric and machinery, to the food industry. The Kęty Group employs nearly 5500 experienced and qualified staff. Consolidated sale revenue of Grupa Kęty SA amounts over 700 million EUR. We export 47% of our output to countries all over Europe and beyond.



Logistical Centre, Aluprof Hungary

Aluprof's sales revenue is approximately EUR 438 million. Aluprof SA sells its solutions to the majority of European countries, and even the United States. The company has its representative office and distribution centres across Europe, in Germany, in Belgium, the United Kingdom, the Ukraine, Russia, the Czech Republic, Hungary, the Netherlands and Romania. Special mention should be made of a modern logistical centre in Hungary that has a warehouse facility of 2,900 sq. m. equipped with 8-level high.





Selected certification institutions and organisations that issue certificates to the company and its products

In its operations Aluprof SA strives for the constant improvement of the quality level of its products. The total quality management system in the company complies with the requirements of EN/ISO 9001 standards. The offered products meet the requirements of the European standards as regards the quality of alloys, working tolerances and the strength properties. Technological expertise is the company's know-how. Trained professionals work on the state-of-the-art technological solutions. The designed systems satisfy the market demands, architectural visions, and also the developments of the aluminium systems industry.



The highest quality of our products is the result of the creative work of the development department. It designs new elements of windows and doors, curtain walls and roller shutters, taking into consideration the remarks and guidelines of our clients; it also conducts research and development, and supervises the production quality at every stage of product development.

The company has won numerous awards and distinctions: Ambassador of the Polish Economy, Market Leader 2021, Consumer Leader of Quality 2011-2016, the Large Pearl of the Polish Economy, Forbes's Diamonds, the Brown Emblem of Quality QI, a Diamond for the Polish Business Leader, the Crystal Profile, Eagles of the Polish Construction Industry, the Exports Leader, Eu Standard.



Polish awards and distinctions



As one of the companies of the Kety Group, Aluprof has pursued the idea of the Business Social Responsibility and sustained development through the establishment of multi-lateral relations with its environment that consist in accounting for the needs of an increasingly larger group of stakeholders: shareholders, employees, clients, business partners, and local communities. Building such comprehensive relations with the environment warrants the company's harmonious development and is a path that leads to creating a positive image.

Based on an initiative of the Kety Group, Kety Group for Children from the Podbeskidzie Region Foundation has been established, the main purpose of which is to provide support for those who are in Care Centres of Orphanage Houses and to promote the idea of foster family homes.

Paints to RAL



The surface of aluminum profiles used for windows, doors and curtain walls can be finished with powder coating or anodizing.

ALUPROF SA has the technical capabilities of producing various decorative and protective coat types: in the RAL palette, in the NCS palette, wood-like coats in the ADEC range, using our customized ATEC lacquers or lacquers with special properties or application range.

Wood-effect colours

ADEC D101 golden oak	ADEC D210 rustic oak	ADEC D502 swamp oak	ADEC M102 ebony	ADEC O102 walnut
ADEC M103 mahogany	ADEC M204 mahogany sapeli	ADEC O205 walnut vein	ADEC S106 pine	ADEC S110 pine
ADEC W109 cherry	ADEC W205 wenge	ADEC C106 dark gean	ADEC C110 gean	ADEC C212 gean
ADEC K101 chestnut	ADEC D825 vintage oak	ADEC O306 dark walnut	ADEC M332 palisander	ADEC E137 concrete

Colours range of roller shutters profiles

silver	beige	brown	cream white	bordeau*	light grey	anthracite grey
white	wood dark	yellow*	ivory*	black*	ultra white	basalt grey*
grey	wood light	red*	fir green*	mahogany	golden oak	quartz grey*
dark beige	dark brown	green*	steel blue*	nut	golden oak	concrete grey*
gray - pearl matt*	light gray - pearl matt*	white - pearl matt*	gray aluminum	wenge	winchester	mill finish**
malt oak	light oak	metallic grey	satin grey	frozen grey	dark gray - pearl matt*	anthracite gray - pearl matt*

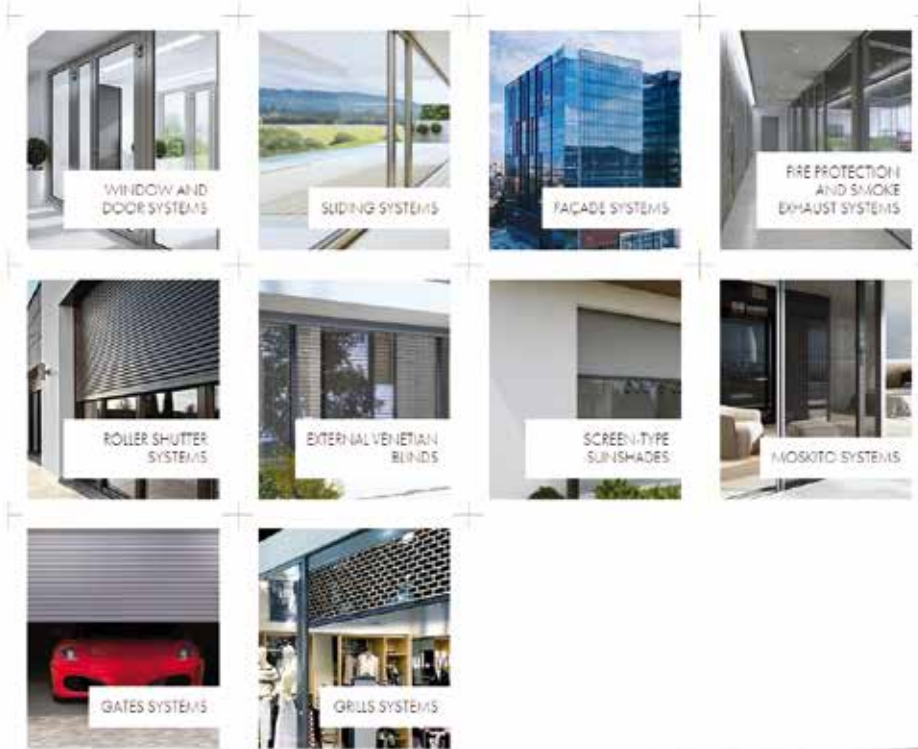
The colours don't pattern faithfully upon the real colours. The availability of colours depends on the profiles' type.

Detailed information on the products presented in the Guide and dwg files for designing can be found in our multimedia-based **Catalog for architects** at www.architects.aluprof.com



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RESPONSIBILITY CERTIFICATE

Aluprof systems help to care for the environment

Real-estate developers and fabricators increasingly attach importance to environmental building rating systems. A certification adds value to a building, gives it prestige and makes it easier to get tenants. Obtaining the certification is not an easy task. It takes time and requires best practices, but the effort it takes to obtain it, is something that more and more investors are aware of. The same goes for the importance of sustainable building, and the responsibility building brings. On the other hand, increased environmental awareness of the society (consumers, tenants) and direction of changes in technical conditions to be met by buildings make a lot of corporate social responsible companies think of the environment and energy-efficient building as part of their business strategy and thus making it a priority.

There are different systems for assessing buildings' energy efficiency and their environmental impact. One of the most famous is BREEAM, introduced in 1990. So far, more than 13000 buildings in the world have been awarded with this certification. LEED, an American organization established in 2000 is becoming increasingly popular. The youngest European system is the EU Green Building, launched by the European Commission in 2008.

While assessing newly constructed buildings, the following key criteria apply: location of the building, its immediate proximity, access to the city's infrastructure, suitability of the building, its impact on the quality of life of the local community, water conservation, care about the quality of conditions in the interior, the amount and cost of energy needed to operate the facility and effectiveness of energy saving systems. Thermal insulation and air-tightness of the building are of primary importance. These two depend on the proper selection of windows and building envelope systems: facades, windows and doors that minimise heat loss while providing access to sunlight and the energy that comes with it.



Alma Tower, Cracow - LEED PLATINUM



Aquarius Business House, Wroclaw - BREEAM



Atrium City, Warsaw - LEED PLATINUM



Pollard Street, Manchester - BREEAM EXCELLENT



Alchemia, Gdańsk - LEED PLATINUM



Quattro Business Park, Cracow - BREEAM VERY GOOD

ALUPROF SA co-operates with Poland's Passive House and Renewable Energy Institute and participates in the "Passive Buildings Ambassador" programme. In our development activities, we put strong emphasis on thermal insulation and excellent technical parameters of our products. That is why Aluprof's systems are often used in sustainable building, and the list of certified facilities that have used our products or for which they were specifically designed just gets longer and longer. These solutions are brought up as early as the design stage for the facilities for which the investors are willing to apply for such a certificate.

ECOLOGY IS ECONOMY



Energy-efficient building & construction is becoming increasingly important, as people are more & more looking at the impact on the environment. Newly constructed buildings use technologies & products that ensure the lowest power consumption possible but in reality.

What is an energy efficient building?

Energy-efficient buildings include low-energy & Passive Houses, not forgetting to mention those in which the energy consumption amounts to nearly zero. They are called the nZEB – Zero Energy Buildings. What are the differences between them? Each structure is characterised by way of the energy standard, that which shows or defines the annual energy consumption. For an energy-efficient building, the standard is NF40 – EuCO <40 kWh/ (m² per year), for Passive House NF15 – EuCO <15 kWh/ (m² per year), & for the nZEB building, the standard reaches 0 kWh/ (m² per year). In addition to these performances it should be remembered that, there are buildings with a positive energy effect, characterised by a positive energy balance. This means that within a year, such a building would produce more energy than they consume.

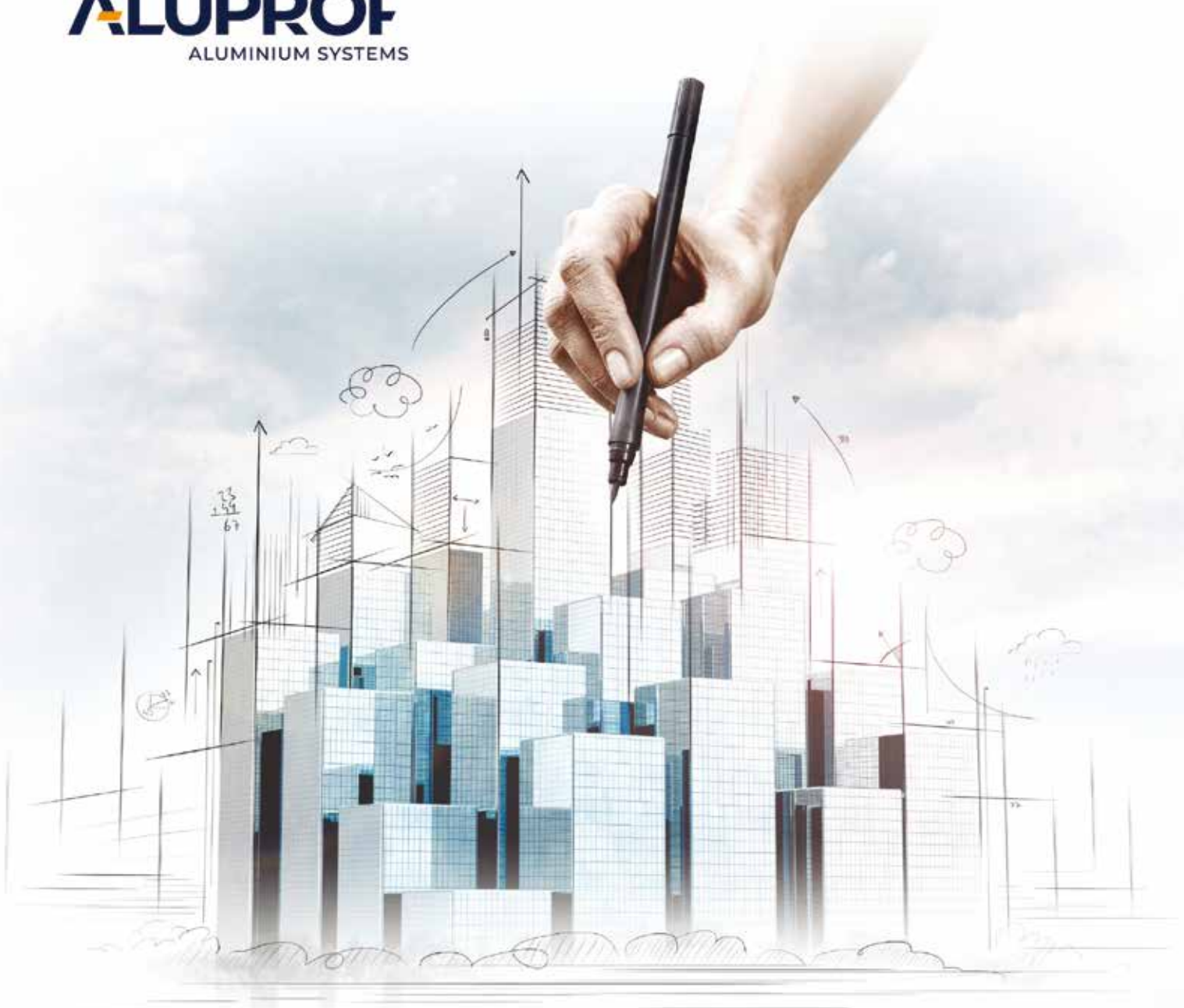
But what does passive building really mean?

These structures have low energy requirements that are used for heating purposes. Passive buildings consume no more than 15 kWh/ (m² per year), which equates to 1.5 m³ gas per 1 m² of the building surface. The level of primary energy consumption in a building of this type cannot exceed 120 kWh/ (m² per year) for all energy needs, which include heating, hot water & electricity consumption we need for living. At the same time, & with existing residential dwellings, the energy consumption (heating only) is up to 120 kWh/ (m² per year). The demand for energy in the passive building is eight times smaller than in the traditional one.

The essence of the energy-efficient building is to minimise energy loss. With that, each stage of the process is of importance, from identification of the right project, choosing of a suitable plot, through to the very last detailing however small, such as the selection & install of a suitable window sill. Low energy house is, first of all, a perfectly insulated house that prevents heat from escaping. To encourage the people to build ecologically & economically, governments in many countries have launched a program of subsidised loans for energy-efficient houses. A bonus is available upon completion of construction, provided that the building is compliant with the relevant parameters & can be proven as such.

Then why not invest in a house that will reduce energy consumption for heating, lighting & air conditioning, whilst at the same time being more friendly for us & for our planet?





The Architecture of the Future? The Models of ALUPROF Systems for **BIM-Based** Design

- Support throughout the design process
- Easier and faster 3D object modeling
- Wide range of ready-to-use constructions

curtain wall SYSTEMS

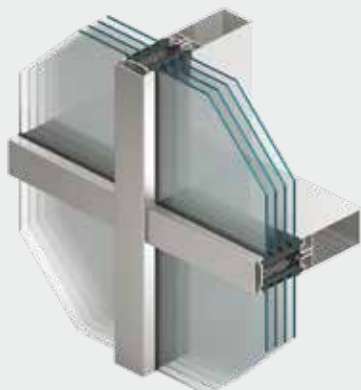


www.aluprof.com

ALUPROF
ALUMINIUM SYSTEMS

SYSTEM MB-TT50

CURTAIN WALL SYSTEMS



A mullion and transom curtain wall system (stick system) for the construction of curtain walls or infill walls, roofs and spatial structures. It is based on a new approach to aluminum profile structures and accessories used for sealing and the thermal insulation of joints. Thanks to which, the curtain wall ensures the building high protection for against the loss of heat. The MB-TT50 system offers multiple possibilities for structure forms; it is also designed as the basis for anti-burglar solutions. Important features also include a wide selection of available profiles, simplified prefabrication and "mullion-to-mullion" construction – using one type of profiles for the entire support structure of the curtain wall. This allows for optimizing material consumption, as well as the shorter prefabrication and installation time of the curtain wall in the construction phase, which results in lower investment costs.

MULLION AND TRANSOM CURTAIN WALL SYSTEM

Construction

The support structure consists of vertical and horizontal aluminum sections with a box cross-section (mullions and transoms and a fixed width of 50 mm, suitably secured to one another. On the external side, there are pressure plates securing the panes and finishing trims of the selected shape. The system also includes additional profiles, accessories for sealing or joining and a wide range of EPDM gaskets for sealing glazing or other types of infill.

Profile depth:
 mullions: 65-245 mm,
 transoms: 64-244 mm.
 The system can utilize 24-64 mm thick infill panels.

Visual appeal

The shape of mullions and transoms allows the construction of aesthetic curtain walls with visible thin division lines. The profiles can be selected so as to create a flush surface on the internal side.

Structure functionality, a wide range of opening elements

A characteristic feature of MB-TT50 is its compatibility with other MB systems. Thanks to which, curtain walls can include opening parts adjusted exactly to the requirements of the project in terms of functionality and thermal insulation: various types of windows and doors, including roof windows, windows integrated with the curtain wall, as well as MB-SR50N OW parallel tilting windows. In most cases, the opening elements placed in the curtain walls and roof glazing can be equipped with cylinders and used as smoke ventilation windows.



Apex Ealing, London
 design / Darling Associates

Flexibility in design

With the extensive selection of profile types and accessories, architects and designers can implement even their most inventive ideas as related to aluminum and glazing structures. Various angular connections make spatial structure designing very flexible.

Resistance proven in practice

Depending on the divisions and external loads, the system utilizes an adequate number of vertical and horizontal members with the moment of inertia (I_x) within 35,47 – 1639,59 cm⁴, selected to guarantee optimum aluminum

consumption and efficiently reduce material costs. Under very high loads, all mullions can be additionally reinforced with special aluminum profiles to increase the overall strength. Modern solutions used in the production of accessories and connectors ensure higher resistance to load transfer. State-of-the-art solutions in accessories and joining means allow to achieve increased ranges of load transfers, including the weight of the infill (up to 600kg).

**Very good thermal insulation,
excellent water and air tightness**

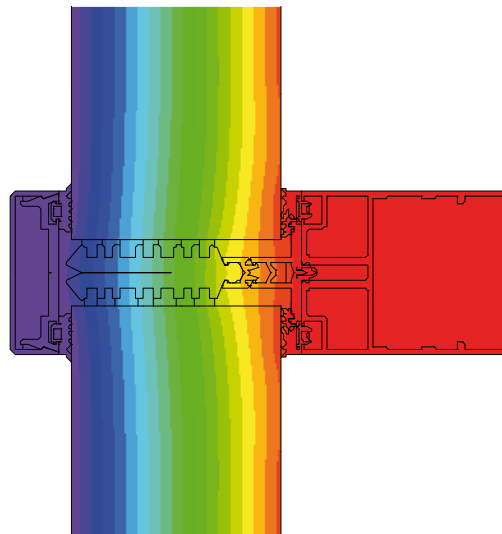
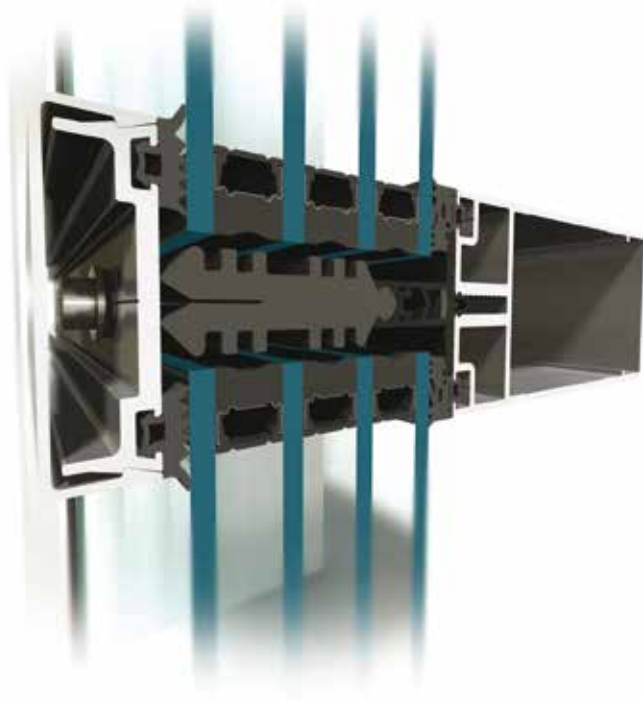
In terms of technical performance, the curtain wall can meet the requirements of applicable standards, as well as the increasing expectations of architects and investors. A system of specially selected thermal breaks provides excellent protection against heat losses within the structure. Special shapes of thermal breaks and the appropriate connection of plastic accessories ensure the correct drainage and ventilation of the wall, with low air infiltration and high water tightness. They also make the curtain wall prefabrication easier and faster. MB-TT50 system is certified highest class A+ by the PHI Darmstadt Institute.

Reliable connectors

Accessories delivered with the system, aluminum brackets and fixings for securing the wall to the building are made in aluminum alloys compliant with EN AW-6060 T66 (AlMgSiO, 5F22). With their modern design, they allow the wall position to be adjusted in three directions, which makes the installation much easier.

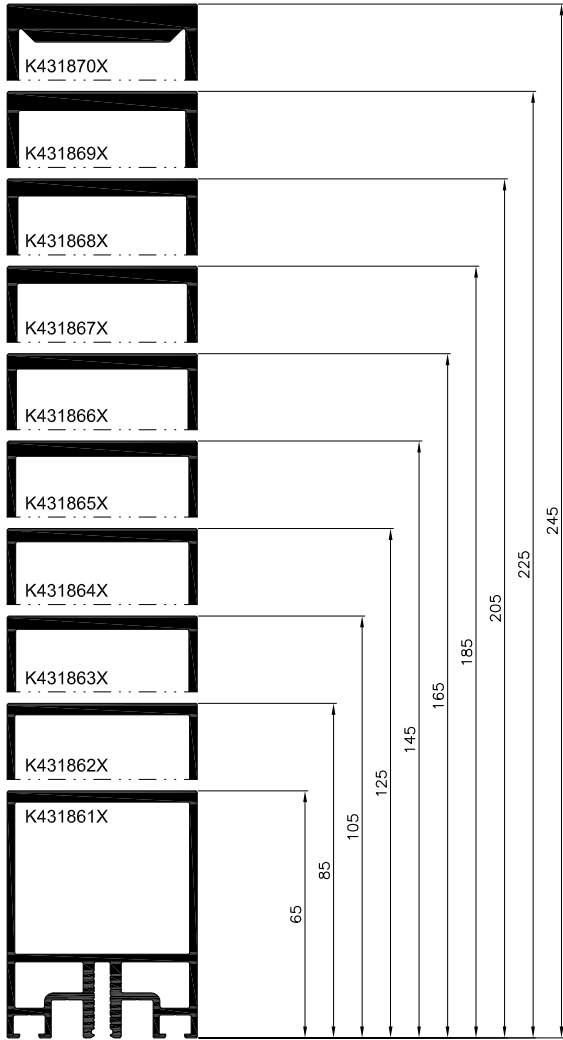
Performance:

- Heat transfer coefficient:
U_f from 0,5 W/(m²K),
EN ISO 10077-2:2005
- Air permeability:
Class AE 1350 Pa, EN 12152
- Watertightness:
Class RE1800 Pa, EN 12154
- Wind load resistance:
2700 Pa, EN 13116:2004
- Impact resistance:
Class I5/E5, PN-EN 14019
- Acoustic insulation: R_w=46 dB
(depending on the type of filling)
- Burglary resistance:
class RC1 to RC3, EN 1627

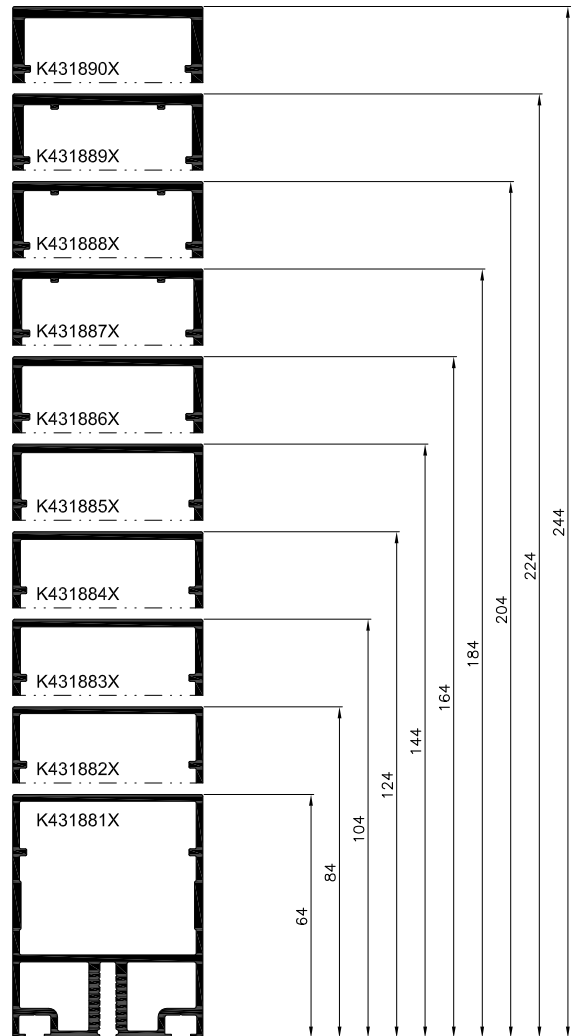


Isothermal lines in MB-TT50 curtain wall

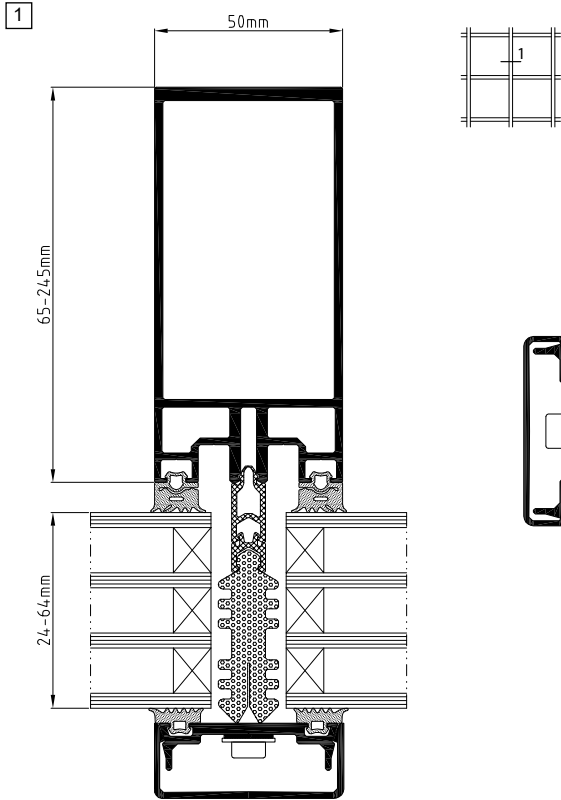
MB-TT50 Mullion profiles - overview



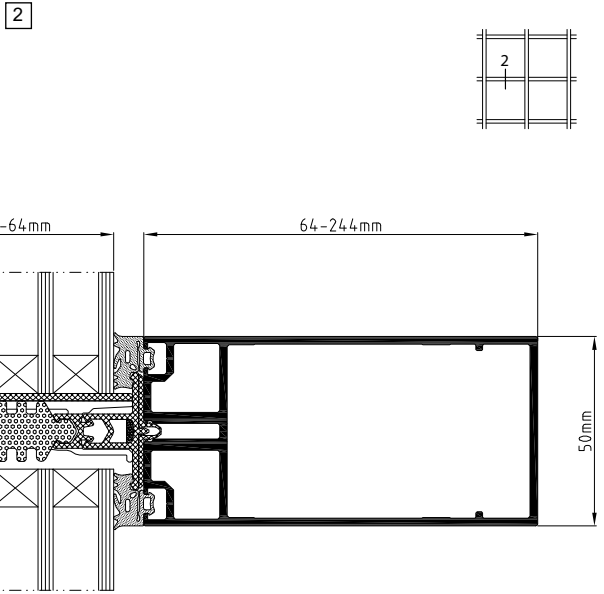
Transom profiles - overview



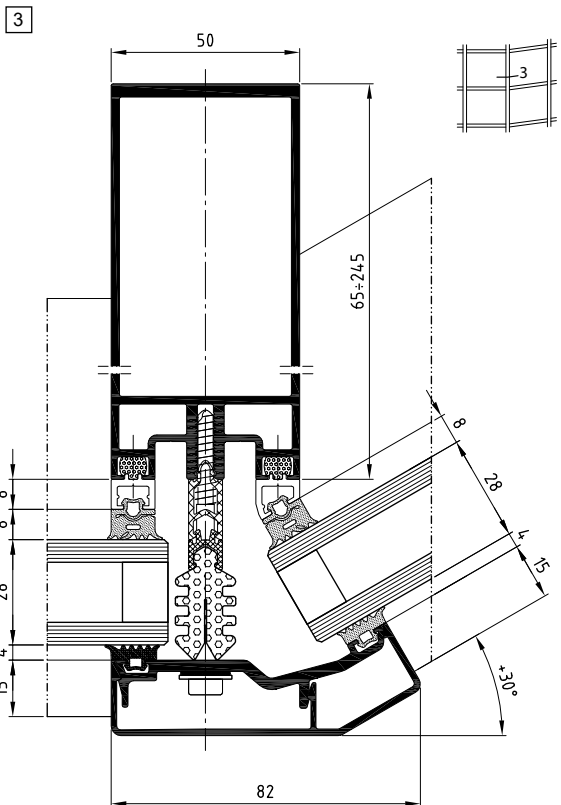
Mullion - cross - section



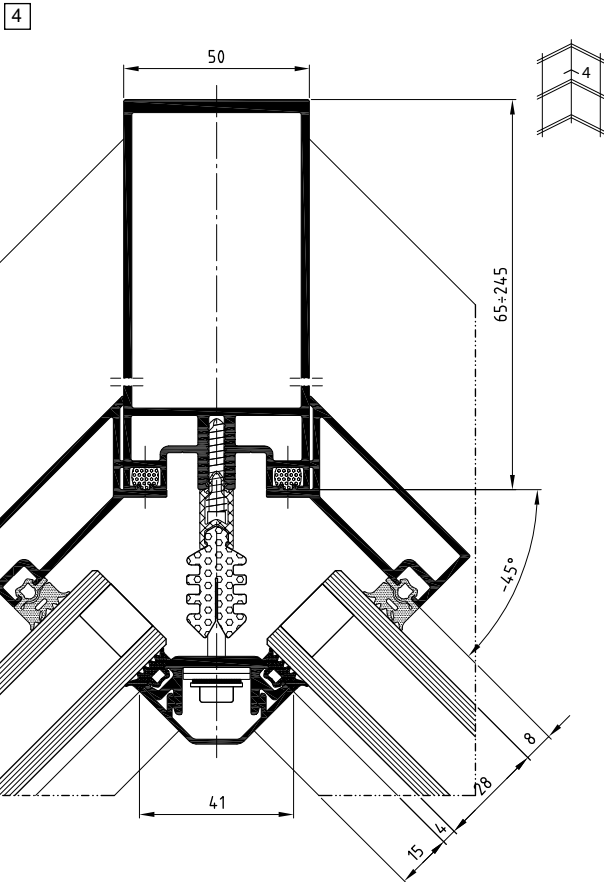
Transom - cross - section



Asymmetrical angel joint - cross-section



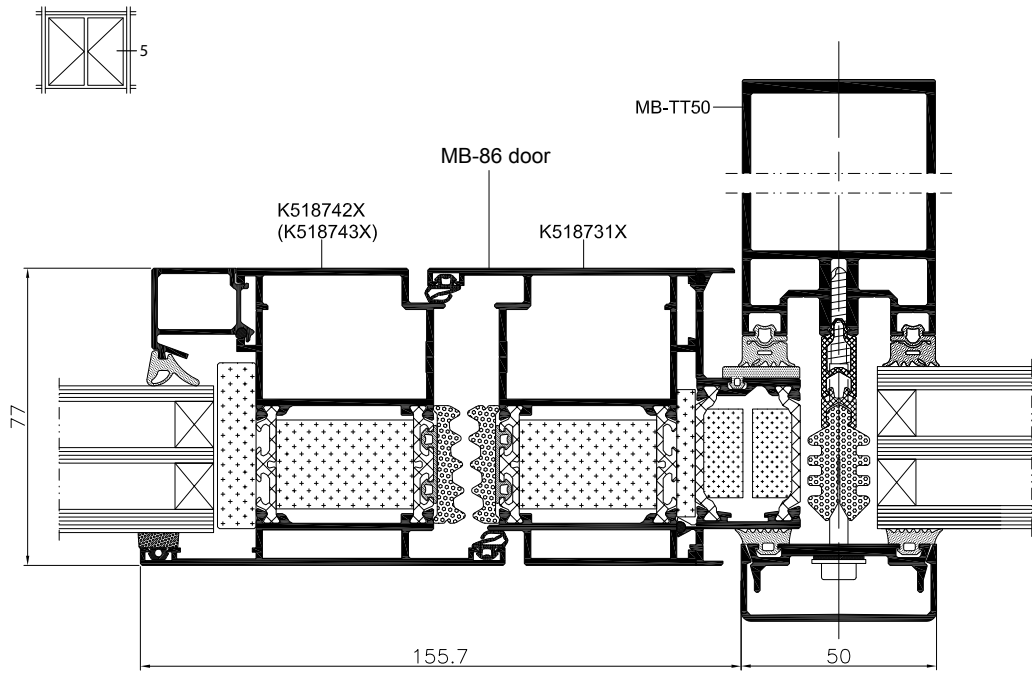
Symmetrical angel joint - cross-section



Scale 1:2

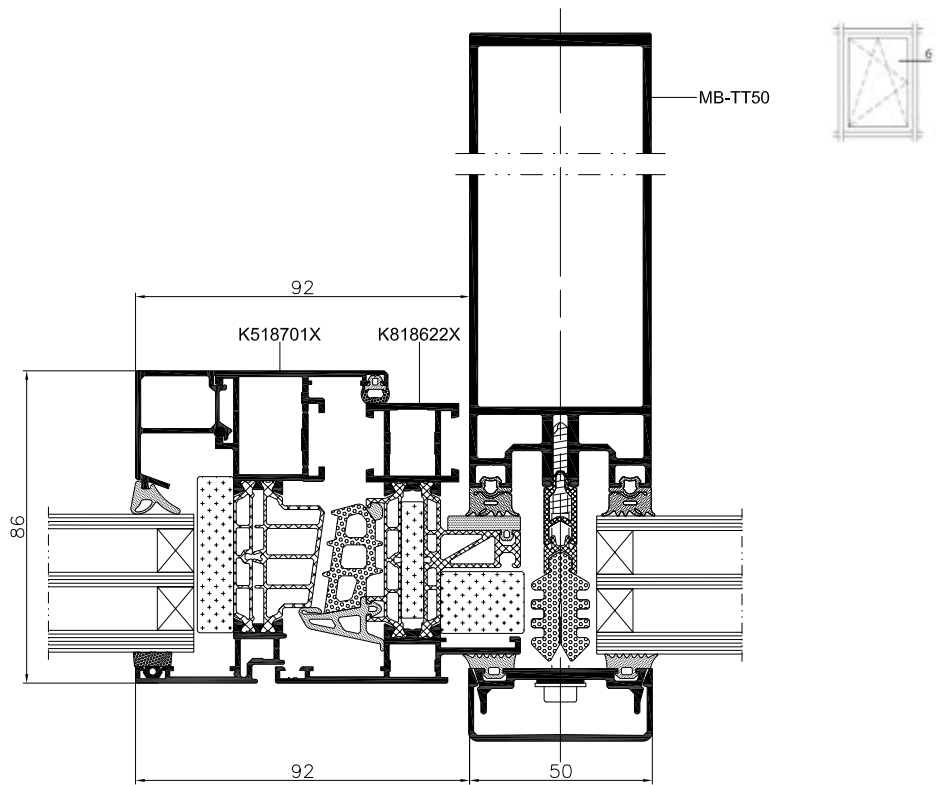
Mullion TT50 with MB 86 AREO doors
- cross-section

5

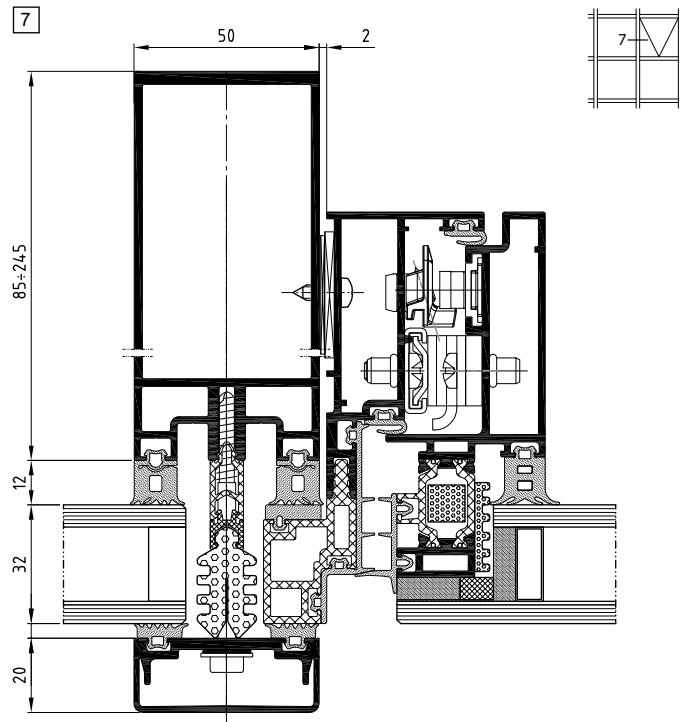


Mullion TT50 with MB 86 AREO window
- cross-section

6



Mullion TT50 with MB-SR50N OW parallel window - cross-section



Transom and roof window - cross - section



More examples on: www.architects.aluprof.eu

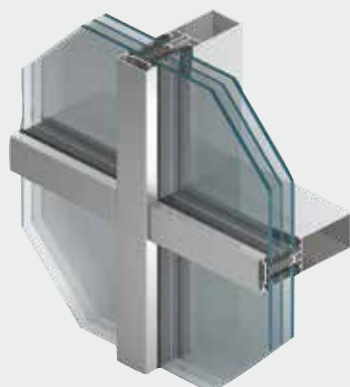
Scale 1:2

SYSTEM

MB-SR50N

MB-SR50N HI+

CURTAIN WALL SYSTEMS



The system is designed for the fabrication and installation of flat, light-weight curtain walls of a suspended or filling type, roofs, skylights and other spatial structures. It enables constructing aesthetic curtain walls with narrow sight lines, ensuring at the same time durability and strength of the end product. There are different ways to finish off the external appearance, including the horizontal or vertical line (MB-SR50N HI PL) and the semi-structural version (MB-SR50N HI EFEKT). The system features very good technical parameters. Among its strong points is flexibility in shaping space and a wide variety of opening elements to be installed on the curtain wall. Particularly noteworthy is the version with enhanced thermal insulation MB-SR50N HI, HI+ which uses special insulators. The MB-SR50N HI+ system is certified by the Passive House Institute PHI Darmstadt.

MULLION AND TRANSOM CURTAIN WALL SYSTEM

Construction

The load bearing construction is formed by vertical and horizontal aluminium sections of box-type cross-sections (mullions and transoms) of a fixed width, i.e. 50 mm and properly connected with each other. Clamping strips supporting the panes and masking strips of any shape form the external side of the curtain wall. The system also includes additional sections, accessories performing sealing or connecting function and a wide range of EPDM gaskets, applied to seal panes or other infills in the curtain wall.

Depth of sections:

mullions: 50 – 325 mm,

transoms: 5 – 189,5 mm.

Infills 24 – 64 mm thick may be fitted in the system.

High aesthetic values.

Varying Applications

The shape of mullions and transoms enables developing aesthetic curtain walls with visible narrow division lines, ensuring at the same time durability and strength of the construction. Profiles may be selected in such a way that they are flush on the inside of the curtain wall. The "horizontal and vertical line" forms an aesthetic variety of the MB-SR50N PL and MB-SR50N HI PL systems, with an emphasis placed on either horizontal or vertical division with the bullnose cap used in lieu of the square cap. A particular variant is the MB-SR50N EFEKT which resembles a structural wall in appearance: a uniform and smooth wall is obtained from the outside, divided by



D48, Warsaw

design: HRA Architekci, Epstein

a truss of vertical and horizontal lines 20 mm wide.

Functionality of the construction and a wide range of opening elements on the curtain wall

A characteristic feature of the MB-SR50N HI system is its close correlation with the door & window system of the MB series. Therefore, different opening elements may be installed on the curtain wall, suited to the project requirements with regard to the function and thermal insulation performance:

- self-closing, swing or sliding doors,
- standard windows (casement, tilt & turn

- or hopper),
- windows with a hidden sash of the following versions: MB-70US, MB-86US, MB-79N US (with a wider frame) or MB-70SG (with a narrower frame),
- pivot windows,
- awning windows with sash profiles imperceptible on the outside or with sash profiles visible on the outside.
- integrated windows – inward opening but imperceptible from the external side of the curtain wall,
- roof windows MB-SR50N RW, MB-RW.

Freedom of design

A wide range profiles allows architects and designers to implement even the most challenging ideas for aluminium and glass constructions. In order to construct a broken wall, both in its vertical and horizontal sections, special overlapping profiles and appropriately shaped clamping and concealing strips have been used, with the result that there are no restrictions as to styling the body of the building and there is no need to use special angle mullions.

Proven strength

Proven strength Depending on the division pattern and external loads, the system provides for an adequate number of mullions and transoms varying in depth, with the moment of inertia I_x , adjusted in such a way as to guarantee optimal aluminium consumption and effective reduction in material costs. In case

of large bearing loads all mullions may be additionally reinforced by applying special internal aluminium profiles, thus significantly improving their strength. Max. weight of glass: up to 1100 kg.

Excellent tightness to water and air infiltration

The system provides for the execution of mullion – transom overlapping connection, which enables proper water drainage and wall ventilation, as well as securing low values of air infiltration coefficient and water tightness.

Fire safety

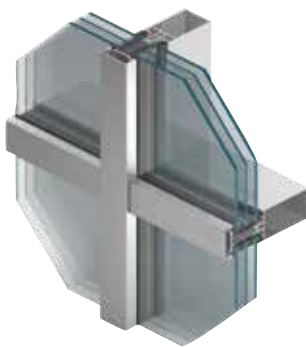
Due to the sandwich construction of the window head & sill area, in which nonflammable materials such as mineral wool and plasterboards have been used, fire classification EI30 and EI60 have been achieved depending on the construction. The MB-SR50 EI system is a separate

solution, which meets fire safety requirements set for the whole curtain wall, i.e. of class EI30 or EI60.

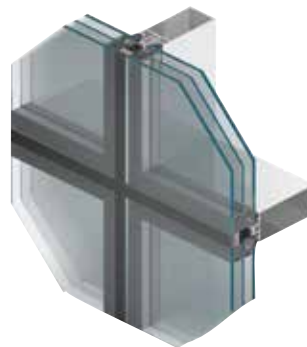
Performance:

- Heat transfer coefficient: U_f from 0,59 W/(m²K), EN ISO 10077-2:2005
- Air permeability: to Class AE 1200, EN 12152
- Watertightness: to Class RE1200, EN 12154
- Wind load resistance: 2,4 kN/m², EN 13116:2002
- Impact resistance: Class I5/E5, PN-EN 14019
- Acoustic insulation: $R_w=47$ dB, $R_{a2}=44$ dB (depending on the infill material)
- Burglary resistance: class RC1 to RC3, EN 1627

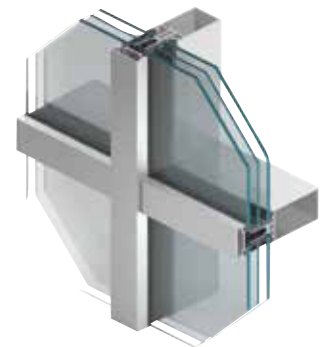
Variations available in MB-SR50N system



MB-SR50N HI+



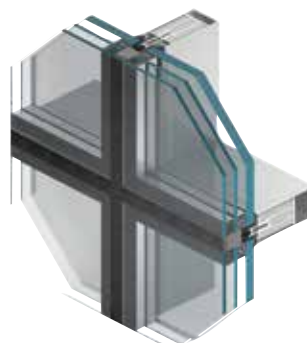
MB-SR50N EFEKT



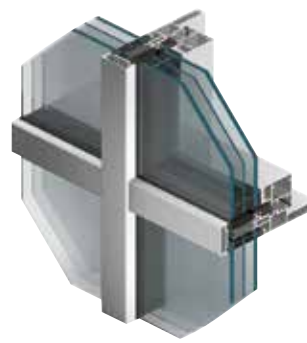
MB-SR50N HI



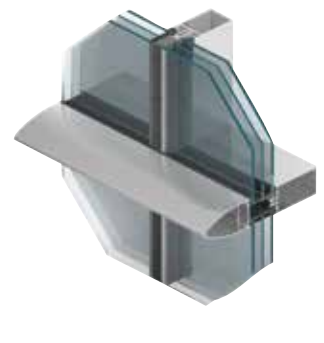
MB-SR50N EI



MB-SR50N EI EFEKT



MB-SR50N IW



MB-SR50N PL



The window structure is based on aluminum profiles with a thermal break enabling the installation of large windows with high performance. It is designed in two glazing versions:

- as a window with a visible capping, used to hold the glass and highlight the window outlines
- as a frameless construction, using a structural silicone sealant to fix the outer pane to the aluminum frame – operable windows are then consistent with the appearance of adjacent fixed sections.

In the MB-SR50N OW HI+ windows glass units with a thickness of 48 – 64 mm can be used.

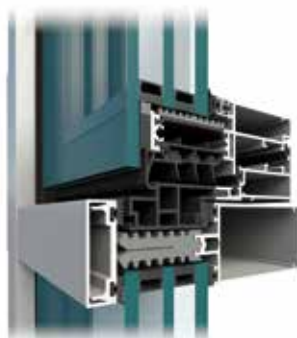
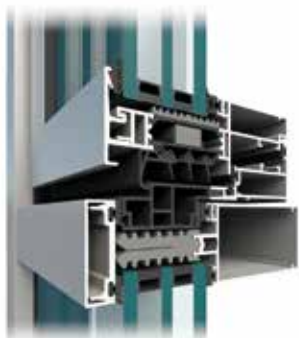
PARALLEL TILTING SLIDING WINDOWS OPENING OUTWARDS

Performance:

- Air permeability:
Class 4, EN 12207
- Water tightness:
E 1950, EN 12208
- Resistance to wind load:
B5/C5, EN 12210

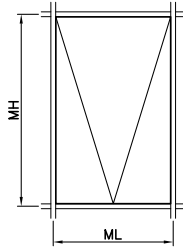


Medicus, Wrocław
project: JSK ARCHITEKCI



Max. dimensions in the curtain wall

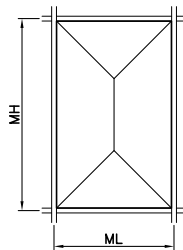
MB-SR50N QW
top hung window



MHmax=2630 mm MHmin=500 mm
MLmax=2000 mm MLmin=500 mm

- 180 kg

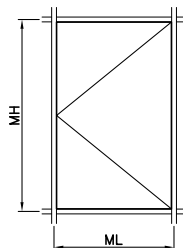
MB-SR50N QW
parallel window



MHmax=3000 mm MHmin=890 mm
MLmax=2000 mm MLmin=540 mm

- 440 kg

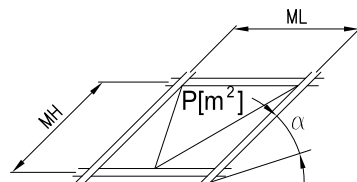
MB-SR50N QW
side hung window



MHmax=2000 mm MHmin=500 mm
MLmax=970 mm MLmin=430 mm

- 47 kg

MB-SR50N RW
roof vent



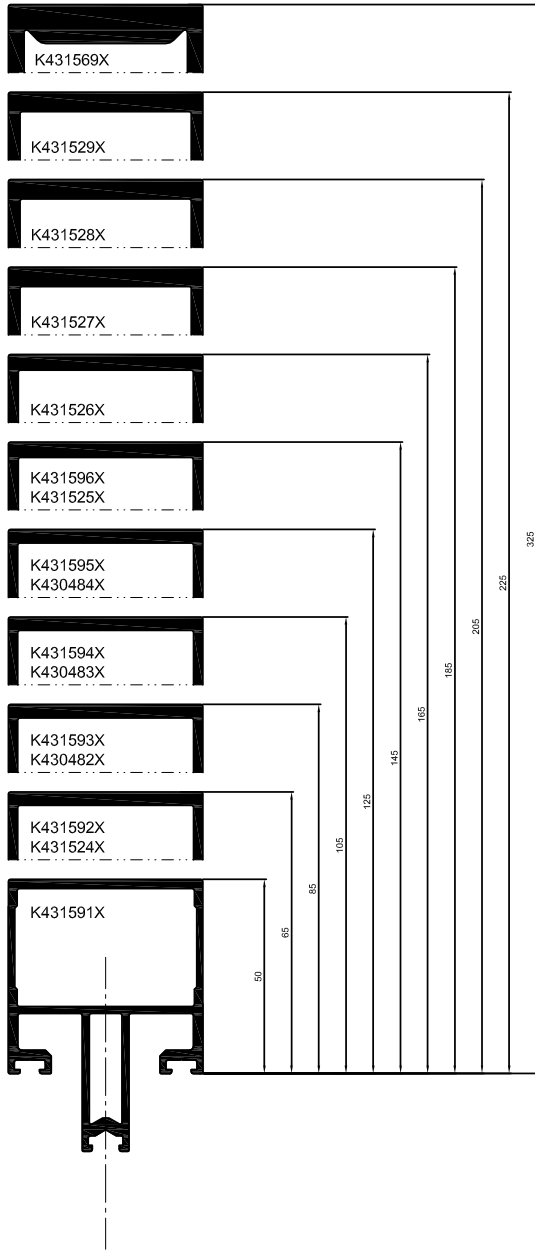
MHmax=2050 mm
MLmax=1800 mm
Pmax= 3,40 m²

α min=5°
α max=75°

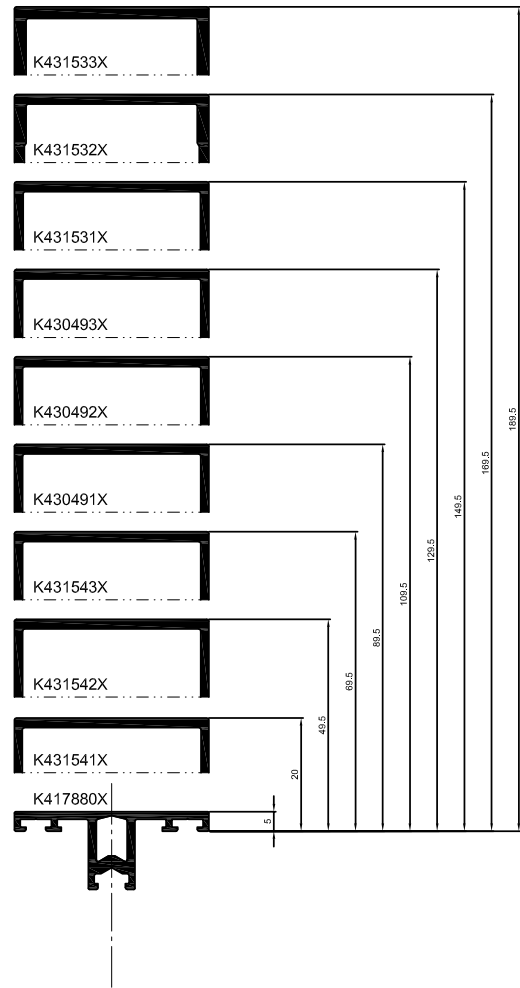
- 150 kg

} Maximum weight of the vent

Mullions

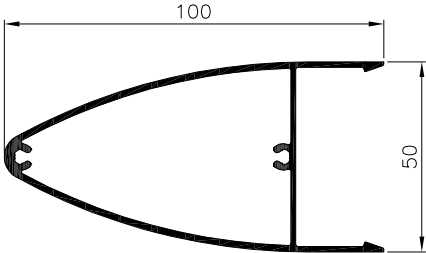


Transoms

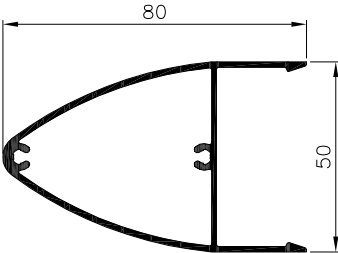


Cover caps and pressure plates, additional profiles

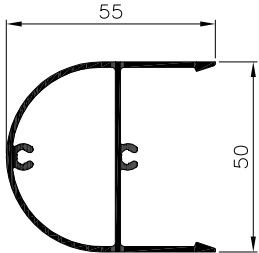
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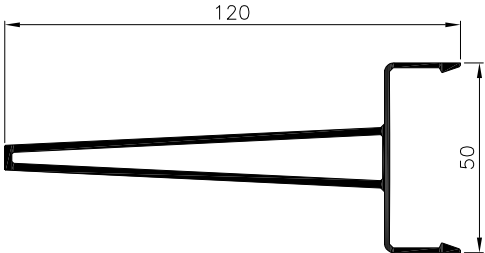
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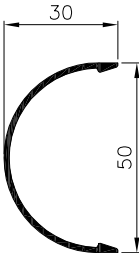
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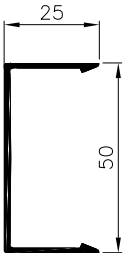
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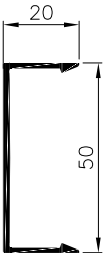
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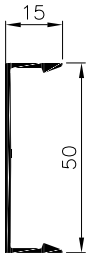
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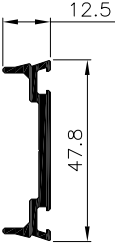
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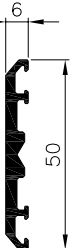
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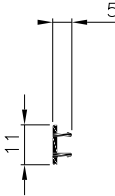
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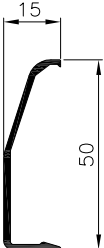
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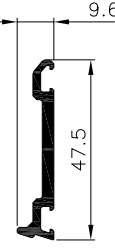
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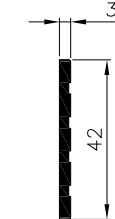
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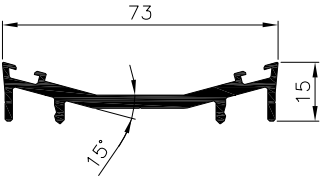
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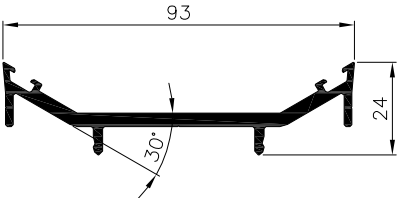
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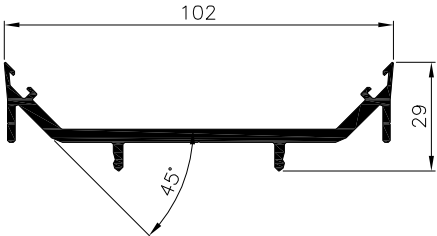
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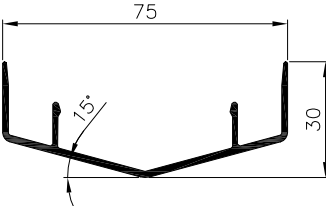
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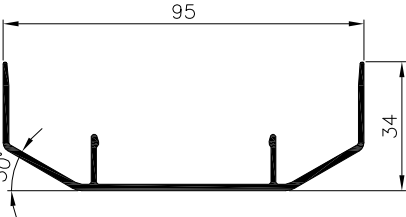
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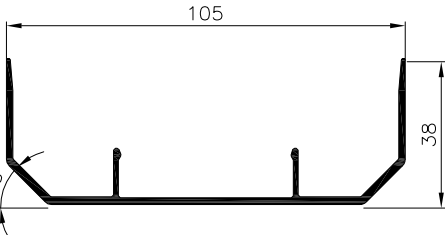
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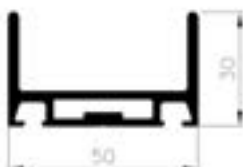
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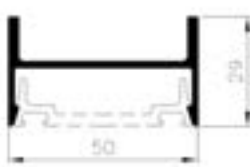
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Cover caps and termination bars

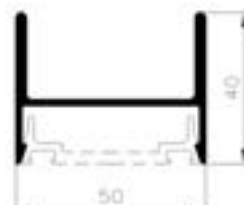
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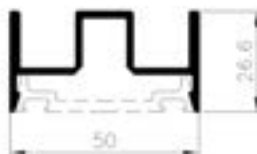
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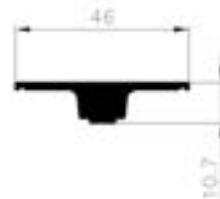
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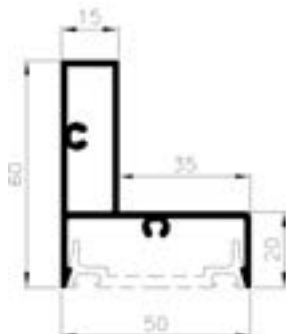
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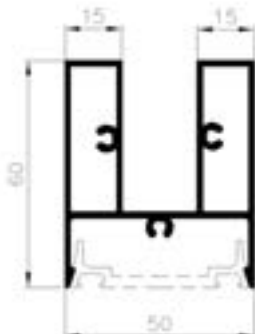
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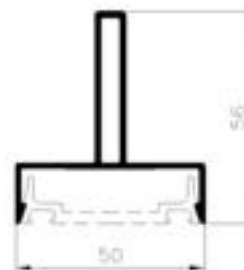
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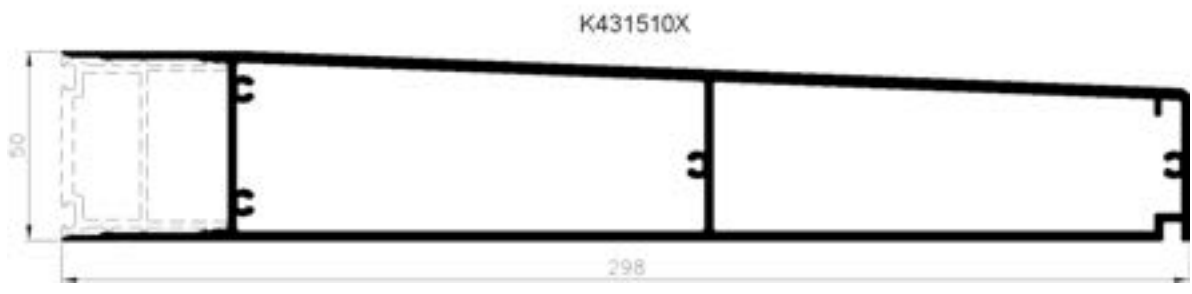
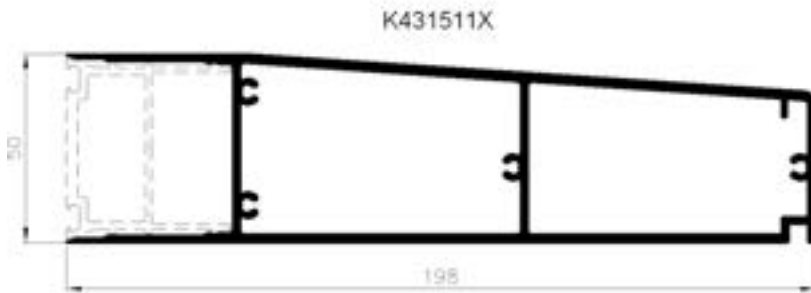
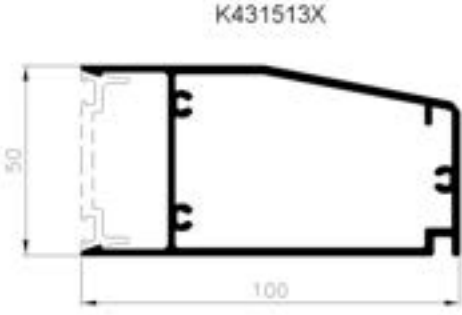
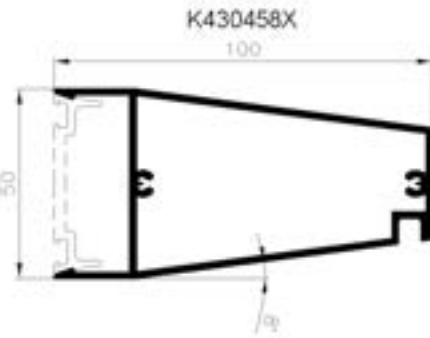
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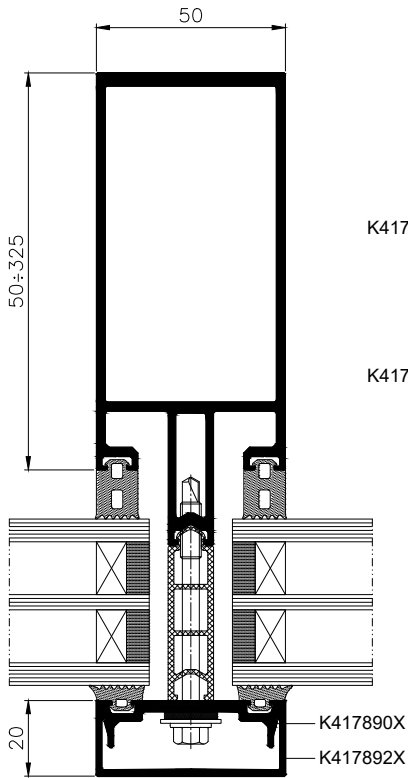


Cover caps and termination bars

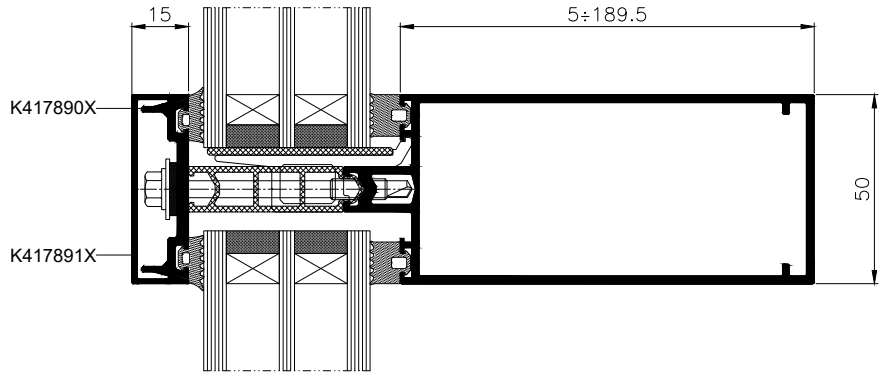


More termination bars and cover caps' profiles are presented in the Catalogue for Architects on www.architects.aluprof.com and in the Project Specific & Bespoke Solutions.

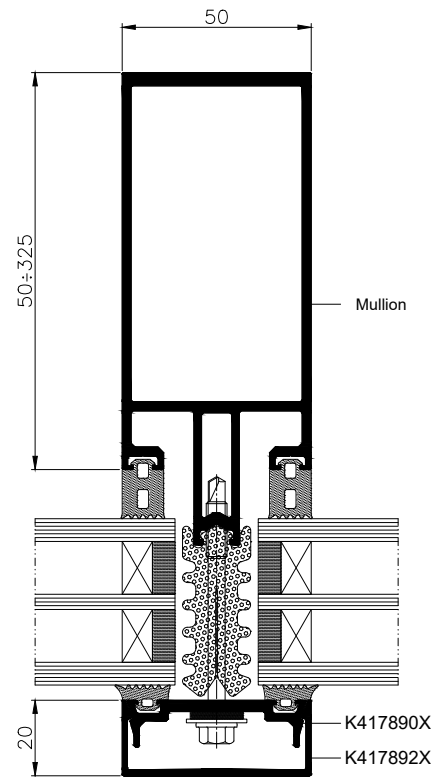
Mullion - cross-section MB-SR50N



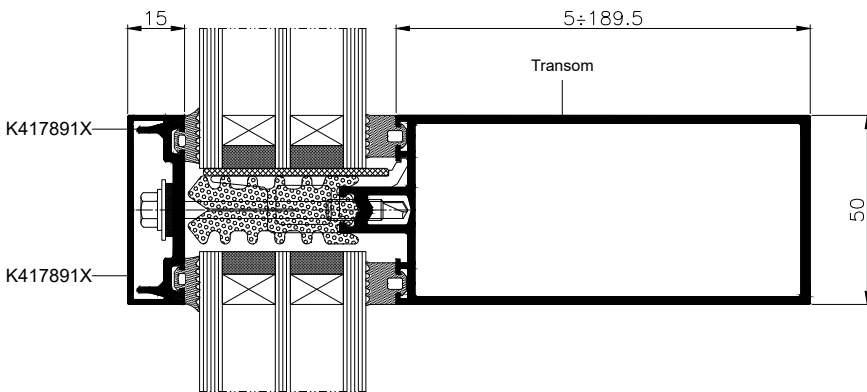
Transom - cross-section MB-SR50N



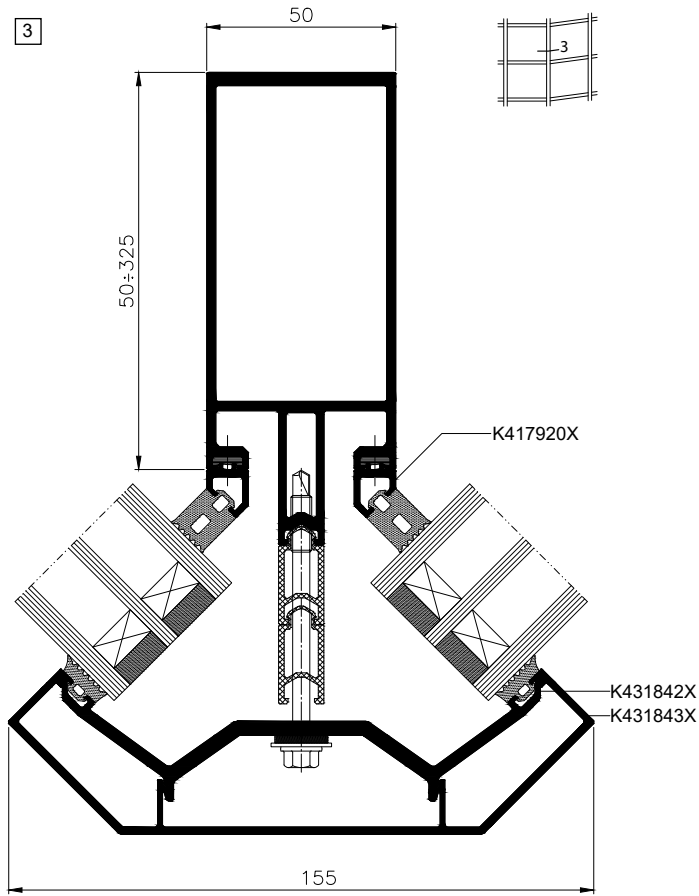
Mullion - cross-section MB-SR50N HI+



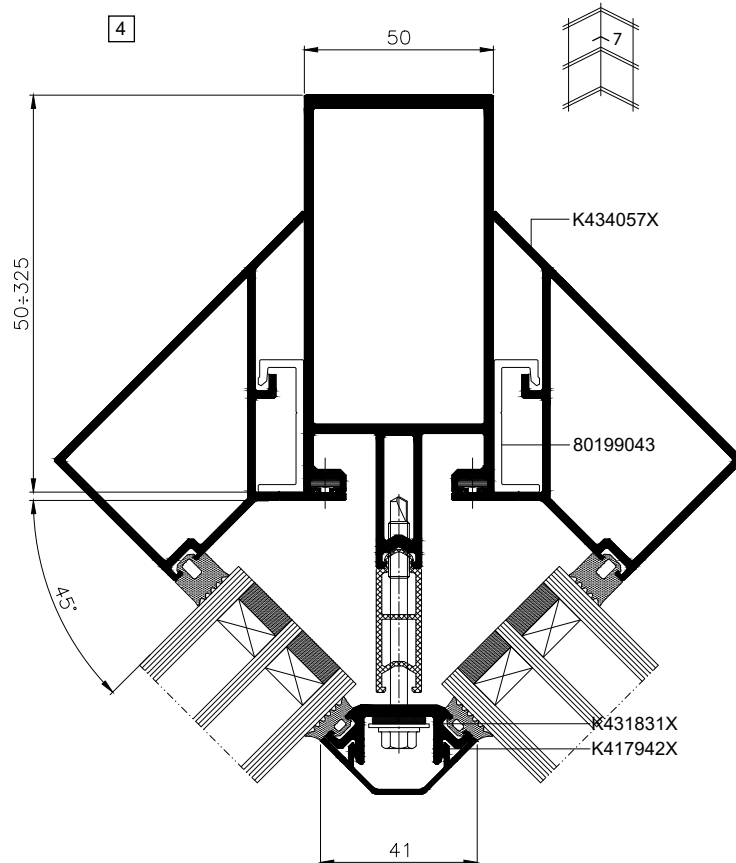
Transom - cross-section MB-SR50N HI+



Symmetrical angel joint - cross-section



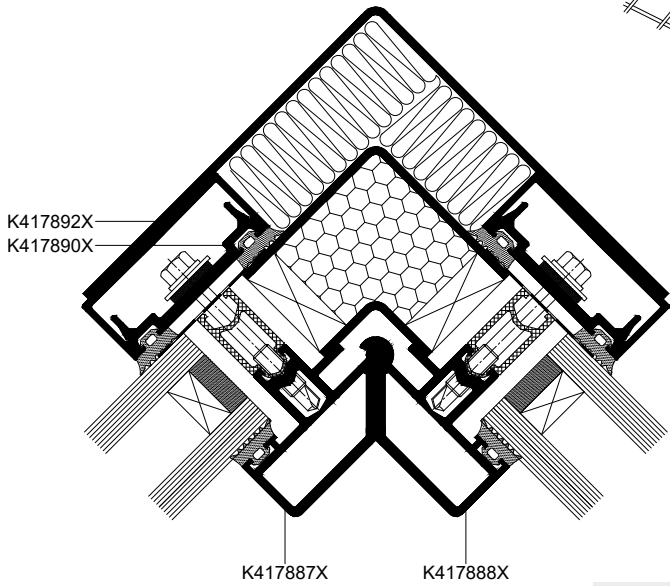
Symmetrical angel joint - cross-section



Scale 1:2

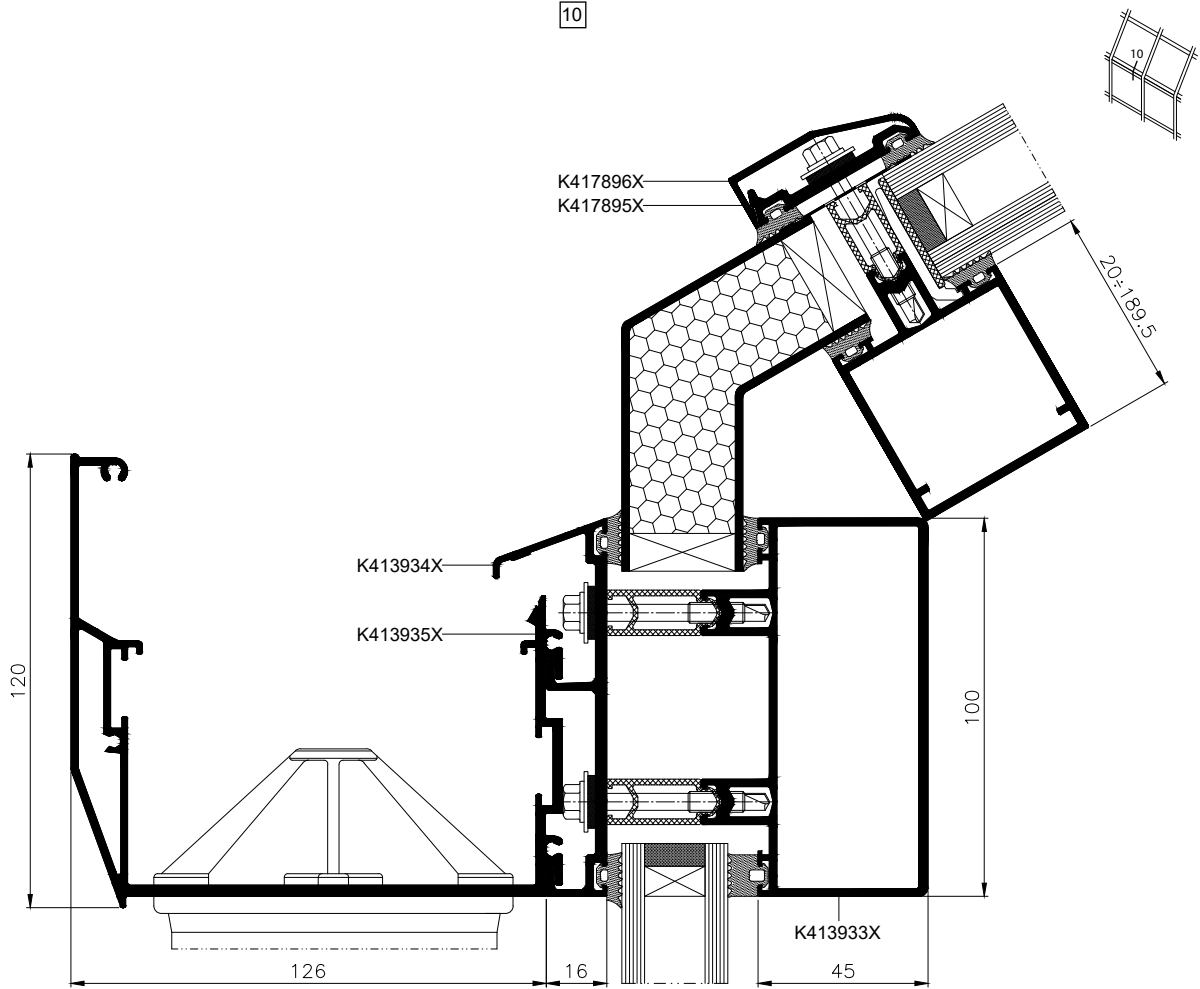
Horizontal section of roof ridge

9

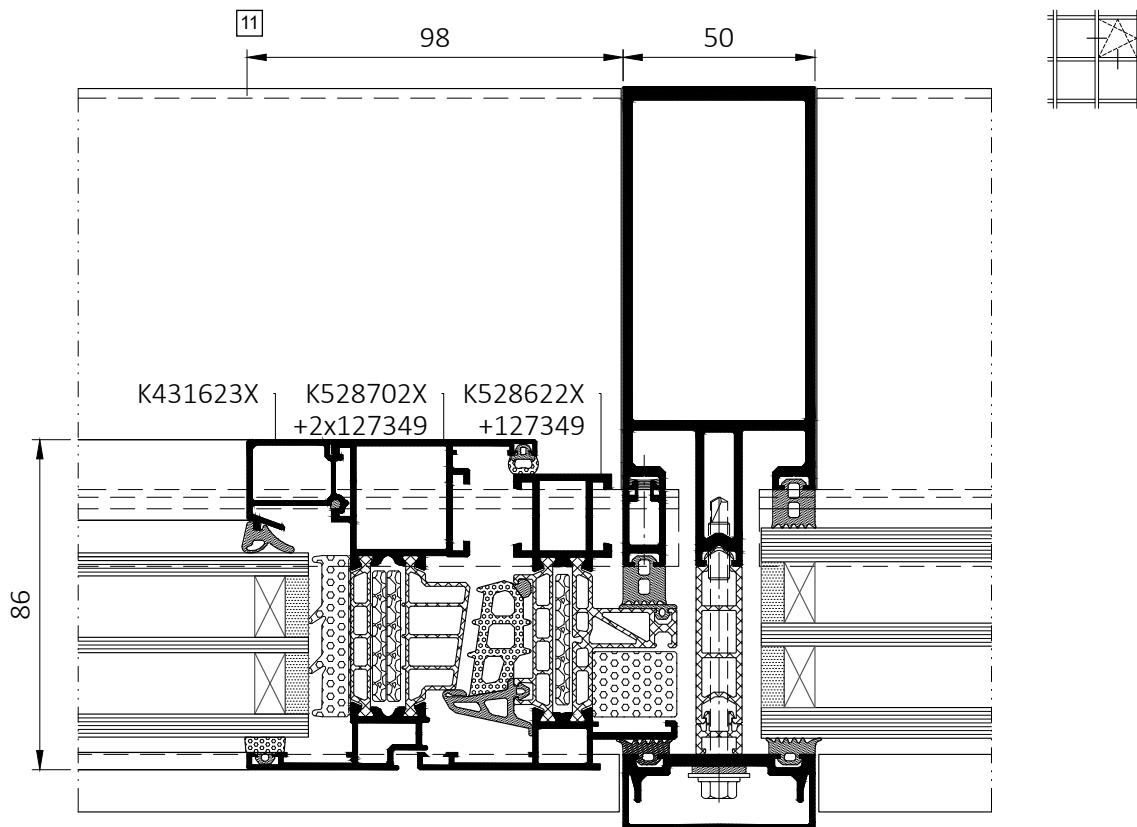


Horizontal section of gutter

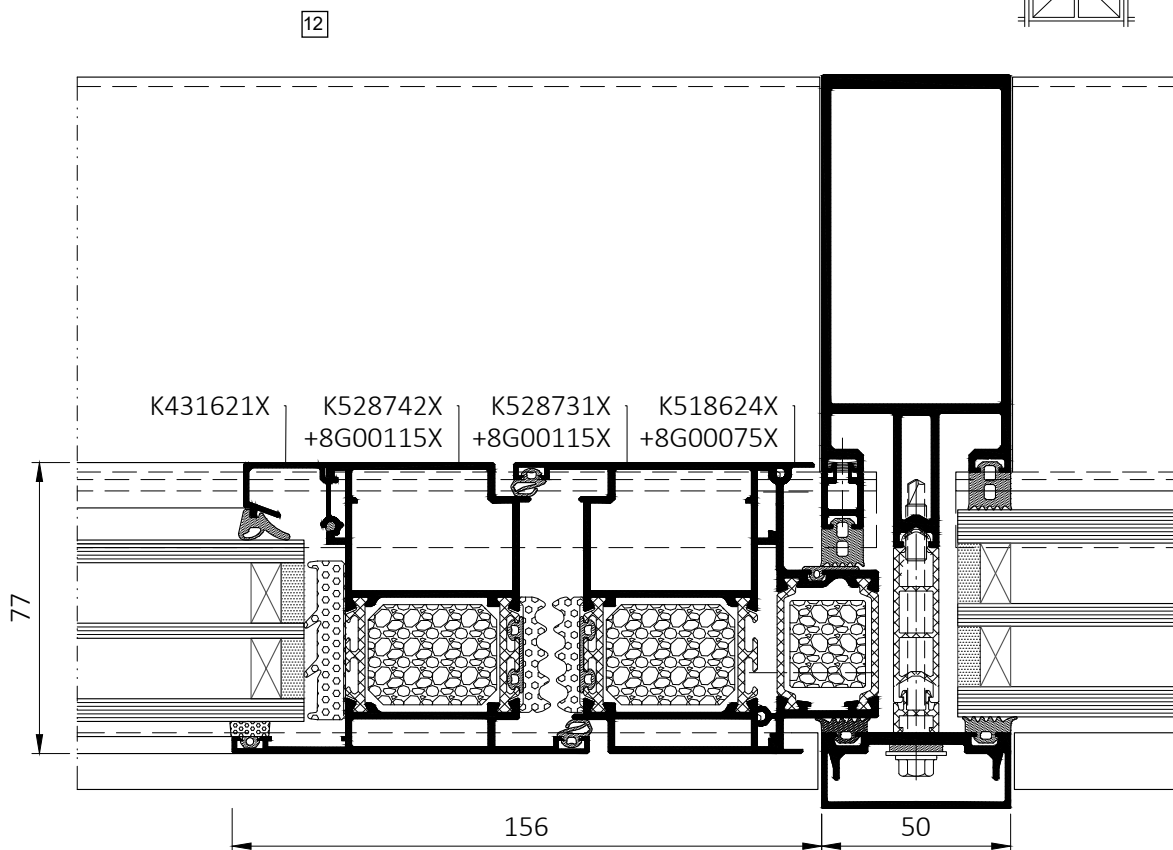
10



MB-86N SI window cross-section
in MB-SR50N HI curtain wall

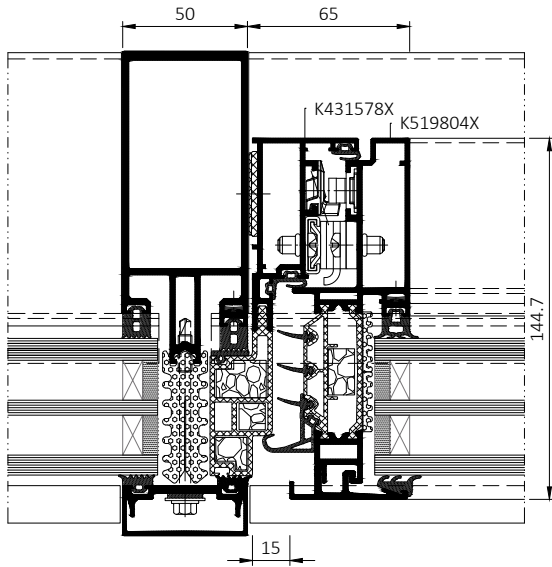


MB-86N SI door cross-section
in MB-SR50N HI+ curtain wall

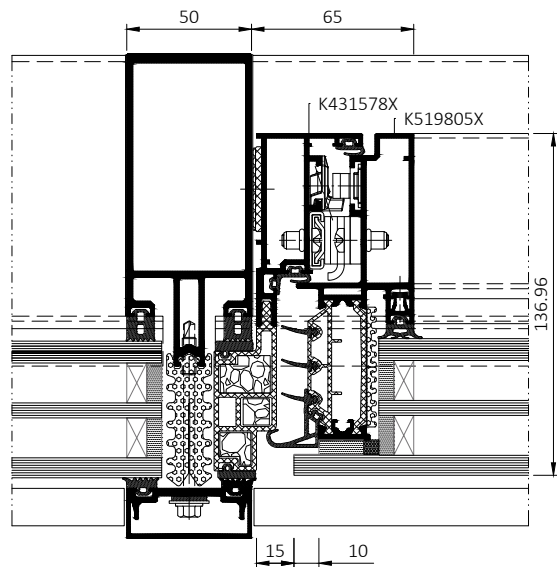


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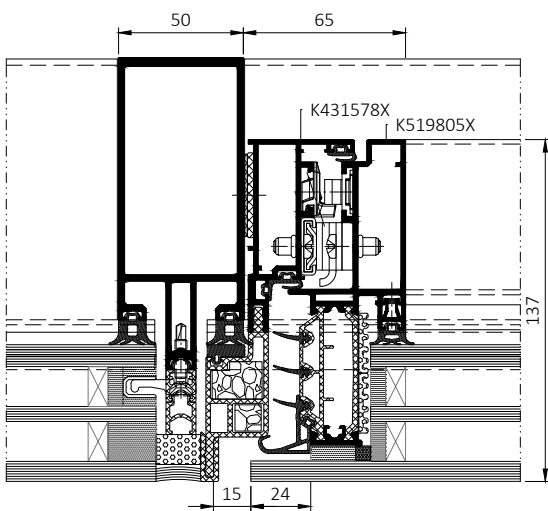
MB-SR50N OW HI+ beaded casement window
- cross-section



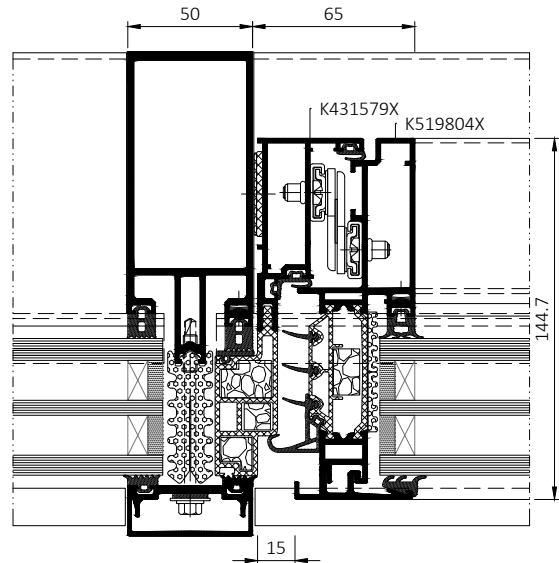
MB-SR50N OW HI+ SGG casement window
- cross-section

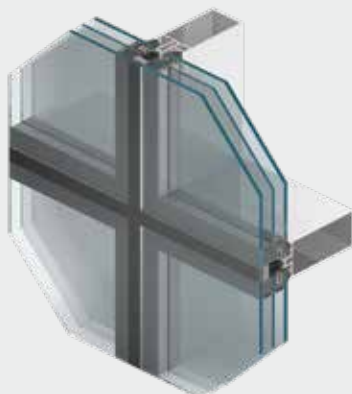


MB-SR50N OW HI+ beaded parallel window
- cross-section



MB-SR50N OW HI+ SGG casement window
- cross-section





MB-SR50N EFFECT is a special curtain wall system, in which the method of fixing the glass to mullions and transoms offers a unified external glass surface sectioned by 2 cm wide vertical and horizontal lines. The gaps between the glass panels of the curtain wall are filled with a special silicone sealant providing high tightness and improved insulation of the structure.

SEMI - STRUCTURAL CURTAIN WALL SYSTEM

MB-SR50N EFFECT is used for the construction of light curtain walls of a suspended and filling type, as well as roofs, skylights and other spatial structures. Its support structure is based on a modern and proven aluminum MB-SR50N mullion and transom system offering a wide range of profiles and options for selecting the profiles to harmonize the surfaces of members on the internal side of the curtain wall, thus, creating a visually attractive connection with the curtain wall and the inner structure.

One of the key benefits of MB-SR50N EFFECT curtain walls is the wide offer of glazing: a wide range of infills available in the catalog with a thickness within 24 to 56 mm includes double-glazed or triple-glazed glass units, as well as opaque panels based on insulated glass. A real novelty in such curtain walls is the possibility to use laminated glass units. A precise fixing system for infills allows flexible and economic adjustment to the requirements of an individual project – differentiated depending on glass weight and including solutions for transferring the loads from glass to profiles up to a capacity of 600 kg. We have two standard variants for glass fixing: with continuous or non-continuous spacers. It is also worth noting that for this system sealants of various colors can be used, which significantly increases the options for creating aesthetic curtain walls.



DOUBLE TREE BY HILTON, Łódź, Poland
design / APA Kuryłowicz&Associates

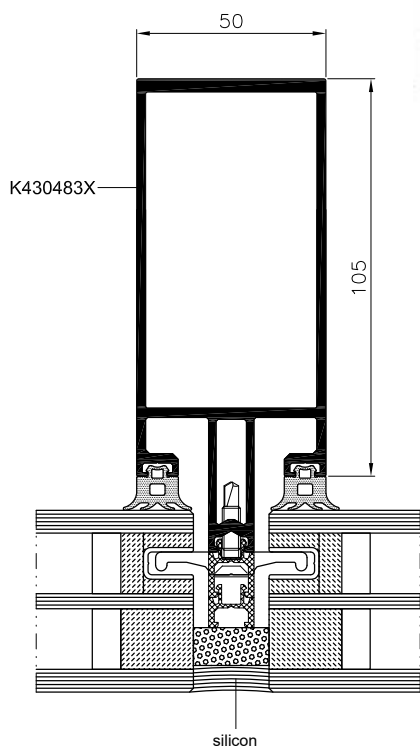
Curtain walls based on MB-SR50N EFFECT have excellent user properties and offer not only desired visual attractiveness, but also very high thermal insulation, which is one of the main criteria for assessing contemporary curtain walls due to the strong world-wide trend focused on the reduction of energy consumption in buildings.

Performance:

- Air permeability:
Class AE 1200 Pa
- Water tightness:
Class RE 1200Pa
- Wind load resistance:
up to 2400 Pa
- Impact resistance:
Class I5/E5
- Thermal insulation:
 U_f from 1,1 W/(m²K)

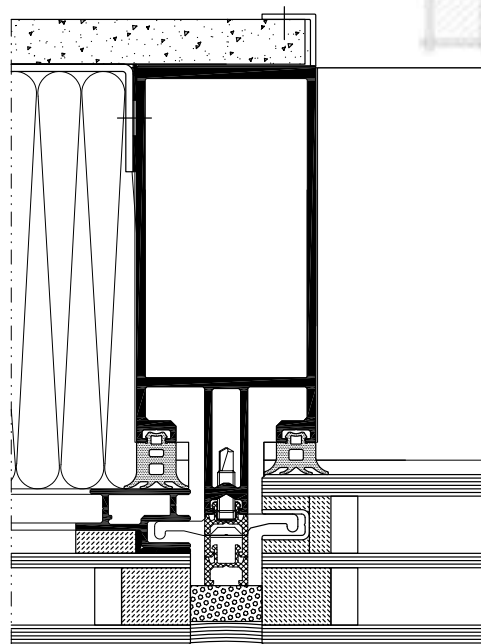
Mullion - cross-section

1



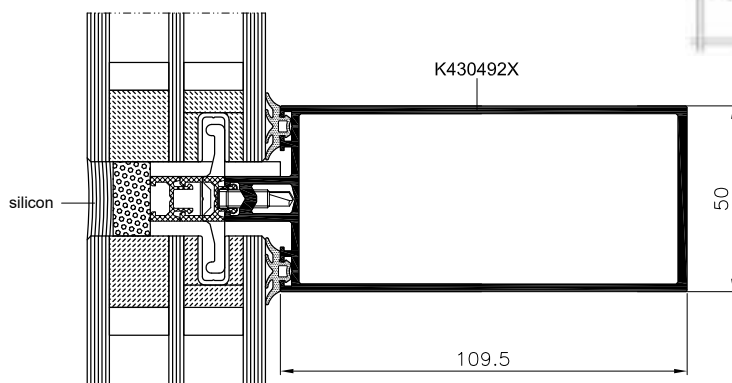
Mullion with glazing unit and obscure panel - cross-section

2



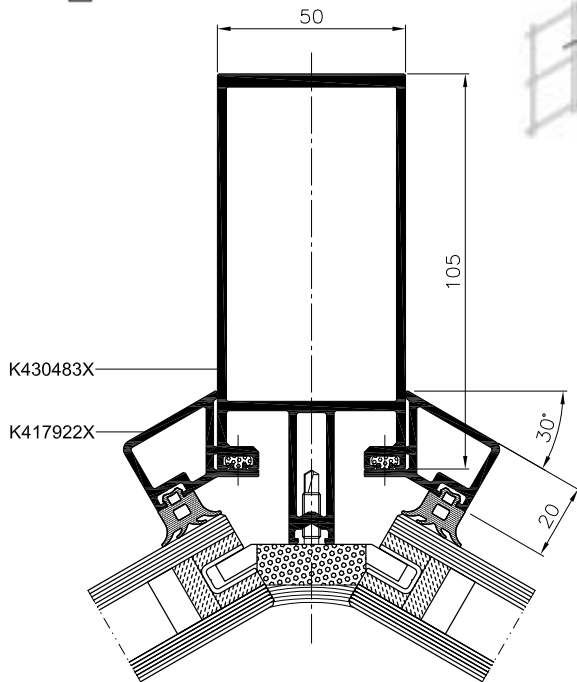
Transom - cross-section

3



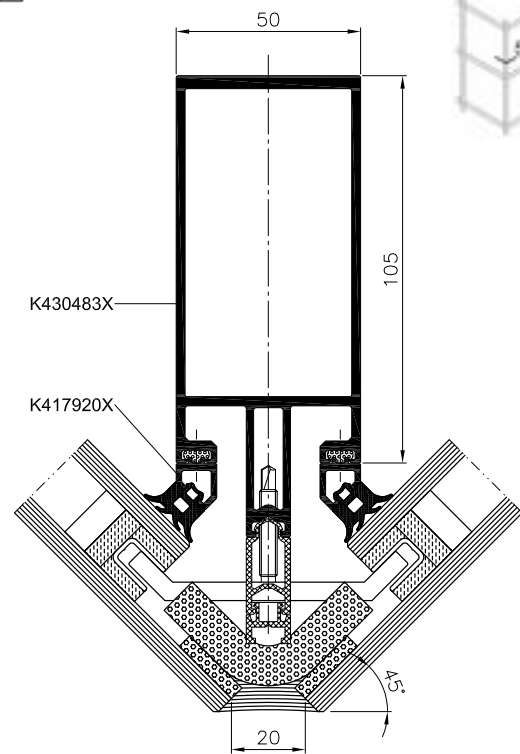
Internally folding joint - cross-section

4



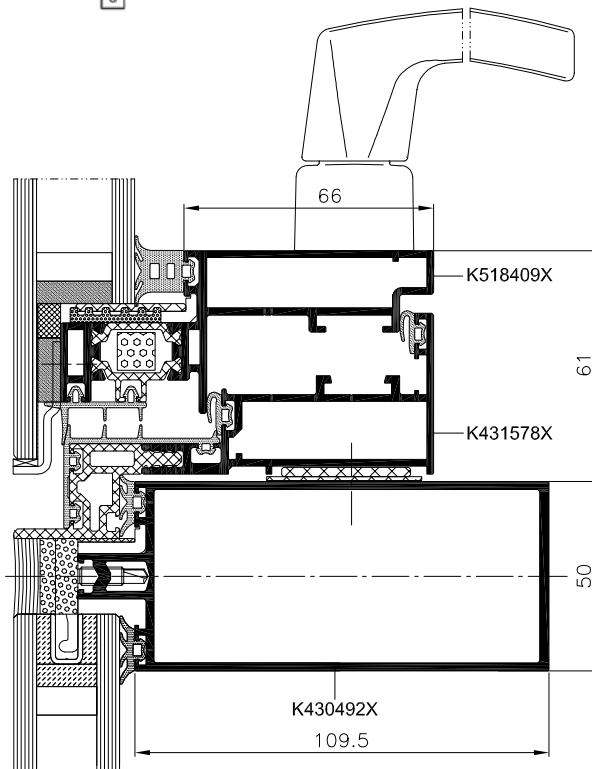
Externally folding joint - cross-section

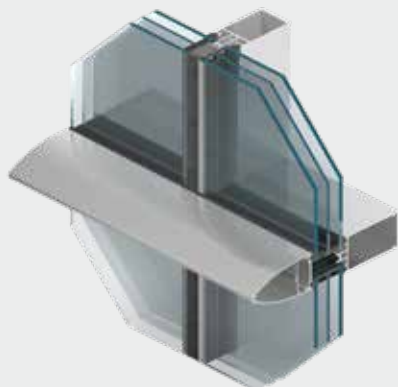
5



Transom with SG parallel window - cross-section

6





Solution MB-SR50N PL "Horizontal line" is the aesthetic variant of the mullion and transom façade, in which horizontal or vertical partitions are emphasised. This is realised by using the appropriate masking (e.g. elliptical) strips to stress one direction of façade division, whereas in lines that are perpendicular to them, the glass fastening strips are eliminated. When required, the connectors that function between fillings can be used in these lines and masked with so-called weather silicone or special gasket, thus making them not visible from the outside. As in other façade versions, hinged windows can be used in the MB-SR50N PL construction without changing its appearance.

HORIZONTAL LINE

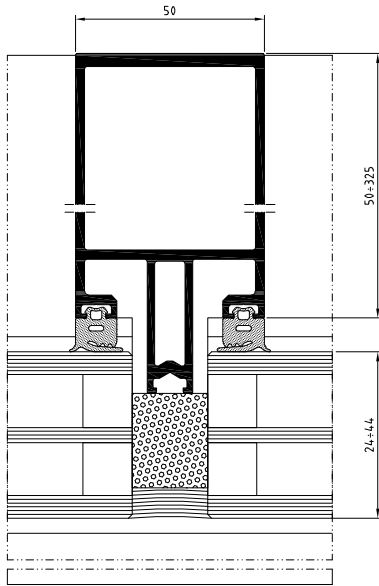
MB-SR50N PL is used for the construction of light curtain walls of a suspended and filling type, as well as roofs, skylights and other spatial structures. Its support structure is based on a modern and proven aluminium MB-SR50N mullion and transom system offering a wide range of profiles and options for selecting the profiles to harmonize the surfaces of members on the internal side of the curtain wall, thus, creating a visually attractive connection with the curtain wall and the inner structure.

Performance:

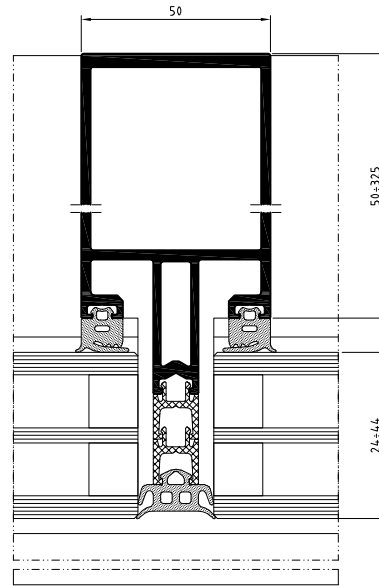
- Air permeability:
class AE, EN 12152
- Water tightness:
class RE 1200, EN 12154
- Wind load resistance:
2,4 kN/m², EN 13116
- Impact resistance:
class I5/E5, EN 14019



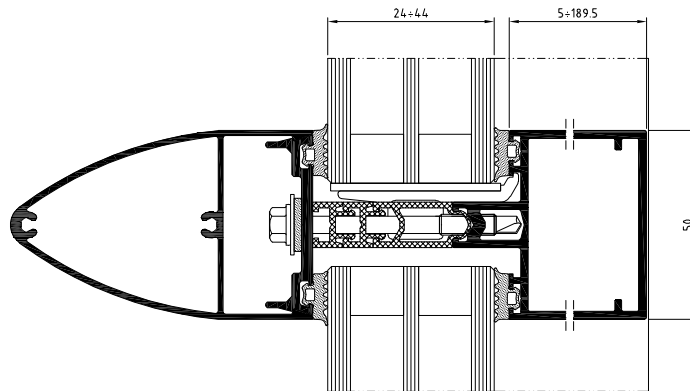
Mullion – cross section

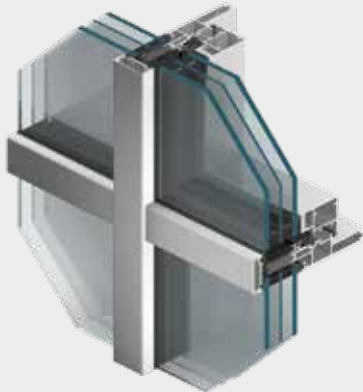


Mullion – cross section



Transom – cross section





Unique in its design, the MB-SR50 IW system gives a fully integrated curtain wall option, that of an inward opening concealed vent. The external appearance of a fixed light is no different to that of a Tiltturn vent. The MB-SR50IW system is available in three "finished look" options, including standard cap, flat 4mm pressure caps, and EFEKT system option silicone joint.

BESPOKE CURTAIN WALLING SYSTEM WITH INTEGRATED WINDOW

Flexibility in design

The structure of MB-SR50IW curtain wall is based on bespoke design mullion and transom sections. The sections are shaped to accommodate vent profiles in opening areas, providing sharp edge finish profiles and the choice of an internal flush finish mullion & transom, giving a modern, contemporary look. Various design features relating to the glazing are available, including different shape standard 50mm capping, 46mm wide flat pressure plates and 20mm wide silicon joints. The overlapping nature of the mullion-transom joints, provides excellent weather tightness.

Glazing

MB-SR50N IW system accommodates glazing units from 24mm up to 36mm for fixed lights, and from 28mm up to 36mm for opening lights. The glass unit of the "IW" concealed vent is bonded to the frame by way of a structural silicone.

Performance:

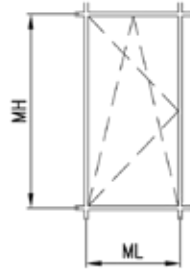
- Heat transfer coefficient:
U_f from 1,68 W/(m²K)
- Air permeability:
AE1200, EN 12153:2003;
EN 12152:2002
- Watertightness:
RE1200, EN 12155:2003;
EN 12154:2002
- Wind load resistance:
2400Pa, EN 12179:2002;
EN 13116:2002
- Impact resistance: E5/15
- Acoustic insulation: R_w=42 dB
(depending on the infill material)




TRANSATLANTYK, Gdynia, Poland
design / Bazyli Domsta,
Adam Drohomirecki and Marcin Pilch

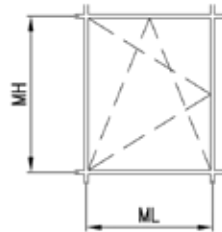
Max. dimensions in the curtain wall

Tilt and turn window



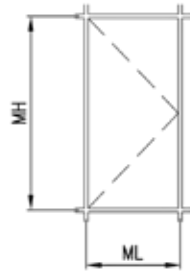
MHmax = 2400 [mm] MHmin = 550 [mm]
MLmax = 1300 [mm] MLmin = 450 [mm]

 - 180 [kg]




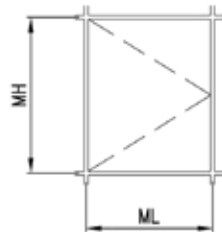
MHmax = 2000 [mm] MHmin = 550 [mm]
MLmax = 1600 [mm] MLmin = 450 [mm]

Side hung window




MHmax = 2400 [mm] MHmin = 500 [mm]
MLmax = 1300 [mm] MLmin = 400 [mm]

 - 180 [kg]

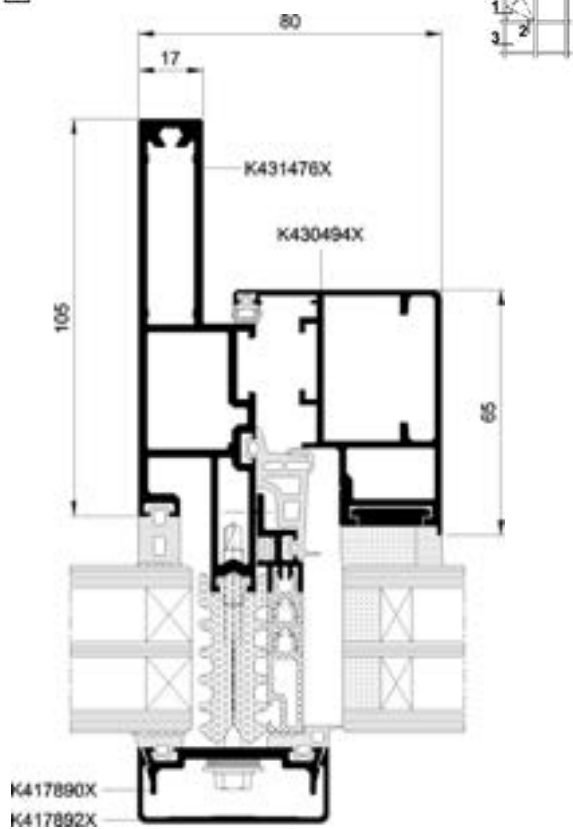


MHmax = 2000 [mm] MHmin = 500 [mm]
MLmax = 1600 [mm] MLmin = 400 [mm]

 } Maximum weight of the vent

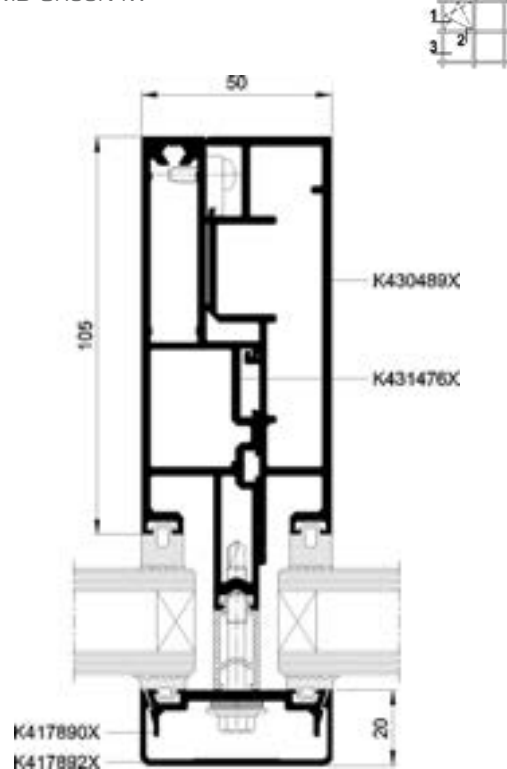
Mullion cross-section

1 MB-SR50N IW



Transom cross-section

3 MB-SR50N IW



Transom cross-section

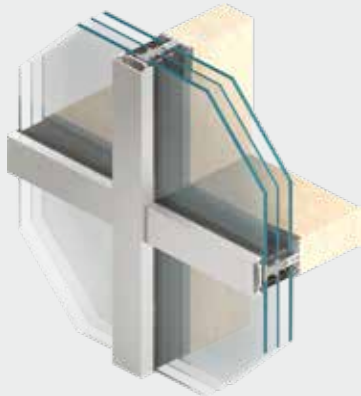
2 MB-SR50N IW



SYSTEM

MB-SR50N
MB-SR50N A
MB-SR50N A EFEKT

FAÇADE SYSTEMS

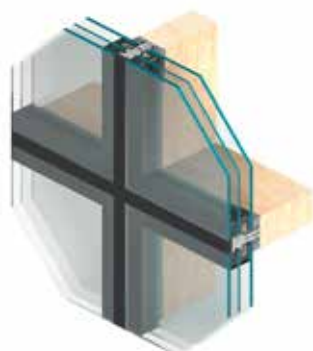


Our panelled front doors are an offer for even the most demanding of users. The cutting-edge technology and design make them not only a functional and durable entrance to a home, but also an attractive showpiece in their own right. They are built using our MB-70, MB-79N, MB-86 and MB-104 Passive aluminium profile systems. The profile for the leaf is adapted for use together with special infills which are flush with the frame on the exterior. The panels can be installed by gluing them to the supporting profiles on one or both sides. The option of using concealed hinges adds an even greater aesthetic value.

OVERLAY SYSTEM FOR WOOD AND STEEL

Construction

The structure is designed with a mulliontransom profile, which is attached to wooden or steel profiles with fasteners. This creates the composite profile from which the curtain wall framework is constructed. The mulliontransom profile is used to attach and hold glazing or other infills and it also transfers wind loads and other forces acting on the structure. This profile also plays a fundamental role in draining and ventilating the structure. To this end, it is covered with EPDM sheathed gaskets. The gaskets are varied in order to obtain cascading drainage for the mullion and transom, which is essential to maintaining watertightness. A thermal insulator with excellent parameters is located between the panes of glass. Thanks to its component parts, the MB-SR50N A curtain wall construction meets the highest technical requirements in terms of both thermal and acoustic insulation, as well as air and watertightness.



MB-SR50N A EFEKT

A wide range of uses

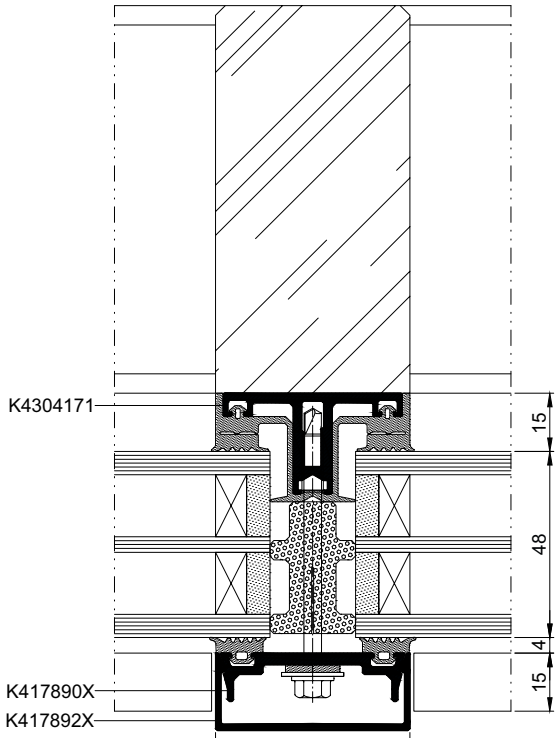
The MB-SR50N A can be used for vertical structures, glass roofs and conservatories. Like the MB-SR50N, its appearance can be moulded in line with individual tastes and the architectural design by shaping the cover caps accordingly.

Technical data and parameters:

- mullion width: 50 mm
- transom width: 50 mm
- transparent glazing, 24-64 mm thick
- maximum infill weight: 600 kg
- thermal insulation: U_f from 0.72 W/(m²K)

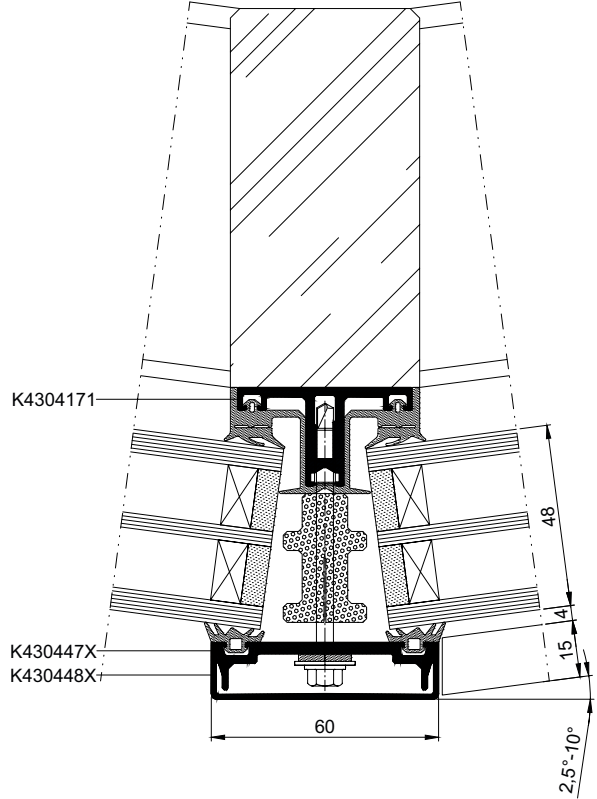
Mullion cross-section

1 MB-SR50N A



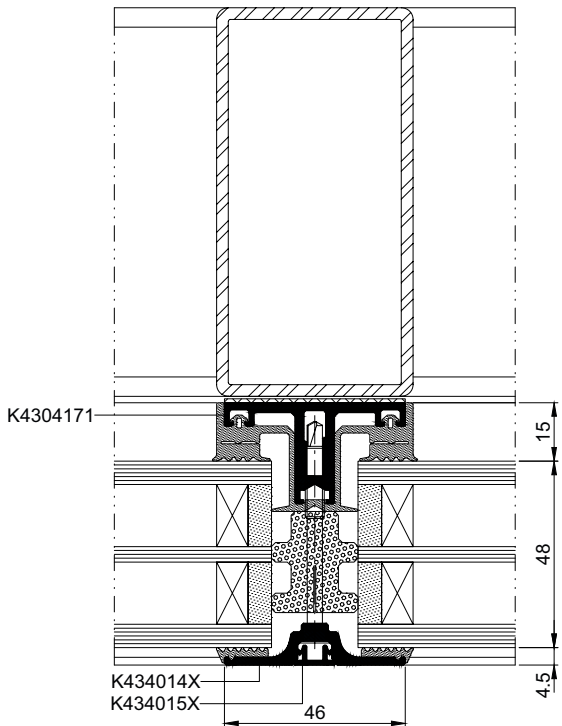
Mullion cross-section

1 MB-SR50N A



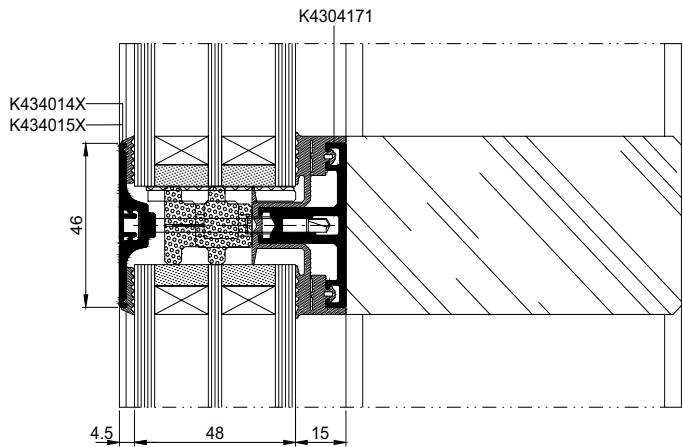
Mullion cross-section

1 MB-SR50N A



Transom cross-section

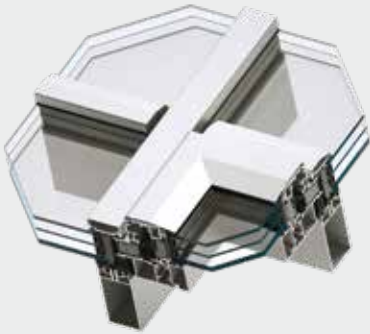
2 MB-SR50N A



SYSTEM

MB-RW ROOF WINDOW

CURTAIN WALL SYSTEMS



Regardless of the type, windows are a major element of the roof and support the ventilation of important parts of the building. But glazed roof plane's windows should have special features. In addition to the "opening function", windows should as much as possible match the rest of the structure in terms of aesthetics, glazing possibilities and thermal insulation. MB-RW is a modern system which responds to the increasing thermal and functional demands the contemporary roof constructions are facing today. It also complements Aluprof's offering of energy-efficient aluminium systems. Windows fabricated using the MB-RW system are intended for installation on roofs with mullion-transom systems (MB-SR50N & MB-TT50 group of products) of an inclination angle of 3° to 75° in relation to the horizontal plane. In rafters/purlins axes, roof windows can have dimensions up to 2.5 m and weight up to 200 kg.

MB-RW's high thermal insulation and a wide range of glazing (from 32 to 51 mm) allows the realization of energyefficient building projects. To do so, special insulating materials were used. A specially-designed glazing gasket and a cover cap allow to obtain excellent tightness parameters while providing an efficient and simple installation of the infill.

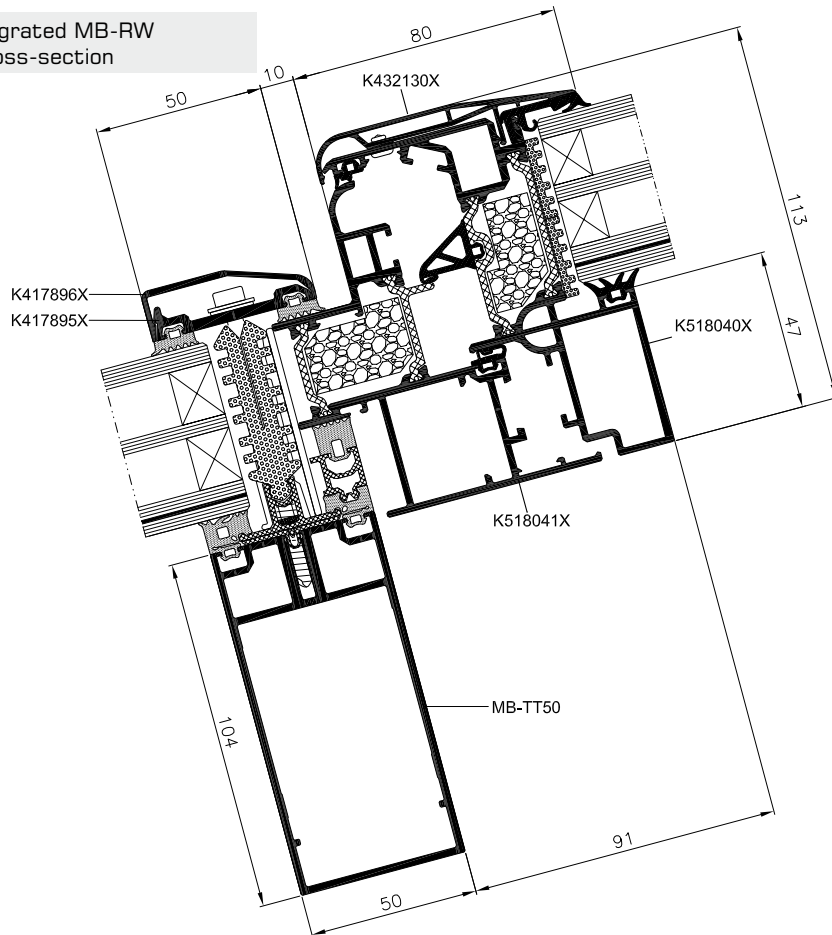
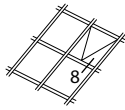
Technical capabilities – in terms of fittings – is yet another advantage of the MBRW system-based window roofs. To simplify fabrication stage, dedicated hinges were developed – these can be installed at the final stage of the construction's fabrication. In order to increase the dimensions of the windows, profiles can be optionally ferruled with standard multi-point locking fixtures, this without prejudice to the tightness of the whole structure. This also allows to fabricate windows opened manually by the handle. The system also allows the installation of electric actuators from different manufacturers in a wide range of constructions – MB-RW windows can therefore be part of the gravitational ventilation system of the building.

Performance:

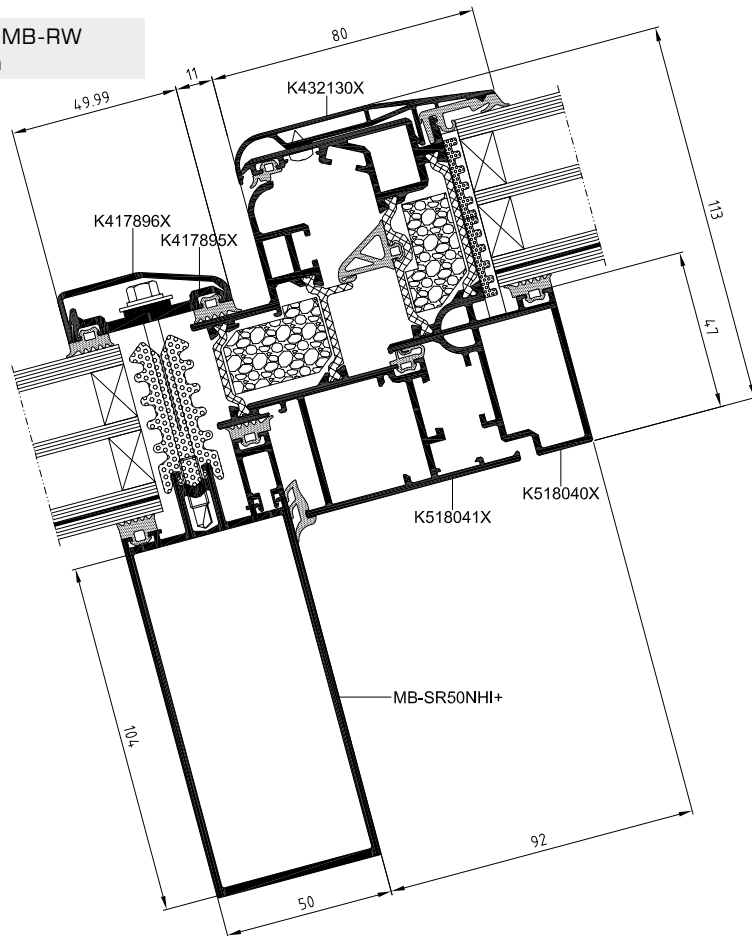
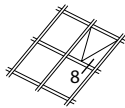
- Thermal insulation:
 U_f from 1,8 W/(m²K)
- Air permeability:
Class 4 (1350 Pa); EN 12207
- Water tightness:
E1800; EN 12208
- Wind load resistance:
2,4 kN/m²; EN 12210
- Impact resistance:
Class 4; EN 1873



MB-TT50 façade-integrated MB-RW window roof - cross-section



MB-SR50N HI + façade-integrated MB-RW window roof - cross-section



More examples on: www.architects.aluprof.eu

Scale 1:2

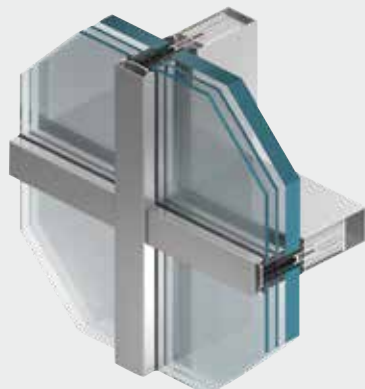
SYSTEM

MB-SR50N EI

MB-SR50N EI EFEKT



CURTAIN WALL SYSTEMS



The mullion-transom system MB-SR50N EI is intended for the construction and execution of light fire resistant curtain and filling walls of the fire resistance class EI15, EI30, EI45, EI60 according to the standards EN 1364-3 and EN 1364-1 as well as glazed roof coverings of the fire resistance class RE20, REI20, RE30, REI30 as per the standard EN 1365-2. The system has been classified as non-fire-propagating (NFP). The MB-SR50N EI system is also available in „EFFECT” version – without aluminium strips visible from the outside.

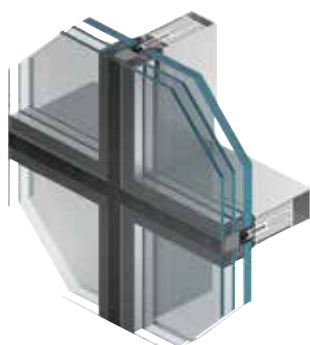
CURTAIN WALL FIRE RATED SYSTEM

System designed based on well proven MB-SR50N solution

This solution uses profiles of the basic MB-SR50N facade system: mullions of a depth of between 85 and 225 mm and transoms of a depth of between 69,5 and 189,5 mm. In order to obtain fireproof aluminium profiles, mullions and transoms have been equipped with special fireproof inserts. A fireproof insert consists of a special-shape aluminium profile, fulfilling the function of reinforcement, shielded with panels made from fireproof materials.

High thermal and acoustic insulation

In order to achieve optimal heat and sound insulation in construction we use continuous thermal break profile of HPVC and EPDM seals. In addition, the side surfaces of the insulator are equipped with fire-proof tape that under high temperature expands and fills the space between the areas of the facade.



MB-SR50N EI EFEKT



CROSS POINT, Łódź, Poland
design / AGG-Architekci Grupa Grabowski

Glazing

The MB-SR50 EI and MB-SR50N EI systems can accommodate glazing units from 15mm up to 64mm. This gives flexibility of using single or double glazing fire rated glass products, such as Pyrobel, Polflam, Swissflam, Pyrostop and Promaglas, depending on the project requirement. The system also allows for fire rated panels.

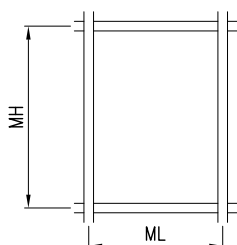
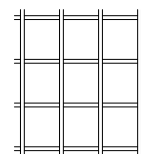
Functionality and aesthetics

The design of the fire rated curtain wall system allows the use of angled connections 90° or 135° (inside and outside), angled connections to $\pm 7.5^\circ$ per side and building facades tilted from the vertical at an angle of $\pm 10^\circ$. It is also possible to install the MB-78EI fire doors while maintaining the fire resistance of the whole structure in classes EI 30 or EI 60.


Performance:

- Air permeability:
MB-SR50N EI:
Class AE 1050 Pa,
MB-SR50N EI EFEKT:
Class AE 1200 Pa
- Water tightness:
Class RE 1200Pa
- Thermal insulation:
 U_f from 1,78 W/(m²K)

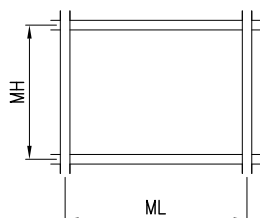
Max. dimensions in the curtain wall




MHmax=3000 mm
MLmax=1500 mm


 - 300 kg

Fixed window, transparent



MHmax=1200 mm
MLmax=1800 mm

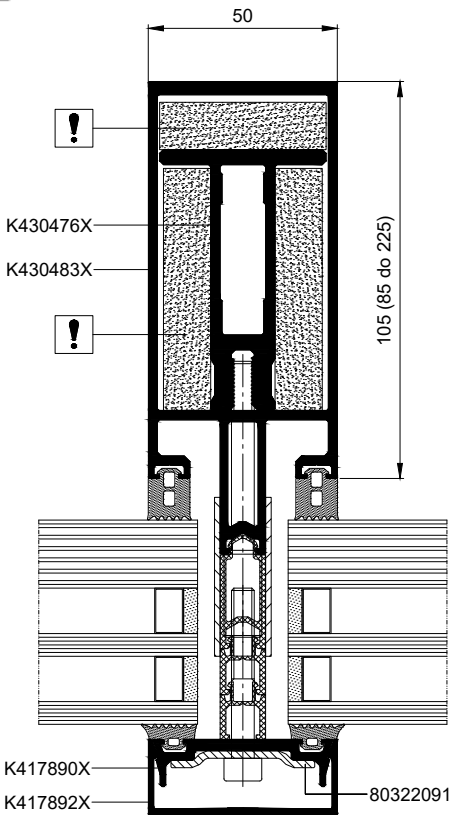
 - 300 kg

 } Maximum weight of the vent

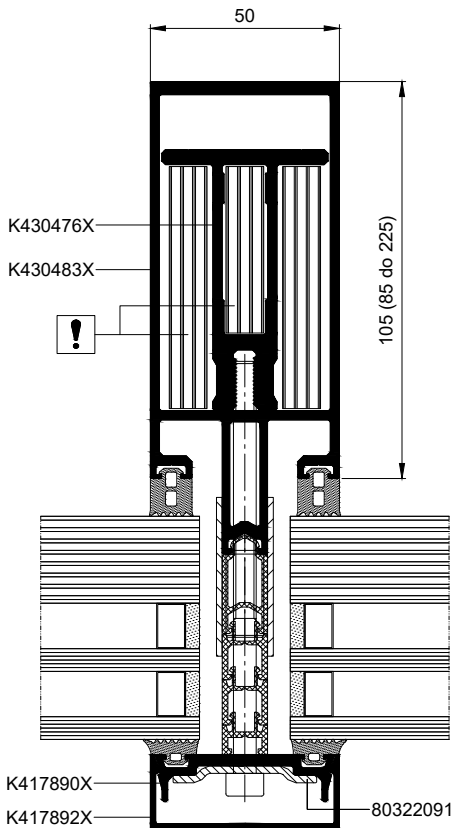
Mullion cross- section EI 30

Mullion cross- section EI 60

1 MB-SR50N EI

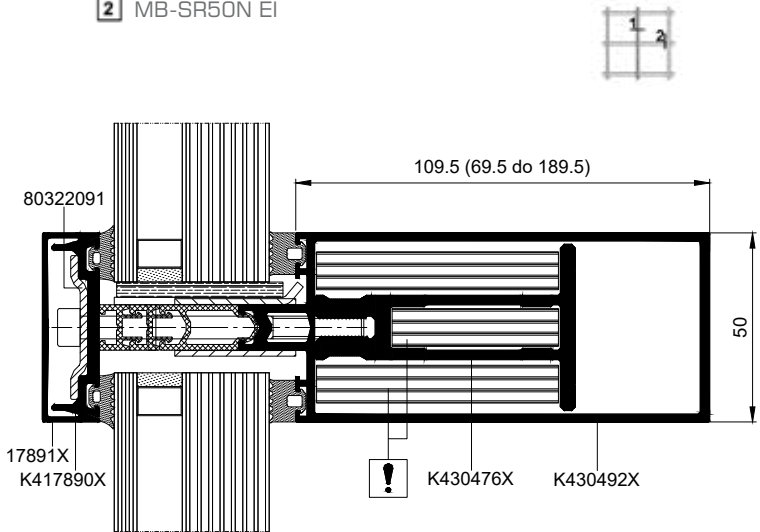


1 MB-SR50N EI

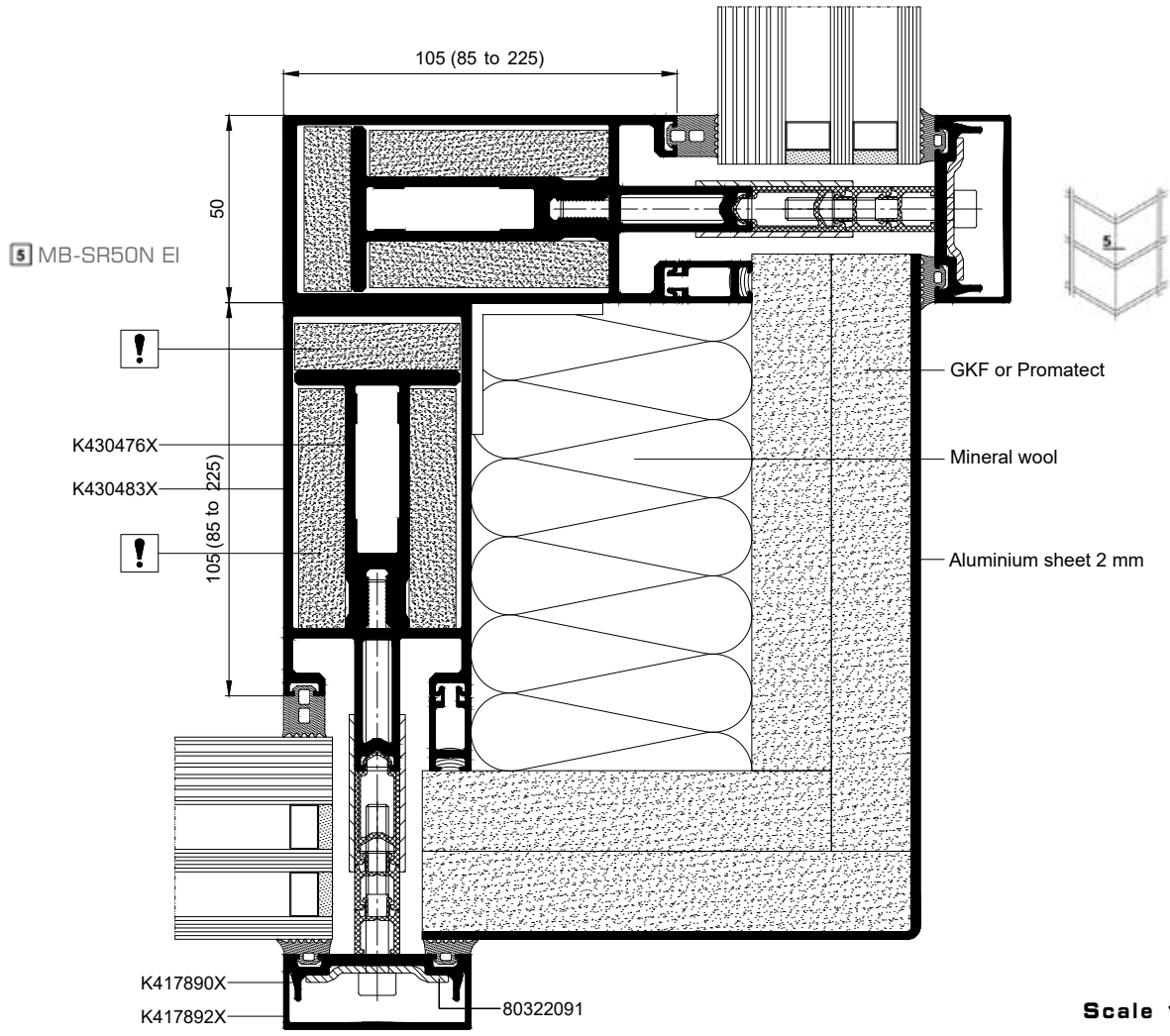
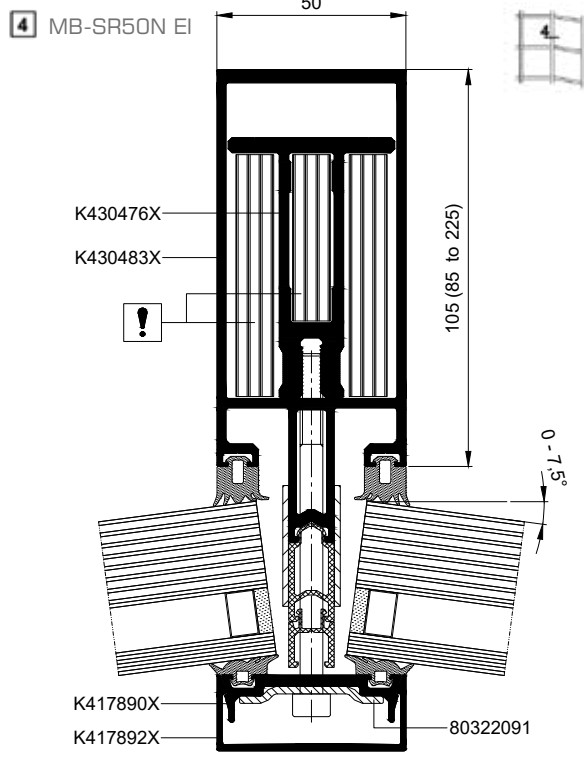
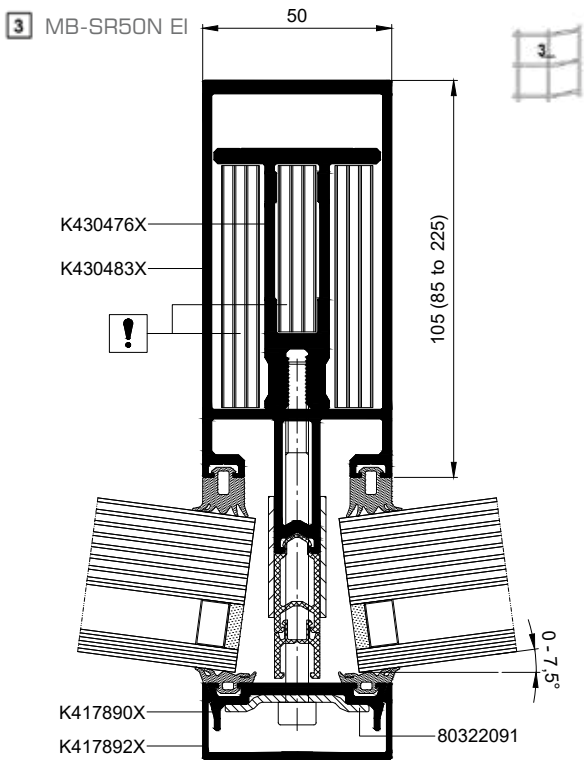


Transom cross-section EI 60

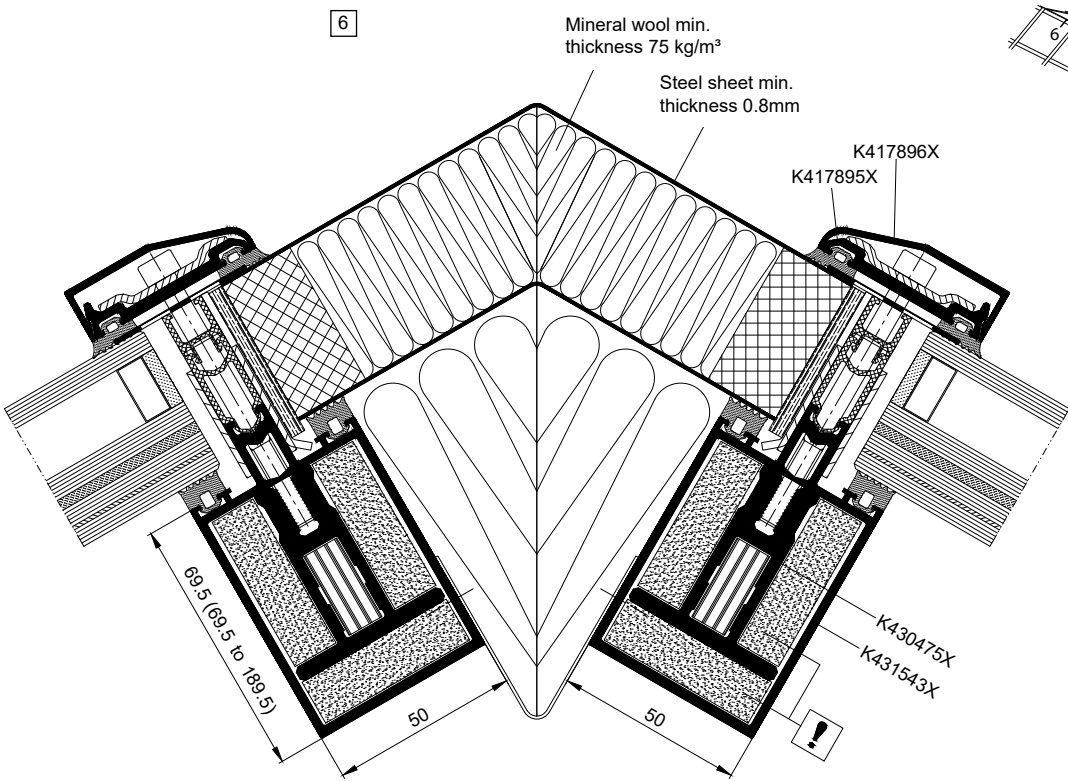
2 MB-SR50N EI



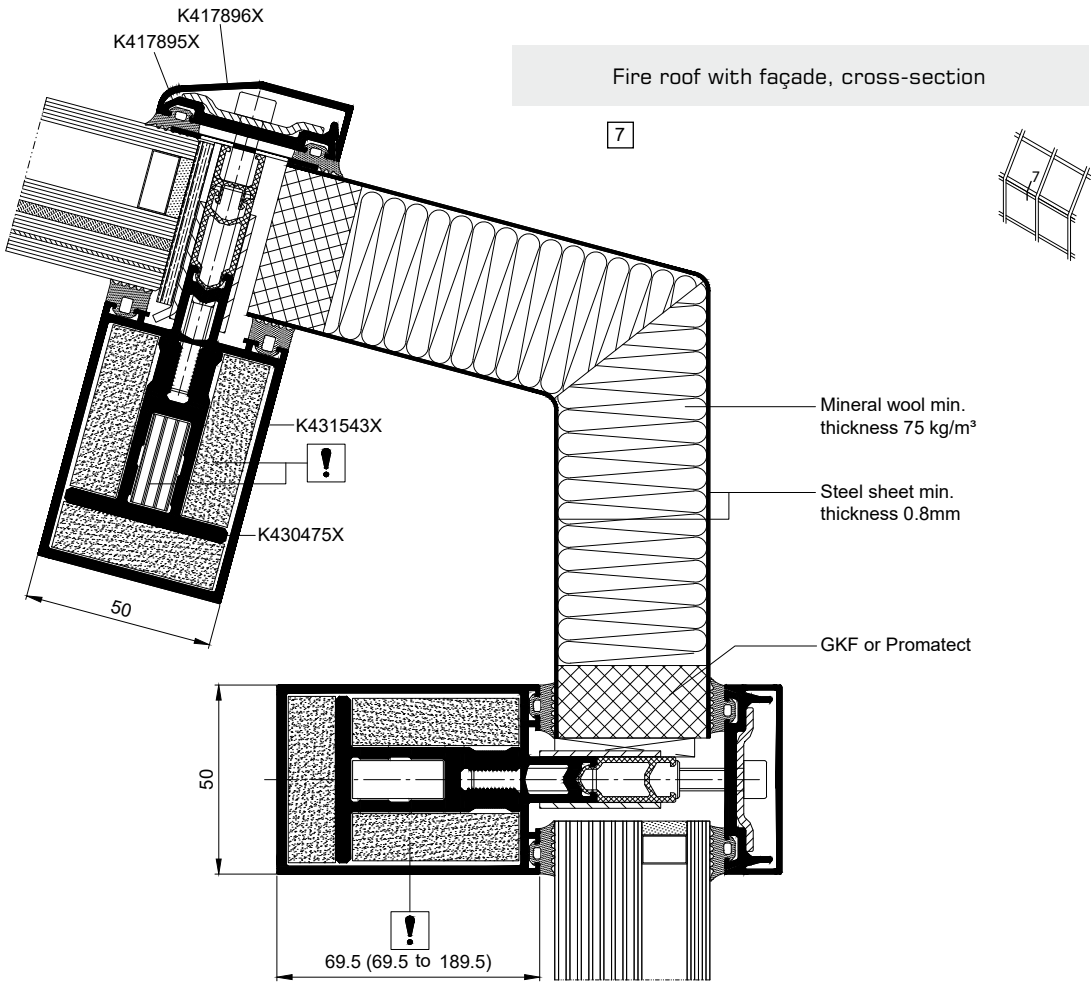
Mullion cross-section $(-7,5^\circ) \div 7,5^\circ$ EI 30



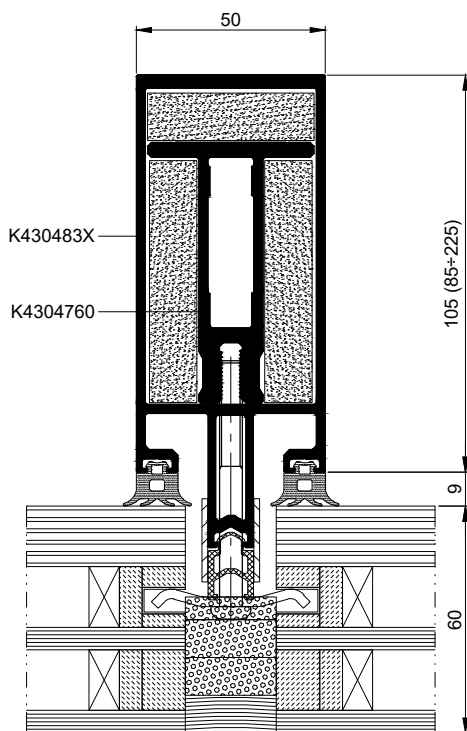
Fire roof peak line, cross-section



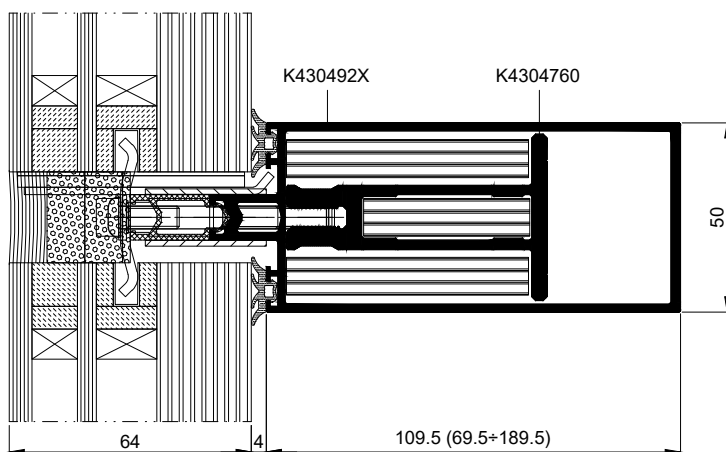
Fire roof with façade, cross-section

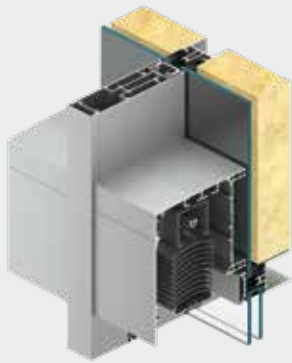


Mullion cross- section EI30



Transom cross-section EI60





The MB-SR50N ZS system is an innovative solution combining the SkyFlow venetian blind system with Aluprof's mullion-transom curtain walling system MB-SR50N. It has been created primarily for the construction of buildings where complete harmony between the technical and aesthetic aspects plays a particular role. With this in mind, we designed clamping strips, making it possible to fit the façade infills and concealing strips, which also act as the guides for the external blinds. This means that the decision to use this kind of blind can be taken later on in the process, when the façade has already been installed. The entire mechanism is discreetly concealed in an aesthetic, extruded aluminium headbox. The MB-SR50N ZS is available with aluminium or cord guides. The maximum dimensions are 4500 x 4000 mm.

MULLION AND TRANSOM CURTAIN WALL SYSTEM INTEGRATED WITH SKYFLOW VENETIAN BLINDS



FUNCTIONALITY AND AESTHETICS

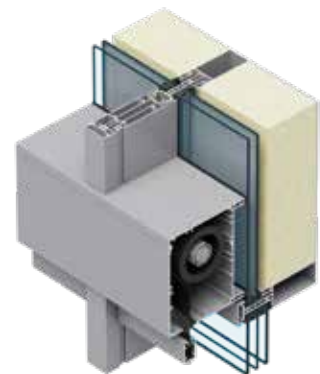
- there are two types of pins available in the offer: aluminium (durable and resistant) and PVC (minimizes noise that may arise during wind)
- slats made of shaped aluminium sheet and are available in two shapes: C and Z
- the guide channels, the only solution of this type available on the market, are equipped with special seals eliminating the noise that can arise when the slat hits the guide channel
- the textile elements of the blind (ladders and straps) are made of high quality polyester and they are thermally fixed, which guarantees high

resistance to weathering, stretching, abrasion, as well as UV rays and the appearance of mould.

- the string ladder is arranged in the shape of the number 8 during rolling, so that it does not become entangled between the slats, ensuring smooth retraction
- two variants of the bottom bar: complete and open

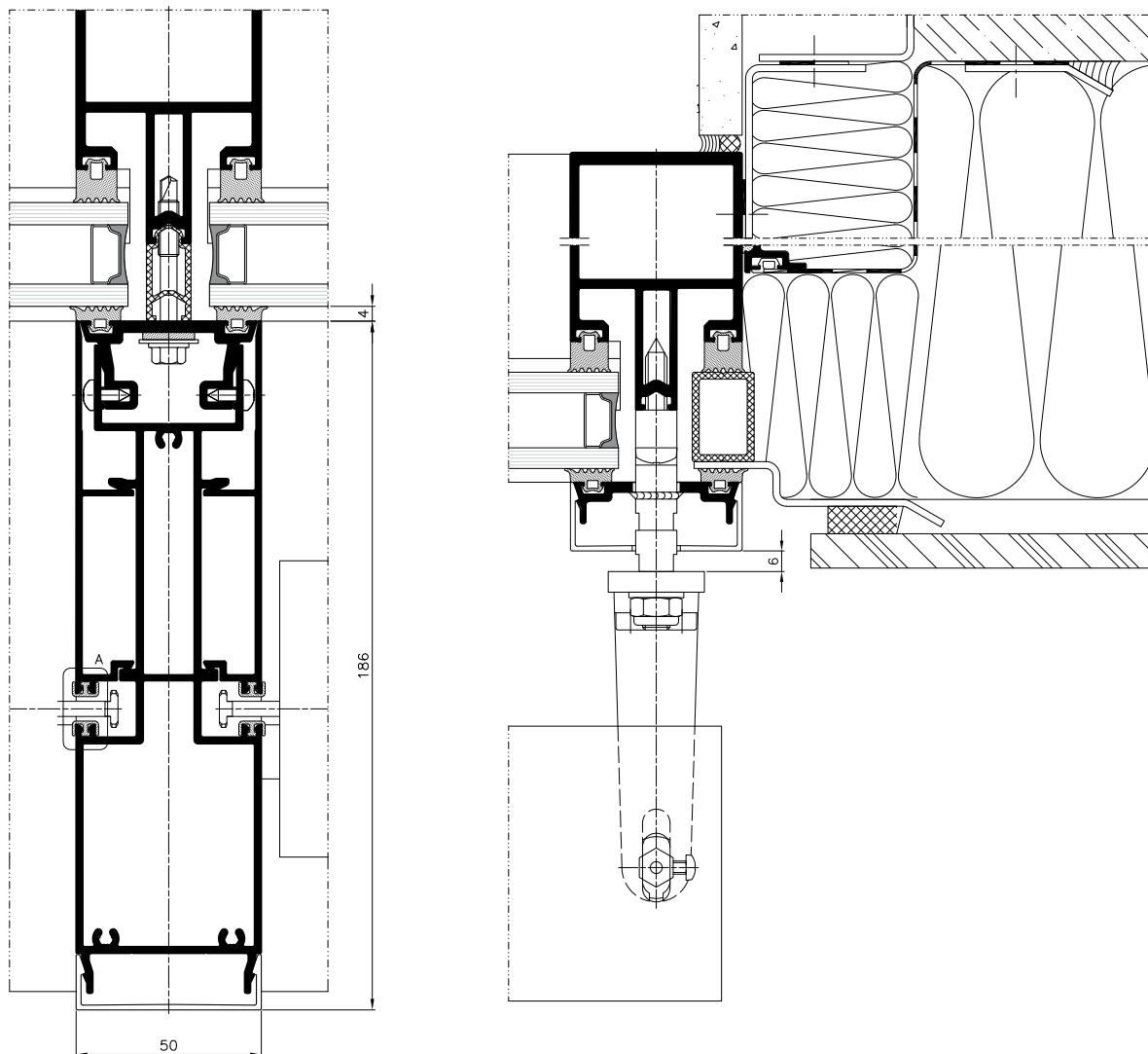
Performance:

- Air permeability: class AE1200 Pa, EN 12152
- Watertightness: class RE1200 Pa, EN 12154
- Wind load resistance 2,4 kN/m², EN 13116

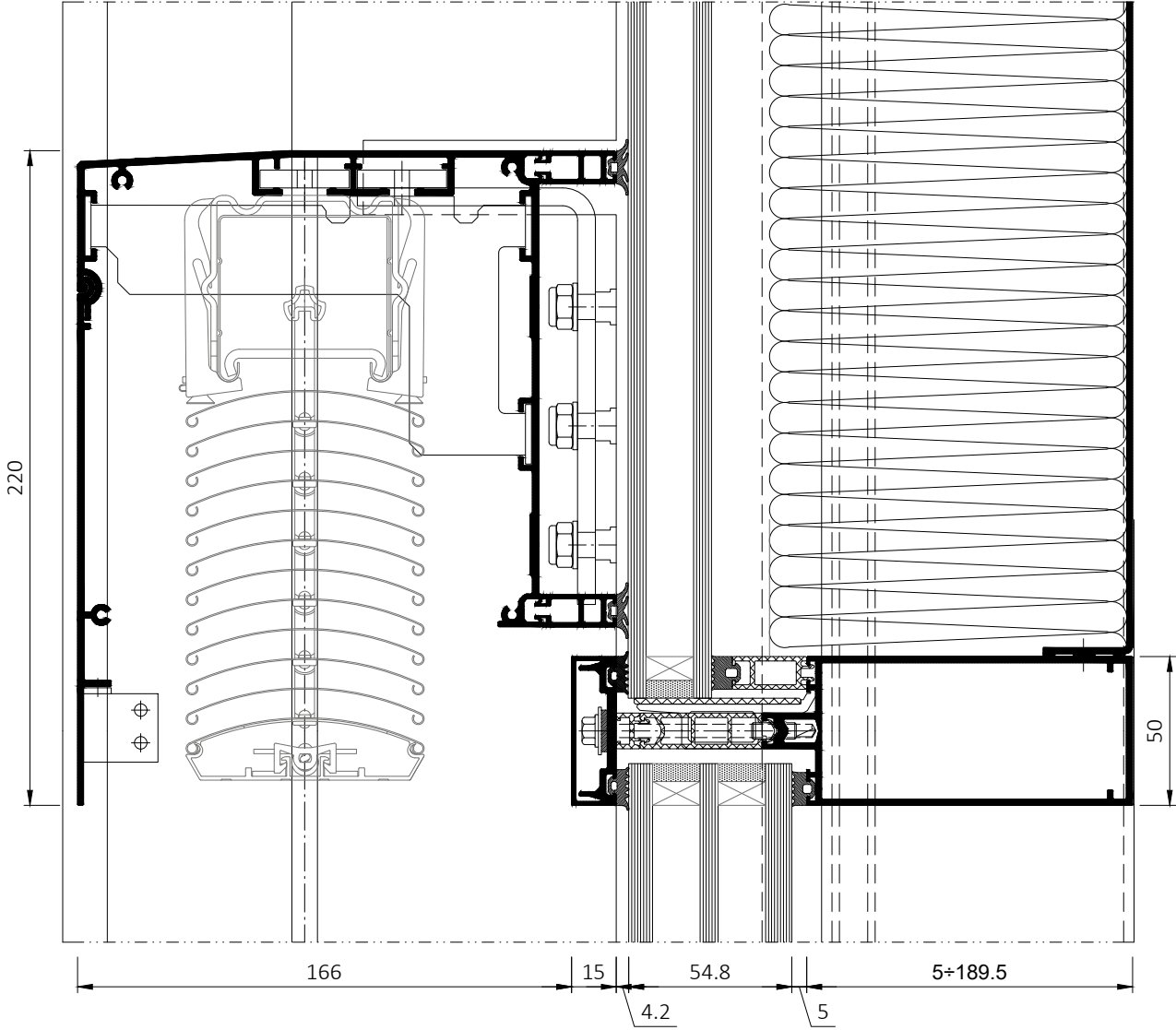


MB-SR50N ZS system is available as façade system compatible with SkyRoll screens.

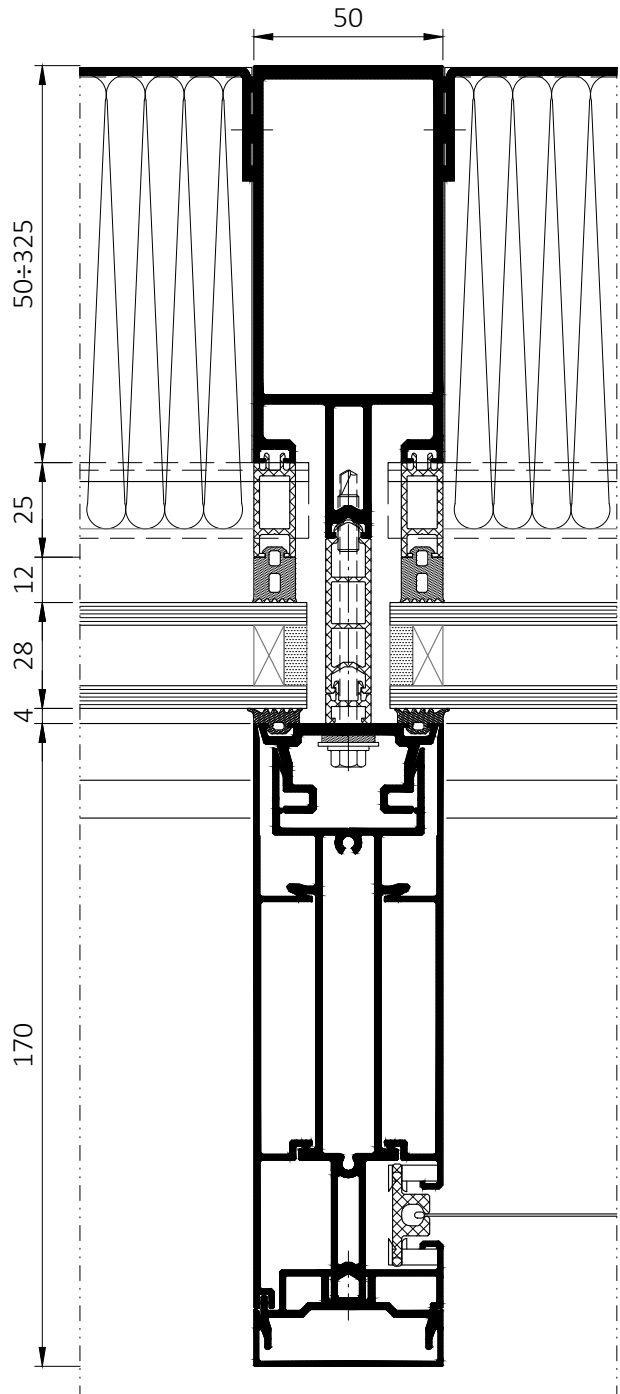
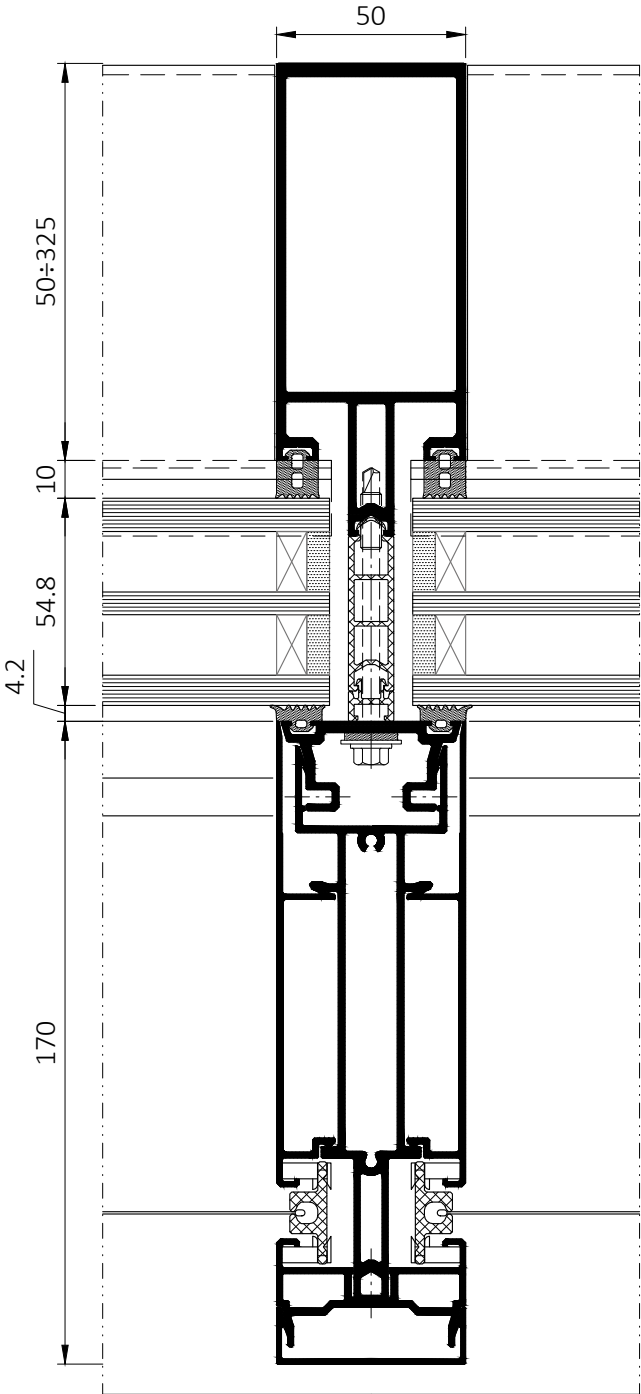
Mullion - cross-section



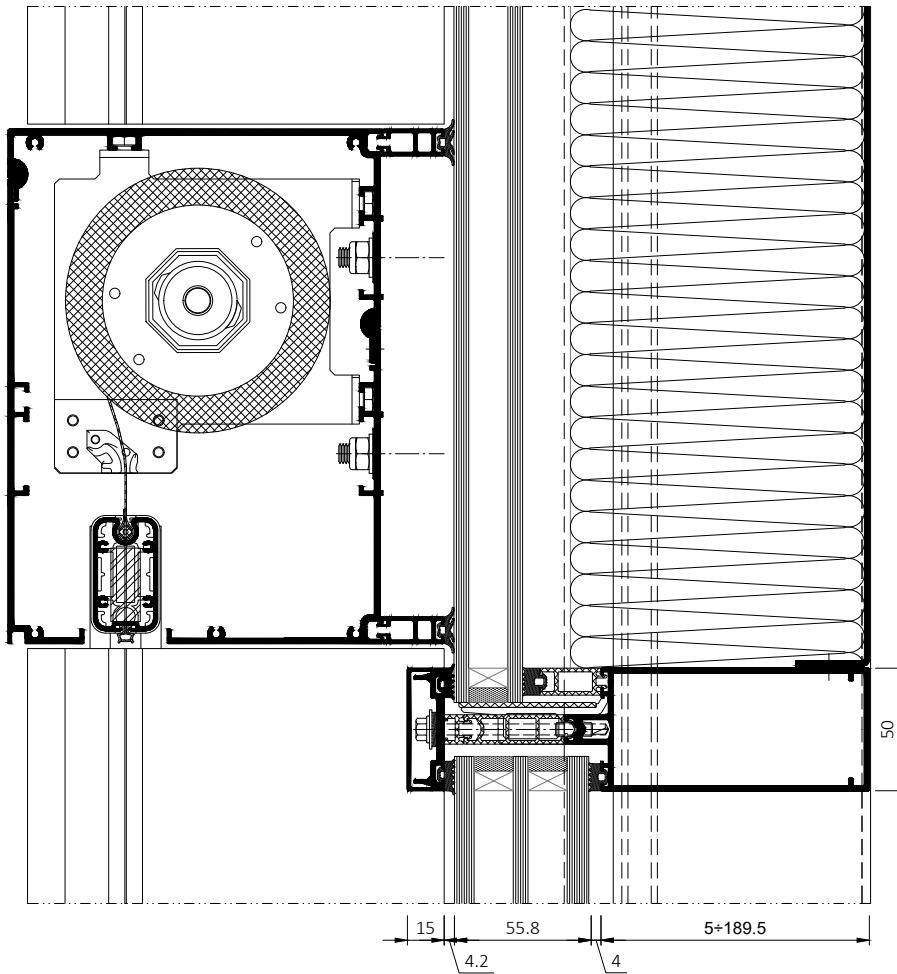
Transom - cross section



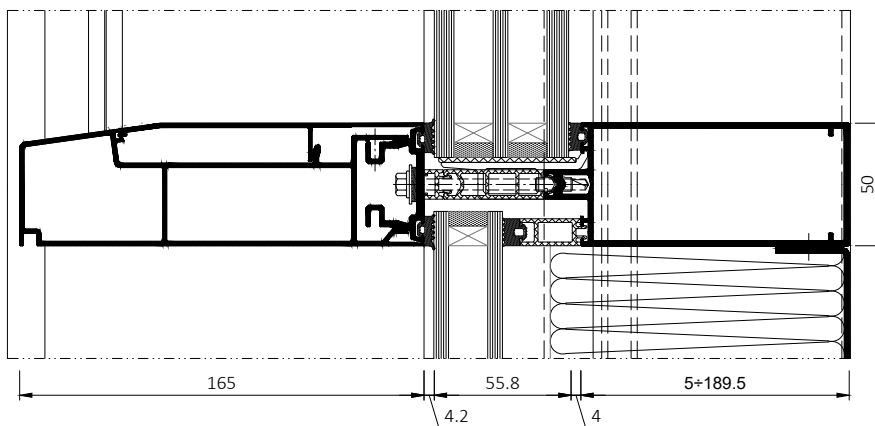
Mullion - cross-section



Transom - cross section



Transom - cross section



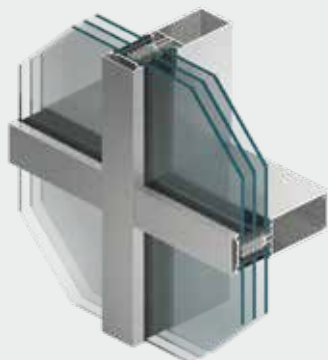
SYSTEM

MB-SR60N

MB-SR60N HI+

MB-SR60N EFEKT

CURTAIN WALL SYSTEMS



The system is designed for the fabrication and installation of flat, light-weight curtain walls of a suspended or filling type, roofs, skylights and other spatial structures. It enables constructing aesthetic curtain walls with narrow sight lines, ensuring at the same time durability and strength of the end product. There are different ways to finish off the external appearance and the semi-structural version (MB-SR50N HI EFEKT). The system features very good technical parameters. Among its strong points is flexibility in shaping space and a wide variety of opening elements to be installed on the curtain wall. Particularly noteworthy is the version with enhanced thermal insulation MB-SR60N HI+ which uses special insulators. The MB-SR60N EFEKT, another version with no cover caps visible from the outside, is also available

MULLION AND TRANSOM CURTAIN WALL SYSTEM

Construction

The load bearing construction is formed by vertical and horizontal aluminium sections of box-type cross-sections (mullions and transoms) of a fixed width, i.e. 60 mm and properly connected with each other. Clamping strips supporting the panes and masking strips of any shape form the external side of the curtain wall. The system also includes additional sections, accessories performing sealing or connecting function and a wide range of EPDM gaskets, applied to seal panes or other infills in the curtain wall.

Depth of sections:

mullions: 50 – 325 mm,

transoms: 5 – 189,5 mm.

Infills 24 – 72 mm thick may be fitted in the system.



PPNT, Gdynia
design / AEC Krymow & Partnerzy

High aesthetic values.

Varying Applications

The shape of mullions and transoms enables developing aesthetic curtain walls with visible narrow division lines, ensuring at the same time durability and strength of the construction. Profiles may be selected in such a way that they are flush on the inside of the curtain wall.

A particular variant is the MB-SR50N EFEKT which resembles a structural wall in appearance: a uniform and smooth wall is obtained from the outside, divided by a truss of vertical and horizontal lines 24 mm wide.

Proven strength

Proven strength Depending on the division pattern and external loads, the system provides for an adequate number of mullions and transoms varying in depth, with the moment of inertia I_x ranging between 54.6 and 1232.5 [cm⁴], adjusted in such a way as to guarantee optimal aluminium consumption and effective reduction in material costs. In case of large bearing loads all mullions may be additionally reinforced by applying special internal aluminium profiles, thus significantly improving their strength. Max. weight of glass: up to 1000 kg.

Very good thermal insulation, excellent water and air tightness

In terms of technical performance, the curtain wall can meet the requirements of applicable standards, as well as the increasing expectations of architects and investors. Particularly noteworthy is the version with enhanced thermal insulation MB-SR60N HI+ which uses special insulators.

Performance:

- Air permeability:
to Class AE 1350, EN 12152
 - Watertightness:
to Class RE1500, EN 12154
 - Wind load resistance:
2,4 kN/m², EN 13116:2002
 - Impact resistance:
Class I5/E5, PN-EN 14019
- Acoustic insulation: Rw=45 dB
(depending on the infill material)

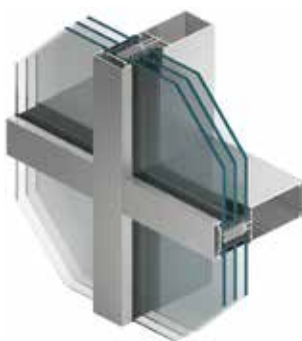


HILTON, Kijów
design / John Seifert Architects Ltd

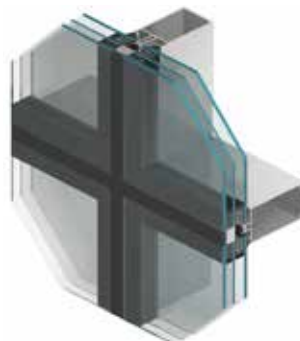


THE PARK, Warszawa
design / APA Wojciechowski

Variations available in MB-SR60N system:



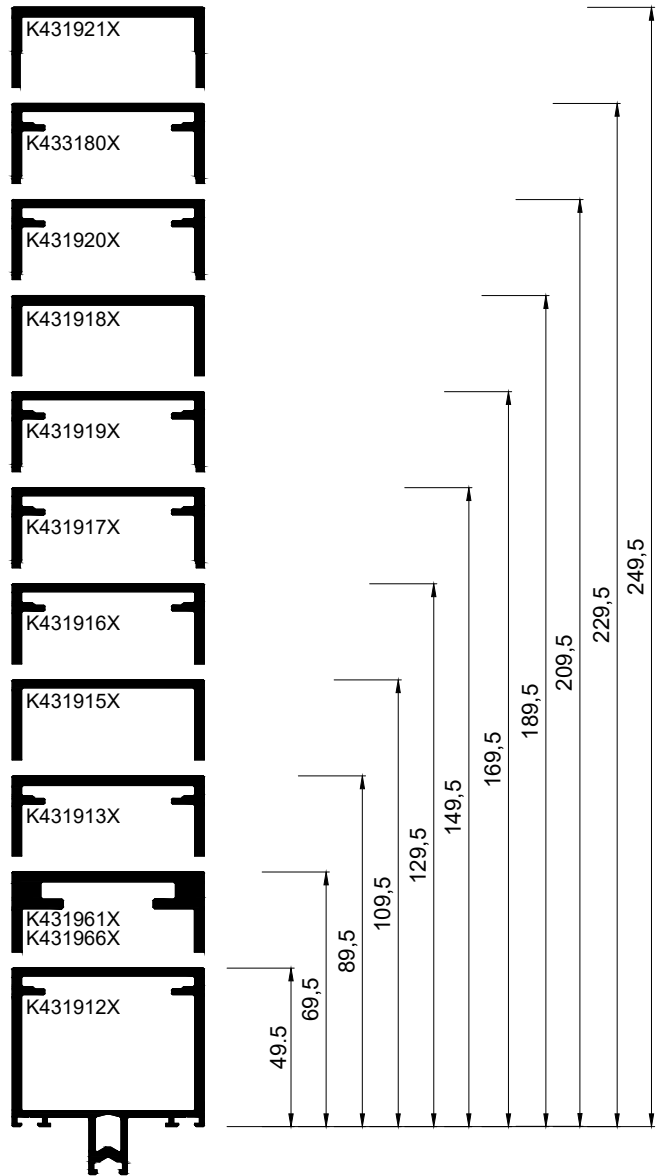
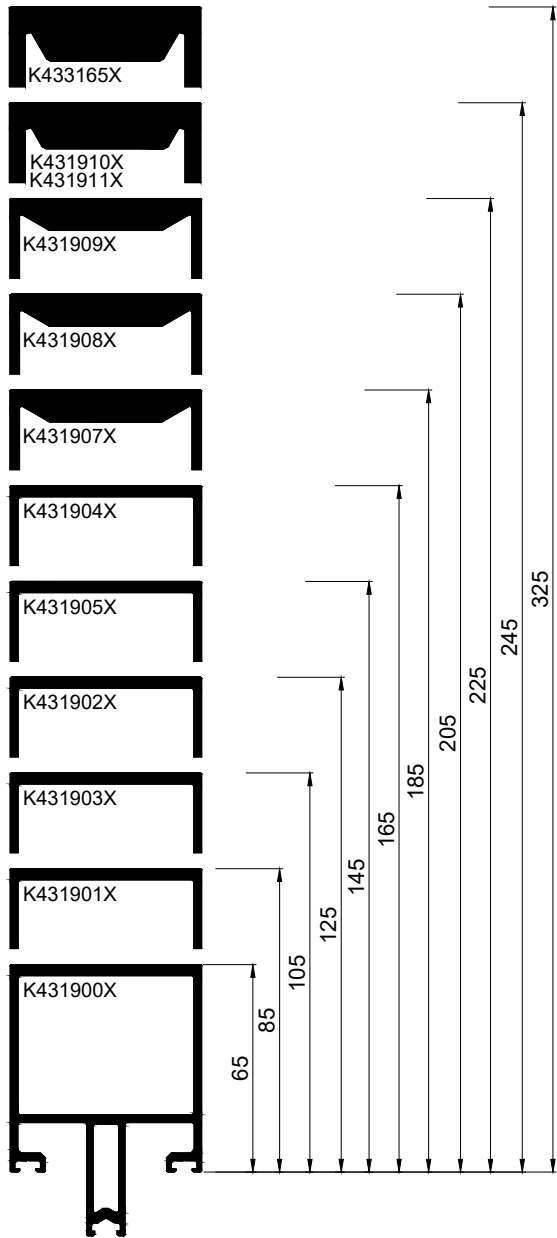
MB-SR60N HI+



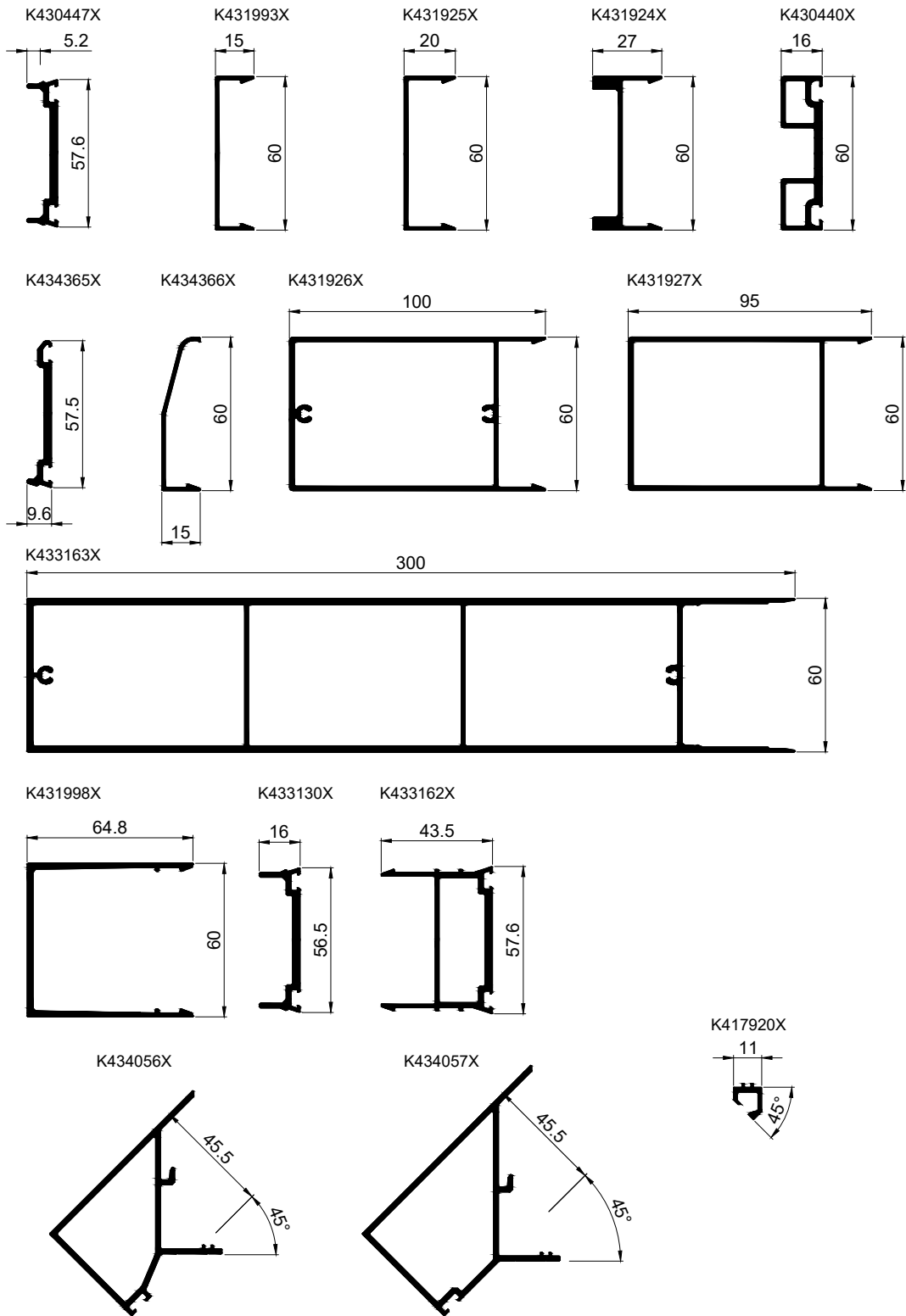
MB-SR60N EFEKT

Mullions

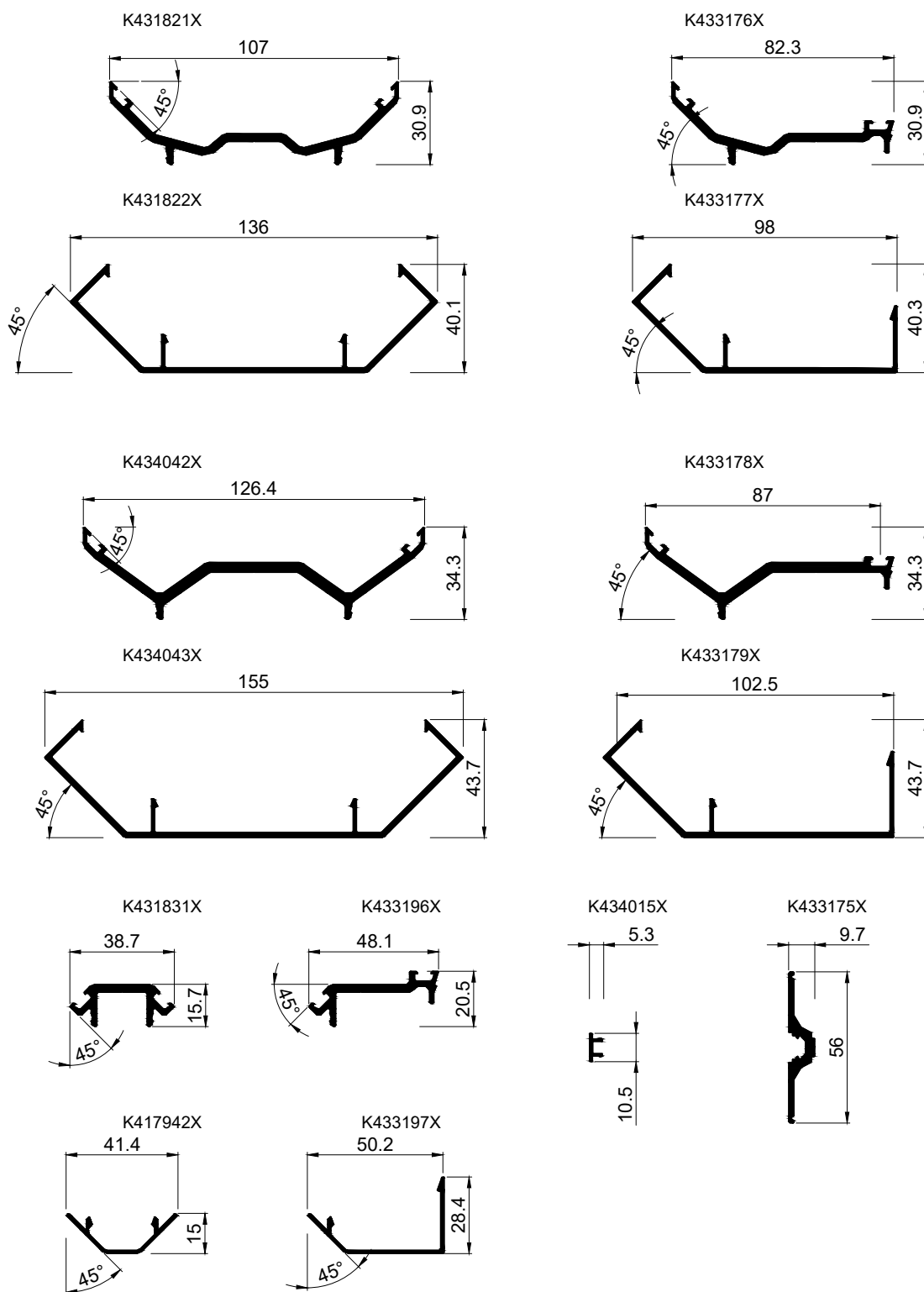
Transoms



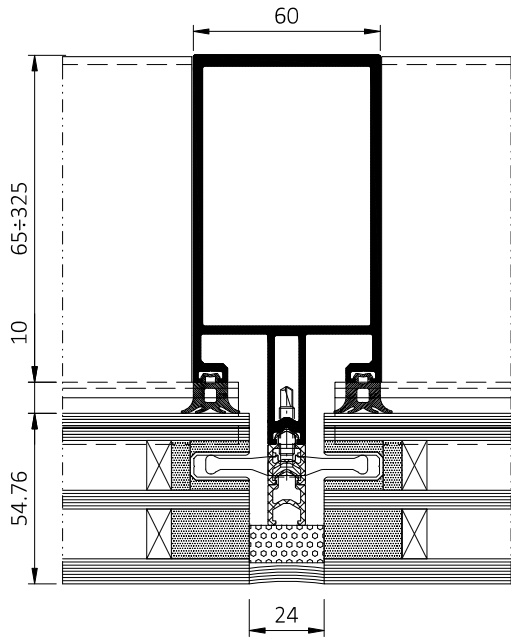
Cover caps and pressure plates, additional profiles



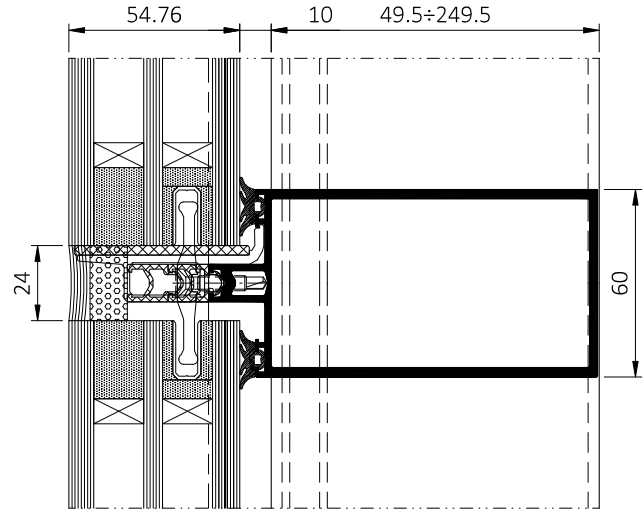
Cover caps and pressure plates, additional profiles



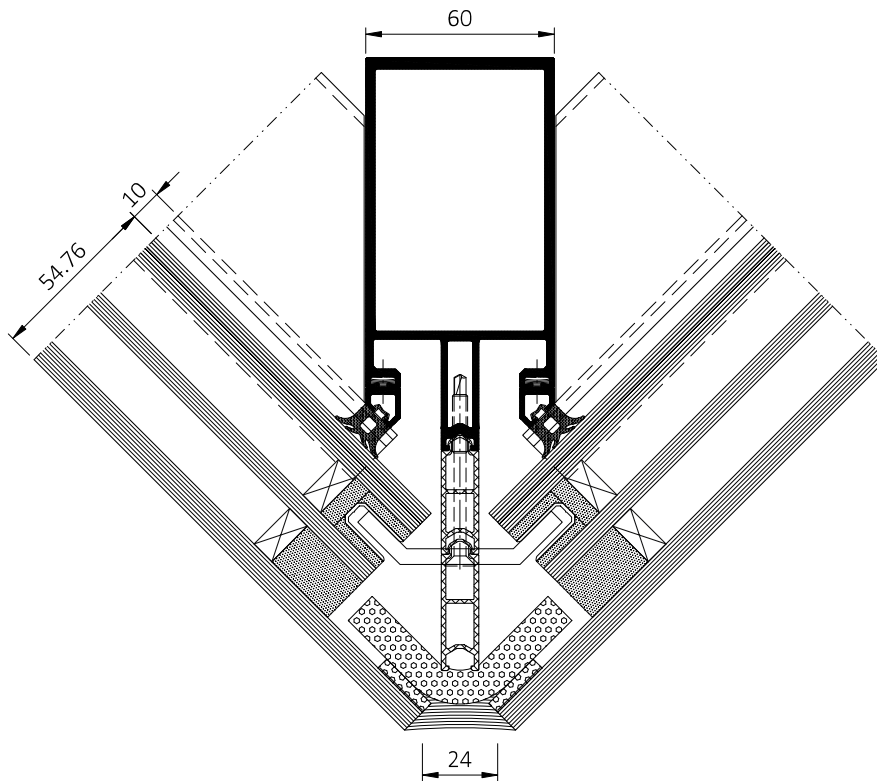
MB-SR60N EFEKT mullion cross section



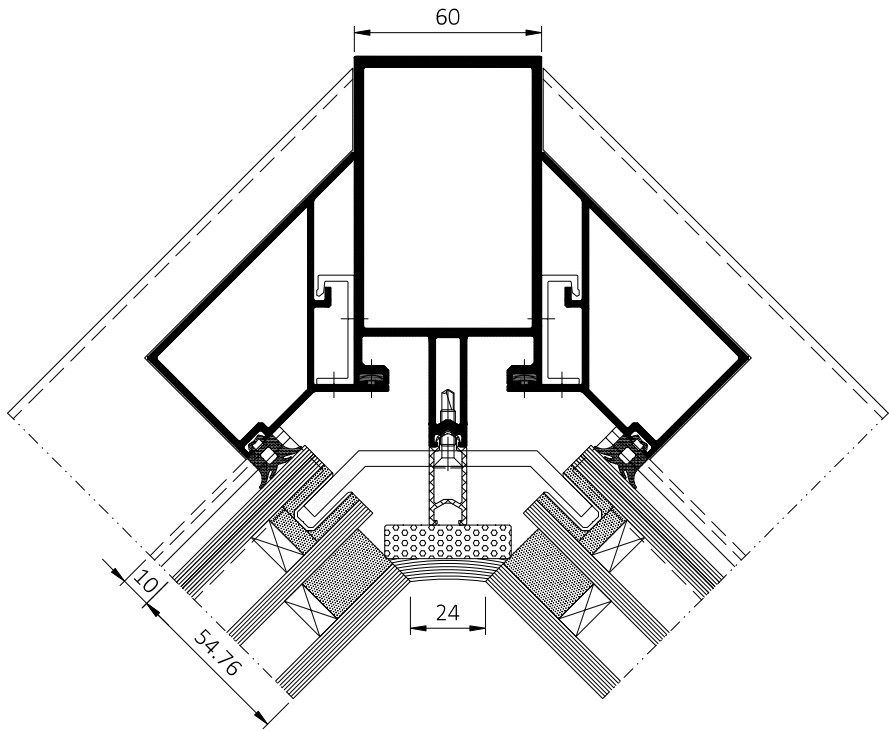
MB-SR60N EFEKT transom cross section



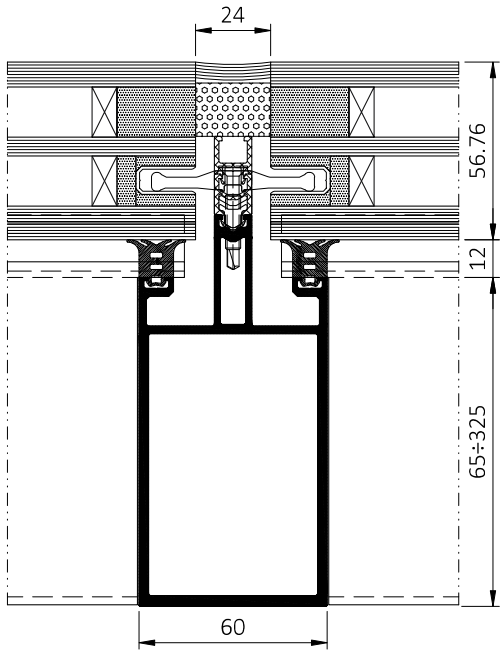
Cross section of an angled intersection point



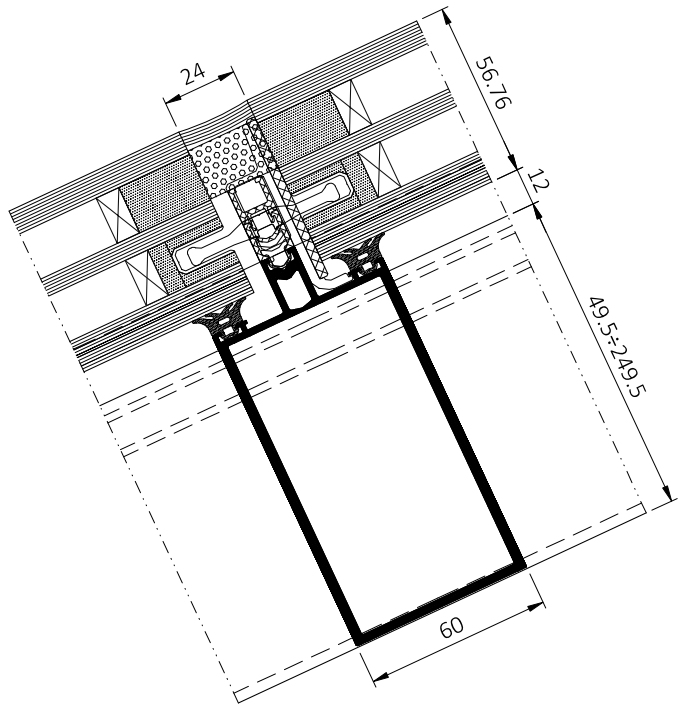
Cross section of an angled intersection point

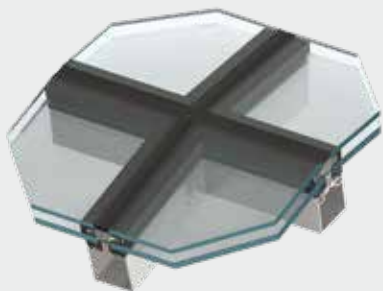


Cross section of a roof mullion



Cross section of a roof transom





The MB-SR60N roof glazing system is a solution that offers extensive possibilities in the scope of spatial structures providing the architects with a complete freedom in designing modern building envelopes. The MB-SR60N allows to fabricate structures of a complex shape: pitched roofs, multiplane skylights and domes that pass into vertical walls in the form of a rotunda. This system has been designed specifically for the Galeria Katowice shopping mall. The solution consists of using 60mm wide aluminium profiles of an appropriate strength to maximize glazing area and increase amount of natural light inside the building in order to achieve stunning aesthetic effect and create an optimal indoor environment.

MULLION-TRANSOM SYSTEM FOR SPATIAL STRUCTURES

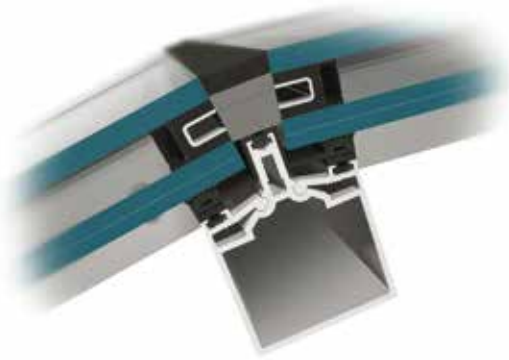
The supporting mullion-transom structure is aligned on the inside of the façade. Due to the required, industrial-look interiors or to some large spans between the supports, system structure can be supported by steel substructure to obtain the required strength of the whole construction. Mullion and transom profiles are designed to play a fundamental role in drainage and ventilation strategy. Fitted with specially shaped EPDM gaskets to form channels which allow proper cascade drainage and ventilation of the façade. Glazing, in the form of a fixed glazing units and spandrel panels, can be installed on a continuous basis or using glass fittings. With a range of glazing beads, the joints can be made with angles from 0 to 20°. The glazing of different shapes can be used (trapezoidal, triangular, etc.).



Katowice Gallery, Poland
design / SUD ARCHITECTES

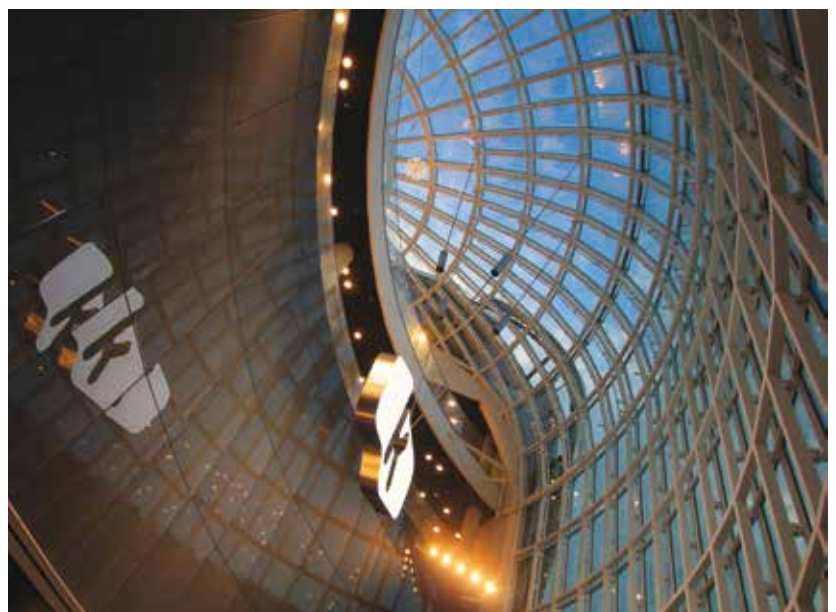


From the outside the system is sealed with a special PE sealing cord (PP) and with weather silicone guarantee full air and water tightness, as well as providing an excellent thermal insulation of the façade.

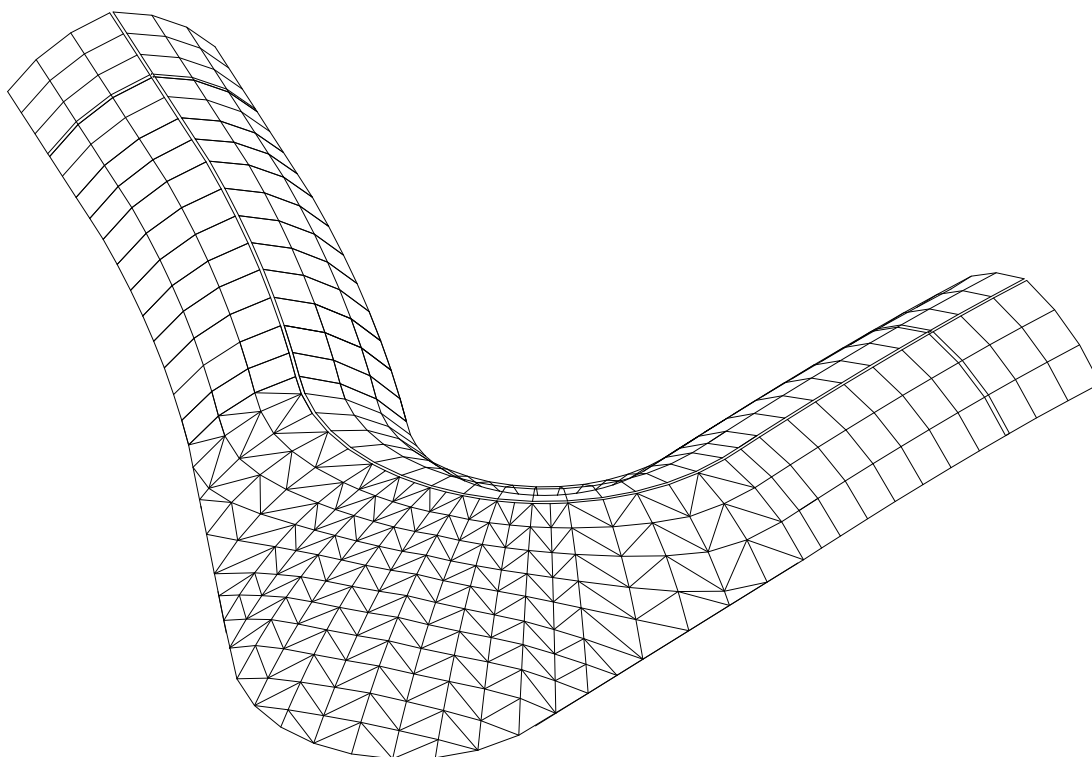
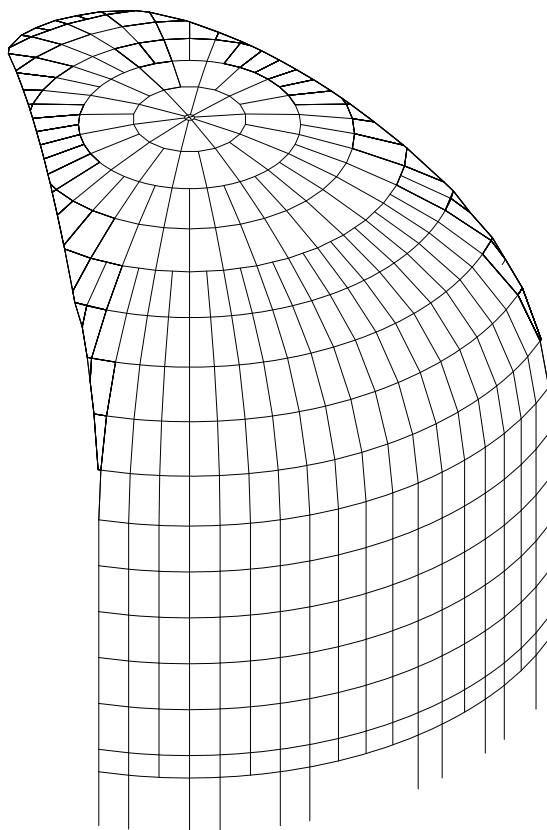


Performance:

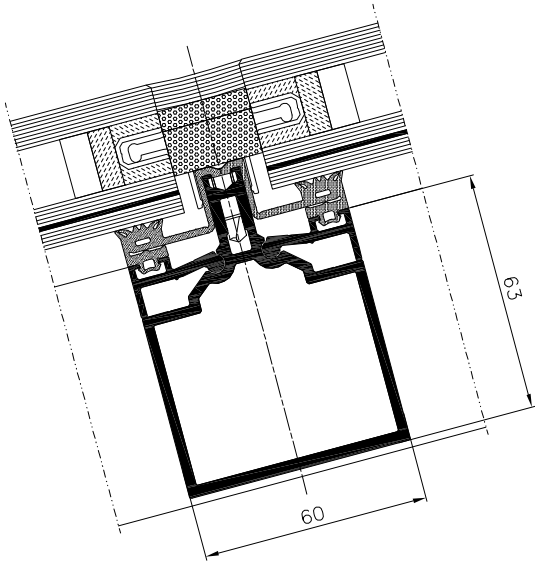
- Air permeability:
Class AE 1200 Pa
- Water tightness:
Class RE 1200 Pa
- Wind load resistance:
2800 Pa (safety testing 4200 Pa)
- Clamping load:
Class DL 4200
- Pull-off-load:
Class UL 4200
- Impact resistance:
Class SB 1200



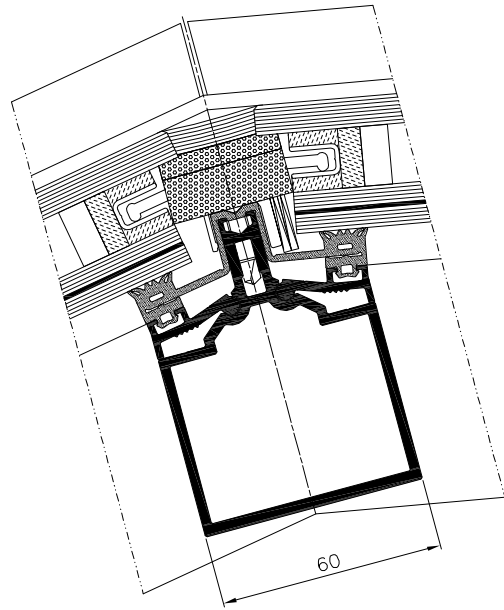
Construction schemes



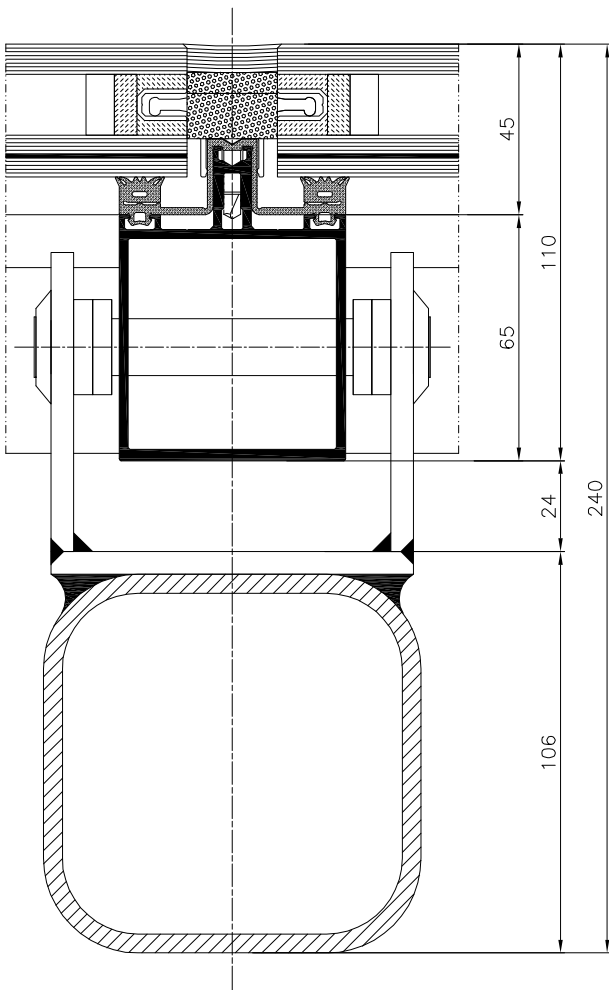
Transom, cross-section



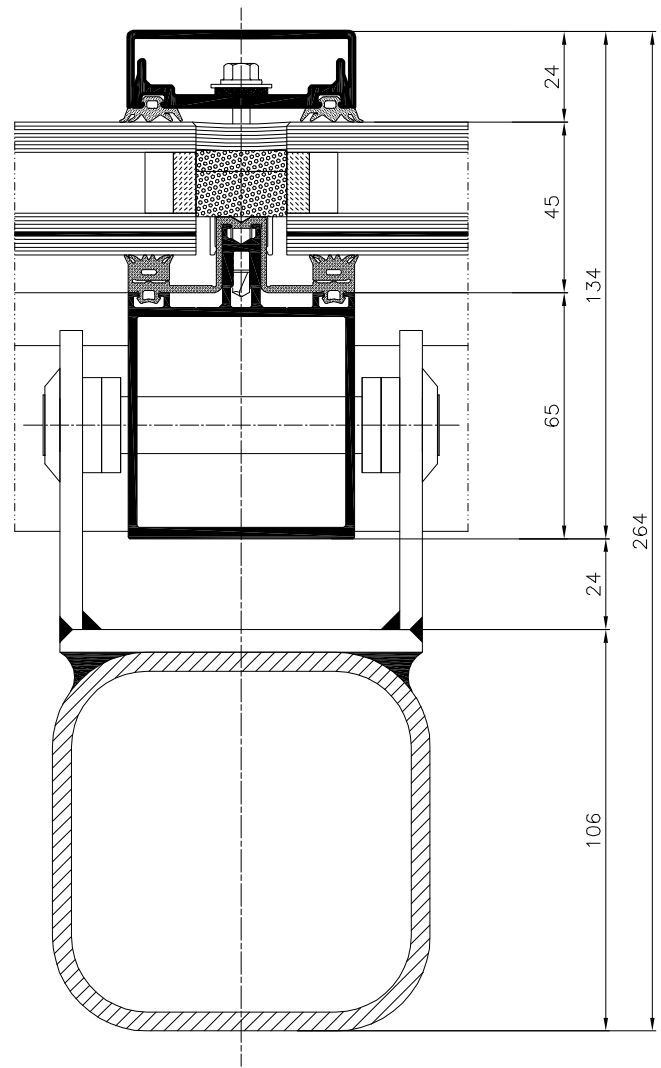
Transom, cross-section



Mullion, cross-section



Mullion, cross-section

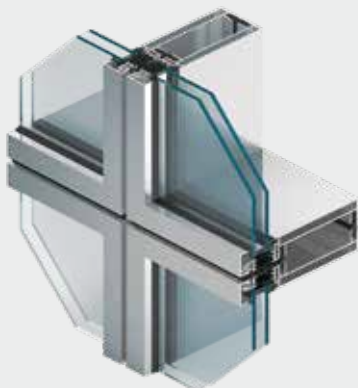


SYSTEM

MB-SE75

MB-SE75 HI

CURTAIN WALL SYSTEMS



The unitised curtain wall system MB-SE75 has been developed for projects that adopt a modular or uniform appearance & developments where site access is restrictive. An internally loaded or installed system, the MB-SE75 can eliminate the need to erect scaffolding, unlike standard stick systems, & provided added benefit where site installation programs are particularly stringent.

UNITISED CURTAIN WALL

Design

The MB-SE75 system is based on modular units delivered to the site, completed and ready to be integrated together on the building. The fabrication process takes place in the factory, which significantly enhances the quality of the final product. The technological concept of the unitised solution brings a number of benefits, including shorter assembly and installation time on site in comparison with regular stick systems, and potentially lower installation costs without scaffolding. The profile range availability provides different size sections from 85mm up to 145mm, making the system suitable for various applications. The MB-SE75 units can accommodate glazing units or panels between 26 and 42mm. The standard system offer has a profile sightline of 75mm wide, with an expansion joint between each module as slim as 9mm.

Performance:

- U_f from 1,56 to 2,83 W/(m²K)
- Air permeability:
Class AE1200, EN 12153:2003,
EN 12152:2004
- Water tightness:
Class RE1200, EN 12155:2003,
EN 12154:2004
- Resistance to wind load:
2400(Pa), EN 12179:2002,
EN13116:2004
- Impact resistance:
Class I5/E5, EN14019:2004
- Acoustic insulation:
 $R_w = 40$ dB
(depending on the infill material)



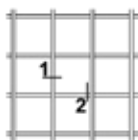
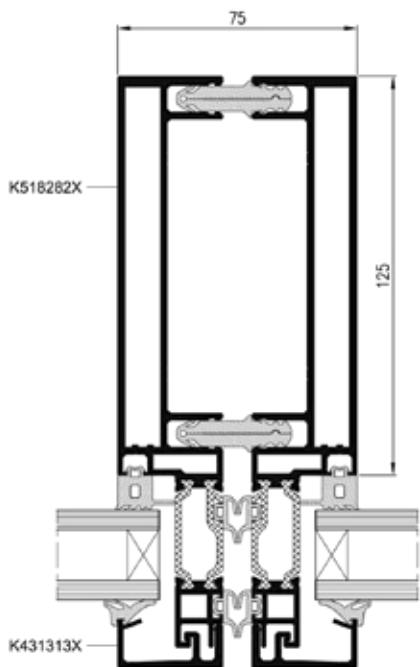
Compatibility with door/window systems

A wide selection of opening lights can be used in conjunction with the MB-SE75 unitised system, including doors and windows from Aluprof MB-70 and MB-70HI open-in system, concealed vents MB-70US and MB-70USHI or open-in frameless vents of the MB-70SG option. An open out vent option based on the MB-SG50 solutions can also be accommodated.

Alchemia, Gdańsk
design / APA Wojciechowski

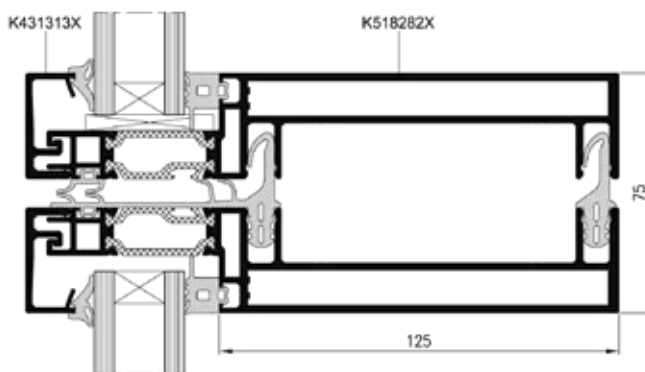
Mullion cross-section

1 MB-SE75



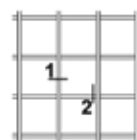
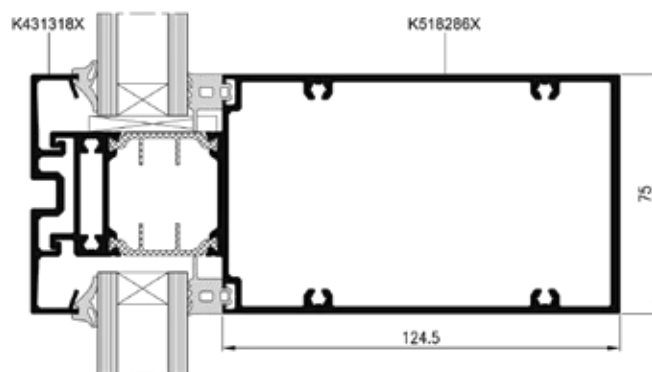
Transom cross-section

2 MB-SE75

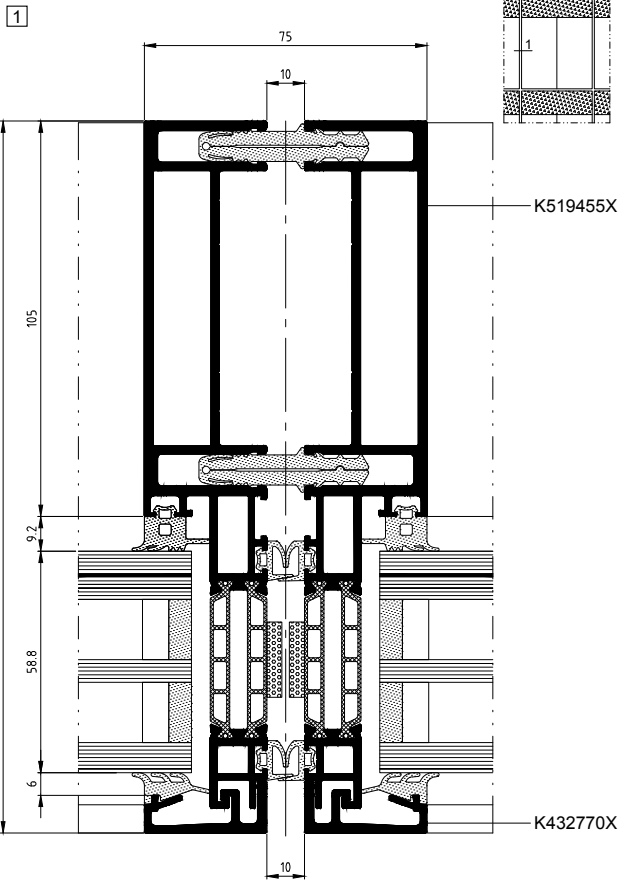


Transom cross-section

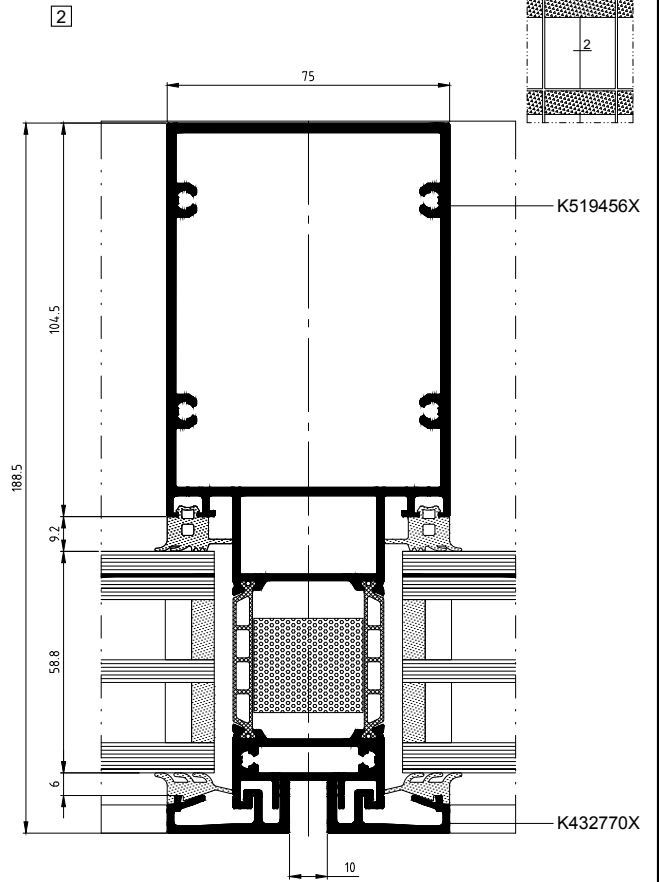
2 MB-SE75



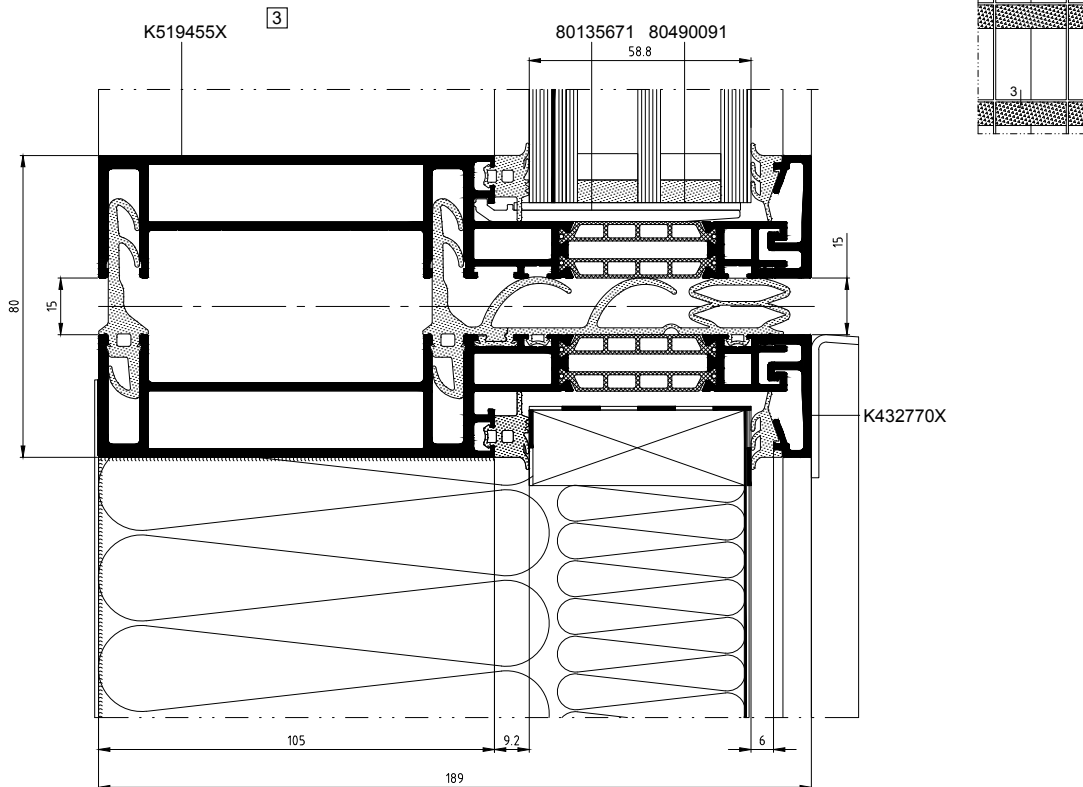
Mullion cross-section



Mullion cross-section



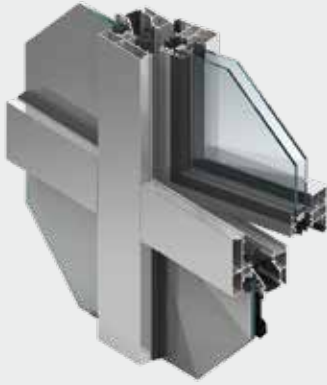
Transom cross-section



SYSTEM

MB-70CW

MB-70CW HI

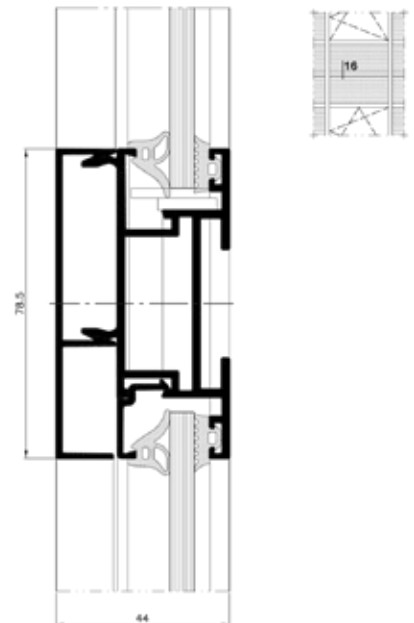
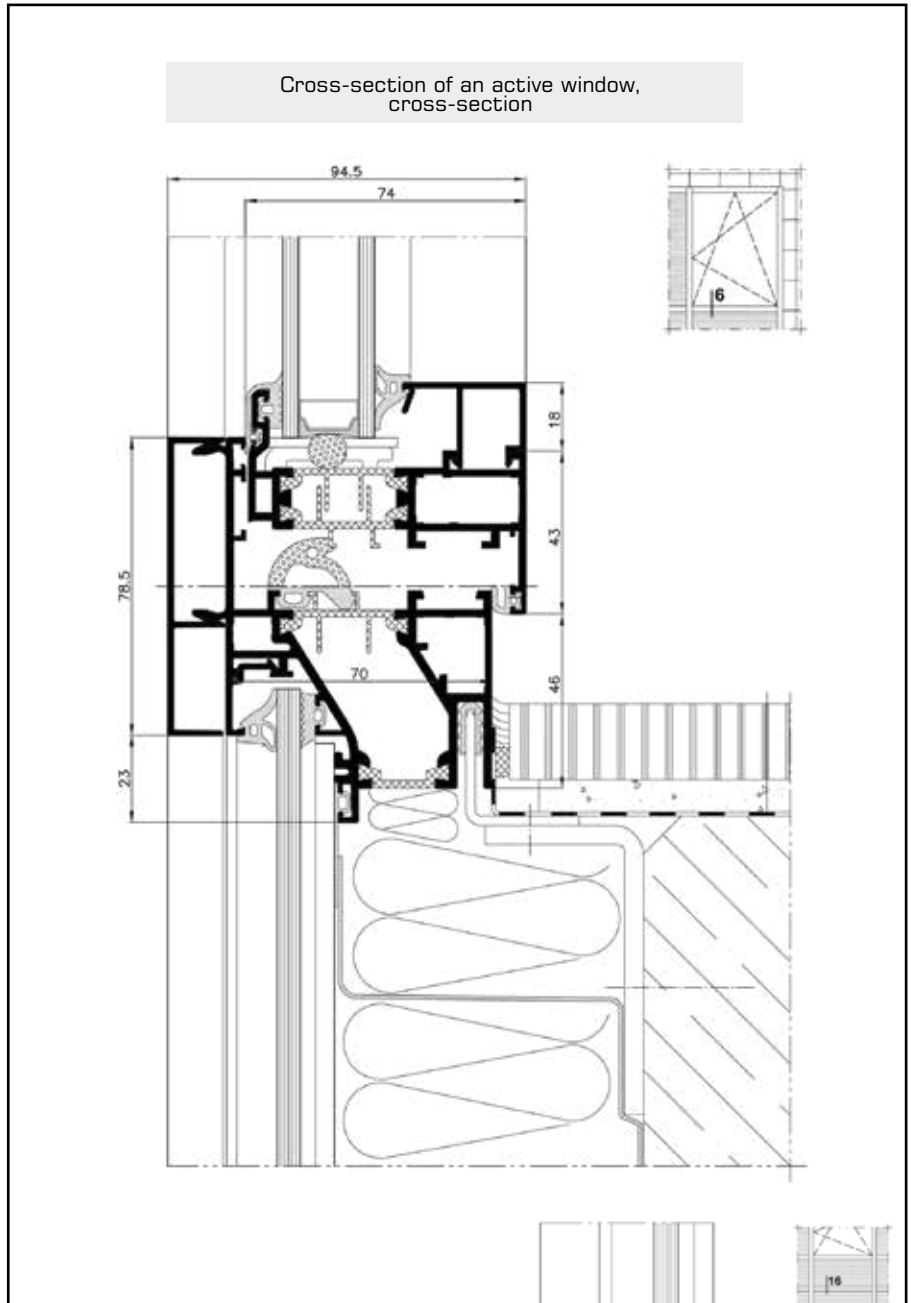


WINDOW-CLADDING SOLUTION BASED ON WINDOW SYSTEM

Based on the MB-70 window system of enhanced thermal insulation properties, the profiles are applied to perform concrete or brick curtain walls with window apertures. In this kind of curtain wall two types of areas can be isolated: "cold" and "warm". The "warm" area comprises thermally insulated windows, mounted in the window openings in front of the face of the curtain wall, whereas "cold" areas are belts between the windows protecting the structure and the thermal insulation (e.g. mineral wool) against weather conditions. Application of this system significantly shortens the time of construction, thanks to the possibility of "closing" the window openings before completing the belts between the windows and the external finish of the curtain wall. The MB-70CW system features very good thermal and sound insulation performance. It also meets aesthetic requirements that architects and investors impose for this type of curtain walls, i.e. no difference between "warm" and "cold" fields or between fixed and opening elements.

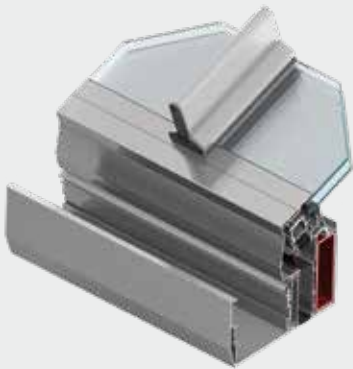
Performance:

- Heat transfer coefficient:
 U_f from 1,43 W/(m²K)
- Air permeability:
Class 4, EN 1026:2001;
EN 12207:2001
- Watertightness:
Class E750, EN 1027:2001;
EN 12208:2001
- Wind load resistance:
Class C5, EN 12211:2001;
EN 12210:2001



Newton/Edison, Cracow, Poland
design / DDJM Biuro Architektoniczne
fabrication / AL-BUD

Scale 1:2



MB-WG60 thermally insulated profiles system designed for building winter gardens and other constructions such conservatories, verandas, etc, allowing users to have direct contact with nature and the surrounding landscape. This type of construction aims at adding new quality to the living space, with natural light falling from above, which provides optimum lighting of the room and ensures proper atmosphere of the interior. In the conventional meaning, a winter garden is an unheated veranda used in winter and summer time, making it possible to rest close to nature. Our aim was to design such a system that could be used as a living room all year long.

WINTER GARDEN

Construction

The system of winter gardens has been designed while taking into account basic requirements of its user with regard to aesthetic properties of the facility.

Primary load-bearing profiles, i.e. rafters are shaped from the outside of the room in the form of a reversed profile ended with a 20 mm radius.

To enhance resistance of the roof there is an option of strengthening profiles with additional aluminium or steel elements. Rafters are joined with purlin profiles and hinge profiles leaning against the eaves beam and wall-mounted beam in cascades, which significantly facilitates proper water drainage and enables efficient ventilation of the room. The roof gradient equals 7°-45° measured from the horizontal surface.

Thermal insulation

Very good thermal insulation performance and high durability have been attained due to the application of special chamber thermal breaks. EPDM membranes and an HPVC profile thermally protect the corner area of a window pane, particularly exposed to low temperature.

Glazing and tightness to water and air infiltrations

This system allows for the use of glazing range between 24-36 mm. To ensure efficient drainage of rainwater from the roof and condensed vapour from the inside of the room, the system has been equipped with an internal drip, integrated with the profile of eaves beam and hinge profile as well as with an external gutter detachable from the eaves beam, thus the image of the winter garden can be changed.

Designed compatibility

The system enables application of doors and windows in MB system as well as other elements made of plastic, wood or other materials available on the market.

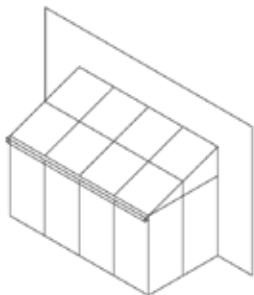
Colour palette

A wide choice of colours offered in the standard colour option meets the requirements of even the most demanding customers. Colour finishes are made by powder coating or anodising.

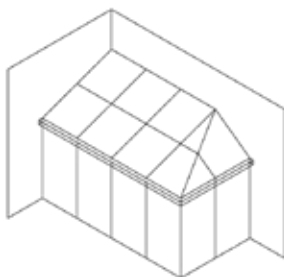


Standard constructions

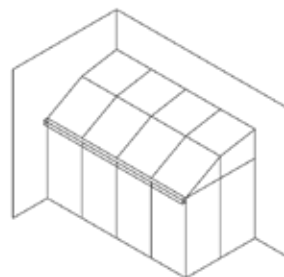
Type 1



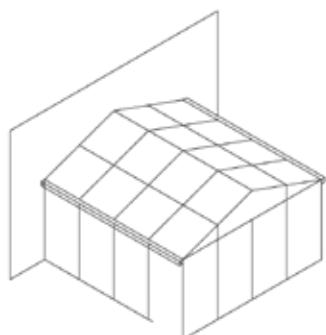
Type 2



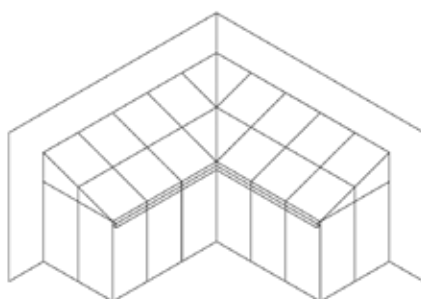
Type 3



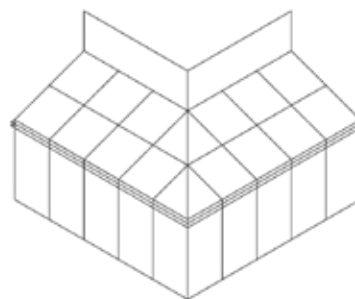
Type 4



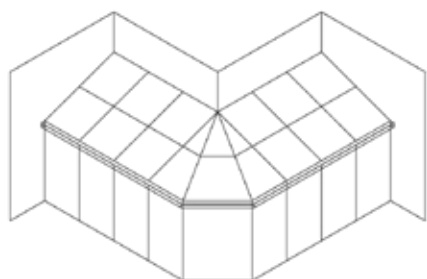
Type 5



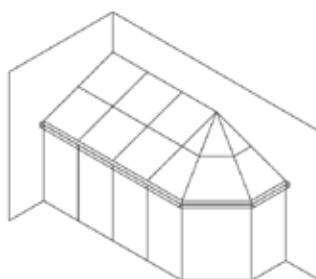
Type 6



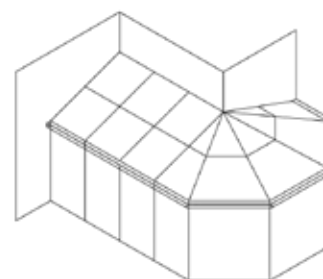
Type 7



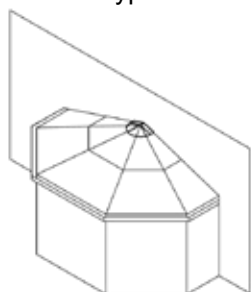
Type 8



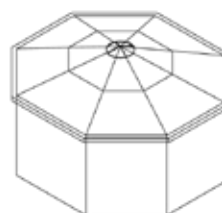
Type 9



Type 10

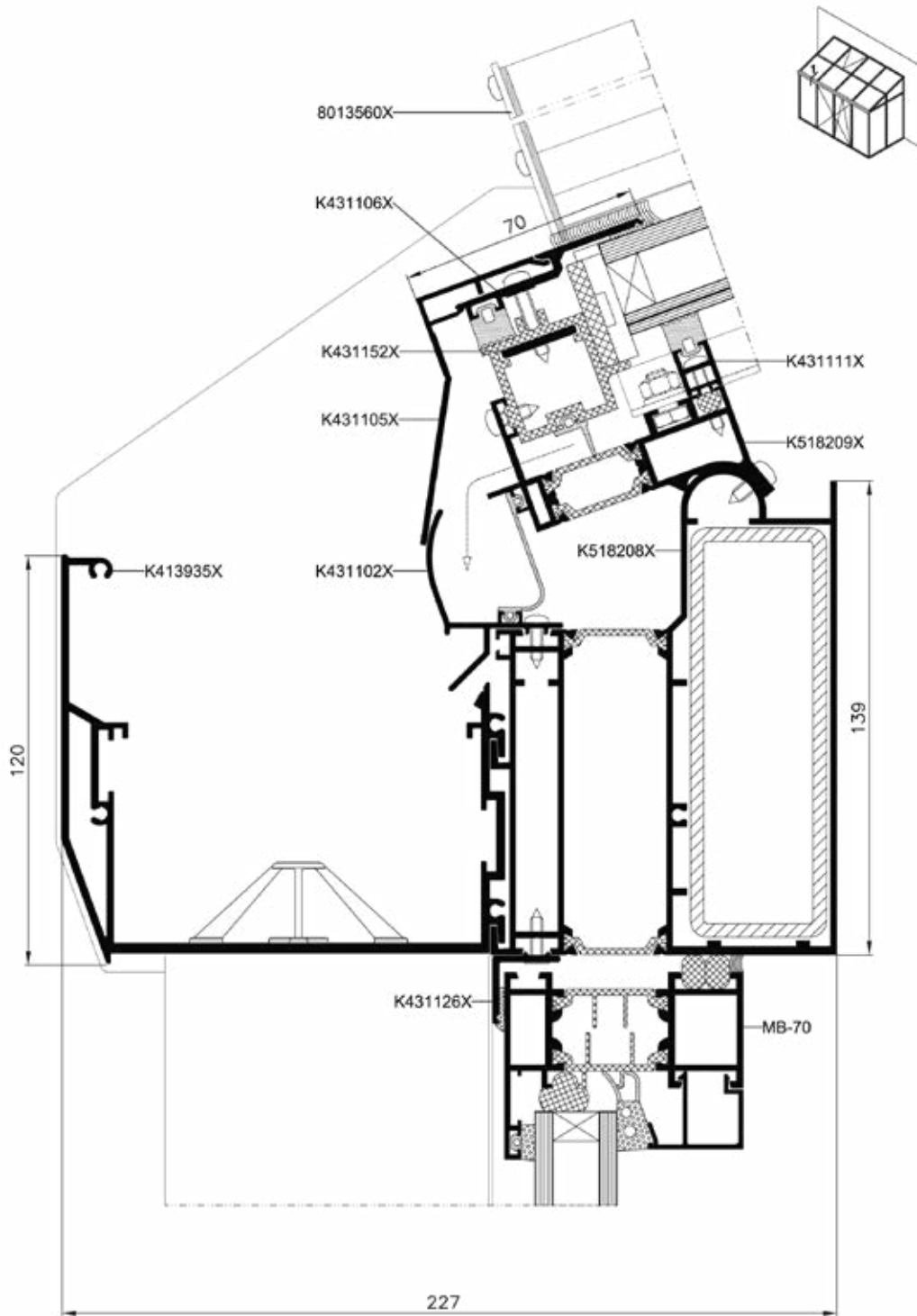


Type 11



Eaves beam cross-section

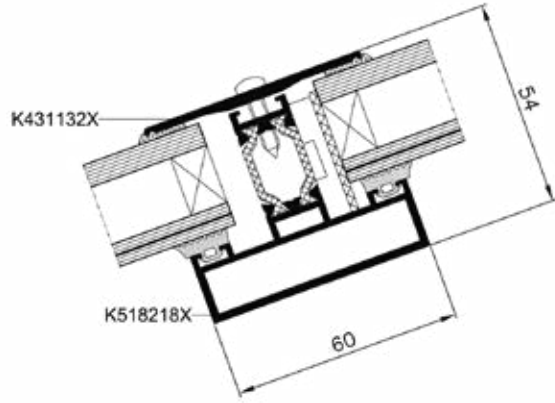
1 MB-WG60



Scale 1:2

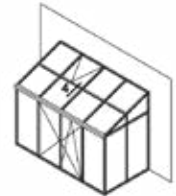
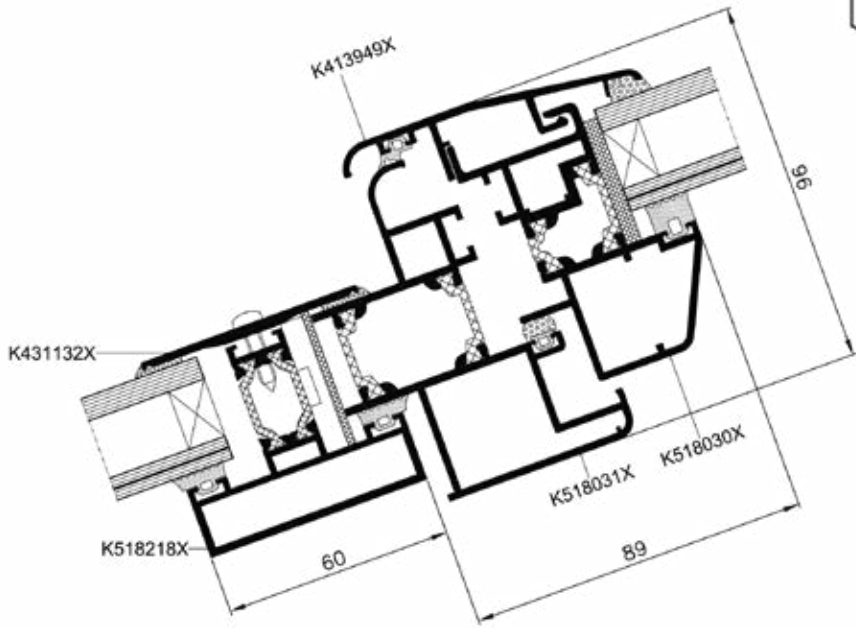
Purlin cross-section

2 MB-WG60



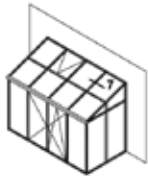
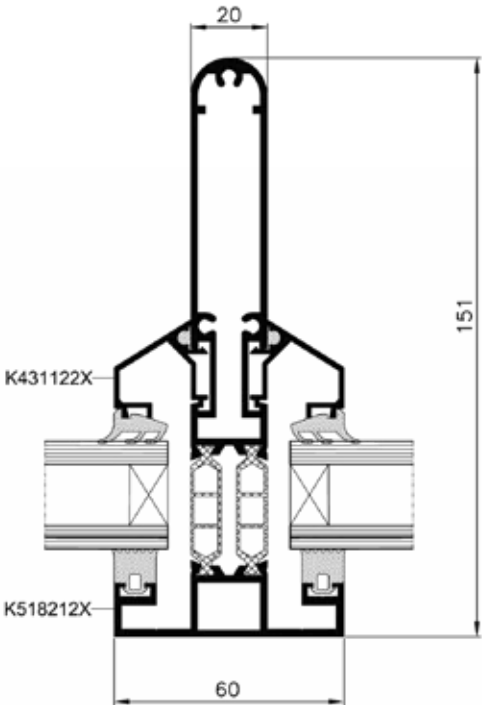
Purlin cross-section

4 MB-WG60



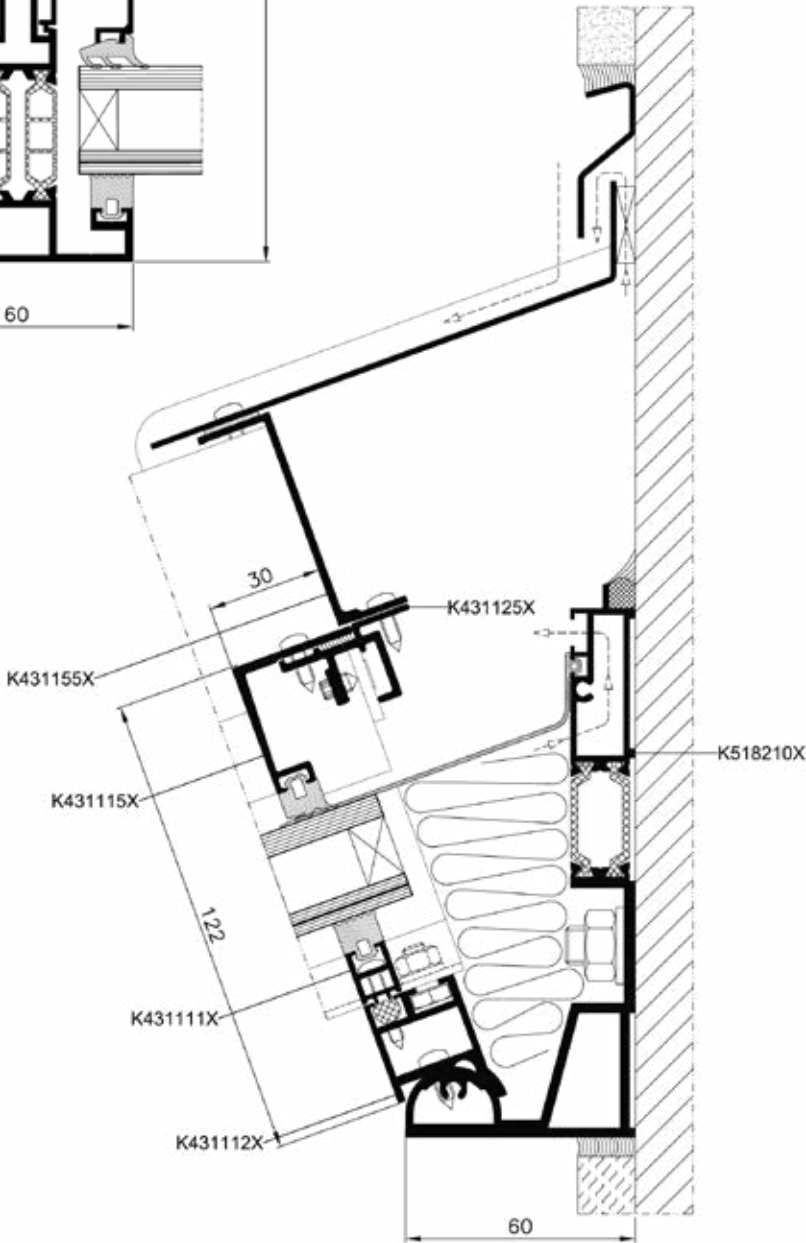
Rafter cross-section

7 MB-WG60



Wall beam cross-section

3 MB-WG60



SYSTEM EXTRABOND

CURTAIN WALL SYSTEMS



EXTRABOND system is among rainscreen-type ventilated façades. It is used to fabricate internal and external cladding and is perfectly suited for installation in both new and modernized buildings, giving them a modern, aesthetic appearance. The system consists of an external panels formed of aluminium or fiber-cement composite sheets, aluminium grid system and insulation materials. The specially designed profiles and panels allow pressure equalization between the outer and the inner part of the wall and thereby reduce forces which cause the penetration of water behind the cladding. EXTRABOND is the perfect solution for buyers looking for a system that combines high technical parameters and aesthetic requirements.

VENTILATED FACADE SYSTEM

Structure and panel types

EXTRABOND range of ventilated cladding options, depending on the sizes of panels or type of cladding, can be divided into three types:

- **EXTRABOND Horizontal (EBH)** -

façade for aluminium composite panels, arranged horizontally,

- **EXTRABOND Vertical (EBV)** -

panels are arranged vertically,

- **EXTRABOND T (EBT)** -

structure suited for mounting fibercement panels from most suppliers.

The following panels are available:

- **EXTRABOND** which are characterized by high durability and resistance to weather conditions

- **EXTRABOND FR** are additionally characterized by a higher fire resistance – class B-s1, d0 – material that prevents the spreading of fire, NRO classification

- **EXTRABOND A2** are additionally characterized by a higher fire resistance – class A2-s1, d0 – material that prevents the spreading of fire, NRO classification

Panel's functionality and aesthetic appearance

- external layers of the panel, made of 0.5mm aluminium sheet - (AW-3005 alloy),
- high resistance to weather, UV rays corrosion, abrasion and graffiti,
- high durability based on strong, lightweight and rigid materials, 20-years product warranty
- quick installation, easy to shape,
- rich colours and high aesthetics of the panels – a completely smooth surface,
- fire resistance, sound-proofing, impact

resistance,

- low noise and heat transfer coefficient,
- product is environmentally friendly (made from harmless materials, 100% recyclable).

Extrabond system advantages

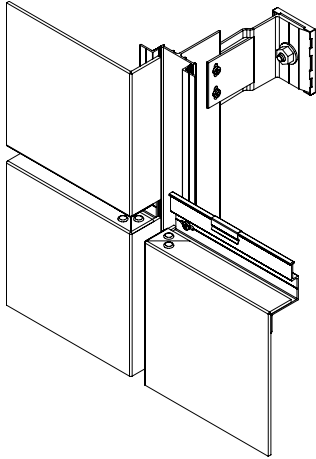
- Possibility to uninstall and replace selected individual panels,
- possibility to adjust the gap between panels within 10-20 mm,
- Vertical, load-bearing Ω -shape with a very good relation weight / resistance =price
- universal Ω -shape can be used in MBEBV and MB-EBH options by using an adapting bracket (adapter),
- Embossed façade brackets of large load capacity allowing to reduce the number of anchors per 1m²,
- Thermal pads reducing the adverse impact of thermal bridges,
- Façade brackets adjustable vertically within ± 12.5 mm
- Profile surfaces finished with anodic oxide coatings in accordance with Qualanod requirements or with polyester powder coatings according to Qualicoat requirements.

Gemini Park, Bielsko-Biała, Poland
design / Wojciech Kurzak Vide Studio

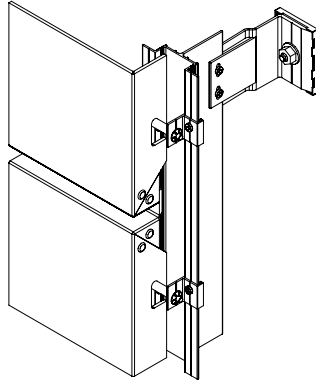


Options

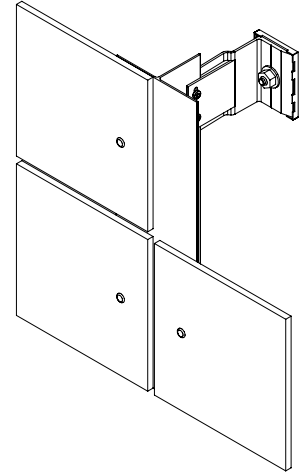
Extrabond Horizontal EBH



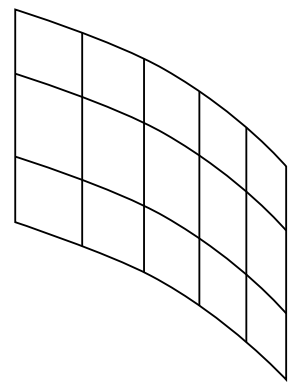
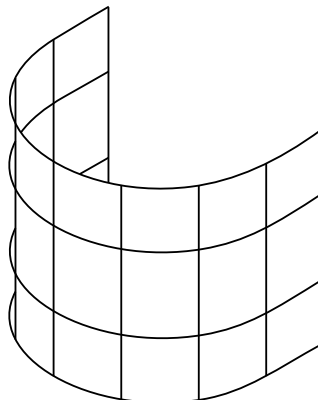
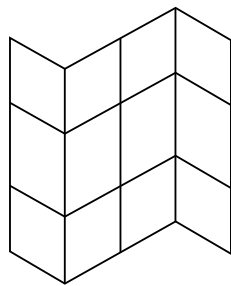
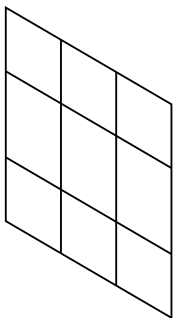
Extrabond Vertical EBV



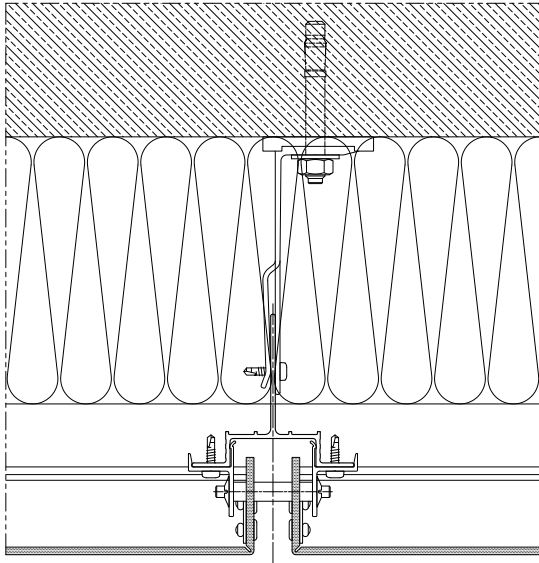
Extrabond T EBT



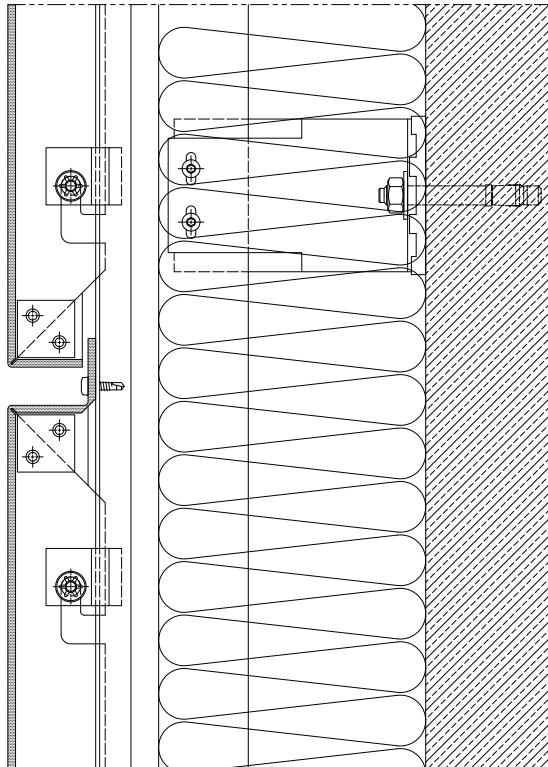
Elevation shapes that can be fabricated using Extrabond system

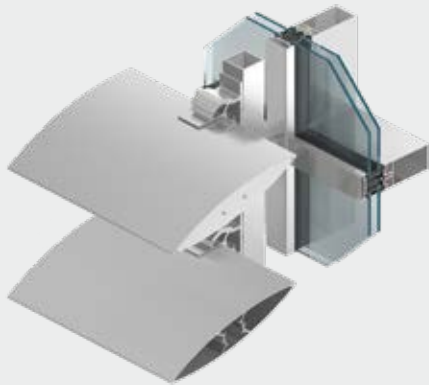


Extrabond EBV - horizontal section



Extrabond EBH - vertical section





Conserving energy by reducing exposure to direct solar radiation while allowing for natural day lighting is one of a major focus of today's environmentally aware engineers, architects and specifiers. MB-SUNPROF Sun Shades have been designed to meet these needs. The system comprises aluminum blades, which are available in variety of sizes and integrate the Aluprof's curtain wall systems range, providing an impressive visual effect that helps unite the building envelope.

Features and benefits

- Selection of aluminum blade profiles of width from 100 to 300 mm to serve variety of projects' requirements
- Range of outriggers (brackets) to choose from
- Up to 45 degrees incident angle
- Brings together solar glare control with the appropriate amount of natural light coming into the building's internal environment
- Comes together with Aluprof's MB range of curtain wall systems, ensuring significant visual effect on the building envelope
- Quick and easy to install to the curtain wall, load bearing wall or window frame
- Retrofit options for existing buildings that have utilized MB range of curtain walls
- Wide range of finish option

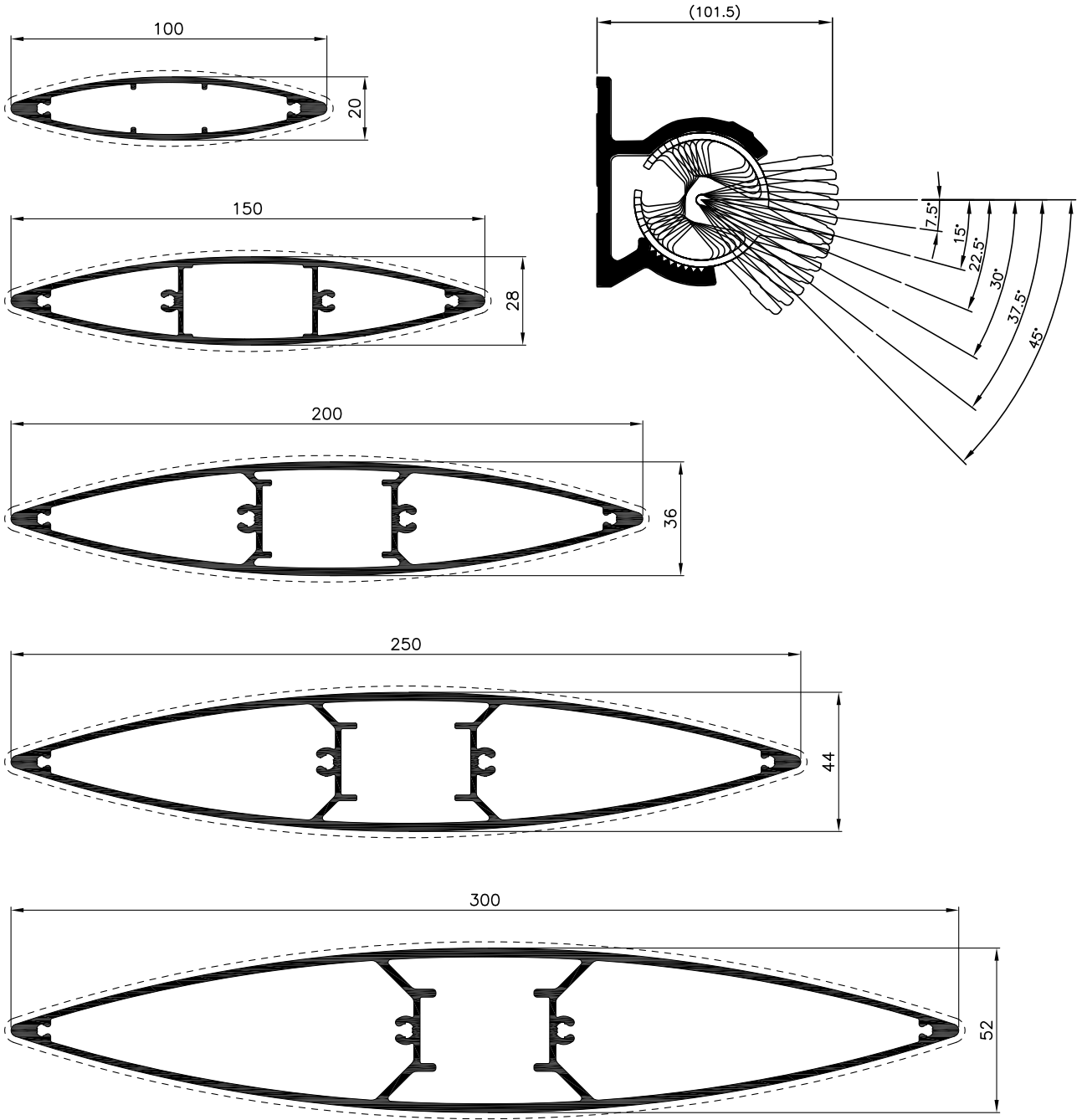
Limiting the solar heat gain of the building through the use of MB-SUNPROF Sun Shades on the curtain wall ensures the enhancement of the thermal performance of the building combined with energy savings through

- Reduction of direct solar heat whilst remaining natural light rate coming inside the building
- Lowered use of energy required to operate electric ventilation and air conditioning systems
- Optimization of natural ventilation

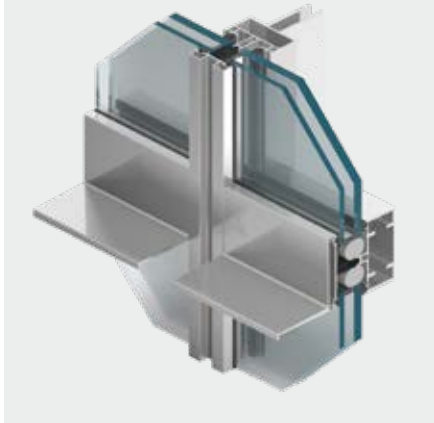
Please refer to our Local technical support team for advice and support in estimating energy saving rates that result from the use of MB-SUNPROF sun shades for each individual project.



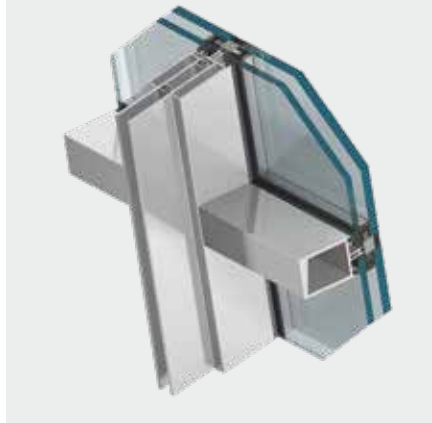
Brise soleil profiles



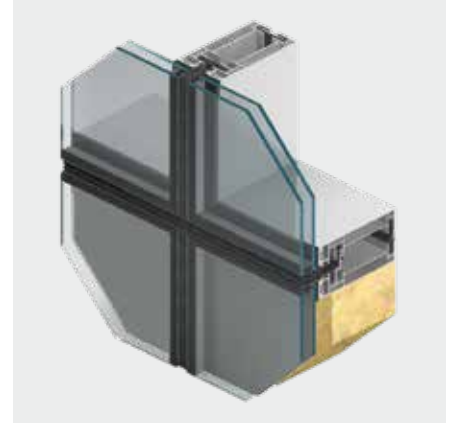
SYSTEM MB-SR80



SYSTEM MB-SG60



SYSTEM MB-SE80 SG



BESPOKE SOLUTIONS

More and more often contemporary architectural projects use concepts that require an individual approach to the curtain wall. Based on the experience of our design engineers and technical capabilities, we are able to quickly design and implement into production structures that meet the specific needs of architects and ensure proper technical parameters with respect to visual appearance and functionality. References of ALUPROF SA include a few dozen customized solutions for individual projects. Several examples of such structures are presented below.

One of the most important buildings, for

which customized solutions in ALUPROF systems were designed was the Warsaw Chopin Airport. The following curtain wall systems were designed for the airport: MB-SR80, MB-SR100 and MB-SG50.

The airport terminal uses MB-SR80 stick system curtain walling. The design of its profiles is a feature that deserves special attention.

The inclined external walls of the upper part of the airport pier use MB-SG60 revers curtain wall system.

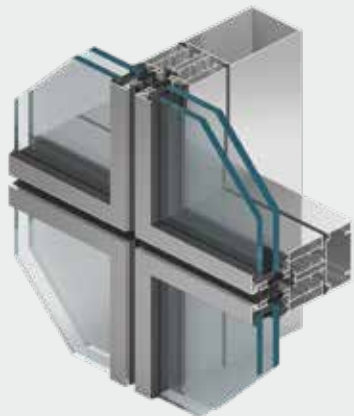
325 LEX is one of the many typical high-rise buildings in New York. And it's yet another Aluprof systemsbased project in the US. The unitized curtain wall MB-SE80 SG, designed especially for this project is an example of a system that meets the individual needs of the project both in terms of aesthetics and technical solutions. It allows a quick segment installation to the reinforced concrete frame. In terms of glazing technology, it is a fully structural, 4-edge SSG system that comes with customized bottom hung windows and foldable corner joints. The MB-SE80 SG system was tested at the National Certified Testing Laboratories in York by the standards applicable in the US.

Warsaw Chopin Airport, Warsaw
design / arch. Pierluca Roccheggiani, arch. Paweł Czaplicki

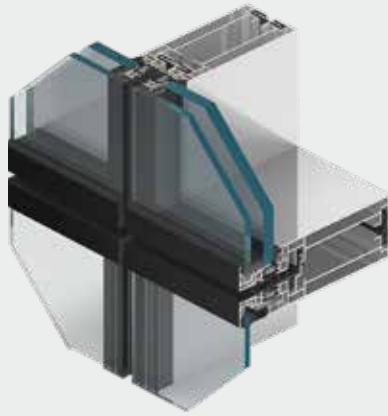


325 LEX, New York
design / Time Square Development

SYSTEM MB-SR85 SEMI



SYSTEM MB-SE85 SG



On the outside, the system resembles semi-structural and element curtain walls, where every glazing frame is visible. There are mechanical Frames, made of thermally insulated profiles, are mechanically fixed to the stick support structure, which allows the use of a wide range of infills with single panes or insulated glass units. The profiles of mullions, transoms and frames were designed in such a way as to create a monolithic structure when joined together. Thanks to its well-thought design, the MB-SR85 SEMI system is not only visually appealing but also shows very high technical parameters. The solution was designed specially for the construction of buildings in the Pomeranian Science and Technology Park in Gdynia.

The 212m high SKY TOWER is the highest residential and commercial building in Poland. For the needs of this building, the structural element MB-SE85 SG curtain wall system was adopted to meet the requirements related to the visual quality, strength, high technical parameters and quick installation of segments without the use of traditional scaffolding. The system for anchoring the panels to the structure of roofs made of reinforced concrete was also customized.



SKY TOWER, Wrocław
design / Biuro Architektoniczne FOLD



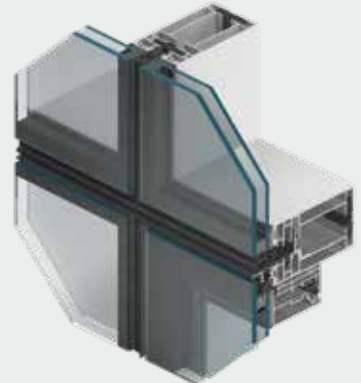
Pomeranian Science and Technology Park, Gdynia
design / AEC Krymow & Partnerzy

SYSTEM MB-SE98 SG



125 Greenwich is 278m (912 feet) high, and has 88 levels. As provided for in the architectural design, the external wall has rounded corners, providing the dwellers with a magnificent panoramic view to the city. 125 Greenwich Street-dedicated unitized curtain wall system MB-SE98 SG enables to build fully glazed constructions from the outside, and the glass is attached by means of structural sealant using the SSG technology. Typical dimensions for this structure are: width of mullions & transoms 98mm (3.85"), vertical expansion joint 16mm (0.62"), horizontal expansion joint 42mm (1.65"). Horizontal expansion joint has a large movement tolerance range – up to ± 27.4 mm (1.08"). MB-SE98 SG system has two types of mullions that provide the ability to fabricate basic types of façade segments plus the segments with a special vertical profile for attaching a transport platform. Also, the system has two types of parallel opening windows.

SYSTEM MB-SE80 SG



LIC MARRIOTT is a 106 m high, 31-storey building. Its design encompasses the unitized curtain wall MB-SE80 SG, which, in terms of glazing technology, is characterized by a fully structural, 4-edge SSG system. In order to meet project requirements, the curtain wall has been modified accordingly: sealing system and profiles' design have been changed. This enabled the structure to meet the required resistance to seismic displacement, and increased the level of tightness of the façade. Another customized aspect are bottom hung windows and angle connections, allowing the fabrication of the characteristic, concave portion of the building façade. In terms of compensation of tectonic movements, the construction allows vertical segment movements, increased to ± 13 mm. The MB-SE80 SG system provides a possibility to install special anchors for "climbing fixing", designed for façade maintenance teams.

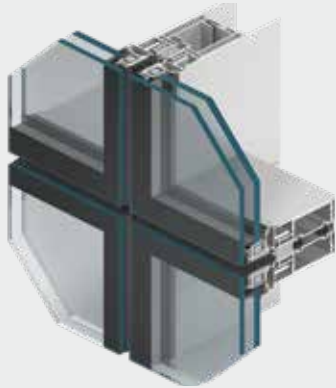
125 Greenwich Street, New York
design / Rafael Vinoly Architects PC



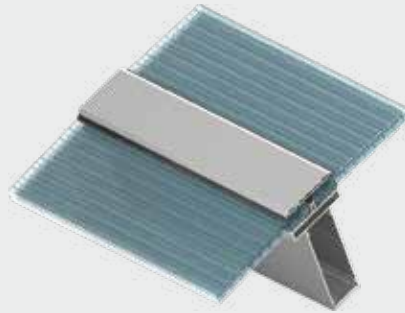
LIC MARRIOTT, Long Island City, New York
design / Handel Architects LLP



SYSTEM MB-SE95 CKK



ROOFING SYSTEM



PGE Arena stadium is yet another construction with a customized roofing system solution. Due to the unusual shape, and the lightness of the roofing, it was decided to use polycarbonate and aluminium profiles. The main task here was to design bulky, bending, T-shaped purlin profiles. Each element was given a different curvature, and the entire roof was to be totally tight, thus eliminating the risk of ingress of rainwater. This was made possible thanks to a double sealing system, that entirely covered the infills in the glazing groove.

PGE Arena, Gdańsk
design / RKW Rhode Kellermann Wawrowsky

Developed for the Centrum Kongresowe building in Cracow, the unitized curtain wall MB-SE95 CKK is adapted for quick segment assembly to the steel substructure using special connectors. In terms of glazing technology, it is a fully structural system and the glazing is fixed to the aluminium profiles using a special adhesive with no mechanical protection, and the façade itself has infills with tin or ceramic panels. The construction provides large opportunities in terms of development: it allows to create angle connections both with a smooth adjustable angle of $\pm 15^\circ$, as well as to deflect portions of the façade from the vertical by an angle of $12 - 25^\circ$. The MB-SE95 also gives the opportunity to replace external glazed modules without having to remove the façade segments' aluminium construction.



For more information on our products see **Project Specific & Bespoke Solutions Catalogue.**

ICE Kraków Congress Centre, Cracow
design / Ingarden & Ewý Architekci, Arata Isozaki & Associates

window and door SYSTEMS



www.aluprof.com

ALUPROF
ALUMINIUM SYSTEMS

SYSTEM

MB-104 PASSIVE

WINDOW AND DOOR SYSTEMS



Thanks to its excellent thermal performances, thermally broken window-door system MB-104 Passive meets all the requirements for the building elements used in passive buildings. This was confirmed by certificates granted by the Passive House Institute PHI Darmstadt. This system is intended for fabrication of external structure elements such as various types of windows, doors, anterooms, shop fronts and spatial structures, which are highly robust and characterized by excellent water and air tightness, and thermal & acoustic insulation performance.

FOR PASSIVE HOUSES

Features and benefits

- windows certified by the Passive House Institute PHI Darmstadt (MB-104 Passive SI & MB-104 Passive Aero)
- excellent weather tightness & thermal insulation performance U_w for window from 0,59 W/(m²K)*
- wide range of glazing, up to 81 mm allowing for triple and fourfold glazing units
- "Euro" grooves allow the fitting of most of the available hardware, both for aluminium and PVC windows
- can use surface, roller or concealed hinges
- expansion joint profiles for the door leaf
- 95 mm-wide threshold – the threshold and the frame have the same width
- anti-burglary windows and doors up to RC3 class



TECHNICAL SPECIFICATION	WINDOWS MB-104 PASSIVE	DOOR MB-104 PASSIVE
Depth of frame	95 mm	95 mm
Depth of leaf	104 mm	95 mm
Glazing range	frame: 27 – 72 mm, vent: 34,5 – 81 mm	27 – 72 mm
Maximum size of leaf (H×L)	H to 2900 mm, L to 1700 mm	H to 3000 mm, L to 1400 mm

PERFORMANCE	WINDOWS MB-104 PASSIVE	DOOR MB-104 PASSIVE
Air Permeability	class 4, PN-EN 12207:2001	class 4, PN-EN 12207:2001
Watertightness	to class AE 1800, PN-EN 12208:2001	class E1200 Pa, PN-EN 12208:2001
Thermal insulation	U_w from 0,59 W/(m ² K)* U_w from 0,62 W/(m ² K)**	U_D from 0,66 W/(m ² K)***
Windload resistance	class C5/B5, PN-EN 12210:2001	class C4/B5, PN-EN 12210:2001
Burglary resistance	class RC1 to RC3, EN 1627	class RC1 to RC3, EN 1627

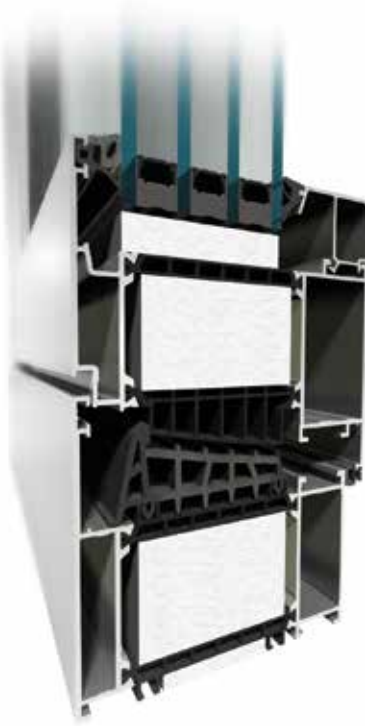
* - U_w for MB-104 Passive Aero-based fixed window casement size 1700 × 2900 mm, with glazing $U_g=0,5$ W/(m²K)

** - U_w for MB-104 Passive Aero-based openable window casement size 1700 × 2150 mm, with glazing $U_g=0,5$ W/(m²K)

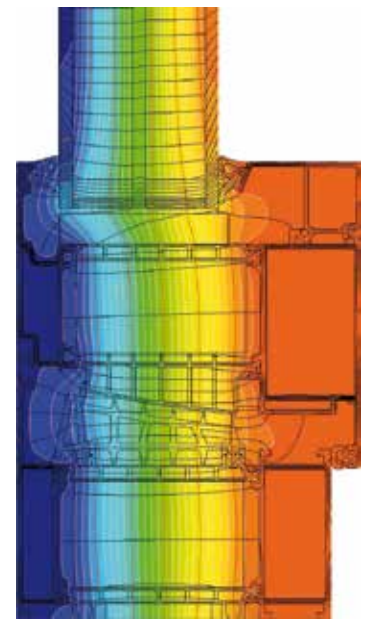
*** - U_D for panel door MB-104 Passive Aero casement size 1230 × 2180 mm, with glazing $U_g=0,5$ W/(m²K)



MB-104 SI Window



MB-104 Aero Window



Isothermal lines
in MB-104 Passive Aero window

Examples of heat transfer coefficients U_w

WINDOWS SCHEMES	SECTION A OR B		Value U_w [W/m ² K]	
			Glass with Multitech frame	
			Double chamber	
			$U_g=0,5$	$U_g=0,7$
	MB-104 Passive SI		0,62	0,78
			0,68	0,80*
	MB-104 Passive AERO		0,60	0,75
			0,64	0,76*

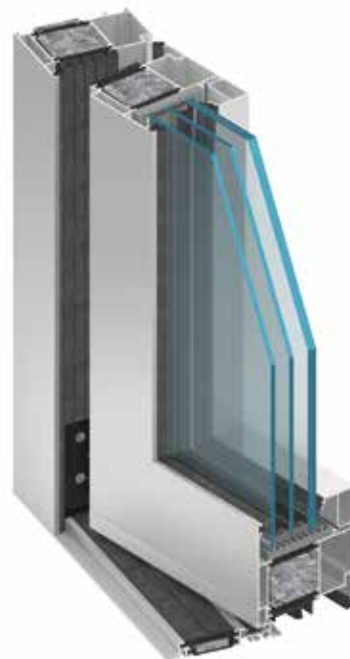
* according with PHI Darmstadt Certificate



MB-104 Passive SI Door



MB-104 Passive Aero Door



MB-104 Passive SI Door, RC3

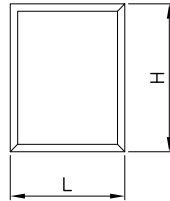
Examples of heat transfer coefficients U_D

DOOR SCHEME	SECTION A OR B	Value U_D [W/m ² K]				
		Glass with Multitech frame Double chamber		Panel G=60mm		
		$U_g=0,5$	$U_g=0,7$	$U_g=0,55$		
	MB-104 Passive SI			0,88	1,01	0,87
	MB-104 Passive SI+			0,76	0,88	0,72*
	MB-104 Passive AERO			0,71	0,84	0,70

* according with PHI Darmstadt Certificate

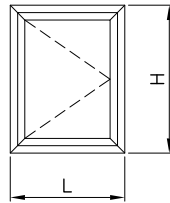
Max. dimensions of windows

Fixed window



Max. dimensions of windows result from maximal glass sizes

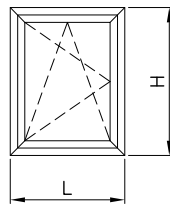
Turn-hung window



Hmax=2900 mm
Lmax=1260 mm

Hmax=2150 mm
Lmax=1700 mm

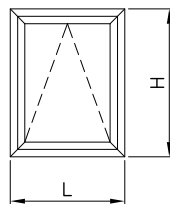
Tilt and turn window



Hmax=2900 mm
Lmax=1260 mm

Hmax=2150 mm
Lmax=1700 mm

Tilt window



Hmax=2900 mm
Lmax=1260 mm

Hmax=1400 mm
Lmax=2400 mm

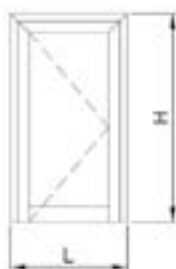
- 160 kg

- 130 kg

} Maximal vent weight

Maximum standard dimensions of the door

Inward openable



Hmax=3000 mm
Lmax=1400 mm


 - 200 kg

Outward openable

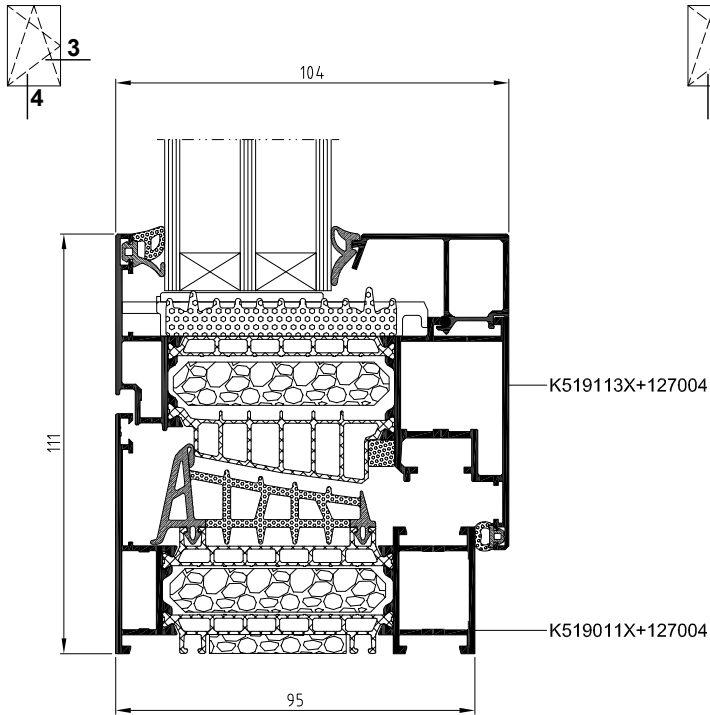


Hmax=3000 mm
Lmax=1400 mm

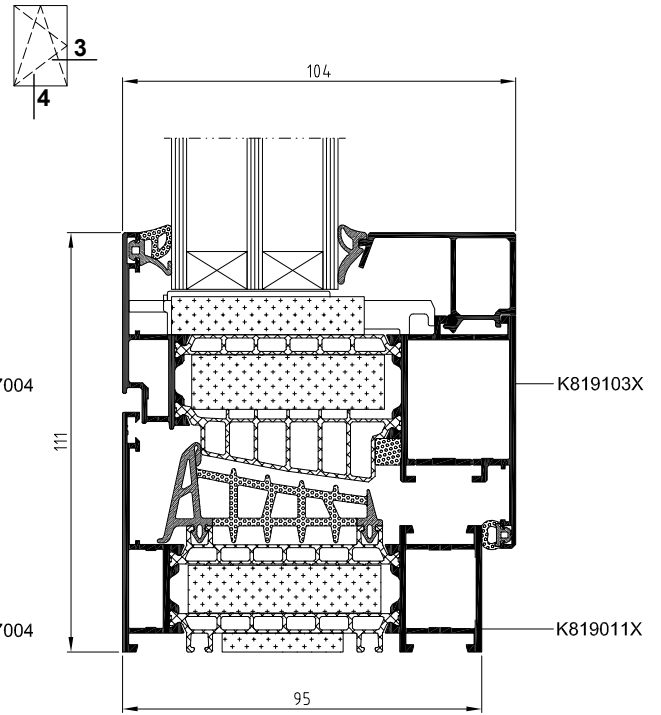
 - 200 kg

 } Maximal vent weight

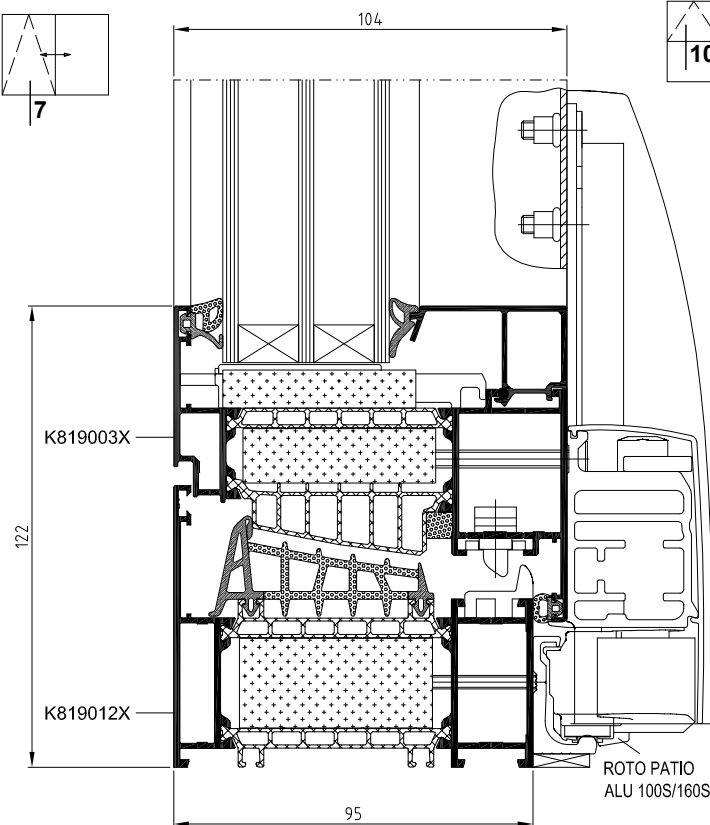
MB-104 Passive SI openable window
- cross-section



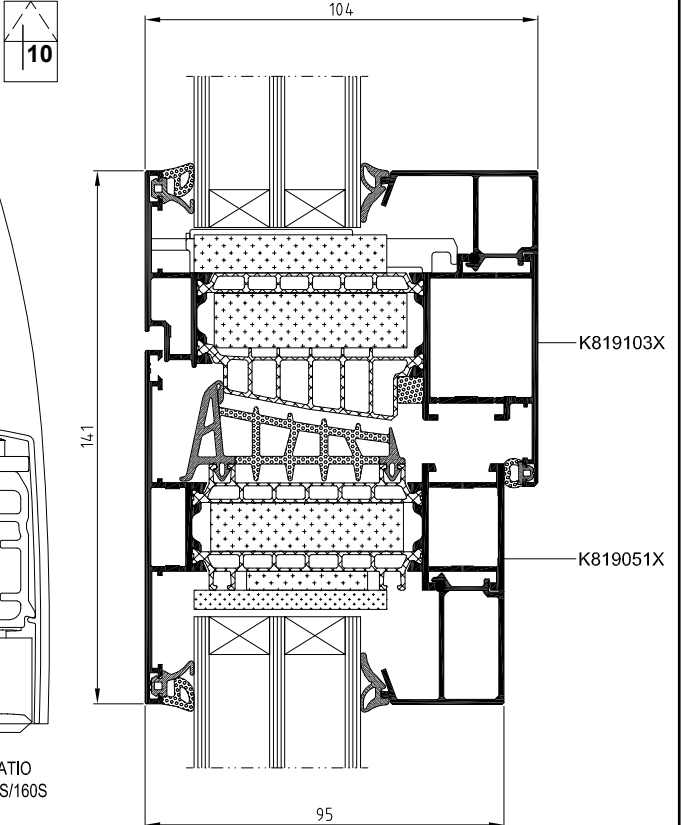
MB-104 Passive Aero openable window
- cross-section



MB-104 Passive Aero tilt-and-slide window
- cross-section

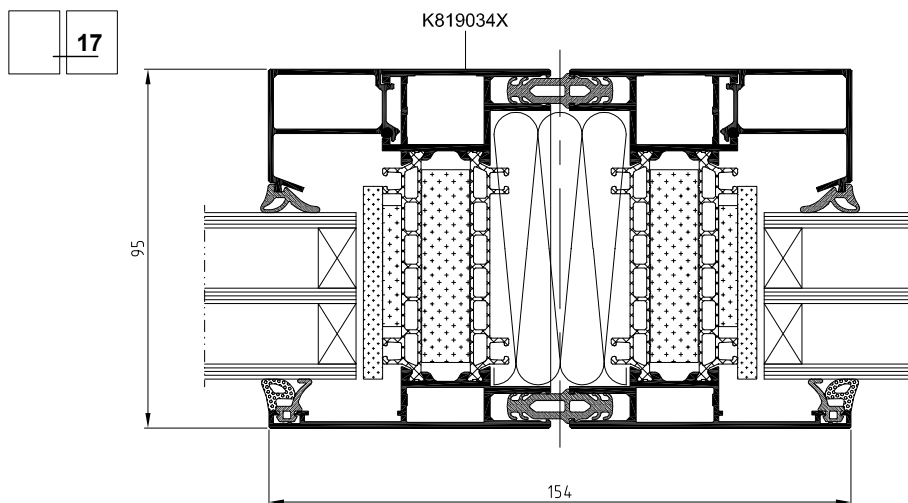


MB-104 Passive Aero window transom
- cross-section

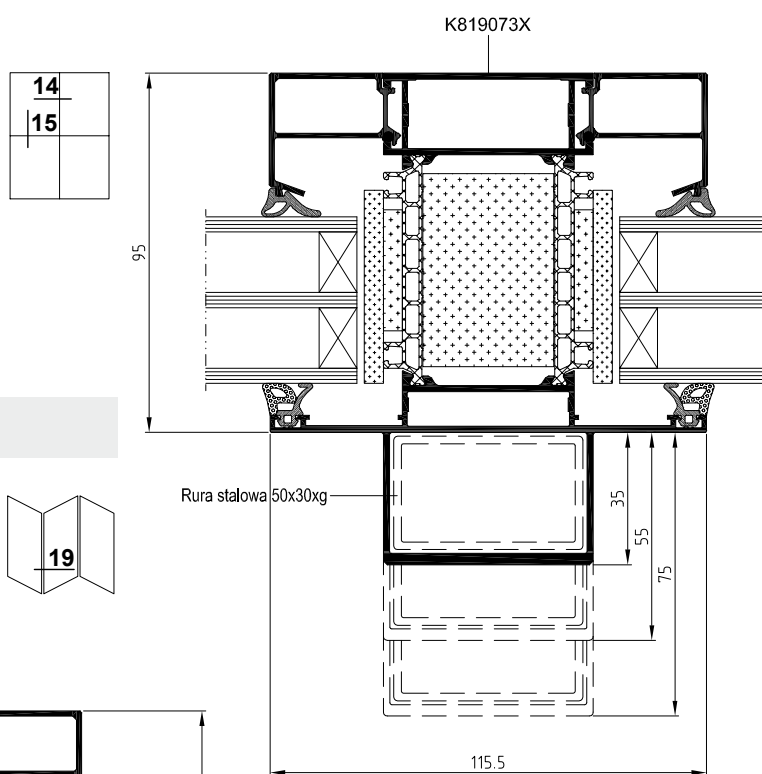


Scale 1:2

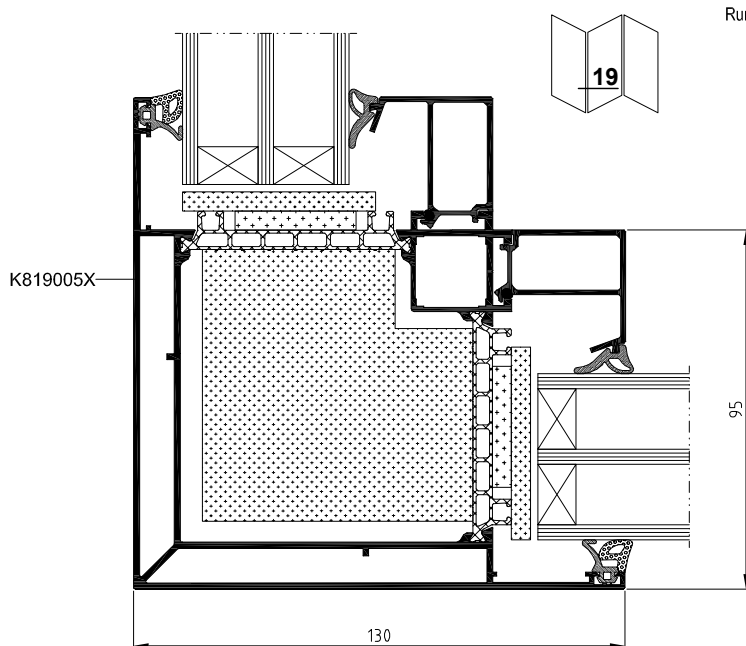
Expansion joint



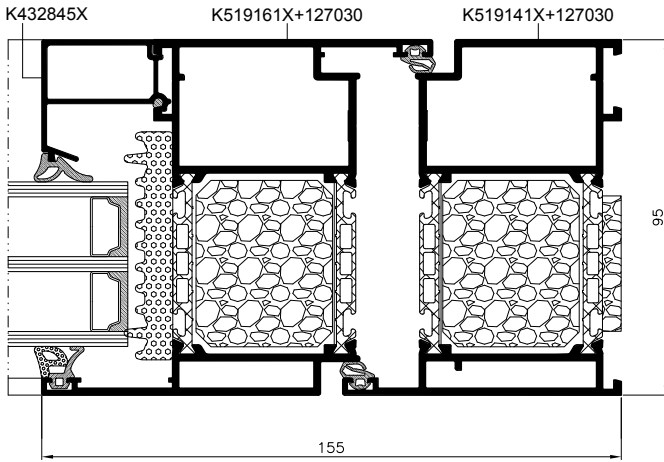
Reinforced mullion - cross-section



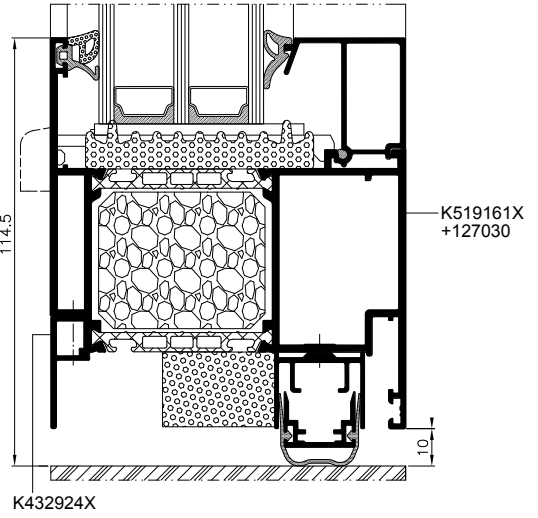
Corner mullion 90° - cross-section



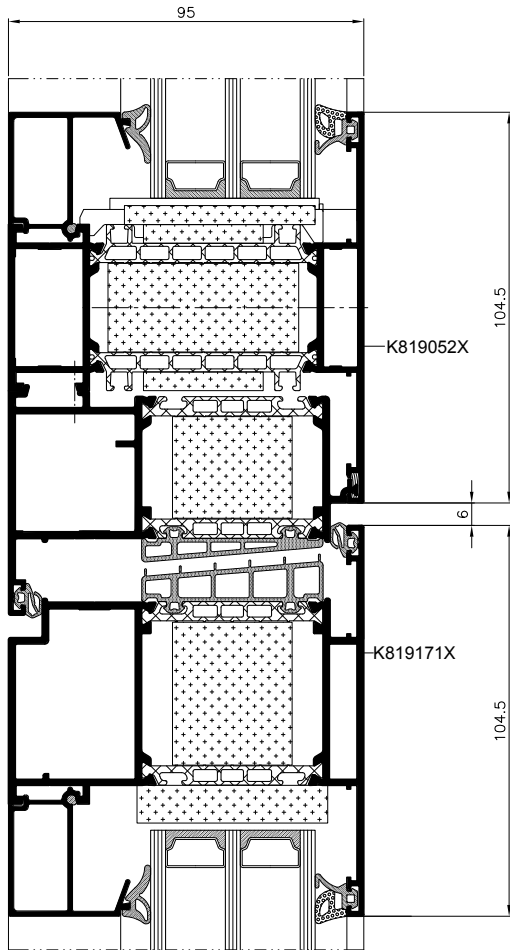
MB-104 Passive SI door
- cross-section



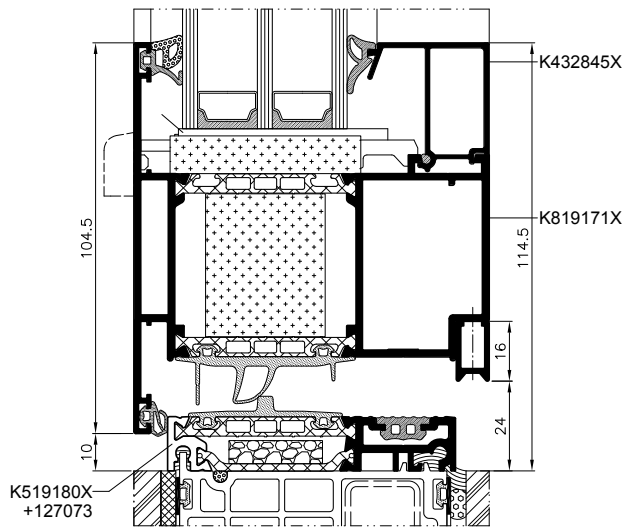
MB-104 Passive SI door threshold
- cross-section



MB-104 Passive Aero - horizontal section
of rail in display window assembly



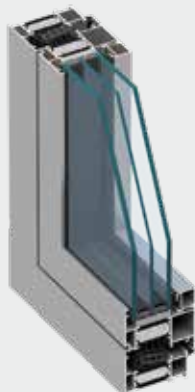
MB-104 Passive Aero door threshold
- cross-section



SYSTEM MB-86N

**RECOMMENDED
FOR ENERGY-EFFICIENT
CONSTRUCTIONS**

WINDOW AND DOOR SYSTEMS



This highly efficient window and door system meets the diverse needs of users. The system's profiles have been designed in 2 versions depending on the requirements of thermal energy savings: ST and SI. Highly resistant profiles are yet another advantage of MB-86N system – they allow for producing large-size and heavy structures. Also, Aluprof offers a version for windows with concealed sash MB-86US as well as a thermally broken, outward opening window system – the MB-86 Casement. MB-86B has been developed to meet the requirements/needs of the Belgian market.

SYSTEM WITH A THERMAL BREAK

System features

- A wide range of sections guarantees the desired visual qualities and structural strength. The system includes a wide range of profiles for frames, leafs, batten plates, reinforced mullions and angular braces, which offer good flexibility while designing buildings and minimize the necessity of using additional braces for large windows or display windows.

- Wide thermal spacers with a new shape, allowing the use of additional barriers in the profile insulation section. Thermal spacers occupy the central chamber of MB-86N profiles and are 43, 42 or 30,5 mm wide. Depending on the system version, additional elements can be used between them to improve thermal insulation: SI includes plastic or metal sheet partitions, while Aero includes special aerogel inserts.

- A double-component central gasket provides excellent sealing and thermal insulation in the space between the leaf and frame.

- A wide range of glazing allows the use of all types of triple-glazed units, soundproof or anti-burglar glass.

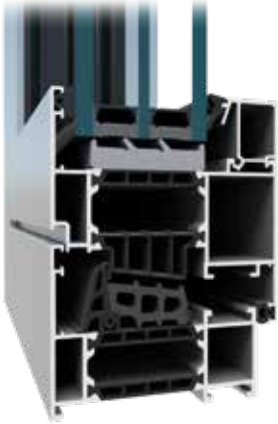
- Glazing beads are available in three lines: Standard, Prestige and Style. Most strips in the Standard and Prestige versions are closed profiles, which ensures the secure fixing of infills and improves the anti-burglar qualities of the structure. Internal glazing gaskets are set deep in the beads so they are barely visible from outside.



- The shapes of the profiles are adjusted to the installation of various types of peripheral fittings, including hidden hinges. The use of typical fitting grooves in window leafs allows the installation of most available fittings, designed both for aluminum and PVC windows.

- Profile drainage is available in two options: traditional, with a visible decorative cap for the drain opening or hidden.

- Anti-burglary windows and doors up to RC3 class.



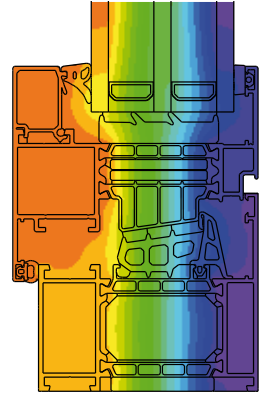
MB-86N ST Window



MB-86N SI Window



MB-86US Window



Isothermal lines
in MB-86N SI window

Examples of heat transfer coefficients U_w

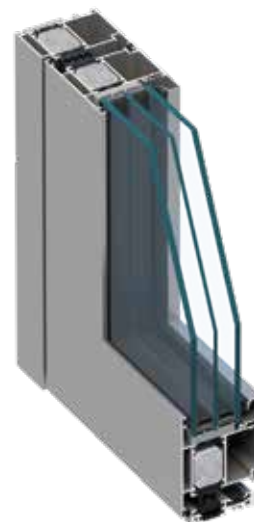
WINDOWS SCHEMES	SECTION A OR B		Value U_w [W/m ² K]	
			Glass with Multitech frame - Double chamber	
			$U_g=0,5$	$U_g=0,7$
	MB-86N ST		0,80	0,96
			0,89	1,02
	MB-86N SI		0,67	0,83
			0,76	0,89



MB-86N ST Door



MB-86N SI Door



MB-86N SI+ Door

Examples of heat transfer coefficients U_D

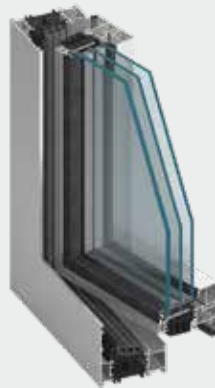
DOOR SCHEMES	SECTION A OR B		Value U_D [W/m ² K]	
			Glass with Multitech frame - Double chamber	
			$U_g=0,5$	$U_g=0,7$
	MB-86N ST		1,09	1,23
	MB-86N SI		0,96	1,09
	MB-86N SI+		0,87	1,01

SYSTEM MB-86B



MB-86B system has been developed to meet the requirements/needs of the Belgian market. It has been designed to execute elements of architectural external development, e.g. different types of windows, porch enclosures, shop windows, spatial structures, featuring high thermal and sound insulation performance, tightness to water and air infiltration. MB-86B has been awarded with certification ATG by the Belgian Research Institute UBAtc.

SYSTEM MB-86US



CONCEALED CASEMENT WINDOW

A characteristic feature of this solution is its appearance: the profile of the sash is concealed behind the frame profile and the glass surfaces lazed in openable and fixed sections lie in one plane. This makes the openable and fixed lits look the same on the outside.

SYSTEM MB-86 Casement



OUTWARD OPENING WINDOWS

The system enables the fabrication of various types of outward opening or fixed windows, anterooms, shop fronts and spatial structures. Top-hung or side hung windows can use traditional butt hinges or friction hinges, that can move away the entire casement from the frame.

TECHNICAL SPECIFICATION	MB-86N	MB-86B	MB-86US	MB-86 Casement
Depth of frame (window / door)	77 mm / 77 mm	77 mm / 77 mm	77 mm	77 mm
Depth of leaf (window / door)	86 mm / 77 mm	86 mm / 77 mm	80,8 mm	77 mm
Glazing range (window / door)	frame: 8,5 to 61 mm leaf: 17,5 to 70 mm / frame: 8,5 to 61 mm	frame: 13 to 61 mm leaf: 21 to 70,5 mm / frame: 13 to 61 mm	frame: from 7 to 52 mm leaf: from 15 to 60 mm	frame: from 13 to 61 mm leaf: from 22 to 70 mm
Maximum size (H×W) (window / door)	H to 3000 mm, W to 1700 mm / H to 3000 mm, W to 1400 mm	H to 2500 mm L to 1500 mm / H to 2600 mm L to 1400 mm	H to 2500 mm, W to 1600 mm	H to 2500 mm L to 2400 mm / H to 2800 mm L to 1400 mm

PERFORMANCE	MB-86N	MB-86B	MB-86US	MB-86 Casement
Air Permeability (window / door)	class 4, EN 12207	class 4, EN 12207	class 4, EN 12207	class 4, EN 12207
Watertightness (window / door)	class E 4800*, EN 12208, class E1500, EN 12208 / class E1350 Pa, EN 12208	class 9A, EN 12208 / class 6A, EN 12208	class E 1350, EN 12208	E1950 Pa, EN 12208
Thermal insulation (window / door)	U_w from 0,62 W/(m ² K)* U_w from 0,68 W/(m ² K)** U_D from 0,80 W/(m ² K)***	-	-	-
Windload resistance (window / door)	class CE3330 (3330Pa) EN 12210 / class C5 (2000Pa), class B5 (2000Pa) EN 12210	class C4, EN 12210 / class C5, EN 12210	class C5, EN 12210	C5, EN 12210
Impact resistance (window / door)	-	class 3 / class 3	-	class 3 / class 3

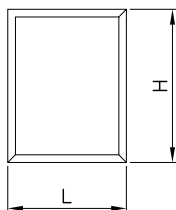
* - U_w for MB-86N SI -based fixed window casement size 1700×2800 mm, with glazing $U_g=0,5$ W/(m²K)

** - U_w for MB-86N SI -based openable window casement size 1700×2150 mm, with glazing $U_g=0,5$ W/(m²K)

*** - U_D for panel door MB-86N SI+ casement size 1400×3000 mm, with glazing $U_g=0,5$ W/(m²K)

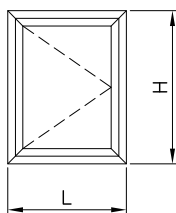
Max. dimensions of windows

Fixed window



Max. dimensions of windows result from maximal glass sizes

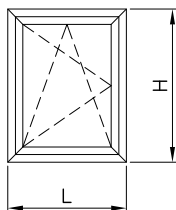
Turn-hung window



Hmax=3000 mm
Lmax=1300 mm

Hmax=2150 mm
Lmax=1700 mm

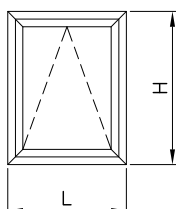
Tilt and turn window



Hmax=3000 mm
Lmax=1300 mm

Hmax=2150 mm
Lmax=1700 mm

Tilt window



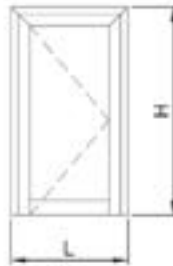
Hmax=3000 mm
Lmax=1300 mm

Hmax=2150 mm
Lmax=1700 mm

Hmax=1300 mm
Lmax=2400 mm

Maximum standard dimensions of the door

Inward openable



Hmax=3000 mm
Lmax=1400 mm


 - 200 kg

Outward openable

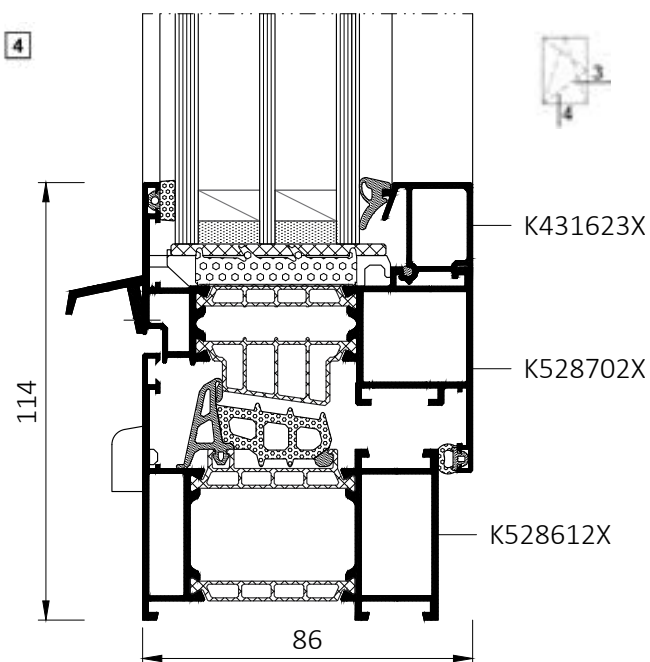


Hmax=3000 mm
Lmax=1400 mm

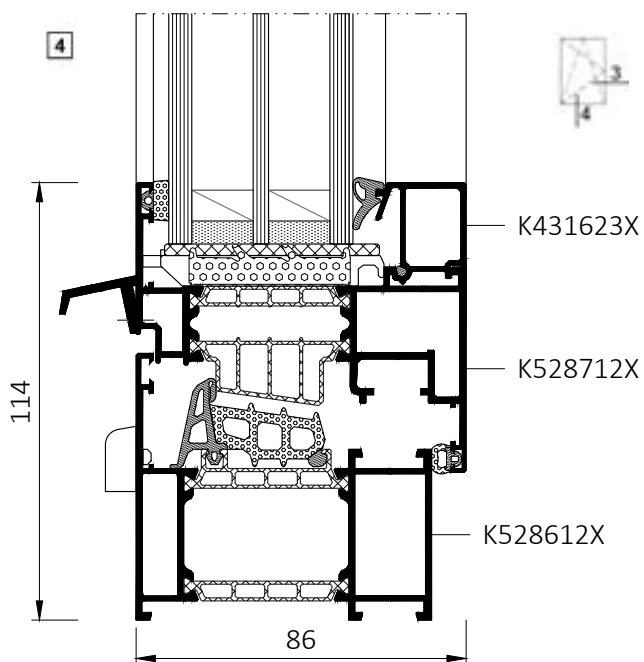
 - 200 kg

 } Maximal vent weight

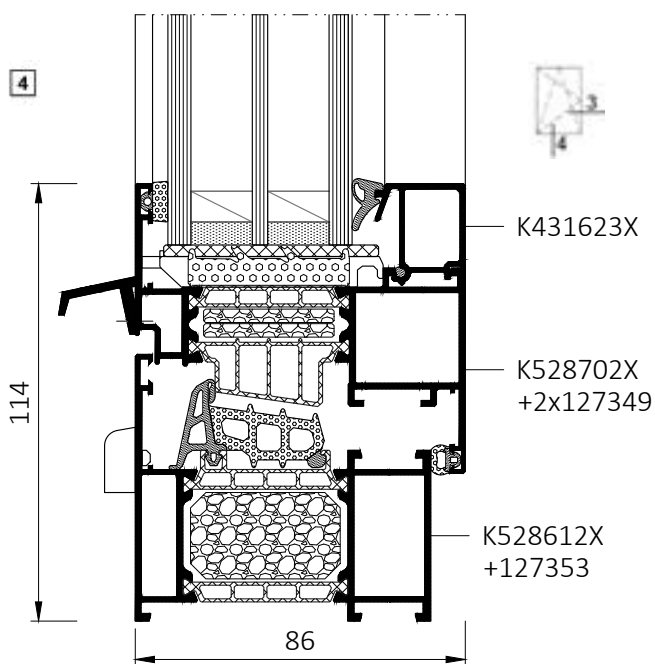
Opening window MB-86N ST



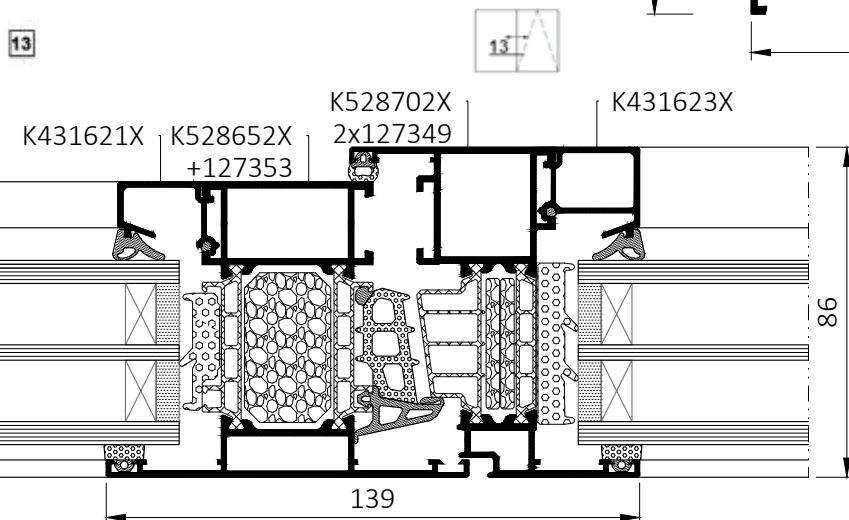
Opening window MB-86N ST



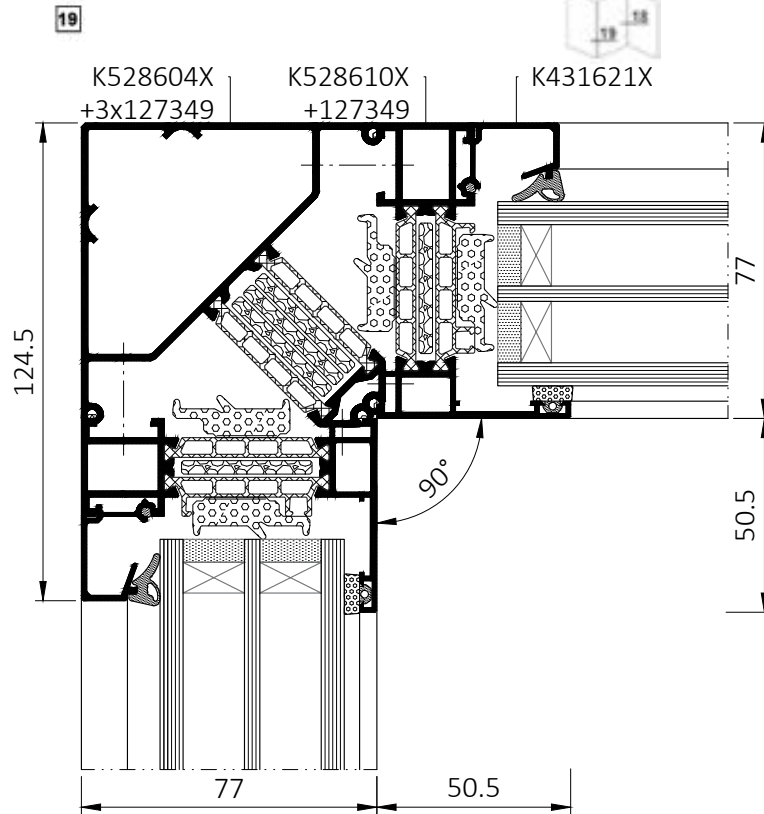
Opening window MB-86N SI



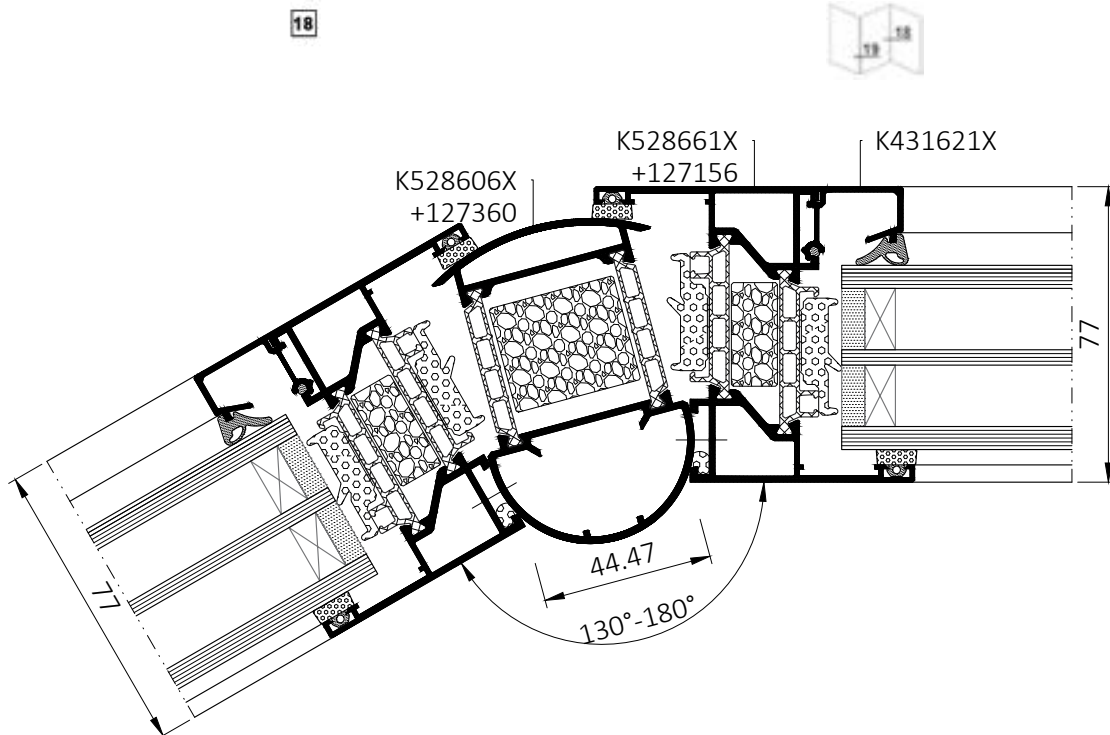
Opening-fixed windows MB-86N SI



Windows corner connections MB-86N SI



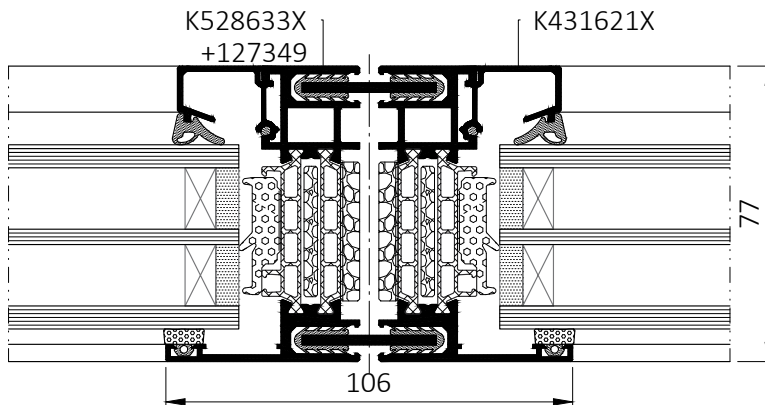
Windows corner connections MB-86N SI



Expansion connection MB-86N SI

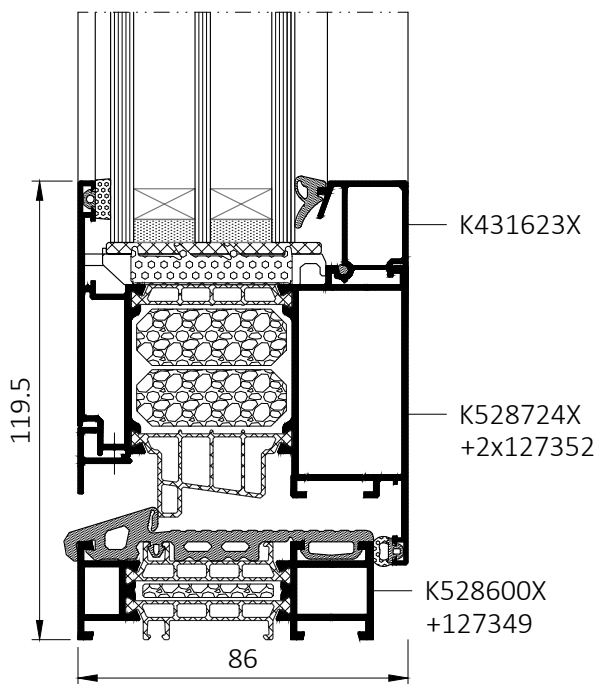
17

17



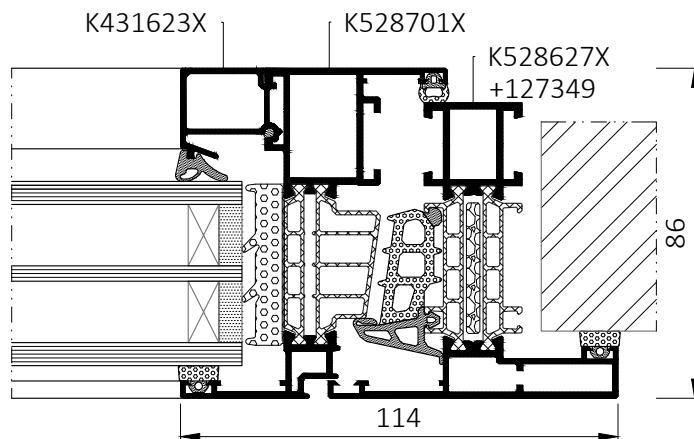
MB-86N SI balcony door with low treshold

4a

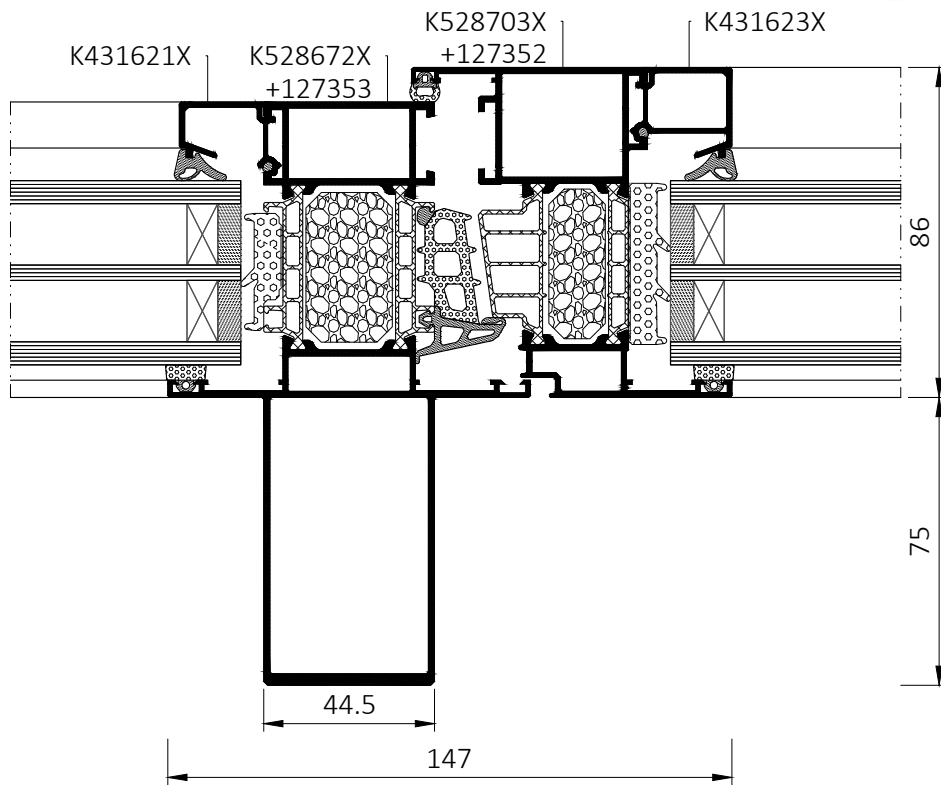


Openable window with renovation frame, cross-section

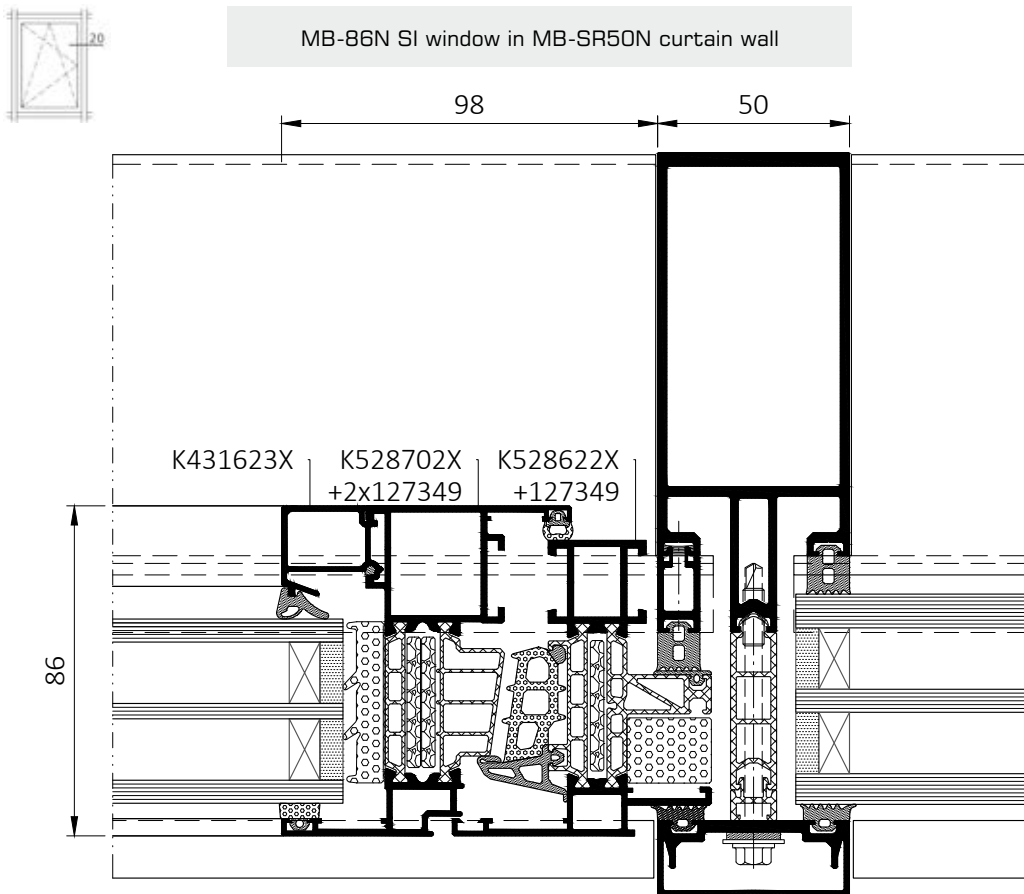
3



MB-86N SI Tilt&Slide window
with reinforced mullion



MB-86N SI window in MB-SR50N curtain wall



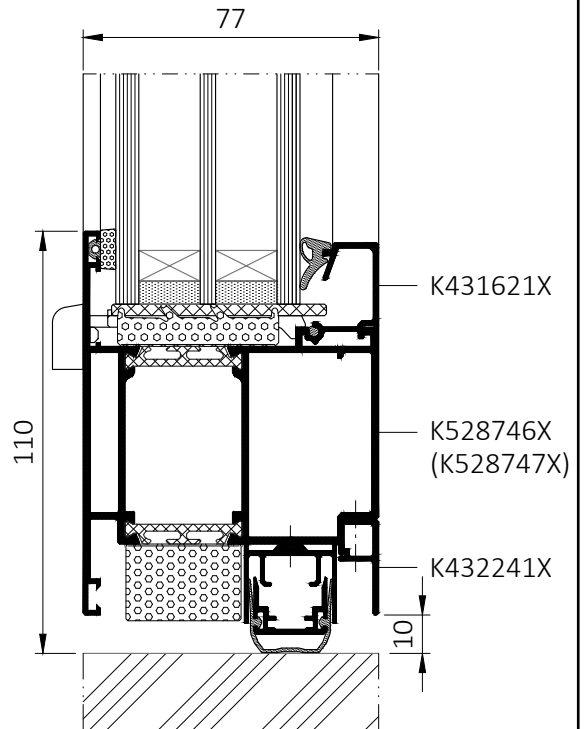
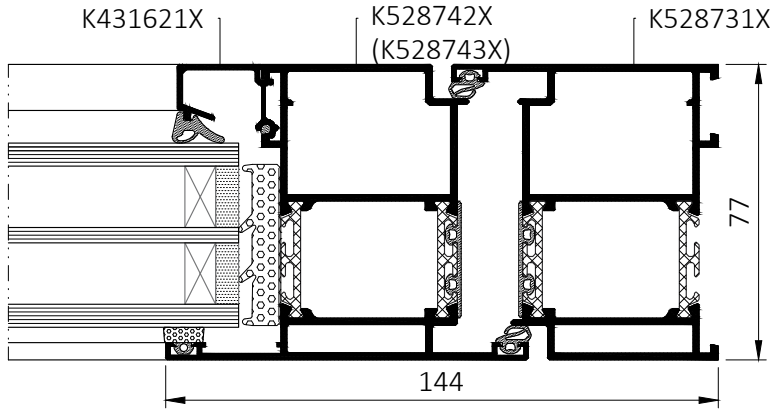
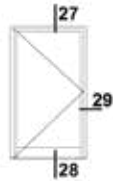
Scale 1:2

MB-86N ST door section

MB-86N ST door threshold section

29

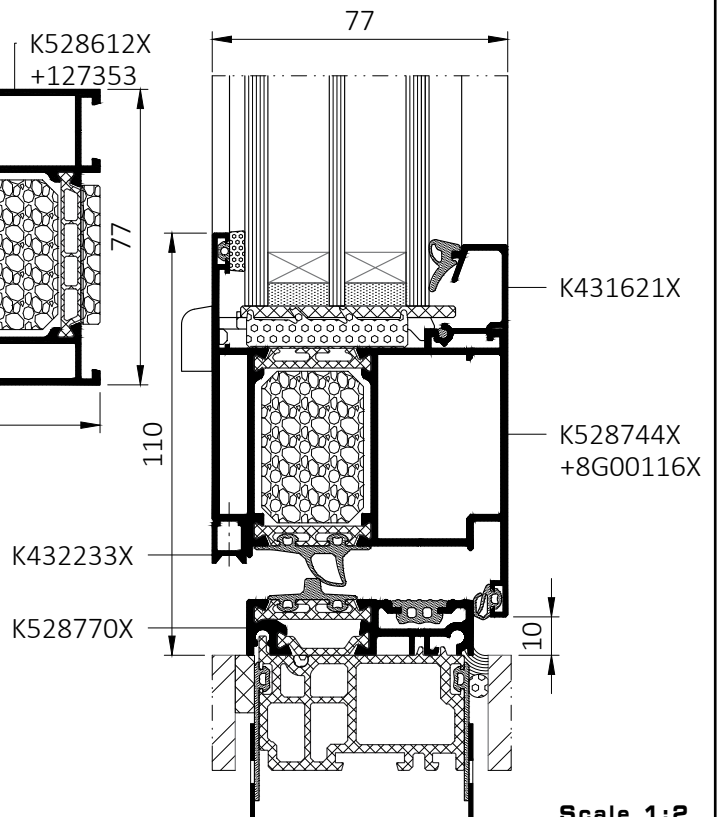
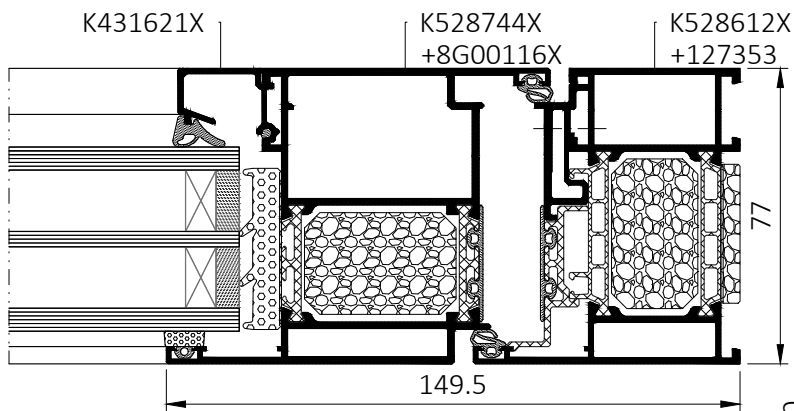
28



Cross-section through the MB-86N SI door in continuous shopfront

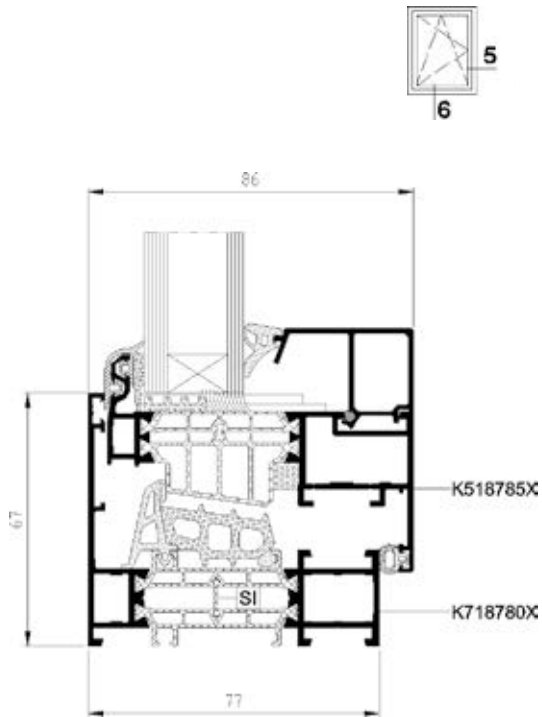
Cross-section through the MB-86N SI door threshold

35

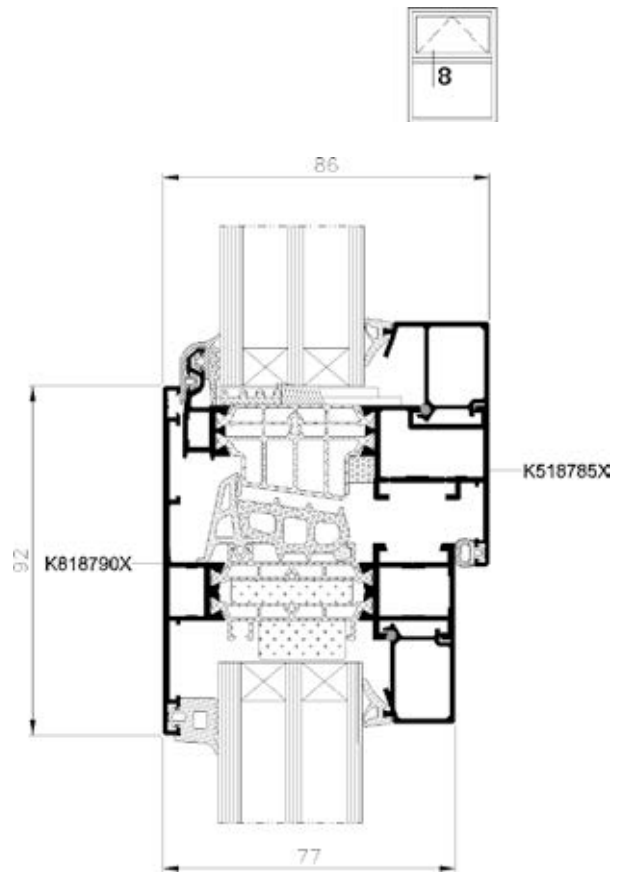


Scale 1:2

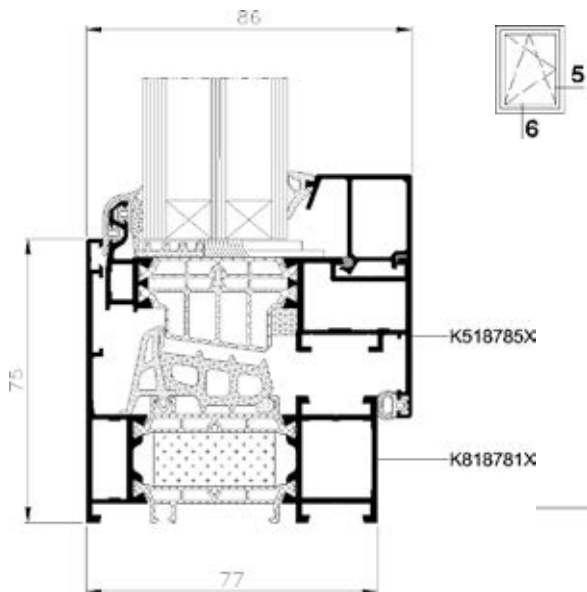
MB-86US ST/SI openable window, cross-section



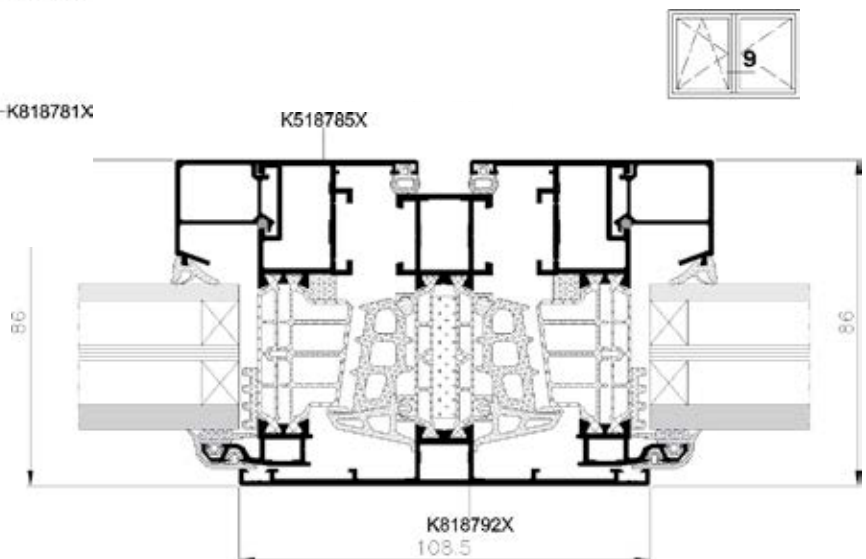
MB-86US AERO fixed and openable window, cross-section



MB-86US openable window, cross-section

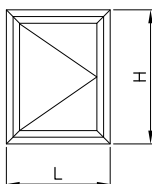


MB-86US AERO openable 2-casement window, cross-section




Max. dimensions of windows

Outward opening casement window

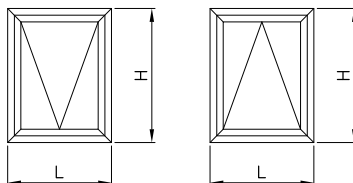


Hmax=2800 mm
Lmax=1300 mm


Hmax=2700 mm
Lmax=1400 mm

 - 180 kg

Outward opening awning window

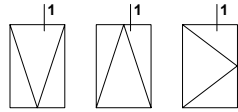


Hmax=2500 mm
Lmax=2400 mm

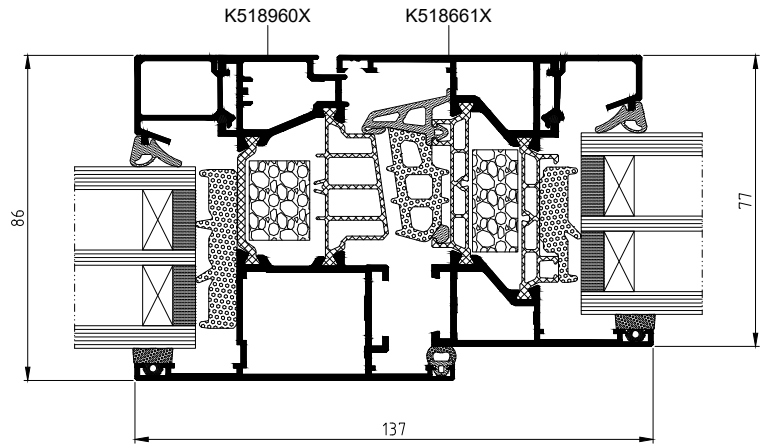
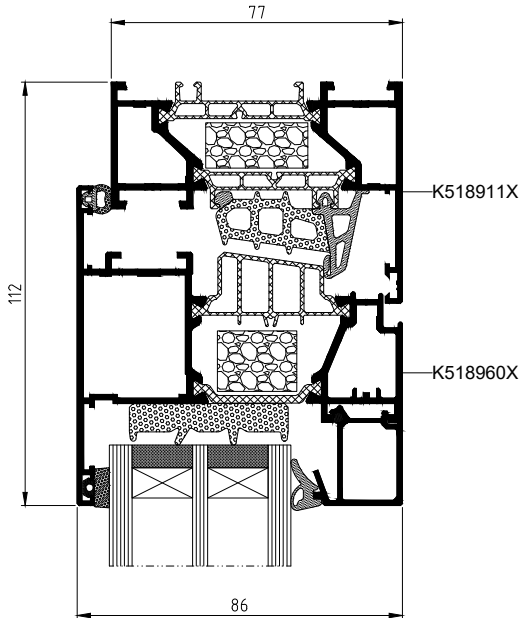
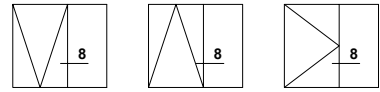
 - 180 kg

Maximum dimension are clearly correlated with the sash profiles and are applicable only with the total set of hardware, taking into account the application range of this hardware.

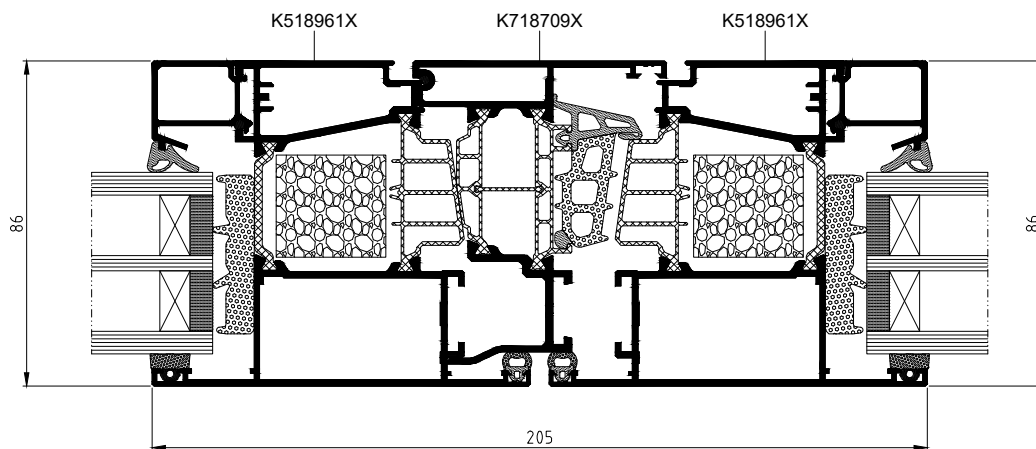
Opening window



Opening and fixed window



Openable 2-casement window





Exterior folding door offers greater flexibility to its users. It enables us to use weather conditions to our advantage and virtually eliminate the barrier between the interior space and its surroundings. Such door can perfectly combine the interior space (home, café, restaurant) with the terrace or the outside area that is used seasonally.

With its excellent technical parameters, MB-86 FOLD LINE HD is a very convenient solution that enables the fabrication of large-dimension structures. Folding door can be opened both outwards and inwards and its leaves can be freely configured. It's a modern product, designed to meet the high demands of users, architects and owners.

FOLDING DOOR



Features and benefits MB-86 FOLD LINE

- three-chambered, durable aluminium profiles of a structural depth of 86 mm for frames and 77 mm for door leaves
- MB-86 Fold Line profiles are designed for triple glazing, with the central section serving as insulation between thermal breaks that are 24 and 34 mm wide
- specialized and dedicated hardware for MB-86 FOLDLINE ensures comfortable operation of the door leaves of a maximum weight of up to 120 kg

- large dimensions of the construction enable the fabrication of doors that are up to 3000 mm high and 700 to 1200 mm wide
- threshold solutions in different versions: classic, with edge sealing or convenient, with a low-level threshold
- glazing thickness range from 13.5 to 61.5 mm; all types of glass available on the market can be installed

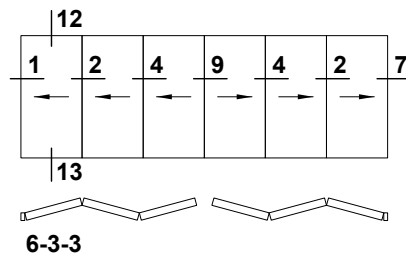
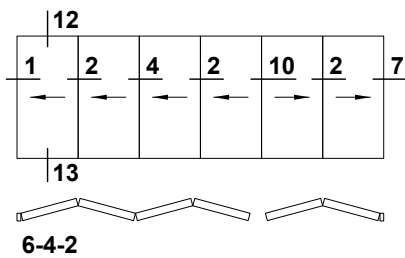
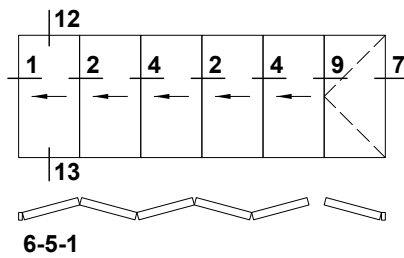
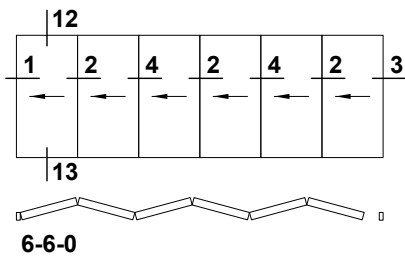
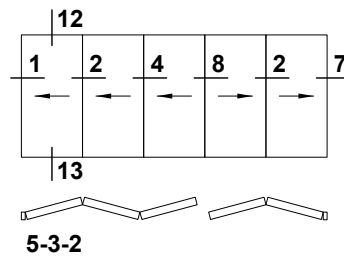
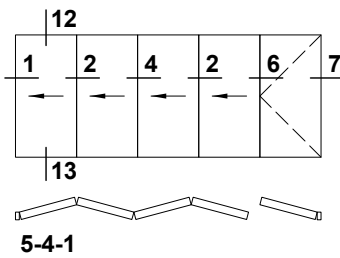
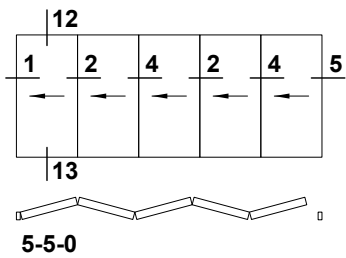
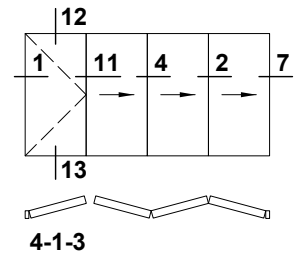
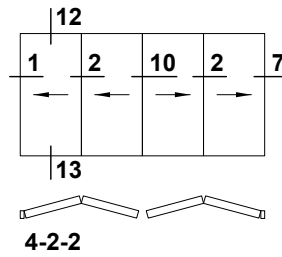
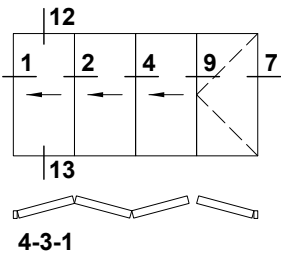
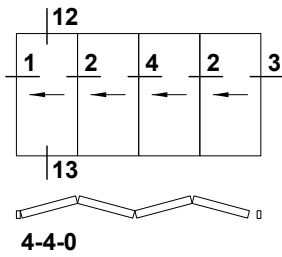
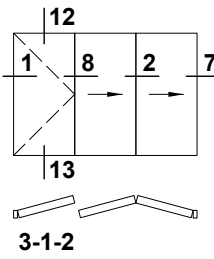
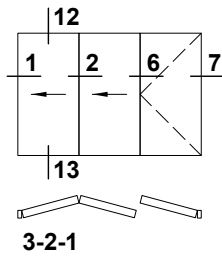
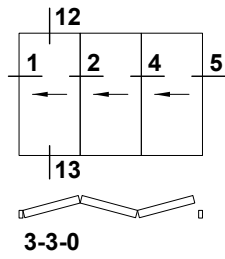
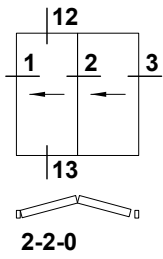
- important degree of compatibility with the well-known and highly appreciated window & door system ALUPROF MB-86:

profiles are jointed the same way, and some profiles, gaskets and accessories are common to both systems.

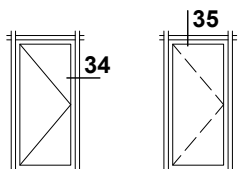
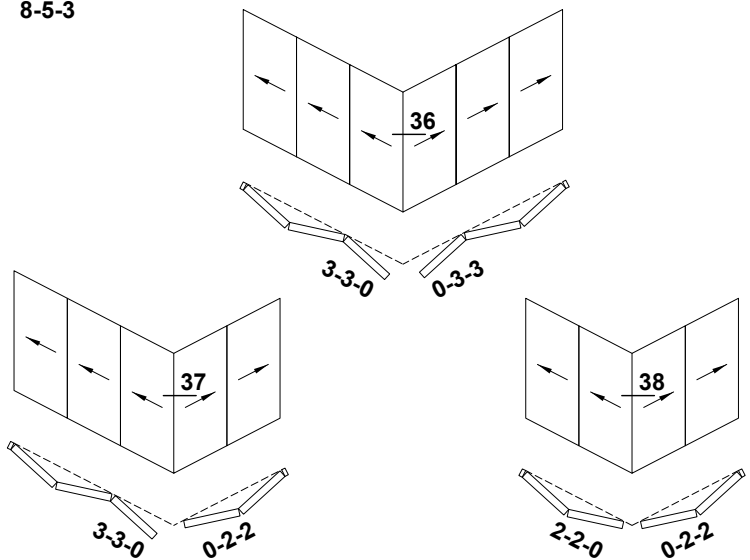
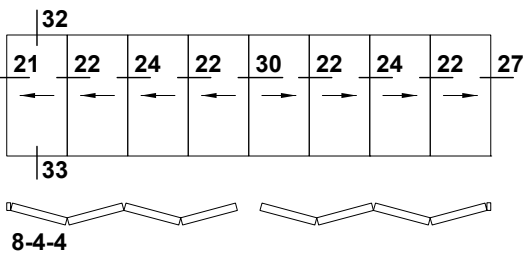
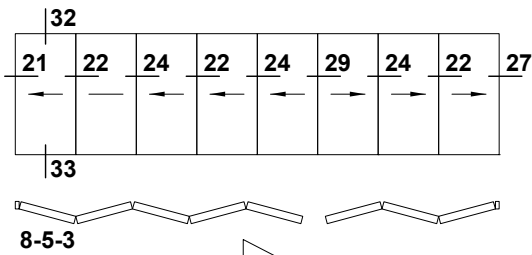
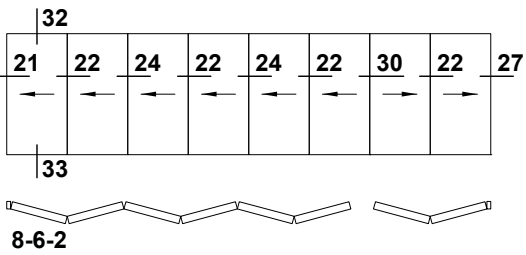
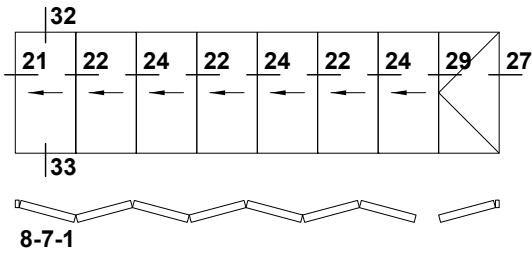
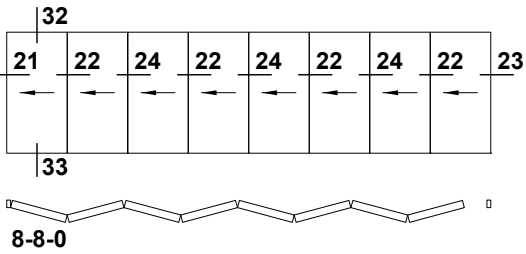
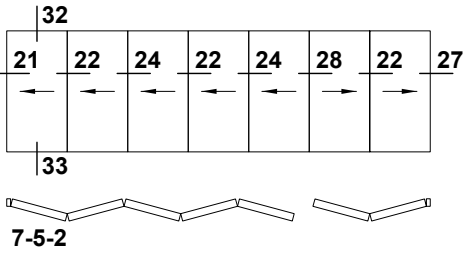
Performance:

- Air permeability: up to class 4, EN 12207
- Water tightness: up to class 9A (600 Pa), EN 12208
- Wind load resistance: class C1, EN 12210

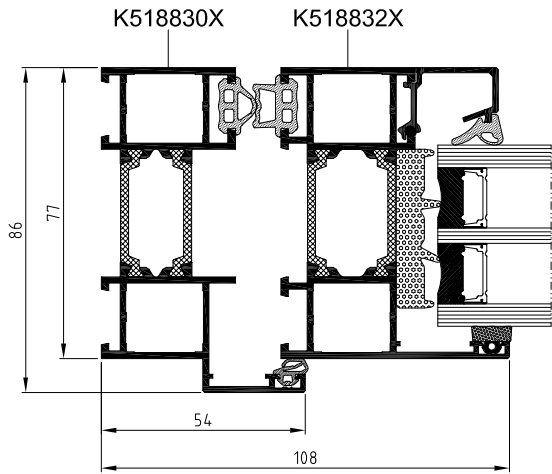
Selected configurations



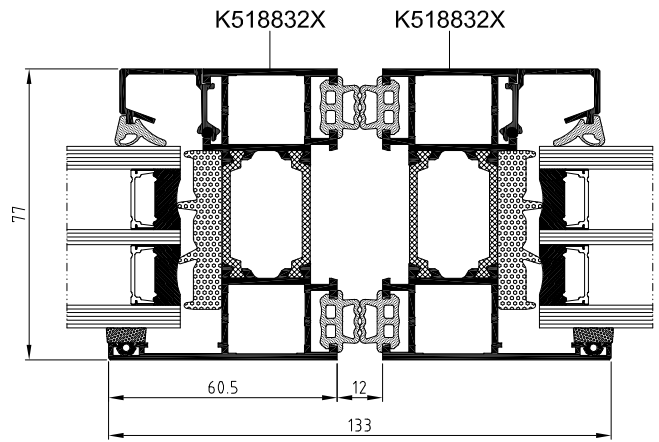
Selected configurations



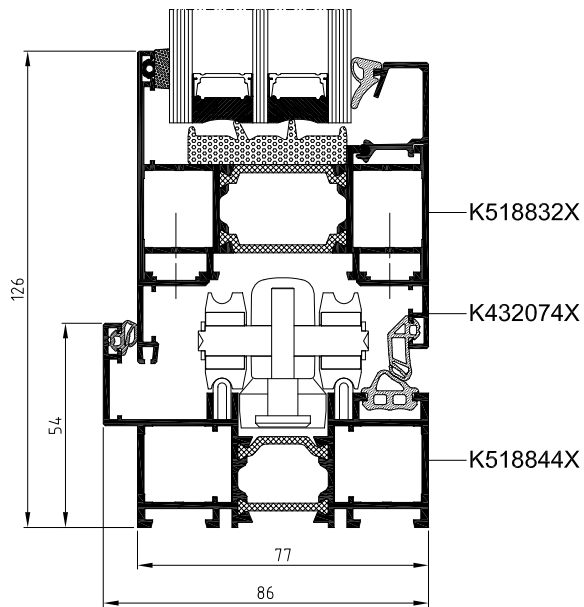
Door - cross-section



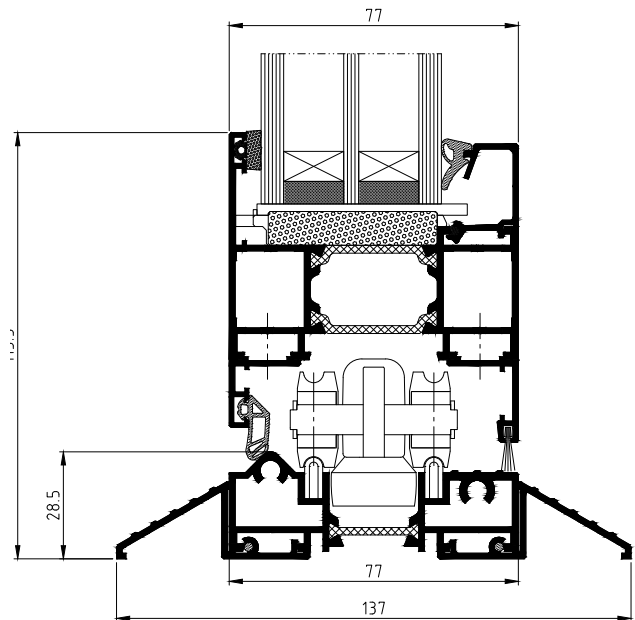
Door/leaves - cross-section



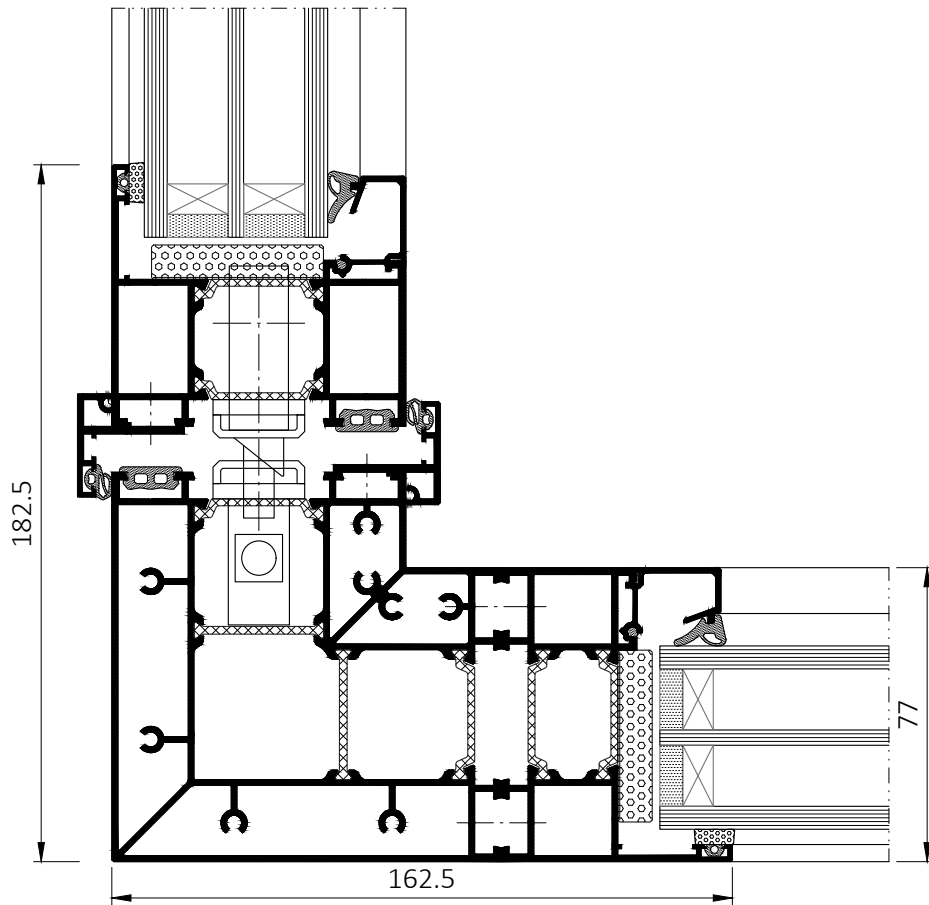
Door with edge sealing, bottom cross-section



Door with low-level threshold, bottom cross-section



Section thru door leaf joint in corner door





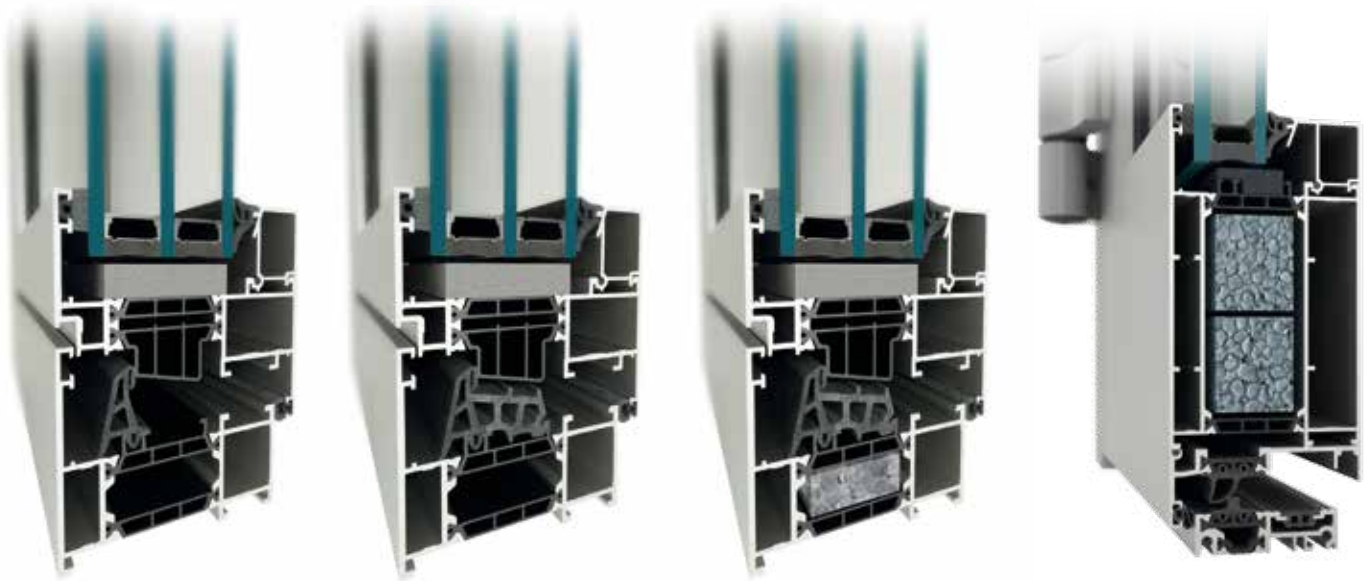
The MB-79N is a state-of-the-art and economical addition to the Aluprof window & door systems. It has been designed to outperform typical thermal insulation requirements. The MB-79N series can be used to fabricate fixed, side-hung, hopper, tilt-and-turn, and hopper-and-slide windows, as well as single and double exterior doors, and storefront solutions complete with doors. In addition to the economical version MB-79N E, featuring a one-component central seal, and the MB-79N ST version with a two-component central seal, Aluprof also offers the MB-79N SI variant with enhanced thermal insulation, and with profiles that come equipped with insulating inserts and a two-component central seal. For external doors, Aluprof also offers the MB-79N SI+ variant that comes with a central seal and insulating inserts inside the profiles.

INNOVATIVE SYSTEM WITH THERMAL BREAK



Features and aesthetics

- profile depth: 79 mm (casement) and 70 mm (window frame and door leaf)
- thermal breaks made of an innovative material with a brand-new shape allow the use of a seal in the area of profile insulation, in both windows and doors
- windows in 3 thermal variants (MB-79N E, MB-79N ST, MB-79N SI) and doors in 4 thermal variants (MB-79N E, MB-79N ST, MB-79N SI and MB-79N SI+)
- thermal insulation: U_w starting from 0.64 W/(m²K), U_f starting from 0.83 W/(m²K)
- excellent kinematics enabling the fabrication of narrow, operable windows and doors
- door leaf profiles have isolation joint, which eliminates thermal stresses during operation
- possibility of using invisible hinges and the most popular multi-point hardware, including hidden fittings + state-of-the-art AluPilot fittings; for doors, fittings with automation and access control functions are also available
- able to receive double or triple glazing, up to 63 mm for windows and 54 mm for doors, thus making it possible to use all common types of glass, including acoustic or burglar-resistant glass
- possibility to produce security doors rated RC1 - RC3, and panel doors in many highly aesthetically pleasing versions
- large selection & different styles of handles, including minimalist looking handles with or without rosette



MB-79N E

MB-79N ST

MB-79N SI

MB-79N SI+ door

TECHNICAL SPECIFICATION	MB-79N WINDOW	MB-79N DOOR
Depth of frame	70 mm	70 mm
Depth of leaf	79 mm	79 mm
Glazing range	frame: 1,5 – 54 mm, leaf: 10,5 – 63 mm	leaf: 1,5 – 54 mm
Max dimensions of leaf (HxL)	H to 2700 mm, L to 1350 mm / H to 2150 mm, L to 1700 mm	H to 2800 mm, L to 1400 mm

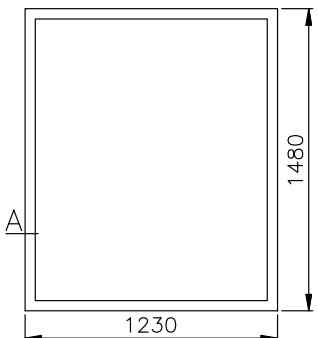
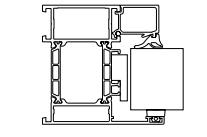
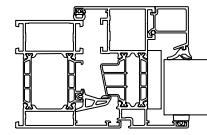
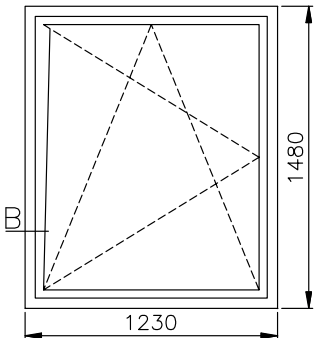
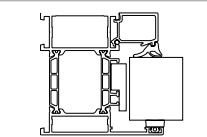
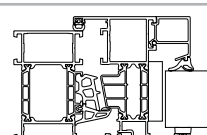
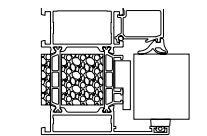
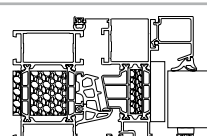
PERFORMANCE	MB-79N WINDOW	MB-79N DOOR
Air Permeability	class 4, EN 12207	class 4, EN 12207
Watertightness	class E 1950, EN 12208	class E 900, EN 12208
Thermal insulation	U_w from 0,64 W/(m ² K)* U_w from 0,72 W/(m ² K)**	U_D from 0,90 W/(m ² K)***
Windload resistance	class C5, EN 12210	class C5/B5, EN 12210

* - U_w for MB-79N SI -based fixed window casement size 1700×2700 mm, with glazing $U_g=0,5$ W/(m²K)

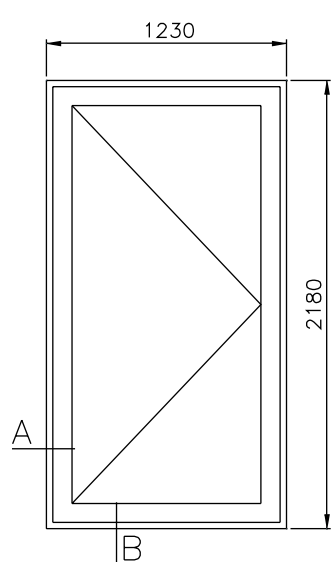
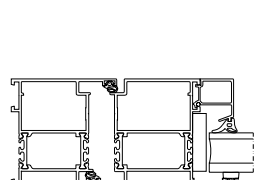
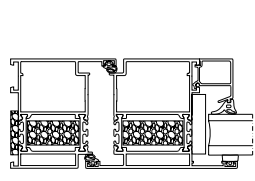
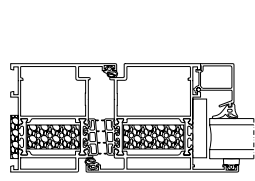
** - U_w for MB-79N SI -based openable window casement size 1700×2150 mm, with glazing $U_g=0,5$ W/(m²K)

*** - U_D for panel door MB-79N SI+ casement size 1400×2800 mm, with glazing $U_g=0,5$ W/(m²K)

Examples of heat transfer coefficients U_w

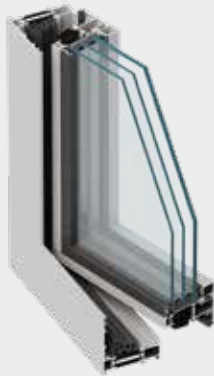
WINDOWS SCHEMES	SECTION A OR B		Value U_w [W/m ² K]	
			Glass with Multitech frame - Double chamber	
			$U_g=0,5$	$U_g=0,7$
	MB-79N E		0,82	0,98
			0,98	1,12
	MB-79N ST		0,82	0,98
			0,95	1,09
	MB-79N SI		0,70	0,86
			0,79	0,93

Examples of heat transfer coefficients U_D

DOOR SCHEMES	SECTION A OR B		Value U_D [W/m ² K]	
			Glass with Multitech frame - Double chamber	
			$U_g=0,5$	$U_g=0,7$
	MB-79N E (ST)		1,16	1,29
	MB-79N SI		1,06	1,20
	MB-79N SI+		1,01	1,14

S Y S T E M

MB-79N US



INVISIBLE SASH
WINDOW SYSTEMS
VARIETY

Functionality and aesthetics

- uniform external appearance of fixed and active windows,
- fixed and inward-opening windows: casement windows, tilt-and-turn, double-casement with a fixed or floating mullion,
- different types of glazing beads: Standard, Prestige, Style,
- possibility of building two-colour constructions: profiles can have different colours outside and inside,
- installation in individual developments or on aluminium curtain walls.

S Y S T E M

MB-79N Casement



OUTWARD OPENING
WINDOWS

The system enables the fabrication of various types of outward opening or fixed windows, anterooms, shop fronts and spatial structures.

As it is the case for the base system, MB-79N Casement windows have the SI variant, with central chamber filled with a special insulating insert. Possible ranges of glazing thickness are: for the window frame – from 1,5 to 54 mm, for the casement – from 10,5 to 63 mm.

Top-hung or side hung windows can use traditional butt hinges or friction hinges, that can move away the entire casement from the frame.

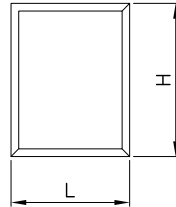
Compared to the inward opening windows, the outward opening constructions have an important feature: wind pressure

affects their tightness to a lesser extent, as it compresses the casement to the frame. This type of construction has excellent thermal and acoustic performance.



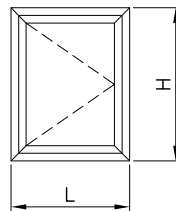
Max dimensions of window

Fixed window



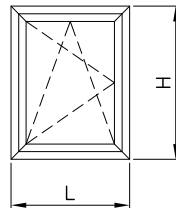
Max. dimensions of windows result from maximal glass sizes

Turn-hung window



Hmax=2700 mm
Lmax=1350 mm

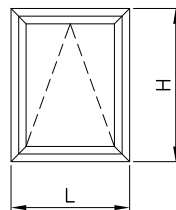
Tilt and turn window



Hmax=2700 mm
Lmax=1350 mm


Hmax=2150 mm
Lmax=1700 mm

Tilt window



Hmax=2700 mm
Lmax=1350 mm

Hmax=1300 mm
Lmax=2400 mm

 } Maximal vent weight

Maximum standard door size

Inward opening door



Hmax=2800 mm
Lmax=1400 mm


 - 200 kg

Outward opening door



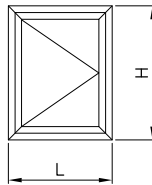
Hmax=2800 mm
Lmax=1400 mm

 - 200 kg


 } Maximum leaf weight

Max dimensions of window

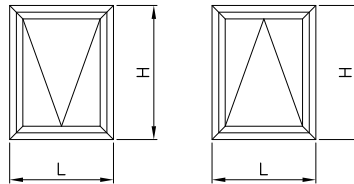
Outward opening casement window




Hmax=2700 mm
Lmax=1400 mm

 - 180 kg

Outward opening awning window

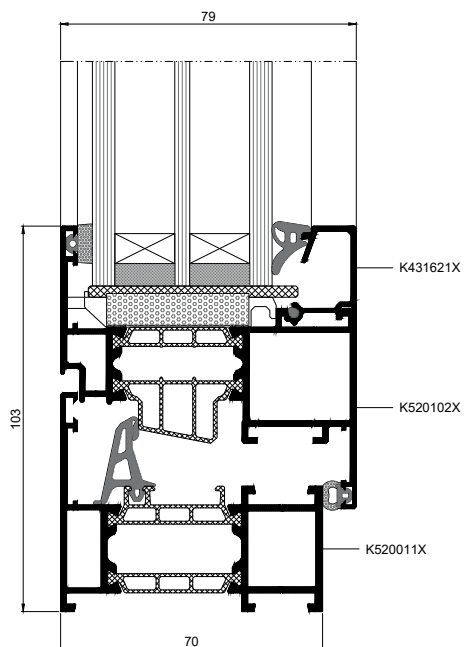


Hmax=2500 mm
Lmax=2400 mm

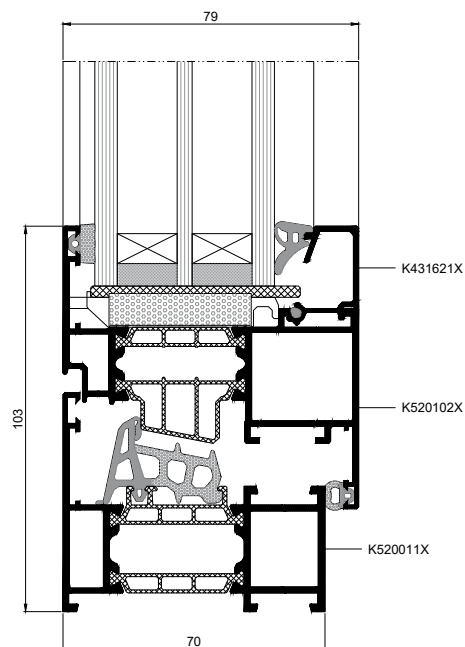
 - 180 kg

Maximum dimension are clearly correlated with the sash profiles and are applicable only with the total set of hardware, taking into account the application range of this hardware.

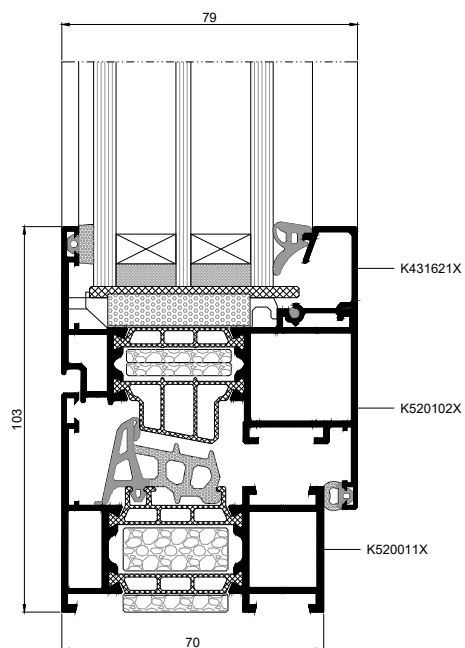
Openable window MB-79N E - cross-section



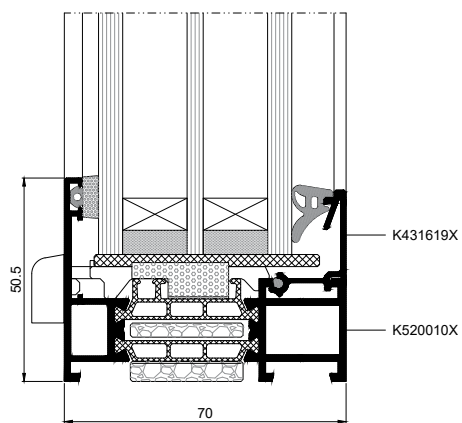
Openable window MB-79N ST - cross-section



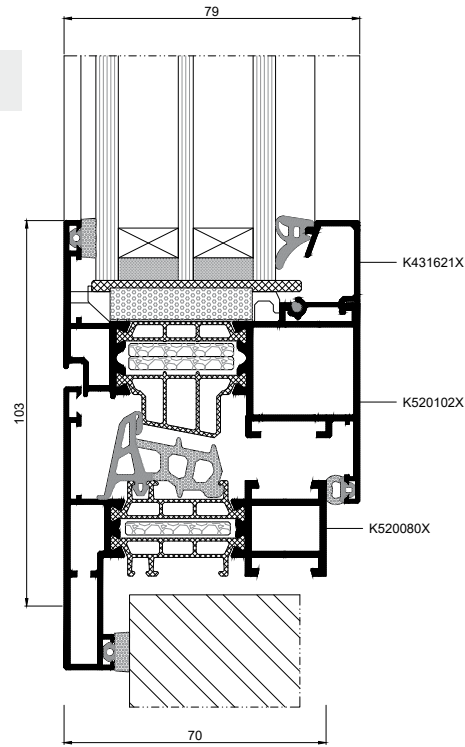
Openable window MB-79N SI - cross-section



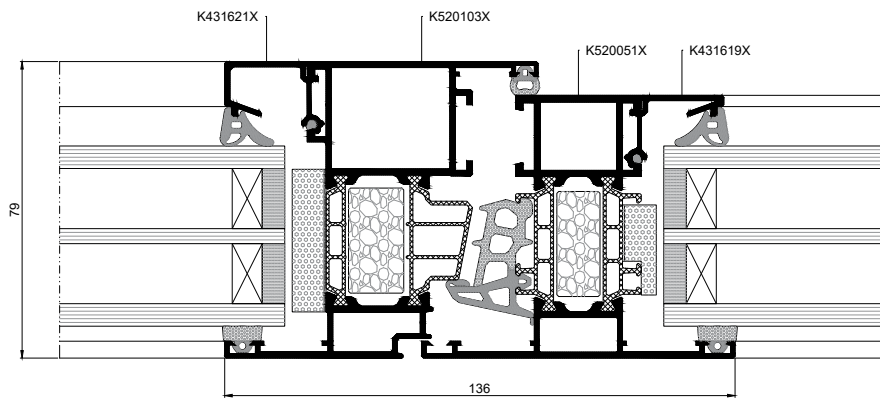
Fixed window MB-79N SI - cross-section



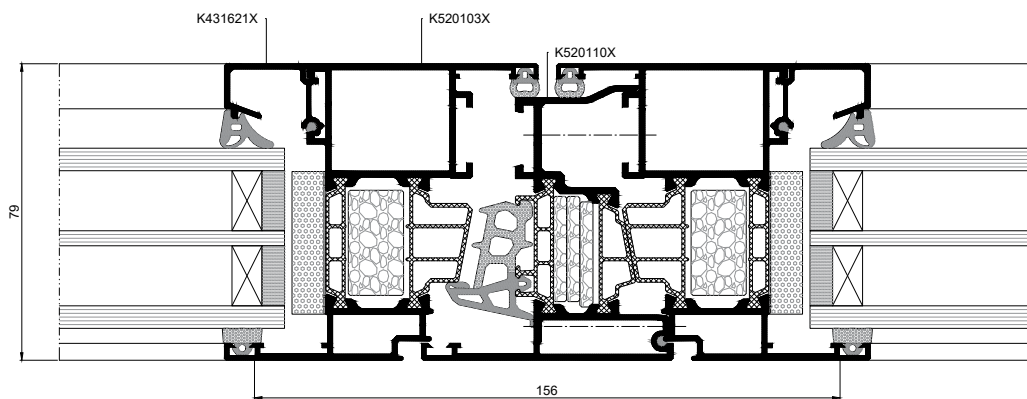
Window with renovation frame
- cross-section



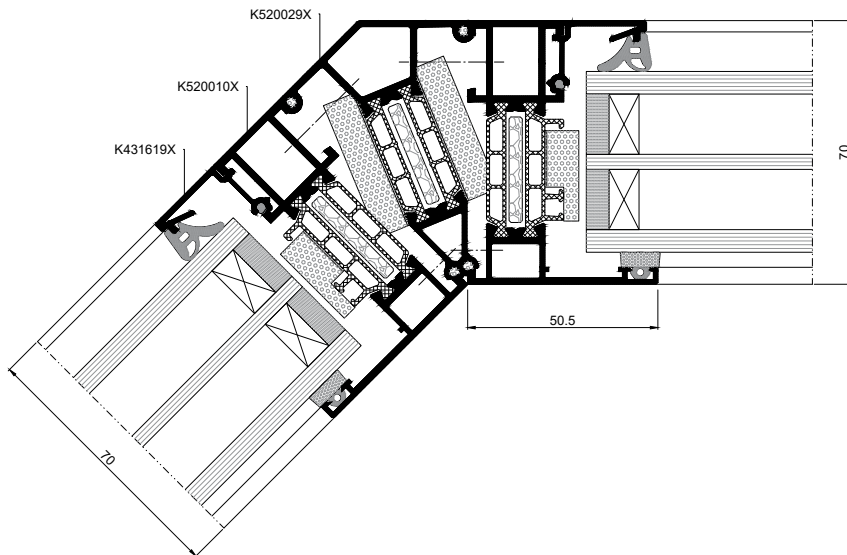
MB-79N SI openable and fixed window -
cross-section



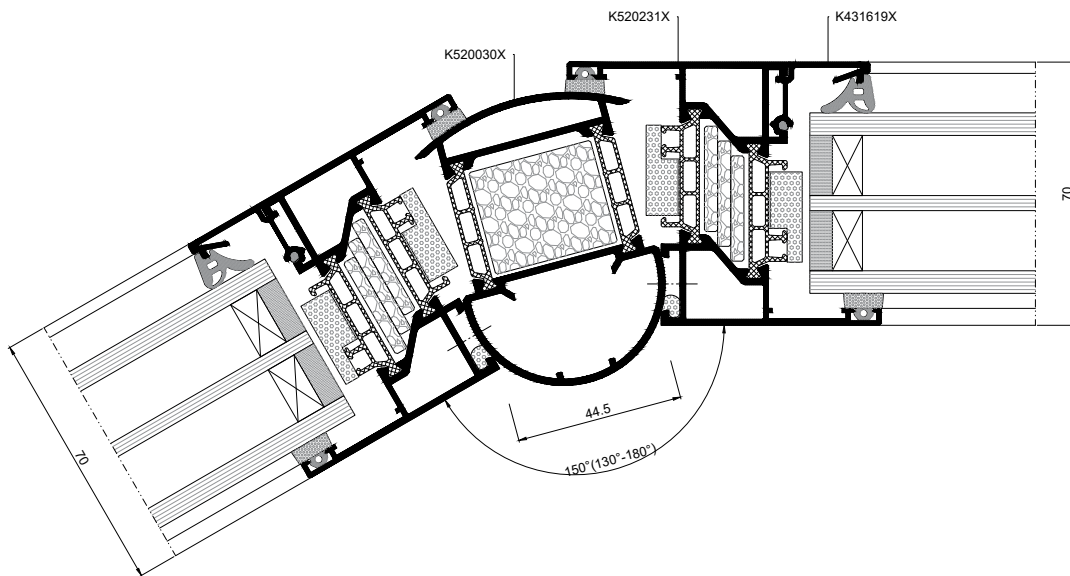
MB-79N SI openable, 2-leaf window -
cross-section



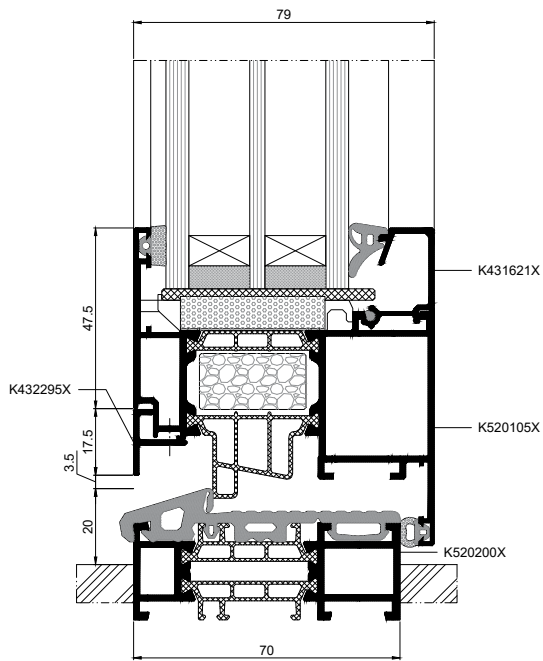
Angular connection - cross-section



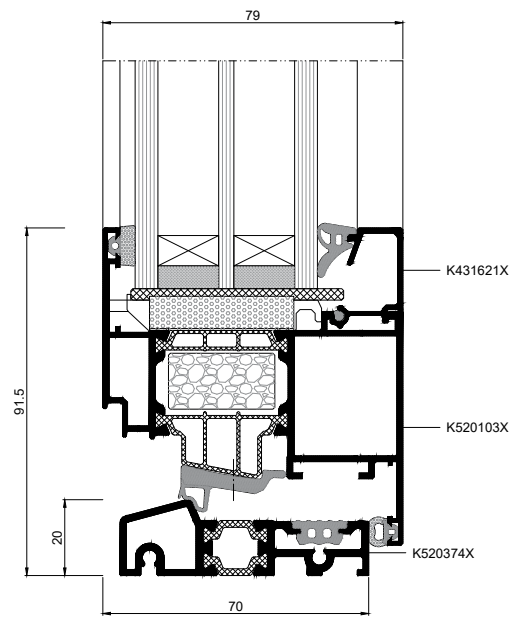
Angular connection - cross-section



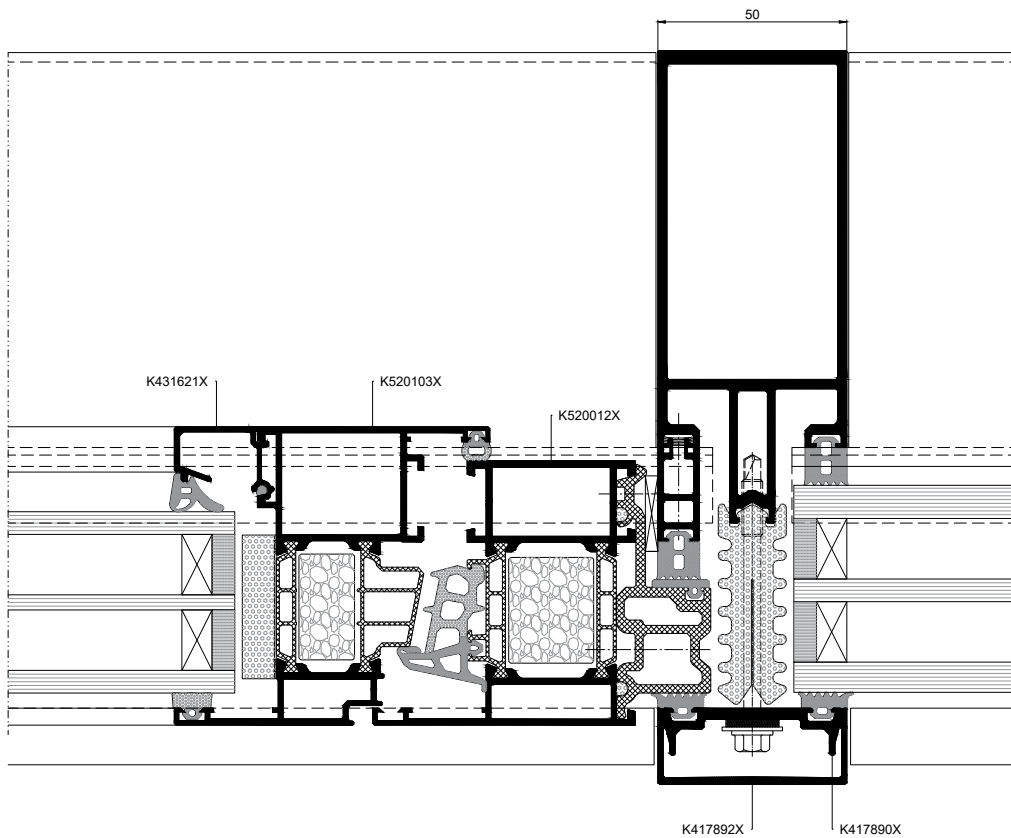
MB-79N SI balcony door
with low treshold - cross section



MB-79N SI balcony door
with low treshold - cross section

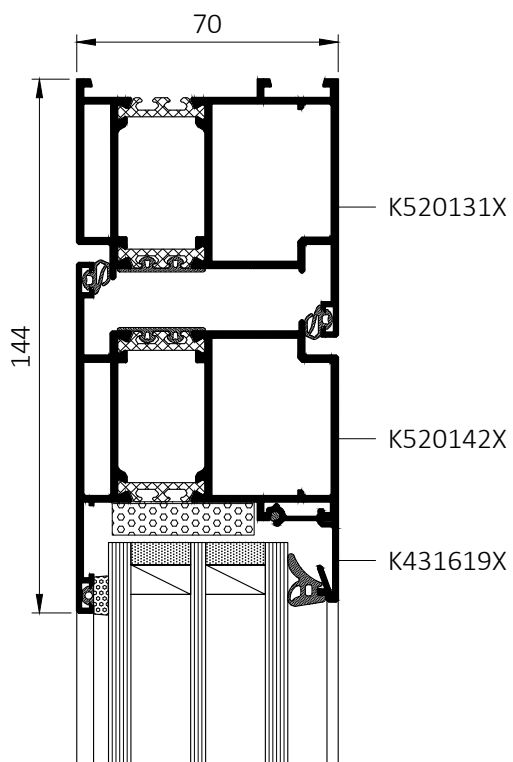


MB-79N SI window in MB-SR50N HI+ curtain wall
- cross section

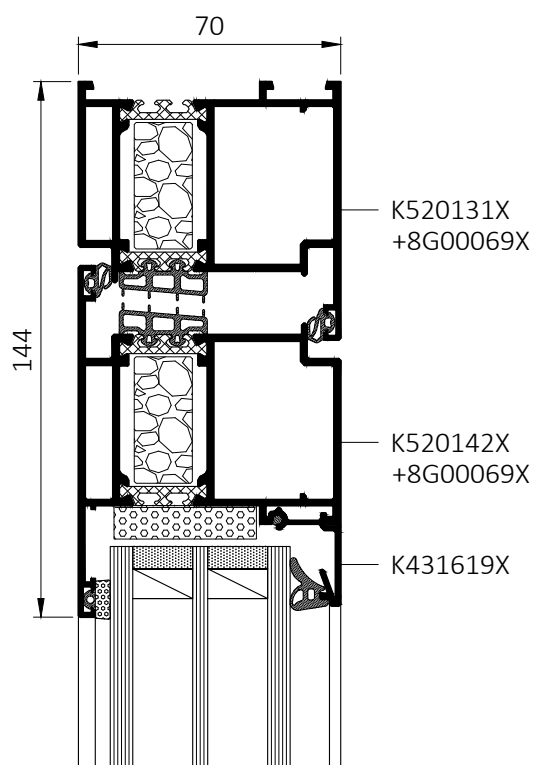


Scale 1:2

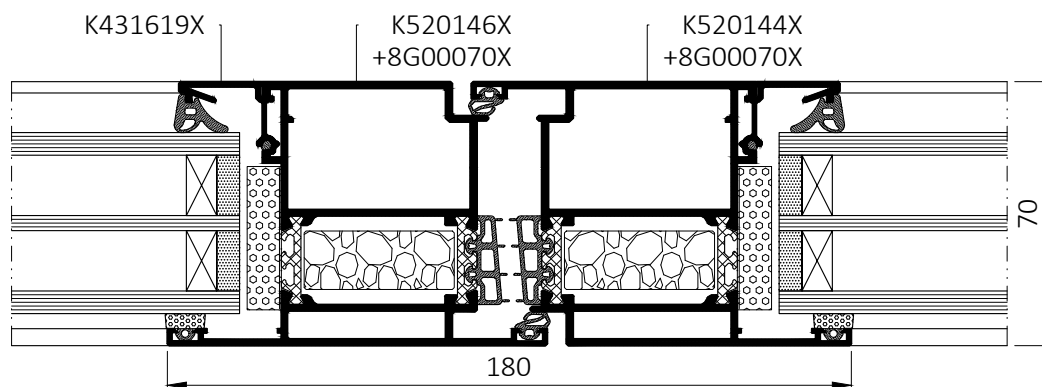
MB-79N E, ST door, cross section



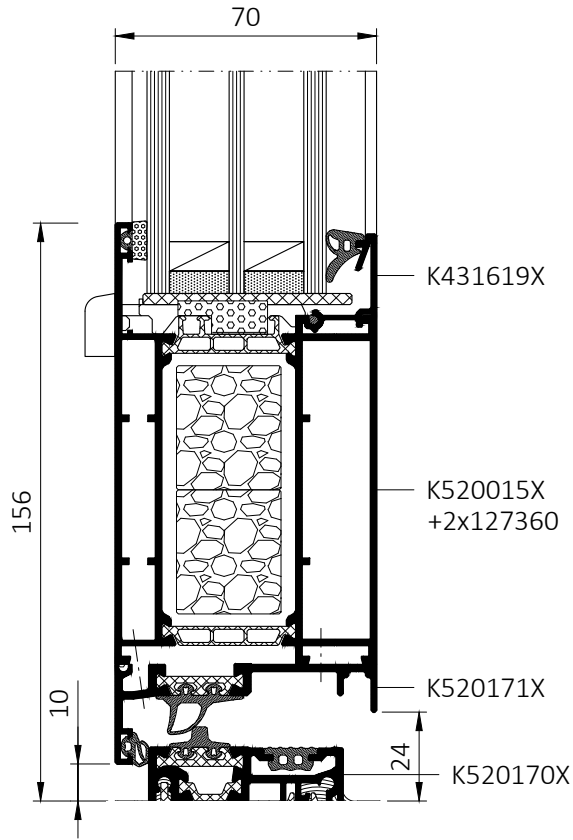
MB-79N SI+ door, cross section



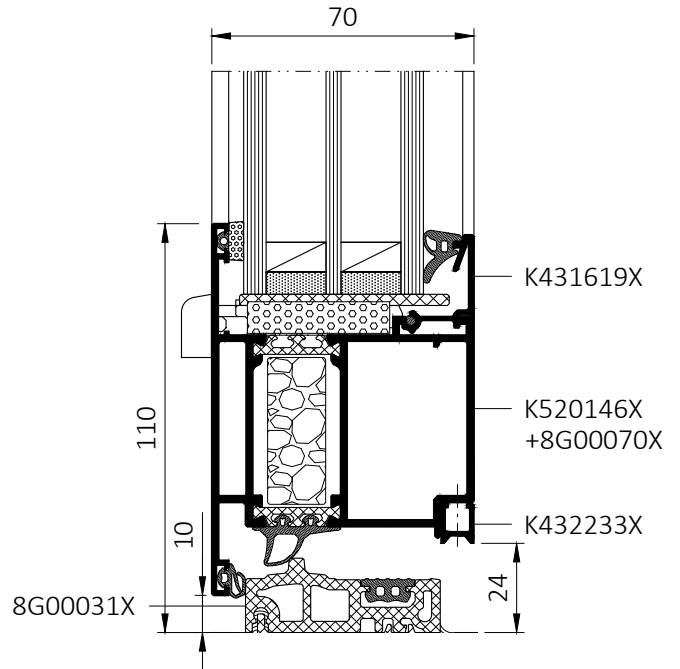
MB-79N SI+ double door, cross section



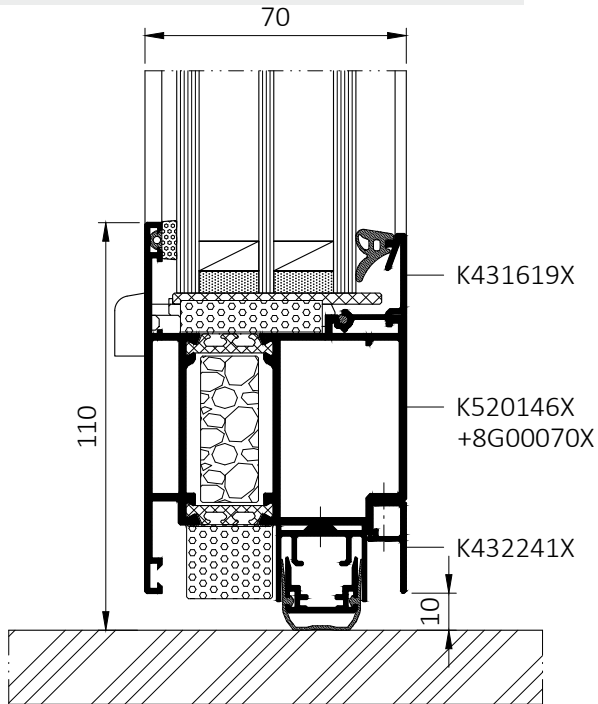
MB-79N SI+ door, cross section



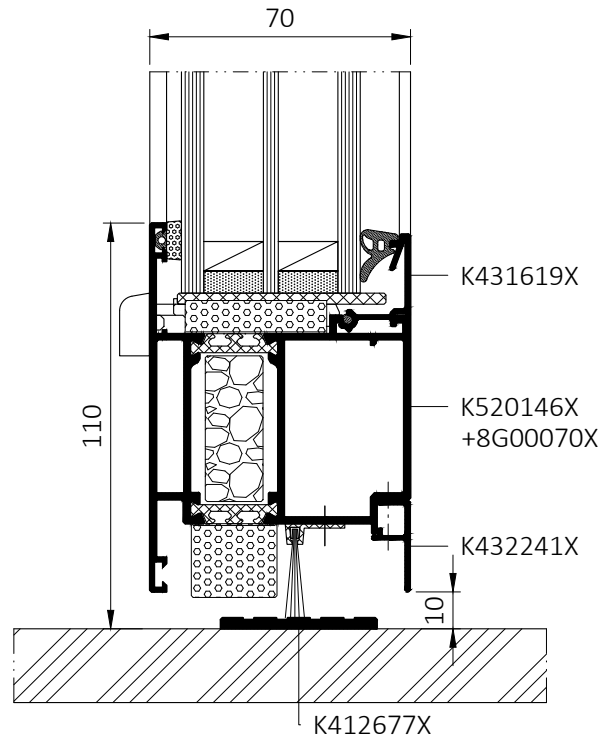
MB-79N SI+ door, cross section



MB-79N SI+ door, cross section

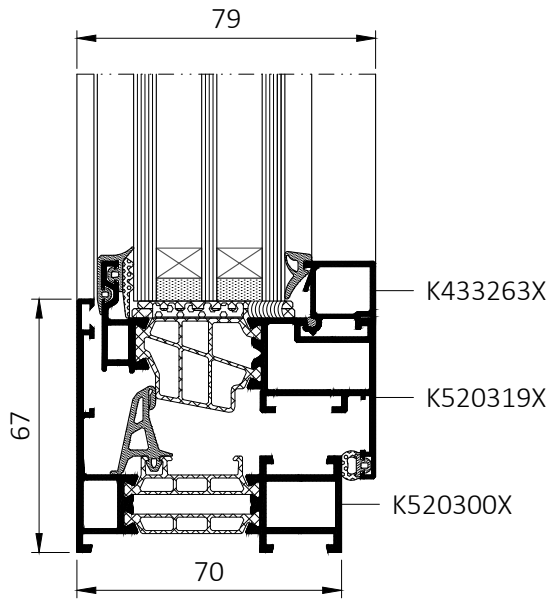


MB-79N SI+ door, cross section

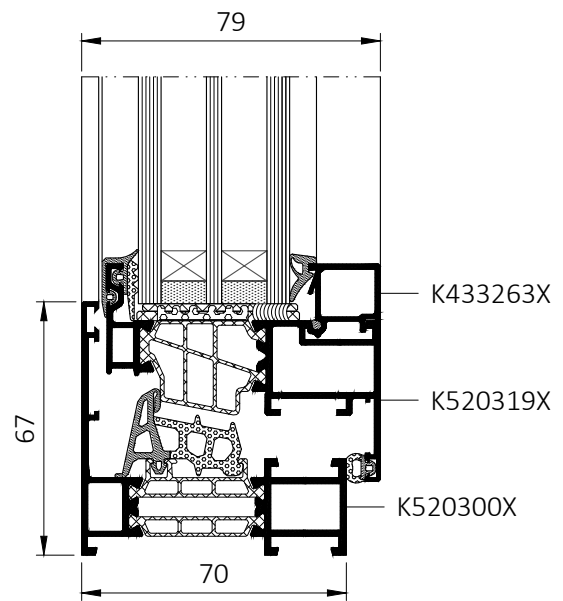


Scale 1:2

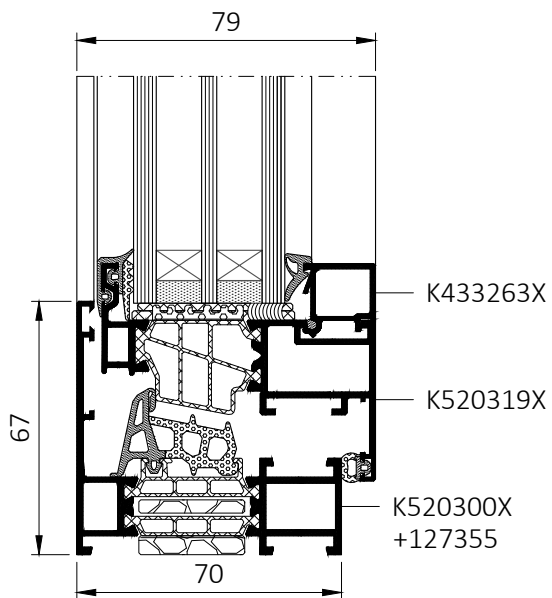
MB-79N US E opening window
- cross-section



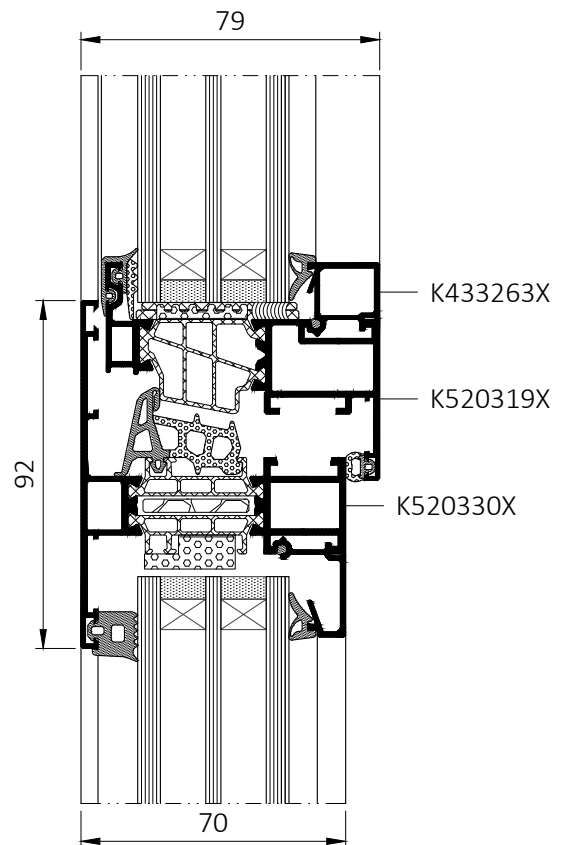
MB-79N US ST opening window
- cross-section



MB-79N US ST opening window
- cross-section



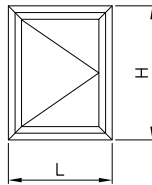
MB-79N US SI openable and fixed window -
cross-section




Scale 1:2

Max dimmensions of window

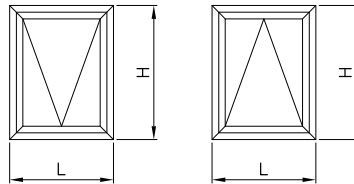
Outward opening casement window




Hmax=2700 mm
Lmax=1400 mm

 - 180 kg

Outward opening awning window

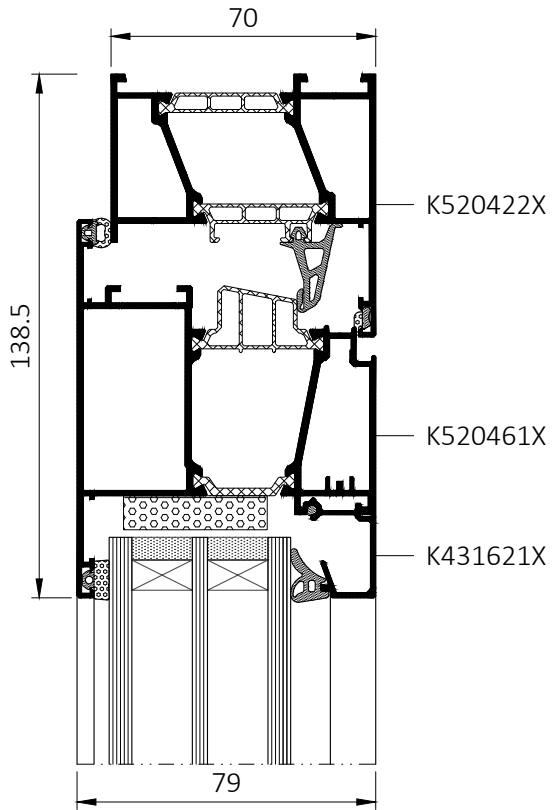


Hmax=2500 mm
Lmax=2400 mm

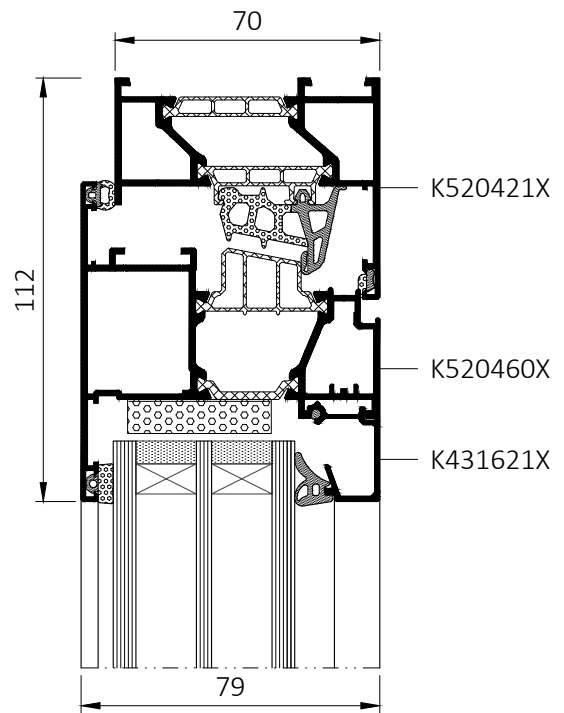
 - 180 kg

Maximum dimension are clearly correlated with the sash profiles and are applicable only with the total set of hardware, taking into account the application range of this hardware.

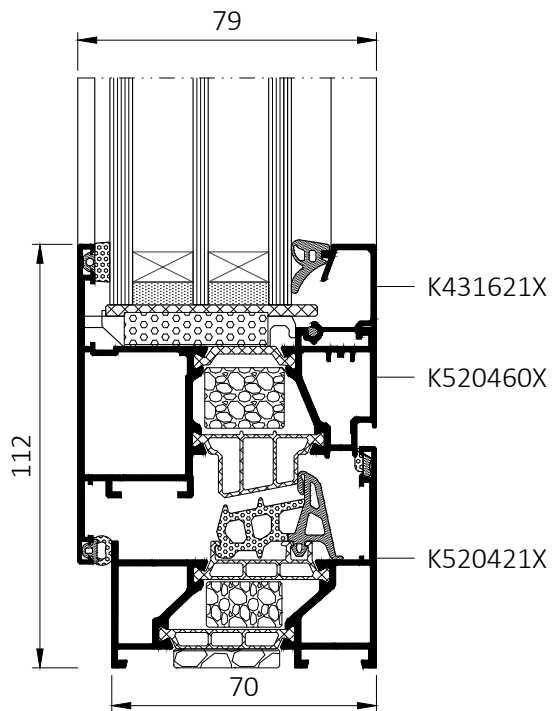
Outward opening window - cross-section



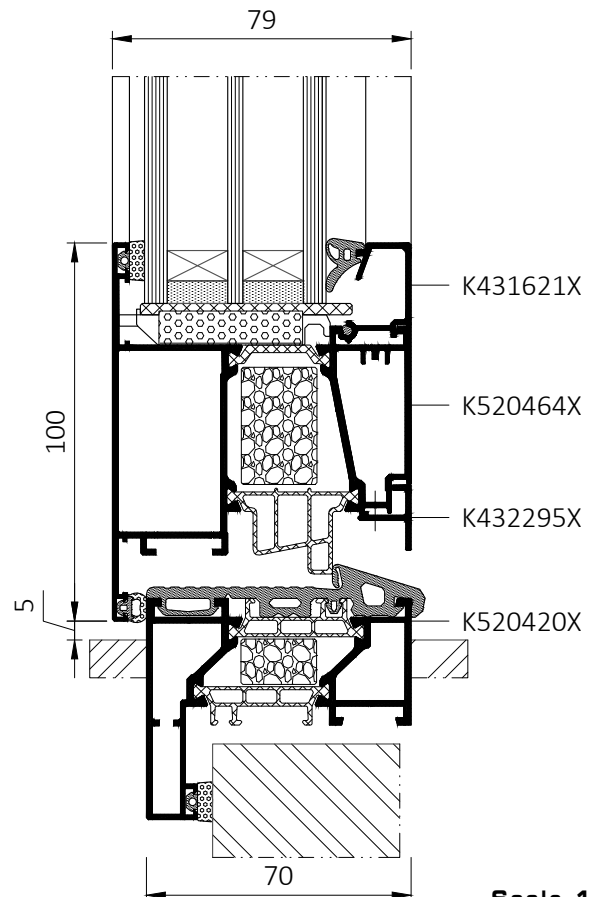
Outward opening window - cross-section



Outward opening window - cross-section



Balcony door with low treshold - cross-section



Scale 1:2

SYSTEM

MB-70

MB-70HI



WINDOW AND DOOR SYSTEMS



The MB-70 door and window system with enhanced thermal insulation. The solutions based on MB-60 profiles featuring a three-chamber construction. The MB-70 system is not only characterised by a special construction of the thermal barrier but also by an innovative solution of two-component gaskets. Apart from antiburglary doors and windows which can be built in this system anti-burglary products up to RC4 class, there are also available different versions of windows, such as the MB-70US / MB-70US HI with the so-called "hidden sash" and the MB-70 Industrial / MB-70 Industrial HI. The system is also the base for constructing the "cold-warm" curtain wall MB-70CW / MB-70CW HI.

WITH THERMAL BREAK

Optimally selected profile shape

The system profiles feature a three-chamber structure. The constructional depth of window sections is 70 mm (frame) and 79 mm (casement), while in the case of door sections it is 70 mm and 70 mm, respectively. With windows and doors closed, such depths of casement and frame sections give the effect of a single plane for windows and the effect of the leaf being flush with the frame surface for doors, when looking from the outside. The shape of profiles makes it possible to obtain slender and resistant window and door constructions.

High thermal and acoustic insulation

The MB-70 / MB-70HI is a system of low heat transfer coefficient: U_f - from 1.03 W/(m²K). This is of great importance in an era of increasing demands for energy management and environmental protection. The system uses profiled, omega-shaped thermal breaks of a width of 34mm [windows] and 24mm [doors] of glass fiber reinforced polyamide.

Excellent resistance to water and air infiltration

The tightness is ensured by the use of special gaskets made of two-component synthetic rubber (EPDM) solid and cellular, which provides resistance to aging during long-term operation and a very good thermal insulation.



BCB Business Park, Gdansk, Poland
design / Biuro Projektów BASS

Possibility of bending profiles

An important advantage of the MB-70 system is the ability to bend frame, casement and batten plate profiles, which allows to fabricate various types of arches and arch structures.

Variety of solutions

Versatility and attractiveness of the system is even greater with the possibility to choose between several variants of solutions for different design details, such as the bottom seal of the door leaf,

glazing beads shape, shape and height of the doorsills.

Large glazing range

Panes of glass or other infills are installed using glazing beads and gaskets. The system allows for the use of glazing between 23.5 and 62 mm thick for windows and from 14.5 to 53.5 mm thick for doors. This wide range of infill thickness guarantees the use of all standard and non-standard glass panes.

SYSTEM
MB-70US
MB-70US HI



INVISIBLE SASH
WINDOW SYSTEMS
VARIETY

Functionality and aesthetics

- uniform external appearance of fixed and active windows,
- fixed and inward-opening windows: casement windows, tilt-and-turn, double-casement with a fixed or floating mullion,
- different types of glazing beads: Standard, Prestige, Style,
- possibility of building two-colour constructions: profiles can have different colours outside and inside,
- installation in individual developments or on aluminium curtain walls.

MOKOTÓW PLAZA I, Warsaw, Poland
design / JPM Design & Build



SYSTEM
MB-70 Industrial
MB-70 Industrial HI



LISTED BUILDING
RENOVATION
SYSTEMS

Whether for renovating old steel windows or giving a stylish steel look to new-build, the MB-70 Industrial enables to keep with the original style, providing all the benefits of modern aluminum technology. Combining attractive design options with long term reliability, the system also features enhanced thermal insulation properties to ensure energy conservation.

SILESIA CITY CENTER, Katowice, Poland
design / STABIL, ARUP, BOSE



SYSTEM
MB-70SG



INVISIBLE SASH
AND NARROW
FRAME

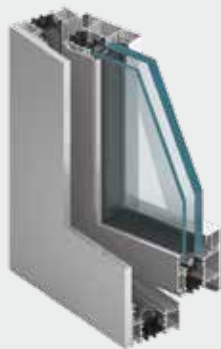
The MB-70SG window construction meets the aesthetic requirements of architects and end users in regards to a smooth even external appearance between fixed and opening lights. In its appearance, the system resembles a window with a hidden sash; however, the outside frame is considerably narrower than in the already well utilised MB-70US solution, as it is only 47 mm wide. To achieve such an effect, glazing technology has been changed – a glass panel is glued to the sash with structural silicone.

PLATINIUM BUSINESS PARK, Warsaw, Poland
design / JEMS Architekci Sp. z o.o.



SYSTEM

MB-70RC4



ANTI-BURGLARY WINDOWS

MB-70RC4 window is a solution based on the standard aluminium profile system (MB-70), supplemented with components and accessories to ensure the best possible protection against burglary in aluminium constructions. **MB-70RC4** window profiles are reinforced on the outside with aluminium flat bars, bolted to the frame and crosspiece profiles. P6 B insulating glass units constitute the windows' infill, and the panes are glued to the window profiles. With a RC4 class confirmed by the tests, the windows can resist for 10 minutes to an experienced burglar equipped with a substantial arsenal: hammer, axe, chisel or cordless drill. The **MB-70RC4** solution can replace gratings made of thick steel bars, whilst allowing to achieve a high level of security and preserving the aesthetic appearance of the building.



SYSTEM

MB-70 Casement MB-70HI Casement



OUTWARD OPENING WINDOWS

First MB-70 Casement windows were developed for the project 325 Lexington Avenue, New York. The system enables the fabrication of various types of outward opening or fixed windows, anterooms, shop fronts and spatial structures. As it is the case for the base system, MB-70 Casement windows have the HI variant, with central chamber filled with a special insulating insert. Possible ranges of glazing thickness are: for the window frame – from 15 to 51 mm, for the casement – from 23 to 60 mm. Top-hung or side hung windows can use traditional butt hinges or friction hinges, that can move away the entire casement from the frame. Compared to the inward opening windows, the outward opening constructions have an important feature: wind pressure affects their tightness to a lesser extent, as it compresses the casement to the frame. This type of construction has excellent thermal and acoustic performance.

SYSTEM

MB-70 PIVOT



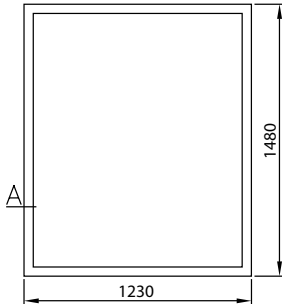
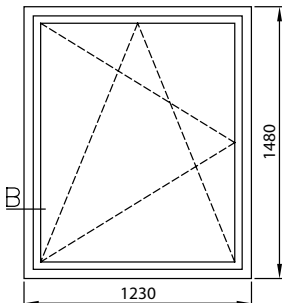
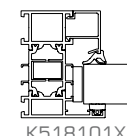
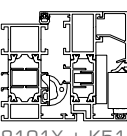
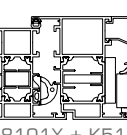
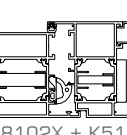
PIVOT WINDOW

The MB-70 Pivot system is used to make windows that require thermal and sound insulation, with a vertical or horizontal axis of rotation. A particular attention should be paid to dimensional ranges for pivot window casements: a window with a horizontal axis of rotation can be 800 - 2000 mm in height and 500 - 2400 mm in width. Max weight: 180 kg.



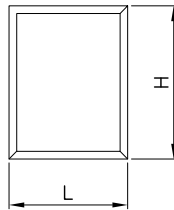
TECHNICAL SPECIFICATION	MB-70 MB-70 HI	MB-70US MB-70US HI	MB-70 Industrial MB-70 Industrial HI	MB-70SG	MB-70CW MB-70CW HI
PROFILE SIZES, RANGE OF GLAZING					
Depth of Frame (door / window)	70 mm / 70 mm	70 mm			
Depth of Leaf (door / window)	70 mm / 79 mm	79 mm			
Glazing range (fixed window and door / opening window)	15 - 54 mm / 23 - 62 mm	9 - 45 mm / 18 - 54 mm	15 - 54 mm / 23 - 62 mm	18 - 54 mm	9 - 45 mm / 18 - 54 mm
MIN VISIBLE WIDTH T PROFILE					
Door / window frame	51 mm / 47 mm	75 mm	47 mm	47 mm	78,5 mm
Door / window leaf	72 mm / 32 mm	-	32 mm	-	34,6 mm
SIZE AND WEIGHT LIMITATIONS					
Maximum size of window (H×W)	H to 2400 mm W to 1600 mm	H to 2100 mm W to 1400 mm	-	H to 2400 mm W to 2000 mm	H to 2100 mm L to 1400 mm
Maximum size of door of door (H×W)	H to 2400 mm W to 1300 mm	-	-	-	-
Max weight (doors / windows)	120 kg / 130 kg	90 kg	-	130 kg	90 kg
TYPES OF CONSTRUCTION					
Available solutions	tilt window, turn window, tilt&turn window, doors open in and open out	fixed window, tilt window, turn window, tilt&turn window	fixed window, tilt&turn window	turn window, tilt window, tilt&turn window	fixed window, tilt&turn window
PERFORMANCE	MB-70 MB-70 HI	MB-70US MB-70US HI	MB-70 Industrial MB-70 Industrial HI	MB-70SG	MB-70CW MB-70CW HI
Air Permeability	class 4, EN 1026:2001; EN 12207:2001				
Resistance to windload	to class C5 / EN 12211:2001; EN 12210:2001			class C5 EN 12211:2001; EN 12210:2001	
Watertightness	to class E1200 EN 1027:2001; EN 12208:2001			E750 EN 1027:2001; EN 12208:2001	
Thermal Insulation U_f (W/m ² K)	from 1,0	from 1,5	from 1,9	from 2,2	from 1,4
Burglary resistance	class RC1 to RC3, EN 1627	class RC1 to RC3, EN 1627	-	-	-

 Examples of heat transfer coefficients U_w

WINDOWS SCHEMES	SECTION A OR B	Value U_w [W/m ² K]			
		Glass with Chromatech Ultra frame			
		Double chamber		Single chamber	
		$U_g=0,5$	$U_g=0,7$	$U_g=1,0$	
 	MB-70HI	 K518101X	0,8	1,0	1,2
		 K518101X + K518111X	1,0	1,1	1,3
		 K518101X + K518112X	1,0	1,1	1,3
		 K518102X + K518112X	1,0	1,1	1,3

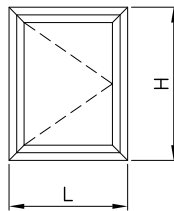
Max. dimensions of windows

Fixed window



Max. dimensions of windows result from maximal glass sizes

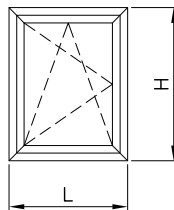
Turn-hung window



Hmax=2250 mm
Lmax=1300 mm

- 130 kg

Tilt and turn window

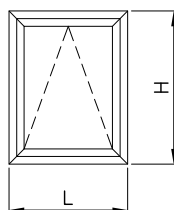


Hmax=2400 mm
Lmax=1250 mm

Hmax=1850 mm
Lmax=1600 mm

- 90 kg/130 kg

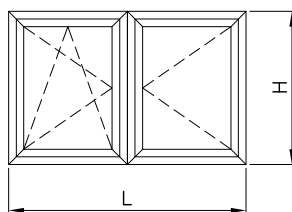
Tilt window



Hmax=1000 mm
Lmax=2150 mm

- 130 kg

Double casement



Hmax=2250 mm
Lmax=2700 mm

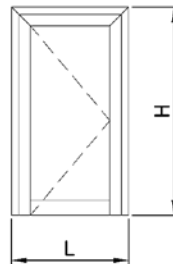
Turn-hung vent - - 130 kg

Tilt and turn vent - - 130 kg

} Maximal vent weight


Maximum standard dimensions of the door

Inside opening door

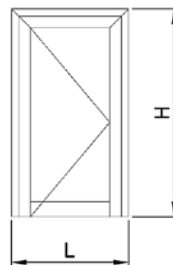


Hmax=2400 mm
Lmax=1200 mm

Hmax=2200 mm
Lmax=1300 mm


 -120 kg


Outside opening door



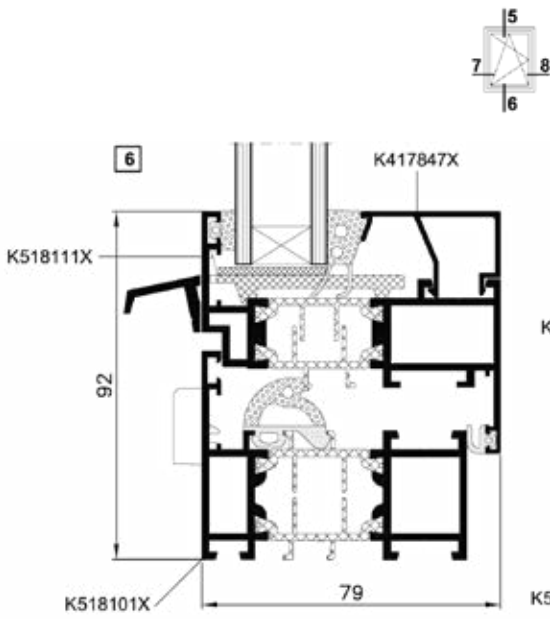
Hmax=2400 mm
Lmax=1200 mm

Hmax=2200 mm
Lmax=1300 mm

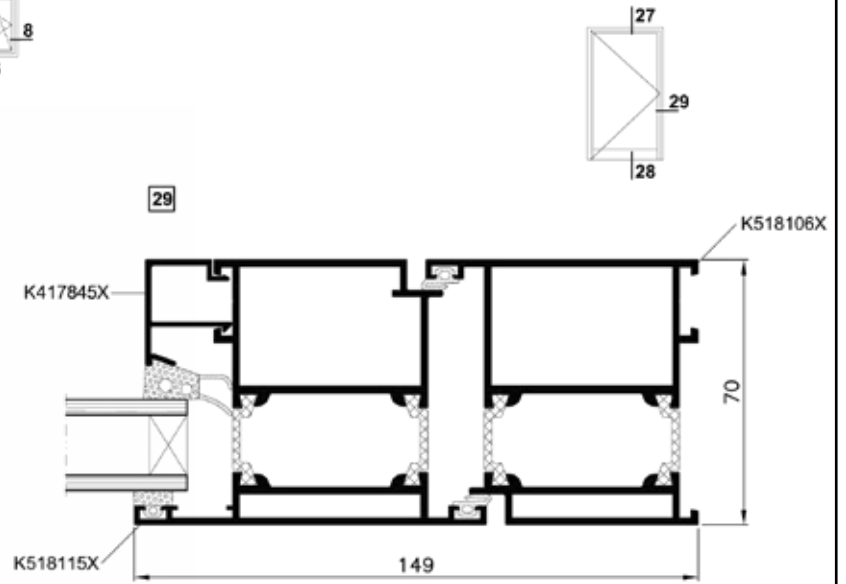
 -120 kg

 } Maximal vent weight

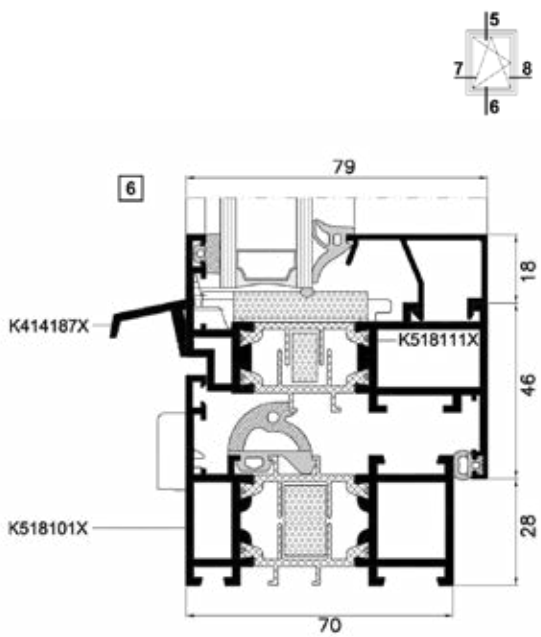
Active window MB-70 - cross-section



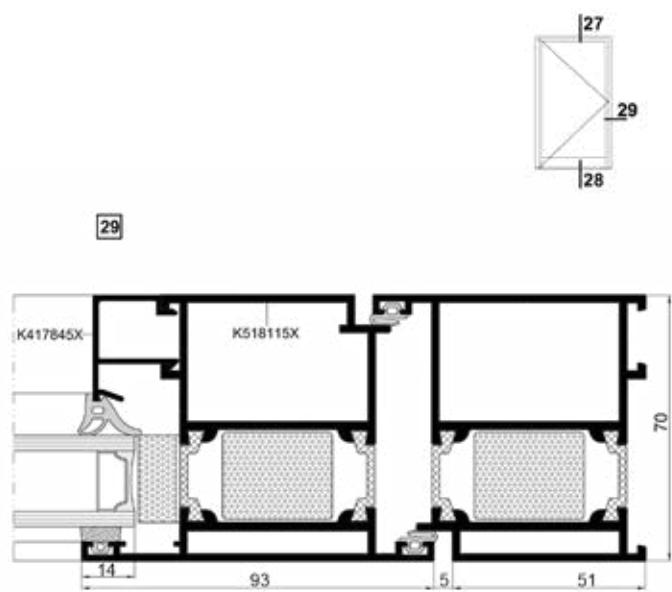
MB-70 door - cross-section



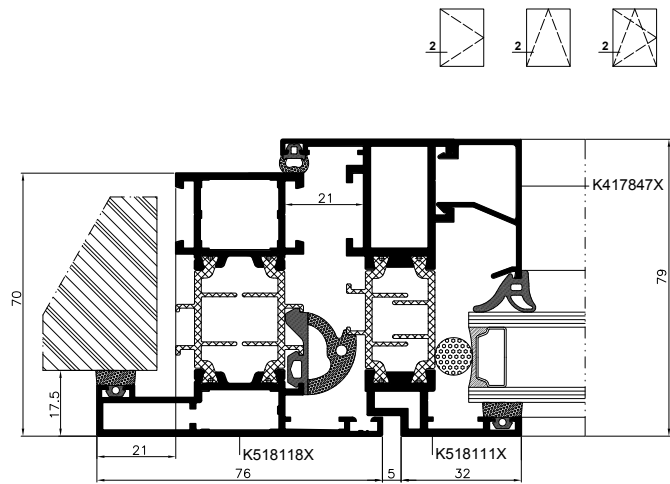
Active window MB-70HI - cross-section



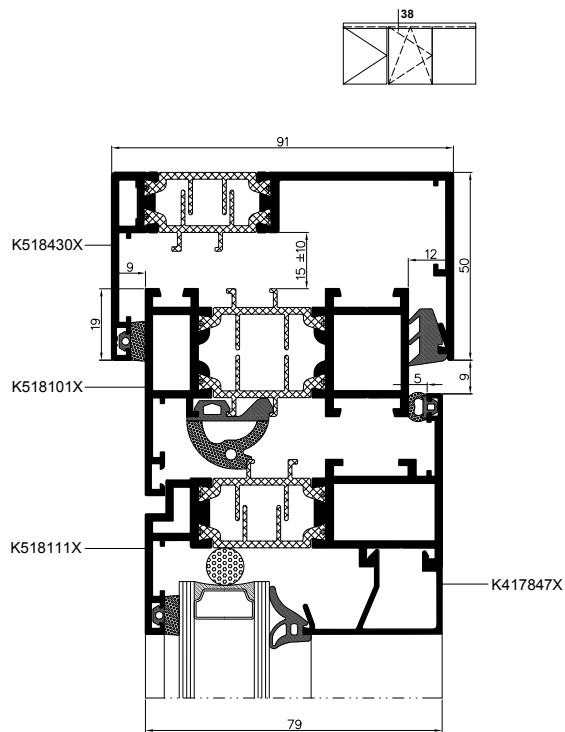
MB-70HI door - cross-section



Window with renovation frame, cross-section



Expansion joints, cross-section



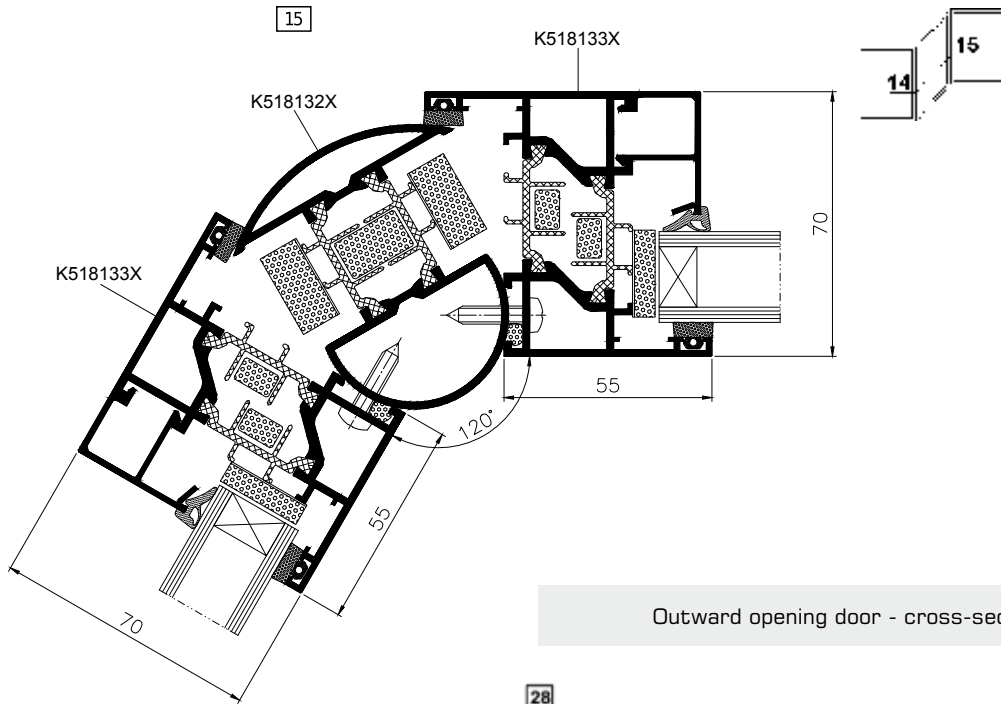
Tilt and turn window - cross-section



Angular connection - cross-section



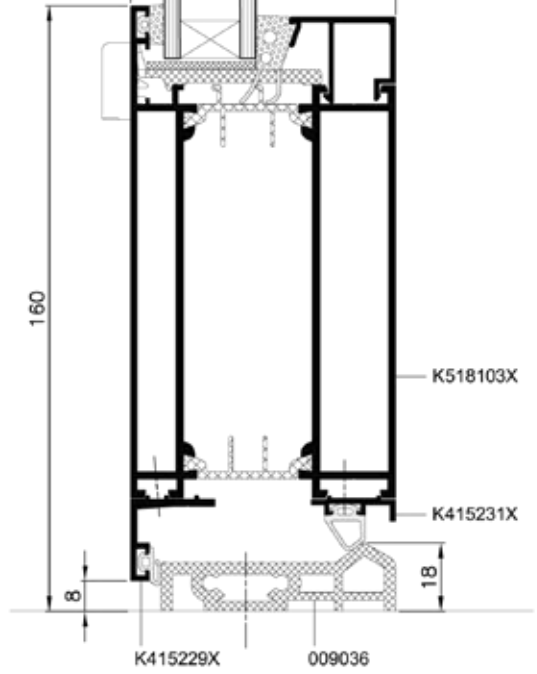
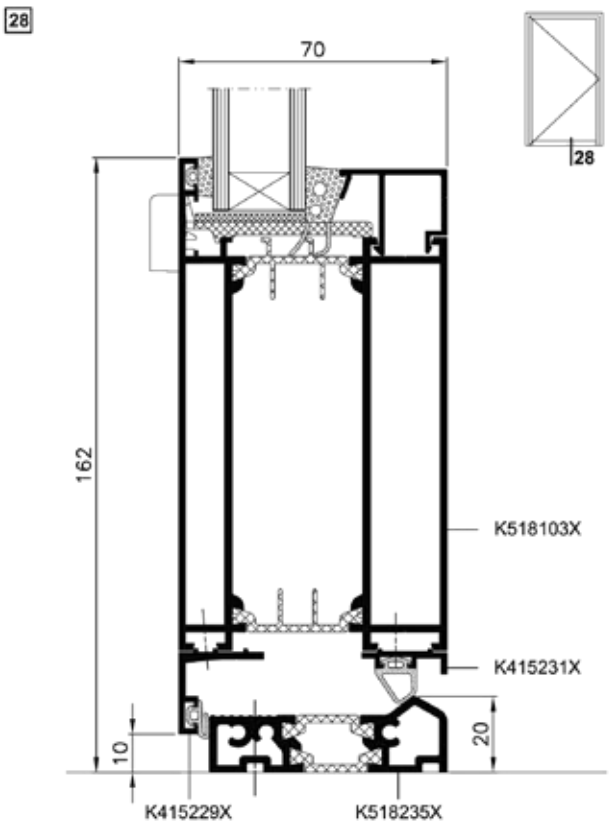
Angular connection - cross-section



Outward opening door - cross-section



Outward opening door - cross-section

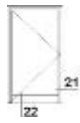
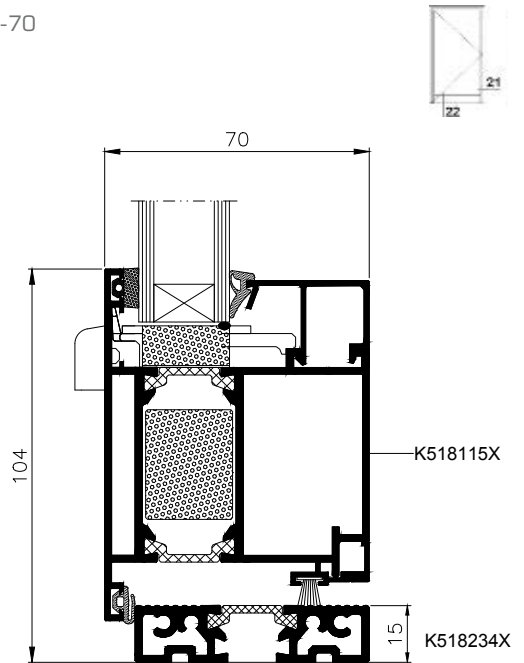
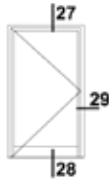
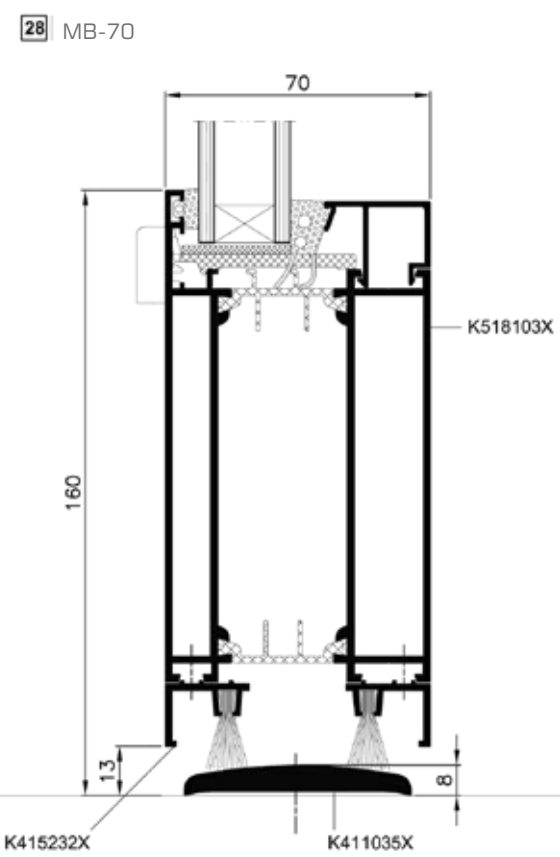


Outward opening door - cross-section

Outward opening door - cross-section

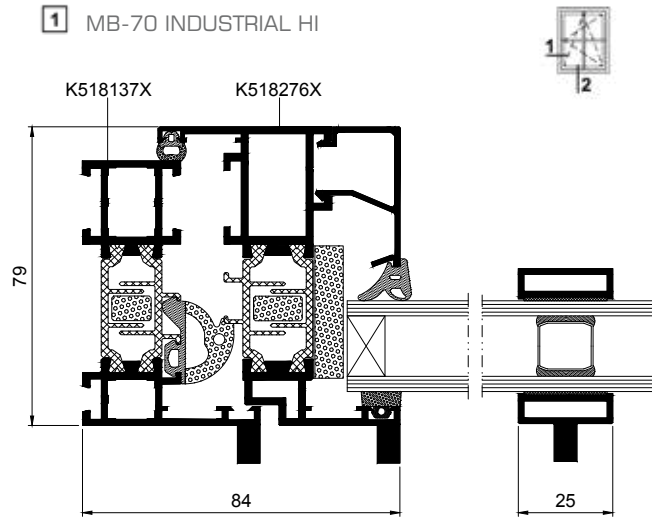
28 MB-70

22 MB-70



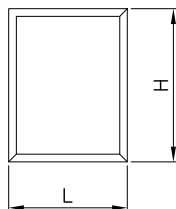
Active window - cross-section

1 MB-70 INDUSTRIAL HI



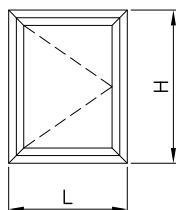
Max. dimensions of windows

Fixed window



Max. dimensions of windows result from maximal glass sizes

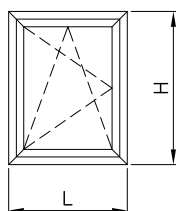
Turn-hung window



Hmax=1900 mm
Lmax=1000 mm

- 130 kg

Tilt and turn window

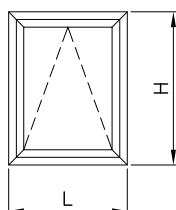


Hmax=1900 mm
Lmax=1100 mm

Hmax=1500 mm
Lmax=1400 mm

- 130 kg

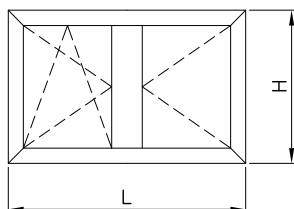
Tilt window



Hmax=1000 mm
Lmax=2150 mm

- 130 kg

Double casement



Hmax=1900 mm
Lmax=2400 mm

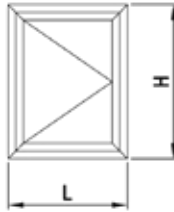
Turn-hung vent - - 130 kg

Tilt and turn vent - - 130 kg

} Maximal vent weight

Max. dimensions of windows

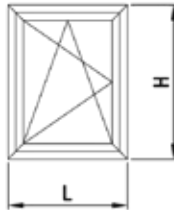
Turn-hung window



Hmax=2000 mm Lmax=1600 mm	Hmax=2400 mm Lmax=1350 mm
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- 130 kg

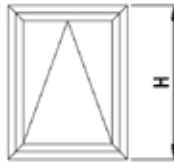
Tilt and turn window



Hmax=2000 mm Lmax=1600 mm	Hmax=2400 mm Lmax=1350 mm
------------------------------	------------------------------

- 130 kg

Tilt window



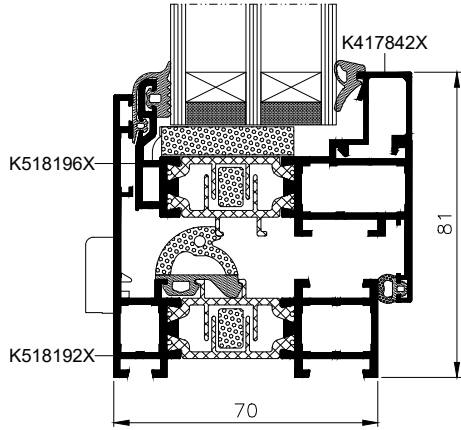
Hmax=2400 mm Lmax=2000 mm

- 130 kg

} Maximum weight of infills

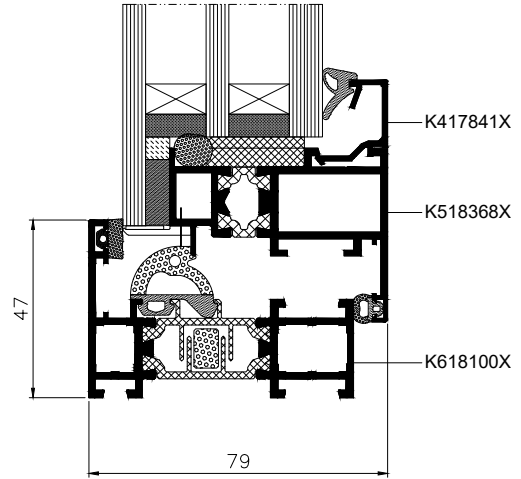
MB-70US HI Opening window - cross-section

MB-70US HI



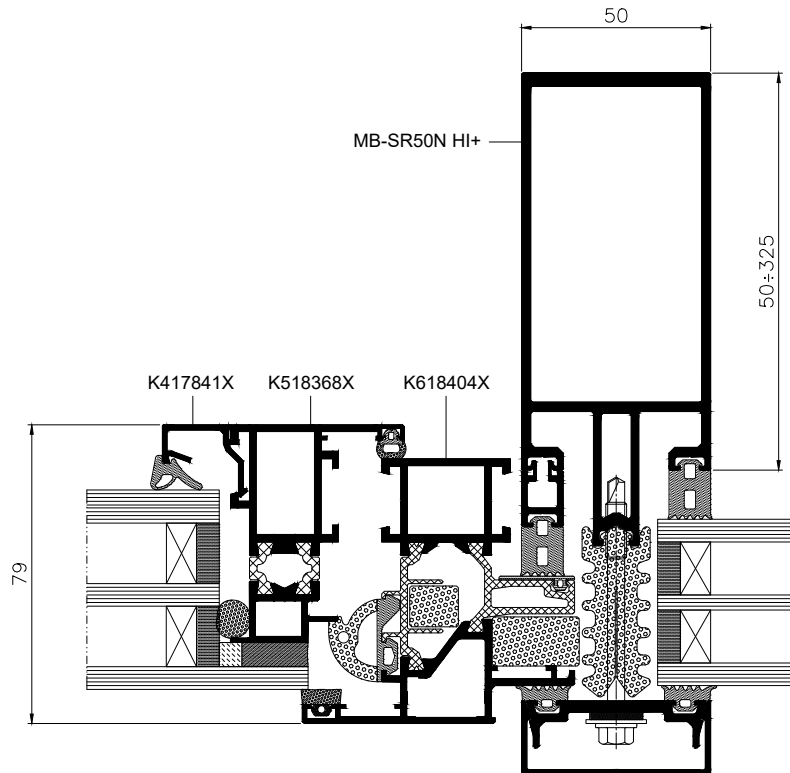
MB-70SG Opening window - cross-section

MB-70SG



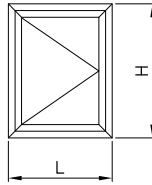
MB-70SG window in the MB-SR50N HI+ façade

MB-70SG




Max. dimensions of windows

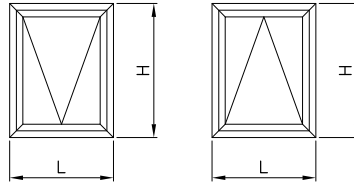
Outward opening casement window




Hmax=2700 mm
Lmax=1400 mm

 - 180 kg

Outward opening awning window

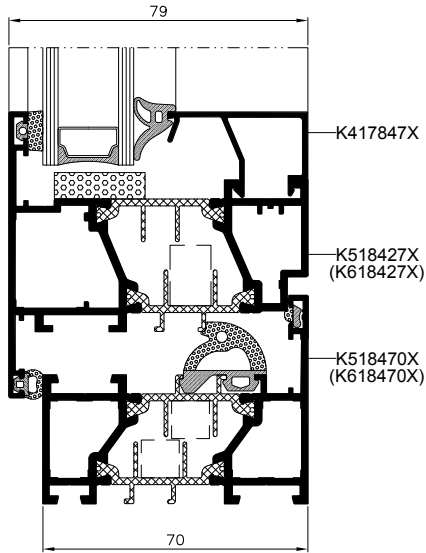


Hmax=2500 mm
Lmax=2400 mm

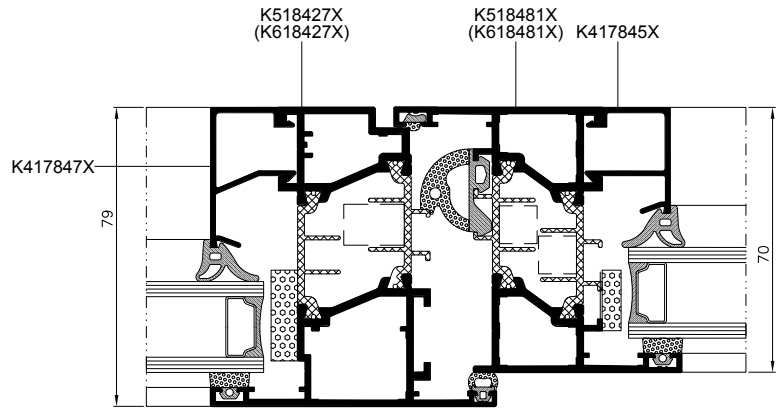
 - 180 kg

Maximum dimension are clearly correlated with the sash profiles and are applicable only with the total set of hardware, taking into account the application range of this hardware.

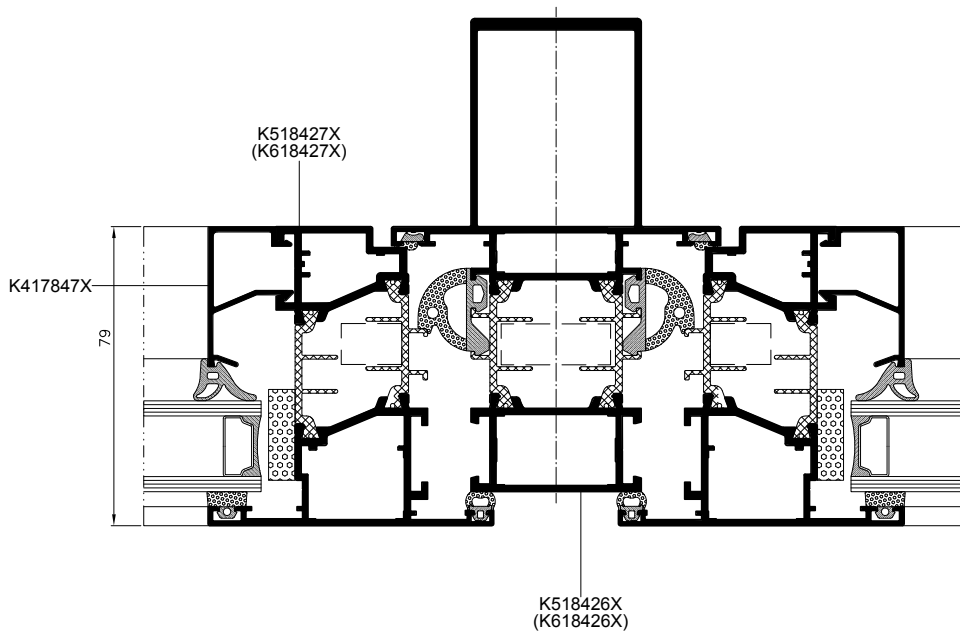
Outward opening window - cross-section



Outward opening window and fixed window - cross-section

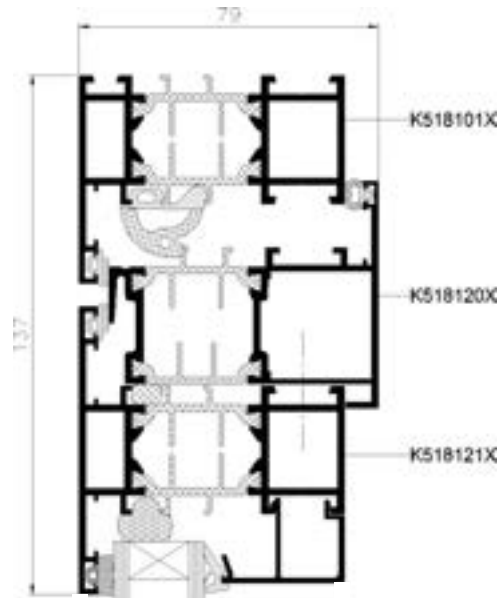


Reinforced mullion and outward opening windows - cross-section

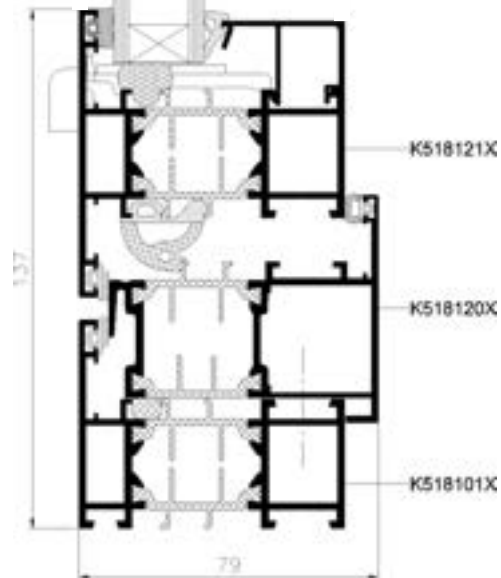


Pivot window with a horizontal axis of rotation
- cross-section

MB-70 PIVOT



MB-70 PIVOT



PANELLED FRONT DOORS

DOOR SYSTEMS



Our panelled front doors are an offer for even the most demanding of users. The cutting-edge technology and design make them not only a functional and durable entrance to a home, but also an attractive showpiece in their own right. They are built using our MB-70, MB-79N, MB-86N and MB-104 Passive aluminium profile systems. The profile for the leaf is adapted for use together with special infills which are flush with the frame on the exterior. The panels can be installed by gluing them to the supporting profiles on one or both sides. The option of using concealed hinges adds an even greater aesthetic value.

A contemporary and stylish look which will stay in vogue for years

The panels are available in a wide range of designs and colours. The techniques used in their production, which include milling to create different shapes, decorative inlays and the addition of insulated glass, open up the possibility of creating countless combinations and variants. This makes the doors are a perfect solution for contemporary homes and classical architecture alike. One thing is certain; they will always create a stunning entrance that is not only eye-catching, but also enhances the appeal of entire façade. The infills are constructed using durable and weatherresistant materials. The exterior parts often have an additional coating in the form of layers of special varnishes. In other cases, the surfaces contain epoxy resins. Either way, this means that the panels will retain their stylish appearance for a long time. It is also possible to use Finea's unique Teflon™ paints, which minimise the amount of dirt adhering to the surface.



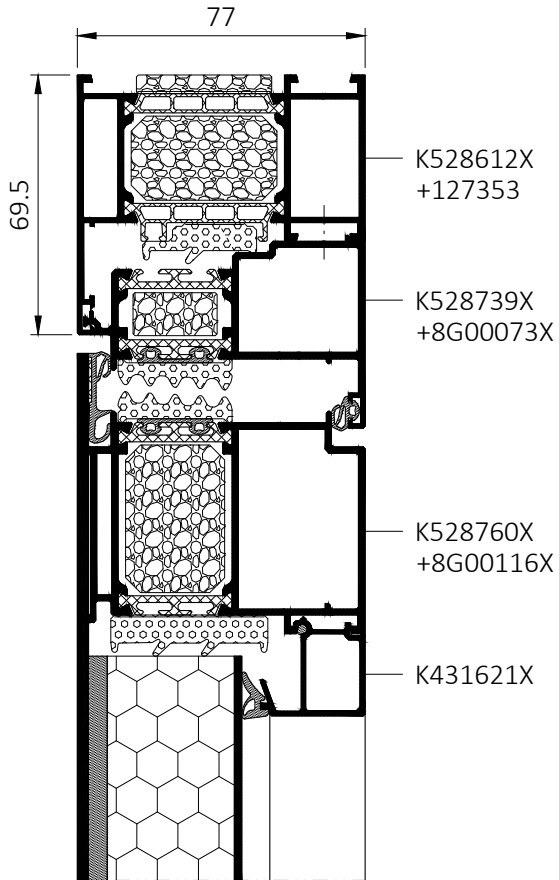
In three words... the ideal door
ALUPROF's front doors offer a stylish look and high technical parameters and, given the largescale construction dimensions available and the possibility of using them as part of a sweeping, glazed structure, they offer an abundance of freedom in

designing the entrance to a building. They are a perfect proposition for people whose home means very much more than simply a place to live.

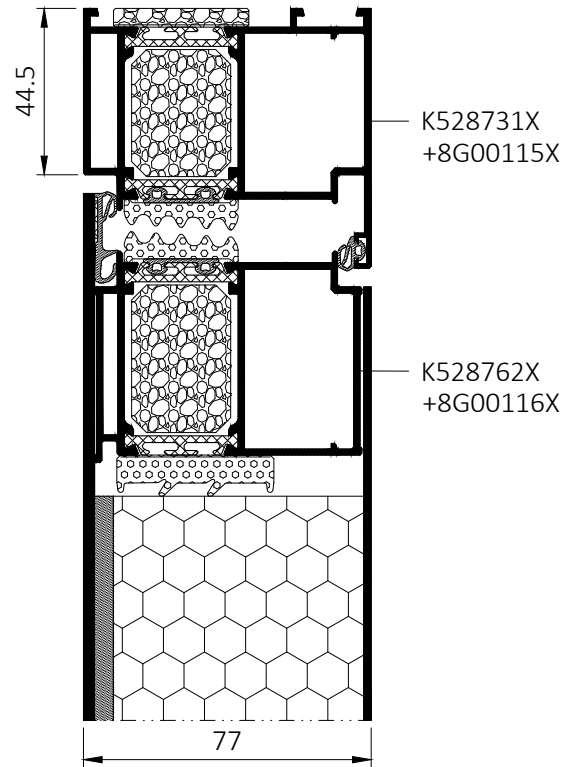
TECHNICAL DATA	MB-70 PANELLED FRONT DOOR	MB-79N PANELLED FRONT DOOR	MB-86 PANELLED FRONT DOOR	MB-104 PASSIVE PANELLED FRONT DOOR
Frame depth	70 mm	70 mm	77 mm	95 mm
Leaf depth	70 mm	70 mm	77 mm	95 mm
Infill panel thickness	44 mm and 70 mm	44 mm and 70 mm	44 mm and 77 mm	up 95 mm
Maximum leaf dimensions (H*L)	H: 2400 mm, L: 1200 mm	H: 2600 mm, L: 1400 mm	H: 2600 mm, L: 1400 mm	H: 2600 mm, L: 1400 mm

PERFORMANCE	MB-70 PANELLED FRONT DOOR	MB-79N PANELLED FRONT DOOR	MB-86 PANELLED FRONT DOOR	MB-104 PASSIVE PANELLED FRONT DOOR
Air permeability	class 4 PN-EN 12207:2001	class 3 PN-EN 12207:2001	class 3 PN-EN 12207:2001	class 3 PN-EN 12207:2001
Watertightness	class 7A (300 Pa), PN-EN 12208:2001	class E900 (900 Pa), PN-EN 12208:2001	class 6A (250 Pa), PN- EN 12208:2001	class 7A (250 Pa), PN-EN 12208:2001
Wind load resistance	class C5/B5, PN-EN 12210:2001	class C5/B5, PN-EN 12210:2001	class C5/B5, PN-EN 12210:2001	class C4/B5, PN-EN 12210:2001
Thermal insulation	U _D from 0,9 W/(m ² K)	U _D from 0,7 W/(m ² K)	U _D from 0,63 W/(m ² K)	U _D from 0,44 W/(m ² K)

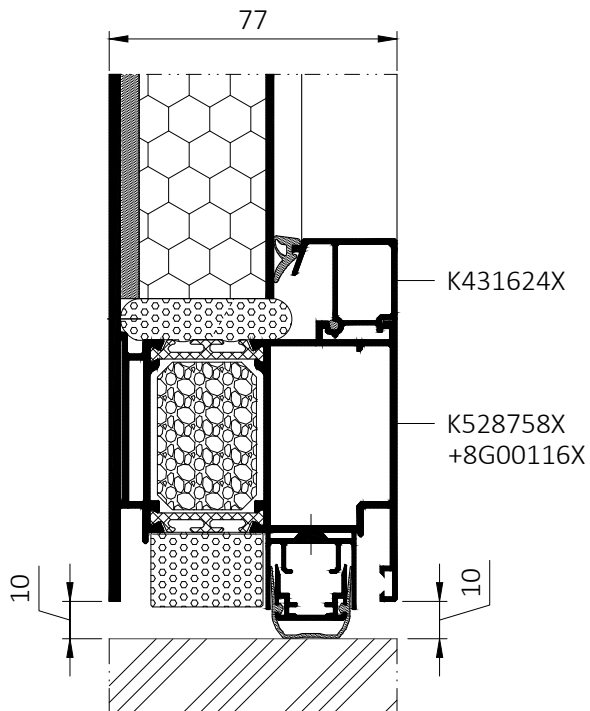
Cross section of the MB-86N SI+ panelled front door with a single-sided panel, in continuous shopfront



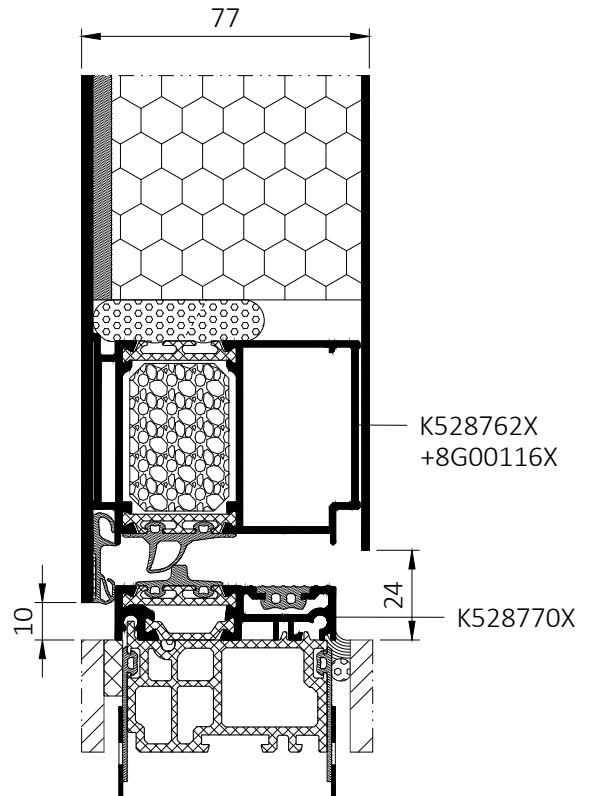
Cross section of the MB-86N SI+ panelled front door with a double-sided panel



Cross section of the MB-86N SI panelled front door with a single-sided panel

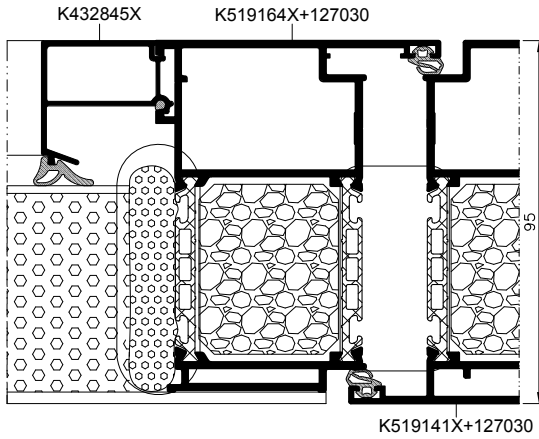


Cross section of an MB-86N SI panelled front door with a double-sided panel

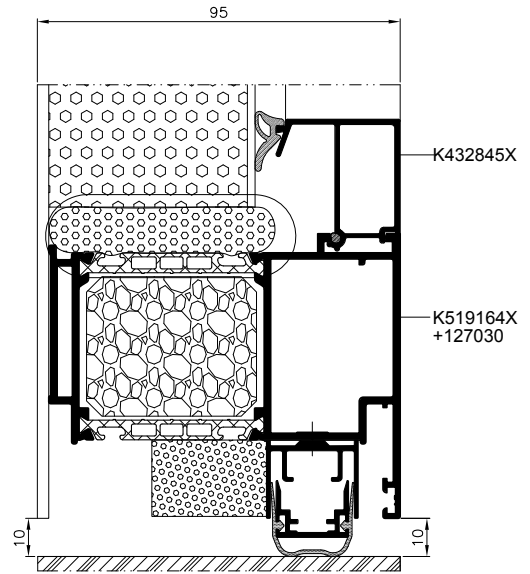


Scale 1:2

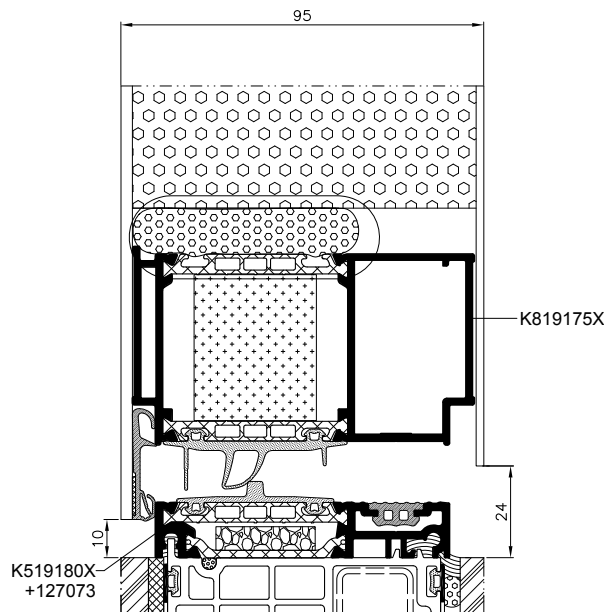
Cross section of an individual MB-104 Passive SI with a single-sided panel



Cross section of the sill of an MB-104 Passive panelled front door with a single-sided panel



Cross section of the sill of an MB-104 Passive AERO panelled front door with a double-sided panel





Highly insulated, MB-Slimline window system with thermal break is intended for fabrication of external structure elements such as various types of highly resistant, inward-openable windows (side-hung, hopper, tilt-and-turn windows) and fixed windows of an excellent water resistance, air tightness, and sound insulation performance.

NARROW-PROFILE WINDOWS

With its very small-width aluminium profiles visible from the external side of the construction, MB-Slimline enables to fabricate casements in two variants – with visible or invisible profiles (SG) from the external side of the structure.

When invisible casements are used, the appearance of openable and fixed units is almost identical.

This system can also greatly replace the old-style windows, made of steel profiles, and maintain a similar appearance from the outside of the construction while significantly increasing the thermal insulation of the partition.

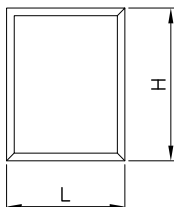


TECHNICAL SPECIFICATION	MB-SLIMLINE
PROFILE SIZES, RANGE OF GLAZING	
Frame depth	68,5 – 123,5 mm / 90,5 – 145,5 mm
Sash depth	77,5 mm / 99,5 mm
PROFILES DIMENTIONS	
Fixed / opened window for 68,5 mm frame (typeA)	8 – 50 mm / 17 – 59 mm
Fixed / opened window for 90,5 mm frame (typeB)	30 – 72 mm / 39 – 81 mm
SIZE AND WEIGHT LIMITATIONS	
Maximum size of window (H×W)	H to 2400 mm, W to 1400 mm, H to 2100 mm, W to 1600 mm
Max weight of sash	150 kg

PERFORMANCE	MB-SLIMLINE
Air Permeability	class 4, EN 1026:2001; EN 12207:2001
Watertightness	class E 1500, EN 1027:2001; EN 12208:2001
Thermal insulation	U_w from 0,8 W/(m ² K)
Burglary resistance	class RC1, RC2, EN 1627

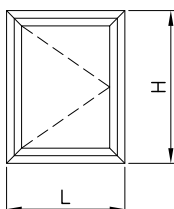
Max. dimensions of windows

Fixed window



Max. dimensions of windows result from maximal glass sizes

Turn-hung window



Type A:

Hmax=2100 mm
Lmax=1070 mm

Hmax=1600 mm
Lmax=1400 mm

- 90 kg

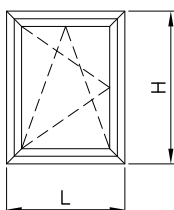
Type B:

Hmax=2400 mm
Lmax=1350 mm

Hmax=2030 mm
Lmax=1600 mm

- 150 kg

Tilt-and-turn window



Type A:

Hmax=2100 mm
Lmax=1600 mm

Hmax=900 mm
Lmax=2400 mm

- 130 kg

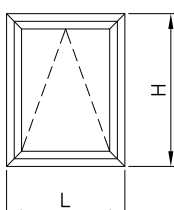
Type B:

Hmax=2400 mm
Lmax=1600 mm

Hmax=1300 mm
Lmax=2400 mm

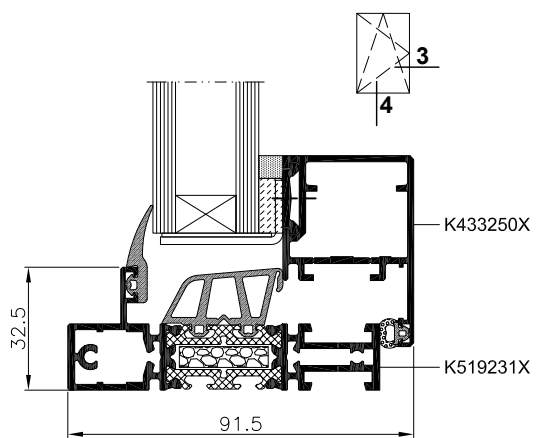
- 130 kg

Turn-hung window

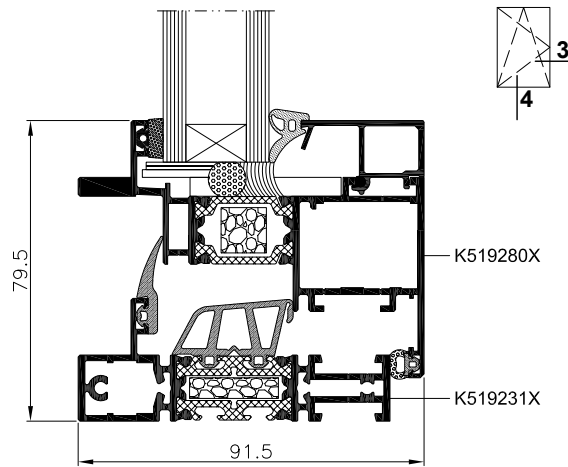


} Maximal vent weight

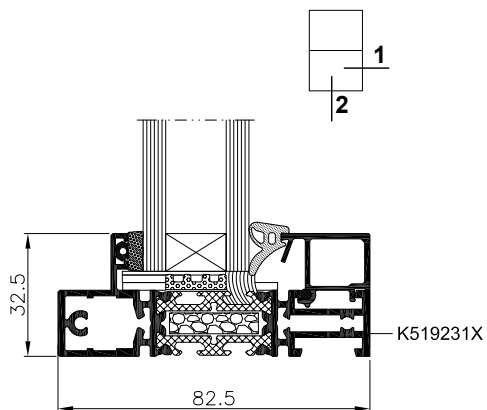
Openable window SG – type A, cross-section



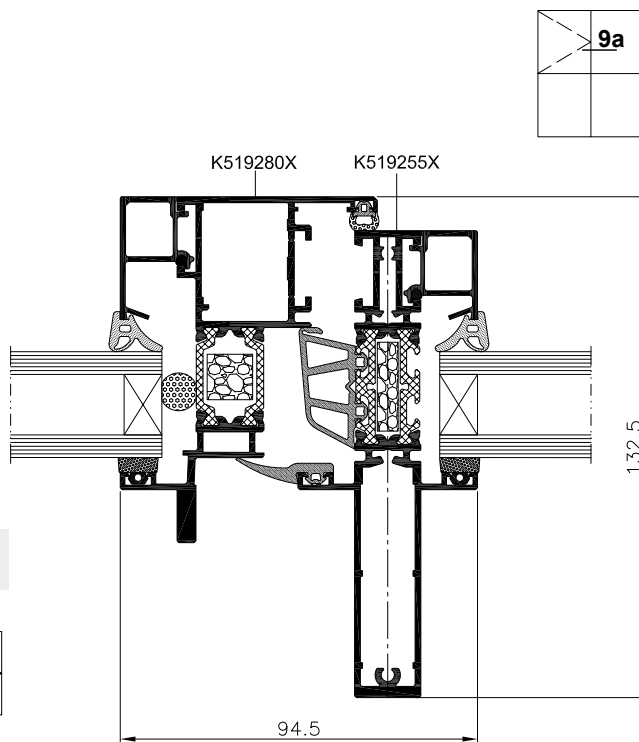
Openable window – type A, cross-section



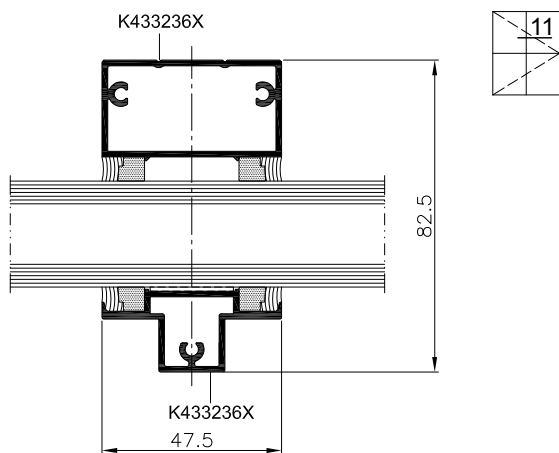
Fixed window - type A, cross-section



Openable window & mullion – type A, cross-section

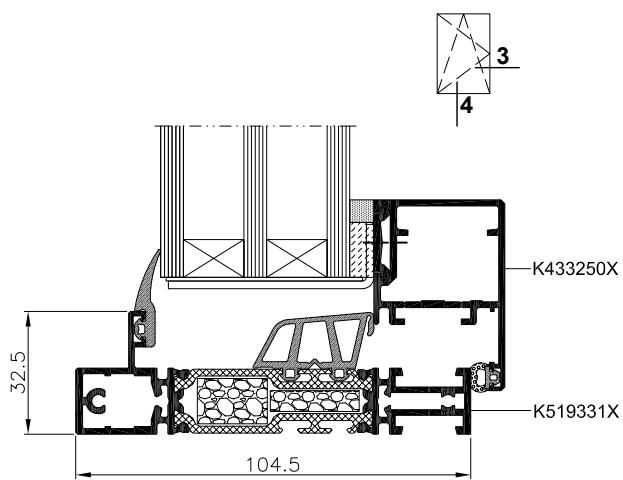


Decorative strip - cross-section

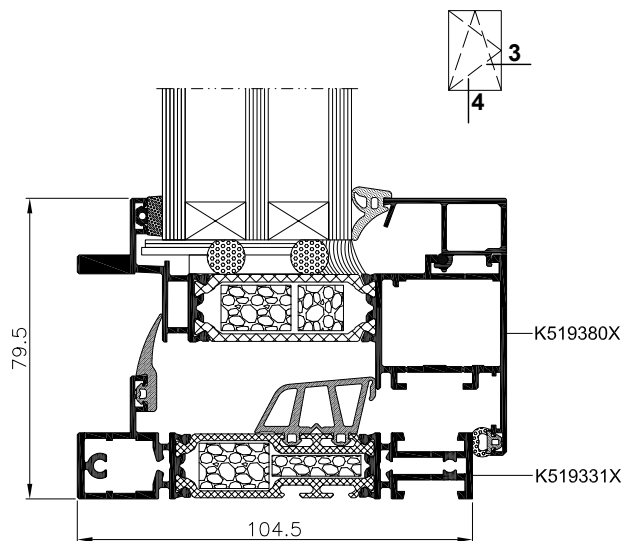


Scale 1:2

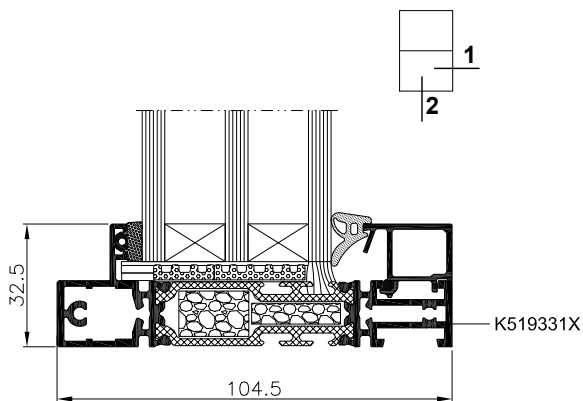
Openable window SG – type B, cross-section



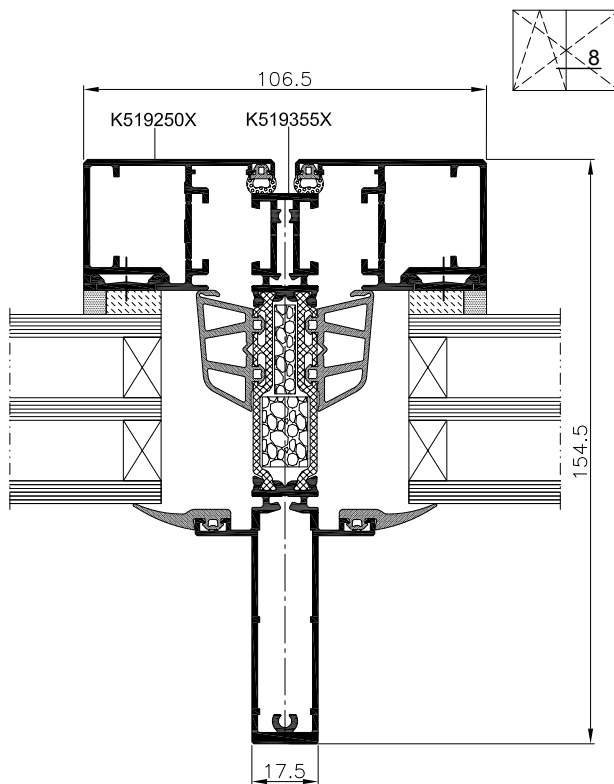
Openable window SG – type B, cross-section



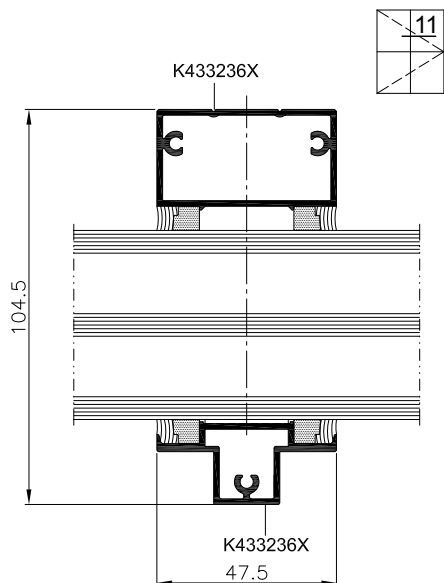
Fixed window - type B, cross-section



Openable window & mullion – type B, cross-section



Decorative strip - cross-section



SYSTEM MB-FERROLINE

WINDOW AND DOOR SYSTEMS



The new window system with thermal break MB-FERROLINE is perfectly suitable for renovation of historic buildings and helps to preserve the appropriate appearance of windows, which can imitate steel joinery, whilst ensuring very good technical performance of the construction. The system enables the fabrication of various types of highly resistant, inward opening windows (side-hung, hopper, tilt-and-turn windows), outward opening windows (side-hung and top hung windows) and fixed windows of an excellent water resistance, air tightness, and sound insulation performance.

WINDOW SYSTEM WITH SLIM PROFILES

Several types of profile appearance are offered. Renovation frames available within the system enable for installation of new constructions without having to disassemble the old frames, and there is no risk of damage to the surrounding wall. The adjusted, visible width of aluminium profiles makes the old and new windows look virtually identical. Based on reliable solutions and offering a whole range of appropriately shaped new profiles, MB-FERROLINE enables the fabrication of constructions that fit the appearance of the building.

Features and benefits

- classical appearance
- MB-86-based technical solutions ensure an excellent thermal protection of the construction, profiles come in two versions with different thermal insulation performance: ST and SI
- high resistance to water & air infiltration



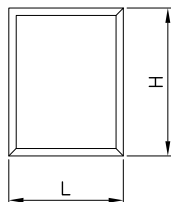
- wide range of glazing up to 61.5 mm
- application of the typical euro grooves enable the installation of most of the available fittings offered by major companies

TECHNICAL SPECIFICATION	MB-FERROLINE
Depth of frame	77 mm – 110 mm
Depth of leaf	86 mm – 93,5 mm
Glazing range: frame / leaf	13,5 mm – 61,5 mm

PERFORMANCE	MB-FERROLINE
Air Permeability	class 4, EN 12207
Watertightness	to class E1350, EN 12208
Wind load resistance	to class C5, EN 12210
Burglary resistance	class RC1, RC2, EN 1627

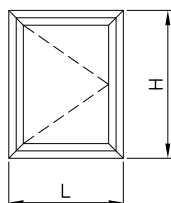
Max. dimensions of windows

Fixed window



Max. dimensions of windows result from maximal glass sizes

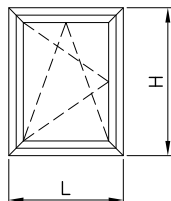
Turn-hung window



Hmax=2400 mm Lmax=1360 mm	Hmax=2030 mm Lmax= 1600 mm
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- 150 kg

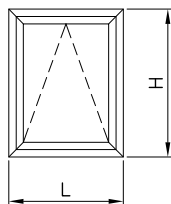
Tilt-and-turn window



Hmax=2400 mm Lmax=1360 mm	Hmax=2030 mm Lmax= 1600 mm
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- 150 kg

Tilt window



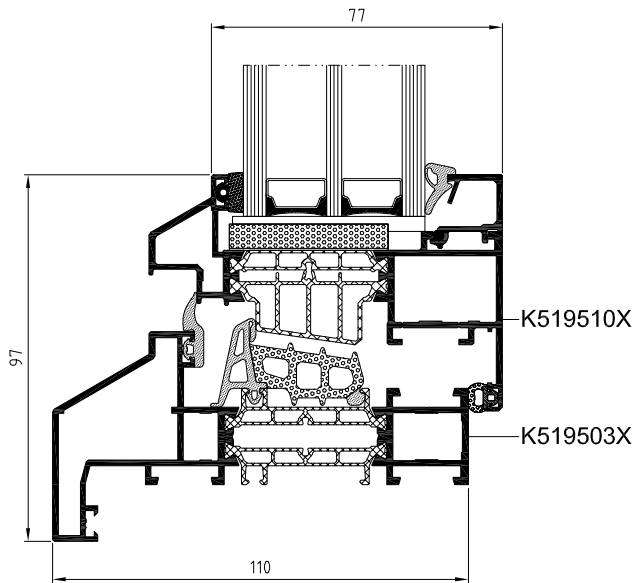
Hmax=2400 mm Lmax=1600 mm	Hmax=1300 mm Lmax=2400 mm
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- 130 kg

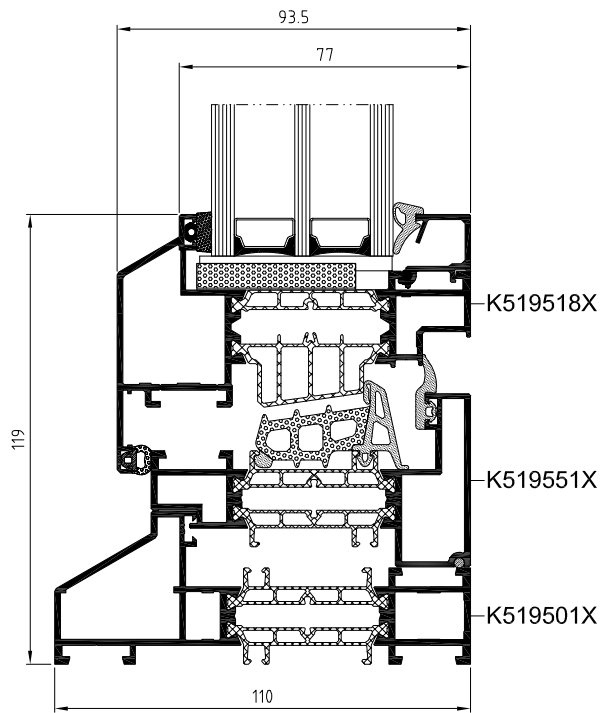
} Maximal vent weight

Turn-hung vent - - 150 kg

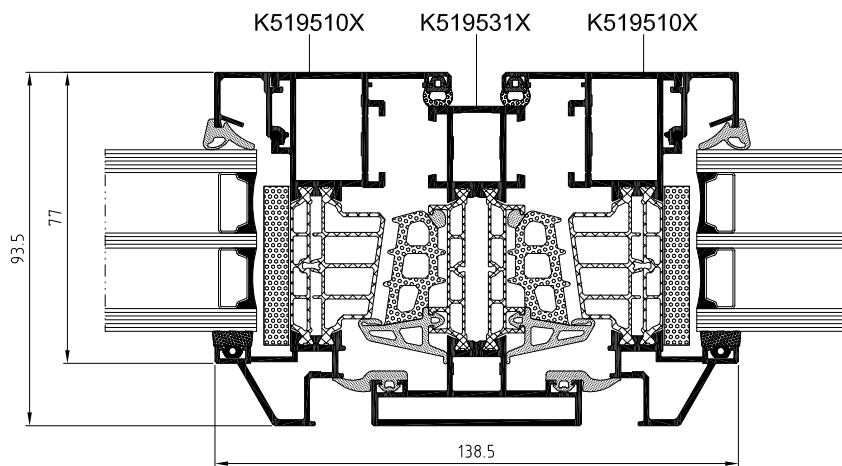
Window with renovation frame, cross-section



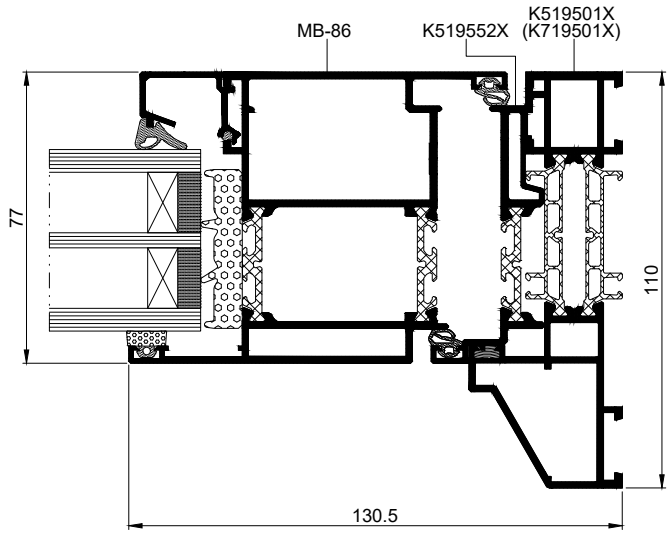
Outward opening window - cross-section



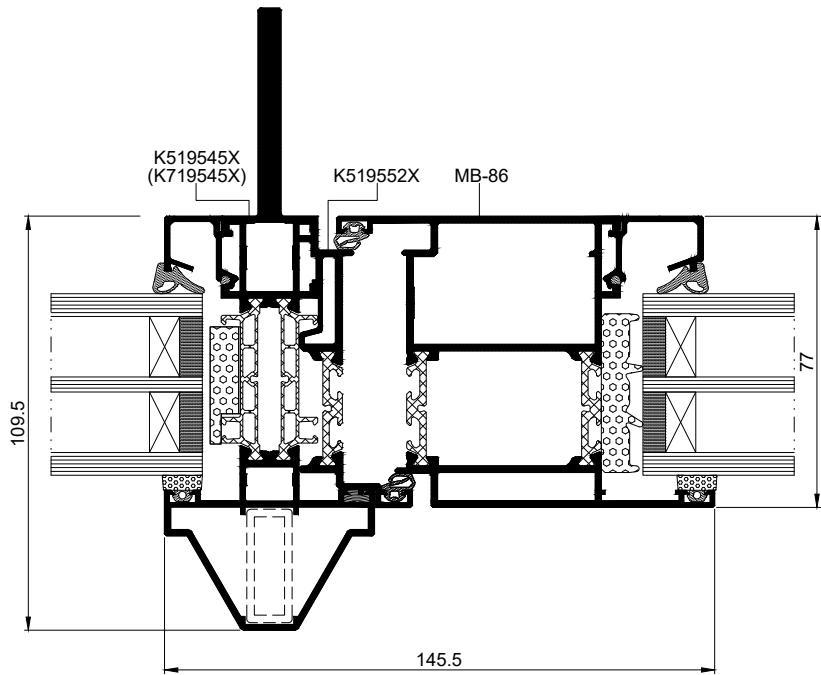
Mullion and opening windows - cross-section



Horizontal section of door



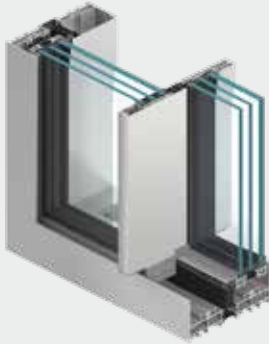
Horizontal section of jambs



SYSTEM

MB-SKYLINE

WINDOW AND DOOR SYSTEMS



The MB-SKYLINE sliding door system with invisible frame uses narrow profiles. This gives the construction a modern and minimalist look. Constructions fabricated with MB-SKYLINE have a one-of-a kind design and raise the profile of any project. They provide a comfortable, threshold-free connection of indoor and outdoor living spaces making natural environment part of users' daily experience. While the doors can be very large, their slim construction gives the impression of lightness and delicacy. The product is uniformly glazed, has slim modulations and perfectly fits into high-end construction market.

SLIDING DOOR WITH INVISIBLE FRAME



Features and benefits:

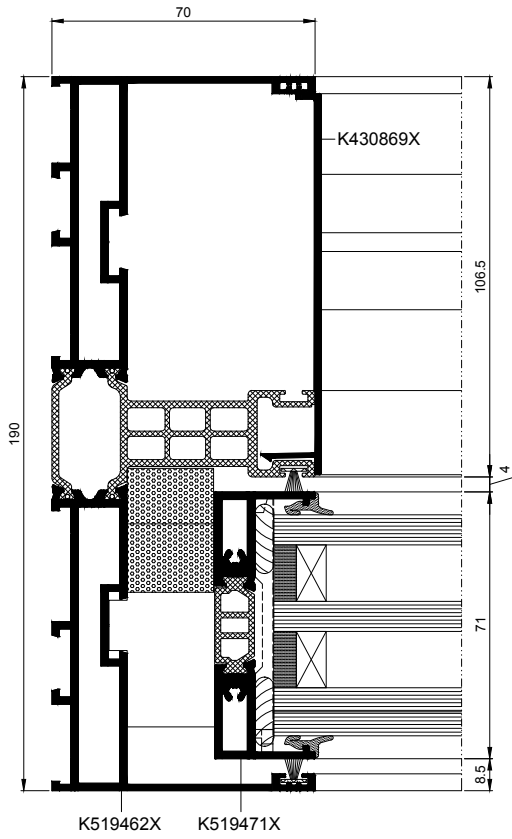
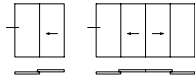
- 71mm (door leaf), 190mm-deep profiles (2-rail frame) and 292 mm-deep profiles (3-rail frame)
- modern design and high aesthetics: the frame is concealed in the wall, in the floor and in the ceiling, the frame profile is fully aligned at the sides, the visible connection width of door leaves is 25 mm
- door leaves up to 700 kg and up to 4 m high
- 3-chambered, thermally-insulated profiles
- 52 to 60 mm-thick triple glazing units
- door opens manually or automatically
- drives and control units are concealed in frame profiles
- can use an automatic unit mounted on the outside of the construction

TECHNICAL PARAMETERS	MB-SKYLINE
Air permeability	class 4, EN 12207
Watertightness	up to class 8A (450Pa), EN 12208
Wind load resistance	up to class C3 (1200 Pa) / B3 (1200 Pa), EN 12210
Thermal insulation	U _D from 0,85 W/(m ² K)*

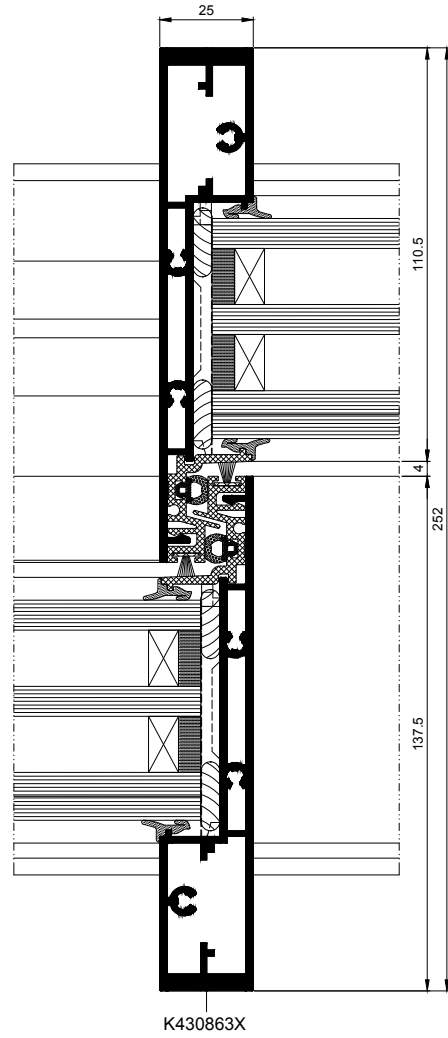
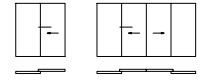
* - for door leaf: 2,07 × 3,44 m, infilled with triple glazing units U_g=0,5 W/(m²K) and warm spacer



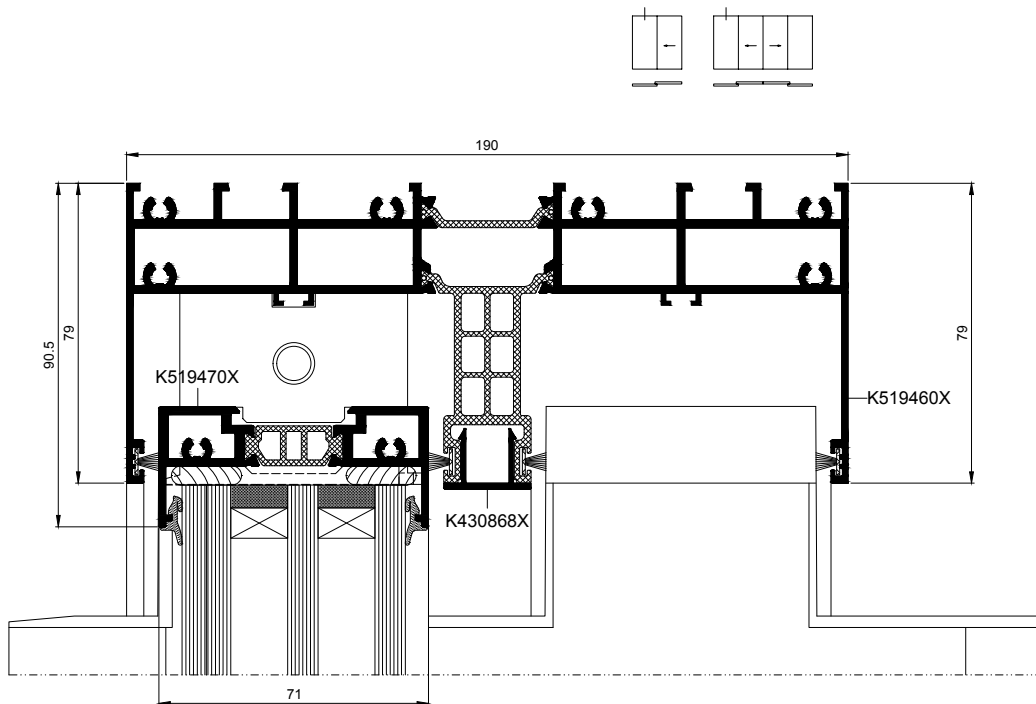
Door, side cross-section



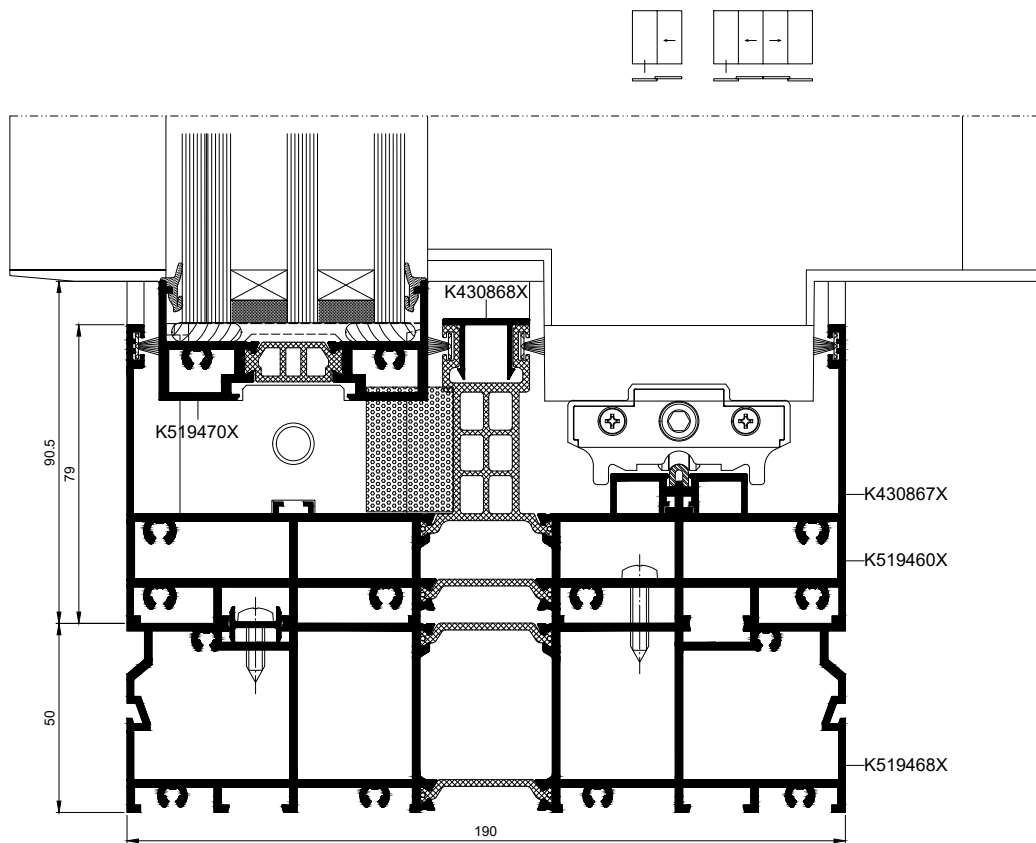
Door leaves connection, cross-section

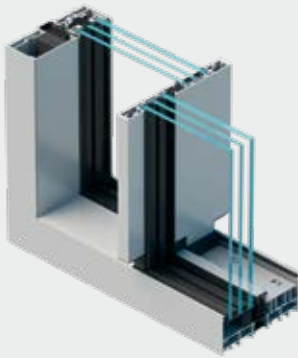


Door, top cross section



Door, bottom cross-section





The ALUPROF MB-SKYLINE TYPE R is a cutting-edge, large-scale, sliding door system which makes a feature of lightness and aesthetics. Slender profiles simultaneously provide both a contemporary look and a panoramic view of the surroundings. The main features of the MB-SKYLINE TYPE R are the completely invisible profile of the door leaf, the slender mullion and the shallow frame, all of which will be appreciated at the very first glance. The leaves may be massive, but no great effort is required to slide them open and close and the mechanism that operates them is almost soundless. The maximum height for a structure based on the system is no less than four metres and, if the motor is fitted on the outside rather than being hidden, then the moving leaf can weigh as much as seven hundred kilos. This affords the possibility of designing spectacular glass walls. Doors created using the MB-SKYLIBE TYPE R give a building an exceptional style and enhance the status of an entire development.

SLIDING DOOR SYSTEM WITH INVISIBLE FRAME



Functions and aesthetics:

- the door frame is built into the walls, floors and ceiling
- the leaf profiles are completely hidden in the upper and lower frames
- when the automatic drive unit option is selected, or the mullion features a locking mechanism, the leaf profiles remain invisible at the sides of the structure
- the width of the mullion where the leaves meet is 25 mm
- a convenient, shallow, 23 mm deep frame
- a slender, symmetrical, three-light structure with an operable central section (type G), which is also available for the manually operated version
- the innovative profile compensates for the results of slab drift
- the maximum leaf weight is 500 kg for manually operated leaves and 1200 kg for automatically operated
- glazing options range from 52 to 60 mm
- the structural depth of the door profiles is 71 mm for the leaves and 190 mm for the frame
- the door leaves are made using state-of-the-art insulation material with high thermal parameters
- the cutting-edge sliding seals used in the frame are aesthetically pleasing and silent in use
- the rollers the leaf moves along are available in stainless steel or black polyamide
- there are two locking; manual, using BT Lock hardware or fitted to the mullion
- the motor is equipped with a radio receiver and security radar
- state-of-the-art drainage system, complete with guttering
- system brackets with height regulation
- the structural base has excellent thermal isolation
- the system features a 'zero mullion', which makes it possible to use external venetian and roller blinds like the ALUPROF Skyflow and Skyroll.

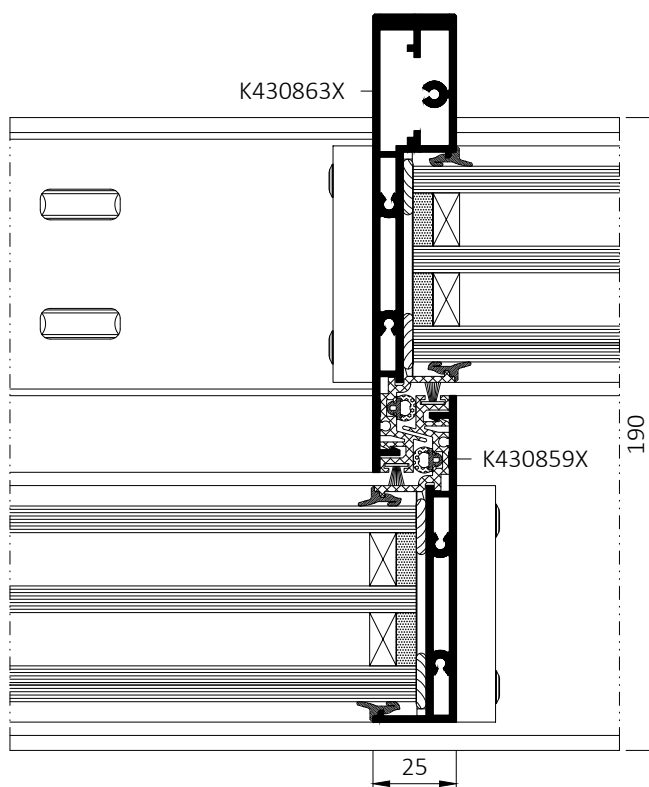
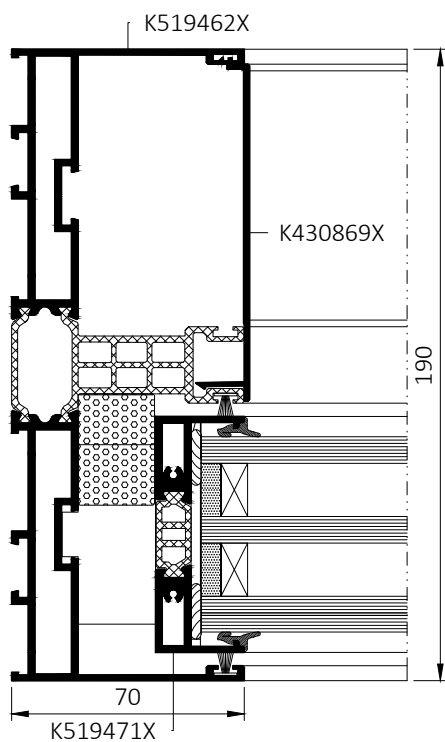
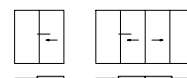
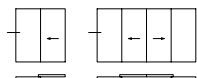


TECHNICAL PARAMETERS	MB-SKYLINE TYPE R
Air permeability	class 4, EN 12207
Watertightness	up to class 8A (450Pa), EN 12208
Wind load resistance	up to class C3 (1200 Pa)/B3 (1200 Pa), EN 12210
Thermal insulation	U_D from 0,80 W/(m ² K)*

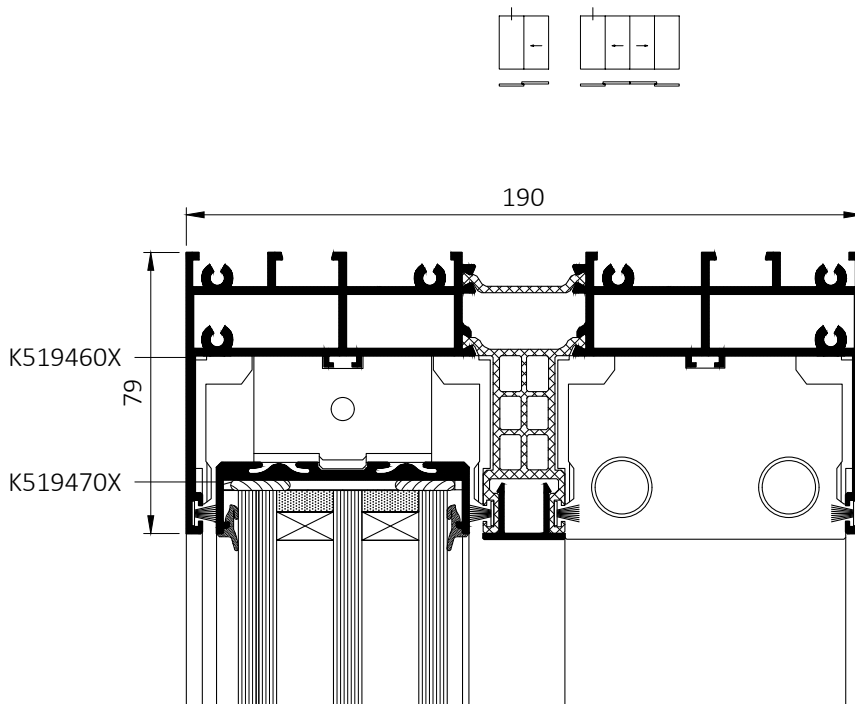
* - for door leaf: 2049×3441 mm, infilled with triple glazing units $U_g=0,5$ W/(m²K) and warm spacer

Door, side cross-section

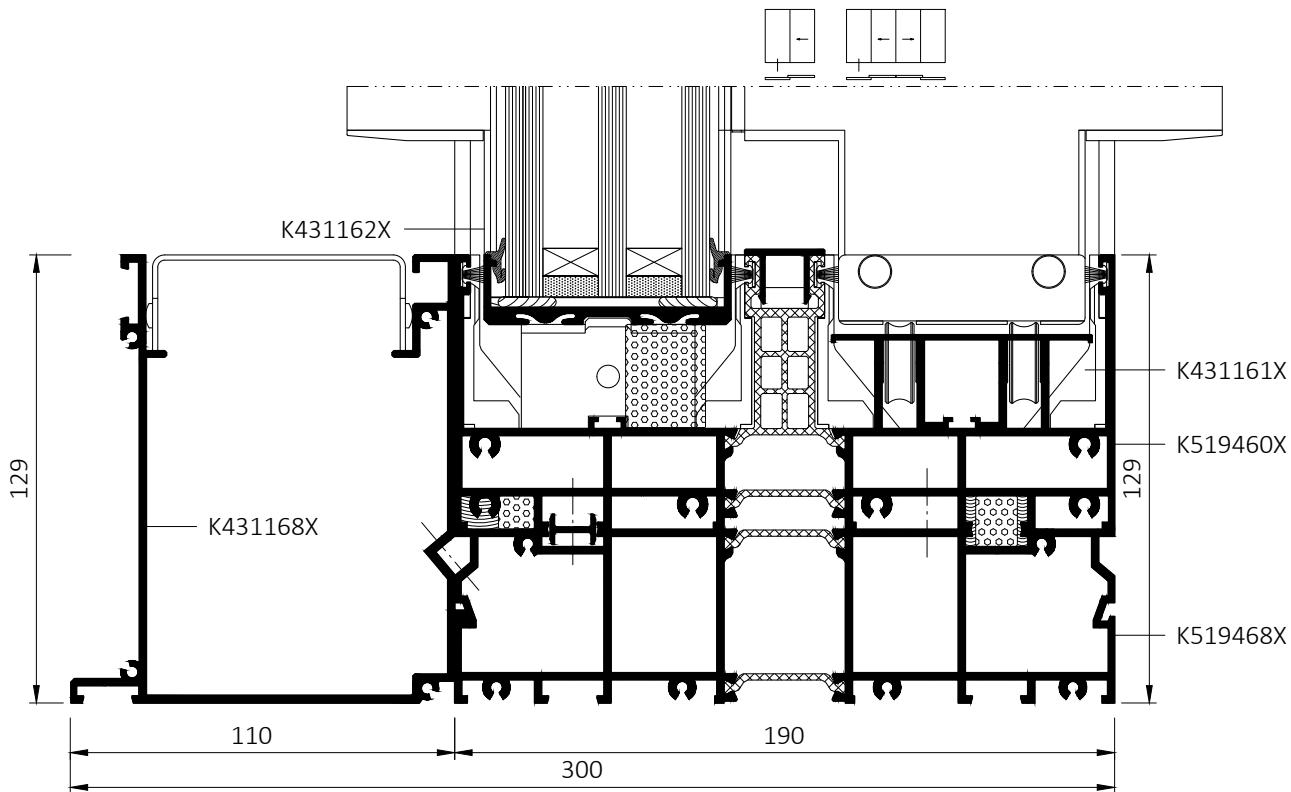
Door leaves connection, cross-section



Door, top cross section

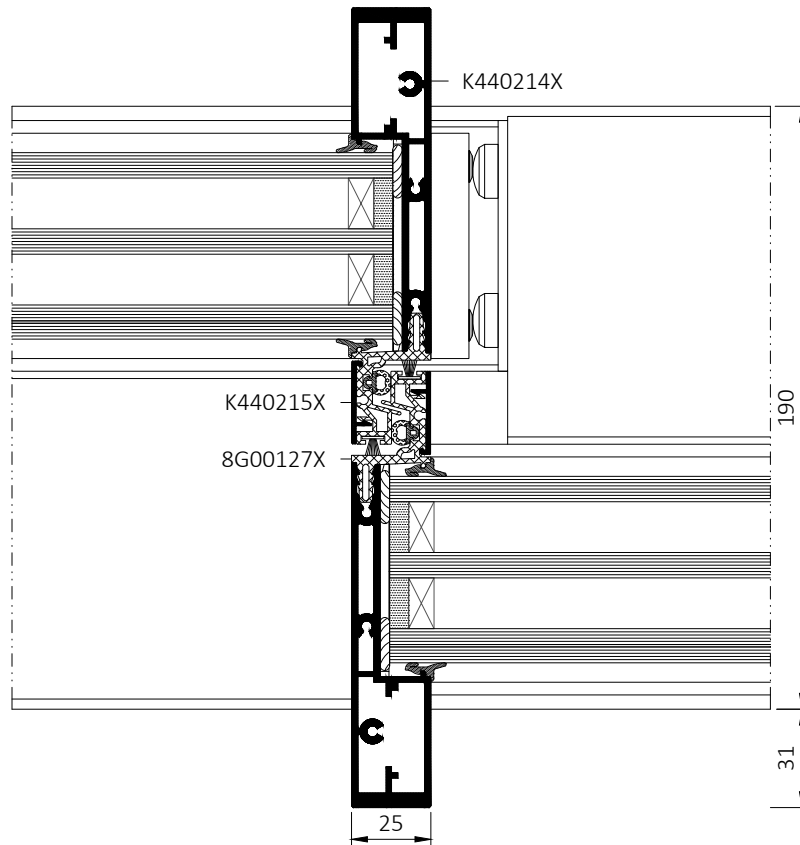


Door, bottom cross-section



Scale 1:2

Door leaves connection in the slender, symmetrical, three-light structure with an operable central section, cross-section



SYSTEM

MB-77HS

MB-77HS HI

WINDOW AND DOOR SYSTEMS



The MB-77HS "Lift & Slide" door product is an ideal solution for connecting interior space rooms or conservatories with the outside balcony, terrace or garden area. Providing both a smooth & silent slide action operation, it can bring the benefits of a beautiful day outside, into the living space. In addition, & by way of its design & operation, the MB-77HS is a great space saving opening & does not encroach the free space beyond the internal or external confines of the frame, without any compromise.

LIFT & SLIDE DOOR WITH ENHANCED THERMAL PERFORMANCE

Providing excellent weather tightness together with enhanced thermal performance, the MB-77HS complies with all of the requirements associated with this product type. Available in two different options, with regard to the level of thermal performance, the MB-77HS is further categorised as "ST" and "HI" standard or highly insulated. The design & arrangement of the system profiles enable luxurious openings of large dimensions, accommodating double & even triple glass unit compositions, which in conjunction with the constituent parts & innovative technical solutions, help achieve a high level of thermal & acoustic performance. Due to the system properties, & rigorous performance proven through a stringent testing regime, the MB-77HS is ideally suited to many domestic & retail applications, providing a comfortable, safe working, cost effective & low maintenance solution for the end user.

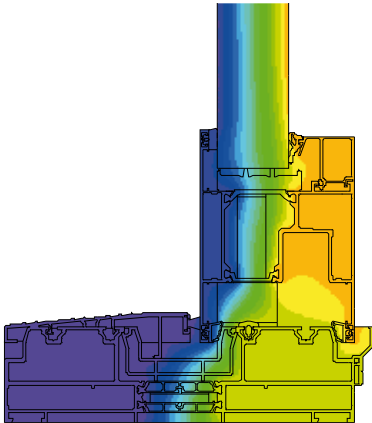
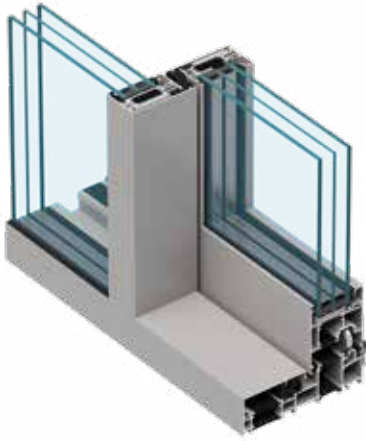
Features of systems

MB-77HS

- durable and slender profiles enable screens of a low-threshold door of the weight of the leaf of up to 600 kg, height – up to 3.24 m and width – up to 3.3 m
- we offer solutions with narrow mullion, and our profile sections have a visible width of only 47.5 mm
- a wide range of glazing options, allowing application of double or triple glazed units combined with thermal breaks as well as additional inserts, enable achieving high thermal and acoustic insulation of the door



- for aesthetic values glazing beads come in three options: Standard (rectangular), Prestige (rounded) and Style (shaped)
- closed shape of glazing beads and antijemmy details provide enhanced security properties without altering any essential constructional elements of the door
- unique shape of closing and glazing gaskets and quality hardware ensure top end weather and air tightness performance
- profiles adapted to accommodate a number of manually or automatically operated hardware available on the market
- a large degree of compatibility with the MB-86 system creates an aesthetic combination of the MB-77HS doors with windows and using the same components in fabrication process
- the MB-77HS features mechanisms designed to facilitate door operation: HS Master visible drive, ePower concealed drive, Comfort Close / Silent Close restrictor and GU Lift Unit mechanism that facilitates lifting of the door leaf
- a wide range of colour schemes allows for arrangement of doors to meet any individual requirements



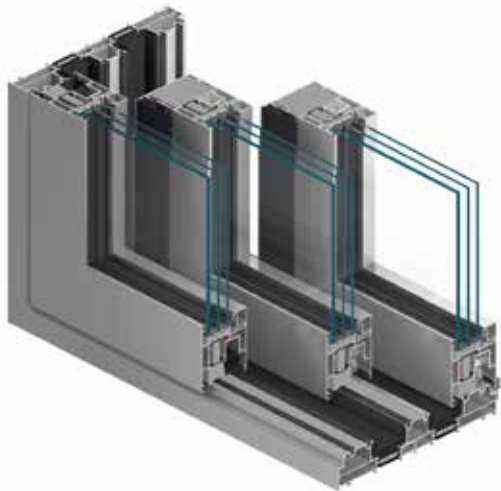
distribution of isotherms
in the **MB-77HS HI** door



TECHNICAL SPECIFICATION	MB-77HS ST / MB-77HS HI
Depth of frame	174 mm (2-rail profile), 271 mm (3-rail profile)
Depth of leaf	77 mm
Glazing rang	13,5 – 58,5 mm
Min visible width T-profile	
Frame	48 mm
Leaf	94,5 – 105,5 mm
PERFORMANCE	MB-77HS ST / MB-77HS HI
Air permeability	class 4, EN 12207
Water tightness	class 9A, EN 12208
Thermal insulation	U_w from 0,84 W/(m ² K)*
Wind load resistance	to class C4, EN 12210
Burglary resistance	class RC1, RC2, EN 1627

* - U_w for MB-77HS HI doors with 3,0 × 2,9 m leaf, and glazing of $U_g=0,5$ W/(m²K) equipped with a Chromatech Ultra spacer.

AVAILABLE CONSTRUCTIONS



3-rail frame



fixed glazing in the frame



openable corner joint



MECHANISMS TO FACILITATE THE OPERATION

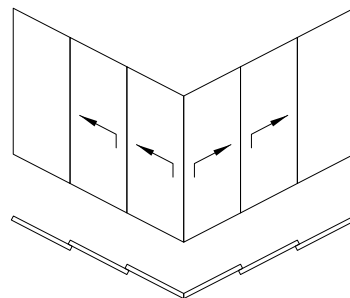
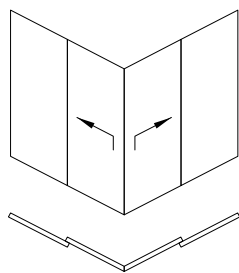
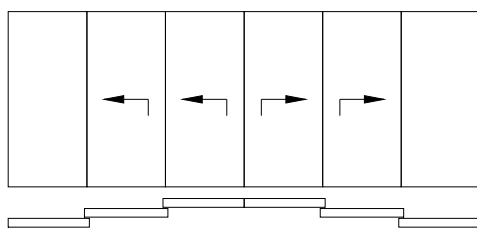
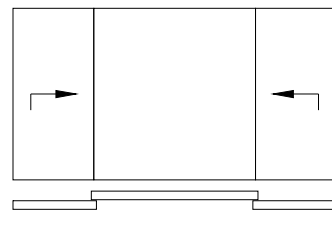
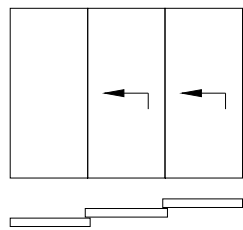
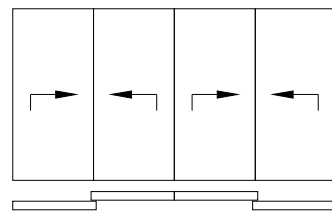
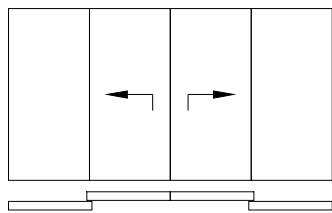
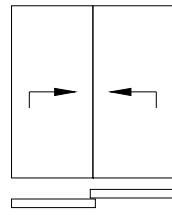
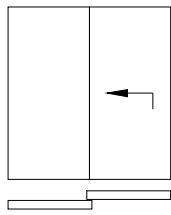


HS Master drive

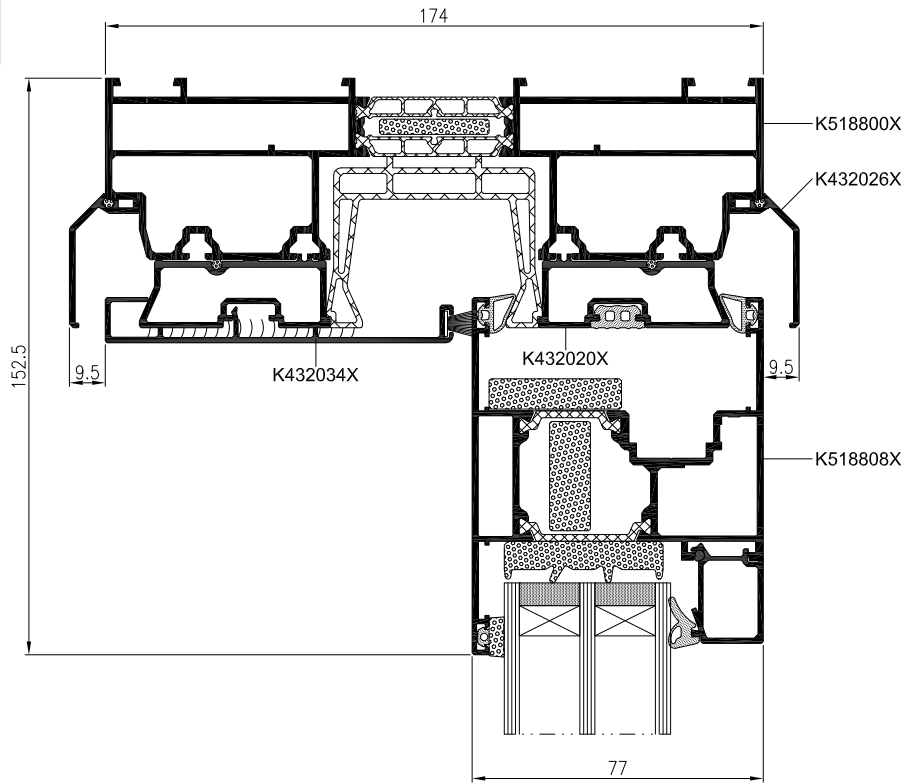
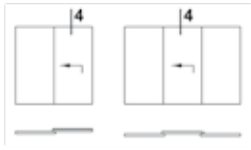


GU Lift Unit mechanism that facilitates lifting of the door leaf

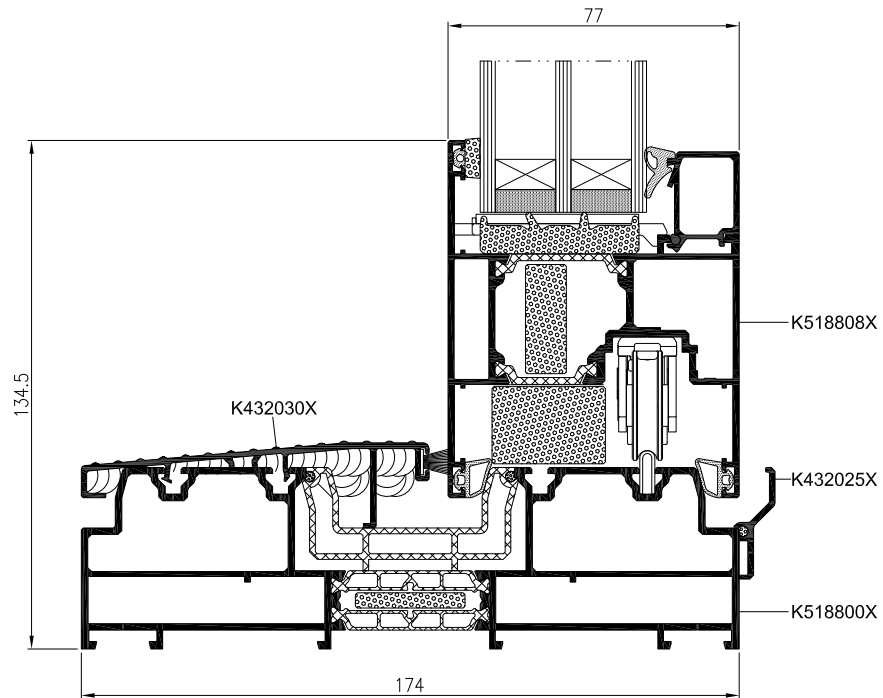
Lift& slide doors types



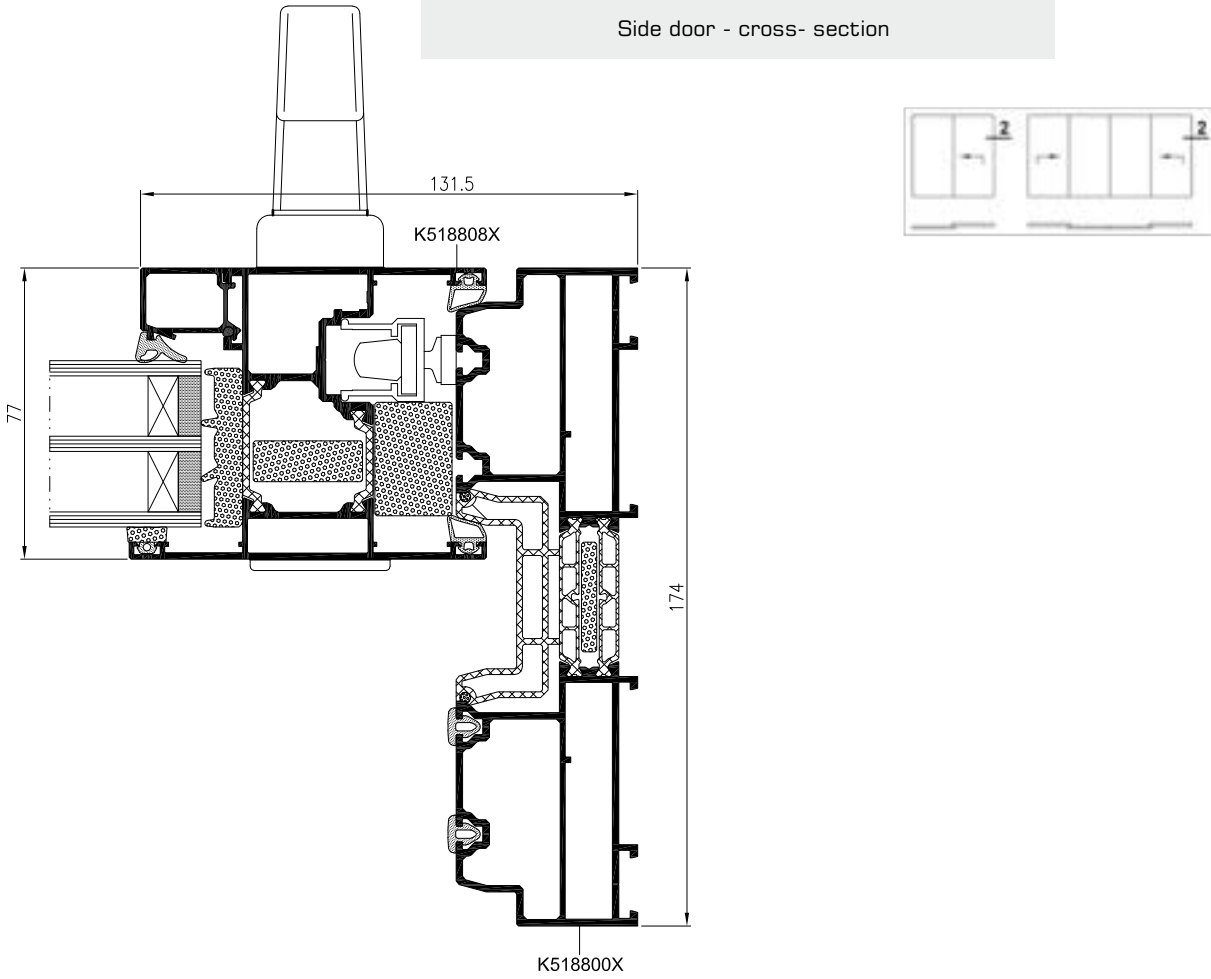
Door top rail - cross- section



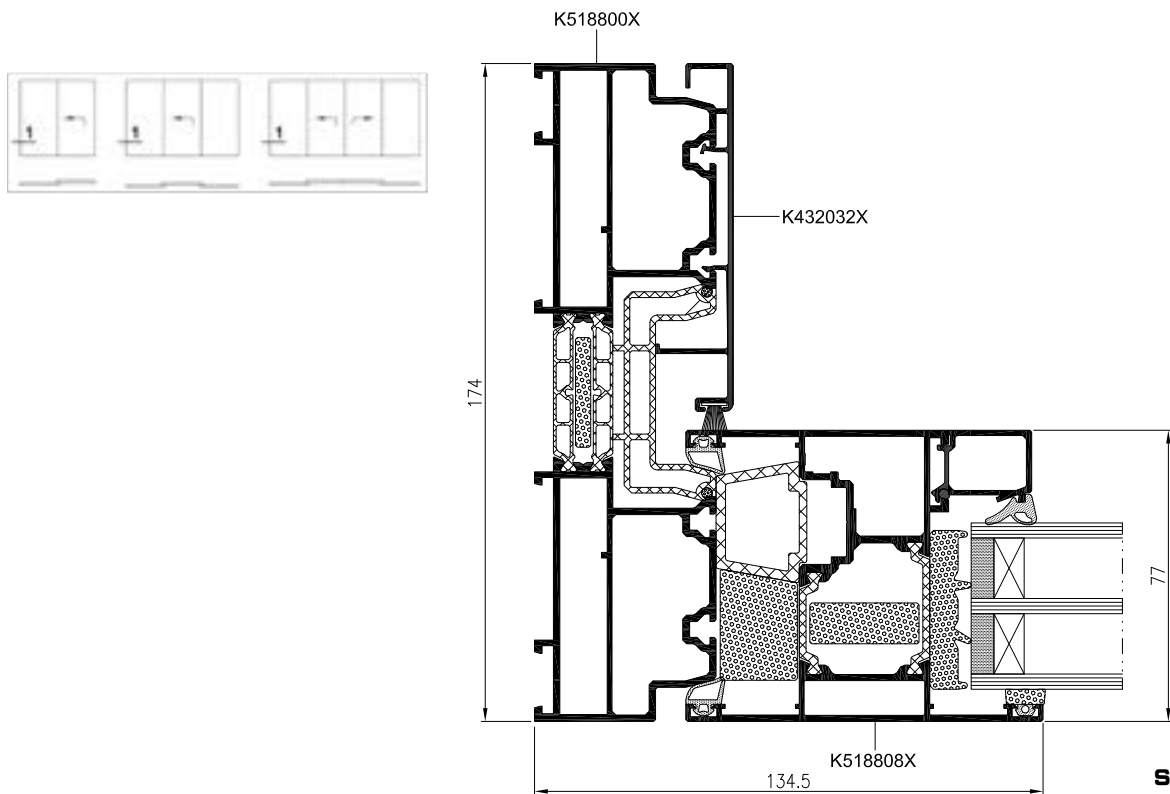
Cross - section of door bottom rail



Side door - cross- section

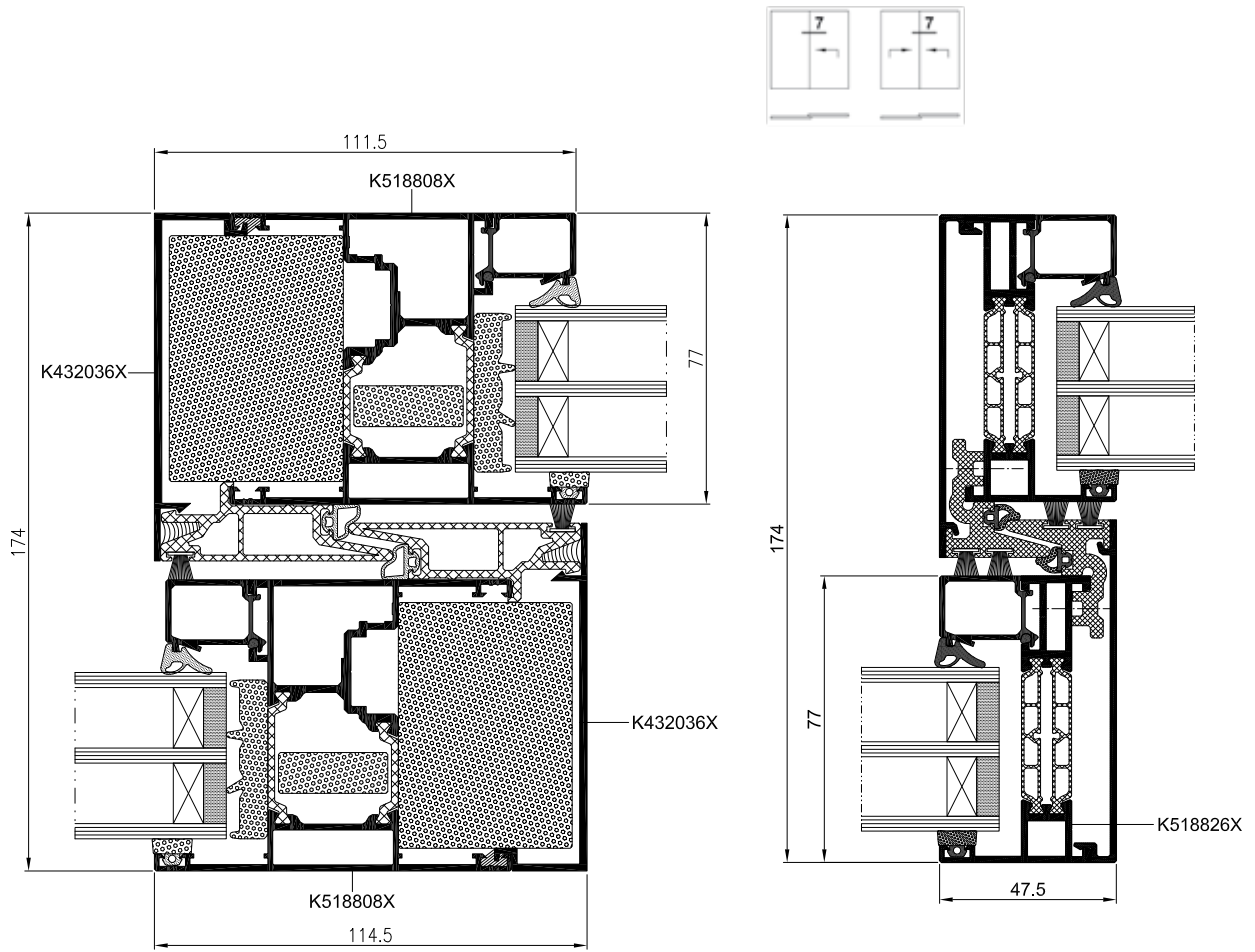


Side door - cross- section

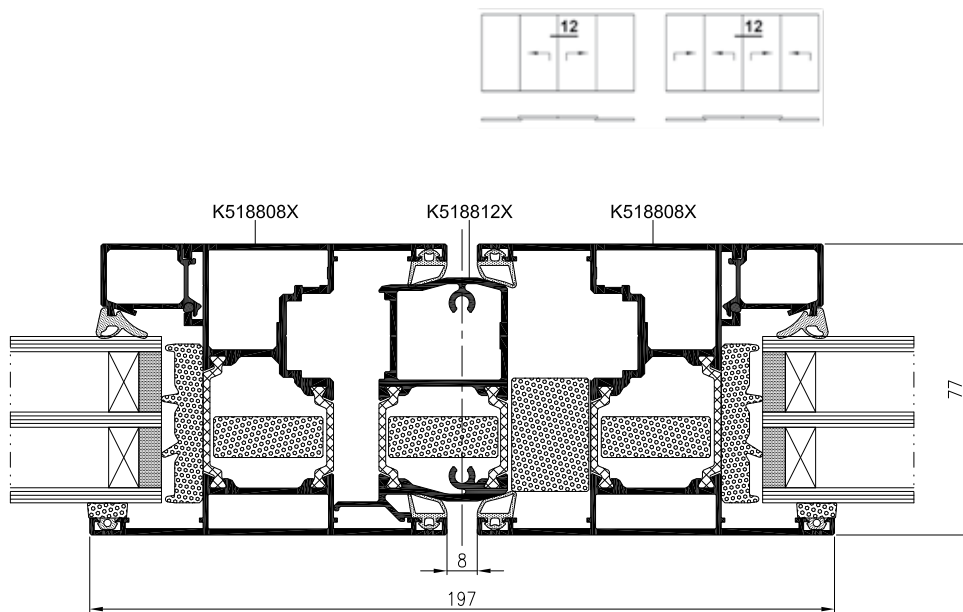


Scale 1:2

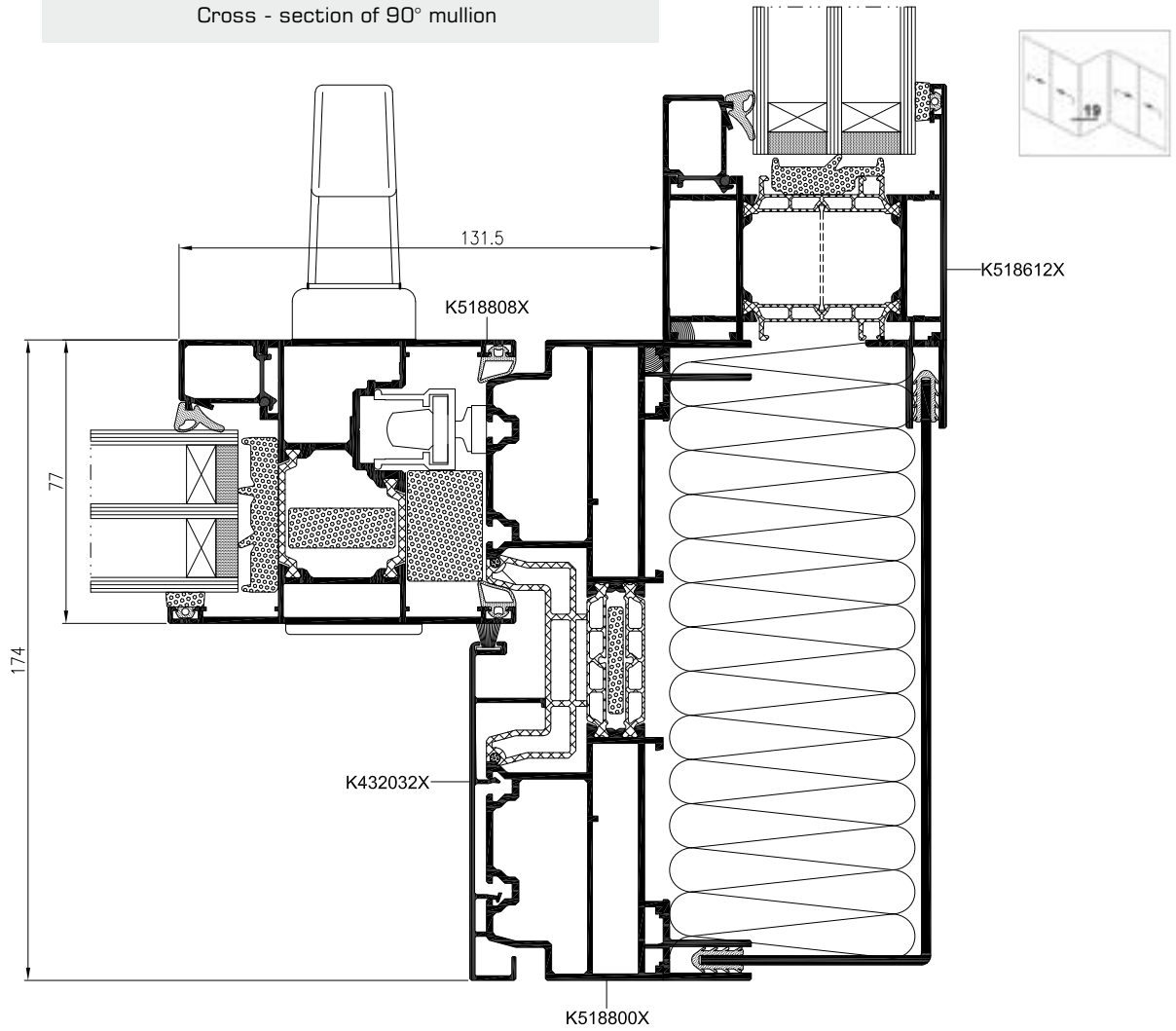
Cross - section of jambs of door



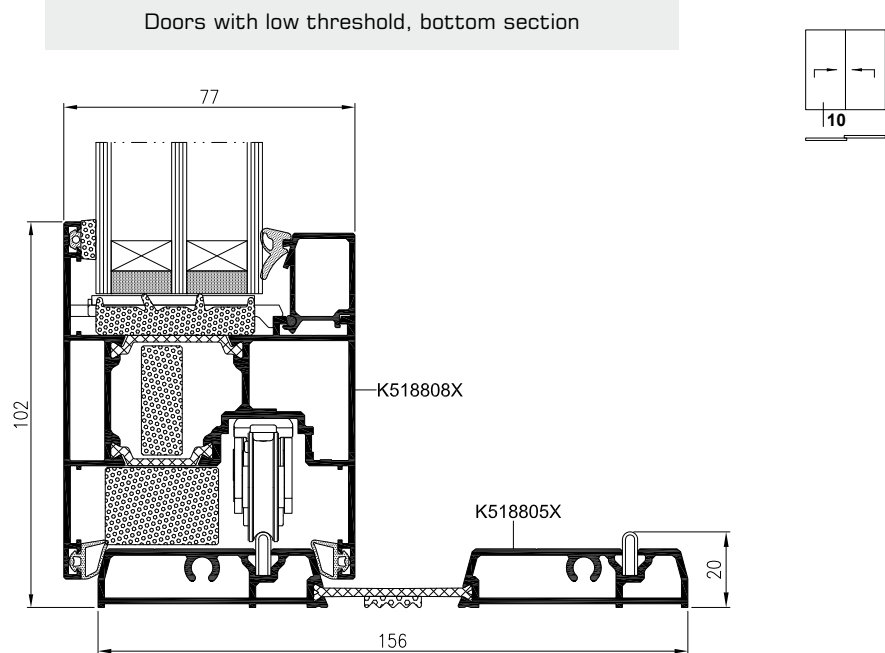
Cross - section of jambs of door



Cross - section of 90° mullion

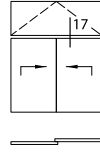
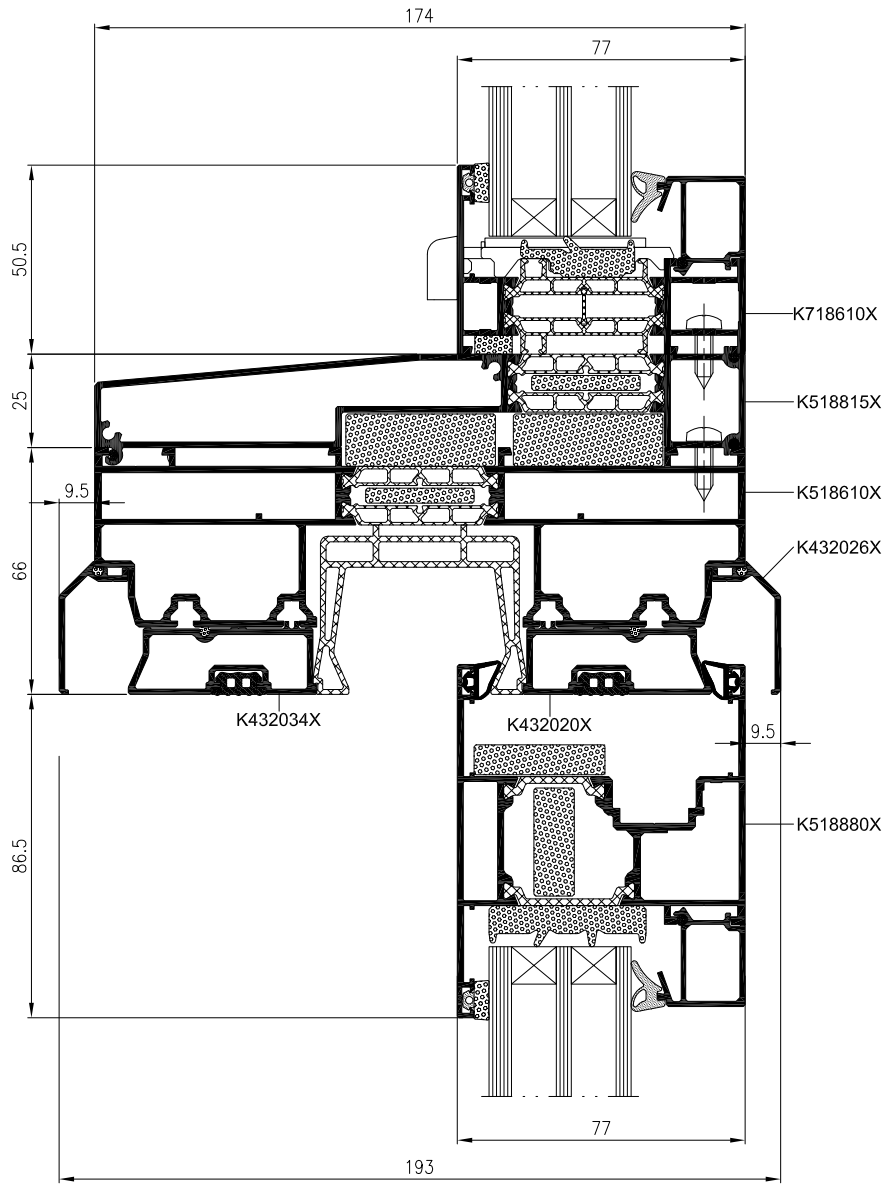


Doors with low threshold, bottom section

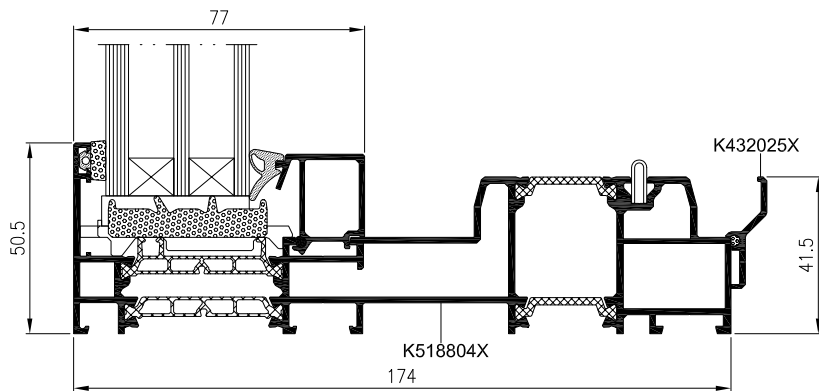


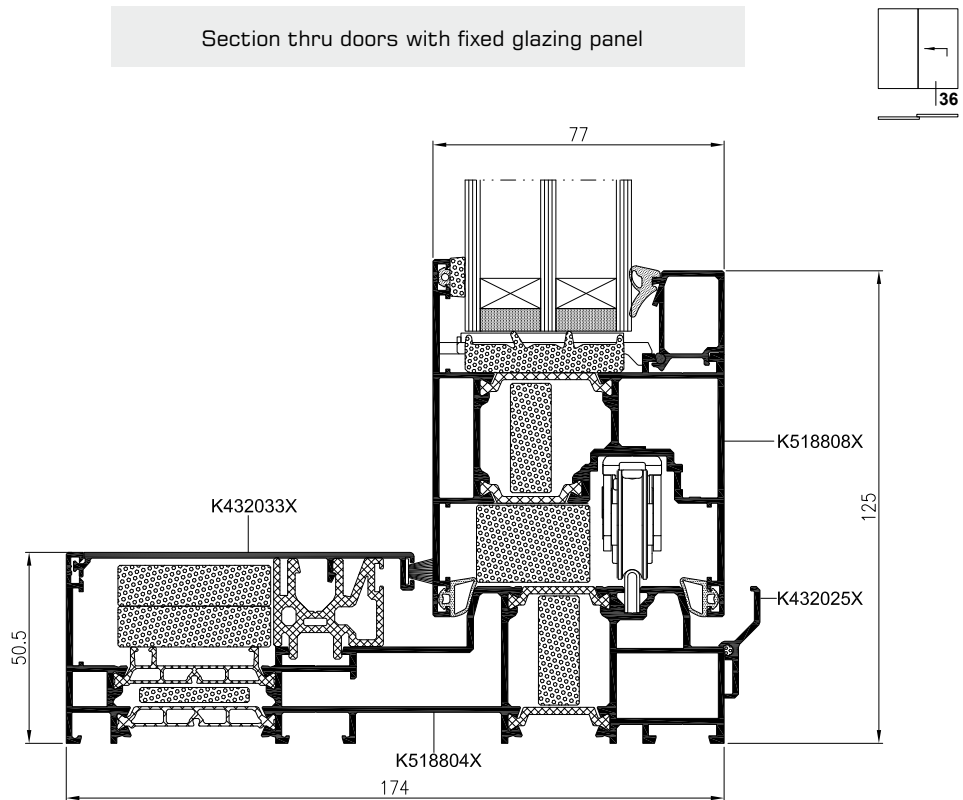
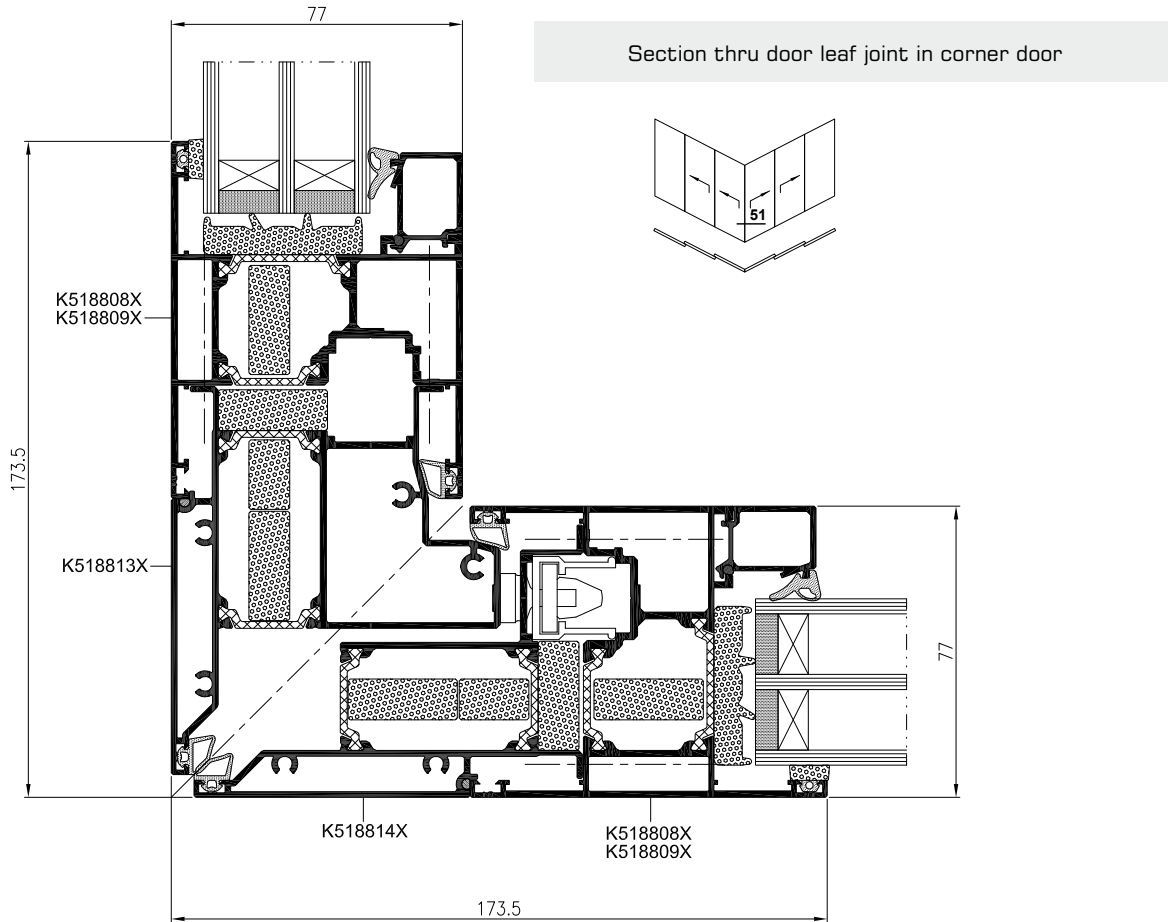
Scale 1:2

Horizontal section of door top rail

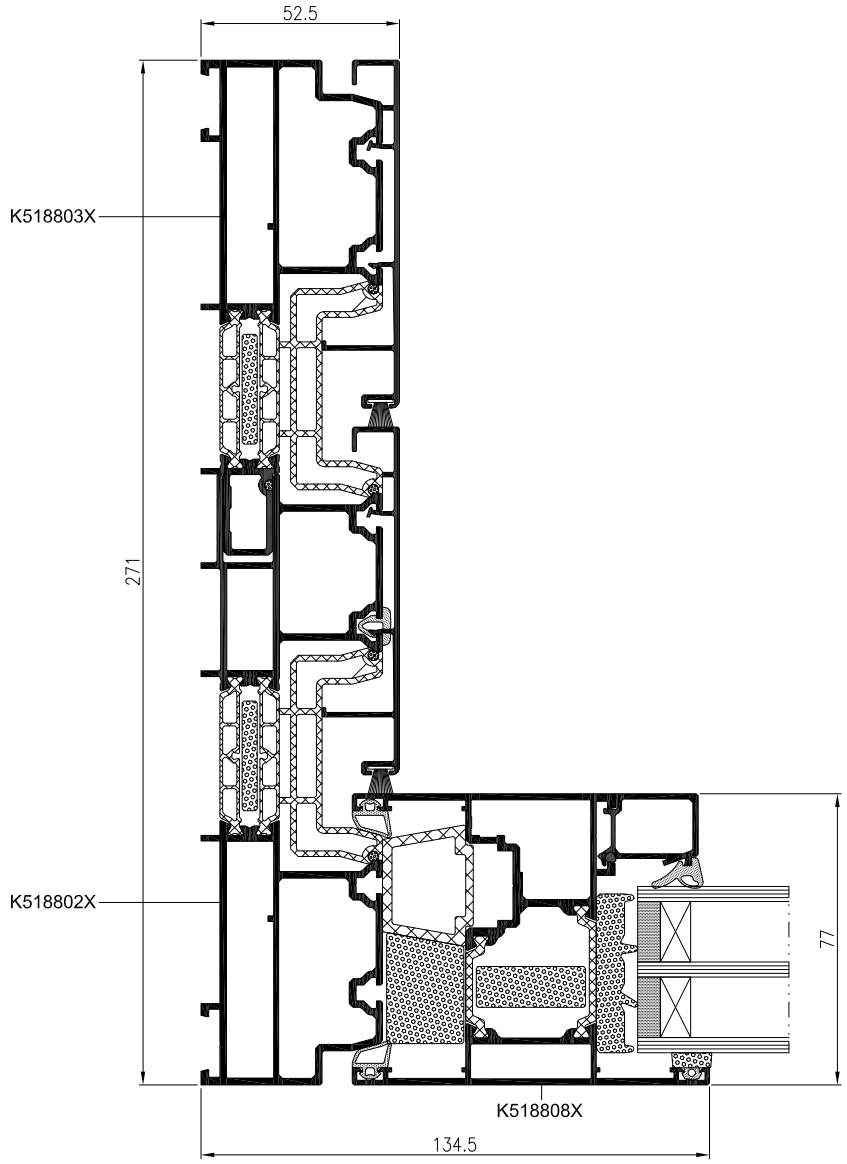
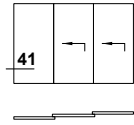


Section thru doors with fixed glazing panel





Section thru triple track frame

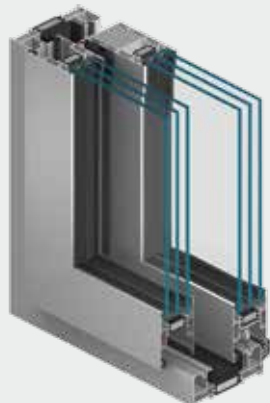


SYSTEM

MB-59HS

MB-59HS HI

WINDOW AND DOOR SYSTEMS



Lift & slide door is the perfect integrating element that connects rooms or winter gardens with external spaces. It provides a convenient exit to the balcony, terrace or garden. MB-59HS gives you great possibilities in applications of lift & slide doors, and is the optimized solutions in terms of construction and dimensions of its profiles and frames. With its high thermal and sound insulation, combined with excellent water and air tightness, MB-59HS meets all the requirements for energy conservation and environmental protection.

LIFT & SLIDE BALCONY DOOR

In terms of thermal insulation, MB-59HS profiles have two different variants: ST and HI. The range of available profiles include 2- and 3-rail frames, and leaves that are adapted to two heights of rolling devices. A wide range of glazing enables the use of double and triple glazing units, including safety and sound insulation units. Due to its characteristics, the MB-59HS can be used in various types of buildings: individual buildings, hotels or apartments.

Advantages:

- important dimensions of the door leaves that exceed by far any standard values: height up to 2.8 m, width up to 3.3 m; and max. leaf weight up to 300 kg
- slender and robust, 3-chambered profiles, with insulating chamber equipped with wide thermal breaks in the central part
- 2-or 3-rail frames that enable the fabrication of doors with wide clear passage size
- large glass thickness to be fitted in the door leaves (up to 42 mm), to bring flexibility in choosing the appropriate glass
- fixed lites can be fabricated with glass mounted directly to the frame – a solution that is both aesthetic and economical
- relatively low heat transfer coefficient for frames (U_f) assured by wide thermal breaks, polyethylene inserts and chambered profiles mounted in thermal insulation strips



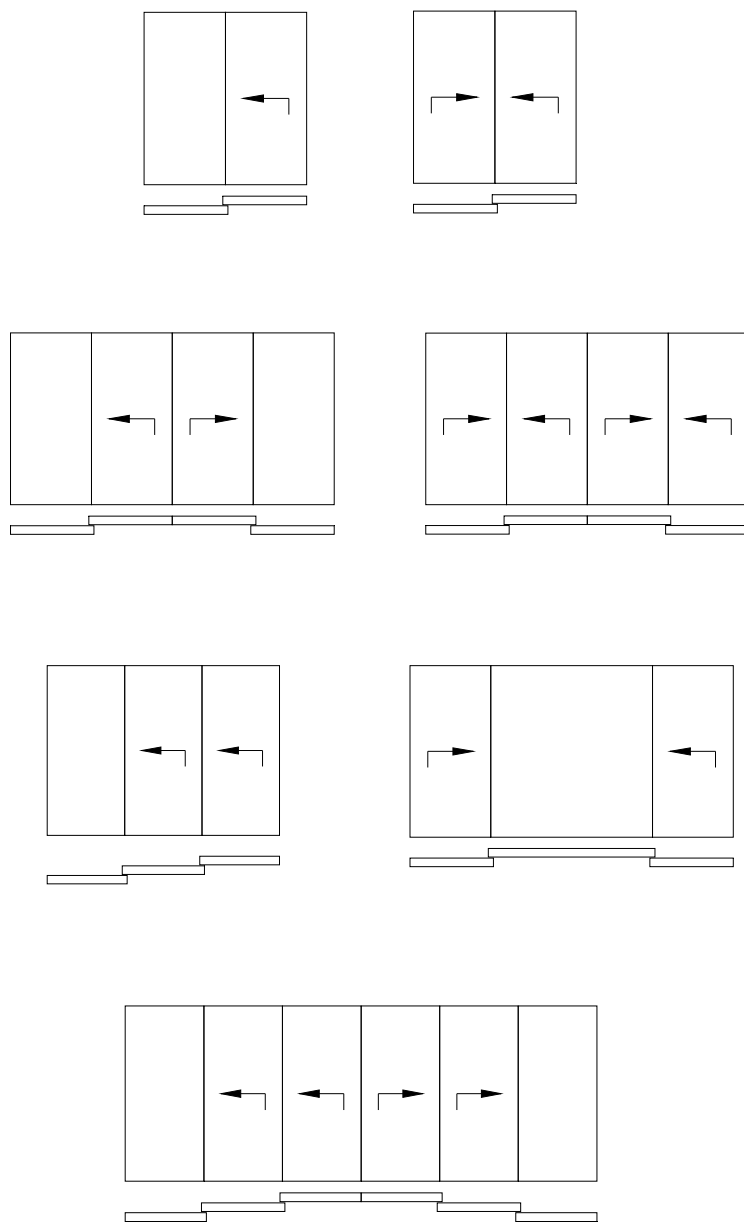
- high water and air tightness assured by specially-shaped gaskets and hardware that allow the leaf to embed on the frame in the final stage of closing the leaf ability to mount most of the hardware for lift & slide doors available on the market
- door version with a low-level threshold, which makes it easier to use the door especially by the elderly or disabled
- doors can be mounted individually or as part of larger constructions: mullion and transom curtain walls or winter gardens
- maximally simplified construction technology to reduce time and costs of fabrication

- compatibility with other Aluprof systems – common components can be used

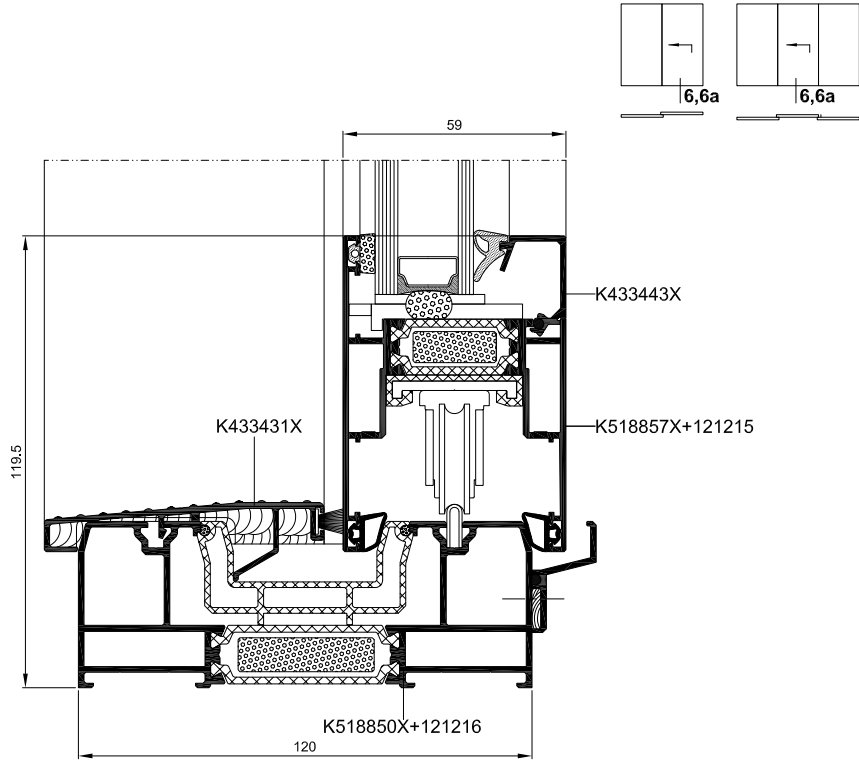
Performance:

- Air tightness: class 3, EN 12207
- Watertightness: up to class 9A, EN 12208
- Wind load resistance: to class C3, EN 12210
- Thermal insulation: U_f from 1.8 W/(m²K)

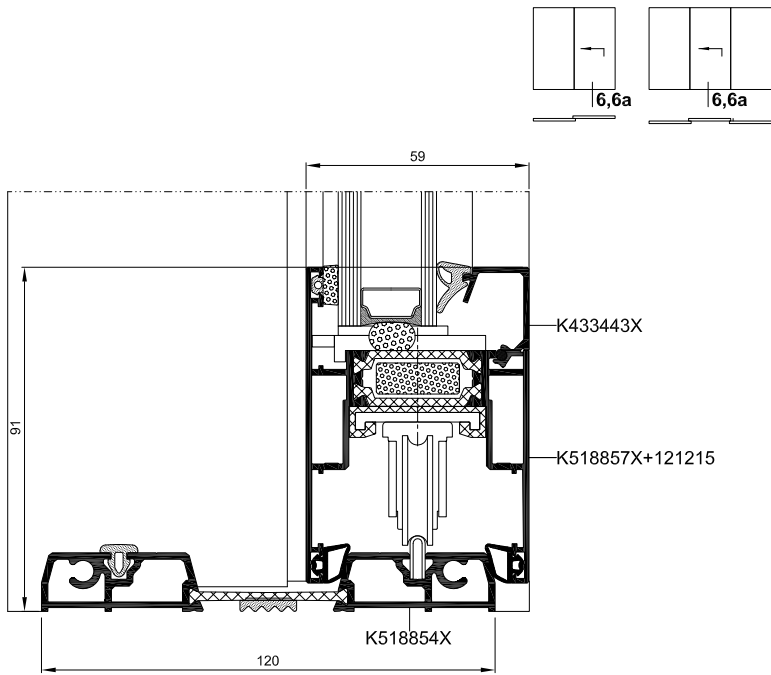
Lift & slide doors types



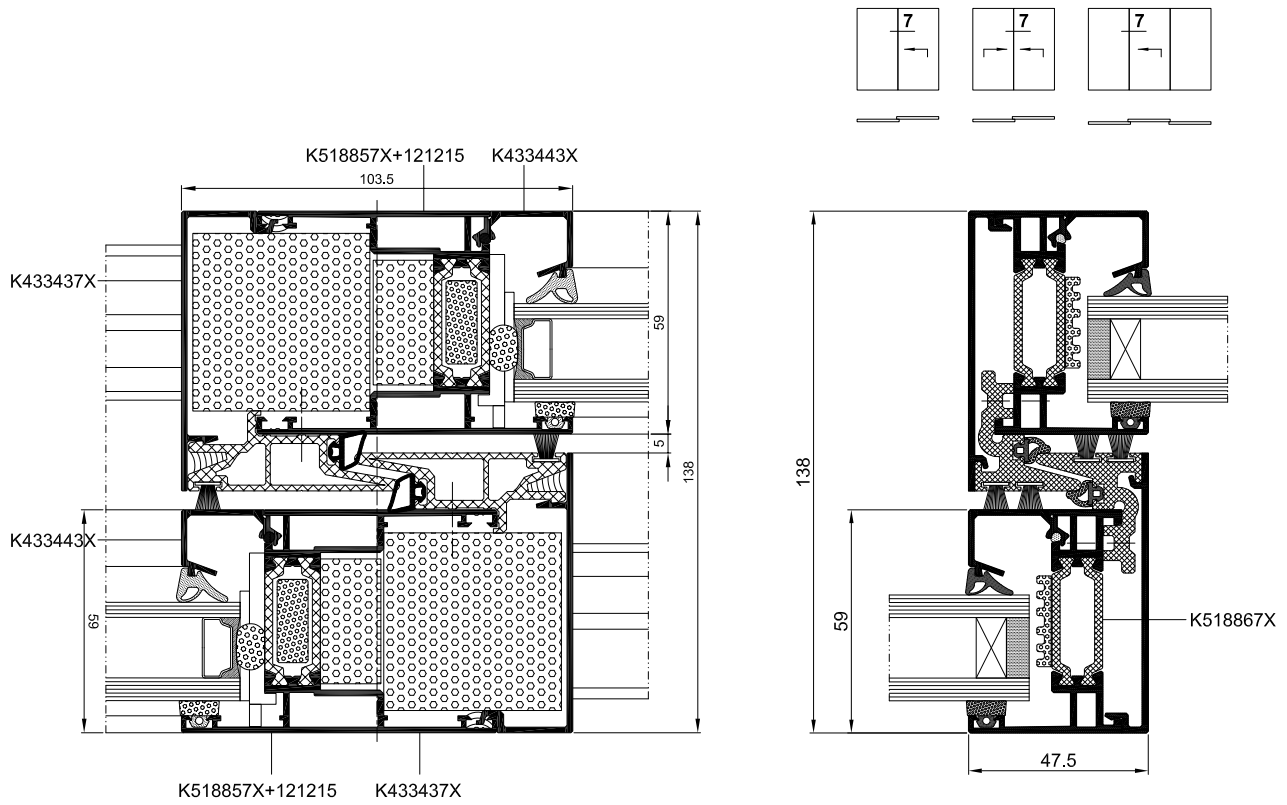
Cross - section of door bottom rail



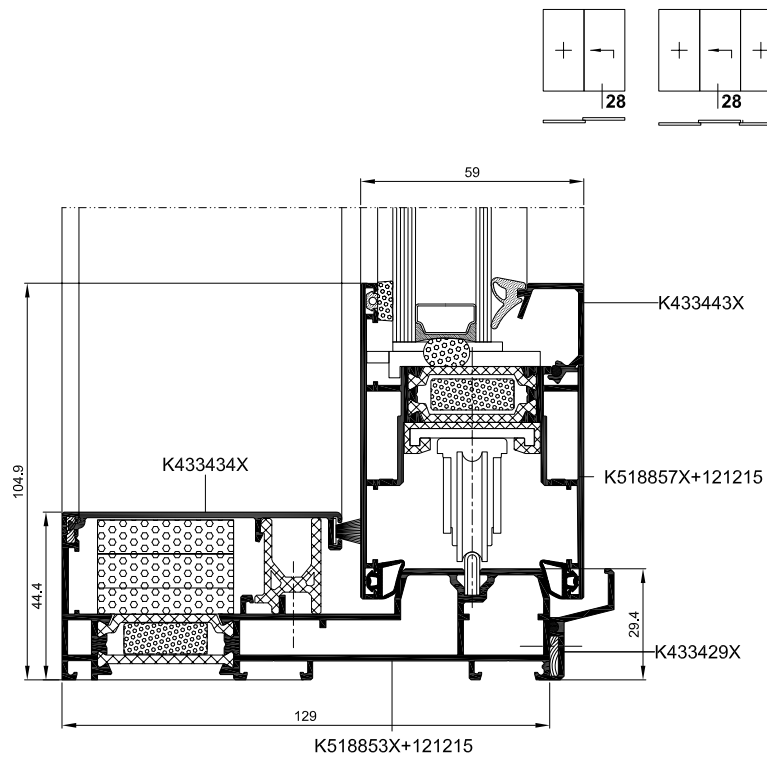
Doors with low threshold, bottom section



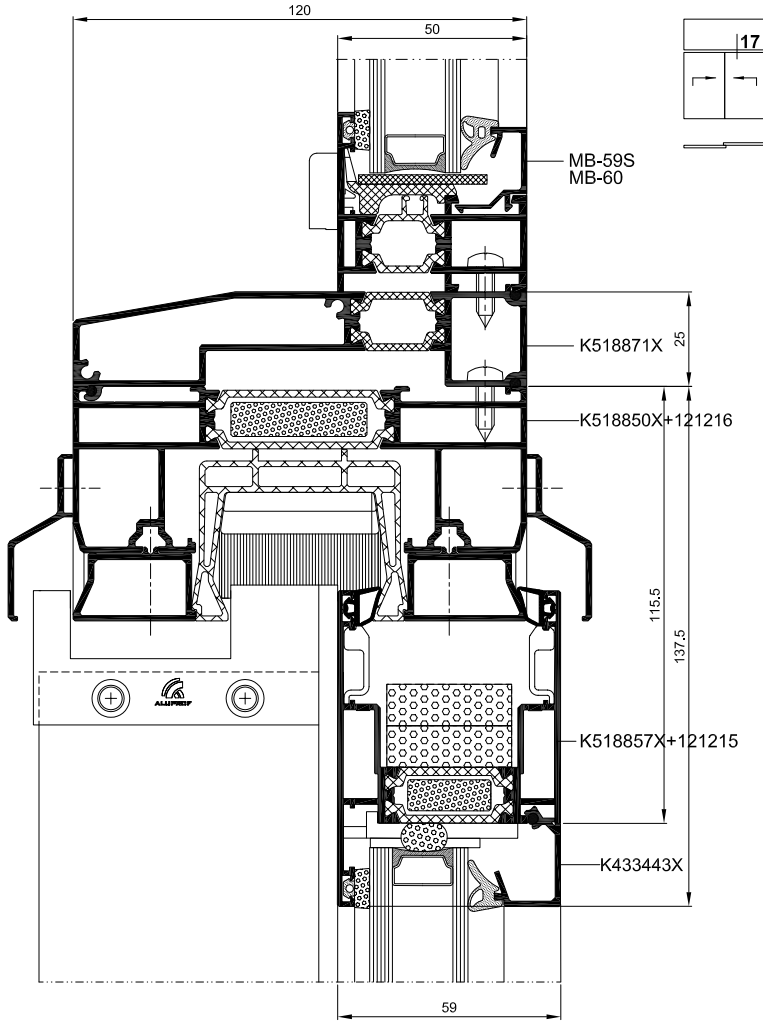
Cross - section of jambs of door



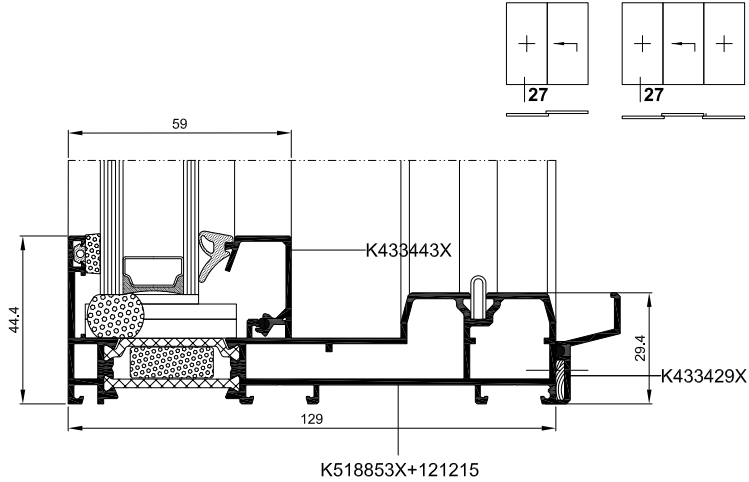
Section thru doors with fixed glazing panel



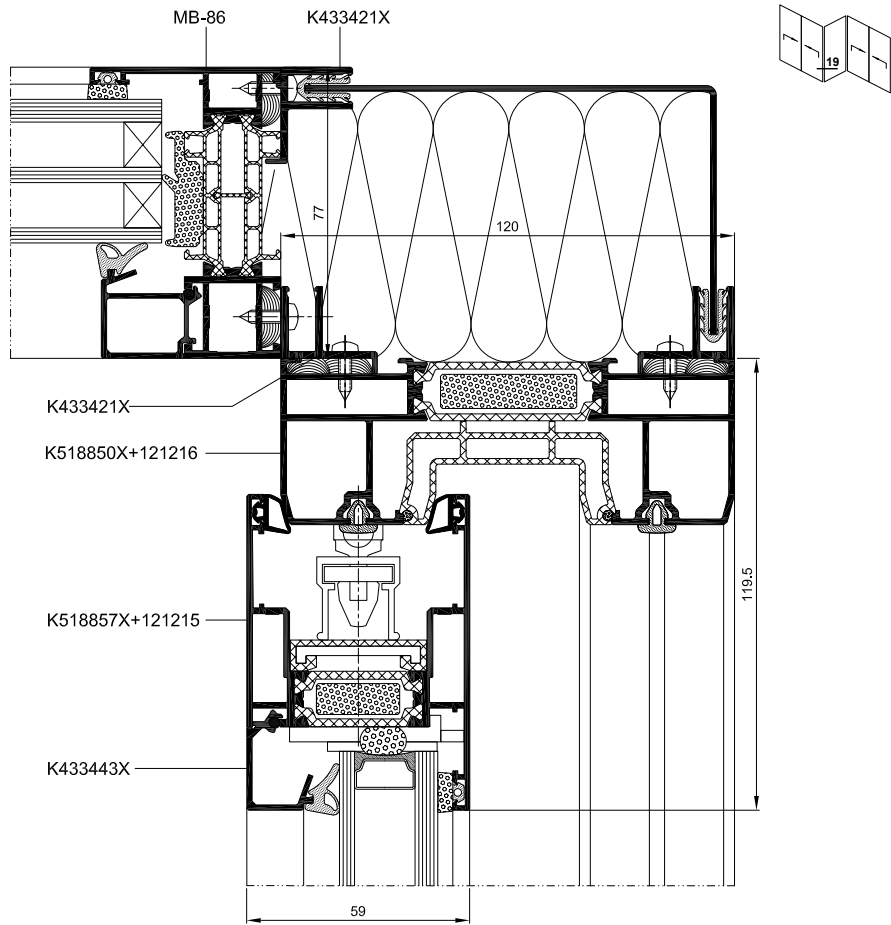
Horizontal section of door top rail



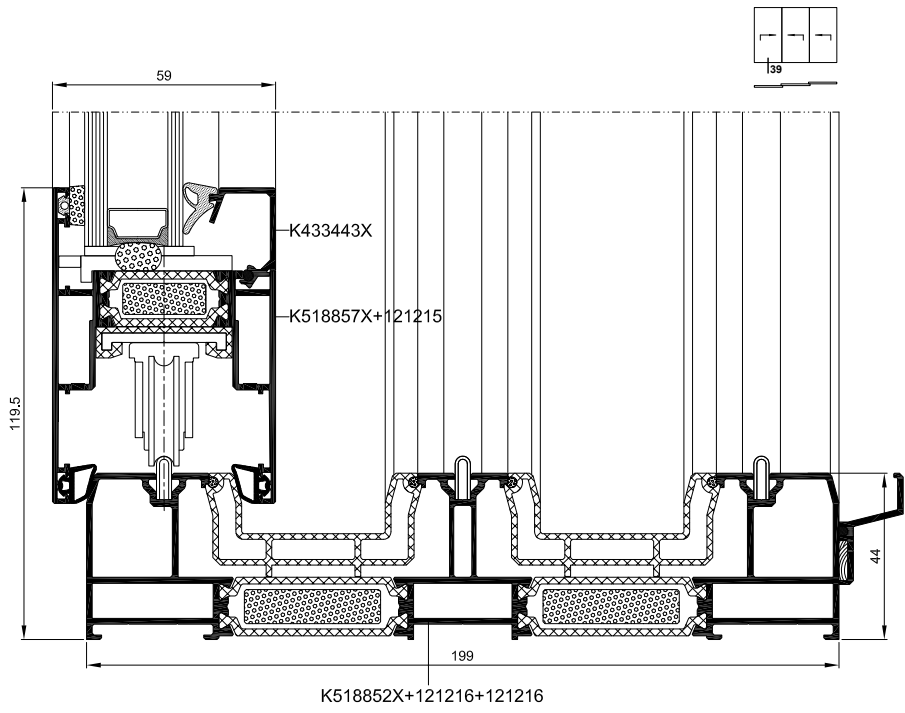
Section thru doors with fixed glazing panel



Cross - section of 90° mullion



Section thru door with 3-rail frame





MB-59 Slide system has been designed to fabricate thermally-insulated sliding doors to be integrated in masonry walls, aluminum curtain walls, winter gardens or window walling. Sliding doors, especially large ones, can make living space visually bigger by combining it with the external terrace or garden. In terms of thermal insulation, MB-59 Slide profiles have two different variants: ST and HI. The range of available profiles include 2- and 3-rail frames. A wide range of glazing enables the use of double and triple glazing units, including safety and sound insulation units. The system can be used in various types of buildings: individual buildings, hotels or apartments.

BALCONY SLIDING DOOR

Features and benefits:

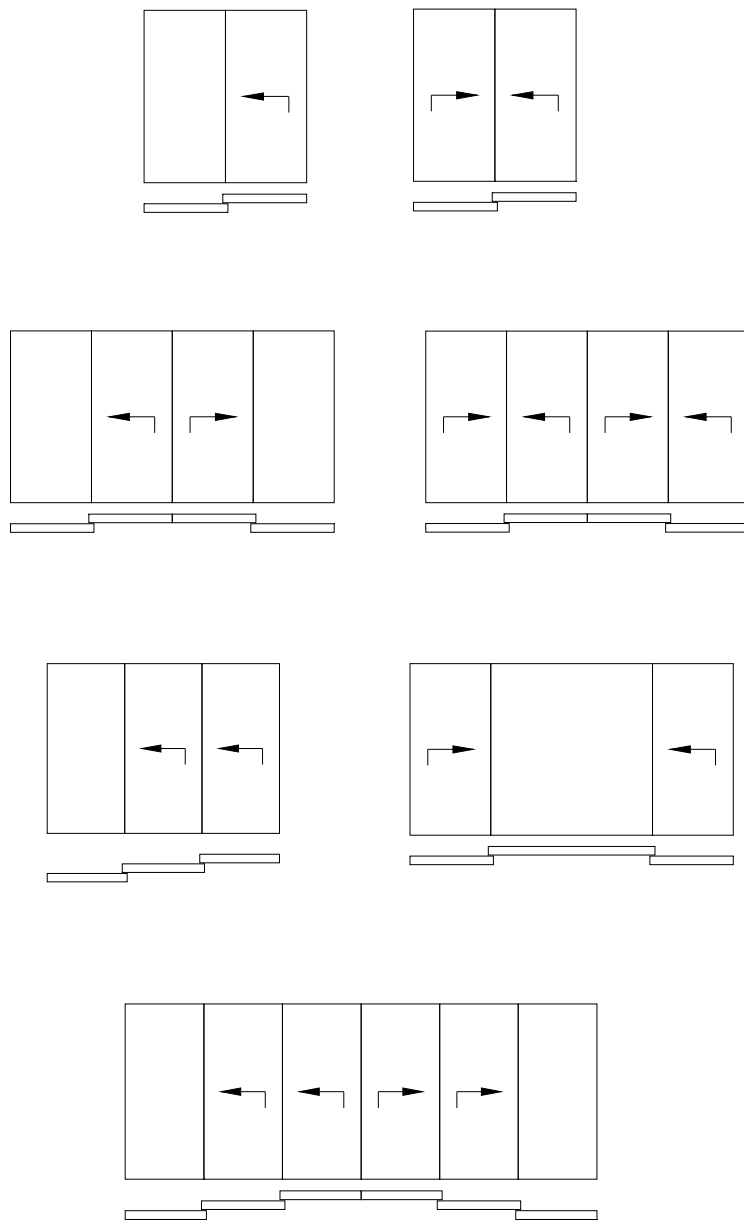
- important dimensions of the door leaves: height up to 2.6 m, width up to 1.8 m; and max. leaf weight up to 160 kg
- slender and robust, 3-chambered profiles with insulating chamber equipped with wide thermal breaks in the central part
- 2-or 3-rail frames that enable the fabrication of doors with wide clear passage size
- large glass thickness to be fitted in the door leaves (up to 42 mm), to bring flexibility in choosing the appropriate glass;
- possibility to use most of the sliding door hardware available on the market
- doors can be mounted individually or as part of larger constructions: mullion and transom curtain walls or winter gardens
- maximally simplified construction technology to reduce time and cost of fabrication
- compatibility with other Aluprof systems – possibility to use common components



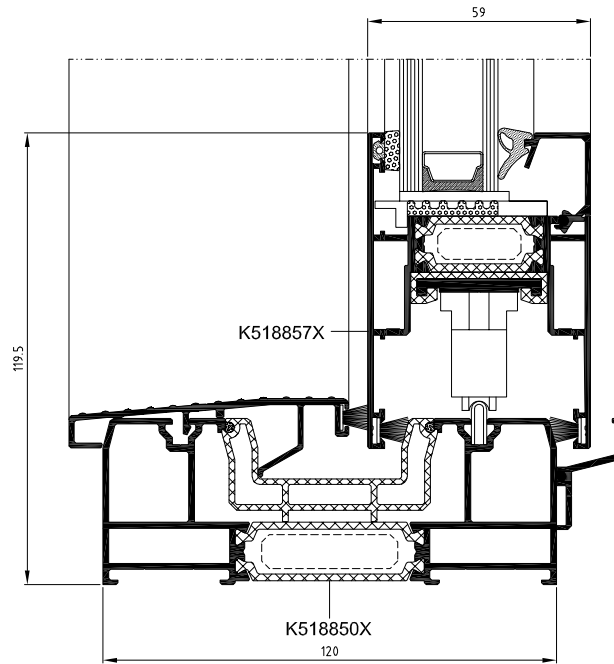
TECHNICAL SPECIFICATION	MB-59 SLIDE / MB-59 SLIDE HI
Frame depth	120 mm (2-rail profile), 199 mm (3-rail profile)
Leaf depth	59 mm
Glazing thickness	10,5 mm – 42 mm
MINIMAL PROFILE WIDTH, AS SEEN FROM THE OUTSIDE	
Frame	44 mm
Leaf	83,5 mm

PERFORMANCE	MB-59 SLIDE / MB-59 SLIDE HI
Air Permeability	class 3, EN 12207:2001
Watertightness	class 6A, EN 12208:2001
Windload resistance	class C3, EN 12210:2001
Thermal insulation	U _f from 1,9 W/(m ² K)

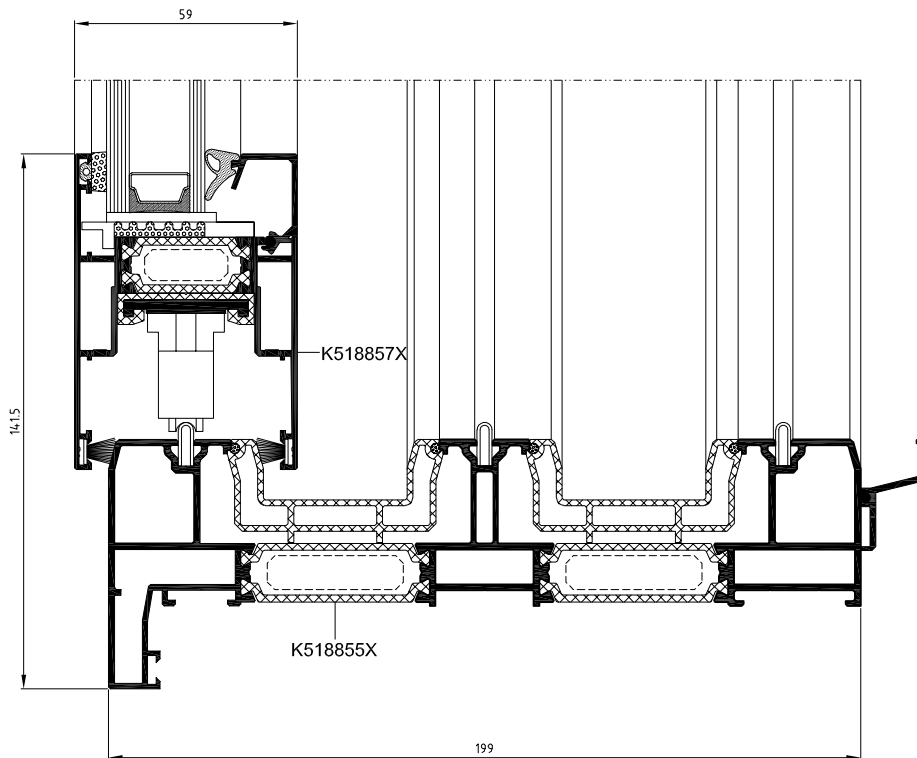
Slide doors types



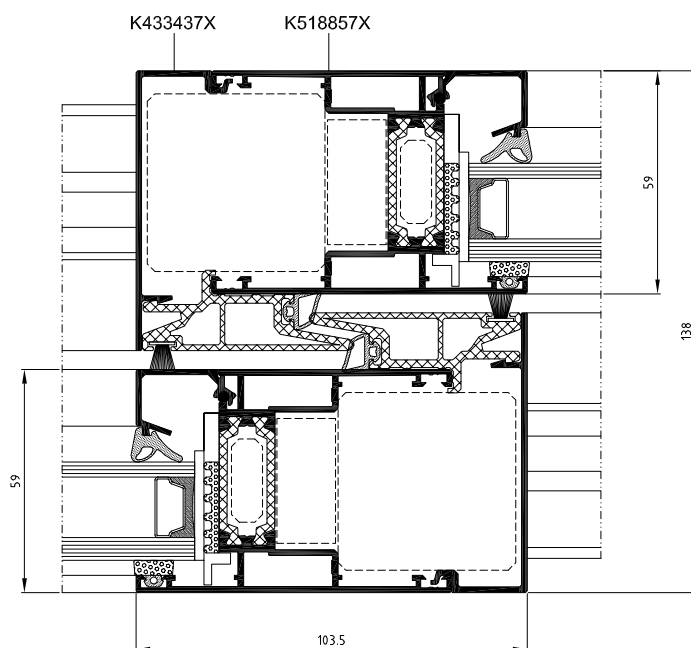
Door – bottom cross-section



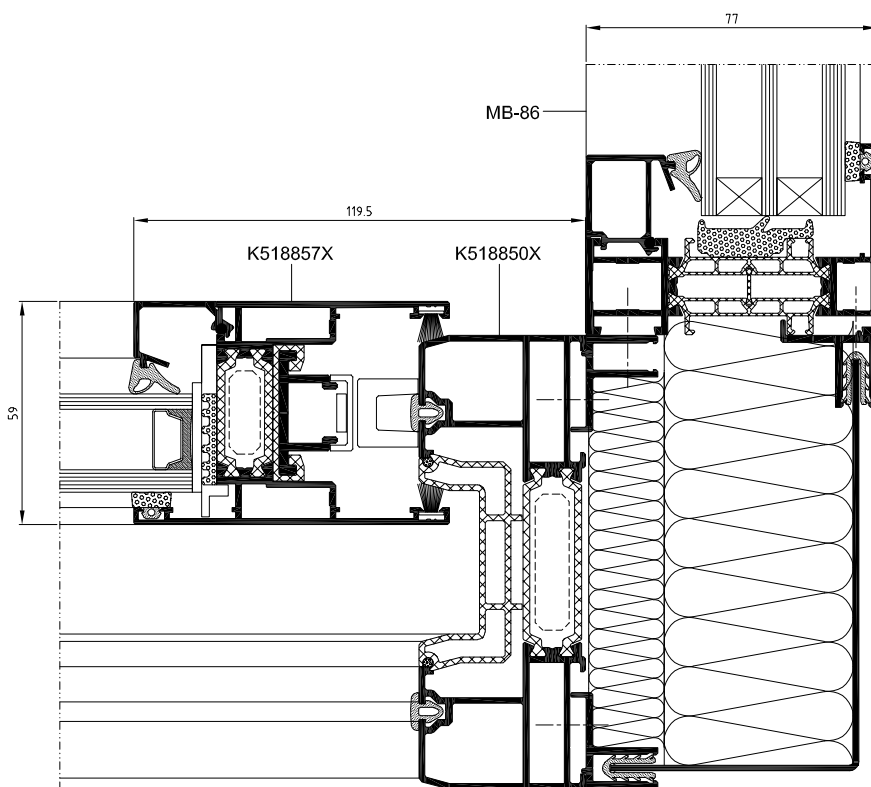
Door with 3-rail frame, cross-section

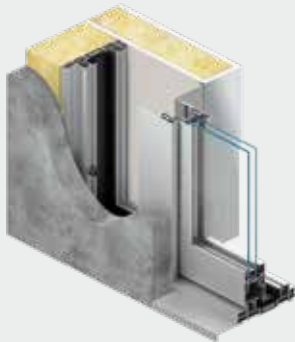


Horizontal section of jambs of door



Cross - section of 90° mullion





MB-59 Slide Galandage is based on the MB-59 Slide system solutions and has been designed for producing thermally insulated sliding doors that slide straight into the wall (once open, the door leaf is hidden in the wall). Installed that way, the door fully connects indoor and outdoor living spaces. MB-59 Slide Galandage's system profiles come in two options that offer different thermal insulation performances: ST and HI. The range of available profiles include 2- and 3-rail frames. Many glazing options allow for double and triple glazing units, including safety and sound insulation glass.

SLIDING FRENCH DOORS

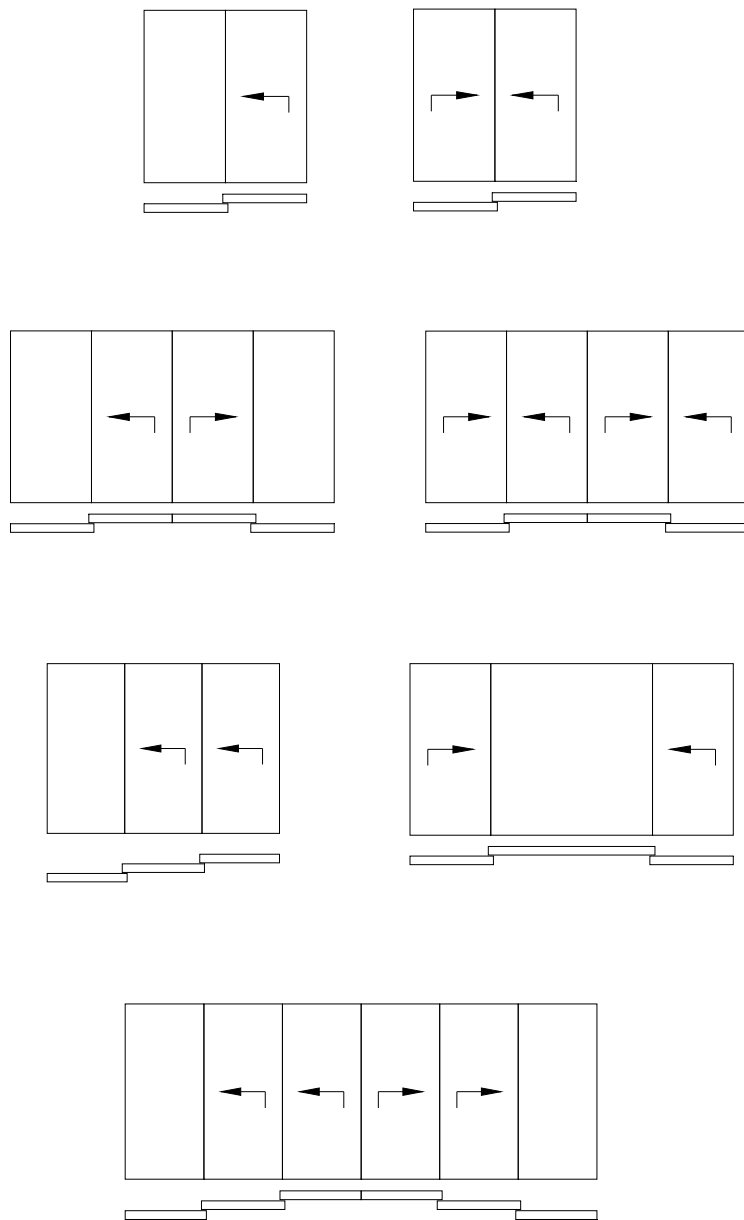
Features and benefits:

- door leaf hidden in the wall gives full access to the open space of the terrace or garden,
- large size of door leaves: up to 2.6 m high, up to 1.8 m wide and up to 160 kg in weight
- slender and robust 3-chambered profiles with a thermally broken central chamber,
- 2-or 3-rail frames to produce doors with wide clear passage size
- large glazing options (up to 42 mm) to bring flexibility in choosing the appropriate glass
- can use most of the sliding hardware available on the market

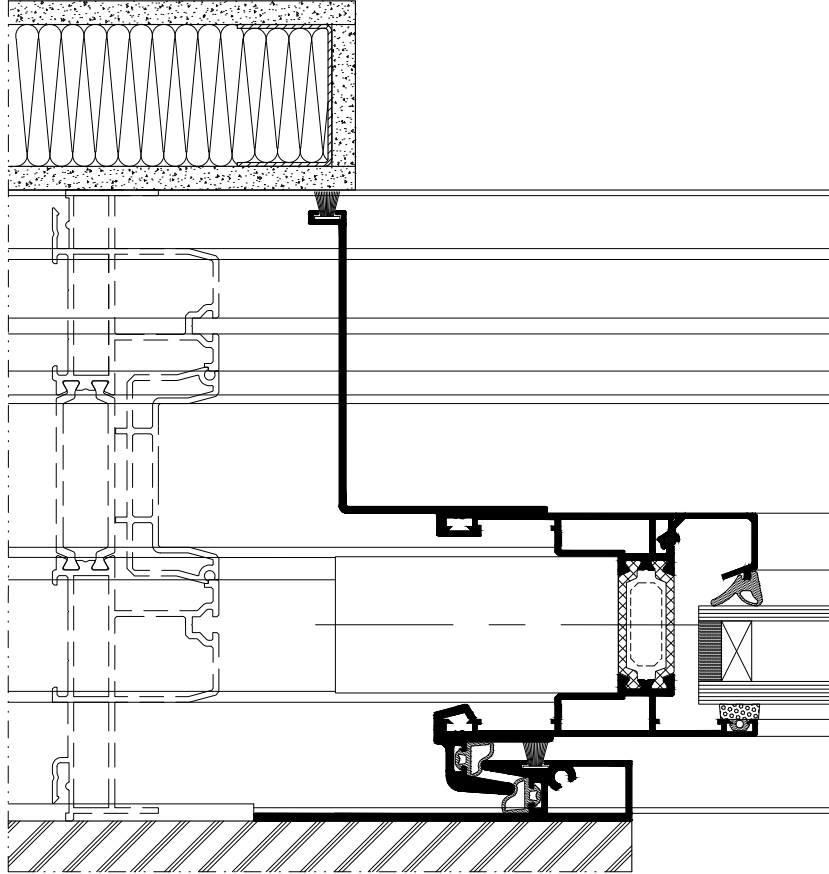


TECHNICAL SPECIFICATION	MB-59 SLIDE GALANDAGE / MB-59 SLIDE GALANDAGE HI
Frame depth	120 mm (2-rail profile), 199 mm (3-rail profile)
Leaf depth	59 mm
Glazing thickness	10,5 mm – 42 mm
MINIMAL PROFILE WIDTH, AS SEEN FROM THE OUTSIDE	
Frame	44 mm
Leaf	83,5 mm
PERFORMANCE	MB-59 SLIDE GALANDAGE / MB-59 SLIDE GALANDAGE HI
Air Permeability	class 3, EN 12207:2001
Watertightness	class 5A, EN 12208:2001
Windload resistance	class C2 / B2, EN 12210:2001
Thermal insulation	U _f from 1,9 W/(m ² K)

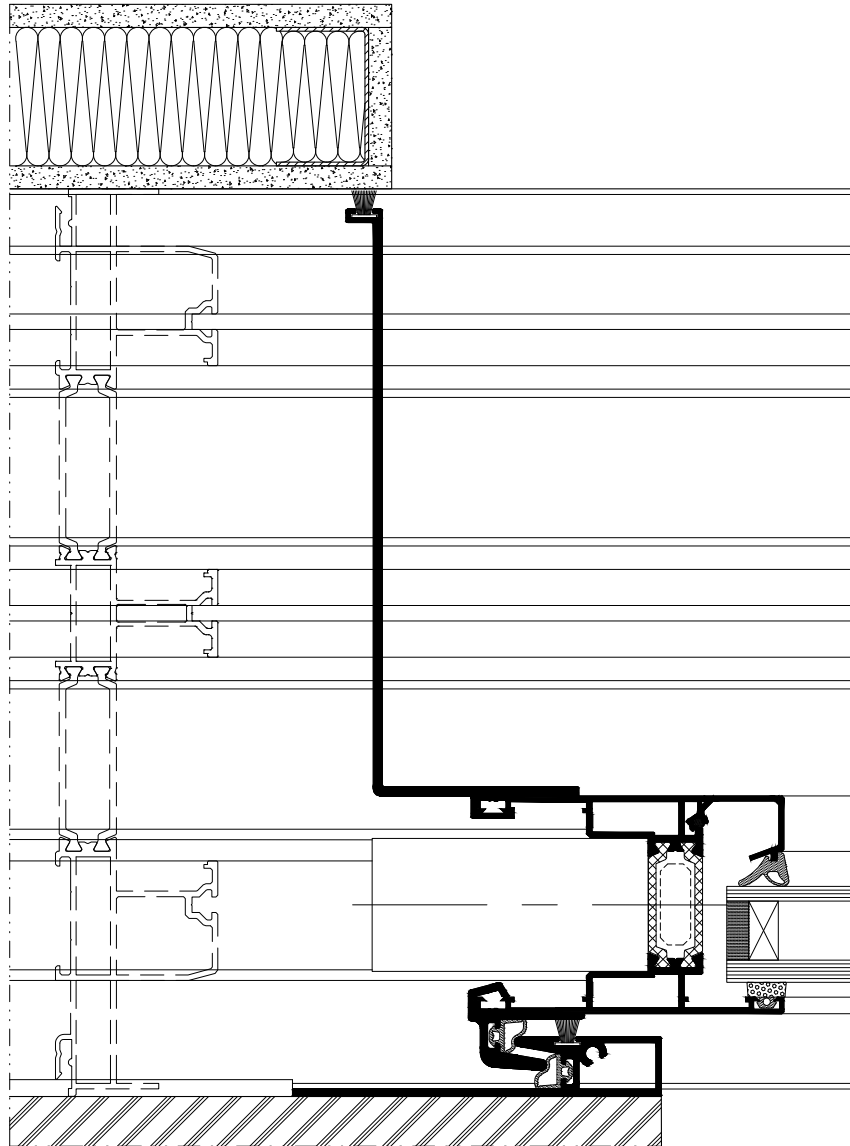
Slide doors types



Sliding French doors
with 2-rail frame - cross - section



Sliding French doors
with 3-rail frame - cross - section





The MB-78 EI system is used to construct exterior and interior fire rated partition walls with single and double-leaf doors featuring fire resistance class of EI30, EI60 or EI90 according to EN 13501-2:2005. The construction of the MB-78 EI system is based on aluminium profiles with a thermal break. The constructional depth of the profiles is 78 mm. The profiles are characterised by a low overall heat-transfer coefficient U_f due to the use of, among other things, special profiled thermal breaks 34 mm wide. The system allows glazing with any standard fireproof glass pane of the appropriate class (infill thickness between 8 and 65,5 mm). Within his system it is also possible to built smoke-proof constructions, which come in several options. Bending profiles and building arch constructions is also possible.

FIRE RATED DOORS AND WALL PARTITIONS

Wide range of applications

The **MB-78EI** system has been developed for the producing of internal or external fire rated partition walls, with single- or double-leaf doors.

Optimally selected profile shape

The system profiles have a three-chamber structure. The constructional depth of profiles is 78 mm. The door leaf and frame surfaces are flush with the wall both outside and inside. The shape of profiles makes it possible to built slender and durable window and wall constructions.

High fire resistance and smoke tightness

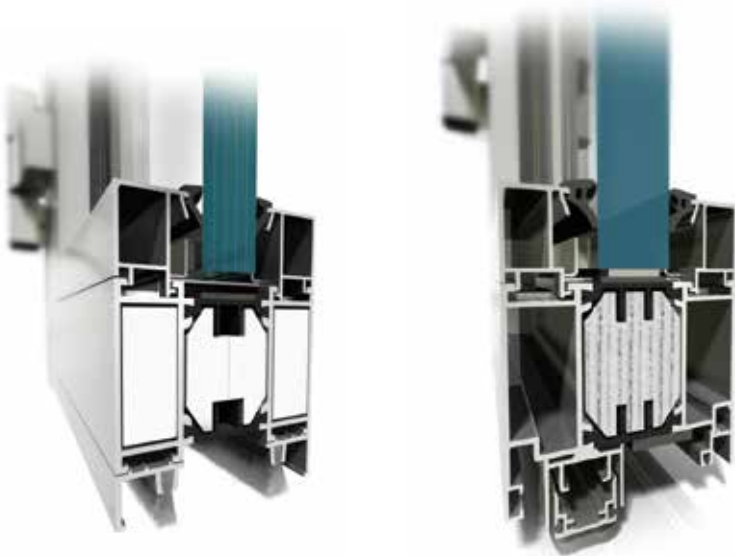
Depending on the construction variant and the type of panes (infills) installed, the fire resistance of the MB-78EI system can be **EI30**, **EI60** or **EI90**. According to this classification, fire resistance relates to fire insulation and tightness. It is obtained, inter alia, by insertion of profiles into internal chambers and fire resistance components into the spaces between these profiles. The system also features high smoke tightness classifications according to EN13501-2:2010 – classes **S200** and **Sa**. The system is classified as non-fire propagating (NRO).



Good thermal and sound performance

The MB-78EI system is characterised by a low overall heat-transfer coefficient U due to the application of special thermal breaks and gaskets. The value of overall heat transfer coefficient U_f starts from 1,60 W/(m²K). Omega-shape profiled thermal breaks 34 mm wide are used in the system. Such shape of breaks improves profile rigidity in relation to

flat breaks and facilitates water removal from sections, thus ensuring proper thermal insulation under any weather conditions. A thermally insulated sill and EPDM gaskets ensure good thermal insulation of door leaves and water and air tightness. The system also ensures good sound insulation. The value of the R_w index depends on the pane and type of door used.



Diversity of solutions

Versatility and attractiveness of the system is additionally enhanced by the possibility to select from several variants of solutions for different constructional details, e.g. bottom sealing of door leaves or the shape and height of doorsills.

Wide glazing range.

Freedom of hardware selection

The MB-78EI construction has been adapted to typical hardware, locks and hinges, following European standards. Sections are equipped with grooves of such dimensions as to enable fixing of multi-point locking hardware and connecting members, as per EURO standard. Thus, it is possible to meet the demands of our customers without changing the basic construction.

Flexible glazing

MB-78EI system can be glazed with package of thickness between 8 mm and 65,5 mm

- single glass units in accordance with EN 357:2005

- double or triple glazing units in accordance with EN 1279-1:2006 and EN 1279-5+A1:2009, with fire rated glass internally and safety glass externally
 - multi-layer panels made of two aluminium or steel sheets of relevant thickness and gyp-rock or Promatec insulation between with additional mineral wool layer of 70 kg/m³ minimum density if required.

Fire rated glass range

Tested and approved to be used with

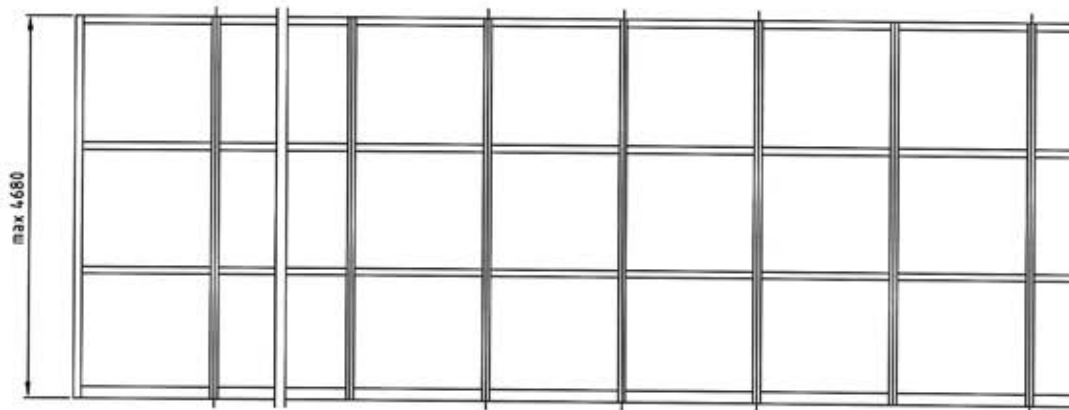
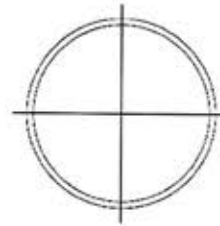
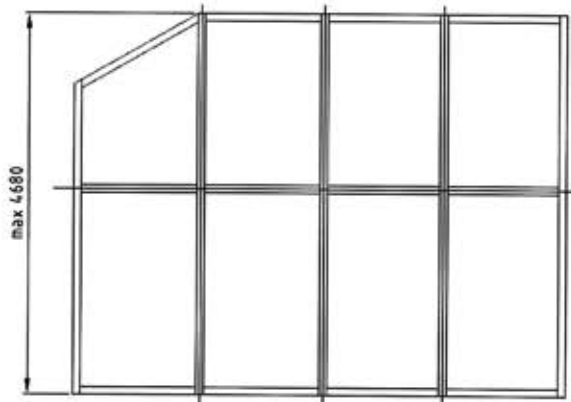
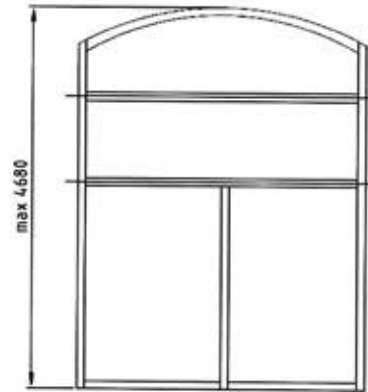
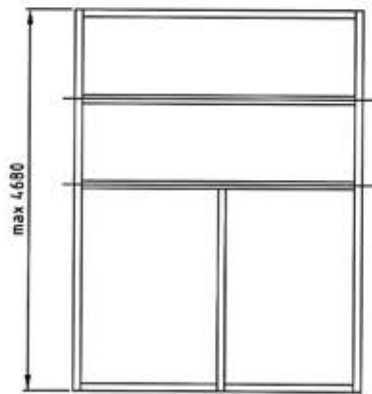
MB-78EI system includes:

- Contraflam 30 (16 mm)
- Contraflam 60 (25 mm)
- Pyrobel 16 (17,3 mm)
- Pyrobel 25 (25 mm)
- Promaglas 30/17 (17 mm)
- Bohflam EI30 (15 mm)
- Bohflam EI60 (26 mm)
- Polflam EI30 (20 mm)
- Polflam EI60 (25, 27 mm)
- Pyroguard T-EI30 (18 mm)
- Pyroguard T-EI60 (28 mm)
- Pyrostop (23 mm)
- Glassprof (15, 25, 35 mm)

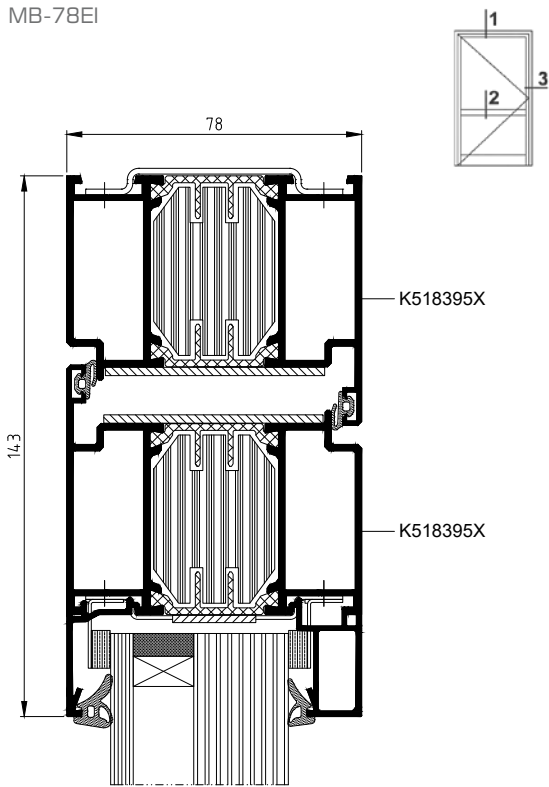
Performance:

- Air permeability:
class 2 EN 12207
- Water tightness:
class 5A, EN 12208
- Resistance to windload:
2400(Pa), EN 12179,
EN13116
- Acoustic insulation:
 $R_w = 41$ dB (subject
to the glazing package
being used)

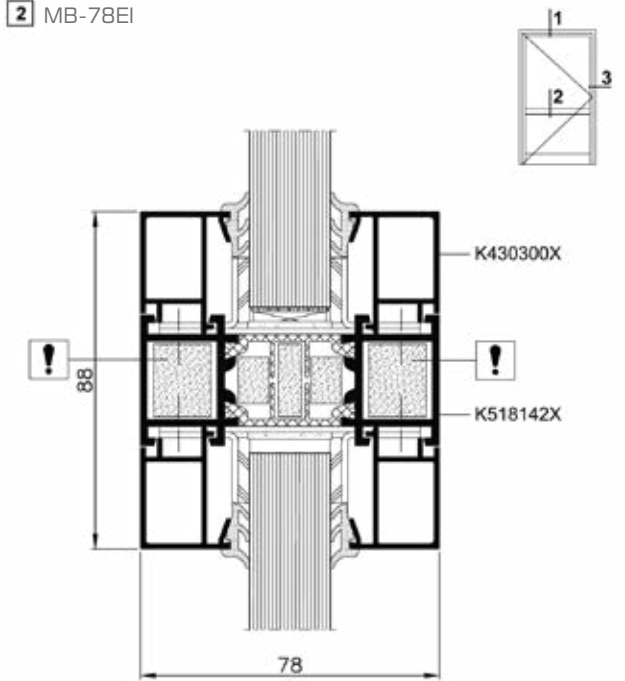
Maximum dimensions of wall segments.



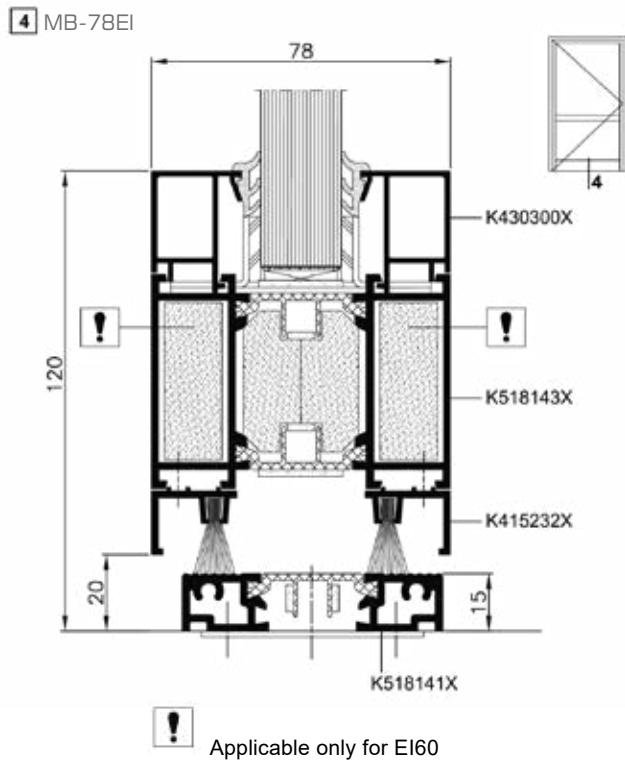
Single outward or inward opening door
- cross-section



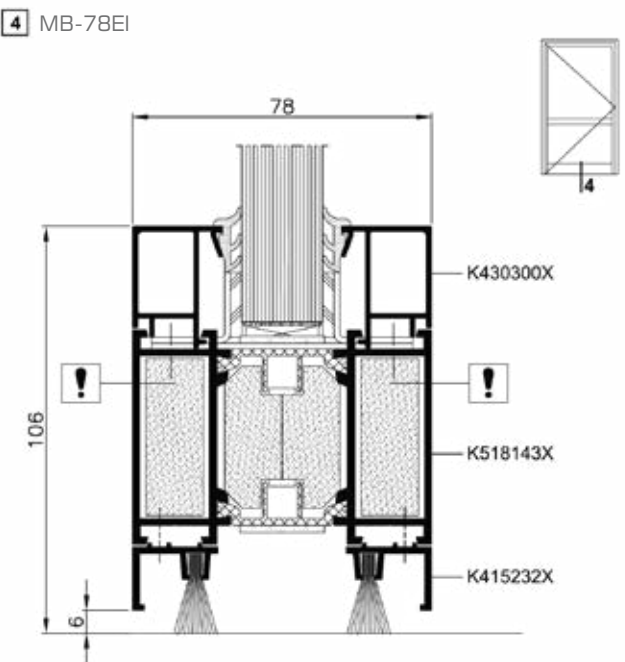
Single outward or inward opening door
- cross-section



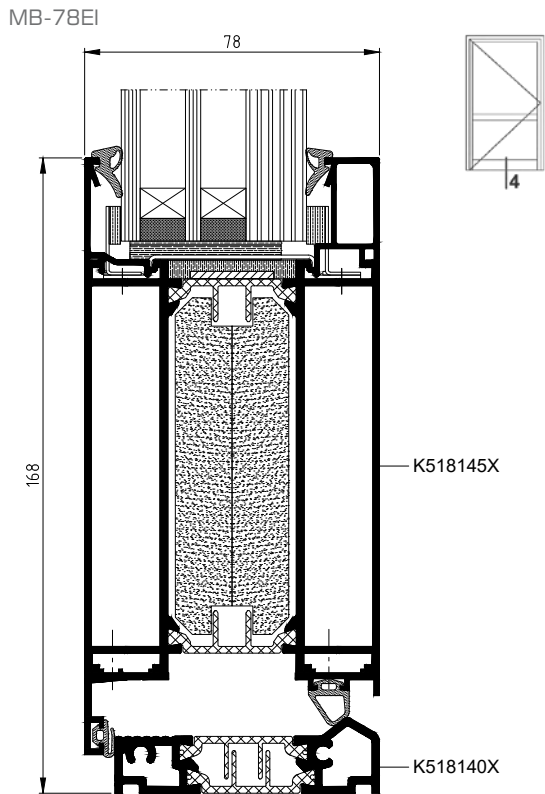
Single outward or inward opening door
- cross-section



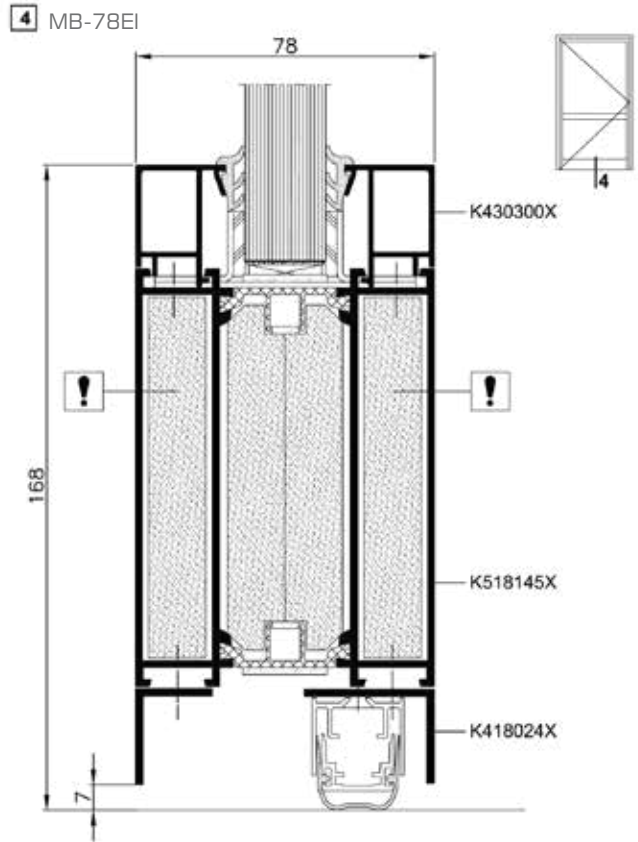
Single outward or inward opening door
- cross-section



Single outward or inward opening door
- cross-section

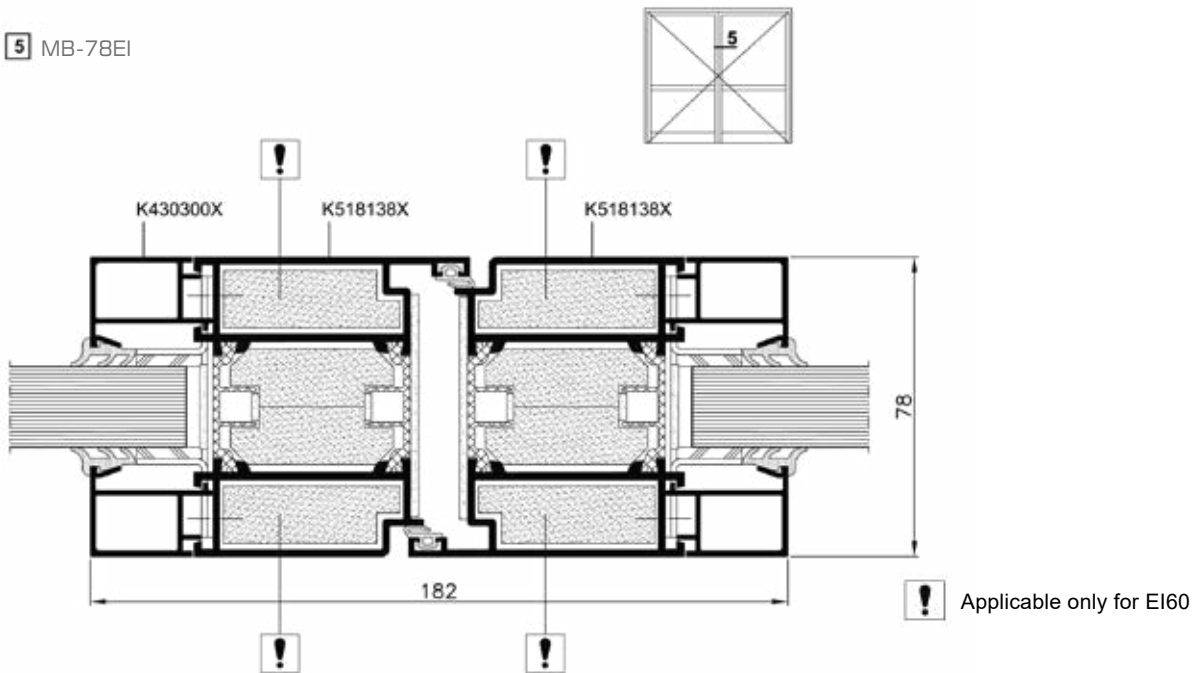


Single outward or opening door
- cross-section



Double door - cross-section

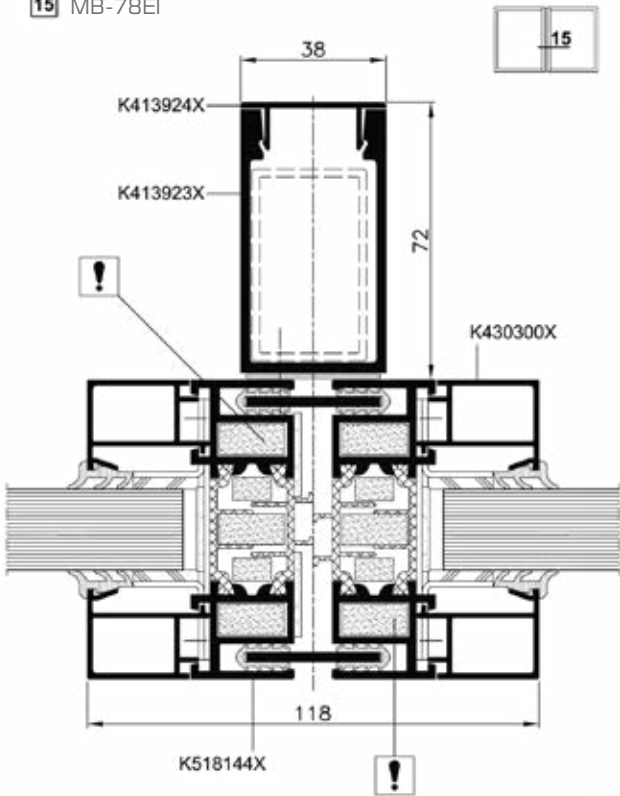
5 MB-78EI



Scale 1:2

Expansion - cross- section

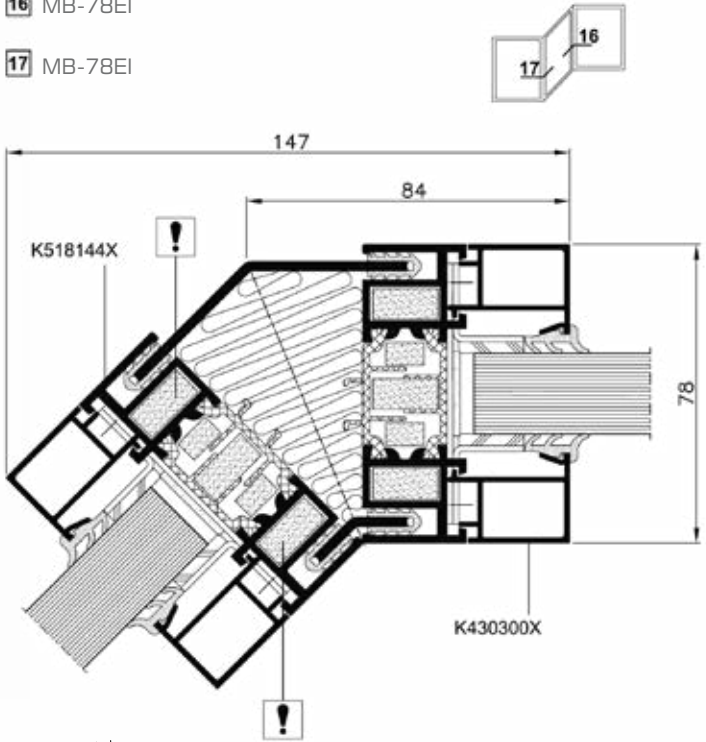
15 MB-78EI



Angular connection - cross- section

16 MB-78EI

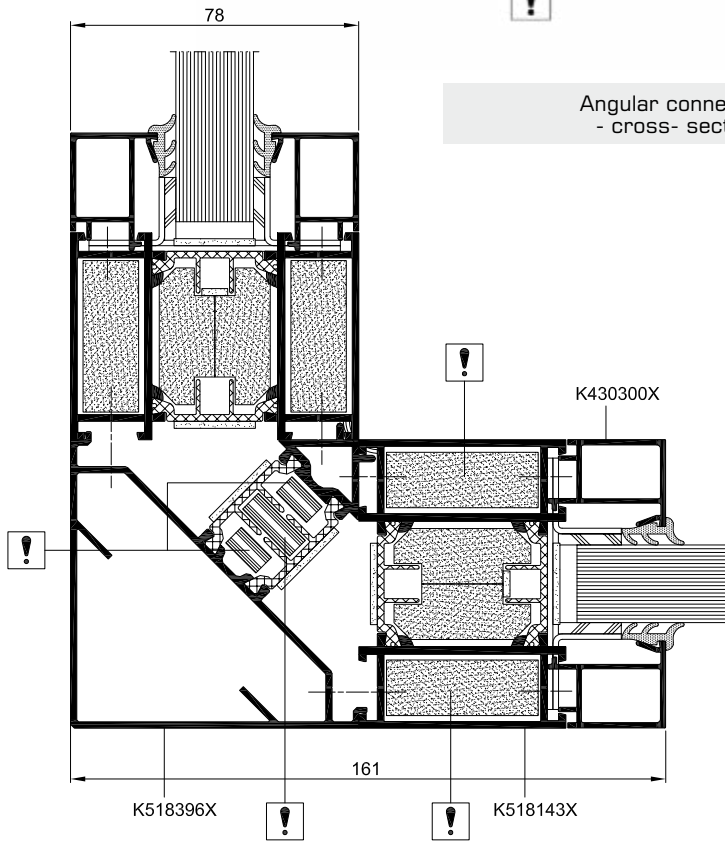
17 MB-78EI



Angular connection - cross- section

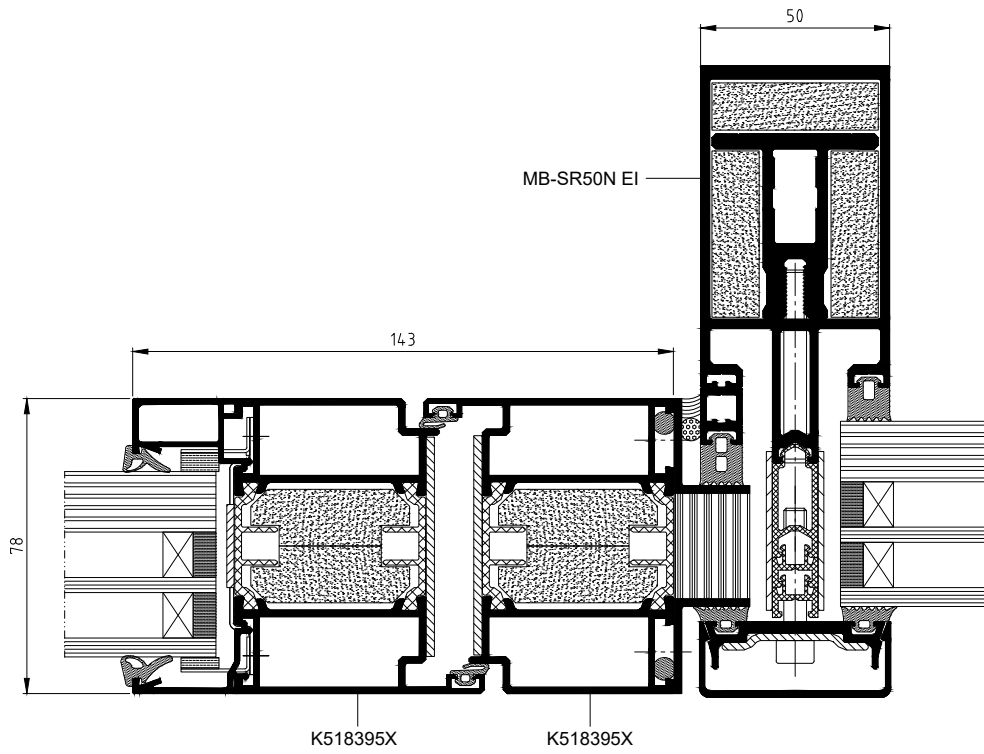
18 MB-78EI

19 MB-78EI



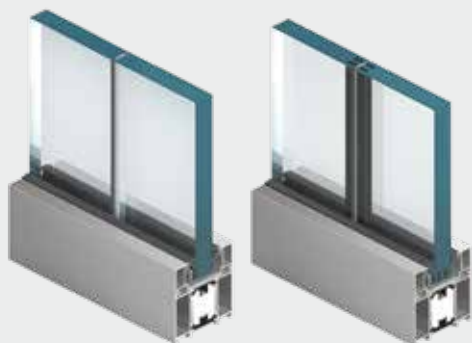
! Applicable only for EI60

MB-78EI fire rated doors in
MB-SR50N EI fire rated curtain wall



MB-78EI

FIRE RESISTANT CONSTRUCTIONS



Aluprof offers MB-78EI system-based transparent, fire-rated wall solution: silicone-jointed glazed walls. This enables fabrication of internal partitions without the visible vertical wall profiles that separate the individual modules of the wall, while preserving its full fire resistance in classes EI30 and EI60. The joint between the glass panes is only 4 mm and is filled with firestop, intumescent material and with non-inflammable silicone. The silicone is available in three colours (black, grey or white).

SILICONE-JOINTED GLAZED PARTITIONS

MB-78EI-based partition walls in their silicone-jointed variant can thus have a height of more than 3.6 m with modules' width up to 1.8 m. Fire tests performed by the Building Research Institute (ITB, Poland) on these partitions included the so-called "free-edge model", so there is no limit as to the maximum length of this type of walls.

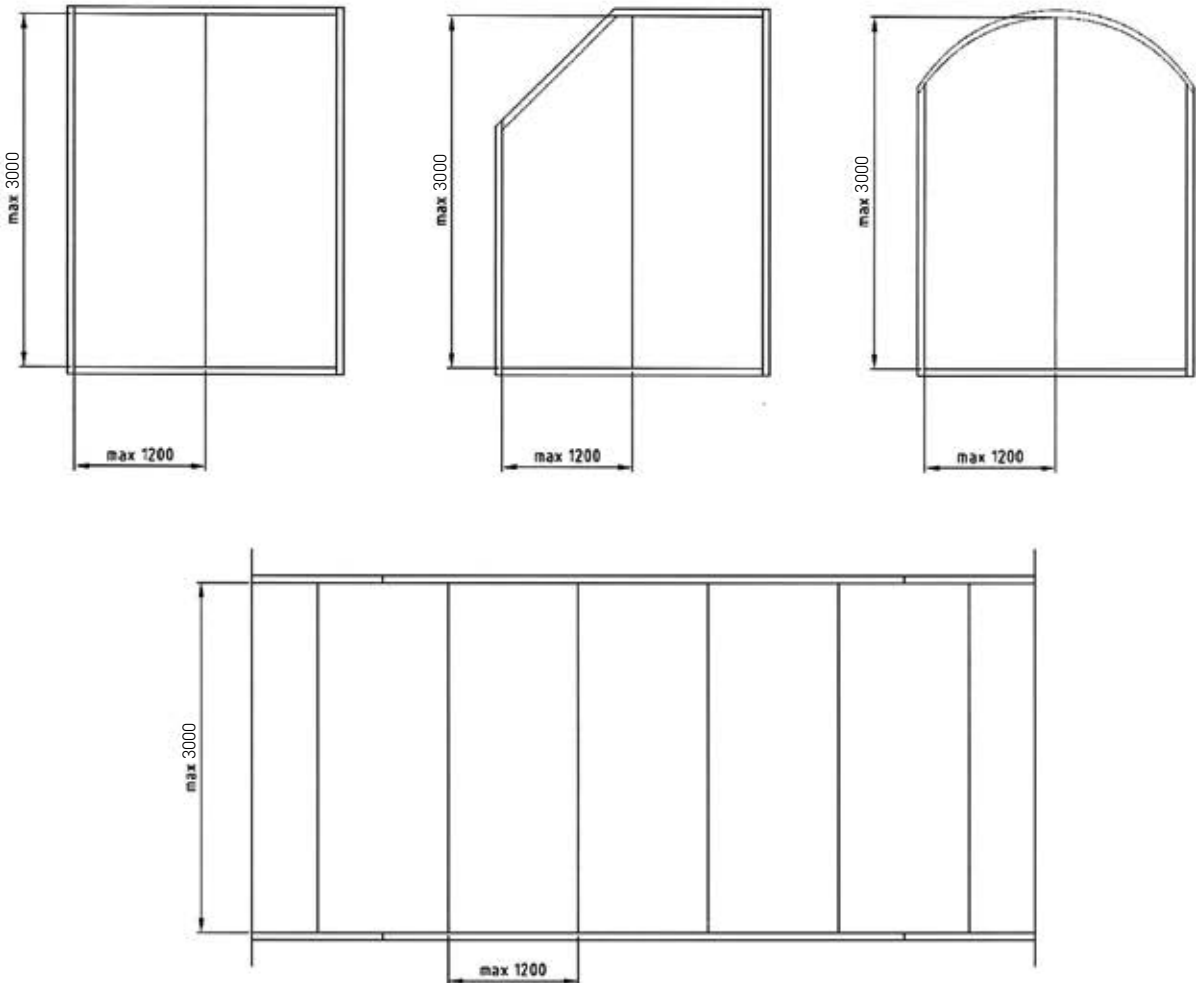
MB-78EI-based silicone-jointed glazed walls enable to freely design and build very large internal partition walls. With their transparent modules, the constructions made of this system make every room optically bigger. The system also provides security by allowing the arrangement of the building's fire zones, whilst ensuring appropriate conditions for the evacuation of building occupants.

Aluprof also offers a version with profiles fitted in the floor, walls and ceiling. Hidden wall mount enhances this optical effect while maintaining the full fire protection of the construction.

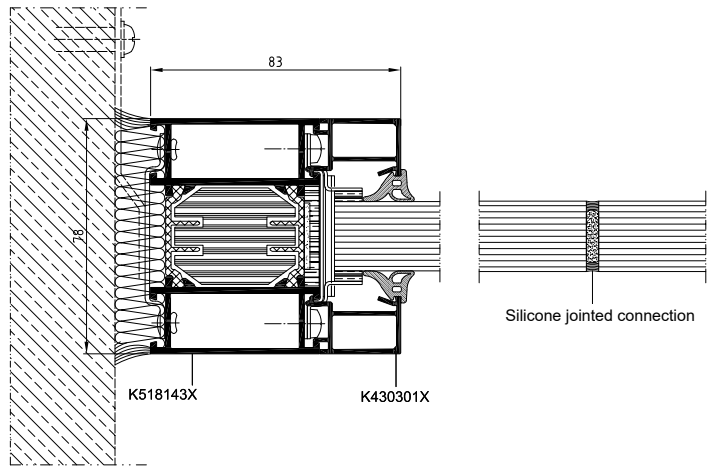




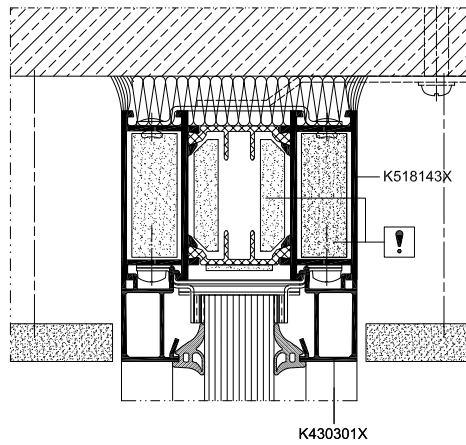
Examples, max. dimensions



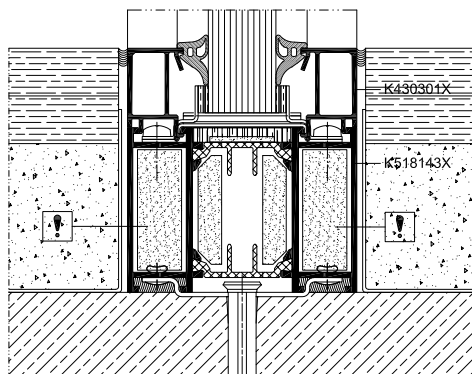
Silicone joined glazed wall MB-78EI, cross-section



Partition with a ceiling-integrated profile, cross-section



Partition with a floor-integrated profile, cross-section

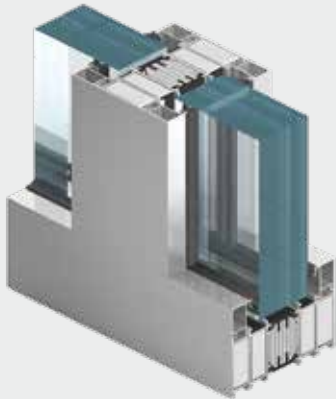


SYSTEM

MB-118EI



FIRE RESISTANT CONSTRUCTIONS



MB-118 EI is a system for external or internal fire rated wall partitions with a fireproofing classification of EI120. It is based on the MB-78EI system of fire partitions with doors, which provides here most of the components, including glazing beads, cooling inserts, expanding foam tapes, seals and most accessories. The system is classified as fire-retardant; it can be also used for smoke-tight structures.

FIRE RATED PARTITIONS

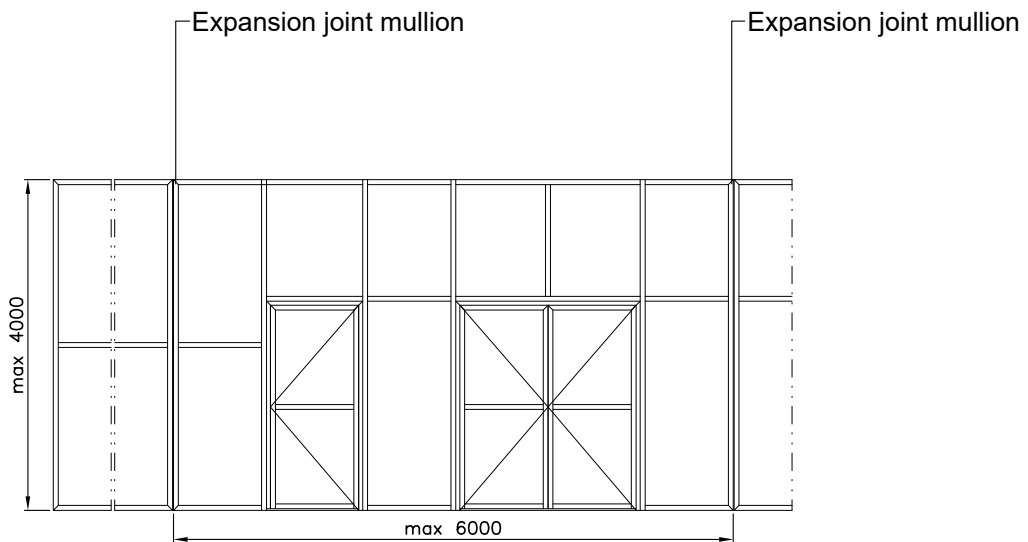
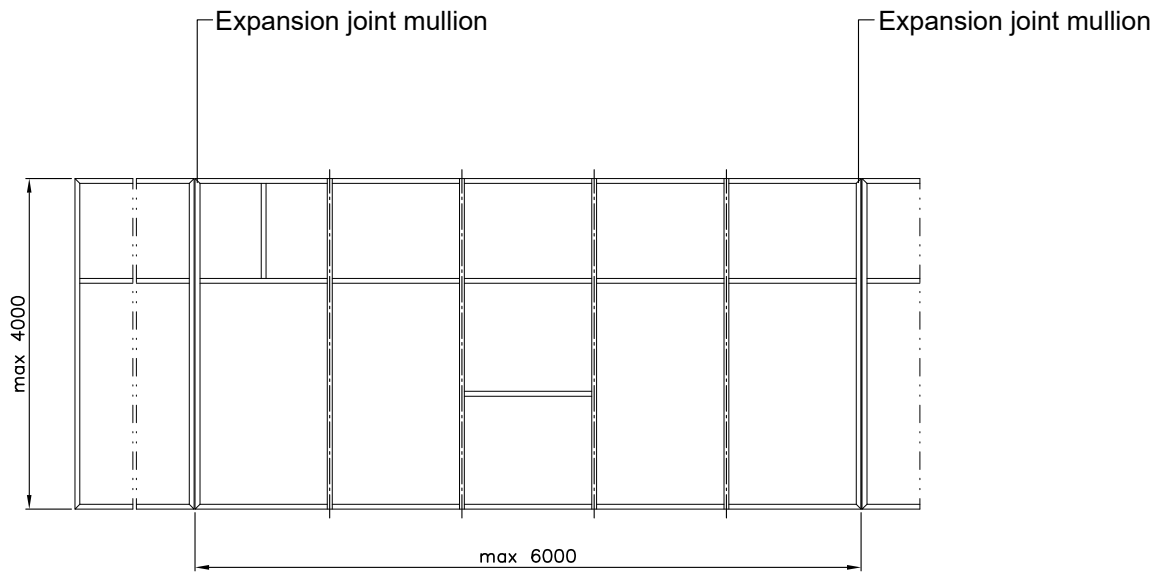
MB-118EI features:

- Design depth of profiles is 118 mm
- The system is based on five-chamber aluminum profiles with a 34 mm wide thermal spacers
- The internal chambers of the profiles and insulating spaces between the profiles include fire insulation elements. On the external surfaces, additional foam tapes are mounted, which expand under high temperatures
- The glazing range for MB-118EI partition walls covers a infill thickness of 31-84 mm. Depending on the function of the building, single fire-resistant panes or glazing units with fire-resistant glass can be used
- The fire-resistance of MB-118EI walls is classified EI120 for both external and internal fire
- It is possible to use decorative muntins
- Technical approval ITB AT-15-9186/2013
- The construction technology is the same as for the MB-78EI system

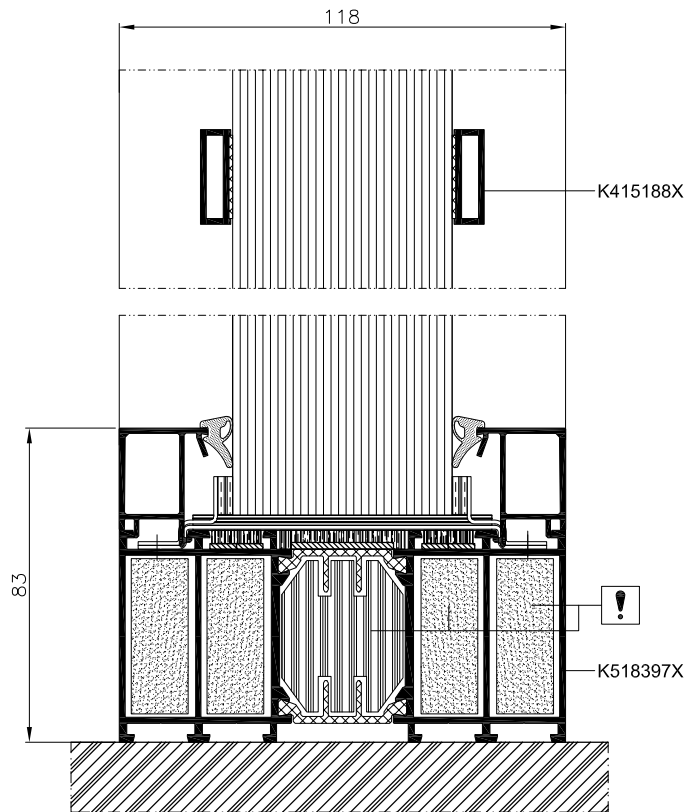


G2A Arena, Jasionka, Poland
design / A.P.P. DOM

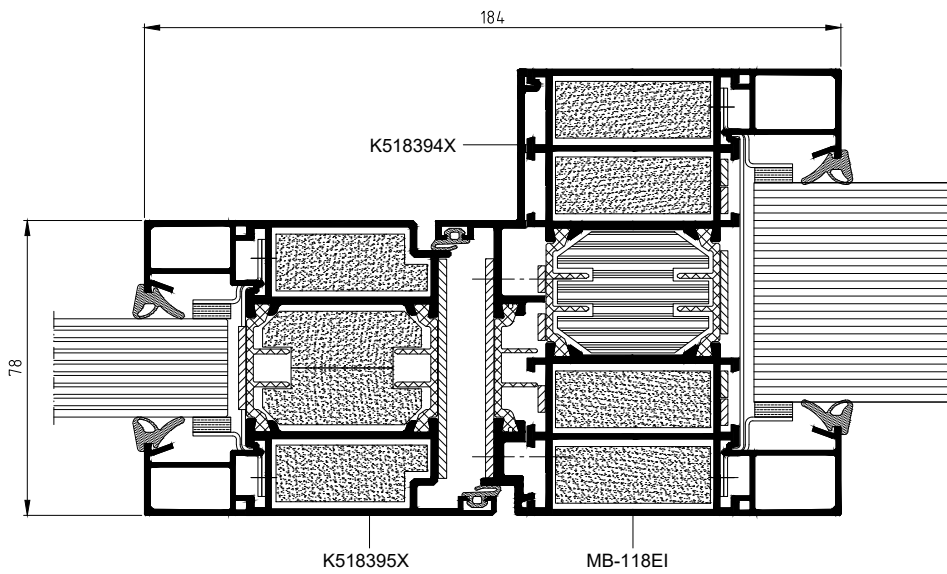
Maximum dimensions of wall segments.



Section through bottom rail



Section through the joint of MB-118EI screen with MB-78EI doors





MB-60E EI has been designed to fabricate internal or external single & double fire-rated door. It also enables the fabrication of "technical windows" and fire-resisting partitions. MB-60E EI-based constructions are classified EI15 or EI30 to EN 13501-2+A1:2010. The system is classified as non-fire spreading (NRO).

FIRE RATED DOORS AND WALL PARTITIONS

This solution is based on aluminium profiles with thermal break (system MB-60E) with the structural depth of profiles of 60 mm. The fire resistance of the construction is ensured by its fire insulation components that are mounted in internal chambers of its profiles. In addition, constructions are equipped with intumescent tapes, which stop the fire from spreading.

The system enables the use of all typical fire-resistant glass panes classified EI15 and EI30. Unlike other fire-resisting systems, MB-60 E EI glass is fastened on the inner face using glazing strips. Special steel elements are an important element in securing the glass before falling out during the fire.

This solution, due to its design capabilities and compatibility with other MB-series systems is in many cases a very attractive proposition in this class of fire protection products.

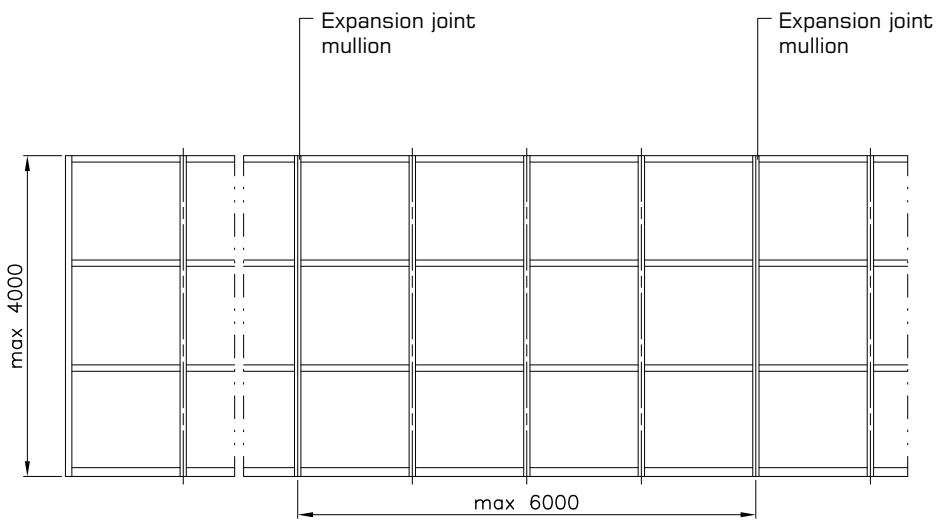
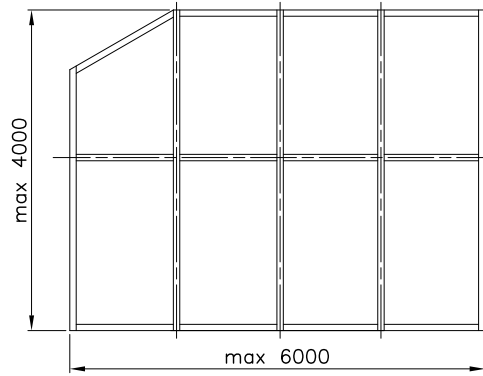
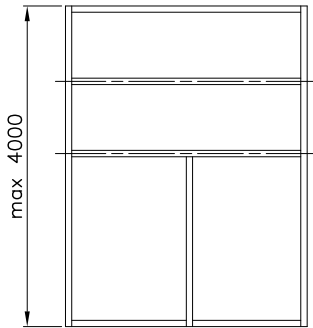
Performance:

- Air permeability: class 2, EN 12207
- Water tightness: class 3A, EN 12208
- Wind load resistance: class C5, EN 12210



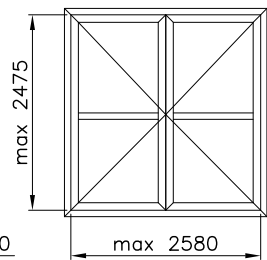
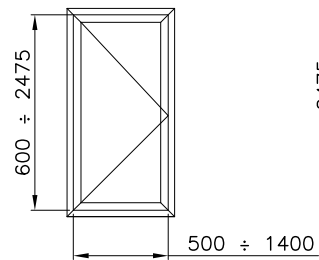
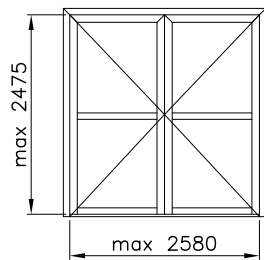
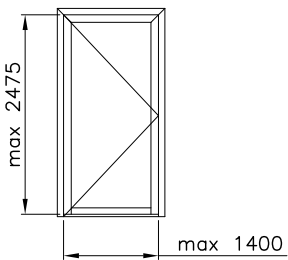
TECHNICAL SPECIFICATION	MB-60E EI
PROFILE SIZES, RANGE OF GLAZING	
Frame width	60 mm
Leaf width	60 mm
Glazing width	5 - 41 mm
MIN VISIBLE WIDTH T PROFILE	
Door frame	62,5 mm / 55 mm
Door leaf	67 mm / 76 mm
SIZE AND WEIGHT LIMITATIONS	
Max size of door leaf / wall area (H×W)	H up to 2475 mm, L up to 1400 mm
Max weight of door leaf / wall area	120 kg

Max. dimensions of the construction

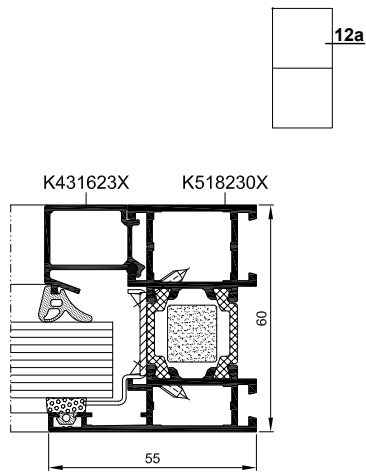


Doors

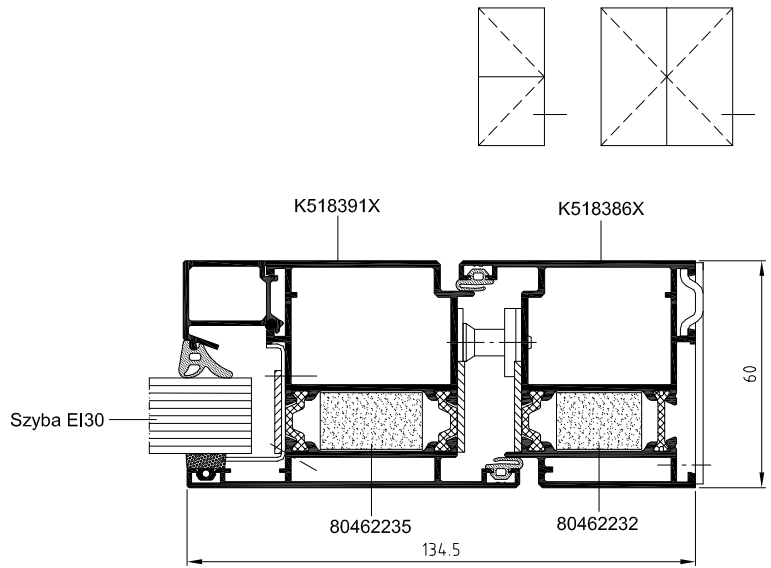
Technical window



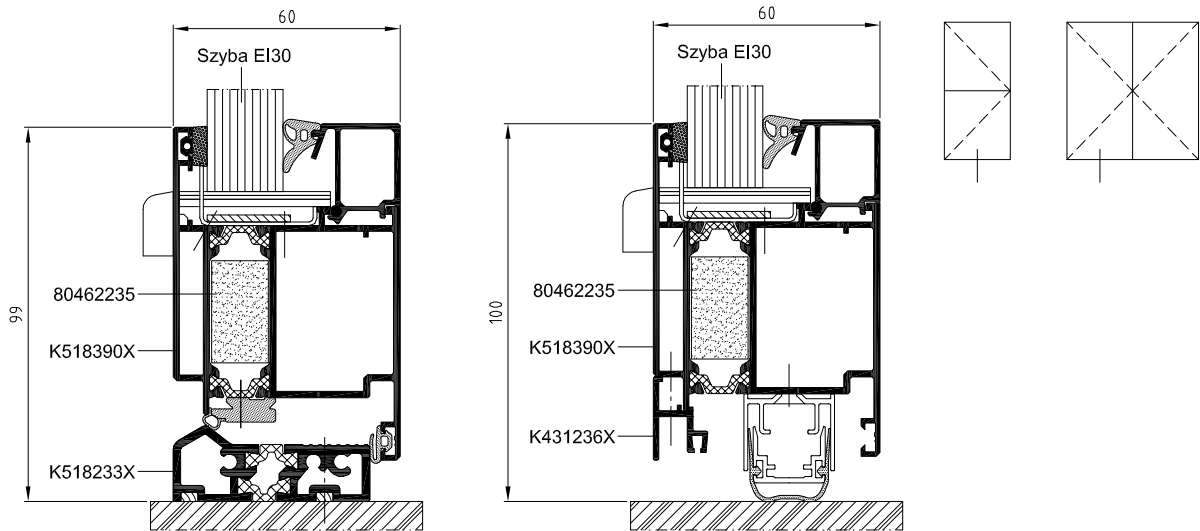
Fixed partition - cross-section



Door - cross-section



Horizontal sections of bottom rail for door





MB-86EI is used for fabrication of EI30 fire-rated openable windows and doors to EN 13501-2+A1. MB-86EI is based on MB-86 system, and has excellent thermal, sound reduction, water resistance and air leakage performances. The MB-86EI combines the advantages of a classic window system with the properties of a fire partition walling – the construction meets all the requirements of the applicable regulations and standards, especially regarding energy saving and environmental protection, while ensuring proper fire safety. The system is classified as non-fire spreading (NRO).

FIRE-RATED WINDOWS AND DOORS

System characteristics

Three-chambered profiles, with a 43 or 42 mm -wide insulation chamber between thermal breaks as a central part.

Fire resistance is ensured by the appropriately rated glass panes, fire insulation elements in the internal chambers of aluminium profiles and special accessories and materials used in the space between aluminium profiles and the glazing.

Wide range of glazing thickness allows for use of different types of insulated glass, including triple glazing units.

Hardware used in MB-86EI is typically RC2 burglar-resistant-rated.

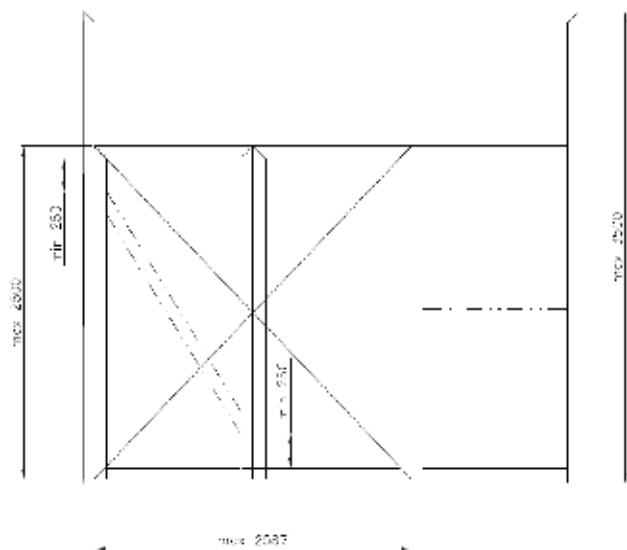
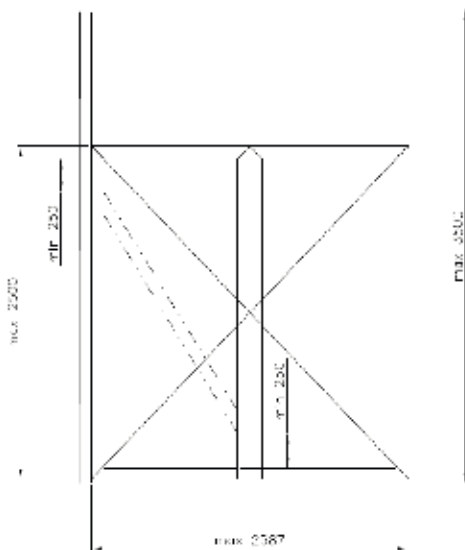
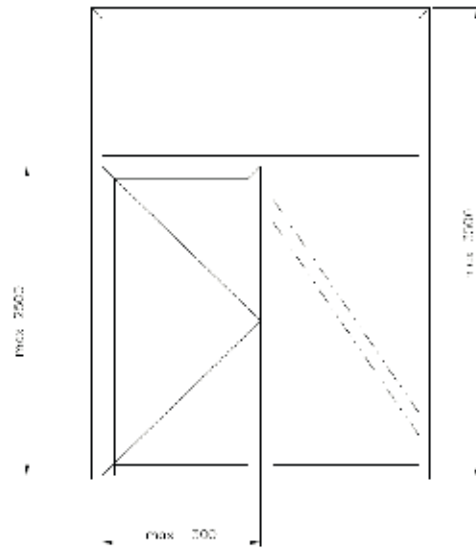
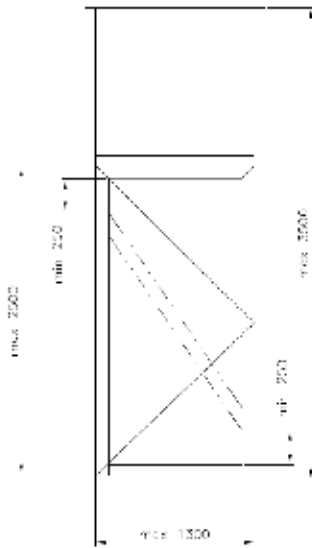
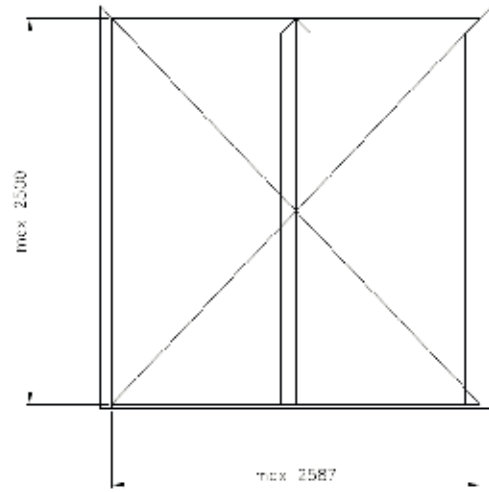
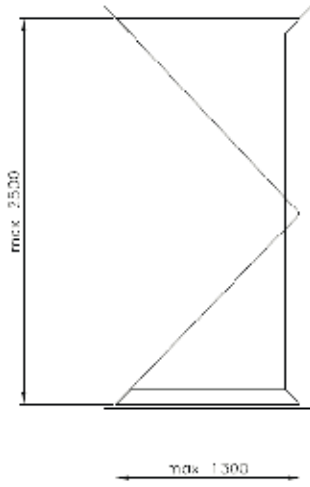


TECHNICAL SPECIFICATION	WINDOWS MB-86EI	DOOR MB-86EI
Frame depth	77 mm	77 mm
Casement depth	86 mm	77 mm
Glazing thickness	frame: 41 – 61 mm, casement: 41 – 70 mm	41 – 61 mm
MAX. SIZE OF THE CONSTRUCTION		
Max. casement size (H×W)	H to 2400 mm, W to 1600 mm	H to 3000 mm, W to 1300 mm

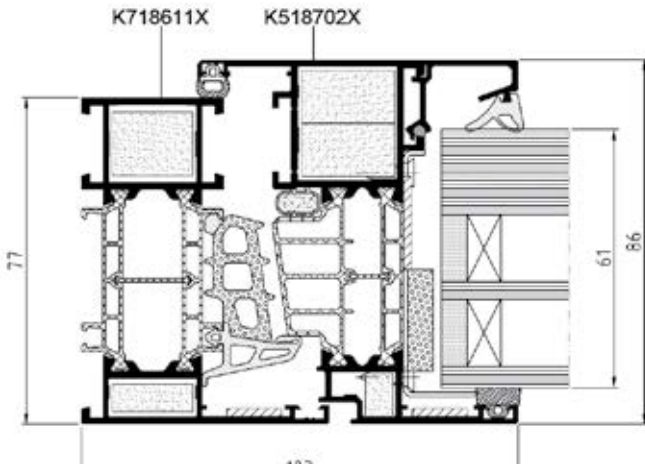
TECHNICAL PARAMETERS	WINDOWS MB-86EI	DOOR MB-86EI
Air Permeability	class 4, EN 12207	class 4, EN 12207
Watertightness	class E 1500, EN 12208	class E 1350, EN 12208
Windload resistance	class C5, EN 12210	class C5/B5, EN 12210
Thermal insulation	U_w up to 0.86 W/(m ² K)*	U_D up to 1.2 W/(m ² K)
Fire resistance	class EI15, EI30	class EI15, EI30

* - for a 2000 × 1100 mm window with triple glazing unit U_g 0,5 W/(m²K), warm spacer and EI30-rated fire-resisting glazing pane

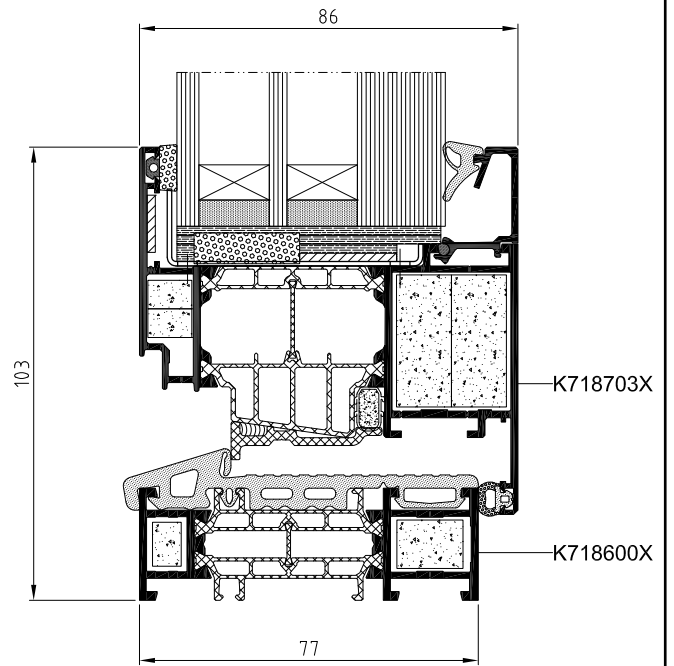
Max. dimensions of construction



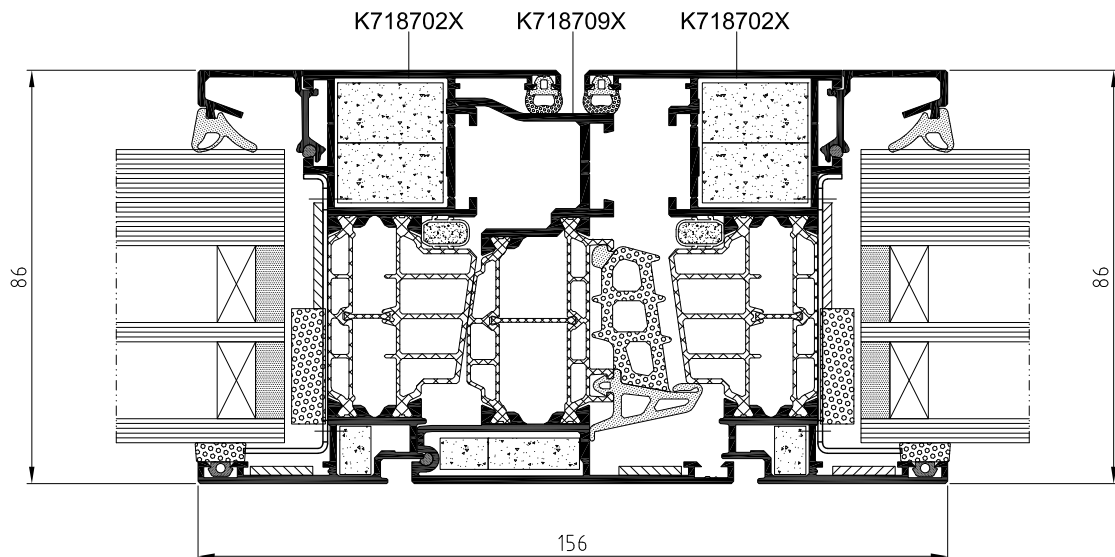
Window - cross-section



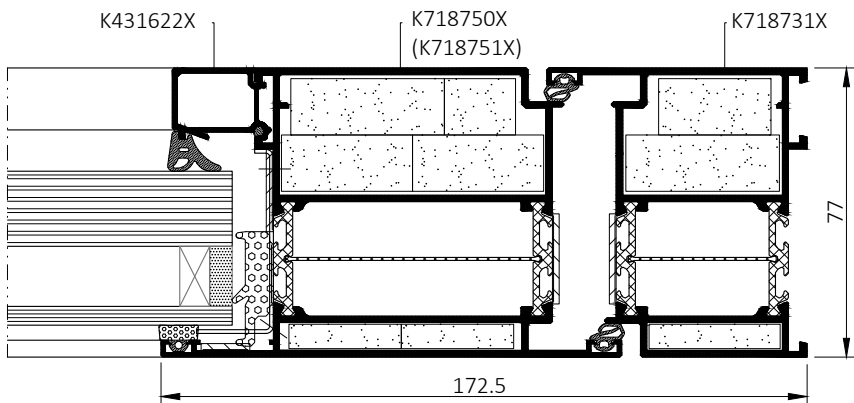
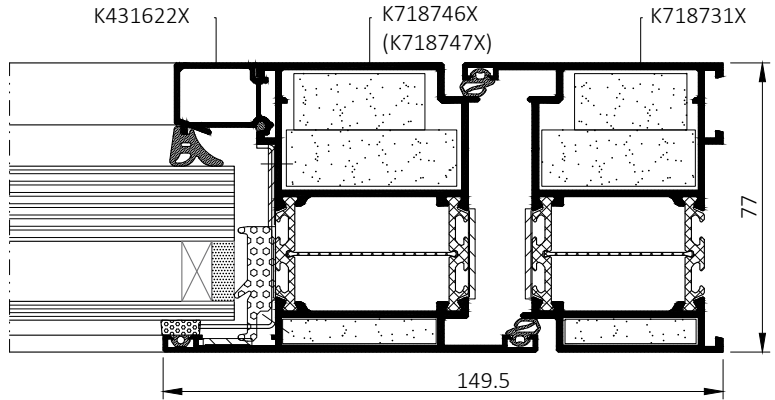
Balcony door with low-level threshold - cross-section



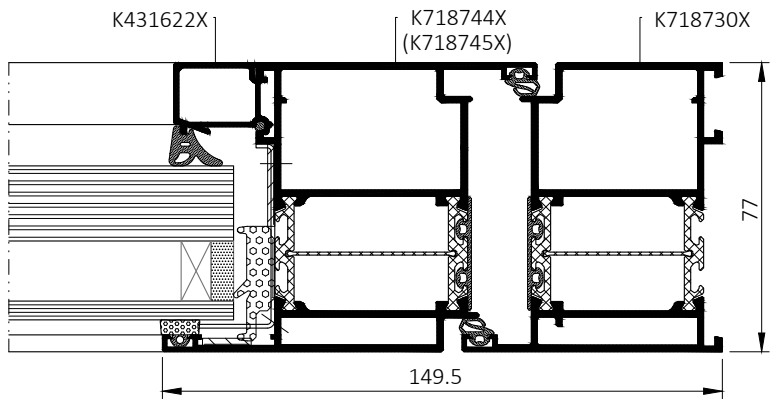
Double window with floating mullion - cross-section



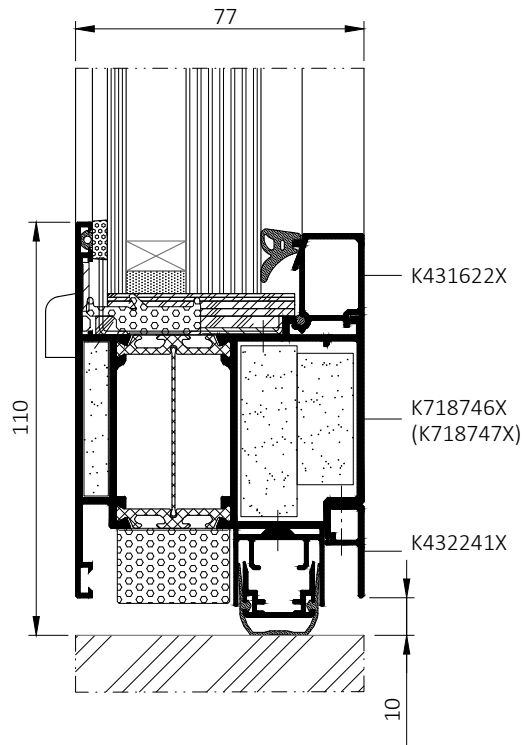
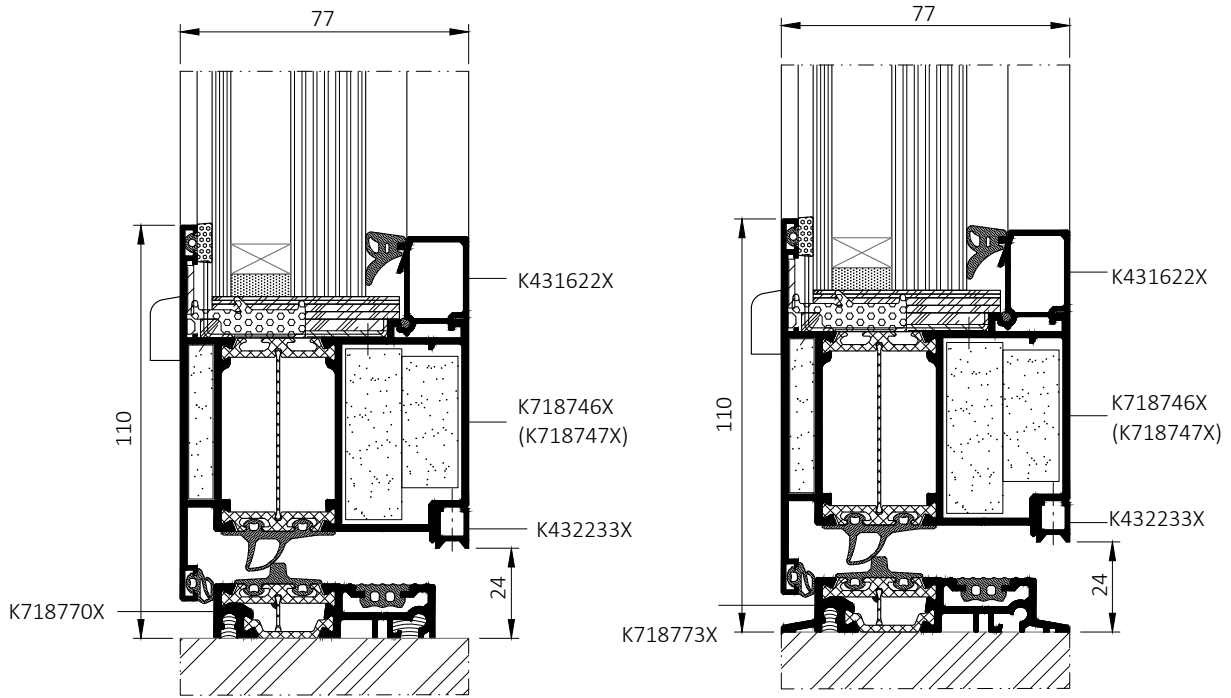
Door EI₁ - cross-sections



Door EI₂ - cross-sections

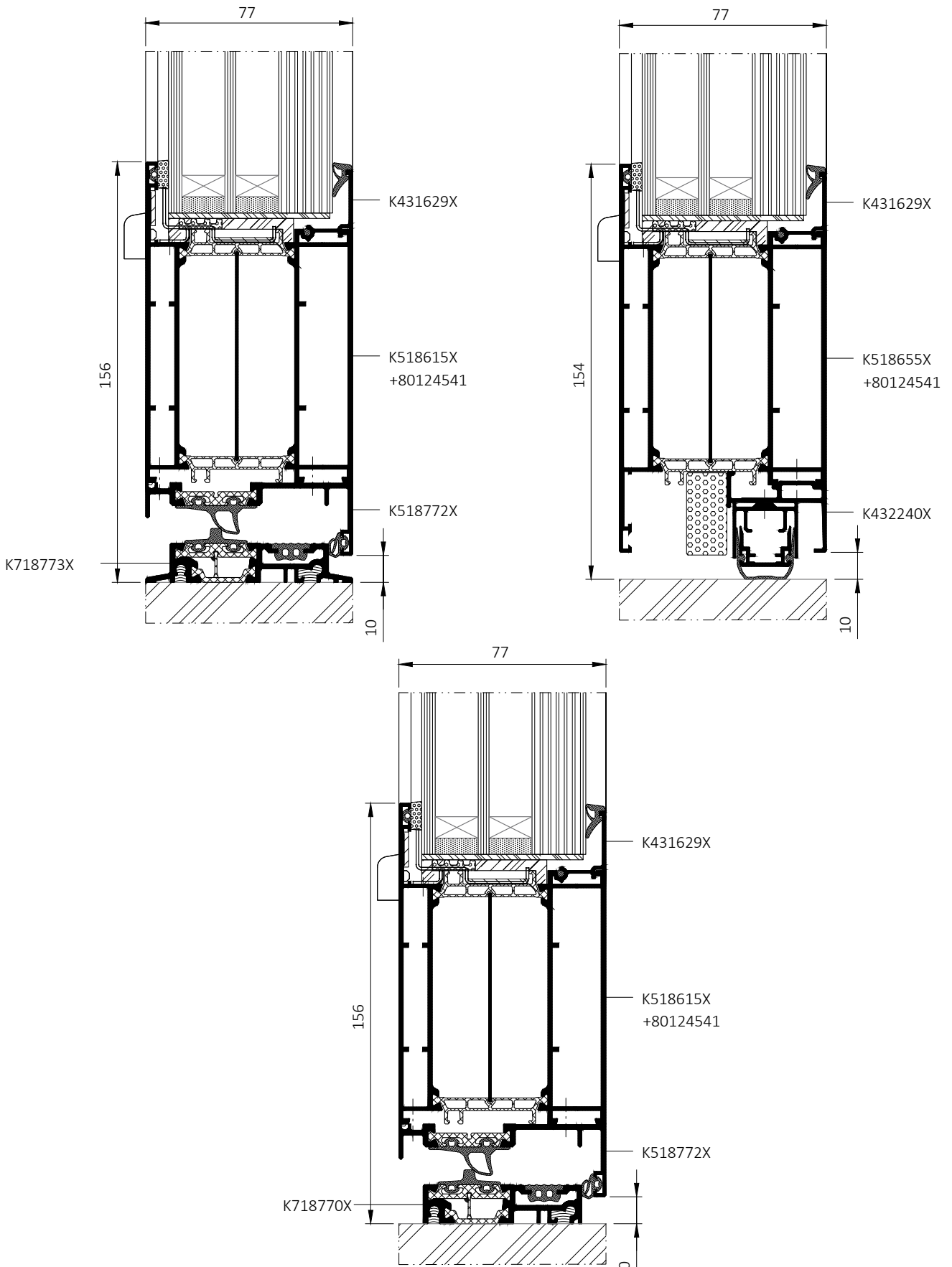


Door - cross-sections (class EI₂)



Scale 1:2

Door - cross-sections (class EI₁)

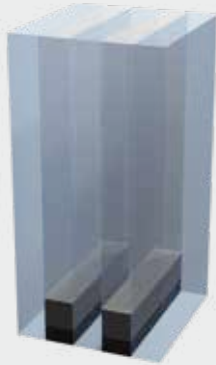


More examples on: www.architects.aluprof.eu

Scale 1:2

GLASSPROF EI

FIRE-RESISTANT GLASS

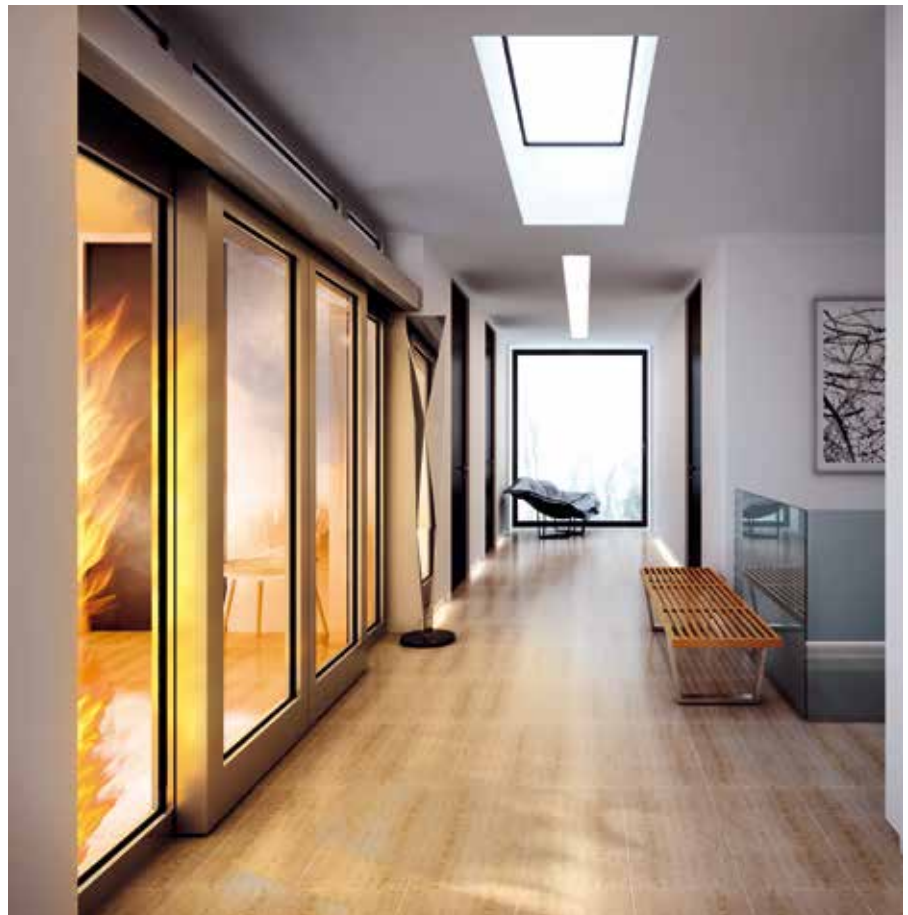


GLASSPROF's EI-rated glass, which is manufactured by GLASSPROF sp. z o.o., a subsidiary of ALUPROF SA., is designed for use in building structures such as windows, doors, partitions, façades and similar. The company's product range includes not only EI 30, EI 60 and EI 90 fire-rated glass, but also other types of glazing. The technology used at GLASSPROF enables us to produce insulating glass units featuring a range of glass functions, including fire resistance, thermal insulation, sun protection, sound reduction and security.

SAFETY GLASS

Our EI glass is layered in structure, made with sheets of 5-mm-thick, clear, tempered glass to ensure user safety and reduce the risk of breakage during transport, installation and use. The panes are separated by a layer of special fire-resistant gel. The overall thickness of glass constructed in this way ranges from 15 mm for EI 30 glass to 35 mm for EI 90 glass.

The fire rating determines the quantity of tempered glass and layers of gel. The gel used in GLASSPROF panes is resistant to radiation. As a result, it crystallises in the event of fire, forming a layer that provides fire insulation and safety. The fundamental advantages of GLASSPROF EI glazing are its high transparency, low weight and UV resistance.



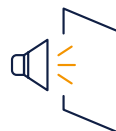
Fire proof



Tempered glass



Lightweight



Reduces noise



Impact resistant



Transmits light



Large dimensions



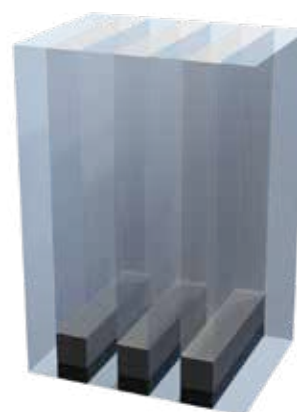
High temperature range



EI 30



EI 60



EI 90

Functions and aesthetics of GLASSPROF fire-resistant glass:

- The glass is neutral in colour, with a transparency level as high as 87%.
- The radiation resistance has been confirmed by independent testing (EN 12543-4). There is no need to use external laminated glass to protect the fire-rated glass in insulating units from UV radiation.
- It is classified as safety class 1B1, the highest as per the EN 12600 standard.
- The high level of sound insulation reduces noise by 93% and more.
- Lightweight, at 32.5 kg/m² for GLASSPROF's EI30 glass.
- Large-scale glazing is possible.
- GLASSPROF glasses are composed of tempered panes featuring automatically arrised edges.
- No aluminium tape is needed on the edges of the glass for moisture protection.
- Cutting-edge, fully automatic production technology is used for the glass.
- The glass is also available in the form double and triple glazing units featuring a range of glass functions.



TECHNICAL SPECIFICATION	GLASSPROF EI30	GLASSPROF EI60	GLASSPROF EI90
FIRE RESISTANCE (EN 13501-2)	EI 30	EI 60	EI 90
Thickness	15 mm	25 mm	35 mm
Composition	5 / 5 / 5	5 / 5 / 5 / 5 / 5	5 / 5 / 5 / 5 / 5 / 5 / 5
Weight	32,5 kg/m ²	52,5 kg/m ²	72,5 kg/m ²
Temperature range for transport, storage and use	-10 / +45°C		
Visible light transmission Lt (EN 410)	87 %	84 %	82 %
Solar factor g (EN410)	74 %	69 %	66 %
U _g value (EN 673)	5,0 W/m ² K	4,5 W/m ² K	4,0 W/m ² K
Sound reduction R _w (C; C _{tr}) (EN ISO 10140-2, EN 717-1)	39 (-1; -2) dB	43 (-2; -2) dB	45 (-2; -3) dB
Radiation resistance (EN 12543-4)	2000 h		
Humidity resistance (EN 12543-4)	2 weeks / 100% relative humidity		
Pendulum impact class (EN 12600)	1B1		
Hazardous substances	none		



The MB-HARMONY is a single-glazed system which is part of the MB-HARMONY OFFICE glass partition series. Geometrically light and easy to assemble, it requires no special construction tools. It is designed to be combined with tempered glass or with 10-12 mm acoustic glass. The system is ideal for typical office spaces, even those with acoustic requirements above the norms. Our MB-HARMONY OFFICE is a new range of products for the construction of interior glass partitions. It was conceived to create an easily prefabricated and quickly installed system that delivers durable, contemporary and spacious designs with guaranteed performance and user comfort.

SPACIOUS DESIGN AND USER COMFORT

Important features

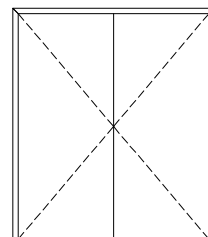
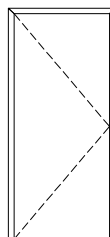
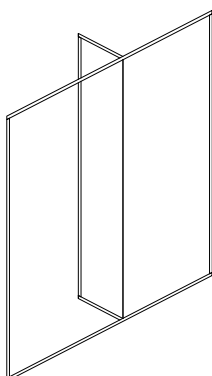
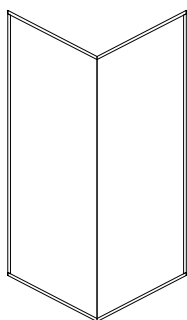
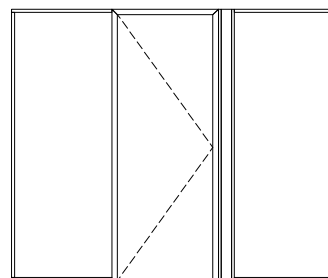
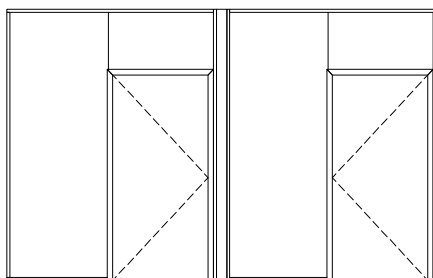
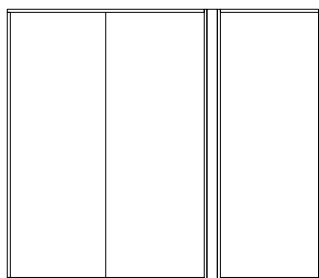
- the structurally light profiles are only 31 mm high
- the entire system consists of just a few basic elements
- the connectors and accessories have been reduced to a minimum
- the system is simple to prefabricate and to install, that can be done on site
- the unique installation panel is built using base profiles
- acrylic joints by walls are unnecessary
- hardware and accessories are mainly installed without machining, which has been limited to no more than a few instances
- the required machining can be carried out using portable tools
- the concealed glazing gaskets are inserted before the profiles are installed
- the stability and reliability of the structure has been confirmed by tests
- the universal frame is suitable for all types of doors



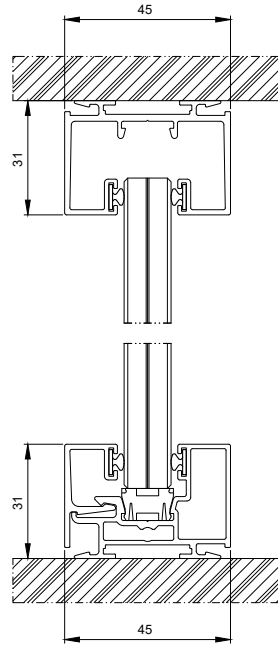
SPECIFICATIONS	MB-HARMONY
Glazing	ESG 10, ESG12, VSG 55.1, VSG 55.2, VSG 66.1, VSG 66.2 VSG 55.2 with acoustic foil, VSG 66.2 with acoustic foil
Acoustic insulation	R_w of 39 Db max. / RA_1 of 38 dB max.
Use category	IVb
Room category	A, B, C1÷C5, D
Height	3200 / 3600 mm*
Finishing	anodised, RAL colours, ADEC wood and concrete colours

* - for glass types ESG 12, VSG 66.1, VSG 66.2 and VSG 66.2 with acoustic film

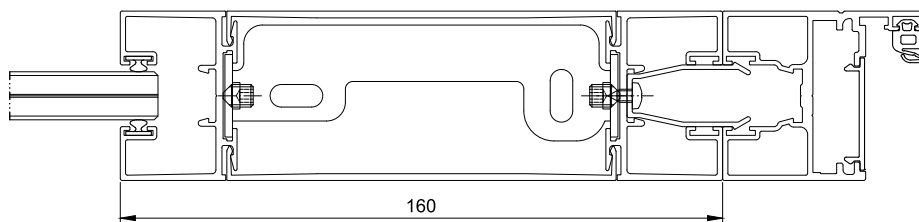
Example solutions



Internal partition, vertical cross-section

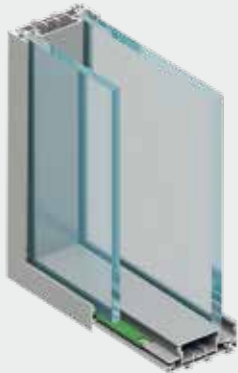


Horizontal cross-section through the mullion and door frame



MB-HARMONY DUO

INTERIOR GLASS PARTITION SYSTEMS



The MB-HARMONY DUO is a system for building double-glazed interior partitions. It was designed primarily for office spaces with very high acoustic requirements. The double glazing provides the insulation essential to maintain both excellent user comfort and the privacy of conversations held inside. The DUO echoes the geometry of single-glazed partitions of its sister system, the MB-HARMONY, meaning that both solutions can be used together to create an aesthetic consistency.

HIGH ACOUSTIC PARAMETERS

Important features

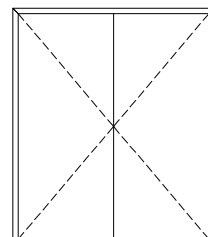
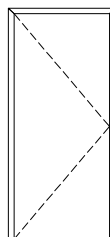
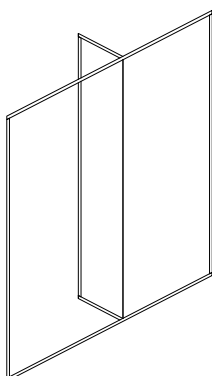
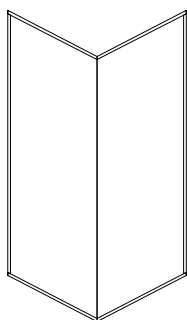
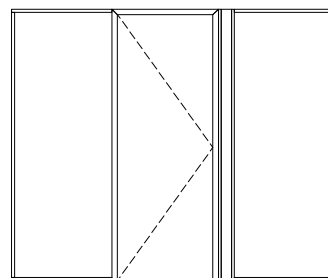
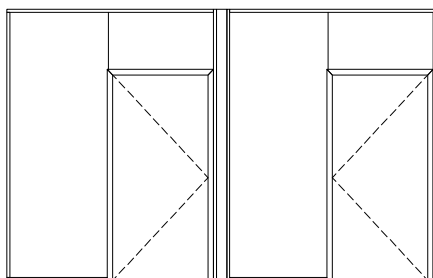
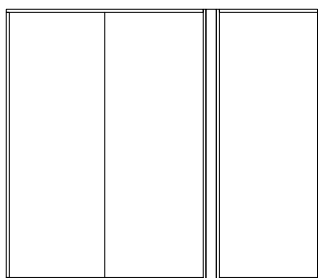
- the structurally light profiles are only 31 mm high
- the MB-HARMONY and MB-HARMONY DUO solutions are compatible
- the entire system consists of just a few basic elements
- the connectors and accessories have been reduced to a minimum
- the system is simple to prefabricate and to install, that can be done on site
- the unique installation panel is built using base profiles
- acrylic joints by walls are unnecessary
- hardware and accessories are mainly installed without machining, which has been limited to no more than a few instances
- the required machining can be carried out using portable tools
- the stability and reliability of the structure has been confirmed by tests
- the universal frame is suitable for all types of doors
- the concealed glazing gaskets are inserted before the profiles are installed



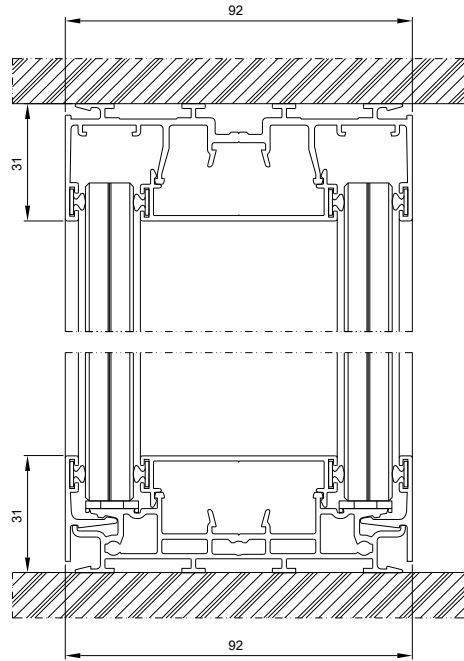
SPECIFICATIONS	MB-HARMONY
Glazing	ESG 10, ESG 12, VSG 55.1, VSG 55.2, VSG 66.1, VSG 66.2, VSG 55.2 with acoustic foil, VSG 66.2 with acoustic foil
Acoustic insulation	R_w of 39 Db max. / RA_1 of 38 dB max.
Use category	IVb
Room category	A, B, C1÷C5, D
Height	3200 / 3600 mm*
Finishing	anodised, RAL colours, ADEC wood and concrete colours

* - for glass types ESG 12, VSG 66.1, VSG 66.2 and VSG 66.2 with acoustic film

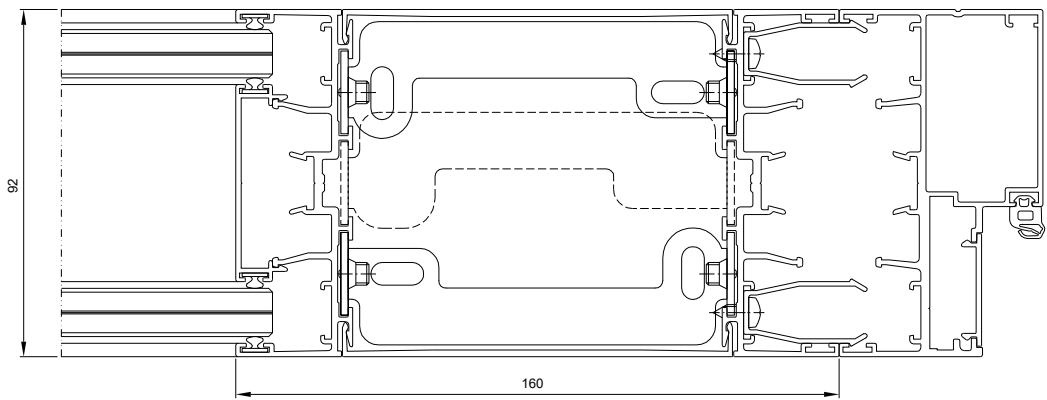
EXAMPLE SOLUTIONS



Internal partition, vertical cross-section



Horizontal cross-section through the mullion and door frame





MB-EXPO Fixed and moveable partition walling system is developed for internal partition walls that distinguish themselves by a tempered glass units fixed in clamp profiles which is a structural element. The possibility of using the MB- 45 in high ceilings areas with wide openings, makes this solution ideal for shopping malls and contemporary office interiors. The components of this system allow the fabrication of the fixed walls, glass hinged and swing doors and parked doors' segments – folding-sliding doors, that are described in a separate chapter. An important advantage of this system is its versatility and the possibility of using different hardware manufacturers.

FIXED AND MOVEABLE PARTITION WALLING SYSTEM WITH CLAMP PROFILES

The MB-EXPO system's maximum height is of about 4 m with maximum panels width up to 1,4m. It has two groups of profiles of different heights in the outside/inside view [from the floor level]: low - 36 mm and high - 100 mm. Profiles' structural depth of 33 mm for low profiles and 35 mm for high profiles, but there is possibility of in-lining by using wider decorative profiles.

The system can use tempered glass of the following thicknesses: 8, 10 and 12 mm. Due to the permissible dimensions of the structure, it is recommended to use the "suspended" glass.

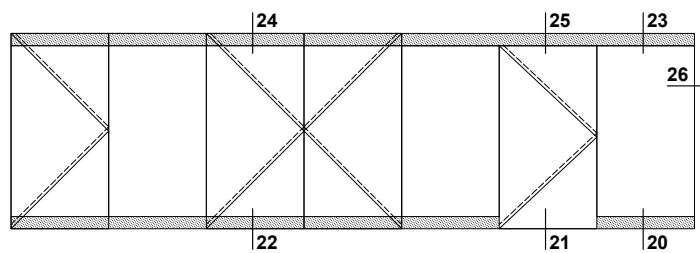
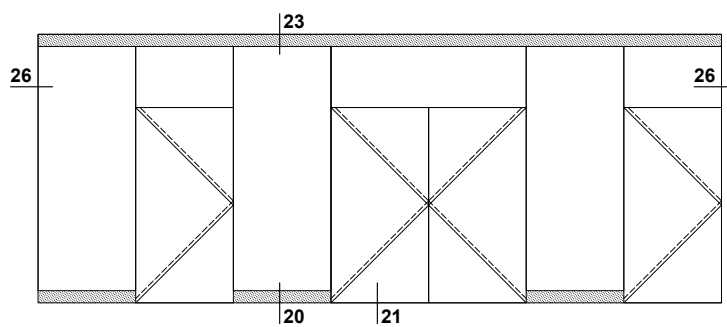
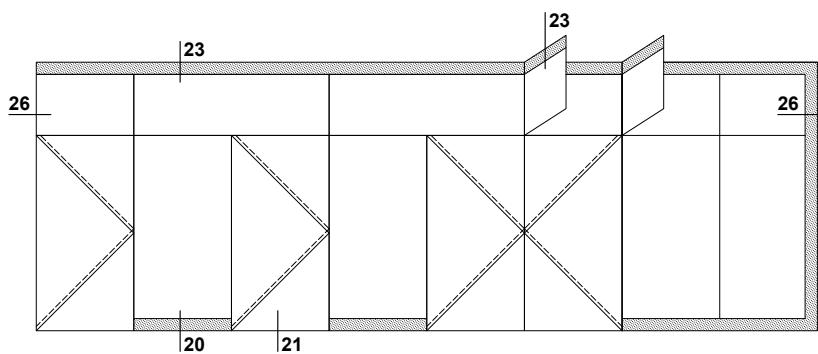
The glass as the support element of the whole structure is fixed by the clamp in the upper set of profiles. The glazing gaskets are not visible, whichever the side. The height of the profiles and the depth of the structure can be increased by extended decorative profiles. Using the MB-EXPO system allows to easily change the functionality of the premises and to divide space of the interiors. Also different finishes of aluminium decorative profiles are available on both sides ["dual-colour"] as well as the stainless steel strips. For 100 mm high profiles, it is possible to use lower brush seals to increase the tightness of the leaf. The profiles of this system, unlike many other similar solutions on the market, have a constant depth regardless of the thickness of the glass which makes the fabrication process easier.



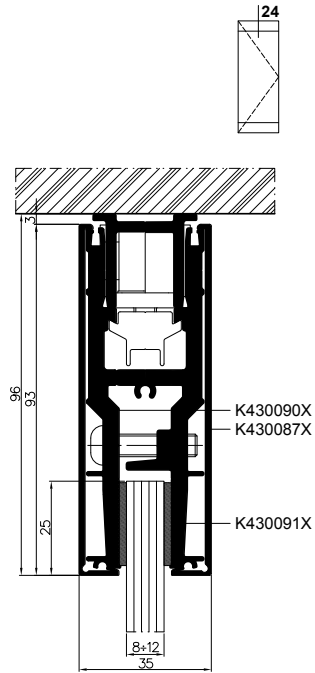
The profiles are designed to allow installation of typical locks, hinges, suspension brackets, parked systems, their installation requiring only minor adaptations. In this respect, system is very flexible – in terms of hardware, we can use products from different

manufacturers. Its major advantage, in addition to high aesthetics and functionality of the walling, is also a simple prefabrication and installation, which allows to carry out all the works on site with a few basic, portable devices.

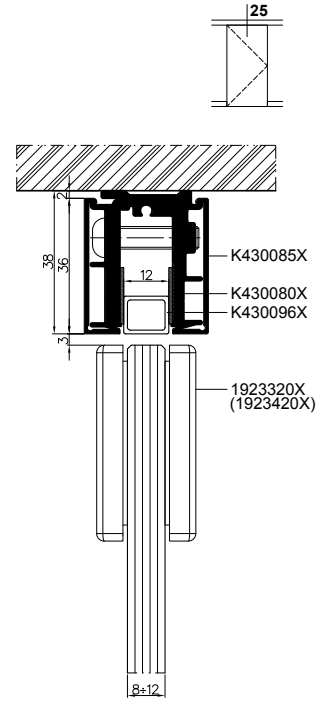
Selected configurations



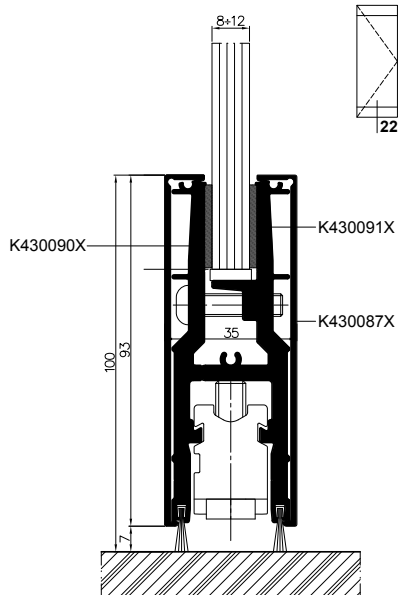
Upper section of door



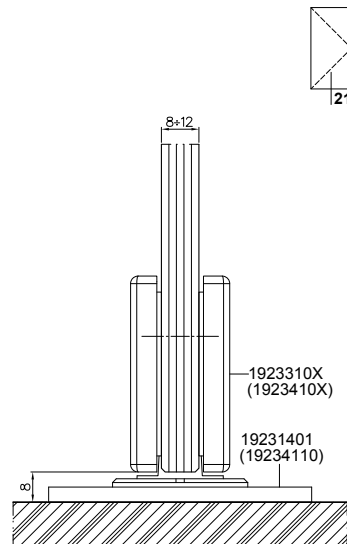
Upper section of door



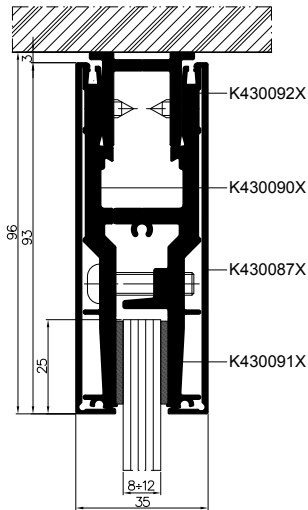
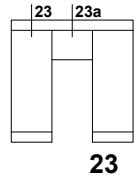
Bottom section of door



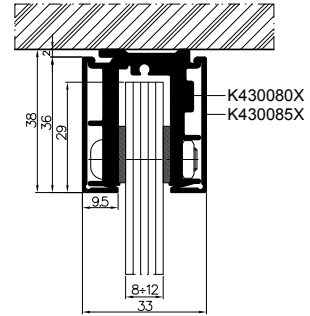
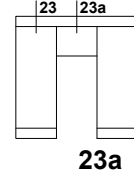
Bottom section of door



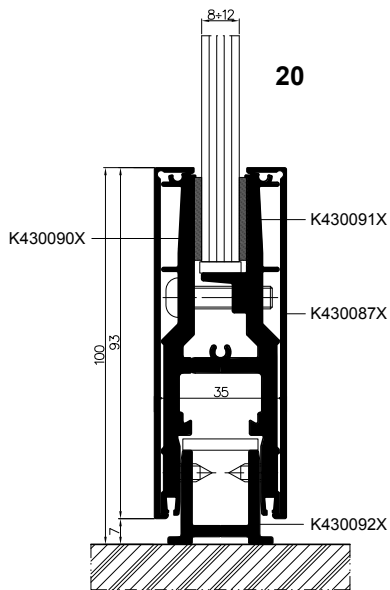
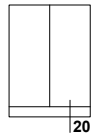
Upper section of display assembly



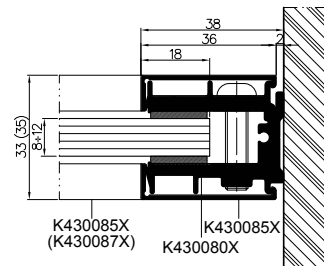
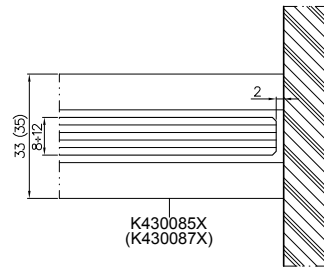
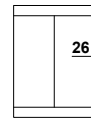
Upper section of display assembly



Bottom section of window display arrangement



Lateral section of display assembly





MB-EXPO Mobile system is designed for internal partition walls that distinguish themselves by the fact that a tempered glass pane can be their structural element. The possibility of using the MB-45 in high ceilings areas with wide openings, makes this solution ideal for shopping malls and contemporary office interiors. The components of this system allow the fabrication of the parked doors' segments – folding-sliding doors. An important advantage of this system is its versatility and the possibility of using different hardware manufacturers.

MOBILE PARTITION WALLING SYSTEM WITH CLAMP PROFILES

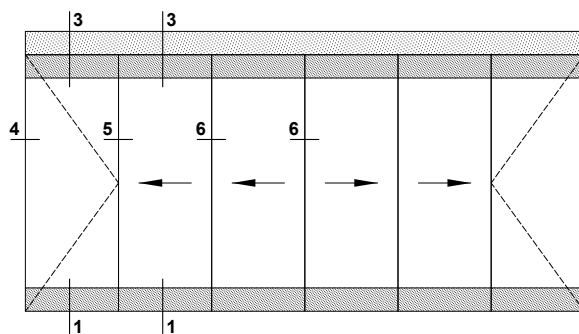
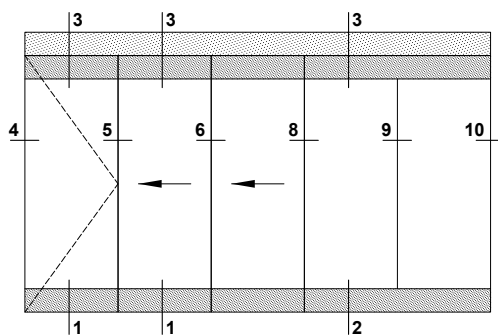
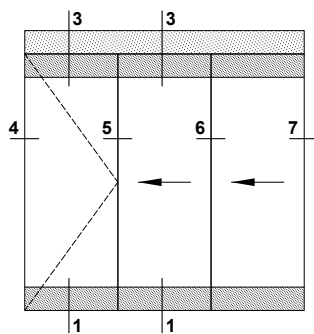
The MB-EXPO Mobile system includes 100 mm high profiles of a design depth of 35 mm. This depth doesn't change regardless of the glazing thickness. The maximum height of the door panels is 4 m and the maximum width is 1.5 m. Tempered glass of the following thickness can be used: 8, 10 and 12 mm. The main advantage of this system is the ability to easily change the functionality of the premises and the segmentation of the interior space.

The sections of the MB-EXPO Mobile systems are designed to allow installation of the hardware [locks, hinges, suspension brackets, parked systems] supplied by Aluprof and Geze. In order to increase the tightness of the panel, it is possible to use lower brush seals for profiles of a height of 100 mm.

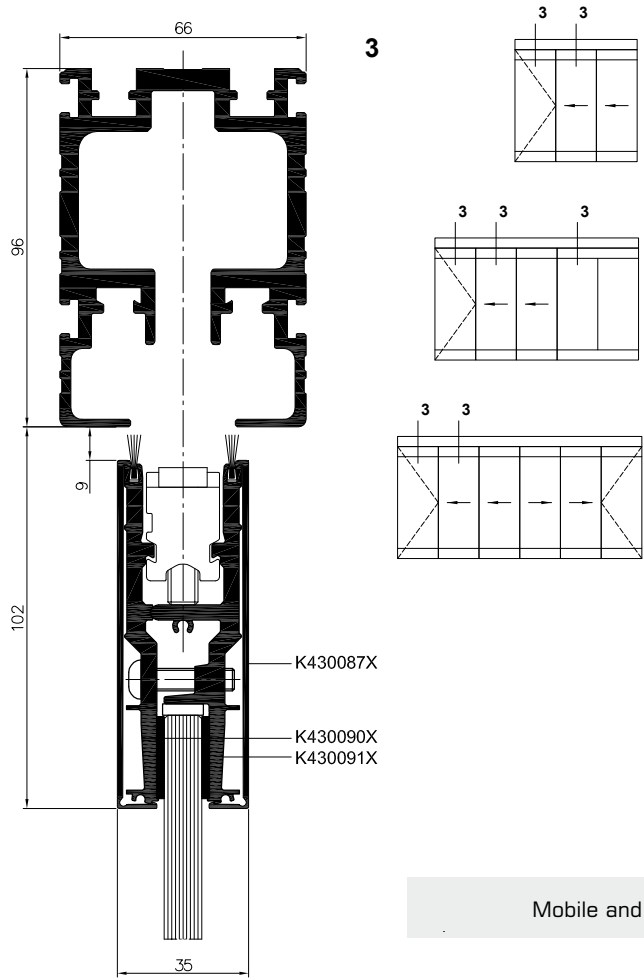
Glass units are support elements of the structure and so they are used in a "suspended" configuration. The fixing method is analogous to the basic version of this system: using the clamp in the upper set of profiles. The glazing gaskets remain invisible, whichever the side. With the basic MB-EXPO system, it shares colour choice and the simplicity of installation, that allows to carry out all the works on site.



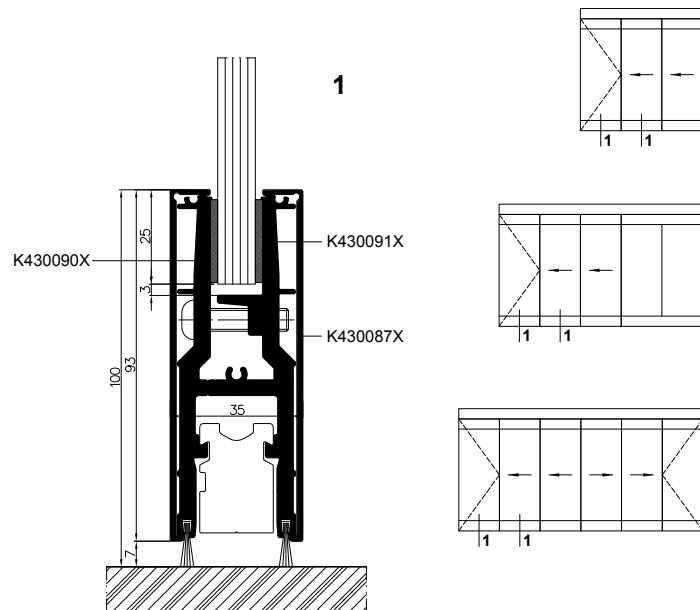
Mobile partition walls – examples of construction



Mobile and door leaf – upper section

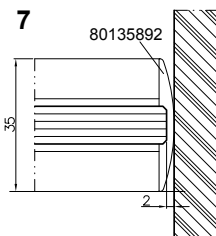
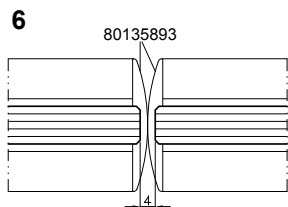
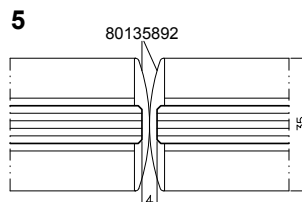
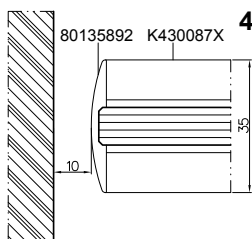
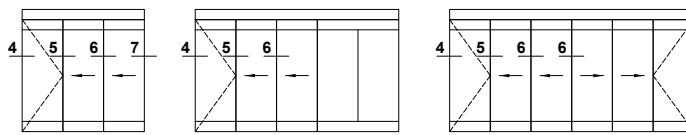


Mobile and door leaf – bottom section

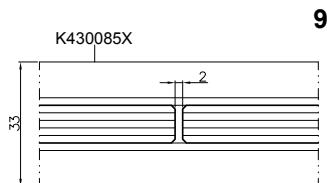
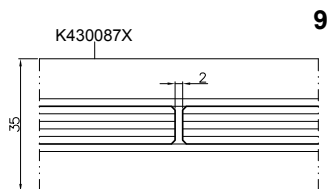
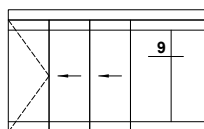


Scale 1:2

Leaves – horizontal sections



Shop front – horizontal sections





This internal, double-glass partition walling system is designed to fabricate internal partitions in offices and other public facilities. The system enables the use of different types of infills, transparent or obscure, with internal blinds and electrical components and office equipment. These partitions are especially suitable in buildings where a high sound insulation is required. The basic feature of this construction is its versatility in arranging office space, combined with the simplicity of execution of all the works on site.

PARTITION WALLING SYSTEMS

System characteristics

- different types of infill: panes 4-14 mm thick, furniture boards 16-18 mm thick, gypsum plasterboards
- depth & construction of the basic profiles enables installation of intra-pane blinds
- can be combined with a standard, 75 mm -thick gypsum plasterboards
- excellent sound insulation in office spaces - noise reduction of 50 dB depending on the type of infill used
- possibility to fabricate 80 mm & 92 mm walls
- custom division of space, angle of refraction within the range 90°÷180°
- simple prefabrication & installation, direct on-site pre-fabrication in option
- cables inside the wall, installation of standard power sockets
- can be combined with MB-45-based wall (MB-45S-based doors that flush with the plane of the wall) (flushed with the plane of the wall and with non-protruding hinges), and with MB-EXPO & MB-45

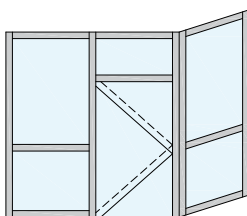
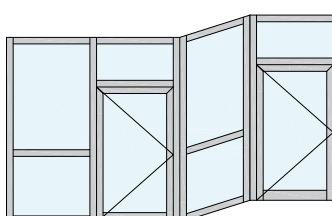
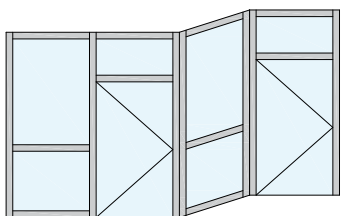
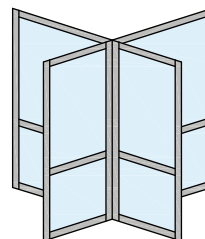
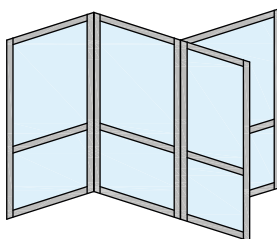
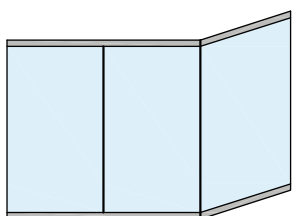
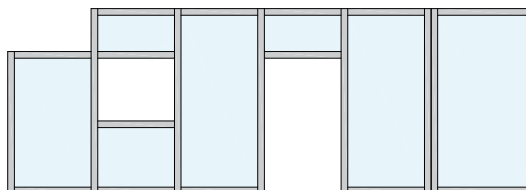
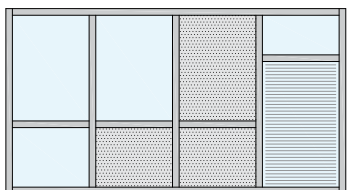


OFFICE doors (with centrally-installed leaf, flushed with the plane of the wall, plus non-protruding hinges)

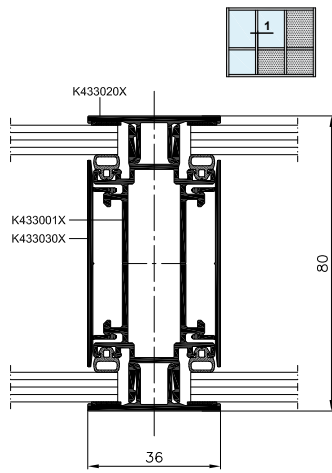
- high rigidity of the profiles makes the construction fit to any interior space, for instance, a construction with 4 mm glass and 1.3 m post spacing can be up to 5.4 m high and up to 6.35 m if the posts are steel core-reinforced



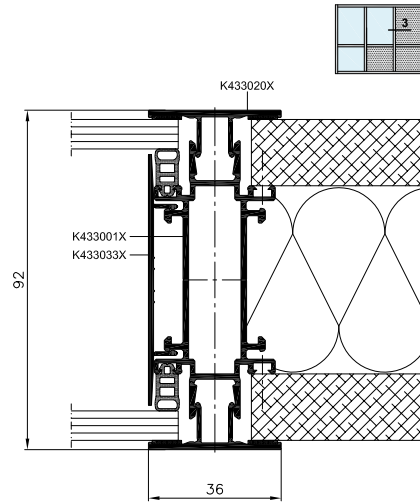
Examples of construction



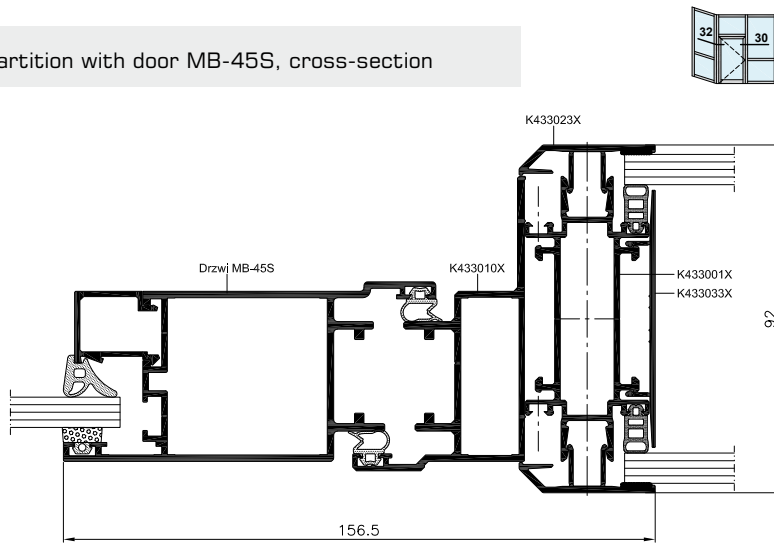
Partition 80 mm, cross-section



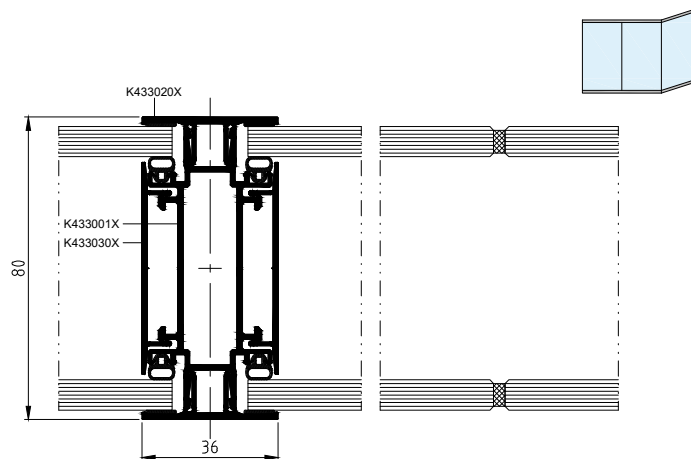
Partition 92 mm, cross-section



Partition with door MB-45S, cross-section

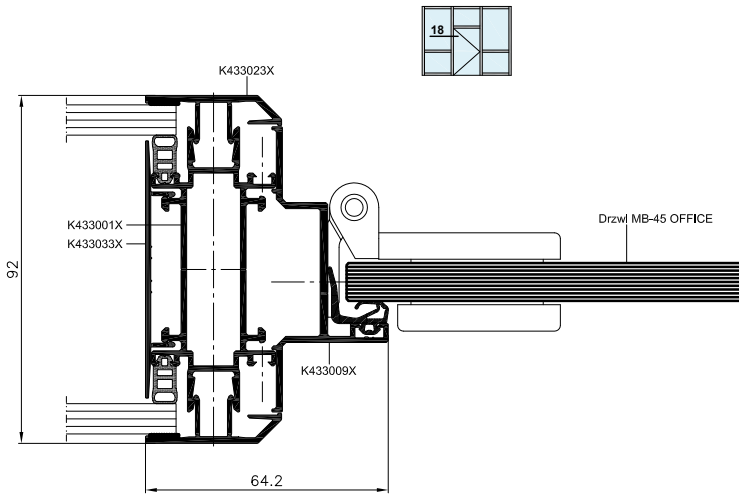


Silicone joined glazed wall, cross-section

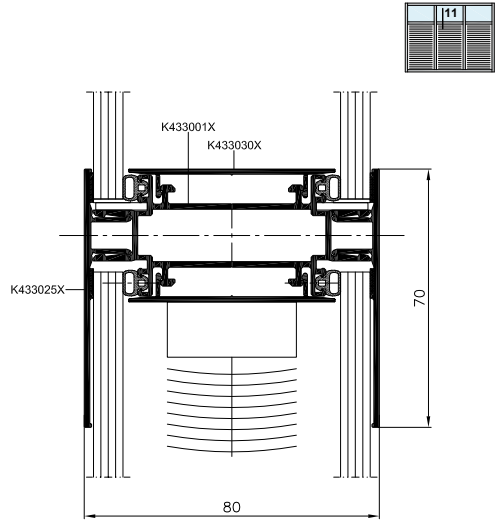


Scale 1:2

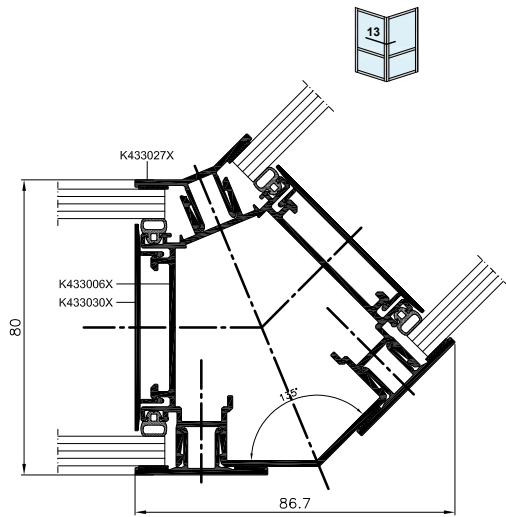
Partition with all-glass doors, cross-section



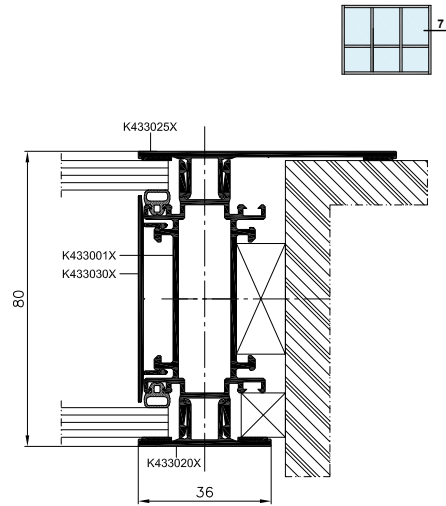
Partition with blind, cross-section



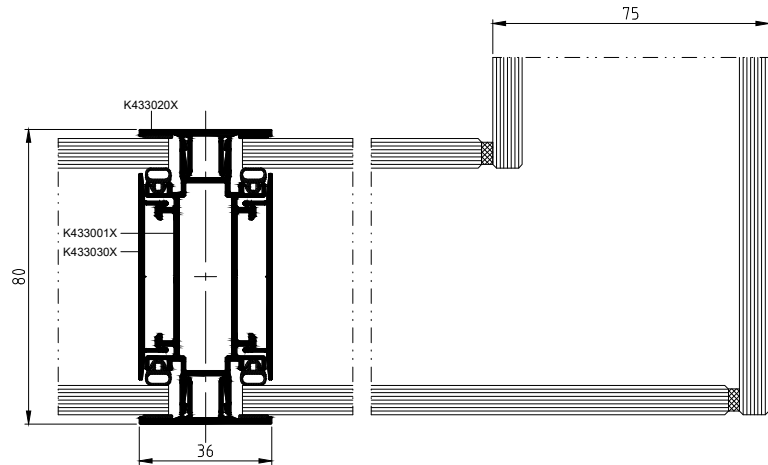
Partition, angle connection, cross-section



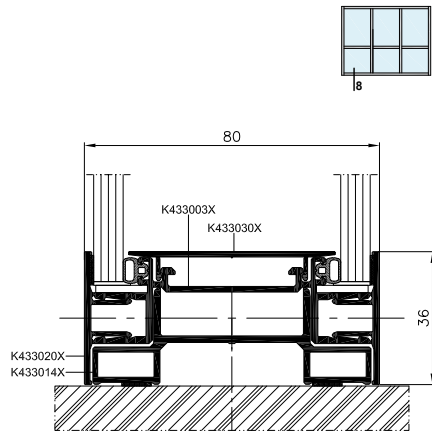
Edge of the partition attached to the wall, cross-section



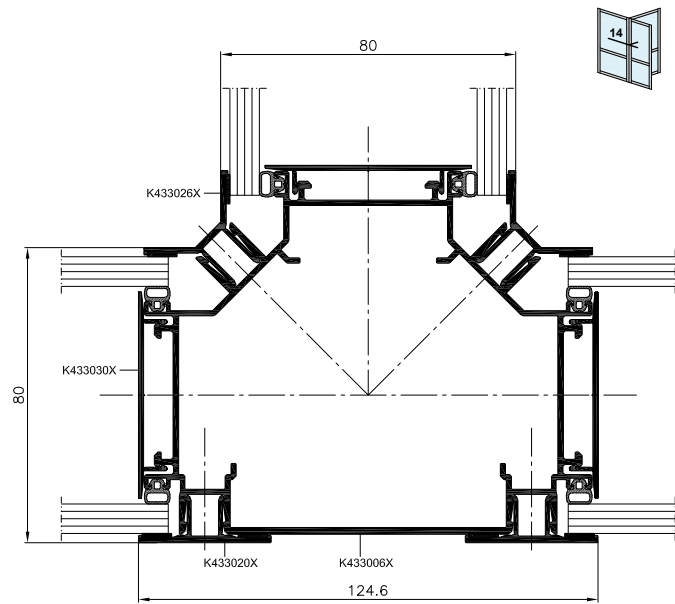
Silicone joined glazed wall, cross-section



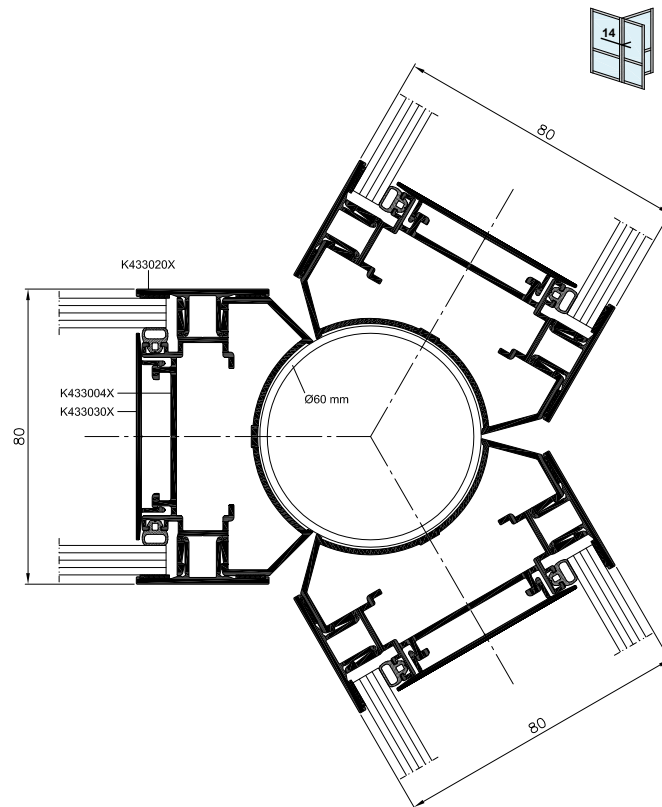
Lower crossbar – cross-section



Three partitions interconnected, cross-section

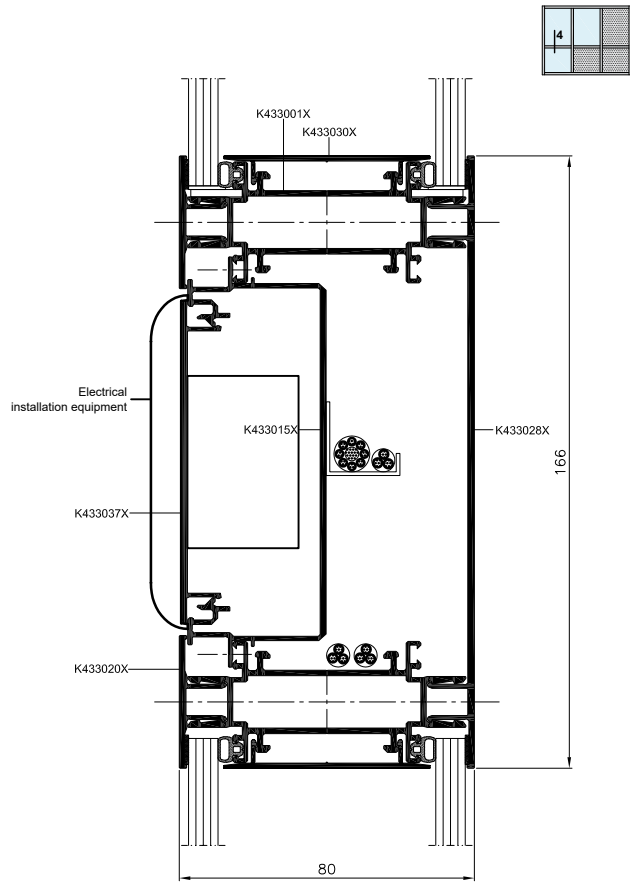


Three partitions interconnected, cross-section

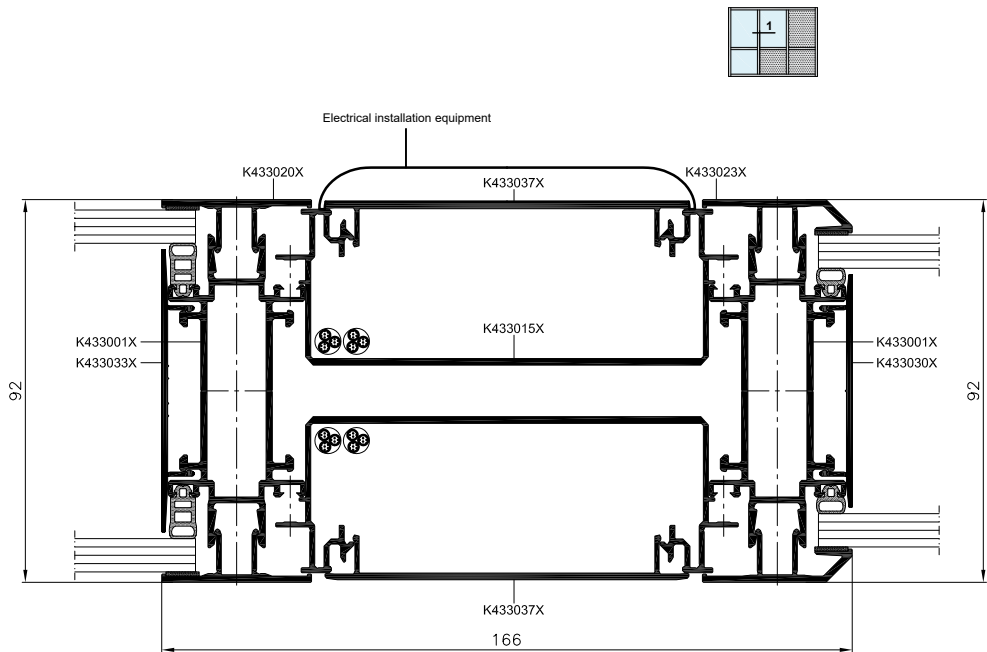


Scale 1:2

Transom with electrical fittings, cross-section



Mullion with electrical fittings, cross-section





MB-45 OFFICE system is designed for internal partition walls and distinguishes itself by the fact that a tempered glass can be its structural element. The details of this system allow to fabricate fixed partition walls and all-glass hinged and swing doors. The possibility of using the MB-45 in high ceilings areas with wide openings, makes this solution this ideal for shopping malls and contemporary office interiors.

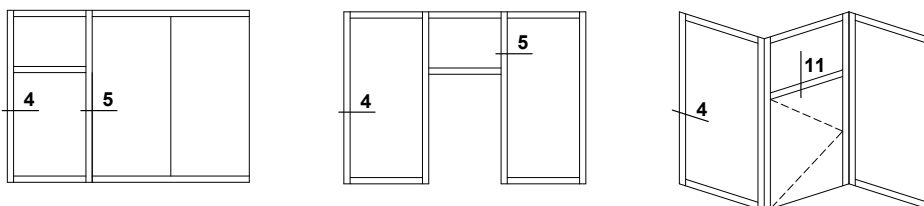
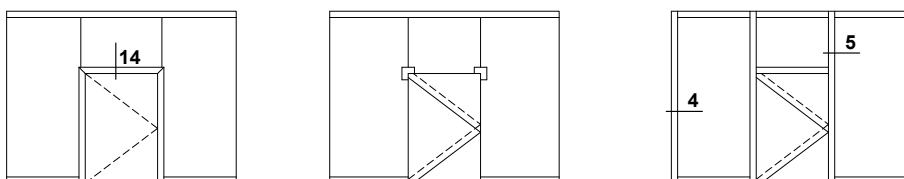
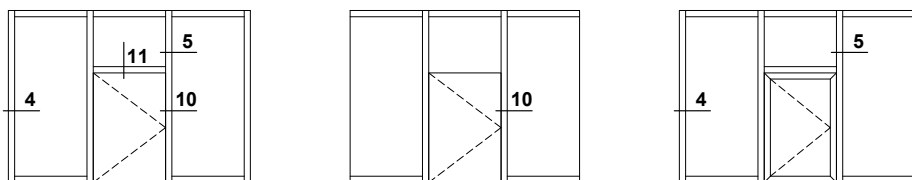
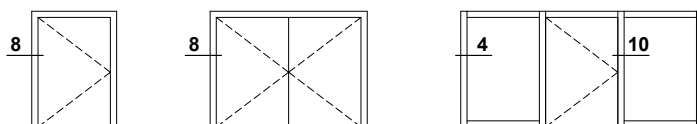
FIXED AND OPERABLE PARTITION WALLING SYSTEM

This system option comes with the same 45mm profiles' depth as the basic MB-45 system. Both solutions are fully compatible, making it possible to freely combine the profiles of both systems. The MB-45 OFFICE is based on a few standard profiles and appropriate adapter profiles giving wide choice of window frames, profile door frames and, transoms. Hinges, locks and closers available with the MB-45 OFFICE can be selected from range offered by Aluprof, Geze and WSS. The functionality of the MB-45 system allows to change the interior layout design by removing the connections and then reassembling them i.e. with new angle or functions.

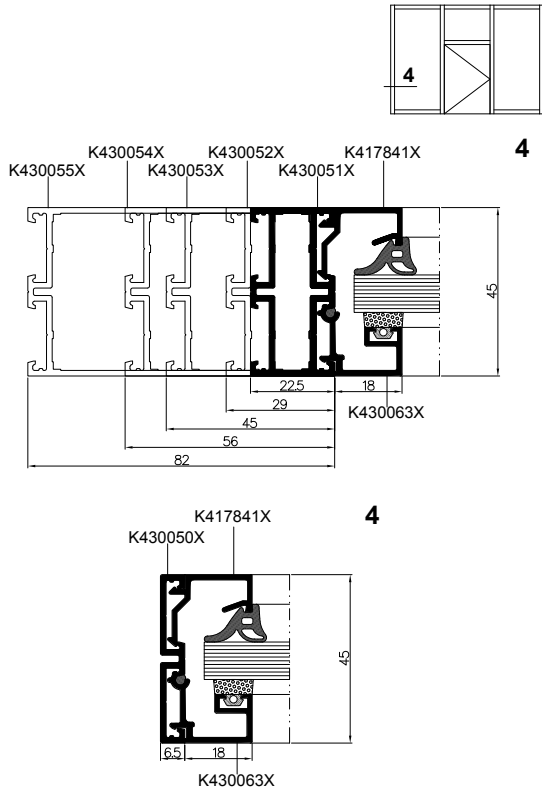
The MB-EXPO version with supporting aluminium structure can accommodate different types of panels and lazing: both single and double units, with thicknesses ranging from 2-25mm. The system is available with dedicated 8, 10 and 12mm thin bulky tempered glass. Units are installed using beads and glazing gasket. Glazing beads are available in two versions: Standard and Prestige, both box-type, which allows a robust and secured glass fixing.



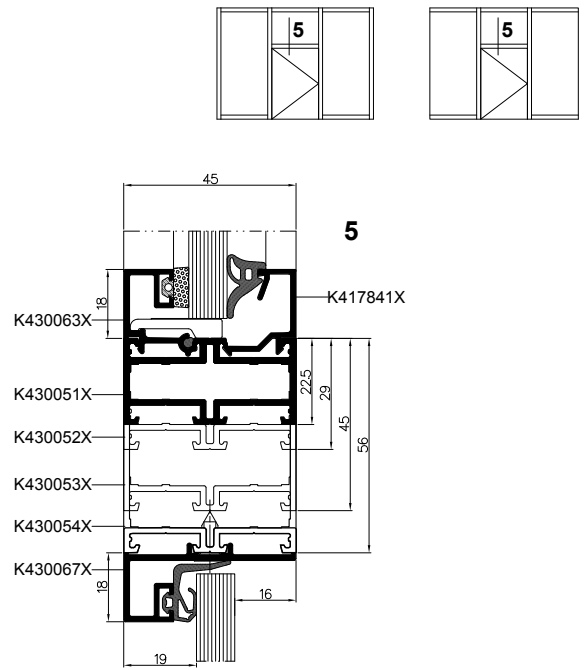
Selected configurations



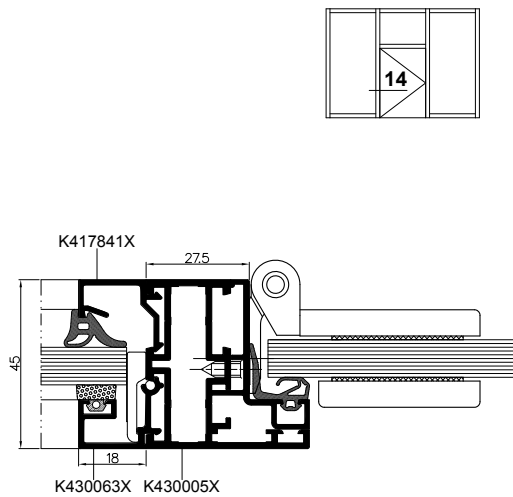
Horizontal section of jambs



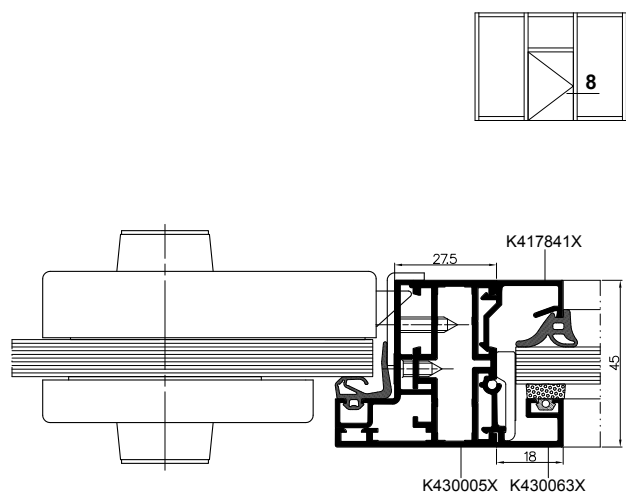
Door transom - cross-section



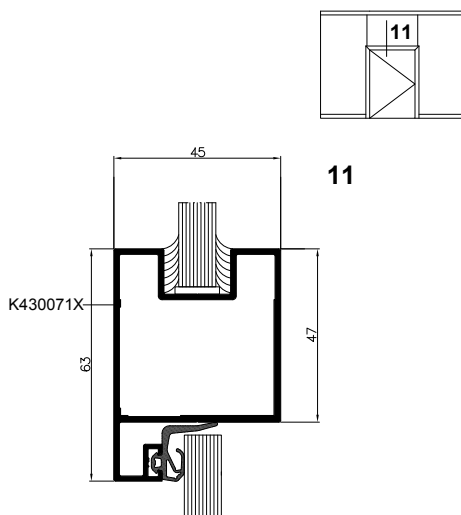
Horizontal section of jambs



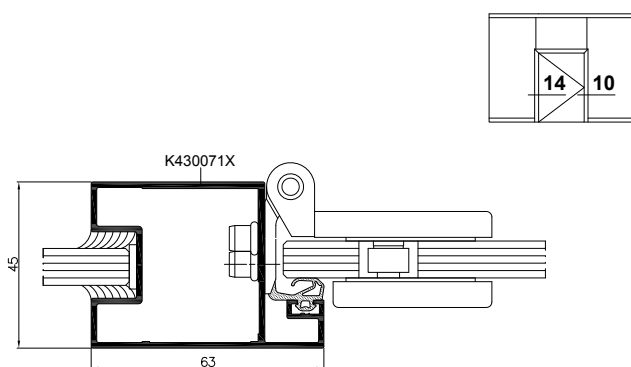
Horizontal section of jambs



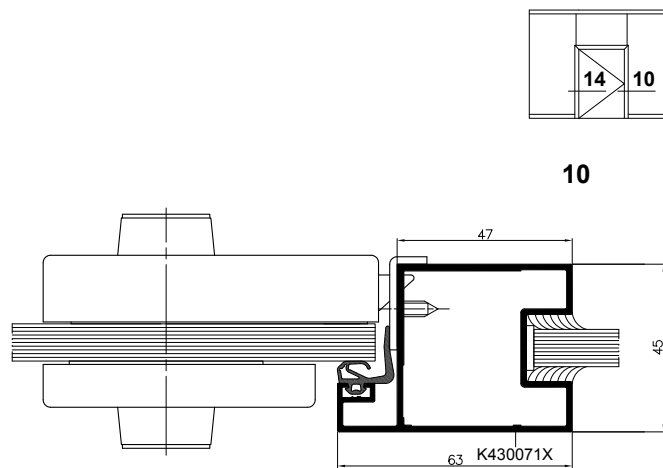
Door transom – cross-section



Horizontal section of jambs



Horizontal section of jambs



SYSTEM MB-45

WINDOW AND DOOR SYSTEMS



The MB-45 system has been designed for internal use where thermal insulation is not required. i.e. various types of partition walls, windows, and doors. Additionally, sliding, swing and self-closing doors, enclosed entrance porches, shop windows, cash-desk boxes, display cabinets, etc. The system is also the basis for special solutions: MB-45D smoke-proof partitions and doors (class S30) and the MB-45S doors with clamp hinges. The versatility and attractiveness of the system is also enhanced by a wide selection of door sealing options, glazing beads or sills of various shapes and heights.

NON-THERMAL BARRIER

Lightweight, durable profile design

The MB-45 window system comes with a frame depth of 45 mm and a sash depth of 54 mm. The door system is 45 mm frame and sash. Depths of the sash and frame provide smooth external sightlines on the opening lights and single surface effect after closing the window and - with regard to the door - an aligned effect of leaf and outer frame surface. The profile dimensions results in a narrow sightline on our sturdy yet lightweight windows and doors suitable for all internal applications.

Diversity of solutions

Versatility and attractiveness of the system is additionally enhanced by the option to select from several variant solutions for different constructional details, e.g. bottom sealing of door leaves, sealing of sliding and swing doors, the shape of glazing beads, the shape and height of doorsills..

Freedom of hardware selection

The MB-45 construction has been adapted to typical hardware, locks and hinges, following European standards. Sections are equipped with grooves as to enable fixing of multi-point locking hardware and connecting members, as per EURO standard. Therefore, it is possible to meet the demands of our customers without changing the basic construction.

Performance:

- Impact resistance: class 3, PN-EN 1192:2001
- Acoustic insulation: $R_w=45$ dB (depending on the infill material)



SYSTEM MB-45D



SMOKE-PROOF DOORS

MB-45 partition system is intended for producing smoke exhaust single- or doubleleaf doors with a class of S_a, and S₂₀₀ according to the EN 13501-2:2016-07 standard.

Proper performance of the smoke-tightness function is conditioned by the correct application of the leaf peripheral sealings, rear glazing and other fillings as well as the application of threshold seals.

SYSTEM MB-45S



DOOR SYSTEM

MB-45S doors are also available with 2 part butt hinges as part of the same range. The MB-45S system is intended for constructing cost-efficient doors equipped with butt hinges, featuring good functional parameters, as well as partition walls equipped with such doors. The constructional depth of profiles equals 45 mm. The MB-45S system features simple and quick prefabrication of products eliminating the majority of labour and time consuming mechanical workings. Due to the application of special grooves, the profile construction allows hinges, catches and locks to be fixed with minimal effort.

SYSTEM MB-45EW



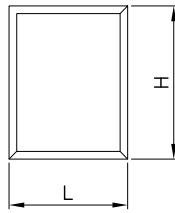
DOOR SYSTEM

The MB-45EW system enables the fabrication of fire-rated single and double doors and fixed partition walls with doors. The constructions based on the MB-45EW system are classified fire-resistant EW30 to EN 13501-2+A1:2010. The fire resistance of the construction is ensured by materials inserted into the internal chambers of the profiles. The outer surfaces have strips that swell under the effect of temperature. The system can use fire-resistant glazing EW 30 (thickness 11 mm – 15,5 mm).

TECHNICAL SPECIFICATION	MB-45	MB-45S	MB-45 smoke-proof doors	MB-45EW
PROFILES DIMENSIONS				
Depth of frame (door / window)	45 mm			
Depth of leaf (door / window)	45 mm / 54 mm	45 mm		
Glazing range (fixed window and door / opening window)	1,5 – 31,5 mm / 1,5 – 34 mm	1,5 - 32 mm		11 - 15,5 mm
SIZE LIMITATIONS				
Maximum size of tilt turn window (H×W)	H to 2400 mm (1850 mm), W to 1250 mm (1600 mm)	-	-	-
Maximum size of door (H×W)	H to 2400 mm (2200 mm), W to 1250 mm (1400 mm)			
Max weight of doors / windows	120 kg / 130 kg	130 kg	120 kg	120 kg
TYPES OF CONSTRUCTIONS				
Available solutions	Tilt window, turn window, tilt turn window, Doors open out and open in	Mortise doors, Partition walls with doors	Doors open out and open in	One or both sides doors, solid walls in class EW30

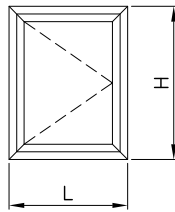
Max. dimensions of windows

Fixed window



Max. dimensions of windows result from maximal glass sizes

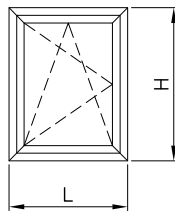
Turn-hung window



Hmax=2250 mm
Lmax=1300 mm

- 130 kg

Tilt and turn window

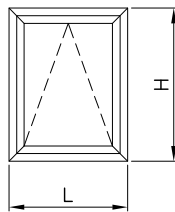


Hmax=2400 mm
Lmax=1250 mm

Hmax=1850 mm
Lmax=1600 mm

- 90 kg/130 kg

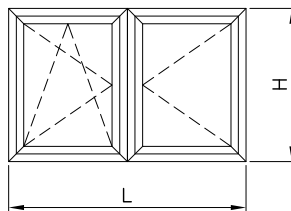
Tilt window



Hmax=1000 mm
Lmax=2150 mm

- 130 kg

Double casement



Hmax=2250 mm
Lmax=2700 mm

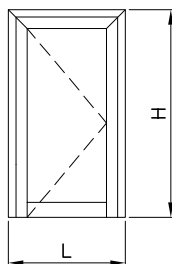
Turn-hung vent - - 130 kg

Tilt and turn vent - - 130 kg

} Maximal vent weight


Max. dimensions of doors

Inside opening door,
internal development

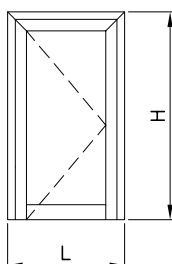


Hmax=2400 mm
Lmax=1250 mm

Hmax=2200 mm
Lmax=1400 mm


 -120 kg

Inside opening door,
external development

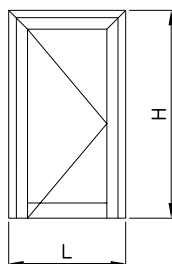


Hmax=2400 mm
Lmax=1200 mm

Hmax=2200 mm
Lmax=1300 mm


 -120 kg

Outside opening door,
internal development

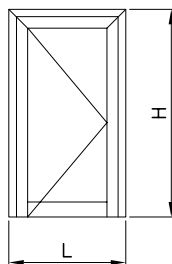


Hmax=2400 mm
Lmax=1250 mm

Hmax=2200 mm
Lmax=1400 mm


 -120 kg


Outside opening door,
external development



Hmax=2400 mm
Lmax=1200 mm

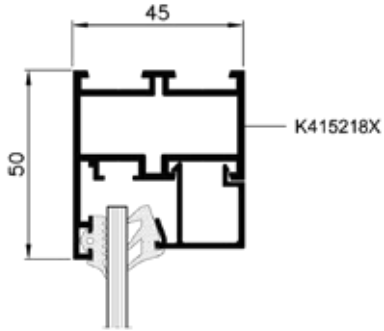
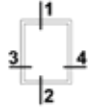
Hmax=2200 mm
Lmax=1300 mm

 -120 kg

 } Maximal vent weight

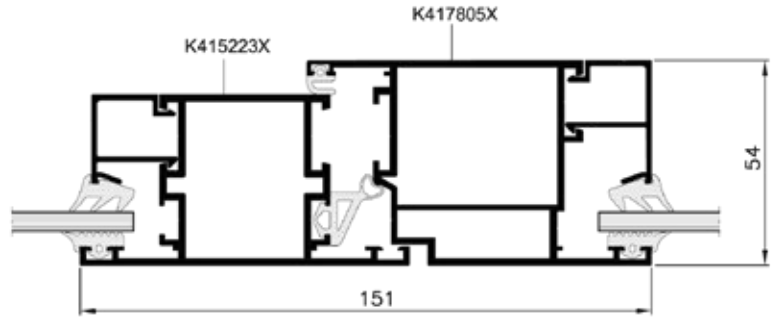
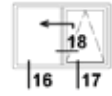
Fixed window - cross-section

1 MB-45



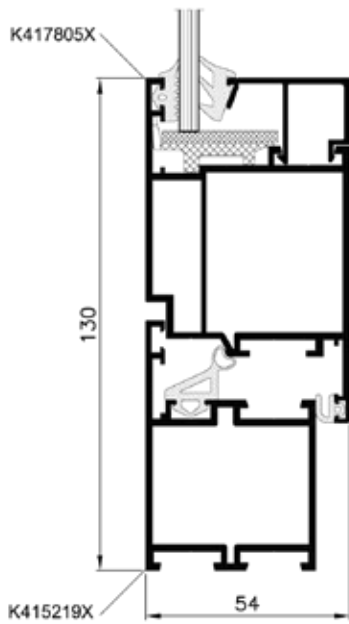
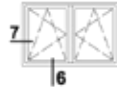
Opening window - cross-section

18 MB-45



Tilt and slide window - cross-section

6 MB-45



Opening window - cross-section

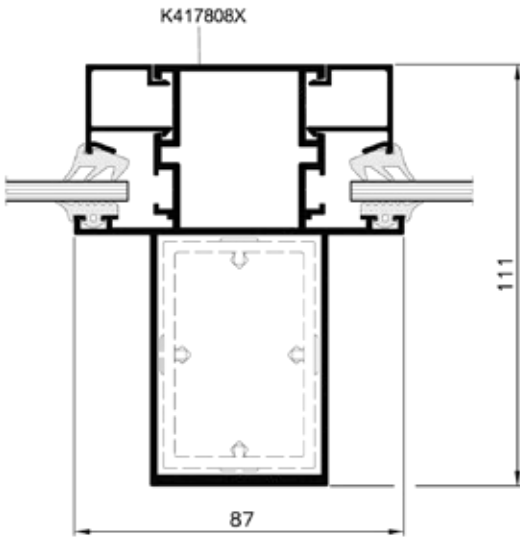
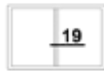
14 MB-45



Scale 1:2

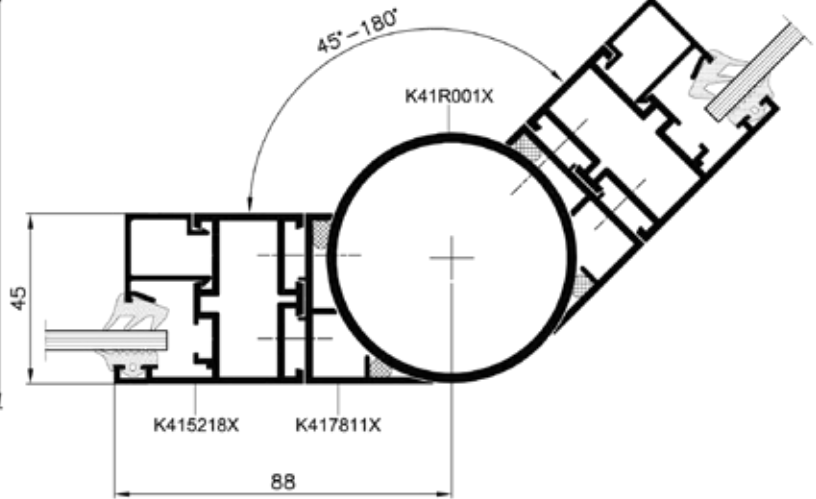
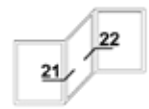
Reinforced mullion - cross-section

19 MB-45



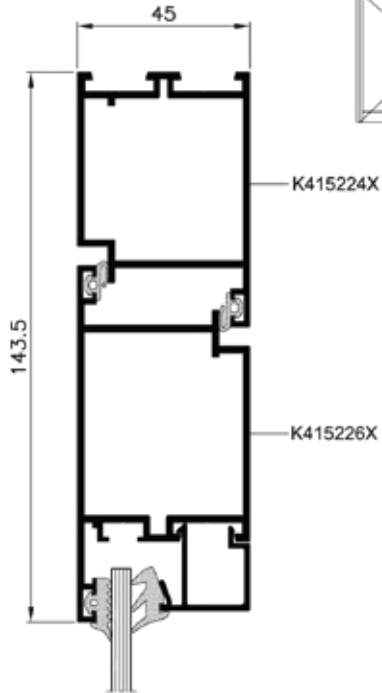
Adjustable corner connection - cross-section

21 MB-45



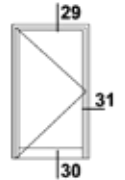
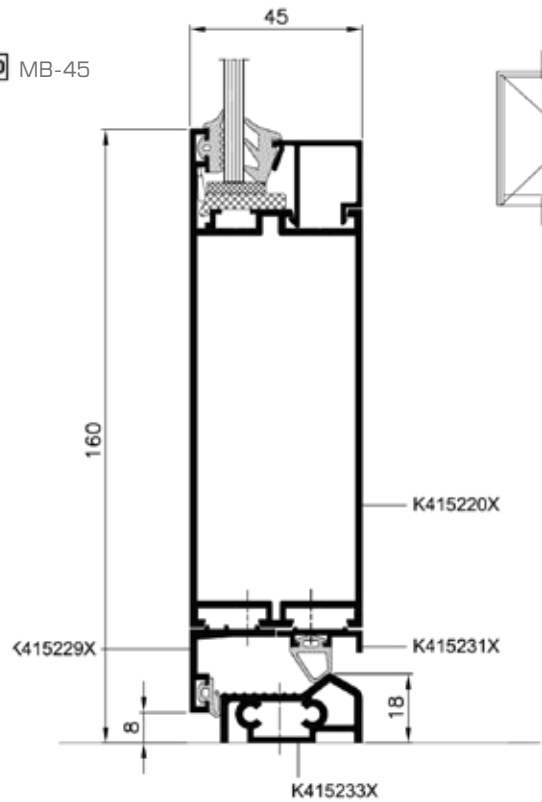
„Standard“ single, active, outward opening door - cross-section

29 MB-45



„Standard“ single, active, outward opening door - cross-section

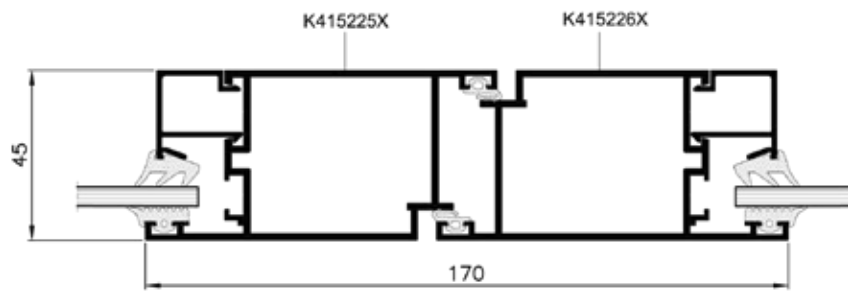
30 MB-45



Scale 1:2

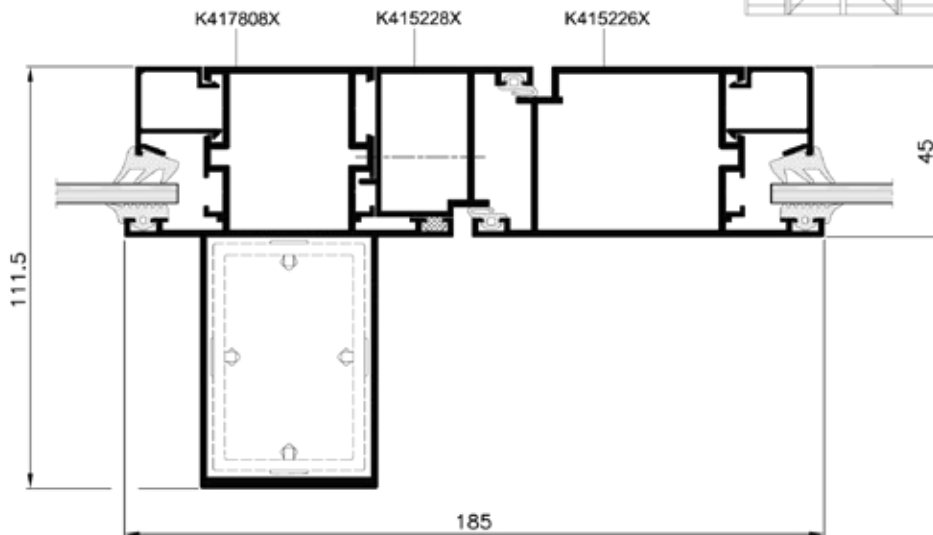
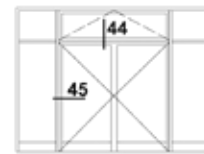
Double leaf door - cross-section

35 MB-45



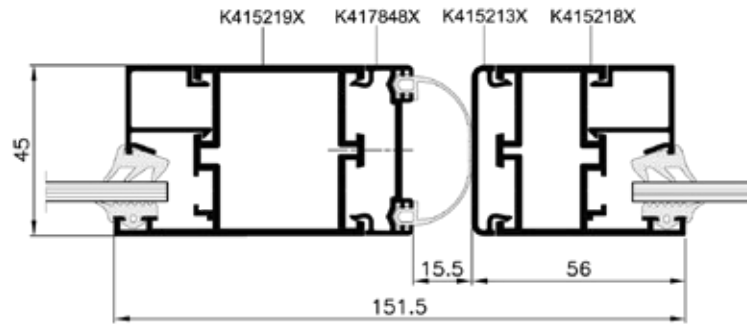
Display window with double door - cross-section

45 MB-45



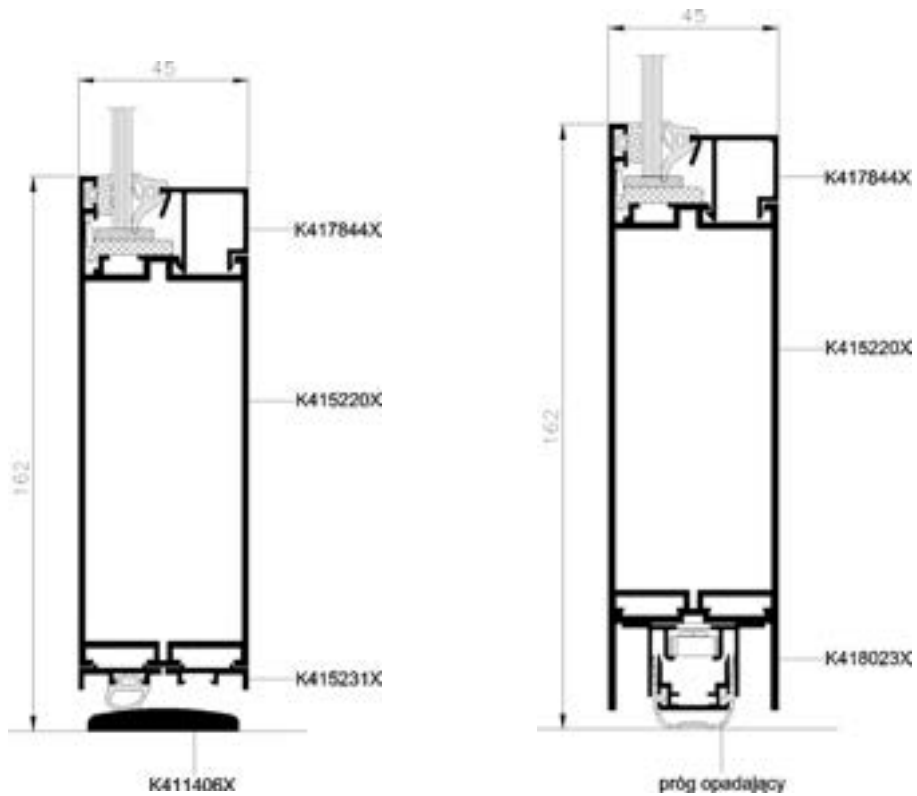
Swing door - cross - section

68 MB-45



Single outward opening smoke-proof door - cross- section

5 MB-45D



SYSTEM MB-SLIDE



SYSTEM MB-SLIDE ST



SLIDING DOORS

Sliding doors, especially the ones of large dimensions, visually “enlarge” the living space by connecting it with an outside terrace or a garden. The MB-SLIDE, MB-SLIDE ST systems are designed to construct thermally insulated sliding doors and windows, which may be built in brick walls, aluminium curtain walls, winter gardens or window display constructions based on the MB-59S or MB-59S Casement elements.

Wide range of applications

The MB-Slide and MB-Slide ST sliding door systems offer a wide range of space arrangement possibilities with maximum dimensions of leaves: H: 2600 mm, L: 1800 mm, max. weight 160 kg. There are available different constructional variants from 2 to 6 modules. They may be fitted with glazing sets up to 26 mm wide.

Construction

Constructional depth of leaf profiles is 37 mm (apart from horizontal profiles in the MB-Slide ST) and of frames 50 mm and 97 mm for double track frames and triple-track frames respectively. The same depth of basic double-track frames in the MB-Slide system and window or door frames of such systems as MB-59S, MB-59S Casement, MB-59S Pivot and MB-59SE allow to directly join products based on these systems. Frames of depth over 50 mm may be joined with each other via a special strengthened intermediate mullion.

Tightness and thermal insulation

Sliding door constructions ensure very good technical parameters: plastic thermal breaks guarantee suitable thermal insulation of aluminium profiles, while sliding brush gaskets or gaskets made of thermoplastic elastomer TPE, combined with EPDM cover and glazing gaskets, enable obtaining high tightness of the construction.

Diversity of solutions

The basic difference between the MB-Slide and MB-Slide ST systems lies in the construction of leaf profiles as well as in the technology of production and glazing. MB-Slide leaf profiles feature 3-chambered construction, they are trimmed at the angle of 45° and connected by means of suitable corner cleats. Then, the corners are crimped. Thus formed frame is then glazed and the glass panel is secured with glazing strips and gaskets. In the case of MB-Slide St the profiles have single chamber construction and they are joined by screwing vertical and horizontal profiles together by means of appropriate screws. Glass panel installation is performed at the stage of connecting leaf profiles.

Compatibility with other systems

Both sliding door systems are compatible, to a large extent, with other systems manufactured by ALUPROF SA. Assuming such a constructional concept enables application of a number of common profiles, accessories and technological processes. All components of sliding door systems are compliant with the applicable standards.

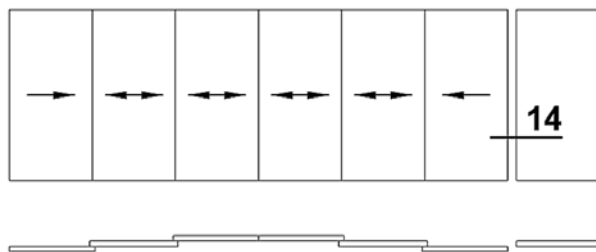
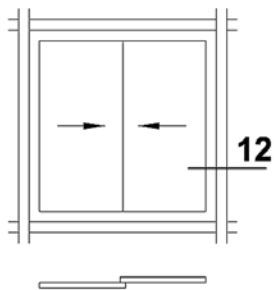
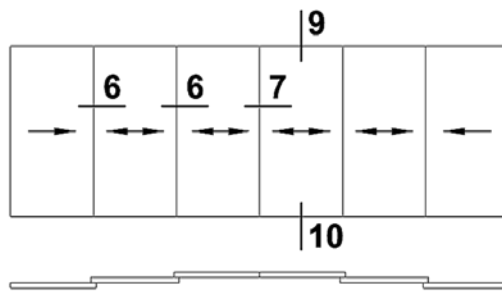
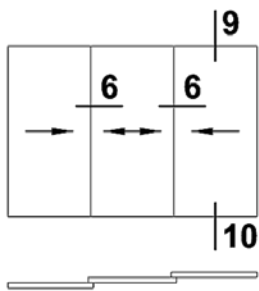
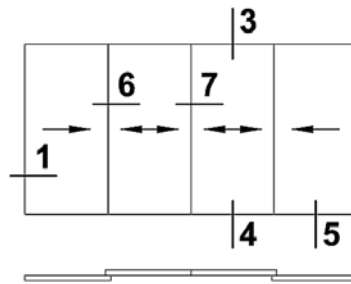
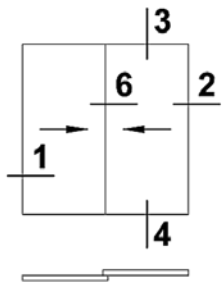
Functionality and aesthetics

A wide range of Sobinco and Giesse hardware can be accommodated into the sliding door systems. Depending on the applied system various accessories and elements can be used in sliding operation. They can be fitted with mosquito screen modules. There is also an option to built two-colour construction.

Performance:

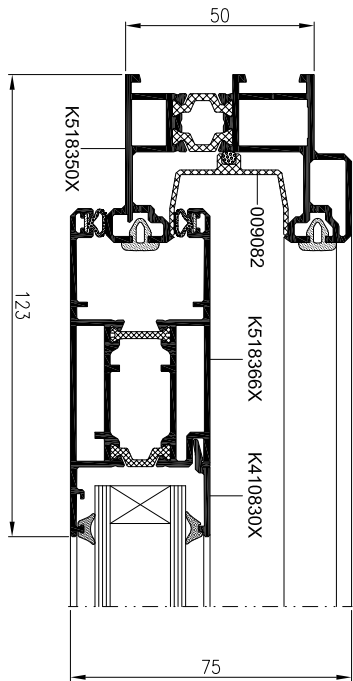
- Air permeability: class 4, EN 1026:2001; EN 12207:2001
- Watertightness: class 7A, EN 1027:2001; EN 12208:2001
- Wind load resistance: class 3C/4B, EN 12211:2001; EN 12210:2001
- Impact resistance: class 3
- Heat transfer coefficient: U_f from 2,61 W/(m²K)

Examples of constructions



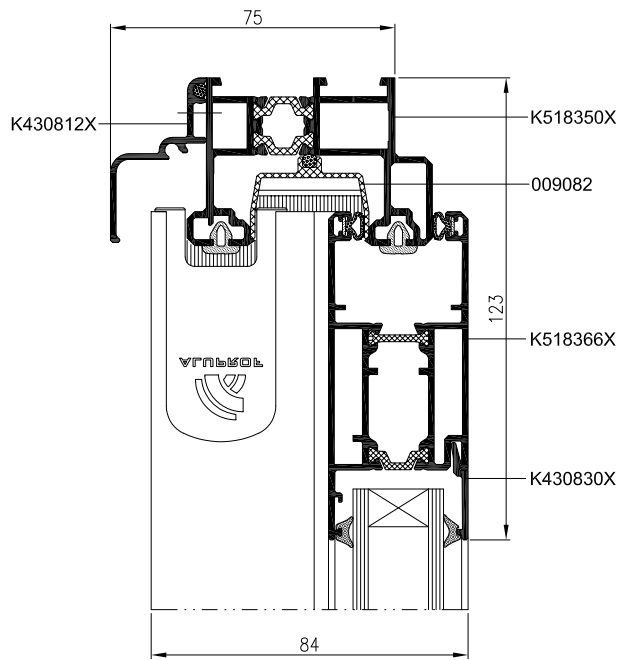
Cross-section of door jambs

1



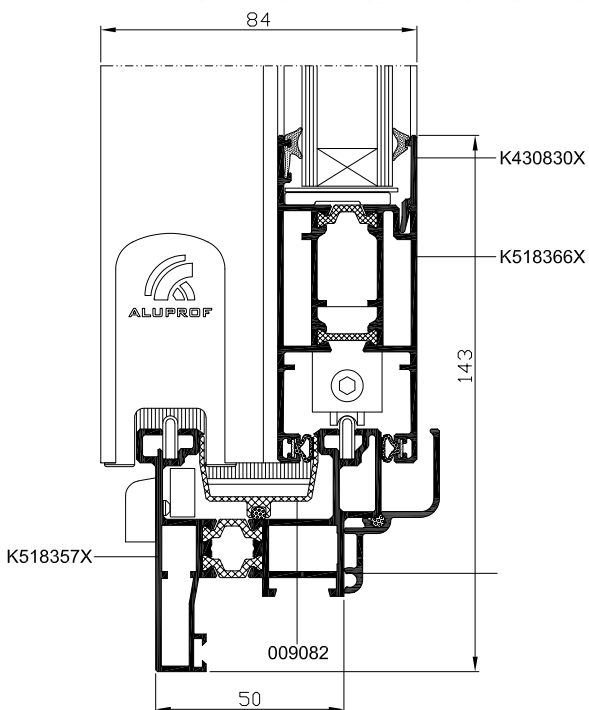
Cross-section of door upper rail

3



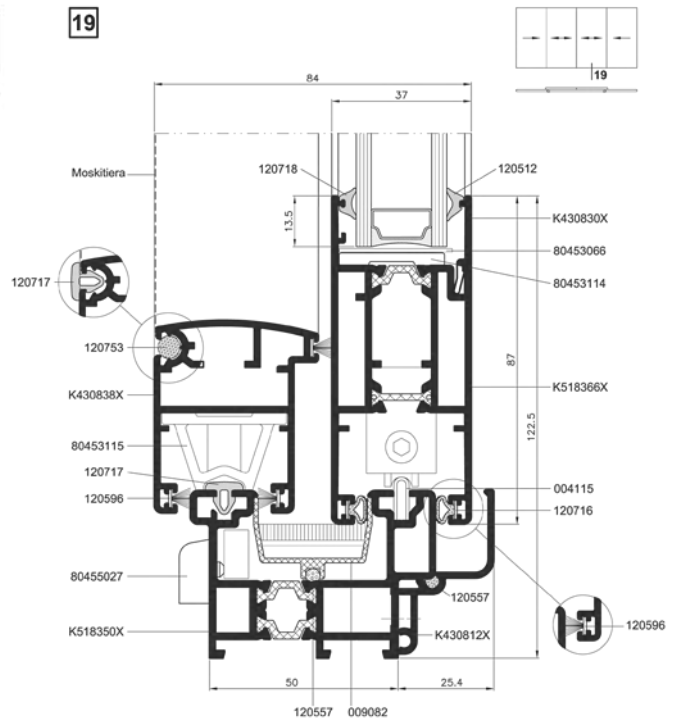
Cross-section of door bottom rail

4



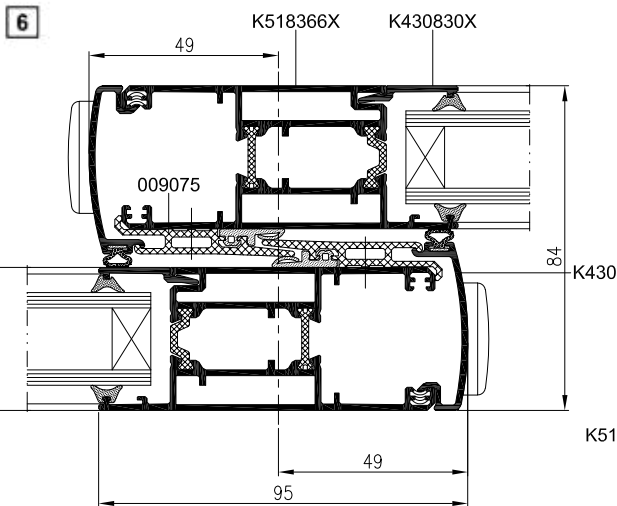
Cross-section of door bottom rail with a mosquito screen

19

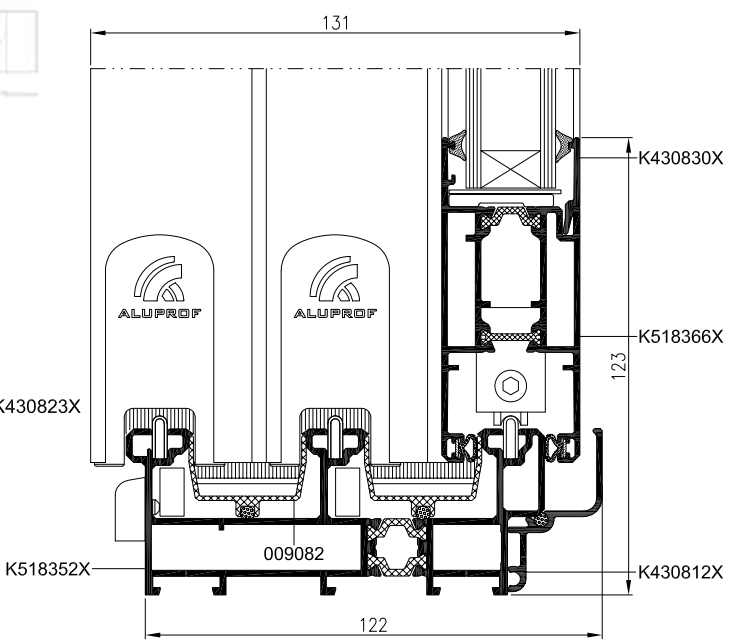


Scale 1:2

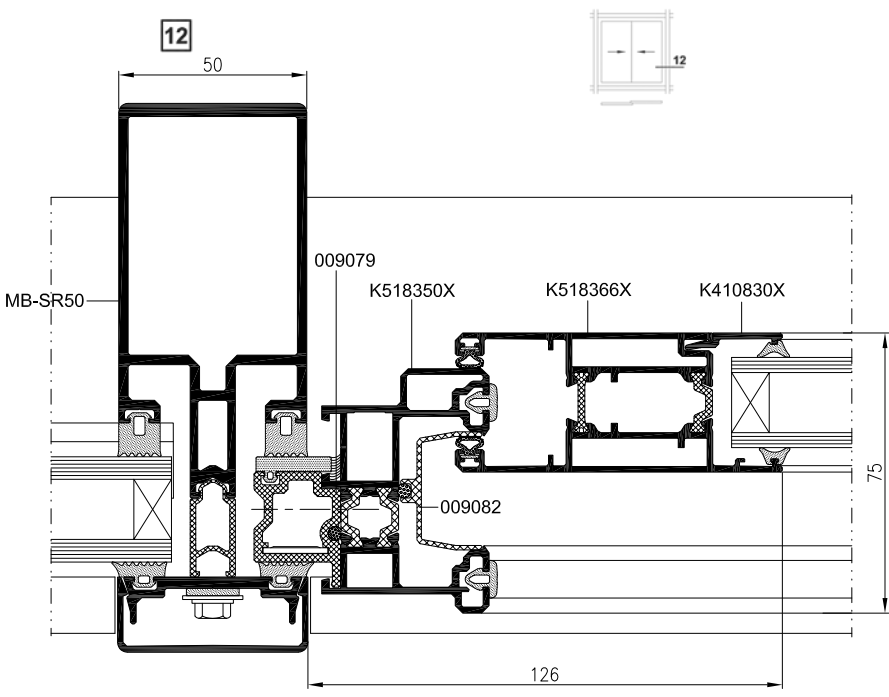
Cross-section of door jambs



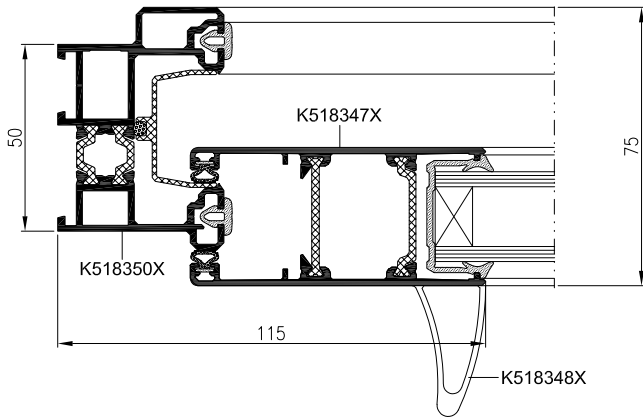
Cross-section of door bottom rail



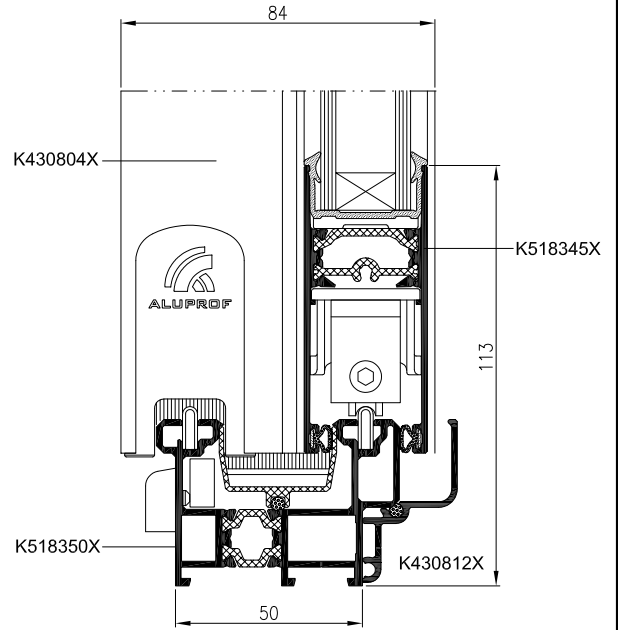
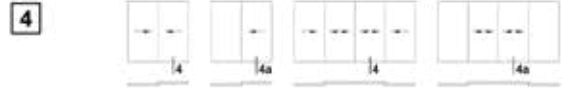
Cross-section of door in MB-SR50



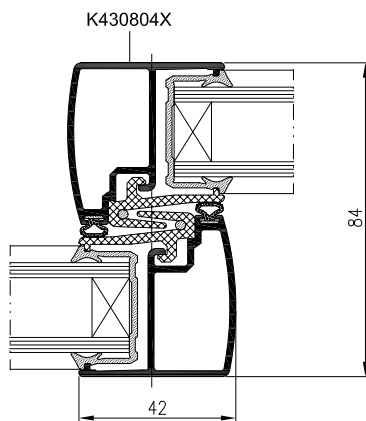
Cross-section of door and window jambs



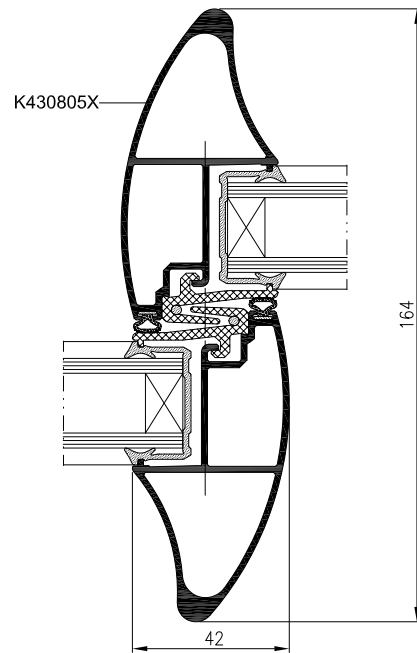
Cross-section of door and window bottom rail



Cross-section of door and window jambs



Cross-section of door jambs





MB-Slider Window is used for producing vertically and horizontally sliding windows in internal and external applications which do not require thermal insulation. MB-Slider Window can be used as reception windows in banks, canteens, receptions, etc. Constructions based on the sliding window system can be quickly and easily prefabricated as they no longer need labor-intensive mechanical processing.

SLIDING WINDOW SYSTEM

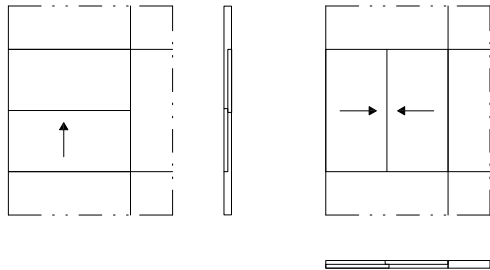
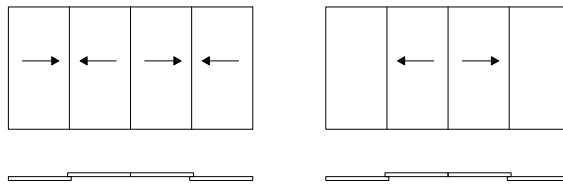
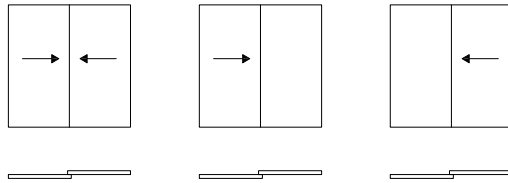
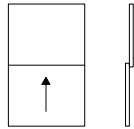
MB-Slider Window features slender leaf & frame profiles. The structural depth of window profiles is 45 mm for frame and 26 mm for leaves. A great advantage of the vertical sliding window system is that its drives are concealed in the leaf profile. This makes the construction even more aesthetically appealing. MB-Slider Window can further benefit from hardware manufactured by industry recognized companies so that the final appearance and functionality of the products meets the highest standards.

Features and benefits

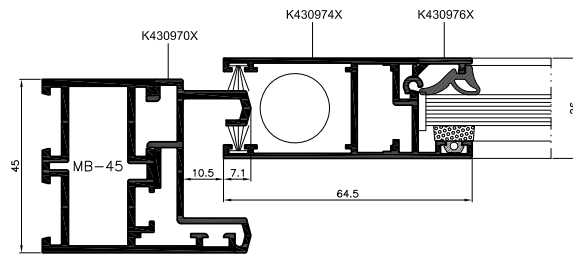
- system-based windows can slide vertically or horizontally
- can be used with any window & door system
- maximum leaf weight in horizontal sliding window: 80 kg
- maximum active leaf weight in vertical sliding window: 25.5 kg
- drive concealed in the leaf profile
- effective water drainage & ventilation system in internal applications
- hardware by recognized companies
- two sizes of leaf profile
- reception windows can be fabricated in MB-45 system frame or as independent constructions - thanks to the system frame
- glazing options from 4 mm to 10.5 mm



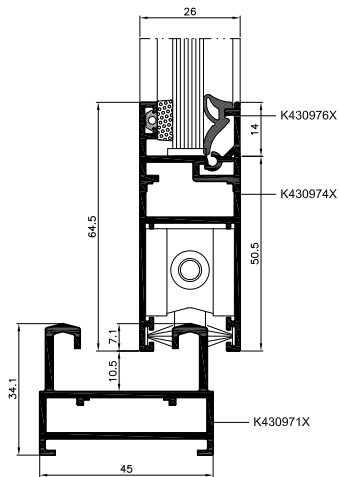
Examples of constructions



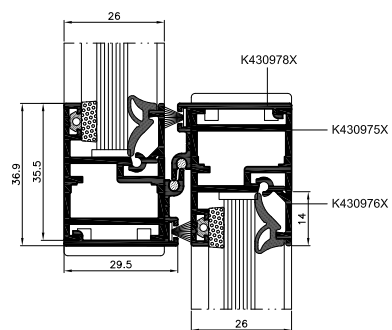
Window in MB-45 system frame -cross-section



Horizontally sliding window - cross-section



Vertically sliding window - cross-section





Sliding doors provide an aesthetic, safe and comfortable solution for their users. In view of their properties they find application both in small objects, as well as in large office buildings and shopping centres. The construction of the MB-DPA system enables execution of doors in two variants: they may be built of thermally insulated profiles belonging to the MB-59S Casement system, MB-70 Casement system or from profiles without a thermal break, which are a part of the MB-45 system. Among assets of this solution are large allowable dimensions and weight of the construction: the leaves may be up to 3000 mm wide and weigh up to 200 kg.

AUTOMATIC AND MANUAL SLIDING DOOR

Construction

The constructional depth of profiles equals 50 mm in the case of thermally insulated profiles and 45 mm in the case of uninsulated profiles. The MB-DPA sliding doors may be fitted in different types of development: they can be installed directly in masonry or in glazed internal partitions of the MB-45 system, in glass and aluminium curtain walls or in display window structures, built either of profiles of the MB-59S, MB-60 or MB-70 systems, depending on thermal insulation requirements. The Aluprof door and window systems may come with wide crosspiece and frame profiles, which allow mounting most of sliding-door automatic gear available on the market. The gear may be freely selected, independent of the type of development.

A wide range of infills

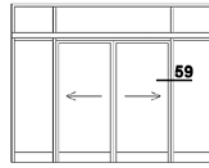
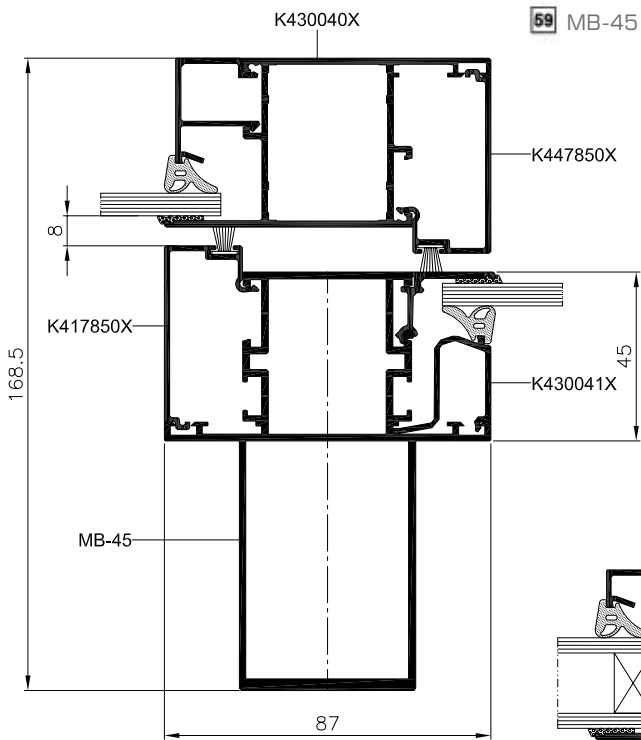
Depending on the choice of variant and requirements, the door leaves may be filled with either single glass panes or with insulating glass units. Glazing range for infills ranges between 4.5 mm and 31.5 mm.

Comfort and safety of use

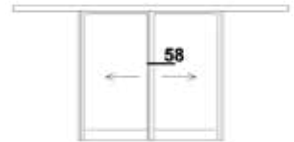
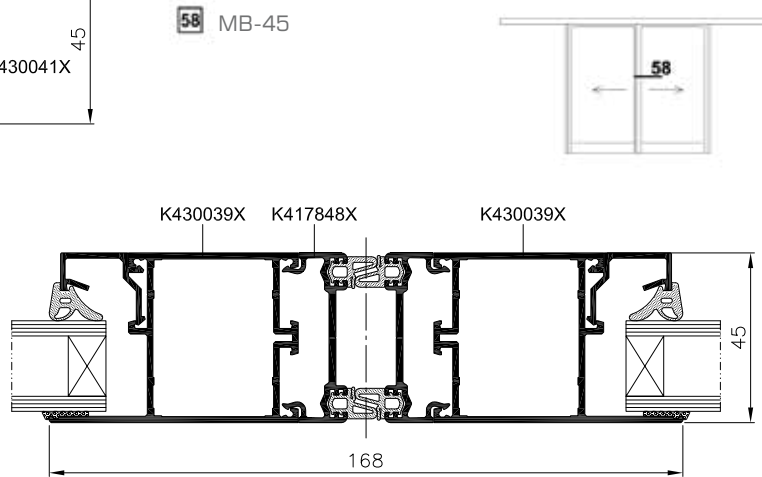
Due to their principle of operation, sliding doors are space-efficient and ensure safety of operation and in automatic version they provide their user full comfort of passage devoid of any architectural barriers. However, in view of a lack of the threshold, doors installed in external developments should be protected against direct exposure to rain water.



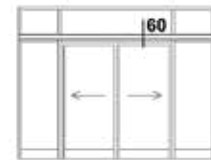
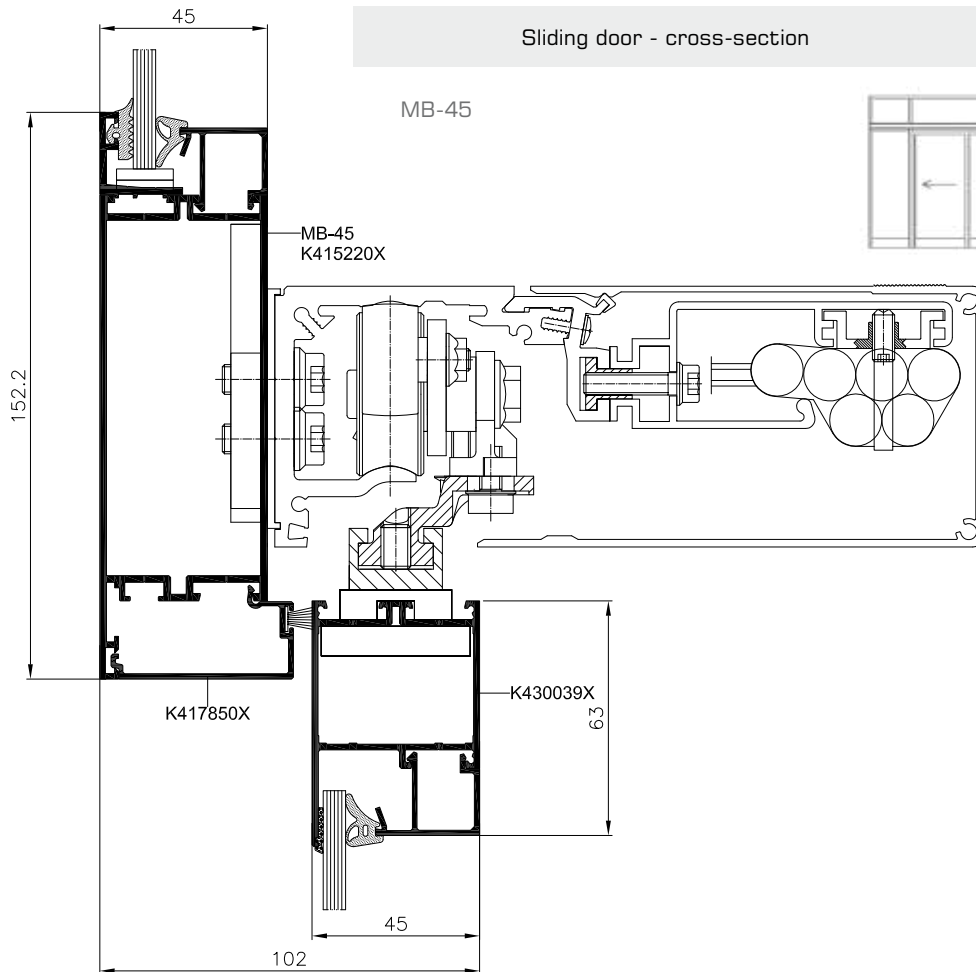
Sliding door – cross-section



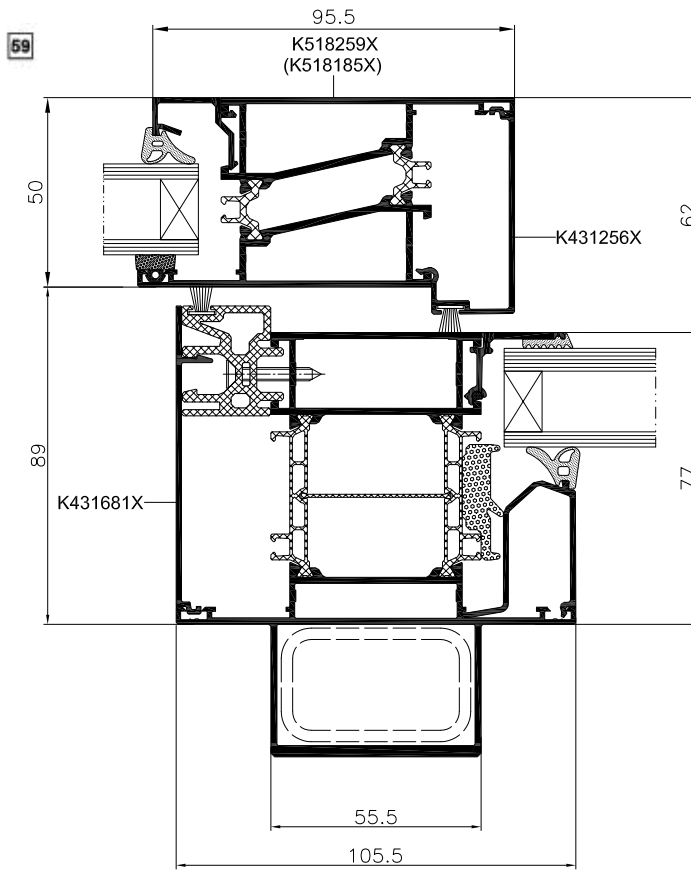
Sliding door - cross-section



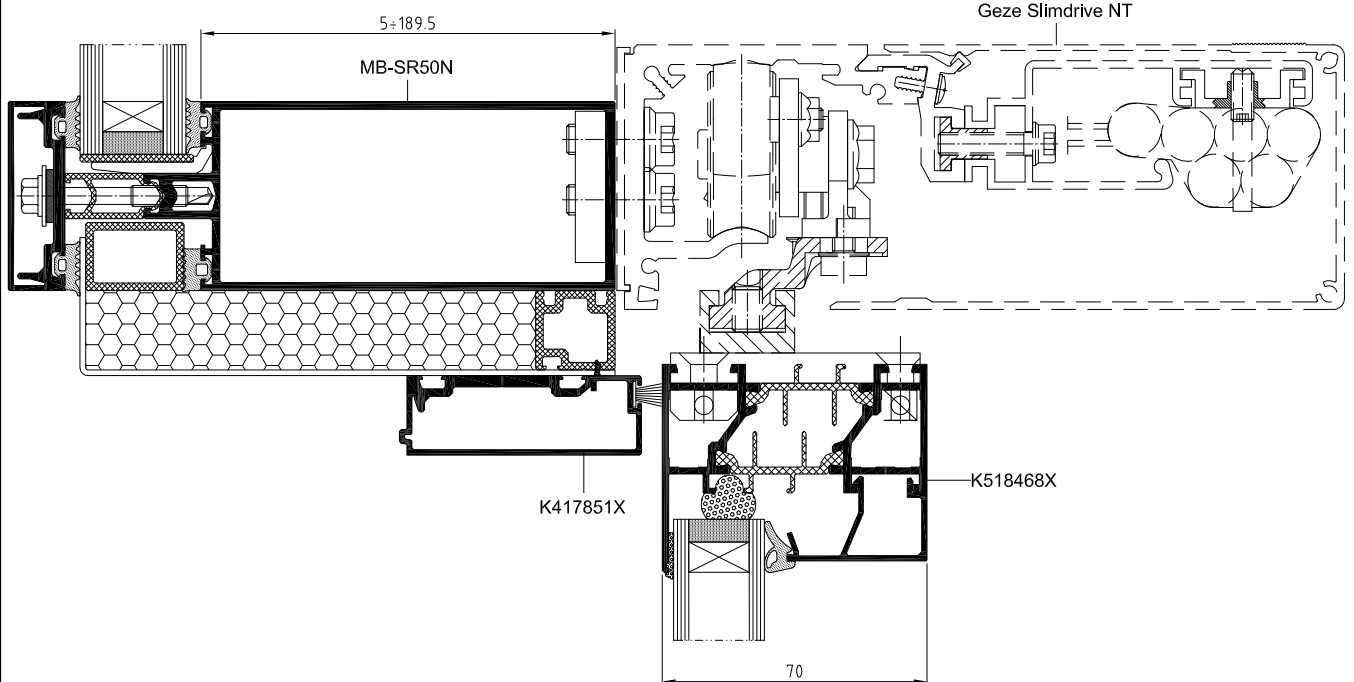
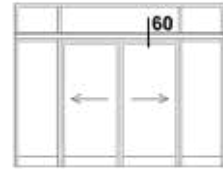
Sliding door - cross-section



DPA doors in MB-86 screen - section



DPA doors in MB-SR50N curtain wall - section





Smoke exhaust windows play a particular role in ensuring safety and comfort for the people staying in the building. When properly selected, they are the elements of gravity ventilation, and when necessary they can help to quickly get rid of smoke & toxic vapours which can be hazardous to health or worse. Smoke exhaust joinery based on MB aluminium systems comes fitted with specialized openers and control systems and has been tested and certified to EN 12101-2. Variety of solutions makes our product well suited for individual or joint integration (with aluminium façades, roof glazings). Our smoke exhaust and ventilation system is supplemented by fresh air doors or windows.

Functionality and good appearance

- wide range of solutions based on i. a. MB-60, MB-60US, MB-70, MB-70US, MB-86, MB-86US window systems or on façade-dedicated window structures
- various opening options: side or inward bottom/top hung casement but also roof slope windows used in sloped façades or skylights
- reliable, silent mechanisms, different types of actuators (chain, spindle or rack)
- possibility of using single, double or triple operators of an opening force up to 3,000N, in synchronized "Tandem"-type systems
- mechanisms allowing windows to open wide
- additional functionalities and security features such as "High Speed" functionality, protection against crushing, extra interlocks
- good appearance and possibility of using small openers, disposed parallelly to the surface of the window
- integration with power supply, control and protection systems e.g. emergency power supply, coupling with the building's ventilation system

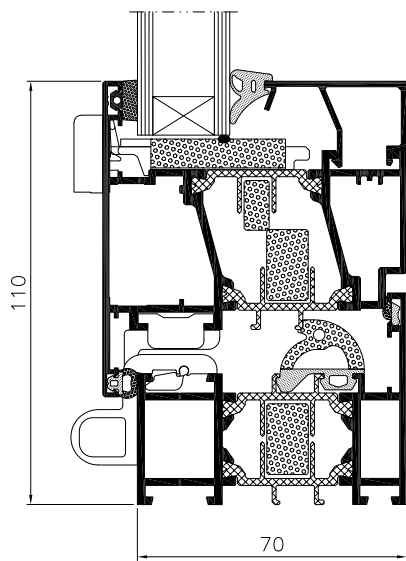
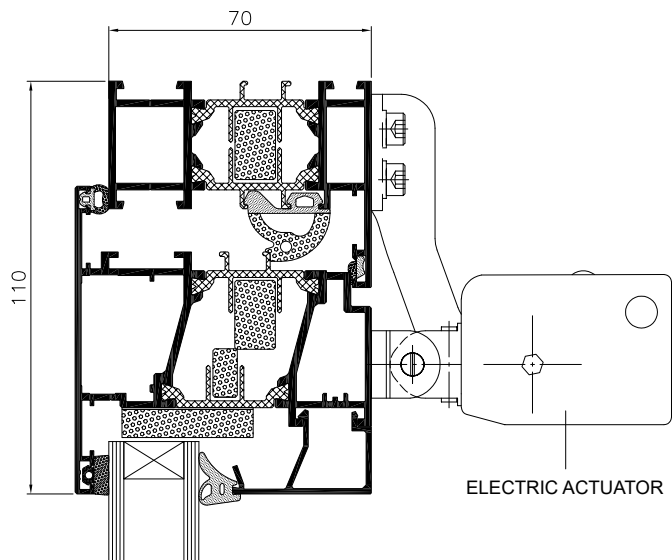


PLAZA SOSNOWIEC, Poland
design / Architekci PALLADO SKUPIN
Biuro Projektów Architektonicznych Sp. z o.o.

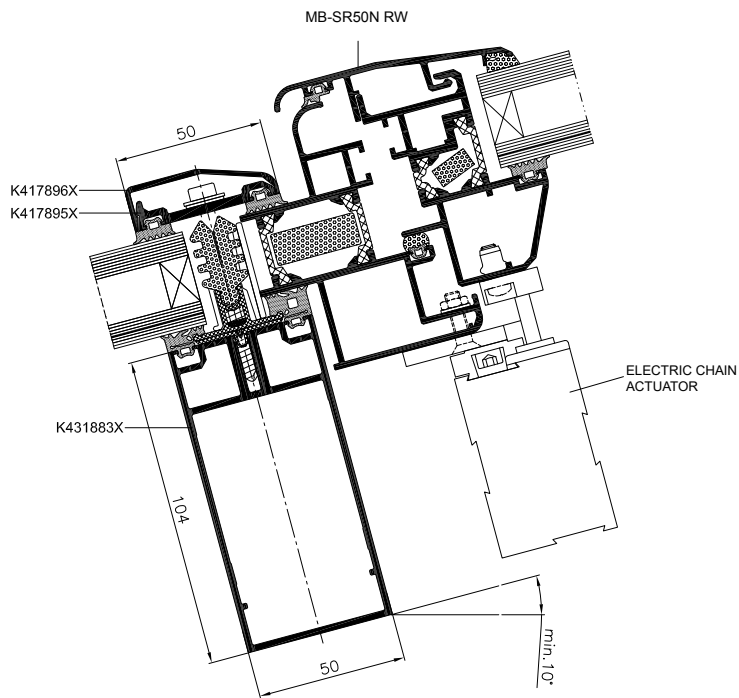
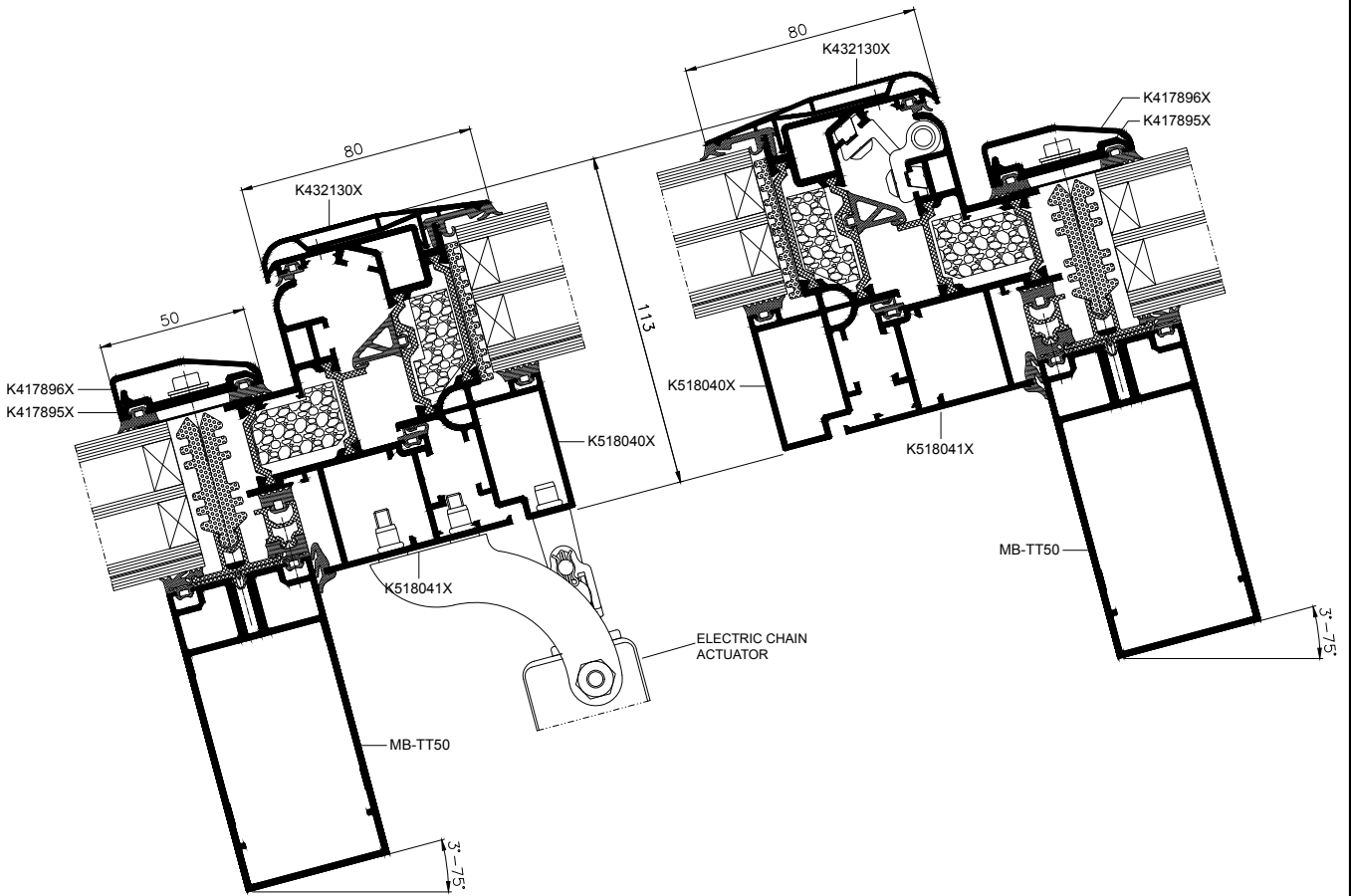
TECHNICAL SPECIFICATION

Maximum dimensions of the casement (horizontal view)	L to 2500 mm, H to 1600 mm
Maximum dimensions of the casement (vertical view)	L to 1600 mm, H to 2500 mm
Maximal dimensions of the roof window	L to 1500 mm, H to 2200 mm or L to 2200 mm, H to 1500 mm
Max. area of the vertical/roof smoke exhaust window	to 4,0 m ² / to 3,3 m ²
Max. opening angle of the smoke exhaust window	to 90°

MB-70HI smoke exhaust window, cross-section



Smoke exhaust roof window, cross-section



S Y S T E M

MB-GLASS BARRIER



MB-GLASS BARRIER-based external balustrades are used on upper floors with opening French doors or floor to ceiling full high windows as a safety element to prevent from falling. Additionally can also help to reduce noise coming from the outside. When attached to aluminium windows, they can perfectly fit their colour. Also, they can be attached to PVC or wooden windows.

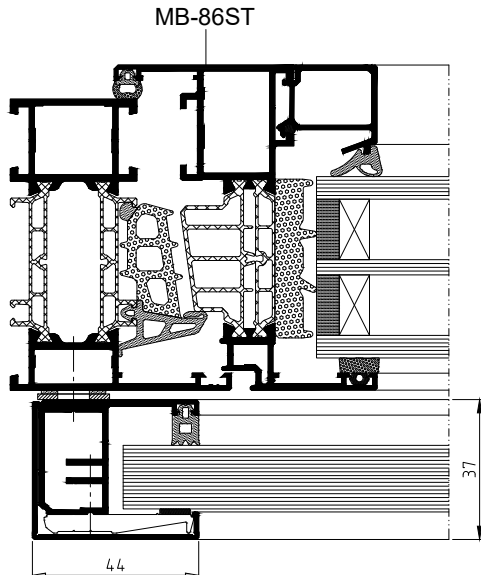
EXTERNAL JULIET BALCONY

Features and benefits

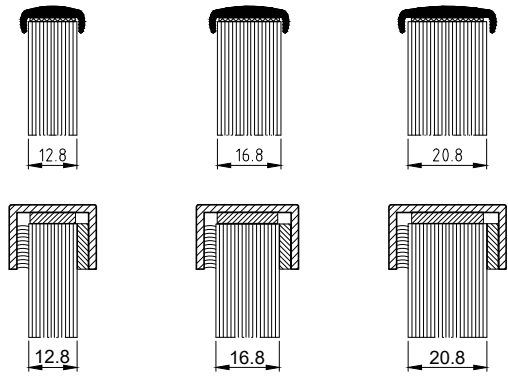
- attached directly to window profiles
- upper edge of the glass protected with aluminium or stainless-steel strip
- can be installed on single or double-leaf constructions
- glass infills increase daylighting
- infills made of bonded glass from 8.8 to 20.8 mm
- can be used in housing, offices and public facilities



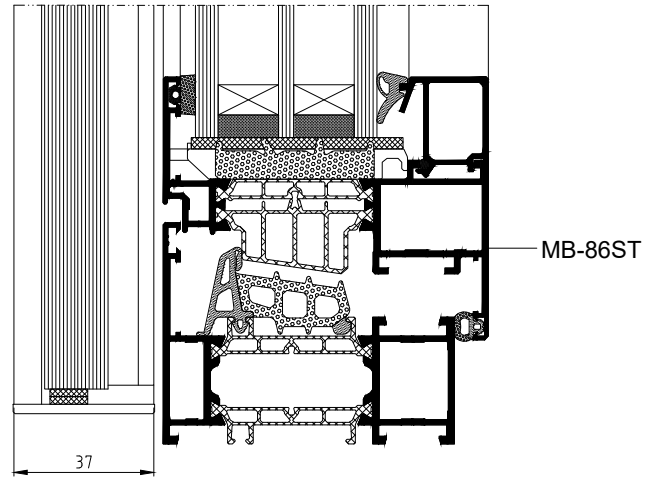
Window with barrier - cross-section



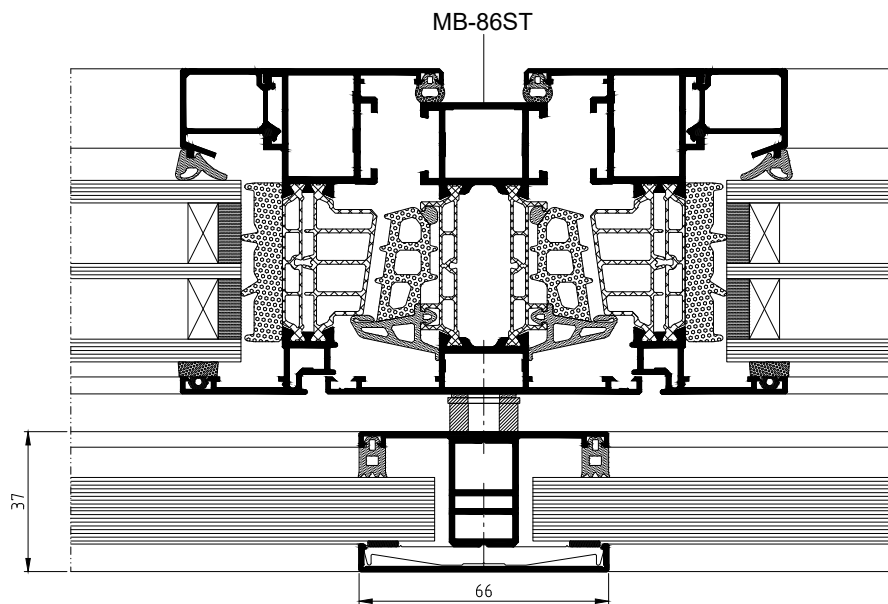
Barrier, top cross-section



Window with H-type barrier - bottom, cross-section



Window mullion cross-section





Energy-saving and passive buildings seek to reduce heat losses due to thermal bridges and leaky connections. But even installing highly insulated fenestration products (windows, doors) may simply be not enough. For this reason, it is recommended to install windows and balcony doors in the thermal insulation area, if possible, extended beyond the face of the wall (moved to the external insulation area of the building), and to tightly connect window and door frames to the wall. The MB-Installation Solution ensures that this installation is carried out easily, quickly and accurately.

A WARM AND TIGHT INSTALLATION SYSTEM

This solution is based on segmented EPS hard polystyrene components with very low heat conductivity $\lambda = 0.032 \text{ W/(m}^2\text{K)}$. It consists in widening the door opening by making a tight supporting frame out of these elements – it's like putting the blocks together. The frame is made of 100 or 200mm wide warm mounting beams, equipped with two types of system anchors (external or internal). These beams, together with their additional mounting elements: bottom beam, inner and outer threshold bases and other connecting elements such as adhesives, PU foams, mounting connectors and sealing tapes, ensure tight and easy installation of windows and doors produced with ALUPROF systems.

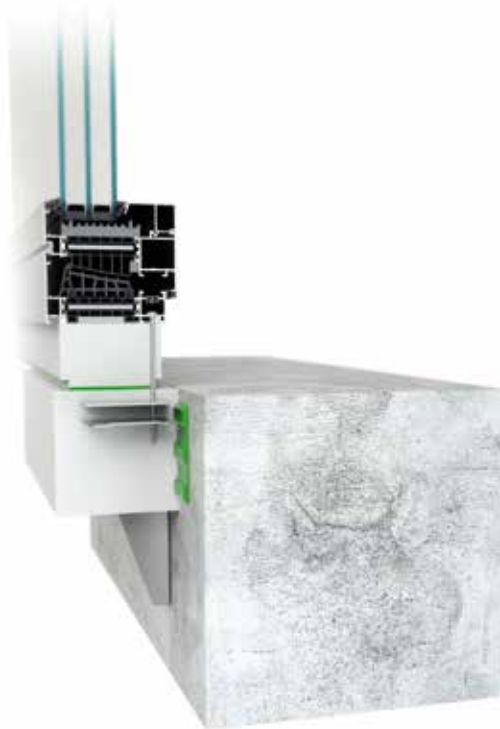
The MB-Installation Solution can be used for masonry walls made of ceramic and carved blocks, light concrete blocks, limestone blocks, solid bricks, concrete and concrete hollow blocks, wooden or steel frame. It can be combined with a seamless system based on polystyrene or wool (ETICS system) or with insulation in the wall.

In addition to installing windows in the insulation area, the MB-Installation Solution allows the woodwork to be installed in the face of a wall, with bottom beam, and sealed with a vapour-permeable and breathable tape.



Examples of window's mounting connections:

Bottom connection, 100 mm beam with external anchor



Bottom connection, 200 mm beam with internal anchor



Examples of window's mounting connections:

Top connection, with vapour-permeable tape and sealing adhesive



Top connection, with jamb external profile

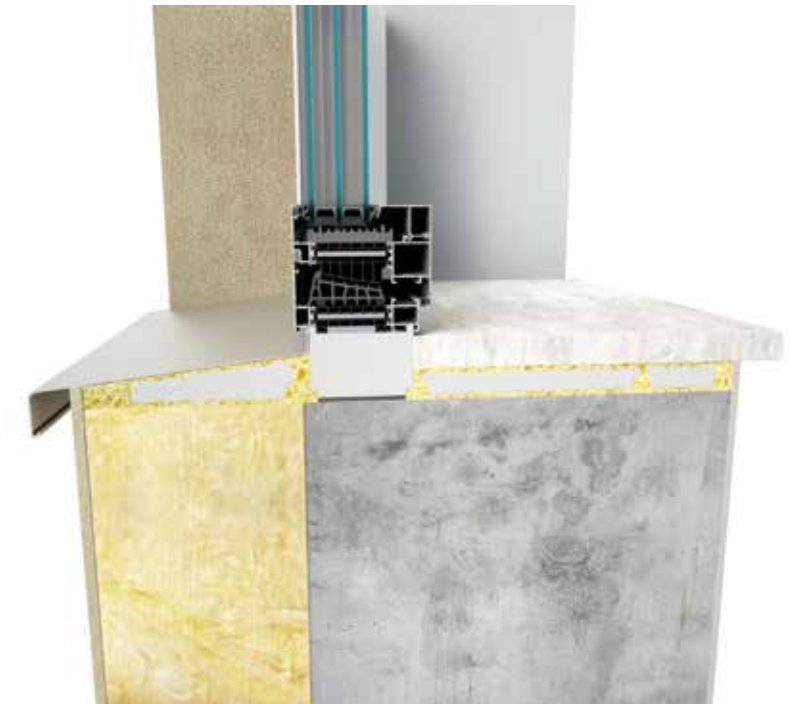


Examples of window's mounting connections:

Window installed in the insulation area, view



Window installed in the face of the wall, view



sun protection, gates
and insect screen
SYSTEMS



www.sunprotect.aluprof.com

ALUPROF
ALUMINIUM SYSTEMS

FRONT MOUNTED ROLLER SHUTTER SYSTEMS

SK, SKE and SKP

ROLLER SHUTTERS SYSTEMS



SK and SKE

SKP



Functionality

SK, SKE and SKP front mounted roller shutters are intended for use in existing buildings. The main advantage of these products is that they do not require any work to existing building or any special preinstallation preparation – they are not integrated with the window. Buyers can thus decide to install front-mounted roller shutters at any time. These solutions can be installed to the window joinery (in the niche) or directly on the wall.

Construction details

The roller shutter curtain is usually made of high quality aluminium sheet filled with foam (profiles PA), that have special twolayer paint coatings (system PU/PA). This makes the product more resistant to abrasion and weathering. Aluprof also offers profiles of greater rigidity and stability, made of extruded aluminium, plus PVC profiles. SK & SKP systems have aluminium roller shutter boxes that are made of high quality aluminium sheets, which provide their high resistance, just as the profiles PA. The roller shutter box in SKE system is made from extruded aluminium that guarantees its durability and resistance to abrasion and weathering. Aluminium roller shutter boxes differ in shape: SK and SKE roller shutter boxes are cut and angled of 45°, and SKP roller-box is semi-oval, which makes it look great in the niche.

Comfort of operation

Depending on the users' needs, roller shutters can be controlled manually or by an electric drive via a wallmounted

transmitter or remote control. Smart control via computer, tablet or smartphone is also an option.

Advantages of application

External roller shutters perform a very important function when it comes to comfort. In adverse weather conditions, they constitute a barrier that efficiently protects the window from the rain, snow or wind. In the summer they perfectly protect interior spaces from excessive sunlight, whilst limiting the use of air conditioning equipment. In addition, a properly selected external roller shutter provides effective protection against burglary. The advantage of these products is the ability to use the roller-independent system "Moskito", that additionally protects interior spaces against insects while maintaining the access of light and air.

Colour scheme

Large selection of colours (standard chart for profiles PA) allow to meet the needs of the most demanding Customers. Woodgrain coatings are also available. Colour coatings on the extruded elements are manufactured using powder coating, which ensures high quality and durability of the product (any RAL colour can be used).

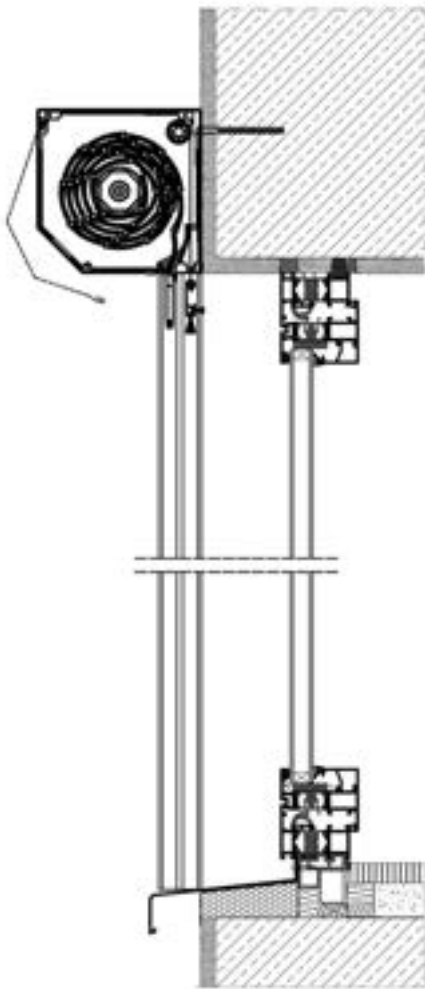
Requirements

SK, SKE and SKP front mounted roller shutters were subjected to initial type testing performed by an accredited research laboratory – test results are available to the buyers. In addition, specific properties were determined eg. thermal resistance, air permeability, acoustic resistance.

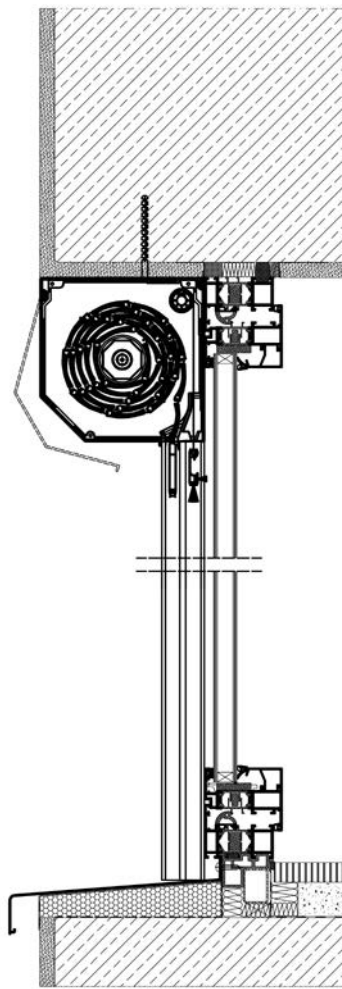


Installation examples in 1-layer wall

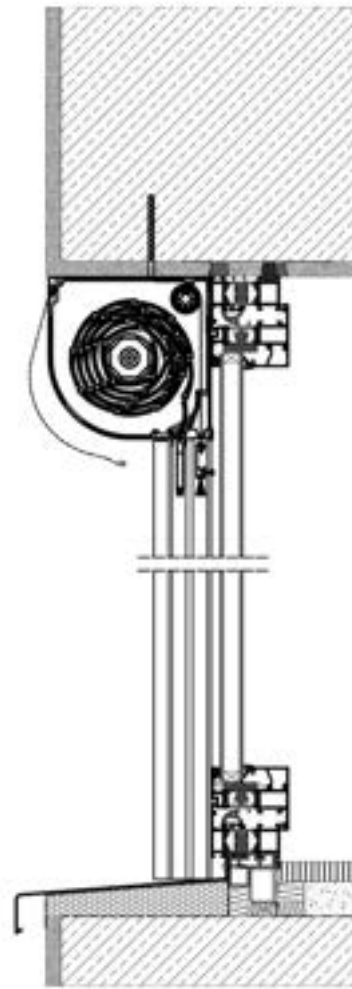
SK + MKT



SKE + MKT

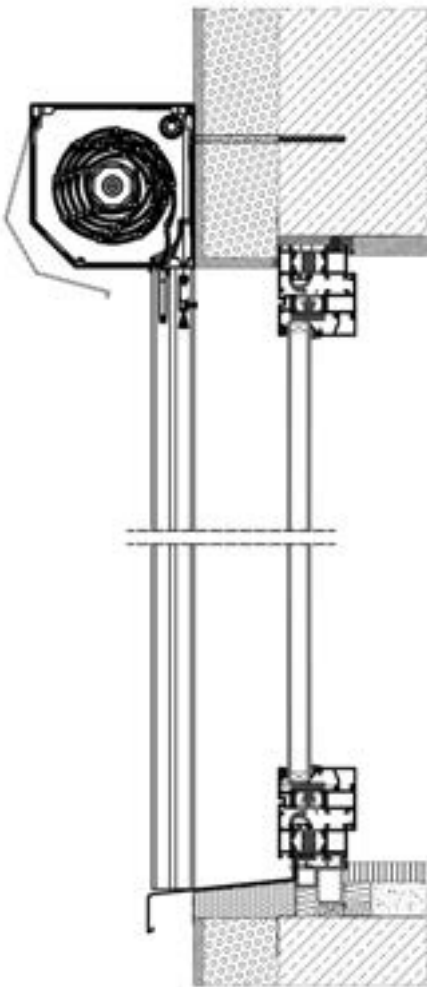


SKP + MKT

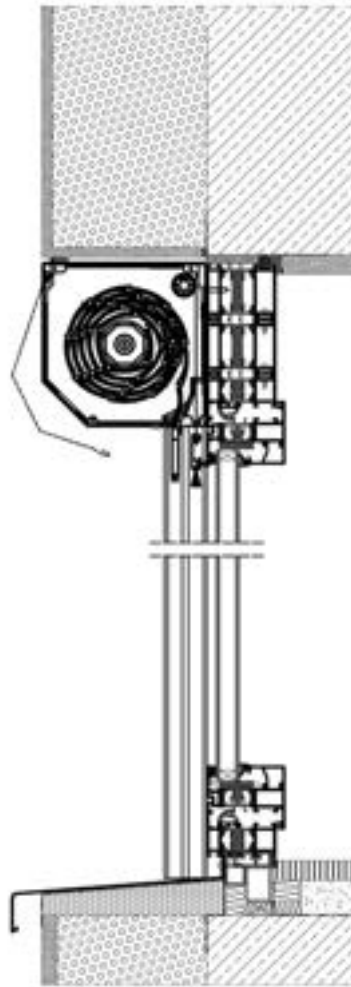


Installation examples in 2-layer wall

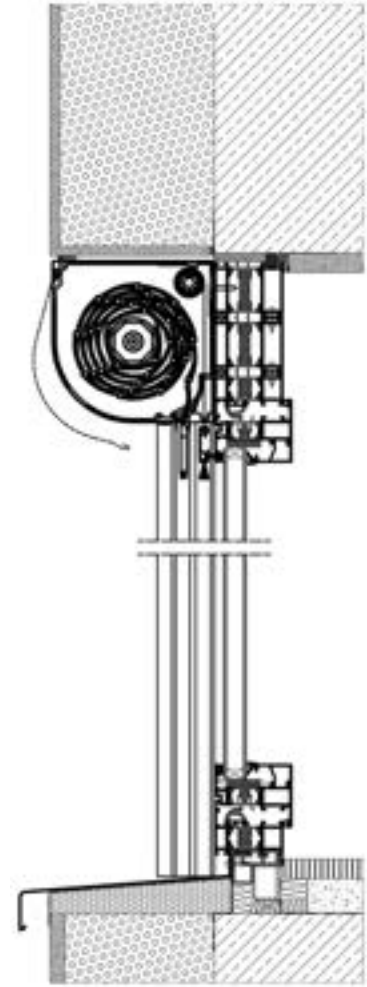
SK + MKT



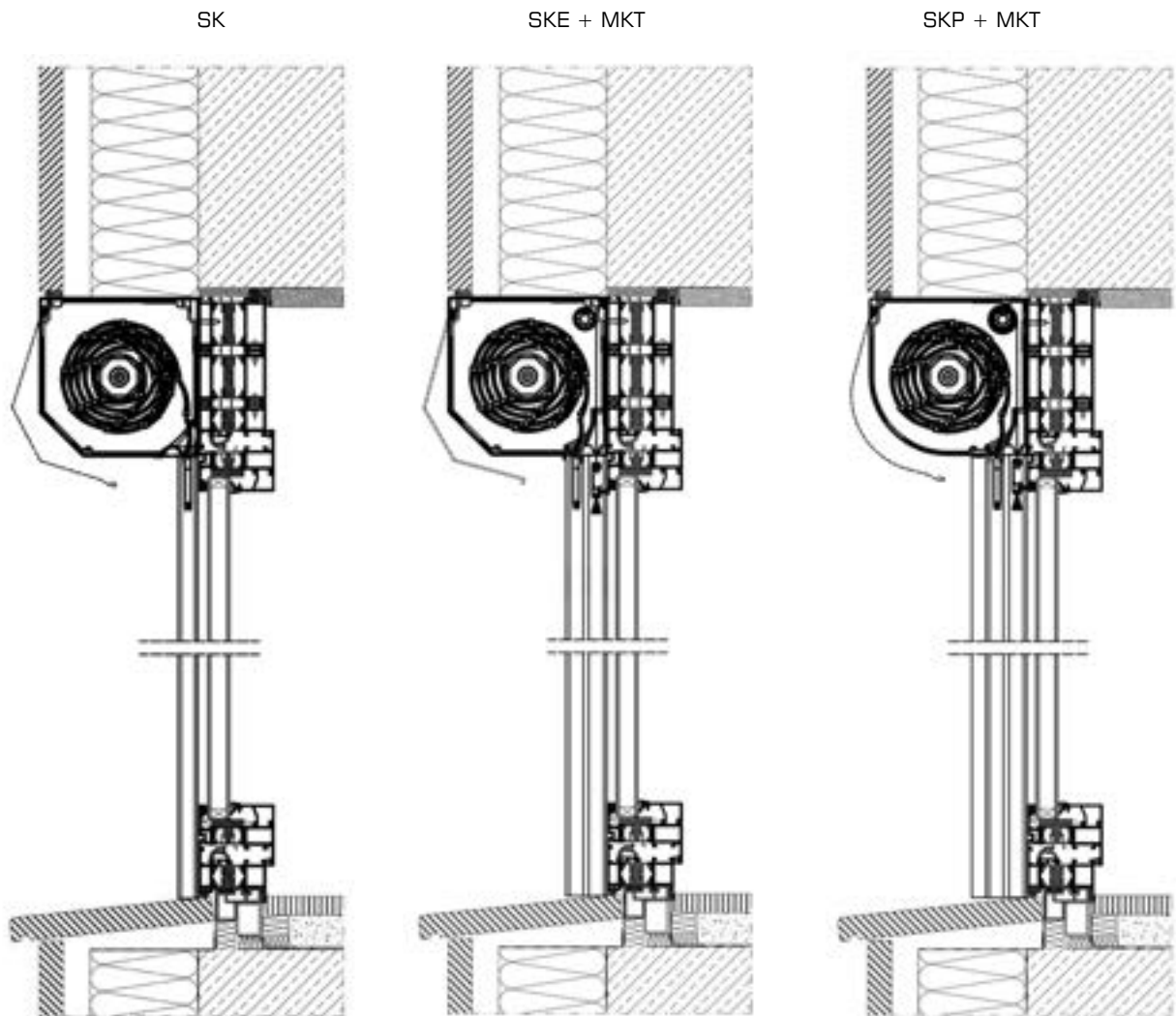
SKE + MKT



SKP + MKT



Installation examples in 3-layer wall



FRONT MOUNTED ROLLER SHUTTER SYSTEMS

SKO and SKO-P

ROLLER SHUTTERS SYSTEMS



Functionality

SKO & SKO-P systems belong to the family of the front-mounted roller shutters, dedicated mainly to existing buildings. As these products are not an integral part of the window and do not require any special pre-installation preparation, they can be installed at any time. Clever design and oval shape make these systems a solution of choice for buyers who want to have their roller shutters on the external wall, as a perfect decorative element.

Construction details

SKO-P roller shutter box is made of high quality aluminium sheet covered with a special, PU/PA technology-based coating that ensures durability and resistance to abrasion and weathering. Unlike, the SKO system box is made of extruded aluminium, which makes it even more rigid and stable. As it is the case for SK and SKP systems, the roller shutter curtain can be made of foam-filled profiles, PVC or extruded profiles.

Comfort of operation

Depending on the users' needs, roller shutters can be controlled manually or by an electric drive via a wallmounted transmitter or remote control. Smart control via computer, tablet or smartphone is also an option.

Advantages of application

External roller shutters serve a very important function when it comes to comfort. In adverse weather conditions,

they constitute a barrier that efficiently protects the window from the rain, snow or wind. In the summer, they perfectly protect interior spaces from excessive sunlight, whilst limiting the use of air conditioning equipment. In addition, a properly selected external roller shutter system provides effective protection against burglary. The advantage of these products is the ability to use roller-independent system Moskito, that additionally protects the interiors against insects while maintaining the access of light and air.

Colour scheme

Large selection of colours (standard chart for profiles PA) allow to meet the needs of the most demanding Customers. Woodgrain coatings are also available. Colour coatings on the extruded elements are manufactured using powder coating, which ensures high quality and durability of the product (any RAL colour can be used).

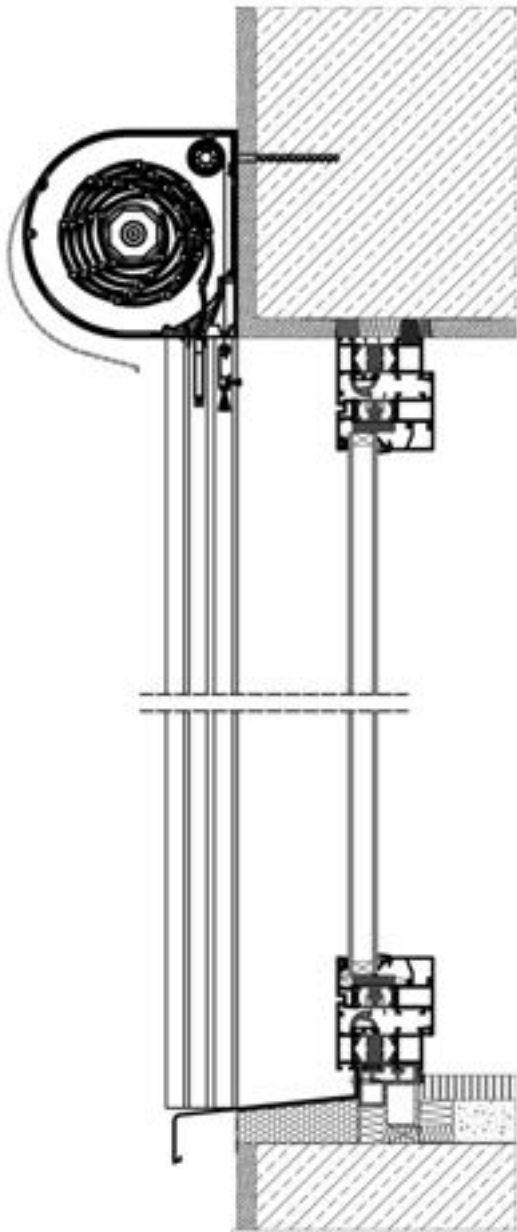
Requirements

SKO & SKP front mounted roller shutters were subjected to initial type testing performed by an accredited research laboratory – test results and available to the buyers. In addition, specific properties were determined: thermal resistance, air permeability, acoustic resistance.

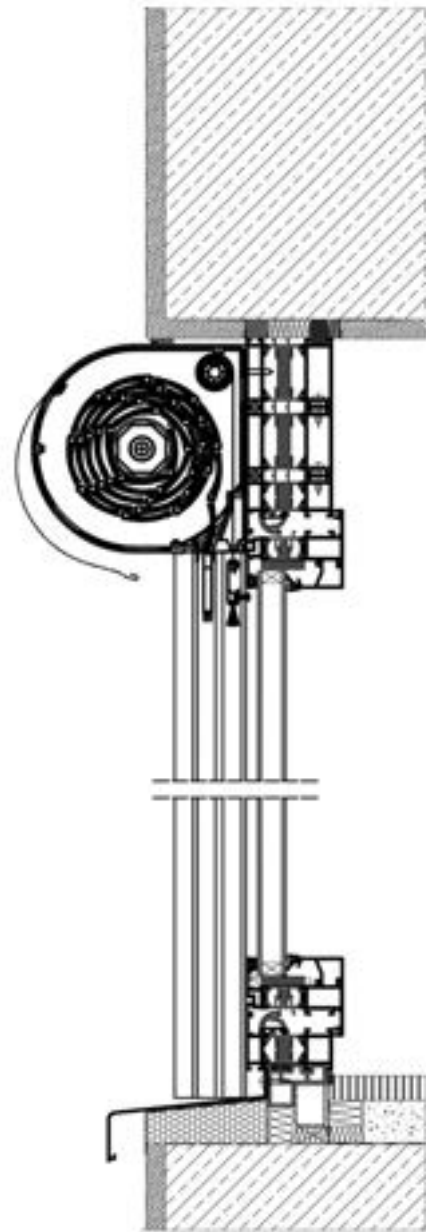


Installation examples in 1-layer wall

SKO + MKT

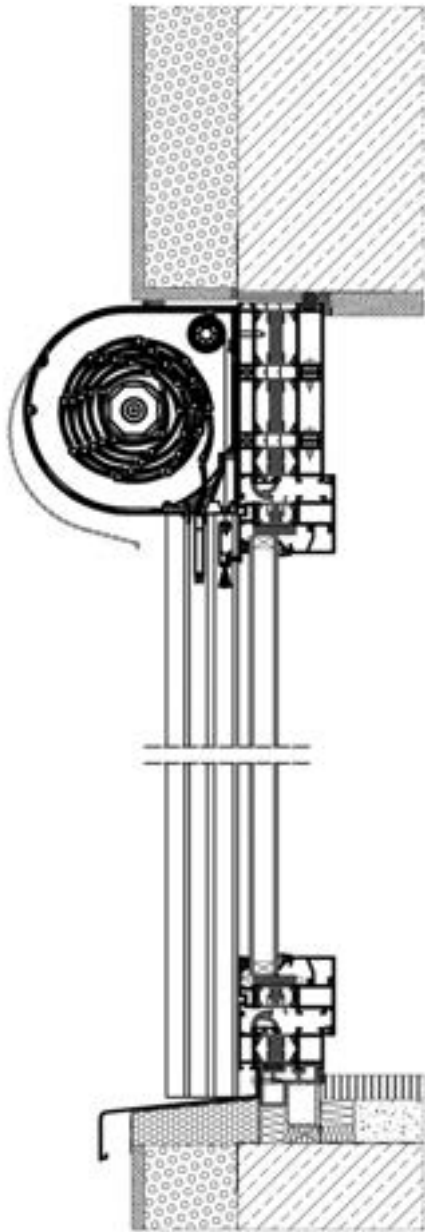


SKO-P + MKT

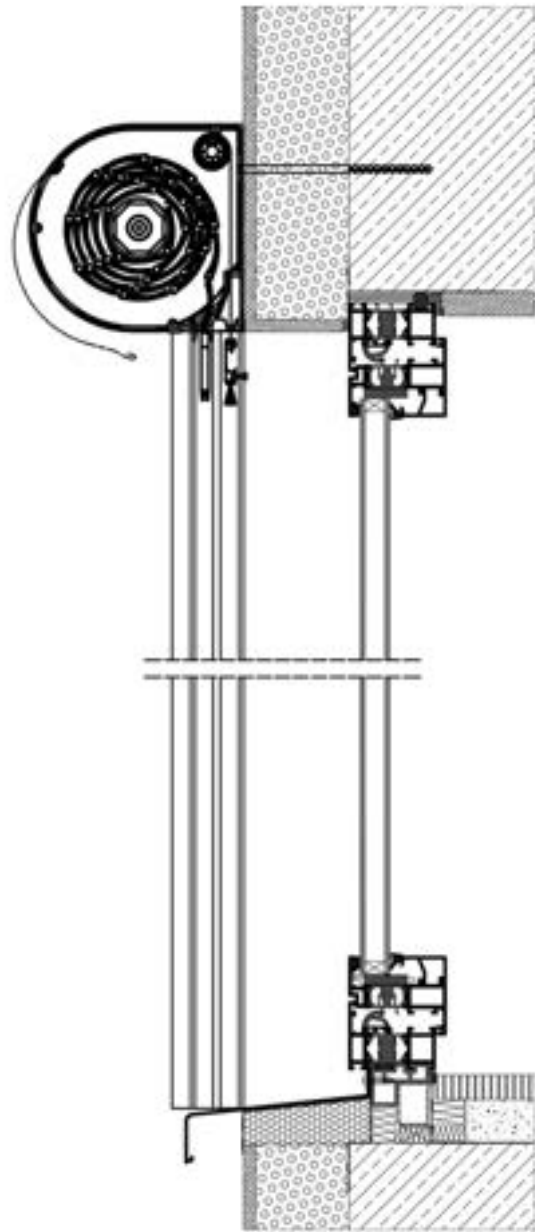


Installation examples in 2-layer wall

SKO + MKT



SKO-P + MKT



TOP MOUNTED ROLLER SHUTTER SYSTEMS

SP and SP-E

ROLLER SHUTTERS SYSTEMS



Functionality

SP & SP-E flush-mounted systems are mainly designed for use in newly erected buildings, but also in existing ones, once the necessary changes are made to the lintel. It is important to plan the use of such solutions, this also applies to the installation method, as early as at the building design stage to allow for the effective use of the product's functional values. SP & SP-E systems bring excellent thermal & sound insulation performance as they do not require any work to existing windows, doors or lintels, and thus they do not affect the building's energy use. What's more, they integrate the building's façade and form an integral part thereof.

Construction details

The front section of the aluminium shutter box is equally a base for any finishing material (plaster, clinker, etc.) so that the box could remain an unnoticed element of the façade. Other elements such as access cover or channels can colour-match the windows. As it is the case for front-mounted systems, the roller's curtain can be made of foamfilled plastic or extruded profiles. Flushmounted system-based roller shutters can be equipped with an insect screen which provides effective protection against insects while maintaining the flow of light and fresh air to interior spaces.

Comfort of operation

Depending on the users' needs, roller shutters can be controlled manually or by an electric drive via a wallmounted

transmitter or remote control. Smart control via computer, tablet or smartphone is also an option.

Advantages of application

External roller shutters are far more efficient than ordinary curtains or shutters – their design produces a sort of airbag between the surface of the window and the curtain making it an excellent insulator. This helps to reduce yearly energy costs up to 30%. Roller shutters significantly contribute to the reduction of heat loss in winter and improve the building's energy use, while in summer, they protect effectively interior spaces from overheating, reducing the consumption of additional cooling equipment.

Colour scheme

Large selection of colours (standard chart for profiles PA) allow to meet the needs of the most demanding Customers. Woodgrain coatings are also available. Colour coatings on the extruded elements are manufactured using powder coating, which ensures high quality and durability of the product (any RAL colour can be used).

Requirements

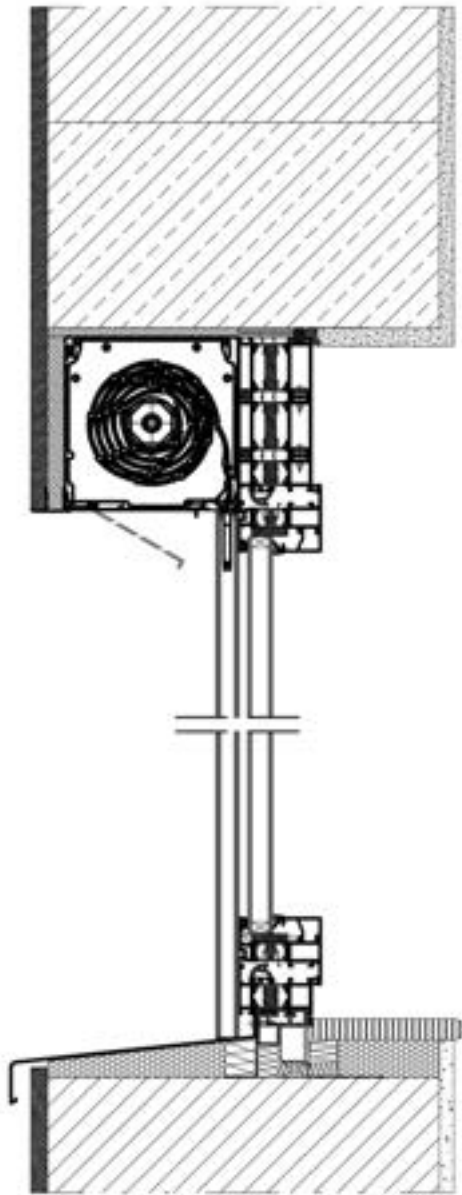
SP & SPE flush-mounted roller shutter systems were subjected to initial type testing performed by an accredited research laboratory – test results and available to the buyers. In addition, specific properties were determined: thermal resistance, air permeability, acoustic resistance. In addition, SP & SP-E roller

shutter aluminium boxes, size: 165 mm or lower are certified by the Passive House Institute PHI Darmstadt, which means that, once certain installation requirements are met, the product can be used in low-energy buildings.

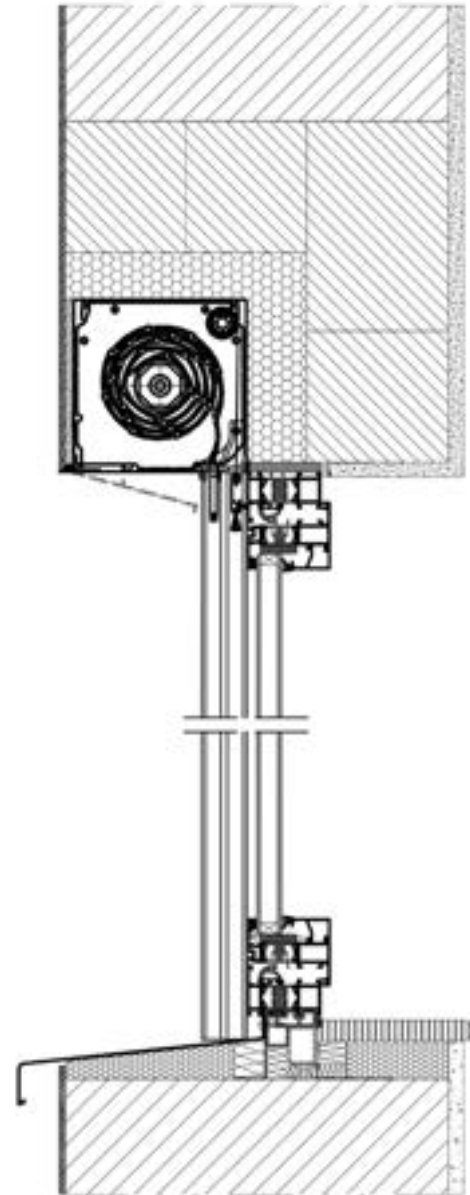


Installation examples in 1-layer wall

SP

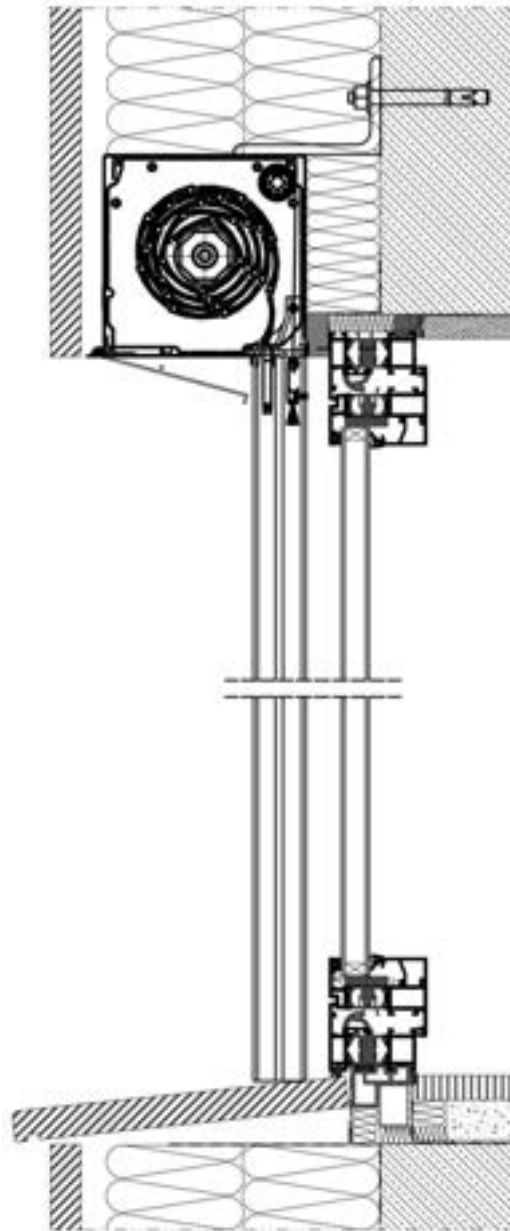


SP-E



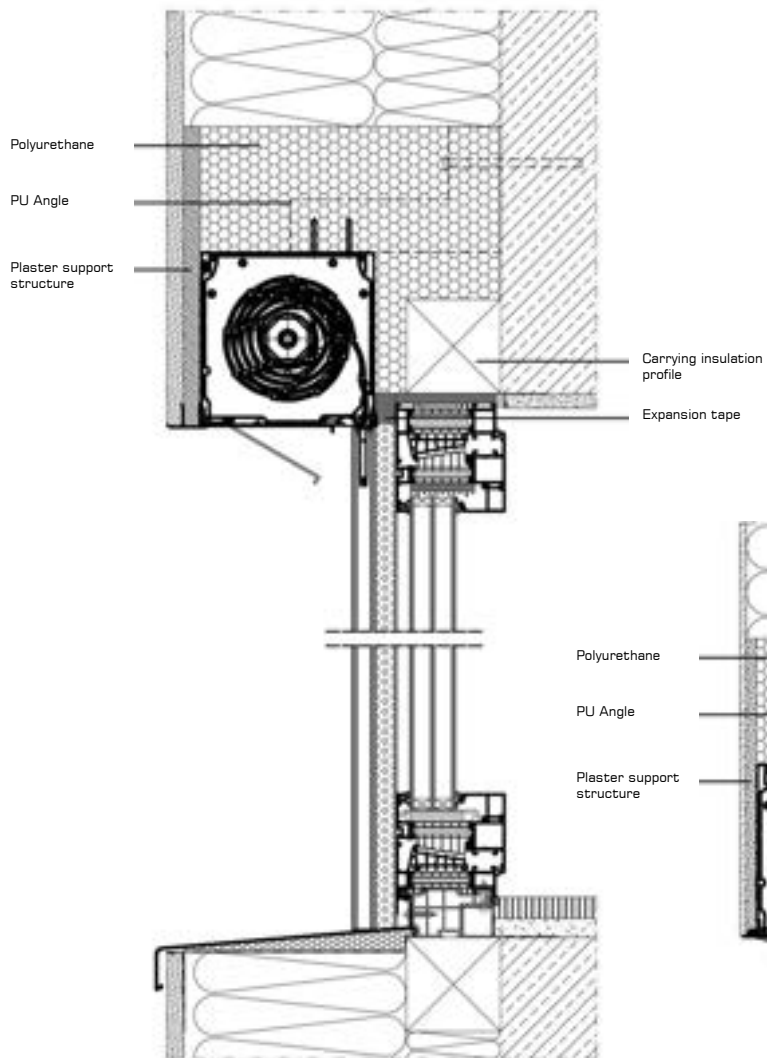
Installation examples in 3-layer wall

SP-E

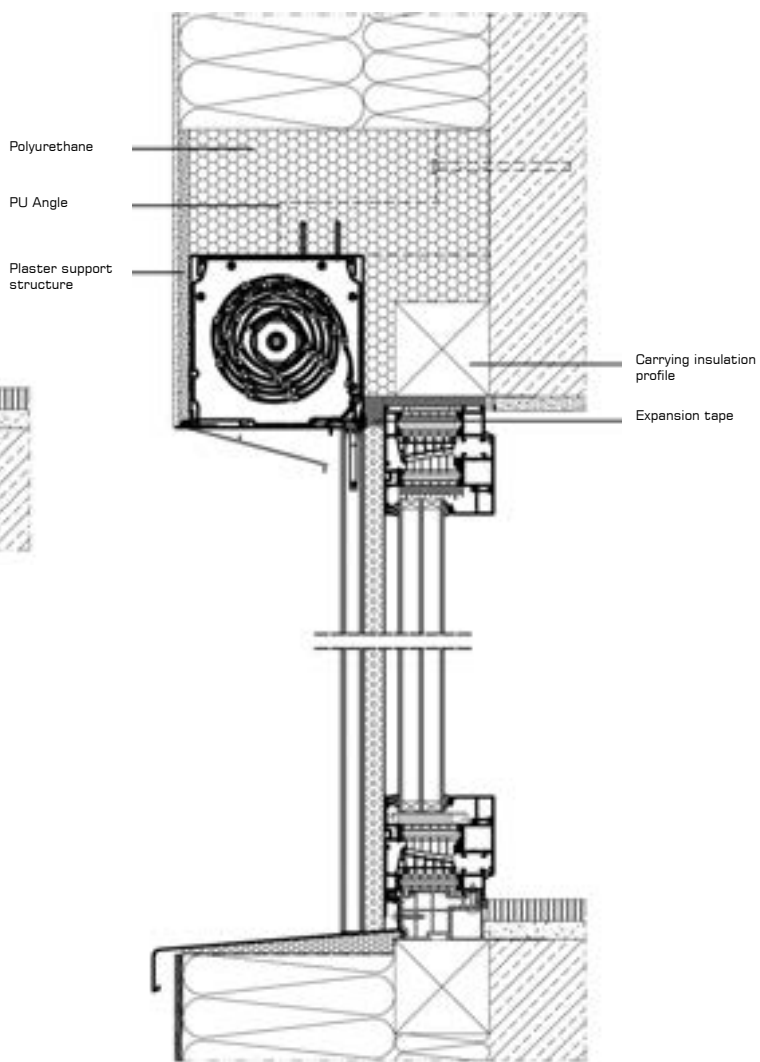


Installation of under plaster systems SP, SP-E
certified by the Passivehaus Institut

SP



SP-E



ROLLER SHUTTER SYSTEM

SKB STYROTERM

ROLLER SHUTTERS SYSTEMS



Functionality

The SKB Styroterm top-mounted roller shutter system is a highly technologically advanced solution, which was developed with a view to improving the energy balance of the building. The product can be used both in newly erected buildings, as well as in those that already exist during replacement of window joinery. As in the case of the Opoterm system, the installation of roller shutters involves direct installation of the shutter box on the window frame by means of an appropriately selected adaptation profile. Aluprof's offer includes several options, which are adjusted to 90% of profiles available on the market. The SKB Styroterm system has been designed to be completely insulated, so that the shutter box remains an unnoticeable element of the building façade.

Construction details

The main element of this product is a shutter box, which was made of a material specially designed at the request of Aluprof, characterized by very good thermal properties. It is available in two sizes: 260 × 260mm and 300 × 300mm. The advantage of the new product is also the possibility to choose the revision flap from the inside or outside of the room, which is extremely important in the case of maintenance services. The well thought-out system design makes it possible to use the mechanism of façade shutters in the box. As a result, external roller shutters and façade

shutters can be aesthetically combined on the same façade, ensuring homogeneous appearance of the building façade. The roller shutter's curtain can be made of foam filled profiles and plastic profiles. Roller shutters in the STYROTERM system can be equipped with insect screens installed in a shutter box. Due to the click technology it is very fast and easy to install.

Operation simplicity

Depending on the needs of the users, the roller shutters can be controlled manually, via an electric motor via a wall transmitter or remote control, as well as through the use of intelligent control via a computer, tablet or smartphone.

Advantages of application

Roller shutters in SKB Styroterm system are an extremely versatile solution. In winter the system reduces heat loss through windows and doors, while in summer it protects rooms against overheating. This allows for significant savings of up to 30% per year. What is more, due to its integration with the insect screen, it provides a barrier that protects the interior of the house from the presence of annoying insects.

Colour scheme

Large selection of colours (standard chart for profiles PA) allow to meet the needs of the most demanding Customers. Woodgrain coatings are also available. Colour coatings on the extruded elements are manufactured using powder coating,

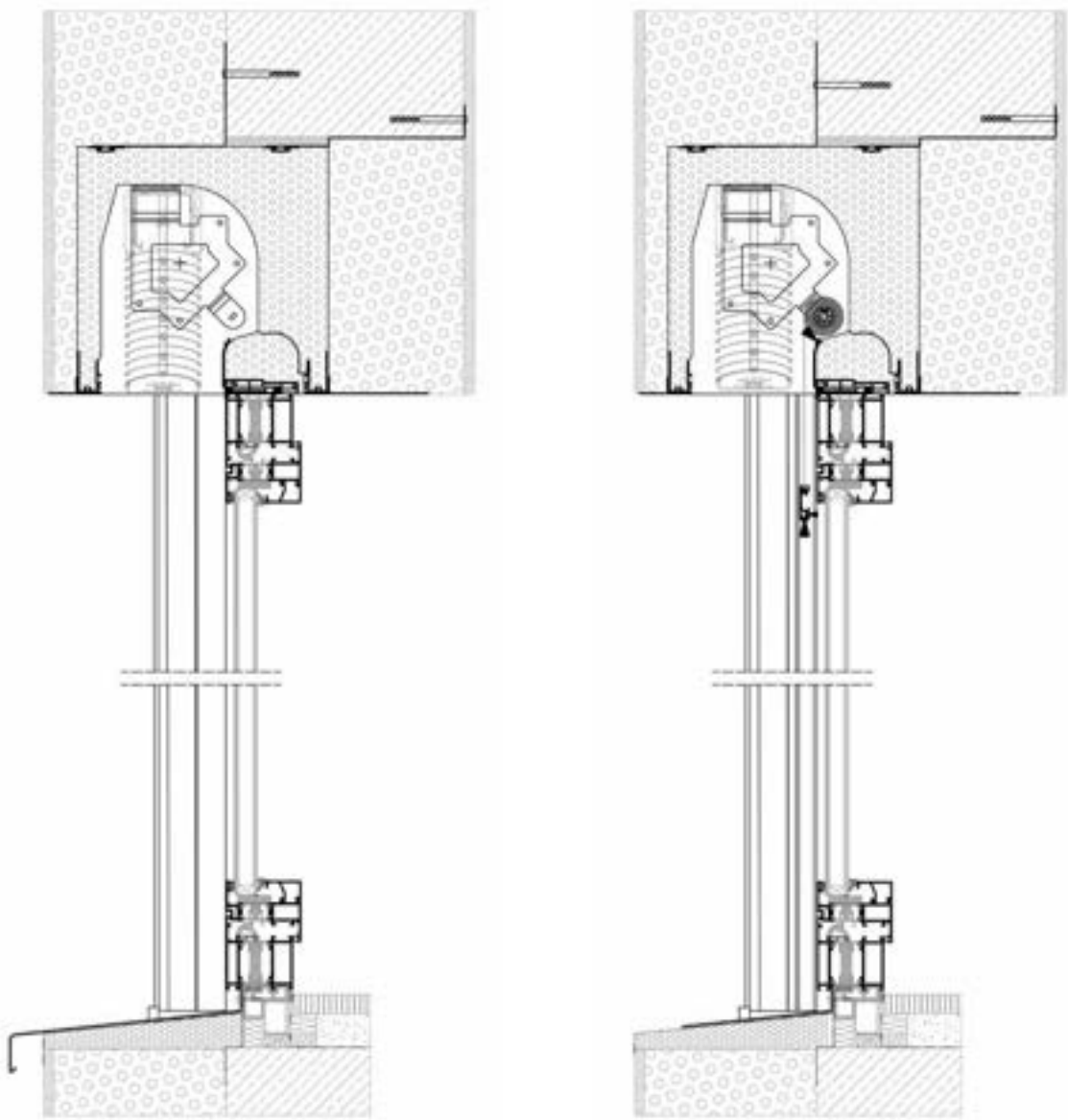
which ensures high quality and durability of the product (any RAL colour can be used).

Requirements

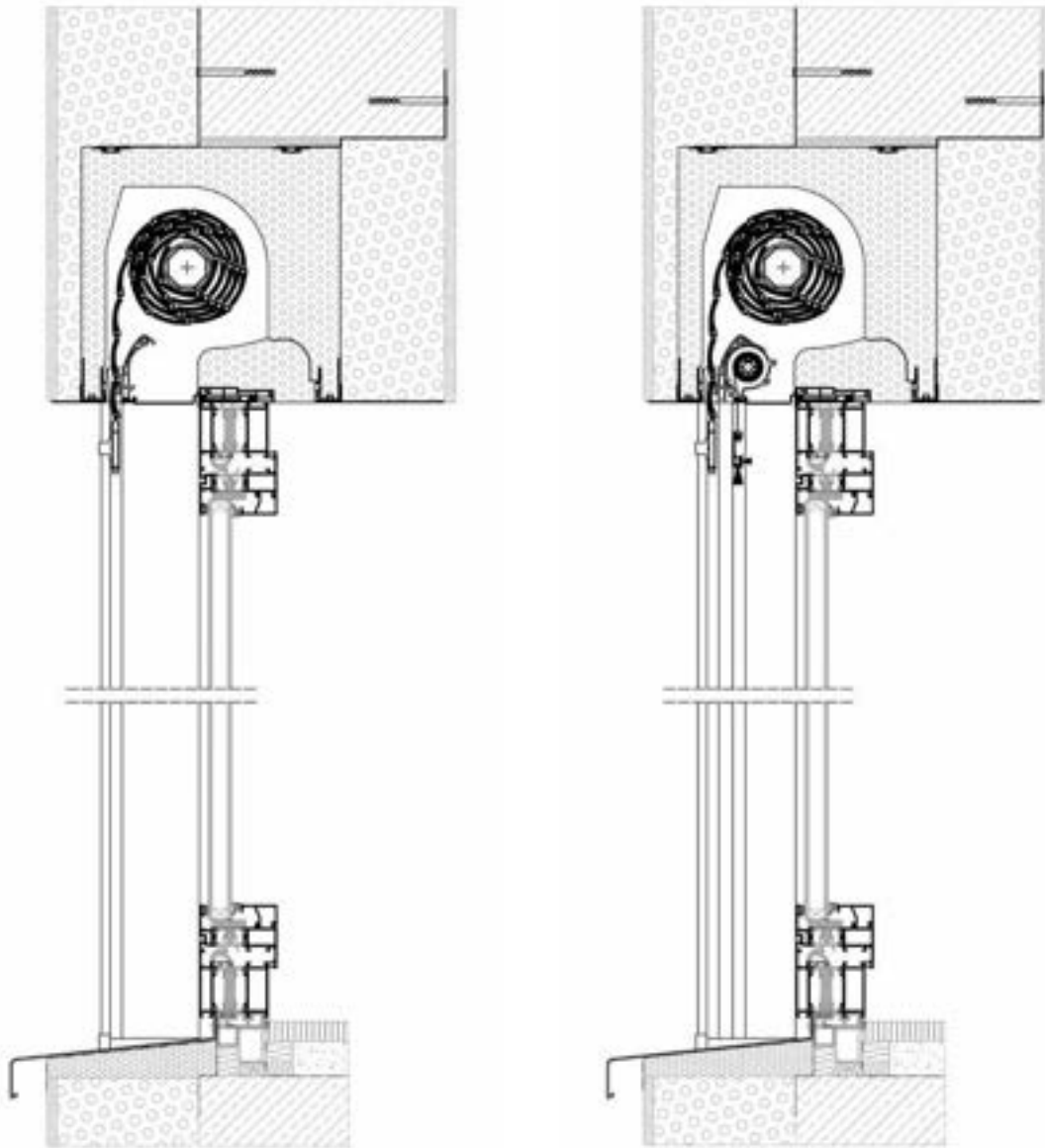
Roller shutters in the SKB Styroterm system have preliminary type tests, which have been carried out by an accredited laboratory and are available for system recipients. In addition, special parameters such as thermal resistance, air permeability or acoustic resistance have been determined. Studies at a renowned research institute IFT ROSENHEIM have shown that the proposed solution has an extremely high coefficient of thermal transmittance with U_{SB} from only 0.29 W/(m²K), which places the system in the first place among other products of this type.



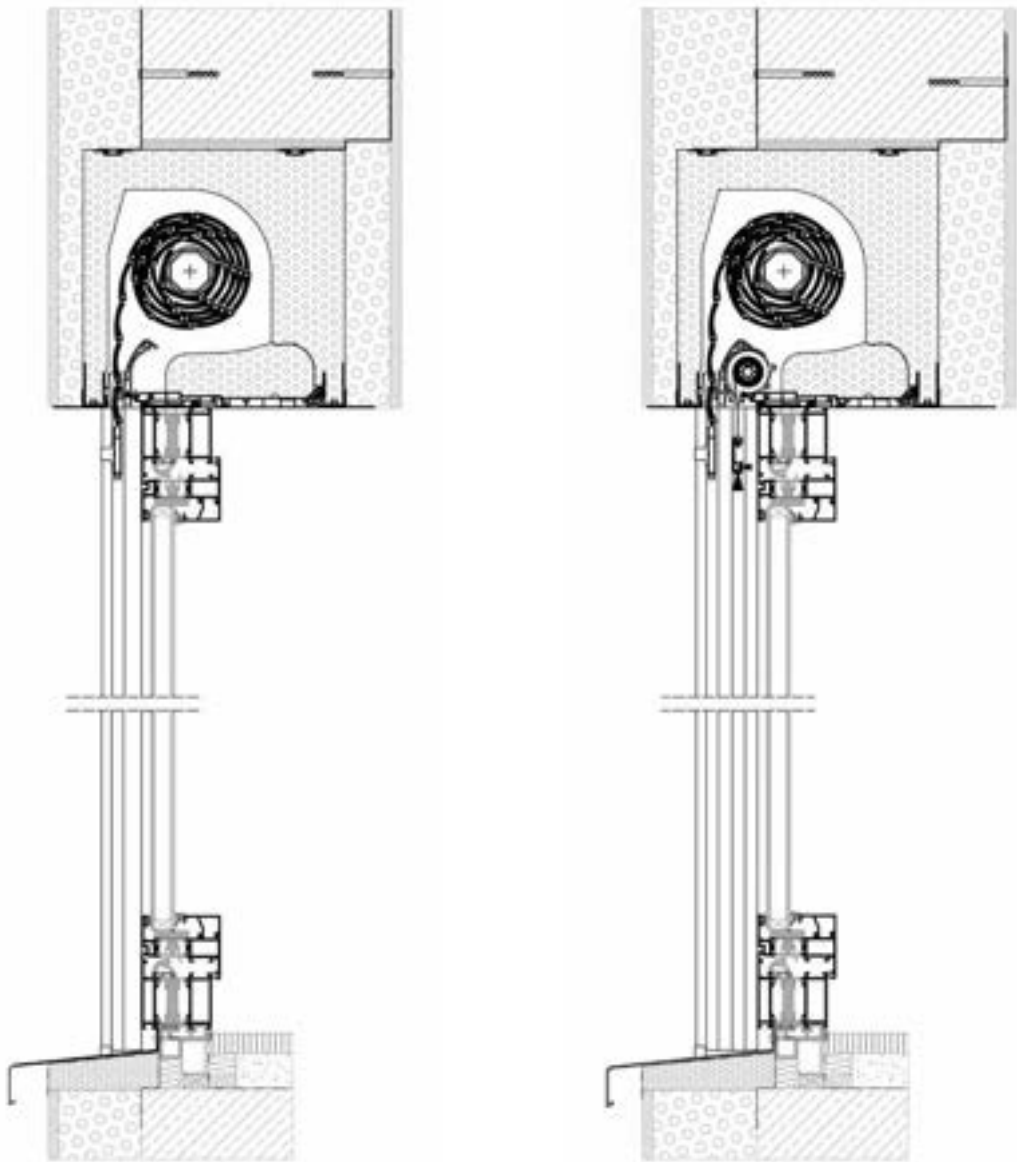
Installation examples in 2-layer wall



Installation examples in 2-layer wall



Installation examples in 2-layer wall



PVC ROLLER SHUTTER SYSTEM

SKT OPOTERM

ROLLER SHUTTERS SYSTEMS



Functionality

SKT OPOTERM top mounted roller shutter system is intended for both newly constructed and refurbished buildings (replacement of windows). This on-window mounted system has its box direct installed on the window frame by means of an appropriate profile. These profiles are compatible with the majority of window and door frame profiles (aluminium, wooden & PVC). This universal and versatile product can be installed unintegrated, partially or totally integrated, as the front face of the box is also a base for any finishing material (polystyrene, plaster, clinker, etc.) so that it remains unnoticed element of the façade.

Construction details

These boxes are made of high quality PVC components and are characterised by an increased thermal insulation. Its clever design allows to fabricate a single roller shutter, as well as a set of rollers shutters contained in only one box. SKT Opoterm's particular advantage is the ability to choose how to access the product from the bottom or from the front of the box, this before the final installation of the roller shutter. The installation is made directly to the window frame using an appropriate profile. Special profiles offered by Aluprof are compatible with the majority of window & door systems (aluminium, wooden & PVC joinery). The roller's curtain can be made of high quality aluminium sheet that ensures durability and resistance to abrasion and weathering or made of

PVC profiles. The system enables the integration with insect screens, which ensures effective protection against insects.

Comfort of operation

Depending on the users' needs, roller shutters can be controlled manually or by an electric drive via a wallmounted transmitter or remote control. Smart control via computer, tablet or smartphone is also an option.

Advantages of application

SKT OPOTERM top mounted roller shutter systems ensure high thermal insulation that enable to lower the costs of heating in winter and reduce solar gains inside the rooms. The possibility of direct integration with Mosquito system guarantees the insect protection while keeping the access to the light and fresh air.

Colour scheme

Large selection of colours (standard chart for profiles PA) allow to meet the needs of the most demanding Customers. Woodgrain coatings are also available. Colour coatings on the extruded elements are manufactured using powder coating, which ensures high quality and durability of the product (any RAL colour can be used).

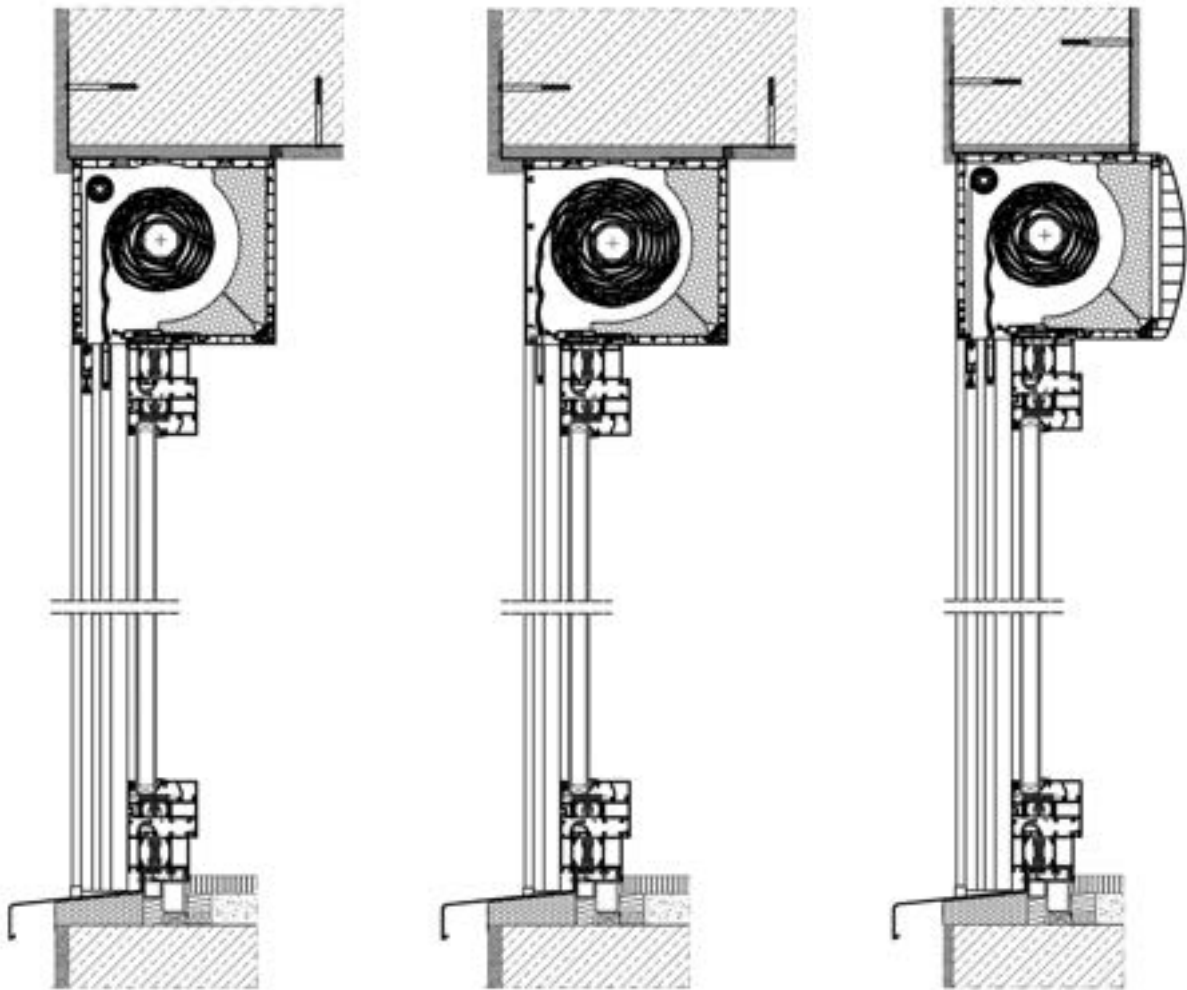
Requirements

SKT OPOTERM top mounted roller shutters system was subjected to initial type testing performed by an accredited research laboratory – test results and available to the buyers. In addition, specific

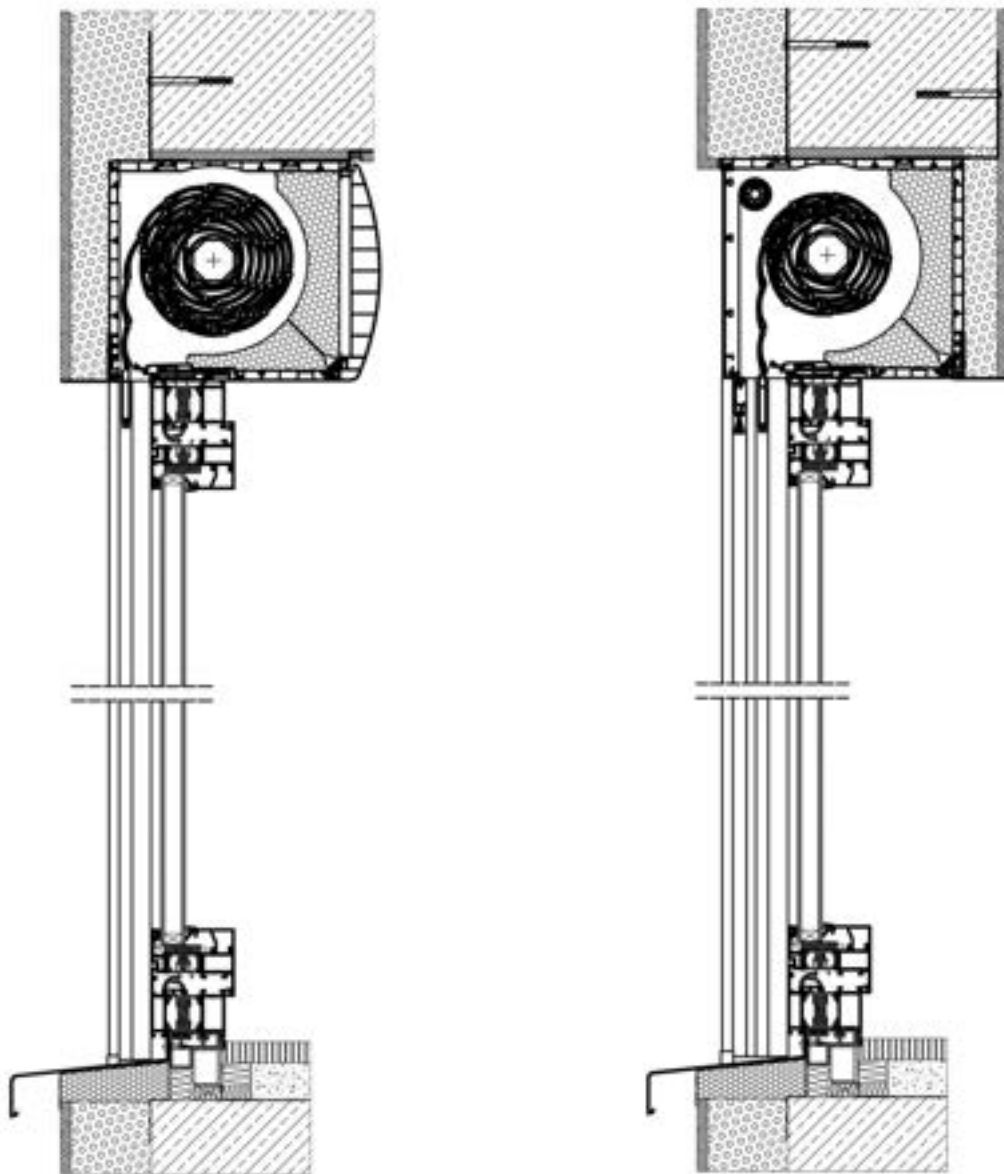
properties were determined: thermal resistance, air permeability, acoustic resistance. This system has received a thermal transmittance-related certificate from renowned research centre IFT Rosenheim. The rollerboxes were tested using EPS (Neopor, thermal insulation material) – the tests were based on the current standards and calculation methods. The product demonstrated an excellent performance, e.g. the SKT 230/170 box with integrated insect screen obtained a U_{sb} coefficient of $0.73 \text{ W/(m}^2\text{K)}$.



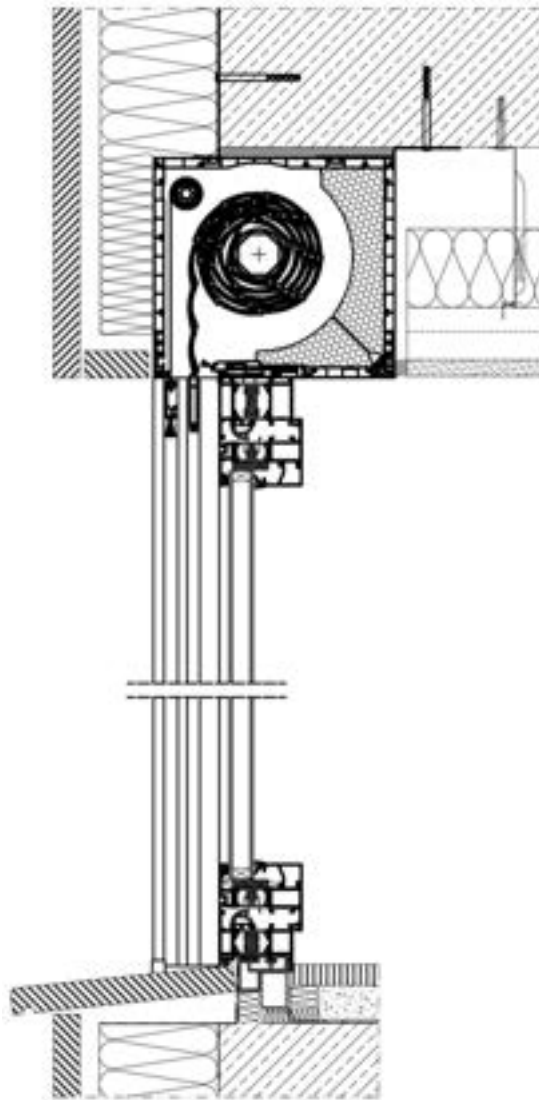
Installation examples in 1-layer wall



Installation examples in 2-layer wall



Installation examples in 3-layer wall



ANTI-BURGLARY SYSTEMS

SAFETY PREMIUM and SAFETY PLUS

ROLLER SHUTTERS
SYSTEMS



Designed for users with special requirements for home safety. As a manufacturer of shutter systems, we decided to go a step further and offer a product that would be an excellent decorative element and yet provide efficient protection against burglary at the same time.

SAFETY PREMIUM

Anti-burglar roller shutter system Aluprof Safety Premium is a highly technically advanced product, which thanks to the design of innovative structural elements has successfully passed specialized research and was the first system in Poland to receive the RC3 class of burglary resistance. Effective protection is guaranteed here by, among others, reinforced construction of guide channels, which does not allow for bending and pulling out the roller shutter profiles and special reinforcement in the endslat, ensuring high rigidity and stability of the curtain. In addition, adequately strong and durable construction of roller shutter curtain made of extruded aluminium profiles prevents any damage during impact. In addition, the latch system in the lower part of the roller shutter prevents the closed roller shutter from being lifted, which guarantees effective protection of the house.

SAFETY PLUS

Aluprof Safety Plus anti-burglar roller shutter system is a proposal addressed to investors for whom security issues are of vital importance and are looking for a certified solution at an affordable price.

The main advantage of the product is a specially developed latch system in the endslat, which makes it difficult to lift the roller shutter curtain when attempting to open manually the shutter from the bottom and enter into the property. Thanks to the reinforcement of the guide channels and the bottom endslat, it is also difficult to pull out single roller shutter profiles and thus dismantle the curtain. Its robust and durable construction, made of extruded profiles PE41 provides increased resistance to impact. The proposed solution has been successfully tested in a research institute and has been certified in the RC2 burglary resistance class.

Operation simplicity

Anti-burglar roller shutters can be controlled only by an electric drive via a wallmounted transmitter or remote control. Smart control via computer, tablet or smartphone is also an option.

User properties

The anti-burglar roller shutters can be adapted to various systems, in which the curtain is rolled back into an aluminum box installed on the wall or frame. The technology and well-thought out design allow the boxes to be concealed as much as possible. A wide range of compatible systems ensure aesthetic compatibility with the curtain wall.

Color palette

The profiles are available in a wide range of colors, therefore, they can perfectly match the windows and doors.

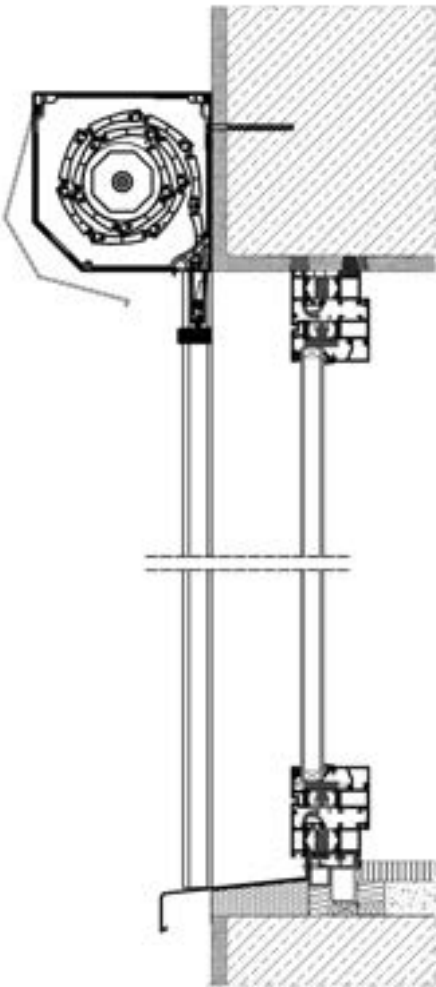
Requirements

Anti-burglar roller shutters based on Aluprof systems are type-tested in an accredited laboratory.

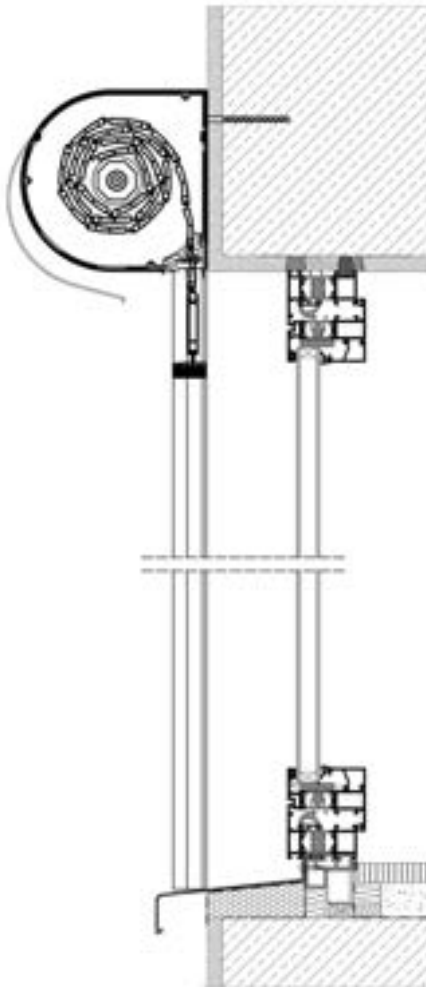


Installation examples in 1-layer wall

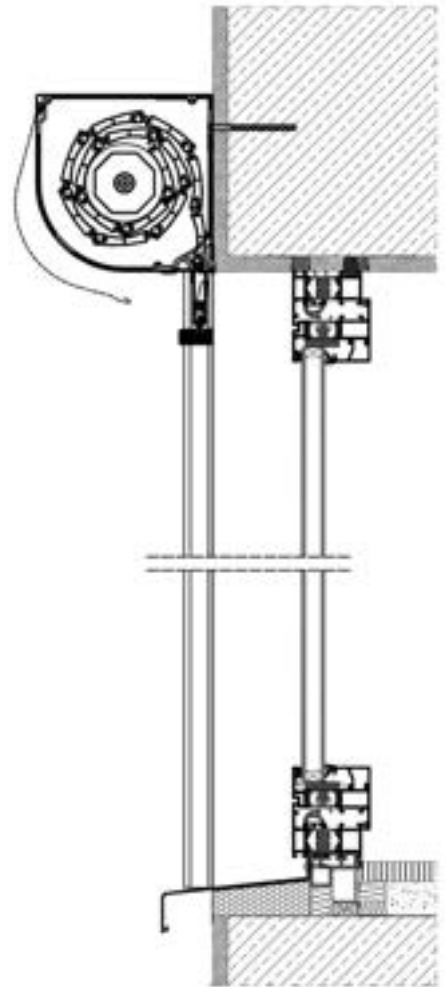
SAFETY PREMIUM - SKE



SAFETY PLUS - SKO

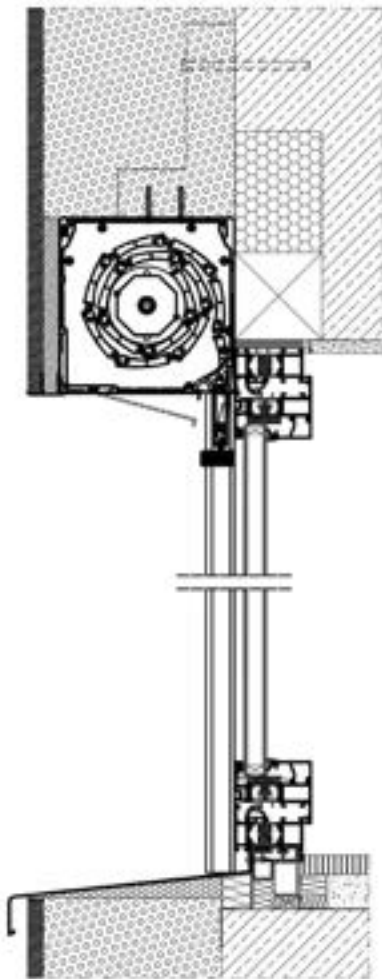


SAFETY PREMIUM - SKP



Installation examples in 2-layer wall

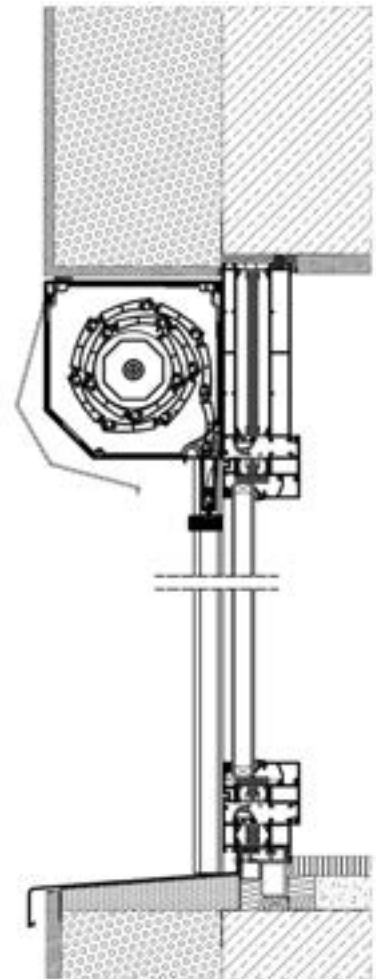
SAFETY PREMIUM - SP



SAFETY PLUS - SKO-P

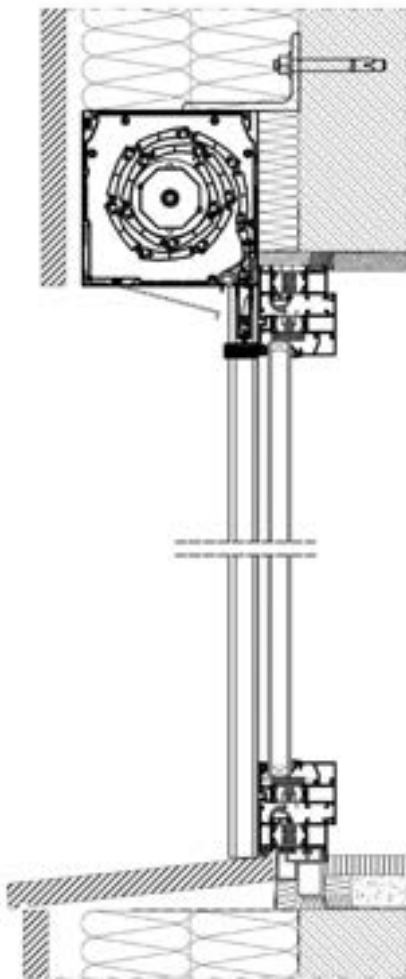


SAFETY PREMIUM - SKE

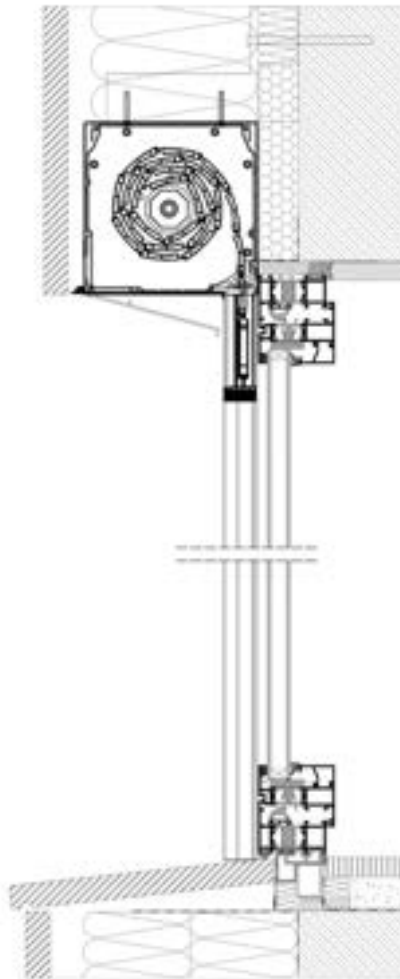


Installation examples in 3-layer wall

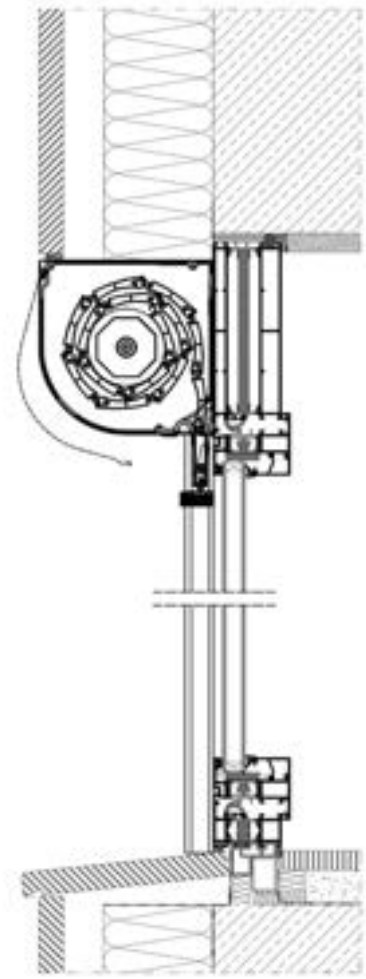
SAFETY PREMIUM - SP



SAFETY PLUS - SP-E



SAFETY PREMIUM - SKP



BUILT-IN ROLLER SHUTTER SYSTEM

SDZ

BUILT-IN ROLLER SHUTTER SYSTEM



Functionality

SDZ system, commonly known as the traditional roller shutter system, is mainly intended for use in existing buildings. This is the perfect solution in case of renovation, when the old roller shutters need to be replaced. Also, this system is often used in newly constructed buildings. At the building's design stage, architects provide the opportunity to replace roller shutters after years of operation.

Construction details

Specially designed SDZ system allows to quickly and noninvasively install the product to the existing surface. Aluprof offers many construction variants of the system, depending on the components used to match the functionality of the roller shutter and its mode of installation. Roller shutter's curtain consists of profiles made of high quality sheets covered with two-layer PU/PA paint coatings that are highly resistant to abrasion and weathering. There is also an option to use the PVC profiles.

Comfort operation

Depending on the user preferences, roller shutters can be controlled manually or by an electric drive via a wall-mounted transmitter or a remote control. Smart control via computer, tablet or smartphone is also an option.

Practical values

Use of external roller shutters in the SDZ system can fully satisfy expectations of investors. They constitute extremely aesthetic and functional tools that can contribute to minimising heat loss, prevent overheating rooms in the summer, but also constitute protection against excessive noise, or simply protect the interior from the eyes of undesirable persons. In addition, special design enables the replacement of roller shutters after years use.

Colour range

Large selection of colours (standard chart for profiles PA) allow to meet the needs of the most demanding Customers. Woodgrain coatings are also available. Colour coatings on the extruded elements are manufactured using powder coating, which ensures high quality and durability of the product (any RAL colour can be used).



ROLLER SHUTTERS WITH CURTAIN

S_ONRO®

ROLLER SHUTTERS
SYSTEMS



Functionality

The Aluprof s_onro® roller shutters with curtain is designed for use in existing and newly build developments. The curtain profiles can completely exclude external light from a room or other interior space. They can also protect the room from overheating in the sun's rays, while letting in some important amount of light (up to 20% of the curtain surface can be transparent). In addition, their unique form plays a decorative role, providing a definite enhancement to the overall aesthetics of a building.

Construction details

The curtain is made using highly stable, dihedral, rolled aluminium profiles. They contain a light perforation which fulfils the additional function of facilitating the exchange of air. The volume of light is regulated by closing individual profiles up to the point where a total blackout is obtained inside the room. The standard curtain can be immobilised on both sides and to its full height, which secures the profiles, preventing them from shifting in relation to each other. The state-of-the-art shape of the profiles, with a geometry corresponding to the very latest requirements as regards the permeation of light brings savings on electricity.

Easy to use

The roller shutters can be controlled manually or by means of an electric drive connected to the control system for ease of use.

Practical values

The s_onro® profiles curtain will work without drawbacks in conjunction with roller shutter systems such as the SK, SKP, SKD and SKO-P adaptive systems and the top-mounted systems (SP, SP-E). The degree to which the curtain is open during the day is flexible and can be adapted to suit individual requirements simply by opening or closing it further. When the angle at which the sun's rays are falling exceeds 20°, the s_onro® profiles prevent any direct sunlight whatsoever from entering the room, while

simultaneously guaranteeing the possibility of seeing out.

Colour range

S_onro® profiles are available in the standard colours of silver, white, grey and anthracite grey.

Requirements

The Aluprof s_onro® roller shutters with curtain hold initial type testing certification according with the product standard.



VENETIAN BLINDS SYSTEM

SKEF

VENETIAN BLIND SYSTEM



Functionality

SKEF venetian blinds system is intended for use in existing buildings. The advantage of these products is that they do not require any special pre-installation preparation nor works to the existing structure as they are not integrated with the window. Buyers can thus decide to install the front-mounted roller shutters at any time. These solutions can be mounted to the window joinery (in the recess) or directly on the wall. In the first case.

Construction details

The construction of the systems is made of extruded aluminium that ensures its durability and resistance to abrasion and weathering. Using any RAL colour allows for a perfect colour match for visible elements of the façade or window frame. The box of the SKEF system is cut at an angle of 45° and due to its specially design construction is more durable and resistant to weathering.

Practical values

Prefabrication is very easy - non-invasive installation of venetian blind rail eliminates the need for drilling keeping the product aesthetic. Specially designed guide channels provide a consistent functioning. SKEF system is an universal solution that can be used for installation of venetian blinds using slats in size from 50 – 80 mm. Moreover SKEF system allows to equip venetian blinds with an insect screen, which provides effective protection against insects while maintaining the flow of light and fresh air

to interior spaces.

Colour range

A wide range of standard colors will satisfy the most demanding customers.

The color coats are applied with the following methods, depending on customer needs: powder coating and Decoral paints.





Functionality

Venetian blinds are highly functional solutions that effectively protect interiors against excessive heat while providing appropriate optical comfort. As a result, the use of air-conditioning equipment is limited, which reduces costs, resulting in large savings over the year. There are 3 product variants available: SZF/P under plaster blind and SZF/BX, SZF/S self-supporting blind and SZF/A adapting blind. Therefore, the decision to install this type of solutions can be made at every stage of the investment, also in existing buildings.

Construction

The blind slats are made of aluminium sheet and are available in two shapes: "C" and "Z". The former are turned inwards on both sides, which guarantees rigidity and wind resistance. In addition, they have a rotation range of 0-180 degrees. The Z-shaped slats, on the other hand, provide more complete shading due to their design and are additionally equipped with a special soundproofing seal. Their rotation range is from 0 to 90 degrees. The blinds are covered with a cassette which, depending on the selected option, may be made from 1.2 or 2.0 mm thick aluminium sheet or extruded aluminium. The guide channels, as the only solution

of this type available on the market, are equipped with special seals eliminating the noise that can arise when the slat hits the guide channel. There are two types of pins available in the offer: steel and PVC.

Advantages

Due to the slat angle adjustment function, it is possible to select the appropriate degree of shading, which allows the user to manage it individually according to his individual needs. In addition, the well-thought-out construction makes it possible to create larger size blinds, which makes them often used for large glazed areas. This makes these products ideal for both public buildings and residential developments.

Operation simplicity

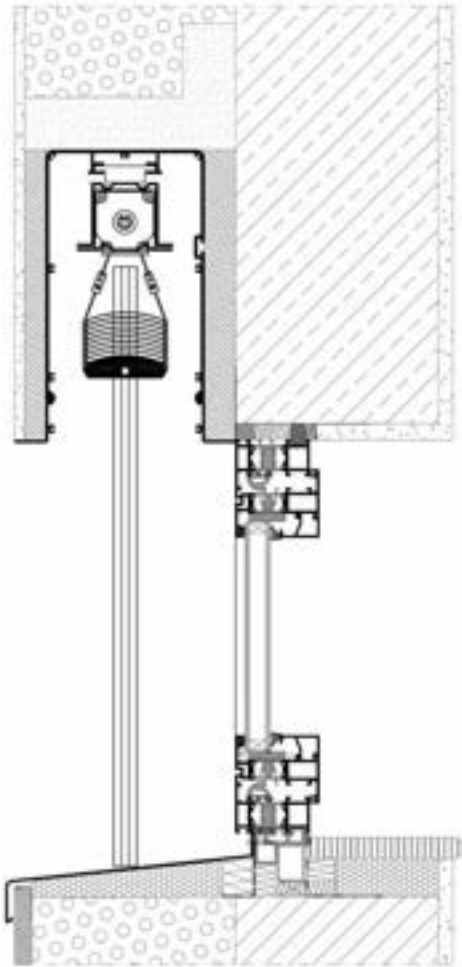
Electrical control not only ensures comfort of use, but also lowers the building's operating costs, while ensuring the appropriate indoor microclimate. Due to the use of various accessories, such as weather sensors (wind, solar, etc.) or time automation, we can create scenarios tailored to our needs, and what is more, we can remotely manage our blinds from any place and at any time using tablets or smartphones.

Colour palette

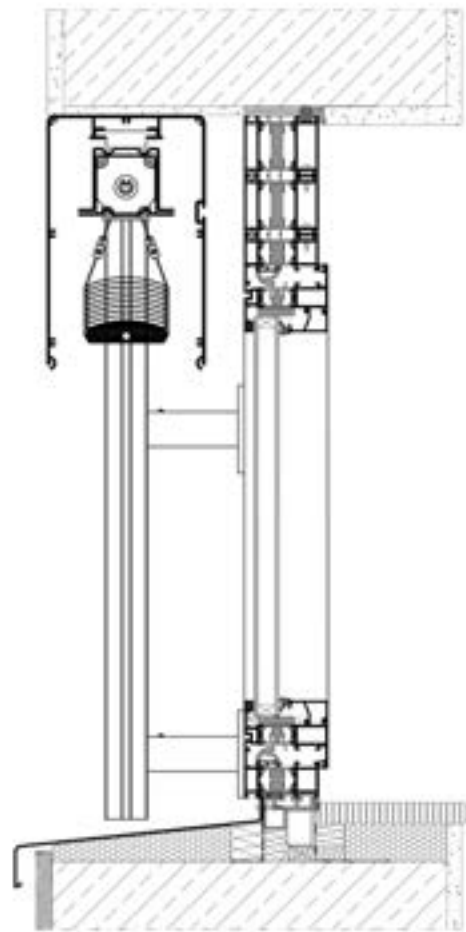
The colour palette of venetian blind slats available in the offer will certainly satisfy all needs of the most demanding customers. Colour coatings of extruded elements are made by powder coating, which ensures high quality and durability of the product.

Example of SkyFlow venetian blinds installation

SkyFlow SZF/P
(under plaster)

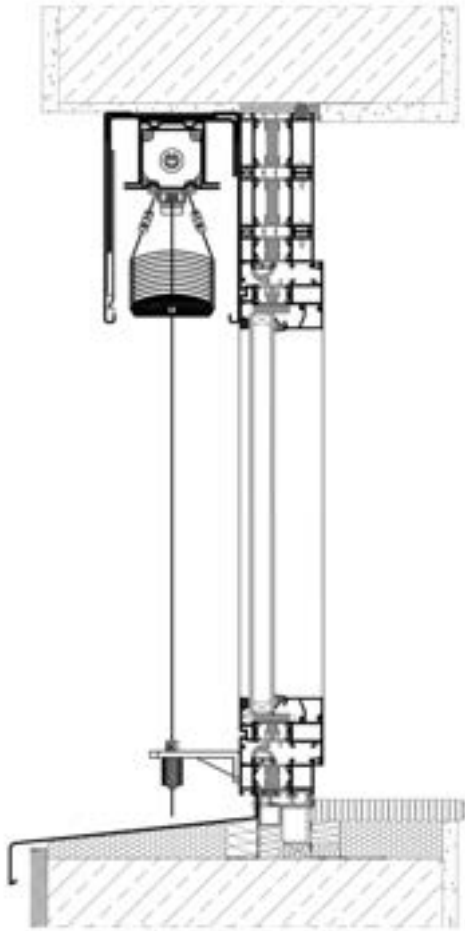


SkyFlow SZF/S
(self-supporting)

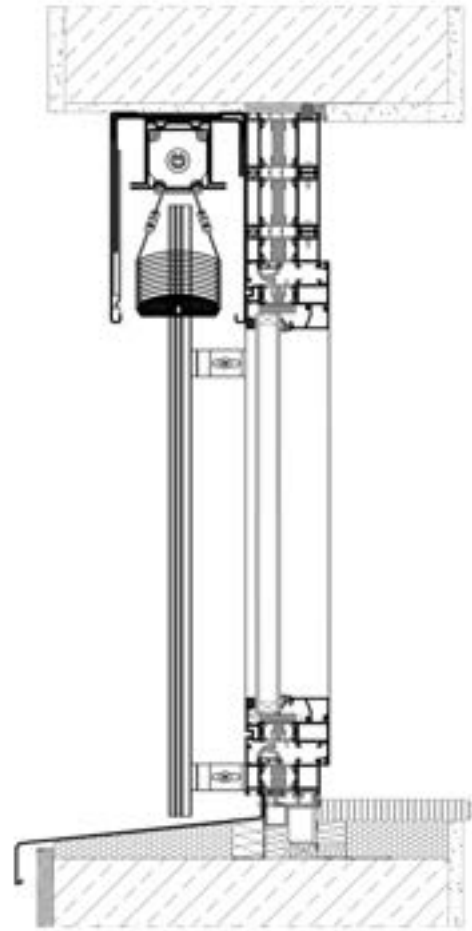


Example of SkyFlow venetian blinds installation

SkyFlow SZF/A
(adapting with a rope)



SkyFlow SZF/A
(adapting with guide channels)



SCREEN-TYPE SUN PROTECTION SYSTEM

SKYROLL

VENETIAN BLINDS
AND SCREENS



Functionality

Screens are modern and very functional solutions which are eagerly used both in public buildings and in residential construction. They are also perfect as a protective element on balconies, gazebos or pergolas. There are three systems available in Aluprof offer: SkyRoll Zip, SkyRoll Classic and SkyRoll Eco. Therefore, the decision to install this type of solutions can be made at every stage of the investment, also in existing buildings.

Construction

The available screen solutions differ in detail design and are available as under plaster, adapting (visible box) and top-mounted (system mounted directly on the window frame, built-in; not applicable to the ECO version). SkyRoll ZIP is an innovative product due to the use of technology borrowed from the zipper mechanism on the edges of the fabric. Specially designed two-part guide channels are thus directly integrated into the fabric, which guarantees maximum sealing and protection of the interior against insects. The fabric is properly tensioned and stably fixed in the guide channel, which protects it especially against gusty winds. SkyRoll CLASSIC is the most popular solution in the screen family, where there is no direct integration of the fabric with the guide channel. SkyRoll ECO, on the other hand,

is a low-budget product for less demanding investors. A characteristic feature of the blind is its manual control using a spring system. An intuitive mechanism ALU-CLICK for convenient closing and opening of the insect screen is applied here, which makes the use very simple and does not require a lot of effort.

Advantages

Screens are very functional solutions which are eagerly used both in public buildings and in residential construction. The main advantage of this type of product is the protection of rooms from intense sunlight through the use of specialised technical fabrics. In addition, they protect the interior from the gaze of unwanted people while maintaining good visibility to the outside. These solutions also provide an effective optical barrier to light entering the room, minimising the glare effect that can occur on monitor screens. Owing to properly selected fabric they are also a stylish accessory that will give the object a unique character: SkyRoll ZIP and SkyRoll ECO, due to their well-thought-out construction, can also be used as an insect screen, protecting interiors from insects.

Operation simplicity

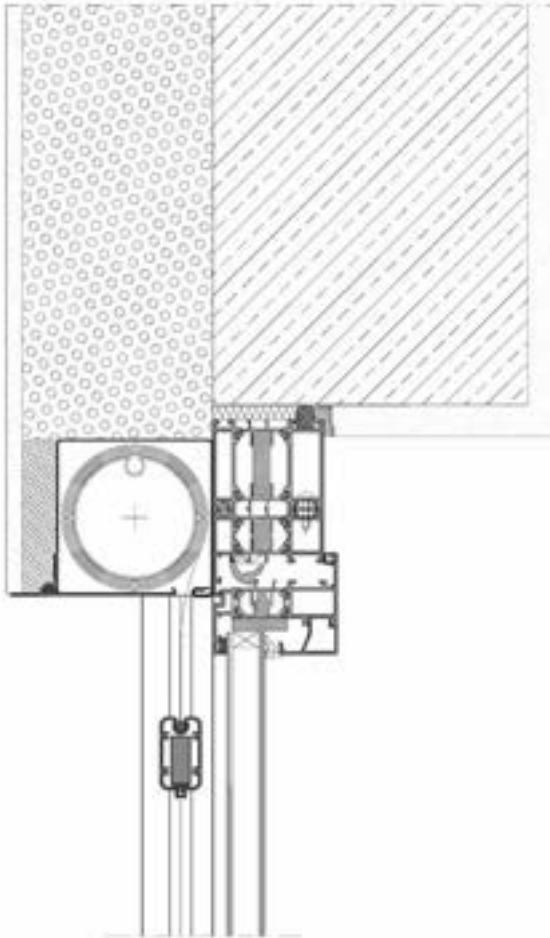
Electrical control available for ZIP and CLASSIC options not only ensure comfort of use, but also lower the building's operating costs, while ensuring the appropriate indoor microclimate. Due to the use of various accessories, such as weather sensors (wind, solar, etc.) or time automation, we can create scenarios tailored to our needs, and what is more, we can remotely manage our blinds from any place and at any time using tablets or smartphones.

Colour palette

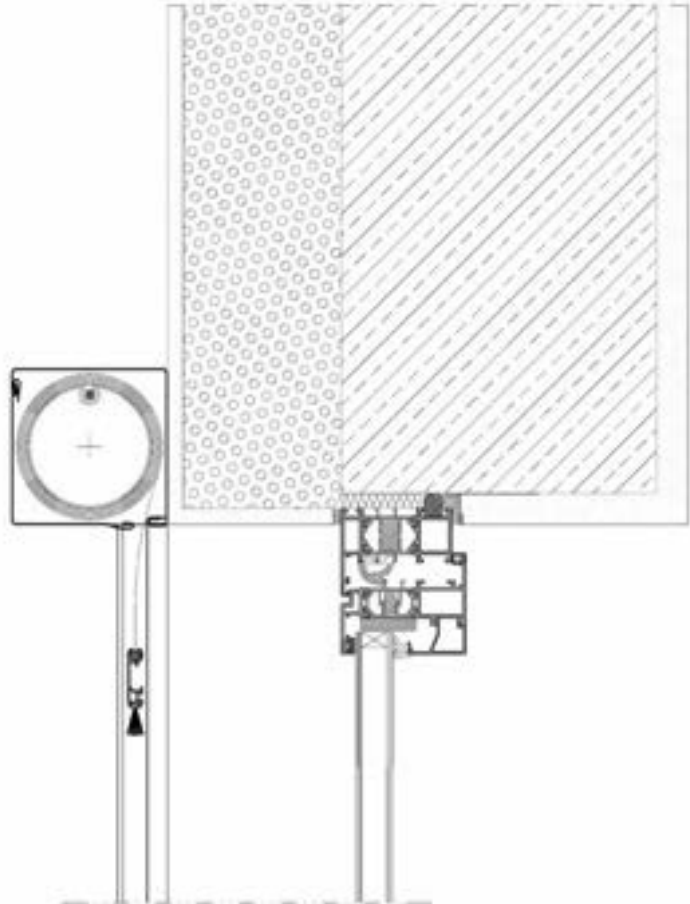
The colour palette of screen constructions available in the offer will certainly satisfy the needs of the most demanding investors, allowing for their colour matching with the window woodwork or façade.

Examples of screen installations

SkyRoll ZIP
(under plaster variant)

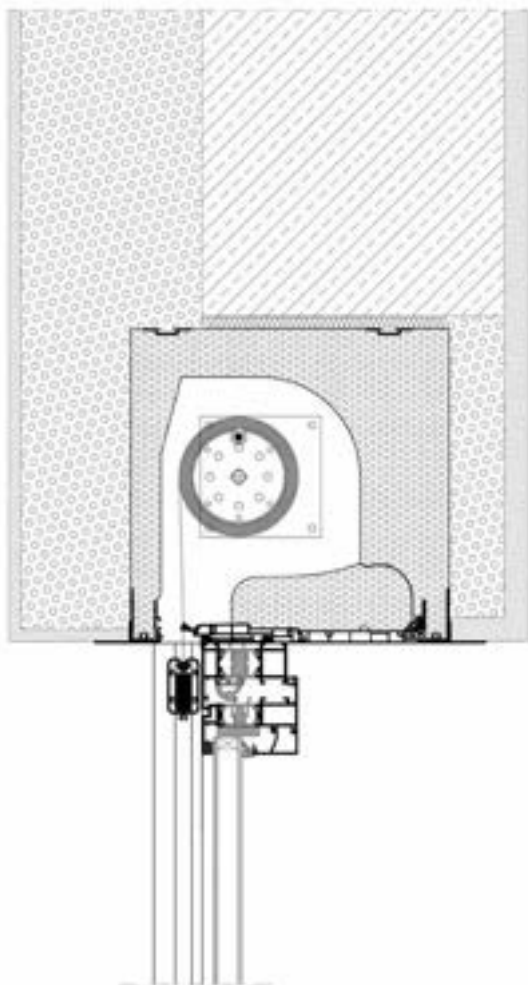


SkyRoll ECO
(adapting variant)

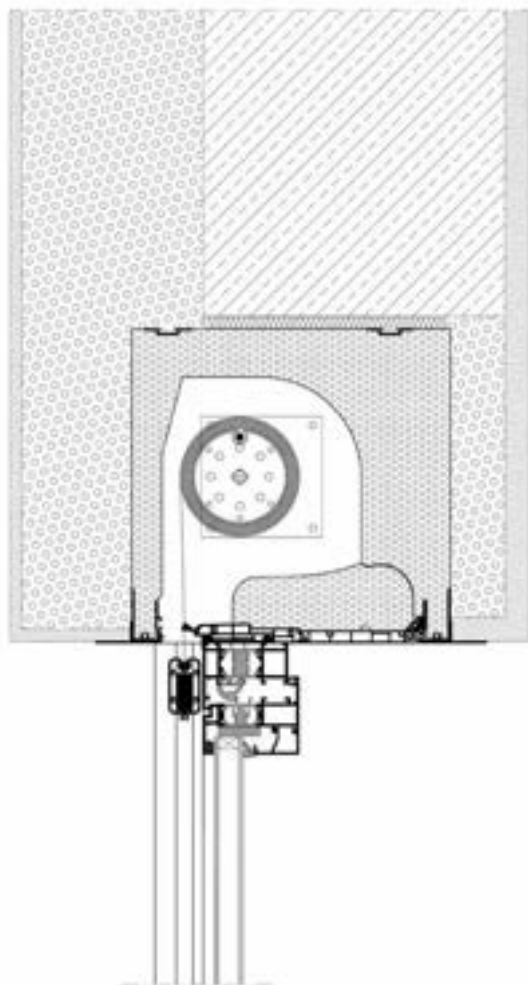


Examples of screen installations

SkyRoll ZIP
(under plaster variant)



SkyRoll ECO
(adapting variant)





MB-OpenSky 120 is a unique product that perfectly fits in with the trends of modern construction and is characterised by its high durability and high quality of details. The use of an innovative method of fitting profiles has ensured the stability of the entire system, as well as aesthetically pleasing connections with invisible gaps.

The roofing of the MB-OpenSky 120 pergola is a module made up of movable slats (two shapes available), equipped with a mechanism enabling smooth change of its inclination angle from 0 to 135° on the axis. The transmission mechanism, equipped with an automatic adjustment system, allows rapid installation on-site and easy and problem-free adjustment of the individual slats. The clever design of the MB-OpenSky 120 pergola makes it durable and resistant to weather conditions.

MB-OpenSky 120 pergola is resistant to weather conditions. The product has been equipped with a gabled drainage system, allowing rainwater to be effectively drained from the roof inside the entire surface of the column (water discharge capacity of up to 57 l/min). Tests have shown that for maximum dimensions, i.e. length 6 m ×

width 4 m × height 3 m, the permissible snow load is 72kg/m² and a simultaneous wind load of around 110 km/h.

Comfort of use

The MB-OpenSky 120 pergola is equipped with an electric drive that allows the use of SMART technology control devices from various manufacturers, including Somfy. Pergola can be operated using a remote control, a switch, a mobile phone app or the desired scenario programmed into a smart home control system. The pergola can also be fitted with further accessories

Utility values

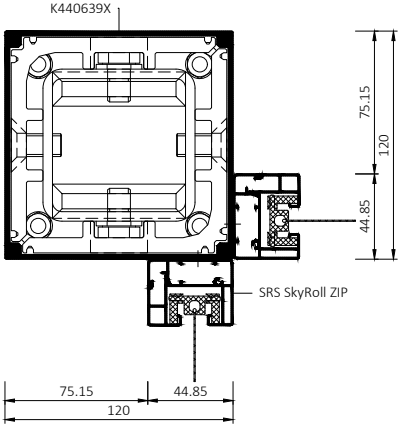
The clever design of the MB-OpenSky 120 pergola allows for any arrangement. It is possible to incorporate side screens such as screens, sliding glass panels or both solutions at the same time. In this way, we can create a unique atmosphere in a natural setting regardless of the prevailing weather conditions. What's more, the product also has the option of LED lighting. The lighting has been designed to work non-invasively with the roof slats. The available solution provides for its installation in the form of an LED strip both in the roof slat (linear for SLIM

slats, punctual for STANDARD slats) and along the outline of the structure. In addition, a special revision in the rafter makes it possible to install radiant heaters.

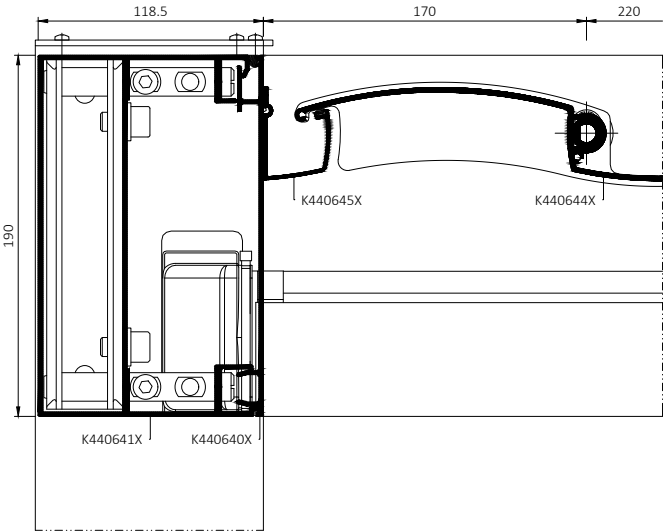
Color palette

The extruded aluminium structure can be coated with any colour from the RAL palette. It can also be coordinated with the joinery of a building's window and/or façade. Up to 12 colours are available in the standard palette. The powder coating technology ensures the durability and strength of the coating for many years of use.

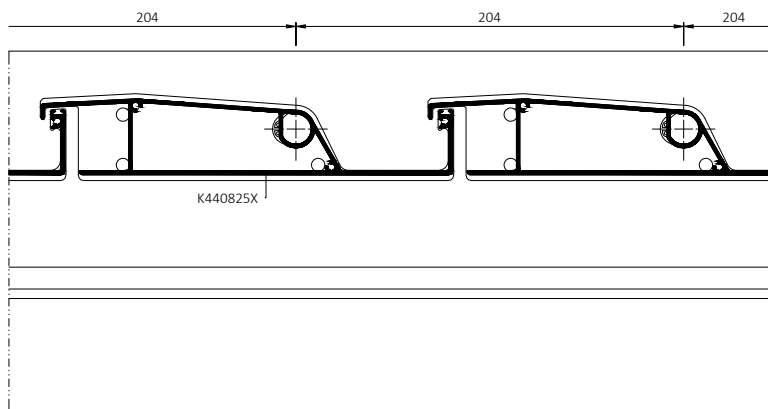
Cross section of a mullion



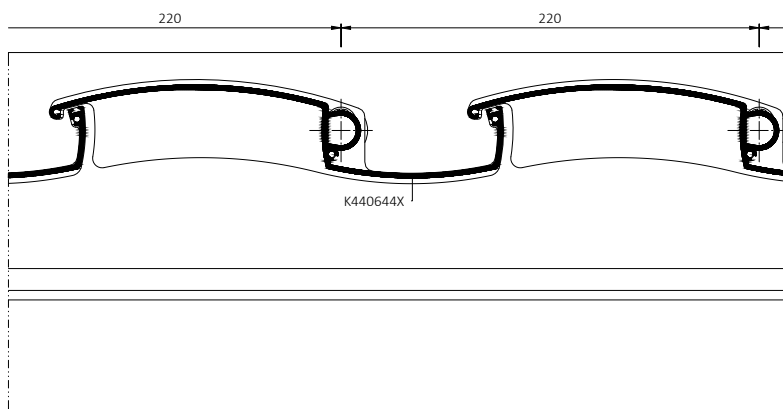
Cross section of a purlin and the roofing



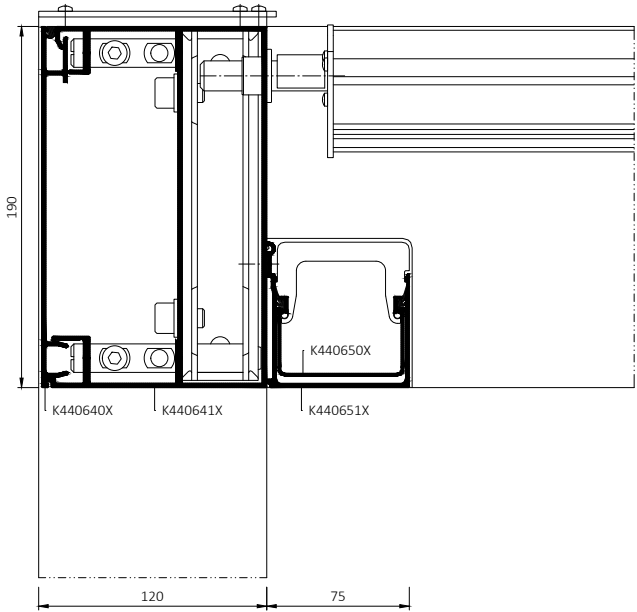
Cross section of the roofing



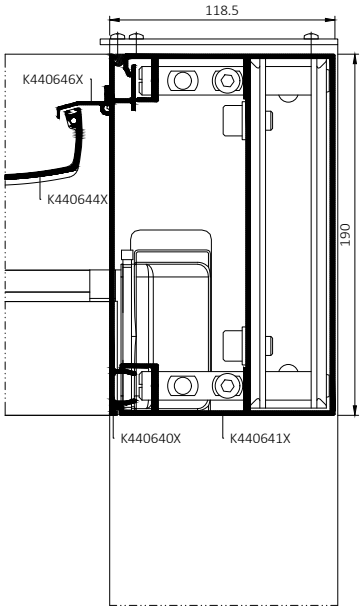
Cross section of the roofing



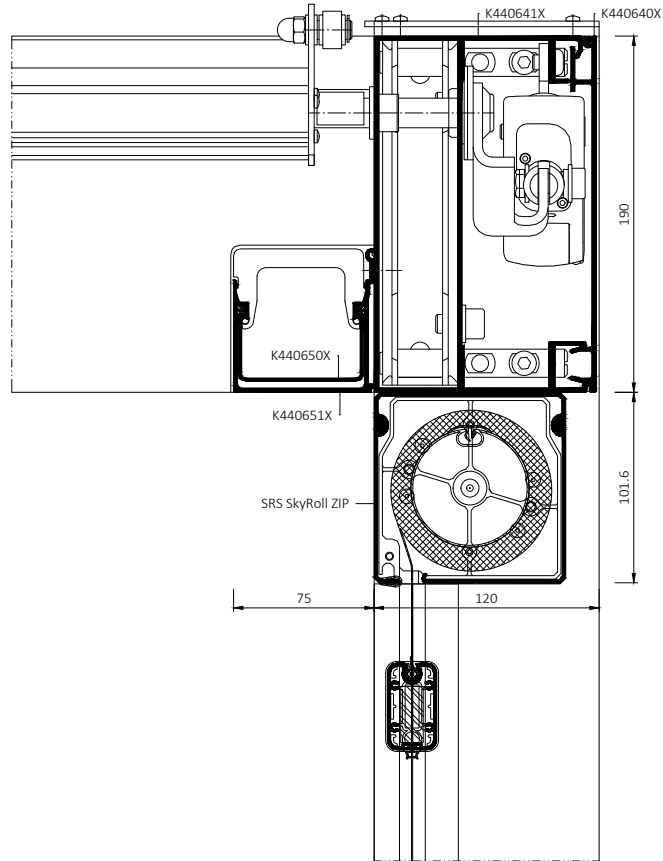
Cross section of a rafter



Cross section of a purlin and the roofing



Cross-section through the rafter
and the SkyRoll sunshade box





Pergola is a modern and extremely functional solution, used as roofing for terraces or separate garden areas, which, depending on the needs and creativity of the user can find a number of applications.

The MB-OpenSky 140 structure is made of extruded aluminium, which guarantees its durability for years. The supporting posts are extremely tough and their geometry provides exceptional rigidity. The profiles of the posts and purlins are connected by means of C and L type joints. An innovative method of spacing the profiles with custom-designed cleats makes it possible both to ensure the stability of the entire system and to create an aesthetic connection with no visible gaps. The canopy is formed by a module composed of movable slats and fitted with a mechanism for changing their angle on an axis from 0 to 135°. The slats feature tailor-made seals for protection against rainwater and there is a drainage system located in the posts. This ensures that water is efficiently fed through gutters and downpipes to the storm drain.

The product meets the conditions for resistance to snow load and strong wind gusts. Tests carried out on the system showed that, for structures with the dimensions of 6 m length × 4 m width × 3 m height, the permissible snow load

is 200 kg/m², which corresponds to a covering of snow approximately 1000 mm deep and a simultaneous wind load of around 59 mph.

The product is available as a free-standing and wall-mounted version, with a special console for wall insulation. It is possible to use the two-nave option, which allows to increase the usable area. The maximum dimensions of one section are 7 m length × 5 m width × 3 m height.

Comfort of use

The MB-OpenSky 140 pergola is equipped with a fully electric roof-control mechanism that is completely concealed in the structure. The angle of the slats can be smoothly adjusted to anywhere between 0 and 135°, which provides full control not only of how much sunlight is allowed in but also of the natural ventilation. The mechanism can be operated using a remote control, a switch, a mobile phone app or the desired scenario programmed into a smart home control system. The pergola can also be fitted with further accessories, including a wind sensor, a rain sensor and/or a sun sensor, all of which significantly enhance user comfort. If side blinds or panels are used, they can be fully integrated into the roof control system. This means that the entire pergola can be controlled via one device.

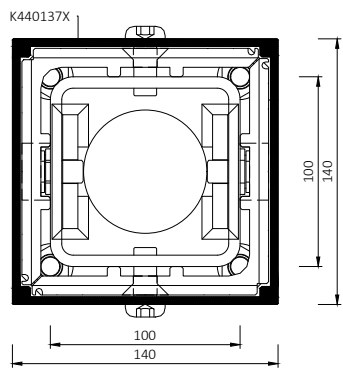
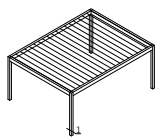
Utility values

The ingenious design of the ALUPROF MB-OpenSky 140 means that side blinds or sliding glass panels can be fitted. This opens up the possibility of creating a unique atmosphere, surrounded by nature, no matter how the weather is. The pergola can also be equipped with LED lighting tailored to work without affecting the roof slats and heating unit. The solution provides for it to be installed in the form of a LED strip on the roof slats and a spotlight, together with additional lighting, around the upper edge.

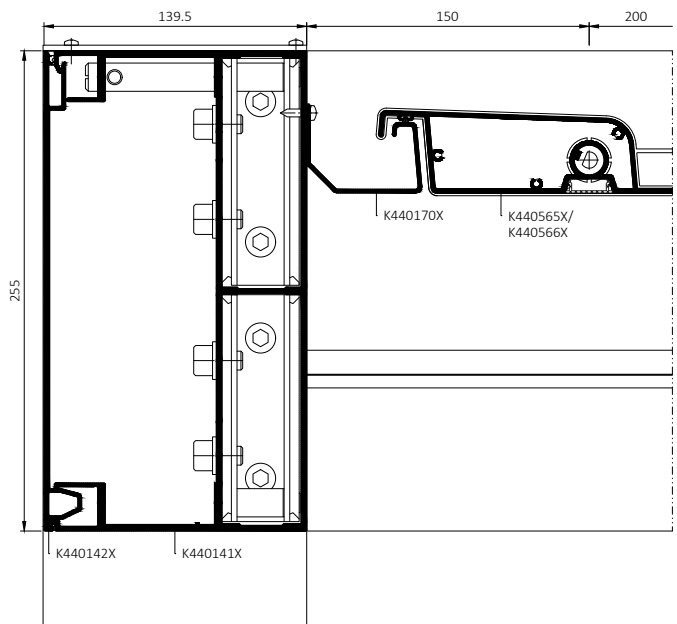
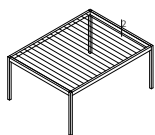
Color palette

The extruded aluminium structure can be coated with any colour from the RAL palette. It can also be coordinated with the joinery of a building's window and/or façade. The powder coating technology ensures that the coating is tough and will endure for years.

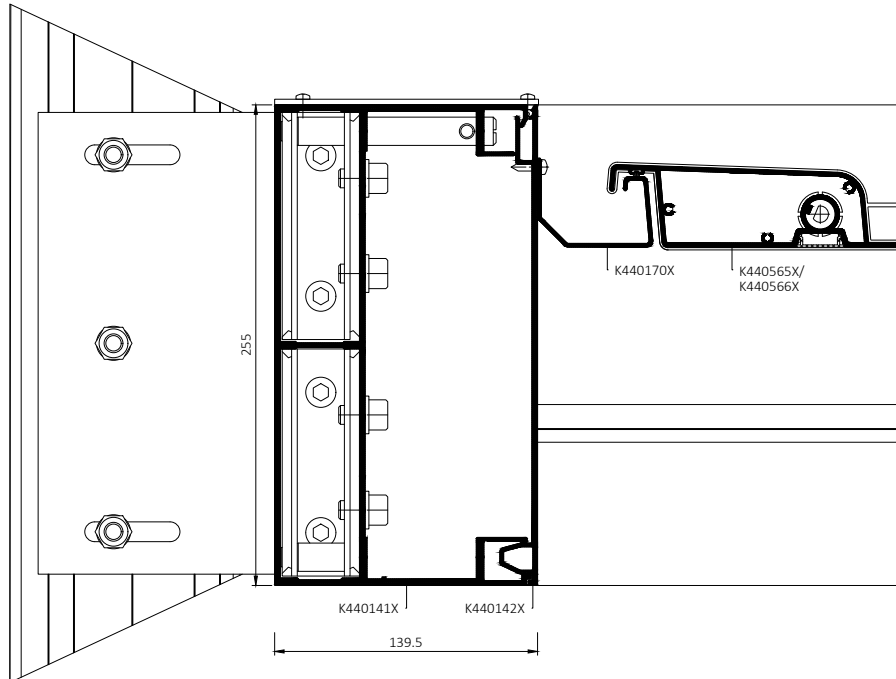
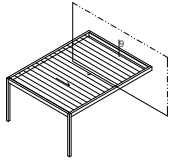
Cross section of a mullion



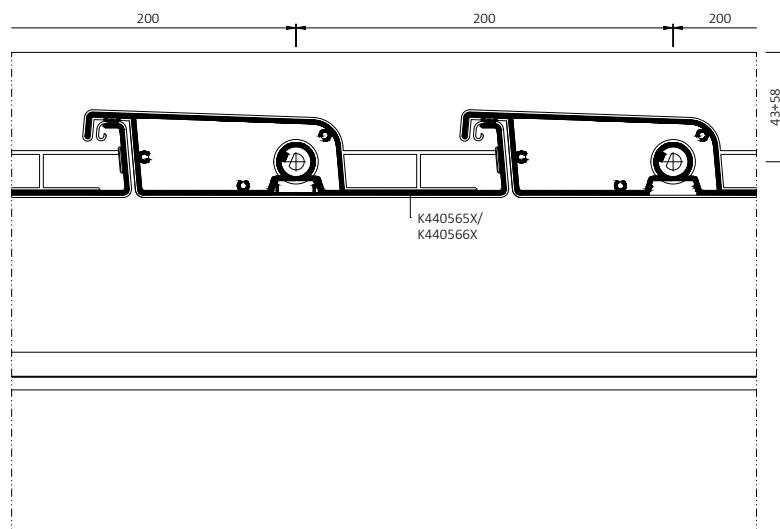
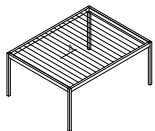
Cross section of a purlin and the roofing



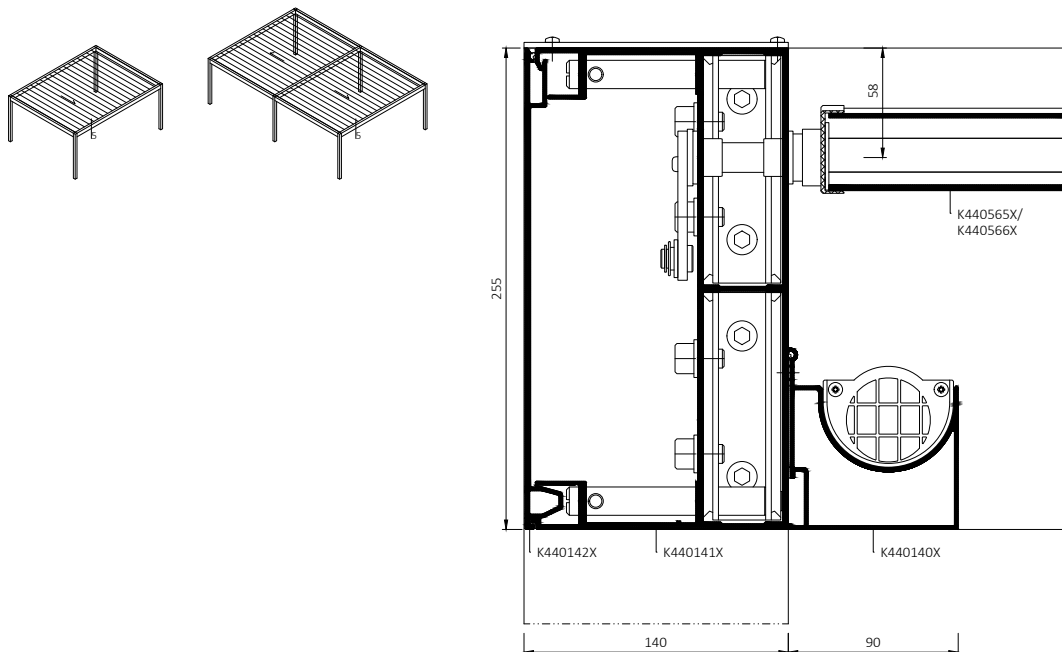
Cross section of a purlin attached to a wall



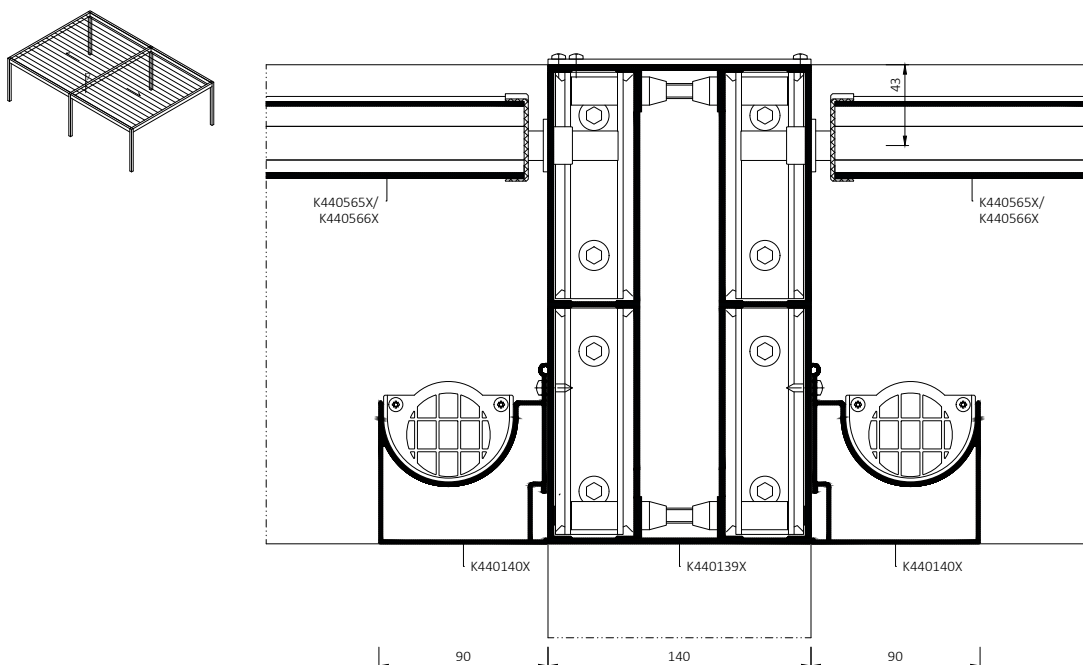
Cross section of the roofing



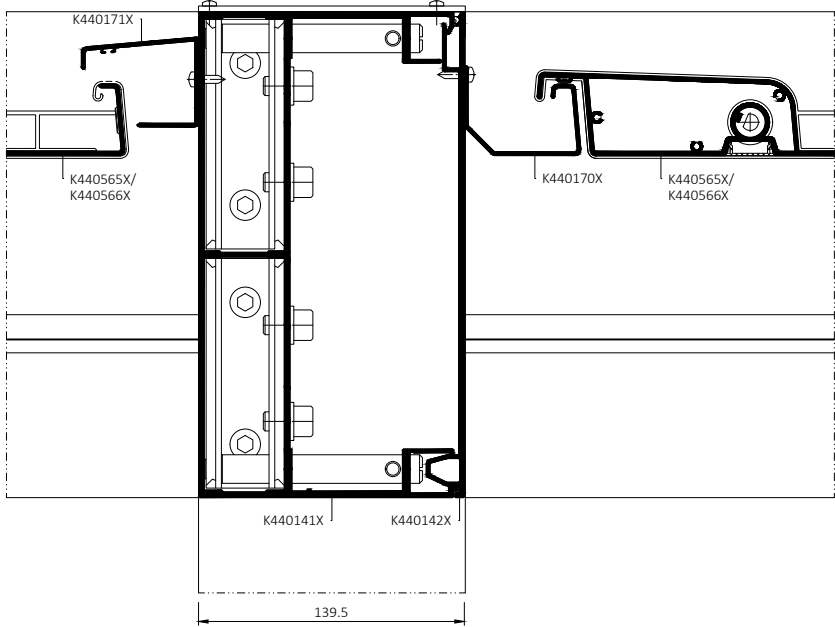
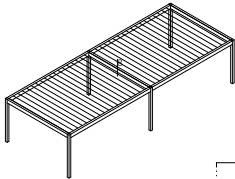
Cross section of a rafter



Cross section of the central rafter



Cross section of the central purlin



INSECT SCREEN SYSTEM

MPH HARMONY

INSECT SCREEN
SYSTEM



Functionality

Pleated insect screen system MPH is a solution primarily designed with the aim of providing space savings. This product is ideal for installation on the patio doors and balcony niches, where the width reaches up to 4 m.

Construction

The insect screen is made of extruded aluminium, which makes it durable and resistant to weather conditions, and in addition it can be varnished in any RAL colour. The use of special pleated mesh, which when closing arranges in a zigzag pattern and hides in the side profile is a characteristic feature of this product. Thus, the insect screen takes up little space allowing optimal use of the surface. Importantly, it does not impair, in any way, the functionality of the door and does not obstruct visibility to the outside. An advantage of this solution offered by Aluprof is the possibility of separate tension control of each of the ropes controlling the insect screen, which guarantees its stable arrangement.

Operation simplicity

The MPH system is characterized by an extremely smooth movement, which makes its use very simple and does not require much effort. In addition, the construction of the insect screen allows to stop it in any position. The advantage of this solution is also the low threshold that does not hinder in any way the passage.

Advantages

The well-considered construction of the insect screen and good selection of materials provide excellent protection against insects, without reducing the amount of light and air. Moreover, the pleated insect screen Harmony has been designed to smoothly work with the Aluprof roller shutter systems with the guide channel PPMO 53.

Colours

A large selection of standard colours meets the requirements of the most demanding customers. Colour layers are applied using the following methods depending on the customer's request: powder coating and Decoral.



The insect screen construction is made of extruded aluminium, which guarantees its durability and strength



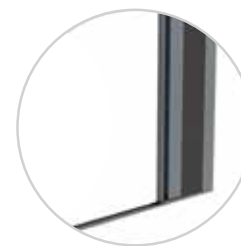
The possibility of separate tension control of each of the ropes controlling the insect screen, which guarantees its stable arrangement



The possibility of achieving large widths up to 4 m



The use of low threshold allows free passage of users



The pleated mesh when closing arranges in a zigzag pattern and hides in the side profile, which guarantees considerable space savings

THE SLIDING
INSECT SCREEN

MRP

INSECT SCREEN
SYSTEMS



MRP



Functionality

The system of mosquito screens with a sliding frame protects rooms against insects and is used in large, glazed niches of buildings, terraces and conservatories. The screen panel slides between the upper and lower guide. The lower section includes a roller with a mechanism for the smooth adjustment of the tilt angle for each leaf. Additional reinforcement, mounted by snap joints, makes it possible to install larger frames.

Construction details

The frames and guides are made of strong extruded aluminum profiles with a modern shape, finished with a coat of increased resistance to abrasion and weathering. The shape of the main profile eliminates the need for additional brackets. The frame and leaf of the screen are fixed with internal corner joints. The mosquito screen can be installed in a three section version.

Comfortable operation

The mosquito screen with a sliding frame is fixed directly to the frame or jamb. A wide range of guides allows the use of different installation versions on all types of windows and frames, without blocking the external roller blinds.

User properties

The well-thought out design of the mosquito screen and properly selected materials provide effective protection against insects, without blocking the light and air. Each screen leaf is additionally sealed with brush weatherstrips.

The system also includes a braking device to slow down the roller close to the extreme position and a stopper to prevent the screen from hitting the guide.

Color palette

A wide range of standard colors will satisfy the most demanding customers.

The color coats are applied with the following methods, depending on customer needs: powder coating and Decoral paints.



Optional installation in three rows.



The guide is used to position and secure the leaf.



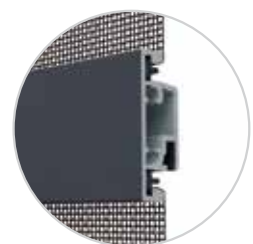
The frame and leaf are fixed with internal corner joints offering high durability and an aesthetic finish.



Each leaf is provided with a brush seal.



The solution with a low rail makes this product work perfectly with sliding doors with the so-called low-level threshold.



Additional reinforcement of a framed screen is installed by the use of snap joints, so the surface of a leaf can be easily expanded.

THE SWING INSECT SCREEN

MRO

INSECT SCREEN
SYSTEMS



Functionality

Mosquito screens with opening frames excellently protect rooms against insects without having any impact on the operation of the balcony door. The frame can be fixed using internal aluminum corner joints of a snap or screw type (set screws). Additional reinforcement, mounted by snap joints, make it possible to install larger frames.

Construction details

The frame profile is made of strong extruded aluminum profile with a modern beveled shape that nicely matches current door frames.

Comfort operation

The mosquito screen with an opening frame is installed directly onto the door frame using hinges with a door closer, with a simple design allowing the adjustment of the spring tension with an Allen key. The infill panel in the lower section of the leaf protects the net against damage when opening.

User properties

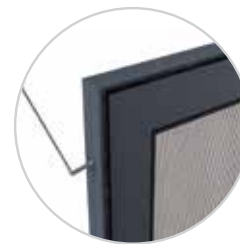
The well-thought out design of the mosquito screen and properly selected materials provide effective protection against insects, without blocking the light and air. The screen is equipped with a handle for opening and a magnet for keeping the closed position, as a standard.

Colour scheme

A wide range of standard colors will satisfy the most demanding customers. The color coats are applied with the following methods, depending on customer needs: powder coating and Decoral paints.



A hinge with a closer allows easy control of the spring tension using an Allen key. It is possible to install the hinge in two planes. The system has been patented.



Easy installation of the frame with an internal corner joint and set screws.



Two opening variants available: "ergonomic" and "aesthetic" or a specially designed, joining profile allow to open and close the mosquito net from both inner and outer part of the casement.



Two different heights of the cavity slab of in the lower part of the casement protect the screen from opening-induced damages.

INSECT SCREEN SYSTEM

MPH HARMONY VERTI

INSECT SCREEN
SYSTEM



Functionality

The insect screen system MPH HARMONY VERTI complements the offer of pleated insect screens and was designed primarily for installation on standard and roof windows.

Construction

The use of a special pleated mesh, which when closing arranges in a zigzag pattern and hides in the upper profile is a characteristic feature of this product. The main advantage of the new system is the possibility of tensioning each of the cords guiding the insect screen net, which allows for its precise and even layout. It is available in several sizes, so called sets, which, depending on the needs, can be cut symmetrically, thus adjusting the pleats to the size of the window. The construction of the insect screen is made of extruded aluminium guaranteeing its durability, and is based to a large extent on components of the MPH HARMONY system. Maximum size of the new insect screen is 2300×2000 mm.

Operation simplicity

Closing and opening of the insect screen is very easy and smooth, thanks to the system of springs installed in the bottom profile. The tensioning elements have been aesthetically hidden under a special masking profile, which can be detached and clipped in at any time. The sliding profile of the insect screen, thanks to the designed recess, allows for convenient opening and closing. It is also possible to stop the insect screen at any time.

Advantages

The well-considered construction of the insect screen and good selection of materials provide excellent protection against insects, without reducing the amount of light and air. Moreover, the pleated insect screen does not obstruct visibility to the outside.

Colour scheme

A large selection of standard colours meets the requirements of the most demanding customers. Colour layers are applied using the following methods on the customer's request: powder coating and Decoral.



The construction of the insect screen is made of extruded aluminium which ensures its stability and resistance to weather conditions



The possibility of separate tension control of cords controlling the insect screen, which guarantees its stable arrangement



Specially designed recess in the sliding profile allows convenient opening and closing of the insect screen



The tensioning elements in the form of a system of springs have been aesthetically hidden under a special masking profile, which can be detached and clipped in at any time

ROLLER INSECT SCREEN SYSTEM

MZH

INSECT SCREEN
SYSTEMS



MZH



Functionality

The system MZH for roll-up insect screen is a modern and fully functional solution designed primarily for installation on roof windows. Extremely versatile, MZH is also well suited for mounting on vertical windows. With the use of specially designed channels with offset, MZH-based insect screen can also be mounted on windows with outer sill that usually prevents the standard, direct installation to the window frame.

Construction details

The construction is made of extruded aluminium and is mainly based on components of the system MZN. This solution enabled to use i.a. a bottom strip and channels that perfectly match a specially designed swing hook. With this innovative solution, it is now possible to block the bottom strip on the roof windows from the inside.

Comfort of operation

The carefully formed hook shape enables to efficiently click-in and click-out the bottom strip, which makes the use of this fly screen straightforward and simple. What's more, the hook provides additional sealing to the bottom part of the fly screen, so there's no need for additional gaskets.

User properties

The well-thought out design of the mosquito screen and properly selected materials provide effective protection against insects, without blocking the light and air. The screen is equipped with

a handle for opening and a magnet for keeping the closed position, as a standard.

Colour scheme

A wide range of standard colors will satisfy the most demanding customers. The

color coats are applied with the following methods, depending on customer needs: powder coating and Decoral paints.



Small-size, semi-oval cassette of extruded aluminium.



Hook shape enables to efficiently click-in and click-out the bottom strip.



With this innovative solution, it is now possible to block the bottom strip on the roof windows from the inside.



The hook provides additional sealing to the bottom part of the insect screen.

ROLLER INSECT SCREEN SYSTEM

MZN

INSECT SCREEN SYSTEMS



Functionality

The independent roll-up insect screen system is an excellent and extremely tight solution that secures interior spaces against insects with the possibility of closing and opening at any time. This is a very aesthetic and modern solution, which, thanks to its small box fits perfectly in any recess.

Construction details

Structural elements of the screen (box, rails, endslat) are made of extruded aluminium, which ensures durability and resistance for many years of use. A special clip helps adjust the height of the mesh closure. Installing the system to the lintel is very fast and simple, thanks to the aluminium catch, which is also painted in the colour of the box. In addition, it is possible to use a restrictor, allowing the gentle and noiseless closure of the endslat to the box. The system is very practical, especially that it uses, to the maximum extent, other insect screen system components that are offered by Aluprof.

Comfort operation

The roll-up insect screen system is an excellent and extremely tight solution that secures interior spaces against insects with the possibility of closing and opening at any time. A novelty in the offer is an intuitive mechanism ALU-CLICK for convenient closing and opening of the insect screen, which makes its use very simple and does not require a lot of effort. When closing it is enough to gently close the bottom endslat of the insect screen. If you want to open it, press on the

endslat, which opens automatically.

User properties

The well-thought out design of the mosquito screen and properly selected materials provide effective protection against insects, without blocking the light and air. The screen is equipped with a handle for opening and a magnet

for keeping the closed position, as a standard.

Colour scheme

A wide range of standard colors will satisfy the most demanding customers. The color coats are applied with the following methods, depending on customer needs: powder coating and Decoral paints.



Small-size, semi-oval cassette of extruded aluminium.



Endslat of extruded aluminium with sealing gasket to the windowsill / window frame.



Sealing gasket mounted at the top of the box.

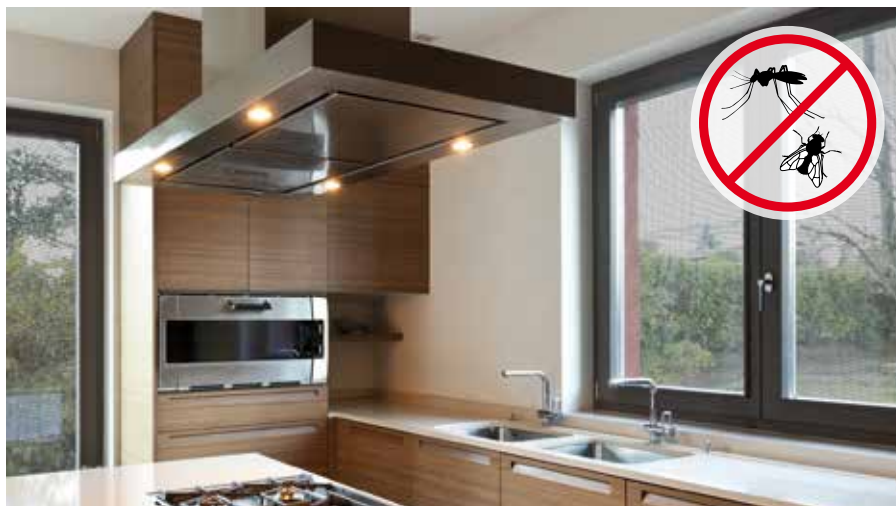


Channels of extruded aluminium with sealing gasket.

THE FIXED INSECT SCREEN

MRS

INSECT SCREEN
SYSTEMS



Functionality

The system of framed mosquito screens excellently protects rooms against insects. The frame can be fixed using internal aluminum corner joints of a snap or screw type. The offer also includes external plastic corner joints in various colors. The system is compatible with most window profiles. Fixing brackets are offered in five sizes.

Construction details

The frame profile is made of strong extruded aluminum with a modern shape and powder coated surface. The profile is offered in two versions: with a "fin" abutting the window frame and without the "fin", with a place for a brush weatherseal, used for a fully enclosed window frame.

Comfortable operation

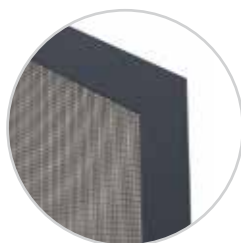
The framed mosquito screen is installed on the external side of the window frame. With the use of noninvasive rotary joints, the screen can quickly and easily be mounted and dismantled, while keeping the full functionality of the windows.

User properties

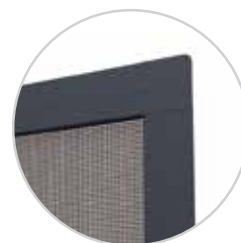
The well-thought out design of the mosquito screen and properly selected materials provide effective protection against insects, without blocking the light and air.

Color palette

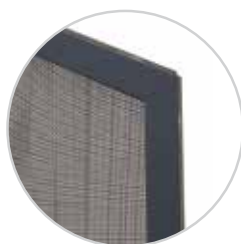
A wide range of standard colors will satisfy the most demanding customers. The color coats are applied with the following methods, depending on customer needs: powder coating and Decoral paints.



Frame with an internal corner joint.



Frame with an internal corner joint and side sealing.



Frame with an external plastic corner joint.



Frame with an external corner joint and side sealing.

FIXED INSECT SCREEN SYSTEM

MRSZ

INSECT SCREEN
SYSTEMS



Functionality

Fixed insect screen system MRSZ is designed for use on flushed aluminium windows. The screens are highly aesthetic and are supplemented by high quality details. This solution is perfectly suited for the balcony door. In rooms where we need regular protection, such as bedroom, bathroom or child's room.

Construction details

All of its components are made of extruded aluminium, which ensures resistance to weathering, and a reliable operation of the product for many years. The specially designed mosquito profile together with brush seal provides the full sealing of the window frame. Moreover, using of the joining profile let to obtain larger dimensions of the insect screens.

Comfort operation

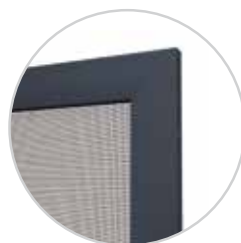
Installation of the MRSZ system is made at the external side of the window frame. Mounting clips help easily and quickly to set up and dismantle of the the insect screen from the windows frame keeping the functionality of the window.

Advantages of application

The well-thought out design of the mosquito screen and properly selected materials provide effective protection against insects, without blocking the light and air. The screens are highly aesthetic and are supplemented by high quality details that guaranty its durability and resistance for many years of use.

Colour scheme

A wide range of standard colors will satisfy the most demanding customers. The color coats are applied with the following methods, depending on customer needs: powder coating and Decoral paints.



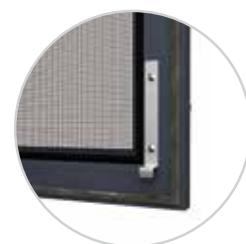
Frame with plastic inside corner (screwed or crimped).



Mounting clip helps to easily and quickly set the screen in the windows frame.



The upper hook allows for easy setting of the screen in the upper part of the frame, which is also equipped with a brush seal that provides full sealing.



The lower hook allows an easy setting of the screen in the bottom part of the frame.



Functionality

The roller shutter garage door can be mounted in already existing facilities as well as in those that are being built. One of the advantages of their application is the economy of space. The door operable in the vertical plane is a good solution when the driveway to the garage is short or comes directly from the street. It significantly improves the driver's safety, as the raised curtain of the door does not limit visibility.

Construction details

Depending on the overall dimensions and conditions of installation, it is possible to mount the roller shutter garage door on brackets and in a box. The door profiles are made of high-grade aluminium sheet. This sheet is covered with a two-layer varnish coat in the PU/PA system, characterised by enhanced resistance to abrasion and weather conditions. Due to the filling foam, the profiles feature good thermal and sound insulating performance. Sufficient amount of fresh air can be provided by application of ventilation profiles in the door curtain. You can also use glazed profiles to fill the interior with natural light. With regard to the manner of fitting a winding tube roller shutter garage door fall into two categories:

- sitting on brackets: BGR/KNB
- in a box: BGR/SK

Comfort of operation

The electrical drive allows for the use of a remote control. The radio-wave control allows the door to be opened and closed without the need to leave the car. It is

particularly useful in the evening, when it is raining, or in winter.

Safety

In accordance with the applicable standards, the roller shutter garage door is standard-equipped with the anti drop device. Can be retrofitted with protection against crushing when closing and motion sensing devices. In the event of power failure, the roller shutter garage door can be opened with the emergency manual drive. The electromagnetic brake of the roller shutter garage door drive and the locking hangers efficiently thwart any attempts to lift the curtain.

Colour scheme

A wide range of colours in the standard colour chart allows for meeting the requirements of the most demanding customers. The colour finish of the surface is applied by powder coating.

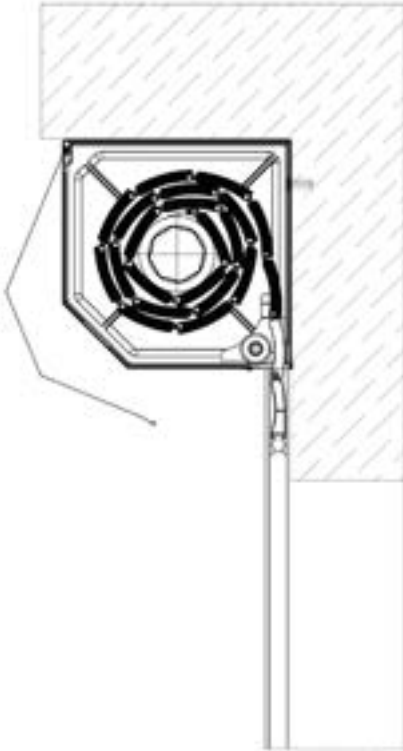
Requirements

Roller shutter garage doors of the ALUPROF systems have a Initial Type Testing, made by the notified body and rendered



Gate system – installation examples

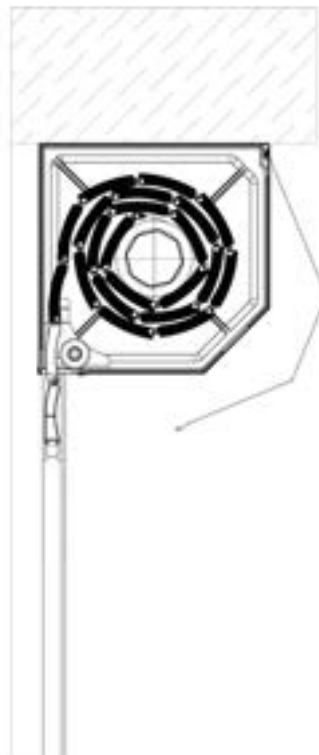
BGR/SK VARIANT 1



BGR/SK VARIANT 2

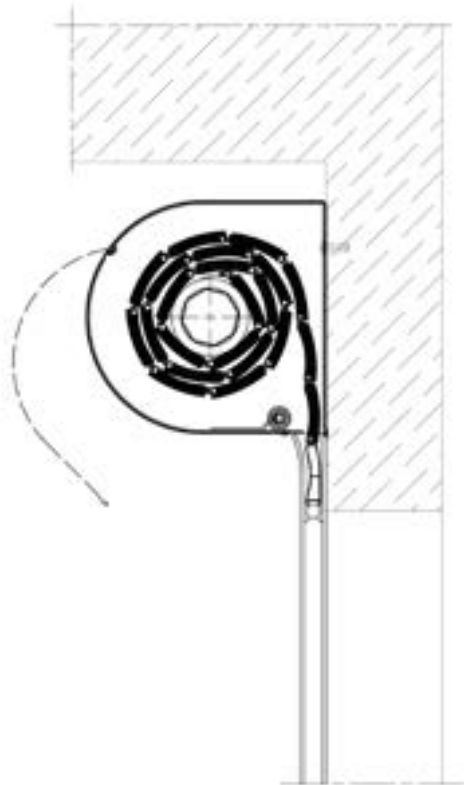


BGR/SK VARIANT 3

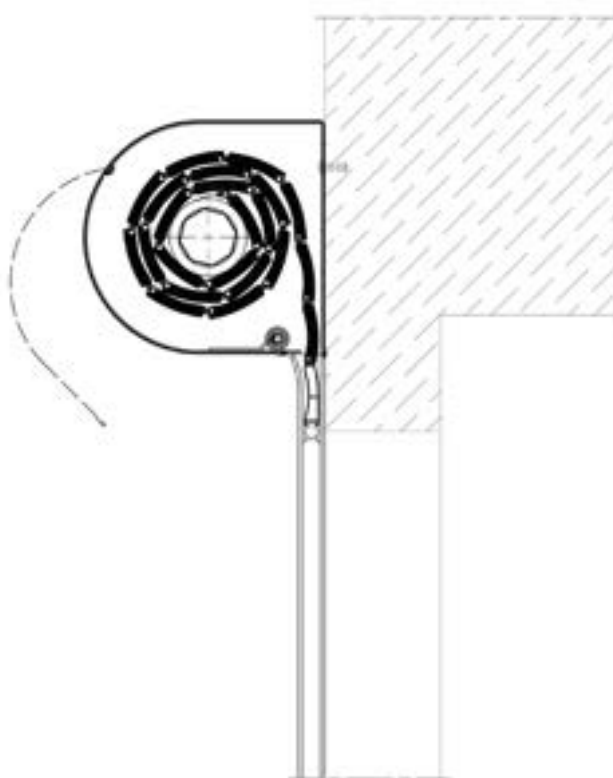


Gate system – installation examples

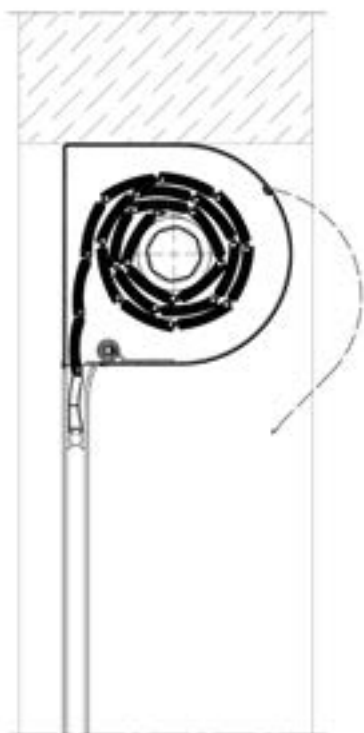
BGR/SKO-P VARIANT 1



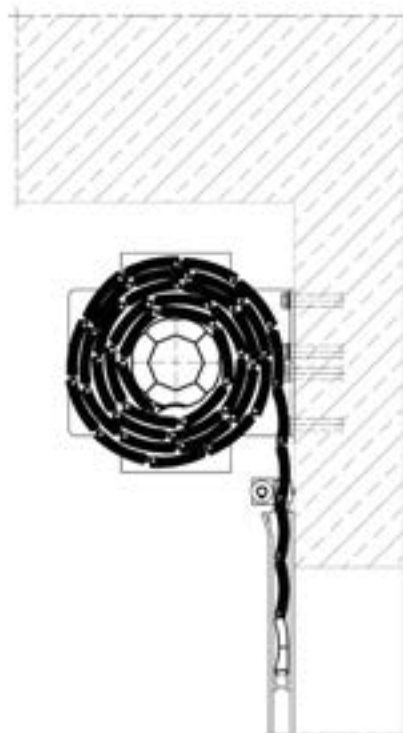
BGR/SKO-P VARIANT 2



BGR/SKO-P VARIANT 3



BGR/KNB





Comfort of operation

Industrial roller shutter doors provide primary protection for building apertures in industrial halls, warehouses or commercial and serviceproviding buildings against unauthorised entry, break-ins or weather conditions. These are external doors, situated behind the opening of the building, inside the facility. They may also be utilized as internal doors.

Construction details

The door curtain is made of PE 100 extruded aluminium profile. The shape and thickness of its walls were selected so that the curtain made from it is stable and resistant to mechanical damage. Profiles and guide rails are powder coated in a wide range of RAL colours. The curtain is rolled up into a steel winding tube sitting on the brackets that are its support and bearings. For doors mounted within the area of the header, attention should be paid to the minimum height of the header that is required to mount the door. With regard to the type of applied brackets industrial roller shutter doors fall into two categories:

- sitting on travelling brackets: BPR/KNJ
- sitting on fixed brackets: BPR/KNS

Comfort of operation

The industrial roller shutter door can be mounted in already existing facilities, as well as in those that are being erected. The door operation is controlled with a switch located inside the building. When necessary, the radio-wave control or other selected combinations of control devices can also be applied to improve the

comfort of operation.

Safety

In accordance with applicable standards, the industrial roller shutter door is standardequipped with the anti drop device. Can be retrofitted with protection against crushing when closing and motion sensing devices. In the event of power failure, the roller shutter garage door can be opened with the emergency manual drive.

Colour scheme

A wide range of colours in the standard colour chart allows for meeting the requirements of the most demanding customers. The colour finish of the surface is applied by powder coating.

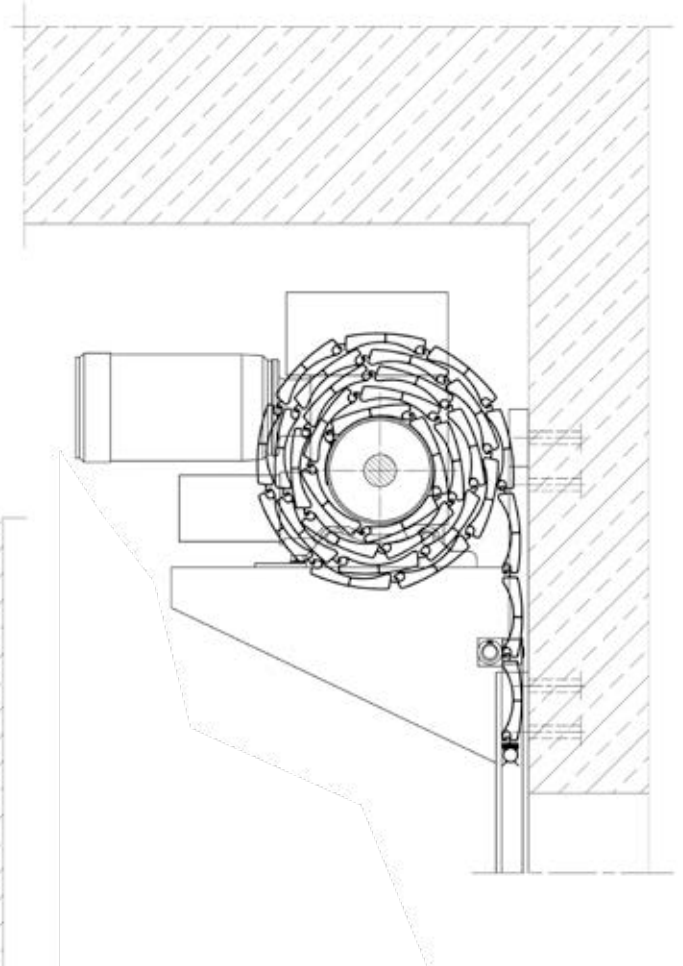
Requirements

Industrial roller shutter doors of the ALUPROF systems have a Initial Type Testing, made by the notified body and rendered accessible recipients of systems.

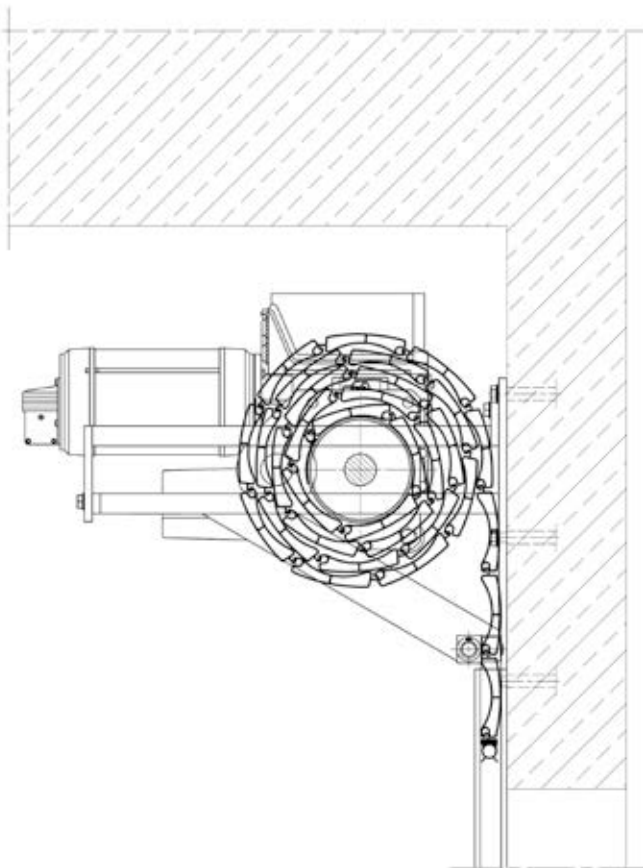


Industrial rolling gates – installation example

BPR/KNS



BPR/KNJ





Functionality

The rolling grille can be mounted in already existing facilities as well as in those that are being erected. The basic function of the rolling grille grating is to protect the facility and at the same time to:

- present shop window displays;
- provide proper ventilation in shopping arcades and underground garages;
- use glazing in the grating profile as an additional protection against wind and other weather conditions.

Construction details

Depending on the overall dimensions and conditions of installation, it is possible to mount the rolling grille on brackets and in a box. The door curtain is made of extruded aluminium PEK 52, PEK 77, PEK 80, PEK 100 or new PEKO grating profile. Profiles and guide rails are powder coated in a wide range of RAL colours. With regard to the manner of fitting a winding tube rolling grille falls into two categories:

- sitting on brackets: BKR/KNB,
- in a box: BKR/SK.

Comfort of operation

The rolling grille is controlled with a switch placed inside or outside the facility. When necessary, the radio-wave control or other selected combinations of control devices can also be applied to improve the comfort of operation.

Safety

In accordance with the applicable standards, the rolling grille is standard equipped with the anti drop device. Can be

retrofitted with protection against lifting, protection against crushing when closing and motion sensing devices. In the event of power failure, the rolling grille can be opened with the emergency manual drive. The electromagnetic brake of the grating drive and the locking hangers efficiently thwart any attempts to lift the curtain.

Colour scheme

A wide range of colours in the standard colour chart allows for meeting the

requirements of the most demanding customers. The colour finish of the surface is applied by powder coating.

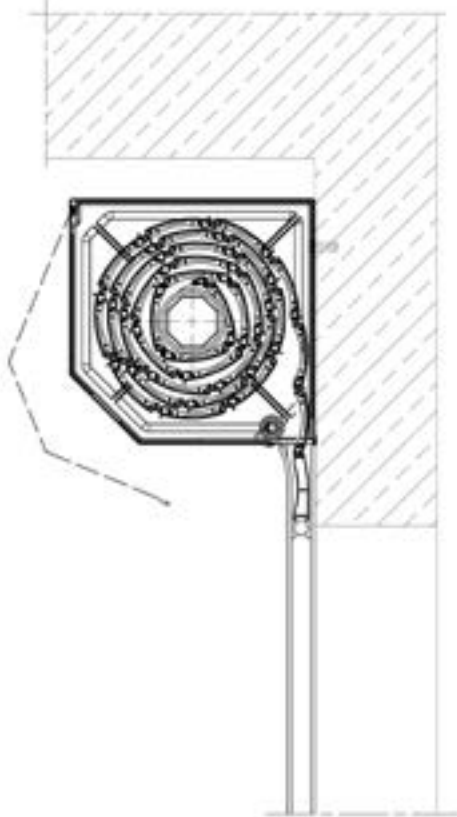
Requirements

Rolling grilles of the ALUPROF systems have a Initial Type Testing, made by the notified body and rendered accessible recipients of systems.

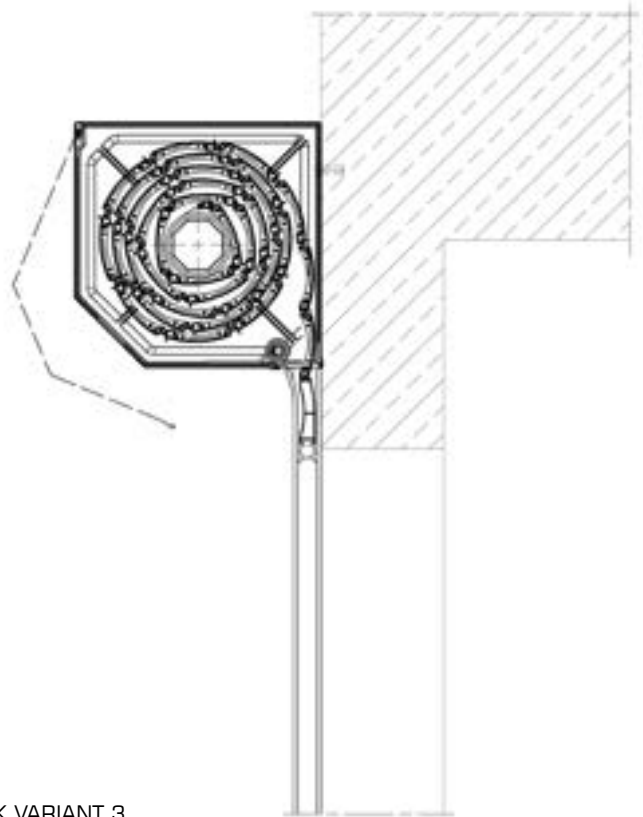


Commercial gate – installation example

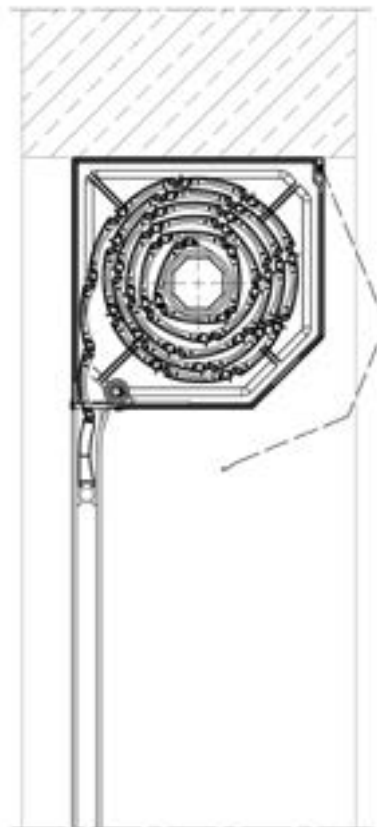
BKR/SK VARIANT 1



BKR/SK VARIANT 2

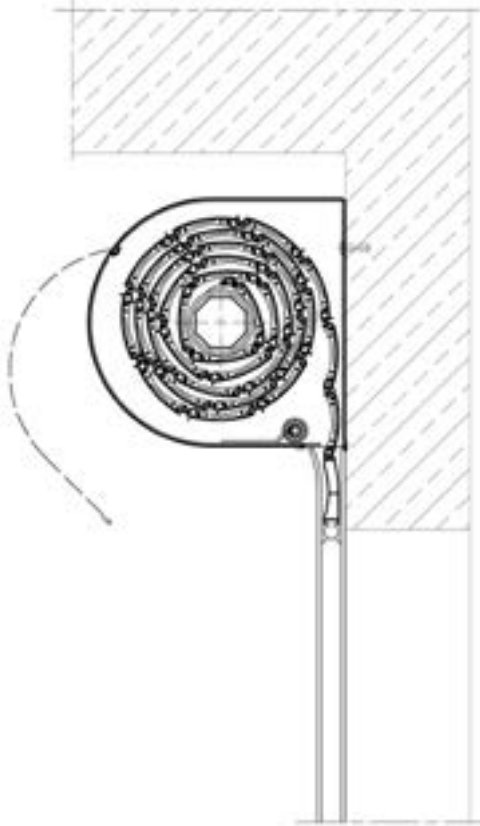


BKR/SK VARIANT 3

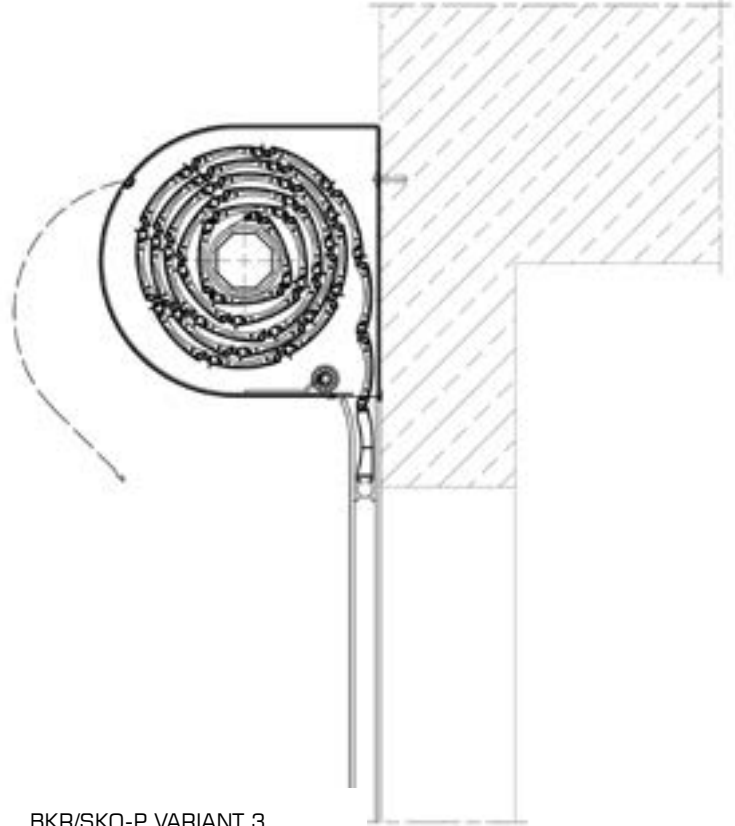


Commercial gate – installation examples

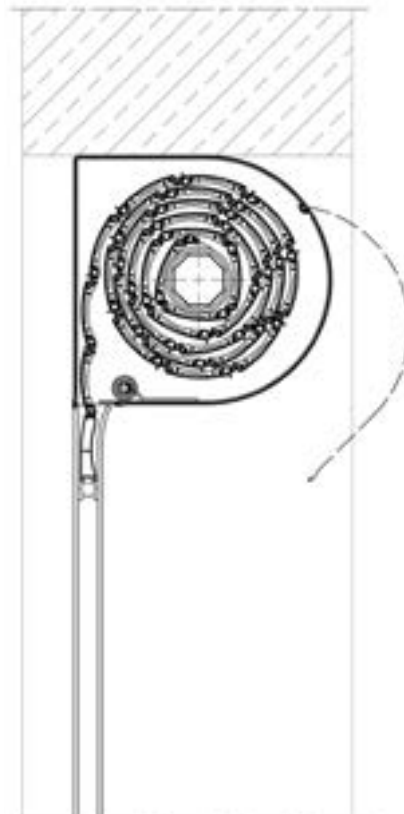
BKR/SKO-P VARIANT 1



BKR/SKO-P VARIANT 2

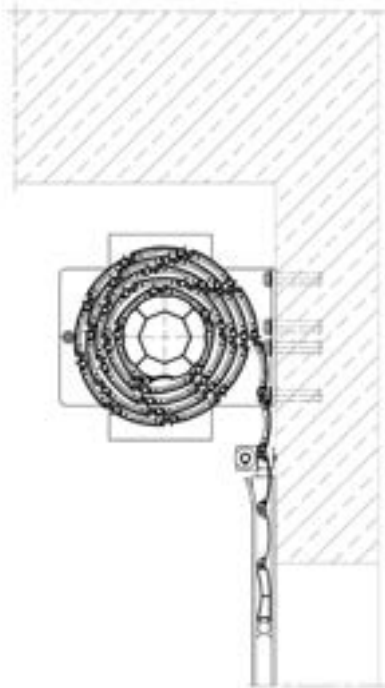


BKR/SKO-P VARIANT 3

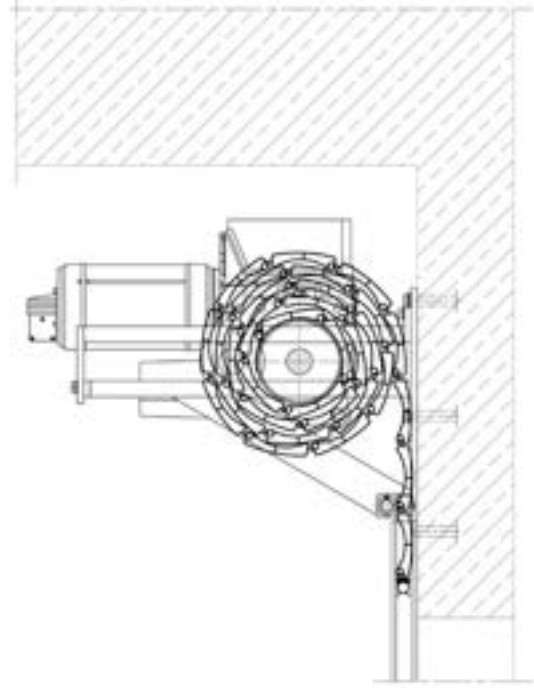


Commercial gate – installation examples

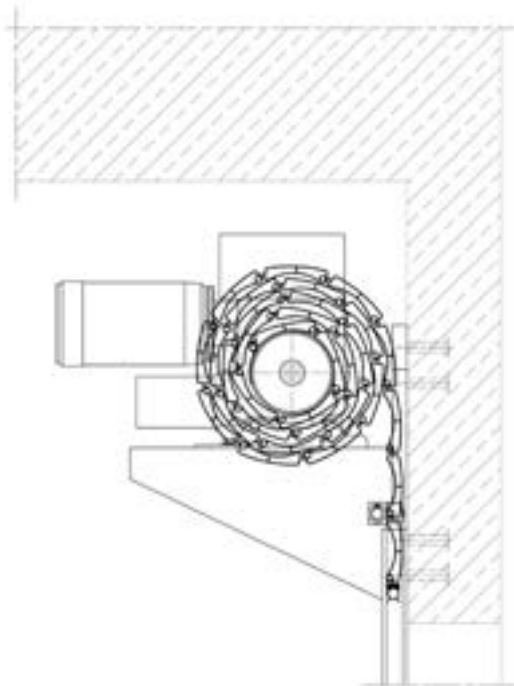
BKR/KNB



BKR/KNJ



BKR/KNS





PT 37
Profile height: 37 mm
Thickness: 8 mm



PT 52
Profile height: 52 mm
Thickness: 14 mm



PA 37
Profile height: 37 mm
Thickness: 8,5 mm



PA 39
Profile height: 39 mm
Thickness: 9 mm



PA 40
Profile height: 40 mm
Thickness: 8,7 mm



PA 43
Profile height: 43 mm
Thickness: 8,8 mm



PA 45
Profile height: 45 mm
Thickness: 9 mm



PA 52
Profile height: 52 mm
Thickness: 13 mm



PA 55
Profile height: 55 mm
Thickness: 14 mm



PA 77
Profile height: 77 mm
Thickness: 18,5 mm



PE 41
Profile height: 41 mm
Thickness: 8,5 mm



PE 55
Profile height: 55 mm
Thickness: 14 mm



PE 100
Profile height: 100 mm
Thickness: 25 mm



PEK 52
Profile height: 52 mm
Thickness: 13 mm



PEKP 52
Profile height: 52 mm
Thickness: 13 mm



PEK 77
Profile height: 77 mm
Thickness: 18,5 mm



PEKP 77
Profile height: 77 mm
Thickness: 18,5 mm



PEK 80
Profile height: 80 mm
Thickness: 18,5 mm



PEKP 80
Profile height: 80 mm
Thickness: 18,5 mm



PEKO 80
Profile height: 80 mm
Thickness: 18,5 mm



PEK 100
Profile height: 100 mm
Thickness: 25 mm



PER 77
Profile height: 77 mm
Thickness: 18,5 mm



PEW 77
Profile height: 77 mm
Thickness: 14,5 mm



PER 100
Profile height: 100 mm
Thickness: 25 mm

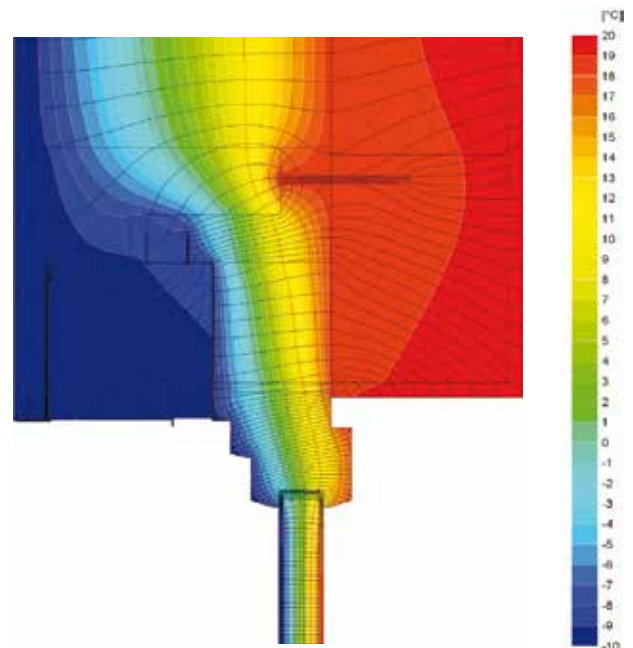


CERTIFIED THE PASSIVE HOUSE INSTITUTE, DARMSTADT

We are pleased to announce that our roller-boxes SP/165 & SP-E/165 (SP and SP-E top-mounted systems) have obtained a component certificate from the Passive House Institute Darmstadt.

Passive House Institute, Darmstadt, issued a certificate for the roller-box in the size of 165 mm or lower (for both SP & SP-E top-mounted systems), thus approving the system and its installation as a solution for passive houses.

Suitable installation method enables the use of any window recommended by the PHI, i.e. windows whose heat transfer coefficient U_w does not exceed $0.80 \text{ W}/(\text{m}^2\text{K})$, and the glass coefficient U_g does not exceed $0.70 \text{ W}/(\text{m}^2\text{K})$. It is the first all-in-one solution for top-mounted roller shutter in the PHI passive components base, as well as the first certificate for a Polish company in this group of products.



Isothermal lines

SYSTEM

MB-SUNSHADES

SHUTTER SYSTEM



MB-SUNSHADES provide solar shading and give the external wall its characteristic appearance. The solution consists of a frame with diagonally arranged slats or panels. Made of aluminium, the components are highly resistant to weather conditions and do not require any renovation work over years, which distinguishes them from products built with PVC or timber. Frame profiles are slim and light, but of an appropriate stiffness, which allows to fabricate both shutters for windows and patio doors.

SHUTTERS BY ALUPROF PROTECTING AND EMBELLISHING YOUR HOME

Aluprof's shutters are an option for those who look for practical yet aesthetic solutions. The shutters can be colour matched with the external wall or with the windows or used simply as a remarkable accent on the wall. Given the ample possibilities offered by the technology of decorative and protective coatings made on aluminium, the MB-SUNSHADES are perfect for use in various types of construction: traditional buildings will successfully call for structures with timber-like texture, whereas in modern homes, a colour combination of a structure with muted colours, identical to those of the windows, especially impressive when windows and doors are made of aluminium, may be preferred.

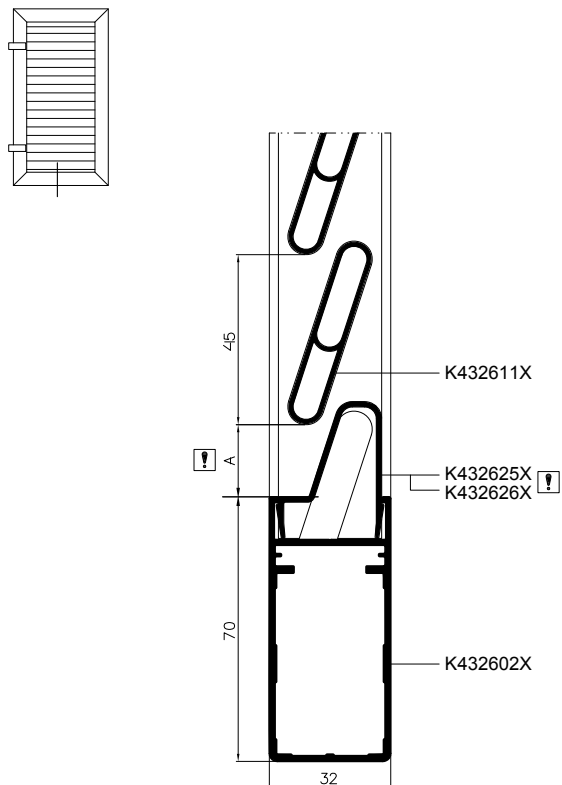
The hinges available for this system allow to use different solutions when in closed position: they can be jutting out, flushed in line, or placed deeper in the window recess.



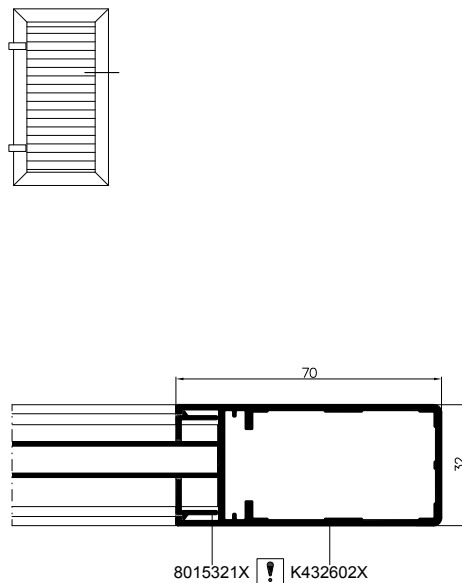
TECHNICAL SPECIFICATION

Profile dimensions	70 × 32 mm
Infill profiles depth	50 mm
Module (infill profiles distance)	every 45 mm
Maximum dimensions of the casement (H×L)	L to 1200 mm, H to 2500 mm

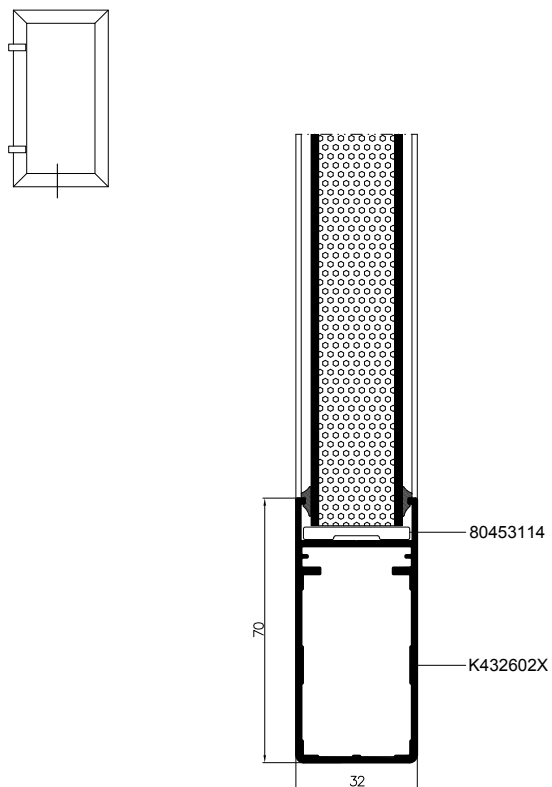
Louvres, vertical view



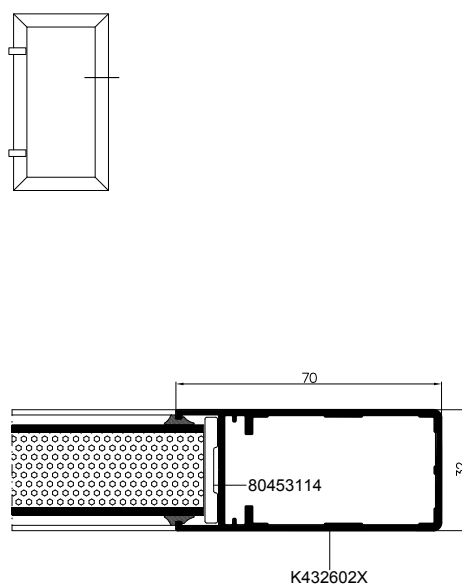
Louvres, horizontal view



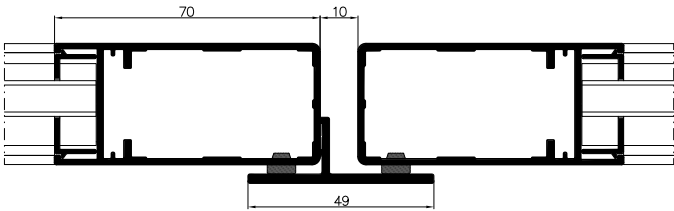
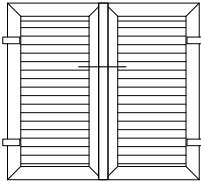
Paneled shutter, vertical view



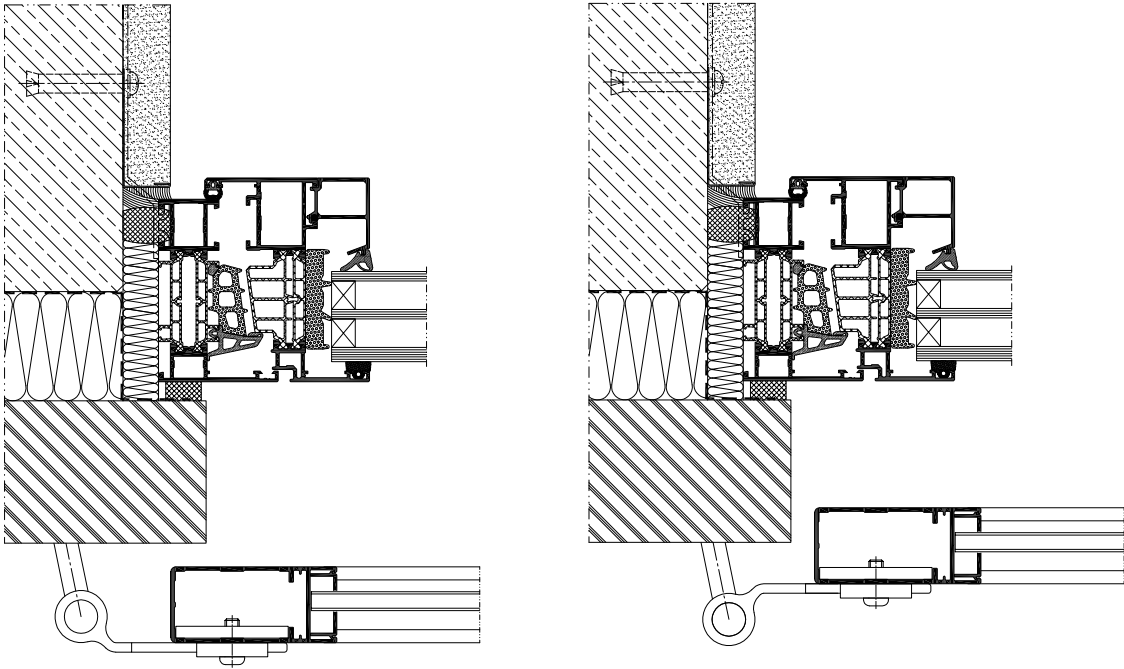
Paneled shutter, horizontal view



Casement with rebate, horizontal view



Construction examples



TEXTILE SHUTTER SYSTEM SRT SPACE

TEXTILE
SHUTTER SYSTEM



Functionality

Textile shutter system SRT SPACE is a classic solution designed to shadow interiors of various purpose. Interior textile shutters are among the most popular shading solutions used not only in public utility buildings but also in private houses. Due to their practical nature they are becoming more common than traditional curtains or drapes.

Construction details

An aesthetic shutter box made of extruded aluminium is equipped with an adaptive profile which allows its non-invasive installation and removal at any time. It is also possible to screw the side plates of the shutter box directly to the window surface using screws. A characteristic element of the system are aluminium spatial guide channels in the shape of C-profile. They are glued to the surface of the window frame so as not to obstruct the window opening using double-sided foam tape.

Comfort of operation

The shutter SRT SPACE is provided with the self-locking mechanism with chain, which allows to stop the shutter at any height. The chain control system is very simple and does not require much effort. Chain guide secures the loop against free sagging.

Advantages

The advantage of textile shutters is not only protection against intense sunlight, but also from the eyes of undesirable persons. Fabrics used in shutters also guarantee effective optical barrier for

light penetrating into the room. They eliminate reflections that can occur on computer screens or television sets. The proposed solution is also adapted

to use "day&night" fabrics (SRT SPACE D&N), which due to their structure allow for easy adjustment of light access.





Functionality

Textile shutter system SRT FLAT is a modern solution, which can be installed in every interior and fulfils expectations of the most demanding users. These type of products not only protect against overheating the room, but also against the glare effect, which could occur, especially when working at the computer. Therefore, very often interior shutters are used in buildings where it is impossible to mount the external shutters.

Construction details

A slim, streamlined shutter box made of extruded aluminium ensures the elegant design of the system. Its thoughtful design allows for a wider opening of windows with the shutter installed on the wing. Owing to the designed fin, the shutter box can be fixed using a special double-sided tape, or directly mounted to the window frame using screws. Flat system is equipped with flat aluminium guide channels, which are glued directly to the glazing beads. Their shape fits perfectly to the window woodwork, making the construction of shutters almost invisible.

Comfort of operation

The shutter is provided with the self-locking mechanism with chain, which allows to stop the shutter at any height. Its installation of possible replacement is very fast and simple. Chain guide (tensioning mechanism) minimizes the risk of dangerous loops.

Advantages

These products are the perfect combination of functional and aesthetic values. Owing to well selected fabric they can also constitute a stylish addition that will give a unique character to any interior. In addition, the shutters

effectively protect the interior against the intense sunlight but also from the eyes of undesirable persons. The shutters in SRT FLAT system are also adapted to use "day&night" fabrics (SRT FLAT D&N), which like the façade blinds allow for easy adjustment of light access.



TEXTILE SHUTTER SYSTEM SRT FLAT MAXI

TEXTILE
SHUTTER SYSTEM



Functionality

The SRT FLAT MAXI textile roller blind system is an innovative solution designed to cover larger window areas and balcony doors. Certainly, this product will be perfect for modern interiors, where, in addition to its protective function, it will be a fashionable decorative element.

Construction

The SRT SPACE shutter box was added to the construction of this solution, which was additionally equipped with a special masking profile that allowed to maintain the same shape of the shutter box as in the standard version FLAT. Thanks to the use of flat aluminium guide channels, it is possible to install the roller blind directly on the glazing bead, which makes the construction of the roller blind practically invisible. The SRT FLAT MAXI system has an innovative mechanism of strap adjustment for "day&night" fabrics. Thanks to this system, it is possible to adjust the convergence of the straps after closing the blind on the already installed application.

Operation simplicity

The product is provided with the self-locking mechanism with chain, which allows stopping the blind at any height.

Advantages

Due to their practical and aesthetic nature, roller blinds are becoming more common than traditional curtains or drapes. They have modern design and they are also easy to keep clean. Besides that, they take up little space making interiors

optically bigger. Roller blinds perfectly fit also to office buildings stressing individual character of each interior.



TEXTILE SHUTTER SYSTEM SRT FREE

TEXTILE SHUTTER SYSTEM



Functionality

Textile shutter system SRT FREE belongs to the family of the simplest and also the most commonly used means of shading. Simple and easy to install solution guarantees an appropriate shading of an interior, at the same time raising aesthetic values of any interior, due to application of a variety of fabrics.

Construction details

It a shutter box free solution, designed to be directly installed on the window wing. Due to the specially designed non-invasive handles, installation of the system is extremely simple and does not require much effort. A characteristic feature of shutters in the FREE system is a string lead which, in contrast to this type of products available on the market is placed under the fabric. This aesthetic procedure allow to secure the string against catching while opening the window, which could cause its damage. The SRT FREE system features an innovative solution of string tensioning in the self-locking system. Durable and reliable design of this element allows for easy installation on a window wing.

Comfort of operation

Self-locking mechanism with chain, used in the system allows to stop the shutter at any height. Its installation of possible replacement is very fast and simple. Tensioning mechanism minimizes the risk of hazardous loops, which can cause harm to children.

Advantages

Simple and easy to install roller blinds provide adequate shading in the room. Due to the possibility of use of variety of fabrics, they ensure also the aesthetics

look of each interior. An option with "day&night" fabrics (SRT FREE D&N), which enables adjustment of the incoming light to complete darkness.



New terrace pergola
MB-OPENSKY 120

Perfect in every way





ARCHITECTURAL PRODUCT GUIDE
edition 03-2023

Publisher ALUPROF SA
www.aluprof.com



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ALUPROF

ALUMINIUM SYSTEMS

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