

### WINDOW AND DOOR SYSTEMS

MODERN, COMPREHENSIVE SOLUTIONS

## ■ MB-60E, MB-60E HI

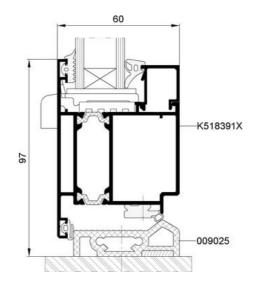
#### COST-EFFECTIVE DOOR SYSTEM WITH A THERMAL BARRIER

MB-60E - cost-effective door system with a thermal barrier

The MB-60E system is intended for execution of doors with a thermal barrier as well as window sets incorporating a door unit. It allows to obtain a construction featuring good functional properties combined with high technical parameters, ensuring at the same time cost efficiency of production, convenience and shorter time required for door installation, which is of prime importance in the times when so much emphasis is put on economy at each stage of investment realization.

The MB-60E system is a part of a popular and generally appreciated MB-60 door & window system. A characteristic feature of the system is its close compatibility with other door & window systems manufactured by ALUPROF S.A., which enables utilization of common accessories and glazing beads. The construction depths of profiles, featuring 3-chamber construction, equals 60 mm. The surface of leaves is aligned with the door frame both as seen from the outside and inside. The glazing units to be incorporated in the MB-60E system may range from 5 mm to 41 mm. Pre-cut gaskets applied in glass panels installation reduce to a minimum the number of trims and ensure high tightness.









## ■ MB-70, MB-70HI

### WINDOW-DOOR SYSTEM WITH A THERMAL BARRIER AND ENHANCED THERMAL INSULATION

MB-70 is a modern aluminium system intended for realizations of exterior architectural building elements requiring thermal and acoustic insulation, such as: various types of windows, doors, vestibules, display windows or spatial structures.

The system profiles have a three-chamber structure. The structural depth of the window sections is equal to 70 mm (frames) and 79 mm (casement), and for doors: 70 mm and 70 mm respectively. Such assumed depths of casement and frame sections give the effect of one surface from the exterior side after closing – in the case of the window, and the facing effect to the surface of casement and frames – in the case of doors. Shape of the profiles allows achieving slender and resistant window and door structures. In the MB-70 system, it is also possible to produce windows with the so-called "hidden casement" MB-70US and the MB-70 "Industrial", finding its application during modernisations of post-industrial historic and monumental objects.

As a response to ever growing demand for building products featuring high insulation performance there have been designed door and window systems with a thermal barrier MB-70HI, MB-70US HI and a curtain wall based on the MB-70CW HI windows. Their construction is based on well-proven, well developed and highly appreciated base systems, i.e. MB-70, MB-70US i MB-70CW.







## ■ MB-70US, MB-70US HI

#### WINDOW SYSTEM WITH HIDDEN SASH

As far as the aesthetics is considered, this solution is identical to MB-60US structure. However, its advantage is the enhanced thermal insulation performance: the value of heat transfer coefficient Uf - depending on the applied profiles - ranges between 1.35 and 2.16 W/(m2K). The system also comes as an option featuring enhanced thermal insulation performance, i.e. MB-70US HI with the value of heat transfer coefficient Uf between 1.31 and 2.0 W/(m2K).

The windows made in MB-70US system have casements that are unseen from the

exterior side of the building. The position of the adjacent fixed and openable windows cannot be distinguished. In the row of adjacent fixed and openable windows all the compartments looks the same. The width of window frames is small, what makes the structure look slender and light.

Similarly to the standard solution, the MB-70 windows have the effective water drainage and ventilation system from the glass chamber and from the chamber between the casement and the frame. The ventilation and drainage holes are covered from the outside with caps made of plastics.

The characteristic feature of the MB-70US window system is that it is closely connected with the other MB systems. Adapting such a structural design allowed achieving and applying many common elements, e.g. common glazing beads, gaskets, hardware, etc.



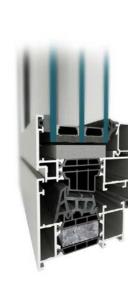


### THERMALLY INSULATED WINDOW & DOOR SYSTEM

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.











#### THERMALLY INSULATED WINDOW AND DOOR SYSTEM

The highly efficient **MB-86N** window and door system makes it possible to satisfy the diverse needs of users. There are two versions of the profiles, the ST and the SI, which are designed to meet different thermal energy efficiency requirements. The system provides superb performance parameters.

Another advantage of the MB-86N is the high durability of the profiles, which make it possible to produce large-scale and heavy structures. Several versions are available. The MB-86US is a window with a concealed vent. The MB-86 Casement provides an outward-opening window with a thermal break. The MB-86B has been developed to meet the requirements of the Belgian market.









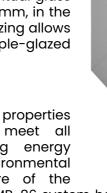
## MB-86US ST, SI

THE INVISIBLE WINDOW SASH

The MB-86US system is used to make different types of windows, balcony doors, porches, shop windows and spatial structures, which characterise very good thermal and acoustic insulation and high air and water tightness.

The window features that a vent profile is hidden behind the profile of the window outer frame, and surfaces of mounted glass panels in active and fixed profiles are on one plain. Thanks to that external opening and fixed panels look identical.

The depth of window section is 77 mm (jamb), 80.8 mm (leaf). The width of external window frame is little what makes glass fitting and the quantity of falling through lighting maximum increased. A design seems to be slender and light. The value of eventual glass thickness: in the window outer frame – from 7 up to 52 mm, in the casement – from 15 to 60 mm. Such a wide range of glazing allows to mount all found at the market types of double or triple-glazed units, sound proof/acoustic or anti-burglar glass.



In terms of technical properties the MB-86US system meet all requirements concerning energy conservation and environmental protection. The structure of the

profile similarly to basic MB-86 system has three variants depending on requirements of thermal insularity: MB-86US ST, MB-86US SI and MB-86US AERO with the use of modern insulation from aerogel.

The system gives great abilities in created structures: maximal dimensions of casements exceed standard values for this type of construction. Hs max=2,5 m, Ls max=1,6m. Maximum loaf weight is 150 kg.

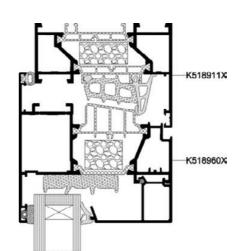


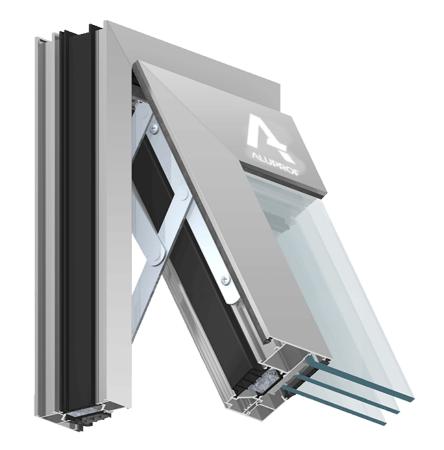
## ■ MB-86 CASEMENT

### **OUTWARD-OPENING WINDOWS**

The MB-86 Casement outward opening window system with a thermal break forms a part of the MB-86 system designed to execute elements of architectural external development, e.g. different types of fixed and outward-opening windows, porch enclosures, shop windows and spatial structures featuring high thermal and sound insulation performance, as well as tightness to water and air infiltration. The

system meets all the requirements in respect of energy efficiency and environmental protection. The parameters of windows based on the MB-86 Casement system exceed the most stringent applicable regulations and standards.







### FIRE-RESISTANT WINDOW, DOOR AND PARTITION SYSTEM WITH EI15, EW30 AND EI30 FIRE RATINGS

The MB-86EI is a system of thermally insulated, fire-rated windows, doors and partitions. It is designed to be used for building external fire compartments fitted with operable windows and doors and fixed partitions with a primary fire-rating of EI30, EW30 and EI15, in line with the PN-EN 13501-2 standard. The structure is based on our MB-86 system, meaning that it features high thermal and acoustic insulation, along with excellent water- and airtight parameters.

As such, it combines the advantages of a classic window and door system with the properties of fire compartments in terms of its thermal properties, durability and production technology. The construction not only fulfils all the requirements of the regulations in force and the standards for energy efficiency and environmental protection, but also ensures proper fire safety provision. The system is classified as 'no fire spread' (NRO).











WINDOW & DOOR SYSTEM THAT PROVIDES THE HIGHEST THERMAL INSULATION PERFORMANCE

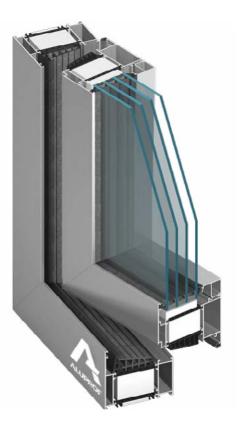
The MB-104 Passive is a thermal break-equipped window & door system that provides the highest thermal insulation performance, and meets all the requirements for passive building components.

The system is used to fabricate exterior architectural development elements, e.g. various types of windows, doors, vestibules, and spatial structures, which are characterized, in addition to the excellent thermal insulation, by a very good sound insulation, water- and air tightness and high structural strength.



The MB-104 Passive system's profile construction comes in two variants, depending on the requirements for thermal energy savings: SI and **AERO** 

The MB-104 Passive -based door & window parameters the exceed current requirements of the strictest applicable regulations and standards - that's why the MB-104 Passive system is dedicated to energyefficient and passive building.



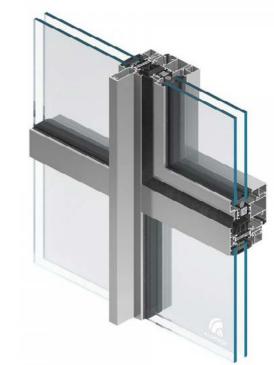


WINDOW SYSTEM WITH SLIM PROFILES

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 fixe windows of an excellent water resistance, air tightness, and sound insulation performance.

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.





# ■ MB-FERROLINE

SYSTEM WITH SLIM PROFILE

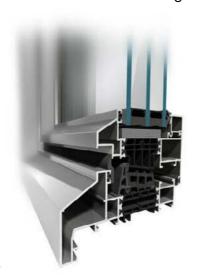
Window system with thermal break MB-FERROLINE is perfectly suitable for renovation of historic buildings and helps to preserve the appropriate appearance of windows, which can imitate steel joinery, whilst ensuring very good technical performance of the construction.

The system enables the fabrication of various types of highly resistant, inward opening windows (side-hung, hopper, tiltand-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.

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.













## PANEL DOORS

MB-79N, MB-86N, MB-104 PASSIVE

Our offer includes panel doors based on the MB-86 system. It is a very visually attractive and, at the same time, technologically advanced product, which due to its design solutions and the rich diversity of colours for door fill, it can be, not only the functional and durable entrance into your home, but also its mark and decoration.

It is available in four versions: ST, SI, SI+ and AERO. On account of



their technical parameters, panel doors are a perfect solution for improving the energy efficiency of buildings. They also provide the innovative ability to mount the panel in the structure using a double-sided tape. For more information on panel doors, click HERE:

The panel doors are the proposal for the most demanding users. Due to state-ofthe-art technical solutions and design they can be, not only the functional and durable entrance into your home, but also its mark and decoration.







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 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.



The systems are designed to construct thermally insulated sliding doors and windows, which may be built in brick walls, aluminium façades, winter gardens or window display constructions based on the MB-59S or MB-59S Casement elements. 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 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 6 mm wide.

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

MB-SLIDE, MB-SLIDE ST SLIDING DOORS

### MB-59 SLIDE

#### **BALCONY SLIDING DOOR SYSTEM**

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

> 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.

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.

### MB-59 SLIDE GALANDAGE

SLIDING FRENCH DOOR SYSTEM

### MB-SLIDER WINDOW

### SLIDING WINDOW SYSTEM

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. 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









FOR LIFT & SLIDE DOORS

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.

When in the open position, the door does not take up space inside the room, whilst enabling a very good contact with the environment which further increases the comfort of use. 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.

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.







## **■** MB-77HS

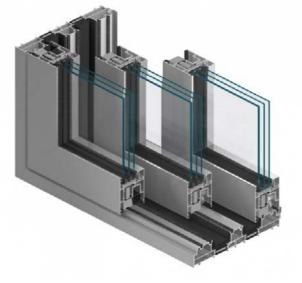
#### LIFT AND SLIDE BALCONY DOOR

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. 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.



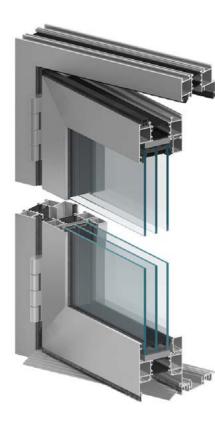
The design & arrangement of the system profiles enable luxurious openings of large dimensions, accommodating double & even triple glass unit compositions, which in conjunction with the constituent parts & innovative technical solutions, help achieve a high level of thermal & acoustic performance.





## MB-86 FOLD LINE

**BIFOLD DOOR** 



Bifold doors leading outside offer their users enormous freedom, allowing them to make the most of good weather and more or less completely eliminating the barrier between a building's interior and its surroundings. They can be used to create an excellent, expansive way out onto a patio or to link a restaurant or café with the outdoor spaces it uses seasonally.

The MB-86 FOLD LINE HD is a solution which provides plenty of comfort in its daily use. At

the same time, it not only features high technical parameters, but also makes it possible to create largescale structures. The bifold doors can open outwards or inwards and the panels

can be configured as desired. This state-of-the-art product is designed to meet the exhaustive demands of users, architects and developers alike.

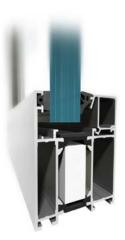


### MB-60E EI

### FIRE RATED PARTITIONS WITH DOORS

MB-60E EI enables the fabrication of fire-resisting internal or exterior single or double leaf doors. It also enables the fabrication of "technical windows" and fireresisting partitions. MB-60E Elbased constructions are classified EI15 or EI30 to PN-EN 13501-2+A1:2010. The system is classified as non-fire spreading (NRO).

This solutions 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 visible vertical wall profiles that separate the individual modules of the wall, while preserving their full fire resistance.

The joint between the glass panes is only 4 mm and is filled with fireproofing, intumescent material, and

with non-inflammable silicone. The silicone is available in three colours (black, grey or white). The partition walls can thus have a height up to 3,6 m with modules' width up to 1.8 m. Fire tests performed on these partition walls by the Poland's Building Research Institute (ITB) included the so-called "free-edge model", so there is no limit on the maximum length of this type of walls.



SEAMLESS FIREPROOF PARTITION WALL







### FIRE-RESISTANT WINDOW, DOOR AND PARTITION SYSTEM WITH EI15, EW30 AND EI30 FIRE RATINGS

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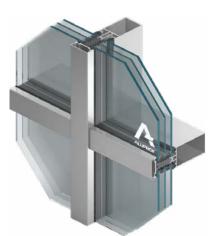




environmental protection, but also ensures proper fire safety provision. The system is classified as 'no fire spread' (NRO).

The MB-SR50N HI+ mullion and transom façade system has been designed to construct lightweight curtain walls of a hanging and filling type as well as roofs, skylights and other spatial constructions.

This system allows façades to be constructed with visible narrow dividing lines while ensuring the durability and strength of the structure. The wide offer of profiles enables the architects and designers to realise even the most enterprising ideas for aluminium and glass structures. To obtain the optimum thermal and acoustic insulation and facilitate mounting in the MB-SR50N HI+ system façade, the PE insulator was used, as it provides a very good thermal insulation ((Uf) from 0,59 W/m2K) and its shape ensures proper screw driving when glazing the façade.



As regards the opening elements in "HI"-type façades with improved thermal insulation, the use of windows and doors with improved thermal insulation in MB-86 Aero system is especially recommended.

COMPONENT

Passive House Institute



A MULLION-TRANSOM WALL WITH HIGH THERMAL INSULATION

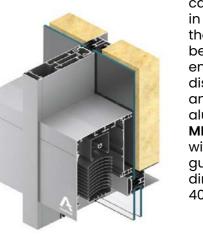


### MULLION AND TRANSOM CURTAIN WALL SYSTEM INTEGRATED WITH SKYFLOW VENETIAN BLINDS

The MB-SR50N ZS system is an innovative solution combining the SkyFlow venetion blind system with Aluprof's mulliontransom 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.



Screen-type sunshades are very functional solutions and are popular both in public and residential buildings. The main advantage of this type of products is the protection of rooms against intense sunlight by using specialized technical fabrics. In addition, they protect the interior from eyes of undesirable persons while maintaining a clear view of the outside.

These solutions also provide an effective optical barrier to light entering the room, minimizing the glare effect that can occur on monitor screens. Owing to well selected fabric they can also constitute a stylish addition that will give a unique character to any interior.

> It is worth remembering that a properly selected screen system presence of insects.

can also serve as an insect screen effectively protecting rooms from the



**SkyFlow** venetian blinds are an example of a solution, which effectively protects the interior from excessive heat, while providing adequate optical comfort. One of the unquestionable advantages of this product is free adjustment of the angle of slats, which allows to choose the right degree of shading and thus individual management by the user.

The well-considered construction also allows to create larger dimensions of the structure, which makes them often used for large glazing. As a result, the blinds are perfect for both public buildings and residential investments.

> The MB-SR50N ZS solution is designed with a view to object-oriented projects, combining the SkyFlow facade blind system with Aluprof's mullion-transom curtain walling system MB-SR50N. Special pressure plates have been designed for the columns to allow the installation of the façade filling and decorative caps, which at the same time serve as a guide channel for the blind.







### MB-OPENSKY 140

PERGOLA SYSTEM





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 deepand a simultaneous wind load of around 59 mph.







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