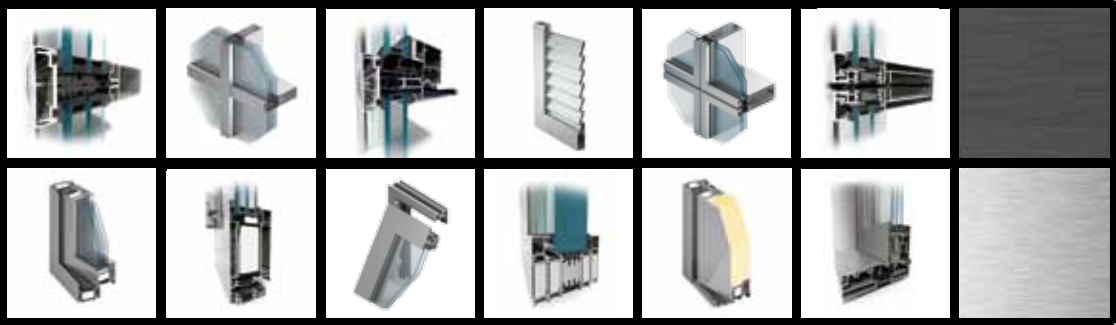
FENSTERTEK

ALUPROF SYSTEMS OVERVIEW



ALUPROF

Aluprof systems overview
Edition 2017

Publisher ALUPROF S.A.
www.aluprof.eu

Description and printing VGraf Studio

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Aluprof – everything's under control

RESEARCH & DEVELOPMENT

In its activities, Aluprof S.A. pursues the continuous improvement in the quality of products. They meet and exceed the requirements of the European standards for the quality of alloys, manufacturing tolerance and strength properties.

The know-how of the enterprise is its engineering ideas. The world class designers and engineers work on state-of-the-art innovative and technologically advanced solutions. The designed systems meet the needs of the market and help to achieve the architect's visions, and they also significantly contribute to the development of the aluminium structure branch.

The high quality and success of our systems is a result of the creative work of the design department. Development of new window and door, façade and roller blind system involves our customers, taking into consideration their ideas, concerns and suggestions.

TECHNICAL SUPPORT

The in house technical team provides our business partners with support and advice in solving a wide range of problems, as well as training and explaining new systems and construction/calculation software. The responsibility of the department is to provide advice and support in system selections, material valuations, specifications, technical drawings, as well as the design of details and calculations. The department's mission is also to promote Aluprof's solutions among architects, support and advise them in design and construction processes, as well as provide any technical support in solving problems.

The specialists working in the department are at the disposal of architects and manufacturers of aluminium joinery. If you have questions or issues the team will be more than happy to help find a resolution for your problem. For contact details, visit **www.aluprof.eu** and click the tab Contact.

PRODUCTION PROCESS

As we extrude our own profiles with the company group, Kety Capital, we are able to provide a competitive price, flexibility and very good lead times.

Aluprof has lines for automatic insulation of aluminium profiles using a thermal break. "Warm" profiles manufactured like this are the basic component of window and door systems offered by the company.

Thermally insulated profiles are also made as a part of service provision. In addition to standard profiles, customers can also order the dual colour ones, i.e. two different paint colours, paint and anode, anode and wood-grain coating etc.

Powder coating

In both its plants, Aluprof has modern powder paint shops at its disposal. There are high-duty, fully automatic lines equipped with quick colour change spray booths. Thanks to the additional manual painting line, the company is able to quickly adapt to the requirements of its clients, depending on the scale of the order and its completion date. The company focuses on environmental friendly solutions, using non-toxic preparations and chromium-free aluminium treatment. The sandwich-type booth, as well as the powder supply and recovery system, allows the effective use of varnish and a quick colour change.

The entire powder coating process is computer-controlled, which guarantees the Consistency and conformity of painting parameters, including coating thickness. The effectiveness of control over painting parameters is confirmed by the certificates from the Qualicoat organisation and the supplier of IGP powder coating systems.

The offer includes:
– any types of powder varnishes in the entire RAL colour palette, NCS, ATEC system and paints with extended warranty,
– wood-like DECORAL surfaces,
– powder coated sheets of 1250 x 3000 mm,
– two-layer system (primer + topcoat paint) recommended in the "swimming-pool, seaside" environment, and preanode+paint.

The output of Aluprof's paint shops is 7 million m² per year. Maximum overall dimensions: L 7200 mm; H 500 mm; weight of material hung on tag up to 300 kg.

ADDITIONAL SERVICES

Curved Profiles

– bending profiles according to drawings and templates
– possibility to construct curved structures using raw, painted and wood-grain coated profiles

Anodising

Aluprof's offer includes anodised profiles. They are also available with a brushing and shot blasting effect. Quality confirmed by Qualanod certificate.

TESTING FACILITY

Aluprof has its own independent Centre For Research & Innovation which carries out testing according to the European (EN) and American (ASTM, AAMA) standards in collaboration with numerous notified bodies.

The Centre specialises in the following test areas. The Laboratory has, among others, the largest test chamber in Central and Eastern Europe for windows, doors, façades and exterior roller shutters, in which items are tested for weather-tightness: air & water tightness or wind load. This fully automatised and computerised chamber is suitable for testing constructions up to 6.5m high and 6m wide.

Also, the Laboratory carries out testing for mechanical properties of windows and doors: resistance to repeated opening and closing (cycles) static and dynamic loads, and resistance to burglary.

The Laboratory carries out, i.a. certification and periodic tests and offers good prices against other testing laboratories in Poland which is a great competitive advantage.

The Laboratory has signed an agreement on testing with the most prestigious research institute in Europe – IFT Rosenheim, and is entitled to perform tests which are subsequently certified by IFT Rosenheim.

TRAINING CENTRE

Prototype room, training centre, service group – we provide our business partners with technological support and technical advice in solving technical problems both at Aluprof's headquarters and on site at the customer's location.

The service group offers full support to manufacturers, as a result of which they get to know the secrets of manufacture and prefabrication of components so that the entire production line can be fully optimised and the production efficiency improved.

The service group visits all the manufacturers cooperating with Aluprof who need help in the prefabrication of Aluprof systems, and even the servicing for fixture mounting.

All the new solutions to be implemented by Aluprof are first made on site in the prototype room and then the customer is trained in the precise manufacture of complete products based on pre-configured system components. The on-site service at the customers' location offers higher training opportunities, as the employees work at their workplaces and with their tools. During such a visit, the co-operators are given specific information on the optimum workshop organisation and precisely defined rules of joinery manufacture.

Thanks to such cooperation, customers obtain higher productivity, due to the elimination of errors, inspection of machines or simply normal counselling in prefabrication, which ensures failure-free operation. The service group is characterised by flexibility and a very fast response to any reported service demands.

Aluprof's service group is a qualified and flexible crew.

Certificate of training at Aluprof S.A.

TOOLING

The offer of Aluprof S.A. includes the full range of tooling which is necessary for window, door and curtain wall fabrication.

Aluprof's modern tooling ensures high quality. Long-standing experience in this branch has been conducive to the designing of easy-to-operate equipment, which is at the same time very advanced from the technological point of view. Thus, the equipment will allow you to save time and increase your productivity. The offer also includes multi-functional devices that can be used in several different operations.

The tooling is characterised by simple maintenance and part replacement. Some of the devices can be used in multiple systems, which, to a large extent, eliminates the additional costs related to the commencement of production of another system. Aluprof's instrumentation also means the warranty of safety when performing treatments.

The list of required tooling is provided in the production catalogues, available in the section "Tooling". For a full catalogue of instrumentation offered by Aluprof, see our website at **www.aluprof.eu/en/tooling**

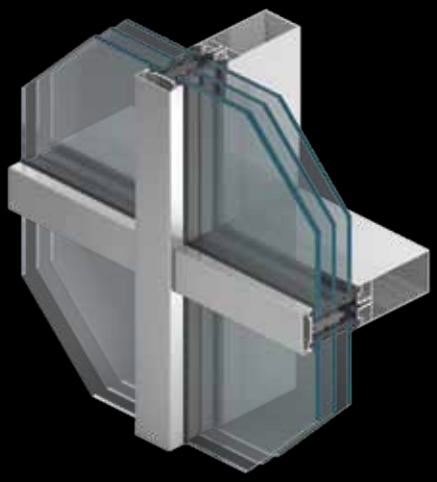
SOFTWARE

TO MAKE IT EASIER for customers to make aluminium structures in Aluprof systems, we offer specialist computer programs.

MB – CAD – specialist calculation software to facilitate and accelerate the works related to design, cost estimation and production set-up of aluminium structures. It enables the fast creation of offers for the customer, the generation of material summaries, and the creation of production lists and cut-out lists.

Uni_Link – is a versatile and unique software for CNC machines used for aluminium, steel and PVC profile treatment. All the production lists prepared with the Uni_Link platform can be used by every machine in the industry. In addition to controllers for all the machines, Uni_Link has also prepared a platform for connection with different construction and calculation programs. Thus, we offer our customers complete automation. Instead of manual machine programming at the workshop, the program enables the controlling all of the machines by importing data from any calculation program.

LOGICAL – computer program supplied by Orgadata. This application controls CNC treatment centres and is integrated with the financial and accounting department.



Façade systems

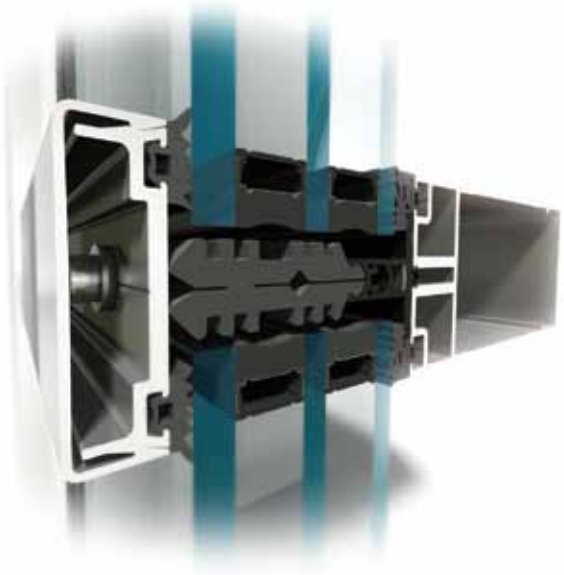
MB-TT50

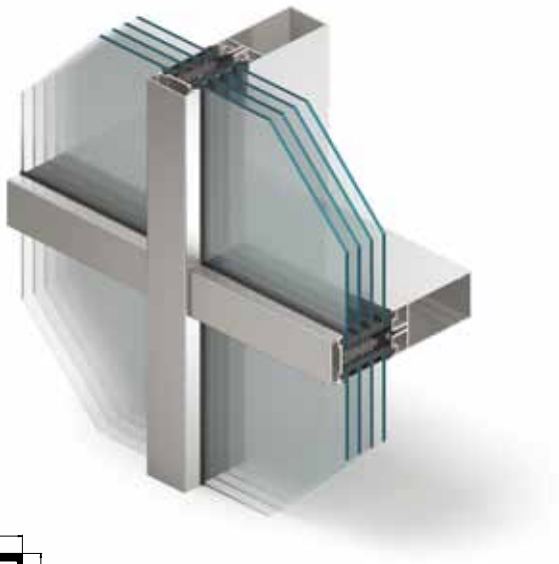
The new and innovative **MB-TT50** goes a step beyond standard stick systems in terms of performance and functionality. It offers exceptional insulation and weather performance achieved by special 3 zone cascade drainage and ventilation of the glazing rebates. It's innovative design saves time and therefore money on fabrication due to square cut transom to mullion connection. The standard configuration of the system can be enhanced to conform to security and fire rated requirements.

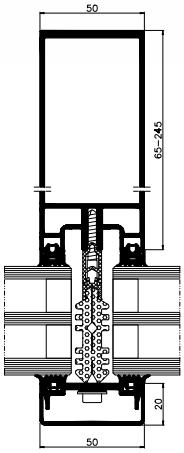
- *U_f from 0,5 W/(m²K)*
- *CWCT compliant*

RECOMMENDED FOR ENERGY-EFFICIENT CONSTRUCTIONS

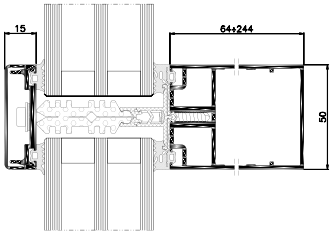
ALCHEMIA
Location: Gdansk / Poland
Design: APA Wojciechowski







Mullion – cross-section



Transom – cross-section

FEATURES AND BENEFITS

- certified highest class A+ by the PHI Darmstadt Institute, MB-TT50 system can be successfully used in all passive buildings
- profile shapes are adjusted to current trends in architecture and enables flushing of mullion-transom profiles from the inside of the façade
- wide variety of angular connections to allow greater spatial structure design flexibility
- set of adapted insulators to provide an excellent protection against the construction's heat loss, while their special shape facilitates prefabrication of the façade
- set of gaskets and a 3-zone drainage and ventilation cascade system to ensure proper operation of the façade and to provide protection against the most unfavourable weather conditions
- high capacity mullion-transom connections (3,0 KN) coupled with wide range of glazing to enable the use of various types of glass and installation of large, heavy sets
- wide range of façade-integrated, openable elements: various types of doors and windows, including roof slope windows, façadeintegrated windows, tilt and parallel opening windows MB-SR50N OW

cool, temperate climate
phA+
CERTIFIED COMPONENT
Passive House Institute

TECHNICAL SPECIFICATION	MB-TT50
Mullions depth	65 – 245 mm
Transom depth	64 – 244 mm
Inertia mullions (range Ix)	35,41 – 1639,59 cm^4
Inertia transoms (range Iz)	28,53 – 1233,76 cm^4
Glazing width	to 64 mm
Max weight of façade pane	600 kg

PERFORMANCE	MB-TT50
Air Permeability	class AE 1350Pa, EN 12153; EN 12152
Watertightness	class RE 1800Pa, EN 12155; EN 12154
Windload resistance	2700Pa, EN 12179, EN 13116
Impact resistance	class I5/E5, EN 13049, EN 14019:2006
Resistance to break-in	RC2 & RC3

Façade systems

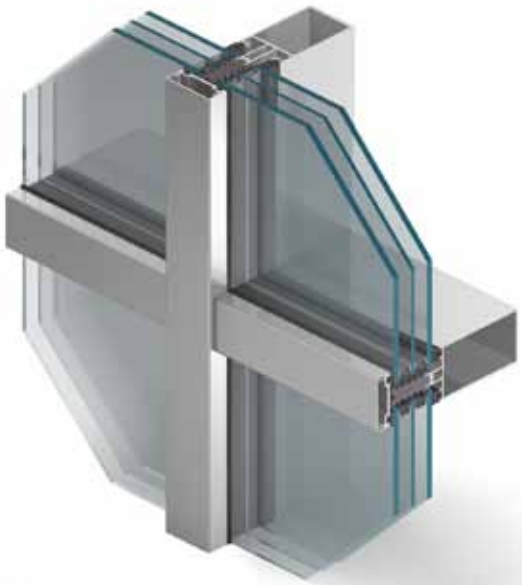
MB-SR50N HI+

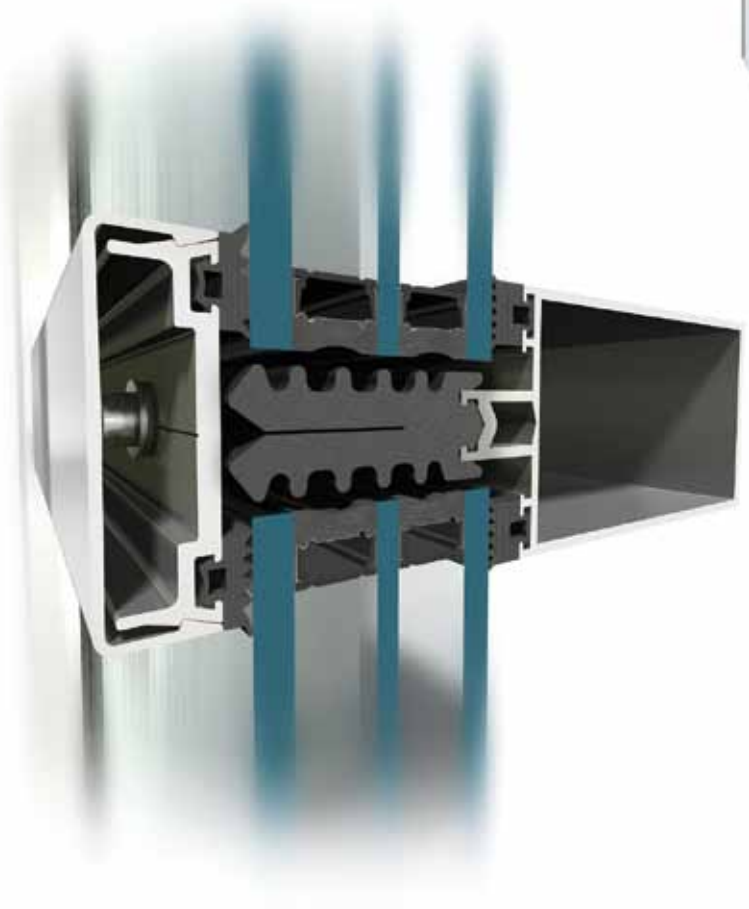
The M**B-SR50N HI+** mullion and transom façade system has been designed to construct lightweight curtain walls of a hanging and filling type as well as roofs, skylights and other spatial constructions.
This system allows façades to be constructed with visible narrow dividing lines while ensuring the 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 (U_f from 0.7 W/m²K) and its shape ensures proper screw driving when glazing the façade.

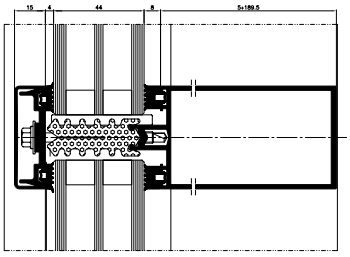
- *U_f from 0,59 W/(m²K)*

RECOMMENDED FOR ENERGY-EFFICIENT CONSTRUCTIONS

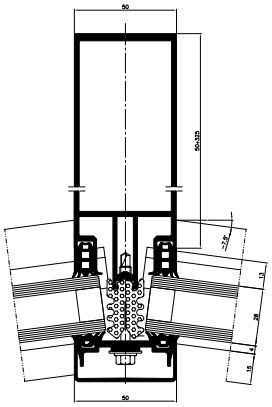
GALERIA KATOWICKA
Location: Katowice / Poland
Design: SUD Architectes







Transom – cross-section



Mullion – cross-section – 7,5°

FEATURES AND BENEFITS

- certified highest class A+ by the PHI Darmstadt Institute, MB-SR50N HI+ system can be successfully used in all passive buildings
- angular connections to allow free formation of aluminium developments
- mullions and transoms with "sharp" edges, to enable fabrication of uniform, truss-appearance, load-bearing curtain walls
- aesthetic curtain wall varieties and a number of lining profiles of various shapes providing multiple curtain wall appearances
- wide range of façade-integrated, openable elements: various types of doors and windows, including roof slope windows, façade-integrated windows, tilt and parallel opening windows MB-SR50N OW
- wide range of glazing and available insulators & accessories to achieve a high level of thermal insulation performance
- possibility to bend profiles, and to create arch structures
- compliance with CE marking requirements

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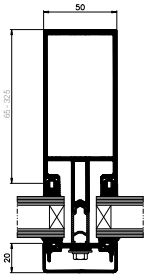
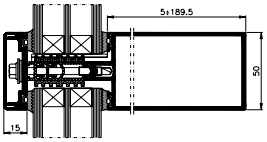
phA+
CERTIFIED COMPONENT
Passive House Institute

MB-SR50N
MB-SR50N HI



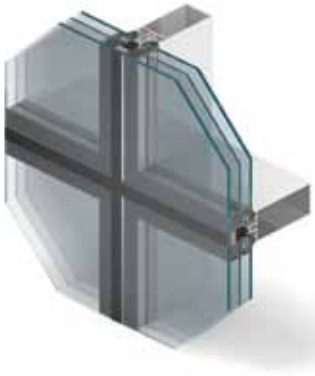
MB-SR50N

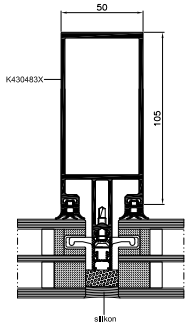


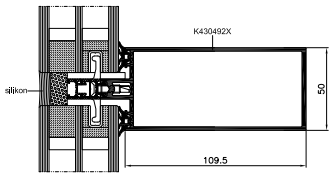
MB-SR50N HI

The basic system version and its variant with enhanced insulating power allow constructing façades with visible narrow parting lines while ensuring 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.

MB-SR50N EFEKT

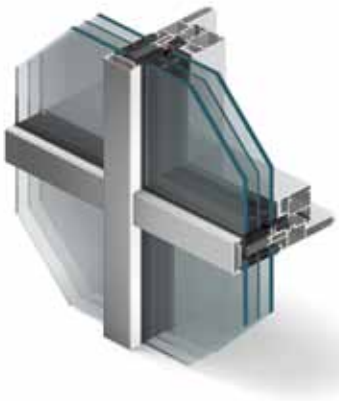


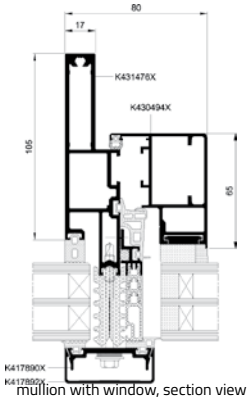




A curtain wall which uses toggles and channels to fix the glazing to provide a uniform appearance of a smooth glass wall divided by a structure of vertical and horizontal lines of a width of 2 cm. It is possible to use within it large and heavy one- or two-chamber glass in-fills, including laminated pane sets and non-transparent panels based on insulated glass.

MB-SR50N IW



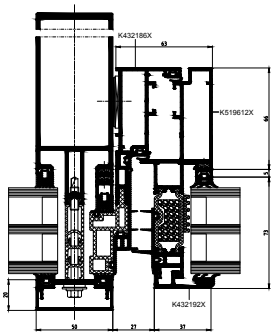


mullion with window, section view
MB-SR50N IW – standard variant

mullion with window, section view
MB-SR50N IW – EFEKT variant

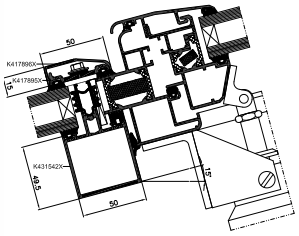
MB-SR50N IW enables the use of inward openable windows integrated with mullion-transom profiles. The area of the façade with tilt-andturn function does not differ, as seen from the outside, from the neighbouring areas with fixed glazing. This systems comes in 3 varieties: standard, with flat strip and EFEKT.

MB-SR50N OW



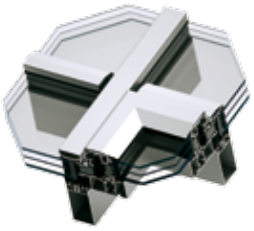
Ones of the most important advantages of this solution are the unusually economical shapes, which add lightness to the entire structure. Thanks to application of the most modern technology of structural gluing, based on gluing the outer glass panel to the aluminium frame with structural silicon, we have avoided the necessity to use any aluminium elements from the outside or any mechanical joints for fitting the glass panel.

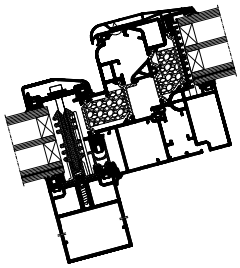
MB-SR50N RW



A skylight window is a part of the MB-SR50N system, and is intended for roof mounting at the inclination angle from 5° to 75° in relation to the horizon, and may be used for making the ventilation hatches.

MB-RW

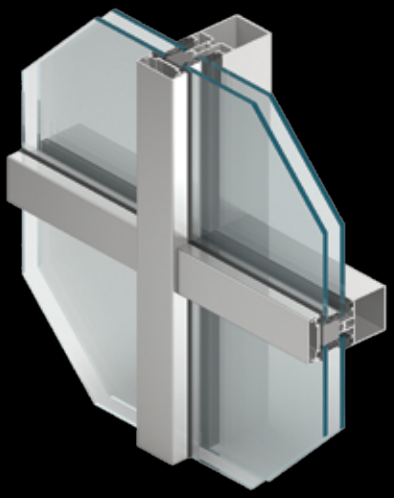




Windows fabricated using the MB-RW system are intended for installation on roofs with mullion-transom systems (MB-SR50N & MB-TT50 group of products) of an inclination angle of 3° to 75° in relation to the horizontal plane. In rafters/purlins axes, roof windows can have dimensions up to 2.5 m and weight up to 200 kg.

TECHNICAL SPECIFICATION	MB-SR50N MB-SR50N HI+	MB-SR50N HI	MB-SR50N EFEKT	MB-SR50N IW	MB-SR50N OW	MB-SR50N RW
Mullions depth	50 – 325 mm			85 – 125 mm	–	–
Transom depth	5 – 189,5 mm			49,5 – 129,5 mm	–	–
Inertia mullions (range wsp. Ix)	26,04 – 4123,45 cm^4			70,43 – 245,70 cm^4	–	–
Inertia transoms (range wsp. Iz)	0,79 – 629,54 cm^4			23,76 – 205,98 cm^4	–	–
Glazing width	24 – 56 mm	24 – 52 mm	24 – 56 mm	24 – 56 mm	28 – 41 mm	24 – 32 mm

PERFORMANCE	MB-SR50N MB-SR50N HI+	MB-SR50N HI	MB-SR50N EFEKT	MB-SR50N IW	MB-SR50N OW	MB-SR50N RW
Air Permeability	AE 1200, EN 12152			class 4, EN 12207		
Wind load resistance	RE 1200, EN 12154	RE 1500, EN 12154	RE 1200, EN 12154	E 1500, EN 12208	E 1650, EN 12208	E 1200, EN 12208
Watertightness	2,4 kN/m^2, EN 13116			E 2400, EN 12210	class C5, EN 12210	
Impact resistance	I5/E5, EN 14019				–	class 5, EN 13049
Thermal insulation (U_f)	from 0,59 W/(m^2K)	from 0,85 W/(m^2K)	from 1,1 W/(m^2K)	from 1,6 W/(m^2K)	–	–



Façade systems

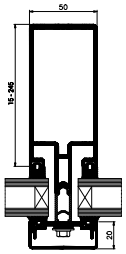
MB-SR50 HI

Such a high thermal insulating power of this construction was obtained by replacing the HPVC continuous thermal insulator by the PE one, which is characterised by low lambda thermal conductivity and very good insulation parameters, and by having raised the height of the sealing in relation to that of the standard facade version. The **MB-SR50 HI** facade allows the use of glazing of 26 – 44 mm. In addition to the high thermal insulating power, it has also got very good tightness parameters for water (RE 1200 class) and air (AE(1050) class) infiltration. The wind resistance is 2400 Pa.

- *U_f from 0,8 (W/m²K)*

DOUBLE TREE BY HILTON
Location: Lodz / Poland
Design: APA Kurylowicz & Associates

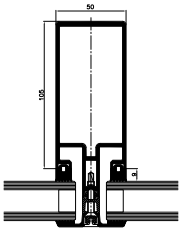
MB-SR50
MB-SR50HI



Mullion – cross-section

The base version of Aluprof's flagship curtain wall system offers great opportunities to meet individual project requirements. Due to large selection of profiles and accessories, the specifiers can bring their most bold architectural concepts into reality.

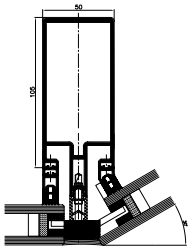
MB-SR50PL



Mullion – cross-section

MB-SR50 PL is available in a horizontal or vertical capped system. You can choose from a wide range of caps, including bullnose or flat strip as shown on the right.

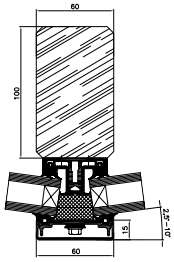
MB-SR50 EFEKT



Angular Connection
– cross-section

The EFEKT is a toggle glazed system complete with silicone weather seal.

MB-SR50 A



Angular Connection – cross-section, supporting structure: wooden profiles

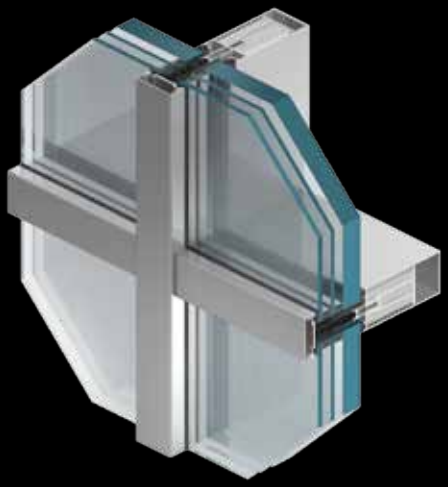
A plant on variation of the MB-SR50 to enable the client to fix to steel or timber framework.

FEATURES AND BENEFITS

- aesthetic varieties of façades and a series of overlay profiles of different shapes to provide a multitude of variants of the façade
- angular connections to allow free formation of aluminium developments
- wide range of façade-integrated, openable elements: various types of doors and windows, including roof slope windows, and façadededicated solutions (MB-60EF-based windows, etc.)
- wide range of glazing and available insulators & accessories to achieve excellent thermal insulation performance
- burglary-resistant constructions classified 2 and 3
- possibility to bend profiles, and to create arch structures
- compliance with CE marking requirements

TECHNICAL SPECIFICATION	MB-SR50	MB-SR50 PL	MB-SR50 EFEKT	MB-SR50 HI	MB-SR50 A
Mullions depth	15 – 245 mm		15 – 185 mm	15 – 245 mm	5 mm
Transom depth	5 – 185 mm		5 – 145 mm	5 – 185 mm	5 mm
Inertia mullions (range Ix)	3,92 – 1570,44 cm^4		3,92 – 701,89 cm^4	3,92 – 1570,44 cm^4	0,79 cm^4
Inertia transoms (range Iz)	0,79 – 571,27 cm^4		0,79 – 263,46 cm^4	0,79 – 571,27 cm^4	0,79 cm^4
Glazing width	4 – 48 mm		28 – 36 mm	26 – 44 mm	5 – 40 mm

PERFORMANCE	MB-SR50	MB-SR50 PL	MB-SR50 EFEKT	MB-SR50 HI	MB-SR50 A
Air Permeability	AE1200; EN 12153; EN 12152:2002				
Watertightness	RE1500; EN 12155; EN 12154:2002				
Windload resistance	2400 Pa EN 12179:2002; EN 13116:2002		1800 Pa EN 12179:2002; EN 13116:2002	2400 Pa EN 12179:2002; EN 13116:2002	
Thermal insulation (U_f)	from 1,3 W/(m^2K)	from 1,3 W/(m^2K)	from 1,1 W/(m^2K)	from 0,8 W/(m^2K)	Measured individually
Accoustic insulation (R_w)	to 46 dB	–	to 37 dB	to 52 dB	–



Fire rated system

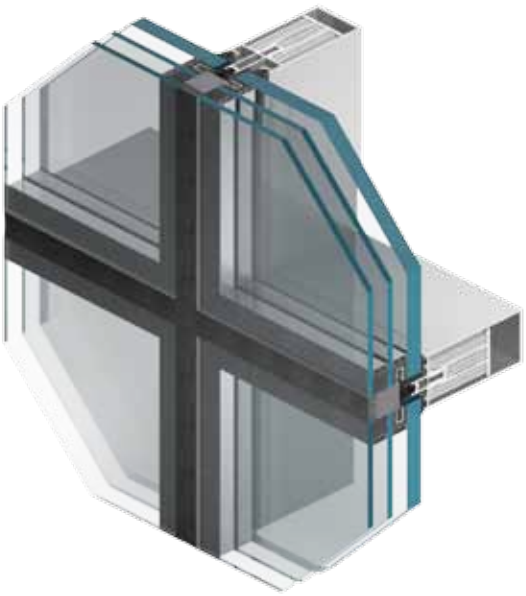
MB-SR50EI
MB-SR50N EI
MB-SR50N EI EFEKT

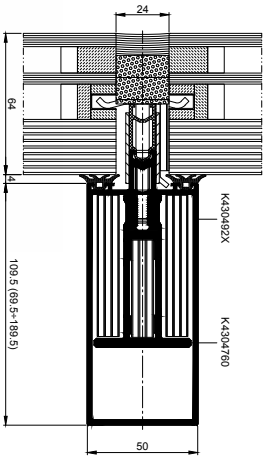
Aluprof fire protection systems allow to make different building elements responsible for organisation so called fire zones in buildings and ensure suitable conditions for evacuating people.

Mullion-transom curtain walls **MB-SR50 EI**, **MB-SR50N EI & MB-SR50N EI EFEKT** are designed for fabrication of lightweight, hung & in-filled fire-resistant curtain walls classified fire-resistant EI 30-EI 60. They allow to create both flat and frangible walls with connections between modules up to ± 7,5° aside and tilted curtain walls inclined ± 15°. These curtain walls can use MB-78EI-based fire doors. **MB-SR50 EI**, **MBSR50N EI & MB-SR50N EI EFEKT** systems can be used as a basis for fire-resistant glazed roofs of an inclination angle of 0° to 80° classified fire-resistant REI 30 / RE 30.

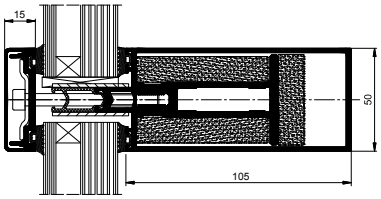
▪ *fire resistance to EI 60*

GREEN HORIZON
Location: Lodz / Poland
Design: Medusa Group





Mullion – cross-section EI 45, EI 60



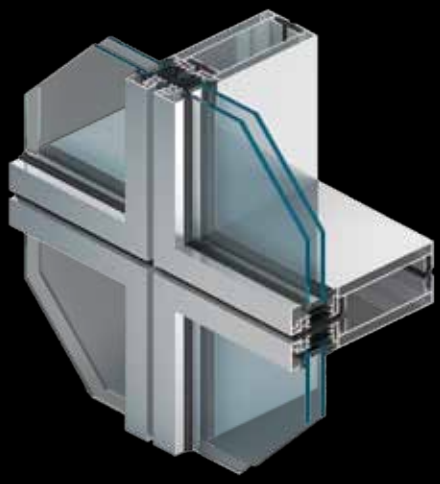
Transom – cross-section EI 15, EI 30

FEATURES AND BENEFITS

- the same appearance for fire and non-fire rated elements of curtain wall facade
- various design and aesthetics options for capping
- system flexibility allows facetted joints up to ±7,5° per side, and inclined facades up to ±15° as well as slope & roof glazing between 0° and 80°
- full compatibility with MB-78EI system allows fire rated door to be fitted into a curtain wall

TECHNICAL SPECIFICATION	MB-SR50EI	MB-SR50N EI	MB-SR50N EI EFEKT
Frame / mullions width	85 – 185 mm	85 – 225 mm	85 – 225 mm
Leaf / transom width	65 – 145 mm	69,5 – 189,5 mm	69,5 – 189,5 mm
Inertia mullions (range Ix)	88,47 – 725,81 cm^4	81,34 – 1222,14 cm^4	81,34 – 1222,14 cm^4
Inertia transoms (range Iz)	42,02 – 263,48 cm^4	49,54 – 629,54 cm^4	49,54 – 629,54 cm^4
Glazing width	15 – 64 mm		36 – 64 mm
SIZE AND WEIGHT LIMITATIONS			
Max size of door leaf / curtain wall element (H×W)	H to 3000 mm / 1200 mm; L to 1500 mm / 1800 mm		
Max weight of door leaf / curtain wall	300 kg		

PERFORMANCE	MB-SR50EI / MB-SR50N EI	MB-SR50N EI EFEKT
Air Permeability	1050 Pa / Klasa AE, EN 12152	class AE1200 Pa; EN 12153
Watertightness	class RE1200, EN 12154	class RE1200; EN 12155
Fire resistance	EI30, EI60, EN-13501-2, roof lights: REI20, REI30, RE20, RE30, EN 13501-2	
Thermal insulation (U_f)	from 1,78 W/(m^2K)	



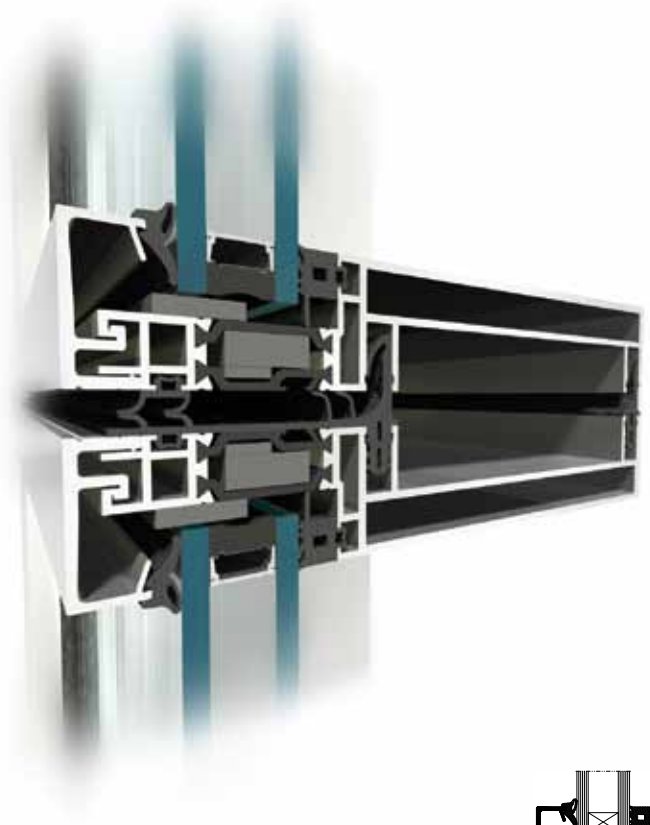
Façade systems

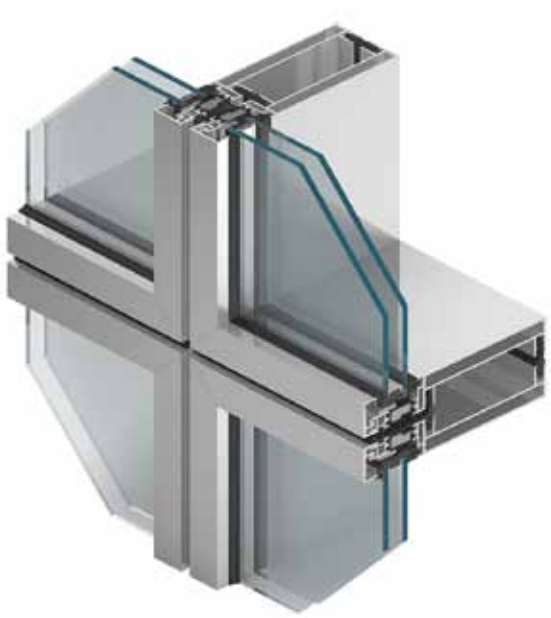
MB-SE75
MB-SE75 HI

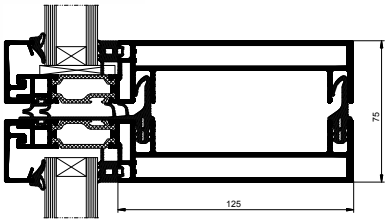
The **MB-SE75** unitised curtain wall offers the advantage of unitised assembly giving the construction team a distinctive exceptional set of advantages. These include factory fabrication that allows for additional quality control, fast on site installation without the need for expensive and time consuming scaffolding and both outer and inner modern look. It enables to meet fast paced construction schedules as it requires only limited access to assembly therefore building can be refurbished with residents still being in it.

- *a quick installation without an external scaffolding usage*

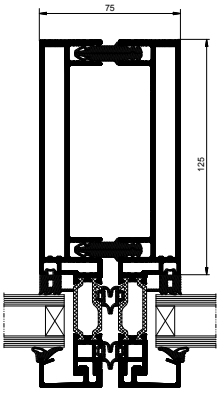
MASARYKA UNIVERISTY CAMPUS
Location: Brno / Czech Republic
Design: A-PLUS







Transom – cross-section



Mullion – cross-section

FEATURES AND BENEFITS

- great variety of façade-integrated opening elements – windows and doors with enhanced thermal insulation, windows with concealed sash MB-70US, MB-70US HI or version MB-70SG, as well as "frameless" constructions reclining on the outside, based on the structural system MB-SG50

TECHNICAL SPECIFICATION	MB-SE75 / MB-SE75 HI
Mullions depth	85 – 145 mm
Transom depth	84,5 – 144,5 mm
Inertia mullions (range Ix)	101,2 – 366,1 cm^4
Inertia transoms (range Iz)	143,1 – 523,7 cm^4
Glazing width	24 – 42 mm

PERFORMANCE	MB-SE75 / MB-SE75 HI
Air Permeability	class AE1200 EN 12153; EN 12152
Watertightness	class RE1200 EN 12155; EN 12154
Impact resistance	class I5/E5 EN 14019
Windload resistance	2400 Pa EN 12179:2002U; EN 13116:2002U
Thermal insulation (U_f)	from 1,5 W/(m^2K)
Accoustic insulation (R_w)	Measured individually

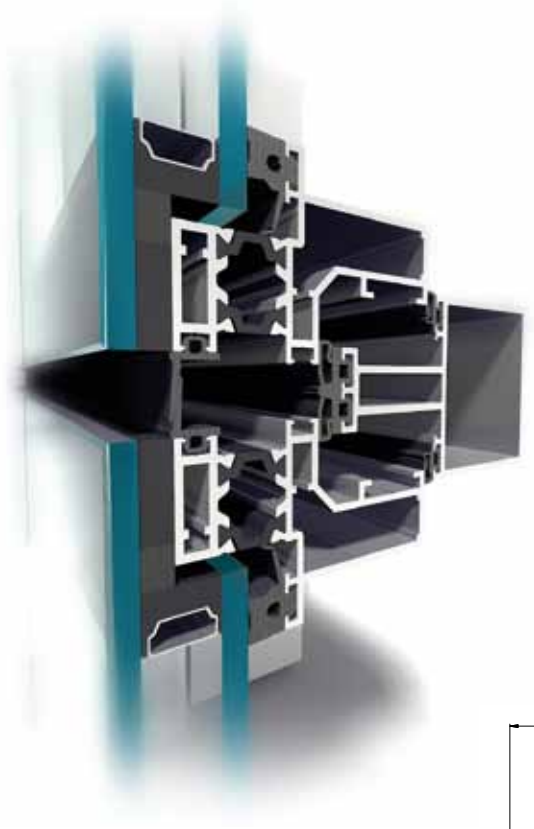
Structural wall system

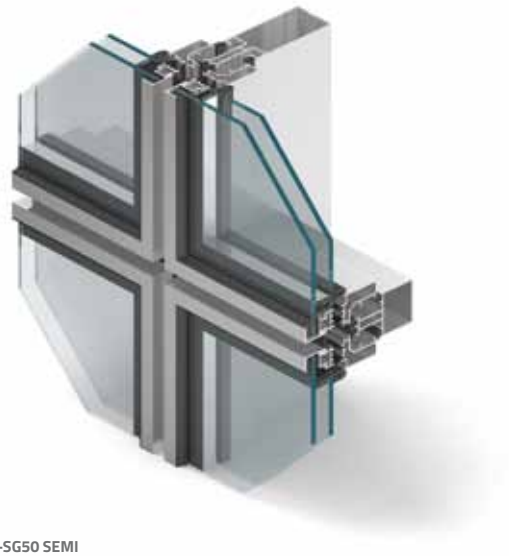
MB-SG50
MB-SG50 SEMI

The **MB-SG50** system enables to build curtain walls with glazing without the visible aluminum face caps giving an impression of glassy surface from the outside. They come as prefabricated units from the manufacturing site which ensures quality and reduces on site assembly. **MB-SG50** base system variety features glazing units integrated together with the use of silicone sealant. The system carries thermal barrier and triple insulation system of gaskets that provide enhanced thermal insulation as well as watertightness and air permeability. Also available in semi-structural version **MB-SG50 SEMI**.

▪ *an excellent visual effect*

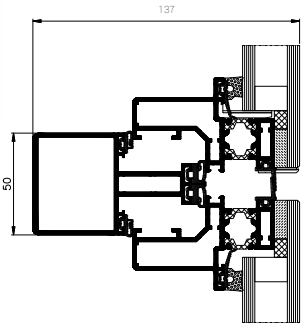
EVPU
Location: Nová Dubnica / Slovakia
Design: Marek Guga



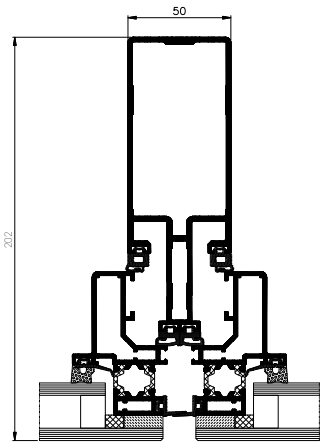


MB-SG50 SEMI
Semi-structural wall

The **MB-SG50 SEMI** variety features key benefits of structural glazed curtain wall and at the same time offers delicate picture frame look when viewed externally..



Transom – cross-section



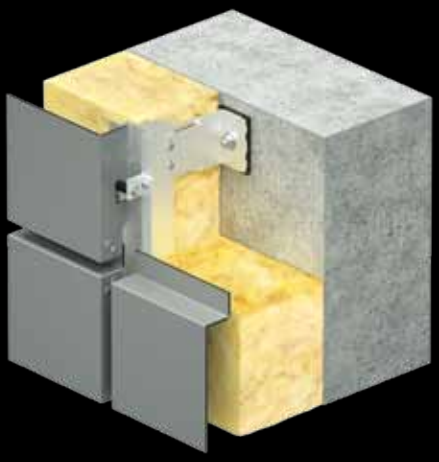
Mullion – cross-section

FEATURES AND BENEFITS

- aesthetically pleasant appearance – the gap between glazing unit is 16 mm
- front glass joint silicone sealed
- tilt window does not affect the appearance
- mullion drainage

TECHNICAL SPECIFICATION	MB-SG50 / MB-SG50 SEMI
Mullions depth	85 – 125 mm
Transom depth	45 – 105 mm
Inertia mullions	81,06 – 315,40 cm^4
Inertia transoms	35,06 – 166,45 cm^4
Glazing thickness	28 – 30 mm

PERFORMANCE	MB-SG50	MB-SG50 SEMI
Air Permeability	class A4 EN 12153:2002U; EN 12152:2002U	
Watertightness	class R7 EN 12155:2002U; EN 12154:2002U	
Windload resistance	1430 Pa EN 12179:2002U; EN 13116:2002U	1637Pa EN 12179:2002U; EN 13116:2002U
Thermal insulation	Measured individually	



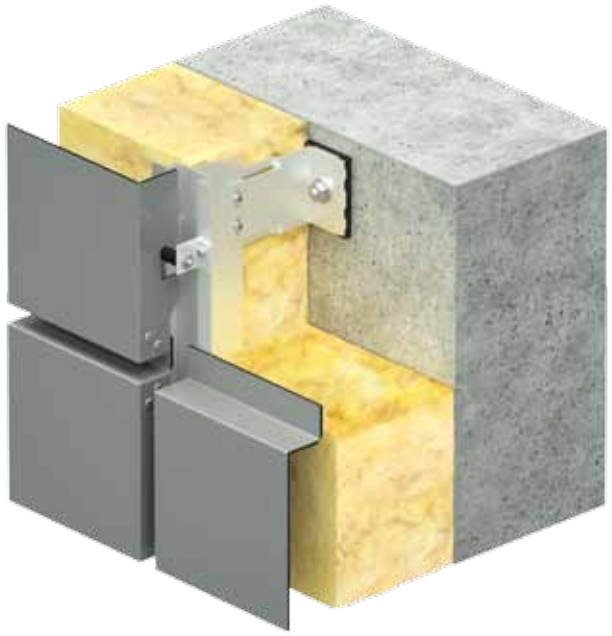
Ventilated facade system

EXTRABOND

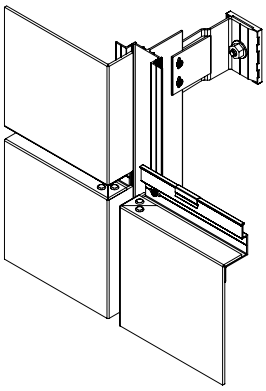
EXTRABOND ventilated façade is used to make internal and external cladding in new and/or modernized buildings to give them a modern and aesthetic appearance. **EXTRABOND**are highly resistant to weather conditions, UV, corrosion and abrasion. Additionally, the system has properties that reduce noise and allows to limit heat loss. Extrabond panels are available in wide range of colors. Among the panels available: **EXTRABOND** which are characterized by high durability and resistance to weather conditions, and EXTRABOND A2 & EXTRABOND FR with an even better reaction-to-fire performance (EXTRABOND A2 - reaction-to-fire A2-s1, d0i, EXTRABOND FR - reaction-to-fire B-s1, d0). These are additionally classified as non-fire spreading (NRO). Depending on to the dimensions of the panels or on the type of the cladding, EXTRABOND ventilated facades family can be divided into three types: EXTRABOND Horizontal (EBH), EXTRABOND Vertical (EBV), EXTRABOND T (EBT). **EXTRABOND** – a perfect solution for those who look for a system that combines technical parameters with aesthetic requirements.

▪ *highly esthetical facades*

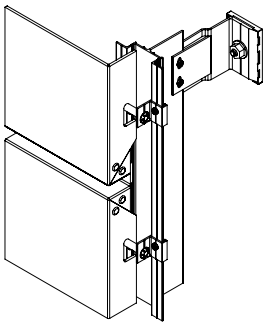
GEMINI PARK
Location: Bielsko-Biała
Design: Wojciech Kurzak Vide Studio



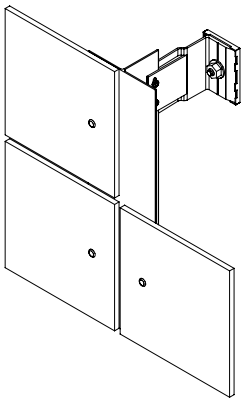
Extrabond Horizontal EBH



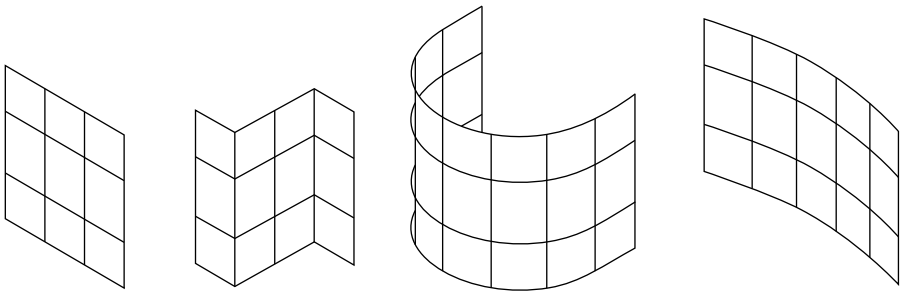
Extrabond Vertical EBV



Extrabond T EBT

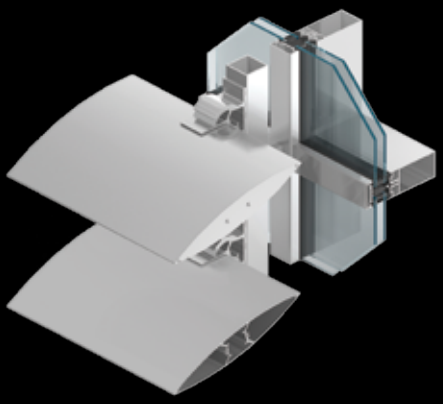


OPTIONS AVAILABLE



FEATURES AND BENEFITS

- composite panel with a thickness of 4 mm, sheet metal panel of a thickness of 0,5 mm (alloy AW-3005)
- high resistance to weather conditions, UV, corrosion, abrasion and graffiti
- high durability thanks to the robust, light and rigid materials – 20 year warranty
- easy and quick installation, ease of shaping
- rich colors and highly esthetical panels with a totally smooth surface
- fire resistance, sound-proofing and high impact resistance
- low heat and noise transfer coefficient
- this product is environmentally friendly (made from non-hazardous materials, 100% recyclable)



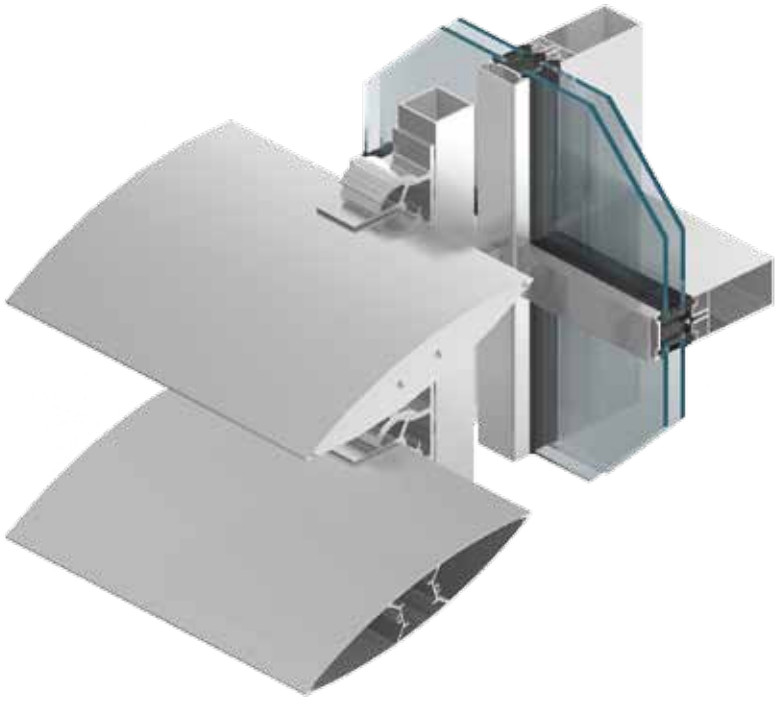
Brie soleil system

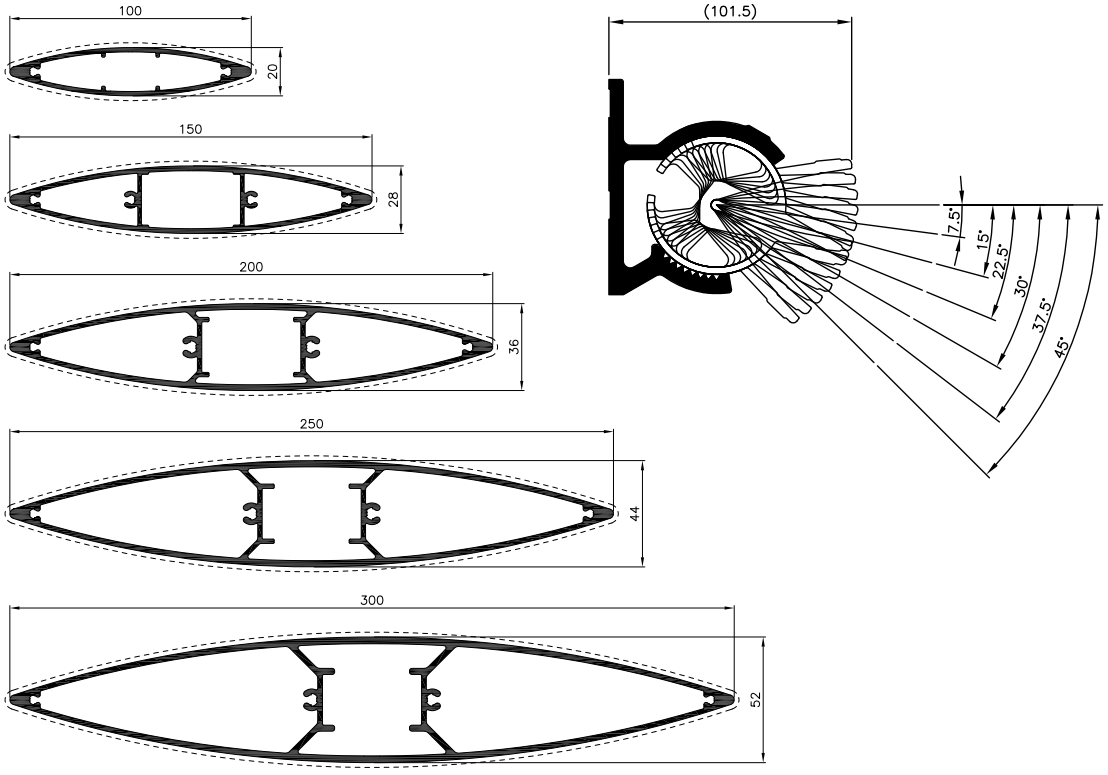
MB-SUNPROF

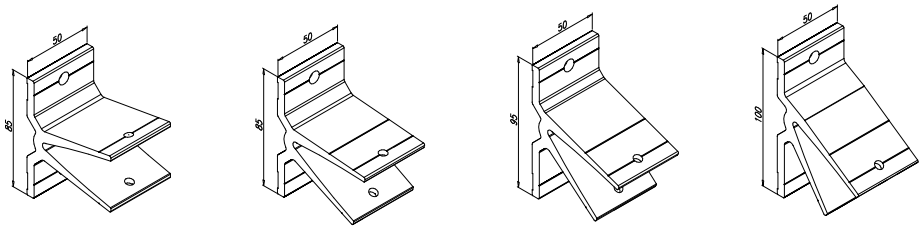
Saving energy by reducing exposure to direct solar radiation while allowing for natural day lighting is one of a major focus of today's environmentally aware engineers, architects and specifiers. **MB SUNPROF** brie soleils have been designed to meet these requirements. The system comprises aluminum 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. It includes roller shutter profiles available in various sizes and accessories to enable façade-integrated installation at the right angle.

▪ *a perfect light and shadow balance*

SUWALKI TECHNOLOGY INCUBATOR
Location: Suwalki / Poland
Design: ARH+ Architect Andrzej Rydzewski







FEATURES AND BENEFITS

- brings together solar glare control with the appropriate amount of natural light coming into the building's internal environment
- range of outriggers (brackets) to choose from
- selection of aluminum blade profiles of width from 100 to 300 mm to serve variety of projects' requirements
- up to 45 degrees incident angle
- quick and easy to install to the curtain wall, load bearing wall or window frame

Shutter system

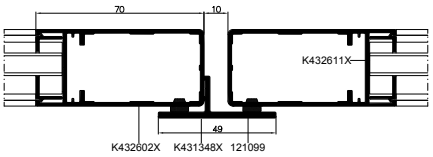
MB-SUNSHADES

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

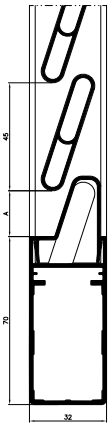
Aluprof's **MB-SUNSHADES** are an option for those who look for practical yet aesthetic solutions. The shutters can be colour-matched with the external wall or with the windows or used simply as a remarkable accent on the wall. Given the ample possibilities offered by the technology of decorative and 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, where as 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.

▪ *making your home exceptional*

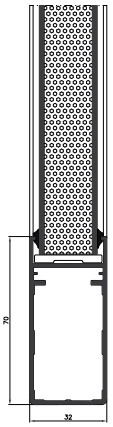
Shutters by ALUPROF – protecting and embellishing your home



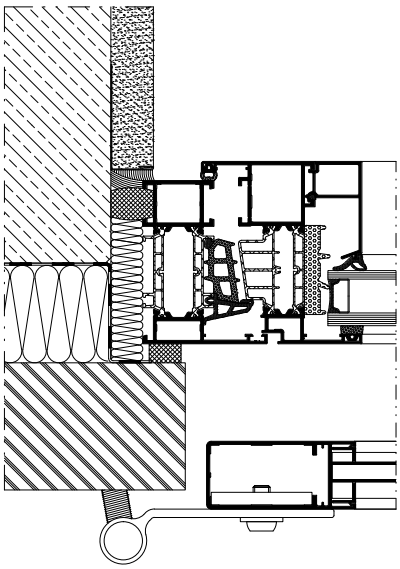
casement, horizontal view



Louvres, vertical view



Paneled shutter, vertical view



How to install

FEATURES AND BENEFITS

- MB-SUNSHADES – a unique visual effect and an effective sun protection
- wide range of colors – all RAL, ATEC and ADEC wood-like colours available
- lightweight and resistant structure, with the infill of your choice: aluminium slats or aluminium panel
- maximum dimensions of the shutters are 1,2m × 2,5m, which allows to use them of not only in standard window openings but also in door's
- the hinges available in the 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
- shutter casement is adapted to use hinges of different manufacturers
- locking elements are also available

TECHNICAL SPECIFICATION	MB-SUNSHADES
Depth of leaf	32 mm
Infill profiles depth	50 mm
Infill profiles distance	every 45 mm
Maximum dimensions	1200 × 2500 mm

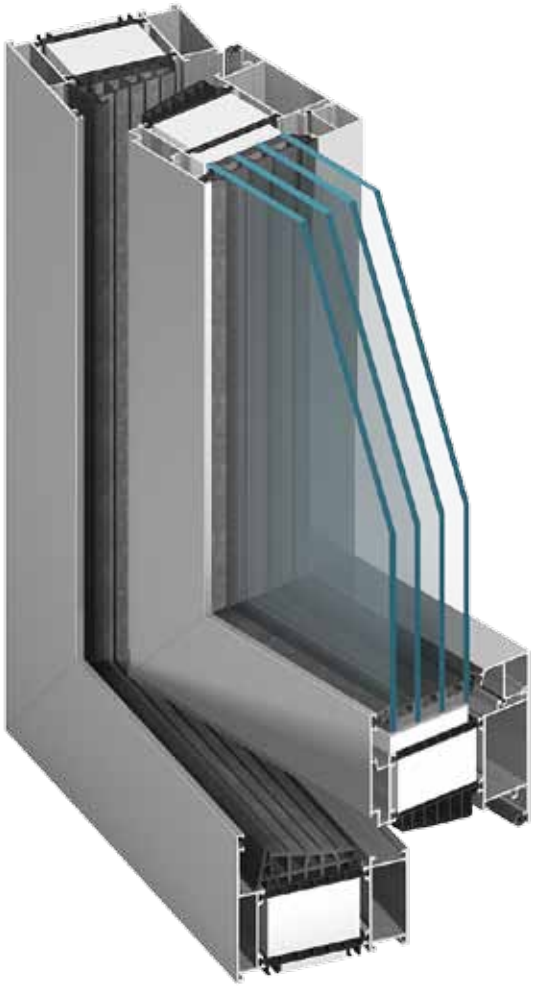
Window and door systems

MB-104 Passive

Thanks to its excellent thermal performances, the thermally broken window and door system **MB-104 Passive** meets all the requirements for the components 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, shop fronts and spatial structures, which are highly resistant and characterized by excellent water & air tightness, and thermal & acoustic insulation performance.

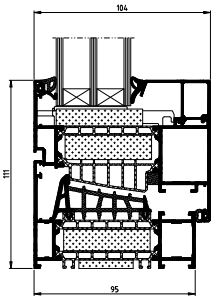
- *U_w for openable window from 0,53 W/(m²K)*

Dedicated windows for energy-efficient homes and Passivhauses

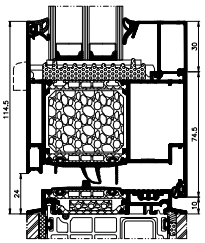


Window MB-104 Passive Aero

Door MB-104 Passive SI



MB-104 Passive Aero
opening window – cross-section



MB-104 Passive SI
door – cross-section

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 openable window from 0,53 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

cool, temperate climate
phB
CERTIFIED COMPONENT
Passive House Institute

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	freme: 27 – 72 mm, vent: 34,5 – 81 mm	27 – 72 mm
MAX DIMENSIONS AND WEIGHT OF THE CONSTRUCTION		
Maximum size of leaf (H×L)	H to 2900 mm, L to 1700 mm	H to 3000 mm, L to 1400 mm
Max weight of leaf	160 kg	200 kg

PERFORMANCE	WINDOWS MB-104 PASSIVE	DOOR MB-104 PASSIVE
Air Permeability	class 4, EN 12207	class 4, EN 12207
Watertightness	to class AE 1800, EN 12208	class E1200 Pa, EN 12208
Thermal insulation	U_w from 0,53 W/(m²K) *	U_D from 0,60 W/(m²K) **
Windload resistance	class C5/B5, EN 12210	class C4/B5, EN 12210

* - U_w for MB-104 Passive Aero-based openable window casement size 1700 × 2100 mm, with glazing U_g=0,4 W/(m²K)
* - U_D for MB-104 Passive Aero door size 1500 × 2660 mm

Window and door systems

MB-86
MB-86B
MB-86US

This highly efficient window and door system can meet the diverse needs of its users. The design of the profiles comes in 3 versions depending on the requirements of thermal energy savings: ST, SI and AERO. **MB-86** is the world's first aluminum window and door system to use aerogel – a material of excellent thermal insulation. Profiles of high resistance is another advantage of the **MB-86** system which allows fabrication of large size and weight structures. **MB-86US**-based windows with concealed sash are also available. The **MB-86B** system has been primarily designed to meet the needs of the Belgian market. It is based on a proven, sophisticated and highly acclaimed window & door system MB-86SI. An important feature of the interior design of doors and windows is the 2mm ventilation gap between the insulating glazing unit and the insulating material located by the edge of the glazing, around its entire perimeter. The **MB-86B** is designed to meet the needs of the Belgian market.

- *U_w for openable window from 0,72W/(m²K)*

RECOMMENDED FOR ENERGY-EFFICIENT CONSTRUCTIONS

Stay warm for years to come

MB-86 AERO

MB-86B

MB-86US
Window system with concealed casement

A characteristic feature of the **MB-86US** windows are its casements, virtually invisible from the outside, making neighboring fixed and openable windows look identical. A small window frame makes the window look slim and lightweight from the outside.

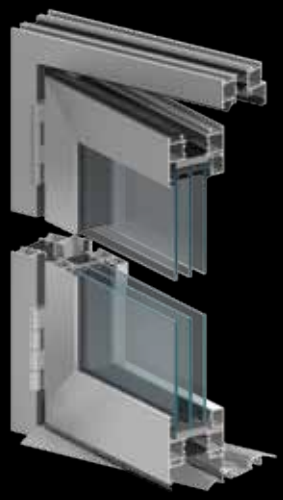
FEATURES AND BENEFITS

- wide range of profiles guarantees the desired aesthetics and resistance
- with its new shape, wide thermal breaks allow the use of an additional barrier in the profiles' insulation zone
- two-component, central gasket seals perfectly and thermally insulates the space between the casement and the frame
- glazing strips with additional sealing, comes in three versions: Standard, Prestige and Style
- profiles' shapes are well adapted to numerous multi-point locking systems, including concealed hinges
- a wide range of glazing allows the use of all common types of windows triple glazing units, acoustic or security panes
- profiles' drainage functionality is available in two versions: traditional and concealed
- compliance with CE marking requirements
- MB-86B has been awarded with certification ATG by the Belgian Research Institute UBAtc.

TECHNICAL SPECIFICATION	MB-86	MB-86B	MB-86US
PROFILES DIMENSIONS			
Depth of frame (window / door)	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
Glazing range (window / door)	frame: 13,5 to 61,5 mm leaf: 21 to 70,5 mm / frame: 13,5 to 61,5 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
SIZE AND WEIGHT LIMITATIONS			
Maximum size (H×W) (window / door)	H to 2800 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
Max weight (window / door)	150 or 160 kg* / 200 kg	150 / 160 kg	150 kg
TYPES OF CONSTRUCTION			
Solutions (window / door)	–	fenêtre fixe, ouvrable, oscillo-battante à 1 et 2 vantaux / porte à un vantail à ouverture vers l'extérieur et vers l'intérieur	–

PERFORMANCE	MB-86	MB-86B	MB-86US
Air Permeability (window / door)	class 4, EN 12207 / class 3, EN 12207	classe 4, EN 12207	class 4, EN 12207
Watertightness (window / door)	class E 1500, EN 12208 / class 5A (200 Pa), EN 12208	classe 9A, EN 12208 / classe 6A, EN 12208	class E 1350, EN 12208
Thermal insulation (window / door)	MB-86 ST U_f from 1,39 W/(m²K) MB-86 SI U_f from 0,92 W/(m²K) MB-86 AERO U_f from 0,57 W/(m²K) MB-86 AERO U_w from 0,72 W/(m²K)** / MB-86 ST U_f from 2,16 W/(m²K) MB-86 SI U_f from 1,76 W/(m²K) MB-86 SI+ U_f from 1,49 W/(m²K) MB-86 AERO U_f from 1,22 W/(m²K)	U_f from 1,3 W/(m²K) / U_f from 2,0 W/(m²K)	MB-86 ST U_f from 1,03 W/(m²K) MB-86 SI U_f from 1,01 W/(m²K) MB-86 AERO U_f from 0,86 W/(m²K)
Windload resistance (window / door)	class C5, EN 12210 / class C1/B2, EN 12210	classe C4, EN 12210 / classe C5, EN 12210	class C5, EN 12210
Impact resistance (window / door)	–	classe 3 / classe 3	–

* - 160 kg for tilt-and-slide window
* - U_w for openable window MB-86 Aero 1,70 × 2,10 m, glazing U_g=0,5 W/(m²K) with spacer Chromatech Ultra



Folding door

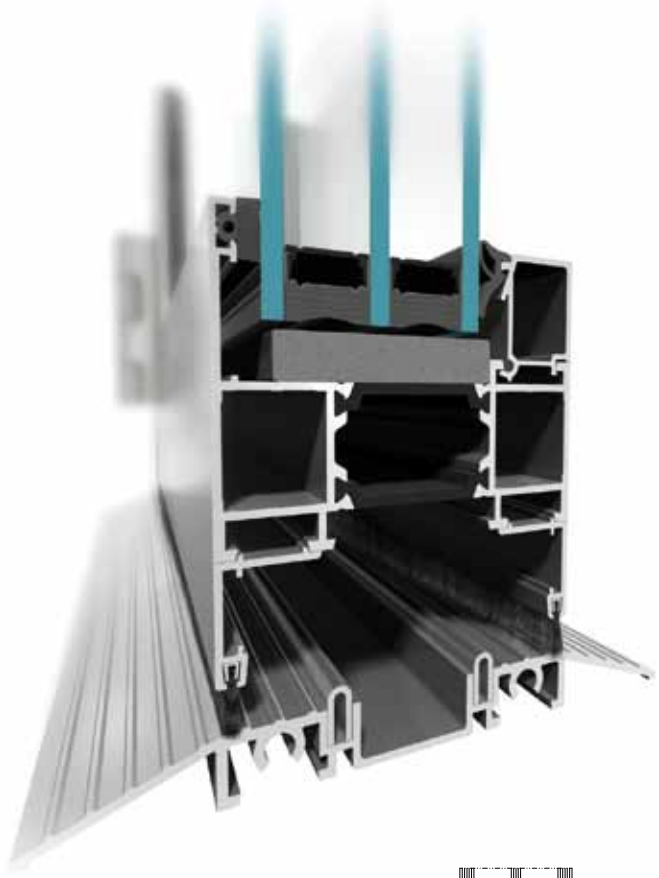
MB-86 FOLD LINE

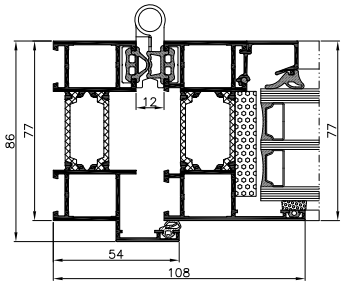
Exterior folding door offers greater flexibility to its users. It enables us to use weather conditions to our advantage and virtually eliminate the barrier between the interior space and its surroundings. Such door can perfectly combine the interior space (home, café, restaurant) with the terrace or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

With its excellent technical parameters, **MB-86 FOLD LINE** 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.

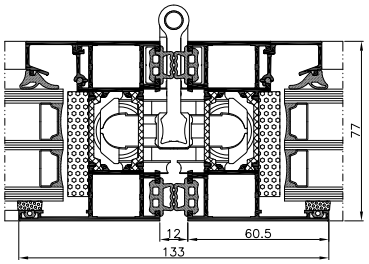
- *excellent thermal insulation*

Make the natural environment part of your daily experience

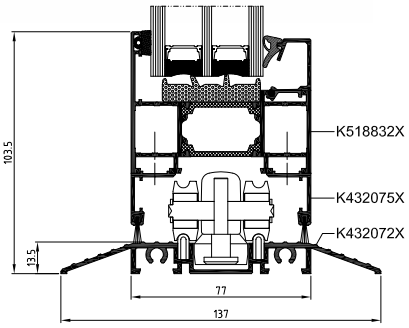




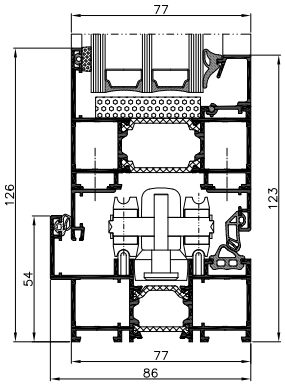
Door, side view



Door/leaves, view



Door with low-level threshold, bottom view



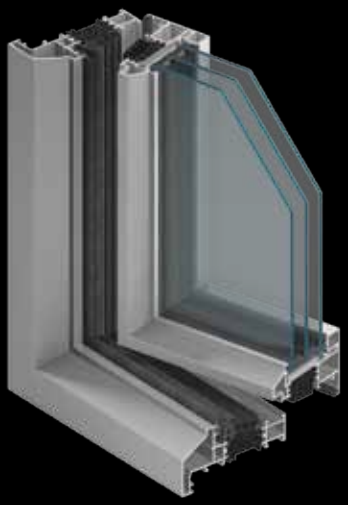
Door with edge sealing, bottom view

FEATURES AND BENEFITS

- three-chambered, durable aluminium profiles of a structural depth of 86 mm for frames and 77 mm for door leaves
- central chamber of the profiles is equipped with thermal break (24 mm-wide for frames and 34 mm-wide for door leaves) providing excellent thermal insulation performance.
- specialized and dedicated hardware for MB-86 Fold Line ensures comfortable operation of the door leaves of a maximum weight of up to 100 kg
- large dimensions of the construction enable the fabrication of doors that are up to 2700 mm high and 1000 mm wide
- threshold solutions in different versions: classic, with edge sealing or convenient, with a low-level threshold
- a large range of glazing from 14 to 61.5 mm to enable the use of single and double glass units, including specialized, more performant units in terms of sound insulation or burglary resistance
- 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	MB-86 FOLD LINE
Air Permeability	to class 4, EN 12207
Watertightness	to class 9A (600 Pa), EN 12208
Windload resistance	class C1, EN 12210
Impact resistance	to class 4, EN 13049
Thermal insulation	(U_D) from 0,8 W/(m²K)*

* - U_D for MB-86 Fold Line-based door size 970 × 2400 mm, with glazing U_g=0,5 W/(m²K)



Window system with slim profiles

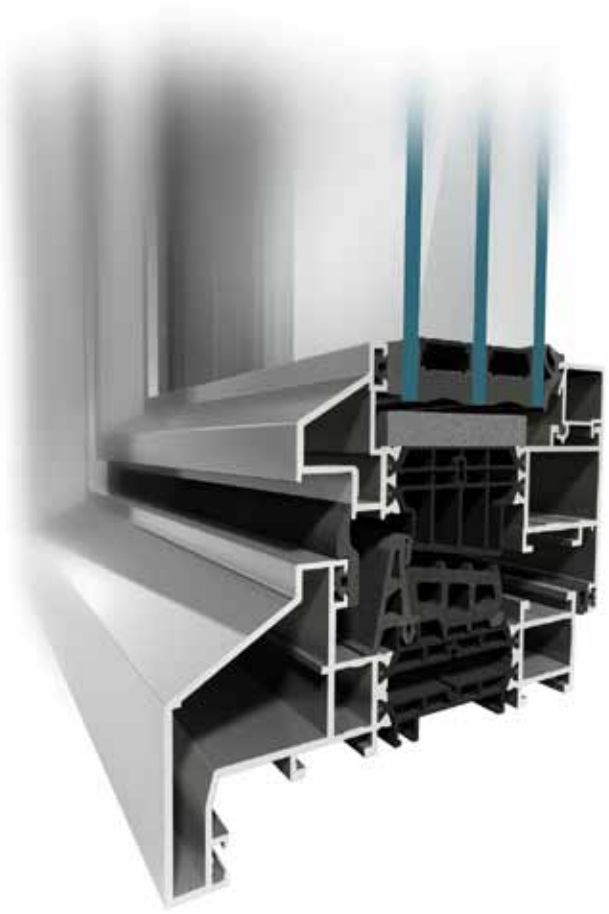
MB-FERROLINE

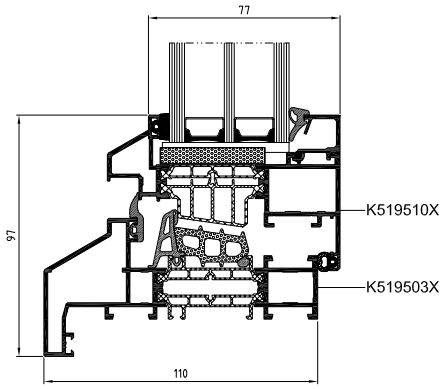
The new window system with thermal break **MB-FERROLINE** is perfectly suitable for renovation of historic buildings and helps to preserve the appropriate appearance of windows, which can imitate steel joinery, whilst ensuring very good technical performance of the construction. The system enables the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

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.

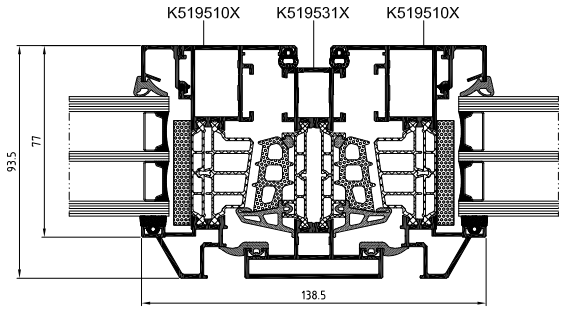
- *wide range of solutions*
- *high thermal insulation*

The new edition of the traditional design





Openable window with renovation frame
– cross-section



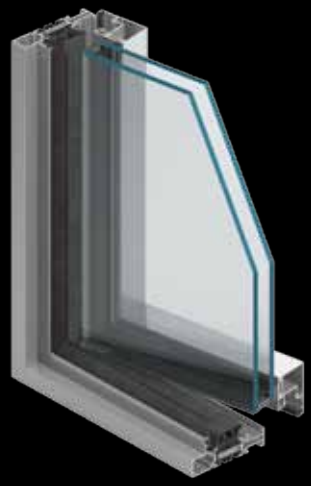
Window transom & openable windows
– cross-section

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
Thermal insulation	U_f from1,5 W/(m²K)



Window system with slim profiles

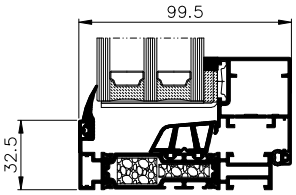
MB-SLIMLINE

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.

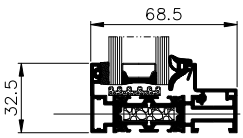
With its very small-width aluminium profiles, visible from the external side of the construction, **MB-SLIMLINE** enables to fabricate casements in two variants – with visible or invisible profiles (SG) from the external side of the structure. When invisible casements are used, the appearance of openable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

- *U_w from 0,8 W/(m²K)*

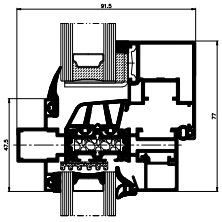
Traditional look with a modern twist



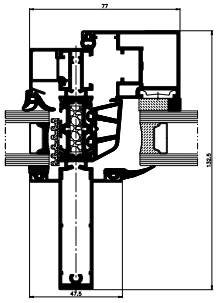
Opening window – cross-section



Fixed window - cross section



Fixed and opening window
– cross section



Fixed and opening window
– cross section

FEATURES AND BENEFITS

- high resistance to water & air infiltration plus an excellent thermal insulation can be obtained thanks to the special shape of the central gasket
- good thermal insulation U_W from 0,8 W/(m²K)
- important glazing range, up to 81 mm
- the use of typical "Euro" grooves enables installation of most of the available fittings
- the construction method is maximally simplified. Profile connections (corner & T-connections) are performed by bolting or studding

TECHNICAL SPECIFICATION	MB-SLIMLINE
PROFILES DIMENTIONS	
Frame depth	68,5 – 123,5 mm / 90,5 – 145,5 mm
Sash depth	77,5 mm / 99,5 mm
A RANGE OF GLAZING	
Fixed / opened window for 68,5 mm frame	8 – 50 mm / 17 – 59 mm
Fixed / opened window for 90,5 mm frame	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; EN 12207
Watertightness	class E 1500, EN 1027; EN 12208
Thermal insulation (U_W)	from 0,8 W/(m²K)*

* - Heat transfer coefficients for single chamber glazing units with a plastic spacer amount to $U_W \geq 1,3$ W/(m²K) , and to the excellent value of $U_W \geq 0,8$ W/(m²K) for double chamber glazing units.

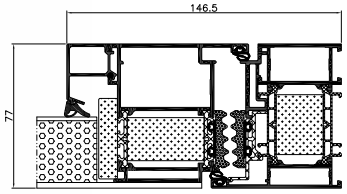
PANEL DOOR

Panelled door's design is based on the MB-86 and MB-104 Passive thermally insulated aluminium doors and is available in four versions, each with different frame and leaf profiles construction. As infills, the door uses highest quality decorative panels, available in a wide range of designs and colours, which can be glued to the door profiles on one or both sides.

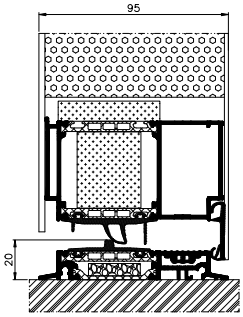
The **panelled door** combines a high level of aesthetics and excellent thermal and acoustic insulation. The use of self-cleaning paints makes them look very pretty and stylish for a long time. Aluprof **panelled door** is a solution for the most demanding users, to whom a door means not only safety and durability, but is also a matter of pride and aesthetic pleasure.

▪ *durability and aesthetic in your house*

Comfort is just a step away



Cross-section through the MB-86 AERO panel door in the storefront building



Cross through the threshold of the panel door MB-104 Passive Aero

FEATURES AND BENEFITS

- solid construction based on thermally insulated aluminium profiles MB-86
- modernity, style and perfect look for years in many various designs and colours
- perfect tightness and thermal insulation
- large sizes constructions available
- wide selection of modern, aluminium door panels
- modernity, style and excellent appearance for years, this in many different patterns and colours
- excellent tightness and thermal insulation performance
- large-size constructions

TECHNICAL SPECIFICATION	PANEL DOOR MB-86	PANEL DOOR MB-104 Passive
Frame depth	77 mm	95 mm
Leaf depth	77 mm	95 mm
Filling panel thickness	22 – 77 mm	to 95 mm
Maximum leaf dimensions (H×W)	H to 2600 mm, W to 1400 mm	H to 2600 mm, L to 1400 mm

PERFORMANCE	PANEL DOOR MB-86	PANEL DOOR MB-104 Passive
Air Permeability	class 3, EN 12207	class 3, EN 12207
Watertightness	class 6A (250 Pa), EN 12208	class 7A (300 Pa), EN 12208
Windload resistance	class C5/B5, EN 12210	class C4/B5, EN 12210
Thermal insulation	U_D from 0,63 W/(m²K)	U_D from 0,44 W/(m²K)

Door and window systems

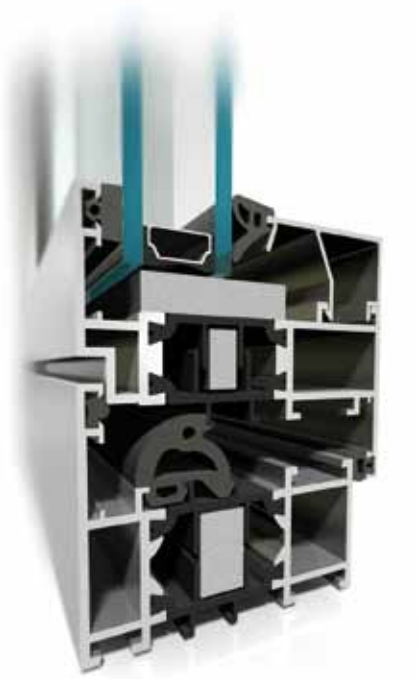
MB-70
MB-70B
MB-70 HI

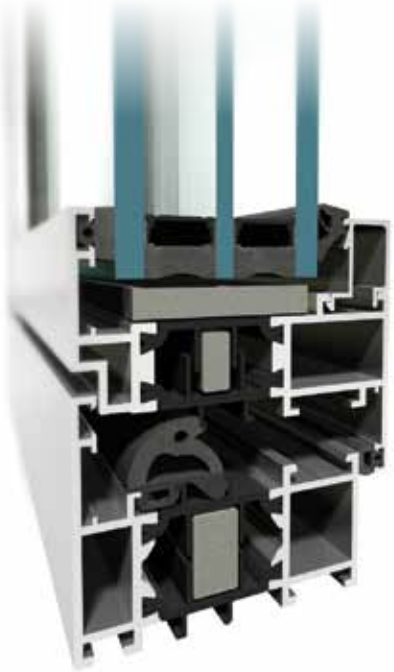
This aluminium system is intended for fabrication of various thermal & sound insulated external structures: windows, doors, entrance enclosures, shop fronts and spatial structures. It features a version with enhanced thermal insulation obtained thanks to special insulating inserts inside the profiles and in the under-the-glass area. **MB-70** allows for fabrication of burglar-resistant windows & doors up to class RC4 plus smoke exhaust windows. Various types of windows including "concealed sash-windows" MB-70US / MB-70US HI, MB-70SG plus a version for historic buildings MB-70 Industrial. The system is also a base for MB-70CW / MB-70CW HI-based "cold-warm" curtain wall. The **MB-70B** is designed to meet the needs of the Belgian market.

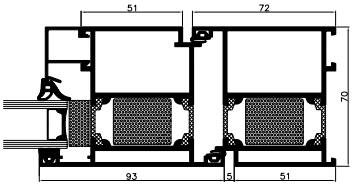
- *U_w from 1,0 W/(m²K)*

RECOMMENDED FOR ENERGY-EFFICIENT CONSTRUCTIONS

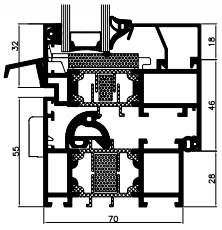
AQUARIUS BUSINESS HOUSE
Location: Wroclaw / Poland
Design: Arcad Sp. z o.o. S.K.A.



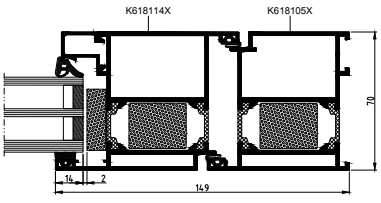




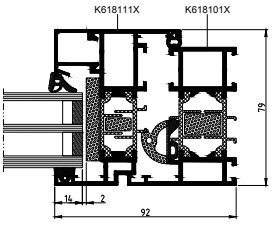
MB-70 Door – cross-section



MB-70 Window – cross-section



MB-70B Door – cross section

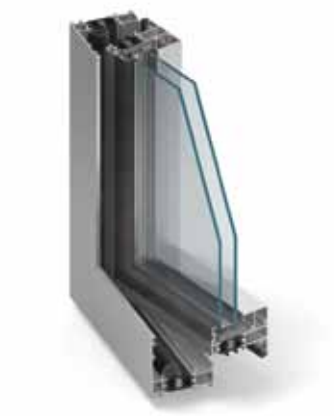


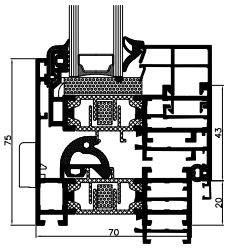
MB-70B Window – cross section

FEATURES AND BENEFITS

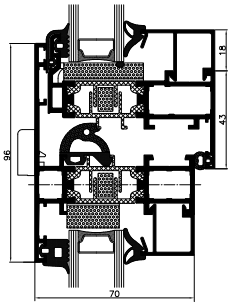
- variety of functions, tailored to users' needs
- possibility to bend profiles, and to create arch structures
- variety of aesthetic solutions offered by windows with concealed sash, Industrial "steel-like" variant and three types of glazing beads: Standard, Prestige, Style
- outward or inward openable single/double doors including "safe stop" doors
- structures suited to different types of hardware, including concealed hinges in windows and roller hinges in doors
- basis for solutions with enhanced thermal insulation: MB-70 HI, MB-70US HI and MB-70CW HI
- possibility of fabricating two-colour constructions: profiles can have different colours on external and internal side
- compliance with CE marking requirements
- MB-70B has been awarded with certification ATG by the Belgian Research Institute UBAtc.

MB-70US
MB-70US HI





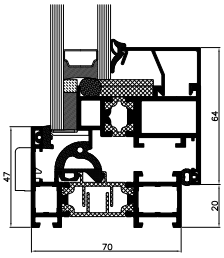
Opening window – cross-section



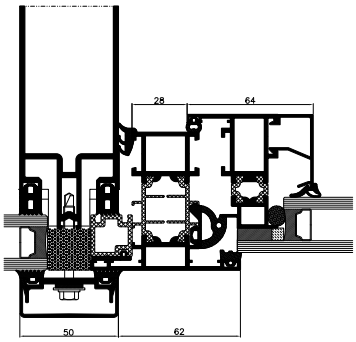
Opening window and fixed window – cross-section

The invisible window sash variety. It enables an effect of indifferent look of series of neighboring combination of fixed and opening windows from the outside of the building. It gives an impression of light and neat look since low width of frames seen from the outside. Available in both regular and HI variety with enhanced thermal insulation.

MB-70SG



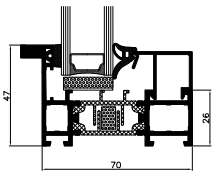
Opening window – cross-section



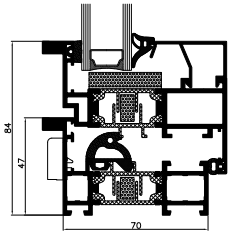
Acitve window
in a curtain wall – cross-section

The variety of system that enables to make window with sash invisible from the outer space. It resembles regular concealed sash construction but since its frame features 47 mm width it is therefore narrower than MB-70US and offers slimmer and lighter look.

MB-70 INDUSTRIAL
MB-70 INDUSTRIAL HI



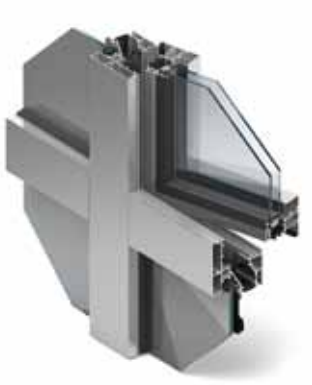
Fixed window – cross-section



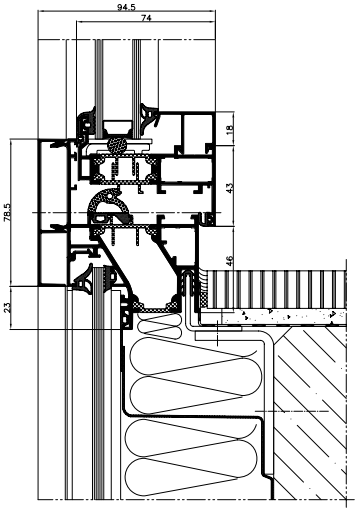
Opening window – cross-section

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.

MB-70CW
MB-70CW HI



This solution is used for reinforced concrete or brick external wall developments with window openings. This curtain wall includes two types of zones: "cold" and "warm". "Warm" zones are thermally insulated windows installed in front of the façade, in window openings. "Cold" zones are intra-window areas made of non-thermally insulated profiles and single panes that protect the construction and its thermal insulation (eg. mineral wool) against adverse weathering conditions.



Cross-section of an active window

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	MB-70B
Depth of frame (door / window)	70 mm / 70 mm	70 mm				70 mm / 70 mm
Depth of leaf (door / window)	70 mm / 79 mm	79 mm				79 mm / 70 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	14,5– 53,5 mm / 23,5 – 62 mm
MIN VISIBLE WIDTH T PROFILE						
Door / window frame	51 mm / 47 mm	75 mm	47 mm	47 mm	78,5 mm	51 mm / 47 mm
Door / window leaf	72 mm / 32 mm	–	32 mm	–	34,6 mm	72 mm / 32 mm
SIZE AND WEIGHT LIMITATIONS						
Opening 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 W to 1400 mm	H to 2400 mm W to 1600 mm
Door (H×W)	H to 2400 mm W to 1300 mm	–	–	–	–	H to 2374 mm W to 1100 mm
Max weight (doors / windows)	120 / 130 kg	130 kg	–	130 kg	–	160 / 130 kg
TYPES OF CONSTRUCTION						
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	tilt window, turn window, tilt&turn window, doors open in and open out

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	MB-70B
Air Permeability	class 4, EN 1026; EN 12207					class 4, EN 1026; EN 12207
Watertightness	to class E1200 EN 1027; EN 12208			E750 EN 1027; EN 12208		9A, EN 1027; EN 12208
Windload resistance	to class C5 / EN 12211; EN 12210			class C5 EN 12211; EN 12210		to class C3, EN 12211; EN 12210
Thermal insulation	U_f from 1,0 W/(m²K) U_W from 1,0 W/(m²K)*	U_f from 1,5 W/(m²K)	U_f from 1,9 W/(m²K)	U_f from 2,2 W/(m²K)	U_f from 1,4 W/(m²K)	U_f from 1,3 W/(m²K)

* - U_W for MB-70HI openable window, 1,23 × 1,48 m, glazing U_g=0,5 W/(m²K) with Chromatech Ultra spacer

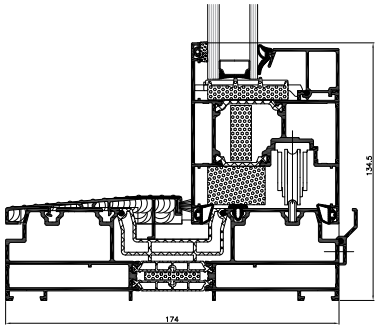
Lift and slide balcony door

MB-77HS
MB-77HSB
MB-77HS HI

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 **MB-77HSB** is designed to meet the needs of the Belgian market.

- *large sizes constructions with the width over 6 m*

Bring the outdoor inside



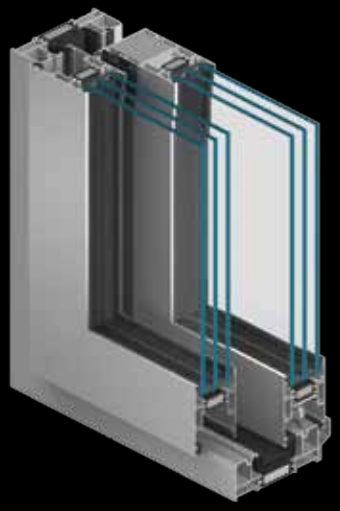
FEATURES AND BENEFITS

- durable and slender profiles to enable fabrication of low-threshold doors, leaf weight of up to 400 kg, heigh up to 3,2 m, width up to 3,3 m frames available in 2-rail and 3-rail variants – comfortable solutions with low doorsill
- wide range of infills, including the use of one- or two-chambered sets, as well as thermal breaks and additional accessories and insulation inserts to provide very good thermal and sound performance
- can be corner-fitted – 90° & 270°
- glazing beads in thee variants: Standard (rectangular), Prestige (rounded) and Style (shaped) closed-shape glazing beads and burglar-resistant details allow to obtain important burglar-resistant performance without having to make any significant changes to the door's structural elements
- unique glazing & end gaskets and appropriate hardware to provide excellent air tightness and water resistance performance
- profiles adapted to accommodate a number of manually or automatically operated hardware available on the market
- a large degree of compatibility with MB-86 system creates an aesthetic combination of the MB-77HS with windows and allows the use of common components
- wide range of colours to arrange doors in any environment, both externally and internally

TECHNICAL SPECIFICATION	MB-77HS / MB-77HS HI	MB-77HSB
Frame depth	174 mm (2-rail profile), 271 mm (3-rail profile)	
Sash depth	77 mm	
Window glazing thickness	13,5 – 58,5 mm	
MIN. WIDTH OF PROFILES		
Frame	48 mm	
Sash	94,5 – 105,5 mm	

PERFORMANCE	MB-77HS / MB-77HS HI	MB-77HSB
Air Permeability	class 4, EN 12207	
Watertightness	class 9A, EN 12208	
Thermal insulation	U_f from 1,4 W/(m²K), U_W from 0,84 W/(m²K)*	U_W from 0,88 W/(m²K)*
Windload resistance	to class C4, EN 12210	to class C2, EN 12210

* - U_W for MB-77HS HI & MB-77HSB openable window, 3,0 × 2,9 m, glazing U_g=0,5 W/(m²K)



For Lift & Slide Doors

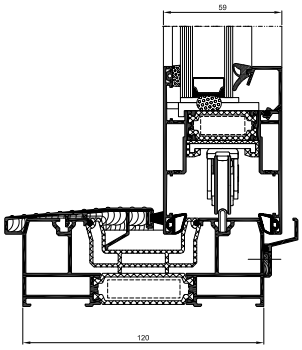
MB-59HS

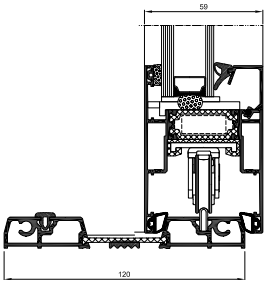
Lift & slide door is the perfect integrating element that connects rooms or winter gardens with external spaces. It provides a convenient exit to the balcony, terrace or garden. When in the open position, the door does not take up space inside the room, whilst enabling a very good contact with the environment 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.

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.

- *wide range of solutions*
- *optimal constructions*

Convenient exit to the terrace





FEATURES AND BENEFITS

- 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 (Uf) 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

TECHNICAL SPECIFICATION	MB-59HS ST / MB-59HS HI
Frame width	120 mm (2-rail profile), 199 mm (3-rail profile)
Leaf width	59 mm
Glazing width	up to 42 mm
PROFILE WIDTH , AS SEEN FROM THE OUTSIDE	
Frame	44 mm
Leaf	83,5 – 94,5 mm

PERFORMANCE	MB-59HS ST / MB-59HS HI
Air Permeability	class 3, EN 12207
Watertightness	up to 9A (600 Pa) class, EN 12208
Windload resistance	up to C3 class, EN 12210
Thermal insulation	U_f from 1,8 W/(m²K)

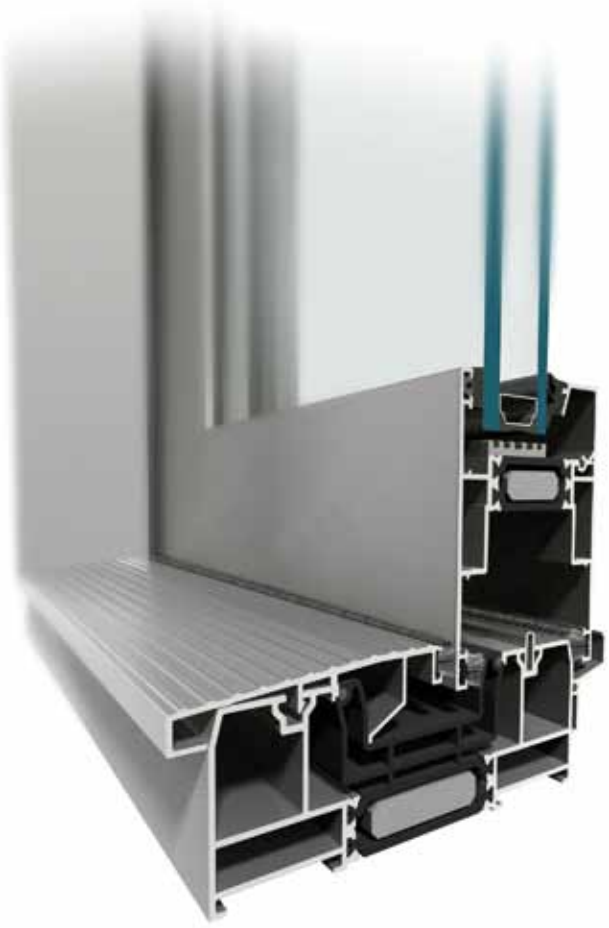
Balcony sliding door system

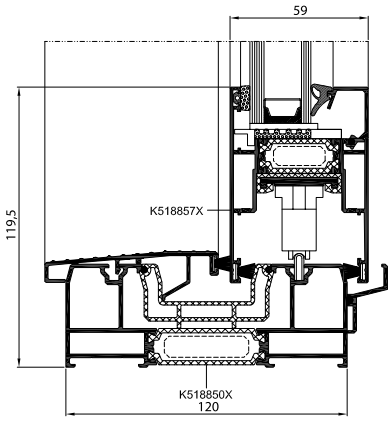
MB-59 SLIDE

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.

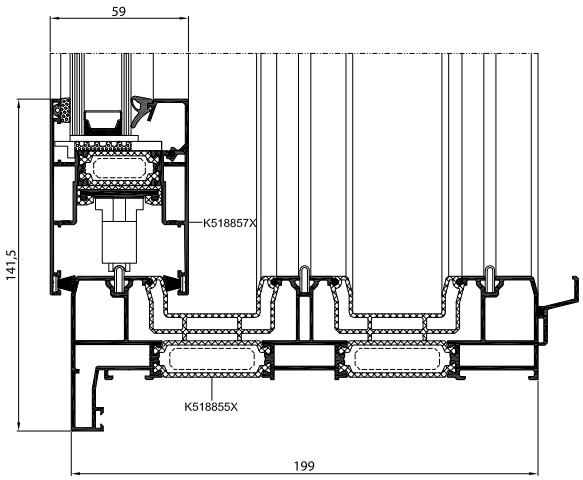
- *short prefabrication time*

Live closer to the nature





Door with 2-rail frame, view



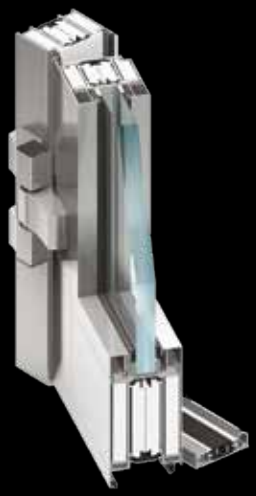
Door with 3-rail frame, view

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 – 42 mm
MINIMAL PROFILE WIDTH, AS SEEN FROM THE OUTSIDE	
Frame	44 mm
Leaf	83,5 mm

TECHNICAL SPECIFICATION	MB-59 SLIDE / MB-59 SLIDE HI
Air tightness	class 3, EN 12207
Water resistance	class 6A, EN 12208
Wind load resistance	class C3, EN 12210
Thermal insulation	U_f from 1,9 W/(m²K)



Fire rated walls systems

MB-78EI
MB-78EI DPA
MB-118EI

Fire-rated partition walling system **MB-78EI** is used for fabrication of internal or external fire partitions with single and double doors classified fire-resistant EI15, EI30, EI45 or EI60 to EN 13501-2+A1:2010. If needed, fire doors can simultaneously have smoke leakage characteristics. **MB-78EI** enables fabrication of automatic sliding doors – **MB-78EI DPA** classified fire-resistant EI15 or EI30. The **MB-118EI** system is based on **MB-78EI**, and is used to fabricate EI120-fire rated structures. Fire doors can be integrated in fire-resistant curtain walls MB-SR50EI and MB-SR50N EI.

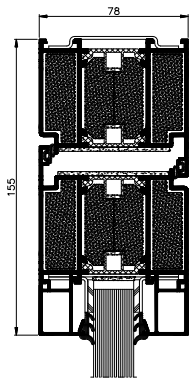
▪ *fire resistance to EI 120*

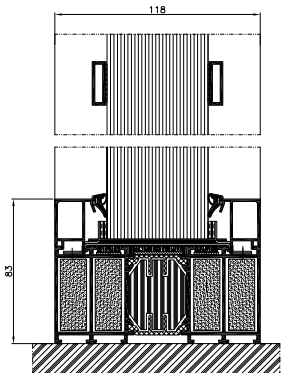
Gain valuable time

MB-78EI DPA
Automatic sliding fire doors

The **MB-78EI DPA** system is used for internal or external fire barriers with automatic sliding single- or double--leaf doors in the class EI15 or EI30. The applied motor allows the efficient and failure-free operation of doors with a leaf weight of up to 200 kg.

The maximum size of the structure
in a door opening:
– height of 1-leaf and 2-leaf doors:
up to 2450 mm.
– width of 1-leaf doors: up to 1100 mm.
– width of 2-leaf doors: up to 2125 mm.



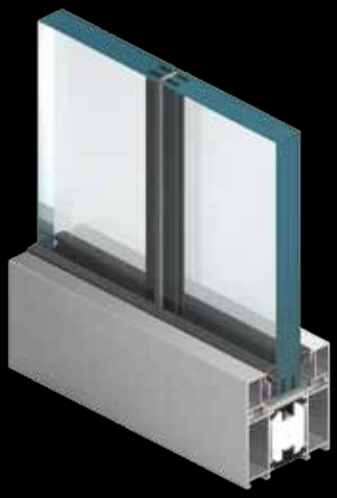


FEATURES AND BENEFITS

- single or double-acting doors with leaf up to H=2500 mm or automatic sliding doors MB-78EI DPA up to H=2515 mm
- fixed walls and partitions with doors up to 4 m high
  possibility to use oblique battens, to bend,
  and to create arch structures
- wide selection of accessories, including
  aesthetically looking roller guides

TECHNICAL SPECIFICATION	MB-78EI	MB-118EI
PROFILES DIMENSIONS		
Frame width	78 mm	118 mm
Leaf width	78 mm	–
Glazing width	6 – 49 mm	31 – 84 mm
MIN VISIBLE WIDTH T PROFILE		
Door frame	51 (72) mm	83 mm
Door leaf	72 (51) mm	110 mm
SIZE AND WEIGHT LIMITATIONS		
Max size of door leaf / curtain wall element (H×W)	H to 3000 mm W to 1400 mm	H to 2500 mm W to 1400 mm
Max weight of door leaf / curtain wall	250 kg	410 kg

PERFORMANCE	MB-78EI	MB-118EI
Air Permeability	class 2, EN 12207	class 4, EN 12207
Watertightness	class 5A, EN 12208	class RE750, EN 12208
Fire resistance	partition walls & rebated doors: EI15, EI30, EI45, EI60, EI 90, EN 13501-2, automatic sliding doors: EI30, EN 1634-1	EI120, EN 13501-2
Thermal insulation (U_f)	from 1,6 W/(m²K)	–
Acoustic Insulation (R_w)	to 41 dB	–



Silicone jointed glazed walls

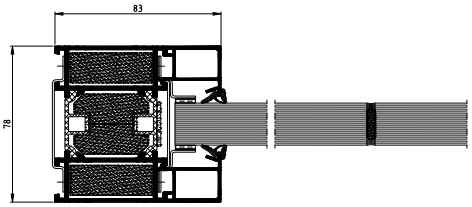
MB-78EI

Aluprof offers **MB-78EI** system-based transparent fire-rated wall solution – "Silicone joined fire-rated glazed walls". This enables fabrication of internal partitions walls without the visible vertical wall profiles that separate the individual modules of the wall, while preserving its full fire resistance. 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).
Partition walls can thus have a height of more than 3,6 m with modules' width up to 1,8 m. Fire tests performed by the Poland's Building Research Institute (ITB) on these partition walls included the so-called "free-edge model", so there is no limit on the maximum length of this type of walls.

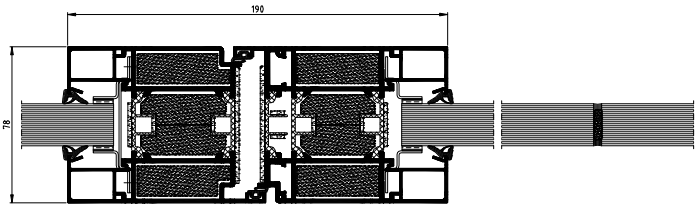
MB-78EI brings virtually unlimited design and construction possibilities of very large internal partition walling. Thanks to the transparent modules, all the constructions fabricated using this system make the interiors optically bigger. The system also provides security by allowing the arrangement of the building's fire zones and this ensuring appropriate conditions for the evacuation of building occupants.

- *fire resistance to EI 60*

Fire protection of office space

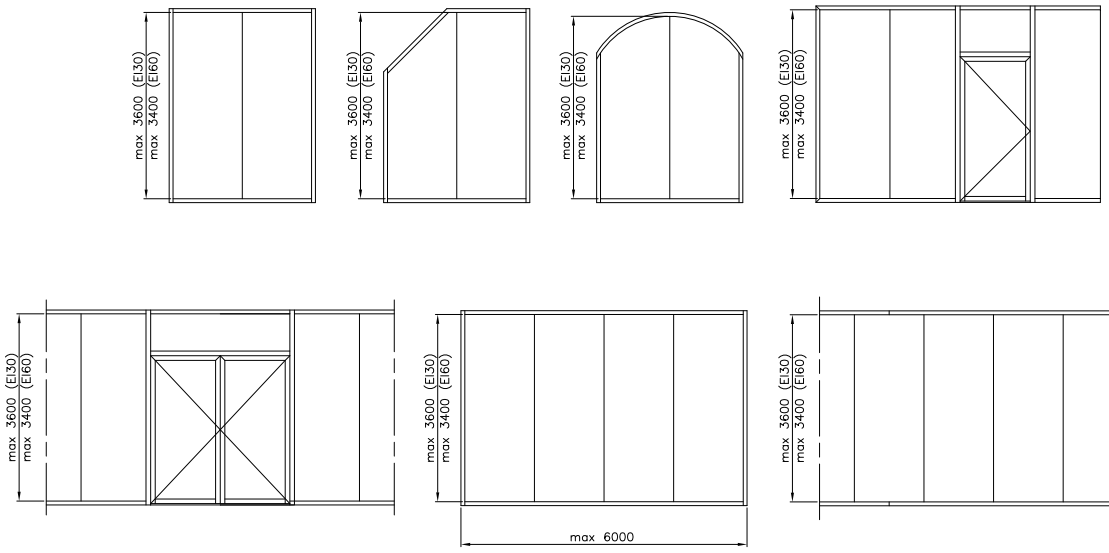


Silicone jointed glazed walls – cross section EI60



Door – cross section EI30

MB-78EI SELECTED CONFIGURATIONS



FEATURES AND BENEFITS

- our solution has been designed and then tested at the ITB in two fire-rating classes: EI30 and EI60
- joint width between the modules is only 4 mm
- max. width of a single module is 1,5 m (max. height is 3,6 m) or 1,8 m (max. height is 3,0 m)
- unlimited width of single walls

Fire rated system

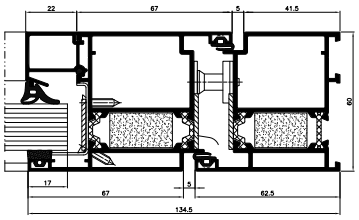
MB-60E EI

MB-60E EI is designed to fabricate internal or external singe & double fire-rated door. This system also enables fabrication of "technical windows" and fire-rated partition walls.

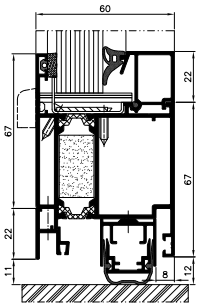
Constructions fabricated based on **MB-60E EI** can be classified fire-resistant EI 15 and EI 30 to PNEN 13501-2+A1:2010 and non-fire spreading (NRO).

- *fire resistance to EI 30*

Solidity & Safety



EI30 door – view



EI30 door – view

FEATURES AND BENEFITS

- MB-60E-based, it enables the use of elements that are common to both systems
- product scope: single & double door with side lite, plus walls.
- constructions classified EI15, EI30
- enables the glazing of typical fire-resistant glass panes ranging from 5-41 mm
- profile design depth: 60 mm
- from-the-inside glazing with glazing strips.
- prefabrication made fast and easy

TECHNICAL SPECIFICATION	MB-60E EI
PROFILES DIMENSIONS	
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, W up to 1400 mm
Max weight of door leaf / wall area	120 kg
TYPES OF CONSTRUCTION	
Solutions	fixed partition walls and single-acting doors

PERFORMANCE	MB-60E EI
Air Permeability	class 2
Watertightness	class 3A, EN1027, EN12208
Windload resistance	C5, EN 12211; EN 12210
Fire resistance	partition walls & rebated doors: EI15, EI30; EN 13501-2+A1

Fire partition walls with door

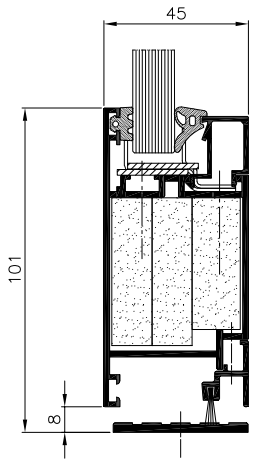
MB-45EW

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 construction is based on aluminium profiles of the "cold" system MB-45 which has a structural depth of 45mm. 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.

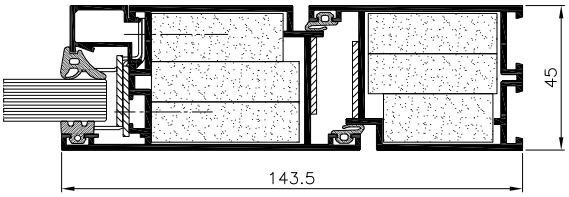
The system can use fire-resistant glazing EW 30 (thickness 11mm – 15,5mm). The infill is made using standard glazing beads, and the entire construction has steel accessories that protect the glass in case of fire. The **MB-45EW** system enables the fabrication of doors with maximum leaf size of up to 2.40m high and 1.25m wide. Structural capabilities and compatibility with other MB-series systems make this solution very attractive in this product category, while providing an excellent fire protection.

- *fire resistance up to EW 30*

For more performance and safety



door with low-level threshold, bottom view



door, section view

FEATURES AND BENEFITS

- a solution based on MB-45 window & door profiles. Prefabrication made simple and fast with the use of elements that are common to both systems
- special infills in the profiles and accessories for even better fire rating
- possibility to use all standard types of fire resistant glass Pyroguard (EW classes)
- "From-the-inside" glazing – with glazing beads
- low-level threshold solution with smoke rating Sm & Sa

efectis france

TECHNICAL SPECIFICATION	MB-45EW
PROFILES DIMENSIONS	
Frame width	45 mm
Leaf width	45 mm
Glazing width	11 – 15,5 mm
MIN VISIBLE WIDTH T PROFILE	
Door frame	66,5 mm / 66 mm
Door leaf	72 mm / 87 mm
SIZE AND WEIGHT LIMITATIONS	
Max size of door leaf / wall area (H×W)	H up to 2400 mm, L up to 1250 mm
Max weight of door leaf / wall area	120 kg
TYPES OF CONSTRUCTION	
Solutions	single or double-acting doors, fixed walls

PERFORMANCE	MB-45EW
Air Permeability	class 2
Fire resistance	EW30

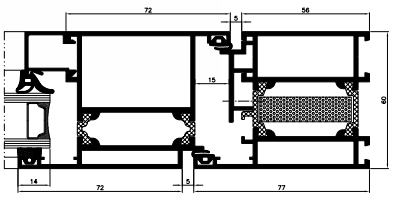
Door and window systems

MB-60
MB-60 HI

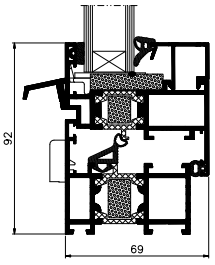
The **MB-60** is a stable, universal and complete window and door system for any application requiring enhanced thermal performance that reflect different needs of the various market segments. Its wide selection of compatible components enables to construct various elements from basic thermally insulated windows and doors to pivot and concealed sash windows, industrial type windows with the steel like lookout and security doors. Majority of system varieties are available in both standard and HI version with increased thermal insulation properties.

- *great number of solutions' options*

INSTYTUT TECHNOLOGII ŻYWNOŚCI I GASTRONOMII PAŃSTWOWEJ WYŻSZEJ SZKOŁY INFORMATYKI I PRZEDSIĘBIORCZOŚCI
Location: Lomza / Poland
Design: PW ARKON



Door – cross-section

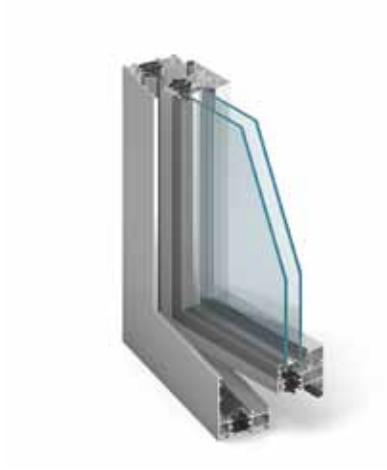


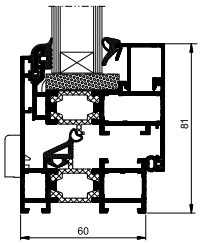
Window – cross-section

FEATURES AND BENEFITS

- windows available as fixed, tilt and turn, tilt and slide and pivot
- hidden vent option
- 1 or 2 leaf doors open in or open out
- large size door constructions available
- glazing up to 50 mm
- burglar resistant secure windows and doors options
- dual color options
- lower cost door option
- numerous finish options
- multi-point locking
- Eurogroove that broadens the choice of hardware available
- suites with other Aluprof's MB systems allowing total design flexibility and project solutions
- compliance with CE marking requirements

MB-60US
MB-60US HI

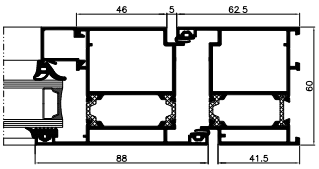




Opening window – cross-section

The invisible sash system variety enables to accomplish an effect of indifferent look of series of neighboring combination of fixed and opening windows from the outside of the building. It is presented in regular and enhanced thermal performance varieties.

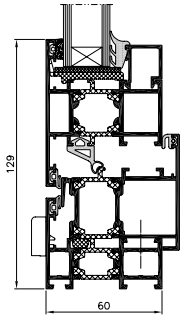
MB-60E
MB-60E HI



Door – cross-section

The extremely cost efficient system for making thermally insulated doors and sets of windows and doors. It offers combination of good performance and limited production costs related to shorter time and high ease to manufacture.

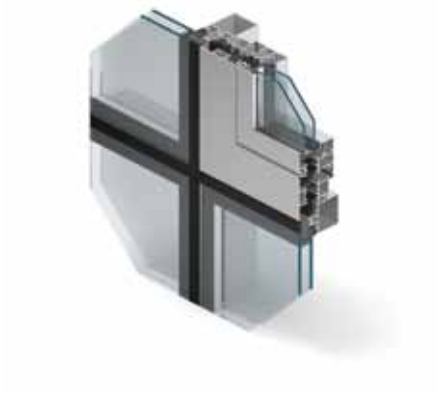
MB-60 PIVOT

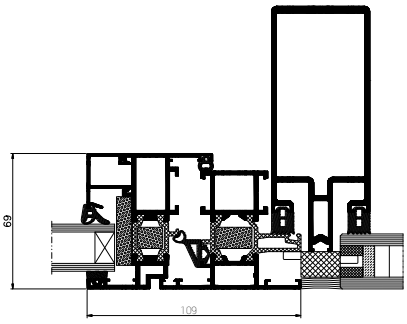


Pivot window – cross-section

The pivot variety is available for both vertical pivot and horizontal pivot applications ensuring flexibility. Its hardware enables for window to open a full 180 degrees. The key competitive advantages it offers include large size and weight limitations.

MB-60EF
MB-60EF HI



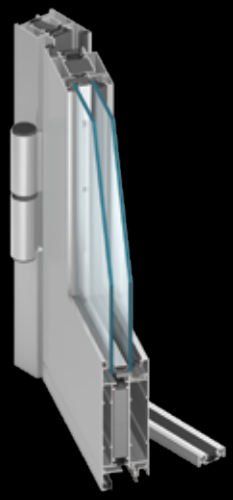


Acitve window in a curtain wall – cross-section

The system variety features windows integrated with the MB-SR50 EFEKT curtain wall partitions, therefore enables for specific visual effect – on the "all-glass" external surface of the curtain wall there comes a clear outline of an aluminum window frame. External surfaces of window profiles and glass panels are aligned. It is presented in regular and enhanced thermal performance varieties.

TECHNICAL SPECIFICATION	MB-60 MB-60 HI	MB-60US MB-60US HI	MB-PIVOT	MB-60E MB-60E HI	MB-60EF MB-60EF HI
PROFILES DIMENTIONS, A RANGE OF GLAZING					
Depth of frame (door / window)	60 mm / 60 mm	60 mm			
Depth of leaf (door / window)	60 mm / 69 mm	69 mm		60 mm	69 mm
Glazing range (fixed window and door / opening window)	5 – 44 mm / 14 – 52 mm	4 – 35 mm / 8 – 44 mm	5 – 41 mm / 14 – 50 mm	5 – 41 mm	–
MIN VISIBLE WIDTH T PROFILE					
Door / window frame	51 mm / 47 mm	75 mm	60 mm	41,5 mm	72 mm
Door / window leaf	72 mm / 29 mm	34,6 mm	60 mm	67 mm	72 mm
SIZE AND WEIGHT LIMITATIONS					
Maximum size of window (H×W)	H to 2400 mm W to 1250 mm	H to 1900 mm W to 1100 mm	H to 2000 mm W to 2400 mm	–	H to 2400 mm W to 1250 mm
Maximum size of door (H×W)	H to 2400 mm W to 1200 mm	–	–	H to 2300 mm W to 1300 mm	–
Max weight (doors / windows)	120 / 130 kg	130 kg	180 kg	120 kg	130 kg
TYPES OF CONSTRUCTIONS					
Solutions	Tilt windows, turn windows, tilt&turn windows, tilt sliding windows and doors, doors open in and open out	Fixed windows, tilt windows, turn windows, tilt&turn windows	Pivot windows	Doors and window and door sets	Tilt&turn windows in curtain walls

PERFORMANCE	MB-60 MB-60 HI	MB-60US MB-60US HI	MB-PIVOT	MB-60E MB-60E HI	MB-60EF MB-60EF HI
Air Permeability	class 4			class 3	class 4
Watertightness	class E900 EN 1027; EN 12208			class E1200 EN 1027; EN 12208	
Windload resistance	C5 EN 12211; EN 12210		class C2 EN 12211; EN 12210	class C1 EN 12211; EN 12210	class C4 EN 12211; EN 12210
Impact resistance	class 3	–	–	class 3	–
Thermal insulation (U_f)	from 1,4 W/(m²K)	from 1,7 W/(m²K)	–	from 2,8 W/(m²K)	–



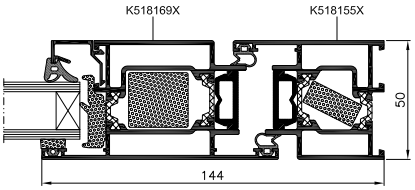
Window and door system

MB-59S HI

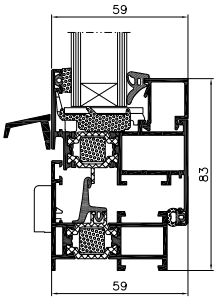
The **MB-59S HI** system has been designed to give architects an integrated window and door system, allowing flexibilty of design whilst at the same time as providing good thermal and acoustic insulation. It is the starting point for any specifier and provides a multitude of options for window projects; Tilt&turn, Tilt&slide, side hung, bottom hung, pivot and also an open out option for top hung and side hung. They are also avaliable in high thermal insulation variety name HI.

- *economical and functional*

MALTA OFFICE PARK
Location: Poznan / Poland
Design: Architects Litoborski + Marciniak



Door – cross-section

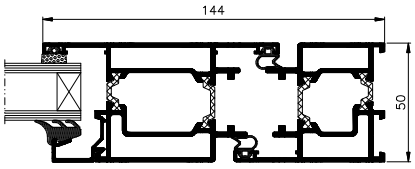


Opening window – cross-section

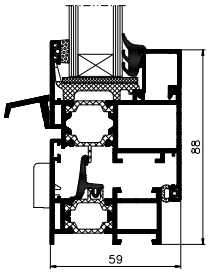
FEATURES AND BENEFITS

- window options include, open in side hung, bottom hung,pivot tilt & turn and Slide & Tilt. The Casement derivative provides open out options of top hung and side hung
- single or double doorsets available in open in or out
- wide range of finishes and colours, Anodises, Powder coated, dual colour and new Decoral wood grain finish
- dual color option
- Eurogroove to broaden the choice of hardware available
- suites with other Aluprof's MB systems allowing total design flexibility and project solutions
- compliance with CE marking requirements

MB-59S HI



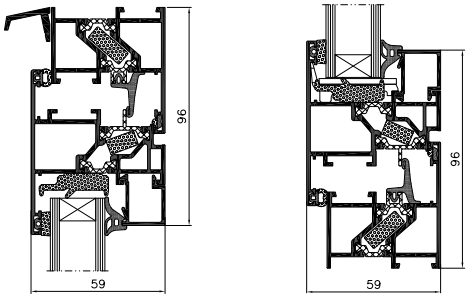
Door – cross-section



Opening window – cross-section

The standard tilt and turn variety offers great value for money. It is ideal for limited budget projects with basic thermal and acoustic requirements. It is suitable for installation in low or medium rise buildings for commercial and domestic, new build or refurbishment projects.

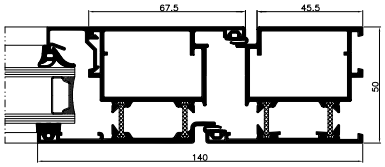
MB-59S CASEMENT
MB-59S CASEMENT HI



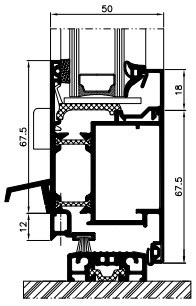
Outward opening window – cross-section

The casement window features modern structure designed to get more out of its thermal performance in compliance with building regulations. It is available as a top or side hung window and has multi point locking and fixed restrictors with adjustable friction for enhanced security.

MB-59SE



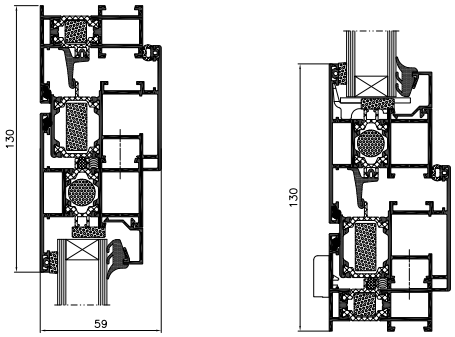
Door – cross-section



Cross-section of the bottom rail in door

This modern variety is designed for economy type of doors and combination of doors and windows that meet enhanced performance requirements.

MB-59S PIVOT
MB-59S PIVOT HI



Pivot window – cross-section

The pivot window is available in horizontal or vertical applications which makes it an appropriate window for most occasions. The compliance with safety and ventilation requirements makes the pivot the ideal choice for hospitals, schools and offices. It is greatly compatible with curtain wall systems for enabling easy and intuitive assembly to already set wall.

TECHNICAL SPECIFICATION	MB-59S MB-59S HI	MB-59SE	MB-59S CASEMENT MB-59S CASEMENT HI	MB-59S PIVOT MB-59S PIVOT HI
PROFILES DIMENTIONS, A RANGE OF GLAZING				
Depth of frame (door / window)	50 mm / 50 mm	50 mm	50 mm	50 mm
Depth of leaf (door / window)	50 mm / 59 mm	50 mm	59 mm	59 mm
Glazing range (fixed window and door / opening window)	4,5 – 31,5 mm / 4,5 – 40,5 mm	4,5 – 31,5 mm	4,5 – 31,5 mm / 4,5 – 40,5 mm	4,5 – 31,5 mm
MIN VISIBLE WIDTH T-PROFILE				
Door / window frame	36,5 mm / 47,5 mm	45,5 mm	33,5 mm	47,5 mm
Door / window leaf	72,5 mm / 34,5 mm	67,5 mm	72,5 mm	77,5 mm
SIZE AND WEIGHT LIMITATIONS				
Maximum size of window (H×W)	H to 2400 mm W to 1250 mm	–	H to 2000 mm W to 2400 mm	
Maximum size of door (H×W)	H to 2300 mm W to 1100 mm	H to 2300 mm W to 1000 mm	–	–
Max weight (doors / windows)	100 / 130 kg	100 kg		180 kg
TYPES OF CONSTRUCTIONS				
Solutions	Titl window, turn window, tilt&turn window, doors open out and open in	Economy doors	Top or side hung window	Pivot window with horizontal or vertical applications

PERFORMANCE	MB-59S MB-59S HI	MB-59SE	MB-59S CASEMENT MB-59S CASEMENT HI	MB-59S PIVOT MB-59S PIVOT HI
Air Permeability	class 4 EN 1026; EN 12207	class 2 EN 1026; EN 12207	class 4 EN 1026; EN 12207	
Watertightness	E1050 EN 1027; EN 12208	3A EN 1027; EN 12208	E1050 EN 1027; EN 12208	AE750 EN 1027; EN 12208
Windload resistance	C3 EN 12211; EN 12210	C2 EN 12211; EN 12210	C5 EN 12211; EN 12210	CE2400 EN 12210
Impact resistance	class 3	class 4	class 1	–
Thermal insulation (U_f)	from 1,8 W/(m²K)	from 2,7 W/(m²K)	from 2,1 W/(m²K)	–

Partition walling systems

MB-EXPO
MB-EXPO MOBILE

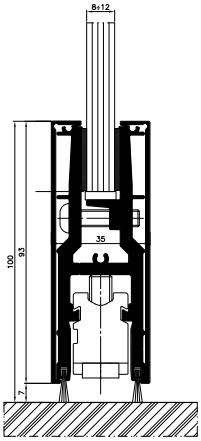
The **MB-EXPO** is an elegant, glass partition walling system designed for various types of internal partition walls with all-glass doors, whose function is to separate and to soundproof the selected areas, without visually limiting the room as it is the case with the non-transparent walls.

The **MB-EXPO MOBILE** is an internal walling system that allow the fabrication of high-quality segment doors. The possibility of using the **MB-EXPO MOBILE** in high ceilings areas (up to 4m high) and of having a wide, openable door, makes it a solution oriented mainly towards shops, shopping malls, exhibition centres and office buildings.

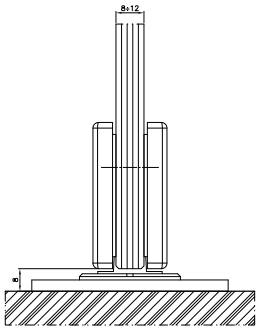
The sections of the **MB-EXPO** and **MB-EXPO MOBILE** systems are fitted to allow installation of the hardware (locks, hinges, suspension brackets, parked systems) manufactured by Aluprof and Geze. The panes are the structural component of both systems and the glazing gaskets remain invisible, whichever the side. Both systems are offered in a variety of colours, and allow an easy fabrication & installation.

- *structures up to 4m high*

Stylish Shop Fronts

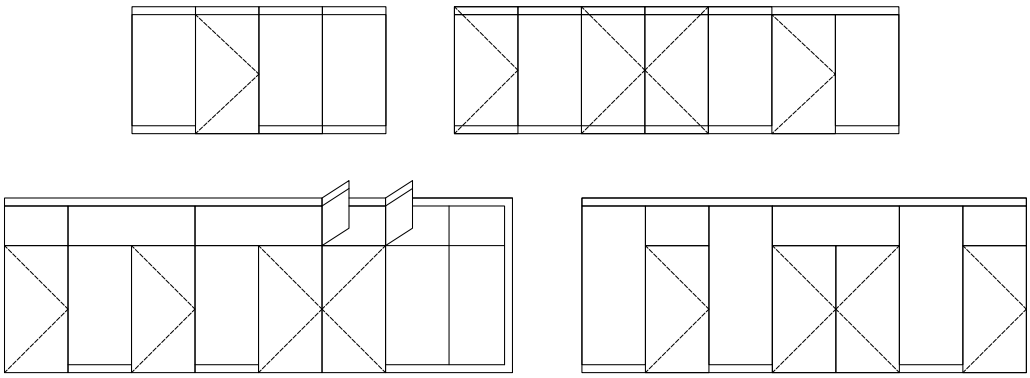


Mobile and door leaf –
lower cross section

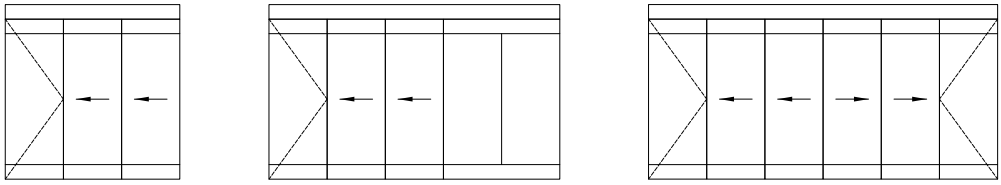


Shop front –
lower cross section

MB-EXPO SELECTED CONFIGURATIONS



MB-EXPO MOBILE SELECTED CONFIGURATIONS



FEATURES AND BENEFITS

- invisible glazing gaskets
- light structure
- glazing range 8-12 mm
- fixed profile depth regardless of the glass pane thickness
- structures up to 4 m high
- adapted to use numerous companies' hardware products: Aluprof, Geze

Partition walling system

MB-80 OFFICE

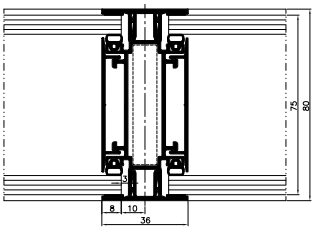
This internal partition double-glass walling system is designed to fabricate internal partitions in offices and other public facilities.

The system enables the use of different types of infills, transparent or obscure, with internal louvers and electrical components and office equipment. These walls are especially suitable in buildings where a high sound insulation is required.

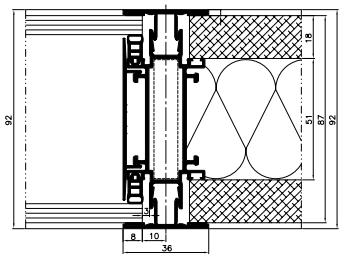
The basic feature of this construction is its versatility in arranging office space, combined with the simplicity of execution of all the works on site.

- *maximum construction height: 6,35 m*

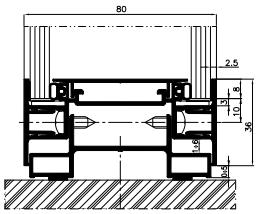
Practical solutions for the office



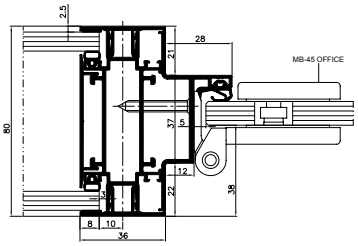
Vertical section through the wall 80 mm



Vertical section through the wall 92 mm

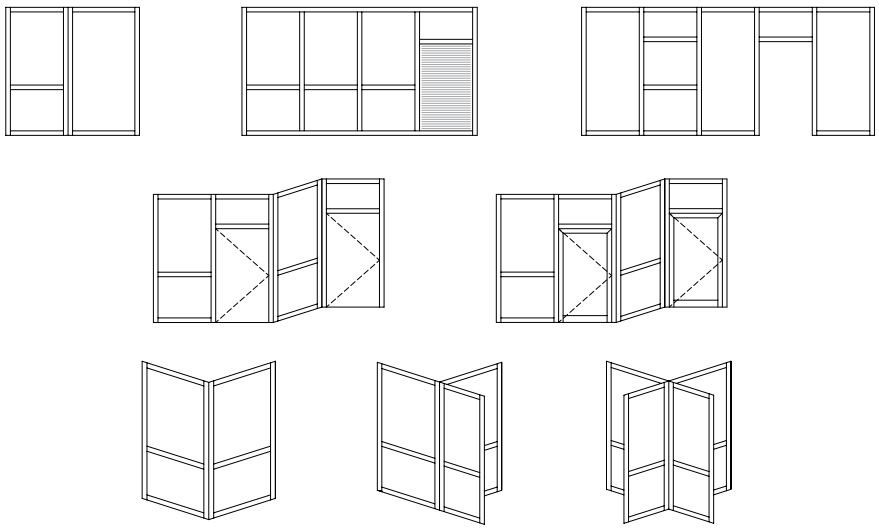


Lower crossbar - view



Door posts - view

MB-80 OFFICE SELECTED CONFIGURATIONS



FEATURES AND BENEFITS

- 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 louvers
- 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

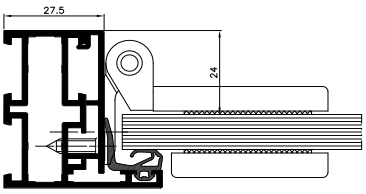
Partitioning system

MB-45 OFFICE

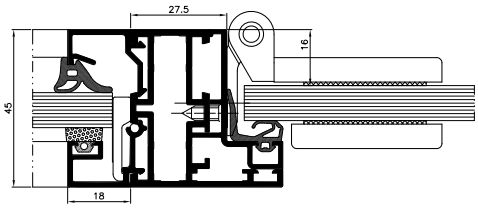
The **MB-45 OFFICE** fixed and door-equipped partitioning system has been designed to fabricate internal partition walls whose distinguishing feature is that a tempered glass pane can be its structural component.
Due to its versatility and wide application possibilities, the **MB-45 OFFICE** system is dedicated to the fabrication of lightweight, yet solid walls in meeting rooms and office spaces with "clearly marked" door.
The elements of this system allow to fabricate fixed partition walls and all-glass door leaves for hinged and swinging-type doors. **MB-45 OFFICE** is available in a wide range of colours – RAL, ATEC and wood-like ADEC.

- *all-glass door made from tempered glass panel*

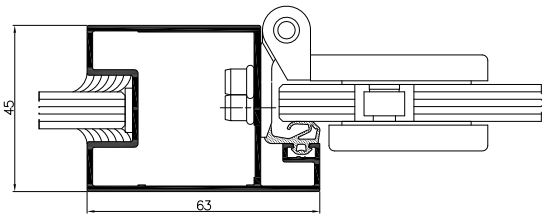
Elegant office interior



Door – side view

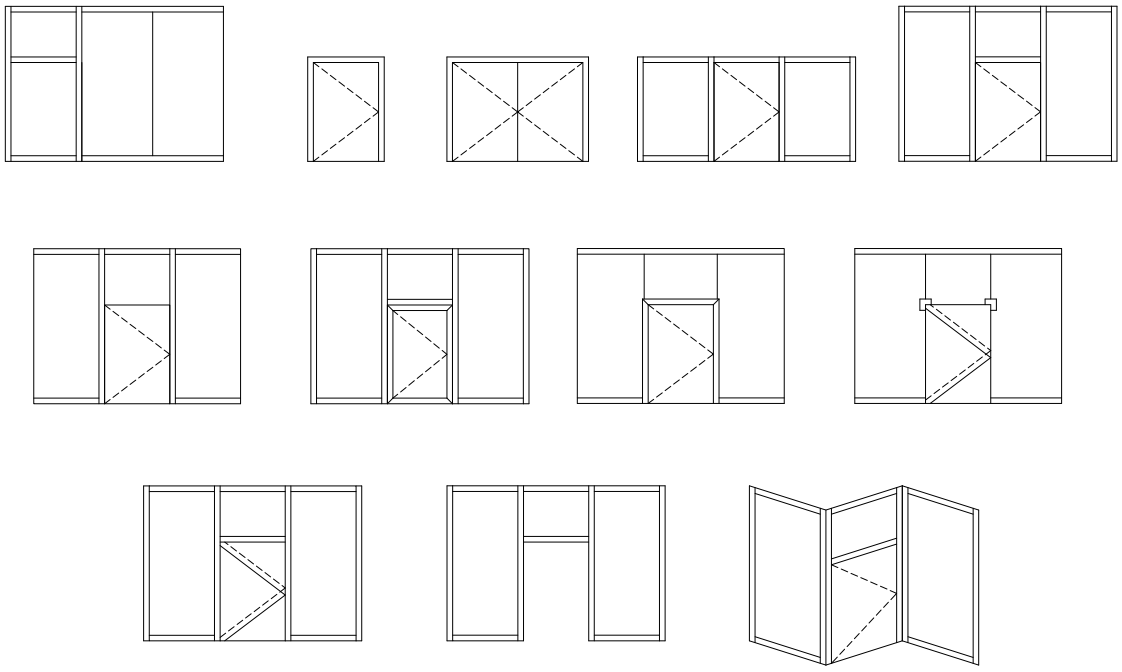


Door stud – section view



Door stud and upper crossbar view

MB-45 OFFICE SELECTED CONFIGURATIONS



FEATURES AND BENEFITS

- light and durable structure
- 45 mm structure depth – the system is fully compatible with the MB-45
- infill ranging from 2-25 mm (dedicated, 8 mm 10 mm and 12 mm tempered glass panes)
- continuous glazing gaskets, no more cutting at the corners
- possibility of changing the interior design
- adapted to use numerous companies' hardware products: Aluprof, WSS

Window and door system

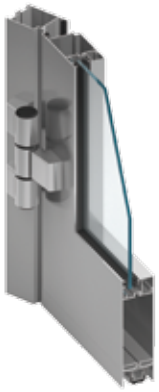
MB-45

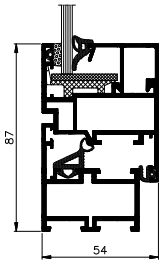
MB-45 is a competively priced non thermal window and door system. Can be used externally where no thermal insulation is required or also internally as a partition system. With its broad selection of profiles, **MB-45** offers a variety of possible uses and combines cost efficiency with minimum basic depths. The system comes with a full suite of door options; sliding, swing anti finger trap, and open in window configurations; Slide & Tilt, Side hung, bottom hung and tilt&turn. **MB-45** has been designed to provide a competive edge to medium traffic applications across the retail, commercial and public sector markets.

▪ *perfect for indoors*

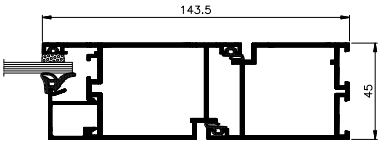
GORZOW WIELKOPOLSKI PHILHARMONIC
Location: Gorzow Wielkopolski / Poland
Design: BUDOPOL S.A. General construction design office

MB-45
MB-45D





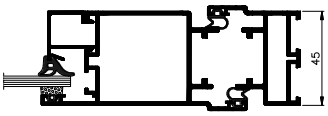
Window – cross-section



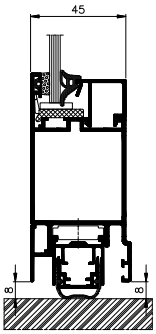
Door – cross-section

Base system for use in building interiors with low thermal insulation requirements. It features large selection of profiles and accessories. It is also available as smoke proof wall partitions and doors in the class S_m, S_a in compliance with the norm EN 13502-2:2008.

MB-45S



Door – cross-section



Door – cross-section

The variety of main system comprising the elements of wall partitions and doors fitted with mortise hardware.

FEATURES AND BENEFITS

- variety of functions and opening types tailored to the users' needs
- large selection of door sealing variants and shapes & heights of doorsills
- three types of glazing beads: Standard, Prestige, Style
- possibility to bend profiles, and to create arch structures

TECHNICAL SPECIFICATION	MB-45	MB-45S	MB-45D
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 – 31,5 mm	
MIN VISIBLE WIDTH T-PROFILE			
Door / window frame	66,5 mm / 27,5 mm		
Door / window leaf	66 mm / 27,5 mm		
SIZE AND WEIGHT 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 / 130 kg	130 kg	120 kg
TYPES OF CONSTRUCTIONS			
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

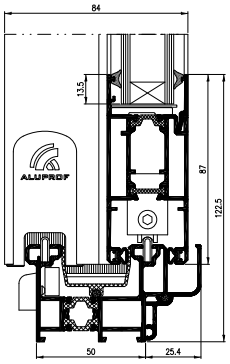
SLIDING AND FOLDING DOORS

Sliding and accordion door systems enable fabrication of user-friendly and aesthetically looking developments that can be used effectively in interior spaces. In most cases, these constructions are MB window & door systems-based. Wide range of available solutions and potential applications: from products suitable for balcony enclosures, terraces or garden rooms to construction that are perfectly suited for public buildings and commercial buildings.

▪ *an ability of adapting in every conditions*

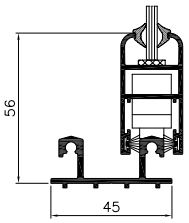
POLECZKI BUSINESS PARK
Location: Warsaw / Poland
Design: RKW Rhode Kellermann Wawrowsky

MB-SLIDE
MB-SLIDE ST



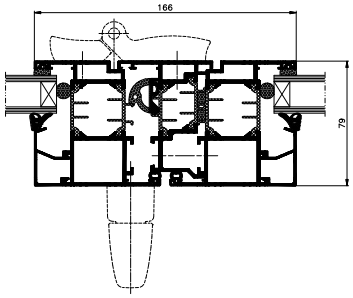
The MB-SLIDE and MB-SLIDE ST have been designed to meet the needs of users with its easy to operate functions and single or double sliding doors and windows that offer flexibility for variety of project applications. They are suitable for installation in masonry wall and aluminum facades. They can also be used as part of winter gardens and commercial windows.

MB-23P



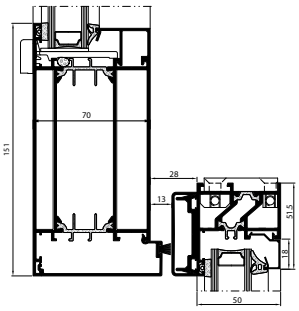
MB-23P is an aluminum system designed for balcony glazing offering open balconies protection from wind, rain, residues and extensive noise. It also improves home safety standards making it more difficult for intruders to enter, especially in the ground-floor apartments.

Folding door



These solutions are well suited as a combination of home space with a terrace or garden. All accordion doors are made of thermally insulated profiles. Depending on the requirements, these can be inward openable (MB-59S, MB-60 or MB-70-based) or outward openable constructions, based on MB-59S Casement.

MB-DPA



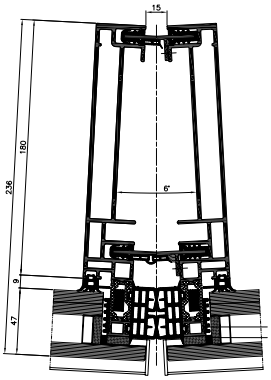
Automatic sliding door system is designed for use as individual construction, in larger glazing modules and as part of aluminum curtain wall. It can employ both thermally insulated and non insulated aluminum profiles. Offering comfort of use and high rate of safety it features large size of glazing panes.

TECHNICAL SPECIFICATION	MB-23P	MB-SLIDE MB-SLIDE ST	Folding doors	MB-DPA
Depth of Frame (door / window)	53 mm	50 and 97 mm	50 to 70 mm	
Depth of Leaf (door / window)	23 mm	37 mm	from 59 mm depending upon system	45; 50 mm
Glazing range (fixed window and opening door / window)	4 – 8 mm	22 – 26 mm	4,5 – 60 mm	4,5 – 31,5 mm
MIN VISIBLE WIDTH T PROFILE				
Door / window frame	15 mm	44,5 mm	Depending upon system	–
Door / window leaf	42 mm	68,5 mm	Depending upon system	69; 73,5 mm
MAX SIZE OF DOOR AND TILT TURN WINDOW				
Max size of windows (H×W)	H to 2000 mm W to 1000 mm	H to 2600 mm W to 1800 mm	H to 2400 mm W to 1600 mm	W to 1500 mm
Max weight of door / window leaf	50 kg	160 kg	130 kg	200 kg

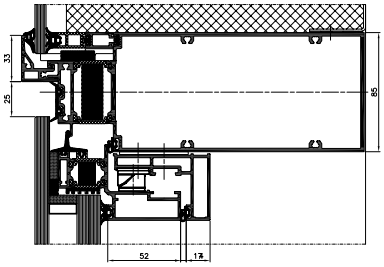
Structural segment-based façade

MB-SE85 SG

Performance:
Air Permeability: class AE 1200 Pa
Watertightness: class RE 1200 Pa
Windload resistance: 3000 Pa
Impact resistance: class I5/E5



Mullion – cross-section



Transom – cross-section
and window operable

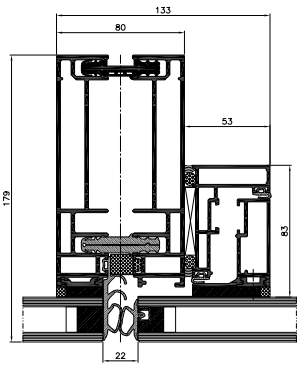
SKY TOWER
Location: Wroclaw / Poland
Design: FOLD Architects

In order to create Sky Tower the aesthetic quality the building elevation brings and satisfy the high technical requirements, a bespoke, structurally glazed unitize curtain wall system **MB-SE85 SG** was developed. This high specification system allows both fast and precise installation on side directly from ground level with no scaffolding required. The façade incorporated a mix of fixed glazed panels together with bespoke top hung openings, all automatically operated.

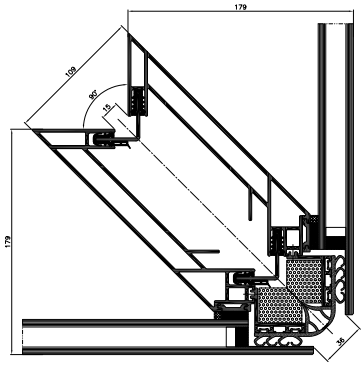
Structural segment-based façade

MB-SE80 SG

Performance:
Air Permeability: class AE 1200 Pa
Air infiltration: class RAE 1350 Pa
Watertightness: class RE 1500 Pa
Windload resistance:1500 Pa
Impact resistance: class I5/E5



Mullion and casement window cross-section



Corner mullion cross-section

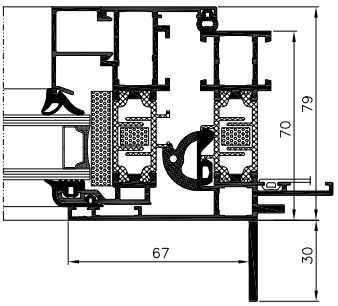
LEXINGTON AVENUE
Location: Nowy York / USA
Design: Time Square Development

325 Lexington Avenue 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. In addition to the parameters such as the tightness of the façade, the assumed resistance to tectonic movements was also confirmed. In such cases, the structure allows a vertical movement of segments in relation to each other, this within ±5 mm.

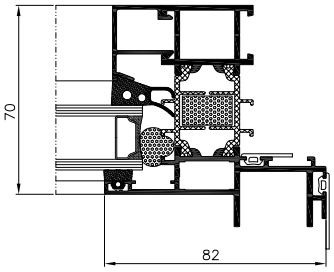
Window with a hidden sash

MB-70US HI

Performance:
Air Permeability: class 4
Watertightness: class E 1050 Pa
Windload resistance: class C4 / B4



MB-70US windows - cross-sections



MB-70US windows - cross-sections

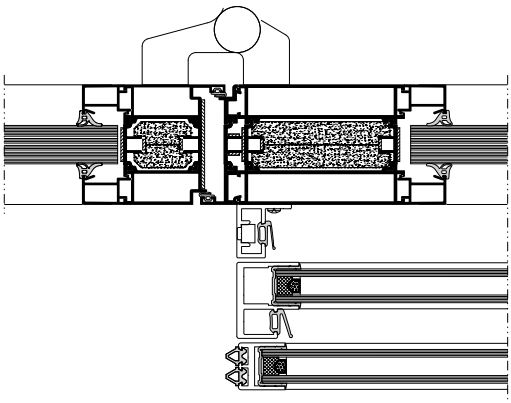
ATHLETES VILLAGE
Location: London
Design: Lifschutz Davidson Sandilands

As regards window & door systems, the requirements for the London's Athletes' Village encompassed both excellent tightness and thermal performance, as well as particular aesthetic requirements for the form of profiles and uniform apearance of its fixed and openable lites. The solution used is the **MB-70US HI** system with a hidden sash and bespoke, unique shape profiles adapted to provide perfect weatherproof joint between window frame and building structure using EPDM membrane. Additionally, bespoke profile was developed to adopt external door into concealed vent screen.

Fire barrier system

MB-78EI

Performance:
Air Permeability: class 2
Watertightness: class 5A
Windload resistance: 2400 Pa



horizontal cross-section of a wall with door

GALERIA VENEDA
Location: Łomża
Design: Mąka Sojka Architekci
in collaboration with Echo Investment

Galeria VENEDA in Łomża is a shopping mall totalling app. 40K m². As in many facilities of this type, some passages need to comply with the fire protection requirements and at the same time ensure efficient traffic. This facility utilises, among other things, the **MB-78EI** fire walls connected with telescopic sliding doors, which made it possible to optimally use the passage space in compliance with safety regulations. Such "integrated" solution was positively evaluated by the Building Research Institute, appears aesthetic and plays its role perfectly.

REFERENCE PROJECTS

completed using systems by ALUPROF

www.aluprof.co.uk/en/projects

FENSTERTEK

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