



Window and door system

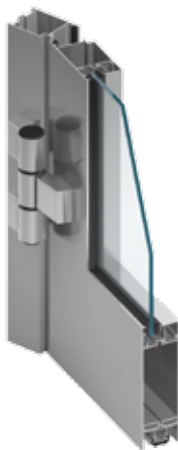
MB-45

MB-45 is a competitively 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 competitive edge to medium traffic applications across the retail, commercial and public sector markets.

▪ *Flexibility in design*

▪ *Simple Installation*



MB-45 / MB-45D

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 Sm, Sa in compliance with the norm EN 13502-2:2008.

MB-45S

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

FEATURES AND BENEFITS

- window options include, open in side hung, bottom hung, tilt & turn and Slide & Tilt
- doors available as a single and double leaf open in and open out
- light construction, easy to install
- mortise hardware option

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 rang (fixed window and door / opening window)	2 – 25 mm / 2 – 34 mm	2 – 25 mm	
MIN VISIBLE WIDTH T-PROFILE			
Frame (door / window)	66,5 mm / 43,5 mm		
Leaf (door / window)	72 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 (door / window)	120 kg / 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



Door and window system

MB-70

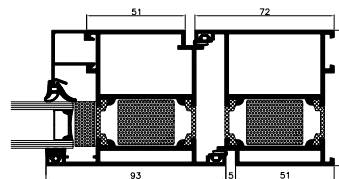
The Aluprof **MB-70** is a high performance and fully integrated window and door system. Due to the specially designed polyamide break and extruded gaskets that are incorporated into the aluminum profile it offers excellent thermal insulation performance with the U_f rate from $1,0 \text{ W/(m}^2\text{K)}$ and reduced noise properties. The range perfectly suites with Aluprof 's curtain walling and framing products and is appropriate for installation in low and high rise buildings for new buildings and refurbishment projects.

- *Flexibility of design*

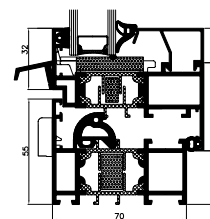
- *Thermal insulation: U_f from $1,0 \text{ W/(m}^2\text{K)}$*



MB-70 / MB-70 HI



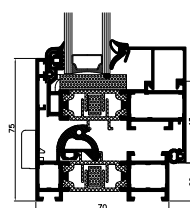
Door – cross-section MB-70 HI



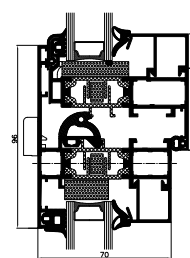
Window – cross-section MB-70 HI

The basic range of profiles allows the manufacturing of windows that open inwards and outwards. Thanks to its construction, it allows the use of many types of turn, tilt, turn-and-tilt and tilt-and-slide fittings as well as folding constructions. As regards doors, we have at our disposal the conventional single- or double-leaf doors as well as doors with the so-called safe doorstop. The system is also used for making bigger showcase structures using reinforcing profiles when required. It is also the basis for a number of interesting individual solutions.

MB-70US / MB-70US HI

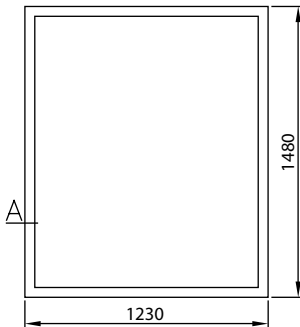
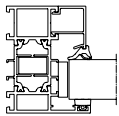
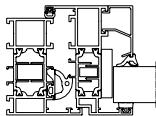
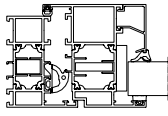
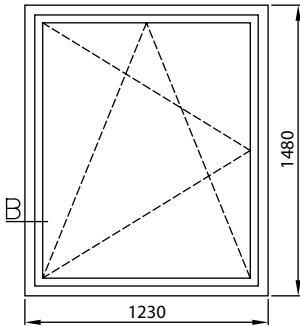
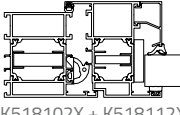


Opening window – cross-section

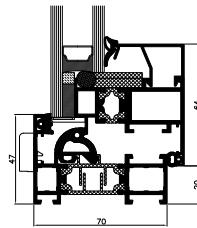


Opening window and fixed window – cross-section

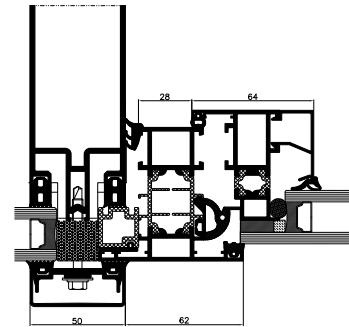
The invisible window sash variety. It enables an effect of indifferent look of series of neighboring combination of fixed and opening windows from the outside of the building. It gives an impression of light and neat look since low width of frames seen from the outside. Available in both regular and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

WINDOW DIAGRAMS	SECTION A OR B	U _W value W/(m²K)			
		Glass pane with Chromatech Ultra frame			
		Double-chamber		Single-chamber	
		U _g =0,5	U _g =0,7	U _g =1,0	
	MB-70HI	 K518101X	0,8	1,0	1,2
 K518101X + K518111X		1,0	1,1	1,3	
 K518101X + K518112X		1,0	1,1	1,3	
		 K518102X + K518112X	1,0	1,1	1,3

MB-70SG



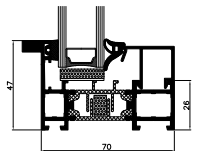
Opening window – cross-section



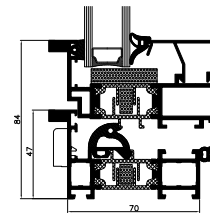
Active window
in a curtain wall – cross-section

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



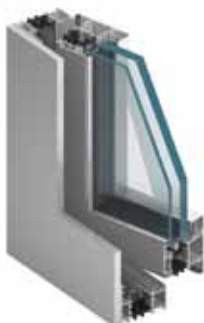
Opening window – cross-section

Whether for renovating old steel windows or giving a stylish steel look to newbuild, 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-70 Casement



MB-70RC4



MB-70 Pivot



MB-70CW / MB-70CW HI



The MB-70 system can be used for fabrication of the outward openable windows MB-70 Casement / MB-70HI Casement, pivot windows MB-70 Pivot, burglar proof windows including a special version of the MB-70 RC4 in class RC4, and window façade MB-70CW / MB-70CW HI. For more information, please refer to our publications for architects or contact our technical consultants.

FEATURES AND BENEFITS

- windows available as fixed or open in, tilt and turn, tilt and slide
- 1 or 2 leaf doors open in or open out
- safety locking
- steel look like industrial options
- large size door constructions available
- hidden sash option
- secure windows and door options, providing burglar resistance
- multitude of finish options
- dual color options
- glazing up to 60 mm
- 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

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
Depth of frame (door / window)	70 mm / 70 mm	70 mm			
Depth of leaf (door / window)	70 mm / 79 mm	79 mm			
Glazing rang (fixed window and door / opening window)	15 – 51 mm / 23 – 62 mm	9 – 45 mm / 18 – 54 mm	15 – 51 mm / 23 – 62 mm	18 – 54 mm	9 – 45 mm / 18 – 54 mm
MIN VISIBLE WIDTH T-PROFILE					
Frame (door / window)	51 mm / 47 mm	75 mm	47 mm	47 mm	78,5 mm
Leaf (door / window)	72 mm / 32 mm	–	32 mm	–	34,6 mm
SIZE AND WEIGHT LIMITATIONS					
Maximum size of window (H×W)	H to 2400 mm W to 1600 mm	H to 2100 mm W to 1400 mm	–	H to 2400 mm W to 2000 mm	–
Maximum size of door (H×W)	H to 2400 mm W to 1300 mm	–	–	–	–
Max weight (door / window)	120 kg / 130 kg	130 kg	–	130 kg	–
TYPES OF CONSTRUCTIONS					
Solutions	Tilt window, turn window, tilt&turn window, doors open in and open out	Fixed window, tilt window, turn window, tilt&turn window	Fixed window, tilt&turn window	Turn window, tilt window, tilt&turn window	Fixed window, tilt&turn window

PERFORMANCE	MB-70 MB-70 HI	MB-70US MB-70US HI	MB-70 INDUSTRIAL MB-70 INDUSTRIAL HI	MB-70SG	MB-70CW MB-70CW HI
Air Permeability	class 4, EN 1026:2001; EN 12207:2001				–
Windload resistance	to class C5, EN 12211:2001; EN 12210:2001			class C5, EN 12211:2001; EN 12210:2001	
Watertightness	to class E1200, EN 1027:2001; EN 12208:2001			E750, EN 1027:2001; EN 12208:2001	
Thermal insulation (U _f)	from 1,0 W/(m²K)	from 1,5 W/(m²K)	from 1,9 W/(m²K)	from 2,2 W/(m²K)	from 1,4 W/(m²K)



Lift and slide balcony door

MB-77HS

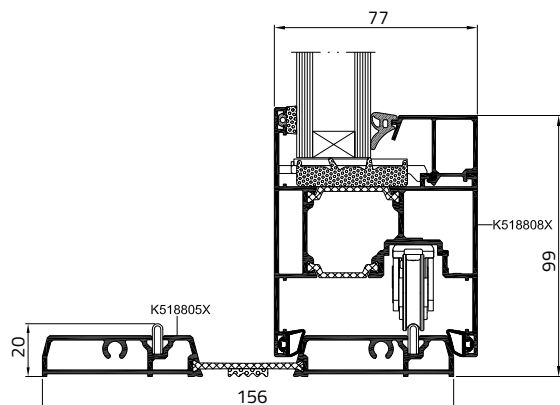
▪ *brings the outdoors inside*

▪ *excellent weather performance*

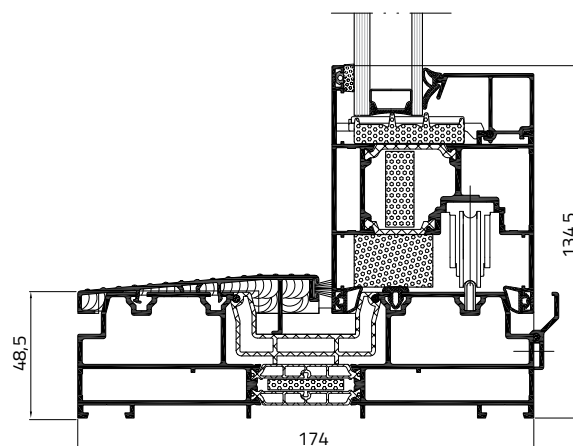
The **MB-77HS** "Lift & Slide" door product is an ideal solution for connecting interior space rooms or conservatories with the outside balcony, terrace or garden area. Providing both a smooth & silent slide action operation, it can bring the benefits of a beautiful day outside, into the living space. In addition, & by way of its design & operation, the **MB-77HS** is a great space saving opening & does not encroach the free space beyond the internal or external confines of the frame, without any compromise. Providing excellent weather tightness together with enhanced thermal performance, the **MB-77HS** complies with all of the requirements associated with this product type. Available in two different options, with regard to the level of thermal performance, the **MB-77HS** is further categorised as "ST" and "HI," standard or highly insulated. The design & arrangement of the system profiles enable luxurious openings of large dimensions, accommodating double & even triple glass unit compositions, which in conjunction with the constituent parts & innovative technical solutions, help achieve a high level of thermal & acoustic performance.



CONSTRUCTION VARIANTS

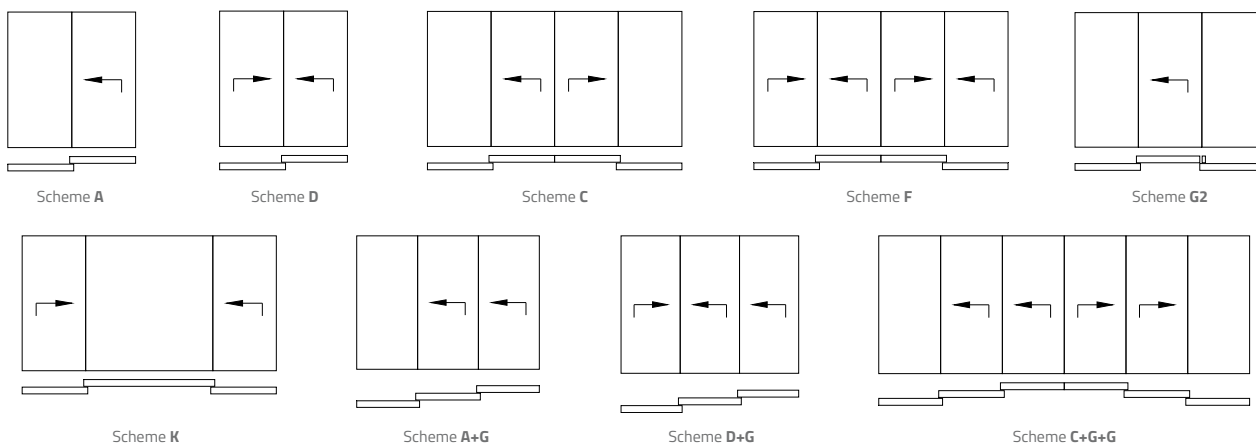


MB-77HS ST - low doorsill variant

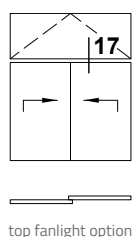


MB-77HS HI

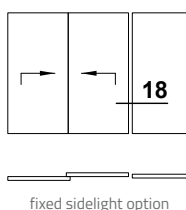
AVAILABLE DOOR CONSTRUCTION



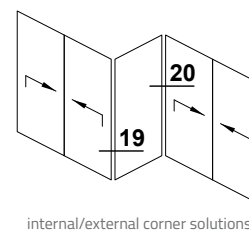
EXAMPLES OF CONSTRUCTIONS



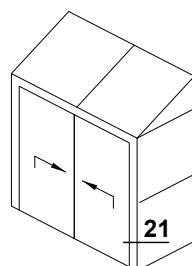
top fanlight option



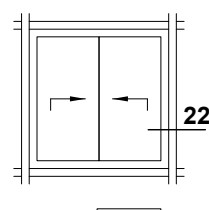
fixed sidelight option



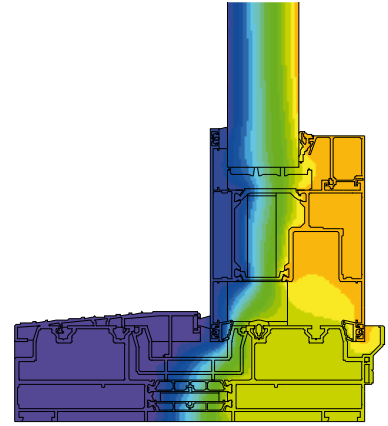
internal/external corner solutions



build into MB-WG60 conservatory system



build into a curtain walling system

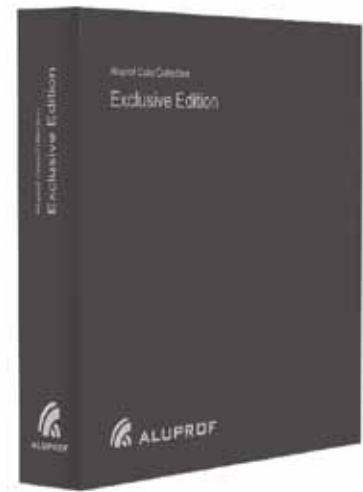


distribution of isotherms in the MB-77HS HI door

RAL palette varnishes



Special finishes ATEC



Wood grain ADEC

ADEC D101 golden oak



ADEC O102 walnut



ADEC M103 mahogany



ADEC M204 mahogany sapeli



ADEC O205 walnut vein



ADEC S106 pine



ADEC J107 fir



ADEC B108 beech



ADEC W109 cherry



ADEC W205 wenge



ADEC D207 winchester



ADEC C110 gean



ADEC C212 gean





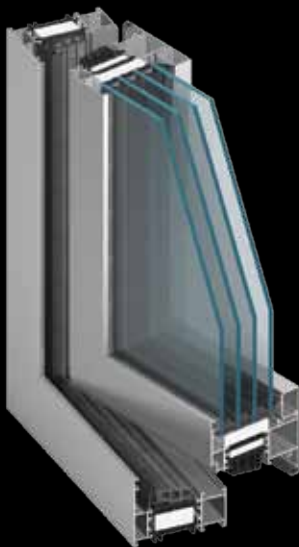
FEATURES AND BENEFITS

- durable and slender profiles enable screens of a low-threshold door of the weight of the leaf of up to 400 kg, height – up to 3.2 m and width – up to 3,3 m
- a wide range of glazing options, allowing application of double or triple glazed units combined with thermal breaks as well as additional inserts, enable achieving high thermal and acoustic insulation of the door.
- for aesthetic values glazing beads come in three options: Standard (rectangular), Prestige (rounded) and Style (shaped)
- closed shape of glazing beads and anti-jemmy details provide enhanced security properties without altering any essential constructional elements of the door
- unique gasket designs, together with quality hardware, ensure top end weather and air tightness performance
- profiles adapted to accommodate a number of manually or automatically operated hardware available on the market
- possibility to drive the doors with automatic "HS-Master" mechanism controlled with a push-button or remote control
- safe use of even large and heavy doors thanks to "HS Speed Limiter" mechanism available in the system
- a large degree of compatibility with the MB-86 system creates an aesthetic combination of the MB-77HS doors with windows, and using the same components in the fabrication process
- a wide range of colour schemes allows for arrangement of doors to meet any individual requirements

TECHNICAL SPECIFICATION	MB-77HS ST / MB-77HS HI
Depth of frame	174 mm (2-rail profile), 271 mm (3-rail profile)
Depth of leaf	77 mm
Glazing rang	13,5 – 58,5 mm
MIN VISIBLE WIDTH T-PROFILE	
Frame	48 mm
Leaf	94,5 – 105,5 mm

PERFORMANCE	MB-77HS ST / MB-77HS HI
Air Permeability	class 4, EN 12207
Watertightness	class 9A, EN 12208
Windload resistance	to class C4, EN 12210
Thermal insulation	U_f from 1,4 W/(m ² K), U_w from 0,84 W/(m ² K)*

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



Window and door system

MB-86

The new **MB-86** window and door series have been designed to offer outstanding insulation properties. It meets the increasing requirements from the legislative and general market demands for the enhanced energy saving construction of new windows and doors. Offered in three varieties ST, SI and AERO it is the first aluminum system to employ silica aerogel. The nanoporous material has a very high proportion of free void volume compared to conventional solid materials. Its high pore volume, low solid content, and torturous path amorphous structure give rise to low values of thermal conductivity. Therefore the system features the industry leading thermal performance. In addition it also features exceptional rate of profiles inertia that allows for greater construction in size and weight. Version with concealed sash (MB-86US) is also available.

▪ U_f from 0,57 W/(m²K)

▪ Innovative Nanotechnology

**RECOMMENDED
FOR ENERGY-EFFICIENT
CONSTRUCTIONS**



WINDOWS MB-86



window MB-86 ST



window MB-86 SI

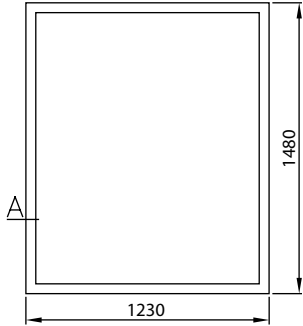
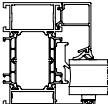
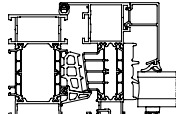
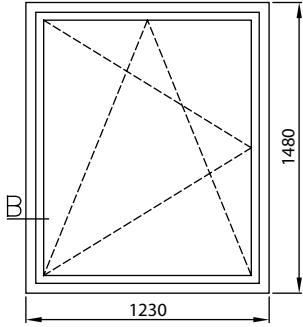
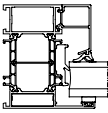
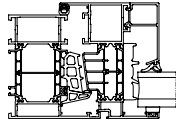
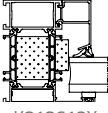
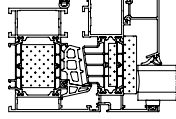


window MB-86 Aero



window MB-86US Aero

Examples of heat transfer coefficients U_w

WINDOW SCHEME	SECTION A OR B		Value U_w W/(m ² K)		
			Glass with Chromatech Ultra frame		
			Double chamber		Single chamber
			$U_g=0,5$	$U_g=0,7$	$U_g=1,0$
	MB-86 ST	 K518612X	0,77	0,94	1,23
		 K518612X + K518702X	0,90	1,04	1,29
	MB-86 SI	 K718612X	0,74	0,91	1,20
		 K718612X + K718702X	0,85	0,99	1,24
	MB-86 AERO	 K818612X	0,72	0,88	1,16
		 K818612X + K818702X	0,80	0,93	1,19

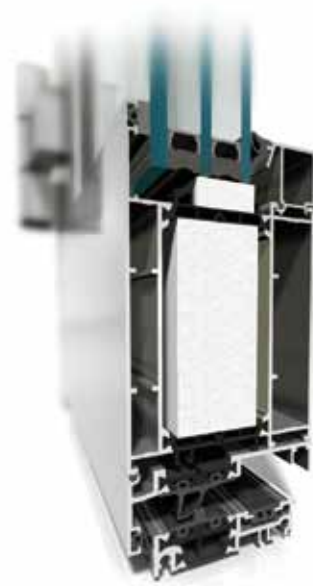
DOORS MB-86



door MB-86 ST



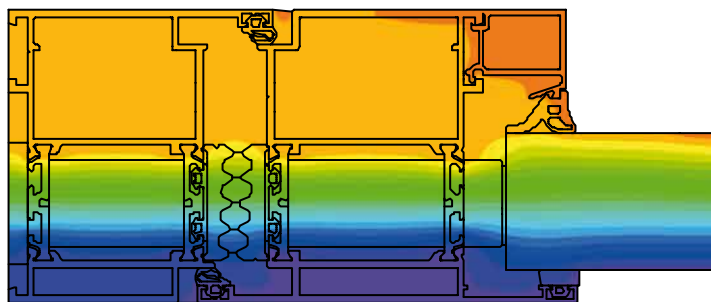
door MB-86 SI



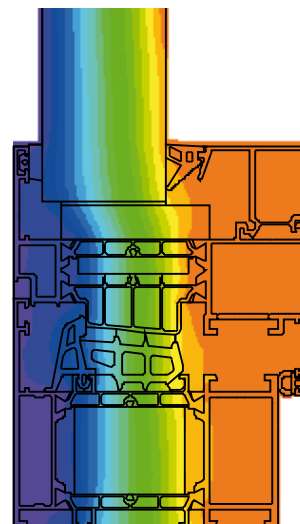
door MB-86 Aero

Examples of heat transfer coefficients U_D

DOOR SCHEME	SECTION A OR B		Value U_D W/(m ² K)		
			Glass with Chromatech Ultra frame		
			Double chamber		Single chamber
			$U_g=0,5$	$U_g=0,7$	$U_g=1,0$
	MB-86 ST	 K518731X+K518746X+K518770X	1,19	1,32	1,54
	MB-86 SI	 K718731X+K718746X+K718770X	1,07	1,20	1,41
	MB-86 SI+	 K718731X+K718746X+K718770X	0,98	1,11	1,33
	MB-86 AERO	 K818731X+K818746X+K818770X	0,88	1,02	1,23



Distribution of isotherms in MB-86 AERO door



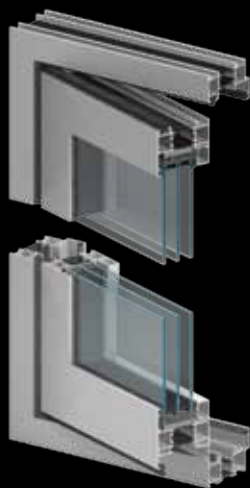
Distribution of isotherms in MB-86 AERO window

FUNCTIONALITY AND AESTHETICS

- large selection of profiles
- newly shaped, extra thick thermal breaks
- multi component central gasket
- glazing strips with additional sealing option
- glazing up to 67,5 mm enabling all types of three chamber glazing, acoustic and security, anti burglary glazing
- large, wire-free glass areas
- appropriate for variety of hardware including concealed hinges
- water draining available in both traditional and concealed options
- highly energy efficient from 0,5 W/(m²K)
- clean, sharp lines of narrow extruded aluminum framing
- multitude of finish options

TECHNICAL SPECIFICATION	MB-86 WINDOWS	MB-86 DOORS	MB-86US
Depth of frame	77 mm	77 mm	77 mm
Depth of leaf	86 mm	77 mm	80,8 mm
Glazing range	frame: 13,5 – 58,5 mm leaf: 21 – 67,5 mm	13,5 – 58,5 mm	frame: 7 – 52 mm leaf: 15 – 60 mm
SIZE AND WEIGHT LIMITATIONS			
Maximum size (H×L)	H to 2800 mm L to 1700 mm	H to 3000 mm L to 1400 mm	H to 2500 mm L to 1600 mm
Max weight	150 kg	200 kg	150 kg

PERFORMANCE	MB-86 WINDOWS	MB-86 DOORS	MB-86US
Air Permeability	class 4, PN-EN 12207:2001	class 3, PN-EN 12207:2001	class 4, PN-EN 12207:2001
Watertightness	class E 1500, PN-EN 12208:2001	class 5A (200 Pa), PN-EN 12208:2001	class E 1350, PN-EN 12208:2001
Thermal insulation (U _f)	MB-86 ST od 1,39 W/(m²K) MB-86 SI od 0,92 W/(m²K) MB-86 AERO od 0,57 W/(m²K)	MB-86 ST od 2,16 W/(m²K) MB-86 SI od 1,76 W/(m²K) MB-86 SI+ od 1,49 W/(m²K) MB-86 AERO od 1,22 W/(m²K)	MB-86US ST od 1,03 W/(m²K) MB-86US SI od 1,01 W/(m²K) MB-86US AERO od 0,86 W/(m²K)
Windload resistance	class C5, PN-EN 12210:2001	class C1/B2, PN-EN 12210:2001	class C5, PN-EN 12210:2001



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.

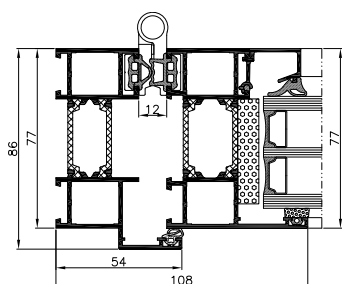
■ *excellent thermal insulation*



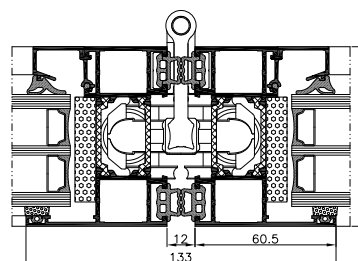


FEATURES AND BENEFITS

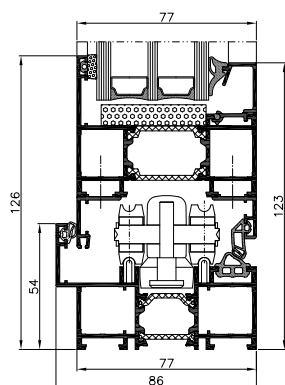
- three-chambered, durable aluminium profiles of a structural depth of 86 mm for frames and 77 mm for door leaves
- central chamber of the profiles is equipped with thermal break (24 mm-wide for frames and 34 mm-wide for door leaves) providing excellent thermal insulation performance.
- specialized and dedicated hardware for MB-86 FOLDLINE 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



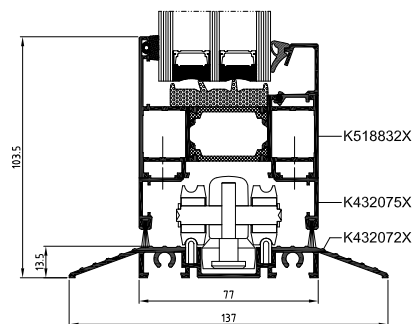
Door, side view



Door/leaves, view



Door with edge sealing, bottom view



Door with low-level threshold, bottom view



Window System

MB-104 Passive

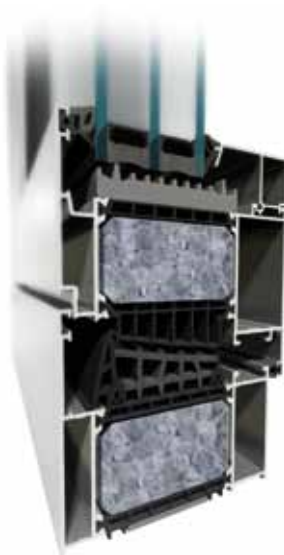
Thanks to its excellent thermal performances, the thermally broken window system **MB-104 Passive** meets all the requirements for the components used in passive buildings. This was confirmed by certificates granted by the Passive House Institute PHI Darmstadt. This system is intended for fabrication of external structure elements such as various types of windows, balcony 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)

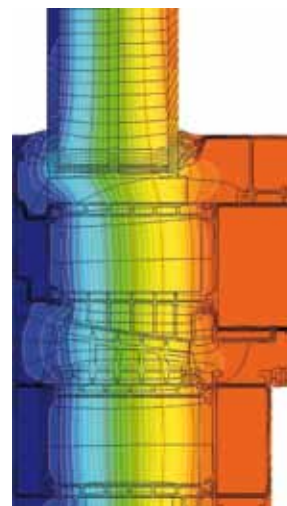




MB-104 Passive Aero



MB-104 Passive SI



Isotherm distribution
MB-104 Passive Aero

FUNCTIONALITY AND GOOD APPEARANCE

- windows certified by the Passive House Institute PHI Darmstadt (MB-104 Passive SI & MB-104 Passive Aero)
- excellent weather tightness & thermal insulation performance
- 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
- possibility to use typical or concealed hinges

TECHNICAL DATA	WINDOWS MB-104 PASSIVE
Frame depth	95 mm
Vent depth	104 mm
Glazing thickness	frame: 27 - 72 mm vent: 34,5 - 81 mm
MAX DIMENSIONS AND WEIGHT OF THE CONSTRUCTION	
Max vent dimensions (H×W)	H up to 2900 mm W up to 1700 mm
Max vent weight	160 kg

TECHNICAL PARAMETERS	WINDOWS MB-104 PASSIVE
Air tightness	class 4, PN-EN 12207:2001
Water tightness	up to AE 1800, PN-EN 12208:2001
Thermal insulation	U_w from 0,53 W/(m ² K)*
Wind load resistance	class C5/B5, PN-EN 12210:2001

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