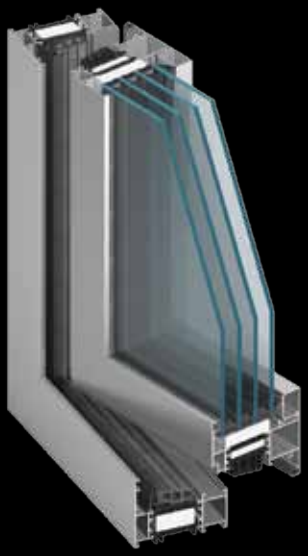


Window and door system

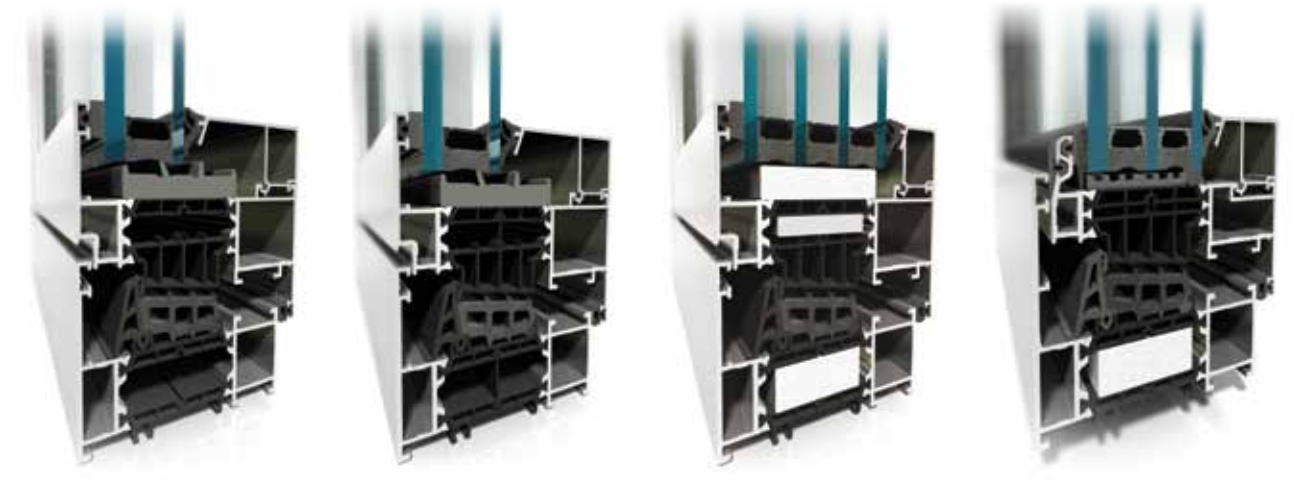
MB-86

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*

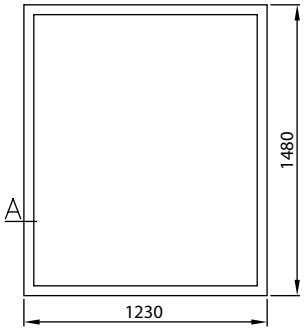
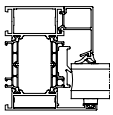
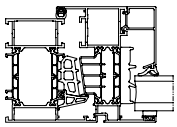
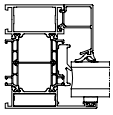
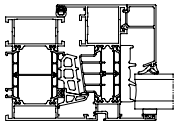
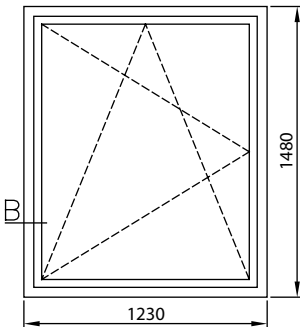
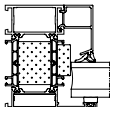
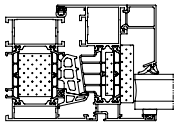
RECOMMENDED FOR ENERGY-EFFICIENT CONSTRUCTIONS

WINDOWS MB-86



window MB-86 ST | window MB-86 SI | window MB-86 Aero | window MB-86US Aero

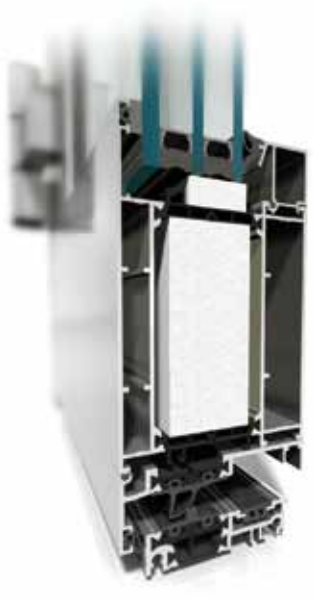
Examples of heat transfer coefficients U_w

WINDOW SCHEME	SECTION A OR B		Value U_w W/(m²K)		
			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

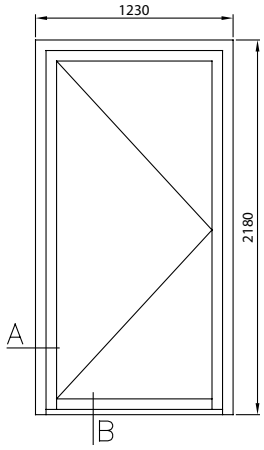
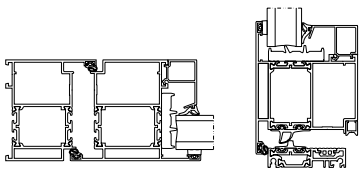
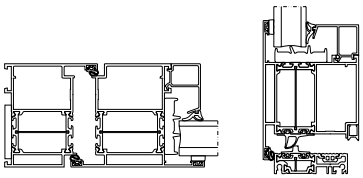
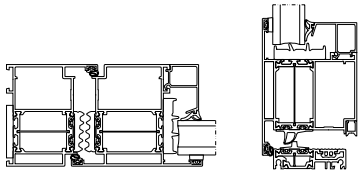
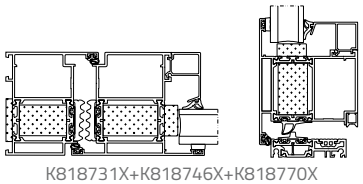
door MB-86 ST

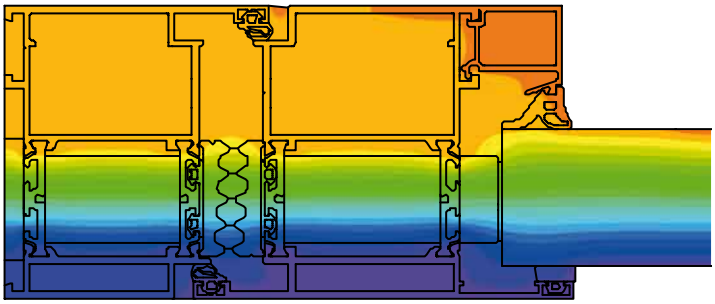
door MB-86 SI



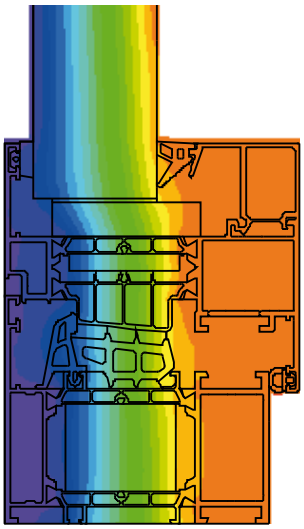
door MB-86 Aero

Examples of heat transfer coefficients U_D

DOOR SCHEME	SECTION A OR B		Value U_D W/(m²K)		
			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