



Hansen



Window and door system ALUPROF MB-86

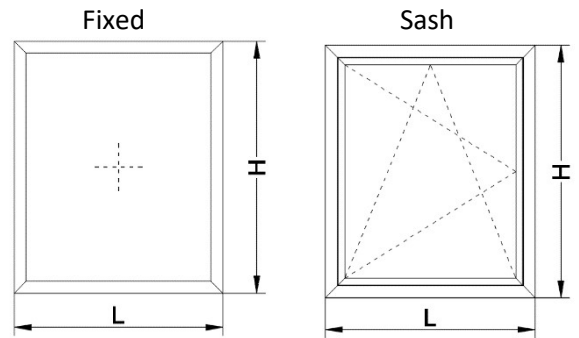
The new MB-86 window and door series have been designed to offer outstanding insulation properties. It meets the increasing requirements from the legislative and general market demands for the enhanced energy saving construction of new windows and doors.

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.

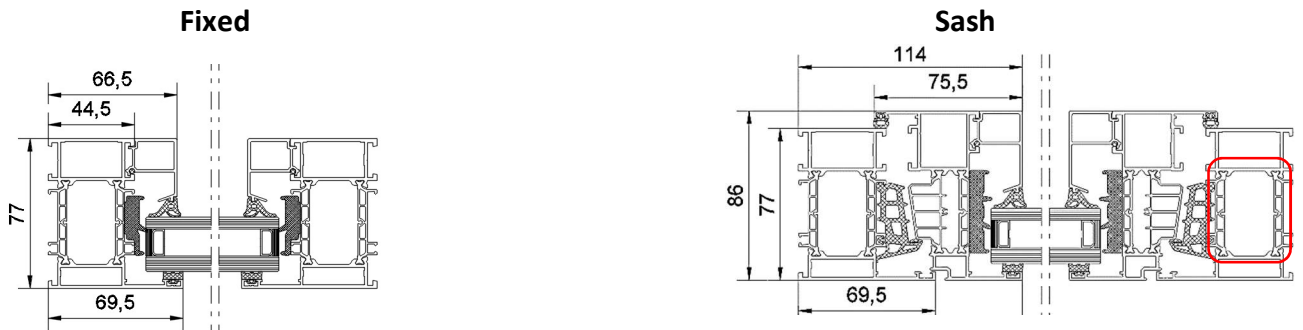
| | |
|---------------------------------|--|
| Design: | MB-86 WINDOWS: Max dim sash: L to 1700 mm, H to 2800 mm MB-86 DOORS: Max dim single door: L to 1400 mm, H to 3000 mm |
| Air permeability: | MB-86 WINDOWS, MB-86 CASEMENT, MB-86 US: Class 4, EN 12207 MB-86 DOORS: Class 4, EN 12207 |
| Water tightness: | MB-86 WINDOWS: Class E 1500, EN 12208 MB-86 CASEMENT: Class E 1350, EN 12208 MB-86 US: Class E 1950, EN 12208 MB-86 DOORS: Class E 1350, EN 12208 |
| Resistance to wind load: | MB-86 WINDOWS, MB-86 CASEMENT, MB-86 US: Class C5, EN 12210 MB-86 DOORS: Class C5/B5, EN 12210 |
| Burglar resistance: | RC1 - RC3 |

WINDOWS MB-86

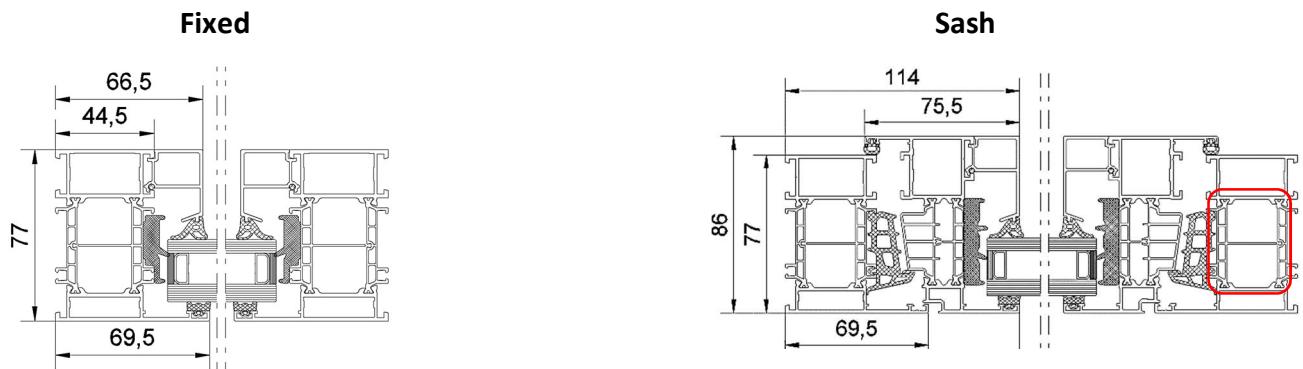
| TECHNICAL SPECIFICATION | |
|-----------------------------|---------------------------------------|
| Depth of frame | 77 mm |
| Depth of sash | 86 mm |
| Glazing range | frame: 13 – 61 mm sash: 22 – 70 mm |
| SIZE AND WEIGHT LIMITATIONS | |
| Maximum size (H x L) | H to 2800 mm L to 1700 mm |
| Max weight | 150 kg |



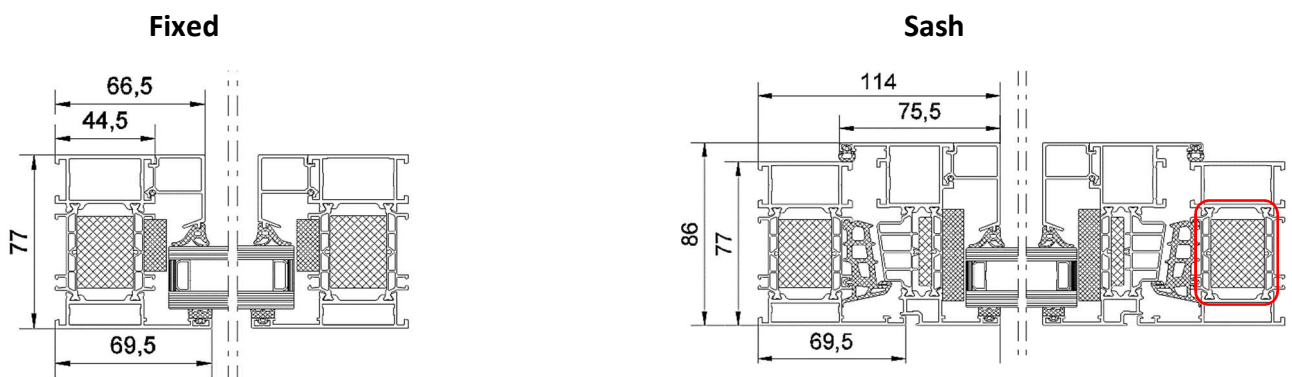
MB-86 ST – cross section



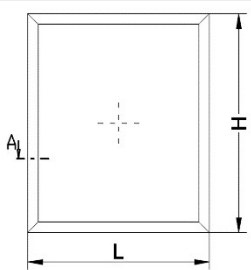
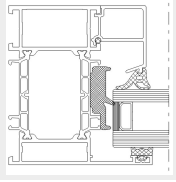
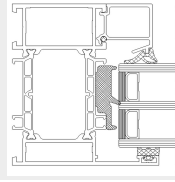
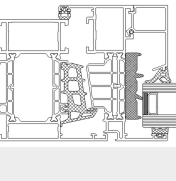
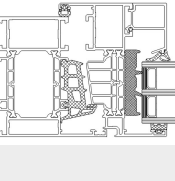
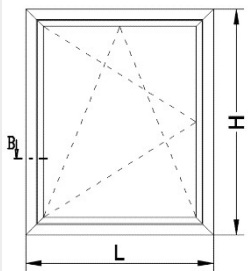
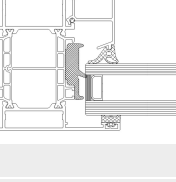
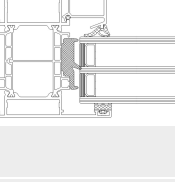
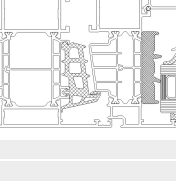
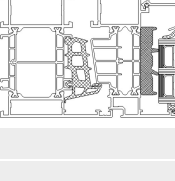
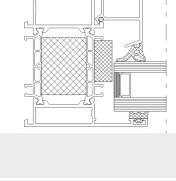
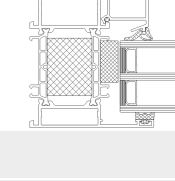
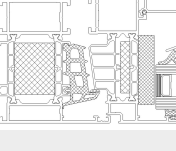
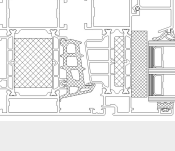
MB-86 SI – cross section



MB-86 AERO – cross section

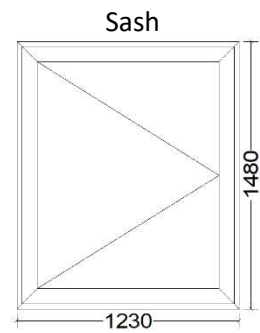


Examples of heat transfer coefficients Uw

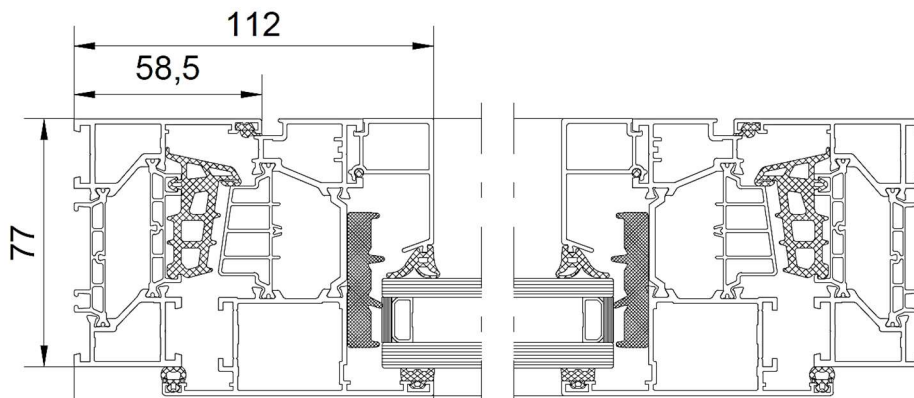
| Window scheme | Section A or B | | Value Uw [W/m²K] | | | |
|---|----------------|---|---|--|------|------|
| | | | 2-layer glass with Chromatech Ultra frame Ug=1,0 | 3-layer glass with Chromatech Ultra frame Ug=0,7 Ug=0,5 | | |
| | 2-layer glass | 3-layer glass | | | | |
|  | MB-86 ST |  |  | 1,23 | 0,94 | 0,77 |
| | |  |  | 1,29 | 1,04 | 0,90 |
|  | MB-86 SI |  |  | 1,20 | 0,91 | 0,74 |
| | |  |  | 1,24 | 0,99 | 0,85 |
| | MB-86 AERO |  |  | 1,16 | 0,88 | 0,72 |
| | |  |  | 1,19 | 0,93 | 0,80 |

MB-86 Casement

| TECHNICAL SPECIFICATION | |
|-----------------------------|---------------------------------------|
| Depth of frame | 77 mm |
| Depth of sash | 77 mm |
| Glazing range | frame: 13 – 61 mm sash: 22 – 70 mm |
| SIZE AND WEIGHT LIMITATIONS | |
| Maximum size (H x L) | H to 2500 mm L to 2400 mm |
| Max weight | 150 kg |

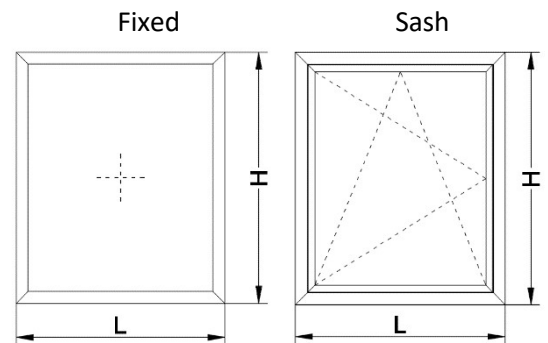


MB-86 Casement – cross section

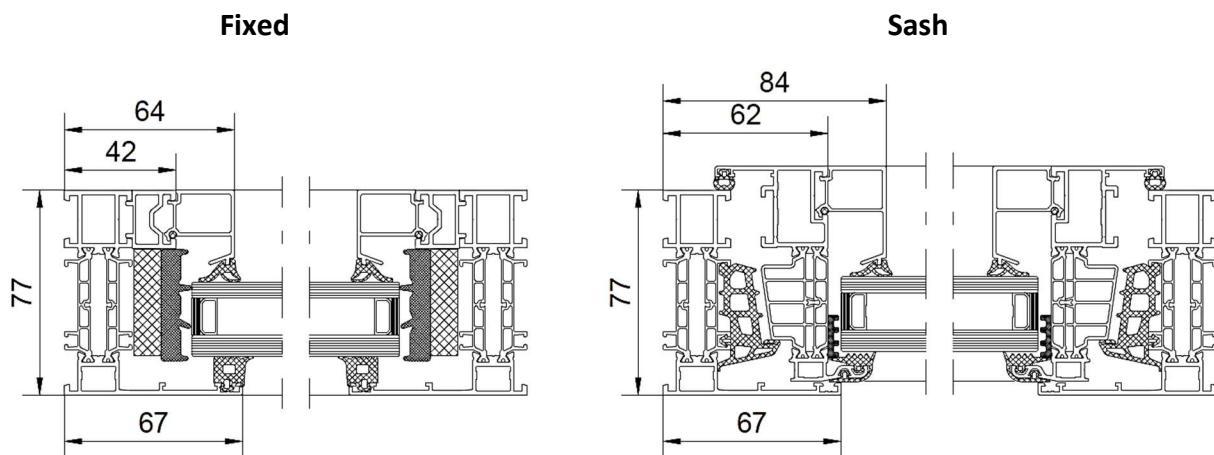


MB-86 US – cross section

| TECHNICAL SPECIFICATION | |
|-------------------------------|---|
| Depth of frame | 77 mm |
| Depth of sash | 80,8 mm |
| Glazing range | frame: 7 – 52 mm sash: 15 – 60 mm |
| SIZE AND WEIGHT LIMITATIONS | |
| Maximum size (H x L) | H to 2500 mm L to 1600 mm |
| Max weight | 150 kg |
| Value Ud [W/m ² K] | MB-86US ST from 1,03 W/m ² K MB-86US SI from 1,01 W/m ² K MB-86US AERO from 0,86 W/m ² K |



MB-86 US – cross section



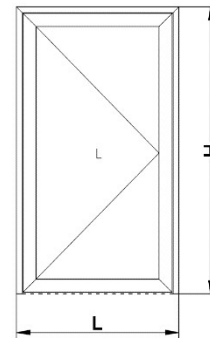
DOORS MB-86

TECHNICAL SPECIFICATION

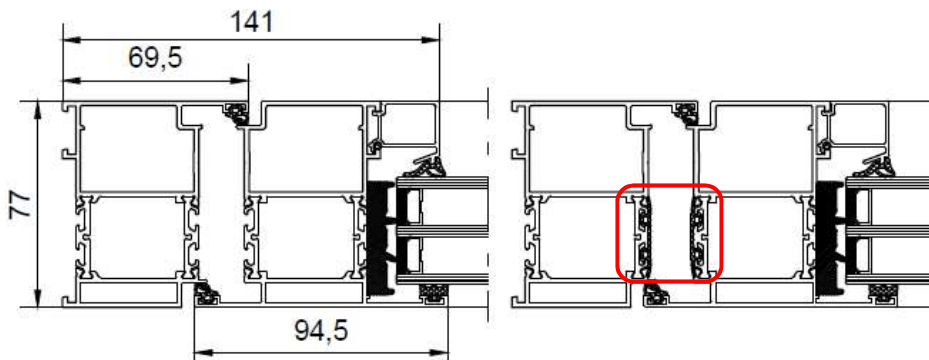
| | |
|----------------|------------|
| Depth of frame | 77 mm |
| Depth of leaf | 77 mm |
| Glazing range | 13 – 61 mm |

SIZE AND WEIGHT LIMITATIONS

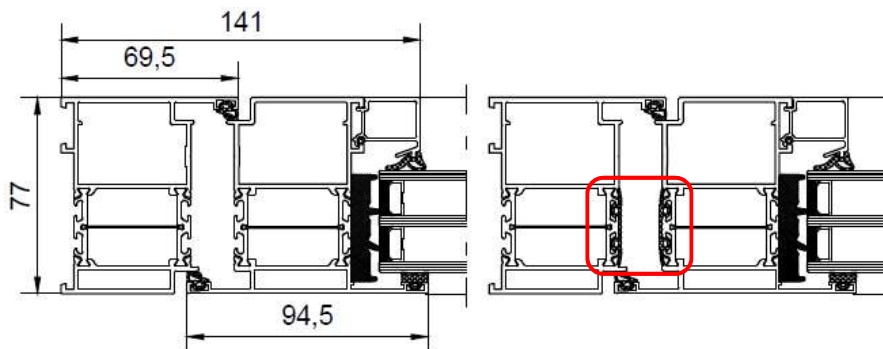
| | |
|--------------------|------------------------------|
| Maximum size (HxL) | H to 3000 mm L to 1400 mm |
| Max weight | 200 kg |



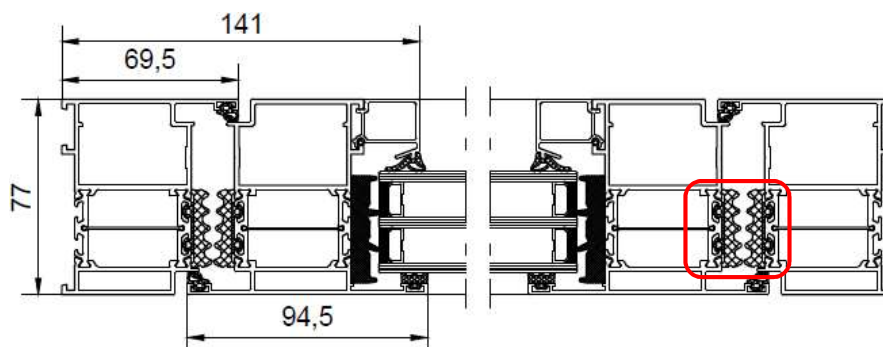
MB-86 ST – cross section



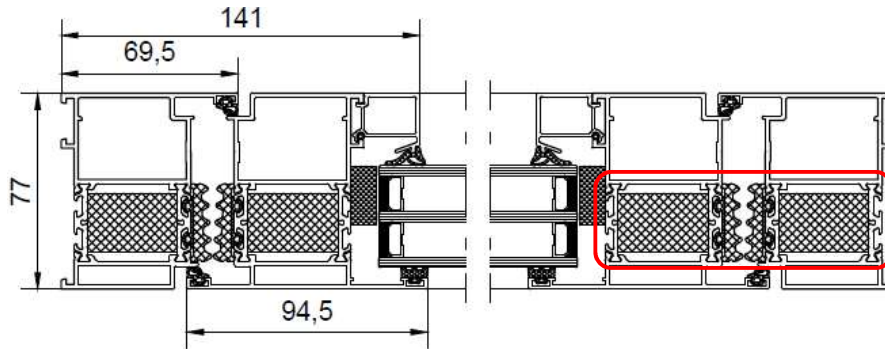
MB-86 SI – cross section



MB-86 SI+ - cross section

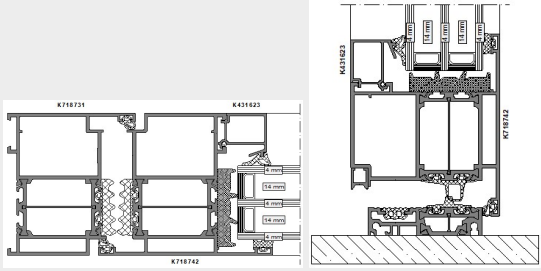
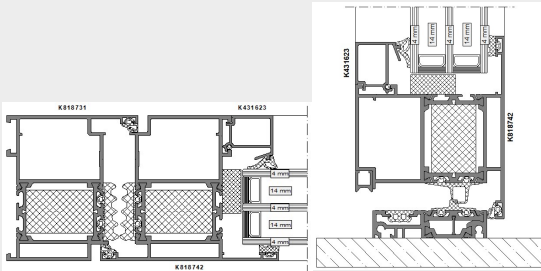


MB-86 AERO – cross section



Examples of heat transfer coefficients Uw

| Door scheme | Section A or B | Value Uw [W/m²K] | |
|-------------|-----------------|------------------|--------|
| | | Ug=0,7 | Ug=0,5 |
| | <p>MB-86 ST</p> | 1,32 | 1,19 |
| | <p>MB-86 SI</p> | 1,20 | 1,07 |

| | | | | |
|--|------------|--|------|------|
| | MB-86 SI+ |  | 1,11 | 0,98 |
| | MB-86 AERO |  | 1,02 | 0,88 |