

The MB-86N door and window system with a thermal break is an aluminium system designed to execute elements of architectural external development, e.g. different types of windows, doors, porch enclosures, shop windows, spatial structures, featuring high thermal and sound insulation performance, as well as tightness to water and air infiltration. Parameters of windows and doors based on the MB-86N system elements meet the requirements of the most stringent applicable regulations and standards, including the ones relating to energy saving and environmental protection.

FEATURES OF THE MB-86N DOOR AND WINDOW SYSTEM:

- High-quality, functional and compliant with all the technical requirements door and window system.
- The elements applied in the MB-86N system are made with the use of the latest technologies and from the best available materials. In addition, well-proven solutions and constructional elements of other ALUPROF system, mainly MB-86 and MB-104 Passive were used.
- Due to excellent values of heat transfer coefficient U_f in the door and window frames, the system belongs to the absolute market leaders in this category. Examples of heat transfer coefficients U_w and U_D in selected windows and doors are shown on the following pages of this Technical Description.
- The constructional depth of window profiles equals: 77 mm (window frame), 86 mm (sash), and of the door profiles: 77 mm (door frame) and 77 mm (door leaf). Such depths of sash/leaf and frame profiles give the effect of unbroken surface seen from the outside after closing – both in case of a window and a door, and - with regard to the door – aligned effect of the leaf and frame surface also from the inside.
- The profiles used in the system feature three-chamber construction. The central chamber is an insulation between aluminum sections, it is made of shaped thermal breaks 43, 42 or 30.5 mm wide.
- The system is available in two construction variants, differing in the level of insulation. MB-86N ST is a variant with a two-component central gasket. The MB-86N SI structure (with the best thermal insulation) is based on profiles equipped with dedicated insulating inserts in the area of thermal breaks, optimizing thermal parameters and a two-component central gasket.
- High tightness to water penetration and air infiltration, as well as excellent thermal insulation performance has been possible to achieve due to the special shapes two-component central gasket (with cellular insulating part) as well as glazing and closing gaskets.
- Most gaskets (e.g. glazing and internal closing gaskets) are fitted as continuous stripping, without any corner trimming. The ends of gaskets are joined in mid-length of the top rail of the window frame. The central gasket is trimmed at the angle of 45° and glued in the corners or trimmed at the angle of 90° and glued to a rubber corner. The central gasket is also available in the form of a vulcanized frame. Such manner of gasket fitting guarantees very high tightness to water penetration and air infiltration.
- Glazing strips of the closed shape, both in the Standard and Prestige versions allow for secure installation of infills, which significantly facilitates fabrication of burglar-proof constructions. Positioning strips made of EPDM are fitted in the said glazing strips, which makes it easier to fit strips in the door or window frame.
- Internal glazing gaskets are deep-fitted in glazing strips, that is why they are hardly visible from the outside.
- Possible glazing ranges: window frame and door leaf – from 8,5 to 61 mm, window sash – from 17,5 to 70 mm. Such a wide glazing range allows for the installation of all available on the market types of two-chamber glass panels, sound proof or burglar-proof.
- Application of standard Euro grooves makes it possible to accommodate most hardware types available on the market, intended for aluminium and plastic windows.
- Both hidden and traditional hinges may be fitted in doors and windows of this system. Handles may be either with an escutcheon or without.
- Drainage of profiles may be either hidden or visible version (with a decorative cap).
- Compound profiles of the MB-86N versions may be subjected to the process of powder coating or anodic oxidation.

MB-86N ST

Thermally insulated window and door system

- Corners connecting profiles are offered in two options: either as elements made of extruded profiles or as elements injected under pressure. In both options it is possible to apply the process of crimping or pinning with the use of 2-component Cosmofen DUO.
- Door sills are fastened to the jambs in such a way as to enable their dismantling without having to unscrew other door elements. Working and fitting door sills is very simple and time efficient.
- In grooves formed in the door threshold gaskets are mounted: a closing gasket (compression seal) and the gasket concealing assembly screws. These gaskets can be easily replaced with new ones in the case of wear and tear.
- Windows and doors may come with astragals applied on the glass pane.
- The technology of fabrication of the construction is simplified as much as possible, hence high time efficiency is achieved in door and window fabrication.
- Special tooling, such as drilling templates, presses or blanking dies may be used for most workings. All elements of the tooling applicable in the system MB-86N are contained in the section "Tooling".
- Maximum dimensions of window and door sashes significantly exceed the values adopted as standard ones:
- The door may also come in anti-panic, anti-burglary and paneled doors (with glued decorative insulation panels).
- The MB-86N system is compatible with other systems manufactured by Aluprof, especially with the MB-79N and 104 Passive system. That is why a great number of elements may be applied in more than one system, e.g. glazing strips, gaskets, hardware and most accessories.

