

The MB-79N US window system with a concealed window and high performance thermal insulation is designed to execute elements of architectural external development, e.g. different types of windows, porch enclosures, shop windows or spatial structures featuring high thermal and sound insulation performance, as well as tightness to water and air infiltration. The windows made of elements of this system have sashes imperceptible from the external side of development. It is not possible to notice the layout of fields in a row of fixed and active window adjacent to each other.

The system meets all the requirements in respect of energy efficiency and environmental protection.

The parameters of windows based on the MB-79N US system elements meet the requirements of the most stringent applicable regulations and standards.

### Features of the MB-79N US window system:

- Economical, functional and compliant with all the technical requirements door and window system.
- The elements applied in the MB-79N US 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.
- The constructional depth of window profiles equals: 70 mm (window frame), 79 mm (sash). On the outside sash profiles are concealed behind the frame profiles.
- 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 33,5 or 36 mm wide.
- The external surfaces of glass panes installed in active and fixed fields are aligned.
- The system is available in two variants of frames. Type A is a frame partially covering the leaf, and type B with a frame completely covering the leaf.
- Thanks to the special adaptive profile, frames and lacings from the MB-79N base system can be used.
- The system allows for building windows that come in the same variants with regard to thermal insulation as in the case of the MB-79N. The MB-79N US E version is the most economical solution with a one-component central gasket, MB-79N US ST is a variant with a two-component central gasket. The MB-79N US 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.
- Due to excellent values of thermal transmittance  $U_f$  in the window frames, the system belongs to the absolute market leaders in this category.
- High tightness to water penetration and air infiltration, as well as excellent thermal insulation performance has been possible to achieve, just as in the MB-79N base system, mainly due to the special shapes one or 2-component central gasket (with cellular insulating part) as well as glazing and closing gaskets.
- 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 window frame.
- Internal glazing gaskets are deep-fitted in glazing strips, which is why they are hardly visible from the outside.

## MB-79N US SI

A window with a concealed sash

- Possible glazing ranges: window frame – from 1,5 to 44,5 mm, window sash – from 12 to 52,5 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 windows of this system. Handles may be either with an escutcheon or without.
- Drainage of profiles may be either hidden or may come with a decorative cap.
- Compound profiles of the MB-79N US E, ST, SI versions may be subjected to the process of powder coating or anodic oxidation.
- The technology of fabrication of the construction is simplified and similar to the one applied in the MB-79N base system.
- 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-79N US are contained in the section “Tooling”.
- Maximum dimensions of window sashes significantly exceed the values regarded as the standard ones for this type of structure.  $H_s \text{ max} = 2.7 \text{ m}$ ,  $L_s \text{ max} = 1.7 \text{ m}$ . Maximum weight of the sash - 160 kg. In order to reinforce the sash profiles of large dimensions, insulating glass units are glued in the profiles.
- The MB-79N US system is compatible with other systems manufactured by Aluprof, especially with the MB-79N 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.

