

The MB-Ferroline window system with a thermal break and high thermal insulation performance features very small width of aluminium profiles visible on the outside of the structure. The system has been designed to execute elements of architectural external development, e.g. various types of inward opening windows (casement, bottom-hung, tilt & turn) as well as fixed windows characterised by high thermal and sound insulation performance, tightness to water and air infiltration and high durability of the structure. The sashes may come in two options – either as visible or invisible (SG) on the external side of the development. The appearance of fixed fields and the ones operable with the use of invisible sashes is almost identical. The system meets all the requirements relating to energy saving and environmental protection.

## FEATURES OF THE MB-FERROLINE WINDOW SYSTEM

- The width of visible aluminium profiles in fixed windows is 40.4 mm for frames and 55.5 for crosspieces and mullions. The widths are the same for all profiles irrespective of their resistance, thickness of glazing, etc. The width of visible profiles of active windows is 82 and 112.5 mm. The structural depth of window frame profiles is varied and is 84.5 mm and 110 mm. It is also possible to apply other profiles, e.g. conforming to specific requirements of a building.
- The profiles applied in the system feature a three-chamber structure, the core of which is formed by an insulating chamber placed between thermal spacers 43 and 42 mm wide.
- Heat transfer coefficients for active windows with a single-chamber glass unit and a plastic inter-panel frame reach the values  $U_{w\geq x} W/(m^2K)$ , whereas in the case of a double-chamber glass panel, the values of heat transfer coefficients are excellent and reach the values  $U_{w\geq y} W/(m^2K)$ .
- The system windows feature a standard structure not requiring any untypical activities at the production stage. The structure of the frame and mullion profiles used in the system comprises three chambers, the core of which is formed by an insulating chamber placed between thermal spacers 30.5 mm or 52.5 mm wide. The sash profiles, on the other hand, come as single-chambered without thermal insulation (glass units are structurally bonded) or as three-chambered (glass units are installed by means of glazing beads).
- High tightness to water penetration and air infiltration, as well as excellent thermal insulation performance has been possible to achieve due to the special shape of the 2-component central gasket (with cellular insulating part) as well as due to glazing and closing gaskets.
- Glazing gaskets (internal and external) and internal closing gaskets are fitted in an active window 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 and the external closing gasket in windows are trimmed at a 45° angle and glued in the corners. The central gasket can also be trimmed at a 90° angle and glued to a rubber corner. Gaskets are also available in the form of a vulcanised frame. Such manner of gasket fitting guarantees very high tightness to water penetration and air infiltration.
- Glass units in fixed and active windows with visible profiles are installed with the use of glazing beads and gaskets. The closed shape of glazing beads allow for secure installation of infills. To facilitate the installation of glazing beads, positioning EPDM rollers are fitted in the beads. Glass units can be additionally glued to profiles to achieve higher rigidity of the structure.
- Allowable glazing ranges are identical for frames and sashes and reaches the values between 16.5 and 58.5 mm. A wide glazing range allows for installation of all types of two-chamber, acoustic and anti-burglary glass units available on the market.
- Application of standard “Euro” grooves makes it possible to accommodate most hardware types available on the market, intended both for aluminium and plastic windows. Only concealed hinges and special-structure scissor stays dedicated to a standard hardware groove can be fitted in the windows of the MB-Ferroline system.
- Drainage of profiles may be either concealed or it may come with a decorative cap.
- Windows may come with muntins applied on the glass pane.
- The technology of fabrication of the structure is simplified as much as possible, hence high time efficiency is achieved in window fabrication.
- Tooling can be used for most workings (drilling templates, presses or blanking dies).

# MB-FERROLINE

Віконна система з вузькими профілями

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- Maximum allowable dimensions depend on the applied hardware.
- The MB-Ferroline system is compatible with other systems manufactured by Aluprof, especially with the MB-86 system. That is why a great number of elements may be applied in more than one system, e.g. gaskets, hardware and most accessories.

