The MB-70CW system presented here, manufactured by ALUPROF S.A., is a modern aluminum construction applied to execute elements of external architectural development requiring very good thermal and acoustic insulation performance. This system is applied to perform concrete or brick façades with window apertures. There are two types of fields in this kind of façades – the so called “cold” and “warm”. “Warm” fields are formed by thermally insulated windows installed in window openings before the wall face. “Cold” fields are belts made from thermally non-insulated profiles and single glass panels between windows, which protect the construction and thermal insulation, (e.g. mineral wool) against weather conditions.

Application of this system considerably shortens the construction time, as it is possible to “close” window openings before executing the belts between windows and external finish of the wall. The MB-70CW system meets aesthetic requirements set out by architects and investors with regard to such kinds of façades, i.e. looking from the outside the difference in appearance between “warm” and “cold” fields and fixed and active elements is not visible. The lines formed by aluminum profiles which as seen on the external side of the development are extremely narrow – their width is only 78.5 mm wide, which makes the construction slender and light. Window sashes come from a well-proven MB-70US system with a hidden sash.

The profiles of the MB-70CW system feature very low value of overall heat transfer coefficient Uf thanks to the application of special thermal breaks and gaskets, which is of prime importance in the times of ever growing demand for energy-efficient and environmentally friendly products. Molded thermal breaks 34 mm and 24 mm wide in the shape of omega letter applied in the system are made of polyamide reinforced with fiberglass. Such shape of thermal breaks increases rigidity of profiles compared to flat thermal breaks and facilitates deflection of water from profiles. The central gasket is made of EPDM - two-component synthetic solid and cellular rubber, featuring very good thermal insulation performance. Other gaskets are made of solid EPDM. The space between a glass panel and frame is additionally filled with polyethylene cord whose purpose is to insulate and seal.

The structural depth of window profiles equals: 70 mm (frame) and 79 mm (sash). Window profiles are equipped with grooves of such dimensions as to enable fixing of multi-point locking system and connecting members in accordance with the EURO standard. Working required to connect profiles is reduced to the minimum thanks to the use of aluminum connecting members and auxiliary accessories provided with the system. Corner connections of “L” type are executed by trimming the ends of frame or sash profiles at the angle of 45° followed by kneading or pinning and gluing (with CORALGLUE® - two-component glue) to aluminum corner cleats embedded in the inner chambers of profiles. Application of glue ensures high rigidity and tightness of the joint, whereas cleats secure perpendicularity of the joined profiles. Crosswise joints of the “T” type in “warm” fields are performed by pinning lacings with embedded corner cleats and gluing with CORALGLUE®. Transom connections in “cold” fields are made by screwing a connecting member “travelling” in the transom being connected onto the window frame or a transom. Glass panels and other types of infills are fitted by means of glazing beads and gaskets.

In transparent section, the infills are installed from the outside, due to which it is possible to apply different glazing thickness. The system permits application of glazing units of thickness ranging between 18 mm and 54 mm in window sashes and between 9 mm and 45 mm in fixed windows. “Cold” areas may be glazed with tempered glass 6-10 mm thick. Each construction built in the MB-70CW system must be equipped with an efficient ventilation and drainage system both in “cold” and “warm” areas.

If you have any queries or doubts, ALUPROF S.A. specialists are always ready with their assistance and advice.