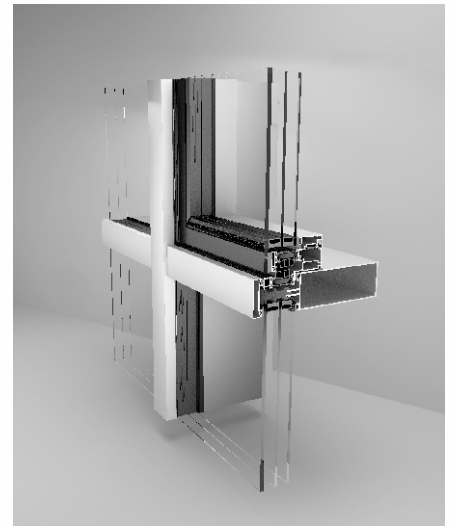




TECHNICAL SYSTEM DESCRIPTION

ALUMINIK CS55 [combined] is one of seven systems within the ALUMINIK CS55 family and represents a thermally insulated curtain wall system that combines the visual characteristics of continual and structural façades. Glass panels are fixed to the primary aluminium mullion-and-transom structure using concealed fastening elements, while horizontal cover caps emphasize the façade's horizontal lines and create a distinctive architectural appearance. Vertical glazing joints are sealed with durable elastic gaskets or black structural silicone, resulting in a clean and dynamic façade design.

Like all systems within the ALUMINIK CS55 family, the Combined façade system is intended for the construction of glazed façades, skylights, and roof lanterns with a minimum roof inclination of 10°.

- Aluminum profiles are manufactured through the extrusion process at Tehnomarket production facilities. The raw material used for profile production is primary aluminum alloy AlMgSi0.5 (AA6063 and AA6060), with a minimum tensile strength of 210 kN/mm².
- Visible profile width of 55 mm, with mullion and transom depths ranging from 50 mm to 150 mm depending on structural requirements and static calculations.
- Carefully selected insulation materials and an optimized profile design provide excellent thermal performance, achieving frame values of up to $U_f = 0.61 \text{ W/m}^2\text{K}$ when used with triple glazing configurations.
- Supports double glazing (32–41 mm), triple glazing (49–58 mm), and a wide range of compatible façade infill panels.
- Dedicated reinforcement profiles increase the moment of inertia, enabling values exceeding $I_x = 1100 \text{ cm}^4$ and allowing large spans without the need for secondary steel reinforcement.
- Opening elements are integrated as structural vents, available in top-hung or parallel-opening configurations, maintaining a uniform façade appearance without visually distinguishing operable and fixed fields.
- The system allows seamless integration of standard tilt-and-turn windows, balcony and entrance doors, as well as automatic sliding and sliding-folding door systems.
- Thermal insulation thickness within parapet zones ranges from 50 mm to 150 mm, while single-glazed parapet configurations can be implemented without additional insulation layers.
- Multiple cover cap designs are available to create distinctive architectural expressions, including rectangular, oval, accentuated, and semi-structural façade appearances.