



# CW-50 HCC

CURTAIN WALL SYSTEM

ALUMEG

Integrated Façade Solutions



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# CURTAIN WALL SYSTEM CW-50 HCC

## Stick Construction System

**ALUMEG CW-50** is designed according to the state of art of engineering with ethical and delicate design. The system is suitable for vertical and inclined facades.

Horizontal partially captured curtain wall with glass joint width 20 mm. The glass overlaps with mullion/transom fins by 15mm. Glazing is supported by 2 or 3 glass supports based on glazed pane size which fixed by continuous aluminum pressure plate on top of continuous gasket using stainless steel screws spaces by average 30-50 cm according to structural calculation at horizontal joints and fixed vertically by toggles spaced according to structural calculation. Glass vertical joints will be sealed by weather sealant on top of umbrella gasket, while horizontal joints gap is not filled.

Cantilever sun breakers could fixed to mullion or penetrating it and fixed to background substrate, covering all shading strategies. Slim sightline even for treble height free standing curtain wall reaching approximate 12 meter span.

Paramount thermal and acoustical insulation performance using standard and custom made PA, PE & PVC thermal isolators specially design for ALUMEG systems. Variety of profile lengths, accessories and hardware are available in stock meeting fast track projects requirements.

### System Description

**ALUMEG CW-50** is pressure equalized, mullion drained, thermally broken curtain wall system with slim sightline 50mm width mullion and transom with varies lengths ranging from 85mm to 250mm.

**ALUMEG CW-50** includes split mullion to allow for horizontal thermal movement and vertical mullion expansion joint to allow for vertical movement due to thermal, slab deflection and seismic movement.

### Openings

varies opening configurations are available using concealed top hung manually and electrically operated using Italian and Spanish hardware, side hung with butt hinges, bottom hung with friction hinges/stays, and turn and tilt. Vertical and horizontal pivoting windows are available within this systems. Doors could be single or double glazed with hinged, swing, automatic and full glass doors opening outward or inward.

### Glazing Thickness

**ALUMEG CW-50** system is glazed from outside. Glass should conform the requirements of BS 6262 & ASTM E 1300-3 for thickness and type, in terms of wind resistance, safety and security.

Glazing thickness from 6 up to 34.2 mm

### Drainage

The system is mullion drained & pressure equalized, achieved by meeting the requirements of "Ventilated and drained glazing system" as specified in BS 6262

### Thermal Insulation Performance

Due to varies glazing configuration and material used which affect overall thermal conductivity of the system. **ALUMEG CW-50** thermal insulation performance varies from  $U_f$  2.17 – 2.75 W/m<sup>2</sup>K depending on gasket selection. Thermal simulation according to **EN ISO 10077-2:2012**.

### Sound Insulation

Depending largely upon the glass specification, generally the curtain wall reduces the figure by 2 to 3 db(A). Sound reduction of approx. 40 DBA can be achieved when tested according to **(UNE-EN ISO 140-3:1995)**

### Materials

The system is constructed from extruded aluminium profiles, using alloy **6063** subject to **T5** or **T6** thermal treatment, following **UNE EN – 573-1** standard. Profiles are extruded following the standard **UNE EN – 12020 & UNE EN – 755**.

### Construction

The individual elements of a stick system are fabricated (cut to length and prepared for connection) within the factory and then shipped to site as a kit of parts which is then installed by a team of specialist contractors. Once the mullion/transom grid is erected, the glass panes and spandrel panels are positioned and typically held in place by pressure plates and cover caps at horizontal joints and clamping the glass using clamping toggle clamping the internal pan for vertical joints. The outer and inner pans are supported by glass support.

### Weathering

Glazing vision strips are made of EPDM conforming to BS 4255 Part 1.

### Technical Performance

The system can achieve the following criteria when manufactured, installed and glazed according to ALUMEG recommended procedures and fabrication manual.

### System Classifications

- Air permeability "Fixed panels" : **Class AE 750**
- Air permeability "Opening frame" : **Class 4**  
Classification according to UNE-EN 12152:2002  
Tested according to UNE-EN 12153:2000
- Water tightness: **Class RE 750**  
Classification according to UNE-EN 12154:2000  
Tested according to UNE-EN 12155:2000
- Wind resistance: **2400 Pa design-3600 Pa safety**  
Classification according to UNE-EN 13116:2001  
Tested according to UNE-EN 12179:2000  
Mullion and transom sizes should be calculated using **ALUMEG curtain wall structural design software** which is available free at our web site **www.ALUMEG.com**
- Resistance to impact: **E3, I3**  
Classification according to UNE-EN 14019:2004  
Tested according to UNE-EN 13049:2004

### Size limitations

Relaying on our selective vast range of profiles, the system is capable of free length span up to approx. 12 meter height when calculated according to AAMA or BS 8118 standards.

*Kindly consult our engineering department for further details.*