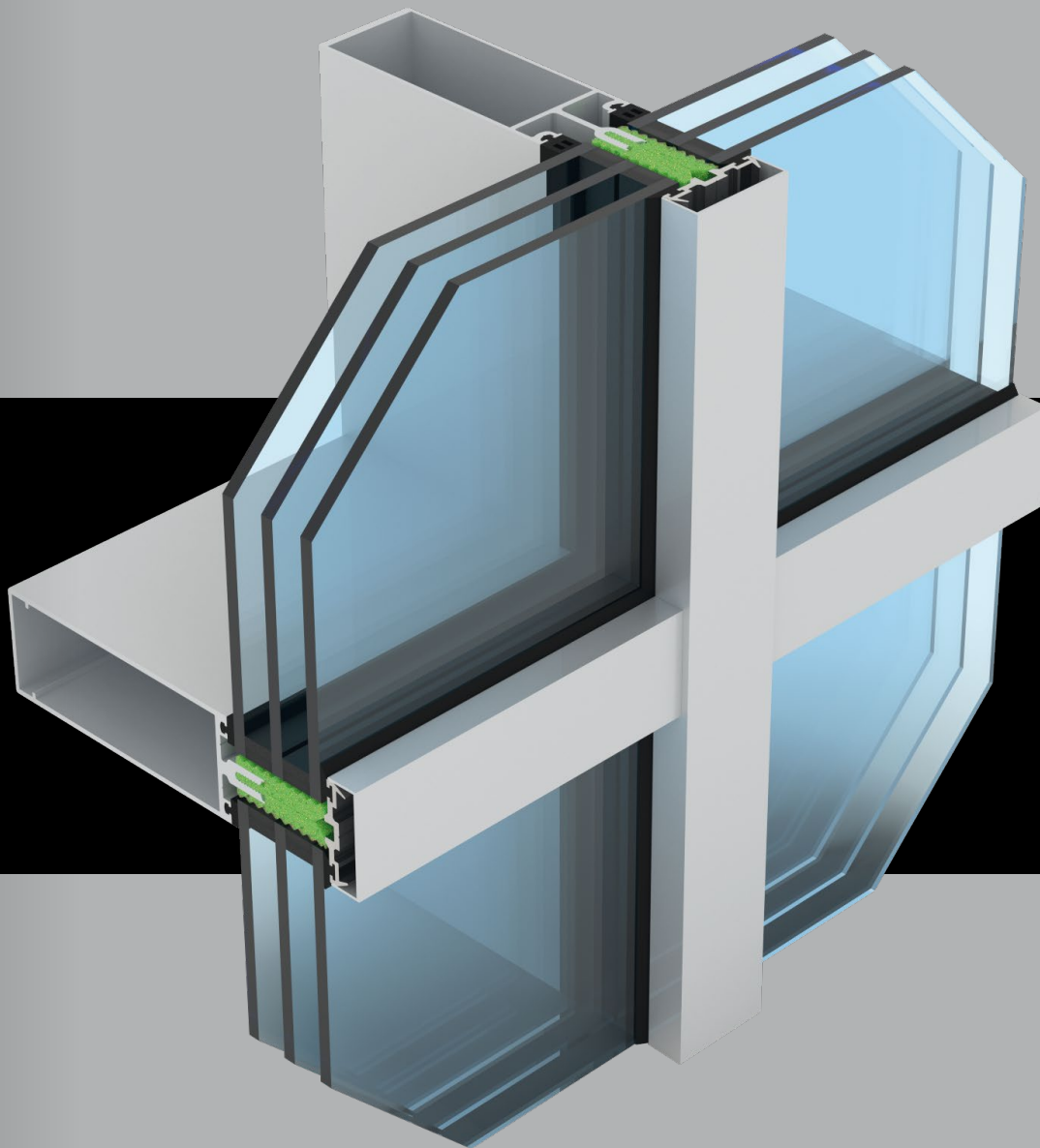


System 17 Hi+

High Rise Curtain Walling



System 17 Hi+

Metal Technology, an acknowledged leader in window and door systems, has designed System 17 Hi+ Curtain Walling, offering enhanced thermal performance for high rise applications. Its attractive and clean lines will enhance all types of office and commercial façades, with the added benefit of simple fabrication.

Introduction

This system is designed for use in multi-storey applications and is capable of accommodating a variety of glazing, panel and opening options. As with all curtain walling systems, intermediate tie backs to the structure may be required subject to site conditions. The basic suite is comprised of structural profiles, spigots, pressure plates and thermal isolators. A wide range of caps allows the designer to select from a variety of aesthetic solutions.

Scope

This specification defines materials, construction and finishes for curtain walling.

Materials

Aluminium profiles are extruded from aluminium alloy 6060T6, T5 or T4 complying with the recommendations of BS EN 12020-2 / BS EN 755-Parts 1 to 9.

Finishes

The range of sections can be provided in either of the following ranges of finishes:

- 1. Anodised to BS 3987 or BS EN ISO 7599
- 2. Powder organic coated to BS EN 12206-1

Where required, a different colour / finish can be provided internally and externally.

Construction

Mullions are square cut and jointed using specially designed jointing spigots. Transoms have notched ends to ensure an easily weather-proofed joint can be provided between mullion and transom. The system is mullion drained and provision is made to drain water out of the mullion at regular intervals.

Opening Vents

Details and specifications for the opening vents can be found in the Metal Technology Thermally Enhanced and Window manuals.

Installation

The Metal Technology High Rise Curtain Wall system is designed as a ‘Stick’ built system. Therefore, mullions and transoms are transported to site as prepared components and the grid work is assembled onto the building in stick form.

Extruded profiles for manufacturing adjustable structural brackets are available, capable of accommodating site tolerance, thermal and structural movement. These allow the curtain walling to be fixed to the structure easily and securely so that all loads are transferred back to the building’s main structural form.

Expansion joints are allowed on every floor or every other floor to accommodate any building movement.

Glazing

Glass is set against extruded gaskets internally, which are fitted into gasket grooves in the mullions and transoms. Special care has been taken to design high performance gaskets which will ensure the long term weather-tightness of the system. Internal gaskets have the option of pre-formed vulcanised corner pieces to aid continuity of the internal seal.

Horizontal and vertical unit edges are then retained using pressure plates and gaskets screw fixed into the structural members. Cover caps are applied to conceal the pressure plate fixings.

Performance

The curtain walling has been impact tested to BS EN 14019 and tested for weather tightness to EN 13050 and in accordance with the CWCT dynamic test for curtain walling and achieved the following results:

Air permeability	- 600 Pa
Water tightness	- 600 Pa
Wind resistance	- 2400 Pa
Dynamic water tightness	- 600 Pa
Wind load (safety)	- 3600 Pa

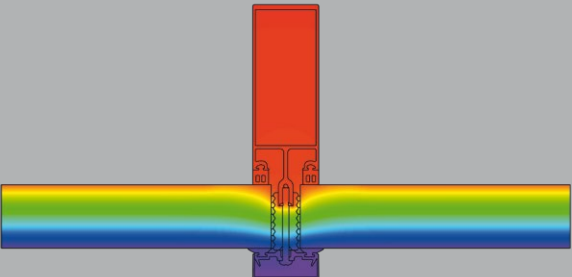
Full test report details are available on request.

Thermal Performance

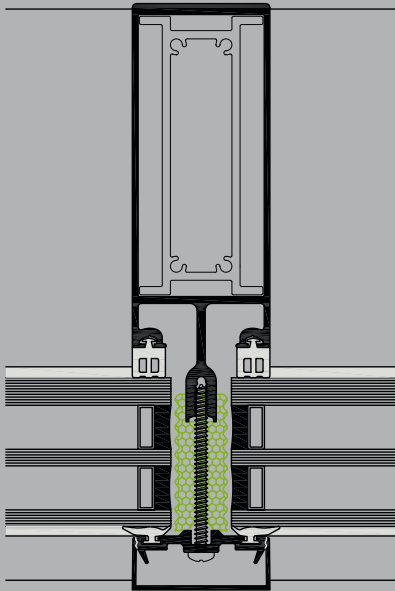
Metal Technology System 17 Hi+ Curtain Walling, in conjunction with the correct glass specification, is designed to meet and exceed the latest thermal requirements of the current building regulations.



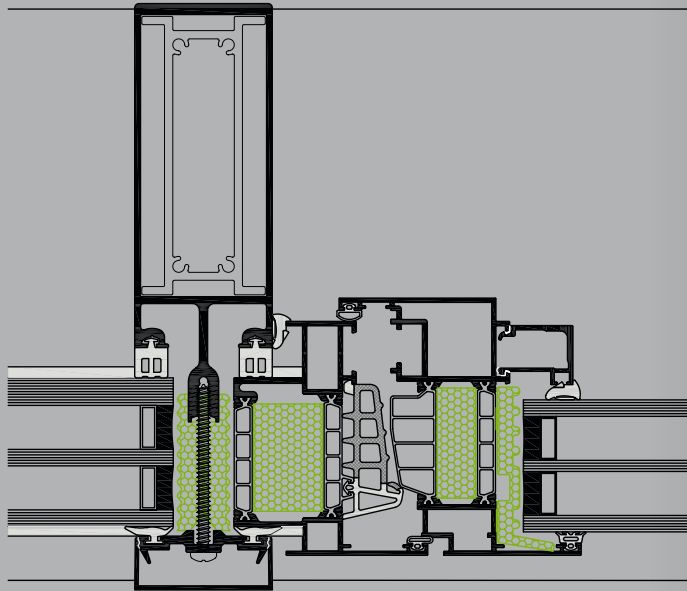
Frame cut	Frame width b _f /mm	Frame U value U _f /(W/(m²K))	Glass edge Ψ-value Ψ _g /(W/(mK))	Temperature factor f _{RSi} = 0,25m²K/W
Mullion Fixed	50	0.95	0.036	0.81
Transom Fixed	50	0.95	0.037	0.82
Bottom Fixed	50	0.96	0.037	0.82
Top Fixed	50	0.96	0.037	0.82
Lateral Fixed	50	0.96	0.036	0.80



Triple Glazing Mullion Detail



Triple Glazing Window Insert Detail



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