

System 17

High Rise Curtain Walling

Metal Technology, an acknowledged leader in window and door systems has designed System 17 curtain walling 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 and roof glazing 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. Alternative silicone pointed and frameless vent options are available using System 17 Latitude, SSB and SP. A further unitised modular option is available using System 17 Cassette. Various other bespoke profiles can be produced allowing architects to achieve flexible designs. Glazing options are available for a variety of unit thicknesses. As with all other Metal Technology products, manufacturing is to exacting standards giving economy with required strength, and many years of aesthetic, trouble-free operation.

Thermal Performance

Metal Technology System 17 Curtain Walling in conjunction with the correct glass specification, is designed to aid compliance with the latest thermal requirements of the current building regulations.

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 1615 or BS 3987
2. Powder organic coated to BS 6496 or 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.

The system offers the facility to produce screens façetted on plan. Gaskets provide the facility of façetting up to $\pm 5^\circ$. When combined with the adaptor profiles and pressure caps any angle from 90° to 180° can be achieved.

Metal Technology do not recommend façetting curtain walling screens when incorporating intermediate mullion expansion joints. To facilitate more efficient fabrication of the system Metal Technology can supply punch tooling and jigs to ensure the accurate and efficient preparation of mullions and transoms. Metal Technology recommend that A2 or A4 Austenitic (300 series/class 70) stainless steel fixing screws are used in the assembly of their products.

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 capable of accommodating site tolerance, thermal and structural movement are available. 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 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.

Curved Sections

In accordance with Metal Technology's policy of offering the maximum flexibility to the designer, Metal Technology have special facilities available to enable profile to be supplied curved.

Requirements for curved sections should be discussed with Metal Technology at an early stage in the project.

Opening Vents

Details and specifications for the opening vents can be found in the Metal Technology Thermally Enhanced and Window manuals. For frameless vents refer to System 17 Latitude manual.

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.

These levels of performance should be sufficient for any location within the UK and Ireland. For further information on testing and performance contact Metal Technology's Technical Department. Where overall screen height exceeds 20 storeys or screen requirements differ from those stated in this literature refer to Metal Technology's Technical Department.

Development

Our policy is to continually research the market for new and improved products. We must therefore retain the right to amend specifications without prior notice. It is recognised at Metal Technology that in some instances special sections may be required for particular projects. When this occurs it may be possible to produce special sections subject to there being sufficient quantity and adequate time. These requirements should be discussed with Metal Technology.

