SPECIFICATION

AMS MU800 Hi Curtain Wall system

MU800Hi mullion drained curtain walling system offers unique architectural design features combined with market leading performance. The system is propriety based and is suitable for both low & high rise applications. MU800Hi offers a 55mm sight line and comes in a suite of mullion / transom combinations which range from 60, 96, 125, 145, 155 and 200 mm in depth. The range of thermal isolators allow for glazing with 28, 32, 36, 40 and 54mm units. MU800 Hi offers an extensive range of capping options including fin, squared, boxed and curved profiles. It offers a modular design with the use of our Matrix cap sections. The matrix cap system is available in 3 different depths to suit a range of interface details and also has the option of a frameless sash insert.

Thermal Performance

AMS MU800Hi curtain walling is designed to offer the specifier excellent U-frame and U-curtain wall values. This is achieved with the use of the extended thermal isolator which greatly reduces the energy loss across the façade and improves the CO2 footprint of the building. Building thermal performance requirements are easily achieved with the use of the AMS MU800Hi curtain wall system. Thermal performance of curtain walls to be calculated in accordance with BS EN ISO 12631:2012.

Scope

This specification defines materials, fabrication, paint finishes, and size limitations for curtain walling.

Materials

Aluminium profiles are extruded from aluminium alloy 6063 T6 complying with BS EN 12020-2:2008 and BS EN 755: 1 – 9.

Paint Finishes

Polyester Powder Coatings

Aluminium profiles are polyurethane powder coated to BS EN 12206-1:2004. AMS offers in house painting with the following Qualicoat approved paint suppliers –Valspar / Syntha Puvin, Akzo-Nobel Interpon, Axalta.

Decoral

Aluminium profiles can be polyurethane powder coated with a woodgrain effect paint finish to BS EN 12206-1:2004. Woodgrain finishes include :

Chestnut, Cinnamon, Dark Oak, Finest Black, Golden Oak, Knotted Pine, Mahogony, Natural Maple, Natural Oak, Natural Oregon, Oregan, Raw Teak, Rosewood, Teak, Wengen Walnut, Mandal Maple, Winchester Oak, Worn Ash, Burnt Oak, Barn Oak, Truffle Oak, Mid Oak and Teak Softwood

Anodised

Aluminium profiles can be anodised to BS EN ISO 7599:2010 or BS 3987:1991.

SPECIFICATION

Fabrication

The AMS MU800 Hi curtain walling system is designed as a stick system and frame members such as mullions and transoms shall be fabricated in accordance with AMS technical literature and transported to site as prepared components. The stick grid system shall be assembled on the proposed facade area as per fabrication shop drawings and engineering calculations.

Mullions shall be square cut and can be joined with specially designed jointing sleeves. Mullions shall run the full height of the façade with transoms spanning in between. Transoms shall be notched and lapped over the mullion and a special sealing gasket is to be positioned between mullions and transoms for improved weather and air tightness. Mullion splice joints are sealed and weathered using splice cover profiles. Transoms to be screw fixed into the position with No.8 x 19 tamper proof screws.

Fixing points should be advised by a structural engineer and relevant fixing brackets approved so that all loads are transferred back to the main building structure. Low modulus silicone shall be used throughout for weathering joints as recommended by the silicone manufacturer.

Glazing

Glass shall be set against extruded gaskets internally which are fitted into gasket grooves in the mullions and transoms. Glass loading plates to be fitted to the screw port of the transom, each plate is to be in 150mm approximately from each end. Suitable PVC/EPDM glass support pieces are to be fitted between the glass and the loading plate. Material and size of the glass support piece should be as per the glass manufacturer's recommendations. All Gaskets are EPDM and manufactured to BS 4255 and tested to BS EN 12365-4:2003. MU800 Hi can accommodate glazing thickness of 28, 32, 36, 40 and 54 mm.
Glazing shall be in accordance with current standards and Building Regulations.

Installation

AMS offer detailed installation instructions on all systems and these should be followed as per AMS's technical department's recommendations

Performance

Tested to CWCT standard for systemised building envelopes, test sequence B .
Air Classification – Class 4: 600 Pa.
Water Tightness – Class R7: 600 Pa.
Wind Resistance – Class EA2400.
Wind resistance safety – Class - 3600Pa.
Impact resistance - BS EN 14019:2016.

Soft body - Serviceability, class E2.
Safety, class E4 & E5.
Hard body - Serviceability, class E5.
Safety, class E5.

CWCT TN75 / TN 76
Soft body - Serviceability, category B,C, E&F - Class E1.
Safety, category B,C, E&F - Class - Negligible risk.
Hard body - Serviceability, category B&C - Class 1.
Safety, category B&C - Class - Negligible risk.

SPECIFICATION

Structure

Section performance requirements must be calculated from site conditions and all loading requirements. All structural profiles shall be designed so as the maximum deflection of any member shall not exceed the limits as set out by the CWCT standard for systemised building envelopes, Part 3. Further advice on deflection limitations should be sought from the glass supplier.

CWCT Guidelines for deflection:

Length	Allowable deflection
H ≤ 3000	Δ≤ H/200
3000 < H < 7500	Δ≤ 5 + H/300
7500 ≤ H	Δ ≤ H/250

The recommended torque setting for the pressure plate screw is 5.5 - 6.5 Nm. Where glass weights are in excess of 100Kg's and/or the transom spans more than 2.5m, transom support blocks are to be fitted to the mullion. Maximum allowable weight of glass unit with support block is 510kg's (With 3 no. 14 x 19mm S/S pan head screws & MU799 transom). For large units ensure the transom is within deflection limits. Standard glass support plates are supplied in 100mm cut pieces, for unit above 300 kgs increase glass support plates to 150mm.

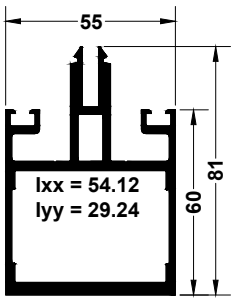
Insert opening vents and doors

Details and specification information for these insert products can be found in the window and door section of AMS's technical literature.

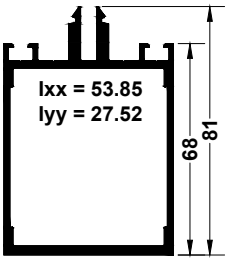
AMS Ltd. Wallingstown, Little Island, Co. Cork:
Tel: 021 4705100 **Fax:** 021 4705198, **E-mail:** pohara@ams.ie, **Web:** www.ams.ie

MU 800Hi - CAPPED CURTAIN WALL SYSTEM

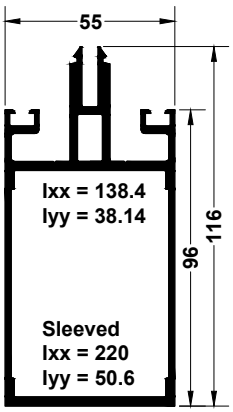
Mullions and Transoms



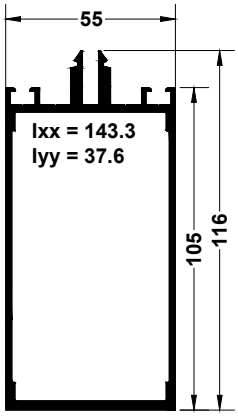
MU 792
MULLION
Sleeved
Ixx = 69.1
Iyy = 45.0



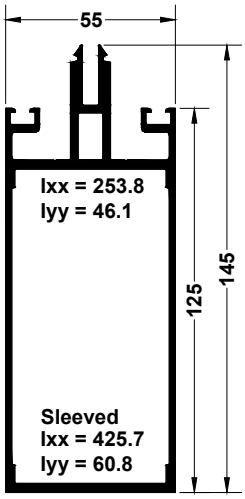
MU783
TRANSOM



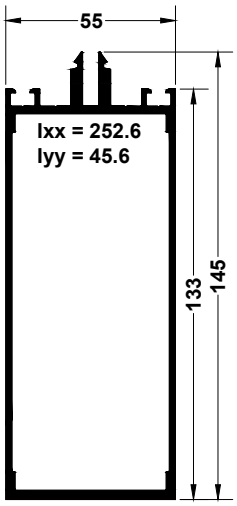
MU 795
MULLION



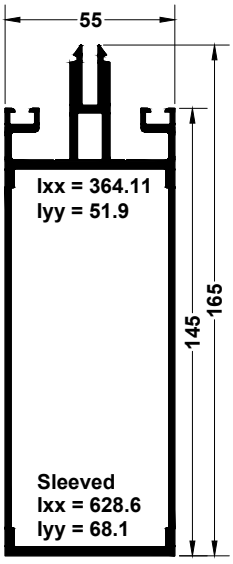
MU 796
TRANSOM



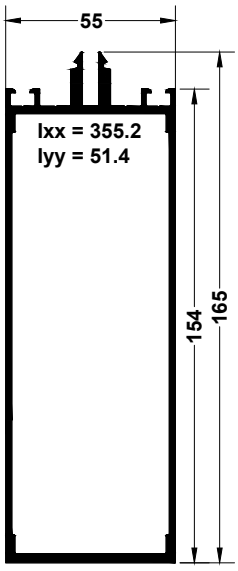
MU 782
MULLION



MU 794
TRANSOM



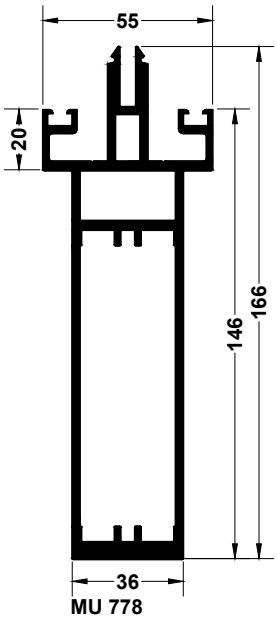
MU 798
MULLION



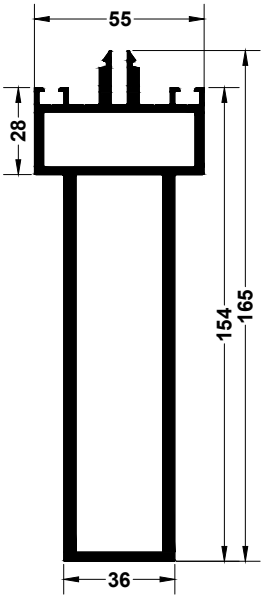
MU 799
TRANSOM

MU 800Hi - CAPPED CURTAIN WALL SYSTEM

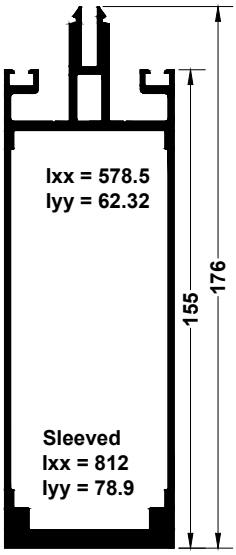
Mullions and Transoms



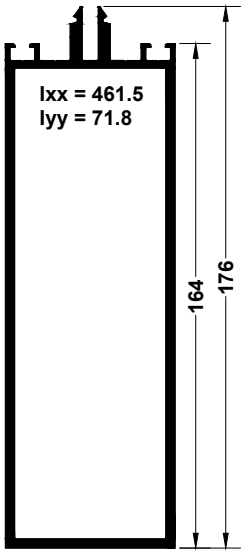
MU 778
SLIM MULLION
Ixx = 397.9
Iyy = 31.7



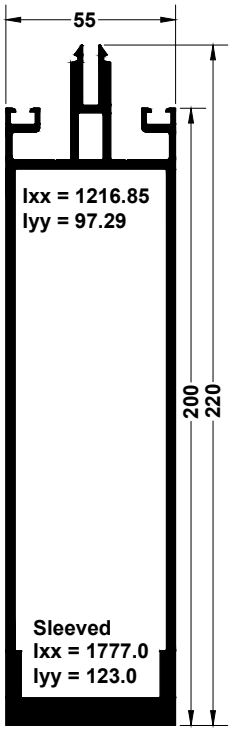
MU 779
SLIM TRANSOM
Ixx = 417.7
Iyy = 42.7



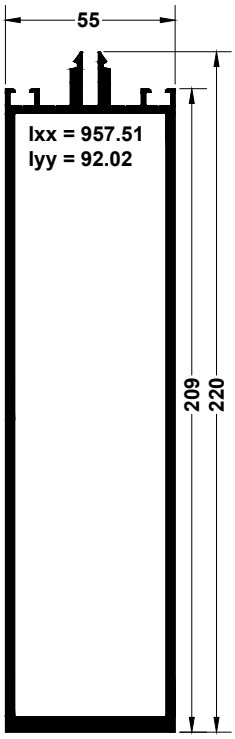
MU 755
MULLION



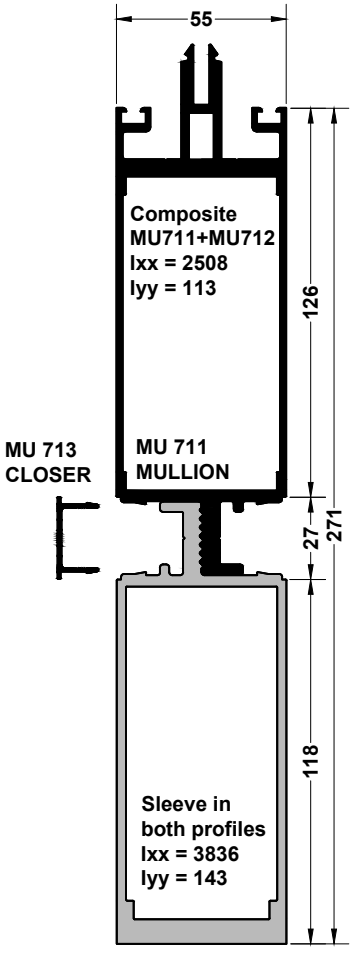
MU 756
TRANSOM



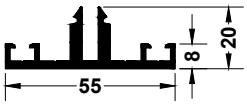
MU747
MULLION



MU748
TRANSOM



MU 712
MULLION

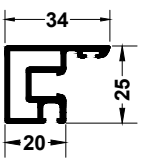


MU793
TRANSOM

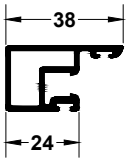
For composite mullion limitations see page 1.4.07

MU 800Hi - CAPPED CURTAIN WALL SYSTEM

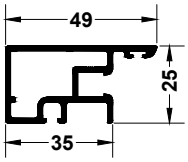
Cappings and Pressure Plates



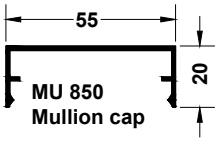
MUSL 01
'Matrix' Capping



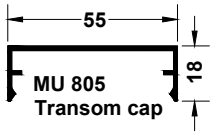
MUSL 05
'Matrix' Capping



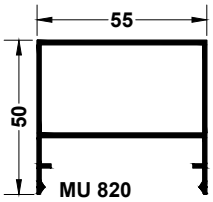
MUSL 04
Extended 'Matrix' Capping



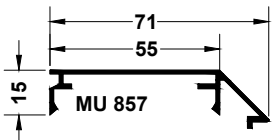
MU 850
Mullion cap



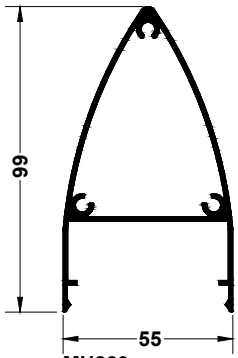
MU 805
Transom cap



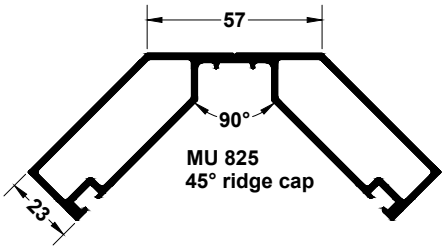
MU 820
Mullion / transom cap



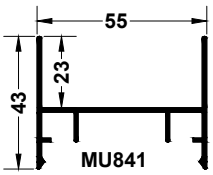
MU 857
Transom cap
Sloped cap for roof glazing



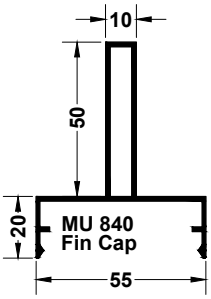
MU889
Bullet cover cap
with screw ports



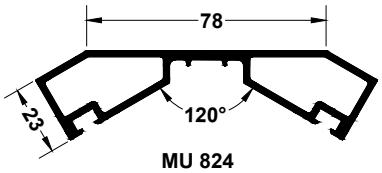
MU 825
45° ridge cap



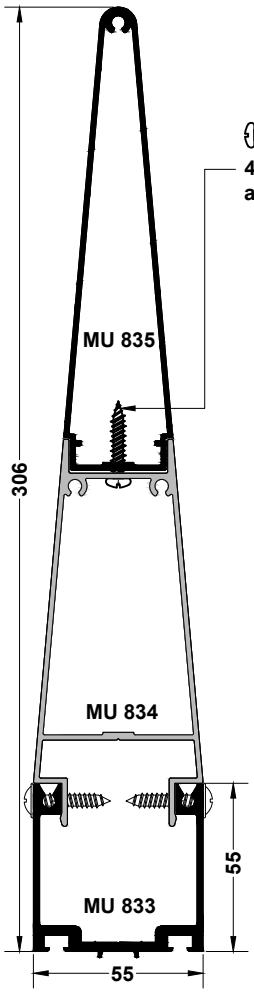
MU841
'H' cap



MU 840
Fin Cap

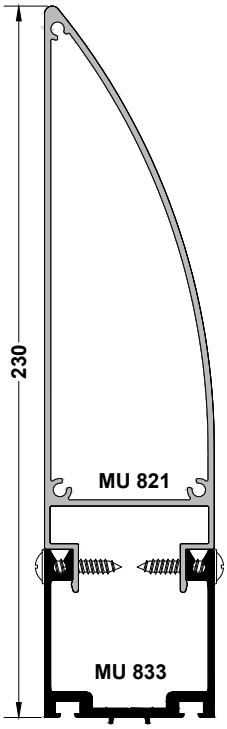


MU 824
30° ridge cap

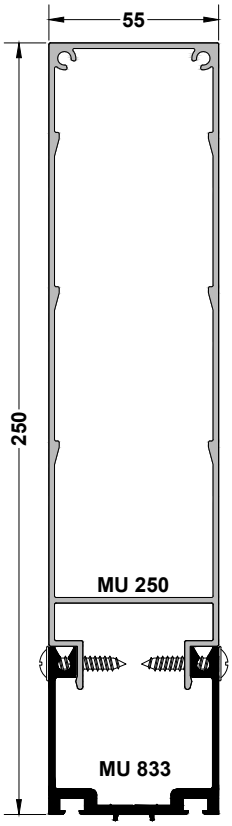


Wing Cap

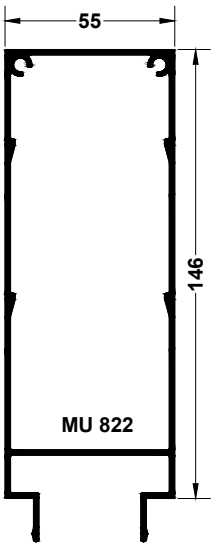
4.8 x 19 pan pozi screw
at 1.5m c/c.

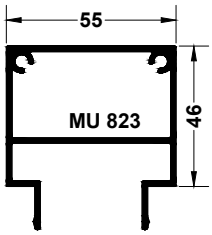


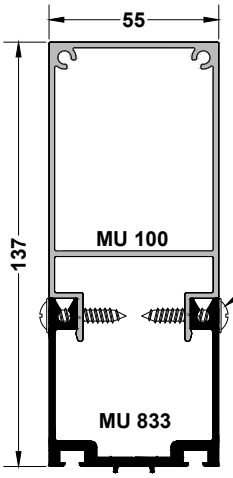
Radius Cap



Box Cap

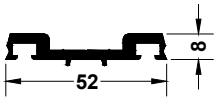






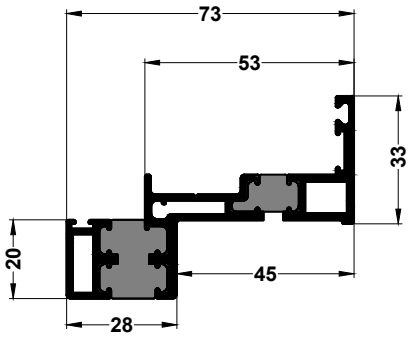
MU 100 Cap

4.8 x 25
flange screw

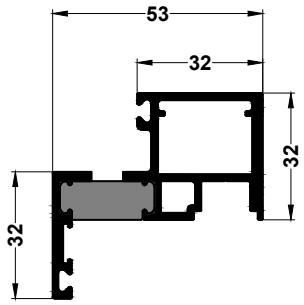


MU847
Pressure plate

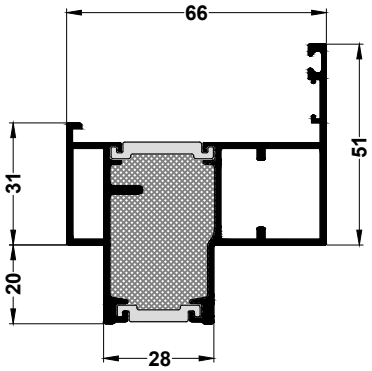
MU 800Hi - CAPPED CURTAIN WALL SYSTEM
Inserts



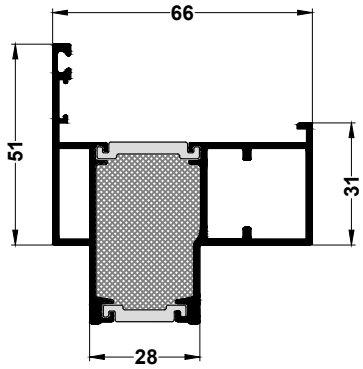
MUSL07
Matrix frame - 28mm glazing



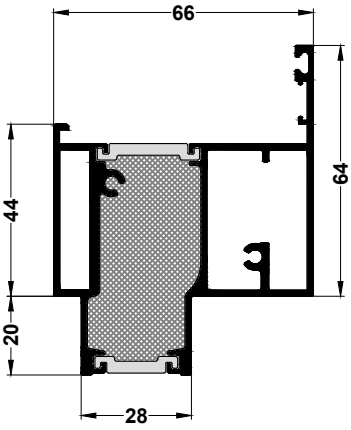
MUSL 06
Matrix sash



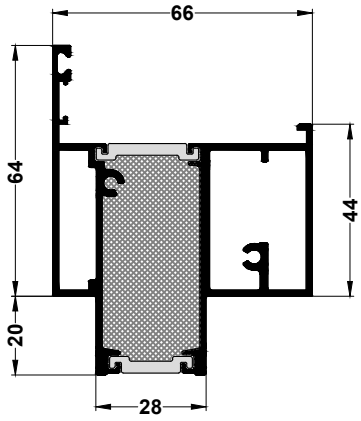
XT6 209
Insert for 28mm glazing



XT6 210
Insert for 28mm glazing,
tilt and turn / door frame



XT6 211
Insert for open out doors



XT6 212
Insert for open in doors

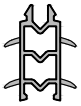
MU 800Hi - CAPPED CURTAIN WALL SYSTEM

Gaskets and Accessories

CWG001
Pressure plate gasket

CWG 010
Transom gasket

CWG 014
Mullion gasket



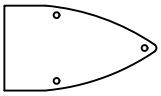
CWATB2
Isolator for 28mm units

CWATB
Isolator for 40mm Units
(Used with conjunction with CWATB2)

CWATB 32
Add on for 32mm glazing

CWATB 36
Add on for 36mm glazing

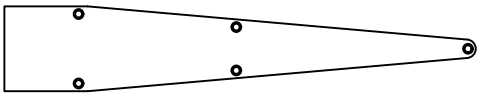
G1550
Transom sealing / end gasket.



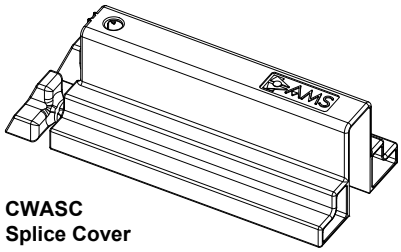
MU889E
End plate for MU899 capping

MU821EC
End plate for *Radius* capping

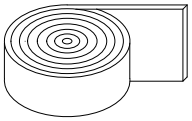
MU250EC
End plate for *Box* capping



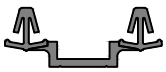
MU833E
End plate for *Wing* capping



CWASC
Splice Cover



Butyl tape
50mm - CWG003



MUSLCLIP
Matrix Clip

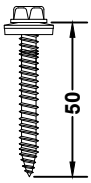
(CDA016)
5.1 x 1200 Woolpile
for matrix cap MUSL05

4.8 x 450 Woolpile
for all matrix caps

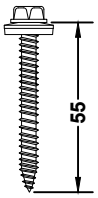
8471
Matrix flipper gasket

Stepped drill bit
T114

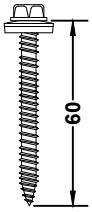
CWA 031
Drill bit to suit
transom screw



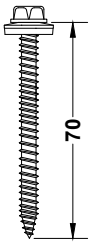
CWA050
No.14 x 50 hex head screw
with bonded washer
(28mm & 32mm glazing).



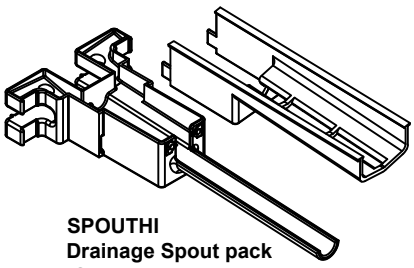
CWA055
No.14 x 55 hex head screw
with bonded washer
(36mm glazing)



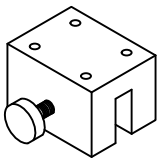
CWA060
No.14 x 60 hex head screw
with bonded washer
(40mm glazing).



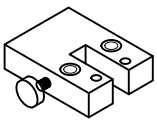
CWA070
No.14 x 70 hex head screw
with bonded washer
(54mm glazing).



SPOUTHI
Drainage Spout pack
(Spout + Addon)

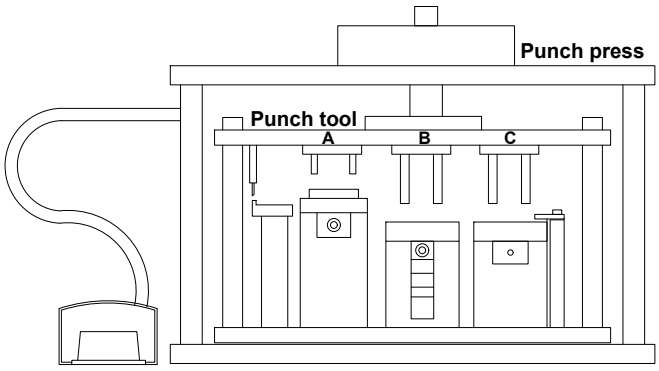


Mullion jig
T112



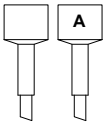
Transom jig
T113

CWA030
No.8 x 19 tamper-proof
transom screw

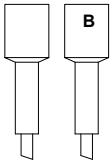


Punch press for curtain wall transoms

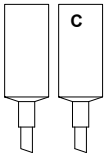
Heads for punch tool



Transom drained
holes for cleats

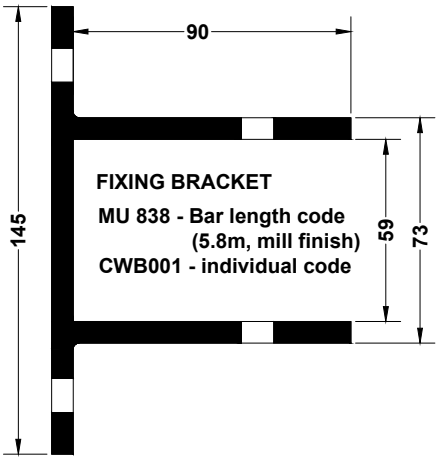


Mullion drained
holes for cleats

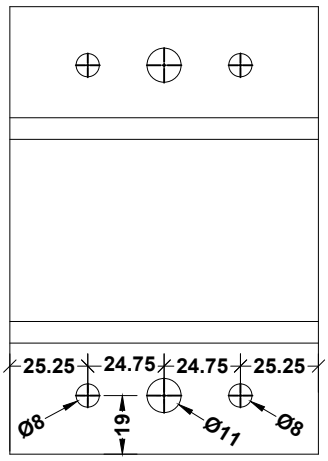


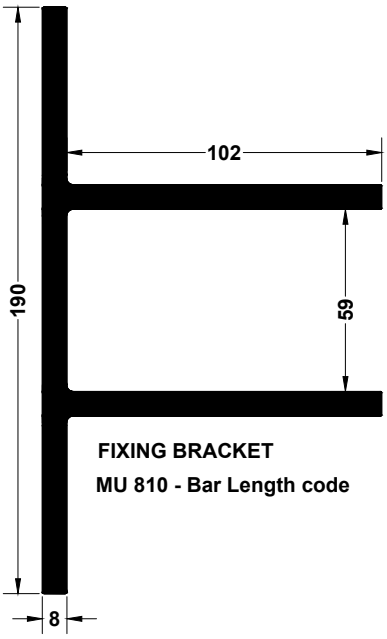
Mullion drained
holes for transom
fixing screws
(Oval head)

MU 800Hi - CAPPED CURTAIN WALL SYSTEM
Accessories

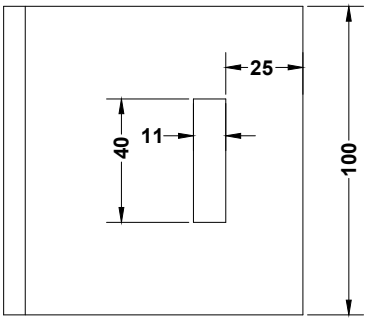


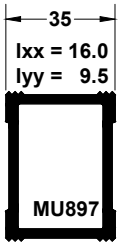
FIXING BRACKET
MU 838 - Bar length code (5.8m, mill finish)
CWB001 - individual code



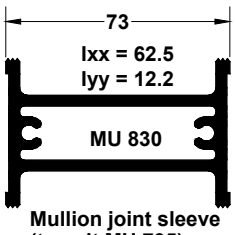


FIXING BRACKET
MU 810 - Bar Length code

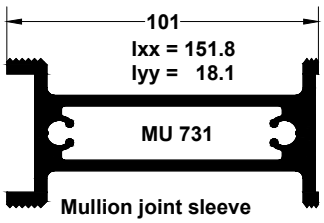




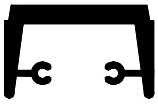
Mullion joint sleeve
for MU 892 & MU 792



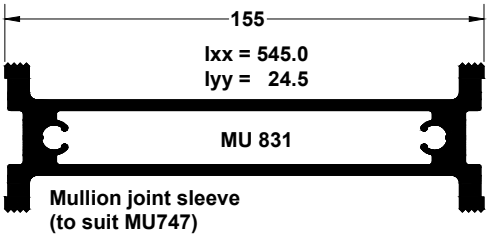
Mullion joint sleeve
(to suit MU 795)



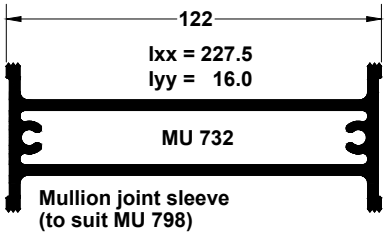
Mullion joint sleeve
(to suit MU 782)



MU844 Cleat (Bar length)
CWA019 - 57mm cleat (MU783)
CWA040 - 92mm cleat (MU796)
CWA041 - 121mm cleat (MU794)
CWA042 - 140mm cleat (MU799 / MU756)
CWA043 - 192mm cleat (MU748)

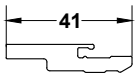


Mullion joint sleeve
(to suit MU747)

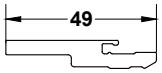


Mullion joint sleeve
(to suit MU 798)

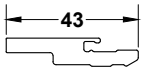
(For transom spans over 2.5m and / or if glass weight is more than 100kg, use support cleats)



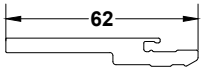
TOG06C1 - Grey
Glass support plate
for 28/32mm glazing



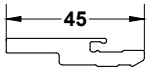
TOG09C1- Blue
Glass support plate
for 40mm glazing



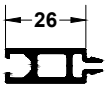
TOG08C1 - Brown
Glass support plate -
34mm glazing



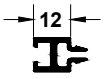
TOG10C1- Green
Glass support plate
for 54mm glazing



TOG07C1 - Black
Glass support plate
for 36mm glazing

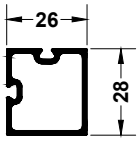


MU754
Packer for 54mm glazing inserts and perimeter closer for 28mm glazing

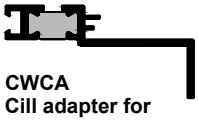


MU740
Packer for 40mm glazing inserts

MU736
Packer for 36 mm glazing inserts

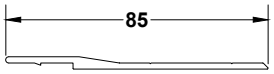


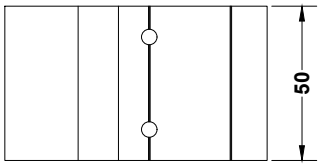
CWAC28
channel closer to suit 28mm units



CWCA
Cill adapter for 28mm glazing

MU801
Membrane adapter

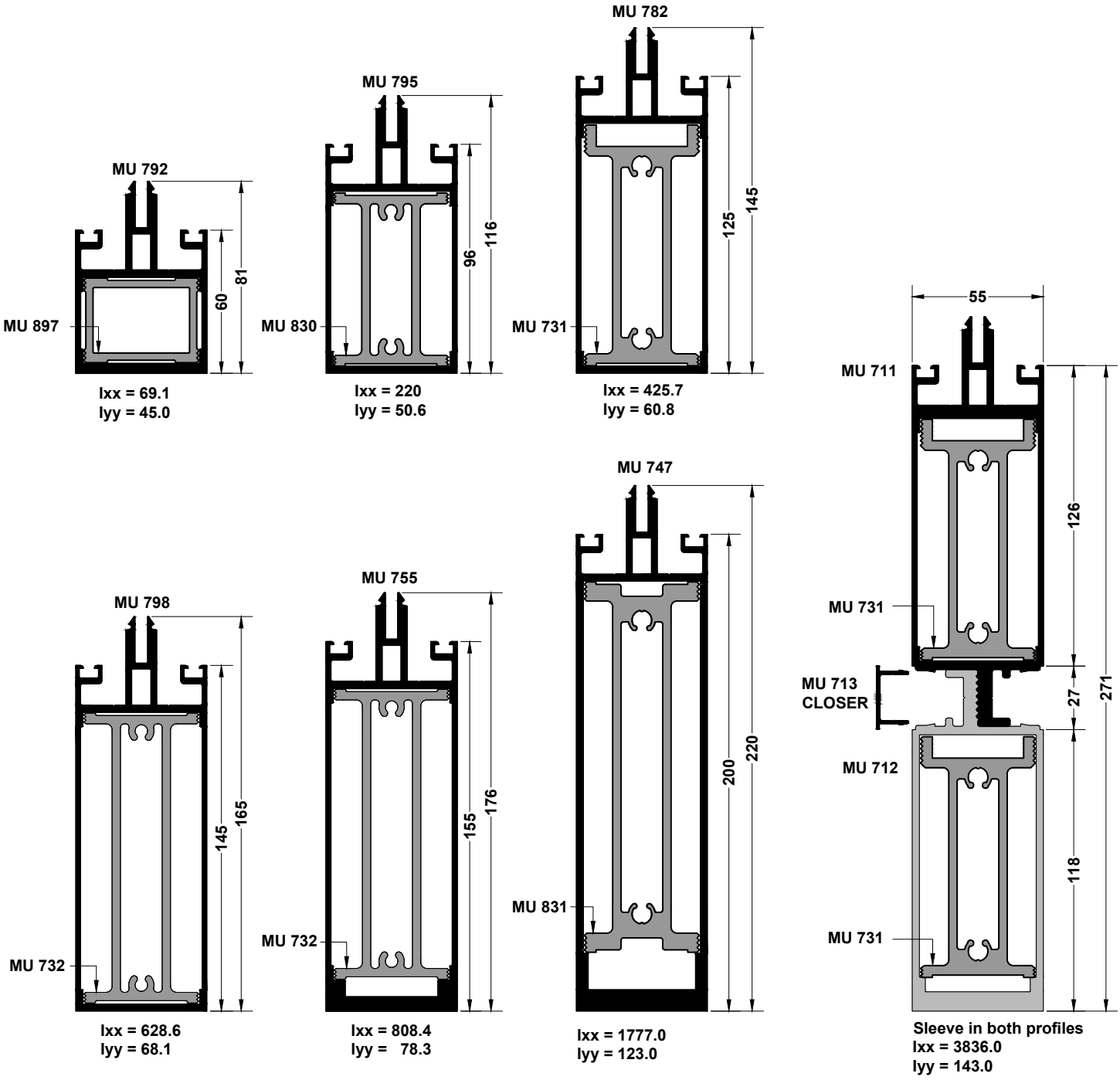




MU120CC
Flashing clip

MU 800Hi - CAPPED CURTAIN WALL SYSTEM

Sleeved Mullions



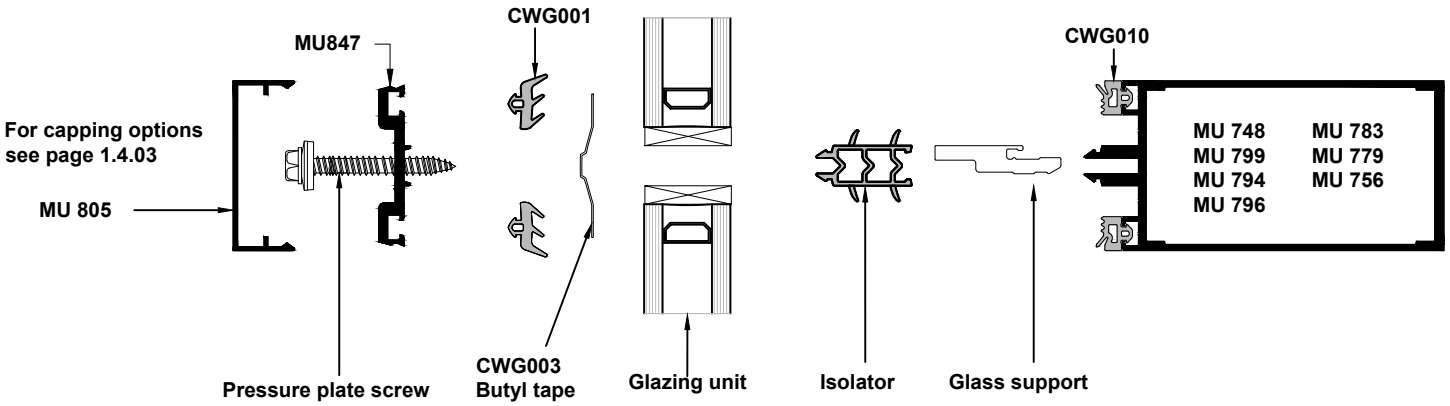
Composite mullion parameters are as follows:
Anything outside these parameters will require analysis by a certified structural engineer. For both options the mullion must be fully sleeved with MU 731 in both cavities, M10, socket head stainless steel bolts to be fitted at 250mm C/C and torque to 35Nm. (Fixing brackets at the head and cill have not been considered and should also be signed off by a certified engineer)

Span 1:
Mullion single height span = 6.590m
Mullion Centres = 1.2 m
Wind load = 1500 Pa.

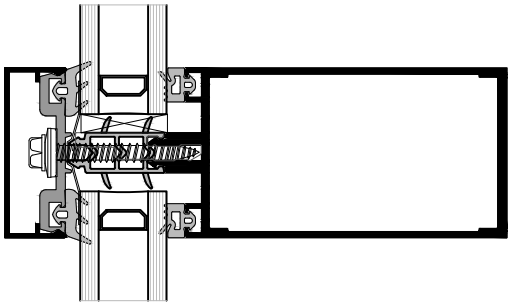
Span 2:
Mullion single height span = 6.0m
Mullion Centres = 2.0m
Wind load = 1500 Pa.

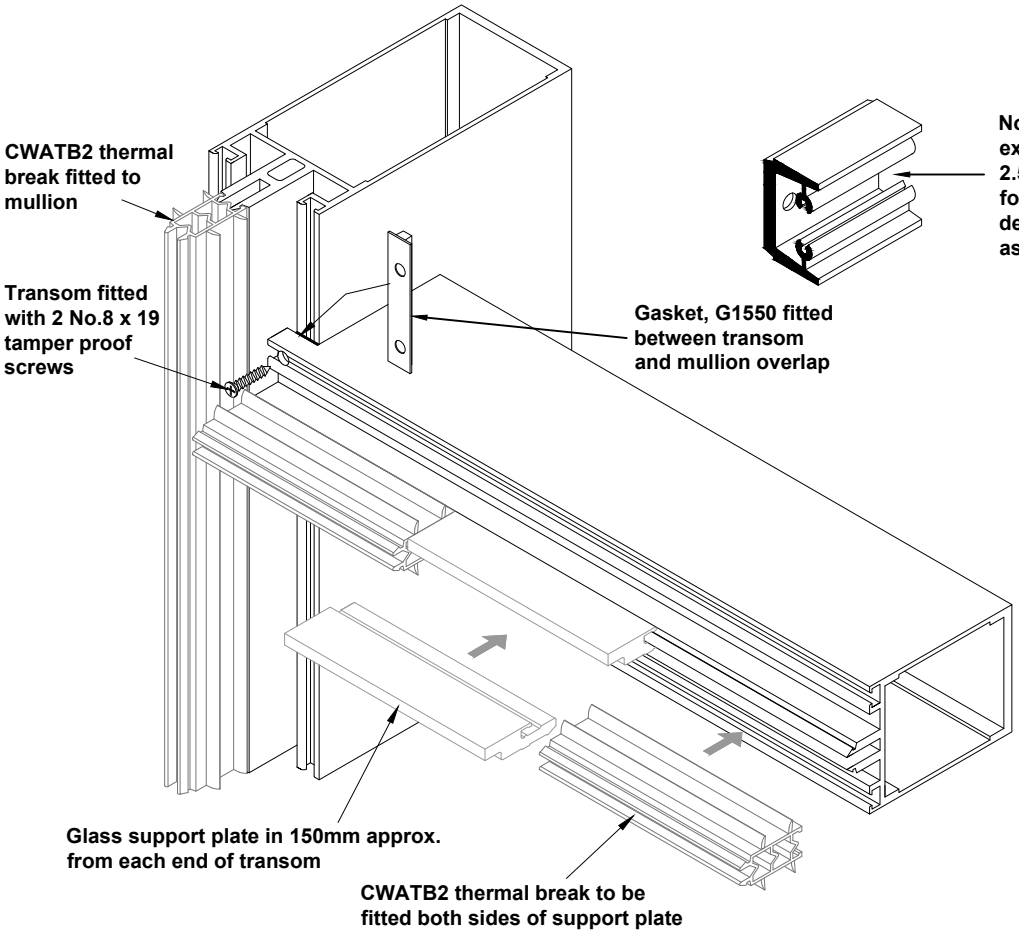
MU 800Hi - CAPPED CURTAIN WALL SYSTEM
Profile assembly

TRANSOM ASSEMBLY



GLAZING THICKNESS	PRESS.PLATE SCREW	ISOLATOR	GLASS SUPPORT
28	CWA050	CWATB2	TOG06C1 - Grey
32	CWA050	CWATB2 + CWATB32	TOG06C1 - Grey
36	CWA055	CWATB2 + CWATB36	TOG07C1 - Black
40	CWA060	CWATB2 + CWATB	TOG09C1 - Blue
54	CWA070	CWATB2 + CWATB2	TOG10C1 - Green





Note: Support cleat to be used when glazing unit exceeds 100 kg and / or transoms spans more that 2.5m. (See page 1.4.06 for cleat codes), Max load for transom / cleat combination is 500 kg. Ensure deflection on transom does not exceed 3mm as per CWCT guidlines.

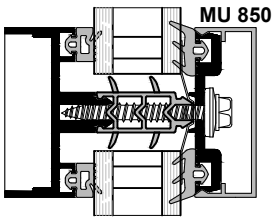
Note:
Guide for glass area & glazing support plates:
2 No. Standard 100mm support plates (both in 150mm approx from each end) - max area of glass = 3.3m²

4 No. Standard 100mm support plates, 2 side by side positioned in 150mm approx from each end - max area of glass = 6.6m². Glass packers to be fitted for full width of both plates.

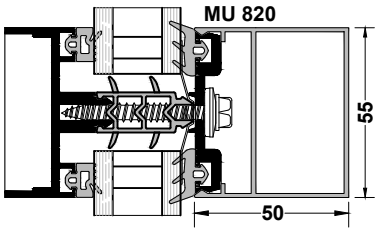
Glass packers:
Glazing packers to be fit for purpose, in accordance with the glass suppliers recommendations and also in accordance with BS 6262. At least 50% of the outer pane of glass to be supported by packers / support plates.

MU 800Hi - CAPPED CURTAIN WALL SYSTEM

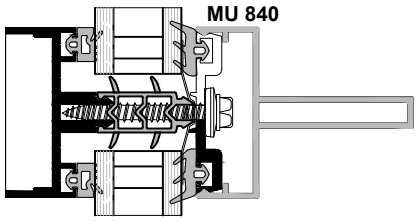
Capping assembly



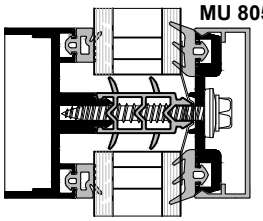
Standard capping



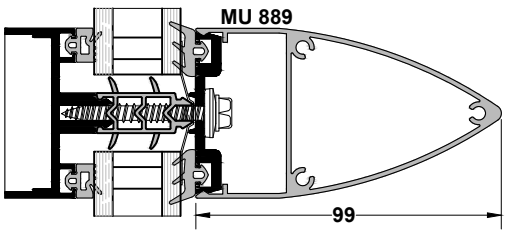
Standard capping



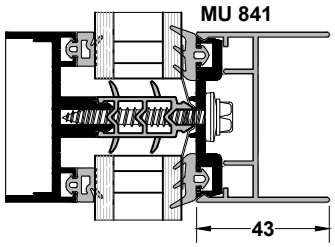
Fin capping



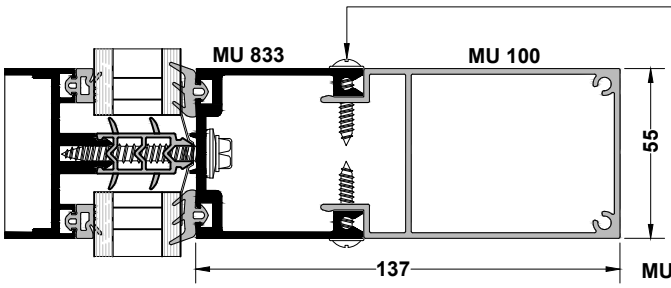
Standard capping



Bullet nose capping



'H' Cap



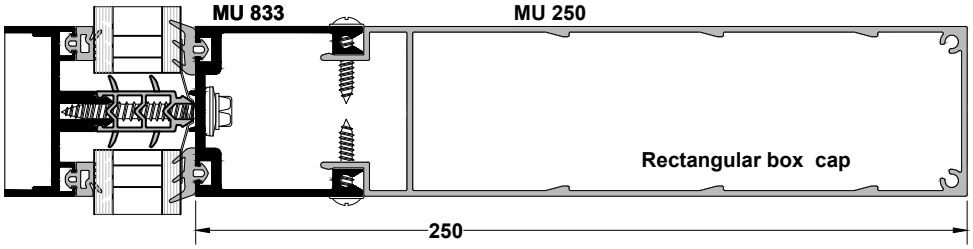
MU 100 - Cap

4.8 x 25
flange screw

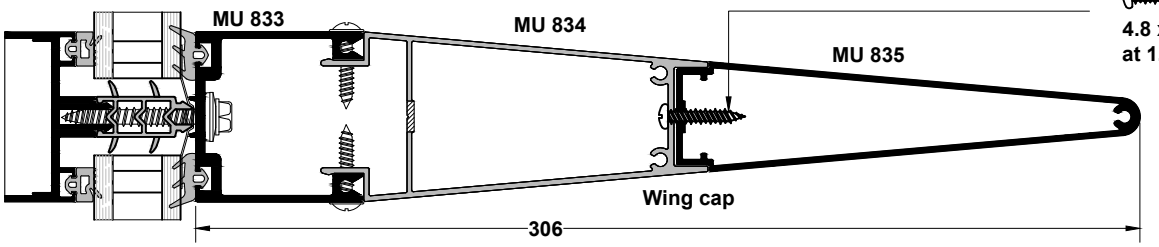
Ø7mm hole drilled on a side wall of MU833. One 150mm up from the bottom and 150mm down from top, and at 1.0m c/c thereafter.

On caps over 4.0m, expansion should be considered and designed into the assembly.

Screws not to be overtightened in order to allow expansion in the assembly.

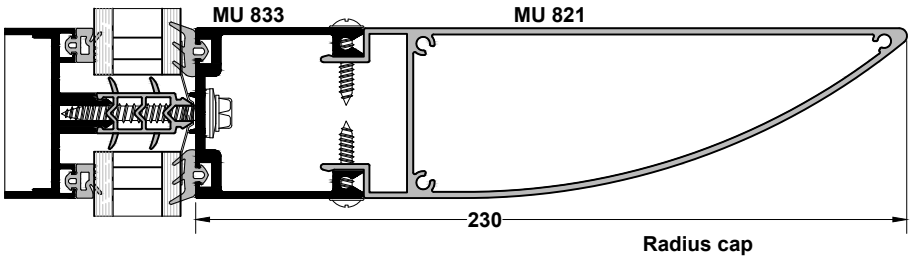


Rectangular box cap



Wing cap

4.8 x 19 pan pozi screw
at 1.5m c/c.



Radius cap